THIS FILM MAY NOT BE USED TO REPRODUCE ADDITIONAL FILM COPIES

Use of this film in reproduction is limited to individual page reprints when occasional demands require paper copies for use and study.

Micro Photo Inc.

OFFICIAL GAZETTE UNITED STATES PATENT OFFICE

VOL. 218 - 219

SEPT. - OCT.

1915

MICRO PHOTO INC. M
CLEVELAND, OHIO P

1/28.16 PL Bride

OFFICIAL GAZETTE

BANGOR PUBLIC
DEC 31 1915
LIBRARY

OF THE

UNITED STATES PATENT OFFICE.

L

VOLUME CCXVIII.

SEPTEMBER,

1915.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1915.

ERRATA.

1,152,662, page 105, first claim, line 7, for the word "action" read *section*.
1,152,881, page 185, fifth claim, lines 3–4, for the words "a selector impedance" read *an impedance device*.
1,153,045, page 242, second claim, line 7, for the word "mechanism" read *mechanisms*.
1,153,134, page 271, first claim, line 1, strike out the word "In" and make the article "a" a capital letter.
1,153,985, page 645, fifth claim, line 1, for the word "manufacturing" read *manufacture*.
1,154,691, page 917, in heading, assignment, after the word "assignor" insert the words *of five-sevenths*.
1,154,723, page 927, fourth claim, line 5, after the word "piston" strike out the comma, and same claim, line 6, after the word "piston" insert a comma.
1,155,075, page 1047, strike out all after number—heading, drawing, and claims—and insert the word WITHDRAWN.
106,005, (Trade-Mark,) page 599, strike out all after number and insert the word WITHDRAWN.

CONTENTS.

	Page.
PATENTS AND DESIGNS GRANTED, September 7, 14, 21, 28	3, 327, 609, 883
TRADE-MARKS PUBLISHED AND REGISTERED, September 7, 14, 21, 28	295, 585, 865, 1141
LABELS AND PRINTS REGISTERED, September 7, 14, 21, 28	319, 601, 874, 1154
DECISIONS OF THE COMMISSIONER OF PATENTS, September 7, 14, 21, 28	321, 603, 875, 1155
INDEX TO THE DECISIONS OF THE COMMISSIONER OF PATENTS	1159
ALPHABETICAL LIST OF PATENTEES AND INVENTIONS	1

ANNOUNCEMENTS.

	Page.
ADVERSE DECISIONS IN INTERFERENCE—	
Ellis, No. 1,040,532	324*a*
Ellis, No. 1,071,221	324*a*
Rockey and Eldridge, No. 1,037,538	881
Welkert and Pettibone, No. 1,106,761	324*a*
APPLICATIONS—	
Condition of pending	2, 326, 608, 882
BRIEFS IN APPEALED CASES	607
CANCELATION NOTICE—	
Quinn & Co	324*a*
CLASSIFICATION OF INVENTIONS—	
Bulletin No. 34 on sale	325, 607
Changes in—*Order 2212*	605
Order 2215	605
Order 2219	1158
Order 2220	1158
Order 2221	881
EXAMINERS' LETTERS AND AMENDMENTS	
INTERFERENCE NOTICES—	
Cook, John J	324*a*, 606
Rosenberg, Harry	324*a*, 606, 607
OFFICIAL GAZETTE—	
Subscription price of	1
PATENTS—	
Coupon orders for copies—*Order 2193*	325
List of adjudicated	324*a*, 1157
RENEWAL OF FORFEITED CASES	1

Patents Nos. 1,152,388 to 1,153,182.

THE OFFICIAL GAZETTE

OF THE

United States Patent Office.

Vol. 218—No. 1. TUESDAY, SEPTEMBER 7, 1915. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF SEPTEMBER 7, 1915	1
THE OFFICIAL GAZETTE	1
RENEWAL OF FORFEITED CASES	1
APPLICATIONS UNDER EXAMINATION	2
PATENTS GRANTED	3
REISSUES	288
DESIGNS	288
TRADE-MARKS—REGISTRATION APPLIED FOR	295
TRADE-MARK REGISTRATIONS GRANTED	317
LABELS	319
PRINTS	320
DECISIONS OF THE U. S. COURTS—	
Adrian Wire Fence Co. v. United Fence Co	321
ADJUDICATED PATENTS	324a
ADVERSE DECISIONS IN INTERFERENCE	324a
NOTICE OF CANCELATION	324a
INTERFERENCE NOTICES	324a

ISSUE OF SEPTEMBER 7, 1915.

Patents	795—No.	1,152,388 to No. 1,153,182,	inclusive.
Designs	28—No.	47,779 to No. 47,806,	inclusive.
Trade-Marks	23—No.	105,969 to No. 106,991,	inclusive.
Labels	32—No.	18,723 to No. 18,754,	inclusive.
Prints	7—No.	4,049 to No. 4,055,	inclusive.
Reissues	1—No.	13,976.	
Total	886		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	5	.....	North Carolina	3	.....
Arizona	2	.....	North Dakota	5	.....
Arkansas	5	.....	Ohio	63	4
California	30	2	Oklahoma	3	.....
Colorado	1	.....	Oregon	5	.....
Connecticut	18	1	Pennsylvania	49	4
Delaware	.....	.....	Rhode Island	.....	.....
Florida	2	.....	South Carolina	1	.....
Georgia	2	1	South Dakota	.....	.....
Idaho	2	.....	Tennessee	2	.....
Illinois	91	5	Texas	13	.....
Indiana	24	1	Utah	3	1
Iowa	8	.....	Vermont	5	.....
Kansas	12	3	Virginia	9	2
Kentucky	6	2	Washington	10	.....
Louisiana	4	2	West Virginia	8	.....
Maine	2	1	Wisconsin	14	.....
Maryland	4	.....	Wyoming	1	.....
Massachusetts	74	2			
Michigan	30	1	Alaska, District of	.....	.....
Minnesota	19	3	Canal Zone	.....	.....
Mississippi	.....	.....	District of Columbia	7	1
Missouri	22	5	Hawaii Territory	2	.....
Montana	2	.....	Philippine Islands	.....	.....
Nebraska	4	.....	Porto Rico	.....	.....
Nevada	2	.....	U. S. Army	.....	.....
New Hampshire	5	.....	U. S. Navy	1	.....
New Jersey	48	2			
New Mexico	2	.....	Total to residents of the United States	757	60
New York	127	17			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	1	.....	Natal	.....	.....
Austria-Hungary	1	.....	Netherlands	1	.....
Belgium	.....	.....	New South Wales	1	.....
Brazil	.....	.....	New Zealand	1	.....
British West Indies	.....	.....	Norway	1	.....
Canada	7	.....	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	.....	.....
Cuba	.....	.....	Scotland	2	.....
Denmark	.....	.....	South Africa	1	.....
England	14	.....	Spain	.....	.....
Finland	.....	.....	Sweden	2	.....
France	8	1	Switzerland	3	.....
Germany	19	.....	Transvaal, South Africa	.....	.....
Guatemala	.....	.....	Victoria	.....	1
Honduras	1	.....	Western Australia	.....	.....
Ireland	.....	.....			
Italy	3	.....	Total to residents of foreign countries	66	2
Luxemburg	.....	.....			
Mexico	.....	.....			

The Official Gazette.

The OFFICIAL GAZETTE is published every Tuesday simultaneously with the weekly issue of patents. From January 1, 1872, (the commencement of its publication,) to June 30, 1883, it was published and bound in semi-annual volumes; from July 1, 1883, to December 31, 1902, in quarterly volumes; from January 1, 1903, to December 31, 1908, in bimonthly volumes; since January 1, 1909, in monthly volumes. Terms: Annual subscriptions, $5; monthly, 50 cents. For postage upon foreign subscriptions, except those from Canada and Mexico, $5 or more, as required. Moneys received from foreign subscribers in excess of the subscription price of $5 will be deposited to the credit of the subscriber and applied to postage upon the subscription as incurred. Single copies, 10 cents; if mailed to foreign countries, excepting Canada and Mexico, 10 cents additional for postage. *Payment in advance required. No club rates. No discount to newsdealers. No sample copies.* All subscriptions must commence with the beginning of a volume. None taken for less than an entire volume. All orders should be addressed to "The Superintendent of Documents, Government Printing Office, Washington, D. C."

Renewal of Forfeited Cases.

A petition for the renewal of a forfeited application need not be signed by the inventor or assignee, but may be signed by the attorney.

A power of attorney in the original application authorising an attorney to transact all business in the Patent Office in connection with the application construed to be of sufficient scope to include the signing of a petition for renewal and the subsequent prosecution of the application. (*Ex parte Agee*, 101 O. G., 1609.)

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business September 4, 1915.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	June 19	June 14	512
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Mar. 18	May 11	873
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	Aug. 14	Aug. 16	108
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	Apr. 8	July 19	614
167	5. Bookbinding; Harvesters; Jewelry; Music.	June 4	July 15	371
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilisers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar. 2	Aug. 7	510
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	July 1	July 2	455
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Apr. 1	July 20	1223
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Jan. 8	July 26	631
235	10. Carriages and Wagons	May 7	July 16	768
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	July 22	Aug. 16	146
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	June 15	June 26	760
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	June 25	July 20	430
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Apr. 19	July 21	229
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Stock and Earthenware Apparatus; Plastics.	May 17	July 26	555
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Apr. 19	July 8	462
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	June 15	Aug. 9	204
327	18. Injectors and Ejectors; Liquid Heaters and Vaporisers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	July 28	July 28	269
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	July 9	July 14	202
179	20. Artificial Limbs; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Aug. 4	July 30	313

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	May 12	July 16	389
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	July 6	July 12	266
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 9	May 13	522
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	May 17	July 12	461
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Aug. 10	Aug. 16	128
106	26. Electricity, Generation; Motive Power.	Mar. 4	Apr. 23	616
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	July 19	July 22	337
65	28. Internal-Combustion Engines	May 18	July 3	423
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Wood-working; Wood working-Tools.	June 28	July 1	324
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	July 6	July 31	259
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	July 5	July 21	346
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	Mar. 3	July 16	767
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	June 3	July 3	384
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	June 19	June 19	329
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	May 3	July 23	796
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	May 15	July 24	717
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Mar. 12	May 14	897
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Apr. 2	July 10	643
321	39. Water Distribution	June 4	June 12	433
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 16	July 6	1018
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	May 17	July 21	390
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	May 1	May 4	846
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	July 6	June 15	260

Oldest new case, Jan. 8; oldest amended, Apr. 23.
Total number of applications awaiting action..... 21,186

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	July 7	Aug. 4	812
	Designs	Apr. 16	Aug. 17	547
	Labels and Prints	Aug. 6	Aug. 15	50

PATENTS

GRANTED SEPTEMBER 7, 1915.

1,152,388. SKEWER-SUPPORT FOR CREELS. CHARLES A. ALLEN, Whitinsville, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Aug. 21, 1909. Serial No. 513,957. (Cl. 242—131.)



1. In a creel, a creel-board having a perforation and a skewer-step therein, a transverse support for said step forming the top wall of a downwardly opening chamber adapted to receive and support the top of a lower skewer, said transverse support being provided with a hole or passageway, forming a communication between said chamber and the step, of suitable shape or size to prevent the ejection of the step by an upwardly thrust skewer.

2. In a creel, a tubular holder secured to a creel-board or rail thereof, a skewer step seated in one end of said holder, the other end being adapted to receive the top of a lower skewer, and means for obstructing the ejectment by the skewer therein of the said skewer step.

3. In a creel, a creel-board comprising a sheet metal plate, a tubular bushing therefor having a portion seated within a perforation in said plate and provided with another portion bearing against the plate at the side of the perforation adapted to reinforce said bushing, in combination with a skewer step held in the upper end of said bushing, the lower end thereof being open and forming a chamber adapted to receive the top of a lower skewer.

4. In a creel, a creel-plate, a tubular bushing secured therein and having a part projecting below the same, the lower end of said projecting part being turned backwardly and bearing upwardly against the creel-plate, and a support for a skewer at the upper end of said bushing.

5. In a creel, a perforated creel-board, a bushing secured therein and having a part projecting below the same and having its projecting end turned backwardly against and bearing upon the creel-board, in combination with a skewer-step mounted in the said bushing.

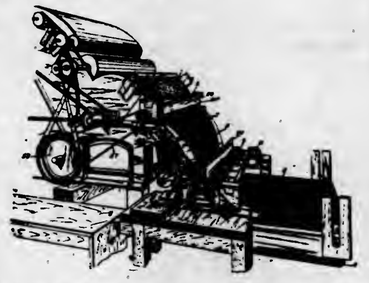
[Claims 6 to 12 not printed in the Gazette.]

1,152,389. CARD-FLEECE-WIDTH CONTROLLER. CHARLES A. ALLEN, Whitinsville, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Aug. 21, 1912. Serial No. 716,139. (Cl. 19—18.)

1. In apparatus for making cotton wadding, the combination of a series of cards provided with a conveyer receiving the fleeces thereof in superposition and each provided with fleece conducting means between itself and such conveyer comprising multiple surfaces moving in convergent lines and adapted to change the width of the fleece passing thereon toward said conveyer.

2. In apparatus for making cotton wadding, a series of cards combined with a conveyer common to the series and with fleece controlling card-fronts comprising means for changing the width of the fleeces and a cylinder and doffer knife for delivering the changed fleeces in superposition upon such conveyer.

3. In apparatus for making cotton wadding, the combination of a series of cards, a conveyer common to the series adapted to receive the fleeces therefrom in superposed relation and means comprising a series of moving surfaces for changing the width of such fleeces in transit from the card to the conveyer.



4. In apparatus for making cotton wadding, the combination of a series of cards, a conveyer common to the series arranged to receive the fleeces therefrom in superposed relation and a card-front operative to change the width of each of such fleeces in its passage to the conveyer and means for adjusting such front to control the degree of such change.

5. A fleece width-controlling means for cards comprising a plurality of surfaces forming the support for the fleece which leaves the card doffer and arranged to move in non-parallel directions away from such doffer whereby the said fleece is changed in width.

[Claims 6 to 38 not printed in the Gazette.]

1,152,390. SCREEN. WARREN A. BISHOP, Lowell, Mass. Filed Oct. 31, 1914. Serial No. 869,625. (Cl. 156—14.)

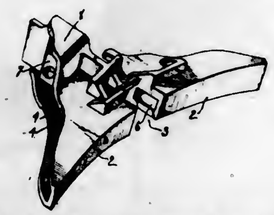


1. A metallic screen frame comprising two channeled side pieces; and a top and a bottom piece, each being L-shaped in cross-section, and having two plane end extensions bent at right angles to the main piece, each extension engaging and secured to, the adjacent portion of the bottom of the channel of the side piece; and metallic plates connecting the end portions forming the corners of the frame.

2. A metallic screen frame comprising two channeled side pieces, and a top and a bottom piece, each L-shaped in cross section: each of said latter pieces having the end of one arm of the L abutting the outside of the bottom of the channel of the side piece, and having the end of the other arm extended, and bent to form a right angle, to engage and be secured to the inside of the bottom of the channel of the side piece; all designed to obtain a screen frame with rigid corners.

3. A screen frame; metallic plates with inwardly bent lips, to overlay one face of the frame; the lips lying just within the edges of the screen opening through the frame to engage and with them to confine and firmly secure the edge portions of the wire meshing of the screen, lying between the face of the frame, and said plates, to confine the screen in one plane.

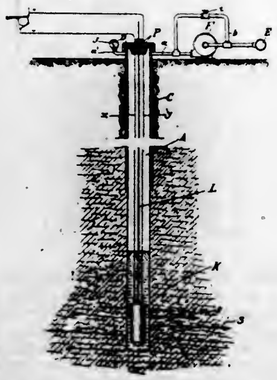
1,152,391. BRAKE-HEAD. WARREN L. BOYER, Kingston, N. Y., assignor to Bemis Car Truck Company, Springfield, Mass., a Corporation of Delaware. Filed Sept. 29, 1913. Serial No. 792,322. (Cl. 188—28.)



1. A brake head adapted to support a brake shoe and formed of manganese steel, which, when cold, and subjected to normal conditions, is hard and strong, and which, under abnormal conditions and when contacting with a car wheel, rapidly softens and disintegrates under the frictional heat so generated.

2. A brake head adapted to support a brake shoe for contact with car wheels and made of a metal possessing the properties, that when cold it is relatively harder than the wheel tread, and which when subjected to the influence of frictional heat by contact with the car wheel, rapidly softens and disintegrates, for the protection and preventing the scoring of, the said car wheel.

1,152,392. METHOD OF TREATING SUBTERRANEAN WELLS. EDWARD NICKLAS BREITUNG, Marquette, Mich., and ALFRED PICK, New York, N. Y., assignors to Subterranean Heater Corporation, New York, N. Y., a Corporation of New York. Filed Feb. 10, 1914. Serial No. 817,746. (Cl. 166—21.)

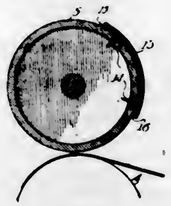


1. The method of treating subterranean wells which consists of heating a closed well and alternately forcing a gas into the well under pressure and releasing the pressure.

2. The method of treating subterranean wells which consists of heating the material in the well, applying a continued artificial pressure to the material greater than the natural pressure thereon for a substantial period of time to thereby force said heated material into the openings of the surrounding medium and in then releasing the artificial pressure to allow the material to again enter the well.

3. The method of treating oil wells which consists of closing the well, heating the oil in the well, alternately forcing a gas into the well under pressure to force the heated oil into the openings of the surrounding medium to thereby melt such liquefiable materials as clog said openings and releasing the gas pressure to allow the oil to again enter the well.

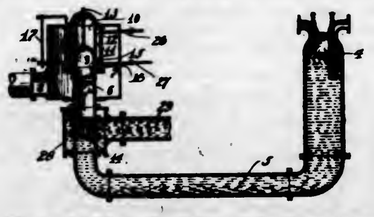
1,152,393. PAPER-MARKING DEVICE. HOWARD BROWN, Mittineague, Mass. Filed Mar. 9, 1914. Serial No. 823,347. (Cl. 92—48.)



1. In a pressure water marking device for paper, a backing roll, a pressure roll adapted to be forced thereagainst under heavy pressure, a design plate on the pressure roll and a resilient sheet under the design plate to equalize and distribute its pressure and allow the same to creep and bend under the pressure imposed thereupon.

2. In a pressure water marking device for damp paper, a backing device, a pressure roll adapted to be forced thereagainst under heavy pressure, a metallic design plate, having a hard surface, on said pressure roll, a resilient pad for said design plate to allow the same to bend and give to equalize the effect of all portions thereof.

1,152,394. UTILIZING HEAT ENERGY. WILLIAM G. BROWN, Syracuse, N. Y., assignor to Humphrey Gas Pump Company, a Corporation of New York. Filed Jan. 31, 1912. Serial No. 674,508. (Cl. 160—1.)



1. The combination of a play pipe for the reciprocation of liquid of sufficient bulk and path of travel to enable it to acquire useful momentum, a chamber connected with the play pipe adapted to contain an expansible medium, a piston separating the liquid from the medium, and a liquid dash-pot pocket between the piston and its seat.

2. The combination of a power chamber, a play pipe and an air chamber connected together for the reciprocation of liquid therein, a piston separating the liquid from the air and having limited movement in the air chamber, and a liquid dash pot pocket between the piston and its seat.

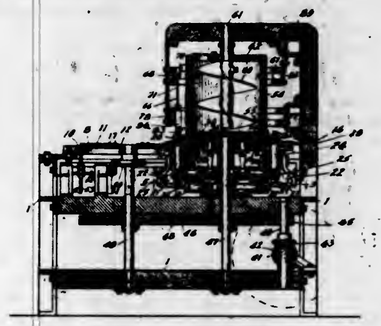
3. The combination of a power chamber, a play pipe and an air chamber connected together for the reciprocation of the liquid therein, a piston separating the liquid from the air provided with a lower extension of reduced diameter having a close fit with the margin of its surrounding seat, so that the liquid is trapped in the pocket formed between the piston shoulder and its seat, toward the end of its downward movement, to form a hydraulic dash pot.

4. The combination of a power chamber, a play pipe and an air chamber connected together for the reciprocation of liquid therein, a piston separating the liquid from the air and having limited movement in the air chamber, and a liquid dash pot pocket between the piston and its seat, said piston so constructed that its weight shall be less than the weight of an equal bulk of water.

5. The combination of a power chamber, a play pipe and an air chamber connected together for the reciprocation of liquid therein, a piston separating the liquid from the air and having limited movement in the air chamber, and a liquid dash pot pocket between the piston and its seat, said piston made of such form or of such material as to reduce its specific gravity, in order to reduce momentum of the piston and also to lessen the tendency of the liquid to leak past.

[Claims 6 and 7 not printed in the Gazette.]

1,152,395. CAN-HEAD-FLANGE CURLING AND COATING MACHINE. WILLIAM F. BUTLER, Indianapolis, Ind., assignor to Sanitary Can Company, New York, N. Y., a Corporation of New York. Filed Dec. 2, 1909. Serial No. 530,921. (Cl. 113—80.)



1. In a machine for curling can heads and applying cement thereto, the combination of a continuously rotating can head feeder having a plurality of can head receiving pockets, a continuously rotating can head carrier having a plurality of pairs of axially rotatable can head holder chucks, a plurality of flange curling rollers mounted on said carrier, one for each pair of can holder chucks, a tank mounted on said carrier, a plurality of distributing nozzles on said carrier and communicating with said tank, a plurality of feed pumps, one for each nozzle, and a plurality of controlling valves, one for each nozzle, substantially as specified.

2. In a machine for curling can heads and applying cement thereto, the combination of a continuously rotating can head feeder having a plurality of can head receiving pockets, a continuously rotating can head carrier, having a plurality of pairs of axially rotatable can head holder chucks, a plurality of flange curling rollers mounted on said carrier, one for each pair of can holder chucks, a tank mounted on said carrier, a plurality of distributing nozzles on said carrier and communicating with said tank, a plurality of feed pumps, one for each nozzle, and a plurality of controlling valves, one for each nozzle, and a can head ejector device and discharge chute, substantially as specified.

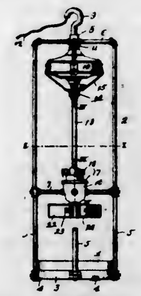
3. In a machine for curling can heads and applying cement thereto, the combination of a continuously rotating can head feeder having a plurality of can head receiving pockets, a continuously rotating can head carrier having a plurality of pairs of axially rotatable can head holder chucks, a plurality of flange curling rollers mounted on said carrier, one for each pair of can holder chucks, a tank mounted on said carrier, a plurality of distributing nozzles on said carrier and communicating with said tank, a plurality of feed pumps, one for each nozzle, a plurality of controlling valves, one for each nozzle, and a stationary cam for reciprocating the lower can holder chucks, substantially as specified.

4. In a machine for curling can heads and applying cement thereto, the combination of a continuously rotating can head feeder having a plurality of can head receiving pockets, a continuously rotating can head carrier having a plurality of pairs of axially rotatable can head holder chucks, a plurality of flange curling rollers mounted on said carrier, one for each pair of can holder chucks, a tank mounted on said carrier, a plurality of distributing nozzles on said carrier and communicating with said tank, a plurality of feed pumps, one for each nozzle, a plurality of controlling valves, one for each nozzle, and a stationary cam for reciprocating the lower can holder chucks, the spindles of the lower chucks of each pair having gears, and a stationary gear meshing therewith to rotate said can holder chucks, substantially as specified.

5. In a machine for curling can heads and applying cement thereto, the combination of a continuously rotating can head feeder having a plurality of can head receiving pockets, a continuously rotating can head carrier having a plurality of pairs of axially rotatable can head holder chucks, a plurality of flange curling rollers mounted on said carrier, one for each pair of can holder chucks, a tank mounted on said carrier, a plurality of distributing nozzles on said carrier and communicating with said tank, a plurality of feed pumps, one for each nozzle, a plurality of controlling valves, one for each nozzle, and a stationary cam for operating said pumps as the carrier rotates, substantially as specified.

[Claims 6 to 52 not printed in the Gazette.]

1,152,396. MEANS FOR SUPPORTING AND CONTROLLING GYRATORY STRUCTURES. GEORGE W. COMBS, Leavenworth, Kans. Filed Oct. 11, 1911. Serial No. 654,038. (Cl. 83—38.)



1. The combination with a structure, suspending means therefor capable of lateral movement in any direction, means not engaging said structure but supported by said suspending means to impart gyratory motion to the structure, and a self-contained motor supported by the suspending means and operably-connected to said gyratory means.

2. The combination with a gyratory structure, suspending means therefor capable of lateral movement, a driven shaft independent of the structure but mounted in said suspending means, and means fixed to said shaft to impart gyratory motion thereto.

3. The combination with a gyratory structure, suspending means therefor capable of lateral movement, a drive shaft, and a self-adjusting bearing carrying said drive shaft and supported by the suspending means.

4. The combination with a gyratory structure, suspending means therefor capable of lateral or orbital movement, a driver independent of the structure and mounted on said suspending means, and a drive shaft independent of the structure and yieldingly connected to said driver and the suspending means.

5. The combination with a structure, suspending means therefor capable of lateral or orbital movement, a drive shaft independent of the structure and journaled in the suspending means, means mounted on said shaft to impart gyratory motion thereto, and means to prevent the suspending means from rotating with the drive shaft.

[Claims 6 to 22 not printed in the Gazette.]

1,152,397. CABLE-HOOK. FRANK W. COOPER, Cora, W. Va. Filed Oct. 20, 1914. Serial No. 867,687. (Cl. 191—12.)



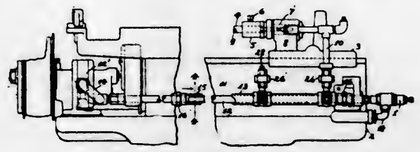
1. The combination with a hook adapted to engage a trolley wire, of a tube longitudinally slotted throughout a portion of its length and having a closed bifurcated end portion, said tube slipping over the shank of the hook, a pin passing through said shank and working in the slot of the tube, a spring encircling said tube and bearing at one end upon said pin, a sleeve inclosing the head of the hook and said tube, a collar carried by the tube and centering the said tube in said sleeve, a cable having an end secured in the bifurcated portion of the closed end of the tube and a sleeve fitting over said closed end and extending over the end portion of said cable.

2. The combination with a hook having a head portion provided with a shoulder and having a reduced shank, a longitudinally slotted tube fitting loosely upon said shank, a pin passing through the shank and adapted to work in the slots of the tube, a helical spring carried by said tube and arranged between said pin and the hook head, a cable having one end secured in the outer end of the tube, a sleeve of insulating material carried by the outer end portion of said tube and lapping over upon said cable, a collar fixed upon the tube between the pin and the sleeve, a second sleeve fitting upon said collar and upon the head of the hook and engaging the shoulder on said head and a covering of insulating material for said second mentioned sleeve.

1,152,398. LUBRICATOR. WILLIAM W. COREY, Hartford, Conn., assignor to Pratt & Whitney Company, Hartford, Conn., a Corporation of New Jersey. Filed Mar. 2, 1915. Serial No. 11,514. (Cl. 184—6.)

1. A lubricator comprising a main pipe, an auxiliary pipe surrounding the main pipe and slidable thereon, the ends of the auxiliary pipe being closed, the two pipes being separated and the main pipe having a port in communication with the space between the pipes, one of said pipes having an inlet and the other having an outlet.

2. A lubricator comprising a main pipe, an auxiliary pipe surrounding and slidable on the main pipe, the two being separated to provide a lubricant receiving space, the main pipe having a port opening into said space and the auxiliary pipe being closed at opposite sides of the port, means for supplying lubricant to the main pipe, and means for delivering lubricant from the auxiliary pipe.



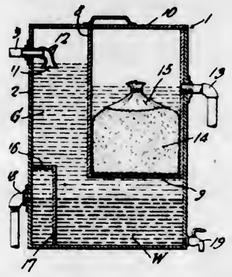
3. A lurbicator comprising a main pipe, an auxiliary pipe surrounding and slidable on the main pipe, the two being separated to provide a lubricant receiving space, the main pipe having a port opening into said space and the auxiliary pipe being closed at opposite sides of the port, means for supplying lubricant to the main pipe, and means for delivering lubricant from any one of several places, from the auxiliary pipe.

4. The combination of a movable element, and mechanism for supplying lubricant under pressure to said movable element comprising means for balancing the pressure of the lubricant before it reaches said element.

5. The combination of a slide, and mechanism for supplying lubricant under pressure to said slide, comprising means for balancing said pressure before the lubricant reaches the slide.

[Claims 6 and 7 not printed in the Gazette.]

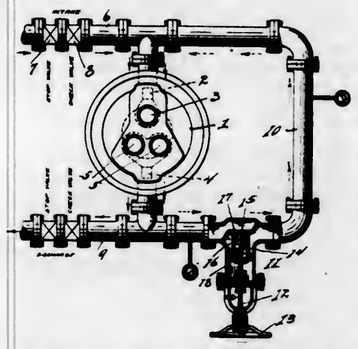
1,152,399. SEPARATOR AND FILTER. WALTER M. CRONENBERGER, Toledo, Ohio. Filed June 12, 1915. Serial No. 33,844. (Cl. 210—10.)



1. A separator and filter, comprising a tank having an inlet, a receptacle disposed within the tank and having an apertured bottom, an outlet pipe leading from the receptacle, filtering material disposed within the lower portion of the receptacle below said pipe, the bottom of the receptacle being spaced above the bottom of the tank, the tank having a lower chamber adjacent its bottom, said chamber having an inlet aperture adjacent the bottom of the tank, and an outlet pipe communicating with the interior of the chamber above said aperture.

2. A separator and filter, comprising a tank, a receptacle disposed within the tank and secured to one side thereof, the receptacle having an apertured bottom spaced above the bottom of the tank, an inlet pipe engaged through the tank at that side opposite the receptacle, an outlet pipe engaged through the tank and receptacle, filtering material disposed within the receptacle below the outlet pipe, the tank having a lower chamber below the inlet pipe and adjacent the bottom of the tank, the said chamber having an inlet aperture adjacent the bottom of the tank, and an outlet pipe communicating with the interior of the said chamber above said aperture.

1,152,400. MEANS FOR CONTROLLING THE OPERATION OF AIR AND GAS COMPRESSORS. JAMES H. DENNEDY, Detroit, Mich. Filed May 23, 1912. Serial No. 699,212. (Cl. 230—24.)



1. In a fluid pressure system, in combination a compressor, intake and discharge lines connected therewith, stop and check valves in each of said lines, a by-pass connecting the intake and discharge passages at points between the check valves and the compressor, and a manually operatable valve in said by-pass.

2. In a fluid pressure system, in combination a compressor, intake and discharge pipe lines connected therewith, stop and check valves in each of said lines, a by-pass connecting the intake and discharge passages at points between the check valves and the compressor, a valve for controlling the flow of gas through the by-pass, and means whereby said valve may be gradually closed to build up the pressure on one side of the valve and decrease it on the other side.

3. In a fluid pressure system, in combination a compressor, intake and discharge lines connected therewith, stop valves in each of said lines, a check valve in each line between the stop valves and compressor, a by-pass connecting the intake and discharge passages at points between the check valves and the compressor, and a valve controlling the flow of fluid through the by-pass.

4. The herein described method of loading a fluid compressor consisting in closing the intake and discharge lines, opening a by-pass connecting said lines to equalize the pressure between the valves in the intake and discharge lines, and then gradually closing the by-pass during the operation of the compressor in a manner to build up the pressure on the discharge side of the compressor and decrease the pressure on the intake side thereof between the stop valves.

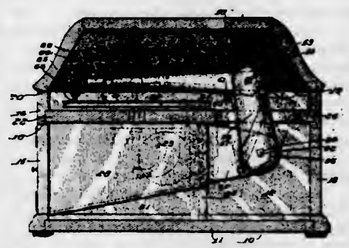
5. In a fluid pressure system, in combination a compressor, a main circulation system connected therewith, a normally closed auxiliary system connected therewith, means for closing the main circulation system, a valve in said auxiliary system, said valve being arranged to be positively opened or closed, a spring for said valve for holding it on its seat when in its intermediate position, and means whereby the pressure of said spring may be gradually increased and the lift of the valve from its seat gradually decreased.

[Claims 6 and 7 not printed in the Gazette.]

1,152,401. TALKING-MACHINE. WILBURN N. DENNISON, Merchantville, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed July 31, 1911. Serial No. 641,640. (Cl. 181—3.)

1. A sound conveyer for talking machines, comprising a sound amplifier, a tone arm, and a tubular section comprising a return bend mounted to oscillate on a horizontal axis, said section having its opposite ends respectively fitted in pivotal relation with said tone arm and with said amplifier.

2. A sound conveyer for talking machines, comprising a sound amplifier, a tone arm movable in substantially the direction of its axis, and a tubular section comprising a return bend connected to said tone arm and to said amplifier and lying at all times in a plane perpendicular to a vertical plane coincident with the longitudinal axis of said tone arm.



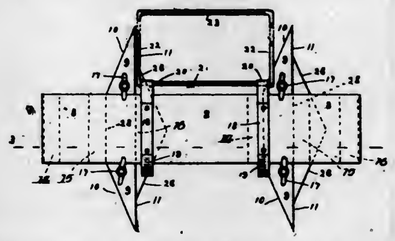
3. A sound conveyer for talking machines comprising a sound amplifier, a tone arm, and a movable laterally extending tapered tubular section connected to said tone arm and comprising a return bend, said return bend being directly connected to said amplifier to oscillate with respect thereto on a horizontal axis.

4. A sound conveyer for talking machines, comprising a sound amplifier having a laterally disposed inlet, a laterally extending tubular section comprising a return bend pivotally connected to communicate with said inlet, and a tone arm movably connected to said return bend and communicating therewith.

5. A sound conveyer for talking machines, comprising a sound amplifier having a laterally disposed cylindrical inlet, a laterally extending tubular section comprising a return bend provided with a cylindrical end pivotally fitted for relative oscillation in said inlet, and a tone arm movably connected to said section and communicating therewith.

[Claims 6 to 22 not printed in the Gazette.]

1,152,402. PLANTER. DAVID DRAPER, Rome, N. Y. Filed Feb. 3, 1915. Serial No. 5,972. (Cl. 55—18.)



1. In a planter, a plow member having a perpendicular side extending in the direction of travel of the planter, a face sloping to one side from said upright side and adapted to throw the earth away from said upright side and a bottom sloping upward from the lower edge of said upright side and forming a correspondingly shaped trench.

2. In a planter, a plow member having a perpendicular side extending in the direction of travel of the planter, a face sloping to one side from said upright side and adapted to throw the earth away from said upright side, a bottom sloping upward from the lower edge of said upright side and forming a correspondingly shaped trench and a wing part way up on said upright side and slanting outwardly and rearwardly therefrom and adapted to throw the upper layer of earth back from the upright side of the trench.

3. In a planter, a plow member having an upright guiding side and a face slanting outwardly and rearwardly

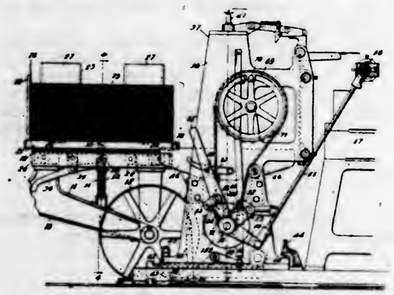
from the front edge of said guide and having its lower edge slanting upwardly from the bottom of said guide whereby a trench is formed with one side upright and one side slanting and the earth therefrom is thrown out beyond said slanting side.

4. In a planter, a plow member having an upright guiding side and a face slanting outwardly and rearwardly from the front edge of said guide and having its lower edge slanting upwardly from the bottom of said guide whereby a trench is formed with one side upright and one side slanting and the earth therefrom is thrown out beyond said slanting side and a wing part way up on said upright side of the plow and slanting outwardly and rearwardly therefrom and adapted to throw the upper layer of earth back from the upright side of the trench.

5. In a planter, the combination of a framework and a plurality of plow members mounted thereon, each having an upright guiding side and a face slanting outwardly and rearwardly from the front edge of said guide and having its lower edge slanting upwardly from the bottom of said guide whereby a series of parallel and similar trenches are formed with one side thereof upright and one side slanting and the earth therefrom is thrown out beyond said slanting side.

[Claims 6 and 7 not printed in the Gazette.]

1,152,403. SHEET-STACK-HANDLING MECHANISM. FELIX EBERHART, Newark, N. J., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 6, 1911. Serial No. 658,702. (Cl. 164—48.)



1. In a machine of the kind described, a stationary frame, auxiliary platform supporting members thereon, main platform supporting members, said last named members being adjustable above and below the level of the auxiliary supporting members, means for automatically raising the main platform supporting members step by step the thickness of a sheet, a device for rendering said means inoperative and hand operated mechanism for lowering the main supporting platform members, substantially as specified.

2. In a device of the class described, a stationary frame having auxiliary table supporting means, said means comprising spaced rollers, main table supporting means comprising horizontal members vertically adjustable and adapted to be automatically raised step by step, means for automatically raising said main platform members step by step, mechanism for rendering said last named means inoperative and hand operated mechanism for raising said main table supporting members, substantially as specified.

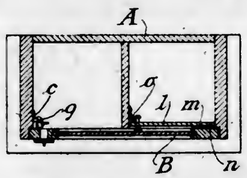
3. In a device of the class described, a stack holding and supporting platform or table adapted to be interchangeably supported on a transporting device and a stationary stack lifting mechanism, said platform having two sets of stack guiding or truing members mounted thereon, substantially as specified.

4. In a device of the class described, a stack holding and supporting platform or table adapted to be interchangeably supported on a transporting device and a stationary stack lifting mechanism, said platform having two sets of stack guiding or truing members mounted thereon, one of said guiding members being adjustable, substantially as specified.

5. In a device of the class described, a transporting device comprising a horizontal bed portion, a truck supporting the same, and a table having two upright stack guiding members thereon, one of said members being mounted on said table and adjustable in horizontal directions relative to a stack of sheets and parallel with the guiding face of the other member, substantially as specified.

[Claims 6 to 11 not printed in the Gazette.]

1,152,404. CABINET. FREDERICK P. ELDRIDGE, Northampton, Mass. Filed May 19, 1913. Serial No. 768,412. (Cl. 211—7.)



A fool-proof medicine cabinet having in combination a door provided with a finger opening therein, a self-locking finger-operable latch for the door, constructed and arranged inside the cabinet adjacent to but sufficiently distanced from the finger opening in a direction perpendicular to the axis of said opening so that it is invisible through the opening and cannot be operated by a child's finger.

1,152,405. LADY'S UNDERVEST. EDWARD EMMERS, Royersford, Pa. Filed May 22, 1914. Serial No. 840,153. (Cl. 2—41.)



1. A low necked undergarment having the borders of the chest and back portions provided with lace edging, combined with separately operative adjustable drawing tapes through each of said lace edgings of the back and chest, one end of each of such tapes secured to the garment, and said tapes providing two coöperating free ends at the chest portion and two coöperating free ends at the back portion whereby the said chest and back portions may be separately and independently adjusted as to size.

2. An undergarment having low cut chest and back portions and arm-holes in which the junctures of the chest and back portions with the arm holes are each provided with shoulder straps having free ends arranged to be coupled in pairs so as to be capable of changing the chest and back portions into arm-holes and the arm-holes into chest and back portions, combined with separate sets of drawing tapes threaded into the upper edges of the low cut chest and back portions and each set having one end of each tape secured in the respective shoulder straps and the remaining ends free and adapted to be adjustably tied, whereby the chest and back portions may be independently adjusted as to size.

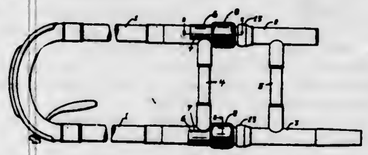
1,152,406. PAPER-CLIP. ALBERT J. GIFFORD, Worcester, Mass. Filed Oct. 20, 1908. Serial No. 458,596. (Cl. 24—261.)



1. As an article of manufacture, a clip comprising a plurality of members identical in shape and size formed of a continuous resilient wire, each substantially in the form of a D-shaped figure having a straight bar extending across it and an incomplete curved part, said bars being offset so as to cross each other within the figure, and each figure being symmetrical with respect to a line normal to the center of its said bar, whereby all parts of the clip are contained within a circular space of the periphery of which the curve of each D-shaped figure forms a part.

2. A clip consisting of a plurality of integrally connected nearly complete substantially D-shaped superposed resilient metallic members, each having a chordal cross-bar located entirely within the periphery of the members, each being symmetrical with respect to a central line normal to the cross bar thereof and each of the same shape, said cross-bars being offset in opposite directions, one end of one cross-bar being brought toward the opposite end of the otner cross-bar so as to cross each other and constitute a pair of jaws located within the periphery of both members, the other two ends being separated and located substantially on the peripheries of both members, the adjacent ends of the two bars lying on the same side of the diameters which bisect the distance between the free ends of the wire.

1,152,407. OILER FOR THE SLIDES OF WIND MUSICAL INSTRUMENTS. GEORGE W. GILL, Three Rivers, Mich. Filed Apr. 10, 1915. Serial No. 20,407. (Cl. 84—8.)



1. In a musical instrument of the class described, the combination of a pair of telescoping members, the outer slide member being provided with a cross piece at its inner end, a sleeve having an annular enlargement providing an internal annular chamber, the inner end of said sleeve being fitted upon the outer slide member and longitudinally slotted to receive said cross piece thereof, whereby the sleeve is supported to slidably embrace the inner member, a lip on the end of said outer slide member projecting into said chamber, a ring arranged in the outer end of said sleeve to project into said chamber to provide a filler supporting lip, and a filler of wicking disposed in said chamber with its edges supported by said lips at the ends thereof.

2. In a musical instrument of the class described, the combination of a pair of telescoping members, the outer member constituting a slide member, a sleeve mounted upon the inner end of said slide member and having an annular enlargement providing an internal annular chamber, a lip on the end of said slide member projecting into said chamber, a lip at the outer end of said sleeve projecting into said chamber, and a filler disposed in said chamber whereby said filler is supported to slidably embrace said inner member, said filler being adapted to receive a lubricant.

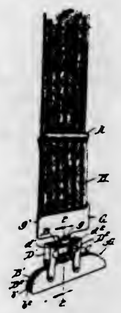
3. In a musical instrument of the class described, the combination of a pair of telescoping members, the outer member constituting a slide member, a sleeve mounted upon the inner end of said slide member and having an annular enlargement providing an internal annular chamber, a lip at the outer end of said sleeve projecting into said chamber, and a filler disposed in said chamber with its edges supported by said lip whereby said filler is supported to slidably embrace said inner member, said filler being adapted to receive a lubricant.

4. In an instrument of the class described, the combination of a pair of telescoping members, the outer member constituting a slide, a sleeve removably mounted on said outer member to project from the inner end thereof, said sleeve being provided with an internal annular chamber in its projecting portion having lips projecting into it at each end, and a filler disposed in said chamber with its edges engaged by said lips, said filler being adapted to receive a lubricant.

5. In an instrument of the class described, the combination of a pair of telescoping members, the outer member constituting a slide, a sleeve removably mounted on said outer member to project from the inner end thereof, said sleeve being provided with an internal annular chamber in its projecting portion having a lip projecting into it, and a filler disposed in said chamber with its edge engaged by said lip, said filler being adapted to receive a lubricant.

[Claim 6 not printed in the Gazette.]

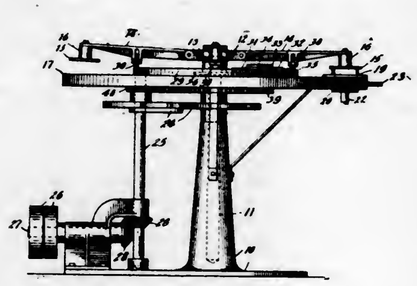
1,152,408. SUSPENDER-CLASP. MORRIS GLATT, Chicago, Ill. Filed Nov. 18, 1913. Serial No. 801,601. (Cl. 24—258.)



1. A clasp for suspenders and the like comprising two jaws, a resilient member forming an extension and connecting said jaws, the upper end of said member being above and shorter than the longitudinal gripping edges of the jaws, and two latches pivoted on opposite ends of said member and adapted to engage the later edges thereof and straddle said jaws to retain them in clamped engagement with an interposed object and to be swung in opposite directions away from said member to release said jaws and permit the removal of the interposed article.

2. A clasp for suspenders and the like comprising two jaws, a resilient member formed integrally with and connecting said jaws, the upper end of said member being above and shorter than the longitudinal gripping edges of the jaws, and two latches pivoted on opposite ends of said member and adapted to engage the lateral edges thereof and straddle said jaws intermediate their ends to retain them in clamped engagement with an interposed article and to be swung in opposite directions away from said member to release said jaws and permit the removal of an interposed article, said member comprising means intermediate of said latches for engaging a support for the clasp.

1,152,409. SOLDERING-MACHINE. CHARLES W. GRAHAM, New York, N. Y., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 26, 1911. Serial No. 667,777. (Cl. 113—78.)



1. In a machine for soldering cans or other similar articles, the combination of a solder bath, a magnetized plate adapted to attract and hold a can body, with a cover secured thereto, in an inverted position, means for rotating the said plate in a substantially horizontally plane over the solder bath, and connected mechanism for automatically depressing the plate to dip the seam of the can body and cover into the solder bath during a period of intermission in the horizontal rotation of the plate.

2. In a machine for soldering cans or other similar articles, the combination of a stationary solder bath, an intermittently movable arm adapted to rotate in a substantially horizontal plane above the bath, a plate depending from the said arm and adapted to hold the can by the bottom surface of the plate, means for intermittently rotating the said arm and causing it to come to rest above the bath, and mechanism connected with said rotating means for automatically depressing the arm and plate to dip the seam of the can into the said bath, said mechanism being arranged to act during the intermission of the rotary movement of the said arm.

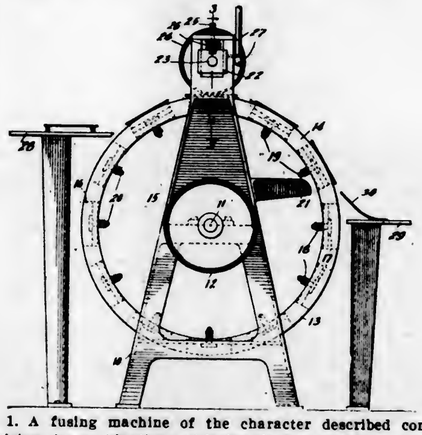
3. In a machine for soldering cans or other similar articles, the combination with a stationary solder bath, of an intermittently rotatable carrier having a plurality of radially projecting pivotally mounted arms thereon, each of said arms being provided at its free end with a magnetized plate adapted to hold a can body having a cover secured thereto in an inverted position over the solder bath, and means whereby the free end of each of the arms and the solder bath are caused to move vertically relatively to each other.

4. In a machine for soldering cans or other similar articles, the combination with a stationary table, of a solder bath, an intermittently rotatable carrier having a plurality of pivotally mounted radially extending arms thereon, each of said arms being provided at its free end with a magnetized plate, a cam track on said table, each of said arms having a roller adapted to travel on the cam track, said cam track being provided at a portion thereof with a reciprocating slide, means for intermittently rotating the carrier, and a continuously rotatable cam for reciprocating said slide.

5. In a device of the class described, in combination, a stationary table provided with centering devices at one portion thereof, and with a solder bath at another portion, an intermittently rotatable carrier having a plurality of radially extending pivotally mounted arms thereon, each of said arms having at its free end means adapted to hold a can body having a cover secured thereto in an inverted position, and means adapted to cause the free end of two of said arms to move relatively to the table and the solder bath during each period of rest of the rotatable carrier.

[Claims 6 to 8 not printed in the Gazette.]

1,152,410. SOLDER-FUSING MACHINE. CHARLES W. GRAHAM, New York, N. Y., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 26, 1911. Serial No. 667,778. (Cl. 113—92.)



1. A fusing machine of the character described comprising, in combination: a fusing device; and a movable cooling pressure device having a curved pressure surface coöperating with said fusing device, said pressure device having a pocket therein within which a can or other article is adapted to be seated and carried bodily by said pressure device past said fusing device, substantially as specified.

2. A fusing machine of the character described, comprising in combination: a fusing device; an axially rotatable cooling pressure consisting of a hollow cylinder having means thereon for carrying a can or other article, exposed to the air on both its inner and outer sides, bodily past said fusing device; and means for axially rotating said cooling pressure device, substantially as specified.

3. In a can fusing machine, the combination with a fusing and pressing roller, of a rotatable cylindrical carrier having a can body receiving pocket in the circumference thereof and means for directly supporting the can flange in opposition to the fusing roller, said roller and carrier being rotatable about parallel axes and arranged substantially tangentially to each other.

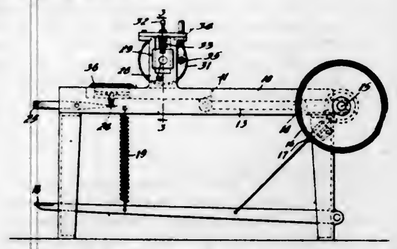
4. In a can fusing machine, in combination, a pressure roller and a rotatable cylindrical carrier having a can body receiving pocket in the circumference thereof, the surface of said carrier forming a curved pressure surface for one side of the seam to be soldered, and coöperating with the pressure roller to act progressively on a constantly changing minute area of the seam.

5. In a can fusing machine, the combination with a pressing and fusing roller, of a rotatable cylindrical carrier having a plurality of can body pockets in the circumference thereof, said carrier and roller being rotatable about parallel axes and tangentially arranged relatively to each other, said carrier having a curved pressure surface adapted to coöperate with the roller while fusing the can seams.

[Claims 6 to 10 not printed in the Gazette.]

1,152,411. MACHINE FOR FUSING CAN-SEAMS. CHARLES W. GRAHAM, New York, N. Y., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 26, 1911. Serial No. 667,779. (Cl. 113—92.)

1. In a solder fusing machine, the combination with a heated pressure member, of an opposing cooling pressure device conforming in shape and size to the seam being fused and engaging spaced non-continuous portions of one side of the seam where the seam projects beyond the can body, said heated pressure member acting progressively on successive portions of the other side of the seam, substantially as specified.



2. In a solder fusing machine, the combination with a heated fusing and pressure roller, of an opposing, cooling pressure device conforming in shape to the seam, said roller acting progressively and continuously on successive portions on one side of the seam, and said cooling pressure device having an interrupted surface engaging the opposite side of the seam.

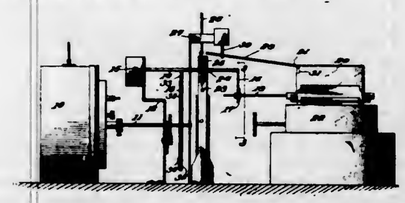
3. In a solder fusing machine, the combination with a heated fusing pressure roller, of a can holder pressure device adapted to pass beneath the roller and having a recess therein adapted to fit and receive a can, said holder having a portion conforming in shape to the seam and upon which the latter is adapted to be supported, said portion of the holder being slotted on its upper face.

4. In a machine of the class described, in combination: a frame; a heated pressure roller mounted on said frame; a reciprocating cooling pressure device having a can body holding pocket therein; means for reciprocating the cooling pressure device; and an ejector having means whereby it is operable on the return movement of the reciprocating device to remove can bodies from the said pocket, substantially as specified.

5. In a machine of the class described, in combination, a frame, a hested pressure roller, a reciprocating slide provided with a can body holder, said holder serving as a cooling pressure device, and means for reciprocating said slide, said roller acting continuously and the cooling pressure device acting upon spaced portions of the seam.

[Claims 6 to 11 not printed in the Gazette.]

1,152,412. AUTOMATIC LIGHT OR HEAT REGULATOR. YOSHISUKI HANAOKA, Hilo, Hawaii. Filed Feb. 19, 1915. Serial No. 9,336. (Cl. 161—14.)

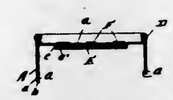


1. In a device of the character described, in combination, a clock mechanism, a disk cam adapted to rotate in accordance therewith, a lever adapted to be actuated by the cam, a source of light having a wick, a shield about said wick, means for raising and lowering the shield connected with said lever, igniting means adapted to light the wick, and a striker adapted to engage said igniting means simultaneously with the lowering of the shield.

2. In combination, a clock mechanism, a source of light, means for controlling the intensity of said light, cam mechanism rotatably mounted to move in accordance with said clock mechanism, and means controlled by said cam mechanism for regulating the position of said light controlling means, igniting means adapted to ignite the source of light, and a spring actuated striker adapted to ignite said igniting means simultaneously with the actuation of the ligh tcontrolling mechanism.

3. In combination, a clock mechanism having a central shaft, a dial corresponding to the clock dial mounted on said shaft and rotatable therewith, a volute cam mechanism carried by said dial, a source of light comprising a wick, a shield adapted to be raised and lowered about said wick, means actuated by said cam mechanism for raising and lowering said shield at desired times according to the position of said volute cam mechanism, igniting means for igniting the wick and a spring actuated striker adapted to ignite said igniting means simultaneously with the lowering of the shield about said wick.

1,152,413. VESSEL-CLOSURE. JERVIS R. HARBECK, Chicago, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 12, 1912. Serial No. 730,863. (Cl. 229—43.)



1. A container of the character described having a sheet metal end provided with an opening near one edge thereof, which opening is of less area than the end of the container and is surrounded by a depressed shelf, said shelf having integral tangs struck upwardly therefrom around the edges of the opening, the tangs being adapted to secure a closure disk in place over the opening, substantially as specified.

2. A container of the character described, having one of its ends of sheet metal provided with an opening, the end being countersunk around said opening to thereby provide a vertical wall and a supporting shelf at the base of such wall, and a disk composed of layers of fibrous material united by a fused cement fitting said opening and resting on said shelf, said fused cement being adapted to be rendered fluid by heat and to be oozed out by pressure all around said closure to seal the opening, and tangs integral with and cut from the said shelf and bendable over the top of the said disk, substantially as specified.

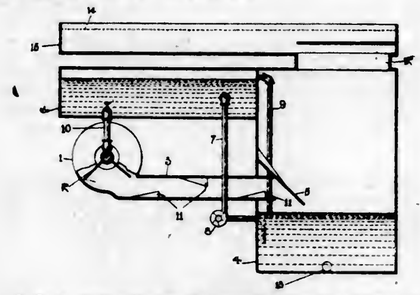
3. A container of the character described comprising a body of fibrous material having a sheet metal top secured thereto, the top having an opening near one edge thereof surrounded by a depressed shelf and having also a plurality of bendable tangs F struck from the said shelf around the edges of said opening, and a closure disk composed of layers of fibrous material united by a fused cement, said closure being adapted to fit the opening in the top, the fused cement being adapted to be rendered fluid and flowed by the application of heat and pressure, whereby the disk may be sealed around its edges to the can top and held in place by said tangs, substantially as specified.

4. A container having a sheet metal head formed with an opening surrounded by a wall and a depressed inwardly extending shelf, the said shelf being cut to form integral bendable tangs at the sides thereof and at the ends thereof, and a closing disk of fibrous material seated on the said shelf and adapted to be secured in place by having the said tangs bent down upon the top surface of the disk, the under side of the disk being scored in line with two of the said tangs which are opposite to each other, whereby the containers may be opened by bending up one of the tangs and causing a portion of the disk to hinge outward on the said score line and alined tangs.

1,152,414. WET DUST-COLLECTOR. GEORGE A. HELSON, Peterborough, Ontario, Canada. Filed Oct. 29, 1913. Serial No. 798,051. (Cl. 83—47.)

1. In a dust collector the combination of a blower provided with a suction inlet; means for introducing water into the blower; a discharge pipe for the blower; a water

tank into which the discharge pipe leads; and baffles in said discharge pipe close to the blower and inclined alternately in opposite directions whereby the water is beaten into fine spray and intimately mixed with the dust-laden air passing through the apparatus.



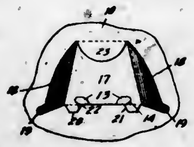
2. In a dust collector the combination of a blower provided with a suction inlet; means for introducing water into the blower; a discharge pipe for the blower; a water tank into which the discharge pipe leads; baffles in said discharge pipe close to the blower and inclined alternately in opposite directions whereby the water is beaten into fine spray and intimately mixed with the dust-laden air passing through the apparatus; and an inclined baffle at the mouth of the discharge pipe adapted to direct the discharge toward the bottom of the tank.

3. In a dust collector the combination of a blower provided with a suction inlet; means for introducing water into the blower; a discharge pipe for the blower; a water tank into which the discharge pipe leads; and baffles in said discharge pipe close to the blower and inclined alternately in opposite directions at a small angle to the longitudinal axis of the pipe whereby the water is beaten into fine spray and intimately mixed with the dust-laden air passing through the apparatus.

1,152,415. PROCESS OF BREWING BEER. ERNST HINTERLACH, Munich, Germany. Filed Mar. 23, 1915. Serial No. 16,475. (Cl. 195—35.)

In the process of producing beer poor in alcohol, the step of holding combined beer and wort at low temperature during its refining, prior to pasteurizing said mixture.

1,152,416. POURING-SPOUT CONTAINER VESSEL. HARRY W. JONES, Chicago, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 7, 1912. Serial No. 735,363. (Cl. 221—11.)



1. An article of manufacture of the character described comprising, in combination: a container vessel provided with a pouring opening; a pouring spout having side wings and attachable to the vessel from the outside; and coöperating hinge-forming members on the spout and the vessel so arranged that the spout may be permanently attached by pressing the same into position, said hinge-forming members being undercut and interlocking and acting to hold the spout to a fixed hinge line on the vessel while permitting its hinge action; substantially as specified.

2. An article of manufacture of the character described comprising, in combination: a container vessel provided with a pouring opening and having hinge-forming portions on the edge of said opening; and a spout having hinge-forming portions adapted to coöperate with the hinge-forming portions of the vessel, all of said hinge-forming portions being so arranged that the spout may be permanently attached from the outside by pressing the hinge-forming members together, said hinge-forming members being undercut and interlocking and acting to hold the spout to a fixed hinged line on the vessel while permitting its hinge action; substantially as specified.

3. An article of manufacture of the character described comprising, in combination: a container vessel provided with a pouring opening having hinge-forming projections along one edge of said opening; and a spout having hinge-forming projections coöperating with the hinge-forming projections on the vessel, some of said projections having notches in which engage, and are retained against movement in the plane of the top of the container, others of the projections after the spout has been snapped into place; substantially as specified.

4. An article of manufacture of the character described comprising, in combination: a container vessel provided with a pouring opening at one end thereof and having a pair of oppositely arranged hinge-forming projections on one edge of the opening, said hinge-forming projections being provided with undercut portions; and a pouring spout having hinge-forming projections adapted to coöperate with the hinge forming projections on the vessel, the projections on the pouring spout being also provided with undercut portions adapted to engage the undercut portions of the projections on the vessel and interlock therewith against movement in the plane of the top of the container and hold the spout to a fixed hinge line, the interengaging hinge-forming projections being so arranged that the pouring spout may be attached by merely pressing the same into position from the outside of the vessel after the same has been filled; substantially as specified.

5. An attachable pouring spout for containers comprising an elongated piece of fibrous material having arcuate end sections and scored intermediate said sections, said piece of fibrous material being provided with integral hinge-forming projections 20, 20, each having a cam face 21, and an undercut 22 arranged to hold the spout to a fixed hinge line while permitting its hinge movement; substantially as specified.

1,152,417. RAILWAY-TIE. MARCYAN KARPOWICZ, Bridgeport, Conn. Filed July 12, 1915. Serial No. 39,352. (Cl. 238—5.)

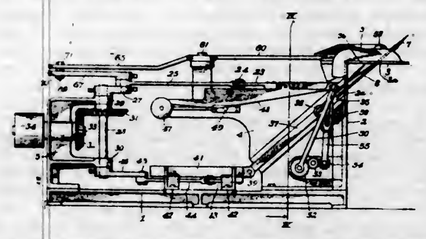


1. A railway tie triangular in cross section and provided with passages therethrough adjacent the three edges of the tie and at different distances from the triangular opposite base faces of the tie, a binding rod positioned through the upwardly arranged one of said passages when the tie is operatively positioned, and rail-engaging means at the opposite ends of the said rod.

2. A device of the class described comprising in combination with railroad rails having opposite perforations through the webs thereof, a tie beam triangular in cross section perpendicularly arranged between the said rails in engagement with the base flanges thereof, the said tie being provided with a longitudinal passage therethrough adjacent its upper edge, a tie rod positioned through the said passage and extending through the said web perforations, spacing sleeves upon the said rod between the webs of the said rails and the adjacent ends of the said tie and lock nuts secured upon the outer ends of the said rod.

3. A device of the class described comprising in combination with opposite rails having registering perforations through the webs thereof, a tie triangular in cross section and having a longitudinal passage therethrough adjacent and at different distances from each of the three corners thereof, a tie rod positioned through one of the said passages having its opposite ends secured through the said web perforations, and spacing collars between the webs of the said rails and the adjacent end of the said tie.

1,152,418. MATTRESS-SEWING MACHINE. WILLARD A. KELSEY and JOHN G. STONEBACK, Topeka, Kans. Filed Oct. 8, 1913. Serial No. 794,079. (Cl. 112—24.)



1. In a machine of the kind described, a mattress-guide forming a right-angled recess, a reciprocating packing-needle traveling partly across said recess, means to cause said needle to move toward the apex of said angle as it advances, means to reciprocate said needle, and sewing means.

2. In a machine of the kind described, a mattress-guide forming a right-angled recess, a reciprocating packing-needle traveling partly across said recess, means to cause said needle to move toward the apex of said angle as it advances, means to reciprocate said needle, and sewing means adapted to form a row of stitches through a corner of a mattress.

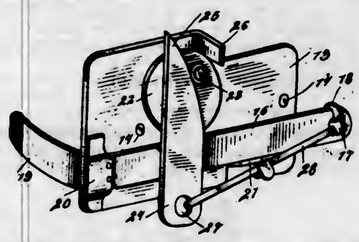
3. In a machine of the kind described, a needle-bar, provided with projecting rollers, guides having grooves for guiding said rollers, means for reciprocating said needle-bar, said grooves being adapted to shift the angle of the needle-bar as said bar inserts and withdraws the needle, and a packing-needle.

4. In a machine of the kind described a cross-head a needle-bar a link connecting said parts, rollers projecting from the needle-bar, roller-guides adapted to shift the angle of the needle-bar as said bar inserts and withdraws the needle, a packing-needle, and means for reciprocating the crosshead.

5. In a machine of the kind described, a needle-bar 9, a packing needle 8, rollers 19, 20 on said bar, guiding slots 23, 15, 22 for said rollers, a link 10, and means for reciprocating said link, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,152,419. CAR-DOOR FASTENING. NOAH P. KEMP, Norfolk, Va. Filed Aug. 31, 1914. Serial No. 859,374. (Cl. 70—102.)



1. The combination with a car-body and its movable door, of an element operated from the interior of the car-body and adapted to hold the door against movement in the desired position and to extend beyond the exterior of the car-body to indicate from such exterior that the door is locked.

2. The combination with a car-body and its movable end door having an opening formed therethrough, of a movable element arranged within the car-body and having a portion thereof adapted to be passed through the opening in the door and extend to the exterior of the car-body to serve as a lock for the door and as an indicator visible from the exterior of the car-body showing that the door is properly locked, means to connect the element with the interior of the car-body, and means to retain the element in the locked position.

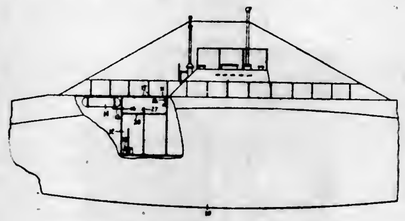
3. Apparatus of the character described, comprising an element to be arranged within a car-body and having a portion thereof adapted to engage with the door of the car-body to extend to the exterior thereof and serve as a combined lock member and indicator, means to connect the element with the car-body, and means to hold the element in the active position.

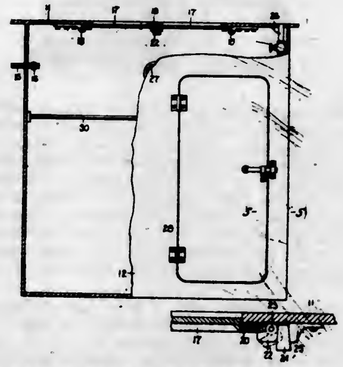
4. Apparatus of the character described, comprising a movable element arranged within a car-body and operated from the interior thereof and adapted to engage with the door of the car-body to hold the same against movement and to extend exteriorly thereof for a substantial distance to serve as an indicator, means for connecting the element with the car-body, and gravity operated means to hold the element in the active position.

5. Apparatus of the character described, comprising a plate accessible from the interior of the car-body, a movable element operated from the interior of the car-body and adapted to engage the door of the car-body to hold the same against movement and extend exteriorly of the door for a substantial distance to serve as an indicator, gravity operated means pivotally connected with the plate and adapted to engage with the element to retain the same in the active position, and a sealing device connected with the gravity operated means to prevent fraudulent operation thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,152,420. MEANS OF ESCAPE FROM SUBMARINES. WILLIAM J. KENELY, Elizabeth, N. J. Filed Dec. 5, 1914. Serial No. 875,649. (Cl. 114—16.6.)



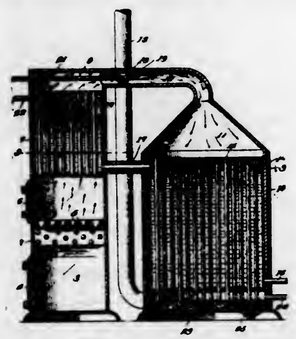


1. In a submarine boat, the combination of a compartment of a size suitable to hold the entire crew, means for the crew to have access to the interior of the compart-

ment, a doorway leading from the compartment to the exterior of the boat, a door hinged along one edge to the frame of the doorway and adapted to open inwardly, a series of lag bolts passing through the edge of the door and into the structure surrounding the doorway for holding the door shut under ordinary conditions, auxiliary holding means serving to temporarily hold the door shut after the lag bolts are removed, said auxiliary holding means comprising a dog pivoted opposite each end of the door and each having a point extending beneath the adjacent end of the door, and a wedge acting directly against the dog on that side of its pivot opposite the engaging point, substantially as set forth.

2. In a submarine boat, the combination of a substantially airtight compartment adjacent the top of the boat, a doorway leading from the compartment to the exterior of the boat, a pair of doors hinged at their opposite edges along opposite sides of the doorway and overlapping each other at their adjacent edges, a plurality of lag bolts passing directly through the doors and locking the same to each other at their overlapping edges and to the framework surrounding the doorway holding the door shut, a pair of dogs pivoted to the doorway frame opposite the ends of the overlapping portions of the doors, each dog including a point extending to one side of the vertical plane of its pivot and adapted to swing downwardly under the action of the doors, a rigid lug secured to the doorway frame adjacent but spaced from each of the dogs, and a wedge driven normally between said lug and the adjacent door serving to hold the dog in position to temporarily sustain the doors shut after the lag bolts aforesaid are removed.

1,152,421. STEAM-BOILER. THOMAS A. KILLMAN, Nashville, Tenn., assignor of twenty-six and one-fourth one-hundredths to William L. Danley, Nashville, Tenn., one-tenth one-hundredth to Edward H. Roy, Tullahoma, Tenn., and eighteen and three-fourths one-hundredths to Thomas Taylor, Nashville, Tenn. Filed July 21, 1913. Serial No. 780,306. (Cl. 122—412.)



1. The combination with a boiler furnace and boiler having a relatively small water heating cubical content, of a preheater having a relatively large water heating cubical content including a casing adapted to contain feed water and connected at its upper end directly to the lower end of the boiler, fire tubes passing down through the casing, means for passing products of combustion from the furnace into direct contact with the boiler and then downward through the fire tubes of the preheater, and means for admitting feed water into the lower end of the preheater.

2. The combination with a boiler and furnace, of a preheater including an outer casing, the upper end of the preheater being approximately on a level with the lower end of the boiler, a water container disposed within the casing, fire tubes passing through the water container and opening into the upper and lower portions of the casing, an inlet pipe entering the water container at its lower end, an outlet pipe extending directly from the upper end of the water container to the lower end of the boiler, a flue extending from the boiler and furnace to the upper end of the said casing, and a discharge flue extending from the lower end of the casing of the preheater, said preheater having a much greater cubical content than the boiler.

3. In a boiler, an outer shell, a boiler proper supported above the fire box in said shell, fire tubes passing through the boiler and opening at their lower ends into the fire box and at their upper ends into the space above the boiler, a preheater conprising an outer shell, a casing supported within the preheater, the upper end of said casing being approximately on a level with the lower end of the boiler, fire tubes passing through the casing and opening at their upper ends into the space above the casing and having their lower ends open and extended into the space below the casing, the cubical content of the boiler being smaller than the cubical content of the preheater, a flue connecting the space above the boiler to the space above the casing in the preheater, and a discharge flue extending from the lower portion of the preheater casing, the upper portion of the preheater casing being connected by a horizontal duct with the lower portion of the boiler.

4. In an apparatus of the character described, a vertical shell, a fire box therein, a boiler disposed in said shell above the fire box and comprising upper and lower sheets and vertical fire tubes, the fire tubes opening at their lower ends into the fire box and at their upper ends discharging into the upper portion of the shell, a feed water heater comprising a shell, a water container disposed in the said shell and having vertical fire tubes extending therethrough opening at their lower ends into the lower portion of the shell and at their upper ends into the upper portion thereof, the upper end of the water container being disposed approximately on a level with the lower end of the boiler, the content of the feed water heater being considerably larger than the content of the boiler, a duct connecting the upper portion of the water container with the lower portion of the boiler, an inlet pipe leading into the lower portion of said water container, a flue connecting the upper portion of the furnace shell with the upper portion of the preheater shell, a discharge flue leading from the lower portion of the preheater shell, a by-pass flue connecting the first named flue with said discharge flue, and a valve in said by-pass flue.

5. The combination of a boiler and furnace, of a heat absorbing preheater having a greater cubical content than the boiler and including an outer casing, a water container disposed within the casing, fire tubes passing through the water container and opening into the upper and lower portions of the casing, the lower portion of the casing constituting a water collecting chamber and the lower ends of said tubes extending a distance into said chamber, an inlet pipe entering the water container at its lower end, an outlet pipe extending transversely from the upper end of the water container directly to the lower end of the boiler, a flue extending from the boiler and furnace to the upper end of the casing, a discharge flue extending from the lower end of the casing of the preheater, and means for maintaining a water seal in the lower end of said container.

[Claim 6 not printed in the Gazette.]

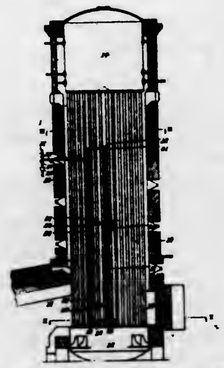
1,152,422. LACING AND LACE-FASTENER. HENRY D. LEFEBVRE, Alpena, Mich. Filed Feb. 3, 1915. Serial No. 5,814. (Cl. 24—121.)



1. A lacing terminal clip formed from a single piece of sheet material and including a plate having a rigid hooked arm at one end thereof and an opposed spring clamping arm at the opposite end thereof, said rigid hooked arm and spring clamping arm projecting in opposite directions and the extremity of the spring clamping arm being returned outwardly to provide a lacing hook carried by the clamping arm and extending in an opposite direction thereto.

2. A lacing terminal clip formed from a single piece of sheet material and including a plate having a pair of parallel slits in each end thereof, said slits providing an intermediate tongue and a pair of side prongs at each end of the plate, and the corresponding tongues and side prongs being in alinement with each other, the side prongs being sharpened and bent rearwardly and one of the intermediate tongues being comparatively short and bent outwardly to provide a rigid hooked arm while the opposite intermediate tongue is comparatively long and is deflected outwardly to provide a spring clamping arm adapted to coöperate with the plate to grasp a lacing, the rigid hooked arm and the spring clamping arm projecting in opposite directions from the plate and the extremity of the clamping arm being returned to provide a lacing hook which is carried by the spring clamping arm and projects in the opposite direction thereto.

1,152,423. TUBE-CLEANER. FREDERICK W. LINAKER, Dubois, Pa., assignor to The Vulcan Soot Cleaner Co. of Pittsburg, Pa., Dubois, Pa., a Corporation of New Jersey. Filed Mar. 3, 1915. Serial No. 11,899. (Cl. 122—392.)



1. In a tube cleaner, the combination with a vertical water tube boiler having spaced rows of vertical tubes, of a revoluble fluid distributing pipe mounted in the boiler setting and extending transversely of the boiler between two adjacent rows of tubes thereof and provided with discharge nozzles, said pipe shiftable longitudinally to space the nozzles thereof in line with different spaces between the rows of boiler tubes whereby each nozzle projects fluid into different spaces.

2. In a tube cleaner, the combination with a vertical wate tube boiler having spaced rows of vertical tubes, of a revoluble fluid distributing pipe extending transversely of the boiler between two adjacent rows of tubes thereof and provided with discharge nozzles, said pipe shiftable longitudinally to space the nozzles thereof in line with different spaces between the rows of boiler tubes, and means to hold the pipe against revolving during the longitudinal shifting thereof.

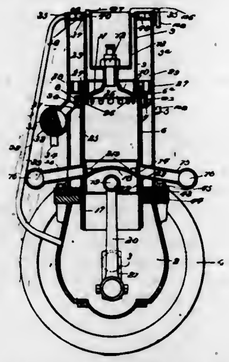
3. In a tube cleaner, the combination with a vertical tube boiler having spaced rows of vertical tubes, of a plurality of revoluble fluid distributing pipes extending transversely of the boiler at different points in its height, each pipe provided with discharge nozzles less in number than the number of spaces between the rows of tubes, and each pipe shiftable longitudinally independently of the other pipes to aline the nozzles with spaces between different rows of tubes, a fluid supply pipe common to all the distributing pipes, and connections between the fluid supply pipe and the several distributing pipes.

4. In a tube cleaner, the combination with a vertical tube boiler having spaced rows of vertical tubes, of a revoluble distributing pipe extending transversely of the boiler between two adjacent rows of tubes and provided with discharge nozzles, the nozzles being less in number than the number of spaces between the rows of tubes and the pipe being shiftable longitudinally to space each nozzle opposite different tube-spaces, and means exteriorly of the boiler for shifting the pipe.

5. In a tube cleaner, the combination with a vertical tube boiler having spaced rows of vertical tubes, of a revoluble distributing pipe extending transversely of the boiler between two adjacent rows of tubes and provided with discharge nozzles, the nozzles being less in number than the number of spaces between the rows of tubes and the pipe being shiftable longitudinally to space each nozzle opposite different tube-spaces, means exteriorly of the boiler for shifting the pipe, and means holding the pipe against revolving while being shifted.

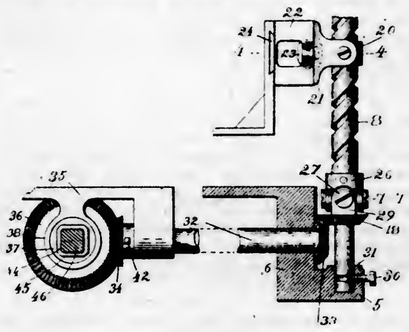
[Claims 6 to 21 not printed in the Gazette.]

1,152,424. INTERNAL-COMBUSTION ENGINE. WALTER M. LIPPINCOTT, Lynbrook, N. Y. Filed Oct. 15, 1912. Serial No. 725,828. (Cl. 123—65.)



In an internal combustion engine, a cylinder forming a combustion chamber, a crank case at one end of the cylinder into which it opens, the other end of the cylinder being open, an annular wall entering the last named end of the cylinder, a head forming the inner end of said wall, said wall and head being less in diameter than the diameter of the cylinder, the outer end of the annular wall being formed with a laterally extending hollow flanged portion closing the upper end of the cylinder and detachably engaged therewith, said cylinder adjacent the wall being formed with a plurality of intake ports and adjacent the other end of the cylinder with a plurality of exhaust ports, an outer annular wall extending parallel to the wall having the head and the wall of the cylinder, a web intersecting the space between the cylinder wall and the outer wall, the space so defined immediately surrounding the cylinder constituting a water jacket and the space so defined immediately surrounding the annular wall and the head thereof constituting a pumping chamber, said pumping chamber having an intake port, a valve for controlling the inlet of a charge through said inlet port, a piston disposed within the cylinder and having an annular extension fitting the cylinder and projecting through the space formed between the annular wall and its head and the adjacent wall of the cylinder and into the pumping chamber, an annular piston head carried upon said end of the piston extension and operating within the pumping chamber, said piston having exhaust ports adjacent its head and inlet ports adjacent the opposite end adapted to register with the intake ports of the cylinder, and a tubular connection between the hollow flanged portion of the annular wall and the crank case, said hollow flanged portion opening into the pumping chamber.

1,152,425. WINDOW-OPERATING APPARATUS. ALBERT K. LOVELL, New Haven, Conn. Filed Feb. 14, 1913. Serial No. 748,501. (Cl. 16—53.)



1. In window operating apparatus, the combination with a movable sash, of a pair of actuating screws mounted in the frame for supporting the sash, engaging nuts fitting and adapted to travel on the screws, universal coupling mechanism connecting the engaging nuts to the sash, and universal coupling joints between the screws and their mountings for enabling the screws to sway in conjunction with the sash.

2. In window operating mechanism the combination of a window frame, a pair of sashes movable in the frame, a pair of operating screws for each sash each pair arranged with the sash supported between them, engaging nuts carried by the screws and connected to the sashes, a pair of driving shafts for each pair of screws, gearing for transmitting the motion of the driving shafts to the screws, a driving gear for each pair of driving shafts, said respective driving gears being mounted and adapted to rotate upon a common axial center, gearing for transmitting the motion of each driving gear to its corresponding pair of shafts to rotate them in unison, a rotatively mounted clutch key axially engageable with one of the driving gears, and a clutching head mounted upon the key and rotatively driven thereby, engageable with the other driving gear whereby the respective gears and corresponding sashes may be operated independently or together.

3. In operating mechanism for double sash windows, comprising independent sets of operating devices for the respective sashes the combination of a driving gear for each set of mechanism, both mounted on a common axial center, gearing for transmitting the motion of each driving gear to the corresponding operating mechanism, a rotatively mounted clutch key axially engageable with one of the driving gears, and a clutching head mounted upon the key and rotatively driven thereby engageable with the other driving gear whereby the respective gears and corresponding sashes may be operated independently or together.

1,152,426. PLANE FOR AEROPLANES. FRANK MCCARROLL, Dallas, Tex. Filed Nov. 28, 1911. Serial No. 662,791. (Cl. 244—12.)



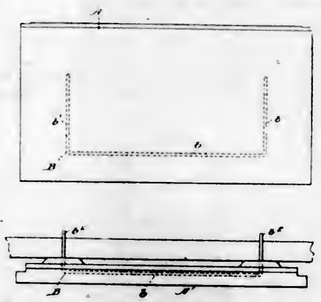
1. A plane for aeroplanes, provided with corrugated surface sections, said corrugated sections being formed so that the extending parts of the corrugations forming the sections are in the same plane as the main surfaces of the plane, and marginal portions of the main surface extending around the corrugated sections.

2. A plane for aeroplanes, provided with corrugated sections in its surfaces, said corrugated sections being formed in the upper and lower surfaces of the plane, and having the extending parts of the corrugations forming the sections substantially in the same planes as the main surfaces of the plane.

3. A plane for aeroplanes, provided with corrugated surface sections countersunk with relation to the surfaces of the plane portions and having the extending edges of the corrugations in the same plane as the surfaces.

4. A plane for aeroplanes, comprising a body having corrugations on its upper and under surfaces, said surfaces being spaced apart and said corrugations being countersunk with relation to the plane surfaces, and the corrugations on one surface extending relatively beyond the corrugations on the other.

1,152,427. ARTIFICIAL-STONE FACING SLAB OR TILE. HUGH E. MCLAUGHLIN, New York, N. Y. Filed June 25, 1914. Serial No. 847,257. (Cl. 72—20.)



1. A facing tile or slab for the walls of buildings, having a reinforcement and fastener for securing the tile to the face of the wall formed of a single piece of wire, said wire extending horizontally longitudinally of the slab with its ends bent upwardly and then extended outwardly from the rear face of the tile, said rearwardly extended portion forming a support for the slab passing between the blocks of one course of the wall and resting on the top of the same, the free end of the wire being extended downward forming hook-like portions which are hooked behind the blocks.

2. A facing tile or slab for the walls of buildings having a reinforcement and fastener for securing the slab to the face of the wall formed from a single piece of wire, said wire extending horizontally longitudinally of the slab with its ends bent upwardly and inclined rearwardly of the slab, and then brought out substantially at right angles from the rear face of he slab, forming supports resting on the top of the blocks of one course of the wall, and then bent downwardly forming hooks which take behind the blocks of one course.

1,152,428. HOLLOW ARTICLE OF REFRACTORY MATERIAL. ARTHUR T. MALM, Worcester, Mass., assignor to Norton Company, Worcester, Mass., a Corporation of Massachusetts. Filed Oct. 4, 1912. Serial No. 723,865. (Cl. 75—182.)

1. A hollow article made of a highly refractory non-glazing material and a glazing composition, and having a non-glazing coating applied thereto.

2. A hollow article comprising a highly refractory non-glazing body rendered impervious by a glazing composition, and having a non-glazing coating applied thereto.

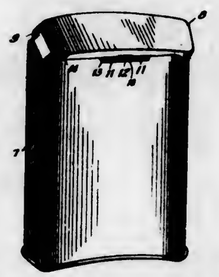
3. A hollow article comprising a highly refractory non-glazing body rendered impervious by a glazing composition and non-glazing exterior and interior coatings applied thereto.

4. A hollow article comprising a body portion containing previously molten alumina rendered impervious by glazing, and a non-glazing highly refractory coating applied to said body portion.

5. A hollow article comprising a body portion containing previously molten alumina rendered impervious by glazing, and non-glazing highly refractory exterior and interior coatings applied to said body portion.

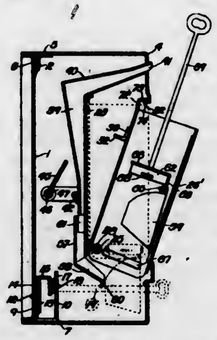
[Claims 6 and 7 not printed in the Gazette.]

1,152,429. POCKET-BOX. ISAAC J. MARCUSE, Richmond, Va., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 3, 1914. Serial No. 854,647. (Cl. 206—41.)



A sheet metal pocket box comprising a reniform body, and a flanged cover of corresponding shape, the flange of the cover closely embracing the top end of the body and being hinged thereto at the concave part of the back of the body, and the lower edge of the flange of the cover being cut away at each side of the hinge to conform to the shape of the back of the body.

1,152,430. VENDING-MACHINE. CHARLES A. MELCHERT, Kansas City, Mo., assignor to Automatic Machine Manufacturing Company, Kansas City, Mo., a Corporation of Missouri. Filed Nov. 27, 1914. Serial No. 874,217. (Cl. 194—1.)



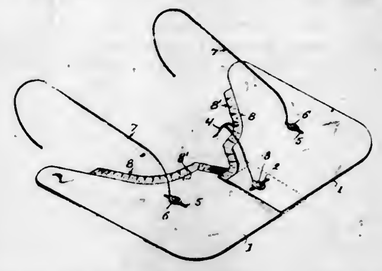
1. A vending machine comprising a casing, a plurality of bins mounted in the casing, means for releasing each bin through the intermediacy of a check, a catch box suspended from one of the bins and adapted for removal therethrough, and means for conducting coins through the casing to the catch box.

2. A vending box comprising a casing, a bin pivotally mounted in the casing, check-controlled mechanism adapted for retaining the bin in locked position, a lock housing removable through the bin and adapted for locking co-operation therewith, a catch box suspended from the housing, and means for conducting coins from the controlling mechanism to the catch box.

3. A vending machine comprising a casing, an open-bottomed bin mounted in the casing, check-controlled mechanism for normally retaining the bin in locked position, ribs on the inner faces of the bin near the lower end thereof, a lock housing having upper flanges adapted for supporting the housing on the ribs, and having bolts adapted to shoot under the ribs to hold the housing in place, a catch box suspended from the housing, and means for conducting checks from the controlling mechanism to the catch box.

4. A vending machine comprising a casing, a plurality of bins mounted in the casing, check-controlled mechanism for retaining the bins in locked position, ribs on the inner faces of one of the bins, a lock housing supported on the ribs and having bolts adapted to shoot beneath the ribs, a catch box suspended from the lock housing, inclined troughs adapted for catching the checks delivered from the controlling mechanism, and means for conducting the checks from the troughs to the catch box.

1,152,431. EYE-SHIELD. SIMON S. MULLEN, Watertown, Wis. Filed July 27, 1914. Serial No. 853,305. (Cl. 2—149.)



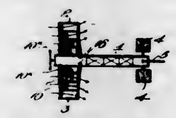
1. As a new article of manufacture, a shield for the purpose described formed of opaque material, and arranged to fit the face below the eyes to entirely obstruct the line of downward vision between the eyes and hands of the wearer.

2. An eye shield comprising a body portion opaque in its entirety, said body portion being provided with a nose-engaging portion, and ear-engaging portions adjustably connected to the body transversely to the length thereof.

3. An eye shield for students of touch systems in keyboard manipulation comprising a pair of adjustably connected opaque sections forming a continuous flat vision interrupting surface that is opaque in its entirety, and means for attaching the body to the face of the user to interrupt the vision between the eyes and hands.

4. An eye shield for use in teaching the touch system of keyboard manipulation comprising a body formed of two complementary slotted sections having their slotted portions arranged in overlapped relation with their slots in alinement, the sections being entirely opaque, a nose bridge having an engaging portion that engages the slots of the two sections, and ear-engaging means carried by the sections.

1,152,432. AEROPLANE. CONRAD MUNKER, Washington, D. C. Filed Dec. 13, 1909. Serial No. 532,856. (Cl. 244—29.)



1. A sustaining plane, for an aeroplane, provided with openings, extending from near its center to near its ends; sets of movable elements arranged within the openings, and means to move the elements in each set at different speeds with relation to each other.

2. A sustaining plane, for an aeroplane, provided with openings, extending from near its center to near its ends; sets of movable elements arranged within the openings, and common means connected with the elements in each set and adapted to move the outer element at a greater rate of speed than the adjacent inner element.

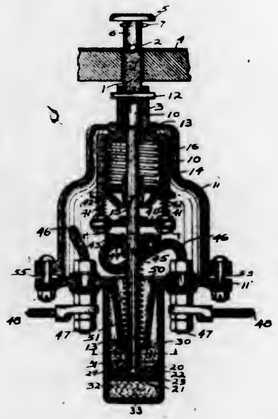
3. A sustaining plane for an aeroplane, adapted to be arranged transversely to the line of flight; and means to longitudinally taper the plane so that it decreases in width toward its ends.

4. An aeroplane including supporting planes composed of independent folding sections, and operating means connected to the independent sections for folding the same proportionately to their distances from the central portion of the aeroplane.

5. An aeroplane including a central frame, a plurality of flexible supporting planes arranged on each side of the central frame in parallelism to each other and to the line of flight of the machine, and operating means connected independently to the flexible planes for diminishing the same to reduce the air opposing areas thereof for regulation of the different speeds of the machine.

[Claims 6 to 17 not printed in the Gazette.]

1,152,433. TIME-SWITCH. THOMAS J. MURPHY, Rochester, N. Y. Filed Aug. 5, 1914. Serial No. 855,341. (Cl. 161—25.)



1. The combination of a housing, a contact connected to the housing, a rod movable in the housing, a spring for actuating the rod in one direction relative to the housing, a second contact secured to the rod, a releasable buffer secured to the rod and a second spring for returning the housing, contacts and the rod to their normal positions.

2. The combination of a pair of contacts, a member for closing the contacts, one of the contacts secured to the member, a yielding member connecting the first member to the other contact and means for regulating the time interval in which the contacts are closed.

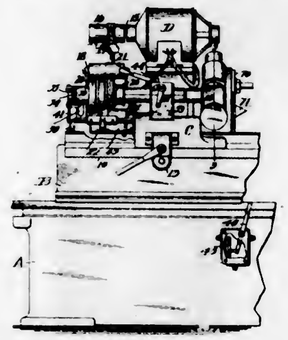
3. The combination of a pair of contacts, a closing member for closing the contacts, a spring connecting the closing member with one of the contacts, a detent released in the closing operation of the closing member for permitting the said spring to open the contacts.

4. The combination of a pair of contacts, a closing member for closing the contacts, a spring connected between the contacts for separating the contacts and a detent for temporarily holding the contacts in closed relation.

5. The combination of a pair of contacts, a closing member for closing the contacts, a spring located intermediate the contacts for opening the contacts and a spring for returning the contacts to their normal positions and a detent for permitting the contacts to be temporarily retained in their closed positions.

[Claims 6 to 8 not printed in the Gazette.]

1,152,434. GEARING. CHARLES H. NORTON, Worcester, Mass., assignor to Norton Grinding Company, Worcester, Mass., a Corporation of Massachusetts. Filed May 31, 1913. Serial No. 771,063. (Cl. 74—7.)



1. In a head stock for a grinding machine, the combination of a base, a motor mounted thereon and having a shaft, a transmission shaft, means for transmitting power from the motor shaft to the transmission shaft, comprising a clutch means for supporting the transmission shaft at its end beyond the clutch, a rod extending through said supporting means for operating said clutch, and means beyond the end of the transmission shaft for moving the rod.

2. In a head stock for a grinding machine, the combination of, a motor shaft, a transmission shaft, means for transmitting power from the motor shaft to the transmission shaft, comprising a friction clutch means for supporting the transmission shaft at its end, a rod extending through said supporting means for operating said clutch, means beyond the end of the transmission shaft for moving the rod, the last named means comprising a pair of friction plates connected with said rod, a lever having one arm connected with one of said plates, and a solenoid for operating the other arm of the lever.

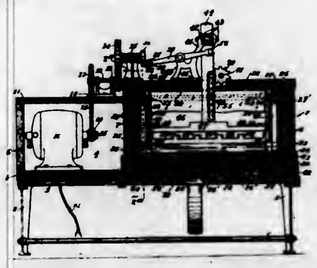
3. In a grinding machine, the combination of a bed, a motor having a shaft, a shaft parallel with the motor shaft, a long faced pulley on the motor shaft, a cone pulley on the second shaft, means for transmitting power from the long faced pulley to the cone pulley, a clutch for connecting the second shaft with the cone pulley, a rod extending from the clutch for operating it, and means mounted on the front of said bed for controlling said rod.

4. In a grinding machine, the combination of a bed, a motor having a shaft, a shaft parallel with the motor shaft, a long faced pulley on the motor shaft, a cone pulley on the second shaft, means for receiving power from the long faced pulley and transmitting it to the cone pulley, a clutch for connecting the second shaft with the cone pulley, a lever extending from the clutch for operating it, a spindle, means for operating the spindle from said second shaft, and an arm mounted at the end of said spindle for supporting the end of the second shaft.

5. In a grinding machine, the combination with a motor having a shaft, of a second shaft, a cone pulley loose on the second shaft, means for transmitting power from the motor shaft to said pulley, a clutch for connecting the pulley with the second shaft, said clutch having a spring for normally holding the clutch closed, a rod extending from the clutch along the shaft and through the end of the pulley for operating the clutch, and a solenoid for operating said clutch in opposition to the spring to open the clutch and stop the rotation of the second shaft from the motor.

[Claims 6 to 9 not printed in the Gazette]

1,152,435. ETCHING APPARATUS. ROBERT R. PAGE, Brooklyn, N. Y. Filed Dec. 12, 1914. Serial No. 876,770. (Cl. 41—9.)



1. An apparatus for etching metallic plates comprising a housing forming an etching chamber, a support in said housing to which a sensitized plate may be attached, said housing containing a chemical bath, means for reciprocating said support to convey said sensitized plate into contact with said bath and to remove it therefrom, there being bent air passages having deflecting surfaces directed toward the bath, said air passages permitting the free passage of air into said housing so as to shear off the liquid from the plate when the plate is being withdrawn from the bath and to fill up the vacuum tended to be created by such withdrawal, and to permit the quick escape of the air therefrom when the plate is descending so as to facilitate the unhampered descent of the plate, the bent passages and deflected surfaces preventing the outward splashing of any of the liquid in said housing.

2. An apparatus for etching metallic plates comprising a housing forming an etching chamber, a support in said housing to which the sensitized plate may be attached, said housing containing a chemical bath, means for reciprocating said support to convey said sensitized plate into contact with said bath and to remove it therefrom, there being air passages from said housing to permit the free passage of air into and out of said housing, a cover forming one of the walls of said housing when in closed position and hinged in place, and a curtain attached to said cover and positioned to hang over its hinged joint when said cover is in open position to prevent any of the liquid of said bath to drip out of said housing.

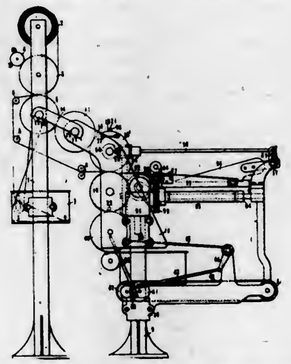
3. An apparatus for etching metallic plates comprising a housing forming an etching chamber, a cover forming the roof of said housing when in closed position, a support attached to said cover to which a sensitized plate may be attached, said housing containing a chemical bath, means for reciprocating said support to convey said sensitized plate into contact with said bath and to remove it therefrom, there being air passages through said cover along the side of the path of movement of said support to permit the free passage of air into said housing so as to shear off the liquid from the plate when the plate is being withdrawn from the bath and to fill up the vacuum tended to be created by such withdrawal, and to permit the quick escape of the air therefrom when the plate is descending so as to facilitate the unhampered descent of the plate.

4. An apparatus for etching metallic plates comprising a housing forming an etching chamber, a cover forming the roof of said housing when in closed position, ventilating means provided in said housing in the upper ends of the side walls of such housing adjacent to said cover and provided with a series of openings, there being a series of openings in said cover in staggered relation to the openings in said ventilating means when said cover is in closed position to permit the free passage of air into and out of said housing, and due to the staggered relation of the two series of openings, splashing of the liquid out of the bath is prevented.

5. An apparatus for etching metallic plates comprising a housing forming an etching chamber, a cover forming the roof of said housing when in closed position, ventilating means provided in said housing adjacent to said cover and provided with a series of openings, there being a series of openings in said cover in staggered relation to the openings in said ventilating means when said cover is in closed position to permit the free passage of air into and out of said housing, and due to the staggered relation of the two series of openings, the splashing of the liquid out of the bath being prevented, a support attached to said cover to which a sensitized plate may be attached, said housing containing a chemical bath, and means for reciprocating said support to convey said sensitized plate into and out of contact with said bath, said ventilating means being disposed along the side of the path of movement of said support.

[Claims 6 to 35 not printed in the Gazette.]

1,152,436. WEB-TRANSFORMING MECHANISM. WILLIAM A. PRINGLE, Niagara Falls, N. Y., assignor, by mesne assignments, to American Sales Book Company, Limited, a Corporation of Ontario, Canada. Filed Apr. 2, 1910. Serial No. 552,957. (Cl. 101—125.)



In application of the character described, in combination, web printing mechanism, means adapted to fold a web transversely, means adapted to cut the web into single sheets, means adapted to deliver folded sheets, means adapted to deliver the single sheets, and feeding means, a portion of which is common to the means for delivering the folded sheets and the means for delivering the single sheets.

1,152,437. PORTABLE CAN-FLANGE STRAIGHTENER. FRANK RUDOLPHI, Montclair, N. J., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 12, 1914. Serial No. 811,599. (Cl. 153—39.)

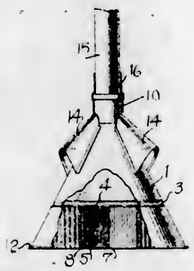


1. A can flange straightener, including, in combination: a base; an anvil removably attached to the base, said anvil being formed with an upwardly extending middle portion the bottom of which is substantially the same

diameter as that of the cans to be operated on, and of substantially the same contour, and formed with an annular shoulder extending out from the bottom of the said middle portion for a distance substantially as great as the width of a can flange; a free wing pivotally mounted on the base; its pivot being at a distance from said shoulder; a striker plate attached to the wing with the bottom of its operative edge arranged to coincide with the plane of a segment of the surface of the shoulder of the anvil; and a free lever connected with the wing and having a hand-hold at a distance from the pivot of the wing; whereby the striker plate may be caused to strike an abrupt and heavy blow on a can flange resting on the anvil shoulder.

2. A portable hand tool for straightening can flanges including, in combination: a base; an anvil removably attached to the base, said anvil being formed with an upwardly tapering middle portion the bottom of which is of substantially the same diameter as that of the cans to be operated on, and of substantially the same contour, and formed with an annular shoulder extending out from the bottom of the said tapering portion for a distance substantially as great as the width of a can flange; a free wing pivotally mounted on the base its pivot being at a distance from and at substantially the same height as said shoulder; a striker plate removably attached to the wing with the bottom of its operative edge arranged to coincide with the plate of substantially one half of the surface of the shoulder of the anvil and a free lever connected with the wing and having a hand-hold at a distance from the pivot of the wing; whereby the striker plate may be caused to strike an abrupt and heavy blow on a can flange resting on the anvil shoulder.

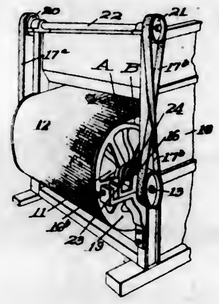
1,152,438. CLOTHES-POUNDER. AUSTIN J. RUPPERT, Forreston, Ill. Filed Sept. 28, 1914. Serial No. 863,922. (Cl. 68—5.)



A clothes pounder including a conical shaped body having a socket member secured to its smaller end and projecting within the body, a downwardly inclined circular plate fixed to said socket member and contacting at its outer edge with the body wall of the pounder, said plate constituting one wall of a water receiving chamber and provided in its outer edge with a series of recesses affording communication between said chamber and the interior of the pounder body, the body wall of the pounder being also provided adjacent to the socket member and inwardly of the recesses in said plate with a series of openings through which the water is ejected in the operation of the pounder, and directing hoods fixed to the exterior of said body wall over the latter openings.

1,152,439. APRON-GUIDING DEVICE. FREDERICK G. SARGENT and CHARLES T. BROOKS, Westford, Mass., assignors to C. G. Sargent's Sons Corporation, Graniteville, Mass., a Corporation of Massachusetts. Filed Mar. 19, 1915. Serial No. 15,570. (Cl. 193—23.)

1. In an apron guiding device, in combination, a rotatable shaft and a drum fixed to said shaft, means controlled by surface engagement with said apron effective to shift the bearings of said shaft laterally when the apron deviates from central position, and additional means acting independently of said first named means effective to restore said bearings to initial position when the apron returns to central position.



2. In an apron guiding device, in combination, a rotatable shaft, a drum fixed to said shaft, a pulley rotatable concentric with said shaft and having a portion of substantially the same diameter as said drum, means for moving one end of the shaft laterally when the apron engages and turns the pulley, and means to automatically restore the pulley and shaft to initial position when the pulley is freed from said apron.

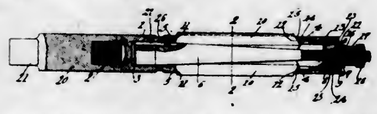
3. In an apron guiding device, a rotatable shaft, a drum fixed on said shaft, bearings for said shaft comprising a rotatable bushing having an eccentric outer bearing surface and also having a concentric outer portion, a pulley secured to said concentric portion, said pulley being positioned closely adjacent one end of said drum and having a portion of substantially the same diameter as said drum, and means for yieldingly restoring said pulley and bushing to predetermined initial position after angular displacement therefrom.

4. The combination, with a drum for carrying a traveling apron, of an idle pulley at the end of the drum rotatable independently thereof, means operated by said pulley when turned on the axis of the drum for moving the end of the drum laterally, and means for retaining said pulley in predetermined initial position and for automatically restoring said pulley to such position after displacement therefrom.

5. The combination with a drum for carrying a traveling apron, of an idle pulley at the end of the drum rotatable independently thereof, and means operated by said pulley when turned on its axis for moving the end of the drum laterally, said pulley being eccentrically weighted so that it will automatically return to initial position after displacement therefrom.

[Claims 6 to 10 not printed in the Gazette.]

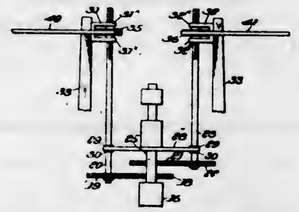
1,152,440. EXPANSION-REAMER. WILLIAM F. SCHEUBER, Marshall, Tex. Filed Jan. 14, 1915. Serial No. 2,219. (Cl. 77—76.)



1. An expansion reamer comprising a stock having a longitudinal bore and longitudinal slots, a tapering expansion pin disposed within said bore and having a stem at its smallest end projecting from one end of the stock, a bushing engaged in said end of the stock and through which said stem is slidable, the bushing and stock having interengaging means for holding them against relative rotation, cutters mounted within said slots and bearing against the pin, reams for holding the cutters against the pin, and a nut threaded upon said stem and bearing against the bushing, the bushing and nut having coöperating means for indicating the position of the nut relative to the bushing.

2. An expansion reamer comprising a stock having a longitudinal bore and longitudinal slots, a tapering expansion pin disposed within said bore and having a stem at its smallest end projecting from one end of the stock, cutters mounted within said slots and bearing against said pin, adjustable means for holding the cutters against the pin, a nut threaded upon said stem and coöperating with said end of the stock, and a second nut threaded upon the stem and adapted to be adjusted relative to the first mentioned nut for facilitating the positioning of the first mentioned nut to its original position after it has been loosened.

1,152,441. CUTTING MEANS FOR CANNING APPARATUS. JAMES SCHLOTHAN, San Francisco, Cal., and WILLIAM F. SCHLOTHAN, Ketchikan, Alaska. Filed Feb. 17, 1915. Serial No. 8,791. (Cl. 146—7.)



1. In an apparatus of the character disclosed, a cutter comprising a pair of contiguous co-acting knives for cutting a cylindrical body of material, and independently driven means for rotating said knives with relation to each other in opposite directions or in the same direction.

2. In an apparatus of the character disclosed, a cutter comprising a pair of contiguous co-acting knives for cutting a cylindrical body of material and means for rotating only one of said knives at a time.

3. In an apparatus of the character disclosed, a cutter comprising a pair of contiguous co-acting knives for cutting a cylindrical body of material and means for rotating only one of said knives at a time, and means for reciprocating said cutter.

4. In an apparatus of the character disclosed, a cutter comprising a pair of concentric co-acting knives, the outer surface of the cutting edge of the inner knife being beveled and the inner surface of the cutting edge of the outer knife being inclined inwardly so as to contact with the beveled surface of the inner knife and means for rotating only one of said knives at a time.

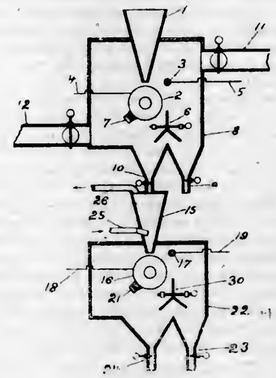
5. In an apparatus of the character disclosed, a cutter comprising a pair of concentric co-acting knives, the outer surface of the cutting edge of the inner knife being beveled and the inner surface of the cutting edge of the outer knife being inclined inwardly so as to contact with the beveled surface of the inner knife and means for rotating only one of said knives at a time, and means for rotating said knives with relation to each other in opposite directions or in the same direction.

[Claim 6 not printed in the Gazette.]

1,152,442. SEPARATION OF COAL. FREDERIC W. C. SCHNIEWIND, Englewood, N. J.; Elma M. Schniewind executrix of said Frederic W. C. Schniewind, deceased. Filed Jan. 20, 1913. Serial No. 743,185. (Cl. 83—49.)

1. The process of separating coal from granulated coal mixtures which comprises moistening the coal to develop the differences in hygroscopicities of the different constituents of the mixture, and subjecting the moistened coal to electrostatic separation.

2. The process of separating coal from coal mixtures which comprises crushing the mixture to such an extent that particles of different constituents of the mixture possessing different hygroscopicities are separated from each other, developing the difference in hygroscopicities of such coal particles by moistening the same while still in a freshly crushed condition and subjecting the moistened coal mixture to electrostatic separation.



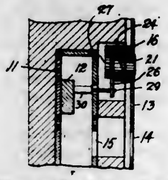
3. The process of separating coal from coal mixtures which comprises crushing the coal, subjecting the crushed coal to electrostatic separation to separate therefrom conductive pyritical impurities, developing in the resulting coal the difference in hygroscopicities of the different constituents by moistening the same and subjecting the moistened coal mixture to electrostatic separation.

4. The process of separating coal from coal mixtures which comprises crushing the coal, separating from the crushed coal the finer particles, moistening the resulting coal to develop the difference in hygroscopicities of the different constituents of the mixture, and subjecting the moistened coal to electrostatic separation.

5. The process of separating coal from coal mixtures which comprises crushing the coal, separating from the crushed coal the finer particles, subjecting the resulting coal to electrostatic separation to separate therefrom conductive pyritical impurities, developing in the resulting coal the difference in hygroscopicities of the different constituents by moistening the same, and subjecting the moistened coal to electrostatic separation.

[Claims 6 to 18 not printed in the Gazette.]

1,152,443. INDICATOR-LOCK. JOHN H. SHAW, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed July 29, 1913. Serial No. 781,800. (Cl. 70—6.)



1. The combination with a lock having a bolt, of an escutcheon, a plunger having a screw movement in said escutcheon, and means of connection between the plunger and the bolt and independent of the bolt operating means for actuating the plunger by the movement of the bolt; substantially as described.

2. The combination with a lock having a bolt, of an escutcheon, a plunger having a screw movement in said escutcheon, and means of connection between the plunger and the bolt and independent of the bolt operating means for actuating the plunger by the movement of the bolt, said plunger having one end withdrawn rearwardly from

the escutcheon when the bolt is in one position to create a depression in the escutcheon; substantially as described.

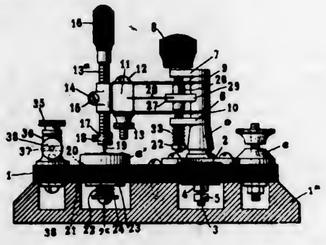
3. The combination with a lock having a bolt, of an escutcheon, a housing or bushing carried by the escutcheon, a plunger having a screw movement in said housing or bushing, a projection on the bolt extending out of the lock case, and means of connection between said projection and said plunger including a plunger actuating member mounted to move in a plane parallel to the door and adapted to engage said projections on the bolt; substantially as described.

4. The combination with a lock having a bolt, of an escutcheon, a bushing carried by the escutcheon, a plunger mounted in said bushing and having an oblique groove, a pin extending through the bushing wall into said groove, and an arm on the rear end of said plunger fitting over a projection on the bolt; substantially as described.

5. The combination with a lock having a bolt, of an escutcheon, a bushing carried by the escutcheon, a plunger mounted in said bushing and having an oblique groove, a pin extending through the bushing wall into said groove, and an arm on the rear end of said plunger fitting over a projection on the bolt, said bushing being cut away at the rear portion to present stop surfaces to limit the movement of said arm; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,152,444. DETECTOR. AUGUSTUS K. SLOAN, Jr., Brooklyn, N. Y. Filed Dec. 17, 1910. Serial No. 597,808. (Cl. 250—31.)



1. A detector having a standard or support, a flexible arm extending therefrom, a contact point adjustably supported at the outer end thereof and means including an adjusting screw borne upon the standard for positively varying to minute degrees in both directions of movement the tensioned position of the outer end of said flexible arm and its adjustable contact point.

2. A detector having a standard or support, a plurality of flexible members comprising a resilient supporting arm for the contact member, a contact member adjustable with reference to said arm, an adjusting screw out of engagement with the resilient supporting arm, said screw mounted upon the standard, a flexible member intermediate said adjusting screw and the outer end of the flexible arm positively moved in both directions along said screw for varying to minute degrees the tensioned position of the outer end of the supporting arm and its adjustable contact member.

3. A detector having a standard or support, a flexible arm extending therefrom, an adjustable contact member mounted at one end of said arm, an adjusting device for said arm comprising an adjusting screw mounted upon the standard and a flexible member intermediate said screw and the outer end of the flexible arm, said flexible member being positively adjustable in both directions along said screw whereby a fixed tension is exerted upon the outer end of the flexible arm when positioned in either direction.

4. A detector having a standard or support, a pair of substantially parallel flexible members extending therefrom and forming a supporting arm, a screw-threaded spindle, operatively mounted at the outer end of said arm and bearing a contact-point, an adjustable spring member interengaging said supporting arm at its outer end and an adjusting device having a bearing entirely upon the support and adapted to positively influence the position of the spring-member to exert a positive adjusting influence upon the supporting arm in both directions of adjustment at any adjusted position of the supporting arm.

5. A detector having a standard or support, a flexible arm extending therefrom, a contact adjustably mounted at the outer end of said arm, means for raising and lowering the outer end of said arm to minute degrees, said means comprising a spring member in engagement with the outer end of the spring arm and having its opposite end positively adjustable in an axial direction along an adjusting screw borne upon the standard whereby the tension of said spring member is increased or decreased with reference to the outer end of the spring arm at any adjusted position thereof, and a contact member cooperating with the adjustable contact.

[Claims 6 to 17 not printed in the Gazette.]

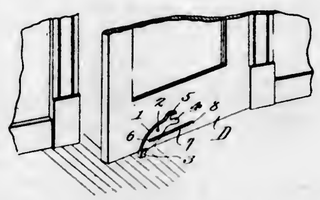
1,152,445. METHOD OF MAKING SOUND-RECORDS. AUGUST SMITH and CLARENCE S. WICKES, Camden, N. J. Filed Sept. 23, 1905. Serial No. 279,765. (Cl. 18—48.4.)



1. The herein described method of producing a sound record for talking machines which consists in placing upon a heating table a piece of carrying material, placing upon the said piece a thin disk of high-grade record material and softening the same, then transferring said carrying material and sift high-grade material into a mold with said record material in contact with the matrix, placing heated low-grade material upon said carrying material, and pressing the layers of record material together with the carrying material between them.

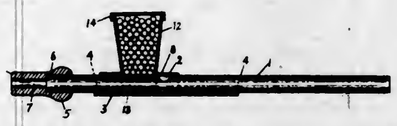
2. The hereindescribed method of producing a sound record for talking machines, which consists in placing upon a heating table, a sheet of carrying material and a thin disk of high grade record material on one side of the same, softening said high grade record material, transferring said carrying material and said high grade material to a mold, and placing said high grade material in contact with the matrix of said mold, placing heated low grade material on the side of said carrying material opposite to that upon which is said high grade material, and then uniting said layers of record material with said carrying material between them, and simultaneously forming a sound record groove in said high grade material.

1,152,446. DOOR-HOLDER. JAMES M. SPENCER, Hastings, Fla. Filed Sept. 16, 1914. Serial No. 862,085. (Cl. 16—82.)



A door holder, including a plate having a reduced floor engaging terminal at one end, the terminal being thicker than the plate to form a foot receiving lug, and two spaced lugs at the opposite end, one of the two latter lugs being bent so as to be at an approximate right angle to the body of the plate, means for pivoting the plate intermediate of its ends, and a coiled spring engaging the plate beyond the pivotal point and having a normal tension to hold the floor engaging end upon or away from the floor, the bent lug contacting the spring when the floor engaging lug is out of use and limiting the distance of the floor engaging lug above the floor.

1,152,447. AIR-GUN. WILLIAM J. SPROULL, Saginaw, Mich. Filed July 20, 1914. Serial No. 852,129. (Cl. 124—9.)



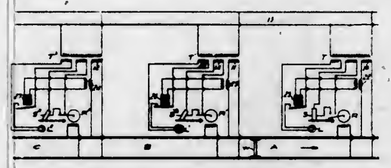
1. A toy blow gun comprising a blow tube provided with ammunition admitting means, a guide track carried by the tube and provided with end abutments, and a magazine for delivering ammunition to the said admitting means and provided with means for slidably embracing the tube between said abutments and for slidably engaging the longitudinal edges of said track.

2. A blow gun comprising a blow tube provided with an inlet, a magazine slidably mounted on the tube and having an outlet adapted to be alined with said inlet, baffle plates within the magazine and arranged in overlapping relation and each provided with means for causing the shot to be delivered one at a time to the tube inlet, and means for limiting the slidable movements of the magazine.

3. A blow gun comprising a blow tube provided with an ammunition inlet, a guide track carried by the tube and provided with end abutments, a split sleeve slidably mounted on the tube and having its longitudinal edges engaging the longitudinal edges of the track, a magazine mounted on the sleeve and having reinforcing base flanges that overlap said sleeve, and a cover for said magazine.

4. A blow gun comprising a tube provided with an ammunition inlet, a magazine slidably mounted on the barrel and provided with an ammunition outlet adapted to be alined with the inlet of the tube, and downwardly inclined baffles arranged within the magazine adjacent the outlet thereof and having their free ends provided with notches to facilitate the discharge of ammunition.

1,152,448. RAILWAY SIGNALING. THOMAS S. STEVENS, Topeka, Kans., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed June 7, 1912. Serial No. 702,209. (Cl. 246—30.)



1. In combination, a plurality of successive sections of a railway track; track circuits for the sections each including a source of energy and a track relay connected with the rails of a section; signals for the sections controlled by said track relays, lamps for the signals for giving signal indications at night, a second relay for each section receiving energy from the connection between the source of energy and a rail of the section, and a circuit for a lamp of each signal, said lamp circuit being controlled by said second relay for the section in the rear.

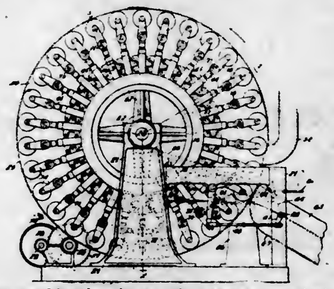
2. In combination, a plurality of successive sections, of a railway track; track circuits for the sections each including a source of alternating current and a track relay connected with the rails of a section; signals for the sections controlled by said track relays, lamps for the signals for giving signal indications at night, a transformer for each section whose primary receives current from the connection between the source of current and one rail of the section and a circuit for a lamp of each signal, said lamp circuit being controlled by the secondary of the transformer for the section in the rear.

3. In combination, a railway track divided into a plurality of successive sections, track circuits for the sections each comprising a source of current connected with the rails and a track relay also connected with the rails, signals for the sections controlled by said relays, lamps for the signals for giving signal indications at night, and means for each section receiving current from the connection of the source of current with a rail of the section for controlling the lamp of the signal for the section next in advance.

4. In combination, a plurality of successive sections of a railway track, means for each section for supplying signaling current to the rails of the section, a relay for each section receiving current from the rails of the section, signals for the sections controlled by said relays, lamps for the signals for giving signal indications at night, and means for each section receiving current from the said current supplying means for the section for controlling the lamp of the signal for the section next in advance.

5. In a signal system, a plurality of block sections, each block section including a closed track circuit having connected in series therein a source of current and an electrical device of high resistance, said electrical device being arranged to be short-circuited when a train enters the block section including the circuit containing said electrical device, and thereby causing an increased flow of current from the source of current contained in said circuit, a signal device for each of the said block sections, and electrical means whereby upon said increase of current said signal device will be illuminated.

1,152,449. AIR CAN-TESTING MACHINE. EDWIN V. SWANGREN and MAGNUS E. WIDELL, Maywood, Ill., assignors to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed May 29, 1911. Serial No. 629,972. (Cl. 73—51.)



1. The combination in an air passage can tester with means for sealing the can and for admitting compressed air thereto, of a displacement body to be inserted in the sealed can for diminishing the volume of compressed air in the can and means for indicating any lessening of the air pressure in the sealed can, such indicating means including a chamber containing a flexible diaphragm having an air communication at one side to the compressed air supply and at the other side to the interior of the can being tested and an electric circuit having included therein a switch and an electromagnet, the switch being operated by movements of the diaphragm, substantially as specified.

2. The combination in an air passage can tester with means for sealing the can and for admitting compressed air thereto, of a displacement body to be inserted in the sealed can for diminishing the volume of compressed air in the can and means for indicating any lessening of the air pressure in the sealed can, such indicating means including a chamber containing a flexible diaphragm having

an air communication at one side to the compressed air supply and at the other side to the interior of the can being tested, an electric circuit having included therein a switch and an electromagnet, the switch being operated by the movements of the diaphragm, and a device moved by the magnet to determine the path of the can when discharged, substantially as specified.

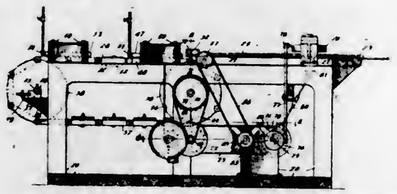
3. The can tester comprising in combination a rotating great wheel or carrier provided with a multiplicity of can holders, each having a cradle shaped and arranged to engage and support the convex side of the can, the cradles being bodily movable with the carrier and movable relative to the carrier, a base to receive and seal the open mouth of the can, means carried by said base for diminishing the volume of the interior of the can, a movable head for pushing the can against the base, an air duct to supply the sealed can with compressed air and means for connecting said air duct automatically and momentarily with the supply source or tank, substantially as specified.

4. The can tester comprising in combination a rotating great wheel or carrier provided with a multiplicity of can holders each having a cradle for supporting the can, a base to receive and seal the open mouth of the can, and a displacement body on each base to enter the can and diminish the volume of compressed air, substantially as specified.

5. The can tester comprising in combination a rotating great wheel or carrier provided with a multiplicity of can holders each having a cradle for supporting the can, a base to receive and seal the open month of the can, a movable head for pushing the can against the base, an air duct to supply the sealed can with compressed air and means for connecting said air duct automatically and momentarily with the supply source or tank and subsequently with a chamber containing a diaphragm opposed by compressed air from the supply source, substantially as specified.

[Claims 6 to 22 not printed in the Gazette.]

1,152,450. CAN-COVER TUCKING AND FUSING MACHINE. WILLIAM E. TAYLOR, Eastport, Me., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 26, 1911. Serial No. 667,821. (Cl. 113—71.)



1. In a machine of the class described, in combination: flange tucking mechanism; fusing means comprising spaced solder heating members parallelly arranged in a horizontal plane and operable to fuse spaced portions of can seams; and conveying means for propelling the cans to the tucking mechanism and from the latter to the fusing means, whereby the flanges forming the can seams are first tucked and the seams subsequently fused, substantially as specified.

2. In a machine of the class described, in combination: flange tucking mechanism; an intermittently movable conveyer for conveying the cans to the tucking mechanism and allowing the same to be brought to rest while being operated upon and then for moving the can bodies away from the tucking mechanism; fusing means comprising parallel spaced solder heating devices; a continuously movable conveyer for conveying the cans to and from the fusing means; and means for transferring the can bodies from the intermittently movable conveyer after the can flanges have been tucked to the continually movable conveyer, substantially as specified.

3. In a machine of the class described, in combination, a flange tucking mechanism, an endless can body conveyer adapted to convey can bodies to and from the tucking mechanism, a second can body conveyer, and combined fusing and pressing bars beneath which the second named conveyer is adapted to move the can bodies.

4. In a machine of the class described, in combination, a flange tucking mechanism, an intermittently operating can body conveyer adapted to convey can bodies to and from the tucking mechanism, a second can body conveyer, means for transferring can bodies from the first to the second named conveyer, and combined fusing and pressing bars beneath which the second named conveyer is adapted to pass the can bodies.

5. In a machine of the class described, in combination, flange tucking mechanism, fusing devices and means for conveying can bodies from the tucking mechanism to the fusing devices, said fusing devices comprising a plurality of sets of solder heating means.

[Claims 6 to 22 not printed in the Gazette.]

1,152,451. RAILWAY-TRAIN. CHARLES THERVC, Marseille, France. Filed Apr. 14, 1915. Serial No. 21,378. (Cl. 104—61.)



1. In a sliding railway train, a car provided with a runner having an inner chamber receiving compressed air for the purpose of raising the car and permitting it to be slidingly propelled, and also having supporting surfaces provided with grooves; an air counter-pressure device connected to said runner exterior to said chamber and acting for the purpose of surrounding, balancing and maintaining at a constant pressure the compressed air contained in said chamber; and means for driving the counter-pressure device by the movement of the car.

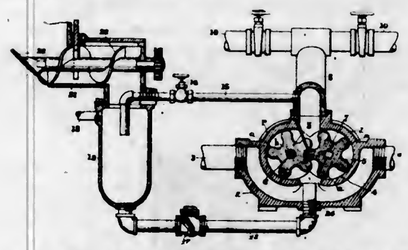
2. In a sliding railway train, a car provided with a runner having an interior chamber receiving compressed air for the purpose of raising the car and permitting it to be slidingly propelled, and also having supporting surfaces provided with grooves; a set of spindles connected to said runner and arranged one in front, another at the rear and one each at the sides of the runner, and rotating in cylindrical chambers in the runner, each spindle being provided with blades; and means for driving the said spindles by the movement of the car.

3. In a sliding railway train, a car provided with a runner having an inner chamber receiving compressed air for the purpose of raising the car and permitting it to be slidingly propelled, and also having supporting surfaces provided with grooves; an air counter-pressure device connected to said runner exterior to said chamber and acting for the purpose of surrounding, balancing and maintaining as a constant pressure the compressed air contained in said chamber; a device for driving the counter-pressure device by the movement of the vehicle; an intermittently-acting movable frame mounted to extend around the said runner and provided with grooves; and mechanical connections between the said frame and the said runner, acting to operate the said frame when the said runner is raised.

4. In a sliding railway train, a car provided with a runner having an inner chamber receiving compressed air for the purpose of raising the car and permitting it to be slidingly propelled, and also having supporting surfaces provided with grooves; a set of bladed spindles mounted one in front, another at the back and one at each side of the runner and rotating in cylindrical chambers in the runner, each spindle being provided with blades; means for driving the said spindles by the movement of the car; an intermittently-acting movable frame mounted to extend around the said runner and provided with grooves; and mechanical connections between the said movable frame and the said runner, acting so as to operate the said frame when the said runner is raised.

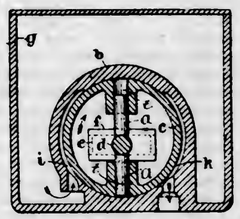
5. In a sliding railway train, a car provided with a runner having an inner chamber receiving compressed air for the purpose of raising the car and permitting it to be slidingly propelled, and also having supporting surfaces provided with grooves; a set of spindles mounted one in front, one at the back and one at each side of the runner, each spindle being provided with blades; means for driving the said spindles by the movement of the car; an intermittently movable frame mounted to extend around said runner and provided with grooves; arms on said frame; a cylinder mounted upon the top of said runner; a piston movable in said cylinder; a disk secured to the rod of the said piston; and hinged levers in contact at one end with the said disk and operatively engaged at the other end with said arms.

1,152,452. FIRE-FIGHTING APPARATUS. JOHN A. THOMAS, Lansing, Mich. Filed Jan. 2, 1912. Serial No. 668,824. (Cl. 169—9.)



In a fire-fighting apparatus, a force pump having a pair of rotors and a single inlet, a plurality of water supply connections leading to said inlet and a single discharge connection for said pump, in combination with a chemical mixing receptacle having water-supply communication with the discharge connection of said pump and provided with a delivery connection for the chemical solution extending through said water supply connections directly to said inlet.

1,152,453. ROTARY PISTON-PUMP. SVERRE THUNE, Madserud, Vestre Aker, near Christiania, Norway. Filed Mar. 30, 1914. Serial No. 828,186. (Cl. 184—33.)



1. In rotary piston pumps, a pump cylinder rotatable about a transverse axis, a piston rotatable about a transverse axis eccentric relatively to the axis of rotation of the cylinder and reciprocative therein during rotation, and driving means for rotating the cylinder and piston on said axes.

2. In rotary piston pumps, a pump cylinder rotatable about a transverse axis, a piston rotatable about a transverse axis eccentric relatively to the axis of rotation of the cylinder and reciprocative therein during rotation, and driving means for rotating the cylinder and piston on said axes and including a sliding connection compensating for the eccentricity of said axes.

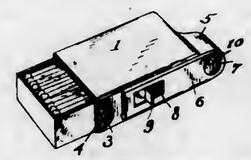
3. In rotary piston pumps, a pump cylinder rotatable about a transverse axis, a piston rotatable about a transverse axis, eccentric relatively to the axis of rotation of the pump cylinder and reciprocative therein during rotation, and driving means for rotating the cylinder and piston on said axes and including a crank-guide and a guide head slidable therealong transversely of the piston.

4. In rotary piston pumps, a rotatable shell carrying a plurality of radially disposed pump cylinders, a rotatable shaft carrying a plurality of pistons reciprocative in respective cylinders and having a crank-guide at each end, a guide head for each crank-guide slidable therealong transversely of the pistons and journaled for rotation on an axis eccentric to the axis of rotation of the shell, and driving means for rotating the shell and shaft.

5. In rotary piston pumps, a tank, a cylinder fastened to the tank, a shell rotatable in the cylinder and carrying a plurality of diametrically disposed pump cylinders, a rotatable shaft carrying a plurality of pistons reciprocative in respective pump cylinders and having a crank-guide at each end, a guide head for each crank-guide slidable therealong transversely of the pistons and journaled for rotation on an axis eccentric to the axis of rotation of the shell, driving means for rotating the shell and shaft, a passage from the tank arranged to communicate with the pump cylinders during the suction stroke of the pistons therein, and an outlet passage arranged to communicate with the pump cylinders during the discharge stroke of the pistons therein.

[Claim 6 not printed in the Gazette.]

1,152,454. SMOKER'S CONVENIENCE. GEORGE E. VAN DUSEN, Cleveland, Ohio. Filed July 6, 1914. Serial No. 849,063. (Cl. 206—35.)



1. A device of the character described, comprising a casing open at the ends and at one side and adapted to receive a box of matches, a hood portion mounted upon the casing and open at both ends, a cutter blade slidably held upon the casing and adapted to be reciprocated past one end of the hood whereby the end of a cigar inserted in the end of the hood may be severed.

2. A device of the character described, comprising a casing having side pieces provided with retaining flanges at the free edges thereof, and a strip which joins the side pieces, a hood extending from one end of the side pieces, a cutting blade adapted to slide along the strip and to be reciprocated past the end of the hood, whereby the end of a cigar inserted in the end of the hood may be severed by the cutting blade.

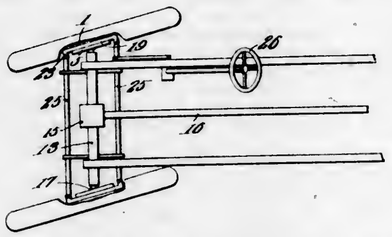
3. A device of the character described, comprising a casing having side pieces, flanges at the free edges thereof and stops provided at one end whereby a match box may be held within the said casing, a hood portion extending from one end of the side pieces, a knife casing secured upon the said casing and provided with a circular opening which registers with the hood, a knife within said casing adapted to reciprocate past the opening in the knife casing and the hood whereby the end of a cigar may be severed by the cutting blade.

4. A device of the character described, comprising a casing open at the ends and at one side and adapted to receive a box of matches, a hood portion extending from one end of the casing, a cutting blade slidably mounted upon the casing and adapted to reciprocate past one end of the hood whereby the end of a cigar inserted in said hood may be severed, said hood also being provided with a means to receive and retain a match stem whereby a lighted match may be shielded from the wind.

5. A device of the character described comprising a casing open at the ends and at one side and adapted to receive a box of matches, a hood portion extending from one end of the casing, a cutting blade slidably mounted upon the casing and adapted to reciprocate past one end of the hood whereby the end of the cigar inserted in the end of the hood may be severed by the cutting blade, said hood being provided with a slot adapted to receive and retain a match stem whereby a lighted match may be shielded from the wind.

[Claims 6 and 7 not printed in the Gazette.]

1,152,455. STEERING MECHANISM FOR MOTOR-VEHICLES. LEWIS C. VAUGHN, Forkston, Pa. Filed May 1, 1911. Serial No. 624,432. (Cl. 21—90.)



1. A device of the class described, comprising a hub with an arcuate annular groove with the center of curvature of the groove arcuation remote from the side of the hub to which a wheel is secured, a concavo-convex ring fitting within the said arcuate groove and provided with outstanding portions, and means for securing steering rods to the outstanding portions of said ring.

2. A mechanism of the class described, including a hub with an arcuate annular groove extending around the outer periphery thereof, the center of curvature of the arcuation of the groove lying upon that side of the hub which is secured to the vehicle axle, a concavo-convex ring fitting within the groove and provided with outstanding portions extending therebeyond, ears mounted upon and extending at right angles to the said outstanding portions of the ring, knuckles pivotally secured to the said ears, steering bars connected to said knuckles with their line of thrust passing through the said outstanding portions of the ring, the arrangement of the ears preventing a bending of the pivotal connection between the ears and knuckles.

3. A device of the class described, comprising a hub with an annular groove extending therearound, said groove provided with concavo-convex side walls, the concave side wall lying adjacent the outer side of the wheel, a concavo-convex ring fitting within the said groove and provided with outstanding projections, anti-friction means engaging and adapted to transmit a stress between the said ring and groove, and means for engaging the said outstanding projections at points spaced apart a distance relatively greater than the diameter spacing of the said anti-friction means.

1,152,456. PROCESS FOR COMBINING AND EMULSIFYING TWO OR MORE LIQUIDS. JOHN B. VOGELSANG, Webster Groves, Mo. Original application filed June 8, 1914, Serial No. 843,668. Divided and this application filed Oct. 10, 1914. Serial No. 866,128. (Cl. 99—2.)

1. The method of combining and emulsifying two or more liquids which comprises the propulsion thereof by aid of a fluid under pressure into a chamber from which their egress is impeded.

2. The method of combining and emulsifying two or more liquids which comprises the propulsion thereof by aid of a steam-jet into a chamber from which their egress is impeded.

3. The method of combining and emulsifying two or more liquids which comprises the propulsion thereof by aid of a steam-jet through the perforate walls of a chamber.

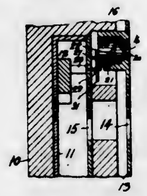


4. The method of combining and emulsifying two or more liquids which comprises the propulsion thereof by aid of a steam-jet through the perforate walls of a chamber having a roughened interior surface.

5. The method of combining and emulsifying two or more liquids which comprises the projection thereof in a stream under pressure against a solid surface disposed at one end of a perforate chamber and the subsequent propulsion of the substances through the perforations of said chamber.

[Claims 6 to 8 not printed in the Gazette.]

1,152,457. LOCK. HENRY G. VOIGHT, New Britain, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed June 4, 1915. Serial No. 32,109. (Cl. 70—6.)



1. The combination with a lock having a bolt, of an escutcheon, a housing or bushing on said escutcheon, a plunger having a screw movement in said housing or bushing, a slide to operate said plunger, and a projection on the bolt to operate the slide; substantially as described.

2. In an indicator lock, the combination of an escutcheon, a plunger having a screw movement in the escutcheon, and a slide mounted on the rear face of the escutcheon and adapted to actuate said plunger; substantially as described.

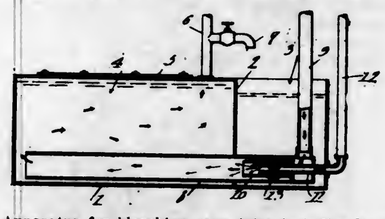
3. The combination with a lock having a bolt, of an escutcheon, a housing or bushing mounted on said escutcheon, a plunger having a screw movement in said housing or bushing, a sliding member carried by the housing or bushing and movable laterally thereon to actuate said plunger, and means of connection between said sliding member and said bolt; substantially as described.

4. In an indicator lock, the combination of an escutcheon, a bushing thereon, a plunger having a screw movement in the bushing, an actuating plate, means mounting said plate for lateral sliding movement on the rear end of the bushing, and an eccentric pin on the plunger engaging a notch in said plate; substantially as described.

5. In an indicator lock, the combination of an escutcheon, a plunger having a screw movement in said escutcheon, and a laterally shiftable actuating slide for the plunger; substantially as described.

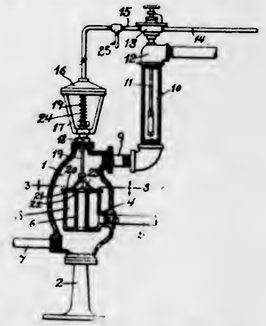
1,152,458. APPARATUS FOR BLEACHING CANE-JUICE. WILLIAM H. WAGGONER, Jeanerette, La. Filed Feb. 19, 1915. Serial No. 9,355. (Cl. 127—1.)

1. Apparatus for bleaching cane juice, comprising a receptacle sub-divided into an open receiving compartment and a closed compartment, a tube for establishing communication between the two compartments, means for directing a bleaching medium or the like into said tube, a nozzle within the tube, and means for directing a fluid under pressure into the nozzle thereby to suck the said medium into the nozzle and discharge it into the contents of the tube and eject the contents of the tube into the closed compartment, an outlet pipe extending from the closed compartment, and valved means for directing fluid from the outlet pipe back into the open compartment.



2. Apparatus for bleaching cane juice including a casing sub-divided into a closed compartment and an open receiving compartment, a tube constituting means for maintaining communication between the two compartments, an outlet pipe extending from the closed compartment, means for directing fluid from the outlet pipe and back into the receiving compartment, and means for directing gas or the like forcibly into the contents of the tube thereby to create a forced movement of the juice from the receiving chamber and into the closed chamber.

1,152,459. NOISELESS STEAM AND WATER MIXER. GEORGE A. WELD, Winchester, Mass. Filed Aug. 2, 1912. Serial No. 712,927. (Cl. 137—26.)



1. A steam and water mixer comprising a mixing chamber having a continuously open water inlet, a water outlet, a steam nozzle projecting into the chamber, a valve in said chamber arranged to seat on the outlet of said steam nozzle and means for opening and closing said valve.

2. A steam and water mixer comprising a mixing chamber having a continuously open water inlet, a water outlet, a steam nozzle projecting into the chamber, a valve in said chamber adjacent to the steam nozzle arranged to move against and from the end of the latter, and means for so moving said valve.

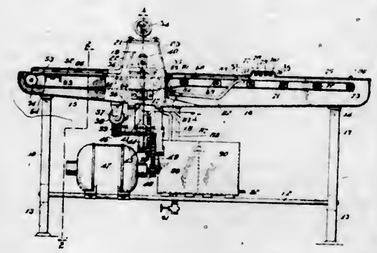
3. A steam and water mixer comprising a mixing chamber having a continuously open water inlet and a water outlet, a steam nozzle extending into said chamber and having a valve seat on its end, a valve within said chamber arranged to co-act with said seat, and means for moving the valve toward and from said seat.

4. A steam and water mixer comprising a chamber, a steam conduit entering said chamber, a water conduit entering the chamber and passing longitudinally through the steam conduit, and a valve within the mixer arranged to close and open the steam space between the walls of the steam and water conduits at the end of such space, and constructed to leave the water conduit always open.

5. A steam and water mixer comprising a chamber, a cup within said chamber having external steam communication through the wall of the chamber, a tube passing through the interior of said cup and having external water communication through a wall of the chamber, the termination of said tube and the rim of said cup being approximately in the same plane, a valve contained in the chamber and constructed to seat against the cup and tube to close the outer end of the steam space in the cup leaving the tube open, and controlled means for seating and unseating said valve.

[Claims 6 and 7 not printed in the Gazette.]

1,152,460. APPARATUS FOR CLEANING ELECTROTYPE-CASTS AND TYPE-FORMS. EDWARD C. WILLIAMS, Chicago, Ill., assignor to Edward D. Moeng, Chicago, Ill. Filed Jan. 23, 1913. Serial No. 743,840. (Cl. 101—52.)



1. In a machine of the class described, in combination, a pair of tanks, plate carrying means extending through both tanks, a gate for closing the second tank and being automatically closable by a plate mounted on the carrying means, means for discharging fluid into both tanks, reciprocating brushes located in the first of the two tanks, and power mechanism for actuating the brushes and the plate carrying means.

2. In a machine of the class described, in combination, a pair of tanks, plate carrying means extending through both tanks, a gate for closing the second tank and being automatically closable by a plate mounted on the carrying means, means for discharging fluid into both tanks, reciprocating brushes located in the first of the two tanks, means for adjustably supporting the brushes, and power mechanism for actuating the brushes and the plate carrying means.

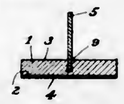
3. In a machine of the class described, in combination, a pair of tanks, plate carrying means extending through both tanks, a gate for closing the second tank and being automatically closable as a plate mounted on the carrying means enters the second of the two named tanks, means for discharging fluid into both tanks, reciprocating brushes located in the first of the two tanks, and power mechanism for actuating the brushes and the plate carrying means.

4. In a machine of the class described, in combination, means for scrubbing a cast or type form, a tank for receiving the cast or type form from the scrubbing means, a gate for closing the port of entry to the tank, means for automatically closing the gate as the cast or type form enters the tank, and means for delivering a fluid upon the cast or type form from within the tank.

1,152,461. DISPLAY-CARD HOLDER. BENJAMIN S. WRIGHT, Mount Vernon, N. Y., assignor to The American Tobacco Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 16, 1914. Serial No. 877,459. (Cl. 40—140.)

1. As a new article of manufacture, a holder for display cards comprising a substantially disk-shaped mem-

ber having a high specific gravity, the bottom of which is substantially flat whereby the member may rest unattached to and be freely movable upon a supporting surface, said member having a relatively narrow slit formed therein and opening through the upper face thereof, said slit being bounded by oppositely disposed walls, portions of which, at the upper face of the said member, more closely approach each other than other portions, whereby a display card inserted edgewise in said slit will be gripped by the said walls.

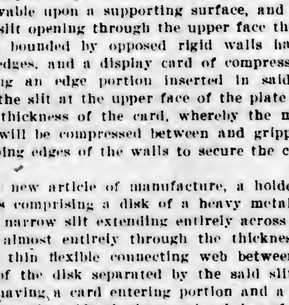


2. A display device consisting of a relatively thin and heavy metal plate, the bottom of which is substantially flat, whereby said plate may rest unattached to and be freely movable upon a supporting surface, and said plate having a slit opening through the upper face thereof, said slit being bounded by opposed rigid walls having card gripping edges, and a display card of compressible material having an edge portion inserted in said slit, the width of the slit at the upper face of the plate being less than the thickness of the card, whereby the material of the card will be compressed between and gripped by the said gripping edges of the walls to secure the card to the plate.

3. As a new article of manufacture, a holder for display cards comprising a disk of a heavy metal having a relatively narrow slit extending entirely across the upper face and almost entirely through the thickness thereof, leaving a thin flexible connecting web between the two portions of the disk separated by the said slit, and the said slit having a card entering portion and a card gripping portion, the said gripping portion being of less width than the card entering portion.

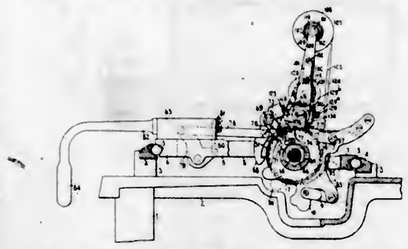
4. As a new article of manufacture, a holder for display cards comprising a disk-shaped member having a relatively narrow slit extending entirely across the upper face and almost entirely through the thickness thereof, leaving a thin yieldable connecting web between the two portions of the disk separated by the said slit, opposite walls of the slit or kerf converging toward the upper face of the disk whereby to provide gripping portions to embrace opposite faces of a display card inserted edgewise between the walls of the slit.

1,152,462. MUSIC-LEAF TURNER. CLAYTON F. WYATT, Fullerton, Cal. Filed Apr. 13, 1914. Serial No. 831,540. (Cl. 84—135.)



A music leaf turner including a hollow base member having a rigid end portion, and a removable end portion, a frame mounted upon the base, leaf turning members including standards, one end of each of said standards being rotatably engaged with the frame and the other or lower end being rotatably mounted within the base, leaf engaging arms extending outwardly at right angles from the standards at a point adjacent each end thereof, a spring actuated double catch member carried by the base and adapted to engage the lower set of arms to retain the leaf turning members in their operative positions, means connected with said catch member whereby to actuate the same and release the leaf turning members, and coil springs connected with the standards of the leaf turning members and adapted to rotate the same to the opposite side of the frame from their operative positions.

1,152,463. TYPE-WRITING MACHINE. CLIO B. YAW, Arlington, N. J., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed May 2, 1913. Serial No. 765,145. (Cl. 197—132.)



1. In a typewriting machine, the combination of a plurality of platen sections, having a constant longitudinal relationship, disconnectible connections between said platen sections, a push button having a constant normal position when said connections are disconnected, and actuating devices between said push button and said connections.

2. In a typewriting machine, the combination of a plurality of platen sections having a constant longitudinal relationship, disconnectible connections between said platen sections, and a push button having a constant normal position when said connections are disconnected and movable axially of said sections to render said connections operative.

3. In a typewriting machine, the combination of a divided platen comprising two co-axial sections, disconnectible connections between said sections, a rod provided with a button located at one end of said platen, said rod lying in the axis of said platen, said button when pushed in actuating said rod to cause it to render said connections operative.

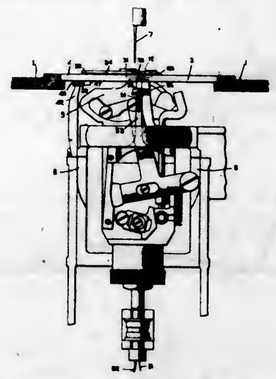
4. In a typewriting machine, the combination of a divided platen comprising two co-axial sections, disconnectible connections between said sections, a rod provided with a button located at one end of said platen, said rod lying in the axis of said platen, said button when pushed in actuating said rod to cause it to render said connections operative, the pulling out of the button causing said rod to free said connections so that said platen sections are disconnected.

5. In a typewriting machine, the combination of a plurality of platen sections having a constant longitudinal relationship, disconnectible connections between said platen sections, and means for controlling said connections including a push button, said button being frictionally retained in set positions during turning movements of said platen sections.

[Claims 6 to 27 not printed in the Gazette.]

1,152,464. THREAD CUTTER AND CLAMP FOR BUTTONHOLE-SEWING MACHINES. FRANK ZALESKI, Somerville, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed June 1, 1914. Serial No. 842,278. (Cl. 112—33.)

1. In a sewing machine, the combination with upper thread mechanism and under thread mechanism mounted for bodily rotative movement and having thread-manipulating means, of means to sever the under thread at the completion of a stitching operation, and under-thread-gripping means carried by said under thread mechanism and partaking of the bodily movement thereof and situated to engage said thread between the cutting means and the thread-manipulating means.



2. In a buttonhole sewing machine, the combination with a clamp frame, of a stitch frame having upper thread mechanism and under thread mechanism including a throat-plate mounted for bodily rotative movement, said frames being capable of movement relative to each other, means supported by the throat-plate and rendered operative upon the completion of a buttonhole to grip the under thread, and means to sever said thread.

3. In a buttonhole sewing machine, the combination with a clamp frame, of a stitch frame having upper and under thread mechanism the latter being mounted for turning movement in the stitch frame and said frames being capable of movement relative to each other, means carried by and turning with the under thread mechanism and rendered operative upon the completion of the buttonhole to grip the under thread between said under mechanism and the work, and means to sever said thread.

4. In a buttonhole sewing machine, the combination with a clamp frame, of a stitch frame having upper thread mechanism and under rotatable thread mechanism, said frames being capable of movement relative to each other, means associated with and partaking of the rotative movement of the under thread mechanism and rendered operative upon the completion of the buttonhole to grip the under thread between said under thread mechanism and the work, and means to sever said thread between the gripping means and the work.

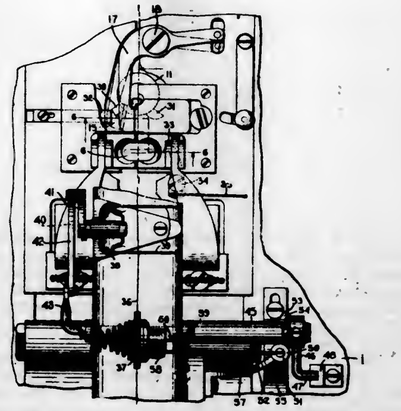
5. In a buttonhole sewing machine, the combination with a clamp frame, of a stitch frame having upper and under thread mechanism, said frames being capable of movement relative to each other, means carried by the stitch frame and rendered operative upon the completion of the buttonhole to grip the under thread between said under thread mechanism and the work, and means carried by the clamp frame to sever the under thread.

[Claims 6 to 24 not printed in the Gazette.]

1,152,465. BUTTONHOLE-SEWING MACHINE. FRANK ZALESKI, Somerville, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed Sept. 29, 1914. Serial No. 864,187. (Cl. 112—33.)

1. In a buttonhole sewing machine, the combination with upper and under thread mechanism which are mounted for turning movement to effect the stitching around the end of a buttonhole, of under-thread-gripping mechanism mounted to turn with the under thread mechanism, and means to operate said gripping mechanism first to grip the under thread upon the completion of a buttonhole and then to release the under thread after the commencement of the stitching operation on the next buttonhole.

2. In a buttonhole sewing machine, the combination with a clamp frame, of a stitch frame having upper and under thread mechanism which are mounted thereon for turning movement to effect the stitching around the end of a buttonhole, said frames being capable of movement relative to each other, and means mounted to turn with the under thread mechanism and render operative by such relative movement upon the completion of a buttonhole to grip the under thread and subsequently to release the under thread after the commencement of the stitching operation on the next buttonhole.



3. In a buttonhole sewing machine, the combination with a clamp frame, of a stitch frame having upper and under thread mechanism, said frames being capable of movement relative to each other, a thread-clamping member provided with two projections, and means carried by the clamp frame for engaging said projections successively at the completion of a buttonhole and at the commencement of the stitching operations on the next buttonhole thereby to clamp and then unclamp the under thread.

4. In a buttonhole sewing machine, the combination with a clamp frame, of a stitch frame having upper and under thread mechanism, said frames being capable of movement relative to each other, a thread-clamping member mounted for turning movement on the under thread mechanism and provided with projections, and means carried by the clamp frame for engaging said projections alternately thereby to clamp the under thread at the end of the stitching operation on a buttonhole and to unclamp said thread at the beginning of the stitching operation on the next buttonhole.

5. In a buttonhole sewing machine, the combination with an under thread mechanism mounted for turning movement to effect the stitching around the end of a buttonhole, of an under thread-gripping member supported to turn with said under thread mechanism, and means to cause said gripping member to grip the under thread upon the completion of a buttonhole.

[Claims 6 to 13 not printed in the Gazette.]

1,152,466. BUTTONHOLE-SEWING MACHINE. FRANK ZALESKI, Somerville, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed Nov. 6, 1914. Serial No. 870,697. (Cl. 112—4.)

1. In a buttonhole sewing machine, the combination with stitch-forming mechanism including an under thread mechanism, of means to deliver a stay-cord to the buttonhole being stitched, and a stay-cord clamp carried by the under thread mechanism and having provision to permit the stay-cord to feed forwardly but prevent it from being pulled backwardly.

2. In a buttonhole sewing machine, the combination with upper thread mechanism and under thread mechanism, of a combined stay cord guide and clamp carried by the under thread mechanism and operating to permit the stay-cord to be fed forward freely but preventing it from being pulled backwardly.



3. In a buttonhole sewing machine, the combination with upper thread mechanism and under thread mechanism, of a combined stay-cord guide and clamp comprising a spring-actuated guiding member through which the stay-cord passes, and a pivoted clamping member which permits the stay-cord to feed forward freely, but clamps it against backward movement.

4. In a buttonhole sewing machine, the combination with stitch-forming mechanism including a rotary stitch block provided with a throat plate and carrying under thread mechanism, said stitch block having depending therefrom a hollow spindle provided with two thread passages extending longitudinally thereof to receive the under thread and stay-cord, respectively, of a stay-cord clamp carried by the block and situated between the upper end of the stay-cord thread passage and the throat-plate, said clamp having means to prevent backward movement of the stay cord.

5. In a buttonhole sewing machine, the combination with stitch-forming mechanism including a rotary stitch block provided with a throat-plate and carrying under thread mechanism, of a hollow spindle depending from said stitch-block and movable therein for operating the under thread mechanism, said spindle being provided with a longitudinally-extending stay-cord-receiving passage, and a stay-cord clamp carried by said block and provided with means to permit the stay-cord to feed freely forwardly but to prevent it from being pulled backwardly.

[Claims 6 to 10 not printed in the Gazette.]

1,152,467. MANUFACTURE OF MARBLED PAPER. BOGUMIL ZARNOWIECKI, Gr. Lichterfelde, near Berlin, Germany. Filed Feb. 13, 1913. Serial No. 748,213. (Cl. 92—39.)

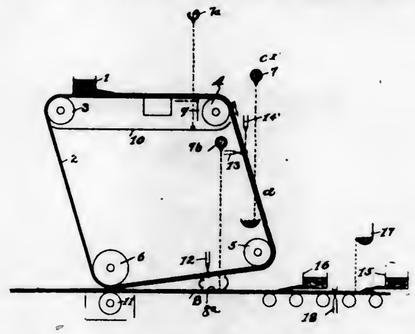
1. The process of manufacturing figured papers, which consists in applying to and pressing into an unfinished paper web additional fiber-complexes produced by displacement of the fibers of another paper web.

2. The process of manufacturing figured papers, which consists in displacing the fibers of a paper-web by the action of a fluid fiber-displacing agent to form fiber complexes, and then incorporating said fiber-complexes into an unfinished paper-web.

3. The process of manufacturing figured papers, which consists in displacing the fibers of a paper-web by the action of an oscillating fluid fiber-displacing agent to form fiber complexes into an unfinished paper-web.

4. The process of manufacturing figured papers, which consists in displacing the fibers of a paper-web by the action of a pressure-fluid fiber-displacing agent to form fiber complexes, and then incorporating said fiber complexes into an unfinished paper-web.

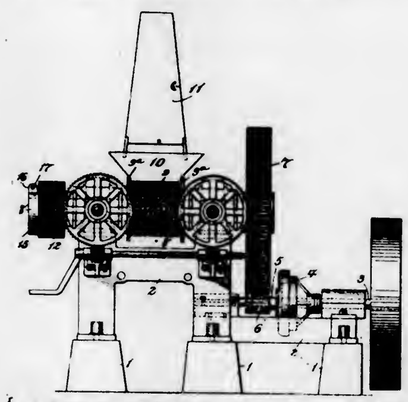
5. The process of manufacturing figured papers, which consists in displacing the fibers of a paper-web by the action of an intermittently-acting fluid fiber-displacing



agent to form fiber-complexes, and then incorporating said fiber-complexes into an unfinished paper-web.

[Claims 6 to 12 not printed in the Gazette.]

1,152,468. MACHINE FOR MAKING BRIQUETTES. ELLSWORTH B. A. ZWOYER and ROLLAND A. ZWOYER, Perth Amboy, N. J., assignors to The Zwoyer Fuel Company, a Corporation of New Jersey. Filed Oct. 26, 1908. Serial No. 459,576. (Cl. 25—77.)



1. A briquette making roll, composed of a plurality of circular disks, each disk having a single peripheral row of pockets on its edge surface, the pockets being complete in each disk, and there being a like number of pockets in each disk, each pocket extending entirely across the disk, and producing a sharp cutting edge in conjunction with the adjacent pocket on the abutting disk.

2. A briquette making machine provided with two forming rolls composed of disks having complete or integral pockets in the outer face of each disk and all supported upon parallel intergeared shafts; in combination with means for varying the angular relation of the surfaces of the rolls, substantially as described.

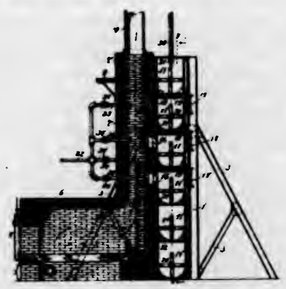
3. In a briquette making machine two forming rolls having an equal number of like pockets on their faces, the horizontal and vertical edges of which register accurately during operation; in combination with means for varying the angular relation of the rolls so that the horizontally disposed cutting edges shall always be in actual elemental contact when they pass each other, whereby all of the pressure which the two rolls exert is utilized in effecting perfect briquettes, substantially as described.

4. In a briquette making machine a pair of briquette forming rolls having like briquette forming pockets in their faces; a hopper therefor; a pipe for conveying the material from a source of supply to the hopper, said pipe having a smaller internal diameter at its upper end than the length of the forming rolls, its lower end having an internal diameter of greater length than the forming rolls, whereby the material is distributed equally upon the surface of such rolls, substantially as described.

5. A briquette making machine, having two briquette making rolls, each having pockets each of the shape of a truncated pyramid.

[Claims 6 to 10 not printed in the Gazette.]

1,152,469. MECHANISM FOR PREPARING PULVERULENT MATERIALS FOR MOLDING OR BRIQUETING. ELLSWORTH B. A. ZWOYER and ROLLAND A. ZWOYER, Perth Amboy, N. J., assignors to The Zwoyer Fuel Company, a Corporation of New Jersey. Filed Oct. 26, 1908. Serialy No. 459,577. (Cl. 44—3.)



1. A machine for mixing pulverulent substance and a binding agent, embracing a mixing chamber; an inlet for the pulverulent substance and binder located at one end thereof; a mixer or stirrer located in the chamber and provided with a plurality of radially disposed arms adapted to stir and mix the two substances; an outlet located at the distant end from the inlet, the last arm of the mixer or stirrer being located at such a distance from the outlet as will permit the material to accumulate in a mass and be acted upon successively for a definite time, before the material thus accumulated shall drop by gravity through the outlet whereby any lumps or imperfectly mixed masses shall be subjected to the action of such last arm for such time as will effect the completion of the mixture, substantially as described.

2. An apparatus for preparing pulverulent materials for molding or briquetting, which comprises a plurality of mixing chambers, arranged one over another, each having a shaft and mixing blades thereon, whereby the material will pass through the chambers in succession, and a single furnace, and connections between the said furnace and a plurality of said chambers for directly admitting hot gases of combustion from the furnace to a plurality of the chambers.

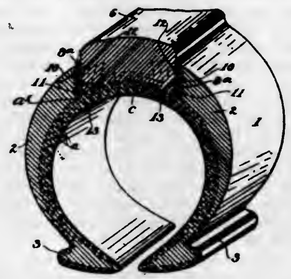
3. An apparatus for preparing pulverulent materials for molding or briquetting, which comprises a plurality of mixing chambers, arranged one over another, each having a shaft and mixing blades thereon, whereby the material will pass through the chambers in succession, and a single furnace, an uptake passing adjacent to the chambers from the furnace, and separate flues from the uptake to a plurality of the chambers.

4. An apparatus for preparing pulverulent materials for molding or briquetting, which comprises a plurality of mixing chambers, arranged one over another, each having a shaft and mixing blades thereon, whereby the material will pass through the chambers in succession, a single furnace, an uptake passing adjacent to the chambers from the furnace, separate flues from the uptake to a plurality of the chambers, and means for varying the quantity of hot gases passing through the separate flues.

5. An apparatus for preparing pulverulent materials for molding or briquetting which comprises a plurality of mixing chambers, arranged one over another, each having a shaft and mixing blades thereon, whereby the material will pass through the chambers in succession, a single furnace, an uptake passing adjacent to the chambers from the furnace, separate flues for the uptake to a plurality of the chambers, and forced draft pipes directing into the flues for varying the quantity of hot gases entering the separate flues.

[Claims 6 to 8 not printed in the Gazette.]

1,152,470. VEHICLE-TIRE. FREDERICK U. ADAMS, Hastings-upon-Hudson, N. Y. Filed May 13, 1914. Serial No. 838,199. (Cl. 152—17.)



1. A vehicle shoe comprising a rubber body portion having a fabric reinforcement therein, a channel in the tread portion thereof, the walls of said channel being formed by the rubber body portion, the base of said channel being formed by the said fabric portion, a removable tread portion cemented in said channel, said tread portion having a fabric and rubber body portion, part of said fabric forming the base of said tread portion and affording means for cementing said tread in said channel.

2. A vehicle shoe comprising a channeled rubber body portion, having a fabric reinforcement therein, and an annular removable tread member in said channel, said tread member being comprised of rubber reinforced by fabric and being cemented in said channel fabric to fabric.

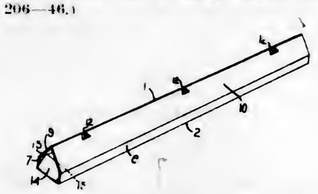
3. A vehicle shoe comprising a reinforced rubber body portion, a tread seat molded in said body portion, an annular reinforced resilient removable tread member in said seat, said tread member being smaller in width than the seat in said body portion leaving a clearance between the side walls of said tread member and said body portion, and a filler in said clearance, said filler being vulcanized to said walls thereby binding said tread member to said body portion.

4. A vehicle shoe comprising a reinforced rubber body portion, a tread seat molded in said body portion, an annular reinforced resilient removable tread member in said seat, said tread member being smaller in width than the seat in said body portion leaving a clearance between the side walls of said tread member and said body portion, a filler in said clearance, there being annular grooves in the opposing side walls of said tread member and said body portion, and annular ribs on said filler disposed in said annular grooves.

5. A vehicle shoe comprising a reinforced rubber body portion, a tread seat molded in said body portion, an annular reinforced resilient removable tread member in said seat, said tread member being smaller in width than the seat in said body portion leaving a clearance between the side walls of said tread member and said body portion, a filler in said clearance, there being annular grooves in the opposing side walls of said tread member and said body portion, and annular ribs on said filler disposed in said annular grooves, said filler being vulcanized to said walls thereby binding said tread member to said body portion.

[Claim 6 not printed in the Gazette.]

1,152,471. PIN-TICKET CARTRIDGE AND CONTAINER. MARCUS O. ANTHONY, Englewood, N. J., assignor to A. Kimball Company, New York, N. Y., a Corporation of New York. Filed June 27, 1914. Serial No. 847,697. (Cl. 206—46.)



1. A pin ticket cartridge, comprising a series of similarly shaped pin tickets arranged with the card portions overlapping and the pins projecting in parallelism, and a container inclosing said series and engaging the card portions thereby to hold the pins out of contact with the container, thus protecting the pin points and permitting the tickets to be fed in sequence from the container.

2. A pin ticket cartridge comprising a series of similarly shaped pin tickets arranged with the card portions overlapping and the pins projecting in parallelism, and a container inclosing said series having an inclined wall overlying the said pins and engaging the pin tickets thereby to hold the pin tickets in compact form with the pin points projecting while permitting the tickets to be fed in sequence from the container.

3. A pin ticket cartridge comprising a series of similar pin tickets having similar rectangular shaped card portions arranged with the card portions overlapping, and the pins projecting in parallelism, and a container inclosing said series and presenting roof-shaped inclosing walls, said walls engaging the edges of the overlapped card portions, thereby to hold the pins out of contact with the said walls, thus protecting the pin points and permitting the tickets to be fed in sequence from the container.

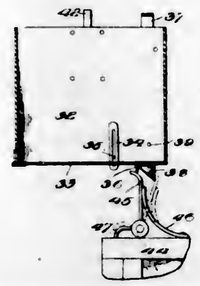
4. A pin ticket cartridge comprising a series of similarly shaped pin tickets arranged with the card portions overlapping and the pins projecting in parallelism, and a container inclosing said series presenting roof shaped inclosing walls engaging the edges of the overlapped card portions, and having inwardly turned end portions engaging said tickets thereby holding the pins out of contact with the walls and protecting the pin points while permitting the pins to be fed in sequence from the container upon the removal of the inturned end.

5. A pin ticket cartridge comprising a series of similarly shaped pin tickets arranged with the card portions overlapping and the pins projecting in parallelism, a container inclosing said series having a bottom and upwardly extending walls overlying and protecting the ends of said pins and an inwardly folded end portion retained in position by said walls and engaging the last of the series of pin tickets, thereby holding the tickets from displacement and providing rigid removable means whereby the pin tickets may be fed in sequence from the container.

[Claims 6 to 10 not printed in the Gazette.]

1,152,472. HOISTING AND DUMPING BUCKET. FRANKLIN E. ARNDT, Gallon, Ohio, assignor to The Gallon Iron Works and Manufacturing Company, Gallon, Ohio. Original application filed Apr. 8, 1914, Serial No. 830,470. Divided and this application filed Mar. 9, 1915. Serial No. 13,180. (Cl. 214—4.)

1. In an apparatus of the character described, an overhead track, a bucket shiftable along the track and having a hinged bottom, a latching member mounted on the bucket and engaging the bottom to hold the same closed, a tripping member mounted upon the track in the path of the latching member to engage the upper end of the same and release said member from the bottom of the bucket, and means below the track in the path of movement of the bucket yieldable in one direction to permit movement of the bucket and unyielding in the opposite direction to engage the bottom of the bucket and urge the same into reëngagement with the latching member.



2. In an apparatus of the character described, an overhead track, a bucket shiftable along the track and having a hinged bottom, a spring-actuated latching member on the bucket holding the bottom closed and projecting above the upper end of the bucket, a tripping member mounted upon the track and disposed in the path of the upper end of the latching member to release said member and permit the bottom of the bucket to drop, and fingers disposed in the path of return movement of the bucket to engage the bottom thereof and close the same, said fingers yielding in one direction to permit movement of the bucket to a dumping position and held from movement in the opposite direction to cause the closing of the bottom.

3. In an apparatus of the character described, an overhead track, a bucket shiftable along the track and having a hinged bottom, a spring-actuated latching member mounted on the bucket and holding the bottom closed and projecting beyond the upper end of the bucket, a tripping member mounted upon the track in the path of the upper end of the latching member to release said member and permit the bottom of the bucket to drop, and means disposed in the path of the bucket for causing the closing of said bottom, said means comprising a transversely extending rock shaft, angular fingers mounted upon the shaft and having curved extremities, springs acting to permit the shaft to be rotated in one direction to permit passage of the bucket past the fingers and to return the fingers to a vertical position to engage the bottom of the bucket upon its return movement and thereby close the same.

4. In an apparatus of the character described, an overhead track, a bucket shiftable along the track and having a hinged bottom, spring actuated latching members pivotally mounted upon the sides of the bucket, the lower ends of said members providing detents engaging the bottom of the bucket to hold it closed and the upper ends of the members projecting above the upper end of the bucket on each side thereof, tripping members mounted upon the track and projecting downward therefrom in the path of movement of the upper ends of the latching members to release said members and permit the bottom of the bucket to drop, and fingers disposed in the path of movement of the bottom of the bucket yielding in one direction to permit the movement of the bucket past the fingers to a dumping position and unyielding in the opposite direction to engage the bottom of the bucket and close it.

5. In an apparatus of the character described, a track, a bucket adapted to be shifted along said track and having a hinged bottom, a spring actuated latching member holding the bottom closed, a tripping member disposed in the path of movement of the latching member on the bucket to thereby release the latching member when the bucket has reached a dumping position to permit the bottom of the bucket to drop, and upwardly projecting fingers disposed in the path of movement of the bottom of the bucket and yielding in one direction to permit the passage of the bucket past the fingers to a dumping position and unyielding in the opposite direction to cause the bottom of the bucket to ride upon the fingers and close.

[Claims 6 and 7 not printed in the Gazette.]

1,152,473. VACUUM-CREATOR. EDWARD M. BARNES, Hastings, Mich., assignor to Advance Mfg. Co., of Hastings, Mich. Filed Nov. 4, 1912. Serial No. 729,240. (Cl. 230—11.)



1. In a structure of the class described, the combination of a fan casing chamber consisting of a pair of sheet metal pan-like sections, the upper sections being inverted upon the lower, said sections being provided with integrally formed registering delivery nipple members at one side, the lower section being provided with joint lugs, the edge of the upper section being shouldered downwardly to receive the edge of the lower and being provided with seats for said lugs; and a ferrule sleeved upon said delivery nipple members of said fan casing sections, said ferrule having opposed grooves adapted to receive the shouldered portions of said upper section, said ferrule and lugs and their coacting seats coacting to secure the said casing sections together.

2. In a structure of the class described, the combination of a fan casing chamber consisting of a pair of sheet metal pan-like sections, the upper section being inverted upon the lower, said sections being provided with integrally formed registering delivery nipple members at one side, the edge of the upper section being shouldered downwardly to receive the edge of the lower; and a ferrule sleeved upon said delivery nipple members of said fan casing sections, said ferrule having opposed grooves adapted to receive the shouldered portions of said upper section.

3. In a structure of the class described, the combination of a fan casing chamber, consisting of a pair of sheet metal pan-like sections, the upper section being inverted upon the lower, said sections being provided with integrally formed registering delivery nipple members at one side, the lower section being provided with joint lugs, the edge of the upper section being shouldered downwardly to receive the edge of the lower and being provided with seats for said lugs.

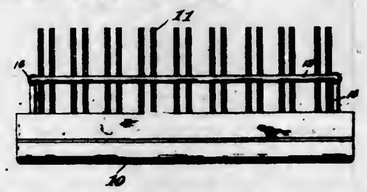
4. In a structure of the class described, the combination of a pair of sheet metal pan-like sections, the upper section being inverted upon the lower, said sections being provided with integrally formed projecting delivery nipple members at one side; and a ferrule sleeved upon said delivery nipple members of said fan casing sections and constituting a member for securing said sections together, said ferrule being adapted to receive the neck of a dust bag.

5. In a structure of the class described, the combination of a cylindrical fan casing chamber comprising a pair of sheet metal facing pan-like sections having telescoping engagement, said sections being provided with integrally formed tangentially disposed registering delivery nipple members, one of said sections being provided with lugs and the other with seats for said lugs; and a ferrule sleeved upon said delivery nipple members of said fan casing sections, said ferrule and lugs and their coacting seats coacting to secure the said casing sections together.

[Claims 6 to 8 not printed in the Gazette.]

1,152,474. BRUSH-BRIDLE. GILBERT C. BEMIS, Worcester, Mass., assignor of one-half to Edward F. Fletcher, Worcester, Mass. Filed Nov. 30, 1914. Serial No. 874,837. (Cl. 15—23.)

1. As an article of manufacture, a brush bridle comprising two wire members each having a main body portion adapted to extend along the body of bristles of the brush at the side thereof, and arms bent inwardly at both ends in the same plane, and means in the plane of said arms for fastening the said arms together.



2. As an article of manufacture, a brush bridle comprising two wire members each having a main body portion adapted to extend along the body of bristles of the brush at the side thereof, and arms bent inwardly at both ends in the same plane, the ends of said arms being bent at right angles to that plane to form legs to permit of fastening the same to the brush back, and means at both extremities spaced from the brush back for fastening the said arms together.

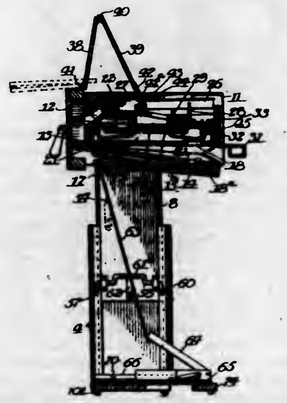
3. As an article of manufacture, a brush bridle having a pair of legs spaced apart at each end of the body of bristles, secured in the brush back, and extending normally from the plane thereof, said legs being bent outwardly in opposite directions at their extreme ends to form arms in alinement with each other and then being bent again at right angles in the plane of said arms to form main body portions parallel to each other, and a tubular member surrounding said arms and connecting said legs together.

4. As an article of manufacture, a brush bridle comprising two wire members each having arms bent inwardly, the ends of said arms being bent at right angles to form legs to permit of fastening the same to the brush back, and means for fastening the said arms together, said means consisting of a hollow sheet metal member surrounding said arms separated along one side and having apertures at the edges for receiving the tops of said legs.

5. As an article of manufacture, a brush bridle having a hollow cylindrical sheet metal member at the end for engaging the bristles and holding the parts of the bridle in position, said member throughout part of its length substantially surrounding a part of the bridle.

[Claim 6 not printed in the Gazette.]

1,152,475. FOLDING ORGAN. PETER P. BILHORN, Chicago, Ill. Filed July 1, 1912. Serial No. 706,881. (Cl. 84—111.)



1. A folding organ comprising a case provided with vertically arranged ends, a pair of slides having sliding connections with said ends of the case, a boxlike structure containing organ mechanism arranged between said slides

and pivotally connected with the upper ends of the same, the pivotal connection being adapted to permit said boxlike structure to fit between said slides with its front and back flush with the front and back of the slides when swung about its pivotal connection, whereby said slides with the boxlike structure between them can be lowered into the case, said slides being substantially the height of the end walls of the case whereby said structure may fit closely within the case and substantially fill the same.

2. A folding organ comprising a case having its opposite ends provided with vertical grooves, a pair of slides arranged to fit and work in said grooves, a boxlike structure containing organ mechanism arranged between said slides and pivoted to the upper rear portions of the same, said slides being substantially the height of the ends of the case, and said boxlike structure being substantially the size of the interior of the case, whereby the slides and structure may be lowered into the case and substantially fill the same, and locking devices for locking the slides in vertical adjustment, said locking devices being also adapted to serve as handles for lifting and lowering said slides and structure.

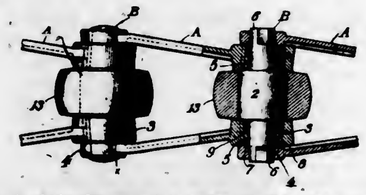
3. A device of the class specified, comprising in combination a case of suit case shape, organ mechanism adapted for arrangement within said case and for removal therefrom, and sliding mechanism carrying said organ mechanism and arranged for vertical sliding movement longitudinally of the ends of said case, when the same is resting upon one of its long narrow sides.

4. A folding organ comprising a base having vertically disposed ends, vertical supports having sliding connection with said ends, and a boxlike structure comprising organ mechanism pivotally mounted at the upper ends of said supports.

5. A folding organ comprising a base having vertically disposed ends, vertical supports having sliding connection with said ends, a boxlike structure comprising organ mechanism pivotally mounted at the upper ends of said supports, and latches whereby said boxlike structure may be temporarily locked in different angular adjustments.

[Claims 6 to 27 not printed in the Gazette.]

1,152,476. CHAIN-LINK. ALLAN S. BIXBY, Indianapolis, Ind., assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 4, 1914. Serial No. 822,370. (Cl. 74—32.)



1. A chain formed of a series of links, each of said links comprising two side bars and a pin, each pin having a sprocket engaging portion, a plurality of conical portions, and a plurality of non-conical portions and each side bar having an eye portion with a conical opening and an eye portion with a non-conical opening, each side bar having a rotative engagement with one pin and a non-rotative engagement with a second pin, said side bars forming pulling connections between successive pins.

2. A chain link comprising two side bars and a pin, said pin having a central sprocket-engaging portion, said pin having a pair of conical journal portions and a pair of non-conical portions, each side bar having at one end an eye portion with a conical opening adapted to have a rotative bearing upon a journal portion of the pin, and at the other end an eye portion with a non-conical opening adapted to engage and fit a non-conical portion of the pin of an adjacent link, each of said side bars having a rotative engagement with its own pin, and a non-rotative engagement with the pin of an adjacent link.

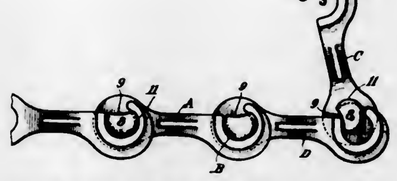
3. A chain comprising a series of links, each link comprising a pin and a plurality of side bars, each pin having a body portion, a pair of conical journal portions and a pair of flattened portions, and each side bar comprising a body portion and an eye portion at either end of said body portion, one of said eye portions having a conical aperture adapted to turn upon a journal portion of a pin, and the other of said eye portions having an opening with a flattened side adapted to have a non-articulating engagement with a flattened portion of another pin, each of said pins having a journaled engagement with eye portions of one pair of side bars and a non-articulating engagement with eye portions of another pair of side bars.

4. A chain link comprising a pin and a plurality of side bars, each pin having a center or body portion, conical journal portions adjacent said body portion and smaller in diameter than said body portion, and means on the pin, between said body and said journal portions, adapted to limit the approach of said side bars, said bars having eyes engaging the journal portions of said pin.

5. A chain consisting of a plurality of links, each of said links comprising a pin and a plurality of side bars, said pin having a central portion, non-conical end portions and intermediate conical journal portions, a pair of side bars rotatively engaging the journal portions of said pin, and a pair of side bars fixedly engaging the ends of said pin, said rotatively-engaging side bars being held in engagement on said pin by the fixedly-engaging side bars, and means for securing the last-named side bars on the pin.

[Claims 6 to 9 not printed in the Gazette.]

1,152,477. CHAIN-LINK. ALLAN S. BIXBY, Indianapolis, Ind., assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 18, 1914. Serial No. 825,450. (Cl. 74—43.)



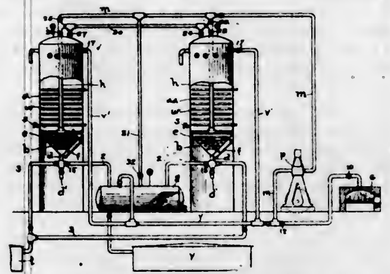
1. A chain link comprising a pair of side bars, and a connecting pin, each side bar having an eye at one end and being hook-shaped at its other end, the pin having flattened portions thereon adapted to engage correspondingly flattened portions in the eyes of the side bars and thereby hold the side bars in non-rotatable engagement with said pin, the hook-shaped ends of the side bars being adapted in one position for the insertion of the ends of a pin of another link, and in another position to hold the ends of said pin in rotative engagement therewith.

2. A chain link comprising a pair of side bars and a connecting pin, the said pin having a non-rotative engagement with the said side bars, means on the pin adapted to maintain the side bars in separated position, the opposite ends of the side bars having hook shaped portions adapted to rotatively engage opposite ends of a pin of another link, and means for holding the hook shaped ends in rotative engagement with the ends of the pin.

3. A chain link comprising a pair of side bars and a connecting pin, each side bar having a non-rotative engagement with an intermediate portion of said pin and having at its other end a hook shaped portion, the said hook shaped portion being adapted to rotatively engage an end of a pin of another link, and a lip on the end of said pin adapted to bear on a side of said hook shaped portion and to hold the link in operative engagement therewith.

4. A chain consisting of a plurality of links, each link comprising a pin and a pair of side bars, said pin having a central portion and flanged end portions adjacent thereto, said end portions being adapted to receive and hold in non-rotative relation eye portions of said side bars, and also being adapted to receive hook shaped portions of side bars of an adjacent pin and hold them in rotative engagement, the hook shaped portions being adapted to engage said pin in an extreme angular position of said side bars, and flanges adapted to hold said hook shaped portions against lateral movement in all operative positions of said side bars.

1,152,478. REFINING PETROLEUM. JOHN C. BLACK, Point Richmond, Cal., assignor to Standard Oil Company, a Corporation of California. Filed Mar. 5, 1909. Serial No. 481,538. (Cl. 196—26.)



1. The improvement in refining a liquid, as oil, by means of an agent, as sulfur dioxid, which is aeriform under atmospheric preasure at temperatures above the freezing point of water and which unites at such temperatures under appropriate superatmospheric pressures when in suitable proportion with constituents of said liquid to form compounds that separate by gravity from the remainder of said liquid and that liberate said agent in aeriform condition when heated, which improvement consists in subjecting liquid to be refined to said agent at a temperature above the freezing point of water in sufficient proportion and under sufficient superatmospheric pressure to form such compounds at the treating temperature, withdrawing the so formed compounds from the remaining liquid, heating the so withdrawn compounds in such manner as to liberate said agent therefrom in aeriform condition under superatmospheric pressure sufficient to form such compounds at a temperature above the freezing point of water, conveying the so liberated agent under such a superatmospheric pressure resulting in its entirety from said heating operation, and subjecting liquid to be refined to said agent in sufficient proportion under the so resulting pressure at a temperature above the freezing point of water and suitably correlated with said pressure so as to form such compounds, substantially as described.

2. Apparatus for refining a liquid, as oil, by means of an agent, as sulfur dioxid, which is aeriform under atmospheric pressure at temperatures above the freezing point of water and which unites at such temperatures under appropriate superatmospheric pressures when in suitable proportion with constituents of said liquid to form compounds that separate by gravity from the remainder of said liquid and that liberate said agent in aeriform condition when heated, which apparatus consists of appliances for subjecting liquid to be refined to said agent at a temperature above the freezing point of water in sufficient proportion and under sufficient superatmospheric pressure to form such compounds at the treating temperature, appliances for withdrawing from the remaining liquid the compounds so formed by means of the first mentioned appliances, appliances for heating the so withdrawn compounds in such manner as to liberate said agent therefrom in aeriform condition under superatmospheric pressure sufficient to form such compounds at a temperature above the freezing point of water, and appliances for conveying the so liberated agent under such a superatmospheric pressure resulting in its entirety from the heating performed with the aid of said heating appliances and for subjecting liquid to be refined to said agent in sufficient proportion under the so resulting pressure at a temperature above the freezing point of water and suitably correlated with said pressure so as to form such compounds, substantially as described.

3. The improvement in refining a liquid, as oil, by means of an agent, as sulfur dioxid, which is aeriform under atmospheric pressure at temperatures above the freezing point of water and which unites at such temperatures under appropriate superatmospheric pressures when in suitable proportion with constituents of said liquid to form compounds that separate by gravity from the remainder of said liquid and that liberate said agent in aeriform condition when heated, which improvement consists in subjecting liquid to be refined to said agent at a temperature above the freezing point of water in sufficient proportion and under sufficient superatmospheric pressure to form such compounds at the treating temperature, withdrawing the so formed compounds from the remaining liquid, heating said remaining liquid to a temperature not exceeding about 125° F. in such manner as to liberate therefrom a part of its content of said agent in aeriform condition under superatmospheric pressure sufficient to form such compounds at a temperature above the freezing point of water, conveying the so liberated agent under such a superatmospheric pressure resulting in its entirety from said heating operation, subjecting liquid to be refined to said agent in sufficient proportion under the so resulting pressure at a temperature above the freezing point of water and suitably correlated to said pressure so as to form such compounds, and later heating said remaining liquid at the specified temperature under a reduced pressure in order to get off another part of its content of said agent, substantially as described.

4. Apparatus for refining a liquid, as oil, by means of an agent, as sulfur dioxid, which is aeriform under atmospheric pressure at temperatures above the freezing point of water and which unites at such temperatures under appropriate superatmospheric pressures when in suitable proportion with constituents of said liquid to form compounds that separate by gravity from the remainder of said liquid and that liberate said agent in aeriform condition when heated, which apparatus consists of appliances for subjecting liquid to be refined to said agent at a temperature above the freezing point of water in sufficient proportion and under sufficient superatmospheric pressure to form such compounds at the treating temperature, appliances for withdrawing from the remaining liquids the compounds so formed by means of the first mentioned appliances, heating appliances for raising the temperature of said remaining liquid to one not exceeding about 125° F. in such manner as to liberate a part of its content of said agent in aeriform condition under superatmospheric pressure sufficient to form such compounds at a temperature above the freezing point of water, appliances for conveying the so liberated agent under such a superatmospheric pressure resulting in its entirety from the heating performed with the aid of said heating appliances and for subjecting liquid to be refined to said agent in sufficient proportion under the so resulting pressure at a temperature above the freezing point of water and suitably correlated with said pressure so as to form such compounds, and appliances whereby the heating of said remaining liquid can later be performed at the specified temperature under a reduced pressure in order to get off another part of its content of said agent, substantially as described.

1,152,479. DEEP-WELL PUMP. LARS W. BODINSON, Aurora, Ill., assignor to The American Well Works, Aurora, Ill., a Corporation of Illinois. Filed Sept. 6, 1912. Serial No. 718,843. (Cl. 103—72.)

1. A pump comprising an imperforate well-tube, a tubular pump-rod adapted to reciprocate therein, means di-

viding said well-tube into upper and lower chambers, plungers in said upper and lower chambers operated by said pump-rod, means outside of said pump-rod for conducting water from below the lower plunger to the upper chamber above the plunger therein, and upwardly-opening valves secured in said well-tube below said lower plunger and above said upper plunger, respectively.



2. A pump comprising an imperforate well-tube, a tubular pump-rod adapted to reciprocate therein, means dividing said well-tube into upper and lower chambers, plungers in said upper and lower chambers, and a passage outside the pump-rod for conducting water from below the lower plunger to the upper chamber below the upper plunger.

3. A pump comprising an imperforate well-tube, a tubular pump-rod adapted to reciprocate therein, means dividing said well-tube into upper and lower chambers, plungers in said upper and lower chambers, a passage outside the pump-rod for conducting water from below the lower plunger to the upper chamber below the upper plunger and to the upper chamber above the plunger therein, and an upwardly-opening valve between the upper portion of said upper chamber and said passage.

4. A pump comprising an imperforate well-tube, a tubular pump-rod adapted to reciprocate therein, means dividing said well-tube into upper and lower chambers, plungers in said upper and lower chambers, a passage outside the pump-rod for conducting water from below the lower plunger to the upper chamber below the upper plunger, a downwardly-opening valve between said passage and the lower portion of said upper chamber, a passage through the upper plunger leading from the lower portion of the upper chamber to the pump-rod, and an upwardly-opening valve for preventing downward flow through the latter passage.

5. A pump comprising a well-tube, a partition dividing said well-tube intermediately into upper and lower chambers, a tubular pump-rod extending through said partition and adapted to reciprocate in the well-tube, plungers in said upper and lower chambers, said plungers being connected with the pump-rod, an upwardly-opening check-valve in the well-tube below the lower plunger, a suction tube connected with the lower end of the pump-rod and extending through said check-valve, and a passage connecting said suction tube with the upper chamber.

[Claims 6 to 24 not printed in the Gazette.]

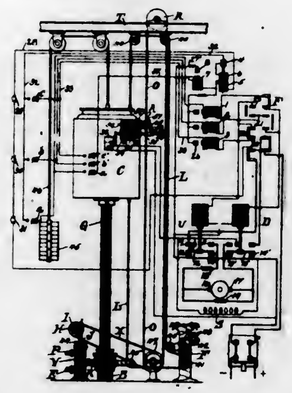
1,152,480. THEATER-CHAIR. HENRY A. BOUK, Seattle, Wash., assignor to Bouk Patents Company, Seattle, Wash., a Corporation of Washington. Filed July 18, 1912. Serial No. 710,201. (Cl. 155—13.)

A mounting for chair seats including a pair of bushings formed with angular end portions adapted to be fitted in the side frames of a chair so as to extend through the same, the inner ends of the bushings being formed with enlarged heads, a pivot rod connecting the bushings and extending through the same, a pair of tubular bearings adapted to be applied to opposite sides of the chair seat and to loosely receive the pivot rod, cylindrical rollers arranged within the said bearings and surrounding the pivot rod, washer members applied to the pivot rod and engaging opposite ends of the two sets of cylindrical rollers, a tubular member fitted upon the pivot rod between



the bearings so as to engage the inner washer members of each set and hold the same in position, the outer washer members of each set being interposed between the enlarged heads of the bushings and the outer ends of the tubular bearing, and means applied to the extremities of the pivot rod to hold the same against displacement.

1,152,481. CONTROLLING DEVICE FOR HYDRAULIC ELEVATORS. JOHN E. BOYCE, New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Sept. 13, 1911. Serial No. 649,150. (Cl. 187—29.)

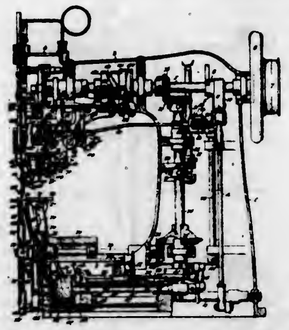


1. In an elevator, the combination of a car, hydraulic operating means therefor, a change valve, means for opening the valve, electrically controlled means on the car and having an operating connection with the valve for effecting the closing of said valve, and automatically controlled mechanism for controlling the operation of said valve opening and closing means.

2. In a hydraulic elevator, the combination of a plunger and connected car, a plunger cylinder, a valve controlling the movement of said plunger, an electric motor for operating said valve to open position, a standing cable operatively connected to said valve, a magnet controlled clutch on the car for effecting an engagement with said standing cable, and automatically controlled electrical apparatus for effecting the operation of said motor and clutch.

3. In an automatic electric control system for push button hydraulic elevators, the combination of a change valve, an electric motor for moving said valve to open position, a cable operatively connected to said valve for moving the latter to closed position, means carried on the car for engaging and disengaging said cable, and a selective device controlled by the movement of the car for effecting the operation of said motor and said cable engaging means.

1,152,482. STITCH-FORMING DEVICE. OTIS E. BROWN, Brockton, Mass., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Oct. 19, 1911. Serial No. 655,519. (Cl. 112—28.)



1. In a sewing machine, the combination with a reciprocating open-eyed needle, and a loop-taker coöperating therewith, of a threading implement for inserting the upper thread in the needle-eye in each stitch-forming cycle, a carrier for said threading implement, a movable fulcrum for said carrier, and actuating means for the carrier whereby the latter in one stage of its movement acts to change the position of its fulcrum and in a second stage of its movement swings upon said fulcrum as an axis.

2. In a sewing machine, the combination with a reciprocating open-eyed needle, and a loop-taker coöperating therewith, of a threading implement comprising spaced eyed and forked members adapted for inserting the upper thread in the needle-eye in each stitch-forming cycle, a swinging carrier in which the component members of said threading implement are mounted for relative adjustment, an actuating cam, and an operative connection between the actuating cam and said carrier.

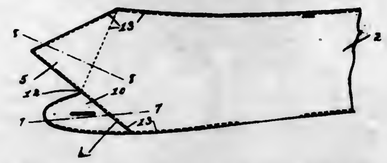
3. In a sewing machine, the combination with a reciprocating open-eyed needle, and a loop-taker coöperating therewith, of a threading implement comprising spaced eyed and forked members adapted for inserting the upper thread in the needle-eye in each stitch-forming cycle, a swinging carrier, sockets sustained by and relatively adjustable upon said carrier and each provided with means for adjustably securing therein one of said threading-implement members, and means for actuating said carrier to move the threading implement into and out of operative relation with said needle.

4. In a sewing machine, the combination with a reciprocating needle-bar carrying an open-eyed needle, a laterally jogging frame in which the needle-bar is mounted, and a loop-taker coöperating with the needle, of a threading implement mounted independently of said jogging frame and adapted for laying the upper thread in the needle-eye in each stitch-forming cycle, feeding mechanism connected with said frame for imparting to the needle lateral work-feeding movements, feed-regulating means for determining the range of lateral feeding movements of the needle, actuating means for said threading implement, and means for varying the operative movements of the threading implement to correspond with the range of feeding movements imparted to the needle.

5. In a sewing machine, the combination with a reciprocating and laterally jogging needle-bar, a needle mounted therein and formed with an eye open on one side and arranged in the direction of lateral jogging movements of the needle-bar, and a loop-taker coöperating with said needle, of a threading implement comprising spaced thread-holding members movable successively transversely of the jogging movements of the needle-bar and then substantially in the same direction therewith and in paths upon opposite sides of the needle and adapted for laying the upper thread in the needle-eye in each stitch-forming cycle, feed-actuating mechanism from which the needle-bar derives the said jogging movements, feed-regulating means for determining the range of lateral jogging movements of the needle-bar, actuating means for said threading implement, and means for varying the operative movements of the threading implement to correspond with the range of feeding movements imparted to the needle.

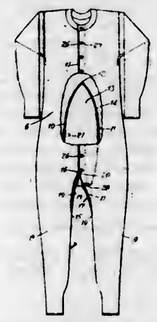
[Claims 6 to 9 not printed in the Gazette.]

1,152,483. WING-COLLAR. HENRY BRYCE, Cohoes, N. Y. Filed Oct. 23, 1912. Serial No. 727,336. (Cl. 2—67.)



A standing collar having end buttonhole-tabs, and wings forming reëntrant angles with said buttonhole-tabs, said collar comprising a plurality of plies and having one of its surface plies wholly covering one side of the collar, except said wings, and its other surface ply wholly covering the other side of the collar, except said buttonhole-tabs and separate facings for the wing and tab.

1,152,484. UNION GARMENT. JAMES E. BURKE, Bennington, Vt., assignor of one-half to Cooper Manufacturing Co., Bennington, Vt., a Corporation of Vermont. Filed Jan. 24, 1912. Serial No. 673,133. (Cl. 2—144.)

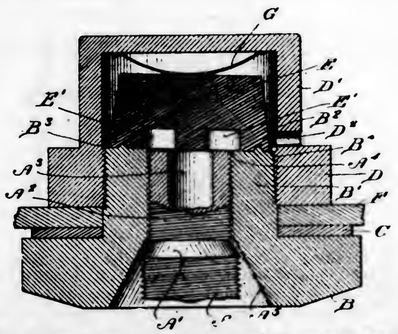


A union garment having an opening extending down the front to the rear and terminating at a point in the back near the waistline, overlapping flaps substantially coextensive in area secured at one of their edges to opposite sides of said opening from said point in the back to points at the front substantially above the crotch, and means to detachably secure the front edge of one of said flaps to the margin of the body portion of said garment at the front thereof and to which the other of said flaps is secured, at points at one side of the crotch of said garment along one inner leg seam thereof and at a substantial distance from the edge of said other flap.

1,152,485. DISCHARGE CONTROL FOR FLUID-RECEPTACLES. JOHN E. CARROLL and WILLIAM H. ANDREWS, Boston, Mass., assignors, by mesne assignments, to Wizard Tire Inflator & Fire Extinguisher Co., a Corporation of Massachusetts. Filed Jan. 10, 1914. Serial No. 811,459. (Cl. 220—110.)

1. In a closure for receptacles for fluid under pressure, the combination of an apertured member provided with a valve seat, a flexible valve coöperating with said valve seat, and a valve lifter movable to engage the flexible valve and unseat it by deformation of the valve.

2. In a closure for receptacles for fluid under pressure, the combination of an apertured member provided with a valve seat, a flexible valve coöperating with said valve seat, and a valve lifter movable to engage the flexible valve at one side thereof and unseat it by deformation of the valve.



3. In a closure for receptacles for fluid under pressure, the combination of an apertured member provided with a valve seat, a flexible valve coöperating with said valve seat, and a valve lifter movable to engage the flexible valve and unseat it by deformation of the valve, and means to limit the valve-deforming movement of the valve lifter.

4. In a closure for receptacles for fluid under pressure, the combination of an apertured member provided with a valve seat, a flexible valve coöperating with said seat and having a recess on its seating side, and a tubular valve lifter movable to engage the flexible valve and unseat it by deformation of the valve, said recess in the valve providing a way for escaping fluid into the valve lifter.

5. In a closure for receptacles for fluid under pressure, the combination of an apertured member provided with a valve seat, a flexible valve coöperating with said seat, and a valve lifter movable in said apertured member to engage the valve and unseat it by deformation of the valve, the valve-engaging surfaces of the valve seat and valve lifter lying in planes at an angle to each other.

1,152,486. HATCH-COVER. CLIFFORD E. CASH, Detroit, Mich. Filed Mar. 15, 1915. Serial No. 14,557. (Cl. 114—202.)

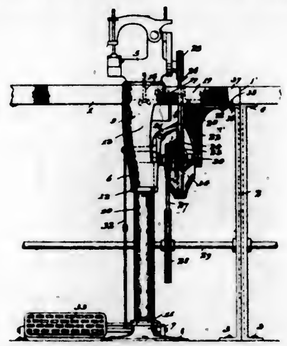


1. A hatch cover comprising sections and each section composed of telescopic members, the confronting ends of the innermost members of said sections, and means adapted for holding said coupling member relative to a coupling member adapted to fit over said cover.

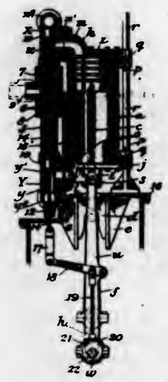
2. A hatch cover comprising sections each composed of telescopic members, beads carried by the innermost members of said sections, a coupling member adapted to be fitted over said beads, and means adapted to connect the ends of said coupling member to the innermost members of said sections.

1,152,487. SEWING-MACHINE SUPPORT. JOHN H. CHENOWETH, Chicago, Ill. Filed Feb. 17, 1912. Serial No. 678,596. (Cl. 45—27.)

The combination of a table supported upon a common foundation, a standard having its base securely fastened to said foundation, a machine rigidly secured to the upper end of said standard and adapted to be driven at high speed whereby the head of the standard tends to vibrate seriously in a vertical direction, and a resilient member having flexibility in a vertical direction disposed in a substantially horizontal plane and rigidly secured independently to the head of the standard and to the table, respectively, the distance between the points of attachment of said resilient member to the plate and standard being sufficient to permit a limited amount of vertical flexing of said member to compensate for vibratory movements of the head of the standard in a vertical direction relative to said table, said member, however, constituting a horizontally inextensible link to prevent lateral movements of said machine relative to said table.



1,152,488. STEAM-ENGINE. JOHN M. CLARK, Whitestone, N. Y. Filed Jan. 6, 1915. Serial No. 726. (Cl. 121—46.)



1. In an engine of the class described a cylinder and a piston therein, said cylinder having heads formed with extensions provided with ports, castings bolted to said extensions and having ports registering with the ports in the extensions, said castings being provided with longitudinal bores, a tube having ports and being connected to the castings, the bore thereof registering with that of the castings to form a valve chamber, a fixed steam cylinder of greater diameter than the tube and through which the tube is adapted to slide, companion valves slidable in the valve chamber, means for giving the cylinder and piston opposite movements and for operating the valves.

2. In an engine having a reciprocating cylinder and a piston therein, a valve chamber arranged alongside the cylinder and exteuding above and below the same and being provided with lateral ports, companion valves operating in said chamber to open and close the ports, a rod connecting the valves and extending downwardly through the end of the valve chamber and geared in connection with an eccentric on a crank pin of the engine shaft and means for giving the cylinder and piston opposite movements.

3. In a steam engine a cylinder having heads provided with tubular elbow extensions, a valve chamber carried by the extensions, valves in said chamber to control ports opening into the chamber above and below the ends of the cylinder, a fixed steam inlet cylinder surrounding the valve chamber and in communication therewith and through which the valve chamber moves, means for operating the valves and for giving the cylinder and piston opposite movements for the purpose described.

4. In a steam engine, a cylinder and a piston therein, said cylinder being provided with tubular elbow extensions, a valve casing carried thereby and having ports registering with ports in the extensions, an inlet steam cylinder of greater diameter than the valve chamber and surrounding the same to provide a steam chamber in communication with the valve casing, elbow extensions at the top and bottom of the valve casing, exhaust pipe sections secured thereto, a fixed exhaust cylinder of greater diameter than the exhaust pipe sections and inclosing the free ends thereof to form an exhaust steam chamber through which the pipe sections move, valves in said casing to open and close the ports, means for operating the valves and for operating the cylinder and piston in opposite directions.

5. In an engine of the class described a cylinder and a piston therein, a valve casing at the side of the cylinder having ports communicating with the top and bottom thereof, an inlet steam cylinder surrounding the casing and communicating therewith, exhaust pipe sections carried by the valve casing, an exhaust steam cylinder of greater diameter than the exhaust pipe sections and inclosing the spaced free ends thereof to form an exhaust steam chamber, the said inlet and exhaust cylinders being connected one to the other and to the frame of the engine, a pair of valves in said casing, means for operating the valves and for giving the piston and cylinder of the engine opposite movements.

[Claim 6 not printed in the Gazette.]

1,152,489. TOY TRACK. JOSHUA L. COWEN, New York, N. Y. Filed Apr. 12, 1915. Serial No. 20,780. (Cl. 238—5.)



1. A sectional toy railroad track, each section comprising a sheet metal roadbed, rails formed out of material of the roadbed and integral therewith, and means at the end of each section for interlocking with the adjacent section.

2. A toy railway track comprising a bed plate, a pair of rails formed out of the material thereof and integral therewith, and ties embossed upon said bed plate adjacent to the rails.

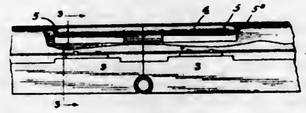
3. A sectional toy railway track, each section comprising an integral sheet metal plate having depending walls, and a pair of rails formed integral therewith, a bottom plate attached to the depending walls, and means for locking the sections together.

4. A sectional toy railway track, each section comprising a sheet metal bed having a pair of rails formed out of the material thereof and integral therewith, and ties, sleeper plates and spikes embossed upon the bed in their proper position with respect to the rails.

5. A sectional toy railway track, each section comprising a sheet metal bed plate having a pair of rails formed out of the material thereof and integral therewith, and ribs depending from the bed plate for stiffening the same.

[Claims 6 to 9 not printed in the Gazette.]

1,152,490. TOY-RAIL JOINT. JOSHUA L. COWEN, New York, N. Y. Filed Apr. 12, 1915. Serial No. 20,781. (Cl. 239—13.)



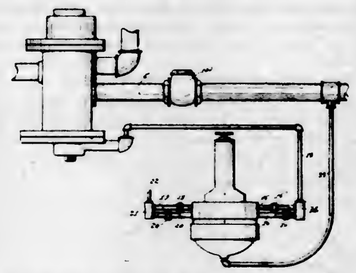
1. In combination with a sheet metal rail having a hollow tread and web, a tongue bent inwardly of the web adjacent the tread and forming a socket, and a pin held in said socket.

2. In combination with a sheet metal rail having a hollow tread and web, a tongue punched out of one of the walls of the web and bent inwardly adjacent the tread and forming a socket, and a pin held in said socket.

3. In combination with a sheet metal rail having a hollow tread and web, a tongue punched out of one of the walls of the web and bent inwardly of the latter adjacent the tread forming a socket, said tongue being formed with an inner upturned corner, and a pin held in said socket and abutting said corner.

4. In combination with a sheet metal rail having a hollow tread and web, a tongue punched out of one of the walls of the web and bent within the web adjacent the tread to constitute a socket and formed with a tapering inner upturned corner to form a stop, and a pin adapted to be held within said socket.

1,152,491. AUTOMATIC GOVERNOR-VALVE. IRÉNÉ DEPOT, St. Roch de Quebec, Quebec, Canada. Filed June 9, 1914. Serial No. 843,941. (Cl. 50—11.)



1. In combination: an exhaust receiving casing having an inlet and two outlets, one of which outlets communicates with the atmosphere; a steam supply pipe communicating with the other outlet of the said casing; a check valve mounted therein; a governor valve connected to a source of supply of fluid pressure and adapted to have the direction of flow of the pressure fluid therethrough changed; means for changing the direction of flow of the pressure fluid through the said governor valve; connections between the said governor valve and steam supply pipe; a piston mounted in the said exhaust receiving casing; a slide valve operative thereby and adapted to close the lower outlet of the said casing when the piston is depressed and to close the upper outlet when the piston is raised; a pipe connected to the governor valve casing and to the exhaust receiving casing, beneath the said piston, and leakage means provided in the said exhaust receiving casing beneath the said piston.

2. In combination; an exhaust receiving casing having an inlet and two outlets, one of which outlets communi-

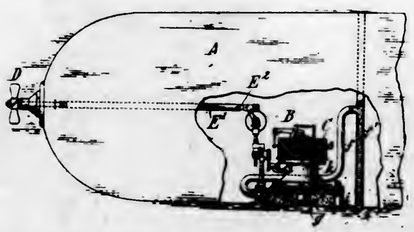
cating with the other outlet of the said casing; a check valve mounted therein; a piston mounted in the lower part of the said casing; a piston rod carried thereby; means for normally holding the said piston in depressed condition; a slide valve carried by the said piston rod and adapted to close the lower outlet of the said casing when the piston is depressed, and to close the upper outlet when the piston is raised; a governor valve casing provided with superposed communicating passages; a pipe communicating therewith and adapted to be connected to a source of fluid pressure; a second pipe communicating with the passages of the said governor valve casing and with the said exhaust receiving casing, beneath the said piston; control means interposed in the said pipes; a pipe connected to the said steam supply pipe and to the lower end of the said governor valve casing; means for controlling communication between the passages of the governor valve casing in accordance with the pressure in the last mentioned pipe; and a plug communicating with the interior of the said exhaust receiving casing, beneath the said piston, and provided with a leakage duct.

1,152,492. GARMENT-SUPPORTER. WILLIAM L. DEMING, Salem, Ohio. Filed Sept. 13, 1913. Serial No. 789,583. (Cl. 24—261.)



A garment fastener made of a single piece of spring-metal bent on itself to provide the following parts, namely: an inwardly bent intermediate portion, two rounded shoulders adjacent thereto, two inwardly bent portions leading from the respective rounded shoulders, two longitudinal portions leading away from the inwardly bent portions, two return bends leading from the ends of the longitudinal portions, two adjacent tines leading from these bends toward said shoulders and between the longitudinal members and having their free ends flared apart and terminating within the space provided by the inwardly bent portions and the intermediate portion, as described.

1,152,493. DEPTH-RECORDER FOR TORPEDOES. WILLIAM DIETER, New York, N. Y., assignor to E. W. Bliss Company, Brooklyn, N. Y., a Corporation of West Virginia. Filed Mar. 21, 1914. Serial No. 826,178. (Cl. 234—1.)



1. A submersible vessel having a lateral opening in its hull, combined with a recording hydrostat fitting said opening with its recording means entering within the vessel, and removable through said opening, and driving mechanism for said recording means mounted within the vessel.

2. A submersible vessel having a lateral opening in its hull, a hydrostat fitting into said opening, and removable therefrom, comprising a pressure-responsive part, a member moved thereby, and a rotary record-receiving part, driving means mounted in said vessel, and a separable driving connection therefrom to said record-receiving part, whereby the hydrostat is removable without the driving mechanism to get access to the record-receiving part and on replacing it the latter is automatically connected.

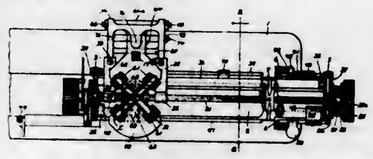
3. A submersible vessel having a lateral opening in its hull, a screw at the bow, and a shaft turned by said screw entering within the vessel, combined with a hydrostat fitting removably into said opening and comprising a pressure-responsive part, a marker moved thereby, and a rotary record-receiving part, and means for transmitting rotation from said shaft to turn said receiving part, the latter separable from said transmitting means to permit the removal of the hydrostat.

4. A submersible vessel having a lateral opening with a marginal mounting, and having a hydrostatic duct leading to such mounting, combined with a recording hydrostat comprising a base fitting said mounting and having a hydrostat chamber communicating with said duct, and a diaphragm exposed to said chamber.

5. A depth recorder for a submersible vessel, comprising a recording hydrostat having a recording cylinder and a base for said hydrostat whereby it constitutes a unit removable from such vessel, and driving mechanism for rotating said cylinder mounted within the vessel and adapted to be brought into operative engagement with the cylinder upon the insertion of the hydrostat unit in place within the vessel.

[Claims 6 and 7 not printed in the Gazette.]

1,152,494. TYPE-WRITER. KENNEDY DOUGAN, Minneapolis, Minn. Filed Dec. 27, 1913. Serial No. 808,998. (Cl. 197—1.)



1. In combination, a multicharacter printing device adapted to be carried by a finger of the hand, a device for holding a sheet of paper to receive the printing, and a guide adjacent to the paper holding device, said guide being adapted to guide said printing device.

2. In combination, a multicharacter printing device adapted to be carried by a finger of the hand, a carriage for holding a sheet of paper to receive the printing, and a relatively fixed guide for guiding the printing device.

3. In combination, a multicharacter printing device adapted to be carried by a finger of the hand, a guide for guiding said printing device, and character selecting means on said printing device and guide.

4. In combination, a multicharacter printing device comprising a finger clip and a type block carried by said clip, means for holding a sheet of paper to receive the printing, a guide for guiding said printing device, and character selecting means on said printing device and guide.

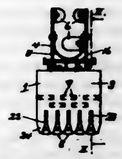
5. In combination, a type carrier comprising a finger clip and a multicharacter type block; means for holding a sheet of paper to receive the printing, and a guide for guiding said type block.

[Claims 6 to 13 not printed in the Gazette.]

1,152,495. TYPE-WRITER. KENNEDY DOUGAN, Minneapolis, Minn. Filed Dec. 27, 1913. Serial No. 809,000. (Cl. 197—1.)

1. In a typewriter, a frame adapted to be set upon a flat sheet of paper, means held by said frame for guiding type in successive positions to write a line, and a manually carried frame, provided with a plurality of type.

2. In a typewriter, a frame adapted to be set upon a flat sheet of paper, means held by said frame for guiding type in successive positions to write a line, a manually carried frame, provided with a plurality of type, and means for selectively printing with said type, said means comprising a member associated with the type-guide held by said frame.



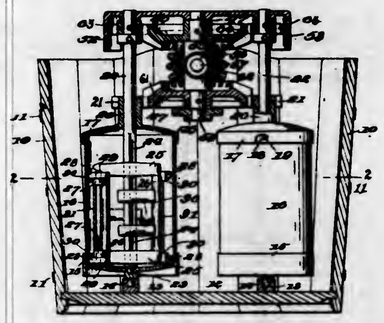
3. In a typewriter, a multicharacter printing device adapted to be carried by and upon a finger of the hand; a frame adapted to be set upon a flat sheet of paper; and means mounted on said frame for guiding and selectively operating the type when the said printing device is depressed in certain relative positions to said guiding and selective operating means.

4. In a typewriter, a base adapted to be set upon a flat sheet of paper, said base having a slot therein parallel to the lines of writing; a carriage movable on said base parallel to said slot, a type-guide and an abutment carried by the carriage, a manually carried frame, a series of separately movable type carried by said frame, and projections on said type, adapted for engagement with said abutment.

5. In a typewriter, a base adapted to be set upon a flat sheet of paper, said base having a slot therein parallel to the lines of writing; a carriage movable on said base parallel to said slot, means for shifting the carriage step by step, said means comprising a movable element positioned to be actuated by a type-carrier, a manually carried type-carrier provided with means for actuating said element, and a series of movable type-bars in said carrier.

[Claims 6 to 10 not printed in the Gazette.]

1,152,496. ICE-CREAM FREEZER. CHARLES H. EDDY, Attleboro, Mass. Filed May 19, 1914. Serial No. 839,608. (Cl. 259—2.)

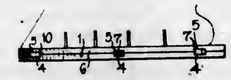


1. In a device of the class described, a receptacle for the freezing medium, a plurality of freezing cans mounted for rotation in the said receptacle, a beater device mounted for rotation in each of said freezing cans, a standard having terminal bearings and a transverse bearing, a gear wheel mounted for rotation upon each of said terminal bearings, a gear pinion connected to each of said freezing cans and engaging one of said gear wheels, a gear pinion connected to each of said beater devices and engaging the other gear wheel, a shaft mounted for rotation in the transverse bearing of said standard, and a gear pinion carried by said shaft and engaging said gear wheels, whereby the freezing cans and beater devices are rotated in opposite directions when motion is imparted to the shaft.

2. In a device of the class described, a receptacle for the freezing medium, a plurality of freezing cans mounted for rotation in said receptacle, a beater device mounted for rotation in each of said freezing cans and each including a vertical shaft, standards rising from said receptacle, a frame detachably supported in said standards and having bearings to receive said beater shafts, a pinion carried by each of said beater shafts, a pinion carried by each of said freezing cans, a vertical standard carried by said frame, a gear pinion carried by said vertical standard and engaged by the pinions of said freezing cans, another gear pinion carried by the vertical standard and engaged by the pinions of the beater shafts, and means for simultaneously rotating said gear pinions in opposite directions.

3. In a device of the class described, a receptacle for the freezing material, guide ribs spaced apart and carried by said receptacle, a plurality of freezing cans mounted for rotation in said receptacle, a beater device mounted for rotation in each of said freezing cans and each including a vertical shaft, a frame including a depending portion having laterally directed lugs detachably engaging said spaced ribs, means for detachably connecting said frame at its upper part to said receptacle, and means carried by said frame for simultaneously rotating said freezing cans in the same direction and for simultaneously rotating said beater devices in the opposite direction.

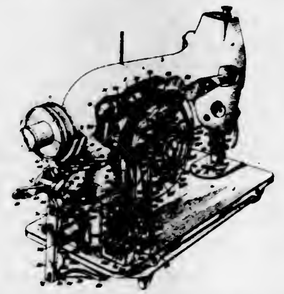
1,152,497. HORSESHOE. OLIVER ELMORE, Louisville, Ky. Filed Jan. 16, 1915. Serial No. 2,650. (Cl. 168—11.)



1. A device of the class described including a permanent section and a removable section, lugs carried by the permanent section, said removable section having recesses to receive the lugs and retain the sections against lateral movement, with respect to each other, and means for detachably connecting the two sections, as and for the purpose set forth.

2. A device of the class described including a permanent section, and a removable section, lugs carried by said permanent section and arranged in spaced relation, said removable section having recesses adapted to receive said lugs to retain the removable section against lateral movement, each of said sections being provided within the opposed faces thereof with dove-tailed grooves adapted to be arranged in opposed relation, and double dove-tailed pins adapted to be arranged within said grooves whereby to connect the removable section with the permanent section.

1,152,498. SEWING-MACHINE. ALBERT F. FIFIELD, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Mar. 18, 1911. Serial No. 615,193. (Cl. 112—33.)



1. In a sewing machine, the combination with stitch-forming mechanism, of thread-cutting mechanism, a cam for controlling the operation of the thread-cutting mechanism, actuating means for said cam, a coupling device between said cam and its actuating means, and manually controlled means adapted for engagement with said cam

independently of the coupling device whereby the latter is caused to couple and uncouple said cam and its actuating means.

2. In a sewing machine, the combination with stitch-forming mechanism and a stop-motion for controlling the action of the same, of thread-cutting mechanism, a cam for tripping the stop-motion to arrest the stitch-forming mechanism and actuating the cutting mechanism, and manually controlled means whereby said cam is thrown into and out of operation.

3. In a sewing machine, the combination with a stitch-forming mechanism and a stop-motion for controlling the action of the same, of a thread-cutting mechanism, a cam provided with means for tripping the stop-motion to arrest the stitch-forming mechanism, a connection between said cam and the thread-cutting mechanism for imparting to the latter initial thread-engaging action, a connection between said stop-motion and the cutting mechanism through which the latter receives a final thread-cutting movement, actuating means for said cam, a coupling between said cam and its actuating mechanism, and manually controlled means for operating said coupling device in coupling together and uncoupling said cam and its actuating means.

4. In a sewing machine, the combination with stitch-forming mechanism including a needle and loop-taking means, and actuating means therefor, of thread-cutting mechanism including a member adapted to engage the thread intermediate the needle and loop-taking means, a rotary member for controlling the action of the thread-cutting mechanism, means connected with the actuating means of the stitch-forming mechanism for actuating said rotary member, and means for connecting and disconnecting said rotary members and its actuating means.

5. In a sewing machine, the combination with stitch-forming mechanism and actuating means therefor, of thread-cutting mechanism comprising a train of permanently connected elements, a rotary member for controlling the action of the same, means connected with the actuating means of the stitch-forming mechanism and normally coupled with said rotary member whereby the latter is actuated, and manually operated means for disconnecting said rotary member and its actuating means and maintaining such disconnection for stitching-periods of variable length.

[Claims 6 to 16 not printed in the Gazette.]

1,152,499. MINING SULFUR. HERMAN FRASCH, New York, N. Y., assignor, by mesne assignments, to The Union Sulphur Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 3, 1912. Serial No. 695,008. (Cl. 83—78.)



1. The process of mining by fusion, consisting in withdrawing water of a temperaure below the melting point of the substance mined from a water flooded porous deposit of such substance through an artificially provided passage, introducing fusion fluid into said deposit, and removing the melted substance from said deposit, substantially as described.

2. The process of mining by fusion, consisting in withdrawing water of a temperature below the melting point of the substance mined from a water flooded porous deposit of such substance through an artificially provided passage, introducing fusion fluid into said deposit, and removing the melted substance from said deposit contemporaneously with withdrawal of water of said non-melting temperature, substantially as described.

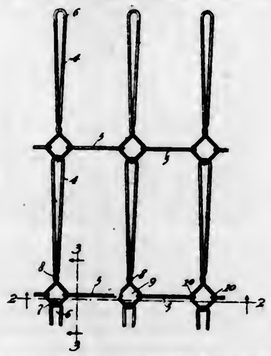
3. The process of mining by fusion, consisting in withdrawing water of a temperature below the melting point of the substance mined from a water flooded porous deposit of such substance through an artificially provided passage, introducing fusion fluid into said deposit contemporaneously with withdrawal of water of said non-melting temperature, and removing the melted substance from said deposit, substantially as described.

4. The process of mining by fusion, consisting in withdrawing water of a temperature below the melting point of the substance mined from a water flooded porous deposit of such substance through an artificially provided passage, introducing fusion fluid into said deposit, and removing the melted substance from said deposit, the three operations being performed contemporaneously, substantially as described.

5. The process of mining by fusion, consisting in withdrawing water of a temperature below the melting point of the substance mined from a water flooded porous deposit of such substance through an artificially provided passage, introducing fusion fluid into said deposit and in part at least near an intake for the melted substance, keeping the piping through which the melted substance is removed at a temperature above the melting point of the latter by conveyance of fusion fluid in appropriate relation to said piping, and removing the melted substance from the deposit through said piping, substantially as described.

[Claims 6 to 37 not printed in the Gazette.]

1,152,500. BED FABRIC. CLARENCE H. FREDERICK, Kenosha, Wis., assignor to The Simmons Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed June 20, 1914. Serial No. 846,295. (Cl. 245—5.)

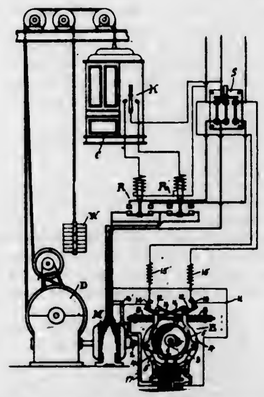


1. A wire link bed fabric, comprising a plurality of similarly formed longitudinal link chains arranged in substantial parallelism, each link being made from a piece of wire bent upon itself intermediate its ends to form the eye of the link, and the two ends of the wire being bent to form a pair of hooks at the other end of the link, said hooks engaging the eye of the adjacent link of the chain, the link being given a longitudinal twist adjacent its hook ends and being provided with opposing bights adjacent the hooked ends, and cross-links engaging said bights and connecting together the adjacent longitudinal chains of the fabric.

2. A wire link bed fabric, comprising a plurality of similarly formed longitudinal link chains arranged in substantial parallelism, each link being made from a piece of wire bent upon itself intermediate its ends to form the eye of the link and the two ends of the wire being bent to form a pair of hooks at the other end of the link, said hooks engaging the eye of the adjacent link of the chain, said link being given a longitudinal twist and provided with a pair of opposed bights intermediate the twist and its hooked end, and cross-links engaging said bights for tying the longitudinal chains together.

3. A wire link bed fabric, comprising a plurality of similarly formed longitudinal link chains arranged in substantial parallelism, each link being made from a length of wire bent upon itself intermediate its ends to form the end eye of the link, the two ends of the wire being formed into hooks, said hooks engaging the end eye of the adjacent link of the chain, the link having a longitudinal twist intermediate the length of the link and a pair of opposed bights contiguous to said twist, and cross-links engaging said bights for tying said chains together.

1,152,501. BRAKE-MAGNET-DEMAGNETIZING DEVICE. ERNEST L. GALE, Sr., Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed July 14, 1910. Serial No. 571,899. (Cl. 175—181.)



1. The combination of an electromagnet and its armature an energizing circuit therefor, a switch to open and close the said circuit, and automatic means controlled by said electromagnet to supply a demagnetizing current only when said switch is opened and thereby reduce the residual magnetism and release the magnet armature.

2. The combination of an electromagnet and its armature, an energizing circuit therefor, a switch to open and close the said circuit, and a demagnetising circuit controlled by the said switch and electromagnet to effect the release of the armature.

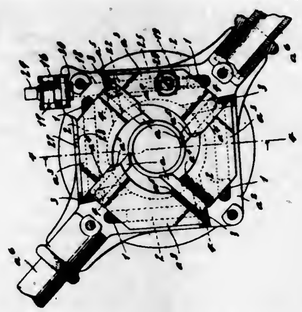
3. The combination of an alternating current electromagnet and its armature, circuit connections therefor, a switch to open and close the circuit, and automatic means controlled by the electromagnet and rendered active by the opening of said switch to demagnetise the electromagnet and release its armature.

4. The combination of an alternating current electromagnet and its armature, circuit connections therefor, a switch to open and close the circuit, and means controlled by said switch and by the armature to effect the demagnetization and release of the said armature should it fail to release upon the opening of the switch.

5. The combination of an electromagnet and its armature, an energizing circuit therefor, a switch to open and close the said circuit, and means controlled by said armature and rendered active upon the opening of said switch to effect the release of the armature upon its failure to release when the said switch is opened.

[Claims 6 to 23 not printed in the Gazette.]

1,152,502. THREADING-MACHINE. HENRY GAUTSCHI, Evanston, Ill. Filed Nov. 26, 1912. Serial No. 733,579. (Cl. 10—120.)



1. A threading machine comprising a holder for a plurality of die-carrying members, each die-carrying member having a slot and projection engagement with the holder, the said slots and projections being arranged on tangents to the circumference of a circle of which the axis of the holder is the center, a die being mounted in each die-carrying member and being movable relatively thereto, the movement of the die-carrying members constituting means for regulating the position of the dies.

2. A threading machine comprising a frame, die-carrying members mounted in said frame and being adapted for movement relative to said frame, a die mounted in each die-carrying member and movable relatively thereto, each member being adapted to be actuated to advance and retract its die in a direction at an angle to the direction of movment of the member.

3. A threading machine comprising a frame and a clamping part, the said frame and the clamping part having relative longitudinal and rotary movements for securing a feed motion of the frame, die blocks mounted in said frame, guiding means for the die blocks comprising a slot and projection engagement between the frame and each die block, threading dies carried by said die blocks, other guiding means in said frame comprising a slot and projection engagement between each die and the frame, the said slots and projections constituting means for regulating the position of the threading dies, and means for moving the die blocks in said frame.

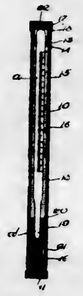
4. A threading machine comprising a die-carrying part and a clamping part, said parts having relative longitudinal and rotary movements for securing a feed motion of the die-carrying part, a plate or base carried by the die-carrying part, die blocks mounted on said plate and arranged for movement upon tangents to the circumference of a circle of which the axis of the die-carrying part is the center, means for moving the die blocks, and threading dies carried by said die blocks and adapted to have a movement in the die blocks relative thereto when the die blocks are moved and actuating mechanism for moving the die blocks in said tangential direction, whereby a coöperative movement relative to the die blocks and to the plate is imparted to the dies to adjust them for varying diameters of pipe to be threaded.

5. A threading machine comprising a die-carrying part, a clamping part, said parts having relative longitudinal and rotary movements for securing a feed motion of the die-carrying part, a plate or base carried by the die-carrying part, a plurality of grooves formed in said plate, die blocks mounted on said plate and having elongated projections fitting in sad grooves, the said grooves and pro-

jections comprising guiding means for the die blocks, threading dies carried by said die blocks, other grooves in said plate, projections carried by the dies and fitting in said last mentioned grooves, the said sets of grooves and projections constituting means for regulating the position of the threading dies, and means for moving the die blocks on said plate.

[Claim 6 not printed in the Gazette.]

1,152,503. CLINICAL-THERMOMETER CASING. JAMES T. GREELEY, Nashua, N. H. Filed Aug. 18, 1913. Serial No. 785,220. (Cl. 73—52.)



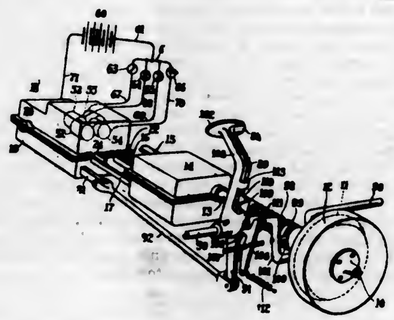
1. A thermometer casing comprising an outer shell having side openings, two glass tubes confined in said shell, a packing between said tubes, said packing extending inwardly to form a valve seat, a valve and an actuating spring therefor located in one of said tubes, said valve having an annular portion to co-act with the valve seat portion of said packing to confine a sterilising liquid, and a removable closure to confine a thermometer in said casing.

2. A thermometer casing comprising an outer metal shell having side openings, said shell having a closing plug at one end and an internal rib near the other end, a transparent tubular container within the shell having a valve seat intermediate its ends, packing between one end of the tubular container and the said internal rib and packing between the other end of the container and said closing plug, a valve to coöperate with said seat, and an actuating spring located between said valve and the closing plug, a removable closure being provided for the end of the shell above the internal rib.

3. A thermometer casing having an annular valve seat intermediate its ends, a valve having an annular portion formed to bear on said seat, and an elongated cylindrical cup-shaped portion the mouth of which is surrounded by the annular portion, and a spring surrounding the cup-shaped portion and confined between the annular portion and the lower end of the casing, said cup-shaped portion being of sufficient depth and diameter to receive and guide the tip of a thermometer, and to remove liquid from the portion of the casing below the valve seat, substantially as and for the purpose specified.

1,152,504. POWER-TRANSMISSION MECHANISM. EDWARD A. HALBLEIB, Rochester, N. Y., assignor to North East Electric Company, Rochester, N. Y., a Corporation of New York. Filed Sept. 17, 1913. Serial No. 790,360. (Cl. 74—58.)

1. Power-transmission mechanism having, in combination, a gear-shifting member movable in opposite directions; an actuating-member; means for moving the actuating member first in one direction and then in the opposite direction; normally operative means whereby the first movement of the actuating-member may be communicated to the gear-shifting member; normally inoperative means for communicating the second movement of the actuating-member to the gear-shifting member; and means, operable under the control of the operator, for holding said normally inoperative means in operative position.



2. Power-transmission mechanism having, in combination, a gear-shifting member movable in opposite directions; an actuating-member; means for moving the actuating-member first in one direction and then in the opposite direction; normally operative means whereby the first movement of the actuating-member may be communicated to the gear-shifting member; normally inoperative means for communicating the second movement of the actuating-member to the gear-shifting member; and magnetically-controlled means for holding said normally inoperative means in operative position.

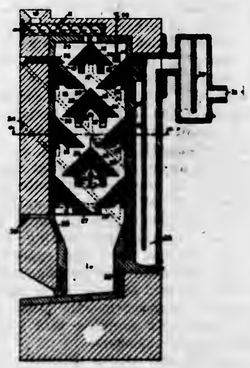
3. Power-transmission mechanism having, in combination, a gear-shifting member movable in opposite directions; an actuating-member; means for moving the actuating-member first in one direction and then in the opposite direction, with a gradually accelerated and retarded movement; normally operative means whereby the first movement of the actuating-member may be communicated to the gear-shifting member; normally inoperative means for communicating the second movement of the actuating-member to the gear-shifting member; and means, operable under the control of the operator, for holding said normally inoperative means in operative position.

4. Power-transmission mechanism having, in combination, a gear-shifting member movable in opposite directions; an actuating-member located alongside the gear-shifting member; means for moving the actuating-member first in one direction and then in the opposite direction; abutments on the two members whereby the actuating-member may move the gear-shifting member in either direction, those of said abutments for movement in one direction being fixed and constantly operable, while one of the abutments for movement in the opposite direction is normally yieldable; and means, operable under the control of the operator, for holding said yieldable abutment in operative position.

5. Power-transmission mechanism having, in combination, a gear-shifting member movable in opposite directions; an actuating-member movably mounted alongside the gear-shifting member; an eccentric rotatable member; a link connecting the rotatable member with the actuating-member; a manually-operable member; connections between the manually-operable member and the rotatable member whereby a complete stroke of the manually-operable member, in one direction, may cause a complete rotation of the rotatable member, so as to produce a movement of the actuating-member first in one direction and then in the opposite direction; and means, operable under the control of the operator, whereby the actuating-member may be connected with, or disconnected from, the gear-shifting member so as to move the latter to, and leave it in, either of a plurality of positions.

[Claims 6 to 12 not printed in the Gazette.]

1,152,505. ELECTRICAL FURNACE. WILLIAM H. HAMPTON, New York, N. Y., assignor to The Conley Electric Furnace Company, Incorporated, Wilmington, Del., a Corporation of Delaware. Filed Feb. 28, 1913. Serial No. 751,258. (Cl. 204—64.)



1. An electrical furnace for the reduction of zinc or the like provided interiorly with a staggered arrangement of guide members extending in proximity to each other and partially inclosing a plurality of connecting cavities with sloping surfaces over which the material flows from one to another in a zigzag downward course, non-arcing resistance means in the interior of said guide members for internally heating the surfaces thereof so as to heat the material as it flows thereover, and means for leading off at different levels from said cavities the material vaporized from the charge.

2. An electrical zinc-reduction furnace having a shaft from which air is excluded, refractory blocks therein, provided with reversely sloping surfaces to change the direction of the flow of the material, non-arcing carbonaceous resistance conductors located inside part or all of said blocks, and means for conducting off and condensing the zinc vapor.

3. An electrical zinc-reduction furnace, comprising a shaft from which air is excluded, a staggered collection of guide members comprising central triangular refractory blocks and lateral blocks affording a plurality of zigzag communicating passages having sloping surfaces over which the material travels back and forth downwardly, means for heating the charge as it flows over said surfaces comprising electrical resistance elements composed of a mixture of clay and graphite embedded within said blocks, and means for conducting off the zinc vapor from the shaft.

4. An electrical furnace for the reduction of zinc or the like, comprising a shaft from which air is excluded, a plurality of guide members in staggered relation therein having reversely sloping surfaces over which the material travels by gravity in a succession of downward slides, non-arcing resistance means located entirely within said members for internally heating said surfaces to a high degree of heat so as to heat the material as it flows thereover, and means for conducting off the liberated vapors at different levels from beneath said guide members.

5. An electrical furnace having a shaft and a plurality of triangular guide blocks therein arranged in staggered relation so that the material in descending slides in a zigzag course over their surfaces, said blocks comprising upper and lower sections fitted together and containing a chamber, and resistance conductors composed of a carbonaceous mixture filling said chamber so as to heat the guide surfaces from within.

[Claims 6 to 18 not printed in the Gazette.]

1,152,506. METHOD OF MANUFACTURING CARBID. HERMAN L. HARTENSTEIN, Constantine, Mich., assignor, by mense assignments, to Continental Investment Company, Duluth, Minn., a Corporation of Minnesota. Filed Feb. 18, 1907. Serial No. 358,015. (Cl. 204—62.)

1. The process of recovering carbid waste which comprises intimately commingling such carbid waste with finely divided carbon to produce a reaction mixture and subjecting such mixture to a fusing heat.

2. The process of recovering carbid waste which comprises intimately commingling such carbid waste with finely divided carbon to produce a reaction mixture and subjecting such mixture to a fusing heat, such carbon being in amount at least sufficient to reduce the oxidised bodies present capable of reacting on carbid.

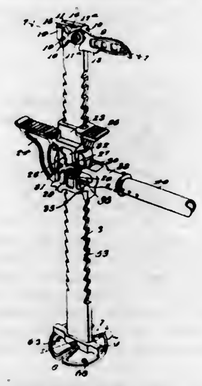
3. The process of recovering carbid waste which comprises intimately commingling such carbid waste with finely divided carbon to produce a reaction mixture and subjecting such mixture to a fusing heat, such carbon being in amount in excess of that required to reduce the oxidised bodies present capable of reacting on carbid.

4. The process of recovering carbid waste which comprises intimately commingling such carbid waste with finely divided carbon to produce a reaction mixture and subjecting such mixture to a fusing heat, such carbon being in amount sufficient to reduce the oxidised bodies present capable of reacting upon carbid and also to form carbid with the calcium existing in other forms than carbid.

5. The process of utilizing calcium carbid waste, which consists in intimately commingling the waste with finely-divided carbon, in amount at least sufficient to reduce the calcium oxid present in the waste, and subjecting the mixture to a fusing heat.

[Claims 6 and 7 not printed in the Gazette.]

1,152,507. LIFTING-JACK. WILLIAM F. HIATT, Indianapolis, Ind., assignor, by mesne assignments, to Charles E. Benefiel Company, Indianapolis, Ind., a Corporation of Indiana. Filed MAR. 5, 1914. Serial No. 822,744. (Cl. 254—110.)



1. In a lifting jack, a toothed standard, a slide mounted on the standard, a rocking actuating member bifurcated to engage on either side of the standard, each arm of the bifurcated portion having a bearing recess at its upper edge, the slide having inwardly projecting studs with which said bearing recesses are engaged, a support for the actuating member to rock upon and holding the recessed furcate portions thereof in engagement with the studs, and pawls mounted in the rocking member and engaging with the teeth of the standar

2. In a lifting jack, a toothed standard, a slide mounted on the standard, a rocking actuating member disposed in the slide, the slide being provided with an inwardly pro-

jecting stud with which the upper edge of the actuating member engages, and a detachable bottom plate mounted in the slide immediately beneath said actuating member.

3. In a lifting jack, a standard having teeth upon its opposite edges, a slide mounted upon the standard and having opposite inwardly projecting studs, a rocking actuating member bifurcated at its end to embrace the standard, the arms of said bifurcated end being disposed within the slide and each arm being formed in its upper edge with an open bearing recess engaging a corresponding stud, means for rockingly supporting the actuating member detachably fitted to the slide and extending along opposite sides of the standard, and oppositely disposed pawls pivotally mounted between the arms of the rocking member and engaging the teeth of the standard.

4. In a lifting jack, a standard having teeth upon its opposite edges, the teeth being upwardly and outwardly inclined, a slide mounted upon said standard, the slide being slotted at its upper end for the passage of the standard and having two spaced depending side portions disposed on each side of the standard, a detachable plate forming the bottom of the slide and slotted to embrace the standard, the side pieces of the slide being formed with inwardly projecting studs, a rocking member bifurcated to embrace the standard, each arm of the bifurcated portion of the actuating member being convexly rounded upon its lower edge and formed with an open bearing recess upon its upper edge adapted to engage with the corresponding stud, oppositely disposed pawls pivotally mounted between the arms of the actuating member and engageable with the teeth of the standard, and a spring urging said pawls toward each other.

5. In a lifting jack, a toothed standard, a slide mounted on the standard, a rocking actuating member mounted in the slide, oppositely disposed pawls mounted in the rocking member and engageable with the teeth of the standard, a reversing member mounted for vertical movement upon the slide and movable into and out of engagement with the pawls, and a cam mounted upon the slide and engageable with the reversing member to shift the same.

[Claims 6 to 14 not printed in the Gazette.]

1,152,508. PUNCTURE-PROOF WHEEL. WALLACE J. HIGGS, Lehi, Utah. Filed Jan. 27, 1915. Serial No. 4,731. (Cl. 152—10.)



1. In a device of the class described, an inner wheel, an inflatable tire engaging said wheel, a plurality of bearing units spaced apart and engaging the said tire by their inner ends, a plurality of other bearing units interposed between the first mentioned bearing units and spaced at their inner ends from said inflatable tire, and means for limiting the outward movement of the interposed bearing units.

2. In a device of the class described, an inner wheel, an inflatable tire engaging said wheel and having outwardly directed projections spaced apart, a plurality of bearing units spaced apart and respectively engaging the projections of said tire by their inner ends, a plurality of other bearing units interposed between the first mentioned bearing units and spaced at their inner ends from said inflatable tire, and means for limiting the outward movement of said interposed bearing units.

3. In a device of the class described, an inner wheel, an inflatable tire engaging said wheel, a plurality of bearing units spaced apart and engaging tire by their inner ends, a plurality of other bearing units interposed between the first mentioned bearing units and spaced at their inner ends from said inflatable tire, annular members disposed at opposite sides of said bearing units, means for connecting said annular members to said inner wheel, and fastening devices movably coupling said interposed bearing units to said annular members.

4. In a device of the class described, an inner wheel, an inflatable tire engaging said wheel, a plurality of bearing units spaced apart and engaging said tire by their inner ends and each provided with lateral bearing shoulders, a plurality of other bearing units interposed between the first mentioned bearing units and having lateral projections engaging the bearing shoulders of the first mentioned bearing units and spaced at their inner ends from said inflatable tire, and means for limiting the outward movement of the interposed bearing units.

5. In a device of the class described, an inner wheel, an inflatable tire engaging said wheel, a plurality of bearing units spaced apart and engaging said tire by their inner ends and each provided with lateral bearing shoulders, a plurality of other bearing units interposed between the first mentioned bearing units and having lateral projections engaging the bearing shoulders of the first mentioned bearing units and spaced at their inner ends from said inflatable tire, annular members disposed at opposite sides of said bearing units, means for connecting said annular members to said inner wheel, and fastening devices movably coupling said interposed bearing units to said annular members.

[Claim 6 not printed in the Gazette.]

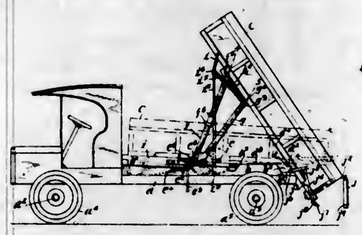
1,152,509. FOUNTAIN-PEN. JOHN A. HOLLAND, Cincinnati, Ohio, assignor to The John Holland Gold Pen Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 3, 1914. Serial No. 870,142. (Cl. 120—46.)

1. A fountain pen comprising a barrel, a collapsible reservoir located in the barrel, a tube section located in the barrel adjacent to the reservoir, a compressor bar located in the barrel to compress the reservoir, a pin secured to the tube section to mount the compressor bar to move transversely of said barrel, a lever to operate said compressor bar and pivotally mounted on the barrel and means secured to said tube section to yieldingly secure said lever in its inoperative position.

2. A fountain pen comprising a barrel having a slot formed therein, a collapsible ink reservoir located in said barrel, a compressor bar located in said barrel and engaging said reservoir, a lever pivotally mounted in said slot and to be swung from an inoperative position at one end of said slot to an operative position engaging said compressor bar at the other end of said slot, a projection on the lever to assist in compressing said reservoir when the lever is in an inoperative position, and means mounted within the barrel to engage said projection to retain said lever in its inoperative position.

1,152,510. DUMPING-WAGON. WILLIAM H. HUNT, New York, N. Y. Filed May 19, 1913. Serial No. 768,406. (Cl. 21—20.)

1. In a vehicle of the class described, a truck frame, a bed or body mounted thereon, and the rear end of which is movably connected with the rear end of the truck frame, and a hoisting mechanism for said bed or body, said hoisting mechanism consisting of a winding shaft mounted centrally and transversely of the truck frame, means for operating said shaft, two pairs of arms arranged transversely of the bed or body and connected with the bottom thereof forwardly of the middle thereof, the connection of one of said pairs of arms with the bottom of the bed or body being rearward of the connection of the other pair of arms with said bed or body, and being a sliding pivotal connection, and the connection of the other pair of said arms being a pivotal connection only, said other pair of arms being of telescopic construction, said pairs of arms being also each provided at their other ends with a truck frame connection movable toward and from the winding shaft, and means connected with said other ends of said pairs of arms and with the winding shaft for moving said ends of said arms toward said shaft.

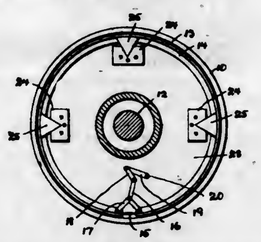


2. In a vehicle of the class described, a truck frame, a bed or body mounted thereon and the rear end of which is movable connected with the rear end of the truck frame, and a hoisting mechanism for said bed or body, said hoisting mechanism consisting of a winding shaft mounted centrally and transversely of the truck frame, means for operating said shaft, two pairs of arms arranged transversely of the bed or body and connected with the bottom thereof forwardly of the middle thereof, the connection of one of said pairs of arms with the bottom of the bed or body being rearward of the connection of the other pair of arms with said bed or body, and being a sliding pivotal connection, and the connection of the other pair of said arms being a pivotal connection only, said other pair of arms being of telescopic construction, said pairs of arms being also each provided at their other ends with a truck frame connection movable toward and from the winding shaft, and means connected with said other ends of said pairs of arms and with the winding shaft for moving said ends of said arms toward said shaft, said telescopic arms being adapted to give an initial lifting movement to the front end of the bed or body, and the other pair of arms being adapted to give a final lifting movement thereto, and to sustain the bed or body in a raised position.

3. In a vehicle of the class described, a truck frame, a bed or body mounted thereon and the rear end of which is movably connected with the rear end of the truck frame, and a hoisting mechanism for said bed or body, said hoisting mechanism consisting of a winding shaft mounted centrally and transversely of the truck frame, means for operating said shaft, two pairs of arms arranged transversely of the bed or body and connected with the bottom thereof forwardly of the middle thereof, the connection of one of said pairs of arms with the bottom of the bed or body being rearward of the connection of the other pair of arms with said bed or body, and being a sliding pivotal connection, and the connection of the other pair of said arms being a pivotal connection only, said other pair of arms being of telescopic construction, said pairs of arms being also each provided at their other ends with a truck frame connection movably toward and from the winding shaft, and means connected with said other ends of said pairs of arms with the winding shaft for moving said ends of said arms toward said shaft, said telescopic arms being adapted to give an initial lifting movement to the front end of the bed or body, and the other pair of arms being adapted to give a final lifting movement thereto, and to sustain the bed or body in a raised position, and said bed or body being also provided with other means to said in giving the front end thereof an upward initial movement consisting of link devices pivoted thereto, telescopic rods pivotally connected with said link devices and with the truck frame, and link members connected with said link devices, and telescopic rods at the points of their connection, and with the arms which are slidably connected with the bottom of the bed or body.

4. In a vehicle of the class described, a truck frame, a bed or body mounted thereon and the rear end of which has a movable connection with the truck frame, two pairs of arms pivoted to the bottom of the bed or body transversely of the bottom thereof and forwardly of the middle thereof, the connection of one pair of said arms with the bottom of the bed or body being rearwardly of the connection of the other pair of said arms, and being a sliding connection, the other pair of said arms being of telescopic construction, and both pairs of said arms being provided with a sliding connection with the truck frame.

1,152,511. DRUM-BRAKE. WILLIAM SANFORD HUTCHINSON, Oyster Bay, N. Y. Filed Jan. 15, 1915. Serial No. 2,804. (Cl. 74—13.)



1. A brake comprising a rotatable drum, a shoe arranged within the drum and adapted to impinge upon the rim of the drum, said shoe having a limited rotary movement in both directions with the drum, a stationary abutment between the shoe and the drum axis, said abutment having guides diverging toward the drum rim, and a member connected with the shoe and in engagement with the guides whereby the movement of the shoe with the drum in either direction forces the shoe against the drum rim.

2. A brake comprising a rotatable drum having a rim, a shoe concentrically arranged within the drum and adapted to impinge upon the drum rim, means independent of the setting mechanism for moving the shoe into and out of frictional engagement with the drum rim, a stationary abutment between the shoe and the axis of the drum fixed guides on the abutment directed to set the shoe against the rim, and members connected to the shoe and arranged to follow the guides on the fixed abutment, whereby the rotation of the drum in either direction will cause the shoe members to follow their guides and set the shoe forcibly against the rim.

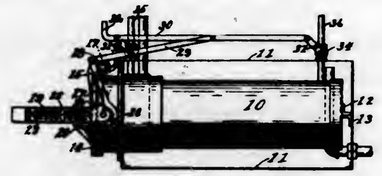
3. A brake comprising a rotatable drum, a shoe arranged within the drum, means for moving the shoe toward and away from the drum, a stationary abutment between the shoe and the axis of the drum, said abutment having oppositely inclined guiding surfaces diverging toward the drum, and a member on the shoe following the guiding surfaces of the fixed abutment, said guiding surfaces acting to force the shoe outward against the rim whereby the shoe and rim are in frictional engagement.

4. A brake comprising a rotatable drum, an expansible shoe arranged concentrically within the drum and adapted to impinge on the drum rim, means for expanding and contracting the shoe, stationary abutment blocks arranged within the shoe and between the shoe and the axis of the drum, said blocks having guiding surfaces diverging toward the shoe, and members secured to the shoe and constructed to follow the guiding surfaces of the abutment blocks.

1,152,512. ACETYLENE-GENERATING APPARATUS. HENRY W. JACOBS and HOWARD H. LANNING, Topeka, Kans. Filed Mar. 23, 1914. Serial No. 826,661. (Cl. 48—4.)

1. In an apparatus of the class described, having a generating cell provided with a cover and one or more water conduits leading to the cell, said conduits being provided with shut-off valves, a member pivotally secured to the

cell, means pivotally secured to said member and arranged to have operative relation with the cover, said means being adjustable lengthwise thereof so that movement of the members and means into parallel position will exert predetermined pressure on the cover and maintain the latter in closed position, and means intermediate of the shut-off valves and said member whereby movement of the latter out of said parallel position will induce closure of said valves.



2. In an apparatus of the class described, having one or more generating cells provided with one or more water supply conduits having a shut-off valve, the generating cell being provided with a cover at one end thereof, means pivotally secured to the cell and adapted to move across the cover, means having operative relation with the first mentioned means and the cover and being adjustable in a lengthwise direction whereby predetermined pressure will be exerted on the cover when the first mentioned and second mentioned means are brought into parallel position, and means intermediate of the shut-off valve and the first mentioned means whereby movement of the latter out of said parallel position will affect the third mentioned means and induce closure of the valve.

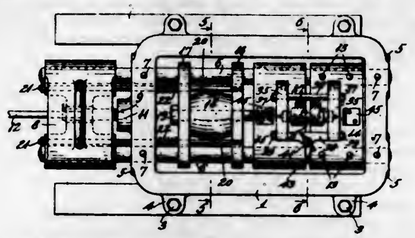
3. In combination with a generating cell provided with one or more water supply conduits, a valve in said conduit for controlling the water supply for the cell, and a cover for said cell, of means pivotally secured to the cell and arranged to be moved over the cover, a portion of said means being adjustable and adapted to operatively engage with said cover so that movement of said means into a position substantially at right angles to the cover will apply predetermined pressure thereto, and means intermediate of the first mentioned means and said valve whereby the latter will move to closed position when the first mentioned means is moved out of the pressure applying position.

4. In combination with a generating cell provided with a cover and a water supply conduit, said conduit being provided with a valve whereby passage through the conduit may be controlled, of a member pivotally secured to the cell and arranged to move into a position substantially at right angles to said cover, extensible means intermediate of said member and the cover, arranged to apply predetermined pressure on the cover when said member and means are arranged substantially parallel, a portion of said member being arranged to project beyond the path of said member, and means intermediate of said portion and said valve and arranged to be affected by said portion so that when said member is moved out of said right angular position closure of the valve will be effected.

5. In combination with a receptacle provided with a cover and a fluid delivering conduit, a valve in said conduit for controlling the flow therethrough, of a yoke pivotally secured to said receptacle so as to swing through the arc of a circle, turn-buckle mechanism pivotally secured to said yoke and arranged to bear against the cover when the yoke and turn-buckle mechanism are brought into parallel position, said yoke being provided with a lug, and means intermediate of said valve and said lug, the relation of said means and lug being such that movement of the yoke out of parallel position with the turn-buckle mechanism will induce closure of said valve and release pressure on said cover.

[Claim 6 not printed in the Gazette.]

1,152,513. CALKING-MACHINE. WILLIAM R. JEAVONS and ARNOLD R. WHITTAKER, Cleveland, Ohio. Filed Apr. 10, 1913. Serial No. 760,824. (Cl. 78—13.)



1. In an apparatus of the character set forth, the combination, with calking means comprising separable members, of operating mechanism therefor including a reciprocating member, yielding means whereby a part of the movement of the reciprocating member is transmitted to the calking means to cause its members to separate, said yielding means comprising a pair of plates and a resilient cushion interposed therebetween, one of the plates being connected with the reciprocating member and the other with the calking means, and a device whereby the joint to be calked is supported during the operation of the calking means.

2. In an apparatus of the character set forth, the combination, with calking means comprising a stationary and a reciprocating member, of operating mechanism therefor including a member which is adapted to move in alinement with the aforesaid reciprocating member, means for transmitting motion from the movable member to the reciprocating member, the last-mentioned means comprising a pair of plates having a resilient device interposed therebetween, the plate farthest removed from the movable member being connected therewith and there being a connection between the reciprocating member and the plate farthest therefrom, and a device within which the joint to be calked may be supported.

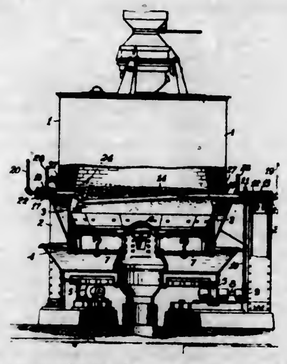
3. In an apparatus of the character set forth, the combination, with a frame, of a pair of stationary bars supported thereby, calking means comprising separable members one of which is secured to the aforesaid bars and the other movable thereon, operating mechanism for said calking means comprising a cross head which is adapted to be reciprocated on the bars, a cam carried by the cross head and having engagement with a part of the aforesaid frame, a pair of plates slidably mounted upon the bars intermediate of the cross head and the movable member of the calking means, a block of resilient material interposed between the said plates, a pair of rods connecting the cross head with the plate farthest removed therefrom, means connecting the movable member of the calking means with the other of said plates, a pair of hinged frames having recesses within their adjacent faces, wherein the joint to be calked is adapted to be confined and having means whereby they may be firmly locked together, and a projection carried by the members of the calking means whereby the frames are located.

4. Apparatus to secure flanged caps to tubes by means of calking material compressed between the cap flanges and tube wall comprising, in combination, a pair of tube calking members adapted to surround the tube and engage such calking material, means for holding said caps with their flanges spaced from the tube wall, and yielding means whereby relative longitudinal movement may be secured between said caps and said calking members.

5. In an apparatus of the character set forth, the combination of a pair of calking members adapted to surround the end portions of a tube, a support at each end of said tube and adapted to receive a cap with its flange surrounding the adjacent end portion of the tube, and means for separating the calking members to cause the ends thereof to enter the cap flanges.

[Claims 6 to 20 not printed in the Gazette.]

1,152,514. GAS-PRODUCER. EBENEZER A. W. JEFFERIES, Worcester, Mass., assignor to Morgan Construction Company, Worcester, Mass., a Corporation of Massachusetts. Filed Jan. 20, 1911. Serial No. 603,642. (Cl. 48—66.)



1. In a gas producer, the combination with a wall inclosing a heating chamber, a rotatable ash pan below said chamber and arranged to support the fuel in said chamber, and means for imparting a rotative movement to the fuel in said chamber, of a rotatable water cooled poker extending through said chamber, and means for rotating said poker.

2. In a gas producer, the combination with a stationary wall inclosing a heating chamber, a rotatable ash pan spaced below said chamber and arranged to support the fuel in said chamber, and means for rotating said ash pan, of alined bearings in opposite sides of said wall, a rotatable water cooled poker journaled in said bearings and extending through said chamber, and means for rotating said poker.

3. In a gas producer, the combination with a wall inclosing a heating chamber, a rotatable ash pan spaced below said chamber and arranged to support the fuel in said chamber, and means for rotating said ash pan, of opposite bearings in said wall with their axes in alinement, a rotatable bent water cooled poker journaled in said bearings, and means for revolving said poker.

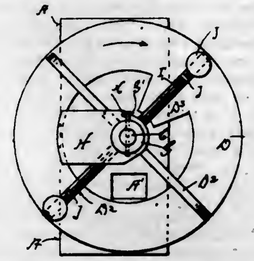
4. In a gas producer, the combination with a wall inclosing a heating chamber, a rotatable ash pan spaced below said chamber and arranged to support the fuel in said chamber, and means for rotating said ash pan, of alined opposite bearings in said wall, a water cooled poker journaled in said bearings and passing through said chamber in an irregular path between said bearings, and means for revolving said poker about an axis coincident with the axis of said bearings.

5. In a gas producer, the combination with a heating chamber for the fuel, a rotating ash support, means for transmitting the rotation of said ash support to the fuel in said chamber, a cranked member extending transversely of said chamber, and means for rotating said member.

1,152,515. MOTION-PICTURE APPARATUS. CHARLES FRANCIS JENKINS, Washington, D. C. Filed Dec. 16, 1914. Serial No. 877,592. (Cl. 88—19.4.)

1. In motion picture apparatus, the combination with a rotary shutter, of a distinct plate normally barring the passage of light to the film, and centrifugal devices mounted upon the shutter and provided with normally inactive means adapted to move the plate out of light-obstructing position when the shutter rotates rapidly.

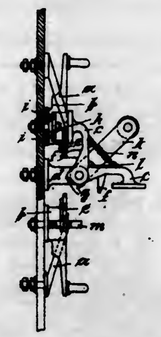
2. In picture projecting apparatus, the combination with a stationary plate having an aperture for the passage of light to a film alongside the plate, of a rotary shutter, a swinging plate normally barring the passage of light to said aperture, normally disconnected frictionally engaging means for swinging said swinging plate out of obstructing position, and centrifugal devices carried by the shutter and arranged to throw said frictionally engaging means into action when the speed or rotation of the shutter exceeds a certain limit.



3. In motion picture apparatus, the combination with a stationary plate provided with an opening for the passage of a light beam to the film, of a shutter rotating alongside said plate upon a suitable shaft, a loose sleeve revolubly mounted upon the same shaft, a plate secured to the sleeve and normally in position for obstructing said beam, and a centrifugal clutch carried by the shutter and arranged to engage the sleeve frictionally and impart angular movement thereto whenever the speed or rotation of the shutter exceeds a certain rate.

4. In motion picture apparatus, the combination with a stationary frame plate having an aperture for the passage of a projecting light beam, of a shaft fixed to the plate, a shutter parallel to the plate and rotating on said shaft, a swinging plate mounted upon said shaft and normally barring the passage of light to said aperture, two oppositely sliding approximately radial rods mounted upon the shutter and each at its inner end loosely encircling the support of said swinging plate, and a stop limiting the angle through which the rotary plate may swing.

1,152,516. ELECTRIC CHANGE-OVER SWITCH. THEODOR JESSEN, Altona-Bahrenfeld, Germany, assignor to the Firm of Blohm & Voss, Kommandit-Gesellschaft auf Aktien, Hamburg, Germany. Filed Feb. 24, 1914. Serial No. 820,751. (Cl. 175—282.)



1. An electric-change-over switch for selectively connecting a feeder line to any one of a plurality of independent supply lines comprising two sets of supply line contacts, a pair of movably mounted selectors each movable over one set of said contacts, a pair of movably mounted switch members each adapted to close upon and make contact with one of said selectors, means for closing and opening said switch members, said means operating to open one of said members shortly before the other member reaches its closed position, and a feeder line terminal connected to said switch members.

2. An electric change-over switch for selectively connecting a feeder line to any one of a plurality of independent supply lines comprising, in combination, two sets of supply line contacts mounted on a support, two movably mounted selectors, each movable over one set of said contacts, a feeder line terminal mounted on said support between said contacts, and a switch mounted between said selectors comprising two pivoted levers in electrical connection with said terminal and each adapted to close upon one of said selectors, a tractile spring connecting said levers, a stop on each lever, said stops co-acting when one of said levers is in closed position and when the other is nearly in closed position, and means for moving said levers alternately into closed position.

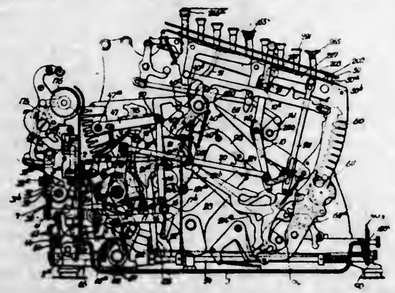
3. An electric change-over switch for selectively connecting a feeder line to any one of a plurality of independent supply lines comprising, in combination, a multi-series of supply line contacts, a plurality of movably mounted selectors, each movable over one series of said contacts, a pair of movably mounted switch members for each pair of selectors, feeder line terminals in electrical connection with said switch members and means for moving the switch members of each pair alternately into conducting relationship with said selectors.

4. An electric switch comprising, in combination, a switch board, a pair of supply line contacts thereon, a feeder line terminal mounted on said board, a pair of levers pivotally mounted on said board in electrical connection with said terminal and each adapted to close upon one of said contacts, a spring connecting said levers, yielding lugs holding the switch closed against the action of the spring, an abutment on each of said levers, said abutments being adapted to release the levers from the lugs and to collide when one of said levers is in closed position and when the other lever is neary in its closed position and means for alternately closing said levers.

5. An electric switch comprising, in combination, a switch board, a pair of supply line contacts thereon, a feeder line terminal between said contacts, a pair of levers mounted on a common pivot on said board in electrical connection with said terminal and each adapted to close upon one of said contacts, a tractile spring connecting said levers, yielding lugs holding the switch closed against the action of the spring, an abutment on each of said levers, said abutments being adapted to release the levers from the lugs and to collide when one of said levers is in closed position and when the other lever is nearly in closed position, a pivotally mounted operating handle and an abutment on said handle adapted to alternately engage said levers.

[Claims 6 to 9 not printed in the Gazette.]

1,152,517. ADDING AND LISTING MACHINE. WILLIAM J. KILPATRICK, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich. Filed Aug. 13, 1912. Serial No. 714,799. (Cl. 235—60.)



1. In a machine of the class described, the combination of setting up devices, two accumulators, a prime mover and actuating connections therefrom to said accumulators, means actuated by said prime mover in successive operations thereof to provide for alternate actuation of the two accumulators, a laterally shiftable paper carriage, and means set thereby which disables the last-specified means.

2. In a machine of the class described, the combination of setting up devices, racks, two sets of adding pinions, duplex controlling devices for causing engagement and disengagement of racks and pinions, means for alternating effectiveness of the set of controlling devices, a prime mover, connections therefrom to said last-mentioned means, a laterally shiftable paper carriage and means set thereby to disable the said prime mover connections.

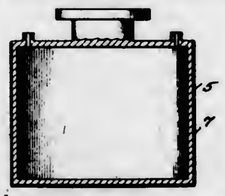
3. In a machine of the class described, the combination of setting up devices, racks, two sets of adding pinions, duplex controlling devices for causing engagement and disengagement of racks and pinions, means for alternating effectiveness of the sets of controlling devices, including a rocking member with opposed engaging portions, a prime mover and a lever oscillated thereby and carrying a reversible thrust-piece to alternately act upon the engaging portions of said rocking member.

4. In a machine of the class described, the combination of setting up devices, racks, two sets of adding pinions, duplex controlling devices for causing engagement and disengagement of racks and pinions, means for alternating effectiveness of the set of controlling devices, including a rocking plate with a V-shaped portion and substantially radial shoulders on opposite side thereof; a prime mover; and a lever oscillated thereby and carrying a reversible thrust-piece adapted to engage said plate on opposite sides of its V-shaped portion and alternately act upon the radial shoulders to rock the plate first one way and then the other in successive operation of the prime mover.

5. In a machine of the class described, the combination of setting up devices, racks, two sets of adding pinions, duplex controlling devices for causing engagement and disengagement of racks and pinions, means for alternating effectiveness of the set of controlling devices, including a rocking member with opposed engaging portions; a prime mover; a lever arranged to be actuated by the latter and carrying a thrust piece to alternately act upon the engaging portions of said rocking member; a spring applied to said lever; and interlocking devices between the prime mover and the means which govern effectiveness of the aforesaid controlling devices.

[Claims 6 to 29 not printed in the Gazette.]

1,152,518. MOLD-PLUNGER. ALEXANDER KINNEAR, Toledo, Ohio. Original application filed Jan. 14, 1913, Serial No. 742,004. Divided and this application filed Oct. 6, 1913. Serial No. 793,674. (Cl. 25—102.)

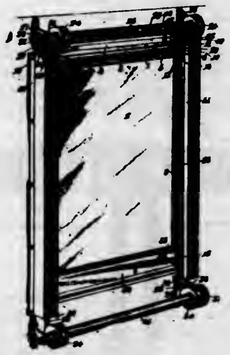


1. A mold plunger having a covering of porous material, said covering being air absorbent and free to allp off the plunger to remain on the molded article when said plunger is retracted.

2. A mold plunger having a covering of porous material frictionally held thereon, said covering being air absorbent and free to slip off the plunger to remain on the molded article when the plunger is withdrawn.

1,152,519. WINDOW-CLEANING DEVICE. THOMAS EDWIN KIRK, Columbus, Ohio, assignor of one-half to John George Lehr, Columbus, Ohio. Filed July 14, 1914. Serial No. 850,952. (Cl. 15—59.)

1. A cleaning device of the class described including straight spaced guides or ways, spaced guide rails located at the guides or ways, and a wiper having terminal pivots slidable in the guides or ways, said wiper being also provided with projecting means slidable along the guide rails and arranged at the inner faces of the same during one of the movements of the wiper and at the outer faces of the said guide rails during the other movement of the wiper, said guide rails being provided with terminal portions for automatically guiding the said projecting means to the other face of the rails.



2. A cleaning device of the class described including straight spaced guides or ways, spaced guide rails located at the guides or ways, and a wiper having terminal pivots slidable in the guides or ways, said wiper being also provided with projecting means slidable along the guide rails and arranged at the inner faces of the same during one of the movements of the wiper and at the outer faces of the guide rails during the other movement of the wiper, said guide rails being provided with terminal offset portions arranged to guide the said projecting means to the other face of the rails.

3. A cleaning device of the class described including spaced guide rails to be mounted at opposite sides of a window, and a wiper slidable along the guide rails and having projecting means arranged at the inner faces of the guide rails during one of the movements of the wiper, and at the outer faces of the guide rails during the other movement of the wiper, said guide rails being provided at one end with fixed offset portions and having yieldable portions at the other end arranged to be fixed by the said projecting means.

4. A cleaning device of the class described including spaced casings provided with straight longitudinal slots, guide rails located at the said slots, and a wiper having pivots slidable in the slots, said wiper being also provided with separate projecting means slidable along the guide rails, and means for actuating the wiper.

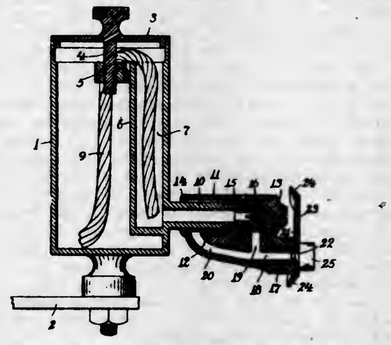
5. A cleaning device of the class described including spaced guide rails, a wiper slidable along the same and tiltable to move it into and out of contact with a window, said wiper being provided with arms having openings, links slidable in the openings to facilitate such tilting movement of the wiper, and means connected with the links for moving the wiper along the guide rails.

[Claim 6 to 16 not printed in the Gazette.]

1,152,520. LUBRICATOR. AUGUST L. KNUDSEN, Boston, Mass. Filed Apr. 19, 1915. Serial No. 22,284. (Cl. 184—21.)

1. An oiler for guide rails comprising a reservoir, a tubular vent out of direct communication with said reservoir, means for supplying a limited amount of oil from the reservoir to said vent, a sleeve slidable and rotative on said vent having a downwardly and outwardly extended conduit, and a delivery nozzle attached to the outer end of said conduit.

2. An oiler for guide rails comprising a reservoir, a tubular vent out of direct communication with the reservoir, means for supplying a limited amount of oil from the reservoir to the vent, a sleeve inclosing said vent having a shoulder at its inner end slidably fitting the vent, the sleeve having a downwardly and outwardly extended conduit, and a delivery nozzle attached to the outer end of said conduit.

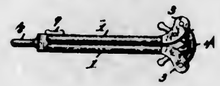


3. An oiler for guide rails comprising a tubular vent disposed for receiving a limited supply of oil, a sleeve inclosing the vent having a shoulder at its inner end slidably fitting the vent, the sleeve having its outer end closed and being formed with a downwardly and outwardly extended conduit, a thimble attached to the outer end of the vent slidably fitting the sleeve, a helical spring pressing between the thimble and the outer closed end of the sleeve, and a delivery nozzle attached to the outer end of said conduit.

4. An oiler for guide rails comprising a tubular vent disposed for receiving a limited supply of oil, a sleeve inclosing the vent having a shoulder at its inner end slidably fitting the vent, the sleeve having its outer end closed and being formed with a downwardly and outwardly extended conduit, a thimble attached to the outer end of said vent and slidably fitting the sleeve, an oil delivery device attached to the outer end of said conduit, the latter being connected both with the outer section of the sleeve-chamber and also with the inner end thereof near said shoulder.

5. An oiler for guide rails comprising a tubular vent disposed for receiving a limited supply of oil, a sleeve slidable on said vent having a downwardly and outwardly extended conduit, and an oil delivery device attached to the outer end of said conduit, said device having a flat surface for contacting with the surface of the guide rail, a lug to engage each lateral surface of said rail in the same horizontal plane with the conduit, said flat surface being upwardly prolonged to the level of the top part of said sleeve, and both top and bottom ends of said flat surface being beveled, a hole being provided through the delivery device to connect with the conduit.

1,152,521. FOLDING EYEGLASSES. HENRY E. LEIBE, Newark, N. J. Filed Aug. 29, 1914. Serial No. 859,155. (Cl. 88—44.)



1. A pair of eye-glasses comprising lenses, frames for holding the lenses, bridge-securing means on said lens frames, spring-actuated nose guards pivotally secured to said bridge-securing means, a spring-actuated bridge pivotally connected to the ends of said bridge-securing means and so arranged that the lens frames may be folded one upon the other, a handle on one of the lens frames and locking means on the handle for engagement with the other lens frame to lock the lens frames in folded position.

2. A pair of eye-glasses comprising lenses, frames for holding the lenses, bridge-securing means on said lens-frames projecting toward each other, each of said bridge-securing means being provided with a slot, spring-actuated nose guards provided with flattened end portions pivotally secured to said bridge-securing means, said flattened end portion projecting through the slots in said bridge-securing means, a spring-actuated bridge provided with stops, pivotally connected to the ends of the said bridge-securing means and so arranged that the lens frames may be properly positioned and folded one upon the other.

3. A pair of eye-glasses comprising lenses, frames for holding the lenses, bridge-securing means on said lens frames projecting toward each other, each of said bridge-securing means being provided with a slot, spring-actuated nose guards provided with flattened end portions pivotally secured to said bridge-securing means, said flattened end portions projecting through the slots in said bridge-securing means, a spring-actuated bridge provided with stops, pivotally connected to the ends of said bridge-securing means and so arranged that the lens frames may be properly positioned and folded one upon the other, a handle on one of the lens frames and locking means on the handle for engagement with the other lens frame to lock the lens frames in folded position.

4. A pair of eye-glasses comprising lenses, frames for holding the lenses, slotted channel-shaped bridge-securing means on said lens frames projecting toward each other, spring-actuated nose guards provided with flattened end portions pivotally secured to said bridge securing means, said flattened end portions projecting through the slotted bridge-securing means, a spring-actuated bridge provided with tubular ends, and stops formed integral with the upper portion of the bridge in close proximity to the tubular ends pivotally connected to the ends of said bridge-securing means and so arranged than the lens frames may be properly positioned and folded one upon the other.

5. A pair of eye-glasses comprising lenses, frames for holding the lenses, channel-shaped bridge-securing means on said lens frames projecting toward each other, a post rotatively located in each of said bridge-securing means, the lower end of said post being provided with a slot, spring-actuated nose guards provided with flattened end portions pivotally secured to said bridge-securing means, said flattened end portions projecting through the slots in said bridge-securing means and said tubular posts, a spring-actuated bridge provided with tubular ends and stops formed integral with the upper portion of the bridge in close proximity to the tubular ends pivotally connected to the ends of said bridge-securing means and so arranged that the lens frames may be properly positioned and folded one upon the other.

1,152,522. VALIDATING STAMPING SYSTEM. JOHN J. LEIDIGH, Milwaukee, Wis., assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio. (Incorporated in 1906.) Original application filed July 2, 1906, Serial No. 324,363. Renewed Apr. 13, 1911, Serial No. 620,888. Divided and this application filed July 17, 1913. Serial No. 779,436. (Cl. 164—94.)

1. In an apparatus of the described class, the combination with a perforated table; a die supporting bracket mounted on said table; a die supported by said bracket above the table, and having perforations corresponding with the perforations in said table; a punching head having pins in alinement with said perforations; an electro-magnetic coil depending from said table; and a magnetizable bar adapted to be actuated by said coil into contact with the punching head.

2. In a device of the character described, a magnetic check-punching device comprising a solenoid, a core therefor, a spring retracted punch member in the path of the core and adapted to be struck and moved thereby, punch-pins carried by the punch member, a plate having perforations in which the punch-pins project, and a die adapted to receive a check and having perforations into which the punch-pins may be driven through the check when the punch member is struck by the solenoid-core.

3. In a device of the character described, a magnetic check-punching device comprising a solenoid, a core therefor, a punch member in the path of the core and adapted to be struck and moved thereby, punch-pins carried by the punch member, a plate having perforations in which the punch-pins project, said punch member having a shouldered reduced portion, a punch rest connected to the plate and having an opening through which the reduced portion of the punch member passes, a coil spring surrounding the reduced portion of the punch member and bearing against its shoulder and against the punch-rest, and a check receiving die mounted on the plate and having perforations into which the punch-pins are adapted to be driven through the check when the punch member is struck by the solenoid-core.

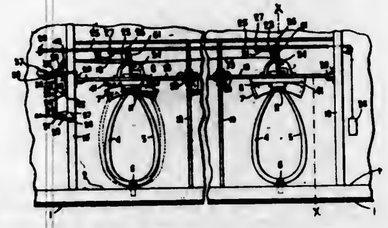


4. In a device of the character described, a check-punching means comprising a solenoid, a core-tube for the solenoid extending beneath the same, a core operating in the core-tube, a plate to which the core-tube is rigidly secured, a punch member having a reduced portion projecting into the core-tube and adapted to be struck and moved by the core, a series of punch-pins carried by the punch member, a top-plate connected with the beforementioned plate at a distance therefrom and having perforations into which the punch pins extend, a punch-rest mounted on the top of the plate for supporting the punch member and having an opening through which the reduced portion of the punch member extends, a coil-spring surrounding and engaging the reduced portion of the punch member and bearing on the punch-rest, a check-receiving die-strip on the top plate having perforations into which the punch-pins are adapted to be driven when the punch member is struck by the solenoid-core, and a bracing-strip on the die-strip adapted to prevent it being bent out of position.

1,152,523. CATTLE-STANCHION. JAMES H. LEWIS, Ipswich, Mass. Filed Feb. 24, 1913. Serial No. 750,109. (Cl. 119—148.)

1. In a stanchion, the combination with two stanchion members pivotally connected at their lower ends and capable of swinging toward and from each other, of a head embracing the movable upper ends of said members, latches carried by said head for locking the stanchion members in closed relation, said latches resting on and being supported in inoperative position by the stanchion members when the latter are opened, means supporting said stanchion members for turning movement about a vertical axis, and means coöperating with said latches when they are in inoperative position to hold the stanchion centered.

2. In a stanchion, the combination with two stanchion members pivotally connected at their lower ends and capable of swinging toward and from each other, of a head embracing the upper movable ends of said members, latches carried by said head for locking the stanchion members in closed relation, said latches resting on and being supported in inoperative position by the stanchion members when the latter are opened, means supporting said stanchion members for turning movement about a vertical axis, and means coöperating with said latches when they are in their inoperative position to hold the stanchions centered.



3. In a stanchion, the combination with two stanchion members pivotally connected at their lower ends and capable of swinging toward and from each other, of a head embracing the upper movable ends of said members and having a hollow neck, latches carried by said head for locking the stanchion members in closed relation, cords connected to said latches and extending through said hollow neck by which the latches can be raised, said latches resting on and being supported in inoperative position by the stanchion members when they are opened, means sustaining said head for turning movement about a vertical axis and means to engage said latches when raised and hold the stanchion from turning.

4. In a stanchion, the combination with two stanchion members pivotally connected at their lower ends and capable of moving toward and from each other, of a supporting member a head having a hollow neck mounted for turning movement in said member, weighted latches pivoted at their inner ends to said head each having provision between its pivot and its weighted end to engage said stanchion member and hold it closed, said latches being held in raised position by the stanchion members when they are open, a cord connected to said latches by which they may be released from the stanchion members and means to engage the latches when raised to hold the stanchions centered.

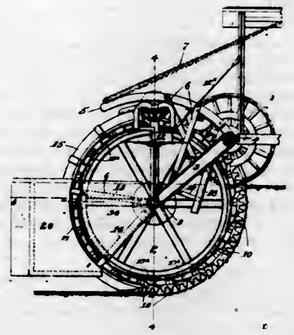
5. The combination with a plurality of stanchions, of a stanchion-opening cord for each stanchion, said cords all extending to the same place, a movable selective device, means for detachably connecting any particular cord or cords to said selective device, and means for operating said selective device thereby to open the stanchions corresponding to said cords.

[Claims 6 to 10 not printed in the Gazette.]

1,152,524. DITCHING-MACHINE APPARATUS. TORB-JÖRN LINGA, Thor, Iowa, assignor to American Ditching Machine Company, West Minneapolis, Minn., a Corporation of Minnesota. Filed Sept. 30, 1910. Serial No. 584,693. (Cl. 37—17.)

1. In a ditching machine the combination with a movable truck, of a digging wheel, an arm pivotally mounted at one end upon the truck and carrying the wheel rotatably mounted at its free end, means for moving the arm on its pivot to position the wheel vertically for digging ditches of different depths and for raising the wheel clear of the ground, a dirt guard extending from the top to the bottom of the wheel surrounding the rear periphery thereof and adapted to direct dirt from the top of the digging wheel to the bottom of the ditch, and means for automatically maintaining the guard in position with its upper end at substantially the topmost point of the wheel regardless of the depth of ditch being dug.

2. In a ditch digging machine the combination with a movable truck, of a digging wheel, an arm pivotally mounted at one end upon said truck and carrying said wheel rotatably mounted at its free end, means for raising and lowering the arm to position the wheel vertically for digging ditches of different depths and for raising the wheel clear of the ground, a standard pivotally connected with the free end of said arm uprising therefrom and spanning the wheel, means for maintaining said standard in vertical position regardless of the relative height of the wheel, a wheel guard extending over the rear portion of the wheel and having its upper end connected with said standard, whereby the upper end of said standard is maintained at all times at the topmost point of the wheel, and guard supports pivotally connected at the center of the wheel and extending rearwardly to said guard to maintain the lower end thereof properly spaced from the periphery of the wheel.



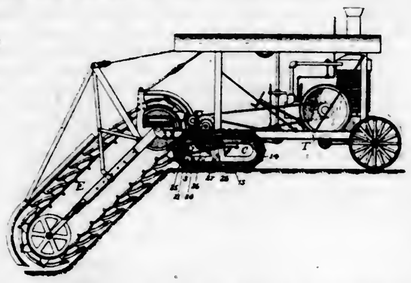
3. In a ditching machine, a truck and a digging wheel carried thereby and movable therewith, a lever pivotally mounted at one end to the rear end of the truck and carrying the wheel rotatably mounted on its free end, in combination with a dirt guard and protector shield associated with said digging wheel, said guard directing dirt from the top of the wheel to the bottom of the ditch and said protector shield maintaining the sides of the ditch against collapse and means connecting the guard and shield to said pivoted arm and to the truck for automatically maintaining said devices in a fixed relation to the vertical diameter of the wheel and the bottom of the ditch.

4. In a ditching machine, a truck, an arm arranged to move vertically and pivoted at its forward end to the rear end of the truck, a digging wheel rotatably mounted on the rear end of the arm, a dirt guard arranged adjacent to the rear side of the wheel and adapted to direct dirt from the top of the wheel to the bottom of the ditch, a protector shield carried by the guard and adapted to prevent the collapse of the sides of the ditch and means connecting said guard and shield with the free end of said arm and with the truck and adapted to hold the guard and shield in fixed positions relatively to the bottom of the ditch and to the vertical diameter of the wheel regardless of the position of the movable arm.

5. In a ditching machine, the combination with a digging wheel vertically adjustable in circular arc, of a peripheral guard adjacent said wheel concentrically mounted with respect to the axis thereof and extending from the top of said wheel to substantially the bottom of the ditch dug by said wheel, a protector shield fitted to and carried by the guard and supporting the sides of the ditch and means for supporting said guard and shield in a fixed relation to the horizontal diameter of the wheel regardless of the height of the wheel.

[Claims 6 to 13 not printed in the Gazette.]

1,152,525. CATERPILLAR-WHEEL FOR DITCHING-MACHINES. TORBJÖRN LINGA, Thor, Iowa, assignor to American Ditching Machine Company, West Minneapolis, Minn., a Corporation of Minnesota. Filed Sept. 30, 1910. Serial No. 584,697. (Cl. 21—114.)



1. In a traction machine having a live axle, an elongated caterpillar traction element carried thereon and comprising a horizontally elongated frame member pivotally mounted adjacent its middle portion and above the center thereof on said axle, a traction belt encircling the frame movable thereon and composed of a series of metallic plates hinged together, a central row of inwardly projecting teeth on said belt, a transverse shaft rotatably mounted in the rear end of said elongated frame, a gear wheel on said shaft adapted to engage the teeth on the belt to drive same, and driving means connecting said transverse shaft and the axle for transmitting power from the axle to said belt.

2. In a traction machine having a live axle, an elongated caterpillar traction element carried thereon and comprising a horizontally elongated frame member pivotally mounted adjacent its middle portion and above the center thereof on said axle, a traction belt encircling the frame movable thereon and composed of a series of metallic plates hinged together, a central row of inwardly projecting teeth on said belt, a transverse shaft rotatably mounted in one end of said elongated frame, a gear wheel on said shaft adapted to engage the teeth on the belt to drive same, and driving means connecting said transverse shaft and the axle for transmitting power from the axle to said belt.

3. In a traction machine having a live axle, an elongated caterpillar traction element carried thereon and comprising a horizontally elongated frame member pivotally mounted adjacent its middle portion and above the center thereof on said axle, a traction belt encircling the frame movable thereon, and composed of a series of metallic plates hinged together, a row of inwardly projecting teeth on said belt, a transverse shaft rotatably mounted in the rear end of said elongated frame, a gear wheel on said shaft adapted to engage the teeth on the belt to drive same, and driving means connecting said transverse shaft and the axle for transmitting power from the axle to said belt.

4. In a traction machine having a live axle, an elongated caterpillar traction element carried thereon and comprising a horizontally elongated frame member pivotally mounted adjacent its middle portion and above the center thereof on said axle, a traction belt encircling the frame movable thereon and composed of a series of metallic plates hinged together, a row of inwardly projecting teeth on said belt, a transverse shaft rotatably mounted in one end of said elongated frame, a gear wheel on said shaft adapted to engage the teeth on the belt to drive same, and driving means connecting said transverse shaft and the axle for transmitting power from the axle to said belt.

1,152,526. HORSESHOE-CALK. RAYMOND L. LOUDERBACK, Middletown, Ohio. Filed Dec. 21, 1914. Serial No. 878,398. (Cl. 168—34.)

1. A device of the character described including a body portion adapted to engage a horse shoe and provided with an inclined shoulder sloping toward the shoe, a calk carried by the body portion and provided with an inclined shoulder seating upon said first mentioned shoulder, a clamping plate coacting with the body portion and adapted to engage the shoe, and means operatively engaging the calk and coacting with the clamping plate for moving the said plate toward the body portion and for moving the shoulder of the calk upon the shoulder of the body portion to bring the calk into binding engagement with the shoe.



2. A device of the character described including a body portion adapted to engage a horse shoe and provided with a shoulder sloping toward the lower face of the shoe, a calk operatively supported by the body portion to confront the lower face of the shoe and provided with a shoulder seating upon said first mentioned shoulder, a clamping plate coacting with the body portion and adapted to engage the shoe, and means operatively engaging the calk and coacting with said clamping plate for moving the said plate toward the body portion and for moving the shoulder of the calk upon the shoulder of the body portion to bring the calk into binding engagement with the lower face of the shoe.

3. A device of the character described including a body portion adapted to engage over the upper face of a horse shoe and provided with arms extending beneath the lower face of the shoe, the said arms having inclined shoulders formed thereon, a calk supported by said arms and provided with inclined shoulders seating upon said first mentioned shoulders, a clamping plate coacting with the body portion and adapted to engage over the shoe, and means coacting with the said clamping plate and operatively engaging the calk whereby the calk is brought into binding engagement with the lower face of the shoe.

4. A device of the character described including a body portion adapted to engage a horse shoe, said body portion having arms formed thereon provided with inclined shoulders, a calk supported by said arms and movable longitudinally thereof, the said calk being provided with inclined shoulders seating upon said first mentioned inclined shoulders, a clamping plate coacting with the body portion and adapted to engage the shoe, and means operatively engaging the calk and coacting with the said clamping plate for moving the calk longitudinally between said arms.

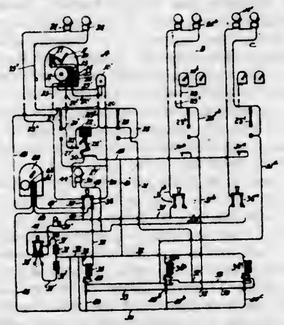
5. A device of the character described including a body portion adapted to engage a horse shoe, said body portion having spaced arms formed thereon provided with inclined shoulders, a calk supported by said arms and movable longitudinally thereof, said calk being provided with inclined shoulders seating upon said first mentioned shoulders and having a shank extending therefrom, a clamping plate formed to receive the shank and said arms, the said clamping plate being movable longitudinally upon the arms and being adapted to coact with the body portion to engage the shoe, and means adjustable longitudinally upon the shank and coacting with the clamping plate for moving the calk longitudinally between said arms.

[Claims 6 to 11 not printed in the Gazette.]

1,152,527. FIRE-ALARM SYSTEM. JUDSON MCFELL, Chicago, Ill. Filed Nov. 5, 1914. Serial No. 870,396. (Cl. 177—354.)

1. In a fire alarm signaling system, the combination of an energized main circuit divided into a plurality of normally-closed parallel branches, each branch circuit including a plurality of transmitters, suitable alarm devices, and a high-resistance reducing the current to prevent operation of the other devices, a relay in each branch

circuit and, connections controlled by said relay for closing energized low-resistance circuits for the alarm devices of the other branches.

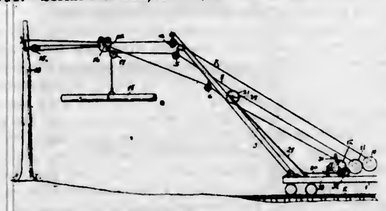


2. In a fire alarm signal system, the combination of an energized main circuit divided into a plurality of system-sections, each section including a plurality of transmitters, a plurality of alarm devices and a high resistance test-magnet normally preventing operation of the alarm devices, said alarm devices being located in the circuit, beyond said transmitters, and said transmitters arranged, when operated, to short circuit the connections for the high resistance magnet thereby to operate the alarm devices and, for each section, a relay, and relay controlled connections for establishing, for all of the other sections, circuits including their alarm devices and excluding their high resistance magnets.

3. In a system of the character described the combination of a plurality of sectional circuits, normally closed under test, each including the normally-closed line-switches of a plurality of transmitters, and switches arranged to be opened when their transmitters are operated, suitable alarm devices in a loop of said circuit beyond said transmitters, and a high resistance magnet having connections arranged to be short circuited by the closure of the signaling switch of any transmitter, a common battery for said sectional circuits, and, in each said sectional circuit a relay controlling energized circuit connections for the alarm devices of all other sections, said circuit, for one of said sections, including the normally closed transmitter switches of said sections.

4. In a system of the character described, the combination of a main circuit divided into a plurality of branches, each normally closed for test and including alarm devices, and a high resistance device; a plurality of transmitters having line switches included in the test circuit and signaling switches arranged, when closed, to short circuit the connections for the high resistance device, and a master transmitter, at the central station, controlling circuit closing means for the alarm devices of all of said sections.

1,152,528. INTERLOCKING SHEAVES AND MEANS FOR OPERATING THE SAME. JOHN R. MCGIFFERT and THEODORE H. BLAIR, Duluth, Minn. Filed Jan. 18, 1914. Serial No. 811,797. (Cl. 212—91.)



1. In apparatus of the character described, the combination with a suitable trackway and a carriage movable therealong; of an outhauling cable attached to said carriage; a lifting cable movably supported thereover; two axially alined, freely rotatable elements movable axially into engagement, each of said cables receiving one of said cables thereover; and means adapted to move said elements into such engagement, and to lock the same together, whereby the movement of said outhauling cable is controlled by said lifting cable.

2. In apparatus of the character described, the combination with a suitable trackway and a carriage movable therealong; of an outhauling cable attached to said carriage; a lifting cable movably supported thereover; a freely rotatable sheave receiving thereover said lifting cable; a second sheave axially alined with said first-named sheave and movable axially into engagement therewith, said second sheave being also freely rotatable; and means adapted to lock said two sheaves together, whereby the movement of said lifting cable controls the movement of said outhauling cable.

3. In apparatus of the character described, the combination with a suitable trackway and a carriage movable therealong; of an outhauling cable attached to said carriage; a lifting cable movably supported thereover; a shaft; a sheave receiving thereover said lifting cable, said sheave being rotatably mounted on said shaft; a second sheave receiving thereover said outhauling cable, said second sheave being also rotatably mounted on said shaft adjacent to said first-named shaft and being axially movable into engagement with said first-named sheave; and manually operable means adapted to lock said two sheaves together, whereby the movement of said lifting cable controls the movement of said outhauling cable.

4. In apparatus of the character described, the combination with a suitable trackway and a carriage movable therealong; of an outhauling cable attached to said carriage; a lifting cable movably supported thereover; a shaft; a sheave receiving thereover said lifting cable, said sheave being rotatably mounted on said shaft, and being provided with a friction surface on one side; a second sheave also rotatably mounted on said shaft and receiving thereover said outhauling cable, said second sheave having a friction surface adjacent such friction surface on said first-named sheave and being axially movable into engagement therewith; and means adapted to move said second sheave into engagement with said first-named sheave.

5. In apparatus of the character described, the combination with a suitably trackway and a carriage movable therealong; of an outhauling cable attached to said carriage; a lifting cable movably supported thereover; a shaft; a sheave rotatably but non-slidably mounted on said shaft and having a clutch member on one side, said sheave receiving thereon said lifting cable; a second sheave rotatably mounted on said shaft and having a clutch member on one side adapted to engage such member on said first-named sheave upon axial movement of said second sheave, the latter receiving thereover said outhauling cable, and said shaft being threaded adjacent to said second sheave; and means adjustably mounted on such threaded portion of said shaft and adapted when rotated to force said second sheave against said first-named sheave, thereby engaging said members.

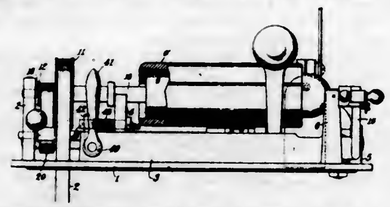
[Claims 6 to 9 not printed in the Gazette.]

1,152,529. EJECTOR OR THROW-OFF FOR SOUND-RECORDS. THOMAS H. MACDONALD, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Dec. 17, 1908. Serial No. 468,007. (Cl. 181—2.)

1. In combination, a revolving mandrel, a record cylinder mounted thereon, a throw-off for said cylinder comprising a transverse rock-shaft having a handle, a longitudinally-sliding bar connected to and actuated by said rock-shaft, and ejecting means for said cylinder carried by the end of the longitudinal bar in juxtaposition to the end of the cylinder.

2. In combination, a revolving mandrel, a record cylinder mounted thereon, a throw-off for said cylinder com-

prising a transverse rock-shaft having a handle, a longitudinally-sliding bar actuated by said rock-shaft, a plate carried by the end of the longitudinal bar in juxtaposition to the end of the cylinder, and means for holding said plate normally out of contact with the cylinder.



3. In combination, a revolving mandrel adapted to receive a cylinder, of a throw-off therefor comprising a transverse rock-shaft having a handle, a longitudinally-sliding shaft actuated by said rock-shaft, a plate carried by the end of the longitudinal shaft in juxtaposition to the end of the cylinder, and means for holding said plate normally out of contact with the cylinder.

4. In combination, a revolving mandrel, a record cylinder mounted thereon, a throw-off for said cylinder comprising a transverse rock-shaft having a handle, a longitudinally-sliding bar, an arm mounted on said rock-shaft and engaging said bar, a plate carried by the end of the longitudinal bar in juxtaposition to the end of the cylinder, and a spring for holding said plate normally out of contact with the cylinder.

1,152,530. CLAMPING DEVICE. EDWARD J. MADDEN, Bridgeport, Conn., assignor to The Hawthorne Manufacturing Company, Inc., Bridgeport, Conn., a Corporation of Connecticut. Filed June 4, 1912. Serial No. 701,701. (Cl. 248—3.)



1. A device of the class described having, in combination, a bracket receiving device having two lugs provided with apertures, an inclosing shell for said bracket receiving device provided with an aperture located substantially in alinement with the apertures in said lugs and having a laterally extending flange, a member against which said flange and bracket receiving device are disposed, fastening means extending through said flange, said member and said bracket receiving device, and clamping means extending through said bracket receiving device into said shell.

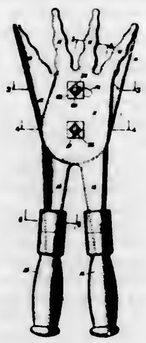
2. In a device of the class described, the combination of a casing provided with a projecting shell having a chamber communicating with the interior of said casing, and having a post-receiving aperture leading from said chamber to the exterior of said casing, a member inclosed within said chamber secured to said casing and provided with a post-receiving aperture disposed in substantial alinement with the first-mentioned aperture, and means supported by and within said casing and coöperating with said member to secure a post in said aperture.

3. In a device of the class described, the combination of a casing provided with a projecting shell having a chamber communicating with the interior of said casing and having a post-receiving aperture leading from said chamber to the exterior of said casing, a member within said chamber secured to said casing and provided with a post-receiving aperture disposed in substantial alinement with the first-mentioned aperture, and means supported by and within said casing and tending to displace said member and the post one with relation to the other to cause the post to be forced against one side of the aperture in said member.

4. In a device of the class described, the combination of a casing provided with a projecting shell having a chamber communicating with the interior of the casing, and having a post-receiving aperture leading from said chamber to the exterior of said casing, a member within said chamber provided with a post-receiving aperture disposed in substantial alinement with the first-mentioned aperture, and means supported by and within said casing for causing a tendency of the apertures to move into an out-of-register relation.

5. In a device of the class described, the combination of a casing provided with a projecting shell having a chamber communicating with the interior of said casing, and having a post-receiving aperture leading from said chamber to the exterior of said casing, a member within said chamber supported by said casing and provided with a post-receiving aperture disposed in substantial alinement with the first-mentioned aperture, and a threaded member supported by and coöperating with said apertured member to secure a post therein.

1,152,531. HEDGE-CUTTER. HERBERT E. MARSHALL, New York, N. Y. Filed July 25, 1912. Serial No. 711,440. (Cl. 30—13.)



1. A hedge cutter comprising, in combination, two coöperating concave members arranged with their concave sides adjacent, the central portions of these members being flattened to present plane surfaces and being in parallel relation, a pivot pin passing through the flattened parallel portions and pivoting together the two members, the members in their flattened portions having pivot holes for the pivot pin, the margins around the pivot holes being depressed and turned inward around the pivot pin so that the depressed annular surfaces form annular bearing surfaces for the pivot pin, the members being provided with a plurality of coöperating concave cutting blades projecting therefrom and arranged with their concave sides adjacent, each of the members being provided with an operating shank, each member and its blades and shank being of a single piece of sheet metal, and means for limiting the relative pivotal movement of the two members.

2. A hedge cutter comprising, in combination, two coöperating concave members arranged with their concave sides adjacent, the central portions of these members being flattened to present plane surfaces and being in parallel relation, a pivot pin passing through the flattened parallel portions and pivoting together the two members, the members in their flattened portions having pivot holes for the pivot pin, the margins around the pivot holes being depressed and turned inward around the pivot pin so that the depressed annular surfaces form annular bearing surfaces for the pivot pin, the members being provided with a plurality of coöperating concave cutting blades projecting therefrom and arranged with their concave sides adjacent, each of the members being provided with an operating shank, each member and its blades and shank being of a single piece of sheet metal, the upper member in its flat portion adjacent to the blades having therein a limiting slot, an abutment stud carried by the lower member and projecting through the limiting slot, the lower member having a socket hole therein for the abutment stud, the margin around the socket being depressed and turned inward around the abutment stud so that the depressed annular surface gives firm support to the abutment stud, and adjustable yielding means carried by the free end of the abutment stud for yieldingly and adjustably pressing the coöperating blades into coöperative relation.

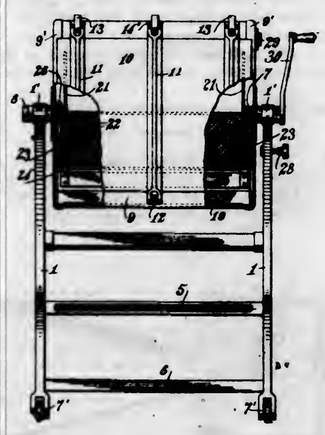
3. A hedge cutter comprising, in combination, a steel cutting blade and a member adjacent thereto and coöperating therewith, the blade having a cutting edge coöperating with such member by shearing action and the blade at its cutting edge being harder at one side and becoming gradually softer toward its other side and having its softer side adjacent to such member so that rubbing contact with such member will progressively bear away the softer portions of the blade more rapidly than the harder portions to offset the wear upon the cutting edge due to the cutting operation and keep the cutting edge sharp.

4. A hedge cutter comprising, in combination, two coöperating steel cutting blades arranged with sides adjacent for shearing action and having coöperating cutting edges, the blades at their cutting edges being harder at their outer sides and becoming gradually softer toward their inner adjacent sides so that the rubbing together of the blades will progressively wear away the softer portions of the blades more rapidly than the harder portions and thereby keep the cutting edges sharp.

5. A hedge cutter comprising, in combination, a concave steel cutting blade and a coöperating member adjacent to the concave side of the blade, the blade having a shearing face in rubbing contact with such member and joining the outer face of the blade at an angle to form a cutting edge, the blade being harder adjacent to the shearing face at its outer side and becoming gradually softer inward therefrom toward its inner concave side so that the rubbing contact with such member will progressively wear away the softer portions of the blade more rapidly than the harder portions to keep the cutting edge of the blade sharp.

[Claim 6 not printed in the Gazette.]

1,152,532. DISH-WASHING MACHINE. HOWARD P. MARSHALL and GEORGE E. DANIELS, Dayton, Ohio. Filed Jan. 8, 1915. Serial No. 1,086. (Cl. 141—9.)



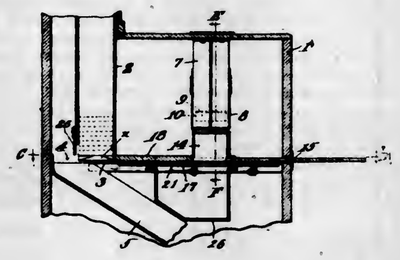
1. In a dish washing machine, the combination with a rotatable cylinder, a cover hinged thereto, a series of stirrer blades fixed to the interior of said cylinder and cover, a dish receptacle in said cylinder, brackets in which said receptacle is supported, and a baffle blade supported in said brackets in a position to aline with said stirrer blades during the rotation of the cylinder, substantially as described.

2. In a dish washing machine, the combination of a cylinder, a door hinged to said cylinder, a series of stirrer blades fixed to the inner sides of said cylinder and cover, inwardly projecting flanges at the margins of the opening in the cylinder, the stirrer blades at the edges of the cover being adapted to engage said inwardly projecting flanges, and strips on the cylinder and cover respectively coöperating with said stirrer blades in sealing the opening in the cylinder, substantially as described.

3. In a dish washing machine, the combination of a cylinder and a cover, said cylinder having inturned marginal flanges at the opening thereof, a series of stirrer blades arranged on the inner sides of said cylinder and cover; two of said stirrer blades on the cover being in positions to engage said inturned marginal flanges, sealing strips on the cover abutting with said two stirrer blades, and sealing strips on the cylinder engaged by the sealing strips on the cover, said sealing strips on the cylinder and cover and the stirrer blades and flanges coöperating to effectually seal the opening in said cylinder.

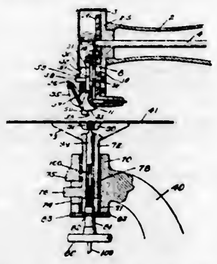
4. In a washing machine, the combination with a rotatable cylinder having a cover, and a series of stirrer blades arranged on the inner sides of said cylinder and cover, having water passages between them and the adjacent surfaces of the cylinder and cover of a dish basket in said cylinder, end brackets in which said basket is supported, and a baffle blade projecting from the lower ends of said brackets and adapted to throw the water into the basket when the stirrer approaches said baffle blade.

1,152,533. VENDING-MACHINE. COMMODORE V. MARTIN, Indianapolis, Ind., assignor of one-fourth to Enoch Buckles and three-eighths to Albert J. Edwards, Indianapolis, Ind. Filed May 15, 1914. Serial No. 838,760. (Cl. 194—80.)



In a vending machine, a base plate having a discharge opening, coin receiving hoods upon the plate adjacent opposite sides of the opening, upwardly converging coin chutes extending from the hoods and overhanging the discharge opening, each of said chutes having an outlet opening in the bottom thereof for the escape of improper coins, a stack holder back of each hood, each stack holder having an outlet at the back thereof, an ejector slidably mounted on the base plate and normally positioned between each hood and the stack holder in rear thereof, a plunger slidably mounted upon the base plate and movable into each hood, the space between the ejector and plunger being adapted to be filled by a deposited coin, thereby to transmit motion from the plunger to the ejector, and means under the base plate for resetting the ejector between the hood and stack holder when the plunger is pulled outwardly from the hood.

1,152,534. MACHINE FOR STITCHING BOOKS. CHARLES W. MEARS and BRENNAN B. WEST, Cleveland, Ohio; said West assignor to said Mears. Filed Dec. 8, 1911. Serial No. 664,635. (Cl. 1—7.)



1. In a device of the character described, the combination, with means for supporting a book or signature, of means for driving a staple thereinto, means for preventing the bending of said staple during the driving operation, a pivoted member having a spacing projection to be included in said staple when the same has been completely applied, and means operated by the return movement of said bending preventing means for withdrawing said projection from said staple.

2. In a device of the character described, the combination with means for supporting a book or signature, of means for guiding a staple to said book or signature, means for driving said staple thereinto, a spacing member adapted to be interposed between the legs of said staple to space the crown thereof from said book, means for maintaining said staple in engagement with said driving means during the driving motion thereof, means for returning said maintaining means to initial position, and means actuated by the returning movement of said maintaining means for withdrawing said spacing member from said staple.

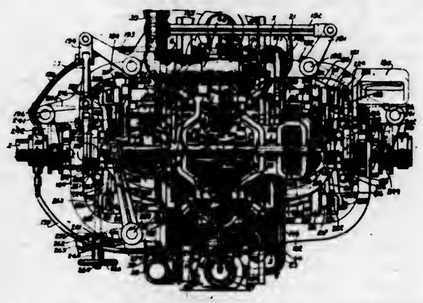
3. In a machine for stitching books, the combination, with means for supporting a book or signature, of means for guiding a staple to said book or signature, a driver for inserting said staple thereinto, a reciprocable member mounted at one side of said driver and movable in a direction parallel thereto, a pivoted member carried by said reciprocable member and having a spacing tongue, means for maintaining said tongue in a position to be inclosed by said staple during the driving operation, said reciprocable member being arranged to advance prior to the driving operation so as to move said pivoted member into contact with said book, means for withdrawing said tongue from said staple after the completion of the driving operation, and means for withdrawing said reciprocable member so as to remove said pivoted member from the book.

4. In a device of the character described, the combination with means for supporting a book or signature, of means for guiding a staple to said book or signature, means for driving said staple thereinto, means for maintaining said staple in engagement with said driving means during the driving motion thereof, a spacing member carried by said maintaining means for limiting the insertion of said staple, means for withdrawing said spacing member from said staple, and means for returning said maintaining means to initial position.

5. In a device of the character described, the combination, with means for supporting a book or signature, of means for guiding a staple to said book or signature, means for driving said staple thereinto, a supporting member for maintaining said staple in engagement with said driving member during the driving operation, a toe carried by the end of said supporting member so as to be included in said staple when the same has been completely applied and means for imparting to said supporting member an initial rearward motion simultaneously with the retraction of said driving means, whereby said toe is removed from said staple.

[Claims 6 to 8 not printed in the Gazette.]

1,152,535. ROTARY ENGINE. WILLIAM NICHOLS MEARS, Brookline, Mass., assignor to American Rotary Motor Company, Boston, Mass., a Corporation of Maine. Filed Dec. 19, 1907. Serial No. 407,235. (Cl. 123—15.)



1. A rotary engine comprising a casing, a shaft having a rotor thereon and positioned within said casing for relative rotation with respect thereto, a head or heads secured to said casing; a tapering portion or portions surrounding said shaft and extending into said rotor, said portion or portions being threaded for axial adjustment with respect to the shaft.

2. A rotary engine comprising a casing and a relatively rotatable rotor mounted therein, heads for said casing, a one-piece abutment mounted for coöperation with the rotor and the casing, the abutment being provided with a stationary, removable, one-piece, wear holder and a movable two point contact shoe directly carried by said holder.

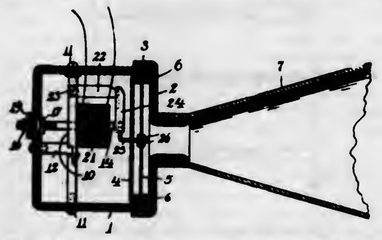
3. A rotary engine comprising a casing and a relatively rotatable rotor mounted therein, one or more heads removable from said casing, means removably to secure said head or heads to said casing, said means being adjustable to permit the taking up of wear, and limiting means to determine the extent of movement of said head or heads toward said casing.

4. A rotary engine comprising a casing and a relatively rotatable rotor mounted therein, one or more heads removable from said casing, means removably to secure said head or heads to said casing, said means being adjustable to permit the taking up of wear, and screws to determine the extent of movement of said head or heads toward said casing.

5. A rotary engine comprising a casing and a relatively rotatable rotor mounted therein, one or more heads removable from said casing, means for taking up wear between said head or heads and the casing and rotor respectively, and limiting and holding means to determine the extent of movement of said head or heads toward said casing.

[Claims 6 to 216 not printed in the Gazette.]

1,152,536. TELEPHONE-RECEIVER. ALBERT S. MOFFAT, Belmont, Mass., assignor to Kuns-Garniss Company, a Corporation of Massachusetts. Filed Aug. 8, 1914. Serial No. 855,890. (Cl. 179—119.)



1. A telephone receiver comprising an electromagnet having its poles in the same transverse plane, an armature, and a diaphragm centrally connected with one end of said armature, the end of the armature farther removed from said diaphragm being slidably supported by one of said poles and its other end being in the field of the other pole, the armature-supporting pole being adjustable toward and from the other pole, whereby the leverage of the armature is changed without affecting its position.

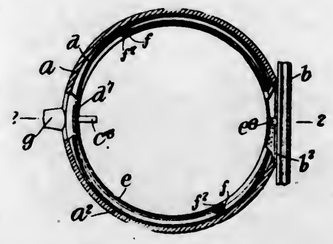
2. A telephone receiver comprising an electromagnet having its poles in the same transverse plane, an armature, and a diaphagm centrally connected with one end of said armature, the other end of the armature being supported by one of said poles, the latter being adjustable toward and from the other pole, and it and the armature having means for keeping the armature from lateral displacement.

3. A telephone receiver comprising an electromagnet having its poles in the same transverse plane, an armature, and a diaphragm centrally connected with one end of said armature, the other end of the latter having a longitudinally disposed groove, one of said poles being adjustable toward and from the other pole and having a lug engaging said groove.

4. A telephone receiver comprising a diaphragm, a case supporting the same, an armature parallel with the diaphragm and connected at one end with the latter, a pole piece supported rigidly by the case with its field close to the end of the armature connected with the diaphragm, windings about said pole piece, a second pole piece parallel with and in magnetic connection with the first pole piece and adjustable toward and from the same, the first named pole-piece being tubular, a core longitudinally movable in the tubular pole-piece, and means operative exteriorly of the case for longitudinally adjusting the core, the end of the armature not connected with the diaphragm being slidably supported by the second-named pole-piece.

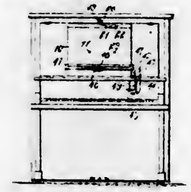
5. A telephone receiver comprising a horse shoe magnet, a fulcrum armature, and a diaphragm connected with one end of said armature, said magnet having a longitudinally adjustable pole presented to the end of said armature connected with said diaphragm, the said adjustment being accomplished by means of a threaded stem projecting from the pole, a shouldered sleeve internally and externally threaded and turning on said stem, and a nut on said sleeve, the receiver having a case penetrated by said stem and sleeve, the shoulder of said sleeve abutting against the inner surface of the case, and said nut abutting against the outer surface thereof.

1,152,537. WATCHCASE CONSTRUCTION. JACOB MURSET, Brooklyn, N. Y. Filed Mar. 16, 1915. Serial No. 14,634. (Cl. 58—102.)



In a watch case, a rim provided at one side with a hinged side member and at the opposite side with a radially movable winding post, spring devices countersunk in opposite side portions of the rim and one of which serves to lock the hinged side case member in a closed position and the other to force said hinged side case member open when the lock is released and said lock being released by the inward movement of the winding post, said spring devices being formed from strips of metal bent to form parallel parts one of which is longer than the other, and the shorter parts being free from the longer parts at their ends and being provided with loops through which are passed pins by which said spring devices are secured to the case, and the longer parts being free from the case throughout their lengths.

1,152,538. MUSIC-LEAF TURNER. INGLE R. NAUGLE, Amesville, Ohio. Filed Oct. 14, 1912. Serial No. 725,748. (Cl. 84—135.)



A leaf turner of the class described embodying a rotatably supported disk, independently mounted leaf turning arms, gears on said arms, segmental gears on the opposite face of said disk projecting at right angles to the face of the disk through spirally arranged slotted apertures in said disk and adapted to engage successively the gears on said arms, means to cause the rotation of said disk in one direction to shift the arms, spring members connected to said segmental gears for starting the engagement thereof when oppositely moved, a gear wheel carried by said disk, a spring wound interrupted gear wheel to intermesh with the first named gear wheel, ratchet wheels connected to each gear wheel, pawls engageable with said ratchet wheels to hold the gears against rotation, shiftable rods connected with the pawls to release the same and means normally retaining said rods in position to release the pawls.

1,152,539. REGISTER-SHIELD. HARRY W. NEAL, Indianapolis, Ind. Filed Feb. 13, 1915. Serial No. 8,001. (Cl. 98—51.)



1. A register shield, comprising a pair of end members of cast metal having water pockets formed in them and integral with their bodies, which water pockets open on both the inner and outer sides of such end members, and a deflector plate which is curved to produce the desired deflection and connects the two end members, said deflector plate being of sheet metal.

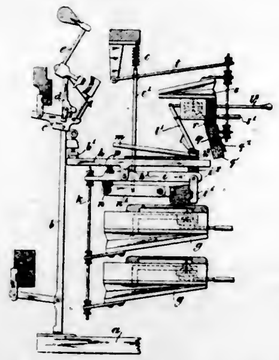
2. A register shield, comprising a pair of end members having water pockets formed in them, which water pockets open on both the inner and outer sides of such end members, and a deflector plate which is curved to produce the desired deflection and connects the two end members.

3. A register shield, comprising a pair of end members having water pockets formed in them, which water pockets open on both the inner and outer sides of such end members, and a deflector plate which is curved to produce the desired deflection and connects the two end members, said deflector plate at its forward end being curved downwardly, rearwardly, and upwardly, so as to form an inwardly opening pocket so as to catch dirt particles carried by the stream of air deflected thereby.

1,152,540. PLAYER-PIANO. MARTIN NEWCOMER, New York, N. Y., assignor to Volotone Company, Elizabeth, N. J., a Corporation of New Jersey. Filed Dec. 4, 1913. Serial No. 804,573. (Cl. 84—160.)

1. In a mechanism of the character described, the combination of a striking pneumatic, a hammer, transmission

devices whereby the hammer is actuated from the pneumatic and means to vary at will the range of movement of the pneumatic through which it is effective with respect to the hammer while maintaining a constant throw of the hammer.



2. In a mechanism of the character described, the combination of a striking pneumatic, a hammer, transmission devices interposed between the pneumatic and the hammer and means to adjust said transmission devices to vary the range of movement of the pneumatic through which it is effective with respect to the hammer without varying the throw of the hammer, the hammer being subject to the action of the pneumatic throughout the stroke of the hammer.

3. In a mechanism of the character described, the combination of a striking pneumatic, a hammer, an actuating lever operatively disposed with respect to the penumatic and the hammer whereby the latter is actuated by the pneumatic, a fulcrum for the lever and means to move the fulcrum to vary at will the intensity of the blow of the hammer without relieving the hammer from the action of the actuating lever at any time during its throw.

4. In a mechanism of the character described, the combination of a striking pneumatic, a hammer, transmission devices whereby the hammer is actuated from the penumatic and including a lever, and a fulcrum for the lever movable at will along a line parallel to the position of the lever at the time the hammer blow is delivered.

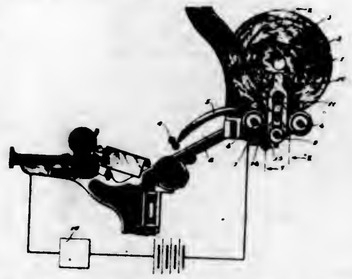
5. In a mechanism of the character described, the combination of a striking pneumatic, an actuating lever operatively connected thereto, a hammer actuated by said lever and a fulcrum for said lever movable along a line parallel to the position of the lever at the time the hammer blow is delivered whereby the effective throw of the striking pneumatic is varied at will while the throw of the hammer is maintained constant and the intensity of the blow changed.

[Claims 6 to 11 not printed in the Gazette.]

1,152,541. STOP-MOTION. OSCAR L. OWEN, Whitinsville, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Nov. 26, 1910. Serial No. 594,271. (Cl. 19—25.)

1. A stop motion for lap-working machines, comprising in combination with the means for supporting and unwinding the lap-roll, said means permitting the axis of the lap roll to descend as the roll is unwound, a throw-off mechanism and means for operating the same, comprising a feeler mounted independently of the roll and having normal engagement with the end of the roll and means controlled by said feeler for operating said mechanism.

2. A stop motion for lap-working machines, comprising in combination with the means for supporting and revolving the lap-roll, and the spool vertically movable therein, a feeler normally having engagement with the end of the roll and its spool and mounted independently in predetermined relation to the height of the spool, said spool having a portion adapted to cause the actuation of the feeler, a throw-off mechanism, and means controlled by the feeler to actuate said mechanism.



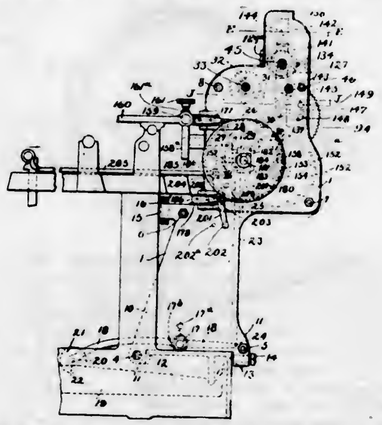
3. A stop motion for lap-working machines, comprising the combination of the lap-roll arranged to approach its support by the unwinding of the lap therefrom and having a bore or cavity at its end, a feeler coöperatively related to the end of the roll and the cavity in the spool, a throw-off mechanism and means controlled by the feeler to actuate said mechanism.

4. In a stop motion for lap-working machines, the combination of the lap roll supporting means and a lap-roll thereon having a cavity in its end and arranged to approach its support by the unwinding of the lap, a feeler engaged with the end of the roll and adapted to enter the cavity, a throw-off mechanism and means brought into operation by the movement of the feeler, to actuate said mechanism.

5. In a stop motion for lap-working machines, a lap-roll and spool, a feeler having a rounded nose held ineffective by the end of the lap-roll and adapted to enter the bore of the lap-roll spool when the latter is lowered by the unwinding of the lap, in combination with a throw-off mechanism and operating connections therefor controlled by the feeler on such entering movement of the nose.

[Claims 6 to 18 not printed in the Gazette.]

1,152,542. CALCULATING APPARATUS. EDWARD H. PALMER, Reading, Mass.; Emily M. Palmer and Harold V. Palmer, Reading, Mass., and Walter H. Roberts, Malden, Mass., executors of said Edward H. Palmer, deceased, assignors to said Emily M. Palmer and Harold V. Palmer, individually. Filed Mar. 2, 1906. Serial No. 303,793. (Cl. 235—59.)



1. A calculating mechanism, comprising movable figure-bearing members, a driven actuator therefor, manually-operated means representing a series of numbers, and a series of relatively movable escape devices mounted on the actuator and controlled by said manually-operated means adapted to permit step-by-step movements of said actuator proportional to the numerical values of the several manually-operated means.

2. A calculating mechanism comprising movable figure-bearing members, a driven actuator therefor, control devices representing a series of numbers, and a series of relatively movable escape devices, each controlled by one of said devices and adapted to be held stationary when one of the said devices is operated, to permit a movement of the actuator proportional to the valve of the number represented by that device.

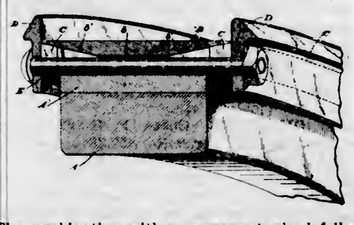
3. A calculating mechanism, comprising movable figure-bearing members, an actuator therefor, escape members mounted on said actuator, one of which is fixed and another of which is relatively movable thereon in the direction of movement thereof through a limited distance having a definite proportion to a value employed in calculation, and escape devices operated in unison and arranged to hold either of said escape members from movement while releasing the other of such members.

4. A calculating mechanism, comprising movable figure-bearing members, a driven actuator therefor, manually-operated means representing a series of numbers, and a series of escape devices carried by said actuator, each controlled by one of said manually-operated means and having an amount of movement relative to the actuator in the direction of movement of the latter proportional to the value of the number represented by its controlling means, each said device when one of the manual means is operated being held stationary and adapted to permit movement of the actuator by such amount.

5. A calculating mechanism, comprising movable figure-bearing members, a driven actuator therefor, an arrester for folding the actuator stationary, a plurality of manual means representing a series of numbers operable to cause registration of different numbers, a series of escape devices with respect to which the actuator has varying amounts of movement corresponding to the values of the several numbers, and controlling means, each arranged for actuation by one of said manual means to engage and hold stationary an escape device and disengage the arrester from the actuator, whereby the latter is enabled to move and carry a number-bearing member through a distance corresponding to the particular manual means operated.

[Claims 6 to 68 not printed in the Gazette.]

1,152,543. DEMOUNTABLE FELLY-BAND FOR VEHICLE-WHEELS. JOSEPH E. PERRAULT, Belmont, Mass., assignor to Hood Rubber Company, Watertown, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1914. Serial No. 877,182. (Cl. 152—21.)



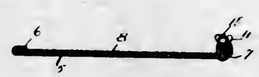
1. The combination with a permanent wheel felly band, of a removable felly band having oppositely inclined faces on its inner periphery, a plurality of wedge-blocks entered from opposite sides between said permanent felly band and removable felly band and spaced from each other, and side flange members connected together through the spaces between the adjoining ends of said wedge-blocks, substantially as described.

2. In combination a permanent felly band, a removable felly band concentric therewith and having oppositely inclined portions upon its inner periphery, a plurality of wedge blocks entered between said permanent felly band and removable felly band, circular side clamping rings extending over the exposed ends of all of said wedge-blocks on each side and bolts connecting said side rings and passing through the spaces between the ends of the wedge blocks, substantially as described.

3. The combination with a permanent wheel felly band, of a removable felly band having oppositely inclined faces on its inner periphery, a plurality of wedge blocks entered from opposite sides between said permanent felly band and removable felly band and spaced from each other, and clamping rings connected to each other through the spaces between the adjacent ends of said wedge blocks, each of said wedge blocks having a lug or extension for engagement with a prying tool, substantially as described.

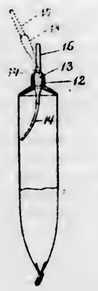
4. In combination a wheel felly band and an outer removable band, one of said bands having oppositely inclined faces, a plurality of wedge blocks entered from opposite sides between said bands and spaced from each other, each of said wedge blocks having a lug or extension for engagement with a prying tool, and removable means for clamping said wedge blocks in position.

1,152,544. FLY-PAPER HOLDER. CHARLES P. PFEIFER, Humphrey, Nebr. Filed Sept. 23, 1914. Serial No. 863,143. (Cl. 43—22.)



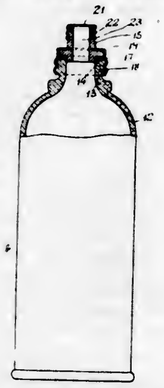
As an article of manufacture, a holder of the class described comprising a plate having one side edge bent to form a channeled receiving portion, the other side edge of said plate being bent upwardly, a clamping strip of channel shape adapted to seat on said upwardly turned edge portion and to clampingly engage with the plate, and means for procuring such clamping engagement comprising a clamping screw passed through the adjacent portion of the plate and through the channel member.

1,152,545. PLUG FOR GLUE AND PASTE TUBES. NATHAN C. PHILLIPS, Gloucester, Mass., assignor to Russia Cement Company, Gloucester, Mass., a Corporation of Massachusetts. Filed May 12, 1914. Serial No. 838,053. (Cl. 91—67.4.)



A combined plug and spreader formed of a single piece of material comprising a rounded body portion that tapers longitudinally and forms a sealing plug, the body portion terminating at one end in a flattened portion that is curved to form a spreading blade, the other portion of the body portion terminating in an enlarged flat widened portion that projects laterally beyond the sides of the body and blade and forms a weighted finger-grip.

1,152,546. INK-BOTTLE. NATHAN C. PHILLIPS, Gloucester, Mass., assignor to Russia Cement Company, Gloucester, Mass., a Corporation of Massachusetts. Filed May 18, 1914. Serial No. 839,184. (Cl. 215—54.)



A pouring extension for bottle necks comprising a body provided with an external seat for engaging a bottle neck, means engaging the seat for detachably fastening the extension to a bottle neck, said body being provided with a longitudinal bore, said bore having acute angular sides relatively disposed so that oppositely disposed narrow deep gutters and oppositely disposed wide shallow gutters are provided, the gutters extending the full length of the bore of the extension, the deep gutters serving to dispense an attenuated stream and to admit air above the stream, and the shallow gutters serving to dispense a wide stream and also admit air above the stream.

1,152,547. SUPPORT FOR BLEED-RODS. EDWARD P. QUIRK, Syracuse, N. Y. Filed Mar. 9, 1914. Serial No. 823,447. (Cl. 248—31.)

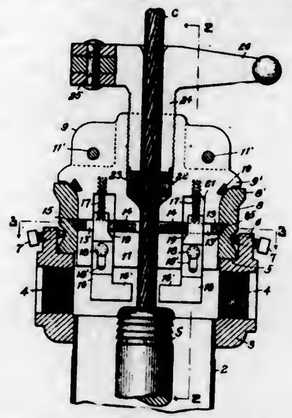


1. In a device of the class described, a strip of sheet metal return-bent to form an eye for the reception of a bleed rod and in which eye the bleed rod is free to move longitudinally, said strip of sheet metal having its end portions normally spaced apart a distance less than the diameter of the bleed rod and adapted to be spread apart against the resilient action of the metal strip by lateral movement of said rod and to grip the rod in this position to prevent longitudinal movement of the same.

2. In a device of the class described, a strip of sheet metal return-bent to form an eye for the reception of a bleed rod and in which eye the bleed rod is free to move longitudinally, said strip of sheet metal having its end portions normally spaced apart a distance less than the diameter of the bleed rod and adapted to be spread apart against the resilient action of the metal strip by lateral movement of said rod and to grip the rod in this position to prevent longitudinal movement of the same, and means for preventing separation of said end portions beyond a predetermined point.

3. In a device of the class described, a sheet metal strip return-bent to form an eye for the reception of a bleed rod, said strip having its end portions normally spaced apart a distance less than the diameter of said rod and adapted to be spread apart against the resilient action of the metal strip by lateral movement of said rod and to grip the rod in this position to prevent longitudinal movement of the same, a bolt in connection with one of said end portions, the opposite end portion slidable along said bolt whereby relative lateral movement of the end portions is prevented.

1,152,548. OIL-SAVER. CLARK F. RIGBY, Butler, Pa. Filed Mar. 26, 1914. Serial No. 827,383. (Cl. 166—14.)



1. The combination of a casing head, a casing head closure having a cable passage, and releasable head securing means operative beneath the closure and within the head.

2. The combination of a casing head, a casing head closure having a cable passage and closure-securing latch mechanism mounted on and operative at the under side of the closure.

3. The combination of a casing head, a casing head closure having a cable passage, and latch mechanism operative beneath the closure for detachably securing the latter to the casing head, the latch mechanism adapted to be engaged and actuated by a device carried by the cable.

4. The combination of a casing head, a casing head closure having a cable passage, and latch mechanism mounted on the closure and depeding therefrom, said mechanism detachably securing the closure to the casing head and adapted to be engaged and actuated by a device carried by the cable.

5. The combination of a casing head, a casing head closure having a cable passage, latch mechanism for detachably securing the closure to the head, the latch mechanism including latch actuating means located beneath the closure, a cable operative through the closure, and a device secured to the cable and adapted to be raised into engagement with and operate the latch actuating means for releasing the closure.

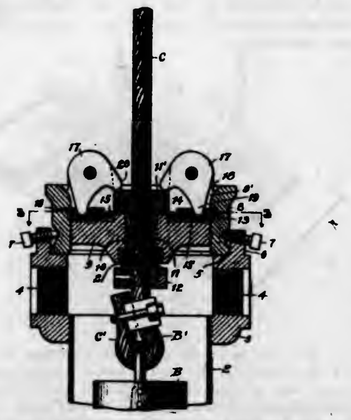
[Claims 6 to 17 not printed in the Gazette.]

1,152,549. OIL-SAVER. CLARK F. RIGBY, Butler, Pa. Filed Mar. 26, 1914, Serial No. 827,384. Renewed Feb. 25, 1915. Serial No. 10,613. (Cl. 166—14.)

1. The combination of a casing head, a closure therefor formed with a cable passage, latch means for detachably securing the closure to the casing head, and means movable in the cable passage and depending from the closure for actuating the latch means.

2. The combination of a casing head, a closure therefor having a cable passage, a plurality of latch devices for detachably securing the closure to the casing head, and a vertically movable latch-actuating means common to the latches and depending beneath the closure.

3. The combination of a casing head, a casing head closure formed with a cable passage, a sleeve movable vertically in the passage and depending from the closure, and latch means operatively connected to the sleeve and adapted to detachably secure the closure to the casing head.

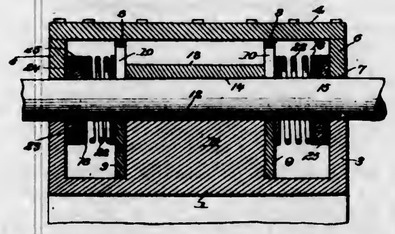


4. The combination of a casing head, a closure therefor formed with a cable passage, normally projecting latches mounted in the closure and adapted to engage the head, dogs pivoted to the closure and operatively connected to the latches, and means for oscillating the dogs to retract the latches.

5. The combination of a casing head, a closure therefor formed with a cable passage, latch mechanism for securing the closure to the casing head, a sleeve movable vertically in the cable passage and depending therefrom and adapted when raised to release the latch mechanism, and a spring for opposing upward movement of the sleeve.

[Claims 6 and 7 not printed in the Gazette.]

1,152,550. LINE-SHAFT JOURNAL-BOX. FREDRICK A. ROBERTS, Dickey, N. D. Filed Sept. 25, 1912. Serial No. 722,354. (Cl. 64—10.)



1. A journal box including a body casing having end walls provided with shaft receiving openings, a pillow block formed integrally with the bottom wall of the body casing and arranged intermediate the length thereof, said pillow block being provided in its upper face with a longitudinally extending shaft receiving channel, a half bearing plate, means for securing the half bearing plate on the upper face of the pillow block, a pair of removable partition walls arranged transversely in the body casing and supported by the bottom wall thereof, said partition walls bearing against the terminals of the pillow block and a removable cover plate for the body casing.

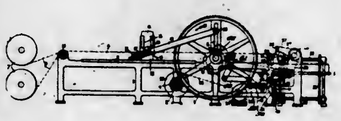
2. In a journal box having opposite walls provided with journal receiving openings, a pillow block rising from the bottom wall of the box and having a longitudinal extending journal receiving channel formed in its upper face, a half bearing plate removably secured upon the pillow block and arranged to hold a journal against displacement from the pillow block and a pair of transversely extending partition walls supported by the bottom wall of the box and arranged one at each end of the pillow block, said walls forming in connection with the adjacent end walls of the box lubricant receiving compartments.

3. A journal box including a body casing having opposite walls provided with shaft receiving recesses opening through the upper edges thereof, a pillow block rising from the bottom wall of the body casing and having a longitudinally extending journal receiving channel formed in its upper face, transversely arranged partition walls supported by the bottom wall of the body casing at the longitudinal extremities of the pillow block, said partition walls having shaft receiving recesses formed therein opening through the upper edges thereof and disposed to receive a journal seating in the channel formed in the pillow block, and a cap plate bearing over the journal and operatively connecting the journal with the pillow block.

4. A journal box including a body casing having a cap plate removably connected thereto and being provided with recesses in opposite walls thereof opening through the free edges of said walls adjacent said cap plate, said recesses being disposed to receive a journal, a pillow block rising from the bottom wall of the body casing and disposed to operatively support the journal, transversely arranged partition walls supported by the bottom wall of the body casing, said partition walls having recesses formed therein opening through their upper edges and disposed to receive the journal, and fillers carried by the cap plate and normally fitting within the recesses formed in the opposite walls of the body casing to bear over the adjacent side of the journal.

5. A journal box including a body casing having recesses formed in opposite walls thereof opening through the upper edges of said walls and disposed to removably receive a journal, a pillow block rising from the bottom wall of the body casing and disposed to operatively support the journal, vertically extending grooves formed in opposite walls of the body casing intermediate the length of the journal within the casing, transversely arranged partition walls removably fitted within said grooves and supported by the bottom wall of the body casing, said partition walls having recesses formed therein opening through their upper edges and disposed to removably receive the journal, and a cap plate detachably connecting the journal with the pillow block.

1,152,551. APPARATUS FOR CUTTING AND STACKING SHEETS OF PAPER OR THE LIKE. ALBERT ROMMENEY and GEORG KATHE, Heidenau, Dresden, Germany. Filed Dec. 29, 1911. Serial No. 668,518. (Cl. 101—31.)



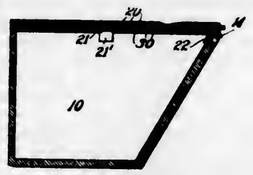
1. A machine for cutting a web transversely into sheets and stacking the sheets, comprising a channeled transverse cutter-supporting beam the channel in which is formed with jet-outlets on the side thereof toward which the severed sheets are delivered; a cutting member mounted upon said beam above said jet-outlets; a second cutting member which is arranged to coöperate with the first-named cutting member to sever the web transversely of its length; and means for forcing compressed air into the channel in said beam and thence through said jet-outlets.

2. A machine for cutting a web transversely into sheets and stacking the sheets, comprising a channeled transverse cutter-supporting beam the channel in which is formed with jet-outlets; a cutting member mounted upon said beam above said jet-outlets; a second cutting member which is arranged to coöperate with the first named cutting member to sever the web transversely of its length;

means for forcing compressed air into the channel in said beam and thence through said jet-outlets; and reciprocating guide-members which are arranged to move away from and then back toward said beam and to support the edge of the sheet contiguous thereto.

3. A machine for cutting a web transversely into sheets and stacking the sheets, comprising a channeled transverse cutter-supporting beam the channel in which is formed with jet-outlets; a cutting member mounted upon said beam above said jet-outlets; a second cutting member which is arranged to coöperate with the first-named cutting member to sever the web transversely of its length; and means for forcing compressed air into the channel in said beam and thence through said jet-outlets.

1,152,552. ATTACHMENT FOR SINKS, WASHTUBS, AND THE LIKE. JOSHUA H. RYDER, Brockton, Mass., assignor of one-half to George I. Pettengill, Boston, Mass. Filed Oct. 22, 1914. Serial No. 868,111. (Cl. 68—31.)



1. An attachment for washtubs, sinks and the like comprising a frame adapted to rest on the walls of the basin thereof combined with a cover slidable backward and forward in the frame and adapted to bend around and depend from the front edge of the basin when drawn forward.

2. An attachment for washtubs, sinks and the like comprising a frame adapted to rest on the walls of the basin thereof combined with a series of slats, individually extending across the basin with their ends supported movably in said frame and collectively joined together by a continuous hinge, constituting a cover for the basin adapted to be drawn past an edge of the basin and to be bent around and to depend from said edge.

3. An attachment for washtubs, sinks and the like comprising a frame adapted to rest on the walls of the basin thereof, having channels extending from front to back combined with a series of slats individually extending across the basin and guided in said channels, and hinges joining the slats together, said hinges having plate portions adapted to form the sliding bearing surfaces of the slats in the channel, and there being means located outside the channel to fasten said hinge plates to said slats.

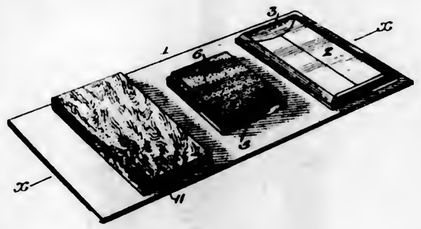
4. An attachment for washtubs, sinks and the like comprising a frame adapted to rest on the walls of the basin thereof, combined with a series of slats individually extending across the basin with their ends guided by said frame, and wires on the tops of the individual slats and fastened individually thereto, the slats being joined together into a flexible cover for the basin.

5. An attachment for washtubs, sinks and the like comprising a series of slats adapted individually to extend across the basin thereof in one direction and collectively to extend across it in the other direction, means extending continuously in said other direction joining them together; and wires resting on the tops of individual slats, the ends of said wires penetrating through the slats and through said joining means, fastening said slats and joining means together.

[Claims 6 and 7 not printed in the Gazette.]

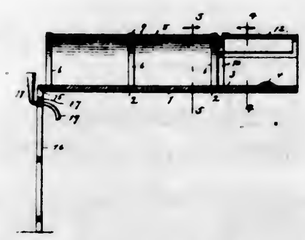
1,152,553. COMBINATION IRONING-PAD. ANTONIO SAVARESE, Philadelphia, Pa. Filed July 18, 1914. Serial No. 851,705. (Cl. 68—27.)

1. In a pad device for flat irons, a continuous flexible backing, a wax slab, a closed receptacle completely inclosing said slab, the bottom of said receptacle being secured to said flexible backing, and a block of asbestos also secured directly to said backing, the latter having an extension adaptable to fold over and overlap said backing when said asbestos is folded so as to be superimposed upon said receptacle.



2. In a device of the character described, the combination of a strip of flexible material, a receptacle secured at one end of said strip, a slab of wax inclosed within said receptacle, a tray secured to said strip a short distance away from the receptacle, a slab of abrading material secured in said tray and a block of asbestos material secured upon said strip a short distance away from the tray, the space between the parts permitting the latter to be superimposed upon each other with the flexible material between the parts whereby the operative faces are prevented from contact with each other.

1,152,554. PROTECTIVE APPARATUS FOR REPAIRERS OF BAKERS' OVENS. CARL SCHILLER, New York, N. Y. Filed May 14, 1915. Serial No. 27,996. (Cl. 107—64.)



1. An apparatus of the character described comprising a frame adapted to be projected into a baking chamber, a base plate fitted within the frame, a roof extending over the frame to form a chamber, and means for injecting an air blast into said chamber.

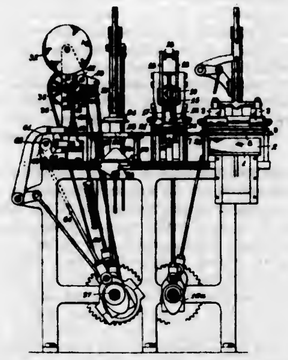
2. An apparatus of the character described, comprising a base, a roof spanning the base, a leg hinged to the base, and a nozzle carried by the leg and adapted to be projected beneath the roof.

3. An apparatus of the character described, comprising a frame, a plurality of straps hinged at one of their ends to the frame, means for removably securing the other ends of the straps to the frame, a covering carried by the straps, and means for injecting an air blast underneath the roof.

4. An apparatus of the character described, comprising a frame, a plate fitted therein, an openable roof carried by the frame, a leg hinged to one end of the frame, and a nozzle carried by the leg.

5. An apparatus of the character described, comprising a frame, an openable roof carried by the back of the frame, a leg hinged to the rear end of the frame, a nozzle secured to the leg, and a windowed hood carried by the front of the frame.

1,152,555. ENVELOP-MACHINE. FERDINAND L. SCHMIDT, New York, N. Y., assignor to United States Envelope Company, Springfield, Mass., a Corporation of Maine. Filed Nov. 5, 1909. Serial No. 526,358. (Cl. 93—66.)



1. In an envelop machine, the combination of the following instrumentalities: a die plate, means for gumming the flaps only of an envelop blank, means for feeding the gummed blank upon said die plate, means for forming an outlook opening in the body of said gummed blank upon said die plate, means for gumming said blank upon said die plate around said outlook opening, a creasing plate, means for feeding said gummed blank upon said creasing plate, means for applying a patch of paper directly to said gummed outlook opening in said blank upon said creasing plate, a plunger arranged to force said blank after it has received said patch through an opening in said creasing plate, and means for folding the flaps of said blank.

2. In an envelop machine, the combination with means for gumming the flaps only of an envelop blank and means for folding said flaps, of means for feeding said blank from said gumming mechanism to said folding mechanism with an intervening period of dwell, and means for forming an outlook opening in the body of said blank and gumming around said opening during said period of dwell.

3. In an envelop machine, the combination with means for gumming the flaps only of an envelop blank and means for folding said flaps, of means for feeding said blank from said gumming mechanism to said folding mechanism with an intervening period of dwell, means for forming an outlook opening in the body of said blank and gumming around said opening during said period of dwell, and means for applying a patch of paper directly to said outlook opening after said blank has reached said folding mechanism, but before the operation of said folding mechanism begins.

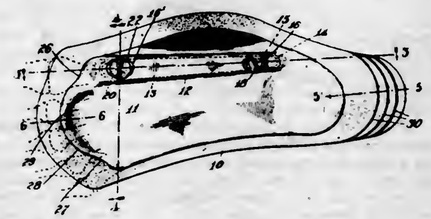
4. In an envelop machine, the combination of the following instrumentalities acting in the order named: means for gumming the flaps of an envelop blank, means for forming an outlook opening in the body of said gummed blank, means for gumming around said opening, means for applying a patch of paper to said gummed opening, means for folding the flaps of said blank, and means for progressively feeding said blank.

5 In an envelop machine, the combination with a creasing table and a reciprocating plunger for pushing an envelop blank through said creasing table, of means for carrying an individual patch by a horizontal movement between said creasing table and said plunger, and means for holding said patch in fixed relation to said carrying means during said horizontal movement.

[Claims 6 to 14 not printed in the Gazette.]

1,152,556. ARCH-SUPPORT. WILLIAM M. SCHOLL, Chicago, Ill. Filed Jan. 3, 1913. Serial No. 739,983. (Cl. 36—71.)

1. An arch-plate adapted to underlie the ball of a human foot having its upper surface curved for general conformity with the curvatures of the appropriate plantar surfaces of the foot, and having a non-flexible and non-resilient front end shaped to provide a projecting tongue to underlie the forward portions of the central metatarsal bones and to leave free from such support the heads of the first and fifth metatarsal bones, said plate having formed therein, in addition to its normal curvature, a transverse hump for support of the central metatarsal bone, said hump extending into the tongue.



2. In an arch support the combination of a cover piece, a plate adapted to underlie the ball of a human foot having its upper surface generally curved to conform to the adjacent portions of the plantar surface of the foot, the front edge of said plate being provided, in addition to its normal curvatures, with a transverse hump to support the middle metatarsal bones, and means connecting said plate to said cover piece for adjustment of said plate both longitudinally and transversely with respect to the cover piece.

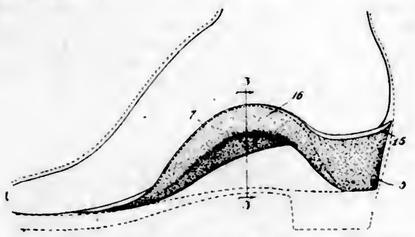
3. In an arch support, the combination of a leather cover piece, shaped to fit the heel of the shoe and extending thence along the inner and outer sides of the shoe to a point approximately at the ball of the foot, and having an extension to extend up the inside curve of the shank of the foot, a metal arch plate shaped to conform substantially to the curvatures of the under side of the foot and to extend from the bearing point adjacent the heel of the foot at one end to a bearing point adjacent the ball of the foot at the other end, and transversely to conform to the curvature of the high arched point or surface underlying the scaphoid and adjacent cuneiform bones and devices carried by said cover piece for connecting the same to the plate at longitudinally spaced points, one of said connecting devices providing longitudinal movement of said arch plate with respect to the cover piece and the other providing movement in all directions in the plane of said plate.

4. In an arch support the combination of a leather cover piece, shaped to fit the heel of the shoe and extending thence along the inner and outer sides of the shoe to a point approximately at the ball of the foot, and having an extension to extend up the inside curve of the shank of the foot, a metal arch plate shaped to conform substantially to the curvatures of the under side of the foot and to extend from the bearing point adjacent the heel of the foot and to one end to a bearing point adjacent the ball of the foot at the other end, and transversely to conform to the curvature of the high arched point or surface underlying the scaphoid and adjacent cuneiform bones, and adjusting means interposed between the forward end of said arch plate and the superposed portion of the cover piece for effecting adjustment of said portion of said arch plate with respect to the coöperating portion of the leather cover piece in all directions in the plane of said plate.

5. In an arch support the combination of a leather cover piece, metal anchorage members secured thereto at front and rear portions thereof, a metal arch-plate having openings therein, and means secured to said anchorage members and engaging said openings in the arch-plate for adjusting the rear of the arch-plate longitudinally with respect to the cover piece and the front end in all directions in the plane of the plate.

[Claims 6 to 9 not printed in the Gazette.]

1,152,557. STATURE-INCREASER. WILLIAM M. SCHOLL, Chicago, Ill. Filed Dec. 6, 1913. Serial No. 805,131. (Cl. 36—71.)

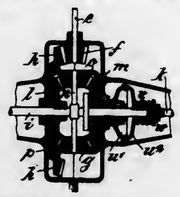


1. In a device of the character described the combination of a heel elevating member for insertion in the heel of a shoe, and an arched plate, arranged to underlie the ball of the foot at its forward end and support the instep of the wearer, the highest portion of the plate lying flush with the forward top edge of the heel elevating member, the portion at the rear thereof being inclined abruptly downwardly and backwardly to underlie the bottom of the heel elevating member.

2. In a device of the character described the combination of a heel elevating member for insertion in the heel of a shoe and an arched plated arranged to support the instep of the wearer, and bearing at its forward end upon the shoe, the highest portion of the plate lying flush with the top of the elevating member, the portion at the rear of the highest portion being inclined abruptly downwardly along the forward face of the heel elevating member and rearwardly to underlie the bottom of said elevating member.

3. In a device of the character described the combination of a heel elevating member for insertion in the heel of a shoe, and a plate arranged to span the shank of the shoe and adapted to bear at each end upon the shoe and having an arched portion the elevation of which is greater than that of the normal human instep arch, said elevating member being secured upon the upper surface of the plate near the rear end thereof.

1,152,558. DRIVING MECHANISM FOR ROTARY POWER HOES OR CULTIVATORS. KARL HEINRICH WILHELM LUDWIG SECK, Mannheim, Germany, assignor to the Firm of Heinrich Lanz, Mannheim, Germany. Filed Dec. 11, 1912. Serial No. 736,145. (Cl. 97—71.)



1. A rotary cultivator comprising, in combination, a vehicle frame, wheels supporting said frame, a prime mover mounted on the frame, a separate counter-shaft divided into two parts, a differential gear intermediate the two parts of said counter-shaft and driven from said prime mover independently of the supporting wheels, a through cultivator shaft each end of which rests in a bearing of an arm pivotally supported from said frame and means for driving said through shaft from said counter-shaft.

2. A rotary cultivator comprising, in combination, a vehicle frame, wheels supporting said frame, a prime mover mounted on the frame, a separate counter-shaft divided into two parts, a differential gear intermediate the two parts of said counter-shaft and driven from said prime mover independently of the supporting wheels, a clutch intermediate said differential gear and counter-shaft for connecting and disconnecting said gear and counter-shaft, a through cultivator shaft pivotally supported from said frame and means for driving said through shaft from said counter-shaft.

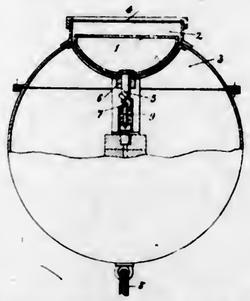
3. The combination with a rotary cultivator of a prime mover, a counter-shaft divided into two parts, a differential gear intermediate the two parts of the counter-shaft and driven from said prime mover independently of the supporting wheels of the cultivator-frame, a clutch intermediate said differential gear and counter-shaft, said clutch being adapted to automatically disengage said gear and counter-shaft when said cultivator meets with excessive resistance, a through shaft carrying the cultivators and means for driving said through shaft from said counter-shaft.

4. The combination with a rotary cultivator, of a prime mover, a counter-shaft divided into two parts, a differential gear intermediate the two parts of the counter-shaft and driven from said prime mover independently of the supporting wheels of the cultivator frame, a spring-controlled friction clutch intermediate said differential gear and counted shaft adapted to automatically disengage said gear and countershaft when said cultivator meets excessive resistance, and to reëngage said gear and countershaft on the diminution of said resistance, a through shaft carrying the cultivators, and means for driving said through shaft from said counter-shaft.

5. The combination with a rotary cultivator, of a prime mover, two coaxial counter-shafts, a toothed wheel fixed on one end of one of said counter-shafts, a loose toothed wheel on the adjacent end of the other counter-shaft, planet wheels gearing with said fixed and loose wheels, a rotatable casing carrying said planet wheels, an annular toothed wheel carried by said casing, and driven from said prime mover independently of the supporting wheels of the cultivator frame, a clutch intermediate said loose toothed wheel and its counter shaft for enabling said loose toothed wheel to be put into or out of engagement with its counter-shaft, a through shaft carrying the cultivators, and means for driving said through shaft from said counter-shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,152,559. SUBMARINE MINE. HARRY SENFFTLEBEN, Clamart, France. Filed July 18, 1913. Serial No. 779,750. (Cl. 102—3.)



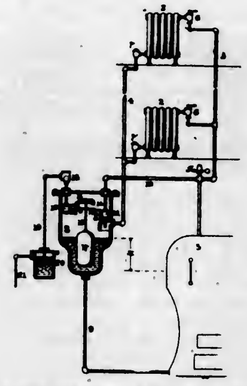
1. Means for causing explosions under water comprising in combination a percussion device, a float normally connected therewith and having sufficient buoyancy to operate said device and means adapted to be broken by the shock of a vessel and adapted normally to prevent the buoyancy of said float from becoming effective, substantially as described.

2. Means for causing explosions under water comprising in combination a body, a percussion device thereon having two separable parts, a float adapted when released to separate said parts temporarily, and means adapted to be broken by the shock of a vessel and adapted normally to prevent movement of said float with relation to said body, substantially as described.

3. Means for causing explosions under water comprising in combination a body portion, a float, a pin for securing said float to said body portion, means tending to disengage said pin from said float, breakable means for restraining the action of said disengaging means and a percussion device operatively connected with said float, substantially as described.

4. Means for causing explosions under water comprising in combination a percussion cap, a spring-pressed stem for striking the same, a float, a hook adapted normally to engage said stem and means in the path of movement of said hook when moved by said float adapted to disengage the same from said stem, substantially as described.

1,152,560. SYSTEM OF STEAM-HEATING. JOHN A. SERRELL, North Plainfield, N. J. Filed Jan. 7, 1910. Serial No. 536,894. (Cl. 237—68.)



1. In a steam heating system, the combination of the radiators or coils, a steam boiler, a supply pipe from the boiler to the radiators or coils, a return pipe from the radiators or coils to the boiler and containing a fixed n n-condensing receiver at a higher level than the normal water level of the boiler and in which a static head is maintained, a valve for admitting steam to the receiver whenever the static head therein becomes greater than the predetermined normal static head, motor mechanism for automatically operating the valve and actuated under the influence of the boiler pressure, and means independent of the motor mechanism for permitting the escape of air from the receiver while restricting the escape of steam at all times during the normal operation of the system.

2. In a steam heating system, the combination of the radiators or coils, a steam boiler, a supply pipe from the boiler to the radiators or coils, a return pipe from the radiators or coils to the boiler and containing near its lower part a fixed receiver arranged at a higher level than the normal water level of the boiler and in which a static head is maintained, automatic trap devices arranged between the radiators or coils and the return pipe for permitting the passage of water and air from the radiators or coils into the return pipe while preventing the passage of steam whereby no appreciable steam is permitted to enter the return pipe and receiver by way of the radiators, a valve for admitting steam to the receiver whenever the static head therein becomes greater than that predetermined as the normal static head, motor mechanism for automatically operating the valve and actuated under the influence of the boiler pressure for causing the valve to admit steam into the receiver at proper times to increase the pressure therein commensurately with an increase of pressure in the boiler, and automatic means for permitting the escape of air from the receiver while restricting the escape of steam therefrom at all times during the normal operation of the system.

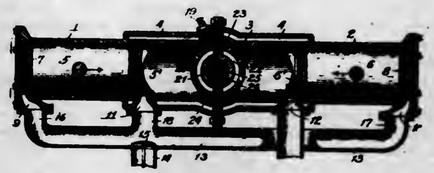
3. In a steam heating system, the combination of the radiators or coils, a steam boiler, a supply pipe from the boiler to the radiators or coils, a return pipe from the radiators for delivering water of condensation to the boiler and air from the radiators, said return pipe containing a fixed receiver at a higher level than the normal water level of the boiler and in which a static head is maintained, automatic means for permitting the escape of water of condensation and air from the radiators or coils into the return pipe while restricting the escape of steam, means for permitting the discharge of air from the return side of the system into the atmosphere while restricting the escape of steam, and separate automatic means controlled by the difference in relative pressures in the boiler and in the return side of the system for admitting steam to the receiver when the static head therein becomes greater than that predetermined as the normal static head.

4. In a steam heating system, the combination of the radiators or coils, a steam boiler, a supply pipe from the boiler to the radiators or coils, a return pipe from the radiators for delivering water of condensation to the boiler said return pipe containing a fixed receiver at a higher level than the normal water level of the boiler and in which a static head is maintained, thermostatic means for permitting the discharge of air from the receiver into the atmosphere while preventing the escape of steam therefrom, and separate automatic means in addition to the receiver controlled by the difference in relative pressures in the boiler and the return side of the system for admitting steam to the receiver whenever the static head therein becomes greater than that predetermined as the normal static head.

5. In a steam heating system, the combination of the radiators or coils, a steam boiler, a supply pipe from the boiler to the radiators or coils, a return pipe from the radiators to the boiler and containing a receiver at a higher level than the normal water level of the boiler and in which a static head is maintained, automatic traps between the radiattors or coils and the return pipe for permitting the passage of air and water but restricting the passage of the steam, automatic means influenced by the pressures in the return part of the system for admitting steam to the receiver whenever the static head therein becomes greater than that predetermined as the normal static head, said means consisting of a steam pipe receiving steam from the boiler and a pressure reducing valve in the steam pipe adapted to open wider with any abnormal decrease of pressure in the receiver and vice versa, and automatic means for permitting the escape of air from the return pipe while restricting the escape of steam.

[Claims 6 and 7 not printed in the Gazette.]

1,152,561. INTERNAL-COMBUSTION ENGINE. JAMES SHAW, Lodi, Cal. Filed Mar. 30, 1914. Serial No. 828,318. (Cl. 123—51.)



1. An internal combustion engine, comprising a pair of cylinder arranged in longitudinal alinement and provided with end closure heads and with a central combustion chamber, a transverse wall disposed centrally in said combustion chamber and having a transverse orifice, a journal bearing in said orifice, a crank shaft journaled in said bearing, a supply trunk having ports opening into the outer ends of said cylinders and an intermediate port opening into one of said cylinders adjacent to the central combustion chamber, the other cylinder having an exhaust port opening through same adjacent to the combustion

chamber, means for introducing supplies of gaseous fuel into the outer portions of the piston chambers of said cylinders, a pair of pistons arranged in the pair of cylinders aforesaid and adapted to cover and uncover the aforesaid ports, and operative connections between saird pistons and the crank shaft, substantially as set forth.

2. An internal combustion engine, comprising a pair of cylinders arranged in longitudinal alinement and provided with end closure heads and with a central combustion chamber, a transverse wall disposed centrally in said combustion chamber and having a transverse orifice, a journal bearing in said orifice, a crank shaft journaled in said bearing, a supply trunk having ports opening into the outer ends of said cylinders and an intermediate port opening into one of said cylinders adjacent to the central combustion chamber, the other cylinder having an exhaust port opening through same adjacent to the combustion chamber, a valved fuel gas supply branch connecting with the supply trunk aforesaid, a pair of pistons arranged in the pair of cylinders aforesaid and adapted to cover and uncover the aforesaid ports, and operative connections between said pistons and the crank shaft, substantially as set forth.

3. An internal combustion engine, comprising a pair of cylinders arranged in longitudinal alinement and provided with end closure heads and with a central combustion chamber, a transverse wall disposed centrally in said combustion chamber and having a transverse orifice, a journal bearing in said orifice, a crank shaft journaled in said bearing, a supply trunk having ports opening into the outer ends of said cylinders and an intermediate port opening into one of said cylinders adjacent to the central combustion chamber, the other cylinder having an exhaust port opening through same adjacent to the combustion chamber, the exhaust port being disposed closer to the central combustion chamber than the intermediate port aforesaid, means for introducing supplies of gaseous fuel into the outer portions of the piston chambers of said cylinders, a pair of pistons arranged in the pair of cylinders aforesaid and adapted to cover and uncover the aforesaid ports, and operative connections between said pistons and the crank shaft, substantially as set forth.

4. An internal combustion engine, comprising a pair of cylinders arranged in longitudinal alinement and provided with end closure heads and with a central combustion chamber, a transverse wall disposed centrally in said combustion chamber and having a transverse orifice, a journal bearing in said orifice, a crank shaft journaled in said bearing, a supply trunk having ports opening into the outer ends of said cylinders and an intermediate port opening into one of said cylinders adjacent to the central combustion chamber, the other cylinder having an exhaust port opening through same adjacent to the combustion chamber, the exhaust port being disposed closer to the central combustion chamber than the intermediatet port aforesaid, a valved fuel gas supply branch connecting with the supply trunk aforesaid, a pair of pistons arranged in the pair of cylinders aforesaid and adapted to cover and uncover the aforesaid ports, and operative connections between said pistons and the crank shaft, substantially as set forth.

5. An internal combustion engine, comprising a pair of cylinders arranged in longitudinal alinement and provided with end closure heads and with a central combustion chamber, a transverse wall disposed centrally in said combustion chamber and having a transverse orifice, a journal bearing in said orifice, a crank shaft journaled in said bearing, a supply trunk having ports opening into the outer ends of said cylinders and an intermediate port opening into one of said cylinders adjacent to the central combustion chamber, the other cylinder having an exhaust port opening through same adjacent to the combustion chamber, means for introducing supplies of gaseous fuel into the outer portions of the piston chambers of said cylinders, a pair of pistons arranged in the pair of cylinders aforesaid and adapted to cover and uncover the aforesaid ports, and operative connections between said pistons and the crank shaft, the same comprising cross-heads attached to the pistons intermediate their lengths, slideways therefor carried on the walls of the pair of cylinders, and pitmen connecting the cross-heads to the crank arms of the crank shaft, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,152,562. PROCESS OF PRODUCING SOUND-RECORDS. JOHN C. SHERMAN, Brookline, Mass. Original application filed Nov. 16, 1912, Serial No. 731,798. Divided and this application filed Dec. 16, 1913. Serial No. 807,001. (Cl. 181—1.)

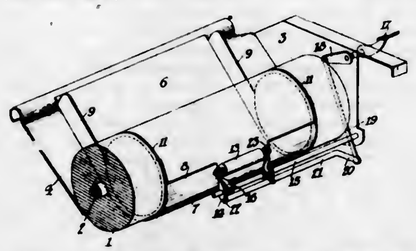


1. The method of producing a sound record which consists in photographing on a moving sensitized ribbon, a light path of varying width representing sound characteristics, developing the said light path as an image, printing it upon a ribbon of magnetic material and then removing the portions of said material not occupied by said light path of varying width.

2. The method of producing a sound record which consists in photographing on a moving sensitized ribbon, a light path of varying width representing sound characteristics, developing the said light path, printing it upon a ribbon of magnetic material and submitting said ribbon to an etching bath thereby removing the portions not occupied by said light path of varying width.

3. The method of producing a sound record which consists in photographing on a moving sensitized ribbon, a light path of varying width representing sound characteristics, developing the said light path, printing it upon the surface of a ribbon of magnetic material and then submitting said material to an etching bath thereby removing the portions of said surface not occupied by the said light path of varying width.

1,152,563. TYPE-WRITING MACHINE. JESSE A. B. SMITH, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Apr. 3, 1914. Serial No. 829,162. (Cl. 197—127.)



1. The combination with a rotary platen, of a stationary guide for work members curved around the platen and spaced a short distance therefrom to permit a work member to be slipped into position between the platen and said guide, the platen being formed with an annular groove, and said guide formed with an extension to enter said groove.

2. The combination with a rotary platen, of a stationary guide for work members curved around the platen, flanges on said guide, and annular grooves in the platen into which said flanges project.

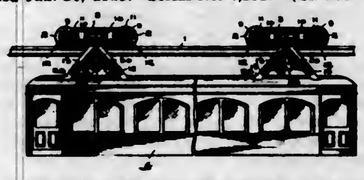
3. The combination with a rotary platen of a stationary guide for work members curved around the platen, flanges on said guide, and annular grooves in the platen into which said flanges project, said flanges and grooves being of a relative depth to permit the flanges to bear against the bottom of the grooves and thereby space the guide from the platen.

4. The combination with a rotary platen, of a stationary guide for work members, said guide curved around the platen, and means on said guide to extend inward within the outline of the printing surface of the platen and thereby position the work member.

5. In a typewriting machine, the combination with a rotary platen, of an attachment comprising an inclined flat sheif, and an extension curved to conform to the periphery of the platen, a flange on said curved portion, and an annular recess or groove in the surface of the platen to receive said flange.

[Claims 6 to 11 not printed in the Gazette.]

1,152,564. TRUCK. JOSIAH H. SMITH, Philadelphia, Pa., assignor to William H. Tigerman, Philadelphia, Pa. Filed Jan. 20, 1915. Serial No. 3,292. (Cl. 105—237.)



1. A suspension railway truck, comprising side frames, wheels supporting the side frames, longitudinally positioned springs supported in the side frames, a transverse beam supported on the springs, and a car support located above and pivotally connected to the beam, substantially as described.

2. A suspension railway truck, comprising side frames, wheels supporting the side frames, longitudinally positioned springs supported in the side frames, a tranverse beam supported on the springs, a pivot block above the beam, a king pin connecting the pivot block with the beam, and a car support connected to the pivot block, substantially as described.

3. A suspension railway truck, comprising side frames, wheels supporting the side frames, longitudinally positioned springs supported in the side frames, a transverse beam supported on the springs, a car support positioned above the center of the beam, and a king pin pivotally connecting the car support and the beam, substantially as described.

4. A suspension railway truck, comprising side frames, wheels supporting the side frames, hangers on the side frames, longitudinally positioned springs supported in the hangers, a transverse beam supported on the springs, a center block secured to the beam, a pivot block above the center block, said blocks having registering openings therein, a king pin in said openings, and a car supported on the pivot block, substantially as described.

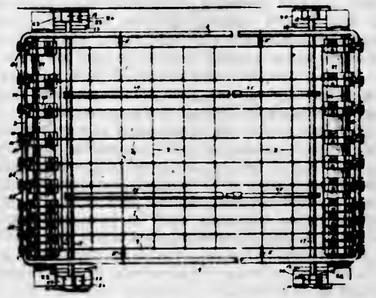
5. A suspension railway truck, comprising side frames, wheels supporting the side frames, hangers on the side frames, longitudinally positioned springs supported in the hangers, a transverse beam supported on the springs, a center block secured to the beam, a pivot block above the center block, said blocks having registering openings therein, a king pin in said openings, forks secured to opposite sides of the pivot block, and a car suspended from said forks, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,152,565. MACHINE FOR SECURING WEBBING TO FRAMES. JAMES W. SNEDEKER, Adrian, Mich. Filed July 24, 1914. Serial No. 852,825. (Cl. 140—24.)

1. In a machine for securing transverse wires to frames, the combination of a plurality of headstocks, a cross bar mounted thereon, means on the cross bar for engaging the wires, means for moving the cross bar to tension the wires, benders to wrap the wires around the frame, and means to wind the ends of the wires around the main portions thereof.

2. In a machine for securing transverse wires to frames, the combination of a plurality of headstocks, a cross bar mounted thereon, means on the cross bar for engaging the wires, means for moving the cross bar to tension the wires, benders to wrap the wires around the frame, gears and twisters mounted therein to wind the ends of the wires around the main portions thereof, and means to revolve the gears.



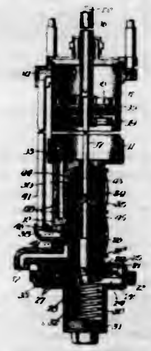
3. In a machine for securing transverse wires to frames, the combination of a plurality of headstocks, a cross bar mounted thereon, bender frames mounted on the cross bar, eccentries on the bender frames for engaging the wires, means for moving the cross bar to tension the wires, benders to wrap the wires around the frame, and means to wind the ends of the wires around the main portions thereof.

4. In a machine for securing transverse wires to frames, the combination of a plurality of headstocks, a cross bar mounted thereon, bender frames mounted on the cross bar, engaging devices on the bender frames for engaging the wires, means for moving the cross bar to tension the wires, benders to wrap the wires around the frame, gears revolubly mounted in the bender frames, dies mounted in the gears to wind the ends of the wires around the main portions thereof, and a rack-bar to simultaneously revolve said gears.

5. In a machine for securing transverse wires to-gate frames, the combination of a plurality of headstocks, a bed on which the headstocks are adjustably mounted, a cross bar mounted on the headstocks, benders to wrap the wires around the gate frame, and means to wind the ends of the wires around the main portions thereof.

[Claims 6 to 20 not printed in the Gazette.]

1,152,566. WATER-MOTOR. MORTON O. SNEDIKER, Chicago, Ill., assignor to The Powers Regulator Company, Chicago, Ill., a Corporation of Illinois. Filed July 27, 1914. Serial No. 853,280. (Cl. 138—2.)



1. In a fluid motor, the combination of a cylinder and a piston, a valve casing provided with ports leading to said

cylinder on both sides of said piston, a valve for controlling said ports, means for moving said valve, means for admitting fluid under service pressure to both sides of said valve actuating means and a spring also acting upon said valve actuating means and exerting the balance of power to move said valve in one direction, substantially as described.

2. In a fluid motor, the combination of a cylinder and a piston, a valve casing, a valve controlling ports which admit fluid to and exhaust the same from said cylinder, a diaphragm associated with said valve, means for exerting fluid pressure against said diaphragm to move said valve in one direction, and combined fluid pressure and spring means for moving said diaphragm and valve in the opposite direction, substantially as described.

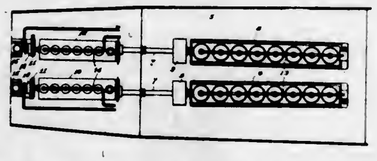
3. In a fluid motor, the combination of a cylinder and a piston, a valve casing, a valve controlling ports which admit fluid to and exhaust the same from said cylinder, a diaphragm associated with said valve, means for exerting a constant fluid pressure against one side of said diaphragm, a spring exerting a constant pressure against the other side of said diaphragm, and means for admitting fluid to and exhausting the same from the spring side of said diaphragm to cause the movement of said valve, substantially as described.

4. In a fluid motor, the combination of a cylinder and a piston, a valve casing, a valve controlling ports which admit fluid to and exhaust the same from said cylinder, a diaphragm and a spring moving said valve, means for exerting equal fluid pressure on both sides of said diaphragm, the pressure on one side plus the force of the spring causing movement of the valve in one direction, the exhausting of pressure on that side of the diaphragm causing movement in the opposite direction due to overcoming the spring force by pressure, substantially as described.

5. In a fluid motor, the combination of a cylinder and a piston, a valve casing, a valve controlling ports which admit fluid to and exhaust the same from said cylinder, a diaphragm, a spring, means for exerting combined spring and fluid pressure on one side of said diaphragm, a constant pressure being exerted on the opposite side of the diaphragm, and a valve for controlling ports for the admission of fluid to and exhausting the same from the spring side of the diaphragm, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,152,567. PROPELLING APPARATUS FOR VESSELS. LAWRENCE YORK SPEAR, Groton, Conn., assignor to Electric Boat Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 30, 1915. Serial No. 17,971. (Cl. 115—34.)



1. In a vessel, propelling apparatus comprising the combination of a propeller shaft, two internal combustion engines of different sizes, and means for mechanically connecting either of the two engines at will to the propeller shaft to drive the latter and thus propel the vessel, whereby the vessel may be propelled at different speeds with the propelling engine operating at high efficiency; substantially as described.

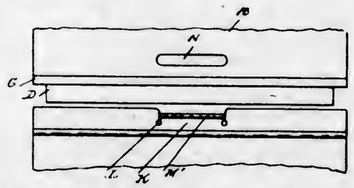
2. In a vessel, propelling apparatus comprising the combination of a propeller shaft, a main internal combustion engine, means for connecting the main engine to and disconnecting it from the propeller shaft, a second internal combustion engine, an air compressor supplying air for the main engine, and means for connecting the second engine to either the air compressor or to the propeller shaft; substantially as described.

3. In a vessel, propelling apparatus comprising the combination of a propeller shaft, a main internal combustion engine, means for connecting the main engine to and disconnecting it from the propeller shaft, a second internal combustion engine, an air compressor supplying air for the main engine, and means for connecting the air compressor to either the second engine or the propeller shaft; substantially as described.

4. In a vessel, propelling apparatus comprising the combination of a propeller shaft, a main internal combustion engine, means for connecting the main engine to and disconnecting it from the propeller shaft, a second internal combustion engine, an air compressor supplying air under pressure to the main engine, means for connecting the second engine to and disconnecting it from either the air compressor or the propeller shaft, and means for connecting the air compressor to and disconnecting it from the propeller shaft; substantially as described.

5. In a vessel, propelling apparatus comprising the combination of a propeller shaft, a main internal combustion engine, means for connecting the main engine to and disconnecting it from the propeller shaft, a second internal combustion engine, an air compressor supplying air for the main engine, and means for connecting the air compressor to either engine so as to be driven thereby; substantially as described.

1,152,568. LOCKING DEVICE FOR SECTIONAL CONDUITS. ISAAC STEARNS, Detroit, Mich., assignor to Michigan Safety Furnace Pipe Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 18, 1912. Serial No. 691,639. (Cl. 137—75.)

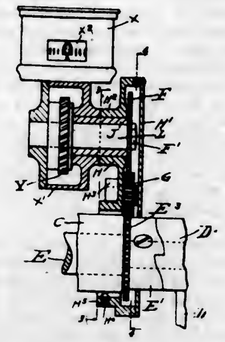


1. The combination of telescoping conduit sections each being provided with parallel outer and inner walls, and each having a spacer between said walls and having a portion lying adjacent to the outer wall to form a double ply flange, and the double-ply flange of one of the sections having a tongue formed out of a portion thereof, said tongue being separated from the remaining portion of said double-ply flange by slits and having its outer end laterally bent to form a hook, the other section being provided with a slot in the telescoping flange for engagement with said laterally bent hook.

2. The combination with telescopically engaging conduit sections having parallel inner and outer walls, of a spacer extending between the walls of each of said sections and provided with an outward extension parallel and adjacent to the outer wall to form a two-ply flange, the flange of one section having a tongue formed therefrom, said tongue being separated from the remaining portion of the last-mentioned flange by longitudinal slits and being laterally bent to form a hook, the telescoping flange of the adjacent section being slotted to form a keeper for engagement with said laterally bent hook.

1,152,569. DRIVE-GEARING FOR SHAFT-SPEED INDICATORS. JOHN K. STEWART, Chicago, Ill., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill., a Corporation of Virginia. Filed Dec. 13, 1913. Serial No. 806,454. (Cl. 74—7.)

1. The combination of a rotary shaft, a cylindrical journal bearing therefor, and means for connecting thereto a mechanism to be actuated thereby comprising a gear train, a housing for said gear train having an annular flange dimensioned to encircle the cylindrical journal bearing, and adjustable means carried by the flange adapted to engage the journal bearing for securing the housing thereto.



2. In combination with a rotary shaft, a removable drive crank having a hub formed with clutch teeth, means for actuating a mechanism by said shaft, comprising a sleeve fixed on the shaft, circumferentially provided with gear teeth, a gear train meshing therewith for communicating motion to said mechanism, said sleeve being also formed with clutch teeth adapted for engagement with those of the crank hub.

3. In combination with a rotary shaft, a journal bearing from which it projects at one end, and a driving crank on said end of the shaft, means for actuating from said shaft a mechanism whose casing is wider than the distance between said journal bearing and said crank, comprising a spur gear secured to the shaft between said journal bearing and said crank, a housing for said gear mounted on the journal bearing and extending transversely therefrom, a gear train in said housing terminating in a shaft parallel to the first-mentioned shaft, and means for supporting said mechanism on the extending portion of the housing in position to engage said final shaft of the train.

4. In combination with a rotary shaft, a journal bearing from which it projects at one end, and a driving crank on said end of the shaft, means for actuating from said shaft a mechanism whose casing is wider than the distance between said journal bearing and said crank, comprising a spur gear secured to the shaft between said journal bearing and said crank, a housing for said gear mounted on the journal bearing and extending transversely therefrom, a gear train in said housing terminating in a shaft parallel to the first-mentioned shaft, and a bushing for said final shaft of the gear train projecting from the extending portion of said housing for supporting said mechanism, the casing of said mechanism having an aperture to fit tightly over said bushing, and means for securing it thereto.

1,152,570. DEVICE FOR DRESSING CASTINGS AND THE LIKE. THEODOR STIEGELMEYER, Hanover-Wülfel, Germany. Filed Dec. 26, 1913. Serial No. 808,820. (Cl. 78—34.)

1. In means for dressing castings, plates, rivet heads, and the like the combination of a rotatable member having a plurality of conical openings with a plurality of strikers disposed within said conical openings and being adapted to move radially with respect to the axis of rotation and to move circularly in every direction.

2. In means for dressing castings, plates, rivet heads, and the like the combination of a rotatable member having a plurality of openings, said openings having beveled outer edges, a plurality of tools located in said member and having thickened inner ends within the member and being adapted to move radially with respect to the axis of rotation and to move circularly in every direction.

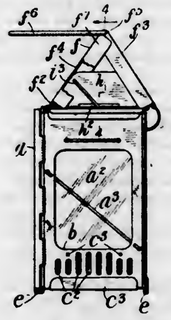


3. In means for dressing castings, plates, rivet heads and the like, the combination of a rotatable member having a plurality of conical openings, a plurality of strikers disposed within said conical openings and means for forming an inner abutment for said strikers, said strikers being adapted to move radially with respect to the axis of rotation and to move circularly in every direction.

4. In means for dressing castings, plates, rivet heads and the like, the combination of a rotatable member having a plurality of conical openings with a plurality of strikers disposed within said conical openings, a sleeve mounted coaxially with said rotatable member and forming an inner abutment for said strikers, said strikers being adapted to move radially with respect to the axis of rotation and to move circularly in every direction.

5. In means for dressing castings, plates, rivet heads and the like, the combination of a rotatable member having a plurality of openings, said openings having beveled outer edges, a plurality of tools located in said member and having thickened inner ends within the rotatable member and being adapted to move radially with respect to the axis of rotation and to move circularly in every direction, and a sleeve mounted coaxially with said rotatable member forming the inner abutment for said tools.

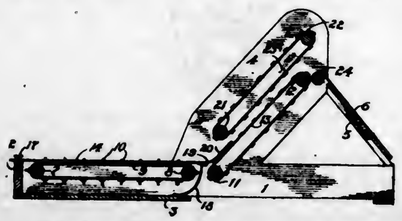
1,152,571. FOLDING LANTERN. CHARLES H. STONEBRIDGE, New York, N. Y. Filed June 11, 1914. Serial No. 844,402. (Cl. 240—36.)



1. A folding lantern of the class described, said lantern being provided in the bottom thereof with air inlets and in the sides of the bottom portion with air registers, the body of the lantern being also provided with a folding top consisting of opposite parts and within which are passed oppositely arranged side shields adapted to be folded inwardly and horizontally and to be raised in an upright or approximately upright position.

2. A folding lantern of the class described, comprising a rectangular body provided in the bottom with air inlets and in the bottom side portions with air register devices, the top of the body of the lantern being provided with a folding top open at the opposite sides and within which are oppositely arranged side shields hinged to the body of the lantern and adapted to be folded inwardly and horizontally and to be raised into an upright position.

1,152,572. CONVEYER FOR HARVESTING-MACHINES. GEORGE R. STRICKLAND, Chicago, Ill., assignor of one-half to W. W. Wagg, Moose Jaw, Saskatchewan, Canada. Filed Apr. 13, 1914. Serial No. 831,388. (Cl. 193—8.)



1. In a device of the class described the combination with conveying mechanism and a plurality of elevating mechanisms mounted adjacent one another to elevate material therebetween, of a sectional hingedly connected apron releasably and resiliently mounted above said conveying mechanism and bridging the gap between said conveying and elevating mechanisms to prevent the loss of material therebetween.

2. In a device of the class described the combination with conveying and elevating mechanisms, of an apron bridging the space between said conveying and elevating mechanisms and with a section hingedly connected to said apron and supported upon said elevating mechanism, said apron and section acting to prevent the loss of material handled between said respective conveying and elevating mechanisms.

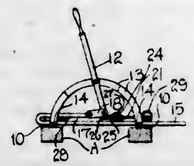
3. In a device of the class described the combination with conveying and elevating mechanisms, of an apron releasably mounted and resiliently supported over said conveying mechanism and a section hingedly connected thereto co-acting therewith to bridge the gap between said conveying and elevating mechanisms and partly supported upon said elevating mechanism to prevent loss of material between said conveying and elevating mechanisms.

4. In a device of the class described the combination with a conveying mechanism, of a plurality of elevating mechanisms, and hingedly connected sectional means resiliently and detachably supported above said conveyer to bridge the space between said conveying and elevating mechanisms to prevent loss of material handled therebetween.

5. In a device of the class described the combination with a conveying and a plurality of elevating mechanisms, of a resilient support adjustably mounted between said conveying and elevating mechanisms, and a section hingedly connected to said support and partly supported upon portions of said elevating mechanism to prevent loss of material handled between said conveying and elevating mechanisms.

[Claims 6 to 9 not printed in the Gazette.]

1,152,573. RAILWAY-TRACK SWITCH. WILLIAM A. STULL, Fort Defiance, W. Va. Filed Apr. 19, 1915. Serial No. 22,457. (Cl. 104—25.)



1. In a switch mechanism, the combination with a point rail, of a shifting lever, a bridge member pivotally supporting the lever, an operating rod mounted for sliding movement through the bridge member and freely connected to the shifting lever, a bell crank lever having a fixed pivot, one arm of said bell crank lever being connected to the operating rod, means freely connecting the other arm of the bell crank lever to the point rail, and yieldable means for normally holding the operating rod in adjusted position.

2. In a switch mechanism, the combination with a point rail, of a shifting lever, a bridge member pivotally supporting the lever, an operating rod mounted for sliding movement through the bridge member and freely connected to the shifting lever, a bell crank lever having a fixed pivot, one arm of said bell crank lever being connected to the operating rod, means freely connecting the other arm of the bell crank lever to the point rail, a toggle arm pivotally connected to the bell crank lever and to the operating rod, a lever pivoted for movement at its free end toward and away from the operating rod, and yieldable means normally drawing the free end of the lever toward the operating rod, whereby the toggle arm is yieldably maintained in position to resist the movement of the operating rod.

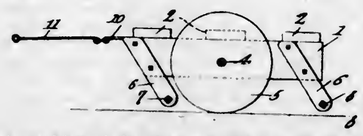
3. In a switch mechanism, the combination with a point rail, of a shifting lever, a bridge member pivotally supporting the lever, an operating rod mounted for sliding movement through the bridge member and freely connected to the shifting lever, means operatively connecting the rod to the point rail, and yieldable means for normally holding the operating rod in adjusted position.

4. In a switch mechanism, the combination with a point rail, of a shifting lever, a bridge member pivotally supporting the lever, said bridge member including spaced, substantially semi-circular bars, the lever being pivoted between the bars at the upper portions thereof, an operating rod mounted for sliding movement between the bars of the bridge, and freely connected to the shifting lever, means operatively connecting the rod and point rail, and yieldable means for holding the rod in adjusted position.

5. In a switch mechanism, the combination with a point rail, of a shifting lever, a bridge member comprising spaced, substantially semi-circular bars, the lever being pivotally supported between the bars, an operating rod slidable between the bars, one terminal of the rod being re-bent and extended in parallel spaced relation to the body of the rod, a link pivotally connecting said re-bent terminal of the rod with the shifting lever, means operatively connecting the rod and point rails, and yieldable means for maintaining the rod in adjusted position.

[Claim 6 not printed in the Gazette.]

1,152,574. WEED-REMOVER. JAMES TOMLIN, Moro, Oreg., assignor of one-half to Richard T. Morgan, Moro, Oreg. Filed Sept. 21, 1914. Serial No. 862,839. (Cl. 97—34.)

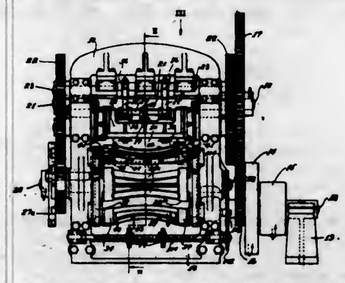


1. A machine of the class described including supporting wheels, a frame carried thereby and balanced therebetween, means upon the front and rear portions of the frame for supporting a driver, and means connected to and extending transversely under the front and rear portions of the frame for engaging and loosening the surface of the ground when the weight of the driver is applied to the front and rear portions of the frame respectively.

2. A machine of the class described including supporting wheels, a frame carried thereby and balanced therebetween, means upon the front and rear portions of the frame for supporting a driver, means connected to and extending transversely under the front and rear portions of the frame for engaging and loosening the surface of the ground when the weight of the driver is applied to the front and rear portions of the frame respectively, said means including hangers, a transverse rod connecting the lower ends of the hangers, and rollers mounted on the rod between the hangers.

3. In a machine of the class described, the combination with a frame and means upon the front and rear portions thereof for supporting a driver, of supporting wheels connected to the sides of the frame, said frame being balanced therebetween, downwardly and rearwardly inclined hangers connected to the front and rear portions respectively of the hanger, and means extending transversely of the machine and connecting the lower end portions of the hangers for engaging and loosening the surface of the soil when the weight of the driver is applied to the front or to the rear portion of the machine respectively.

1,152,575. BARREL-MACHINE. BENJAMIN W. TUCKER, South Orange, N. J. Filed Oct. 14, 1911. Serial No. 654,723. (Cl. 113—38.)



1. In a machine of the character described, the combination of rotary supporting means, a plurality of dies each having fixed and relatively movable members mounted on said supporting means and conforming to the general shape of the staves, means for holding stave blanks on the dies, transverse die members carried by the first-mentioned dies, a reciprocatory cross-head, means for reciprocating said cross-head, a punch having die members extending transversely thereof and conforming to the shape of the stave body, together with means for reciprocating the cross-head and punch carried thereby to cause the blank to have flanges formed thereon lengthwise and to have depressed portions transversely of the blank.

2. In a machine of the character described, the combination with a turret having heads, a plurality of bar-like die members extending between said heads and conforming to the general shape of the staves and a relatively movable die member movable between each pair of bar-like members and also conforming to the general contour of the stave, means for moving the movable die member inward and outward, means for intermittently rotating the turret, means for holding stave blanks on the die members, a reciprocatory cross-head, means for reciprocating said cross-head, a punch coöperating with the turret dies, die members extending transversely of the punch and the turret dies, together with means for reciprocating the cross-head and punch.

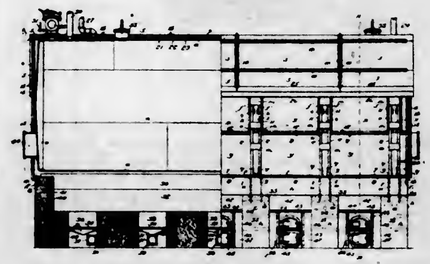
3. In a machine of the character described, the combination of a plurality of dies each having relatively fixed and movable members conforming to the general shape of the staves, a reciprocatory punch coöperating with the dies in succession to simultaneously bilge a stave blank and form beads transversely thereof and locking portions lengthwise of said stave blanks, means for intermittently moving the dies, and means for bending a part of said locking portions.

4. In a machine of the character described, the combination of a die comprising a plurality of members, means for imparting a relative independent movement between one of said die members and the others, a vertically movable cross-head, a punch carried by said cross-head, means for reciprocating the cross-head and punch, together with independent bending mechanism.

5. In a machine of the character described, the combination of a turret having a plurality of dies thereon, said dies each comprising a plurality of members, means for rotating said turret, means for moving one of said die members radially, a vertically movable cross-head, a punch carried by said cross-head, means for adjusting the punch relatively to the dies of the turret, means for reciprocating the cross-head and punch to form flanges lengthwise of the stave blanks, together with independent means for bending the flanges of each stave.

[Claims 6 to 37 not printed in the Gazette.]

1,152,576. SETTING FOR PETROLEUM-STILLS OR ANALOGOUS VESSELS. JOHN W. VAN DYKE and WILLIAM M. IRISH, Philadelphia, Pa., assignors to The Atlantic Refining Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 13, 1910. Serial No. 586,861. (Cl. 122—510.)



1. A petroleum still or analogous vessel provided with exterior supporting lugs attached thereto, in combination with columns upholding said still or analogous vessel by means of said lugs, plates intervening between said columns and secured thereto in such manner that they serve to brace the same and to retain them in place and forming a gas-tight inclosure for the heating space and the lower part of the still or analogous vessel and a lining for protecting said columns and plates from heat, substantially as described.

2. A petroleum still or analogous vessel provided with exterior supporting lugs attached thereto, in combination with a structure which upholds said still or analogous vessel by means of said lugs and incloses the heating space and the lower part of the stil or analogous vessel and includes columns under said lugs and metal plates secured by removable fastenings to said columns in such manner that they serve to brace the latter and to retain them in place, and a readily removable and replaceable lining which protects said structure from heat, substantially as described.

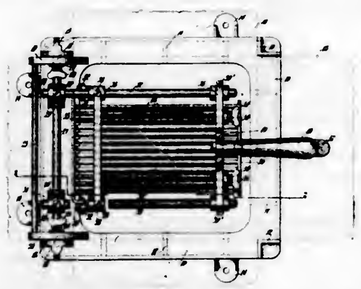
3. A petroleum still or analogous vessel provided with exterior supporting lugs attached thereto and also with interior braces extending across said still or analogous vessel at about the level of said lugs, in combination with means for upholding said still or analogous vessel through said lugs, substantially as described.

4. A petroleum still or analogous vessel provided with exterior supporting lugs attached thereto and also with interior braces extending across said still or analogous vessel at about the level of said lugs, in combination with means for upholding said still or analogous vessel through said lugs, which means are not tied to the still, but are otherwise supported against lateral motion so that the still can contract and expand independently of said means, substantially as described.

5. A petroleum still or analogous vessel provided with exterior supporting lugs attached thereto, in combination with a masonry foundation which incloses the fire boxes and the lower part of the overlying heating space, and a metal structure which is upheld by said foundation and upholds said still or analogous vessel by means of said lugs and which forms a gas-tight inclosure for the upper part of said heating space and the lower part of the still, substantially as described.

[Claims 6 to 25 not printed in the Gazette.]

1,152,577. CUTTER. BRUNO VON BÜLTZINGSLÖWEN, New York, N. Y., assignor, by direct and mesne assignments, of one-half to Morris Rubens and one-half to Robert R. Debacher, New York, N. Y. Filed Apr. 22, 1915. Serial No. 22,984. (Cl. 17—28.)



1. In a cutter, a base, standards mounted on the said base, a pivoted supporting member mounted between said standards and adapted to be adjusted upwardly and downwardly on said standards with respect to the base, and to be securely fixed in said adjusted portion, cutting means carried by said supporting member, and a pivoted yoke member coöperating with said cutting means and adapted to be raised and lowered therewith to prevent matter from adhering thereto, the said yoke member being movable independently from the said cutting means.

2. In a cutter, a base, standards mounted on the said base, a pivoted supporting member mounted between said standards and adapted to be adjusted upwardly and downwardly on said standards with respect to the said base, and to be securely fixed in said adjusted portion, cutting means carried by said supporting member, and a pivoted yoke member carried by said supporting member and cooperating with the said cutting means to prevent matter from adhering thereto, the said yoke member being movable independently from the said cutting means.

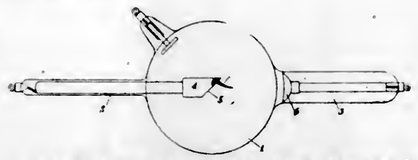
3. In a cutter, a base, standards mounted on the said base, a pivoted supporting member mounted between said standards and adapted to be adjusted upwardly and downwardly with respect to the said base, and to be securely fixed in said adjusted position, spacing members carried by said supporting member, cutting means supported between said spacing members, a pivoted yoke member carried by one of said spacing members coöperating with the said cutting means to prevent matter from adhering thereto, the said yoke member being movable independently from the said cutting means, and a handle carried by the other of said spacing members for manipulating the said cutting means.

4. In a cutter, a base, standards mounted on the said base, a pivoted supporting member mounted between the said standards and adapted to be adjusted upwardly and downwardly with respect to said base, and to be securely fixed in said adjusted position, spacing members carried by said supporting member, one of said members being provided with recessed portions at each side thereof, the other of said members being provided with a manipulating handle, cutting means supported between said spacing members, comprising supporting bars, a plurality of cutting members supported between said bars, extending portions on one of said bars adapted to engage the recessed portion of one of the said supporting members, and upwardly extending projections on the other of the said bars adapted to be removably secured to the other of said supporting members, and a pivoted yoke member carried by said supporting member, cooperating therewith to prevent matter from adhering thereto and movable independently from the said cutting means.

5. In a cutter, a base, standards mounted on said base, a pivoted supporting member mounted between said standards and adapted to be adjusted upwardly and downwardly with respect to said base, and to be securely fixed in said adjusted position, cutting means carried by said supporting member and comprising end supporting bars, a plurality of cutting members supported between said bars, and means on the said bars for removably securing the same to the said supporting member, and a pivoted yoke member carried by said supporting member coöperating with the said cutting means to prevent matter from adhering thereto, and movable independently from the said cutting means.

[Claims 6 to 13 not printed in the Gazette.]

1,152,578. X-RAY TUBE. REINHOLD H. WAPPLER, New York, N. Y., assignor to Wappler Electric Manufacturing Company, Inc., New York, N. Y., a Corporation of New York. Filed Dec. 13, 1912. Serial No. 736,651. (Cl. 250—35.)



1. In an X-ray tube, a cathode, an anode having a plane reflecting surface, and current-directing means on the reflecting surface arranged to direct the current within a defined area of the cathode.

2. In an X-ray tube, a cathode, and an anode having a plan reflecting surface and having a pointed conductor extending from such surface and directed at the cathode.

3. In an X-ray tube, an anode having a plane reflecting surface, a cathode arranged to focus the cathode rays upon the reflecting surface of the anode, and a pointed conductor extending from the reflecting surface of the anode and arranged to direct the current at substantially the center of the cathode.

4. In an X-ray tube, an anode having a plane reflecting surface, a cathode arranged to focus the cathode rays upon the reflecting surface of the anode, and a pointed conductor extending from the reflecting surface of the anode with its base outside of the cathode stream upon the reflecting surface and arranged to direct the current at substantially the center of the cathode.

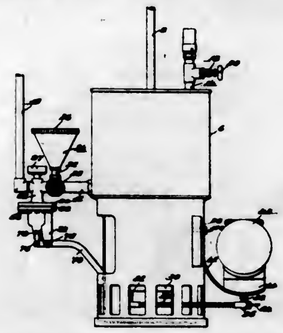
5. In an X-ray tube, an anode having a plane reflecting surface arranged at an angle to the axis of the anode, a cathode arranged to focus the cathode rays upon the reflecting surface of the anode, and a pointed conductor extending from the upper portion of the reflecting surface of the anode outside of the range of the cathode stream and bent to bring its pointed end in the line of the cathode stream and directed at substantially the center of the cathode.

[Claim 6 not printed in the Gazette.]

1,152,579. STEAM-GENERATOR. GEORGE E. WARREN, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 1, 1913. Serial No. 803,956. (Cl. 236—6.)

1. A steam generator, having in combination, a boiler, a burner comprising a vertically movable liquid fuel holder for heating the boiler, a liquid fuel reservoir connected with the fuel holder, means for maintaining a substantially constant level of liquid in the reservoir, and means controlled by the pressure of the steam in the steam chamber for raising and lowering the burner to vary the depth of fuel in the burner and thereby vary the size of the flame.

2. A steam generator, having in combination, a boiler, a burner comprising a liquid fuel holder for heating the boiler, a liquid fuel reservoir connected with the fuel holder, means for maintaining the liquid fuel in the reservoir at a substantially constant level, and means controlled by the pressure of the steam in the boiler for relatively moving the fuel holder and reservoir to vary the depth of the fuel in the fuel holder and thereby vary the size of the flame.



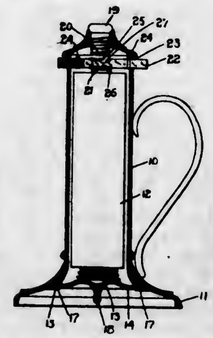
3. A steam generator, having in combination, a boiler, a burner comprising a liquid fuel holder for heating the boiler, a liquid fuel reservoir connected with the fuel holder and means controlled by the pressure of steam in the boiler for relatively moving the fuel holder and reservoir to vary the depth of the fuel in the fuel holder and thereby vary the size of the flame.

4. A steam generator, having in combination, a boiler, a burner comprising a liquid fuel holder for heating the boiler, a liquid fuel reservoir connected with the burner and means acting automatically to move relatively the fuel holder and reservoir to vary the depth of liquid in the fuel holder and thereby vary the size of the flame in accordance with variations in the pressure of the steam in the boiler.

5. A steam generator, having in combination, a boiler, a burner comprising a vertically movable fuel holder for heating the boiler, a pivoted lever supporting the fuel holder, a liquid fuel reservoir connected with the fuel holder, means for maintaining the fuel in the reservoir at a substantially constant level and means controlled by the pressure of steam in the chamber for actuating the lever to raise and lower the fuel holder to vary the depth of fuel therein and thereby vary the size of the flame.

[Claims 6 to 10 not printed in the Gazette.]

1,152,580. ELECTRIC SWITCH. LOUIS WEIDLICH, Stratford, Conn. Filed Apr. 27, 1915. Serial No. 24,241. (Cl. 240—8.5.)



1. In a lamp of the character described, the combination with a case open at one end and provided with a base having a circular shoulder and overhanging lugs, of a battery spring and a circular retaining plate by which it is carried, said plate being adapted to engage the shoulder and being provided with notches adapted to receive the lugs, a battery being retained in place by turning the retaining plate on the shoulder sufficiently to carry the notches out of alinement with the lugs.

2. In combination, a case, a lamp, a battery and a slide bar adapted to be moved transversely in the case, said bar being provided with contact springs adapted to engage the terminals of the clamp and the battery respectively.

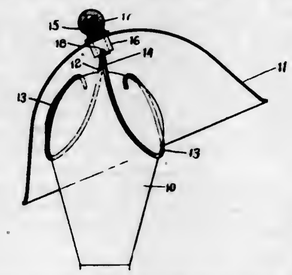
3. In combination, a case, a lamp, a battery and a slide bar adapted to be moved transversely in the case, said bar being provided with contact springs adapted to engage the terminals of the lamp and the battery respectively, and with stop lugs adapted to limit its movement in both directions.

4. In combination, a case, a lamp carried thereby, a battery within the case and a transversely movable slide bar having contact springs recessed into opposite sides thereof, one of said springs engaging the battery terminal and the other being adapted to engage the lamp terminal to close the circuit.

5. In combination, a case, a lamp, a battery, a slide bar adapted to be moved transversely in the case, said bar being provided with contact springs adapted to engage the terminals of the lamp and the battery respectively, and a spring acting upon the slide bar to move the lamp contact spring out of engagement with the lamp terminal when pressure on the slide bar is relieved.

[Claims 6 and 7 not printed in the Gazette.]

1,152,581. ADJUSTABLE REFLECTOR FOR INCANDESCENT LAMPS. LOUIS WEIDLICH, Stratford, Conn. Filed Feb. 23, 1915. Serial No. 9,840. (Cl. 240—103.)



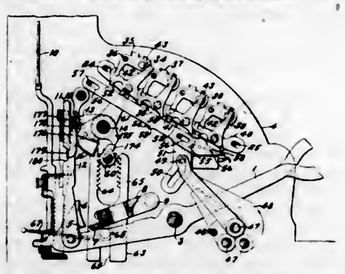
A device of the character described comprising a reflector, holding coils adapted to yieldingly engage the bulb of an incandescent lamp, a central coil continuous with and connecting the holding coils and of greater radius than said coils, a stud through which the central coil passes, a sleeve between the central coil and the reflector, and a nut on the stud for locking the parts in place, loosening of said nut permitting either oscillation or longitudinal movement of the central coil relatively to the stud.

1,152,582. DEPARTMENTAL CASH-REGISTER. JOHN A. WERNER, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Nov. 21, 1910. Serial No. 593,373. (Cl. 235—3.)

1. In an accounting machine, the combination with a printing mechanism, of means for operating the same, a plurality of carrying frames for record paper, only one of which is normally in operative position, transaction keys, and means operated by the transaction keys for moving any one of the carrying frames which is out of operative relation with the printing mechanism into operative relation with the same, and the carrying frame which is normally in operative relation out of operative relation.

2. In an accounting machine, the combination with printing mechanism, of means for operating the same, a plurality of pivoted carrying frames for record paper nor-

mally out of operative relation with the printing mechanism, transaction keys, and means operated by the transaction keys for rocking any desired carrying frame into operative relation with the printing mechanism.



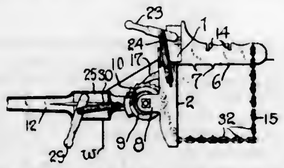
3. In an accounting machine, the combination with a printing mechanism, of means for operating the same, a plurality of pivoted carrying frames for record paper only one of which is normally in operative position, transaction keys, and means operated by the transaction keys for rocking any one of the carrying frames which is out of operative relation with the printing mechanism into operative relation with the same and the carrying frame which is normally in operative relation out of operative relation.

4. In an accounting machine, the combination with a plurality of record strip carrying frames, of a paper feeding device for the same normally out of operative relation with the record strip carrying frames, transaction keys, and means operated by the transaction keys for moving any one of the carrying frames into operative relation with the feeding mechanism.

5. In an accounting machine, the combination with a totalizing device, of key levers for actuating the totalizing device, transfer mechanism comprising a slide and a rack positioned to be engaged by said slide, means carried by the totalizing device for moving the slide into effective position, and means driven by the key levers for further moving the slide and thereby effecting a transfer.

[Claims 6 to 31 not printed in the Gazette.]

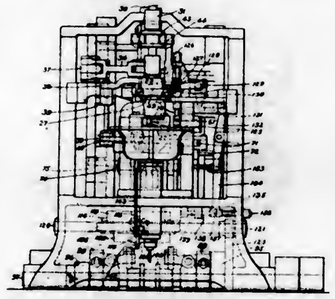
1,152,583. WIRE-STRETCHER. NEWTON WHITESEL and FRED WHITESEL, Watertown, Nebr. Filed Oct. 14, 1914. Serial No. 866,643. (Cl. 254—163.)



In a wire stretcher, a head provided with pairs of post engaging arms, each arm of one of said pairs being provided with a laterally projecting lug, a shaft rotatably mounted in said lugs, a grooved sheave secured on said shaft, a ratchet segment formed on one side of said sheave and having a lug formed thereon, a chain connected at one end to the sheave and having its other end arranged for engagement with one of the other arms, a lever mounted at one end on said shaft, said lug being disposed in the path of the lever, whereby upon movement of the lever in the proper direction, said sheave will be rotated to tighten said chain, wire holding means carried by the lever, and means carried by the head for preventing rotation of the sheave in the opposite direction to loosen the chain.

1,152,584. MACHINE FOR OPERATING ON SHOE-SOLES. ERASTUS E. WINKLEY, Lynn, Mass. Filed Feb. 14, 1911. Serial No. 608,489. (Cl. 12—30.)

1. A machine for operating on shoe soles, having, in combination, a tool for operating on the marginal portion of a sole blank, and means for presenting the blank to the tool including devices for intermittently gripping the flat surfaces of the blank and swinging the blank to maintain its marginal portion in proper relation to the tool, substantially as described.



2. A machine for operating on shoe soles, having, in combination, a tool for operating on the marginal portion of a sole blank, and means acting progressively on the blank for presenting it to the tool including sole gripping devices and mechanism for actuating the devices to intermittently grip the blank and for turning the devices to swing the blank, substantially as described.

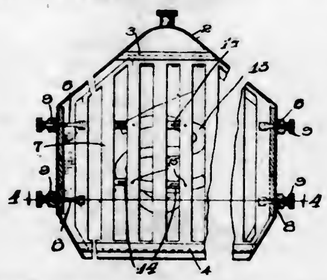
3. A machine for operating on shoe soles, having, in combination, devices for operating on the marginal portion of a sole blank including means for feeding the blank, and mechanism for actuating the feeding means to maintain the marginal portion of the blank in proper relation to the operating devices as the point of operation progresses along the marginal curves of the blank, substantially as described.

4. A machine for operating on shoe soles, having, in combination, means for operating on the marginal portion of a sole blank, sole gripping devices, and mechanism for actuating the sole gripping devices to intermittently grip and to feed the blank and for turning the devices to swing the blank, substantially as described.

5. A machine for operating on shoe soles, having, in combination, means for operating on the marginal portion of a sole blank including sole gripping devices, mechanism for actuating said devices to intermittently grip and feed the sole, and mechanism controlled by a contour on the sole for actuating said devices to swing the sole to maintain the contour in the line of feed, substantially as described.

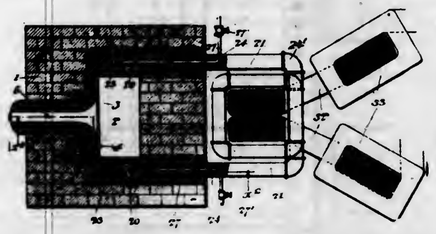
[Claims 6 to 34 not printed in the Gazette.]

1,152,585. RADIATION-REGULATOR. ARTHUR B. WRIGHT, Hinsdale, Ill. Filed Dec. 14, 1912. Serial No. 736,732. (Cl. 98—49.)



A register, comprising a frame, a stationary grid vertically disposed in said frame, a pair of transverse parallel angular bars rigidly secured to the top and bottom on the inner side of said frame, an adjustable grid slidably mounted between said bars and coacting with said stationary grid to control the draft therethrough, a pair of outwardly directed bolt members connected at each side of said adjustable grid and extending loosely through the lateral walls of the frame, and adjusting members movably mounted on said bolt members to shift said adjustable grid laterally in either direction to vary the draft therethrough.

1,152,586. ELECTRIC FURNACE. PARVIN · WRIGHT, Seattle, Wash. Filed Sept. 13, 1913. Serial No. 789,724. (Cl. 204—64.)



1. In an electric furnace, the combination with a furnace crucible and a chute for supplying ore thereto, of means for obstructing the downward movement of the ore in the chute to relieve the molten matter in the crucible of its weight.

2. In an electric furnace, the combination with a frame crucible and a chute for supplying ore thereto, of means for obstructing the downward movement of the ore in the chute to relieve the molten matter in the crucible of its weight, said obstructing means being movably mounted to enable it to be moved out of the way of the ore so as to permit the ore to descend into the crucible under the weight of the column of ore and to displace the melted metal in the crucible, said crucible having an overflow discharge opening over which the melted metal flows when so displaced.

3. An electric furnace having a chamber provided with electric heating means for producing a smelting zone, means for supplying a column of ore to said zone, a chamber surrounding said ore supply means and communicating at its lower end with the smelting zone and closed at its upper end for communicating the heat from the smelting zone to said column of ore so as to provide a drying zone for the incoming ore, and a preheating zone between the drying zone and the smelting zone.

4. An electric furnace provided with electric heating means for producing a smelting zone, and a chute for feeding ore to said smelting zone, said furnace being provided with a chamber surrounding said chute and adapted to receive the heat from the smelting zone and communicate it to the ore in the chute to heat and dry the same, said chamber being substantially closed at its upper end to retain the heat therein and communicating at its lower end with the smelting zone, said chute having perforations establishing communication between the inside of the chute and said chamber surrounding the chute.

5. An electrode for an electric furnace, comprising a shell of wrought iron and a core of copper.

[Claims 6 to 10 not printed in the Gazette.]

1,152,587. PRINTING APPARATUS. WALTER WRIGHT, San Francisco, Cal., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 6, 1905. Serial No. 281,609. (Cl. 101—4.)

1. The combination of a frame, an impression roller arranged transversely to said frame, terminal cylindrical supports for said roller eccentric thereto, boxes in which said supports or rotatably mounted, vertical guideways for said boxes, a screw arranged to move each box in its vertical guideway in one vertical direction, and resilient means arranged to move it therein in the opposite vertical direction, a type bed in said frame beneath said roller having parallel rows of type thereon, an inking ribbon between said impression roller and the type on said type bed, means for reciprocating one of said elements, the roller and type bed, relatively to the other, said frame having guides for said reciprocating element, substantially as described.



2. The combination of a frame, an impression roller arranged transversely to said frame, terminal cylindrical supports for said roller eccentric thereto, boxes in which said supports are rotatably mounted, vertical guideways for said boxes, a screw arranged to move each box in its vertical guideway in one vertical direction, and resilient means arranged to move it therein in the opposite vertical direction, a type bed in said frame beneath said roller having parallel rows of type thereon, an inking ribbon between said impression roller and the type on said type bed, means for reciprocating one of said elements, the roller and type bed, relatively to the other, said frame having guides for said reciprocating element, and arms connected to said supports to turn the same, and arranged to be actuated by the movement of said reciprocating element, substantially as described.

3. In combination, a frame, a carriage reciprocable thereon, and having a handle for reciprocating the same, a chase in said carriage and type therein, an inking ribbon overlying said type, means, operated by the movement of the carriage, for advancing the inking ribbon thereon, boxes on said frame at the sides of the carriage, cylindrical supports in said boxes for the ends of a shaft, a shaft having its ends eccentrically secured to said supports, a roller loosely supported upon said shaft and having a yieldable pressure surface, and means automatically operated, by the movement of the carriage in one direction to approximate the roller and type sufficiently near to cause said roller to be rotated by the frictional pressure on said yielding surface of parts carried by the carriage, operating through the inking ribbon and paper, and by the movement of the carriage in the other direction to separate said carriage and roller.

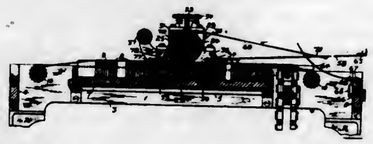
4. In combination, a frame, a carriage reciprocable thereon, and having a handle for reciprocating the same, a chase in said carriage and type therein, an inking ribbon overlying said type, means, operated by the movement of the carriage, for advancing the inking ribbon thereon, guideways on the frame at the sides of the carriage, boxes vertically adjustable in said guideways, supports in said boxes for the ends of a shaft, a shaft having its ends eccentrically secured to said supports, a roller loosely supported upon said shaft and having a yielding pressure surface, and means automatically operated, by the movement of the carriage, in one direction to approximate the roller and type sufficiently near to cause said roller to be rotated by the frictional pressure on said yielding surface of parts carried by the carriage, operating through the inking ribbon and paper, and by the movement of the carriage in the other direction to separate said carriage and roller.

5. In combination, a frame, a carriage reciprocable thereon, and having a handle for reciprocating the same, a chase in said carriage and type therein, an inking ribbon overlying said type, means, operated by the movement of the carriage, for advancing the inking ribbon thereon, boxes supported on said frame, at the sides of said carriage, a shaft supported at its ends in said boxes, a roller over said ribbon and carried by said shaft and having a yielding surface, means automatically operated, by the movement of the carriage in one direction to approximate the roller and type sufficiently near to cause said roller to be rotated by the frictional pressure on said yielding surface of said type operating through the inking

ribbon and paper, and by the movement of the carriage in the other direction to separate said type and roller, and pressure strips carried by the carriage outside said inking ribbon, and adapted to contact with said roller to rotate the same, said pressure strips being mounted at such a height as to slightly raise the surface of the roller and slightly reduce the pressure of the roller upon the inking ribbon.

(Claims 6 to 13 not printed in the Gazette.)

1,152,588. INDIVIDUAL-LETTER-PRINTING APPARATUS. WALTER WRIGHT, San Francisco, Cal., assignor to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed May 11, 1908. Serial No. 432,001. (Cl. 101—11.)



1. In apparatus for printing imitation typewritten matter, a ribbon covered type form, a resilient-faced impression roller coacting therewith and an undercut trackway which confines the roller to the printing plane during the printing stroke, in combination with pressure relief means acting upon the resilient surface of the roller and tending to displace the latter from the printing plane, whereby the impression pressure is maintained uniform throughout the area of the type surface.

2. In apparatus for printing imitation typewritten matter, a ribbon-covered type form, a resilient-faced roller coacting theretwith, a trackway which confines the roller to the type surface during the printing stroke and strips on both sides of the type surface acting against the resilient surface of the roller.

3. In apparatus for printing imitation typewritten matter, a ribbon-covered type form, a resilient-faced roller coacting therewith, a trackway which confines the roller to the type surface and localized pressure relief means adapted to support the margin of the paper and acting through the paper against the surace of said roller.

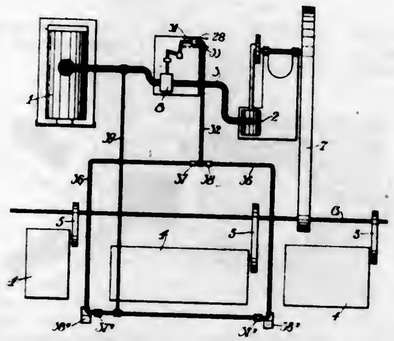
4. In apparatus for printing imitation typewritten matter, a ribbon-covered type form, a resilient-faced impression roller coacting therewith, and pressure withstanding means at the sides of the type form adapted to be covered by the paper sheet and acting through such sheet upon the resilient face of the roller.

5. In apparatus for printing imitation typewritten matter, a ribbon-covered type form, an impression roller adapted to roll thereon and pressure-controlling means serving to establish uniformity of impression between the short lines of the form and the full length lines thereof, the said means being disposed along the sides of the form to engage the opposite end portions of the roller, and the engaging contact of the said means with the roller being resilient or yielding in its nature.

(Claims 6 to 40 not printed in the Gazette.)

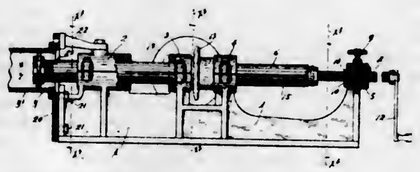
1,152,589. STEAM CUT-OFF. CARL GUSTAV ALENIUS, Meadowlands, Minn. Filed Jan. 2, 1914. Serial No. 810,066. (Cl. 137—4.)

1. The combination with a steam feed pipe provided with a steam chest, of sliding apertured plates disposed within said chest, said apertures being normally in alinement with each other and with said feed pipe, plate shifting mechanism associated with the head of said steam chest and with said sliding plates, an auxiliary emergency steam pipe, a branch steam pipe, steam controlled means connected with said auxiliary emergency steam pipe and said branch steam pipe, and controlling said plate shifting mechanism, an endless emergency steam pipe communicating with said auxiliary emergency steam pipe and provided with check valves upon the respective sides of the point of communication of the two pipes, hand valves associated with said emergency steam pipe and a supply pipe connecting the aforesaid feed pipe and a portion of the said emergency steam pipe between two of its hand valves.



2. The combination with a steam feed pipe provided with a steam chest, of sliding apertured plates disposed within said chest, said apertures being normally in alinement with each other and with said feed pipe, plate shifting mechanism associated with the head of said steam chest and with said sliding plates, a steam cylinder provided with a piston associated with said plate shifting mechanism, an auxiliary emergency steam pipe associated with said cylinder for supplying steam to move the piston thereof in one direction, means associated with said cylinder and auxiliary emergency steam pipe for supplying steam to move the piston thereof in the opposite direction, an endless emergency steam pipe communicating with said auxiliary emergency steam pipe and provided with check valves upon the respective sides of the point of communication of the two pipes, hand valves associated with said emergency steam pipe and a supply pipe connecting the aforesaid feed pipe and a portion of the said emergency steam pipe between two of its hand valves.

1,152,590. CYLINDER-BORING MACHINE. CHARLES S. ANDERSON, Minneapolis, Minn. Filed Mar. 18, 1914. Serial No. 825,547. (Cl. 77—3.)



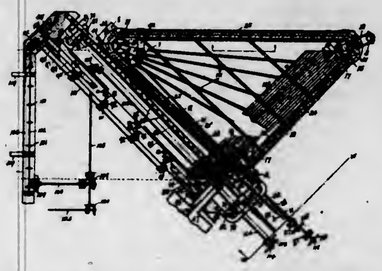
A self-contained boring machine comprising a bed frame having longitudinally spaced axially alined bearings, a cylinder alining plate secured to one end of said frame and having a cylinder seat located adjacent to one end member of said bearings and axially alined therewith, a boring shaft mounted for rotary and endwise movements in said bearings and provided with a threaded axially projecting stem, at one end, extended through the bearings at the other end of said frame, said latter bearing having a sectional dismountable internally-threaded bushing normally anchored therein and in engagement with said threaded stem, the said boring shaft having a boring tool at that end which projects through the cylinder seat of said alining plate, and means for rotating said boring shaft.

1,152,591. MANUFACTURE OF CATALYSTS. RAYMOND F. BACON and BENJAMIN H. NICOLET, Pittsburgh, Pa., assignors to Acme Manufacturing Company, Chicago, Ill., a Corporation of West Virginia. Filed Nov. 4, 1914. Serial No. 870,190. (Cl. 23—28.)

1. The method of producing a catalyst for the hydrogenation of fatty acids or their glycerids, which consists in impregnating a finely divided carrier with a precipitant for a nickel salt, and a salt for simultaneously precipitating in the carrier a supplemental bulky material, then adding a nickel salt solution, whereupon the desired precipitation of an insoluble nickel salt is obtained together with the desired precipitation of the bulky supplemental constituent, and finally reducing the insoluble nickel salt to a catalytically active state; substantially as described.

2. The method of producing a catalyst for the hydrogenation of fatty acids or their glycerids, which consists in impregnating a finely divided carrier with sodium hydroxid, and sodium aluminate, then adding a solution of nitrate of nickel, whereupon the nickel will be precipitated as nickel hydroxid, and the aluminum as aluminum hydroxid, and finally reducing the nickel hydroxid to a catalytically active state; substantially as described.

1,152,592. LOOM FOR WEAVING WIRE FABRIC. OLIN W. BENSTER, Toledo, Ohio. Filed Nov. 23, 1908. Serial No. 464,129. (Cl. 139—39.)



1. In a loom of the class described, the combination of a plurality of heddles capable of relative longitudinal movements, and means capable of transversely moving the heddles in unison across the length of the fabric.

2. In a loom of the class described, the combination of parallel sets of relatively movable heddles, and means capable of moving said heddles in unison to shift their positions relative to the fabric being woven and transversely across the length of the fabric.

3. In a loom of the class described, an endless heddle-chain having an angled course of movement, and means operative to impart step by step movement to the chain across the length of the fabric.

4. In a loom of the class described, the combination of an endless heddle-chain, the heddles of which are relatively movable transversely thereof, and means for relatively moving different of the heddles in unison.

5. In a loom of the class described, the combination of an endless heddle-chain for carrying the warp-wires, the heddles of which chain are relatively movable transversely thereof, and means movable to impart opposed movements to different of the heddles during a predetermined portion of their movements with the chain.

[Claims 6 to 66 not printed in the Gazette.]

1,152,593. FLANGE-OILER. DANIEL G. BLACK, Detroit, Mich. Filed Dec. 21, 1914. Serial No. 878,243. (Cl. 184—8.)

1. In a device of the character described, an oil conducting pipe, a swinging tube hinged to the pipe, a wick adapted to apply oil to the flange of a wheel supported by the tube and projecting from the end of the latter, resilient means for normally maintaining the tube at an angle to the pipe, and a spring adapted to act upon the wick to force it gradually beyond the end of the tube as the wick wears away.



2. In a device of the character described, an oil conducting pipe, a swinging tube hinged to the pipe, a wick adapted to apply oil to the flange of a wheel housed partially in the pipe and in the tube, resilient means for normally maintaining the tube at an angle to the pipe, and a spring housed within the pipe adapted to act upon the wick to force it gradually beyond the end of the tube as the wick wears away.

3. In a device of the character described, an oil conducting pipe, a swinging tube hinged to the pipe, a wick adapted to apply oil to the flange of a wheel housed partially in the pipe and in the tube, resilient means for normally maintaining the tube at an angle to the pipe, a spring housed within the pipe adapted to act upon the wick to force it gradually beyond the end of the tube as the wick wears away, and means for limiting the movement of the wick.

4. In a device of the character described, an oil conducting pipe, a swinging tube hinged to the pipe, a wick adapted to apply oil to the flange of a wheel housed partially in the pipe and in the tube, a thimble housed within the pipe to receive the end of the wick, resilient means for normally maintaining the tube at an angle to the pipe, a spring housed within the pipe adapted to act upon the wick to force it gradually beyond the end of the tube as the wick wears away, and means for limiting the movement of the wick.

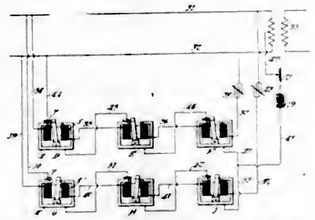
5. In a device of the character described, an oil conducting pipe, a swinging tube hinged to the pipe, a stud integral with the lower end of the tube to engage a wick, a wick adapted to apply oil to the flange of a wheel, and a spring engaging the pipe and the tube to normally maintain the tube at an angle to the pipe.

1,152,594. ALTERNATING-CURRENT-RECTIFYING SYSTEM. DONALD M. BLISS, West Orange, N. J., assignor to Thomas A. Edison, Incorporated, West Orange, N. J., a Corporation of New Jersey. Filed June 7, 1912. Serial No. 702,160. (Cl. 171—253.)

1. In an alternating current rectifying system, the combination of an alternating current circuit and a plurality of rectifying devices, each having fixed and movable contacts, the latter adapted to vibrate into and out of contact with the former, and an actuating coil for causing such vibration in synchronism with the current to be rectified, the actuating coils being connected to the alternating current circuit to cause said vibrating contacts to vibrate in phase with each other and the fixed and movable contacts being connected so as to provide a plurality of breaks in series during the operation of the devices, substantially as described.

2. In an alternating current rectifying system, the combination of an alternating current circuit and a plurality

of vibratory rectifying devices, each having an actuating circuit and a rectifying circuit, the actuating circuits being connected to the alternating current mains to cause said vibratory devices to operate in phase with each other, and the rectifying circuits being connected in series, substantially as described.

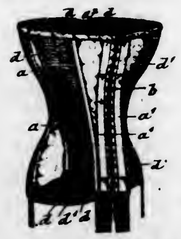


3. In an alternating current rectifying system, the combination of an alternating current circuit, a direct current translating device, and a plurality of groups of vibratory rectifying devices, each device having an actuating circuit and a rectifying circuit, the actuating circuits being connected to the alternating current circuit and the rectifying circuits of each group being connected in series with each other, and with the direct current translating device, substantially as described.

4. In an alternating current rectifying system, the combination of an alternating current circuit and a plurality of groups of rectifying devices, each device having an actuating circuit and a rectifying circuit, the actuating circuits being connected to the alternating current circuit, the rectifying circuits of each group being connected in series, and the serially connected groups of rectifying circuits being connected in parallel, substantially as described.

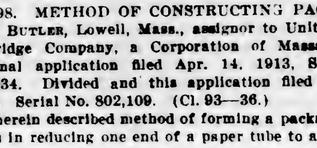
5. In an alternating current rectifying system, the combination of an alternating current circuit and a plurality of rectifying devices, each having a fixed contact and movable contacts, the latter adapted to vibrate into and out of contact with the former, and an actuating coil for causing such vibration in synchronism with the current to be rectified, the actuating coils being connected in series to the alternating current circuit, and the contacts being connected so as to provide a plurality of breaks in series during the operations of the devices, substantially as described.

1,152,595. INVALID'S CORSET. JENNIE M. BODENSIEK, New York, N. Y., assignor of one-third to Gottfried O. Bodensiek, New York, N. Y., and one-third to Frank Broaker, Brooklyn, N. Y. Filed Aug. 20, 1910. Serial No. 578,123. (Cl. 2—73.)



In an invalid's corset, the combination with a corset comprising a central rear stay, front stays, fastening means for said front stays, continuous uninterrupted elastic inserts adjacent to and at either side of the said rear stay, extending uninterruptedly from the top to the bottom edge of the corset, shaped to conform to the contour of the corset to give an equal elasticity to the same at all points, triangular gussets at either side of the said front stays, having one side secured to the said stays, extending from the top edge of the corset to a point above the lower edge of the corset, and one side inclined from the said top edge to the stay, and continuous uninterrupted elastic inserts secured to the inclined sides of the said gussets, and to the lower part of the said front stays, and extending uninterruptedly from the upper to the lower edge of the said corset, of an abdominal bandage composed of two elastic sections, each attached at its rear edge to the inner rear part of the corset between the rear elastic inserts and the forward elastic inserts, said bandage being provided with suitable fastening means and being wholly within the corset and having its lowest edge above the lowest edge of the corset, and its upper edge below the waist line of the corset.

1,152,596. SUCTION-ROLL COVERING. PETER BOUCHER, Green Bay, Wis., assignor to Inland Knitting Works, Green Bay, Wis. Filed Apr. 28, 1915. Serial No. 24,508. (Cl. 92—53.)

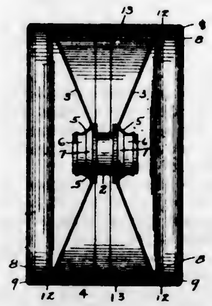


1. A suction roll covering, consisting of a knit sleeve, said sleeve adapted to be pulled over a suction roll and cover the periphery thereof, substantially as set forth.

2. A suction roll covering, consisting of a coarsely knit woolen sleeve, said sleeve adapted to be pulled over a suction roll and cover the periphery thereof, substantially as described.

3. A suction roll covering, consisting of a plurality of knit yarn coverings, said coverings adapted to be placed around the periphery of a suction roll, substantially as described.

1,152,597. PULLEY. GEORGE BOWERS, San Francisco, Cal. Filed Jan. 21, 1911. Serial No. 603,836. (Cl. 64—17.)



A pulley comprising a hub having circumferential grooves on opposite sides thereof, the diameter of the base of the grooves being less than the diameter of the end of the hub, a face having a width greater than the length of the hub, and sheet metal heads spaced apart and formed integral with said face and crimped into said grooves in the hub, the heads being bent to form a stiffened portion at the edges of the face and to contact with the face at points removed from said edges.

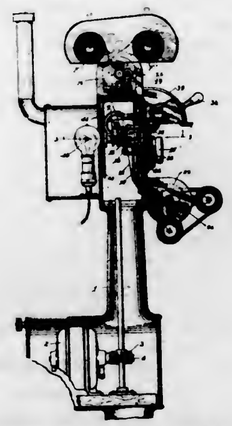
1,152,598. METHOD OF CONSTRUCTING PACKAGES. PAUL BUTLER, Lowell, Mass., assignor to United States Cartridge Company, a Corporation of Massachusetts. Original application filed Apr. 14, 1913, Serial No. 760,934. Divided and this application filed Nov. 20, 1913. Serial No. 802,109. (Cl. 93—36.)

The herein described method of forming a package which consists in reducing one end of a paper tube to a diameter smaller than the original diameter of the tube; forming a lateral opening through the reduced portion of the tube; fitting upon the said reduced portion, a sleeve of the same material and diameter as the main portion of the tube; expanding the reduced portion of the tube beyond said



sleeve to its original diameter; and finally inserting into the open ends of said tube disks which fit tightly therein, and crimping the ends of said tubes over said disks to complete the closed package.

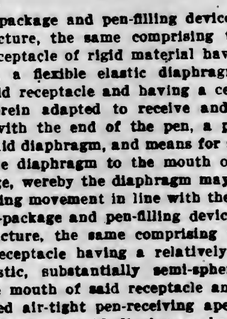
1,152,599. APPARATUS FOR PRINTING POSITIVE MOTION-PICTURE FILMS. HERBERT O. CARLETON, New York, and ERIK W. NELSON, New Rochelle, N. Y. Filed Oct. 23, 1913. Serial No. 796,881. (Cl. 95—75.)



Means for making positive motion picture films including in combination a source of power, a vertical drive shaft operated thereby, a horizontal shaft being operatively connected with said vertical drive shaft, a double sprocket on said horizontal shaft, upper and lower positive and negative film rolls, means for connecting said upper and lower rolls with said double sprocket to rotate said rolls in unison, a source of light, means for confining said light to the successive pictures upon the films advanced, a movable glass, means for pressing said films upon said glass at predetermined intervals and means for effecting registration of said films with said glass and said light at predetermined times, as and for the purpose set forth.

1,152,600. CAM-MOVEMENT. HERBERT O. CARLETON, New York, and ERIK W. NELSON, New Rochelle, N. Y. Filed Oct. 23, 1913. Serial No. 796,882. (Cl. 74—1.)

A cam movement comprising an eccentric curved face cam and a cam frame operated thereby, said cam being formed with three faces each formed on circular arcs and said cam frame being formed with four rectangular faces each engaging said cam, whereby a four-direction straight line movement is imparted to said cam frame as the cam is rotated, said cam frame being also provided with an integrally formed extension, a rectilinear guide having a projection, said extension being pivotally attached to



said projection, whereby a reciprocating and oscillating motion is imparted thereto and the extension caused to move toward and away from said guide.

1,152,601. FOUNTAIN-PEN FILLER. HAROLD N. CARPENTER, Woodford, Vt. Filed Nov. 5, 1909. Serial No. 526,467. (Cl. 226—34.)

1. An ink-package and pen-filling device combined in a unitary structure, the same comprising the combination of an ink receptacle having a relatively wide mouth, a flexible diaphragm extending over the mouth of the receptacle and having a pen-receiving aperture at the center thereof adapted to make air tight connection with an inserted pen, means for securely uniting said diaphragm by its periphery air tight to the mouth of said receptacle, said diaphragm formed and united to said receptacle to have a reciprocatory pumping movement transmitted thereto by a reciprocatory longitudinal movement of the inserted pen.

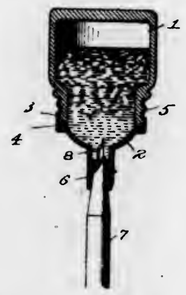
2. An ink-package and pen-filling device combined in a unitary structure, the same comprising the combination of an ink receptacle of rigid material having a relatively wide mouth, a flexible elastic diaphragm covering the mouth of said receptacle and having a centrally situated aperture therein adapted to receive and make air-tight connection with the end of the pen, a peripheral flange formed on said diaphragm, and means for securely uniting, air tight, the diaphragm to the mouth of the receptacle by said flange, wereby the diaphragm may have a reciprocatory pumping movement in line with the inserted pen.

3. An ink-package and pen-filling device combined in a unitary structure, the same comprising the combination of an ink receptacle having a relatively wide mouth, a flexible, elastic, substantially semi-spherical diaphragm covering the mouth of said receptacle and having a centrally-situated air-tight pen-receiving aperture therein, a peripheral flange on said diaphragm having a shoulder formed thereon, a mating shoulder formed on the mouth of the receptacle, an annular clamping ring having engagement with the receptacle and the peripheral flange of

the diaphragm to securely unite the diaphragm, air tight, to the receptacle with the said mating shoulders in interlocking engagement, whereby longitudinal movement of the pen causes a reciprocatory pumping movement of the diaphragm.

4. An ink package and pen-filling device combined in a unitary structure, the same comprising an ink receptacle having a relatively wide mouth, a destructible sealing disk covering said mouth, a flexible diaphragm extending over said mouth above said sealing disk, said diaphragm being substantially semi-spherical in form and having a peripheral flange, a pen-receiving aperture at the center of said diaphragm, a clamping ring surrounding the semispherical portion of said diaphragm and engaging the flange thereof and the receptacle, and securely uniting said diaphragm to the receptacle.

1,152,602. FOUNTAIN-PEN FILLER. HAROLD N. CARPENTER, Bennington, Vt. Filed July 23, 1914. Serial No. 852,680. (Cl. 226—34.)



1. In a pen-filling device the combination of an ink-receptacle, a reciprocatory diaphragm united fluid-tight to said receptacle, a tubulure in the diaphragm adapted to make fluid-tight connection with the pen, and an ink-collecting recess at the inner end of the tubufure, substantially as and for the purpose described.

2. In a pen-filling device the combination of an ink-receptacle, a reciprocatory diaphragm united fluid-tight to said receptacle, and a tubulure in said diaphragm adapted to make fluid-tight connection with the inserted pen, said tubulure terminating at its inner end in an ink-collecting recess, substantially as described.

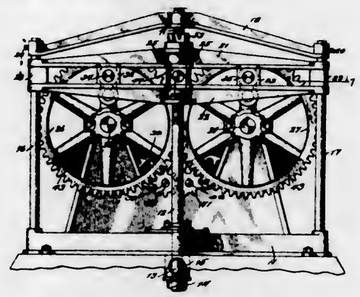
3. In a pen-filling device the combination of a reciprocatory diaphragm united fluid-tight to said receptacle, a tubulure formed in said diaphragm to receive and make fluid-tight connection with the inserted pen, said tubulure terminating substantially flush with the interior face of the diaphragm and having its bore enlarged at its interior end to form an ink-collecting recess about the end of the pen.

1,152,603. PUMPING MACHINERY. MATTHEW T. CHAPMAN and MARK C. CHAPMAN, Aurora, Ill., assignors to The American Well Works, Aurora, Ill., a Corporation of Illinois. Filed Nov. 21, 1910. Serial No. 593,470. (Cl. 103—62.)

1. In a pump, the combination of a pump-rod, a cross-head, oscillating means connecting said pump-rod with said cross-head comprising semi-cylindrical bearing-plates having trunnions journaled in the cross-head, said cross-head having a conical passage to receive said bearing-plates, and means for reciprocating said cross-head.

2. In a pump, the combination of a pump-rod, a cross-head, means for reciprocating said crosshead, and means for connecting said crosshead to said pump-rod, said connecting means comprising bearing plates pivotally mounted on said crosshead and embracing said pump-rod, and means for tightening said bearing plates in position about the pump-rod in adjusted position thereon.

3. In a pump, the combination of a pump-rod, a cross-head, means for reciprocating said crosshead, and means for connecting said crosshead to said pump-rod, said connecting means comprising bearing plates pivotally mounted on said crosshead and embracing said pump-rod, a collar about said bearing plates, and a set-screw mounted in said collar adapted to tighten said bearing plates together about said pump rod, said rod and said bearing plates having their contact faces roughened whereby secure clamping is attained.

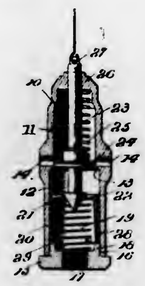


4. In a pump, the combination of a pump-rod, a cross-head, means for reciprocating said cross-head, and means for connecting said cross-head to said pump-rod, said connecting means comprising two bearing plates adapted to embrace said pump-rod, trunnion members carried by each of said plates adapted to coöperate with the trunnion members of the other plate, bearings carried by said cross-head in which said trunnions are journaled, and other means for tightening said bearing plates in position about the pump-rod.

5. In a pump, the combination of a pump-rod, a cross-head, means for reciprocating said cross-head, and means for connecting said cross-head to said pump-rod, said connecting means comprising two bearing plates adapted to embrace said pump-rod, trunnion members carried by each of said plates adapted to coöperate with the trunnion members of the other plate, bearings carried by said cross-head in which said trunnions are journaled and which are adapted to be tightened about the trunnion members for holding said bearing plates together about the pump-rod, and other means for tightening said bearing plates in position about the pump-rod.

[Claims 6 and 7 not printed in the Gazette.]

1,152,604. VALVE. JOHN J. COLL, Reno, Nev. Filed Mar. 19, 1914. Serial No. 825,827. (Cl. 137—26.)



1. In a valve mechanism, in combination, a casing having an inner chamber and an outer chamber, a hollow piston forming a fluid passage and provided with a valve seat in its upper end and adapted to move in the inner chamber, a spring extending within the piston and adapted to

actuate the same, and a collar formed at the junction of said chambers adapted to limit the upward movement of said piston.

2. In a valve mechanism, in combination, a casing having an inner chamber and an outer chamber, a hollow piston forming a fluid passage and provided with a valve seat in its upper end and adapted to move in the inner chamber, a collar formed at the junction of said chambers adapted to limit the upward movement of said piston, a nut adapted to close the lower end of the inner chamber and having an upwardly extending central portion forming a seat, and a spring extending within the piston and seated at its lower end on the extended central portion of the nut.

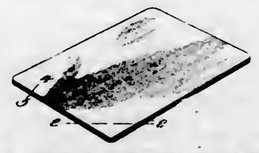
3. In a valve mechanism, in combination, a casing having an inner chamber and an outer chamber, a hollow piston forming a fluid passage and provided with a valve seat in its upper end and adapted to move in the inner chamber, a collar formed at the junction of said chambers adapted to limit the upward movement of said piston, a nut adapted to close the lower end of the inner chamber provided with an internal threaded portion adapted to co-act with means to connect the valve to the engine and having an upwardly extending central portion forming a seat, and a spring extending within the piston and seated at its lower end on the extended central portion of the nut.

4. In a valve mechanism, in combination, a casing having an inner chamber and an outer chamber, a hollow piston forming a fluid passage and provided with a valve seat in its upper end and adapted to move in the inner chamber, a spring extending within the piston and adapted to actuate the same, and a collar formed at the junction of said chambers adapted to limit the upward movement of said piston, a slidable stem adjustably mounted in the outer chamber and having a cone-shaped lower end adapted to engage the valve seat in said piston.

5. In a valve mechanism, in combination, a casing having an inner and an outer chamber, a hollow piston forming a fluid passage and having a valve seat and adapted to move in the inner chamber, a collar intermediate said chambers forming a stop to limit the upward movement of said piston, air inlets in the casing above said collar, a spring extending within the piston and adapted to force the same upwardly, a slidable stem mounted in the outer chamber and provided with a cone-shaped lower end adapted to engage the valve seat in the piston and having its opposite end extending through the upper end of said outer chamber, and a spring surrounding said stem and adapted to cause its lower end to seat in the piston, and manually operated means for adjusting the tension of said spiral spring.

[Claim 6 not printed in the Gazette.]

1,152,605. PLAYING-CARDS. JOHN J. COLL, Reno, Nev. Filed Feb. 3, 1915. Serial No. 5,875. (Cl. 46—25.)

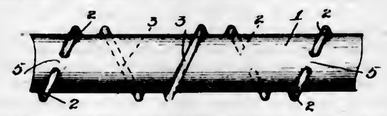


1. An article of manufacture of the character described, comprising a body portion having a uniform color completely impregnating the same, and a face portion secured to the body portion which is adapted to receive the value symbols of the card.

2. An article of manufacture of the character described, comprising a card composed of superposed layers of relatively differing thicknesses, one of which is of a uniform color throughout, and one of said layers being of a suitable color to receive the printed markings denoting the value of the card and securely pasted to its companion layer.

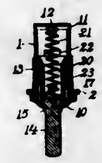
3. A playing card having one of its sides impregnated with a uniform color through a substantial portion of its thickness, and an opposite side adapted to receive the value symbols of the card.

1,152,606. DEFORMED REINFORCING-BAR. WILLIAM A. COLLINGS, Kansas City, Mo. Filed Feb. 24, 1914. Serial No. 820,457. (Cl. 72—111.)



In a device of the class described, a bar, and a plurality of groups of helically arranged long and short ribs integral therewith on the periphery thereof, each of said ribs having one end terminating in a broad flat abutting face, said faces of the respective ribs being all in substantially the same plane longitudinally of the bar, and said short ribs having their adjacent ends in alinement with each other and being rounded and tapering.

1,152,607. LIQUID-SERVER. CHARLES W. COREY, Malden, Mass. Filed May 20, 1914. Serial No. 839,905. (Cl. 221—102.)



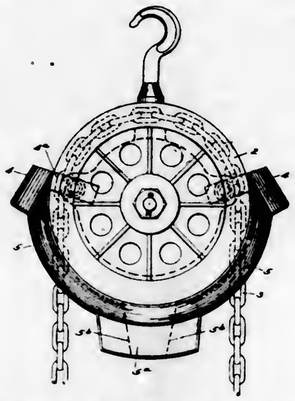
1. A liquid delivery device comprising a tubular member having an opening at its lower end and a seat surrounding the opening, the upper end of the tubular member being air-tight, said member having a lateral opening spaced from said upper end and communicating with the liquid to be delivered, a vertically extended plunger slidable liquid-tight in the tubular member and having a stem somewhat smaller in diameter than, and descending through, the lower opening of the tubular member, the stem having a shoulder larger in diameter than itself but smaller than the plunger for closing the lower opening by coaction with the seat, and yielding means pressing the plunger downward, the plunger having a hole descending from its upper end and communicating through to the space about the shoulder, and the upper end of the plunger being normally at the level of the lower edge of the lateral opening.

2. A liquid delivery device comprising a tubular member having an opening at its lower end and a seat surrounding the opening, the upper end of the tubular member being air-tight, said member having a lateral opening spaced from the upper end and communicating with the liquid to be delivered, a vertically extended plunger slidably liquid-tight in the tubular member and having a stem smaller in diameter than, and descending through, the lower opening of the tubular member, the stem having at its upper portion a shoulder fitting the lower opening, and a second shoulder between the first-named shoulder and the plunger and smaller in diameter than the latter but larger than the first-named shoulder, for closing the lower opening by coaction with the seat, and yielding means pressing the plunger downward, the plunger having a hole descending from its upper end and communicating through to the space about the second-named shoulder, and the upper end of the plunger being normally at the level of the lower edge of the lateral opening.

1,152,608. PULLEY-BLOCK. LOUIS D. CULL, Cleveland, Ohio, assignor to the Firm of David Round & Son, Cleveland, Ohio, a Partnership. Filed Aug. 10, 1914. Serial No. 855,986. (Cl. 254—190.)

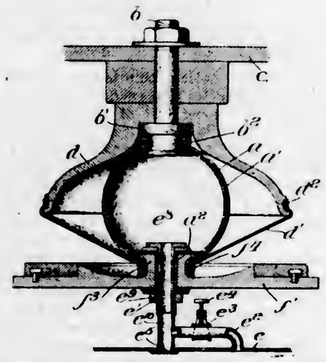
1. In a pulley block, the combination with a pulley or hoist block, and an actuating flanged wheel and its chain; of two chain guides secured to said block in a stationary position at diametrically opposite sides of said wheel and

connected by a pair of depending inwardly and downwardly curved outwardly flaring guide members following the contour of the flanges of said actuating wheel and flaring outwardly therefrom, said guide members terminating in and being separated and braced by depending transversely extending spaced bridge or loop portions whereby the members of said actuating chain are held separate and apart from each other beneath the median portion of said actuating wheel.



2. In a pulley block, an actuating wheel and a chain, and a pair of chain separating guide loops secured to said block and flaring outwardly from the periphery of said actuating wheel, said guide loops terminating in and being divided by a median chain separating bridge portion consisting of a longitudinally extending depending spaced web and transversely extending depending bridge or loop portions adapted to keep the members of said actuating chain spaced from each other beneath said actuating wheel.

1,152,609. PNEUMATIC SPRING. BENJAMIN WALTER DAVIS, Phillips, Wis. Filed Nov. 15, 1906. Serial No. 343,574. (Cl. 21—50.)



1. A pneumatic spring comprising a substantially globular fluid retaining chamber having flexible walls, curved means engaging the flexible walls of the retaining chamber to increase the supporting area thereof at a predetermined rate when weight is applied thereto, and means for connecting said chamber to two relatively movable members between which the chamber is interposed.

2. A pneumatic spring comprising a substantially globular fluid retaining chamber having flexible walls, rigid means engaging the flexible walls of the fluid retaining chamber adapted to distribute the load when weight is applied thereto, and means for connecting said chamber to two relatively movable members between which the chamber is interposed.

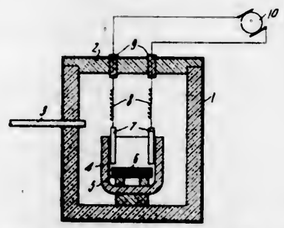
3. A pneumatic spring comprising a flexible fluid retaining chamber, means for connecting said chamber to two relatively movable members respectively, means whereby the supporting area of the chamber is increased as the weight thereon is increased, means for quickly relieving the chamber of a portion of the fluid therein, and means for gradually restoring the fluid to the fluid chamber.

4. A pneumatic spring comprising a flexible fluid retaining chamber, means for connecting said chamber to two relatively movable members respectively, means whereby the supporting area of the chamber is increased as the weight thereon is increased, a fluid relief chamber connected to the retaining chamber, and means for controlling the flow of fluid from the relief chamber to the retaining chamber.

5. A pneumatic spring comprising a flexible fluid retaining chamber, means for connecting said chamber to two relatively movable members respectively, a relief chamber connected to the fluid retaining chamber, and rigid means engaging the walls of the retaining chamber when weight is applied thereto.

[Claims 6 to 10 not printed in the Gazette.]

1,152,610. METHOD OF WELDING. JEAN HUBERT LOUIS DE BATS, Zelienople, Pa. Filed Aug. 18, 1913. Serial No. 785,391. (Cl. 78—93.)



1. The method of welding dissimilar metals, consisting in heating the same in contact with each other in a vacuum to a welding temperature and thereby preventing corrosion of the contacting surfaces of the two metals and causing the particles of the two metals along the contacting surfaces to intermingle and unite with each other.

2. The method of welding relatively hard and soft metals, consisting in bringing clean surfaces of said metals into contact with each other in a vacuum, heating said metals while in said vacuum to a temperature near the melting point of the soft metal, and then allowing said metals to cool in said vacuum.

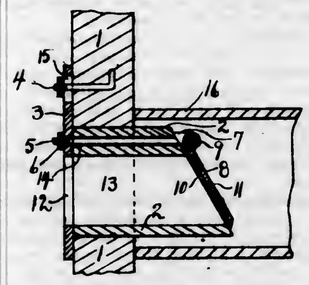
3. The method of welding relatively hard and soft metals, consisting in heating said metals while in contact with each other in a vacuum, and applying pressure to said metals to cause the particles along the contacting surfaces thereof to intermingle and unite with each other.

4. The method of welding relatively hard and soft metals, consisting in heating said metals while in contact with each other in a vacuum, applying pressure to said metals while in said vacuum to cause the particles along the contacting surfaces thereof to intermingle and unite with each other, and allowing said metals to cool while in said vacuum.

1,152,611. CATCH-BASIN. LOUIS L. DEISBECK, Peru, Ill. Filed June 17, 1915. Serial No. 34,693. (Cl. 182—14.)

1. In a trap for catch basins, a tubular member having a small auxiliary aperture, a plate having apertures which register with the apertures in the tubular-member, a slot in said plate for receiving external fastening means, a bolt passing through the smaller of said apertures locking said tubular member and said plate together, a door and means on one of said bolts for pivotally fastening said door to said bolt.

2. In a trap for catch basins, a tubular member having a small auxiliary aperture above a larger aperture, a plate on one end of said member having apertures which register with said apertures, fastening means for locking said member and said plate together, and a door pivotally mounted on said fastening means adjacent to the other end of said tubular member.



3. In a trap for catch basins, a member having two apertures, a plate having apertures which register with said apertures adjacent to one end of said member, fastening means passing through one of said apertures in each locking said plate and said member together, a door adjacent to the other end of said member and means on said fastening means for suspending said door.

4. In a trap for catch basins, a member having two apertures, a plate having apertures which register with said apertures adjacent to one end of said member, external means on said plate for fastening same independent of said member, a bolt for locking said member and said plate together, a door adjacent to the other end of said member and means for pivotally connecting said door to said bolt.

1,152,612. PIN-TICKET. WILLIAM G. DUNHAM, Mount Vernon, N. Y., assignor to The Noesting Pin Ticket Company, Inc., a Corporation of New York. Filed Aug. 3, 1914. Serial No. 854,730. (Cl. 40—25.)



1. In a pinticket, a ticket, a wire bent to form a pin, composed of two members, the members of said pin at a predetermined point being bent to form means engaging with said ticket to hold the pin fixedly secured thereto, wherein portions of said members engage the back face of the ticket and the free ends of said portions pass through said ticket and engage the front face of said ticket, said portions with their free ends lying in substantially the same plane.

2. In a pin ticket, a ticket having a notch in one edge thereof, a pin formed of a wire bent upon itself to form a pin composed of two members, said pin being attached to one face of said ticket adjacent the notch and normally lying throughout its length in a position parallel to and on the underside of said ticket, a portion of the pin composed of two members being adapted when in use to be bent around said ticket in said notch and to engage with the other face of the ticket.

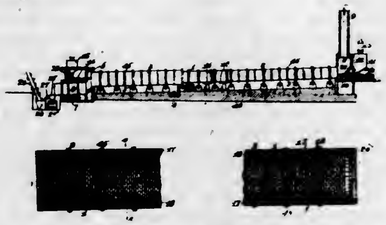
3. In a pin-ticket, a ticket having a notch in one edge thereof, a wire bent to form a pin composed of two members, said members, at a predetermined point, being bent to form means to engage with and to hold the pin fixedly secured to one face of said ticket, a portion of said pin adapted, when in use, to be bent around said ticket in said notch and to engage with the opposite face of said ticket to hold same secured to the material to be ticketed.

4. In a pin-ticket, a ticket having a notch in one edge thereof adapted to receive a pin, a pin fixedly secured to one face of said ticket formed of a wire bent upon itself to form a pin composed of two members, said members, at a predetermined point, being bent in opposite directions away from said pin to lie along one face of the ticket and being again bent to engage the opposite face of said ticket to hold same in engagement therewith.

5. In a pin-ticket, a ticket having a notch in one edge thereof, a pin formed by bending a piece of wire upon itself to form a pin composed of two members, said members, at a predetermined point, being bent at a right angle to the pin, said ticket having openings therein and the ends of said members being bent to pass through said openings and being folded down upon the opposite side of the ticket to hold said pin fixedly secured thereto.

[Claim 6 not printed in the Gazette.]

1,152,613. METHOD OF BURNING PORTLAND-CEMENT CLINKER. THOMAS A. EDISON, Llewellyn Park, Orange, N. J. Original application filed Dec. 5, 1902, Serial No. 134,017. Divided and this application filed Sept. 29, 1905. Serial No. 280,577. (Cl. 222—7.)



1. The method of burning cement clinker in a rotary kiln which consists in creating and maintaining within said kiln a clinkering zone by continually burning fuel therein, in maintaining a load of cement material within said kiln by feeding said material into and slowly through the kiln, in continuously agitating and subjecting said material to the heat from the gases of combustion resulting from said burning fuel and passing up through said kiln for such a length of time that said material is substantially completely calcined before it reaches the clinkering zone and to the heat of said burning fuel for such a length of time that said material is thoroughly clinkered in the clinkering zone and in maintaining a substantially continuous coating of material on that portion of the inner surface of the kiln, where the temperatures are highest, by continuously agitating and subjecting to the action of the burning fuel such quantity of suitable cement material that the weight thereof will be sufficient, when the cement material becomes plastic by reason of the heat, to maintain such coating, substantially as described.

2. The method of burning cement clinker in a rotary kiln which consists in creating and maintaining within said kiln a clinkering zone by continually burning fuel therein, in maintaining a load of cement material within said kiln by feeding said material into and slowly through the kiln, in continuously agitating and subjecting said material to the heat from the gases of combustion resulting from said burning fuel and passing up through said kiln for such a length of time that said material is substantially completely calcined before it reaches the clinkering zone and that the gases issuing from the kiln are reduced in temperature to approximately a red heat and to the heat of said burning fuel for such a length of time that said material is thoroughly clinkered in the clink-

ering zone and in maintaining a substantially continuous coating of material on that portion of the inner surface of the kiln where the temperatures are highest, by continuously agitating and subjecting to the action of the burning fuel such quantity of suitable cement material that the weight thereof will be sufficient, when the cement material becomes plastic by reason of the heat, to maintain such coating, substantially as described.

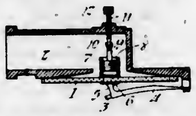
3. The method of burning Portland cement clinker which consists in maintaining within a rotating kiln a clinkering and a calcination zone, each of which is at least fifty per cent. greater in length than the corresponding zone in standard 60-foot kiln practice, in feeding continuously therethrough a load of substantially dry material at least four times as great as the normal load in said practice, and in rotating said kiln with sufficient rapidity to bring the portions of the kiln lining exposed to the heat of the fuel beneath the load of material in the kiln before the adherent clinker lining is undesirably stripped therefrom, substantially as set forth.

4. The method of burning Portland cement clinker which consists in maintaining within a long rotary kiln a combined calcining and clinkering zone more than twice as long as in standard 60-foot kiln practice, in continuously feeding through said kiln more than four times as much substantially dry cement material as in standard 60-foot kiln practice and in maintaining the clinkering and calcination action of the burning fuel and products of combustion on the cement material for more than twice the extent used in standard 60-foot kiln practice and in rotating said kiln with sufficient rapidity to maintain an adherent protecting lining of clinker thereon by the weight of cement material in said clinkering zone by bringing the portions of the kiln lining exposed to the heat of the fuel beneath the load of material in the kiln before the adherent clinker lining is undesirably stripped therefrom.

5. The method of burning Portland cement clinker in a large diameter rotary kiln which consists in burning within said kiln at least twice as much fuel per hour as is used in standard 60-foot kiln practice, in feeding into and slowly down through said kiln and exposed to the heat from said fuel and its gases of combustion, a load of substantially dry cement material more than six times as great as in said standard 60-foot kiln practice, in calcining and clinkering such material, in maintaining a protecting lining of clinker on the kiln lining of the clinkering zone by the weight of material therein, and in rotating said kiln with sufficient rapidity to bring the portions of kiln lining exposed to the heat of the fuel beneath the load of material in the kiln before the adherent clinker lining is undesirably stripped therefrom, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,152,614. PHONOGRAPHIC RECORDING APPARATUS. THOMAS A. EDISON, Llewellyn Park, West Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Jan. 27, 1910. Serial No. 540,317. (Cl. 181—10.)



1. In a device of the class described, the combination of a sound box, a diaphragm mounted therein, a stylus in operative relation to said diaphragm, and means bearing on said diaphragm and comprising an air chamber for imposing a resistance to the vibrations of the diaphragm, substantially as described.

2. In a device of the class described, the combination of a sound box, a diaphragm mounted therein, a stylus in operative relation to said diaphragm, and means for imposing resistance to the vibrations of the diaphragm, comprising an air chamber and a plunger fitting therein, one of said parts bearing on said diaphragm, said air chamber and plunger being manually adjustable relatively to each other for varying the resistance to the movement of the diaphragm, substantially as described.

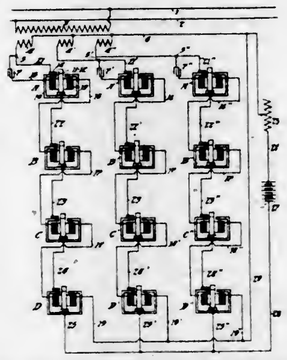
3. In phonographic sound recording apparatus, in combination, a sound box, a diaphragm secured thereto, a stylus connected therewith, and a device for imposing a resistance to the vibrations of the diaphragm of considerable amplitude, comprising a cylinder and a plunger closely fitting therein, said parts being relatively movable, and one of said parts bearing on and moving with said diaphragm, substantially as described.

4. In phonographic sound recording apparatus, in combination, a sound box, a diaphragm secured thereto, a stylus connected therewith, a cylinder and a plunger closely fitting therein, one of said parts being secured to said diaphragm and the other of said parts being secured to said sound box, and supporting means for one of said parts constructed to prevent binding between said cylinder and plunger in their relative movement, substantially as described.

5. In phonographic sound recording apparatus, in combination, a sound box, a diaphragm secured thereto, a stylus connected therewith, a cylinder secured axially to said diaphragm, a plunger fitting closely therein, an adjustable member secured in said sound box axially in line with said plunger, and a ball and socket connection between said member and said plunger, substantially as described.

[Claim 6 not printed in the Gazette.]

1,152,615. ALTERNATING-CURRENT-RECTIFYING SYSTEM. THOMAS A. EDISON, Llewellyn Park, West Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed June 13, 1912. Serial No. 703,367. (Cl. 171—253.)



1. In an alternating current rectifying system, the combination of a plurality of secondary transformer windings, and a plurality of groups of serially connected rectifying devices, one of said groups being connected to each of said windings, and said groups being connected to operate in parallel, substantially as described.

2. In an alternating current rectifying system, the combination of a transformer having a plurality of secondary windings, and a plurality of rectifying devices, each of said windings having a rectifying device connected thereto, and the rectifying devices being connected to operate in parallel, substantially as described.

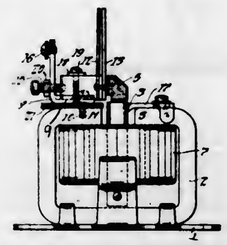
3. In an alternating current rectifying system, the combination of a transformer having a plurality of secondary windings, and a plurality of groups of serially connected rectifying devices, each of said secondary windings having one of said groups connected thereto, and said groups being connected to operate in parallel, substantially as described.

4. In an alternating current rectifying system, the combination of a source of alternating current, a transformer having a single primary winding connected thereto and having a plurality of secondary windings, and a plurality of rectifying devices, one of said rectifying devices being connected to each of said secondary windings, and said rectifying devices being connected to operate in parallel, substantially as described.

5. In an alternating current rectifying syatem, the combination of a source of alternating current, a transformer having a single primary winding connected thereto and having a plurality of secondary windings, and a plurality of groups of serially connected rectifying devices, one of said groups being connected to each of said secondary windings, and the said groups being connected to operate in parallel, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,152,616. CONTACT FOR ELECTRICAL APPARATUS. THOMAS A. EDISON, Llewellyn Park, West Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed June 13, 1912. Serial No. 703,368. (Cl. 171—253.)



1. In electrical apparatus, a supporting member, a contact adjustably mounted thereon, said contact having a portion coöperating with said supporting member and an upwardly extending recessed portion for radiating and dissipating heat, and means for clamping said contact in adjusted position upon said supporting member, substantially as described.

2. In electrical apparatus, a metallic contact member comprising a substantially U-shaped portion provided with outwardly extending projections at the ends thereof, and plates secured to said projections, said plates having subdivided portions for radiating and dissipating heat, substantially as described.

3. In electrical apparatus, a supporting member having guiding means, a metallic contact member having a portion coöperating with said guiding means, and a plate secured to said portion, said plate having a contact surface and having also portions subdivided for the radiation and dissipation of heat, substantially as described.

4. In electrical apparatus, a stationary contact member and a vibrating contact member adapted to coöperate therewith, the stationary contact member being provided with a heat-radiating and dissipating comb-like extension of substantially greater area than the area of contact surface between said contact members, substantially as described.

1,152,617. WINDOW SHADE AND CURTAIN SUPPORT. JOHN L. EVELAND, Hornell, N. Y., assignor of one-half to Wilber Gates, South Dansville, N. Y. Filed Feb. 10, 1914. Serial No. 817,828. (Cl. 156—23.)



1. A window shade and curtain support, comprising two body sections each of which is provided at its outer end with spurs adapted to engage with the outer edge of a window frame and at its inner end with an arm which slides past the corresponding arm of the other section, a loop embracing both arms, and a spring connecting said arms.

2. A window shade and curtain support, comprising two body sections each of which is provided at its outer end with spurs adapted to engage with the outer edge of a window frame and at its inner end with an arm which is provided with a plurality of openings arranged in a horizontal row, and a spring provided at each end with a coupling link adapted to pass through one or another opening of one of said arms and against the rear side of said arm adjacent to opposite edges of the respective opening.

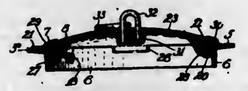
3. A window shade and curtain support, comprising two body sections each of which has a head composed of two horizontal rods, hooks arranged at the outer ends of said rods and adapted to engage with the outer edge of a window frame, a vertical rod connecting the inner ends of said horizontal rods, and an arm connected with the inner part of said head, and a spring connecting said arms.

4. A window shade and curtain support, comprising two body sections each of which has a pair of horizontal parallel guide rods, a supporting plate provided with perforated flanges which receive said rods and a channel-shaped yoke which receives one of said flanges and is guided on said rods and is provided with a bracket.

5. A window shade and curtain support, comprising two body sections each of which has a pair of horizontal parallel guide rods, two supporting plates arranged side by side and guided on said rods and each provided with a bracket, and means for pressing said plates laterally relatively to each other for clamping the same on said rods.

[Claim 6 not printed in the Gazette.]

1,152,618. CISTERN NECK-RING AND COVER. HARRY W. FARRIS, Indianapolis, Ind., assignor to Byram Foundry Company, Indianapolis, Ind., a Corporation of Indiana. Filed Feb. 7, 1912. Serial No. 676,093. (Cl. 72—9.)

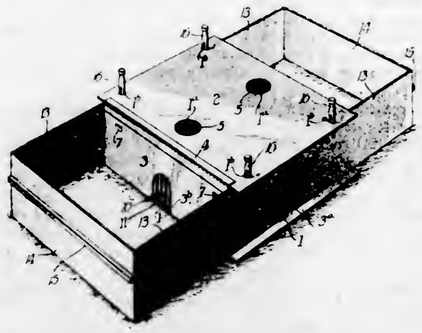


The herein-described neck closure for cisterns consisting of a flat annular plate, an annular flange on the inner edge of the plate extending downward therefrom, a plurality of pairs of locking bars on the inner edge of said plate extending with their tops on one and the same plane with the top of said plate, the two bars of each pair having under sides that are respectively inclined each in the opposite direction to the other to form two oppositely disposed wedges the thinner ends of which are in proximity each to the other, two arrows formed on the edge portion of the top of said plate on a plane between the two of each of the pair of locking bars, each arrow pointing inward toward the other, a concavo-convex disk on the concave side of which is an annular flat bearing face that is normally on the top of said annular plate, two arrows formed on the edge portion of the convex upper side of said disk pointing outward each from the other, two lugs on the concave side of said disk on the plane of said arrows that are on said convex side, said lugs being each adapted to engage the inclined under side of either one of the two of each pair of said locking bars, and two guide projections on opposite portions of said bearing face in contact with the inner edge of said annular plate, each projection being between the thicker ends of two of the said locking bars.

1,152,619. BROODER. JEFFREY T. FERRES, Anderson, Ind., assignor to The Sefton Manufacturing Company, Anderson, Ind., a Corporation of Indiana. Filed May 8, 1911. Serial No. 625,893. (Cl. 119—33.)

1. A collapsible brooder formed of paper board and comprising a collapsible rectangular box body having a

ventilation opening and an opening for the chicks, a rectangular false top narrower in one dimension than such box body to permit circulation of air past its side edges from the interior to the space above it, and thence through said ventilation opening, said top being hingedly secured at its opposite ends to the box body, whereby the entire box body and said top may be collapsed together.



2. A collapsible brooder formed of paper board and comprising a collapsible rectangular box body having a ventilation opening and an opening for the chicks, a false rectangular top narrower in one dimension than such box body to permit circulation of air past its side edges from the interior to the space above it and thence through said ventilation opening, said top consisting of a body piece and flaps hinged to its opposite ends, whereby the entire box body and said top may be collapsed together, and means for securing said flaps to two opposite sides of the box body.

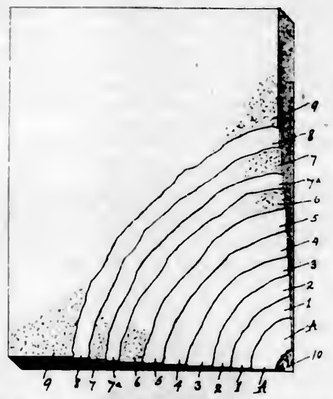
3. In a brooder, the combination of a box body composed of top, bottom, and side walls connected together, the top being constructed to extend beyond the outermost walls of the brooder structure at two opposite sides and form projecting flanges overhanging said side walls, a three part strip to form a yard, two of which parts are arranged parallel to each other and adapted to slide along the outer side of said last mentioned two sides of the box and below the overhanging flange portion of the top, and means for holding said strip in any adjusted position relative to the box.

4. In a brooder, the combination of a box body composed of top, bottom, and side walls connected together, the top being constructed to overhang the side walls on two of the sides, a three part strip to form a yard, two of which parts are arranged parallel to each other and adapted to slide along the outer side of said last mentioned two sides of the box and below the overhanging portion of the top, said top having apertures in said overhanging part, and detachable fastening devices passing through said apertures and engaging the parallel parts of said strip and the adjacent side walls of the box for holding said strip in any adjusted position relative to the box.

5. In a brooder, the combination of a box body composed of top, bottom, and side walls connected together, the top being constructed to extend beyond the outermost walls of the brooder structure at two opposite sides and form projecting flanges overhanging said side walls; a three part strip to form a yard, two of which parts are arranged parallel to each other and adapted to slide along the outer side of said last mentioned two sides of the box and below the overhanging flange portion of the top, said box body having a side opening for the chicks adapted to be closed by said strip in its innermost position, and means for holding said strip in any adjusted position relative to the box.

[Claims 6 to 10 not printed in the Gazette.]

1,152,620. MOVING-PICTURE SCREEN AND PROCESS OF PRODUCING THE SAME. JOHN B. FLOGERZI, St. Paul, Minn., assignor of one-half to John T. Smith, St. Paul, Minn. Filed Mar. 3, 1915. Serial No. 11,780. (Cl. 91—68.)



1. As an article of manufacture, a moving picture screen comprising a backing, an adhesive coating applied on one face thereof, finely divided reflecting metal held by said adhesive coating, and a coating of finely divided glass applied over the said metallic coating.

2. As a new article of manufacture, a moving picture screen comprising a flexible backing, a coating of adhesive material and granulated glass applied to one face thereof, a coating of adhesive material and finely divided reflecting metal applied over said coating of granulated glass, and a coating of adhesive material and glass particles applied over said metallic coating.

3. As a new article of manufacture, a moving picture screen comprising a flexible backing, an adhesive coating of oil, paint and varnish applied to one face thereof, a coating of ground glass applied to the said adhesive coating, a coating of varnish applied over said ground glass coating, a coating of finely divided reflecting metal applied to said last noted varnish coating, a coating of varnish applied over said metallic coating, and a coating of fine glass particles applied to and held by the said last noted varnish coating.

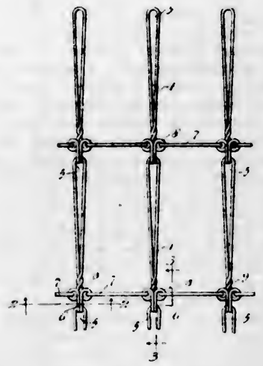
4. As a new article of manufacture, a moving picture screen comprising a backing, an adhesive coating applied on one face thereof, finely divided reflecting metal held by said adhesive coating, a coating of finely divided glass applied over the said metallic coating, and a coat of paint applied on the back surface of said backing.

5. As a new article of manufacture, a moving picture screen comprising a flexible backing, a coating of adhesive material and granulated glass applied to one face thereof, a coating of adhesive material and finely divided reflecting metal applied over said coating of granulated glass and a coating of adhesive material and glass particles applied over said metallic coating, and a coating of paint consisting of lamp black ground in oil with portions of white lead and ground asbestos applied to the back surface of said flexible backing.

[Claims 6 and 7 not printed in the Gazette.]

1,152,621. BED FABRIC. CLARENCE H. FREDERICK, Kenosha, Wis., assignor to The Simmons Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed June 20, 1914. Serial No. 846,296. (Cl. 245—5.)

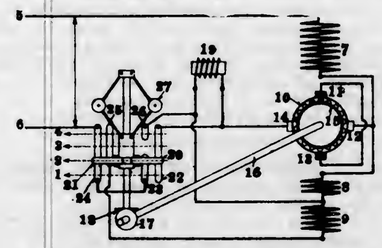
1. A wire link bed fabric, comprising a plurality of similarly formed longitudinal link chains arranged in substantial parallelism, each link being made from a length of wire bent upon itself intermediate its ends to form the end eye of the link, the two ends of the wire being bent to form a pair of hooks at the other end of the link, said hooks engaging the end eye of the adjacent link of the chain, the link being given an axial longitudinal twist intermediate the length of the link, and being provided with a pair of opposite cross-link eyes adjacent the twist in the link, and cross-links engaging said eyes for tying together the adjacent longitudinal chains of the fabric.



2. A wire link bed fabric, comprising a plurality of similarly formed longitudinal link chains arranged in substantial parallelism, each link being made from a length of wire bent upon itself intermediate its ends to form the end eye of the link, the two ends of the wire being bent to form a pair of hooks at the other end of the link, said hooks engaging the end eye of the adjacent link of the chain, the link being given a longitudinal twist adjacent its hook end and being provided with a pair of opposite cross-link eyes intermediate the twist and the hook end, and cross-links engaging said eyes for tying the longitudinal chains together.

3. A wire link bed fabric, comprising a plurality of similarly formed longitudinal link chains arranged in substantial parallelism, each link being made from a length of wire bent upon itself intermediate its ends to form the end eye of the link, the two ends of the wire being bent to form a pair of hooks at the other end of the link, said hooks engaging the end eye of the adjacent link of the chain, the link being given a longitudinal twist intermediate the length of the link and being provided with a pair of opposite completely closed loop eyes adjacent the twist, and cross-links engaging said eyes for tying the longitudinal chains together.

1,152,622. ALTERNATING-CURRENT MOTOR. VALÈRE A. FYNN, St. Louis, Mo., assignor to Wagner Electric Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 1, 1914. Serial No. 828,661. (Cl. 172—276.)



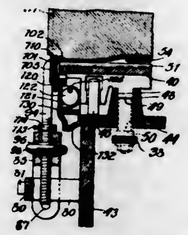
1. In an alternating current motor, the combination with an inducing member, of an induced member provided with a commuted winding and a second winding closed on itself, a magnetic shunt forming a pathway for magnetic flux to link with the commuted winding without linking with said second winding, exciting brushes and short-circuited working brushes coöperating with the commuted winding, and an impedance in circuit with the exciting brushes.

2. In an alternating current motor, the combination with an inducing member, of an induced member provided with a commuted winding and a second winding closed on itself, a magnetic shunt forming a pathway for magnetic flux to link with the commuted winding without linking with said second winding, exciting brushes and short-circuited working brushes coöperating with the commuted winding, and an inductance in circuit with the exciting brushes, and means governed by the speed of the motor for short-circuiting the inductance.

3. In an alternating current motor, the combination with an inducing member having a main inducing winding and a compensating winding, of an induced member provided with a commuted winding and a second winding closed on itself, a magnetic shunt forming a pathway for magnetic flux to link with the commuted winding without linking with said second winding, exciting brushes and short-circuited working brushes coöperating with the commuted winding, and an inductance connected to the exciting brushes in series with the compensating winding.

4. In an alternating current motor, the combination with a source of alternating E. M. F., of an inducing member having a main inducing winding and a compensating winding, an induced member provided with a commuted winding and a second winding closed on itself, a magnetic shunt forming a pathway for magnetic flux to link with the commuted winding without linking with said second winding, exciting brushes and short-circuited working brushes coöperating with the commuted winding, said exciting brushes being connected to the source in series with the main inducing winding at starting, and an inductance connected to the exciting brushes in series with the compensating winding.

1,152,623. MEAT-SLICING MACHINE. ADELBERT L. GARDNER, Chicago, Ill., assignor of one-half to Curtis H. Gardner. Filed Dec. 28, 1912. Serial No. 739,034. (Cl. 17—24.)



1. In a meat slicing machine, the combination with a meat supporting platform and a slicing knife, of a rind stripper adjacent the edge of such platform, such stripper being adapted to support the meat in cutting position and to withhold the rind from the slicing knife, means for adjusting the rind stripper in such position as not to separate the rind from the meat, and means for supporting the forward edge of the meat in the proper cutting position when the stripper is in such latter position.

2. In a meat slicing machine, the combination with a meat supporting platform and a slicing knife, of a shelf below such platform, a bracket pivoted to such shelf, posts supported in such bracket, a rind stripper at the top of such posts, and means for raising and lowering such posts.

3. In a meat slicing machine, the combination with a meat supporting platform and a slicing knife, of a ledge below such platform, a bracket supported by such ledge and having an opening therethrough, a threaded post set

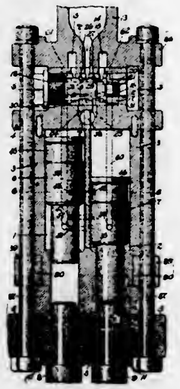
in such opening, a nut engaging therewith, and a rind stripper at the top of such post.

4. In a meat slicing machine, the combination with a meat supporting platform and a slicing knife, of a rind stripper adjacent the edge of such platform the top surface of such rind stripper sloping toward such meat supporting platform and terminating in a thin edge, such stripper being adapted to separate the meat from the rind, to support the meat in cutting position, and to withhold the rind from contact with the edge of the slicing knife.

5. In a meat slicing machine, the combination with a slicing knife and a meat supporting platform, of a rind stripper adjacent the edge of such platform, such rind stripper having an upper surface adapted to support the meat in proper cutting position, and a lower surface adapted to with hold the rind from the slicing knife.

[Claims 6 to 10 not printed in the Gazette.]

1,152,624. PNEUMATIC TOOL. GEORGE H. GILMAN, Claremont, N. H., assignor, by mesne assignments, to Sullivan Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 2, 1908. Serial No. 408,877. (Cl. 121—20.)



1. A pneumatic impact tool or hammer having a pair of piston-hammer members adapted to reciprocate each within its appropriate cylinder, suitably held tools adapted each to receive the impact of one of said hammer members, a single controlling valve for said hammer members having differential pressure areas, means for maintaining the smaller differential area of the valve constantly exposed to pressure fluid to press the valve constantly toward one position, suitable admission and exhaust passages, pressure-fluid passages controlled by the valve and leading to opposite ends of each cylinder, the valve in one position being adapted to connect the head end of one cylinder and the tool end of the other to the admission, and the tool end of the first cylinder and the head end of the other cylinder to the exhaust, and in its reverse position to effect reverse connections, said cylinders being each provided with a constant pressure passage and an intermittent pressure passage having ports opening into the cylinder at or about the same point and adapted to be placed in communication with each other on forward piston movement, thereby to admit pressure to the larger differential area of the valve, an exhaust port for the forward end of each cylinder adapted to be uncovered on rearward piston movement, a second port connecting each cylinder with its intermittent pressure passage and adapted to be uncovered by the rearward piston movement, thereby to exhaust the pressure-fluid from th elarger differential area of the valve and to reverse the latter, and a regulating valve adapted to control the pressure passages of the two cylinders, said valve in one position being adapted to close the intermittent pressure passage and constant pressure passage of one cylinder, while leaving open the intermittent pressure passage and constant pressure passage of the other cylinder and also leaving open the pressure passages leading to the opposite ends of both cylinders, in another position additionally to close the pressure-fluid passages leading to the opposite ends of the first-mentioned cylinders and in still another position to open the intermittent pressure passage, constant pressure passage and cylinder pressure passages for said first-mentioned cylinder while closing the corresponding passages for said other cylinder.

2. A pneumatic impact tool or hammer having a pair of piston-hammer members adapted to reciprocate each within its appropriate cylinder, a separate actuated tool for each hammer member, a single controlling valve for said hammer members having differential pressure areas, means for maintaining pressure fluid upon the smaller differential area of the valve to press the latter constantly toward one position, fluid supply passages controlled by said valve to supply pressure fluid for moving the hammer members in opposite directions in one position to the valve and reversely in its reverse position, an intermittent pressure passage leading to each cylinder and communicating with the larger differential area of the valve, means for placing said passages in communication with a supply of pressure fluid on forward piston movement, and means at will for closing the intermittent pressure passage for one cylinder, thereby causing the joint operation of the hammer members in opposed step and the control of the valve through one hammer member or for cutting off the operative supply of pressure fluid to one cylinder at will, thereby to actuate a single hammer member only.

3. A pneumatic impact tool or hammer having a pair of piston-hammer members adapted to reciprocate each within its appropriate cylinder, separate actuated tools adapted to receive each the impact of one of said hammer members, a single controlling valve for admitting pressure fluid to cause said hammer members to move in opposed step, pressure fluid means for controlling the reversal of said valve through piston movement, and pressure fluid regulating means for withholding operative pressure fluid from one cylinder while continuing to supply the other thereby to throw out of operation one of said piston-hammers at will while continuing the operation of the other.

4. A pneumatic impact tool or hammer having a pair of piston-hammer members adapted to reciprocate each within its appropriate cylinder, a single controlling valve therefor, a pressure fluid passage for each cylinder adapted to be controlled by its respective piston for the passage of pressure fluid to reverse the valve, pressure fluid regulating means to close one of said pressure passages at will, and, at the same time, cut off the operating supply of pressure fluid to the corresponding cylinder, or to close one of said passages while maintaining the operative supply of pressure fluid to each cylinder, thereby to effect the sole operation of one of said hammer members or joint operation of said hammer members at will.

5. A pneumatic impact tool or hammer having a pair of piston-hammers adapted to reciprocate each within its appropriate cylinder, a single pressure-actuated controlling valve to caus said piston-hammers normally to reciprocate in opposed step, and valve means for withholding effective power from one of said hammers while continuing to supply the other thereby to throw out of operation one of said hammer members at will, while continuing the operation of the remaining one.

[Claims 6 to 23 not printed in the Gazette.]

1,152,625. COMPOSITION OF MATTER. BYRON B. GOLDSMITH, New York, N. Y. Filed Aug. 3, 1912. Serial No. 713,028. (Cl. 134—79.)

1. The process of producing a composition of matter which consists in subjecting a vegetable oil to the action of nitric acid sufficiently dilute to oxidize the same without nitration and mixing the resulting product with an ester of cellulose.

2. The process of producing a composition of matter which consists in subjecting a vegetable oil to the action of nitric acid sufficiently dilute to oxidise the same without nitration while heating the same and mixing the resulting product with an ester of cellulose.

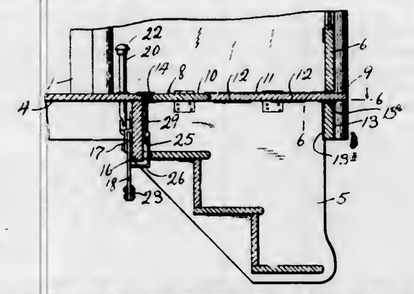
3. The process of producing a composition of matter which consists in subjecting a vegetable oil to the action of nitric acid sufficiently dilute to oxidise the same without nitration and mixing the same with an ester of cellulose and a suitable solvent.

4. The process of producing a composition of matter which consists in subjecting a vegetable oil to the action of nitric acid sufficiently dilute to oxidise the same without nitration and mixing the same with nitro-cellulose.

5. The process of producing a composition of matter which consists in subjecting a vegetable oil to the action of nitric acid sufficiently dilute to oxidise the same without nitration, making a suitable solution of the resulting product and mixing it with a cellulose ester.

[Claims 6 to 14 not printed in the Gazette.]

1,152,626. CAR-VESTIBULE DOOR AND TRAP. CHARLES E. GRIFFITH, Philadelphia, Pa. Filed Feb. 17, 1915. Serial No. 8,775. (Cl. 105—84.)



1. In a railway car, the combination with a vestibule door; of a trap for the steps of the car formed of sections hinged one to the other along a line extending obliquely thereto, one section of said trap being hinged to the car adjacent the inner end of the door and the other section being adapted to project under said door and to the plane of the outer wall of the car when said trap and door are disposed to their closed positions.

2. In a railway car, the combination with a vestibule door; of a trap for the steps of the car formed of sections hinged one to the other along a line extending obliquely thereto, one section of said trap being hinged to the car adjacent the inner end of the door; the outer end of the other section of the trap being adapted to project under the lower edge of said door when the trap and door are disposed to their closed position, and a sill hinged at its one end to the car below the inner end of the door and hinged adjacent its outer end to the under face of the last mentioned section of the trap adjacent the outer side edge thereof.

3. In a railway car, the combination with a vestibule door; of a trap for the steps of the car formed of a pair of sections hinged one to the other along a line extending obliquely thereto, one section of said trap being hinged to the car adjacent the inner end of the door, the outer side edge of the other section of the strap being adapted to project under the lower edge of said door when the trap and door are disposed to their closed positions, and a sill hinged on a vertical axis to the car below the inner end of the door and also hinged adjacent its outer end on a horizontal axis to the under face of the last mentioned section of the trap at a point adjacent the outer side edge of the latter.

4. In a railway car, the combination with a vestibule door; of a trap for the steps of the car formed of sections hinged one to the other along a line extending obliquely thereto, one section of said trap being hinged to the car adjacent the inner end of the door, the outer side edge of the other section of the trap being adapted to be disposed below the lower edge of said door when the latter and said trap are disposed to their closed positions, a flange formed on the outer side edge of the last mentioned section of the trap to project to the plane of the outer wall of the car when said trap is disposed to its closed position, and a sill hinged at its one end to the car below the inner end of the door and also hinged adjacent its opposite end to the under face of the last mentioned section of the trap at a point adjacent the outer side edge of the latter.

5. In a railway car, the combination with a vestibule and door thereof, of a trap for the steps of the car, said strap including two hingedly united sections, one of said sections being hinged to the wall of the car, a supporting sill for the outer end of the trap, said sill being hinged at one terminal to the wall of the car and being also hinged at its upper edge to the other section of the trap, and means connected to the first mentioned section for swinging the trap into open position, said second mentioned section being adapted to fall by gravity into folded position against the first mentioned section and the sill being adapted to swing into folded position against the wall of the car, when the trap is moved to open position.

1,152,627. THERMO-TELEPHONE OR THE LIKE. BRONISLAW GWOZDZ, Schöneiche, near Berlin, Germany. Original application filed Aug. 15, 1911, Serial No. 644,243. Divided and this application filed Nov. 15, 1912. Serial No. 731,558. (Cl. 179—101.)



1. In a thermo-telephone or the like the combination with a body consisting of two halves, of a Wollaston wire separately mounted between the halves, said halves having means for assuring the correct relative position thereof, when united, and means for securing the wire in the said body.

2. In a thermo-telephone or the like the combination with a body consisting of two parts, of a Wollaston wire separately mounted between the parts, the parts being provided with projections and recesses for assuring their correct relative position when united, and means for securing the wire in the said body.

3. In a thermo-telephone or the like the combination with a body consisting of two parts, of a Wollaston wire separately mounted between the parts, the parts being provided with projections and recesses for assuring the correct relative position of the parts and of the wire, and means for securing the wire in the said body.

4. In a thermo-telephone or the like the combination with a body consisting of two halves, of a Wollaston wire separately mounted between the halves, the halves being provided with projections and recesses for assuring the correct relative position of the halves and of the wire, and a holder surrounding the body and securing the said wire in the body.

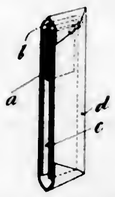
5. In a thermo-telephone or the like the combination with a body consisting of two parts, of a Wollaston wire separately mounted between the parts, the parts being provided with projections and recesses for assuring the correct relative position of the parts and of the wire, and a cylindrical holder surrounding the body and securing the said wire in the body.

[Claims 6 and 7 not printed in the Gazette.]

1,152,628. LETTER-OPENER. HERMAN HESSE, Easton, Pa. Filed Mar. 31, 1915. Serial No. 18,211. (Cl. 229—86.)

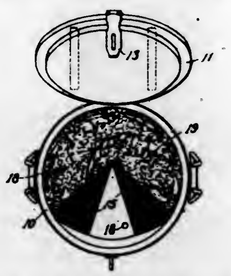
1. An envelop opener, consisting of a rigid part of light material and a flexible member connected at one end thereto, said rigid part serving as anchorage for said flexi-

ble member and being adapted to be placed loosely into the envelop and the flexible member to be folded so as to extend from said anchorage toward the opposite end of and along the edge of the envelop which is to be torn open and to protrude with its free end outwardly from the sealed envelop.



2. The combination with a folded letter or the like and an envelop or wrapper containing the same, of a flat rigid piece and a flexible member connected to said piece, said piece being adapted to be loosely placed between the folded contents of the envelop or wrapper, and said flexible member to be folded so as to extend toward the opposite end of said piece and over the back of the fold and to protrude with its free end from within the envelop or wrapper.

1,152,629. SHIPPING-PACKAGE FOR LOBSTERS. FRED B. HIGGINS, Boothbay Harbor, Me. Filed June 12, 1913. Serial No. 773,223. (Cl. 119—2.)

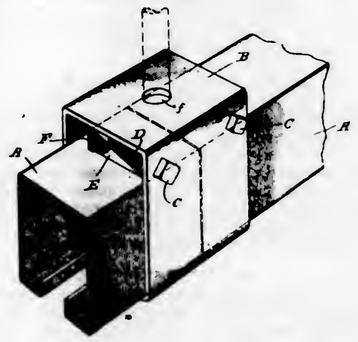


1. A shipping package, comprising a tub; a perforated partition extending up and down therein at an inclination, adapted to hold ice beside its upper side and lobsters beside its lower side, and arranged at a distance from a wall of the tub on its lobster-holding side forming a compartment closed at its ends, having width narrow relative to its length, having depth adapted to receive a plurality of lobsters and having an opening at the top; and means to close said opening; whereby a plurality of lobsters maintained in a single compartment are individually restrained from turning end for end.

2. A shipping package comprising a tub, an ice retaining perforated partition extending up and down therein, forming an ice compartment between itself and the tub's wall on one side and a lobster compartment between itself and the tub's wall on the other side, and being arranged at an approximately uniform distance from the wall on the latter side, making the lobster compartment narrow relative to its length; both compartments having openings and closing means at the top; whereby individuals among a plurality in the lobster compartment are restrained from turning end for end.

1,152,630. BRACKET FOR TROLLEY-TRACKS. PETER L. HOFFMAN, Aurora, Ill., assignor to Richards-Wilcox Manufacturing Company, Aurora, Ill., a Corporation of Illinois. Filed Feb. 15, 1915. Serial No. 8,323. (Cl. 104—181.)

1. In a track-bracket comprising two side walls and a connecting top wall, the combination with a bolt passing through said side walls, of clamping means mounted on said bolt and adapted by the turning of the bolt to be forced into engagement with said top wall of the bracket and also with a track-member supported between said side walls.



2. In a track-bracket comprising two side walls and a connecting top wall, the combination with a bolt passing through said side walls, of longitudinally-movable wedging means on said bolt, and a non-rotatable device screw-threaded onto said bolt and adapted by the turning of the bolt to move said wedging means into frictional engagement with said top wall of the bracket and also with a track-member supported between said side walls.

3. In a track bracket comprising two side walls and a connecting top wall, the combination with a bolt passing through said side walls, of two coöperating wedge-members through which said bolt passes, and a non-rotatable nut screw-threaded onto said bolt and adapted by the rotation of the bolt to force one of the wedges toward the other.

4. In a track-bracket comprising two side walls and a connecting top wall, the combination with a bolt passing through said side walls, of a wedge having a slot through its inclined surface through which the bolt passes, a non-rotatable nut screw-threaded onto the bolt and acting, when the bolt is turned, to move said wedge longitudinally of the bolt, and a second wedge with which said first wedge coöperates for causing a frictional engagement between said bracket and a track supported therein.

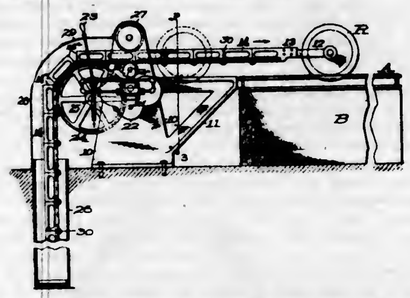
5. In a track-bracket comprising two side walls and a connecting top wall, the combination with a bolt passing through said side walls, of a wedge having a slot through its inclined surface through which the bolt passes and having the upper face of one of the end walls of the slot and the lower face of the other end wall recessed to form seats for the bolt, a non-rotatable nut screw-threaded onto the bolt and acting, when the bolt is turned, to move said wedge longitudinally of the bolt, and a second wedge with which said first wedge coöperates for causing a frictional engagement between said bracket and a track supported therein.

[Claim 6 not printed in the Gazette.]

1,152,631. MOLDING APPARATUS. WALTER H. HOFMANN, Richmond Hill, N. Y. Filed July 16, 1914. Serial No. 851,392. (Cl. 22—40.)

1. A molding apparatus having in combination a support for a flask, a roller movable over the flask to pack the sand therein, and means for moving said roller, said means comprising a flexible plunger whereby excessive rearward horizontal extension of said means is avoided in any position of the roller.

2. A molding apparatus having in combination a support for the flask, a roller movable over the flask to pack the sand therein, and means for moving said roller, said means comprising a plurality of rigid elements pivotally connected together and provided with abutting end surfaces, whereby said elements can be moved out of longitudinal alinement in one direction only.



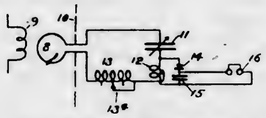
3. A molding apparatus having in combination a support for a flask, a roller movable over the flask to pack the sand therein, a support for said roller when in inoperative position, a linked plunger connected by said roller, having a plurality of rack teeth on each link thereof, a pinion meshing with said teeth for driving said plunger, and means for rotating said pinion.

4. A molding apparatus having in combination a support for a flask, a roller movable over the flask to pack the sand therein, a support for said roller when in inoperative position, a linked plunger connected to said roller, rack teeth on said links, and a guide for maintaining operative relation between said rack teeth and pinion.

5. A molding apparatus having in combination a support for a flask, a roller movable over the flask to pack the sand therein, a support for said roller when in inoperative position, a linked plunger connected to said roller, rack teeth on said links, a pinion for driving said rack, and stops on said plunger for limiting its travel in both directions.

[Claim 6 not printed in the Gazette.]

1,152,632. OSCILLATING-CURRENT METER. JOHN L. HOGAN, Jr., New York, N. Y., assignor, by mesne assignments, to Samuel M. Kintner, Pittsburgh, Pa., and Halsey M. Barrett, Bloomfield, N. J., receivers. Filed May 16, 1912. Serial No. 697,654. (Cl. 250—39.)



1. A wave meter comprising a closed resonating circuit, containing inductance and capacities, and an oscillation indicator circuit shunted around a portion of said inductance and containing an oscillation detector and a condenser in series, and an indicating instrument shunted around one of the elements of the said indicating circuit.

2. In a wave meter, a resonant circuit having a continuously variable tuning element, a tuning inductance variable by steps, and a potential coil, and a circuit containing a rectifier and condenser in series shunted around said potential coil.

3. In a wave meter, a resonant circuit having a continuously variable tuning element, a tuning inductance variable by steps, and a potential coil, a circuit containing a rectifier and condenser in series shunted around said potential coil, and connections to eliminate the effect of the coils not in use.

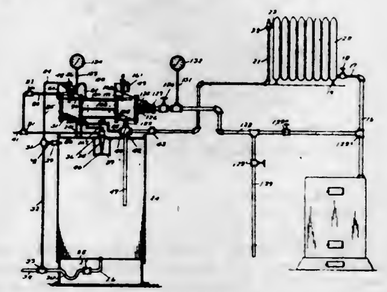
4. In a wave meter, a resonant circuit containing inductance and capacity, one of which is variable by small increments, and a potential coil, a circuit containing a rectifier and condenser in series shunted around said potential coil, and an instrument to indicate the rectified current connected to said last named circuit.

1,152,633. SCISSORS OR SHEARS. ERNST HOLTGRAVE, Brooklyn, N. Y. Filed Nov. 27, 1914. Serial No. 874,110. (Cl. 30—12.)



Scissors or shears consisting of two blades, a headed bolt joining the said blades together, the blade opposite the head of the bolt having at the forward end of its flat surface a wedge-shaped groove in its outer face, a member movably mounted between the head of the bolt and the said blade, said member having at the forward end of its lower face a projection conforming and coöperating with said groove and a radial flexible extension adapted to engage notches formed in the outer face of the said blade to secure the member in adjusted position, substantially as and for the purpose set forth.

1,152,634. APPARATUS FOR PRODUCING AND CONTROLLING THE VACUUM IN STEAM-HEATING SYSTEMS. LESLIE HOPKINS, Kansas City, Mo. Filed Aug. 11, 1914. Serial No. 856,228. (Cl. 160—3.)



1. In a vacuum producing and maintaining apparatus, the combination with a closed vacuum tank, a supply pipe having a suitable source of supply of the heating medium leading to said tank, an air pipe leading within the said tank, and with a valve in the supply pipe for the heating medium of a fluid pressure operated device having a source of fluid supply independent of the heating medium for controlling said valve.

2. In a vacuum producing and maintaining apparatus, the combination with a closed vacuum tank, a steam supply pipe having a suitable source of steam supply leading to said vacuum tank, and an air pipe leading with the said tank, of a heat expanded and controlled regulator in operative relation with the steam pipe, a valve controlling the passage of the steam to the vacuum tank, a motor controlling the opening and closing of said valve, a vacuum controlled governor in communication with and controlled by the force of the vacuum within said tank acting to control the movement of said motor upon a maintenance of a vacuum within the said tank, and means

controlled by said heat expanded regulator to start and stop the action of the motor.

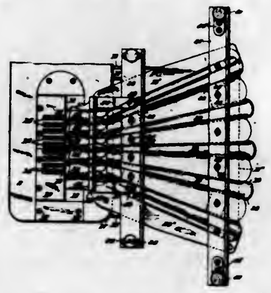
3. In a vacuum producing and maintaining apparatus, the combination with a steam condensing closed tank, a steam supply pipe having a suitable source of steam supply leading within said tank and a steam supply valve, a valve cock for delivering the water within the condensing tank, means co-acting to open and close said steam supply valve and said valve cock at predetermined intervals independent of the steam heat or pressure of the steam.

4. In a vacuum producing and maintaining apparatus, the combination with a steam condensing tank, a steam supply pipe having a suitable source of steam supply leading within said tank, a valve controlling the flow of the steam and with an air pipe leading within the said steam condensing tank, of a fluid pressure operated device having its source of supply independent of the steam supply pipe and mechanism actuated thereby co-acting to open and close said steam and water valves at predetermined intermissions.

5. In a vacuum producing apparatus, the combination with a closed vacuum tank for steam condensation and with means for supplying steam to said tank, a steam supply valve, a pipe for the admission of air leading within the vacuum tank of mechanism co-acting with the steam and air valves to open and close said valves, a motor co-acting with said mechanism, motor starting means, and a steam controlled thermo-dynamic regulator actuating the starting means to said motor.

[Claims 6 to 35 not printed in the Gazette.]

1,152,635. MULTIPLE TUCKING-GUIDE FOR SEWING-MACHINES. CHARLES M. HORTON, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Aug. 23, 1911. Serial No. 645,606. (Cl. 112—12.)



1. A tuck-forming attachment for sewing machines, comprising a lower series of separate spaced and convergent forming-bars rigidly connected together and each having at its delivery end a laterally twisted wing with that portion thereof immediately adjacent said forming bar in alinement with one face of the bar and with the extremity of said twisted wing arranged transversely to the same face of the bar, an upper series of spaced and convergent forming-bars entering the spaces between the bars of the lower series and rigidly connected together, a series of tuck-guides disposed in register with the upper forming-bars and adapted to guide the bases of the tucks to the stitch-forming mechanism, a rigid connection between said tuck-guides and the upper forming-bars, and means arranged at opposite sides of the series of upper and lower tuck-forming bars for adjustably securing the same together in fixed relation.

2. A tuck-forming attachment for sewing machines, comprising a lower series of separate spaced and convergent forming-bars rigidly connected together and each having at its delivery end a laterally twisted wing with that portion thereof immediately adjacent said forming bar in alinement with one face of the bar and with the extremity of said twisted wing arranged transversely to the same face of the bar, an upper series of spaced and convergent forming-bars entering the spaces between the bars of the lower series and rigidly connected together, a series of tuck-guides disposed in register with the upper forming-bars and adapted to guide the bases of the tucks to the stitch-forming mechanism, and means for adjusting both the angular relation and the spacing apart of the upper and lower series of tuck-forming bars.

3. A tuck-forming attachment for sewing machines comprising a lower series of separate, spaced and convergent forming-bars mutually unconnected at their bases throughout the greater portion of their length and each having at its delivery end and at one side thereof a flat laterally extending wing and above the same extending from the opposite side a laterally twisted wing with that portion thereof immediately adjacent said forming bar in alinement with one face of the bar and with the extremity of said twisted wing arranged transversely to the same face of the bar, the bases of said bars being separated by an intervening opening throughout that part of the length of each from said wings at the delivery end to the opposite end, an upper series of separate and similarly spaced and convergent forming bars also mutually unconnected at their bases throughout the greater portion of their length and entering the spaces between the bars of the lower series, means for sustaining the upper and lower series of the forming bars, and means for delivery of tucks from said bars in parallelism.

4. A tuck-forming attachment for sewing machines comprising a lower series of separate, spaced and convergent forming-bars mutually unconnected at their bases through the greater portion of their length and each having at its delivery end and at one side thereof a flat laterally extending wing and above the same extending from the opposite side a laterally twisted wing with that portion thereof immediately adjacent said forming bar in alinement with one face of the bar and with the extremity of said twisted wing arranged transversely to the same face of the bar, the bases of said bars being separated by an intervening opening throughout that part of the length of each from said wings at the delivery end to the opposite end, an upper series of separate and similarly spaced and convergent forming-bars also mutually unconnected at their bases throughout the greater portion of their length and entering the spaces between the bars of the lower series, a series of tuck-guides disposed in register with the upper forming-bars and adapted to guide the bases of the tucks therefrom to the stitch-forming mechanism, and means for rigidly connecting together the component forming-bars of each series.

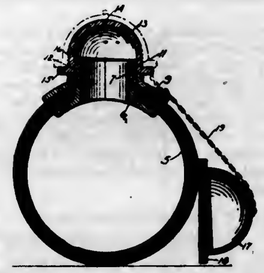
5. A tuck-forming attachment for sewing machines comprising a lower series of spaced forming-bars hollow throughout the greater portion of their length and rigidly connected together and each formed of substantially inverted U-shaped cross-section with a flat lateral wing extending forwardly from the edge of the extremity of one member and a twisted wing extending forwardly from the same member and turned oppositely from said lateral wing at its forward end into transverse relation with said member and offset above said lateral wing, and an upper series of forming bars also hollow throughout the greater portion of their length and of substantially U-shaped cross-section entering the spaces between the bars of the lower series and rigidly connected together.

[Claims 6 and 7 not printed in the Gazette.]

1,152,636. SPRINKLER. HUGH EDWARD HOUSTON, Wichita Falls, Tex. Filed July 21, 1914. Serial No. 852,305. (Cl. 137—83.)

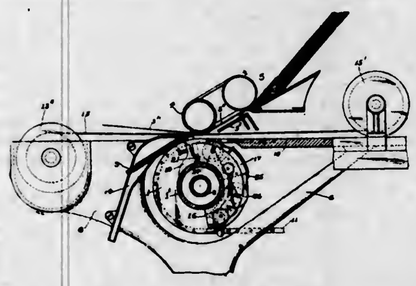
1. In a device of the class described, nipple sections having a flange portion at one end adapted to fit the interior surface of a hose and a threaded portion at the other end, a retaining flange adapted to fit the nipple sections and fit the outer surface of the hose, a sprinkler head adapted to engage the threaded portion of said nipple sections and force said retaining flange toward the flange portion of said nipple sections, and a threaded cap for said sprinkler head removable therefrom.

2. In a device of the class described, a nipple having a flange portion and a threaded portion, said flange portion being adapted to fit the interior surface of a hose, a retaining flange associated with said nipple and adapted to fit the exterior surface of the hose, a sprinkler head adapted to engage the threaded portion of the nipple and force said retaining flange toward the flange portion of the nipple, and a threaded cap for said sprinkler head removable therefrom.



3. In a device of the class described, a nipple formed of longitudinal sections, said sections having flange portions at one end, said flange portions forming part of a cylindrical surface adapted to contact with the interior surface of a hose, said nipple sections having the other end threaded, a retaining flange forming part of a cylindrical surface adapted to fit the exterior surface of a hose, said retaining flange having an annular collar adapted to receive the nipple sections, a sprinkler head adapted to engage the threaded parts of said nipple sections and said collar of said retaining flange, whereby the retaining flange is forced toward the flanged part of the nipple sections, and a threaded cap for said sprinkler head removable therefrom whereby the same can be placed into operative or into inoperative position.

1,152,637. DATING-MACHINE. DAVIDD C. HUGHES, Chicago, Ill., assignor, by mesne assignments, to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 8, 1910. Serial No. 586,057. (Cl. 101—1.)



1. An addressing machine of the kind wherein type plates are periodically pressed into printing engagement with the pieces of printable material fed to the machine, in combination with mechanism for presenting an inked ribbon between each plate and piece of material during the interval of pressure thereupon, a dating mechanism, an inked ribbon co-acting therewith, and actuating means for said dating mechanism operable to impress a date upon the pieces of material through said co-acting inked ribbon and at a pre-determined time interval following the addressing operation.

2. In a machine of the class herein described, a printing drum, in combination with a co-axial type plate drum, and a dating mechanism positioned on and rotatable in time with said type plate drum, said mechanism being independently and rotatably adjustable with respect to said drum.

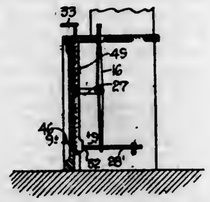
3. A machine of the class described, a printing drum, and a co-axial type plate drum rotatable in the same direction, a dating mechanism co-axial with said drums and rotatable therewith, a wide inked ribbon common to said drums and movable there with, and a narrow independent inked ribbon individual to said dating mechanism.

4. In a machine of the class described, a printing drum and a type plate drum co-axially arranged and rotatable at the same peripheral speed during the printing operation, a dating mechanism rotatable upon the same axis as said drums and adjustable relatively thereto for dating articles fed to the machine at a pre-determined instant in the complete printing operation, a broad inked ribbon co-acting with and common to said drums, and an independent inked ribbon individual to and co-acting with said dating mechanism.

5. In a machine of the class described, a printing drum and a type plate drum co-axially arranged and rotatable at the same peripheral speed during the printing operation, a dating mechanism rotatable with and upon the same axis as said drums, said dating mechanism being adjustable relatively to the drums for dating articles fed to the machine at a pre-arranged instant in the complete printing operation, a broad inked ribbon co-acting with and common to said drums, an independent, comparatively narrow, inked ribbon individual to and movable with said dating mechanism, and a pressure roll co-extensive with and operable to press the articles to be printed upon said drums and dating mechanism.

[Claims 6 to 34 not printed in the Gazette.]

1,152,638. KEY-CONTROLLED VENDING-MACHINE. JUDSON B. HUBD, Washington, D. C. Filed Jan. 27, 1914. Serial No. 814,846. (Cl. 211—8.)



1. The combination with a vending machine having key-controlled actuating means, and an elongated opening, of a key to control said actuating means and having an elongated body portion adapted to be operatively positioned by lateral movement of the key through said opening.

2. A vending machine, comprising a counter, a cabinet associated therewith adapted to hold articles to be vended, means associated with said cabinet to successively release said articles, key-controlled actuating means for said last-named means, said counter having an elongated key opening, and a key adapted to be inserted through said opening into its operative position.

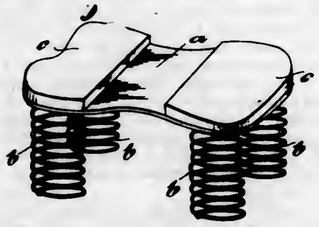
3. A vending machine, comprising a counter, a cabinet associated therewith adapted to hold articles to be vended, means associated with said cabinet to successively release said articles, key-controlled actuating means for said last-named means, said counter having an elongated key opening, and an elongated key adapted to be inserted laterally through said opening into its operative position.

4. A vending machine, comprising a container, a plurality of shelves positioned therein adapted to hold the articles to be vended, a curtain associated with the container and normally preventing access to said shelves, actuating means adapted to move at each actuation thereof, the curtain a predetermined amount to permit access to one of the shelves, and a key to control said actuating means.

5. A vending machine, comprising a key-controlled mechanism for successively vending articles, a counter upon which said mechanism is positioned, said counter having a key opening therein in which a key may be inserted.

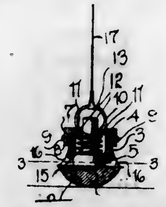
[Claims 6 to 16 not printed in the Gazette.]

1,152,639. TOY. JOSIAH ISAACS, Birmingham, England. Filed May 13, 1915. Serial No. 27,817. (Cl. 46—40.)



A toy consisting of the representation of a four-legged animal, the body of which may be composed of any suitable outer covering filled with a suitable packing, and in which body a board or member is incorporated extending from front to back, and from side to side of the body, and from which board the upper extremities of coiled springs constituting the legs are secured, such coiled springs being externally covered with material similar to that utilized to cover the body, substantially as and for the purpose set forth.

1,152,640. RETURN-TORPEDO. GARRETT P. JOHNSON, Rochester, N. Y. Filed Jan. 16, 1915. Serial No. 2,693. (Cl. 46—46.)



1. In a torpedo of the character described, a hollow body, a spring actuated firing pin disposed in this body, the body being formed with a slot for the insertion and removal of a detonating cap, and means for holding the firing pin raised against the force of the spring, said means being rendered operative or inoperative upon a rotation of the firing pin around its longitudinal axis to predetermined positions.

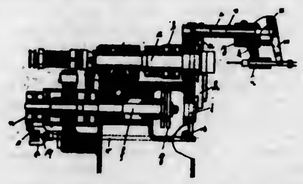
2. A torpedo of the character described including a hollow globular body having a bored neck formed with oppositely disposed slots intersecting the hollow interior of the body, a firing pin having a shank disposed within the bore of the body, a ring attached to the extremity of the shank, a spring surrounding the shank and urging the firing pin downward, a cap removably disposed upon the neck of the body and having a central bore for the firing pin, and radially extending notches to accommodate the ring on the end of the firing pin, the firing pin and ring being rotatable to carry the ring out of the notches to thereby hold the firing pin raised against the force of the spring.

3. In a torpedo of the character described, a hollow body having a firing chamber open at one end, a cap mounted upon the body and closing said end, a spring actuated firing pin disposed in the body and having a shank extending through said cap, the body being formed with a slot for the insertion and removal of a detonating cap, and means for holding the firing pin raised against the force of said spring, said means being rendered operative or inoperative by a relative rotation of the firing pin and the cap.

4. A torpedo having a hollow body formed with a rounded lower end, and an interior chamber defined by a surrounding wall, the floor of the chamber being relatively thick and the wall of the chamber having radially disposed slots on a level with the lower end of the chamber, a firing pin reciprocatively disposed within the chamber, and a flexible connection extending through the firing pin.

5. A torpedo including a hollow body inclosing a firing chamber, the bottom of the chamber forming a seat for a detonating cap, the body having slots for the insertion and removal of said cap, a firing pin disposed in the chamber and having an enlarged head and a relatively small shank, a cap detachably engaging the upper end of the body and extending over the end of the body and having an opening for the passage of the shank smaller than the head, and a flexible connection extending from the firing chamber.

1,152,641. AUTOMATIC MACHINE FOR PROFILE-TURNING. KARL JUNG, Berlin, Germany, assignor to The General Composing Company, Gesellschaft mit beschränkter Haftung, Berlin, Germany, a Corporation. Filed July 22, 1914. Serial No. 852,478. (C. 29—43.)



1. In an automatic machine for profile turning in combination a bed, a work spindle arranged above the bed, tools to be fed from the front side in the axial direction toward the work and a support for these tools said support being arranged above the work spindle and said bed and being substantially in the same vertical plane with the front end of the spindle, thereby keeping free the space in front of and below the spindle for the purpose to allow the shavings to fall freely.

2. In an automatic machine for profile turning in combination a bed, a work spindle arranged above the bed, tools to be fed from the front side in the axial direction toward the work, a support and a controlling mechanism for these tools said support and controlling mechanism being arranged in part above the work spindle and said bed and being substantially in the same vertical plane with the front end of the spindle, thereby keeping free the space in front of and below the spindle for the purpose to allow the shavings to fall freely.

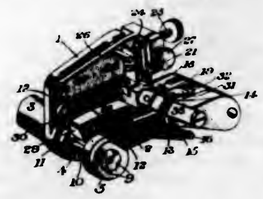
3. In an automatic machine for profile turning, in combination, a bed, a work spindle arranged above the bed, tools to be fed from the front side in the axial direction toward the work, means for carrying said tools arranged above the work spindle, and means for controlling said tools, said bed ending substantially in the same vertical plane with the front end of the spindle and said last mentioned means, thereby keeping free the space in front of and below the spindle for the purpose of allowing the shavings to fall freely.

4. In an automatic machine for profile turning in combination, a bed, a work spindle, tools to be fed from the front side in the axial direction toward the work, a support for said tools arranged above the work spindle and a bearing on which the said support is mounted, said support being longitudinally adjustable on said bearing.

5. In an automatic machine for profile turning in combination a bed, a work spindle, tools to be fed from the front side in the axial direction toward the work, a support for said tools arranged above the work spindle a bearing, on which the said support is mounted and means for controlling said tools said means being partly guided by said bearing.

[Claim 6 not printed in the Gazette.]

1,152,642. ELECTRIC CONTACT DEVICE. ARTHUR ATWATER KENT, Philadelphia, Pa. Filed Dec. 26, 1905. Serial No. 293,237. (Cl. 123—166.)



1. In a sparking device a support, a resilient member carried thereby, means for preventing the free oscillation of said resilient member independently of said support, an actuating member adapted to move said support, a spring for maintaining said actuating member in normal position, and means for moving said actuating member against the tension of said spring.

2. In a contact device a contact point support, an actuating member for operating the same, means for advancing and releasing said actuating member and for effecting the return of said actuating member in a different path from that in which it was advanced, said support being operated by said actuating member during its return movement, a resilient member carried by said support, a contact carried by said resilient member, means to prevent any movement of said resilient member independent of said support and a stationary contact coacting with said first mentioned contact to make and break the circuit.

3. In a contact device, a driven member, an actuating member operated thereby, a tension device for said actuating member, means for advancing and releasing said member, means for effecting the return of said actuating member in a different path from that in which it was advanced, a contact point support operated by said actuating member during its return movement, a resilient contact carried by said support, a rigid stop against which said resilient contact normally presses.

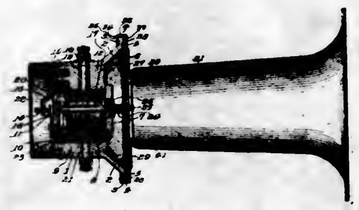
4. In a contact device, a driven member, an actuating member advanced thereby, a stop for said actuating member, a tension device for normally maintaining said actuating member against said stop, means for effecting the return of said actuating member in a different path from that in which it was advanced, a pivoted support adapted to be oscillated by said actuating member on the return movement of the latter, a resilient contact member carried by said pivoted support, and a stationary contact cooperating with said resilient contact member to make and break the circuit.

5. In a contact device an actuating member, means for advancing and releasing said member, means for effecting the return of said member, a movable support moved by said actuating member during its return movement, a resilient member carried by said support, a contact carried by said resilient member, and a stationary contact coacting with said first mentioned contact to make and break the circuit.

[Claims 6 to 23 not printed in the Gazette.]

1,152,643. SIGNALING-HORN. ARTHUR ATWATER KENT, Philadelphia, Pa. Filed Mar. 5, 1913. Serial No. 752,111. (Cl. 116—1.)

1. In a signaling horn the combination of a casing provided at one end with a cylindrical flange substantially the entire front face of which forms a flat annular seat, a diaphragm having the marginal portion of one of its faces lying flat on said seat, annular resilient means engaging the other face of said diaphragm along substantially a circular line only, and fitting over the periphery of said flange and engaging the back of said flange, and means inclosed within said casing to vibrate said diaphragm.



2. In a signaling horn the combination of a casing provided at one end with a cylindrical flange forming a flat annular seat, a diaphragm having the marginal annular portion of its rear face in flat engagement with said seat, annular resilient means engaging the front face of said diaphragm and fitting over the periphery of said flange and bent over the rear edge of said flange, and means within said casing to vibrate said diaphragm.

3. In a signaling horn the combination of a casing provided at one end with a cylindrical flange forming throughout the front face thereof a flat annular seat, a diaphragm having the annular marginal portion of its rear face in flat engagement with said seat, annular resilient means engaging the front face of said diaphragm along substantially a circular line only, and fitting over the periphery of said flange and secured to the back thereof, an anvil rigidly secured to said diaphragm and extending therefrom rearwardly, and means to impart to said anvil a rapid succession of blows.

4. In a signaling horn the combination of a casing providing a flat annular seat, a diaphragm having the marginal portion of one of its faces in engagement with said seat, resilient clamping means passing over the periphery of said diaphragm and engaging the other face of said diaphragm along a circular line substantially only, the diameter of said line being greater than the diameter of the inner circular edge of said seat, said means also engaging the rear side of said flange, a projector supported by said clamping means, and means within said casing to vibrate said diaphragm.

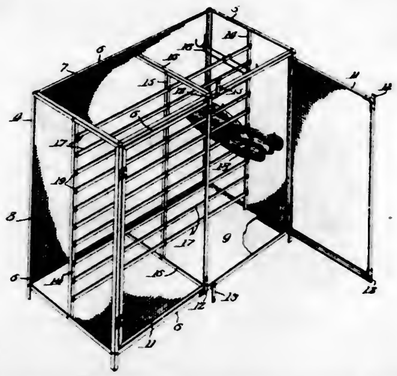
5. In a signaling horn the combination of a casing provided with an annular projection and having a flat annular seat, a diaphragm having the marginal portion of one of its faces in engagement with said seat, and annular resilient clamping means to hold said diaphragm on said seat, said means engaging said annular projection of said casing and the face of said diaphragm opposite said seat, and the rear side of said flange, said means being in engagement with said face of said diaphragm along a circular line substantially only, the diameter of which is greater than the diameter of the inner circular edge of said seat, and means within said casing to vibrate said diaphragm.

[Claims 6 to 10 not printed in the Gazette.]

1,152,644. CORN-KILN. RAYMOND D. KING, Lamoille, Ill.. Filed Apr. 2, 1915. Serial No. 18,821. (Cl. 34—26.)

1. A corn kiln comprising a perforate container having an open side and a movable closure adapted to cover said open side, and means for supporting ears of corn within the container comprising corn-hanger supports arranged in a general vertical plane dividing the container intermediate its open side and the side opposite thereto into two general corn-containing compartments, and corn-hanging means mounted on said supports in each of said compartments, certain of said supports being removable

from the container to permit access through said open side to the compartment farthest therefrom.



2. A corn kiln comprising a perforate container having an open side and a movable closure adapted to cover said open side, and means for supporting ears of corn within the container comprising a plurality of horizontal corn-hanger supports removably mounted and disposed one above the other dividing the container intermediate said open side and the side opposite thereto into two general corn-containing compartments, and corn-hanging means mounted on said supports in each of said compartments.

3. A corn kiln comprising a cage-like container having an open side and provided with a movable closure adapted to cover said open side, and corn-hangers mounted in the container and arranged to support ears of corn in tiers arranged one above the other, said tiers each comprising two rows of ears of corn extending parallel with the open side of the container with the ears extending crosswise of the rows, the tiers of hangers being independently removable from the container through its open side, whereby the tiers above any given tier may be removed to permit access through said open side to both rows of corn in said given tier.

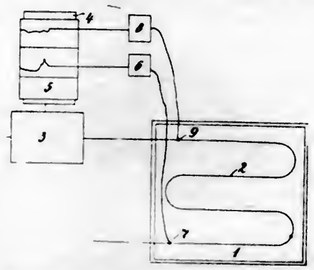
4. A corn kiln comprising a cage-like housing inclosing a corn-containing compartment, a plurality of horizontal bars arranged in said compartment spaced apart in substantially vertical alinement and being independently movable out of operative position, each bar forming a support upon which a row of corn-hangers may be mounted, and a plurality of corn-hangers, each comprising a pair of spaced, forked members, and means connecting said forked members and forming therewith a support upon which two ears of corn may be held in substantially longitudinal alinement and from lateral displacement, said hangers being each provided with means intermediate their forked members whereby the hangers may be removably mounted on the supporting bars with the ears of corn extending transversely of said bars.

5. A corn kiln comprising a cage-like container, and means disposed within the container for holding ears of corn, comprising individual corn-hangers each adapted to hold two ears of corn in substantially longitudinal alinement, and means for supporting said hangers in close proximity in horizontal rows one above the other, whereby tiers of rows are formed, each tier comprising two parallel rows of ears of corn.

[Claims 6 to 11 not printed in the Gazette.]

1,152,645. HEAT-RECORDER. MARTIN KRAUSE, Berlin, Germany. Filed Apr. 27, 1914. Serial No. 834,805. (Cl. 234—11.)

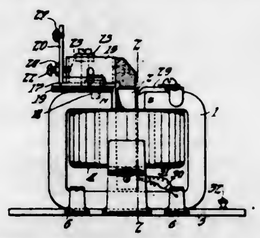
1. An instrument for recording the heat units absorbed in a heating plant, comprising in combination with the heating coil of said plant, a liquid meter adapted to measure the amount of liquid fed to said coil at a predetermined time, a drum rotatably mounted on said meter and adapted to be rotated by said meter in proportion with the passage of the liquid through the same, a recording sheet upon said drum, two recorders, a temperature measuring instrument controlling each of said recorders, and means for connecting one of said measuring instruments to the coil of entrance and the other to the coil if exit of the liquid into and out of said heating coil.



2. An instrument for recording the heat units absorbed in a heating plant, comprising in combination with the heating coil of said plant, a liquid meter adapted to measure the amount of liquid fed to said coil during a predetermined time period, a drum rotatably mounted on said meter adapted to be rotated by said meter in proportion with the passage of the liquid through the same, a recording sheet upon said drum, a temperature scale on said sheet at right angles to the direction of movement of said drum, a volume scale on said sheet in the direction of movement of said drum, two recorders, a temperature measuring instrument controlling each of said recorders, a connection for one of said measuring instruments to the point of entrance and for the other to the point of exit of the liquid into and out of said heating coil for recording on said sheet the temperature currents.

3. An instrument for recording the heat units absorbed in a heating plant comprising in combination with the heating coil of said plant, a meter for the heating medium flowing through said coil, a drum rotated upon said meter in proportion with the amount of liquid passing said meter during a predetermined period of time, a recording sheet upon said drum having a straight line passing through zero, two recorders, means connected to the point of entrance of the heating medium into said coil and to one of said recorders, and means connected to the point of exit of said heating medium and to the other of said recorders adapted to operate said recorders for marking the temperature curves on said sheet so that the space limited by both curves indicates the difference in temperature.

1,152,646. ALTERNATING-CURRENT RECTIFIER. SAM G. LANGLEY, Orange, N. J., assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed June 7, 1912. Serial No. 702,187. (Cl. 171—253.)



1. In electrical apparatus, a contact member having a plurality of contact faces, a support for said member adapted to support said member so as to present any desired contact face for utilization, said support including a guide along which said member is adjustably movable, and means for securing said member fixedly in adjusted position, substantially as described.

2. In electrical apparatus, a contact member having a plurality of contact faces, a support for said member adapted to support said member so as to present any desired contact face for utilization, said support including a pair of guides between which said member is slidably adjustable, and means for securing said member fixedly in adjusted position, substantially as described.

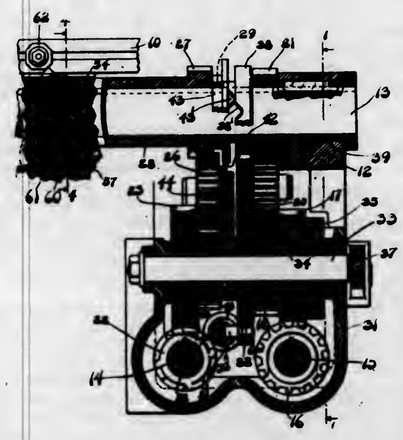
3. In electrical apparatus, a contact member, a second contact member coöperable therewith and having a plurality of contact faces, a support for receiving said second contact member so as to present any desired face for contact, means for adjusting said second contact member on its support toward and from said first-mentioned contact member, and means for securing said second contact member fixedly to the support in adjusted position, substantially as described.

4. As a new article of manufacture, a hollow contact member having a plurality of walls substantially alike in size and shape, each of said walls having a recess, and the exteriors of said walls constituting contact faces, substantially as described.

5. In an alternating current rectifier, the combination of a magnet, an armature located to vibrate in the field of the magnet, an actuating coil for the armature, and a supporting frame for the magnet, armature and coil, said frame having lugs or projections engaging the magnet, and extensions to which the armature is pivoted and on which the coil is supported, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,152,647. MILLING-MACHINE. RICHARD K. LE BLOND and WILLIAM F. GROENE, Cincinnati, Ohio, assignors to The R. K. Le Blond Machine Tool Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Jan. 24, 1913. Serial No. 743,918. (Cl. 90—21.)



1. In a machine of the character described, a reciprocable table, a driving agent for the table, two separate power shafts for driving said agent, a separate gear train between each power shaft and said agent, means for shifting one of said gear trains to render its coöperating shaft effective in driving said agent in both directions and for operatively disconnecting the shaft from the agent, and means controlled by the first-mentioned means for operatively disconnecting the other gear train from said agent.

2. In a machine of the character described, a rotatable driven agent, two separate power shafts for driving said agent, a power transmission mechanism between one shaft and said agent, a gear train driven by the other shaft and capable of being shifted into and out of operative connection with said agent, and means controlled by the shifting of said gear train for rendering said power transmission mechanism inoperative as the driving agent of said driven agent.

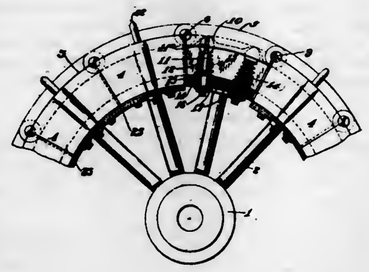
3. In a machine of the character described, a reciprocable table, a feed shaft for actuating the table, a cutting drive mechanism for actuating the feed shaft, a traverse drive mechanism for actuating the feed shaft, comprising a power shaft, a gear train, a reversing plate for shifting the gear train into and out of operative connection with the feed shaft, and on which a gear of said train is mounted, and means actuated by the reversing plate for operatively disconnecting the cutting drive from the feed shaft, when the plate is shifted to operatively connect the gear train to the feed shaft.

4. In a machine of the character described, a reciprocable table, a driving agent for the table, a cutting drive mechanism for actuating the driving agent, a traverse drive mechanism for independently actuating the agent and including a gear train, a reversing plate for shifting the gear train into and out of operative connection with the driving agent, and for reversing the driving agent, and means, comprising a clutch device, actuated by the reversing plate for operatively disconnecting the cutting drive mechanism from the agent when the plate is shifted to operatively connect said gear train to the agent.

5. In a machine of the character described, a reciprocable table, actuating means for the table, two separate power shafts for driving said means, a separate gear train between each shaft and said means, each gear train including an ahead gear and a reversing gear, and a reversing plate, on which said gears are mounted, for shifting one or the other of the gears into or out of operative connection with said means, a clutch device between one of said gear trains and said means, and means actuated by the reversing plate of the other gear train for disengaging the clutch device and for thereby operatively disconnecting its corresponding gear train from said first mentioned means.

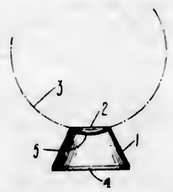
[Claims 6 to 14 not printed in the Gazette.]

1,152,648. RESILIENT WHEEL. GUAVARA J. LEE, Gorman, Md. Filed Apr. 4, 1914. Serial No. 829,628. (Cl. 152—8.)



In a wheel, a plurality of spokes, a hollow felly made up of sections corresponding in number to the spokes, a rim seated in said felly and composed of a series of links pivoted together, a pair of sockets in each of said links, a pair of sleeves in each of said felly sections, pins slidably held in said sleeves, said pins having heads resting in the sockets, and springs coiled around the pins and engaging the heads and sleeves.

1,152,649. GOLF-TEE. LAWRENCE W. LUELLEN, Mountain Lakes, N. J., assignor to Robert H. Davis, New York, N. Y. Filed Mar. 24, 1915. Serial No. 16,547. (Cl. 46—4.)



1. A golf tee composed of a water soluble material.

2. A golf tee composed of a substantially colorless transparent material.

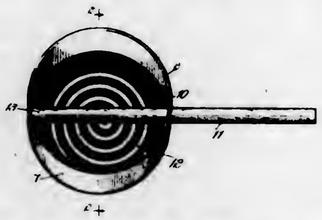
3. A golf tee composed of a readily frangible sheet material.

4. A gelatin golf tee.

5. A golf tee composed of a substantially colorless, transparent water soluble material.

[Claims 6 to 11 not printed in the Gazette.]

1,152,650. FLOUR-SIFTER. WILLIAM LUXMORE, Chicago, Ill. Filed Oct. 5, 1914. Serial No. 865,146. (Cl. 83—60.)



1. The combination of a receptacle, a perforated bottom for said receptacle, a handle extending through said receptacle and disposed above said bottom, and an agitator freely disposed between said handle and bottom.

2. The combination of a receptacle, a perforated bottom for said receptacle, a handle extending through said receptacle and disposed above said bottom, and an agitator freely disposed between said handle and bottom arranged to slide in any direction in a plane parallel to the bottom.

3. The combination of a receptacle, a perforated bottom for said receptacle, a handle extending through said receptacle and disposed above said bottom, and a spiral-shaped agitator freely disposed between said handle and bottom arranged to slide in any direction in a plane parallel to the bottom.

1,152,651. PROCESS OF PRESSING SOUND-RECORDS. MERVIN E. LYLE, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed July 15, 1913. Serial No. 779,174. (Cl. 18—48.4.)

1. The improved process of pressing a sound record from a matrix which consists in preparing a thin film of superior record material upon a suitable support or sheet, placing said film of superior record material in a heated condition in contact with a heated matrix, removing the said sheet, applying a heated layer of inferior record material to the back of said layer of superior record material, and subjecting the whole to pressure in the presence of heat.

2. The process of pressing a sound record from a matrix which consists in forming a thin film or layer of superior thermoplastic record material on a suitable sheet or support, applying said layer of superior record material in a heated condition to a heated matrix, removing the support, applying a body of inferior thermoplastic record material in heated condition to the back of said superior record material, placing a second film of superior thermoplastic record material in a heated condition upon a second heated matrix, removing the support from said film of superior record material, placing the back of said second film of superior record material on top of the said body of inferior record material, and subjecting the whole to pressure in the presence of heat.

3. The process of pressing a sound record from a matrix which consists in applying a plurality of layers or films of superior record material one above the other to a sheet of paper, heating and compacting the same (while heated) under pressure, applying said film of superior record material in a heated condition to a heated matrix, removing the paper, applying a body of inferior thermoplastic record material in disk form to the back of said superior record material, and subjecting the whole to pressure in the presence of heat.

4. The process of making a sound record from a matrix which consists in applying a plurality of layers or films of superior record material one above the other to a sheet of waxed paper, heating and compacting the same (while heated) under pressure, applying said film of superior record material in a heated condition to a heated matrix, removing the waxed paper, applying a body of inferior thermoplastic record material in disk form to the back of said superior record material, and subjecting the whole to pressure in the presence of heat.

1,152,652. HOSE-NOZZLE. JOSEPH MCBOYLE, Oakland, Cal. Filed Sept. 22, 1914. Serial No. 862,913. (Cl. 137—57.)



1. In a device of the class described, the combination with a nozzle, a guide carried by the same, a spray plate pivotally mounted at its inner end to said guide and formed on its opposite side edges with laterally projecting portions, and a sleeve slidably mounted on said guide and carrying cam surfaces for engaging under said laterally projecting portions for forcing the outer end of said spray plate within the path of the stream issuing from said nozzle.

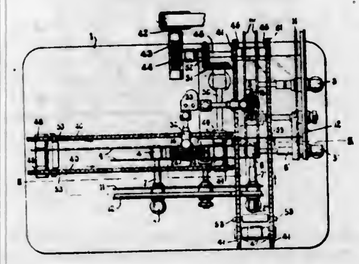
2. In a device of the class described, the combination with a nozzle, a guide surrounding the same and formed with a slot in one side, a sleeve slidable on said guide and formed in one side with a slot and provided at its opposite outer side edges with cam surfaces, and a spray plate adapted at its inner end to extend through said slots in said guide and sleeve and capable of a pivotal movement, said cam surfaces adapted to engage under said spray plate for forcing the outer end thereof within the path of the nozzle.

3. In a device of the class described, the combination with a nozzle, a guide surrounding the same and formed with a slot in one side, a sleeve slidable on the guide and cut away at its front edge forming cam surfaces, and a spray plate adapted at its inner end to extend through said slot in said guide and capable of pivotal movement, said cam surfaces adapted to engage under said spray plate for forcing the outer end thereof within the path of the nozzle.

4. In a device of the class described, the combination with a nozzle, a plate bent therearound and having flat faces, said plate forming a guide, a spray plate projecting beyond the discharge end of said nozzle and pivotally mounted at its inner end to said guide, a plate bent around said guide and having flat faces to correspond with the faces of said guide, and forming a sleeve slidably mounted on said guide, and a cam carried by said sleeve for engaging under said spray plate when said sleeve is moved outwardly on said guide, the cam adapted for moving the end of said spray plate into the path of said nozzle.

5. In a device of the class described, the combination with a cylindrical nozzle formed with an annular groove, a plate bent around said nozzle and having flat faces, said plate forming a guide rotatably mounted on the nozzle and provided with an indentation for coöperation with said annular groove to prevent the movement of the guide from the nozzle, a spray plate pivotally mounted at its inner end to said guide and projecting beyond the discharge end of the nozzle, a sleeve surrounding the said guide and slidably mounted thereon, said sleeve formed with cam surfaces for engaging under said spray plate for moving the free end thereof into the path of the nozzle.

1,152,653. GLASS-CUTTING MACHINE. ARNOLD L. MILENTZ, St. Louis, Mo. Filed May 13, 1912. Serial No. 696,935. (Cl. 33—32.)



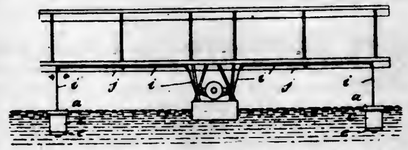
1. In a glass cutting machine, a pair of cutters, one of which is arranged at an angle to the other, stationary means upon which a sheet of glass may be conducted to be cut first by one of said cutters and thereafter by the other cutter at an angle to the first cut, traveling pushers for moving the sheet of glass from one of said cutters to the other cutter, and means for operating said pushers.

2. In a glass cutting machine, a pair of cutters, one of which is arranged at an angle to the other, stationary means upon which a sheet of glass may be conducted to be cut first by one of said cutters and thereafter by the other cutter at an angle to the first cut, traveling pushers for moving the sheet of glass from one of said cutters to the other cutter, means for operating said pushers, and a yieldable device for holding said pushers engaged with the sheet of glass.

3. In a glass cutting machine, a pair of cutters, one of which is arranged at an angle to the other, means upon which a sheet of glass may be conducted to be cut first by one of said cutters and then by the other cutter at an angle to the first cut, traveling pushers for moving the sheet of glass in an angular path from one to the other of said cutters, means for operating said pushers, an abutment adapted to be engaged by the sheet of glass as it moves from one cutter to the other cutter, and a yielding device for holding one of said pushers engaged with the sheet of glass until the latter strikes said abutment.

4. In a glass cutting machine, a pair of cutters, one of which is arranged at an angle to the other, means upon which a sheet of glass may be conducted to be cut first by one of said cutters and then by the other cutter at an angle to the first cut, traveling pushers for moving the sheet of glass in an angular path from one to the other of said cutters, means for operating said pushers, an abutment adapted to be engaged by the sheet of glass as it moves from one cutter to the other cutter, a yielding device for holding one of said pushers engaged with the sheet of glass until the latter strikes said abutment, the said yielding device allowing the pusher to move to an inoperative position, and means for restoring said pusher to its operative position.

1,152,654. HYDROAEROPLANE. WILLIAM HENRY NOSWORTHY and SAMUEL JAMES PRESCOTT, London, England. Filed June 26, 1914. Serial No. 847,537. (Cl. 244—2.)



1. In or in connection with hydro-aeroplanes, lateral balancing water vessels having flotation means buoying the vessels when immersed, means for lowering and raising said vessels into and out of the water, and means permitting the admission and discharge of water to and from the said vessels, substantially as described.

2. In or in connection with hydro-aeroplanes, collapsible lateral balancing water vessels having flotation means buoying the vessels when immersed, means for lowering and raising said vessel into and out of the water, and means permitting the admission and discharge of water to and from the said vessels, substantially as described.

3. In or in connection with hydro-aeroplanes, a collapsible lateral balancing water vessel having flotation means buoying the vessel when immersed, and means associated with the said vessel for permitting the admission and discharge of water to and from the said vessel, substantially as described.

4. In or in connection with hydro-aeroplanes, a lateral balancing water vessel comprising a top of relatively low specific gravity, a casing suspended therefrom, a base of relatively high specific gravity secured to the said casing, and means associated with the said vessel for permitting the admission and discharge of water to and from the said vessel, substantially as described.

5. In or in connection with hydro-aeroplanes, a lateral balancing water vessel comprising a top of relatively low specific gravity, a collapsible casing suspended therefrom, a base of relatively high specific gravity secured to the said casing, and means associated with the said vessel for permitting the admission and discharge of water to and from the said vessel, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

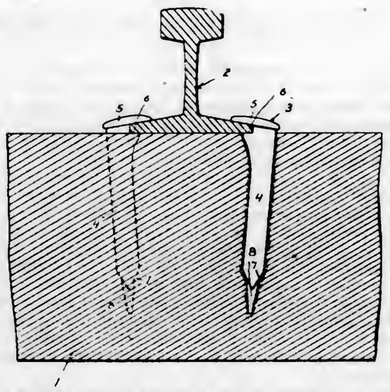
1,152,655. PORTABLE HOUSE. WALTER O'HARA, Seattle, Wash. Filed Nov. 14, 1912. Serial No. 731,343. (Cl. 20—2.)



In a portable wooden building, the combination with a separable corner post having two tongue and groove connected parts alining with the meeting walls, and adapted to receive upon their inner faces overlapping inner wall sheathing, respectively, each post being externally rab-

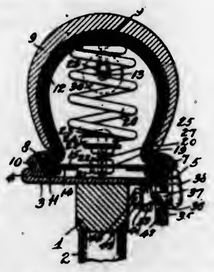
beted to receive the outer sheathing and having, outside the plane of the latter, an inclined face, of rabbeted corner boards each overlapping upon the external sheathing and having an inclined face to wedge against the inclined face first mentioned.

1,152,656. RAILROAD-SPIKE. IRA P. PAYNE, Dubois, Pa. Filed Dec. 29, 1913. Serial No. 809,357. (Cl. 85—30.)



A railroad spike of the character described comprising a rectangular shank, a head formed in one end of the shank, inwardly and downwardly inclined faces formed at the lower end of the shank opposite the head, said faces converging and forming an edge at the point where they meet, and a prong formed centrally of the edge and depending therefrom, said prong tapering toward its lower end, the prong forming a guide point for the spike to permit the same to be easily driven in place.

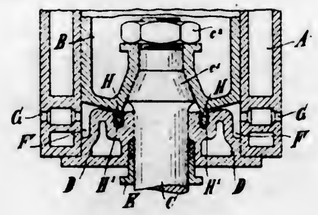
1,152,657. TIRE STRUCTURE. JOHN PIONTKOWSKI, Cleveland, Ohio, assignor of three-eighths to Stephen Wasielewski, one-eighth to John Yablonowski, and one-eighth to Martin Grayek. Filed Aug. 31, 1914. Serial No. 859,507. (Cl. 152—8.)



1. In a tire structure, a rim, clencher rings upon said rim, a tire arranged between said clencher rings and comprising a flexible casing having beads for engaging said rings and internal annular recesses within said beads, a plurality of casing supporting spring members each having an inwardly extending loop near the tread and hooked inner ends engaging the recesses in the beads, a band engaging within said hooked portion, a plurality of springs each engaging the loop of one of the supporting spring members at the outer end, adjustable connecting means between each spring and the band, means for adjustably securing the springs at the inner ends to the band, and means for clamping said rings upon the tire structure.

2. In a tire structure, a rim, clencher rings upon said rim, a tire arranged between said clencher rings and comprising a flexible casing having beads for engaging said rings, and internal annular recesses within said beads, a plurality of supporting spring members conforming to the interior of the casing and having an inwardly extending loop near the tread, and hooked inner ends engaging in the recesses of the beads, a band having its edges engaging within said hooked portions, a plurality of coiled springs, each engaging the loop of one of the supporting spring members at one end, a threaded shank connected to the opposite end of each spring, means for securing said threaded shank in any adjusted position in such band, and means for clamping said rings upon the tire structure.

1,152,658. INTERNAL-COMBUSTION ENGINE. CONRAD REGENBOGEN, Kiel, Germany, assignor to Fried. Krupp Aktiengesellschaft, Germaniawerft, Kiel-Gaarden, Germany. Filed Aug. 2, 1912. Serial No. 712,905. (Cl. 123—193.)



1. In an internal combustion engine having a piston rod running through the combustion chamber, means for completely covering the piston rod thus protecting it from direct contact with the combustion gases at the instant when the temperature is highest in the combustion chamber, said means comprising interengaging male and female members.

2. In an internal combustion engine, the combination of a housing, a combustion chamber, cylinder cover, and piston having the piston rod running through said chamber; with an annular male member and a corresponding female member, adapted to register with each other thus completely inclosing said piston rod at the instant of the highest temperature in the combustion chamber, whereby said piston rod will be protected from direct contact with the hot gases.

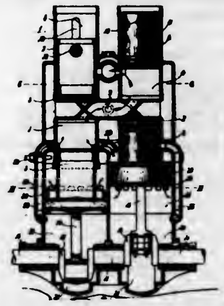
3. In an internal combustion engine, the combination of a housing, a combustion chamber, cylinder cover, and piston having the piston rod running through said chamber; with an annular male member and a corresponding female member, adapted to register with each other thus completely inclosing said piston rod at the instant of the highest temperature in the combustion chamber, whereby said piston rod will be protected from direct contact with the hot gases; said members situated one on said piston and the other on said cylinder cover.

4. In an internal combustion engine having a cylinder, cylinder cover, piston and piston rod running through the combustion chamber, means for completely covering the piston rod thus protecting it from direct contact with the combustion gases at the instant when the temperature is highest in the combustion chamber; said means comprising an annular rib on said piston and a corresponding groove in said cylinder cover.

5. In an internal combustion engine having a piston rod running through the combustion chamber, means for completely covering the piston rod and protecting it from direct contact with the combustion gases at the instant when the temperature is highest in the combustion chamber; said means comprising an annular male member partaking of the movement of said piston and a corresponding stationary female member adapted to register with the male member at the instant of highest temperature of the combustion gases.

[Claims 6 and 7 not printed in the Gazette.]

1,152,659. TWO-STROKE-CYCLE COMBUSTION-ENGINE. THOMAS REID, Northfield, Birmingham, England. Filed Nov. 28, 1913. Serial No. 803,579. (Cl. 123—53.)



1. In a two stroke cycle internal combustion engine, the combination of two pairs of working pistons, each pair being arranged tandem fashion, substantially in alinement, and extension of increased diameter upon a piston of each pair, forming a piston of the annular type adapted to compress the fuel, four corresponding cylinders each containing a piston, side rods connecting together the pistons of each pair, a chamber forming a combustion space common to the inner cylinder of one pair and the outer cylinder of the other pair, a second chamber forming a combustion space common to the remaining two cylinders, and short passages adapted to admit the fuel compressed by said extensions upon the pistons direct to the corresponding cylinder of the opposite pair.

2. In a two stroke cycle internal combustion engine the combination of two pairs of working pistons, each pair being arranged tandem fashion, substantially in alinement; an extension of increased diameter upon the inner piston of each pair adapted to form a piston of the annular type, four corresponding cylinders each containing a piston, side rods connecting the pistons of each pair, a crank shaft having a pair of cranks set at approximately 180 degrees, connecting rods connecting the inner piston of each pair to one of the cranks, a chamber forming a combustion space common to the inner cylinder of one pair and the outer cylinder of the other pair, a second chamber forming a combustion space common to the remaining two cylinders, passages for the admission of scavenging air to the cylinders, means for the drawing in and compressing of the scavenging air by the pistons, means for the drawing in and compressing of the fuel charge by the annular inner pistons of each pair, and short passages adapted to admit the fuel compressed by each of said annular pistons direct to the inner cylinder of the opposite pair.

3. In a two stroke cycle internal combustion engine, the combination of two pairs of working pistons, each pair being arranged tandem fashion, substantially in alinement, four corresponding cylinders each containing a piston, side rods connecting together the pistons of each pair, an extension of increased diameter upon a piston of each pair, forming a piston of the annular stepped type, a chamber forming a combustion space common to the inner cylinder of one pair and the outer cylinder of the other pair, a second chamber forming a combustion space common to the remaining two cylinders, means for admitting fuel to the inner cylinder of each pair into the space inclosed by the said extension, a short passage leading from the said space to the corresponding cylinder of the opposite pair, the wall of the said last mentioned cylinder having a port therein terminating the said passage and so disposed as to open only when the corresponding piston approaches the bottom of its stroke and means for delivering compressed scavenging air to each of the lower cylinders at a point on the opposite side of each cylinder from the fuel inlet therefor, said fuel admitting means being so arranged that fuel is drawn into the said space on the down stroke of the extension pistons, is compressed upon the up stroke, and admitted to the corresponding cylinder of the opposite pair upon the opening of the above mentioned port, said air compressing means being so arranged that the air is admitted slightly before the fuel.

4. In a two stroke cycle internal combustion engine the combination of two pairs of working pistons, each pair being arranged tandem fashion, substantially in alinement, four corresponding cylinders each containing a piston, side rods connecting together the pistons of each pair, an extension of increased diameter upon each of the pistons, forming a piston of the annular stepped type, a chamber forming a combustion space common to the inner cylinder of one pair and the outer cylinder of the other pair, a second chamber forming a combustion space common to the remaining two cylinders, means for admitting fuel to one of each pair of cylinders into the space inclosed by the said extension, a passage leading from the said space to the corresponding cylinder of the opposite pair, a port in the wall of the said cylinder terminating the said passage and so disposed as to be open only when the corresponding piston approaches the bottom of its stroke, said piston serving as means for the drawing in and compressing of the scavenging air, the whole being so arranged that the fuel is drawn into the said space on the down stroke of the piston, is compressed upon the upstroke, and admitted to the corresponding cylinder of the opposite pair upon the opening of the above-mentioned port.

5. In a two stroke cycle internal combustion engine the combination of two pairs of working pistons, each pair being arranged tandem fashion, substantially in alinement, four corresponding cylinders each containing a piston, side rods connecting together the pistons of each pair, an extension of increased diameter upon each of the pistons, forming a piston of the annular stepped type, a chamber forming a combustion space common to the inner cylinder of one pair and the outer cylinder of the other pair, a second chamber forming a combustion space common to the remaining two cylinders, means for admitting fuel to one of each pair of cylinders into the space inclosed by the said extension, a passage leading from said fuel compressing space to the corresponding cylinder of the opposite pair, ports for admitting atmospheric air for scavenging to the second of each pair of cylinders into and air compressing space inclosed by the said extension, a passage leading from the said air compressing space to the other cylinder of the same pair, and ports in the walls of the said cylinder for the admission of scavenging air and fuel respectively adapted to be opened as the piston nears the bottom of its stroke.

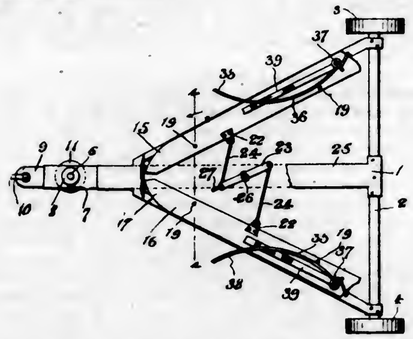
[Claims 6 to 12 not printed in the Gazette.]

1,152,660. CORN-HARVESTER. WILLIAM H. S. RITCHIE, West Point, Ky. Filed Mar. 12, 1914. Serial No. 824,157. (Cl. 56—103.)

1. In a corn harvester, a supporting base, a pair of cutting knives carried by said base, substantially U-shaped guard members formed of resilient wire and having their legs positioned upon opposite sides of said knives, the apexes of said guards curving outwardly from said knives for guiding corn stalks to said knives, and means for yieldably supporting said guards for permitting of a limited yieldable movement thereof toward or from said knives.

2. In a corn harvester, a supporting base, a pair of cutting knives pivotally carried by said base, substantially U-shaped guard members formed of resilient wire and having their legs positioned upon opposite sides of said knives, the apexes of said guards curving outwardly from said knives for guiding corn stalks to said knives, means for yieldably supporting said guards for permitting of a limited yieldable movement thereof toward or from said knives, a pair of rods connected to said knives, a lever pivotally connected to said supporting base, said rods connected to the end of said lever for moving said

knives inwardly or outwardly upon oscillatory movement of the lever.



3. In a corn harvester, a supporting base, a pair of cutting knives carried by said base, substantially U-shaped guard members formed of resilient wire and having their legs positioned upon opposite sides of said knives, the apexes of said guards curving outwardly from said knives for guiding corn stalks to said knives, means for yieldably supporting said guards for permitting of a limited yieldable movement thereof toward or from said knives, flat springs secured to said knives and engaging the uppermost legs of said guards for holding them in proper spaced relation to said knives.

4. In a corn harvester, a supporting base, a pair of cutting knives pivotally carried by said base, substantially U-shaped guard members formed of resilient wire and having their legs positioned upon opposite sides of said knives, the apexes of said guards curving outwardly from said knives for guiding corn stalks to the knives, said guard members having their ends bent to form resilient convolutions for yieldably supporting said guards for permitting of a limited yieldable movement of the guards toward or from said knives, flat springs secured to said blades and engaging the uppermost legs of said guards for holding them in proper spaced relation to said knives, a pair of rods connected to said knives, a lever pivotally connected to said supporting base, said rods connected to the ends of said lever for moving said knives inwardly or outwardly upon oscillatory movement of the lever.

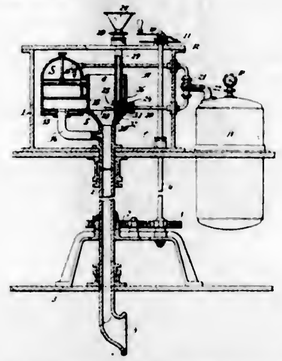
5. In a corn harvester, a substantially triangularly shaped supporting base, supporting traction wheels connected to the base angles of said base, a sinuously bent resilient supporting shoe carried by the apex of said base, a pair of cutting knives pivotally carried by said base, substantially U-shaped guard members formed of resilient wire and having their legs positioned upon opposite sides of said knives, the apexes of said guards curving outwardly from said knives for guiding corn stalks to the knives, and means for yieldably supporting said guards for permitting of a limited yieldable movement toward or from said knives.

[Claims 6 and 7 not printed in the Gazette.]

1,152,661. TRANSMITTING APPARATUS FOR SUBMARINE SIGNALING. JOSEF SCHIESSLER, Baden, near Vienna, Austria-Hungary. Original application filed Feb. 8, 1908, Serial No. 414,998. Divided and this application filed Mar. 1, 1910. Serial No. 546,710. (Cl. 116—18.)

1. In a transmitting apparatus for submarine signaling, a siren, a resonator in proximity thereto, a rotatable tube having a subaqueous outlet, said tube containing a body of water in communication with the water in which the sound is to be propagated, and means to transmit the sound waves generated in the resonator to the body of water in the tube.

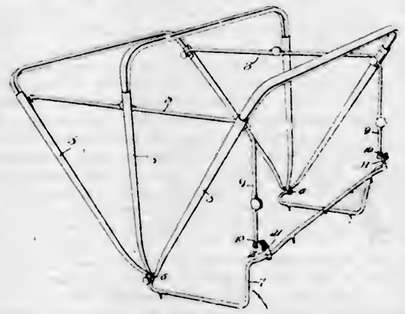
2. In a transmitting apparatus for submarine signaling, a siren, a resonator in proximity thereto, a rotatable tube having a subaqueous outlet, a sound collecting funnel having a cylindrical part larger than the tube and at the upper end of the same, a port for communication between the resonator and said cylindrical part of the funnel and a second communication established between the resonator and the tube body.



3. In a transmitting apparatus for submarine signaling, a siren, a resonator in proximity to the siren, a tube having an upper stationary portion and a lower revoluble portion with a subaqueous outlet, said lower portion containing a body of water in communication with the surrounding water through the medium of said outlet and means to establish communication of the resonator with the stationary part of the tube at two points thereof.

4. In a transmitting apparatus for submarine signaling, a siren, a resonator in proximity thereto, a tube having an upper stationary portion and a lower revoluble portion with a subaqueous outlet, means to rotate the lower portion of the tube, said lower portion containing a body of water in communication with the surrounding water through the medium of said outlet, a sound collecting funnel having a cylindrical part larger than the tube positioned at the upper end of the stationary tube, a port for communication between the resonator and said cylindrical part, and a second tube to establish communication between the resonator and the body of the stationary tube.

1,152,662. CARRIAGE-TOP. ARTHUR P. SERAMOR, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed Apr. 17, 1914. Serial No. 832,618. (Cl. 21—61.)



1. In a carriage top, the combination of pivoted bows, a jointed brace located at the inner side of and adjacent to each side portion of the bows, for maintaining the same in raised position, said braces being pivotally mounted on fixed pivots, and a fixed stop adjacent to the pivotal mounting of each brace and being so arranged that only the pivotally mounted action of the jointed brace may abut against the stop when the bows have been lowered, whereby to support the bows in such position through the medium of the braces.

2. A carriage top comprising pivoted associated bows, upright braces pivotally mounted on fixed pivots and being connected with the bows to maintain them in their raised position, the braces being movable with the bows when the latter are moved to a lowered position, and means adjacent to the pivotal support of each brace upon which only the braces rest when in a lowered position, the bows being supported in their said lowered position through the medium of said braces and said means upon which they rest.

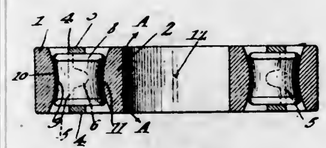
3. A carriage top comprising pivoted associated bows, pivotally supported braces for maintaining the bows in their raised position and being swingable with the bows when the latter are moved to their lowered position, and means adjacent to the supporting pivots of the braces for receiving and holding the braces only from lowering and lateral movement when the bows have been moved to a lowered position, and serving as means for supporting the bows in said lowered position.

4. In a carriage top, the combination of pivoted bows, a pair of jointed braces arranged within the sides of the carriage top, the braces being pivotally mounted at their lower ends and being pivotally connected at their upper ends with the bows for maintaining the same in raised position, the braces being movable with the bows when the same are moved to lowered position, and means upon which only the braces rest directly when the bows have reached their lowered position whereby they will be supported in said lowered position through the medium of the braces.

5. The combination with a seat having sides and an upright back, of a bow-top pivotally mounted at the sides of the seat, a pair of jointed braces pivotally mounted on the raised back of the seat and being pivotally connected to the bow-top, the said braces being constructed to hold the bow-top in raised position and being movable with the top when the same is moved to lowered position, and rest means mounted on the said raised back of the seat and upon which only the braces rest when the bows are moved to lowering position, whereby the bows will be supported in such position by said braces.

[Claims 6 and 7 not printed in the Gazette.]

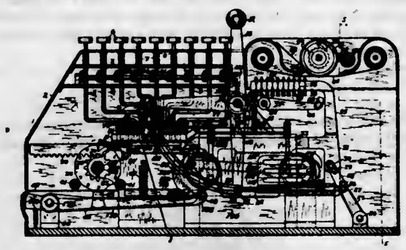
1,152,663. ROLLER-BEARING. JULIUS E. SHAFER, Chicago, Ill. Filed Oct. 27, 1914. Serial No. 868,882. (Cl. 64—62.)



1. A device of the class described comprising an inner ring; an outer ring; a spacer between the rings; and rollers carried by the spacer; the outer ring having an inwardly and transversely convexed track and the inner ring having an outwardly and transversely convexed track, each roller having a concaved tread engaging both tracks, the track of the inner ring being convexed on an arc the center of which is the geometrical center of the inner ring thereby to permit relative transverse swinging movement between the outer ring, the spacer and the rollers upon the one hand, and the inner ring upon the other hand, the engagement between the tread of the rollers and the track of the outer ring serving to prevent relative transverse movement between the outer ring, the spacer and the rollers when relative swinging movement between the outer ring, the spacer and the rollers upon the one hand and the inner ring upon the other hand occurs.

2. In a device of the class described, an outer ring having an inwardly and transversely convexed track; a spacer within the outer ring; rollers in the spacer and having concaved treads coacting with the track, the spacer being provided with bendable tongues which engage the rollers to hold the treads thereof engaged with the track thereby to connect the spacer and the outer ring against relative transverse movement but for rotation in a common plane; and an inner ring within the spacer and having an outwardly and transversely convexed track, the said track being transversely curved along an arc the center of which is the geometrical center of the inner ring, whereby the inner ring may be tilted transversely to cause the track thereof to engage the treads of the rollers after the rollers are assembled with the spacer through the instrumentality of the tongues.

1,152,664. COMPUTING AND RECORDING MACHINE. STUART F. SMITH, San Francisco, Cal. Filed June 1, 1909. Serial No. 499,450. (Cl. 235—60.)



1. The combination of a series of columns of keys, two recording devices for each column, two series of accumulators, one of each series forming a pair corresponding to each column of keys, means whereby, when either series of accumulators is operative, the other series is automatically rendered inoperative, means whereby when one of said series of accumulators is rendered inoperative, one of said series of recording devices is also automatically rendered inoperative, and means for simultaneously moving said recording devices and also the operative series of accumulators through variable distances in correspondence with the particular keys depressed in the corresponding columns, substantially as described.

2. The combination of a casing, a series of columns of numeral keys, two recording devices for each column, said casing being provided with means for removably guiding paper into proximity to one of said series of recording devices to print therefrom, and also with means for supporting a roll of paper in proximity to the second series of recording devices to print therefrom, two series of accumulators, one of each series forming a pair corresponding to a column of numeral keys, means whereby, when either series of accumulators is rendered operative, the other is automatically rendered inoperative, means whereby when one of said series of accumulators is rendered operative the first-named series of recording devices is rendered inoperative, and means for simultaneously advancing the operative recording devices and accumulators through variable distances in correspondence with the particular keys depressed in the corresponding columns, substantially as described.

3. The combination of a series of columns of keys, a corresponding series of recording devices, slidepieces, operatively connected with the several recording devices, springs for moving said recording devices and slidepieces, a transverse bar normally arresting all of said slide pieces, a shaft, an operating handle thereon, a slotted segment carried by said shaft, a link connected to said bar, having a pin in said segment, and a spring tending to rotate said operating shaft in opposition to the aforesaid springs, substantially as described.

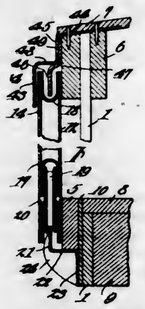
4. The combination of a series of columns of keys, a corresponding series of recording devices, slidepieces operatively connected with the several recording devices,

springs for moving said recording devices and slidepieces, a transverse bar normally arresting all of said slide pieces, a shaft, an operating handle thereon, a slotted segment carried by said shaft, a link connected to said bar, having a pin in said segment, a spring tending to rotate said operating shaft in opposition to the aforsaid springs, a printing lever, a block on said lever adapted to press a sheet of paper against said wheels, a spring for pressing said block toward said wheels, and a device carried by said segment adapted to engage the printing lever to move it against the action of said spring, substantially as described.

5. The combination of a series of columns of keys, a corresponding series of recording devices, slidepieces operatively connected with the several recording devices, springs for moving said recording devices and slidepieces, a transverse bar normally arresting all of said slide pieces, a shaft, an operating handle thereon, a slotted segment carried by said shaft, a link connected to said bar, having a pin in said segment, a spring tending to rotate said operating shaft in opposition to the aforesaid springs, a printing lever for the recording devices and means carried by said segment for controlling said print lever, substantially as described.

[Claims 6 to 56 not printed in the Gazette.]

1,152,665. CAR-DOOR. WILLIAM SNEDDON, Del Rio, Tex. Filed Oct. 19, 1914. Serial No. 867,445. (Cl. 20—22.)

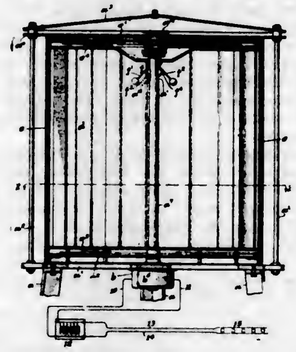


In a device of the class described, a car having a doorway; a slidable door for the doorway; car carried means engaging the lower edge of the door to support the same for sliding movement; an inner guard secured to the car, the door having a recess in the upper edge, in which the inner guard is received; and an outer guard on the car, the outer guard overlapping the outer face of the door adjacent its upper edge.

1,152,666. WINDMILL CONTROL FOR ELECTRICAL EQUIPMENT. CLEMENT A. STERNER, Allentown, Pa., assignor to Helen L. Sterner, trustee, Allentown, Pa. Filed Apr. 26, 1913, Serial No. 763,778. Renewed Jan. 28, 1915. Serial No. 4,952. (Cl. 170—17.)

1. A wind power controlling means, comprising a turbine type of rotor carried on a sleeve rotatable therewith, shutters or blinds movable independently of said rotor, a governor operatively connected with said sleeve and with a slotted cam and pin device and the latter in connection with a disk or plate in positive movable connection with said shutters or blinds, to automatically regulate movement of said shutters or blinds under variable wind conditions controlled by said governor, substantially as and for the purposes described.

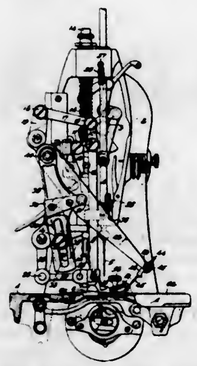
2. A wind power controlling means, comprising a turbine type of rotor carried by a sleeve rotatable therewith, shutters or blinds pivotally supported in connection with a rotatable disk independent of the action of said rotor, a centrifugal governor in fixed connection with a shaft located within said sleeve and actuatted thereby, a rack and notched cams suspended from means connected with said shaft and having devices to engage the notches of said cams to actuate the same in regulating under variable wind conditions by means of said governor said rotatable sleeve, substantially as and for the purposes described.



3. A wind power controlling means, comprising a windmill having shutters or blinds in pivotal connection with a rotatable disk, a slotted sleeve carrying a turbine type of rotor, said shutters or blinds and disk operable independently of said rotor, a governor fixed to said sleeve and the weighted arms fixed to a shaft located within said sleeve and rotatable therewith, a rack and a cam and pin means actuatted by the disk of said shutters or blinds to regulate by means of said governor the speed of said sleeve, substantially as and for the purposes described.

4. A wind power controlling means having a rotatable sleeve, a turbine type of rotor carried thereby, pivoted shutters or blinds automatically controlled by means operable independently of said rotor, a governor connected with said sleeve and fixed to a shaft movable within said sleeve, and a rack and cam and pin means controlled by said shutters or blinds to regulate by means of said governor the speed of said sleeve substantially as and for the purposes described.

1,152,667. SEWING-MACHINE. FRANS T. STRÖBECK, Beachmont, Mass., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Dec. 8, 1913. Serial No. 805,228. (Cl. 112—16.)



1. In a sewing machine, the combination with stitch-forming and feeding mechanisms, of ruffling mechanism comprising a vibratory arm, a swinging arm overlying the same and having a fulcrum remotely disposed relatively to that of the other arm, means adjustable toward and from said fulcra for pivotally connecting said arms together at different points, means connected with and adapted to impart to said vibratory arm operative movements, a ruffling blade carrying arm having a fulcrum coaxial with that of said swinging arm, a detachable connection between said coaxially fulcrumed arms, means for maintaining said ruffler-blade carrying arm retracted from operative position and disconnected from said swinging arm and a ruffling blade sustained by said blade-carrying lever.

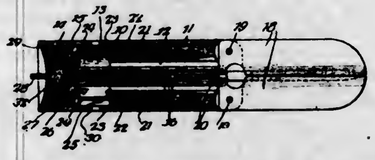
2. In a sewing machine, the combination with stitch-forming and feeding mechanisms, of ruffling mechaniam comprising a vibratory arm, a swinging arm overlying the same and having a fulcrum remotely disposed relatively to that of the other arm, means adjustable toward and from said fulcra for pivotally connecting said arms together at different points, means connected with and adapted to impart to said vibratory arm operative movements, a ruffling blade carrying arm having a fulcrum coaxial with that of said swinging arm, means for confining said arms against movement lengthwise of their fulcrums, a spring-pressed pin mounted upon one of said arms for engaging the other for locking said arms detachably together, means for maintaining said ruffling-blade carrying arm retracted from operative position and disconnected from said swinging arm, and a ruffling blade carried by said blade carrying arm.

3. In a sewing machine, the combination with stitch-forming and feeding mechanisms, of a binder, ruffling mechanism comprising a ruffling blade having a range of movement adjacent said binder, and a work-support provided with a guide-rib disposed beneath the range of movement of and in operative relation with said ruffling blade and inclined to its direction of movement and toward said binder.

4. In a sewing machine, the combination with stitch-forming and feeding mechanisms, of a binder formed with spaced upper and lower laterally extending channel members, ruffling mechanism comprising a ruffling blade having a range of movement adjacent said binder, and a work-supporting plate disposed beneath said ruffling blade adjacent the binder and having in its lower face a clearance recess to accommodate the lower channel member of said binder and upon its upper face a plurality of convergent guide-ribs inclined toward said binder and adapted to support a body fabric under the action of the ruffling blade.

5. In a sewing machine, the combination with stitch-forming and feeding mechanisms, of ruffling mechanism comprising a vibratory arm, actuating means therefor, a swinging arm, a detachable connection between said arms, means for retracting said swinging arm when detached, a ruffling blade carried by said swinging arm, and means for directing the ruffling blade away from the work when said swinging arm is retracted.

1,152,668. PROJECTILE. CHARLES F. SULLIVAN, Des Moines, Iowa; Virginia A. Sullivan administratrix of said Charles F. Sullivan, deceased. Filed Jan. 14, 1915. Serial No. 2,111. (Cl. 102—26.)



1. In a projectile, the combination of a shell, one or more cutter elements connected therewith and projectable with respect thereto, a movable element within the shell operatively connected with the cutter elements for projecting and retracting the latter, means tending normally to move the second recited element in one direction to retract the cutter elements and for holding them retracted, and means movable with the shell and operating automatically to project the cutter elements with respect to the shell, and against the stress of the first recited means.

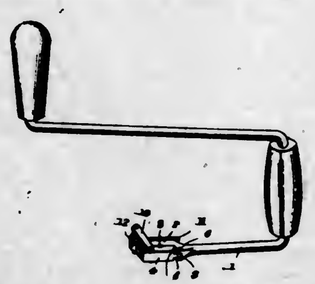
2. In a projectile, the combination of a shell, one or more cutter elements connected therewith and projectable with respect thereto, a movable element within the shell operatively connected with the cutter elements for projecting and retracting the latter, means tending normally to move the second recited element in one direction to retract the cutter elements and for holding them retracted, and timing provisions movable with the shell and operating automatically to project the cutter elements with respect to the shell and against the stress of the first recited means.

3. In a projectile, the combination of a shell, one or more cutter elements connected therewith and projectable with respect thereto, a movable element within the shell operatively connected with the cutter elements for projecting and retracting the latter, means tending normally to move the second recited element in one direction to retract the cutter elements and for holding them retracted, and explosive means movable with the shell and operating automatically to project the cutter elements with respect to the shell and against the stress of the first recited means.

4. In a projectile, the combination of a shell, one or more cutter elements connected therewith and projectable with respect thereto, a movable element within the shell operatively connected with the cutter elements for projecting and retracting the latter, means tending normally to move the second recited element in one direction to retract the cutter elements and for holding them retracted, means movable with the shell and operating automatically to project the cutter elements with respect to the shell, and against the stress of the first recited means, and means for holding the cutter elements projected.

5. In a projectile, the combination of a shell, one or more cutter elements connected therewith and projectable with respect thereto, a movable element within the shell operatively connected with the cutter elements for projecting and retracting the latter, means tending normally to move the second recited element in one direction to retract the cutter elements and for holding them retracted, means movable with the shell and operating automatically to project the cutter elements with respect to the shell, and against the stress of the first recited means and positive means for maintaining the cutter elements projected.

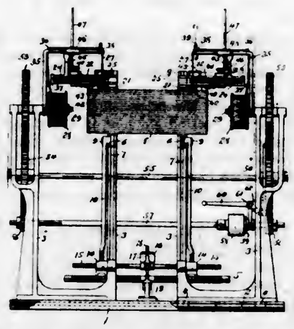
1,152,669. HOLDER FOR BITS AND SIMILAR TOOLS. WILLIAM J. G. TAYLOR, Clarksburg, W. Va. Filed July 24, 1914. Serial No. 852,917. (Cl. 145—98.)



A brace having a bit receiving end thereof projected laterally and then forwardly to provide a jaw, the laterally projected portion of the brace being slotted, a second jaw pivotally mounted in the slot and having an area coextensive with that of the first named jaw, the contacting surfaces of the jaws being formed with coöperating channels to together form a bit receiving recess, a yoke pivotally connected to the pivoted jaw, a cam lever mounted upon the yoke, said yoke being of a length to swing around the free ends of the jaws to position the lever beyond the first mentioned jaw or beyond the pivoted jaw

and a spring strip carried by the fixed jaw to be put under tension in the clamping operation of th elever, the yoke when the lever is in clamping position being inclined to permit a play of the spring under a slight release movement of the lever for initially operating the jaws.

1,152,670. BOARD-BUNDLING MACHINE. NEWTON B. THOMPSON, Kansas City, Kans. Filed Nov. 10, 1913. Serial No. 800,126. (Cl. 100—31.)



1. In a board bundling machine, means for supporting and holding compressed a pile of boards, a revoluble member adapted to revolve around said pile and having means for engaging a wire and looping it tightly around and against the entire periphery of said pile, and means for holding one end of the looped wire and for twisting together the meeting portions of said looped wire while the pile is held compressed.

2. In a board bundling machine, means for supporting and holding compressed a pile of boards, a revoluble member adapted to revolve around said pile and having means for engaging a wire, drawing it from a roll and looping it tightly around and against the entire periphery of said pile, means for holding one end of the looped wire and for twisting together the meeting portions of said looped wire while the pile is held compressed, and means for severing the looped portion from the roll.

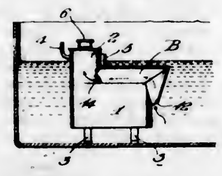
3. In a board bundling machine, means for supporting and holding compressed a pile of boards, a rotary member having means for holding one end of a wire and for receiving a second portion of the wire and, when rotated, being adapted to twist together the two portions of wire held thereby, means for forming the wire into a loop tightly around and against the entire periphery of said pile and for bringing said second portion into engagement with said rotary member, and means actuated by said loop forming means for rotating said rotary member after said second portion has been engaged by said rotary member while the pile is held compressed.

4. In a board bundling machine, means for supporting a pile of boards, a rotary member having means for holding one end of a wire, and having a longitudinal peripheral slot for receiving a second portion of said wire, a revoluble member having means for engaging the held wire and looping it around said pile and bringing said second portion into said slot, and means actuated by said revoluble member for rotating the rotary member after said second portion has been brought into said slot, thereby twisting together the ends of said loop.

5. In a board bundling machine, means for supporting and holding compressed a pile of boards, a rotary member having means for holding one end of a wire and for receiving a second portion of the wire, a revoluble member adapted to revolve around said pile and having means for engaging said wire, drawing it from a roll and looping it tightly around and against the entire periphery of said pile and for bringing said second portion into engagement with said rotary member, means for rotating said rotary member, after said second portion has been engaged thereby while the pile is held compressed, and means for severing the looped portion of the wire from the roll.

[Claims 6 to 10 not printed in the Gazette.]

1,152,671. TANK-HEATER. JOHN TRISLER, Homer, Ill. Filed Feb. 18, 1915. Serial No. 9,174. (Cl. 126—360.)



1. A tank heater of the class described comprising a heating chamber, a vertical air inlet at one end of said heating chamber, an outlet pipe at the other end, and a hood having a water inlet and outlet covering the top and part of one end of said heating chamber to guide the circulation of water created by the heating chamber over the same.

2. A tank heater of the class described comprising a heating chamber, a vertical air inlet at one end and an outlet pipe at the other end, running back to the vertical inlet and upward parallel therewith to a point near its top, an inverted substantially L-shaped hood being U-shaped in cross section along its horizontal portion adapted to cover the top of the heating chamber and extending past the air outlet end thereof, the downwardly extending portion of said hood projecting inward and engaging the end of the heating chamber, said hood having a water inlet at the bottom of the downwardly projecting portion and a water outlet at one side of the forward end of the horizontal portion substantially as described.

3. A tank heater of the class described comprising a heating chamber, a pair of vertically disposed air inlet pipes of different diameters one disposed within the other for said heating chamber, the inlet pipe having a larger diameter adapted to be closed and the inlet pipe having a smaller diameter being formed with a continual free passage for air therethrough, and an outlet pipe at the outer end of said heater for the escape of the products of combustion.

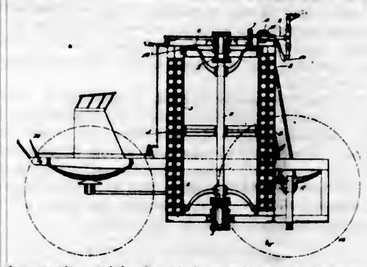
4. A tank heater of the class described comprising a heating chamber, a vertical air inlet at one end of said heating chamber, lugs on the inner surface of said air inlet near its lower end, a closure adapted to slide within said inlet and be held on said lugs, an additional air pipe having its upper end projecting through the side of the inlet near the top and adapted to extend downwardly through the closure into the heating chamber to form a continual free passage for air therethrough, an outlet pipe at the other end of said heating chamber running back to the vertical inlet and up parallel therewith to a point near its top, and a hood having a water inlet and outlet covering the top and part of one end of said heating chamber to guide the circulation of water created by the heating chamber over the same.

5. A tank heater of the class described comprising an L-shaped heating chamber, and an inverted substantially L-shaped hood adapted to contact with the horizontal portion and the outer end of the heating chamber to guide the circulation of water created by the heating chamber over the same.

[Claim 6 not printed in the Gazette.]

1,152,672. HOSE-SUPPORTER. THOMAS P. TUITE, New York, N. Y. Filed Apr. 13, 1909. Serial No. 426,651. Renewed Nov. 18, 1912. Serial No. 732,131. (Cl. 242—86.)

A hose supporter having an upright reel, means for supporting the reel, a vertical track adjacent to the reel, a carriage on the track, a pulley on the carriage, a rack on the track, a pinion on the carriage engaging with the rack,



a pawl engaging with the pinion and means for rotating the pinion.

1,152,673. WATCHCASE-CROWN. LOUIS F. VERBERCKMOES, Anaconda, Mont. Filed Jan. 21, 1915. Serial No. 3,580. (Cl. 58—95.)



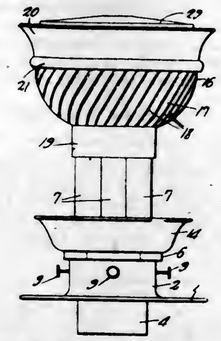
1. The combination with a winding stem having a threaded shank and provided with a shoulder at the inner end thereof, of a watch case crown provided with a recess in its underside and having a threaded socket extending upwardly from the recess, a crown post exteriorly threaded at its upper or outer portion to screw into the threaded socket of the crown, said crown post being provided with a threaded bore of a diameter to receive the threaded shank of the winding stem, and a threaded plug also mounted within the threaded bore of the post and adapted to project therefrom to effect an adjustment of the crown and the post for raising and lowering the winding stem.

2. The combination of a watch case crown provided in its underside with a threaded socket, a crown post exteriorly threaded at one end to screw into the threaded socket of the crown, said crown post being provided with a threaded bore adapted to receive the threaded shank of a winding stem, and a threaded plug also mounted within the threaded bore of the post beyond the end of the winding stem, said crown being adapted to receive crown posts having bores of different diameters to enable a crown to be connected with stems of various sizes.

1,152,674. HYDROCARBON-BURNER. CHARLES H. VON HOHENSTEIN, San Antonio, Tex. Filed May 27, 1915. Serial No. 30,786. (Cl. 158—68.)

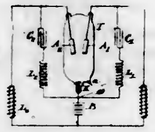
1. In a hydrocarbon burner, a member having a bore extending therethrough, a tube having one end engaged to said member and communicating with said bore, the other end of the tube having a restricted vapor outlet, a spiral element within said tube and having one end engaged to said member, and a sheet of wire mesh wound upon said spiral element and fitting in said tube.

2. In a hydrocarbon burner, a base having an upstanding socket member and a fuel inlet, a plug engaged into said socket member and having bores extending therethrough, upstanding generating tubes carried by said plug and communicating with said bores, heat conducting elements within said tubes, the upper ends of the tubes having restricted outlet apertures, and a mixing and discharge head mounted upon the upper ends of said tubes and having air inlets.



3. In a hydrocarbon burner, a bowl-shaped head having a dished portion provided with air inlets, a central portion for receiving gaseous fuel, a flared rim forming a deflector, an annular corrugation between said deflector and dished portion, a hood arranged within said deflector and having a central opening and an outstanding flange at its edge, said flange having a bead engaged in said corrugation, a member seated on said flange and engaged to said bead, said member having a series of outlets directed toward the deflector, and a cap carried by said member over said hood.

1,152,675. ELECTRICAL OSCILLATOR. FREDERICK K. VREELAND, Montclair, N. J., assignor to Wireless Telegraph Exploitation Company, New York, N. Y., a Corporation of New York. Filed Dec. 18, 1906. Serial No. 348,403. (Cl. 250—36.)



1. An electrical oscillator wherein are combined a vacuum tube, means for passing an electric current through said tube, means for producing a high negative resistance in said tube, and an electrical oscillating circuit, whereby variations in the current in said tube are caused to excite oscillations in said oscillating circuit, substantially as set forth.

2. An electrical oscillator wherein are combined a mercury vapor tube, means for passing an electric current through said tube, means for producing a high negative resistance in said tube, and an electrical oscillating circuit, whereby variations in the current in said tube are caused to excite oscillations in said oscillating circuit, substantially as set forth.

3. A system for generating electrical oscillations wherein are combined means for maintaining a gaseous medium of such pressure and composition that the electric current hereinafter specified, when traversing it, produces a concentrated discharge with a high negative resistance and a small potential gradient, means for maintaining an electric current through such medium adapted to establish such discharge, and an electrical oscillating circuit wherein oscillations are excited as the result of variations of current in said medium, substantially as set forth.

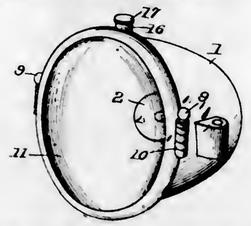
4. An electrical oscillator wherein are combined a vacuum tube, means for passing an electric current through said tube, means for concentrating the discharge

in said tube, and an electrical oscillating circuit, whereby variations in the current in said tube are caused to excite oscillations in said oscillating circuit, substantially as set forth.

5. An electrical oscillator wherein are combined a mercury vapor tube, means for passing an electric current through said tube, means for concentrating the discharge in said tube, and an electrical oscillating circuit, whereby variations in the current in said tube are caused to excite oscillations in said oscillating circuit, substantially as set forth.

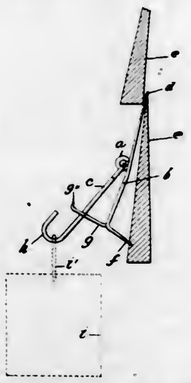
[Claims 6 to 47 not printed in the Gazette.]

1,152,676. HEADLIGHT FOR AUTOMOBILES AND THE LIKE. JOHN P. WALSH, New York, N. Y., assignor of one-half to Henry J. McGuckin, New York, N. Y. Filed June 17, 1914, Serial No. 845,637. Renewed Aug. 2, 1915. Serial No. 43,340. (Cl. 240—41.)



The combination with a door; of a lens positioned in said door and having a solid peripheral flange engaged against the inner face of said door, the central portion of said lens being hollow and offset from the flange, the sides of the central portion of said lens having concentric convex surfaces, said lens having a filling opening communicating with the hollow central portion thereof, and securing means carried by said door and engaged with said solid peripheral flange to retain said lens in position.

1,152,677. PAINTER'S HOOK. JOHN E. WARREN, Greenfield, N. H., assignor of one-half to James H. Fassett, Nashua, N. H. Filed Oct. 6, 1914. Serial No. 865,238. (Cl. 248—24.)

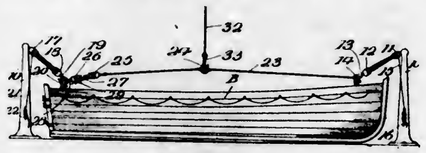


1. A painter's hook comprising a baseplate having angularly-disposed prongs bent therefrom at one end thereof and a transversely-disposed lug which is bent from the latter end in a direction opposite that in which the prongs are bent, said lug being formed with a recess; and a pot-supporting hook pivotally attached to said baseplate and having its hook-end arranged to lie in said recess, the walls of which prevent excessive lateral vibration of the hook.

2. A reversible painter's hook comprising a baseplate having prongs angularly disposed thereto and a lug formed with teeth; said prongs extending from said baseplate in a direction opposite to said lug whereby the hook is made reversible; and a pot-supporting hook pivotally attached to said baseplate and arranged in one position thereof to rest on said lug.

3. A reversible painter's hook comprising a baseplate one end of which is edged to adapt said baseplate to enter readily between clapboards and from the other end of which are struck up prongs and a lug formed with a recess and with teeth; and a pot-supporting hook pivotally attached to said baseplate and arranged in one position thereof to rest in said recess, the walls of which prevent excessive vibration of the hook.

1,152,678. LAUNCHING APPARATUS FOR BOATS. SIGFRID NELSON WESSBERG, Brooklyn, N. Y. Filed Feb. 26, 1914. Serial No. 821,252. (Cl. 9—22.)



1. A launching apparatus comprising a derrick located between tiers of boats on the deck of a ship and having a swinging boom adapted to extend beyond the ship's side more than the length of the boat to be launched, a lowering tackle on said boom, davits for supporting the boats, davit blocks and tackle connected with said davits and adapted to be connected with the boats, a boat hung on said davit blocks, a detachable span connected to each end of said boat and provided with means midway its length for connection with the lowering tackle on the boom, one end of said span including a block and tackle whereby said end may be lengthened while the boat is being lowered, substantially as set forth.

2. A launching apparatus for boats comprising tackle connecting the boat with davits on the ship, a lowering apparatus arranged to be swung out and hang a distance from the side of the ship, a span detachably connected with each end of the boat, one end of which includes means for lengthening said end as the boat is being lowered, and means in the normal center of said span for connecting the same with the lowering means, substantially as set forth.

3. A launching apparatus for boats comprising tackle supporting said boat at each end from davits on the ship, a lowering apparatus extending from a boom over the side of the ship, a span attached at each end of said boat and formed with means at its normal center for attachment with said lowering apparatus and with means in one end whereby its length may be extended while the boat is being lowered, substantially as set forth.

4. A launching apparatus for boats comprising pivoted hooks located in the respective ends of said boat, a rod connected with said hooks for operating both simultaneously, means for operating said rod, a span connected with said pivoted hooks and having a centrally located means for connection with the lowering apparatus, a block and tackle interposed in one end of said span to lengthen the same, davit blocks connected to each end of said span, and the lowering apparatus connected with the central attaching means of said span, substantially as set forth.

5. A launching apparatus for boats comprising tilting hooks connected in the respective ends of the boats, means for tilting said hooks simultaneously, a span having a ring at each end connected with said hooks and a ring in the center for connection with the lowering apparatus, davit blocks connected in said end rings for supporting the boat, and said lowering apparatus including a swinging boom attached to extend beyond the side of the ship, substantially as set forth.

1,152,679. LAST FOR BOOTS AND SHOES. LORING Q. WHITE, Brockton, Mass. Filed Dec. 10, 1914. Serial No. 876,568. (Cl. 12—133.)



1. A last for boots and shoes comprising a body portion and a toe piece separable therefrom, and means for detachably coupling said parts together in such manner as to permit the toe piece to be moved bodily in the direction of the length of the last, and comprising a member secured to each of said parts and extended beyond the same substantially parallel with the bottom thereof to overlap the other of said parts, and means for detachably securing the overlapping portions of said members in fixed relation to each other.

2. A last for boots and shoes comprising a body portion and a toe piece separable therefrom, and means for detachably coupling said parts together in such manner as to permit the toe piece to be moved bodily in the direction of the length of the last, and comprising a member secured to each of said parts and extended beyond the same substantially parallel with the bottom thereof to overlap the other of said parts, and means to detachably secure said overlapping parts in fixed relation.

3. A last for boots and shoes comprising a body portion provided with a cavity in its bottom surface, a toe piece separable from said body portion and provided in its bottom surface with a cavity which registers with the cavity in the body portion, and devices located in said cavities for detachably coupling the said toe piece to the body portion, the device on each part projecting into the cavity in the other part, to permit the toe piece to be moved bodily in the direction of the length of the last.

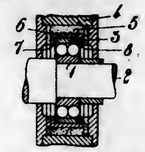
4. A last for boots and shoes comprising a body portion and a toe piece separable therefrom, and means for detachably coupling said parts together in such manner as to permit the toe piece to be moved bodily in the direction of the length of the last and comprising a coupling member secured to the bottom of one of said parts and provided with arms extended beyond said part and spaced apart at their outer ends and substantially parallel with the bottom of said part, a coupling member secured to the bottom of the other of said parts and provided with a tongue which extends beyond the end of said other part and between said arms when the toe piece is moved bodily toward the body portion to couple the toe piece to the said body portion, and means to secure said arms and tongue in fixed relation.

5. A last for boots and shoes comprising a body portion and a toe piece separable therefrom, a coupling member secured to the bottom of one of said parts and provided with arms spaced apart at their outer ends and substantially parallel with the bottom of said part, a coupling member secured to the bottom of the other of said parts and provided with a tongue which extends between said arms when the toe piece is coupled to the body portion, said tongue having a slot extended from its front edge, and a screw engaging said arms and passing through the said slot to secure said arms and tongue in fixed relation, said screw being accessible from the bottom of the last.

[Claim 6 not printed in the Gazette.]

1,152,680. ELECTRICALLY-INSULATED BEARING. CARL EMIL WIESELGREEN, Gottenborg, Sweden, assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden, a Corporation of Sweden. Filed June 26, 1914. Serial No. 847,368. (Cl. 64—36.)

1. The combination with a ball bearing ring of a support therefor, insulation carried by the support, and a metal sleeve engaging the ring and interposed between it and the insulation for distributing the load throughout the body of insulation.

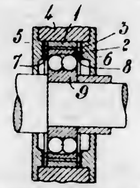


2. The combination with a ball bearing ring of a support therefor, insulation wider than the ring carried by the support, and a metal sleeve engaging the ring and interposed between it and the insulation for distributing the load throughout the body of insulation.

3. The combination with a ball bearing ring of a support therefor, insulation carried by the support, and a metal sleeve engaging the ring with a working fit and interposed between it and the insulation for distributing the load throughout the body of insulation.

4. The combination with a ball bearing ring of a support therefor, insulation wider than the ring carried by the support, and a metal sleeve engaging the ring with a working fit and interposed between it and the insulation for distributing the load throughout the body of insulation.

1,152,681. INSULATED ROLLER-BEARING. CARL EMIL WIESELGREEN, Gottenborg, Sweden, assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden, a Corporation of Sweden. Filed July 18, 1914. Serial No. 851,698. (Cl. 64—36.)



1. In bearings of the kind described, a track ring composed of a number of concentric, undivided rings, and an electric insulation between the said rings, substantially as and for the purpose set forth.

2. In a bearing, the combination with an inner and an outer track member, one of such members being composed of two metallic rings, and electric insulating material disposed between such rings.

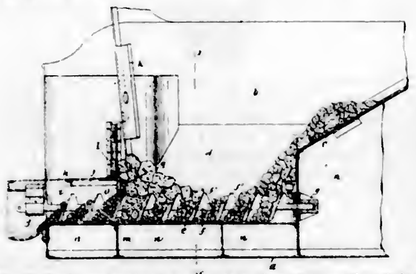
3. In a self-contained bearing, the combination of an inner and an outer track member, one of said members being composed of a metallic ring having track faces for the rolling elements, a ring having a plain bearing surface, and electric insulating material disposed between said rings and bonding the same together.

1,152,682. AUTOMATIC STOKING MECHANISM. DAVID T. WILLIAMS, Paterson, N. J., assignor to Standard Stoker Company, Inc., Wilmington, Del., a Corporation of Delaware. Filed Dec. 6, 1913. Serial No. 805,021. (Cl. 83—53.)

1. A fuel conveying mechanism for automatic stokers including means to advance the fuel in a definite course having a fuel pushing abutment operating in said course to exert reducing pressure on the fuel and means beside said course against which reducing pressure is exerted by said abutment while the fuel is being advanced in said course, the second-named means having a roughened fuel-abutment surface facing oppositely to the direction of advance of the fuel.

2. A fuel conveying mechanism for automatic stokers including a fuel-supporting means over which to advance

the fuel in a definite course, means to advance the fuel in said course having a fuel-pushing abutment operating in said course to exert reducing pressure on the fuel, and means beside said course against which reducing pressure is exerted on the fuel by said abutment while the fuel is being advanced, the last-named means having a roughened fuel-abutment surface facing oppositely to the direction of advance of the fuel.



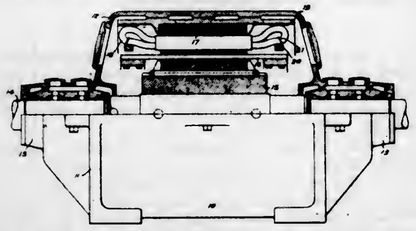
3. A fuel conveying mechanism for automatic stokers including means to advance the fuel in a definite course having a fuel-pushing abutment operating in said course to exert reducing pressure on the fuel and a plate arranged beside and in a plane transverse to said course and against which reducing pressure is exerted by said abutment on the fuel while the latter is being advanced in said course, said plate having the surface thereof facing oppositely to the direction of advance of the fuel roughened.

4. A fuel conveying mechanism for automatic stokers including means to advance the fuel in a definite course having a fuel-pushing abutment operating in said course to exert reducing pressure on the fuel and a plate arranged beside and in a plane transverse to said course and against which reducing pressure is exerted by said abutment on the fuel while the latter is being advanced in said course, said plate having the surface thereof facing oppositely to the direction of advance of the fuel provided with spurs.

5. In combination, a fuel bunker, said bunker having a forward support for the fuel including an upper movable and a lower rigid portion, and means to advance the fuel in a forward course under said support having a fuel-pushing abutment, the lower rigid portion of said support affording means against which fuel-reducing pressure is exerted on the fuel by said abutment while the fuel is being advanced.

[Claim 6 not printed in the Gazette.]

1,152,683. DYNAMO-ELECTRIC MACHINE. ROBERT B. WILLIAMSON, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed May 17, 1912. Serial No. 697,952. (Cl. 172—252.)



1. In a dynamo-electric machine, the combination of a frame, a removable shell within said frame and supported thereby, a core mounted in said shell, and a winding carried by said core and provided with end turns extending beyond said core, said shell extending beyond said end-turns.

2. In a dynamo-electric machine, the combination of a frame, a shell within said frame and removable therefrom, a core mounted in said shell, a winding carried by said core and having end-turns projecting beyond said core, said shell extending beyond said end-turns, and means for holding said end-turns against said shell.

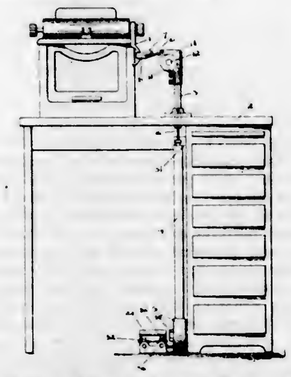
3. In a dynamo-electric machine having a split frame, an annular member mounted in said frame, a stator core supported in said annular member, a winding having end-turns and carried thereby, said annular member extending beyond said end-turns, and means for holding said end-turns in a fixed position.

4. In a dynamo-electric machine, the combination of a removable unit including a shell, a core mounted in said shell, windings having end-turns and carried by said core, said shell extending beyond said end-turns, and retaining members located radially inward from said end-turns and being adapted to hold said end-turns in a fixed position with respect to said shell.

5. In a dynamo-electric machine having a split frame, a removable unit located in said frame and including an annular member, a core mounted in said annular member, a winding having end-turns and carried by said core, and retaining rings for retaining said end-turns in engagement with said annular member, said end-turns being interposed between said retaining means and annular member.

[Claims 6 to 8 not printed in the Gazette.]

1,152,684. TYPE-WRITER CARRIAGE-RETURN. AUGUSTUS M. WING, Portland, Oreg. Filed Sept. 2, 1914. Serial No. 859,902. (Cl. 197—165.)



1. In a device of the character described, a clamp secured to a line space lever, a bifurcated hook attached to said clamp, a tube attached to a typewriter desk, a fixed tube attached below the desk, a vertically movable tube within said fixed tube, a flexible member attached to the bifurcated hook and passing downwardly to a weight in the vertically movable tube, a chamber secured to the lower part of the fixed tube, a flexible member fixed at one end to said vertically movable tube, means attached to said flexible member at its free end without the chamber to operate the same, and a spring within the fixed tube to bring said operating means back to its normal position, for the purposes set forth.

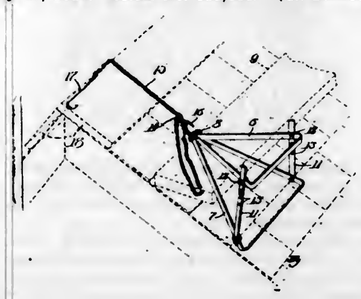
2. In a device of the character described, a pair of telescopic tubes, a flexible member attached to a typewriter carriage and passing downward into the inner tube of said pair of telescopic tubes, a counterweight attached to said flexible member within said inner tube, a flexible member attached to the inner tube and passing outside of the outer tube, and means to operate said flexible member, substantially as described.

3. In a device of the character described, a pair of telescopic tubes, a flexible member attached to the lower end of the inner tube and passing outside of the outer tube to a foot pedal, a counterweight within said inner tube, a flexible member attached to said counterweight and passing outside of said inner tube to a typewriter carriage, substantially as described.

4. In a device of the character described, a pair of telescopic tubes, and means to connect the inner tube to a typewriter carriage and means to connect the inner tube to a foot pedal, substantially as described.

5. In a device of the character described, a pair of telescopic tubes, counterweighted flexible means to connect the inner tube to a typewriter carriage, and flexible means to connect said inner tube to a foot pedal, substantially as described.

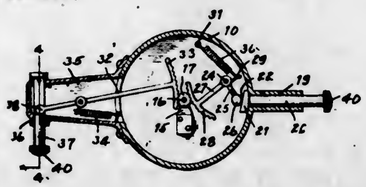
1,152,685. ROOF-SCAFFOLD BRACKET. CHARLES S. WINN and CLARENCE A. WALL, Rockford, Ill. Filed July 27, 1914. Serial No. 853,444. (Cl. 20—86.)



1. A roof scaffold bracket comprising a pair of triangularly shaped sections arranged one within the other and having their ends terminating at a common apex, a bolt passing through said ends whereby the sections are pivotally connected, means for holding the outer ends of the sections spaced apart, and roof-connecting means connected with the pivoted ends of the sections for holding the bracket at different elevations on the roof.

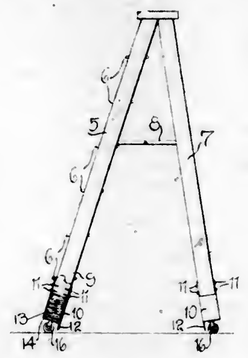
2. A roof scaffold bracket comprising a pair of triangularly shaped sections each formed of a single strip of metal, one of the sections being disposed within the other, means pivotally connecting the sections at a common apex whereby the sections may be collapsed and moved relatively so that the outer ends of the sections may be spaced apart, adjustable means for holding the outer ends of the sections spaced apart various distances, and roof-connecting means connected with the pivoted ends of the sections for holding the bracket at different elevations on a roof.

1,152,686. DIAL TEST-INDICATOR. FRANK ZAHORIK, Racine, Wis. Filed July 23, 1914. Serial No. 852,742. (Cl. 33—172.)



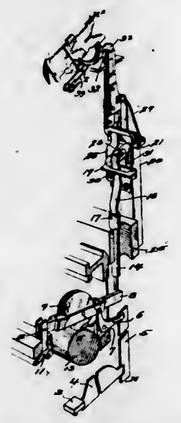
In a measuring instrument of the kind described, a hand carrying staff, a pinion on said staff, gears meshing with said pinion on opposite sides thereof, springs urging said gears in opposite directions, reciprocable spindles, and operative connections between respective spindles and gears one of said connections including a bell-crank lever having one arm connected to the related gear, the inner end of the adjacent spindle being provided with a beveled face arranged to engage the other arm of the bell-crank to rock the same when said spindle is reciprocated.

1,152,687. STEP-LADDER. ROBERT ACTON, La Salle, Ill. Filed Dec. 23, 1914. Serial No. 878,735. (Cl. 228—5.)



The combination with a ladder, of a casing fixed to the lower end of the ladder rail and provided upon one of its walls with an outwardly projecting piercing spur, a supporting caster, and a coil spring arranged in said casing and normally acting to force the caster downwardly and yieldingly support the ladder thereon, the action of said spring being overcome when a weight devolves upon the ladder and said piercing spur embedded in the floor or other surface to hold the ladder against casual shifting movement.

1,152,688. ESCAPEMENT MECHANISM FOR LINE-COMPOSING MACHINES. HENRY A. ARMSTRONG, Brooklyn, N. Y., assignor to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed Nov. 22, 1913. Serial No. 802,487. (Cl. 199—7.)



1. In combination, two reciprocatory matrix escapements, one actuating means therefor, and connections between said actuating means and the escapements whereby one complete motion of the actuating means causes the escapements to move, in opposite directions, one-half of their full reciprocating stroke.

2. In combination, two matrix controlling escapements, each having lower and upper retaining pawls adapted to be placed alternately into engaging positions, a single actuating device therefor, and intermediate means for causing a single stroke of the actuating device to reverse the two escapements in opposite directions.

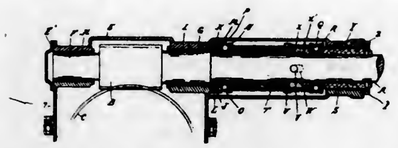
3. The combination with a pair of matrix controlling escapements, of actuating means common to said pair of escapements and operative to cause portions of the reciprocatory movements of the latter in reverse directions simultaneously at each operation of such actuating means.

4. The combination with a pair of matrix controlling escapements, of actuating means common to said pair of escapements for causing operation of said escapements alternately in reverse directions at each operation of said actuating means.

5. The combination with a pair of matrix controlling escapements each having to and fro reciprocatory movements, of actuating means common to said pair of escapements for moving one of said escapements in a direction to release a matrix and permitting reciprocating movement of the other escapement in a reverse direction at each operation of said means.

[Claims 6 to 8 not printed in the Gazette.]

1,152,689. YIELDABLE THRUST-BEARING FOR WORM-SHAFTS. EDWIN P. ASHTON, Detroit, Mich. Filed Aug. 3, 1912. Serial No. 713,061. (Cl. 64—49.)



1. The combination with a rotative shaft of a collar having a cross pin engagement with said shaft, an anti-friction roller bearing for receiving thrust from said shaft through the medium of said collar, an anti-friction roller bearing for receiving thrust in the opposite direction, a resilient member sleeved upon said shaft intermediate said collar and the last-mentioned anti-friction roller bearing, and a resilient member of lesser tension between said collar and the first-mentioned roller bearing.

2. The combination with a rotative shaft of a collar having a cross pin engagement with said shaft, an anti-friction roller bearing for receiving thrust from said shaft through the medium of said collar, an anti-friction roller bearing for receiving thrust in the opposite direction, a resilient member sleeved upon said shaft intermediate said collar and the last-mentioned anti-friction roller bearing, said cross-pin extending transversely through said shaft and collar and engaging a slotted bearing in the latter, permitting relative movement of the collar and shaft, a tubular casing sleeved about said collar for retaining said pin from disengagement, and a resilient member of slight tension sleeved upon said tubular casing and bearing upon said collar and first-mentioned roller bearing.

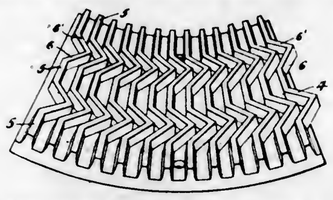
3. The combination with a rotative shaft, of a journal bearing therefor, a member arranged on the shaft and disposed to rotate therewith, said member being supported for limited movement longitudinally of the shaft, a stop carried by the shaft, a spring embracing the shaft and contacting with said member, a thrust bearing interposed between said spring and said stop, a member constituting a stop embracing the shaft, a thrust bearing interposed between said stop member and the first mentioned member, and means for adjusting the stop member.

4. The combination with a rotative shaft, of a journal bearing therefor, a member arranged on the shaft and disposed to rotate therewith, said member being supported for limited movement longitudinally of the shaft, a ring carried by the shaft, a spring embracing the shaft and contacting with said member, a thrust bearing interposed between said spring and said ring, a member constituting a stop embracing the shaft on the opposite side of the member, a spring embracing the member on the shaft, and a thrust bearing interposed between said stop member and the first mentioned member and spring.

5. The combination with a rotative shaft, of a journal bearing therefor, a collar on said shaft having a loose connection therewith for limited movement in one direction while permitting adjustment in the opposite direction, a thrust bearing and a resilient member interposed between said collar and said thrust bearing revoluble with the shaft.

[Claims 6 to 10 not printed in the Gazette.]

1,152,690. SHELL-LINING FOR PAPER-PULP-GRINDING MILLS. AMEL F. BAHR and OTTO B. BAHR, Marion, Ind. Filed Aug. 5, 1913, Serial No. 783,219. Renewed Feb. 5, 1915. Serial No. 6,397. (Cl. 92—27.)

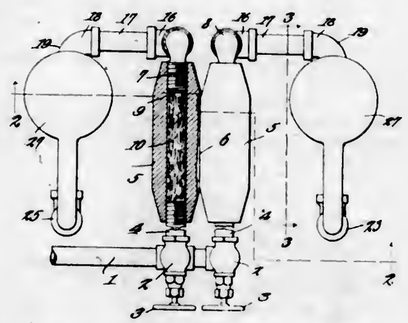


1. A shell lining for paper pulp grinding mills comprising a hollow body having internal blades, each formed with alined axial sections connected by offstanding retarding sections.

2. A shell lining for paper pulp grinding mills comprising a hollow truncated conical section having a plurality of internal blades, each blade consisting of spaced longitudinal sections and intermediate retarding sections, the latter comprising laterally extending webs connected together at one end and at their other ends to the longitudinal sections.

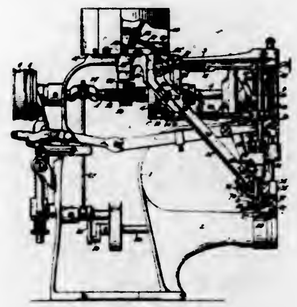
3. A shell lining for paper pulp grinding mills comprising a hollow truncated conical section having a plurality of internal blades, each blade consisting of spaced alined longitudinal sections and intermediate V-shaped retarding sections, the longitudinal and retarding sections, of the blades being arranged in parallel relation to each other.

1,152,691. COMBUSTION DEVICE. WILLIAM S. BARNETT, Decatur, Ill. Filed Mar. 29, 1915. Serial No. 17,952. (Cl. 158—71.)



In a device of the class described, a generator; a source of supply communicating with the generator; a conduit connected to one end of the generator, the conduit being extended downwardly below the generator, laterally away from the generator and below the generator, and forwardly below the generator in approximate parallelism to the generator, the conduit terminating in an upstanding burner outlet; a deflector located above the outlet and disposed opposite to the generator; and a bracket independent of the generator and carried by the forwardly extended portion of the conduit, the deflector being mounted directly on the bracket.

1,152,692. BUTTON-FEEDING MECHANISM. WILLIAM L. BARRON, New York, N. Y., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed July 31, 1911. Serial No. 641,518. (Cl. 112—32.)



1. In a button-fastening machine, the combination with fastening devices, of button-supporting and guiding means including a button-head guideway leading to a position within the range of action of the fastening devices, a button-feeder adapted to engage the buttons and to propel them along and in contact with said guideway and provided with a button-engaging jaw adapted to yield transversely of the operative face of said guideway, and means beginning its action prior to and ending its action subsequent to the beginning of a fastening operation whereby said button-feeder is moved in operative engagement with a button from a remote position into fastening position in engagement with which the button is maintained during the beginning of a fastening operation.

2. In a button-fastening machine, the combination with fastening devices, of button-supporting and guiding means including a button-head guideway leading to a position within the range of action of the fastening devices, and a button-feeder adapted to engage the buttons and to propel them along and in contact with said guideway and comprising a plurality of relatively yielding button-engaging jaws of which one is adapted to yield transversely of the operative face of said guideway.

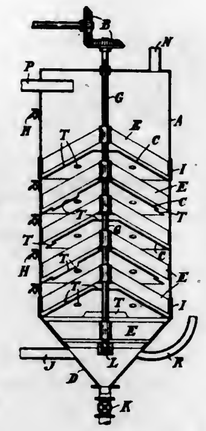
3. In a button-fastening machine, the combination with fastening devices, of button-supporting and guiding means including a button-head guideway leading to a position adjacent the fastening devices, a stop to arrest the movement of the buttons along said guideway, a button-feeder adapted to engage and propel the buttons along said guideway into engagement with said stop and comprising a movable member and a button-engaging element yieldingly mounted thereon and having a jaw adapted to yield transversely of the operative face of said guideway, feeder-actuating means, and a yielding connection between said movable member and said actuating means.

4. In a button-fastening machine, the combination with fastening devices, of button-supporting and guiding means including a button-head guideway leading to a position within the range of action of the fastening devices, and a button-feeder movable along and adapted to engage and propel the buttons in contact with said guideway and provided with a spring-pressed lever fulcrumed thereon for movement transversely of its direction of movement and provided with a button-head engaging jaw, and feeder-actuating means, acting at the beginning and end of a period embracing the beginning of a fastening operation and adapted to move the feeder in engagement with the button into fastening position and hold the same in such position during at least a part of the fastening operation.

5. In a button-fastening machine, the combination with fastening devices, of button-supporting and guiding means including a button-head guideway leading to a position within the range of action of the fastening devices, a button-feeder adapted to engage and propel the buttons along said guideway and provided with a button-engaging jaw adapted to wield transversely of the operative face of said guideway, and means for retracting said jaw from normal operative position when remote from fastening position.

[Claims 6 to 17 not printed in the Gazette.]

1,152,693. APPARATUS FOR MAKING WHITE LEAD. LIONEL VINCENT BARTON and WILLIAM PHILLIPS THOMPSON, Liverpool, England. Filed Jan. 3, 1914. Serial No. 810,207. (Cl. 134—75.)



1. In an apparatus for making white lead, the combination of a cylindrical chamber having a substantially vertical axis; a series of diaphragms having large perforations at the sides; means for passing carbonic acid, oxid of lead, water and a catalyte into the chamber near the bottom thereof; means for causing a rapid rotary current in the chamber; means for letting the waste gases, if any, escape at the top; and an exit pipe near the top for water and white lead.

2. In an apparatus for making white lead, the combination of a chamber having a substantially vertical axis; a series of conical, perforated diaphragms, each with one or more large passages or openings not coinciding vertically with the principal holes in adjacent diaphragms; means for passing carbonic acid, oxid of lead, water and a catalyte into the chamber near the bottom thereof; means for causing a rapid rotary current in the chamber; means for letting the waste gases, if any, escape at the top; and an exit pipe near the top for water and white lead.

3. In an apparatus for making white lead from oxid of lead, water, carbonic acid, and a catalyte, a chamber round in cross section; a series of conical diaphragms placed with their convex face uppermost; with means for causing a rapid circulation of the material; and means for allowing the heavy portions of the material to fall at the side to which it is carried by the centrifugal action set up in the apparatus.

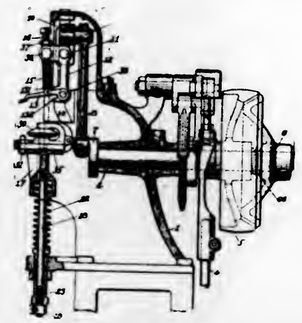
4. In an apparatus for making white lead from oxid of lead, water, carbonic acid and a catalyte, a chamber round in cross-section having a conical bottom and a blow-off cock; a series of perforated diaphragms conical in form and placed with their convex face uppermost; a central shaft; and a stirrer attached thereto a little above each of the diaphragms.

5. In an apparatus for making white lead from oxid of lead, water, carbonic acid and a catalyte, a chamber

round in cross-section: a series of diaphragms; a shaft and stirrer; a conical bottom for said chamber; a stirrer in the upper portion of the conical bottom and extending nearly to the sides of the same; and means for rotating the shaft so as to cause a vigorous circulation of the material being treated.

[Claim 6 not printed in the Gazette.]

1,152,694. STITCH-DOWN-SHOE-LASTING MACHINE. PAUL THEODOR JEHER, Rodelheim, Frankfort-on-the-Main, Germany, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 5, 1913. Serial No. 804,870. (Cl. 12—7.)



1. In a machine of the class described, the combination with means for supporting a shoe with its sole slightly inclined to a horizontal plane and its upper presented toward the workman as he stands in front of the machine, of a shoe forming tool constructed and arranged to engage the upper at a point above the edge of the last and force it into the angle between the side of the last and a projecting portion of the shoe sole, and actuating means for said tool.

2. In a machine of the class described, the combination with means for supporting a shoe with its sole slightly inclined to a horizontal plane and its upper presented toward the workman as he stands in front of the machine, of a shoe forming tool arranged for movement in a downwardly curved path about the side of a last for molding the upper to the side of the last and tucking it into the angle between the edge of the last and a projecting portion of the sole, and actuating means for said tool.

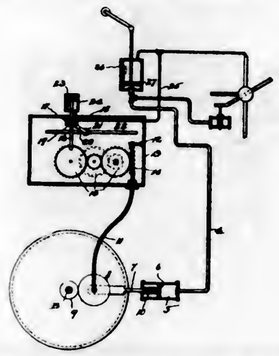
3. In a machine of the class described, the combination with means for supporting a shoe with its upper presented toward the workman as he stands in front of the machine, of a shoe forming tool arranged for movement in a curved path to mold the upper to the side of the last and tuck it into the angle between the edge of the last and a projecting portion of the sole and constructed to press the marginal portion of the upper firmly against the sole, and actuating means for said tool.

4. In a machine of the class described, the combination with a rotatable work support constructed to engage beneath the outer edge portion of a shoe sole, of a shoe forming tool and actuating mechanism for causing the tool to engage the upper at a point above the edge of the last and force it downwardly along the side of the last and into the angle between the last edge and a projecting portion of a shoe sole.

5. In a machine of the class described, the combination with a rotatable support constructed to engage the channel lip of a shoe sole and guide the shoe, of a shoe forming tool and actuating mechanism to cause the tool to mold the upper to the side of the last and tuck it into the angle between the edge of the last and a projecting portion of the sole.

[Claims 6 to 31 not printed in the Gazette.]

1,152,695. BRAKE-ACTUATING DEVICE FOR AUTOMATIC TRAIN-STOP MECHANISM. FRED BEDFORD, Stratton, Nebr. Original application filed June 26, 1913, Serial No. 775,018. Divided and this application filed July 10, 1914. Serial No. 850,113. (Cl. 188—1.)



1. In an air brake system, a valve for controlling the pressure in said system having an arm secured thereto, a rod operatively secured to said valve arm, a train of gears, said rod being pivotally secured to one of the members of said train of gears, a flexible shaft suitably journaled and having a worm thereon meshing with one of the members of said train of gears, a friction disk secured to said flexible shaft, a rod member having a friction disk mounted thereon and adapted to engage the first mentioned friction disk, and means to move the first mentioned friction disk into and out of engagement with the last mentioned friction disk.

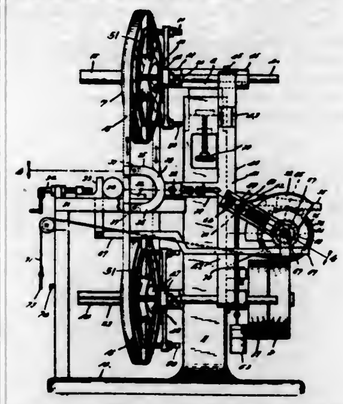
2. In an air brake system, a valve for controlling the pressure in said system having an arm secured thereto, a rod operatively secured to said valve arm, a train of gears, said rod being pivotally secured to one of the members of said train of gears, a flexible shaft suitably journaled and having a worm thereon meshing with one of the members of said train of gears, a friction disk secured to said flexible shaft, a rod member having a friction disk mounted thereon and adapted to engage the first mentioned friction disk, a cylinder, a piston reciprocally mounted in said cylinder, a piston rod secured to said piston and engaging the first mentioned friction disk, and a valve controlled air pressure system connected with said cylinder to convey air to said cylinder to move the piston and engage said friction disks with one another.

3. In an air brake system, a valve for controlling the pressure in said system, an arm secured to said valve, a rod having a lateral extension provided with a transverse slot, a pin secured to said valve arm and slidably engaging said slot, means to actuate said rod to open the valve, a cylinder, a piston in said cylinder and operatively connected with said rod, and an air supply pipe connected with said cylinder and adapted to supply air to said cylinder to move the piston therein and the rod to close the valve.

1,152,696. BAND-SAW. ROBERT C. BERRY, Indianapolis, Ind. Filed Aug. 3, 1914. Serial No. 854,625. (Cl. 29—68.)

1. A band saw, comprising the combination of two band wheels for receiving the saw band and having their axes substantially parallel, a driving shaft carrying one of such band wheels and having its axis at an angle to the axis of such band wheel, guides for skewing the cutting part of the saw band so that it is in a plane parallel to such shaft axis, and means for moving the band wheels parallel to such shaft axis.

2. A band saw, comprising the combination of two band wheels for receiving the saw band and having their axes substantially parallel, a driving shaft carrying one of such band wheels and having its axis at an angle to the axis of such band wheel, and means for moving the band wheels parallel to such shaft axis.



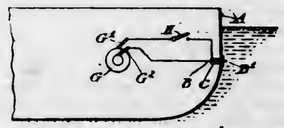
3. A band saw, comprising the combination of two band wheels for receiving the saw band and having their axes substantially parallel, a driving shaft carrying one of such band wheels and having its axis at an angle to the axis of such band wheel, and guides for skewing the cutting part of the saw band so that it is in a plane parallel to such shaft axis.

4. A band saw, comprising the combination of two band wheels for receiving the saw band and having their axes substantially parallel, and a driving shaft carrying one of such band wheels and having its axis at an angle to the axis of such band wheel.

5. A band saw, comprising the combination of two band wheels for receiving the saw band, means for holding stationary the work to be sawed, means for supporting said band wheels so that they can be moved parallel to the line of sawing, means for transmitting power to one of said band wheels, and means for varying the angle between the axes of the band wheels and the line of such movement and still maintaining the operative connection between one of such band wheels and the same power-transmitting means.

[Claims 6 to 23 not printed in the Gazette.]

1,152,697. SUBMARINE SIGNALING. THEODORE BODDE, Brant Rock, Mass. Filed May 22, 1909. Serial No. 497,592. (Cl. 177—380.)



1. The method of generating sound waves in water for submarine signaling which consists in passing an intermittent electric current through a fluid medium and thereby setting up mechanical stresses in such fluid medium and translating such mechanical stresses into sound waves in the water.

2. A sending device for submarine signaling adapted to be attached to the hull of a ship below the water line thereof, and comprising separated electrodes and means whereby when said electrodes are connected to a suitable source of electrical energy a current flow of electricity will take place between said electrodes of a character to generate sound waves in the water.

3. Sending apparatus for submarine signaling, comprising a pair of submerged electrodes, and means for causing an intermittent flow of electricity between said electrodes in the water in which the electrodes are submerged.

4. A sending device for submarine signaling secured to the wall of the ship below the water line thereof and comprising electrodes having portions exposed externally of the ship.

5. A sending device for submarine signaling comprising electrodes and means whereby they are secured to the wall of the ship below the water line thereof with portions of said electrodes exposed externally of the ship.

[Claim 6 not printed in the Gazette.]

1,152,698. FISH-HOOK. STEPHEN T. BONNER, Spokane, Wash. Filed Dec. 12, 1914. Serial No. 876,895. (Cl. 43—30.)



1. A fish hook including the hook proper having a shank, and an impaling member longitudinally movable with respect to said shank and provided with a prong adapted to engage the shank and be forced outwardly when the impaling member is moved in one direction and projected into a bait engaged upon said shank.

2. A fish hook including the hook proper having a shank, and an impaling member having spaced prongs adapted to engage said shank when said member is moved in one direction and be forced outwardly from the shank and into the body of a bait engaged thereon.

3. A fish hook including the hook proper having a shank, and an impaling member having spaced resilient prongs adapted to engage said shank when said member is moved in one direction and be forced outwardly from the shank and into the body of a bait engaged thereon.

4. A fish hook including the hook proper having a shank, and an impaling member having spaced resilient prongs integrally formed with said member adapted to engage said shank when said member is moved in one direction and be forced outwardly from the shank and into the body of a bait engaged thereon.

5. A fish hook including a tubular shank having the hook proper on one end, said shank being provided with opposed openings, and an impaling member movably engaged in said shank and having spaced prongs adapted to engage the wall of the shank in the movement of said member in one direction and project outwardly through said openings into the body of a bait engaged on the shank.

[Claims 6 to 10 not printed in the Gazette.]

1,152,699. PROCESS FOR SEPARATING IRON AND NICKEL FROM COPPER IN CERTAIN ORES AND MASSES. WILHELM BORCHERS and EDUARD THILGES, Aachen, Germany. Filed May 23, 1914. Serial No. 840,886. (Cl. 75—17.)

1. The method of recovering iron and nickel from sulfid ores, matte and like material containing copper, which comprises smelting the material with an excess of calcareous flux in a carbon-lined furnace, for the purpose described.

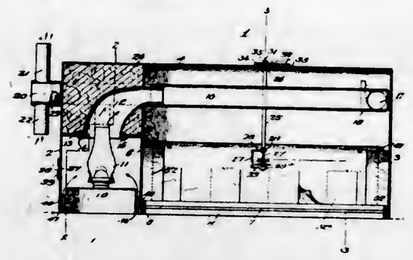
2. The method of recovering iron and nickel from sulfid ores, matte and like material containing copper, which comprises smelting the material with an excess of calcareous flux and sufficient carbonaceous material to reduce only the iron and nickel and separating the ferro-nickel constituents.

3. The method of recovering iron and nickel from sulfid ores, matte and like material containing copper, which comprises smelting the material with an excess of calcareous flux and sufficient carbonaceous material to reduce only the iron and nickel and allowing the carbonaceous reducing agent to act gradually upon the material being treated, for the purpose described.

4. The method of recovering iron and nickel from sulfid ores, matte and like material containing copper, which comprises smelting the material with an excess of calcareous flux and sufficient carbonaceous material to first

reduce only the iron and nickel and to cause the resulting quantity of calcium sulfid to retard the separation of copper, whereby ferro-nickel may be obtained substantially free from copper.

1,152,700. CHICKEN-BROODER. CHARLES S. BORDNER, Circleville, Kans. Filed June 16, 1914. Serial No. 845,402. (Cl. 119—34.)



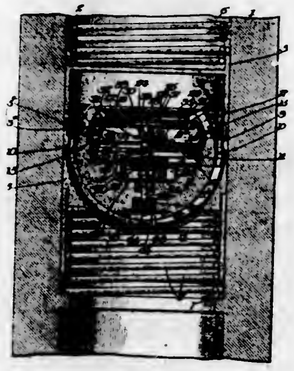
1. A chicken brooder, comprising a casing having an open bottom and provided with a transverse vertical partition near its front end and with a horizontal partition intermediate the top and the bottom between the front end and the vertical partition, said casing having a vertical partition between the front end and the vertical partition above the horizontal partition, a base fitting within the casing between the rear end and the partition, said casing having a lateral entrance near its rear end, the casing having a door opening at one side between the front end and the vertical partition and a door mounted to slide over the opening, the casing having air inlets in the opposite side wall, a heater within the casing at the door opening, a heat conducting pipe leading from above the burner and opening through the horisontal partition and extending through the vertical partition to the opposite end of the casing, and having a return portion extending from the said opposite end to and through the front end of the casing.

2. A chicken brooder, comprising a casing having an open bottom, said casing having a vertical partition near one end and a horizontal partition between the vertical partition and the adjacent end, a heating device between the vertical partition and the adjacent end and below the horizontal partition, said casing having a door at one side for permitting the insertion and withdrawal of the heating device, a heat conducting pipe extending from the burner to the opposite end of the casing and having a return portion extending from the said opposite end to and through the end of the casing adjacent to the heater, said casing having a vertical partition above the horizontal partition and between the first-named vertical partition and the adjacent end, the inlet end of the heating pipe being at one side of the said last-named partition and the outlet end at the other side, and a filling of non-heat conducting material inclosing the inlet end of the heat conducting pipe.

3. A chicken brooder, comprising a casing having an open bottom and having a vertical partition near one end, and a horizontal partition between the vertical partition and the adjacent end, a heating device between the vertical partition and the adjacent end and below the horizontal partition, said casing having a door at one side for permitting the insertion and withdrawal of the heating device, a heat conducting pipe extending from the burner to the opposite end of the casing and having a return portion extending from the said opposite end to and through the end of the casing adjacent to the heater, and a branch pipe extending from the return portion of the heating pipe through the horizontal partition between the vertical partition and the adjacent end of the casing.

4. A chicken brooder, comprising a casing having a vertical partition near one end and a horizontal partition between the vertical partition and the adjacent end, said partitions dividing the interior into a front heating chamber and a rear brooder chamber, and an upper insulating chamber, a heater in the heating chamber and having a burner near one side of the casing, a heat conducting pipe leading from above the burner to the rear end of the casing within the brooder chamber and having a return portion within the brooder chamber extending to and through the front wall, a filling of non-heat conducting material at the inlet end of the heating pipe, and means for regulating the temperature of the brooder chamber.

1,152,701. DEVICE FOR ASCERTAINING THE VERTICAL ANGLE AND DIRECTION OF DIAMOND-DRILL HOLES. HELGE A. BORRESEN, Marquette, Mich. Filed Nov. 4, 1908. Serial No. 461,016. (Cl. 33—205.)



1. A casing, another casing mounted within said first-mentioned casing upon gimbals, spring-actuated means for locking said casings at the various angles that they may assume with respect to each other, and timing mechanism for causing said locking mechanism to operate at a pre-determined time.

2. An outer casing, a casing swung upon gimbals within said outer casing, a compass needle mounted in said inner casing, means for locking said compass needle against further oscillation, means for locking said casings at the angle they may assume to each other, and timing mechanism for causing said locking mechanism to operate at a predetermined time.

3. An outer casing, a gimbal mounted inner casing, a compass needle within said inner casing, means for locking said compass needle against further oscillation, means for locking said casings against further relative motion, timing means for causing said locking means to operate at a pre-determined time, and means for stopping said timing mechanism at the time it causes the action of said locking mechanism.

4. In a vertical angle and direction register, a timing mechanism and locking mechanism to be operated thereby, comprising a spring-actuated member having a segmental slot therein, a lug carried by said timing mechanism in the path of said slot adapted to permit the movement of said spring-actuated member when said lug comes in vertical alinement with said slot.

5. In a vertical angle and direction register, a timing mechanism and locking mechanism to be operated thereby, comprising a spring-actuated member, a plate having a circular slot therein, a projection carried by said timing mechanism in the line of said slot, adapted to permit the motion of said spring-actuated member when said projection and said slot come in vertical alinement, and spiral means for returning said projection out of said slot by the further rotation of said timing mechanism.

[Claims 6 to 17 not printed in the Gazette.]

1,152,702. NOTE-BOOK AND HOLDER FOR SAME. CLARK J. BROWN, Petersburg, Va. Filed July 19, 1912. Serial No. 710,418. (Cl. 129—1.)



1. In combination, a stiff back cover having two apertures near one end, and two counterpart spring wire holders each including a terminal eye engaged by one of said apertures, a base stem continued from each eyelet, said stem having an off-set shoulder, intermediate of its ends, the holder being continued at right-angles in an end section from which extends an L-shaped hook ending in a point, normally held in the eyelet.

2. In combination, a stiff back cover having two apertures near one end, an eyelet within each of said apertures, two counterpart spring wire holders each including a terminal eye engaged by one of said eyelets, a base stem continued from each eyelet, said stem having an off-set shoulder intermediate of its ends, the holder being continued at right-angles in an end section from which extends an L-shaped hook ending in a point normally held in the eyelet and a stiff front cover slidably held upon said hooks and at times upon said off-set base stem, as and in the manner set forth.

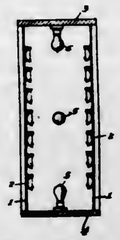
3. In combination, a stiff back cover having two apertures near one end, two counterpart spring wire holders each including a terminal eye engaged by one of said apertures, a base stem continued from each aperture having an off-set shoulder intermediate of its ends, the holder being continued at right-angles in an end section from which extends an L-shaped hook ending in a point normally held in the eyelet, a stiff front cover slidably held upon said hooks and at times upon said base stem, and a plurality of leaves held upon said hooks.

4. In combination, a stiff back cover having two apertures near one end, an eyelet within each of said apertures and two counterpart spring wire holders each including a terminal eye engaged by one of said eyelets, a base stem continued from each eyelet from which is continued at right-angles an end section from which extends an L-shaped hook ending in a point normally held in the eyelet.

5. In combination, a stiff back cover having two apertures near one end, an eyelet within each of said apertures, two counterpart spring wire holders each including a terminal eye engaged by one of said eyelets, a base stem continued from each eyelet from which is continued at right-angles an end section from which extends an L-shaped hook ending in a point normally held within the eyelet, and means to connect said covers to their outer ends.

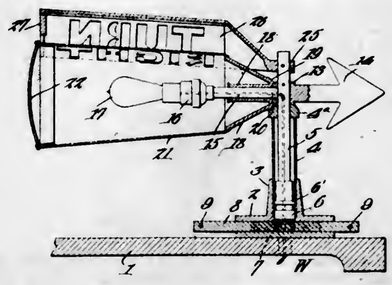
[Claim 6 not printed in the Gazette.]

1,152,703. ILLUMINATED SIGN. FRANK W. BURTON, San Diego, Cal. Filed June 11, 1914. Serial No. 844,473. (Cl. 40—133.)



In an illuminated sign the combination of metallic side plates spaced apart from each other, each metallic side plate provided with a plurality of circular holes therein in such a position as to form a plurality of characters, a plurality of leg members integral with the metallic side plates extending inwardly from the edge of each of said holes some distance, provided with bent portions on their inwardly extending ends and a corrugated convex surface plate mounted in said leg members so that the convex surface faces the hole from the inner side of said plate and set back so that all of said convex surface plate is set in from said metallic side plate and means for illuminating said convex surface plates.

1,152,704. MOTOR-CAR SIGNAL. JOSEPH C. BUTLER. Pomona, Cal. Filed Sept. 14, 1914. Serial No. 861,704. (Cl. 40—77.)



1. An automobile signal including a hood, a rotatable signal carrying member adjacent the hood and having annularly spaced characters either of which is adapted to be concealed by the hood, means for simultaneously swinging the hood and signal carrying member about a common axis, and means for rotating the signal carrying member about its individual longitudinal axis during its rotation with the hood thereby to withdraw a character from the hood and expose it and house another character within the hood.

2. An automobile signal including a hood, a rotatable signal carrying member adjacent the hood and having annularly spaced characters either of which is adapted to be concealed by the hood, means for simultaneously swinging the hood and signal carrying member about a common axis, and means for rotating the signal carrying member about its individual longitudinal axis during its rotation with the hood thereby to withdraw a character from the hood and expose it and house another character within the hood, there being characters on the hood readable in connection with either of the characters on the signal carrying member, and means carried by said signal carrying member for eliminating all of the characters on said member.

3. An automobile signal, including a support, a vertically disposed tubular member carried thereby, a shaft journaled in the tubular member, means for oscillating the shaft, a hood carried upon the upper end of the shaft, a rotatable signal carrying member attached to and carried by the shaft and disposed below the hood, and coöperable means carried by the signal carrying member and sleeve for imparting independent rotation to the signal carrying means coincident with the oscillation or rotation of the shaft.

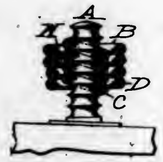
4. An automobile signal, including a support, a sleeve carried thereby, a shaft journaled in the support and sleeve, coöperative means mounted in the support and carried by the shaft for imparting oscillation to the shaft, a hood fixed to the upper end of the shaft and movable with the shaft, said hood being disposed to project radially therefrom, a collar fixed upon the shaft above the tube, an arm carried by the sleeve, a rotatable signal carrying member mounted upon the arm, and coöperative means carried by the tube and the signal carrying member, whereby as the shaft is oscillated, independent oscillation or rotation is imparted to the signal carrying mem-

ber, such signal carrying member being disposed below the hood.

5. An automobile signal, including a support, a sleeve carried thereby, a shaft journaled in the support and sleeve, means mounted in the support and connected to the shaft for oscillating the shaft, a hood fixed to the upper end of the shaft and projecting radially therefrom, an independent rotatable signal carrying member connected to the shaft and disposed below and in alinement with the hood, and coöperative means carried by the sleeve and the adjacent portion of the signal carrying member, whereby as the shaft is oscillated, the signal carrying member is oscillated.

[Claims 6 to 9 not printed in the Gazette.]

1,152,705. BINDING-POST. GEORGE A. H. CHURCHILL, Rumson, N. J. Filed Aug. 4, 1914. Serial No. 855,047. (Cl. 173—259.)



1. A binding post comprising a stud, and a conductor securing device, said device comprising a single piece of wire formed in two concentric coiled portions, one of said portions encircling and engaging said stud, and the second portion being supported by the first portion and being of such diameter that it is effective to grip and hold an electrical conductor inserted transversely between adjacent coils thereof.

2. A binding post comprising a threaded stud and a nut, said nut being formed of a single piece of wire and comprising a portion engaging the stud, and a resilient coil integral therewith, said coil being of larger diameter than said portion and being effective to grip and hold an electrical conductor inserted transversely between adjacent turns thereof.

3. A binding post comprising a threaded stud and a nut, said nut being formed of a single piece of wire having one portion bent to form a close spiral coil fitting the thread of said stud, and the remaining portion of said wire comprising a spiral coil of larger diameter and constituting means for securing a conductor in electrical connection with said stud when inserted transversely between adjacent turns thereof.

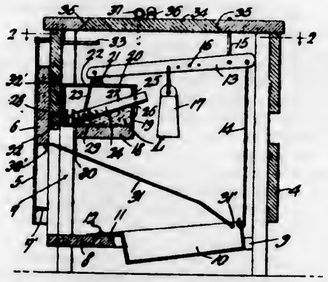
4. A binding post comprising a threaded stud and a nut, said nut being composed of two concentric spiral coils of wire, the smaller coil fitting the thread of the stud and the larger coil being effective to grip and hold a conductor inserted between the turns thereof.

5. A binding post comprising a threaded stud and a nut, said nut being formed of a single piece of wire bent to form two concentric spiral coils, the smaller coil fitting the thread upon the stud, and the larger coil being effective to grip and hold a conductor inserted between the turns thereof.

[Claims 6 to 10 not printed in the Gazette.]

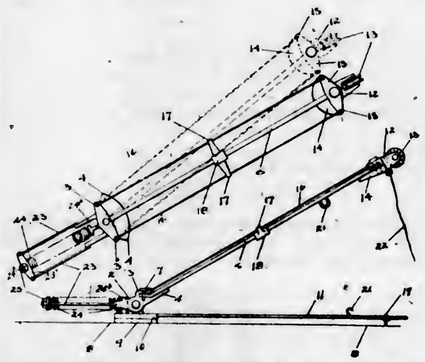
1,152,706. NEST. BEN F. CLARK, Wichita, Kans. Filed June 9, 1914. Serial No. 844,050. (Cl. 119—49.)

1. In a device of the character described, a frame, a nest tray having its forward end connected to the frame to enable the rear end to swing vertically, a liquid reservoir carried by the frame above the forward end of the nest tray, a dispensing trough pivotally connected to and having one end projecting from the rear side of the reservoir, the other end of the trough being swingable within the reservoir below and above the liquid level, the sides of the trough having apertures adjacent the last mentioned end and the bottom of the trough, a lever fulcrumed to the frame above the nest tray and reservoir and having relatively short and long arms projecting rearwardly and forwardly, links connecting the short arm of the lever and rear end of the nest tray and the long arm of the lever and last mentioned end of the trough, whereby when the nest tray is swung downwardly, the dispensing trough will be swung upwardly to discharging position, and an adjustable weight carried by the long arm of the lever.



2. In a device of the character described, a frame, a nest tray carried thereby and movable vertically, a liquid reservoir carried by the frame above the nest tray, a dispensing trough pivotally connected to and having one end portion projecting from the reservoir, the other end of the trough being swingable within the reservoir below and above the liquid level, the sides of the trough having apertures therein adjacent the last mentioned end and the bottom of the trough, and means operatively connecting the nest tray and dispensing trough whereby when the nest tray is moved downwardly, the dispensing trough will be swung upwardly to discharging position, the said means including adjustable means for controlling the velocity at which the nest moves downwardly.

1,152,707. TROLLEY-POLE. WILLIAM W. CLARK, Portland, Oreg., assignor of one-half to Irving J. Boyce, Portland, Oreg. Filed Feb. 16, 1914. Serial No. 819,115. (Cl. 191—64.)

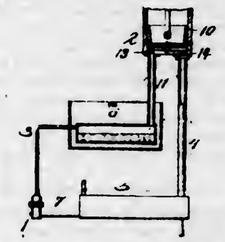


1. The combination with a swivel, of a trolley-pole, means to attach said swivel to a car, a harp pivoted to the free end of the trolley-pole, bearing means in said harp, a sheave mounted on said bearing means, and positively acting devices to aline the harp with a conductor, substantially as described.

2. The combination with a swivel, of means to attach said swivel to the roof of a car, a trolley-pole pivoted to said swivel and arms passing transversely of said swivel, a harp pivoted to the free end of said trolley-pole, bearing means in said harp, and a sheave revolubly mounted on said bearing, transverse arms at the upper side of said harp, wires passing from said arms to the arms of the swivel, said wires serving to aline the sheave with a conductor, and means to revolve the trolley-pole on the roof of the car, substantially as described.

3. The combination with a swivel, of means to attach said swivel to a car, arms transversely attached to said swivel, a trolley-pole pivotally mounted in said swivel, a harp pivoted to the free end of said trolley-pole, a rest at the lower side of said harp and transverse arms at the upper side, a sheave revolubly mounted in said harp, guide-wires passing from the arms of the harp to the arms of the swivel, sleeves intermediate said arms to brace the guide-wires, means to support said sleeves attached to the trolley-pole, and means to raise and lower said trolley-pole, substantially as described.

1,152,708. REFIGERATING APPARATUS. CLYDE J. COLEMAN, New York, N. Y., assignor, by mesne assignments, to Virginia Refrigerator Corporation, a Corporation of Virginia. Filed Oct. 1, 1902, Serial No. 125,547. Renewed July 24, 1914. Serial No. 852,034. (Cl. 62—126.)



1. A closed cycle refrigerating apparatus comprising a condenser, a refrigerator, means for establishing a difference of pressure between the condenser and refrigerator, and an expansion device between the condenser and refrigerator provided with vapor resisting and fluid conducting means adapted to permit at all times the passage of liquid medium from high pressure to low and also provided with means for maintaining a heat supplying medium in thermal conductive agency to the point of expansion.

2. A closed cycle refrigerating apparatus comprising a condenser, a refrigerator, a compressor, and an expansion device between the condenser and refrigerator provided with vapor resisting and fluid conducting expansion means adapted to permit at all times the passage of liquid medium from low pressure to high pressure, and also provided with means for maintaining a refrigerant medium in liquid condition in contact with such expansion means on both the high pressure and expansion sides thereof.

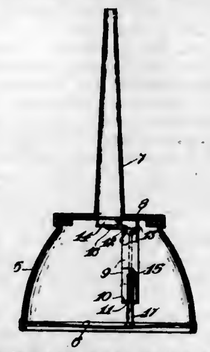
3. An expansion device for supplying a refrigerant medium from a high pressure to a low pressure, comprising a porous partition, and means for maintaining at all times a liquid saturated condition of the pores thereof to prevent the passage therethrough of gaseous medium from high pressure to low pressure, such means including medium-containing chambers above and below the porous partition.

4. An expansion device for supplying a refrigerant medium from a high pressure to a low pressure comprising a porous partition and means for maintaining a liquid saturated condition of the pores thereof to prevent the passage therethrough of gaseous medium and for maintaining a body of refrigerant medium and in liquid condition in contact therewith on the expansion side thereof, such means including a medium-containing-reservoir located above the porous partition.

5. An expansion device for supplying a refrigerant medium from a high pressure to a low pressure comprising a porous partition, and means for maintaining liquid saturated condition of the pores thereof to prevent the passage therethrough of gaseous medium and for maintaining a refrigerant medium in liquid condition in contact therewith on both the high pressure and expansion sides thereof, such means including two medium-containing-reservoirs located respectively above and below the porous partition.

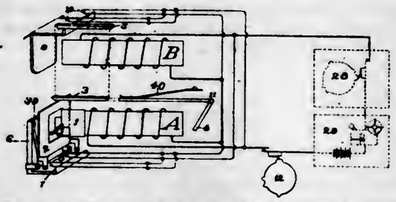
[Claims 6 to 11 not printed in the Gazette.]

1,152,709. OIL-CAN. JOHN W. COWELL, Chicago, Ill., assignor of one-third to Rudolph Karwiese, Chicago, Ill. Filed Oct. 20, 1913. Serial No. 796,256. (Cl. 221—43.)



The combination with a can having a flexible bottom and an outlet spout having its passageway unobstructed throughout its entire length and provided with a base having a valve seat from which the spout passageway extends; of a valve located in the can beneath the spout base to engage the aforesaid valve seat, a lever carrying the valve, a closing spring engaging the valve, a depending bracket secured to the base of the spout inside the body of the can, said bracket having laterally spaced walls and a connecting cross-piece at the lower ends of said walls, said cross-piece being provided with a guide aperture, a pin carried by the aforesaid walls and extending transversely therebetween, on which pin the aforesaid lever is pivoted, and a rod connected to the lever and extending through the aforesaid guide aperture, said rod having a lower end portion which is in engagement with the flexible bottom of the can.

1,152,710. NON-INTERFERING SUCCESSION-MOVEMENT FIRE-ALARM SIGNALING-MACHINE. GEORGE O. CRANMER and GEORGE V. TUDHOPE, Oakland, Cal. Filed Feb. 26, 1914. Serial No. 821,212. (Cl. 177—301.)



1. In a signaling machine, a make and break circuit device, a driving motor, an electro-responsive device consisting of two electro-magnets, an armature pertaining to each of said electro-magnets, shunt springs controlled by each of said electro-magnet armatures to respectively shunt out the winding of the other electro-magnet, a locking lever caused by the act of pulling the box or setting the machine in the operative position, to engage some part movable with said motor and detain the same, a prop retained in position by said electro-responsive device to engage and hold said locking lever in the detaining position during the continuance of current interruptions occasioned by the operation of another signaling machine on the same circuit, substantially as described.

2. In a signaling machine, a signaling train, a slow releasing non-interfering electro-magnet, combined with a relay adapted to shunt out the winding of said electro-magnet, a prop controlled by the armature of said electro-magnet, a locking lever adapted to be retained in position by said prop to detain said signaling train indefinitely during an interruption in the line current and to permt the release of said signaling train when normal circuit conditions are restored for a period of time somewhat longer than one of the current impulses which constitute the signal of any similar machine on the same circuit, substantially as described.

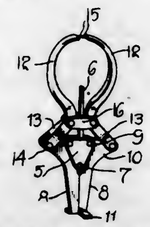
3. In a signaling box mechanism, a locking lever to detain the motion of said signaling mechanism, a prop to retain said locking lever in the detaining position, an electro-magnet and armature coöperating with said prop, a second electro-magnet, said armature when retracted being adapted to short circuit the winding of said second electro-magnet and when attracted to remove said short circuit, an armature pertaining to the second named electro-magnet adapted to short circuit the winding of the first named electro-magnet when attracted, the two electro-magnets and armatures combined with said locking lever and prop being adapted to effect or permit the release of said signaling mechanism in response to a prolonged flow of current in the box circuit, substantially as described.

4. In a signaling box mechanism of the non-interfering succession signal type, included in a normally closed circuit with a plurality of signaling devices, a signaling train, a slow acting electro-magnet, a second electro-magnet for controlling said slow acting magnet, a prop controlled by the slow releasing electro-magnet armature, a locking lever adapted to be held in position by said prop to detain said signaling train during an interruption of the current flow in the main line circuit, and to effect or permit the release of said signaling train upon a closure in the circuit of longer duration than any of the current impulses, substantially as described.

5. In a non-interfering, succession signaling box mechanism, two electro-magnets, one of said electro-magnets being adapted when energized to shunt out the winding of a second electro-magnet, said second named electro-magnet being slow acting by reason of a closed conductor in its magnetic field, a prop controlled by the armautre of said second named electro-magnet, a locking lever adapted to be retained in position by said prop to hold the signaling mechanism inoperative during the continuance of the short circuit impulses of any signal previously started on the same circuit, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,152,711. MATRIX-RETAINER. FRANCIS M. DEAN, Anacortes, Wash. Filed Jan. 19, 1915. Serial No. 3,104. (Cl. 32—17.)



1. A device of the character described including opposed retaining jaws having obliquely disposed extensions formed on one end, a bearing, opposed levers pivotally mounted on said bearing and provided with laterally extending arms connected to the extensions of the respective retaining jaws, and link connections between the inner end of said jaws at their juncture with said extensions.

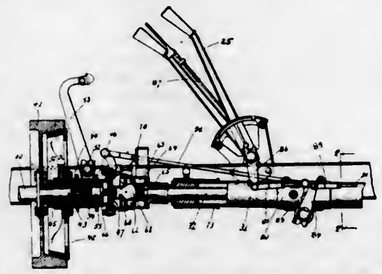
2. A device of the character described including opposed retaining jaws having obliquely disposed extensions at their inner ends, a bearing, opposed operating levers pivotally mounted on said bearing, each of said levers being provided with a laterally disposed arm on its pivoted end, the arms of said levers being connected to the extensions of the respective jaws, a longitudinally extending rod fixed at one end to said bearing, and link connections between the jaws at their inner ends disposed upon opposite sides of said rod.

3. A dental matrix retainer including a bearing, opposed retaining jaws, means independent of the bearing connecting said jaws for relative movement, and a pair of levers mounted upon said bearing and connected to the respective jaws to move the jaws in unison with respect to said bearing, said levers in one position locking the jaws in closed engagement with the matrix.

4. A dental matrix retainer including a bearing, opposed retaining jaws, guide means for said jaws fixed to the bearing, and levers pivotally mounted upon the bearing and connected to the inner ends of the respective jaws to move the jaws in unison longitudinally with respect to said bearing and in one position lock the jaws closed upon the matrix.

5. A dental matrix retainer including a body, opposed retaining jaws, means independent of the body connecting said jaws to each other, and levers pivotally mounted upon said body and having pivot connections with the respective jaws at their inner ends, said levers moving the jaws in unison longitudinally with respect to the body and in one position disposing the pivot connections between the jaws and the levers with respect to the pivot connections between the levers and the body whereby the jaws are locked in their closed position upon the matrix.

1,152,712. AUTOMOBILE CONSTRUCTION. EDWARD A. DEEDS, Dayton, Ohio. Filed Feb. 1, 1911. Serial No. 606,010. (Cl. 21—90.)



1. In an automobile construction, the combination with an engine driving mechanism, a propeller shaft, and a clutch member for connecting up the said engine driving mechanism; of a universal joint connecting said clutch member with said propeller shaft; a torque tube mounted to swing substantially upon the same pivotal center with said universal joint; and a forward bearing for said universal joint associated with said clutch member for preventing forward longitudinal displacement of the said universal joint.

2. In an automobile construction, the combination with an engine driving shaft, and a clutch member adapted to be connected therewith; of a shifting sleeve connected with said clutch member; a revoluble collar located within said shifting sleeve and formed to be rotated thereby, said collar being mounted to maintain a relatively fixed longitudinal position; a propeller shaft; and a universal connecting said revoluble collar and said propeller shaft, one element of said universal being connected to said revoluble collar and thereby having a relatively fixed longitudinal position independent of longitudinal shifting of said clutch member.

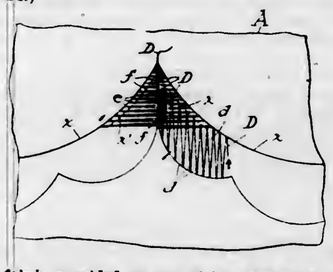
3. In an automobile construction, the combination with an engine driving shaft, and a clutch member adapted to be connected therewith; of a shifting sleeve connected with said clutch member; a collar located within said sleeve and formed to be engaged with and rotated by the latter; a propeller shaft; and a universal connecting said collar and said propeller shaft.

4. In an automobile construction, the combination with an engine driving shaft, and clutch device comprising a fly-wheel mounted upon said engine shaft and a clutch wheel coöperating with said fly-wheel and journaled upon an extension of said driving shaft, said clutch wheel having a longitudinal movement with respect to said extension; of a propeller shaft; a universal located between the propeller shaft and said clutch wheel for transmitting the rotary movement of the clutch wheel to the propeller shaft; and a spring intervening between said clutch wheel and said universal to thrust backward upon the universal and assist in preventing longitudinal forward displacement thereof.

5. In an automobile construction, the combination with an engine driving shaft, and a clutch device comprising a primary clutch member mounted upon the engine shaft and a secondary clutch member coöperating with the primary clutch member; of a propeller shaft; a collar connected with and rotating with said propeller shaft; and a sleeve connected with said secondary clutch member and comprising means for connecting the sleeve with said collar to permit longitudinal movement of the sleeve with reference to the collar and to impart rotary movement to the collar from said sleeve and its connected secondary clutch member.

[Claims 6 to 8 not printed in the Gazette.]

1,152,713. REINFORCED SCALLOPED EDGING FOR EMBROIDERY. LAWRENCE DINKELSPIEL, New York, N. Y. Filed Dec. 5, 1914. Serial No. 875,590. (Cl. 112—34.)

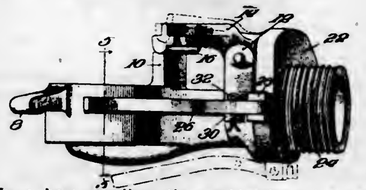


1. A fabric provided on one of its edges with a notch, a thread of stitches to form a binding for said edge, a plurality of reinforcing stitches disposed in angular relation to the binding stitches and adjacent the notch at the edge of the fabric, said reinforcing stitches overlying the binding stitches adjacent said notch for the purpose of reinforcing the edge of the fabric at its notched portion, and a plurality of tying stitches positioned in angular relation to the stitches overlying the binding stitches for tightly securing the binding stitches and the reinforcing stitches to one another and to the fabric.

2. A fabric provided with a scalloped edge, a thread worked along said scalloped edge to form substantially parallel stitches for the purpose of binding the scalloped edge of the fabric, said thread being diverted at the meeting point of two adjacent scallops to form a plurality of stitches in angular relation to, and overlying, the binding stitches whereby the fabric is reinforced at the meeting point of two adjacent scallops, and said thread also forming a plurality of tying stitches arranged in angular relation to the reinforcing stitches.

3. A fabric provided with a scalloped edge, a thread worked along said scalloped edge to form substantially parallel stitches for the purpose of binding the scalloped edge of the fabric, said thread being diverted at the meeting point of two adjacent scallops to form a plurality of stitches in angular relation to, and overlying, the binding stitches whereby the fabric is reinforced at the meeting point of two adjacent scallops, and said thread also forming a plurality of tying stitches arranged in angular relation to the reinforcing stitches and passing from the tying stitches into the interior of the fabric and formed into a plurality of stitches forming the embroidery design.

1,152,714. HOSE-COUPLING. WILLARD A. DODGE, Hornell, N. Y. Filed Nov. 11, 1914. Serial No. 871,577. (Cl. 137—89.)



1. In a hose coupling, the combination of a pair of heads each having a segmental projection at one end and a locking member at the other end, the segmental projection of one head adapted to co-act with the locking member of the other head, each locking member being pivoted to its head and having a free end, and collars having cam shaped parts adapted to co-act with the free ends of said locking members and hold them in engagement with said segmental projections, substantially as described.

2. In a hose coupling, the combination of a pair of heads each having a segmental projection at one end and a locking member at the other end, the segmental projection of one head adapted to co-act with the locking member of the other head, each locking member being pivoted to its head and having a free end, and collars having cam shaped grooves into which the free ends of said locking members project whereby said grooved collars hold said locking members in engagement with said segmental projections, substantially as described.

3. In a hose coupling, the combination of a pair of heads each having a segmental projection at one end and a locking member at the other end, the segmental projection of one head adapted to coact with the locking member of the other head, collars having cam shaped grooves adapted to coact with said locking members and hold them in locking engagement with said segmental projections, and levers for holding said collars in position, substantially as described.

4. In a hose coupling, the combination of a pair of heads each having a segmental projection at one end and a locking member at the other end, the segmental projection of one head adapted to coact with the locking member of the other head, collars having cam shaped grooves adapted to coact with said locking members and control the position of the same, and levers pivoted to said collars and arranged to hold said collars in locking position, substantially as described.

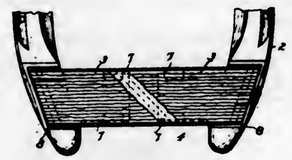
5. In a hose coupling, the combination of a pair of heads each having a segmental projection at one end and a locking member pivotally supported by the other end, the segmental projection of one head adapted to coact with the locking member of the other head, collars having cam shaped grooves adapted to coact with said locking members and control the position of the same, and levers pivotally connected to said collars and adapted to hold the same in position, substantially as described.

[Claim 6 not printed in the Gazette.]

1,152,715. HORSESHOE. JAMES A. DOLAN, Hartford, Conn., assignor to The Side-Weight Horse Shoe Company, Hartford, Conn., a Corporation of Connecticut. Filed July 23, 1915. Serial No. 41,444. (Cl. 168—13.)

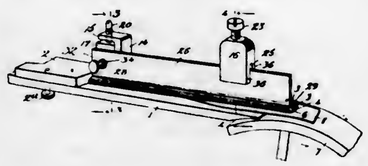
1. A horse shoe comprising a body, the sides of which are relatively adjustable toward and from each other, and

a sectional slip resisting device extending transversely of the body at the heel end thereof, the sections of said device being alined crosswise of the shoe and spaced from each other.



2. A horse shoe comprising a body, the sides of which are relatively adjustable and a tread member extending transversely of the body at the heel of the shoe, the tread member comprising a carrier, and a slip resisting device carried by said carrier and consisting of sections in alinement with each other crosswise of the shoe.

1,152,716. MACHINE FOR FINISHING CIGARETTE-SEAMS. PAUL A. DRUCKLIEB, New York, N. Y., assignor to New York Cigarette Machine Company, New York, N. Y., a Corporation of New York. Filed Mar. 18, 1913. Serial No. 755,104. (Cl. 131—43.)



1. In a machine for finishing cigarette seams, the combination with a suitable support, of a pressure blade pivotally secured at one end to said support, means for vertically adjusting said pivot and the height of the lower edge of the blade, and further means operating upon the free end of the blade for exerting thereon a yielding and adjustable pressure and giving the desired amount of downward deflection thereto.

2. In a machine for finishing cigarette seams, the combination of a frame comprising a plate, arms extending therefrom, a presser blade, means for pivotally securing the presser blade at one end to one of said arms, and a guide secured to the other of said arms for providing a movable engagement with the free end of said blade.

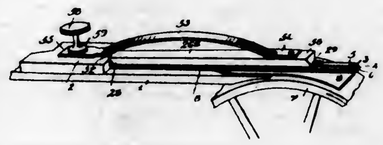
3. In a machine for finishing cigarette seams, the combination of a frame comprising a plate, arms extending therefrom, an upright extension from one of said arms, a block adjustably secured to said upright extension, a presser blade pivoted to said block, a guide-head secured to the other arm movably engaging the free end of the blade, and means for exerting a yielding and adjustable pressure on the blade carried by said guide head.

4. In a machine for finishing cigarette seams, the combination with the presser blade, a pivotal support for the same at one end, a guide for its free end, a spring in said guide bearing on said blade, and means for adjusting the tension of the spring.

5. In a machine for finishing cigarette seams, the combination with a frame, a block vertically adjustable in said frame, a presser blade pivoted to said block, a guide head secured to said frame and movably engaging said blade, a spring in said head engaging said blade, and means for adjusting the tension of said spring.

[Claims 6 to 12 not printed in the Gazette.]

1,152,717. MACHINE FOR FINISHING CIGARETTE-SEAMS. PAUL A. DRUCKLIEB, New York, N. Y., assignor to New York Cigarette Machine Company, New York, N. Y., a Corporation of New York. Original application filed Mar. 18, 1913, Serial No. 755,104. Divided and this application filed Aug. 2, 1913. Serial No. 782,607. (Cl. 131—43.)



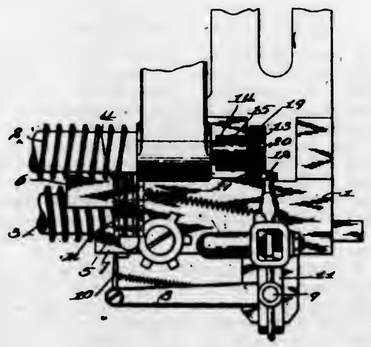
1. In a machine for finishing cigarette seams, the combination with a support with a recess therein, a presser blade, a projection from one end of the blade received in said recess, and a spring secured to said support and to said blade.

2. In a machine for finishing cigarette seams, the combination with the presser blade, a support therefor, a flat spring secured to said support at one end and to the presser blade at the other end.

3. In a machine for finishing cigarette seams, the combination with a support, a presser blade movably secured thereto, a flat spring secured at one end to said support, and at the other end to the presser blade adjacent the free end of said blade.

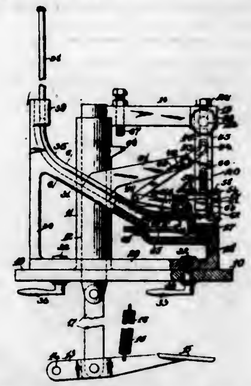
4. In a machine for finishing cigarette seams, the combination with a support with an upwardly extending recess formed therein, a presser blade having a projection extending into said recess, and a spring connecting the support and presser blade.

1,152,718. DISTRIBUTER MECHANISM FOR TYPOGRAPHICAL MACHINES. HARRY L. EIGENBROT, Pittsburgh, Pa., assignor to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed Jan. 9, 1914. Serial No. 811,233. (Cl. 199—7.)



In a typographical machine provided with means for distributing matrices therein, a separator operative to lift the matrices to deliver them in proper order to the distributer, and a cam for actuating said separator, said cam being constructed in parts adjustable to vary the point of lift and thereby secure and maintain the correct relative timing of the operation of the separator relatively to the distributer.

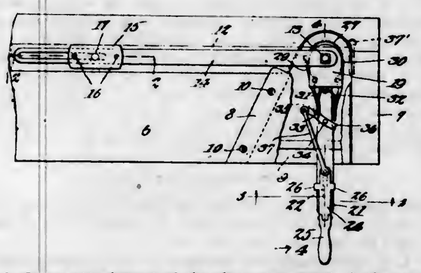
1,152,719. FASTENER-SETTING MACHINE. IRVING EPSTEIN, New York, N. Y. Filed July 8, 1913. Serial No. 777,864. (Cl. 1—3.)



1. A fastener setting machine consisting of a reciprocating post having a substantially T-shaped frame thereon, plungers arranged on the cross-piece of the frame, means on the cross-piece for adjusting the plungers along the cross-piece, a table, brackets mounted on the table, means for adjusting the brackets on the table, a die on each bracket, a chute supported on each bracket to conduct objects to a position to be operated on by the plunger and die aforesaid, feeding means mounted on each bracket and adjustable therewith, and an operative connection between the feeding means and the plunger.

2. In a fastener setting machine, a plunger, a holder suspended on the plunger and slidable thereon, the holder being slotted at the bottom, yielding means for holding the holder in its normal position, the holder being open at its ends to permit the passage of objects through the slot, a die toward which the plunger is arranged to be moved and means for projecting objects into the holder through one of the open ends, said yielding means aforesaid consisting of a spring bearing on the plunger and bearing on the holder, said spring having a projecting end arranged to form a yielding stop for objects in the holder.

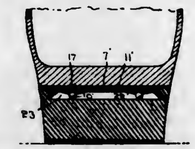
1,152,720. SHUTTER-LOCK. GEORGE W. FISHER, Baltimore, Md., assignor of one-half to Hyman N. Talkin, Baltimore, Md. Filed Nov. 20, 1914. Serial No. 873,100. (Cl. 10—135.)



1. In an attachment of the character specified, the combination of a spindle adapted to be pivoted to a window sill, and a lever secured to turn with the spindle and slidably connected with a shutter hinged to the frame, with means for turning the spindle and locking the same at either extremes of its movement, said means embodying a plate fixed to said spindle and provided with an extension, a pivoted handle slidably mounted on said extension and adapted to move said extension to rotate said spindle, ratchet disks having oppositely faced teeth on said spindle, a pawl for each ratchet disk, and means operated by sliding said handle back and forth for throwing said pawls into and out of engagement with said ratchet disks.

2. In an attachment of the character specified the combination of a spindle adapted to be pivoted to a window sill, and a lever secured to turn with the spindle and slidably connected with a shutter hinged to the frame, with means for automatically locking the spindle at either extreme of its movement, said means embodying two plates on the spindle, two ratchet disks on the spindle between the plates, two pawls pivoted between the plates, a spring normally holding the pawls in engagement with the disks, an extension on one of the plates, a pawl operating lever pivoted to said extension having teeth to engage the pawls, an extension slidable on the plate extension, a handle carried by the last named extension, and a link connecting the pawl operating lever with the slidable extension.

1,152,721. DETACHABLE HEEL. WILLIAM M. FRITSCHE, Mangum, Okla. Filed Oct. 23, 1913. Serial No. 796,006. (Cl. 36—36.)



1. Means for securing a detachable lift to a shoe heel comprising a heel plate arranged to be secured to a heel, a plate arranged to be embedded in the detachable lift, shanks secured upon said heel plate, and ball heads formed upon the ends of said shanks, said lift plate having key hole slots formed therein, and its portions at the sides of said slots deflected laterally and inclined longitudinally, said lift plate also having a concavity formed at the lower ends of each of said slots and projecting in opposite direction to the side edges of said slots, whereby to provide for the downward travel of said shanks through said slots and the subsequent seating of said ball heads in said concavities for securing said lift to said shoe heel.

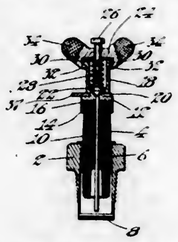
2. In combination with a shoe having a heel, a plate secured to said shoe heel, a detachable heel member for said shoe heel, a plate embedded in said detachable heel member, shanks secured upon said shoe heel plate, and ball heads formed upon the ends of said shanks, said detachable heel member plate having key hole slots formed therein, and its portions at the sides of said slots deflected laterally and inclined longitudinally, said plate also having a concavity formed at the lower ends of each of said slots and projecting in opposite direction to the side edges of said slots, whereby to provide for the downward travel of said shanks through said slots and the subsequent seating of said ball heads in said concavities for securing said detachable heel member to said shoe heel.

1,152,722. PRIMING DEVICE. FREDERICK M. FURBER, Revere, Mass., assignor to Arthur R. Mosier, New York, N. Y. Filed Dec. 10, 1913. Serial No. 807,763. (Cl. 123—169.)

1. The combination with a spark plug having an insulator provided with a bore, of an electrode movable in said bore, a cap on said insulator, a valve seat in said cap, and a valve carried by said electrode and adapted to fit said seat.

2. The combination with a spark plug having an insulator provided with a bore, of an electrode movable in said bore, a cap on said insulator having an aperture through which said electrode projects, said aperture and bore forming a passage through said plug, a valve seat in said cap, a valve mounted on said electrode and adapted to fit said seat to close said passage or to be moved away from said seat to open the passage, and means for normally holding said valve on its seat.

3. The combination with a spark plug having an insulator provided with a bore, of an electrode slidable in said bore, a cap upon said insulator having a passage through which said electrode projects, and means carried by said electrode for closing said passage.



4. The combination with a spark plug having an insulator provided with a passage therethrough, of an electrode removably supported in said passage, a valve fixed on said electrode, and means coöperating with said valve and electrode to maintain said passage normally closed, but permitting the removal of the electrode and valve from the plug.

5. The combination with a spark plug having an insulator provided with a bore, of a priming cup mounted on said insulator and having an outlet communicating with said bore, said outlet and bore forming a passage through said plug, a valve seat in said outlet, a valve mounted to slide longitudinally of said outlet toward said insulator into engagement with said seat to close said passage and movable in an opposite direction to open said passage, and means for normally holding said valve closed.

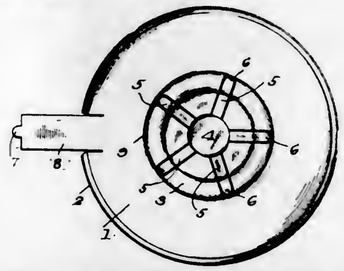
[Claims 6 to 10 not printed in the Gazette.]

1,152,723. SPRINGLESS LOCK. SAMUEL GARVIN, Terre Haute, Ind. Filed Sept. 2, 1913. Serial No. 787,622. (Cl. 194—83.)



The combination with a lock casing and a coin guide open at its ends, of an arcuate bolt slidably mounted within the casing and having a coin receiving space normally registering with the outlet end of the guide, said bolt being weighted and normally projected to active position, there being a recess in the bolt for the reception of a bolt retracting key, a coin guard pivotally mounted in the casing above and beyond the bolt and slidably engaging the bolt, means carried by the bolt and coöperating with the coin guard for supporting a deposited coin within the recess in the bolt, manually operated means for shifting the coin guard relative to the bolt, thereby to engage a deposited coin in the face of the bolt and retract the bolt from normal position, a guard extending across the coin chute and slidably mounted therein, said guard being normally held by gravity in position below the inlet end of the coin chute, and means depending from said guard for engagement by the deposited coin to elevate the guard and close the inlet end of the coin chute when the bolt is retracted, and a second manually operated means for retracting the bolt, said last named means being extended from one side of the casing and the coin guard operating means being extended from the other side of the casing.

1,152,724. CANDLESTICK. FREDERICK TAYLOR GAUSE, New York, N. Y., assignor to Standard Oil Company of New York, New York, N. Y. Filed Feb. 6, 1915. Serial No. 6,430. (Cl. 67—23.)



1. A candlestick comprising a blank of sheet material provided with a ridge and with a plurality of bifurcate slits intersecting the said ridge to form bendable tongues having offset portions, the tongues of the blank being adapted to be bent upwardly to form a candle-receiving socket and thus complete the article.

2. A candlestick comprising a blank of sheet material provided with an upstanding ridge and with a plurality of bifurcate slits intersecting the said ridge to form bendable tongues having offset portions, the tongues of the blank being adapted to be bent upwardly to form a candle-receiving socket and thus complete the article.

3. A candlestick comprising a blank of sheet material provided with an annular ridge and with a plurality of bifurcate slits extending radial to the said ridge and intersecting the same to form bendable tongues having offset portions, the tongues of the blank being adapted to be bent upwardly to form a candle-receiving socket and thus complete the article.

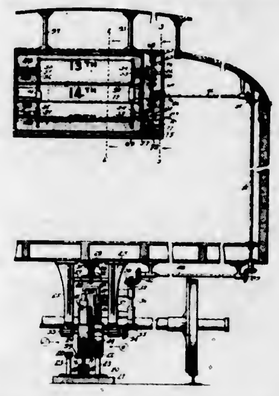
4. A candlestick comprising a blank of sheet material provided with a depression in its upper surface and with bifurcate slits disposed so that their side portions terminate at the edges of the said depression, bendable tongues being provided between the side portions of said slits and being adapted to form a candle-receiving socket when bent upwardly from the blank in the formation of the complete article.

5. A candlestick comprising a blank of sheet material provided with a circular depression and with an annular ridge concentric thereto, said blank also having a plurality of bifurcate slits extending radial to the said ridge with their side portions terminating at the edges of the depression and intersecting the ridge to form bendable tongues having offset portions, the tongues of the blank being adapted to be bent upwardly to form a candle-receiving socket and thus complete the article.

1,152,725. RAILWAY-STATION INDICATOR. CHARLES W. GROENING, New York, N. Y. Filed July 7, 1914. Serial No. 849,408. (Cl. 40—46.)

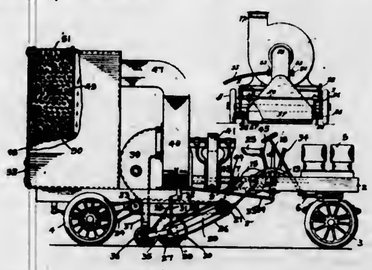
1. A railway station indicator, comprising a movable index having display members serially arranged; means for successively exposing said members, embodying an actuating device disposed adjacent the roadbed; and a plurality of operating devices serially mounted on the roadbed for operatively engaging said actuating device, said operating devices being graduated to operate in correspondence with the serial arrangement thereof.

2. A railway station indicator, comprising a movable index having the names of stations serially arranged; an operating mechanism for successively exposing said names, said mechanism embodying a rotary member disposed adjacent the roadbed; a plurality of operating rails for engaging said rotary member for relatively short periods, in correspondence with the time requirement for exposing said names; resilient supports for said rails to maintain the same normally in the path of said rotary member; a brake for said rotary member; means for automatically setting said brake to hold said rotary member; and means mounted upon the roadbed for releasing said brake prior to the engagement of said rotary member with said rails.



3. A railway station indicator, comprising a movable index having the names of stations serially arranged; and operating mechanism for successively exposing said name, said mechanism embodying a rotary member disposed adjacent the roadbed; a plurality of operating rails for engaging said rotary member for relatively short periods, in correspondence with the time requirement for exposing said names; resilient supports for said rails to maintain the same normally in the path of said rotary member; a brake for said rotary member; means for automatically setting said brake to hold said rotary member; and a plurality of releasing rails disposed intermediate the stations of a railway system.

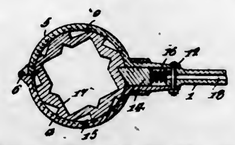
1,152,726. STREET-SWEEPER. LESLIE S. HACKNEY, St. Paul, Minn. Filed Feb. 21, 1911. Serial No. 609,998. (Cl. 15—17.)



1. A street sweeper comprising a frame having carrying wheels, a motor mounted on said frame, a revolving brush operatively connected with said motor, bars pivotally connected at their forward ends with said frame and extending downwardly and rearwardly therefrom and having bearings at their rear ends for said brush, a suction fan mounted on said frame, a suction head arranged in the rear of said brush and having carrying wheels and links pivotally connecting it with the pivots of said brush, the walls of said head being connected at its upper end with said fan, said brush and head being free to rise and fall with the inequalities of the ground over which they are moving, the open end of said head being adjacent to said brush for collecting the dust and dirt from said brush.

2. A street sweeper comprising a frame having carrying wheels, a motor mounted on said frame, a revolving brush operatively connected with said motor and having freedom of vertical movement, a suction head composed of telescoping sections arranged in the rear of said brush and having an open lower end, carrying wheels for said head, a suction fan and casing therefor, and a trunk connecting said head with said suction fan, said head being free to rise and fall with the inequalities of the ground over which the brush may be moving.

1,152,727. WRENCH. JAMES G. HARTER, Berwick, Pa. Filed Jan. 21, 1915. Serial No. 3,621. (Cl. 81—60.)



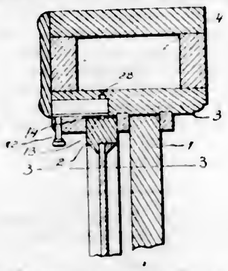
1. A wrench of the character described comprising a pair of substantially semicircular holding members, one end of said members being pivotally connected, extensions carried at the free ends of said members, each of said members provided with a groove, a socket, an enlarged portion on said socket for engagement with said grooves, said socket being retained between said members, a sleeve arranged about said extensions to retain said members in engagement with said socket, a handle portion, an enlargement on one end of said handle portion, said enlargement extending between said extensions, means connecting said enlargement and said extensions, a pair of outstanding lugs on said enlargement engaging said sleeve and retaining the same in a rigid position, said enlargement being bifurcated, a pawl mounted between the braces of the bifurcation in said enlarged portion, and a spring to retain said pawl in engagement with said socket, as and for the purpose set forth and described.

2. A wrench of the character described comprising a pair of substantially semicircular holding members, one end of said members being pivotally connected together, extensions formed at the free ends of said members and extending in substantially parallel relation to each other, a socket arranged between said members, a sleeve mounted on said extensions to retain said members in engagement with said socket, a handle portion having an enlargement formed at one end, said enlargement fitting between said extensions, means connecting said enlargement and said extensions, a pair of lugs on said enlargement engaging said sleeve, to retain the same in a rigid position, and a pawl carried by said enlargement to actuate said socket as and for the purpose set forth and described.

1,152,728. SASH-LOCK. CLAUDE P. HATHAWAY, Coffeyville, Kans., assignor of one-half to John G. Robinson, Coffeyville, Kans. Filed May 13, 1913. Serial No. 767,345. (Cl. 16—119.)

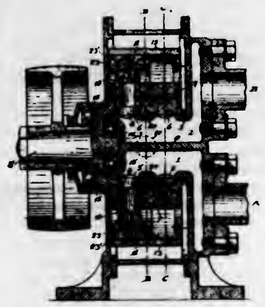
The combination with a window sash and a window casing, of a perforated locking plate secured to said window sash, a spring pressed locking pin mounted for locking engagement with said plate, a housing for said locking pin, a leaf spring rigidly secured at one of its ends to the wall of said housing, its free end extending toward the opposite end of said housing and being curved downwardly, a lever pivoted at its intermediate portion in said housing adjacent the locking pin, one end of said lever engaging the locking pin, its free end inclining upwardly, a second lever pivoted at its intermediate portion at the opposite end of said housing, one of its ends extending downwardly and engaging the inner end of a slidable push pin, said pin mounted in said housing, the

free end of said second lever extending upwardly and its end engaging the spring, the upwardly extending end of the first mentioned lever engaging the second mentioned lever adjacent its end, said spring engaging the first



mentioned lever between its pivotal point and its end providing means for holding said locking pin in an operative or inoperative position.

1,152,729. VARIABLE-STROKE MOTOR OR PUMP. HENRY SELBY JIELE SHAW, London, England. Filed May 19, 1909. Serial No. 496,057. (Cl. 138—3.)



1. The fluid machine comprising the combination of a cylindrical valve provided with ports, radial cylinders rotatable relative to said valve and having ports coöperating radially with the ports of said valve, pistons operating in the cylinders; a ring mounted eccentrically in relation to the primary axis of rotation with which ring the pistons coöperate without definite attachment, and a compensating ring engaging the piston heads and always maintaining position concentric with the eccentric ring.

2. The fluid machine comprising the combination with a cylindrical valve provided with ports, radial cylinders rotatable relative to said valve and having ports coöperating with the ports of said valve, and pistons operating in the cylinders; of a ring mounted eccentrically in relation to the primary axis of rotation with which ring the pistons coöperate without definite attachment, slippers capable of angular movement carried by the piston heads, and passages leading from the outside of said slippers and communicating with fluid within the pistons and means for controlling the flow of fluid through said passages.

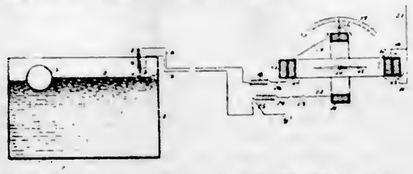
3. The fluid machine comprising the combination of a cylindrical valve provided with ports, radial cylinders rotatable relative to said valve and having ports coöperating radially with the ports of said valve, pistons operating in the cylinders; a ring mounted eccentrically in relation to the primary axis of rotation with which ring the pistons coöperate without definite attachment, a compensating ring engaging the piston heads and always maintaining position concentric with the eccentric ring, and slippers capable of angular movement carried by the piston heads.

4. The fluid machine comprising the combination with a circular valve provided with ports, radial cylinders rotatable relative to said valve and having ports coöperating with the ports of said valve, and pistons operating in the cylinders; of a ring mounted eccentrically in relation to the primary axis of rotation, with which ring the pistons coöperate without definite attachment, a ring engaging the piston heads and always maintaining position concentric with the eccentric ring, slippers capable of angular movement carried by the piston heads, and passages leading from the outside of said slippers and communicating with fluid within the pistons and means for controlling the flow of liquid through said passages.

5. The fluid machine comprising the combination of a cylindrical valve provided with ports, radial cylinders rotatable relative to said valve and having ports coöperating radially with the ports of said valve pistons operating in the cylinders; a ring mounted eccentrically in relation to the primary axis of rotation with which ring the pistons coöperate without definite attachment, means for varying the eccentricity of the ring, and a compensating ring engaging the piston heads and always maintaining position concentric with the eccentric ring.

[Claims 6 to 20 not printed in the Gazette.]

1,152,730. ELECTRIC LEVEL-INDICATOR. GEORGE E HENDERSON, near Manton, Cal. Filed Sept. 26, 1912. Serial No. 722,485. (Cl. 177—351.)



1. In an indicator for electrically designating at a station the height of the level of a liquid supply situated at a distant point therefrom, the combination of a plurality of electric circuits energized from a common source of electric energy, one of said circuits extending to said distant point, with means including a coil situated at such distant point for automatically varying the ratio of the current flowing in one of the said electric circuits to the current flowing in each of the remaining circuits in accordance with changes in the height of the level of the liquid at such distant point, electrical connections between said coil and the circuit extending to said distant point, a solenoid at the station, and an armature cooperating with said solenoid and acted upon by magnetic forces due to the current flowing through the one and each of the remaining electric circuits for designating the changes of the height of the level of the liquid at a distant point.

2. In an indicator for electrically designating a station the height of level of a liquid supply situated at a distant point therefrom, the combination of two electric circuits energized from a common source of electric energy, one of said circuits extending to said distant point, a variable reactance coil located at said distant point, means including a core operable by the liquid supply at such distant point for changing the positions relative to each other of the electric circuit and the magnetic circuit of said variable reactance coil for automatically varying the ratio of the current flowing in one of said circuits to the current flowing in the other of the circuits, a solenoid at the station, and an armature coacting with said solenoid and operatable by magnetic forces due to the said currents for designating the height of the level of the liquid at the distant point.

3. In an indicator for electrically designating at a station the height of the level of a liquid supply situated at a distant point therefrom, the combination of two electric circuits energized from a common source of electric energy, one of said circuits extending to said distant point, a variable reactance coil located at said distant point, means

including a core operatable by the liquid supply at such distant point for changing the positions relating to each other of the electric circuit and the magnetic circuit of said variable reactance coil for automatically varying the ratio of the current flowing in one of said circuits to the current flowing in the other circuit in accordance with the variations in the height of elevel of the liquid, electrical connections between said core and the circuit extending to said distant point, a solenoid at the station, and an armature associated with said solenoid acted upon by the magnetic forces due to the current flowing through each of the said circuits for designating the changes of the height of level of the liquid at a distant point.

4. In an indicator for electrically designating at a station the height of level of a liquid supply situated at a distant point therefrom, the combination with a variable reactance coil located at said distant point, of means operatable by the liquid supply at such distant point for changing the positions relative to each other of the electric circuit and the magnetic circuit of said coil; a series electric circuit including said coil energized from a source of alternating current and including one of two coaxial solenoids lying in the same plane and a second reactance coil; a second series electric circuit energized from the same source of alternating current including the other of said solenoids, a third reactance coil and a resistance; a third solenoid, whose plane is at right-angles to the planes of said other solenoids, connected in series with one of said series circuits; and a pivotally mounted armature associated with said solenoids and adapted to be acted upon by magnetic forces due to the current flowing in each of said solenoids for designating the changes of the height of the level of the liquid at a distant point.

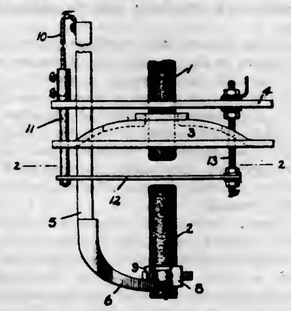
5. In an indicator for electrically designating at a station the height of level of a liquid supply situated at a distant point therefrom, the combination with a variable reactance coil located at said distant point, of means operatable by the liquid supply at such distant point for changing the positions relative to each other of the electric circuit and the magnetic circuit of said coil, a series electric circuit energized from a source of alternating current, including one of two coaxial solenoids lying in the same plane and including a second reactance coil, a second series electric circuit energized from the same source of alternating current and including the other of said solenoids, said solenoids being wound in opposite directions about their common axis when considered with reference to either terminal of said source of alternating current, a third reactance coil and a resistance included in said second series circuit, a third solenoid whose plane is at right-angles to the planes of said other solenoids and which is connected in series to one of said electric circuits, and an armature pivotally mounted in said solenoids and adapted to be acted upon by magnetic forces due to the current flowing in each of said solenoids for designating the changes of the height of level of the liquid at said distant point.

[Claims 6 to 18 not printed in the Gazette.]

1,152,731. ARC-LAMP. CHRISTIAN HENRICHSEN, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 11, 1912. Serial No. 725,124. (Cl. 176—118.)

1. In an arc lamp, a pair of axially alined electrodes between which the arc is formed, a conductor adapted to carry the arc current past the arc, a second conductor arranged parallel and adjacent to said first conductor and connected in series therewith, and a conductor arranged substantially parallel to said first conductor on the opposite side of the arc therefrom and electrically connected to said second conductor.

2. In an arc lamp, a pair of axially alined electrodes between which the arc is formed, a conductor adapted to carry the arc current past the arc, a second conductor arranged substantially parallel and adjacent to said first conductor and connected in series therewith, a third conductor substantially parallel to said first conductor but on the opposite side of the arc therefrom, and a conducting ring inclosing the axis of the electrodes connected to the second and the third conductors.

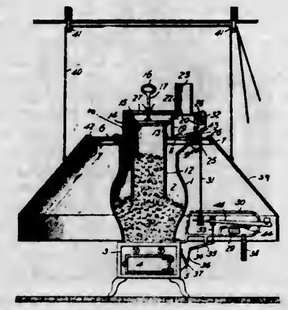


3. In an arc lamp, a pair of axially alined electrodes between which the arc is formed, a conductor adapted to carry the arc current past the arc, a second conductor arranged substantially parallel and adjacent to said first conductor and connected in series therewith, a third conductor substantially parallel to said first conductor on the opposite side of the arc therefrom, and a conducting ring surrounding the arc electrically connected to the second and the third conductors.

4. In an arc lamp, a pair of axially alined electrodes between which the arc is formed, a conductor adapted to carry the arc current past the arc and two arms electrically connected to said first conductor and to the lower electrode and inclined downwardly from the bottom of said conductor and passing partially around said electrode.

5. In an electric arc lamp, a pair of electrodes, one of which has its arcing face above that of the other, a conductor adapted to carry the arc current past the arc on one side thereof, a second conductor adjacent to said first conductor and connected in series therewith to partially neutralize the blow effect of the first conductor upon the arc, a third conductor in the arc circuit on the opposite side of the arc for neutralizing the residual blow effect, and a conductor in a neutral position connecting the conductors of the two sides.

1,152,732. HEATER FOR BROODERS. CLEMENT V. HILL, Trenton, N. J. Filed Dec. 19, 1914. Serial No. 878,093. (Cl. 126—74.)



1. In a brooder heater, the combination with a stove having a top plate provided with a smoke opening and a fuel opening, a gas collecting chamber positioned on said plate over each of said openings, said chambers being always in open communication with each other and with the smoke discharge flue, and a damper in the smoke opening.

2. In a brooder heater, the combination with a stove having a fuel opening and a smoke opening in its top plate, a valve for the fuel opening and a damper in the

smoke opening, a gas collecting chamber over each of said openings, and a smoke discharge flue leading from one of said chambers, said chambers being in constant open communication with each other and with the smoke discharge fuel opening.

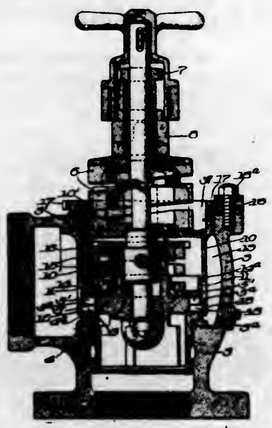
3. In a brooder heater, the combination with a stove, having an opening in its top plate, a magazine suspended in the stove through said opening, a valve to close the upper end of the said magazine, a chamber to collect gas escaping from the magazine, a second chamber mounted on the top plate of the stove in constant open communication with the magazine chamber and the smoke discharge flue, said top plate being provided with a smoke opening leading to said second chamber, and a damper in said smoke opening.

4. In a brooder heater, the combination with a stove having a fuel opening and a smoke opening in the top plate, of a magazine suspended through the fuel opening in the stove, a valve for the top of the magazine, a chamber surrounding the top of the magazine and always in communication with the smoke discharge flue, a damper in the smoke opening, a chamber over said damper in smoke opening and always in communication with said flue, an air door for the chamber over the smoke opening and means for closing the said door and opening the damper.

5. In a brooder heater, the combination with a stove having a fuel opening and a smoke opening, a valve for the fuel opening and a damper for the smoke opening, communicating chambers over said openings always in communication with the smoke discharge flue, an air door for one of said chambers, an air door for said stove and means for approximately simultaneously opening one air door and closing the other air door and closing the damper when the chamber air door is open and opening the damper when the chamber air door is closed.

[Claims 6 and 7 not printed in the Gazette.]

1,152,733. SAFETY-VALVE. ARTHUR M. HOUSER, Chicago, Ill., assignor to Crane Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 14, 1913. Serial No. 795,135. (Cl. 137—53.)



1. In a safety valve, the combination of a body member having inlet and outlet openings and an upper open bore disposed in substantial alinement with the inlet opening, the latter being provided with a seat, a pop valve mechanism depending from the bore to the said seat, a pop regulating means therefor adjustably mounted in the body member and arranged about and normally in a lap relation with the said mechanism, said means comprising a ring-like member constructed to permit the exit of steam through the outlet opening when the valve mechanism is unseated and having its upper end disposed in a projecting relation with reference to the opening of the bore to provide for its direct manipulation to vary the lap relation of said member with the valve mechanism.

2. In a safety valve, the combination of a valve body having inlet and outlet openings and comprising a casing provided with a seat and a bore located above said seat, a pop valve mechanism depending from the bore to the seat and presenting dissimilar areas to the pressure when seated and unseated, and a pop regulating means therefor adjustably mounted in said casing and comprising a tubular member having its lower portion normally disposed in a lap relation with that part of the valve presenting the greater area to the pressure, the diameter of the bore being slightly greater than that of the said valve part, said member having its upper portion disposed in said bore for its ready manipulation to vary the lap with said mechanism.

3. In a pop safety valve, the combination of a casing provided with a seat and an upper bore, a pop valve mechanism extending downwardly through the bore to said seat, and a pop regulating means therefor adjustably mounted in the casing and normally in a lap relation with the said mechanism, said means comprising a valve inclosing sheath member having an outwardly projecting upper portion extending through said bore whereby the sheath may be manipulated thereby to vary the lap, substantially as described.

4. In a pop safety valve, the combination of a casing provided with a seat and an upper bore, a pop valve mechanism extending downwardly through the bore to said seat, a pop regulating means therefor adjustably mounted in the casing and normally in a lap relation with the said mechanism, said means comprising a valve inclosing sheath member having an outwardly projecting upper portion extending through said bore whereby the sheath may be manipulated thereby to vary the lap, and a locking means engaging said extending portion to lock the sheath in an adjusted position.

5. In a pop safety valve, and in combination, a casing provided with a seat and an upper bore, a pop valve mechanism comprising a main valve on the seat having an apertured circumferential rim portion and an auxiliary valve seated thereon, and a pop regulating means comprising a valve inclosing sheath mounted in the casing to have its ported lower end in lap relation with said auxiliary valve and rim portion to provide a double exit for the pressure when these members are lifted, said sheath having its upper portion extended beyond the bore to provide for its direct manipulation to vary the lap with said mechanism.

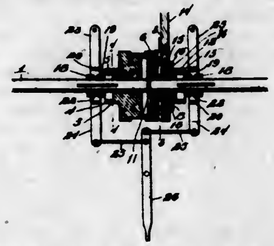
[Claims 6 and 7 not printed in the Gazette.]

1,152,734. PUMP. JOSEPH F. JONES, Jr., Bakersfield, Cal. Filed May 14, 1914. Serial No. 838,437. (Cl. 103—84.)



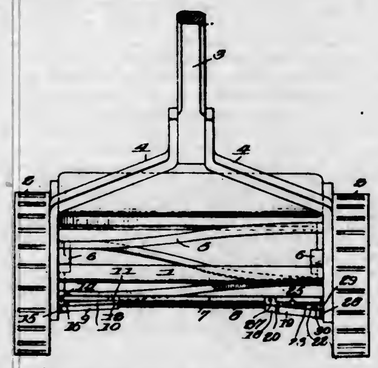
In a compressed air lift pump, the combination with an outer circular flow pipe, of an air pipe concentrically positioned therein and extending to a point adjacent the lower end thereof to provide an annular space between said flow pipe and said air pipe, a T-shaped casing secured on the lower end of said air pipe and having its opposite ends closed, a discharge nozzle projecting at substantially right angles from said casing on diametrically opposite sides of said air pipe substantially midway of said annular space, said nozzle being inclined to the vertical and discharging upwardly to produce a spiral motion around said air pipe, the construction and arrangement of parts being such that air bubbles move inwardly toward the air pipe and decrease the friction between the surface thereof and the body of ascending water.

1,152,735. REVERSIBLE COUNTER-SHAFT GEARING. ROY D. JONES, Cuyahoga Falls, Ohio. Filed July 2, 1913. Serial No. 777,109. (Cl. 74—59.)



A reversing gearing for a counter shaft including a shaft, a relatively fixed element encircling the shaft and having a bore of materially greater diameter than that of the shaft, a pulley rotatably mounted on the shaft, a hub loosely mounted on the shaft and having an annular projection formed with gear teeth and seated in a recess in the pulley, said annular projection being of materially less diameter than the interior diameter of the recess, said hub being rotatably mounted in the bore of the fixed element, pinions engaging the gear teeth of the annular projection and a gear rack formed on the interior of the recess, said pinions being diametrically located with respect to the pulley and rotatably mounted in the fixed element, and means for operatively connecting either the pulley or the hub to the shaft.

1,152,736. LAWN-MOWER SHARPENER. CHARLES F. JUDSON, Eagle, Idaho. Filed Dec. 18, 1914. Serial No. 877,896. (Cl. 56—19.)



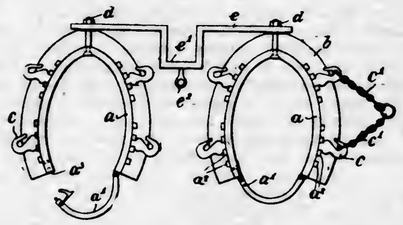
1. A sharpener for lawn mowers comprising a file or bar of approximately rectangular cross section having alternate file or cutting faces, and means in connection with the file for connecting the file to a lawn mower with the long axis of the file parallel with the axis of rotation of the blades of the mower, said means comprising a pair of U-shaped brackets, each consisting of a body adapted for connection with the mower, and arms extending approximately parallel from the body, a link for connecting the arms of each bracket to the adjacent end of the bar, each link being of channel shape and comprising a body and flanges extending laterally from the body in the same direction, the arms of each bracket being pivoted to the flanges of the adjacent link at the outer end thereof, and the bar having a pair of oppositely arranged indentations on the plain faces thereof near each end, the flanges of each link having bosses on their inner faces for engaging the indentations, said bosses being at the inner end of the link, and a spring arranged between the body of each link and the bar, between the pivotal connections of the link and the adjacent end of the bar, the springs normally holding the links inclined with respect to the bar, one of the links being sectional, and the sections being adjustable with respect to each other, and means for securing the sections in adjusted position.

2. A sharpener for lawn mowers comprising a file or bar of approximately rectangular cross section having alternate file or cutting faces, and means in connection with the file for connecting the file to a lawn mower with the long axis of the file parallel with the axis of rotation of the blades of the mower, said means comprising a pair of U-shaped brackets, each consisting of a body adapted for connection with the mower, and arms extending approximately parallel from the body, a link for connecting the arms of each bracket to the adjacent end of the bar, each link being of channel shape and comprising a body and flanges extending laterally from the body in the same direction, the arms of each bracket being pivoted to the flanges of the adjacent link at the outer end thereof, and the bar having a pair of oppositely arranged indentations on the plain faces thereof near each end, the flanges of each link having bosses on their inner faces for engaging the indentations, said bosses being at the inner end of the link, and a spring arranged between the body of each link and the bar, between the pivotal connections of the link and the adjacent end of the bar, the springs normally holding the links inclined with respect to the bar, one of the links being sectional, the sections being adjustable with respect to each other.

3. A sharpener for lawn mowers comprising a file or bar of approximately rectangular cross section having alternate file or cutting faces, and means in connection with the file for connecting the file to a lawn mower with the long axis of the file parallel with the axis of rotation of the blades of the mower, said means comprising a pair of U-shaped brackets, each consisting of a body adapted for connection with the mower, and arms extending approximately parallel from the body, a link for connecting the arms of each bracket to the adjacent end of the bar, each link being of channel shape and comprising a body and flanges extending laterally from the body in the same direction, the arms of each bracket being pivoted to the flanges of the adjacent link at the outer end thereof, and the bar having a pair of oppositely arranged indentations on the plain faces thereof near each end, the flanges of each link having bosses on their inner faces for engaging the indentations, said bosses being at the inner end of the link, and a spring arranged between the body of each link and the bar, between the pivotal connections of the link and the adjacent end of the bar, the springs normally holding the links inclined with respect to the bar.

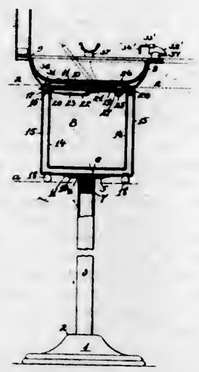
4. A sharpener for lawn mowers comprising a file or bar having cutting faces, a link pivoted to the bar near each end thereof and at the inner end of the link, a bracket pivoted to the outer end of each link for attachment to the lawn mower frame, each link extending beyond the adjacent end of the bar, and a spring arranged between each link and the bar normally holding the link inclined with respect to the bar, one of the bars being sectional and the sections being adjustable with respect to each other.

1,152,737. DRAFT-HARNESS FOR OXEN AND CATTLE. DENNIS MEADE KENNEDY, Durban, Natal, South Africa. Filed June 3, 1913. Serial No. 771,398. (Cl. 54—3.)



A draft harness for oxen comprising, in combination, a plurality of collar frames yoked together at the top only, bump and shoulder padding fixed to each collar frame at the top and sides, a yoke piece pivotally connecting the collars at the top, a frame member hinged at the lower part of each frame and arranged to be opened and closed, and attaching means at the sides of the frames for receiving the draft connections whereby the combined yoke harness as a whole can be put on by passing the opened collars onto the necks of the team and closing the hinged members.

1,152,738. SMOKER'S ARTICLE. JAMES W. KNOBLOCK, West Orange, N. J. Filed Dec. 16, 1913. Serial No. 807,003. (Cl. 131—51.)



1. A clip for ash trays comprising a body portion, and a skeleton extension in line with said body portion and extending inwardly over the tray, substantially as set forth.

2. A clip for ash trays comprising a substantially half round body portion, and a skeleton extension including a cross-bar in line with said body portion and extending inwardly over the tray, substantially as set forth.

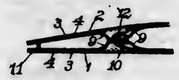
3. A clip for ash trays having a part thereof extending over the tray and cut away at the bottom to prevent deposit of ashes thereon, substantially as set forth.

4. A clip for ash trays comprising a body portion secured to the margin of the tray, side-bars extending inwardly of the tray beyond the body portion, and a cross-bar between said side-bars, substantially as set forth.

5. A clip for ash trays comprising a body portion secured to the margin of the tray, side-bars extending inwardly of the tray beyond the body portion, and a cross-bar depending from said side-bars and in line with the body portion, substantially as set forth.

[Claims 6 to 21 not printed in the Gazette.]

1,152,739. TIE-CLASP. RICHARD KREMENTZ and FRIEDRICH KAELBER, Newark, N. J., assignors to Krements & Co., a Firm composed of George K. Krements and Carl H. Lebkuecher, Newark, N. J. Filed Jan. 16, 1915. Serial No. 2,543. (Cl. 24—253.)



1. A tie clasp comprising two members pivotally connected together, each member consisting of an inner and an outer part connected together and a spring hinge connection between them, the spring of which is held between the inner and outer parts of one member and engages between the inner and outer parts of the other member, substantially as described.

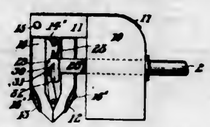
2. A tie clasp comprising two members, each composed of an inner and an outer part connected together, each inner part having ears, punched out therefrom and with raised portions adjacent said ears, said raised portion on one part forming a socket for receiving a spring, and the raised portion on the inner part of the other member holding the end of said spring, and a pivot pin extending through the ears, substantially as described.

3. In combination in a tie clasp, two members each composed of an inner part and an outer part having its edge turned over the edge of the inner part, ears integral with each inner part with an opening between the ears, each inner part adjacent the ears being raised from its attached outer part, a pivot pin extending through the ears, and a spring engaging between the two parts of each member, substantially as described.

4. A tie clasp comprising two members, each composed of an inner and an outer part connected together, each part having ears punched out therefrom and raised portions adjacent to said ears, the ears of one member being arranged closer together to provide recesses to receive the ears of the other member whereby the raw edges of the ears of both members are concealed, a pivot pin extending through the ears, and a spring having its ends arranged within the spaces afforded between the raised inner and outer parts of the members, substantially as described.

5. A tie clasp comprising two members, each composed of an inner and an outer part connected together, each part having ears punched out therefrom and raised portions adjacent to said ears, the ears of one member being arranged relatively close together to provide recesses for the reception of the ears of the other member, the inner part of the member having the narrowly spaced ears being provided with a socket constituted by the ears and transverse walls extending between the said ears, said walls being adapted to project into the opening provided in the inner part of the other member between its ears, whereby the raw edges of the ears and the socket walls are concealed, a pivot pin extending through the ears, and a spring having its ends arranged within the spaces afforded between the raised inner and the outer parts of the members, substantially as described.

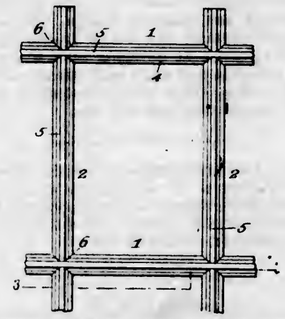
1,152,740. REVOLVING-HOOK MECHANISM. FERDINAND KULHAWY, Philadelphia, Pa. Filed Oct. 21, 1914. Serial No. 867,778. (Cl. 112—38.)



The combination with a substantially L-shaped head having an opening therethrough, of an oscillatory shaft passing through said opening, a bobbin case support pivoted to the head and arranged to swing in and out of the angle of the L-shaped head, the bobbin case support being

provided with an end adjacent its pivot point constituting a detent, a spring carried by the head and arranged to lock the bobbin case support in selected positions, the bobbin case support being provided with a pair of broad and flat arms of resilient material having opposed converging sides, in combination with a bobbin case having converging sides terminating in a guide rib, the bobbin case being adapted to be locked in the arms in one position only and a revolving hook carried by said shaft and oscillatable over the guide rib.

1,152,741. PROCESS OF CONSTRUCTING WINDOW-SASHES. MAURICE LACHMAN, New York, N. Y., assignor to Universal Electric Welding Company, Long Island City, N. Y., a Corporation of New York. Original application filed Nov. 15, 1911, Serial No. 660,373. Divided and this application filed Jan. 22, 1915. Serial No. 3,704. (Cl. 219—10.)



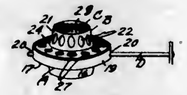
1. The process of joining the intersecting members of a metal window sash consisting in providing members having a web portion and a lateral molding, mitering each molding at the place of intersection, slotting the web portion of each member from opposite edges, placing the slotted parts in intermeshed relation to bring the moldings in a common plane, placing a separate button over and spanning the intersection and passing a welding current from one to the other and at the same time applying pressure to force the parts together to lock the members to each other.

2. The process of joining the intersecting members of a metal window sash consisting in providing members having a web portion and a lateral molding, mitering each molding at the place of intersection, slotting the web portion of each member from opposite edges, placing the slotted parts in intermeshed relation, providing four shoulders in the web at the intersections, placing a metal button in contact with said four shoulders and passing a welding current from one to the other and at the same time applying pressure to force the button down into the cavity formed by said shoulders.

3. The process of joining the intersecting members of a metal window sash consisting in providing members having a web portion and a lateral molding, mitering each molding at the place of intersection, slotting the web portion of each member from opposite edges, placing the slotted parts in intermeshed relation, forming a notch in the continuous web where it passes through the slot of the other web whereby a sharp four-shouldered cavity is formed, placing a metal button spanning said cavity and in contact with the four shoulders and passing a welding current from the button to the webs and at the same time applying pressure to force the parts together.

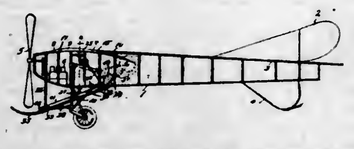
1,152,742. WICK-BURNER. WARREN MCARTHUR, Jr., Chicago, Ill. Filed Jan. 17, 1914. Serial No. 812,606. (Cl. 67—53.)

1. A wick burner having a body comprising a marginal portion having annular horizontal upper and lower walls provided with air passages, an upwardly extending portion also provided with air passages and with a flat top, a downwardly extending shank, a wick tube secured with its upper end in said flat top and with its lower end in the bottom of said shank, and a wick raiser shaft journaled in said marginal portion.



2. A wick burner comprising a body composed of a lower and an upper part provided with lapping marginal flanges, the lower body part comprising a shank adapted to be seated in a burner socket, a perforated horizontal portion extending outwardly from said shank and an upstanding marginal flange, the upper body part comprising a horizontal perforated portion, a downwardly extending marginal flange on the same and an upwardly extending central portion having a flat top, and a wick tube arranged with its upper end in the upper end of said top portion and with its lower end in the lower end of said shank.

1,152,743. AEROPLANE. FRANK MCCARROLL, Dallas, Tex. Filed Nov. 3, 1911. Serial No. 658,328. (Cl. 244—2.)



1. A running gear for aeroplanes, comprising in combination with a frame-work, an inclined slide-member carried by said frame, a carriage on said inclined slide-member, wheel supports pivoted to the sides of the frame, means operatively connecting said wheel-supports and said carriage, whereby when said carriage is moved upwardly on said slide-member, said wheels are carried into said frame, and means for operating said slide.

2. A running gear for aeroplanes, comprising in combination, with a frame-work, a fixed slide-member projecting downwardly from said frame-work, a carriage slidable on said slide-member, means for moving said slide on said slide-member, wheel supports pivotally hung from said frame-work, and pivotal connections between said wheel-supports and said slidable carriage, whereby said wheel-supports are swung into said frame-work when said carriage is moved upwardly.

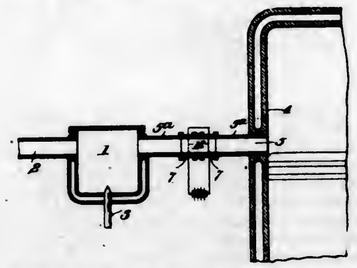
3. A running gear for aeroplanes, comprising in combination with a frame-work, wheel carrying supports pivotally carried by said frame, a carriage mounted for movement upwardly into said frame, a rigid slide-member for guiding the movement of said carriage, and means operatively connecting said wheel carrying supports and said carriage whereby said supports are carried upwardly into said frame, when said carriage is actuated upwardly.

4. A running gear for aeroplanes, comprising in combination, with a frame-work, wheel carrying supports pivotally mounted on said frame, a rigid slide-member for guiding the movement of said carriage, connecting rods pivotally joining said wheel supports and said carriage for throwing said supports upwardly into said frame when said carriage moves upwardly, the operation being such that said wheel-supports are also drawn inwardly against said frame, and means for operating said carriage.

1,152,744. REVAPORIZER FOR INTERNAL-COMBUSTION ENGINES. BARRY MACNUTT, South Bethlehem, Pa. Filed Jan. 3, 1911. Serial No. 600,482. (Cl. 123—122.)

1. In an internal combustion engine, the combination, with the engine cylinder, the carbureter, and the pipe

connecting them, of a ring in said pipe provided with an annular groove in its inner surface, insulating material in said groove, electric conductors extending across said ring with their ends seated in said insulating material, and means for passing an electric current through said conductors whereby they are heated for the purpose specified.

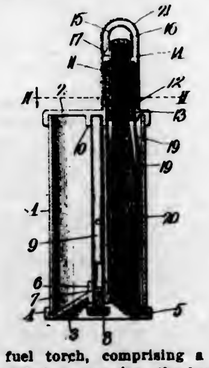


2. In an internal combustion engine, the combination, with the engine cylinder, the carbureter, and the pipe connecting them, of a ring in said pipe provided with an annular groove in its inner surface, insulating material in said groove, a bent electric conductor having portions extending across said ring, the bends of said conductor being seated in said insulating material, and means to pass an electric current through said conductor whereby the latter is heated for the purpose specified.

3. In an internal combustion engine, the combination, with the engine cylinder, the carbureter, and the pipe connecting them, said pipe being made in sections, of an enlarged globe-shaped coupling interposed between the sections of said pipe, and an electrically heated grid extending across said coupling for the purpose specified.

4. In an internal combustion engine, the combination, with the engine cylinder, the carbureter, and the pipe connecting them, said pipe being made in sections, of an enlarged globe-shaped coupling, interposed between the sections of said pipe, and an electrically heated grid extending across said coupling at the point of its greatest internal diameter for the purpose specified.

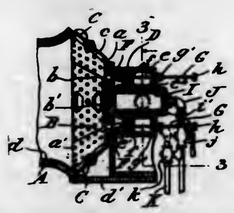
1,152,745. ALCOHOL-TORCH. ARTHUR H. MELENBACKER, Kansas City, Mo. Filed Apr. 19, 1915. Serial No. 22,323. (Cl. 158—72.)



1. A liquid fuel torch, comprising a tank having a communicating tubular extension, the bore or passage of which is of smaller diameter at its lower end than at its upper end, and is threaded at such lower end, said extension having a series of passages which establish communication between the upper or enlarged portion of said bore or passage and the interior of the tank, a pipe extending centrally and vertically through said extension and of diameter corresponding to the threaded portion of the said bore or passage and externally threaded to cooperatively engage said threaded portion of the bore or passage of the extension, a hollow cap secured upon the upper end of said pipe and spaced above the said extension and provided with a jet orifice, a series of wicks extending through said series of passages and down into the tank, and spirally wound around the said pipe and filling the said extension above the said series of passages, and wicking extending through the said pipe and into the tank.

2. A liquid fuel torch having a permanent cap at one end and a removable cap at the other, the latter being of conical form and provided with a central bore or passage, a screw plug closing said bore or passage with a liquid tight relation, a perforated pipe extending from one cap to the other and held in position thereby, a tubular extension for and communicating with the tank and of variable interior diameter and provided with a series of passages establishing communication between the interior of the tank and the portion of said extension which is of greatest interior diameter, a pipe extending through said extension and fastened therein, wicking extending through said passages and wound around said pipe and filling the extension at its upper ends, a generating cap upon the said pipe and above said extension and provided with a jet orifice, and a wicking extending through said pipe and into the tank and said cap.

1,152,746. HYDROCARBON-BURNER. EDWARD MELTZER, New York, N. Y., assignor, by mesne assignments, to Hydrocarbon Burner & Manufacturing Company, a Corporation of New Jersey. Filed Nov. 19, 1908. Serial No. 463,814. (Cl. 158—56.)

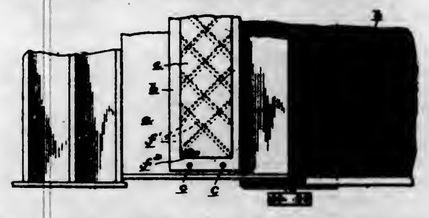


1. In a hydrocarbon burner, the combination of means for supplying air thereto and for regulating the quantity of air, an oil chamber, means for supplying oil to the oil chamber, the forward wall of said oil chamber forming a vaporizing plate, said vaporizing plate having a solid central portion and an exterior perforated portion, a steam chamber concentric with and surrounding said oil chamber whereby the oil in the oil chamber may be heated prior to vaporizing it, nozzles leading from said steam chamber and alining with the perforations in the vaporizing chamber, and manually operated means for removing obstructions from said nozzles.

2. In a hydrocarbon burner, the combination of an oil chamber, means for supplying oil to the oil chamber, the forward wall of said oil chamber forming a vaporizing plate, said plate being provided with a plurality of perforations, a steam chamber substantially concentric with and exterior of said oil chamber whereby the oil in the oil chamber may be heated, nozzles leading from the steam chamber and in alinement with the perforations in the vaporizing plate, manually operated means for removing obstructions from said nozzles and perforations, air supply means for the burner, and valve mechanism for regulating said air supply.

3. In a hydrocarbon burner, the combination of concentric oil and steam chambers, the forward wall of said oil chamber forming a vaporizing plate and extending in front of the steam chamber, a mixing chamber forwardly of said vaporizing plate, an air inlet to said mixing chamber positioned forwardly of said vaporizing plate, apertures in said vaporizing plate and leading into said mixing chamber, steam nozzles leading from the steam chamber and in alinement with the apertures in the vaporizing plate, and reciprocating members for cleaning said nozzles and apertures.

1,152,747. PAPER-MAKING MACHINE. WALTER E. METCALF, Hudson Falls, N. Y. Filed Mar. 9, 1915. Serial No. 13,142. (Cl. 92—44.)

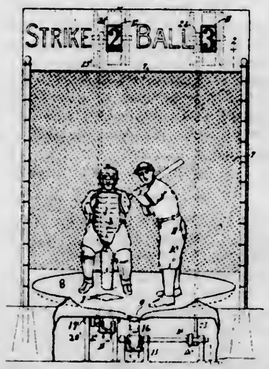


1. In combination with a Fourdrinier paper making machine, an attachment located in the pond back of the slices and provided with means for forming superposed cross-currents in the stock as it approaches the slices, said attachment consisting of an upper and a lower series of deflectors and means for supporting them, the lower set of deflectors being arranged at an angle to the deflectors of the upper set.

2. In combination with a Fourdrinier paper making machine, an attachment mounted in the pond back of the slices and extending entirely across the same and consisting of a plurality of horizontal plates connected together by vertical partitions, said partitions forming open-ended channels, the upper set of partitions being arranged at an angle to the lower set of partitions, for the purpose set forth.

3. In combination with a Fourdrinier paper making machine, an attachment mounted in the pond back of the slices and extending entirely across the same and consisting of a plurality of horizontal plates connected together by vertical partitions, said partitions forming open-ended channels, the upper set of partitions being arranged at an angle to the lower set of partitions, the partitions at the ends of the device being adjustable as to angularity.

1,152,748. BALL-PLAYING, EXERCISING, AND PRACTISING APPARATUS. HARRY R. MEYERS and WILLIAM R. MEYERS, New York, N. Y. Filed Dec. 26, 1914. Serial No. 879,124. (Cl. 124—15.)



1. A device of the character described, comprising a figure representing a catcher having a cavity for receiving pitched balls, the entrance of which substantially corresponds to the area for a strike, a conduit communicating with said cavity and adapted to return balls entering said cavity to the pitcher's position, a visual indicator and indicator operating means located in said conduit and adapted to be operated by a ball entering said cavity for indicating the balls received by said cavity, a bowl adapted to collect balls that pass outside the boundaries of said cavity and a conduit for returning said balls, the figure of the catcher being located within said bowl.

2. A device of the character described, comprising a target representing the figure of a catcher provided with a cavity for receiving pitched balls, a cage surrounding said figure on both sides, back and top, and spaced therefrom, a bowl in which said figure stands, indicators for indicating balls and strikes located in a prominent position to be easily seen from the pitcher's position, and means operated by a pitched ball adapted to register upon the strike indicator for a ball entering said cavity, and means adapted to register upon the ball indicator for a ball which fails to enter said cavity.

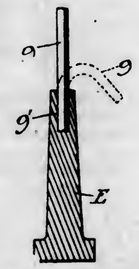
3. A device of the character described, comprising a figure representing a catcher provided with a cavity for receiving pitched balls, the entrance to which corresponds substantially to the area for a strike, indicators for indicating balls and strikes displayed in a location so as to be easily seen from the pitcher's position, a stop for pitched balls which fail to hit the target, inclosing the catcher on both sides and the back, a conduit for returning balls and a conduit for returning strikes, and means in the strike conduit operated by a pitched ball adapted to register upon the strike indicator for a ball entering said cavity, and means in the ball conduit adapted to register upon the ball indicator for a ball which fails to enter said cavity.

4. A device of the character described, comprising a target provided with a cavity for receiving pitched balls, the entrance to which corresponds substantially to the area for a strike, an indicator for indicating strikes, a return ball conduit communicating with said cavity, and a bucket wheel adapted to be turned by a ball after entering said cavity for operating said strike indicator.

5. A device of the character described, comprising a target provided with a cavity for receiving pitched balls, the entrance to which corresponds substantially to the area for a strike, an idicator for indicating strikes and an indicator for indicating balls, a return ball conduit, a connection between said cavity and said conduit, a stop for the balls which fail to hit the target, said indicators located near the top of said stop so as to be easily seen from the pitcher's position, a bowl adapted to receive all balls which fail to enter the cavity, a second conduit for returning said last mentioned balls, a connection between the same and said bowl, and a device operated by a ball which passes from said bowl for actuating the ball indicator, and a device operated by a ball which enters the cavity for actuating the strike indicator.

[Claims 6 to 11 not printed in the Gazette.]

1,152,749. SELF-LOCKING PIN. THOMAS F. MULLANEY, New York, N. Y. Filed Feb. 8, 1913. Serial No. 747,186. (Cl. 85—5.)

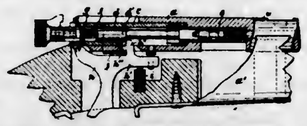


1. A self-locking pin embodying a rigid, non-threaded, tapered body portion, and a separate rod of pliable material extending from, and secured to, the small end of said body portion.

2. A self-locking pin embodying a rigid, non-threaded body portion of substantially uniform thickness, said body portion being tapered in width substantially throughout its length, and a separate rod composed of more pliable material extending from, and secured to, the small end of said pin.

3. A self-locking pin embodying an elongated, non-threaded tapering castings, provided with a socket at its small end, and a pliable rod seated in said socket and extending from the end of the casting in alinement therewith.

1,152,750. FIREARM. CHARLES A. NELSON, Utica, N. Y., assignor to Savage Arms Company, Utica, N. Y., a Corporation of New York. Original application filed Oct. 6, 1914, Serial No. 865,266. Divided and this application filed Feb. 17, 1915. Serial No. 8,742. (Cl. 42—70.)

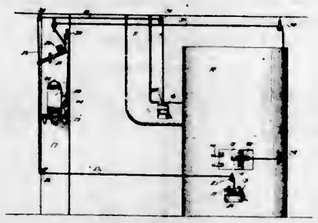


1. In combination, with the breech-including part of a gun, a firing mechanism, and a firing mechanism locking device embracing said part and rotative around the same into and out of locking relation to said mechanism.

2. In combination, with the gun barrel having a breech-casing, a firing mechanism, and a firing mechanism locking device consisting of a strap embracing said breech-casing and rotative around the same, said strap opposing in one position thereof firing movement of said mechanism and in another position having a recess registering with said mechanism and thereby allowing firing movement thereof.

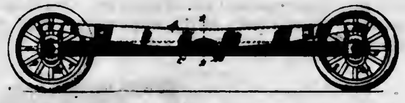
3. A gun having a firing mechanism and also having fixed parts one partly covered by the other, in combination with a firing mechanism controlling device movable back and forth between said parts, said device and the first-named part having indices of opposite significance one of which is adapted to be covered by said device and the other by the second-named part alternately on back and forth movement of said device.

1,152,751. DRAFT-REGULATOR FOR HEATING-FURNACES. ABRAHAM T. OLIVER, Tamaqua, Pa. Filed May 13, 1913. Serial No. 767,466. (Cl. 126—286.)



The combination with a heating element having draft doors therein, of a draft regulator, said regulator comprising a bracket, a standard supported upon the bracket, an arm pivotally connected to the standard and having an elongated eye in the free end thereof, a second arm pivotally connected to the standard and adapted to pass through the eye in the first mentioned arm, a weighted lever pivotally supported above the standard, a cable connected at one end to the weighted lever and the opposite end provided with an eye adapted to engage the second mentioned pivoted arm on the standard, means connecting the weighted lever with the doors of the heating element, and means supported upon the bracket for releasing the first mentioned pivoted arm from the second mentioned pivoted arm.

1,152,752. COMBINED CUSHIONING AND REBOUND-CHECKING DEVICE FOR VEHICLES. DOCTOR FRANKLIN OLIVER, San Francisco, Cal. Filed Dec. 17, 1912, Serial No. 737,228. Renewed Mar. 8, 1915. Serial No. 12,914. (Cl. 21—50.)



1. A cushioning device for vehicles consisting of a fixed sleeve surrounding the vehicle axle and having exterior, longitudinal keys, nuts slidable upon the keys, compressible springs between the nuts, an exterior, loosely turnable sleeve having interior right and left screw threads engaging corresponding threads of the nuts, an exterior pinion, and means connected with the vehicle frame and engaging the pinion to rotate the sleeve and advance the nuts in unison with the movements of the vehicle body.

2. The combination with a vehicle body and its axle, of a plurality of horizontally compressible springs surrounding the axle and slidable interposed nuts, a revoluble sleeve with interior right and left threads engaging the nuts, an exterior pinion, and a vertically movable rack carried by the vehicle body and engaging the teeth of the pinion.

3. The combination with a vehicle body and its axle, of a plurality of horizontally compressible springs surrounding the axle and slidable interposed nuts, a revoluble sleeve with interior right and left threads engaging the nuts, an exterior pinion, a vertically movable rack carried by the vehicle body and engaging the teeth of the pinion, and supplemental cushion springs carried by the rack above and below the pinion.

4. A cushioning device for vehicle frames, comprising a sleeve secured stationary with relation to the vehicle axle, a pair of nuts slidably mounted on keys secured in said sleeve, a coil spring interposed between said nuts, a cylindrical casing concentrically mounted with relation to the sleeve, nuts and spring, right and left hand threads formed on the inner surface of the casing with which the nuts engage, means for revolving said casing, and means for transmitting the vertical movements of the frame with relation to the axle to actuate said revolving means.

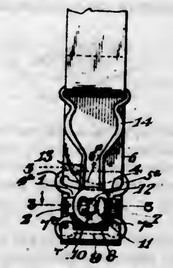
5. A combined cushioning and rebound checking device for vehicle frames, comprising a sleeve secured stationary with relation to the vehicle axle, a pair of nuts slidably mounted on keys secured in the sleeve, a cylindrical casing concentrically mounted with relation to the sleeve and nuts, bearing members secured to the sleeve upon which the casing is revolubly mounted, right and left hand threaded sections formed on the inner surface of the casing with which the nuts engage, means for transmitting both the downward and upward vertical movements of the frame with relation to the vehicle axle to revolve the casing so as to feed the nuts in opposite directions, and means interposed between the nuts and the bearing members to resist the sliding movements of the nuts with relation to each other.

[Claims 6 to 8 not printed in the Gazette.]

1,152,753. GARMENT-SUPPORTER. BENJAMIN FRANKLIN OREWILER, Chicago, Ill. Filed June 20, 1912. Serial No. 704,780. (Cl. 24—245.)

1. In a garment supporter, a stud member constructed of a single piece of sheet metal and comprising a back or base portion bent upwardly and inwardly at diametrically opposite points to form a flat sleeve, the terminal portions of the sheet metal being spaced to render the sleeve resilient and then bent into outwardly extending approximately L-shaped spring arms, the latter being provided with opposite notches, and a rubber disk having an opening through which the arms extend, said disk being seated in the said notches and forming a head.

2. A garment supporter including a plate having a transverse slot and provided at one side of the center thereof and away from the end with a narrow diagonally arranged opening to permit a piece of webbing to be inserted in the slot, said plate being provided at the outer side of the slot with an inwardly curved edge merging into the slot for holding the webbing away from the entrance.



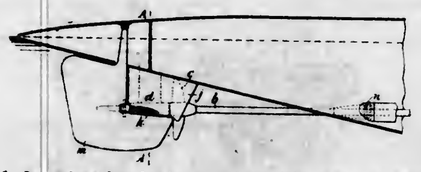
3. In a garment supporter, a plate provided with oppositely disposed approximately hook-shaped arms of unequal length spaced apart at their terminals and providing a transverse slot and forming an entrance opening at one side of the center of the slot, the longer hook-shaped arm having an approximately segmental head presenting a curved inner edge adapted to flex or bow a piece of webbing for holding the same away from the entrance opening.

4. In a garment supporter, a stud member constructed of a single piece of sheet metal forming a back portion and then bent outwardly and inwardly over the back portion at diametrically opposite points and in spaced relation to form a flat open sleeve, the terminals of the metal being spaced from each other on opposite sides of the center to render the sleeve resilient, and then bent into outwardly extending spaced approximately L-shaped arms forming a resilient stud, and a disk having an opening through which the arms extend, the outer portions of the arms being arranged at the outer face of the disk and engaging the same to retain the disk detachably on the arms.

5. A stud member comprising a back provided at opposite sides, with resilient portions bent inwardly over the back and then outwardly to form spaced spring arms, the terminals of which are bent laterally outward to form angular heads on the arms, and a rubber disk having an opening of less diameter than the combined diameter of the two heads of the arms when in their normal position, such opening allowing the angular heads to be passed therethrough and engage with and lie against the outer face of the disk, whereby the disk is detachably retained on the arms in rear of the heads.

[Claim 6 not printed in the Gazette.]

1,152,754. SUBMARINE OR SUBMERSIBLE BOAT. EDWARD LASIUS PEACOCK, Wallsend-on-Tyne, England. Filed Jan. 26, 1915. Serial No. 4,495. (Cl. 114—16.)



1. In submarine boats or submersible boats, a strut boss disposed in the stern of the boat, a shaft protruding through the hull of the boat to the strut boss, a propeller disposed on the shaft between the strut boss and the hull of the vessel, a diving rudder disposed to the rear of the strut boss and supported by the strut boss, one end of said shaft being also supported by the strut boss.

2. In submarine boats or submersible boats, a strut boss disposed in the stern of the boat, a shaft protruding through the hull of the boat to the strut boss, a propeller disposed on the shaft between the strut boss and the hull of the vessel, a diving rudder disposed to the rear of the strut boss and supported by the strut boss, one end of said shaft being also supported by the strut boss, said diving rudder being pivoted inboard of its outboard edge and curved on its under surface.

3. In submarine boats or submersible boats, a strut boss disposed in the stern of the boat, a shaft protruding through the hull of the boat to the strut boss, a propeller disposed on the shaft between the strut boss and the hull of the vessel, a diving rudder disposed to the rear of the strut boss and supported by the strut boss, one end of said shaft being also supported by the strut boss, said diving rudder being pivoted inboard of its outboard edge and curved on its under surface, said strut boss being supported by a bracket having a vertical skeg and horizontal strut.

4. In submarine boats or submersible boats, a strut boss disposed in the stern of the boat, a shaft protruding through the hull of the boat to the strut boss, a propeller disposed on the shaft between the strut boss and the hull of the vessel, a diving rudder disposed to the rear of the strut boss and supported by the strut boss, one end of said shaft being also supported by the strut boss, said diving rudder being pivoted inboard of its outboard edge and curved on its under surface, said strut boss being supported by a bracket having a vertical skeg and horizontal strut, said horizontal strut being curved on its upper surface and disposed in the plane of the diving rudder.

5. In submarine boats or submersible boats, a strut boss disposed in the stern of the boat, a shaft protruding through the hull of the boat to the strut boss, a propeller disposed on the shaft between the strut boss and the hull of the vessel, a diving rudder disposed to the rear of the strut boss and supported by the strut boss, one end of said shaft being also supported by the strut boss, a coupling to said shaft disposed between the propeller and the hull.

[Claim 6 not printed in the Gazette.]

1,152,755. COMBINATION GUIDE AND LINE-CLASP FOR FLOATS. LOUIS F. PERRON, Ballston, Va. Filed July 11, 1913. Serial No. 778,522. (Cl. 43—4.)



1. A float comprising a buoyant body having a stem projecting therefrom, a combination guide and clip engaged on the stem comprising a single piece of wire having an intermediate portion engaged through the stem transversely, one end portion of the wire being coiled around the inner part of the stem, and the other being extended longitudinally outward thereof and having a plurality of helices formed therein.

2. As an improved article of manufacture, a combined line guide and clip comprising a piece of wire bent to form an inner series of helices forming a clip, an integral longitudinal portion thereon extending a considerable distance whereby it may be wrapped upon a float stem, the first mentioned helix being of greater diameter than and arranged to encircle the stem, and a second outer integral series of helices at the outer end of said longitudinal portion and spaced from the first series whereby it may lie longitudinally outwardly of the float stem and coaxial therewith.

3. A combined clip and guide formed of wire comprising a series of concentric closed coils, an inner terminal of lesser arc thereon, a transverse stem extended from the inner terminal of the coils, a longitudinal stem formed integrally at right angles to the first at its end opposite its connection with the coil, the junction of the two stems being within the arc of said concentric coils, and a series of open coils formed on the outer end of the last named stem.

4. A clip of the class described comprising a series of close coiled concentric wire helices, one terminal being

inclined outwardly divergently from the adjacent helix, the other being turned inwardly of the arc of the concentric helices, a transverse stem formed on the inner terminal, and having an outer portion turned abruptly thereto, also within the arc of the concentric helices, and a supporting stem concentric to the clip and having a diameter equal to the length of the said transverse stem between said inner terminal and the outer abruptly turned portion of the transverse stem.

1,152,756. ELASTIC TIRE FOR VEHICLE-WHEELS. LUDVIG T. PETERSEN, Youngstown, Ohio, assignor to The Republic Rubber Company, Youngstown, Ohio, a Corporation of Ohio. Filed Mar. 31, 1915. Serial No. 18,345. (Cl. 152—13.)



1. An elastic tire for wheels having embedded directly in the material of which its tread portion is formed a series of cords transversely arranged to constitute a breaker-strip.

2. An elastic tire for wheels having embedded directly in the material of which its tread portion is formed a series of parallel cords transversely arranged to constitute a breaker-strip.

3. An elastic tire for wheels having embedded directly in the material of which its tread portion is formed a series of individual cords transversely arranged and collectively extending around the circumference of the tire to constitute a breaker-strip.

4. An elastic tire for wheels having embedded directly in the material of which its tread portion is formed a series of individual cords of uniform length transversely arranged and cohesively joined to constitute a breaker-strip.

5. An elastic tire for wheels having embedded directly in the material of which its tread portion is formed a breaker strip composed of transverse cords crossing said tread portion at an angle and collectively encircling the structure.

[Claims 6 and 7 not printed in the Gazette.]

1,152,757. WELT-GROOVER. PER ADOLF PETERSON, New York, N. Y. Filed Feb. 11, 1911, Serial No. 607,961. Renewed Feb. 4, 1915. Serial No. 6,171. (Cl. 12—103.)



In a welt groover, the combination of a handle, a head connected to the handle and having a laterally extending portion provided with a substantially V-shaped recess, whose sides are of unequal length; the longer of the said sides being co-incident with the end of the head and forming a guide, the shorter side having a pointed end forming a groover.

1,152,758. ELECTRIC SWITCH. CLARENCE D. PLATT, Bridgeport, Conn. Filed Jan. 4, 1915. Serial No. 477. (Cl. 175—293.)

1. The combination with an open switch body and a supporting yoke bridging the open end of the same having a relatively narrow intermediate portion and enlargements at opposite sides of the same, of a sheet of insulating material covering the open end of the switch body, having a parallel sided slot therein as wide as the narrowere intermediate portion and narrower than the enlarged portions of the yoke and edge portions bordering said slot engaged beneath the enlargements of the yoke.



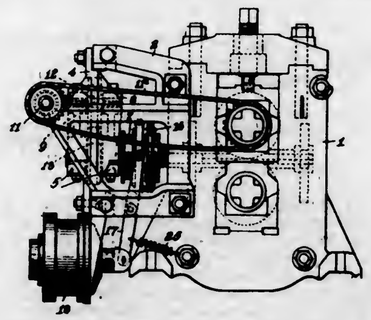
2. The combination with a supporting yoke provided with widened portions joined by a relatively narrower portion having supporting arms dependent from the opposite edges thereof, of a relatively flat sheet of insulating material having a parallel sided slot therein of the width of the narrower portion of the yoke and portions bordering said slot depressed below the plane of the sheet, the said depressed edge portions being engaged beneath the wider portions of the yoke and the edges between the said engaging portions abutting the dependent arms of the yoke to thereby center the sheet in locked engagement with the yoke.

3. As an article of manufacture, a cover for push button switches comprising a resilient sheet of insulating material having a parallel sided slot therein, and edge portions bordering said slot adjacent the ends thereof permanently depressed below the plane of the sheet.

4. The combination with an open switch body and a yoke bridging the open face of the same perforated for the passage of switch push buttons therethrough, of an insulating cover for the switch consisting of a sheet of insulating material overlying the yoke at its ends and having a slot therein extending between said ends and receiving the switch push buttons, said cover having flanges engaging beneath the edges of the yoke at relatively widely separated points adjacent opposite ends of the cover.

5. The combination with an open switch body and a yoke bridging the open face of the same provided with longitudinally separated portions perforated for the passage of switch push buttons therethrough, of an insulating cover for the switch consisting of a sheet of insulating material overlying the yoke at its ends and having a slot therein extending between said ends, said cover having flanges at the edges of the slot therein extending from the end portions which overlie the yoke down beneath the edges of the separated perforated portions of the yoke through which the push buttons pass whereby the cover is held down at four points adjacent the corners of the slot.

1,152,759. MACHINE FOR THE MANUFACTURE OF TWISTED BARS. ROBERT PORTER, Youngstown, Ohio. Filed Mar. 31, 1911. Serial No. 618,231. (Cl. 153—78.)



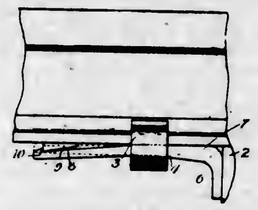
1. The combination of a rotatable head, jaws movably mounted in the head, rolls arranged to force the bar between the jaws, and means controlled by the bar in its movements for shifting the jaws.

2. The combination of a rotatable head, jaws movably mounted in the head, rolls arranged to force the bar between the jaws, and means intermediate the rolls and head and controlled by the bar in its movement for shifting the jaws.

3. In an apparatus for twisting bars, the combination of a rotatable head, jaws movably mounted in the head, rolls arranged to feed a bar between the jaws, and means for opening the jaws arranged in front of the rolls and adapted to be controlled by the bar.

4. The combination of a rotatable head, jaws movably mounted in the head, rolls arranged to force the bar between the jaws and means controlled by the bar in its movement for turning the head and shifting the jaws.

1,152,760. ANTICREEPER. FREDERICK A. PRESTON, Highland Park, Ill., assignor to The P. & M. Co., Chicago, Ill., a Corporation of Illinois. Filed Oct. 23, 1914. Serial No. 868,234. (Cl. 238—4.)



1. A rail anchor comprising a yoke and a wedging member having double wedging surfaces extending forward and backward from the point of contact with said yoke, one of said wedging surfaces being maintained by means forced between said wedging member and the rail base after said member and yoke have been positioned on the rail.

2. The combination with means for engaging opposite sides of a rail base, of means coöperating therewith and engaging a tie, and additional means for insuring permanent coöperation between said first and second means, to grip the rail base firmly.

3. In combination, a transverse member for engaging opposite flanges of a rail base, a longitudinal member engaging a tie and a third member insuring coöperation between said first two members to enable them to resist creeping.

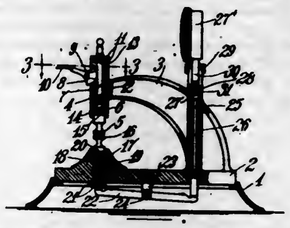
4. A rail anchor comprising a tie abutting member and a yoke extending around the rail base and member, which in operative position is put under stress by said member, the latter being adjustable to operative position by a movement away from the rail base.

5. A rail anchor comprising a tie-abutting member bearing against the rail base at one end, a yoke extending around said rail base and member at an intermediate part of the latter, and means for forcing the other end of said member away from the rail base to prevent movement of said yoke toward that end.

[Claims 6 to 11 not printed in the Gazette.]

1,152,761. MICROMETER-GAGE. MILFORD E. PROVOST, Holyoke, Mass. Filed Feb. 11, 1915. Serial No. 7,492. (Cl. 33—147.)

1. In a micrometer of the class described, the combination, of a platform member, of an arm secured thereto, a pair of anvils slidably mounted in the arm and platform, means for elevating the uppermost anvil, a gage operatively connected to the lower anvil, means for operating the lower anvil by the upper anvil, said means comprising two springs acting in opposite directions on the anvils, one spring actuating the upper anvil and the other spring actuating the lower anvil, the upper anvil actuating spring being stiffer than the lower anvil actuating spring, means for limiting the downward movement of the upper anvil, whereby the movement of the lower anvil will determine the thickness of the article to be measured, as described.



2. In a micrometer gage the combination, of a pair of movable anvils, means for moving the same in opposite directions toward each other into normal contacting relation, means for limiting the extent of movements of said anvils in opposite directions, a micrometer gage operatively connected with one of said anvils, a rack and pinion construction to move the other of the anvils, to permit the insertion of a sheet of paper, therebetween.

3. In a micrometer gage, the combination, a platform member, a lever pivotally attached thereto, an anvil slidably mounted in said member, means for limiting the extent of movement of said anvil, a micrometer gage operatively connected to said lever, an arm secured to said platform member and formed with a bored out hub portion, an anvil mounted in said hub, means for forcing said anvil in a downward direction toward the other anvil, means for limiting the extent of movement of said anvil, and means for elevating the said last mentioned anvil to permit the insertion of an article whose thickness is to be determined, said anvils being arranged in the same vertical line so as to engage each other, the means for forcing the upper anvil downward being stronger than the means for forcing the lower anvil upward, as described, whereby when a sheet of paper or other article is to be measured the lowermost anvil will be moved downwardly and the downward movement of the upper anvil will be limited, as described.

4. A micrometer gage comprising, in combination, a platform member, an arm integral therewith, a pair of vertically alined anvils normally in contact with each other, and located in the platform and arm, respectively, means to move the upper anvil downward, means to limit the downward movement of said anvil, means to move the lower anvil upward and means to limit the upward movement of the lower anvil, a gage proper, mechanism operatively connected to the lower anvil to operate the gage, means to separate the anvils to permit the insertion of the article to be measured, the operating means of the upper anvil being stronger than the operating means which causes the upward movement of the lower anvil, whereby only the lower anvil and the gage proper connected therewith, after the insertion of the article to be measured, will be actuated from the upper anvil, as described.

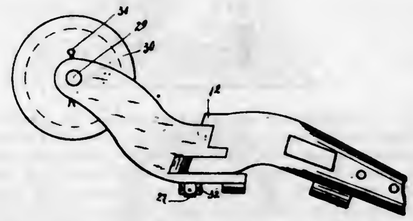
5. A micrometer gage, comprising, in combination, a pair of normally contacting anvils, means to separate the same to permit the insertion of an article whose thickness is to be measured, a coiled spring for each of the anvils to move each of the anvils toward the other into contacting relation, one of the springs being stronger than the other, a stop to limit the movement of the anvil which is moved by the stronger spring, a gage proper operatively connected to the other anvil, whereby when an article is inserted between the anvils only the anvil which is connected with the gage will be operated.

[Claim 6 not printed in the Gazette.]

1,152,762. TROLLEY. WILLIS F. REAM, Seanor, Pa. Filed Nov. 24, 1914. Serial No. 873,698. (Cl. 64—70.)

1. A trolley comprising a pole head formed with an extension, a harp including a base cut away to form a pair

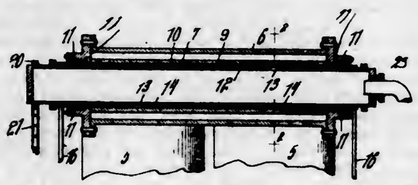
of extensions, said extension of said pole head projecting between the pair of extensions of said base, means for pivotally connecting the harp base to said extension, said harp further including a pair of arms connected together by a curvilineal coupling portion, a lug on the pole head adapted to engage and overreach said curvilinear coupling, said arms of the harp being formed integral with one side of said base, projecting from one face and one end of the base, and provided with means for receiving a trolley wheel axle.



2. A trolley, comprising a pole head and a harp pivotally connected therewith and adapted to rock thereon horizontally, the pole head and harp being each provided with a longitudinally extending lug, said lugs spaced from each other and adapted to receive and hold a trolley cable, whereby the resiliency of the cable will serve to yieldingly hold the pole head and harp in longitudinal alinement with each other.

3. A trolley comprising a pole head having an extension, a plurality of seats one above the other, and a lug; a harp including a pair of extensions one above the other and a pair of arms connected together by a curvilinear section, said extensions of the harp being adapted to cooperate with said extension of the pole head, the extension of the pole head extending between the extensions of the harp, the upper one of said harp extensions and said curvilinear section being adapted to coöperate with said seats of the pole head; means for pivotally connecting said pole and harp extensions together; and a trolley wheel journaled in said harp.

1,152,763. INTERNAL-COMBUSTION ENGINE. FLOYD T. ROMBERGER, Elizabethville, Pa. Filed June 21, 1915. Serial No. 35,377. (Cl. 136—7.)

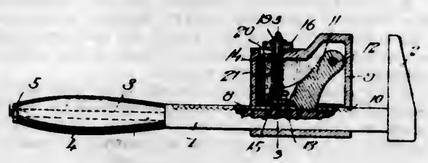


1. The combination with an engine having a valve casing, of a rotatable valve arranged within the valve casing, a pair of telescoping valve-sleeves disposed between the valve casing and the valve and having tapered contacting surfaces, and yielding means to move one valve-sleeve longitudinally in one direction.

2. The combination with an engine having a valve casing, of a rotatable valve arranged within the valve casing, a pair of telescoping valve-sleeves disposed between the valve casing and the valve and having tapered contacting surfaces, yielding means to move the valve-sleeves inwardly longitudinally, and means to effect a relative turning movement between the valve-sleeves.

3. The combination with an engine having a valve casing, of a rotatable valve arranged within the valve casing, a pair of telescoping longitudinally split circumferentially expansible and contractible valve-sleeves disposed between the valve casing and valve and having tapered contacting surfaces, yielding means to move one valve-sleeve longitudinally with relation to the other, and means to effect a relative turning movement between the valve sleeves.

1,152,764. WRENCH. HARRY E. ROSE, Greenfield, Okla. Filed Mar. 17, 1915. Serial No. 15,012. (Cl. 81—139.)



1. A wrench comprising a shank having teeth formed therein, a slidable jaw mounted on said shank, a dog pivoted within said jaw for engagement with said teeth, a rod carried by said dog and projecting exteriorly of the jaw, a member loosely mounted on said rod, cam surfaces formed on said member, cam surfaces formed on said jaw, the cam surfaces of said member adapted to engage the cam surfaces of said jaw, and means to move said dog in locking engagement with said teeth.

2. A wrench comprising a shank having a channel formed in one face thereof, teeth formed in the bottom of said channel, the sides of said channel forming upstanding flanges, said flanges projecting above the upper face of said teeth, a slidable jaw mounted on said shank, a dog pivoted within said jaw for engagement with said teeth, said jaw engaging the upper edges of said flanges, the rod carried by said dog projecting exteriorly of said jaw, a member loosely mounted on said rod, cam faces formed on said member, cam surfaces formed on said jaw, the cam surfaces of said member adapted to engage the cam surfaces of said jaw, and means to move said dog into locking engagement with said teeth.

1,152,765. PROCESS OF CONVERTING PETROLEUMS AND OTHER HEAVY LIQUID HYDROCARBONS INTO VOLATILE HYDROCARBONS DISTILLING BELOW 150° C. PAUL SABATIER and ALPHONSE MAILHE, Toulouse, France, assignors to Société des Raffineries Catalytiques des Pétroles et hydrocarbures, Paris, France. Filed July 11, 1914. Serial No. 850,502. (Cl. 196—26.)

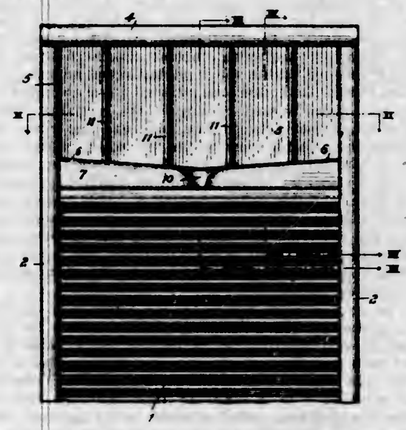
1. The herein-described process of converting petroleums and other heavy liquid hydrocarbons of any origin whatever into volatile hydrocarbons distilling below 150° C., which consists in mixing a body of finely-divided catalytic material with neutral substances free from considerable quantities of silica, to reduce the catalysing property of said catalytic body; heating the mixture to a temperature between 400° C. and dark red heat; passing the hydrocarbons to be treated over said mixture; passing steam at the same temperature over the catalytic body to revivify the latter by the water gas formed by the passing steam; and subjecting the volatile products obtained from such treatment to hydrogenation in the presence of finely-divided metals heated to a temperature between 150° and 300° C.

2. The herein-described process of converting petroleums and other heavy liquid hydrocarbons into volatile hydrocarbons distilling below 150° C., which consists in mixing a catalytic body of finely-divided iron with neutral substances free from considerable quantities of silica, to reduce the catalysing property of said catalytic body; heating the mixture to a temperature between 400° C. and dark red heat; passing the hydrocarbons to be treated over said mixture; passing steam at the same temperature over the catalytic body to revivify the latter by the water gas formed by the passing steam; and subjecting the volatile products obtained from such treatment to hydrogenation in the presence of finely-divided metals heated to a temperature between 150° and 300°.

3. The herein-described process of converting petroleums and other heavy liquid hydrocarbons into liquid hydrocarbons distilling below 150° C., which consists in mixing a catalytic body of finely-divided metallic substances with neutral substances free from considerable quantities of silica, to reduce the catalysing property of said metallic substances; agglomerating the mixture with a binder which is free from silica; heating the agglomerate to a temperature between 400° C. and dark red heat; passing the hydrocarbons to be treated over said agglomerate; passing steam at the same temperature over the catalytic body to revivify the latter by the water gas formed by the passing steam; and subjecting the volatile products obtained from such treatment to hydrogenation in the presence of finely-divided metals heated to a temperature between 150° and 300° C.

4. The herein-described process of converting petroleums and other heavy liquid hydrocarbons into liquid hydrocarbons distilling below 150° C., which consists in mixing a catalytic body of finely-divided metallic substances with neutral substances free from considerable quantities of silica, to reduce the catalysing property of said metallic substances; introducing the mixture into tubes lined with non-silicious material; heating said tubes to a temperature between 400° C. and dark red heat; passing the hydrocarbons to be treated over said tubes; passing steam at the same temperature over the catalytic body to revivify the latter by the water gas formed by the passing steam; and subjecting the volatile products obtained from such treatment to hydrogenation in the presence of finely-divided metals heated to a temperature between 150° and 300° C.

1,152,766. WASHBOARD. JAMES T. SARGENT, Merchantville, N. J. Filed Aug. 12, 1914. Serial No. 856,378. (Cl. 68—29.)



1. A washboard having a soap support with its upper or supporting surface inclined transversely of the rubbing surface for conducting away water draining from the soap in combination with means for directing such drainage onto the rubbing surface in use.

2. A washboard having in combination therewith a soap support provided with a gutter permitting the flow of water from below the cake resting on such support down onto the rubbing face in use, said gutter being inclined transversely of the rubbing face, and means for directing water from the gutter onto the rubbing face.

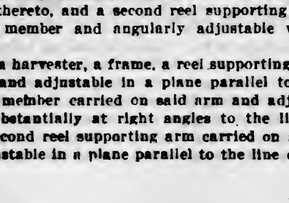
3. A washboard having in combination therewith a support for the soap having protions of its upper surface upwardly and outwardly inclined toward its ends whereby water may be directed from the sides of the board toward the median line of and onto the rubbing face in use.

4. A washboard having in combination therewith a soap support having portions of its upper surface inclined upwardly but in opposite directions from a common point above the middle portion of the rubbing face in use, whereby the drainage is delivered to the middle portion of the rubbing surface.

5. A washboard having in combination therewith a soap support having portions of its upper surface upwardly and oppositely inclined from a common point and provided with a spout arranged at the intersection of the inclined surfaces for the reception of water flowing down such surfaces and adapted to discharge such water onto the rubbing face in use.

[Claims 6 and 7 not printed in the Gazette.]

1,152,767. STAND FOR SAD-IRONS. GEORGE J. SCHNEIDER, Detroit, Mich., assignor to Acme Electric Heater Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 8, 1914. Serial No. 876,105. (Cl. 68—26.)



1. The combination with a said iron provided with a detachable hood, of a supporting stand for said iron having a hooked engagement with the wall of said hood.

2. In a sad iron, the combination with a base section and a detachable hood section having its lower edge in proximity to said base, of a stand having a hooked portion engaging said hood from the lower edge thereof and retained in position by the base portion.

3. In a sad iron, the combination with a base portion and a detachable hood section having its lower edge extending in proximity to the base and notched, of a stand having a hook portion engaging said hood from the lower edge thereof, the bend of said hook passing through said notch and retained by said base.

4. In a sad iron, the combination with a base section and a detachable hood section, of a stand comprising a substantially U-shaped member having return-bent hooks at opposite ends thereof adapted to engage said hood from the lower edge thereof and to be retained in engagement by said base.

5. In a sad iron, the combination with a base section and a detachable hood, of a stand comprising a substantially U-shaped wire member having return-bent hook portions at its opposite ends for embracing the rear wall of said hood, the bends of said hooks engaging notches in the lower edge of said rear wall and being retained by said base.

[Claims 6 and 7 not printed in the Gazette.]

1,152,768. HARVESTER-REEL. JAMES A. SHARP, Springfield, Ohio, assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed June 20, 1912. Serial No. 704,714. (Cl. 56—22.)

1. In a harvester, a frame, a reel supporting arm carried thereon and angularly adjustable with respect thereto, a member carried on said arm and angularly adjustable with respect thereto, and a second reel supporting arm carried by said member and angularly adjustable with respect thereto.

2. In a harvester, a frame, a reel supporting arm carried thereon and adjustable in a plane parallel to the line of draft, a member carried on said arm and adjustable in a plane substantially at right angles to the line of draft, and a second reel supporting arm carried on said member and adjustable in a plane parallel to the line of draft.

3. In a harvester, a frame, a reel supporting arm pivoted thereon and angularly adjustable with respect thereto, a member carried on said arm and angularly adjustable with respect thereto, a second reel supporting arm carried by said member and angularly adjustable with respect thereto, and independent means for positioning each of said elements in each position of adjustment thereof.

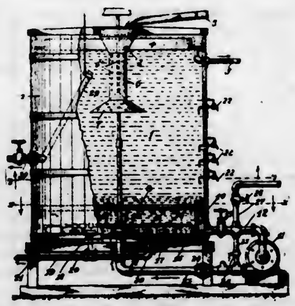


4. In a harvester, a frame, a reel supporting arm pivoted thereon and angularly adjustable with respect thereto, a member carried on said arm and angularly adjustable with respect thereto, a second reel supporting arm carried by said member and angularly adjustable with respect thereto, independent means for positioning each of said elements in each position of adjustment thereof, and means operable from a distant point for controlling a plurality of said positioning means.

5. In a harvester, a frame, a reel supporting arm pivoted thereon and angularly adjustable with respect thereto, a member carried on said arm and angularly adjustable with respect thereto, a second reel supporting arm carried by said member and angularly adjustable with respect thereto, independent means for positioning each of said elements in each position of adjustment thereof, a lever operatively connected to said arms and movable to swing the same about their pivots, and means operable from the free end of said lever for controlling a plurality of said positioning means.

[Claims 6 to 13 not printed in the Gazette.]

1,152,769. APPARATUS FOR TREATING SOLID-BEARING SOLUTIONS. LAMARTINE C. TRENT, Los Angeles, Cal. Filed June 12, 1912. Serial No. 703,208. (Cl. 75—86.)



1. In an apparatus for separating solids from liquids, the combination with a receiving vessel, of an agitator provided with discharge outlets rotatably mounted therein, means for removing the settled solids from within the receiving vessel, a suction pipe situated above and in close proximity to the agitator, a suction pump located outside of the receiving vessel, connection between the said pump and the suction pipe within the said vessel for the withdrawal of solution therefrom, connection between the said pump and the agitator for the delivery of the withdrawn solution thereto under pressure, and means for supplying liquid to be treated into the receiving vessel.

2. In an apparatus for separating solids from liquids, the combination with a receiving vessel, of an agitator provided with discharge outlets rotatably mounted therein, means for removing the settled solids from within the receiving vessel, a suction pipe situated above the agitator, a suction pump located outside of the receiving vessel, valve controlled connection between the said pump and the suction pipe within the said vessel for the withdrawal of solution therefrom, controlled connection between the said pump and the agitator for the delivery of the withdrawn solution thereto under pressure, a controlled by-pass connection interposed between said connections, and means for supplying liquid to be treated into the receiving vessel.

3. In an apparatus for separating solids from liquid and thickening the same, the combination with a receiving vessel, of means for supplying liquid thereto for treatment, devices for withdrawing the clear liquid from within the said vessel, an agitator rotatably mounted within the receiving vessel adjacent the bottom thereof, a suction pipe situated adjacent to the agitator, a suction pump outside the receiving vessel, valved connection between said pipe and the pump for withdrawing solution from within the vessel adjacent its bottom, valved connection between the pump and the agitator for returning the withdrawn solution into the receiving chamber through the agitator under pressure, means for supplying through the pump and agitator clear solution for replacement or wash purposes, and means controlling the discharge of the thickened solids from within the receiving vessel.

4. In an apparatus for separating solids from liquid and thickening the same, the combination with a receiving vessel, of a diffuser for supplying liquid thereto for treatment, devices for decanting and overflowing the clear liquid from within the said vessel, an agitator provided with outwardly projecting tubular discharge arms rotatably mounted within the receiving vessel adjacent the bottom thereof, a suction pipe situated above the agitator, a suction pump located outside of the receiving vessel, valved connection between said pipe and the pump for withdrawing solution from within the vessel, valved connection between the pump and the agitator for returning the withdrawn solution into the receiving chamber through the agitator under pressure, a valved by-pass connection interposed between the said valved connections, means for supplying through the pump and agitator clear solution for replacement or wash purposes, and means controlling the discharge of the thickened solids from within the receiving vessel.

5. In an apparatus for separating solids from liquids, the combination with a receiving vessel, of means for supplying thereto solutions to be treated, an agitator provided with peripheral discharges rotatably mounted within the said vessel adjacent the bottom thereof, a suction pipe provided with a series of inlet openings situated within the receiving vessel adjacent to the agitator, suction means for withdrawing solution from within the vessel through said suction pipe, connection between said means and the agitator for supplying thereto under pressure the withdrawn solution, devices controlling the discharge of solids from within the receiving vessel, and means for carrying off the clear liquid freed of its solids.

[Claims 6 to 22 not printed in the Gazette.]

1,152,770. CRADLE-BIT. FREDERICK H. TROVILLE, South Hero, Vt. Filed Apr. 15, 1914. Serial No. 832,078. (Cl. 54—9.)

1. A bit comprising elongated cheek pieces, a bridle bit bar rigidly connected between said cheek pieces near one end thereto to join and hold said pieces in a spaced relation, links connected at their one end pivotally with each of said cheek pieces in the body portion thereof, a curb bit bar connected between said links, rein loops on the free end of said cheek pieces through which the reins are passed, and loops on said links in which the reins are secured after passage through said rein loops on the cheek pieces.



2. A bit comprising elongated curved cheek pieces, a bridle bit bar connected across said cheek pieces near one end thereof to join the same in a rigid and spaced relation, links connected at their one end with each of said cheek pieces in the body portion, a bridle bit bar rigidly connected between said links in a proximate center thereof, rein loops formed on the free end of said cheek pieces through which the reins are adapted to be threaded and have sliding movement, and loops provided on the free end of said links to have the reins secured therethrough.

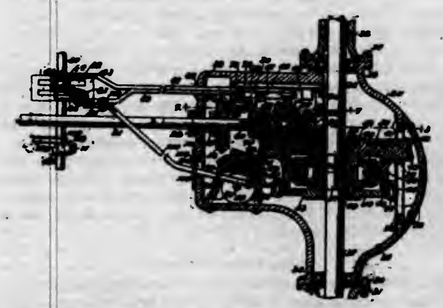
3. A bit comprising cheek pieces made crescent shape in side elevation and provided at their ends with oppositely disposed loops, a bridle bit bar connected to join said cheek pieces near the upper end thereof, a link pivoted at its one end near the center of each of said cheek pieces, and a curb bit bar connected between said links to normally lie adjacent said bridle bit bar and to be capable of movement from the adjacent position.

4. A bit comprising cheek pieces made crescent shape in side elevation and provided at each of their ends with a loop, a bridle bit bar rigidly connected between said cheek pieces near the upper ends thereof to join and hold the pieces in a spaced relation, a link pivoted at the end thereof to each of said cheek pieces near the center, a curb bit bar rigidly connected between said links, and loops provided on the free end of said links beyond the mounting of the curb bit bar.

5. A bit comprising cheek pieces made crescent shape in side elevation and provided at each of their ends with a loop, a bridle bit-bar connected to join said cheek pieces near the upper ends thereof, a link pivoted to each cheek piece near the center thereof, and a curb bit-bar connected between said links, the loops of the upper ends of the cheek pieces adapted to have the cheek straps of the bridle connected therewith and the loops on the free ends of the cheek pieces to have the reins passed therethrough and connected with the free ends of the links.

[Claim 6 not printed in the Gazette.]

1,152,771. AUTOMOBILE TRANSMISSION POWER. EDGAR J. WENDLE, Johnstown, Pa. Filed July 13, 1914. Serial No. 850,761. (Cl. 74—58.)



1. In a transmission mechanism, a multiple gear, a drive shaft, gears loosely mounted on the drive shaft and each meshing with one of the gears of the multiple gear, an additional gear slidably mounted upon the drive shaft and movable into mesh with one of the gears of the multiple gear, means for selectively locking one of the loosely mounted gears to its shaft or sliding the additional gear into mesh with a gear of the multiple gear, said means being operable by a single lever, and clutch controlled means for locking the lever in position, said clutch controlled means including a shaft upon which the lever is mounted, a keeper bracket carried by the shaft, a locking arm pivoted intermediate its length and terminating at one end in a head engageable by the clutch pedal, said keeper bracket having a plurality of sockets, and a stud formed upon the other end of the locking lever and engageable in one of the other sockets when the clutch is in active position.

2. In a transmission mechanism, a multiple gear, a drive shaft, a plurality of beveled gears loosely mounted on the drive shaft and constantly meshing with certain gears of the multiple gear, an additional gear slidably mounted on the drive shaft and movable into mesh with one of the gears of the multiple gear, a beveled gear fixed upon the drive shaft, a stub shaft, a second multiple gear carried by the stub shaft and movable to bring one of its gears into mesh with one of the gears of the first multiple gear and its other gear into mesh with that gear fixed on the drive shaft, and means for selectively locking any one of the gears in mesh with the first multiple gear to the drive shaft or for moving the slidably mounted gear into mesh with the multiple gear, or for moving the second multiple gear into engagement with the fixed gear and first multiple gear.

3. In a transmission mechanism, a multiple gear, a drive shaft, a plurality of beveled gears loosely mounted on the drive shaft and constantly meshing with certain gears of the multiple gear, an additional gear slidably mounted on the drive shaft and movable into mesh with one of the gears of the multiple gear, a beveled gear fixed upon the drive shaft, a stub shaft, a second multiple gear carried by the stub shaft and movable to bring one of its gears into mesh with one of the gears of the first multiple gear and its other gear into mesh with that gear fixed on the drive shaft, and means for selectively locking any one of the gears in mesh with the first multiple gear to the drive shaft or for moving the slidably mounted gear into mesh with the multiple gear, or for moving the second multiple gear into engagement with the fixed gear and first multiple gear, said means being operable by a single hand lever.

4. In a transmission mechanism, a multiple gear, a drive shaft, a plurality of beveled gears loosely mounted on the drive shaft and constantly meshing with certain gears of the multiple gear, an additional gear slidably mounted on the drive shaft and movable into mesh with one of the gears of the multiple gear, a beveled gear fixed upon the drive shaft, a stub shaft, a second multiple gear carried by the stub shaft and movable to bring one of its gears into mesh with one of the gears of the first multiple gear and its other gear into mesh with that gear fixed on the drive shaft, and means for selectively locking any one of the gears in mesh with the first multiple gear to the drive shaft or for moving the slidably mounted gear into mesh with the multiple gear, or for moving the second multiple gear into engagement with the fixed gear and first multiple gear, said means being operable by a single hand lever, and means for locking the hand lever in any of its various positions.

5. In a transmission mechanism, a multiple gear, a drive shaft, a plurality of beveled gears loosely mounted on the drive shaft and constantly meshing with certain gears of the multiple gear, an additional gear slidably mounted on the drive shaft and movable into mesh with one of the gears of the multiple gear, a beveled gear fixed upon the drive shaft, a stub shaft, a second multiple gear carried by the stub shaft and movable to bring one of its gears into mesh with one of the gears of the first multiple gear and its other gear into mesh with that gear fixed on the drive shaft, and means for selectively locking any one

of the gears in mesh with the first multiple gear to the drive shaft or for moving the slidably mounted gear into mesh with the multiple gear, or for moving the second multiple gear into engagement with the fixed gear and first multiple gear, said means being operable by a single hand lever, means for locking the hand lever in any of its various positions, and means for automatically returning the sliding gear and second multiple gear to normal position when released.

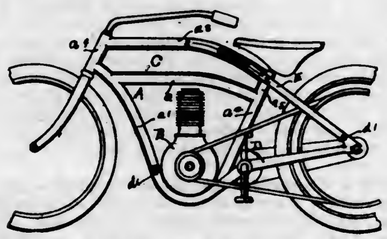
[Claims 6 to 15 not printed in the Gazette.]

1,152,772. CATHODE FOR ELECTROLYTIC CELLS. FRANK G. WHEELER, Appleton, Wis., assignor of one-half to Kimberly-Clark Company, Neenah, Wis., a Corporation of Wisconsin. Filed Jan. 25, 1915. Serial No. 4,316. (Cl. 204—58.)



In combination, a diaphragm, a perforated cathode, the perforations being of sufficient area to receive portions of the diaphragm and thereby effectively to support the latter, and electrically conductive means located in the rear of said perforations for backing the diaphragm to prevent rupture.

1,152,773. MOTOR-CYCLE FRAME. EDWARD YOUNG WHITE, San Antonio, Tex. Filed Sept. 10, 1913. Serial No. 789,154. (Cl. 208—94.)



1. In a frame for bicycles, motorcycles, or the like, the combination of a main frame comprising an upper tube having its rear portion downwardly curved, a rear wheel frame pivotally connected to the main frame, a spring in the curved portion of said upper tube, a slider within the tube engaging the spring, and a connection between the slider and said articulated frame.

2. In a frame for bicycles, motorcycles, or the like, the combination of a main frame including an upper tube having a downwardly curved rear portion, a spring within said curved portion, a block engaged by the spring and slidable within said curved tube portion, a driving wheel frame pivoted to the main frame and a connection between said articulated frame and said block.

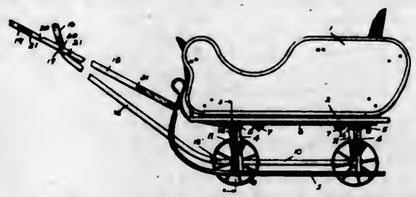
3. In a frame for bicycles, motorcycles, or the like, the combination of a main frame including an upper tube having a downwardly curved rear portion, a spring within said curved portion, a block engaged by the spring and slidable within said curved tube portion, rear braces pivoted to the main frame and carrying a drive wheel, a rear fork pivoted to the braces and a pivotal connection between the rear fork and said block.

4. In a frame for bicycles, motorcycles, or the like, the combination of a main frame including an upper tube having a downwardly curved rear portion, a spring within said curved portion, a block engaged by the spring and slidable within said curved tube portion, a driving wheel frame pivoted to the main frame, a connection between said wheel frame and said block, and a reaction spring interposed between said block, and an abutment within said tube.

5. In a frame for bicycles, motorcycles, or the like, the combination of a main frame including an upper tube having a downwardly curved rear portion, a spring within said curved portion, a block engaged by the spring and slidable within said curved tube portion, rear braces pivoted to the main frame and carrying a drive wheel, a rear fork pivoted to the braces, a pivotal connection between the rear fork and said block, and a reaction spring interposed between said block and an abutment within said tube.

[Claims 6 and 7 not printed in the Gazette.]

1,152,774. CONVERTIBLE SLED. ROLAND E. WHITMAN, Sturgis, Mich., assignor of one-half to William Slattery, Sturgis, Mich. Filed Sept. 22, 1914. Serial No. 862,879. (Cl. 21—96.)



1. In a structure of the class described, the combination of a body, runners supporting said body, wheel supporting links pivotally mounted on said body, axles journaled in the lower ends of said links, wheels carried by said axles, means connecting the front and rear axles together, a tongue secured to said runner structure, a link connected to said wheel supporting links to swing the same on their pivots and extending upwardly and forwardly adjacent the tongue, whereby said structure may be drawn either by said tongue or said link and detent means on said tongue for holding said link in adjusted position, all coacting substantially as described for the purpose specified.

2. In a structure of the class described, the combination of a body, runners supporting said body, angle brackets secured to said body and having downardly turned ends, laterally extending stop pins carried by said ends, wheel supporting links pivoted to the downwardly turned ends of said brackets and provided with notches adapted to engage said stop pins, axles journaled in the lower ends of said links, wheels carried by said axles, means connecting the front and rear axles together, and actuating means for swinging said wheel supporting links on their pivots, all coacting substantially as described for the purpose specified.

3. In a structure of the class described, the combination of a body, runners supporting said body, wheels supporting links pivoted on said body, axles journaled in the lower ends of said links, wheels carried by said axles, a forwardly projecting tongue secured to the front of said runner structure and provided with a handle at its forward end and a slot adjacent said handle, a link connected to said wheel supporting links to swing the same on their pivots and extending upwardly and forwardly, the upper end thereof being disposed in said slot in said tongue and being provided with a handle, said tongue being provided with notches adjacent the slot, and a laterally projecting pin carried by the upper end of said link and adapted to engage in said notches.

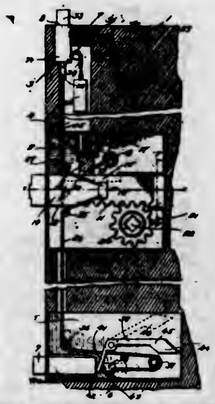
1,152,775. ROPE-GUIDE FOR DUMB-WAITER ROPES. LOUIS WIEBKE, New York, N. Y. Filed Mar. 23, 1915. Serial No. 16,353. (Cl. 254—194.)

1. A rope-guide for a dumb-waiter rope, comprising a rope-guiding member; a pivot-pin therefor; a supporting-plate which supports the ends of said pivot-pin; and a base-plate one end of which lies on one side of said pivot-pin and the other end of which extends to the other side of and beyond said pivot-pin and is hingedly fastened to the supporting-plate on the guiding side of said rope-guiding member; the first-named end of said base-plate being arranged to be fastened to a wall of the opening that leads into the dumb waiter shaft.



2. A rope-guide for a dumb-waiter rope, comprising a rope-guiding member; a pivot-pin therefor; a supporting-plate which supports the ends of said pivot-pin; and a base-plate one end of which lies on one side of said pivot-pin and the other end of which extends to the other side of and beyond said pivot-pin and is hingedly fastened to the supporting-plate on the guiding side of said rope-guiding member; the first-named end of said base-plate being arranged to be fastened to a wall of the opening that leads into the dumb-waiter shaft; and the axis of said pivot-pin being inclined to said base-plate.

1,152,776. LOCK. CLINTON L. WOLFE and BERT W. WOLFE, Brooklyn, N. Y. Filed Dec. 10, 1912. Serial No. 735,888. (Cl. 70—74.)



1. The described device consisting of a plurality of lock bolts one of which is provided with a racked edge, a gear adapted to operate said racked bolt and means carried by said racked bolt for operating said other bolts, said means being flexible, and consisting of chains, one of said other bolts being connected to an end of one of said chains.

2. The described device consisting of a plurality of lock bolts one of which is provided with a racked edge, a gear adapted to operate said racked bolt, means carried by said racked bolt for operating said other bolts, said means being flexible, and consisting of chains, one of said other bolts being connected to an end of one of said chains, and a weight carried by the end of said last chain whereby said bolt is held normally shot.

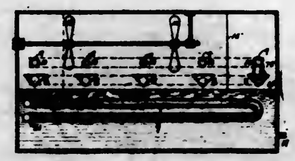
3. The described device consisting of a plurality of lock bolts one of which is provided with a racked edge, a gear adapted to operate said racked bolt, means carried by said racked bolt for operating said other bolts, said means being flexible, and consisting of chains, one of said other bolts being connected to an end of one of said chains, a weight carried by the end of said last chain whereby said bolt is held normally shot, and a lock for holding said racked bolt in a fixed position.

4. The described device consisting of a plurality of lock bolts one of which is provided with a racked edge, a gear adapted to operate said racked bolt, means carried by said racked bolt for operating said other bolts, said means being flexible, and consisting of chains, one of said other bolts being connected to an end of one of said chains, a weight carried by the end of said last chain whereby said bolt is held normally shot, and a bolt for holding said racked bolt in a fixed position, said bolt being spring actuated.

5. The described device consisting of a plurality of lock bolts one of which is provided with a racked edge, a gear adapted to operate said racked bolt and means carried by said racked bolt for operating said other bolts, said means being flexible and consisting of chains, said last bolts being connected to the extreme ends of said chains, said chains adapted to hold said last bolts in an unlocked position.

[Claims 6 to 17 not printed in the Gazette.]

1,152,777. PROCESS OF RECOVERING SALT FROM BRINE. FRANK J. WOOD, New York, N. Y., assignor to Wood Apparatus Company, New York, N. Y., a Corporation of New York. Filed Dec. 26, 1912. Serial No. 738,708. (Cl. 127—9.)



1. The process of effecting a series of surface evaporations of brine at temperatures below the boiling points consisting of heating the first body of brine, evaporating in contact with air, absorbing heat from the combined air and vapor in water and utilizing the heated water to effect a second surface evaporation.

2. The process of evaporating brine consisting of effecting a surface evaporation at a pressure above atmospheric by confining air under pressure above and in contact with the surface of the body of heated brine, circulating the air and combining vapor with said air and separating the vapor from the combination by condensing.

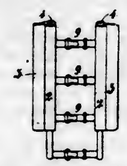
3. The process of effecting a series of evaporations without agitation consisting of maintaining heated bodies of brine in surface contact with confined bodies of air, and absorbing heat from the first of the series to effect an evaporation in the second.

4. In the process of recovering salt from brine the effecting of a series of surface evaporations by successively heating bodies of brine which are in surface contact with air by absorbing the heat contained in the vapor rising into the air from the first body in sprays of water and then utilizing said heat by collecting said sprays into a single column of flowing water and causing same to heat a second body.

5. In the process of recovering salt from brine the effecting of a series of surface evaporations by successively heating two bodies of brine which are in surface contact with air, the air pressure in the first being higher than that in that of the second, by absorbing the heat contained in the vapor rising into the air from the first body in sprays of water and then utilizing said heat by collecting said sprays into a single column of flowing water and causing same to heat a second body.

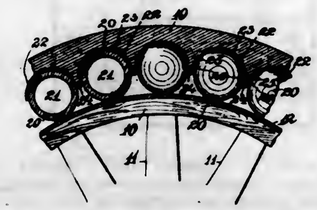
[Claims 6 to 9 not printed in the Gazette.]

1,152,778. FASTENING DEVICE. ENRICO BATTISTI, Rome, Italy. Filed Aug. 13, 1913. Serial No. 784,563. (Cl. 24—207.)



Fastening device for flexibly joining the edges of articles of dress, such as shoes, gloves and the like, comprising: a middle sliding piece with two lateral strings forming the edges of same, and two side pieces each of them formed by a metallic wire having the shape of a Greek fret and bent so as to form an incomplete cylindrical groove, which leaves between its edges a longitudinal slit and is provided inside and outside with a flexible covering, in which grooves may slide the lateral strings of the middle piece.

1,152,779. TIRE. HENRY BEHM and JOSEPH VENE, Elizabeth, N. J., assignors of one-fifth to said Behm, one-fifth to said Vene, one-fifth to William Marks, one-fifth to George J. Streisel, Sr., and one-fifth to Charles C. Mair, Elizabeth, N. J. Filed June 2, 1914. Serial No. 842,395. (Cl. 152—22,)



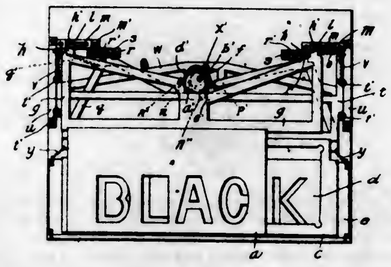
1. In a tire, a shoe with projections on its inner face, balls between the projections, whereby the balls are held against longitudinal movement, the projections being higher than the radius of the balls, but less in height than the diameter of the balls, and puncture-proof cups between the projections and covering the outer surfaces of the balls, the projections spacing the balls apart but leaving them free to expand at their inner portions.

2. In a tire, a shoe having a series of projections on its inner face, the spaces between the projections being cup-shaped with their edges undercut, cups fitting said cavities and being held in place by reason of their edges engaging the undercut edges of the cavities, and balls in the cups, the balls being resilient, the projections extending between the balls and being in excess of the radius of the balls, but less in height than the diameter of the balls.

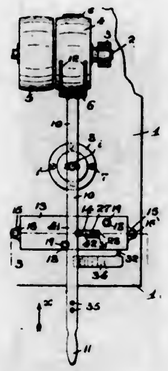
1,152,780. ADVERTISING-SIGN. HUGH MILNER BLACK, Brighton, England. Filed Feb. 18, 1913. Serial No. 749,257. (Cl. 40—125.)

1. A device of the character described comprising a casing, a display plate stationary therein, horisontal and vertical guides in the casing, laterally movable plates provided with means for slidably engaging the horizontal guides and adapted when moved to vary the apparent size of the display on the display plate, means for simultaneously moving the laterally movable plates in opposite directions, vertically movable plates slidably engaging the vertical guides and adapted when moved to vary the apparent size of the display on the display plate, and means for simultaneously moving the vertically movable plates in opposite directions.

2. A device of the character described comprising a casing, a stationary display plate therein, a pair of vertically movable plates and a pair of laterally movable plates slidably mounted in the casing and adapted when moved to vary the apparent size of the display on the display plate, and means for simultaneously moving the vertically movable plates in opposite directions and the laterally movable plates in opposite directions.



1,152,781. SAFETY BELT AND CLUTCH SHIFTING MECHANISM. ROBERT T. BOAL, Kearney, N. J. Filed Dec. 15, 1914. Serial No. 877,284. (Cl. 74—39.)



1. A safety belt and clutch-shifting mechanism comprising in combination with a swinging shifting lever, a spring-controlled locking arm having a portion with which said lever can be brought into locked engagement, and means connected with said lever adapted to be brought into engagement with said locking arm for releasing said lever from its locked engagement with said arm.

2. A safety belt and clutch-shifting mechanism comprising in combination with a swinging shifting lever, a spring-controlled locking arm having a portion with which said lever can be brought into locked engagement, and means connected with said locking arm for releasing said lever from its locked engagement with said arm, and stop-bolts located with relation to said locking arm to limit the swinging movements of said shifting lever.

3. A safety belt and clutch-shifting mechanism comprising in combination with a swinging shifting lever, a pivoted and spring-controlled locking arm having a portion with which said lever can be brought into locked engagement, and means connected with said lever adapted to be brought into engagement with said locking arm for releasing said lever from its locked engagement with said arm.

4. A safety belt and clutch-shifting mechanism comprising in combination with a swinging shifting lever, a pivoted and spring-controlled locking arm having a portion with which said lever can be brought into locked engagement, means connected with said lever adapted to be brought into engagement with said locking arm for releasing said lever from its locked engagement with said arm, and stop-bolts located with relation to said locking arm to limit the swinging movements of said shifting lever.

5. A safety belt and clutch-shifting mechanism comprising in combination with a swinging shifting lever, a casing provided in its top with an opening, a spring-controlled locking arm pivoted in said casing, said arm extending upwardly and having a locking enlargement extending into and through the opening in said casing so as to normally project above the top of said casing, said enlargement having a portion with which said lever is adapted to be brought into locked engagement, and means connected with said lever adapted to be brought into engagement with said pivoted locking arm to withdraw the locking enlargement of said arm beneath the opening in the top of said casing to thereby disengage said lever from its locked engagement with said arm.

[Claims 6 to 12 not printed in the Gazette.]

1,152,782. FINDER FOR CAMERAS. CARL BORNMANN, Binghamton, N. Y., assignor to Ansco Company, Binghamton, N. Y., a Corporation of New York. Filed Mar. 19, 1915. Serial No. 15,439. (Cl. 88—1.5.)

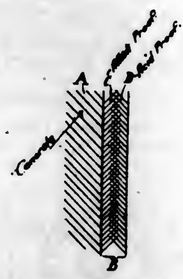


1. A finder embodying a closed box, a single lens, a mirror and an observation plate carried by the box, diaphragm plates, one fixed and the other movable, adjacent to two sides of the box and provided with openings adapted to register with the observation plate, a flanged plate upon a third side of the box and means upon the box and upon the movable diaphragm plate and upon the flanged plate whereby the box may be given a quarter turn and be compelled to assume and maintain proper positions relative to the diaphragm plates.

2. A finder embodying a closed box provided with a lens, a mirror and an observation plate, a fixed diaphragm plate adjacent to one side of the box, a spring actuated diaphragm plate hinged to the fixed diaphragm plate, a flanged base plate and devices upon the box and upon the movable diaphragm plate and upon the base plate whereby the box may be given a quarter turn and caused to assume and maintain proper relation with the diaphragm plates upon the completion of each quarter turn movement.

3. A finder embodying a box closed on all sides and provided with a lens, a mirror and an observation plate, diaphragm plates adjacent to two sides of the finder box, and means upon the box and upon the adjacent parts, whereby the box may be given a quarter turn and which, co-acting together, guide the box in proper relation to the diaphragm plates during each quarter turn and maintain it therein upon the completion thereof.

1,152,783. MATERIAL FOR LINING CONCRETE-TANKS. HEINRICH BORSARI-FISCHER, Zollikon, near Zurich, Switzerland. Filed Sept. 18, 1912. Serial No. 721,065. (Cl. 72—14.)



A concrete tank provided with a lining comprising two layers integrally fused together, the outer layer against the inner wall of the vessel being alkali-proof and united thereto by an alkali material, and the inner layer being acid-proof to resist the attack of the contents of the vessel.

1,152,784. RERAILER. NEWTON K. BOWMAN, North Lawrence, Ohio. Filed June 23, 1914. Serial No. 846,827. (Cl. 104—1.)



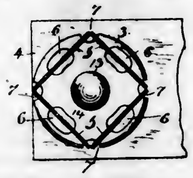
1. A rerailer of the character described including a plurality of transverse supporting members, a pair of rails mounted thereon, filler beams mounted on the supporting members and occupying the space between the rails, the plane of the upper faces of the beams being below the plane of the tread surfaces of the rails, a beam mounted on the transverse members adjacent the outer side of each rail, said filler beams and said last-mentioned beam each having those of their terminals, which constitute the entrance to the rerailer, beveled, providing inclined lifting track ways for derailed car wheels, a wear plate positioned on each side of each rail for the reception of a derailed car wheel, and a pair of diagonally arranged guide bars for each rail, the individual bars of each pair of guide bars being arranged on opposite sides of the adjacent rail, whereby a car wheel riding on the wear plates at either side of a rail will be deflected from an abnormal path back to proper position on the rail.

2. A rerailer of the character described including a plurality of transverse ties, rails mounted thereon, filler beams mounted on the ties and occupying the space between the rails, a beam mounted on the ties at the outer side of each rail, said first-mentioned and said second-mentioned beams being provided with beveled terminals, wear plates mounted on each side of each rail and on the beams adjacent thereto, the terminals of said wear plates being bent downwardly to bear against the beveled terminals of the beams, and a diagonally extending cross section L-shaped guide bar mounted on each side of each rail and engaging against the outer edge of the adjacent wear plate.

3. In a railway embodying ties and rails, filler beams disposed longitudinally between the rails of a section of the track and secured to the ties, other beams disposed exterior to the rails and secured to the ends of the ties, wear plates secured to the filler and outer beams upon opposite sides of the rails and contiguous thereto, the

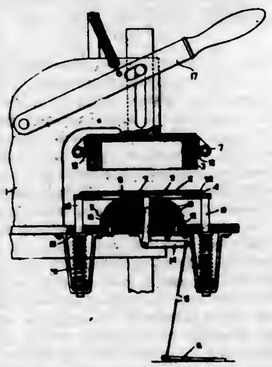
upper surfaces of the inner wear plates being below the treads of the rails a distance about equal to the depth of the flanges of the car wheels, and the upper surfaces of the outer wear plates being in the plane of the treads of the rails, and guard rails secured to the filler and outer beams adjacent the edges of the wear plates and converging in their length toward the track rails from front to rear, the forward ends of the beams and wear plates being beveled to facilitate the mounting of the car wheels thereon.

1,152,785. SNAP-BUTTON. JULIUS J. BRELL, New York, N. Y. Filed Aug. 25, 1914. Serial No. 858,439. (Cl. 24—208.)



In a device of the class described, a fastener having a flange extending about its edge, said flange being bent inwardly at intervals to form thread receiving recesses and a series of eyelets in said fastener adjacent the flange.

1,152,786. PROCESS FOR AFFIXING COVERING MATERIAL TO FRAMES. LOUIS E. BROWN, Roxbury, Mass., assignor to Farrington Manufacturing Company, Roxbury, Mass., a Corporation of Maine. Filed Dec. 31, 1913. Serial No. 809,801. (Cl. 93—36.)



1. The process of affixing fabric to a frame which comprises coating one of the elements with an adhesive substance neutral when cold, shaping the fabric by the application of heat and simultaneously pressing the edges of the fabric to the frame and applying heat thereto which causes the fabric to assume a desired contour and its ends and sides to be secured to the frame.

2. The process of affixing fabric to a frame which comprises coating the frame with an adhesive substance neutral when cold, shaping the fabric by the application of heat and simultaneously pressing the edges of the fabric to the coated frame and applying heat thereto which causes the fabric to assume a desired contour and its ends and sides to be secured to the frame.

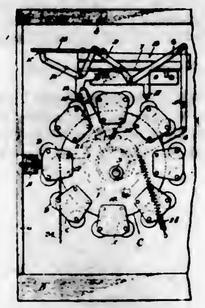
3. The process of forming puffs for boxes which comprises forming a frame of narrow strips, securing the sides and ends of a piece of fabric of greater area than the area of the frame to the sides thereof and simultaneously shaping the piece of fabric thus held.

4. The process of forming puffs for boxes which comprises coating a rim with an adhesive substance which is neutral when cold, placing the rim around a die having a portion projecting through the rim, stretching a piece of fabric upon said die and pressing the same upon the rim by a heated complementary die which causes the contour of the die to be imparted to the fabric and the fabric simultaneously to adhere to the rim.

5. The process of forming puffs for jewelry boxes which comprises coating a frame with an adhesive substance which is neutral when cold, placing the frame on a die, supporting a piece of fabric above said frame and die, pressing the same by a heated complementary die upon the first-mentioned die and the frame to cause a portion of the fabric to adhere to the frame and the remainder to be shaped in conformity with the first-mentioned die.

[Claims 6 and 7 not printed in the Gazette.]

1,152,787. AUTOMATIC MUSICAL INSTRUMENT WITH MAGAZINE. KARL O. CARLSON, Grand Rapids, Mich., assignor to National Piano Manufacturing Company, Grand Rapids, Mich., a Corporation of Illinois. Filed July 18, 1913. Serial No. 779,736. (Cl. 84—161.)



1. In an automatic player-piano, a magazine having rotatable disks, a support for said magazine mounted so as to have a partial rotative movement on its own axis to which the axis of said magazine is eccentric, a tracker-board, a plurality of rollers upon which perforated music sheets are mounted and which are journaled in the disks of said magazine parallel to the axis thereof and to said tracker-board, and means for rocking said support so as to bring said perforated sheets into engagement with said tracker-board.

2. In an automatic player piano, a magazine having rotatable disks, a support for said magazine mounted so as to have a rotative movement on its own axis to which the axis of said magazine is eccentric, a tracker-board, a plurality of rollers upon which perforated music sheets are mounted and which are journaled in the disks of said magazine parallel to the axis thereof and to the tracker-board, a bellows, and means including links for connecting said bellows to said support.

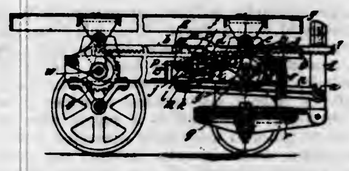
3. In an automatic player piano, a magazine having rotatable disks, a support for said magazine mounted so as to have a rotative movement on its own axis to which the axis of said magazine is eccentric, a tracker-board, a plurality of rollers upon which perforated music sheets are mounted and which are journaled in the disks of said magazine parallel to the axis thereof and to the tracker-board, a bellows, and means including links for connecting said bellows to said support and rocking the same.

4. In an automatic player piano, a magazine having rotatable disks, a support for said magazine mounted so as to have a rotative movement on its own axis to which the axis of said magazine is eccentric, a tracker-board, a plurality of rollers upon which perforated music sheets are mounted and which are journaled in the disks of said magazine parallel to the axis thereof and to the tracker-board, a bellows, means including links for connecting said bellows to said support, and a spring for automatically returning said means.

5. In an automatic player piano, a magazine having rotatable disks, a rock shaft supporting the same, to the axis of which the axis of said magazine is eccentric, a horizontal stationary tracker-board to which the rock-shaft is parallel, an overhead collapsible bellows, a support, an arm projecting from said support, and devices including links and levers connected to the leaves of said bellows for moving said arm and support.

[Claim 6 not printed in the Gazette.]

1,152,788. TRUCK. GEORGE P. CLARK, WILLIAM F. IRRGANG, and GEORGE E. CLARK, Windsor Locks, Conn., assignors to George P. Clark Company, Windsor Locks, Conn., a Corporation of Connecticut. Filed Mar. 30, 1912. Serial No. 687,434. (Cl. 254—6.)



1. The combination in an elevating truck, of a wheel supported frame, a steering handle, a platform on said frame arranged to be raised and lowered, a rack, a plurality of lifting devices operable therefrom and arranged to move said platform and means to operate said rack backwardly or forwardly in a step by step manner, said means comprising a pair of pawls, a lever, and an operating bar connected to said lever automatically engageable with said handle, said pawls arranged alternately to move said rack in a step by step manner as said handle is moved.

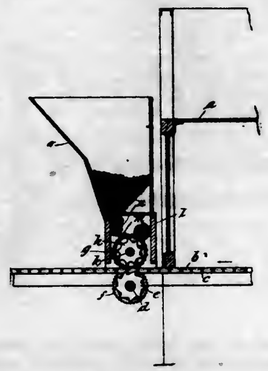
2. An elevating truck, a handle, a frame, a supporting part mounted thereon arranged to be raised and lowered, a rack slidable in said frame, shafts operable from said rack, cams on said shafts arranged to elevate said supporting part, operating pawls for said rack, a lever arranged to operate said pawls and a connection between said lever and said handle, all constructed and arranged so that said supporting part may be raised or lowered in a step by step manner from said handle.

3. In a device of the class described a truck frame, a truck platform adapted to be raised and lowered, two shafts mounted in the frame, a cam on each end of each shaft bearing against the platform, a gear on each shaft, a rack meshing with each gear, together with two operating pawls, a lever mechanism on which the pawls are mounted, means to operate said lever mechanism, to operate the pawls one after the other, as described.

4. The combination in an elevating truck of a wheel supported frame, a member thereon arranged to be raised and lowered, a handle, a plurality of shafts mounted in said frame, cams on each of said shafts arranged to engage said member, a rack, connections operable therefrom to drive each of said shafts, and means to move said rack backwardly or forwardly in a step by step manner to operate said cams to raise said member, said means comprising a pair of pawls, a lever arranged to move said pawls in opposite directions, and a link connected to said lever and automatically engagable with said handle.

5. The combination in an elevating truck of a wheel supported frame, a handle for hauling and steering said frame, a platform on said frame arranged to be raised and lowered, a rack slidable in said frame, a plurality of cam devices operable from said rack and arranged to move said platform and means to move said rack backwardly or forwardly in a step by step manner, said means comprising a lever, a link connection therewith automatically engageable with said handle and two pawls carried by said lever arranged to move in opposite directions, whereby said pawls alternately act on said rack to move the latter step by step as said handle is moved.

1,152,789. FEEDING DEVICE FOR CHOCOLATE-MOLDING MACHINES. CHARLES CLEMENS, East Long Meadow, Mass., assignor to National Equipment Company, Springfield, Mass., a Corporation of Massachusetts. Filed June 26, 1912. Serial No. 705,942. (Cl. 107—27.)



1. The combination in a molding machine of a series of trays arranged to travel through the machine each having molds formed therein, a movable feeding device arranged above the travel of the trays to feed articles to each mold, lugs on each tray one for each mold, together with mechanism operable from said lugs by movement of the tray to move said feeding device and thereby feed an article to a mold.

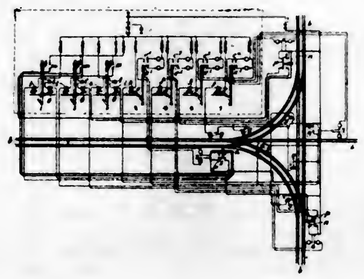
2. The combination in a molding machine of a series of trays arranged to travel through the machine, a plurality of molds formed in said trays, a container arranged above the travel of said trays for articles to be fed to said molds, a movable device arranged at the mouth of said container to receive a measured quantity of articles from said container and to transfer the same to a mold, together with mechanism to operate said device, said mechanism arranged to operate by the movement of the tray containing the mold to be filled.

3. The combination, in a mold filling machine, with a receptacle to contain articles to be fed to the mold of an opening formed in said receptacle, a movable gate to vary the size of said opening to permit articles to pass therethrough, a feed wheel having its periphery formed to receive said articles as they are delivered from the receptacle, means operable from the feed wheel to control the movable gate, the mold to be filled having a projection formed thereon, a toothed wheel operated by the projection when the mold is in registration with the discharging position of the feed-wheel, and connecting mechanism between the toothed-wheel and the feed wheel, whereby the feed wheel is actuated from the mold.

1,152,790. SWITCH AND SIGNAL SYSTEM. ROY V. COLLINS, New York, N. Y., assignor, by mesne assignments, to Collins Switch & Signal Company, a Corporation of New York. Filed Sept. 23, 1910. Serial No. 519,254. (Cl. 246—94.)

1. A switch and signal system comprising means for throwing the switches, hand engaging rotatable means for controlling said switch throwing means, means for giving the signal, and hand engaging push rods for controlling said signal giving means.

2. A switch and signal system having therein a plurality of means for giving signals, a plurality of sliding rods comprised in the aforesaid means whereby when each of the sliding rods are moved from one position to another a signal will be caused to be given, hand push rods and cams for operating the aforesaid sliding rods, means for throwing the switches, sliding rods comprised in said switch throwing means, and rotatable handles for operating the last mentioned rods, said switch throwing means being constructed so that when each of the sliding rods comprised therein is moved from one position to another a corresponding switch will be positioned.



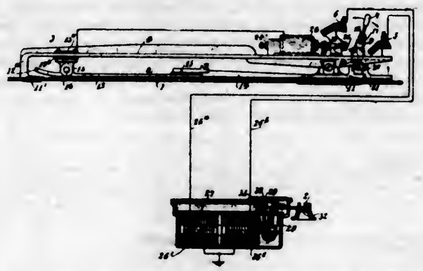
3. In a switch and signal system the combination of switch throwing mechanism, an electrical signal device comprising a go-ahead signal and a stop signal, a circuit for each of said signals, a member that retains the go-ahead circuit closed after said member has been moved to position to complete the circuit for giving the go-ahead signal, means for interlocking said mechanism and said device so that when the switch is only partially thrown the go-ahead signal cannot be flashed or given, means for locking in circuit closing position the member that retains the go-ahead circuit closed after said member has been moved to position to complete the circuit for giving the go-ahead signal, and train controlled means for causing an automatic unlocking of said member, the signal device being provided with means for automatically moving the member, when unlocked, from the position which is occupies when completing the circuit for giving the go-ahead signal and for automatically restoring the circuit for giving the stop signal.

4. In a switch and signal system the combination of switch throwing mechanism, signal devices having electrically operated signals, means for operating said mechanism, means for controlling said devices so that the signal devices will be changed from a normal condition to a reverse condition, and means comprising locking members for interlocking said mechanism and said devices, the system comprising spring means for restoring the signal controlling devices to normal condition, said signal devices being provided with train controlled means for causing the release of the locking members when in locking position whereby the spring means will automatically cause a restoring of a signal controlling device from a reverse condition to a normal condition.

5. In a switch and signal system, the combination of switch throwing mechanism, signal devices having electrically operated signals, means for operating said mechanism and said devices so that the latter can be changed from a normal condition to a reverse condition, and locking members for interlocking said mechanism and said devices when in the reverse condition, the system comprising spring means for restoring the signal controlling devices to normal condition, said signal devices being provided with train-controlled means for automatically unlocking a signal device whereby the latter can be restored to normal condition due to the operation of the spring means.

[Claims 6 to 9 not printed in the Gazette.]

1,152,791. SWITCH-THROWING MECHANISM. ROY V. COLLINS, New York, N. Y., assignor, by mesne assignments, to Royal Engineering Corporation, a Corporation of New York. Filed Nov. 10, 1911. Serial No. 659,485. (Cl. 104—198.)



1. A line contactor having a frame which is adapted to be connected with a trolley wire, said frame carrying at its approach end an insulated section, and a movable section located adjacent to the leaving end of the contact, said frame supporting a contact controlling means comprising a magnet, one terminal of which is adapted to be electrically connected to a supply wire and the other end of which is electrically connected with the insulated section, said frame also carrying two contacts, a movable contact operated by the movable section, the aforesaid contacts, movable section and contact controlling member so constructed, arranged and operated that when a substantial or large current is being passed through the magnet of the contact controlling means the circuit will be completed by a movement of the movable member due to engagement of the movable contact with one of the contacts on the frame and so that when a lesser current or no current at all is passing through said magnet the movable section will cause engagement between the movable contacts and the other contact carried by the frame thereby completing a second circuit.

2. The combination of a line contactor comprising a frame, a supply wire connected therewith and a trolley member, said frame supporting between it and the supply wire, a pivoted lever having at the approach end thereof an insulated section, the movable or free end of the lever being at the leaving end of the contactor the cross section of the approach end which is insulated being so shaped and positioned relative to the trolley wire that the trolley wheel when in engagement therewith will be moved out of engagement with the trolley wire, said frame carrying two stationary contacts and a controlling means for a movable contact, said controlling means being electrically connected to the supply wire and to the insulated section and the movable contact being operated by the pivoted lever the movable contact being moved into engagement with one of the stationary contacts on the frame at one time and in engagement with the other stationary contact at another time, the movement of the movable contact into engagement with a particular contact being dependent upon the controlling means carried by the frame.

3. A line contactor having a frame, a pivoted lever comprising an insulated portion, a contact which is moved by the lever when it is moved, an electrical selector comprising a magnet, one terminal of which magnet is electrically connected to the trolley line when the contactor is in place the other terminal of which is connected to the insulated portion, the electrical selector so constructed and arranged that when current is passing to the magnet thereof to supply the operating current for a car the selector will coöperate with the lever and movable contact whereby the latter may be moved to one position by the lever, the lever and movable contact so arranged that the latter will be moved by the former to another position when car-operating current is not passing through the magnet.

4. A line contactor having a frame to be secured to a trolley wire, a trolley wheel engaging portions insulated from the frame, a trolley wheel engaging portion movable relative to the frame, a selector comprising electrically operated means having one terminal to be electrically connected to the supply wire and the other to be insulated portion whereby when current for operating the car is being drawn therethrough the electrical means will operate the selector to regulate the position of a contact and means operated by the movable portion to close a circuit.

5. A line conductor having a frame, means for securing the frame to a trolley wire, a member insulated from the frame, a vertically movable member, a contact adapted to be mechanically operated by the last mentioned member, an electrical means having one terminal electrically connected to the supply wire, the other to the insulated member carried by the frame, and circuit controlling means comprising said electrical means.

[Claims 6 to 11 not printed in the Gazette.]

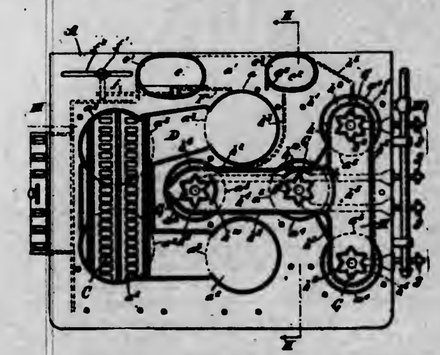
1,152,792. INSPECTOR'S GAGE. FRED B. CORBY, Edgewood, Pa. Filed Dec. 2, 1914. Serial No. 875,059. (Cl. 33—143.)



1. A gage having two edges carrying coöperating gage surfaces, one of said edges being continuous or unbroken and projecting beyond the limits of the other to permit of the transverse application of the gage to the object to be measured and to serve as a longitudinal guide.

2. A gage having two edges carrying coöperating gage surfaces, one of said edges carrying non-continuous gage surfaces, the other being continuous or unbroken and projecting beyond the limits of the first to permit of the transverse application of the gage to the object to be measured and to serve as a longitudinal guide.

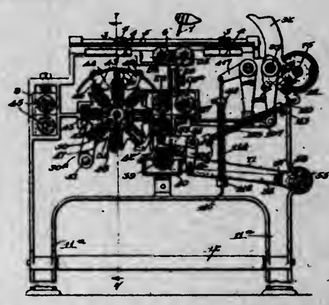
1,152,793. STOVE. EARL V. COULSTON, Cleveland, Ohio. Filed Jan. 4, 1913. Serial No. 740,182. (Cl. 126—86.)



1. In a combined coal and gas stove, the combination of an upper space; a fire-box; outlet flues; a chamber containing gas burners and projecting into said space; another part of said space forming a duct connecting said fire-box and flues and adjacent to said chamber; a part of the latter extending transversely of said space at one end thereof and another part of said chamber part which extends toward said fire-box door of said duct adjacent to said transversely extending chamber part being downwardly inclined; the end of such chamber part which extends toward said fire-box decreasing in cross-sectional area as it approaches same; that part of said duct adjacent to such varying chamber-end increasing in depth as it recedes from the fire-box; whereby the cross-sectional area of said duct is maintained substantially constant throughout.

2. In a combined coal and gas stove, the combination of an upper space; a fire-box; outlet flues; a chamber containing gas burners and projecting into said space; said chamber comprising a transverse and a longitudinal portion, said transverse portion being located at the end of the stove opposite the fire-box and the longitudinal portion projecting toward the latter; another portion of said space forming a duct connecting said fire-box and outlet-flues, and adjacent to said chambers, a dimension of that part of said duct adjacent to such parts of said chamber as are of different cross-sectional area varying in accordance with such change of area; whereby the cross-sectional area of said duct is maintained substantially constant.

1,152,794. FOLDING AND WRAPPING MACHINE. SANDFORD C. COX, Edison, Park, Ill., assignor to Cox Multi-Mailer Company, Augusta, Me., a Corporation of Maine. Filed Mar. 9, 1906. Serial No. 305,050. (Cl. 101—46.)



1. In a machine for the purpose described, the combination of a rotary transversely-oscillatory holder having a plurality of pockets or clamps for the papers and wrappers, a lap-deflector arranged contiguous to the line of movement of the lap of the wrapper while in said holder, means at one side of the holder for inserting the papers and wrappers thereinto, and means removed from the last said means for receiving the partially wrapped papers from the holder.

2. In a machine for the purpose described, the combination of a rotary and transversely-oscillatory holder having a plurality of pockets or clamps for the papers and wrappers, a lap-deflector arranged contiguous to the line of movement of the lap of the wrapper while in said holder, and being movable with said holder, means at one side of the holder for inserting the papers and wrappers thereinto, and means removed from the last said means for receiving the wrapped papers from the holder.

3. In a machine for the purpose described, the combination of a rotary and transversely-oscillatory holder having a plurality of pockets or clamps for the papers and wrappers, a lap-deflector arranged contiguous to the line of movement of the lap of the wrapper while in said holder, and being movable bodily with the holder during its said transverse movement and fixed against rotary movement therewith, means at one side of the holder for inserting the papers and wrappers thereinto, and means removed from the last said means for extracting the papers from the holder.

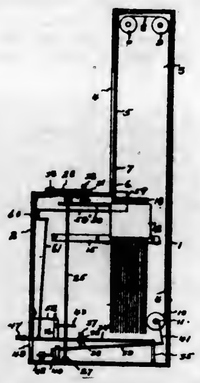
4. In a machine for the purpose described, the combination of a rotary and transversely oscillatory holder

having a plurality of pockets or clamps for the papers and wrappers, a lap-deflector arranged contiguous to the line of movement of the flap of the wrapper while in said holder, slidable boxes in which said holder is supported, means supporting said deflector upon said boxes, means for inserting papers to and means for extracting the papers from said holder.

5. In a machine for the purpose described, the combination of a holder having a plurality of pockets for the wrappers and papers, a pair of rolls arranged contiguous to said holder, one of which is provided with grooves extending longitudinally thereof and dividing the periphery of the roll into two separate surfaces, a paste fountain, means movable between said fountain and said grooved roll and adapted to contact with one of the surfaces thereof for applying paste thereto, means for forcing the paper and wrapper between said rolls and into said holder, and means for extracting the paper and wrapper from said holder and sealing the lap of the wrapper.

[Claims 6 and 7 not printed in the Gazette.]

1,152,795. DISPLAY DEVICE. ISABELLA M. CUTLER, Sawtelle, Cal. Filed Feb. 19, 1914. Serial No. 819,699. (Cl. 40—36.)



1. In a display device; a case having an opening therethrough; a curtain; a lever pivotally mounted to a fixed member at one end and within said case and projecting through said case at the other end; a secondary lever, also pivotally mounted to a fixed member; an operative connection between said levers whereby the movement of one lever is transmitted to the other; a rotary shaft; an operative connection between said secondary lever and shaft; and a connection between said curtain and shaft.

2. In a display device; a case having an opening therethrough; a curtain; a lever pivotally mounted to a fixed member at one end within said case and projecting through said case at the other end; a secondary lever, also pivotally mounted to a fixed member; the member to which the said lever is pivotally connected and that to which the secondary lever is connected being at opposite ends of the case; an operative connection between said levers whereby the movement of one lever is transmitted to the other; a rotary shaft; an operative connection between said secondary lever and shaft; and a connection between said curtain and shaft.

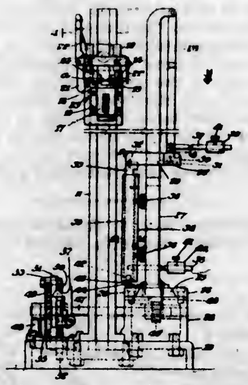
3. In a display device; a case having an opening therethrough; a curtain; a lever pivotally mounted at one end to a fixed member and projecting through said case; a secondary lever, pivotally mounted to a fixed member; an operative connection between said levers adjustable at a right angle to said levers and toward and away from their pivot mountings whereby the movement of one lever is transmitted to the other; a rotary shaft; an operative connection between said secondary lever and shaft; and a connection between said curtain and shaft.

4. In a display device; a case having an opening therethrough; a curtain; a lever pivotally mounted to a fixed member and projecting through said case; a secondary lever pivotally mounted to a fixed member; a counterbalance weight adjustably secured to said secondary lever; an operative connection between said levers whereby the movement of one lever is transmitted to the other; a rotary shaft; an operative connection between said secondary lever and shaft; and a connection between said curtain and shaft.

5. In a display device; a case having an opening therethrough; a curtain movable within said case opposite said opening; a plurality of cards; a selector bar connected with said curtain; a carriage for carrying said cards; means for moving said carriage so as to bring a predetermined card into register with said selector bar and curtain, comprising a shaft, having a pinion attached thereto; a rack connected with said carriage, and having an operative connection with said pinion; means for operating said curtain and the selector bar connected therewith, to lift a predetermined card from said carriage and expose it through said opening, comprising a rotary shaft; a connection between said last mentioned shaft and curtain; lever mechanism through which said last mentioned shaft is rotated in one direction; and means for locking said first mentioned shaft against rotation while the lever mechanism is operating said last mentioned shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,152,796. MATCH-TESTING APPARATUS. FREDERICK VAN DYKE CRUSER, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 29, 1914. Serial No. 869,197. (Cl. 73—51.)



1. A match testing machine comprising a standard, a drop head slidingly mounted thereon having means for supporting a specimen match substantially horizontal, means for temporarily locking said head at different heights on the standard, and means for supporting an ignition surface adjacent the downward path of the match head.

2. A match testing machine comprising a standard, a drop head slidingly mounted thereon having means for supporting a match substantially horizontal, a distance member on said standard having means for securing it in different positions of adjustment on the standard, means for temporarily locking the drop head to said member, and means for supporting an ignition surface adjacent the downward path of the match head.

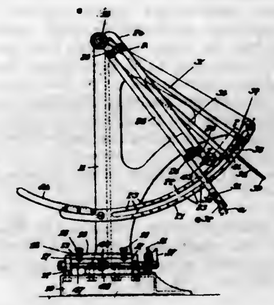
3. In a match testing machine having a match support movable through a striking path, a member having an ignition surface in said path, a yielding support for said member, and adjustable means for said support to determine the active position of the said member and its ignition surface relatively to the striking path.

4. In a match testing machine having a match support movable through a vertical striking path, a depending member having an ignition surface in said path, a yielding support for said member, and means whereby said support may be laterally adjusted to move the lower end of the said member and its ignition surface transversely of said path.

5. In a match testing machine having a match support movable through a striking path, a member having an ignition surface in said path, jointed supporting means for said member, and means for adjustably loading said supporting means to determine the active position of the said member and its ignition surface relatively to the striking path.

[Claims 6 to 11 not printed in the Gazette.]

1,152,797. MATCH-TESTING APPARATUS. FREDERICK VAN DYKE CRUSER, Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 29, 1914. Serial No. 869,198. (Cl. 73—51.)



1. In a match testing machine, a support, a pendulum thereon including a match holder having capacity for independent movement longitudinally of the pendulum and a horizontal ignition element arranged in the path of the head of a match projecting downwardly from said holder.

2. In a match testing machine, a support, a pendulum thereon including a match holder having capacity for independent movement longitudinally of the pendulum, a horizontal ignition element arranged in the path of the head of a match projecting downwardly from said holder, and means for temporarily locking said pendulum in different angular positions relative to said element.

3. In a match testing machine, a support, a pendulum thereon comprising two parallel members whereof one is movable lengthwise of the other, a match holder on said movable member, and an ignition element in the path of the head of a match in said holder.

4. In a match testing machine, a support, a pendulum thereon comprising two parallel members whereof one is movable lengthwise of the other, a match holder on said movable member, an ignition element in the path of the head of a match in said holder, and means for temporarily locking said pendulum at different angular positions relative to said element.

5. In a match testing machine, a support, a pendulum thereon comprising two parallel members whereof one is movable lengthwise of the other, a match holder on said movable member, an ignition element in the path of the head of a match in said holder, a latch member for temporarily locking said pendulum at different angular positions relative to said element, a support for said latch member, and means whereby the latch member may be adjustably secured on said latter support.

[Claims 6 to 11 not printed in the Gazette.]

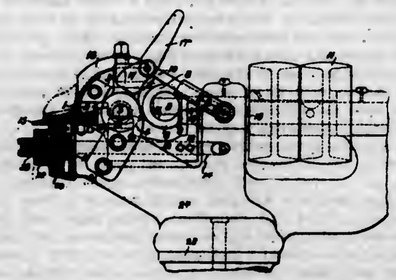
1,152,798. INSULATING MATERIAL FOR BUILDING AND ANALOGOUS PURPOSES. JULIUS DE LONG, New York, N. Y., and JOHN BAPTISTE D'HOMERGUE, Pittsburgh, Pa. Filed Aug. 16, 1912. Serial No. 715,483. (Cl. 154—44.)



1. An insulating material of the class described including outer waterproofed covering sheets comprising a base, a waterproof material applied thereto and a fabric pressed onto said waterproof material, inner protective sheets, and fibrous material arranged between said inner protective sheets.

2. An insulating material of the class described comprising outer water proof covering sheets including a base, a water proof material applied thereto, and a fabric pressed onto said water proof material, and alternate layers of asbestos and fibrous material arranged between the said outer water proof covering sheets.

1,152,799. HEEL-SEAT-TRIMMING MACHINE FOR USE IN THE MANUFACTURE OF BOOTS AND SHOES. MARK THOMAS DENNE, Rushden, England. Filed Aug. 22, 1910. Serial No. 578,397. (Cl. 12—55.)



1. In a machine for trimming the projecting edge of the heel seat of lasted boots and shoes, the combination of a work support, a curved trimming knife, a curved feeder, a rocking lever on which the said knife and feeder are mounted, a shaft on which the said lever is mounted so that it can rock and slide thereon, and means comprising a rotating crank pin and a triangular cam for imparting a four-motion movement to the said rocking lever.

2. In a machine for trimming the projecting edge of the heel seat of lasted boots and shoes, the combination of a work table, a feed roller let into an aperture in the said table, means for intermittently rotating the said roller, a curved trimming knife, a curved feeder, means for imparting a simultaneous four-motion movement to the said knife and feeder, and a combined presser-foot and gage supported on a horizontal spindle the axis of which is in approximately the same horizontal plane as the acting face of the said presser-foot.

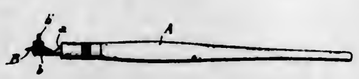
3. In a machine for trimming the projecting edge of the heel seat of lasted boots or shoes, the combination of a work table, an arcuate trimming knife and an arcuate work feed-foot, a rocking lever supported on a horizontal spindle to carry said knife and feed foot at its front end and having a claw with a cylindrical recess at its other end, a cylindrical block in said recess, means to impart simultaneous vertical and horizontal movements to said block and means to impart axial movements to the rocking lever.

4. In a machine for trimming the projecting edge of the heel seat of lasted boots or shoes, the combination of a work-table, a work feed wheel, means for intermittently rotating said work feed wheel, a trimming knife, a spring pressed presser foot to engage the upper face of the sole near its edge and also to limit the movement of the work toward the knife, a saddle to carry said presser foot and a spindle whose axis is in substantially the plane of the table to carry said saddle.

5. In a machine for trimming the projecting edge of the heel seat of lasted boots or shoes, the combination of a work table, a trimming knife, a stationary shear blade located in a slot in the said table and adapted to cooperate with the said knife, and a spring-pressed presser foot pivotally mounted on a spindle the axis of which is in approximately the same horizontal plane as the acting face of the said presser foot.

[Claim 6 not printed in the Gazette.]

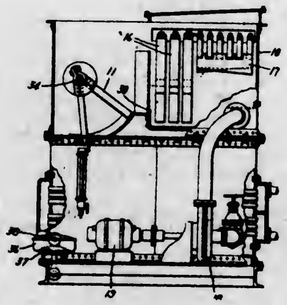
1,152,800. STYLUS. ALBERT B. DICK, Lake Forest, Ill., assignor to A. B. Dick Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 29, 1914. Serial No. 835,073. (Cl. 101—131.)



1. A stylus for operating upon stencil-sheets comprising a handle, a stub mounted therein, cut away at one side, a pivot pin carried by said stub and a wheel mounted on said pin, having a flat side terminating in a thin, continuously curved and unbroken cutting edge, said side being mounted against the cut-away portion of said stub, and said edge being in the axial plane of said handle, the other side of said wheel being beveled inwardly, and provided with an indicating projection extending axially of the wheel, substantially as set forth.

2. A stylus for operating upon stencil-sheets comprising a handle, a stub mounted therein, cut away at one side, a pivot pin carried by said stub and a wheel mounted on said pin, having a flat side terminating in a thin, continuously curved and unbroken cutting edge, said side being mounted against the cut-away portion of said stub, the other side of said wheel being provided with an indicating projection extending axially of the wheel, substantially as set forth.

1,152,801. LIQUID RHEOSTAT. GEORGE H. DORGHLOH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 2, 1914. Serial No. 815,882. (Cl. 219—57.)



1. A liquid rheostat for electric circuits comprising main electrodes and auxiliary electrodes arranged to be successively immersed in the liquid, said auxiliary electrodes being normally disconnected from the said circuit, and means for automatically connecting said auxiliary electrodes in circuit when they are immersed.

2. A liquid rheostat for electric circuits comprising main electrodes spaced apart, auxiliary electrodes spaced apart by a less distance than the main electrodes and arranged to be immersed in the liquid after the main electrodes, and means for causing the auxiliary electrodes to be connected in the electric circuit when they are immersed.

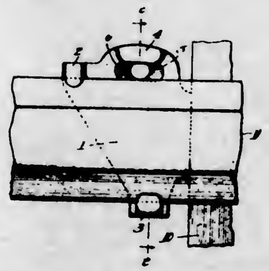
3. A liquid rheostat for electric circuits comprising main electrodes and auxiliary electrodes, means for causing the auxiliary electrodes to be connected in the electric circuit after the main electrodes have been immersed a predetermined amount, the minimum spacing between electrodes being less when the auxiliary electrodes are connected in circuit than when the main electrodes are connected in circuit.

4. A liquid rheostat for electric circuits comprising a liquid chamber, means for causing the liquid to gradually rise in said chamber, main and auxiliary electrodes spaced apart and mounted to be successively immersed as the liquid rises in the chamber, means for causing the auxiliary electrodes to be connected in the electric circuit when they are immersed, the minimum spacing of the electrodes in the liquid being less when the auxiliary electrodes are connected.

5. A liquid rheostat for electric circuits comprising main and auxiliary electrodes, a liquid chamber, means for causing first the main electrodes and then the main and auxiliary electrodes to be successively and gradually immersed in the liquid as the latter rises in the chamber, and means whereby the auxiliary electrodes are connected in circuit when they are immersed, the minimum spacing of the electrodes being less when the auxiliary electrodes are connected in circuit than before they are so connected.

[Claims 6 to 11 not printed in the Gazette.]

1,152,802. ANTICREEPER. WILLIAM H. FERGUSON, San Francisco, Cal., assignor to The P. & M. Co., Chicago, Ill., a Corporation of Illinois. Filed Jan. 5, 1914. Serial No. 810,458. (Cl. 238—4.)



1. An anti-creeper comprising a base plate having a pair of vertical walls, between which the rail is received, and a freely rotatable member arranged between one of said walls and the adjacent edge of the rail base, said member being of elliptical cross section whereby it is adapted to be forced further against the rail, upon longitudinal movement of the latter.

2. An anti-creeper comprising a base plate having a vertical shoulder, and a pin of non-circular outline held against said shoulder by the edge of the rail base, said pin being compressed on its shortest diameter whereby its effective diameter increases and crowds it more firmly against said rail base when it is rolled along said shoulder by the movement of said rail base.

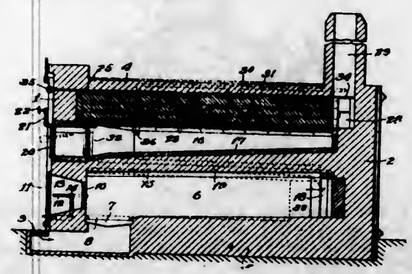
3. An anti-creeper comprising a base plate having a recess therein, a pair of jaws thereon spaced apart a distance substantially equal to the width of the rail base, said jaws being arranged normally diagonally opposite to each other and being adapted to secure the rail anchor in place, said recess being arranged substantially opposite to one of said jaws, and a pin arranged in said recess between a vertical wall thereof and the adjacent edge of the rail base and arranged to turn about a vertical axis, the bottom of said recess serving to limit the downward movement of said pin.

4. An anti-creeper comprising an element extending beneath the rail base, a rail gripping jaw on one end of said element and a rail check of approximately elliptical contour at the other end of said element, between which said rail is normally gripped, the gripping being automatically increased by a bodily rolling movement of said rail check caused by the longitudinal movement of said rail.

5. An anti-creeper comprising a plate extending beneath the rail base, a jaw on one side of said member and a cam element at the other side of said member, between which said rail may be gripped to prevent creeping, and a second jaw on said member on the side opposite said first jaw, whereby said jaws may hold said anti-creeper to the rail base, independently of said cam.

[Claims 6 to 10 not printed in the Gazette.]

1,152,803. BAKE-OVEN. AUGUST FINNILA, Los Angeles, Cal. Filed June 8, 1914. Serial No. 843,883. (Cl. 107—55.)



1. A bake oven comprising a fire box, a baking chamber of greater width than the fire box, the top and bottom of said chamber each being formed of a series of separate tubes, the top and bottom tubes being in communication with one another at their front ends, a dead air cell along the upper side of each of the top tubes the bottom tubes at their rear ends communicating with the fire box, and a chimney in communication with the rear ends of the top tubes.

2. A bake oven comprising a fire box, a baking chamber above the fire box, the top of said fire box forming a portion of the bottom of the baking chamber, the top and another portion of the bottom of said chamber each being formed of right and left separate series of longitudinal tubes, a right vertical flue and a left vertical flue connecting the front ends of the right top and bottom and the left top and bottom series respectively of the longitudinal tubes, the rear ends of the bottom tubes being in communication with the fire box, and a chimney communicating with the rear ends of the top tubes.

3. A bake oven provided with a baking chamber having its floor partially formed of longitudinally arranged tubes, and a fire box connected to said tubes, the top of said fire box partially forming the floor of the baking chamber.

4. A bake oven provided with a baking chamber having its top formed of tubes, a dead air cell along the upper side of each of said tubes and a fire box connected to said tubes.

5. A bake oven provided with a baking chamber having its floor and top formed of tubes placed side by side, said tubes communicating with one another at their front ends, an upper and a lower dead air cell along the upper side of each of the top tubes and a fire box connected to the rear ends of the floor tubes.

[Claims 6 to 15 not printed in the Gazette.]

1,152,804. RECORDING MECHANISM. GEORGE W. FREELAND, Moline, Ill., assignor to Williams, White & Company, a Corporation of Illinois. Filed July 13, 1910. Serial No. 571,762. (Cl. 234—1.)



1. In combination with a periodically movable member whose movements are to be recorded; a recording mechanism operated thereby and including a printing member, a movable impression device, a record tape between the printing member and the impression device and a feeding device for the record tape; a rocker arm connected with the tape feeding device and with the impression device for operating said devices; and a connection between the periodically movable member and the rocker arm for rocking the latter.

2. In combination with a periodically movable member whose movements are to be recorded; a movable means cooperating with said member to render the same inoperative; a releasable locking device adapted to lock the movable means against movement; a recording mechanism adapted to be operated by the movements of the said periodically movable member to record said movements, said recording mechanism including a key coöperating with the locking device and movable to release the same, and said key acting when thus moved, to render the recording mechanism operative.

3. In combination with a periodically movable member whose movements are to be recorded; a releasable locking mechanism coöperating with said member to hold the same against action; a record tape, an identifying key adapted to coöperate with said record tape in making an impression of the identifying marks on the key, said key adapted, when turned to printing position, to coöperate with the locking mechanism in releasing the same, and the said locking mechanism being constructed to lock the key in printing position when the locking mechanism is operated to release the periodically movable member.

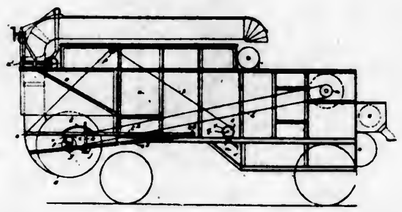
4. In combination with a periodically movable member whose movements are to be recorded; movable means cooperating therewith for rendering said member inactive; a releasable locking device for locking said movable means against movement; and a recording mechanism operated by said periodically movable member and including a key movable to printing position, said key operating when so moved to release the locking device and permit the periodically movable member to operate.

5. In combination with a periodically movable member whose movements are to be recorded; a movable device for rendering the same inoperative; a recording mechanism normally inoperative and adapted to be operated by the periodically movable member to record the movements of the latter, said recording mechanism including a removable identifying key; suitable connections between the periodically movable member and recording mechanism for operating the latter; a locking mechanism for locking the movable device in position to maintain the periodically movable member inoperative, said locking mechanism being released to permit the periodically movable member to operate, by the insertion and turning of the key to operative position, and said locking mechanism acting to lock the key in operative position, and being op-

erable to release the key, when the movable device is moved to render the periodically movable member inoperative.

[Claims 6 to 10 not printed in the Gazette.]

1,152,805. WIND-STACKER. THOMAS JOHN GEE, Buenos Aires, Argentina. Filed Apr. 14, 1914. Serial No. 831,700. (Cl. 193—21.)



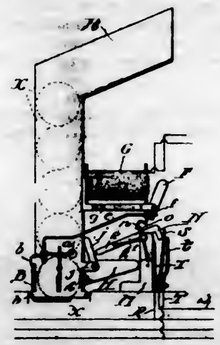
1. In a threshing machine, maize-sheller or the like, a windstacker including a frame pivoted to the machine structure, said frame including two arms at one side of the machine structure mounted on a common pivot, and an arm at the opposite side of said structure mounted on a pivot coaxial with the first mentioned pivot, brackets by which said first mentioned arms are spaced, a fan casing securing to said frame, a hopper also secured to said frame for leading straw and chaff to said casing, spindle bearings secured to said brackets, and means connected to an arm at each side of said structure for raising and lowering said frame and therewith said casing and hopper.

2. In a threshing machine, maize-sheller or the like, a windstacker including a frame pivoted to the machine structure, said frame including two arms mounted on a common pivot at one side of the machine structure, an arm at the opposite side of said structure mounted on a pivot coaxial with the first mentioned pivot, brackets spacing said first mentioned arms, a fan casing supported by said frame, the discharge pipe of said casing being directed substantially vertically upward, a hopper also secured to said frame, fan spindle bearings secured to said brackets, and means connected to an arm at each side of said structure for raising and lowering said frame, and therewith said casing and said hopper.

3. In a threshing machine, maize-sheller or the like, a windstacker including a frame pivoted to the machine structure, said frame including relatively inclined arms at one side of the machine structure, brackets by which said arms are spaced, a single arm at the opposite side of said structure, all said arms mounted for angular movement around a common axis, a fan casing supported by said frame intermediate said arms, the discharge pipe of said casing being directed substantially vertically upward, a hopper also secured to said frame, fan spindle bearings secured to said brackets, and means for raising and lowering said frame, and therewith said casing and said hopper, said raising and lowering means including members one on each side of said structure, said members conjointly rotatable on a common axis, cables led from arms on both sides of said structure to said rotatable members, to effect simultaneous angular movement of all said arms, a manually operable actuating member, and means for transmitting movement from said actuating member to said rotatable members.

4. In a threshing machine, maize-sheller or the like, a windstacker including a frame pivoted to the machine structure, said frame including relatively inclined arms at one side of the machine structure, brackets by which said arms are spaced, a single arm at the opposite side of said structure, all said arms being angularly movable around a common axis, a fan casing supported by said frame, the discharge pipe of said casing being directed substantially vertically upward, a hopper also secured to said frame, fan spindle bearings secured to said brackets, means connected to an arm at each side of said structure for raising and lowering said frame, and therewith said casing and said hopper, a fan spindle journaled in said bearings, a driven pulley on said spindle, a driving pulley revoluble around a fixed axis eccentric to the axis of angular movement of said arms, a belt for transmitting movement from said driving pulley to said driven pulley and a belt-tensioning device carried by said frame close to said driven pulley.

1,152,806. MULTIPLE-COIN CHUTE. CLIFFORD H. GREEN, Grand Rapids, Mich., assignor to National Piano Manufacturing Company, Grand Rapids, Mich., a Corporation of Illinois. Filed May 15, 1914. Serial No. 838,031. (Cl. 194—45.)



1. The combination with a tubular coin-chute adapted to hold several coins, one following the other, of an angular rocking element having a vertically disposed medial spindle member journaled in the rear of said chute, an arm member projecting from the upper end thereof the free end of which is adapted to enter the bore of the chute through a suitable opening in its side, and an arm member projecting from the lower end of said spindle whose full end extends transversely under the discharge end of said chute.

2. The combination with a tubular coin-chute adapted to hold several coins, one following the other, of an angular rocking element having a vertically disposed medial spindle member journaled in the rear of said chute, an arm member projecting from the upper end thereof the free end of which is adapted to enter the bore of the chute through a suitable opening in its side, and an arm member projecting from the lower end of said spindle whose full end extends transversely under the discharge end of said chute; said arm members being disposed in different horizontal planes and vertically at an angle to each other.

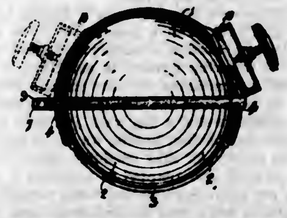
3. The combination with a tubular coin-chute adapted to hold several coins, one following the other, of an angular rocking element having an arm member movable into and out of the path of the coin gravitating through said chute, an arm member adapted to move laterally through said chute into the bore thereof when said first mentioned arm member withdraws and vice-versa, a trip adapted to enter the bore of said chute through one vertical edge thereof and to be moved by the lowermost coin in the same, means released by said trip for closing an electric circuit, a magnet, a rocking armature arranged relatively to said magnet, and a connection between said armature and the angular rocking element for moving said arm member to discharge the lowermost coin in said chute and restore said trip to its normal position and open said electrical circuit.

4. Mechanism of the kind specified comprising a vertically disposed tubular chute, an angular rocking element having a vertical spindle member pivoted to one side of the chute, arm-members respectively projecting from the opposite ends of said spindle member in different but parallel horizontal planes and in a vertical angle to each other, and adapted to alternately enter the path of the coin gravitating through said chute, an electro-magnet, an armature pivoted at one end adjacent the same, and a link connecting one of said arms to said armature.

5. Mechanism of the kind specified comprising a vertically disposed tubular chute, an angular rocking element having a vertical spindle-member pivoted to said chute, arm members respectively projecting from the opposite ends of said chute at suitable angles to each other and adapted to alternately enter the path of the coin gravitating through said chute, a trip pivoted mediate its ends to the chute on the side opposite the angular rocking element and adapted to enter the path of the coin gravitating through said chute; a lever; said trip being adapted to lock and release said lever; electrical circuits alternately opened and closed by said lever, an electric magnet, an armature pivoted adjacent the same, and a link connecting one of said arms to said armature.

[Claim 6 not printed in the Gazette.]

1,152,807. LAMP FOR VEHICLES. THOMAS LEONARD GRIFFITHS, Birmingham, England. Filed Apr. 20, 1914. Serial No. 833,132. (Cl. 240—41.)



1. In a lamp for vehicles, the combination of a spherical lamp body comprising a front and a rear portion; a source of light carried upon said front portion; means permitting a relative rotation between the said two portions in the plane of their common boundary; and an attachment fitting adapted to be attached at either side of the vehicle, the rear portion of the lamp being inverted correspondingly and the front portion being adapted to remain the same way up.

2. In a lamp for vehicles, the combination of a spherical lamp body comprising a front and a rear portion; an electric light globe carried by said front portion; electrical connections leading to said front portion; means permitting a relative rotation between the said two portions in the plane of their common boundary; and an attachment fitting adapted to be attached at either side of the vehicle; the rear portion of the lamp being inverted correspondingly and the front portion being adapted to remain the same way up.

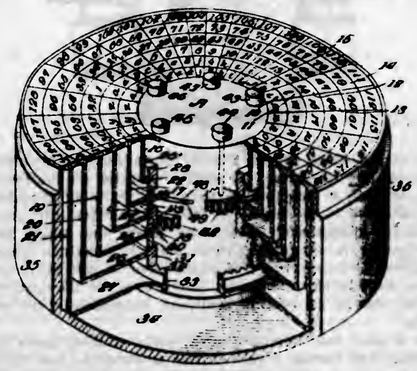
3. In a lamp for vehicles the combination of a semi-spherical rear portion; an attachment fitting fixed to said rear portion; a semi-spherical front portion; a lens carried upon said front portion; flanges at the edges of each of said portions; and a ring inclosing the said flanges and permitting the said portions to be rotated relatively one to the other.

4. In a lamp for vehicles the combination of a semi-spherical rear portion; an attachment fitting fixed to said rear portion; a semi-spherical front portion; a Fresnel lens carried upon said front portion; flanges at the edges of each of said portions; a ring inclosing the said flanges and permitting the said portions to be rotated relatively one to the other; a source of light disposed substantially in the center of the sphere; and a semi-spherical reflector formed by the inner surface of the rear portion of the said lamp body.

5. In a lamp for vehicles the combination of a semi-spherical rear portion; a semi-spherical front portion; a Fresnel lens carried upon said front portion; flanges at the edges of each of said portions; a ring inclosing the said flanges and permitting the said portions to be rotated relatively one to the other; and an attachment fitting fixed to said rear portion and adapted to be attached at either side of the vehicle and set at such an angle relatively to the body that the concentrated beam from the lens is adapted to extend from a direction pointing slightly inwardly to an outward direction approximately at right angles to the direction of travel.

[Claim 6 not printed in the Gazette.]

1,152,808. CRYPTOGRAPHIC APPARATUS. RAMÓN GUZMÁN M, Tegucigalpa, Honduras. Filed Sept. 22, 1914. Serial No. 863,031. (Cl. 35—13.)



1. A cryptographic apparatus comprising a central or hub portion, a plurality of chart plates mounted to turn about the central portion, one of such plates bearing letters of the alphabet and the remaining plates bearing numbers in numerical order, and means mounted upon the said central portion for imparting independent rotary movement to the chart plates.

2. A cryptographic apparatus comprising a hub, a plurality of chart plates mounted to turn about the hub, shafts mounted longitudinally in the hub, each having an end portion projecting to be grasped when it is required to rotate the shaft, and means between the several shafts and chart plates to admit of imparting an independent rotary movement to the several chart plates.

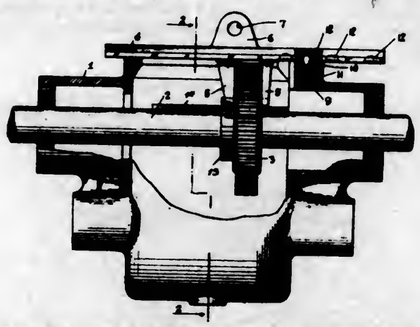
3. A cryptographic apparatus comprising a hub, chart plates mounted to turn about the hub, circular racks located at different points in the length of the hub and encircling the same and having connection with the respective chart plates, shafts mounted longitudinally in the hub and pinions rotatable with the shafts and engaging the respective racks to admit of each of the chart plates being independently rotated.

4. A cryptographic apparatus comprising a hub, annular chart plates having a concentric arrangement, each being provided with a depending portion and an inwardly extending part encircling the hub and formed with rack teeth, the depending portions being of different lengths to bring the rack portions at different points in the length of the hub, shafts mounted in the hub parallel with one another and with the axis of the hub and chart plates, and pinions rotatable with the respective shafts and in engagement with the rack teeth of the respective chart plates to admit of each of such plates being independently rotated.

1,152,809. GEAR-SHIFTING DEVICE. GEORGE T. HANCHETT, New York, N. Y. Filed July 24, 1914. Serial No. 852,829. (Cl. 74—7.)

1. In gear transmission devices, a gear case having a cover slidably mounted thereon, and a gear shifter mounted on the inner side of said cover, substantially as set forth.

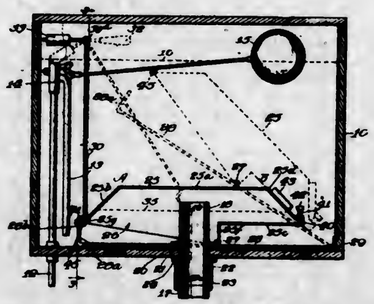
2. In gear transmission devices, a gear case having a cover slidably mounted thereon, and a gear within said case slidably mounted for shifting into positions for engagement with other gears, said cover having inwardly extending projections for shifting said gear when the cover is moved, substantially as set forth.



3. A gear case having a cover plate slidably mounted thereon, and having a gear shifter mounted on the inner side thereof, a gear within said case shiftably mounted and adapted to be moved by said gear shifter into positions for engagement with other gears, and means for frictionally retaining said cover plate in positions corresponding to the positions of engagement of said gear, the cover plate being of sufficient length to cover the opening in the case in all of said positions, substantially as set forth.

4. A gear case having a cover plate slidably mounted thereon, and having a gear shifter mounted on the inner side thereof, a gear within said case shiftably mounted and adapted to be moved by said gear shifter into positions for engagement with other gears, and means on the gear case for guiding the cover plate in its sliding movement, said cover plate being of sufficient length to cover the opening in the case in all the gear-engaging positions of said shiftable gear, substantially as set forth.

1,152,810. PNEUMATIC VALVE APPARATUS. GEORGE A. HANLY, Elgin, Ill. Filed Nov. 27, 1914. Serial No. 874,178. (Cl. 4—5.)



1. The combination of a tank having a source of liquid supply, a discharge element projecting upward in said tank, an air pocketing device having a downward opening in one end portion thereof and being substantially closed at another end portion thereof, said two portions being open to each other, the downwardly open portion of said device being adapted substantially to surround said discharge orifice, said air pocketing device being pivotally mounted whereby the same may move upward to discharge pocketed air, and also to tilt whereby said open portion moves downward from its normal air pocketing position, the substantially closed end portion of said hood-like device being adapted to tilt upward and having an air intake opening adapted to rise above the surface of the liquid in said tank when the open end of said hood-like device tilts downward, the open portion of said hood-like device together with said discharge pipe constituting a siphon when said hood-like device is in a downwardly tilted position, and means for releasably holding said hood-like device in its normal air pocketing position.

2. The combination of a tank for a liquid, a discharge element having a discharge orifice in said tank, a support pivotally mounted, a hood-like device pivotally mounted intermediate its ends on said support, said hood-like device having side, end and top walls, and a bottom wall over a portion thereof, said hood-like device being open downwardly at a portion thereof, said open portion being adapted to tilt downward, said open portion substantially surrounding the discharge orifice in said discharge pipe and adapted to pocket a quantity of air thereabout, means for releasably holding said hood-like device and frame in normal air pocketing position, the open portion of said hood-like device and said discharge pipe constituting a siphon when in such downwardly tilted position, the more inclosed portion of said hood-like device having provisions for admitting air thereinto when the liquid in said tank is flowing through said discharge orifice by siphonic action, such admitted air being adapted to break such siphonic action and to constitute an obstruction about said discharge orifice when the liquid in said tank again rises above said discharge orifice.

3. The combination of a tank for a liquid, a discharge element in said tank, and a pneumatic valve apparatus comprising in combination a support adapted to be pivotally mounted to swing upward in said tank, a hood-like device pivoted intermediate its ends on said support, one end portion of said hood-like device being substantially a pocket having side walls, a top wall, end wall and a bottom wall, said end portion having an air intake opening, the other end portion of said hood-like device being open normally downward and adapted to surround a portion of such pipe in air pocketing relation when normally in use, said two portions being open to each other, and means for releasably holding said hook-like device in normal air pocketing position.

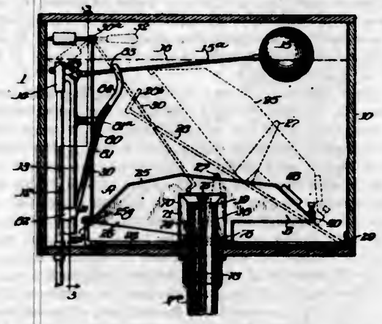
4. The combination of a tank for a liquid, a discharge element therein, and a pneumatic valve apparatus comprising a hood-like device pivoted intermediate its ends, one end portion thereof constituting a pocket open toward said other end portion, and having an air-intake opening, the other end portion also constituting a pocket open downwardly and adapted to surround such discharge element in air pocketing relation, and means for releasably holding said hood-like device in air pocketing position about such discharge element.

5. The combination of a tank for a liquid, a discharge element therein, and a pneumatic valve apparatus comprising a hood-like device pivoted intermediate its ends, one end portion thereof constituting a pocket open toward said other end portion, and having an air-intake opening, the other end portion also constituting a pocket open downwardly and adapted to surround such discharge element in air pocketing relation, the end portion which has said air intake opening having a counterweight adapted normally to tend to cause said end portion to tilt downward, and means for releasably holding said hood-like device in air pocketing position about such discharge element.

[Claims 6 to 12 not printed in the Gazette.]

1,152,811. PNEUMATIC VALVE MECHANISM. GEORGE A. HANLY, Elgin, Ill. Filed Mar. 3, 1915. Serial No. 11,708. (Cl. 4—5.)

1. The combination of a tank adapted to contain a liquid, a discharge element projecting upward in said tank and having a discharge orifice at the upper portion thereof, said discharge element having a trap normally below said discharge orifice, means for imprisoning a quantity of air about said discharge orifice, and a siphon device in coöperative relation with said discharge element and orifice adapted to cause a liquid discharge through said orifice independently of said imprisoning means after a discharge through said orifice is started, said imprisoning means being adapted to prevent a discharge through said orifice until the imprisoned air about said orifice is released, and means for releasing air imprisoned by said imprisoning means.



2. The combination of a tank adapted to contain a liquid, a discharge element projecting upward in said tank and having a discharge orifice at the upper portion thereof, said discharge element having a trap normally below said discharge orifice, a pivoted hood-like device adapted to imprison a quantity of air about said discharge orifice, and an inverted cup-like siphon device about said discharge element and orifice adapted to cause a liquid discharge through said orifice independently of said hood-like device after a discharge through said orifice is started, means for releasably holding said hood-like device in air imprisoning position, and means for supplying a liquid to said tank.

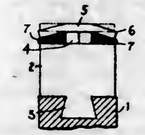
3. The combination of a tank adapted to contain a liquid, a discharge pipe having a portion thereof projecting upward in said tank and having a discharge orifice in said upwardly projecting portion, a pivoted hood-like device adapted to imprison a quantity of air about said discharge orifice in said tank, means for releasably holding said hood-like device in air-imprisoning position, means for supplying a liquid to said tank, and a draining element comprising an inverted cup-like siphon device about said discharge pipe in said tank and having its lower edge normally below said discharge orifice and so spaced from said pipe and orifice that a liquid in said tank may flow around the lower edge of said draining element and into said discharge orifice.

4. The combination of a tank adapted to contain a liquid, a discharge pipe having a discharge orifice in said tank and a trap outside said tank and normally below said discharge orifice, means for imprisoning a body of air about said discharge orifice in said tank, a cup shaped device about said discharge orifice and constituting a siphon in conjunction with said discharge pipe, said trap being adapted to contain a quantity of the liquid from said tank, means providing an air passage from above the normal liquid line in said trap to the space occupied by imprisoned air in said air imprisoning means, means for discharging air from said air imprisoning means whereby liquid in said tank may flow through said discharge orifice, the construction of said air imprisoning means being such as to provide an intake for air to said air imprisoning means to provide a body of air therein after a discharge of liquid through said discharge orifice.

5. The combination of a tank adapted to contain a liquid, an open end discharge pipe projecting upward in said tank, a pivoted hood-like device adapted to imprison a quantity of air about the open end of said discharge pipe in said tank, means for releasably holding said hood-like device in air imprisoning position, and a draining element comprising a hood-like device providing a siphon about said discharge pipe in said tank, said draining element having an air tube extending through a portion of said discharge pipe and open throughout its length, said air tube being in communication with the imprisoned air beneath said hood-like element when the device is normally in use, and a trap in said discharge pipe and adapted to contain a quantity of liquid normally below the open end of said discharge pipe, said air tube having its lower end normally above the normal liquid line in said trap.

[Claims 6 to 12 not printed in the Gazette.]

1,152,812. SHROUD AND BUCKET. HENRY J. HANZLIK, Trenton, N. J., assignor to De Laval Steam Turbine Company, Trenton, N. J., a Corporation of New Jersey. Filed Feb. 2, 1915. Serial No. 5,630. (Cl. 121—57.)



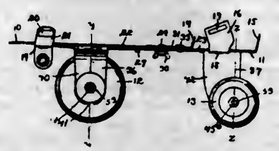
1. The combination with a bucket carrier, and buckets thereon provided with necks and with projecting ears beyond such necks, of a sectional shroud band comprising a plurality of sections notched to engage the necks of the buckets and provided with means adapted for engagement by said ears, the said bucket ears being bent down upon such shroud band sections and thereby engaging the latter and holding them in place.

2. The combination with a bucket carrier, and buckets thereon provided with necks and with projecting ears beyond such necks, of a sectional shroud band comprising a plurality of sections notched to engage the necks of the buckets and formed on their upper sides for lateral engagement by said ears, the said bucket ears having lateral engagement with said shroud band sections.

3. The combination with a bucket carrier, and buckets thereon, of a sectional shroud band comprising a plurality of sections provided with means adapted for lateral engagement by portions of said buckets for the holding of such shroud band sections in place, said buckets comprising means having lateral engagement with such engaging portions of the shroud band sections.

4. The combination with a bucket carrier, and buckets thereon provided with projecting ears, of a sectional shroud band comprising a plurality of sections mounted on said buckets and having beveled upper surfaces, the said ears of said buckets being bent into lateral engagement with said shroud band sections.

1,152,813. ROLLER-SKATE. EMERY E. HARDY, Bayside, N. Y. Filed July 25, 1914. Serial No. 853,060. (Cl. 46—51.)



1. In a roller skate, a body frame for engaging with the foot, a set of rear wheels positioned below the rear portion of the said body frame, and a single front wheel, positioned below the said body frame, in front of the said rear wheels, and appreciably rearwardly of the front end of the said body frame suitably to receive and sustain the greater part of the load supported by the said body frame, and the said front wheel being of relatively large diameter.

2. In a roller skate, a sole member having a forked rear portion and a headed stud in front of the said forked rear portion, a heel member having a longitudinal slot for a portion of its length, the said stud being engaged with the said slot, and a clamping screw and nut serving to lock the said members together.

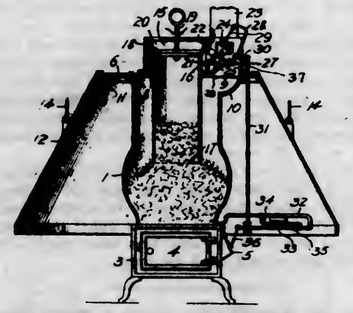
3. In a roller skate, a sole member having a forked rear portion and a headed stud in front of the said forked rear portion, a heel member having a longitudinal slot for a portion of its length, the said stud being engaged with the said slot, and a clamping screw and nut serving to lock the said members together, and the said heel member having a cross-wise slot suitable to receive the free ends of the said forked rear portion.

4. In a roller skate a body portion and a front heel lug, the said body portion having a headed stud and being provided with a longitudinal slot, the said heel lug comprising a piece of sheet metal having a main portion for engaging with the said body portion and an upturned portion serving as the lug proper, the said main portion having a longitudinal slot suitable for receiving the said stud and having a hole for a clamping screw in registration with the said slot, and the said heel lug having a cross-wise slot in the said upturned portion, connected with said longitudinal slot, and suitable to admit the head of the said headed stud.

5. In a roller skate, a wheel support of U-shape, comprising a yoke and side arms, the said side arms having slots extending inwardly from the free ends, and a shaft for a wheel positioned in the said slots and secured to the said side arms, the free ends of the said arms being bent outwardly so as to overhang the body portion of the said arms and serving to prevent the removal of the said shaft from the said side arms.

[Claims 6 to 8 not printed in the Gazette.]

1,152,814. HEAT-REGULATOR FOR BROODERS. CLEMENT V. HILL, Trenton, N. J. Filed Dec. 19, 1914. Serial No. 878,094. (Cl. 126—286.)



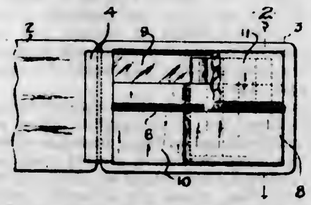
1. The combination with a stove having fuel and smoke openings in juxtaposition, a chamber over each opening, said chambers being in communication with each other and in constant communication with a flue, a flue damper between one of said chambers and the stove, an air door for one of said chambers and the stove, a bell crank lever on said damper one arm of which has an operative connection with said air door, a rod having an operative connection with the other arm of the bell crank lever, and means to operate said door and damper.

2. The combination with a stove having fuel and smoke openings in juxtaposition, a chamber for each opening, said chambers being in communication with each other and in constant communication with a flue, a flue damper between one of said dampers and the stove, an air door for one of said chambers and the stove, a bell crank lever on said damper one arm of which has an operative connection with said air door, a rod having an operative connection with the other arm of the bell crank lever, means connected with said rod to operate it, an air door for the ash pit of the stove and in operative connection between said ash pit air door and said means whereby both of said air doors and the damper are operated simultaneously as described.

3. The combination with a stove, of a frame suspended from said stove, a lever pivotally mounted on said frame, a second lever pivotally mounted on said frame, at one end and pivotally connected at its other end to the first named lever, operating means connected to said frame, and to the said second named lever, a flue damper for said stove, and two air doors for said stove, an operative connection between the first named lever and said air doors and damper whereby one of said doors is moved to open position while the other of said doors is being moved to open position and whereby said damper is moved to open position simultaneously with the movement of one of said doors to closed position.

4. The combination with a stove having fuel and smoke openings in juxtaposition, a chamber for each opening, said chambers being in communication with each other and in constant communication with a flue, a flue damper between one of said dampers and the stove, an air door for one of said chambers and the stove, a bell crank lever on said damper one arm of which has an operative connection with said air door, a rod having an operative connection with the other arm of the bell crank lever, means operatively connected with said rod to operate it, an air door for the ash pit of the stove and in operative connection between said ash pit air door and said means whereby both of said air doors and the damper are operated simultaneously as described, and a counterbalance weight for the parts moved by the said means.

1,152,815. CIGARETTE-BOX. CHARLES W. HUBBARD, Jr., New York, N. Y. Filed Oct. 24, 1914. Serial No. 868,354. (Cl. 206—41.)



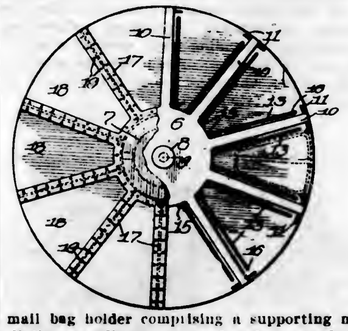
1. A package for cigarettes, comprising an outer receptacle consisting of oblong dished box-halves joined by a hinge at one of the short ends and adapted to receive the cigarettes in a single row, in combination with an elastic retaining band secured lengthwise across the interior of one of the box-halves, and a folder pocket beneath said band, said pocket comprising a back overlying the bottom of said box-half, a lower flap continuous with said back and carried up over the cigarettes from their lower ends and held by said retaining band, and an upper flap continuous with the back and covering the upper portions of the cigarettes and adapted to permit the removal of the same.

2. A package for cigarettes, comprising an outer receptacle consisting of hinged box halves, consisting of a single piece of dished cardboard stock, in combination with an elastic retaining band secured across one of the box halves, and a folder comprising a back applied to the bottom of said box half, a lower and inner flap interposed between the band and the cigarettes, and an upper and outer flap adapted to be turned back to expose the ends of the cigarettes.

1,152,816. MAIL-BAG HOLDER. JOHN HUNEKE, Chicago, Ill., assignor to Cox Multi-Mailer Company, Augusta, Me., a Corporation of Maine. Filed Jan. 13, 1913. Serial No. 741,862. (Cl. 211—86.)

1. A mail bag holder comprising arms spaced apart, rods parallel therewith, and hooks at the ends of the arms, the rods and the hooks being adapted to hold and distend mail bags.

2. A mail bag holder comprising arms spaced apart, rods parallel therewith, and hooks at the ends of the arms, the rods being adapted to support the mail bags and the hooks being disposed to maintain the mail bags in distended position when supported by the rods.



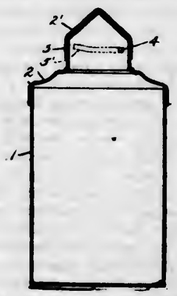
3. A mail bag holder comprising a supporting member with radially extending arms, and rods secured thereto parallel with the sides of the arms.

4. A mail bag holder comprising a supporting member with radially extending arms, rods secured to said member and extending parallel with the sides of said arms, and hooks in the ends of said arms for distending a mail bag supported by the rods.

5. In a mail bag holder, the combination with a laterally extending top support, of means secured to said support for engaging the hooks of a mail bag, and a laterally extending bottom support spaced from and corresponding with the top support substantially the distance of the height of a mail bag.

[Claims 6 and 7 not printed in the Gazette.]

1,152,817. TOP FOR CANS AND OTHER RECEPTACLES. FRANK S. HYATT, Brooklyn, N. Y. Filed Aug. 1, 1907. Serial No. 386,618. (Cl. 221—64.)

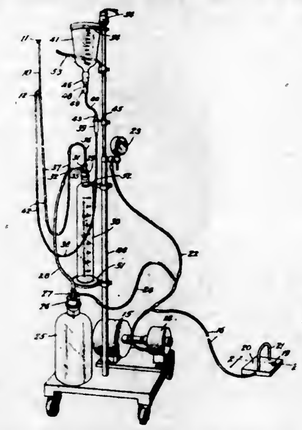


A closure for cans comprising a fixed and a rotary cap, each of said caps being provided with an opening or openings adapted to register with each other, the walls of the caps in which the openings are formed being arranged at such an angle to the body of the can that the contents will be discharged by gravity in a substantially vertical direction when the can is held in the natural position for pouring the material.

1,152,818. APPARATUS FOR SURGICALLY CLEANSING SURFACES. CHARLES EDMUND KELLS, New Orleans, La. Filed Oct. 5, 1914. Serial No. 865,068. (Cl. 128—9.)

1. A tubular instrument or tip for surgically cleansing surfaces provided with a reticulated end to be placed adjacent to the surface to be cleansed, means for exerting suction on the interior of the tip to draw fluid through the reticulated end into and through its interior, and means to introduce fluid immediately inside of the tip for the purpose set forth.

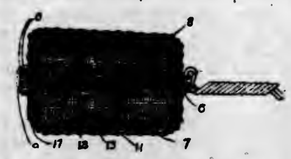
2. A tubular instrument or tip for surgically cleansing surfaces provided with a reticulated end to be placed adjacent to the surface to be cleansed, means for exerting suction on the interior of the tip to draw fluid through the reticulated end into and through its interior, and means to introduce fluid immediately inside of the tip for the purpose set forth, and means for interrupting the suction to permit the fluid to exude upon the surface.



3. In combination, a tubular instrument or tip, a graduated fluid reservoir, means to conduct fluid to the tip, a graduated receiver, means to withdraw fluid from the tip and conduct the same to the receiver whereby the excess fluid in the receiver over that removed from the reservoir can be determined, and an overflow receiver connected with the first named receiver whereby to prevent the flooding of the suction exerting means by the withdrawn liquid.

4. In combination, a reservoir means for regulating the flow therefrom, a tubular tip means for conducting fluid to the interior thereof, a receiver, means connecting the receiver and tip, an over-flow receiver connected to the first named receiver and means for applying suction to the interior of the over-flow receiver.

1,152,819. SOAP RECEPTACLE OR SHAKER. WILBER M. KELSO, Oak Park, Ill. Filed Oct. 5, 1912. Serial No. 724,159. (Cl. 45—28.)



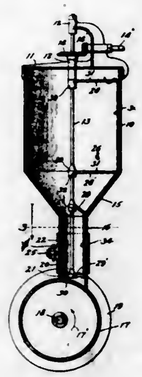
1. A soap receptacle adapted for use as a shaker, having its body composed of an inner fine-mesh relatively fine woven wire fabric, and an outer relatively coarse-mesh woven wire fabric adapted to serve as a guard and against the inner surface of which the inner fabric bears.

2. A soap receptacle comprising two sections adapted to be opened, each section formed of a relatively fine-mesh inner woven wire fabric, and a relatively coarse-mesh outer protecting woven wire fabric against whose inner surface the inner fabric rests, a handle attached to one section, and a device serving to secure the sections in closed position.

3. A soap shaker comprising a receptacle composed of two sections pivotally united at one edge, each section composed of an inner fine-mesh fabric and an outer coarse-mesh wire fabric against which the inner fabric

reats, a handle secured to one section opposite the line of hinging, and a latch device adjacent the handle serving to secure the sections together.

1,152,820. MEANS FOR FEEDING POWDERED MATERIAL. CASS L. KENNICOTT, Chicago Heights, Ill., assignor to The Kennicott Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 27, 1914. Serial No. 874,189. (Cl. 210—19.)



1. In apparatus of the class described, the combination with a receptacle having a downwardly-sloping conical bottom and a central outlet spout leading therefrom, of a shaft mounted axially within said receptacle, radial arms carried by the shaft, and a cutting wire stretched taut between the arms and lying parallel to and adjacent the inner surface of the receptacle, for the purpose set forth.

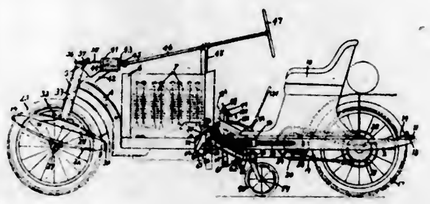
2. In apparatus of the class described, the combination with a receptacle having a downwardly-sloping conical bottom and a central outlet spout leading therefrom, of a shaft mounted axially within the receptacle and extending through the conical bottom and the outlet spout, radial arms carried by said shaft, and a cutting wire stretched taut between the arms and lying parallel to and adjacent the inner surfaces of the receptacle, the bottom, and the outlet spout, for the purpose set forth.

3. In apparatus of the class described, the combination with a receptacle having an outlet opening in the lower end thereof, and adapted to discharge material by gravity, a shaft mounted centrally within the receptacle in line with the general direction of motion of the material therein, and a cutting wire stretched taut between supports carried by the said shaft and adapted on the rotation of the shaft to cut the material in a line substantially parallel to the general direction of movement of the material.

4. In apparatus of the class described, the combination with a receptacle having a downwardly sloping conical bottom and a central outlet spout leading therefrom, a shaft mounted axially within the receptacle and passing through the said conical bottom and outlet spout, radial arms carried by the shaft, a cutting wire stretched taut between the arms and lying parallel to and adjacent the inner surfaces of the receptacle, the bottom and the outlet spout, means for driving the shaft, a movable feeding surface mounted in operative relation to the discharge outlet of the spout, and means for simultaneously driving the feeding surface.

1,152,821. MOTOR-VEHICLE. SAMUEL B. KURTS, Brooklyn, N. Y. Filed Dec. 20, 1907. Serial No. 407,294. (Cl. 21—90.)

1. A motor-vehicle having in combination, a frame supported at its rear end upon a driving-wheel and at its front end a steering-wheel; means for journaling said steering-wheel on the frame: means for manipulating the steering-wheel; and means for actuating the driving-wheel including a transmission-shaft extending longitudinally of the vehicle frame and having splined thereto a clutch-gear, transmission mechanism coöperating with said clutch-gear including two sprocket-wheels, means whereby one or the other of said sprocket-wheels may be positively driven, and connections between the sprocket-wheels and the driving-wheel.



2. A motor-vehicle having in combination, a frame supported at its rear end upon a driving-wheel and at its front end upon a steering-wheel; means for journaling said steering-wheel on the frame; means for manipulating the steering-wheel; means for actuating the driving-wheel including a two-part transmission-shaft; a clutch-device between the two parts of said shaft; a second shaft arranged at an angle to the said transmission-shaft; sprocket-wheels carried by said second shaft; a sliding clutch coöperative with said sprocket-wheels, means connecting the said transmission-shaft with the said second shaft; and connecting means between said sprocket-wheels and the driving-wheel.

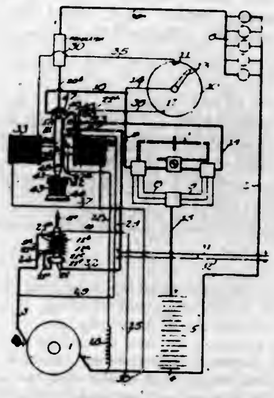
3. A motor-vehicle having in combination, a frame supported at its rear end upon a driving-wheel and at its front end upon a steering-wheel; means for journaling said steering wheel on the frame; means for manipulating the steering-wheel; means for actuating the driving-wheel including a two-part transmission-shaft; a countershaft paralleling the latter; gears carried by said countershaft; a sliding-clutch-gear carried by one part of said transmission-shaft; means connecting the other part of said transmission-shaft with the said clutch-gear and the said countershaft; means whereby the said clutch-gear may be moved into coöperation with one of the gears on the said countershaft for changing the speed transmitted by the two-part transmission-shaft; and a motor for driving the two part transmission-shaft.

4. A motor vehicle having in combination, a frame supported at its rear end upon a driving-wheel and at its front end upon a steering-wheel; means for journaling said steering-wheel on the frame; means for manipulating the steering-wheel; means for actuating the driving-wheel including a transmission shaft; a shaft arranged at a right-angle thereto; gearing connecting the two said schafts whereby one may be driven by the other; sprocket-wheels carried by the latter shaft; a clutch-device co-operative with both of said sprocket-wheels whereby the gearing may drive either of said sprocket-wheels; and a motor for driving the transmission-shaft.

5. A motor-vehicle having in combination, a frame supported at its rear end upon a driving-wheel and at its front end upon a steering-wheel; means for journaling said steering-wheel on the frame; means for manipulating the steering-wheel; means for actuating the said driving-wheel including a transmission-shaft in two parts independently operable; a clutch and gearing connecting the driving-wheel and one part of said shaft; means whereby the two parts of said shaft may be coupled and uncoupled at will; means whereby the speed of one part of said shaft may be changed at will; and means whereby the movement of said part may be reversed at will.

[Claims 6 to 10 not printed in the Gazette.]

1,152,822. BATTERY-CONTROLLING DEVICE FOR AXLE-DRIVEN GENERATORS. ROBERT C. LANPHIER, Springfield, Ill., and EAVIN M. FITZ, Columbus, Ohio. Filed Feb. 17, 1912. Serial No. 678,349. (Cl. 171—313.)



1. In a system of electric train lighting, in combination, an electric generator adapted to be driven from the train axle and to generate a current after a critical speed has been reached, a storage battery, translating devices connected to said storage battery and to said generator, an ampere-hour meter connected to said battery to register the charge and discharge thereof and adapted to close the circuit between contacts at maximum charge and discharge of said battery, electric circuits connected with said contacts, a solenoid in the circuit from said maximum discharge contact of said meter, a second solenoid in the circuit from said maximum charge contact of said meter, a rocking switch member, means controlled by said solenoids for rocking said switch member in one direction or the other as said solenoids are respectively energized, contact devices connected to said switch and adapted, when said switch is swung in one direction by the closing of the contacts when the maximum charge is recorded by the meter, to connect the battery and the translating devices with the generator and when the contact has been closed at the maximum charge point of said meter, to disconnect said battery from said generator and connect said battery and the translating devices.

2. In an electric train lighting system, in combination, a generator adapted to be driven from the axles of said train, automatically-operated switching devices adapted to disconnect the generator armature from the circuit when its speed falls below a critical point, a storage battery, translating devices connected with said storage battery and the armature circuit of said generator; a meter connected with said storage battery and adapted to record the charge and discharge thereof and having contacts adapted to be closed when the maximum charge and the maximum discharge of said battery has been reached, electrical circuits connected to said maximum charge and maximum discharge contacts, a switch member, solenoids connected, respectively, with the maximum charge and maximum discharge contacts of said meter, mechanism operated by the energizing of said solenoids, respectively, to move said switch in one direction or the other, contacts on said switch and in said circuits adapted, when said switch is moved in one direction by the connection of one of said solenoids with the maximum discharge contact of said meter, to automatically connect said battery and the translating devices with said generator and, when said switch is operated by the energizing of the other solenoid connected with the maximum charge contact of said meter, to disconnect the field circuit of said generator from the generator circuit, then to disconnect said battery and the translating devices from said generator, and to connect said battery with said translating devices.

3. In combination, an ampere-hour meter, a solenoid, a circuit connecting said meter and said solenoid, mechanism in said meter adapted to close said circut at a given point, switch mechanism operated by the energizing of said solenoid, a switch in the circuit connecting said meter and said solenoid held normally in a closed position, and means operated by said first-named switching mechanism to open said switch as said switching mechanism is operated on by said solenoid.

4. In combination, an ampere-hour meter, a storage battery connected therewith, circuits connected with said ampere-hour meter and adapted to be closed at given maximum charge and discharge points on said meter, a solenoid connected with each of said circuits, switching mechanism adapted to be operated by the energizing of said solenoids, a switch in the circuit connecting each of said solenoids with said meter normally in yielding closed position, and mechanism operated by said first-mentioned switching mechanism to open said switches as said switching mechanism is operated by the energizing of said solenoids, respectively.

5. In combination, an ampere hour meter, a pair of solenoids, circuits between said solenoids and said meter, mechanism in said meter adapted to close said circuits at given maximum charge and discharge points, plungers for said solenoids, a switching mechanism operated by said plungers, a switch on each of said solenoids in the circuit connecting the same with the meter and adapted to be normally closed, and mechanism operated by said plungers to open said switches as the said plungers are operated on respectively by said solenoids.

1,152,823. SAFETY APPLIANCE FOR RAILWAY-CARS. THEODORE B. LA RUE, Spokane, Wash. Filed Nov. 21, 1914. Serial No. 873,367. (Cl. 188—1.)

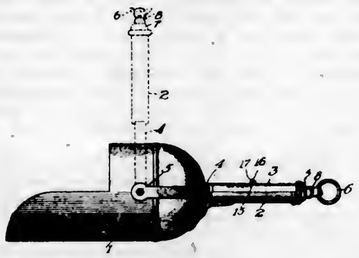
1. The combination with a car having an automatic air brake system, of an emergency controlling apparatus for the system, said apparatus including a plurality of tubes, each of a length slightly less than the distance from center to center of the car seats, a cable extending through the tubes and connected to the conductor's valve of the air brake system, and means slidable transversely beneath the seats of the car and connected to the exposed portions of the cable whereby the effective length of the same may be lessened with the consequent opening of the conductor's valve.

2. The combination with a car having an automatic air brake system, of an emergency controlling apparatus including a cable attached to the conductor's valve, a plurality of tube members arranged with their terminals in spaced relation to the terminals of the adjacent tube members, brackets removably securing the tubes to the side walls of the car, said tubes receiving the cable member, rods slidable transversely of the car and secured beneath the seats thereof, frame members formed on the terminals of the rods, and pulleys journaled in the frames and engaged with the adjacent exposed portions of the cable which lie between the adjacent terminals of each pair of tube members.

3. The combination with a car having an automatic air brake system, of an emergency controlling apparatus, said apparatus including a cable extending longitudinally along the sides of the car and connected to the conductor's valve of the air brake system, a plurality of tubes through which the cable extends, there being a portion of the cable exposed between the adjacent terminals of the tubes, and a plurality of rods mounted for transverse sliding movement in the car, said rods being freely connected at their terminals to the exposed portions of the cable, said rods being adapted upon movement away from the side of the car to shorten the effective length of the cable, whereby the conductor's valve may be opened.

4. An emergency controlling apparatus adapted for attachment to a car having an automatic air-brake system, said apparatus including a cable connected to the conductor's valve of said system, an operating rod freely engaging the cable, and brackets slidably connecting the rod to a seat of the car, whereby the effective length of the cable may be shortened upon the actuation of said rod to thereby open the conductor's valve.

1,152,824. SCOOP. JAMES I. LEARY, Chicago, Ill. Filed Oct. 8, 1914. Serial No. 865,675. (Cl. 73—46.)



1. A spring balance scale scoop comprising a scoop supported within the semi-circular support so as to be capable of rotation about the axis of such support and attached to a spring balance scale held within a tubular handle and provided with an adjusting screw for regulating the tension of such spring scale, a protecting cap over such adjustment screw, a loosely fitted ring attached to such protecting cap and a rigid handle attached to such scoop so as to fit back against or partly around the chamber of the weighing scale as and for the purpose described.

2. The combination of a scoop and a weighing attachment comprising a scoop (1) and the pivot (5), support (4), the spring balance device (3), the cap (7), the protecting cap (8), the ring (6) and the rigid handle (2) as and for the purpose described.

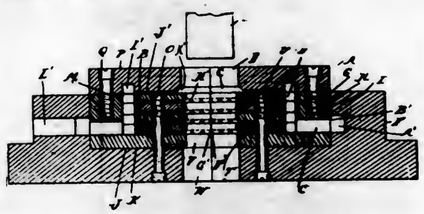
1,152,825. DENTAL FLOSS-HOLDER. ISAAC W. LITCHFIELD, Boston, Mass. Filed Mar. 4, 1914. Serial No. 822,270. (Cl. 132—13.)



1. A dental floss holder constructed of wire bent to form a pair of parallel portions, said parallel portions being together bent into a loop like portion at one end to serve as a handle, the wire lengths beyond the parallel portions at the end opposite the loop being divergent to provide arms, the ends of the arms being grooved, a clip embracing the wire strands at the juncture of the paralel end divergent portions, said clip serving to maintain the strip in parallelism and floss holding means carried by the clip and supported to one side of the parallel portions.

2. A dental floss holder consisting of a single length of wire constructed to form paralel portions throughout the greater length thereof, the wire terminals beyond the paralel portions being projected on divergent lines to form arms, a clip binding the wire length in paralel portions, said clip being adjacent the divergent arms and a floss gripping element carried by the clip and disposed at one side of the end adjacent the meeting point of the divergent arms, the paralel portions of the holder beyond the divergent arms being formed remote from said arms in a return bend to provide a handle, and a bobbin support carried by the terminal of the handle below and approximately in line with the floss gripping element.

1,152,826. DIE FOR PLANING METAL ARTICLES. JOHN LUNDGREN, Detroit, Mich. Filed Nov. 28, 1913. Serial No. 803,489. (Cl. 10—81.)



1. A die for planing metal articles, comprising a plurality of tools having their inner cutting edges arranged to form an opening of substantially the contour of the article to be planed, each tool comprising a plurality of superimposed members, there being channels formed at the meeting side edges of the tools and the latter being provided with channels at their outer edges with which the first-mentioned channels communicate, a channel for compressed fluid communicating with the last-mentioned channel, the first-mentioned channels having their opposite ends positioned to direct compressed fluid over the cutting edges of said tool.

2. A die for planing metal articles, comprising a bed, a member arranged in said bed, a plurality of tools arranged in said member each composed of a plurality of superimposed members, the meeting side edges of said members being provided with channels having their opposite ends opening adjacent the cutting edges of said tool, and members being provided with channels at their outer ends with which the first-mentioned channels communicate, and the member carried by said bed having bores communicating with the second-mentioned channels, and a channel for compressed fluid communicating with each of said bores.

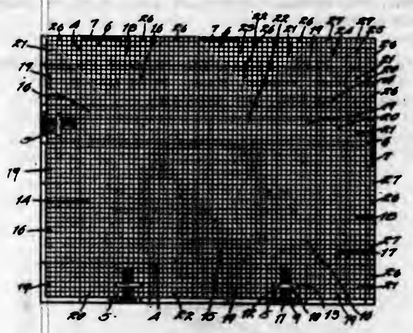
3. A die for planing metal articles, comprising planing tools having their inner cutting edges arranged to form an opening of substantially the contour of the article to be planed, each tool being composed of a plurality of cutting edges arranged in different planes, there being chambers intermediate the cutting edges, a bed upon which said tools are arranged, having an annular member surrounding said tools, there being channels for compressed fluid leading to said chambers, for the purpose described.

4. A die for planing metal articles, comprising a bed, a plurality of planing tools mounted upon said bed and having their inner cutting edges arranged to form an opening of substantially the contour of the article to be planed, each tool being composed of a plurality of cutting edges arranged in different planes, there being shaving-receiving chambers between adjacent cutting edges, and there being a plurality of channels for compressed fluid leading through said tools and communicating with said shaving-receiving chambers, said bed having a channel leading to a source of supply of compressed fluid and communicating with said channels in the tools.

5. In a die, a foot plate, a holder mounted therein and arranged to form an air passage between the foot plate and the holder, a series of cutting plates in the holder each having an inner shearing opening of desired contour, the plates being disposed in series with the opening therethrough decreasing in size toward the bottom of the series, a clamping ring for securing the dies in the holder, and an air nipple in the foot plate connected with the air passage formed between the foot plate and the holder, the cutting plates having channels connecting the air passage with the relief surfaces of the cutting plates.

[Claim 6 not printed in the Gazette.]

1,152,827. PRINTING-BLOCK SYSTEM. GEORGE E. MCCABE, Grand Haven, Mich., assignor to The Challenge Machinery Company, Incorporated, Grand Haven, Mich. Filed Jan. 31, 1913. Serial No. 745,849. (Cl. 101—177.)



1. In a furniture font the combination of a plurality of separate blocks arranged in sections and adapted to constitute a form of given size, the blocks of each section being contiguous and having one common and one variant dimension, and the blocks of other sections each having a different common dimension and the same variant dimensions.

2. In a block furniture system the combination of a plurality of separate pieces adapted to be arranged in sections and to fill a form of given size, the blocks of each section being contiguous and having one common and one variant dimension, and the pieces of other sections each having a different common dimension and the same variant dimensions, and a border section having pieces of uniform width and differing in length.

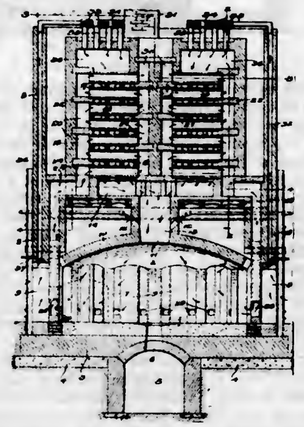
3. In a furniture block system for making up forms of predetermined size the combination of a plurality of separate pieces adapted to be arranged in sections, the blocks of each section being contiguous and having one common and one variant dimension, and the pieces of other sections each having a different common dimension and the same variant dimensions, and a border section having pieces of uniform width and differing in length, and means to engage the edges of plates placed on top of the blocks.

4. In a furniture block system for making up forms of predetermined size the combination of a plurality of separate blocks adapted to be arranged in sections, the blocks of each section being contiguous and having one common and one variant dimension, pieces of other sections each having a different common dimension and the same variant dimensions, and one or more border sections having blocks of uniform width and differing in length, some of the blocks of one border section being provided with catches, and some of the blocks of another border section being provided with hooks, said hooks and catches being adapted to engage a plate placed on top of the blocks, and the hooks and catches being adjustable to any desired positions.

5. In a furniture block system for making up forms of predetermined size for printing plates, the combination of a plurality of separate blocks arranged in sections, the blocks of each section being contiguous and having one common and one variant dimension, and the blocks of other sections each having a different common dimension and the same variant dimensions, and one or more border sections each having blocks of uniform width and varying in length, of a catch member comprising a block of the width of one of said border sections having an inclined projection extending above the face of the other blocks, and a hook consisting of an adjustable clamping member extending above one of the blocks of another border section and adapted to be moved to engage the edges of a plate placed on top of the blocks and to press the same against the said catches to bind the plate firmly in position, said hooks and catches being adapted to be moved into any desired positions with respect to the other blocks and with respect to each other, the blocks filling the form.

[Claims 6 to 8 not printed in the Gazette.]

1,152,828. GLASS-FURNACE. WILLIAM NICHOLLS MATHEWS, Wellsburg, W. Va. Filed Mar. 27, 1915. Serial No. 17,480. (Cl. 49—59.)



1. A glass melting pot furnace comprising a combustion chamber, the wall thereof having arched openings therein and in which the pots are located, said wall extending upward above the combustion chamber, a fresh air heating chamber superposed over the combustion chamber and within said wall, vertical flues extending through the wall and having their upper ends opening at the upper end of the wall tubes rising from the top of the heating chamber and horizontally disposed tubes affording communication between the upper ends of the flues and first named tubes, as and for the purpose set forth.

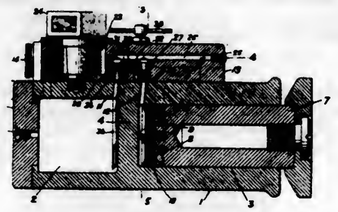
2. A glass melting pot furnace comprising a combustion chamber having in its wall arched openings within which the pots are located, said wall extending upward above the combustion chamber, a fresh air heating chamber superposed over the combustion chamber and within said wall, vertical flues extending through the wall, the upper end of the flues opening at the top of the wall and the lower end of said flues opening at the arches of the openings, a plurality of vertical tubes supported by the top of the fresh air heating chamber, casings supported by the upper ends of the tubes and common to certain of said tubes, and horizontally disposed tubes having one of their ends attached to the casings and their other end engaged in the upper ends of the flues, whereby exterior air is conducted to the fresh air heating chamber.

1,152,829. HYDRAULIC JACK. WILLIAM MESSINGER, Philadelphia, Pa. Filed Sept. 2, 1913. Serial No. 787,556. (Cl. 138—9.)

1. In a hydraulic jack the combination of a pump plunger having a large and a small effective area, a ram and its pressure cylinder, fluid connections from the ram to the small and to the large area, a valve for excluding fluid from and affording it access to the large area and a single pressure valve common to both areas.

2. In a hydraulic jack the combination of a casing having therein a liquid reservoir and a pressure cylinder and their fluid outlets through the casing, a ram in the pressure cylinder, a pump body having therein a multiple speed pump, connections for each pump speed to the

reservoir and pressure cylinder, a valve carried by the pump body for positively closing one of said connections and a single pressure valve common to both pump speeds.



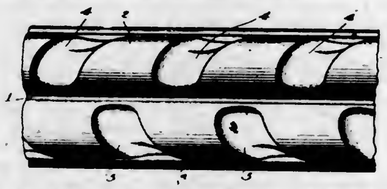
3. In a hydraulic jack the combination of means including a single automatic pressure valve and a single automatic suction valve for operating it at two different speeds, and a single valve independent of said valves for making one of the speeds both inoperative and ineffective.

4. In a hydraulic jack the combination of a liquid reservoir and pressure cylinder, a pump operatively connected therewith, fluid passages connecting the pump and reservoir and cylinder, and suction, and pressure valves and their seats interposed in the fluid passages and both made of hardened steel which distorts under high unit pressure making irregularities in contact surfaces of the parts to conform, thereby insuring tightness and which recovers its original form when released from such pressure, whereby the jack can be small and of great power.

5. In a hydraulic jack the combination of a pressure cylinder, a ram, a non-metallic packing, and a radially expansible packing interposed between the non-metallic packing and the ram to prevent the non-metallic packing from being forced between the bore of the cylinder and the surface of the ram.

[Claims 6 to 8 not printed in the Gazette.]

1,152,830. ELASTIC VEHICLE-TIRE. THOMAS MIDGLEY, Worthington, Ohio, assignor to Morgan & Wright, Detroit, Mich., a Corporation of Michigan. Filed Nov. 21, 1911. Serial No. 661,472. (Cl. 152—1.)



1. An elastic vehicle tire comprising a substantially solid body portion having a central circumferential groove on the tread thereof, and continuous shallow grooves extending across the sides of the tire and intersecting said central groove, there being substantial plane spaces between successive side grooves.

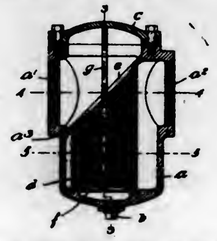
2. An elastic vehicle tire comprising a substantially solid body portion having a central circumferential groove on the tread thereof, and continuous, shallow, radially inclined grooves extending across the sides of the tire and the tread and intersecting said central groove.

3. An elastic vehicle tire comprising a substantially solid body portion having two rounded tread portions separated by a central circumferential groove and continuous, shallow, radially inclined grooves extending across the sides of the tire and across said rounded tread portions on each side of the tire respectively.

4. An elastic vehicle tire comprising a substantially solid body portion having two rounded tread portions separated by a central circumferential groove and continuous, shallow, radially inclined grooves extending across the sides of the tire and across said rounded tread portions at alternate points thereon.

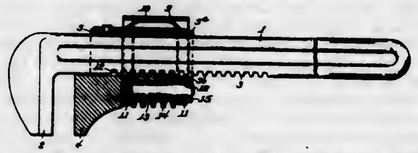
5. An elastic vehicle tire comprising a substantially solid body portion having two rounded tread portions separated by a central circumferential groove and continuous, shallow, radially inclined grooves extending across the sides of the tire and across said rounded tread portions, and having substantially plane surfaces between said grooves.

1,152,831. PIPE-STRAINER. ROBERT CHARLES MONTEAGLE, West Newton, Mass. Filed May 5, 1914. Serial No. 836,539. (Cl. 210—16.)



In combination with a cylindrical casing having oppositely disposed inlet and outlet ports in its side wall, a cylindrical strainer open at its upper end, and arranged in said casing to extend longitudinally thereof, said strainer being continuously connected at its upper edge to the inner walls of the casing below said inlet port and above said outlet port, so that liquid passing from the inlet to the outlet port will pass into the upper end of the strainer and through its side walls, said strainer being eccentrically disposed within the casing with the wall portion thereof directly beneath the inlet port in substantially closer proximity to the casing than at other portions, so that the space between the strainer and casing walls increases in volume from the inlet to the outlet side of the casing, substantially as described.

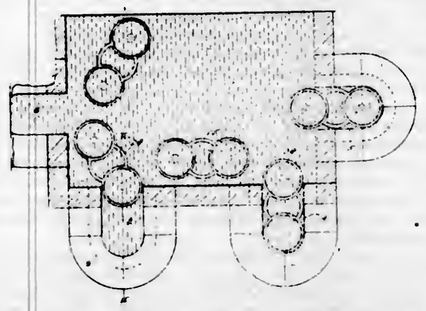
1,152,832. WRENCH. DAVID WALTER NULL, Ned, Pa. Filed May 3, 1915. Serial No. 25,405. (Cl. 81—158.)



1. In a wrench, a shank having a fixed jaw and teeth, a movable jaw on the shank, a sleeve connected to the movable jaw and extending beyond the latter and having an opening in register with the teeth, said sleeve having a pair of spaced transverse grooves on each side thereof and extending thereacross, a yoke having a pair of parallel arms at each end thereof which arms are received in the respective grooves, a pair of bearings connected to the free ends of the arms, one of said bearings being disposed adjacent the inner end of the movable jaw, a shank encircling member on the inner end of the sleeve against which the other bearing abuts, a worm carrying spindle journaled in said bearings, said member being slotted and said shank extending beyond its inner bearing and into said slot, and a spring on the sleeve and bearing against the yoke.

2. In a wrench, a shank having a fixed jaw and teeth, a movable jaw on the shank, a sleeve connected to the movable jaw and extending beyond the latter and having an opening in register with the teeth, said sleeve having a pair of spaced transverse grooves on each side thereof and extending thereacross, a yoke having a pair of parallel arms at each end thereof which arms are received in the respective grooves, a pair of bearings received in the space between the free ends of the arms of the respective pairs thereof, pins extending transversely through the arms and bearings, one of said bearings being disposed adjacent the inner end of the movable jaw, a shank encircling member on the inner end of the sleeve against which the other bearing abuts, a worm carrying spindle journaled in said bearings, said member being slotted and said shank extending beyond its inner bearing and into said slot, and a spring on the sleeve and bearing against the yoke.

1,152,833. GLASS-DRAWING. ROGER S. PEASE, Pittsburgh, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 5, 1914. Serial No. 816,780. (Cl. 49—56.)



1. In combination, a glass melting tank with a main heated portion roofed over and a drawing extension having an open top, and with the side walls thereof terminating adjacent the surface of the glass and a drawing ring floating in the glass in said extenson, the said ring lying with the glass therein exposed to the cooling action of the air outside the tank and having a bottom with an opening therethrough and a conduit extending laterally from said opening toward the main heated portion of the said tank.

2. In combination, a glass melting tank with a main heated portion roofed over and a drawing extension having an open top, and with the side walls thereof terminating adjacent the surface of the glass and a drawing member floating in the body of glass and comprising two drawing rings, one lying in the said extension with the glass therein exposed for drawing into glass cylinders and the other lying in the main heated portion of the tank, the said rings each having a bottom closure with an opening therethrough and a conduit connected to the said opening and extending to the other ring and communicating with the main body of glass outside the drawing member.

3. In combination, a main glass melting tank, a pair of similar drawing extensions with open tops leading therefrom, and with the side walls thereof terminating adjacent the surface of the glass and a floating drawing member comprising a pair of drawing rings constructed so that when one ring is in an extension in position for drawing the other ring is in the melting tank, the said drawing member being adapted to be floated from one extension to the other.

4. In combination in cylinder forming apparatus, a glass melting tank with its main portion roofed over and having a roofless extension, and with the side walls thereof terminating adjacent the surface of the glass and a drawing ring in the extension having a bottom closure and an open top so that an area of glass greater than that of the cross sectional area of the cylinder drawn is exposed to the cooling action of the atmosphere, the said ring having a conduit extending toward the main portion of the tank and adapted to supply glass to the interior of the ring.

5. In combination in cylinder forming apparatus, a glass melting tank with its main portion roofed over and having a roofless extension, and with the side walls thereof terminating adjacent the surface of the glass and a drawing ring in the extension having a bottom closure and an open top so that an area of glass greater than that of the cross sectional area of the cylinder drawn is exposed to the cooling action of the atmosphere, the walls of the said extension at its end at the surface of the glass being formed on a curve so as to fit the curved outer surface of the ring.

1,152,834. PROCESS OF MANUFACTURING ARTICLES FROM PLASTIC MATERIALS. RAYMOND B. PRICE, Mishawaka, Ind. Filed Dec. 30, 1911. Serial No. 668,792. (Cl. 18—53.)

1. The process of vulcanizing plastic material having incorporated therein the amount of sulfur necessary for its vulcanization, which consists in subjecting the same to the action of the vulcanizing heat in a medium fluid under the vulcanizing temperature and possessing such an affinity for moisture as will substantially prevent ingress of moisture to the material during the vulcanizing operation and simultaneously exerting a differential of external and internal pressure on the articles.

2. The process of vulcanizing plastic material having incorporated therein the amount of sulfur necessary for its vulcanization, which consists in subjecting the same to the action of the vulcanizing heat in a medium fluid under the vulcanizing temperature and possessing such an affinity for moisture as will not only prevent ingress of moisture to the material during the vulcanizing operation, but will also tend to withdraw from said material moisture contained therein and simultaneously exerting a differential of external and internal pressure on the material.

3. The process of vulcanizing a plastic article having incorporated therein the amount of sulfur necessary for its vulcanization, which consists in subjecting the unvulcanized plastic mass to the action of the vulcanizing heat in a medium with which the unvulcanized surface of the mass is in direct contact, said medium being fluid under the vulcanizing temperature and at such temperature exerting no deleterious effect on the material being treated, and simultaneously exerting a differential of external and internal pressure on the article.

4. The process of vulcanizing plastic material having incorporated therein the amount of sulfur necessary for its vulcanization, which consists in subjecting the unvulcanized plastic mass to the action of the vulcanizing heat in a medium with which the unvulcanized surface of the mass is in direct contact, said medium being fluid under the vulcanizing temperature and at such temperature exerting no deleterious effect on the material being treated, and simultaneously exerting a differential of pressure upon said fluid and upon the interior of the material.

5. The process of vulcanizing a plastic article having incorporated therein the amount of sulfur necessary for its vulcanization, which consists in subjecting the unvulcanized plastic mass to the action of the vulcanizing heat in a medium with which the unvulcanized surface of the mass is in direct contact, said medium being fluid under the vulcanizing temperature and at such temperature exerting no deleterious effect on the material being treated, and exerting a controllable differential of internal and external pressures upon said article.

1,152,835. PROCESS OF TREATING PLASTIC MATERIALS. RAYMOND B. PRICE, Mishawaka, Ind. Filed Jan. 9, 1912. Serial No. 670,344. (Cl. 18—53.)

1. The process of treating plastic material, which consists in surrounding it during the setting operation with a heating medium having an affinity for moisture and subjecting the medium to a pressure greatly in excess of that produced by the expansive action of said medium under the heat.

2. The process of vulcanizing plastic material, which consists in surrounding it during the vulcanizing operation with a heating medium having an affinity for moisture and subjecting the medium to a pressure greatly in excess of that produced by the expansive action of said medium under the vulcanizing heat.

3. The process of vulcanizing plastic material consisting of surrounding it during vulcanization with a fluid medium having an affinity for moisture and subjecting the medium to approximately 500 lbs. pressure.

1,152,836. PROCESS OF TREATING COMBINED PLASTIC AND FABRIC ARTICLES. RAYMOND B. PRICE, Mishawaka, Ind. Filed Jan. 9, 1912. Serial No. 670,345. (Cl. 18—53.)

1. The method of treating articles formed of a fabric interior and having exterior surfaces of plastic material on both sides of the fabric, which consists in subjecting the fabric to the action of a fluid pressure and during or subsequent to said action, subjecting the exterior surfaces to a greater pressure, whereby fluids in said fabric and plastic material will be removed, the plastic material will be compacted and the plastic and non-plastic portions will be properly united.

2. The method of treating articles formed of a fabric layer having exterior surfaces of plastic material on both sides of the fabric, which consists in exerting simultaneously a controllable pressure upon said fabric layer and separate controllable pressures upon the exterior surfaces of plastic material thereof during the setting operation.

3. The method of producing articles of vulcanizable plastics consisting in forming an article of raw plastic material having embedded therein a non-plastic stratum, subjecting the non-plastic stratum to the action of a fluid pressure and during or subsequent to said action, subjecting the exterior surface to a greater pressure, whereby fluids in said plastic or non-plastic material will be removed, the plastic material will be compacted and the plastic and non-plastic portions will be properly united.

4. The method of producing articles of vulcanizable plastics consisting in forming an article of raw or green plastic material having a fabric embedded therein, and applying a suction to said fabric, whereby said plastic material will be brought into intimate union with said fabric, the fluids will be removed from said plastic material and fabric, and said plastic material will be compacted, and vulcanizing said article while so compacted.

1,152,837. PROCESS OF TREATING PLASTIC MATERIALS. RAYMOND B. PRICE, New York, N. Y. Filed Mar. 8, 1913. Serial No. 753,126. (Cl. 18—53.)

1. The process of treating settable material or articles, which consists in first subjecting the same to a preliminary warming, at or under atmospheric pressure, then to a pre-heating at a temperature above the setting temperature, and then subjecting them to the setting operation.

2. The process of treating settable materials or articles, which consists in first subjecting the same to a preliminary warming, at or under atmospheric pressure, then to a pre-heating at a temperature above the setting temperature and at a controllable pressure above, at or below atmosphere, and then subjecting them to the setting operation.

3. The process of vulcanizing rubber, which consists in first subjecting the same to a preliminary warming, at or under atmospheric pressure, then to a pre-heating at a temperature above the vulcanizing temperature, and then vulcanizing the same.

4. The process of vulcanizing rubber, which consists in first subjecting the same to a preliminary warming, at or under atmospheric pressure, then to a pre-heating at a temperature above the vulcanizing temperature and at a controllable pressure above, at or below atmosphere, and then vulcanizing the same.

1,152,838. METHOD OF MAKING VULCANIZED-RUBBER PRODUCTS. RAYMOND B. PRICE, New York, N. Y. Filed Mar. 18, 1914. Serial No. 825,508. (Cl. 18—53.)

1. A method of making vulcanized rubber products consisting in superimposing upon each other a number of layers of unvulcanized rubber compound having a coating of a medium which is liquid at the vulcanizing temperature, said coating being applied between adjacent layers, whereby adhesion of the rubber of one layer to that of its adjacent layers is prevented, and while so coated subjecting the pile to the action of a vulcanizing medium.

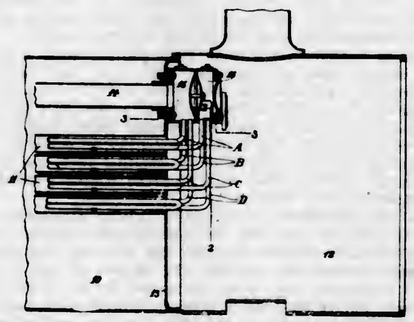
2. A method of making vulcanized rubber products consisting in applying a coating of a medium which is a liquid at the vulcanizing temperature to sheeted unvulcanized rubber compound, forming a pile consisting of a number of layers of said rubber with said medium between adjacent layers whereby the adhesion of the rubber of one layer to that of its adjacent layers is prevented, and while so coated subjecting the pile to the action of a vulcanizing medium.

3. A method of making vulcanized rubber products consisting in applying a coating of glycerin to sheeted unvulcanized rubber compound forming a pile consisting of a number of layers of said rubber with said medium between adjacent layers whereby the adhesion of the rubber of one layer to that of its adjacent layers is prevented, and then subjecting the pile to the action of a vulcanizing medium.

4. A method of making vulcanized rubber products consisting in applying a coating of a medium which is liquid at the vulcanizing temperature to a sheet of unvulcanized rubber compound, rolling said sheet upon itself to form a number of superimposed layers with the said coating between adjacent layers, whereby the adhesion of the rubber of one layer to that of its adjacent layers is prevented, confining said roll with an external jacket, and then subjecting the roll to the action of a vulcanizing medium.

5. A method of making vulcanized rubber products consisting in applying a coating of glycerin to a sheet of unvulcanized rubber compound, rolling said sheet upon itself to form a number of superimposed layers with the coating of glycerin between adjacent layers whereby the adhesion of the rubber of one layer to that of its adjacent layers is prevented, confining said roll with an external jacket, and then subjecting the roll to the action of a vulcanizing medium.

1,152,839. LOCOMOTIVE-SUPERHEATER. JOHN PRIMROSE, New York, N. Y. Filed Aug. 5, 1914. Serial No. 855,081. (Cl. 122—462.)



1. The combination with a boiler having a plurality of fire-tubes arranged one above another in substantially the same vertical plane, of a header provided with steam chambers, and superheater units arranged in the fire-tubes and having upwardly projecting end portions which are expanded into said chambers, the end portions of the upper units being located substantially behind the end portions of the lower units, and any of said units adapted to be removed from the boiler independently of the others.

2. The combination with a boiler having a plurality of fire-tubes arranged one above another in the same vertical plane, of a header provided with steam chambers, and superheater units projecting rearwardly into the fire-tubes and having upwardly projecting end portions which are expanded into said chambers with the end portions of alternate units lying on opposite sides of a plane passing through the axes of said tubes, and with the said portions on either side lying in front of one another, said end portions of any unit adapted to be shifted laterally so that any unit can be removed from the boiler independently of the others.

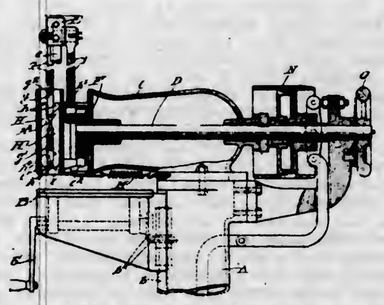
3. The combination with a boiler having a plurality of fire tubes arranged one above another in the same vertical plane, of a header provided with steam chambers, and superheating units projecting rearwardly into the fire tubes and having upwardly projecting end portions expanded into said chambers substantially in lateral rows, some of the end portions of said rows being located behind and spaced laterally from each other at least a distance equal to the external diameter of said end portions whereby any of said units may be removed independently of the others.

4. The combination with a boiler having a plurality of fire tubes arranged one above another in the same vertical plane, of a header provided with steam chambers, and superheating units projecting rearwardly into the fire tubes and having upwardly projecting end portions expanded into said chambers, said end portions located alternately on the opposite sides of a plane passing through the axes of said fire tubes, said end portions on either side located substantially behind one another and the portions on one side being sufficiently spaced from the portions on the other side to permit any of said portions to be laterally shifted, whereby any one of said units may be removed independently of the others.

5. The combination with a boiler having a plurality of fire tubes arranged one above another in the same vertical plane, of a header provided with steam chambers, and superheating units projecting rearwardly into the fire tubes and having upwardly projecting end portions expanded into said chambers, said end portions located alternately on the opposite sides of a plane passing through the axes of said fire tubes, the end portions on either side located substantially behind each other, but capable of being laterally shifted whereby any unit is independently removable.

[Claims 6 to 10 not printed in the Gazette.]

1,152,840. SHEET-METAL-FASTENER-DRIVING MACHINE. WILLIAM H. RAY, St. Joseph, Mich., assignor, by mesne assignments, to Saranac Machine Co., St. Joseph, Mich., a Corporation of Michigan. Filed Mar. 7, 1906. Serial No. 304,787. (Cl. 1—9.)



1. In a machine for making and driving corrugated sheet metal fasteners, the combination of means for first forming transverse corrugations in the strip of sheet metal, means for then cutting off a suitable length of said strip of corrugated sheet metal, means for finally driving the sheet metal edgewise and in a direction to insert the corrugations endwise, and suitable operating connections by which the corrugating and cutting and driving operations are performed on each fastener in the order mentioned, said cutting mean sincluding a pair of shearing knives, one knife being pivoted, the cutting edges of which knives are longer than the transverse corrugations in the strip of sheet metal, the said driving means including a fastener driver provided with an end portion adapted to engage the ends of the transvers ecorrugations of each fastener.

2. In a machine for making and driving corrugated sheet metal fasteners, the combination of automatic means for feeding a transversely corrugated strip of sheet metal, automatic means for cutting off a suitable length of the strip of sheet metal thus fed in a direction cross-wise of its transverse corrugations, means for driving the sheet metal fasteners edgewise and in a direction to insert the corrugations endwise, and suitable connections by which the feeding and cutting and driving operations are performed on each tranaversely corrugated fastener in the order mentioned, said cutting means including a pair of shearing knives, one knife being pivoted, the cutting edges of which are longer than the transverse corrugations in the strip of sheet metal, the said driving means including a fastener driver provided with an end portion adapted to engage the ends of the transverse corrugations of each fastener.

3. In a machine for making and driving corrugated sheet metal fasteners, the combination of means for first forming transverse corrugations in the strip of sheet metal, means for then cutting off a suitable length of said strip of corrugated sheet metal, means for finally driving the sheet metal edgewise and in a direction to insert the corrugations endwise, suitable operating connections by which the corrugating and cutting and driving operations are performed on each fastener in the order mentioned, and holding means adapted to move with each finished fastener to engage and support the corrugated sides thereof.

4. A machine for making and driving corrugated sheet metal fasteners, by inserting the fasteners edgewise in the line of their corrugations, comprising mechanism for driving the fasteners, automatic mechanism in said machine for feeding a transversely corrugated strip of sheet metal to said driving mechanism, and means for cutting off suitable lengths of the corrugated strip of metal and delivering the same to said driving mechanism, said cutting means including a pivoted knife.

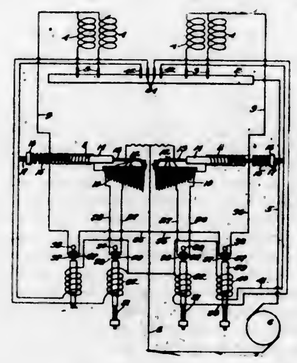
5. In a machine for making and driving corrugated sheet metal fasteners, the combination of automatic means for first forming transverse corrugations in the strip of sheet metal, automatic means for then cutting off a suitable length of said strip of corrugated sheet metal, automatic means for finally driving the sheet metal edgewise and in a direction to insert the corrugations endwise, and suitable operating connections by which the corrugating and cutting and driving operations are performed on each fastener in the order mentioned, including a single shaft the end of which is operatively connected by a fixed element thereon with all said means, and mechanism for controlling the rotation of said shaft.

[Claims 6 to 25 not printed in the Gazette.]

1,152,841. ELECTRICALLY-OPERATED PIANO-PLAYER. WALTER C. REED, Dalton, Mass., assignor to The Telelectric Company, Pittsfield, Mass., a Corporation of Massachusetts. Filed Sept. 18, 1912. Serial No. 721,010. (Cl. 84—228.)

1. An electrically-operated piano player comprising a series of playing magnets arranged in parallel branches of a circuit having a portion which is common to all the magnets of the series, means for closing the branch cir-

cuits through the several magnets according to the notes to be played thereby, a resistance included in the common portion of the circuit, and means for automatically varying said resistance to such an extent as to substantially maintain a predetermined strength in the current sent through each one of such magnets as are in closed circuit at one time.



2. An electrically-operated piano player comprising a series of playing magnets arranged in parallel branches of a circuit having a portion which is common to all the magnets of the series, means for closing the branch circuits through the several magnets according to the notes to be played thereby, a resistance included in the common portion of the circuit, means for automatically varying said resistance to such an extent as to substantially maintain a predetermined strength in the current sent through each one of such magnets as are in closed circuit at one time, and means for varying the predetermined current strength.

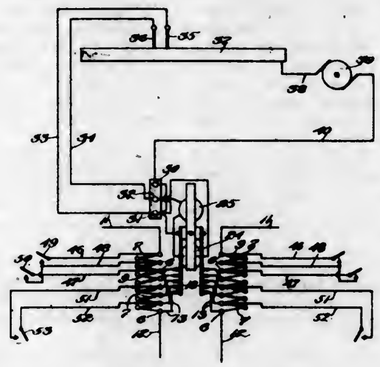
3. An electrically-operated piano player comprising a series of playing magnets arranged in parallel branches of a circuit having a portion which is common to all the magnets of the series, means for closing the branch circuits through the respective magnets according to the notes to be played thereby, a resistance included in the common portion of the circuit, and means for varying said resistance comprising an electromagnet and circuit connections for supplying the same with a current the strength of which varies according to the number of playing magnets in closed circuit at one time.

4. An electrically-operated piano player comprising a series of playing magnets arranged in parallel branches of a circuit having a portion which is common to all the magnets of the series, means for closing the branch circuits through the respective magnets according to the notes to be played thereby, a resistance included in the common portion of the circuit, means for automatically varying said resistance according to the number of playing magnets in closed circuit at one time, and means for independently varying said resistance to regulate the normal current strength transmitted through the same.

5. An electrically-operated piano player comprising a series of playing magnets arranged in parallel branches of a circuit having a portion which is common to all the magnets of the series, means for closing the branch circuits through the respective magnets according to the notes to be played thereby, a resistance included in the common portion of the circuit, means for automatically varying said resistance according to the number of playing magnets in closed circuit at one time, and independent means for short-circuiting a predetermined amount of resistance.

[Claims 6 to 17 not printed in the Gazette.]

1,152,842. VARIABLE-RESISTANCE DEVICE. WALTER C. REED, Dalton, Mass., assignor to The Telelectric Company, Pittsfield, Mass., a Corporation of Massachusetts. Filed Oct. 16, 1913. Serial No. 795,591. (Cl. 171—229.)



1. The combination with an electric circuit having a variable resistance included therein, of means for varying said resistance comprising a movable contact device, an electro-magnet for moving the same into one of its extreme positions, another electro-magnet for moving said contact device into its other extreme position, said magnets being arranged to move said device into an intermediate position when energized simultaneously, and means for closing the circuits through said magnets either singly or simultaneously.

2. The combination with two independent electric circuits each having a variable resistance included therein, of electrically-operated means for simultaneously and similarly varying said resistance, and supplementary means for varying either of said resistances without affecting the other resistance.

3. The combination with two independent electric circuits each having a variable resistance included therein, of a movable contact device for varying each resistance, an electro-magnet arranged to move both contact devices simultaneously to one of their extreme positions, another electro-magnet arranged to move both contact devices simultaneously to their other extreme position, said magnets being arranged to move the contact devices to an intermediate position when energized simultaneously, means for closing the circuits through said magnets either singly or simultaneously, and supplementary means for varying either of said resistances without affecting the other resistance.

4. The combination with an electric circuit and a variable resistance included therein, of an electrically operated contact device for varying a portion of said resistance, means for independently varying a portion of the resistance which is subject to the control of said contact device, and supplementary means for varying another portion of said resistance which is not subject to the control of the contact device.

5. The combination with two independent electric circuits each having a variable resistance included therein, of electrically-operated contact devices for simultaneously and similarly varying said resistances, means coöperating with each resistance for independently varying a portion of the same which is subject to the control of the corresponding contact device, and supplementary means cooperating with each resistance for independently varying another portion of the same which is not subject to the control of said contact device.

[Claims 6 to 10 not printed in the Gazette.]

1,152,843. CIRCUIT-CONTROLLER. WALTER C. REED, Dalton, Mass., assignor to The Telelectric Company, Pittsfield, Mass., a Corporation of Massachusetts. Original application filed Aug. 23, 1910, Serial No. 578,587. Divided and this application filed Sept. 11, 1914. Serial No. 861,819. (Cl. 175—325.)



1. A circuit controller comprising a series of circuit connections each including an insulated spring wire and a coöperating contact terminal, a support on which the spring wires rest collectively, and a spring acting on said support in opposition to the spring wires and normally balancing the collective effect of the same.

2. A circuit controller comprising a series of insulated spring wires each of which is adapted to be connected to one branch of an electric circuit, a corresponding series of insulated metallic terminals adapted to be connected to the other branches of said circuits respectively and located in position to be engaged by said wires, a support on which the free end portions of the spring wires rest, a spring acting on said support in opposition to said spring wires and normally balancing the collective effect of the latter, and means comprising an electromagnet for moving said support in opposition to the spring acting thereon.

1,152,844. PAPER BOX. LEY P. REXFORD, St. Louis, Mo., assignor to American Paper Products Company, St. Louis, Mo., a Corporation of Missouri. Filed July 20, 1914. Serial No. 851,917. (Cl. 229—37.)

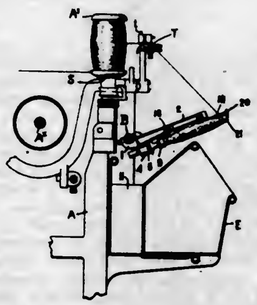
1. A paper box blank having fold scores between the side wall members and between the side wall members and the end wall members and provided with slits at one side of, and parallel with, the fold scores between the side wall members, so as to produce inner and outer closure flaps joined to the side wall members by parallel hinges, the outer closure flaps being wider than the side wall members to which they are joined and adapted to extend over the hinges of the inner flaps when the blank is folded; said inner closure flaps being adapted to be folded entirely within the body of the box, and said outer closure flaps being adapted to fold thereover to protect the hinges of the inner flaps.

2. A paper box having fold scores between the side wall members and between the side wall members and the end wall members and provided with slits at one side of, and parallel with, the fold scores between the side wall members, thereby producing inner and outer closure flaps joined to the side wall members by parallel hinges, the outer closure flaps being wider than the side wall members to which they are joined and extending over the hinges of the inner flaps; said inner closure flaps being folded entirely within the body of the box, and said outer closure flaps being folded thereover to protect the hinges of the inner flaps.

3. A paper box comprising side wall sections forming the box body, said box being provided with scores at the junctions of said wall sections and with slits formed parallel with said scores to produce inner and outer closure flaps, said closure flaps being hinged to said wall sections, and said slits being offset from said scores so that the inner flaps are substantially equal in width to the distance between the inner faces of the wall sections to which the outer flaps are hinged and the outer flaps being substantially equal in width to the distance between the outer faces of the wall sections to which the inner flaps are hinged, the said inner flaps being foldable into the box body to serve as braces therefor, and the outer flaps being foldable over the inner flaps and over the walls to which the inner flaps are hinged so as to serve as protectors for the hinges of said inner flaps.

4. A paper box blank having fold scores between its side wall members and end wall members, and provided with slits offset from and parallel with the fold scores between the side wall members, so as to produce inner and outer closure flaps joined to the side wall members by parallel hinges, the offset slits being formed without removing any appreciable amount of material from the blank so that the closure flaps of the blank abut against each other, the outer closure flaps being wider than the side wall members to which they are joined and adapted to extend over the hinges of the inner flaps when the box blank is folded, and the inner closure flaps being narrower than the side wall members to which they are joined.

1,152,845. SPOOLER. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Feb. 14, 1913. Serial No. 748,280. (Cl. 242—156.)



1. In a spooler, a bobbin-holder comprising a clamping jaw having a depending hub and an elongated, laterally offset-arm, a bearing fixed in the hub, a bobbin-receiving spindle mounted to rotate freely in the bearing and extended substantially parallel to and below the arm, and an elongated tension member pivotally connected with the arm and having a portion extended lengthwise of the spindle at the side thereof farthest from the arm, the tension member engaging frictionally the rotating yarn mass on the bobbin.

2. In a spooler, the bobbin-holder comprising an elongated arm provided at its inner end with a laterally offset, axially parallel bearing, a bobbin-receiving spindle mounted to rotate freely in the bearing, and a tension member having an elongated portion extended lengthwise of and adjacent the spindle and connected pivotally by bends with the arm, the connecting bends extending over the spindle to enable said member to rest upon and engage frictionally the yarn mass.

3. In a spooler, a bobbin holder comprising a bracket having a laterally offset ear and a rigidly connected, elongated arm, a bearing fixedly connected with the bracket below the ear, a bobbin-receiving spindle freely rotatable in the bearing and extended parallel to and beyond the arm, a tension member pivotally connected with the arm and having an elongated portion located adjacent the spindle at the side thereof farthest from the arm, and means on the arm to limit downward swinging movement of the tension member.

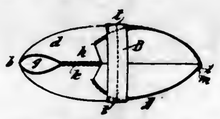
4. In a spooler provided with a rotatable-spool-carrier and a reciprocating thread-guide, and a horizontal rod fixedly mounted below the spool-carrier, in combination,

an upwardly inclined and prolonged arm fixedly mounted at its inner end on the rod, a bearing offset laterally from and fixedly connected with the arm below it, a bobbin-receiving spindle freely rotatable in the bearing and in substantial parallelism with the arm, and a tension member pivotally connected with the arm and having an elongated portion adjacent and extended lengthwise of the spindle the yarn passing under said elongated portion as it travels from the bobbin to the spool, said tension member preventing overruning of the bobbin and exerting the requisite tension on the yarn.

5. In a spooler provided with a rotatable spool-carrier and reciprocating thread-guide, in combination, a freely rotatable spindle, a bobbin mounted on said spindle with yarn wound thereon with a weft or filling wind, and means for automatically controlling the rotation of the bobbin to deliver the yarn therefrom at a substantially uniform tension.

[Claims 6 to 9 not printed in the Gazette.]

1,152,846. FOLDABLE AND COLLAPSIBLE BUCKET. WILLIAM H. ROSS, Holyoke, Mass. Filed May 5, 1915. Serial No. 26,178. (Cl. 150—48.)



1. A bucket consisting of a pouch of impervious fabric, open at its top, adapted to be collapsed to flat form, having at its top, near one folding edge an upward extension comprising portions of the fabric occupying positions at opposite sides of the pouch, portions of which, at and inwardly from such folding edge are unattached to form the mouth of a pouring spout while upper edge portions thereof further inwardly relatively to such mouth portion are secured together, and said pouch having, at an intermediate portion of its top, a strap handle.

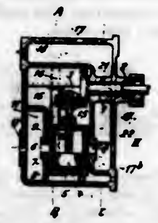
2. A collapsible bucket formed of a generally rectangular sheet or blank of impervious fabric, having intermediately of its upper edge, an upward extension, the sheet being folded on a vertical line centrally thereof and of said extension to bring its outer vertical edges and the edge portions of said extension into conjunction, the said outer edges, the bottom edge portions, and the adjoined edge portions of the extension removed from its central vertical folding line being secured together by stitching, and the so made receptacle having a strap handle at its top.

3. A collapsible bucket formed of a generally rectangular sheet or blank of impervious fabric, having, intermediately of its upper edge, an upward extension, the edges of which at its opposite outer portions are inclined downwardly and outwardly, the sheet being folded on a vertical line centrally thereof and of said extension to bring its outer vertical edges and the inclined outer portions of said extensions into conjunction, the said outer edges, the bottom edge portions, and the said adjoined inclined portions of the extension being united by stitching, and the so made receptacle having a strap handle at its top.

1,152,847. AUTOMATIC LUBRICATOR. EDUARD RUEGER, Zurich, Switzerland, assignor to Escher, Wyss & Co., a Corporation of Switzerland. Filed Apr. 28, 1914. Serial No. 834,881. (Cl. 184—55.)

1. The combination with a compressor, of a discharge chamber containing an oil reservoir, a second chamber above said first chamber and oil reservoir, and oil and gas conveying means opening vertically between the top and bottom surfaces of said first chamber connecting said chambers.

2. The combination with a compressor, of a discharge chamber containing an oil reservoir, a second chamber above said first chamber and oil reservoir, means opening vertically between the top and bottom surfaces of said first chamber for conveying oil and gas from said first to said second chamber.



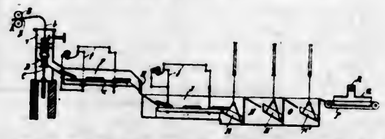
3. The combination with a compressor, of a casing surrounding the same and comprising a lower oil reservoir, an upper separating chamber and an oil and gas conveying means connecting said chambers.

4. The combination with a source of compressed air, of an oil reservoir subject to said pressure, means for supplying oil to said reservoir, a separating chamber above said reservoir, and a pipe connecting said reservoir and said chamber and opening into said reservoir above the bottom and below the top thereof.

5. The combination with a compressor, of a compression chamber connected therewith and containing an oil reservoir, an upper chamber receiving oil from said reservoir and allowing said oil to flow by gravity over parts to be lubricated.

[Claims 6 to 12 not printed in the Gazette.]

1,152,848. PLANT FOR COOLING, REMOVING SCALE FROM, CHALKING, AND DRYING WIRE DELIVERED BY FINISHING-ROLLS. HEINRICH SCHLIGGEMANN, Gleiwitz, Germany. Filed Dec. 8, 1914. Serial No. 876,170. (Cl. 29—1.)

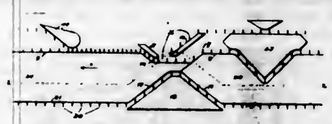


1. In a wire mill and plant for cooling, removing scale from, chalking and drying wire delivered by finishing rolls of said mill, a reeling device which is located far away from and elevated above the finishing rolls, a relatively long guide tube provided with friction shifting rolls therein arranged in front of the reeling device, and devices for subsequently treating the wire after it has left the reeling chamber, all of which are located successively stepwise downwardly from said finishing rolls, so that on termination of the treatment of the wire ring the latter arrives at a place convenient for handling same from the ground.

2. In a wire mill and a plant for cooling, removing scale from, chalking and drying wire delivered by finishing rolls of said mill, a reeling device which is located far away from and elevated above the finishing rolls, a relatively long guide tube provided with shifting rolls therein arranged in front of the reeling device, and devices for subsequently treating the wire after it has left the reeling chamber, said devices being partly located successively stepwise downwardly from said finishing rolls.

1,152,849. ATTACHMENT FOR CIRCULAR HOSIERY-MACHINES. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Boston, Mass., a Corporation of New Jersey. Filed June 27, 1912. Serial No. 706,277. (Cl. 66—21.)

1. In a knitting machine, a needle carrier and independently movable needles therein, a cam carrier and a stitch cam for actuating the needles, means to rotate and reciprocate the cam carrier, in combination with a supplemental cam mechanism carried by the cam carrier for rendering the needles active or idle at the stitch cam, comprising a retracting cam surface, and an advancing cam surface out of the path of the retracted needles, means to render said surfaces active or idle, and means for advancing some of the needles after they have been influenced by the retracting cam to cause them to be engaged and actuated by the advancing cam, to render said needles idle.



2. In a knitting machine, a needle carrier and independently movable needles therein, a rotatable cam carrier, cams thereon comprising means to maintain the needles at a normal level and a stitch cam for moving the needles to knit, in combination with a supplemental cam mechanism comprising a retracting cam surface to carry all of the needles below said level, an advancing cam surface, means for rendering the supplemental cam mechanism operative or inoperative upon the needles and means for actuating certain of the needles after they have been influence by the retracting cam to cause them to engage and be actuated by the advancing cam to carry said needles only out of the path of the stitch cam.

3. In a knitting machine, a relatively fixed needle carrier and independently movable needles therein, a cam carrier, means to rotate and reciprocate said cam carrier, and a stitch cam on said carrier for actuating the needles, in combination with a supplemental cam mechanism on said cam carrier for rendering the needles active or idle at the stitch cam, comprising a retracting cam surface and an advancing cam surface out of the path of the retracted needles, independently movable jacks, and means moving with the cam carrier for actuating said jacks to cause certain of the needles to be advanced from the position given by said retracting cam to cause them to be engaged and actuated by the advancing cam.

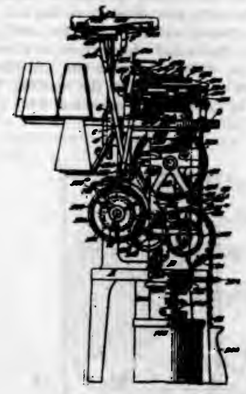
4. In a knitting machine, a needle carrier and independently movable needles, means for knitting including a cam carrier, means to rotate said cam carrier, a stitch cam, means carried by said cam carrier for causing certain of the needles to be operated at predetermined intervals to cause them to tuck comprising a retracting cam for carrying all of the needles below their normal level, and a following advancing cam, and means to selectively engage certain needles only with said advancing cam, and pattern controlled devices having an element movable with the cam carrier for moving the retracting and advancing cams into and out of contact with the needle butts at predetermined times.

5. In a knitting machine, a needle carrier and independently movable needles therein, a rotatable cam carrier and a stitch cam for actuating the needles, means to return the needles to a normal level in combination with a supplemental cam mechanism comprising a retracting cam surface to carry all of the needles below said level and an advancing cam surface and means for actuating certain of the needles after they have been influenced by the retracting cam to cause them to be engaged and to be actuated by the advancing cam to carry said needles only out of the path of the stitch cam.

[Claims 6 to 17 not printed in the Gazette.]

1,152,850. CIRCULAR-KNITTING MACHINE. ROBERT W. SCOTT, Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J., a Corporation of New Jersey. Filed Feb. 3, 1913. Serial No. 746,070. (Cl. 66—24.)

1. In a knitting machine devices for leveling the needles for transfer comprising a cam carrier having advancing and retreating cams thereon in a position excluding a free level for the needle-butts and fixed with respect to said cam carrier, a stitch cam, and means whereby said stitch cam may be moved into and out of contact with the needles.



2. In a knitting machine devices for leveling the needles for transfer comprising a cam carrier having fixed advancing and retracting cams thereon on either side of planes defining a free level for the needle-butts with respect to said cam carrier, a stitch cam having a depressing face normally across said level and means whereby said stitch cam may be moved out of contact with the needles.

3. In a knitting machine, devices for leveling the needles for transfer comprising a cam carrier having a ledge at a level upon which the needles travel at intervals between knitting, a top center cam fixed with respect to said ledge, in a position to retract needles encountering it to the level of said ledge, stitch cams, and means whereby said stitch cams may be moved out of contact with the needles.

4. In a knitting machine, a cam carrier having fixed advancing cams and a fixed retracting center cam thereon in a position to define a free level for the needle-butts with respect to said cam carrier, a leading stitch cam having an advancing surface to encounter needles at said level and a following stitch cam having a depressing cam surface coöperating with said center cam, in combination with means permitting said stitch cams to be moved out of contact with the needles to permit them to be positioned at said level.

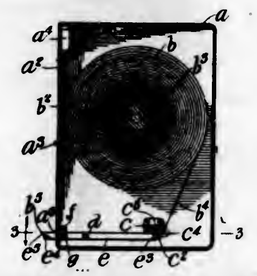
5. In a knitting machine, a cam cylinder having a horizontal flange and a terminal ledge interrupted at one point to form an opening the slopes of which constitute advancing cams, a center cam centrally mounted with respect to said opening on an attachment of said cam cylinder, symmetrical stitch cams, and a mounting for said stitch cams guided to slide horizontally in a direction parallel to the radial plane at said center cam.

[Claims 6 to 41 not printed in the Gazette.]

1,152,851. TOWEL-PAPER HOLDER. ROBERT N. SHELLEY, Newark, N. J. Filed Oct. 14, 1914. Serial No. 866,578. (Cl. 211—29.)

1. A holder for towel paper, comprising a box or case in the bottom front part of which is a transverse slot, a bar secured transversely in said box or case, a lever pivoted between said bar and the front of the box or case and the one end portion of which passes through the front of the box or case and is vertically movable therein, and the other end portion of which operates in connection with said bar, and said front end portion being also provided with a transverse cutting edge, and two rollers mounted inwardly of said slot and above and below the same.

2. A holder for towel paper, comprising a support or case in the top portion of which are supports for a roll of towel paper, and the bottom front portion of which is open to permit the passage of a sheet of paper therefrom, a bar secured in the bottom portion of said support or case and parallel with the supports of the roll of paper, a lever pivoted between said bar and the front of the support or case and the inner end portion of which is adapted to bear on the bottom of said bar and the front end portion of which passes through the opening in the front of the support or case and is provided with a transverse cutting edge.



3. A holder for towel paper, comprising a support or case in the top portion of which are supports for a roll of towel paper, and the bottom front portion of which is open to permit the passage of a sheet of paper therefrom, a bar secured in the bottom portion of said support or case and parallel with the supports of the roll of paper, a lever pivoted between said bar and the front of the support or case and the inner end portion of which is adapted to bear on the bottom of said bar and the front end portion of which passes through the opening in the front of the support or case and is provided with a transverse cutting edge, said bar being also provided with a groove adapted to receive the inner end portion of said lever.

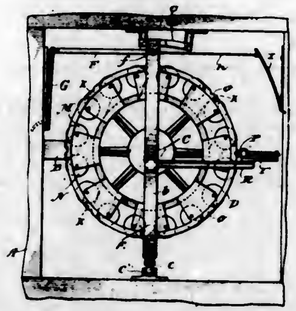
4. A holder for towel paper, comprising a support or case in the top portion of which are supports for a rolled sheet of paper and in the bottom front portion of which is an opening through which said sheet may be passed, a bar secured transversely of said support or case and in the bottom portion thereof and below the supports of said roll of paper, a lever pivoted between said bar and the front of the support or case and the inner end portion of which is adapted to bear on the bottom of said bar and the front end portion of which passes through the opening in the front of the support or case and is vertically movable therein and is provided with a transverse cutting edge.

1,152,852. AUTOMATIC PLAYER-PIANO. EDGAR B. SHERMAN, Grand Rapids, Mich., assignor to National Piano Manufacturing Company, Grand Rapids, Mich., a Corporation of Illinois. Filed July 18, 1913. Serial No. 779,749. (Cl. 84—161.)

1. In a player piano, a horizontal tracker-board, a revoluble drum, the axis of which is parallel to the said tracker-board, a series of music rolls mounted in annular arrangement on said drum, a tiltable frame in which said drum is journaled, the axis around which said frame tilts being parallel to the tracker-board, a suitable support for said frame, a collapsible bellows, and means connecting said bellows to move said tiltable frame.

2. In a player piano, a horizontal tracker-board, a revoluble drum the axis of which is parallel to the said tracker-board, a series of music rolls mounted in annular arrangement on said drum, a tiltable frame in the upright members of which said drum is journaled, the axis around which said frame tilts being parallel to the tracker-board, a suitable support for said frame, a collapsible bellows, and means connecting said bellows to move said tiltable frame.

3. In a player piano, a horizontal tracker-board, a revoluble drum the axis of which is parallel to said tracker-board, a series of perforated music rolls mounted in annular arrangement in said revoluble drum, a tiltable frame in which the drum is journaled, the axis around which said frame tilts being parallel to the tracker-board, a suitable support to which the ends of said frame are pivoted a collapsible bellows connected to the tiltable frame and adapted to move said frame toward said tracker-board, and means for automatically returning said frame.



4. In a player piano, a horizontal tracker-board, a revoluble drum the axis of which is parallel to said tracker-board, a series of perforated music rolls mounted in annular arrangement in said revoluble drum, a tiltable frame in which the drum is journaled, the axis around which said frame tilts being parallel to the tracker-board, a suitable support for said frame a collapsible bellows connecting to the tiltable frame and adapted to move said frame toward said tracker-board, and a spring for automatically returning said frame.

5. In a player piano, a horizontal tracker-board, a revoluble drum the axis of which is parallel to said tracker-board, a series of music rolls mounted in annular arrangement on said drum, a tiltable frame in which said drum is journaled, the axis around which said frame tilts being parallel to the tracker-board, a suitable support to which said frame is pivoted, adjustable feet carried by said frame, bearings in which said feet engage, a collapsible bellows, and means connecting said bellows to said tiltable frame.

[Claims 6 and 7 not printed in the Gazette.]

1,152,853. REST-RAIL FOR GRAVE-VAULTS. CHARLES L. SHERWOOD, London, Ohio, assignor to The London Grave Vault Company, London, Ohio, a Corporation of Ohio. Filed Jan. 20, 1913. Serial No. 743,019. (Cl. 27—2.)



1. In combination with the base of a burial vault, an independent rest rail comprising end pieces inwardly mounted along opposite edges of said base, and a supplemental structure spanning the distance between said end pieces.

2. In combination with the base of a burial vault, a rest rail comprising end pieces inwardly mounted along opposite edges of said base, and a supplemental member entirely supported by each pair of opposing end pieces and spanning the distance between such end pieces.

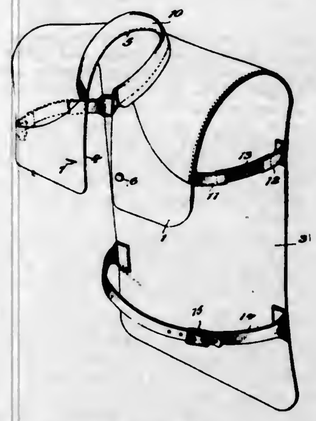
3. In combination with the base of a burial vault, a rest rail comprising end pieces inwardly mounted along opposite edges of said base, rearwardly projecting lugs on said end pieces, and a sheet metal structure extending between each pair of opposing end pieces and interlocking with said lugs.

4. In combination with the base of a burial vault, a rest rail comprising end pieces inwardly mounted along opposite edges of said base, a cross bar extending between each pair of end pieces, and a sheet metal structure extending between each pair of opposing end pieces.

5. In combination with the base of a burial vault, a rest rail comprising end pieces inwardly mounted along opposite edges of said base, rearwardly projecting lugs on said end pieces, a cross bar extending between each pair of opposing end pieces, and a sheet metal structure extending between each pair of opposing end pieces and interlocking with said lugs.

[Claims 6 to 9 not printed in the Gazette.]

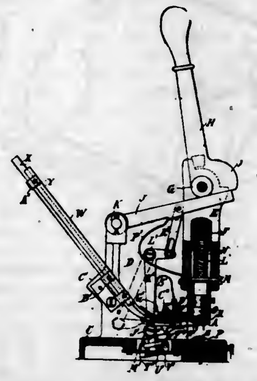
1,152,854. CAPE. CLARENCE L. SIMPSON, Tacoma, Wash., assignor of one-half to Eli Brumberg, Hoquiam, Wash. Filed Jan. 30, 1913. Serial No. 745,278. (Cl. 2—54.)



A garment of the class described including a body open at the sides and having continuous and uninterrupted side edges, said body including a front, shoulders, and a back, the front being relatively shorter than the back and being equal in width therewith, said shoulders being wider than the front and back and having a neck opening formed between them, a yieldable connection engaging the side edges of the garment body upon each side thereof and permanently connecting the front and back below the shoulders, said connections normally acting to yieldably hold the front and back against the body of the wearer, and a belt extending in front of the back at the lower end thereof and from side to side of the said back.

1,152,855. MACHINE FOR ATTACHING HOOKS AND EYES. ELIZABETH J. SMITH, Larchmont, N. Y. Filed Dec. 11, 1909. Serial No. 532,660. (Cl. 1—3.)

1. In a machine of the kind described, the combination of two dies, one adapted to press down upon the upper side of a pronged member of a hook and eye fastener, and the other having fixed inclined faces permitting free movement of the ends of the prongs in the direction of the incline, adapted to first engage the prongs at the points thereof to bend the prongs inward, then engage the body of the prongs to bend them inward and upward and then engage the prongs at the bases thereof to bend the prongs bodily upward against the underside of goods to which the fasteners are applied, whereby the prongs are substantially bodily bent from a position at right angles to the body of the member to a position substantially parallel therewith.



3. In a machine of the kind described, the combination of two dies, one adapted to press down upon the upper side of a pronged member of a hook and eye fastener, and the other having fixed inclined faces permitting free movement of the ends of the prongs in the direction of the incline, adapted to first engage the prongs at the points thereof to bend the prongs inward, then engage the body of the prongs to bend them inward and upward and then engage the prongs at the bases thereof to bend the prongs bodily upward against the underside of goods to which the fasteners are applied, whereby the prongs are substantially bodily bent from a position at right angles to the body of the member to a position substantially parallel therewith, and means for retaining a fastener in position between said dies.

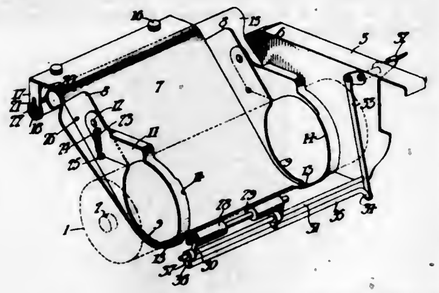
4. In a machine of the kind described, the combination of two dies, one adapted to press down upon the upper side of a pronged member of a hook and eye fastener, and the other having fixed inclined faces permitting free movement of the ends of the prongs in the direction of the incline, adapted to first engage the prongs at the points thereof to bend the prongs inward, then engage the body of the prongs to bend them inward and upward and then engage the prongs at the bases thereof to bend the prongs bodily upward against the underside of goods to which the fasteners are applied, whereby the prongs are substantially bodily bent from a position at right angles to the body of the member to a position substantially parallel therewith, and automatic means for feeding a fastener to a position between said dies.

5. In a machine of the kind described, the combination of two dies, one adapted to press down upon the upper side of a pronged member of a hook and eye fastener and the other having fixed inclined faces having a recess at the lower edges thereof, said recess thus permitting free movement of the ends of the prongs in the direction of the incline, said faces being adapted to first engage the prongs at the points thereof to bend the prongs inward, then engage the body of the prongs to bend them inward and upward and then engage the prongs at the bases thereof to bend the prongs bodily upward against the underside of goods to which the fasteners are applied, whereby the prongs are substantially bodily bent from a

position at right angles to the body of the member to a position substantially parallel therewith.

[Claims 6 to 20 not printed in the Gazette.]

1,152,856. TYPE-WRITING MACHINE. JESSE A. B. SMITH, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed May 20, 1914. Serial No. 839,667. (Cl. 197—127.)



1. An attachment for typewriting machines, comprising a paper table having a curved portion to extend partially around the platen, means to hold said curved portion spaced from the platen, and guide arms extending from said table around the opposite side of the platen to meet said table and thereby surround the platen, said arms provided with guides for the work-sheet spaced from the platen.

2. The combination with a rotary platen, of a stationary table forming a guide for work-pieces, said guide curved around the platen and spaced a short distance therefrom to permit a work-piece to be slipped into position between the platen and said guide, and arms secured to said guide and extending around the platen on the opposite side from said curved portion to hold the attachment in position on the platen.

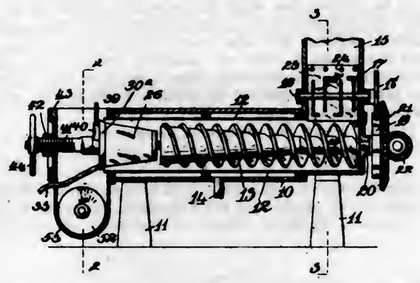
3. The combination with a rotary platen, of a stationary table forming a guide for work-pieces, said guide curved around the platen and spaced a short distance therefrom to permit a work-piece to be slipped into position between the platen and said guide, and arms secured to said guide and extending around the platen on the opposite side from said curved portion to hold the attachment in position on the platen, said arms hinged to the guide and movable into position to permit the removal of said guide from the platen without removing the platen from the machine.

4. The combination with a rotary platen, of a rear stationary guide for work-sheets curved around under the platen and spaced therefrom to permit a work-sheet to be slipped between the platen and said guide, and having means to guide the side edges of the work, and guiding arms secured to said guide in rear of the platen and extending forwardly over the platen and across the printing line, said arms also provided with means for guiding the work-sheet laterally.

5. In a typewriting machine, the combination with a platen frame and platen, said frame comprising a paper shelf at the rear of the platen, of an auxiliary paper table supported on said shelf and extending forward beneath the platen and spaced therefrom to permit a work-sheet to be slipped between said table and platen, said table provided with side flanges having curved extensions to hold the said table spaced from the platen, arms pivoted to said flanges and extending forward over the platen and curved around the platen toward said table, said arms having inwardly-extended flanges spaced from the platen to guide the side edges of the work-sheet, said arms hinged to said flanges, springs to hold said arms in position, a rod extending across the platen frame behind the paper shelf, brackets slidably mounted on said rod, and thumb screws securing said table to said brackets.

[Claims 6 to 23 not printed in the Gazette.]

1,152,857. SCREW-PRESS. CHARLES F. STEHLIN, New Rochelle, N. Y. Filed July 20, 1914. Serial No. 851,853. (Cl. 100—48.)



1. In a screw press, a screw, a casing, means for supplying material between said screw and casing at one side of the screw, and means at the opposite side of the screw for preventing the passing of material away from the screw, substantially as set forth.

2. In a screw press, a casing, a screw therein, a chute or hopper extending across the casing and in free communication with the space between the screw and casing on one side, and a plate on the other side of the screw for retaining material in contact with the screw, substantially as set forth.

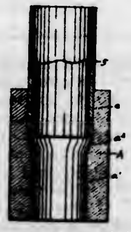
3. A screw press comprising a screw and a perforated casing, means for supplying material to said casing, and a plate of resilient material extending into the neighborhood of the periphery of the screw, substantially as set forth.

4. In a screw press, a screw, a perforated casing therefor, a chute or hopper for supplying material, and a plate of resilient material secured to the chute or hopper at one margin and extending into the neighborhood of the screw at the other margin, substantially as set forth.

5. In a screw press, a screw, a perforated casing therefor, a chute or hopper for supplying material, an agitator therein, and a thin curved plate of resilient material in said chute or hopper and secured thereto at one margin and extending into the neighborhood of the screw at the opposite margin, substantially as set forth.

[Claims 6 to 15 not printed in the Gazette.]

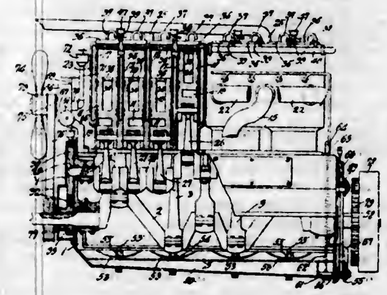
1,152,858. METHOD OF MAKING TUBING-RINGS. ANDREW M. STEWART, Toledo, Ohio, assignor to The National Supply Company, Toledo, Ohio, a Corporation of Ohio. Filed Dec. 16, 1914. Serial No. 877,521. (Cl. 153—21.)



1. The method of producing an integral flange and an internal shoulder on a tube of different cross-sections connected by an intermediate section, which consists in confining the sections at the ends of the intermediate section to their original dimensions while applying end pressure, thereby producing an external flange and an internal shoulder, substantially as set forth.

2. The method of making tubing rings, which consists in confining to their original dimensions the adjacent portions of a metal tube of different diameters connected by an inclined portion and subjecting the same to end pressure, one toward the other, until the metal adjacent to the said inclined portion is doubled outwardly as a flange.

1,152,859. EXPLOSION-ENGINE. ELMER U. STEWART, Sharon, Pa. Filed July 25, 1914. Serial No. 853,052. (Cl. 123—59.)



1. An explosion engine, including a power cylinder having a single port adjacent the top thereof and two branch conduits leading therefrom and constituting the intake and exhaust conduits of the engine, two valve cylinders disposed in parallel to the engine and power cylinder, the bore of one of the valve cylinders bisecting each conduit, two cylindrical reciprocatory valves one mounted in each valve cylinder, each valve being provided with a diametrically disposed port for registration with the conduit, a crank shaft, a power piston connected thereto, a counter shaft operably connected to the crank shaft and to both valves, the upper end of the valve cylindera being closed, an air intake valve mounted in the closed end of each valve cylinder, an air directing pipe provided with a check valve leading therefrom, an air storage reservoir in communication with the last conduit, whereby the valves form air supplying means for the tank, a pipe leading from the air supplying pipe, and an intake manifold connected to one of the conduits of the power cylinder and to the last mentioned pipe, whereby air is directed thereto.

2. An explosion engine, including a casting provided with two parallel power cylinders each one of which is provided with a port adjacent the top thereof leading into a channel extended downwardly and parallel with the walls of the cylinder, said casting being further provided with two divergently disposed gas conducting passages leading from the lower end of the channel to the exterior of the engine, the two adjacent passages for both power cylinders constituting the intake passages therefor while the two outer ones constitute the exhaust passages therefor, an intake manifold connected to both of the inlet ends of the two intake passages, an exhaust manifold connected to the outer ends of both exhaust passages, four valves bisecting the respective intake and exhaust passages, each of said valves being provided with a diametrically disposed port intermediate of its ends for registration with its respective passage, a power piston mounted in each cylinder, a crank shaft operably connected thereto, a counter shaft operably connected to the crank shaft and to all of the valves, the upper ends of each of the respective valves constituting an air compressing means, a valve controlled intake pipe connected to supply air to each valve, a valve controlled outlet pipe leading from each valve cylinder, a pipe common to all of the outlet pipes, an air storage reservoir connected to the last pipe, and a pipe connected to the last mentioned pipe and to the intake manifold for supplying air to the intake manifold to accelerate the fuel.

3. An explosion engine, including a casting provided with two parallel power cylinders each one of which is provided with a port adjacent the top thereof leading into a channel extended downwardly and parallel with the walls of the cylinder, said casting being further provided with two divergently disposed gas conducting passages leading from the lower end of the channel to the exterior of the engine, the two adjacent passages for both power cylinders constituting the intake passages therefor while the outer ones constitute the exhaust passages therefor, an intake manifold connected to both of the inlet ends of the two intake passages, an exhaust manifold connected to the outer ends of both exhaust passages, said casting being provided with four vertical bores disposed at their upper ends and in parallel with the power cylinders, said bores intersecting the respective passages, a cylindrical valve mounted for reciprocation within each bore and provided with a diametrically disposed port intermediate of its ends for controlling the passage of gas through its respective passages, two power pistons, a crank shaft operably connected thereto, a counter shaft operably connected to the crank shaft and all of the reciprocatory valves, a valve controlled air inlet member connected in the upper end of each valve cylinder, a valve controlled outlet pipe connected thereto, a single pipe connected to all of the latter pipes, an air reservoir operably connected to the single pipe to receive the compressed air from all of the valve cylinders, and a pipe leading from the last pipe to the intake manifold for supplying air to the intake manifold to accelerate the fuel charge.

1,152,860. MATERIAL FOR BINDING PLASTER TO CONCRETE SURFACES. WILLIAM A. STOETZER, Wheeling, W. Va. Filed Dec. 31, 1914. Serial No. 879,830. (Cl. 72—123.)



1. As an article of manufacture, a backing of thin material having a covering of fibrous material lightly adhering to one face thereof.

2. As an article of manufacture, a paper backing having disposed in lightly adhering relation to one face thereof a loosely tangled mass of fibrous material.

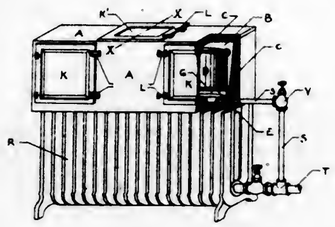
3. A binder of the character described, comprising a flexible paper backing, and a mass of scattered thread-like fibers disposed in lightly adhering relation to one face of said backing.

4. A binder by means of which a plaster coating may be closely bonded to a concrete surface, said binder comprising a flexible backing, and a mass of scattered fibers disposed in lightly adhering relation to one face of said backing, the free ends of said fibers being adapted to become embedded in the concrete, and said backing being adapted to be stripped from said fibers before the application of said coating.

1,152,861. FIRELESS COOKER. WALTER C. STRAUSS, Chicago, Ill. Filed Apr. 19, 1913. Serial No. 762,193. (Cl. 126—20.)

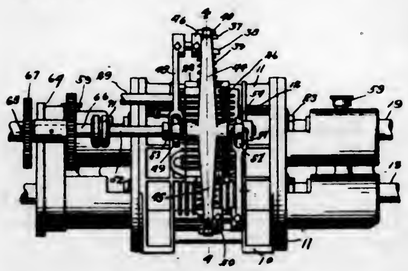
A fireless cooker of the character described, comprising a casing having a lining of heat insulating material and provided with an opening having a closure therefor, a heat storing and radiating plate having a relatively flat top portion adapted to support a receptacle arranged within the casing, the heat storing and radiating plate being formed hollow to provide an interior chamber to receive the heating medium, the said plate having a horizontally disposed channeled extension at its lower end adapted to rest against the bottom of the casing to constitute a supporting and positioning means for the heat

storing chamber at the center thereof and connecting with said interior hollow chamber, the bottom wall of the interior chamber gradually sloping toward the said channeled extension and resting on the insulating material, means for supplying steam to the interior chamber of the heat storing and radiating plate, comprising a combined supply and drain pipe leading from the ex-



terior of the casing and extending horizontally through the wall of the casing adjacent the bottom thereof and connecting with said horizontally disposed channeled extension of the heat storing and radiating plate, substantially as described.

1,152,862. GAS-TURBINE. DEAN L. TAYLOR, Santa Maria, Cal. Filed Jan. 12, 1914. Serial No. 811,666. (Cl. 60—4.)



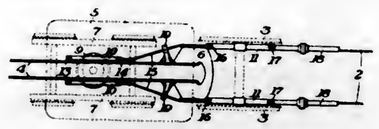
1. In a rotary motor, the combination with a casing, of rotors mounted therein on parallel axes and having inter-engaging ribs thereon, a single explosion chamber having a passage extending into the casing adjacent the point of inter-engagement of the ribs and constructed and arranged to convey the gas passing therethrough to the ribs on the said rotors independently and simultaneously, and means for opening the said passage intermittently and in rapid succession.

2. In a rotary motor, the combination with a casing, of rotors mounted therein on parallel axes and having inter-engaging ribs thereon, the said casing being provided with chambers at the ends of the rotor and an exhaust port in communication with said chambers and means for injecting gas under pressure into said casing against the said ribs, the said ribs being constructed and arranged to convey the gas to the said chambers upon the rotation of the rotors.

3. In a rotary motor, the combination with a casing, of rotors mounted therein on parallel axes, each of said rotors being provided with two sets of helical ribs extending in opposite directions from a centrally located circumferential line, the said casing being provided with chambers at the ends of the rotors, and an exhaust in communication with said chambers, means for injecting gas under pressure into the casing and against the ribs on the rotors in alinement with the said circumferential lines thereon, whereby the rotors will be actuated and the ribs will convey the gas to the said chambers.

1,152,863. LOCOMOTIVE. SAMUEL G. THOMSON, Reading, Pa. Filed May 10, 1915. Serial No. 26,976. (Cl. 105—17.)

1. A locomotive having a supporting frame extending longitudinally underneath a locomotive firebox and lying adjacent to the vertical center plane of the firebox, a rear truck, and an equalizing rigging or system which connects the bearing on said truck with the back driving wheel springs of the locomotive.



2. A locomotive having a supporting frame extending longitudinally for at least the greater portion of the length of its firebox and lying adjacent to its vertical center plane, a rear truck, and a suspending rigging for said frame, said rigging acting to carry at least a portion of the weight resting on said truck.

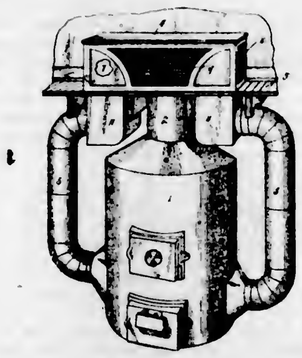
3. A locomotive having a supporting frame extending longitudinally for at least the greater portion of the length of its firebox, and lying adjacent to its vertical center plane, a rear truck, and means for distributing the weight of the locomotive driving wheels and that of the truck in any desirable proportion.

4. A locomotive having a supporting frame extending longitudinally for the greater portion of the length of its firebox and lying adjacent to its vertical center plane, and a rear truck, said frame having a fulcrum and a lever bearing on said fulcrum and connected to the locomotive spring rigging and acting to transmit a portion of the locomotive weight to said truck.

5. A locomotive having a supporting frame extending longitudinally along the greater portion of the length of its firebox and lying adjacent to its vertical center plane, a rear truck, and a spring resting on said truck, said frame being suspended free of the truck and having a fulcrum and a lever acting against said fulcrum and forming a part of a rigging which connects the track spring with the back driving springs of the locomotive.

[Claims 6 to 13 not printed in the Gazette.]

1,152,864. REGISTER. JAMES M. TRIGGS, Huntington, Ind. Filed Mar. 24, 1915. Serial No. 16,784. (Cl. 98—49.)



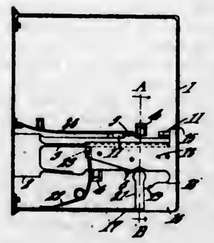
1. A heating appliance of the class described comprising a box-like member divided into compartments one of which compartments has an inlet opening in its bottom and a grated outlet opening in a side thereof, and another of said compartments having an inlet opening in a side

thereof at an angle to the outlet side opening of said compartment, and having an outlet opening in its bottom.

2. A heating appliance of the class described comprising an oblong box-like member having center and end compartments, with the center compartment provided with an inlet opening in its bottom and having a wall thereof which is formed by a side of said member grated to form an outlet opening and with the end compartments each provided with grated inlet openings in the respective end walls of said member and having outlet openings in their bottoms.

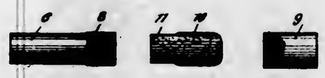
3. A heating appliance of the class described comprising an oblong box-like member having an imperforate top and forming center and end compartments, the center compartment being divided from the end compartments by walls which extend inwardly and downwardly from the respective end portions of the member longitudinally thereof, said center compartment having an inlet opening in its bottom and having a grated outlet in a side of said member, and each of said end compartments having a grated inlet in the respective end of said member and an outlet in its bottom.

1,152,865. DOOR-LOCK. WILLIAM E. WALKER, Seattle, Wash. Filed June 7, 1915. Serial No. 32,637. (Cl. 70—8.)



The combination with a lock casing, a bolt, a guard plate slidably engaging the bolt and normally positioned at one side of the keyhole slot in the casing, and a tumbler for holding the bolt and guard plate in either of two positions, of wards upon the bolt for engagement by the bit of a key when inserted into either side of the lock casing, and wards upon the guard plate for engagement by the bit of a key when inserted in one side of the casing, said wards on the guard plate being out of the path of the key bit when inserted in the other side of the casing, there being a slot within the guard plate for the reception of the stem of the key during the movement of said plate relative to the key.

1,152,866. BILLIARD-CUE ATTACHMENT. EDMUND J. WATERS, Asbury Park, N. J. Filed Dec. 26, 1914. Serial No. 879,202. (Cl. 46—9.)

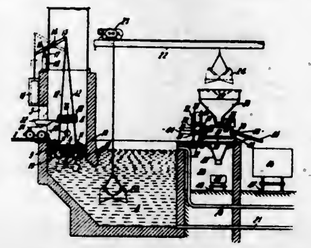


The combination with a cue, of a tubular body portion arranged upon the forward end of the cue and projecting forwardly therebeyond for a substantial distance and having a circumferentially enlarged forward exterior screw-threaded portion, a striking tip having a reduced rear portion inserted within the forward portion of the tubular body portion and projecting forwardly therebeyond in substantially flush relation thereto, and a longitudinally adjustable sleeve screw-threaded throughout its entire length and having screw-threaded engagement with the screw-threaded portion of the tubular body portion and tip.

1,152,867. APPARATUS FOR RECOVERING METAL SCRAP. GEORGE E. WISHNER, Steubenville, Ohio. Filed June 25, 1914. Serial No. 847,260. (Cl. 75—146.)

1. Apparatus for recovering metal scrap from slag, comprising in combination, a slag cooling grating, means for depositing heated slag on said grating, means for spraying water on the heated slag supported on the grating, and a granulating pit into which said grating discharges the slag supported thereon.

2. Apparatus for recovering metal scrap from slag, comprising in combination, a tilting slag cooling grating, means for depositing heated slag on said grating, means for spraying water on the heated slag supported on the grating, means for tilting said grating, and a granulating pit into which said grating discharges the slag supported thereon.



3. Apparatus for recovering metal scrap from slag, comprising in combination, a slag cooling grating, means for spraying water on heated slag supported on the grating, a granulating pit into which said grating discharges the slag supported thereon, a crushing mill having means for crushing the granulated slag, and means for transferring the slag from the granulating pit to the crushing mill.

4. Apparatus for recovering metal scrap from slag, comprising in combination, a vertical shaft having a cooling grating, means for spraying water on heated slag supported on said grating, a granulating pit containing water into which said grating discharges the slag supported thereon, and means for removing the granulated slag from said pit.

5. Apparatus for recovering metal scrap from slag, comprising in combination, a vertical shaft having a cooling grating, means for spraying water on heated slag supported on said grating, a granulating pit containing water into which said grating discharges the slag supported thereon, a rotating crushing mill, and means for transferring granulated slag from the pit to the crushing mill.

[Claim 6 not printed in the Gazette.]

1,152,868. AUTOMATIC SCALE. RICHARD J. ZANONE, New Albany, Ind., assignor to Jacob Zinsmeister, New Albany, Ind. Filed Mar. 15, 1915. Serial No. 14,601. (Cl. 73—177.)

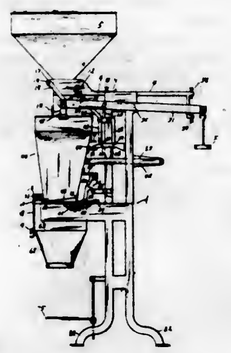
1. In a scale, a frame, a scale beam pivoted thereon, a hopper suspended from said beam, a hinged bottom on said hopper, means carried by said hopper adapted to engage a fixed point on said frame to hold said hopper in its down position, said means controlled by said bottom.

2. In a scale, a frame, a scale beam pivoted thereon, a hopper suspended from said beam, a bottom hinged on said hopper, a stop on said frame, and a latch on said hopper adapted to be moved into position to engage with said stop to hold the hopper in its down position.

3. In a scale, a frame, a scale beam pivoted thereon, a hopper suspended from said beam, a bottom hinged on said hopper, a stop on said frame, a latch on said hopper adapted to be moved into position to engage with said stop to hold the hopper in its down position, and operative connections whereby the position of said latch is controlled by said bottom.

4. In a scale, a frame, a scale beam pivoted thereon, a hopper suspended from said beam, a bottom hinged on said

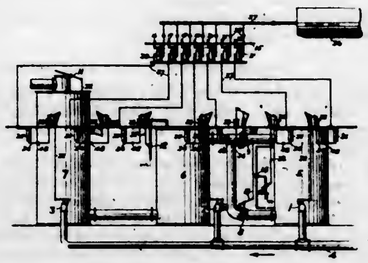
hopper, a stop on said frame, a latch on said hopper, means operable by the opening of said bottom to permit said latch to move into position to engage with said stop to hold the hopper in its down position, said means operable by the closing of the bottom to release said latch and allow the hopper to rise.



5. In a scale, a frame, a receiving hopper having a bottom outlet supported thereby, a gate adapted to close said outlet, a lever adapated normally to hold said gate open, a trip lever adapted to hold said gate lever in its normal position, a scale beam pivoted on said frame, a weighing hopper suspended from said beam, means associated with said weighing hopper to actuate said trip lever and permit said gate to close, means adapted to actuate said gate lever to open said gate, a bottom hinged on said hopper, a stop on said frame, and a latch on said hopper adapted to be moved into position to engage with said stop to hold the hopper in its down position.

[Claims 6 to 9 not printed in the Gazette.]

1,152,869. MANUFACTURE OF WATER-GAS. CHARLES FRANKLIN ZEEK, Pensacola, Fla., assignor to The United Gas Improvement Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 21, 1914. Serial No. 826,199. (Cl. 48—87.)



1. In a water gas set the combination of a normally positioned apparatus valve, a fluid piston and cylinder for moving said valve, a reservoir in communication with said cylinder, a flow check valve between the reservoir and cylinder, an air supply in communication with the reservoir, an air valve having a normally retracted lever for controlling the air supply to the reservoir, and a rotating tappet-arm or cam for shifting and holding and subsequently releasing said lever.

2. In a water gas set the combination of a normally positioned apparatus valve, a fluid piston and cylinder for moving said valve, a reservoir in communication with said cylinder, an air supply in communication with the reservoir, an air valve having a normally retracted lever for controlling the air supply to the reservoir, and a rotating tappet-arm or cam for shifting and holding and subsequently releasing said lever.

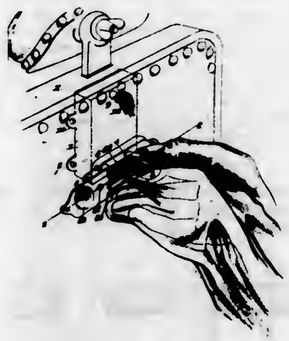
3. An automatic water gas set comprising the combination of the apparatus valves, a series of fluid pistons and cylinders and reservoirs for operating the valves, a series of air valves and their connections for independently operating said fluid devices, and a rotating lay shaft having a series of cams adapted to open to hold open to close and to permit to remain closed said air valves and arranged on said shaft in different angular relations, whereby for each revolution of the shaft the apparatus valves are operated to complete the gas making cycle of operations.

4. An automatic water gas set comprising the combination of the apparatus valves, a series of fluid pistons and cylinders and reservoirs for operating the valves, a series of air valves and their connections for independently operating said fluid devices, and a rotating lay shaft having a series of cams adapted to open to hold open to close and permit to remain closed said air valves and arranged on said shaft in different angular relations, whereby for each revolution of the shaft the apparatus valves are operated to complete the gas making cycle of operations, and clock mechanism for rotating said lay shaft.

5. An automatic water gas set comprising the combination of the apparatus valves, a series of fluid pistons and cylinders and reservoirs for operating the valves, a series of air valves and their connections for independently operating said fluid devices, a rotating lay shaft having a series of cams adapted to open to hold open to close and to permit to remain closed said air valves and arranged on said shaft in different angular relations, whereby for each revolution of the shaft the apparatus valves are operated to complete the gas making cycle of operations, clock mechanism for rotating said lay shaft, and a speed governor mechanism for arresting said shaft.

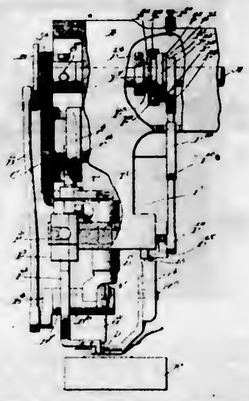
[Claim 6 not printed in the Gazette.]

1,152,870. BARBER'S ACCESSORY. CHRIS Z. ALEXANDER, Redwood City, Cal. Filed Dec. 18, 1914. Serial No. 877,950. (Cl. 155—26.)



In combination with a barber's chair having a recess in its back, a reservoir invisibly mounted in the said recess, said reservoir having an ejecting bulb and a discharge nozzle at its lower end, the said chair having an opening in its back through which the said bulb and nozzle project, a casing secured to the said chair over the said opening and including a hinge cover having sockets for receiving the bulb and the nozzle, the nozzle socket serving as a closure for the nozzle and means by which the reservoir may be filled.

1,152,871. BLINDSTITCH-FELLING MACHINE. WOLF ARBETTER, Chelsea, Mass., assignor to Arbetter Felling Machine Company, Boston, Mass., a Corporation of Maine. Filed June 2, 1908. Serial No. 436,223. (Cl. 112—24.)



1. A blindstitch sewing machine for felling a superimposed layer or layers of fabric to a base layer, comprising a work-support, a reciprocating needle and complemental stitch-forming mechanism located and operative at one side of said work-support, independent feeding instrumentalities acting upon the opposite faces of the fabric, and means for operating them to give a feeding movement to the upper instrumentality when the lower is substantially at rest, and then to give a feeding movement to the lower instrumentality.

2. A blindstitch sewing machine for felling a superimposed layer or layers of fabric to a base layer, comprising a work-support, a reciprocating needle and complemental stitch-forming mechanism located and operative at one side of said work-support, a presser-foot coöperating with said work-support to hold the material therebetween, feeding mechanism located on the opposite side of the work-support from the stitch-forming mechanism and operative to feed the material forward at desired intervals, auxiliary feeding mechanism located on the same side of the work-support as the stitch-forming mechanism and operative upon the superimposed layer or layers of fabric only, and means for operating said auxiliary feeding mechanism to cause it to have its feeding movement while the main feeding device is at rest, whereby the superimposed layer or layers will be fed forward slightly independently of the base layer.

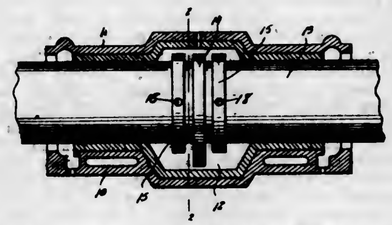
3. A blindstitch sewing machine for felling a superimposed layer or layers of fabric to a base layer, comprising a work-support, a reciprocating needle and complemental stitch-forming mechanism located and operative at one side of said work-support, a presser-foot adapted to rest on the upper surface of the fabric, a main feeding device operating against the lower surface of the fabric, an auxiliary feeding device operating against the upper surface of the superimposed layers, an auxiliary presser-foot mounted to yield vertically with respect to the work support and adapted to rest against the lower surface of the fabric beneath the auxiliary feeding device, and means to operate the auxiliary feeding device to cause it to contact with the upper surface of the superimposed layers and move forward relatively to the auxiliary presser-foot and tuck the upper layer under the presser-foot resting upon the upper surface of the fabric.

4. A blind-stitch sewing machine for felling a superimposed layer or layers of fabric to a base layer, comprising a work-support, a reciprocating needle and complemental stitch-forming mechanism located and operative at one side of said work-support, a presser-foot and an auxiliary feeding device located on the same side of the work-support as the stitch-forming mechanism, the said auxiliary feeding device adapted to act only on the superimposed layer, a main feeding device and an auxiliary presser-foot carried thereby located on the opposite side of the work-support, means to operate the auxiliary feeding device while the main feeding device is in substantially retracted position to cause it to descend and clamp the fabric against the auxiliary presser-foot, and then to move forward, means for thereafter causing the completion of the feeding movement of the main feeding device.

5. A blindstitch sewing machine for felling a superimposed layer or layers of fabric to a base layer, comprising a work-support, stitch-forming mechanism located and operative at one side of said work-support, a presser-foot adapted to rest upon the upper surface of the fabric, a main feeding device operating against said presser-foot, and means for giving it the usual four motion feeding movement, an auxiliary presser-foot carried by said feeding device, an auxiliary feeding device acting on the upper surface of the superimposed layer or layers and coöperating with said auxiliary presser-foot, means for moving the auxiliary feeding device to cause it to descend upon and clamp the fabric against the auxiliary presser-foot, and to move the upper layers forward upon said auxiliary presser-foot, and crowd them slightly beneath the presser-foot.

[Claims 6 to 11 not printed in the Gazette.]

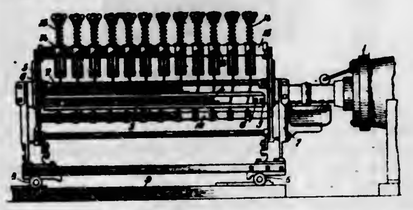
1,152,872. RING BEARING-LUBRICATING DEVICE. BERTRAM G. BADHAM, Waihi, New Zealand. Filed Oct. 13, 1914. Serial No. 866,539. (Cl. 64—31.)



1. The combination with a shaft and a lubricating ring therefor; of guard rings surrounding said shaft in spaced relation thereto, said guard rings being arranged on opposite sides of said lubricating ring, and means to secure said guard rings to said shaft.

2. The combination with a shaft and a lubricating ring therefor; of guard rings each consisting of a plurality of detachably connected segments, surrounding said shaft in spaced relation thereto, said guard rings being arranged on opposite sides of said lubricating ring, and means to secure said guard rings to said shaft.

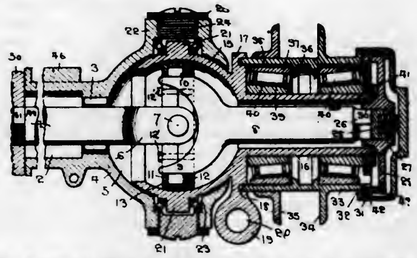
1,152,873. BRICK-CUT-OFF TABLE. JAMES G. BARBOUR, Canton, Ohio. Filed Apr. 22, 1912. Serial No. 692,297. (Cl. 25—111.)



In a brick cut off table, a cut off frame, a lower platen adapted to support a column of clay, said platen provided with a series of transverse curved slots, an upper platen located above said column of clay, said upper platen provided with a series of transverse, oppositely curved slots,

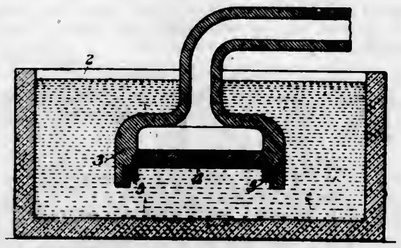
a bar adapted to reciprocate transversely above the clay column, a second bar adapted to reciprocate transversely beneath the clay column, and wires carried between said bars, said wires located through the oppositely curved slots in the upper and lower platens.

1,152,874. STEERING MECHANISM. WILLIAM A. BERSERDICH, Clintonville, Wis., assignor of one-half to Bernhard A. Mosling, Clintonville, Wis. Filed June 7, 1912. Serial No. 702,225. Renewed Mar. 2, 1915. Serial No. 11,579. (Cl. 21—90.)



In a device of the character described, a housing of substantially spherical contour, a skein member having a substantially spherical end portion extending within said housing, an axle having a bifurcated end extending within said end portion of the skein member, a stub axle extending within said spherical end portion and bifurcated, the bifurcations of said axle and stub axle being provided with trunnions, a pair of oppositely disposed rings provided each with semi-cylindrical apertures to receive said trunnions, means detachably uniting said rings, said housings having oppositely disposed apertured bosses and the skein member having trunnions rotatably seated therein located diametrically opposite said housing, adjusting screws having threaded engagement with said bosses, interposed ball bearings for the trunnions of the skein member, nuts for retaining said screws and ball bearings in adjustment, said housing being horizontally separable, and a wheel hub mounted on said skein member and having spoke attaching means out of alinement with said bosses and screws.

1,152,875. FILTERING APPARATUS. CLARENCE J. BROCKBANK, Niagara Falls, Ontario, Canada, assignor to The Carborundum Company, Niagara Falls, N. Y., a Corporation of Pennsylvania. Filed Jan. 7, 1914. Serial No. 810,759. (Cl. 75—86.)

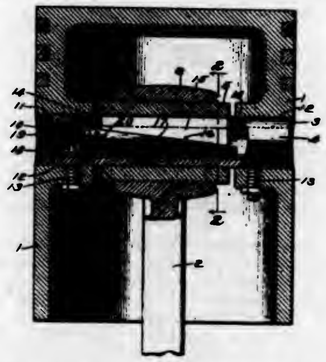


1. A filter device comprising a filter plate of carborundum free from any foreign binding substance, and a carrier or support therefor of acid resisting material.

2. A filter device comprising a filter plate of carborundum free from any foreign binding substance, and a carrier or support therefor of silicon.

3. A filter device comprising a filter plate of carborundum free from any foreign binding substance, and a carrier or support therefor of acid resisting material, together with acid resisting keying means for securing the filter plate in the carrier or support.

1,152,876. ENGINE-ROD CONNECTION. WILLIAM LEE BROWN and ALEX J. MEUWLY, Little Rock, Ark. Filed Sept. 26, 1913. Serial No. 791,970. (Cl. 64—7.)



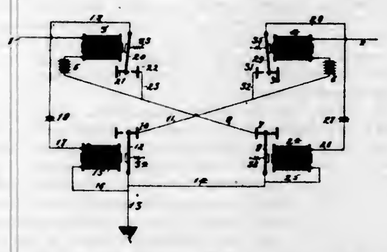
1. An engine rod connection, comprising a hollow pin closed at one end and provided with an opening between the end portions thereof extending longitudinally of the hollow pin, a wedge having an edge portion inclined in the same direction throughout the length of the wedge and extending longitudinally of the hollow pin in said longitudinal opening, a second wedge within said hollow pin of greater length than the first-named wedge and having a straight edge portion resting on the interior surface of the hollow pin, and means acting automatically to move said second wedge longitudinally of the said hollow pin to force the first-named wedge outwardly.

2. An engine rod connection, comprising a hollow pin having a longitudinal opening at one side, a wedge extending through said opening and having an inclined edge formed in a single plane throughout the length of the wedge, a second wedge movable longitudinally within the hollow pin and of greater length than the first-named wedge, said second wedge having a circularly curved bearing portion conforming to and resting upon the interior surface of the hollow pin and an inclined edge formed in a single plane to conform to the inclined edge of the first-named wedge, a spring acting upon one end of the second wedge, and means for adjusting the tension of the spring.

3. In an engine rod connection, the combination of a movable engine part, a hollow pin secured from rotative movement to said part and provided with a longitudinal opening, a connecting rod having an end embracing said hollow pin, a wedge having an inclined edge portion formed in a single plane and extending longitudinally of the hollow pin within said opening and movable radially of the hollow pin, a second wedge member of greater length than the first-named wedge and movable longitudinally within the hollow pin, said second wedge having an inclined edge formed in a single plane to coöperate with the inclined edge of the first-named wedge, and a cylindrically curved surface to conform to and rest upon the interior surface of the hollow pin, and adjustable means acting automatically for forcing said second wedge member longitudinally of the hollow pin to move the first-named wedge radially and take up wear.

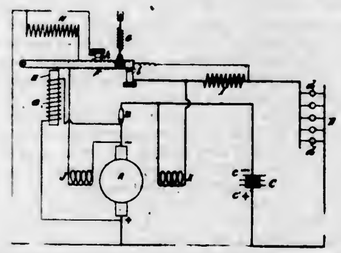
4. An engine rod connection comprising a hollow pin provided with a longitudinal opening through the cylindrical wall thereof, a wedge having an inclined edge portion formed in a single plane, said wedge extending longitudinally of the hollow pin within said opening through the cylindrical wall of the pin and movable radially thereof, a second wedge movable longitudinally within the hollow pin, said second wedge having a straight inclined edge formed in a single plane to coöperate with the inclined edge of the first-named wedge and having a surface bearing on the interior of the hollow pin, and spring means acting automatically to force said second wedge longitudinally of the hollow pin while maintaining its surface bearing on the interior of said pin and the said inclined edge portions of the two wedges in contact for forcing the first-named wedge radially.

1,152,877. REPEATER FOR TELEGRAPH-LINES. HARRY C. CAHILL, Akron, Ohio. Filed Sept. 19, 1914. Serial No. 862,491. (Cl. 178—71.)



In a device for repeating electrical impulses, a line wire, a relay magnet connected thereto, a battery connected to said relay magnet, a contact connected to said battery a switch arm normally in engagement with said contact, a ground wire leading from said switch arm to a ground, a second line wire, a second magnet connected to the second line wire, a second battery connected with the second magnet, a second contact connected to the second battery, a second switch arm normally in engagement with the second contact, a second ground wire connected to the first ground wire, a third magnet arranged to attract the first switch arm, a fourth magnet arranged to attract the second switch arm, a ground wire leading from the third magnet to the first ground wire, a ground wire leading from the fourth magnet to the first ground wire, a third switch arm normally attracted by the first magnet, a connection between the third switch arm and the fourth magnet including a battery, a fourth switch arm normally attracted by the second magnet, a connection between the fourth switch arm and the third magnet including a battery, a contact with which said third switch arm is adapted to engage when the first magnet is deënergized, the last-mentioned contact being connected to the connection between the first-mentioned battery and first-mentioned contact, a fourth contact adapted to be engaged by the fourth switch arm when the second magnet is deënergized and the connection between the fourth contact and the connection between the second battery and second contact.

1,152,878. ELECTRIC-LIGHTING AND BATTERY-CHARGING SYSTEM FOR VEHICLES. ALEXANDER CHURCHWARD, Boston, Mass. Filed Jan. 2, 1914. Serial No. 809,957. (Cl. 171—313.)



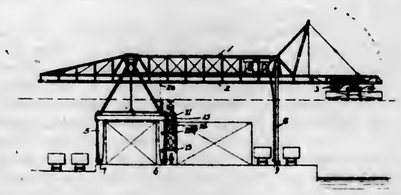
1. The combination with an intermittently operated dynamo having a resistance normally in series with its shunt field winding, a storage battery connected therewith, and work circuits containing a normally short circuited series resistance connected with both the dynamo and battery, of means for simultaneously inserting the circuit resistance and short circuiting the shunt field resistance when the dynamo is stopped, and for again short circuiting the work circuit resistance and re-inserting the field resistance after the dynamo is started and the battery charge becomes normal.

2. The combination with an intermittently operated compound wound dynamo having a resistance normally in series with its shunt field winding, a storage battery connected therewith, and work circuits containing a normally short circuited series resistance connected with both the dynamo and battery, of means for simultaneously inserting the circuit resistance and short circuiting the shunt field resistance when the dynamo is stopped, and for again short circuiting the work circuit resistance and re-inserting the field resistance after the dynamo is started and the battery charge becomes normal.

3. The combination of a shunt wound dynamo, a resistance in series with its field, means for short circuiting the same so that the dynamo will produce an abnormal current up to a predetermined point goverened by the battery condition, and means to automatically insert said resistance when the predetermined point has been reached, thereby making the dynamo produce its normal current only, said current tapering off as the battery charge continues at the lower rate.

4. The combination of a compound wound dynamo, a resistance in series with its shunt field, means for short circuiting the same so that the dynamo will produce an abnormal current up to a predetermined point governed by the battery condition, and means to automatically insert said resistance when the predetermined point has been reached, thereby making the dynamo produce its normal current only, said current tapering off as the battery charge continues at a lower rate, a series winding connected in series with the lamps or other load so arranged in relation with the shunt winding that it will compound the dynamo in its normal conditions (unsaturated fields), but will not tend to cause it to compound materially when running under abnormal conditions (saturated fields), thereby keeping the potential at the lamps approximately constant.

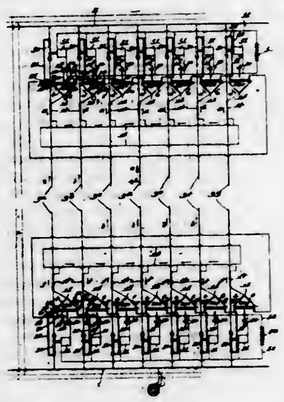
1,152,879. MEANS FOR HOISTING AND CONVEYING LUMBER-PACKAGES. MARK R. COLBY, Portland, Oreg., and ERNEST W. TAYLOR, Cleveland, Ohio, assignors to The Brown Hoisting Machinery Company, Cleveland, Ohio, a Corporation. Filed July 31, 1914. Serial No. 854,378. (Cl. 212—15.)



1. As a means for hoisting and conveying lumber and similar load-units, the combination, with a portable bridge-tramway hoisting and conveying machine, of a supporting element for the same provided with a load-accumulating platform, transversely and below the level of the travel of said trolley and load, the members of which series above the lowermost being hinged to said element, together with suitable mechanism for severally retracting said members around their said hinged connection, substantially as shown and described.

2. As a means for hoisting and conveying lumber and similar load-units, the combination, with a portable bridge-tramsway, of a trolley movable on the tracks of the same, hoisting mechanism connected with said trolley, a supporting pier having an open space in its upper portion of suitable dimensions to permit the passage therethrough of the trolley and load when traversed along the tramway with the load suspended from and crosswise of the trolley, and a series of shelf-like projections on the pier, in vertical alinement with each other, beneath and transversely arranged with respect to the range of travel of said trolley and load, the members of said series above the lowest being retractable from their projected relation to the pier, substantially as shown and described.

1,152,880. FAULT-DETECTOR. WILLIAM H. COLE, Waltham, Mass. Filed June 26, 1912. Serial No. 705,967. (Cl. 175—294.)



1. In a device for isolating faulted conductors in an electrical-distributing system, the combination with three or more conductors connected in parallel, of means for disconnecting said conductors from the system, and means rendered operative by the occurrence of a fault in any one of the conductors by which the current in said conductor is either increased, decreased or reversed in direction relative to that in the other conductors to actuate said disconnecting means to isolate said conductor from the system without disturbing in any way the operation of the other conductors.

2. In an electrical distributing system, the combination with two supply and receiving mains, of three or more separate conductors connecting said mains, a cut-out for each end of each conductor for isolating it from the mains, fault-discriminating cut-out actuating means at each end of the conductors, the means at one end being independent from those at the other end, each fault-discriminating cut-out actuating means comprising a relay for each conductor, and means electrically connecting the relays with each other and inductively connecting them with the conductors whereby each relay responds only to fault conditions of any nature in its associated conductor thereby to isolate said conductor from the system without being affected by overload conditions at some other part of the system.

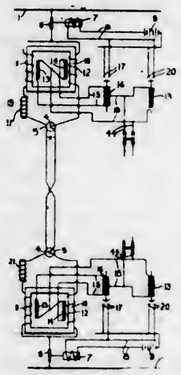
3. In an electrical-distributing system, the combination with supply and receiving mains, of three or more separate conductors connecting said mains, a cut-out for each end of each conductor for isolating it from the main, a relay responsive to fault conditions only for controlling the operation of each cut-out, the relays at each end of the conductors being independent from those at the opposite end, and devices by which the occurrence of a fault in any conductor causes each of the relays associated with the faulted conductor only to become operatively energized thereby to isolate the conductor from the system.

4. In a device of the class described, the combination with a plurality of conductors connected in parallel, of a cut-out for each end of each conductor for isolating it from the system, a plurality of electrically-connected normally-deënergized relays, one associated with each end of each conductor, separate means at each end of the conductors by which the occurrence of a fault in any conductor develops a current flow through the connected relays in a direction to operatively energize the relays associated with the faulted conductor and to non-operatively energize the other relays.

5. In an electrical-distributing system, the combination with two separated bus-bars, of a plurality of parallel-connected conductors connecting said bus-bars, a separate switch connecting each end of each conductor to its bus-bar, a current transformer associated with each conductor at each end thereof, a relay for operating each switch, means electrically connecting the relays at each end of the conductors and connecting each relay to its current transformer, the relays at opposite ends of any conductor acting independently whereby the occurrence of a fault in any conductor causes the relays associated therewith only to actuate their switches.

[Claims 6 to 18 not printed in the Gazette.]

1,152,881. SYSTEM OF ELECTRICAL DISTRIBUTION. WILLIAM H. COLE, Waltham, Mass. Filed Oct. 31, 1913. Serial No. 798,594. (Cl. 175—294.)



1. In a system of electrical distribution, the combination with a divided conductor extending between two receiving or distributing points and having the two legs thereof insulated from each other but connected in parallel, of means for disconnecting said conductor from the system and devices to render said means operative whenever the insulation between said legs breaks down at any point in the length of the conductor sufficiently to permit a current flow between them.

2. In a system of electrical distribution, the combination with a divided conductor connecting two receiving or distributing points and having the two members thereof insulated from each other but connected in parallel, of means to cause an unbalanced current flow in the two members whenever the insulation between said members breaks down at any point sufficiently to permit a current to flow between said members, and means operated by said unbalanced current flow to isolate the conductor from the system.

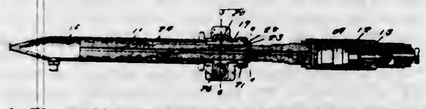
3. In a system of electrical distribution, the combination with a divided conductor connecting two receiving or distributing points and provided with two current paths connected in parallel but insulated from each other, of a selector-impedance in each current path arranged to cause an unbalanced current flow in said paths whenever the insulation between said paths breaks down at any point sufficiently to form an electrical contact between said paths, and means operated by said unbalanced current flow to isolate said conductor.

4. In a system of electrical distribution, the combination with a divided conductor connecting two receiving or distributing points and provided with two current paths connected in parallel but insulated from each other, of a selector-impedance in each curent path, one situated at one end of the conductor and the other at the other end and arranged to cause an unbalanced current flow in said paths whenever the insulation between said paths breaks down at any point sufficiently to permit a current flow between said paths, and means operated by said unbalanced current flow to isolate said conductor.

5. In a system of electrical distribution, the combination with parallel connected current paths extending between two receiving or distributing points, of a selector-impedance in each current path arranged to cause an unbalanced current flow in said paths whenever a fault occurs which involves both current paths, and means rendered operative by said unbalanced current flow to disconnect said current paths from the system.

[Claims 6 to 28 not printed in the Gazette.]

1,152,882. DEVICE FOR ROTATING PNEUMATIC DRILLS. HENRY J. COOK, Los Angeles, Cal., and HERBERT E. MARSDEN, Ottumwa, Iowa. Filed May 19, 1914. Serial No. 839,641. (Cl. 121—10.)



1. The combination with a pneumatic drill including an air feed cylinder and an air feed piston disposed within the cylinder, said piston being provided with a longitudinal groove, a tubular member fixed to the air feed cylinder, a sleeve rotatably mounted in the tubular member, a key carried by said sleeve and engaged in said groove whereby the sleeve and piston are non-rotatably and slidably connected, and means for rotating said sleeve.

2. The combination with a pneumatic drill including an air feed cylinder and an air feed piston movable within the cylinder, said piston being provided with a longitudinal groove, a tubular member fixed to the air feed cylinder, a sleeve rotatably mounted in the tubular member, a sectional ring secured to one end of the sleeve and having a key engaged in said groove whereby the sleeve and piston are non-rotatably and slidably connected, and means for rotating said sleeve.

1,152,883. BARRETTE OR HAIR-RETAINER. RUSSELL H. DAMON, Leominster, Mass.; Clare B. Damon and Murray C. Damon, Leominster, Mass., executors of said Russell H. Damon, deceased, assignors to The Hairlight Company, Leominster, Mass., a Corporation of Massachusetts. Filed Oct. 16, 1907. Serial No. 397,647. (Cl. 132—22.)

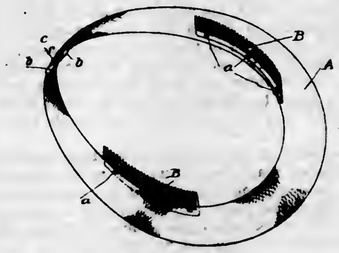


1. A device of the class described, comprising a body portion, a stud rigid with one end thereof, a flexible pin or tongue hingedly connected with the other end thereof, and being formed with an opening in its free end, the distance between the said opening and point of hinge of said pin or tongue being slightly greater than the distance between the said stud and the said point of hinge, whereby upon bending of said pin or tongue the stud will be received in said opening, and the pin or tongue secured from displacement upon cessation of pressure.

2. A device of the class described, comprising a body member, a pin member hingedly attached thereto, and being formed with an opening the walls of which are substantially unyielding, one of said members being flexible, a stud rigid with the body member and having its upper portion offset or inclined toward said point of hinge, the length of the pin member between its opening and its point of hinge being greater than the distance between the top or offset end of the stud and the point of hinge, whereby upon exertion of bending pressure upon the said flexible member the stud may be inserted into said opening of the pin, and locked therein to secure the pin by the offset portion of the pin by the offset portion of the stud upon resumption of the flexible member of its normal position.

3. A device of the class described, comprising a body portion; a stud rigidly mounted on one end thereof, said stud having on offset; a longitudinally-disposed staple-shaped member located at the opposite end of the body portion; and a flexible tongue hinged to said staple-shaped member, said tongue being formed of a flat strip and provided adjacent to the free end with an elongated opening adapted to receive the stud when the body of the tongue is flexed, the tongue being held by the offset of the stud when it resumes its normal shape.

1,152,884. HAIR-ROLL. RUSSELL H. DAMON, Leominster, Mass.; Clare B. Damon and Murray C. Damon, Leominster, Mass., executors of said Russell H. Damon, deceased, assignors to The Hairlight Company, Leominster, Mass., a Corporation of Massachusetts. Filed Aug. 24, 1908. Serial No. 450,034. (Cl. 132—23.)



1. A self-sustaining, self-conforming hair-roll of woven or braided material, having its end portions tapered and flattened for a considerable extent from the ends thereof, said ends being united, whereby the roll may be placed upon the head so as to produce a relatively large roll or puff either at the front or back of the head and a comparatively small projection at the opposite side of the head.

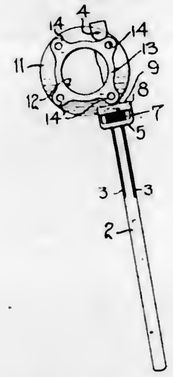
2. A hair-roll having its end portions tapered and flattened, the flattened portions being in a plane oblique to the longitudinal axis of the roll as a whole, whereby said flattened portions are adapted to lie in close contact above the forehead when the roll is in use.

3. An annular hair-roll adapted to completely encircle the head of the user comprising a braided or woven wire body A of circular cross-section in its body portion, tapering toward its ends, and flattened at its extremities, the flattened portions being connected by a removable fastening, substantially as set forth, whereby a puff may be produced at any point upon the head of the user while at the opposite side of the head the roll lies close to the head without forming any appreciable projection, and by reason of the removable fastening the diameter of the roll may be varied at will.

4. A hair-roll comprising a tubular body of braided or woven material, tapering toward its ends and having its end portions overlapped, and the extremities thereof inserted through the meshes of the body into the interior thereof.

5. A hair-roll consisting of a braided or woven tubular body having its ends tapered and flattened, said end portions being overlapped and having their extremities passed through the mesh of the structure to its interior, and a separable fastening connecting the overlapping end portions.

1,152,885. WRENCH FOR FLANGE-UNIONS. CLAYTON G. DENNIS, Hastings, Nebr. Filed Mar. 25, 1915. Serial No. 16,921. (Cl. 81—90.)



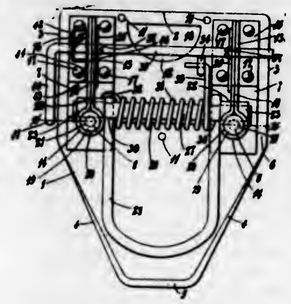
1. wrench of the character described comprising a screw-threaded shank, the end of the shank being bent to form a hook-shaped jaw, a jaw movably mounted upon the shank and opposed to the fixed jaw, and a nut carried by the movable jaw and engaging the screw threads of the jaw, the movable jaw being formed with two gripping faces laterally extending from the middle of the jaw and inclined outward and toward the handle end of the shank.

2. A wrench of the character described comprising a screw-threaded shank, one extremity of the shank being bent to form a hook-shaped fixed jaw, a movable jaw mounted upon the shank and comprising a yoke slidably engaging the shank, and a jaw proper extending laterally from the yoke and opposed to the fixed jaw, said jaw having outwardly diverging wedging faces extending in a direction away from the fixed jaw, and a nut carried by the yoke and engaging the screw threads of the shank.

3. A wrench for removing and applying flange unions comprising a shank rectangular in cross section and screw-threaded on its side edges, the shank at one end being bent to form a hook, the bill of the hook being relatively flat and thin and forming a fixed jaw, a movable jaw mounted upon the shank and comprising a yoke having sliding engagement with the shank, the yoke having a laterally projecting portion formed thereon opposed to the hook-shaped jaw, this laterally projecting portion being formed with outwardly divergent gripping faces extending in a direction away from the fixed jaw and with a flange defining the outer end of said gripping faces, said flange being relatively thin.

4. A wrench of the character described comprising a shank carrying a jaw adapted to extend transversely across the periphery of a flange union and embrace the same, and a jaw mounted upon the shank and having laterally extending inwardly converging gripping faces, the gripping faces being convergent toward the first-named jaw, one of said jaws being adjustable with relation to the other jaw.

1,152,886. PUNCH. CHESLEY DOM, Cincinnati, Ohio, assignor to The Globe-Wernicke Company, Cincinnati, Ohio. Filed Mar. 23, 1914. Serial No. 826,633. (Cl. 164—91.)



1. In a device of the character described, a punch, a shaft extending at an angle thereto, and means for operative engagement between the shaft and the punch, a punch head having an upper loop and a lower loop within which the punch is guided, and having a slot between the loops adjacent to the punch, and a bearing for said shaft.

2. In a device of the character described, a punch, a shaft extending at an angle thereto, and means for operative engagement between the shaft and the punch, a punch head having an upper loop and a lower loop within which the punch is guided, and having a slot between the loops adjacent to the punch, and a bushing-clip having upper and lower members and a rear part joining the members, and the upper and lower members of the bushing-clip having openings alined with the loops, said punch sliding through these openings and holding the bushing-clip in position in the punch head, and the bushing-clip receiving and forming a bearing for said shaft.

3. In a device of the character described, a punch having adjacent notches in its side, whereby a single tooth is formed by the material of the punch between the notches, a shaft having a longitudinal slot and lying within said notches with the tooth received in the slot, a punch head having an upper loop and a lower loop within which the punch is guided, and having a slot between the loops adjacent to the punch, and bushing-clip having upper and lower members and a rounded rear part joining the members, and the upper and lower members of the bushing-clip having openings alined with the loops, said punch sliding through these openings and holding the bushing-clip in position in the punch head, and the bushing-clip receiving and forming a bearing for said shaft.

4. In a device of the character described, a punch having an upper notch and a lower notch in its side, the upper side of the upper notch and the lower side of the lower notch being concave, but the other sides of the notches being so shaped that a single tooth is formed by the material of the punch left between the notches, a shaft having a longitudinal slot and extending into the notches in the punch with the tooth received in the slot, and the concave sides of the notch being arcs of radius substantially equal to that of the shaft, whereby they form upper and lower stops, respectively, against the shaft, for the punch when said punch is depressed or raised by rotation of the shaft with the tooth engaging in the slot, a punch head having an upper loop and a lower loop within which the punch is guided and having a slot between the loops adjacent to the punch, and a bushing-clip having upper and lower members and a rounded rear part joining the members, and the upper and lower members of the bushing-clip having openings alined with the loops, said punch sliding through these openings and holding the bushing-clip in position in the punch head, and the bushing-clip receiving and forming a bearing for said shaft.

5. In a device of the character described, a punch, a shaft, and means for engagement between the shaft and punch, and a punch head formed of a single plate having symmetrical halves brought together from forward loops formed separate by a slot in the middle of the plate, and the brought-together parts of the plate having outwardly extended feet, said loops forming the guide for the punch and the slot between the loops receiving the shaft for coöperation with the punch, a die-block having a die-opening in alinement with said loops, and means rigidly securing the feet of said punch head to said die block.

[Claims 6 to 11 not printed in the Gazette.]

1,152,887. INNERSOLE. EDWIN C. DONNELL, Brockton, Mass. Filed Apr. 9, 1915. Serial No. 20,185. (Cl. 36—22.)



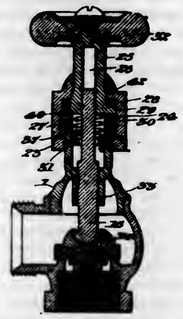
1. An inner sole comprising a body having a groove in one side spaced from and following the contour of its margin, an inseam stitch-engaging lip composed of an elongated strip folded longitudinally to form two lip members arranged side by side and a bent neck connecting said members and seated in said groove, and stitches uniting said strip with the body and passing through the neck of the strip, said stitches being depressed by the seating of the neck in the groove, below the points where the usual inseam stitches pass through the lip.

2. An inner sole comprising a body having a groove in one side spaced from and following the contour of its margin, an inseam stitch-engaging lip composed of an elongated strip folded longitudinally to form two lip members arranged side by side and a bent neck connecting said members and seated in said groove, and stitches uniting said strip with the body and passing through the neck of the strip, said stitches being depressed by the seating of the neck in the groove below the points where the usual inseam stitches pass through the lip, the strip being grooved to additionally depress the neck-engaging stitches and prevent the neck from bulging laterally.

3. An inner sole comprising a body made up of superimposed layers including facing layers and an intermediate layer of compressible material, said body having an indented groove in one side spaced from and following the contour of its margin and formed in one of the facing layers and the intermediate layer, an inseam stitch-engaging lip composed of an elongated strip folded longitudinally to form two lip members arranged side by side, and a bent neck connecting said members and seated in said groove, and stitches uniting said strip with the body and passing through the neck of the strip, one of the facing layers, and the intermediate layer, said stitches being covered by the other facing layer, and depressed by the seating of the neck in the groove, below the point where the usual inseam stitches pass through the lip.

4. An inner sole comprising a body made up of superimposed layers including facing layers and an intermediate layer of compressible material, which is also absorbent, said body having an indented groove in one side spaced from and following the contour of its margin and formed in one of the facing layers and the intermediate layer, the sides of the intermediate layer being more or less impregnated with a waterproofing material having also the capacity of rendering the groove permanent, an inseam stitch-engaging lip composed of an elongated strip folded longitudinally to form two lip members arranged side by side, and a bent neck connecting said members and seated in said groove, and stitches uniting said strip with the body and passing through the neck of the strip, one of the facing layers, and the intermediate layer, said stitches being covered by the other facing layer.

1,152,888. VALVE. GEORGE JONES FERGUSON, St. Louis, Mo. Filed Dec. 6, 1909. Serial No. 531,735. (Cl. 137—4.)



1. In a compression valve, a valve stem, an angular thimble secured to said stem, and an extension stem having an angular socket engaging said thimble.

2. In a compression valve, a valve stem, an angular thimble secured thereto, and an extension stem carrying a handle and having an angular socket engaging said thimble.

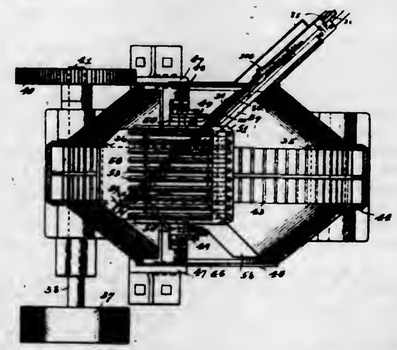
3. In a compression valve, a stem of circular cross section, and a thimble secured to said stem and having an angular periphery and a roughened interior engaging said stem.

4. In a compression valve, a valve stem, an angular thimble secured thereto, and an extension stem carrying a handle and having an angular socket lined with an angular bushing engaging said thimble.

5. In a compression valve, a compound valve stem having an angular portion, and an angular socket surrounding such portion, a compression nut, a bushing having an interior thread engaging said nut, a retaining nut engaging exterior threads on said bushing and retaining the outer portion of the compound stem, said bushing having an inwardly projecting flange between said outer portion and the compression nut.

[Claims 6 to 13 not printed in the Gazette.]

1,152,889. MACHINE FOR MAKING WIRE STRUCTURES. JOHN F. GAIL, Kenosha, Wis., assignor to The Simmons Manufacturing Company, Kenosha, Wis., a Corporation of Wisconsin. Filed Oct. 10, 1914. Serial No. 866,036. (Cl. 140—11.)



1. Means for disposing a plurality of similar articles in like position, comprising, in combination, a member adapted to form a track for said articles, and means for agitating said articles and causing them promiscuously

to impinge upon and engage said track, said track having guiding means adapted to reject said articles when the latter are presented to said track in improper position.

2. Means for disposing a plurality of similar articles in like position, comprising, in combination, a longitudinal track member, means for agitating said articles and causing them to impinge upon and engage said track, said track having guiding means adapted to reject said articles when the latter are presented to said track in improper position, and means for propelling said articles along said track after engagement therewith.

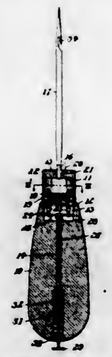
3. Means for disposing a plurality of similar articles in like position, comprising, in combination, a longitudinal track member, means for agitating said articles and causing them to impinge upon and engage said track, said track having guiding means adapted to reject said articles when the latter are presented to said track in improper position, and a reciprocatory member adapted to engage said articles and move them along said track after engagement therewith.

4. Means for disposing a plurality of similar articles in like position, comprising, in combination, a longitudinal track member, means for agitating said articles and causing them to impinge upon and engage said track, said track having guiding means adapted to reject said articles when the latter are presented to said track in improper position, a reciprocatory claw member adapted to engage said articles and move them along said track after engagement therewith while moving in one direction, and means for moving said claw member out of engagement with the clips on said track when said claw member is moving in the other direction.

5. Means for disposing a plurality of similar articles in like position, comprising, in combination, a longitudinal track rail adapted to form a slide for said articles, means for elevating the supply of articles and permitting said articles to impinge upon and engage said track rail, guiding means coöperating with said track rail to reject said articles where the latter are improperly presented to said track rail, and means for positively urging said articles along the track rail after their engagement therewith.

[Claims 6 to 27 not printed in the Gazette.]

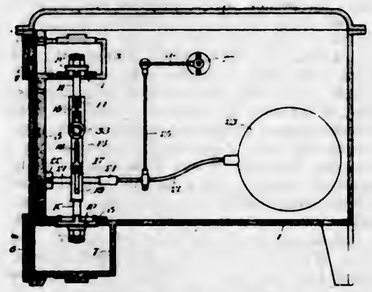
1,152,890. SHOEMAKER'S AWL. MICHAEL GAYDOSH, Clymer, Pa. Filed Mar. 13, 1915. Serial No. 14,153. (Cl. 223—37.)



1. A device of the class described, comprising a handle having a chamber at one end thereof and also having a central longitudinal bore extending therethrough, a casing removably positioned in the open end of the said chamber and having a socket and a perforation provided in the front wall thereof, a needle removably positioned within said socket, a spool removably mounted within said casing, and extending through the said perforation, a pair of tensioned brake levers adapted to frictionally engage the spool flanges, and controlling means for the brake levers connected thereto and operable from the inner end of the handle.

2. A device of the class described, comprising a handle having a chamber at one end thereof, and also having a central longitudinal bore extending therethrough, a casing removably positioned in the open end of the said chamber and having a socket and a perforation provided in the front wall thereof, a needle removably mounted within said socket, a spool journaled in said casing, and extending through said perforation, a shaft transversely journaled through the said chamber, spaced arms secured to the said shaft, spool-engaging brake members at the free ends of the said arms, a centrally positioned operating lever upon said shaft, an operating rod extending through said bore and having its inner end freely pivoted to the free end of the said lever, a disk upon said rod, an expansion spring within said bore and engaging the said disk, and an operating head upon the outer free end of the said rod.

1,152,891. LIQUID-MEASURING DEVICE. ROBERT HALL, Lockport, N. Y., assignor to American District Steam Company, North Tonawanda, N. Y., a Corporation of New York. Filed Mar. 2, 1914. Serial No. 822,022. (Cl. 137—103.)



1. A liquid measuring device including in combination, a casing provided with an inlet and an outlet, valves for controlling said inlet and outlet, and mechanism for operating said valves in synchronism comprising a yoke-member, an oscillating frame-element encompassed by and operating between the walls of said yoke-member, connections between said yoke-member and frame-element, and a float-carrying rod operating to actuate said frame-element.

2. A liquid measuring device including in combination, a casing provided with an inlet and an outlet, valves for controlling said inlet and outlet, mechanism for operating said valves in synchronism comprising a yoke-member, an oscillating frame-element encompassed by and operating between the walls of said yoke-member, connections between said yoke-member and frame-element, a float-carrying rod operating to actuate said frame-element, and means acting on said connections to actuate said yoke-member.

3. A liquid measuring device including in combination, a casing provided with an inlet and an outlet, valves for controlling said inlet and outlet, mechanism for operating said valves in synchronism comprising a yoke-member, an oscillating frame-element encompassed by and operating between the walls of said yoke-member, connections between said yoke-member and frame-element, a float-carrying rod operating to actuate said frame-element, and resilient means acting on said connections to actuate said yoke-member.

4. A liquid measuring device including in combination, a casing provided with an inlet and an outlet both at the same side of said casing, valves for controlling said inlet and outlet, and mechanism for operating said valves in synchronism comprising a yoke-member, an oscillating frame-element encompassed by and operating between the walls of said yoke-member, connections between said yoke-member and frame-element, a float-carrying rod operating to actuate said frame-element, and resilient means acting on said connections to actuate said yoke-member.

5. A liquid measuring device including in combination, a casing provided with an inlet and an outlet, valves for controlling said inlet and outlet, mechanism for operating said valves in synchronism comprising a yoke-member, an oscillating frame-element encompassed by and operating between the walls of said yoke-member, connections between said yoke-member and frame-element, a float-carrying rod operating to actuate said frame-element, and resilient means acting on said connections to actuate said yoke-member, said rod being fulcrumed at its end on the casing and at one side of its connection with the frame-element.

[Claims 6 to 13 not printed in the Gazette.]

1,152,892. SAFETY CLASP OR CATCH. GEORGE W. HENRY, Glendale, N. Y., assignor of one-half to Edgar Boissier, Great Neck, N. Y. Filed June 8, 1914. Serial No. 843,756. (Cl. 24—155.)



1. A safety clasp or catch comprising an elongated strip of elastic material bent upon itself into substantially U-shape with the terminal portions of the legs thereof spaced apart, and one leg having a continuation in the form of a tongue extending between the two legs toward the yoke end and also bent away from the leg carrying it in a direction toward the other leg and into coactive relation to the latter, both legs and the tongue being perforated with the perforations out of line in the inactive position and movable into line on causing the outer ends of the legs to approach one toward the other, with the line of coincidence with the perforations substantially perpendicular to the length of the legs of the clasp.

2. A safety clasp or catch comprising an elongated strip of spring metal bent upon itself into substantially U shape with one leg provided with a continuation of its outer end in the form of a tongue returned upon the leg between said leg and the other leg toward the yoke end of the clasp with the free end of the tongue engaging the inner wall of the said other leg, and both legs and the tongue being perforated with the perforations out of line in the inactive position of the clasp and movable into line on causing the outer ends of the legs to approach, the line of coincidence of the perforations agreeing substantially in direction with the movements of the free ends of the legs toward and from each other.

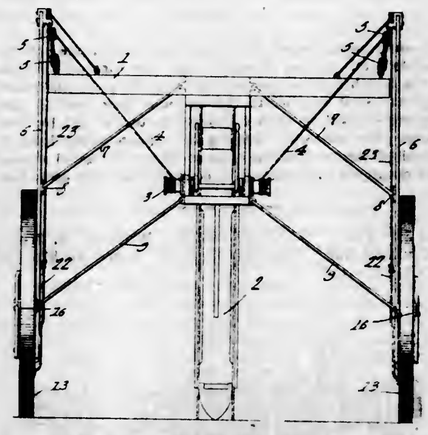
3. A safety clasp or catch comprising an elongated strip of elastic material bent upon itself into substantially U-shape and having one leg prolonged in the form of a tongue close to said leg where proceeding from it and extending between the two legs toward the yoke end of the clasp and toward the leg other than the one it prolongs, both legs and the tongue being perforated with the perforations out of line in the inactive position and movable into line on causing the outer ends of the legs to approach, the line of coincidence of the perforations being substantially perpendicular to the length of the legs of the U-shaped clamp, the perforations through the legs being each bordered by a bur or flange on the inner face of the leg and the tongue being plain or free from a bur or flange.

4. A safety clamp or catch comprising an elongated strip of metal bent into substantially U shape with the outer end of one of the legs continued in the form of a tongue directed toward the yoke end of the U-shaped clamp between the two legs, the tongue and the leg carrying it tapering from the yoke end of the clamp to the free end of the tongue and both legs and the tongue having perforations therethrough normally out of alinement and movable into alinement by the approach of the free ends of the legs one toward the other, the line of coincidence of the perforations being substantially in the same direction as the movement of the free ends of the legs toward and from each other.

5. A safety clasp or catch comprising an elongated strip of metal bent upon itself into substantially U shape with one leg having a continuation of its free end in the form of a tongue returned between the two legs toward the yoke end, said tongue being longitudinally curved toward the leg remote from that from which it springs and both of the legs and the tongue being perforated with the perforations normally out of line and movable into alinement by approaching the free ends of the legs, the line of coincidence of the perforations being substantially in the same direction as the movements of the free ends of the legs toward and from each other.

[Claims 6 to 12 not printed in the Gazette.]

1,152,893. DITCHING-MACHINE. WILLIAM HUBERTZ, La Fayette, Ind. Filed Dec. 21, 1914. Serial No. 878,382. (Cl. 21—114.)



1. In a machine of the class described, the combination with opposed side structures, a ditching frame interposed therebetween, and parallel connections between each side structure and the adjacent side of the ditcher frame, said connections being parallel, of a supporting wheel connected to each side structure, each wheel comprising a ring having a continuous interior groove, and spaced wheels connected to the side structure and bearing within the groove.

2. In a machine of the class described, the combination with opposed side structures, a ditching frame interposed therebetween, and parallel connections between each side structure and the adjacent side of the ditcher frame, said connections being parallel, of a supporting wheel connected to each side structure, each wheel comprising a ring having a continuous interior groove, spaced wheels connected to the side structure and bearing within the groove, a lever mounted upon each side structure, a second lever fulcrumed adjacent to and actuated thereby, and an angular head carried by said second lever and shiftable into the groove to clean the groove, said head constituting a brake shoe.

3. In a machine of the class described, the combination with a side structure, of a ring constituting a wheel rim and having a continuous V-shaped groove in its inner edge, a wheel upon th elower end of the side structure, a cross bar connected to the side structure, wheels pournaled upon the ends of the cross bar, all of said wheels projecting into said groove to hold the ring against displacement relative to the side structure, a bracket connected to said side structure and bar, a lever fulcrumed thereon, an angular head upon the lever and constituting means for

cleaning the groove, said head likewise constituting a brake shoe, and means for actuating the lever to retard or stop the rotation of the ring about its center.

1,152,894. SNAP-HOOK. JOHN JACOBSON, Stanley, N. D. Filed Dec. 12, 1914. Serial No. 876,907. (Cl. 24—236.)



A snap hook formed of two pieces of wire, one bent to provide a bill having divergent legs, the wire at the ends of the legs being bent outwardly to provide shoulders and then extended parallel to the bill and then bent in parallel overlapped relation transversely to the bill to form a cross bar, the wire forming the tongue being bent to provide divergent legs the ends of which are coiled around said shoulders and then again coiled around the cross bar.

1,152,895. WINDING-DRUM. WILLIAM M. KNOX, Coalinga, Cal. Filed Dec. 19, 1914. Serial No. 878,061. (Cl. 242—117.)

1. A winding drum comprising a rotatable drum shaft formed with an unbroken spirally grooved outer surface providing a line guide, and a pair of end flanges rotatably mounted on said drum shaft and provided with spirally grooved hubs for engagement with the spirally grooved line guiding surface of said drum shaft, whereby said end flanges are capable of independent adjustment longitudinally of said drum shaft.

2. A winding drum comprising a cylindrical hub formed with an unbroken spirally grooved surface providing a line guide, a pair of end flanges rotatably mounted on said hub and each formed with a spirally grooved hub for intermeshing with the line guide spirals on said first mentioned hub, each of said flanges comprising a plurality of sections, and means for retaining the sections of the respective flanges together and around said first mentioned hub.

3. A winding drum comprising a shaft adapted to be rotatably mounted, a tubular hub portion mounted on said shaft for rotation therewith and formed with an unbroken spirally grooved outer surface providing a line guide, a pair of end flanges rotatably mounted on said hub and each formed with a spirally grooved hub for intermeshing with the spirals on said first mentioned hub, each of said flanges formed of a plurality of sections, and means for uniting said sections together and for locking the same in their adjusted position on said first mentioned hub.

1,152,896. SHUTTLE RIDING-PLOW. VIRGIL E. KING, Palmyra, Ill. Filed Nov. 14, 1914. Serial No. 872,239. (Cl. 97—27.)

1. In a reversible plow, a frame, reversed plows mounted thereon in offset relation, furrow wheels disposed at the ends of the frame, a lan dwheel intermediate the ends of the frame, shafts extending upward from the wheels to said frame, and manually operable means for independently moving any one, or unitarily moving all of said shafts.



2. In a reversible plow, a frame, reversed plows mounted thereon in offset relation, furrow wheels disposed at the ends of the frame, a land wheel intermediate the ends of the frame and on the opposite sides of the frame to the furrow wheel, vertically disposed shafts passing through the frame and carrying said wheels, manually operable levers extending from each shaft, and means for independently moving any one of, or unitarily moving all of said shafts.

3. In a reversible plow, a frame, reversed plows mounted thereon in offset relation, furrow wheels disposed at the ends of the frame, a land wheel intermediate the ends of the frame and on the opposite side of the frame to the furrow wheels, vertically disposed shafts passing through the frame and carrying said wheels, manually and independently operable levers extending one from each shaft, and means for causing the simultaneous operation of the land wheel lever and either of the furrow wheel levers or the simultaneous operation of the land wheel lever and both of the furrow wheel levers.

4. In a reversible plow, a frame having its end portions angularly disposed with relation to each other, reversed plows mounted one in each end portion, a frame having a lateral extension on its reëntrant side, a vertical shaft extending downward through said extension, a land wheel carried by said shaft, vertical shafts disposed at the ends of the frame and on the side opposite the land wheel, furrow wheels carried thereby and manually operable means for controlling the rotation of said shafts.

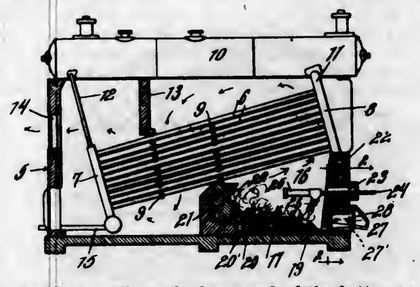
5. In a reversible plow, a frame, having its end portions angularly disposed with relation to each other, reversed plows mounted one in each end portion, a frame having a lateral extension on its reëntrant side, a vertical shaft extending downward through said extension, a land wheel carried by said shaft, vertical shafts disposed at the ends of the frame and on the side opposite the land wheel, furrow wheels carried thereby and manually operable means for connecting all of the shafts to each other for common rotary movement or connecting the land wheel shaft and either of the furrow wheel shafts for common rotary movement.

[Claims 6 to 18 not printed in the Gazette.]

1,152,897. LIQUID-FUEL BOILER-FURNACE. CHARLES I. LINDAU, Pearce, Ariz. Filed Mar. 23, 1915. Serial No. 16,407. (Cl. 158—1.)

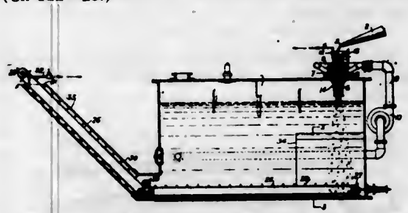
The combination with a fire box of a furnace, comprising an inclined bottom wall increasing in height inwardly and having inclined transverse steps, and a vertical transverse wall arranged at the inner high end of the bottom wall and projecting upwardly therebeyond for a substantial distance and having a forwardly inclined face upon its forward side; of a burner arranged substantially horizontally within the fire box over the outer lower end of the bottom wall and having a downwardly discharging flame outlet device arranged at substantially a

right angle to its body portion, and means spaced a substantial distance from the burner for introducing air



into the fire box above the lower end of the bottom wall to travel between the bottom wall and the burner.

1,152,898. STEAM-GENERATOR. WILLIAM E. MCKEE, Warren, Ariz. Filed Aug. 11, 1911. Serial No. 643,555. (Cl. 122—28.)



1. In an inlet device for delivering molten slag to a steam generator, means for maintaining a body of water within the device and around the slag passing therethrough.

2. An inlet device for delivering slag to a steam generator, comprising a cone for delivering a stream of molten slag into the generator, and means for maintaining a body of water between the wall of the cone and the slag passing therethrough.

3. In a steam generator, a casing having an inlet for heated material, and means for maintaining a flow of sealing liquid through said inlet.

4. An inlet device for delivering molten material into a steam generator, comprising a liquid injector and means for feeding molten material through said injector into the generator.

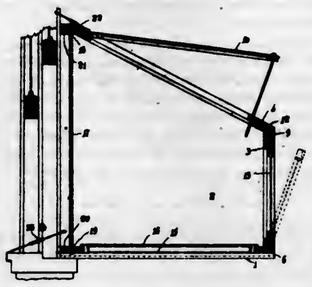
5. In a steam generator, a casing having an inlet for heated material, a nozzle projecting into the inlet and through which the material is adapted to pass into the casing, and means for maintaining a head of sealing liquid in said nozzle and for thereby closing communication between the interior and exterior of the casing.

[Claims 6 to 10 not printed in the Gazette.]

1,152,899. WINDOW-CONSERVATORY. HENRY JACKSON MOORE, Niagara Falls, Ontario, Canada. Filed May 8, 1913. Serial No. 766,351. (Cl. 47—41.)

1. A window conservatory comprising a bottom; glazed sides, top and front; a pair of sliding panels forming a closure for the rear side; a hinged ventilator frame in the top; a hinged ventilator frame in the front; and means for securing the whole in place outside a window with the rear side applied to a window opening and substantially closing the opening below the outer sash.

2. A window conservatory comprising a bottom; glazed sides, top and front, said bottom, sides, top and front being all detachably connected; a hinged ventilator frame in the top; a hinged ventilator frame in the front; a pair of sliding panels forming a closure for the rear side; and means for securing the whole in place outside a window with the rear side applied to a window opening and substantially closing the opening below the outer sash.



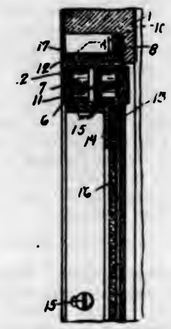
3. A window conservatory comprising a bottom; sides having a dovetail tongue and groove connection with the bottom; a front having a dovetail tongue and groove connection with the bottom; a top overlying the ends and having a tongue and groove connection therewith; an eaves bar forming the top of the front and having a dovetail tongue and groove connection with the said front, said top being fitted to the eaves bar.

4. A window conservatory comprising a bottom; sides having a dovetail tongue and groove connection with the bottom; a front having a dovetail tongue and groove connection with the bottom; a top overlying the ends and having a tongue and groove connection therewith; an eaves bar forming the top of the front and having a dovetail tongue and groove connection with the said front, said top being fitted to the eaves bar and having its sides extended to overlap the ends of the eaves bar.

5. A window conservatory comprising a bottom; sides having a dovetail tongue and groove connection with the bottom; a front having a dovetail tongue and groove connection with the bottom; a top overlying the ends and having a tongue and groove connection therewith; an eaves bar forming the top of the front and having a dovetail tongue and groove connection with the said front, said top being fitted to the eaves bar and having its sides extended to overlap the ends of the eaves bar; and releasable fastenings securing said eaves bar to the side of the top.

[Claim 6 not printed in the Gazette.]

1,152,900. VENTILATING SAFETY-WINDOW. ARTURO MUOJO, Brooklyn, N. Y. Filed May 19, 1914. Serial No. 839,588. (Cl. 20—48.)

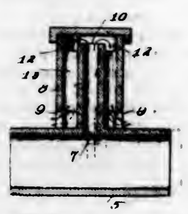


1. In a window, a sash, a glass frame pivoted on the sash, a U-shaped member secured to the inner edges of

the upper and lower cross bars of the sash, a similar member slidably mounted on each of the first mentioned members and adapted to bear against the upper and lower edges of the glass frame and resilient means for pressing the said first mentioned members into contact with the said frame.

2. In a window, a sash, a bearing member mounted in each of the upper and lower cross bars thereof, a conical head rotatably mounted in each of the bearing members, a pintle extending from each head, a glass frame secured to said pintles and a spring pressed weather strip mounted between each of the upper and lower edges of the glass frame and the adjacent edge of the sash, the said weather strips being adapted to slide upon the pintles.

1,152,901. IRRIGATION-PIPE. ISAAC B. NAYLOR, New York, N. Y. Filed Feb. 13, 1914. Serial No. 818,487. (Cl. 137—65.)



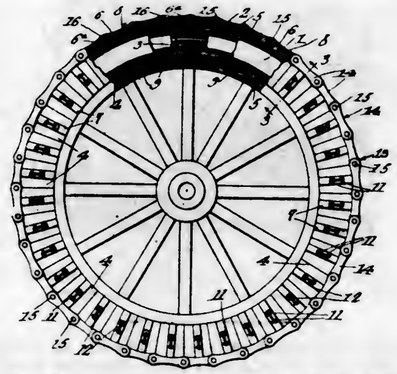
1. In an irrigation system, a discharge nozzle comprising a main flow pipe having a port therein, a casing extending from said pipe and surrounding said port, a discharge nozzle pipe connected to and leading from said port to a point short of the top of the casing, channels formed between the nozzle pipe and casing, and a port through said casing at the bottom of each channel, said ports being so disposed as to lead the water to opposite sides of the casing.

2. A discharge nozzle for an irrigation system comprising a main flow pipe having a discharge port, a casing surrounding said port and extending at right angles from said pipe, a cap for said casing, a nozzle pipe leading from said port and extending to a point short of the top of the casing, said nozzle pipe being concentric with the casing, partitions dividing the space between said casing and nozzle pipe into channels, and a port at the bottom of each channel, said ports being so disposed as to lead the water to opposite sides of the casing leading through the wall of the casing.

3. A discharge nozzle for an irrigation system comprising a main flow pipe having a discharge port, a casing surrounding said port and extending at right angles from said pipe, a nozzle pipe within said casing and leading from the said port to a point short of the top of the casing, said nozzle pipe and casing being spaced from each other, partitions dividing the space between the casing and nozzle pipe into channels, a port at the bottom of each channel leading through the wall of the casing, said ports being so disposed as to lead the water to opposite sides of the casing, said partitions terminating short of the top of the nozzle pipe.

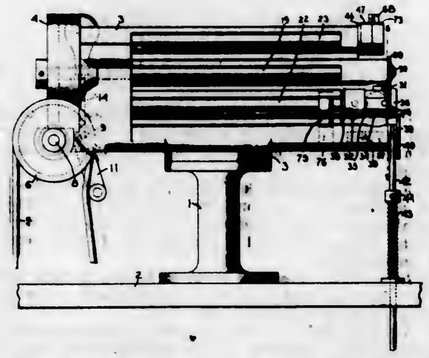
1,152,902. AUTOMOBILE-TIRE. MIGUEL PEREZ, Chicago, Ill. Filed Aug. 11, 1914. Serial No. 856,258. (Cl. 152—2.)

A vehicle tire comprising an inner tube, a casing mounted thereon and including a plurality of annular sections each having an outer lug provided with a slot therethrough, a band embracing each of the casing sections and passing through the slot of the corresponding lug.



and a tread chain surrounding the casing and engaged over the said lugs.

1,152,903. BINDING-MACHINE. ALBERT F. PRESTON, East Boston, Mass. Filed Sept. 16, 1914. Serial No. 862,098. (Cl. 153—1.)



1. In a pattern binding machine, the combination of a driving element, a pair of coöperating binding rollers, binding notching means, means for positively and continuously operating said binding rollers and notching means from said driving element, means for separating said rollers to permit the insertion and removal of the work, means for positioning the partially bound pattern with respect to the notching means to insure the notch in the binding being cut in correct position whereby the operative without stopping the machine may be move the work from between the binding rollers and accurately notch the binding.

2. In a pattern binding machine, the combination of a driving element, a pair of coöperating binding rollers, a binding notching means, means for positively and continuously operating said binding rollers and notching means from said driving element, and means whereby when a sharp angle in a pattern is reached the operative without changing his position may reduce the speed of said rollers.

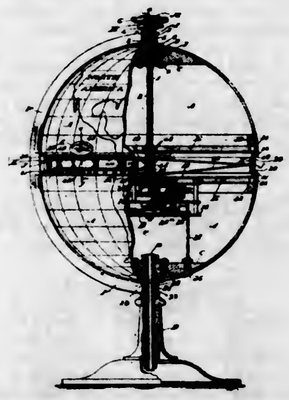
3. In a pattern binding machine, the combination of a driving element, a pair of coöperating binding rollers, binding notching means, means for positively and continuously operating said binding rollers and notching means from said driving element, means for separating said rollers to permit the insertion and removal of the work, means for positioning the partially-bound pattern with respect to the notching means to insure the notch in the binding being cut in correct position whereby the operative without stopping the machine may remove the work from between the binding rollers and accurately notch the binding, and manually-operated speed reducing means whereby when a sharp angle in the pattern is reached the operative without changing his position may reduce the speed of said binding rollers.

4. In a power actuated machine for affixing flanged binding to sheet material, a main driven shaft, a plurality of work shafts continuously actuated by said main shaft, means for rotating two of said work shafts at the same rate of speed and in opposite directions, a roller mounted upon each of said oppositely rotated work shafts and revoluble therewith whereby the material and binding is continuously fed between said rollers and the binding pressed on said material, means whereby another of said work shafts is continuously actuated by said main shaft at a relatively higher rate of speed, and means for notching said binding actuated by said high-speed shaft.

5. In a power actuated machine for affixing flanged binding to sheet material; a main driven shaft; a plurality of work shafts continuously actuated by said main shaft, including an upper and a lower roller shaft and a cutter shaft; a roller mounted upon each of said roller shafts and revoluble therewith, said rollers being opposed; means for continuously actuating said roller shafts at the same rate of speed and in opposite directions whereby the sheet material and binding is continuously fed between said rollers and said flanges are pressed upon said material edge, a bearing for said lower roller shaft whereby said shaft can be moved while continuously actuated and said lower roller moved into and out of normal operating position, and means for moving said lower roller shaft while continuously actuated; and means for continuously actuating said main shaft.

[Claims 6 to 29 not printed in the Gazette.]

1,152,904. GEOGRAPHICAL TIME-GLOBE. GEORGE WOOD RAMAGE, Cleveland, Ohio. Filed Sept. 11, 1914. Serial No. 861,174. (Cl. 58—44.)



1. In a geographical time globe, the combination with a rotary dial, of a clock-work mechanism for driving said dial, and a setting device for said dial outside of said globe, and comprising a head, a setting tube located concentric with the axis of said globe, a sleeve arranged concentric with the axis of said dial, said tube and sleeve being adapted to be coupled together, and a spring for normally holding the coupling parts separated but which will yield to manual pressure when the dial is to be set.

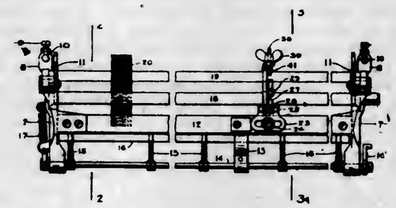
2. In a geographical time globe, the combination with a rotary dial, of a clock-work mechanism for driving said dial, a winding rod for said clock-work operable from the outside of said globe, a setting tube for said dial also operable from outside of said globe, said rod and tube being both arranged concentric with the axis of said globe, a sleeve also arranged concentric with the axis of said globe and adapted to be coupled with said tube, a spring for normally holding the coupling parts separated but adapted to yield to manual pressure when the dial is to be set.

3. A geographical time globe consisting of two hemispherical parts the adjacent or proximate edges of which are provided with annular metal rims having vertical grooves receiving said edges and having also, inside of said edges, other vertical grooves, combined with an equatorial transparent band the edges of which are received in said last-named grooves.

4. A geographical time globe consisting of two hemispherical parts the adjacent or proximate edges of which are provided with annular metal rims having vertical grooves receiving said edges and having also, inside of said edges, other vertical grooves, combined with an equatorial transparent band the edges of which are received in said last-named grooves, and a band or bands inserted in one or both of said last-named grooves and having matter thereon observable through said transparent band.

5. A geographical time globe consisting of two hemispherical parts the adjacent or proximate edges of which are provided with annular metal rims having vertical grooves, combined with an equatorial transparent band or crystal the edges of which are received in said grooves, an adjustable index device movably mounted on one of said rims, and means for securing said index in any desired position.

1,152,905. LOOM. FRANCOIS D. RAYMOND, Fall River, Mass. Filed Nov. 28, 1914. Serial No. 874,539. (Cl. 139—92.)



1. In a warp stop motion, a frame, a warp change mechanism removably mounted in said frame and including a pair of spaced warp rest bars and a detector supporting bar, and a latching device for removably locking said warp change mechanism in said frame and including a fixed latch piece having engagement with said warp rest bars, a swiveled latch piece having engagement with said warp rest bars and with said detector supporting bar, and a pivoted lockable member having engagement with said detector supporting bar, and means for locking said pivoted member.

2. A latching device for removably locking the warp rest and detector supporting bars of a warp stop motion for a loom, comprising a pair of attaching members, a cross piece fixed to said members and having engagement with the lower edges of the warp rest bars, a pair of lateral members pivoted to said attaching members, a latch member swiveled to one of said lateral members and disposed for engagement with both the warp rest and the detector supporting bars, and a latch member pivoted to one of said lateral members, above the swiveled member and disposed for engagement with said detector supporting bars and for locking engagement with the coöperating pivoted lateral member.

3. A latching device for removably locking the warp rest and detector supporting bars of a warp stop motion for a loom, comprising a pair of adjustable attaching members, a cross piece fixed to said members and disposed transversely of the bars and having a plurality of locking projections disposed for engagement with the lower edges of the warp rest bars, a pair of lateral members

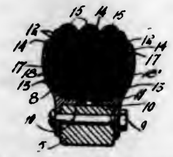
pivoted to said attaching members, a latch member swiveled to one of said lateral members and disposed for engagement with the upper edges of the warp rest bars and the lower edges of the detector supporting bars, and a latch member pivoted to the free end of one of said lateral members and disposed for engagement with the upper edges of said detector supporting bars and for locking engagement with the coöperating pivoted lateral member.

4. A latching device for removably locking the warp change mechanism of a loom in its frame, comprising a fixed member, a swiveled member, and a pivoted latch member, a mount for said swiveled and pivoted members and means for locking said pivoted member.

5. A latching device for removably locking the warp change mechanism of a loom in its frame comprising a pair of vertical members, a member connecting said vertical members, a member swiveled to one of said vertical members, and a latch member pivoted to one of said vertical members, and means for locking said pivoted member.

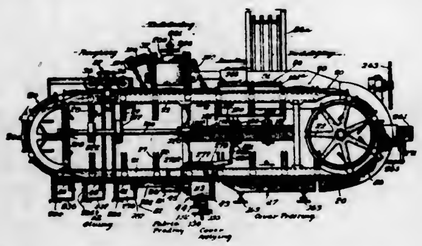
[Claims 6 to 15 not printed in the Gazette.]

1,152,906. AUTO-TIRE. JAMES A. READ, Arlington, N. J. Filed Mar. 20, 1914. Serial No. 826,084. (Cl. 152—36.)



A resilient wheel comprising the combination with a felly, of side plates secured thereto and provided with annular flanges engaging the periphery of the felly, a band of material of relatively great flexibility disposed about and engaging the flanges, tread rings disposed about and on the said flexible band in parallel relation and having web portions and transversely extending tread portions and base portions, rings of material of relatively slight resiliency disposed between the tread rings and between the outer tread rings and side plates, said tread rings having slots in the web portions extending radially of the wheel, and transverse bolts disposed through the side plates, flexible rings and the said slots of the tread rings.

1,152,907. BOOKBINDING-MACHINE. FRED A. RISBERG, Chicago, Ill. Filed June 19, 1914. Serial No. 846,106. (Cl. 11—33.)



1. A book binding machine having a work holder, a cover holder, means for bringing said work and cover holders into adjacent positions, mechanism for projecting a strip of fabric between said work in said work holder and a cover on said cover holder when said holders are in adjacent positions, and means for causing a relative movement of said holders to press said work, fabric and cover together.

2. A book binding machine having a work holder, a cover holder, means for advancing said work holder into a position opposite said cover holder, and mechanism controlled by the work itself for projecting a strip of fabric between the work and a cover on said cover holder.

3. A book binding machine having work holders, a cover holder, means for bringing said work holders successively into a position opposite said cover holder, and mechanism controlled by the work itself for projecting a strip of fabric between a piece of he work and a cover on said cover holder.

4. A book binding machine having a series of work holders, a cover holder, means for intermittently advancing said work holders by substantially equal advances so as to bring said work holders successively opposite said cover holder, and mechanism controlled by each piece of work for projecting a strip of fabric between that particular piece of work and a cover on said cover holder.

5. A book binding machine having a work holder, a cover holder, means for advancing said work holder into a position opposite said cover holder, and mechanism controlled by the work itself for projecting a strip of fabric between the work and a cover on said cover holder and determining the length of the strip so projected.

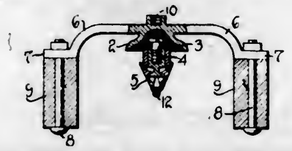
[Claims 6 to 19 not printed in the Gazette.]

1,152,908. GAME-CUE. JAMES M. ROBINETTE, Williamson, W. Va. Filed Oct. 29, 1913. Serial No. 797,965. (Cl. 46—9.)



A game cue including a butt having a longitudinal recess formed therein, a block secured to said butt having intersecing axial and diametrical openings, a stem, a bar connected at one end to said stem and projecting at its other end through the axial opening and into the longitudinal recess, said bar being formed upon one edge with a plurality of teeth, a latch slidably mounted in the diametrical opening in the block and formed with a longitudinal slot adapted to be moved into registration with the axial opening to permit sliding movement of the bar therethrough, an angular extension on said latch, a spring disposed between said butt and said angular extension for holding the latch normally in locking engagement with the teeth of said bar, a spring coiled upon the bar and disposed between the stem and the block, and a stop pin secured in the end of the bar slidable in the longitudinal recess adapted to engage the block to limit the outward movement of the bar and stem under the influence of the coiled spring.

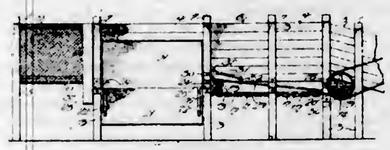
1,152,909. TROLLEY-HANGER. WILLIAM T. ROBINSON and CHARLES D. HYLTON, Ethel, W. Va. Filed June 5, 1915. Serial No. 32,399. (Cl. 191—35.)



1. A trolley hanger for mines comprising a yoke embodying oppositely disposed arms and a depending bell, the bell being provided with a stud bolt for engagement with a trolley clamp, the extremities of the arms being formed with perforated feet, guard timbers bearing against the under faces of the feet, and bolts passing upward through the guard timbers and through said feet.

2. A trolley hanger comprising a yoke embodying oppositely projecting arms and a bell, the bell being formed with a downwardly projecting stud bolt, the upper face of the yoke above the bell being formed with an upwardly projecting screw threaded socket, the outer ends of the arms being formed with feet, guard timbers disposed against said feet and depending therefrom, and bolts passing through the guard timbers and through the feet.

1,152,910. AUTOMATIC SHEEP-DIPPER. JOHN JAMES ROBERSON, Springville, Utah. Filed Mar. 14, 1914, Serial No. 824,811. Renewed Aug. 2, 1915. Serial No. 43,341. (Cl. 119—158.)



1. In an automatic sheep dipper, the combination with a runway and a tank disposed beneath the same, of a trap mechanism situated in the length of the runway above the tank, and including a shaft rotatably secured to and extending longitudinally of the runway, a plurality of angularly arranged floors carried by said shaft, and adapted to have their upper surfaces successively brought into horisontal alinement with that of the runway floor, means to lock said floors as the latter are brought into said horisontal position, and other means coöperating with the last mentioned means to actuate the latter and release said floors substantially as and for the purpose set forth.

2. In an automatic sheep dipper the combination with a runway and a tank disposed beneath the same, of a trap mechanism situated in the length of the runway above said tank and including a shaft rotatably secured to and extending longitudinally of the runway castings keyed upon the extremities of said shaft, radially extending arms carried by said castings, a plurality of floors disposed between the latter, and having their extremities secured to the arms thereon, whereby the upper surface of said floors may be successively brought into horizontal alinement with that of the runway floor, means to lock said rotatable floors as the latter are brought into said horizontal position and other means coacting with the last mentioned means to actuate the latter and relase said horizontally disposed floor substantially as and for the purpose set forth.

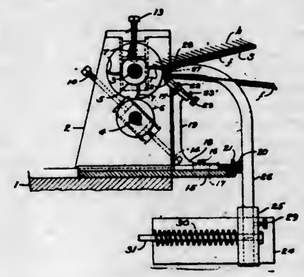
3. In an automatic sheep dipper the combination with a runway and a tank disposed beneath the same; of an endless conveyer traveling in the length of said runway, means to actuate said conveyer, a trap mechanism disposed at the inner extremity of said conveyer, and including a shaft rotatably secured to and extending longitudinally of the runway, a plurality of angularly arranged floors carried by said shaft, and adapted to have their upper surfaces successively brought into horizontal alinement with that of said conveyer to form a continuation thereof, means to lock said rotatable floors as the latter are brought into said horisontal position and means in connection with said conveyer actuating means for coöperation with the first mentioned means to actuate the latter and release said floors substantially as and for the purpose set forth.

4. In an automatic sheep dipper the combination with a runway and a tank disposed beneath the same of an endless conveyer traveling in the length of said runway, means to rotate said conveyer, a trap mechanism situated at the inner extremity of said conveyer, and including a shaft rotatably secured to and extending longitudinally of the runway, castings keyed upon the extremities of said shaft, radially extending arms carried by said castings, a plurality of floors disposed between the latter and having their extremities secured to the arms thereon, whereby the upper surfaces of said floors may be successively brought into horisontal alinement with that of said conveyer, means to lock said rotatable floors when the latter are brought into a horizontal position, and means in connection with said conveyer rotating means for coöperation with the last mentioned means to actuate the latter and release said floors substantially as and for the purpose set forth.

5. In an automatic sheep dipper the combination with a runway and a tank disposed beneath the same; of a trap mechanism situated in the length of the runway above said tank and including a shaft rotatably secured and extending longitudinally of the runway, castings keyed upon the extremities of said shaft, radially extending arms carried by said castings, an apertured projection formed on the latter intermediate each of said arms, a plurality of floors disposed between said arms, and having their extremities secured thereto whereby the upper surfaces of said floors may be successively brought in horisontal alinement with that of the runway floor, a locking rod reciprocatively secured to the side of the runway and extending longitudinally thereof, one end of said rod being adapted to normally project into the opening formed in the projection on said casting when the floors are brought into a horisontal position, means coöperating with the opposite end of said rod to reciprocate the latter and withdraw the engaged end thereof from said opening to release said floors, and means to assist in restoring said rod to its normal position substantially as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

1,152,911. COMBINED SHAVING AND CLIPPING MACHINE. MICHAEL EMMET RYAN, Fall River, Mass. Filed Feb. 23, 1915. Serial No. 9,789. (Cl. 38—12.)



1. In a machine of the class described, a rotary cutter, a rest member effectively disposed relative thereto, a shear blade disposed in coactive relation to said rotary cutter, and an adjustable support for an article to be clipped having an effective position wherein the article is presented between said rotary cutter and shear blade and having an adjusted position wherein the article is presented between said rotary cutter and said rest member.

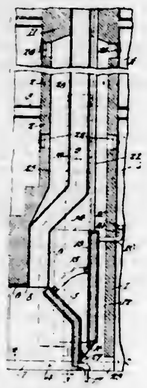
2. In a machine of the class described, a rotary cutter, a rest roll in operative relation thereto, a shear blade mounted in vertically and horisontally adjustable relation to said cutter, and an adjustable work holder having an effective position wherein the work carried thereby is presented for clipping between the rotary cutter and the shear blade, and having an adjusted position wherein the work is presented for clipping between the rotary cutter and the rest roll.

3. In a machine of the class described, a rotary cutter, a rest roll below and in peripheral contact therewith, a shear blade movable into and out of operative relation to said cutter, and an adjustable work holder having an effective position wherein the work carried thereby is presented for clipping between the rotary cutter and the shear blade, and having an adjusted position secured by moving the shear blade out of operative relation to the rotary cutter and wherein the work is presented for clipping between the rotary cutter and the rest roll.

1,152,912. FIREPLACE HEATING APPLIANCE. GEORGE H. RUSSELL, Florence, Ala. Filed Mar. 15, 1915. Serial No. 14,590. (Cl. 126—132.)

1. A fire place having a heating chamber therein provided with the lower inlet and upper outlet, and having

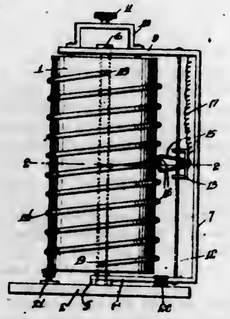
a combustion chamber provided with a water back, a radiator located within said heating chamber between the water back and rear of the fire place, and riser and return pipes connecting the water back and radiator.



2. A fire place having a heating chamber therein and a combustion chamber provided with a water back, radiator comprising a water reservoir disposed in said heating chamber between the water back and rear of the fire place and having forwardly projecting portions between the sides of the water back and fire place, and riser and return pipes connecting the water back and said reservoir.

3. A fire place having an air heating chamber therein and a combustion chamber built in its front wall, said heating chamber having a lower inlet and upper outlet, the combustion chamber having a water back and an outlet portion extending upwardly, a radiator within said heating chamber and comprising a vertical laterally arranged reservoir between the water back and the rear of the fire place and having forwardly projecting side portions between the sides of the water back and the fire place, said reservoir projecting above the water back, and riser and return pipes connecting the upper and lower portions of the water back and reservoir.

1,152,913. ELECTRICAL REGULATING DEVICE. ROY E. SAGLE, Roseville, Ohio. Filed Oct. 18, 1913. Serial No. 796,042. (Cl. 219—56.)

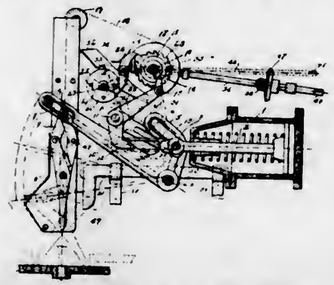


1. In an electrical regulating device, a helically wound conductor rigidly mounted, a slider mounted in embracing relation with one of the windings of said conductor, and a carrier mounted to have turning movement around said fixed helically wound conductor which turning movement is in a fixed horizontal plane, and a rod mounted on said carrier by which the slider is supported and upon which the same has movement as the frame is given turning movement to permit travel of the slider along the length of the conductor.

2. In an electrical regulating device, a cylinder rigidly mounted, a conductor secured in a helix about said cylinder, a frame mounted coaxially with said cylinder to have turning movement about said cylinder in a fixed and definite plane, a conductor mounted as a part of said frame and carried in a fixed relation therewith, a slider mounted on said conductor member to be capable of sliding movement thereon in a direction parallel with the axis of turning of said frame and engaged to embrace a portion of said helically mounted conductor, and all of said parts so arranged that movement of the frame in its fixed path about the cylinder carries the slider along the convolution of the conductor and causes movement thereof along the length of the conductor carried by the frame.

3. In an electrical regulating device, a cylinder of insulating material, a support of conducting material axially disposed in said cylinder and mounted to rigidly support the same to be fixed against rotation, a conductor mounted in a helix about said cylinder, a circuit lead connected with said conductive support, a second circuit lead connected with one terminal of said conductor, a frame of a conducting material mounted upon the support for said cylinder to be capable of turning movement around said cylinder in a fixed plane of rotation, a conductor fixed in said frame, a slider mounted on said conductor to be capable of sliding movement and engaged with a portion of said helically disposed conductor, and all of said parts so arranged that a circuit is completed from the one lead to the other lead and that as the frame is turned the slider will be carried along the conductor upon which it is mounted and will cut into and cut from the circuit a greater or less length of the helically mounted conductor.

1,152,914. APPARATUS FOR ACTUATING CONDUIT-COVERS AND COLLECTOR-PLOWS FOR ELECTRIC RAILWAYS. DINO SAMAIA, Milan, Italy. Filed Apr. 18, 1913. Serial No. 762,018. (Cl. 104—47.)



1. An automatic apparatus of the kind referred to herein comprising means to open and close axial conduit covers, means to lower and raise the current collecting plow, means to engage and disengage the electric switch, means to lock and unlock the shoe of the plow, and means for the manual operation of the plow.

2. An automatic apparatus of the kind referred to herein comprising means to open and close axial conduit covers, means to lower and raise the current collecting plow, means to engage and disengage the electric switch, means to lock and unlock the shoe of the plow, and means for the manual operation of the plow, said cover opening and closing means comprising a scissors apparatus.

3. An automatic apparatus of the kind referred to herein comprising means to open and close axial conduit covers, means to lower and raise the current collecting plow, means to engage and disengage the electric switch, means to lock and unlock the shoe of the plow, means for the manual operation of the plow, a motor mechanism provided with a piston rod and operatively associated with the first three of said means, and a slotted member mounted on said piston rod in such a manner that in the first half of its travel the member actuates one of said means and in the second half another of said means while maintaining the first actuated means in its actuated position.

4. An automatic apparatus of the kind referred to herein comprising means to open and close axial conduit covers, means to lower and raise the current collecting plow, means to engage and disengage the electric switch, means to lock and unlock the shoe of the plow, means for the manual operation of the plow, said plow lifting means comprising a shaft, a ratchet on said shaft, and means associated with said ratchet whereby it is released during every other cycle of the apparatus.

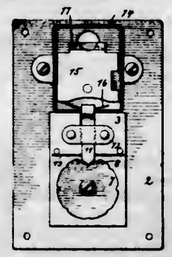
1,152,915. CARBURETER. STEPHEN P. SANDERS, Cupertino, Cal. Filed Oct. 28, 1914. Serial No. 868,922. (Cl. 78—156.)



1. In a carbureter having a carbureting chamber, a cartridge in the chamber composed of a pair of substantially parallel spaced ringed connected by spaced cross rods, and fabric strings stretched across the rings and across the space between the rings and rods so as to form a drum defined in outline by a netwrok of strings.

2. In a carbureter, a cartridge composed of a pair of substantially parallel spaced rings, cross rods connecting the rings and having their ends extending beyond the respective rings, and fabric strings stretched across the rings and transversely across the space between the rings and around said rod ends so as to form a drum defined at its top, bottom, and periphery by a network of strings.

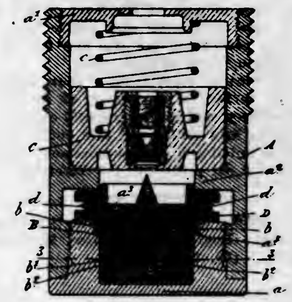
1,152,916. LOCK FOR TRUNKS AND SIMILAR ARTICLES. MAX SCHLESINGER, New York, N. Y., assignor of one-half to John Feldman, Brooklyn, N. Y. Filed June 11, 1915. Serial No. 33,437. (Cl. 70—55.)



A lock of the character described, comprising a plurality of tumblers, a slidable bar adapted to engage the same, a spring adapted to project the bar against the tumblers, a slide independent of the bar and movable in the same direction as said bar, said slide being provided with an abutment which is in permanent axial alinement with the bar, a spring adapted to retract the slide from the bar, a catch member carried by the slide, a hasp, and a coacting catch member carried by the hasp.

1,152,917. PERCUSSION-FUSE. EUGÈNE SCHNEIDER, Le Creusot, France. Filed July 31, 1914. Serial No. 854,272. (Cl. 102—89.)

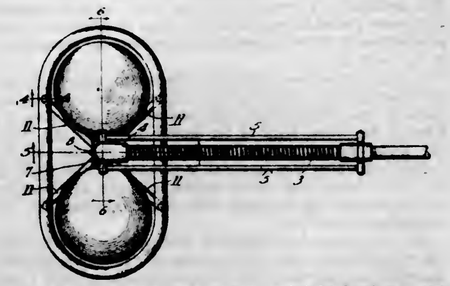
1. A percussion fuse for projectiles intended to burst after passing through a target, comprising a strike element and a priming element both movable in a forward direction on impact of the projectile, means for holding one element out of contact with the other element after impact, and resilient means acting on the other element and rendered active after the projectile passes through the target for moving said element into firing contact with its companion element.



2. A percussion fuse for projectiles intended to burst after passing through a target, comprising a strike element and a priming element, means normally holding one element in safety position for handling, both elements movable in a forward direction on impact of the projectile, means for holding one element out of contact with the other element after impact, and resilient means acting on the other element and rendered active after the projectile passes through the target for moving said element into firing contact with its companion element.

3. A percussion fuse for projectiles intended to burst after passing through a target, comprising a strike element and a priming element both movable in a forward direction on impact of the projectile, means for holding one element out of contact with the other element after impact, resilient means acting on the other element and rendered active after the projectile passes through the target for moving said element into firing contact with its companion element, and means for retarding the action of said spring.

1,152,918. BOILER-SKIMMER. NORBERT SCHREIBER, Lincoln, Ill., assignor of one-half to Raphael Rosenthal, Lincoln, Ill. Filed Oct. 17, 1914. Serial No. 867,056. (Cl. 122—389.)



1. A boiler cleaner comprising an intake having a continuous uninterrupted opening facing in all directions in a horizontal plane, and a float for maintaining said intake at the surface of the water, during the ordinary rise and fall thereof.

2. A boiler cleaner comprising an intake consisting of a closed loop of piping having a continuous uninterrupted opening in a horizontal plane, and a float arranged within said loop and movable vertically with respect thereto to adjust said opening to the level of the water.

3. A boiler cleaner comprising an intake consisting of a closed loop of piping having a continuous opening in a

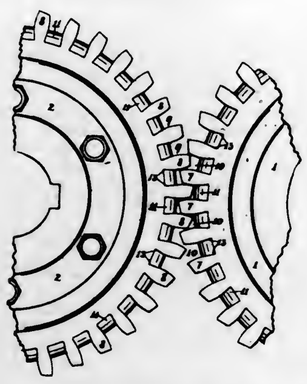
horisontal plane, a plurality of floats arranged within said loop and means connecting said loop to said floats to support the former at the level of the water, said means permitting vertical adjustment of said loop with respect to said floats.

4. A boiler cleaner comprising an intake at the surface of the water in the form of a closed loop having a continuous outer slot, a float within said loop for supporting said intake with its slot at the level of the water, and an armored hose connecting said intake with a suitable outlet thereby permitting the rise and fall of said float with the changing level of said water.

5. A boiler cleaner comprising a float maintaining an intake at the surface of the water, an outlet, a flexible connection between said intake and said outlet, and means for maintaining said intake and said outlet in spaced relation while permitting a pivotal movement of the former.

[Claims 6 to 8 not printed in the Gazette.]

1,152,919. PRESS. GEORGE RICHARD SCHUELER, Kingston-upon-Hull, England. Filed Dec. 23, 1914. Serial No. 878,736. (Cl. 100—47.)



1. In a press, two revoluble compressing wheels having intergearing teeth, the bottoms of the spaces between the teeth of one wheel being angle-shaped, thereby forming pockets at each side portion of the wheel into which the material is pressed by the teeth of the other wheel, and cheek plates arranged at the sides of the wheels and provided with outlet openings for the material compressed in the said pockets.

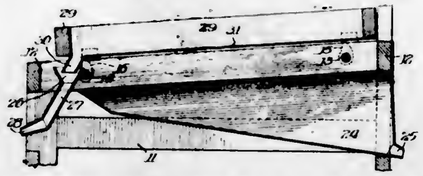
2. In a press, two revoluble compressing wheels having intergearing teeth, the bottoms of the spaces between the teeth of one wheel being angle-shaped and wider at the sides of the wheel than at its middle part, thereby forming wedge-shaped pockets at each side portion of the wheel into which the material is pressed by the teeth of the other wheel, and cheek plates arranged at the sides of the wheels and provided with outlet openings for the compressed material.

3. In a press, two revoluble compressing wheels having intergearing teeth, the bottoms of the spaces between the teeth of each wheel being angle-shaped, thereby forming pockets at each side portion of each wheel into which the material is pressed by the teeth of the wheels, and cheek plates arranged at the sides of the wheels and provided with outlet openings for the compressed material.

4. In a press, two revoluble compressing wheels having intergearing teeth, the bottoms of the spaces between the teeth of each wheel being angle-shaped, thereby forming pockets at each side portion of each wheel into which the material is pressed by the teeth of the wheels, cheek plates arranged at the sides of the wheels and provided with outlet openings for the compressed material, and extracting boxes secured against the cheek plates and provided with passages which register with the said outlet openings and having also small outlets for the escape of fluid.

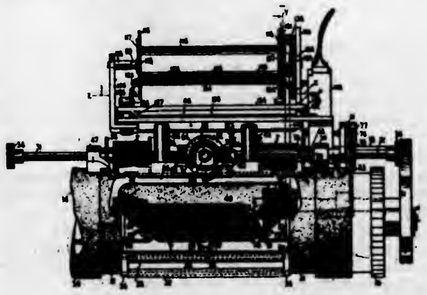
5. In a press, two revoluble compressing wheels having intergearing teeth, the bottoms of the spaces between the teeth of each wheel being angle-shaped, thereby forming pockets at each side portion of each wheel into which the material is pressed by the teeth of the wheels, cheek plates arranged at the sides of the wheels and provided with outlet openings for the compressed material, extracting boxes secured against the cheek plates and provided with passages which register with the said outlet openings and having also small outlets for the escape of fluid, and die plates secured against the extracting boxes and having holes which register with the outlet ends of the said passages and having also means for regulating the passage of the compressed material through the said holes to afford a predetermined resistance to its passage through the extracting boxes.

1,152,920. METHOD OF CLEANING GRAIN. RUDOLF SEIDL, Minneapolis, Minn. Filed July 10, 1914. Serial No. 850,142. (Cl. 130—15.)



In the separating of elongated grains heavier at one end from grains of substantially symmetrical shape by the use of a screen having a mesh to exclude the passage therethrough of the symmetrical grains, the steps of feeding a mixture of such grains to the screen and forming a thin layer thereon, and imparting an up and down movement to the screen to throw the layer of grains upwardly and permitting the grains to fall back against the screen, the length of descent of the grains being sufficient to permit the elongated unbalanced grains to assume a vertical position before reaching the screen, whereby said grains will pass through the screen and be separated from the substantially symmetrical grains.

1,152,921. TYPE-WRITING MACHINE. WILLIAM GARFIELD SHELDON, London, England, assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Apr. 17, 1914. Serial No. 832,458. (Cl. 197—153.)



1. In a typewriting machine, the combination of a carriage, a platen, means for feeding over the platen a ribbon carried by the carriage, and automatically operated ribbon reversing means carried by the carriage and operating independently of the carriage carried ribbon itself.

2. In a typewiting machine, the combination of a carriage, two platens, means for guiding separate work sheets over said platens, separately controlled ribbons one for each work sheet, one of said ribbons being controlled from the frame of the machine and the second ribbon from said carriage, and means carried by the carriage for automattically reversing the direction of feed of said second ribbon.

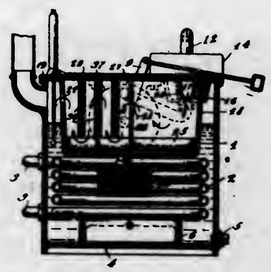
3. In a typewriting machine, the combination of a carriage, means on said carriage for controlling a main work sheet, tally strip devices on said carriage, a carriage-carried ribbon coöperative only with the tally strip, means for automatically reversing the feed of said carriage carried ribbon, and a ribbon supported independently of the carriage and coöperating only with said main work sheet, the main and tally sheets being arranged in superposed relationship and interposed between said ribbons.

4. In a typewriting machine, the combination of a carriage, a platen, a releasable pressure roller coöperative with the platen to feed a work sheet, a carriage-carried ribbon, means including pawl and ratchet devices for feeding the ribbon when the pressure roller is released, and means including other pawl and ratchet devices for simultaneously feeding a second work sheet when said pressure roller is released.

5. In a typewriting machine, the combination of a carriage, a platen, a pressure roller, a releasable rock shaft operative thereon, carriage-carried ribbon mechanism including pawl and ratchet feeding devices operative from a crank arm on said rock shaft, a tally receiving spool, and means for turning said spool to feed the tally strip, said tally feeding means including other pawl and ratchet devices operative from a second crank arm on said rock shaft.

[Claims 6 to 19 not printed in the Gazette.]

1,152,922. PACKAGE-COATING APPARATUS. PHILIP SHERRER, Cleveland, Ohio. Filed Jan. 27, 1913. Serial No. 744,326. (Cl. 91—11.)



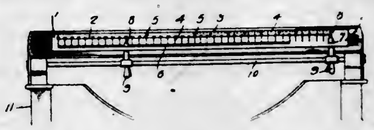
1. In a device of the kind described, the combination with a melting kettle, article support and spray apparatus, of a basin for receiving molten material from an article so supported, and a settling box within the kettle and adapted to receive the material from said basin, the side of said settling box being formed at a point above its bottom with a discharge opening which communicates with said kettle at a point above the normal level of the material in said kettle, the body of said box extending below the normal level of the material in said kettle.

2. In a device of the kind described, the combination with a melting kettle, article support and spray apparatus, of a basin carried by the top of said kettle and adapted to receive molten material from an article so supported, a settling box within the kettle and adapted to receive material from said basin, said settling box having its body portion depending into the liquid receiving portion of said kettle and having a discharge opening communicating with said kettle at a point above the level of the material in said kettle, and baffle plates within said settling box said plates being spaced alternately above and below the top and bottom of said kettle whereby a tortuous passage is provided within said settling box as set forth.

3. In a device of the kind described, the combination with a melting kettle, article support, and spray apparatus, of a basin for receiving molten material from the article so supported, a settling box arranged within the kettle and adapted to receive material from said basin, said settling box having an opening communicating with the kettle at a point above the level of material contained within said kettle, a plurality of alternately arranged baffle plates within the settling box, and a pan located in the bottom of said box, said pan being removable.

4. In a device of the kind described, the combination with a melting kettle, barrel support and spraying apparatus, of a basin carried by the kettle top and adapted to receive molten material from said barrel, a settling box in said kettle and partially submerged in the molten material, said box being adapted to receive the material from said basin and having a discharge opening communicating with the melting kettle at a point above the level of the material in said kettle, and a plurality of alternately arranged baffle plates within said settling box whereby a tortuous passage therethrough is provided, said baffle plates being removable as set forth.

1,152,923. TYPE-WRITER CENTERING-SCALE. CHARLES E. SMITH, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed July 13, 1912. Serial No. 709,128. (Cl. 197—194.)



1. A centering-device, for use in connection with typewriters employing movable margin-stops, comprising means provided with two scales, each scale comprising a series of graduations, the space between each two adjacent graduations of one scale being twice that between each two adjacent graduations of the other scale, said centering-device being also provided with a perforation toward one end thereof and with a longitudinally-extending slot, for attachment of the centering-device to the typewriter margin stops.

2. In a typewriter, the combination with movable margin-stops, of a centering-device carried by one of said margin-stops, and comprising means provided with two scales, each scale comprising a series of graduations, the space between each two adjacent graduations of one scale being twice that between each two adjacent graduations of the other scale.

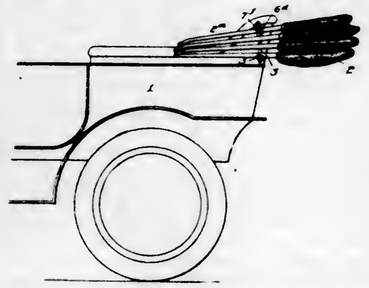
3. In a typewriter, the combination with movable margin-stops, of a centering-device detachably carried by one of said margin-stops, and comprising means provided with two scales, each scale comprising a series of graduations, the space between each two adjacent graduations of one scale being twice that between each two adjacent graduations of the other scale.

4. In a typewriter, the combination with movable margin-stops, of a centering-device carried by one of said margin-stops and movable independently of one of said margin-stops, and comprising means provided with two scales, each scale comprising a series of graduations, the space between each two adjacent graduations of one scale being twice that between each two adjacent graduations of the other scale.

5. In a typewriter, the combination with movable margin-stops, of a centering-device comprising slotted means provided with two scales, one of said margin-stops engaging said slot, each scale comprising a series of graduations, the space between each two adjacent graduations of one scale being twice that between each two adjacent graduations of the other scale.

[Claims 6 to 10 not printed in the Gazette.]

1,152,924. BOW REST AND CLAMP DEVICE. HARRY B. WHITE, Canton, Ohio, assignor to The Gilliam Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed May 21, 1910. Serial No. 562,738. (Cl. 21—61.)



1. The combination with a bracket adapted to be arranged on one side of a vehicle body, of a support carried by said bracket and carrying a bow rest, and bow clamping means bodily adjustable to said bow rest mounted on said support and carrying a bow clamping plate to engage the uppermost bow, the said means comprising a support, a hollow casing arranged to receive the said support whereby one of said parts may be elevated relative to the other, and a lever carried by the casing and connected to the support and arranged to operate and lock the clamping means in engagement with the uppermost bow.

2. In a device of the character described, the combination of supporting means arranged to be supported at the side of a vehicle, two members mounted on said supporting means and coöperable to engage the upper and lower bows of a vehicle top, one of said members being movable toward and from the other member, and means for connecting said members together in locked relationship, the said means comprising an engaging device carried by one of said members and a device carried by the other member and bodily movable into and out of the path of movement of said engaging device for engagement with and disengagement from said engaging device.

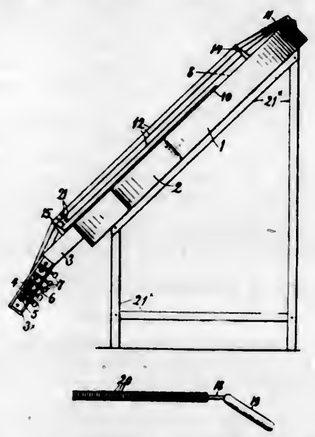
3. In a device of the character described, the combination of supporting means arranged to be supported at the side of a vehicle, two devices mounted on said supporting means and coöperable to engage the upper and lower bows of a vehicle top, one of said devices being movable toward and from the other device, and means for locking said devices in operative relation, the said means comprising an engaging member carried by one of said devices and a cam carried by the other device and bodily movable into and out of the path of movement of said engaging member for engagement with and disengagement from said member.

4. In a device of the character described, the combination of supporting means arranged to be supported at the side of a vehicle, two members mounted on said supporting means and coöperable to engage the upper and lower bows of a vehicle top, one of said members being movable toward and from the other member, and means for locking said members in operative relation, the said means comprising an engaging member carried by one of said members, a rotatable member carried by the other member, a device mounted on said rotatable member and arranged to be bodily moved thereby into and out of the path of movement of said engaging member, and means for operating said rotatable member.

5. In a device of the character described, the combination of a stationary member and a movable member coöperable to engage the upper and lower bows of a vehicle top, and means for drawing the said movable member toward the stationary member and positively locking the bows between them, the said means including a hollow casing carried by one of said members, a cam swingably supported in said casing and a standard or spindle fitting within said casing, whereby the casing and standard or spindle may slide and rotate relative to each other, the said standard or spindle being provided with a recess to receive said cam, whereby the latter when swung in one direction operates to engage the walls of said recess and lock the movable member in operable position and when moved in the other direction operates to free itself from said spindle.

[Claims 6 to 29 not printed in the Gazette.]

1,152,925. STRINGED MUSICAL INSTRUMENT. JOHN A. BACH, St. Paul, Minn. Filed Sept. 5, 1914. Serial No. 860,436. (Cl. 84—14.)



1. A musical instrument comprising a hollow body, a perforated sounding board for said body, a neck carried by the body, a head carried by the said neck, strings secured at their opposite ends in said head and to said hollow body, bridges supporting said strings adjacent the outer ends of said hollow body, a playing device adapted to pick and bow the strings simultaneously and yieldable cushioning members arranged between said strings adjacent one of said bridges to silence the parts of the strings between said cushioning members and the playing device.

2. A musical instrument comprising a hollow body including an apertured sounding board, a neck carried by said hollow body and having a head, a plurality of strings arranged in rows and having their ends secured to said head and to the opposite end of the hollow body, bridges supporting said strings in spaced relation from said sounding board, a bowing playing device and yieldable cushioning members between the rows of strings near one of the bridges to silence the part of each string between said cushioning members and the playing device.

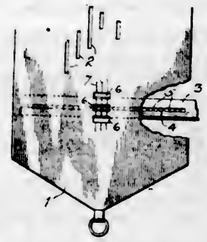
3. The combination with a string musical instrument, of a rod, a handle on said rod, and a wire wrapped spirally around the rod; said rod adapted to be moved longitudinally across the strings of the said musical instrument with either side in contact with the strings.

4. In combination, a musical instrument comprising a hollow body with an apertured top serving as a sounding board, a neck secured to one end of said body, a head carried by the neck, a plurality of strings arranged in parallel plane rows one row above the other and secured at their opposite extremities to said head and the opposite end portion of said body; two bridges arranged in spaced relation and supporting said rows of strings, yieldable cushioning members arranged between said rows of strings near one of the bridges, a bowing device for playing upon said sets of strings alternately at different distances from the cushioning members.

5. The combination with a stringed musical instrument, of cushioning members permanently engaging one end of each string and a transversely corrugated rod serving as a bowing device in playing upon the strings, and means adjacent the strings for indicating the various points of each string upon which the bowing device when reciprocated upon the string will produce sounds of varied pitch according to the distances between the bowing device and the uncushioned end of the string.

[Claims 6 to 9 not printed in the Gazette.]

1,152,926. MUSIC-SHEET. WILLIAM BAYLEY, Springfield, Ohio. Filed Jan. 12, 1914. Serial No. 811,624. (Cl. 84—162.)



1. A perforated music sheet, to be passed over a tracker bar having orifices therein, a gage mark on the music sheet in advance of the operating perforations to be registered with a partition between succeeding orifices of the tracker bar to insure the registration of the note perforations of the sheet with the tracker bar orifices.

2. A perforated music sheet to be passed over a tracker bar having orifices therein, said music sheet having an observation space therein through which a plurality of orifices of the tracker bar may be observed, and gage marks on the music sheet intersecting the observation space to be registered with the partitions between succeeding tracker bar orifices.

3. A perforated music sheet to be passed over a tracker bar having orifices therein, an observation space in the music sheet in advance of the note perforations, through which the orifices of the tracker bar may be observed, and gage marks carried by the music sheet and intersecting the observation space by which the note perforations of the sheet may be registered with the tracker bar orifices.

4. A perforated music sheet to be passed over a tracker bar having orifices therein, a gage mark so located on the music sheet that when the sheet is properly positioned in relation with the tracker bar said gage mark will be registered with a partition between adjoining tracker bar orifices to insure registration of the note perforations with the corresponding orifices.

5. A perforated music sheet, a tracker bar with the orifices of which the perforations of the music sheet are to be brought into registry by the relative adjustment of the sheet and bar, and gaging means in the sheet in advance of the note perforations adapted to register with a predetermined point upon the tracker bar when the note perforations of the music sheet are in proper alinement with the orifices of the tracker bar.

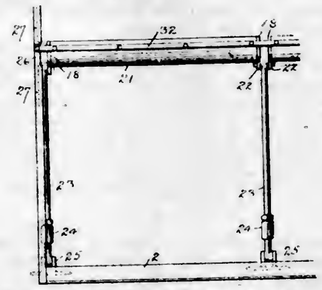
[Claims 6 to 10 not printed in the Gazette.]

1,152,927. SWINGING WINDOW-SASH. WILLIAM BAYLEY, Springfield, Ohio. Filed Mar. 16, 1914. Serial No. 825,125. (Cl. 20—53.)

1. A swinging sash comprising upper and lower sections spaced one from the other, bearing heads connecting the separated sash sections and cylindrical frame members located within the window space between the sash sections and intermediate successive bearing heads to which the said heads are pivotally connected.

2. A swinging sash comprising two sections separated one from the other, bearing heads located between the sash sections connecting them one to the other, and a supporting frame projecting into the plane of the sash with which the bearing heads are pivotally connected.

3. A swinging sash divided longitudinally into separated sections, each section comprising a plurality of units transversely arranged side by side, a plurality of supporting heads located intermediate the separated sash sections, oppositely disposed arms carried by the heads, said arms being interposed between the adjacent sides of succeeding section units, and a supporting frame with which the heads are pivotally connected.

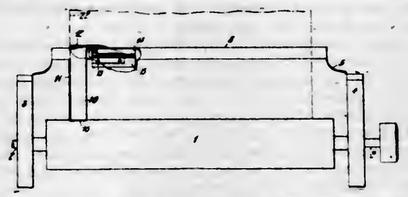


4. A swinging sash comprising separated sections, rigidly connected one to the other in spaced relation, and a supporting frame extending transversely through the space intermediate the sash sections with which the intermediate connections of the sash sections are pivotally engaged.

5. A swinging sash comprising two separated sections rigidly connected one to the other, a supporting structure and pivotal connections between the sash and supporting structure projecting in the plane of the sash intermediate the sections, and pivotal connections with the supporting structure so arranged that the sash will oscillate upon an axis intermediate the sash sections.

[Claims 6 to 27 not printed in the Gazette.]

1,152,928. TYPE-WRITING MACHINE. RICHARD M. BECKER, New York, N. Y., assignor to John T. Underwood, Brooklyn, N. Y. Filed Jan. 27, 1913. Serial No. 744,314. (Cl. 197—142.)



1. In a typewriting machine, the combination of a paper shelf having one edge rolled; a paper guide projecting at one end over and to the rear of said rolled edge, and in spaced relation thereto; and a bearing member slidably fitting within said rolled edge and frictionally engaged therewith, said member being connected to the projecting end of said guide and constituting the sole support for the same at said end.

2. In a typewriting machine, the combination of a paper shelf having one edge rolled to form a slotted tube; a paper guide projecting at one end over and to the rear of said tube, and in spaced relation thereto; and a bearing member slidably fitting within said tube and having an extension which projects downwardly through the slot in said tube and is connected to the projecting end of said guide, said member constituting the sole support for said guide at said end.

3. In a typewriting machine, the combination of a roller platen, an inclined paper shelf located in rear of the platen and having its upper edge rolled to form a concave bearing surface, a paper guide slidable along said shelf and having its lower edge bearing against the shelf at

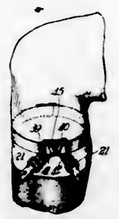
a point behind and below the platen, said guide extending from said bearing point upwardly and rearwardly over the shelf to the rear of said rolled portion but out of contact therewith, and a bearing member rigidly secured to the paper guide and slidable in said concave bearing.

4. In a typewriting machine, the combination of a shelf having its edge rolled, a paper guide having one end curved around the shelf roll, and a bearing member connected to the guide and slidable within said rolled edge and holding said curved end of the guide out of contact with the rolled edge of the shelf.

5. In a typewriting machine, the combination with a platen, of a paper shelf having a curled edge to form a roll extending short of the full length of said platen, a paper guide having a laterally offset portion, and a bearing member secured to said offset portion and slidable within said roll, for supporting said guide by said roll when the outer side thereof extends toward the end of said platen and beyond the confines of said roll.

[Claims 6 and 7 not printed in the Gazette.]

1,152,929. GARMENT-SUPPORTER. LEE E. BERKBAUM, Chicago, Ill. Filed Nov. 28, 1913. Serial No. 803,458. (Cl. 241—6.)



1. An elastic, leg-encircling hose supporter, comprising a strip of webbing, fabric-engaging clamps secured respectively to opposite ends thereof, and a pair of clasps having mutual engaging means, each said clasp having web-engaging-and-deflecting portions fixing the clasp in adjusted position on the strip and deflecting the contiguous strip-end into pendant position, whereby the respective lengths of the leg-encircling portion and the pendant-portions of the strip are fixedly defined.

2. An elastic, leg-encircling hose supporter, comprising a strip of webbing, fabric-engaging clamps secured respectively to opposite ends thereof, a pair of clasps having mutual engaging portions, each said clasp having web-engaging-and-deflecting portions fixing the clasp in adjusted position on the strip and deflecting the contiguous strip-end into pendent position, and a loop-retaining take-up engaging a looped portion of the strip between the two clasps.

3. An elastic hose supporter comprising a strip of webbing, fabric engaging clamps secured respectively to opposite ends of said strip, and a pair of clasps having mutual engaging means, each said clasp laterally attachable and detachable with respect to the mid-length of the web and having web-engaging-and-deflecting portions fixing the clasp in adjusted position on the strip and deflecting the contiguous strip end into pendant position, whereby attachment of the clasps fixedly defines the respective lengths of the leg encircling portion and the pendant portions of the strip, as a leg encircling garter; and removal of the clasps converts the structure into a drawers garter.

4. A hose supporter comprising a single strip of elastic webbing, fabric-engaging clamps secured respectively to opposite ends thereof, and a pair of clasps having mutual engaging means, each said clasp having two convergent slots and a cross slot connecting said convergent slots, each said clasp effecting laterally-removable, longitudinally-adjustable, non-sliding engagement with the strip; and deflecting the contiguous strip end into pendant position at an acute angle to the leg encircling strip portion, whereby the respective lengths of the leg encircling portion and the pendant portions of the strip are fixedly defined, and whereby the clasps are laterally removable from the strip to convert the structure into a drawers garter.

5. As an article of manufacture, a supporter of the character described comprising a pair of mutually engaging clasps, each comprising a plate provided with a vertical slot, tape gripping means, a diagonal deflecting slot and a cross connecting slot connecting said vertical and diagonal slots; a single continuous tape engaged and deflected between its ends by said clasps, and fabric engaging clamps on the extremities of said tape.

1,152,930. PRODUCTION OF AMMONIA. CARL BOSCH, ALWIN MITTASCH, HANS WOLF, and GEORG STERN, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin- & Soda-Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Original application filed Dec. 24, 1910, Serial No. 599,101. Divided and this application filed Oct. 28, 1914. Serial No. 869,147. (Cl. 23—21.)

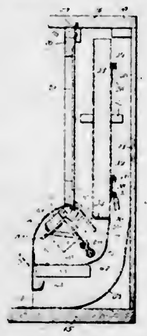
1. The process for the manufacture of ammonia by passing a mixture of nitrogen and hydrogen free from contact poison over an active iron catalyst substantially as described.

2. The process for the manufacture of ammonia by passing a mixture of nitrogen and hydrogen free from contact poison over an active catalyst consisting of iron and a promoter.

3. The process for the manufacture of ammonia by passing a mixture of nitrogen and hydrogen free from contact poison over an active catalyst consisting of iron and aluminium oxid.

4. The process for the manufacture of ammonia by passing a mixture of nitrogen and hydrogen free from contact poison over an active catalyst consisting of iron and aluminium oxid at a pressure of one hundred atmospheres or higher.

1,152,931. VENDING DEVICE. CHARLES E. BRIDGES, Chicago, Ill., assignor to Autosales Gum and Chocolate Company, a Corporation of New York. Filed Nov. 3, 1911. Serial No. 658,379. (Cl. 194—75.)



1. In a coin-operated vending machine, a coin-carrier comprising a pivotally mounted shelf having an opening at its upper end, and a pair of headed studs secured at the sides of said opening to support the deposited coin by engaging the same at two points on the circumference below the diameter, said studs holding the coin in rigid position during the forward movement of the shelf, while during the return movement of the shelf said studs and said opening permit the coin to be tilted off the shelf.

2. In a coin-operated vending machine, a coin-carrier comprising a pivotally mounted shelf having an opening at its upper end, and a pair of headed studs secured at the sides of said opening to support the deposited coin by engaging the same at two points on the circumference below the diameter, said studs holding the coin in rigid position during the forward movement of the shelf, while during the return movement of the shelf said studs and said opening permit the coin to be tilted off the shelf, said opening having beveled sides to increase its effective diameter and thereby facilitate the tilting of the coin.

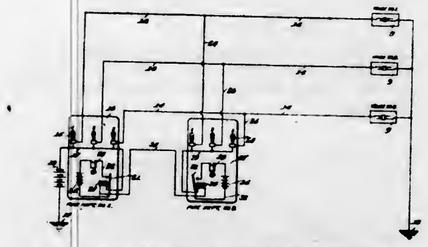
3. In a coin-operated vending machine, the combination of a movable support for the deposited coin, and yieldable means arranged to withdraw a washer from said support when the same is operated, said means being moved into inoperative position by a proper coin on the support to allow said coin to remain on said support, whereby said coin is carried past said washer-catching means into operative position.

4. In a coin-operated vending machine, the combination of a movable support for the deposited coin, and a pivoted hook member so arranged in the path of the coin on said support as to be moved out of the way by a proper coin to allow the latter to remain on said support, whereby a proper coin is carried past said hook member into operative position, said member being adapted to enter the opening of a washer on said support and withdraw the same from the support when the latter is operated.

5. In a coin-operated vending machine, a coin-carrier comprising a pivotally mounted shelf having an opening at its upper end, and a pair of headed studs secured at the sides of said opening to support the deposited coin by engaging the same at two points on the circumference below the diameter, said studs holding the coin in rigid position during the forward movement of the shelf, while during the return movement of the shelf said studs and said opening permit the coin to be tilted off the shelf, in combination with yieldable means arranged to withdraw the washer from between said studs when said shelf is operated, said yieldable means being moved into inoperative position by a proper coin on said shelf to allow said coin to remain supported by said studs, whereby the coin is carried past said washer-catching means into operative position.

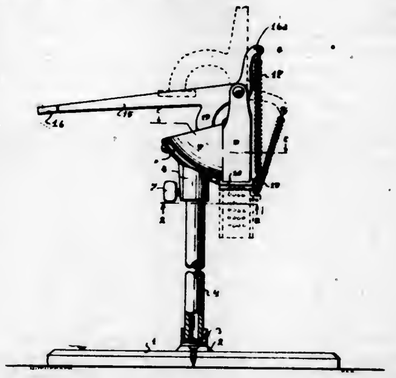
[Claim 6 not printed in the Gazette.]

1,152,932. AUTOMATIC FIRE-ALARM. WILLIAM F. CALDWELL, Hot Springs, Ark., assignor to J. A. Riggs, Hot Springs, Ark. Filed Aug. 19, 1910. Serial No. 577,915. (Cl. 177—355.)



A fire alarm system comprising in combination a plurality of subscribers' stations, and a plurality of central stations, a plurality of indicating devices at each subscriber's station, each device connected by two wires, one of the wires being grounded, a common lead to which the other wires are connected, a signal interposed in each of the said wires at a common point at the subscriber's station, a switchboard at each of the central stations, the common lead from each subscriber's station passing to the board of one central station, and having a branch passing to the board of the other station, a signal interposed in each lead and in each branch at the central stations, a lead connecting all of the said leads at one central station, said lead being grounded, a source of electrical energy interposed in the grounded lead, a lead connecting all of the branches at the other central station, an electromagnet at each station, having one termination connected with the connecting lead, a wire connecting the other terminals of the electromagnets, a normally open auxiliary circuit at each station and provided with a signal, and means operated by the electromagnets for closing the circuits.

1,152,933. LEMON-SQUEEZER. JAMES A. COOPER and JOEL C. COOPER, Dallas, Tex. Filed July 13, 1914. Serial No. 850,573. (Cl. 100—41.)



1. In a device of the character described, the combination with a body forming a squeezing chamber and having its bottom open, of a perforated hinged closure mounted upon said body and adapted to rest against the bottom thereof, a lever having one extremity pivoted upon said body, a curved arm projecting downwardly from said lever, and a head formed upon the free end of said arm, said head being parallel and adjacent to the rear wall of the squeezing chamber within the same when the lever is lowered, and being spaced above the inlet of the squeezing chamber when the lever is raised.

2. In a device of the character described, the combination with a body forming a squeezing chamber and having its bottom open, of a perforated closure hinged upon said body and bearing against the bottom thereof in one of its limiting positions, a lever pivoted at one end of said body, an arm projecting from the pivoted end of said lever, a spring extending from said arm to said closure, a curved arm projecting downwardly from the lever in one limiting position thereof, and entering the squeezing chamber, a head formed upon the free end of said arm spaced from the rear wall of the squeezing chamber, in said position of said lever, said head being spaced above the inlet of the squeezing chamber in the other limiting position of the lever and the tension of said spring being relaxed in the other limiting position allowing said perforated closure to swing open.

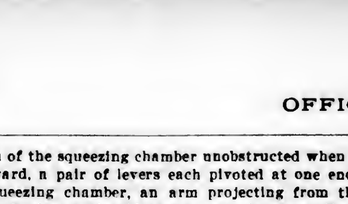
3. In a device of the character described, the combination with a body forming a squeezing chamber, the bottom of said chamber being open, of a perforated closure hinged upon said body and bearing against the bottom thereof in one of its limiting positions, an arcuate chute having communication with the squeezing chamber at the front thereof, a knife blade mounted to traverse diametrically in the rear portion of said chute its edge being directed forwardly, two levers pivoted at one end upon each body, curved arms projecting downwardly from the pivoted end of said levers in one of the limiting positions thereof, heads provided upon the free ends of said arms, said heads being within the squeezing chamber and closely adjacent to the rear wall thereof in said limiting position of the levers, said heads being spaced above the inlet of said chute in the other limiting position of the levers.

4. In a device of the character described, the combination with a body forming a squeezing chamber the bottom of which is open, of a perforated closure for the bottom of said chamber, hinged upon the body and leaving the

bottom of the squeezing chamber unobstructed when swung downward, a pair of levers each pivoted at one end upon the squeezing chamber, an arm projecting from the pivoted end of one of said levers, a spring extending from said arm to said closure allowing the closure to hang down in one position of said lever and maintaining it firmly pressed against the bottom of said body in the other limiting position of said lever, arms similarly projecting downward from the pivoted ends of said levers, and heads formed upon the rear ends of said arms, the heads being within the squeezing chamber adjacent to the rear wall thereof when the levers are down and spaced above the inlet of the squeezing chamber when the levers are up.

5. In a device of the character described, the combination with a body forming a squeezing chamber, having its bottom open, of a perforated closure hinged upon said body, an arcuate chute formed integral with said body at the front thereof and communicating with the squeezing chamber, a knife blade extending diametrically across said chute at the rear thereof, its edge being directed toward the inlet of the chute, a pair of levers each pivoted at one end upon said body, an arm projecting from the pivoted end of one of said levers, a spring extending from said arm to said closure, an arm projecting downwardly from each lever, and a head formed upon the bottom end of each arm, in one limiting position, said closure being maintained by said spring tightly pressed against the bottom of said body, and the heads of said arms being inserted in the squeezing chamber closely adjacent to the rear wall thereof, and in the other limiting position of said arms, the tension of said spring being relaxed allowing the closure to fall clear of the outlet of the squeezing chamber, and the heads being spaced above the inlet of said chute.

1,152,934. TYPE-WRITING MACHINE. GROVER F. COVERDELL, Council Bluffs, Iowa, assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 20, 1914. Serial No. 813,163. (Cl. 197—130.)



1. The combination, with a rotary platen, of a work-piece receptacle comprising a bottom section having a feed passage leading therefrom to the introductory side of the platen, a regulator mounted upon said bottom section for supporting the lower edges of the work-pieces, and vertical end sections for supporting the side edges of said work-pieces adjustably mounted upon said bottom section for movement toward or from each other, to conform to the width of the work-pieces; and feeding means mounted on said bottom section and projecting into said passage, to engage said work-pieces, said regulator being adjustable toward and from said feeding means to permit only a single work-piece at a time to be fed thereby through the passage.

2. The combination, with a rotary platen, of a work-piece receptacle comprising a bottom section having a feed passage leading therefrom to the introductory side of the platen, a regulator mounted upon said bottom section for supporting the lower edges of the work-pieces, and vertical end sections for supporting the side edges of said work-pieces adjustably mounted upon said bottom section for movement toward or from each other, to conform to the width of the work-pieces; and coacting feed and friction rollers mounted on said bottom section and projecting into said passage from opposite sides thereof, to engage said work-pieces, said regulator being adjustable toward and from said feed rollers to permit only a single work-piece at a time to be fed thereby through the passage.

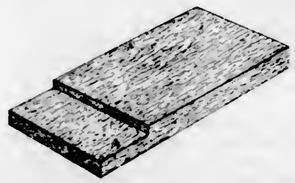
3. The combination, with a rotary platen, of a work-piece receptacle comprising a bottom section having a feed passage leading therefrom to the introductory side of the platen, said section consisting of front and rear plates having adjacent portions thereof bent downwardly and spaced apart to form said passage, a regulator mounted upon said bottom section for supporting the lower edges of the work-pieces, and vertical end sections muonted upon said bottom section for supporting the side edges of said work-pieces; feed rollers projecting from the passage-forming portion of one of said plates into said passage, to engage said work-pieces; and friction rollers projecting into said passage from the passage-forming portion of the other plate, to coact with said feed rolls, said regulator being adjustable toward and from said feed rollers to permit only a single work-piece at a time to be fed thereby through the passage.

4. The combination, with a rotary platen, of a work-piece receptacle comprising a bottom section having a feed passage leading therefrom to the introductory side of the platen, said section consisting of front and rear plates having adjacent portions thereof bent downwardly and spaced apart to form said passage, a regulator mounted upon said bottom section for supporting the lower edges of the work-pieces, and vertical end sections for supporting the side edges of said work-pieces adjustably mounted upon said bottom section for movement toward and from each other, to conform to the width of the work-pieces; feed rollers projecting from the passage-forming portion of one of said plates into said passage, to engage said work-pieces; and friction rollers projecting into said passage from the passage-forming portion of the other plate to coact with said feed rollers, said regulator being adjustable toward and from said feed rollers to permit only a single work-piece at a time to be fed thereby through the passage.

5. An apparatus of the class described, comprising a bottom section composed of two plates spaced apart to form a passage between them, feed rollers mounted on the said section, means for rotating the rollers, a regulator plate mounted on the said section in coöperative relation with the feed rollers, adjustable end sections mounted on the bottom section, and devices movable under the regulator plate for adjusting the end sections.

[Claims 6 to 16 not printed in the Gazette.]

1,152,935. PROCESS OF PRODUCING COMPOUNDS OF RUBBER AND STEEL-WOOL. JAMES P. CRANE, Chicago, Ill. Filed Mar. 18, 1911. Serial No. 615,253. (Cl. 106—23.)



1. The herein described method of producing a compound composed of resilient vulcanized rubber and steel wool, the same consisting in first mixing rubber and steel wool in the usual manner, and then subjecting the compound to a force moving the fibers of the steel wool to substantially longitudinal parallelism to each other, and finally vulcanising the compound with the fibers of steel wool in said position, substantially as described.

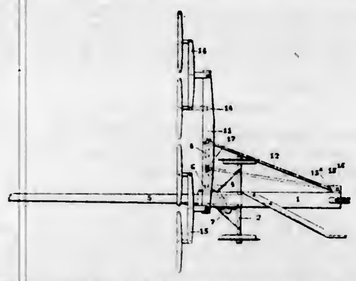
2. The herein described method of producing a compound composed of resilient vulcanized rubber and steel wool, the same consisting in mixing rubber and steel wool until the steel wool is distributed throughout the mass, and then subjecting the mixed mass to a force moving the fibers of the steel wool to substantially longitudinal parallelism with each other throughout the mass and finally vulcanizing the mass with the fibers of the steel wool in said position, substantially as described.

3. The herein described method of producing a compound composed of resilient vulcanized rubber and steel wool, the same consisting in first passing the mass between heated rollers in the usual manner for mixing rubber and its compound until the steel wool is distributed throughout the mass of rubber, then subjecting the mixed mass to a force moving the fibers of the steel wool so distributed to substantial longitudinal parallelism with each other, and finally vulcanizing the mass with the fibers of steel wool in said position, substantially as described.

4. The herein described process for producing a compound composed of rubber and steel wool fibers, which consists in drawing the temper of the fibers of steel wool to a degree preventing their undue breaking under the pressure of their incorporation with rubber, then disposing of such fibers in a general longitudinal direction, subsequently incorporating them so disposed with and throughout a mass of rubber, and finally vulcanizing such mass.

5. The herein described method of producing compounds of resilient vulcanized rubber and steel wool, the same consisting in drawing the temper of the fibers thereof until an undue breaking brittleness under pressure is removed therefrom, then mixing said fibers with rubber in dough-like form until distributed through a given mass of rubber as uniformly as may be, and then repeatedly drawing said mixed mass between pressure rollers a sufficient number of times in the same direction to produce the disposal of the metal fibers in the same general longitudinal parallel direction throughout the mass.

1,152,936. DRAFT DEVICE. JOSEPH DAIN, Moline, Ill., assignor to Deere & Company, Moline, Ill., a Corporation of Illinois. Filed Dec. 23, 1913. Serial No. 808,350. (Cl. 21—76.)



1. The combination of a tongue, a plurality of bearings on the tongue, an arm supported in one bearing and movable to another, and an equalizer pivoted on the arm, the pivotal relation of the equalizer and the arm adapted to be changed when said arm is moved to another bearing.

2. The combination of a tongue, two bearings one on each side of the tongue, an arm supported in the bearing on one side of the tongue and movable to the other bearing on the opposite side of the tongue, and an equalizer pivoted on the arm, the pivotal relation of the equalizer and the arm adapted to be changed when said arm is moved to the other bearing.

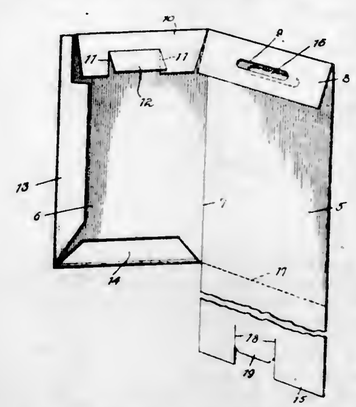
3. The combination of a tongue, a bearing on one side of the tongue, a bearing on the opposite side of the tongue rearward of the first bearing, an arm supported in one bearing and movable to the other, and an equalizer pivoted on the arm, the pivotal relation of the equalizer and the arm adapted to be changed when said arm is moved to the other bearing.

4. The combination of a tongue, a plurality of bearings on the tongue, an arm supported in one bearing and movable to another, an equalizer pivoted on the arm, the pivotal relation of the equalizer and the arm adapted to be changed when the latter is moved to the other bearing, a draft rod connected to said pivot and to the tongue, and adapted to be adjusted with the arm when the latter is moved.

5. The combination of a tongue, a bearing on one side of the tongue, a bearing on the opposite side of the tongue, an arm having one end bent downwardly to engage with a bearing on one side of the tongue and movable to the bearing on the opposite side of the tongue, the other end of said arm bent upwardly to form a pivot and an equalizer having two holes with one of which said pivot engages, said pivot adapted to be transposed to the other hole when the downwardly bent end of the arm is moved to another bearing.

[Claims 6 and 7 not printed in the Gazette.]

1,152,937. COIN-RECEPTACLE. JACOB W. ELVYN and EDWARD A. CHRISTOPH, Chicago, Ill. Filed May 14, 1915. Serial No. 27,985. (Cl. 229—69.)



1. In a coin container, a front wall and a back wall each having a flap extending downwardly therefrom, one of said flaps having an opening therein and the other having a secondary flap extending therefrom, said main flaps being secured together, with said secondary flap extending through said opening, and an opening in one of said walls above the bottom of said flaps.

2. In a coin container, a front wall and a back wall each having a flap extending downwardly therefrom, one of said flaps having an opening therein and the other having a secondary flap extending therefrom, said main flaps being secured together, with said secondary flap extending through said opening, and an opening in one of said walls above the bottom of said flaps, the remaining edges of said walls being secured together.

3. In a coin container, a front wall and a back wall each having a flap extending downwardly therefrom, one of said flaps having an opening therein and the other having a secondary flap extending therefrom, said main flaps being secured together, with said secondary flap extending through said opening, and an opening in one of said walls registering with the opening in said flap.

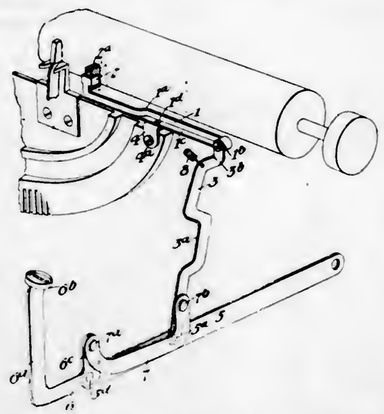
4. In a coin container, a front wall and a back wall each having a flap extending therefrom, the flap on said front wall having an opening therein, and the other flap having a secondary flap extending therefrom, said main flaps being secured together, with the secondary flap extending through said opening, and an opening in the front wall registering with the opening in said flap, the remaining edges of said walls being secured together.

5. In a coin container, an envelop having a slot therein near one end thereof for the entry of coins, and an extension hinged to the opposite end of said envelop, the free end of said extension having a tongue insertible in

said slot to hold said extension in position folded back upon the face of said envelop.

[Claim 6 not printed in the Gazette.]

1,152,938. ERASING-SHIELD FOR TYPE-WRITING MACHINES. BENJAMIN P. FORTIN, Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 25, 1914. Serial No. 820,809. (Cl. 197—181.)



1. In a typewriting machine, the combination with a key lever pivoted therein, of an eraser holder pivotally supported on a universal joint adjacent to the platen, and means between said lever and holder to operate the latter by the former.

2. In a typewriting machine, the combination of an eraser holder mounted on the machine frame and supporting the eraser in operative position relative to the platen, a universal-jointed horizontal arm supporting said holder, and finger-actuated mechanism for operating said holder.

3. In a typewriting machine, the combination of an eraser holder consisting of an arm pivotally supported in parallelism with the platen in manner to vibrate vertically, said holder carrying an eraser, a horizontally pivoted bracket supporting said arm, a finger-key, and connections between said holder and finger-key to operate the latter by the former.

4. In a typewriting machine, the combination of an eraser holder consisting of an arm bent into two portions extending substantially parallel and pivotally supported in parallelism with the platen in manner to vibrate vertically, said holder carrying an eraser, means also permitting said holder to vibrate horizontally, a finger-key, and connections between said finger-key and holder to operate the latter by the former.

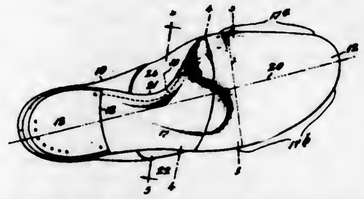
5. In a typewriting machine, the combination of a platen, an eraser holder mounted to vibrate at one end across and against the printing zone on said platen, a universal-jointed arm carrying said holder, a key lever, and a link pivotally connecting said holder and lever.

[Claims 6 to 19 not printed in the Gazette.]

1,152,939. SHOE. EDWARD D. GALLAGHER, New York, N. Y., assignor to Ancell H. Ball and Thomas A. Ball, a Copartnership trading under the name of Best & Company, New York, N. Y. Filed Jan. 25, 1915. Serial No. 4,096. (Cl. 36—1.)

1. In a shoe, a sole having an otherwise unsupported upward convexity or bulge molded in the material thereof at a location which falls under the metatarsal bones, for supporting the latter, in combination with a foot-inclosing portion secured to said sole.

2. In a shoe, the combination of a sole having a shank which is abnormally offset at its outer edge relatively to a straight line which equally divides those transverse portions of the heel and forepart which are directly contiguous to the end portions of said shank, and the inner edge of said shank abnormally offset inwardly relatively to the inner edge of said forepart, said sole also having an upward convexity or bulge formed in the material thereof at a location which falls under the metatarsal bones, for supporting the latter, with an upper foot-inclosing portion secured to said sole and having an arch portion in its waist, which is extended abnormally outward relatively to the inner edge of the shank.

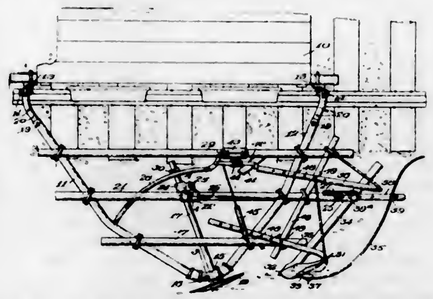


3. A sole having an otherwise unsupported upward convexity or bulge molded in the material thereof at a location which falls under the metatarsal bones, for supporting the latter.

4. A sole having a shank which is abnormally offset at its outer edge relatively to a straight line which equally divides those transverse portions of the heel and forepart which are directly contiguous to the end portions of said shank, and the inner edge of said shank abnormally offset inwardly relatively to the inner edge of said forepart, said sole also having an upward convexity or bulge formed in the material thereof at a location which falls under the metatarsal bones, for supporting the latter.

5. In a shoe, a sole having as an integral part thereof, an upwardly presented convexity or bulge having a transverse dimension sufficient to cause the bulge to underlie a plurality of metatarsal bones, whereby they may be conjointly supported.

1,152,940. WEED-DESTROYING MACHINE. PATRICK J. GANNON, Farmington, Minn. Filed July 28, 1914. Serial No. 853,605. (Cl. 37—22.)



1. In an apparatus for destroying weeds on railway tracks, a traveling supporting frame, a rotary cutter-disk, a shaft carrying the cutter-disk, a boxing for the shaft pivoted on the supporting frame to allow the shaft to be swung in a horizontal plane to vary the angle of the cutter-disk to the line of travel of the apparatus, a longitudinal bar on the supporting frame, a sleeve slidable on said bar, and a boxing pivotally connected to said sleeve, through which last-mentioned boxing the aforesaid shaft loosely passes.

2. In an apparatus for destroying weeds on railway tracks, a traveling supporting frame, a rotary cutter-disk, a shaft carrying at one of its ends the cutter-disk, a boxing for said end of the shaft pivoted on the supporting frame to allow the shaft to be swung in a horizontal plane to vary the angle of the cutter-disk to the line of travel of the apparatus, a bar carried by the supporting frame and having a slot in which the opposite end of the shaft is supported, a longitudinal bar on the supporting frame, a sleeve slidable on said longitudinal bar, and a boxing pivotally connected to said sleeve, through which last-mentioned boxing the intermediate portion of the shaft loosely passes.

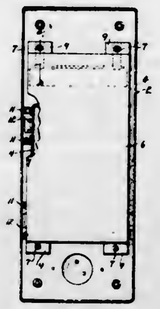
3. In an apparatus for destroying weeds on railway tracks, a traveling supporting frame, a weeding hoe carried by said frame, said hoe having a vertical shank which is pivotally supported to swing transversely of the supporting frame and about an axis which is parallel to the line of travel of the supporting frame, said hoe being set at an oblique angle to said line of travel, and resilient means for holding the hoe to its work.

4. In an apparatus for destroying weeds on railway tracks, a traveling supporting frame, a longitudinal bar on said frame, a sleeve mounted on the bar to rotate about an axis which is parallel to the line of travel of the supporting frame, a weeding hoe having its shank fastened to the sleeve to permit a swing of the hoe transversely of the line of travel of the supporting frame, said hoe being set at an oblique angle to said line of travel, and a resilient connection between the hoe shank and the supporting frame.

5. In an apparatus for destroying weeds on railway tracks, a traveling supporting frame, an oblique weed cutting blade carried by the frame, an oblique scraper blade running behind the weed cutting blade, and bendable to vary its angle to the line of travel, and means for holding the scraper blade in adjusted position.

[Claim 6 not printed in the Gazette.]

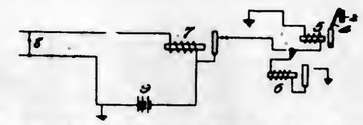
1,152,941. LETTER-BOX. ARTHUR S. GODDARD, Waterbury, Conn., assignor to Waterbury Mfg. Co., Waterbury, Conn., a Corporation. Filed Dec. 26, 1914. Serial No. 879,091. (Cl. 232—19.)



A sheet metal letter box plate having separately formed hollow rivets having flanges which are secured to its rear face and projecting rearward therefrom, and parts of a letter box secured to the plate by upsetting the outer ends of the said rivets.

1,152,942. FIRE-ALARM SYSTEM. FELIX GOTTSCHALK, Stirling, N. J. Filed Feb. 13, 1914. Serial No. 818,501. (Cl. 179—5.)

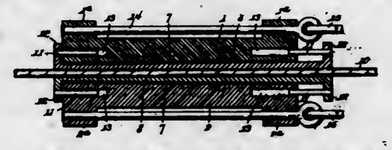
1. In an electric alarm system of the character described, the combination of a telephone having a switch hook, a latch for holding said switch hook in its normal position, electrical means for releasing said latch, a circuit including a source of energy, thermostatic circuit openers and a relay, and a circuit including normally open contacts on said relay, said source of energy and said electrical means.



2. In an electric alarm system of the character described, the combination of a telephone having a switch hook, a latch for holding said switch hook in its normal position, electrical means for releasing said latch, a circuit including a source of energy, thermostatic circuit openers and a relay, a circuit including normally open contacts on said relay, said source of energy and said electrical means, and a sound producing device controlled by said relay.

3. In an electric alarm system of the character described, the combination of a telephone having a switch hook, actuating means for said hook, electrically operated means for controlling said actuating means, a circuit, a device in said circuit, adapted to change its resistance in the presence of abnormal heat, a relay in parallel with said device a source of energy connected to said circuit, and a circuit and associated devices controlled by said relay.

1,152,943. WIRE-CLAMPING DEVICE. WILLIAM L. HALL, Newark, Ohio. Filed Aug. 12, 1914. Serial No. 856,364. (Cl. 24—136.)



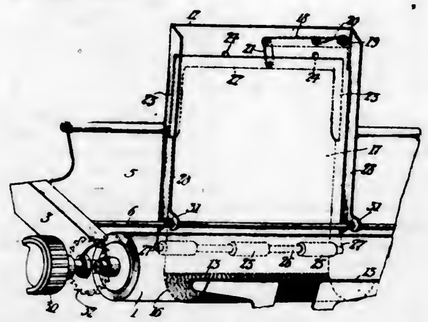
1. A clamping device comprising opposing relatively slidable body members each having lateral longitudinal flanges, guide members carried by the flanges of one member adapted to embrace the flanges of the other member, said members having in their contiguous faces longitudinal grooves which decrease in depth from the front ends to the rear ends thereof, opposing tapered gripping members mounted in said grooves, each of said gripping members being slidably retained by its corresponding body member.

2. A clamping device comprising opposing relatively slidable and separable body members, means maintaining said body members against lateral separation, said members having their contiguous faces provided with longitudinal tapered grooves, opposing tapered gripping members slidably mounted in said grooves, each gripping member being slidably retained by its corresponding body member, and means for placing said body members under tension.

3. A clamping device comprising opposing relatively slidable and separable body members, means maintaining said body members against lateral separation, said members having their contiguous faces provided with longitudinal tapered grooves, opposing tapered gripping members slidably mounted in said grooves, said gripping members having a greater length than said body members, each gripping member being slidably retained by its corresponding body member, and means for placing said body members under tension.

4. A clamping device comprising opposing relatively slidable and separable body members, means for maintaining said members against lateral separation, said members having tapered grooves in their contiguous faces, opposing tapered gripping members slidably mounted in said grooves, and means carried by each gripping member for preventing dissociation of said gripping member from its corresponding body member, said gripping members having wire-receiving grooves in their contiguous faces.

1,152,944. TYPE-WRITING MACHINE. JOSEPH C. HARVEY, Chicago, Ill., assignor to John T. Underwood, Brooklyn, N. Y. Filed Mar. 8, 1913. Serial No. 752,887. (Cl. 197—128.)



1. The combination, with a revoluble platen, and a platen frame having a paper shelf at the rear of the platen; of an auxiliary work shelf between the platen and the first-named shelf hinged to said platen frame to permit its lower end to swing toward said platen; and a roll carried by the auxiliary shelf at its said lower end to be pressed by the weight of said shelf against said platen for coöperation with the latter to feed forwardly sheets which are laid upon said auxiliary shelf.

2. The combination, with a revoluble platen, and a platen frame having a paper shelf at the rear of the platen; of an auxiliary work shelf between the platen and the first-named shelf having a detachable hinged mounting to permit its lower end to swing toward said platen; and a roll carried by the auxiliary shelf at its said lower end to be pressed by the weight of said shelf against said platen for coöperation with the latter to feed forwardly sheets which are laid upon said auxiliary shelf.

3. The combination with a revoluble platen, a platen frame having a paper shelf at the rear of the platen, and a horizontal rod mounted longitudinally in said frame; of an auxiliary work shelf between the platen and the first-named shelf hinged upon said rod to permit its lower end to swing toward said platen; and a roll carried by the auxiliary shelf at its said lower end to be pressed by the weight of said shelf against said platen for coöperation with the latter to feed forwardly sheets which are laid upon said auxiliary shelf.

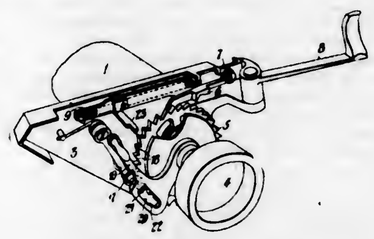
4. The combination, with a revoluble platen, a platen frame having a paper shelf at the rear of the platen, and a horizontal rod mounted longitudinally in said frame; of an auxiliary work shelf between the platen and the first-named shelf having a pair of opposite hooks thereon detachably and pivotally engaging said rod, to permit the lower end of said auxiliary shelf to swing toward said platen; and a roll carried by the auxiliary shelf at its said lower end to be pressed by the weight of said shelf against said platen for coöperation with the latter to feed forwardly sheets which are laid upon said auxiliary shelf.

5. The combination with a revoluble platen and a platen frame, of an auxiliary work shelf, an inking strip extending along the platen and means yieldingly connecting said strip to said auxiliary work shelf to permit the strip to be fed around the platen together with a work sheet supplied from said auxiliary work shelf.

[Claims 6 to 24 not printed in the Gazette.]

1,152,945. TYPE-WRITING MACHINE. JOSEPH C. HARVEY, Chicago, Ill., assignor to John T. Underwood, Brooklyn, N. Y. Filed Apr. 24, 1913. Serial No. 763,183. (Cl. 197—123.)

1. The combination of a platen frame, a platen, a ratchet wheel to rotate the platen, a clutch frictionally connecting said platen and ratchet wheel, a line-space mechanism to rotate the ratchet wheel, means for locking said ratchet wheel against rotation, and means for unlocking said ratchet wheel by actuating the line-space mechanism.



2. In a typewriting machine, the combination with a line-space wheel and a platen, of means to afford a rotatable adjustment of the platen relatively to the line-space wheel, comprising a clutch connecting the line-space wheel to the platen, said clutch constructed to yield by the application of force to turn the platen relatively to the line-space wheel, a lock adapted to be set in position to hold the line-space wheel while the platen is being forced around relatively thereto, a line-space lever, and means operated by a single movement of said lever to release the lock and rotate the line-space wheel, thereby effecting a line-space rotation of the platen.

3. The combination with a platen and a line-space wheel, of an intervening clutch, said platen, line-space wheel and clutch forming a train permitting relative adjustment of the line-space wheel and platen by the application of force, mechanically releasable means for locking one member of said train while the force is being applied to another member of said train to effect rotatable adjustment between said members, a line-space lever, and means operated thereby to release said releasable means and rotate said members.

4. The combination of a platen frame, a platen, a ratchet wheel to rotate the platen, a line-space mechanism to rotate the ratchet wheel, a friction clutch between said ratchet wheel and platen, means for holding said ratchet wheel from rotation while said platen is adjusted, and means controlled by the line-space mechanism to automatically release the ratchet wheel from said holding means when the line-space mechanism is operated.

5. The combination of a platen frame, a platen, a ratchet wheel to rotate the platen, a line-space mechanism to rotate the ratchet wheel, a friction clutch between said ratchet wheel and platen, a detent for alining said ratchet wheel, means for locking said detent to prevent the ratchet wheel from turning while the platen is adjusted, said locking means being self-holding in locking position, and means operated by the line-space mechanism to actuate said locking means to release the detent.

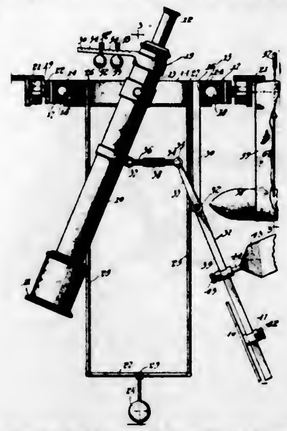
[Claims 6 to 13 not printed in the Gazette.]

1,152,946. RANGE-FINDER FOR AIR-CRAFT. JOHN WILLIAM HASBURG, Chicago, Ill. Filed Dec. 8, 1914. Serial No. 876,089. (Cl. 33—46.)

1. In a device of the character described, the combination of a sighting structure, a pivotal mounting therefor, a pivoted air pressure responsive wing, a connection between the wing and the sighting structure, and adjustable means for varying the distance between the wing and its pivot.

2. In a device of the character described, the combination of a sighting structure, a universal mounting therefor, an air pressure responsive wing, a connection between the said wing and sighting structure for moving the latter in a vertical plane in response to wing movement, and a second air pressure responsive wing connected with the sighting structure and adapted to move the same about a vertical axis.

3. In a device of the character described, the combination of a sighting structure, a pivotal mounting therefor, a pivoted air pressure responsive wing, a connection between the wing and the sighting structure, and adjustable means resisting the movement of the sighting structure.

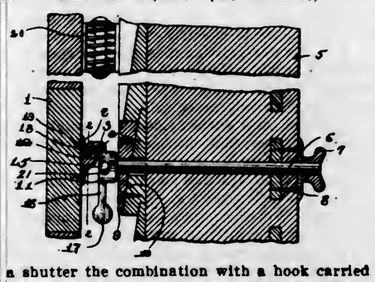


4. In a device of the character described, the combination of a sighting structure, a universal mounting therefor, an air pressure responsive wing, a connection between the said wing and sighting structure for moving the latter in a vertical plane in response to wing movement, adjustable means resisting the movement of the sighting structure in a vertical plane, and a second air pressure responsive wing connected with the sighting structure and adapted to move the same about a vertical axis.

5. In a device of the character described, the combination of a sighting structure, a pivotal mounting therefor, a pivoted air pressure responsive wing, a connection between the wing and the sighting structure, and two separate and independently adjustable means resisting the movement of the sighting means.

[Claims 6 and 7 not printed in the Gazette.]

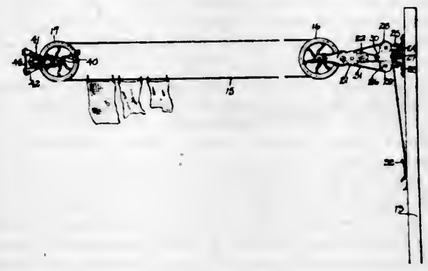
1,152,947. SHUTTER-HOLDING DEVICE. JOSEPH HESKETH and ALFRED OLSON, Portsmouth, Va. Filed June 14, 1915. Serial No. 33,948. (Cl. 16—129.)



1. In a shutter the combination with a hook carried by the shutter, of a rod rotatably associated with the wall of the building, said rod having a shank pivotally and slidably connected to its outer end, said shank having a hook adapted to engage the first named hook, and to disengage the same upon rotation of the rod.

2. In combination with a hook carried by the shutter, of a rod rotatably supported by the wall of the building, said rod having spaced plates carried by its outer end, a shank slidably and pivotally supported between the plates and having a hook on its upper end, and a weight on its lower end, said hooks being adapted for interlocking engagement when the shutter is in its open position, and means for rotating the rod to swing the hook of the shank laterally to disengage the hook carried by the shutter.

1,152,948. CLOTHES-LINE. FRANK S. HETRICK, Fortville, Ind. Filed Oct. 20, 1913. Serial No. 796,231. (Cl. 68—12.)



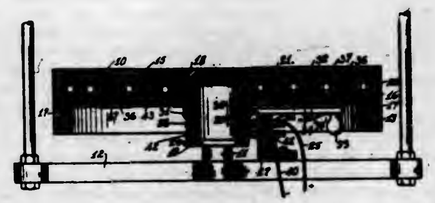
The combination with an endless clothes line and wheels upon which said clothes line is mounted, of a vertically fixed frame having a plurality of vertical pulleys one over the other, a pulley frame in which one of said wheels is mounted, vertical pulleys in alinement with each other in said last mentioned frame, a cable over said pulleys, and a cable operating over the pulleys in the fixed frame and pulley frame whereby said first mentioned wheel will be maintained in a vertical position.

1,152,949. CAUSTIC-SODA PROCESS. JULES HECTOR HIRT, El Paso, Tex. Filed Feb. 11, 1913. Serial No. 747,607. (Cl. 23—22.)

1. The process of making caustic soda consisting in flowing molten sulfid of soda into water and thereby dissolving the sulfid and adding thereto while hot, successive small portions of calcium hydrate in dilute solution.

2. The process of making caustic soda consisting in flowing molten sulfid of sodium into water and thereby dissolving the sulfid and in adding to the hot solution, calcium hydrate.

1,152,950. HOT-PLATE-HEATING MEANS FOR CORN-POPPING MACHINES AND THE LIKE. FREDERICK HOKE, Indianapolis, Ind., assignor to Holcomb & Hoke Mfg. Co., Indianapolis, Ind., a Corporation. Filed July 16, 1914. Serial No. 851,317. (Cl. 219—19.)



1. A hot plate for a popcorn or like machine, a heating coil located adjacent the same in spiral form, an annular series of contact plates in electrical connection with said heating coil at successive points, a switch arm rotatably mounted substantially concentric with said coil and carrying a contact point adapted to engage any of said contact plates according to the position of said switch arm, and means for conveying current to the switch arm and therethrough to the coil so that the extent of the length of said coil through which the current passes may be regulated.

2. A hot plate for a popcorn or like machine, a heating coil located below the top surface of said hot plate, a body of insulating material in which said heating coil is mounted and having a central downwardly extending por-

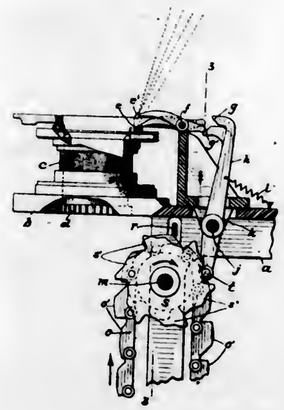
tion, an annular series of contact plates secured to the underside of said body of insulation and in electrical connection with successive points on said heating coil, a switch arm rotatably mounted on said downward extension of the body of insulating material and carrying a contact point adapted to engage any of said contact plates according to the position of said switch arm, and means for conveying current to said switch arm.

3. A circular hot plate for a popcorn or like machine, a heating coil located below the top surface of said hot plate, a body of insulaing material in which said heating coil is mounted and having a central downwardly extending portion, an annular series of contact plates secured to the underside of said body of insulation and in electrical connection with successive points on said heating coil, a ring surrounding and embedded in the downwardly extending portion of the body of insulating material, means for supplying current to said ring, a switch arm having an annular end mounted in said channel so that the switch arm can be angularly adjusted, a contact point loosely carried in said switch arm in position to engage any of said contact plates according to the position of said switch arm, and a spring for forcing said contact point against the contact plates.

4. A rotary hot plate for a popcorn or like machine, a heating coil located immediately below the top surface of said hot plate, a body of insulating material in which said heating coil is mounted and having a central downwardly extending portion, an annular series of contact plates secured to the underside of said body of insulation and in electrical connection with successive points on said heating coil, a channeled ring surrounding and embedded in the downwardly extending portion of the body of insulating material, a switch arm having an annular end mounted in said channel so that the switch arm can be angularly adjusted, a contact point loosely carried in said switch arm in position to engage any of said contact plates according to the position of said switch arm, a spring for forcing said contact point against the contact plates, a pair of rings embedded in a downwardly extending portion of said body of insulation, means for connecting one of said rings with the ring on which the switch arm is mounted, means for connecting the other ring to the end of the heating coil, a stationary bracket near said rings, brushes on said bracket for engaging said rings, and electrical connections with said brushes.

5. The combination of a rotary hot plate for a popcorn or like machine having a central downwardly extending column for rotatably mounting the same and a flange extending outward from the periphery of said plate, an electrical heating coil below said plate between said flange and central column and spirally disposed, an insulating sleeve surrounding said column, means connected with said column for supporting said sleeve, an annular body of insulating material surrounding said sleeve and extending to the flange of the hot plate and supporting said heating coil, means connected with the flange of the hot plate for supporting said insulating member, insulating strips extending between the sections of said heating coil for separating the same, a channeled ring secured on said insulating sleeve, a switch arm with an annular portion mounted in the channel of said ring so that the switch arm will be angularly adjustable, a contact pin loosely mounted in said switch arm, a spring on said switch arm for forcing said spring upward, a series of contact plates mounted in succession with said annular body of insulating material and in position to be engaged successively by said contact point, electrical connection between said contact plates and successive portions of said heating coil, rings surrounding said insulating sleeve, means for connecting one of said rings with said channeled ring, means for connecting the other ring to the end of the heating coil, a stationary brush for supplying current to one of said rings, and another stationary brush for taking current from the other ring, substantially as set forth.

1,152,951. THREAD-CARRIER-OPERATING MECHANISM FOR CIRCULAR-KNITTING MACHINES. HARRY A. HOUSEMAN, Philadelphia, Pa., assignor to Standard Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 9, 1914. Serial No. 860,852. (Cl. 66—12.)



1. In a circular knitting machine, the combination with a rotatable needle cylinder, of a series of non-rotatable independent thread carriers, positively operated mechanism adapted to positively move one carrier into action and another carrier out of action, and pattern-controlled mechanism to establish operative relation between said mechanism and different combinations of carriers to cause said mechanism to so operate to effect any predetermined change of yarn.

2. In a circular knitting machine, the combination with a rotatable needle cylinder, of a series of non-rotatable independent thread carriers, positively operated mechanism adapted to positively move one carrier into action and another carrier out of action, and pattern-controlled mechanism adapted to first select the carriers to be moved respectively into and out of action and then positively operate the same to effect the change of yarn.

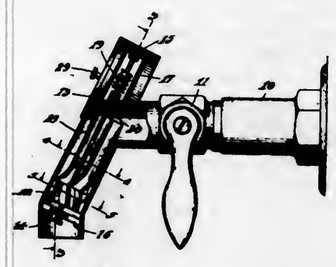
3. In a circular knitting machine, the combination with a rotatable needle cylinder, of a series of non-rotatable independent thread carriers, positively operated mechanism adapted to positively move said thread carriers into and out of action, and pattern means to establish operative relations between said mechanism and different combinations of carriers.

4. In a circular knitting machine, the combination with a rotatable needle cylinder, of a series of non-rotatable independent thread carriers, positively operated mechanism adapted to positively move said thread carriers into and out of action, pattern means adapted to establish operative relations between said mechanism and different pairs of carriers to dictate the movement of one carrier into, and the other out of, action, and positively operating means to positively actuate said mechanism to effect the change of yarn.

5. In a circular knitting machine, the combination with a rotatable needle cylinder, of a series of non-rotatable independent thread carriers, mechanism adapted to positively move said thread carriers both into and out of action, pattern-controlled means adapted to preliminarily position said mechanism to dictate a change of carriers, and pattern-controlled means to positively actuate said mechanism.

[Claims 6 to 13 not printed in the Gazette.]

1,152,952. LIQUID-MEASURING DEVICE. JOSEF A. KEPKA, Chicago, Ill. Filed Mar. 25, 1914. Serial No. 827,066. (Cl. 73—37.)



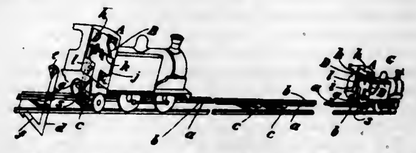
1. A liquid measuring device comprising a liquid passage; a meter wheel rotatably mounted in said passage, the axis of said wheel being coincident with the axis of said passage, and the blades of said wheel being helically disposed; longitudinally extending deflector blades fixed in said passage, positioned rearwardly of said meter wheel, the major portion of said blades being straight and parallel with said passage and the lower end portions thereof being curved in a direction opposite to the direction of curvature of said meter wheel blades so as to direct the liquid passing through said passage into effective engagement with said meter wheel blades, substantially as described.

2. A liquid measuring device comprising a liquid passage; a meter wheel rotatably mounted in said passage, the axis of said wheel being coincident with that of said passage and the blades of said wheel being curved; deflector blades fixed in said passage positioned rearwardly of said meter wheel, said deflector blades being curved in a direction opposite to the direction of curvature of said meter wheel blades so as to direct the liquid passing through said passage into effective engagement with said meter wheel blades; a shaft carrying said meter wheel; a bearing in the lower end of said passage for one end of said shaft, and a second bearing therefor arranged above said passage and out of communication therewith; a rotary indicator; and an operative connection between said shaft and said indicator, substantially as described.

3. A liquid measuring device comprising a liquid passage; a meter wheel rotatably mounted in said passage, the axis of said wheel being coincident with that of said passage and the blades of said wheel being curved; deflector blades fixed in said passage positioned rearwardly of said meter wheel, said deflector blades being curved in a direction opposite to the direction of curvature of said meter wheel blades so as to direct the liquid passing through said passage into effective engagement with said meter wheel blades; a shaft carrying said meter wheel; a bearing in the lower end of said passage for one end of said shaft, and a second bearing therefor arranged above said passage and out of communication therewith; a rotary indicator; an operative connection between said shaft and said indicator, said connection comprising a worm fixed to said shaft; a worm wheel meshing with said worm; and a train of gears interposed between said indicator and said worm wheel, substantially as described.

4. A liquid measuring device comprising a liquid passage; a meter wheel rotatably mounted in said passage adapted to be rotated by the liquid flowing through said passage; a rotary indicator; a train of gears operatively connected with said meter wheel; a pawl and ratchet connection between said gears and said indicator whereby the latter will be free for manual adjustment in one direction; and an exteriorly positioned finger piece for manually adjusting said indicator, substantially as described.

1,152,953. MEANS FOR THE PREVENTION OF ACCIDENTS ON RAILWAYS. THOMAS CURRIE KERR, Stevenston, Scotland. Filed June 12, 1914. Serial No. 844,667. (Cl. 246—25.)



1. The combination, on a moving body, of a partial circuit, a multi-cell battery and means whereby as the speed of the body varies a varying number of cells of said battery will be included in said partial circuit.

2. The combination, on a train or part thereof, of a partial circuit, a multi-cell battery, a governor operable from a movable part of the train and a switch, operable from said governor, adapted to include a number of cells in said partial circuit.

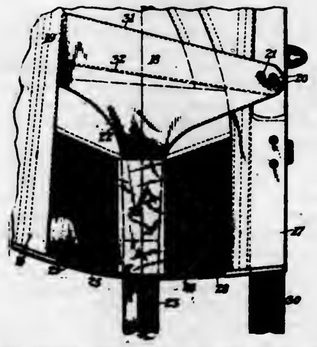
3. Means for preventing collisions on railways between two moving bodies comprising electric conductors for the track, a partial circuit on each body, means connecting said partial circuits with the track conductors, an electric device in each partial circuit, a multi-cell battery on each body and means, on each body, for including a number, dependent upon the speed of the body, of cells of the battery in that body's partial circuit.

4. Means for preventing collisions on railways between two trains comprising electric conductors for the track, a partial circuit on each train, means connecting said partial circuits with the track conductors, an electric device in each partial circuit, a source of electricity connected with each partial circuit, a governor on each train operable from a movable part of the train and means, on each train, operable from said governor, for varying the potential of the electric energy transmitted from its source of electricity to its partial circuit.

5. Means for preventing collisions on railways between two moving bodies comprising electric conductors for the track, a partial circuit on each body, means connecting said partial circuits with the track conductors, an electric device in each partial circuit, a source of electricity connected with each partial circuit, a governor on each body operable from a movable part thereof, and switch means, on each body, operable from said governor, for varying the potential of the electric energy transmitted from its source of electricity to its partial circuit.

[Claim 6 not printed in the Gazette.]

1,152,954. APPAREL-CORSET. DANIEL KOPS, New York, N. Y. Filed May 26, 1915. Serial No. 30,501. (Cl. 2—73.)



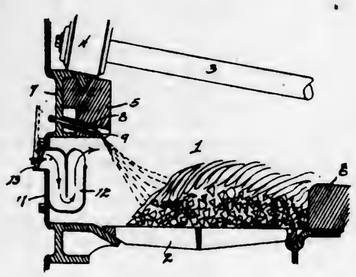
1. In an apparel corset and in each corset body half thereof, a skirt depending therefrom, a tension strap se-

cured at one edge on a line distant from the front steel, means for adjustably securing the opposite end of the tension strap at the front of the corset body, a hose supporter prolongation depending from said tension strap, and means secured in said skirt and between which and a portion of the skirt the said prolongation of the tension strap passes.

2. In an apparel corset and in each corset body half thereof, a skirt depending therefrom, a tension strap secured at one edge by a line of stitches distant from the front steel, means for securing the opposite end of the tension strap to the lower front portion of the corset body, a hose supporter prolongation depending from the said tension strap, a sleeve formed in the lower front portion of the said depending skirt, and a hose supporter secured to and extending from the lower end of the said prolongation of the tension strap, predetermined portions of the said prolongation and hose supporter lying within the said sleeve in the skirt so as to be maintained in position relatively to the skirt when the wearer of the garment is seated.

3. In an apparel corset and in each corset body half thereof, a skirt depending therefrom, a tension strap secured at one edge by a line of stitches distant from the front steel, means for securing the opposite end of a tension strap to the lower front portion of the corset body, a hose supporter prolongation depending from the said tension strap, a sleeve formed in the lower front portion of the said depending skirt, and a hose supporter secured at one end to the lower end of the prolongation of the tension strap and secured at its opposite end to the said skirt so that predetermined portions of the said prolongation of the tension strap and the hose supporter lie within the said sleeve in order to be maintained in position relatively to the skirt when the wearer of the garment is seated.

1,152,955. FUEL-ECONOMIZER. JOHN C. LANDEFELD, Detroit, Mich. Filed July 23, 1914. Serial No. 852,767. (Cl. 110—60.)



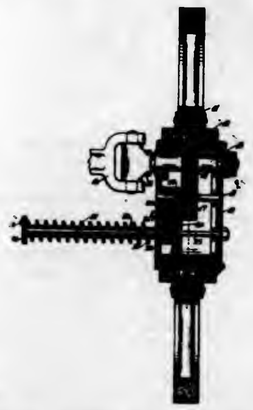
1. In a furnace, in combination with steam conduits adapted to deliver jets of steam directly into the fire at an angle, a substantially U shaped metal air conduit extending into the fire box of such length that the air becomes highly heated in passing therethrough and having a discharge end positioned to direct the air through the jets in a manner to deflect the steam over the area of combustion.

2. In a furnace, the combination with steam conduits adapted to direct jets of steam at an angle into the fire, of a sheet-metal air conduit extending into the fire-box and adapted to direct air flowing therethrough into the jets at an angle to the direction of flow of steam, said conduit being suspended on the door of the fire box.

3. In a furnace, the combination with steam conduits adapted to direct jets of steam at an angle into the fire, of a U shaped sheet-metal air conduit secured to the furnace door, and extending into the fire-box, and having a curved discharge end adapted to direct heated air over the area of combustion through the said jets.

4. In a furnace, in combination with steam conduits adapted to deliver steam through a plurality of jets directly into the fire at an angle, a substantially U shaped metal air conduit secured to the inside of the fire door and extending outwardly therethrough providing an inlet, the outlet end within the fire-box being curved to direct the air through the jets in a manner to distribute the steam over the area of combustion, and a damper for controlling said inlet, the length of the conduit being such that air passing therethrough becomes highly heated prior to its liberation into the fire-box.

1,152,956. RESILIENT HUB. RUTHERFORD B. LONGNECKER, Dayton, Ohio. Filed July 27, 1914. Serial No. 853,528. (Cl. 21—187.)



1. A wheel hub, an eccentrically disposed spindle therein, a spring member, and a set of gears connected to said spindle for actuating said spring member.

2. A wheel hub, an eccentrically disposed spindle therein, a spring member, and a gear attached to said spindle adapted to mesh with a set of gears for actuating said spring member.

3. A wheel hub, an eccentrically disposed spindle therein, gears connected to said spindle, a spring member, and means for connecting one end of said spring member to a gear revolving in one direction and the other end of said spring member to a gear revolving in the opposite direction.

4. A wheel hub, an eccentrically disposed spindle therein, two rods one within the other and attached to two gears respectively, oscillating in opposite directions and meshing with a set of gears in connection with said spindle, the outer portions of said rods turned at right angles and away from each other, and a spring attachment between the ends of said rods.

5. A wheel hub, an eccentrically disposed spindle therein, two rods one within the other and attached to two gears respectively, oscillating in opposite directions and meshing with a set of gears in connection with said spindle, the outer portions of said rods turned at right angles and away from each other, two arc shaped members telescoped between the ends of said rods, and a spiral spring surrounding said arc shaped members with each end attached respectively to each arc shaped member.

1,152,957. PAPER CASING FOR HOES. ERWIN D. LOWELL, Cleveland Heights Village, Ohio, assignor to The American Fork & Hoe Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 8, 1915. Serial No. 11,836. (Cl. 206—46.)

1. The combination, with a hoe having a blade shank and handle, of a casing comprising a tube extending over the handle of the hoe and well toward the blade, and a sheet folded onto both sides of the blade and over the shank of the blade and beyond the inner end of the tube and there secured to the tube.



2. The combination, with a hoe, of a casing comprising a tube closed at its outer end and extending over the handle well toward the blade, and a sheet extending onto the inner side of the blade and folded across the cutting edge of the blade upwardly on the outer side and backwardly over the shank, such sheet having the portion over the shank bent transversely into a U-shape about the shank and onto the opposite sides of the tube, and means for fastening such U-shaped portions to the tube.

3. The combination, with a hoe, of a casing comprising a tube closed at its outer end and extending over the handle well toward the blade, and a sheet extending onto the inner side of the blade and folded across the cutting edge of the blade upwardly on the outer side and backwardly over the shank, such sheet having the portion over the shank bent transversely into a U-shape about the shank and onto the opposite sides of the tube, and a single fastening device passing through the two U-shaped portions and the intermediate tube to hold the parts of the casing together.

4. The combination, with a hoe head, of a casing consisting of a blank bifurcated and lapped over the hoe blade on opposite sides of the shank, extending along the inner face of the blade and then bent upwardly parallel with itself across the cutting edge of the blade onto the outer face of the blade, and then bent over the shank and brought together beneath the shank.

5. The combination, with a hoe head, of a casing comprising an approximately triangular sheet of paper having a portion lying on the inner face of the hoe blade, wings at the side bent across the edges of the hoe blade and onto the outer face, and a portion below the cutting edge which is then bent upwardly onto the outer face of the blade and over the lapped wings, the narrowest portion of the blank being then bent still farther across the top of the shank and bent around the shank.

[Claims 6 and 7 not printed in the Gazette.]

1,152,958. HINGE CONSTRUCTION. GUY A. LYON, Detroit, Mich., assignor to Long Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 20, 1912. Serial No. 732,418. (Cl. 16—104.)



1. A hinge construction for connecting two opposite body portions, comprising a body portion having a hook-shaped formation, a separate member having a corresponding hook-shaped formation to clasp into the hook of the body portion, said member having a portion bent into tubular form to receive a hinge pin, the portion so formed being of such length as to complete the tube and leave a surplus to be tucked into the hook on said separate member.

2. A hinge construction comprising two opposite body portions, each having a hook-shaped formation at the adjacent edges, a separate member for each body portion, each of which has a corresponding hook-shaped formation to clasp into the hook of its body portion, said members having alternate and opposite hinge sections to receive the hinge-pin; flanges formed on each of said members where they will be adjacent to each other when the body portions are in normal position; and a hinge-pin to engage these opposite sections and thus connect said two opposite body portions with a hinge-joint.

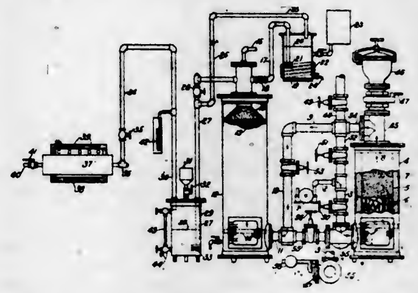
3. In a hinge for metal parts, a strip of metal having a longitudinal bend which folds one edge of the strip into a position opposite to and parallel with the strip and separated therefrom by a narrow space, said strip being bent to form a flange substantially perpendicular to the aforesaid parallel parts; and tubular hinge members extending from said flange in longitudinal alinement with each other and adapted to receive the hinge-pin.

4. In a hinge for metal parts, a strip of metal having a longitudinal bend which folds a portion of the strip into a position opposite to and parallel with the strip and separated therefrom by a narrow space, said strip being bent to form a flange substantially perpendicular to the aforesaid parallel parts; and tubular hinge members formed of strips long enough to encircle a hinge-pin and leave projecting ends, one of said ends on each strip being secured to the flange, with the other end inserted in the aforesaid space, the hinge members, being thereby mounted in longitudinal alinement and adapted to receive the hinge-pin.

5. In a hinge for metal parts, a strip of metal having a longitudinal bend which folds a portion of the strip into a position opposite to and parallel with the strip and separated therefrom by a narrow space; and tubular hinge members extending from said strip in longitudinal alinement with each other and adapted to receive the hinge-pin, said members being so placed with reference to the aforesaid space that the neck by which they are attached to the strip passes across the entrance to the space.

[Claims 6 and 7 not printed in the Gazette.]

1,152,959. CASE-HARDENING. ADOLPH W. MACHLET, Elizabeth, N. J. Filed Apr. 13, 1909. Serial No. 489,576. (Cl. 148—26.)



1. The process of case-hardening steel or iron articles, consisting in exposing them while heated to an atmosphere of carbon-monoxid and ammonia charged with oil or oily vapor.

2. The process of case-hardening steel or iron articles, consisting in subjecting them, while uniformly heated by controlled heat, to a current of carbon-monoxid and ammonia charged with naphtha.

3. The process of case-hardening steel or iron articles, consisting in subjecting them, while heated, to an atmosphere comprising air which has been passed through

heated ammonia-yielding and carbon-yielding materials, and to gas or vapor containing carbon or hydrocarbon.

4. The process of case-hardening steel or iron articles, consisting in subjecting them, while heated, to an atmosphere comprising air which has been passed through both a heated body of nitrogenous organic matter and a contiguous body of incandescent charcoal, and also charged with oil.

5. The process of case-hardening steel or iron articles, consisting in subjecting them, while heated, to an atmosphere comprising air which has been passed through an incandescent or heated body of nitrogenous organic matter, and then through an oil.

[Claims 6 to 14 not printed in the Gazette.]

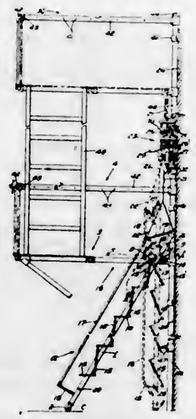
1,152,960. SCREW. SIMON J. MOLONEY, Chicago, Ill. Filed Dec. 2, 1914. Serial No. 875,191. (Cl. 85—41.)



1. The combination with a screw shank and head, there being an annular groove extending around said head, of a cap fitting over said head and provided with spring fastenings engaging said groove, substantially as described.

2. The combination with a screw shank and head provided with a screw driver slot, there being an annular groove formed in said head, of a substantially hemispherical metallic cap fitting over said head, the sides of said cap being slit to form spring leaves and the lower ends of said leaves being turned inwardly to automatically engage said groove, substantially as described.

1,152,961. FIRE-ESCAPE. CHARLES H. MORAND, Los Angeles, Cal. Filed Nov. 1, 1913. Serial No. 798,770. (Cl. 227—5.)



1. In a fire-escape, the combination with a support, of guides mounted on said support, side rails slidably mounted in the guides, and steps mounted to run on the rails and spaced apart to form a stairway when the side rails are lowered, said steps being adapted to slide together upon the side rails under said guides.

2. In a fire-escape, the combination of a support, guides mounted on said support and provided with elongated eyes, side rails slidably mounted through said eyes and adapted to be accommodated in a slanting position, and steps mounted to run on the side rails and spaced apart to form a stairway when the side rails are extended aslant, said steps being adapted to slide together upon the side rails under said guides.

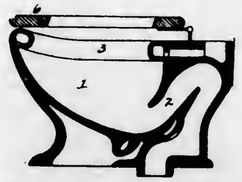
3. In a fire-escape, the combination with a wall, of a support upon said wall, guides mounted on said support adjacent the wall, side rails mounted to slide in the guides and alongside said wall, and steps mounted to run on the side rails and spaced apart to form a stairway when the side rails are lowered, said steps being adapted to slide together upon the side rails under said guides when said side rails are drawn up through the support and alongside the wall to thereby allow the side rails only to extend up adjacent said wall.

4. In a fire-escape, the combination of a support, disengageable guides mounted on said support, side rails slidably mounted in said guides and steps mounted to run on the side rails, flexible connections between the steps, and a flexible connection detachably connected to said disengageable guides to support the topmost step when the side rails are in place therein.

5. In a fire-escape, the combination of a support, guide members pivotally mounted on said support, said members each having semi-elliptical openings adapted to register one with another to form elongated eyes, side rails slidably mounted through said eyes and adapted to be accommodated in a slanting position, steps mounted to run on the side rails, and flexible connections to carry the steps.

[Claims 6 to 9 not printed in the Gazette.]

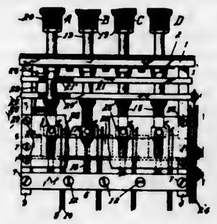
1,152,962. WATER-CLOSET. CHARLES H. MUCKENHIRN, Detroit, Mich. Filed Mar. 16, 1910. Serial No. 549,690. (Cl. 4—18.)



A water closet bowl having a body portion formed at its upper edge with a flushing rim, the sides of the rim rising in a gradual curve toward the front of the bowl to a plane slightly above the rear of the bowl, the forward portions of the sides of the rim being connected by a front portion of the rim and formed therewith on broad sweeping lines to merge gradually together in both horizontal and vertical projections to afford an unbroken rim having a uniform channel with a continuous smooth wall throughout the rim offering no resistance to the flow of water therethrough, the forward connecting portion of the rim forming a seat rest, the relation of the front and rear portions of the bowl being such as to support a seat of the usual formation in an approximately horizontal plane, in combination with said approximately horizontally disposed seat hinged to the rear portion of the bowl and resting on the front thereof.

1,152,963. NON-INTERFERING SWITCH DEVICE. GEORGE E. MUELLER, La Grange, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 1, 1912. Serial No. 729,105. (Cl. 179—177.)

1. A switch device comprising three or more actuating members, means comprising a plurality of sliding bars for preventing a simultaneous effective operation of more than one actuating member, and means for locking an actuated member against restoration until a second member is actuated.



2. A switch device comprising three or more manually operated members, control mechanism individual to each of said manual members, means comprising a plurality of endwise movable elements for preventing a simultaneous effective operation of more than one manual member, and means for locking an actuated member against restoration until a second member is actuated.

3. A switch device comprising three or more manually operated members, a control device individual to each of said members and adapted to be operated thereby, means comprising sliding bars controlled by said manual members to prevent a simultaneous effective operation of more than one of said manual members, and means for locking an actuated member against restoration until a second member is actuated.

4. A device of the character described comprising three or more independently operable actuating members, control devices individual to said members and adapted to be operated thereby, means comprising a plurality of endwise slidable elements effective when more than one of said actuating members are moved to prevent an effective operation thereof, and means for locking an actuated member against restoration until a second member is actuated.

5. A device of the character described comprising three or more independently operable actuating members switch contacts individual to said members and adapted to be operated thereby, means comprising a plurality of sliding bars for preventing a simultaneous operation of said switch contacts, and means for locking an actuated member against restoration until a second member is actuated.

[Claims 6 to 15 not printed in the Gazette.]

1,152,964. MANUFACTURE OF DENTAL MODELS. WILHELM NIELSEN, Bielefeld, Germany. Filed Oct. 17, 1913. Serial No. 795,642. (Cl. 18—55.)

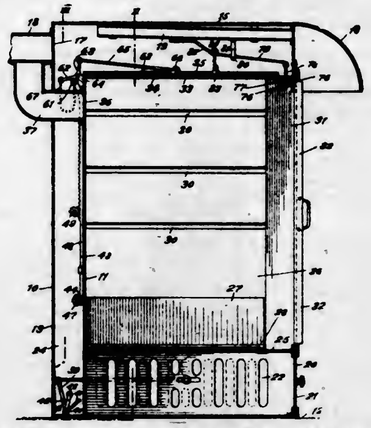
1. The method of obtaining a dental model which consists in obtaining a negative impression in a composition consisting of plaster of Paris and an additional agent and which composition on hardening is adapted to disintegrate in a hot liquid, obtaining a positive model therefrom in plaster of Paris and detaching the negative impression from the positive model by immersing the negative impression in a hot liquid.

2. The method of obtaining a dental model which consists in obtaining a negative impression in a composition consisting of plaster of Paris and potato flour, obtaining a positive model therefrom in plaster of Paris and detaching the negative impression from the positive model by immersing the negative impression in a hot liquid.

3. The method of obtaining a dental model which consists in obtaining a negative impression in a composition consisting of about 4 parts of plaster of Paris to about 1 part of potato flour, obtaining a positive model therefrom in plaster of Paris and detaching the negative impression from the positive model by immersing the negative impression in a hot liquid.

1,152,965. SMOKE-HOUSE. JACOB F. OBERLE, Richmond, N. Y. Filed Apr. 25, 1914. Serial No. 834,388. (Cl. 34—19.)

1. A smoke-house comprising an inner casing having a fire-box and a smoking compartment each having smoke exit openings, means for suspending the material to be smoked within the smoking compartment, an outer casing spaced from the inner casing to form an outer chamber thereabout, independent flues leading from the smoking compartment and from the outer chamber, said smoking compartment having a large opening for access by the workmen to the smoking compartment, doors controlling the access opening to said smoking compartment, doors for the fire-box to prevent smoke from entering the smoking compartment or to permit smoke to enter therein, means for closing said smoke exit openings of the fire-box and the smoking compartment, mechanism for controlling the position of the closing means of the smoke exit openings for automatically locking and unlocking the access doors of the smoking compartment, and means for opening or closing the doors of the fire-box.



2. A smoke-house comprising an inner casing having a fire-box and a smoking compartment each having smoke exit openings, means for suspending the material to be smoked within the smoking compartment, an outer casing spaced from the inner casing to form an outer chamber thereabout, means for conveying the smoke from the smoking compartment and from the outer chamber, said smoking compartment having a large opening for access by the workmen to said smoking compartment, doors controlling the access opening to said smoking compartment, doors for the fire-box to prevent smoke from entering the smoking compartment or to permit smoke to enter therein, means for closing said smoke exit openings of the fire-box and the smoking compartment, means for controlling the position of the closing means of the smoke exit openings, means for locking or unlocking the access doors of the smoking compartment, and means for opening or closing the doors of the fire-box.

3. A smoke-house having a fire-box and a smoking compartment each provided with smoke exit openings, an outer casing providing an outer chamber about the smoking compartment, flues leading from the smoking compartment and from the outer chamber, said smoking compartment having a large opening for access by the workmen to said smoking compartment, means controlling the access opening to said smoking compartment, doors for closing the fire-box to prevent smoke from entering the smoking compartment or to permit smoke to enter therein, and means for closing said smoke exit openings of the fire-box and doors leading to the smoking compartment.

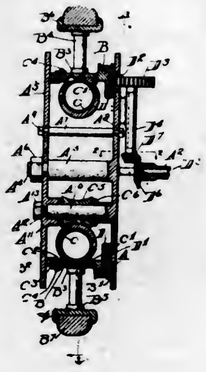
4. A smoke-house having an inner casing having a fire-box and a smoking compartment and having smoke exit openings, means for suspending the material to be smoked within the smoking compartment, an outer casing spaced from the smoking compartment to form an outer smoke chamber thereabout, independent flues leading from the smoking compartment and from the outer chamber, said inner smoking compartment having an access opening to the smoking compartment, doors controlling the access

opening to said smoking compartment, means for closing said smoke exit openings of the fire-box and the smoking compartment, and mechanism for controlling the position of the closing means of the smoke exit openings and for automatically locking or unlocking the access doors of the smoking compartment.

5. A smoke-house comprising an inner casing having a fire-box and a smoking compartment each having smoke exit openings, an outer casing spaced from the inner casing to form an outer smoke chamber thereabout, means for conveying the smoke from the smoking compartment and from the outer chamber, said smoking compartment having a large opening for access by the workmen to said smoking compartment, doors for closing the fire-box to permit smoke from entering the smoking compartment, and means for closing said smoke exit openings of the fire-box and the smoking compartment and for simultaneously closing the fire-box doors.

[Claims 6 to 24 not printed in the Gazette.]

1,152,966. RESILIENT WHEEL. DAVID H. PADDEN, Chicago, Ill. Filed Mar. 21, 1913. Serial No. 755,861. (Cl. 21—151.)



1. A wheel having an inner and an outer tread and laterally projecting annular portions intermediate the treads and a guide comprising two disk-like parts of less diameter than the wheel and rigidly secured together, the wheel being placed between them and held in parallelism through the annular projections.

2. A wheel having an outer tread and inner pneumatic tread and two laterally projecting annular portions, the guide consisting of two disk-like bodies between which the wheel is inclosed, cross bars for connecting them together, means for centering the wheel within the guide so that it projects therefrom and bearings between the annular projections and the disks.

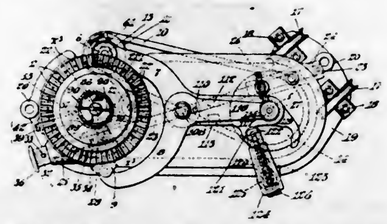
3. A wheel having an outer tread and inner pneumatic tread and two laterally projecting annular portions, the guide consisting of two disk-like bodies between which the wheel is inclosed, cross bars for connecting them together, means for centering the wheel within the guide so that it projects therefrom and bearings between the annular projections and the disks, and means for rotating the tire.

4. A wheel comprising a rotary annular tread member, a pneumatic tire on the inner side thereof, and a bearing roller in contact with and supported by and free to travel along said pneumatic tire.

5. A wheel comprising a rotary annular tread member, a pneumatic tire on the inner side thereof, and a bearing roller in contact with and supported by and free to travel along said pneumatic tire and means for supporting said roller and holding said annular tread member against tipping.

[Claims 6 to 8 not printed in the Gazette.]

1,152,967. MACHINE FOR GENERATING PATTERNS. FREDERICK H. PERRY, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 21, 1911. Serial No. 650,519. (Cl. 142—13.)



1. A model-device comprising a plurality of curved pattern-control-edges, operable in juxtaposition for simultaneous engagement with a model, one of said edges comprising members movable radially to vary the contour of said edge.

2. A model-device comprising a plurality of curved pattern-control-edges, arranged co-axially, for simultaneous engagement with a model, one of said edges comprising members movable radially to vary the contour of said edge.

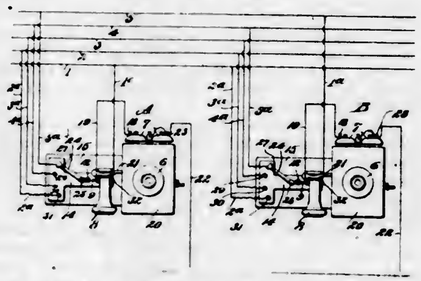
3. A model-device comprising a plurality of substantially circular pattern-control-edges, arranged co-axially, for simultaneous engagement with a model, one of said edges being of variable radius, and another of said devices being of fixed radius.

4. A model-device comprising a plurality of substantially circular pattern-control-edges, arranged co-axially, one of said edges being of variable radius; said variable edge including a number of independently movable members, extensible radially beyond the periphery of another of said circular edges, the latter serving as a track for engagement with a model to set said variable members.

5. A model-device comprising a plurality of substantially circular pattern-control-edges, arranged co-axially, for simultaneous engagement with a model, one of said edges being of variable radius; said variable edge including a number of blocks movable radially; and means to secure said blocks in adjusted position respectively.

[Claims 6 to 19 not printed in the Gazette.]

1,152,968. SUBSCRIBER'S AUTOSWITCHING SYSTEM FOR INTERCOMMUNICATING TELEPHONES. ROBERT F. PICKENS, St. Louis, Mo. Filed May 19, 1914. Serial No. 839,651. (Cl. 179—37.)

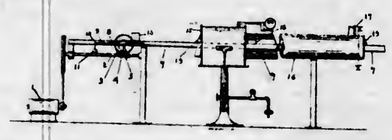


1. In a telephone system having a plurality of stations, a line wire, calling and telephone instruments in each station, said telephone instruments having the usual receiver hook, means at each station whereby the telephone user thereat may communicate with another station, and a party line switch having a handle arranged to stand directly across the path of the telephone receiver while the latter is being replaced upon its hook to block the entrance of the receiver between the forks of said hook until said handle is moved to a position which will restore its telephone to the line on which it belongs.

2. In a party line telephone system, the combination of a plurality of main lines, a plurality of stations connected to said lines, calling and telephone instruments in each station, said telephone instruments having the usual receiver hook, means at each station whereby the telephone user thereat may communicate with other stations, and a party line switch at each station having a handle arranged to stand directly across the path of the telephone receiver while the latter is being replaced upon its hook to prevent the receiver being placed upon said fork until said switch has been thrown to a position which will restore its telephone to the line on which it belongs.

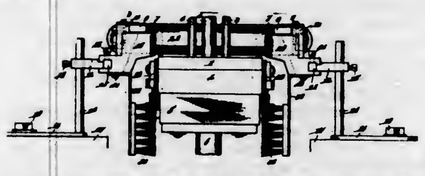
3. In an intercommunicating telephone system, a plurality of lines, a telephone set having the usual receiver-support and receiver, and a substantially V-shaped switch-blade having a mechanical portion arranged to "block" the path of said receiver in its movement of being replaced upon said receiver-support during the time that said receiver is removed from said support, and until said switch-blade is moved to restore the telephone to the line on which it belongs.

1,152,969. WARE-MANUFACTURING. CLARENCE E. QUIMBY, Geneva, N. Y., assignor, by mesne assignments, to Kryptok Company, New York, N. Y., a Corporation of New York. Filed Sept. 16, 1912. Serial No. 720,481. (Cl. 49—58.)



An apparatus for making glass articles comprising a continuous way; an automatic feeding device, a magazine, a furnace and an annealing oven located successively along said way, said way passing through the furnace and oven, the magazine and furnace being spaced apart, the former carrying a quantity of blocks adapted to be successively moved from the magazine to the way by said feeding device, said blocks acting upon each other to communicate movement to all of the blocks along the way through the furnace and oven.

1,152,970. BOX-COVERING MACHINE. PETER P. RACZYNSKI, Chicago, Ill. Filed Dec. 8, 1914. Serial No. 876,109. (Cl. 93—54.)



1. In a box-covering machine, means for supporting the box to be covered; mechanism for folding and applying the covering material to the lateral walls of the box; means for causing a relative movement between the box supporting means and the covering mechanism, said covering mechanism comprising side-engaging means and end-engaging means for folding the side and end portions respectively of the covering material into engagement with the side and end walls of the box, the end-engaging means coöperating with each end of the box comprising a member of less width than the end wall of the box adapted to fold the central portion of the end of the covering material into engagement with the corresponding end wall of the box and, upon folding of the side portions of said covering material into engagement with the side walls of the box, to form outwardly projecting flaps at the vertical edges of the corresponding end wall of the box; means for subsequently creasing the corners of said covering material at the inner sides of said flaps; and means for subsequently folding said flaps against said end wall, substantially as described.

2. In a box-covering machine, means for supporting the box to be covered; mechanism for folding and applying the covering material to the lateral walls of the box; means for causing a relative movement between the box supporting means and the covering mechanism, said covering mechanism comprising side-engaging means and end-engaging means for folding the side and end portions respectively of the covering material into engagement with the side and end walls of the box, the end-engaging means coöperating with each end of the box comprising a member of less width than the end wall of the box adapted to fold the central portion of the end of the covering material into engagement with the corresponding end wall of the box and, upon folding of the side portions of said covering material into engagement with the side walls of the box, to form outwardly projecting flaps at the vertical edges of the corresponding end wall of the box; two spaced parallel plates having edges adapted to subsequently engage in and crease the corners of said covering material at the inner sides of said flaps, the outer sides of said plates adjacent said edges being beveled; and means for subsequently folding said flaps against said end wall, substantially as described.

3. In a box-covering machine, means for supporting the box to be covered; mechanism for folding and applying the covering material to the lateral walls of the box; means for causing a relative movement between the box supporting means and the covering mechanism, said covering mechanism comprising side-engaging means and end-engaging means for folding the side and end portions respectively of the covering material into engagement with the side and end walls of the box, the end-engaging means coöperating with each end of the box comprising a member of less width than the end wall of the box adapted to fold the central portion of the end of the covering material into engagement with the corresponding end wall of the box and, upon folding of the side portions of said covering material into engagement with the side walls of the box, to form outwardly projecting flaps at the vertical edges of the corresponding end wall of the box; two spaced creasing members adapted to subsequently crease the corners of said covering material at the inner sides of said flaps; and means for subsequently folding said flaps against said end wall, substantially as described.

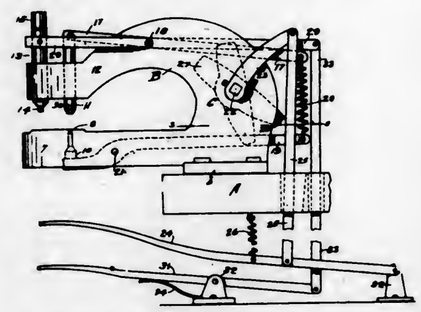
4. In a box covering machine, means for supporting the box to be covered; mechanism for folding and applying the covering material to the lateral walls of the box to affix the same thereto; means for vertically reciprocating said box supporting means, said covering mechanism comprising side-engaging means and end-engaging means for folding the side and end portions respectively of the covering material upwardly into engagement with the side and end walls of the box, the end-engaging means coöperating with each end of the box comprising a brush of less width than the end wall of the box adapted to fold and press the central portions of the end of the covering material into engagement with the corresponding end wall of the box, and, upon folding of the side portions of said covering material into engagement with the side walls of the box, to form outwardly projecting flaps at the vertical edges of the corresponding end wall of the box; vertically extending contact surfaces arranged below said brush adapted subsequently to engage in and crease the corners of said covering material at the inner sides of said flaps; laterally movable blades arranged below said creasing surfaces for subsequently folding said flaps to position against the end walls of the box; and means arranged below said blades for subsequently pressing said flaps toward folded position, substantially as described.

5. In a box-covering machine, means for supporting the

box to be covered; means for folding and applying the covering material to the lateral walls of the box; means for causing a relative movement between the box supporting means and the covering mechanism, said covering mechanism comprising means for folding the side and end portions of the covering material into engagement with the side and end walls respectively of the box so as to form outwardly projecting flaps at the vertical edges of said end walls; means for subsequently creasing the corners of said covering material at the inner sides of said flaps; and means for subsequently folding said flaps against said end walls, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,152,971. RIVETING DEVICE. THEODOR REIS, Cincinnati, Ohio. Filed June 5, 1914. Serial No. 843,293. (Cl. 78—48.)



1. In a device of the kind described, the combination of a pivot, a frame in which it is supported, two operating levers mounted on this pivot, a rivet-set connected for operation to one of these levers, a countersunk die connected for operation to the other lever, a punch adapted to co-act with the die mentioned, an operating lever for it and means to actuate all these levers.

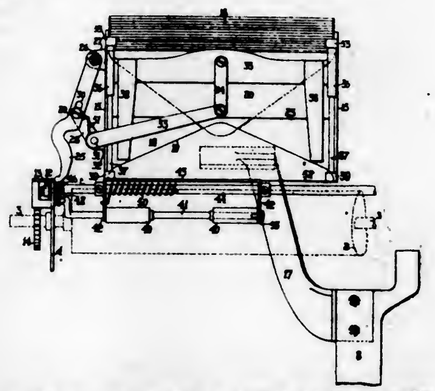
2. In a device of the kind described, the combination of an anvil for supporting sheet metal to be riveted, a rivet pocket provided in said anvil, a punch movably supported in this pocket, a countersunk die movably supported opposite the rivet pocket and in axial alinement therewith, means to move this die in contact with the sheet metal while positioned above the rivet pocket and means to move the punch toward the die so as to force a rivet into the sheet metal.

3. In a device of the kind described, the combination of a support for the sheet metal, complementary rivet-inserting members consisting of a countersunk die and of a punch adapted to co-act therewith, an actuating lever for each of these members adapted to operate them so that the die is first moved upon the sheet metal from one side after which the punch is moved against the other side for the purpose of inserting a rivet, a cam whereby these levers are moved in the manner set forth, and means to actuate this cam.

4. In a device of the kind described, the combination of a frame comprising an anvil adapted to support sheet metal to be connected, a countersunk die and a rivet-set positioned above the anvil, a lever to actuate each, a pivot supported in the frame on which these levers are mounted, a punch positioned below the countersunk die and adapted to co-act therewith, a lever to actuate it and means to operate each of these levers.

5. In a device of the kind described, the combination of a frame comprising an anvil adapted to support sheet metal to be connected, a countersunk die and a punch adapted to co-act therewith for the purpose of inserting a rivet into the sheet metal, a lever to actuate each of these parts supported in the frame mentioned, a rivet-set for clenching the inserted rivet, a lever to actuate it also supported in the frame mentioned and means to operate each of these levers.

1,152,972. TYPE-WRITING MACHINE. JOHN A. RENNIE, Lyndhurst, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Dec. 3, 1910. Serial No. 595,333. (Cl. 197—130.)



1. The combination with a writing machine including a paper carriage to travel in letter spacing direction and return, a platen mounted in the carriage, and feed rolls on the platen, of a work piece receptacle, mechanism dependent upon the return of the carriage toward initial position to automatically feed the work pieces singly, and an auxiliary feed roll on the carriage to which the work pieces are delivered from the receptacle.

2. The combination with a writing machine including a carriage fed in letter spacing direction, a platen mounted on the carriage, and feed rolls co-acting therewith, of a stationary work piece receptacle, mechanism operable by the carriage on its return toward initial position to feed work pieces singly from the receptacle, and an auxiliary feed roll operating subsequently to the first-named feed mechanism to advance the work-pieces to the feed rolls.

3. The combination with a writing machine including a carriage fed in letter-spacing direction, a platen mounted thereon, and feed rolls on the platen, of a work piece receptacle, a vibratory frame, ejectors on the frame, mechanism operated by the carriage on its return toward initial position to vibrate the frame, and an auxiliary feed roll to which the ejectors deliver the work piece.

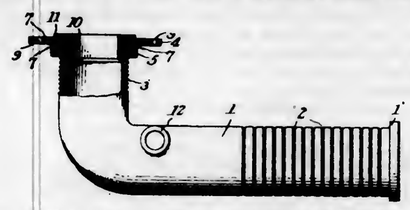
4. The combination with a writing machine including a carriage fed in letter-spacing direction, a platen mounted to rotate thereon, line-spacing mechanism controlling the rotation of the platen, and feed rolls for the platen, of a work piece receptacle, work piece feeding mechanism therefor, and an auxiliary feed device controlled by the line-space mechanism to which the work-pieces are delivered, and by which they are introduced between the platen and feed rolls.

5. The combination with a writing machine including a carriage fed in letter-spacing direction, a platen mounted to rotate thereon, line-spacing mechanism controlling the rotation of the platen, and feed rolls for the platen, of a work piece receptacle, work piece feeding mechanism therefor, and a swinging feed roll controlled by the line-space mechanism to engage the work piece and advance it to the main feed rolls after it has been delivered to the platen.

[Claims 6 to 38 not printed in the Gazette.]

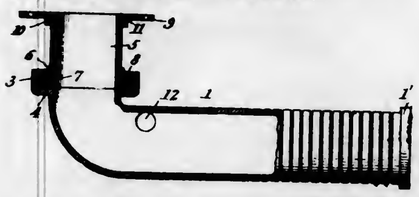
1,152,973. WATER-CLOSET CONNECTION. OSCAR W. RICE, Rochester, N. Y., assignor to The Edward J. Rice Mfg. Co., Rochester, N. Y., a Corporation. Filed Apr. 14, 1915. Serial No. 21,345. (Cl. 137—94.)

1. A water closet connection comprising a bend, circumferentially threaded about one end thereof, a flanged ring having its inner circumference beveled a portion of the width of the opening therein and the balance threaded, the latter portion adapted for engagement with the threads of the bend, a filler intermediate the beveled wall of the opening and the threads of the bend and its upper end flush with the face of the flange of said ring, and a gasket fitting over the threaded end of the bend and said filler.



2. A water closet connection comprising a bend, one end of the bend being circumferentially threaded, a flanged ring, the wall of the opening of which is beveled partially the depth of the ring and the balance interiorly threaded for engagement with said threads, and a flanged gasket telescoping within the bend and engaging over the end of the latter.

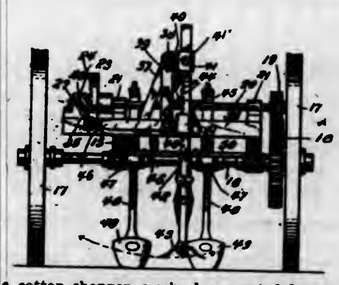
1,152,974. WATER-CLOSET BEND. OSCAR W. RICE, Rochester, N. Y., assignor to The Edward J. Rice Mfg. Co., Rochester, N. Y., a Corporation. Filed Apr. 14, 1915. Serial No. 21,346. (Cl. 137—94.)



1. A water closet bend and connection, comprising a bend with a hub portion, a flaring ferrule resting upon the shoulder of the hub portion, a pipe telescoping within said ferrule and resting upon the shoulder of said hub portion, a filler intermediate the pipe and ferrule and between the latter and the wall of the hub portion.

2. A water closet bend and connection, comprising a bend with a hub portion, a flaring ferrule resting upon the shoulder of the hub portion, a pipe telescoping within said ferrule and resting upon the shoulder of said hub portion, a filler intermediate the pipe and ferrule and between the latter and the wall of the hub portion, a ring having an opening with a flange about the same, the wall of the opening being beveled a part of its width and adapted to receive the upper expanded end of the pipe.

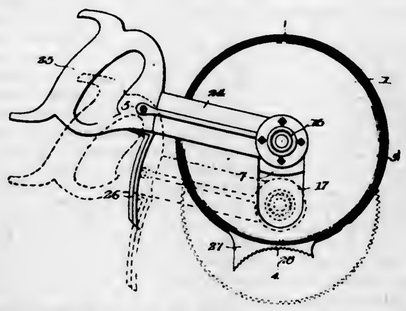
1,152,975. COTTON-CHOPPER. JOHN T. RICHEY, Rogersville, Ala. Filed Nov. 28, 1914. Serial No. 874,541. (Cl. 97—45.)



1. In a cotton chopper, a wheel supported frame having a bracket and a spindle supported by said bracket, an arm mounted for oscillation on the spindle and having laterally extending brackets provided with terminal sleeves, a notched hoe carrying handle guided through said sleeves, a spring actuated latch member mounted on the arm for engagement with the notched handle, and means for rocking the arm.

2. In a cotton chopper, the combination with a wheel supported frame, of an arm supported for oscillation, said arm having laterally extending brackets provided with terminal sleeves, a hoe carrying handle guided in said sleeves, said handle having notches in one side face thereof, a spring actuated dog pivotally mounted on the arm and engaging the notches in the handle, a set screw threaded into one of the sleeves and engaging the handle to prevent accidental displacement thereof, and means for imparting oscillatory motion to the arm from a supporting wheel of the machine.

1,152,976. MEAT-SAW. ARTHUR RIOUX, Jamestown, N. D. Filed July 3, 1914. Serial No. 848,900. (Cl. 143—43.)



1. In a meat sawing device, a case, a saw rotatably and slidably mounted in the case, means for holding the case against displacement on the material to be cut, means for depressing the saw, and means for supporting the device which normally holds the saw elevated in the case.

2. In a meat sawing device, a saw slidably and rotatably mounted therein, means for guiding the saw, means for reciprocating the saw in the case, and means for supporting the device which normally holds the saw elevated in the case.

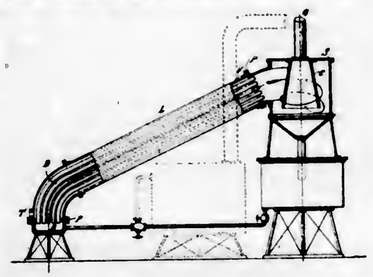
3. In a meat sawing device, a saw rotatably and slidably mounted in the case, means normally acting to hold the saw lifted in the case, a handle for depressing the saw against said means, and a suspending cable connected to the saw, and adapted to support the saw and case and to hold the saw in elevated position in the case.

4. In a meat sawing device, a case, guides extending across the case, a frame slidably mounted in the guides, a saw head rotatably mounted in and traveling with the frame, a saw carried by the head and operating within the case, a cable connected to the frame and adapted to support the frame in elevated position within the case and to support the case, auxiliary means for raising the saw in the case, and means for depressing the saw against said means when the case is resting on the meat.

1,152,977. APPARATUS FOR CONCENTRATING LIQUIDS. UGO ROSAI, Milan, Italy. Filed June 3, 1911. Serial No. 631,057. (Cl. 127—18.)

1. A tubular evaporation apparatus for concentrating liquids comprising in combination a chamber containing the liquid to be evaporated, a plurality of inclined tubes curved at their lower ends only the said curved lower ends of the tubes opening in the same horizontal plane into said liquid chamber so as to permit of a uniform feed of the liquid and also the expansion of the tubes, a casing containing the said tubes, means for conducting steam through the said casing to heat the liquid contained with-

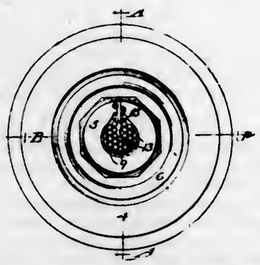
in the said chamber and the lower ends of said tubes, means in communication with the upper ends of the said tubes for separating the pulverized liquid from the steam as the same escapes from the tubes, means for leading off the dry steam from the said separating means and means for collecting the concentrated liquid.



2. A tubular evaporation apparatus for concentrating liquids comprising in combination a chamber containing the liquid to be evaporated, a plurality of inclined tubes curved at their lower ends only, the said curved lower ends of the tubes opening in the same horizontal plane into the said liquid chamber so as to permit of a uniform feed of the liquid and also the expansion of the tubes, a short curved helical baffle plate disposed with the lower curved ends of each of the tubes, for imparting a rotatory movement to the liquid as it ascends within the tubes, a casing containing the said tubes, means for conducting steam through the said casing to heat the liquid contained within the said chamber and the lower ends of said tubes, means for separating the pulverized liquid from the steam as the same escapes from the tubes, means for leading off the dry steam from the said separating means, and means for collecting and leading away the concentrated liquid.

3. In an evaporator system, each evaporator comprising a cylindrical casing containing inclined nests of tubes headed into upper and lower plates, the lower ends of said tubes being bent so as to open at the same level into a chamber for containing the liquid to be evaporated, means for circulating a heated vapor through said casing and around said tubes, a separator arranged at the upper end of said tubes and in communication therewith, a hollow cone arranged within said separator, means for conducting steam from the interior of said hollow cone to the cylindrical casing of a second evaporator in series with the first, and means connected to the base of said separator for conducting liquid and foam particles to the liquid chamber at the base of the cylindrical casing of the said second evaporator.

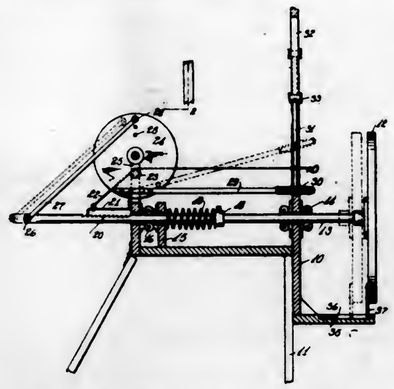
1,152,978. TUBING-MACHINE. VERNON BOYLE, Paterson, N. J. Filed Nov. 27, 1912. Serial No. 733,835. (Cl. 18—45.)



1. In a tubing machine, a die, a double core bridge, a gang of core members extending from each member of the double core bridge, the core members of one gang intermingling with the core members of the other gang, the core members of the two gangs terminating in substantially the same plane within the die and spacing pins located in a plane a short distance back from the free ends of the core members.

2. In a tubing machine, a die, a core bridge, a gang of core members extending from the bridge into the mouth of the die, and a tapered projection extending inwardly from the wall of the die partially across the mouth of the die among the core members to form an opening along one side of the finished tube to permit the latter to contract.

1,152,979. THROWING-MACHINE. CHARLES E. ROYSE, Eugene, Ind., assignor of one-half to Charles A. Winters, Eugene, Ind. Filed Mar. 8, 1915. Serial No. 13,043. (Cl. 73—15.)

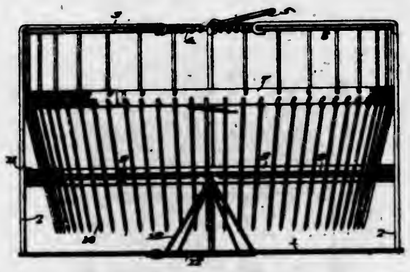


1. A throwing machine having a frame, a plunger extending through said frame, a link pivoted to said plunger, an indicator supported on said frame and a wheel pivotally connected with said plunger by said link for actuating said indicator.

2. A throwing machine having a frame, a plunger extending therethrough, a target on one end of said plunger, a wheel supported on said frame, a link pivotedly connecting said plunger to said wheel and a rod securely attached near the periphery of said wheel and pivotally connected to said indicator for actuating the same.

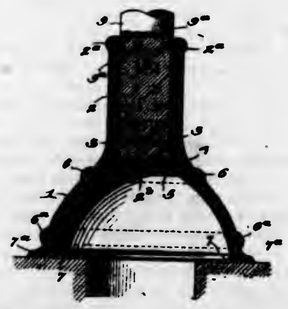
3. A throwing machine having a frame, a plunger extending therethrough, a target on one end of said plunger, a wheel supported on said frame, a link pivotedly connecting said plunger to said wheel and a means for holding and releasing said plunger after it has been actuated.

1,152,980. TRAP. SAMUEL M. RYASON, Kirkwood, Ill. Filed Feb. 27, 1914. Serial No. 821,466. Cl. 43—24.)



A trap comprising a base, standards rising therefrom, a pair of superimposed supporting rings secured to the standards, the side and top forming members secured to certain of the rings, pendent gate or door forming members having pointed ends and being pivoted to the upper of the supporting rings, the lower of said supporting rings being provided with an inwardly extending flange, guiding loops connected to the under surface of said flange and radiating therefrom, whereby said pendent gate or door members may be limited in their outward movements by said flange and by said guiding loops in their inward movement, said gate or door members being pivoted to the door rings at suitably spaced intervals throughout the circumference of the supporting rings and having their lower pointed ends arranged adjacent the base.

1,152,981. FORCE-CUP. WILLIAM F. SCHACHT, Huntington, Ind. Filed Jan. 22, 1914. Serial No. 813,688. (Cl. 4—1.)



1. A force cup comprising an elastic cup-body formed with an integral shank having a handle socket therein, and a fabric reinforce embedded in the material of the cup at the base of the socket, substantially as and for the purpose described.

2. A force cup comprising an elastic cup-body having an integral shank provided with a handle socket and a canvas reinforce for the bottom of the socket embedded in the material of the cup, substantially as described.

1,152,982. METHOD OF FORMING A SHELL FOR A SPARK-PLUG. WILLIAM E. SHERBONDY, Cleveland, Ohio, assignor, by mesne assignments, to The Bigsby Rotary Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 22, 1913. Serial No. 808,222. (Cl. 29—148.)



1. An improved method of forming a shell for a spark plug with dies consisting in first cutting a disk from sheet metal, then reducing it to a cupped form, then elongating the cupped form and reducing its diameter and retaining a curved and closed bottom thereon, still further reducing the diameter of the lower portion of the shell while retaining the size and shape of the upper portion and producing shoulders simultaneously on the interior and exterior surfaces, compressing the upper portion to form alternate sides and angles of a hexagon thereon, and to give a taper to the lower portion thereof, then shearing away a segmental portion of the rounded bottom of the shell to produce a downwardly and inwardly turned finger, and finally compressing and shaping said finger and producing an external screw thread upon the tapered portion, and an internal screw thread upon the hexagonal portion.

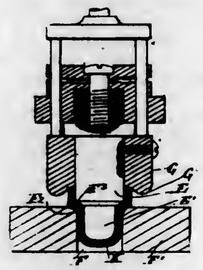
2. An improved method of forming a shell for a spark plug with dies consisting in first cutting a disk from sheet metal, cupping the disk, elongating the same with a curved integral bottom, reducing the diameter of the lower portion thereof, and forming internal and external shoulders, compressing the upper portion to produce an external hexagon thereon, and shearing a segmental portion from the closed bottom to produce an inwardly and downwardly extending finger thereon, and shaping said finger.

3. An improved method of forming a shell for a spark plug with dies, consisting in first cutting a disk from sheet metal, drawing the disk into cup form, elongating the cupped disk, and reducing it in diameter, reducing the diameter of the lower portion, and forming interior and exterior shoulders thereon, next compressing the upper portion in a hexagonal die to form alternate straight sides and angles thereon, and then cutting away a portion of the curved bottom to form an integral finger or electrode, producing a sleeve having a hexagonal rim, and screw threading the sleeve and interior of the hexagonal portion and the exterior of the lower portion of the shell, substantially as described.

4. An improved method of forming a shell for a spark plug with dies, consisting in first cutting a disk from sheet metal, drawing the disk into cup form, elongating the cupped disk and reducing it in diameter, reducing the diameter of the lower portion compressing the upper portion in a hexagonal die to form the exterior of the shell and next cutting away a portion of the curved bottom to form an integral electrode, and then depressing the end of the finger and shaping the same.

5. The method of forming a spark plug which consists in cutting a disk from sheet metal, modifying the shape of said disk to a cup-like form, making a cut in the edge of said cup-like form to partially separate a finger from the remainder of the material, and changing the position of said finger into such relation with the remainder of the material that it may serve as an electrode.

1,152,988. PROCESS FOR FORMING A SHEET-METAL SHELL FOR A SPARK-PLUG. WILLIAM E. SHERBONDY, Cleveland, Ohio, assignor, by mesne assignments, to The Bigsby Rotary Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 7, 1914. Serial No. 855,601. (Cl. 113—51.)



1. An improved method of producing a sheet metal shell for a spark plug, consisting in first cutting a disk of predetermined size from sheet metal from which all the integral parts are to be formed, second, drawing the disk laterally into a cupped form, while retaining it accurately in absolutely concentric dies, third, further reducing the lower portion while retaining the diameter of the upper portion substantially constant, said diameter of the upper portion being proportionately greater than the outer dimensions of the finished hexagon, next still further reducing the diameter of the lower portion while retaining the diameter of the upper portion substantially unchanged, next drawing the cup shaped blank having the

reduced and elongated lower extremity through a forming die for the upper extremity, and thereby forming hexagonal sides, and radially and outwardly extending corners thereon, gradually reducing and elongating the sides and reducing the corners, and finally compressing and upsetting the upper portion until the perfect shape is attained.

2. The improved method of constructing a spark plug having a hexagonal upper portion and a reduced lower extremity from sheet metal, consisting in first, cutting a circular blank of predetermined size, second, drawing the same laterally into a cup form of predetermined larger diameter than the finished hexagon, drawing out the lower portion, while retaining the diameter of the upper portion substantially unchanged, and thickening slightly the wall of the upper portion to provide material for the angles of the hexagon, continuing the reduction of the lower portion and slightly elongating the same while retaining the diameter of the upper portion constant and finally forcing the shell through a die having a hexagonal opening of less diameter than the diameter of the upper portion of said shell, to form the hexagonal sides thereon.

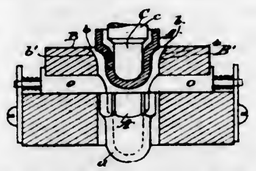
3. An improved method of producing the shell of a spark plug from sheet metal having an opening in the lower end to receive the electrode, said shell having a hexagonal upper portion and a reduced lower portion consisting in first cutting a blank disk of predetermined diameter, drawing the same internally into cup form of greater diameter than the greater diameter of the finished shell, then drawing out the lower end of the cup to elongate it and reduce it in diameter while retaining the diameter of the upper portion unchanged and simultaneously slightly thickening the wall of the upper portion, repeating this operation until the lower portion is of the prescribed diameter and thickness, reducing the diameter of the upper portion of the cup and simultaneously forming hexagonal sides thereon, and finally cutting away a portion of the lower extremity of the cup to form an opening therethrough.

4. An improved process for constructing a shell for a spark-plug from sheet metal, having an opening in the lower end to allow for electrode, consisting in, first cutting a blank in the form of a flat disk from sheet metal, supporting the same in a closely fitting die, and drawing the disk laterally by means of an accurately concentric punch to form a cup having its upper edges in a common horizontal plane gradually drawing out the lower portion to reduce its diameter and elongate the same, and simultaneously forming a shoulder thereon, and retaining the diameter of the upper portion substantially unchanged, and slightly upsetting the upper portion to thicken the metal therein, continuing this part of the operation until the lower part is substantially of the required diameter. then annealing the shell, and afterward forcing it through a hexagonal die of less diameter than the larger diameter of the cup.

5. An improved process for constructing a shell for a spark plug, having an opening in the lower end to allow for an electrode, consisting in first cutting a circular blank of predetermined size from sheet metal, drawing out the disk laterally to form a cup, drawing out the lower portion of the cup to elongate it and reduce it in size, and meanwhile retaining the upper portion of the cup in a fixed position, and slightly upsetting the same to provide for the increased amount of metal required in filling out the corners of the hexagon, further reducing the diameter of the lower portion and elongating the same until the approximate shape of the lower portion has been secured, and meanwhile rigidly holding the upper portion and slightly upsetting the same, annealing the cup, drawing the cup through a hexagonal die of less diameter than the cup, and of approximately the finished size of the shell, to form sides upon the upper portion of the cup and to elongate the same, giving a final pressure to the cup in dies of finished sizes, and removing a portion of the lower end of the cup to form an opening for the passage of the electrode.

[Claims 6 and 7 not printed in the Gazette.]

1,152,984. TOOL FOR FORMING POLYGONAL SIDES UPON A HOLLOW METAL SHELL. WILLIAM E. SHERBONDY, Cleveland, Ohio, assignor, by mesne assignments, to The Bigsby Rotary Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 7, 1914. Serial No. 855,602. (Cl. 113—49.)

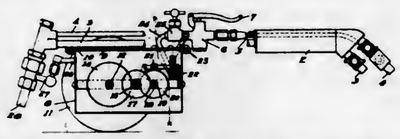


1. In a tool for forming polygonal sides upon a cup shaped blank having portions of two diameters and having its upper portion of larger diameter than the required diameter of the finished product, comprising a die having a polygonal opening, the angles of said opening tapered and radially extended and the upper edge of said opening and its extensions formed in a smooth flowing curve, and a punch having portions of two diameters, separated by a shoulder, the upper portion of the punch having the diameter of the finished product, and the lower portion reduced therefrom and having a rounded extremity.

2. A tool for forming hexagonal faces and corresponding angles upon a cup shaped blank having portions of two diameters, a die of larger diameter than the larger portion of the blank and having a hexagonal opening, the angles in said opening extended radially and tapered to an edge, and a punch having portions of two diameters separated by a shoulder, the upper portion of the punch having the internal diameter of the finished product and less than the internal diameter of the upper portion of the cup shaped blank.

3. In a tool for forming hexagonal sides upon the body portion of a cup shaped blank having a body and a reduced inner end, a die block having an opening provided with hexagonal sides, and outwardly curved upper edges, and a punch having a reduced portion fitting the opening in the reduced inner end of the cup shaped blank, said punch also having a body portion of less diameter than the internal diameter of the body of said blank, the angles of the opening in said die having tapered extensions providing means for the outward flow of metal, at said corners.

1,152,985. ACETYLENE-BLOWPIPE. JOHN W. SMITH and ELMER H. SMITH, Minneapolis, Minn. Filed June 16, 1913. Serial No. 773,979. (Cl. 75—90.)



1. The combination, with an acetylene blow pipe and a carrier therefor, of an oxygen supply pipe and mechanism actuated by the pressure of the oxygen for operating said carrier to move said blow pipe.

2. The combination, with a blow pipe and a carrier therefor, of a pipe for supplying gas under pressure, and mechanism actuated by the pressure of the gas for operating said carrier to move said blow pipe.

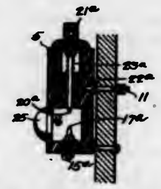
3. The combination, with an acetylene blow pipe and nossle therefor, of a carrier supporting said pipe, and comprising a closed casing and supporting wheels therefor, mechanism within said casing having driving connections with said wheels, an oxygen supply pipe having pipe connections with said casing, said mechanism including means actuated by the pressure of the oxygen for operating said wheels, and a nossle having a pipe connection with said casing.

4. The combination, with an acetylene blow pipe, of a wheeled carrier therefor and including a casing, a fan mounted therein having a driving connection with the wheels of said carrier, an oxygen supply pipe having tubes leading through said casing for directing the oxygen against the blades of said fan, above and below its axis, regulating valves for said tubes, and a nossle having a pipe connection with said casing.

5. An acetylene blow pipe comprising a handle, acetylene and oxygen gas supply pipes and a nossle therefor, a pure oxygen supply pipe and a regulating valve therefor, and means supporting said blow pipe and actuated by the pressure of the oxygen for moving said blow pipe back and forth over the metal to be cut.

[Claims 6 to 9 not printed in the Gazette.]

1,152,986. ELECTRICAL INDICATOR. RICHARD SCOTT SMITH, Jr., Woodbury, N. J., assignor of one-half to George C. Gunn, Burlington, N. J. Filed Jan. 13, 1913. Serial No. 741,704. (Cl. 175—183.)



1. In an electrical indicating device, the combination of a pair of contacts normally separated, one of which is movable, said movable contact being grounded, a spark plug in electrical connection with one of said contacts, means for bringing said contacts into such relation with each other as to form jump sparks, and means for automatically restoring said contacts to their normal separated position.

2. In an electrical indicating device, the combination of a pair of contacts normally separated, one of which is movable, one of which is adjustable, one of said contacts being grounded, a spark plug in electrical connection with one of said contacts, means for effecting movement of one of said contacts with respect to the other so as to form a jump spark, and means for automatically restoring said contact to its normal position.

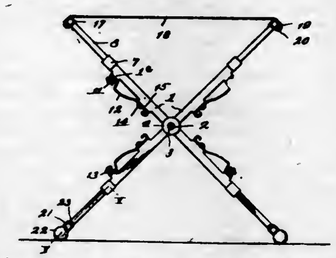
3. In an electrical indicating device, the combination of a movable grounded contact, a second contact, a spark plug, said spark plug being in electrical connection with said movable contact, means for bringing said respective contacts into such relation with each other as to form jump sparks, and means for automatically restoring said contacts to their normal position.

4. In an electrical indicating device, the combination of a pair of contacts normally separated, one of which is grounded, said grounded contact being movable with respect to the other, a spark plug, said spark plug being in electrical connection with the non-grounded contact, means for bringing said contacts into such position with relation to each other as to form jump sparks, means for adjusting the position of one of said contacts to regulate the extent of the gap between such points, and means for automatically restoring said contacts to their normal position.

5. In an electrical indicating device, the combination of an adjustable contact point, a grounded contact point movable with respect to the adjustable point, a spark plug, said spark plug being in electrical connection with the non-grounded movable contact point, means for moving one of said contact points into such relation with the other as to form jump sparks, means for adjusting said contact points to regulate the extent of the gap between the same, and means for automatically restoring said contacts to their normal non-sparking position.

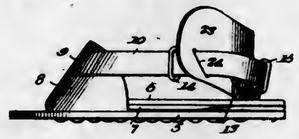
[Claims 6 and 7 not printed in the Gazette.]

1,152,987. FOLDING EXTENSIBLE STOOL. JAMES F. SPALDING, Kansas City, Mo. Filed June 15, 1914. Serial No. 845,111. (Cl. 155—32.)



A folding extensible stool comprising spaced pairs of hollow legs, a rod pivotally connecting the legs of each pair, an extensible tubular leg section slidable in each end of each leg and having its inner concaved to form a seat to engage with the pivot rod, each leg section being provided with spaced openings adapted to register with an opening provided in the respective end of the leg, a slidably mounted pin adapted to enter each set of registering openings to retain the leg section in extended or innermost position, reinforcing blocks secured in the outer ends of leg sections and provided with tenons, tubular bars uniting the outer ends of the leg sections of one pair to those of the other pair, reinforcing blocks secured in the opposite ends of the bars and having secured thereto the respective tenons of the first reinforcing blocks, feet secured to the lower horizontal bars, and a flexible seat secured to the upper horizontal bars.

1,152,988. HORSESHOE ATTACHMENT. LAWRENCE J. STROB, St. Louis, Mo. Filed Jan. 23, 1915. Serial No. 3,975. (Cl. 168—3.)



1. A horse shoe attachment comprising a broad flat sole, a toe cap secured thereto, a hoof engaging strap having one end connected with the cap, a wire anchor adjustably mounted upon said sole and formed to provide a circumferential series of spaced eyes through which said strap is passed, a flexible guard mounted upon said strap and anchor, and means for securing the free ends of said strap.

2. A horse shoe attachment comprising a broad flat sole, a toe cap secured thereto, a hoof engaging strap having one end connected with said cap, an anchor adjustably mounted upon said sole, means for guiding said anchor in its adjustments, said anchor being constructed from a single length of material and including a semicircular body portion terminating to provide offset eyes through which said strap is passed, a guard mounted upon said strap and anchor, and means for securing the free ends of said strap.

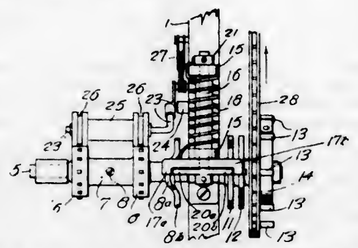
3. A horse shoe attachment comprising a broad flat sole, a toe cap secured at one end thereof, a hoof engaging strap having one end connected to said cap, an anchor constructed from a single length of material and including a sectional semicircular body portion terminating in offset eyes, upstanding eyes formed at the point of juncture of said sections, said strap being passed through said eyes, a guard mounted upon said strap and anchor, said anchor being slidably adjustable with respect to the sole, and means for fastening the free ends of the strap.

4. A horse shoe attachment comprising a broad flat sole, a toe cap secured thereto, a hoof engaging strap having one end connected to said cap, a wire anchor including an intermediate forwardly projecting loop slid-

ably embedded in the sole, and a sectional semicircular body portion disposed above the sole, said sections terminating in offset eyes and provided with upstanding eyes at their point of juncture with said loop, said strap being passed through said eyes, a guard carried by the strap and anchor, and means for fastening the free ends of the strap.

5. A horse shoe attachment comprising a broad flat sole, reinforcing soles secured thereupon, a toe cap overlying the uppermost sole, a hoof engaging strap connected with said cap, a wire anchor including a semicircular body portion having a circumferential series of eyes through which the strap is passed, a guard mounted upon said strap and anchor, said anchor being formed with an intermediate forwardly projecting loop passed through said guard and slidably mounted between said soles, means for guiding said cover in its adjustment and means for securing the free ends of said strap.

1,152,989. MOTION-PICTURE DEVICE. PHILIP JACKSON TAYLOR, Cairo, Ill. Filed Oct. 28, 1914. Serial No. 869,067. (Cl. 88—18.2.)



1. In a moving picture machine, a shaft, a drive wheel mounted to rotate about the axis of the shaft, a spring connecting said drive wheel with said shaft, a pair of sprocket wheels arranged to engage the film, an integral sleeve carried by said sprockets, said sleeve being arranged to fit over said shaft, a stop member carried by said sleeve and movable stop members actuated by the movement of said drive wheel for intermittently engaging said first named stop member, thereby causing the intermittent rotation of the sprocket wheels.

2. In a moving picture machine, a rotatable shaft, a drive wheel mounted to rotate about the axis of the shaft, a spring connecting said drive wheel with said shaft, cams carried by said drive wheel, a sleeve secured to said shaft, integral sprocket wheels carried by said sleeve, an escapement wheel carried by said sleeve, and escapement members adapted to be moved by said cams into and out of the path of the escapement wheel.

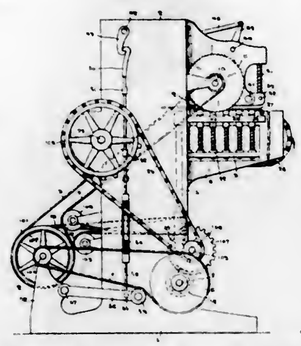
3. In a moving picture machine, a rotatable shaft, a drive wheel mounted to rotate about the axis of the shaft, a spring connecting said drive wheel with said shaft, cams carried by said drive wheel, a sleeve secured to said shaft, integral sprocket wheels carried by said sleeve, an escapement wheel carried by said sleeve, said escapement wheel having a plurality of sets of oppositely bent teeth, and a pair of pivoted escapement members arranged to be moved by said cams into and out of the path of the oppositely bent teeth on the escapement wheel.

4. In a moving picture machine, a frame, an extended bearing carried by said frame, a shaft mounted for rotation in said extended bearing, a drive wheel mounted for rotation on the exterior of said extended bearing, said drive wheel being provided with a hub, a pair of integral cam wheels carried by said hub, a spring connecting said drive wheel with said shaft, a sleeve surrounding a portion of said shaft, means for securing said sleeve to said shaft, integral sprocket wheels carried by said sleeve, an integral escapement wheel carried by said sleeve, said escapement wheel having two sets of oppositely bent teeth, a pair of pivoted escapement members carried by said frame, an individual spring for normally holding one end of each of said escapement members in engagement with one of said cams, the opposite end of each of said escapement members being arranged to project into the path of one of the sets of oppositely bent teeth on the escapement wheel, said cams being arranged to cause a movement of one end of one of the escapement members outward and from the axis of the shaft and to permit the simultaneous movement of the companion member toward the axis of the shaft.

5. In a moving picture machine, a frame, an extended bearing carried by said frame, a shaft mounted for rotation in said extended bearing, a drive wheel mounted for rotation on the exterior of said extended bearing, said drive wheel being provided with a hub, a pair of integral cam wheels carried by said hub, a spring connecting said drive wheel with said shaft, a sleeve surrounding a portion of said shaft, means for securing said sleeve to said shaft, integral sprocket wheels carried by said sleeve, an integral escapement wheel carried by said sleeve, said escapement wheel having two sets of oppositely bent teeth, and a pair of pivoted escapement members carried by said frame.

[Claims 6 and 7 not printed in the Gazette.]

1,152,990. AUTOMATIC TRIP MECHANISM FOR END-MATCHING MACHINES. WALTER TAYLOR, Nashville, Tenn. Filed Oct. 24, 1914. Serial No. 868,442. (Cl. 74—46.)



1. An automatic trip mechanism for end matching machines, comprising a spring pressed pivoted gaging means, a plurality of spring pressed supporting devices adapted to successively force objects against said gaging means, a trip mechanism operated by said gaging means, an idle pulley a driving belt and pivotally mounted means carrying said idle pulley and connected to said trip mechanism to engage the idle pulley with or release the same from the driving belt of said end matching machine.

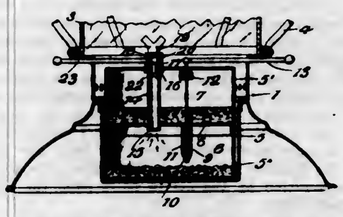
2. An automatic trip mechanism for end matching machines, comprising; a plurality of resiliently mounted supporting devices, pivotally mounted gage members above said supporting devices, a resilient mounted member pivotally connected to said gage member and operated thereby, a bell crank lever operated by said last mentioned means, a connecting link pivotally connected with said bell crank lever, trip mechanism connected to said link to operate thereby, a driving belt and an idle pulley connected to said trip mechanism and engaging the driving belt of said end matching machine to be released upon the operation of said trip mechanism when actuated by said first mentioned gage member.

3. An automatic trip mechanism for end matching machines comprising; a base, a plurality of standards therefrom, a plurality of vertically mounted supporting members mounted in a portion of said standards, spring means supporting said members in an upward position, a platform supported by said vertically mounted means, and adapted to receive the ends of material, gage members pivotally mounted above said last mentioned means, means actuated by said gage members, bell crank mechanism actuated by said last mentioned means, trip mechanism, a link rod connecting said bell crank lever to said trip mechanism, a driving belt and means connected to said trip mechanism and engaging the drive belt of said end matching machine to be released from the belt upon the operation of said pivoted device.

4. An automatic trip mechanism for end matching machines, comprising the combination with standards, means to carry material over the standards and additional means to direct upward pressure on said material, of pivotally mounted gage members immediately above the path of the material, link members pivoted to said gage members, a bearing for the upper ends of said link members, springs surrounding said link members between the bearing and gage members, driving means for the machine and an automatic trip mechanism coöperating with said link members and the driving means of the machine to stop the motion of the machine when undue pressure of material is directed upwardly against said gage members.

5. An automatic trip mechanism for end matching machines, comprising standards, a plurality of spring pressed supporting bolts vertically movable in said standards, springs adapted to direct upward pressure on the bolts, yielding platforms over the upper ends of the bolts, means to convey material over said platforms, a spring pressed pivotally mounted gage member above the platform operating means for the machine and trip mechanism coöperating with the gage member and said operating means of the machine to stop the operation of the machine when undue pressure of the material is directed against the gage member.

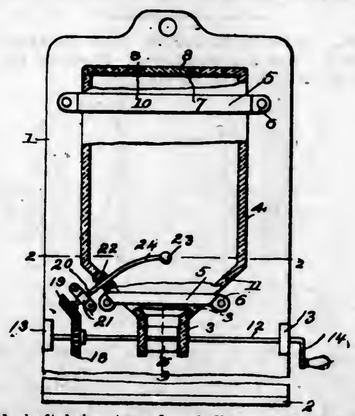
1,152,991. ACETYLENE-LANTERN. WILLIAM TENBUSCH, Pana, Ill. Filed May 14, 1914. Serial No. 838,610. (Cl. 67—121.)



In combination, a horizontal supporting plate having an opening, an upright tube having its upper end projected through and above said opening and provided with external screw threads, a shoulder on the tube contacting with the lower side of the plate, an upright internally threaded sleeve whose lower end receives therein the upper externally threaded end of the tube and bears on the upper side of said plate, the threads in said sleeve being continued therein substantially throughout the length thereof, and said sleeve being provided with a horizontal slot, a centrally apertured partition in the sleeve having external screw threads engaging the threads in the sleeve above the tube, a handle projecting from the partition through the slot in the sleeve, and a fixed needle valve in the tube alined with the aperture in the partition.

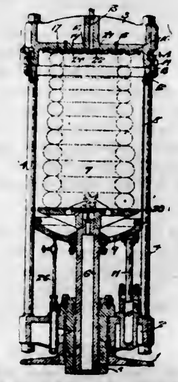
1,152,992. SUGAR-BOX. ISAIAH FREDRICK THOMAS, Norristown, Pa., assignor of one-half to Earl Johnson, Norristown, Pa. Filed Nov. 23, 1914. Serial No. 873,574. (Cl. 221—106.)

A sugar box including a supporting plate, a box body mounted upon said supporting plate, means for securing said body in position, said body having a filling opening, means for closing said filling opening, a discharge spout, inclined walls connecting the discharge spout with the body of the box, said plate having a shelf projecting outwardly beneath the discharge spout, a shaft extended longitudinally through said discharge spout, a sleeve mounted upon said shaft, feeding blades projecting radially from said sleeve to feed out a predetermined quantity of the contents of the box body, means for rotating said shaft, means for supporting said shaft, an agitating shaft positioned at an angle to the first mentioned shaft and extended through one of the inclined walls, the inner end



of said shaft being turned, a ball mounted upon the inner extremity of said agitating shaft, and operable connections between the first mentioned shaft and the agitating shaft to revolve the latter upon rotation of said first mentioned shaft.

1,152,993. VULCANIZER. PETER D. THROPP, Trenton, N. J., assignor to The De Laski and Thropp Circular Woven Tire Company, Trenton, N. J., a Corporation of New Jersey. Filed Feb. 24, 1914. Serial No. 820,606. (Cl. 18—17.)



1. A vulcanizing apparatus comprising a chamber, a head therefor, an inlet for a heating medium in said head, and grooves in said head extending from the inlet to the outer portion thereof.

2. A vulcanizing apparatus comprising a chamber, a head therefor, a plate secured to the under face of said head, and grooves in said plate extending from one side to the other thereof.

3. A vulcanizing apparatus comprising a chamber, a head therefor, an inlet for a heating medium in said head, a plate secured to the under face of said head, and grooves in said plate extending from said inlet to the outer edges of the plate.

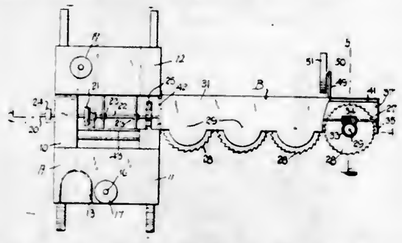
4. A vulcanizing apparatus comprising a chamber, a head therefor, a plate secured to the under face of said head, and grooves in both sides of said plate.

5. A vulcanizing apparatus comprising a chamber, a head therefor, an inlet for a heating medium in said head,

a plate secured to the under face of said head, said plate having a depression in communication with said inlet, and grooves extending from said depression to the outer edges of the plate.

[Claims 6 to 10 not printed in the Gazette.]

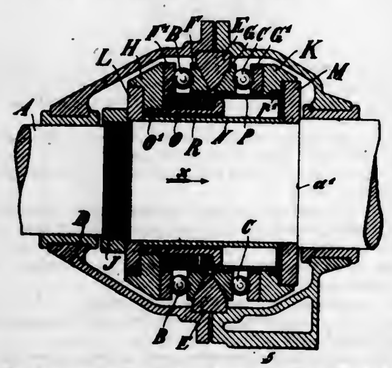
1,152,994. MOWING-MACHINE FOR SUGAR-CANE. VACLAV J. VITEK, Cincinnati, Ohio. Filed Apr. 10, 1915. Serial No. 20,505. (Cl. 56—74.)



1. A cane harvester including a wheeled supporting frame, a cutter beam including a rear wall, a top wall, a bottom wall, a front wall, and an outer end wall, a plurality of longitudinally extending bars mounted in the corners defined by said walls, and a plurality of cutting elements mounted in the cutter beam, means for actuating the cutting elements, supporting rods extending from the wheeled frame, an axle passing through certain of said rods and through the terminals of the bars at the upper corners of the cutter beam for pivotally supporting the cutter beam, and a locking rod adapted to be passed through certain other of the rods and through the bars at the lower corner of the cutter beam for maintaining the cutter beam against swinging movement when the same is horizontally disposed for use.

2. A harvester including a wheeled supporting frame, a cutter beam, cutting elements carried by the beam, means for actuating said elements, extensions carried by the inner end of the beam in vertical relation, supporting rods extending from the wheeled frame, an axle passing through certain of said rods and through the upper extensions of the beam for pivotally supporting said beam, and a locking rod adapted to be passed through certain other of the rods and through the lower extensions of the beam for maintaining the beam against swinging movement when the same is horizontally disposed for use.

1,152,995. DOUBLE-ACTING BALL THRUST-BEARING. KARL JULIUS VON KAJDACSY, Kiel, Germany, assignor, by mesne assignments, to Deutsche Waffen- und Munitionsfabriken, Berlin, Germany. Filed Dec. 10, 1912. Serial No. 736,025. (Cl. 64—49.)



1. In a thrust ball bearing constructed for application to a shaft provided with a pair of thrust collars, spaced apart thereon; said thrust ball bearing comprising an intermediately located abutment member, ball race members with balls between them, said ball race members being constructed to engage with said abutment member and said thrust collars respectively, and being thereby adapted to transmit thrust directly from the shaft to said abutment member, a spring tending to press said ball race members against the balls, thereby sustaining the balls in position when no thrust is being transmitted from the shaft to the housing.

2. In a thrust ball bearing constructed for application to a shaft provided with a pair of thrust collars, spaced apart thereon; said thrust ball bearing comprising an intermediately located abutment member, two pairs of ball race members with balls between them, the members of each pair being constructed to engage with one of said thrust collars and said abutment member and being thereby adapted to transmit thrust from the shaft to the abutment member, a spring tending to press the ball race members against corresponding balls, thereby sustaining the inactive balls in position while the thrust is being transmitted to active balls from the shaft to said abutment member.

3. In a double acting thrust ball bearing for a shaft, a stationary bearing therefor, a thrust collar adapted to transmit thrust in opposite directions to the stationary bearing and a pair of abutments constructed to receive thrust in opposite directions from the shaft, two pairs of ball race members with balls between them, each pair rigidly engaging with the thrust collar on the one hand, and with one of said shaft abutments on the other hand, a spring tending to press the ball race members of each pair against the corresponding balls thereby sustaining the temporarily inactive balls in position while the thrust is being transmitted by the active balls from the shaft to the stationary bearing.

4. In a double acting thrust ball bearing for a shaft, a suitable stationary bearing therefor, a thrust collar mounted on said stationary bearing, a pair of ball systems suitably constructed to be suspended between abutments on the shaft, adapted to resist the thrust of the shaft in opposite directions, each of said systems comprising a pair of ball race rings with balls between them, an inner ring in each pair abutting against said thrust collar, a spring tending to press the rings against the balls thereby sustaining the inactive balls in position while the thrust is being transmitted by the active balls from the shaft to said thrust collar.

5. In a double acting thrust ball bearing for a shaft, provided with a pair of thrust abutments, a thrust collar constructed to be mounted on a suitable stationary bearing, a pair of ball systems suitably constructed to be suspended between the abutments on the shaft adapted to resist thrust of the shaft in opposite directions, each of said systems comprising a set of balls, an inner ball race ring engaging with said thrust collar and an outer ball race ring engaging with said shaft abutments, two telescoping sleeves having opposing collars engaging respectively with the outer ball race ring of the ball system, a spring between said sleeve collars adapted to telescope the sleeves and thereby to force together the two ball systems.

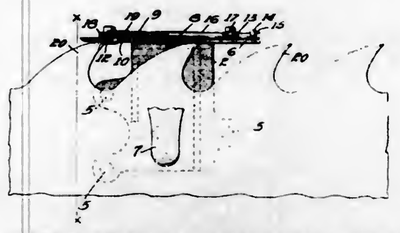
[Claims 6 to 10 not printed in the Gazette.]

1,152,996. SAW-TOOTH-CENTERING INDICATOR. ALBERT E. WHITE, Eau Claire, Wis. Filed Oct. 5, 1914. Serial No. 865,045. (Cl. 33—202.)

1. A saw tooth centering device comprising a suitable plate adapted for movement back and forth over the blade of a saw, a lever pivoted on said plate and having one end depending below said plate and adapted for engagement with the point of a saw tooth, and an indicator pivotally connected with the other end of said lever above said plate.

2. A saw tooth centering device comprising a support adapted to be placed on a saw, a lever pivoted in said support and having a recess provided with converging side walls adapted to receive the point of a saw tooth, and an indicator pivotally connected with said lever.

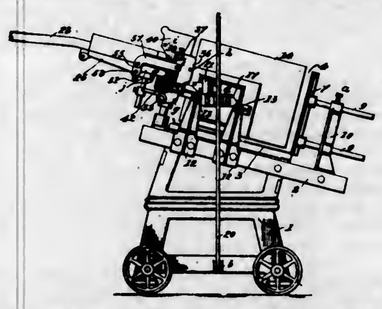
3. In a saw tooth centering device, a lever having a V-shaped recess therein adapted to receive the point of a saw tooth, the contact of the tooth with the edges of said recess alining the lever with the plane of the tooth, and means for indicating the degree of movement of the lever when the point of the tooth is out of the plane of the base thereof.



4. A device for indicating the lateral offset or deflection of a saw tooth, comprising a support adapted to be placed on a saw, a member pivoted on said support and having a V-shaped recess to receive the point of a tooth, the engagement of the edge of the recess with the tooth point oscillating said member if the tooth point is offset from the plane of the tooth, and means for indicating the movement of said member and the lateral deflection of the tooth point.

5. A saw tooth centering device comprising a support adapted to be placed on a saw, a lever pivoted in said support and having means adapted to receive the point of a saw tooth for alining the lever with the plane of the tooth, and an indicator pivotally connected with said lever.

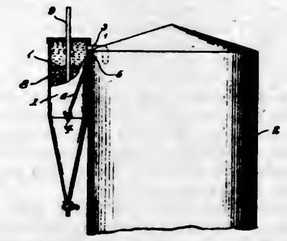
1,152,997. MACHINE FOR CASING OR BOXING CANS. FREDERICK W. WILD, Jr., Baltimore, Md., assignor to Burt Machine Company, a Corporation of Delaware. Filed Feb. 5, 1914. Serial No. 816,747. (Cl. 100—59.)



1. In a machine for the purpose described, a receptacle for cans, a plunger plate situated in the receptacle with means to effect its forward movement, a runway leading to the receptacle, hinged plates situated at the sides of the runway and exteriorly thereof carrying intercepting rods to hold back cans on the runway, or allow of the passage of cans from the runway to the said receptacle, combined with means to effect the movement of the plunger plate, and other means to actuate the said plates carrying the intercepting rods.

2. In a machine for the purpose described, a receptacle for the cans, a plunger plate situated in the receptacle, a hand lever mechanism to move the plunger plate in a forward or a backward direction in the receptacle, a sliding saddle having a straight and an inclined surface a detachable connection substantially as described between the hand lever mechanism and the saddle, and a runway for the cans leading to the receptacle, combined with devices to alternately interrupt and release the cans on the runway the said devices embracing a roller adapted to bear against either the straight or the inclined surface of the saddle.

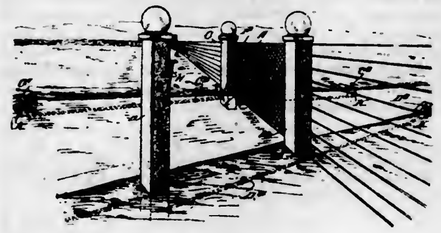
1,152,998. WATER TANK AND FILTER. CHARLES J. WILKERSON, Leonard, Tex. Filed Sept. 2, 1914. Serial No. 859,826. (Cl. 210—4.)



1. In combination, a tank provided with perforated lugs secured thereon in spaced relation, a filter adjacent said tank and having securing lugs thereon, said filter adapted to discharge into said tank, rods adapted to swingingly engage the lugs on said tank, with hooks on the ends thereof adapted to engage the securing lugs on said filter whereby said filter is sustained in secured relation to said tank.

2. In combination, a tank with perforated lugs near the top thereof, a filter adjacent the side of said tank and near the top thereof and adapted to discharge into the tank at the top thereof, said filter having perforated lugs secured thereon at diametrically opposite points and below the lugs on said tank, rods having hooks on the lower ends thereof and adapted to swingingly engage the lugs on said tank and detachably engage the lugs on said filter, whereby the filter is detachably supported on the side of said tank and may be swung away and lifted above said tank without detaching the filter, substantially as described.

1,152,999. AUTOMATIC GATE. ADRIAN WILLIAMSON, Monticello, Ark. Filed Nov. 19, 1914. Serial No. 872,993. (Cl. 39—20.)



1. The combination with a swinging gate, of a spring strap secured at one end thereto, a post at the free side of the gate, a shaft journaled transversely through the post and projecting exteriorly thereof through its side adjacent the side of the gate, an arm secured at its lower end to the said projecting shaft, and projecting upright along the said post side, the said arm having an upper angular extremity for engagement with the free portion of the said spring strap, and road-side means remote from the post and having connections with the said shaft and extending within the post whereby to rock the shaft and swing the said upright arm in order to move the free side of the gate away from the said post.

2. The combination with a swinging gate, a spring strap secured at one end to the free side of the gate, a post having a pair of transverse shafts journaled therethrough and provided with exteriorly projecting ends one above the other adjacent the free side of the gate, an upright arm secured at its lower end to the projecting end of the

upper shaft and extending vertically along one side of the post and provided with an angular extremity at its upper end adapted to engage the free end portion of the said gate strap, a latch piece secured to the projecting end of the lower shaft for engagement with the gate, said last named shaft having a lateral arm within the post and a spring connected to and depending from the said arm and secured at its lower end to the post, an arm intermediately secured to the upper shaft within the post, a chain connecting one end of the last-mentioned arm to the arm of the lower shaft, and road-side means remote from the post and having flexible connections with the other end of the arm of the upper shaft whereby to simultaneously release the latch member from the gate and swing the upright arm to move the gate away from the post, the latch member being movable, through the flexible connections of its shaft arm, independent of movement of the said upright arm and its shaft when engaging the gate.

3. The combination with a swinging gate, having a spring strap at one side of a post having a latch for engagement with the free side of the gate, a gate moving member carried by the post and movable to engage said gate strap and swing the gate away from the post before the latch is released, means located remote from the post and having connections with said gate moving member for moving the same, and connections between the latch and the said gate moving member whereby to release the former after initial movement of the latter.

4. The combination with a swinging gate, having a spring strap at its free side, of a post having a spring controlled latch for engagement with the said free side of the gate, a gate moving member carried by the post and movable to engage said spring strap before the latch is released, means located remote from the post and having connections with said gate moving member for moving the same, and connections between the latch and the said gate moving member whereby to release the former during movement of the latter, said last named connections being flexible whereby the latch may move upon engagement of the gate therewith, independent of the gate moving member.

5. The combination with a swinging gate, of a post having a latch for engagement with the free side of the gate, a gate moving arm carried also by the said post and having a swinging movement with respect thereto, road-side means remote from the post and having connections for swinging said gate moving arm and disengaging the latch during such swinging movement of the said gate moving arm, and elastic means carried by the gate whereby to permit limited relative movement of the gate moving arm previous to the release of the latch.

[Claim 6 not printed in the Gazette.]

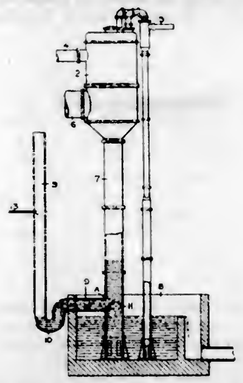
1,153,000. GUARD FOR EYEGLASSES. FRANCIS JOHN WITTS, Manor Park, England. Filed Feb. 18, 1914. Serial No. 819,453. (Cl. 88—48.)



1. A guard for eye-glasses, comprising two members, each member comprising an integral base portion from which projects a pair of gripping faces divided by a tapering depression, the side walls of which converge toward each other, and in direction of the base of the nose, the bottom wall of said depression terminating at the base, whereby movement of the members toward the front of the nose will force the flesh thereof into the tapering depression and hold the guard in position.

2. A guard for eye-glasses, comprising a plurality of members, each member comprising a plurality of gripping faces divided by a central depression, one of said gripping faces being higher than the other of said faces.

1,153,001. BAROMETRIC CONDENSER. LOUIS A. WOODARD, Youngstown, Ohio, assignor to The William Tod Company, Youngstown, Ohio, a Corporation of Ohio. Filed Dec. 23, 1914. Serial No. 878,799. (Cl. 261—2.)



1. In a barometric condenser, a tail pipe leading from the condenser, a sink or receptacle into which said pipe discharges at its lower end, and a free steam exhaust passage communicating with said pipe at a point above the normal water level of the water in the sink or receptacle.

2. In a barometric condenser, a tail pipe leading from the condenser, a sink or receptacle to which the tail pipe leads and into which it discharges, a free steam exhaust passage communicating with the tail pipe at a point above the normal water level in the sink or receptacle and a trap for automatically sealing said passage.

3. In a barometric condenser, a tail pipe leading from the condenser, a sink or receptacle into which the tail pipe leads and discharges, a free steam exhaust passage communicating with the tail pipe at a point above the normal water level in the sink or receptacle and means at the point of connection of the tail pipe with the free exhaust passage to deflect water from said pipe into said passage.

4. In a barometric condenser, a tail pipe leading from the condenser chamber, a sink or receptacle into which the tail pipe leads and into which it discharges, a free steam exhaust passage communicating with the tail pipe at a point above the normal water level in the sink or receptacle, a trap for automatically sealing said passage, said tail pipe having a lip projecting thereinto at the point of connection of the exhaust passage therewith to automatically deflect water from said pipe into said trap.

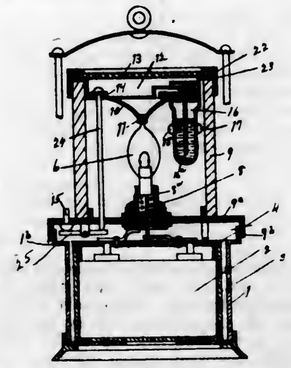
1,153,002. JOINT FOR HOSE CONNECTIONS. ALFRED M. WRIGHT, Bloomington, Ill. Filed Mar. 16, 1914. Serial No. 825,087. (Cl. 137—28.)



1. The combination with a metallic pipe section, of a hose pipe section having an end portion fitted over upon the metallic pipe section, and a gasket interposed between the interfitting ends of said pipe sections, said gasket comprising a body or sleeve having beveled end portions, said body or sleeve being formed of a plastic material capable of being softened so as to adhere to the surfaces of the said pipe sections through the solvent action of a hydrocarbon and to retain such state through the application of heat.

2. The combination of a metallic pipe section with a hose pipe section having an end portion fitted over upon the metallic pipe section by means of a connecting gasket interposed between the interfitting ends of the sections, said gasket being made of a tube of normally solid material having beveled end portions and adapted to be softened and rendered viscous by the action of a hydrocarbon and thereafter to be hardened by the action of heat and evaporation, rendering the joint water-tight and susceptible of withstanding the ordinary vibration of motion when in use without breaking the connection.

1,153,003. MINER'S SAFETY-LAMP. MARTIN ALBRECHT, Frankfort-on-the-Main, Germany. Filed Nov. 24, 1913. Serial No. 802,819. (Cl. 240—17.5.)



1. The combination of a lamp, a member having a diffusion chamber adjacent said lamp, and a U-shaped passage carrying a fluid therein, said passage communicating at one end with said chamber, and interposed between the lamp and the spectator.

2. The combination of a lamp, a member having a diffusion chamber above said lamp, and a U-shaped passage connected at one end with said chamber, the limbs of said passage being adapted to display distinctive colors, substantially as described.

3. An apparatus for the purpose specified, comprising a lamp, a casing having a diffusion chamber, and a U-shaped passage carrying a fluid therein, said passage being of very small cross section connected with said diffusion chamber and depending beside the lamp, and a liquid in said passage.

4. An apparatus for the purpose specified, comprising a base, a lamp attached thereto, a casing surrounding the lamp and having a diffusion chamber above the lamp, and a U-shaped passage carrying a fluid therein, said passage being connected with said diffusion chamber and depending beside the lamp, substantially as described.

5. The combination of a lamp and a member having a diffusion chamber, and a U-shaped passage connected with said chamber and depending beside the lamp, and a vent valve in said diffusion chamber.

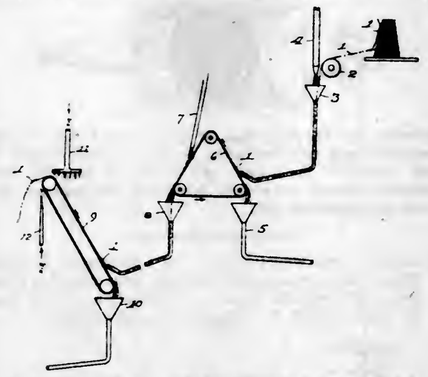
[Claims 6 and 7 not printed in the Gazette.]

1,153,004. PROCESS OF TREATING THREAD. CHARLES SCOTT ALTHOUSE, Reading, Pa. Filed Mar. 21, 1912. Serial No. 685,319. (Cl. 8—5.)

1. The process of treating threads which consists in conveying the thread, immersed in liquid through the tube, to a movable separator; separating the liquid from the thread by the movement of the separator and engaging the thread in a second liquid before it leaves the separator.

2. The process of treating threads which consists in conveying the thread, immersed in liquid through a tube to a separator; separating the liquid from the thread, automatically picking up the thread by the said separator and engaging the thread in a second liquid as it leaves said separator.

3. The process of treating threads which consists in conveying the thread through a tube to a separator while immersed in liquid; automatically picking up the thread by said separator, shedding the liquid and engaging the thread in a second liquid as it leaves the separator.



4. The process of treating threads which consists in carrying the thread, immersed in liquid, through a tube to a revolving separator; shedding the liquid from the thread by the action of the separator, and removing the thread from the separator by means of a second liquid applied thereto.

5. The process of treating threads which consists in carrying the thread through a tube while immersed in a liquid, to a separator; automatically shedding the liquid as the thread engages the separator and automatically removing the thread from the separator.

[Claims 6 to 18 not printed in the Gazette.]

1,153,005. SPARK-COIL. BUTLER AMES, Lowell, Mass. Filed Mar. 28, 1914. Serial No. 827,871. (Cl. 175—349.)



1. In a spark coil, a metallic vibrator having more than two resilient leaves secured together at one end; and means whereby the movements of each leaf are limited in relation to each other.

2. In a spark coil, a metallic vibrator, having three resilient leaves secured together at one end; and a stud which is secured in an outside leaf, passes through the other two leaves, and has upon its free end portion a head, whereby the movements of each leaf are limited in relation to each other.

3. In a spark coil, a bridge, a metallic vibrator to engage said bridge and having three resilient leaves secured together at one end; a stud which is provided with a head, is secured to one outside leaf, passes through the middle leaf and the outer leaf which may engage the under side of the head; the top leaf being provided with a rearwardly extending adjusting spring; and means to give the vibrator the desired tension; all designed so as to limit the movements of each leaf in relation to each other, to avoid objectionable noise, and also permit a long make, and a quick break, by the vibrator.

1,153,006. ARMATURE FOR MAGNETOS. BUTLER AMES, Lowell, Mass. Filed Mar. 28, 1914. Serial No. 827,872. (Cl. 171—207.)

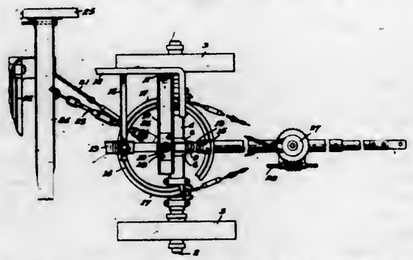
An armature having a core; and two pole pieces; one of which is removably secured thereto; a primary coil removably slipped thereon; a secondary coil removably

mounted over said primary coil; two collared tubes of insulation removably mounted upon said primary coil, and abutting each other and separating said primary and secondary coils; insulating material covering the space



between the abutting ends of said collared tubes of insulation; and two insulating covers mounted outside of the collars of insulation, and extending inwardly into contact, thereby completely insulating the primary coil from the secondary coil.

1,153,007. DRAFT-RIGGING. AXEL ANDERSON, St. Paul, Minn., assignor to Russell Grader Manufacturing Company, Minneapolis, Minn., a Corporation. Filed Dec. 19, 1913. Serial No. 807,623. (Cl. 21—189.)



1. The combination, with a frame having a forward axle and carrying wheels and a bolster mounted on said axle, a king-bolt pivotally connecting said frame and bolster, a draft tongue connected to said bolster, a draft connection for the lower end of said king-bolt, the pull being transmitted from said tongue through said king-bolt to said draft connection independently of said axle.

2. The combination, with a frame, an axle and carrying wheels therefor and a bolster mounted on said axle, of a king-bolt pivotally connecting said frame and bolster independently of said axle, a draft connection for said king-bolt, and a draft tongue having a direct connection through said bolster with said king-bolt.

3. The combination, with a forward axle having carrying wheels, of a transverse beam wherein said axle is mounted, a bolster having an upper and a lower bracket arranged to straddle said axle and beam, a draft tongue connected to said brackets, a frame having bearings on said bolster, a king-bolt passing through said bolster and pivotally connecting it with said frame, and a direct draft connection for said king-bolt.

4. The combination, with an axle having carrying wheels, of a bolster mounted thereon and having forwardly projecting brackets arranged one above another and straddling said axle, a draft tongue connected to the forward portion of said brackets, a frame having bearings on said bolster, a king-bolt mounted in said frame and having a comparatively long bearing surface in said bolster in the rear of said axle, the pull of said draft tongue on said bolster being transmitted through said brackets to said king-bolt independently of said axle, and draft connections for the lower portion of said king-bolt.

5. The combination, with a forward axle and carrying wheels and a bolster mounted thereon, of a frame supported by said bolster, a king-bolt pivotally connecting said frame and said bolster, means having a draft connection with said bolster, a draft connection for said king-bolt, the draft being applied directly through said bolster to said king bolt.

[Claims 6 to 8 not printed in the Gazette.]

1,153,008. WINDOW FOR VESTIBULES OF STREET-CARS. CHARLES H. ANDERSON and THOMAS ELLIOTT, Cincinnati, Ohio. Filed Oct. 9, 1914. Serial No. 865,902. (Cl. 20—52.)



1. The combination of a window frame and sash, means for moving the sash rearwardly away from its seat on the frame, traveling hangers carrying said moving means, and combined lock and guide carried by the sash at its lower end, one part of said lock and guide having a pivoted and sliding movement on the other part, the said other part having sliding engagement with a fixed rail located at one side of the frame.

2. The combination of a window frame and sash, means for moving the sash rearwardly away from its seat in the frame, traveling hangers carrying said moving means, and a combined lock and guide carried by the sash at its lower end and having sliding engagement with a fixed rail located at one side of the frame.

3. The combination of a window frame of a car vestibule, a trackway located in a plane above said window and also at one side thereof, hangers mounted to travel on said trackways, a sash carried by said hangers, a fixed rail adjacent the lower edge and at one side of said window and a combined lock and guide carried by the sash at its lower end, one part of said lock having a pivoted and also a sliding movement on the other part, and the said other part having a sliding engagement with the said rail.

4. The combination of a frame, sash, traveling hangers supporting the sash at the upper end of the latter and jointed guiding means composed of parts having pivotal and sliding connection with each other one of said parts being secured to the sash near the lower end of the latter and another part engaging a fixed guide rail whereby the lower end of the sash will be guided and retained against swinging movement.

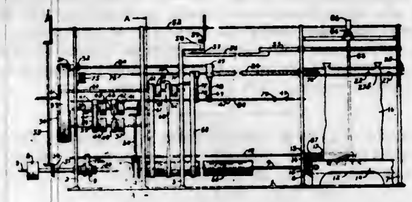
5. The combination of a frame, sash, traveling hangers supporting the sash and means connecting the sash and traveling hangers whereby the sash may have an upward and inward movement on its hangers, and a guide and lock composed of parts pivotally and slidably connected for guiding the lower end of the sash in its vertical and lateral movement and for locking it in its closed position.

[Claims 6 and 7 not printed in the Gazette.]

1,153,009. SACK-SEWING MACHINE. PIETRO ARRIGHI, San Jose, Cal. Filed Jan. 18, 1915. Serial No. 2,896. (Cl. 112—24.)

1. A device of the character described, comprising the combination of a member having a slot, of a pair of jaws hinged together and provided with a spring holding them normally apart, means for operating said jaws in a reciprocating manner, and a spiral needle adapted to be operated in a reciprocating manner above said jaws and

alternately with respect to the movement of said jaws, as described.



2. A device of the character described, comprising the combination with a member provided with a slot, of a pair of jaws hinged together and movable in a reciprocating manner above said slot, a catch secured near the end of one of said jaws adapted to lock said jaws when forced together, means for forcing said jaws together when in an extended position, means for unlocking said jaws when in a retracted position, and a spiral needle operating in a reciprocating manner above said jaws, as shown and described.

3. A sack sewing machine comprising the combination of a sack carrier having driving means operatively connected thereto while a sack is being positioned for sewing, means operated by said sack for rendering said driving means inoperative when said sack is positioned for sewing, and an arm pivotally mounted on said machine and operatively connected to said driving means for discharging said sack when sewed, as shown and described.

4. In a sack sewing machine, the combination of a sack feeding mechanism having driving means operatively connected thereto while a sack is being positioned for sewing, mechanism operated by the sack for rendering said sack feeding mechanism inoperative while the sack is being sewed, a cam shaft operatively connected to said driving means, a cam mounted on said cam shaft having one half of the projecting portion thereof removed, a bar pivotally mounted on said machine having a head rounded on its upper side and flat on its under side and adapted to engage said cam, said bar having an outwardly projecting arm formed upon its lower extremity so positioned as to arrest the return movement of the sack operated mechanism until the sack is wholly discharged, as shown and described.

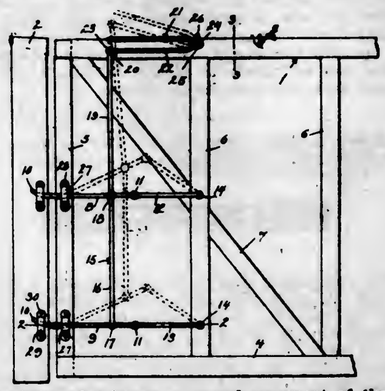
5. In a device of the character described, the combination of a pair of hinged jaws mounted upon the end of a tube operating in a reciprocating manner, a hollow shaft operating in a reciprocating manner through said tube and at alternate periods with respect to said jaws, and a spiral needle mounted on said hollow shaft in such a manner that a thread may be passed through said hollow shaft and said tube to the needle's point.

[Claim 6 not printed in the Gazette.]

1,153,010. GATE AND DOOR FASTENER. LYNN T. BANKS, Kahoka, Mo. Filed Jan. 12, 1915. Serial No. 1,853. (Cl. 70—28.)

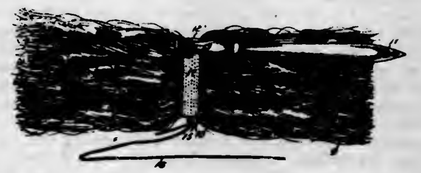
1. The combination with a gate, and a gate post, a keeper carried by the gate post, an operating element pivotally secured to the top portion of said gate, a rod pivotally connected to one end of the operating element and extending downwardly therefrom, bolts having curved ends secured to said operating rod intermediate their ends, links pivotally secured to the gate, their free ends being pivotally secured to the ends of the bolts whereby on operating movement of the operating element the operating rod will be drawn upwardly and inwardly owing to the pivotal action of the bolt, thereby drawing the curved portion of the bolt away from the keeper.

2. The combination with a gate and a gate post, keepers arranged to be carried by the gate post, a U-shaped operating element secured to the upper portion of said post, an operating rod pivotally secured to one of the arms of the U-shaped operating element, a plurality of bolts pivotally secured to the operating rod intermediate their ends, said bolts having one of their ends curved to engage the keeper of the gate post, links pivotally secured to the gate, their free ends pivotally secured to the free ends



of the bolts whereby upon upward movement of the U-shaped operating element the operating rod will be drawn upwardly and inwardly owing to the pivotal motion of the links and bolts and thereby withdraw the curved portion of the bolts from the keepers.

1,153,011. DUSTER. ANASTASIA G. BARRON, New York, N. Y., assignor to Chester G. Barron and William V. Barry, Brooklyn, N. Y. Filed Apr. 14, 1915. Serial No. 21,801. (Cl. 15—28.)



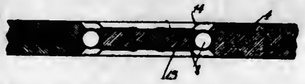
1. A duster comprising a body portion formed from a plurality of short lengths of cord; a girdle surrounding said short lengths at the center thereof, the sides of said girdle being rigidly united through the interposed lengths of cord; a rigid handle for said duster; a plurality of eyelets disposed at one end of said girdle at opposite sides of said handle; and a cord operatively engaged with said eyelets for securing the eyeleted end of said girdle on said handle.

2. A duster comprising a body portion formed from a plurality of short lengths of cord; a girdle surrounding said lengths of cord at the center thereof, the sides of said girdle being rigidly united with each other to bind upon the interposed short lengths of cord; a plurality of eyelets mounted on said girdle, two of said eyelets being disposed in space and paired relation at one end of said girdle, and one being disposed at the opposite end of said girdle; a handle disposed between and secured to said paired eyelets for rigidly attaching the adjacent end of said girdle on said handle; and means embodying a flexible binding member and the eyelet at the opposite end of said girdle, adapted for wrapping about said girdle, for holding the same in service relation to said handle.

3. A duster comprising a body portion formed from a plurality of short lengths of cord; a girdle surrounding said lengths of cord at the center thereof, the sides of said girdle being rigidly united with each other to bind upon the interposed short lengths of cord; a plurality of eyelets mounted on said girdle, two of said eyelets being disposed in spaced and paired relation at one end of said

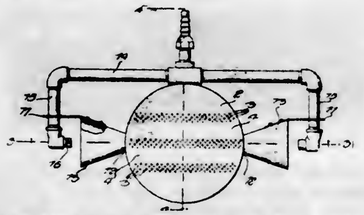
girdle, and one being disposed at the opposite end of said girdle; a handle disposed between and secured to said paired eyelets for rigidly attaching the adjacent end of said girdle on said handle; and means embodying a flexible binding member and the eyelet at the opposite end of said girdle, adapted for wrapping about said girdle, for holding the same in service relation to said handle, said flexible member being wrapped upon to form a binding for the outer half of said cord lengths when the same are folded over said girdle, to dispose the ends of said cord lengths all in the same service relation.

1,153,012. LEVEL. JOHN BARTHA, Clinton, Mass. Filed Nov. 17, 1914. Serial No. 872,577. (Cl. 33—212.)



The combination with a level-body having a circular hole in its longitudinal center throughout its thickness, from its top edge to its bottom edge, of an annular transparent tube containing a fluid and an air-bubble formed therein, said tube fitting into a concave groove formed in the inner edges of said circular slot, a disk shaped member provided with graduations on both sides filling out the space encompassed by said annular tube, brackets connecting said disk-shaped member to said level-body so as to maintain all the said elements securely in position and metal plates having oval slots formed in their longitudinal centers secured on the top and bottom edges of said level-body, substantially as and for the purpose set forth.

1,153,013. GAS-BURNER. BENJAMIN CAVEN BARTLEBAUGH, Wheeling, W. Va. Filed Apr. 29, 1915. Serial No. 24,835. (Cl. 158—114.)

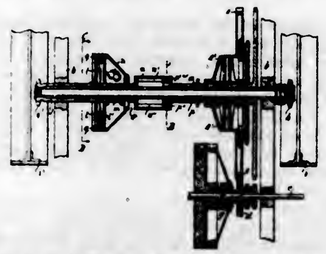


1. A gas burner comprising one chamber disposed within another, the inner chamber having outlet openings in opposite side walls and inlet openings arranged in its side walls in planes at right angles to the planes of the outlet openings, funnel-shaped inlet members arranged outside said outer chamber and having the apices thereof extending through the walls of said outer chamber into the inner chamber, and gas nipples discharging into the mouths of said funnel-shaped members, the top of said outer chamber being disposed above that of the inner chamber and having fuel outlet openings therein.

2. In a gas burner, the combination of a closed cylindrical outer casing, an inner casing disposed therein and having straight side walls and curved ends conforming to the curvature of and fitting the opposed inner faces of the outer casing, said inner casing being of less height than the outer casing, funnel-shaped inlet pipes arranged outside the outer casing and having their apices extending through the side walls of the outer casing and opening into the ends of the inner casing, the side walls of said inner casing having openings therein and the top of said outer casing having laterally spaced series of fuel outlet apertures arranged thereacross.

3. In a gas burner, the combination of a closed cylindrical outer casing, an inner casing disposed therein and having straight side walls, and curved ends conforming to the curvature of and fitting the opposed faces of the outer casing, said inner casing being of less height than the outer casing, funnel-shaped inlet pipes arranged outside the outer casing and having their apices extending through the side walls of the outer casing and opening into the ends of the inner casing, the side walls of said inner casing having inverted V-shaped openings therein at their lower edges, and the top of said outer casing having laterally spaced series of fuel outlet openings.

1,153,014. CLUTCH MECHANISM FOR MOTOR HAULAGE-VEHICLES. HENRY BAUCHET, Rethel, France. Filed Jan. 9, 1914. Serial No. 811,199. (Cl. 21—114.)



1. Mechanism for the purpose described, comprising in combination a pair of road wheels, a motor driven shaft, an intermediate countershaft driven from the motor shaft, a sleeve on one end of the countershaft, a power transmission means on said sleeve, and on the other end of the countershaft, a compound disk clutch on the countershaft, and means for actuating said clutch mechanism whereby both the sleeve and the countershaft will be coupled to the motor so that both road wheels will be simultaneously driven, or whereby either the sleeve or the counter-shaft will be driven and thus only one of the road wheels.

2. Mechanism for the purpose described comprising in combination, a pair of road wheels, a motor driven shaft, an intermediate countershaft, a change speed gear on the countershaft, a sleeve on one end of the countershaft, power transmission devices on one end of said sleeve and on the other end of the countershaft, a compound disk clutch mechanism on the countershaft, means whereby the change speed gear drives the clutch mechanism, two sets of engaging claws on the clutch mechanism, a toothed disk on the sleeve and a toothed disk on the countershaft in the proximity of the claws, and means for longitudinally sliding the clutch mechanism on the countershaft whereby both sets of claws and disks are brought into engagement to drive both road wheels simultaneously or either disk is brought into engagement with either set of claws to drive one road wheel.

1,153,015. SCREEN. CONRAD BAUER, Pittsburgh, Pa. Filed Aug. 22, 1913, Serial No. 786,085. Renewed July 24, 1915. Serial No. 41,798. (Cl. 156—39.)

1. In a device of the character described, the combination with a frame, of a roller mounted at the top thereof, a screen carried by the roller, a stop carried by the frame, a pivotal dog associated with the roller and adapted to be brought into abutment with the stop, for limiting the rotary travel of the roller and dependent for operation upon unwinding of the screen from the roller, and means coöperating with said limiting means, for stretching the screen to a taut condition.

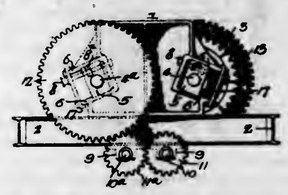
2. In a device of the character described, the combination with a frame, of a roller mounted at the top thereof, a screen carried by the roller, means for actuating said roller whereby the screen may be raised and lowered in the frame, a stop carried by the frame, a pivotal dog associated with the roller and adapted to be brought into abutment with the stop, for limiting the rotatory travel of the roller, and means coöperating with the limiting means, for stretching the screen to a taut condition.

3. In a device of the character described, the combination with a frame work, of a screen operatively mounted in said frame work, a bar carried by the lower end of said screen, a plurality of clamping rods associated with said bar, for drawing the screen to a taut condition, and an actuating device commonly associated with said rods.



4. In a device of the character described, the combination with a frame work, of a screen operatively mounted in said frame work, a bar carried by the lower end of said screen, a plurality of clamping members associated with said bar, for drawing the screen to a taut condition; and a cam member mounted intermediate the ends of the bar and adapted to commonly actuate the said clamping members.

1,153,016. ROLL-CRUSHER. ROBERT H. BEAUMONT, Philadelphia, Pa. Filed June 17, 1915. Serial No. 34,729. (Cl. 83—12.)

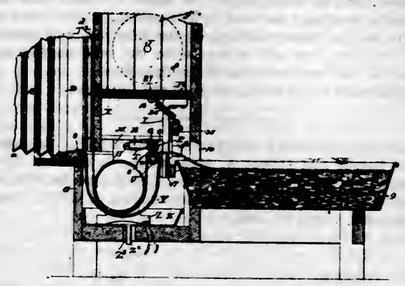


1. The combination in a roll crusher, of housings having shafts on which the rolls are mounted; boxes carrying the shafts; the boxes for one shaft being adjustable; a driving shaft for the adjustable roll shaft; gearing on the driving shaft and on the roll shaft by which the roll shaft is driven, the boxes for the adjustable shaft being adjustable on a line substantially at right angles to a radial line taken through the center of the driving shaft and the roll shaft.

2. The combination in a roll crusher, of housings; two rolls; shafts on which the rolls are mounted; bearings on the shafts adjustable in the housings; a driving shaft for each roll shaft, the roll shafts being adjustable on a line substantially at right angles to the radial line through the driving shafts and the roll shafts.

3. The combination in a roll crusher, of housings; two driving shafts spaced apart and geared together so as to turn in opposite directions; two rolls mounted between the housings; shafts on which the rolls are mounted; housings having guideways; boxes mounted in the guideways; to which the roll shafts are adapted; means for adjusting the boxes; a gear wheel on each roll shaft; a pinion on one of said driving shafts which meshes with the gear wheel on one roll shaft; a pinion on the other driving shaft which meshes with the gear wheel on the other roll shaft, the guideways having such relation to the driving shafts that they can be adjusted without materially changing the relation of the driving gears.

1,153,017. PHOTOGRAPHING AND DEVELOPING APPARATUS. GEORGE C. BEIDLER, Oklahoma, Okla. Filed Feb. 3, 1909. Serial No. 475,791. (Cl. 95—13.)



1. In a photographing and developing apparatus, a casing comprising a stationary and a removable section, the removable section containing a supply of film and having means for exposing the film to light, a tank designed to contain developer inclosed by the casing, a roller journaled in the tank, a member mounted to rotate in the tank, a feed roller having yieldable bearings associated with the removable section of the casing and coacting with the first mentioned roller, means for yieldingly holding the second roller in contact with the first mentioned roller, and means for rotating the rollers in unison whereby film may be drawn around the member.

2. In a photographing and developing apparatus, a casing comprising a stationary and a removable section, the said removable section containing a magazine designed to contain a supply of film, associated with means for exposing said film to light, brackets extending from the removable section of the casing, a tank in the stationary section of the casing for containing developer, a member mounted in the brackets and rotatable in the tank, a feed roller journaled in the tank, a second feed roller having a shaft journaled in the bracket of the removable section, arms in which the shaft of the roller is mounted, said arms being pivotally held in position, means for yieldingly holding one roller in contact with the other roller, and means for rotating the rollers in unison whereby film may be drawn around the member and projected from the casing.

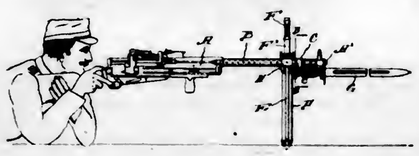
3. In a photographing and developing apparatus, a casing comprising a stationary and a removable section, the said removable section containing a magazine designed to contain a supply of film, associated with means for exposing said film to light, bracets extending from the removable section of the casing, a tank in the stationary section of the casing for containing developer, a member mounted in the brackets and rotatable in the tank, a feed roller journaled in the tank, a second feed roller having a shaft journaled in the bracket of the removable section, arms in which the shaft of the roller is mounted, said arms being pivotally held in position, means for yieldingly holding one roller in contact with the other roller, a drip pan under the tank, and a drain for the drip pan.

4. In a photographing and developing apparatus, a casing comprising a stationary and a removable section, the said removable section containing a magazine designed to contain a supply of film, associated with means for exposing said film to light, brackets extending from the removable section of the casing, a tank in the stationary section of the casing for containing developer, a member mounted in the brackets and rotatable in the tank, a feed roller journaled in the tank, a second feed roller having a shaft journaled in the bracket of the removable section, arms in which the shaft of the roller is mounted, said arms being pivotally held in position, means for yieldingly holding one roller in contact with the other roller, a drip pan under the tank, a drain for the drip pan, supports for the tank, and means for anchoring the supports to the drip pan.

5. In a photographing and developing apparatus, a casing comprising a stationary and a removable section, the removable section containing a supply of film and having means for exposing the film to light, a tank designed to contain developer inclosed by the casing, a drip pan, supports for the tank standing in the drip pan, and studs in the drip pan, the said supports for the tank having apertures to receive the studs of the drip pan.

[Claims 6 to 29 not printed in the Gazette.]

1,153,018. MUZZLE-SUPPORT FOR GUNS. LAURENCE V. BENÉT and HENRI A. MERCIÉ, Paris, France. Original application filed Dec. 27, 1913, Serial No. 809,064. Divided and this application filed Jan. 5, 1915. Serial No. 676. (Cl. 42—94.)



1. A muzzle support for firearms comprising a bayonet scabbard provided with a leg hinged thereto, and means for connecting said scabbard to the gun near its muzzle, substantially as described.

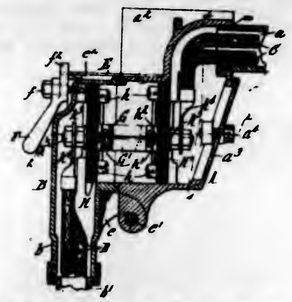
2. A muzzle support for firearms comprising a reinforced bayonet scabbard provided with a leg hinged thereto, and means for detachably connecting said scabbard to the gun near its muzzle, substantially as described.

3. In a gun, the combination with the barrel and its casing, of a muzzle support for said gun comprising a bayonet scabbard, a leg pivoted to said bayonet scabbard, and means for attaching said bayonet scabbard to said barrel casing, said means comprising a trunnion lug projecting from said scabbard, and engaging in a recess in said casing, a curved link hinged to said scabbard and provided with a trunnion lug adapted to engage the opposite side of the barrel casing from the first-mentioned lug, with means for holding said hinged link in place, substantially as described.

4. In a gun, the combination with the barrel and its casing, of a muzzle support for said gun comprising a bayonet scabbard, a leg pivoted to said bayonet scabbard, and means for attaching said bayonet scabbard to said barrel casing, said means comprising a trunnion lug carried by said scabbard, and engaging in a recess in said casing, a curved link hinged to said scabbard and provided with a trunnion lug adapted to engage the opposite side of the barrel casing from the first-mentioned lug, with a second link pivoted to said scabbard and engaging the first link for holding said trunnion lugs in engagement, substantially as described.

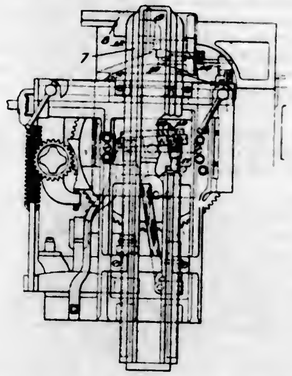
1,153,019. CONNECTION-BOX. WILLIAM F. BOUCHÉ, Buffalo, N. Y., assignor to Gould Coupler Company, New York, N. Y. Filed Nov. 23, 1911. Serial No. 661,992. (Cl. 173—338.)

In a connection box, the combination of a casing comprising a relatively fixed part and a part which is movably connected to said fixed part and which is of unitary structure and has integral side, top and rear walls, said parts having open meeting ends, insulating plates secured in said parts and removable through said open ends thereof when said movable part is detached from said fixed part, conductors entering said parts and located between the outer walls thereof and said plates, and coöperating knife switch members on the faces of said plates adjacent to the open ends of said parts, said switch members having parts extending through said plates and to which the conductors are adapted to be secured at the opposite faces of said plates, said plates with said switch members mounted thereon being adapted to be removed from said movable part of the casing through said open end when the parts



are separated to afford easy access to the rear faces of said plates.

1,153,020. LINE-CASTING MACHINE. WILLIAM E. BERTRAM, Brooklyn, N. Y., assignor to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed Jan. 20, 1913. Serial No. 743,186. (Cl. 199—7.)



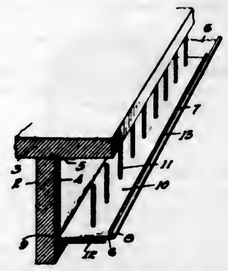
1. In a machine of the linotype class, the combination of a mold, fixed and movable vise jaws arranged in front of the mold, means for adjusting the movable jaw against the fixed jaw, a justifier arranged normally under the jaws to expand wedged spacers, and a head arranged on the justifier to engage the movable jaw to force and lock the same against the fixed jaw during the casting operation.

2. In a machine of the linotype class, the combination of a mold, a metal supply pump therefor having means for releasing the same, fixed and movable vise jaws, and means for forcing the movable jaw directly against the fixed jaw to close the opening in the mold and to operate the pump releasing means.

3. In a machine of the linotype class, the combination of a mold, a pair of vise jaws adapted to confine a line of matrices between them and capable of being brought together into direct contact, justifier mechanism for expanding the spacers in a line of matrices, and means operative automatically by the justifier mechanism for forcing one of said jaws against the other when the same are brought together without matrices between them.

4. In a machine of the linotype class, in combination, a mold, a pair of vise jaws, justifier mechanism for driving up the wedge spacers, and a taper or wedge head mounted on said justifier mechanism and adapted to drive one of said jaws against the other and hold it during the casting of the slug.

1,153,021. SPOOL-CARRIER. CORA B. BRAITHWAITE, Minneapolis, Minn. Filed Nov. 27, 1914. Serial No. 874,197. (Cl. 242—139.)



1. A spool carrier having means for attaching it to a suitable overhanging support, upright pins mounted in said carrier and spaced a suitable distance apart, and adapted to support spools of thread placed thereon, said means having guides wherein said carrier is slidable, the upper ends of the spools when the device is in use being sufficiently near said support to prevent their removal from said pins.

2. The combination, with an overhanging support, of a plate supported beneath the same and having a horizontal extension and guides thereon, a spool carrier slidable in said guides and having pins whereon the spools are mounted, the upper ends of said pins being adjacent to said support, whereby the removal of the spools from the pins is prevented until said plate is withdrawn from beneath said support.

3. A spool carrier comprising a vertical plate having means for attachment to a support, the lower portion of said plate having an outwardly projecting part provided with horizontal guides formed therein, a plate slidable between said guides, a series of pins mounted at intervals on said plate and projecting upwardly therefrom, the outer guide terminating in a lip having notches therein provided with sharpening edges, for the purpose specified.

4. The combination, with an overhanging support, of a spool carrier comprising a plate having means for attaching it to said support, upright pins carried by said plate and whereon the spools are mounted, the upper ends of the spools being adjacent to said support, whereby their removal from the pins is prevented while the plate is in use, and guides wherein said plate is mounted to slide lengthwise.

1,153,022. SNAP-HOOK. OSCAR BROCKMAN, Louisville, Ky. Filed Mar. 9, 1915. Serial No. 13,226. (Cl. 24—231.)



1. A hook comprising a body in the shape of a frame with a bar across it producing two eyes, a hook-shank projecting rigidly from the frame adjacent one end of said bar, and a bill leading from the outer end of said shank toward the body and terminating opposite and slightly remote from one end of said bar.

2. A hook comprising a substantially flat body in the shape of a frame with a bar across it producing two eyes, a hook-shank projecting rigidly from the frame and on a line at an angle of about 45° to the plane of said frame, and a bill leading backward from and standing beneath said shank and terminating opposite and slightly remote from said bar.

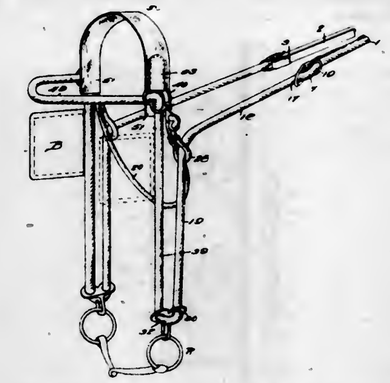
3. A hook comprising a substantially flat body having through it two round eyes, a hook-shank projecting rigidly from one side of the body and on a line at an angle to its plane, and a bill leading backward from the shank to a point near said body and on a plane passing through one side of both eyes.

4. A combined buckle and hook comprising a frame-like body with a bar across its center producing two eyes, and a hook whose shank projects obliquely from said body opposite said bar and whose bill underlies the shank and has its tip rounded off, for the purpose set forth.

5. A combined buckle and hook comprising a flat body having a pair of eyes and a cross bar between them, and a hook whose shank projects rigidly from one side of the body and whose bill underlies said bar and is spaced therefrom, the tip of the bill standing in a plane through such tip and the nearest side of both eyes, for the purpose set forth.

[Claim 6 not printed in the Gazette.]

1,153,023. BRIDLE. OSCAR BROCKMAN, Louisville, Ky. Filed Mar. 9, 1915. Serial No. 13,227. (Cl. 54—6.)



1. The herein described bridle having a throat latch formed one piece of rope with loops at its extremities, rosettes connected with said throat latch, a head-stall supporting the rosettes, and a second piece of rope forming the brow-band and cheek lines, adapted to be connected with the bit, and extending through said loops to the reins.

2. The herein described bridle comprising a head-stall, rosettes at the ends thereof, snap hooks engaging the rosettes and each having a pair of eyes, a throat latch of rope which near each end engages one pair of said eyes, and a loop at each extremity of the throat latch; and a main rope whose center constitutes the brow-band, and which leads from each end thereof first through the rosette, thence down in a cheek line adapted to be connected with the bit, thence upward along the cheek and through on of said loops, and thence rearward to the reins.

3. The herein described bridle comprising a head-stall, rosettes at the ends thereof, snap hooks engaging the rosettes and each having an open frame with a bar across it producing a pair of eyes, a throat latch of rope which near each end passes upward through one of said eyes, over said cross bar, and downward through the other of said eyes, and which has a loop at its extremity; a main rope whose center constitutes the brow-band, and which

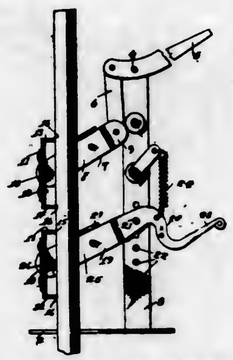
leads from each end thereof first through a rosette, thence down alongside the cheek and beat upward again alongside the cheek, thence through one of said loops, and to the rear; and a bit hook engaging the bend in the last-named rope and adapted to be connected with the bit.

4. The herein described bridle comprising a head-stall having a loop near each end, two rosettes whereof each includes a frame having a pair of eyes separated by a cross bar and an opning with which said loop engages, a throat latch having loops at its extremities, snap hooks on said throat latch engaging the rosettes; and a main rope whose center constitutes the brow-band and which leads from each end thereof first through said eyes of a rosette and over its cross bar, thence down alongside the cheek and is adapted to be connected with the bit, thence upward again alongside the cheek and through one of the loops of the throat latch, and thence rearward to the reins.

5. In a bridle, a head-stall, rosettes at its ends, a throat latch connected with said rosettes and having loops, and a single piece of rope forming the brow-band, passing through said rosettes, thence down in the cheek lines adapted to be connected with the bit, and thence upward through said loops and to the rear; combined with same pads underlying the rear stretches of said rope, and buckles connecting them respectively therewith, for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,153,024. PIPE-CLAMP. MILO BROWN, Wellington, Tex., assignor of one-half to William B. Kirby, Wellington, Tex. Filed May 27, 1913. Serial No. 770,222. (Cl. 24—249.)



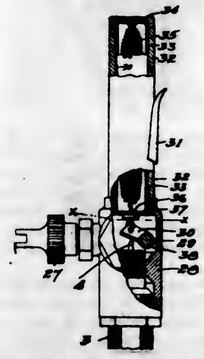
A pipe grip comprising a pair of spaced bars, a strip pivoted at a point adjacent to the extremities of said bars, said strip having its ends bent at right angles to form gripping surfaces, and a grip element secured to the bars and having its gripping surface positioned to one side of the pivotal connection of said strip.

1,153,025. PLOW. GEORGE F. BUTLER, Jacksonport, Wis. Filed Jan. 20, 1914. Serial No. 813,291. (Cl. 97—18.)



In a plow having a beam, a standard and share of ordinary construction, an angular substantially L-shaped mold board mounted above and adjacent to the share and comprising a base portion and an upwardly extending shank portion, in combination with a sifting member consisting of a plate secured on the rear face of the base portion and having rearwardly extending fingers, and a wing secured on the rear face of the upwardly extending shank portion, said wing extending laterally above the fingers of the sifting member.

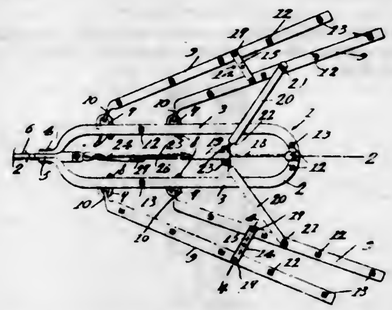
1,153,026. TIRE-PRESSURE GAGE. ROBERT A. CAMPBELL, Minneapolis, Minn. Filed May 29, 1914. Serial No. 841,772. (Cl. 73—31.)



1. The combination with a tire valve, of a casing having an indicating device, a member in said casing to open communication between the tire and said indicating device, means exterior to said casing for operating said member, and a spring connected with said indicating device and said member in their retracted positions.

2. The combination, with a tire valve, of a casing mounted thereon, an indicating device mounted on said casing, a member in said casing to open communication between the tire and said indicating device, a lever exterior to said casing for operating said member, and a spring connected with said indicating device and with said member and normally holding said indicating device and said member in their retracted positions.

1,153,027. HARROW. EDGAR PIERCE CANNEDY, Clovis, N. Mex. Filed Mar. 25, 1915. Serial No. 16,935. (Cl. 55—125.)



A harrow comprising a central longitudinal frame embodying a doubled member having its ends disposed forwardly, a draft member secured between the ends of the frame member, rearwardly diverging beams connected loosely to the sides of the frame, a guide bar terminally secured to the said draft member and rear end of the frame, an adjustable slide mounted upon the guide bar, and links connecting the said slide and beams.

1,153,028. PLANT AND FLOWER STAND. ALVIN THOS. CHALK, Baltimore, Md. Filed Jan. 28, 1915. Serial No. 4,876. (Cl. 47—25.)



The improved plant and flower stand comprising a skeleton frame formed of a series of vertical metal rods constructed of portions forming legs and having a series of outward bends serving as horizontal shoulders or supports, a clamp securing together the upper ends of said rods, a series of annular shelves graduated in size, a drip pan arranged beneath the lowest shelf and made of greater diameter than the latter, and means supporting it detachably from the lower shoulder of the vertical rods, as described.

1,153,029. TELEPHONE ATTACHMENT. JOHN H. W. CHAMPION, Hermon, Cal. Filed Nov. 4, 1914. Serial No. 870,262. (Cl. 179—147.)



1. In combination, a telephone including a hollow base having an aperture and a hollow standard communicating therewith and having a second aperture therein, a wire extending through said second aperture and into said hollow base, a shaft rotatably mounted in said base, a winding drum or pulley secured to said shaft in spaced relation to the bottom of said hollow base, a bearing block rotatably supporting the lower extremity of said shaft, a guard arranged over said bearing block, said wire extending through said aperture and coiled upon said winding drum or pulley and the portion of said shaft intermediate said pulley and said guard.

2. In combination, a telephone including a hollow base and a hollow upstanding standard having an aperture adjacent its upper end, a wire extending through said aperture, downwardly through said standard and into said hollow base, a shaft rotatably mounted in said hollow base, a grooved pulley secured to said shaft and arranged in spaced relation to the bottom of said hollow base, means securing said wire in the groove of said pulley, said wire being extended over said pulley and coiled about said shaft, and means normally tending to rotate said pulley to wind said wire thereon.

3. In combination, a telephone including a hollow base and a hollow standard communicating therewith and having an aperture adjacent its upper end, a shaft rotatably mounted in said hollow base, a bearing block rotatably receiving the lower end of said shaft, a guard arranged over said bearing block, a pulley secured to said shaft in spaced relation to said guard and having a peripheral groove, a wire extending through said aperture, downwardly within said standard, into said hollow base and positioned in the groove in said pulley, means securing said wire in said groove, said wire extending under said pulley and being coiled about said shaft intermediate said pulley and said guard, and means normally tending to rotate said pulley to wind said wire thereon.

4. In combination, a telephone including a hollow base and an upstanding standard having an aperture therein, a wire extending through said aperture, downwardly through said standard and into said hollow base, a shaft rotatably supported in said hollow base, a grooved pulley secured on said shaft and arranged in spaced relation to the bottom of said hollow base, said wire being extended over said pulley and coiled about said shaft, and means normally tending to rotate said pulley to wind said wire thereon.

5. In combination, a telephone including a hollow base and a hollow standard communicating therewith and having an aperture adjacent one end thereof, a shaft rotatably mounted in said hollow base, a bearing block rotatably receiving the lower extremity of said shaft, a guard arranged over said bearing block, a pulley secured to said shaft in spaced relation to said guard and having a peripheral groove, a wire extending through said aperture, downwardly within said standard, into said hollow base and positioned in the groove in said pulley, means securing said wire in said groove, said wire extending under said pulley and being coiled about said shaft intermediate said pulley and said guard, means normally tending to rotate said pulley to wind said wire thereon, and means arranged in said hollow base and standard for guiding said wire therethrough.

1,153,030. DIVER'S DRESS CONSISTING OF A SHIRT OR JACKET AND SEPARATE TROUSERS. FERDINAND LUDWIG CLAREN, Lübeck, Germany, assignor to the Firm Drägerwerk, Heinr. und Bernh. Dräger, Lübeck, Germany. Filed Sept. 22, 1914. Serial No. 863,046. (Cl. 61—7.)

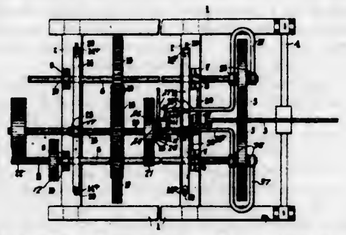


In a diver's dress, an adjustable metal belt having overlapping ends, one of said ends being provided with a series of holes spaced along the belt to receive hooks formed on the other end and adapted to hold said ends together, trousers overlapping said belt, a jacket overlapping the edge of the trousers and belt, a flexible belt outside the jacket to bind the latter onto the trousers and metal belt, and supplemental buckles and straps adapted to connect the jacket and trousers independently of the flexible belt.

1,153,031. POWER-TRANSMISSION DEVICE. JOHN WILSON COCKBURN, Dundas, Ontario, Canada. Filed Dec. 22, 1913. Serial No. 808,233. (Cl. 74—26.)

1. In a power transmission device the combination with a friction disk, of friction wheels engaging the friction disk on each side thereof, longitudinal shafts, the friction wheels rigidly mounted upon the longitudinal shafts, intermeshing gears rigidly mounted on the longitudinal shafts, laterally swingable rocker brackets, a power shaft rotatably mounted on the said rocker brackets, a flanged gear slidably keyed to the said power shaft and means

for simultaneously swinging the rocker brackets one way or the other for throwing the flanged gear into engagement with one or other of the inter-meshing gears.



2. In a power transmission device the combination with a friction disk, of friction wheels engaging the friction disk on each side thereof, longitudinal shafts, the friction wheels rigidly mounted upon the longitudinal shafts, inter-meshing gears rigidly mounted on the longitudinal shafts, laterally swingable rocker brackets, a power shaft rotatably mounted on the said rocker brackets, a flanged gear slidably keyed to the said power shaft, means for simultaneously swinging the rocker brackets one way or the other for throwing the flanged gear into engagement with one or other of the inter-meshing gears, and means for locking the rocker arms in position.

3. In a power transmission device, the combination with a friction disk, of friction wheels engaging the friction disk on each side thereof, longitudinal shafts, the friction wheels rigidly mounted upon the longitudinal shafts, inter-meshing gears rigidly mounted on the longitudinal shafts, laterally swingable rocker brackets, a power shaft rotatably mounted on the said rocker brackets, a flanged gear slidably keyed to the said power shaft and meshing with one of the aforementioned gears, a controlling lever having its upper end freely mounted on the power shaft, pivotally mounted pawls adapted to engage the extremities of the rocker brackets for locking the flanged gear in position, a bell crank lever on the lower end of the aforesaid lever, pulley blocks, and cables passing over the pulley blocks and connected to the lower end of the pawls for controlling the operation of the pawls.

4. In a power transmission device the combination with a friction disk, of friction wheels engaging the friction disk on each side thereof, longitudinally slidable shafts, the said friction wheels rigidly mounted on said shafts, inter-meshing gears rigidly secured to the longitudinal snafts, a longitudinal power shaft, a gear slidably keyed to said power shaft, and meshing with one of the aforementioned gears, a depending lever freely mounted on said power shaft, and means controlled by the lever for simultaneously moving the aforesaid longitudinal shafts longitudinally.

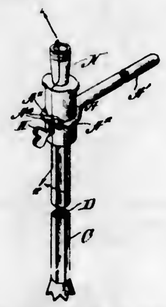
5. In a power transmission device the combination with a friction disk, of friction wheels engaging the friction disk on each side thereof, longitudinally slidable shafts, the said friction wheels rigidly mounted on said shafts, inter-meshing gears rigidly secured to the longitudinal shafts, a longitudinal power shaft, a gear slidably keyed to said power shaft and meshing with one of the aforementioned gears, a depending lever freely mounted on said power shaft, a yoke, supporting brackets for the friction wheels having bearing portions surrounding the longitudinal shafts and connected to said yoke, a link pivotally connected at one end to said yoke and pivotally connected at the other end to the lever intermediately of its length.

[Claims 6 to 15 not printed in the Gazette.]

1,153,032. PROCESS OF MAKING ARTIFICIAL STONE. ROBERT CONN and OTTO HUGO SHULTZ, Vernon, British Columbia, Canada. Filed July 3, 1914. Serial No. 849,001. (Cl. 106—29.)

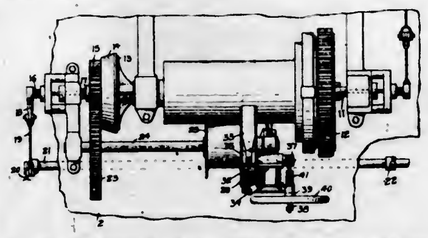
The herein-described process of making an artificial stone composition, which consists in mixing one part of concentrated sulfuric acid with 3 parts of plumbic oxid and stirring until reaction ceases, dissolving 175 parts of magnesium chlorid in 226 parts of water, adding the solution to the mixture and stirring continuously until reaction again ceases, preparing a dry mixture of 210 parts of calcium sulfate, 105 parts of magnesium carbonate, and 280 parts of sand, adding the wet mixture first prepared to the dry mixture, and stirring the mass to eliminate all gases in combining the mixtures until all reaction ceases.

1,153,033. CHUCK FOR DRILLS. WILLIS COULSON, Mace, Idaho. Filed June 1, 1915. Serial No. 31,466. (Cl. 255—55.)



A chuck comprising a cylindrical shell with its socket angular to conform to the angular outlined circumference of a drill and interiorly threaded at one end to receive a pipe, the outside of said shell having indentures therein, a handle with forked ends engaging said indentures and their ends overlapping and secured together.

1,153,034. BOOM-OPERATING MECHANISM. OLIVER CROSBY, St. Paul, Minn., assignor to American Hoist & Derrick Co., St. Paul, Minn., a Corporation of Minnesota. Filed Nov. 21, 1910. Serial No. 593,586. (Cl. 212—59.)



1. The combination, with a continuously revolving shaft and means for operating the same, of a drum shaft arranged adjacent to said continuously revolving shaft and having a driving connection therewith, means for rendering said driving connection operative or inoperative to revolve said drum shaft or allow it to be stationary, a drum secured on said drum shaft and provided at one end with a peripheral flange projecting outwardly parallel, substantially, with the axis of said drum, a disk having a hub loosely mounted on said drum shaft and provided with a peripheral flange encircling the flange of said drum and spaced therefrom, the outer surface of said disk flange forming a friction surface, a brake strap and means for clamping said strap on said friction surface, the inner face of said drum flange having a series of ratchet teeth formed thereon, a series of dogs pivotally mounted on said disk intermediate to its flange and hub, springs for normally holding said dogs in engagement with the teeth of said drum flange, said dogs temporarily connecting said disk and drum for revolution simultaneously in one direction but allowing said drum and its shaft to be revolved independently in the opposite direction when said disk is locked, whereby the operation of said drum and shaft from said continuously revolving shaft to wind a cable on said drum is permitted without releasing said brake strap and said dogs preventing the unwinding of the cable from said drum until said brake strap is released.

2. The combination, with a continuously revolving shaft and means for operating the same, of a pivoted boom, a clutch mechanism provided in connection with said shaft, means within control of the operator for rendering said clutch mechanism operative or inoperative, a drum shaft geared to said clutch mechanism, a brake secured on said drum shaft, a cable therefor connected with said boom, a friction brake mechanism and means for operating the same, and a ratchet device interposed between said drum and said brake mechanism and locking said drum against revolution in one direction when the brake is set but permitting its free revolution in the other direction to wind said cable.

3. The combination, with a boom, of a shaft and a drum secured thereon, a cable wound on said drum and connected with said boom to raise and lower the same, a brake mechanism and means for setting it to lock said drum and boom, and a ratchet device mounted to allow said drum to be revolved and wind said cable to raise said boom without releasing said brake mechanism.

1,153,035. SAFETY CONTROLLING APPARATUS FOR AEROPLANES. THOMAS M. DANIELS, Chicago, Ill. Filed Apr. 23, 1912. Serial No. 692,602. (Cl. 244—25.)

1. A device of the character described comprising a framework, a propeller shaft supported thereby, a propeller mounted upon said propeller shaft, means for turning said propeller shaft in order to actuate said propeller, mechanism controllable by hand for shifting said propeller shaft to different angles relatively to said framework, and means controllable by gravity for adjusting the blades of said propeller automatically.

2. A device of the character described comprising a car provided with planes and adapted to be carried through the air, a propeller shaft extending from said car and movable to different angles relatively to the latter, a propeller on the shaft, an arm for shifting said propeller shaft to different angles relatively to said car, means controllable at will for shifting said arm to different angular positions, a weight journaled upon said arm and depending from the same, and mechanism connected with said weight and controllable thereby for changing the pitch of said propeller in order to vary the power thereof.

3. In a flying machine, a frame-work, an adjustable propeller, intermediate of the sides of the frame-work and provided with adjustable blades, means controlled by gravity for adjusting the blades when said frame-work dips downwardly, a propeller on each side of the frame-work and provided with adjustable blades, and the mechanism controlled by gravity for adjusting the blades of one propeller in one direction and those of the other in the opposite direction when the frame-work tilts laterally.

4. In a flying machine, a frame-work, a pivoted propeller shaft intermediate of the sides of the frame-work, means for shifting the propeller shaft to different angles relatively to the frame-work, a propeller on the shaft and having adjustable blades, means controlled by gravity for adjusting the blades of the propeller when the frame-work dips downwardly, a propeller shaft at each side of the frame-work, propellers on the shafts and having adjustable blades, and mechanism controlled by gravity for adjusting the blades of one propeller in one direction and those of the other in the opposite direction when the frame-work tilts laterally.

5. In a flying machine, a frame-work, a transversely extending track on the frame-work, a seat mounted to travel on the track, a propeller shaft at each side of the frame-work, a propeller on each shaft having adjustable blades, collars slidable on the said shafts, links connecting the collars with the blades of the propellers, pivoted bell crank levers each having one member engaging a collar, crank arms at opposite sides of the frame-work, links connecting the seat with the crank arms, and rods connecting the crank arms with the bell crank levers.

[Claims 6 to 9 not printed in the Gazette.]

1,153,036. MEANS FOR JOINING RAILWAY-RAILS. THOMAS MARION DANIELS, Chicago, Ill. Filed June 11, 1915. Serial No. 33,487. (Cl. 239—6.)

1. The combination with two adjacent rails, of a shoe, means thereon for preventing vertical and longitudinal movement of said rails, a toothed member on said shoe, a toothed plate bearing on said rails, and a toothed wedge interposed between said member and plate.

2. The combination with two adjacent rails, of a shoe, means thereon for preventing vertical and longitudinal movement of said rails, a toothed member on said shoe, a toothed plate bearing on said rails, a toothed wedge interposed between said member and plate, and means for resisting longitudinal removal of said wedge.

1,153,037. MAGNETIC ORE-WASHER. EDWARD W. DAVIS, Minneapolis, Minn. Filed Mar. 4, 1915. Serial No. 12,180. (Cl. 83—71.)

1. An ore separator comprising an inclined trough, curved in cross section, and means for feeding the material upwardly in said trough, and magnet field pieces extending continuously beneath said trough and conforming to the curvature thereof.

2. A magnetic ore separator comprising a trough arranged at an incline and having a curved bottom and a conveyer operating in said trough to feed the material upwardly therein, and magnets having pole pieces disposed beneath said trough, said pole pieces being sub-

stantially T-shaped and conforming to the curvature of the bottom of the trough.

3. A magnetic ore separator comprising a pair of inclined troughs arranged side by side in parallel relation, each having a curved bottom and conveyers operating in said troughs, electro-magnets mounted beneath said troughs and having outer pole pieces curved to conform to the outer side walls of said troughs, and intermediate pole pieces curved to conform to the inner portion of the bottoms of said troughs at the junction thereof with one another to form an apex between them.

4. An ore separator comprising a pair of inclined troughs arranged side by side in parallel relation, each trough having a curved bottom and conveyers operating therein, electro-magnets mounted beneath said troughs and having T-shaped pole pieces fitting the curved bottoms of said troughs, the heads of said pole pieces being placed end to end lengthwise of said troughs, one group of them extending along the middle line of the separator at the junction of the walls of said troughs and there being a group of said pole pieces beneath the outer portions of said troughs on each side of the middle group of pole pieces.

5. An ore separator comprising a pair of inclined troughs arranged side by side in parallel relation and means for feeding the material upwardly in said troughs, said troughs having a discharge spout for the material at their upper ends and a transverse wall at their lower ends, means for delivering a supply of water to said troughs, means for feeding the ore thereto, and magnets having pole pieces disposed beneath the inner adjoining walls of said troughs and also beneath the outer portions of said walls.

[Claims 6 to 8 not printed in the Gazette.]

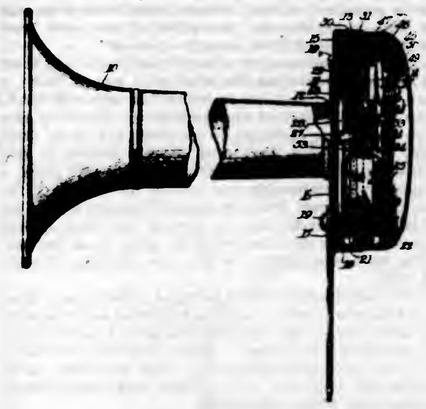
1,153,038. TIMEPIECE. JOHN E. DAWSEY, Conway, S. C. Filed Nov. 4, 1914. Serial No. 870,284. (Cl. 58—125.)



In a time piece, the combination with the minute arbor, of a series of overlapping time indicating disks, a gear fast on said arbor and provided with escapement teeth; a spur pinion driven thereby, an arbor for said pinion, an escapement wheel on said pinion arbor, and means admitting of a limited relative rotative movement of said pinion and escapement wheel, whereby the spur pinions is constantly revolved and the escapement wheel is operated intermittently, said means embodying a spring connecting said pinion and escapement wheel and acting to quickly advance the escapement wheel when the latter is released by the escapement lever, and an escapement lever one arm of which coöperates with the minute gear and the other arm of which coöperates with said escapement wheel.

1,153,039. ELECTRIC HORN. WILLIAM W. DEAN, Chicago, Ill., assignor, by mesne assignments, to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 15, 1913. Serial No. 795,345. (Cl. 177—7.)

1. An electric horn comprising, in combination, a diaphragm, an electromagnet substantially parallel with the diaphragm, and an armature for said magnet mounted in substantially the same plane as the magnet normally tilted away from the diaphragm and having its free end adjacent the electromagnet and in a position to be drawn toward the diaphragm by said magnet.



2. An electric horn comprising, in combination, a diaphragm, an electromagnet mounted substantially parallel with said diaphragm, an armature for said magnet radially disposed with respect thereto and having its free end adjacent the magnet and in a position to be drawn toward the diaphragm when the magnet is energized, a support, and a spring connected to said armature and mounted on said support and normally tilting the armature away from the diaphragm.

3. An electric horn comprising, in combination, a diaphragm, an electromagnet supported substantially parallel with the diaphragm, an armature for said magnet, having its ends adjacent the poles of the magnet moved in a line crossing the axis of said poles and toward the diaphragm when the magnet is energized, a spring for said armature, a support, an inclined seat on said support for receiving one end of said spring to normally tilt the armature away from the diaphragm, and means for securing said spring on said seat.

4. An electric horn comprising, in combination, a diaphragm, an annular support, an electromagnet mounted on said support substantially parallel with the diaphragm, an armature for said magnet having its free ends adjacent the poles of the magnet and moved toward the diaphragm when the magnet is energized, and a spring for said armature connected at one end to said armature and having its other end secured on said support diametrically opposite the supporting point of the magnet and in a position to normally tilt the armature out of parallel with the axis of the poles of the magnet and away from the diaphragm.

5. An electric horn comprising, in combination, a diaphragm, a support, an electromagnet mounted on said support substantially parallel with the diaphragm, a plate, a spring secured at one end to said plate and having its opposite end mounted on said support, an armature on the opposite end of said plate, a contact-carrying spring mounted on said support and overlapping said plate, and a stationary contact member also mounted on said support and lying above said plate.

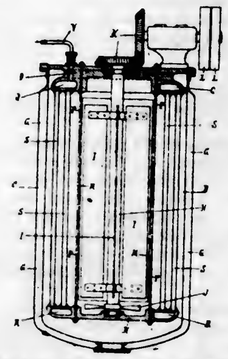
[Claims 6 to 27 not printed in the Gazette.]

1,153,040. PROCESS AND APPARATUS FOR PURIFYING CAOUTCHOUC. HENRY DUBAUOR, Paris, France. Filed Apr. 6, 1915. Serial No. 19,527. (Cl. 18—2.)

1. Process of purifying caoutchouc, comprising attriting the caoutchouc in the presence of a solvent and subjecting the solution of the caoutchouc to dialysis.

2. Process of purifying caoutchouc, comprising heating and attriting the caoutchouc in the presence of a solvent and subjecting the solution of the caoutchouc to dialysis.

3. Process of purifying caoutchouc, comprising heating, circulating and attriting the caoutchouc in the presence of a solvent and subjecting the solution of the caoutchouc to dialysis.

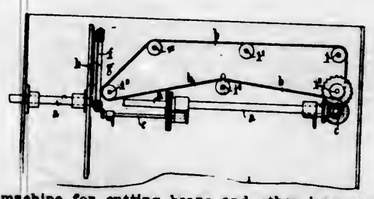


4. An apparatus for use in purifying caoutchouc, comprising a receptacle, a mechanical attriting device therein, and osmotic separators.

5. An apparatus for use in purifying caoutchouc, comprising a receptacle, means for heating said receptacle, a mechanical attriting device therein, and osmotic separators.

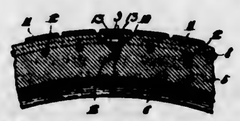
[Claims 6 to 8 not printed in the Gazette.]

1,153,041. MACHINE FOR CUTTING BEANS AND OTHER LEGUMES. PIETER ABRAHAM DE LANGE, Alkmaar, Netherlands. Filed Dec. 13, 1913. Serial No. 806,462. (Cl. 146—11.)



A machine for cutting beans and other legumes comprising a movable cutter, a grating adjacent the cutter, a plurality of spaced pairs of feed rolls adjacent the grating the openings between which feed rolls register with the openings in the grating for feeding the legumes through the grating to the cutter, and an endless conveyer band arranged to move adjacent the feed rolls in a plane slanting relatively to the axes of the rolls for feeding the legumes to the latter in an oblique direction relatively to the axes of the feed rolls.

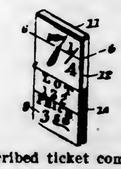
1,153,042. TIRE-PROTECTOR. GEORGE L. DILLARD and WILLIAM JOHNS, Mogollon, N. Mex. Filed Sept. 4, 1914. Serial No. 860,238. (Cl. 152—16.)



1. A tire protector comprising an annulus having a concaved inner surface forming a seat for receiving a resilient tire for concentrically mounting the annulus relative thereto, and also having spaced circumferential grooves in the outer periphery opening through the outer surface thereof, tension cables arranged in the grooves and having their ends connected together, a plurality of substantially U-shaped tread wearing plates bridging the outer periphery of the annulus at intervals thereof, and pins passed transversely through the annulus inwardly with relation to the cables and engaged in the limbs of the tread plates for the fastening of the same in position on the annulus.

2. A tire comprising a transversely split annulus having a concaved inner surface forming a seat for receiving a resilient tire for concentrically mounting the annulus relative thereto, and also having spaced circumferential grooves in the outer periphery opening through the outer surface thereof, tension cables arranged in the grooves and having their ends connected together, a plurality of substantially U-shaped tread wearing plates bridging the outer periphery of the annulus at intervals thereof, and pins passed transversely through the annulus inwardly with relation to the cables and engaged in the limbs of the tread plates for the fastening of the same in position on the annulus, one of said tread plates overlapping the ends of the annulus and having its pin located between the said ends.

1,153,043. TICKET. HOWARD A. DRAKE, Richmond, Va. Filed May 23, 1913. Serial No. 769,493. (Cl. 40—9.)



The herein described ticket comprising a strip folded on its transverse central line so that the ticket is doubled and formed in two elongated portions, one portion of the ticket having short integral rectangular extensions at opposite sides thereof at the end next the fold and folded onto the side of the said portion opposed to the other portion, said extensions serving to space the said portions of the ticket apart, having their inner edges meeting each other on the longitudinal center of the ticket and having adhesive on both sides serving to secure the said portions of the ticket against accidental separation.

1,153,044. EXTERMINATOR. JAMES E. DUNHAM, Portland, Oreg. Filed Feb. 9, 1915. Serial No. 7,187. (Cl. 43—5.)



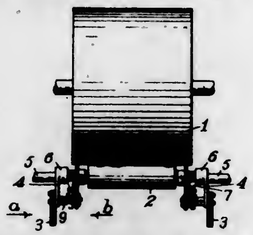
1. A device of the class described comprising a flexible pipe, a flexible tubular tip connected thereto, means for manipulating the tip, means for forcing fumes through the pipe to the tip, conductors passing through the pipe and flexible tip and connected to a source of electrical energy, an incandescent bulb connected in the circuit, and apertured caps removably connected to the tip.

2. A device of the class described comprising a flexible pipe, a flexible tubular tip connected thereto, means for manipulating the tip, means for forcing fumes through the pipe to the tip, conductors passing through the pipe and flexible tip and connected to a source of electrical energy, an incandescent bulb connected in the circuit, and a cap removably threaded upon the tip and covering said incandescent bulb and having a lens therein.

1,153,045. MACHINE FOR PRINTING FABRICS. MOSES DUPUIS, Worcester, Mass., assignor to Allen-Higgins Wall Paper Company, Worcester, Mass., a Corporation of Massachusetts. Filed Oct. 17, 1911. Serial No. 655,158. (Cl. 101—117.)

1. In a machine of the class described, an impression cylinder, a printing roller journaled in supports capable

of being moved toward and away from said impression cylinder, cams supported by the rigid framework of the machine for moving the roller supports toward said impression cylinder, and means driven by the printing roller shaft and including a pawl and ratchet connection for imparting rotary movement to said cams.



2. In a machine of the class described, an impression cylinder, a printing roller having a shaft journaled in supports capable of being moved toward and away from said impression cylinder, studs held in the rigid framework of the machine, cams held on said studs having surfaces adapted to move said roller supports toward said impression cylinder, pawl and ratchet mechanism for rotating said cams, and cams driven by the printing roller shaft for actuating said pawl and ratchet mechanisms.

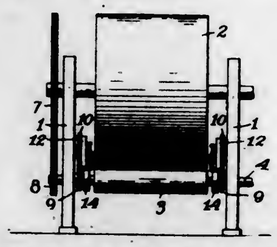
3. In a machine of the class described, a framework, an impression cylinder, a printing roller mounted in slotted supports on the framework capable of being moved toward and away from said impression cylinder, studs held by the framework and passing through the slots in said roller supports, cams mounted on said studs and acting against said supports to move them toward the impression cylinder, and means including pawl and ratchet connections for actuating said cams.

4. In a machine of the class described, an impression cylinder, a printing cylinder journaled in supports capable of being moved toward and away from said impression cylinder, cams mounted on the framework of the machine adapted to act against said roller supports to move them toward said impression cylinder and to give a sudden release to said supports, and means for imparting an intermittent rotary motion to said cams.

5. In a machine of the class described, an impression cylinder, a printing roller having a shaft, a cam on a second shaft for moving said printing roller toward said impression cylinder and holding it in operative relation thereto, a pawl and ratchet mechanism for imparting an intermittent motion to said cam, and means carried by the shaft of said printing roller for actuating said ratchet mechanism.

[Claims 6 to 10 not printed in the Gazette.]

1,153,046. MACHINE FOR PRINTING FABRICS. MOSES DUPUIS, Worcester, Mass., assignor to Allen-Higgins Wall Paper Company, Worcester, Mass., a Corporation of Massachusetts. Filed July 24, 1912. Serial No. 711,264. (Cl. 101—117.)



1. In a machine of the kind specified, a framework, a drum, a printing roller, gears mounted on said framework in adjustable bearings, gears carried by said printing roller and engaged by the gears on said framework, cams carried by the gears on the framework, collars on said printing roller, and yielding means for holding said collars in contact with said cams.

2. In a machine of the kind specified, a drum, a printing roller, collars on the printing roller, cams engaging the collars to move the printing roller away from the drum, yielding means for holding the collars in contact with the cams, and means for driving the drum, printing roller, and cams at predetermined relative angular velocities.

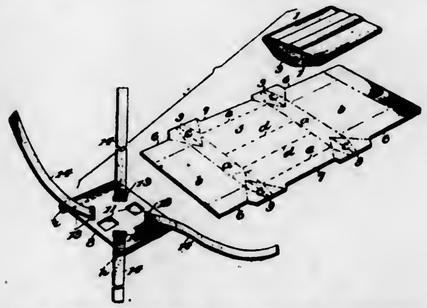
3. In a machine of the kind specified, a drum, a printing roller, a collar on the printing roller, a two part cam engaging the collar to move the printing roller away from the drum, the two parts of the cam being relatively adjustable to vary the effective length of the raised portion of the cam, yielding means for holding the collar in contact with the cam, and means for driving the drum, printing roller, and cam at predetermined relative angular velocities.

4. In a machine of the kind specified, a drum, a printing roller, a collar on the printing roller, a two part cam engaging the collar to move the printing roller away from the drum, the two parts of the cam being relatively adjustable to vary the effective length of the raised portion of the cam, and means for driving the drum, printing roller, and cam at predetermined relative angular velocities.

5. In a machine of the kind specified, a drum, a printing roller, a two part rotatable cam for moving the printing roller away from the drum, the two parts of the cam being relatively adjustable to vary the effective length of the raised portion of the cam and being also adjustable together about their axis, and means for rotating the drum, printing roller, and cam at predetermined relative angular velocities.

[Claim 6 not printed in the Gazette.]

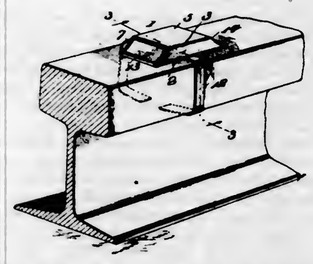
1,153,047. RAILWAY SIGNAL-TORPEDO. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Apr. 4, 1912. Serial No. 688,569. (Cl. 246—20.)



1. An improved railway signal torpedo, comprising a thin paper explosive containing case and a cover of thin metallic foil inclosing the said explosive containing case and projecting beyond the ends of the said explosive containing case and formed into projecting clip receiving flanges, a clip having its end turned over to form flanges, a rail-engaging strap carried by the said clip, the said flanges of the said clip clamping the said projecting clip receiving flanges, whereby all danger of explosion in clamping the clip to the torpedo is prevented and whereby a water-proof non-flying torpedo is produced in which cushioning by the impact of the car wheels is prevented.

2. A railway signal torpedo comprising a thin paper explosive containing case, a cover of metallic foil folded about the said case, the junction of the said folds projecting beyond the ends of the said case, the corners of the said folded ends folded upon themselves, and a clip having its ends turned over to form flanges, the said flanges of the clip clamping the said projecting ends of the folds and the folded corners thereof forming means for attaching the clip to the foil covering without engaging the explosive containing case, the folded corners of the metallic covering forming means for locking the clip to the said covering.

1,153,048. FIBER-CASE RAILWAY-TORPEDO. FRANK DUTCHER, Versailles, Pa., assignor to Central Railway Signal Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Sept. 17, 1913. Serial No. 790,257. (Cl. 246—20.)



1. A railway torpedo composed of a blank having a body portion, flaps carried by one side of the body portion and constructed and folded to form an open-ended case having a reduced upper face, an explosive compound within the case and said body portion having flaps at the ends of a length greater than the open ends of the case and adapted to be folded into the same in a curved position, and having their outer edges abutting the lower face of the top of the torpedo case.

2. A railway torpedo comprising a body portion, a flap secured to one side of the body portion and having slanting end walls, the said flap carrying at one side a rectangular top of an area less than the body portion, the opposite edge of said top carrying a flap having its walls diverging and a rectangular portion carried by the free edge of the last-mentioned flap and of an area equal to that of the body portion, an explosive compound within the body-portion and flaps carried by the ends of the body portion, and of a length greater than the open slanting ends of the case and adapted to be folded into the same in a curved position and having their outer edges abutting the lower face of the top of the torpedo case.

3. A railway torpedo, composed of a blank having a body-portion, flaps carried by the body-portion and constructed and arranged to be folded to form an open ended case having the upper face of a length less than that of the body-portion, an explosive compound within the case, said body-portion having flaps at the ends of a length greater than the open ends of the case and adapted to be folded into the same in a curved position, substantially as shown and described.

4. A railway torpedo composed of a blank having at one side flaps constructed and arranged to form an open ended case secured to the upper face of the body portion, an explosive compound within the open ended case and end flaps carried by the ends of the body portion and of a length greater than the end walls of the case and adapted to fold up within the ends of the open ended case in a curved position against the side walls thereof and under the top thereof in a curved position.

5. A railway torpedo composed of a blank having at one side flaps constructed and arranged to form an open ended case secured to the upper face of the body portion, a rail-attaching strap secured to the lower face of the body portion, an explosive compound within the open-ended case and end flaps carried by the ends of the body portion, and of a length greater than the end walls of the case and adapted to fold up within the ends of the open ended case in a curved position against the sides and under the top thereof in a curved position.

[Claims 6 and 7 not printed in the Gazette.]

1,153,049. APPARATUS FOR COMPOSING AND CASTING TYPE. HARDMAN A. EARLE, London, and PERCY WALTER DRUITT, county of Surrey, England. Filed May 31, 1913. Serial No. 771,043. (Cl. 199—7.)



1. A multiple magazine type composing and casting machine having a type distributer which comprises means whereby matrices belonging to different magazines are discharged in succession from the distributer bar at different phases of revolution of the conveyer worms and an oscillating guide arranged with its axis extending the whole width of the magazines and provided on each side of the axis with a group of chutes for the recepiton of the matrices and means for oscillating the guide in synchronism with a prearranged partial revolution of the conveyer worms thereby bringing each group of chutes into position to receive the matrices from the distributer bar and divert them into their appropriate magazines, substantially as described.

2. A multiple magazine type composing and casting machine having a type distributer which comprises an oscillating guide formed with two longitudinal compartments each with a row of chutes for receiving and guiding the matrices to the appropriate channels of their respective magazines, the chutes in the two compartments being staggered at their receiving ends, and a single distributer bar arranged to deliver matrices to both of said compartments.

3. A multiple magazine type composing and casting machine having a type distributer which comprises an oscillating guide formed with two longitudinal compartments each with a row of chutes for receiving and guiding the matrices into the appropriate channels of their respective magazines, the chutes in the two compartments being staggered at their receiving ends, a single distributer bar arranged to deliver matrices to both of said compartments and two sets of stationary guide channels interposed between the oscillating guide and the magazines.

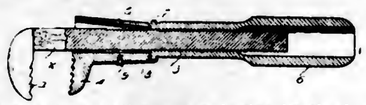
4. A multiple magazine type composing and casting machine having a type distributer which comprises a distributer bar, conveyer worms coöperating with the bar, means whereby the matrices belonging to different magazines are discharged in succession from the distributer bar at different phases of revolution of the conveyer worms, an oscillating guide having two rows of chutes, and two sets of stationary guide channels forming a continuation of said chutes and leading to the compartments of two magazines, substantially as described.

5. A multiple magazine type composing and casting machine having a type distributer which comprises a distributer bar, conveyer worms coöperating with the bar, means whereby the matrices belonging to different magazines are discharged in succession from the distributer bar at different phases of revolution of the conveyer worms a cam rotating synchronously with the conveyer screws, an oscillating guide driven by the said cam and

mechanism comprising a pair of levers yieldingly coupled, substantially as described.

[Claim 6 not printed in the Gazette.]

1,153,050. WRENCH. WILLIAM F. ESTES, Ozark, Mo. Filed Feb. 17, 1915. Serial No. 8,844. (Cl. 81—169.)



In a wrench, a stationary jaw having its shank provided at opposite edges with threads throughout the major portion of its length, a movable jaw having a tapering bore, one wall of which normally lies parallel to one threaded edge of said stationary jaw, said movable jaw having an arcuate shaped extremity and a handle engaging the threads of the stationary jaw and having one end abutting the arcuate extremity of said movable jaw.

1,153,051. VALVE. WILLIAM S. FAIRHURST, New York, N. Y. Filed Dec. 5, 1914. Serial No. 875,651. (Cl. 103—66.)



1. A sheet metal valve comprising an annular portion having inwardly projecting arms which together are adapted to embrace a central guide.

2. A sheet metal valve comprising an annular portion having inwardly projecting arms having yokes which together are adapted to embrace a central guide.

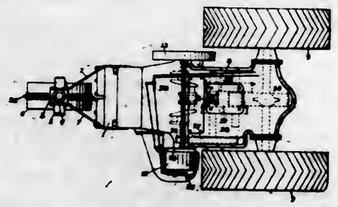
3. A valve comprising a valve seat, a valve retainer plate, a guide pin connecting the plate with the seat and a sheet metal valve proper comprising an annular portion having inwardly projecting arms which together are adapted to embrace said pin.

4. A valve comprising a valve seat, a valve retainer plate, a guide pin connecting the plate with the seat, and a sheet metal valve proper comprising an annular portion having inwardly projecting arms having yokes which together are adapted to embrace said pin.

5. A sheet metal valve comprising an annular portion having two inwardly and oppositely projecting arms having yokes which together are adapted to embrace a central guide.

[Claims 6 to 9 not printed in the Gazette.]

1,153,052. TRACTION-ENGINE. HENRY FORD, Detroit, Mich. Filed Aug. 19, 1910. Serial No. 577,927. Renewed Nov. 11, 1914. Serial No. 871,637. (Cl. 21—114.)



1. A tractor comprising a substantially horizontal hollow frame, a reciprocating internal combustion motor whose running parts are housed in the frame and whose cylinders constitute the forward portion thereof, a pair of traction bearing wheels supporting the rear portion of the frame, means in the frame operatively connecting and disconnecting the motor and traction wheels, the frame forming a platform body rigidly holding the wheels in spaced relation and in which said means are housed, a pulley and clutch mechanism exteriorly of the housing, a bearing yoke extending forward from the cylinders, an upright caster frame swiveled in the yoke, and a caster bearing guide wheel pivotally mounted in the caster frame.

2. A tractor comprising a hollow, horisontally disposed frame whose forward end portion constitutes the horisontal cylinders of an internal combustion motor which are disposed longitudinally of the frame, the running parts of the motor being housed in the frame, a bearing yoke extending forward from the cylinders, an upright caster frame on which the yoke is pivotally mounted, a guide bearing wheel journaled in the caster frame, a pair of traction wheels on which the other end of the frame is supported, the frame forming a platform body rigidly holding the wheels in spaced relation, differential change speed mechanism within the hollow frame operatively connecting the motor and traction wheels to rotate the latter, means exteriorly of the frame for connecting and disconnecting the mechanism and motor and fast and loose pulleys on the motor shaft ends.

3. A tractor comprising a hollow frame whose end portion constitutes the cylinders of an internal combustion motor whose running parts are housed in the frame, a pair of traction bearing wheels supporting one end of the frame, a bearing yoke on which the other end is pivotally supported, a caster frame, a guide bearing wheel journaled in the caster frame, a steering rod longitudinally disposed in the frame in screw-threaded engagement with a bracket on the frame, and connections between the rod and caster frame to swing the latter when the rod is reciprocated in the bracket, the frame forming a platform body rigidly holding the wheels in spaced relation.

4. A tractor comprising a motor with horizontally disposed cylinders and extended crank case secured to the crank ends thereof, the cylinders and case forming a main frame, in which the main shaft of the motor is journaled, a power transmitting member rotatable on the frame, clutch mechanism for coupling the member and main shaft, traction bearing wheels supporting the frame, mechanism for driving the traction wheels housed in the case, and clutch mechanism for coupling the traction wheel driving mechanism with the member, the frame forming a platform body rigidly holding the wheels in spaced relation.

5. A tractor comprising a motor with horizontally disposed cylinders and extended crank case secured to the crank ends thereof, the cylinders and case forming a main frame in which the main shaft of the motor is journaled, a pulley journaled on the frame, a clutch for locking the pulley and main shaft to turn together, traction bearing wheels supporting the frame, change speed differential mechanism housed in the case for driving the wheels, and clutch mechanism for coupling the pulley and wheel driving mechanism, the frame forming a platform body rigidly holding the wheels in spaced relation.

[Claims 6 to 8 not printed in the Gazette.]

1,153,053. FISHING-LINE ATTACHMENT. SEBASTIAN FORSTER, Brooklyn, N. Y. Filed Sept. 23, 1914. Serial No. 863,174. (Cl. 43—7.)



As a new and improved article of manufacture, a connector for fishing lines and hooks, the same comprising a comparatively long and narrow flat plate, having all of its portions lying in the same plane, said plate being provided with a plurality of at least four openings arranged centrally along the length thereof in equidistant relation to each other, the longitudinal side edges of said plate being scalloped or fluted to provide recesses, said recesses being arranged in transversely alined pairs arranged in alternation with said openings.

1,153,054. PROCESS OF PRODUCING SULFIDS OF PHOSPHORUS. FRANCIS C. FRARY, Minneapolis, Minn. Filed Feb. 3, 1915. Serial No. 5,912. (Cl. 23—10.)

1. The process of producing sulfids of phosphorus which consists in heating together sulfur and phosphorus in proper proportions at atmospheric pressure in the presence of an inert solvent having a boiling point at least as high as the temperature at which sulfur and phosphorus unite.

2. The process of producing sulfids of phosphorus, which consists in heating together sulfur and phosphorus in proper proportions, in the presence of an inert solvent, having a boiling point of over 180 degrees centigrade.

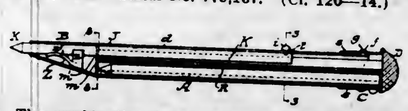
3. The process of producing phosphorus sesquisulfid in a state of high purity, which consists in heating together sulfur and phosphorus in the proper proportions, in the presence of an inert solvent at a temperature at least as high as 180 degrees centigrade.

4. The process of producing sulfids of phosphorus, which consists of heating together, in proper proportions, sulfur and phosphorus in the presence of products obtained by the chlorination of a hydrocarbon of the naphthalin series.

5. The process of producing phosphorus sesquisulfid in a state of high purity and fine division, which consists in uniting sulfur and phosphorus in solution in an inert solvent of high boiling point, and in cooling the same, with agitation, so as to thereby precipitate the greater part of the sesquisulfid in the form of a very fine powder.

[Claims 6 to 9 not printed in the Gazette.]

1,153,055. MAGAZINE CRAYON AND LEAD HOLDER. HERBERT MORTON FULLER, Philadelphia, Pa., assignor to himself and Jessie C. Fuller, Philadelphia, Pa. Filed July 15, 1913. Serial No. 779,137. (Cl. 120—14.)



1. The combination in a crayon or lead holder, of a tube having a single longitudinal slot therein; a separator; a head mounted on one end of the tube and arranged to carry the crayons so that one of a series of crayons can be brought in line with the slot in the tube; a tip having an opening at its end on the same side of the center as the slot in the tube; and a spring arranged to bear against the crayon when projected from the tube through the tip so that the crayon will have an extended bearing upon the inner wall of the tip and the inner wall of the tube.

2. The combination in a crayon or lead holder, of a tube having a single longitudinal slot therein, a tip having an opening at its end at one side of the center of the tube and on the same side of the center as the slot in the tube and through which the crayon can be projected from the tube; a head at the opposite end of the pencil arranged to turn on the tube and having a series of slots therein according to the number of crayons so that, on turning the head, the slot therein will aline with the slot in the tube and the crayon to be projected will be in a direct line with the opening in the tip; and a separator extending from the cap to the tip and arranged to separate the several crayons, each crayon having a three point contact, two on the separator and one on the inner wall of the tube.

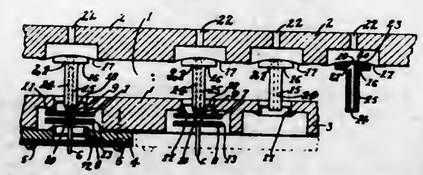
3. The combination in a crayon or lead holder, of a tube having a longitudinal slot therein; a tip; a partition within the tube having an opening for the passage of a crayon; an opening in the tip in line with the opening in the partition, the slot being also arranged in line with the two openings; a spring in the tip arranged to bear against the projected crayon; a cap arranged to rotate freely on the end of the tube opposite the tip; a separator for the crayons, the cap having a slot for each crayon, each crayon having a stem arranged to project through the slot so that when the slot of the cap alines with the single slot in the tube a crayon can be projected through the opening in the partition past the spring and through the opening in the tip.

4. The combination of a tube having a cylindrical slot and a tip, said tip having an opening in its end at one side of the center; a head mounted at the end of the tube opposite the tip and having a series of longitudinal slots therein; a separator forming a series of cavities, each cavity being capable of retaining a crayon; a partition in the tube having a single opening in line with one of the cavities and the opening in the end of the tip; a spring having a body portion; and a tongue arranged to bear against the side of a projected crayon.

5. The combination in a magazine pencil holder of a casing having a longitudinal slot in one side thereof; a separator within the casing; a cap at one end of the pencil and provided with means to select any one of a series of crayons mounted in the casing; a funnel shaped tip having an opening off center on the same side as the slot in the casing; and means mounted in said tip adapted to exert pressure on a projected crayon or lead.

[Claims 6 to 8 not printed in the Gazette.]

1,153,056. MUSIC-PLAYER VALVE. ROBERT A. GALLY, Cincinnati, Ohio, assignor to The Baldwin Company, Cincinnati, Ohio. Filed Apr. 21, 1913. Serial No. 762,509. (Cl. 84—156.)



1. A music-player valve-chest having a valve-port and a valve thereto, an actuating pneumatic having a moving part thereof opposite to said port and valve and at a distance therefrom, an extension from said moving part having its outer end within said port, a hole lengthwise in said extension, and a valve-rod removably held in said hole, a collar fixed on said rod intermediate its length and at less distance from the end of the rod within said hole than the depth of said hole, said valve being mounted on said rod at the face of the collar away from said extension.

2. A music-player valve-chest having a valve-port and a valve thereto, an actuating pneumatic having a moving part thereof opposite to said port and valve and at a distance therefrom, an extension from said moving part, a hole lengthwise in said extension and a valve-rod removably held in said hole, a collar fixed on said rod intermediate its length and at less distance from the end of the rod within said hole than the depth of said hole, said valve being mounted on said rod at the face of the collar away from said extension.

3. A music-player valve-chest having a valve-port and a valve thereto, an actuating pneumatic having a moving part thereof opposite to said port and valve and at a distance therefrom, an extension from said moving part having its outer end within said port, a hole lengthwise in said extension, and a valve-rod removably held in said hole, a collar fixed on said rod intermediate its length and at less distance from the end of the rod within said hole than the depth of said hole, said valve being mounted on said rod at the face of the collar away from said extension, and a removable washer on said rod between said collar and said valve.

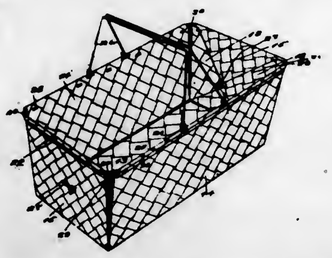
4. A music-player valve-chest having a valve-port and a valve thereto, an actuating pneumatic having a moving part thereof opposite to said port and valve and at a

distance therefrom, an extension from said moving part; a hole lengthwise in said extension and a valve-rod removably held in said hole, a collar fixed on said rod intermediate its length and at less distance from the end of the rod within said hole than the depth of said hole, said valve being mounted on said rod at the face of the collar away from said extension, and a removable washer on said rod between said collar and said valve.

5. A music-player valve-chest having a valve-port and a valve thereto, an actuating pneumatic having a moving part thereof opposite to said port and valve and at a distance therefrom, an extension from said moving part having its outer end within said port, a hole lengthwise in said extension, and a valve-rod removably held in said hole, said valve being mounted on said rod and removable therewith, and a return-vent at the rear of said hole and opening into the interior of said pneumatic.

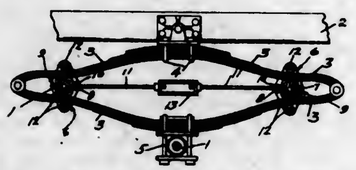
[Claims 6 to 15 not printed in the Gazette.]

1,153,057. BASKET. HENRY R. GARAITSON, Logansport, Ind. Filed Apr. 13, 1914. Serial No. 831,466. (Cl. 229—52.)



A basket comprising a blank provided with ends and sides carrying at their outer edges flaps, the flaps carried by the sides being substantially shorter than the sides and terminating at points spaced substantial distances from the ends of the sides, a substantially rectangular bail carrying frame disposed outwardly of the ends and sides and provided in its side portions with upstanding eyes extending upwardly beyond the downwardly folded flaps for a substantial distance, the side and end flaps being folded outwardly and downwardly about the substantially rectangular bail carrying frame and corner portions of the bail carrying frame being exposed, and a pair of bails provided at their lower ends with eyes pivotally engaging the upstanding eyes and adapted when the basket is supported by the bails to be spaced a substantial distance above the flaps of the sides.

1,153,058. VEHICLE-SPRING. JAMES O. GILFILLAN, Napoleon, N. D. Filed Jan. 2, 1915. Serial No. 25. (Cl. 21—50.)



1. The combination with a vehicle spring, of a relatively fixed spacing head having coöperating upper and lower roller guides embracing said spring, permitting longitudinal movement of said spring there between, for throwing more or less of said spring out of action, under the movement of the body of the vehicle with respect to the running gear thereof, and means for adjusting said spacing head longitudinally of said spring.

2. The combination with a vehicle spring, of a pair of relatively fixed spacing heads having coöperating upper and lower roller guides embracing the outer end portions of said spring, permitting longitudinal movement of said spring there between, for throwing more or less of said spring out of action, under the movement of the body of the vehicle with respect to the running gear thereof, and means for adjusting said spacing heads toward and from each other.

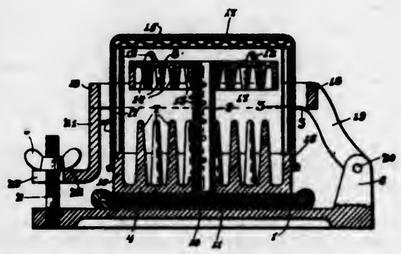
3. An elliptical vehicle spring having its upper and lower sections anchored, one to the vehicle body and the other to the running gear thereof, and a pair of relatively fixed spacing heads embracing the outer end portions of the spring and having transverse portions extending between the sections thereof, said spacing heads permitting longitudinal movement of the spring therethrough, for throwing more or less of said spring out of action, under the movement of the body of said vehicle with respect to said running gear, but holding the sections of the spring against separation and approach in respect to each other.

4. An elliptical vehicle spring having its upper and lower sections anchored, one to the vehicle body and the other to the running gear thereof, a pair of relatively fixed spacing heads embracing the outer end portions of said spring sections, permitting longitudinal movement of said spring therethrough, for throwing more or less of said spring out of action, under the movement of the body of said vehicle with respect to said running gear, said spacing heads holding the embraced portions of said spring sections against separation and approach in respect to each other, and means for adjusting said spacing heads, toward and from each other.

5. An elliptical vehicle spring having its upper and lower sections anchored, one to the vehicle body and the other to the running gear thereof, and a pair of relatively fixed spacing heads having coöperating upper and lower roller guides through which the outer end portions of the upper section of said spring are free to move longitudinally and having coöperating upper and lower guides through which the outer end portions of the lower section of said spring are free to move longitudinally, for throwing more or less of said spring sections out of action, under the movement of the body of said vehicle with respect to said running gear.

[Claims 6 to 9 not printed in the Gazette.]

1,153,059. VULCANIZER. JOHN M. GINTER, Wooster, Ohio. Filed Jan. 29, 1915. Serial No. 5,020. (Cl. 18—18.)



1. In a vulcanizer, a base, a vulcanizing plate provided with a series of pins, means for attaching said vulcanizing plate to said base, a cup provided with a series of posts having air inlets located through said posts, and an open ended hollow tube connected to said cup and vulcanizing plate.

2. In a vulcanizer, a base, a vulcanizing plate provided with a series of pins, means for attaching said vulcanizing plate to said base, a cup provided with a series of posts having air inlets located through said posts, and an open ended hollow tube connected to said cup and vulcanizing plate, said hollow tube provided with apertures intermediate its ends.

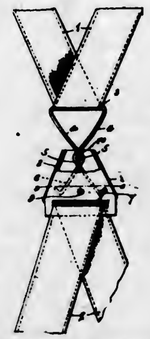
3. In a vulcanizer, the combination of a cup adapted to receive a supply of liquid fuel, said cup provided with a series of posts having air inlets, a hollow tube connected to said cup and open at its connected end, a vulcanizing plate provided with a series of pins, said vulcanizing plate connected to said hollow tube and a cover adapted to inclose said cup.

4. In a vulcanizer, the combination of a cup adapted to receive a supply of liquid fuel, said cup provided with a series of posts having air inlets, a hollow tube connected to said cup and open at its connected end, a vulcanizing plate provided with a series of pins, said vulcanizing plate connected to said hollow tube and a cover adapted to inclose said cup, a base and means for connecting said base to said vulcanizing plate.

5. In a vulcanizer, the combination of a base plate, a reversible vulcanizing plate and a fuel cup, said fuel cup provided with air passages and means for holding said fuel cup and vulcanizing plate in spaced relationship with reference to each other.

[Claims 6 to 8 not printed in the Gazette.]

1,153,060. OVERALL-SUSPENDER ATTACHMENT. GEORGE A. GLEDHILL, Milwaukie, Oreg. Filed Aug. 5, 1914. Serial No. 855,206. (Cl. 74—72.)



1. A spring attachment for suspenders comprising a sheet metal guide member having inclined sides, a spring wire mounted in the guide member and provided with divergent arms having angular feet forming stops and overlapping bent portions forming a loop within the guide member, a rivet extending through the guide member and through the loop between the bent portions of the wire, and said wire having a loop at its upper end for connection to the back straps of a suspender.

2. A suspender attachment comprising a guide member having inclined sides, an attaching member having divergent resilient arms, slidably mounted in the guide member, a rivet extending through the guide member and located between the divergent arms, having said arms adapted to coöperate with the rivet to limit the sliding movement of the resilient arms with relation to said guide member.

1,153,061. HOG-RING. GERHARDT GLOGGNER, St. Joseph, Mo. Filed Feb. 4, 1914. Serial No. 816,409. (Cl. 119—135.)

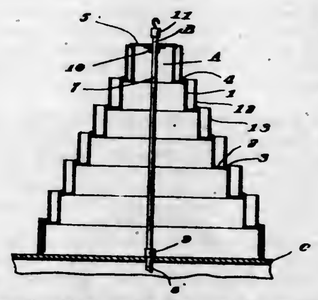
1. A hog ring comprising a U-shaped loop, the limbs of which are disposed in parallel relation throughout and provided with eyes intermediate the ends thereof, the portions of the limbs beyond the eyes being bent to form hooks having sharp points directed toward the bridge of the yoke, and a rod supported loosely in the eyes of the limbs and having terminal sharp-pointed arcuate arms positioned adjacent to the outer faces of and in substantially parallel relation to the limbs of the yoke.

2. A hog ring comprising a U-shaped loop having sharp-pointed limbs partly bent for insertion through the cartilage of the nose of the animal, said limbs being substantially parallel throughout and formed with eyes intermediate the ends thereof, in combination with a rod supported loosely for rocking movement in the eyes of the



limbs and having terminal sharp-pointed arcuate arms extending in opposite directions in planes adjacent and substantially parallel to the outer faces of the limbs of the yoke.

1,153,062. CABINET. EZRA BENJAMIN HENRY ANDREW GOURLAY, Edmonton, Alberta, Canada. Filed Aug. 24, 1914. Serial No. 858,293. (Cl. 211—17.)



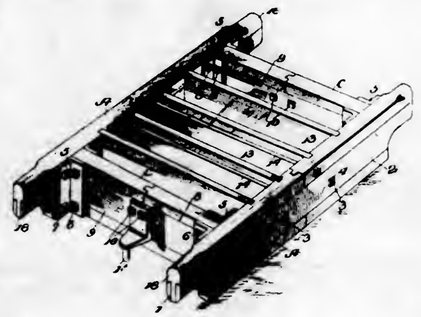
1. In seed cabinet or the like, and in combination, a plurality of concentrically located and disposed cylindrical members open in the top and bottom, provided with a radial flange extending from the bottom edge of each of said members, such flanges terminating in annular grooves, the top edge of each of said members being bent over inwardly to form an annular flange adapted to engage with the annular groove in the said flange of the adjacent cylindrical member, radial ribs between said concentric cylindrical members to form pockets therebetween, and means for supporting said members in an extended position, as for the purpose specified.

2. In a seed cabinet or the like, and in combination, a plurality of concentrically located and disposed cylindrical members open in the top and bottom, provided with a radial flange extending from the bottom edge of each of said members, such flanges terminating in annular grooves, the top edge of each of the said members being bent over inwardly to form an annular flange adapted to engage with the annular groove in the said flange of the adjacent cylindrical member, radial ribs between said concentric cylindrical members to form pockets therebetween, a cap having an orifice therethrough adapted to fit the center cylindrical member, a rod, a flange mounted on the said rod, a socket attached to the said rod and a hook attached to the said socket, as and for the purpose specified.

1,153,063. EXTENSIBLE MOLDING-FLASK. THADDEUS GRASK, Wichita, Kans. Filed Oct. 12, 1912. Serial No. 725,425. (Cl. 22—100.)

1. In a molding flask, the combination with sectional side rails provided with longitudinal grooves in the side walls thereof, of end rails connected to the side rails and clamping bars slidably mounted in the grooves of the side rails for fastening the sections of each of the side rails together.

2. In a molding flask, the combination with sectional side and end rails provided with longitudinal grooves in the sides thereof, of clamping bars slidably mounted in the grooves of the side and end rails for connecting the sections of each of the side and end rails together.



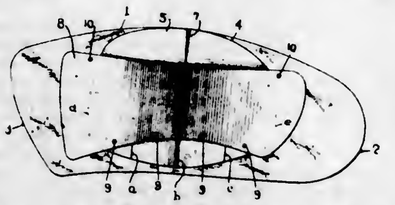
3. In a molding flask, the combination with extensible sectional side and end rails provided with longitudinal grooves in the sides thereof, of clamping bars slidably mounted in the grooves of the side and end rails for connecting the sections of each of the side and end rails together.

4. In a molding flask, the combination with extensible side rails having longitudinal grooves in the sides thereof, end rails connected to the side rails, clamping bars seated in the longitudinal grooves of the side rails for fastening the sections of the side rails together, and said side rails provided with vertical grooves for the reception of the ends of the sand supporting bars.

5. In a molding flask, the combination with extensible sectional side and end rails, said side and end rails connected together and provided with longitudinal grooves, of clamping bars received in the longitudinal grooves for fastening the sections of the side and end rails together, and means for locking the clamping bars to the side rails for holding the various sections of the side and end rails together.

[Claims 6 to 10 not printed in the Gazette.]

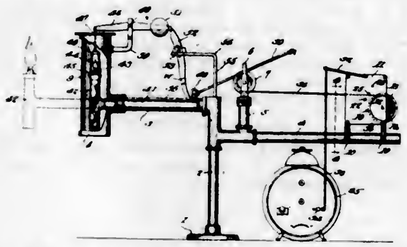
1,153,064. ARCH-SUPPORT. ALBERT F. GREENIG, Lancaster, Pa. Filed June 10, 1915. Serial No. 33,312. (Cl. 36—71.)



1. An arch support comprising a securing plate and a main plate superimposed upon the securing plate and attached thereto adjacent to one side of the main plate, and having its sides extended beyond the securing plate, said main plate being upwardly curved on the arch side of the foot and provided with a central slit, extending almost to the center of said plate, the opposite side of said main plate being provided with a series of slits extending inwardly from the edge thereof toward the center of said plate, and a cover of non-metallic material secured to the securing plate.

2. An arch support comprising a securing plate, and a main plate secured to the securing plate near the outer edge thereof, the main plate being upwardly curved from points considerably within the inner edge of the securing plate, whereby said plate is permitted to have a resilient action with relation to the securing plate, the main plate being provided on the inner side in the curved portion thereof, with a slit, whereby the front and rear side portions of said plate may have independent movements, and a series of slits in the opposite or outer side of the main plate and extending from the edge thereof toward the center, whereby said outer portion is rendered resilient.

1,153,065. FIRE-LIGHTER. HERBERT E. GRIFFIN, Mount Horeb, Wis. Filed Sept. 25, 1914. Serial No. 863,542. (Cl. 44—6.)



1. In a device of the class described, a frame; a lamp mounted to move thereon; a motor operatively connected with the lamp to advance and retract the lamp; a brake coöperating with the motor; and a releasing means operatively connected with the brake.

2. In a device of the class described, a frame; a lamp mounted to move thereon; a motor operatively connected with the lamp to advance and retract the same; a brake in coöperative relation to the motor; a releasing means operatively connected with the brake; a hood for the lamp; and means operable by the movement of the lamp to retract the hood when the lamp is advanced.

3. In a device of the class described, a frame; a lamp mounted to move thereon; a support upheld by the frame; a rod pivoted to the lamp and upheld intermediate its ends by the support; a flexible element trained about the support and connected with the rod upon the opposite side of the support from the lamp; and mechanism for actuating the flexible element.

4. In a device of the class described, a frame; a lamp mounted to move thereon; mechanism operatively connected with the lamp to advance and retract the same; a hood for the lamp; and means operable by the movement of the lamp to retract the hood when the lamp is advanced.

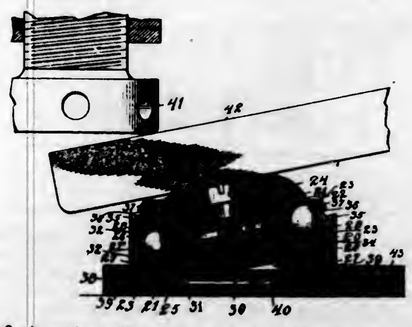
5. In a device of the class described, a frame; a lamp mounted to move thereon; mechanism for advancing and retracting the lamp; a hood for the lamp; a lever fulcrumed on the frame and operatively connected with the hood; and a latch fulcrumed on the frame and engaged with the lever, a portion of the latch lying in the path of a portion of the lamp, thereby to effect a disengagement of the latch from the lever when the lamp is moved.

[Claims 6 and 7 not printed in the Gazette.]

1,153,066. METHOD FOR ASSEMBLING BALL-BEARINGS. FREDERICK W. GURNEY, Jamestown, N. Y., assignor to Gurney Ball Bearing Company, a Corporation of New York. Filed Jan. 28, 1911, Serial No. 606,199. Renewed Aug. 7, 1915. Serial No. 44,291. (Cl. 29—84.)

1. A method of assembling a ball bearing having an outer race ring and an inner race ring and balls therebetween in race grooves, one of said race grooves being of less depth on one side than on the other, which consists in holding the balls in one race groove and assembling into the race groove of the other ring by way of the side thereof having less depth.

2. A method of assembling a ball bearing having an outer race ring and an inner race ring with balls therebetween in race grooves, which consists in holding said balls in the race groove in one of said rings and bringing said assembly of ring and balls into the assembled position with the other race ring from one side.



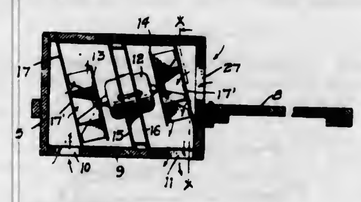
3. A method of assembling a ball bearing having an outer race ring and an inner race ring with balls therebetween in race grooves in said rings, which consists in holding a full complement of said balls in the race groove of one of said rings and inserting the assembly of balls and said ring into the race groove of the other ring from one side and bringing said balls and ring into the assembled position by sidewise pressure on said assembly of balls and ring from said one side.

4. A method of assembling a ball bearing having an outer race ring and an inner race ring with balls therebetween in race grooves, which consists in holding said balls in the race groove in one of said rings and bringing said assembly of ring and balls into the assembled position with the other race ring from one side and stopping the movement of assembling so that said balls shall not strike and deface the side of the race groove opposite the side from which they are assembled.

5. A method of assembling a ball bearing having an outer race ring and an inner race ring and balls therebetween in race grooves, which consists in holding said balls in one of said race grooves, bringing said assembly of ring and balls into the assembled position with the other ring from one side, and letting the ball or balls first entering the race groove of said other ring act as a pivot on which the assembling movement swings.

[Claims 6 to 13 not printed in the Gazette.]

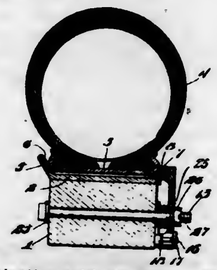
1,153,067. VENTILATING DEVICE. LESLIE S. HACKNEY, St. Paul, Minn. Filed June 8, 1911, Serial No. 632,039. Renewed Feb. 15, 1915. Serial No. 8,290. (Cl. 98—27.)



1. A window ventilating device comprising a cabinet having openings in its outer wall, one of said openings forming an intake for the fresh air and the other an outlet for the foul air, the wall of said cabinet having an outlet opening therein for the foul air and the inner portion of the wall of said cabinet having an outlet opening for the fresh air, said outlet and inlet openings communicating respectively with the corresponding openings in the outer wall of said cabinet, a partition located in said cabinet between the openings in its outer wall and dividing the interior of the cabinet into independent compartments, and fans mounted in said compartments and operating to establish currents of fresh air inwardly through said fresh air openings, and currents of foul air outwardly through said foul air openings.

2. A window ventilating device comprising a cabinet adapted to fit into a window between the sill and the sash, said cabinet having openings in its outer wall, one of said openings forming an intake for the fresh air and the other an outlet for the foul air, the inner portion of one of the walls of said cabinet having an outlet opening therein for the foul air and a wall of said cabinet having an inlet opening for the fresh air, end partitions extending diagonally across said cabinet from wall to wall near the ends thereof and separating said fresh air intake opening and the foul air outlet opening of said cabinet from the middle portion of said cabinet, said partitions having openings therein, a central partition mounted diagonally in the middle portion of said cabinet and forming fan chambers between it and said end partitions, one of said fans being adjacent to the fresh air inlet opening of one of said partitions and the other fan adjacent to the foul air outlet opening of the other partition, one fan chamber communicating with the foul air outlet opening in the outer wall of said cabinet and the other with the fresh air inlet opening leading from said cabinet to the space to be ventilated.

1,153,068. DEMOUNTABLE-RIM FASTENER. WILLIS L. HALL, North Attleboro, Mass. Filed Dec. 6, 1913, Serial No. 805,059. Renewed Feb. 13, 1915. Serial No. 8,080. (Cl. 152—21.)



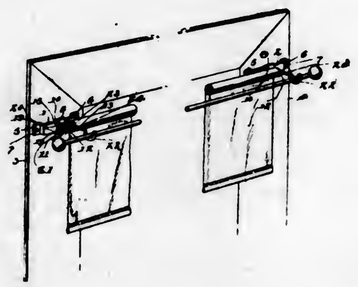
1. The combination with a demountable rim for vehicle wheels, of a circular wedging ring, and fastening means for said rim carried by the wheel and embodying a series of clamps each movable into and out of engagement with said wedging ring, and a locking device for holding each clamp from turning, said locking device comprising a keeper plate fixedly secured to the wheel, and a locking member carried by and slidable on said clamp and movable into and out of locking engagement with said keeper plate.

2. The combination of a wheel, a rim fastened to the wheel felly, a flange at one side of said rim having an inclined inner face, a tire carrying demountable rim, a circular wedging ring having an inclined inner face, and fastening means carried by the wheel embodying a series of pivoted clamps each movable into and out of engagement with said wedging ring, a lock carried by each clamp, and a keeper plate for each lock fixedly secured to the wheel, the lock being movable into and out of engagement with said plate and slidable upon and relatively to the clamp.

1,153,069. CURTAIN-SHADE BRACKET. CHARLES HALLAIRE, Amsterdam, N. Y. Filed Oct. 9, 1914. Serial No. 865,917. (Cl. 156—24.)

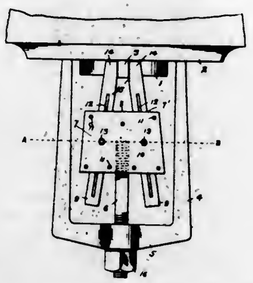
1. In a device of the class described, the combination with a base plate adapted for attachment to a window

frame, a shade bracket adjustably mounted on the base plate and provided with a head, and a pair of laterally projecting lugs arranged one above the other and located in rear of the head and having registering openings, the free terminals of the lugs being bent in opposite directions, a curtain pole bracket interposed between one side of the head and the bent terminal of one of the lugs and having a depending portion extending through the openings in the lugs, as and for the purpose specified.



2. In a device of the class described, the combination of a stationary base plate adapted for attachment to a window frame and having a bracket adjustably mounted thereon and having guides engaging over the longitudinal edges of the base plate, relatively flat members interposed between the base plate and the window frame and extending parallel with the base plate and frame and serving to hold the base plate spaced from the window frame and to engage the guides to limit the adjustments of the brackets in one direction, and means extending through the base plate and the spaced members and engaging the window frame whereby to hold the various parts in position.

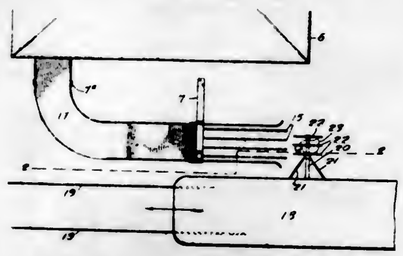
1,153,070. EXTRACTOR. CHARLES C. R. HAMMAR, New Duluth, Minn. Filed Mar. 27, 1914. Serial No. 827,653. Renewed July 28, 1915. Serial No. 42,454. (Cl. 29—86.1.)



1. An extractor comprising a U-shaped body portion, a screw-threaded bolt mounted within the said body portion, a head mounted on the said bolt within the body portion, the said head having converging ways, and gripping levers slidably mounted within the said ways.

2. A key extractor comprising a U-shaped body portion, a screw-threaded bolt mounted within the said body portion, a nut carried by the bolt outside the body portion and adjacent thereto, a head carried by the bolt within the body portion, the said head having converging ways, gripping levers slidably mounted within the said ways, the said levers having grooves, screws carried by the head entering the said grooves, the parts arranged as and for the purpose described.

1,153,071. RAILWAY PACKAGE-TRANSFERRING DEVICE. ELBERT BIRD HARRAL, New Orleans, La. Filed Apr. 12, 1913, Serial No. 760,727. Renewed May 12, 1915. Serial No. 27,666. (Cl. 105—231.)



1. A railway package transferring device comprising a group of fingers for holding and releasing a package, and a chute for receiving said package, said chute being provided with fingers having upturned ends, said chute being further provided with a portion inclined obliquely in relation to the horizon for the purpose of causing the package to glide obliquely upward, said chute being further provided with a substantially horizontally disposed curved portion, said curved portion and said obliquely inclined portion being for the purpose of arresting the momentum or inertia of the package as delivered to said chute.

2. A device of the character described comprising two package handling members, one located at a station and the other carried by a car, one of said members being provided with fingers for the purpose of supporting and easily discharging the package, the other of said members having the form of a chute provided with side walls and with flanges outwardly extended at the ends of said walls, said chute being further provided with fingers extending from the end of the chute and spaced apart, said chute being further provided with a substantially horizontal portion curved in a horizontal plane, said chute being further provided with a portion between the curved portion and said fingers, said last mentioned portion being inclined obliquely in relation to said horizontally disposed portion.

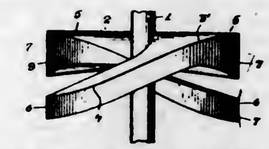
3. A railway package transferring device comprising two package handling members, one located at a station and the other carried by a car, one of said members being for the purpose of discharging the package and the other having the form of a chute for receiving said package, said chute being provided with a substantially horizontal portion and with a portion inclined obliquely downward from said horizontal portion, the inclined portion being provided with fingers extending from it and spaced apart, said fingers virtually constituting a continuation of the inclined portion, each of said fingers being provided with a rib integral with it for the purpose of strengthening it.

1,153,072. GENERATIVE-ORGAN APPLIANCE. LEWIS B. HART, Plaquemine, La. Filed Nov. 4, 1914. Serial No. 870,274. (Cl. 128—28.)



A generative organ appliance of the class described, comprising a resilient and flexible sleeve-like body having longitudinally disposed slits arranged radially of its bore and opening through the outer surface of the said body, the slits being slightly removed from the wall of the bore in the body to provide weakened points at intervals concentrically of the said bore.

1,153,073. HELICOPTER. WILLIAM B. HARTLEY, Watts, Cal. Filed July 24, 1914. Serial No. 852,944. (Cl. 170—176.)



A propeller comprising a shaft, diametrically disposed spiral blades carried by the shaft, each of said blades having an elevated leading edge and a depressed trail edge, a flange depending from the peripheral edge of each blade and of major depth along the leading portion thereof, and a vane extending beneath the leading portion of each blade and between the flange and shaft, said vane forming with the leading portion of the blade a circumferentially and radially flaring gathering channel.

1,153,074. GREASE-CUP. FERDINAND Q. HARTMAN, Danville, Pa. Filed May 15, 1915. Serial No. 28,321. (Cl. 184—43.)



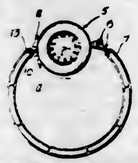
1. The combination in an oil cup of the centrifugal type, of a casing having a reservoir and a passage which leads from the cup; a piston mounted in the reservoir and having a tubular stem located in the passage, said stem being slotted at the end opposite the piston; and an adjustable valve extending into the slot in the stem and arranged to regulate the flow of oil from the reservoir.

2. The combination of a casing having a reservoir therein and having a passage leading from the reservoir; a cap arranged to close the reservoir; a piston located in the reservoir; a tubular stem projecting from the piston and extending into the passage, the stem being slotted at the lower end and communicating with the space between the piston and the cap; and an inclined adjusting screw having an end conforming to the shape of the slot in the stem.

3. The combination of an oil cup having a reservoir and a passage leading from the reservoir; a cap arranged to close the reservoir; a piston mounted in the reservoir; a tubular stem projecting from the piston and located in the passage, the said tubular stem communicating with the space between the piston and the cap, the opposite end of the stem being slotted, the slot being V-shaped in cross section; and an inclined adjusting screw having a V-shaped end projecting into the slot and so shaped as to regulate the flow of the lubricant from the reservoir through the stem.

1,153,075. ATTACHMENT FOR WRIST-WATCHES. THOMAS F. HATHAWAY, Elgin, Ill., assignor to Illinois Watch Case Company, Elgin, Ill., a Corporation of Illinois. Filed Jan. 30, 1915. Serial No. 5,283. (Cl. 224—4.)

1. In combination with a watch body of the character described, an attachment comprising a stem having a recess in one end extending partially the length thereof, a flange formed at the extremity of said recessed end, a ring at the opposite end of said attachment, and guard members attached to the watch body and arranged at each side of the ring, substantially as described.

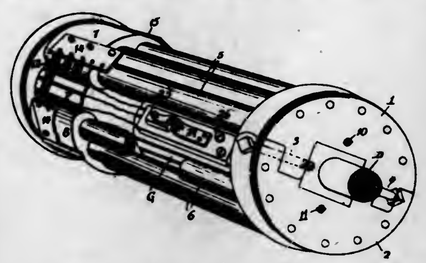


2. In combination with a watch case, a shield, guard or protecting piece comprising a single piece of metal arranged with companion or complementary end portions positively secured directly to the curved outer periphery of the watch case, and a central portion raised as to its outer surface, substantially as described.

3. In combination with a watch case, a shield, guard or protecting piece comprising a single piece of metal arranged with companion or complementary end portions positively secured directly to the curved outer periphery of the watch case, and a central portion of concavo-convex formation, substantially as described.

4. In combination with a watch case, an attachment composed of a single piece of metal arranged with companion or complementary end portions positively secured directly to the periphery of a watch case, a central portion and the inner face of the central portion being raised with respect to the inner faces of the end portions whereby said central portion is out of contact with the periphery of the watch case when the attachment is secured thereto, substantially as described.

1,153,076. DYNAMO-ELECTRIC GENERATOR. JOHN O. HEINZE, Jr., Lowell, Mass. Filed Dec. 20, 1911. Serial No. 666,890. (Cl. 171—227.)



1. In a generator having driving means and a stationary armature; a rotatable magnet having pole pieces and legs hinged to the driving means; said legs and pole pieces having one of their planes of movement pass through the longitudinal axis of the armature; the rotation of said magnet causing the pole pieces to move in said plane away from the armature.

2. In a generator having a driving shaft and a stationary armature; a rotatable magnet, having two legs provided with pole pieces to rotate about, and to form the magnetic field for, said armature, and pivoted to the driving shaft; said legs and pole pieces having a common plane of inward and of outward movement passing through the longitudinal axis of the armature.

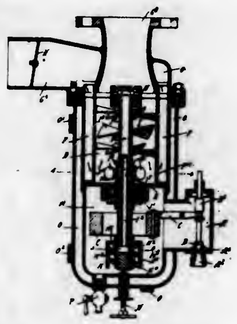
3. In a generator having a driving shaft and a stationary armature; a rotatable magnet, having two legs provided with pole pieces to rotate about, and to form the magnetic field for, said armature, and pivoted to the driving shaft; said legs and pole pieces having a common plane of inward and of outward movement passing through the longitudinal axis of the armature; and suitable spring connections whereby the pole pieces tend to

approach the armature, upon a decrease in the speed of rotation, and hence in the centrifugal force in the rotating legs and pole pieces of the magnet.

4. In a generator having a driving shaft and a stationary armature; a rotating magnet, having two legs provided with pole pieces to rotate about, and to form the magnetic field for, said armature, and pivoted to the driving shaft; said legs and pole pieces having a common plane of inward and of outward movement passing through the longitudinal axis of the armature; suitable spring connections whereby the pole pieces tend to approach the armature, upon a decrease in the speed of rotation, and hence in the centrifugal force inherent in the rotating legs and pole pieces of the magnet; and limiting arms sliding on the shaft and connected to the pole pieces whereby each pole piece moves equally toward or away from the armature.

5. In a generator having a driving shaft and a stationary armature; a rotatable magnet, having two legs provided with pole pieces to rotate about, and to form the magnetic field for, said armature, and pivoted to the driving shaft; said legs and pole pieces having a common plane of inward and of outward movement passing through the longitudinal axis of the armature; suitable spring connections whereby the pole pieces tend to approach the armature, upon a decrease in the speed of rotation, and hence in the centrifugal force inherent in the rotating legs and pole pieces of the magnet; limiting arms sliding on the shaft and connected to the pole pieces whereby each pole piece moves equally toward or away from the armature; and means for limiting the inward and the outward movements of the pole pieces.

1,153,077. CARBURETER. ALFRED J. HIPPEL, New York, N. Y. Filed Feb. 6, 1912. Serial No. 675,708. (Cl. 48—152.)



1. A carbureter, comprising a reservoir for containing a liquid, a mixing chamber, an air chamber connected with the said mixing chamber at the inner end thereof, a revoluble mixing wheel in the said mixing chamber and having a hollow shaft extending into the said reservoir, the hollow shaft being provided with a spraying device discharging into the inner end of the said mixing chamber, an intake head within the said reservoir and held on the end of the said hollow shaft to rotate with the latter, and a manually-controlled means for regulating the inflow of the liquid to said hollow shaft at the said intake head.

2. A carbureter, comprising a reservoir for containing a liquid, a mixing chamber having an air inlet at one end and adapted to be connected at the other end with an engine, a revoluble wheel in the said mixing chamber and having a hollow shaft extending into the said reservoir, the said hollow shaft being provided with perforations in the said mixing chamber, and being provided with an annular sleeve having perforations staggered relative to the perforations in the said shaft, and an intake head within the said reservoir and secured to the said hollow shaft, the said suction head having a central chamber opening into the said hollow shaft, the wall of said central chamber being perforated, and the said head having a receiving chamber and provided with an inlet for the entrance of the liquid into the said receiving chamber.

3. A carbureter, comprising a reservoir for containing a liquid, a mixing chamber having an air inlet at one end and adapted to be connected at the other end with an engine, a revoluble wheel in the said mixing chamber and having a hollow shaft extending into the said reservoir, the said hollow shaft being provided with perforations in the said mixing chamber and being provided with an annular sleeve having perforations staggered relatively to the perforations in the said shaft, an intake head within the said reservoir and secured to the said hollow shaft, the said suction head having a central chamber opening into the said hollow shaft, the wall of said central chamber being perforated and the said head having a receiving chamber surrounding the said central chamber and provided with an inlet for the entrance of the liquid into the said receiving chamber, a valve in the said central chamber controlling the perforations thereof, and an adjusting screw on the said reservoir and engaging the said valve.

4. A carbureter, comprising a casing having a transverse plate forming an upper mixing chamber and a lower reservoir, an air chamber communicating with the mixing chamber, a revoluble mixing wheel in the said mixing chamber, a revoluble hollow shaft on which said wheel is mounted, the lower end of said shaft extending into the said reservoir, and the upper end of said shaft communicating with the mixing chamber, and an intake head secured on, and surrounding the lower end of said shaft, and embodying means whereby to lift the liquid into the hollow of the shaft when the latter is rotated.

5. A carbureter, comprising a casing having a transverse plate forming an upper mixing chamber and a lower reservoir, an air chamber communicating with the mixing chamber, a revoluble mixing wheel in the said mixing chamber, a revoluble hollow shaft on which said wheel is mounted, the lower end of said shaft extending into the said reservoir, and the upper end of said shaft communicating with the mixing chamber, an intake head secured on, and surrounding the lower end of said shaft, and embodying an inner cylindrical wall forming an inner compartment communicating with said hollow shaft, an outer cylindrical wall spaced from the inner wall and forming an outer intake compartment therebetween, and means for forcing fluid into the inlet compartment and into the hollow shaft when the latter is rotated, said inner wall having an opening establishing communication between the compartments, a valve in the form of a plug which is movable within the inner wall to regulate communication with the outer compartment, and an adjusting screw threaded through the base of the casing and engaging said valve plug.

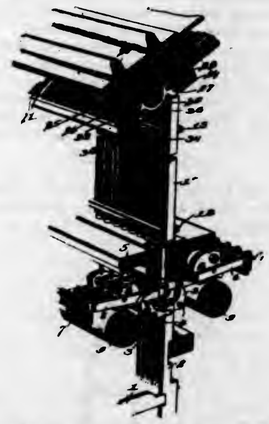
1,153,078. LINOTYPE-MACHINE. THOMAS S. HOMANS, Hempstead, N. Y., assignor to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed July 5, 1912. Serial No. 707,926. (Cl. 199—7.)

1. In a linotype machine, a magazine having converging channels for the matrices, and a matrix-controlling escapement having an axis of motion located within said channel and at a right angle to the plane thereof.

2. In a linotype machine, the combination of a matrix-containing magazine having converging channels, and matrix-controlling escapements, each having an axis of motion located in a line between the matrix-engaging portions of the escapement and at a right angle to the plane of its respective channel.

3. In a linotype machine, an escapement having a bearing of arc form with matrix-controlling pawls at the ends of the arc, and a mounting to coöperate with said bearing.

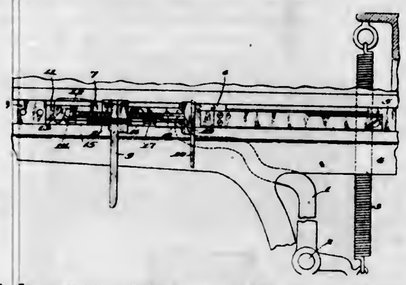
4. An escapement embodying an arc-shaped member having matrix-engaging portions toward the ends thereof, and a mounting having an arc-shaped bearing coöperative with said member, the diameter of said bearing being located between said matrix-engaging portions.



5. The combination of a matrix-containing magazine having converging matrix-guiding channels, a set of escapements for controlling the delivery of matrices therefrom, each escapement being arc-shaped, and a bar extending transversely of the magazine and grooved to form lateral guides and cylindrical bearings for the escapements, the axis of each cylindrical bearing being at a right angle to the plane of its respective matrix channel.

[Claims 6 to 10 not printed in the Gazette.]

1,153,079. LINE-COMPOSING MACHINE. THOMAS S. HOMANS, Hempstead, N. Y., assignor to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed Jan. 18, 1913. Serial No. 742,926. (Cl. 199—7.)



1. In a machine of the linotype class, the combination of the line delivery carriage and means for operating the same, embodying a pin on one of the parts adapted to engage in a notch in the other part, and a bolt to normally lock the pin in said notch and operative to unlock the pin automatically by a relative movement between the carriage and its operating means.

2. In a machine of the linotype class, the combination of the line delivery carriage, a power-operated member for actuating the carriage, and means for connecting the carriage and said member, embodying a pin on one of the parts adapted to detachably engage a notch in another of said parts, and a spring-pressed bolt on one of said parts normally operative to retain the pin in said notch and movable into a position to unlock the pin by a relative movement between said member and the carriage.

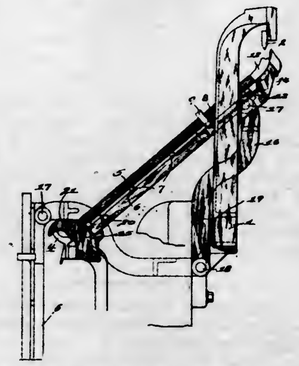
3. In a machine of the linotype class, in combination with the line delivery carriage and its operating means, a connecting link carrying a spring-tensioned locking bolt, said bolt being movable longitudinally of the link and having an operating connection with one of said parts, said bolt being operative to break the connection between the said carriage and its operating means in event of the failure of the carriage to return.

4. In a machine of the linotype class, the combination of a matrix-carrying slide or carriage, a power-operated member for moving said slide, and a link connecting the slide to said member, comprising a portion notched to engage a pin or stud of one of said connected parts, a rod or bar attached to the other of said connected parts and adapted to move lengthwise of said link to close or open said notch, and a spring acting upon said rod portion tending to keep the notch closed.

5. In a machine of the linotype class, the combination of a line delivery carriage, a power-operated member for actuating it, one of said parts provided with a pin, and a connecting link provided with a notch to detachably receive said pin and carrying a spring-actuated bolt normally retaining said pin in the notch and operative to unlock the pin by movement of said member relatively to the carriage.

[Claim 6 not printed in the Gazette.]

1,153,080. TYPOGRAPHICAL MACHINE. THOMAS S. HOMANS, Hempstead, N. Y., assignor to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed Jan. 5, 1914. Serial No. 810,455. (Cl. 199—7.)



1. In a machine of the class described, the combination with a main frame, of a magazine supporting frame, a magazine movable longitudinally into engaged and disengaged relation therewith, and connections between the main frame and magazine supporting frame for guiding the latter from operative position to a vertical position in front of the machine for application or removal of a magazine by lowering or lifting the same vertically.

2. In a machine of the class described, the combination with a main frame, of a magazine frame, a magazine movable longitudinally into engaged and disengaged relation therewith and adapted to occupy an inclined operative position, and means for guiding the magazine carrying frame to a vertical position in front of the machine to permit lifting of the magazine vertically therefrom.

3. In a machine of the class described, the combination with a main frame, of a magazine supporting frame, a magazine removable longitudinally from the upper end of said supporting frame, and means pivotally connecting the main frame and the upper rear portion of the magazine supporting frame and operative to guide the latter from an inclined operative position to a vertical position in front of the machine to permit removal of a magazine vertically from said supporting frame.

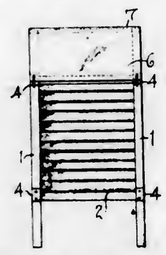
4. In a machine of the class described, the combination with a main frame, of a magazine supporting frame car

rying a magazine removable longitudinally from the upper end thereof, and a pivotal connection between the main frame and the magazine supporting frame for holding the latter in an inclined operative position and for suspending the magazine supporting frame in vertical position in front of the machine for application or removal of a magazine.

5. In a machine of the class described, the combination with a main frame, of a magazine supporting frame carrying a magazine removable longitudinally from the upper end thereof, means pivotally connecting the main frame and the upper rear portion of the magazine supporting frame for carrying the upper rear portion of the latter into a position in font of the machine, and means for guiding the lower forward portion of the magazine supporting frame into such position.

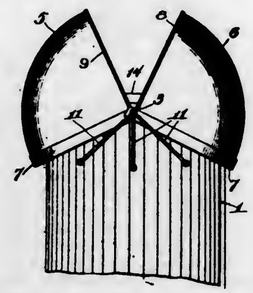
[Claims 6 to 9 not printed in the Gazette.]

1,153,081. WASHBOARD ATTACHMENT. SUSANNA HOOK, Battle Creek, Mich. Filed Apr. 12, 1915. Serial No. 20,696. (Cl. 68—29.)



The combination with a reversible wash board of a removable, detachable end protector, comprising a metal plate extending transversely the entire width of the board, having a top portion bent at right angles to a side piece, said top portion being formed with a downwardly extending flange, said side portion being provided with apertures at each end and means adapted to be inserted through said apertures in the side portion for securing the detachment to the board, as and for the purpose set forth.

1,153,082. SILO-ROOF. JOHN J. HOUTZ and WILLIAM L. HARRIS, Merwin, Mo. Filed Nov. 24, 1914. Serial No. 873,823. (Cl. 108—2.)



1. The combination with a silo, of trunnions secured to the silo adjacent to the upper end thereof and projecting outwardly therefrom at diametrically opposite points, and a roof comprising a hemispherical body formed of two sections, boxings carried by the opposite ends of the inner edges of said sections journaled upon said trunnions whereby the section of the roof may be swung to open and closed positions, and springs encircling said trunnions and acting to hold the sections of the roof normally against lateral movement relatively to the silo.

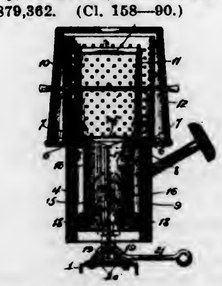
2. The combination with a silo, of trunnions secured to the silo adjacent to the upper ends thereof and projecting outwardly therefrom at diametrically opposite points, a roof comprising a hemispherical body formed of two sections, boxings carried by the opposite ends of the inner edges of said sections journaled upon said trunnions whereby the sections of the roof may swing to open and closed positions, a guide sheave carried by the inner surface of one of said sections, a flexible element trained over said sheave and having one end connected to the inner surface of the other section and the remaining end portion extending downwardly along the silo whereby the sections of the roof may be swung into roof formation.

1,153,083. FRUIT-PICKER. EDWARD F. HOWELL, Fort Smith, Ark. Filed July 8, 1914. Serial No. 849,753. (Cl. 56—99.)



In a reversible fruit picker, a handle of equal diameter throughout its entire length, a ring extending laterally from the handle at each end, an extension on each ring, said extension projecting radially therefrom and being secured to the handle to hold the rings at right angles thereto and in alinement with each other, and a chute of flexible material supported by and extending between the rings, said chute being of greater length than the distance between the rings so that it will bulge outwardly and away from the handle, thus preventing the fruit in passing therethrough from being bruised, the whole being adapted to be inverted so that either of the rings may be used as the mouth of the picker.

1,153,084. HYDROCARBON-BURNER. WALTER E. HUENEFELD, Cincinnati, Ohio, assignor to The Huenefeld Company, Cincinnati, Ohio. Filed Dec. 28, 1914. Serial No. 879,362. (Cl. 158—90.)



1. In a hydrocarbon burner, the combination of a wick tube member, a combustion chamber member, a lifting frame located within the wick tube member and movable vertically for lifting the combustion chamber member, a cam member rigid with the lifting frame and coöperating with a support below and independent of the wick tube member, and a handle located below the wick tube member for rotating the cam member.

2. In a hydrocarbon burner, the combinaton of a wick tube member, a combustion chamber member, a lifting frame composed of a plurality of connected wings bearing at their outer edges against the inner face of the wick tube member and adapted to engage and lift the combustion chamber member and a cam member rigid with said lifting frame and coöperating with a part independent of the wick tube member for elevating the lifting frame.

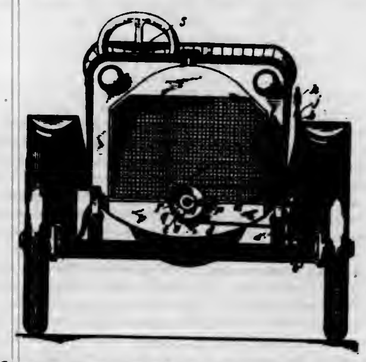
3. In a hydrocarbon burner, the combination of a wick tube member, a combustion chamber member, a lifting frame passing vertically through the wick tube member terminating adjacent the top of the latter and adapted to be moved vertically to engage the combustion chamber member for lifting same, and a cam rigid with said lifting frame and coöperating with a support whereby when the cam member is turned in one direction on said support it will elevate the lifting frame and combustion chamber member, and when turned in the opposite direction will lower said parts.

4. In a hydrocarbon burner, the combination of a wick tube member, an oil supply pipe below the same, a combustion chamber member, a winged frame passing vertically through said wick tube member, and engaging the combustion chamber member for elevating and lowering the same, and a saddle rigid with said winged frame for lifting and lowering the same, the said saddle resting on the oil supply pipe, and provided with a handle for turning the same.

5. A frame for lifting the combustion chamber of a hydrocarbon burner, composed of two V-shaped metal sections secured together forming a three winged frame, a depending extension from said frame, and a cam member carried by said extension.

[Claims 6 to 9 not printed in the Gazette.]

1,153,085. STARTER FOR EXPLOSIVE-ENGINES. CHARLES E. HUNT, Thomasville, Ala. Filed Sept. 21, 1914. Serial No. 862,631. (Cl. 74—54.)



1. In an automobile starter, the combination with a driven shaft operatively connected with the motor of a vehicle, a pulley on said shaft having an opening in its web; a pair of ratchets keyed to the shaft at opposite sides of the pulley, a dog pivoted to the pulley and extending through the opening therein so as to simultaneously engage both ratchets, a spring for normally holding the pulley in normal position with the dog disengaged, a manually operable lever pivoted on the vehicle adjacent the seat and connections between said lever and said pulley whereby the pulley may be turned by pulling the lever to start the motor.

2. In an automobile starter, the combination with a driven shaft operatively connected with the motor of a vehicle, a pulley on said shaft having an opening in its web; a pair of ratchets keyed to the shaft at opposite sides of the pulley, a dog pivoted to the pulley and extending through the opening therein so as to simultaneously engage both ratchets, a spring for holding the pulley in normal position together with the dog disengaged; with a manually operable lever pivoted on the vehicle, connections between said lever and said pulley, whereby the pulley may be turned to start the motor by pulling the lever, and a spring connected to said lever and to a fixed part of the vehicle and adapted to assist the operator in the starting movement of the lever and to resist forward movement of the lever should the engine back-fire.

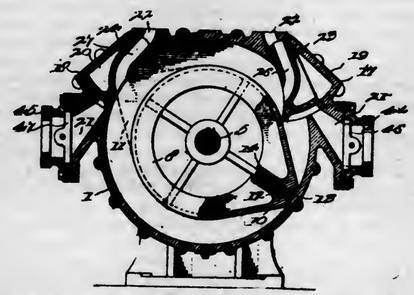
3. In an automobile starter the combination with a driven shaft operatively connected with the motor of a vehicle, a pulley on said shaft and having an opening in its web; a pair of ratchets keyed to the shaft at opposite sides of the pulley, a dog pivoted to the pulley and extending through the opening therein so as to simultaneously engage both ratchets, a spring for holding the pulley in normal position with the dog disengaged, a lever pivoted on the vehicle adjacent the seat, connections between said lever and said pulley whereby the pulley may be turned by pulling the lever to start the motor; a ratchet segment beside the lever, and a catch pivoted to said lever adapted to engage the segment to prevent injury by back-firing of the motor when starting.

4. In an automobile starter the combination with a driven shaft operatively connected with the motor of a vehicle, a pulley on said shaft, a pair of ratchets keyed to the shaft at opposite sides of the pulley, a dog pivoted to the pulley and engaging the ratchet, a spring for normally holding the pulley in normal position with the dog disengaged; with a manually operable lever pivoted on the vehicle adjacent the seat, connections between said lever and said pulley whereby the pulley may be turned by pulling the lever to start the motor; a ratchet segment beside the lever, a catch pivoted to said lever adapted to engage the segment to prevent injury by back-firing, and a spring connected to said lever and to a fixed part of the vehicle and adapted to assist the operator in the starting movement of the lever and to also resist forward movement of the lever should the engine back-fire.

5. An engine starter comprising a wheel loose on the engine shaft and carrying a pivoted dog, a swinging lever, flexible connections between said lever and said wheel, a spring tending to move said lever backwardly and start said wheel through said connections, a weaker spring tending to restore said wheel to starting position, and interengaging means on said wheel and shaft adapted to cause the wheel and shaft to turn together in a direction to start the engine; said means being adapted to become disengaged as rotation of the shaft is continued by the power of the engine, permitting said weaker spring to restore the wheel to starting position.

[Claims 6 and 7 not printed in the Gazette.]

1,153,086. ROTARY STEAM-ENGINE. FRIEDRICH HUPE, U. S. Navy. Filed Apr. 12, 1915. Serial No. 20,852. (Cl. 121—84.)



1. In a rotary engine, the combination of a cylinder, a rotor journaled in said cylinder, a piston on said rotor,

an abutment mounted to swing in said cylinder and cooperating with the piston on said rotor, an arm connected to said abutment, a socket on said cylinder, a rod slidably mounted in said socket and arranged to engage the free end of said arm, means for yieldably maintaining said rod in projected position, and means for confining said arm to hold the abutment in retracted position, substantially as described.

2. In a rotary engine, the combination of a cylinder, a rotor journaled in said cylinder, a piston on said rotor, a pair of abutments mounted to swing in opposite directions in said cylinder and coöperating with the piston to drive said rotor in opposite directions, arms connected to said abutments, sockets on said cylinder, rods slidably mounted in said sockets and engaging the free ends of said arms, means for yieldably maintaining said rods in projected position, and a latch for engaging said arms to maintain the same in position to hold the respective abutments retracted, substantially as described.

3. In a rotary engine, the combination of a cylinder, a rotor journaled in said cylinder, a piston on said rotor, a pair of swinging abutments mounted in said cylinder, arms connected to move with said abutments, sockets on said cylinder, sleeves adjustably mounted in said sockets, headed rods mounted to slide in said sleeves and arranged with their headed ends in engagement with the free ends of said arms, spring means confined between said adjustable sleeves and the heads of said rods for normally projecting the same, a casing arranged between said arms, and a double throw latch mounted in said casing and arranged to be moved to engage either of said arms and confine the same in position to hold the respective abutment retracted, substantially as described.

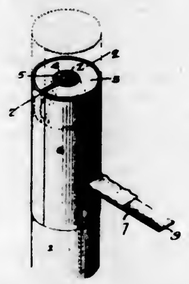
4. In a rotary engine, the combination of a cylinder, a partition dividing said cylinder to provide a pair of coaxial compartments, a shaft journaled in said cylinder and extending into each of said compartments, a rotor mounted on said shaft in each of said compartments, a piston on each of said rotors, a pair of swinging abutments mounted in each of said compartments and coöperating with the respective piston to drive the rotor in a forward or reverse direction, arms connected to move with said abutments and located without the cylinder, sockets on each of said cylinder heads, sleeve adjustably mounted in said sockets, headed rods slidably mounted in said sleeves and arranged to engage the free ends of said arms, spring means confined between said sleeves and the heads of said rods for yieldably projecting the same, a casing on each of said cylinder heads disposed between said arms, and a double throw latch mounted in each of said casings and adapted to engage either of said arms and confine the same against the action of said spring means for maintaining the respective abutment retracted, substantially as described.

5. In a rotary engine, the combination of a cylinder, a rotor journaled in said cylinder, a piston on said rotor, a pair of enlargements formed on said cylinder, swinging abutments mounted in said enlargements and coöperating with the piston to drive said rotor in forward or reverse directions, arms connected to move with said abutments, sockets on said cylinder, rods slidably mounted in said sockets and engaging the free ends of said arms, spring means for normally projecting said rods, means for adjusting the tension of said springs, a double throw latch for engaging and confining said arms against the influence of said spring means to hold the respective abutments retracted, intake and exhaust ports in said enlargements, valve chests removably connected to said enlargements, reciprocating valves mounted in said chests, a cam rotated from the engine, and oscillating levers actuated by said cam and arranged in connection to reciprocate said valves, substantially as described.

[Claim 6 not printed in the Gazette.]

1,153,087. FUSEE. GEORGE B. JACKSON, Philadelphia, Pa. Filed Dec. 11, 1914. Serial No. 876,685. (Cl. 102—24.)

1. A fusee comprising a tubular holder for inflammable illumating material, ignition means at the end of said illuminating material, the exposed area of said illuminating material being relatively small, a wrapping inclosing the end of said fusee and constituting a protective cover, and a separable ignition strip carried at the end of the fusee parallel with the longitudinal axis thereof and protected by said wrapping.



2. A fusee comprising a tubular holder for inflammable illuminating material, an ignitible member at the end of said illuminating material, the latter having an exposed portion of small area, a wrapping for the end of said fusee constituting a protective cover, and an elongated piece of flat stiff material forming an ignition element carried at the end of the fusee parallel with the longitudinal axis thereof and inclosing and protected by said wrapping.

3. A fusee comprising a tubular holder for inflammable illuminating material, ignition means at the end of said illuminating material, said illuminating material having a relatively small exposed area, a wrapping for the end of said fusee forming a protective cover, and an element of stiff material having a scratch surface for said ignition means carried at the end of the fusee parallel with the longitudinal axis thereof and inclosed and protected by said wrapping; said scratch element overlying the end of the fusee and being adapted to rip the wrapping loose from the fusee when it is desired to ignite the same.

4. A fusee comprising a tubular holder for inflammable illuminating material, an ignitible member at the end of said illuminating material, the area of such material exposed being relatively small, a wrapping for the end of said fusee forming a protective cover, and an elongated strip of stiff paper material forming an ignition element with a complemental scratch surface for the ignitible member carried at the end of the fusee parallel with the longitudinal axis thereof and inclosed and protected by said wrapping.

5. A fusee comprising a tubular holder for inflammable illuminating material, a wooden plug in the end of said fusee having a small bore whereby the area of illuminating material exposed is relatively small, ignition means carried by the exposed portion of said illuminating material, a wrapping for the end of said fusee constituting a protective cover, and a complementary ignition element carried at the end of the fusee parallel with the longitudinal axis thereof and inclosed and protected by said wrapping.

1,153,088. FUSEE. WILTON D. JACKSON, Philadelphia, Pa., assignor to George B. Jackson, Philadelphia, Pa. Filed Dec. 10, 1914. Serial No. 876,512. (Cl. 102—24.)

1. The combination, in a fusee, of a tubular body, and a contractile tubular plug fitting the end of the same.

2. The combination, in a fusee, of a tubular body, and a contractile tubular plug fitting the end of the same and having a conical bore.

3. The combination, in a fusee, of a tubular body, and a contractile tubular plug of wood fitting the end of the same.

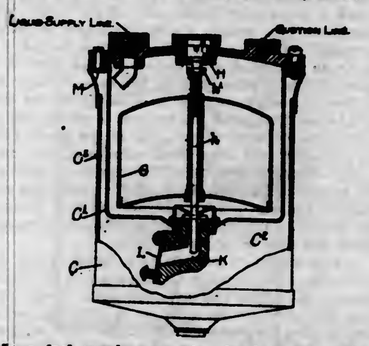
4. The combination, in a fusee, of a tubular body, and a contractile tubular plug of wood fitting the end of the same and having a conical bore.



5. The combination, in a fusee, of a tubular body, and a split tubular plug fitting the end of the same.

[Claims 6 to 12 not printed in the Gazette.]

1,153,089. FUEL-FEEDING DEVICE FOR INTERNAL-COMBUSTION ENGINES. WEBB JAY, Chicago, Ill. Filed Feb. 15, 1915. Serial No. 8,143. (Cl. 158—36.)



1. In a fuel supply apparatus for internal combustion engines, in combination with a low level supply tank, a receptacle at a higher level having a liquid supply connection from said low level tank, and a discharge connection adapted for supplying liquid by gravity, said receptacle comprising a chamber which is closed except as to the connections mentioned and the atmosphere inlet and suction port hereinafter mentioned; said chamber having a valve-controlled atmosphere inlet and a continuously open suction port, the atmosphere inlet being relatively large and the suction port being relatively small; a float in said chamber operatively connected with the atmosphere inlet valve for opening the latter when the float rises.

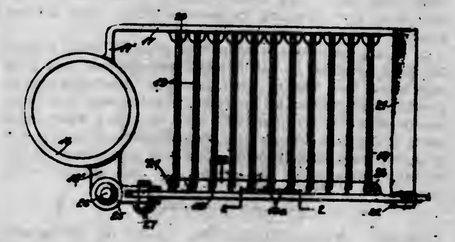
2. In a fuel supply apparatus for internal combustion engines, in combination with a low level supply tank, a receptacle at a higher level having a liquid supply connection from said low level tank, and a discharge connection adapted for supplying liquid by gravity, said receptacle comprising a chamber which is closed except as to the connections mentioned, and the atmosphere inlet and suction port hereinafter mentioned, said chamber having a valve-controlled atmosphere inlet and a continuously-open suction port, the atmosphere inlet being relatively large and the suction port being relatively small; a float in said chamber operatively connected with the atmosphere inlet valve for opening the latter when the float rises, the connection between the float and the valve being such as to allow a wide range of movement of the float relatively to the valve.

1,153,090. STRAINER. CHARLES J. MCCARTHY, Waterbury, Conn. Filed Aug. 26, 1914. Serial No. 858,672. (Cl. 210—16.)



A strainer comprising a cup-shaped body provided in its bottom at one side of the center thereof with an opening, a screen located in the body and parallel with the edge thereof and positioned between the edge of the body and the said opening therein, and a weight mounted at the exterior of the body in the vicinity of the edge thereof and positioned at the opposite side of the center of the body from that side at which the said opening is located.

1,153,091. HOSE-RACK. WILLIAM MCCLINTOCK, New York, N. Y. Filed Aug. 29, 1914. Serial No. 859,198. (Cl. 137—81.)



1. The herein described hose rack comprising, in combination, a pair of arms arranged in the same horizontal plane, means connecting said arms at one end whereby the opposite ends are adapted to move relatively from each other, means rigidly connected to the free end of one arm and extending thence into interlocking engagement with the free end of the other arm to normally prevent such relative movement, and a series of relatively movable supporting members for the individual hose loops extending between said arms, the construction and arrangement being such that the hose may be removed from said series of supporting members loop by loop, the arms remaining parallel to each other, or the hose will instantly drop automatically in a single mass as a result of the relative movement of the arms as aforesaid.

2. In a hose rack, the combination of a pair of rigid arms arranged normally in the same plane, pivotal connections for the rear ends of the arms adapting one to be moved upwardly from said plane and thence outwardly, a member permanently connected to and extending from the end of one of the arms into holding engagement with the free end of the other arm whereby the relative movement aforesaid is prevented, and a series of supporting members extending normally between the arms for holding the individual loops of the hose.

3. In a hose-rack, the combination of a pair of rigid arms arranged normally in the same horizontal plane, an arch rigidly connected to the end of one of the arms and extending thence upwardly and laterally to the vertical plane of the other arm and thence bent downwardly and terminating in engagement means for the other arm, the space between the arms and below the arch being unobstructed, pivotal supporting means for the rear end of the arm last referred to adapting it to be lifted out of engagement with the arch structure, and a series of sup-

porting members extending normally between the arms, substantially as set forth.

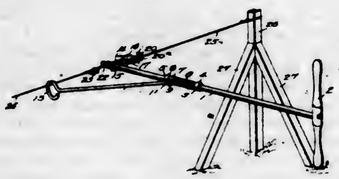
1,153,092. GLAZIER'S TOOL. FRANK W. MCDERMOTT, Rawlins, Wyo. Filed Sept. 4, 1914. Serial No. 860,270. (Cl. 33—27.)



1. In a glass cutter, a support having a friction pad upon its bottom, a pressure head, a bearing head rotatable within and between said support and pressure head, said bearing head having a transverse slot of gradually decreasing height from its outer ends to a point intermediate the width of said head to form a knife edged fulcrumed point directly in alinement with the longitudinal center of said base and bearing head, a sweep arm fulcrumed upon said edges and longitudinally removable through said slot, and clamping means carried by said bearing head.

2. In a glass cutter, a support, a pressure head, a bearing head rotatable in and between said support and pressure head, said bearing head having a transverse slot of gradually decreasing height from its outer ends to a point intermediate the width of said head to form a knife edged fulcrumed point, a sweep arm disposed between said points to permit vertical movement of its ends and means carried by said bearing head for locking said arm against movement.

1,153,093. WIRE-STRETCHER. JOHN L. MCFADDEN, Ness City, Kans. Filed Mar. 6, 1915. Serial No. 12,545. (Cl. 254—161.)



1. A wire stretcher, comprising a shaft provided at one end with a transverse handle and at the other with a transverse kerf or recess, a plate having a longitudinal slot through which the shaft is adapted to extend, a wire clamp or tie connected with one end of the plate, a cable adapted to wind on the shaft on the opposite side of the plate from the handle, an eye bolt having at the end remote from the eye a head and adapted to engage the recess or kerf with the head at one side of the shaft and the eye at the other, the cable being connected with the eye, said cable having a wire tie at the outerend thereof, and means in connection with the shaft for preventing reverse rotation of the shaft and for permitting free forward rotation thereof, said means having anchoring means for engaging the wire to be stretched, and comprising a pair of collars arranged on the shaft and having at their adjacent ends intermeshing and coöperating ratchet teeth, one of the collars being adjustable on the shaft and having means for fixing the same in adjusted position, the other collar being rotatable on the shaft and having the anchoring means, a spring normally pressing the last-named collar toward the first-named collar, and means for varying the tension of the spring, said anchoring means comprising an arm pivoted to the collar and having a hook at its free end for engaging the wire.

2. A wire stretcher, comprising a shaft provided at one end with a transverse handle and at the other with a transverse kerf or recess, a plate having a longitudinal slot through which the shaft is adapted to extend, a wire clamp or tie connected with one end of the plate, a cable adapted to wind on the shaft on the opposite side of the plate from the handle, an eye bolt having at the end remote from the eye a head and adapted to engage the recess or kerf with the head at one side of the shaft and the eye at the other, the cable being connected with the eye, said cable having a wire tie at the outer end thereof, and means in connection with the shaft for preventing reverse rotation of the shaft and for permitting free forward rotation thereof, said means having anchoring means for engaging the wire to be stretched, and comprising a pair of collars arranged on the shaft and having at their adjacent ends intermeshing and coöperating ratchet teeth, one of the collars being adjustable on the shaft and having means for fixing the same in adjusted position, the other collar being rotatable on the shaft and having the anchoring means, a spring normally pressing the last-named collar toward the first-named collar, and means for varying the tension of the spring.

3. A wire stretcher, comprising a shaft provided at one end with a transverse handle and at the other with a transverse kerf or recess, a plate having a longitudinal slot through which the shaft is adapted to extend, a wire clamp or tie connected with one end of the plate, a cable adapted to wind on the shaft on the opposite side of the plate from the handle, an eye bolt having at the end remote from the eye a head and adapted to engage the recess or kerf with the head at one side of the shaft and the eye at the other, the cable being connected with the eye, said cable having a wire tie at the outer end thereof, and means in connection with the shaft for preventing reverse rotation of the shaft and for permitting free forward rotation thereof, said means having anchoring means for engaging the wire to be stretched.

4. A wire stretcher, comprising a shaft having at one end a handle, a plate having an opening to which the shaft is adapted to extend and provided with means for connecting the plate to the wire to be stretched or to an anchor, a cable adapted to wind on the shaft adjacent to the plate and having means at one end for engaging a wire or anchor, said cable and shaft having interengaging means for holding the said end of the cable, the shaft being adapted to be rotated to wind up the cable, and means for preventing reverse rotation of the shaft, said means having anchoring means for anchoring the same to prevent movement with the shaft.

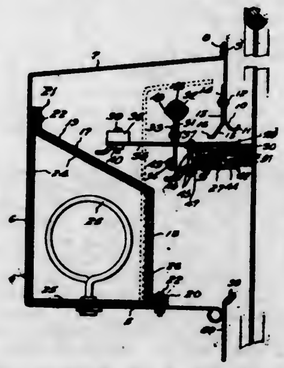
5. A wire stretcher, comprising a shaft adapted to be rotated, a cable winding on the shaft at one end and having means at the other for engaging a wire or a fixed support, a plate having an opening for receiving the shaft, and adapted for connection with the wire or a fixed support, and releasable means on the shaft for preventing reverse rotation thereof, said means having an anchor for engaging the wire to be stretched to prevent movement of the same with the shaft.

1,153,094. IDENTIFICATION-TAG HOLDER. JAMES MCGINTY, Chicago, Ill. Filed May 6, 1913. Serial No. 765,893. (Cl. 40—10.)

The herein described identification tag holder comprising a flat member having an outstruck portion spaced from three of its edges and extending to its fourth edge, a main member secured to said flat member on the side opposite the offset thereof, coacting with said offset to form a pocket and extending beyond said fourth edge of the flat member, a flap arranged beyond said fourth edge of the flat member and to bear against the offset portion thereof and also to bear against the said extended portion of the main member, said flap and main member having openings in the corners farthest removed from the flat member and eyelets in said openings.



1,153,095. CAR-WINDOW CLEANER. EUGENE J. MARTIN, Washington, D. C., assignor of one-fifth to Robert W. Thompson, Washington, D. C. Filed Oct. 16, 1914. Serial No. 866,979. (Cl. 15—59.)



1. A car window cleaner including a housing, a heating chamber within the housing, a rubber pivoted within the housing, said rubber being arranged to swing outwardly to engage the car window on which the device is used, and means to close the opening through which the rubber swings when the device is in its inoperative position.

2. A car window cleaner including a housing, a heating chamber within the housing, a heating coil within the heating chamber, a rubber pivoted within the housing, said rubber extending outwardly and into engagement with the glass of a car window, said rubber being arranged to be swung inwardly when the device is not in use, and means to automatically close the opening through which the rubber extends when the device is in its inoperative position.

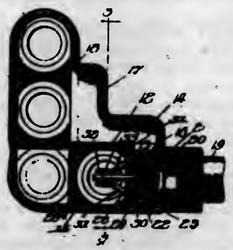
3. A car window cleaner including a housing, guides supporting the housing, said housing being slidable in the guides and having an opening in its rear wall, a rubber pivoted within the housing, the rubber being arranged to project through the opening to engage the car window on which the device is used, means to swing the rubber inwardly when the device is lowered and out of operation, and means to close the opening when the device is in the aforesaid position.

4. A car window cleaner including a slidable housing, guides supporting the housing, the housing being provided with an opening in its rear wall, a rubber pivoted within the housing, said rubber being arranged to extend outwardly into engagement with a car window when the device is in use, means to swing said rubber inwardly when the device is not in use, and a closure to close the opening in the rear wall of the housing when the device is in its inoperative position.

5. A car window cleaner including a vertically slidable housing, guides supporting said housing, a heating chamber within the housing, the rear wall of the housing being provided with an opening, a rubber pivoted within the housing, said rubber being arranged to extend through the opening in the rear wall of the housing and into engagement with a car window when the device is in place, means carried by the guides to cause the rubber to swing inwardly, means to close the opening in the housing to prevent the escape of heat therefrom when the device is in its inoperative position, and cables within the guides to control the operation of the housing.

[Claims 6 to 8 not printed in the Gazette.]

1,153,096. HEATING APPLIANCE. JOSEPH T. MERCIER, Chicago, Ill., assignor of one-half to William S. McClave, Chicago, Ill. Filed May 5, 1913. Serial No. 765,593. Renewed July 23, 1915. Serial No. 41,618. (Cl. 237—72.)



1. In a heating appliance, the combination of means affording a steam chamber and a water of condensation chamber, a main steam supply pipe communicating with the steam chamber, a series of pipes having one end thereof communicating with the steam chamber and the other end communicating with the condensation chamber, and means actuated by differences in pressure within the steam chamber and condensation chamber for simultaneously establishing communication between said chambers and cutting off communication between the supply pipe and steam chamber when moved into one position, and for simultaneously cutting off communication between said chambers and establishing communication between the supply pipe and steam chamber when moved to another position, substantially as described.

2. In a heating appliance, the combination of means affording a steam chamber and water of condensation chamber, a main steam supply pipe communicating with the steam chamber, a series of pipes having one end thereof communicating with the steam chamber and the other end communicating with the condensation chamber, a shiftable member actuated by differences in pressure within the steam chamber and condensation chamber for simultaneously establishing communication between said chambers and cutting off communication between the supply pipe and steam chamber when moved into one position, and for simultaneously cutting off communication between said chambers and establishing communication between the supply pipe and steam chamber when moved into another position, substantially as described.

3. In a heating appliance, the combination of a single casing having a steam chamber and a water of condensation chamber therein, a main steam supply pipe communicating with the steam chamber, a series of pipes, the lowermost pipe thereof communicating with the water of condensation chamber, the remainder of the pipes communicating at one end with the steam chamber and at

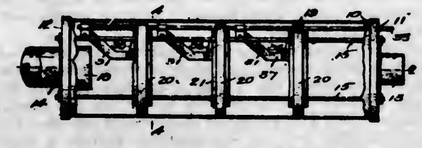
their other end with the lowermost pipe, means actuated by differences in pressure within the steam chamber and condensation chamber for simultaneously establishing communication between the said chambers and cutting off communication between the steam chamber and supply pipe when moved into one position, and for simultaneously cutting off communication between the steam chamber and water of condensation chamber and establishing communication between the supply pipe and steam chamber when moved into another position, substantially as described.

4. In a heating appliance, the combination of a single casing having a steam chamber and a water of condensation chamber therein, a main steam supply pipe communicating with the steam chamber, a series of pipes, the lowermost pipe communicating with the water of condensation chamber, the remainder of the pipes communicating at one end with the steam chamber and at their other end with the lowermost pipe and a shiftable member actuated by differences in pressure within the steam chamber and condensation chamber for simultaneously establishing communication between said chambers and cutting off communication between the supply pipe and steam chamber when moved into one position and for simultaneously cutting off communication between the steam chamber and water of condensation chamber and establishing communication between the supply pipe and steam chamber when moved into another position, substantially as described.

5. In a heating appliance, the combination of means affording a steam chamber and a water of condensation chamber, a main steam supply pipe communicating with the steam chamber, a series of pipes having one end thereof communicating with the steam chamber and the other end communicating with the water of condensation chamber, a shiftable member actuated by differences in pressure within the steam chamber and condensation chamber for simultaneously establishing communication between the said chambers and cutting off communication between the supply pipe and steam chamber when moved into one position, and for simultaneously cutting off communication between said chambers and establishing communication between the supply pipe and steam chamber when moved into another position, and said shiftable member presenting a greater exposed area toward the water of condensation chamber than toward the steam chamber, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,153,097. MUFFLER. CARMI A. MILLER, Spring Valley, Ill., assignor of one-half to John Fenton Miller, Spring Valley, Ill. Filed May 24, 1915. Serial No. 29,991. (Cl. 121—116.)



1. A muffler comprising a series of baffle plates arranged in groups, each group consisting of a central plate having an opening therein and another plate of smaller area arranged on each side of said central plate.

2. A muffler comprising a series of baffle plates arranged in groups, each group consisting of a central plate having a central opening therein, and another plate of smaller area arranged concentrically on each side of said central plate.

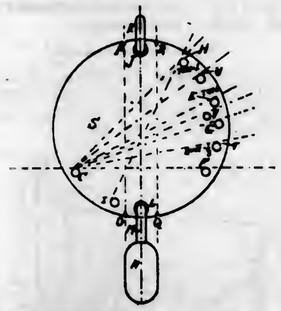
3. A muffler comprising a series of baffle plates arranged in groups, each group consisting of a pivoted central plate having an opening therein, another plate of smaller area arranged on each side of said central plate, and means for securing said plates together.

4. A muffler comprising a casing, a plurality of rings mounted in said casing, a central baffle plate swiveled in each ring and having an opening therein, and another baffle plate of smaller area than said central plate arranged on each side thereof and spaced therefrom.

5. A muffler comprising a cylindrical casing having an inlet and outlet therefor, a baffle ring mounted adjacent said outlet and in alinement with said inlet, a plurality of spaced rings mounted in said casings, a central baffle plate swiveled in each of said rings and having an opening therein, another baffle plate of smaller area than said central plate arranged on each side thereof and concentrically therewith, means for connecting said baffle plates in spaced relation, an operating rod extending longitudinally of said casing, and a lever pivoted to said rod and one of the last-named baffle plates of each series whereby said baffle plates may be swung about their pivots.

[Claims 6 to 12 not printed in the Gazette.]

1,153,098. APPLIANCE FOR MEASURING AND COMPUTING HEIGHTS AND DISTANCES. ROBERT B. MILLER, Toledo, Ohio. Filed July 17, 1913. Serial No. 779,550. (Cl. 33—70.)



1. In a surveying instrument, a plate or disk, means for pivotally suspending said plate or disk at a point above its center of gravity, an observation member carried by the plate or disk on one side of the vertical line through the pivotal suspension point and the center of gravity, a plurality of observation members on the opposite side of said vertical line, one of said last named observation members being in horizontal alinement with the first mentioned observation member when the plate is at rest, and the other observation members being in the same vertical plane with the horizontally alined observation members, and being located at different vertical distances above said horizontally alined members.

2. In a surveying instrument, a plate or disk, means for pivotally suspending the plate or disk at a point above its center of gravity, an observation point carried by said plate on one side of the vertical line through the center of gravity and the point of suspension, a second observation point on the opposite side of the vertical line, said second observation point or member being in horizontal alinement with said first named observation point or member, and a plurality of observation points or members disposed above said second named observation point or member at various angular distances from a base line between the first mentioned and the second mentioned observation points or members, where the first mentioned observation point is taken as the vertex of the angle.

3. In a surveying instrument, a plate or disk, means for pivotally suspending the plate or disk at a point above its center of gravity, an observation member or point carried by said plate on one side of the vertical line through the center of gravity and the point of suspension, a second observation point on the opposite side of the vertical line, said second observation point or member being in horizontal alinement with said first named observation point or member, and a plurality of observation points or members disposed above said second named observation point or member at various angular distances from a base line between the first mentioned and the second mentioned observation points or members, where the first mentioned observation point is taken as the vertex of the angle, and a weight suspended from the bottom of said disk or plate.

4. In a surveying instrument, a plate or disk, a handle for said plate pivotally secured to the plate above the center of gravity, a weight pivotally secured to the plate below the center of gravity, a main observation point on one side of the vertical line between the center of gravity and the point of support, and a plurality of observation points on the opposite side of the vertical line, said last mentioned points being disposed at predetermined vertical distances above said first mentioned points.

1,153,099. BRIDGE. THOMAS J. MOORE and WILLIAM V. MOORE, Sandusky, Mich. Filed Jan. 13, 1915. Serial No. 2,041. (Cl. 14—3.)



1. In a bridge, stringers, truss rods, shafts for anchoring the ends of the truss rods to the stringers, floor beams supported by the stringers, truss beams resting on the truss rods and engaging the stringers, corrugated plates between and supported by the floor beams, a roadbed supported by the plates and floor beams, channel irons embracing the ends of the floor beams and the roadbed, and means for holding the channel irons on the floor beams.

2. In a bridge, stringers, means for supporting the stringers, shafts, means for anchoring the shafts at the ends of the stringers, truss rods connected to the said shafts, truss beams supported by the truss rods, means for clamping the truss beams to the stringers, floor beams supported by the stringers, plates between and supported by the floor beams, channel irons connected to the ends of floor beams, a roadbed supported by the floor beams, standards having extensions anchored to the stringers, and a guard frame secured to the said standards.

3. In a bridge, stringers having truss rod anchoring means at the ends, truss rods extending therefrom, truss beams held against the under surface of the stringers by the said truss rods, floor beams carried by the stringers, channel irons at the ends of the floor beams and extending thereabove, means for securing the channel irons to the floor beams, and metal sheets interposed between the floor beams and forming with the floor beams supports for the roadbed.

4. In a bridge, stringers, truss rods, shafts to which the truss rods are connected, means for anchoring the shafts to the ends of the stringers, and shaft-supporting bars comprising members having angular portions resting on the floor beams, said supporting bars being of curved formation extending under the shafts to produce a bearing therefor.

5. In a bridge, stringers, truss rods, means on the ends of the stringers for anchoring the truss rods thereto, truss beams interposed between the truss rods and the stringers, floor beams supported by the stringers, channel irons having apertures therein, means attached to the floor beams and engaging the channel irons for holding said channel irons on the ends of the floor beams, and metal plates interposed between the floor beams and constituting with said floor beams supports for the roadbed.

[Claim 6 not printed in the Gazette.]

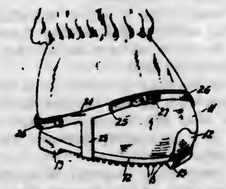
1,153,100. BUCKLE. HUGO MORTARA, Chicago, Ill., assignor to Kabo Corset Co., Chicago, Ill., a Corporation of West Virginia. Filed Sept. 14, 1914. Serial No. 861,611. (Cl. 24—191.)

A buckle comprising a frame formed of a single piece of metal, said frame being composed of an upper bar, and lower inturned ends joined together by side bars, said side bars being off-set with respect to the remainder of the frame, a back secured to said frame, said back being formed of a blank configured to provide oppositely extending tongues and oppositely disposed ears arranged at right angles to the tongues, said ears being secured to the side bars of said frame, a lever member hinged to the lower inturned ends of the frame, the lower of said



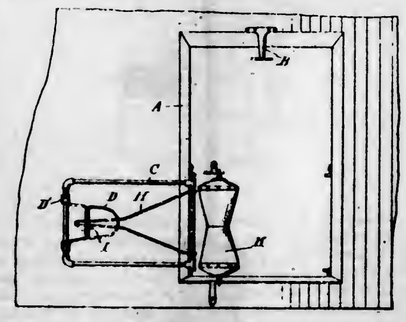
tongues forming a backing surface against which the lever acts, the upper of said tongues being bent into U-shaped formation with the open end thereof upward, and serving as a retainer for one end of a webbing, substantially as described.

1,153,101. HORSESHOE-ATTACHMENT-SECURING MEANS. FERDINAND MÜHLBACH, New York, N. Y. Filed Feb. 26, 1915. Serial No. 10,745. (Cl. 168—22.)



In a device of the character described, angular braces each having a thin, integral, substantially T-shaped upper part disposed centrally against the exterior of a horse's hoof the top-bar of said T-shaped bar being oblique, ears formed at each end of said top-bar and a pair of straps provided with buckles for securing said braces to the horse's hoof, said strap extending obliquely from the bottom of the heel over the toe of the hoof.

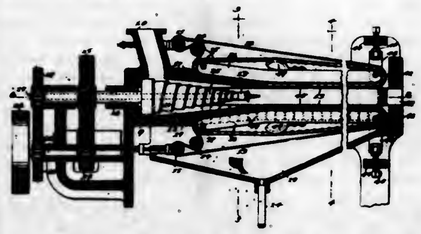
1,153,102. MAIL DELIVERING AND CATCHING DEVICE. AUGUSTUS W. MUTH, Sparks, Ga. Filed Mar. 27, 1915. Serial No. 17,438. (Cl. 258—22.)



A mail delivery and catching apparatus, comprising a skeleton frame, a rod bent at its longitudinal center and having the opposite portions twisted together at right angles to the length of the rod and the ends thereof bent

to form coils engaging the cross-piece at the free swinging end of the frame, a second rod engaging the pivotal end of the frame and bent upon itself at its longitudinal center forming a hook and adapted to engage said twisted part of the resilient rod to hold the same in position to catch the mail bag.

1,153,103. COTTON-SEED PRESS. WILLIAM MCCORMICK NEALE, Greenville, S. C. Filed Sept. 3, 1914. Serial No. 859,990. (Cl. 100—48.)



1. A press, comprising a barrel, a radially adjustable wall on each side of the interior thereof, a worm therein, a fluted head therein, and means for actuating said worm and head.

2. A press, comprising a barrel, a radially adjustable wall on each side of the interior thereof, a worm therein, a fluted head therein, and means for actuating said worm and head in reverse directions.

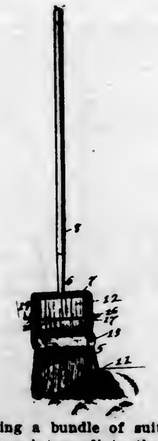
3. A press, comprising a barrel, a radially adjustable wall on opposite sides of the interior thereof, and a porous covering for each of said walls and movable with the material being pressed.

4. A press, comprising a barrel, a radially adjustable wall on opposite sides of the interior thereof, an endless chain movable over the interior surface of each wall, and a fabric belt interposed between each chain and the material being pressed.

5. A press, comprising a barrel, a radially adjustable wall on opposite sides of the interior thereof, an endless chain movable over the interior surface of each wall, a fabric belt interposed between each chain and the material being pressed, and means for varying the tension of said belts.

[Claims 6 and 7 not printed in the Gazette.]

1,153,104. BROOM. WARREN PARKER NEWELL, Horton, Kans. Filed May 14, 1915. Serial No. 28,018. (Cl. 15—19.)



A broom, comprising a bundle of suitable material, a band around the same intermediate the ends thereof, a yoke having two arms in pivotal connection with opposite sides of said band, a hook secured to each arm, and a rod in pivotal connection with each arm and engaged by the hook of the other arm.

1,153,105. PENCIL-HOLDER. WILLIAM V. O'CONNOR, Grand Forks, N. D. Filed May 5, 1915. Serial No. 26,134. (Cl. 24—10.)



1. A protective pocket for pointed instruments having a lining of elastic material, an outer facing of thin resilient material, a compressible band surrounding the mouth of the pocket, a holder strap connected with the facing, and means for adjusting the said holder strap.

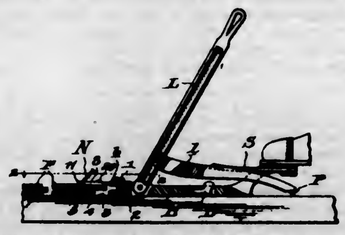
2. A protective pocket for pointed instruments having a lining of elastic material, an outer facing of thin resilient material, a compressible band surrounding the mouth of the pocket, a holder strap for the pocket, said holder strap comprising two members, one of which being longitudinally movable upon the other member, and means for securing the movable member to the stationary member.

3. A protective pocket for pointed instruments including an inner lining of elastic material, an outer facing of resilient material, said inner lining having spaced teats integrally formed therewith, the bottom row of teats being of the greatest length, and the said rows of teats diminishing in length from the lower rows thereof to the upper rows arranged adjacent the month of the body.

4. A protective pocket for pointed instruments including an inner lining of elastic material, an outer facing of resilient material, said inner lining having spaced teats integrally formed therewith, the bottom row of teats being of the greatest length, the said rows of teats diminishing in length from the lower rows thereof to the upper rows arranged adjacent the mouth of the body, and each of said teats having its end formed with a depression.

5. A protective pocket for yieldably sustaining pointed instruments having an inner lining of elastic material and an outer facing of comparatively thin resilient material, spaced teats upon the inner face of the lining, and each of said teats having its end formed with a depression.

1,153,106. FLOORING-TOOL. ULRICH OHLSEN, Denver, Colo., assignor of one-half to Martin Mortensen, Denver, Colo. Filed Jan. 25, 1915. Serial No. 4,266. (Cl. 254—16.)



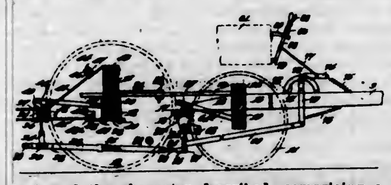
A tool comprising a head including a jaw plate having an active front edge designed to abut a board, a pair of lugs projecting from one face of said plate and disposed near the rear edge thereof, an additional jaw plate contiguous to said one face of the other plate and having portions bearing against the front sides of the lugs thereon, and an additional lug on the additional plate and projecting between the other lugs, combined with means to move the two plates toward and away from each other, and additional means for projecting the head.

1,153,107. STUD-BASE FOR GARMENT-SUPPORTERS. BENJAMIN F. ORNWILER, Chicago, Ill. Filed Nov. 12, 1914. Serial No. 871,709. (Cl. 24—245.)



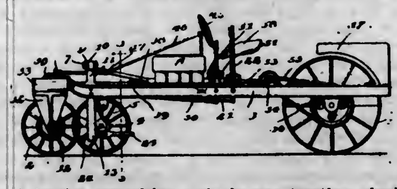
A device of the class described, comprising a base formed of a single piece of metal and consisting of oppositely disposed tape receiving portions connected by a relatively narrow web, arms extending upwardly from opposite sides of said web and spaced apart a distance at their lower ends approximately equal to the width of the web, said arms extending in converging relation to one another to a point adjacent the upper ends thereof to produce a portion of the inverted V-shaped formation and bent outwardly from the upper terminus of said inverted V-shaped portion to provide a head, a compressible button inserted over said arms, said button having an axial bore therethrough, the walls of said bore being spaced away from the side faces of the arms to allow a free compression of the button, and said head serving to hold the button in position, substantially as described.

1,153,108. SCRAPER FOR VEHICLE-WHEELS. WILLIAM T. SHERMAN PATE, Bloomington, Ind., assignor of one-half to Henry P. Splitsgerber, Bloomington, Ind. Filed Nov. 9, 1912. Serial No. 730,399. Renewed Apr. 6, 1915. Serial No. 19,567. (Cl. 21—23.)



A device of the character described, comprising a vehicle provided with wheels, scraper blades movable relatively to said wheels, rocking shafts connected with said scraper blades, a hand lever, a link connected therewith, a second lever connected with said link, connections from said second lever to said rocking shafts, and a pair of tensile springs connected with said second mentioned lever for holding the same in a predetermined normal position.

1,153,109. TRACTOR. CHARLES O. PAUL, Kent, Wash. Filed July 3, 1914. Serial No. 848,927. (Cl. 21—114.)



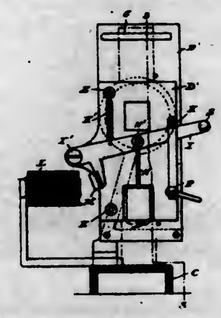
1. A tractor comprising a single rear traction wheel, a single front traction and steering wheel in line with said rear wheel, a machine frame embodying parallel side bars arranged in close proximity to the plane of movement of said wheels and at opposite sides thereof, steering and motor driving mechanism for said wheels, a side stabilising wheel located outside of said frame, a laterally extending yoke having a universal joint connected with the machine frame and terminally supported by said stabilising wheel, and a brace interposed between said yoke and the machine frame.

2. A tractor comprising a single rear traction wheel, a single front traction and steering wheel in line with said rear wheel, a machine frame embodying parallel side bars arranged in close proximity to the plane of movement of said wheels and at opposite sides thereof, steering and motor driving mechanism for said wheels, a side stabilising wheel located outside of said frame, a laterally extending yoke having a universal joint connected with the machine frame and terminally supported by said stabilising wheel, and a brace interposed between said yoke and the machine frame, said yoke being reversible by means of said universal joint so that it may be disposed at either side of the machine frame.

3. A tractor comprising a single rear traction wheel, a single front traction and steering wheel in line with said rear wheel, a machine frame embodying parallel side bars arranged in close proximity to the plane of movement of said wheels and at opposite sides thereof, steering and motor driving mechanism for said wheels, a side stabilising wheel located outside of said frame, a laterally extending yoke having a universal joint connected with the machine frame and terminally supported by said stabilising wheel, a brace interposed between said yoke and the machine frame, and means under control of the operator on the machine for adjusting one end of said brace to change the angle of the latter.

4. A tractor comprising a single rear traction wheel, a single front traction and steering wheel in line with said rear wheel, a machine frame embodying parallel side bars arranged in close proximity to the plane of movement of said wheels and at opposite sides thereof, steering and motor driving mechanism for said wheels, a side stabilising wheel located outside of said frame, a vertically arranged guide extending downwardly below the machine frame in rear of said front wheel, a clevis slidable up and down on said guide, and means under the control of the driver for raising and lowering said clevis.

1,153,110. VIEW-CHANGING DEVICE. CHARLES FRANCIS JENKINS, Washington, D. C. Filed Dec. 12, 1913. Serial No. 806,167. (Cl. 88—28.)

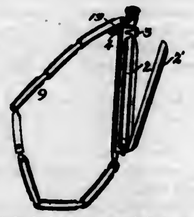


1. The combination with projecting apparatus provided with means for guiding a film strip across the path of a projecting beam, of a film strip guided by said means and bearing a succession of regularly spaced pictures of different subjects, and means whereby a suitable movement of an operator may cause the strip to advance longitudinally approximately a picture's width only for each such movement, and a manually adjustable stop for arresting each film step at the proper point for adjusting the length of the advancing steps.

2. The combination with means for throwing a picture projecting beam upon a screen, of an apertured plate in the path of the beam, a second plate for yieldingly pressing loose film over the aperture in the first plate, a swinging lever, a film-engaging fork carried by the lever, a spring for yieldingly holding the fork in engagement, an electromagnet arranged to swing the fork in film feeding direction, a spring resisting the movement of the lever, and a distant device controlling the circuit of the electromagnet.

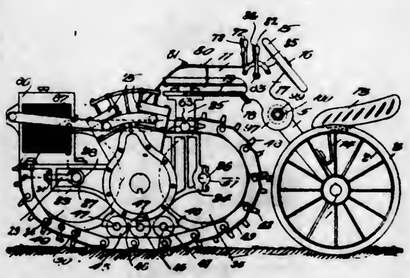
3. The combination with means for projecting a light beam upon a screen, of a fixed interposed plate having an aperture in the path of the beam, a second plate for yieldingly pressing a picture bearing film over said aperture and itself provided with fork guiding slots, a film engaging fork guided by said slots, devices for advancing the fork by single steps, automatic means for retracting the fork, and distant manually operable means for at will causing a single step of the fork.

1,153,111. WRIST-WATCH HOLDER. ADISON J. JOHNSON and ROBERT L. SKINNER, Bethany, Mo. Filed May 1, 1915. Serial No. 25,220. (Cl. 224—4.)



A bracelet watch holder comprising a continuous ring shaped to fit a watch case, clasping means for holding the post of the watch case including a clasp member mounted to swing in a plane at right angles to the plane of the ring, and a member diametrically opposite from said clasping means and rigid with the ring for holding the watch in place on the ring, said last mentioned member being integral with the ring and having a recess therein for receiving the hinge of the watch.

1,153,112. TRACTION-ENGINE. ALFRED C. JOHNSON, Winters, Cal. Filed July 15, 1914. Serial No. 851,065. (Cl. 21—114.)



1. A traction engine comprising a rear axle, wheels journaled on the axle, a column connected with the center of the axle, the axle being adjustable with respect to the column to vary the inclination thereof, said column extending upwardly and forwardly, a main frame adjustably connected with the column and extending forwardly therefrom, a tractor frame pivoted to the front end of the main frame for turning movement on a vertical axis, means on the main frame and engaging the tractor frame for turning the same, said frame having pairs of forward and rearward extensions, an axle supported in each pair of extensions, a wheel journaled on each axle, the front wheel being a sprocket wheel, the front axle being adjustable toward and from the rear axle, an endless chain supported by the wheels, a truck housing at the lower part of the tractor frame between the wheels, truck wheels journaled in the housing and engaging the upper edges of the links of the chain, a motor supported by the tractor frame, a crank shaft between the axles, and connected to the motor, and a reversible driving connection between the crank shaft and the front tractor wheel.

2. A traction engine comprising a rear axle, wheels journaled on the axle, a column connected to the center of the axle, the axle being adjustable with respect to the column to vary the inclination thereof, said column extending forwardly and upwardly, a main frame adjustably connected with the column, a tractor frame pivoted to the front end of the main frame for turning movement on a vertical axis, means on the main frame for engaging and turning the tractor frame, driving wheels journaled on the tractor frame, and a motor connected with the driving wheels for driving the same, said wheels carrying an endless track, and truck wheels supporting the tractor frame and engaging the track.

3. A traction engine comprising a rear axle, wheels journaled on the axle, a column connected to the center of the axle, the axle being adjustable with respect to the column to vary the inclination thereof, said column extending forwardly and upwardly, a main frame adjustably connected with the column, a tractor frame pivoted to the front end of the main frame for turning movement on a vertical axis, means on the main frame for engaging and turning the tractor frame, driving wheels journaled on the tractor frame, and a motor connected with the driving wheels for driving the same.

4. A traction engine comprising a rear axle, a column connected with the center of the axle, a main frame adjustably connected with the column, a tractor frame pivoted to the main frame for turning movement on a vertical axis, means on the main frame and engaging the tractor frame for turning the same to guide the engine, the connection between the column and the main frame comprising a pair of circular heads each having radial teeth on its inner face, and the heads having a registering central opening, a bolt passing through the openings, and a nut engaging the bolt.

5. A traction engine comprising a rear axle, a column connected with the center of the axle, a main frame adjustably connected with the column, a tractor frame pivoted to the main frame for turning movement on a vertical axis, and means on the main frame and engaging the tractor frame for turning the same to guide the engine.

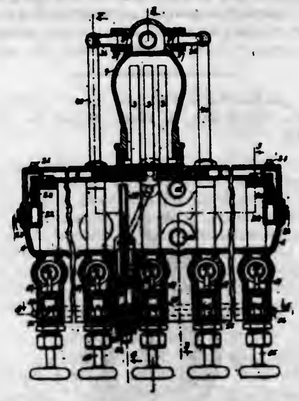
[Claims 6 to 8 not printed in the Gazette.]

1,153,113. SIGHT-FEED LUBRICATOR FOR LOCOMOTIVES. LEOPOLD KASSANDER, New York, N. Y., assignor to The Nathan Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Dec. 24, 1913. Serial No. 808,573. (Cl. 184—50.)

1. In a multiple feed lubricator, the combination with a lubricant reservoir, of a plurality of lubricant-conducting conduits, a common outlet from the reservoir to the various conduits, means for controlling the passage of lubricant through the common outlet to the different conduits, and another conduit that receives lubricant through said common outlet and being disposed out of the range of action and being independent of said controlling means.

2. In a multiple feed lubricator, the combination with an oil reservoir, of a plurality of conduits, means for delivering oil to the various conduits, including a passage common to the said conduits, a valve controlling said supply from the reservoir to the common passage, and another oil conduit supplied from the reservoir independently of the said common passage and being out of the range of action of the valve and independent of control by said valve.

3. In a multiple feed lubricator, the combination with an oil reservoir, of a plurality of conduits, means for delivering oil to the various conduits, including a passage common to said conduits and a supply passage from the reservoir to the common passage, a valve controlling the communication between the supply passage and the common passage, and another conduit having communication with the supply passage between the valve and the reservoir and being independent of control by said valve.

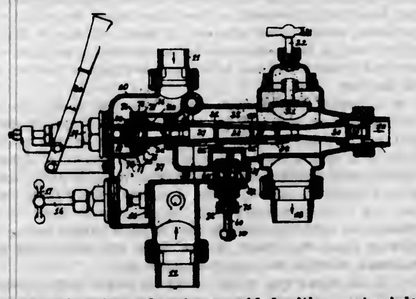


4. In a sight feed lubricator for locomotive engines, the combination with the usual oil reservoir, steam and oil delivery connections and pressure equalising features, of a single oil tube, supplying oil to all oil feed conduits, and means to cut off all conduits except the one leading to the air pump feed, said latter conduit remaining open permanently and being out of the range of action of the cutting-off means independent of said cutting off means for the conduits leading to all other feeds.

5. In a sight feed lubricator for locomotive engines, the combination with a single oil tube and oil chambers located below the oil tube, and including a chamber for supplying the air pump, of an oil conduit, supplying oil to all feed chambers except the air pump feed through channels at substantially right angles to this main conduit, and a valve controlling the admission of oil to the main conduit, said air pump feed being out of the range of action of the valve and independent of the control by said valve.

[Claims 6 to 10 not printed in the Gazette.]

1,153,114. INJECTOR. LEOPOLD KASSANDER and HARRY L. LEVERETT, New York, N. Y., assignors to Nathan Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Apr. 21, 1914. Serial No. 833,402. (Cl. 162—1.)



1. In an injector, a housing provided with a water inlet port and a water outlet port, a casing adapted to be received within the housing, a valve adapted to be moved to one of two positions within the housing, and means within the casing adapted to be moved against the valve to positively bring it to one of two such positions.

2. In an injector, an auxiliary water supply chamber comprising a housing provided with two partitions each provided with an aperture constituting an inlet and an outlet port, a valve adapted to be moved to and fro with respect to such apertures, and means for guiding the valve in such movement.

3. In an injector, an auxiliary water inlet device comprising a housing provided with two partitions each provided with an aperture, a valve adapted to be moved to and fro with respect to such apertures and means for guiding the valve in such movement comprising a valve stem provided with ribs and recesses formed in one partition adapted to be engaged thereby.

4. In an injector, an auxiliary water inlet device comprising a housing provided with two partitions each provided with an aperture, a valve adapted to be moved to and fro with respect to such apertures, in combination with means for moving the valve in one direction comprising a head inclosed by the valve and a stem secured thereto and adapted to be longitudinally moved by rotation.

5. In an injector, an auxiliary water inlet device comprising a housing provided with two partitions each provided with an aperture, a valve adapted to be moved to and fro with respect to such apertures, in combination with means for moving the valve in one direction comprising a head inclosed by the valve and a stem secured thereto and threaded into the housing and a device for turning it.

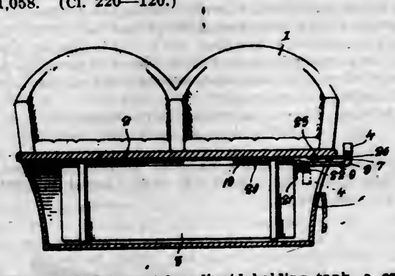
[Claims 6 to 10 not printed in the Gazette.]

1,153,115. LEAD-PENCIL. CHARLES R. KEHRAN, Bloomington, Ill. Filed Oct. 6, 1913. Serial No. 793,688. (Cl. 120—19.)



A pencil comprising a body portion of fibrous material, said body having a bore therethrough, said bore being contracted at the outer end thereof to a size to give a tight fit of the lead therein and being of a size throughout the remainder to permit of a sliding fit of the lead therein, said contracted portion serving as a clutch to maintain the lead in position, a metallic casing surrounding the body portion and terminating short of the end of the body portion, and means for forcing the lead outward through the bore in said body portion, substantially as described.

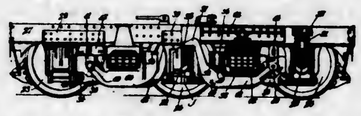
1,153,116. TANK-FILLING DEVICE. ELMER J. KELLEY, Algona, Iowa. Filed Feb. 25, 1914. Serial No. 821,058. (Cl. 220—120.)



1. The combination with a liquid holding tank, a casing inclosing the same, of a filling device for said tank, comprising telescopic horizontal tubes, one of which is stationary and the other slidable in the stationary tube and one of which has a lateral outlet communicating with the top of said tank, and a receiving funnel connected to the other tube and set at an angle thereto, and adapted by the movement of the slidable tube to be positioned within or outside of said casing.

2. The combination with a liquid tank, and an inclosing casing therefor, of a filling device for said tank, comprising a funnel, a pipe extending at an angle to the base of the funnel and embodying telescopic tubular members having a relative sliding movement and a relative rotative movement whereby the funnel is adapted to be shifted within or outside of said casing, and a clip for holding the funnel in filling position when the pipe is extended.

1,153,117. CAR-TRUCK. WILLIAM F. KIESEL, Jr., Altoona, Pa. Filed July 2, 1914. Serial No. 848,613. (Cl. 105—244.)



1. In a car truck, the combination of a pair of axles, a primary equalizer bar supported by said axles, a secondary equalizer bar supported at one end by one of said axles and at the other end by said primary equalizer bar, and a bolster supporting spring carried by said secondary equalizer bar.

2. In a car truck, the combination of a pair of axles, a primary equalizer bar supported by said axles, a secondary equalizer bar supported at one end by one of said axles and yieldably supported at the opposite end by said primary equalizer bar, said secondary equalizer bar extending on opposite sides of said primary equalizer bar, a bolster, and a spring mounted on the secondary equalizer bar and supporting one end of said bolster.

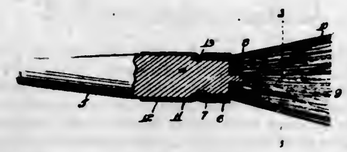
3. In a car truck, the combination of a pair of axles, a side frame member, means for supporting the side frame member on the axles comprising a pedestal carried by one axle and having an extension, a primary equalizer bar having one end connected to said extension and the other end supported by the other axle, a secondary equalizer bar having one end also supported by said extension and the opposite end supported on the primary equalizer bar, and a bolster supporting spring mounted on said secondary equalizer bar.

4. In a car truck, the combination of a pair of axles, a pedestal mounted on one of said axles and having an extension, an equalizer bar flexibly connected at one end to said extension and having its other end supported from the other axle, a secondary equalizer bar flexibly connected at one end to said extension and having its other end yieldingly supported on the primary equalizer bar, and a bolster supporting spring carried by said secondary equalizer bar midway between the pair of axles.

5. In a six-wheel truck, the combination of a plurality of axles, comprising a center axle and end axles, primary equalizer bars each supported at one end on the center axle, a secondary equalizer bar partly supported on each primary equalizer bar, and a bolster supporting spring mounted on each secondary equalizer bar midway between the center and end axles.

[Claims 6 to 9 not printed in the Gazette.]

1,153,118. CLEANING-BRUSH. GRANT C. KIMBS, Ogden, Utah. Filed Sept. 23, 1913. Serial No. 791,426. (Cl. 15—36.)



A paint brush including a handle having a reduced end, the latter provided with an annular depression, bristles abutting the free terminal of said reduced end and extending longitudinally from the latter, wire strands engaged with the periphery of said reduced end and extending exteriorly of said bristles and in parallelism therewith, and a ferrule mounted on said handle and having a portion arranged in parallel relation with the reduced end, to embrace said strands, said ferrule being annularly depressed inwardly to provide an annular flange, adapted to flex said strands into said annular depression, to prevent displacement of said strands from the handle.

1,153,119. RESILIENT WHEEL. ARTHUR KIRBY, Unionville, Mo. Filed Jan. 5, 1915. Serial No. 628. (Cl. 152—28.)



1. A resilient wheel comprising a tire made up of sections fastened together, a series of pneumatic cylinders mounted in each tire section, a cylinder head fitted to each cylinder, a piston rod movable through each piston head, a piston mounted in each cylinder and secured to the piston rod, a felly and spokes connected thereto, a drum from which the spokes radiate, a metallic rim upon the felly, and ball bearings between the felly and said piston rod.

2. A resilient wheel comprising a tire made up of sections fastened together, a series of pneumatic cylinders mounted in each tire section, a cylinder head fitted to each cylinder, a piston rod movable through each piston head, a piston mounted in each cylinder and secured to the piston rod, a cross head upon the piston rod, means in each head for guiding said cross head, a drum and spokes radiating therefrom, a felly secured to the spokes, a metallic rim upon the felly, and ball bearings between the metallic rim and piston rod.

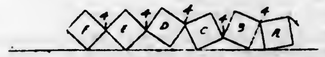
3. A resilient wheel comprising a tire made up of sections fastened together, a series of pneumatic cylinders mounted in each tire section, a chambered cylinder head secured to each cylinder, a piston rod movable through said head, a piston upon the rod, a spring bearing yieldingly against the piston, the wall of the chambered part of the head being grooved, a cross head upon the piston rod movable within said grooves, a drum, spokes radiating therefrom, a felly secured to the spokes, a metallic rim secured to the felly, and ball bearings between the rim and piston rod.

4. A resilient tire made up of sections, each provided with series of recesses, the walls of which are threaded and each recess having a counter recess in the bottom thereof, a spring seated in said counter recess, a cylinder having threaded connection with the walls of each recess, a head fitted to each cylinder, a piston within each cylinder and bearing against said spring, a stem fixed to the piston and movable through said head, a drum, spokes radiating from the drum, a rim upon the felly, and ball bearings between the rim and piston rod.

5. A resilient tire made up of sections, each provided with series of recesses, the walls of which are threaded and each recess having a counter recess in the bottom thereof, a spring seated in said counter recess, a cylinder having threaded connection with the walls of each recess, a head fitted to each cylinder, a piston within each cylinder and bearing against said spring, a stem fixed to the piston and movable through said head, a drum, spokes radiating from the drum, a rim upon the felly, ball bearings between the rim and piston rod, and pull rods pivotally connecting the drum and sections of the tire.

[Claim 6 not printed in the Gazette.]

1,153,120. MATTRESS. GREELEY ELSWORTH LACKEY, Burlington, Iowa. Filed Feb. 3, 1914. Serial No. 816,181. (Cl. 5—13.)



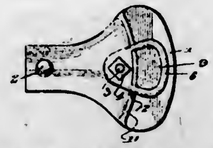
A mattress section consisting of a series of connected units, the units being similar in shape and size, each unit having four equal sides, and the units of each section being arranged alongside each other and connected together by a hinge connection, the alternate hinge connections being at the upper side of the mattress, and the intermediate hinge connections being at the lower side of the mattress for the purpose specified, each unit consisting of a separate body and end covering and a filling.

1,153,121. ANTIPYRETIC, O-SULFAMIDOBENZOYL-P-PHENETIDIN, AND PROCESS FOR PRODUCING THE SAME. JAN LAGUTT, Basel, Switzerland. Filed July 7, 1915. Serial No. 38,554. (Cl. 23—24.)

1. Process for the production of o-sulfamidobensoyl-p-phenetidin, comprising heating o-bensoic acid sulfimid or with p-phenetidin in molecular proportions.

2. As a new article of manufacture o-sulfamidobensoyl-p-phenetidin, being a white, lustrous, tasteless, crystalline substance having a melting point of 171–172° C., soluble in water and alcohol, substantially as described.

1,153,122. COMBINED HOOK AND SADDLE-SEAT. MILTON LEAR and JOHN SLOOP, Findlay, Ohio. Filed Sept. 4, 1914. Serial No. 860,233. (Cl. 54—42.)

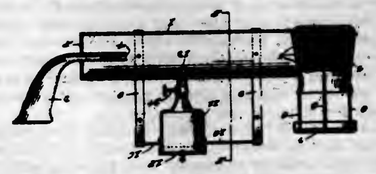


A combined hook and saddle for gig saddles including a seat proper formed with a transverse flange, a threaded stem integral with the seat and depending centrally therefrom in advance of the flange, and a crupper loop having a solid portion formed with an opening to engage the stem and a rear wall to bear against the forward face of the flange, the loop having a hollow portion presenting side sections, the flange being recessed on opposite sides of its central portion to snugly receive the opposite sections of the loop, whereby the loop directly engages the flange and bears against the edge thereof for the greater portion of the transverse line of said loop.

1,153,123. FLY-EXTERMINATOR. EMMA L. LEE, Chicago, Ill. Filed May 7, 1915. Serial No. 26,598. (Cl. 43—22.)

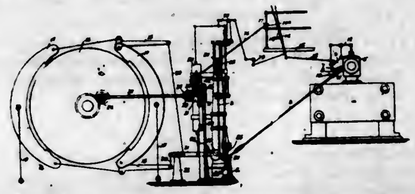
1. A fly exterminator comprising a casing, a container having a series of perforations therein and connected to the casing, an adjustable canopy top for said container, means for filling the casing with a sweetened liquid, and a receiver communicating with the top of the casing for containing a poisonous compound.

2. A fly exterminator comprising a hollow casing, a funnel fitted in one end of said casing, a container connected to the opposite end of said casing and provided with perforations to communicate with said casing, a receiver mounted in the top of the casing for containing a poisonous compound, and a valve in said receiver.



3. A fly exterminator comprising a casing, a container connected to the casing and communicating therewith, and a poison receiver communicating with the upper portion of the casing, and means for feeding sweetened water into the casing.

1,153,124. HOISTING-ENGINE CONTROL. WILLIAM J. LILLY, Butte, Mont. Filed Apr. 2, 1914. Serial No. 829,019. (Cl. 254—174.)



1. A device of the character described, comprising a frame, a spider supported thereby and free to rock, a rack carried by said spider, a stop mounted upon said rack, an arm supported by said frame and movable relatively to said rack, a pawl carried by said arm and adapted to engage said rack so as to actuate said spider, speed controlled mechanism for shifting said arm toward and from said rack, a prime mover and mechanism connected with said spider and controllable by movements thereof for controlling said prime mover.

2. A device of the character described, comprising a hoisting drum, speed-governor mechanism connected therewith and controllable by the speed thereof, a revoluble shaft geared in operative relation to said drum and driven thereby, a radially movable arm carried by said revoluble shaft, pawl mechanism connected with said speed-governor mechanism and movable thereby in the general direction of the length of said arm, a movable rack of annular form disposed adjacent the path of travel of said pawl and so positioned as to be engaged by the latter when said hoisting drum is driven at excessive speed, and mechanism connected with said movable rack and actuated thereby for controlling motions of said hoisting drum.

3. A device of the kind described, comprising a hoisting drum, speed-governor mechanism connected therewith and controllable by the speed thereof, a revoluble shaft geared in operative relation to said drum, a radially movable arm carried by said shaft, a pawl carried by said arm, connections from said speed-controlled mechanism to said pawl for the purpose of moving said pawl toward and from the axis of rotation of said arm, a movable rack of annular form disposed adjacent the path of travel of said pawl and so positioned as to be engaged by said pawl when said speed-governor mechanism acquires a predetermined excess of speed, and mechanism connected with said movable rack and actuated thereby for controlling movements of said drum.

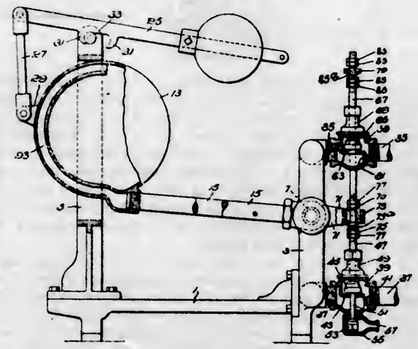
4. A device of the kind described, comprising a hoisting drum, speed-governor mechanism connected therewith and controllable by the speed thereof, a revoluble shaft geared in operative relation to said drum, a radially movable arm carried by said shaft, a pawl carried by said arm, connections from said speed-controlled mechanism to said pawl for the purpose of moving said pawl toward and

from the axis of rotation of said arm, a movable spider provided with a circular member disposed adjacent the path of travel of said pawl, a stop adjustably mounted upon said circular member and provided with surfaces disposed adjacent the path of travel of said pawl, so as to be engaged thereby when said speed-governor mechanism acquires a predetermined excess of speed, and mechanism connected with said circular member and controllable thereby for stopping said hoisting drum.

5. A device of the character described comprising an annular rack provided with teeth extending radially inward, stop members adjustably mounted upon said rack and provided with notches, a pawl to be engaged by said notches or by said teeth as the case may be, a revoluble arm in which said pawl is slidably mounted, a bellcrank lever carried by said revoluble arm and engaging said pawl for thrusting the latter into engagement with said teeth or with said notches, a connecting rod connected with said bellcrank lever, and speed-controlled governor mechanism connected with said connecting rod for actuating the same.

[Claims 6 to 15 not printed in the Gazette.]

1,153,125. STEAM-TRAP. FRANK A. LITTLEFIELD, Nashua, N. H., assignor to Nashua Machine Company, Nashua, N. H., a Corporation of Maine. Filed Oct. 24, 1912. Serial No. 727,498. (Cl. 137—101.)



1. A steam trap comprising in combination, a support including a hollow ring, a tilting bowl journaled on said ring and communicating therewith, steam inlet and discharge pipes connected to and communicating with said ring, valves for said steam and discharge pipes, means connecting said valves, and a member movable with said receiver for reciprocating said connecting means positively to open and close said valves.

2. A steam trap comprising in combination, a support, a tilting receiver fulcrumed thereon, steam inlet and condensation discharge pipes communicating with said receiver, valves for said pipes, stems for said valves, a member fixed to said receiver and movable therewith for operating said steam valve stem, and means fast to said member for operating said discharge valve stem.

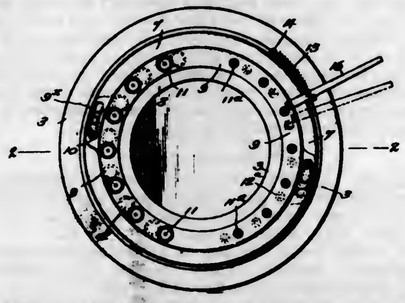
3. A steam trap comprising in combination, a support, a tilting receiver fulcrumed thereon, steam inlet and condensation discharge pipes communicating with said receiver, valves for said pipes, means connecting said valves, and a single member projecting from said receiver and movable therewith for engaging said connecting means positively to open and close said valves.

4. A steam trap comprising in combination, a support, a tilting receiver fulcrumed thereon, steam inlet and condensation discharge pipes communicating with said receiver, valves for said pipes, means connecting said valves including a frame straddling said discharge pipe, and a member projecting from said receiver and movable therewith to reciprocate said frame and thereby open and close said valves.

5. A steam trap comprising in combination, a support including a hollow ring, a receiver fulcrumed on and communicating with said ring, feed, steam inlet and condensation discharge pipes connected to and communicating with said ring, a check valve for said feed pipe, valves for said steam and discharge pipe located substantially in vertical alinement, means including an operating member extending upward from one of said valves to the other, and an actuating member for said operating member fixed to and movable with said receiver.

[Claims 6 to 9 not printed in the Gazette.]

1,153,126. MOLD FOR GLASS SPARK-PLUGS AND CORES. HARRY LONG, Kokomo, Ind. Filed July 1, 1914. Serial No. 848,373. (Cl. 49—66.)



1. In a molding device, a base provided with recesses, a surmounting body ring provided with recesses arranged to register with those in the base, means for establishing communication between the interior of the ring and the registering recesses, a magazine surmounting said body ring, said magazine being provided with bores normally out of registration with the recesses in said base and said body ring, and means for moving a portion of the magazine to bring its openings into alinement with those in the base and body ring.

2. In a molding device, a base provided with recesses, a surmounting body ring provided with recesses arranged to register with those in the base, means for establishing communication between the interior of the ring and the registering recesses, a magazine surmounting said body ring, said magazine consisting of an upper portion having vertically extending bores normally out of alinement with the recesses in said base and said body ring, and a lower portion disposed between said upper portion and said body ring and having openings normally in alinement with bores in the base and body ring, said upper portion being movable relatively to said lower portion to bring the openings in alinement with the bores in the lower portion.

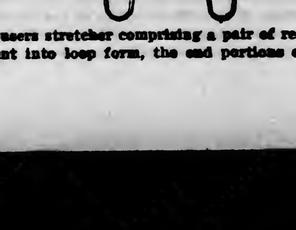
3. In a molding device, a base provided with recesses, a surmounting body ring provided with recesses arranged to register with those in the base, means for establishing communication between the interior of the ring and the registering recesses, a magazine surmounting said body ring, said magazine consisting of an upper portion having vertically extending bores normally out of alinement with the recesses in said base and said body ring, and a lower portion disposed between said upper portion and said body ring and having openings normally in alinement with bores in said base and body ring, said upper portion being movable relatively to said lower portion to bring the openings in alinement with the bores in the lower portion, and engaging portions on said upper and said lower magazine members for limiting the movement of said upper portion of the magazine in one direction.

4. In a molding device, a base provided with recesses, a surmounting body ring provided with recesses arranged to register with those in the base, means for establishing communication between the interior of the ring and the registering recess, a magazine surmounting said body ring, said magazine consisting of an upper portion having vertically extending bores normally out of alinement with the recesses in said base and said ring, and a lower portion disposed between said upper portion and said body ring and having openings normally in alinement with bores in said base and body ring, said upper portion being movable relatively to said lower portion to bring the openings in alinement with the bores in the lower portion, engaging portions on said upper and said lower magazine members for limiting the movement of said upper portion of the magazine member in one direction, and a spring for returning the movable portion of the magazine to its normal position.

5. In a molding device for glass spark plugs and spark plug cores, a base provided with a series of recesses, a body ring surmounting the ring and provided with recesses arranged to register with those in the base, a magazine surmounting said body ring and provided with bores arranged to receive metal conducting members, and means for simultaneously permitting the metal conducting members to fall by gravity into the registering bores of the base and the body ring.

[Claims 6 to 9 not printed in the Gazette.]

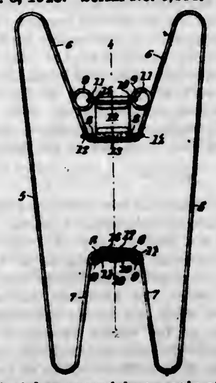
1,153,127. MAGNET-CHARGER. PHILIP LYNCH and HENRY WOCHNER, Rock Island, Ill. Filed May 15, 1914. Serial No. 838,851. (Cl. 175—21.)



1. A magnet charger comprising a base, a fixed coil and an adjustable coil, said coils having openings to accommodate the poles of a permanent magnet, intersecting members carried by said coils, and guiding means for the adjustable coil forming electrical connections between the two coils.

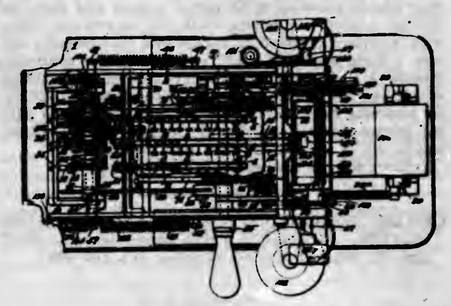
2. A magnet charger comprising a base, a fixed coil, and an adjustable coil, said coils having openings to accommodate poles of a permanent magnet, guiding means for the adjustable coil forming electrical connections between the two coils, and contacting members carried by the coils and with which the poles of the magnet are designed to engage, said contacting members being designed to maintain contact in the different relative positions of the coils.

1,153,128. TROUSERS-STRETCHER. FRANK A. LYONS, Charlotte, N. C. Filed Feb. 7, 1914, Serial No. 817,226. Renewed Feb. 6, 1915. Serial No. 6,638. (Cl. 223—19.)



A trousers stretcher comprising a pair of resilient wires each bent into loop form, the end portions of each loop being bent to form single coils, an eye formed on one terminal of each loop, clamping plates embracing the end terminals of the loops, stretches of the said loops being trained through the eye terminals, links engaged with the coils for preventing the separation of the terminals of the loops from the clamping plates, and means on the plates for engaging the links.

1,153,129. ADDING-MACHINE. WALTER F. MCCALEB, San Antonio, Tex., assignor to McCaleb Adding Machine Company, San Antonio, Tex., a Corporation of Delaware. Filed Oct. 7, 1912. Serial No. 724,259. (Cl. 235—60.)



1. The combination with a series of toothed sectors and means for independently turning each sector through any required degree of its total arc of movement, of a series of adding wheels, a pivotally mounted carrier for said adding wheels, a spring tending normally to move said carrier to effect operative engagement between the adding wheels and the toothed sectors, a main operating shaft, mechanism controlled thereby for returning the sectors to zero, and mechanism also controlled by said shaft for permitting at will the said movement of the adding wheel carrier, and for moving said carrier to effect disengagement between the adding wheels and the sectors after the sectors have been returned to zero.

2. The combination with a series of independently movable toothed sectors each of which is provided with a rigid arm for moving it through any required degree of its total arc of movement, a face plate having slots through which said arms project and provided adjacent to each slot with a numerical scale, of a series of adding wheels mounted to be moved toward and from the toothed sectors and having teeth for coöperating therewith, means tending normally to move the adding wheels into engagement with the sectors, a main operating shaft, mechanism controlled thereby for returning the sectors to zero, and mechanism also controlled by said shaft and operable in the movement thereof in one direction to permit engagement of the adding wheels with the toothed sectors, and in the opposite movement of the shaft to move the adding wheels out of such engagement after the sectors have been returned to zero.

3. The combination with a series of toothed sectors, and means for independently turning each sector through any required degree of its total arc of movement, of a series of adding wheels, a pivotally mounted carrier for said adding wheels, a spring tending normally to move said carrier to effect operative engagement between the adding wheels and the toothed sectors, a main operating shaft, mechanism controlled thereby for returning the sectors to zero, a lever having a slotted engagement with said carrier and operating in the movement of the shaft in one direction to permit the said movement of the adding wheel carrier and in the opposite movement of the shaft to move said carrier away from the sectors to effect disengagement between the adding wheels and the sectors after the sectors have been returned to zero.

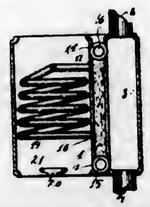
4. The combination with a series of type-carrying sectors, a corresponding series of toothed sectors rigid therewith, and means for moving each type-carrying sector and its corresponding toothed sector through any required

degree of their total arcs of movement, of a series of adding wheels mounted to be moved toward and from the toothed sectors and having teeth for coöperating therewith, a striker designed to engage said type-carrying sectors, a main operating shaft, and mechanisms controlled thereby for effecting operative engagement between the adding wheels and the toothed sectors, and for operating said striker.

5. The combination with a series of type-carrying sectors, a corresponding series of toothed sectors rigid therewith, and means for moving each type-carrying sector and its corresponding toothed sector through any required degree of their total arcs of movement, of a series of adding wheels mounted to be moved toward and from the toothed sectors and having teeth for coöperating therewith, a striker designed to engage said type-carrying sectors, a main operating shaft, and mechanisms controlled thereby for effecting engagement between the adding wheels and the toothed sectors, for operating said striker, for returning the sectors to zero while in engagement with the adding wheels, and, finally, for moving the adding wheels out of engagement with said sectors.

[Claims 6 to 21 not printed in the Gazette.]

1,153,130. COMBINED STEAM, GAS, AND HOT-WATER HEATER. NICHOLAS U. PERIS, Landisville, Pa. Filed Mar. 31, 1914. Serial No. 828,435. (Cl. 122—36.)



1. An article of the character described comprising a cylindrical casing, walls within said casing forming therewith a water heating chamber, and passageways to either side thereof; one of said passageways adapted to receive a heating medium, and means in the other of said passaigways adapted to provid an auxiliary heating medium, substantially as described.

2. An article of the character described comprising a cylindrical casing, walls within said casing forming therewith a water heating chamber, and passageways to either side thereof; one of said passageways adapted to receive a heating medium; and a coil located in the other passageway, communicating with the water heating chamber, and providing an auxiliary heating medium, substantially as described.

3. A water heater of the character described comprising a cylindrical casing, walls disposed transversely of said casing and forming therewith a water heating chamber, and passageways to either side thereof; one of said passageways adapted to receive a heating medium; and a coil located in the other passageway and communicating with the water heating chamber, said coil adapted to be heated by a burner as an auxiliary heating means, substantially as described.

1,153,131. PRODUCTION OF SAFETY-GROUNDS FOR DOCUMENTS. CHARLES GUILLAUME PETIT, Bellevue, France. Filed Oct. 11, 1911. Serial No. 654,428. (Cl. 11—18.)

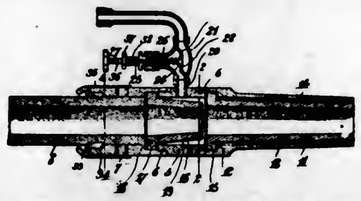
1. As a new article of manufacture, a sheet of suitable material having printed thereon a safety ground of the character described comprising superposed impressions of indeterminate iris-like outlines of diverse light gradations, said impressions being in different colors and screen schemes, the whole forming upon the sheet an image having blended colors and indeterminate outlines practically incapable of lineal decomposition.

2. As a new article of manufacture, a sheet of suitable material having printed thereon a safety ground for bank notes and the like, comprising a half-tone composed of a plurality of superposed images each of indefinite and



vague and uncertain outline having light gradations varying from positive and strong effects to vague and confused and disappearing effects, the superposed images being differently colored and the colors effecting a finished blend.

1,153,132. CEMENT AND CONCRETE NOZZLE. PAUL C. PETTITT, Schofield Barracks, Honolulu county, Hawaii. Filed June 25, 1913, Serial No. 775,770. Renewed Feb. 9, 1915. Serial No. 7,105. (Cl. 137—80.)



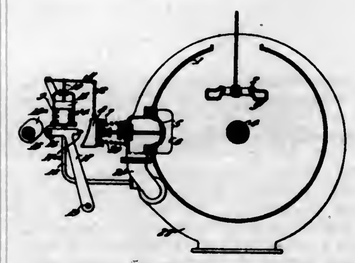
1. A cement and concrete gun nozzle comprising a cylindrical shell having extenranlly threaded ends, an outwardly tapered nipple detachably held within the shell at one end thereof, means detachably connected with one threaded end of the shell for detachably securing a hose, the end of the bore in the nipple next to the hose being of slightly greater size than the bore in the said hose, and a discharge nozzle detachably connected with the other threaded end of the shell, the inner end of the bore of the said nozzle being of slightly greater size than the outer end of the bore of the said nipple, the outer end of the said nipple spaced rearwardly from the inner end of the discharge nozzle, and means for admitting fluid into the shell.

2. A cement and concrete gun nozzle comprising a cylindrical shell having externally threaded ends, an outwardly tapered nipple within said shell, means detachably connected with one threaded end of the shell for detachably connecting a hose and also for detachably holding the said nipple in position within the shell, a tubular protector detachably connected to the other threaded end of the shell, and an outwardly tapered discharge nozzle within said protector and coextensive therewith, and also detachably held in position by the said protector, the bore of the nozzle at its inner end being of slightly greater size than the bore in the nipple at its outer end, and fluid supply means communicating with the shell for supplying fluid thereto, the outer end of the nipple spaced rearwardly from the inner end of the said nozzle.

1,153,133. RECIPROCATING-PISTON ENGINE. HENRY PILLING, Chorlton-cum-Hardy, England. Filed May 1, 1915. Serial No. 25,277. (Cl. 121—45.)

1. In a reciprocating piston engine in which the main exhaust ports are closed before completion of the return stroke of the piston, an auxiliary exhaust valve, and means operative when the steam pressure in the main exhaust passage of the engine exceeds a predetermined value, to automatically and mechanically open said valve during a portion of the return stroke of the piston.

2. In a reciprocating piston engine of the type described, an auxiliary exhaust valve, and means controlled by the pressure in the main exhaust passage of the engine for periodically and mechanically opening said valve when the steam pressure in the main exhaust passage of the engine exceeds a predetermined value.



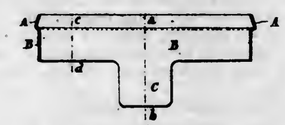
3. In a reciprocating piston engine of the type described, the combination of a cylinder having a main exhaust passage, an auxiliary clearance space, and an auxiliary exhaust valve having a passage leading to said auxiliary clearance space, and means operative when the steam pressure in the main exhaust passage exceeds a predetermined value, to automatically and mechanically open said valve.

4. In a reciprocating piston engine of the type described having main exhaust ports, an auxiliary exhaust valve, and means for mechanically opening said valve and holding the same open for a period which increases as the main exhaust pressure of the engine increases.

5. In a reciprocating piston engine of the type described, a compression pressure control valve, and means controlled by the main exhaust pressure of the engine for opening said valve once during each revolution of the engine embodying a thrust member having means for mechanically operating it from the engine crank shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,153,134. COLLAR. AUBREY LEIGH PRICE, Waverly, New South Wales, Australia. Filed May 13, 1915. Serial No. 27,822. (Cl. 2—71.)



1. In a device of the character described for use with turn-down collars, comprising a single fold strip of material adapted to project up into the fold of the collar and having a laterally-projecting rib spaced a distance below its upper edge adapted to serve both as a spacer for the two members constituting the fold of the collar, and as an abutment to prevent the tie from slipping upward into the angle of said fold, the lower portion of said strip having a continuously smooth surface on which the tie slides freely and serving to completely cover the head of the rear collar button, substantially as described.

2. A device of the character described for use with turn-down collars, comprising a single fold strip of material adapted to project up into the fold of the collar and having a laterally-projecting rib spaced a distance below its upper edge adapted to serve both as a spacer for the two members constituting the fold of the collar, and as an abutment to prevent the tie from slipping upward into the angle of said fold, the lower portion of said strip having a smooth surface on which the tie slides freely, and said lower portion being also provided with a tab to cover the rear collar button, when the collar is in use, substantially as described.

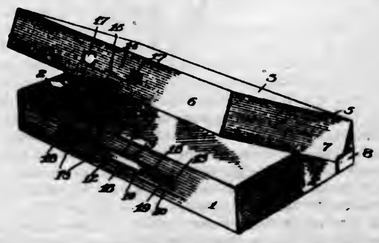
1,153,135. CLIP. WALTER RODECK, New Durham, N. J. Filed Jan. 16, 1915. Serial No. 2,690. (Cl. 24—3.)



1. A clip for holding an ordinary rule or like instrument, comprising a casing open at the back and provided with a flaring mouth for the ready introduction of an instrument, the casing having depending front and side arms, a front spring tongue struck up from the front of the casing and its front arm, and having its terminal extending inward beyond the inner face of the front, and side spring tongues struck up from the sides of the casing and the side arms, the said side spring tongues being curved inward near their terminals.

2. A clip for holding an ordinary rule or like instrument, comprising a casing having a flaring mouth for the convenient insertion of the rule in the casing, side spring tongues on the sides of the casing and adapted to bear against the sides of the rule, and a front spring tongue on the front of the casing and adapted to bear against the face of the rule or against the face of a pocket to support the rule within the pocket, the base of the said spring tongue being adjacent the said flaring mouth to hold the latter above the top of the pocket.

1,153,136. SUITCASE. MORRIS W. ROSENFELD, Rochester, N. Y. Filed Mar. 20, 1914. Serial No. 826,132. (Cl. 229—52.)



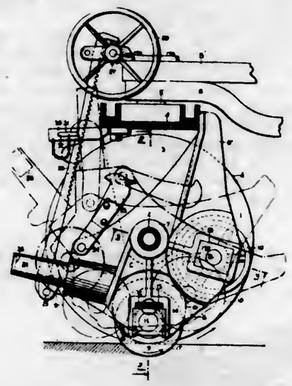
1. A suit case comprising a body member and a cover member hinged together and having overlapping walls or flanges, the under wall being provided with two parallel slots parallel with the hinge axis and the superimposed wall with locking tongues removed from the edges thereof and projecting toward each other transversely of the said axis, said tongues being adapted to engage in the respective slots.

2. A suit case comprising a body member and a cover member having overlapping walls or flanges, the under wall being provided with two parallel slots and the superimposed wall with locking tongues removed from the edges thereof and projecting toward each other, said tongues being adapted to engage in the respective slots, and one tongue being formed out from an intermediate portion of the other.

3. In a suit case, the combination with a body member and a cover member having a wall overlapping a wall of the body member, the last mentioned wall being provided with two parallel slots and the superimposed wall with locking tongues removed from the edges thereof and projecting toward each other to engage in the respective slots of the body wall, the cover wall being further provided with openings at the ends of the tongues, of a handle strap secured to the body walls beyond the ends of the slots and extending through the openings in the cover wall so as to be accessible exteriorly when the cover and body are interlocked.

4. In a suit case, the combination with a body member having parallel slots in one wall thereof forming a securing strap and a handle strap secured to the said wall in superposed relation to such securing strap, of a cover member having a wall overlapping the said body wall when the case is closed and provided with locking tongues projecting toward each other and adapted to permit the handle strap to be passed between them to the exterior of both walls when the case is closed and to themselves pass through the respective slots in the body wall and to interlock beneath the securing strap.

1,153,137. **ASPHALT-CUTTER ATTACHMENT FOR STEAM-ROLLERS.** CARL J. SCHULZ, New York, N. Y. Filed Dec. 23, 1914. Serial No. 878,737. (Cl. 94—6.)



1. An asphalt pavement roller comprising two roller sections, an axle on which the sections are spaced apart, and a rotary cutter carried by the axle and spaced between the roller sections and having an annular cutting blade extending below the bottom of the roller sections, the axis of the cutter being eccentric to the axle.

2. An asphalt pavement roller comprising two roller sections, an axle on which the sections are spaced apart, a rotary cutter carried by the axle and spaced between the roller sections and having an annular cutting blade extending below the bottom of the roller sections, a yoke in which the axle is mounted, and means engageable with the yoke for holding the cutter in operative or inoperative position.

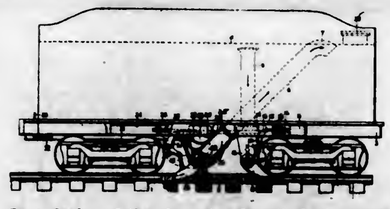
3. The combination of a roller, an axle therefor, a frame or yoke carrying the axle, a carrier pivotally mounted on the axle, a rotary cutter mounted on the carrier and having a cutting blade projecting below the bottom of the roller, and means for holding the carrier in a position with the cutter in operative or inoperative relation to the roller.

4. The combination of a roller consisting of two sections spaced apart, an axle for the sections, a carrier loosely mounted on the axle, a rotary cutter mounted on the carrier and having its axis eccentric to the axle and adapted to be thrown by the carrier to or from the bottom of the roller, and a gap-closing roller mounted on the carrier for forming with the bottoms of the roller sections a continuous roller surface.

5. The combination of a roller divided into two sections, a carrier movably mounted between the sections, a rotary cutter mounted on the carrier, a gap-closing roller mounted on the carrier, and means for holding the carrier in a position with either the gap-closing roller or cutter in operative relation with the roller sections.

[Claims 6 to 9 not printed in the Gazette.]

1,153,138. **INJECTOR FOR LOCOMOTIVE-TENDERS.** WILLIAM B. SMITH, Parkesburg, Pa. Filed Dec. 31, 1914. Serial No. 879,935. (Cl. 103—51.)



1. In a device of the character described, the combination with a tank, of an inlet pipe therefor, a pivotally mounted scoop arranged at the lower end of said inlet pipe, power means for raising and lowering said scoop, and jets arranged to discharge into said inlet member, said jets being adapted to guide gaseous matter under pressure into said inlet pipe for raising the water entering said scoop and discharging the same out of the upper end of said inlet pipe.

2. In a device of the character described, an inlet pipe arranged at an appreciable angle to the horizontal, a movable scoop arranged at the lower end of said entrance pipe, a plurality of jets for guiding gaseous matter into said inlet pipe, means for supplying gaseous matter to said jets, and valve mechanism for controlling the gaseous matter supplied to said jets.

3. In a device of the character described, an inlet pipe, a pivotally mounted scoop, means for raising and lowering said scoop, a tubular member arranged between said scoop and said inlet pipe and connecting said scoop and said pipe, said tubular member being formed with a plurality of apertured projections extending inwardly, whereby the gaseous matter passing through said jets will force water upwardly through said inlet pipe, and means for supplying gaseous matter to said jets.

4. In a device of the character described, an inlet pipe, a plurality of steam jets arranged adjacent the lower end thereof for elevating water in said inlet pipe, a pivotally mounted scoop arranged adjacent the lower end of said inlet pipe, and means for raising and lowering said scoop.

5. In a device of the character described, an inlet pipe, a tubular casting arranged at the lower end of said inlet pipe, said tubular casting being formed with a plurality of jets, means for supplying steam to certain of said jets, means for supplying air under pressure to other of said jets, and a scoop connected with the lower end of said tubular casting.

[Claim 6 not printed in the Gazette.]

1,153,139. **SHOE-FILLER.** HARRY SNELL, Hanover, Mass., assignor of one-third to George J. J. Clark and one-third to Daniel J. Head, West Hanover, Mass. Filed Dec. 29, 1914. Serial No. 879,611. (Cl. 106—3.)

1. A shoe filler or like composition, comprising comminuted cork-like material, rosin, vulcanized oil and castor-oil and gum-resin.

2. A shoe filler or like composition comprising cork, rosin, vulcanized oil and castor-oil and gum-resin in substantially the following proportions, namely, cork 2 lbs., rosin 1 lb., castor-oil and gum-resin 1 lb., and vulcanized oil 1 gill.

3. A shoe filler or like composition comprising a base of finely divided material, rosin, vulcanized oil and castor oil and gum-resin in substantially the following proportions, namely, finely divided base material 2 pounds, rosin 1 pound, castor oil and gum resin 1 pound, and vulcanized oil 1 gill.

4. A shoe filler or like composition including a finely divided base material, rosin and vulcanized oil in substantially the following proportions, namely, finely divided base material 2 pounds, rosin 1 pound, and vulcanized oil 1 gill.

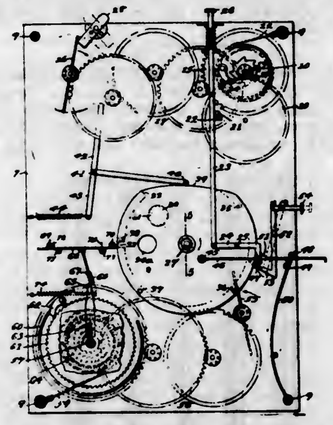
1,153,140. **WINDOW-SCREEN.** HENRY E. SOUTHWORTH, Burlington, Vt., assignor to Porter Screen Company, Burlington, Vt. Filed Apr. 21, 1915. Serial No. 22,924. (Cl. 156—38.)



1. In an extension screen, a connecting slide or clip for connecting the overlapping rails of screen sections, having a base adapted to enter and move in the groove in the rail with which it is to be associated, a detent associated with said base to permit said inward movement of the base for a predetermined distance only, and a second detent also associated with said base, which permits inward but arrests outward or return movement of the base, whereby said base, having once entered the predetermined distance into the rail with which it is to be associated, is there automatically held against further movement in either direction, substantially as and for the purposes hereinbefore set forth.

2. In an extension screen, two screen sections, the overlapping rails of which have in their meeting faces each a longitudinal horizontal undercut groove d, in combination with clips, one for each rail, having a base b seated in groove d in inner end A' of its section rail, and a head which loosely enters and engages the groove d of the opposite rail, a base b having at its outer extremity a detent e which brings up against the end of its rail when the base has entered the groove therein a predetermined distance and thus prevents further inward movement of the same, and, at a point nearer its other end, an automatically acting, spring yielding, detent f which permits inward, but prevents outward, movement of the base, substantially as and for the purposes hereinbefore set forth.

1,153,141. **CAMERA-SHUTTER.** WALTER CHOCLIN SULLENDER, St. Louis, Mo. Filed Jan. 8, 1915. Serial No. 1,143. (Cl. 95—60.)



1. The combination with the lens of a camera; of a movable element provided with an aperture in normal register with said lens, a supplementary element provided with an aperture normally out of register therewith, means for moving said last named element to carry its aperture into register with said lens, means for moving both said elements to carry both apertures out of register with said lens, means for setting said elements, means for releasing the same, means for delaying the movement of said elements after being released, and means for controlling the duration of time between the movement of said first moved element, and of both elements.

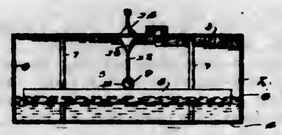
2. The combination with a lens of a camera; of a movable element provided with an aperture in normal register with said lens, a supplemental element provided with an aperture normally out of register therewith, means for moving said last named element to carry its aperture into register with said lens, means for moving both said elements to carry both apertures out of register with said lens, means for setting said elements, means for releasing the same, means for delaying the movement of said elements after being released, and a train of gears, spring actuated, for controlling the duration of time between the movement of said first moved element, and of both elements.

3. The combination with the lens of a camera; of a movable element provided with an aperture in normal register with said lens, a supplemental element provided with an aperture normally out of register therewith, means for moving said supplemental element to carry its aperture into register with said lens, means for moving both said elements to carry both apertures out of register with said lens, means for setting said elements, means for releasing the same, and means for controlling the duration of time between the movement of said first moved element, and of both elements.

4. The combination with the lens of a camera; of a movable element provided with an aperture in normal register with said lens, a supplemental element provided with an aperture normally out of register therewith, means for moving said supplemental element to carry its aperture into register with said lens, a slide for stopping said supplemental element in such position, means for moving both elements to carry both elements out of register with said lens, means for setting said elements, means for releasing the same, and means for actuating said slide at a predetermined interval of time after the movement of said supplemental element to permit the movement of both elements.

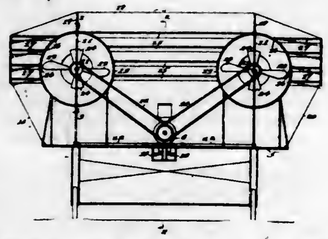
5. The combination with the lens of a camera; of a movable element provided with an aperture in normal register with said lens, a supplemental element provided with an aperture normally out of register therewith, means for moving said supplemental element to carry its aperture into register with said lens, means for moving both said elements to carry both apertures out of register with said lens, means for setting said elements, means for releasing the same, means for controlling the duration of time between the movement of said first moved element, and of both elements, and means connected with one of said elements for preventing the actuation of said control means previous to the movement of said supplemental element into lens registering position.

1,153,142. **FLOAT-OPERATED CIRCUIT-CLOSER.** DATLIF F. THOMSON, Bettsville, Ohio. Filed Oct. 10, 1914. Serial No. 866,058. (Cl. 200—84.)



In a float operated circuit closer, the combination of a liquid tank embodying top, bottom and side walls, the top wall having a hole therein, a hollow cone extending above said top wall, an inverted cone extending below said top wall, both cones having holes in their vertices in line with each other and the hole in said top wall, a float in said tank, a stem actuated by said float and extending upwardly through both cones and said top wall, a lever to which said stem is connected, an electric switch, a switch lever, and a link connecting said levers.

1,153,143. FLYING-MACHINE. CLARENCE G. WALKER, Bramwell, W. Va. Filed Oct. 16, 1914. Serial No. 866,905. (Cl. 244—18.)



1. A flying machine, comprising a frame, a motor, propellers geared thereto, main planes, rudders, ailerons, control means, two cylinders in a longitudinal plane of said machine, provided with slots adjacent the under surfaces of corresponding ailerons, and means for causing whirling currents of air through said cylinders, to stabilize said machine.

2. A flying machine, comprising a frame, a motor, propellers, main planes, rudders, ailerons, and control means, two cylinders in a longitudinal plane of said machine, provided with slots adjacent the under surfaces of corresponding ailerons, a shaft for each propeller in the respective cylinder, and means on each shaft for causing a whirling current of air through the corresponding cylinder and the slots therein.

3. A flying machine, comprising a frame, a motor, propellers, main planes, rudders, and control means therefor, two cylinders arranged longitudinally of said machine and provided with slots in the sides thereof, an aileron pivoted to the outer side of each cylinder, above said slots, means for vertically deflecting said ailerons, and means for causing a whirling current of air through each cylinder and the slots therein.

4. A flying machine, comprising a frame, a motor, propellers, main planes, rudders, and control means therefor, two slotted cylinders arranged longitudinally of said machine, an aileron pivoted to the side of each cylinder above the corresponding slot, means for moving said ailerons, a shaft in each cylinder, and a plurality of parabolic blades carried by each shaft to cause a whirling current of air through the corresponding cylinder and the slots therein.

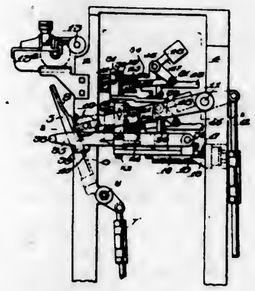
5. In a flying machine, a motor, a cylinder, a shaft in said cylinder in operative connection with said motor, and a plurality of parabolic blades arranged longitudinally of said shaft and carried thereby, for causing a whirling current of air through said cylinder to stabilize said machine, each of said blades being in an axial plane of said shaft for the full length of said blades.

[Claim 6 not printed in the Gazette.]

1,153,144. LABEL-HOLDER FOR LABELING-MACHINES. ALBERT T. WEISS, Rochester, N. Y., assignor to Yawman & Erbe Manufacturing Company, Rochester, N. Y., a Corporation of New York. Original application filed Aug. 1, 1910, Serial No. 574,872. Divided and this application filed Oct. 9, 1911. Serial No. 653,463. (Cl. 101—39.)

1. In a label holder for bottle labeling machines, the combination with a table or support, of a body label box mounted thereon to sustain labels in a horisontal pile, said box being made in separable halves divided horisontally so that the upper half may be lifted off to permit the pile of labels to be inserted edgewise, a detachable label box, and means for supporting the latter independently of the body label box and in a position overhanging the latter.

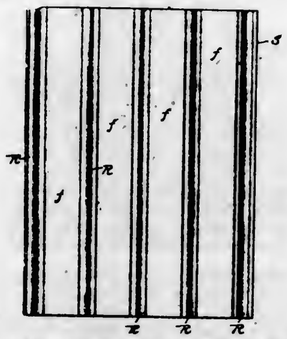
2. In a label holder for bottle labeling machines, the combination with a table or support, of a body label box mounted thereon to sustain labels in a horisontal pile, a standard arranged on the table at one side of the box and independently of the supporting means for the latter, a bracket on the standard, and a neck label box carried on the bracket independently of the body label box to overhang the latter, the neck label box being independently detachable and each box being made in separable halves divided horisontally so that the upper half may be lifted off to permit the pile of labels to be inserted edgewise.



3. In a label holder for bottle labeling machines, the combination with a table or support, of a body label box mounted thereon to sustain labels in a horizontal pile, standards arranged to rise from the table on opposite sides of the box and independently of the supporting means for the latter, a bracket on the standards spanning the box, and a neck label box carried by the bracket independently of the body label box to overhang the latter, the neck label box being made in separable halves divided horizontally so that the upper half may be lifted off to permit the pile of labels to be inserted edgewise.

4. A label holder for labeling machines comprising a support, a label box thereon, a bracket on the support having a guide therein, a follower provided with a stem or rod movable in the guide to bear against the pile of labels, a lever journaled on the bracket having one of its arms weighted and a link connected to the other arm and to the follower.

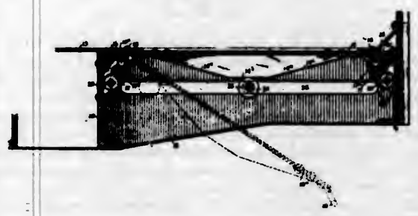
1,153,145. PROCESS FOR MAKING EXPANDED-METAL STRUCTURES. HERBERT E. WHITE, Youngstown, Ohio, assignor to The General Fireproofing Company, Youngstown, Ohio, a Corporation of Ohio. Filed Sept. 10, 1913. Serial No. 789,153. (Cl. 164—6.5.)



1. The method of making expanded metal structures which consists in slitting and stretching longitudinal inside areas of a metal sheet, leaving an uncut area on both margins of each slitted area, and simultaneously depressing alternate uncut areas and the stretched strands connecting therewith to one side of the original plane of the sheet, thereby producing open meshes, and subsequently spreading the sheet laterally to thereby return said alternate uncut areas to the original plane and also to thereby bring the expanded portions into a flat plane.

2. The method of making expanded metal structures which consists in slitting and stretching longitudinal inside areas between the ribs of a ribbed metal sheet and simultaneously causing alternate ribs and the stretched strands connecting therewith to be pressed to one side of the original plane of the sheet, thereby producing open meshes, and subsequently spreading the sheet laterally to thereby return the said alternate ribs to their original plane and also to thereby bring the expanded portions into a flat plane.

1,153,146. DROP-DOOR MECHANISM. CHARLES EDGAR WICKERSHAM, Mount Vernon, Ill., assignor of one-half to B. E. Willis, Mount Vernon, Ill. Filed Jan. 5, 1914. Serial No. 810,334. (Cl. 105—14.)



1. In a car, a drop-door presenting opposite inclined planes, hinge means at opposite edges of the door, and door supporting means movable over the door into contact with either of the inclined planes.

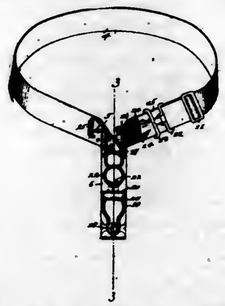
2. In a car, a drop-door presenting opposite inclined planes and an intermediate surface therebetween, hinge means at opposite edges of the door and door supporting means movable over the door from the said intermediate surface into contact with either of the inclined planes.

3. In a car, a drop-door, means at opposite side edges to optionally hinge the door at either of said edges, a door support including a shaft ranging beneath the door, a track on which the shaft may travel transversely, a worm wheel on said shaft, and a worm meshing with the worm wheel.

4. In a car, sills in the form of U-beams the flanges of one sill being disposed toward the flanges of the opposite sill, and a drop door between the sills, said door having hinge pintles thereon at opposite side edges, hinge elements at the opposite edges of the door fixedly secured to the sills, said hinge elements presenting vertical and top members conforming with the upper entrant angles of the U-beams and fitting in said angles, the upper flanges of the beams overlying and forming a backing for the top members of the said hinge elements and the webs of the beams forming a backing for the vertical members of said hinge elements, rock shafts having bearings on the vertical members of said fixed hinge elements, and co-acting hinge elements on said rock shafts below and adjacent to the fixed hinge elements, said fixed hinge elements and said co-acting hinge elements having corresponding bearing depressions jointly receiving the hinge pintles on the door, the said pintles at either side being releasable by a rocking of the adjacent shaft to drop the hinge element thereof.

5. In a car, side sills and center sills in the form of U-beams, the flanges of one sill being disposed toward the flanges of the opposite sill, drop doors between the sills, said doors having hinge pintles at opposite side edges, rock shafts ranging lengthwise of the sills between the flanges thereof, hinge elements on the shafts to rock therewith, and hinge elements of angular form fixedly secured to the U-beams in the upper entrant angles thereof, above the first mentioned hinge elements, both of said hinge elements having mating depressions accommodating the hinge pintles on the doors.

1,153,147. GARTER. EDWARD B. WINTERS, Coffeyville, Kans., assignor to Johnson Spring Garter Co., Coffeyville, Kans. Filed Oct. 28, 1914. Serial No. 868,978. (Cl. 241—6.)



1. A garter formed of inelastic material encompassing the leg, the ends of the band so formed being bent upon themselves to form a hanger, said hanger being stitched together at a point intermediate the length thereof to permit free action thereof above and below said stitching, a member of a stocking clasp secured to said hanger at one point and a complemental clasp member secured thereto at another point, means for adjusting the length of the leg band, and elastic means holding said band at said hanger under tension.

2. A garter formed of inelastic material encompassing the leg, the ends of said band so formed being bent upon themselves to form a hanger stitched together at a point intermediate the length thereof, a stocking clasp connected with said hanger, means for adjusting said leg band, and a yoke of spring metal secured to said hanger adjacent the upper end thereof and the arms of which are secured to corresponding points on said leg band.

3. A garter, comprising a strip of inelastic material formed into a leg band, a member of a leg clasp adjustably held at one end thereof, the other end thereof being bent downwardly to form a hanger and upwardly to form a loop and again outwardly, a complemental member of a leg clasp held at said last named end, beyond said outward bend, a stocking clasp held on said looped portion, and a spring metal yoke secured to said hanger and to corresponding sides thereof to said leg band.

4. A garter, comprising a strip of inelastic material formed into a leg band, complemental members of a leg clasp secured at the ends thereof, said strip being formed into a hanger at a point intermediate its length of double thickness, capable of independent movement, a spring metal yoke secured at its bend to said hanger and at its ends to corresponding points on said leg band, on each side of said hanger, and a stocking clasp carried by said hanger.

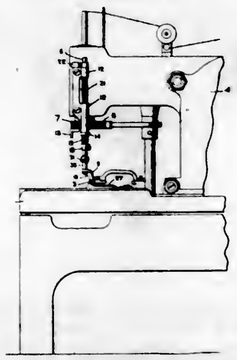
1,153,148. THREAD-CUTTING MECHANISM FOR SEWING-MACHINES. FRANK ZALESKI, Somerville, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed Nov. 2, 1914. Serial No. 869,726. (Cl. 112—33.)

1. In a sewing machine, the combination with upper thread mechanism, of means to rotate said mechanism, a cutter for cutting the upper thread, means sustaining said cutter for rotative movement in a fixed horizontal plane, and means operated by the means for rotating the upper thread mechanism to give the cutter its thread-cutting movement.

2. In a sewing machine, the combination with a frame having a reciprocating needle bar, of means to rotate the needle bar, a cutter for the upper thread sustained by said frame and mounted for movement in a fixed horisontal direction, and means operated by said rotating means to give the cutter its operative movement.

3. In a sewing machine having upper end under thread mechanism, the combination with work-clamping means,

of a cutter for the upper thread movable between the work-clamping means and the work in a direction parallel to the work, and means operated by the upper thread mechanism to actuate the cutter.

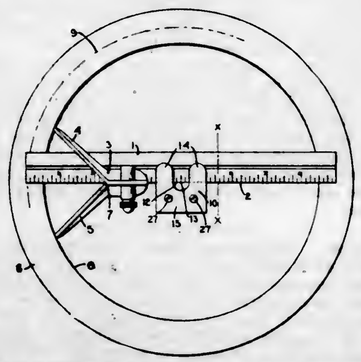


4. In a sewing machine having upper and under thread mechanism, the combination with work-clamping means, of a swinging upper thread cutting knife operating between the clamping means and the work, and means actuated by the upper thread mechanism to give said knife its thread-cutting movement.

5. In a sewing machine having upper and under thread mechanism, the combination with work-clamping means, of a swinging upper thread cutting knife operating between the clamping means and the work, and means actuated by the upper thread mechanism to give said knife its thread-cutting movement at the end of a predetermined stitching operation.

[Claims 6 to 16 not printed in the Gazette.]

1,153,149. CENTER-FINDER FOR CENTER-SQUARES. PETER ABBOTT, Franklin, N. H. Filed Sept. 25, 1914. Serial No. 863,541. (Cl. 33—191.)



1. In a center finder for center squares, the combination with a center square having a rule member provided with a graduated edge and centering means carried thereby and by which said graduated edge can be positioned diametrically, of a center block slidably mounted on the rule member and having an edge which slidably engages the graduated edge of the rule member and which is provided with an instrument-centering notch.

2. In a device of the class described, the combination with a center square having a rule member and centering means carried thereby, of a center block slidably mounted on the rule member and provided with an instrument-centering notch.

1,153,150. GARMENT-STRETCHING DEVICE. THOMAS J. ALDAIDGE, Rochester, N. Y. Filed Mar. 1, 1915. Serial No. 11,334. (Cl. 223—19.)

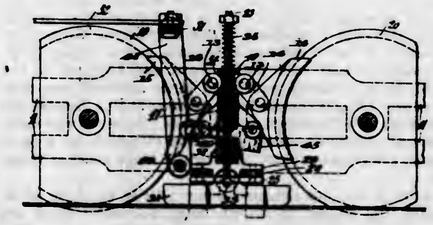


1. A device of the class described, comprising a body of plate-like form, a garment holding member at one end of the body, clamping means disposed adjacent to the other end and comprising a bar pivotally connected at one side of the body and movable to a position transversely of the same for engaging and clamping the garment against the face of the body, said bar being movable longitudinally of the body to draw the garment for stretching the same, and means for holding the bar in the stretching position aforesaid and with which the bar engages on the longitudinal movement.

2. A device of the class described comprising a body member for holding neckwear or the like, means connected to the body member for engaging the neckwear and movable laterally to impart tension and also movable rotatably to impart an increase tension to the neckwear, and a locking member on the plate member with which the bar engages when moved in the last-mentioned direction to hold the garment in stretched condition.

3. As a new article of manufacture, a garment stretcher consisting of a body member composed of sheet material, said material being cut-away adjacent its upper portion to form a sustaining arm for holding neckwear or the like, said material being cut adjacent its lower portion to form a hook member at one side, and a bar member loosely pivoted to the opposite side and adapted to be disposed transversely of the body member for engaging neckwear articles sustained thereby and engageable with the hook member aforesaid for holding said articles upon the body member.

1,153,151. CAR-BRAKE. PHILIPP BOCH, New York, N. Y., assignor of one-half to Paul Reich, New York, N. Y. Filed June 20, 1914. Serial No. 846,304. (Cl. 188—64.)



1. A car-brake comprising a main supporting cross-bar secured at its ends to the car truck, wheel brake-shoes between the truck wheels, said wheel brake-shoes having opposed converging rear faces, rail brake-shoes one at each side of the truck between the wheel brake-shoes, a wheel brake-beam having at each end a wedge-shaped member adapted when the beam is moved to engage the converging faces of the wheel brake-shoes and force them against the wheels, a rail brake-beam movable in opposite direction to the wheel brake-beam for applying the rail brake-shoes, and means for moving said brake-beams simultaneously in opposite directions.

2. A car-brake comprising a main supporting cross-bar secured at its ends to the car truck, wheel brake-shoes between the truck wheels, said wheel brake-shoes having opposed converging rear faces, rail brake-shoes one at each side of the truck between the wheel brake-shoes, a wheel brake-beam having at each end a wedge-shaped member adapted when the beam is moved to engage the converging faces of the wheel brake-shoes and force them against the wheels, a rail brake-beam movable in opposite direction to the wheel brake-beam for applying the rail brake-shoes, and means for moving said brake-beams simultaneously in opposite directions, and means for returning the brake-beams toward each other for releasing the shoes.

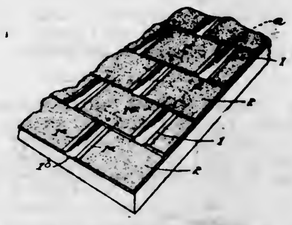
3. The combination of a truck frame provided with vertical guideways on its opposite sides, pillow blocks disposed at opposite sides of said truck and provided with guide studs loosely engaging said guideways, transverse links pivoted to opposite ends of said pillow blocks, rail brakes pivoted to said pillow blocks, a brake beam engaging said pillow blocks, and means for lifting and lowering said brake beam to set and release said brakes.

4. The combination of a truck frame provided with vertical guideways on its opposite sides, pillow blocks disposed at opposite sides of said truck frame and provided with guide studs loosely engaging said guideways, transverse links pivoted to the opposite ends of said pillow blocks, rail brakes pivoted to said pillow blocks, yielding supports for said links, a vertically sliding brake beam engaging said guideways and means for depressing said sliding brake beam for setting the rail brakes.

5. The combination of a truck frame provided with vertical guideways on its opposite sides, pillow blocks disposed at opposite sides of said truck and provided with guide studs loosely engaging said guideways, transverse links pivoted to opposite ends of said pillow blocks, rail brakes pivoted to said pillow blocks, yielding supports for said links, a vertically sliding brake beam engaging said guideways and means for depressing said sliding brake beam for setting the rail brakes.

[Claims 6 and 7 not printed in the Gazette.]

1,153,152. ROOFING. FRANCIS BRUCKER, Lansing, Mich. Filed Dec. 9, 1914. Serial No. 876,251. (Cl. 108—9.)



1. The herein described combination roofing consisting of a series of courses of flexible shingles, and a series of supplementary narrow metallic strips of trough-form, one of said strips being placed with its trough portion between the adjacent edges of the shingles of each course, and with its edges overlapping the adjoining edges of the shingles, said strips having their upper ends secured by nails passing through the underlying shingles, the nail heads being covered by the overlying shingles of the next upper course, the portion of each of said strips exposed to the weather being imperforate.

2. The herein described combination roofing consisting of a series of courses of shingles, and a series of supplementary narrow metallic strips of trough form, one of said strips being placed with its trough portion between the adjacent edges of the shingles of each course, and with its edges overlapping the adjoining edges of the shingles, said strip having at its upper end a portion of the trough raised flush with the sides thereof.

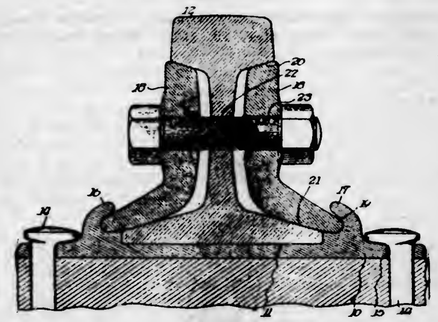
3. A fastening device for securing shingles in place comprising a strip of sheet metal of channel form having laterally projecting side flanges raised above the bottom of the channel a distance approximating the thickness of the shingle, a portion of the trough at one end of the strip being raised flush with the sides thereof.

4. A combination of roofing consisting of a series of lapped courses of flexible shingles, and a series of supplementary rigid metallic strips constructed to overlap the lateral edges of the shingles and to close the space between adjacent shingles, said strips having their upper ends secured by nails whose heads are covered by the overlying shingles of the next upper course.

5. A combination roofing comprising a series of lapped courses of flexible shingles and a series of metallic strips each having a vertical dimension substantially equal to the thickness of the shingles, said strips being interposed between adjacent shingles and extending under the overlapping shingles of the next upper course and there secured, and having portions overlapping the lateral edges of the exposed portions of the shingles between which they lie.

[Claim 6 not printed in the Gazette.]

1,153,153. RAIL-JOINT. HENRY A. CHRISTY, Kenilworth, Ill., assignor to American Car Roof Co., Chicago, Ill., a Corporation of Illinois. Filed June 21, 1915. Serial No. 35,194. (Cl. 239—6.)



1. In a rail-joint construction of the character described, the combination of a base-plate on which the ends of abutting rails are adapted to rest, said base-plate having a longitudinal socket above the bases of such rails, a fish-plate adapted to be disposed longitudinally of the abutting rails out of contact with their webs and with its lower edge accommodated in said base-plate socket, said fish-plate being constructed with a lengthwise bearing on its lower-portion adapted to bear on the bases of the rails outside of their heads only, said fish-plate also having a wedge-upper-portion adapted to engage the under surfaces of the rail-heads, and means to adjustably rock said fish-plate transversely of said bearing to tighten said wedge-portion under the rail-heads, substantially as described.

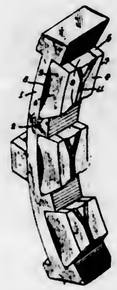
2. In a rail-joint construction of the character described, the combination of a base-plate adapted to support the ends of abutting rails and provided with oppositely disposed longitudinal sockets positioned above the bases of such rails, a pair of fish-plates adapted to be disposed longitudinally of and on opposite sides of the abutting rails and out of contact with their webs, each of said fish-plates having its lower-edge portion constructed for accommodation in one of said longitudinal sockets, each of said fish-plates constructed with a longitudinal bearing on its lower-portion adapted to bear on the bases of the rails outside of their heads only, each of said fish-plates also having a wedge-upper-portion adapted to en-

gage the under surfaces of the rail-heads, and means common to both of said fish-plates to adjustably rock said fish-plates transversely of the rails on their bearings, to tighten such wedge-portions under the rail-heads, substantially as described.

3. In a rail-joint construction of the character described, the combination of a pair of fish-plates constructed to have rocking bearings on the opposite base portions of abutting railroad rails, each of said fish-plates constructed to be out of contact with the rail webs and having a wedge-portion adapted to engage the under surfaces of the rail-heads, means common to both of said fish-plates to rock them on said rail-base bearings to tighten their wedge-portions under the rail-heads, said fish-plate bearings on the rail-bases being at points substantially in planes normal to the central portions of the rail-head surfaces engaged by the wedges, substantially as described.

4. In a rail-joint construction of the character described, the combination of a base-plate adapted to receive the ends of adjacent rails and provided with longitudinal sockets along its opposite sides, a pair of angle fish-plates each having a lower edge-portion adapted to be loosely received in one of said base-plate sockets, each of said fish-plates being constructed to be out of contact with the rail webs and to have a rocking bearing on the bases of the rails at a point substantially in a plane normal to the longitudinal central portion of the corresponding under surfaces of the rail-heads and having a wedge-portion adapted to engage the under surfaces of the rail-heads, and means to rock said fish-plates on such bearings to tighten their wedge-portions under the rail-heads, substantially as described.

1,153,154. BRAKE-SHOE. JAMES A. CONNELLY, Hamilton, Ohio. Filed Mar. 18, 1915. Serial No. 15,166. (Cl. 188—27.)



1. A brake-shoe comprising, a shoe proper provided with a series of tapered and dovetailed recesses extending entirely across its face, and a tapered dovetailed block removably sated in each recess and projecting out from the face of the shoe proper, the neighboring blocks being separated from each other whereby passages extending entirely across the structure are formed between neighboring blocks and between the face of the shoe proper and the wheel when the structure is in braking relationship to a wheel, combined substantially as set forth.

2. A brake-shoe comprising, a shoe proper provided with a series of tapered and dovetailed recesses extending across its face, and a tapered dovetailed block seated in each recess and projecting out from the face of the shoe proper, recesses being provided between the rear faces of the blocks and the shoe proper to provide ventilating air channels, combined substantially as set forth.

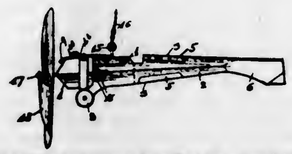
3. A brake-shoe comprising, a shoe proper provided with a series of tapered and dovetailed recesses extending across its face, and a tapered dovetailed block seated in each recess and projecting out from the face of the shoe proper the rear face of each block being provided with a recess extending from end to end, combined substantially as set forth.

4. A brake-shoe comprising, a shoe proper provided with a series of tapered and dovetailed recesses extending across its face, and a tapered dovetailed block seated in each recess and projecting out from the face of the shoe proper, the rear face of each block being provided with a recess extending from end to end, and also with recesses extending across its upper and lower edges and communicating with the recess in the rear of the block, combined substantially as set forth.

5. A brake-shoe comprising, a shoe proper provided with a series of tapered and dovetailed recesses extending across its face, and a tapered dovetailed block seated in each recess and projecting out from the face of the shoe proper, the rear face of each block being provided with a recess extending from end to end, and also with recesses extending across its upper and lower edges and communicating with the recess in the rear of the block, and with a recess formed in its active face and communicating with the recesses in the upper and lower edges of the block, combined substantially as set forth.

[Claim 6 not printed in the Gazette.]

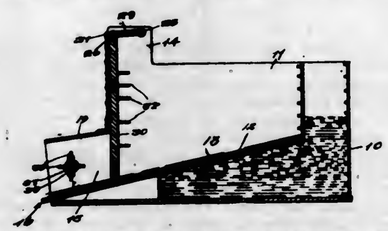
1,153,155. MINIATURE AEROPLANE. JOHN WILLIAM J. FRITSCH, Cincinnati, Ohio, assignor to Marie Elizabeth Fritsch, Cincinnati, Ohio. Filed Feb. 9, 1915. Serial No. 7,207. (Cl. 46—37.)



1. A miniature aeroplane hanging on a cord by which to be twirled and operated, having a center block, a hollow body attached to said center block flattened on its rear end for rudder and tail wings and formed on its front end to appear as wheels below the front end of the aeroplane, a plane adjustably attached above the center block, and a propeller attached to the front end of the aeroplane turning when the aeroplane is operated by twirling.

2. In a miniature aeroplane, a center block, a hollow body attached to the center block, rear wings formed by the flattened hollow body, wheel-shapes formed below the front part, a plane adjustably attached above the center block, a brace attached to and reinforcing the plane, an eye-bolt screwed into the center block from the top, a cord fastened to the eye-bolt for operating the aeroplane by hand, twirling it at will, and a propeller turnably attached to the front operated by said twirling.

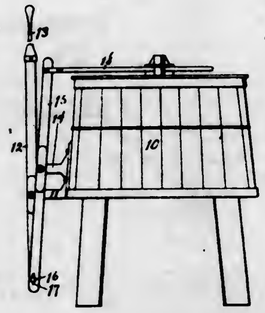
1,153,156. STOKER FOR LOCOMOTIVE-BOILERS AND THE LIKE. EDWARD FULLER, Jr., Altheimer, Ark., assignor of one-third to Charles E. Collier, Altheimer, Ark., and one-third to D. D. Leary, Wabbaseka, Ark. Filed May 20, 1914. Serial No. 839,751. (Cl. 110—101.)



1. The combination with a fire-box having a fuel feeding opening, of a chute for supplying material through the opening disposed adjacent the same, a pivoted lid to normally cover the chute, means to retain the pivoted lid in the open position, approximately vertically arranged rods attached to the fire box adjacent opposite sides of the opening, a movable door adapted to cover and uncover the fire-box opening, elements attached to the movable door and having sliding engagement with the approximately vertically arranged rods, and means to supply material to the chute.

2. In apparatus of the character described, a fuel holding receptacle having a longitudinally inclined bottom wall and an outlet chute adjacent the lower end of the inclined bottom wall with the end wall of the receptacle adjacent said chute extending substantially vertically above it for a substantial distance, a plate arranged within the receptacle inwardly of and adjacent the substantially vertical end wall of the receptacle to engage therewith and with the bottom wall of the receptacle, a plurality of approximately horizontal agitator members secured to the plate and extending inwardly beyond the same for a substantial distance, a substantially horizontal rock-shaft arranged inwardly of the plate and connected with the receptacle and provided with an inner crank portion pivotally connected with the upper end of the plate and provided near one end with a crank, a rotatable shaft provided with the crank, a pitman pivotally connecting said cranks, a rotatable feeding element disposed within the chute in advance of said plate, driving connecting means between the rotatable feeding element and the rotatable shaft, and means to rotate the rotatable shaft.

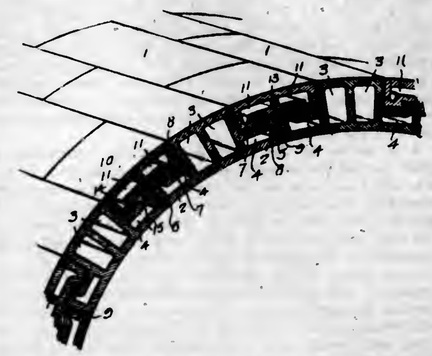
1,153,157. HAND-OPERATED DRIVING MECHANISM. WILLIAM H. GEORGE, Dexter, Iowa, assignor to The Dexter Company, Fairfield, Iowa, a Corporation of Iowa. Filed June 5, 1911. Serial No. 632,089. (Cl. 74—5.)



1. A hand operated driving mechanism comprising a suitable support, a rocking lever fulcrumed intermediate of its ends on said support, a device to be driven, power transmitting means connected to one end of the rocking lever and connected in driving relation to the part to be driven, a hand-lever fulcrumed intermediate its ends on said support substantially parallel to said rocking lever, and a connection between the free end of the rocking lever and one end of the hand-lever so that as the hand-lever is actuated the rocking lever is oscillated about its fulcrum and motion is transmitted to the power transmitting means.

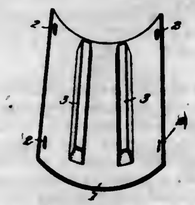
2. A hand operated driving mechanism comprising a suitable support, a hand-lever fulcrumed intermediate its ends to said support, an intermediate lever fulcrumed intermediate of its ends to the support and arranged for oscillation in a path parallel to the swinging path of the hand-lever, power transmitting means connected in driving relation to the part to be driven, and a pivotal connection between the free ends of the hand-lever and intermediate lever.

1,153,158. SEWER CONSTRUCTION. WILLIAM BEALL GRAY, Louisville, Ky., assignor to Martin J. Bannon, Louisville, Ky. Filed Sept. 30, 1914. Serial No. 864,263. (Cl. 72—51.)



A wall construction, comprising a series of constructor blocks and a series of key blocks, each constructor block consisting of a body and lateral extensions at the inner face of the body and of less thickness than the body, each extension having a longitudinally extending groove on its upper face adjacent to the body and forming a longitudinally extending rib at the outer side edge of the extension, each groove having its outer side wall undercut, the said blocks being laid in courses with their ends and with the outer side edges of the extension abutting, and each key block having on its inner face a longitudinally extending groove having its side wall undercut, the least width of the grooves of the key blocks being greater than the greatest aggregate width of the ribs of the extensions to permit the direct engagement of the ribs with the extensions, and mortar arranged between the blocks for forming a mortar lock between the ribs and the grooves, the key blocks being laid between the bodies of adjacent courses of constructor blocks.

1,153,159. REINFORCEMENT FOR PIPE INSULATION. WILLIAM BEALL GRAY, Louisville, Ky., assignor to Martin J. Bannon, Louisville, Ky. Filed Jan. 29, 1915. Serial No. 5,094. (Cl. 154—44.)



1. A device of the character specified, comprising a sheet curved transversely and provided with slots at its side edges, and ribs on the concave face of the sheet and extending longitudinally thereof and spaced apart and parallel with respect to each other, the upper faces of the ribs being concave to fit the pipe and the sheet being curved to fit the insulation of the pipe, said ribs being connected by an integral web, said web having openings for receiving securing means to connect the ribs to the sheet.

2. A device of the character specified, comprising a sheet curved transversely and provided with slots at its side edges, and ribs on the concave face of the sheet and extending longitudinally thereof and spaced apart and parallel with respect to each other, the upper faces of

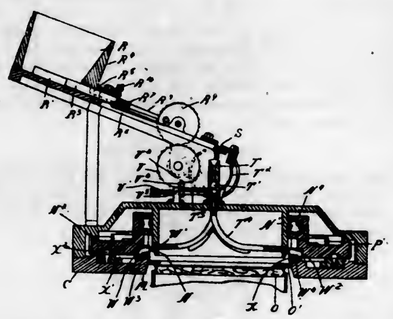
the ribs being concave to fit the pipe and the sheet being curved to fit the insulation of the pipe, each rib having an extension at each end, and each extension having an opening for receiving a securing means to permit the ribs to be connected to the sheet.

3. A device of the character specified, comprising a sheet curved transversely and provided with slots at its side edges, and ribs on the concave face of the sheet and extending longitudinally thereof and spaced apart and parallel with respect to each other, the upper faces of the ribs being concave to fit the pipe and the sheet being curved to fit the insulation of the pipe, said ribs being secured to the sheet.

4. A device of the character specified, comprising a sheet curved transversely and provided with slots at its side edges and ribs on the concave face of the sheet and extending longitudinally thereof and spaced apart and parallel with respect to each other, the upper faces of the ribs being concave to fit the pipe and the sheet being curved to fit the insulation of the pipe.

5. A device of the character specified, adapted to be connected to a pipe having an insulating cover, for supporting the pipe to prevent crushing of the insulation and comprising a sheet curved to fit the periphery of the covering and having ribs or extensions extending inwardly through the covering into contact with the pipe for supporting the said pipe to prevent the crushing of the covering.

1,153,160. BARREL-HEADING MACHINE. HENRY C. HESS, Pittsburgh, Pa., assignor, by mesne assignments, to South Side Trust Company, Pittsburgh, Pa., a Corporation of Pennsylvania, trustee. Original application filed Nov. 25, 1910, Serial No. 594,072. Divided and this application filed June 3, 1911. Serial No. 631,067. (Cl. 1—10.)



1. In a package heading machine, the combination with a movable support for the body of the package having a head in initial engagement therewith, of an abutment for said head, means for moving said support to force the head into the body, said abutment and movable support together constituting a press, an annular member in fixed relation to said abutment surrounding the headed end of the package, radial guides in said annular member for nails, and means operating in sequence to the operation of said press for forcing nails inward in said guides through said body and into the head.

2. In a package heading machine, the combination with an abutment for the head, of means for forcing the body of the package having a head initially engaged therewith against said abutment, an annular member surrounding the headed end of said package in fixed relation to said abutment and having radial guides for nails, means for periodically depositing nails in said guides, and means operating subsequently to the deposit of said nails and the engagement of the head with the body for driving said nails through the body into the head.

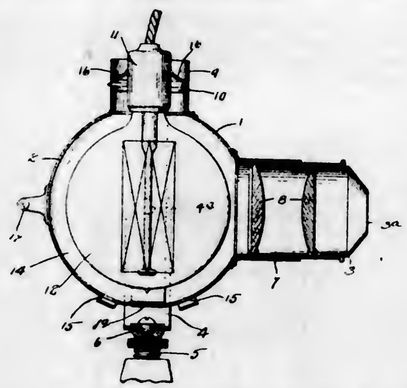
3. In a package heading machine, the combination with an abutment for the package head, of means for moving the head and body of the package against said abutment to complete the arrangement thereof, an annular member surrounding the abutment in fixed relation thereto having radial guides for nails, means for distributing a plurality of nails into the respective radial guides, and means for subsequently driving the nails from said guides through the body into the head of a package.

4. The combination with a nail guide, of a conduit through which the nail is fed to said guide in a direction reverse to that in which the nail is driven, an abutment for arresting movement of the nail in said conduit when in registration with said guide, means for preventing the recoil of the nail from said abutment, and drivers for the nails.

5. The combination with a series of radially arranged nail guides, of a holder for nails located centrally of said guides, means for periodically delivering nails from said holder corresponding in number to said guides, conduits through which said nails are respectively conducted radially outward to said guides, stops for the nails when in registration with said guides, means for preventing the recoil of said nails, and drivers for said nails.

[Claims 6 to 19 not printed in the Gazette.]

1,153,161. LAMP FOR STEREOPTICONS. HARRY M. HILL, Kirkwood, Mo. Filed Aug. 23, 1913. Serial No. 786,324. (Cl. 240—41.)



1. A lamp of the class described comprising a pair of substantially hemispherical housing portions one supported upon the other and adapted to inclose a luminant, means on one of said portions for supporting the luminant, a barrel mounted on one of said housing portions, and condensing lenses mounted in said barrel.

2. A lamp of the class described comprising removable housing portions adapted to inclose a luminant, a support for a luminant provided on one of said housing portions, a barrel supported on one of said housing portions, condensing lenses supported thereby, and a diaphragm member having an axial aperture of less diameter than the barrel supported thereon in front of the condensing lenses.

1,153,162. GASKET. WINTHROP K. HOWE, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed Apr. 25, 1912. Serial No. 693,271. (Cl. 137—121.)

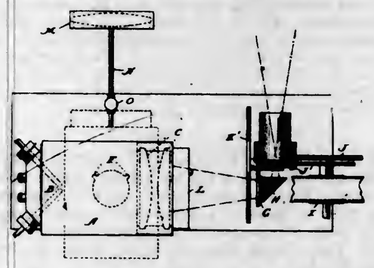


1. As an article of manufacture, a gasket composed of an inner body of felt-like material, an outer body of braided material and a metallic member positioned between the inner material and the outer material adapted for a fastening means for holding the gasket in position.

2. As an article of manufacture, a gasket composed of an inner body of felt-like material, an outer body of braided material, and a metallic member of relatively small diameter positioned longitudinally therebetween.

3. As an article of manufacture, a gasket composed of an inner resilient body, an outer covering of less easily disintegrated material, and a metallic member of relatively small diameter positioned longitudinally therebetween.

1,153,163. PICTURE-PROJECTING APPARATUS. CHARLES FRANCIS JENKINS, Washington, D. C. Filed Mar. 20, 1913. Serial No. 755,751. (Cl. 88—17.)



1. In apparatus of the class described, the combination with a plate having an exposure aperture, of means for throwing a projecting beam of light through said aperture, film feeding means upon the opposite side of the plate arranged to feed film across the axial line of said beam, means for deflecting the beam from said line after it passes through the film and before it meets any other obstruction, and a shutter arranged to interrupt the beam periodically before it reaches the plane of the plate.

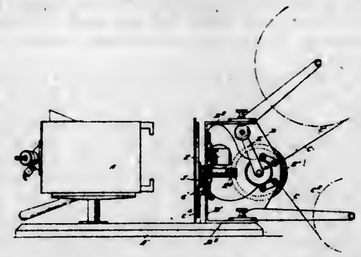
2. The combination with a projecting lantern mounted to rotate through an angle of 90°, of a plate provided with an exposure aperture in line with a beam from said lantern when at one limit of its path, means in the same vertical plane for feeding motion picture film over said aperture, a prism for deflecting the beam at right angles after it leaves said plate, a shutter in free air between the source of light and said plate, and a lens at an adjustable distance from the lantern and in position to receive the same beam when the lantern is at the opposite limit of its path.

3. The combination with a casing revoluble upon a vertical axis through an angle of 90°, of fixed stops for limiting the rotation in each direction, means within the casing for generating and condensing a projecting beam, a plate provided with an exposure aperture in alinement with the beam when the casing is at one limit of its movement, an adjustable lens in position to aline with the beam when the casing is at the opposite limit of its movement, means in the vertical plane of a beam passing through said aperture for feeding the film over the latter, means for deflecting the beam immediately after it leaves the film at said aperture, and a rotary shutter located in the open air in position to interrupt the beam periodically before it reaches said aperture.

1,153,164. MOTION-PICTURE APPARATUS. CHARLES FRANCIS JENKINS, Washington, D. C. Filed Mar. 20, 1913. Serial No. 755,753. (Cl. 88—18.4.)

1. For intermittently feeding perforated film, a tapered film feeding claw tooth having its lower face approximately horizontal adapted to be advanced into a film perforation and to fit, when advanced, the space between the foremost and rear margins of the perforation, and means for moving the tooth in a direction approximately normal to the plane of the film, into and out of engagement therewith and for advancing it laterally while so engaged.

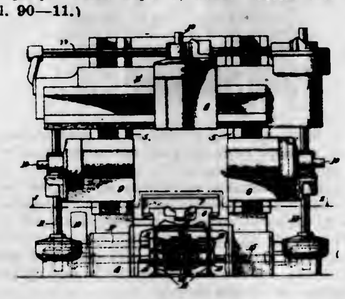
2. The combination with a member having an aperture for exposing film, of means for guiding perforated film over said aperture, a toothed member, for engaging in the film perforations, mounted to rock about an axis substantially parallel to and at one side of the film's path and to slide bodily along that axis, a cam for reciprocating the latter member in the line of said axis, and a second cam arranged to rock the toothed member about said axis alternately into and out of engagement with the film.



3. The combination with a guide for film passing the exposure point, of a film engaging spring fork mounted to rock upon on axis parallel to and at one side of the film's path, a rotary shutter, a cam rigidly connected with the shutter rotating therewith and arranged for reciprocating said fork in the direction of the movement of the guided portion of the film, and a cam also rotating with the shutter similarly connected therewith and arranged to swing said fork into and out of film engaging position.

4. The combination with a plate having an aperture for exposing film and means for guiding a film strip over said aperture, of a shaft, parallel to the film's path, mounted at one side of said aperture in a fixed bearing, offset and provided at its free end with a film engaging spring fork, a rotary shutter, a cam rigidly connected with the shutter and arranged to reciprocate the shaft longitudinally, and a second cam similarly connected with the shutter and adapted to rock the fork periodically for moving it into and out of engagement with the film.

1,153,165. MILLING-MACHINE. JOHN R. JOHNSON, Rockford, Ill., assignor to Ingersoll Milling Machine Company. Filed Sept. 9, 1913. Serial No. 788,798. (Cl. 90—11.)



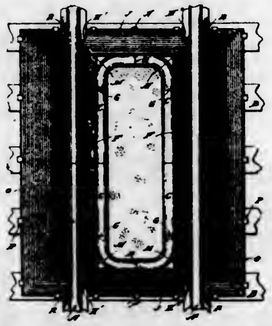
1. In a milling machine of the planer type, the combination of spaced vertical side housings, a bed disposed intermediate the same, having spaced side walls and a top wall, a table slidably mounted on the top wall, a spindle saddle mounted on each side housing, a vertical shaft adjacent to each side housing and in driving connection with each spindle, a horizontal shaft extending transversely through the bed and being in driving connection at its ends with said vertical shafts, a gear transmission disposed within the bed and mounted in the side walls thereof, a driving connection between said transmission and the horizontal shaft intermediate the side

walls, and means for driving said transmission from the outer side of the bed.

2. In a milling machine of the planer type, the combination of a bed having spaced vertical side walls and a top wall, a table slidably mounted upon the top wall, side housings at the outer sides of the side walls, spindle saddles carried by the side housings, a vertical spindle drive-shaft adjacent to each side housing, a horizontal shaft connecting the vertical shafts and extending through the side walls of the bed, a gear transmission mounted in the bed and being in driving connection with said horizontal shaft within the side walls of the bed, and means for driving said transmission from the outer side of the bed.

3. In a milling machine of the planer type, the combination of a longitudinal bed having spaced vertical side walls and a top wall joining the same, a table mounted to slide longitudinally on the top wall, a vertically extending side housing disposed at the outer side of each side wall, a spindle saddle mounted to slide vertically on each side housing, a vertical shaft disposed adjacent to each side housing at the outer side of the bed and being in driving connection with the adjacent spindle, a horizontal shaft extending transversely through the bed and being in direct driving connection at its ends with said vertical shafts, a horizontal drive shaft extending through one of the side walls of the bed and adapted to be driven from its outer end, and a variable speed gear transmission located within the walls of the bed and connecting the drive shaft with the first mentioned horizontal shaft whereby to transmit variable speed drive to the latter shaft at a point thereon within the walls of the bed.

1,153,166. RAILWAY-TRACK CROSSING. GEORGE H. KNOWLES, Wyoming, Ill., assignor of one-half to John J. Abbott and one-half to Alva J. Adams, Wyoming, Ill. Filed Apr. 12, 1913. Serial No. 760,722. (Cl. 104—14.)



1. In a track crossing structure, in combination, the track rails, a frame lying between the rails, opposite portions of which lie substantially parallel to and spaced from the rails, a member secured to and carried by the frame at each side and extending between the frame and an adjacent rail and engaging beneath the head of the same and held by it, and a member extending between the rails at each end of the frame and extending beneath the rails heads and secured relative to said rails and lying adjacent the frame ends.

2. In a track crossing structure, in combination, the track rails, a frame lying between the rails comprising two half portions each lying substantially parallel to and spaced from one of the rails and each at its ends being formed with a bend substantially at right angles, the ends of the portions abutting upon one another, a member secured upon the outer side of each frame portion and engaging beneath the head of its respective rail and held down by the same, and a member lying between the rails adjacent the frame its ends lying beneath the rails heads.

3. In a track crossing, in combination, the track rails, a rectangular part lying between the rails and spaced from the same, a member lying between the part and each rail and having a groove in its upper surface, an approach at each end of the said part lying at right angles to the length of the rails and abutting against the part, and against the ends of the said members, each said approach having a notch in its upper portion in register with and forming a continuation of the grooves of the said members.

4. In a track crossing, the combination with the track rails, of an inclosure or frame lying between the rails, a ground member lying between the frame and each rail and engaging beneath the head of each said rail and adapted to secure the said frame relatively to the rails, and an approach abutting upon the frame and lying perpendicularly to the rails.

5. In a track crossing, the combination with the track rails, of an inclosure or frame lying between the rails, a ground member lying between the frame and each rail and engaging beneath the head of each said rail and adapted to secure the said frame relatively to the rails, and an approach abutting upon the frame and upon the ends of the grooved member and having recesses therein corresponding in position to the grooves of said member.

[Claims 6 to 9 not printed in the Gazette.]

1,153,167. SOAPS CONTAINING ACTIVE OXYGEN AND PROCESS OF MAKING THEM. ERNST KOCHENDOERFER, Frankfort-on-the-Main, Germany, assignor to the Firm of Roessler & Hasslacher Chemical Company, New York, N. Y., a Society organized under the laws of New York. Filed June 24, 1915. Serial No. 36,133. (Cl. 87—5.)

1. A process for preparing soap containing active oxygen which consists in mixing dehydrated and comminuted soap with compounds adapted to deliver active oxygen and subjecting the mixture to a pressure high enough to cause it to melt down to a homogeneous mass.

2. A process for preparing soap containing active oxygen which consists in mixing dehydrated and comminuted soap with a perborate and subjecting the mixture to a pressure high enough to cause it to melt down to a homogeneous mass.

3. As a new composition of matter a fused and substantially anhydrous mixture of soap and compounds containing active oxygen and characterized by its exceedingly great stability.

4. As a new composition of matter a fused and substantially anhydrous mixture of soap and a perborate, possessing very great stability.

1,153,168. ELECTROLYTIC APPARATUS. ISAAC H. LEVIN, Newark, N. J., assignor to International Oxygen Company, a Corporation of New Jersey. Original application filed May 9, 1913, Serial No. 766,469. Divided and this application filed Feb. 26, 1914. Serial No. 821,126. (Cl. 204—9.)

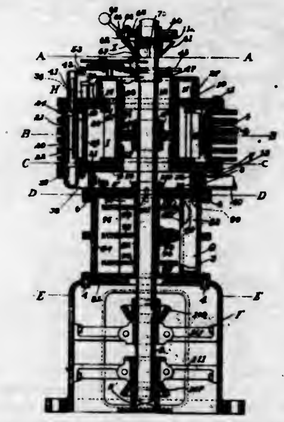


1. An electrolytic apparatus embodying therein a bipolar electrode, the anode of which has a nickel surface and the cathode of which has an iron surface.

2. An electrolytic apparatus embodying therein an electrolytic couple consisting of an iron anode having an operative surface composed of nickel applied thereto by electro-decomposition, and a cathode having an operative surface of iron.

1,153,169. ROTARY EXPLOSIVE-ENGINE. FRANK A. MILLER, Montgomery, Ala. Filed Sept. 15, 1913. Serial No. 789,743. (Cl. 123—15.)

1. A rotary engine comprising in combination, a casing, a rotor within said casing and forming therewith an annular chamber, spaced impelling elements carried by said rotor, pivoted means disposed within said chamber adapted to coöperate with said impelling elements to form pockets, wear plates tensionally engaging said pivoted means for guiding and limiting the movement thereof in one direction, valved fuel inlets adapted to communicate with each of said pockets, means for operating said valved inlets to deliver into said pockets, means for igniting the fuel in each pocket, and exhaust ports for the spent gases.



2. A rotary engine comprising, in combination, a casing, a rotor within said casing and forming therewith an annular chamber, spaced impelling elements carried by said rotor, pivoted means disposed within said chamber adapted to coöperate with said impelling elements to form pockets, wear plates tensionally engaging said pivoted means for guiding the movements thereof, a backstop on said wear plates for limiting the movement of said pivoted means in one direction, means for normally holding said pivoted means against said backstop, valved fuel inlets adapted to communicate with each of said pockets, means for operating said valved inlets to deliver into said pockets, means for igniting the fuel in each pocket, and exhaust ports for the spent gases.

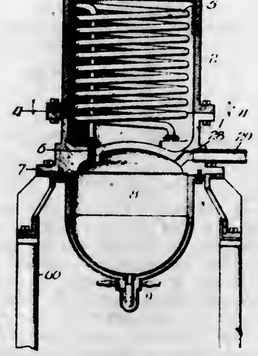
3. In a rotary explosive engine, the combination of a cylinder, a rotor co-axial with said cylinder forming a chamber and having a plurality of impelling elements on its periphery, a plurality of swinging abutments seated in the wall of said cylinder and pivoted therein so as to swing across said chamber and assist in forming pockets in which compressed fuel is received and fired, the number of abutments being different from the number of impelling elements on said rotor, said impelling elements being formed with inwardly and forwardly sloping faces which are adapted to sweep over said abutments and swing them out of their path, means for returning said abutments across said chamber immediately back of the impelling elements, a valve in the wall of said cylinder communicating with each of said pockets and adapted to admit fuel therein the valves being of uneven number as regards the number of impelling elements on said rotor, means for firing the fuel in each of said pockets, said rotor being formed with an exhaust passage leading from in front of each impelling element and terminating through the end of said rotor and an end plate on said cylinder having port openings with which said exhaust passages are adapted to register to exhaust spent gases from the pockets and having perforations which are adapted to register with said port passages to release gases remaining in front of the impelling elements and back of said abutments across said chamber.

4. In a rotary explosive engine, the combination of a cylinder, a rotor co-axial with said cylinder forming a chamber and having a plurality of impelling elements on its periphery and exhaust passages from said chamber from in front of said impelling elements and through the rotor's end, plurality of abutments pivoted in the wall of said cylinder and adapted to swing across said chamber and assist in forming a series of pockets and to move back out of the path of said impelling elements, said chamber having a plurality of valved inlets for compressed fuel into said series of pockets, means for firing the fuel in said pockets and a pair of spring pressed wear rings having seats in which the ends of said abutments are adapted to turn and stop shoulders defining the position of said abutments across said chamber, said rings being held tight upon the opposite ends of said abutments to produce gas tight joints.

5. A rotary engine comprising, in combination, a casing, a shaft extending through said casing, a rotor keyed upon said shaft and forming with said casing an annular chamber, spaced impelling elements carried by said rotor, a plurality of swinging abutments disposed within said chamber and adapted to coöperate with said impelling elements to form pockets, valved fuel inlets adapted to communicate with each of said pockets, a driving collar carried by said shaft and having cam surfaces, mechanism connected with said valved inlets and adapted to be tripped by said cam surfaces for operating said valved inlets to deliver into said pockets, means actuated by said shaft to frictionally engage said collar for automatically governing the movements of said valved inlets to regulate the amount of fuel delivered into said pockets, means for igniting the fuel in said pockets, and exhaust ports for the spent gases.

[Claims 6 to 8 not printed in the Gazette.]

1,153,170. CONTINUOUS COOKER OR EVAPORATOR. ARTHUR R. MORSE, Chicago, Ill. Filed Sept. 26, 1910. Serial No. 583,738. (Cl. 127—9.)



1. A continuous cooker or evaporator, comprising an externally heated container having an inlet and an outlet, and means controlling the flow of liquid through said container, in combination with a pair of temperature controlling chambers, means for connecting said container to said temperature controlling chambers, means for directing the material from said container to either of said chambers, and means for maintaining a partial vacuum in either of said temperature controlling chambers.

2. A continuous cooker or evaporator, comprising an externally heated elongated tubular container having an inlet and an outlet, and means for controlling the flow of liquid through said container, in combination with a pair of temperature controlling chambers, means for connecting said container to said temperature controlling chambers, means for directing the material from said container to either of said chambers, and means for maintaining a partial vacuum in either of said temperature controlling chambers.

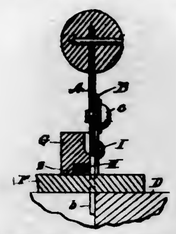
3. A continuous cooker or evaporator, comprising an externally heated container having an inlet and an outlet at its respective ends, and means for controlling the flow of liquid through said container, in combination with a pair of temperature controlling chambers, means for connecting said container to said temperature controlling chambers, means for directing the material from said container to either of said chambers, and means for maintaining a partial vacuum in either of said temperature controlling chambers.

4. A continuous cooker or evaporator, comprising an externally heated container having an inlet and an outlet and a pump for controlling the flow of liquid through said container, in combination with a pair of temperature controlling chambers, means for connecting said container to said temperature controlling chambers, means for directing the material from said container to either of said chambers, and means for maintaining a partial vacuum in either of said temperature controlling chambers.

5. A continuous cooker or evaporator, comprising an externally heated container having an inlet and an outlet, and means for controlling the flow of liquid through said container, in combination with a pair of temperature controlling chambers, means for controlling the temperature of said chambers, and means for connecting said container to said temperature controlling chambers, means for directing the material from said container to either of said chambers, and means for maintaining a partial vacuum in either of said temperature controlling chambers.

[Claims 6 to 22 not printed in the Gazette.]

1,153,171. CLAPBOARD-MARKER. HENRY NEISTADT, Ames, Iowa, assignor to The Stanley Rule & Level Company, New Britain, Conn., a Corporation of Connecticut. Filed Jan. 7, 1915. Serial No. 1,016. (Cl. 33—33.)

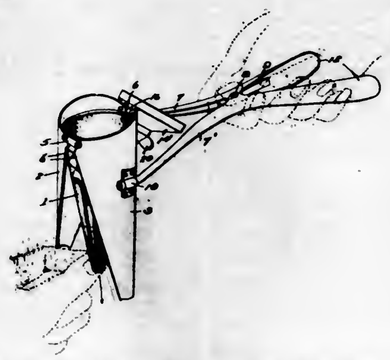


A marking tool comprising a frame, gage arms carried thereby, a relatively fixed marking blade on said frame having a cutting edge in substantially the plane of the working face of the gage-arms and movable with said frame across the face of a clapboard for marking said clapboard, and a gage bar carried by the frame, provided with a smooth bearing face spaced to one side of the marking blade for angularly positioning and slidingly supporting the tool on the clapboard, said gage bar and cutting edge being adjustable in respect to each other and toward or away from the plane of engagement with the clapboard whereby to incline the tool to one side or the other to cause the cutting edge to mark the clapboard for an "easy" or for a "driving" fit.

1,153,172. ICE-CREAM-CONE FILLER. WILLIAM A. ROBINSON, Old Fort, N. C. Filed June 8, 1915. Serial No. 32,979. (Cl. 107—48.)

1. An ice-cream cone filler, comprising a two-part holder adapted to receive a cone, and having semi-conical sections pivotally connected at the larger ends, a molding cover pivotally secured to one of said sections, and a handle having lever-arms secured to said sections.

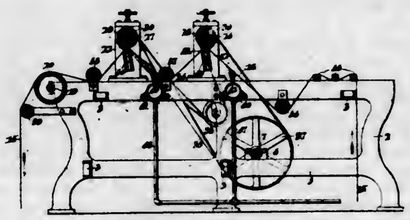
2. An ice-cream cone filler, comprising a two-part holder adapted to receive a cone, said holder having semi-conical sections pivotally connected at the larger ends upon opposite sides, a molding cover pivoted to the larger end of the holder, a cutting member secured to the cover, means for actuating said member, and a handle having fulcrumed lever-arms pivotally connected respectively to said sections.



3. An ice-cream cone filler, comprising a two-part holder adapted to receive a cone, said holder having semi-conical sections pivotally connected at the larger ends upon opposite sides, a molding cover pivoted to the larger end of said holder and normally yieldingly held at one side thereof, a cutting member rotarily mounted within the inclosure of said cover, and an actuating member rotarily secured upon the outer side of the cover and having a stem passing therethrough and secured to said cutting member.

4. An ice-cream cone filler, comprising a two-part holder adapted to receive a cone, and having semi-conical sections, links pivotally connecting the larger ends of said sections upon opposite sides, a molding cover pivotally secured to one of said links, and a handle having fulcrumed lever-arms pivotally connected to the sides of said sections.

1,153,173. NAPPING-MACHINE. RICHARD J. STEINER, Philadelphia, Pa., assignor to Philadelphia Pile Fabric Mills, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 21, 1913. Serial No. 749,790. (Cl. 26—4.)



1. A napping machine including in combination, means for supporting a pile fabric and nap laying devices operating to lay the nap in longitudinal sections and alternately in opposite directions.

2. A napping machine including in combination, a supporting bar having a straight edge over which a pile of fabric may be bent, and a rotating brush roller at each side of said straight edge, and having spaced brush sections adapted to lay the nap in longitudinal sections and alternately in opposite directions.

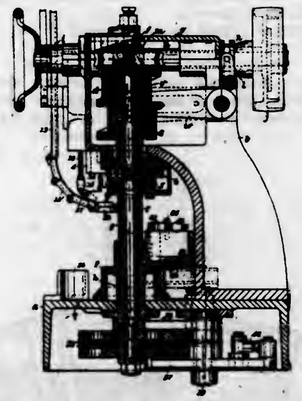
3. A napping machine including in combination, means for supporting a pile fabric and nap laying devices operating to lay the nap in longitudinal sections and alternately in opposite directions, and means for subjecting the fabric to sprays of steam prior to the engagement with said nap laying devices.

4. A napping machine including in combination, spaced supporting bars over which a pile fabric is successively fed, means coöperating with said supporting bars for bending the fabric at each bar, and a nap laying device coöperating with each supporting bar to lay the nap in longitudinal sections and alternately in opposite directions.

5. A napping machine including in combination means for supporting a pile fabric, means for feeding said fabric longitudinally over said support, and a plurality of rotating rollers disposed transversely over said fabric, each roller being provided with spaced continuous brush sections adapted to simultaneously engage and lay the nap of said fabric, and means for rotating said rollers in opposite directions.

[Claims 6 to 14 not printed in the Gazette.]

1,153,174. BOTTLE-SEALING MACHINE. AMOS CALLAHAN, Brooklyn, N. Y., assignor to Benjamin Adriance, Brooklyn, N. Y. Filed Oct. 6, 1913. Serial No. 793,523. (Cl. 113—2.)



1. In combination, a table and a pedestal upstanding from the table and having a forwardly projecting overhang, a rotary container-supporting means arranged under the overhang and having its axis of rotation extending vertically therethrough, a sealing means arranged laterally of and on the overhang, means to shift the containers past the sealing means in a direction lateral of the overhang, and means to actuate the sealing, container-supporting and shifting means.

2. In combination, a table and a pedestal upstanding from the table and having an overhang, a vertical rotary structure journaled in and depending from the overhang, a sealing means movable up and down in the overhang, a rotary container-support concentric with said structure and arranged below the overhang, means, carried by the overhang, for transmitting power from said structure to the sealing means and container support, and means to rotate said structure.

3. In combination, a table and a pedestal upstanding from the table and having an overhang, a vertical rotary structure journaled in and depending from the overhang, a sealing means movable up and down in the overhang, a rotary container-support concentric with said structure, arranged below the overhang and supported on the table, means, carried by the overhang, for transmitting power from said structure to the sealing means and container support, and means to rotate said structure.

4. In combination, a suitable supporting means, a closure supply source and a sealing head arranged in the supporting means and movable therein one relatively to the other, the sealing head being arranged below the closure supply source, and a chute leading down from and attached at its upper end to the closure supply source and having its lower end attached to the sealing head, the lower end portion of the chute consisting of a number of pivotally connected sections arranged in a curve and the remainder of the chute being inflexible.

5. In combination, the frame, a sealing-head-carrying structure movable therein, means to deliver a normally advanced line of closure to the sealing head, an obstructing device for the line of closures engageable with the latter relatively behind the closure about to be applied and movable in said structure, and motion transmitting means connecting said device with a part of the frame.

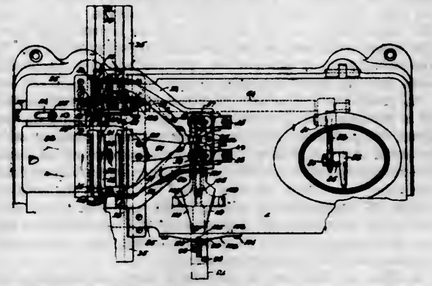
[Claims 6 and 7 not printed in the Gazette.]

1,153,175. PIN-RECEIVING DEVICE. EDWARD D. CONKLIN, Newark, N. J., assignor to The Whitehead & Hoag Company, Newark, N. J., a Corporation of New Jersey. Filed Jan. 21, 1913. Serial No. 743,268. (Cl. 132—27.)



In a pin-receiving device, an annular collet having one edge inturned to form a circumferential flange, a plurality of openings at the rear of the flange adapted for receiving pins, a panel fitted within the collet and having its edge resting against said flange, a protective sheet at the rear of said panel, a pad of puncturable material fitted within the collet and supported on one side by the protective sheet, a second supporting sheet within the collet at the opposite side of the pad, and a cap having a circumferential flange adapted to frictionally engage the other edge of said collet and hold the supporting sheets, the puncturable pad and the panel in operable position.

1,153,176. SEWING-MACHINE. HUGH COUSLAND, Singer, Clydebank, Scotland. Filed Jan. 17, 1913. Serial No. 742,532. (Cl. 112—24.)



1. In a sewing machine, in combination, a traveling work-holder provided with a toothed rack, a constantly reciprocating feed-actuator, a pawl mounted upon said actuator and normally engaging the teeth of said rack, and pawl-retracting means normally spring-pressed out of engagement with the pawl.

2. In a sewing machine, in combination, a work-holder support formed with an open ended guide-way, a work-holder slidingly and removably mounted in the guide-way of said support, said work-holder being provided with two series of clutch elements and an elongated needle aperture intermediate the same, a reciprocating feed-actuator, a clutch device for connecting the same simultaneously with both series of clutch elements on the work-holder, and means for rendering said clutch device ineffective.

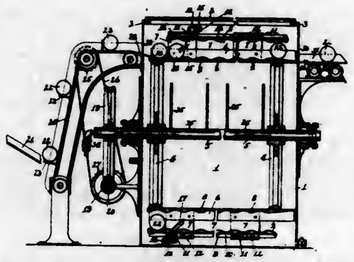
3. In a sewing machine, in combination, a traveling and sidewise-movable work-holder, a reciprocating feed-actuator, a clutch device comprising a member mounted upon said actuator to follow the sidewise movements of the work-holder, and means for shifting the work-holder sidewise relative to the movements imparted thereto by the clutch device.

4. In a sewing machine, in combination, a traveling and sidewise movable work-holder, a reciprocating feed-actuator, a clutch device comprising a member carried by said work-holder and a coöperating member adapted to follow the sidewise movements of the work-holder and operatively connected with the feed-actuator, and means for moving the work-holder sidewise.

5. In a sewing machine, in combination, a traveling and sidewise movable work-holder carrying a clutch element, a rocking feed-actuating element, a supporting pin mounted upon said actuating element parallel with its axis of movement, a clutch element slidingly mounted upon said pin and adapted for engagement with the clutch element of the work-holder, and means for shifting said work-holder sidewise.

[Claims 6 to 14 not printed in the Gazette.]

1,153,177. COOKER. ALFRED JOHN KEAST, San Jose, Cal., assignor of one-half to Nash, Engelhardt, Silva Mfg. Co., a Copartnership of San Jose, Cal., consisting of L. R. Nash, E. J. Engelhardt, and A. J. Silva. Filed June 1, 1915. Serial No. 31,482. (Cl. 126—272.)



1. In a machine of the described class, the combination of a heating box; a rotating carrier in said box, having about its periphery a plurality of can-ways parallel with its axis and adapted to receive successively, at one end, the incoming cans, and to deliver them successively from the other end; and means in each can-way, actuated by the revolution of the carrier, for periodically advancing each can one step, throughout said can-ways.

2. In a machine of the described class, the combination of a heating box; a rotating carrier in said box, having about its periphery a plurality of can-ways parallel with its axis and adapted to receive successively, at one end, the incoming cans, and to deliver them successively from the other end, each of said ways having throughout its length a succession of rest-pockets for the cans; and means in each can-way, actuated by the revolution of the carrier, for periodically shifting each can from one of said rest-pockets to the succeeding one.

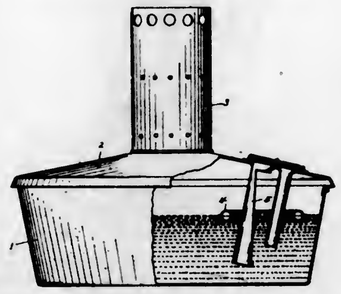
3. In a machine of the described class, the combination of a heating box; a rotating carrier in said box, having about its periphery a plurality of can-ways parallel with its axis and adapted to receive successively, at one end, the incoming cans, and to deliver them successively from the other end, each of said ways having throughout its length a succession of fixed rest-pockets for the cans; a shifting device in each can-way having a succession of rest-pockets opposing and complementing the fixed rest-pockets in the can-way; and means actuated by the revolution of the carrier to operate the shifting devices to successively advance the cans from rest-pocket to rest-pocket throughout said can-ways.

4. In a machine of the described class, the combination of a heating box; a rotating carrier in said box having about its periphery a plurality of can-ways parallel with its axis and adapted to receive successively, at one end, the incoming cans, and to deliver them successively from the other end; a fixed strip of corrugated metal in each can-way, the valleys of said strip forming a succession of rest-pockets for the cans; a movable strip of corrugated metal carried in each can-way, said movable strip opposing the fixed strip, its valleys forming complementary rest-pockets for the cans; and means actuated by the revolution of the carrier to periodically reciprocate the movable strip, to successively advance the cans from rest-pocket to rest-pocket throughout said can-ways.

5. In a machine of the described class, the combination of a heating box; a rotating carrier in said box, having about its periphery a plurality of can-ways parallel with its axis, said ways being formed by angle irons parallel with said axis and wall-blocks radial thereto; a fixed strip of corrugated metal lying upon said angle-irons in each can-way, the valleys of said strip forming a succession of rest-pockets for the cans; cross bars fitted to slide in the wall-blocks of the can-ways; a movable strip in each can-way carried by said cross bars, said movable strip being of corrugated metal opposing the fixed strip, its valleys forming complementary rest-pockets for the cans; and means actuated by the revolution of the carrier to periodically reciprocate the movable strip, to successively advance the cans from rest-pocket to rest-pocket throughout said can-ways.

[Claim 6 not printed in the Gazette.]

1,153,178. PRIMING APPLIANCE FOR ORCHARD-HEATERS. THOMAS SILK, Martins Ferry, Ohio. Filed Jan. 19, 1915. Serial No. 3,045. (Cl. 158—91.)



1. In an orchard heater having a container for liquid fuel, a device for confining a priming fluid to a limited surface area of such fuel, said device comprising a permanently detached tubular sheet-metal float of circular form.

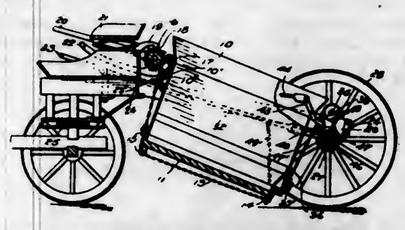
2. In an orchard heater having a container for liquid fuel, a device for confining the priming fluid to a limited surface area of such fuel, said device comprising a permanently detached hollow sheet-metal ring designed to float on said fuel.

3. In an orchard heater having a container for liquid fuel, a circular float disposed within and detached from said container for confining a priming fluid to a limited surface area of such fuel.

4. In an orchard heater, the combination with a fuel container and a cover therefor, said cover having a tube depending therefrom into said container, of a sheet metal float of endless form disposed in encircling relation to said tube.

1,153,179. DIRT-WAGON. HERMAN C. COPENHAGEN, Auburn, Wash. Filed Jan. 16, 1914. Serial No. 812,387. (Cl. 254—4.)

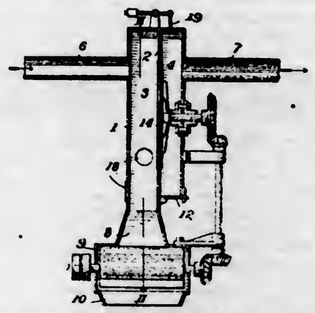
1. In a wagon, the combination with the wagon-frame, a box hingedly connected at its forward end to said frame, supporting wheels for the frame, the axle for the rear wheels being rotatably connected to said frame, a hoisting line connected with the rear end of said box and attached to said axle, and means for releasably coupling said axle to one of said wheels whereby the turning of the latter in the forward travel of the wagon will cause the line to be wound about the axle to elevate the box, of means for regulating the lowering of the box when the same is to be loaded, and means connected with said frame for suspending the box in its lowermost position.



2. In a wagon provided with a frame and a box hinged at its front end to said frame means for raising and lowering the rear end of said wagon-box, brake devices for controlling the speed of the box when lowered, means for supporting the wagon-box in its elevated position, said means also serving to actuate said brake devices.

3. In a wagon provided with a frame and box hingedly connected at its front end to the frame, means to raise and lower the rear end of said box, means connected with the frame for suspending the box in its lowermost position, and a hanger connected to said frame and engageable with the underside of the box for supporting the latter when in its elevated position.

1,153,180. COTTON-SEPARATOR. JAMES Y. HUGHES, Quanah, Tex. Filed May 3, 1910, Serial No. 559,075. Renewed Aug. 2, 1915. Serial No. 43,347. (Cl. 13—19.)



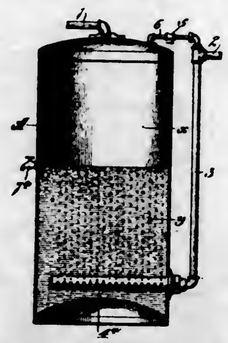
1. A cotton separator comprising a casing divided by a partition into two chambers, a perforated separator-wheel having a substantially plane unobstructed smooth operating surface and revoluble within an opening in said partition and in the plane thereof, one of said chambers having an opening for a conveyer-flue in its side wall and terminating at the bottom in a chute, the other chamber having an opening in its wall for a suction-tube and having its bottom portion closed to form a dust receptacle, and means for operating said separator-wheel.

2. In combination, a cotton separator comprising a casing having opposite walls connected respectively to a conveyer-flue and to a suction-tube, a perforated separator-wheel revoluble within said casing having a plane unobstructed operating surface and having its upper portion in alinement with said flue and tube, said casing terminating at the bottom in a chute, and a distributer belt coöperating with said chute and arranged to move in the plane of said separator-wheel and in the same direction as the adjacent portion thereof.

3. A cotton separator comprising a casing divided by a partition into two chambers, said partition having an opening therein, a conveyer flue entering the wall of one chamber and a suction tube entering the wall of the other chamber, said tubes being in alinement, a rotary screen having a plane unobstructed face operating within said opening and in alinement with said partition, said rotary screen being controlled independently of the blast supply, a distributer located beneath said casing and arranged to move in the plane of the screen, and adapted to receive the cotton when thrown from the screen, said screen and distributer being operated by a common source of power whereby a constant and uniform relative speed is secured between the two.

4. A cotton separator, comprising a casing divided by a partition into two chambers, a perforated separator-wheel having a substantially plane unobstructed smooth operating surface and revoluble within an opening in said partition, one of said chambers having an opening for a conveyer-flue in its side wall and terminating at the bottom in a chute, and the other chamber having an opening in its wall for a suction-tube, and means for operating said separator-wheel.

1,153,181. AIR-DRIER. GEORGE F. STEEDMAN, St. Louis, Mo., assignor to Curtis & Company Manufacturing Company, Wellston, Mo., a Corporation of Missouri. Filed June 18, 1914. Serial No. 845,969. (Cl. 34—2.)



1. An air drier consisting of a closed container provided adjacent its lowe rend with an inlet that communicates with the discharge pipe of an air compressor, a body of liquid in said container through which the air from the compressor passes before it enters the air storage space of the container, and means for equalising the pressure on opposite sides of said body of liquid in case a leakage of pressure at the compressor occurs when the compressor is not in operation.

2. An air drier consisting of a closed container provided adjacent its lower end with an inlet that communicates with the discharge pipe of an air compressor, a body of liquid in said container through which the air from the compressor passes before it enters the air storage space of the container, and a check valve arranged in a passageway between the air storage space of the container and the discharge pipe from the compressor and opening toward the compressor.

3. An air drier consisting of a reservoir partly filled with liquid, means for discharging the air from an air compressor into said liquid so as to cause the air to travel through the liquid in passing into the air storage space above the level of the liquid, means for breaking up the air entering said reservoir into small streams, and means for equalizing the pressure on both sides of the liquid in case a leakage of pressure at the compressor occurs when the compressor is not in operation.

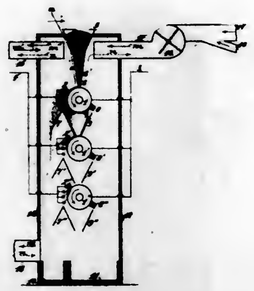
4. An air drier consisting of a reservoir partly filled with liquid, an outlet from said reservoir above the level of said liquid, a discharge pipe from an air compressor leading to the lower end portion of said reservoir and having an upright portion that rises to a point above the level of the liquid in said reservoir, a passageway for establishing communication between the upper portion of said reservoir and the upright portion of said compressor

discharge pipe, and a check valve in said passageway that opens toward the compressor.

5. An air drier consisting of a reservoir partly filled with liquid, an outlet from said reservoir above the level of said liquid, a discharge pipe from an air compressor leading to the lower end portion of said reservoir and having an upright portion that rises to a point above the level of the liquid in said reservoir, a passageway for establishing communication between the upper portion of said reservoir and the upright portion of said compressor discharge pipe, a check valve in said passageway that opens toward the compressor, means for breaking up the air entering said reservoir into minute bubbles, and means on said reservoir for determining the level of the liquid therein.

[Claim 6 not printed in the Gazette.]

1,153,182. PURIFICATION OF COAL. FREDERIC W. C. SCHNIEWIND, Englewood, N. J.; Elma M. Schniewind executrix of said Frederic W. C. Schniewind, deceased. Filed Dec. 19, 1912. Serial No. 737,689. (Cl. 83—49.)



1. The process of separating lustrous and non-lustrous coal constituents from each other, which comprises subjecting coal containing lustrous and non-lustrous constituents in a suitably crushed condition to electrostatic separation, and thereby differentially affecting the lustrous and non-lustrous coal constituents, and separately collecting the so differentiated components.

2. The process of purifying or separating coal from admixed conductive parts which comprises crushing the coal sufficiently to separate the better conductive particles from the less conductive particles, and thereafter separating the conductive particles from the freshly crushed coal by electrostatic means.

3. The process of purifying or separating coal from pyrites-containing gangue which comprises crushing the coal sufficiently to separate the gangue particles from the coal particles, and thereafter separating the gangue from the freshly crushed coal by electrostatic means.

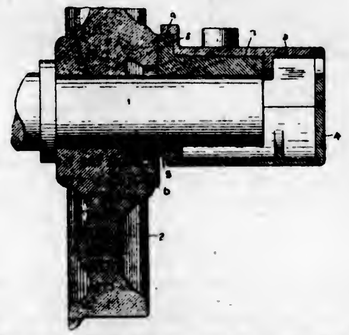
4. The process of purifying or separating coal from pyrites-containing gangue which comprises crushing the coal sufficiently to separate the gangue particles from the coal particles without separating the gangue from its contained pyrites, and thereafter bringing the crushed coal into contact with an electrostatically charged electrode whereby the conductive pyritical gangue after contact is repelled and thus separated from the non-conductive coal.

5. The process of purifying bituminous coals and of separating coking and non-coking constituents from each other, which comprises subjecting bituminous coal containing coking and non-coking constituents in a suitably crushed condition to electrostatic separation, and thereby differentially affecting the coking and non-coking coal constituents and separately collecting the so differentiated components.

[Claims 6 to 18 not printed in the Gazette.]

REISSUES.

13,976. AXLE-BOX. JAMES R. FLEMING, Scranton, Pa. Filed May 1, 1912., Serial No. 694,589. Original No. 1,014,214, dated Jan. 9, 1912. Serial No. 600,706. (Cl. 64—25.)



1. The combination with the bracket member of an axle box, of a bearing block movable relatively to said bracket member and provided with a semi-annular flange which fits into a corresponding recess in the face of said member upon the wheel side, said flange being adapted to receive the wheel thrust and having its ends engaged by transverse projections at the ends of the recess.

2. The combination with a wheel having a hub with an annular groove and an axle, of an axle box comprising a bracket member and a lubricant containing member, and a bearing block in the first member which engages the hub of the wheel, said second member having a semi-cylindrical projection which is spaced from the axle and projects into the annular groove provided therefor in the hub.

3. The combination with the bracket member of an axle box, of a bearing block removably seated in said bracket member and provided with a semi-annular flange which fits into a corresponding recess in the face of said member and is adapted to be engaged directly by the wheel hub and take the thrust thereof, the ends of said recess having walls extending toward the axle and engaging the ends of said flange.

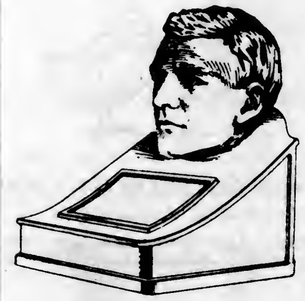
DESIGNS.

47,779. TRACE-CARRIER. CHARLES M. BENTLEY and EDWIN W. HARGISS, Hermitage, Mo. Filed Mar. 8, 1915. Serial No. 11,872. Term of patent 14 years.



The ornamental design for a trace carrier as shown.

47,780. DISPLAY-STAND. OSWALD B. CARSON, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association. Filed July 1, 1915. Serial No. 37,598. Term of patent 3½ years.



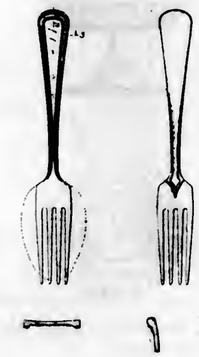
The ornamental design for a display stand as shown.

47,781. DISPLAY DEVICE. OSWALD B. CARSON, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association. Filed July 1, 1915. Serial No. 37,599. Term of patent 3½ years.



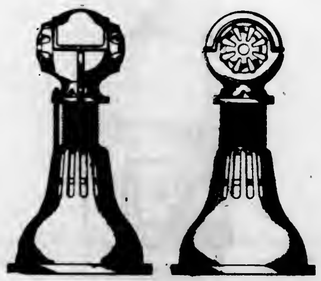
The ornamental design for a display device as shown.

47,782. SPOON, FORK, OR SIMILAR ARTICLE. GILBERT L. CROWELL, Jr., Arlington, N. J., assignor to Dominick & Haff, New York, N. Y. Filed Feb. 4, 1915. Serial No. 6,186. Term of patent 7 years.



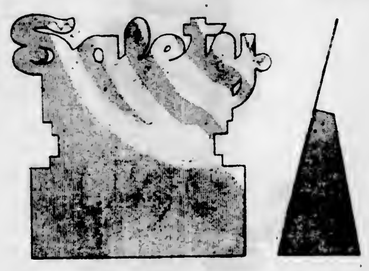
The ornamental design for a spoon, fork or similar article as shown.

47,783. FRAME FOR MOTOR-DRIVEN FANS. LLOYD D. FREELAND, Chicago, Ill., assignor to William J. H. Strong, Chicago, Ill. Filed June 11, 1915. Serial No. 33,602. Term of patent 14 years.



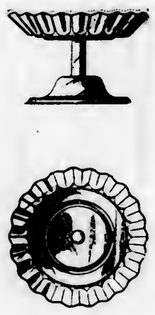
The ornamental design for the frame of a motor-driven fan, as shown.

47,784. ADVERTISING-EASEL. RUDOLF L. GRAEFE, Chicago, Ill. Filed Apr. 23, 1915. Serial No. 23,584. Term of patent 3½ years.



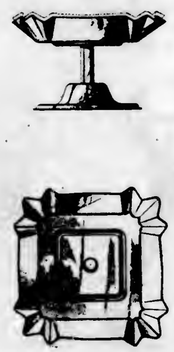
The ornamental design for an advertising easel as shown.

47,785. HOLDER FOR SANITARY PAPER ICE-CREAM PLATES. BONIFACE A. GRASBERGER, Richmond, Va. Filed June 19, 1915. Serial No. 35,176. Term of patent 14 years.



The ornamental design for a holder for sanitary paper ice cream plates, as shown.

47,786. HOLDER FOR SANITARY PAPER ICE-CREAM PLATES. BONIFACE A. GRASBERGER, Richmond, Va. Filed June 19, 1915. Serial No. 35,177. Term of patent 14 years.



The ornamental design for a holder for sanitary paper ice cream plates, as shown.

47,787. TOY DUCK. JOHN B. GRUELLE, New York, N. Y. Filed May 28, 1915. Serial No. 31,071. Term of patent 14 years.



The ornamental design for a toy duck, as shown.

47,788. TOY DUCK. JOHN B. GRUELLE, New York, N. Y. Filed May 28, 1915. Serial No. 31,072. Term of patent 14 years.



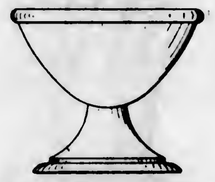
The ornamental design for a toy duck, as shown.

47,789. DOLL. JOHN B. GRUELLE, New York, N. Y. Filed May 28, 1915. Serial No. 31,073. Term of patent 14 years.



The ornamental design for a doll, as shown.

47,790. COLLEGE ICE-DISH. JOSHUA HUGHES, West Somerville, Mass. Filed May 3, 1915. Serial No. 25,615. Term of patent 7 years.



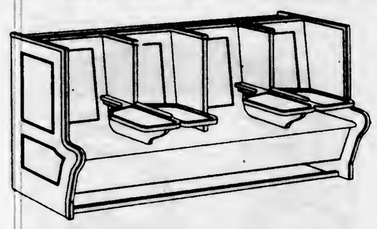
The ornamental design for a college ice dish as shown.

47,791. RAILWAY-COACH BODY. EDWARD B. JONES, Springfield, Ill. Filed July 13, 1914. Serial No. 850,827. Term of patent 3½ years.



The ornamental design for a railway coach body, as shown.

47,792. SETTLE FOR LUNCH-ROOMS. HARRY S. KELSEY, Brookline, Mass. Filed July 14, 1915. Serial No. 40,186. Term of patent 7 years.



The ornamental design for a settle for lunch-rooms, as shown.

47,793. SPUN METAL VESSEL. GEORGE C. KINDT, Jersey City, N. J., assignor to Geo. Borgfeldt & Co., New York, N. Y., a Corporation of New Jersey. Filed Feb. 11, 1915. Serial No. 7,606. Term of patent 3½ years.



The ornamental design for a spun metal vessel as shown.

47,794. PENHOLDER. JOHN H. KULOW, Buffalo, N. Y. Filed Oct. 21, 1914. Serial No. 867,914. Term of patent 3½ years.



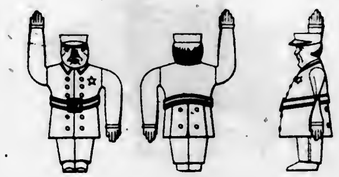
The ornamental design for a pen holder substantially as shown.

47,795. FLASK. JOHN O. LUDWIG, Cincinnati, Ohio, assignor to The Schuster Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 8, 1915. Serial No. 20,058. Term of patent 14 years.



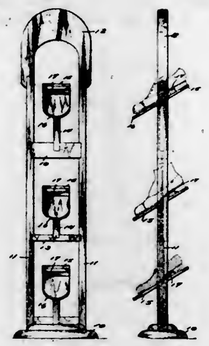
The ornamental design for a flask, as shown.

47,796. TOY. LEWIS A. MAPEL, St. Louis, Mo. Filed June 19, 1915. Serial No. 35,174. Term of patent 3½ years.



The ornamental design for a toy, as shown.

47,797. SHOE-DISPLAY RACK. JUDSON MOORE, Bainbridge, Ga. Filed June 8, 1915. Serial No. 32,978. Term of patent 14 years.



The ornamental design for shoe display rack as shown and described.

47,798. TUMBLER. HUGO PICK, Chicago, Ill. Filed June 7, 1915. Serial No. 32,745. Term of patent 14 years.



The new and ornamental design for a tumbler as shown and described.

47,799. TUMBLER. HUGO PICK, Chicago, Ill. Filed June 7, 1915. Serial No. 32,746. Term of patent 14 years.



The new and ornamental design for a tumbler as shown and described.

47,800. TUMBLER. HUGO PICK, Chicago, Ill. Filed June 7, 1915. Serial No. 32,747. Term of patent 14 years.



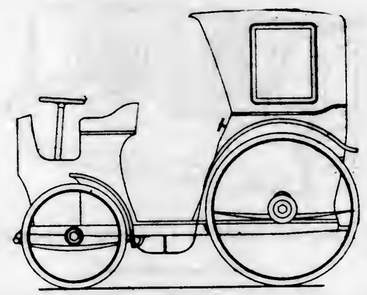
The new and ornamental design for a tumbler, as shown and described.

47,801. TABLE OR MANTEL ORNAMENT. WILLIAM RAMSING, Schenectady, N. Y. Filed Feb. 23, 1915. Serial No. 10,142. Term of patent 7 years.



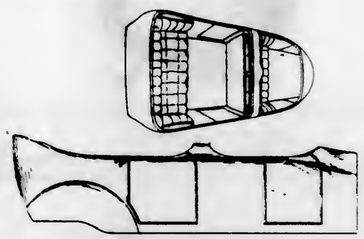
The ornamental design for a table or mantel ornament, as shown.

47,802. AUTOMOBILE. ALBERT FENIMORE ROCKWELL, Bristol, Conn. Filed May 10, 1915. Serial No. 27,279. Term of patent 14 years.



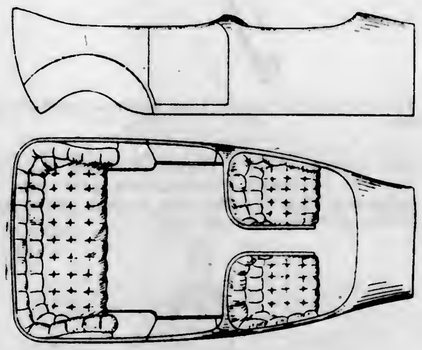
The ornamental design for an automobile as shown.

47,803. AUTOMOBILE-BODY. LEON RUBAY, Cleveland, Ohio, assignor to The White Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 19, 1915. Serial No. 15,612. Term of patent 7 years.



The ornamental design for an automobile body, as shown.

47,804. AUTOMOBILE-BODY. LEON RUBAY, Cleveland, Ohio, assignor to The White Company, Cleveland, Ohio. Filed May 13, 1915. Serial No. 27,937. Term of patent 7 years.



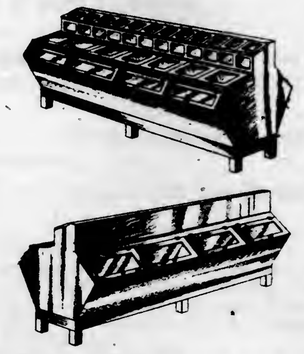
The ornamental design for an automobile body, as shown.

47,805. COLLAR. WILLIAM SCHEUER, New York, N. Y. Filed May 25, 1915. Serial No. 30,473. Term of patent 3½ years.



The ornamental design for a collar, as shown.

47,806. GROCERY-BIN. JOHN SILVANNS REAVES and JAMES GRAHAM WELLS, Anniston, Ala. Filed June 7, 1915. Serial No. 32,775. Term of patent 14 years.



The ornamental design for a grocery bin, as shown.

TRADE-MARKS

PUBLISHED SEPTEMBER 7, 1915

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 68,656. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE ELI LILLY AND COMPANY, Indianapolis, Ind. Filed Feb. 21, 1913.

DROPULE

Particular description of goods.—Containers for Pharmaceutical and Chemical Preparations in Liquid Form Adapted to Dispense the Same Drop by Drop.

Claims use since Jan. 23, 1913.

Ser. No. 71,403. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HERBERT S. GRAVES, Columbus, Ohio. Filed June 27, 1913.



No claim is made to the use of the words "Liver Tone Pills" apart from the mark shown in the drawing.

Particular description of goods.—A Remedy for Liver Troubles.

Claims use since about June 1, 1913.

Ser. No. 71,472. (CLASS 12. CONSTRUCTION MATERIALS.) THE CURTIS LUMBER & MILLWORK CO., Clinton, Iowa. Filed July 2, 1913.

1866 CURTIS

The exclusive use of the word "Curtis" being disclaimed.

Particular description of goods.—Sashes, Doors, Blinds, Stairways, Wooden Moldings, Wooden Frames for Doors and Windows, Wooden Brackets, Wooden Banisters, Wooden Columns and Newels, Porch-Rails, Door and Window Screens, Sideboards, Buffets, Pedestals, Bookcases, Mantel-Shelves, Fancy Store-Fixtures, Fancy Cases, Kitchen-Cupboards, Paneling, Blinds, Flooring, and Wooden Store-Fronts.

Claims use since June 30, 1913.

Ser. No. 74,391. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ANGELEN TEOLIS, Hamilton, Ontario, Canada. Filed Dec. 5, 1913.



The words "Cleaner," "Hygienic," "Superlative," and "Restorer" being disclaimed.

Particular description of goods.—A Detergent Preparation Used for Cleaning Oil-Paintings, Painted Walls and Ceilings, Woodwork, Pressed or Hard Wall-Papers, Floors, and Surfaces of Like Character.

Claims use since the 18th day of August, 1913.

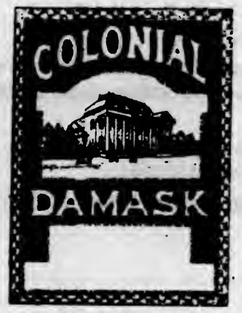
Ser. No. 76,765. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) DUNCAN BROS. MOP CO., Chicago, Ill. Filed Mar. 19, 1914.

BOSS

Particular description of goods.—Mops.

Claims use since about Jan. 1, 1914.

Ser. No. 77,615. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) YOUNG-HARTSELL MILLS COMPANY, Concord, N. C. Filed Apr. 21, 1914.



Disclaiming, however, any exclusive right to the use of the word "Damask."

Particular description of goods.—Damask Used Exclusively for Table Linen, Cloths, and Napkins.

Claims use since about July, 1910.

Ser. No. 78,573. (CLASS 33. GLASSWARE.) WEIAS & BIHELLER, LIMITED, London, England. Filed May 26, 1914.



Particular description of goods.—Hollow Tableware of Glass.

Claims use since December, 1906.

Ser. No. 78,616. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HAWKS, INCORPORATED, Bloomington, Ill. Filed May 28, 1914.

DIAMOND

Particular description of goods.—Sugar, Wheat-Flour, Cavier, Canned Sea Food, Canned Fish, Canned Figs, Canned Sliced Beef, Canned Milk, Canned Soup, Canned Pork and Beans, Canned Hominy, Catsup, Cheese, Cocoa, Cocoanut, Coffee, Tea, Flavoring Extracts for Foods, Fruit and Nut Essences for Foods, Oatmeal, Alimentary Paste, Rice, Gelatin, Canned Strained Honey, Mustard, Olives, Olive-Oil, Peanut-Butter, Pickles in Glass, Salad-Dressing, Table Sauces, Maple-Syrup, Corn-Syrup, Cane-Syrup, Vinegar, and Spices.

Claims use since January, 1904.

Ser. No. 78,695. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THOMAS A. EDISON, INCORPORATED, West Orange, N. J. Filed June 1, 1914.

DIAMOND

Particular description of goods.—Sound-Reproducers.

Claims use since Nov. 3, 1913.

Ser. No. 78,911. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) SPAR-LIGHT COMPANY, Boston, Mass. Filed June 8, 1914.

SPAR-LIGHT

No claim being made to the word "Spar" apart from the mark shown in the accompanying drawing.

Particular description of goods.—Cleaning, Scouring, and Polishing Powder.

Claims use since the 2d day of March, 1914.

Ser. No. 79,013. (CLASS 48. MALT EXTRACTS AND LIQUORS.) STANDARD BREWING CO., New Orleans, La. Filed June 11, 1914.

WIRTHBRÄU

No claim being made to the word "Brau" apart from the mark shown in the drawing.

Particular description of goods.—Beer.

Claims use since about the 1st day of April, 1914.

Ser. No. 79,073. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE HANSON & VAN WINKLE CO., Newark, N. J. Filed June 13, 1914.



Particular description of goods.—Metal-Polishes.

Claims use since May 26, 1914.

Ser. No. 79,126. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE TREMONT STORES, INC., Boston, Mass. Filed June 15, 1914.



Particular description of goods.—Bedspreads, Pillow-Cases, Sheets, Cotton Piece Goods, Lace Curtains, Table-Cloths, and Blankets.

Claims use since Apr. 28, 1914.

Ser. No. 79,893. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) JOHN WANAMAKER, NEW YORK, New York, N. Y. Filed July 17, 1914.



Particular description of goods.—Sporting Implements and Apparatus Comprising Foot-Balls, Hand-Balls, Basket-Balls, Squash-Rackets, Tennis-Rackets, Tennis-Posts, Golf-Balls, Golf-Sticks, Tennis-Balls, Dumb-Bells, and Indian Clubs.

Claims use since about May 4, 1914.

Ser. No. 81,160. (CLASS 43. THREAD AND YARN.) DOLLFUS-MIEG & CIE. SOCIÉTÉ ANONYME, Mülhausen, Germany. Filed Sept. 10, 1914. Under ten-year proviso.



Particular description of goods.—Threads and Twists Made of All Kinds of Yarns.

Claims use since June 15, 1891.

Ser. No. 81,329. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) UNITED STATES TROPICAL FOOD CO., Malden, Mass. Filed Sept. 18, 1914.

BAN-NA-NENA

Particular description of goods.—Banana Food-Flakes and Banana Powdered Flour and Milk.

Claims use since June 10, 1914.

Ser. No. 81,362. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BACCHUS MARSH CONCENTRATED MILK CO. LTD., Melbourne, Victoria, Australia. Filed Sept. 21, 1914.

LACTOGEN

Particular description of goods.—A Milk Food for Infants and Invalids.

Claims use since Apr. 1, 1914.

Ser. No. 81,906. (CLASS 39. CLOTHING.) MILWAUKEE HOSIERY COMPANY, Milwaukee, Wis. Filed Oct. 15, 1914.



No claim being made to the words "Best Knit" except as shown in association with the arrow, wherein they appear written in script.

Particular description of goods.—Men's, Ladies', and Children's Hosiery.

Claims use since March, 1912.

Ser. No. 82,040. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE TURNER & SEYMOUR MANUFACTURING CO., Torrington, Conn. Filed Oct. 20, 1914.



No claim being made to the word "Brand."

Particular description of goods.—Metallic Curtain and Shade Fixtures and Metallic Ornamental Fastening Devices for Drapery and Upholstery other than Safety-Pins.

Claims use since prior to 1890.

Ser. No. 82,150. (CLASS 48. MALT EXTRACTS AND LIQUORS.) GEORGE RINGLER & COMPANY, New York, N. Y. Filed Oct. 24, 1914.



No claim being made to the word "Pale" apart from the mark shown in the drawing.

Particular description of goods.—Beer.

Claims use since Mar. 20, 1911.

Ser. No. 82,586. (CLASS 38. PRINTS AND PUBLICATIONS.) THE BEACON PRESS, INC., Boston, Mass. Filed Nov. 14, 1914.



Particular description of goods.—Books of General Literature Printed in the English Language, Catalogues, and a Periodical—viz., *The Beacon*—a Weekly Paper for the Sunday School and Home, Issued from the First Sunday in October to the First Sunday in June, Inclusive.

Claims use since Oct. 1, 1914.

Ser. No. 82,616. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) GENERAL ELECTRIC COMPANY, Schenectady, N. Y. Filed Nov. 16, 1914.



Particular description of goods.—Electric Incandescent Lamps.

Claims use since about 1901.

Ser. No. 82,753. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RIKER & HEGEMAN CO., New York, N. Y. Filed Nov. 21, 1914.

Incensia

Particular description of goods.—Handkerchief Extract Perfumes and Talcum Powder.

Claims use since about May, 1911.

Ser. No. 82,797. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) BLACK DIAMOND MANUFACTURING CO., Cincinnati, Ohio. Filed Nov. 24, 1914.

Watertite



No claim being made to the word "Watertite" apart from the mark shown in the drawing.

Particular description of goods.—Dry Paints or Ready-Mixed Paints, Cement Paint, and Oil-Colors.

Claims use since Nov. 2, 1914.

Ser. No. 82,942. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS AND PROJECTILES.) N. V. TETERINGSCHE STOOM-LUCIFERSFABRIEK V/H DIJKERMAN & CO., Breda, Netherlands. Filed Nov. 27, 1914.



Particular description of goods.—Matches.

Claims use since November, 1908.

Ser. No. 83,154. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DAVIS BROS., Gloucester, Mass. Filed Dec. 8, 1914. Under ten-year proviso.

BONE-OUT

Particular description of goods.—Fresh, Salted, Smoked, Pickled, and Canned Fish.

Claims use since about Jan. 1, 1895.

Ser. No. 83,617. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CATHERINE LOVIBOND, Lake, near Salisbury, England. Filed Dec. 31, 1914.

STONEHENGE



Particular description of goods.—Woolen Piece Goods.

Claims use since Nov. 9, 1910.

Ser. No. 83,897. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WALTER W. DE BEVOISE, Brooklyn, N. Y. Filed Jan. 16, 1915.

BIG 48 BAR

The word "Bar" being disclaimed.

Particular description of goods.—Candy, and Particularly Confection-Bars Made of Chocolate and Peanuts.

Claims use since about 1904.

Ser. No. 83,900. (CLASS 46. FOODS AND INGREDIENTS OF GOODS.) PETER HAUPT, New Athens, Ill. Filed Jan. 16, 1915.

PINETOP

Particular description of goods.—Self-Rising Wheat-Flour.

Claims use since Mar. 1, 1914.

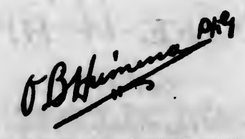
Ser. No. 83,910. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Jan. 16, 1915.

EGGNELLS

Particular description of goods.—Biscuit.

Claims use since at least Jan. 13, 1915.

Ser. No. 84,056. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) OSMOND B. HUMMA, Sheldon, Ill. Filed Jan. 23, 1915.



The signature shown being facsimile of the applicant.

Particular description of goods.—A Dry Powdered Preparation for the Treatment of Diseases of the Stomach.

Claims use since Feb. 15, 1914.

Ser. No. 84,396. (CLASS 32. FURNITURE AND UPHOLSTERY.) LOUISE BRIGHAM, New York, N. Y. Filed Feb. 9, 1915.

I-MA-DA

"I-Ma-Da."

Particular description of goods.—Knife, Fork, and Spoon Racks, Sideboards, China-Closets, Combination Washstand, Bookcase, and Clothes and Linen Closet, Writing-Desks, Bookcases, Clothes-Presses, Nature-Study Stands, Sport-Racks, Window-Seats, Flower-Boxes, Combination Dressers, Washstands, Benches, Cribs, Infants' Washstands, Dressing-Stands, Study and Sewing Stands, Dressers, Desks, Bunks, Kitchenettes, Tent-Costumers, Stool-Boxes, Medicine-Cabinets, Window Play-Galleries, Swiss Play-Chalets, Rockers, Wardrobes, Flower-Cabinets, Hat and Coat Racks, Screens, Provision-Safes, Flower-Stands, Music-Racks, Bureaus, Easels, Mirrors, Picture-Frames, China-Closets, Beds, Shoe-Boxes, and Tables and Chairs for General or Domestic Use.

Claims use since Jan. 1, 1915.

Ser. No. 84,496. (CLASS 39. CLOTHING.) WALTER M. STEPPACHER & BRO., Inc., Philadelphia, Pa. Filed Feb. 12, 1915.

NEK-BAN-TAB

"Nek-Ban-Tab" being disclaimed.

Particular description of goods.—Dress and Negligée Shirts.

Claims use since about Feb. 1, 1915.

Ser. No. 84,820. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) SEARS, ROEBUCK AND CO., Chicago, Ill. Filed Feb. 27, 1915.

RIO

Particular description of goods.—Rubber Garden-Hose.

Claims use since Dec. 12, 1914.

Ser. No. 85,115. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ADOLPH KLAR, New York, N. Y. Filed Mar. 12, 1915.



No claim being made to the exclusive use of the words "Beauté," "Fraicheur," "Jeunesse," "Velouté," "Douceur," and "Souplesse" apart from the mark shown.

Particular description of goods.—Face-Powder.

Claims use since Jan. 13, 1913.

Ser. No. 85,321. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) PHENIX MARBLE COMPANY, Kansas City, Mo. Filed Mar. 22, 1915.

N

Particular description of goods.—Quarried Marble and Stone.

Claims use since Dec. 22, 1914.

Ser. No. 85,600. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) CLARENCE K. BOWMAN, Wooster, Ohio. Filed Apr. 1, 1915.

Cedar Valley

Particular description of goods.—Rye Whisky.

Claims use since the year 1860.

Ser. No. 85,627. (CLASS 31. FILTERS AND REFRIGERATORS.) CENTADRINK FILTERS CO. INC., New York, N. Y. Filed Apr. 2, 1915.

PURO

Particular description of goods.—Filters, Water-Coolers, and Refrigerators.

Claims use since the 1st day of July, 1913.

Ser. No. 85,694. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE BUCKLEY-NEWHALL COMPANY, New York, N. Y. Filed Apr. 5, 1915.

BLUE RIBBON

Particular description of goods.—Household and Office Chairs, Household and Office Tables, Desks, Bookcases, Chiffonniers, Dressers, Sideboards, Buffets, China-Closets, Wardrobes, Music-Cabinets, Pedestals, Household Cabinets, Mirrors, and Clothes-Racks.

Claims use since Aug. 10, 1910.

Ser. No. 85,715. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE JOHN HOFFMAN PACKING CO., Cincinnati, Ohio. Filed Apr. 5, 1915.

LIBERTY

Particular description of goods.—Ham, Bacon, Shoulders, and Lard.

Claims use since 1899.

Ser. No. 85,891. (CLASS 2. RECEPTACLES.) JOSEPH M. CRUCET, New York, N. Y. Filed Apr. 12, 1915.

SAFE-WHITE

Particular description of goods.—Bird-Cages, Baskets, Pin-Trays, Brush-Trays, Ornamental Boxes for Stationery, and Open Racks for Stationery, All of Which are Made of Wood or Heavy Paper or Cardboard Coated with a Plastic Material.

Claims use since Mar. 20, 1915.

Ser. No. 85,910. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) UNITED COFFEE GROWERS CORPORATION OF BRAZIL, New York, N. Y. Filed Apr. 12, 1915.

UNICO

Particular description of goods.—Coffee, Tea, and Spices.

Claims use since Nov. 15, 1914.

Ser. No. 85,919. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) DELION TIRE & RUBBER COMPANY, Trenton, N. J., and New York, N. Y. Filed Apr. 13, 1915.

DELION

Particular description of goods.—Rubber Tires.

Claims use since Feb. 15, 1915.

Ser. No. 86,216. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) SEARS, ROEBUCK AND COMPANY, Chicago, Ill. Filed Apr. 26, 1915.



No claim is made to the word "Peerless" apart from the mark shown in the drawing.

Particular description of goods.—Bicycles.

Claims use since Feb. 18, 1906.

Ser. No. 86,383. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JAS. H. FORBES TEA & COFFEE CO., St. Louis, Mo. Filed May 5, 1915.

FORBES
SANTA FE TRAIL

Particular description of goods.—Coffee.

Claims use since Apr. 30, 1915.

Ser. No. 86,390. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EGIDIO GAMBOGI & Co., Lucca, Italy. Filed May 5, 1915.



We hereby disclaim the printed matter in the drawing, except the signature.

Particular description of goods.—Olive-Oil.

Claims use since Jan. 1, 1909.

Ser. No. 86,395. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) BENJAMIN V. KRESHNER, Chicago, Ill. Filed May 5, 1915.

"UNIQUE"

Particular description of goods.—Banjo and Banjo-Mandolin Tailpieces, Banjo and Banjo-Mandolin Shells, Banjo and Banjo-Mandolin Picks, and Banjo and Banjo-Mandolin Holdfasts.

Claims use since Jan. 1, 1915.

Ser. No. 86,401. (CLASS 37. PAPER AND STATIONERY.) NATIONAL PAPETERIE COMPANY, Springfield, Mass. Filed May 5, 1915.

FRENCH
LINNETTE

No claim being made to the word "French" except in association with the mark as shown.

Particular description of goods.—Printing and Writing Papers.

Claims use since about Oct. 1, 1912.

Ser. No. 86,458. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) REGAN BROS., Minneapolis, Minn. Filed May 7, 1915.

PAN-O'-MA'S

Particular description of goods.—Bread, Biscuit, Rolls, and Cake, Cookies, and Doughnuts.

Claims use since about May 4, 1915.

Ser. No. 86,491. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SHARP & DOHME, Baltimore, Md. Filed May 8, 1915.

SOLMIDES

Particular description of goods.—An Effervescent Medicinal Tablet for Treatment of Nervous Disorders.
Claims use since Oct. 12, 1914.

Ser. No. 86,677. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STEELE-WEDELES COMPANY, Chicago, Ill. Filed May 17, 1915. Under ten-year proviso.

SAVOY

Particular description of goods.—Peanut-Butter, Maple-Sugar, Mushrooms, Fruit Jellies, Fruit Preserves, Honey, Anchovies, Pimento, Spaghetti, Gelatin, Mince-Meat, Corn-Starch, Spices, Flavoring Extracts for Foods, Dried Fruits, Cider Vinegar, Evaporated Milk, Plum-Pudding, Tea, Coffee, Canned Lobster, Canned Clams, Canned Oysters, Apple Sauce, Cocoa, Citron, Fruit-Peel, Succotash, Shrimp, Green-Turtle Calipee, Maple-Syrup, Molasses, Pork and Beans, Clam-Chowder, Barley, Tapioca, Rice-Flour, Self-Rising Pancake-Flour, Cornmeal, Oatmeal, and Candles.
Claims use since 1894.

Ser. No. 86,735. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HANLEY & KINSELLA COFFEE & SPICE COMPANY, St. Louis, Mo. Filed May 19, 1915.



Particular description of goods.—Blended Coffee.
Claims use since January, 1889.

Ser. No. 86,752. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WADSWORTH J. ZITTEL COMPANY, Buffalo, N. Y. Filed May 19, 1915.

"BILLISUNDAES"

Particular description of goods.—Candy.
Claims use since Mar. 30, 1915.

Ser. No. 86,753. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) AL-COOL FAN COMPANY, Chicago, Ill. Filed May 20, 1915.

AL-COOL FAN

No claim being made to the word "Fan" apart from the mark shown in the drawing.
Particular description of goods.—Hot-Air-Driven Fans.
Claims use since Apr. 24, 1915.

Ser. No. 86,790. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WILLIAM B. WEST, Philadelphia, Pa. Filed May 20, 1915.



No claim being made to the word "Pocketing" apart from the mark shown in the drawing.
Particular description of goods.—Pocketing-Cloth.
Claims use since May 6, 1915.

Ser. No. 86,802. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FANNING CHARTERS FRUIT DISTRIBUTING COMPANY, Chicago, Ill., and New York, N. Y. Filed May 21, 1915.

CARDEN OF Eden

Particular description of goods.—Fruits, Both Fresh and Dried.
Claims use since on or about Apr. 12, 1915.

Ser. No. 86,834. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) RATTAN AND CANE COMPANY, New York, N. Y. Filed May 22, 1915.

D. N.
* K. *

Particular description of goods.—Willows and Willow-Cuttings.
Claims use since July 30, 1912.

Ser. No. 86,835. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) RATTAN AND CANE COMPANY, New York, N. Y. Filed May 22, 1915.

D. N.
* A. *

Particular description of goods.—Willows and Willow-Cuttings.
Claims use since July 30, 1912.

Ser. No. 86,908. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) HEAT SAVER COMPANY, Chicago, Ill. Filed May 26, 1915.



No claim being made to the representation of the fuel-saving devices apart from the mark shown.
Particular description of goods.—Fuel-Saving Devices Adapted to be Applied to Stoves, Furnaces, and other Coal-Burning Devices.
Claims use since the 8th day of April, 1915.

Ser. No. 86,909. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE ELI LILLY AND COMPANY, Indianapolis, Ind. Filed May 26, 1915.

GLASEAL

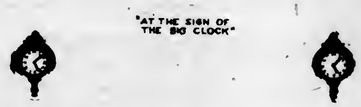
"Glaseal."
Particular description of goods.—Syringes.
Claims use since May 11, 1915.

Ser. No. 86,918. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) SALVATORE SULLO, Boston, Mass. Filed May 26, 1915.



Particular description of goods.—A Powdered Extract to be Used as a Beverage for Soft Drinks.
Claims use since 1914.

Ser. No. 86,928. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) J. CASTELBERG & SON, Baltimore, Md. Filed May 27, 1915. Under ten-year proviso.



Particular description of goods.—Jewelry for Personal Wear, Gold and Silver Ware—viz., Tableware, Cutlery, Hollow Ware, and Flat-Ware—and Diamonds.
Claims use since 1885.

Ser. No. 86,941. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) SELIG POLYSCOPE COMPANY, Chicago, Ill. Filed May 27, 1915.



No claim being made to the word "Plays" except when used in conjunction with other features of the mark shown on the drawing.
Particular description of goods.—Motion-Picture Films.
Claims use since the 1st day of May, 1915.

Ser. No. 86,977. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) TENNESSEE COLA COMPANY, Knoxville, Tenn. Filed May 28, 1915.

Tenn-Cola

Particular description of goods.—A Syrup for Making Soft Drinks to be Sold at Soda-Fountains, Soft-Drink Stands, and in Bottles.
Claims use since Jan. 27, 1915.

Ser. No. 86,991. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE GEM CITY SPECIALTY COMPANY, Dayton, Ohio. Filed May 29, 1915.

TEETER'S SUGAR MINT GUM

No claim being made to the words "Teeter's Sugar Mint Gum" except in connection with the other features of the mark.
Particular description of goods.—Chewing-Gum.
Claims use since Mar. 31, 1915.

Ser. No. 86,992. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE GEM CITY SPECIALTY COMPANY, Dayton, Ohio. Filed May 29, 1915.

BUTTER NUT BRAND CHEWING GUM

No claim is made for the words "Brand" and "Chewing-Gum," as shown in drawing.
Particular description of goods.—Chewing-Gum.
Claims use since Oct. 27, 1914.

Ser. No. 87,014. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HIGHLAND MILLING COMPANY, Highland, Ill. Filed June 1, 1915.

HIGHLAND PRIDE

Particular description of goods.—Wheat-Flour.
Claims use since Jan. 25, 1908.

Ser. No. 87,068. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) ALBERT W. BESSEY, Sunnyvale, Cal. Filed June 3, 1915.

JUBILEE

Particular description of goods.—Incubators and Brooders of All Kinds and Description.
Claims use since 1892.

Ser. No. 87,084. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) STANDARD STEEL CAR COMPANY, Butler and Pittsburgh, Pa. Filed June 3, 1915.



No claim being made to the word "Standard" apart from the mark shown in the drawing.
Particular description of goods.—Automobiles.
Claims use since Nov. 3, 1913.

Ser. No. 87,096. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) FLOWER WASTE & PACKING COMPANY, New York, N. Y., and Bayonne, N. J. Filed June 4, 1915.



The right to the exclusive use of the words "Journal Packing," "Resilient," and "Patented" is disclaimed.
Particular description of goods.—Journal-Packing Made of Cotton and Woolen Threads Combined with Coir or Cocoanut Fiber.
Claims use since Nov. 1, 1909.

Ser. No. 87,111. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARTHUR E. SHULTZ, Olney, Ill. Filed June 4, 1915.



Particular description of goods.—Feed for Horses and other Domesticated Animals, Including Unmixed Grains, Cracked Corn, Cracked Wheat, and Mixed Feeds, Particularly a Mixture of Alfalfa, Corn, Oats, Barley, and Molasses and a Mixture of Corn, Oats, Wheat, Barley, Flaxseed, and Similar Ingredients.
Claims use since on or about Jan. 1, 1905.

Ser. No. 87,147. (CLASS 39. CLOTHING.) PRICE-LESS SKIRT CO., Baltimore, Md. Filed June 5, 1915.

Price-Less

Particular description of goods.—Outer Skirts.
Claims use since December, 1914.

Ser. No. 87,151. (CLASS 39. CLOTHING.) SALZMAN BROS., Baltimore, Md. Filed June 5, 1915.

Vanity

Particular description of goods.—Outer Skirts.
Claims use since February, 1915.

Ser. No. 87,170. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHALLIE M. LE BOW, Kansas City, Mo. Filed June 7, 1915.



No claim is made to the exclusive use of the words "Home Made Yeast."
Particular description of goods.—Yeast.
Claims use since June 3, 1915.

Ser. No. 87,180. (CLASS 27. HOROLOGICAL INSTRUMENTS.) F. L. BOSWORTH CO., Minneapolis, Minn. Filed June 8, 1915.



No claim being made to the exclusive use of the word "Brand."
Particular description of goods.—Clocks.
Claims use since about June 2, 1915.

Ser. No. 87,184. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRANKLIN CARO CO., Richmond, Va. Filed June 8, 1915.

Coca-Cola GUM

The trade-mark consists of the word "Coca-Cola." No claim is made to the word "Gum."
Particular description of goods.—Chewing-Gum.
Claims use since May 1, 1904.

Ser. No. 87,191. (CLASS 7. CORDAGE.) MORICE TWINE MILLS, Philadelphia, Pa. Filed June 8, 1915.

HOLDFAST



Particular description of goods.—Twines and Cordage.
Claims use since May 12, 1915.

Ser. No. 87,202. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CITRA-COLA MANUFACTURING AND BOTTLING COMPANY, Louisville, Ky. Filed June 9, 1915.

Citra-Cola

Particular description of goods.—A Non-Alcoholic Beverage, a Soft Drink.
Claims use since Jan. 1, 1915.

Ser. No. 87,211. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) MACCAR TRUCK COMPANY, Scranton, Pa. Filed June 8, 1915.

MACCAR

Particular description of goods.—Motor-Trucks, (Vehicles.)
Claims use since Dec. 10, 1912.

Ser. No. 87,252. (CLASS 39. CLOTHING.) KAHN BROTHERS COMPANY, Chicago, Ill. Filed June 11, 1915.

WEEK END

Particular description of goods.—Men's, Women's, and Children's Shirts, Waists, and Shirt-Waists, Sweaters, Jerseys, Blazers, Coats, Cloaks, Overcoats, and Jackets, Including Golf-Coats and Rain-Coats, Slip-Ons, and Slickers, Vests, Shoes, Boots, and Slippers of Leather, Rubber, and Canvas, Including Riding-Boots; Hosiery, Men's and Boys' Trousers, Knickerbockers, and Breeches, Including Flannel Trousers and Golf-Trousers; Hats, Caps, and Toggery; Men's, Women's, and Children's Underwear, Gloves, and Collars, Women's and Girls' Bloomers, Knickerbockers, Tights, and Riding-Breeches; Men's, Women's, and Children's Bathing-Suits, and Women's and Girls' Bathing Hats, Caps, Shoes, and Slippers.
Claims use since the 7th day of June, 1915.

Ser. No. 87,358. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CARLSTEN-WILLIAMS COMPANY, Chicago, Ill. Filed June 17, 1915.

GOLD MEDAL

No claim is made to the representation of a pneumatic tire and the words "Gold Medal" apart from the other features of the mark as shown in the drawing.
Particular description of goods.—Pneumatic Vehicle-Tires, Including Pneumatic-Tire Casings and Inner Tubes.
Claims use since Feb. 1, 1915.

Ser. No. 87,380. (CLASS 17. TOBACCO PRODUCTS.) THE ZORRO TOBACCO CO., INC., New York, N. Y. Filed June 17, 1915.

LOBO
NEGRO

Particular description of goods.—Smoking-Tobacco.
Claims use since April, 1915.

Ser. No. 87,381. (CLASS 17. TOBACCO PRODUCTS.) THE ZORRO TOBACCO CO., INC., New York, N. Y. Filed June 17, 1915.

BLACK
ZORRO

Particular description of goods.—Smoking-Tobacco.
Claims use since October, 1914.

Ser. No. 87,391. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE KEEVER STARCH COMPANY, Columbus, Ohio. Filed June 18, 1915.

"Imperial Wheat," "Crystal Victor," "Kesco Corn," "Sterling Corn," "Keever Special," "Victor Wheat," and "Brands" forming no part of the technical trade-mark.
Particular description of goods.—Wheat-Starch, Corn-Starch, and Combination Wheat and Corn Starch.
Claims use since May 1, 1915.

Ser. No. 87,402. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THOMAS J. WILLIAMS, Houston, Tex. Filed June 18, 1915.

MFG. CO.

Particular description of goods.—Ready-Cut Houses and Portable Houses.
Claims use since the 10th day of June, 1915.

Ser. No. 87,448. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE J. WILSON, Rochester, N. Y. Filed June 19, 1915.

GENTEEL

Particular description of goods.—Graham, Entire-Wheat, and Table-Bran Flour.
Claims use since June 2, 1915.

Ser. No. 87,512. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALL-PACKAGE GROCERY STORES CO., Brooklyn, N. Y. Filed June 23, 1915.

Particular description of goods.—Canned Fruits, (Including Canned Berries,) Canned Vegetables, Canned Sauer-Kraut, Canned Beans with Pork, Canned Evaporated Milk, Rolled Oats, Roasted Coffee, Cocoa, Tea, Breakfast Cereal—Namely, White Rolled Oats—Nuts, Wheat-Flour, Spices, and Evaporated Fruit.
Claims use since February, 1915.

Ser. No. 87,525. (CLASS 17. TOBACCO PRODUCTS.) EDWARD J. KELLY, Utica, N. Y. Filed June 23, 1915.

"O B Joyful"

Comprising the letters and word "O B Joyful."
Particular description of goods.—Smoking-Tobacco.
Claims use since Apr. 14, 1897.

Ser. No. 87,592. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) DELBERT W. NORTHROP, Boston, Mass. Filed June 25, 1915.

LETHOBEST

Particular description of goods.—Coated Fabrics.
Claims use since on or about the 21st day of June, 1915.

Ser. No. 87,602. (CLASS 32. FURNITURE AND UPHOLSTERY.) M. REISCHMANN & SONS, INC., New York, N. Y. Filed June 25, 1915.

FURNITURE MAKERS
M R & S
NEW YORK

No claim being made to the words "Furniture Makers, New York" apart from the mark shown on the drawing.
Particular description of goods.—Furniture.
Claims use since Jan. 1, 1915.

Ser. No. 87,627. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) FREYDBERG BROTHERS, New York, N. Y. Filed June 28, 1915.

DUO-DURO

Particular description of goods.—Bias Seam-Binding.
Claims use since Mar. 19, 1915.

Ser. No. 87,629. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DAVID FELTENSTEIN, St. Joseph, Mo. Filed June 28, 1915.

SILVER STAFF

Particular description of goods.—Tea, Mustard, Pepper, Cloves, and Roasted Coffee.
Claims use since Apr. 21, 1915.

Ser. No. 87,634. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROBERT A. JOHNSTON CO., Milwaukee, Wis. Filed June 28, 1915.

LORELEI

Particular description of goods.—Cookies and Cakes Known as Sugar-Wafers.
Claims use since Apr. 28, 1915.

Ser. No. 87,702. (CLASS 39. CLOTHING.) THE WILLIAM CARTER COMPANY, Needham Heights, Mass. Filed July 2, 1915.



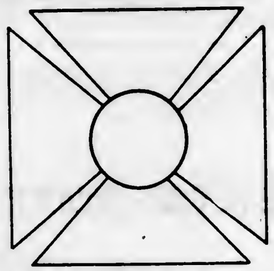
The picture of the man being fanciful.
Particular description of goods.—Knitted Underwear, Hosiery, and Caps.
Claims use since June 7, 1915.

Ser. No. 87,708. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MIRROR, New York, N. Y. Filed July 2, 1915.

FROSTED CUPS

Particular description of goods.—Candy.
Claims use since June 15, 1915.

Ser. No. 87,739. (CLASS 12. CONSTRUCTION MATERIALS.) THE KELLEY ISLAND LIME & TRANSPORT COMPANY, Cleveland, Ohio. Filed July 3, 1915.



Consists of a Maltese cross.
Particular description of goods.—Lime.
Claims use since about Jan. 1, 1887.

Ser. No. 87,744. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) LA PORTE OUTING SULKY COMPANY, Laporte, Ind. Filed July 3, 1915.

L-P

Particular description of goods.—Baby-Carriages and Children's Sulkies.
Claims use since June 21, 1915.

Ser. No. 87,745. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) LA PORTE OUTING SULKY COMPANY, Laporte, Ind. Filed July 3, 1915.

Kumfy-kab

Particular description of goods.—Baby-Carriages and Children's Sulkies.
Claims use since June 21, 1915.

Ser. No. 87,765. (CLASS 38. PRINTS AND PUBLICATIONS.) CAHILL-IGOE COMPANY, Chicago, Ill. Filed July 6, 1915.

EXHIBITORS FILM EXCHANGE

Particular description of goods.—A Periodical Issued Weekly.
Claims use since June 24, 1915.

Ser. No. 87,768. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CARISA MFG. CO., INC., New York, N. Y. Filed July 6, 1915.

SILVRON

The trade-mark being of blue color, bearing the word "Silvron" in white letters inclosed by a border line, also in white.
Particular description of goods.—A Cleaning and Polishing Preparation.
Claims use since about the 20th day of February, 1915.

Ser. No. 87,779. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) C. DEWITT LUKENS SURGICAL MANUFACTURING CO., St. Louis, Mo. Filed July 6, 1915.

Dulox

Particular description of goods.—Surgical Sutures and Surgical Needles.
Claims use since Jan. 15, 1915.

Ser. No. 87,798. (CLASS 10. FERTILIZERS.) UNION MEAT CO., Portland, Oreg. Filed July 6, 1915.

ROSELAWN

"Roselawn."
Particular description of goods.—Fertilizer.
Claims use since May, 1913.

Ser. No. 87,800. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) ASAM BROTHERS, INCORPORATED, Philadelphia, Pa. Filed July 7, 1915.

ASAM BROTHERS INCORPORATED

Particular description of goods.—Painters' Dusters and Brushes Used in the Art and Trade of Commercial Painting.
Claims use since Jan. 1, 1901.

Ser. No. 87,827. (CLASS 37. PAPER AND STATIONERY.) THE HEINN COMPANY, Milwaukee, Wis. Filed July 8, 1915.

BADGER

Particular description of goods.—Temporary Binders or Loose-Sheet Holders, Albums, Filing-Books, Sheet-Holders, and Sheets or Leaves for Loose-Leaf Binders or Books and Albums.
Claims use since about January, 1902.

Ser. No. 87,834. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) ABRAHAM & STRAUS, Brooklyn, N. Y. Filed July 9, 1915.

PRISCILLA

Particular description of goods.—Ginger-Ale, Club-Soda, Lemon-Soda, Sarsaparilla, and Grape-Juice.
Claims use since prior to 1900.

Ser. No. 87,848. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) WILLIAM H. HOUSMAN, Chatham, N. Y. Filed July 9, 1915.

THE LITTLE STEERSMAN

Particular description of goods.—An Automobile Steering Appliance.
Claims use since Jan. 1, 1909.

Ser. No. 87,849. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) IMPERIAL PLAYER ROLL COMPANY, Chicago, Ill. Filed July 9, 1915.

DIAMOND ROLL

No claim being made to the word "Roll" when disconnected from the arbitrary part of the mark.
Particular description of goods.—Music-Sheets for Musical-Instrument Players.
Claims use since June 24, 1915.

Ser. No. 87,858. (CLASS 39. CLOTHING.) SU'CS DE EDUARDO GONZALEZ & CO. S. EN C., Mayagüez, Porto Rico. Filed July 9, 1915.

La Marquesa

Particular description of goods.—Women's High and Low Cut Shoes and Slippers Made of Leather and Cloth.
Claims use since Nov. 15, 1912.

Ser. No. 87,866. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JULIETTE MILLING COMPANY, Macon and Juliette, Ga. Filed July 10, 1915. Under ten-year proviso.

OCONEE

Particular description of goods.—Cornmeal and Cracked Corn.
Claims use since Feb. 20, 1895.

Ser. No. 87,888. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) D-D. SCREEN PAINT COMPANY, New York, N. Y. Filed July 12, 1915.



Applicant herewith disclaims the exclusive use of the words "Moving Picture Screen Paint Makes Your Picture Opaque and Saves Current. 55 West 23rd St., N. Y. City."
Particular description of goods.—Ready-Mixed Paint.
Claims use since June 25, 1915.

Ser. No. 87,889. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) EQUITABLE CORPORATION, Chicago, Ill. Filed July 12, 1915.

KALOMITE

"Kalomite."
Particular description of goods.—Detergent Preparations for Washing Clothes, Hand-Cleanser, and Household Scouring Preparation and Cleanser.
Claims use since Jan. 1, 1915.

Ser. No. 87,896. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) SOL MEYER, Cleveland, Ohio. Filed July 12, 1915.

HERMETI-PAKT

Particular description of goods.—Surgeons' Rubber Gloves.
Claims use since July 8, 1915.

Ser. No. 87,917. (CLASS 37. PAPER AND STATIONERY.) STONE & ANDREW INC., Boston, Mass. Filed July 13, 1915.

D-B-M-

Particular description of goods.—Folding Coated Paper.
Claims use since May 1, 1915.

Ser. No. 87,918. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE STARK ROLLING MILL COMPANY, Canton, Ohio. Filed July 13, 1915.

TONCAN

Particular description of goods.—Rust-Resisting Anti-corrosive Metal.
Claims use since Dec. 1, 1908.

Ser. No. 87,921. (CLASS 39. CLOTHING.) AMAZON PRODUCTS COMPANY, Muskegon, Mich. Filed July 14, 1915.

CUB

Particular description of goods.—Children's Underwear—Namely, Supporting-Waists of Knitted Material.
Claims use since Apr. 15, 1915.

Ser. No. 87,952. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL STARCH CO., New York, N. Y. Filed July 15, 1915.



Particular description of goods.—Corn-Starch.
Claims use since 1858.

Ser. No. 87,954. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed July 15, 1915.

BISON

Particular description of goods.—Fertilizers.
Claims use since Mar. 18, 1915.

Ser. No. 87,955. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed July 15, 1915.

NECTAR

Particular description of goods.—Fertilizers.
Claims use since Apr. 6, 1915.

Ser. No. 87,969. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) FORSBACKA JERNVERKS AKTIEBOLAG, Forsbacks, Sweden. Filed July 16, 1915.

PRINCE

Particular description of goods.—Iron and Steel.
Claims use since Apr. 15, 1915.

Ser. No. 87,996. (CLASS 39. CLOTHING.) HENRY SONNEBORN & CO. INC., Baltimore, Md. Filed July 17, 1915.

SONCO

Particular description of goods.—Men's, Women's, Misses', and Children's Shoes, (Leather, Rubber, and Canvas,) Rain-Coats, Outer and Under Suits, Hats, Shirts, Outer and Under Drawers and Underwear, (Woven and Knitted,) Overcoats, Vests, Slip-Coats, Trousers, Overalls, Top-Coats, Outer and Under Skirts, and Shirt-Waists.
Claims use since July 1, 1913.

Ser. No. 88,084. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE PYORRHEMEDY CORPORATION, New York, N. Y. Filed July 21, 1915.

PYORRHEMEDY

Particular description of goods.—Tooth-Powder.
Claims use since June 1, 1915.

Ser. No. 88,095. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) F. WOLKOW & SONS, Louisville, Ky. Filed July 21, 1915.

KENTUCKY MAID

Particular description of goods.—Articles of Coiffure—viz., Toilet-Combs, Pincers, and Hair-Curlers other than Electric.
Claims use since Sept. 1, 1914.

Ser. No. 88,106. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) MORTON E. CONVERSE & SON, Winchendon, Mass. Filed July 22, 1915.

MAK-A-TOY

Particular description of goods.—Construction-Blocks.
Claims use since June 26, 1915.

Ser. No. 88,117. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) KELLER MECHANICAL ENGRAVING CO., New York, N. Y. Filed July 22, 1915.

KAL-KU-LOG

Particular description of goods.—Circular Slide-Rules.
Claims use since about Jan. 1, 1915.

Ser. No. 88,118. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) LOGAN L. MALLARD, Baltimore, Md. Filed July 22, 1915.

VOLCO

Particular description of goods.—A Soft Drink.
Claims use since July 2, 1915.

Ser. No. 88,119. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) MANHATTAN EMBROIDERY COMPANY, New York, N. Y. Filed July 22, 1915.

SEW-ON-O-GRAM

Particular description of goods.—Embroidered Goods—Namely, Embroidered Initials, Monograms, and Designs.
Claims use since May 15, 1915.

Ser. No. 88,122. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) OLD DUTCH MARKET, Washington, D. C., and Alexandria, Va. Filed July 22, 1915.



The exclusive use of the words "Baking Powder" being disclaimed.
Particular description of goods.—Baking-Powder.
Claims use since July 20, 1915.

Ser. No. 88,124. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) S. W. SMITH & COMPANY, Jacksonville, Fla. Filed July 22, 1915.



Three and Nine Dose

Consisting of the portrait of Soloman W. Smith and the words "Three and Nine Dose."
Particular description of goods.—A Medicine for Venereal Diseases.
Claims use since on or about Apr. 15, 1915.

Ser. No. 88,152. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE WESTINGHOUSE AIR SPRING COMPANY, Pittsburgh, Pa. Filed July 23, 1915.



Particular description of goods.—Air-Springs or Pneumatic Suspension for Vehicles.
Claims use since December, 1911.

Ser. No. 88,159. (CLASS 39. CLOTHING.) HARRY HARRIS, Pittsburgh, Pa. Filed July 24, 1915.



Particular description of goods.—Hosiery.
Claims use since July 1, 1915.

Ser. No. 88,167. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) THE NEW ERA NOVELTY CO. INC., New York, N. Y. Filed July 24, 1915.

NENCO
S'KOOTER KID

Particular description of goods.—Dolls and Toy Vehicles.
Claims use since about July 1, 1915.

Ser. No. 88,178. (CLASS 10. FERTILIZERS.) THE ATLANTIC CHEMICAL CORPORATION, Norfolk, Va. Filed July 26, 1915.

OTTER

Particular description of goods.—Fertilizers.
Claims use since Apr. 14, 1915.

Ser. No. 88,179. (CLASS 10. FERTILIZERS.) THE ATLANTIC CHEMICAL CORPORATION, Norfolk, Va. Filed July 26, 1915.

BEARPOND

Particular description of goods.—Fertilizers.
Claims use since Mar. 22, 1915.

Ser. No. 88,188. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) DAVID HUMPHREY, Cleveland, Ohio. Filed July 26, 1915.

HUM-ALA

Particular description of goods.—Beverages, Sold as Carbonated Soft Drinks, Such as Ginger-Ale.
Claims use since June 20, 1915.

Ser. No. 88,196. (CLASS 17. TOBACCO PRODUCTS.) S. S. PIERCE CO., Boston, Mass. Filed July 26, 1915.



The mark being shown on a red background as indicated.
Particular description of goods.—Smoking-Tobacco.
Claims use since July 14, 1915.

Ser. No. 88,198. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed July 26, 1915.

BRILLIANT

Particular description of goods.—Fertilizers.
Claims use since Mar. 1, 1915.

Ser. No. 88,199. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed July 26, 1915.

TOMAHAWK

Particular description of goods.—Fertilizers.
Claims use since Feb. 5, 1915.

Ser. No. 88,200. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed July 26, 1915.

WALHALLA

Particular description of goods.—Fertilizers.
Claims use since Feb. 15, 1915.

Ser. No. 88,201. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed July 26, 1915.

PICNIC

Particular description of goods.—Fertilizers.
Claims use since Mar. 25, 1915.

Ser. No. 88,202. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed July 26, 1915.

JUBILEE

Particular description of goods.—Fertilizers.
Claims use since Mar. 16, 1915.

Ser. No. 88,203. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed July 26, 1915.

NORMAL

Particular description of goods.—Fertilizer.
Claims use since Mar. 1, 1915.

Ser. No. 88,204. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) STANDARD PLAYING CARD CO., Chicago, Ill. Filed July 26, 1915.

AMERICAN
BANK NOTE
BEAUTY

Particular description of goods.—Playing-Cards.
Claims use since July 5, 1915.

Ser. No. 88,208. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) SYRACUSE SMELTING WORKS, Brooklyn, N. Y. Filed July 26, 1915.

CASTER

Particular description of goods.—Type-Metal.
Claims use since Dec. 1, 1914.

Ser. No. 88,209. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) SYRACUSE SMELTING WORKS, Brooklyn, N. Y. Filed July 26, 1915.

INTERURBAN # 27

Particular description of goods.—Babbitt Metal.
Claims use since Jan. 1, 1914.

Ser. No. 88,225. (CLASS 10. FERTILIZERS.) COLUMBIA GUANO CO., Norfolk, Va. Filed July 26, 1915.

ROUNDUP

Particular description of goods.—Fertilizers.
Claims use since Apr. 8, 1915.

Ser. No. 88,226. (CLASS 10. FERTILIZERS.) COLUMBIA GUANO CO., Norfolk, Va. Filed July 26, 1915.

STRONGHOLD

Particular description of goods.—Fertilizers.
Claims use since Feb. 13, 1915.

Ser. No. 88,227. (CLASS 10. FERTILIZERS.) COLUMBIA GUANO CO., Norfolk, Va. Filed July 26, 1915.

BIG HIT

Particular description of goods.—Fertilizers.
Claims use since Mar. 27, 1915.

Ser. No. 88,276. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) LOUIS KOHN, Chicago, Ill. Filed July 29, 1915.

BALANSCOPE

K

Particular description of goods.—Watchmaker's Tool for Adjusting Balance-Wheels.
Claims use since July 24, 1915.

Ser. No. 88,294. (CLASS 27. HOROLOGICAL INSTRUMENTS.) ISAAC WIGDOR, Bayonne, N. J. Filed July 29, 1915. Under ten-year proviso.

Isaac Wigdor

Particular description of goods.—Clock-Dials.
Claims use since Aug. 1, 1889.

Ser. No. 88,328. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) GEO. BORGFELDT & CO., New York, N. Y. Filed July 31, 1915.

Peakies

Particular description of goods.—Dolls and Toy Figures.
Claims use since July 15, 1915.

Ser. No. 88,331. (CLASS 27. HOROLOGICAL INSTRUMENTS.). CHAS. A. JACQUES, New York, N. Y. Filed July 31, 1915.

Jacques

Particular description of goods.—Chime-Clocks, Clocks, and Clock-Works.
Claims use since July 1, 1915.

Ser. No. 88,385. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ARNOLD FROIDEVAUX, New York, N. Y. Filed Aug. 3, 1915.

PETROCRUDE

Particular description of goods.—A Toilet Preparation for the Treatment of the Hair and Scalp.
Claims use since about the 1st of October, 1914.

Ser. No. 88,403. (CLASS 15. OILS AND GREASES.) TIDE WATER OIL CO., New York, N. Y. Filed Aug. 3, 1915.

TIDE WATER

Particular description of goods.—Petroleum Products—Namely, Cylinder-Oil, Refined Oil, Kerosene, 300 Mineral Oil, Gasolene, Naphtha, Benzene, Lubricating-Oil, Paraffin-Oil, Spindle-Oil, White Oil, Red Oil, Neutral Oil, Automobile-Oil, Gas-Oil, Fuel-Oil, Road-Oil, Lubricating-Grease, Scale-Wax, Refined Wax, Wax Tailings, Paraffin.
Claims use since Jan. 1, 1889.

Ser. No. 88,422. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) RUNDLE NOVELTY CO., INC., Columbus, Ohio. Filed Aug. 4, 1915.

GRA-HOUN

Particular description of goods.—Hand-Propelled Children's Wagons.
Claims use since Apr. 15, 1915.

Ser. No. 88,429. (CLASS 17. TOBACCO PRODUCTS.) MEYER BALISTOCKY, Philadelphia, Pa. Filed Aug. 5, 1915.

THE POST

Particular description of goods.—Cigars.
Claims use since about the 1st of February, 1915.

Ser. No. 88,433. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) INTERNATIONAL MOTOR COMPANY, New York, N. Y. Filed Aug. 5, 1915.

Particular description of goods.—Motor-Trucks, Transmission-Casings, and Hubs.
Claims use since about February, 1913.

Ser. No. 88,466. (CLASS 17. TOBACCO PRODUCTS.) JULIUS C. NEWMAN, Cleveland, Ohio. Filed Aug. 6, 1915.

JOHN CARVER

FIRST GOVERNOR OF PLYMOUTH COLONY 1620

The representation of the man on said mark being fanciful.
Particular description of goods.—Cigars.
Claims use since the latter part of 1900.

Ser. No. 88,475. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES H. GARRISS, Newton, N. C. Filed Aug. 7, 1915.

GARRISS' REMEDY

The use of the word "Remedy" in the mark is disclaimed.
Particular description of goods.—Cough Compound.
Claims use since July 27, 1915.

Ser. No. 88,488. (CLASS 10. FERTILIZERS.) THE ATLANTIC CHEMICAL CORPORATION, Norfolk, Va. Filed Aug. 9, 1915.

IRONCLAD

Particular description of goods.—Fertilizers.
Claims use since Apr. 28, 1915.

Ser. No. 88,497. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) FLINT AND WALLING MANUFACTURING CO., Kendallville, Ind. Filed Aug. 9, 1915.

NO-OIL-EM

Particular description of goods.—Bearings.
Claims use since on or about Apr. 1, 1915.

Ser. No. 88,503. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE JOYNER ORIGINAL CUT RATE DRUG COMPANY, Spokane, Wash. Filed Aug. 9, 1915.

UNITED DRUGS

The word "Drugs" not being claimed.
Particular description of goods.—For Toilet Preparations for Chapped Hands, Rough, Dried, or Cracked Skin, Chafing, and Sunburn; a Lotion for Treating Eczema, Poison-Ivy, Insect-Bites, Barber's Itch, and All other Inflamed or Poisoned Conditions of the Skin; an Antiseptic Shaving-Lotion; a Scalp-Tonic and Dandruff-Eradicator; a Cough Medicine for Children or Adults; a Catarrh Remedy; a Mixture and Tonic for the Blood and for the Treatment of Scrofula, Catarrh, Acne, Eczema, Malarial Poison, Rheumatism, and All other Diseases or Affections of the Blood; a Liniment for Use in the Treatment of Rheumatism, Neuralgia, Sciatica, Pleurisy, Backache, Sore Throat, Stiffness of the Neck or Joints, Sprains, Cuts, Bruises, Swellings of the Flesh Caused by Inflammation, Colds, Fractures of the Bones, Croup, and Cold on the Chest; a Blood and Nerve Tonic; a Kidney and Bladder Remedy; a Uterine Tonic and Sedative; and a Mineral Oil for Use as a Laxative or Purgative.
Claims use since the 29th day of April, 1911.

Ser. No. 88,510. (CLASS 10. FERTILIZERS.) F. S. ROYSTER GUANO CO., Norfolk, Va. Filed Aug. 9, 1915.

BRAVO

Particular description of goods.—Fertilizers.
Claims use since Mar. 1, 1915.

Ser. No. 88,530. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BARYTA MANUFACTURING CO., INC., New Market township, Middlesex county, N. J. Filed Aug. 11, 1915.

BAMCO

The trade-mark consists of the word "Bamco."
Particular description of goods.—Barium and Sodium Products and Compounds.
Claims use since the middle of July, 1915.

TRADE-MARK REGISTRATIONS GRANTED

SEPTEMBER 7, 1915.

105,969. LAGER-BEER. American Brewing Co., New Orleans, La.
Filed January 19, 1915. Serial No. 83,949. PUBLISHED MARCH 23, 1915.

105,970. PLOWS, (OTHER THAN CULTIVATORS AND HARROWS,) MOLDBOARDS, LANDSIDES, PLOW-POINTS, PLOW-BEAMS, AND PARTS OF PLOWS. Cecil Billups, Norfolk, Va.
Filed November 18, 1913. Serial No. 74,050. PUBLISHED MARCH 23, 1915.

105,971. OLEOMARGARIN. Henry H. Butler, Washington, D. C.
Filed November 30, 1914. Serial No. 82,969. PUBLISHED MARCH 30, 1915.

105,972. RUST-RESISTING ANTICORROSIVE METAL. The Canton Culvert and Silo Company, Canton, Ohio.
Filed February 20, 1915. Serial No. 84,646. PUBLISHED MAY 25, 1915.

105,973. CANNED CHOP SUEY. Chop Suey Cannery, San Francisco, Cal.
Filed February 3, 1915. Serial No. 84,277. PUBLISHED APRIL 27, 1915.

105,974. SILVER AND NICKEL POLISH. William Colville, Santa Barbara, Cal.
Filed March 27, 1915. Serial No. 85,472. PUBLISHED JUNE 8, 1915.

105,975. ANTISEPTIC COMPOUND FOR GENERAL USE. Comar & Cie., Paris, France.
Filed August 15, 1913. Serial No. 72,345. PUBLISHED JUNE 8, 1915.

105,976. STEAM-OPERATED CLEANERS FOR BOILER-FLUES OR STEAM-OPERATED SOOT-CLEANERS. William L. Cronin, Springfield, Mass.
Filed April 2, 1915. Serial No. 85,629. PUBLISHED MAY 11, 1915.

105,977. CONSTRUCTION MATERIALS — NAMELY REFRACTORY PREPARATION OR COMPOSITION OF A PLASTIC OR LIQUID CONSISTENCY. Arthur Dunbar, South Melbourne, Australia.
Filed November 14, 1913. Serial No. 73,978. PUBLISHED MAY 25, 1915.

105,978. TRAYS FOR LEAD-PENCILS AND PENHOLDERS AND EASELS FOR LEAD-PENCILS AND PENHOLDERS. Eagle Pencil Company, New York, N. Y.
Filed October 12, 1914. Serial No. 81,816. PUBLISHED MARCH 30, 1915.

105,979. BAKING-POWDER. Egg Baking Powder Company, New York, N. Y., and Akron, Ohio.
Filed May 20, 1914. Serial No. 78,415. PUBLISHED MARCH 30, 1915.

105,980. SMOKING-TOBACCO AND CIGARETTES. Falk Tobacco Co., New York, N. Y.
Filed December 7, 1914. Serial No. 83,110. PUBLISHED JUNE 8, 1915.

105,981. CLOTH FOR POLISHING GLASSES. Kleeno-Glass-Kloth Mfg. Co., St. Louis, Mo.
Filed July 14, 1913. Serial No. 71,686. PUBLISHED MAY 18, 1915.

105,982. ANTISEPTIC POWDER. The Linol Chemical Co., Alexandria, Va.
Filed March 4, 1915. Serial No. 84,936. PUBLISHED APRIL 13, 1915.

105,983. ABRASIVE POLISHING-CLOTHS. Matilda W. Lindlar, Chicago, Ill.
Filed January 20, 1915. Serial No. 83,973. PUBLISHED APRIL 27, 1915.

105,984. TEA, COFFEE, SPICES, OLIVE-OIL, CHIPPED BEEF, AND CERTAIN NAMED CANNED FRUITS AND VEGETABLES. Lippincott & Co., Philadelphia and Altoona, Pa.
Filed October 1, 1914. Serial No. 81,597. PUBLISHED JANUARY 12, 1915.

105,985. PREPARATION FOR THE TREATMENT OF AILMENTS ARISING FROM INDIGESTION AND CONSTIPATION. Hyman Manowitz, New York, N. Y.
Filed March 31, 1915. Serial No. 85,575. PUBLISHED JUNE 1, 1915.

105,986. CANDY. Merchants Candy Company, Salt Lake City, Utah.
Filed January 3, 1914. Serial No. 74,963. PUBLISHED MARCH 16, 1915.

105,987. MEDICINAL COMPOUND OF CERTAIN INGREDIENTS FOR TREATING CERTAIN NAMED DISEASES. John Henry O'Grady, Chicago, Ill.
Filed June 3, 1914. Serial No. 78,750. PUBLISHED FEBRUARY 2, 1915.

105,988. CANDIES AND CHOCOLATES. Park & Tilford, New York, N. Y.
Filed September 9, 1914. Serial No. 81,137. PUBLISHED NOVEMBER 17, 1914.

105,989. BRICKS, TILES, BLOCKS, AND SLABS; FLOORS, WALLS, AND CEILINGS. Charles H. Parkin, Cleveland, Ohio.
Filed September 30, 1914. Serial No. 81,576. PUBLISHED JUNE 1, 1915.

105,990. AMMONIA AND BLUING. So-Jer Manufacturing Company, Baldwinsville, N. Y.
Filed April 21, 1915. Serial No. 86,093. PUBLISHED MAY 18, 1915.

105,991. BOXES, ENVELOPS, WRAPPERS, OR CONTAINERS, MADE OF CARDBOARD, PAPER-BOARD, OR PAPER, FOR LAUNDRY. J. & J. G. Wallach, New York, N. Y.
Filed January 27, 1915. Serial No. 84,154. PUBLISHED MAY 25, 1915.

LABELS

REGISTERED SEPTEMBER 7, 1915.

18,723.—*Title:* "EL-BURTO." (For Cigar-Boxes.) O. B. ABBOTT, Battle Creek, Mich. Filed January 14, 1915.

18,724.—*Title:* "JUMBO ROASTED PEANUTS." (For Peanuts.) BLANKE-WENNEKER CANDY COMPANY, St. Louis, Mo. Filed August 16, 1915.

18,725.—*Title:* "SWEETHEARTS." (For Candy.) CHARLES S. COLE, Glenview, Ill. Filed August 9, 1915.

18,726.—*Title:* "LIGGETT BRAND CHERRIADE." (For Cherriade Flavor.) F. L. DAGGETT COMPANY, Boston, Mass. Filed July 7, 1915.

18,727.—*Title:* "NO-KAFFEEN." (For a Substitute for Coffee.) JENNIE R. DAUGHERTY, Wichita, Kans. Filed July 26, 1915.

18,728.—*Title:* "LYMAN H. DAVIS RHEUMATIC LINIMENT." (For Rheumatic Liniment.) LYMAN H. DAVIS, Louisville, Ky. Filed May 26, 1915.

18,729.—*Title:* "DORAN'S GAPE REMEDY." (For a Gape Remedy.) W. H. DORAN, Brandenburg, Ky. Filed July 19, 1915.

18,730.—*Title:* "BAKER GELATINE." (For Gelatin.) THE FRANKLIN BAKER COMPANY, Philadelphia, Pa. Filed August 7, 1915.

18,731.—*Title:* "FORD SUIT." (For Men's Suits.) MORRIS GOLLAND, New York, N. Y. Filed August 12, 1915.

18,732.—*Title:* "PROTECTION BARBED WIRE LINIMENT." (For Liniment.) ELMER E. GRAY, Protection, Kans. Filed January 4, 1915.

18,733.—*Title:* "HOURS SAVED." (For a Washing Preparation.) HOURS SAVED CO., Toledo, Ohio. Filed June 10, 1915.

18,734.—*Title:* "MADE LAST NIGHT." (For Candy.) JACOBS CANDY COMPANY, LTD., New Orleans, La. Filed July 19, 1915.

18,735.—*Title:* "KALAK WATER." (For Artificially-Prepared Medicinal Water.) KALAK WATER COMPANY OF NEW YORK, INC., Brooklyn, N. Y. Filed August 12, 1915.

18,736.—*Title:* "KALAK." (For Artificially-Prepared Medicinal Water.) KALAK WATER COMPANY OF NEW YORK, INC., Brooklyn, N. Y. Filed August 12, 1915.

18,737.—*Title:* "SPORTSMAN'S 'CHOCOLATE BRACER' SANDWICH FORM." (For Eating-Chocolate.) KNICKERBOCKER CHOCOLATE COMPANY, (INC.,) New York, N. Y. Filed August 2, 1915.

18,738.—*Title:* "WHITE ROCK RHEUMATIC REMEDY." (For Medicine.) AUGUST KVASNICKA, Chicago, Ill. Filed July 22, 1915.

18,739.—*Title:* "REVIL." (For Liver-Tablets.) G. C. JONES, Atlanta, Ga. Filed August 4, 1915.

18,740.—*Title:* "NU-LAX." (For Medicine.) ROBERT L. LUNDGREN, New York, N. Y. Filed July 10, 1915.

18,741.—*Title:* "THE MAJOR BLENDS, 'OUR MATCHLESS.'" (For Roasted Coffee.) SAMUEL T. MAJOR, St. Louis, Mo. Filed July 31, 1915.

18,742.—*Title:* "MARSHELS INTENSE BLACK INK." (For Ink.) BLAINE M. MARSHEL, New Albany, Ind. Filed August 2, 1915.

18,743.—*Title:* "SASNAK." (For Tobacco Cigars.) JAMES MURPHY, Wichita, Kans. Filed July 9, 1915.

18,744.—*Title:* "NACCO." (For Cleaning Compounds, Disinfectants, and Vermin-Exterminators.) THE NATIONAL CHEMICAL COMPANY, New Haven, Conn. Filed July 30, 1915.

18,745.—*Title:* "MUSTERKING." (For a Medicinal Preparation.) A. W. PEABODY, Thomaston, Me. Filed June 22, 1915.

18,746.—*Title:* "SCALP BALM." (For a Hair-Tonic.) ANTHONY J. PRAITANO, New York, N. Y. Filed January 5, 1915.

18,747.—*Title:* "RIC RAC, THE CANDIED FOOD." (For Candy.) THE RIC RAC COMPANY, Canonsburg, Pa. Filed July 21, 1915.

18,748.—*Title:* "SALOME." (For Cigarettes.) RÓSEDOR CIGARETTE CO., New York, N. Y. Filed August 12, 1915.

18,749.—*Title:* "GOLD CROSS BRAND." (For Absorbent Cotton.) SEABURY & JOHNSON, East Orange, N. J., and New York, N. Y. Filed July 31, 1915.

18,750.—*Title:* "FAMILY CAMBRIC." (For Cambric.) MEYER SMOLOWITZ, New York, N. Y. Filed July 29, 1915.

18,751.—*Title:* "WE WANT YOUR HAY BUSINESS." (For Baled Hay.) F. W. TAYLOR & CO., Kansas City, Mo. Filed July 26, 1915.

18,752.—*Title:* "BASE BALL." (For a Game-Board.) OSCAR R. TOMPKINS, Asbury Park, N. J. Filed May 16, 1914.

18,753.—*Title:* "G WASHINGTON'S." (For Prepared Tea.) G. WASHINGTON COFFEE REFINING CO., New York, N. Y. Filed July 28, 1915.

18,754.—*Title:* "PRISCILLA." (For Headwear.) THE WINGET MANUFACTURING CO., INC., Minneapolis, Minn. Filed July 10, 1915.

PRINTS

REGISTERED SEPTEMBER 7, 1915.

4,049.—*Title:* "MADE IN A MINUTE THE MILK'S MIXED IN IT." (For Pancake-Flour.) AUNT JEMIMA MILLS COMPANY, St. Joseph, Mo. Filed August 10, 1915.

4,050.—*Title:* "JACK SPRAT." (For Wheat Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed July 29, 1915.

4,051.—*Title:* "HOME TREAT." (For Ice-Cream Products.) FUSSELL ICE CREAM COMPANY, New York, N. Y. Filed June 5, 1915.

4,052.—*Title:* "HUM-ALA." (For Beverages.) DAVID HUMPHREY, Cleveland, Ohio. Filed July 26, 1915.

4,053.—*Title:* "ALWAYS BUY SCHULZE'S BUTTER-NUT BREAD." (For Bread.) SCHULZE BAKING COMPANY, Chicago, Ill. Filed July 27, 1915.

4,054.—*Title:* "DELICIOUS CANDY KID. A POP-CORN AND PEANUT CONFECTION. 5¢ PER BOX." (For Popcorn and Peanut Confection.) F. S. LOVE MANUFACTURING COMPANY, Johnstown, Pa. Filed June 10, 1915.

4,055.—*Title:* "PRISCILLA." (For Headwear.) THE WINGET MANUFACTURING CO., INC., Minneapolis, Minn. Filed July 10, 1915.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

U. S. Circuit Court of Appeals—Sixth Circuit.

ADRIAN WIRE FENCE CO. *v.* UNITED FENCE CO.

Decided May 4, 1915.

223 FED. REP., 342.

1. PATENTS—VALIDITY—TIES FOR WIRE CONSTRUCTION AND DIES FOR MAKING THEM.

Claim 1 of the Williams patent, No. 533,403, for an improvement in ties for wire structures, such as wire fences, and the Tiffany patent, No. 755,187, for an improvement in dies for forming such ties, *Held* void for lack of patentable invention in view of prior patents.

2. SAME—SAME—COMBINATIONS—"INVENTION."

Where the elements of a combination and the result attained by it were old and the change in the means of attaining such result showed nothing more than mechanical skill, there was no "invention."

Mr. Edward Rector for the appellant.

Mr. W. H. Chamberlin for the appellee.

Before WARRINGTON, KNAPPEN, and DENISON, Circuit Judges.

WARRINGTON, *Cir. J.:*

This was a suit to enjoin alleged infringements of three patents and to recover the usual profits and damages. One of the patents was issued January 29, 1895, to Eugene L. Williams and John S. Williams jointly, and numbered 533,403; later, through mesne assignments, the patent was transferred to the plaintiff; and the invention claimed is for an improvement in "ties for wire structures." The second patent was issued March 22, 1904, to George Sylvester Tiffany, assignor, by mesne assignments, to the plaintiff, and numbered 755,187; the invention is in terms claimed to be an improvement in "dies." The third is alleged to have been issued to George S. Tiffany, assignor to the plaintiff, and numbered 774,210; and counsel for plaintiff dismissed the bill as to this patent, calling it the "Tiffany tie patent." The answer is in effect a denial of invention in or infringement of either of the two patents first mentioned. The court found that the first patent was not infringed, without passing upon its validity, and held that the second patent is invalid. Plaintiff appeals.

(1) 1. *The Williams patent.*—The prominent feature of this device is a wire tie designed to fasten the intersections of cross-wires. According to the claim in issue, one of the wires is bowed to receive the other at the intersecting-points; while the specification and drawings show both wires are so bowed at these points. The use of the tie is not limited to any specified wire structure, but is extended generally to "wire structures." The infringement charged in the instant suit, however, concerns wire fencing; and the evidence, for the most part, relates to structures of that kind. The fences, as constructed under authority of plaintiff, consist of horizontal or strand wires and vertical stay-wires, and both are oppositely bowed at the intersections and there fastened with this form of tie. The tie is made of a staple. The loop (or bend) of the staple engages the vertical wire horizontally at the upper end of its bow, with the legs passing over and engaging the strand-wire at both ends of its bow, and the points turning to and bending in opposite directions partially around the vertical wire at the lower end of its bow. The tie so made is circular in form, having two bearings on one side of the vertical wire and two on the opposite side of the strand-wire. The combination described in the specification and illustrated by drawings, is covered by two claims; both claims are in issue under the pleadings, but in the evidence and arguments only the first one is, and it is set out in the margin.[1] The staples used in making the ties and their relation to the cross-wires will be better understood by the drawings:



The defense of previous invention is set up in the answer; and in view of the patents there referred

[1] The combination in a wire structure, of the crossed wires, one of which is bowed to receive the other, with a tie consisting in a staple engaging with its bend the said bowed wire with its legs crossing the other wire and its points bent around the bowed wire from opposite sides, substantially as described.

to, it is urged that want of patentable novelty in the Williams patent plainly appears. It is therefore necessary to look into the prior art. Cross-wires with crimps or bows at their intersections appear in a number of patents earlier than the one in suit. For instance, Figures 2 and 3 of Caldwell's patent upon wire fences (October 25, 1887, No. 372,060) show cross-wires with intersecting bows, which are the same as those of Figs. 4, 5 and 6 of the patent in suit; this is not apparent in Figs. 4 and 5, but the specification states that the bows of these wires are the same as those in Fig. 6. Both Leggett and Staples, the one in his patent spring bed-bottom (August 19, 1890, No. 434,794) and the other in his patent spring-support for upholstery (September 20, 1892, No. 482,908), show cross-wires with intersecting bows. Jones, in his patent on wire fences (November 1, 1887, No. 372,625), displays cross-wires with the strands bowed at the intersections; and Mitchell, in his patent on such fences (April 16, 1889, No. 401,450), illustrates his device by uprights which are bent to fit the strand-wires at the points of crossing; while Hayden, in his patent on a wire-fastening device for metallic fence-posts (April 20, 1886, No. 340,311), discloses bows in strand-wires at his post-fastenings.

It hardly need be said that the staples used by Williams differ in no material respect from the ordinary and well-known commercial staple. It is true, as the specification states—

> the members of the staple are carried out of alinement with each other—

(Fig. 2), so that when viewed in side elevation the contour of an inverted V appears (Fig. 3); yet it is urged that one of the advantages of the tie is that the commercial staple may be conveniently used in making it.

Caldwell used a "clasp or staple" to fasten the vertical and horizontal wires at their intersecting-points. It is stated in his specification:

> The method of uniting the longitudinal and vertical wires at their intersections [is] by means of a clasp or staple bent around the crimped portion of each wire.

The clasp or staple was used by placing its bend diagonally across the bow of the strand-wire and turning its ends in opposite directions around the vertical wire at the extremities of its bow. Thus, virtually the same kind of instruments (staples) were designed in the Caldwell patent and in the Williams patent, to fasten the intersections of the same sort of bowed wires, vertical and horizontal.

The Depew patent upon wire fencing (April 11, 1893, No. 495,029) described a—

> clip that is normally provided with a reëntrant looped bend and elongated parallel legs—

(practically a staple partially adapted for ultimate use), as "a connecting clamp or tie" at the intersections of the cross-wires (Fig. 3). The bend of the clip was placed about the vertical wire immediately above the strand, with the curves of the legs engaging the strand and the ends projecting on both sides of the vertical wire where they were twisted together. And Mitchell used a wire clamp to effect his tie. This clamp was a staple, with the ends of its legs bent into hooks. The bend of the clamp engaged the iron upright, resting on the shoulder at the upper extremity of the bow, and the hooks held the strand-wire (Fig. 3). This is called by one of the experts a "suspension" tie, but its form would not seem to prevent clasping the cross-wires firmly.

In Briggs's patent upon pliers for building wire fences (January 2, 1894, No. 511,991), a staple is shown (Fig. 3), with its legs turned about midway of their length at right angles and in parallel lines. The bend of the staple was placed about the vertical wire, resting on the strand, and its projecting ends were turned around the strand (Fig. 2).

(2) In the light of the earlier patents, and all of them have not been mentioned, we are of opinion that the Williams device is lacking in patentable invention. The elements of the combination and the result attained by it were old; and upon comparison of the means of attainment here with the old methods, we find no change indicating anything more than mechanical skill. The most that can be said of the means now in issue is that the staple is disposed about the intersection of the cross-wires in a manner differing in some respects from that shown by the earlier patents. It is remarkable that the basic contrivance used for making these various ties, and all for the same object, should have been the staple. True, a number of the earlier patents show the staple partially changed into the final form desired (though without destroying its identity as a staple), while Williams displays the staple in its primary as well as its changed form; and still in the Williams tie the teaching of the prior art is none the less apparent. In view, then, of the purpose common to all these patents, it cannot signify how the patentees placed the staples about the cross-wires at their junctions, whether, for example, in the manner shown by Caldwell or Depew, or by Williams; for such differences could only vary the application of the tying device or possibly add to the efficiency of the intersection. It results that the combination in issue was at best simply an extension of the original idea, a change of form, an improvement in degree; in short, an old production in an old way—since it was without material change in means. This is not invention. It is but another instance calling for the application of the principle reannounced by Mr. Justice Shiras in *Market Street Railway Co.* v. *Rowley*, (155 U. S., 621, 629:)

> The case is obviously within the principle, so often declared, that a mere carrying forward of the original thought, a change only in form, proportions, or degree, doing the same thing in the same way, by substantially the same means, with better results, is not such an invention as will sustain a patent. (*Roberts* v. *Ryer*, 91 U. S., 150; *Belden Manufacturing Co.* v. *Challenge Corn Planter Co.*, 152 U. S., 100.)

See *Smith* v. *Nichols*, (21 Wall., 112, 118;) *Burt* v. *Evory*, (133 U. S., 349, 358;) *Grant* v. *Walter*, (148 U. S., 547, 553;) *Galvin* v. *City of Grand Rapids*, (115 Fed., 511, 517;) *Soehner* v. *Favorite Stove & Range Co.*, (84 Fed., 182, 187;) *Torrey* v. *Hancock*, (184 Fed., 61, 70,) and see *Lane* v. *Wells*, (99 Fed., 286, 290, 291;) *Brown Hoisting & Conveying Mach. Co.* v. *King Bridge Co.*, (107 Fed., 498, 504.)

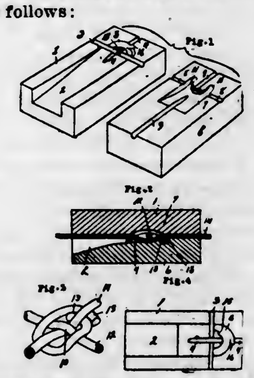
2. *The Tiffany patent.*—It is stated in the specification:

> This invention relates to dies into which may be driven a staple and which will form said staple in the shape of a knot or tie upon crossed wires passing through the dies to unite said crossed wires, as in the making of wire fencing.

The specification further states:

> The object of the invention is to provide simple and efficient means for forming the tie into a peculiar shape upon the crossed wires within the dies. * * *

Doubtless the tie so provided for is the one as to which the bill was dismissed; it corresponds in the main with the Williams tie. The two ties are, however, differently applied to the cross-wires. According to the Tiffany patent, and the testimony of plaintiff's expert, the loop and the ends of the staple engage the strand-wire, while in the Williams tie, as we have seen, these parts of the staple engage the vertical wire. Still it is fairly to be inferred from the evidence and arguments, though it is not distinctly stated, that the Williams tie can be produced upon the Tiffany dies; yet, as counsel suggest, the patentable quality of the dies is to be tested regardless of the Williams tie. The dies will be more readily understood through inspection of the drawings, in connection with the claims and interpolations therein of the reference-numerals of the drawings, as one of the experts has shown. The drawings are as follows:

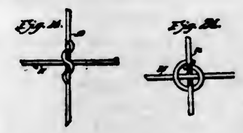


The claims, with the interpolations mentioned, appear in the margin.[a] Here again the defenses made include the one of previous invention and several earlier patents describing dies kindred to those now in issue are referred to. Defendant's counsel insist, moreover, that dies are made simply to reproduce a previously-designed object and cannot involve invention for that reason. The contention in effect is that the shaping of depressions, such as channels, recesses, or the like, in the faces of dies, is predetermined, and so calls for imitation, and not invention. In view of the prior art, this is a broader proposition than we are required to consider. Williams intended his tie to be made through the medium of a suitable die, though apparently he did not regard the die as a device also calling for the exercise of the faculty of invention. His specification states that the vertical and strand wires are to be tied together as shown in Figs. 5 and 6, and proceeds:

> The staple is then manipulated through the medium of a suitable die in a manner to carry its ends in direction of one another, so that they will curve over the vertical wire * * * at a point below the horizontal wire.[b]

Any consideration of the claims and drawings of the Tiffany patent will show that whatever improvement was made by Tiffany is to be found in the peculiar shaping of the channels and recesses of the opposed faces of the dies. When the staple is forced between the dies, it will obviously follow the lines of least resistance, and so be bent around the intersection of the two cross-wires there held, and converted into a tie like that of Fig. 3 of the drawings.

Nearly four years before the date of the Tiffany patent, the Lamb Wire Fence Company, assignee of Lamb and Hoxie, was granted a patent (April 3, 1900, No. 646,497) disclosing two die constructions, both of which are in principle similar to the die construction in issue and one of which produces a tie like that of Tiffany. The Lamb and Hoxie ties are shown in Figs. 14 and 24:



The faces of both sets of dies show transverse registering channels for the cross-wires. The first set is provided with spirally located and registering

[a] 1. Dies having transverse registering channels [3, 8 and 4, 9] for the reception of the cross-wires [12, 14], one of said dies [1] having an inclined way [2] and a semicircular recess [5], the other of said dies [6] having a central concavity [7] with curved branches [11] leading from opposite sides thereof, which curved branches register with the opposite terminals of said semicircular recess [5].

2. The combination of the dies, one die [1] having an inclined way [2] and a transverse channel [8] below the plane of the highest point of said way, a semicircular recess [5] whose terminals abut upon said channel [3], the other of said dies [6] having a central concavity [7] crossed by a transverse channel [8], said central concavity having curved branches [11] which register with the terminals of the semicircular recess [5] in the first-mentioned die, and a registering channel in the face of each die at right angles to the first-mentioned channel [the channel 4 in the case of die 1 and the channel 9 in the case of die 6].

3. In a device for the purpose set forth, the combination of the opposed dies having registering channels [3, 8 and 4, 9] in their inner faces which cross at right angles, one of said dies [6] having concave branches [11] which cross one of the channels [8] below the plane of the bottom thereof, the other of said dies [1] having a semicircular recess [5] which registers with the terminals of said branches [11] to direct the ends [13] of the tying-staple past each other and under one of the crossed wires [14].

4. The combination of the opposed dies having registering cross-channels [3, 8 and 4, 9] in the meeting faces thereof, a semicircular recess [5] in one of said dies [1] crossed by one of said channels [4] and depressed below the plane of the bottom thereof, the opposite die [6] having a depression [7] and concaved branches [11] crossing one of the channels [8] therein, said concaved branches being adapted to lead the ends [13] of the staple into the opposite terminal of said semicircular recess in the opposing die to direct said ends [13] past each other and cause them to lie concentric in the same plane.

[b] Attention may here be directed to the device subsequently designed by John S. Williams and patented, called a "wire crimping and fastening pliers," which is used for making the Williams tie in the field during fence construction. The patent bears date February 2, 1897, and the device has recesses and curves for holding the cross-wires and forming the staple into a tie about the intersection analogous to those of the Tiffany dies.

grooves deeper than the transverse channels and crossing them diagonally; also with registering recesses for the admission of a plunger with a shoulder and continuing reduced width for receiving and driving a straight tie-wire. The plunger forces the tie-wire between the dies in the plane of the cross-wires and into the spiral grooves about the intersection of the cross-wires, producing the result seen in Fig. 14. The only difference that need be mentioned between the first set and the second set of these dies concerns the tie-forming grooves of the dies; the second set being provided with circular arcs or grooves, instead of the spiral grooves of the first set, and the plunger forces the tie-wire in the same plane as it does in the other but through the circular arcs and about the cross-wires with the result shown in Fig. 24. It need not be said that, when the sections of these two sets of dies are placed face to face, the respective tie-forming grooves are so shaped as to constitute continuous channels for the guidance of the tie-wires and the formation of the knots or ties desired. It is true that a straight tie-wire is employed in both sets of these dies, while a staple (a U-shaped wire) is used in the Tiffany dies. The Lamb and Hoxie tie-wire is driven into the grooves provided for its reception and guidance, with only one end forward, and the Tiffany staple is driven into its grooves with both ends forward. Can it be that this difference introduced by Tiffany amounts to invention? The answer will not be found in a consideration of the *form* of his tie; for that was old and is not part of his claims. It must be found, as already stated, in what was done through the introduction of channels, grooves and recesses, into the faces of the dies; and since the methods adopted and the results achieved are practically the same in both devices, it is hard to see why Tiffany did more than to introduce a mechanical equivalent.

But, in addition to the teaching of the Lamb and Hoxie patent, Tiffany was previously advised of the fact that dies might be made for the introduction of a staple and its formation into a tie. Hoxie had accomplished this in 1901 (Letters Patent No. 678,955). The face of one section of his dies contains transverse channels for the reception of the cross-wires, and also recesses for forming a tie similar to the letter S. The other die member is provided with a slot through which the tie-wire (the staple) is driven at right angles to the meeting faces of the dies and into the tie-forming recesses of the other die. And as early as 1899 Lamb provided a die for joining intersecting wires (Letters Patent No. 628,986) by carrying cross-wires through transverse channels in the faces of the dies and driving two staples through slots into the tie-forming recesses and so converting them into a double spiral tie about the intersection. Plungers were used for driving the staples, and like the plunger of the Hoxie patent, were worked transversely to the faces of the dies. Lamb's dies and his method of operation are so plainly described in his specification, that we reproduce a portion in the margin.[4]

It is contended that the Hoxie patent and the Lamb patent should be disregarded because the staples were driven into the dies at right angles to the plane of the cross-wires, and that it is essential to the Tiffany dies that they should be separated from each other in the plane of the cross-wires to which the tie is to be applied by the dies. This ignores the fact that the purpose in all these dies was to fasten the cross-wires at their intersection; it ignores the fact that grooves and recesses were worked into the faces of the dies, with differences alone in shape and depth according to the form of the desired tie; and it would so differentiate the dies simply by the direction the staple was given in its approach to the tie-forming grooves and recesses. It is common knowledge that dies in one form or other are old devices, and that their differences are worked out through changes made in their faces rather than in their operation. The means of introducing the material intended to be given shape and form by the use of dies, would seem to be of little importance. Tiffany does not describe the means to be employed for driving the staple into his dies, and so leaves this feature open to the inference that efficient means were well known. Indeed, when substance and not simply form is considered, there is such practical resemblance in methods of construction and operation between the essential features of the earlier dies and those of the dies in question as to show only mechanical equivalency in the latter; and it is vain to say that the variations, some of them exceedingly slight, in the forms of the ties produced, indicate the presence in the dies themselves of anything beyond the skill of the die mechanic. Thus the elements of the Tiffany combination, like those of the Williams combination, and the result attained by the one, as well as the other, were in every material sense old; and when the Tiffany device is subjected to the tests of the prior art in die construction and uses, it becomes plain that the Tiffany patent in point of validity must be controlled by the principles of law we have applied to the Williams patent.

Furthermore, in view of the state of the prior art touching the feasibility of bending and uniting pieces of wire into particular forms by driving them through predesigned opposing channels and recesses wrought in the faces of an upper and a lower die, the Tiffany patent cannot escape application of the principles declared in *Peters* v. *Active Mfg. Co.*, (130

[4] The improvement consists in coacting dies having feed slots for the staple-like fasteners, arranged diagonally across the lines of the wire-receiving channels, the latter being provided in the working faces of the dies to have the deep wire channel of one die cross the corresponding channel of the other die at right angles in order to properly position the wires in relation to each other and to the feed slots for the staple-like fasteners and each die having semi-spiral grooves which extend in the general direction of the deep wire-receiving channel thereof, whereby the locking fasteners may be fed simultaneously through the diagonal slots of both dies to be positioned thereby in oppositely inclined directions across the joint between the crossed wires, and the semi-spiral groove of one die operates on the closing of the dies to twist the ends of the staple-like fastener fed by the other die around the wire which is contained in the said die that effects the twisting of the staple fastener.

U. S., 623, 628, 629.) See also, *Mahon* v. *McGuire Mfg. Co.*, (C. C., 51 Fed., 681, 683, per Judge Blodgett;) *Dayton Loop & Crupper Co.* v. *Ruhl*, (C. C., 55 Fed., 649, 651, per Judge Taft.) There is at least strong analogy between the use of dies for welding and forming pieces of iron into particular shape (as, for instance, in *Peters* v. *Active Mfg. Co.*) and for forcing pieces of wire into special relations and forms such as are described in the earlier art here disclosed. Nor can the decisions just cited be avoided upon the theory that the Tiffany dies—

are in the nature of machines, or active mechanical devices, which coöperate—

to form the wire into the tie produced by them; or upon the idea that the tie is applied and combined with the cross-wires of the fence structure. The bows of the cross-wires were shown as distinctly by the Hoxie patent of 1901 as they were by the Tiffany patent of 1904, and enough has already been said of the other coöperating features of the earlier dies. The argument in this behalf of the learned counsel seems to proceed upon the basis that Tiffany produced something new instead of something old, and (in the sense of invention rather than mechanical skill) by some new instead of an old way. It might well be conceded that if the Tiffany dies were new in these respects they would possess patentable qualities; but we think upon the facts the hypothesis is not sustainable. It follows that the presumption of validity attending the grant of the patent, which is so much relied on here, is not availing.

We conclude that the first claim, the only one really in issue, of the Williams patent, and all the claims of the Tiffany patent, are void. The decree must therefore be affirmed, with costs.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Hansen patent, No. 650,792, for improvement in underframes for railway-cars, claim 1 *Held* void for lack of invention. *Guaranty Trust Co. of New York* v. *Bettendorf Axle Co.*, 223 Fed. Rep., 542.

(U. S. D. C.) The fourth claim of the Hildreth patent, No. 832,384, for improvements in candy-pulling machines, *Held* void. *Hildreth* v. *Auerbach*, 223 Fed. Rep., 545.

(U. S. D. C.) The Thibodeau patent, No. 857,770, for improvements in candy-pulling machines, *Held* infringed. *Hildreth* v. *Auerbach*, 223 Fed. Rep., 545.

(U. S. C. C. A.) The Evans and Wichmann patent, No. 958,484, for a rotary printing-machine, claim 3 *Held* not infringed. *Evans* v. *Hall Printing Press Co.*, 223 Fed. Rep., 539.

(U. S. C. C. A.) The Rose patent, No. 754,242, for a type-writer, claims 1 and 5 *Held* void for anticipation. *Standard Typewriter Co.* v. *Standard Folding Typewriter Sales Co.*, 223 Fed. Rep., 779.

(U. S. C. C. A.) The Taigman, Wald, and Britsch patent, No. 984,827, for motor-controlled apparatus, *Held* valid and infringed. *Taigman* v. *Forsberg*, 223 Fed. Rep., 787.

(U. S. C. C. A.) The Taigman patent, No. 1,044,944, for a pulley-brake for motor-controlled apparatus, *Held* valid and infringed. *Taigman* v. *Forsberg*, 223 Fed. Rep., 787.

(U. S. D. C.) The Perkins reissue patent, No. 13,436, and the Perkins patent, No. 1,020,656, for starch glue and process of making same, *Held* valid and infringed. *Perkins Glue Co.* v. *Solva Waterproof Glue Co.*, 223 Fed. Rep., 792.

Adverse Decisions in Interference.

PATENT NO. 1,106,761.

On August 6, 1915, a decision was rendered that Alvin W. Weikert and James Pettibone were not the first inventors of the subject-matter covered by claim 1 of their Patent No. 1,106,761, subject, "Self-locking junction-box coupling," and no appeal having been taken within the time allowed such decision has become final.

PATENTS NOS. 1,071,221 AND 1,040,532.

On August 6, 1915, a decision was rendered that Carleton Ellis was not the first inventor of the subject-matter covered by claims 3 and 4 of his Patent No. 1,040,532 and claim 1 of his Patent No. 1,071,221, subjects, "Process of hydrogenating oily material" and "Apparatus for treating oils with gases," and no appeal having been taken within the time allowed such decision has become final.

Notice of Cancelation.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 17, 1915.

Quinn & Co., their assigns or legal representatives, take notice:

A cancelation proceeding has been instituted by this Office upon the application of Richard Hudnut, of 115 East Twenty-ninth street, New York, N. Y., to effect the cancelation of the trade-mark registration of Quinn & Co., % John Quinn, New Bradford Hotel, Michigan avenue and Thirtieth street, Chicago, Ill., registered May 1, 1900, No. 34,594, and the notice of such proceeding sent by registered mail to said Quinn & Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Quinn & Co., their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the cancelation will proceed as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 20, 1915.

John J. Cook, his heirs, successors, or assigns, take notice:

An interference having been declared by this Office between the application of the Hygienic Fleeced Underwear Company, of 2415–2437 Howard street, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered January 18, 1910, No. 76,434, to John J. Cook, of 350 Broadway, New York, N. Y., and the said John J. Cook being deceased, notice is hereby given that unless his heirs, successors, or assigns shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 27, 1915.

Harry Rosenberg, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Barrett Manufacturing Company, 17 Battery Place, New York, N. Y., for registration of a trade-mark and trade-mark registered March 29, 1910, No. 77,332, to Harry Rosenberg, 279 Dearborn street, Chicago, Ill., and a notice of such declaration sent by registered mail to said Harry Rosenberg at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Harry Rosenberg, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

THE

OFFICIAL GAZETTE

OF THE

United States Patent Office.

Vol. 218—No. 2. TUESDAY, SEPTEMBER 14, 1915. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
Issue of September 14, 1915	325
Notice	325
Coupon Orders for Copies of Patents	325
Applications Under Examination	326
Patents Granted	327
Reissues	575
Designs	578
Trade-Marks—Registration Applied for	585
Trade-Mark Registrations Granted	590
Labels and Prints	601
Commissioner's Decisions—	
Ex parte Klemm and Schreiber	603
Decisions of the U. S. Courts—	
Healy v. Sea Gull Specialty Co.	604
Changes in Classification	605
Interference Notices	606

ISSUE OF SEPTEMBER 14, 1915.

Patents	606—No.	1,153,183 to No.	1,153,878, inclusive.
Designs	34—No.	47,807 to No.	47,840, inclusive.
Trade-Marks	50—No.	105,992 to No.	106,041, inclusive.
Labels	6—No.	18,755 to No.	18,760, inclusive.
Prints	2—No.	4,056 to No.	4,057, inclusive.
Reissues	4—No.	13,977 to No.	13,980, inclusive.
Total	792		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	2	1	North Carolina	3	.....
Arizona	2	2	North Dakota	3	.....
Arkansas	3	.....	Ohio	52	5
California	35	.....	Oklahoma	9	.....
Colorado	5	.....	Oregon	5	3
Connecticut	13	.....	Pennsylvania	59	7
Delaware	1	.....	Rhode Island	6	.....
Florida	4	.....	South Carolina	2	.....
Georgia	3	.....	South Dakota	.....	.....
Idaho	1	.....	Tennessee	3	1
Illinois	69	6	Texas	4	1
Indiana	16	1	Utah	6	.....
Iowa	16	2	Vermont	2	.....
Kansas	2	.....	Virginia	5	.....
Kentucky	3	2	Washington	7	1
Louisiana	3	.....	West Virginia	2	.....
Maine	2	2	Wisconsin	18	.....
Maryland	6	.....	Wyoming	1	.....
Massachusetts	50	3			
Michigan	27	2	Alaska, District of	.....	.....
Minnesota	13	1	Canal Zone	.....	.....
Mississippi	.....	.....	District of Columbia	3	.....
Missouri	22	3	Hawaii Territory	1	.....
Montana	3	.....	Philippine Islands	1	.....
Nebraska	5	1	Porto Rico	.....	.....
Nevada	2	.....	U. S. Army	.....	.....
New Hampshire	1	1	U. S. Navy	.....	.....
New Jersey	34	.....			
New Mexico	.....	.....	Total to residents of the United States	638	53
New York	103	8			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	6	1	Netherlands	3	.....
Belgium	1	.....	New South Wales	.....	.....
British India	.....	.....	New Zealand	1	.....
British West Indies	.....	.....	Norway	.....	.....
Canada	12	.....	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	.....	.....
Cuba	.....	.....	Scotland	2	.....
Denmark	.....	.....	South Australia	.....	.....
England	20	.....	Spain	.....	.....
Finland	.....	.....	Sweden	3	.....
France	6	4	Switzerland	3	.....
Germany	32	.....	Transvaal, South Africa	1	.....
Guatemala	.....	.....	Victoria	.....	.....
India	.....	.....	Western Australia	.....	.....
Ireland	.....	.....			
Isle of Jersey	1	.....	Total to residents of foreign countries	92	5
Italy	.....	.....			
Mexico	1	.....			

Notice.

Classification Bulletin No. 34 is now on sale and may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at 10 cents per copy.

Coupon Orders for Copies of Patents.

(Order No. 2,198.)

Department of the Interior,
United States Patent Office,
Washington, D. C., March 16, 1915.

The practice of ordering a small number of printed copies of patents, to be charged against the deposit accounts which are maintained by this Office for the accommodation of inventors and attorneys, involves an inordinate amount of clerical labor in a very large number of small transactions. The necessary bookkeeping incident thereto has attained such proportions that the Office does not feel justified in permitting this practice. Coupon orders have been provided with a view to affording a convenient means for ordering less than twenty copies of patents; but the purpose of the coupon has been largely subverted by the extensive practice of ordering single copies of patents to be charged to account.

Coupon orders are sold by the Office in pads of twenty for one dollar and in stub-books of one hundred for five dollars. These coupons may be filled in, signed or stamped with the name of the sender, and mailed without a letter of transmittal.

Hereafter no requests that less than twenty copies of patents be charged to account will receive attention.

THOMAS EWING,
Commissioner of Patents.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business September 11, 1915.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	June 25	June 26	512
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Mar. 18	May 18	871
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	Aug. 20	Sept. 3	121
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	Apr. 13	July 19	649
167	5. Bookbinding; Harvesters; Jewelry; Music.	June 4	July 15	378
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar. 2	Aug. 12	526
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	July 12	July 24	448
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Apr. 1	Aug. 2	1208
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Feb. 1	Aug. 9	640
235	10. Carriages and Wagons	May 7	July 16	844
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	July 24	Aug. 19	143
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	June 16	June 28	775
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	June 25	July 19	502
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Apr. 20	July 21	265
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	May 18	Aug. 2	583
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Apr. 19	July 8	493
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	June 17	Aug. 9	203
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Aug. 2	Aug. 2	279
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	July 9	July 19	237
179	20. Artificial Limbs; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Aug. 11	Aug. 2	322

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	May 12	July 16	383
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	July 6	July 12	301
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Apr. 28	May 20	519
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	May 17	July 17	490
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Aug. 16	Aug. 21	149
106	26. Electricity, Generation; Motive Power.	Mar. 4	May 1	621
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	July 19	July 22	370
65	28. Internal-Combustion Engines	May 18	July 3	419
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Wood-working; Woodworking-Tools.	July 9	July 9	340
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	July 12	Aug. 12	263
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	June 5	July 29	330
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	Mar. 3	July 22	759
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	May 17	July 9	380
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	June 28	June 21	312
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	May 5	July 29	783
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	May 17	July 30	730
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Mar. 12	May 18	910
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	Apr. 16	July 13	631
321	39. Water Distribution	June 8	July 12	417
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 19	July 16	1002
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	May 17	July 22	431
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	May 15	May 13	811
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Aug. 3	July 6	287

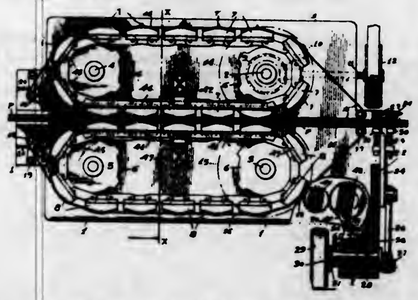
Oldest new case, Feb. 1; oldest amended, May 1.
Total number of applications awaiting action..... 21,637

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	July 24	Aug. 4	940
	Designs	Apr. 26	Aug. 17	526
	Labels and Prints	Sept. 1	Sept. 2	60

PATENTS

GRANTED SEPTEMBER 14, 1915.

1,153,183. DRAWING AND CUTTING MACHINE FOR PAPER TOWELS. GUSTAV A. AICHER and SOLOMON LAZAR, San Francisco, Cal., assignors to National Paper Products Co., San Francisco, Cal., a Corporation of California. Filed Jan. 19, 1914. Serial No. 813,604. (Cl. 164—49.)



1. In a machine for drawing and cutting interleaved paper towels, the combination of a suitable base plate; vertical shafts rotatably mounted upon the base plate and having suitable sprockets secured to the upper ends and gears secured to the lower ends thereof; parallel endless chains composed of vertically disposed flights mounted upon the sprockets and having horisontal seats thereon and adapted to engage and draw a pile of interleaved paper towels from a folding machine; suitable angle irons secured to the base plate and adapted to engage the horisontal seats on the flights for the purpose of preventing the said flights from separating between the sprockets; a knife slidably mounted upon one end of the base plate and transversely to the pile of towels; means for conveying the pile of towels from the flights to the knife; means for operating the knife and disconnected therefrom; suitable driving mechanism for driving the gears on the lower ends of the vertical shafts continuously; and means driven by the said gears and adapted to connect the knife to the operating means therefor at regular intervals.

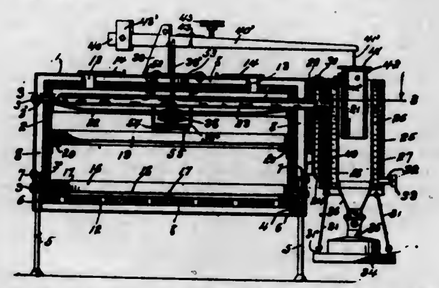
2. In a machine for drawing and cutting, a base plate, endless drawing members movable thereon and arranged to have parallel lengths between which the paper drawn engages, endless tapes encircling the drawing members and extending beyond the latter in the direction of movement thereof for delivering the paper drawn, rotatable supports over which the tapes pass arranged beyond the drawing members, and cutting means arranged for cutting the drawn paper subsequent to leaving the tapes.

3. In a machine for drawing and cutting, a base plate, endless members having parallel lengths between which the paper drawn passes, means for supporting and continuously driving the endless members including a yieldably mounted supporting roller adapted to yield to permit of the flexing of an endless member when the paper being drawn is momentarily stopped, and a cutter arranged to cut the paper when delivered from the endless members.

4. In a drawing and cutting machine, a base plate, endless members movably supported thereon and having parallel lengths between which the paper drawn passes, other endless members having parallel lengths extending beyond the parallel lengths of the first endless members, fixed elements arranged on the base plate to engage with and hold the parallel lengths of the first endless members from flexing, supporting means for the second endless members including a yieldably mounted roller for each adapted to yield on buckling of the drawn paper between said second endless members to permit of the latter yielding, and a cutter mounted for operation on the paper when delivered from the second endless members.

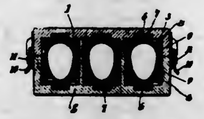
5. In a drawing and cutting machine, a base plate, drawing means thereon, a cutter arranged to operate upon the paper drawn, a rotatable member for operating the cutter, a rotary driving member having a notched portion, a latch carried by the cutter operating member and adapted for normally engaging the notched portion of the driving member to establish an operative connection therebetween, means for operating the drawing means, and a mechanism operable intermittently by the drawing means operating means for normally withholding the latch from the notched portion of the driving member.

1,153,184. INCUBATOR. AMBROSE ALLEN, Kansas City, Mo. Filed Dec. 26, 1912. Serial No. 738,678. (Cl. 119—42.)



In an incubator, an incubation chamber having air inlet openings in its bottom and having air outlet holes in its top, a casing inclosing said chamber and spaced apart therefrom so as to form an air channel passing over the top, at the ends, and at the bottom of said chamber, the channel at the bottom communicating with said inlet openings, the casing having at one end an air inlet communicating with said channel, a partition dividing said channel transversely adjacent to the air inlet of the casing and at the bottom side of said chamber, and means for heating the air as it passes upwardly through said chamber.

1,153,185. EGG-CARRIER. MYRON H. ALLEN, New Brunswick, N. J. Filed July 2, 1914. Serial No. 848,550. (Cl. 217—27.)



1. An egg carrier containing separable members provided with oppositely disposed spiral springs, a covering of flexible material for each of said springs, adapted to engage the opposite end portions of the egg and be indented into the adjacent spring coil, whereby the egg will

be held between the opposed springs and the yielding coverings therefor against longitudinal and lateral movement, each of said members being provided with lateral guiding portions surrounding portions of the spring carried thereby for preventing lateral movement of the spring.

2. An egg carrier comprising separable members, each provided with an egg receiving recess, adapted to register with the recess of the other member, each member being provided with a spiral spring of less diameter than the said recesses, located concentrically therein and seated against the bottoms of said recesses and projecting slightly out of said recesses, and held from lateral movement, a pad of flexible material in each of said recesses, for engaging an egg, and adapted to be indented into the end of the adjacent spring, to hold the egg against lateral movement, and means for holding said members in assembled relation.

3. An egg carrier comprising separable members provided with registering egg receiving recesses, each having its inner end provided with a concentric recess of smaller diameter, coiled springs located in said smaller recesses, pads of flexible elastic material located in the egg receiving recesses, and engaging the adjacent spring, each of said egg receiving recesses being provided with a lining of flexible elastic material around its lateral walls, and means for holding said members together.

4. An egg carrier comprising separable members, each provided with an egg receiving recess, adapted to register with the recess of the other member, each member being provided with a spiral spring of less diameter than the said recesses, located concentrically therein, and held from lateral movement, a pad of flexible material in each of said recesses, for engaging an egg, and adapted to be indented into the end of the adjacent spring, to hold the egg against lateral movement, the egg receiving recesses in one of said members being of greater depth than those in the other member to facilitate the insertion and removal of the egg.

5. An egg carrier comprising separable members, each provided with registering recesses forming egg receiving cells, each member being provided with an auxiliary recess in the bottom of each of its cell recesses, and yielding cushioning devices located in the said auxiliary recesses and having egg engaging portions, said cushioning devices engaging opposite ends of the eggs and holding them from longitudinal and lateral movement in the cells.

[Claims 6 and 7 not printed in the Gazette.]

1,153,186. DITCH-GUARD. JOHN BATES, Turlock, Cal. Filed Oct. 31, 1913. Serial No. 798,520. (Cl. 61—5.)

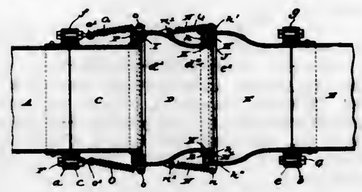


1. A ditch guard comprising a strip of material having tongues struck therefrom and being crimped transversely in alinement with the openings formed by said tongues to cause the tongues to extend outwardly at an angle to said openings, and screening secured to the inner face of said strip and extending across said openings.

2. A ditch guard formed from a strip of resilient material having tongues struck therefrom and being crimped transversely to cause said tongues to extend outwardly at an angle to the openings formed by said tongues.

3. A ditch guard formed from a strip of material crimped transversely to provide alternate faces extending substantially parallel, one set of parallel faces being provided with openings, and strips extending outwardly from the second set of parallel faces partially across the openings formed in the first mentioned set of parallel faces.

1,153,187. FLEXIBLE JOINT. EDWARD FRANCIS BERRY, New Orleans, La. Filed Aug. 5, 1913. Serial No. 783,179. (Cl. 137—34.)

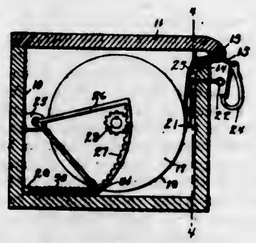


1. A coupling of the character described for dredging pipes and the like comprising pipe sections adapted to be connected, one of said sections being provided with an inwardly offset portion to constitute a shoulder, a flexible packing member on the other pipe section adapted to slidably engage the shouldered section, said packing comprising a reinforced base portion and an offset free edge portion adapted to have an extensive surface engagement with the member which it opposes.

2. A coupling of the character described for dredging pipes and the like comprising pipe sections adapted to be interfitted to permit one section to swing relative to an adjoining section, one of said sections being provided with an inwardly offset portion to constitute a shoulder, a flexible packing member on the other pipe section adapted to slidably engage the shouldered section, said packing comprising a reinforced base portion and an offset free edge portion adapted to have an extensive surface engagement with the section which it opposes.

3. A coupling of the character described for dredging pipes and the like, comprising pipe sections adapted to be interfitted to permit swinging movement of one section relative to the other section, means on one of the sections comprising an inwardly projecting flange or ring normally fixed in position with reference to the said pipe section to constitute a rigid abutting shoulder, a flexible packing member on the other pipe section adapted to slidably engage the shouldered section, said packing having an offset free edge portion adapted to have an extensive surface engagement with the section which it opposes inside of said abutting shoulder, substantially as and for the purpose described.

1,153,188. HITCHING DEVICE. CHARLES W. BLOCK, Neenah, Wis. Filed Jan. 12, 1915. Serial No. 1,856. (Cl. 242—109.)



In a device of the class described, a drum rotatably mounted in the box and carrying a pinion, a quadrant pivotally mounted at its apex within the box and having its curved base provided with teeth meshing with the pinion, a strap wound on the drum, a detent for the drum and a resilient element connected to the box and to the quadrant for rotating the drum to rewind the strap.

1,153,189. LOCK-VALVE. JOHN F. BLEIMING, Chicago, Ill. Filed Oct. 9, 1912. Serial No. 724,792. (Cl. 137—4.)



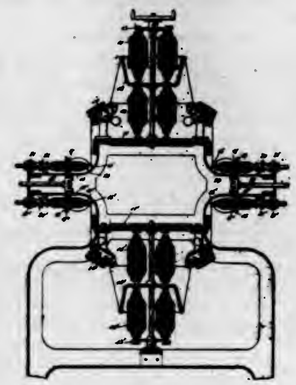
1. In a device of the kind described and in combination, a suitable valve casing provided with an inlet and outlet, a controlling valve in said outlet, means arranged in the inlet for maintaining said valve on its seat, comprising a tubular sleeve slidably carried by the casing, a fixed tubular sleeve arranged in said inlet, and a spring member arranged to abut against both of said sleeves, and normally force the slidable sleeve in the direction of the outlet of the casing, said casing provided with an extended chambered part at one side, a longitudinally movable valve operating rod arranged in the chamber in said part and projecting into the valve casing, means arranged about said rod for preventing the escape of fluid from the casing into said chamber, key-controlled mechanism arranged at the end of said chambered part for operating said rod, including a lock casing secured in said part, and a rotatable barrel arranged therein and provided with a cam member on its inner end arranged eccentrically the rod and only contacting with said rod at the end thereof.

2. In a device of the kind described and in combination, a suitable casing provided with an inlet and outlet, and with a valve seat at said outlet, said casing having a chambered extended part at one side and a recess therein at the opposite side, a spherical valve member arranged in said casing, means for normally maintaining said valve member in alinement with the valve seat, means for resiliently maintaining said valve on its seat, means for displacing the valve member and retaining the same in said recess in position to the resilient means contained therein, comprising a longitudinal movable rod arranged in the chambered part and extending into the casing in contact with the valve member, a stuffing box arranged about said rod between said casing and extended part, a rotatable cam member positioned at the end of the rod and having a cam face in contact with the rod end, and means for rotating said cam, including locking means secured thereto.

1,153,190. SPINNING AND WINDING MACHINE. ZACHARIAH EDWARD BOOTH, New Bedford, Mass. Filed Jan. 19, 1914. Serial No. 812,941. (Cl. 118—10.)

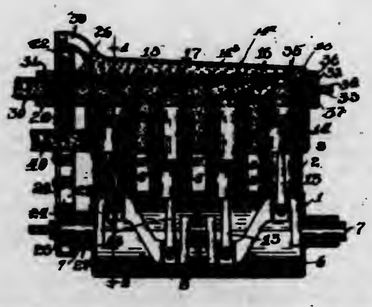
1. In combination, two oppositely-disposed creels, rolls for each creel and a pair of substantially-horizontal spindles, one arranged below the other and each adapted to receive the yarn from one of said sets of rolls, the axes of said spindles being substantially at right angles to the axes of said creels.

2. In combination, two oppositely-disposed creels, rolls and a pair of substantially-horizontal spindles, one arranged below the other and adapted to receive the yarn



from said rolls, the axes of said spindles being substantially at right angles to the axes of said creels.

1,153,191. INTERNAL-COMBUSTION ENGINE. CHARLES M. BRADLEY, Harvey, Ill. Filed July 5, 1912. Serial No. 707,654. (Cl. 123—80.)

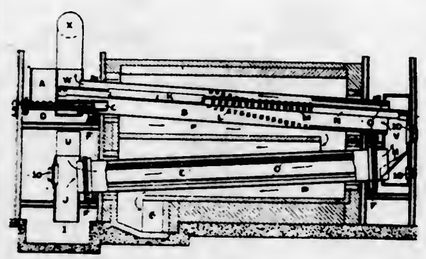


1. In an engine of the class described, a plurality of cylinders, a unitary hollow rotary valve element controlling both the supply and exhaust of all of said cylinders, water jackets for said cylinders and for said valve element, the walls of said valve element being apertured laterally near one end to afford direct communication between said cylinder water jackets and the valve jacket and also with the interior of said valve, packing disposed around said valve element on each side of the apertured portion to prevent leakage of water into the interior of the cylinders and past said end support, a screw-plug for closing the end of said rotary valve element beyond said apertures, a stud shaft on said screw-plug, and a nut apertured to fit over said stud shaft and when in screw-threaded engagement with the cylinder casing engaging said screw-plug to prevent longitudinal movement of the rotary valve element.

2. In an engine of the class described, a plurality of cylinders, a unitary hollow rotary valve element controlling both the supply and exhaust of all of said cylinders, water jackets for said cylinders and for said valve element, the walls of said valve element being apertured at one end to afford direct communication between said cylinder water jackets and the valve jacket and also with the interior of said valve, packing disposed around said valve element on each side of the apertured portion to prevent leakage of water into the interior of the cylinders,

and a cage surrounding said valve element and bearing at each of its ends against said packing to hold the same pressed into position, said cage permitting a flow of water therethrough and through the apertures in the valve element.

1,153,192. APPARATUS FOR DRYING SEWAGE-SLUDGE AND THE LIKE. JOHN BROMET, FRANK THORMAN, and HENRY CLAYTON WOOD, Tadcaster, England. Filed Mar. 30, 1914. Serial No. 828,303. (Cl. 34—6.)



1. In an apparatus for drying sewage sludge or other material, the combination of a rotating cylinder or cylinders, externally and internally heated, and having a forced circulation of air through the interior, with a high temperature refuse destructor having a large fire grate, fire brick arch and linings, a closed ashpit, a fan or other means for drawing foul air from the air circuit through the drying cylinders and forcing it into the ashpit and through the fire of the furnace or into the combustion chamber, and valves for regulating the amounts of foul air forced through the fire of the furnace and discharged into the combustion chamber respectively, so as to reduce the air passing through the fire to the minimum required for combustion, thus obtaining the most intense heat possible when burning fuel of low calorific value.

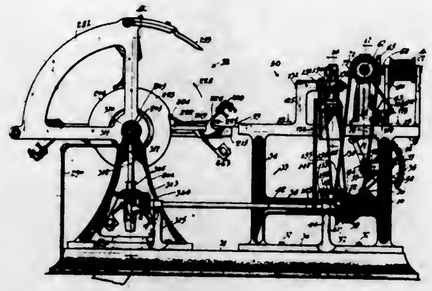
2. In an apparatus for drying sewage sludge or other material and in combination, rotating cylinders adapted to receive the material to be dried, a fan, pipes connecting the cylinders and fan designed to form a circuit through which air is repeatedly circulated, furnace means for externally heating the cylinders adapted to subsequently heat, on the "regenerative principle," the air delivered to the cylinders, fan means for withdrawing a portion of the saturated and foul air from the said circuit and forcing it into the ashpit and combustion chamber of the furnace, and means for continuously replacing by fresh air the foul air drawn from the circuit.

3. In an apparatus for drying sewage sludge or other material and in combination, rotating cylinders adapted to receive the material to be dried, and through which a current of hot air is continuously circulated, furnace means for heating the air, an ashpit under the grate closed to the atmospheric air, means for forcing the hot foul moist air drawn from the hot air circulating through the cylinders into the ashpit beneath the grate, and means for controlling the supply of foul air delivered to the ashpit to regulate the combustion of fuel in the furnace.

4. In an apparatus for drying sewage sludge or other material and in combination, rotating drying cylinders, a fan, a furnace adapted to externally heat the rotating cylinders and provided with a closed ashpit, an air pipe extending between the suction inlet of the fan and the cylinders, pipes leading from the delivery outlet of the fan into the closed ashpit and combustion chamber of the furnace, valves in the said pipes for regulating the amount of saturated air discharged into the ashpit and combustion chamber respectively, and means for introducing comparatively cool air into the combustion chamber to reduce the temperature of the furnace gases and prevent overheating of the cylinders.

5. In a drying apparatus for drying sewage sludge or other material and in combination, rotating cylinders adapted to receive the material to be dried, a fixed internal girder extending through one of the cylinders, a fixed scraper on the girder adapted to remove material adhering to the inner periphery of the cylinder, teeth mounted on the inner periphery of the cylinder, pegs attached to the girder adapted to co-act with the teeth as the cylinder revolves, and means for continuously passing hot air through the cylinders to dry the pulverized material, substantially as described.

1,153,193. MACHINE FOR MAKING PAPER PAILS. FRANK J. BAUNELL, Chicago, Ill., assignor of one-half to Forée Bain, La Grange, Ill. Filed Aug. 8, 1913. Serial No. 783,697. (Cl. 93—36.)



1. An automatically operable pail making machine, comprising means for simultaneously pasting and bail-taping a blank; a plurality of movable means for appropriately folding the blank; means for moving said pasting and folding means in coöperative time relation and means for automatically passing said blank from the pasting and taping means to said folding means.

2. An automatically operable pail making machine, comprising means for simultaneously pasting and bail-taping a blank, receiving means for moving said blank to said pasting and taping means; a plurality of movable means for appropriately folding the blank; means for moving said taping, pasting and folding means in coöperative time relation and means for automatically passing said blanks from the pasting and taping means to said successive folding means.

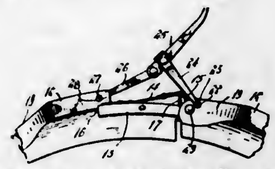
3. An automatically operable pail making machine, comprising means for pasting a blank, perforating the same and inserting the ends of a bail through the said perforations; a plurality of means for appropriately folding the blank; means for moving said folding means in sequential order in proper time relation with said pasting and taping means and means for automatically passing said blank from the pasting and taping means to said folding means.

4. An automatically operable pail making machine, comprising means for pasting and taping a blank; a plurality of means for appropriately folding the blank; means for moving said folding means in sequential order in proper time relation with said pasting and taping means, means for automatically passing said blank from the pasting and taping means to said folding means, and means for blowing said finished pails from said folding means and placing them in nested relation.

5. An automatically operable pail making machine, comprising means for pasting and taping a blank; means for appropriately folding the blank to arranged adhesive-receiving parts in interlapped relation, means for passing said blank from said pasting and taping means to said folding means and means for applying pressure to said interlapped parts.

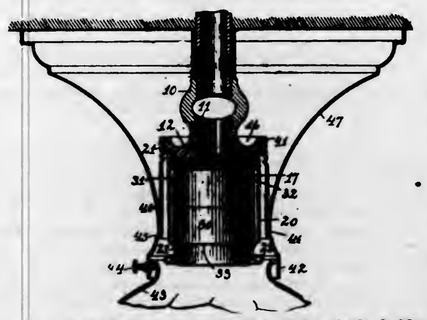
[Claims 6 to 29 not printed in the Gazette.]

1,153,194. TIRE-ARMOR. PETER A. CHRISTENSON, Benson, Minn. Filed Mar. 11, 1914. Serial No. 824,072. (Cl. 152—16.)



In a tire armor, a plurality of pivotally connected links, each of which is formed with a longitudinally extending rib which is bifurcated at one end, the bifurcated end of the rib of one of the end links having a transverse pin therein, a plate slidably mounted on the other end link, a spring latch member carried by the slidable plate for engagement with the transverse pin of the before-mentioned end link, and a beveled nose on the outer end of the spring latch member for engagement with the said pin to guide the latch into engagement with the pin when the links are drawn together.

1,153,195. ELECTRIC-LAMP SOCKET. CHARLES BURT CLARK, East Orange, N. J. Filed June 4, 1914. Serial No. 842,870. (Cl. 240—78.)



1. A combined electric lamp socket and shade holder, comprising a stepped annulus having an internally threaded central aperture, and two externally threaded steps, a hollow cylindrical socket holder threaded on the lower step and a hollow cylindrical shade holder threaded on the upper step.

2. A combined electric lamp socket and shade holder, comprising a stepped annulus having an internally threaded central aperture, and two externally threaded steps, a hollow cylindrical socket holder threaded on the lower step and a hollow cylindrical shade holder threaded on the upper step, the lower step being provided with means to engage the socket within the holder to prevent the rotation of the latter.

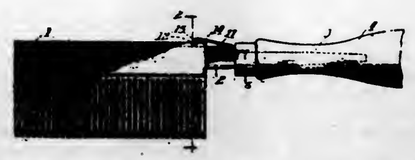
3. A combined electric lamp socket and shade holder, comprising a stepped annulus having an internally threaded central aperture, and two externally threaded steps, a hollow cylindrical socket holder threaded on the lower step and a hollow cylindrical shade holder threaded on the upper step, the lower step being provided with means to engage the socket within the holder to prevent the rotation of the latter consisting of downwardly projecting positioning pins.

4. A combined electric lamp socket and shade holder, comprising a stepped annulus having an inner central aperture, means for connecting the annulus at said aperture with a support, a socket holder and means for connecting it to the lower step of the annulus, a shade holder and means for connecting it with the upper step of the annulus.

5. In combination a hickey, an annulus arranged beneath the same and supported therefrom, a socket holder, a connection between it and the annulus, a shade holder and a connection between it and the annulus, a socket in the holder and means on the top to engage the socket to prevent its rotation.

[Claims 6 and 7 not printed in the Gazette.]

1,153,196. HAIR-DRYING COMB. ALBERT F. COX, Chicago, Ill. Filed Sept. 29, 1913. Serial No. 792,396. (Cl. 34—26.)



1. In a device of the kind described, and in combination, an elongated heat storing member having at one end a suitable handle of insulating material, a detachable comb provided with a body part having a back and connected tapering side walls, the heat storing member being of a shape to conform to that of the chamber provided by the body part of the comb, which said body part has an open end for the insertion and removal of the heat storing member, and said back wall having an opening therein adjacent the open end of the body part, and means to engage in said opening to detachably maintain the heat storing member in place in the body part of the comb.

2. In a device of the kind described and in combination, a comb part comprising a back, and teeth projecting from said back, the back being hollow and open at one end and having integral back and side walls, the side walls tapering inwardly from the opposite sides of the back wall to the point of connection with the teeth, and a detachable heat storing member provided with a suitable handle of insulating material, the heat storing member corresponding in contour with the chamber in the back, and insertible through the end of the back and a spring held latch for detachably connecting the heat storing member and comb part together.

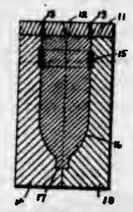
3. In a device of the kind described, and in combination, a comb part comprising a chamber back and teeth projecting from said back, the back being hollow and open at opposite ends and having connected back and side walls, the side walls tapering inwardly from the opposite sides of the back wall to the point of connection with the teeth, and a detachable heat storing member insertible from either end of the back, said member being provided with a suitable handle of insulating material, the heat storing member corresponding in contour with the chamber in the back, and movable means on the heat storing member adapted to engage the back of the comb part to retain the parts in place.

4. In a device of the kind described and in combination, a comb part provided with a chambered back and a heat storing member corresponding in contour with the chamber in said back, and arranged to be detachably positioned therein by a sliding movement through the end of the back, and retaining means interposed between the comb part and heat storing member, said retaining means being automatically released by a relative sliding movement of the comb part and heat storing member.

1,153,197. ART OF CASTING AND UNITING METALS. ALVIN M. CRAIG, New Haven, Conn., assignor to Metal Molds Compressed Castings Company, Wilmington, Del., a Corporation of Delaware. Filed Jan. 12, 1915. Serial No. 1,765. (Cl. 22—204.)

1. The improvement in the art of casting metals, which consists in supporting an unmelted metallic part having a lower melting point in a mold which is a good conductor of heat, whereby said part is kept in substantially unfused condition throughout, and then pouring liquid metal

forming the other part into said mold and in contact with the said first metal whereby a substantially finished article is produced.



2. The improvement in the art of uniting metals of different melting points, which consists in heating but not fusing a metal of lower melting point which is to be on the surface of the united parts, placing the heated metal on the inner surface of a mold which is a good conductor of heat, thereby providing against distortion of said metal of lower melting point, and then pouring the molten metal of the higher melting point in the same mold and in contact with said first metal.

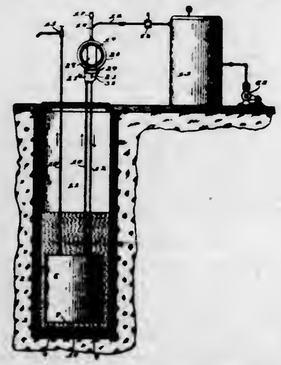
3. The improvement in the art of casting a metallic body with an encircling band having a lower melting point, which consists in supporting the band in the inner wall of a mold which is a good conductor of heat, thereby providing against the fusion and distortion of said band, and then pouring the charge in the mold so as to fill the band and envelop the edges thereof, whereby a substantially finished article is produced.

4. The improvement in the art of casting a metallic body with an encircling band having a lower melting point, which consists in heating and thereby expanding the band to a high temperature but not fusing it, supporting the same in a mold which is a good conductor of heat, thereby providing against its distortion, and then pouring the charge into the mold and band, whereby the charge and band become united and will shrink together when cooling.

5. The improvement in the art of casting a substantially finished metallic body with an encircling band having a lower melting point, which consists in supporting the band in a mold which is a good conductor of heat, thereby providing against the distortion of the band, and then pouring the charge in the mold so as to fill the band, whereby the charge and band become united.

[Claims 6 to 8 not printed in the Gazette.]

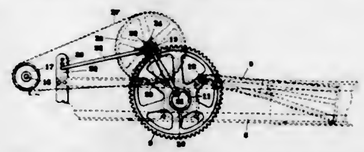
1,153,198. APPARATUS FOR RAISING WATER. WILLIAM T. CROSLEN, Oklahoma, Okla., assignor of one-half to James P. Woolsey, Oklahoma, Okla. Filed June 11, 1914. Serial No. 844,511. (Cl. 103—8.)



1. In apparatus of the character described, a casing adapted to be submerged in the water supply and having a valved inlet for water, a source of compressed air, a pipe leading from said source to the casing, an exhaust pipe leading from the casing, means for causing back pressure of the exhausting air in said exhaust pipe, and means whereby said back pressure stops the entrance of air from the said source.

2. In apparatus of the character described, a casing adapted to be submerged in the water supply and having an inlet opening provided with a valve, a source of compressed air, a pipe leading from said source to the casing, an exhaust pipe leading from the casing, means whereby the lowering of the water to a predetermined point in the casing opens the exhaust pipe, means for causing back pressure in the exhaust pipe, and means whereby said back pressure stops the entrance of air from the air source to the casing.

1,153,199. HAY-PRESS. JOSEPH DAIN, Moline, Ill., assignor to Dain Manufacturing Company of Iowa, Ottumwa, Iowa, a Corporation of Iowa. Filed Dec. 22, 1913. Serial No. 808,194. (Cl. 100—3.)



1. A press, comprising an eccentrically-mounted gear, a plunger operated thereby, a rising and falling pinion meshing with said gear, means supporting said pinion and holding it constantly in mesh with said gear, and means for driving said pinion.

2. A press, comprising an eccentrically-mounted gear, a plunger operated thereby, a vertically-movable pinion meshing with said gear, means supporting said pinion and holding it constantly in mesh with said gear, and means for driving said pinion.

3. A press, comprising an eccentrically-mounted gear, a plunger operated thereby, a pinion meshing with said gear, means centrally connected with said gear and with said pinion, for holding the same in mesh with said gear as the latter rotates, a swinging support for said pinion, and means for driving said pinion.

4. A press, comprising an eccentrically-mounted gear, a plunger operated thereby, a pinion meshing with said gear, means centrally connected with said gear and supporting said pinion for holding the same in mesh with said gear as the latter rotates, a link pivotally mounted upon the machine frame and coöperating with said supporting means for positioning said pinion with reference to the gear, and means for driving said pinion.

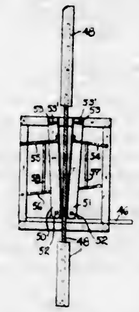
5. A press, comprising an eccentrically-mounted gear, a plunger operated thereby, a circular pinion meshing with said gear, means for holding said pinion in mesh with said gear during the rotation of the latter, and means for driving said pinion.

[Claims 6 to 9 not printed in the Gazette.]

1,153,200. FIRE-ESCAPE. JOHN J. DANIELS, Albia, Iowa. Filed Mar. 6, 1915. Serial No. 12,601. (Cl. 187—93.)

1. A fire escape of the character described including an elevator cage, a vertical guide bar, along which the cage moves, a pair of guide plates pivotally mounted at their lower ends on each side of the guide bar, and closely adjacent thereto, and means operable to move the guide plates into frictional engagement with the guide bar, to thereby control the speed of the cage in descending, said means including members pivoted to the cage, each having wedging engagement with one of said guide plates, and manually operable means for shifting the said members into such wedging engagement to force the guide plates against the guide bar.

2. The combination with an elevator cage, and a vertically disposed guide member therefor, of brake members pivoted to their lower ends upon the frame of the elevator and disposed one on each side of and closely adjacent to the vertical guide, said brake members being adapted to be moved into or out of parallel relation and frictional engagement with the guide, oppositely disposed actuating members pivotally mounted at their outer ends upon the frame of the car and at their inner ends operatively engaging said brake members, and a lever operatively connected to both of said actuating members to simultaneously shift the actuating members toward the horizontal position to thereby shift the brake members into parallel relation and into frictional engagement with the guide.



3. A fire escape of the character described including a tower, and an elevator cage vertically movable therein, guide bars secured vertically within the tower at opposite sides thereof, a pair of guide plates movably mounted at each side of the elevator cage, the individual guide plates of each pair being disposed to bear against opposite sides of the adjacent guide bar, and means operable from within the cage for moving the guide plates into severe frictional engagement with the guide bars for controlling the speed of the cage in descent, said means including a pair of pivoted levers arranged to terminally bear against the outer faces of the guide plates, an operating lever, and link members connecting the operating lever and the first mentioned levers, whereby the terminals of the first mentioned levers may be swung into engagement with the guide plates.

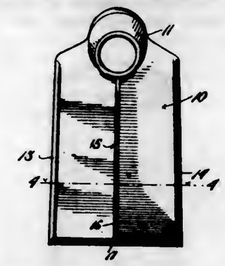
1,153,201. LAST-TUBE. HENRY O. DAVIS, Plymouth, Mass. Filed May 5, 1915. Serial No. 26,067. (Cl. 12—139.)



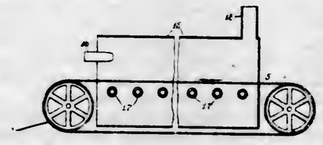
A last tube having an integral inwardly projecting flange at its inner end surrounding a central opening of smaller diameter than the tube, and a bottom member seated on the inner side of the tube flange and having a shank passing through and closely fitting said opening, and riveted into the outer surface of the flange, said tube flange and the bottom member with its shank forming a two-part reinforced tube bottom of the same diameter as the tube, and adapted to enter a hole extending partly through a last end to bear on the bottom of said hole.

1,153,202. HOE. WILLIAM HENRY DOCK, Wilmington, N. C. Filed May 26, 1914. Serial No. 841,074. (Cl. 55—39.)

A hoe of the class described comprising a main blade having a handle socket at its inner end and its sides and outer end ground to form cutting edges, and a supplemental blade secured to the rear of the main blade and disposed centrally and longitudinally of the latter, said supplemental blade having longitudinal and transverse cutting edges, the latter being disposed substantially in the plane of the cutting edge at the outer end of the main blade and at right angles to the longitudinal cutting edge of the supplemental blade.



1,153,203. METHOD OF TREATING ORES. LOUIS C. DREFAHL, Cleveland, Ohio, assignor to The Grasselli Chemical Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 15, 1914. Serial No. 832,079. (Cl. 75—73.)



1. The method of conditioning fine or dusty ore material for further treatment, which consists in forming such material into a plastic mass; dividing up such mass into relatively small nodules; and then maintaining such nodules relatively stationary and simultaneously subjecting the same to heat sufficient to dry and harden, but not otherwise affect the same.

2. The method of conditioning fine or dusty ore material for further treatment, which consists in forming such material into a plastic mass; expressing such mass through perforations in the form of small streams; breaking up such streams into relatively small fragments or nodules; and then maintaining such nodules relatively stationary and simultaneously subjecting the same to heat sufficient to dry and harden, but not otherwise affect the same.

3. The method of conditioning fine or dusty ore material for treatment, which consists in moistening such material and intermixing a suitable binder, so as to form thereof a plastic mass; dividing up such mass into small nodules; and then maintaining such nodules relatively stationary and simultaneously subjecting the same to heat sufficient to expel the moisture therefrom and set such binder, but not otherwise affect said nodules.

4. The method of conditioning fine or dusty ore material for treatment, which consists in moistening such material and intermixing a suitable binder, so as to form thereof a plastic mass; expressing such mass through perforations in the form of small streams; breaking up such streams into relatively small fragments or nodules; and then maintaining such nodules relatively stationary and simultaneously subjecting the same to heat sufficient to expel the moisture therefrom and set such binder, but not otherwise affect said nodules.

5. The method of preparing finely pulverized zinc and silver sulfid ores for desulfurization, which consists in moistening such ores and intermixing a suitable binder so as to form thereof a plastic mass; dividing up such mass into small nodules; and then maintaining such nodules relatively stationary and simultaneously subject-

ing the same to heat sufficient to expel the moisture therefrom and set such binder, but not otherwise affect such nodules.

[Claim 6 not printed in the Gazette.]

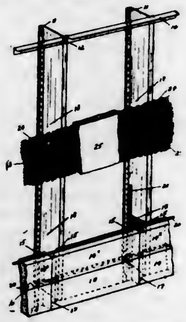
1,153,204. STOVEPIPE. EDWARD W. EDWARDS, Cincinnati, Ohio. Filed June 28, 1915. Serial No. 36,797. (Cl. 126—309.)



1. A sheet metal stove pipe section having formed along one edge of the sheet a flange bent to form two channels facing each other, these channels lying in the interior of the pipe and having a narrow entrance or throat along the edge of the sheet, and the other edge of the sheet being formed into a longitudinal tongue, said tongue being formed with an inwardly and backwardly extending shoulder adapted to enter one of the channels and with a free edge adapted to enter the opposite channel.

2. A sheet metal stove pipe section having formed along one edge of the sheet a flange bent to form two channels facing each other, these channels lying in the interior of the pipe and having a narrow entrance or throat along the edge of the sheet, and the other edge of the sheet being formed into a longitudinal tongue, said tongue being formed with an inwardly and backwardly extending shoulder adapted to enter one of the channels and with a free edge adapted to enter the opposite channel, said free edge of the tongue being bent or crimped longitudinally throughout its length, for the purpose set forth.

1,153,205. WALL-CONSTRUCTION APPARATUS. WILLIAM C. EDWARDS, Jr., Kansas City, Mo. Filed Feb. 15, 1915. Serial No. 8,364. (Cl. 25—131.)



1. A wall building apparatus comprising a superposed plate and depending channel like studs attached to said plate at intervals, said studs being adapted to stand in vertical contact with a permanent wall member and forming therewith molds for concrete columns integral with said permanent wall member.

2. A wall building apparatus comprising a superposed plate and depending channel shaped studs attached to said plate at intervals, said studs being adapted to stand in vertical contact with a reinforced concrete wall member and forming therewith molds for concrete columns integral with said wall member.

3. A wall building apparatus comprising a superposed plate and depending channel like studs attached thereto at intervals; said studs being adapted to stand in vertical contact with a permanent wall member having steel reinforcement embedded therein, and forming therewith molds for reinforced concrete columns integral with said permanent wall member.

4. A wall building apparatus comprising a superposed plate and depending channel shaped studs attached to said plate at intervals, said studs being adapted to stand in vertical contact with a permanent wall member, composed of one or more courses of building blocks, and forming therewith molds for concrete columns integral with said wall member.

5. A wall building apparatus comprising a superposed plate and depending channel like studs attached to said plate at intervals; said studs being adapted to stand in vertical contact with a permanent wall member composed of one or more courses of building blocks, each block extending from stud to stud, said studs and said wall member forming molds for concrete columns integral with said blocks at their ends.

[Claims 6 to 12 not printed in the Gazette.]

1,153,206. TOY NOVELTY. SAMUEL EISENBERG, Newark, N. J. Filed Nov. 11, 1914. Serial No. 871,446. (Cl. 46—37.)



1. A novelty device of the character specified comprising a main body-member having attached thereto and adapted to be furled thereon a flag, end-members mounted upon the end-portions of said body-member, a tubular member detachably mounted upon said body-member and its end-members, said tubular member providing an inclosing casing for the furled flag, and a stem-like element slidable with relation to said main body-member, arranged to provide an extended flag-staff.

2. A novelty device of the character specified comprising a main body-member having attached thereto and adapted to be furled thereon a flag, end-members mounted upon the end-portions of said body-member, a tubular member detachably mounted uopn said body-member and its end-members, said tubular member providing an inclosing casing for the furled flag, a stem-like element slidable with relation to said main body-member, arranged to provide an extended flag-staff, and means connected with the free end-portion of said stem-like member for attachment thereto of said tubular member when removed from its inclosing relation with said body-member and the end-members thereof.

3. A novelty device of the character specified comprising a main tubular body-member having attached thereto and adapted to be furled thereon a flag, end-members mounted upon the end-portions of said tubular body-member, a sprayer-nozzle connected with one of said end-members, a plunger within said tubular member, and a stem connected with said plunger, said stem extending through a perforation in the other end-member.

4. A novelty device of the character specified comprising a main tubular body-member having attached thereto and adapted to be furled thereon a flag, end-members mounted upon the end-portions of said tubular body-member, a sprayer-nozzle connected with one of said end-members, a plunger within said tubular member, a stem connected with said plunger, said stem extending through a perforation in the other end-member, and a tubular casing-member detachably mounted upon said body-member and its end-members, said tubular casing-member providing an inclosing casing for the furled flag.

5. A novelty device of the character specified comprising a main tubular body-member having attached thereto and adapted to be furled thereon a flag, end-members mounted upon the end-portions of said tubular body-member, a sprayer-nozzle connected with one of said end-members, a plunger within said tubular member, a stem connected with said plunger, said stem extending through a perforation in the other end-member, a tubular casing-member detachably mounted upon said body-member and its end-members, said tubular casing-member providing an inclosing casing for the furled flag, and means connected with the free end-portion of said stem for attachment thereto of said tubular casing-member when removed from its inclosing relation with said tubular body-member and the end-members thereof.

[Claims 6 to 10 not printed in the Gazette.]

1,153,207. HORN. SAMUEL EISENBERG, Newark, N. J. Filed Nov. 11, 1914. Serial No. 871,447. (Cl. 46—46.)

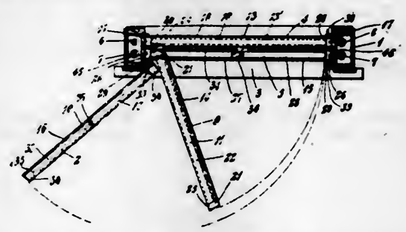


1. A horn comprising a series of hollow truncated cone-shaped sections adapted to be brought into nested relation and also in frictional holding engagement to provide a complete horn, one of said sections being provided with a reed and serving as a mouthpiece, combined with means for retaining confetti within the horn.

2. A horn comprising a series of hollow truncated cone-shaped sections adapted to be brought into nested relation and also in frictional holding engagement to provide a complete horn, one of said sections being provided with a reed and serving as a mouthpiece, combined with a perforated disk in one of said horn-sections, and an end screen-cover, all arranged to provide a chamber for the reception of confetti.

1,153,208. WINDOW. LOUIS W. EISM, Norwood, Ohio. Filed Feb. 26, 1915. Serial No. 10,778. (Cl. 20—48.)

1. In a window, a casing, an upper sash comprising an outer section sliding up and down in the casing, and an inner section hinged to and swinging into and out of the outer section, a lower sash sliding up and down in the casing inwardly of the casing from the upper sash, and comprising an outer section and an inner section hinged to and swinging into and out of the outer section, said outer section of the upper sash comprising stiles, and a top rail and a bottom member rigidly joining the stiles across the window, the inner section of said upper sash comprising side rails and a top rail and a bottom rail of shape and dimensions adapted when fitting into the opening inclosed by the outer section to make up a sash of standard dimensions, a transparent plate held in the stiles and rails of the inner section, said outer section of the lower sash comprising stiles and a bottom rail, and comprising a flat relatively thin top bar of metal rigidly securing the upper parts of the stiles together across the window, and said inner section of the lower sash comprising stiles and a bottom rail and a top rail, said stiles and rails of the inner section being of shape and dimension such that when they are inclosed by the outer section they will make up, with the respective stiles and rails and the bar of the outer section, a sash of standard dimensions, and a transparent plate held in the stiles and rails of the inner section.



2. In a window, a casing, an upper sash comprising an outer section sliding up and down in the casing, and an inner section hinged to and swinging into and out of the outer section, a lower sash sliding up and down in the casing inwardly of the casing from the upper sash, and comprising an outer section and an inner section hinged to and swinging into and out of the outer section, said outer section of the upper sash comprising stiles and a top rail, and a flat relatively thin bottom bar of metal rigidly joining the lower parts of the stiles across the window, the inner section of said upper sash comprising stiles and a top rail and a bottom rail of shape and dimensions adapted when fitting into the opening inclosed by the outer section to make up a sash of standard dimensions, a transparent plate held in the stiles and rails of the inner section, said outer section of the lower sash comprising stiles and a bottom rail, and comprising a flat relatively thin top bar of metal rigidly securing the upper parts of the stiles together across the window, and said inner section of the lower sash comprising side rails and a bottom rail and a top rail, stiles of the inner section being of shape and dimension such that when they are inclosed by the outer section they will make up, with the respective stiles and rails and the bar of the outer section, a sash of standard dimensions, and a transparent plate held in the stiles and rails of the inner section.

3. In a window, a casing, an upper sash comprising an outer section sliding up and down in the casing, and an inner section hinged to and swinging into and out of the outer section, a lower sash sliding up and down in the casing inwardly of the casing from the upper sash and comprising an outer section and an inner section hinged to and swinging out of the outer section, said inner section of the upper sash having its bottom composed of a meeting rail, and said inner section of the lower sash having its top composed of a meeting rail, said meeting rails cooperating by engagement of their upright sides together when the upper sash is up and the lower sash is down, and a transparent plate in each of said inner sections, the top of said outer section of the lower sash being composed of a flat relatively thin bar of metal extending across above the meeting rail that forms the top of the inner section of the lower sash, and allowing said meeting rail to swing under this bar and coöperate with the meeting rail of the upper sash, as aforesaid.

4. In a window, a casing, an upper sash comprising an outer section sliding up and down in the casing, and an inner section hinged to and swinging into and out of the outer section, a lower sash sliding up and down in the casing inwardly of the casing from the upper sash and comprising an outer section, and an inner section hinged

to and swinging out of the outer section, said inner section of the upper sash having its bottom composed of a meeting rail, and said inner section of the lower sash having its top composed of a meeting rail, said meeting rails coöperating by engagement of their upright sides together when the upper sash is up and the lower sash is down, and a transparent plate in each of said inner sections, the top of said outer section of the lower sash being composed of a flat relatively thin bar of metal extending across above the meeting rail that forms the top of the inner section of the lower sash, and allowing said meeting rail to swing under this bar and coöperate with the meeting rail of the upper sash, as aforesaid, the upper side of said meeting rail forming the top of the inner section being rabbeted and leaving an inner part projecting up alongside the inner edge of said flat bar, for the purposes set forth.

1,153,209. FASTENING DEVICE. EDWARD ERICKSON, Beverly, Mass. Filed May 12, 1913. Serial No. 766,949. (Cl. 40—25.)

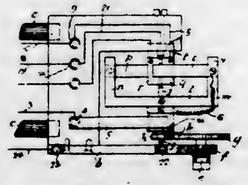


1. A fastening device of the character described, comprising a substantially straight pointed member having a cross bar at one end, and a sheet metal head comprising superimposed members between which the cross bar on the pointed member is located and a neck portion connecting said members, the upper of said members having a concavity in which the said cross bar is located and provided with a slot extended from said concavity to the outer edge of said upper member which is opposite to said neck portion to permit the pointed member to be turned into a position substantially parallel with said head member.

2. A fastening device of the character described, comprising a substantially straight pointed member, and a head comprising members between which the pointed member is pivoted, one of said head members having a slot to receive the pointed member and permit the latter to be turned into a position substantially parallel with said head member, and having prongs which project beyond the other of said members to fasten both members to a tag or like device.

3. A fastening device of the character described, comprising a rigid, substantially straight, pointed member, and a head comprising an upper and a lower member between which the rigid, pointed member is pivotally secured to enable said rigid, pointed member to be turned into a position substantially parallel with said head member, and means on the upper of said members which projects beyond the lower of said members to engage a tag or like device.

1,153,210. APPARATUS FOR OPERATING TWO MECHANISMS IN SYNCHRONISM. GEORGE WILLIAM FORD, Gourock, Scotland. Filed Jan. 6, 1914. Serial No. 810,639. (Cl. 172—239.)



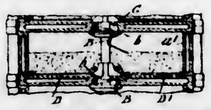
An apparatus for operating a cinematograph camera or projector in synchronism with a sound producing or recording machine comprising in combination a tripolar electric motor, a fixed commutator for said motor, a bracket mounted to revolve around the axis of said commutator, two brushes mounted to revolve with said bracket, one of said brushes being in electrical connection with the outer circuit through its support, spindle and bearing, the other brush being insulated from the bracket but in connection with the outer circuit through a connecting ring and brush.

1,153,211. PENCIL ATTACHMENT. JOHN FORSTER, Los Angeles, Cal. Filed Nov. 18, 1914. Serial No. 872,739. (Cl. 120—8.)



A pencil attachment, comprising a split resilient sleeve adapted to receive a pencil, a spring yoke embracing said sleeve and carrying a stylus point, said yoke having arms bent toward each other, a pin passing through said yoke and said sleeve pivotally securing the yoke to the sleeve for extension of said stylus longitudinally of the sleeve in either direction and for limiting the movement of the stylus in either direction.

1,153,212. COOKER FOR OIL-BEARING MATERIAL AND THE LIKE. ALFRED W. FRENCH, Piqua, Ohio. Filed Feb. 16, 1912. Serial No. 678,115. (Cl. 87—6.)

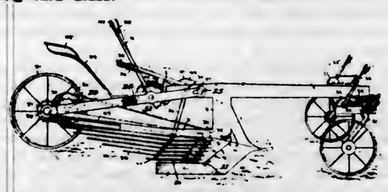


1. The combination of a plurality of heating chambers an upper one of which is provided with a hollow bottom to which steam is supplied for heating the material, and which has an opening through which the material discharges to the next chamber below, the discharge opening of such chamber being undercut, and a gate which is hinged in the enlarged portion of the discharge opening and is adapted to ride on the material in the lower chamber for controlling the discharge of the material from the upper chamber, substantially as set forth.

2. The combination of a plurality of heating chambers an upper one of which is provided with means for heating the material and which has an opening in its bottom through which the material discharges to the next chamber below, the discharge opening of such upper chamber being undercut, a hinged gate which is located in the enlarged portion of said discharge opening, and means adapted to ride on the material in the lower chamber and operatively connected with said gate for controlling the discharge of the material from the upper chamber, substantially as set forth.

1,153,213. BRUSH-PLOW. MORGAN C. FRENCH, Yampa, Colo. Filed Sept. 29, 1914. Serial No. 864,025. (Cl. 55—118.)

1. A plow construction comprising a beam, a standard fixed to said beam, a land side integral with and projecting from said standard, a plow share attached to said standard, a mold board connected to said plow share, a second land side connected to the end of the plow share and mold board, said second land side having a hollow chamber therein, a plurality of disks in the rear of said plow share and mold board, means to rotate said disks in unity, and means to separate roots from the soil after leaving said disks.



2. A plow comprising a beam, a standard to said beam, a landside integral with the rearwardly projecting from said standard, a plow share attached to said standard, a mold board connected to said plow share, a second land side connected to the ends of said plow share and mold board, and means to crush and break the soil and to separate the roots and shrubbery therefrom.

3. A plow comprising a plow beam, a standard thereto, a plow attached to said standard, a plow brace integral with said standard and bracing said plow, and means to crush the soil and separate the roots from said soil in the rear of said plow.

4. A plow comprising a plow beam, a standard, a plow, a plurality of landsides vertically disposed and at each side of said plows projecting rearwardly therefrom, shafts mounted between said land sides, a plurality of crushing and breaking disks mounted upon said shafts in staggered relationship, a plurality of guard rods projecting rearwardly from said plow and between said crushing and breaking disks, and adjustable and removable extensions to said rods.

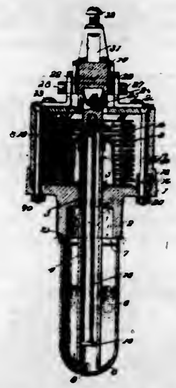
5. A plow comprising a beam, a standard, a plow, a hollow land side at the outer end of said plow rearwardly projecting in a horisontal position, a second landside rearwardly projecting from the inner end of said plow, a rearwardly projecting plate near said second landside and forming a chamber therebetween, a plurality of shafts mounted between said land sides, a pair of gear wheels mounted within the hollow portion of said first mentioned landside upon said shafts, connecting driving means between said driving gear wheels, a driving wheel mounted between said second mentioned landside and said plate, and driving means thereto.

1,153,214. DAMPER-REGULATOR. WESTON M. FULTON, Knoxville, Tenn., assignor to The Fulton Company, Knoxville, Tenn., a Corporation of Maine. Filed Jan. 9, 1914. Serial No. 811,266. (Cl. 236—6.)

1. In a damper regulator, the combination of a thermosensitive bulb provided with a tubular stem, a chambered plug adapted to enter the wall of a boiler and having an opening for receiving and supporting said stem, said bulb and stem forming with the walls of the plug a fluid-circulating chamber open to the boiler space when the plug is in position in the wall of the boiler, and damper operating means having a connection with said bulb.

2. In a damper regulator, the combination of a thermosensitive bulb adapted to be exposed to a heating fluid in a boiler and having a tubular stem, a support to which said stem is secured having a tubular member forming with the stem an annular fluid circulating chamber above the bulb, the end walls of said bulb and said member overlapping to prevent accidental displacement of the bulb and normally out of contact to reduce transfer of heat from the bulb to said support, said member being adapted to be screwed in position in the wall of a boiler.

3. In a damper regulator, the combination of a thermosensitive bulb adapted to be exposed to a heating fluid in a boiler and having a tubular stem, a support to which the stem is secured having a tubular member forming an annular fluid circulating chamber with the stem above the bulb, said member having an engagement with the wall of the bulb to prevent lateral displacement of the latter and also having threads for screwing the support into position in the wall of a boiler.

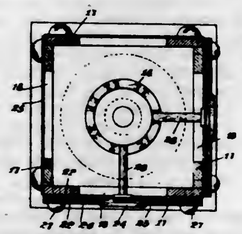


4. In a damper regulator, the combination of a vibratory vessel and a rocking member operated thereby, a thermosensitive bulb having a tubular connection with said vessel, and a guide rod movable with the movable end of said vessel and having on its free end a head loosely playing in said tube and guided thereby to move in a rectilinear direction while its opposite end is free to accommodate itself to the oscillating movement of the rocking member limited by the walls of said tube.

5. In a damper regulator, the combination of a vibratory vessel and a rocking member operated thereby, a thermosensitive bulb having a tubular connection with said vessel, and a guide rod movable with the movable end of said vessel and having its free end housed in said tube and guided thereby to move in a rectilinear direction while its opposite end is free to accommodate itself to the oscillating movement of the rocking member limited by the walls of said tube.

[Claims 6 to 10 not printed in the Gazette.]

1,153,215. SIGNALING DEVICE. PRESTON E. GILLING, East Orange, N. J. Filed Aug. 23, 1912. Serial No. 716,579. (Cl. 116—1.)



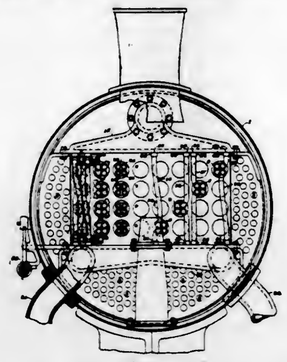
1. In a signaling device, a hollow polyhedral frame, a plurality of flexible diaphragms, each attached to a face of said frame, a pin on each of said diaphragms, a shaft extending parallel to the faces of said diaphragms, a crown toothed wheel on said shaft, arranged to engage with the sides of said pins to vibrate said diaphragms and means to rotate said wheel.

2. In a signaling device, a flexible diaphragm having a projection thereon and means to strike said projection to vibrate said diaphragm, said means including a striking member having its contacting face composed of laminæ of non-metallic material, said member being constructed and

arranged to strike said projection with the edges of said laminæ.

3. In a signaling device, a support, a flexible diaphragm mounted thereon so as to be non-rotatively movable in its own plane, said diaphragm being provided with a projection extending from the face thereof and means to strike said projection to vibrate said diaphragm, said projection and said means being constructed and arranged so that the amount of contact therebetween may be altered by moving said diaphragm bodily and non-rotatively in its own plane.

1,153,216. LOCOMOTIVE-SUPERHEATER. ERNEST G. GOODWIN, Roanoke, Va., assignor to Locomotive Superheater Company, New York, N. Y., a Corporation of Delaware. Filed June 5, 1913. Serial No. 771,929. (Cl. 122—462.)



1. In a superheater, the combination of a horizontal top header for saturated steam, a horizontal bottom header for superheated steam, a plurality of smoke tubes arranged in vertically disposed rows of four tubes each between the said top and bottom headers, superheating pipes for each of said smoke tubes connecting said top and bottom headers, the superheating pipe for each of the first or upper of said smoke tubes in the said vertically disposed rows originating near the inner edge of said top header and terminating near the outer edge of the said bottom header, the superheating pipe for each of the second of said smoke tubes originating near the inner edge of said top header and terminating near the outer edge of said bottom header, the superheating pipe for each of the third of said smoke tubes originating near the outer edge of said top header and terminating near the inner edge of the said bottom header, and the superheating pipe for each of the fourth or lower of the said smoke tubes in the said vertically disposed rows originating near the outer edge of the said top header and terminating near the inner edge of said bottom header, substantially as described.

2. In a superheater, the combination of a horizontal top header for saturated steam, a horizontal bottom header for superheated steam, a plurality of smoke tubes arranged in vertically disposed rows of four tubes each between the said top and bottom headers, superheating pipes for each of said smoke tubes connecting said top and bottom headers, the superheating pipe for each of the first or upper of said smoke tubes in the said vertically disposed rows originating near the inner edge of said top header and terminating near the outer edge of the said bottom header, the superheating pipe for each of the second of said smoke tubes originating near the inner edge of said top header and terminating near the outer edge of the said bottom header, and the superheating pipe for each of the third of said smoke tubes originating near the outer edge of said top header and terminating near the inner edge of the said bottom header, and the superheating pipe for each of the fourth or lower of the said smoke tubes in the said vertically disposed rows originating near the outer edge of the said top header and terminating near the inner edge of said bottom header, substantially as described.

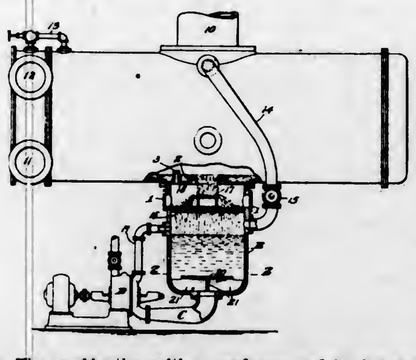
3. In a superheater, the combination of a horizontal top header for saturated steam, a horizontal bottom header for superheated steam, a plurality of boiler smoke tubes arranged in vertically disposed rows of four tubes each between the said top and bottom headers, superheating pipes for each of said smoke tubes connecting said top and bottom headers, the superheating pipe for each of the first or upper of said smoke tubes originating near the inner edge of said top header, passing thence to said upper smoke tube where it passes backwardly inside said smoke tube in one of the upper quarters of its cross section, returning to the front end of said smoke tube in the other of the upper quarters of its cross section, passing again backwardly inside said smoke tube in one of the lower quarters of its cross section, and returning to the front end of said smoke tube in the other of the lower quarters of its cross section, whence said superheating pipe passes downward and is attached to said bottom header near the outer edge of the same, the superheating pipe for each of the second of said smoke tubes in the said vertically disposed rows originating near the inner edge of said top header, passing thence to said second smoke tube which it traverses in the manner described for the upper smoke tube, passing thence downwardly, and being attached near the outer edge of said bottom header, the superheating pipe for each of the third smoke tubes in the said vertically disposed rows originating near the outer edge of said top header and, after traversing the said third smoke tube in the previously described manner, terminating near the inner edge of said bottom header, and the superheating pipe for each of the fourth or lower of the smoke tubes in the said vertically disposed rows originating near the outer edge of the said top header, and, after traversing the fourth smoke tube in the manner already described, terminating near the inner edge of said bottom header, substantially as described.

4. In a superheater, the combination of a horizontal top header for saturated steam, a horizontal bottom header for superheated steam, a plurality of boiler smoke tubes arranged in vertically disposed rows of 4 each between the said top and bottom headers, superheating pipes for each of said smoke tubes connecting said top and bottom headers, the superheating pipe for each of the first or upper of said smoke tubes originating near the inner edge of said top header, passing thence to said upper smoke tube where it passes backwardly inside said smoke tube in one of the upper quarters of its cross section, returning to the front end of said smoke tube in the other of the upper quarters of its cross section, passing again backwardly inside said smoke tube in one of the lower quarters of its cross section, and returning to the front end of said smoke tube in the other of the lower quarters of its cross section, whence said superheating pipe passes downward and is attached to said bottom header near the outer edge of the same, the superheating pipe for each of the second of said smoke tubes in the said vertically disposed rows originating near the inner edge of said top header, passing thence to said second smoke tube which it traverses in the manner described for the upper smoke tube, passing thence downwardly, and being attached near the outer edge of said bottom header, the superheating pipe for each of the third smoke tubes in the said vertically disposed rows originating near the outer edge of said top header and, after traversing the smoke tube in the previously described manner, terminating near the inner edge of said bottom header, and the superheating pipe for each of the fourth or lower of the smoke tubes in the said vertically disposed rows originating near the outer edge of the said top header, and, after traversing the fourth smoke tube in the manner already described, terminating near the inner edge of said bottom header, substantially as described.

5. In a superheater, the combination of a steam header, a plurality of superheating pipes, ball joints attaching said superheating pipes to said header, a ball joint clamp adapted to embrace two of said ball joints transversely of the header, and a ball joint bridge composed of two cross members disposed at substantially ninety degrees from each other, the ends of one of said cross members being adapted to bear upon two of said ball joint clamps and the ends of the other of said cross members being adapted to accommodate bolts or other clamping means, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,153,217. CONDENSER. JOHN F. GRACE, New York, N. Y., assignor to Henry R. Worthington, a Corporation of New Jersey. Filed Mar. 7, 1913. Serial No. 752,605. (Cl. 257—24.)



1. The combination with a condenser and its hot well for receiving the discharge water, of connections for supplying heating steam to the hot well, and means for controlling the discharge water in its passage from the condenser to the hot well to prevent the passage of the heating steam to the condenser.

2. The combination with a condenser and its hot well for receiving the discharge water, of connections for supplying heating steam to the hot well, a spray plate extending entirely over the hot well above the steam connection to the hot well, and a discharge water outlet from the condenser having an overflow arranged to form a solid sheet of discharge water above the spray plate.

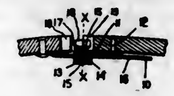
3. The combination with a condenser and its hot well for receiving the discharge water, of connections for supplying heating steam to the hot well, a spray plate above the steam connection to the hot well, and a spill plate above the spray plate over which the water falls from the condenser to the spray plate.

4. The combination with a candenser and its hot well for receiving the discharge water, of connections for supplying heating steam to the hot well, a spray plate above the steam connection to the hot well, a splash plate above the spray plate, and a spill plate above the splash plate over which the water falls from the condenser to the splash plate and spray plate.

5. The combination with a condenser and its hot well for receiving the discharge water, of connections for supplying heating steam to the hot well, a spray plate above the steam connection to the hot well, a spill plate above the spray plate over which the water falls from the condenser from the hot well above the spray plate.

[Claims 6 to 10 not printed in the Gazette.]

1,153,218. ADJUSTABLE DRESS-FORM. FRANK B. GRANGER, New York, N. Y., assignor to Hall-Borchert Dress Form Co., New York, N. Y., a Corporation of New Jersey. Filed Aug. 8, 1913. Serial No. 783,678. (Cl. 223—18.)



1. The combination with a dress form having a shell-like formation and divided into a plurality of sections, of a connecting device situated on the interior of the form for connecting one section directly to an adjacent section, said device comprising a plate or strap connected to one section and a clamping member connected to the adjacent section, the shell of said form having a tool-receiving opening therethrough in line with said clamping member into which an operating tool may be inserted to actuate the clamp.

2. The combination with a dress form having a shell-like formation presenting a substantially continuous exterior dress-supporting surface and divided into a plurality of sections, of connecting devices situated on the interior of the form for adjustably connecting the adjacent sections directly to each other, each device comprising a plate or strap connected to one section, and a clamping member including a clamping screw connected to another section, the shell of said dress form having an opening in line with each clamping screw through which it is accessible from the exterior of the form.

3. The combination with a dress form having a shell-like formation presenting a substantially continuous exterior dress-supporting surface and divided into a plurality of sections, of connecting devices situated on the interior of the form for adjustably connecting the adjacent sections together, each connecting device comprising two overlapping members, and a clamping screw for adjustably clamping said members together, the shell of said form having apertures in line with the clamping screws through which they are accessible from the exterior of the form.

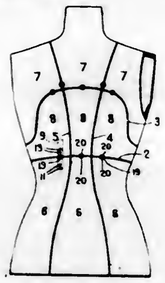
4. The combination with a dress form divided into a plurality of sections, of connections situated on the interior of the form for adjustably connecting the adjacent sections together, each connection comprising a clamping screw which is provided with a head by which it is operated, the said form having openings in which the heads of the clamping screws are received whereby they may be operated from the exterior of the form.

5. In a sectional dress form, the combination with a plurality of sections, of connecting means situated on the interior of the form for adjustably connecting said sections, said connecting means comprising a slotted strap secured to one of two adjacent sections, a clamping member secured to the other section and having a slot through which said strap extends and a clamping screw extending through the slot of the strap and clamping the latter to the clamping member, said dress form sections being provided with openings through which the screw is accessible from the exterior of the form.

1,153,219. SECTIONAL DRESS-FORM. FRANK B. GRANGER, New York, N. Y., assignor to Hall-Borchert Dress Form Co., New York, N. Y., a Corporation of New Jersey. Filed Aug. 8, 1913. Serial No. 783,679. (Cl. 223—18.)

1. The combination with a sectional dress form presenting a shell-like formation divided into a plurality of sections adjustable relative to each other, of connecting means situated entirely on the interior of the form for connecting adjacent sections to each other, said connecting means comprising two overlapping members, one connected to each of the connecting sections, and a spring-actuated frictional clamp engaging one of said members and clamping said members in adjusted position, said

form having an opening through which the clamp is accessible to be released.



2. The combination with a sectional dress form presenting a shell-like formation divided into a plurality of sections adjustable relative to each other, of connecting means situated on the interior of the form for connecting adjacent sections to each other, said connecting means comprising two overlapping members, one connected to each of the connected sections, and a spring-actuated frictional clamp engaging one of said members and clamping said members in adjusted position, said clamp being operable from the exterior of the form to release its frictional engagement with said member thereby permitting the adjustment of the adjacent sections.

3. In a sectional dress form, the combination with two adjacent sections, of connecting means situated entirely on the interior of the form for adjustably connecting said sections, said connecting means comprising a spring-actuated frictional clamp for frictionally holding the sections in adjusted position and the form having an opening through which access may be had to the clamp to release the latter.

4. In a sectional dress form, the combination with two dress form sections, of an adjustable connecting means situated on the interior of the form for adjustably connecting said sections, said connecting means comprising a strap secured to one section and a clamping member secured to the other section and provided with a slot through which the strap extends, and a spring-pressed clamp operable from the exterior of the form for clamping the strap to the clamping member.

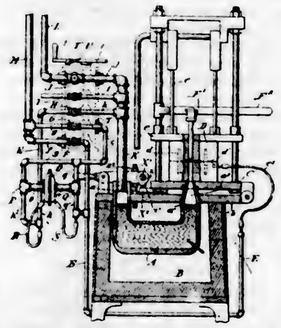
5. In a sectional dress form, the combination with two dress form sections, of an adjustable connecting means situated on the interior of the form for adjustably connecting said sections, said connecting means comprising a strap secured to one section and a clamping member secured to the other section and provided with a slot through which the strap extends and a clamping plunger carried by the clamping member, a spring acting on said plunger and tending to clamp it against the strap and a thumb piece connected to the clamping plunger and accessible from the exterior of the form by which the plunger can be unclamped from the strap.

[Claims 6 to 8 not printed in the Gazette.]

1,153,220. CASTING-MACHINE. CHARLES M. GREY, East Orange, N. J. Filed Jan. 4, 1912. Serial No. 669,350. (Cl. 22—73.)

1. In a casting machine, the combination of two chambers having communication below the surface of material adapted to be contained therein, means for exhausting air from both of said chambers, whereby a partial vacuum is produced above the material therein and the metal freed from entrained gases, and means whereby one of said chambers may be exhausted independently of the other.

2. In a casting machine, the combination of two chambers having communication below the surface of material adapted to be contained therein, a mold having unobstructed communication with one of said chambers, and a vacuum conduit having a branch thereof connected with one of said chambers and another branch thereof connected to the mold for simultaneously producing a partial vacuum in the two chambers and the mold while restraining the material from flowing toward the mold.



3. In a casting machine, the combination of two chambers spaced apart but having communication below the surface of material adapted to be contained therein, a mold having unobstructed communication with one of said chambers, and means for simultaneously exhausting air from the two chambers and directly from the mold while restraining the flow of material into the mold.

4. In a casting machine, the combination of two chambers having communication only below the surface of material adapted to be contained therein, a mold having unobstructed communication with one of said chambers, means connected with one of said chambers and directly to the mold, whereby the air may be simultaneously exhausted from both chambers and from the mold while restraining the material from flowing toward the mold, and means for subsequently forcing the material into the mold.

5. In a casting machine, the combination of two chambers spaced apart and having communication only below the surface of material adapted to be contained therein, a mold having unobstructed communication with one of said chambers, means connected with one of said chambers and directly to the mold whereby a partial vacuum is produced in both chambers and in the mold while restraining the flow of material into the mold, and means for subsequently forcing the material into the mold.

[Claims 6 to 28 not printed in the Gazette.]

1,153,221. PACKAGE. WILLIAM HAIGH, Baltimore, Md. Filed Aug. 3, 1914. Serial No. 854,668. (Cl. 206—47.)



A dessert package consisting of a box, a sack containing comminuted, gelatinous and farinaceous material, the sack being inserted in the box, the upper portion of the sack being empty and folded down to form a suitable closure; a bottle of liquid flavoring; suitable wrapping for the bottle, the latter being placed in the package so that it rests on the folded portion of the paper bag which forms a convenient support for the bottle.

1,153,222. WEIGHING AND ADDING SCALE. HOSEA HATHAWAY, Boston, Mass. Filed Nov. 4, 1912. Serial No. 729,352. (Cl. 73—46.)



1. In a weighing and adding scale the combination with weight indicating and adding mechanism of a dash pot whose lower end is imperforate, supporting means therefor, a piston rod and its piston mounted in said dash pot, a weighing spring located within the dash pot to form a yielding support for the piston rod, an external weight-carrying member secured to said piston rod above the dash pot to transfer the pull of the load thereto, and a rack-bar having adjustable connection with the piston rod at one end and having an operative engagement with the weight-indicating and adding mechanism above, substantially as described.

2. The combination with a dash pot and its supporting means of a piston and its piston rod having lateral bearing engagement with the dash pot near the upper and lower ends thereof, a weighing spring supported by the dash pot to yieldingly oppose the downward thrust of the piston rod during the weighing operation, a weight-carrying member secured to the piston rod above the dash pot and having upper and lower bearing engagement with said dash pot to maintain its parallelism with the piston-rod during the weighing operation and weight-indicating mechanism connected with said piston rod, substantially as described.

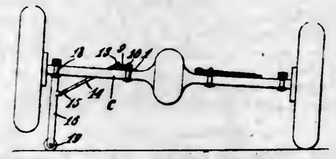
3. A weighing and adding scale embracing in its construction a weight indicating mechanism including a reciprocating rack-bar, an inclosed oil chamber, a piston rod and its piston working in said chamber, a weighing spring mounted in said chamber to yieldingly sustain said piston, a connecting screw adjustably connecting said rack-bar and said piston rod, a reciprocating suspension frame arranged wholly outside of said chamber and secured to the externally projecting upper end of said piston rod, substantially as described.

4. A weighing and adding scale embracing in its construction a casing provided with a dash pot, a piston and its piston rod mounted in said dash pot and a weighing spring arranged to yieldingly support the piston rod, a weight-carrying member secured to said piston rod above the dash pot to transmit the weight of the load thereby to the weighing spring, a key-controlled bolt for locking the piston rod against downward movement and an indicating mechanism whose actuating member is connected with the piston rod, substantially as described.

5. In a weighing and adding scale the combination of weight-indicating mechanism including a reciprocating scale-bar, a suspension frame comprising parallel vertical rods and cross-bars uniting them at top and bottom, an intermediate piston rod, an oil check cylinder located between the aforesaid vertical rods to receive through its upper end the piston-carrying end of said piston rod, an extensible connection for connecting the scale-bar with the piston rod, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,153,223. LIFTING-JACK. THOMAS M. HENDRICKSON, Lees Summit, Mo., assignor of one-half to Thomas J. Ragsdale, Lees Summit, Mo. Filed May 6, 1915. Serial No. 26,336. (Cl. 254—86.)

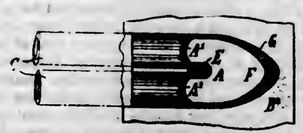


1. A jack for attachment to the axle of a vehicle, including an angular handle engaging lever, means for engaging an axle to pivotally support the lever, a bar, means pivotally engaged by the bar for attachment to the axle, a rod connecting said bar to one arm of the lever, and yielding means for engaging the rod to support said rod and the bar in elevated or in active position.

2. A jack for attachment to a vehicle axle, including an axle engaging element, a bar pivotally connected thereto, a second axle engaging element, a lever pivotally mounted thereon, a rod, universal connections between said rod and the bar, an outstanding yieldable member, said rod being movable on said member to support the bar between the member and the axle.

3. The combination with a vehicle axle, of a jack secured to each end portion thereof, each jack including separate axle engaging members, a roller carrying bar pivotally connected to one of the members, a lever connected to the other member, a yieldable element outstanding from said last-mentioned member, a rod connecting the lever to the bar, and means for actuating the lever to position the rod upon the yieldable element and to elevate the bar between said member and the axle.

1,153,224. PROCESS OF MAKING RETURN-BENDS. FRANZ HEUSER, Mülheim-Ruhr-Styrum, Germany, assignor, by mesne assignments, to Locomotive Superheater Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 27, 1913. Serial No. 744,552. (Cl. 29—157.)



1. The process of making a return bend which comprises providing a short flattened piece of pipe, applying pressure to the walls adjacent to one end thereof, along lines lengthwise of the piece, so as to form a pair of tubular sockets united by a flange and closing the other end of the piece.

2. The process of making a return bend which comprises providing a short piece of circular pipe, closing one end of said pipe so as to form a cap, and also applying pressure to the walls adjacent to the other end of the piece, along lines lengthwise thereof, so as to form a pair of tubular sockets united by a flange.

3. The process of making a return bend which comprises providing a short piece of circular pipe, applying pressure to said piece so as to both flatten it and close one of its ends, and also applying pressure to the walls adjacent to its other end, along lines lengthwise of the piece, so as to form a pair of tubular sockets united by a flange.

4. The process of making a return bend by reshaping a short piece of circular pipe through the aid of dies and a pair of mandrels, said reshaping comprising partially

flattening said pipe in one pair of dies and thereafter closing one end of the pipe with another set of dies and forming the other end of the pipe into two tubular sackets over said mandrels by use of a third set of dies.

5. A process of producing return bends for pipe lines, comprising reshaping a piece of circular pipe by the use of a set of dies and a pair of mandrels; the first step in the process comprising partially flattening said circular pipe in the first pair of dies; the second step comprising forming one end of said pipe into two tubular sockets over said mandrels by the use of the second pair of dies and welding the middle part of the pipe into a longitudinal flange connecting said sockets; and the last step comprising closing the other end of said pipe to form the bend proper by means of a third pair of dies.

[Claims 6 and 7 not printed in the Gazette.]

1,153,225. HAND-PLANTER. RAY C. HIMEBAUGH, Burr Oak, Mich., assignor to Adelbert C. Himebaugh, Burr Oak, Mich. Filed Oct. 5, 1914. Serial No. 865,074. (Cl. 111—20.)



1. In a hand planter, the combination of a staff, a fixed plate having forwardly projecting flanges at its side edges and an upwardly projecting socket plate extension on its upper edge, a socket member channeled to receive the lower end of said staff secured to the rear side of said socket plate and extended onto the rear side of said blade and constituting a reinforcing member therefor, a movable blade having rearwardly projecting flanges on its side edges pivoted on the forwardly projecting flanges of said fixed blade, a hopper formed of sheet metal rolled into a cylinder with lapped edges disposed on the side of said staff, a flaring top member formed of a strip of metal bent into a ring with its ends lapping, said top member disposed within the upper end of said hopper with its lapped ends over the lapped edges of said hopper, a bolt arranged through the lapped edges of said hopper said staff socket members and staff, and a bolt disposed through the lapper ends of said top member and the lapped edges of said hopper and said staff.

2. In a hand planter, the combination of a staff, a fixed blade having forwardly projecting flanges at its side edges and an upwardly projecting socket plate extension on its upper edge, a socket member channeled to receive the lower end of said staff secured to the rear side of said socket plate and extended onto the rear side of said blade and constituting a reinforcing member therefor, a movable blade having rearwardly projecting flanges on its side edges pivoted on the forwardly projecting flanges of said fixed blade, a hopper of sheet metal rolled into a cylinder with lapped edges disposed on the side of said staff, and a bolt arranged through the lapped edges of said hopper said staff socket members and staff.

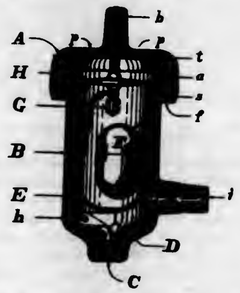
3. In a hand planter, the combination of a staff, a fixed blade having an upwardly projecting socket plate extension on its upper edge, a socket member channeled to receive the lower end of said staff secured to the rear side of said socket plate and extended onto the rear side of said blade and constituting a reinforcing member therefor, a hopper formed of sheet metal rolled into a cylinder with lapped edges disposed on the side of said staff, a flaring top member formed of a strip of metal bent into a ring with its ends lapping, said top member disposed within the upper end of said hopper with its lapped ends over the lapped edges of said hopper, a bolt arranged through the lapped edges of said hopper said staff socket members and staff, and a bolt disposed through the lapped ends of said top member and the lapped edges of said hopper and said staff.

4. In a hand planter, the combination of a staff, a fixed blade having an upwardly projecting socket plate extension on its upper edge, a socket member channeled to receive the lower end of said staff secured to the rear side of said socket plate and extended onto the rear side of said blade and constituting a reinforcing member therefor, a hopper formed of sheet metal rolled into a cylinder with lapped edges disposed on the side of said staff, and a bolt arranged through the lapped edges of said hopper said staff socket members and staff.

5. A hand planter comprising a staff, a fixed blade provided with a socket for said staff, a hopper formed of sheet metal rolled into a cylinder with lapped edges disposed on the side of said staff, a flaring top member formed of a strip of metal bent into a ring with its ends lapping, said top member disposed within the upper end of said hopper with its lapped ends over the lapped edges of said hopper, a bolt arranged through the lapped edges of said hopper said staff socket and staff, and a bolt disposed through the lapped ends of said top member and the lapped edges of said hopper and said staff, said bolts constituting the means for securing the lapped edges of said hopper and the lapped ends of said top member together.

[Claims 6 to 9 not printed in the Gazette.]

1,153,226. AUTOMATIC STOP AND CHECK VALVE. NORMAN HUBBARD, Elizabeth, N. J. Filed July 5, 1913. Serial No. 777,423. (Cl. 236—25.)



1. A combined stop and check valve comprising in combination a valve movable into stop and check positions, a chamber above said valve communicating with the atmosphere, a chamber below said valve exposed to air and steam, and a thermostatic control device located in said lower chamber and normally interposed in the path of a portion of said valve for locking said valve against movement into stop position.

2. A combined stop and check valve comprising in combination upper and lower chambers having respective valve seats, a movable valve disposed between said valve seats for actuation by fluid pressure, and a thermostatic device in said lower chamber adapted to arrest seating of said valve on the upper valve seat when cold and to release said valve when hot.

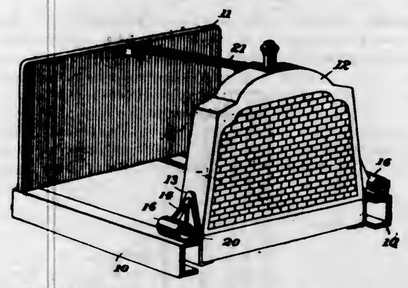
3. A combined stop and check valve comprising in combination a pair of valve seats, a valve disk movably mounted between said seats with a shouldered stem, and a thermostatic control device having a thermally operated tongue normally in the path of the shoulder of said valve stem for holding the valve disk off one of its seats but adapted to release the same when heated.

4. A combined stop and check valve comprising in combination a pair of valve seats, a valve disk movably mounted between said valve seats and having a shouldered stem, and a hydraulically operated control device having a tongue normally in the path of the shoulder on said stem and automatically movable out of said path.

5. A combined stop and check valve comprising in combination a pair of valve seats, a valve movable between said seats and having a shouldered stem, a tongue adapted to engage said shouldered stem to control the movement of said valve, and a float operatively connected with said tongue for moving the same out of such engagement.

[Claims 6 to 16 not printed in the Gazette.]

1,153,227. RADIATOR-SUPPORT FOR MOTOR-VEHICLES. RUSSELL HUFF, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 7, 1910. Serial No. 542,477. (Cl. 21—90.)



1. In a motor vehicle, the combination of a frame having separated side members, a radiator, and a connection between each of said side members and the radiator, each of said connections comprising a bowed leaf spring, a bracket, one of which parts is rigidly secured to the radiator and the other to the side member, and a bolt pivotally connecting the leaf spring and bracket and permitting relative movement therebetween, the springs being oppositely bowed and supporting the entire weight of the radiator.

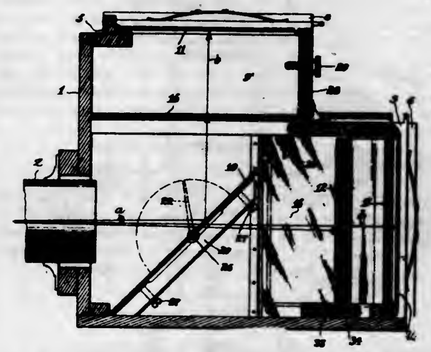
2. In a motor vehicle, the combination of a frame having side members, a radiator, brackets on said radiator provided with ears, a plurality of C springs secured to said side bars and provided with ears, and bolts passing through the ears on said brackets and springs.

1,153,228. TUMBLER WASHING AND RINSING MACHINE. GEORGE H. HUTAFF, Wilmington, N. C. Filed Oct. 10, 1911. Serial No. 653,882. (Cl. 141—3.)



In a machine for washing tumblers and the like, in combination, a tank having a circular guide wall, a horizontal rotary shaft within said tank and arranged longitudinally thereof, hollow radial arms extending from said shaft into proximity to said wall, and a plurality of tumbler holding and positioning rings secured to each of said arms adjacent the outer ends thereof and independently adjustable thereon, said rings being spaced apart from each other so as to fit within a tumbler at separated points.

1,153,229. PHOTOGRAPHIC CAMERA. FREDERIC E. IVES, Woodcliffe-on-Hudson, N. J. Filed Sept. 23, 1912. Serial No. 721,908. (Cl. 95—2.)



1. In or for a camera, a light separating optical screen adapted to be interposed in the light path and consisting of a transparent colored member having totally reflecting portions and transmitting portions.

2. In or for a camera, a light separating optical screen adapted to be interposed in the light path and consisting of a transparent colored member having totally reflecting portions and transmitting portions arranged alternately in patterns.

3. In or for a camera for making a set of color-selection negatives, a light separating reflector consisting of a colored glass plate having a parti-silvered first reflecting surface.

4. A camera for making a set of color-selection negatives including in combination a reflector inclined to the light path and consisting of a colored glass plate having a parti-silvered first reflecting surface and means for holding sensitive films behind and aside of said reflector.

5. A camera for making a set of three color-selection negatives including in combination a parti-silvered transparent reflector inclined to the light path, a second transparent reflector inclined to the light path behind said parti-silvered reflector, and means for holding three sensitive films in relation to said reflectors.

[Claims 6 to 32 not printed in the Gazette.]

1,153,230. SAND MOLD AND METHOD OF TREATING THE SAME. CHARLES B. JACOBS, Port Chester, N. Y., assignor to Murray and Jacobs Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Jan. 4, 1912, Serial No. 669,491. Renewed July 24, 1915. Serial No. 41,796. (Cl. 22—188.)

1. The method of treating sand molds, which method consists in applying to the sand surface of the mold a liquid cement adapted to penetrate into the mold sand and to consolidate and harden the surface thereof, and then drying such surface; whereby the sand mold is rendered able to resist disintegration, deformation, erosion or chemical action by the molten metal.

2. The method of treating sand molds, which method consists in applying to the sand surface of the mold a cement adapted to penetrate the mold sand and harden the surface thereof, and then drying such surface; whereby the sand mold is rendered able to resist injury from the molten metal.

3. The method of treating sand molds, which method consists in applying to the sand surface of the mold a soluble glass cement adapted to penetrate the mold sand and harden the surface thereof, and then drying such surface; whereby the sand mold is rendered able to resist injury from the molten metal.

4. The method of treating sand molds, which method consists in applying to the sand surface of the mold a solution of water glass adapted to harden the surface thereof, and then drying such surface; whereby the sand mold is rendered able to resist injury from the molten metal.

5. The method of treating sand molds, which method consists in applying to the sand surface of the mold a liquiform cement comprising a cementing liquid holding in suspension finely divided solid material, such cement adapted to penetrate into the mold sand and harden the surface thereof, and then drying such surface; whereby the sand mold is rendered able to resist injury from the molten metal.

[Claims 6 to 9 not printed in the Gazette.]

1,153,231. METHOD OF AND MOLD FOR MAKING CASTINGS. CHARLES B. JACOBS, Port Chester, N. Y., assignor to Murray and Jacobs Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Jan. 4, 1912. Serial No. 669,492. (Cl. 22—201.)



1. The method of producing a metal casting with a protective layer, which method consists in coating a surface in the mold in which the casting is to be formed with a suitable material in a finely divided condition, spraying the coating with a liquid cement, drying the cement, and then introducing into the mold the metal in a molten state.

2. The method of producing a metal casting with a protective layer, which method consists in coating a surface in the mold in which the casting is to be formed with a suitable material in a finely divided condition, spraying the coating with a soluble glass, drying the coating, and then introducing into the mold the metal in a molten state.

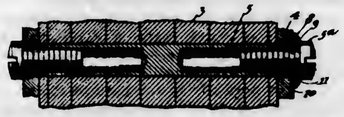
3. The method of producing a metal casting with a protective layer, which method consists in coating a surface in the mold in which the casting is to be formed with a metal different from that of which the body of the casting is to consist and adapted to be fused by the heat of the body metal when in a molten state, said coating metal being in a finely divided condition, spraying the coating with a soluble glass, drying the coating, and then introducing into the mold the body metal in a molten state.

4. The method of producing a ferrous metal casting with a facing having properties different from those of the ferrous metal, which method consists in preparing a green sand mold for the casting, coating a surface of the mold with a suitable material in a finely divided condition, spraying the coating with a soluble glass, drying the coating, and then introducing into the mold the ferrous metal in a molten state.

5. The method of producing a ferrous metal casting with a facing having properties different from those of the ferrous metal, which method consists in preparing a green sand mold for the casting, coating a surface of the mold with a material adapted to be fused by the heat of the ferrous metal when in a molten state, said material being in a finely divided condition, spraying the coating with a soluble glass, drying the coating, and then introducing into the mold the ferrous metal in a molten state.

[Claims 6 to 28 not printed in the Gazette.]

1,153,232. WASHER. WALTER I. KIRK, Chicago, Ill., assignor to Lyon & Healy, Chicago, Ill., a Corporation of Illinois. Filed Jan. 17, 1914. Serial No. 812,656. (Cl. 85—50.)

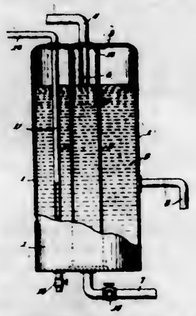


1. A washer comprising opposing metallic members one of which is concave and the other convex, said members being connected together at their outer annular edges, but separated from one another at their inner annular edges, and an intermediate layer of yielding material interposed between said members.

2. A device of the class specified comprising a shell having a concave back wall and a convex front wall, in combination with a layer of yielding material between said walls.

3. A device of the class specified comprising a shell having a back concave wall and a front convex wall, and a layer of wool felt between said walls.

1,153,233. HOT-WATER-CIRCULATING SYSTEM. WILLIAM DEW KNIGHT, Santa Monica, Cal. Filed Aug. 8, 1913. Serial No. 783,781. (Cl. 126—361.)

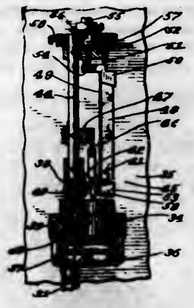


In a hot water circulating system, a boiler, a shell extending longitudinally throughout the length of the boiler for dividing it into a cold water compartment and a hot water compartment, the said shell having an opening formed therein at a point adjacent the boiler top, a cold water inlet pipe extending into said cold water compartment to a point below said opening, a cold water outlet pipe leading from said cold water compartment, a hot water return pipe discharging into the hot water compartment of the boiler at a point intermediate the boiler terminals, and a hot water outlet pipe leading from the boiler and extending thereinto to a point below the point open to the hot water return pipe, as and for the purpose set forth.

1,153,234. HUMIDITY-CONTROLLING APPARATUS. JOHN M. LARSON, Chicago, Ill., assignor to National Regulator Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 11, 1910. Serial No. 537,504. (Cl. 98—39.)

1. The combination of a base, a pillar extending therefrom, said base and pillar having a passage extending therethrough and terminating in a port at the side of the pillar, a valve hung in front of said port and supported by said pillar, and a hygrostatic element consisting of a strip of metal and a strip of hygroscopic material arranged parallel with each other, said element being supported at one end from said pillar, the other end of said element bearing upon said valve and moving toward said port when said element is flexed and having movement transversely of said port when elongated.

2. A hygrostat having a port, a valve supported in front of said port, a hygrostatic element arranged in front of said valve and supported at one of its ends so as to be capable of swinging, and means for angularly adjusting said end and thereby regulating the position of the opposite end of the element with respect to said valve.



3. The combination of a base, a pillar extending therefrom, said base and pillar having a passage extending therethrough and terminating in a port at the side of the pillar, a valve hung in front of said port, and a hygrostatic element consisting of a strip of metal and a strip of hygroscopic material arranged parallel with each other, said element being supported at one end from said pillar, the other end of said element bearing upon said valve and moving toward said port when said element is flexed and having movement transversely of said port when elongated.

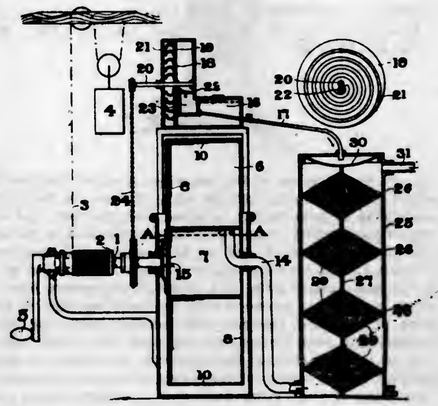
4. A hygrostat having a port, a valve supported in front of said port, a hygrostatic element arranged in front of said valve and supported at one of its ends so as to be capable of swinging, and means for regulating the position of the opposite end of the element with respect to said valve, said hygrostatic element consisting of a hygroscopic element and a non-hygroscopic element, each having the same co-efficient of expansion by temperature.

5. A hygrostat having a port, a valve supported in front of said port, a hygrostatic element arranged in front of said valve and so supported as to be capable of swinging, and means for regulating the position of the ends of said element with respect to said valve, said hygrostatic element consisting of a hygroscopic element and a non-hygroscopic element, each having the same co-efficient of expansion by temperature.

1,153,235. ROTARY PUMP FOR GAS-PRODUCING APPARATUS. CHARLES SEYMOUR MCFARLANE, Auckland, New Zealand. Filed Jan. 12, 1912. Serial No. 670,872. (Cl. 103—43.)

1. In an apparatus of the character described, in combination, a liquid reservoir, a vertical member rotatable on a horizontal axis adapted to be partially immersed in the fluid in said reservoir, a coiled grooved member projecting laterally from said rotatable member and movable therewith, and having the convolutions of said grooved member in the same vertical plane, and a conduit associated with the inner end of said coiled groove whereby the liquid in said reservoir is conveyed to said conduit when said rotatable member is actuated, in a constant quantity proportional to the speed of rotation of the grooved member up to the limit of the capacity of the latter and to discharge excess thereof over and into the reservoir as and for the purpose described.

2. An apparatus of the character described, having in combination, a reservoir adapted to contain fluid, an elevator adapted to convey the fluid therefrom said elevator comprising a single disk mounted to rotate upon a horizontal axis and adapted to be partially immersed in the fluid in said reservoir, a substantially horizontal ledge mounted on one side of said disk and being formed with a grooved channel, said ledge commencing near the periphery of the disk and continuing in a volute form to a point near the center of said disk with the convolutions of said ledge spaced from each other and in the same vertical plane, fluid conveying means connected with the inner end of said channel for conveying the fluid therefrom.



3. In an apparatus of the character described, in combination, a liquid reservoir, means for feeding the liquid through said reservoir with equal and at a constant pressure and volume comprising a disk partially immersed in said reservoir, a rotatable coiled grooved member having the convolutions thereof spaced apart, said convolutions being disposed substantially horizontally and in the same vertical plane and secured to the side of said disk, conduit means associated with the inner end of said coiled grooved member for conducting the liquid in said reservoir therefrom, and means for rotating said disk.

1,153,236. BOTTLE-CLOSURE. JOHN FRANKLIN MACINDOE, Philadelphia, Pa., assignor, by mesne assignments, to said MacIndoe and Joseph F. Donahue, Philadelphia, Pa. Filed June 26, 1914. Serial No. 847,388. (Cl. 215—20.)



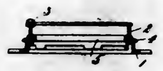
1. In a bottle closure of the character described, a band, having recessed ends adapted to engage the neck of the bottle below the mouth thereof, and oppositely bent catches on the said ends adapted to be brought into engagement for holding the device in place.

2. In a bottle closure of the character stated, a band, spurs integral therewith adapted to engage the stopper of a bottle, the end portions of said band being adapted to engage the neck of a bottle, and opposite catch members on the terminals of said portions adapted for engagement to retain the closure in position on said neck.

3. A bottle closure of the character stated composed of a band having recessed ends, opposite catch members on said ends for retaining the closure in position on the neck of a bottle, and prongs integral with said band between the ends thereof for engagement with the stopper of the bottle.

4. A bottle closure of the character stated composed of a band having end portions adapted to engage the neck of a bottle, opposite catch members adapted for engagement to retain the closure in position on said neck, and prongs on the band adapted to engage the stopper of the bottle, said band with its catches and prongs being of integral construction.

1,153,237. SPINNING MECHANISM. MICHAEL H. MALONEY, Plymouth, Mass. Filed Jan. 10, 1910. Serial No. 537,156. (Cl. 118—11.)



1. In a mechanism of the character specified, the combination with a rotary traveler ring, of separate members comprising a base having a raised body portion and an inwardly-extending flange-forming portion and a holder coöperating with said base by axial and radial bearings forming a joint between said members by which said ring is retained against axial and radial displacement, one of which members is provided with separate bearings at the point of the joint between said members with openings between said separate bearings opening out of said joint.

2. In a mechanism of the character specified, the combination with a rotary traveler ring, of separate members comprising a supporting base and a rotary holder cooperting with said base by axial and radial bearings forming a joint between said members by which said ring is retained against axial and radial displacement, said base presenting a raised body portion and a flange-forming portion extending inwardly therefrom, said holder cooperating with said base by a neck portion entering said base by the flange-forming portion thereof and removed therefrom to leave a clearance between said parts and which holder after entering said base to extend by the flanged portion thereof extends outwardly beneath said flange-forming portion of said base for an axial bearing and downwardly by the body of said base for a radial bearing and one of which members is provided with separate bearings at the point of the joint between said members with openings between said separate bearings communicating with the clearance between the flanged portion of said base and said body of the holder and opening out of said joint to provide outlets therefrom.

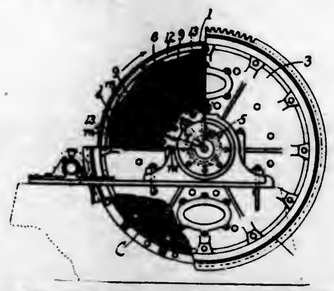
3. In a mechanism of the character specified, the combination with a rotary traveler ring, of separate members comprising a base having a body portion with an inturned head or flange and a rotary holder for said traveler ring extending into said base, thence outwardly beneath the flange-forming portion thereof and thence downwardly alongside the body of said base and forming a joint between said members by which said ring is retained against axial and radial displacement, one of which members is provided with separate bearings at the point of the joint between said members with openings between said separate members opening out of said joint.

4. In a mechanism of the character specified, the combination with a rotary traveler ring, of a supporting base and a rotary holder coöperating with said base for retaining said ring as against axial and radial displacement during the operation thereof, said base presenting a top bearing surface and having an imperforate body portion and a flange-forming portion extending inwardly therefrom, said holder entering said base to extend by the flange-forming portion thereof, thence extending outwardly beneath said flange-forming portion of the base to coöperate therewith for an axial bearing and with the interior surface of said body of the base for a radial bearing, and which holder at the point of the joint between it and said base is provided with separate bearings communicating with the top bearing surface of said base and opening out of said joint.

5. In a mechanism of the character specified, the combination with a rotary traveler ring of separate members comprising a supporting base presenting a top bearing surface provided with separate bearings with openings between the said bearings, a rotary holder for said ring cooperating with said base inside the same by axial and radial bearings forming a joint between said members below said top bearing surface of the base and one of which members is provided at the point of the said joint between said members with separate bearings and openings between said bearings communicating with the openings in the top bearing surfaces of said base and opening out of said joint.

[Claims 6 to 17 not printed in the Gazette.]

1,153,238. SCREEN-GRATE FOR BALL-MILLS. FRANK E. MARCY, Salt Lake City, Utah. Filed June 3, 1914, Serial No. 842,722. Renewed Apr. 19, 1915. Serial No. 22,488. (Cl. 83—9.)



1. In combination with a drum rotatable about a fixed axis and provided with terminal heads having openings respectively for the feed and discharge of the material, a series of radial blades or lifters disposed on the inner surface of one of the heads, sectional grate sectors having radial meeting edges resting on the inner edges of the blades, and means for securing the sections of the sectors together at points between the blades.

2. In combination with a drum rotatable about a fixed axis and provided with terminal heads having openings respectively for the feed and discharge of the material, a series of radial blades or lifters disposed on the inner surface of one of the heads, radial grate sectors composed each of a series of sections disposed transversely to the radii of the sector, and having meeting edges resting on the inner edges of the blades, and means traversing the sectors radially at points between the blades for securing the sections to one another.

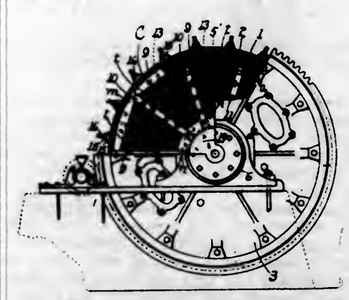
3. In combination with a cylindrical drum rotatable about its axis, a series of circularly disposed ring sections distributed along the inner walls of the drum, a series of grate sectors forming an annular grate and disposed transverse to the rotation axis of the drum, each sector comprising a series of sections separable along surfaces transverse to the radii of the sector and provided with slot formations adjacent said surfaces of separation, an outer terminal section for each sector dovetailing with a corresponding ring section, an inner imperforate section forming the opposite end of each sector, a central disk engaging the inner sections of the respective sectors, and means for securing the parts fixedly in the drum.

4. In combination with a drum rotatable about a fixed axis and provided with terminal heads having openings respectively for the feed and discharge of the material, a series of radial blades or lifters disposed on the inner surface of the discharge head, grate sectors having radial meeting edges resting on the inner edges of the blades, and ring sections engaging the outer portions of the sectors, the ring sections forming a lap joint across the edge of the blade supporting the sectors, and means for securing the sectors to the head and into firm engagement with the blades aforesaid.

5. In a grate, a sector composed of independent sections, the sections having projections and corresponding depressions engaged by said projections to prevent displacement between the sections.

[Claims 6 and 7 not printed in the Gazette.]

1,152,239. BALL-MILL. FRANK E. MARCY, Salt Lake City, Utah. Filed Mar. 3, 1915. Serial No. 11,712. (Cl. 83—9.)



1. In combination with a drum rotatable about a fixed axis and provided with terminal heads having openings respectively for the feed and discharge of the material, a series of radial blades or lifters disposed on the inner surface of one of the heads, grate sectors having contiguous edges resting on the inner edges of the blades, and means engaging the edges of the sectors for securing the sectors to the blades.

2. In combination with a drum rotatable about a fixed axis and provided with terminal heads having openings respectively for the feed and discharge of the material, a series of radial blades or lifters disposed on the inner surface of one of the heads, grate sectors having contiguous edges resting on the inner edges of the blades, means engaging the edges of the sectors for securing the sectors to the blades, and means on the head aforesaid affording a support for the sectors at points between the blades.

3. In combination with a drum rotatable about a fixed axis and provided with terminal heads having openings respectively for the feed and discharge of the material, a series of radial blades or lifters disposed on the inner surface of one of the heads, grate sectors having contiguous edges engaging the inner edges of the blades, a clamping bar engaging the contiguous edges of each pair of sectors, and means traversing the blade for securing the bar to the blade supporting said grate sectors.

4. In combination with a drum rotatable about a fixed axis and provided with terminal heads having openings respectively for the feed and discharge of the material, a series of radial blades or lifters disposed on the inner surface of one of the heads, grate sectors having contiguous beveled edges, resting on the edges of the blades, a clamping bar resting between the beveled edges of contiguous sectors, bolts passed through the blades and bars for securing the latter in place, the outer ends of the bolts projecting through the head aforesaid, and tightening nuts carried by the projecting ends of the bolts on the outside of the head.

5. In a mill of the character described having a peripheral shell and a feed-end head, a one-piece feed-end liner for the head provided with marginal recesses, and corner lugs on the shell wall adjacent the head engaging said recesses for holding the liner against rotary displacement.

[Claims 6 to 14 not printed in the Gazette.]

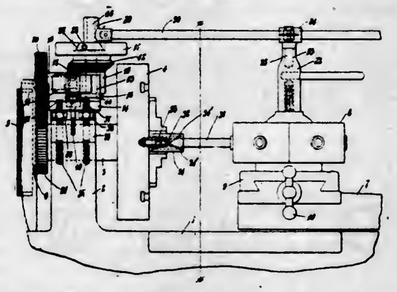
1,153,240. BOTTLE-STOPPER. ALBERT E. MATT, Stillwell, Ind. Filed Oct. 17, 1914. Serial No. 867,179. (Cl. 215—113.)

1. A stopper for bottles or the like having a cap secured to its outer end, said cap having a central laterally projecting sleeve embedded within the stopper, a pin disposed through the stopper from its inner end, said pin being frictionally engaged within said sleeve, the pin projecting at its outer end through said cap and being pointed, and the opposite end of the pin having a head formed thereon for engagement against the inner end of the stopper.



2. The combination with a bottle neck, of a stopper including a cylindrical body member insertible in the neck, said body member being provided with a vertically extending bore which opens through its upper end, a cap member mounted on the upper end of the body member, a sleeve depending from the lower face of the cap and extending into the bore of the body member, said sleeve being freely seated in the bore, a pin extending through the body member and through the sleeve and cap, the upper end of said pin projecting a considerable disttance above the cap member, and a head carried by the inner end of the pin and bearing agaainst the inner end of the cap member.

1,153,241. TURNING OR BORING APPLIANCE. OSCAR W. MUELLER, Cincinnati, Ohio. Filed June 13, 1914. Serial No. 844,860. (Cl. 82—18.)



1. In combination with means for concentrically rotating an object having a cylindrical surface, cutting means adapted to engage with said surface at either one of diametrically opposite sides thereof, means for shifting said cutting engagement from the one side to the other, and means for reciprocating the cutting means synchronously with the rotation of the object.

2. In combination with a lathe comprising a chuck adapted to hold and concentrically rotate an object having a cylindrical surface, means for rotating said chuck, and a rotatable and reciprocable turret adapted to hold a plurality of tools to be operatively applied to said surface successively by rotation and reciprocation of the turret, a cutter carried as one of said tools in said turret to bear on said surface of said object held by said chuck, reciprocating means operated in conjunction with the means for rotating said chuck for reciprocating said turret synchronously with the chuck and the object held therein, and operative connection from said reciprocating means to said turret, said operative connection being detachable from said turret to leave the turret free from reciprocation of the reciprocating means, whereby the turret may be rotated and reciprocated to apply tools held thereby, other than said cutter, to said object.

3. In combination with means for concentrically rotating an object having a cylindrical surface, a cutter, means

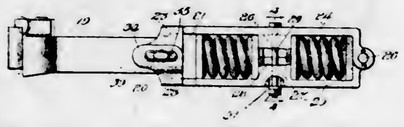
for holding said cutter against said surface, means for reciprocating said cutter synchronously with the rotation of the object, and means to vary the length of reciprocation, said reciprocating means having detachable operative connection with the cutter and from the reciprocating means, and forming a gage for proper location of the cutter on objects successively and uniformly held by the rotating means.

4. In combination with means for concentrically rotating an object having a cylindrical surface, a cutter, means for holding said cutter against said surface, means for reciprocating said cutter synchronously with the rotation of the object, operative connection from the reciprocating means to the cutter, adjustable in its connection with the cutter, to vary the location of the reciprocation of the cutter longitudinally of said object, and means to vary the length of reciprocation, said reciprocating means having detachable operative connection with the cutter, and from the reciprocating means, and forming a gage for proper location of the cutter on objects successively and uniformly held by the rotating means.

5. In combination with means for concentrically rotating an object having a cylindrical surface, a cutter having opposite cutting ends, means for holding said cutter against said surface, means for reciprocating said cutter synchronously with the rotation of the object, operative connection from the reciprocating means to the cutter, adjustable in its connection with the cutter, to vary the location of the reciprocation of the cutter longitudinally of said object, said reciprocating means having detachable operative connection with the cutter, and means for feeding the cutter toward the surface of the object, said means also being adapted for transferring the cutting engagement from one side of the surface to the diametrically opposite side thereof, and for feeding the cutter to said diametrically opposite side when transferred.

[Claims 6 to 15 not printed in the Gazette.]

1,153,242. DRAW-BAR YOKE. GEORGE C. MURRAY, Chicago, Ill., assignor to Keyoke Railway Equipment Company, a Corporation of Delaware. Filed Aug. 17, 1911. Serial No. 644,586. (Cl. 213—42.)

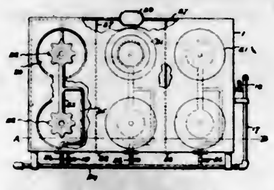


1. In a device of the class described, a yoke comprising two members hinged together at one end and provided at the opposite end with apertured ears adapted to overlap and receive a key when said yoke is closed, and abutments integral with the arms of said yoke intermediate its ends and adapted to coact with a draft rigging contained within said yoke.

2. In a device of the class described, a yoke comprising two members hinged together at one end and provided at the opposite end with inwardly projecting shoulders adapted to coact with outwardly projecting shoulders on a draw-bar and also provided at said opposite end with apertured ears adapted to overlap when said yoke is closed and receive a key passing through said ears and draw-bar, and abutments integrally formed with said members and projecting inwardly of said yoke, said abutments being adapted to coact with a draft rigging contained within said yoke.

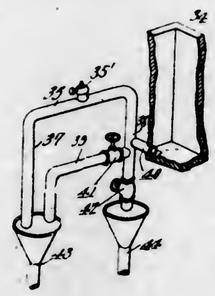
3. In a device of the class described, the yoke members 24, 25 connected at one end by the hinge 26 and provided at the opposite ends with the inturned ends 23 and also provided at such opposite ends with the ears 32, 34 having apertures 33, 35 therein, abutments integral with the yoke arms, and a bolt connecting said abutments.

1,153,243. STOVE. OSIAS NESTEL, New Haven, Conn. Filed Feb. 26, 1915. Serial No. 10,794. (Cl. 126—39.)



In a stove, the combination with a body member, having openings therethrough, an oven compartment formed by partitions within said body member and through some of which are one or more openings, a broiler compartment formed by partitions within said body member and through some of which are one or more openings, and a burner compartment therein between some of said partitions and an outer wall of said body member and extending over said oven and broiler compartments, the partitions of said oven compartment being so arranged as to leave a chamber partly surrounding said oven compartment; a baffle plate within said chamber and between the oven and broiler compartments; a burner below the bottom of said oven compartment; a similar burner below the bottom of said broiler compartment; removable closure members for covering the openings in said body member; a plurality of spiders within said burner compartment; a supply pipe; a connection between said supply pipe and the aforesaid burners; and a similar connection between said supply pipe and said spiders.

1,153,244. APPARATUS FOR SIZING YARNS. WALTER A. NIVLING, Boston, Mass. Filed Mar. 7, 1913. Serial No. 752,722. (Cl. 91—31.)



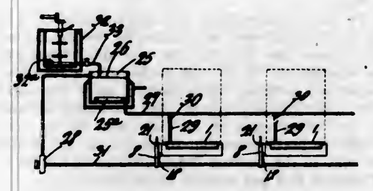
1. In a sizing apparatus, a size box; an outlet for the size box, a portion of the outlet being spaced above the bottom of the box to maintain a constant level in the box, the intake end of the outlet being located close to the bottom of the box to remove the thickened portions of the size simultaneously with the maintenance of a constant level and volume; and means for guiding through the size box the material to be sized.

2. In a sizing apparatus, a size box: means for guiding the material to be sized through the size box, and a combined means for maintaining a constant level in the size box with respect to the guiding means and for draining the box from a point adjacent its bottom.

3. In a sizing apparatus, a size box; means for guiding the material to be sized through the size box, and a combined means for maintaining a constant level in the size box with respect to the guiding means and for draining the box from a point adjacent its bottom; and means for salvaging the drained material and returning the same to the size box.

4. In a sizing apparatus, a size box; an outlet for the size box, a portion of the outlet being spaced above the bottom of the box to maintain a constant level in the box, the intake end of the outlet being located close to the bottom of the box to remove the thickened portions of the size simultaneously with the maintenance of a constant level and volume; means for guiding through the size box, the material to be sized; and means for securing a continuous renewal of the size in the box.

1,153,245. PROCESS OF SIZING YARNS. WALTER A. NIVLING, Boston, Mass. Filed Mar. 7, 1914. Serial No. 823,189. (Cl. 91—46.)



1. The herein described process of sizing which consists in guiding the material to be sized through a size box and maintaining the size in the size box at a constant level while the material is passing through the size box; and drawing off the heavier portions of the size from a point adjacent the bottom of the box.

2. The herein described process of sizing which consists in guiding the material to be sized through a size box; withdrawing the heavier and excess portions of the size from a point adjacent the bottom of the box; introducing fresh size into the size box; and maintaining the size at a constant level in the size box.

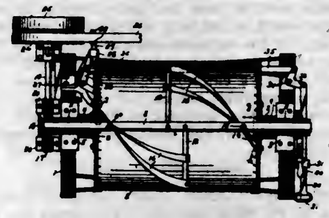
3. The process of sizing with liquid that naturally separates into portions of different densities, which consists in guiding the material to be sized through a receptacle containing the sizing liquid; maintaining the sizing liquid at a constant level in the receptacle while the material is passing through the sizing liquid; and removing one of the denser portions of the size from the receptacle.

4. The herein described process of sizing which consists in guiding the material to be sized through a size box; maintaining the size at a constant level in the size box; withdrawing the excess portions of the size from a point adjacent the bottom of the box; introducing fresh size into the size box; and maintaining the fresh size in a heated condition prior to its introduction into the size box, thereby to prevent a thickening of the size prior to its passage into the size box.

5. The process of sizing with liquid that naturally separates into portions of different densities, which consists in guiding the material to be sized through a receptacle containing the sizing liquid; maintaining the sizing liquid at a constant level in the receptacle while the material is passing through the sizing liquid; and progressively removing certain of the denser portions of the sizing liquid from the receptacle.

1,153,246. DOUGH MIXING AND KNEADING MACHINE. SHERMAN W. NOGGLE, Kansas City, Mo. Filed July 5, 1910. Serial No. 570,367. (Cl. 107—40.)

In a dough mixing machine, a frame, a dough mixing vessel supported thereby, a shaft extending through and rotative in said vessel, two pairs of radial bars secured to said shaft, the bars of each pair being at right angles to each other and respectively disposed adjacent to one end and to the middle of said vessel, the inner bar of each pair being intermediate the bars of the other pair, corresponding bars of the two pairs extending oppositely



from said shaft, and two sets of spiral blades secured respectively to said two pairs of bars.

1,153,247. TRAP. WILLIAM H. OLDFIELD, Rochester, N. Y. Filed Nov. 19, 1913. Serial No. 801,814. (Cl. 182—12.)



1. An anti-siphon trap comprising a horizontally-elongated body having an elevated floor along one side and a sunken curved and upwardly inclined portion along the opposite side, said body having, also, an inlet at one end connecting with the low part of said sunken portion, and an outlet at the opposite end leading from the top of the body.

2. An anti-siphon trap comprising a horizontally-elongated body having an inlet and outlet at opposite portions, said body having a curved or sunken portion along one of its sides inclined from one end upwardly in the direction of the length of the body and merging into the bottom of the body at the opposite portion and adapted to impart a whirling action to the liquid passing through the trap, said inlet connecting with the low part of the sunken portion and said outlet leading from the top wall of the body above the high part of the sunken portion.

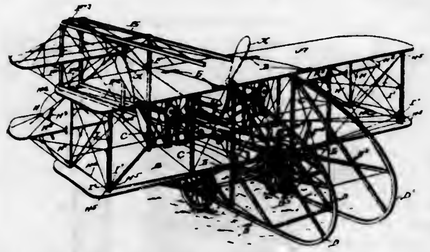
3. An anti-siphon trap comprising a body having an elliptical horizontal cross section and provided with a substantially horizontal curved depressed portion extending from one end thereof to the other and also gradually decreasing in depth from one end to the other, an inlet connecting with the side of the depressed portion where the latter is deepest, and an outlet extending from the top wall of the trap over the shallow end of said depressed portion.

4. An anti-siphon trap comprising a horizontally-elongated body having an inlet and outlet at opposite portions, said body having a curved or sunken portion along one of its sides inclined from one end upwardly in the direction of the length of the body and merging into the bottom of the body at the opposite portion and adapted to impart a whirling action to the liquid passing through the trap, said inlet connecting with the low part of the sunken portion and said outlet leading from the top wall of the body above the high part of the sunken portion, said body having, also, a clean-out opening in its top over the inlet end, and a removable closure for the clean-out opening.

5. An anti-siphon trap comprising a body of less vertical height than horizontal length having an inlet and an

outlet at opposite ends, one leading into the lower portion of the body and the other leading from the top wall of the body, said body having a curved or sunken portion along one of its sides inclined from one end upwardly in the direction of the length of the body and merging into the bottom of the body at the opposite end and adapted to impart a whirling action to the liquid passing through the trap, said body having a clean-out opening in its top over the inlet end, a removable closure for the clean-out opening, an open-ended sleeve mounted on the body and inclosing the clean-out closure, and means removably securing the sleeve in position.

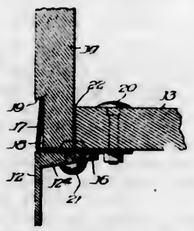
1,153,248. AEROPLANE. HARRY ANTHONY ORMB, Washington, D. C. Filed Apr. 15, 1912. Serial No. 690,791. (Cl. 244—29.)



1. In an aeroplane, the combination with main upper and lower fixed planes spaced apart, of vertical rudders pivoted between and extending to the rear of the fixed planes and adjacent the ends of said planes, balancing planes moving with said rudder planes and adapted to swing independent of the rudder planes and at an angle to the plane of movement of said rudder planes, said balancing planes extending to the rear and beyond the ends of the fixed planes, and means for controlling the rudder and balancing planes.

2. In an aeroplane, the combination with fixed upper and lower planes spaced by front and rear posts, of vertical rudders carried by said rear posts and adapted to swing from side to side, vertically movable balancing planes carried by the rudders and projecting beyond the fixed planes, a rearwardly extending frame, a fixed plane arranged horizontally in said frame and in a plane midway the upper and lower first mentioned planes, and intermediate said rudders, and a vertically movable plane arranged in the rear of the last mentioned fixed plane and forming when in a horizontal position a continuation of the fixed plane.

1,153,249. GRAIN-TIGHT BOX-CAR. PETER PARKE, Chicago, Ill., assignor to The Pullman Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 7, 1914. Serial No. 875,884. (Cl. 105—192.)



1. In car construction, the combination of a sill, a metal plate superposed longitudinally thereof, said plate having along its outer edge an up-turned resilient flange bearing upon the outer face of the sheathing to form a yielding lateral support therefor, and means to secure the plate to the flooring.

2. In car construction, the combination of a sill, a metal plate superposed longitudinally thereof, said plate having along its outer edge an upturned inwardly inclined flange bearing marginally upon the outer face of the sheathing beneath an overhanging portion thereof, and means to secure the plate to the flooring.

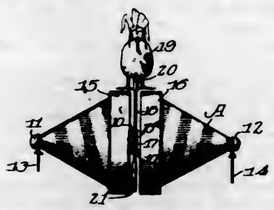
3. In car construction, the combination of a sill, a metal plate superposed longitudinally thereof, said plate having along its outer edge an upturned resilient inwardly inclined flange bearing upon the outer face of the sheathing, and means to secure the plate to the flooring.

4. In car construction, the combination of a sill, a metal plate superposed longitudinally thereof, said plate having along its outer edge an upturned resilient inwardly inclined flange bearing upon the outer face of the sheathing, within a recess of the sheathing having an overhanging upper wall, and means to secure the plate to the flooring.

5. In car construction, the combination of a sill, a metal plate superposed longitudinally thereof beneath the joint between the flooring and the side sheathing, said plate secured to the sill and having along its outer edge an upturned integral flange bearing upon the outer face of the sheathing, said plate also extending inwardly beyond the inner edge of the sill, and means extending through the plate extension to secure the plate along its inner edge to the flooring independently of the sill.

[Claims 6 to 9 not printed in the Gazette.]

1,153,250. TOY. DARIUS T. PHILLIPS, Chicago, Ill. Filed July 5, 1912. Serial No. 707,765. (Cl. 46—45.)



1. A toy comprising a vehicle formed with circular tread portions having a connecting neck between them, and a counterweighted supporting member freely mounted on the neck and adapted to support a toy on its upper extremity above the vehicle portion.

2. In a device of the character described, the combination of a vehicle comprising two substantially conical shaped members provided near their bases with peripheral portions upon which the said members are adapted to roll, the said conical shaped members being connected by a suitable neck portion with their bases adjacent each other and a space therebetween, and a counterweighted toy supporting portion pivotally mounted on the neck and extending above the upper periphery of the adjacent conical bases for supporting a toy thereon.

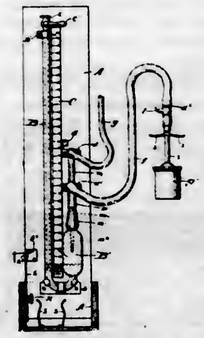
3. In a device of the character described, the combination of a vehicle comprising two substantially conical shaped members having tread portions at their bases upon which the said members are adapted to roll, the said conical shaped members being connected by a suitable neck portion with their bases adjacent each other and a space therebetween, a counterweighted toy supporting portion freely rotatable on the neck and extending above the upper periphery of the adjacent conical bases for detachably supporting a toy thereon, and means at the apexes of said conical members for attachment to a draft member.

4. In a device of the character described, the combination with a vehicle portion comprising two approximately conical shaped members with their bases adjacent and connected by a contracted neck portion, said neck portion being provided with a retaining groove, and a counterweighted toy supporting member pivotally supported in the said groove of the neck portion and having a portion thereof extending beyond the periphery of the said conical shaped bases for supporting a toy thereon.

5. In a device of the character described, the combination with a vehicle portion comprising a cylindrical member provided with a peripheral groove, of a toy supporting member adapted to be freely supported within the groove of the cylindrical member, a counterweight on said toy supporting member disposed within the groove, and a toy carried at the upper extremity of the toy supporting member.

[Claims 6 and 7 not printed in the Gazette.]

1,153,251. APPARATUS FOR MEASURING AND INDICATING BLOOD-PRESSURE. CHARLES J. PILLING, Philadelphia, Pa. Filed Feb. 5, 1912. Serial No. 675,590. (Cl. 73—44.)



1. In an apparatus of the class recited, the combination of a containing casing, a lid pivoted near one of its ends to said casing, a manometer tube fixedly mounted on said pivoted lid, said lid and the tube thereon being adapted to be moved to a perpendicular and operative position, a pin secured to said casing, a link pivoted to said lid and having a part adapted to engage said pin and support said lid in said perpendicular position, and a spring adapted to automatically move said link into engaging position with said pin to support said lid when it is moved to said perpendicular position.

2. In apparatus of the class recited, the combination of a containing casing, a lid pivoted near one of its ends to said casing, a manometer tube fixedly mounted on said pivoted lid, said lid and the tube thereon being adapted to be moved to a perpendicular and operative position, a pin secured to said casing, a link pivoted to said lid and having a longitudinal slot therein through which said pin extends, one wall of said slot having an off-set adapted to engage said pin and support said lid in said perpendicular position, and a spring adapted to automatically move said link so as to force said off-set into engagement with said pin to support said lid when it is moved to said perpendicular position.

1,153,252. TYPE-WRITING MACHINE. LORENS L. PRITZL, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Oct. 4, 1912. Serial No. 723,836. (Cl. 197—194.)

1. In a typewriting machine, the combination, with a carriage, and a pointer thereon; of a scale fixed on the machine frame and with which said pointer coöperates to indicate the printing point; a scale parallel with the fixed scale and shiftable with relation to the same; and a pair of relatively-shiftable margin stops, to one of which the shiftable scale is secured to be shifted thereby, both stops having pointers coöperative with said fixed scale, and one stop having a pointer coöperative with said shiftable scale.

2. In a typewriting machine, the combination of a pair of parallel scales mounted adjacent to each other on the machine frame, one scale being shiftable with relation to the other; a carriage; a pointer on said carriage coöperative with said other scale to indicate the printing point; and a pair of relatively-shiftable margin stops, to one of which the shiftable scale is secured to be shifted thereby, both stops having pointers coöperative with said other scale, and one stop having a pointer coöperative with said shiftable scale.



3. In a typewriting machine, the combination of a pair of parallel scales mounted adjacent to each other on the machine frame, one scale being shiftable with relation to the other, and both scales having similarly-numbered letter-space divisions; a carriage; a pointer on said carriage coöperative with said other scale to indicate the letter-space where the printing point stands; and a pair of relatively-shiftable margin stops, to one of which the shiftable scale is secured to be shifted thereby, said stops having pointers coöperative with said other scale to indicate the initial and terminal letter-spaces of an arbitrary line of writing, and one stop having a pointer coöperative with said shiftable scale to indicate the number of letter-spaces comprehended in such line.

4. In a typewriting machine, the combination of a pair of parallel scales mounted adjacent each other on the machine frame and extending in the same direction, one scale being shiftable with relation to the other, and both scales having similarly-numbered letter-space divisions; a carriage; a pointer on said carriage coöperative with said other scale to indicate the letter-space where the printing point stands; an adjustable beginning-of-the-line gage to which the shiftable scale is secured at one end to be shifted thereby, said gage having a pointer located at the "0" of said shiftable scale for coöperation with said other scale to indicate on the latter the letter-space at the beginning of an arbitrary line of writing; and an end-of-the-line gage adjustable toward and from the first-named gage and having a pointer for coöperation with said other scale to indicate thereon the letter-space at the end of such line, and a second pointer for coöperation with said shiftable scale to indicate thereon the number of letter-spaces comprehended in said line.

5. In a typewriting machine, the combination of a pair of parallel scales mounted adjacent each other on the machine frame and extending in the same direction, one scale being shiftable with relation to the other, and both scales having similarly-numbered letter-space divisions; a carriage, a pointer on said carriage coöperative with said other scale to indicate the letter-space where the printing point stands; an adjustable beginning-of-the-line gage to which the shiftable scale is secured at one end to be shifted thereby, said gage having a pointer located at the "0" of said shiftable scale for coöperation with said other scale to indicate on the latter the letter-space at the beginning of an arbitrary line of writing; and an end-of-the-line gage adjustable toward and from the first-named gage and having a pointer for coöperation with said shiftable scale to indicate thereon the number of letter-spaces comprehended in such line.

[Claims 6 to 16 not printed in the Gazette.]

1,153,253. APPARATUS FOR EXPELLING OIL OR WATER FROM NATURAL-GAS WELLS. JOSEPH S. L. PURDY, Le Roy, N. Y. Filed June 19, 1912. Serial No. 704,509. (Cl. 103—84.)

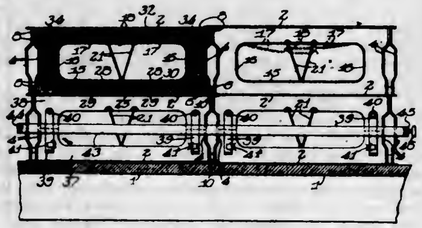
1. The combination with a well casing, a liquid impounding chamber therein, an ejection tube arranged with its lower end projecting into said chamber, a valve seat

arranged on one of said parts and a coöperating valve head on the other part, of means for effecting relative longitudinal movement between the chamber and tube to move said valve seat and head toward and from each other, a source of fluid pressure supply and valve controlled passages connecting it with the well chamber and the impounding chamber.



2. The combination with a well casing, a fluid impounding chamber therein, an ejection tube within the latter having its outer end projecting therefrom and means for moving said tube longitudinally of the chamber, of two coöperating valve members on the chamber and tube for controlling the admission of fluid into said chamber, a source of fluid pressure supply and means for admitting it alternately into the well and chamber to drive liquid from the well into the chamber and to expel it therefrom through said tube.

1,153,254. CONCRETE-MOLD OR THE LIKE. SMITH M. RANDOLPH, Chicago, Ill. Filed Jan. 27, 1912. Serial No. 673,915. (Cl. 25—121.)



1. In a device of the kind described and in combination, side and end pieces, each side piece comprising a pair of members spaced from each other with their edges inwardly offset, the edges of each on one side offset to contact with the edge of the other with the opposite edges spaced from each other, and means for securing said pieces together.

2. The combination in a mold of a removable core therefor, comprising a sheet of resilient material formed with its edges overlapping and inter-engaging, and means for locking said engaging edges in engagement with each other.

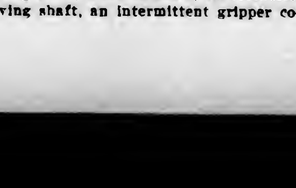
3. The combination in a mold of the kind described of a removable core, comprising a resilient plate of metal having its edges arranged to overlap and inter-engage, means for spacing the core and maintaining said overlapping edges in engagement, comprising a V-shaped member arranged to contact with one side of the mold and engage the same at the opposite side, and means for supporting said core within the mold.

4. In a device of the kind described and in combination, a plurality of side pieces, each side piece comprising two pieces secured together with a space therebetween intermediate the edges, end pieces arranged between said side pieces, means for securing the side and end pieces together, a removable core and means for supporting the same within the mold, said core comprising a flexible resilient plate bent with its edges overlapping, and provided at said overlapping part with inter-engaging grooves, and means for maintaining said edges in engagement with each other.

5. In a device of the kind described, and in combination, a plurality of side and end pieces, each side piece comprising a pair of members spaced from each other with their edges inwardly offset, the like edges forming one edge of a side piece being in contact and the edges forming the other edge of the side piece being secured apart in spaced relation by inserts, and means for securing said pieces together.

[Claims 6 to 8 not printed in the Gazette.]

1,153,255. DISH-WASHING MACHINE. MARION F. REDMON, Cedar Rapids, Iowa. Filed Sept. 14, 1914. Serial No. 861,609. (Cl. 141—9.)



1. In a dish washing machine, a tank, spaced lugs at one side of the tank, a bracket positioned upon the bottom of the tank and having one side thereof engaging the lugs, and a spring having one end secured within the tank remote from the lugs and its other end resiliently projecting above the bracket.

2. A dish washing machine comprising a tank, a bracket therein, a spider platform revolubly supported by the bracket, a dish basket mounted upon the platform, and automatically releasable means carried by the platform in engagement with the basket.

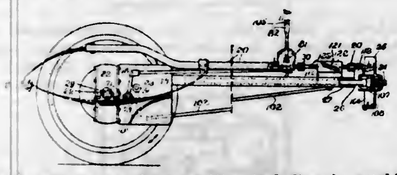
3. A dish washing machine comprising a tank, a bracket mounted therein, a revoluble shaft supported by the bracket and having a projecting upper end terminating in a conical portion, a spider platform upon the upper end of the shaft and adapted for rotation therewith, resilient clip fingers carried by the arms of the platform and projecting in similar directions, and a basket journaled upon the conical portion of the shaft and arranged for interengagement with the fingers during the normal rotation of the platform.

4. In a dish washing machine, a tank, a bracket comprising in part, two oppositely-disposed arms, rigid members carried by said tank for engaging one of said arms, resilient means engaging the other arm to hold the bracket in place, a dish basket supported on said bracket, driving means for the basket carried by said bracket, and means interposed between the basket and bracket for locking the basket to the said driving means.

1,153,256. VARIABLE-SPEED TRANSMITTER. JOHN REECE, Manchester, Mass. Filed Oct. 29, 1914. Serial No. 869,173. (Cl. 21—90.)

1. A variable speed transmitter including in combination, a driving shaft, a driven shaft, an eccentric actuated by the driving shaft, an intermittent gripper coöperating with the driven shaft for rotating it, mechanism between the shafts by which the eccentric vibrates the gripper, and means included in said mechanism for rendering approximately uniform the gripper speed through a substantial part of its travel.

2. A variable speed transmitter including in combination, a driving shaft, a driven shaft, an eccentric actuated by the driving shaft, an intermittent gripper coöperating with the driven shaft for rotating it, mechanism between the shafts by which the eccentric vibrates the gripper, and means included in said mechanism for rendering approximately uniform the gripper speed through a substantial part of its travel; said means comprising an oscillating lever intermediate of said eccentric and gripper, and a device for regularly changing the effective radius of said lever as the parts oscillate.



3. A variable speed transmitter including in combination, a driving shaft, a driven shaft, an eccentric actuated by the driving shaft, an intermittent gripper coöperating with the driven shaft for rotating it, mechanism between the shafts by which the eccentric vibrates the gripper, and means included in said mechanism for rendering approximately uniform the gripper speed through a substantial part of its travel; said means comprising an oscillating lever intermediate of said eccentric and gripper, a link between the lever and gripper and a device for regularly shifting the point of connection between lever and link as the parts oscillate.

4. A variable speed transmitter including in combination, a driving shaft, a driven shaft, an eccentric actuated by the driving shaft, an intermittent gripper coöperating with the driven shaft for rotating it, mechanism between the shafts by which the eccentric vibrates the gripper, and means included in said mechanism for rendering approximately uniform the gripper speed through a substantial part of its travel; said means comprising an oscillating lever intermediate of said eccentric and gripper, and a second lever for regularly changing the effective radius of said lever as the parts oscillate.

5. A variable speed transmitter including in combination, a driving shaft, a driven shaft, an eccentric actuated by the driving shaft, an intermittent gripper coöperating with the driven shaft for rotating it, mechanism between the shafts by which the eccentric vibrates, the gripper, and means included in said mechanism for rendering approximately uniform the gripper speed through a substantial part of its travel; said means comprising an oscillating lever intermediate of said eccentric and gripper, a member, as roller 47, movable along said lever and connected with said gripper, and a device acting automatically as the parts oscillate for changing the position of said member in harmony with the eccentric's action for the purposes stated.

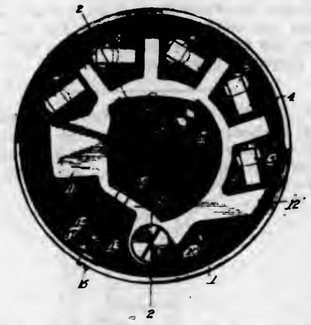
[Claims 6 to 27 not printed in the Gazette.]

1,153,257. SWITCH. LOUIS REINHARD, Milwaukee, Wis., assignor to The Mechanical Appliance Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 28, 1914. Serial No. 821,771. (Cl. 175—310.)

1. In a switch, the combination with a rotatable member, of a plurality of contacts carried thereby, an arm pivotally mounted on said rotatable member and carrying an annular contact carrying member moved by centrifugal force to place the contacts carried thereby into engagement with said relatively stationary contacts, and means for holding said arm against movement until said rotatable member has reached a predetermined speed.

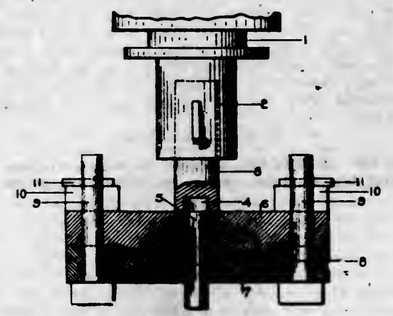
2. In a switch, the combination with a rotatable member, of a plurality of contacts carried thereby and circumferentially spaced, an arm pivotally mounted on said rotatable member and carrying an annular contact carrying member moved by centrifugal force to place the contacts carried thereby into engagement with said relatively stationary contacts, and means for holding said arm against movement until said rotatable member has reached a predetermined speed.

3. In a switch, the combination with a rotatable member, of a plurality of contacts carried thereby and circumferentially spaced, an arm pivotally mounted on said rotatable member and carrying an annular member having a plurality of radial contact arms, said annular member being moved by centrifugal force to place said radial arms in contact with said relatively stationary contacts, and means for holding said arm against movement until said rotatable member has reached a predetermined speed.



4. In a switch, the combination with a rotatable member, of a plurality of contacts carried thereby, an arm pivotally mounted on said rotatable member and carrying an annular contact carrying member moved by centrifugal force to place the contacts carried thereby into engagement with said relatively stationary contacts, and a trigger comprising a semi-cylindrical spring mounted member engaging a semi-cylindrical recess for holding said contact carrying member against movement until the centrifugal force reaches a predetermined point.

1,153,258. METHOD AND APPARATUS FOR PRODUCING CAST-STEEL CAR-WHEELS. CHARLES GRIFFITH ROBINSON and JOHN E. SCHLIEPER, Pittsburgh, Pa. Filed Nov. 9, 1911. Serial No. 659,362. (Cl. 22—67.)



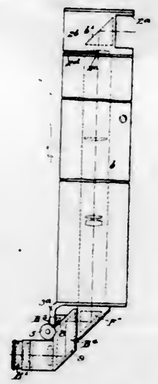
1. The herein described method of making cast steel car wheels, which consists in casting a wheel having an excess amount of metal at the hub on one side thereof, then applying local pressure to the hub portion of the wheel having the excess metal therein while the wheel is still within the mold so as to force the said excess metal into the mold and cause the same to be distributed radially throughout the wheel, thereby solidifying the metal and preventing the formation of blow holes therein.

2. An apparatus for making cast steel car wheels, including a mold having a hub recess on one side thereof which is adapted to receive an excess amount of metal, and a pressure cylinder having a piston operating through the side of the mold and adapted to engage the hub portion of the wheel so as to force the excess amount of metal into the mold and distribute the same radially throughout

the wheel, thereby solidifying the metal and preventing the formation of blow holes therein.

3. An apparatus for making cast steel car wheels including a mold having a hub recess on one side thereof adapted to receive an excess amount of metal, a centrally disposed core piece arranged at the hub of the wheel and projecting through the same, and a pressure cylinder having a piston operable through the side of the mold, said piston being formed with a positioning recess adapted to engage the core piece and being adapted to act upon the hub portion of the wheel to force the excessive amount of metal into the mold and distribute the same radially throughout the wheel so as to solidify the metal and prevent the formation of blow holes therein.

1,153,259. BINOCULAR PERISCOPE. GEORGE N. SAEGMULLER, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 5, 1913. Serial No. 804,931. (Cl. 88—33.)



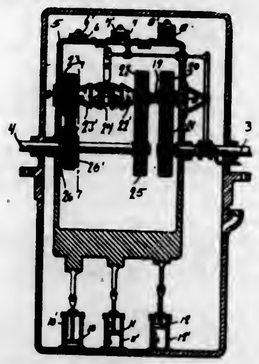
In a binocular periscope, the combination with a periscope tube, two systems of lenses mounted therein side by side and reflectors at the lower ends of said systems, of adjustable oculars for the lens systems, both mounted on one end of said tube and offset from the path of the light rays deflected by the reflectors and other reflectors coöperating with the oculars and said first mentioned reflectors.

1,153,260. MUFFLER. SAMUEL G. SALKA, Chicago, Ill. Filed Jan. 23, 1915. Serial No. 3,852. (Cl. 2—62.)



A device of the class described comprising a middle portion having a concaved outer edge and rounded outer end corners and two end portions extending in approximate parallelism and at a right angle from the opposite ends of the middle portion, said end portions having curved inner and outer side edges and straight end edges, a head band having its opposite ends fastened to the rounded outer end corners of the middle portion, and a series of fasteners attached to the opposite end portions and arranged at intervals along the straight end edges thereof; said device being adapted to be fitted in folded position upon the coat of the wearer or with the middle portion turned up over the ears and back of the head, the head band passed over the head and the straight margins of the end portions lapped upon the chest and secured by the fasteners.

1,153,261. VARIABLE-SPEED-TRANSMISSION DEVICE. WALTER E. SCHREIBNER, Wilbur, Wash. Filed Dec. 9, 1913. Serial No. 805,554. (Cl. 74—34.)

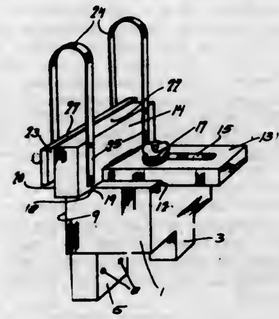


1. A variable speed reversible gear transmission mechanism comprising in combination a driving shaft, a driven shaft coaxial with said driving shaft, gears fixed to said driving and driven shafts, a drum rotatably mounted on said shafts, a planetary shaft rotatably mounted in said drum, a gear fixed on said planetary shaft and meshing with said driving gear, a gear loose on said planetary shaft and meshing with said driven gear, a sprocket fixed on said driven shaft, a sprocket loose on said planetary shaft, a drive chain between said sprockets, clutch members fixed to said loose sprocket and said loose gear, a clutch member on said planetary shaft and adapted to engage either of said first mentioned clutch members in order to lock the loose sprocket or the loose gear to the planetary shaft, a lever fixed to said drum for moving said last mentioned clutch member, a link connected to said lever, a lever connected to the outer end of said link and pivoted on the outside of the drum, a collar slidably mounted on one of the coaxial shafts, means whereby said collar may be shifted to give either a forward or reverse drive, and means for braking said drum when desired.

2. A variable speed reversible gear transmission mechanism comprising in combination a driving shaft, a driven shaft coaxial with said driving shaft, gears fixed to said driving and driven shafts, a drum rotatably mounted on said shafts, a planetary shaft rotatably mounted in said drum, a gear fixed on said planetary shaft and meshing with said driving gear, a gear loose on said planetary shaft and meshing with said driven gear, a sprocket fixed on said driven shaft, a sprocket loose on said planetary shaft, a drive chain between said sprockets, clutch members fixed to said loose sprocket and said loose gear, a clutch member mounted on said planetary shaft and adapted to engage either of said first mentioned clutch members in order to lock the loose sprocket or the loose gear to the planetary shaft, a lever fixed to said drum for moving said last mentioned clutch member, a link connected to said lever, a lever connected to the outer end of said link and pivoted on the outside of the drum, a collar slidably mounted on one of the coaxial shafts, means whereby said collar may be shifted to give either a forward or reverse drive, and means for braking said drum when desired, said means comprising a plurality of eccentrics on the outer face of the drum, a plurality of cylinders having pistons therein, connections between said pistons and said eccentrics, a casing inclosing said drum and said cylinders, said cylinders having ports connecting the interior of the casings with the interior of the cylinders, and means for controlling said ports.

3. A variable speed reversible gear transmission mechanism comprising in combination a driving shaft, a driven shaft coaxial with said driving shaft, gears fixed to said driving and driven shafts, a drum rotatably mounted on said shafts, a planetary shaft rotatably mounted in said drum, a gear fixed on said planetary shaft and meshing with said driving gear, a gear loose on said planetary shaft and meshing with said driven gear, a sprocket fixed on said driven shaft, a sprocket loose on said planetary shaft, a drive chain between said sprockets, clutch members fixed to said loose sprocket and said loose gear, a clutch member on said planetary shaft and adapted to engage either of said first mentioned clutch members in order to lock the loose sprocket or the loose gear to the planetary shaft, a lever fixed to said drum for moving said last mentioned clutch member, a link connected to said lever, a lever connected to the outer end of said link and pivoted on the outside of the drum, a collar slidably mounted on one of the coaxial shafts, means whereby said collar may be shifted to give either a forward or reverse drive, and means for braking said drum when desired, said means including a plurality of eccentrics on the exterior of said drum, a plurality of cylinders having pistons therein, connections between said pistons and said eccentrics, said cylinders having ports therein and means for controlling said ports including sleeves arranged to rotate on said cylinders and having ports therein, and racks for operating said sleeves, each rack being arranged to operate a plurality of sleeves in unison.

1,153,262. SAW-GAGE. DANIEL SEBRING, Spokane, Wash. Filed July 29, 1914. Serial No. 853,849. (Cl. 143—86.)

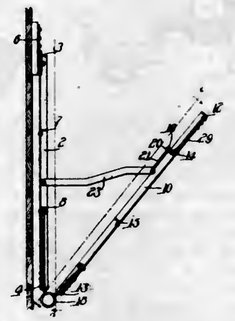


1. In a saw gage, a stock supporting block having a substantially vertically disposed side face against which the stock is adapted to be engaged and also provided with a top horizontal face having a groove extending at right angles to the plane of said side face, a saw gage block adjustable in said groove and having a laterally disposed saw gage face adapted to be shifted with said block into flush relation with said stock face or in parallel relation therewith, saw retaining strip, and U-shaped springs having their ends fixed to said gage block and retaining strip to engage the latter against the saw and hold the saw against said block, substantially as described.

2. In a saw gage, a stock block having a side face for supporting the stock with one edge of the stock flush or below the top face of said block, and a saw gage block adjustable on the top face of said stock block and having a saw gage face adapted to be disposed flush with said stock face or in over-hanging relation therewith, substantially as described.

3. In a saw gage, a stock supporting block having a stock supporting face, a saw gage block adjustable on said supporting block and having a saw gage face adapted to be disposed in parallel or flush relation with said stock supporting face in accordance with the adjustment of said gage block, and a spring controlled saw retaining strip for engaging the latter against the saw to hold the saw against said saw gage face, substantially as described.

1,153,263. HAY-FEEDER. ROSWELL R. SHIRLEY, Rockford, Ill. Filed July 11, 1912. Serial No. 708,915. (Cl. 119—60.)



1. In a feeding device, the combination, of a back rack, a front rack pivoted thereto, means for locking the front rack in an open position, comprising, a locking bar pivoted to the front rack, having crank portions formed at its ends, pivoted links forming a connection between the crank portions and the back rack, the front rack being adapted to be manually operated for releasing it from said locked position, and means for automatically moving the front rack to a closed position.

2. In a feeding device, the combination, of a back rack, a front rack pivoted thereto, means for locking the front rack in an open position, comprising, a locking bar pivoted to the front rack, having crank portions formed at its ends and its center portion, pivoted links forming a connection between the end crank portions and the back rack, means for releasing the front rack from said locked position, comprising, a yielding connection between the center crank portion and the front rack, and means for automatically moving the front rack to a closed position.

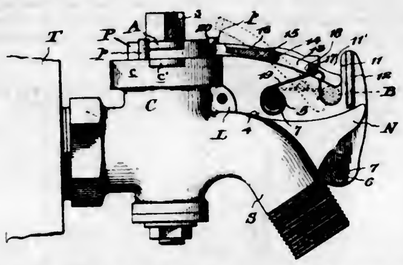
3. In a feeding device, the combination, of a back rack, a front rack pivoted thereto, means for locking the front rack in an open position, comprising, a locking bar pivoted to the front rack, having crank portions formed at its ends, pivoted links forming a connection between the crank portions and the back rack, means for releasing the front rack from said locked position, and means for automatically moving the front rack to a closed position.

4. In a feeding device, the combination of a back rack, a front perforate rack pivoted thereto, and means for locking the front rack in an open position, said means comprising a link pivoted at one end to the front rack, a link pivoted at one end to the back rack and being pivotally connected to the front rack link, said links being disposed intermediate the racks and adapted to limit swinging of the front rack in an open position and to permit their pivotal connection to swing past the center of their rack pivotal connections to effect locking of the front rack from said locked position, and means for automatically moving the said pivoted connection of the links past said center of their rack connections.

5. A feeding device of the character set forth, comprising a back, a perforate rack pivotally connected thereto, means for urging the rack toward the back, and means for locking the rack in an open position, including a connection between the back and rack adapted to limit the extent of opening movement.

[Claims 6 and 7 not printed in the Gazette.]

1,153,264. SAFETY ATTACHMENT FOR VALVES FOR FAUCETS. BASSETT E. SMITH, Ramsey, Ill. Filed Feb. 11, 1915. Serial No. 7,564. (Cl. 137—7.)



1. A safety faucet attachment comprising a faucet engaging support, a lever fulcrumed on said support, a ball receiving member carried by said support, one end of said lever being positioned for engagement by a ball engaged with said receiving member, and means on the other end of said lever for locking a faucet valve when said ball receiving member is unoccupied.

2. A safety faucet attachment comprising a faucet engaging support, a lever fulcrumed on said support and having means on one end for locking a faucet valve when said lever is in normal position, a ball receiving member carried by said support, the other end of said lever being positioned in the path of the ball whereby said lever end is depressed on the engagement of said ball with said member and the other end of said lever raised.

3. A safety faucet attachment comprising a faucet engaging support, a lever fulcrumed intermediately of its ends on said support and having valve locking means at one end, a ball receiving recess in said support, the other end of said lever projecting into said recess, a spring for holding said projecting end normally raised and its opposite end lowered.

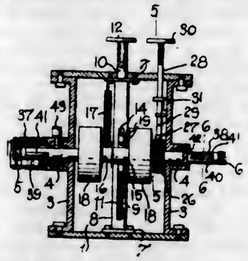
4. A safety faucet attachment comprising a faucet engaging support, means for detachably connecting said support to said faucet, said support having a recess extending transversely thereof, a lever fulcrumed on said support intermediately of its ends with one end projecting into said recess, valve locking means on the other end of said lever, and a spring mounted to engage the end of said lever which extends into said recess and hold said end normally raised and its other end lowered.

5. A safety faucet attachment comprising a faucet engaging support, means for detachably connecting said support to said faucet, said support having a recess extending transversely thereof, a lever fulcrumed on said support intermediately of its ends with one end projecting into said recess, valve locking means on the other end of said lever, and a spring mounted to engage the end of said lever which extends into said recess and hold said end normally raised and its other end lowered, said lever having a laterally extending lug on one side thereof with a notch in its lower face positioned to slidably engage said spring.

[Claims 6 to 8 not printed in the Gazette.]

1,153,265. SIGNALING APPARATUS. CYRUS H. SMITH. Tonica, Ill. Filed Oct. 31, 1914. Serial No. 869,664. (Cl. 74—14.)

1. In combination wit ha movable member, a casing, a shaft rotatably supported by the casing, an operative connection between the shaft and the member whereby the shaft and member are caused to move in synchronism, a tubular member within the casing provided with a longitudinally disposed slot, a plunger mounted for reciprocatory movement within the hollow member, a block secured to the plunger and projecting through the slot, a flexible member secured to the block of the plunger and to the shaft, said flexible member being wound about the shaft whereby said shaft is caused to rotate in one direction upon movement being imparted to the plunger in one direction, an expansible member positioned within the tubular member and bearing against the under face of the plunger for imparting movement to the plunger in an opposite direction, and means for imparting rotation to the shaft in an opposite direction.



2. In combination with a movable member, a casing, a shaft rotatably supported by the casing, an operative connection between the shaft and the member whereby the shaft and member are caused to move in synchronism, a tubular member within the casing provided with opposed longitudinally disposed slots, a plunger mounted for reciprocatory movement within the tubular member and provided with means whereby the same may be depressed, a block exterior of the tubular member, clamping members disposed through the block and the plunger and directed through the slots of the tubular member, a flexible member secured to the block of the plunger and to the shaft, said flexible member being wound about the shaft whereby said shaft is caused to rotate in one direction upon downward movement being imparted to the plunger, and automatic means for imparting movement to the plunger in an opposite direction.

3. In combination with a movable member, a casing, a shaft rotatably supported by the casing, an operative connection between the shaft and the member whereby the shaft and member are caused to move in synchronism, a tubular member within the casing provided with a longitudinally disposed slot, a plunger mounted for reciprocatory movement within the hollow member, a block secured to the plunger and projecting through the slot, a flexible member secured to the block of the plunger and to the shaft, said flexible member being wound about the shaft whereby said shaft is caused to rotate in one direction upon movement being imparted to the plunger in one direction, an expansible member positioned within the tubular member and bearing against the under face of the plunger, means for imparting rotation to the shaft in an opposite direction, and means for holding the shaft against rotation.

1,153,266. MACHINE FOR MAKING BED FABRIC. GARY B. SMITH, Chicago, Ill. Filed Apr. 11, 1914. Serial No. 831,121. (Cl. 140—7.)



1. In a machine for making a bed fabric chain out of stock formed links, means for advancing the stock by successive steps; means for bending the stock into a hook; mechanism for severing the stock to transform the hook into a staple-shaped link; means for concatenating the link with a preceding link to form a chain; and means for retracting the stock between said steps and prior to the severing of the stock thereby to aline the end of the hook with the severing mechanism and to produce a link having arms of equal length, when the stock is severed by the severing mechanism.

2. In a machine for making a bed fabric chain out of stock-formed links, means for advancing the stock by successive steps; means for bending the stock into a hook; mechanism for severing the stock to transform the hook into a staple-shaped link; means for fashioning engaging elements in the arms of the link; and means for retracting the stock between said steps and prior to the severing of the stock thereby to concatenate the bend of the link with the engaging elements of a preceding link, and to aline the end of the hook with the severing mechanism thereby to produce a link having arms of equal length, when the stock is severed by the severing mechanism.

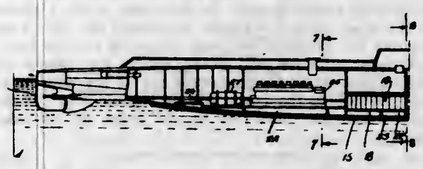
3. In a machine for making bed fabric out of stock, releasable means for advancing the stock by successive steps; a stock-advanced carriage; and yieldable means connected with the carriage and tensioned by the advancing movement of the carriage to retract the carriage between said steps.

4. In a machine for making bed fabric out of stock, a movable member for advancing the stock; releasable means upon the movable member for holding the stock while the same is being advanced; and means for retracting the stock subsequent to the release of the holding means from the stock.

5. In a machine for making bed fabric out of stock, a movable member for advancing the stock; releasable means on the movable member for holding the stock while the stock is being advanced; and yieldable means actuated by the stock during the advancement thereof, to retract the stock subsequent to the release of the holding means from the stock.

[Claims 6 to 44 not printed in the Gazette.]

1,153,267. SUBMARINE BOAT. LAWRENCE Y. SPEAR, Groton, Conn., assignor to Electric Boat Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 23, 1915. Serial No. 23,304. (Cl. 114—16.)



1. A submarine boat having a strong inner hull and a relatively weak outer hull providing space between them which is utilized for ballast tanks, a propelling engine of the type employing liquid fuel mounted within the strong hull of the portion of the boat which is of the double hull construction, propelling devices for the boat actuated by the engine, and a fuel tank located directly below the engine and so constructed as to be of a strength adapted to withstand the pressure of deep submergence; substantially as described.

2. A submarine boat having a strong inner hull and a relatively weak outer hull providing space between them which is utilized for ballast tanks, a propelling engine mounted within the strong hull of the portion of the boat which is of the double hull construction, propelling devices for the boat actuated by the engine and a tank for the storage of liquid fuel for the engine located directly below the engine in the inter-hull space, the plating forming the outer walls of the tank being of a strength sufficient to withstand the pressure of deep submergence; substantially as described.

3. A submarine boat having a strong inner hull and a relatively weak outer hull providing space between them which is utilized for ballast tanks, a propelling engine located in the portion of the boat which is of the double hull construction, propelling devices for the boat actuated by the engine and a tank for liquid fuel for the engine located directly below the engine, the bottom wall of the tank forming part of the outer hull of the boat and being of a strength sufficient to withstand the pressure of deep submergence; substantially as described.

4. A submarine boat having a strong inner hull and a relatively weak outer hull providing an inter-hull space for ballast tanks, a propelling engine located in the portion of the boat which is of the double hull construction, propelling devices for the boat actuated by the engine, and a tank for liquid fuel for the engine located directly below the engine, the bottom wall of the tank forming part of the outer hull of the boat and being of a strength sufficient to withstand the pressure of deep submergence, said inter-hull space being extended aft of the engine on both sides thereof; substantially as described.

5. A submarine boat having a central section consisting of a strong inner hull and a relatively weak outer hull providing an inter-hull space for ballast tanks, and a tank located in the inter-hull space having its outer wall and the portions of its end walls exterior to the inner hull made of strong plating capable of withstanding the pressures of deep submergence; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,153,268. MOTION-AUGMENTING PENDULUM-GEARING. HARRISON L. STALEY, Martinsville, Ind. Filed Sept. 25, 1912. Serial No. 722,203. (Cl. 74—60.)



1. Gearing including a pendulum swingingly supported, a slotted guide bar, a wheel rotatably mounted on the pendulum, and means coöperating with the slotted guide bar for rotating the wheel on movement of the pendulum.

2. Gearing including a pendulum swingingly supported, a wheel rotatably mounted on the pendulum and having a crank pin thereon, and means connected with the crank pin for rotating the wheel on movement of the pendulum.

3. Gearing including a rocking guide bar, a pendulum device supported to swing over the guide bar, and a wheel rotatably mounted on the device and provided with a crank pin having sliding and also rotative connection with the guide bar.

4. Gearing including a pivoted lever, a pendulum device swingingly suspended, a rod connected to the lever and also to the pendulum device, a wheel rotatably mounted on the device, and means for rotating the wheel on swinging movement of the pendulum device.

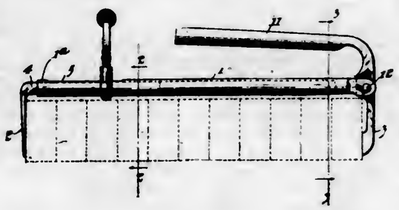
5. Gearing including a longitudinally slotted guide bar supported to rock on its longitudinal axis, a pendulum device supported to swing over the guide bar, and a wheel rotatably mounted on the device and provided with a crank pin that extends into the slot of the guide bar.

[Claims 6 to 37 not printed in the Gazette.]

1,153,269. BRICK-HANDLING TONGS. WILLIAM STURM, Sr., Chicago, Ill. Filed Sept. 18, 1914. Serial No. 862,286. (Cl. 57—9.)

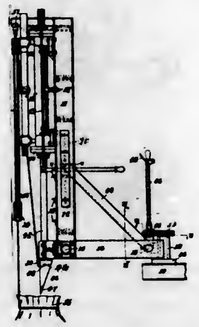
1. A device of the class specified comprising a tubular member having a longitudinal slot, a bar or rod arranged within said tubular member and having a laterally extending grasping portion, and a ring arranged to slide upon said tubular member and having a handle provided

with a shank adapted to extend through the slot in said tubular member and engage said rod or bar.



2. A device of the class specified comprising in combination, a tubular member having a longitudinal slot, a rod or bar arranged within said tubular member and having a projecting end provided with a laterally extending grasping portion, and means for engaging said rod or bar extending through said slot, said means having a handle and a threaded shank connected with said handle and extending through said slot.

1,153,270. STUMP REMOVER AND DESTROYER. CHARLES C. SULLIVAN and LOUIS PENINGTON DAVIS, New Orleans, La. Filed Aug. 31, 1914. Serial No. 859,447. (Cl. 144—198.)

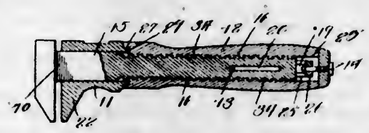


1. In a device of the kind described, a main frame, a supplemental frame adapted to carry a tool and projecting from the main frame, said supplemental frame being pivoted at one end to the main frame, uprights on the supplemental frame, said uprights being pivoted at their lower ends to the supplemental frame, means to adjust the inclination of the uprights to the supplemental frame and a reciprocating tool and means to reciprocate the same carried by the uprights in substantial parallel relation to said uprights.

2. In a device of the kind described, a main frame, a supplemental frame adapted to carry a tool and projecting from the main frame, said supplemental frame being pivoted at one end to the main frame, uprights on the supplemental frame, said uprights being pivoted at their lower ends to the supplemental frame, means to adjust the inclination of the uprights to the supplemental frame comprising bars pivoted at their inner ends to the supplemental frame, pivot pin guides on the uprights, and pivot pins in said guides and extending through said bars and a reciprocating tool and means to reciprocate the same carried by the uprights in substantial parallel relation to said uprights.

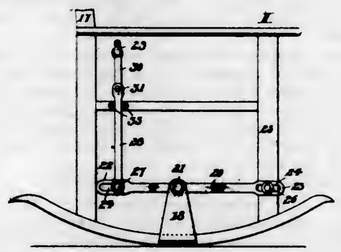
1,153,271. WRENCH. LOUIS A. SWINT, Pickens, W. Va. Filed July 8, 1913. Serial No. 777,252. (Cl. 81—169.)

A wrench comprising a jaw, a shank portion on said jaw, said shank portion being substantially rectangular in cross section and having longitudinally extending slots on opposite faces thereof, and transversely extending grooves on the other opposite faces thereof, a movable jaw mounted on said shank portion and having extensions slidably mounted in the aforementioned grooves, a handle



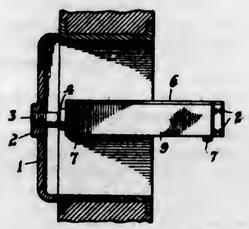
rotatably mounted on said movable jaw, means for swivelly connecting the said handle to the saiad extensions, and means for normally preventing the handle from rotating.

1,153,272. CHAIR-OPERATED CHURN. ALEXANDER SZASZ, Hinsdale, Ill. Filed May 17, 1915. Serial No. 28,655. (Cl. 185—28.)



A crank shaft operating device comprising a base, an oscillating rocker parallel to said base, a lever pivoted to the base, means for loosely connecting one end of said lever to the rocker, a rod guide supported on said base, a rod reciprocable in said guide, means for loosely connecting the rod to the remaining end of the lever, a pitman pivoted to the upper end of the rod and provided with means for connection to the crank on the crank shaft.

1,153,273. PREHEATER. SAMUEL H. TACY, Elkins Park, Pa., assignor to Pre-Heated Air Company, Philadelphia, Pa., a Corporation of Delaware. Filed Feb. 16, 1912. Serial No. 678,077. (Cl. 110—175.)



1. In a device of the character stated, a furnace door and a pre-heater mounted thereon of tapered external shape, having an inlet air connection, outlet air apertures and longitudinal air passages alternately reversing in direction of air travel and parallel to the nearer tapered walls of the heater.

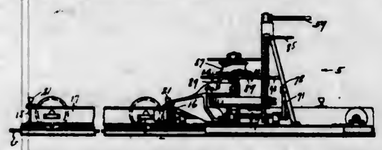
2. In a device of the character stated, a pre-heater having tapered side walls, an inlet connection, outlet apertures and communicating passages of successively increased cross section from the inlet to the discharge opening, said passages being substantially parallel each to the nearer side wall alternating in direction, those at the center diverging to provide for the substantial parallelism with different side walls.

3. In a device of the character stated, an inlet air connection, a tapered pre-heater, fed therefrom, of approximately rectangular transverse section, comprising communicating passages alternately reversed in direction of air travel and parallel to the nearer tapered walls and a chamber at the larger end provided with discharge apertures at variant angles.

4. In a device of the character stated, a tapered preheater of approximately rectangular transverse section having the relatively tapered outside walls generally longitudinally disposed, the pre-heater containing passages alternating in direction of air travel in adjoining passages, having the passages on one side, connected with an inlet at the rear of the pre-heater, substantially parallel with one of the relatively tapered walls and communicating with passages substantially parallel with the other relatively tapered wall, which latter passages are in communication with outlet openings at the front of the pre-heater.

5. In a device of the character stated, a pre-heater adapted for attachment to a furnace door, of substantially rectangular cross section and having two walls relatively tapered, the walls converging toward the door, an inlet connection therefor, passages adjoining one of said tapered walls substantially parallel with it and passages adjoining the other wall substantially parallel with said second tapered wall, said passages communicating at the middle, and outlet openings at the larger front end of the pre-heater.

1,153,274. TRUCK-TRANSFERRING MECHANISM. DANIEL R. TANNER, La Grande, Oreg. Filed Jan. 19, 1915. Serial No. 3,072. (Cl. 104—48.)



1. In a transfer mechanism, a transfer car, trackage therefor, an endless running cable extending along said trackage, sheave shafts rotatably mounted on said car, a sheave on each shaft about each of which one lap of said cable is trained, a winch on one shaft, a gypsy head on the other of said shafts, and devices for connecting said winch and head in driven relation with said shafts, substantially as described.

2. In a transfer mechanism, a transfer car, trackage therefor, an endless running cable extending along said trackage, a sheave shaft driven by one lap of said cable and provided with a friction head, a winch loose on said shaft, and means for shifting said winch on said shaft into frictional engagement with said head to connect said winch in driven relation with said shaft, substantially as described.

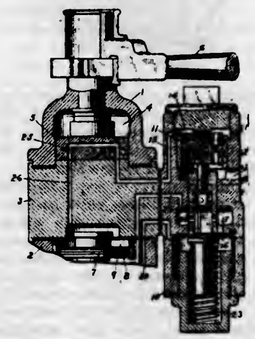
3. In a transfer mechanism, a transfer car, an endless running cable, a drive and idler sheave on said car about which one lap of the cable is trained in crossed drive, a drive and idler sheave on said car about which the other lap of said cable is trained in direct drive, and means for arresting either of said drive sheaves to advance the car in the direction in accordance with the sheave arrested, substantially as described.

4. In a transfer mechanism, a truck, transport tracks for the truck, a transfer car provided with transfer tracks for registry with said transport tracks, running cable means movable about fixed axes for advancing said car, and mechanism on said car driven from said cable means for advancing said truck onto and off from said car, substantially as described.

5. In a transfer mechanism, a truck, transport tracks for said truck, running cable means, a transfer car in constant connection with said cable means and adapted to transfer said truck to and from said transport tracks, means on said car for connecting the latter in driven relation with said cable means to advance said car, and mechanism on said car driven from said cable means for advancing said truck either onto or off from said car, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,153,275. FLUID-PRESSURE BRAKE DEVICE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Wilmerding, Pa., a Corporation of Pennsylvania. Filed Nov. 2, 1914. Serial No. 869,803. (Cl. 188—7.)



1. In a brake valve device, the combination with a brake valve handle, of means for automatically effecting an application of the brakes upon movement of the brake valve handle to handle off position.

2. In a brake valve device, the combination with a brake valve handle, of means for effecting a reduction in brake pipe pressure upon movement of the brake valve handle to a position for removing the handle.

3. In a brake valve device, the combination with a brake valve handle, of means for effecting a predetermined reduction in brake pipe pressure and thereby an application of the brakes upon movement of the brake valve handle to handle off position.

4. The combination with a brake valve device having an equalizing discharge valve mechanism normally subject to the opposing pressures of an equalizing reservoir and brake pipe, of a valve mechanism operated in the handle off position of the brake valve for opening communication from the brake pipe to the brake pipe side of the equalizing discharge valve mechanism.

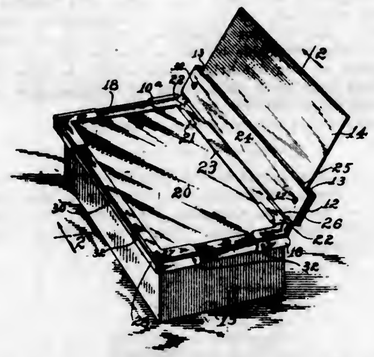
5. The combination with a brake valve device having an equalizing discharge valve mechanism including the usual equalizing piston normally subject to the opposing pressures of the equalizing reservoir and the brake pipe, of a valve for controlling communication from the brake pipe to the brake pipe side of the equalizing piston, and a piston operated by fluid from the equalizing reservoir when the brake valve handle is in handle off position for actuating said valve.

[Claims 6 to 9 not printed in the Gazette.]

1,153,276. SUPPLEMENTAL COVER FOR BOXES. WASHINGTON I. TUTTLE, Baltimore, Md., assignor to Tin Decorating Company of Baltimore, Baltimore, Md., a Corporation of New Jersey. Filed Oct. 3, 1913. Serial No. 793,179. (Cl. 217—58.)

1. The combination with a box and its hinged lid, of a supplemental cover for the box, said cover having longitudinally extensible lid-engaging and supporting means carried thereby adapted to maintain the lid in open posi-

tion and serve also to lift the cover upon swinging movement of the lid on its hinge.



2. A supplemental cover for a box, comprising an extensible frame, embodying corner-units and intermediate spacer-strips adjustably connecting said units, two of said corner-units having means forming a part thereof for attaching the cover to the lid of the box.

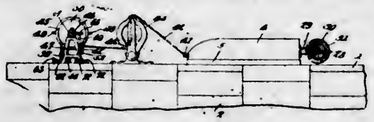
3. A supplemental cover for a box, comprising an extensible frame, embodying corner units and intermediate spacer-strips adjustably connecting said units, each of two of said corner units being provided with an upwardly and rearwardly inclined box lid engaging and supporting member formed integral therewith, and one of said spacer strips having a plate formed integral therewith that extends across the front of the box-lid adjacent its hinge.

4. A supplemental cover for a box, comprising an extensible frame, embodying front and rear corner-units, and front, rear and side spacer-strips adjustably connecting said corner units, each of said rear corner-units being provided with an upwardly extending member having means for engaging an end of a hinged box-lid.

5. A supplemental cover for a box, comprising an extensible frame, embodying front and rear corner-units, and front, rear and side spacer-strips adjustably connecting said corner-units, and each of the rear corner-units being provided with an integral upstanding member having an inwardly turned lip to embrace an end of a hinged box-lid.

[Claims 6 to 8 not printed in the Gazette.]

1,153,277. SIGNAL DEVICE FOR SUBMARINE VESSELS. EDWARD B. WALSH, Los Angeles, Cal. Filed May 27, 1915. Serial No. 30,839. (Cl. 114—16.5.)



1. The combination with a submarine vessel, of a buoy normally carried thereby and adapted to be released, a reel carried by the exterior of the vessel, a cable wound upon the reel and attached to the buoy, and a paddle wheel rotatable with the reel to retard the rotation thereof.

2. The combination with a submarine vessel, of a buoy normally carried thereby and adapted to be released, a reel carried by the exterior of the vessel, and means operable from the interior of the vessel and coöperable with the reel for governing the speed of rotation thereof.

3. The combination with a submarine vessel, of a buoy normally carried thereby and adapted to be released, a reel carried upon the exterior of the vessel, a cable wound upon the reel and attached to the buoy, a brake drum carried by the reel, a brake band passed over said drum and having one end anchored, and a screw engaging through the shell of the vessel and connected to the other end of said brake band.

4. The combination with a submarine vessel, of a buoy normally carried thereby and adapted to be released, a reel carried by the exterior of the vessel, a cable wound upon the reel and connected to the buoy, means engaging through the shell of the vessel and adapted for regulating the velocity of the reel from the interior of the vessel, an indicator within the vessel, and an operative connection between the indicator and reel extending through the shell of the vessel.

5. In a device of the character described, a buoy adapted to be carried at one position by a vessel and adapted to be released, and a signaling means carried by the buoy and normally inoperative when the buoy is in said position, the buoy assuming another position when it is released, and said means being operable when the buoy assumes the last mentioned position.

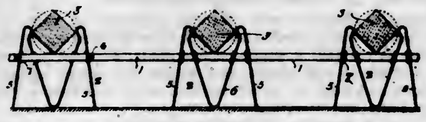
[Claims 6 to 9 not printed in the Gazette.]

1,153,278. IDENTIFICATION DEVICE FOR AUTOMOBILES. LYNFORD A. WARD and WILLIAM D. CRABB, Brooklyn, N. Y. Filed July 8, 1914. Serial No. 849,787. (Cl. 40—120.)



An identification device for automobiles comprising a supporting or base member, a member coöperating therewith to form a pocket between it and the base member, an identification card contained in the said pocket, said second-mentioned member bearing a serial identification number separate from the identification means borne by the identification card and movable relatively to the base member to render said identification card accessible, together with means for sealing the identification card in the pocket between the base member and the identification number bearing member.

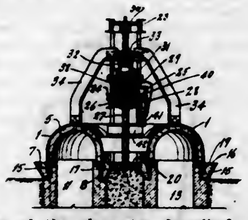
1,153,279. SUPPORTING AND SPACING MEANS FOR REINFORCING-BARS. DANIEL A. WEDMORE, Philadelphia, Pa., assignor to Philadelphia Steel & Wire Co., Philadelphia, Pa., a Corporation of New Jersey. Filed Dec. 13, 1910. Serial No. 597,114. (Cl. 72—122.)



1. The combination of a bar, a supporting chair carried by said bar, said chair having a plurality of legs formed by folding the metal upon itself into M-shape, all of which legs are apertured for the passage of the bar, said legs being disposed diagonally with respect to each other and frictionally held to the bar in adjusted positions by the inherent resiliency thereof, in combination with reinforcing bars supported by the chair-carrying bars and lying between the folded portions of the legs of said support.

2. The combination of a bar, a series of sheet metal supporting chairs having a plurality of legs formed by folding the metal upon itself and being substantially M-shaped in cross section carried by said bar, each of said legs being apertured whereby such support may be strung on a bar, said legs being disposed at an angle with respect to each other so that the natural resiliency of the metal will tend to frictionally clamp the chair to the bar, in combination with reinforcing bars confined between the folded portions of the legs of said chair and resting upon the bar supporting said chair, and means on the supporting bar for maintaining said chairs in definite positions with respect to the same.

1,153,280. REVERSING-VALVE. JOHAN A. WOHLBERG, Chicago, Ill. Filed Apr. 3, 1915. Serial No. 19,024. (Cl. 75—124.)



1. A valve of the character described, comprising a shell in the form of an annular trough having partitions across the same, the shell being arched in radial section, a refractory lining within the shell, and supporting flanges for the lining projecting inwardly from the sides of the shell at some distance from the free edges thereof.

2. A valve of the character described, comprising a plurality of curved trough-like shells engaging with each other at the ends and forming an annulus in the shape of a trough divided into a plurality of compartments, the shell being arched in radial section, a sectional refractory lining within the shell, and supporting flanges for the lining projecting inwardly from the sides of the troughs near the edges thereof.

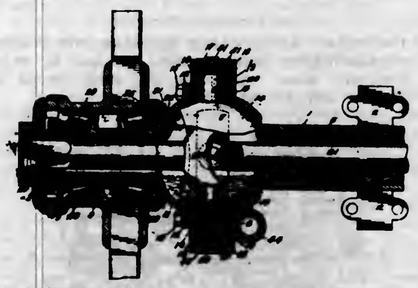
3. A valve of the character described, comprising an inverted trough in the form of an annulus having a plurality of radial partitions dividing it into a plurality of compartments, each of said compartments being arched in radial section and being curved at the ends from top to bottom in longitudinal section.

4. A valve of the character described, comprising a trough in the form of an annulus composed of a plurality of sections having their ends abutting against each other, the end walls of the sections receding gradually from each other along curved lines from the free edges thereof.

5. A valve of the character described, comprising a trough in the form of an annulus composed of a plurality of sections having their ends abutting against each other, the end walls of the sections receding gradually from each other along curved lines from the free edges thereof and the main portion of the trough being arched in radial section.

[Claims 6 to 11 not printed in the Gazette.]

1,153,281. DRIVING AND STEERING AXLE. OTTO ZACHOW, Clintonville, Wis., assignor to Four Wheel Drive Auto Company, Clintonville, Wis., a Corporation of Wisconsin. Filed Oct. 21, 1910. Serial No. 588,275. (Cl. 21—90.)



1. A driving and steering axle, including the combination of a spherically rounded outer bearing shell formed in sections, two of which are provided with pivot post sockets located out of registry with the joint lines of the sections, and an inner bearing shell, having spherically rounded outer bearing surfaces in bearing contact with the inner surface of the outer shell and having pivot posts fitted to said sockets.

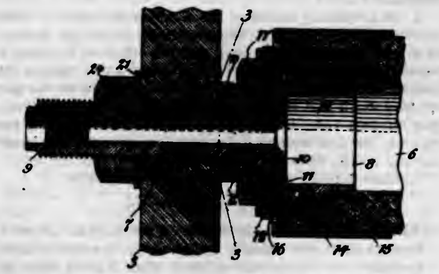
2. A driving and steering axle, including a spherically rounded outer bearing shell formed in three sections, comprising upper and lower connected sections, each provided with integral tubular bearing sockets, closed at their outer ends and adapted to receive a set of pivot posts, the axes of which coincide with a vertical line drawn through the center of the shell, the third section being connected to the other two in an annular zone exterior to that occupied by the bearing members, and the interior surfaces of said three sections being continuous each with the other in spherical curvature.

3. A driving and steering axle, including the combination of an axle member provided with a spherically rounded bearing shell at one end thereof having a set of integral vertically projecting pivot posts, and another member, having a spherically rounded bearing shell, provided with outwardly projecting tubular bearing sockets in which said pivot posts engage, said bearing shells having mutual bearing contact with each other on all sides of the pivot posts.

4. A driving and steering axle, including the combination of an axle member provided with a spherically rounded bearing shell at one end thereof, having a set of integral vertically projecting pivot posts, and another member, having a spherically rounded bearing shell, provided with outwardly projecting tubular bearing sockets in which said pivot posts engage, said bearing shells having mutual bearing contact with each other on all sides of the pivot posts, and said outer shell being formed in sections connected with each other along lines out of registry with the sockets and pivot posts.

5. A driving and steering axle, including the combination of an axle member provided with a spherically rounded bearing shell at one end thereof, having a set of integral vertically projecting pivot posts, and another member, having a spherically rounded bearing shell, provided with outwardly projecting tubular bearing sockets in which said pivot posts engage, said bearing shells having mutual bearing contact with each other on all sides of the pivot posts, said tubular sockets being provided with removable caps, and also having removable bushings embracing the pivot posts.

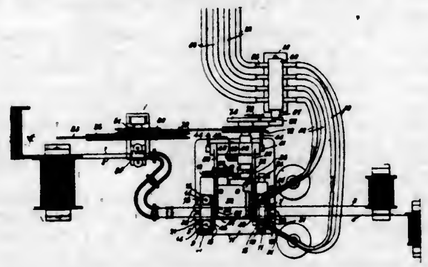
1,153,282. FILTER. EDWARD ZAHM, Buffalo, N. Y., assignor to Zahm Manufacturing Company, Buffalo, N. Y., a Corporation of New York. Filed Nov. 22, 1912, Serial No. 732,923. Renewed Mar. 1, 1915. Serial No. 11,323. (Cl. 210—11.)



A filter comprising a partition or a diaphragm having an opening, a filter tube arranged on one side of said partition, a nozzle having an enlarged head at one end which is secured in said tube, a reduced neck at its opposite end which is arranged in said opening of the partition and a medium sized breast at its central part which forms a shoulder of large diameter between the breast and head and a shoulder of small diameter between the breast and neck, a packing ring engaging with the large shoulder of the nozzle and extending across the joint between the head and filter tube, a clamping screw nut engaging with a thread on the periphery of said breast and bearing against the outer side of said large packing ring, a small packing ring engaging the small shoulder of the nozzle and bearing against the adjacent side of the partition, and a

clamping screw nut engaging with a thread on the periphery of said neck and bearing against the opposite side of said partition.

1,153,283. WELDING-MACHINE. GEORGE W. BEADLE, East Orange, N. J., assignor to Westinghouse Lamp Company, a Corporation of Pennsylvania. Filed July 19, 1909. Serial No. 508,537. (Cl. 78—82.)



1. In a welding machine, the combination with two sets of feed rolls, and means for intermittently actuating the same, of an auxiliary set of feed rolls, and means for actuating the same to maintain the material slack therebetween and one of the sets of main feed rolls.

2. In a welding machine, the combination with two sets of feed rolls, and means for intermittently actuating the same, of an auxiliary set of feed rolls, and means for continuously actuating the same to maintain the material slack therebetween and one of the sets of main feed rolls.

3. In a machine of the class described, the combination with a main set of feed rolls for the material operated upon, and means for actuating the same intermittently, of a continuously actuated auxiliary set of feed rolls for the same material, the machine permitting the material to be slack between the respective sets of feed rolls.

4. In a welding machine, the combination with two sets of feed rolls, of means for momentarily actuating one of said sets to advance a piece of stock therethrough, means for fusing a portion of the protruding stock, and means for thereafter rotating the other pair of feed rolls, whereby another piece of stock is advanced and a portion thereof forced into engagement with the fused portion of the first mentioned stock.

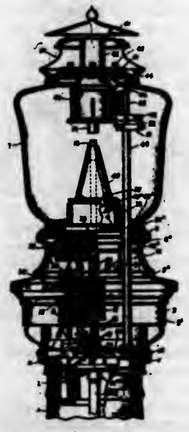
5. In a welding machine, the combination with two sets of feed rolls, of a clamp therebetween, means for momentarily actuating one of said sets to advance a piece of stock therethrough and through the clamp, means for closing the clamp, means for fusing a portion of the protruding stock and means for thereafter rotating the other pair of feed rolls to advance another piece of stock and force a portion thereof into engagement with the fused portion of the first mentioned stock.

[Claims 6 to 13 not printed in the Gazette.]

1,153,284. LAMP AND SUPPORT FOR SAME. JOHN T. BEECHLYN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Nov. 23, 1911. Serial No. 661,884. (Cl. 176—52.)

1. In combination a support, an insulating member located upon the support, an arc lamp frame supported upon the insulating member, an arc inclosing globe located above the lamp frame, an operating mechanism for the lamp supported upon the frame below the globe, and a casing surrounding the operating mechanism and adapted to telescope over the insulating member and said support whereby access may be had to said operating mechanism.

2. In combination, a support, an insulating member located upon the support, an arc lamp frame supported upon the insulating member, an arc inclosing globe located above the lamp frame, an operating mechanism for the lamp supported upon the frame below the globe, a casing surrounding the operating mechanism and adapted to telescope over the support, releasable means for supporting the casing upon the insulating member and about the operating mechanism, and means for supporting the casing upon the insulating member when the same is lowered.



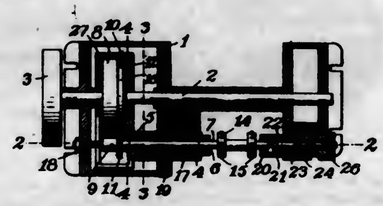
3. In combination, a support, an arc lamp mechanism comprising a frame and an operating mechanism mounted upon the insulating member, an arc inclosing globe mounted upon said frame above he operating mechanism, a casing adapted to surround said operating mechanism and to telescope over the support, releasable catches adapted to engage the insulating member to support the casing about the operating mechanism, said casing being provided with an inwardly extending flange for supporting the casing in its lowered position.

4. In combination, a support, an insulating member located upon the support, an arc lamp mechanism comprising a supporting frame and an operating mechanism supported upon said insulating member and above the same, an arc inclosing globe located upon said frame above the operating mechanism, a casing surrounding the operating mechanism, latches for supporting said casing about the operating mechanism, and an annular flange located near the top of the casing and having a diameter less than that of the insulating member.

5. In an arc lamp, a lamp support, a lower electrode, a coöperating upper electrode, and a support for the upper electrode comprising two cylindrical telescoping members one of which is secured to the lamp support and the other carrying the upper electrode, and means for feeding the lower electrode.

[Claims 6 to 8 not printed in the Gazette.]

1,153,285. ADJUSTABLE BEARING FOR POWER-TRANSMISSION MECHANISM. THOMAS H. BLAIR, Northboro, Mass. Filed Sept. 11, 1913. Serial No. 789,270. (Cl. 64—53.)



1. In a power transmission mechanism a shaft, a sleeve supporting one end of the shaft, a bearing for the other end of the shaft, and a detachable support for said bearing mounted in the machine frame in line with the shaft and its sleeve, said support being as large as the sleeve, whereby the shaft and its sleeve may be removed longitudinally.

2. In a power transmission mechanism a shaft, a bearing for one end of the shaft, a ring rigidly connected to said bearing with its axis in line with the shaft, a bolt extending through said ring, and a support receiving said bolt, whereby said bolt secures the bearing to the support.

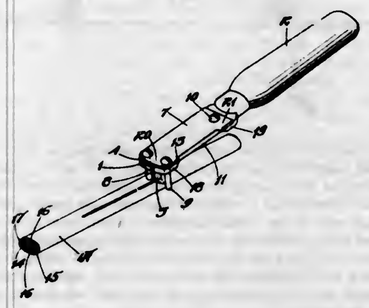
3. In a power transmission mechanism a shaft, a bearing for one end of said shaft, a ring in line with said shaft and fixed to the bearing, a bolt passing through said ring with its shank smaller than the opening in the ring, and a support receiving the bolt, whereby the bolt secures the bearing adjustably to the support.

4. In a power transmission mechanism a shaft, means for adjusting the position of the shaft transversely of its axis, a bearing for one end of said shaft, a ring in line with said shaft and fixed to the bearing, a bolt passing through said ring with its shank smaller than the opening in the ring, and a support receiving the bolt, whereby the bolt secures the bearing adjustably to the support.

5. In a power transmission mechanism a shaft adjustable in a circular path, a bearing carried by one end of said shaft, means for supporting said bearing to permit its movement with the shaft as the latter is adjusted, and means for securing said bearing to hold the shaft in adjusted position.

[Claims 6 to 10 not printed in the Gazette.]

1,153,286. TOOL FOR STRIPPING INSULATION-COVERING FROM ELECTRIC WIRES. HENRY D. CAHILL, Boston, Mass., assignor to Frank W. Whitcher Company, Boston, Mass., a Corporation of Maine. Filed Apr. 19, 1915. Serial No. 22,448. (Cl. 81—9.5.)



1. A tool for stripping insulation from electric wires comprising a holder, a stripping blade and a splitting blade attached to the holder, said splitting blade projecting substantially at right angles to the stripping blade.

2. A tool for stripping insulation covering from electric wires consisting of a holder plate, a stripping blade secured to the face of said holder plate, and guards at each end of the stripping blade.

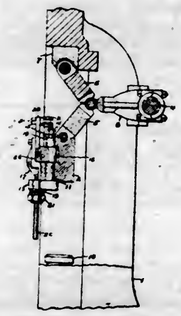
3. A tool for stripping insulation covering from electric wires consisting of a holder plate, a stripping blade, means for clamping said stripping blade to said holder plate in such manner that the cutting edge of the stripping blade projects beyond the edge of said holder plate, and guards at each end of the stripping blade.

4. A tool for stripping insulation covering from electric wires consisting of a holder plate, a stripping blade, means for clamping said stripping blade to said holder plate in such manner that the cutting edge of the stripping blade projects beyond the edge of said holder plate, and a splitting blade projecting from the face of said holder near one end thereof intermediate of its two edges.

5. A tool for stripping insulation covering from electric wires consisting of a holder plate, a stripping blade, means for clamping said stripping blade to said holder in such manner that the cutting edge of the stripping blade projects beyond the edge of said holder plate, a splitting blade projecting from the face of said holder near one end thereof intermediate of its two edges, and guides projecting from the face of said holder plate on opposite sides of said splitting blade.

[Claims 6 to 8 not printed in the Gazette.]

1,153,287. PUNCH-SHIFTING DEVICE. ZENAS P. CANDEE, Waterbury, Conn., assignor to The Waterbury Farrel Foundry and Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed May 25, 1914. Serial No. 840,875. (Cl. 164—86.)



1. In a mechanism of the character described, the combination with a die; of a gate; a punch; a punch holder movable with said gate and rotatably mounted upon an axis substantially parallel to, but upon one side of the axis of said die; a slide having an operative engagement with a part connected with said punch holder; and means for imparting a reciprocatory movement to said slide.

2. In a mechanism of the character described, the combination with a die; of a movably mounted gate; a slide within said gate and having a movement in a path at substantially a right angle to the path of movement of said gate; a punch; and a punch holder connected with said gate having an operative engagement with said slide whereby a rotary movement is imparted thereto and the axis of said punch is moved into and out of alinement with the axis of said die.

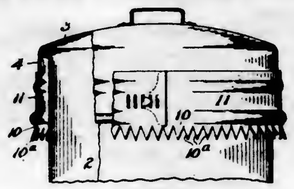
3. In a mechanism of the character described, the combination with a die; of a gate; means for imparting movement thereto; a punch; a rotarily mounted punch holder movable with said gate about an axis substantially parallel to, but upon one side of the axis of said die; a slide connected with said gate, and having an operative engagement with said punch holder; a fixed cam; and an operative engagement between said slide and cam.

4. In a mechanism of the character described, the combination with a gate; means for imparting movement thereto; a punch; a rotarily mounted punch holder movable with said gate about an axis different from that of said punch; a slide having engagement with said punch holder; a link connection between said gate and slide; a cam; and means for operatively connecting said gate with said cam, whereby movement is imparted to said slide in a path at an angle to the path of movement of said gate.

5. In a mechanism of the character described, the combination with a gate; of a punch; a punch holder mounted on and movable with said gate about an axis different from that of said punch; means for imparting a relative movement to said punch holder during the movement of said gate, said means comprising a slide having a rack thereon that engages the toothed portion of said punch holder; and a cam for operating said slide.

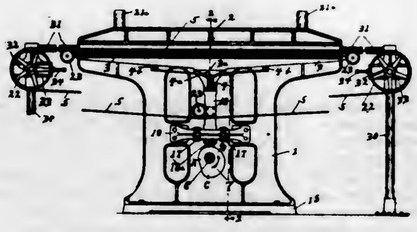
[Claims 6 to 9 not printed in the Gazette.]

1,153,288. GARBAGE-CAN COVER. FRANKLIN J. CLARK, Montclair, N. J. Filed Jan. 2, 1915. Serial No. 0. (Cl. 220—115.)



In combination with a garbage can, a handled cover plate therefor having a can-encircling flange which is provided with a circular series of depending spikes spaced away from the wall of the can, substantially as and for the purpose set forth.

1,153,289. PRESSING-MACHINE. EILERT ALFRED CLEMENTS, Grand Rapids, Mich., assignor to Grand Rapids Textile Machinery Company, Grand Rapids, Mich., a Corporation of Michigan. Filed June 11, 1915. Serial No. 33,618. (Cl. 68—9.)



1. In a device of the class described; a frame, a relatively stationary platen mounted thereon, a second platen carried on said frame and adapted to have a reciprocating motion toward and into pressure relation with the first named platen, means for reciprocating said second platen, a belt conveyer adapted to traverse the space between said platens when the same are in separated position and to be engaged by and between said platens when the same are in pressure relation, a shaft, clutch members and a cam for operating said clutch members all of which are operatively mounted on said shaft, and gearing connecting one of said clutch members with said belt conveyer to transmit motion thereto from said shaft, whereby said conveyer is caused to operate in an orderly sequence of steps timed in relation to the movements of said second named platen during a cycle of operation of the device.

2. In a device of the class described; a frame, a platen mounted on said frame and adapted to have a slight movement at right angles to the plane of its face, yielding means for resisting the said movement, a second platen operatively mounted on said frame and adapted to have a reciprocating motion to bring the face thereof into pressure relation with the face of the first named platen, a rotatable shaft, cams on said shaft for actuating the last named platen, a belt conveyer, one side of which extends between said platens and which is engaged between said platens when the same are in pressure relation but which is adapted to travel when the said platens are in separated position, clutch mechanism on said shaft, a cam for throwing said clutch mechanism into and out of engagement, and gearing for connecting said clutch mechanism with said conveyer for actuating the same, whereby said conveyer will move and dwell in an orderly sequence timed in relation to the movements of the second named platen.

1,153,290. X-RAY TARGET. WILLIAM D. COOLIDGE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 10, 1915. Serial No. 20,409. (Cl. 250—35.)

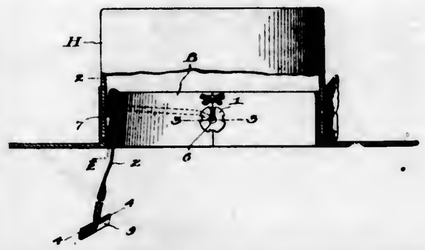


1. An X-ray target comprising a body of molybdenum and a body of tungsten upon which cathode rays may impinge.

2. In an X-ray tube operating with a pure electron discharge, a target comprising a body of molybdenum and a body of tungsten in good heat conducting relation thereto.

3. An X-ray target comprising a body of molybdenum and a body of tungsten mechanically fitted therein at the working face, said body of molybdenum having a substantially larger heat storage capacity than said body of tungsten.

1,153,291. HAT-GUARD. JOSEPH COSTELLO, Atlantic City, N. J. Filed Oct. 1, 1914. Serial No. 864,463. (Cl. 2—186.)



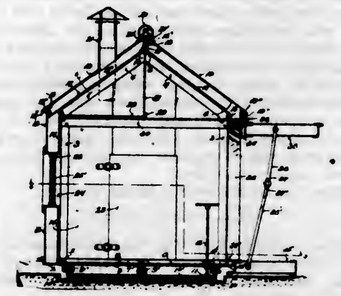
1. The combination with a hat including a head band spaced inwardly from its inner side, of a cord guide carried by the hat and interposed between the crown thereof and the hat band, a cord passing through said guide and having one of its ends anchored to the hat at a point remote from said guide, and a combined stop and attaching member on the free end of the cord, said member being adapted to facilitate the attachment of the cord with a garment and to prevent the same from being withdrawn from the guide.

2. The combination with a hat having a head band spaced from its inner side, of a guide located between the head band and the hat, said guide being formed of a single sheet of material bent upon itself and having one end provided with a guide opening, its other end being secured to the hat band, a flexible cord-anchored to a portion of the hat remote from the guide and sliding through the guide opening in the latter, said cord being adapted to be positioned between the hand band and the side of the hat when inactive, and a combined stop and attaching member on the free end of said cord adapted to facilitate the attachment thereof to a garment and to prevent said end from being drawn through the aforesaid guide opening.

3. The combination with a hat and a cord depending therefrom, of a cross bar U-shaped in cross section and having an opening in its arch, the free end of said cord passed through said opening and being clamped between the sides of said U-shaped bar.

1,153,292. KNOCKDOWN METALLIC HOUSE. RICHARD F. DOWNEY, Milwaukee, Wis., assignor to Badger Steel House Company, Milwaukee, Wis. Filed Aug. 10, 1914. Serial No. 856,061. (Cl. 108—13.)

1. In a metallic house having sheathing plates terminating at their upper ends with outwardly flared flanges, the combination of a roof structure comprising ceiling plates the companion side edges of which are provided with vertically interlocked flanges in slidable union, roofing plates supported upon the interlocked ceiling plate flanges, the said roofing plates being provided with horizontally disposed interlocked flanges in slidable union with each other and breaking joint with the ceiling plate, flanges, means for securing the upper ends of the roofing plates together, and inturned flanges extending from the lower ends of said roofing plates for interlocked union with the outwardly flared end flanges of the sheathing plates.



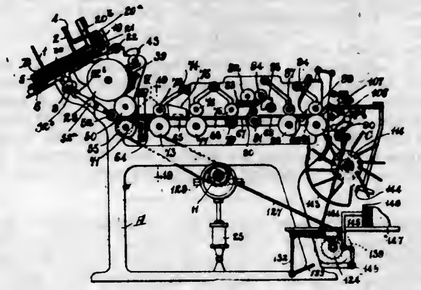
2. In a metallic house having sheathing plates terminating at their upper ends with outwardly extended flanges, the combination of a roof structure comprising ceiling plates the companion side edges of which are provided with vertically disposed interlocked flanges in slidable union, vertically disposed end flanges projecting from the matched ends of the ceiling plates, means for securing the same together, vertically disposed flanges projecting from the lower ends of the ceiling plates, means for securing the last-mentioned flanges to the upper ends of the sheathing plates, roofing plates supported upon the interlocked ceiling-plate flanges, said roofing plates being supported upon the interlocked flanges of the ceiling plates, the said roofing plates being provided with horizontally disposed interlocked flanges in slidable union with each other and breaking joints with the ceiling plate flanges, the upper ends of the roofing plates being provided with obliquely disposed flanges adapted to abut each other over the flanged connection of the ceiling plates means for locking the obliquely disposed flanged ends of the roofing plates together, and inturned flanges extending from the lower ends of the roofing plates for engagement with the outwardly flared end flanges of the sheathing plates.

1,153,293. ENVELOP-MAKING MACHINE. MAX DÜNNEBIER and ALFRED WINKLER, Neuwied-on-the-Rhine, Germany, assignors to Anton Joseph Wantsen, London, England. Filed Sept. 2, 1913. Serial No. 787,745. (Cl. 93—62.)

1. A machine for folding envelop blanks comprising means for feeding separate blanks to a gripping roll, means for adjusting the blanks on said roll, a creasing roll pressing against said gripping roll and between which rolls the blank is introduced immediately after adjustment, transverse blades in said creasing roll operable to crease transverse fold lines on said blank and side creasing and folding means operable on said blank immediately subsequent to said transverse creasing.

2. A rotary machine for folding envelop blanks comprising a table supporting a pile of blanks, means for separating and flexing the bottom blank downward, a gripping roll receiving the forward edge of said bottom blank and withdrawing it from beneath the pile over the top of the roll, means for adjusting the blank during its forward movement on the gripping roll, and creasing mechanism receiving and operating on the blank immediately after adjustment.

3. In a rotary machine for folding envelop blanks, a gripping roll, means for feeding separate blanks to said roll, movable adjusting means engaging said blank on the gripping roll, a creasing roll rotatable in contact with said gripping roll and having openings in the periphery thereof, means for disengaging said adjusting means from the blank when one of said openings has just passed the gripping roll and a transverse creasing knife mounted to slide radially in said creasing roll and spaced from the edge of said opening.

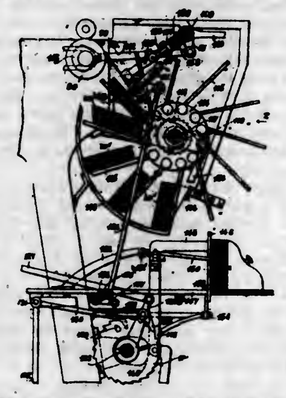


4. In a rotary machine for folding envelop blanks, a rotatable creasing roll having apertures in the circumference thereof, a creasing blade movable radially through one of said apertures, a sleeve adjustable about the axis of said roll, means for clamping said sleeve to said axis, pivoted arms on said sleeve, a folding blade carried by said arms and a fixed cam plate engaging said folding blade parts to move the same radially as they pass a definite point in their rotation and a counter pressure roll contacting with said crossing roll at said definite point.

5. In a rotary machine for folding envelop blanks, a transverse creasing roll having apertures therein, transverse creasing blades movable radially to and carried by said roll, a soft roll in contact with said creasing roll at the point where said blades move radially out from the creasing roll, and means for moving said soft roll toward and away from the apertured creasing roll during its operative and inoperative periods respectively.

[Claims 6 to 13 not printed in the Gazette.]

1,153,294. DELIVERY AND COUNTING MECHANISM. MAX DÜNNEBIER and ALFRED WINKLER, Neuwied-on-the-Rhine, Germany, assignors to Anton Joseph Wantsen, London, England. Original application filed Sept. 2, 1913, Serial No. 787,745. Divided and this application filed June 29, 1914. Serial No. 848,043. (Cl. 93—93.)



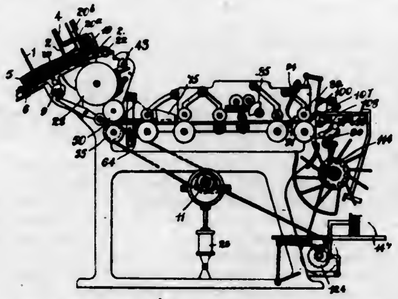
1. Means for delivering folded blanks in counted bundles comprising a receptacle having open ended com-

partments and rotatable in a vertical plane, means for delivering envelops to an upper compartment of said receptacle, a fixed arcuate guide closing the open ends of said compartments, and terminating at the bottom of said rotatable receptacle, and a fixed stop above the lower termination of said arcuate guide and located to arrest the envelops, substantially as described.

2. Counting mechanism comprising single revolution clutch mechanism, a rotatable compartmented receptacle, means operable from said clutch mechanism to advance said receptacle, counting mechanism, a striker carried by said counting mechanism, a lever operated by said striker after a predetermined count, and means connecting said lever to said single revolution clutch mechanism.

3. In a machine of the kind specified, a movable suction delivery nozzle, anoscillatable hollow shaft communicating with said nozzle, a hollow arm on said shaft, a piston movable theren, a spring maintaining said piston at one end of said arm opposed to suction action in the hollow shaft, counting mechanism, and tripping gear for said counting mechanism and operable by said piston.

1,153,295. SHEET-FEEDING MECHANISM. MAX DÜNNEBIER and ALFRED WINKLER, Neuwied-on-the-Rhine, Germany, assignors to Anton Joseph Wantzen, London, England. Original application filed Sept. 2, 1913, Serial No. 787,745. Divided and this application filed June 29, 1914. Serial No. 848,044. (Cl. 101—41.)



1. In a machine for folding envelop blanks in combination, a support for a pile of blanks leaving their forward ends overhanging, suction means located beneath said support to flex the forward end of the bottom blank from the pile, moving grippers to receive said blank and a rotatable member for removing the forward end of said flexed blank from the suction nozzle and moving its front edge into the grippers.

2. In a rotary machine for folding envelop blanks in combination, a movable table supporting a pile of blanks having their forward ends overhanging said table, a suction device for separating the bottom blank at its overhanging end from the pile, means for flexing said separated end downward, a roller located with its top above and in advance of the table, grippers in said roller and means for moving said table downward and subsequent to the flexing to engage the forward end of the separated blank under the grippers.

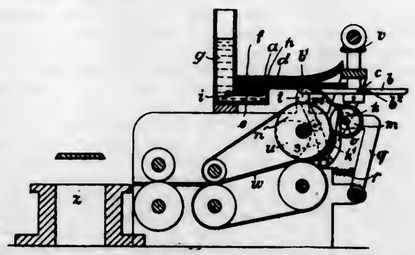
3. In a rotary machine for folding envelop blanks in combination, a movable table supporting a pile of blanks having their forward ends overhanging said table, a suction device for separating the bottom blank at its overhanging end from the pile, means for flexing said separated end downward, a roller located with its top surface higher than and in advance of said table, grippers in said roller and carried at the top of the roller in a direction away from said table and means for moving said table downward to straighten said flexed blank and press its forward edge under the grippers.

4. In a machine for folding envelop blanks in combination, a movable table supporting a pile of blanks with their forward ends overhanging said table, posts at the rear end of said pile of blanks and against which the blanks abut, posts supported at the front end of said blanks and projecting downward to the bottom of the pile, means located beneath the table for flexing the overhanging end of the bottom blank downward clear to the foot of said front posts, grippers beneath and movable away from said table, and means operable after the flexing of said blank to lower said table and move the forward flexed end of the blank under the grippers.

5. In a machine for folding envelop blanks in combination, a movable table supporting a pile of blanks with their forward ends overhanging said table, posts at the rear end of said pile of blanks and against which the blanks abut, posts supported at the front end of said blanks and projecting downward to the bottom of the pile, means located beneath the table for flexing the overhanging end of the bottom blank downward clear of the foot of front posts, members movable beneath the front posts and between the flexed blank and the remaining blanks, grippers beneath and movable away from said table, and means operable after the flexing of said blank to lower said table and move the forward flexed end of the blank under the grippers.

[Claims 6 to 18 not printed in the Gazette.]

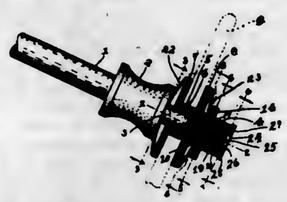
1,153,296. APPARATUS FOR FEEDING BLANKS. MAX DÜNNEBIER and ALFRED WINKLER, Neuwied-on-the-Rhine, Germany. Filed July 2, 1914. Serial No. 848,655. (Cl. 101—41.)



1. Blank feeding mechanism comprising apertured rotary members, a support for a pile of blanks which also rest partially on said rotary members, a suction nozzle movable past said members to draw down the lowest blank through said apertures, means for flexing said blank away from said nozzle and means for further transporting the blank away from the pile.

2. In combination a support for a pile of blanks oppositely rotating apertured disks, a suction nozzle movable past said disks to flex the lowermost blank from the pile, rollers supported laterally of said nozzle, overhanging segmented edges on said rollers said edges being located to engage the blank and separate it from the nozzle.

1,153,297. SAW-GRINDING MACHINE. ABRAHAM ELROD, Seymour, Ind. Filed Jan. 14, 1915. Serial No. 2,172. (Cl. 76—37.)



1. In a saw grinding machine, in combination with a grinding wheel, a rotating arbor, a member carrying said wheel and freely movable on the arbor longitudinally

thereof, removable wear receiving pins carried by said member and removable bushings carried by the arbor to engage said pins.

2. In a saw grinding machine, in combination with a grinding wheel, a rotating arbor, a wheel holding member mounted on said arbor and movable longitudinally thereof, said member having disks which clamp the wheel and each provided with removable pins extending longitudinally of the arbor and means on said arbor outside of each disk provided with removable bushings to engage said pins.

3. In a saw grinding machine, in combination with a grinding wheel, a rotating arbor, a wheel clamping member mounted on said arbor and freely movable longitudinally thereof, said clamping member comprising a hub, a disk fixed thereto, a disk adjustably mounted on said hub, each of said disks having longitudinally extending removable pins, said arbor having a collar provided with removable bushings to engage the pins of the fixed hub disk, a rotatably adjustable and longitudinally movable collar surrounding the arbor, said adjustable collar being provided with removable bushings to engage the pins of said other disk.

4. In a grinding machine, in combination with a rotating arbor, a grinding wheel, a wheel clamping device, freely movable longitudinally on the arbor, a sliding non-rotatable sleeve on said arbor, a sprihg between said sleeve and clamping device and a locking device at the end of the arbor adapted to bear against said sleeve.

5. In a saw grinding machine, in combination with a rotating arbor, a grinding wheel, a wheel clamping device mounted in said arbor for free movement longitudinally thereof, said device including disks to bear against the wheel, one of said disks being adjustable, a non-rotatable longitudinally movable sleeve mounted on the arbor, a locking cap having means to bear against said sleeve and means to engage said arbor, and a spring between said disk and said sleeve.

[Claims 6 to 9 not printed in the Gazette.]

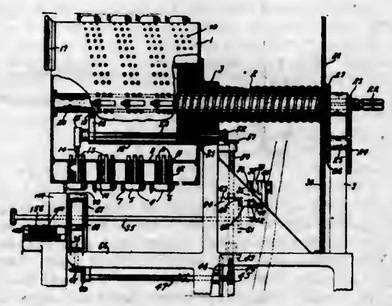
1,153,298. EGG TESTER OR CONTAINER. JOHN H. EMKINS, Omaha, Nebr. Filed May 29, 1911. Serial No. 630,074. (Cl. 229—29.)



1. The described device consisting of a box having a lid with a right angular flange thereon, a bottom having openings therein, said lid having openings in alinement with said first openings, a cell member within said box, said box having its side walls projecting beyond its end walls, said projections being on a vertical plane with said side walls and a casing within which said box is slidable, said projections adapted to space said lid from the upper wall of said casing, said bottom and lid adapted to hold eggs within the cells formed by said cell member and said box.

2. The described device consisting of a box having a lid with a right angular flange thereon, a bottom having openings therein, said lid having openings in alinement with said first openings, a cell member within said box, said box having its side walls projecting beyond its end walls, said projections being on a vertical plane with said side walls and a casing within which said box is slidable, said projections adapted to space said lid from the upper wall of said casing, said bottom and lid adapted to hold eggs within the cells formed by said cell member and said box, said flange adapted to seat between the front end wall of said box and said cell member and adapted to be held frictionally seated between said projections.

1,153,299. RAILROAD-TICKET-ISSUING MACHINE. CHARLES FORTH, Ottawa, Ontario, Canada, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio. (Incorporated in 1906.) Filed Oct. 31, 1913. Serial No. 798,567. (Cl. 235—31.)



1. In a machine of the class described, the combination with a registering mechanism, of a rotatable drum having mounted thereon a plurality of destination devices, means for axially shifting said drum as it is rotated whereby any destination device may be brought into cooperative relation with the registering mechanism, and mechanism for operating the destination device in coöperative relation with the registering mechanism whereby the latter mechanism will be actuated by the operated destination device.

2. In a machine of the class described, the combination with a registering mechanism, of a rotatable drum having mounted thereon a plurality of destination devices, means for axially shifting said drum as it is rotated whereby any destination device may be brought into cooperative relation with the registering mechanism, amount determining fingers carried by each destination device, and mechanism for operating the destination device in coöperative relation with the registering mechanism whereby the latter mechanism will be actuated by the amount determining fingers of the operated destination device.

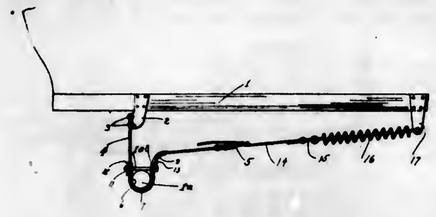
3. In a machine of the class described, the combination with a registering mechanism, of a rotatable drum having mounted thereon a plurality of destination devices, means for axially shifting said drum as it is rotated whereby any destination device may be brought into cooperative relation with the registering mechanism, means for indicating the destination device in coöperative relation with the registering mechanism, and means for actuating the registering mechanism by the destination device in coöperative relation therewith.

4. In a machine of the class described, the combination with a registering mechanism, of a rotatable drum having mounted thereon a plurality of spirally arranged destination devices, means for axially shifting said drum as it is rotated whereby any destination device may be brought into coöperative relation with the registering mechanism, a reciprocatory member for actuating the registering mechanism by the destination device in coöperative relation therewith, and a motor and connections for operating the reciprocatory member.

5. In a machine of the class described, the combination with a registering mechanism, of a rotatable drum having mounted thereon a plurality of spirally arranged destination devices, means for axially shifting said drum as it is rotated whereby any destination device may be brought into coöperative relation with the registering mechanism, means for indicating the device in such relation, amount determining fingers carried by each device, and a motor and connections for actuating the registering mechanism by the amount determining fingers of the destination device in coöperative relation with said mechanism.

[Claims 6 to 28 not printed in the Gazette.]

1,155,300. SHOCK-ABSORBER. WILLIAM H. FRAZINE, Modesto, Cal. Filed Aug. 29, 1914. Serial No. 859,213. (Cl. 21—105.)



1. A device of the character described comprising the combination with a vehicle, of a frame secured to the axle of said vehicle, such frame comprising a pair of U-shaped guides spaced apart, the upper ends of such U-shaped guides extending vertically with respect to said vehicle, a curved portion projecting substantially at right angles from one end of each of said U-shaped guide members, a liner plate on the upper edges of said U-shaped guide members, a liner plate on the under edges of said curved portions, a strap secured to the under portion of said vehicle and projecting vertically downwardly therefrom and through said U-shaped guide members and thence over the liner plate on said curved portions, and a resilient member extending substantially horizontally below said vehicle and connected with said strap, as described.

2. A device of the character described comprising the combination with a vehicle, of a U-shaped guide mounted on the axle of said vehicle and having an extended guide portion on one side projecting at substantially right angles thereto, a strap secured to said vehicle and extending vertically downwardly therefrom and through said U-shaped guide member and thence through said extended guide member whereby said strap will project from said extended guide member in a substantially horizontal position beneath said vehicle, and a resilient member extending in a substantially horizontal position beneath said vehicle and connected with said strap, as described.

1,153,301. BAG-FASTENER. FRANZ A. FULLER, Newark, N. J., assignor to The J. E. Mergott Company, Newark, N. J., a Corporation of New Jersey. Filed Jan. 24, 1914. Serial No. 814,063. (Cl. 70—116.)



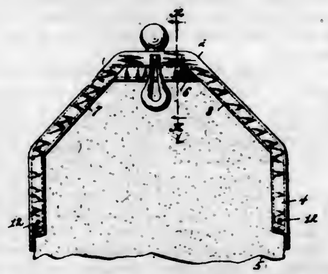
1. In combination, two members movable relatively to each other, a fastener secured to one of said members embracing and holding said frame members together, and a locking device secured to one of said members having locking engagement with said fastener for additionally holding said fastener and members together and independently operated from the fastener.

2. In combination, two members movable relatively to each other, a fastener secured to one of said members embracing and holding said frame members together, and an encircling locking member pivotally mounted on one of said members and adapted to encircle said fastener and provided with means for resisting the application and removal of said encircling member from around said fastener.

3. In combination, two members movable relatively to each other, a plate located on one of said members, a fastener pivotally secured to one end of said plate embracing and holding said frame members together, and a locking device pivotally secured to the other end of said plate, said locking device having locking engagement with said fastener for additionally holding said fastener and members together and independently operated from said fastener.

4. In combination, two members movable relatively to each other, a plate provided with integral end bearings secured to one of said members, a fastener comprising an open ended casing pivotally secured to one of said end bearings and embracing and holding said frame members together, and an encircling locking device pivotally secured to the other end bearing, said locking device designed to encircle and have locking engagement with said fastener for additionally holding said fastener and members together and independently operated from said fastener.

1,153,302. BAG-FRAME. FRANZ A. FULLER, Newark, N. J., assignor to The J. E. Mergott Company, Newark, N. J., a Corporation of New Jersey. Filed Jan. 4, 1915. Serial No. 330. (Cl. 150—29.)

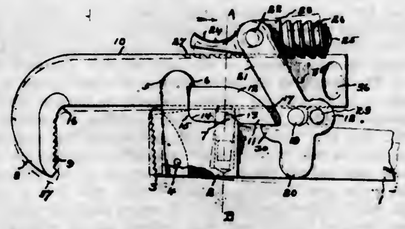


1. In a bag frame, the combination with a frame section comprising a central member and a pair of hinge members, of an inlay-receiving or positioning element provided with retaining lugs struck up out of said element, said retaining lugs having frictional engagement with the inside of the channel of the frame section.

2. In a bag frame, the combination with a channeled frame section comprising a central member and a pair of hinge members, of a channeled inlay-receiving or positioning element secured to the central member of the said frame section.

3. In a bag frame, the combination with a frame section comprising a central member and a pair of hinge members, an inlay-receiving or positioning element located at the central member of the said frame section, and an inlay located within said frame section, a portion of which is received and positioned by said inlay-receiving or positioning element, and the ends of said inlay being secured in the ends of the hinge members of the frame section.

1,153,303. WRENCH. JULIAN A. GILES, Derby, Conn. Filed Sept. 18, 1914. Serial No. 862,306. (Cl. 81—102.)



1. In a wrench, the combination with a handle; of a movable jaw held against lateral movement by said handle; an interposed cradle held against lateral movement by said movable jaw; and means for movably securing said jaw to said cradle.

2. In a wrench, the combination with a handle; of a movable jaw held against lateral movement by said handle; an interposed cradle held against lateral movement by said movable jaw; and means pivotally connected with said cradle for movably securing said movable jaw thereto.

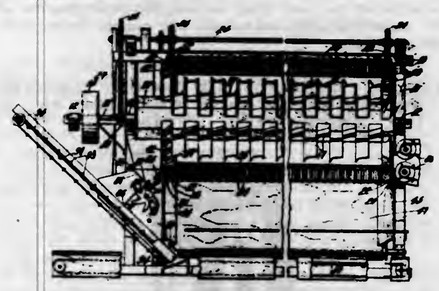
3. In a wrench, the combination with a handle; of a movable jaw held against lateral movement by said handle; a cradle held against lateral movement by said movable jaw; means for movably securing said jaw to said cradle; and means connected with said securing means for imparting a positive movement to said jaw.

4. In a wrench, the combination with a handle; of a movable jaw held against lateral movement by said handle; a cradle having a fulcrum engagement with said handle and held against lateral movement by said jaw; members having a pivotal engagement with said cradle and overlapping the movable jaw; and means connected with said members for positively moving said movable jaw within said cradle.

5. In a wrench, the combination with a handle; of a cradle held against lateral movement by said handle; a movable jaw within said cradle; means connected with said cradle and engaging said movable jaw to prevent the lateral movement of said cradle in relation to said handle; and means connected therewith for actuating said movable jaw.

[Claims 6 to 12 not printed in the Gazette.]

1,153,304. PEA-SEPARATOR. FRANK HAMACHEK, Kewaunee, Wis. Filed Aug. 12, 1912. Serial No. 714,581. (Cl. 130—30.)



1. A pea separator, comprising a rotary sieve drum, rotary hulling beaters contained within the drum, and inwardly projecting sieve having uninterrupted inner edges carried by the drum with their inner ends farther from the axis of the drum than the outer ends of the hulling beaters so as to be beyond the range of the hulling beaters whereby they operate to lift the pea vines and drop them into the path of the hulling beaters to be struck thereby while unsupported, said sieves having openings therethrough extending to near the inner wall of the drum to allow the hulled peas to pass therethrough immediately without being carried along by the sieve so that said peas may escape through the openings of the sieve drum whether the peas are on the ascending portion of the drum or the descending portion thereof.

2. A pea separator, comprising a rotary sieve drum, rotary hulling beaters contained within the drum, and projecting sieves carried by the drum with unbroken inner edges and slots therethrough extending to the inner wall of the drum to allow the hulled peas to pass therethrough immediately without being carried along by the sieve so that said peas may escape through the openings of the sieve drum whether the peas are on the ascending portion of the drum or the descending portion thereof.

3. A pea separator, comprising a rotary sieve drum, rotary hulling beaters contained within the drum, and stationary teeth projecting from points contiguous to the lower edge of the discharge end of the drum to engage the vines in their travel with the drum and assist their discharge from the drum.

4. A pea separator, comprising a rotary sieve drum, rotary hulling beaters contained within the drum, and stationary inclined oblique teeth projecting from points contiguous to the lower edge of the discharge end of the drum to engage the vines as they are carried by the drum to assist in the discharge of the vines from the drum.

5. In a green pea vine separator, a rotary sieve drum, rotary hulling beaters contained therein for opening the pods and liberating the peas, said sieve drum discharging the vines as tailings at one end thereof, an inclined upwardly traveling apron receiving the vines from the sieve drum and carrying them upwardly while permitting the loose peas to roll downwardly thereon, slats extending across the apron on the under side thereof to keep the apron spread without interfering with the downward travel of the loose peas, and narrow fingers projecting upwardly from the slats through the apron to positively engage the vines and carry them away from the discharge end of the drum and prevent their bunching and rolling down the apron and to prevent their interfering with the rolling of the loose peas down the apron.

[Claims 6 to 12 not printed in the Gazette.]

1,153,305. TIRE-CASE. WALTER S. HEATH, San Mateo, Cal. Filed June 15, 1914. Serial No. 845,105. (Cl. 224—29.)



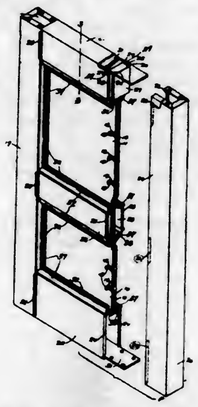
A tire receptacle for automobiles comprising a frame to be secured to an automobile, a half casing secured to said frame, a second frame pivoted to the first frame at a distance from the first casing, a second half casing carried by the second frame and having its closed side in the same plane as the pivot point of the frame, and a lock for securing the two casings together.

1,153,306. METAL DOOR. PETER EDWARD HEGSTEDT, Jamestown, N. Y. Continuation in part of application Serial No. 775,906, filed June 26, 1913. This application filed Jan. 30, 1914. Serial No. 815,566. (Cl. 189—53.)

1. A metal panel structure of the character described comprising panel plates, stiles, cross rails, said stiles and cross rails being formed with moldings integral therewith, each of said panel plates having a plurality of registering slots, means engaging the slots for holding said panel plates together and in spaced relation to each other and means for locking said parts together comprising clamp hooks, each provided with separator lugs disposed between said plates and a clamp extending beyond the edge of said plates.

2. A metal panel structure of the character described comprising panel plates, stiles, cross rails, said stiles and cross rails being formed with moldings integral therewith, each of said panel plates having a plurality of registering slots, means engaging the slots for holding said panel plates together and in spaced relation to each other and means for locking said parts together comprising clamp hooks, each provided with separator lugs disposed between said plates and a U-shaped clamp extending beyond the edge of said plates.

3. A metal panel structure of the character described comprising panel plates, stiles, cross rails, said stiles and cross rails being formed with moldings integral therewith, each of said panel plates having a plurality of registering slots, clamp hooks provided on each side with clamp prongs, said prongs projecting through each pair of the registering slots in said panel plates, the inside molded edges of said cross rails and stiles being disposed over the prongs of said clamp hooks and engaged with said panel plates and locking strips engaging the inside edges of said cross rails and stiles and the prongs of said hooks.



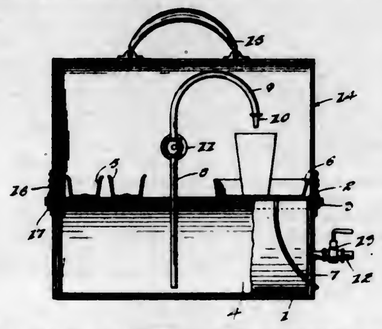
4. A metal panel structure of the character described comprising panel plates, stiles, cross rails, said stiles and cross rails being formed with moldings integral therewith, each of said panel plates having a plurality of registering slots, clamp hooks provided on each side with clamp prongs, said prongs projecting through each pair of the registering slots in said panel plates, the inside molded edges of said cross rails and stiles being disposed over the prongs of said clamp hooks and engaged with said panel plates, and locking strips engaging the inside edges of said cross rails and stiles, the prongs of said hooks and said panel plates.

5. A metal panel structure of the character described comprising panel plates, stiles, cross rails, said stiles and said cross rails being formed with moldings integral therewith, edged portions extending inwardly from said moldings and being parallel to the sides of said stiles and cross rails, each of said panel plates having a plurality of registering slots, clamp hooks provided on each side with clamp prongs, said prongs projecting through each pair of registering slots in said panel plates, the molding on said cross rails and stiles being disposed over the prongs of said clamp hooks, and said edge portions being beneath said prongs, a locking strip disposed between the outside surfaces of said plates and the inside surfaces of said edged portions, whereby the parts are locked together.

[Claim 6 not printed in the Gazette.]

1,153,307. PORTABLE SODA-FOUNTAIN. CHARLIE J. HUNTER and EDDIE C. TWEEDY, Concord, Va. Filed June 5, 1914. Serial No. 843,308. (Cl. 225—28.)

1. A portable soda water fountain including a receptacle having its upper side open, a tank mounted within the receptacle and to contain carbonated water, a pipe communicating with one end of the tank and extending through one wall of the receptacle, a valve intermediate the ends of said pipe, a dispensing pipe communicating with the tank, a valve intermediate the ends of said pipe and exteriorly of the receptacle, a cover plate for the receptacle, having depending end flanges to extend between the tank and the receptacle, a drain pan mounted on the cover plate and arranged beneath the dispensing end of said pipe, and a drain pipe communicating with the drain pan and extending downwardly into the receptacle and through one end wall thereof.



2. A portable soda water fountain comprising a receptacle having one side open, a tank mounted within the receptacle to contain carbonated water, a pipe communicating with the tank at one end and extending through one wall of the receptacle, a valve intermediate the ends of said pipe, a dispensing pipe communicating with the receptacle and extending upwardly therefrom and having its upper end curved outwardly and downwardly, a removable cover plate for the open side of said receptacle to rest upon the tank, means to support a number of glasses mounted on the upper face of the cover plate, a drain pan mounted on the cover plate beneath the dispensing end of the dispensing pipe, and a drain pipe communicating with the drain pan.

1,153,308. APPARATUS FOR WASHING TUMBLERS. MORITAROW ISHIDA, Seattle, Wash. Filed Nov. 30, 1914. Serial No. 874,674. (Cl. 141—3.)



1. In a washing device of the character described, a water supply pipe, a cylinder mounted upon said pipe provided with a nut having a spirally threaded passage therethrough, a spindle formed with a spiral thread engaged within said passage and formed with grooves in its side walls for the flow of water through said nut, a valve on said spindle adapted to close said passage with the water pressure, a tubular post connected to the upper end of said spindle formed with an opening in its lower end, and a brush-head mounted upon said post.

2. In a washing device of the character described, a water supply pipe, a cylinder mounted upon said pipe provided with a nut having a spirally threaded passage therethrough, a spindle formed with a spiral thread engaged within said passage and formed with grooves in its side walls for the flow of water through said nut, a valve on said spindle adapted to close said passage with the water pressure, a tubular post connected to the upper end of said spindle formed with an opening in its lower end, a brush-head mounted upon said post, and a brush-plug socketed in the end of said head formed with an axially arranged bore connecting with the interior of said post.

3. A washing device of the class described, comprising a water chamber having a water inlet and provided with a threaded passageway therethrough, a threaded spindle adapted to move within said threaded passageway and formed with grooves between its threads to permit the passage of liquid, a tubular post secured to the upper end of said spindle, means for directing liquid that passes said grooved spindle upwardly through said post, and cleaning devices associated with the top end of said post.

1,153,309. CASH-REGISTER. MAX JACOB, Berlin, Germany, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Oct. 3, 1911. Serial No. 652,557. (Cl. 235—3.)



1. In an accounting machine, the combination with accumulating elements, of actuators therefor, combined transfer and locking disks for the accumulating elements, and means for rotating said disks, the latter having cut away portions which permit the operation of the accumulating elements by the actuators.

2. In an accounting machine, the combination with accumulating elements, of actuators therefor, a rotary shaft, and combined transfer and locking disks for the accumulating elements mounted upon said shafts, the disks having cut away portions which permit the operation of the accumulating elements by the actuators.

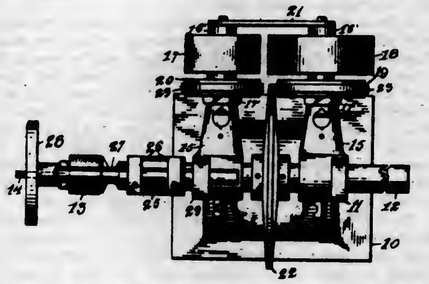
3. In an accounting machine, the combination with accumulating elements, of actuators therefor, a shaft, means for rotating said shaft, combined transfer and locking disks for the accumulating elements carried by the shaft, the disks having cut away portions which permit the operation of the accumulating elements by the actuators, and means actuated by the accumulating elements during the actuation thereof by the actuators for shifting the disks so as to bring the transfer portions thereof into operative relation with the accumulating elements of higher denomination.

4. In an accounting machine, the combination with accumulating elements, of actuators therefor, a shaft, means for rotating said shaft, combined transfer and locking disks for the accumulating elements carried by the shaft, the said disks having cut away portions which permit the operation of the accumulating elements by the actuators during the rotation of the disks, means actuated by the accumulating elements for shifting the disks so as to bring the transfer portions thereof into operative relation with the accumulating elements of higher denominations, and means for restoring the disks to normal position.

5. In an accounting machine, the combination with accumulating elements, of normally inoperative transfer devices between said elements, means actuated by the accumulating elements for shifting the transfer devices into operative relation with the accumulating elements of higher denominations, a shaft carrying said devices, means for rotating the shaft to effect the transfers, and a laterally movable shaft for restoring the shifting means and thereby the transfer devices to normal position.

[Claims 6 to 15 not printed in the Gazette.]

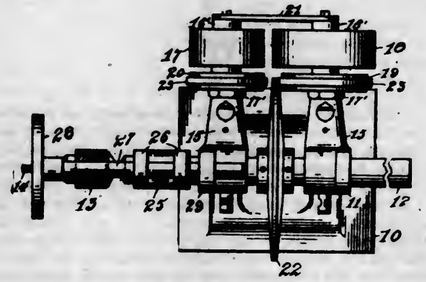
1,153,310. TAPPING-MACHINE. JOHN EMIL JOHNSON, Jamestown, N. Y., assignor to Rickert-Shafer Company, Erie, Pa. Filed June 8, 1914. Serial No. 843,661. (Cl. 10—136.)



1. A tapping machine comprising a frame having two journals thereon in spaced relation, a shaft slidably and rotatively mounted in said journals, a tool holder on said shaft, a frictional drive wheel on said shaft between said journals, a pair of shafts on said frame extending at right angles from said rotatively mounted shaft, suitable driving pulleys revolubly mounted on said pair of shafts, and a frictional drive wheel on each of said driving pulleys in spaced relation to one another and on each side of said frictional drive wheel on said slidably and rotatively mounted shaft to turn the same.

2. A tapping machine comprising a frame having two journals thereon in spaced relation, a shaft slidably and rotatively mounted in said journals, a tool holder on said shaft, a frictional drive wheel on said shaft between said journals, a pair of shafts on said frame extending at right angles from said rotatively mounted shaft, pulleys on said pair of shafts for driving said machine having extended hubs, a frictional drive wheel on each of said extended hubs in spaced relation to one another and on each side of said frictional drive wheel on said slidably and rotatively mounted shaft, a guide on said rotatively and slidably mounted shaft consisting of a bracket piece having upwardly extending arms, a shaft keyed in said arms and a guide piece on the outer end of said shaft extending over the cutting tool, and said shaft of said guide piece extending through a guide projection on one of said journals.

1,153,311. DRIVE FOR MACHINE-TOOLS. JOHN EMIL JOHNSON, Jamestown, N. Y., assignor to Rickert-Shafer Company, Erie, Pa. Original application filed June 8, 1914, Serial No. 843,661. Divided and this application filed Dec. 21, 1914. Serial No. 878,215. (Cl. 74—26.)



1. A drive for machine tools comprising a slidably and rotatively mounted shaft, a frictional drive wheel attached to said shaft to move therewith, a pair of spaced frictional drive wheels one each side of said frictional drive wheel on said slidably and rotatively mounted shaft to turn the same, each of said pair of spaced frictional drive wheels attached to suitably mounted parallel shafts,

pulleys on said shaft in line with one another, and a single belt to turn said pulleys and pair of drive wheels to thereby turn said frictional drive wheel on said slidably and rotatively mounted shaft in opposite directions by the sliding of said shaft.

2. In a drive for machine tools, a first shaft rotatively and slidably supported in suitable journals, two shafts supported at right angles to said first shaft a spaced distance apart, a driving pulley on each of said two shafts and a single driving belt for both pulleys, frictional drive wheels on said two shafts one on each shaft a spaced distance apart and turned by said pulleys, and a third frictional drive wheel on said first shaft extending into the spaced opening between said spaced frictional drive wheels to frictionally contact one or the other of said drive wheels by the endwise movement of said first shaft.

3. A drive for machine tools comprising a frame having two journals thereon in spaced relation, a shaft slidably and rotatively mounted in said journals, a frictional drive wheel on said shaft between said journals, a pair of spaced shafts on said frame extending at right angles from said slidably and rotatively mounted shaft, suitable driving pulleys revolubly mounted in line with one another on said pair of shafts, and a frictional drive wheel on each of said driving pulleys in spaced relation to one another and on each side of said frictional drive wheel on said slidably and rotatively mounted shaft to turn the same.

4. A drive for machine tools comprising a frame having two journals thereon in spaced relation, a shaft slidably and rotatively mounted in said journals, a frictional drive wheel on said shaft between said journals, a pair of spaced shafts on said frame extending at right angles from said slidably and rotatively mounted shaft, pulleys in line on said pair of shafts for driving said machine having extended hubs, and a frictional drive wheel on each of said extended hubs in spaced relation to one another and on each side of said frictional drive wheel on said slidably and rotatively mounted shaft to frictionally contact therewith when said rotatively and slidably mounted shaft is moved endwise in either direction.

1,153,312. PUMP. OTTO KARCHER, Canton, Ohio. Filed Oct. 3, 1914. Serial No. 864,783. (Cl. 103—62.)

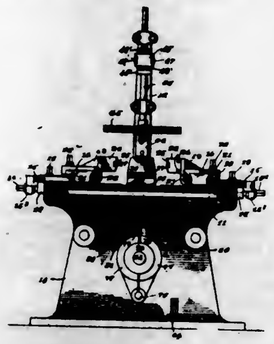


1. In a pump of the character described, the combination of a pump cylinder, a cap located at the top or upper end of the pump cylinder, said cap provided with a bracket, a double faced cam rotatably mounted and carried by the bracket, a piston rod, means for guiding the movement of said piston rod, a block connected to said piston rod intermediate the means for guiding said rod, a rock bar pivotally connected to the block, said rock bar provided with rollers located upon opposite sides of its pivotal point and upon opposite sides of the double faced cam.

2. In a pump of the character described, the combination of a pump cylinder, a cap located at the top or upper end of the pump cylinder, said cap provided with a bracket, a double faced cam rotatably mounted and carried by the bracket, a piston rod, means for guiding the movement of said piston rod, a block connected to said piston rod intermediate the means for guiding said rod, a rock bar pivotally connected to the block, said rock bar provided with rollers located upon opposite sides of its pivotal point and upon opposite sides of the double faced cam, and means for guiding the block.

3. In a pump of the character described, the combination of a pump cylinder, a piston and a piston rod located within said cylinder, a bracket connected to the pump cylinder, said bracket provided with an arm and means for guiding the piston rod, a double faced cam rotatably mounted upon the bracket, a block adjustably connected to the piston rod, said block provided with a straight faced flange adapted for contact with the bracket arm, a rock bar pivotally connected to the block, said rock bar provided with rollers, said rollers located upon opposite sides of the pivotal point of the rock bar and upon opposite sides of the double faced cam.

1,153,313. MACHINE FOR FOLDING THE CORNERS OF PANS AND THE LIKE. EDWARD KATZINGER, Chicago, Ill., assignor to Edward Katzinger Company, Chicago, Ill., a Corporation of Illinois. Filed June 27, 1914. Serial No. 847,612. (Cl. 153—21.)



1. In combination with a mandrel, of substantially alining guides on opposite sides of said mandrel, die carriers slidably mounted on said guides and having transversely extending tracks thereon, a shaft journaled in each of the carriers adjacent the track thereon and provided with right and left hand threads, a pair of die blocks movably mounted on each track and having threaded portions engaging the right and left hand threads on the shaft adjacent said track, and bolts passing through the die blocks and threaded in the carriers locking the blocks against movement on the carriers.

2. In combination with a frame having substantially alining guides therein, a mandrel between the guides, a block slidably mounted in each guide, a die carrier on each block and having slots therein, bolts passing through said slots and threaded in the blocks locking the carriers to the blocks, a shaft mounted in each of the carriers and threaded in the block supporting such carrier, and means for moving the blocks in the guides toward and away from the mandrel.

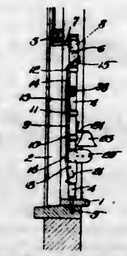
3. The combination with a mandrel, of a carrier mounted for reciprocation upon each side of said mandrel, die blocks and dies mounted upon each carrier and arranged to coöperate with said mandrel, a drive shank, a crank coöperating with said drive shaft, a connection between said crank and said carriers including a reciprocable crosshead, a connecting rod between said crank and said crosshead, and a connection between said cross-head and said carriers.

4. The combination with a mandrel, of a carrier mounted for reciprocation upon each side of said mandrel, die blocks and dies mounted upon each carrier and arranged to coöperate with said mandrel, a drive shaft, a crank coöperating with said drive shaft, a connection between said crank and said carriers including a reciprocable cross-head, a connecting rod between said crank and said cross-head, bell cranks, and link connections between said bell cranks and said carriers and between said bell cranks and said cross-head.

5. The combination with a mandrel, of tracks on each side of said mandrel, blocks mounted for reciprocation on said tracks, carriers mounted on said blocks, die blocks and dies secured to said carriers, a drive shaft, a crank coöperating with said drive shaft, a connection between said crank and said blocks, including a reciprocable cross-head, a connecting rod between said cross-head and said crank, and a connection between said cross-head and said blocks.

[Claims 6 to 10 not printed in the Gazette.]

1,153,314. AUTOMATIC SIGNALING OR RELEASING DEVICE FOR WINDOWS AND THE LIKE. FRANK KEELER, Boston, Mass. Filed May 18, 1914. Serial No. 839,244. (Cl. 39—97.)



1. A closure controlling device comprising a standard, a latch movably mounted thereon, a destructible element secured to the standard, a latch engaging means controlled by the destructible element, and a spring for operating the latch engaging means when said means is released by the destructible element.

2. A closure controlling device comprising a standard, a latch pivoted thereto, a destructible element secured to the standard, a latch engaging means controlled by the destructible element, and an alarm set in operation by movement of the latch engaging means.

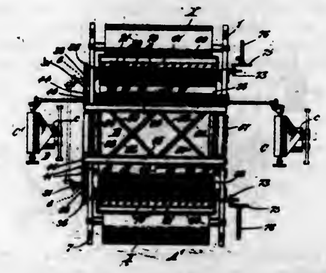
3. A closure controlling device comprising a standard provided with a recess, a latch pivoted to the standard, a destructible element, means for detachably securing the destructible element in the recess, and a latch engaging means connected to the destructible element.

4. A closure controlling device comprising a standard, a latch pivoted thereto, a rod slidably mounted on the standard, and provided at one end with a latch engaging hook, a looped member at the other end of the rod, a spring for moving the rod in one direction and a destructible element secured to the standard and engaging the looped member.

5. A closure controlling device comprising a standard, a latch pivoted thereto, a rod slidably mounted on the standard and provided at one end with a latch engaging hook, a looped member at the other end of the rod, a spring for moving the rod in one direction, a destructible element in the form of a strip, said strip engaging the loop, and spring controlled means for detachably clamping the ends of the strip to the standard.

1,153,315. PRINTING-MACHINE. CARL A. KELLOGG, Battle Creek, Mich. Filed Apr. 6, 1909. Serial No. 488,173. (Cl. 101—124.)

1. A web perfecting printing machine having in combination, a frame, two printing couples having their cylinders parallel, the cylinders of each couple being substantially horizontally disposed with relation to each other, each cylinder of each printing couple having substantially more than one-half of its peripheral surface exposed throughout its length at the sides of the machine, and freely accessible when the web is passing through the machine, and the plate cylinders of the respective couples being at opposite sides of the machine, means for supplying a web to one of said printing couples, and means for delivering a perfected web from the other printing couple.



2. A printing machine comprising a frame and two printing couples, the cylinders of each couple being disposed in a substantially horizontal plane, said couples having their cylinders parallel with each other and adapted for perfecting contact with a web having a continuous upward movement, the plate cylinder of one couple being closely adjacent the impression cylinder of the other couple, and all of the plate and impression cylinders of the two couples being fully exposed for inspection and manipulation at the sides of the machine and no substantial portion of any cylinder being disposed beneath said web or rendered inaccessible thereby.

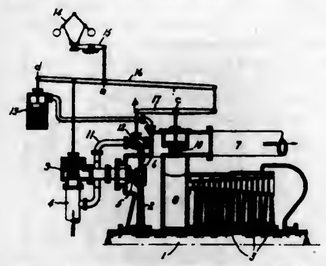
3. A web printing machine having a frame and provided with two printing couples having cylinders parallel with each other and adapted for perfecting contact with a web, the respective cylinders of each printing couple being extended along opposite sides of the machine, and the impression cylinder of each printing couple being adjacent to the plate cylinder of the other printing couple and exposed throughout its length at the side of the machine to facilitate packing or make ready, means for supplying a web to one printing couple, means for delivering a perfected web from the other printing couple, positioned above said couple, and web directing means, including a turning device above the plane of said last-named printing couple, operable to deflect the perfected web received from said delivery means along a path parallel with the length of the cylinders and extended beyond the end of said cylinders, whereby interference of the perfected web with free access to said cylinders is avoided.

4. A web printing machine provided with two printing couples having their cylinders parallel and adapted for perfecting contact with a double-width web, means for supplying web to one of the printing couples, means for delivering the perfected web from the other printing couple, positioned above said couple, a web directing means including two sets of oppositely inclined turning rods disposed above the plane of the last-named printing couple and operable to deflect the perfected web received from said delivery means in two streams oppositely directed along paths parallel with the length of the cylinders and extended beyond opposite ends thereof and interchangeably operable to reverse the direction of the stream of web passing toward one end of the machine and to direct the same along a path parallel with the length of the cylinders and extended beyond the opposite end of the machine.

5. A printing machine having two units each adapted to perfect a web and arranged side by side and affording a passage therebetween, the cylinders of one unit being parallel with those of the other, and web directing means including turning bars operable for directing the web along the passage between the units from each of the respective units in reverse directions parallel with the length of the cylinders.

[Claims 6 to 50 not printed in the Gazette.]

1,153,316. TAPPED TURBINE. WALTER KIESER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Oct. 22, 1914. Serial No. 868,089. (Cl. 121—118.)

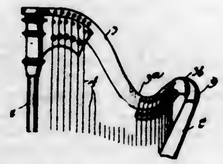


1. The combination with a turbine having a consumption system connected to a point of intermediate pressure, of a high pressure admission valve, an overflow valve between the high-pressure and low pressure sides of the machine, a bypass valve admitting high pressure steam directly to the consumption system, a pressure regulator connected with said system, and means whereby the pressure regulator can actuate the high pressure admission valve and the overflow valve in opposite directions, and will open the bypass valve only after the overflow valve has been closed.

2. The combination with a turbine having a consumption system connected to a point of intermediate pressure, of a high pressure admission valve, an overflow valve between the high pressure and low pressure sides of the machine, a bypass valve admitting high pressure steam directly to the consumption system, a pressure regulator connected with said system, means whereby the pressure regulator can actuate the high pressure admission valve and the overflow valve in opposite directions, and will open the bypass valve only after the overflow valve has been closed, a speed governor, and means whereby it can actuate the admission and overflow valves in the same direction and open and close the bypass valve.

3. The combination with a steam turbine having a high pressure bucket wheel 2, low pressure bucket wheels 3, and a chamber 6 of intermediate pressure, of a consumption pipe 7 connected with said chamber, an admission valve 9, an overflow valve 10, a bypass valve 12 admitting high pressure steam to the chamber 6, a pressure regulator 13 connected to the chamber 6, a speed governor 14, a floating lever 16 connected to the pressure regulator, the speed governor and the valve 9, and an auxiliary floating lever 17, connected to the valves 10 and 12 and to the lever 16.

1,153,317. HARP-NECK. WALTER I. KIRK, Chicago, Ill., assignor to Lyon & Healy, Chicago, Ill. Filed Jan. 5, 1914. Serial No. 810,308. (Cl. 84—14.)



1. A harp having its neck provided with a longitudinally extending reinforcing strip having one of its ends abutting against an adjacent portion of the neck, the joint so formed extending obliquely to the length of the neck at the place where the joint is located.

2. A harp having its neck provided with a reinforcing strip inlaid in a recess formed in the neck, one end of said recess and the end of the reinforcing strip fitting against the same being oblique to that portion of the neck where said end portion of said reinforcing strip is located.

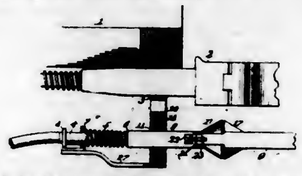
3. A harp having its neck provided with a reinforcing strip made of material different from the remaining portion of the neck and inlaid in a recess of less width than the width of the neck, a portion of said neck covering one edge of said strip.

4. A harp having its neck provided with a reinforcing strip made of material different from the remaining portion of the neck and inlaid in a recess of less width than the width of the neck, a portion of said neck covering the upper edge of said strip.

5. A harp having its neck provided with a reinforcing strip located between other strips and having its upper edge below the upper edge of the neck, a portion of which covers the upper edge of said strip.

[Claims 6 to 13 not printed in the Gazette.]

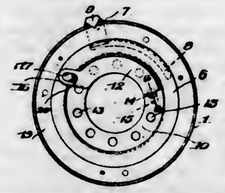
1,153,318. AIR-BRAKE COUPLING. ORSON F. KIRKPATRICK, North English, Iowa. Filed Jan. 13, 1915. Serial No. 2,057. (Cl. 188—13.)



1. An air-brake coupling, comprising a centrally tubular body adapted to connect at its inner end with an air-hose, a sidewise and vertically yielding mounting therefor permitting endwise slide of said body, a spring coöperating with the coupling body to force it outwardly, a laterally inclined head with a centrally disposed air-hole and a yielding packing therefor, the head being extended to form a straight-sided terminal tongue, a bell-mouthed guiding hood terminating in a socket for the tongue of a companion head, and means to prevent the axial turning of said head.

2. An air-brake coupling, comprising a centrally tubular body adapted to connect at its inner end with an air-hose, a yielding mounting therefor permitting the body to move endwise a limited distance, means adapted to prevent its turning axially, a spring coöperating with the body to force it outwardly, a laterally inclined head with a centrally disposed air-hole and yielding packing therefor, the head being extended to form a straight-sided tongue, a flaring hood terminating in a tongue-receiving socket, a latch engaging the tongue when in coupled position, and a slack chain connecting the latch with some fixed portion of the apparatus, and operating to release the latch by the take-up of the slack.

1,153,319. IRIS-DIAPHRAGM. RUDOLPH KLEIN and THEODOR BRUECK, Rochester, N. Y. Filed Dec. 11, 1914. Serial No. 876,651. (Cl. 95—64.)



1. An iris diaphragm comprising an iris ring, a rotary indicator ring, and blades, one end of each blade having a shifting fulcrum on one of said parts, and the other end of the blade having a pivotal interlocking connection with the other of said parts to prevent accidental displacement of the blade during assembling.

2. An iris diaphragm comprising an iris ring, a rotary indicator ring, blades, a shiftable fulcrum connecting each blade with one of the first two named parts, and a pivotal connection between each blade and the other of the first two named parts, the pivotal connection embodying a pivot projecting laterally from one of the parts which it connects, extending through the other of said connected parts and having a portion coöperating with the opposite face of the part through which it extends.

3. An iris diaphragm comprising an iris ring, a rotary indicator ring, blades, a shiftable fulcrum between one end of each blade and one of the first two-named parts, and a pintle projecting laterally from each blade and extending through the other of the first two-named parts, said pintle having a lateral extension to coöperate with the opposite face of the part through which the pintle extends.

4. An iris diaphragm comprising an iris ring, a rotary indicator ring provided with an annular series of openings, blades, a shiftable fulcrum between each blade and the iris ring, and a pintle extending from each blade through one of the openings of the indicator ring and having a lateral extension at one end adapted to coöperate with the opposite face of the ring.

5. An iris diaphragm comprising a support, an indicator ring mounted to rotate on the support and having an annular series of circular openings, a plurality of blades each having a pintle at one end extending obliquely to the plane of the blade through one of the openings of the indicator ring, said pintle having an extension parallel with the blade to engage the opposite face of the indicator ring, an iris ring, and a shiftable fulcrum connecting each blade with the iris ring.

[Claims 6 to 9 not printed in the Gazette.]

1,153,320. CAMERA-SUPPORT. JOHN H. KLENCK, Warren, Pa. Filed June 27, 1914. Serial No. 847,791. (Cl. 248—30.)



1. In a support of the class described, a jaw having a bearing portion, a clamping member carried by the said jaw and having a bearing portion spaced from the bearing portion of the jaw, a supporting member having a head fitted between the said bearing portions and angularly adjustable, a jaw pivoted to the first-mentioned jaw, and a spring yieldably holding the jaws closed.

2. In a support of the class described, pivotally connected jaws, a supporting member angularly adjustable with respect to the jaws, a clamping member coöperating with the supporting member to hold the same at adjustment, and means for moving the said member into clamping engagement with the supporting member.

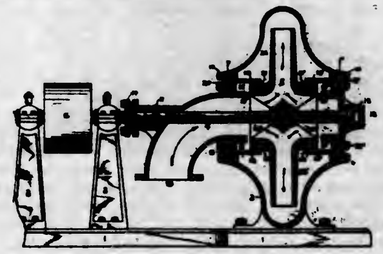
3. In a support of the class described, a jaw having a bearing portion provided with an opening, a supporting member having a head seating within the opening and angularly adjustable, a clamping member having a bearing portion opposing the bearing portion of the jaw and bearing against the said head, means for adjusting the clamping member to bring its bearing portion into clamping engagement with the head, and a jaw pivoted to the first-mentioned jaw and coöperating therewith.

4. In a support of the class described, a jaw having a bearing portion provided with an opening, a supporting member having a head seating within the opening and angularly adjustable, a clamping member having a bearing portion opposing the bearing portion of the jaw and bearing against the said head, means for adjusting the clamping member to bring its bearing portion into clamping engagement with the head, a jaw pivoted to the first-mentioned jaw and coöperating therewith, and a spring for holding the jaws closed.

5. In a support of the class described, a jaw having a bearing portion, a clamping member mounted for rocking movement upon the jaw and having a bearing portion opposing the first-mentioned bearing portion, a supporting member having a bearing portion fitted between the first-mentioned bearing portions, means for moving the clamping member upon its fulcrum to bring its bearing portion into clamping engagement with the said bearing portion of the supporting member, and a jaw pivoted to the first-mentioned jaw and coöperating therewith.

[Claim 6 not printed in the Gazette.]

1,153,321. BALANCED CENTRIFUGAL PUMP. FERDINAND W. KROGH, San Francisco, Cal. Filed July 12, 1911. Serial No. 638,120. (Cl. 103—43.)

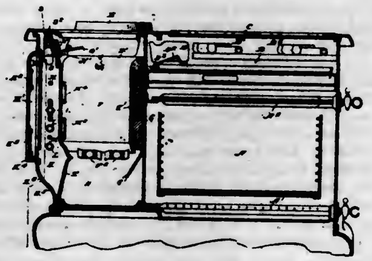


1. A centrifugal pump comprising a casing, an impeller in said casing having a double suction inlet, chambers in said casing adjacent to said suction inlets provided with inlet and outlet passages and means for varying the length of said inlet passages and the space of said outlet passages.

2. In combination with the casing and the impeller of a centrifugal pump, a suction inlet on each side of said impeller, removable suction chambers in the casing engaging the suction sides of the impeller and means for adjusting said chambers in position.

3. A centrifugal pump comprising a casing, an impeller in said casing provided with outward projecting necks on the sides thereof, central suction inlets in said necks, adjustable pressure chambers formed in the casing adjacent to said necks and connected to said suction inlets.

1,153,322. RANGE. JAMES A. LANSING, Scranton, Pa., assignor to Scranton Stove Works, Scranton, Pa., a Corporation of Pennsylvania. Filed Dec. 23, 1914. Serial No. 878,784. (Cl. 126—36.)



1. In a range, the combination of a fire box for the consumption of solid fuel, a gaseous fuel chamber with gaseous fuel burners in said chamber, a partition separating the fire box from the gaseous fuel chamber, and a continuous water circulating medium having coils extending directly over the burners in the gaseous fuel chamber and coils in the fire box lying against the separating partition whereby water may be heated by the combustion of fuel in both the fire box and the gaseous fuel chamber.

2. In a range, the combination of a fire box for the consumption of solid fuel, a gaseous fuel chamber with gaseous fuel burners in said chamber, a partition separating the fire box from the gaseous fuel chamber, and a continuous water circulating coil extending alternately back and forth from the gaseous fuel chamber into the fire box, the coils in the gaseous fuel chamber lying directly above the burners, and the coils in the fire box lying against the separating partition, whereby water may be heated by the combustion of fuel in both the fire box and the gaseous fuel chamber.

3. In a range, the combination of a fire box for the consumption of solid fuel, a gaseous fuel chamber with a plurality of superposed elongated gaseous fuel burners in said chamber, a vertical partition separating the fire box from the gaseous fuel chamber, and a continuous water circulating medium having vertically arranged coils extending directly above the respective burners in the gaseous fuel chamber and vertically arranged coils in the fire box lying against the separating partition, whereby water may be heated by the combustion of fuel in both the fire box and the gaseous fuel chamber.

4. In a range, the combination with a fire box for the consumption of solid fuel, a gas burner chamber located at one side of the fire box, a plurality of superimposed burners in said chamber, a removable plate partly supporting said burners, a water coil extending alternately from one combustion chamber into the other, and means for permitting said water coil and burners to be removed bodily from the range by removing said plate.

1,153,323. KROUT-PRESS. CHARLES W. LENT, Carbondale, Ill. Filed May 4, 1914. Serial No. 836,365. (Cl. 100—41.)



1. The combination with a receptacle, of a plunger mounted within said receptacle, a stem connected to said plunger and having a series of notches in one side, a cross bar constituting a lever and provided with a strap through which said stem passes, a lip on the under side of said cross bar adapted to engage in a selected notch upon twisting the lever, a link pivotally connecting one end of the cross bar with the receptacle, and a second link connected to said cross bar adjacent the opposite end and adapted to engage the receptacle.

2. An attachment for barrels comprising a cross plunger, a stem centrally pivotally connected to the cross plunger and having a series of notches on one side thereof, a cross bar provided with a strap wherethrough said stem passes, a lip carried by said cross bar and adapted to engage a notch in the stem as the cross bar is forced down, a link having pivotal connection with the cross bar and adapted for connection to a barrel, and a second link having pivotal connection with said bar and adapted to engage a barrel.

1,153,324. TIRE-VULCANIZER APPARATUS. JOSEPH H. LAUSCH, Ridgway, Pa. Filed May 18, 1912. Serial No. 698,254. (Cl. 18—18.)

1. A vulcanizing apparatus comprising a base member forming an article support, a heating member adapted to be mounted above and in contact with said base member, a combustion chamber carried by said heating member, said combustion chamber being positioned immediately above said base member, the contacting portion of the heating member constituting the bottom of said chamber, a plurality of integral heat-transmitting members spaced apart and arranged within said combustion chamber, and a water jacket surrounding said combustion chamber and forming a part of the heating member.



2. A vulcanizing apparatus comprising a base member having a raised clamping face extending centrally above said base member and constituting an article support, a heating member adapted to be mounted above said base member and having a centrally arranged depending portion forming a clamping face to correspond to the clamping face of said base member, said clamping faces spacing the remaining portions of the two members from each other, means for adjusting the contact of said clamping faces, said heating member being provided with a combustion chamber the bottom of which is formed by its clamping face, and a water jacket surrounding said combustion chamber, the surrounding wall of said combustion chamber constituting the inner wall of said water jacket.

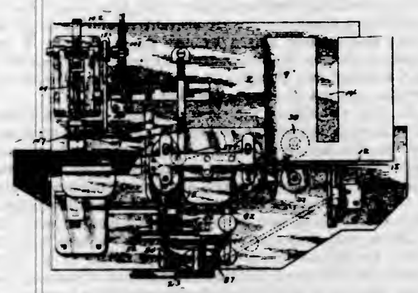
3. A vulcanizing apparatus comprising a base member having a centrally arranged clamping face extending above said base member and constituting an article support, a heating member adapted to be mounted above said base member and having a centrally arranged depressed portion at the bottom forming a depending clamping face corresponding to the clamping face of said base member, a combustion chamber formed in the heating member and located within the area of the depressed bottom of said heating member, said depressed portion constituting the bottom of the combustion chamber and the walls of the latter extending upwardly and open at the top, a water jacket surrounding said combustion chamber, the wall of said combustion chamber constituting the inner wall of said water jacket, and the outer wall of said water jacket being formed at the outer edge of the bottom of said heating member, whereby said water jacket overhangs the space outside the clamping faces of the two members.

4. In a vulcanizing apparatus, a base member having a centrally arranged clamping face extending above said base member and constituting an article support, a heating member adapted to be mounted above said base member and having a centrally arranged depending clamping face formed at the bottom of said heating member, said depending clamping face being coextensive with the clamping face of said base member, the diameter of the two clamping faces being less than the diameter of the two members, a combustion chamber formed in the heating member above its clamping face, the latter constituting the bottom wall of said chamber, the side walls of said chamber rising above the heating member and being open at the top, vertical studs projecting upwardly from the bottom of the combustion chamber, a water jacket surrounding said chamber, the bottom wall of said water jacket being formed by the marginal portion of the bottom of the heating member and the outer edge of the clamping face of said member, and clamping bolts connecting the two members and holding their clamping faces in close contact.

5. A vulcanizing apparatus comprising a base member forming an article support, a heating member adapted to be mounted above and in contact with said base member, a combustion chamber carried by said heating member, said combustion chamber being positioned immediately above said base member, a plurality of integral heat-transmitting members spaced apart and arranged within said combustion chamber, and a water jacket surrounding said combustion chamber and forming a part of the heating member, said water jacket being arranged outside the combustion chamber and below the upper edge thereof and having its upper wall constituting a shield or guard to prevent the flame from the combustion chamber from burning the tire.

[Claim 6 not printed in the Gazette.]

1,153,325. ENVELOP-SEALING AND STAMP-AFFIXING MACHINE. JOHN J. MCDADE, San Francisco, Cal. Filed Mar. 8, 1911. Serial No. 613,159. (Cl. 216—3.)



1. In an envelop sealing and stamping machine, a feed table upon which the envelops are arranged, means for removing the envelops singly from said feed table, means for removing the envelops from said removing means and feeding them endwise to the main feed rollers, the main feed rollers, sealing rollers, a moistening pad arranged intermediate said feed and sealing rollers, means for rotating said feed and sealing rollers, and means for affixing a stamp to the sealed envelop.

2. In an envelop sealing and stamping machine, a feed table on which the envelops are adapted to be arranged in a substantially vertical position, a vertically reciprocating selector plate adapted to engage under the flap of the leading envelop and remove it from the table on the upward stroke, means for clamping the envelop to the plate in its downward stroke, means for releasing the clamp at the end of the downward stroke, a pair of feed rollers, means for feeding the envelop from said selector plate to the feed rollers, a pair of sealing rollers, a moistening device intermediate said feeding and sealing rollers and means for affixing a stamp to the sealed envelop.

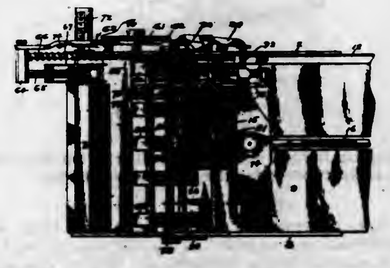
3. In an envelop sealing and stamping machine, the combination of a feed table, a vertically reciprocable selector plate adapted to remove the envelops successively from said feed table, a guide plate having its upper edge in line with the upper edge of the selector when said selector is in the depressed position, rollers adjacent said selector plate for feeding the envelop to said guide plate, a pair of main feeding rollers on opposite sides of said guide plate beyond said feeding rollers, a pair of sealing rollers beyond said moistening device and a stamp affixing device beyond said sealing rollers.

4. In an envelop sealing and stamping machine, the combination of a feed table, a vertically reciprocable selector plate, auxiliary feed rollers on opposite sides of said plate, a guide plate in line with said selector plate provided with an aperture, feed rollers on opposite sides of said guide plate at the said aperture, a moistening pad on one side of said guide plate, a pair of sealing rollers beyond and on opposite sides of said guide plate, means for halting the rotation of said sealing rollers at a predetermined time and means for affixing a stamp to the envelop during said period of rest.

5. In an envelop sealing and stamping machine, sealing rollers, feed rollers arranged in advance of said sealing rollers, means for revolving said rollers, means arranged between said feed and sealing rollers for moistening the envelop flap, a stamp affixing device, and means for halting the revolution of said rollers while the envelop is between the sealing rollers.

[Claims 6 to 11 not printed in the Gazette.]

1,153,326. ENVELOP-SEALING AND STAMP-AFFIXING MACHINE. JOHN J. MCDADE, San Francisco, Cal. Filed Oct. 29, 1912. Serial No. 728,353. (Cl. 216—3.)



1. In a machine of the class described, a pair of rollers, means for simultaneously moistening an envelop and feeding it to said rollers, a guide arranged adjacent said rollers adapted to deflect the envelop as it is discharged therefrom, a pocket adapted to receive said envelop, and means for affixing a stamp to said envelop as it is held in said pocket.

2. In a machine of the class described, a pair of rollers, means for feeding a moistened envelop to said rollers, a guide arranged adjacent said rollers adapted to deflect the envelop as it is discharged therefrom, a pocket adapted to receive said envelop, means for affixing a stamp to said envelop, and means for opening said pocket and discharging the envelop therefrom after the stamp has been affixed.

3. In a machine of the class described, a pair of feed rollers, means for simultaneously moistening and feeding an envelop to said rollers, a guide arranged adjacent said rollers adapted to deflect the envelop as it is discharged therefrom, a pocket adapted to receive said envelop, means for affixing a stamp thereto, means for opening said pocket and discharging the envelop therefrom after the stamp has been affixed, and a pair of pressure rollers arranged below said pocket, between which the envelop passes.

4. In a machine of the class described, a fixed plate having an offset thereon, a movable plate coacting therewith adapted to form a pocket, a stamp affixing device arranged adjacent said pocket and means cooperating with said stamp affixing means to open the pocket after the stamp affixing mechanism has operated.

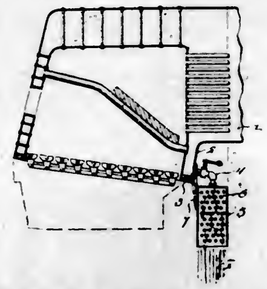
5. In a machine of the class described, a pair of feed rollers between which an envelop is adapted to pass, means for affixing a stamp to said envelop after it is discharged from said feed rollers, a slide operating said stamp affixing means, a shaft operatively connected with said feed rollers arranged in inoperative relation with said slide, and means operative by the passage of an envelop between said rollers to place the shaft and slide in operative relation.

[Claims 6 to 11 not printed in the Gazette.]

1,153,327. MUFFLER ATTACHMENT FOR BLOW-OFF COCKS. FRANKLIN MARSH, National Home, Wis., assignor of one-half to Alexander C. Grant, Milwaukee, Wis. Filed May 4, 1914. Serial No. 836,089. (Cl. 137—4.)

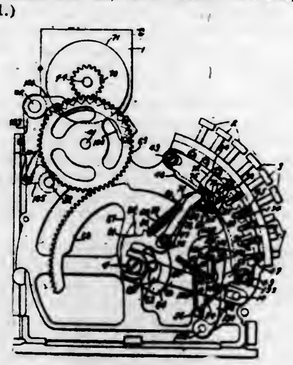
The combination of a boiler provided with a blow-off cock having a threaded nozzle, a muffler shell in threaded union with the nozzle, the mouth of said shell being directed downwardly, a series of baffle-bars arranged in

rows uniformly spaced apart, extending transversely of the shell and staggered with relation to each other and



interrupting the full area of the shell from top to bottom and a bracket connecting the shell and boiler body.

1,153,328. DIFFERENTIAL MECHANISM FOR ACCOUNTING-MACHINES. HALKON A. MARTIN, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Dec. 31, 1913. Serial No. 809,709. (Cl. 235—11.)



1. In a machine of the class described, the combination with a bank of keys, comprising two groups of keys; of independent locking means for each group of keys whereby one key in each group of the bank of keys may be depressed and locked in depressed position at one operation of the machine; a main drive shaft; and independent differential mechanism for each group of keys each driven from the main drive shaft, the keys in each group in the bank being designed to predetermine the extent of movement of its corresponding differential mechanism.

2. In a machine of the class described, the combination with a main drive shaft; of an upright frame; a key frame mounted thereon and curved in form; two groups of keys carried in said key frame; and independent differential mechanism for the groups of keys loosely mounted on said shaft at both sides of said frame and driven from said shaft, the extent of movement of each differential mechanism being predetermined by its corresponding group of keys at the same operation of the machine.

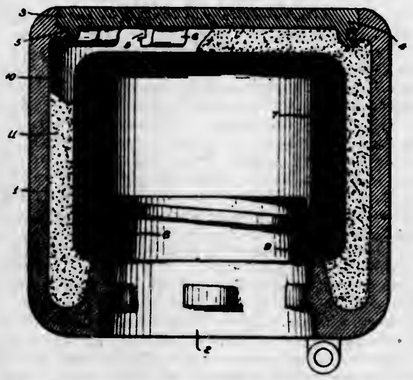
3. In a machine of the class described, the combination with a bank of keys, comprising two groups of keys; independent locking means for each group of keys so designed that any key in each group of the bank of keys may be depressed and locked in depressed position at one operation; a main drive shaft; independent differential mechanism for each group of keys each driven by the main drive shaft but normally disconnected therefrom; and latch mechanism for each differential mechanism for connecting each differential mechanism independent of the other to the main drive shaft, each group of keys being constructed to control its corresponding latch mechanism and thereby determine the extent of movement of its corresponding differential mechanism.

4. In a machine of the class described, the combination with a bank of keys, comprising two groups of keys; of independent locking means for each group of keys whereby one key in each group of the bank of keys may be depressed and locked in depressed position at one operation of the machine; a main drive shaft; independent differential mechanism for each bank of keys and driven from the main drive shaft, the keys in each group in the bank being designed to predetermine the extent of movement of its corresponding differential mechanism; a locking arm normally locking said shaft from movement; a spring normally tending to move said arm out of locking position; a member normally preventing movement of said arm; and a plate moved by one group of keys in said bank but not by the other group to prevent movement of said member and thereby allow said spring to move said locking arm out of locking position.

5. In a machine of the class described, the combination with a main operating mechanism; of a spring operated locking arm normally locking said mechanism from movement; a spring operated device for normally preventing movement of said locking arm and having a notch; a plate bearing a projection normally out of operative relation with the notch in said device; keys for moving said plate to bring said projection into operative relation with the notch in said device whereupon said device is moved to permit movement of said locking arm out of locking position; means for restoring said arm to locking position; an arm pivoted on said device and having a flange normally passing over said notch in said device and movable out of such position upon depression of one of said keys by engagement with a side of the projection on said plate; and means for moving said device past normal position so that the flange on said pivoted arm passes out of engagement with the projection on said plate and over said notch whereby said flange will abut the end of said projection when said device is moved in reverse direction to normal position and prevent a second movement of the locking arm out of locking position if the depressed key is held in such position at the end of the operation.

[Claims 6 to 11 not printed in the Gazette.]

1,153,329. SAFE CONSTRUCTION. MOSES MOSLER, Cincinnati, and CARL BARTELS, Hamilton, Ohio, assignors to The Mosler Safe Company, New York, N. Y. Filed Feb. 9, 1915. Serial No. 7,124. (Cl. 109—4.)



1. Safe-construction comprising, a wall having an opening therethrough and formed of malleable material at the margin of the opening, a support projecting inwardly of said margin at the inner surface of said wall, a plate fitting said opening and having its perimeter tapering with an outward convergence, the margin of the opening being swaged inwardly into contact with the perimeter of the plate after the plate has been inserted in the opening, combined substantially as set forth.

2. Safe-construction comprising, a wall having through it a circular opening, a circumferential series of lugs projecting inwardly of the opening, a plate filling the opening and resting on said lugs, a circumferential series of hooks on the back of the plate and adapted to pass between said lugs and then to engage behind the lugs by the angular adjustment of the plate, plastic filling applied at the inner surface of the wall and plate engaging the hooks and lugs, and means inwardly of said plate and filling to prevent the displacement of said filling, combined substantially as set forth.

3. Safe-construction comprising, a wall having through it a circular opening, a circumferential series of lugs projecting inwardly of the opening, a plate filling the opening, a circumferential series of hooks on the back of the plate and adapted to pass between said lugs and then to engage behind the lugs by the angular adjustment of the plate, plastic filling applied at the inner surface of the wall and plate and engaging the hooks and lugs, and means inwardly of said plate and filling to prevent displacement of the filling, the periphery of the plate contracting outwardly and the margin of the opening being swaged into contact with said periphery combined substantially as set forth.

4. Safe-construction comprising, an outer safe-member provided with a door-opening and with an opening in one of its other walls, an inner safe-member disposed within the outer safe-member and supported therein free therefrom at its back and around its exterior and adapted to pass through the last-mentioned opening, means for supporting the inner safe-member within the outer one, a plate secured in said last-mentioned opening, and a filling of plastic material disposed in the space between the outer and inner safe-members, said filling serving to position said inner safe-member relative to said plate, combined substantially as set forth.

5. Safe-construction comprising, an outer safe-member provided with a door-jamb and with a supplemental opening in one of its walls larger than said door-jamb, an inner safe-member provided with a door-jamb in axial alinement with the door-jamb of the outer safe-member, a joint being formed between the front of the inner safe-member around its door-jamb and the rear portion of the door-jamb of the outer safe-member, a plate applicable from the outside of the outer safe-member and permanently closing said supplemental opening, means for maintaining the inner safe-member in such relation to the outer safe-member that the two door-jambs will be in direct contact, and a door hinged to the outer safe-member and adapted to move into and close both door-jambs, combined substantially as set forth.

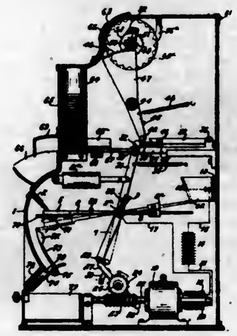
[Claim 6 not printed in the Gazette.]

1,153,330. CASH-REGISTER. WILLIAM H. MUZZY, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Original application filed Oct. 7, 1907, Serial No. 396,331. Divided and this application filed Oct. 29, 1914. Serial No. 869,309. (Cl. 133—4.)

1. In a machine of the class described, the combination with a registering device, and an actuating frame therefor, of a plurality of levers connected to actuate said frame to differential extents, a plurality of levers constructed to be actuated by deposited coins and positioned to engage and operate said frame actuating levers, a motor, and a connection therefrom constructed to drive said coin actuated levers after their coin actuated movement.

2. In a machine of the class described, the combination with a registering mechanism, of a motor, a source of electrical energy, a counter-balanced lever moved by the weight of a coin to close a circuit through the motor, and means to continue the movement of the lever from the motor to actuate the registering mechanism.

3. In a machine of the class described, the combination with registering mechanism for registering the total value of coins of different denominations inserted into the machine, of actuating mechanism therefor controlled by the inserted coins, a normally inoperative operating mechanism for the actuating mechanism, and means operated by the weight of the coins for controlling the extent of actuation of the actuating mechanism by the operating mechanism and for rendering the operating mechanism operative.

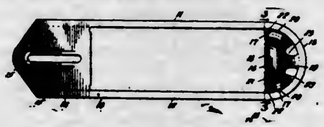


4. In a machine of the class described, the combination with registering mechanism for registering the total value of coins of different denominations inserted into the machine, of actuating mechanism therefor, a plurality of devices for actuating said actuating mechanism and selectively controlled by the inserted coins, a normally inoperative operating mechanism for said devices, and means controlled by the coins for selecting the device to be operated by the operating mechanism and for rendering said operating mechanism operative.

5. In a machine of the class described, the combination with registering mechanism, for registering the total value of coins of different denominations inserted into the machine, of actuating means therefor, a plurality of devices for selectively actuating said actuating means, a normally inoperative operating mechanism for said devices, and means operated by the weight of the coins for selecting the device to be operated by the operating mechanism and for rendering said operating mechanism operative.

[Claims 6 to 13 not printed in the Gazette.]

1,153,331. PROCESS OF MANUFACTURING DRAFT-YOKES. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed July 25, 1914. Serial No. 852,997. (Cl. 29—167.)

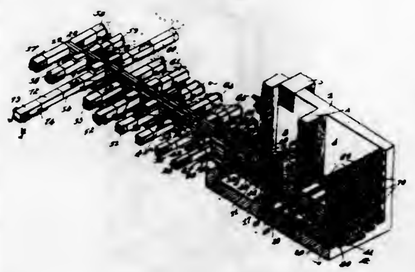


1. The herein described process of making a yoke for railway draft riggings which consists in first providing a yoke casting in the form of a loop having a rounded rear end and a filler cast integrally therewith within said rounded end and with the upper and lower faces of the filler rounded to correspond with the curvature of said rear end of the loop but spaced from the latter, then bending some of the walls of said filler until said upper and lower faces thereof contact with the inner sides of said rounded loop end.

2. The herein described process of manufacturing a yoke for railway draft riggings which consists in first casting a yoke strap having a box-like, hollow filler attached thereto at its rear end on the inner side, the side walls of said

filler being bowed and the upper and lower faces thereof spaced from the adjacent inner faces of the rear end of the yoke, annealing said casting, and then straightening said bowed sides of the filler until the upper and lower faces of the latter engage said inner faces of the rear end of the yoke.

1,153,332. IRRIGATION. ISAAC B. NAYLOR, New York, N. Y. Filed Oct. 28, 1913. Serial No. 797,857. (Cl. 137—66.)



1. In a combined irrigation and drainage system, the combination with a central station, of drainage pipes, individual control for each pipe and means at the central station to regulate the depth of drainage by the respective pipes.

2. In a drainage system, the combination with a central chamber, divided into a supply reservoir and a drainage pipe chamber, of an irrigation water pipe extending from the said supply reservoir, a lateral connected with said irrigation water pipe, and a drainage water pipe also connected with said lateral and extending into said drainage chamber, and a vertical control pipe extending from the drainage pipe within said chamber, a plurality of discharge ports in said vertical pipe arranged one above the other, and a valve for each port, whereby the depth of drainage and the height of the flood in the land may be regulated at will.

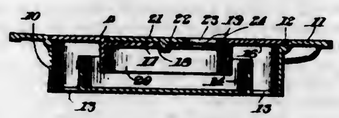
3. In a drainage system, the combination with a central station, of a series of drainage pipes extending therefrom to different points in the area to be drained, means at said central station controlling the discharge from each pipe individually whereby the height of the flood and the depth of the drainage in different parts of the area reached by said pipes may be regulated at will independent of the other points of the area.

4. In a combined irrigation and drainage system, the combination with a chamber divided into a water supply reservoir and a drainage chamber, of irrigating pipes extending from the supply reservoir, laterals connected to said irrigation pipes and a drainage pipe connected to each lateral and leading back to the drainage chamber, a vertical control pipe extending from each drainage pipe within said chamber, a plurality of overflow ports in each of said vertical pipes arranged one over the other and a valve for each port whereby the depth of drainage and the height of the flood can be regulated at will.

5. In a drainage and irrigation system, the combination with a pipe section, longitudinally extending partitions in said section, dividing the section into two vertical sides and a vertical middle channel, the side channels merging into one channel at one end of the section and terminating in a horizontally disposed opening, the middle channel terminating in a horizontally disposed opening parallel with the opening of the combined side channels, the bottom of the middle channel being inclined; one of said openings serving to conduct drainage water from the side channels while the other opening serves to conduct irrigation water into the middle channel.

[Claims 6 to 11 not printed in the Gazette.]

1,153,333. FUEL-SAVING DEVICE. GEORGE O'NEILL, Moncton, New Brunswick, Canada. Filed Apr. 12, 1915. Serial No. 20,720. (Cl. 126—15.)



1. In combination with a stove, a superheater comprising two concentric removable griddle sections each having a depending cylindrical wall integral therewith, a cup shaped member extending upwardly between said cylindrical walls, spokes integrally connecting said cup shaped member to said outer cylindrical wall, and air admission controlling means on said inner griddle section.

2. The combination with a stove of a superheater comprising a cylindrical member having a radial flange on the upper end thereof provided with a recess in its inner periphery and orifices through the bottom, an upwardly extending baffle flange integral with the bottom and concentrically located in the cylinder, a cover adapted to engage with the recess having a depression in the center thereof provided with a central orifice and a plurality of radially extending orifices, one of which is T-shaped, a downwardly extending baffle flange integral with the cover and concentrically located to the first said baffle flange, an air valve having a plurality of orifices therethrough, a projection integral with the air valve adapted to rotatably engage the orifice in the center of the cover, and a second projection integral with the air valve and located near the periphery thereof designed to engage with the T-shaped orifice, substantially as described.

1,153,334. STOCKING-SUPPORTER. JAMES N. OSWALD, Pittsburgh, Pa. Filed June 3, 1913. Serial No. 771,434. (Cl. 24—264.)

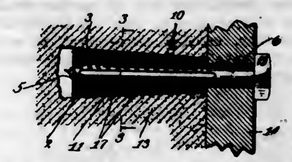


In a securing device for a stocking supporter, the combination of a thin flat looped base composed of a surrounding band having at one end a rounded centrally-open portion providing a clearance space, the band being converged inwardly toward the opposite attaching end to provide a narrowed tapering slot, a gripping arm pivoted upon one side of said looped base member, rounded to conform with one side of its rounded end portion and provided with an attaching terminal located at the middle of said rounded portion, said gripping arm being extended beyond its pivot and provided with an inwardly turned pinching terminal operable across the terminal slot portion of the base, and a slotted keeper secured to the side of the base embracing said gripping arm and providing for a limited range of movement thereof, substantially as set forth.

1,153,335. DRIVE AND SCREW EXPANSION-BOLT. HENRY W. PLEISTER, Westfield, N. J., assignor to Henry B. Newhall. Filed Apr. 11, 1913. Serial No. 760,389. (Cl. 85—2.4.)

1. The combination in a bolt anchor of an expansion shield and a longitudinally operating primarily non-rotative expanding member adapted to expand the shield by moving it longitudinally of the shield and coöperating locking members on the shield and on the expanding member adapted to be brought into engagement by a partial rotation of the expanding member.

2. The combination in a bolt anchor of an expansion shield and a longitudinally operating primarily non-rotative expanding member adapted to expand the shield to substantially its maximum expansion, and coöperating rotative expanding means on the expanding member and the shield to give the bolt anchor its final expansion by rotating the expanding member.



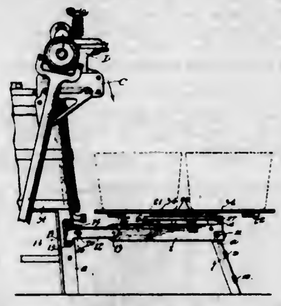
3. The combination in a bolt anchor of an expansion shield provided with interrupted screw threads, a screw provided with interrupted screw threads, the screw threads of one member being adapted to initially register with the interruptions in the other member to permit the screw to be first hammered into the shield to expand the shield to substantially its maximum expansion, the final expansion being given by the coöperating interrupted screw threads upon the screw and the shield.

4. The combination in a bolt anchor of an expansion shield formed of a plurality of parts provided with interrupted screw threads, a screw provided with interrupted screw threads, the screw threads upon the shield and upon the screw being adapted to be initially disengaged to permit the screw to be hammered into the shield to give it a quick initial expansion, and then rotated to complete the expansion.

5. The combination in a bolt anchor of an expansion shield formed of a plurality of parts adapted to have relative rotative movement with relation to each other, an interrupted screw thread upon the different parts of the shield and a screw having an interrupted screw thread, the interruptions in the screw initially registering with the interrupted screw threads in the different portions of the shield.

[Claims 6 to 8 not printed in the Gazette.]

1,153,336. FOLDING WASHBENCH. HOWARD W. POWER, Davenport, Iowa. Filed Jan. 11, 1915. Serial No. 1,524. (Cl. 68—35.)



1. The combination with a suitable support, of a stand having a frame composed of an intermediate top member and two end members, one of said end members being adapted to be detachably secured to the support, the other end member being adapted to form a supporting leg, and a turn-table mounted on said top member.

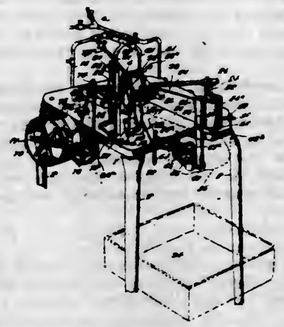
2. The combination with a suitable support, of a stand having a frame composed of flexibly connected members, one of said members being adapted to be detachably fastened to said support, another of said members being adapted to provide supporting legs, and a turn-table rotatably mounted on said frame.

3. The combination with a suitable support, of a stand having a frame composed of an intermediate top member and two end members, one of said end members being adapted to be disposed in an approximately horizontal position and detachably secured to the support, the other end member being adapted to form a supporting leg, and a turn-table mounted on said top member.

4. A supporting stand comprising an intermediate or horizontally disposed top member, a horizontally disposed end member pivotally connected to one end of said top member, and a vertically disposed leg member pivotally connected to and supporting the opposite end of said top member, a suitable vertically disposed bearing securely mounted on said top member, and a circular track concentric thereto securely mounted on said top member, in combination with a turn-table provided with a downwardly projecting pivotal stud engaging said bearings, and suitable casters secured to the underside of the turn-table and adapted to travel on said track.

5. A supporting stand comprising an intermediate or horizontally disposed top member, a horizontally disposed end member pivotally connected to one end of said top member, and a vertically disposed leg member pivotally connected to and supporting the opposite end of said top member, and a suitable vertically disposed bearing securely mounted on said top member, in combination with a turn-table provided with a downwardly projecting pivotal stud engaging said bearings.

1,153,337. COLLAR-FOLDING MACHINE. CHARLES JOHN FRANKARD, Jr., Troy, N. Y. Filed Dec. 14, 1905. Serial No. 291,780. (Cl. 68—9.)



1. In a collar folding machine, the combination with folding mechanism, having a guide to engage the inside of a collar, an ironing element to press the collar on said guide, and a chamber adjacent the folding mechanism into which the folded collars enter, said chamber tapering toward its exit end and to gradually straighten the collar to cause it to pass out of said chamber.

2. In a collar folding machine, the combination with folding rolls, means under pressure for ironing the folded edge of a collar, a chamber adjacent the folding mechanism into which the folded collars enter, said chamber being wider than the thickness of the collar to allow the latter to assume a curve different than the curve given it by the folding rolls.

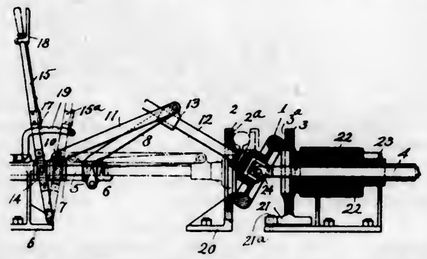
3. In a collar folding machine, the combination with folding rolls, means under pressure for ironing the folded edge of a collar, a chamber adjacent the folding rolls into which the folded collars enter, said chamber being wider than the thickness of the collar to allow the latter to assume a curve different than the curve given it by the folding rolls, and means independent of the folding rolls for drawing the collar from the chamber before being released by said rolls.

4. In a collar folding machine, the combination with ironing mechanism, folding means located adjacent the ironing mechanism, a platform having an opening, a burner in said opening, and a drying chamber closed at its top and sides, said drying chamber being located adjacent the folding means, and over the opening.

5. In a collar folding machine, the combination with an ironer, folding mechanism adjacent the ironer formed to direct a collar toward the top of a drying chamber, means for heating said mechanism, a drying chamber having a top, means for heating the drying chamber, means for drawing the collar from the drying chamber, said means forming a tapered passage for the collar to draw it from the top of the drying chamber.

[Claims 6 to 45 not printed in the Gazette.]

1,153,338. TRANSMISSION MECHANISM. FRANK B. RAE, Cleveland, Ohio. Filed Dec. 9, 1912. Serial No. 735,608. (Cl. 74—14.)



1. The combination with a driving shaft, and a driven shaft, of an annulus flexibly connected at its central portion to the driven shaft and having its center in line with the driving shaft, operative connections between the driving shaft and the annulus for wabbling and turning the annulus about its central axis as the driving shaft is turned.

2. The combination with a driving shaft and a driven shaft, of an annulus mounted to have its center in line with the driving and driven shaft, operative connections between the annulus and the driven shaft, guiding means with which the annulus coöperates, and operative connections between the annulus and the driving shaft whereby the annulus may be wabbled and turned about its center.

3. The combination with a driving shaft and a driven shaft, of an annulus flexibly mounted at its central portion to the driven shaft and having its center in line with the driving shaft, operative connections between the driving shaft and the annulus for wabbling and turning the annulus about its central axis as the driving shaft is turned, said operative connections being adjustable to vary the degree of wabbling and rotation of the annulus.

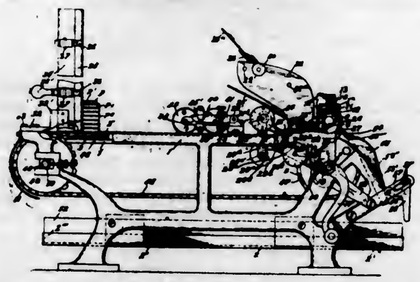
4. The combination with a driving shaft and a driven shaft, of an inclined annulus, the center of the annulus being in line with the driving and driven shafts, spaced guiding disks with which the said annulus coöperates, operative connections between the annulus and the driven shaft, and operative connections between the annulus and the driving shaft, whereby the annulus is wabbled as the driving shaft is turned.

5. The combination with a driving shaft and a driven shaft, of an inclined annulus, guiding means with which said annulus coöperates, the center of the annulus being in line with the driving and driven shafts, operative connections between the driven shaft and the annulus, a short shaft connected at right angles to the plane of the annulus, operative connections between the driving shaft, and the said short shaft, whereby the annulus is wabbled as the driving shaft is turned.

[Claims 6 and 7 not printed in the Gazette.]

1,153,339. PAPER-FEEDER. RUSSELL N. ROGERS, Chicago, Ill., assignor, by mesne assignments, to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 5, 1909. Serial No. 521,115. (Cl. 101—89.)

1. A feeder for printing machines having rotary printing mechanisms consisting of upper and lower parts, comprising, a feed bar mounted on the frame of the machine adjacent to the intake side of the printing mechanism parallel therewith and of greater width than the same, an expansible and contractible envelop holder mounted to support envelops above said bar, said holder being expansible to substantially equal the width of said bar, envelop drawing rolls adjacent to the upper part of the printing mechanism for extracting envelops from said holder and adapted to feed the widest envelop containable thereby, envelop stop-and-release dogs for intermitting the envelop feed, and suitable driving means, substantially as described.



2. The improvements herein described, comprising an envelop holder composed of relatively adjustable sides and an expansible and collapsible bottom inclined upwardly and rearwardly from the point of delivery, substantially as described.

3. The improvements herein described, comprising an envelop holder composed of relatively adjustable sides and an expansible and collapsible bottom, provided with parallel envelop bearing bars and inclining upwardly and rearwardly from the point of delivery, substantially as described.

4. The improvements herein described, comprising an envelop holder composed of relatively adjustable sides and an expansible and collapsible bottom, provided with parallel envelop bearing bars, and a feed bar forming the lower edge of said holder, substantially as described.

5. The improvements herein described, comprising an envelop holder composed of relatively adjustable sides and an expansible and collapsible bottom occupying an inclined position between said sides, in combination with a feed bar forming the lower edge of said holder, and a plurality of drawing rolls presenting their intake, lower sides, to said feed bar, substantially as described.

[Claims 6 to 45 not printed in the Gazette.]

1,153,340. TOOL-HANDLE. JAMES W. RUMMEL, Windber, Pa. Filed Apr. 13, 1915. Serial No. 21,102. (Cl. 145—112.)



1. In a detachable handle for cross cut saws, a saw holder provided with an elongated slot for receiving one end of the saw and having a threaded section provided with opposed releasing sides, a shoe loosely fitting said holder for coaction with the latter to hold the saw, loosely connected master and follower nuts having threaded engagement with the threaded section of said holder and having release ways for releasing said holder for free longitudinal movement through said nuts, and a handle connected with one of said nuts to operate both thereof for tightening or releasing said holder, substantially as described.

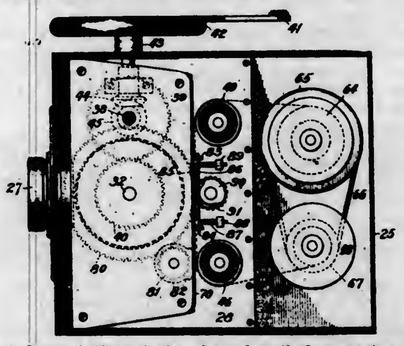
2. In a detachable handle for cross cut saws, a saw holder for engagement with said saw and provided with a threaded section having opposed releasing portions, a shoe for coaction with said holder to grip the saw, master and follower nuts having threaded engagement with said threaded section and provided with release ways for releasing said holder, and a handle operatively connected with said nuts for effecting relative movement of said shoe and holder to grip said saw, substantially as described.

3. In a detachable handle for cross cut saws, a holder for engagement with the saw and provided with a threaded section having opposed releasing portions, a shoe for coaction with said holder to grip the saw, master and follower nuts having threaded engagement with said threaded section and provided with release ways for releasing said holder, means loosely connecting said nuts for relative rotary movement of one with respect to the other to a predetermined extent, and a handle operatively connected with one of said nuts for actuating both thereof to effect relative movement of said shoe and holder to grip the saw or to release the holder and shoe from the saw, substantially as described.

4. In a detachable handle for tool bodies, a holding device for gripping or engaging the tool body and having a threaded section provided with a releasing portion, nuts loosely connected with each other for coaction with said threaded section and having release ways for coaction with said releasing portion to release said holding device, and a handle connected with one of said nuts to actuate the latter consecutively to shift the holding device into a gripping position or to release said holding device from a gripping position, substantially as described.

5. In a detachable handle structure for tool bodies, a holding device for engagement with the tool body and having a threaded section provided with a releasing portion, and threaded mechanism for coaction with said threaded section to engage said holding device with said tool body and provided with a releasing portion for coaction with the releasing portion of said section to release said holding device, substantially as described.

1,153,341. MOVING-PICTURE APPARATUS. WILLIAM A. RYAN, Chicago, Ill. Filed Aug. 30, 1910. Serial No. 579,691. (Cl. 88—18.2.)



1. In a device of the class described, a rectangular casing, a film-carrying roll within the casing at one side thereof, a partial partition across the casing beside said roll, a false bottom within the casing at the other side of the partition from said roll, said false bottom and partial partition completely inclosing the space within the same, a rotary cylindrical shutter mounted on a shaft projecting through said false bottom, a film-driving roll mounted on a similar shaft, and intermittent driving connections between the two shafts beneath the false bottom.

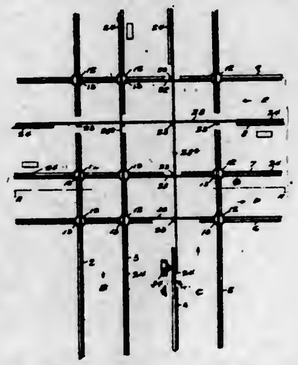
2. In a device of the class described, a film, intermittent driving means therefor, a fixed plate beside which the film passes, a plurality of bars projecting from said fixed plate beside the film, a movable plate with holes therein mounted on said bars with the bars engaging the said holes, rounded projections on the said movable plate, said film having perforations to be engaged by these projections, and means to actuate said plate to cause said projections to engage said film perforations.

3. In a device of the class described, a perforated film, intermittent driving means therefor, two parallel plates between which the film passes, one fixed and the other displaceable, guides constraining the movement of the second plate in a direction at a right angle to the film, projections from said second plate adapted to engage the perforations in the film, and means to actuate said last-mentioned plate to cause said projections to engage said film perforations.

4. In a device of the class described, a perforated film, intermittent driving means therefor, two parallel plates between which the film passes, one fixed and the other displaceable, guides constraining the movement of the second plate in a direction at a right angle to the film, projections from said second plate adapted to engage the perforations in the film, and a cam adapted to act on said last mentioned plate in alternation with said intermittent driving means for the film.

5. In a device of the class described, a perforated film, intermittent driving means therefor, two parallel plates between which the film passes, one fixed and the other displaceable, guides constraining the movement of the second plate in a direction at a right angle to the film, projections from said second plate adapted to engage the perforations in the film, a cam adapted to act on said last mentioned plate in alternation with said intermittent driving means for the film, and a spring to act on said last mentioned plate in opposition to said cam.

1,153,342. RAILROAD-CROSSING. LUTHER SADLER and ROBERT C. GECKLER, Oakland, Cal. Filed Mar. 21, 1914. Serial No. 826,209. (Cl. 104—117.)



1. The combination with two intersecting railroad rails, of an integral steel block of less depth than the depth of the rail formed at said intersection, a turntable having a grooved upper surface seated in said block, a shank on said turntable extending through the lower wall of said block and a pinion secured to said shank.

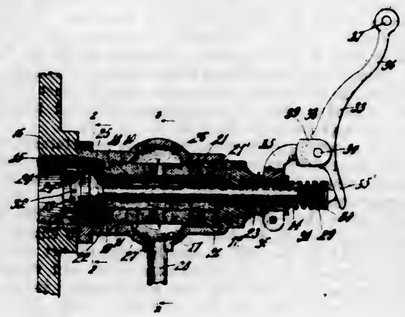
2. The combination with two intersecting railroad rails, of an integral steel block formed at said intersection, said block being provided with a cylindrical seat, a

shell arranged in said seat, a turntable arranged in said shell, anti-friction bearings arranged between said turntable and shell, and means for rotating said turntable.

3. The combination with two intersecting railroad rails, of an integral steel block formed at said intersection, said block being provided with a cylindrical seat of two diameters, the part of smaller diameter occurring at the lower portion of the seat, a cylindrical shell seated in said smaller diameter portion and projecting above the upper edge thereof, a turntable seated in said shell having an upper portion overlying said shell, anti-friction bearings arranged between said turntable and shell, and means for rotating said turntable.

4. The combination with two intersecting railroad rails, of an integral steel block formed at said intersection, a seat in said block, a turntable arranged in said seat, said turntable being provided with a circumferential groove, a pin engaging in said block and extending into said groove, and means for rotating said turntable.

1,153,343. VALVE. WILLIAM M. SAEVKE, Milwaukee, Wis., assignor of one-half to Henry Saevke, Milwaukee, Wis. Filed Apr. 25, 1914. Serial No. 834,301. (Cl. 137—4.)

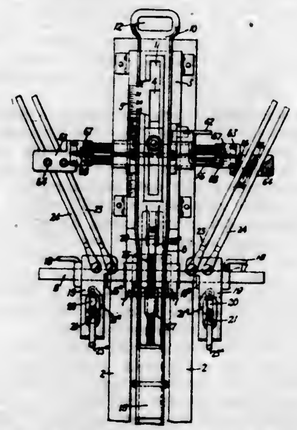


1. A valve for steam boilers comprising a metallic casing, a valve seat in said casing, an open ended tubular extension adjacent said seat, a valve rod slidably mounted in said casing and carrying a metal valve head slidably mounted in said extension and adapted to rest upon said seat to form a steam tight closure, said extension protecting the seat-contacting portion of said valve head from being wire-drawn by the action of the fluid within the boiler when the valve is open and having openings therein to permit the fluid to pass behind the valve head when the valve is open, and means for operating said valve.

2. A valve for steam boilers comprising a metallic casing, a flaring valve seat in said casing, an open ended tubular extension adjacent said seat, a valve rod slidably mounted in said casing and carrying a solid metal valve head slidably mounted in said extension, said valve head having a conical portion adapted to rest upon said seat to form a steam tight closure, said extension protecting the conical portion of the valve head from being wire-drawn by the action of the fluid within the boiler and having openings therein to permit the fluid to pass behind the valve head when the valve is open, and means for operating said valve.

3. A blow-off valve for steam boilers comprising an outer casing, a metallic inner casing fitting within said outer casing, a chamber formed between said inner and outer casing and having an outlet, said inner casing having openings therein communicating with said chamber, a valve seat in said inner casing, an open ended tubular extension integral with said inner casing and disposed adjacent said valve seat, a valve rod slidably mounted in said inner casing and carrying a metal valve head slidably mounted in said extension for engagement with said seat to form a steam tight closure, said extension preventing the seat contacting portion of the valve head from being wire-drawn under the action of the fluid within the boiler and having openings therein to permit the fluid to pass behind the valve head, when the valve is open, into said inner casing and through the openings therein into said chamber, and means for operating said valve.

1,153,844. COIL-FORMING APPARATUS. MICHAEL SANDFIELD, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 1, 1912. Serial No. 674,805. (Cl. 153—20.)



1. A coil former comprising relatively movable hinge-connected members, side clamps adjustably secured to the respective members, pivotally mounted end clamps which are independently adjustable relative to the hinge-connected members, and means for adjusting one of said side clamps transversely of the member to which it is secured.

2. A coil former comprising a vertical plate or frame, a lever pivotally connected thereto, side clamps one of which is supported on the plate or frame and the other of which is both longitudinally and transversely adjustable relative to the lever, and end clamps independently adjustable relative to the hinge-connected members.

3. A coil former comprising a vertical plate or frame, a casting or bracket secured thereto, a lever pivotally secured to the casting or bracket, side clamp members adjustably secured to the plate or frame and to the lever, opposing end clamps pivotally and adjustably supported at the pivotal axis of the lever, and means for adjusting one of the side clamps transversely of the member on which it is mounted.

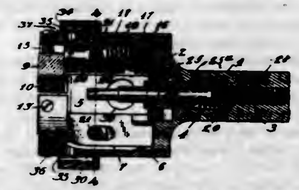
4. A coil former comprising relatively movable hinge-connected members, a side clamp adjustably secured to one of the members, a carriage adjustably secured to the other member, a second side clamp mounted on the carriage and transversely adjustable thereon relative to the member on which it is mounted.

5. A coil former comprising relatively movable hinge-connected members, a side clamp adjustably secured to one of the members, a carriage block adjustably secured to the other member, a second side clamp mounted on the carriage and transversely adjustable thereon relative to the member on which it is mounted and end clamps independently adjustable relative to the hinge-connected members.

[Claim 6 not printed in the Gazette.]

1,153,345. THREADING DEVICE. CHARLES F. SCHULTIS, Cleveland, Ohio, assignor to Christian Girl, Cleveland, Ohio. Filed Apr. 10, 1911. Serial No. 620,102. (Cl. 10—97.)

1. In a device of the character specified, the combination of a pair of die-carrying members, supports therefor, a pivotal connection between each member and its support, means operating to automatically separate the die-carrying portion of said members, and rotatable means for resetting said members, said resetting means being freely rotatable in either direction without obstruction and adapted when rotated in either direction to reset said members.



2. In a device of the character set forth, the combination of a head, levers pivotally supported within said head, dies carried by said levers, means tending to separate the die-carrying portions of said levers, and a ring rotatably mounted on said head and having means arranged when rotated in either direction to engage the outer portions of said levers to move them inwardly or toward each other, said ring being fully rotatable in either direction after the movement of said levers to inward position.

3. In a device of the character set forth, the combination of a head adapted to be secured to the live spindle of a power tool, die-carrying members supported by said head, means tending to separate said members, and means carried by said head and adapted to move said members inwardly or toward each other, said last means being operable during the rotation of the head.

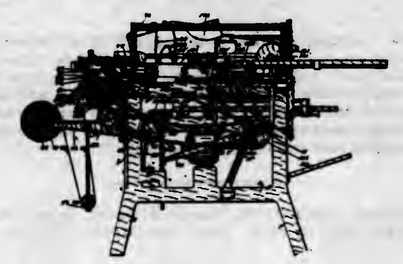
4. In a device of the character set forth, the combination of a head, levers pivotally supported by said head and having inclined portions ending in narrow apices, means tending to separate the outer or die-carrying portions of said levers, a ring rotatably mounted on said head, rollers carried by said ring and adapted to engage the inclined portions of said levers, whereby the relative rotary movement between the head and the ring in either direction will move the outer or die-carrying portions of the levers toward each other, and spring operated means for retaining the levers in inward position.

5. In a device of the character set forth, the combination of a head, a shell inclosing the rear portion of said head, a ring rotatably mounted on said head in front of said shell and projecting beyond the front of said head, levers pivotally supported by said head and projecting beyond the front end of the same, the peripheral portions of said levers being inclined laterally in both directions, dies carried by said levers, means tending to separate the front ends of said levers, engaging devices carried by said ring and adapted to engage the inclined portions of the levers and force the same inwardly or toward each other, and spring operated means for retaining the levers in inward position, said ring being freely rotatable after the locking of the levers.

[Claims 6 to 10 not printed in the Gazette.]

1,153,346. PAPER FEED AND CUT-OFF MEANS. ROBERT J. SEATOR, Battle Creek, Mich., assignor to Seator Machine Mfg. Company, Battle Creek, Mich., a Corporation of Michigan. Filed Nov. 15, 1913. Serial No. 801,268. (Cl. 164—49.)

1. In an automatic paper feed and cut-off, the combination of a paper roll; feed rolls; clutch means to actuate said feed rolls intermittently; a knife mechanism comprising a knife, a suitable carrier bar therefor, springs for urging the knife downwardly into action, a rock shaft with arms connected to said knife carrier, and an actuating arm on said rock shaft for controlling the knife mechanism; a slotted bar disposed to cooperate with said knife over which the paper is fed; a cam for acting upon the said controlling arm of the said rock shaft; a cam shaft for carrying the said cam; a clutch means to drive said cam shaft, comprising a driving gear having a pivoted dog with a beveled portion, a driven gear with a lug disposed to be engaged by said dog; a beveled trip block carried by said knife rock shaft, with spring to elevate the same; a trip lever with a pin for holding the said trip block in depressed position; a clutch arm on the said rock shaft with a wedge or cam disposed and connected to control the clutch for the paper feed and throw the same into gear while the knife is in the elevated position and throw it out of gear when knife is down; and a brake connected to the said clutch arm to control and stop the feed rolls, all co-acting substantially as described for the purpose specified.



2. In an automatic paper feed and cut-off, the combination of paper feed rolls; clutch means to actuate the paper feed rolls intermittently; a knife mechanism, comprising a knife, springs disposed and connected to urge the knife into action, cam mechanism for raising the said knife and permitting the spring to snap; a clutch means to drive the said cam, comprising a dog and lug normally disengaged from each other, a trip block to hold said clutch parts normally disengaged and adapted to permit the said parts to engage; and connections from the knife mechanism to the paper feed clutch mechanism for throwing the said clutch into gear when the knife is elevated, and to threw the same out of gear when the knife is depressed, co-acting substantially as described for the purpose specified.

3. In an automatic paper feed and cut-off, the combination of paper feed rolls; clutch means to actuate the paper feed rolls intermittently; a knife mechanism, comprising a knife, springs disposed and connected to urge the knife into action, cam mechanism for raising the said knife and permitting the spring to snap; a clutch means to drive the said cam, comprising a dog and lug normally disengaged from each other, a trip block to hold said clutch parts normally disengaged and adapted to permit the said parts to engage; and connections from the knife mechanism to the paper feed clutch mechanism for throwing the said clutch into gear when the knife is elevated, co-acting substantially as described for the purpose specified.

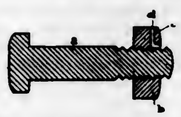
4. In an automatic paper feed and cut-off, the combination of paper feed rolls; clutch means to actuate the paper feed rolls intermittently; a knife mechanism, comprising a knife, springs disposed and connected to urge the knife into action, cam mechanism for raising the said knife and permitting the spring to snap; a clutch means to drive the said cam, a trip to hold said clutch parts normally disengaged and adapted to permit the said parts to engage; and connections from the knife mechanism to the paper feed clutch mechanism for throwing the said clutch into gear when the knife is elevated, coacting substantially as described for the purpose specified.

5. In an automatic paper feed and cut-off, the combination of a paper roll; feed rolls for advancing the same intermittently; a knife mechanism, comprising a serrated knife, a carrying bar therefor, and springs for urging the knife into action; a rock shaft with arms connected to said knife, an actuating arm on said rock shaft; and a cam for acting upon said actuating arm with abrupt angle to elevate the knife against said springs and to permit the

knife to snap and sever the paper, all co-acting for the purpose specified.

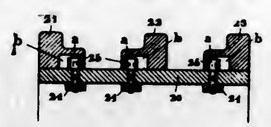
[Claims 6 to 24 not printed in the Gazette.]

1,153,347. NUT-LOCK. GERARD T. SEGEE, Revere, Mass. Filed Apr. 12, 1915. Serial No. 20,603. (Cl. 151—23.)



In combination with a threaded bolt, a coöperating threaded nut having a plurality of its threads channeled transversely and having a radial opening, a locking key of angular form adapted to be inserted in the said opening from the inside of the nut; one arm of said key being located in said channel and the other arm of the key being located within the said radial opening.

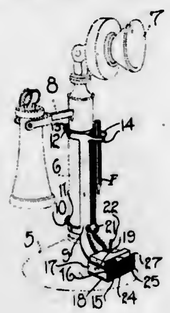
1,153,348. VOID-TIRE. GERARD T. SEGEE, Revere, Mass. Filed Apr. 12, 1915. Serial No. 20,604. (Cl. 94—4.)



1. In combination with a wheel rim, a void tire of annular form mounted on said rim, means for securing the tire against "crawling" on the rim while permitting a limited lateral movement of the tire with respect to the rim.

2. In combination with a wheel rim, a plurality of annular void tire sections mounted upon said rim, each section being formed with chambers that are elongated transversely to the line of movement of the said wheel, and bolts secured to the wheel rim and extending into the said chambers.

1,153,349. ATTACHMENT FOR TELEPHONES. HOWARD R. SMITH, Washington, Pa. Filed Jan. 23, 1915. Serial No. 4,019. (Cl. 240—2.)



1. An attachment of the character described including an elongated body plate transversely curved to fit snugly upon a telephone standard, said body plate being provided upon one of its ends with pencil retaining clip members and having an obliquely disposed base formed upon its other end to extend outwardly and rest upon the telephone base, pad retaining means carried by the base extension of said body plate, and means for clamping said plate upon the standard of the telephone.

2. An attachment of the character described including an elongated sheet metal body plate transversely curved to fit snugly against a telephone standard, said plate being provided at its upper and lower ends with opposed horizontally disposed clamping arms to embrace the standard, laterally extending clip members formed on the upper end of said plate to support a pencil in parallel relation to the standard, and an obliquely disposed outwardly projecting pad receiving base formed upon the lower end of said body plate.

3. An attachment of the character described including a sheet metal body plate transversely curved to fit snugly against a telephone standard, means for removably clamping said plate upon the standard, said plate being provided upon its upper end with laterally projecting spring clip members to receive a pencil and support the same in parallel relation to the standard, an obliquely disposed outwardly extending base formed upon the lower end of said body plate, a housing arranged upon said base, a battery in said housing, an electric light bulb mounted upon the body plate above the base, circuit connections between said bulb and battery, a switch in said circuit, and pad retaining means arranged upon the outer wall of said housing.

4. An attachment of the character described including a body plate provided with means for securing the same upon a telephone standard, a housing on one end of said plate adapted to rest upon the telephone base, pad retaining means on the top wall of said housing, an electric light bulb mounted in the body plate, and supply batteries for said bulb arranged in said housing.

1,153,350. SASH. JOHN A. SMITH, Rochester, N. Y. Filed Nov. 19, 1914. Serial No. 872,948. (Cl. 20—56.4.)



1. A sash having, in combination, a sash-bar or rail rabbeted, on the inner part of its upper surface, so as to produce an outer flange with an inwardly-directed shoulder; and a strip of sheet-metal fitting over said flange and the shoulder thereof, and having an inner margin bent upwardly and parallel with the shoulder so as to provide a channel to receive the edge of a pane of glass, said margin extending higher than the part of the sheet-metal lying on the top of the flange.

2. A sash having, in combination, a sash-bar or rail rabbeted, on the inner part of its upper surface, so as to produce an outer flange with an inwardly-directed shoulder; and a strip of sheet-metal fitting over the outer and upper surfaces of said flange and the shoulder thereof, and having an inner margin bent upwardly and parallel with the shoulder so as to provide a channel to receive the edge of a pane of glass, the outer margin of the sheet-metal being bent inwardly and buried in the outer surface of the sash-bar or rail.

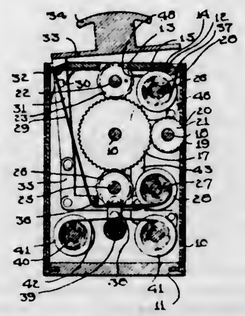
3. A sash having, in combination, an integral sash-bar or rail rabbeted, on the inner part of its upper surface, so as to produce an outer flange with an inwardly directed shoulder; a strip of sheet-metal fitting over the outer and upper surfaces of said flange and the shoulder thereof, the outer edge of the metal being fastened to the outer surface of the sash-bar or rail, and the inner margin of the sheet-metal being bent upwardly so as to provide a channel to receive the edge of a pane of glass; and means, fixed to the sash-bar or rail, for supporting said inner margin laterally.

4. A sash having, in combination, a sash-bar or rail rabbeted, on the inner part of its upper surface, so as to produce an outer flange with an inwardly-directed shoulder; a strip of sheet-metal fitting over said flange and the shoulder thereof, and having an inner margin bent upwardly and parallel with the shoulder so as to provide a slot to receive the edge of a pane of glass, and a molding-strip fixed to the rabbeted surface of the bar, and recessed, on its outer surface, so as to receive and cover the inner margin of the sheet-metal strip and to produce an outwardly-projecting flange for engagement with the inner surface of the glass.

5. A sash having, in combination, stiles and a rail or bar rabbeted to produce flanges with inwardly-directed shoulders, the flanges on the stiles being cut away adjacent to the rail or bar, and the flanges on the rail or bar extending into the recesses so provided; and a strip of sheet-metal fitting over the flange on the rail or bar and extending into said recesses.

[Claim 6 not printed in the Gazette.]

1,153,351. HAND-STAMP. MEREDITH G. STANDLEY, Cincinnati, Ohio. Filed Sept. 7, 1912. Serial No. 719,075. (Cl. 101—161.)

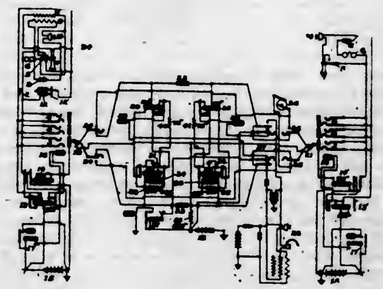


1. A hand stamp of the class described comprising a casing, type wheels carried by said casing, ribbon rollers carried by said casing the ribbon carried thereby passing over said type wheels, recording strip-supporting rollers carried by said casing, a platen roller positioned below one of said printing rollers, and means supporting said platen roller for drawing the same into engagement with one of said printing rollers for causing an impression to be made upon said recording sheet.

2. A stamp of the class described comprising a casing, a plurality of ribbon supporting rollers carried thereby, a plurality of guiding rollers carried by the top of said casing, a guiding roller carried near the bottom of said casing, said ribbon passing over said guiding rollers, ratchet means for turning said ribbon rollers, a stamping platen, arms supporting said stamping platen, a bell crank frame pivotally secured to said casing and engaging said arms, depending links secured to said bell crank lever, a platen roller secured to said depending links, a printing roller carried by the top of said casing and adjacent the bottom of said casing above said platen roller, record strip supporting rollers carried near the bottom of said casing, and said stamping platen adapted to cause said platen roller to be drawn up into engagement with said printing roller as said stamping platen is compressed upon said casing.

3. A device of the class described comprising a casing, a plurality of indicating disks carried by one side of said casing, a printing disk carried by the upper end of said casing, a printing disk carried near the lower end of said casing, an inking ribbon for the printing disks carried by said casing, inking ribbon guiding rollers positioned upon said casing, said inking ribbon passing over said rollers and in front of said upper printing disk, a stamp platen, arms supporting said stamp platen, bell crank levers pivotally secured to the sides of said casing and capable of being swung thereon, a platen roller secured below said bell crank levers, a recording sheet passing over said platen roller, said platen roller adapted to be drawn up in engagement with said printing disk carried near the lower end of said casing as said hand platen is compressed upon said casing, and means coöperating with said guiding rollers for automatically causing the ribbon to wind in an opposite direction.

1,153,352. TELEPHONY. AUGUST W. STEINKE, Fort Dodge, Iowa, assignor to Monarch Telephone Manufacturing Company, Fort Dodge, Iowa, a Corporation of Iowa. Filed Oct. 21, 1914. Serial No. 867,895. (Cl. 179—58.)



1. A telephone exchange system including a plurality of telephone lines extending from substations to an exchange, said substations being provided with magneto wave form current generators for transmitting signaling current over such telephone lines to the exchange; a plurality of common battery telephone lines; jacks at the exchange provided for said telephone lines to enable the establishment of connection therebetween; a cord circuit provided with plugs at its ends for connection with said jacks; two serially related resistances normally in bridge of the cord circuit; a ground connection between said resistances; a clearing out magnet connected between the ground and one side of the cord circuit; a relay, which is responsive to direct current but is unresponsive to magneto current, connected between said ground and the other side of the cord circuit, this relay having armature switching mechanism serving, when idle, to bring the aforesaid resistances into serial relation and, when actuated, to exclude the resistance that is included between said ground and the side of the cord circuit opposite that with which the relay is connected; a common battery for the common battery lines and having a ground complemental to the aforesaid ground; and a local circuit including the grounded common battery, the engaging contacts of the jack of an employed common battery line and the plug received by this jack, the aforesaid relay, and the resistance that is connected with that side of the cord circuit with which the relay is connected, upon the establishment of which local circuit said relay is energized.

2. A telephone exchange system including a plurality of telephone lines extending from substations to an exchange, said substations being provided with magneto wave form current generators for transmitting signaling current over such telephone lines to the exchange; a plurality of common battery telephone lines; jacks at the exchange provided for said telephone lines to enable the establishment of connection therebetween; a cord circuit provided with plugs at its ends for connection with said

jacks; two serially related resistances normally in bridge of the cord circuit; a ground connection between said resistances; a clearing out magnet connected between the ground and one side of the cord circuit; a relay, which is responsive to direct current but is unresponsive to magneto current, connected between said ground and the other side of the cord circuit, this relay having armature switching mechanism serving, when idle, to bring the aforesaid resistances into serial relation and, when actuated, to exclude the resistance that is included between said ground and the side of the cord circuit opposite that with which the relay is connected; a common battery for the common battery lines and having a ground complemental to the aforesaid ground; and a local circuit including the grounded common battery, the engaging contacts of the jack of an employed common battery line and the plug received by this jack, the aforesaid relay, and the resistance that is connected with that side of the cord circuit with which the relay is connected, upon the establishment of which local circuit said relay is energized, the relay, when inert, serving to exclude the common battery from a magneto line to which the relay has become individual.

3. A telephone exchange system including a plurality of telephone lines extending from substations to an exchange, said substations being provided with magneto wave form current generators for transmitting signaling current over such telephone lines to the exchange; a plurality of common battery telephone lines; jacks at the exchange provided for said telephone lines to enable the establishment of connection therebetween; a cord circuit provided with plugs at its ends for connection with said jacks; two serially related resistances normally in bridge of the cord circuit; a ground connection between said resistances; a clearing out magnet connected between the ground and one side of the cord circuit; a relay, which is responsive to direct current but is unresponsive to magneto current, connected between said ground and the other side of the cord circuit, this relay having armature switching mechanism serving, when idle, to bring the aforesaid resistances into serial relation and, when actuated, to exclude the resistance that is included between said ground and the side of the cord circuit opposite that with which the relay is connected; a common battery for the common battery lines and having a ground complemental to the aforesaid ground; a local circuit including the grounded common battery, the engaging contacts of the jack of an employed common battery line and the plug received by this jack, the aforesaid relay, and the resistance that is connected with that side of the cord circuit with which the relay is connected, upon the establishment of which local circuit said relay is energized; and line relays for the common battery lines which are also adapted for inclusion each in the local circuit that may be established in conjunction with its common battery line.

4. A telephone exchange system including a plurality of telephone lines extending from substations to an exchange, said substations being provided with magneto wave form current generators for transmitting signaling current over such telephone lines to the exchange; a plurality of common battery telephone lines; jacks at the exchange provided for said telephone lines to enable the establishment of connection therebetween; a cord circuit provided with plugs at its ends for connection with said jacks; two serially related resistances normally in bridge of the cord circuit; a ground connection between said resistances; a clearing out magnet connected between the ground and one side of the cord circuit; a relay, which is responsive to direct current but is unresponsive to magneto current, connected between said ground and the other side of the cord circuit, this relay having armature switching mechanism serving, when idle, to bring the aforesaid resistances into serial relation and, when actuated, to exclude the resistance that is included between said ground and the side of the cord circuit opposite that with which the relay is connected; a common battery for the common battery lines and having a ground complemental to the aforesaid ground; a local circuit including the grounded common battery, the engaging contacts of the jack of an employed common battery line and the plug received by this jack, the aforesaid relay, and the resistance that is connected with that side of the cord circuit with which the relay is connected, upon the establishment of which local circuit said relay is energized; and line relays for the common battery lines which are also adapted for inclusion each in the local circuit that may be established in conjunction with its common battery line.

5. A telephone exchange system including a plurality of telephone lines extending from substations to an exchange, said substations being provided with magneto wave form current generators for transmitting signaling current over such telephone lines to the exchange; a plurality of common battery telephone lines; jacks at the exchange provided for said telephone lines to enable the establishment of connection therebetween; a cord circuit provided with plugs at its ends for connection with said jacks; two serially related resistances normally in bridge of the cord circuit; a ground connection between said resistances; a clearing out magnet connected between the ground and one side of the cord circuit; a relay, which is responsive to direct current but is unresponsive to magneto current, connected between said ground and the other side of the cord circuit, this relay having armature switching mechanism serving, when idle, to bring the aforesaid resistances into serial relation and, when actuated, to exclude the resistance that is included between said ground and the side of the cord circuit opposite that with which the relay is connected, said magnet and relay being in serial relation with each other and with said resistances; a common battery for the common battery lines and having a ground complemental to the aforesaid ground; and a local circuit including the grounded common battery, the engaging contacts of the jack of an employed common battery line and the plug received by this jack, the aforesaid relay, and the resistance that is connected with that side of the cord circuit with which the relay is connected, upon the establishment of which local circuit said relay is energized.

[Claims 6 to 19 not printed in the Gazette.]

1,153,353. BATCH FOR SEMI-OPAQUE, SEMI-TRANSLUCENT GLASS. HENRY C. STIEFEL, Pittsburgh, Pa., assignor of one-half to Alexander M. Neeper, Pittsburgh, Pa. Filed July 23, 1914, Serial No. 852,730. Renewed July 10, 1915. Serial No. 39,173. (Cl. 49—90.)

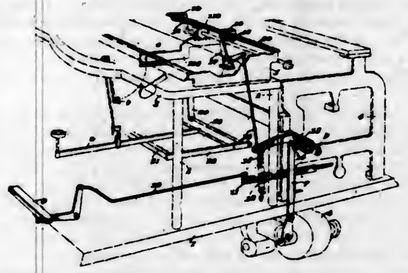
1. A batch for a semi-opaque, semi-translucent glass, consisting of a foundation batch to produce a crystal glass, in combination with phosphate of magnesia and additional ingredients comparatively inert and neutral to the foregoing ingredients of said batch, which upon the fusion thereof evolve gases which in passing off keep said batch, while in a fused condition, in a condition of ebullition.

2. A batch for a semi-opaque, semi-translucent glass, consisting of a foundation batch to produce crystal glass, one of whose ingredients is nitrate of lime, in combination with phosphate of magnesia and additional ingredients comparatively inert and neutral to the foregoing ingredients of said batch, which upon the fusion thereof evolve gases which in passing off keep said batch, while in a fused condition, in a condition of ebullition.

3. A batch for semi-opaque, semi-translucent glass, consisting of the following ingredients in substantially the following quantities by weight: sand, 60 parts; soda ash, 15 parts; lead oxid, 15 parts; nitrate of lime, 3½ parts; phosphate of magnesia, 3½ parts; carbonate of magnesia, 3½ parts; alum 3½ parts.

4. A batch for semi-opaque, semi-translucent glass, consisting of the following ingredients in substantially the following quantities by weight: sand, 60 parts; soda ash, 15 parts; lead oxid, 15 parts; nitrate of lime, 3½ parts; phosphate of magnesia, ½ part to 3½ parts; carbonate of magnesia, 3½ parts; alum 3½ parts.

1,153,354. CARRIAGE-SHIFTING MECHANISM FOR CALCULATING-MACHINES. OTTO THIEME, St. Louis, Mo., assignor to Moon Hopkins Billing Machine Company, St. Louis, Mo., a Corporation of Missouri. Filed June 4, 1912. Serial No. 701,518. (Cl. 235—63.)



1. In a calculating machine, the combination of a movable paper supporting carriage, an adding mechanism, printing type for printing numerals, means for spacing the carriage whereby said numerals are printed in different columns, means for placing said printing type in control of said adding mechanism to add the numerals of certain columns, and means operated by said numeral printing mechanism for back spacing the carriage after a numeral in a certain column has been printed.

2. In a calculating machine, the combination of a laterally movable paper carriage for supporting a sheet of paper to be printed upon, type writing mechanism for printing words and characters on said paper, adding mechanism including a number printing mechanism for printing numerals on said sheet of paper in different columns and alongside of the typewritten characters, an escapement mechanism for the carriage, automatic tabulating mechanism coöperating with said escapement mechanism to column-space the paper, back spacing mechanism, and means for operating the adding mechanism, said number printing mechanism, tabulating mechanism, and back spacing mechanism.

3. In a calculating machine, the combination of a laterally movable paper carriage for supporting a sheet of paper to be printed upon, adding mechanism including a number printing mechanism for printing numerals on said sheet or paper in different columns, an escapement mechanism for the carriage, automatic tabulating mechanism to column space the paper, means for operating the adding mechanism, said number printing mechanism, and said tabulating mechanism after printing in certain of said columns, and means for back spacing the carriage after a certain column has been printed in, said back spacing mechanism returning the carriage the same distance it has been advanced as a result of successive operations of the number printing mechanism.

4. In a calculating machine, the combination of a shiftable paper carriage, adjustable elements thereon, accumulating mechanism, means for operating said accumulating mechanism, and means operated by said operating means for coöperating with said adjustable elements for differentially back-spacing the carriage in two or more laterally different positions.

5. In a calculating machine, the combination of a shiftable paper carriage supporting a sheet of paper to be printed upon, number-printing mechanism, a motor, a key for controlling said motor whereby said number-printing mechanism is rendered effective, and means controlled by said key for differentially back-spacing the carriage a predetermined distance regardless of the number of digits in a number printed.

[Claims 6 to 15 not printed in the Gazette.]

1,153,355. RAIN-GAGE. WILLIAM E. TREDWAY, Blackwell, Okla., assignor to William R. Fretz, and Grover W. Collinson, Arkansas City, Kans. Filed Sept. 15, 1914. Serial No. 861,886. (Cl. 73—151.)



1. An apparatus of the class described comprising a housing, an indicating tube mounted thereon, means for closing the ends thereof, there being an opening extending through the upper end of said tube, a rain water collecting receptacle communicating with the opening in said tube end, and an overflow pipe disposed within said tube.

2. In an apparatus of the class described, the combination of a closed tube, a rain water receiving receptacle in communication therewith, there being graduated upon the said tube, the said scale functional of the ratio of the cross sectional areas of said tube and said collecting receptacle, and an overflow pipe extending through said indicating tube and preventing the rise of liquid therein above a certain level.

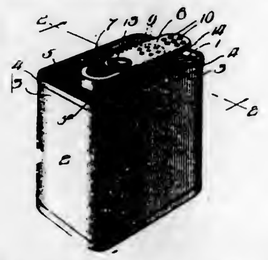
3. In an apparatus of the class described, the combination of a rain water collecting receptacle, an indicating tube in communication therewith, means for determining the height of liquid within said tube, caps secured to the upper and lower extremities of said tube, and an overflow pipe extending through the said tube engaging the said caps and holding the said caps to the ends of said tube, said overflow pipe preventing the rise of liquid within said tube above a certain level.

4. In an apparatus of the class described, the combination of a supporting stand, a tube positioned thereon and extending thereabove, caps secured to the ends of said tube, an overflow pipe extending through said tube engaging said caps and holding the same rigidly in place, a vessel disposed within said stand in communication with said overflow pipe, standards rigidly secured to said base and positioned upon opposite sides of said tube, scales and indicating devices carried by said standards, an upper cap extending across said tube and standards and locking the said tube to said standards, and a rain water receiving receptacle in communication with the said tube.

1,153,356. SIFTER-TOP CLOSURE. FRED C. TRUESBURY, Rockford, Ill., assignor to J. L. Clark Manufacturing Company, Rockford, Ill., a Corporation of Illinois. Filed Jan. 21, 1914. Serial No. 813,361. (Cl. 221—62.)

1. In a container, a sheet-metal top having an integral perpendicular flange extending upwardly therefrom and defining an elongated space, a flat horizontal portion integral with the upper edge of said flange and partially closing the space defined by the flange, said horizontal portion defining a relatively large opening and also being provided with a series of sifting apertures, a closure plate overlying the upper edge of said flange and said horizontal portion and having a series of sifting apertures arranged

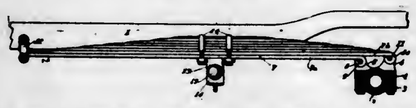
to register at times with the other series of apertures, the portions of the flange at opposite sides of said space being straight and parallel and each of said portions of the flange being provided with an indentation of less width than the height of the flange to form longitudinal guideways, and depending flanges on the opposite straight edges of said closure plate having their edges bent inwardly to engage said guideways, whereby the closure plate will be guided for rectilinear sliding movement to uncover said relatively large opening or to bring said two series of sifting apertures into register.



2. In a container, a top having a relatively large elongated aperture, a closure mounted on said top to slide rectilinearly lengthwise of said aperture, said top having a row of comparatively small apertures therethrough adjacent to and substantially parallel with said large aperture, said closure having a corresponding row of small apertures arranged to register with the row in the top, said closure being slidable to bring the two rows of apertures into registry and also being movable to uncover the large elongated aperture.

3. In a container, a sheet metal top having an integral elevated portion of elongated shape consisting of a flange and a horizontal portion at the upper edge of the flange, there being a relatively large elongated opening alongside said horizontal portion, and the latter having a row of comparatively small apertures running parallel to the longer dimension of said large opening, the said flange at opposite sides of the elevated portion being straight and parallel and being bent to provide guideways, a closure plate overlying said elevated portion, and depending flanges at opposite sides of said plate engaging said guideways, whereby the plate will be slidable rectilinearly lengthwise of said elongated portion, the plate having a row of small apertures adapted to register with the apertures in the horizontal part of said elevated portion.

1,153,357. VEHICLE-SPRING. JOHN G. UTZ, Cleveland, Ohio, assignor to The Perfection Spring Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 13, 1914. Serial No. 831,410. (Cl. 21—50.)



1. The combination, with a vehicle body frame and axle, of a spring connected at one end to the axle and at its opposite end to the frame, means pivotally connecting the central portion of the spring to the frame, and means for limiting the rotary movement of the spring about such pivot.

2. The combination, with a vehicle body frame and axle, of a spring connected at one end to the axle and at the other end to the frame, means pivotally connecting the central portion of the spring to the frame, and means cooperating with such pivotal connection for positively limiting the rotary movement of the spring about its pivot in both directions.

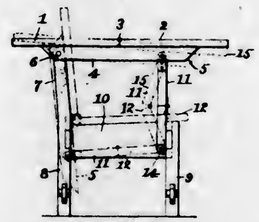
3. The combination, with a vehicle body frame and axle, of a spring, means connecting one end of said spring to the axle, means connecting the opposite end of the spring to the said frame, a pivotal connection between the central portion of the spring and the frame, said connection including a bracket having a pin, a spring seat rotatably mounted on the pin, and means associated with the spring seat and the pin whereby the rotary movement of the seat with reference to the pin is limited.

4. The combination, with a vehicle body frame and axle, of a spring, means connecting one end of said spring to the axle, means connecting the opposite end of the spring to the said frame, a pivotal connection between the central portion of the spring and the frame, and means associated with such connection whereby the rotary movement of the spring is limited in both directions from its normal position.

5. The combination, with a vehicle body frame and axle, of a spring, means connecting one end of the spring to the axle, means connecting the opposite end of the spring to the frame, a spring seat connected to the central portion of the spring, a support carried by the frame on which said seat is rotatably mounted, said seat having one end thereof provided with one or more segmental recesses, and a member carried by the pin having one or more projections adapted to enter said recess or recesses, each projection being of less angular extent than its coöperating recess.

[Claims 6 and 7 not printed in the Gazette.]

1,153,358. FURNITURE. EDWARD W. VAILL, Jr., Oradell, N. J. Filed Oct. 21, 1914. Serial No. 867,688. (Cl. 155—6.)



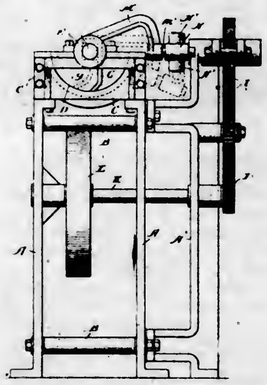
1. An article of furniture, comprising two leaves hinged together, means for maintaining the same in one plane, a frame having uprights on which one of said leaves is pivoted, supports between said frame and said means, and devices connecting said means and said frame with said leaves in two positions, to extend said leaves to form a table top, and to lock said leaves in angular relation as a back and seat.

2. An article of furniture, comprising two leaves hinged together, means for maintaining the same in one plane, a frame having uprights on which one of said leaves is pivoted, and collapsible supports pivoted to said frame and to said means to cause said leaves to form a table top, and adapted to lock said pivoted leaf upright in angular relation to said other leaf to form a back and seat.

3. An article of furniture, comprising two leaves hinged together, means for maintaining the same in one plane, a frame having uprights on which one of said leaves is pivoted and intermediately hinged bars pivoted to said frame and to said means and adapted when in alinement to support said leaves to form a table top and to lock said pivoted leaf upright in angular relation to the other leaf to form a back and seat.

4. An article of furniture, comprising two leaves hinged together, strips fixed to one of said leaves and adapted to maintain said leaves in one plane, a frame having uprights on which the first named leaf is pivoted, and laterally hinged bars forming toggle joints and pivoted to said frame and said strips, and adapted when extended to support said leaves to form a table top and to lock said pivoted leaf upright in angular relation to the other leaf to form a back and seat.

1,153,359. DOUGH-ROUNDING-UP MACHINE. FRANK H. VAN HOUTEN, Jr., Fishkill-on-the-Hudson, N. Y., assignor to Dutchess Tool Company, Fishkill-on-the-Hudson, N. Y., a Corporation of New York. Filed Mar. 20, 1913. Serial No. 755,649. (Cl. 107—9.)



1. In a dough rounding up machine, the combination of a dough trough forming a receptacle in which dough masses are worked, a dough working member within the receptacle shaped to lift the dough masses from the walls of the trough during the working of the dough and thereby impart a substantially rotary movement to the dough mass on an axis approximately parallel with the longitudinal axis of the trough, and means for moving the dough working member both angularly and longitudinally with respect to the trough, whereby the dough masses are molded and shaped by the contact of surfaces moving simultaneously in different directions.

2. In a dough rounding up machine, the combination of a dough trough forming a receptacle in which dough masses are worked, a blade extending longitudinally of the trough and shaped to lift the dough surfaces from the walls of the trough during the working of the dough and thereby impart a substantially rotary movement to the dough mass on an axis approximately parallel with the longitudinal axis of the trough, and means for moving said blade angularly and longitudinally in a circulatory path for working the dough and advancing the same longitudinally in the trough, whereby the dough masses are molded and shaped by the contact of surfaces moving simultaneously in different directions.

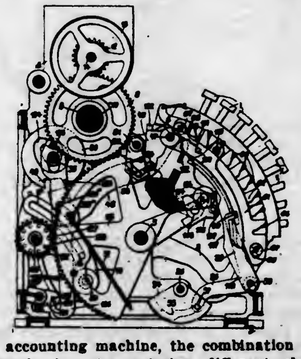
3. In a dough rounding up machine, the combination of a dough trough forming a receptacle in which dough masses are worked, a long blade mounted on an axis coincident with the axis of the trough and shaped to impart a lifting and simultaneously rotary movement to the dough masses during the working of the dough, the edge of said blade being in proximity with the inner face of the trough, and means for imparting simultaneous oscillatory and reciprocatory movements to the blade whereby its edge is caused to travel in a circulatory path, and the dough is simultaneously advanced longitudinally in the trough and imparted a substantially rotary movement about an axis approximately parallel with the longitudinal axis of the trough.

4. In a dough rounding up machine, the combination of a semi-cylindrical trough forming a receptacle in which dough masses are worked, a shaft supported in such manner that its axis is coincident with the axis of the trough, a blade carried by said shaft, movable angularly and longitudinally of the axis, means for imparting simultaneous angular and longitudinal movements to the blade, which acts to advance the dough mass longitudinally in the trough and simultaneously to lift it away from the surface of the trough with a rotary movement about an axis approximately parallel with the longitudinal axis of the trough.

5. In a dough rounding up machine, the combination of a semi-cylindrical trough, forming a receptacle in which dough masses are worked, a blade mounted on an axis coincident with the axis of the trough and movable angularly and longitudinally therein with its edge in proximity to the inner face of the trough to act as a scraper for lifting the dough mass away from the surface of the trough during the working of the dough, a rotary crank shaft and connections intermediate said crank shaft and blade for imparting both angular and longitudinal movements to the blade by which the blade is advanced in the trough in a circulatory path for working the dough longitudinally and simultaneously lifting it vertically with a rotary movement about an axis substantially parallel with the longitudinal axis of the trough.

[Claims 6 to 10 not printed in the Gazette.]

1,153,360. MULTIPLE CASH-REGISTER. EDWARD J. VON PEIN, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Sept. 2, 1911. Serial No. 647,366. (Cl. 235—3.)



1. In an accounting machine, the combination with an operating mechanism for entering different classes of transactions therein, of means for determining the class of transaction to be entered in the accounting machine by said operating mechanism, a check issuing mechanism, and devices adjustable at will and coöperating with the determining means for controlling the check issuing mechanism.

2. In an accounting machine, the combination with an operating mechanism for entering different classes of transactions therein, of means for determining the class of transaction to be entered in the accounting machine by said operating mechanism, a normally inoperative check issuing mechanism, and devices adjustable at will and cooperating with the determining means for rendering the check issuing mechanism operative.

3. In an accounting machine, the combination with an operating mechanism for entering different classes of transactions therein, of means for determining the class of transaction to be entered in the accounting machine by said operating mechanism, a check issuing mechanism, and detachable devices coöperating with the determining means for controlling the check issuing mechanism.

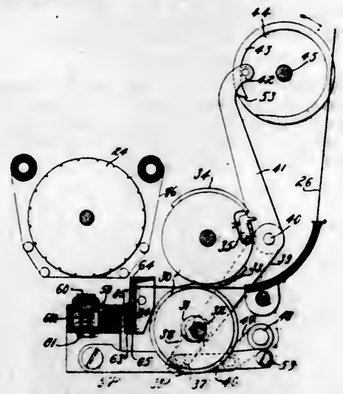
4. In an accounting machine, the combination with type carriers for recording different classes of transactions upon a record strip and a check strip, of normally inoperative mechanism for issuing and severing the latter strip into checks, means for determining the class of transactions to be recorded upon the record and check strips, and devices adjustable at will and coöperating with the determining means for rendering the check issuing and severing mechanism operative.

5. In an accountable machine, the combination with type carriers for recording different classes of transactions upon a record strip and a check strip, of mechanism for issuing and severing the latter strip into checks, means

for determining the class of transaction to be recorded upon the record and check strips, and devices adjustable at will and cooperating with the determining means for enabling and disabling the check issuing and severing mechanism.

[Claims 6 to 81 not printed in the Gazette.]

1,153,361. CASH-REGISTER. JULES VUILLAUME and FRITZ MAERBACH, Paris, France, assignors to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Dec. 18, 1911. Serial No. 666,432. (Cl. 235—3.)



1. In a machine of the class described, the combination with a type carrier, of an operating device, with means for giving it movement of variable extents, and a platen given invariable movements against said type carrier by the variable movements of said operating device, whereby to take a plurality of impressions from said type carrier on a record material.

2. In a machine of the class described, the combination with a type carrier, of a variably movable frame and a platen yieldingly mounted on said frame for taking a plurality of impressions from said type carrier upon a check strip, and an operating mechanism for said platen frame.

3. In a machine of the class described, the combination with a type carrier, of a platen invariably movable for taking a plurality of impressions therefrom upon a check strip, a variably movable operating mechanism for said platen, and means for feeding the check strip between the taking of impressions thereon.

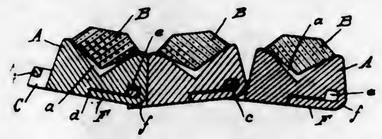
4. In a machine of the class described, the combination with a type carrier, of a variably movable frame and a platen yieldingly mounted on said frame for taking a plurality of impressions upon a check strip from said type carrier, an operating mechanism for said platen frame, and means for feeding the check strip between the taking of impressions thereon.

5. In a machine of the class described, the combination with a type carrier, of a platen invariably movable for taking a plurality of impressions therefrom upon a check strip, a variably movable operating mechanism for said platen, and means controlled by the operating mechanism for severing the check strip when the said mechanism receives its greatest degree of movement.

[Claims 6 to 21 not printed in the Gazette.]

1,153,362. CHAIN. JOHN C. WACHA, Providence, R. I., assignor to George H. Caboone Company, a Corporation of Rhode Island. Filed May 17, 1915. Serial No. 28,527. (Cl. 59—78.)

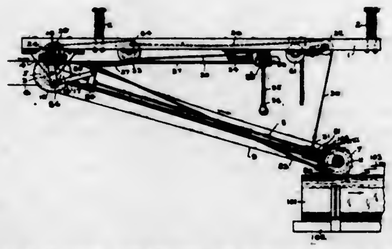
1. A non-expansible chain comprising a plurality of units, each unit consisting of a body, lugs upon one end of the body, a bar connecting the lugs, said body being provided with a transverse channel near its opposite end adapted to receive the bar of an adjacent unit, and an arm upon the first unit adjacent the channel flush with the body embracing said rod.



2. A non-expansible chain comprising a plurality of units, each unit consisting of a body, lugs upon one end of the body, a bar integral with the lugs, said body being provided with a recess in its bottom face, a downwardly and rearwardly directed arm upon the other end of the body embracing the bar of the adjacent unit and having its free end seated in the recess.

3. A non-expansible chain comprising a plurality of units, each unit consisting of a body, lugs upon one end of the body, a bar connecting the lugs, said body being provided with a recess in its bottom face and with a transverse channel above the recess adapted to loosely receive the bar of an adjacent unit, and a bendable arm upon the body surrounding the channel with its free end seated in the recess flush with the face of the body.

1,153,363. ROSSER MECHANISM. JOHN A. WEBER, Toledo, Ohio. Filed Jan. 30, 1914. Serial No. 815,421. (Cl. 144—208.)



1. In a rosser mechanism, the combination of a swinging arm, a rosser connected to said arm, a cable secured to one end of the arm to raise and lower said arm, power mechanism having a pulley and a belt for operating the cable, an eccentric having a pulley, a means for rotating the eccentric so as to connect the second pulley frictionally with the belt or with the first pulley and weighted arms connected to the eccentric for yieldingly maintaining the eccentric in an intermediate position.

2. In a rosser mechanism, the combination of a pivoted arm, a rosser connected to the end of the arm, a power mechanism for driving the rosser, means connected to the arm for connecting and disconnecting the power mechanism with the rosser upon rotation of the arm on its pivot a certain degree and for maintaining the driving connection when the arm is located at variable angular relations of a greater degree.

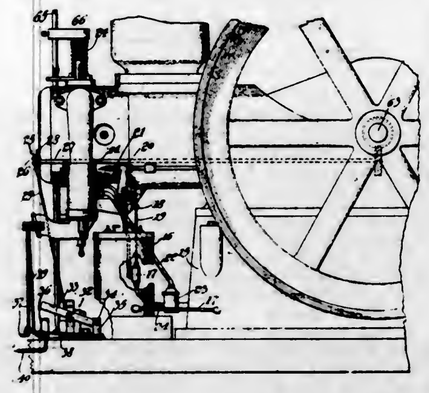
3. In a rosser mechanism, the combination of a pivoted arm, a rosser supported on the free end of the arm, a power mechanism, pulley wheels located on the ends of the arm and a belt for driving the rosser, a clutch mechanism connected to the pivoted end of the arm and means for maintaining the clutch in engagement with the pulley on the pivoted end of the arm upon rotation of the arm to any point beyond a certain degree.

4. In a rosser mechanism, the combination of a pivoted arm, a rosser located on the free end of the arm, a nose located in advance of the rosser, a link mechanism for automatically adjusting the position of the nose with reference to the rosser to regulate the cut of the rosser when working on logs of various sizes, a threaded rod connected to the link mechanism and a threaded wheel for operating the rod.

5. In a rosser mechanism, the combination of a pivoted arm, a rosser located on the free end of the arm, a gage member, a link mechanism for automatically adjusting the position of the gage member with reference to the rosser to regulate the cut of the rosser when working on logs of various sizes, a means for manually adjusting the automatic mechanism.

[Claims 6 to 11 not printed in the Gazette.]

1,153,364. INTERNAL-COMBUSTION ENGINE. WILLIAM F. WARNER, Davenport, Iowa. Filed Dec. 22, 1913. Serial No. 808,056. (Cl. 123—102.)

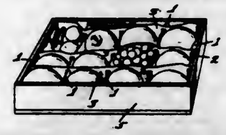


1. An engine equipment for internal combustion engines, comprising, in combination, air heating means, and a movable part controlling the same; spark time-varying means, and a movable part controlling the same; a speed responsive means, operated by the speed of the engine and having a movable part; the first two said movable parts connected with the third said movable part for control thereby to vary the conditions of the air heating means and the spark time-varying means in accordance with the speed of the engine, whereby the said air heating means and spark time-varying means may automatically be controlled for efficient operation of the engine at different speeds of the engine.

2. An engine equipment for internal combustion engines, comprising in combination, compression reducing means, and a movable part controlling the same; air heating means and a movable part controlling the same; spark time-varying means, and a movable part controlling the same; a speed-responsive means, operated by the speed of the engine and having a movable part; the first three said movable parts connected with the fourth said movable part for control thereby to vary the conditions of the compression reducing means, air heating means and a spark time-varying means in accordance with the speed of the engine whereby said compression reducing means, said air heating means and said spark time-varying means may automatically be controlled for efficient operation of the engine at different speeds of the engine.

3. An engine equipment for internal combustion engines, comprising, in combination, air heating means, and a movable part controlling the same; spark time-varying means, and a movable part controlling the same; said devices normally conditioned for efficient starting of the engine; a speed responsive means, operated by the speed of the engine, and having a movable part; the first two said movable parts connected to the third said movable part and automatically operable thereby at a predetermined speed of the engine to control said devices for efficient continued operation of the engine at and above said predetermined speed.

1,153,365. ADJUSTABLE FRUIT-CELL. RICHARD WHEELER, San Francisco, Cal., assignor, by mesne assignments, of seventy-six one-hundredths to H. W. Regan, Vernard O. Davis, and S. D. Merk, Burlingame, Cal. Filed Feb. 3, 1914. Serial No. 816,299. (Cl. 217—30.)



A fruit packing device comprising a series of thin flexible strips each having a plurality of transverse slots formed in the body of the strips distant from the edges thereof and capable of being curved in either of two directions, and a series of narrower strips extending through the slots and upon which latter strips the slotted strips are freely movable.

1,153,366. FASTENER FOR ARTICLES OF WEARING-APPAREL. KATHERINE ELLWOOD ALLPORT, Chicago, Ill. Original application filed May 29, 1908, Serial No. 435,815. Divided and this application filed Apr. 2, 1909. Serial No. 487,588. (Cl. 24—151.)



A fastener composed of a single piece of wire bent to form a substantially triangular structure with a flat spring coil at one of its angles and a securing loop at each of the other angles lying in the plane of the triangular structure, the ends of the wire overlapping between said securing loops, each of said ends having a loop disposed in a plane at substantially right angles with the plane of the triangle, and one of said end loops having a point which normally projects into the opposing end loop.

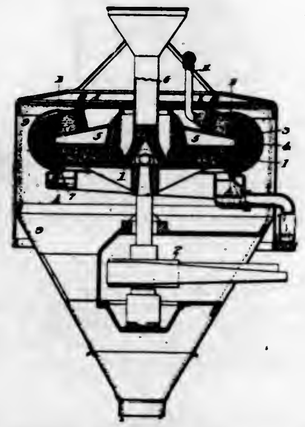
1,153,367. CONTINUOUS-DISCHARGE CENTRIFUGAL MACHINE. JOHN JAMES ARMSTRONG, Honolulu, Hawaii. Filed Jan. 31, 1913. Serial No. 745,358. (Cl. 210—25.)

1. A centrifugal machine for separating liquids and solids, comprising a chamber adapted to throw the material to be treated to the periphery thereof by centrifugal force, a bend in said chamber at the peripheral portion thereof, the outer wall of the peripheral bend being perforated, a casing forming with the outer perforated wall an annular chamber to collect the liquid forced through the perforations of said wall and to back up the liquid in the bend to facilitate the passage of the solid particles therethrough, and a discharge chamber to conduct away the solid particles forced around said bend.

2. A centrifugal machine for separating liquids and solids, comprising a chamber adapted to throw the material to be treated to the periphery thereof by centrifugal force, a bend in said chamber at the peripheral portion thereof, the outer wall of the peripheral bend being perforated, a casing forming with the outer perforated wall an annular chamber to collect the liquid forced through the perforations of said wall, an outlet for the liquid so forced through said perforations so situated with respect to the

outer wall of the bend as to cause a body of liquid to be retained in the bend to facilitate the passage of the solid particles around the bend, and a discharge chamber to conduct away the solid particles forced around the bend.

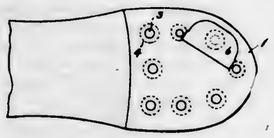
3. A centrifugal machine for separating liquids and solids, comprising a chamber adapted to throw the material to be treated to the periphery thereof by centrifugal force, a bend in said chamber at the peripheral portion thereof in which the liquid collects, a discharge chamber to discharge the solid particles forced around the bend, and means to discharge only the liquid in excess of that which is required to fill said bend.



4. A centrifugal machine for separating liquids and solids, comprising a chamber adapted to throw the material to be treated to the periphery thereof by centrifugal force, a bend in said chamber at the peripheral portion thereof, a discharge chamber extending toward the axis of the machine and adapted to discharge the solid particles forced around said bend, and means to discharge only the liquid in excess of that required to fill said bend.

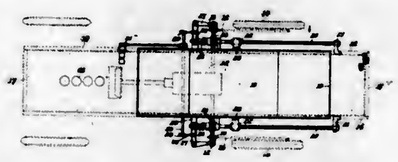
5. A centrifugal machine for separating liquids and solids, comprising a chamber adapted to throw the material to be treated to the periphery thereof by centrifugal force, a bend in said chamber at the peripheral portion thereof, a discharge chamber extending toward the axis of the machine and adapted to discharge the solid particles forced around said bend, the outer wall of the chamber at the bend being perforated, a casing forming with said outer wall an annular chamber to retain the liquid passing through the perforations of said outer wall, and means to discharge only the liquid in excess of that required to fill the bend.

1,153,368. HEEL-PLATE FOR RUBBER HEELS. THOMAS CROXTON BEAZLEY, Richmond, Va.. Filed Jan. 31, 1913. Serial No. 745,365. (Cl. 36—74.)



The combination, in a heel, of a leather heel member, an elastic heel or lift member having vertical openings formed with enlarged horizontally disposed cavities, a flat plate having a lateral curved portion forming a broad wear surface, and formed with vertical arms terminating in horizontal perforated members fitting in the horizontal cavities of the elastic lift, and headed fastenings having their heads arranged in the openings of said elastic lift and passing through the perforations of said horizontal members into the leather heel.

1,153,369. DUMPING-VEHICLE. EINAR J. BAING, Franklin, Pa. Filed July 31, 1911. Serial No. 641,565. (Cl. 21—20.)



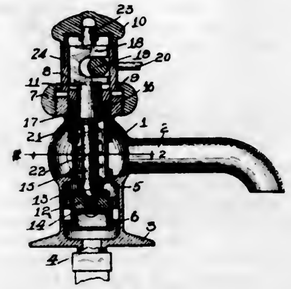
1. In a dumping vehicle, a bottomless hopper, a frame on which said hopper is supported, said frame having a stationary element adapted to form a bottom for the hopper when the latter is in commodity-carrying position, and means for moving the hopper relatively to said element in the direction of length of the frame and in a plane substantially parallel to the frame to gradually remove the commodity-support afforded by the bottom, said means acting to prevent movement of the hopper out of such plane, said frame projecting beyond the rear of the element to form a support for the hopper when in commodity-discharge position.

2. In a dumping vehicle, a bottomless hopper, a wheel frame on which said hopper is supported, said frame having a stationary element adapted to form a bottom for the hopper when the latter is in commodity-carrying position, said element extending to a point in rear of and adjacent to a plane extending vertically through the axes of the rear wheels, and means for moving said hopper rearwardly in a plane substantially parallel to the frame to gradually carry it beyond the rear end of said bottom to gradually remove the commodity-support afforded by the bottom, said frame projecting beyond the rear of the element to form a support for the hopper when in commodity-discharge position, whereby the commodity discharge will be in rear of said wheel axis and within the travel path of the vehicle.

3. The combination with a motor vehicle having a motor, drive wheels, and connections between the motor and wheels to provide movement to the vehicle at will, of a fixed frame on and extending in the direction of length of the vehicle, a bottomless hopper mounted on and movable in the direction of length of said frame and solely in a plane parallel to the frame, said frame having an element adapted to form a bottom for the hopper when the latter is in its commodity-carrying position, and means for operatively engaging said hopper and said connections at will to provide said movements to the hopper, said movements providing an automatic dumping of the hopper within the travel path of the vehicle.

4. The combination with a motor vehicle having a motor, drive wheels, and drive connections between the motor and said wheels to provide movement to the vehicle at will, of a fixed frame on and extending in the direction of length of the vehicle, a bottomless hopper mounted on and movable in the direction of length of said frame and solely in a plane parallel to the frame, said frame having an element adapted to form a bottom for the hopper when the latter is in its commodity-carrying position, and means for operatively engaging said hopper and said connections at will to provide said movements to the hopper, said movements providing an automatic dumping of the hopper within the travel path of the vehicle, the movements of the hopper and of the drive wheels being either concurrent or non-concurrent at will.

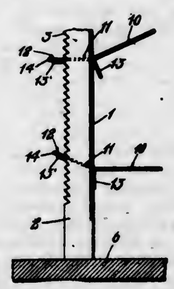
1,153,370. SELF-CLOSING COCK OR FAUCET. ALBERT C. BROWN, Chicago, Ill. Filed Aug. 7, 1911. Serial No. 642,585. (Cl. 137—4.)



1. The combination in a cock or faucet, of a chambered body, a nozzle communicating therewith, a valve seated between the inlet and nozzle, a dash pot below the seat, a valve stem longitudinally adjustable in the body, an apertured immovable sleeve surrounding said stem and extending through and seating on said seat, a closure on said stem to engage and seat on the end of said sleeve and to extend into the dash pot, a casing into which the other end of said valve stem extends, means for engaging the casing and said body, means for moving the stem longitudinally to open the valve, a spring engaging said stem and said sleeve and holding said closure normally seated, and a packing in the body between the inner end of the casing and the upper end of said sleeve and preventing leakage around the stem.

2. The combination in a cock or faucet, of a chambered body, a nozzle communicating therewith, a valve seat between the inlet and nozzle, a dash pot below the seat, a valve stem longitudinally adjustable in the body, an apertured immovable sleeve surrounding said stem and extending through and seating on said seat, a closure on said stem to engage and seat on the end of said sleeve and to extend into the dash pot, a casing into which the other end of said valve stem extends, means engaging the casing and said body, a cam shaft engaging said stem in said casing, a lever thereon for manual actuation to actuate the stem to open the valve, a spring engaging said stem and said sleeve and holding said closure normally seated, and a packing in the body bearing against the inner end of the casing and preventing leakage around the stem.

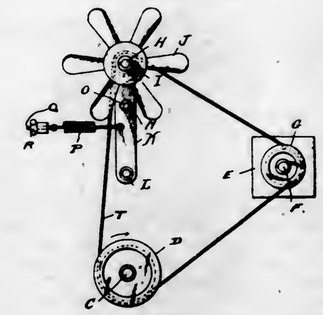
1,153,371. ADJUSTABLE SHELVING. AUGUSTUS A. CARTER, Fayette, Iowa. Filed Sept. 14, 1914. Serial No. 861,615. (Cl. 248—19.)



1. A device of the class described formed of a single substantially rectangular non-resilient sheet metal plate, and comprising a flat substantially rectangular horizontal shelf plate, and a flat substantially rectangular yoke plate inclined upwardly and rearwardly from the rear edge of the shelf plate and having its front edge integrally joined thereto, the side edge portions of said yoke plate being slit rearwardly and longitudinally from the front edge of said plate, to points near the rear edge thereof, and the body of said yoke plate being slit transversely from a point between the ends of one longitudinal slit to such a point between the ends of the other longitudinal slit, the metal in advance of the transverse slit being bent downwardly at right angles to the shelf plate to provide an upright bracing flange, and the metal in rear of said slit being folded downwardly and rearwardly upon the rear edge portion of the yoke plate to reinforce the same.

2. The combination with a vertically adjustable shelf having a laterally extending yoke, of a pair of upright parallel rigid side strips having their flat sides spaced from each other, attaching feet formed integrally with the lower ends of said plates and extending laterally therefrom, teeth on the rear edges of said strips, and an additional upright strip having its upright edges formed integrally with the front edges of the aforesaid strips, the three strips constituting an upright standard to be embraced by the yoke.

1,153,372. POWER-TRANSMISSION MEANS FOR OPERATING DYNAMOS. ALEXANDER CHURCHWARD, Boston, Mass. Filed Jan. 2, 1914. Serial No. 809,956. (Cl. 74—21.)



1. The combination of a power shaft having a pulley, an electric generator provided with a pulley upon the armature shaft, a shaft, a pulley and a fan carried by said shaft, and a belt connecting the said three pulleys.

2. The combination of a power shaft having a pulley, an electric generator having a pulley, a spring actuated support, a pulley and fan journaled to said spring actuated support, and a belt connecting the said three pulleys.

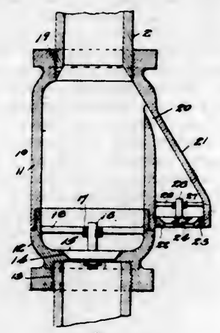
3. The combination of a rotary power shaft having a pulley, an electric generator having a rotary shaft provided with a pulley, a belt connecting said pulleys, and means for interposing a rotary fan pulley resistance upon the interior surface of the belt between said pulleys.

4. The combination of a rotary power shaft having a pulley, an electric generator having a rotary shaft provided with a pulley, a belt connecting said pulleys, and means for interposing a yielding rotary fan pulley resistance upon the interior surface of the belt between said pulleys.

1,153,373. FLUID-ELEVATOR. FRANK C. DEEMER, Brookville, Pa. Filed Mar. 17, 1914. Serial No. 825,262. (Cl. 103—84.)

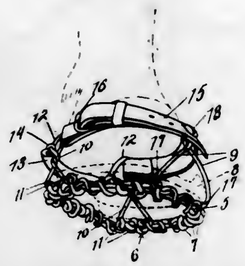
1. The combination with an injector casing having a check valve in its lower open end, the side wall of said casing having an extension with a restricted passage opening into the casing, and a check valve in the lower open end of said extension.

2. The combination with a fluid pressure casing and a liquid eduction pipe therein, of injectors forming part of the eduction pipe having check valves for dividing a column of contained liquid into separate sections, and an



extension to each injector having an opening providing communication for the admission of motive fluid from the casing to each injector, and a check valve in each extension.

1,153,374. TREAD FOR DRAFT-ANIMALS. JAMES HUGH DOLAN, Lee, Mass. Filed Jan. 19, 1915. Serial No. 3,136. (Cl. 168—1.)

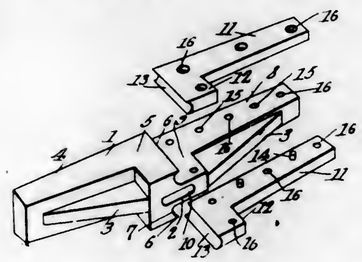


1. A shoe tread for draft animals, comprising a tread chain conforming generally to the shape of the hoof of the animal, a rod conforming generally to the shape of the hoof of the animal and threaded through the links of the tread chain whereby said links are loosely mounted thereon and extend more or less transversely thereof in staggered relation, and means to secure the device upon the hoof.

2. A tread for draft animals, comprising a frame conforming generally to the shape of the hoof of the animal, a tread chain embodying links loosely mounted upon the frame and extending more or less transversely of the frame in staggered relation, a flexible member adapted to encircle the hoof above the frame, and suspension members connecting the frame and the flexible member.

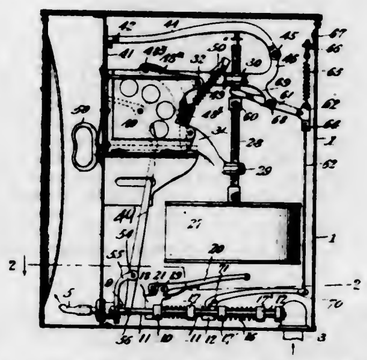
3. A tread for draft animals, comprising a frame conforming generally to the shape of the hoof of the animal, a tread chain embodying links loosely mounted upon the frame, a suspension member connected with certain of the links at the forward end of the frame, spaced suspension members connected with the links at the rear end of the frame, a connecting link secured to the rear suspension members, and a longitudinally adjustable flexible member connecting the rear suspension members and adapted to engage with the forward portion of the hoof and with the forward suspension member.

1,153,375. CONVEYER-BUCKET. ALONZO E. ELLIOTT, Raymond, Wash. Filed Dec. 17, 1913. Serial No. 807,295. (Cl. 193—8.)



A conveyer flight including a body having a reduced portion and opposite shoulders at the butt end of the reduced portion, the faces of the reduced portion being flat to snugly engage within the sides of a chain link, the shoulders being grooved to partially receive the sides of the link, and plates secured to the faces of the reduced portion flush with the respective portions of the body, the inner ends of the plates being grooved to partially receive the sides of the link and coöperating with the aforesaid grooves to embrace the sides of the link.

1,153,376. AUTOMATIC GASOLENE-VENDING APPARATUS. HOMER FOSTER, WILLIAM C. TURNER, CLARENCE E. BENNETT, and WALTER B. LINN, Casey, Ill. Filed Aug. 21, 1914. Serial No. 857,940. (Cl. 221—112.)



1. A gasolene vending apparatus comprising a tank with inlet and exit openings therein, an exit valve, a spring-pressed notched stem fixed to said valve, means for moving the stem to open the exit valve, a float-actuated pawl for engagement with the notch of the stem to hold the valve open, an inlet valve with a spring-pressed stem upon which the same is mounted, means for causing the stems to move together, and float-actuated mechanism for releasing said means to allow the inlet valve to seat independent of the exit valve.

2. A gasolene vending apparatus comprising a tank with inlet and exit openings therein, an exit valve, a spring-pressed notched stem fixed to said valve, means for moving the stem to open the exit valve, a float-actuated pawl for engagement with the notch of the stem to hold the valve open, an inlet valve with a spring-pressed stem upon which the same is mounted, a pivotal releasing lever for causing the stems to move together in one direction, and float-actuated mechanism for operating the releasing lever to allow the inlet valve to seat independent of the exit valve.

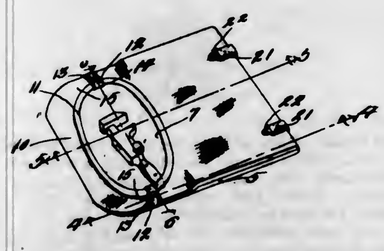
3. A gasolene vending apparatus comprising a tank with inlet and exit openings therein, an exit valve, a spring-pressed notched stem fixed to said valve, means for moving the stem to open the exit valve, a float-actuated pawl for engagement with the notch of the stem to hold the valve open, an inlet valve, a spring-pressed hollow stem upon which the same is mounted and adapted to telescope over the stem upon which the exit valve is mounted, a tilting lever mounted upon the hollow stem and engaging a notch in the other stem, a float within the tank, and means actuated thereby for tilting said releasing lever to allow the inlet valve to seat independent of the exit valve.

4. A gasolene vending apparatus comprising a tank with inlet and exit openings therein, an exit valve, a spring-pressed notched stem fixed to said valve, means for moving the stem to open the exit valve, a float-actuated pawl for engagement with the notch of the stem to hold the valve open, an inlet valve, a spring-pressed hollow stem upon which the same is mounted and adapted to telescope over the stem upon which the exit valve is mounted, a tilting lever mounted upon the hollow stem and engaging a notch in the other stem, a float within the tank, a stem to which the float is attached, a collar upon the float stem, a tilting lever actuated by said collar, and connections between the collar-actuated lever and the releasing lever for allowing the inlet valve to seat independent of the exit valve.

5. A gasolene vending apparatus comprising a tank with inlet and exit openings therein, an exit valve, a spring-pressed notched stem fixed to said exit valve, means for moving the stem to open the exit valve, a spring-pressed pawl adapted to engage the notch in the stem, a member to release said pawl, a float for engagement with said member, an inlet valve, a hollow spring-pressed stem upon which the same is mounted and adapted to telescope over the stem upon which the exit valve is mounted, a pivotal lever mounted upon the hollow stem adapted to engage a notch in the other stem, a stem upon said float, a collar upon the float stem, a pivotal lever in the path of said collar, and a rod pivotally connecting the collar-operating lever and the lever upon said hollow stem.

[Claim 6 not printed in the Gazette.]

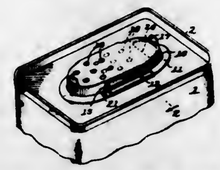
1,153,377. TOOL-BAG FOR AUTOMOBILES. FRANK FOUAT, Fairfield, Iowa. Filed Apr. 8, 1915. Serial No. 19,990. (Cl. 150—52.)



1. A tool bag comprising a single piece of heavy fabric of elongated form folded twice upon itself and having its end edges stitched together, the end portions of the single piece having semi-elliptical cutaway portions, which, when the adjacent end edges are stitched together, form an elliptical shaped opening at one end of the tool bag, the opposite ends and one side of said opening being spaced a short distance from the opposite sides of the bag and one end thereof forming a partial flange, acting to retain the tools adjacent the opening, the adjacent longitudinal edges of the piece being stitched together, said bag being folded adjacent the inner edge of the opening to retain the tools therein, and means for holding the bag folded, said means including means connected to the bag forming and constituting a handle.

2. A tool bag comprising a single piece of heavy fabric of elongated form folded twice upon itself and having its end edges stitched together, the end portions of the single piece having semi-elliptical cutaway portions, which, when the adjacent end edges are stitched together, form an elliptical shaped opening at one end of the tool bag, the opposite ends and one side of said opening being spaced a short distance from the opposite sides of the bag and one end thereof forming a partial flange, acting to retain the tools adjacent the opening, the adjacent longitudinal edges of the piece being stitched together, said bag being folded adjacent the inner edge of the opening to retain the tools therein, and means for holding the bag folded, said means including means connected to the bag forming and constituting a handle, a reinforcing strip stitched to the exterior and the interior of the bag where the adjacent end edges are connected, a folded strip bounding the edge of the opening, and a heavy welt formed on the interior of the side edges adjacent where the longitudinal edge parts of the piece are connected to spread the opposite face portions of the bag.

1,153,378. SIFTER-TOP CLOSURE. ALFRED FRANKENBERG, Rockford, Ill., assignor to J. L. Clark Manufacturing Company, Rockford, Ill., a Corporation of Illinois. Filed Nov. 17, 1913. Serial No. 801,384. (Cl. 221—62.)



1. In a container, a top having an opening therethrough and having an upwardly extending flange surrounding said opening, an apertured closure having a downwardly extending peripheral flange fitting snugly around said flange on the top, guide means on the lower edge of the latter flange, a plate overlying said closure, flanges extending downwardly from the edges of said plate, and guide means on the lower edges of the latter flanges coacting with the said guide means on the closure.

2. In a container, a top having an opening therethrough and having an angular upwardly extending flange surrounding said opening, an apertured closure having a downwardly extending peripheral flange fitting snugly around said flange on the top, a plate overlying said closure, flanges extending downwardly from the edges of said plate alongside said closure flange, and laterally extending portions on the lower edges of said flanges on the closure and plate, the said portions on one of the latter elements being bent around said portions on the other element.

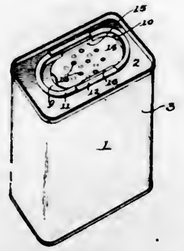
3. In a container, a top having an elongated opening therethrough and having an angular upwardly extending flange surrounding said opening, an apertured closure having a downwardly extending peripheral flange fitting snugly around said flange on the top, the opposite sides of the opening and closure and the corresponding portions of said flanges being straight and parallel, a plate overlying said closure, flanges extending downwardly from the edges of said plate along the opposite parallel sides of said closure flange, and laterally extending portions on the lower edges of said flanges on the closure and the plate respectively, the said portions on the closure being bent to overlie the portions on the plate, whereby to maintain the plate for rectilinear sliding movement on the closure.

4. A container having an elongated discharge opening, a closure therefor, said opening and closure having opposite parallel sides, a plate overlying said closure, inter-

locking means at the edges of the plate and the closure along said parallel sides adapted to maintain the plate for rectilinear sliding movement on the closure lengthwise of said opening, the closure having a pouring aperture therethrough at one end adapted to be closed by said plate, and one of the latter elements having a plurality of sifting apertures adapted to be closed by the other element.

5. A container having an elongated discharge opening with a surrounding angular flange, a closure for the opening having an angular peripheral flange to telescope with the first mentioned flange, the opposite sides of said opening and closure and the corresponding portions of said flanges being straight and parallel, a plate overlying said closure and having flanges at opposite edges lying along the straight portions of the closure flange, integral interlocking portions on the edges of said flanges on the closure and plate adapted to maintain said plate on the closure for rectilinear sliding movement lengthwise of said opening, the closure having a pouring aperture therethrough at one end arranged to be closed by said plate, and one of the latter elements having a plurality of sifting apertures therethrough arranged to be closed by the other element.

1,153,379. SIFTER-TOP CLOSURE. ALFRED FRANKENBERG, Rockford, Ill., assignor to J. L. Clark Manufacturing Company, Rockford, Ill., a Corporation of Illinois. Filed Nov. 17, 1913. Serial No. 801,385. (Cl. 221—62.)



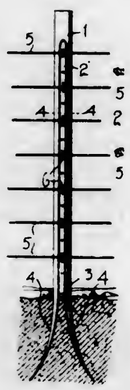
1. A container comprising a body, a top wall having its edges secured to one end of the body to close the same, said top wall having an elongated opening with straight parallel sides, and said top wall being depressed a material distance to position the closure beneath the upper edges of the side walls, an angular upwardly-extending flange surrounding said opening, an inner downwardly-extending flange at the edge of the mentioned flange, an apertured closure having an angular flange extending upwardly from its periphery and fitting snugly within the second mentioned flange on said top wall, a horizontal peripheral flange on the upper edge of the closure flange, said horizontal flange overlying and projecting beyond the two flanges on the top wall, a plate overlying said closure and having upwardly extending flanges along its opposite parallel sides fitting within the first mentioned flanges on the closure, horizontal guide flanges on the upper ends of said plate-flanges overlying the horizontal flange on the closure, and portions on the latter flange bent to overlie the guide flanges on said plate.

2. A container comprising a body, a top wall closing one end thereof and having an elongated opening spaced inwardly from its edges and provided with a surrounding angular flange, the opposite sides of said opening and flange being straight and parallel, a similarly shaped closure having an angular peripheral flange telescoping with said flange on the top wall, horizontal outwardly extending flange-portions along the opposite straight portions of said closure flange, a plate overlying the closure and having angular flanges at its opposite straight sides telescoping with said closure flange, horizontal outwardly extending guide flanges on the edges of said plate flanges, and portions on said horizontal flanges of the closure bent to overlie said guide flanges of the plate to guide the latter for rectilinear reciprocation.

3. A container comprising a body, a top wall closing one end of the body, said top wall having an opening with a surrounding angular flange, a closure having an upwardly extending flange telescoping into the flange on the top wall, said opening, closure and flanges being elongated in shape with their opposite longitudinal sides straight and parallel, and being spaced inwardly from the planes of the body walls, a sifter plate overlying the closure and having upwardly extending flanges along its opposite straight sides telescoping into the flange on the closure, outwardly extending guide portions along the straight portions of the respective flanges on the closure and sifter plate, the said guide portions of the closure having parts bent to overlie the said guide portions of the sifter plate to retain and guide the latter for longitudinal reciprocation.

4. A container comprising a wall having an elongated opening therethrough with a surrounding angular flange, an apertured closure having a narrow upwardly-extending peripheral flange adapted to removably fit within the mentioned flange, the opposite long sides of the opening, closure and flanges being straight and parallel and the ends being rounded, a continuous flat plate closely overlying said closure and having a plurality of small sifting apertures therethrough, straight narrow flanges on the opposite sides of said plate lying alongside the straight portions of the closure flange, and interengaging guides in the upper edges of said flanges on the closure and plate.

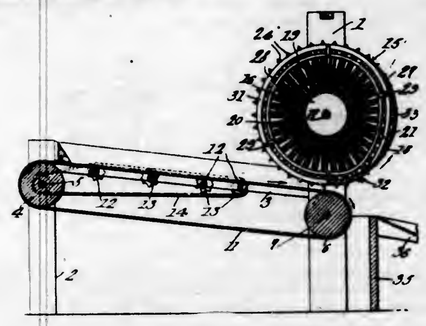
1,153,380. FENCE-POST. JAMES E. FUSSELL, Roff, Okla. Filed Jan. 30, 1915. Serial No. 5,262. (Cl. 189—29.)



As a new article of manufacture, a fence post consisting of a tubular member provided with a relatively long substantially wide elongated open end slot disposed longitudinally of the post substantially the entire length thereof, the open end of the slot being at the lower end of the post, said post being also provided with a longitudinally disposed open slot diametrically opposed to the first mentioned slot, the open end of said second named slot being also at the lower end of the post, said second named slot being of a length materially less than the length of the first named slot, the portions of the post between the slots diverging and being flattened from their inner ends.

1,153,381. BEET-CLEANER. ABRAHAM GUDMUNDSEN, Payson, Utah. Filed Dec. 19, 1914. Serial No. 878,090. (Cl. 130—32.)

1. A separator comprising a conveyer, an endless member disposed above the conveyer, retractable pins carried by the endless member and projectable beyond the same to enter objects carried by the conveyer and to carry the objects therewith, and means for retracting the pins to release the said objects.



2. A separator comprising a conveyer, a rotary drum mounted above the conveyer, retractable pins carried by the drum and projectable through the rim thereof, and means for projecting and retracting the pins as they approach and leave the conveyer, respectively.

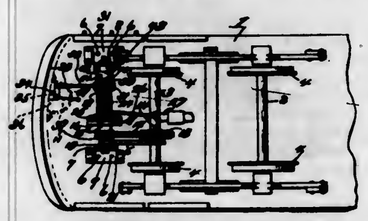
3. A separator comprising a conveyer, a rotary drum mounted thereabove, radially slidable frames carried by the drum within the rim thereof, pins carried by the frames and projectable through the rim of the drum, and means for sliding the frames outwardly and inwardly as they approach and leave the conveyer, respectively, to project and retract the pins.

4. A separator comprising a conveyer, a rotary drum mounted thereabove, radially slidable frames carried by the drum within the rim thereof, pins carried by the frames and projectable through the rim of the drum, and an endless cam disposed at one side of the drum, the said frames having means engaging the cam and the cam being of such formation as to move the frames outwardly and inwardly as they approach and leave the conveyer, respectively, to thereby project and retract the pins.

5. A separator comprising a conveyer, a rotary drum mounted thereabove, radially slidable frames carried by the drum within the rim thereof, pins carried by the frames and projectable through the rim of the drum, a cam ring supported at one side and having a cam slot, yokes connecting the sections of the said ring formed by the said slot, the said frames having lugs engaging in the said cam slot, and the cam slot being of such formation as to move the frames outwardly and inwardly as they approach and leave, respectively, the conveyer, to project and retract the pins.

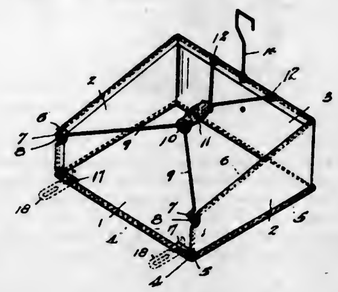
[Claims 6 to 11 not printed in the Gazette.]

1,153,382. BRAKE. ALBERT H. HALE, Cairo, Ill. Filed Nov. 13, 1912. Serial No. 731,197. (Cl. 188—68.)



In a brake, a shaft, a pair of bearing hangers beneath a car body in which said shaft is mounted, a pair of friction elements on the shaft, one having connections with one of the drive axles of the car, whereas the other is provided with a cable connection to a brake bar, a clutch member having a clutch surface at one end and a transverse recess at the other end to receive a portion of one of the bracket hangers, a second clutch member having a clutch surface at one end to coöperate with the first clutch surface and being movable revolubly on said shaft, the other end of said second clutch member having a rectangular portion provided with a friction face, the friction element which is connected to the brake bar having an integral collar at one end frictionally with which the friction face of the second clutch member engages when said second clutch member is partially revolved, and a lever fitting said rectangular portion and having connections with a brake crank rod, whereby upon cranking said rod the second clutch member may be rocked.

1,153,383. GRASS-CATCHER. JAMES P. HASSERIES, Columbus, Ohio. Filed Oct. 8, 1914. Serial No. 865,665. (Cl. 56—114.)



1. The combination in a collapsible grass catcher comprising a bottom, a frame, flexible side walls, and a flexible end wall to the device, of a top portion to said frame composed of a U-shaped bow having loops, a front wire with eyes attached to said loops, said bow having its ends beyond the loops bent toward the center of the catcher into diagonal braces and attached to the rear bar of the U shaped part, and a portion of said braces formed into a handle.

2. The combination in a grass catcher having a metallic bottom with curled edges and a front wire frame portion pivoted in a curled edge, a U-shaped wire bow forming the top frame and loosely connected to said front frame portion, said top portion having diagonally extending integral brace arms attached to the rear bar of the U-shape bow, and a canvas piece attached to the top frame and to the curled edges of the bottom forming the sides and back of the catcher.

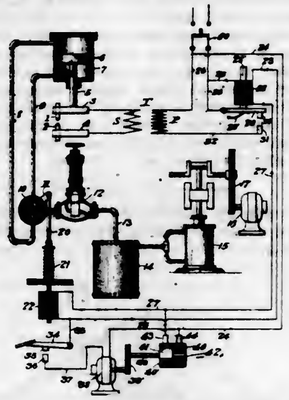
3. In a grass catcher, the combination with a top frame formed of a U-shape bow of wire having squared loops at the ends of the bow, of a front U-shaped bow loosely connected to said squared loops and adapted to swing upon a pivot, a bottom in which the front bow is pivoted, and canvas sides and back connecting the top frame and bottom.

4. A collapsible grass catcher having a bottom and U-shaped bottom frame, a front foldable U-shaped frame pivoted in the bottom and provided with attaching means at its ends, a U-shaped top portion connected to said attaching means, the ends of said top portion being brought together to form a handle and connected to the body of the said portion, and flexible side and end walls to said catcher.

1,153,384. ELECTRIC WELDING APPARATUS. JOHN ALLEN HEANY, New York, N. Y. Filed July 20, 1915. Serial No. 40,944. (Cl. 219—4.)

1. Electric welding apparatus comprising relatively movable welding electrodes, fluid pressure means for effecting the movement thereof and imposing a predetermined pressure of the electrodes on the work, means for regulating the fluid pressure, an adjustable timing device

to regulate the duration of the welding current, and mechanism for controlling the operation of the fluid pressure means and the timing device.



2. Electric welding apparatus comprising relatively movable welding electrodes, a fluid pressure motor for effecting the movement thereof and imposing a predetermined pressure of the electrodes on the work, means for regulating the fluid pressure supplied to said motor, an adjustable timing device to regulate the duration of the welding current, and means actuated by the operator for controlling the fluid pressure supply to the motor and the timing device.

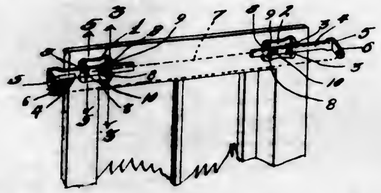
3. Electric welding apparatus comprising a stationary electrode, a movable electrode, a fluid pressure motor for actuating the movable electrode and imposing a predetermined pressure on the work, means for regulating the pressure of the motive fluid, an adjustable timing device to regulate the duration of the welding current, and a operator-controlled means for controlling the fluid pressure supplied to the motor and the timing device.

4. Electric welding apparatus comprising a stationary electrode, a movable electrode, a fluid pressure motor for actuating the movable electrode and imposing a predetermined pressure on the work, a fluid pressure supply for said motor, a pressure regulating device between the motor and the source of supply, an adjustable timing device to regulate the duration of the welding current, and electric means for controlling the fluid supply for the motor and the operation of the timing device.

5. Electric welding apparatus comprising a stationary electrode, a movable electrode, a fluid pressure motor for actuating the movable electrode and imposing a predetermined pressure on the work, means for regulating the pressure of the motive fluid, a transformer having its secondary in circuit with said electrodes, an electro-magnetic switch in circuit with the primary of said transformer, a valve controlling the supply of fluid pressure to said motor, a magnet for operating said valve, an adjustable timing device for controlling the circuit of said magnetic switch and of said valve actuating magnet, and electrical means for controlling the operation of said timing device.

1,153,385. SHADE-BRACKET. FRANK J. HOFFELT and MICHEL HOFFELT, Springfield, Mo. Filed Apr. 20, 1915. Serial No. 22,669. (Cl. 156—24.)

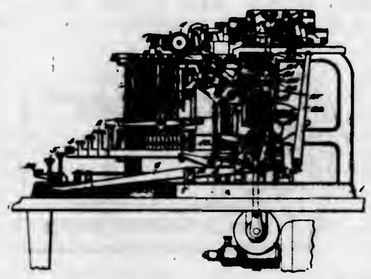
1. In combination, a plate to be secured to a window frame and provided with struck up lugs adjacent one end and extending toward each other, a shade roller bracket having a shank engaging between said lugs and the plate, said plate adjacent its other end having struck up laterally extending ears between which said shank engages, a U-shaped lever having laterally extending pintles fulcrumed in said ears and provided with eccentric projections adjacent said pintles acting to cam and frictionally engage against said shank, to hold the shank in place, and draw the bracket toward the roller when the lever is thrown into clamping position.



2. In combination, a plate to be secured to a window frame, said plate having adjacent one end struck up lugs extending toward each other, a shade roller bracket having a shank to engage between the lugs and the plate, said shank and plate having inter-engaging lugs and openings to assist in holding the shank in position, said plate adjacent its other end having struck up ears extending laterally, a second shade roller bracket having a shank engaging between the ears, the shanks of both brackets having inter-engaging lugs and depressions to interlock the shanks, and a U-shaped lever having pintles engaging bearings of the ears and provided with eccentric projections to cam and frictionally engage against the shank of the second bracket when the lever is thrown to locking position to clamp both brackets in place.

3. In combination, a plate to be secured to a window frame, said plate having adjacent one end struck up lugs extending toward each other, a shade roller bracket having a shank to engage between the lugs and the plate, said shank and plate having inter-engaging lugs and openings to assist in holding the shank in position, said plate adjacent its other end having struck up ears extending laterally, a second shade roller bracket having a shank engaging between the ears, the shanks of both brackets having inter-engaging lugs and depressions to interlock the shanks, and a U-shaped lever having pintles engaging bearings of the ears and provided with eccentric projections to bite frictionally against the shank of the second bracket to bring the shank toward the shank of the first bracket, whereby the interengaging lugs and depressions of the overlapping shank and the plate may be brought into engagement to clamp both brackets in place.

1,153,386. CALCULATING-MACHINE. WILLIAM W. HOPKINS, St. Louis, Mo., assignor to Moon-Hopkins Billing Machine Company, St. Louis, Mo., a Corporation. Filed July 31, 1909. Serial No. 510,618. (Cl. 235—60.)



1. In a calculating machine, the combination of a totaliser, racks for actuating said totaliser, a stationary field of stops for controlling said racks, a traveling carriage and a series of vertically disposed horizontally adjustable setting-up pins arranged in said carriage.

2. In a calculating machine, the combination of a totalizer, actuating racks therefor, a field of stop pins for controlling the movement of said racks, a traveling carriage, a series of horizontally adjustable setting-up pins mounted in said carriage and means for lifting said setting-up pins to position the stop pins.

3. In a calculating machine, the combination of a traveling carriage, a series of horizontally adjustable setting-up pins arranged in said carriage, friction plates for holding said pins in adjusted positions, a push lever for adjusting said pins, and a stop bar for limiting the movement of said pins.

4. In a calculating machine, the combination of a traveling carriage having a series of longitudinally movable setting-up pins, friction plates for holding said pins in adjusted positions, an escapement mechanism for controlling the step by step movement of said carriage, a push lever for moving said setting-up pins as they are successively brought under its control, and a series of stop bars for arresting the setting-up pins in different positions.

5. In a calculating machine, the combination of a traveling carriage, a series of setting-up pins mounted in said carriage, friction plates for holding said pins in adjusted positions, an escapement mechanism for controlling the movement of said carriage and its setting-up pins, a series of digit keys, stop bars which are positioned by said keys respectively, and a push lever under control of all of said digit keys, the movement of said push lever being proportionate to the position of the stop bar arrested by the respective keys.

[Claims 6 to 17 not printed in the Gazette.]

1,153,387. RAILROAD-TIE. HORATIO G. HOUGHTON, Green Bay, Wis. Filed July 28, 1915. Serial No. 42,378. (Cl. 238—8.)



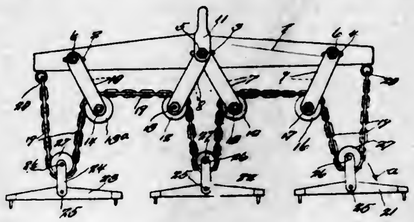
1. A tie comprising an elongated block of plastic material, shock absorbing means adapted to form a bed for the rails secured adjacent each end of said block, reinforcing means disposed intermediate said block and said shock absorbing means, and means for securely joining the said parts together.

2. A tie comprising a rectangular hollow block composed of plastic material, shock absorbing means composed of fibrous material and adapted to form a bed for the rails secured adjacent the ends of said hollow block, reinforcing plates positioned intermediate said shock absorbing means and said block, and a plurality of tie rods adapted to pass longitudinally through said parts for securely joining the same together.

3. A tie comprising a rectangular hollow block composed of plastic material and having transverse V shaped slots in the opposite ends thereof, reinforcing metal V plates adapted to fit in said V shaped slots, shock absorbing rail bed blocks composed of a fibrous material having V shaped tongues thereon adapted to fit in said reinforcing plates, and a plurality of tie rods or bolts for longitudinally joining the said parts together.

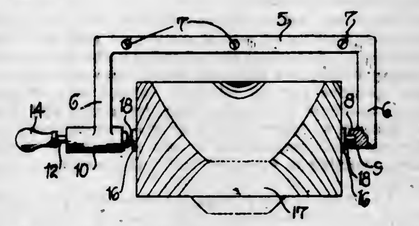
1,153,388. DRAFT-EQUALIZER. OMIE T. HOYT, Good Hope, Ill. Filed Aug. 9, 1913. Serial No. 783,896. (Cl. 21—76.)

A draft equalizer comprising a beam constituting an evener and having a slot adjacent each end and a substantially centrally disposed slot, a clevis connection connected to said centrally disposed slot and designed for connection to a vehicle, a multiplicity of links arranged in pairs, two pair being pivotally joined and having pivotal connections at their joined ends with said clevis in the centrally disposed slot, while another pair have a belt connection with each end slot, said links having rollers between their free ends, a draft chain having its ends connected to opposite ends of the evener beam, the chain intermediate such end connections passing over the rollers of said links and forming loops, one loop being beyond



the roller of each pair of end links, and a third loop extending from between the rollers of the two pairs of centrally connected links, a plurality of swingletrees having link and roller connections with the loops of the draft chain, said bolt and slot connections constituting means to permit the beam to shift incident to shifting the draft from one portion of the draft chain to another.

1,153,389. PAPER-HOLDER. JESSE E. HUDGEL, Sloan, Iowa. Filed Sept. 8, 1914. Serial No. 860,757. (Cl. 211—31.)

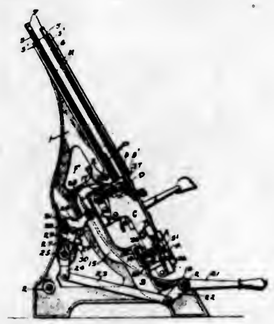


A paper holder of the character described including an elongated U-shaped bar, the extremity of one arm of said bar being formed with an inwardly projecting bearing extension, a central socket to receive the trunnion on one end of a paper roller and provide a non-yielding bearing seat therefor, a sleeve integrally formed upon the extremity of the other arm of said bar and having its longitudinal axis disposed in parallel relation to the intermediate body portion of the bar, said sleeve projecting from each side of the arm and the outer end thereof being closed, a rod loosely mounted in the closed end of the sleeve for longitudinal movement provided upon its inner end with an enlarged cylindrical portion snugly fitting within the sleeve and having a socket in its end to receive the trunnion on the other end of the paper roller, and a coil spring arranged upon said rod between the enlarged end thereof and the closed end of the sleeve and normally acting to yieldingly hold the enlarged end of the sleeve in bearing engagement with the roller trunnion.

1,153,390. TYPE-SETTING MACHINE. DAVID C. HUGHES, Chicago, Ill., assignor, by mesne assignments, to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed June 27, 1910. Serial No. 569,209. (Cl. 101—235.)

1. In a type-setter a magazine having a plurality of channels for containing distributed type, a carriage shiftable into alinement with one of said channels, a receptacle

positioned on said carriage for temporarily holding a line of type, means for moving said receptacle to withdraw the type from said channels and deposit them in said receptacle and a type holder associated with said receptacle and arranged to move with and relatively to the receptacle.



2. In a type-setter a magazine presenting a plurality of rows of distributed type, a carriage shiftable into alined position with said rows of type, a receptacle on said carriage for temporarily holding a composed line of type, mechanism associated with said carriage for moving said receptacle to withdraw the type from said rows and deposit them in said receptacle to form a composed line of type, and a type holder arranged to move with and relatively to said receptacle.

3. In a type setter, the combination with mechanism having a plurality of sets of distributed type, of a carriage having channel members forming a channel for temporarily holding the composed line of type and shiftable into operative position relatively to said sets of type, means associated with said carriage for moving said channel members to extract individual type from said sets and set them up in composition in said channel, and a type holder arranged to be moved with and relatively to said channel.

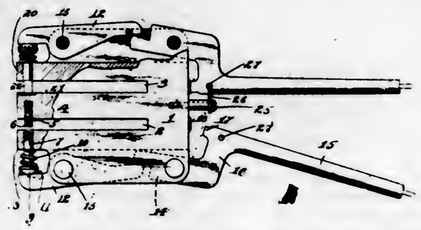
4. In a type setter, a magazine presenting a plurality of sets of distributed type, a type receiving member movable into operative relation with said sets of type and constructed to engage and extract individual type from said magazine, set them up in composition and temporarily hold them while being composed, and a type holder arranged to move with and relatively to said type receiving member.

5. In a machine for composing type for use in the type holders of addressing machines, the combination with a magazine having a plurality of slots containing distributed type, of a movable carriage upon which a type-holder is mounted, said carriage having a temporary receptacle in alinement with said type-holder and being shiftable into operative relation to the slots in said magazine, and mechanism associated with said carriage for moving said receptacle to withdraw type from said slots and deposit them in said receptacle to form a composed group of type previous to being transferred to said type-holder.

[Claims 6 to 53 not printed in the Gazette.]

1,153,391. TOOL FOR FORMING AND DEFORMING TYPE-STOPS IN TYPE-HOLDERS. DAVIDD C. HUGHES, Chicago, Ill., assignor, by mesne assignments, to Addressograph Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 6, 1910. Serial No. 580,547. (Cl. 164—121.)

1. A tool for forming stops against assembled type in a type plate, comprising a punch having dies, one of which is arranged to abut laterally against the type and the other arranged to make a transverse cut immediately adjacent the type and bend the neighboring metal inwardly.



2. A tool for forming abutment stops in a type plate, comprising a pair of dies, one of which abuts laterally against the type and the other of which is arranged to make a transverse cut in the metal and bend the metal inwardly, adjacent to the type, said dies being formed so that the type against which the die abuts forms a shearing edge for the metal.

3. A tool for longitudinally compressing type in the channels of a type plate and forming stops in the metal of the plate to prevent longitudinal movement of the type in the channel, comprising a pair of dies, one of which is constructed to engage the sides of the type and compress the same in the channel, and the other of which is arranged to shear and strike up the metal immediately adjacent the type.

4. A tool for longitudinally compressing type in the channels of a type plate and forming stops in the metal of the plate to prevent longitudinal movement of the type in the channels, comprising a set of fixed jaws spaced apart to permit the positioning of the type plate therebetween, a fixed die carried by one of said jaws and arranged to engage the sides of the type and compress the same in a channel, and a movable die carried by the other jaw and arranged to make a transverse cut immediately adjacent the type and to bend the neighboring metal inwardly.

5. A tool for longitudinally compressing type in the channels of a type plate and forming stops in the metal of the plate to prevent longitudinal movement of the type in the channel, comprising a set of fixed jaws spaced apart to permit the positioning of the type plate therebetween, a fixed die carried by one of said jaws and arranged to engage the sides of the type to compress the same longitudinally, and a movable die carried by the other jaw arranged to make a transverse cut immediately adjacent the type and to bend the neighboring metal inwardly, and power multiplying mechanism for reciprocating said movable die.

[Claim 6 not printed in the Gazette.]

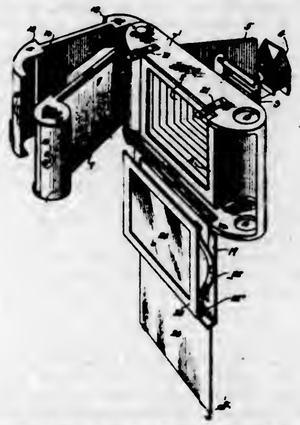
1,153,392. CAMERA. TAKUMA KAJIWARA, St. Louis, Mo. Filed Nov. 18, 1914. Serial No. 872,758. (Cl. 95—32.)

1. In combination with a camera box having a lens mounted thereon, a film container pivotally mounted on the box and movable into and out of exposure position relative to the lens, and means mounted on said box for supporting a plate with its emulsion side in the plane occupied by the emulsion side of the film in the container when the latter is in exposure position.

2. In a device of the class described, a camera box, a film container mounted thereon and foldable into exposure position, a frame mounted on said box and foldable over the film container, and a focusing screen supported on said frame and adapted to occupy the plane occupied by the emulsion side of the film when the film container is in exposure position.

3. In combination, a camera box having a lens supported thereon, a film container pivotally mounted on the camera box, and a focusing screen pivotally mounted on the camera box, said film container and said focusing screen being respectively movable into the same focal relationship with said lens.

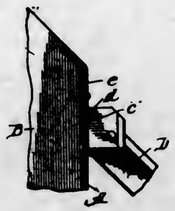
4. The combination of a camera box having a lens supported thereon, a film container movably mounted on the camera box, a focusing screen movably mounted on the camera box and foldable over the film container; said focusing screen being movable into the same focal position relative to the lens as is occupied by a film in the film container when the latter is in exposure position.



5. The combination of a camera box having a lens supported thereon, a film container movably mounted on the camera box, a frame movably mounted on the camera box and foldable over the film container when the latter is in exposure position, and means carried by said frame adapted to support a plate holder so that a plate therein occupies the same focal relationship relative to the lens as a film supported in the film container when the latter is in exposure position.

[Claims 6 to 10 not printed in the Gazette.]

1,153,393. TRAVELER'S GRIP OR BAG. HOWARD L. KENNEDY, Fort Wayne, Ind. Filed July 22, 1914. Serial No. 852,347. (Cl. 190—48.)



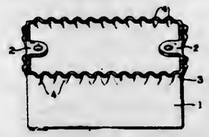
1. A sheet metal traveler's grip having a body comprising rectangular vertical longitudinal side-walls and end-walls which have their upper edges inclined upward from the sides of a central peak, and inclined covers hinged to the longitudinal sides below the upper edges of the latter, one of said covers having its upper edge extend over the peak of the top of the body and down the opposite incline and overlapping the top edge of the other cover and both of said covers having their lower marginal edges flanged downward to form vertical portions that overlap the top edges of the vertical side-walls of the body.

2. A sheet metal traveler's grip having body comprising rectangular vertical longitudinal side-walls, end-walls which have their upper edges inclined upward from the sides to a central peak, and inclined covers having their lower portions extend down past the upper edges of the said side-walls and lap against the outer surfaces thereof, and having their lower edges provided with knuckles, hinge-plates lapping against the inner and outer surfaces and over the upper edges of the side-walls and having knuckles on the outer lower ends, and pintles connecting the knuckles of the covers to those of said hinge-plates; one of said covers having its upper edge extend over the peak of the top of the body and down the opposite incline and overlapping the edge of the other cover and both of said covers having their end edges flanged downward and overlapping the inclined top edges of the end-walls.

3. A sheet metal traveler's grip having a body comprising rectangular vertical longitudinal side-walls, end-walls which have their upper edges inclined upward from the sides of a central peak, and inclined covers hinged to the longitudinal sides below the upper edges thereof, one of said covers having its upper edge extend over the peak of the top of the body and down the opposite incline and overlapping the top edge of the other cover and both of said covers having their lower marginal edges flanged downward to form vertical portions that overlap the top edges of the side walls of the body; the upper portion of said side-walls extending upward in an inclined direction toward the peak of the top of the grip under the covers.

4. A sheet metal traveler's grip having a body comprising rectangular vertical longitudinal side-walls, end-walls which have their upper edges inclined upward from the sides of a central peak, and inclined covers having their lower portions extend down past the upper edges of the said side-walls that lap against the outer surfaces thereof, and having their lower edges provided with knuckles, hinge-plates lapping against the inner and outer surfaces and over the upper edges of the side-walls and having knuckles on the outer lower ends, and pintles connecting the knuckles of the covers to those of said hinge-plates; one of said covers having its upper edge extend over the peak of the top of the body and down the opposite incline and overlapping the top edge of the other cover and both of said covers having their end edges flanged downward and overlapping the inclined top edges of the end-walls; the upper portion of said side-walls extending upward in an inclined direction toward the peak of the top of the grip under the covers.

1,153,394. OUTLET-BOX. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 16, 1914. Serial No. 825,112. (Cl. 247—5.)



1. As an article of manufacture, an electrical outlet box for plastered walls having its outer margin provided with a multiplicity of relatively small and abrupt irregularities for effecting close adhesion of plaster thereto.

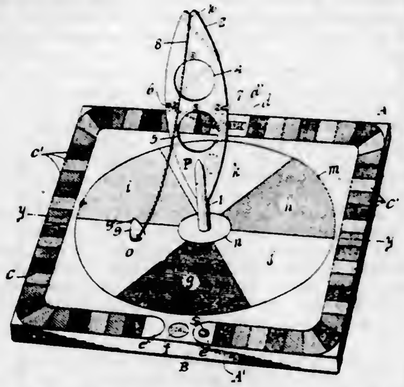
2. As an article of manufacture, an outlet box for plastered walls having numerous exterior irregularities adjacent its outer edges, said irregularities being of small size and angularly abrupt with respect to the remaining surface of the box exterior and affording a gripping surface for plaster contiguous thereto.

3. As an article of manufacture, a rectangular outlet box having its outer margins corrugated, the corrugations being relatively small and presenting a rough area to grip plaster contiguous thereto.

1,153,395. GAME APPARATUS. FRANK H. LEHMAN, Lebanon, Pa. Filed Dec. 21, 1914. Serial No. 878,399. (Cl. 46—59.)

1. In game apparatus, a vertically supported member of thin sheet material, a flexible pendulous member attached thereto and adapted to be thrown to twine about the same, and means formed integral with the vertical

member whereby said pendulous member may be caught when so thrown.



2. In game apparatus, a vertically supported member having an upper portion of thin sheet material, a flexible pendulous member attached to said vertical member and adapted to be thrown to twine about the same, and means formed integral with said upper portion of said vertical member, whereby said pendulous member may be caught when so thrown.

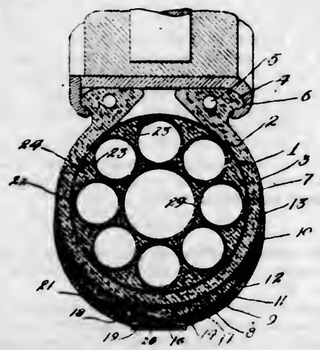
3. In game apparatus, a vertically supported member of thin sheet material, a flexible pendulous member attached thereto and adapted to be thrown to twine about the same, and means provided on the vertical member whereby said pendulous member may be caught when so thrown, said means including perforations in said vertical member.

4. In game apparatus, a vertically supported member of thin sheet material, a flexible pendulous member attached thereto and adapted to be thrown to twine about the same, and means provided on said vertical member whereby said pendulous member may be caught when so thrown, said means including indentures cut in the marginal sides of said vertical member.

5. In game apparatus, a vertical member supported on a base, a flexible pendulous member attached to said vertical member and adapted to be thrown to twine about the same, said pendulous member consisting of a cord or ligature having a flat sided bob secured to the end thereof.

[Claims 6 and 7 not printed in the Gazette.]

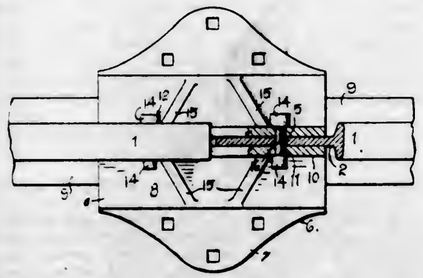
1,153,396. RESILIENT PNEUMATIC TIRE. FRANK LODER, La Fayette, Ind. Filed May 29, 1914. Serial No. 841,832. (Cl. 152—16.)



1. Improvements in an outer casing for a pneumatic tire comprising an inner casing of a composition of cotton and asbestos, a leather covering extending about the inner casing and terminating a little beyond the center of the casing on each side, a tread surface therefor consisting of a composition of fabric and mineral wool and extending almost to the center of the casing on each side thereof, a layer of asbestos covering the composition of fabric and mineral wool and terminating substantially adjacent the center of the casing on each side, a second layer of fabric and mineral wool adjacent the asbestos layer and terminating at substantially the center of the casing on each side thereof, a second layer of leather adjacent the second layer of fabric and mineral wool and terminating adjacent the center of the casing on each side and merging into the first leather layer, thereby entirely inclosing the interior structure of the tread surface, said second leather layer having openings therein to receive protecting non-skidding members which are riveted to the asbestos layer and the second layer of fabric and mineral wool.

2. Improvements in an outer casing for a pneumatic tire comprising an inner casing of a composition of cotton and asbestos, a leather covering extending about the inner casing and terminating a little beyond the center of the casing on each side, a tread surface therefor consisting of a composition of fabric and mineral wool and extending almost to the center of the casing on each side thereof, a layer of asbestos covering the composition of fabric and mineral wool and terminating substantially adjacent the center of the casing on each side, a second layer of fabric and mineral wool adjacent the asbestos layer and terminating at substantially the center of the casing on each side thereof, a second layer of leather adjacent the second layer of fabric and mineral wool and terminating adjacent the center of the casing on each side and merging into the first leather layer, thereby entirely inclosing the interior structure of the tread surface, non-skidding members interposed between the second leather layer and the second fabric and mineral wool layer and protruding through the second leather layer, and means for riveting the non-skidding members to the asbestos layer and the second fabric layer.

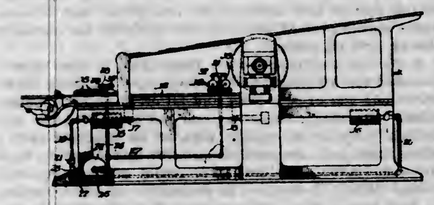
1,153,397. RAIL-JOINT. GEORGE B. LUMMER, Quincy, Ill. Filed July 3, 1915. Serial No. 37,910. (Cl. 239—11.)



1. A rail joint comprising, in combination, the meeting ends of rails, the web portions of which being provided with longitudinally disposed slots, openings at one side of the slots and in communication therewith, a chair provided with plates engageable with the webs of the rails, said plates being provided with key-hole slots adapted to register with the openings in the webs, and keys insertible through the slots of the plates and the openings of the webs when in register, the extremities of the keys being provided with heads of a formation substantially identical to the formation of the key-hole slots.

2. A rail joint comprising, in combination, the meeting ends of rails, the web portions of which being provided with longitudinally disposed slots, openings at one side of the slots and in communication therewith, a chair provided with plates engageable with the webs of the rails, said plates being provided with key-hole slots adapted to register with the openings in the webs, and keys insertible through the slots of the plates and the openings of the webs when in register, the extremities of the keys being provided with heads of a formation substantially identical to the formation of the key-hole slots, the connecting throat between each of the slots of the web and the adjacent opening being of a width less than the diameter of the opening, the intermediate portion of a coacting key being of a diameter less than the width of the throat.

1,153,398. MEANS FOR COOLING PRINTING-ROLLERS. DANIEL E. LYNCH, Chicago, Ill., assignor of one-fourth to Cornelius D. Robbins, one-fourth to Patrick J. Cronin, and one-fourth to James J. Lynch, Chicago, Ill. Filed July 20, 1914. Serial No. 851,909. (Cl. 101—71.)



1. The combination with a moving body associated with elements subject to heating, of a nozzle arranged to discharge an air current on the heated elements, means operated by the moving body to cause a flow of air through the nozzle, and means to modify the temperature of the air in its passage to the nozzle.

2. The combination with a reciprocatory bed of a printing press, and the inking rollers coöperating therewith, of pneumatic means arranged to cushion the reciprocatory bed, a system of air pipes leading from the pneumatic means and discharging onto the inking rollers, and means interposed in said system to lower the temperature of the air.

3. The combination with a reciprocatory bed of a printing press, and the inking rollers coöperating therewith, of dash pot mechanism arranged to cushion the reciprocatory bed, a system of air pipes leading from the dash pots and discharging on to the inking rollers, and means to lower the temperature of the air after leaving the dash pots.

4. The combination with a reciprocatory bed of a printing press, and the inking rollers coöperating therewith, of dash pot mechanism arranged to cushion the reciprocatory bed, a system of air pipes leading from the dash pots and discharging on to the inking rollers, and an expansion tank interposed in the air conducting system.

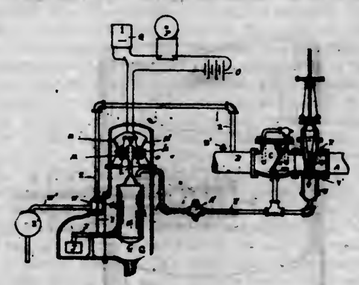
1,153,399. WRENCH. HERMAN L. MELHEIM, Hanska, Minn. Filed Mar. 11, 1915. Serial No. 13,666. (Cl. 81—179.)

1. A wrench comprising a body member having an elongated opening in one end, one wall of said opening being provided with a groove, which at one end opens through to the exterior of the body, a bore being formed in the body, a toothed movable jaw mounted in the opening having a shank to engage the groove and a plunger extending into the bore, a spring on the plunger between the jaw and one end of the opening, said shank having a thumb piece extending through the open end of the groove.



2. A wrench comprising a body having an opening at one end, said opening having a contracted portion, the body having a bore adjoining said contracted portion, one wall of the opening having a guide semi-circular in cross section, a toothed triangular jaw for increasing and decreasing the size of one end of the opening, said jaw having a semi-circular rib fitting and guiding in said semi-circular guide and provided with an extension alined with said rib, said extension having a thumb piece, said body upon one face thereof having a groove having one end adjoining to and communicating with the contracted portion and through which communicating part the extension protrudes, the thumb piece being operable in said groove, said extension, thumb piece, and groove constituting means to additionally guide the jaw, a plunger carried by the jaw and slidably mounted in the bore for further guiding the jaw, and a spring surrounding the plunger and interposed between one end of the contracted portion of said opening and the jaw.

1,153,400. AUTOMATIC SPRINKLER ALARM AND INDICATOR SYSTEM. FRANK W. MILLIKEN, Auburn, Me., assignor of one-half to Cheney C. Brown, Auburn, Me. Filed Feb. 2, 1915. Serial No. 5,777. (Cl. 177—382.)



1. In an automatic sprinkler alarm and indicator system, a water main, a branch pipe leading therefrom, a valve seat and valve located in said branch pipe, a counterbalanced receptacle, an open conduit leading from said branch pipe to said receptacle and adapted to be normally closed by said valve when seated and to discharge into said receptacle when said valve is open, an electric circuit, an alarm mechanism, means operable by movement of said receptacle to make and break said circuit and operate said alarm, a shut-off in the main pipe and means controlled thereby for operating the make and break means to operate the alarm whenever the water is shut off from the main.

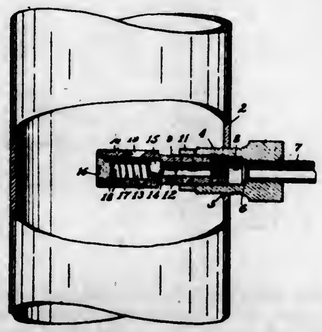
2. In an automatic sprinkler alarm and indicator system, a water main, a branch pipe leading therefrom, a valve seat and valve located in said branch pipe, an elon-

terbalanced receptacle, an open conduit leading from said branch pipe to said receptacle and adapted to be normally closed by said valve when seated and to discharge into said receptacle when said valve is open, an electric circuit, an alarm mechanism, means operable by movement of said receptacle to make and break said circuit and operate said alarm and means for overbalancing the receptacle and sounding the alarm whenever the water is shut off from the sprinkler pipes.

3. In an automatic sprinkler alarm and indicator system, a water main, a branch pipe leading therefrom, a valve seat and valve located in said branch pipe, a counterbalanced receptacle, an open conduit leading from said branch pipe to said receptacle and adapted to be normally closed by said valve when seated and to discharge into said receptacle when said valve is open, an electric circuit, an alarm mechanism, means operable by movement of said receptacle to make and break said circuit and operate said alarm, a shut-off valve casing in the main, a pipe leading from said casing to the receptacle, a double valve in said casing, one adapted to close the main pipe and the other to close the pipe leading to the receptacle, said valves being arranged so that the latter opens as the former starts to close the main.

4. In an automatic sprinkler alarm and indicator system, a water main, a branch pipe leading therefrom, a valve seat and valve located in said branch pipe, a counter-balanced receptacle, an open conduit leading from said branch pipe to said receptacle and adapted to be normally closed by said valve when seated and to discharge into said receptacle when said valve is open, an electric circuit, an alarm mechanism, means operable by movement of said receptacle to make and break said circuit and operate said alarm, a water motor, a pipe leading from the sprinkler system to said water motor, a valve located in said latter pipe adapted to be opened by the fall of said receptacle, thereby allowing the water to flow into and operate said motor, and an auxiliary alarm operated by said motor.

1,153,401. ADJUSTABLE NOZZLE FOR ATOMIZING OIL. RUSSELL A. MILNE, Detroit, Mich., assignor of one-half to Albert C. Picard, Detroit, Mich. Filed Jan. 9, 1915. Serial No. 1,340. (Cl. 184—56.)



1. An oil atomising nozzle comprising a hollow sleeve having means for attachment to a steam pipe and adapted for connection with a source of oil supply, a stem extensible in said sleeve, a chamber in said stem and an oil passage communicating with said chamber and said sleeve, a steam inlet port communicating with said chamber through the wall of said stem upon one side, an oil discharge orifice communicating with one end of said chamber through the opposite wall of said stem, and a check valve in said chamber for closing the oil passage thereto.

2. An oil atomising nozzle comprising a hollow sleeve screw-threaded for attachment to a steam pipe and for connection with an oil supply pipe, a screw-threaded stem adjustable in said sleeve, a mixing chamber in said stem and an oil passage communicating with said chamber and with said sleeve, a steam inlet port communicating with said chamber upon one side thereof, a plurality of oil discharge orifices communicating with said chamber upon the opposite side thereof, and a plug for closing the end of said chamber and adjustable therein for restricting said orifices.

3. An oil atomising nozzle comprising a hollow sleeve screw-threaded for attachment to a steam pipe and for connection with an oil supply pipe, a screw threaded stem adjustably secured in said sleeve, a mixing chamber in said stem and an oil passage communicating with said chamber and with said sleeve, a check valve in said chamber normally closing said passage, a steam inlet port communicating with said chamber upon one side thereof, a plurality of oil discharge orifices communicating with said chamber upon the opposite side thereof, and a plug adjustable in said stem for restricting said orifices and for closing the end of said chamber.

4. An oil atomising nozzle comprising a hollow sleeve adapted for attachment to a steam pipe and for connection with an oil supply pipe, a screw-threaded stem adjustable in said sleeve and carrying a jam nut for engagement therewith, a mixing chamber extending into the end of said sleeve and an oil passage communicating with said chamber and with said sleeve, a steam inlet port communicating with said chamber midway its length upon one side, a plurality of relatively narrow discharge orifices communicating with said chamber at one end upon the opposite side thereof, a screw plug adjustable in the end of said chamber for restricting said orifices, and a spring pressed valve in said chamber for normally closing said oil passage.

5. An oil atomizing nozzle comprising a stem screw-threaded for attachment to a steam pipe, a mixing chamber in one end of said stem and an oil passage communicating with said chamber at one end and fitted for connection with an oil supply pipe at its opposite end, a steam inlet port communicating with said chamber upon one side thereof, a plurality of outlet orifices communicating with said chamber in diagonally opposite relation to said steam port, and a screw plug adjustable in the end of said chamber for restricting said orifices.

1,153,402. MANUFACTURE OF ORGANIC ACID ANHYDRIDS OR OF MIXTURES OF SUCH ANHYDRIDS WITH THEIR ACIDS. RICHARD MÜLLER, Eilenburg, Germany. Filed Mar. 4, 1914. Serial No. 822,450. (Cl. 23—24.)

1. The method of making organic anhydrids, which consists in reacting upon salts of the corresponding organic acids with an oxid of nitrogen.

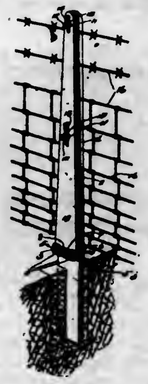
2. The method of making organic anhydrids, which consists in reacting upon the dry salts of the corresponding organic acids with an oxid of nitrogen.

3. The method of making acetic anhydrids, which consists in subjecting an acetate to the action of nitric anhydrid.

4. The method of making acetic anhydrids, which consists in subjecting a dry acetate to the action of nitric anhydrid.

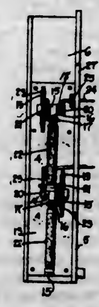
1,153,403. METALLIC FENCE-POST AND WIRE-FENCE-FASTENING MEANS. HEYWARD A. PAXTON, De Land, Fla. Filed Jan. 16, 1915. Serial No. 2,649. (Cl. 256—52.)

1. In combination, a metallic fence post body, a supporting block member having a recess adjacent one face and open upon said face and at the top, said block member being disposed next to one flat face of the post, thereby closing the side face of the recess forming a socket, a metallic strap arranged upon the outer face of said block member, screws for securing the straps to the block member, said strap having its ends overlapping one face of the post opposite the face to which the block member is secured, screws penetrating the ends of the strap and into the post and the block member thereby securing the strap and the block member to the post, a clamping plate having a contracted portion at its lower end received in said socket, and between which clamping plate and the post the fence wire is clamped, and means for securing the clamping plate in place.



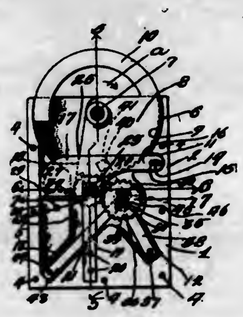
2. In combination, a fence post body T-shaped in cross section, a supporting member having a socket arranged adjacent one face of the body, a plate secured to said supporting member about its outer face and having its ends overlying the opposite edges of the body of the post and secured thereto, thereby holding the supporting member in position, one face of the body of the post having laterally extending lugs, one adjacent the upper end of the body, another substantially midway of the length of the body, a clamping plate having a lower contracted end received in the socket and having a pair of openings corresponding in position with relation to said lugs and designed to receive the lugs, said lugs having openings, wedges passed through the openings of the lugs to hold the clamping plate in position, between which clamping plate and the body of the post the wire fence is arranged, and lugs upon one face of the clamping plate to prevent downward movement of the horizontal wires of the wire fence.

1,153,404. WINDOW-OPERATING MECHANISM. PETER RASMUSSEN and MANOEL F. GOULARTE, Selma, Cal. Filed Nov. 4, 1914. Serial No. 870,294. (Cl. 16—53.)



The combination with a window frame and sash mounted therein, of a base plate secured upon one side of said frame and provided with spaced bearing lugs, said base plate and the frame having coinciding slots therein, a vertically disposed shaft journaled at its ends in said bearing lugs, a transversely disposed shaft rotatably mounted in one of the lugs above said vertical shaft, a coil spring engaged upon said vertical shaft to rotate the same in one direction, a beveled gear fixed upon the upper ends of said shaft, a gear fixed upon one end of said transverse shaft and provided with a bevel gear of relatively small diameter meshing with the gear on the vertical shaft, said first named gear on the transverse shaft extending through the registering slots in the base plate and the frame, a rack bar fixed upon the sash and meshing with said gear, a ratchet secured upon the other end of the transverse shaft, and a manually operable latch device pivotally mounted upon the base plate and engaging at one end with said ratchet to normally hold the shafts against rotation under the action of said spring.

1,153,405. PADLOCK. JOESIRE S. ROGERS, Laurelhill, Fla. Filed May 15, 1915. Serial No. 28,393. (Cl. 70—107.)



1. A padlock comprising a casing, a segmental gear member having a semi-circular bolt mounted in the casing for partial revoluble movement, a spring retained dog having an abutment shoulder lying in the path of the segmental gear member to lock the same against movement, and gear connections adapted to be actuated by a member for partially rotating the segmental gear member when the shoulder is thrown from its path to unlock the bolt.

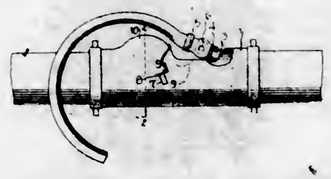
2. A padlock comprising a casing, a segmental gear member having a semi-circular bolt mounted in the casing for partial revoluble movement, a spring retained dog having an abutment shoulder lying in the path of the segmental gear member to lock the same against movement, and gear connections adapted to be actuated by a member for partially rotating the segmental gear member when the shoulder is thrown from its path to unlock the bolt, a spring retained bar mounted in the casing and underlying one of the gears of said connections and provided with a lateral lug at its free end, said segmental gear member having a recess to receive said lug to additionally lock the segmental gear member, said connections when actuated by the member adapted to be pressed by said member toward the back of the casing, and constituting means to withdraw the lug from the recess.

3. A lock comprising a casing, a segmental gear member including semi-circular bolt mounted in the casing for a partial revoluble movement, gear connections mounted in the casing to mesh with the segmental gear member and adapted to be actuated by a device, a spring retained bar underlying one of the gears of said connections and having a lateral lug at its free end, said segmental gear member including a recess to receive the lug to lock the segmental gear member against partial movement, the gear under which the spring retained bar lies adapted to be pressed toward the back of the casing by said device

before being rotated by the device and constituting means to withdraw the lug from the recess.

4. A lock comprising a casing having a pocket provided with an upper semi-circular portion, a segmental gear member journaled in the semi-circular portion of the pocket for a partial revoluble movement and including a semi-circular bolt member, a pair of gears journaled midway of the pocket, one of which meshes with the segmental gear member, a dog loosely journaled in the casing for a slight movement laterally to the casing, said dog having a shoulder lying in the path of one edge of the segmental gear member to lock the member, said dog adapted to be actuated laterally of the casing by a device to remove the shoulder from the path of the segmental gear member, a spring retained bar underlying one of the gears of said path and having a lateral lug at its free end, a segmental gear member having a recess to receive the lug, the gear under which the spring retained bar lies having means to receive a second device whereby the pair of gears may be actuated, and which gear under which the spring retained bar lies adapted to be pressed toward the back of the casing against a spring of said spring retained bar by said second device, and constituting means to actuate the bar to withdraw the lug from the recess, whereby the segmental gear member may be actuated for opening the bolt.

1,153,406. FIRE-HOSE COUPLING. HENRY W. SISSON, Lake George, N. Y. Filed Apr. 1, 1914. Serial No. 828,904. (Cl. 137—75.)

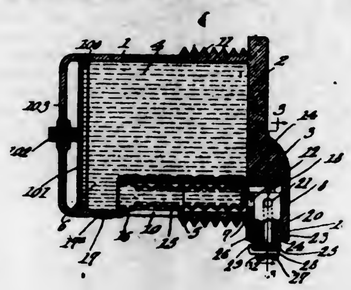


A coupling of the character described including a main body portion having a relatively large uniform interior diameter and formed with a nipple projecting therefrom at an acute angle to the axis of the coupling, a relatively small auxiliary coupling connected to said nopple, and a valve disposed in the auxiliary coupling controlling the passage of water therethrough, the main body portion of the coupling having a lateral enlargement adjacent to the auxiliary coupling and toward which the auxiliary coupling and nipple extend, said enlargement extending outward to a plane beyond the plane of the extremity of the auxiliary coupling to thereby protect the latter from injury when the coupling is dragged over the ground in the direction toward which the auxiliary coupling and nipple extend.

1,153,407. TEMPERATURE-REGULATOR. JAMES O. STENNSLAND, Blanchardville, Wis. Filed Dec. 8, 1914. Serial No. 876,166. (Cl. 236—6.)

1. In a device of the class described, a casing comprising a chamber and having a passage terminating in a port; a valve journaled in the casing and having a shoulder; the valve having an outlet adapted to communicate with the port when the valve is rotated to a predetermined position; yieldable means for rotating the valve; a tubular, contractible element carried by the casing and communicating with the chamber; and a finger on the contractible element, the finger coöperating with the shoulder to prevent rotation of the valve and to maintain the outlet in the valve out of communication with the passage in the casing.

2. In a device of the class described, a casing comprising a chamber and having a passage terminating in a port; a valve journaled in the casing and having a shoulder, the valve having an outlet adapted to communicate with the port when the valve is rotated to a predetermined position; yieldable means for rotating the valve; a tubular, contractible element carried by the casing and communicating with the chamber; a finger carried by the contractible element, the finger coöperating with the shoulder to prevent a rotation of the valve and to maintain the outlet in the valve out of communication with the port; and latch mechanism coöperating with the casing and the valve to hold the valve against rotation.



3. In a device of the class described, a casing comprising a chamber and having a passage terminating in a port; a valve journaled in the casing and having a shoulder, the valve having an outlet adapted to communicate with the port when the valve is rotated to a predetermined position; means for rotating the valve; a tubular contractible element carried by the casing and communicating with the chamber; a finger mounted on the contractible element, the finger coöperating with the shoulder to prevent a rotation of the valve and to maintain the outlet in the valve out of communication with the passage; and interengaging elements on the valve and the casing for limiting the rotation of the valve, thereby to aline the outlet in the valve with the passage in the casing.

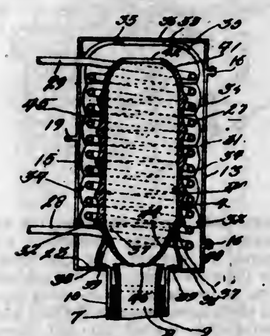
4. In a device of the class described, a casing comprising a chamber having an outlet; a valve controlling the outlet; a hollow contractible member communicating with the chamber, the chamber being provided with an opening exposing the contractible member; interengaging elements on the contractible member and the valve; a yieldable diaphragm constituting a closure for the chamber; and means for adjusting the diaphragm.

5. In a device of the class described, a casing comprising a chamber and having a passage terminating in a port; a valve journaled in the casing and having a shoulder; the valve having an outlet adapted to communicate with the port when the valve is rotated to a predetermined position; yieldable means for rotating the valve; a tubular, contractible element carried by the casing and communicating with the chamber; a finger on the contractible element, the finger coöperating with the shoulder to prevent a rotation of the valve and to maintain the outlet in the valve out of communication with the passage in the casing; a latch pivoted to the valve; and means on the casing for engaging the latch, the latch constituting means whereby the valve may be rotated manually when the latch is out of engagement with the said means.

1,153,408. HEATER FOR A RANGE AND COIL. HENRY E. VINGER, Barron, Wis. Filed July 14, 1915. Serial No. 39,834. (Cl. 126—350.)

1. In combination with a range, an oil burner comprising a casing having an adjustable wick therein, a casing clamped to the burner casing, in which the heat from the wick is confined, said casing comprising two hinged parts having extensions at their lower portions semi-circular in cross section to clamp against the burner casing.

2. In combination with a range, a multiplicity of heaters therein, each heater comprising an oil burner casing having a wick, a heater casing consisting of two semi-cylindrical sections hinged together, said sections having semi-cylindrical contracted extensions at their lower parts to clamp against the burner casing to hold the heater casing in place, the bottom wall of the heater casing having a series of air vents, the top of the heater casing having an opening concentrically with the burner casing, a coil in the heater casing, said heater casing having an irregular passage for confining the heat to the coils.



3. In combination, a burner having a casing, a heater casing clamped to the burner casing, a series of coils in the heater casing, said heater casing having an opening in its top, plates between the coils and the heater casing and secured to said casing and having their upper portions curved toward and terminating adjacent the opening in the top of the heater casing, a second casing upon the interior of said coils having its upper portion curved concentric substantially with the curved parts of said plates and having an opening concentric with the opening in the heater casing, the lower end of the second casing being tapered to deflect the heat from the wick toward the coil and having an opening, said plate and the second casing having convolutions in staggered relation forming an irregular passage to confine the heat to the coils.

1,153,409. MASSAGING DEVICE. IRA ROLLINS WHEELER, Baltimore, Md., assignor of one-half to John C. Allen, Northampton, Mass. Filed June 14, 1915. Serial No. 34,066. (Cl. 128—16.)

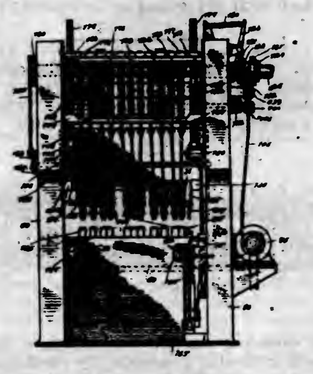


1. In a device of the class described in combination, a substantially semi-spherical gutta-percha body member, a plurality of projections formed upon and integral with said body member, a relatively flat handle, a stud mounted on said handle adjacent one end thereof, a detachable member carried by said body member and constructed to coöperate with said stud to form a detachable connection between said handle and said body member.

2. A dental implement comprising a body portion formed of resilient material, a plurality of protuberances extending from and integral with said body portion, the back of said body portion being substantially flat and of a circular contour, a handle, and a snap button fastener for securing said body portion to said handle.

3. In a dental implement, a resilient body portion, a relatively flat handle, a detachable snap fastener having one element secured to the side of said handle and the other element secured to said body portion, said snap fastener comprising a detachable connection for securing said resilient body portion to said handle to facilitate removal of said body portion from said handle and to permit said body portion to rotate relative to said handle.

1,153,410. PUNCHING-MACHINE. JOHN WRIGHT, Wilmington, Del. Filed June 10, 1914. Serial No. 844,189. (Cl. 164—114.)



1. In a machine of the character described, a movable carriage, means adapted when active to effect the travel of the carriage, means adapted to render the first named means inactive, a pin connected with the carriage and movable with relation thereto and adapted to be brought by the carriage into temporary engagement with said second named means to actuate the same, and means to hold and trip the pin.

2. In a machine of the character described, a movable carriage, means adapted when active to effect the travel of the carriage, means to render the first named means inactive including a pivoted lever arranged near the carriage, a plurality of longitudinally spaced pins connected with the carriage to travel therewith and adapted to move the lever, and means to hold and trip the pins.

3. In a machine of the character described, a movable carriage, means adapted when active to effect the travel of the carriage, means to render the first named means inactive including a pivoted lever adapted to swing automatically in one direction and provided with a lateral extension, an apertured plate connected with the carriage and extending longitudinally thereof, a plurality of spaced pins movably mounted within the apertures and adapted to engage with the extension of the pivoted lever, and a presser-bar arranged above the apertured plate and adapted to engage with the pins to hold and trip them.

4. In a machine of the character described, a movable carriage, means adapted when active to effect the travel of the carriage, gravity operated means adapted when released to render the first named means inactive, releasable lock means normally serving to prevent the movement of the gravity operated means in one direction, a plurality of pivoted levers adapted to automatically swing in one direction and provided with means to operate the lock means to release the same, an apertured plate connected with and extending longitudinally of the carriage, a plurality of pins movably mounted within the apertures of the plate and adapted to move the pivoted levers, and a presser-bar arranged upon one side of the apertured plate to engage with the pins.

5. In a machine of the character described, a movable carriage, means adapted when active to effect the travel of the carriage in either direction, automatically op-

erating means adapted when released to render the first named means inactive, releasable lock means adapted to normally hold the automatically operating means against movement, a plurality of pivoted levers adapted to automatically swing in one direction and provided with means to operate the releasable lock means, an apertured plate connected with and extending longitudinally of the carriage and arranged near the pivoted levers, a plurality of pins movably mounted within the apertures of the plates and adapted to move the pivoted levers, and a plurality of presser-bars arranged upon one side of the apertured plate and adapted to be alternately moved into proximity thereto for engagement with the pins, depending upon the direction of travel of the carriage.

[Claims 6 to 27 not printed in the Gazette.]

1,153,411. CONSTRUCTION OF FERROCONCRETE TRUSSES, GIRDERS, AND THE LIKE. RICHARD WUCZKOWSKI, Vienna, Austria-Hungary. Filed Jan. 27, 1914. Serial No. 814,627. (Cl. 72—110.)



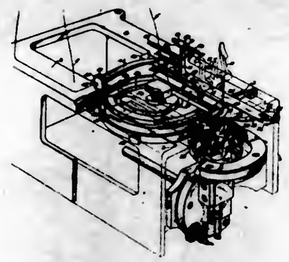
1. In reinforced concrete construction, a compression strap core comprising a substantially continuous member formed of a series of independent members or elements juxtaposed end to end, a thrust trajectory core comprising a continuous member formed of individual members or elements placed end to end, said thrust trajectory core extending at an angle to and engaging said compression strap core, and metallic tie bars for firmly connecting said cores to each other.

2. In reinforced concrete construction, a compression strap core comprising a series of like members or elements arranged end to end to form a continuous core, thrust members between certain of said core members, each of said thrust members having projecting heads, a thrust trajectory core comprising a plurality of independent members or elements placed end to end and forming a continuous series extending at an angle to the compression strap core and tie bars engaging said thrust trajectory core and the projecting heads of the thrust members in said compression strap core.

3. In reinforced concrete construction, a compression strap core consisting of a plurality of separate pressure resisting members arranged end to end to form a substantially continuous series, thrust members interposed at intervals between certain adjacent members of said compression strap core, thrust trajectory cores each arranged at an angle less than a right angle to the compression strap core, each of said thrust trajectory cores comprising a plurality of separate members or elements arranged end to end to form a continuous series, a wedge shaped thrust member between the adjacent surfaces of each thrust trajectory core and the compression strap core, said thrust members having one surface bearing against the compression strap core proper and another surface bearing against one of the thrust members of said compression strap core, and metallic tie bars for connecting said entire structure together.

1,153,412. THREAD-CUTTING MECHANISM. EDWARD B. ALLEN, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Dec. 16, 1912. Serial No. 736,953. (Cl. 112—33.)

1. In a buttonhole sewing machine, the combination with the bed-plate, a traveling work-clamp, a feed-wheel disposed beneath the bed-plate for imparting operative movements to the work-clamp, and stitch-forming mechanism including a needle and loop-taking means, of a thread-cutting blade movable upon a fixed fulcrum across the path of the needle, a slide-bar sustained by the bed-plate and having a pivotal connection with the thread-cutting blade, and means connected with and actuated by the feed-wheel for imparting to-and-fro movements to said slide-bar.



2. In a buttonhole sewing machine, the combination with the bed-plate, a traveling work-clamp, a feed-wheel disposed beneath the bed-plate for imparting operative movements to the work-clamp, and stitch-forming mechanism including a needle and loop-taking means, of a thread-cutting blade movable across the path of the needle, a slide-bar sustained by the bed-plate and operatively connected with the thread-cutting blade, a rocking pin journaled in the bed-plate and having an arm connected with said slide-bar, and a second arm mounted upon said rocking pin beneath the bed-plate and disposed in operative relation with the feed-wheel.

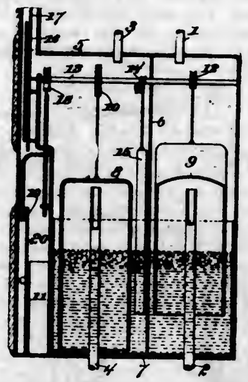
3. In a buttonhole sewing machine, the combination with the bed-plate formed in its upper side with a guideway, a traveling work-clamp, a feed-wheel disposed beneath the bed-plate for imparting operative movements to the work-clamp, and stitch-forming mechanism including a needle and loop-taking means, of a thread-cutting blade movable across the path of the needle beneath the work-clamp, a slide-bar mounted in said guideway of the bed-plate and operatively connected with the thread-cutting blade, a rocking pin journaled in the bed-plate and having an arm secured thereon above the latter and a second arm secured thereto beneath the bed-plate and in operative relation with the feed-wheel, and a link connection between the first-named arm of the rocking pin and said slide-bar.

4. In a buttonhole sewing machine, the combination with stitch-forming mechanism including a needle and loop-taking means, a traveling work-clamp comprising separable clamping members, and a feed-wheel for imparting operative movements to the work-clamp, of a thread-cutting blade, means connected with and actuated by the feed-wheel for operating said blade, and means connected with the blade operating means for opening the work-clamp.

5. In a buttonhole sewing machine, the combination with stitch-forming mechanism including a needle and loop-taking means, a traveling work-clamp comprising separable upper and lower members and a controlling rocking cam element therefor provided with a tappet arm, and a feed-wheel for imparting operative movements to the work-clamp, of a thread-cutting blade movable across the needle-path, a slide-bar operatively connected with said blade, means for imparting to-and-fro movements to said slide-bar, and a tripping pin carried by said slide-bar and adapted for engagement with the tappet arm of said cam element.

1,153,413. PRESSURE-RELATION GAGE. EDWIN G. BAILEY, Newton, Mass. Filed Mar. 21, 1911. Serial No. 616,018. (Cl. 73—31.)

1. In a presure relation gage, the combination with bell-shaped abutments adapted to receive fluid pressures on opposite sides; of an oscillatable indicating member; means for connecting the said abutments to the indicating member at points away from the axis of oscillation, whereby moments are produced by the pressures acting on said abutments, respectively, which moments tend to move said indicating member in opposite directions; means for balancing said moments to establish a state of equilibrium; and means for maintaining said moments in a state of equilibrium by progressively varying the relation between the forces or elements which compose said moments, in response to the movement of said indicating member, whereby the extent of movement is a measure of the relation between the various pressures applied to opposite sides of the different abutments.



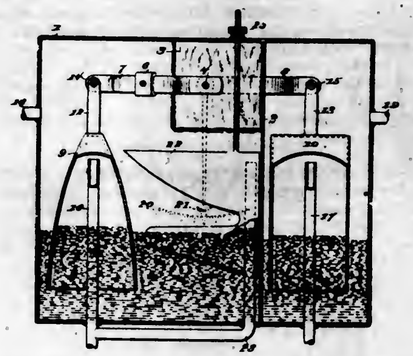
2. In a pressure relation gage, the combination with a plurality of movable abutments each adapted to receive fluid pressures on opposite sides, of an oscillatable indicating member; means for connecting said abutments to said oscillatable member, whereby moments about a common axis of rotation are produced by the pressures acting on said abutments; and means for causing the relative intensities of said moments to vary as the oscillatable member moves, whereby the resultant of said moments is automatically maintained substantially at zero, so that the extent of movement of the indicating member corresponds to the change in the relation of the pressure differences to one another.

3. In a pressure relation gage, the combination with an oscillatable member provided with projecting parts, of pressure actuated devices connected, respectively, with said projecting parts which constitute the moment arms through which the pressure actuated devices operate; and means whereby one moment of force is varied with relation to the other moment of force, in response to the movement of the said member.

4. In a pressure relation gage, the combination with an oscillatable member provided with projecting parts; of pressure actuated devices connected, respectively, with said projecting parts which constitute the moment arms through which the pressure actuated devices operate; and means whereby the relative lengths of the said moment arms are varied in response to the movement of the member around its axis.

5. In a pressure relation gage, the combination with bells adapted to receive pressures on opposite surfaces, of pipes or ducts affording communication between sources of pressure and the said bells; an oscillatable indicating member connected with said bells at different points away from its axis whereby moments are produced by the pressures acting on said bells which tend to rotate the said member in opposite directions; and means whereby the said moments are varied with relation to each other in response to the movement of the oscillatable member, so that a state of equilibrium will be reached and indicated when the position of said oscillatable indicating member denotes a definite relation between the pressure differences.

1,153,414. PRESSURE-RELATION GAGE. ERVIN G. BAILEY, Newton Highlands, Mass. Filed Mar. 20, 1913. Serial No. 755,594. (Cl. 73—31.)



1. In a pressure relation gage, the combination with an oscillatable member; of an indicating member adapted to be moved by said oscillatable member; of two movable liquid sealed bells connected to said oscillatable member, and each adapted to receive fluid pressure on opposite sides and producing opposing moments of force about the axis of said oscillatable member, one of said bells having a varying horisontal sectional area; and means whereby the height of the level of the liquid which seals the variable area bell is automatically varied in response to the pressures acting on said variable area bell.

2. In a pressure relation gage, the combination with an oscillatable indicating member; of two movable liquid sealed bells connected to said indicating member; means for subjecting each bell to fluid pressures outside and inside, one of said bells having a variable horisontal sectional area; a channel containing the liquid in which said variable area bell is sealed; and a displacing member of variable horizontal cross-sectional area, located in said chamber thereby causing the area of the free surface of the liquid in said chamber to be varied with changes in the level of said liquid.

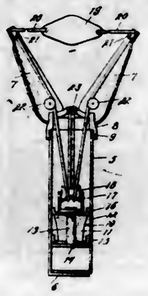
3. In a pressure relation gage, the combination with an oscillatable indicating member; of two movable liquid sealed bells connected to said indicating member; means for subjecting each bell to fluid pressures outside and inside, one of said bells having a variable horisontal sectional area; a chamber containing the liquid in which said variable area bell is sealed; a displacing member located in said chamber, said displacing member comprising a chamber closed at the top and open at the bottom, and sealed in the same liquid as that which seals the variable area bell, said member having a variable horisontal sectional area within and without; and means for subjecting the interior of said displacing member to the action of the same pressure which acts on the interior of the variable area bell.

4. In a pressure relation gage, the combination with an oscillatable indicating member; of two movable liquid sealed bells connected to said indicating member; means forsubjecting each bell to fluid pressures outside and inside, one of said bells having a variable horizontal sectional area; a chamber containing the liquid in which said variable area bell is sealed; a displacing member located in said chamber; and means for vertically adjusting said displacing member.

5. In a pressure relation gage, the combination with an oscillatable member; of an indicating member adapted to be moved thereby; two movable liquid sealed bells adapted to receive fluid pressure outside and inside, said bells being connected to said oscillatable member and producing opposing forces due to the pressure differences acting on said bells; and means whereby equilibrium of all said forces, including those produced by the various parts of the mechanism itself, is obtained, and said indicating member

caused to remain in a definite position so long as a definite relation exists between said pressure differences.

1,153,415. PROJECTILE-THROWER. ARTHUR BEATY, San Fernando, Cal. Filed Jan. 20, 1915. Serial No. 3,302. (Cl. 124—8.)



1. In apparatus of the character described, a tubular handle provided with spaced arms, a plunger mounted to reciprocate within the tubular handle, a projectile receiving member, and a flexible member connected with the projectile receiving member and connected with the arms and the plunger.

2. In apparatus of the character described, a tubular handle provided with spaced arms, a plunger mounted to reciprocate within the tubular handle, a projectile receiving member, guide elements carried by the arms, and relatively inextensible flexible connecting means between the plunger and projectile receiving member and engaging the guide elements.

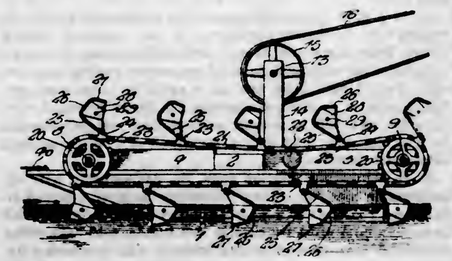
3. In apparatus of the character described, a tubular handle, a projectile receiving member, a plunger mounted to reciprocate within the tubular handle, and speed increasing connecting means between the plunger and projectile receiving member.

4. In apparatus of the character described, a tubular handle provided with spaced arms carrying guide elements, a plunger mounted to reciprocate within the tubular handle, a pulley carried by the plunger, a projectile receiving member, and flexible members connected with the projectile receiving member, engaging the guide elements and pulley, and secured to the tubular handle.

5. In apparatus of the character described, a tubular handle provided with spaced arms, a projectile receiving member, a plunger mounted to reciprocate within the tubular handle, and block and tackle connecting means between the projectile receiving member and plunger and anchored to the arms.

[Claim 6 not printed in the Gazette.]

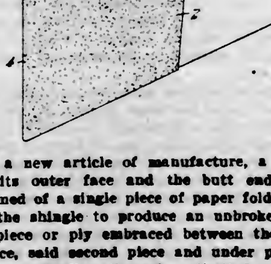
1,153,416. CURRENT-MOTOR. SYLVESTER E. BEMISS and PHILIP JOHNSON, Clarkston, Wash. Filed Nov. 19, 1914. Serial No. 873,034. (Cl. 170—84.)



1. A current motor comprising a float, a pair of spaced upright sprocket wheels revolubly mounted thereon, a sprocket chain passing around said wheels, a plurality of buckets on the lower stretch of said chain and each opening forwardly, downwardly and forwardly inclining plates forming the lower side walls of said buckets and lying nearer parallel to a horizontal plane than to an upright plane, forwardly and upwardly inclining plates forming the upper side walls of the buckets, additional forwardly and downwardly inclining plates connecting the rear edges of the aforesaid plates, and similar buckets on the upper stretch of the chain.

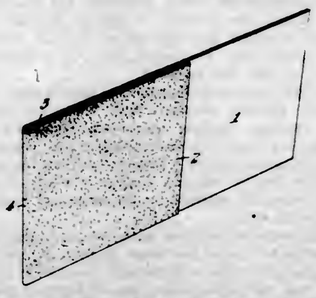
2. A current motor comprising a float, mechanism thereon and including a plurality of buckets to be projected into the water, downwardly and forwardly inclining plates forming the lower side walls of said buckets, and lying nearer parallel to a horizontal plane than to a vertical plane, and other downwardly and forwardly inclining plates forming the rear walls of said buckets and lying nearer parallel to an upright plane than to a horizontal plane.

1,153,417. GAS-GENERATOR. GEORGE HERBERT BENTLEY, Westminster, London, England, assignor of one-half to Edmund Gardner Appleby, London, England. Filed Mar. 23, 1915. Serial No. 16,395. (Cl. 48—85.1.)



The combination of a casing, a grate, means for lifting and lowering the casing relatively to the grate, and means for simultaneously revolving the casing eccentrically relatively to the grate.

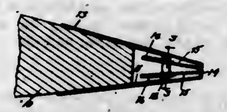
1,153,418. SHINGLE. CHARLES S. BIRD, Walpole township, Norfolk county, Mass. Filed Aug. 22, 1912. Serial No. 716,502. (Cl. 108—8.)



1. As a new article of manufacture, a paper shingle having its outer face and the butt end of its inner face formed of a single piece of paper folded at the butt end of the shingle to produce an unbroken butt, and a second piece or ply embraced between the folds of the first piece, said second piece and under portion of said first piece extending through a limited portion only of the length of the shingle, the various layers or plies being secured together, whereby there is produced a shingle having a relatively thick, unbroken and strengthened butt.

2. As a new article of manufacture, a paper shingle having its butt end composed of a plurality of superposed plies of paper, the upper and lowermost plies being formed from a single piece folded at the butt end of the shingle and embracing at such point the other ply or plies, the end of the lowermost ply extending beyond the embraced ply but terminating short of the upper end of the upper ply, and all of the parts being permanently secured together.

1,153,419. SELF-LIGHTER FOR CIGARS. WILLIAM C. BIERMELEY, Paton, Iowa. Filed Mar. 31, 1915. Serial No. 18,401. (Cl. 131—52.)



1. A cigar lighter comprising an inner member adapted to fit snugly on one end of a cigar, said inner member being open at both ends, and having on its interior at its outer smaller end inflammable material, capable of being ignited by friction, the outer member adapted to fit over the inner member and having a spring member extended into said inner member adjacent to said inflammable material, and means on said spring members for frictionally engaging said inflammable material when the outer member is pulled away from the inner member for igniting said inflammable material.

2. In a cigar lighter, an inner member having substantially the form of a hollow truncated cone, the larger end of which is adapted to fit on the end of the cigar, inflammable material on the interior of the outer smaller end of said inner member, the outer member having the form of a hollow truncated cone of slightly larger diameter and of greater length than said inner member, a pair of spring members secured to the outer end of said outer member extending inwardly, suitable material on said spring members for frictionally engaging and igniting said inflammable material when the outer member is pulled away from the inner member.

1,153,420. PUSH AND PINCH CONTACT-PLUG FOR FLASH-LIGHTS. ALEXANDER BRODY, New York, N. Y. Filed May 7, 1915. Serial No. 26,480. (Cl. 240—8.5.)



1. A cigar shaped electric flash lamp having an electric battery and an electric lamp therein, circuit-closing means between said battery and said lamp, said circuit-closing means including a switch plug having push circuit-closing and pinch circuit-closing means in combination therein.

2. A cigar shaped electric flash lamp having an electric battery and an electric lamp therein, circuit-closing means between said battery and said lamp, said circuit-closing means including a switch plug having push circuit-closing and pinch circuit-closing means in combination therein, and means on said push and pinch circuit-closing switch plug for maintaining the said plug in circuit-closing position.

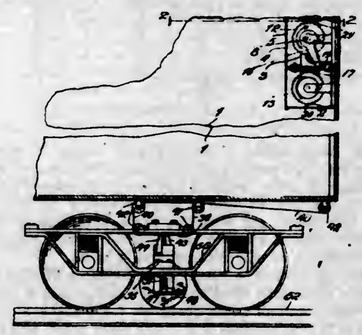
3. A cigar shaped electric flash lamp comprising an insulated outer casing, a conductive tube therein, a reflector lamp socket in electrical contact with said tube, a battery chamber in said tube, batteries therein, insulating means between said batteries and said conductive tube and a circuit-closing plug in the opposite end of said casing, said plug having means thereon whereby by pushing or pinching the same the circuit is closed and the lamp lighted.

4. In a cigar shaped pocket flash lamp of the class described, a circuit-closing plug having a slotted end and circuit closing terminals arranged in said slot.

5. In a cigar shaped pocket flash lamp of the class described, a circuit-closing plug having a slotted end and circuit closing terminals arranged in said slot, said plug having a coiled spring connector between one of said terminals and the source of electric power, one of said terminals being in contact with a conductive element from said batteries.

[Claim 6 to 11 not printed in the Gazette.]

1,153,421. STREET-INDICATOR FOR CARS. GEORGE BUTTERAS, Los Angeles, Cal., assignor to American Holding Company, Los Angeles, Cal., a Corporation of California. Filed Apr. 18, 1913. Serial No. 762,092. (Cl. 40—42.)



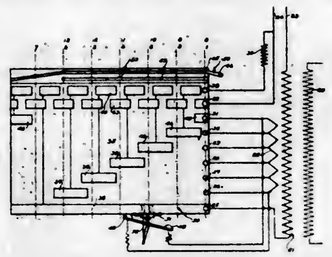
1. The combinstion with a plurality of spools, of an indicating band wound on said spools, shafts on which said spools are mounted, ratchet wheels keyed to said shafts, arms loose on said shafts, pawls on said arms arranged for engagement with said ratchet wheels, a track engaging wheel having on each side a laterally projecting pin, springs to hold said pins projected, a lever on each side of said wheel having beveled edges disposed toward each other, said levers being in the path of said pins whereby only one of said levers is operated by the movement of the car in one direction, and cables connecting the levers and arms.

2. In a street car indicator, the combination with two spools, of an indicating band wound on said spools and shafts on which said spools are mounted, of ratchet wheels keyed on said shafts, arms loose on said shafts and provided with pawls for engagement with said ratchet wheels, springs to normally hold said arms retracted, means to hold said pawls out of engagement with said ratchet wheels when said arms are in retracted position, cables to operate said arms, a track engaging wheel having on each side a pin, a yielding means to hold said pins projected, and a lever disposed on each side of said wheel and in the path of said pins, said levers having beveled edges disposed toward each other, and said cables being attached to and operated by said levers.

3. In a street car indicator, the combination with two spools of an indicating band wound on said spools, and shafts on which said spools are mounted, of ratchet wheels keyed on said shafts, arms loose on said shafts, pawls on said arms arranged for engagement with said ratchet wheels, springs to hold said arms normally retracted, lips to hold said pawls out of engagement with said ratchet wheels when said arms are in retracted position, plates on said shafts and slidable between said pawls and ratchet wheels to prevent engagement of said pawls with said ratchet wheels, a track engaging wheel having on each side a pin, a yielding means to hold said pins projected, a lever on each side of said wheel and in the path of said pins, said levers having beveled edges dis-

posed toward each other whereby one of said levers will be operated by said pins while the other lever remains stationary, and cables connecting said arms and levers.

1,153,422. POTENTIAL-REGULATOR. HERBERT W. CHENEY, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Apr. 22, 1910. Serial No. 557,026. (Cl. 171—119.)

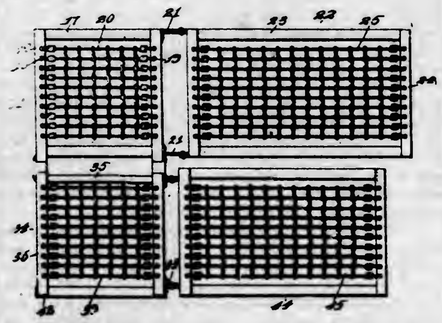


1. In combination, a transformer having a winding divided into two parts, taps from one of such parts, means including the same contacts for twice automatically making a connection to said taps successively in the same order, and means for reversing the connections of one of the parts of said winding to the other at the completion of the first set of connections to said taps.

2. In combination, a transformer having a divided winding, taps from said winding, means comprising a controller having contacts twice operative for making a connection to said taps successively in the same order, and means for reversing the terminal connections of said divided winding at the completion of the first set of connections to said taps.

3. In combination, a winding having an intermediate tap, a controller having a contact connectible to said tap twice during movement of said controller in the same direction, and means operative to reverse a terminal connection of said winding subsequent to the first connection of said contact to said tap and prior to the second connection thereof.

1,153,423. COMBINATION MORRIS CHAIR AND BED. FRANK H. DONOVAN, Wellston, Mo. Filed July 8, 1914. Serial No. 849,644. (Cl. 155—6.)



1. A combination Morris chair and bed comprising a base member, a bed member pivoted thereto; a seat member held to the base member, a bed member pivoted to the seat member, and means for holding the members in a folded inclined position to form a Morris chair, substantially as specified.

2. A device of the class described comprising a base member, a seat member, means for hinging the two together and for properly spacing the same apart; bed member hinged to the base and seat members and means for holding the same in a folded inclined position, substantially as specified.

3. A device of the class described comprising a base member, a wire fabric supported thereby; a seat member hinged to the base member; spaces located between the same, and fabric supported in the base of the seat member; bed members hinged to the base member and to the seat member, folding legs formed by the bed members for supporting the bed member on a level with the seat and base member, and means for supporting the bed members in tilted position when in a chair position.

1,153,424. ART OR METHOD OF PICTURE-BUILDING. ROLLIN EDSON DOOLITTLE and PAUL S. JOHST, New York, N. Y.; said Johst assignor to said Doolittle. Filed July 25, 1914. Serial No. 853,154. (Cl. 41—34.)



1. A method of picture building which consists in printing on a primary sheet the background portions only of a picture thereby leaving the salient portions of the picture blank, printing on said sheet indicating lines for cutting out said background portions, printing the salient features of the same picture on a second sheet, printing a marginal safety portion on said second sheet around the salient features in colors harmonising with the background, cutting out the background portions of the primary sheet along the indicating lines thereof, arranging the cut out background portions on a backing, cutting out the salient features of the second sheet along the outside edge of the marginal safety portion, and superimposing said cut out portions of the second sheet upon the blank spaces of the cut out background portions.

2. A method of picture building which consists in printing on a primary sheet the background portions only of a picture thereby leaving the salient portions of the picture blank, printing a marginal safety portion on said sheet around the background portions in colors harmonising with the background, printing the salient features of the same picture on a second sheet, printing a safety marginal portion on said second sheet around the salient features in colors harmonising with the background, cutting out the background portions of the primary sheet along the outside edge of the marginal safety portion, arranging the cut out background portions on a backing, cutting out the salient features of the second sheet along the outside edge of the marginal safety portion, and superimposing said cut out portions of the second sheet upon the blank spaces of the cut out background portions.

3. A method of picture building which consists in printing on a primary sheet the background portions only of a picture thereby leaving the salient portions of the picture blank, printing a marginal safety portion on said sheet around the background portions in colors harmonising with the background, printing the blank spaces of the background portions in colors harmonising with the background, printing the salient features of the same picture on a second sheet, printing a safety marginal portion on said second sheet around the salient features in colors harmonising with the background, cutting out the background portions of the primary sheet along the outside edge of the marginal safety portion, arranging the cut out background portions on a backing, cutting out the salient features of the second sheet along the outside edge of the marginal safety portion, and superimposing said cut out portions of the second sheet upon the colored blank spaces of the cut out background portions.

4. A method of picture building which consists in printing on a primary sheet the background portions only of a picture thereby leaving the salient portions of the picture blank, printing on said sheet indicating lines for cutting out said background portions, printing the blank spaces of the background portions in colors harmonising with the background, printing the salient features of the same picture on a second sheet, printing a safety marginal portion on said second sheet around the salient features in colors harmonising with the background, cutting out the background portions of the primary sheet along the indicating lines thereof, arranging the cut out background portions on a backing, cutting out the salient features of the second sheet along the outside edge of the marginal safety portion, and superimposing said cut out portions of the second sheet upon the colored blank spaces of the cut out background portions.

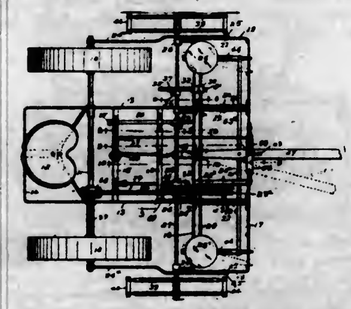
1,153,425. CONTOUR-CAP FOR PROJECTILES. HENRY H. C. DUNWOODY, Washington, D. C. Filed July 26, 1915. Serial No. 42,010. (Cl. 102—28.)



1. A closed contour cap for projectiles provided with a holding flange, an inverted cup shaped closure secured gas tight to the interior rear end of the cap, and with a fuse at the forward end of said cap, substantially as described.

2. In a closed contour cap for projectiles, the combination of a circular holding flange on the rear of said cap adapted to fit a groove in the body of the projectile; a fuse in the forward end of said cap; and an inverted cup shaped closure fitting gas tight the interior rear end of said cap, and provided with a bracing member adapted to contact with the extreme forward portion of the projectile, substantially as described.

1,153,426. WIRELESS CORN-PLANTER. LEE E. EASTER, Leon, Iowa. Filed Jan. 7, 1913. Serial No. 740,666. (Cl. 111—6.)



1. In a corn planter, a frame mounted on wheels, a second frame pivotally mounted on said first frame, planter shoes mounted on said second frame, a shaft mounted on said second frame in the vertical and horizontal planes of the pivotal points of said frames, means whereby rotary movement may be transmitted from said wheels to said shaft, a second shaft mounted on said second frame, marking devices thereon, means for transmitting motion from said first shaft to said second shaft.

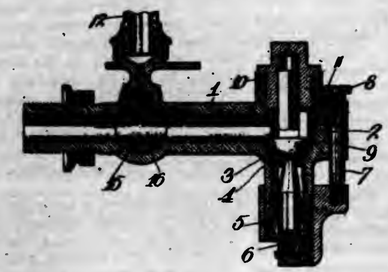
2. In a device of the class described, a corn planter frame, an axle thereon, a sleeve on said axle, drive wheels mounted on said axle and sleeve respectively, a second frame pivotally mounted with relation to said first frame, a marker shaft mounted on said second frame, means for transmitting rotary motion from said wheels to said marker shaft, said means comprising a differential gear having members secured to said axle and said sleeve respectively and having a differentiating member provided with sprocket teeth, a short shaft mounted on said second frame, in the vertical and horizontal transverse planes of the pivotal points of said frames, sprocket wheels on said short shaft fixed with relation to each other, a sprocket chain operatively mounted on the sprocket teeth on said differentiating member and on one of the sprocket wheels on said short shaft, a sprocket wheel mounted on said marker shaft and a sprocket chain mounted on said last named sprocket wheel and on the other of the sprocket wheels on the short shaft.

3. In a device of the class described, a frame, an axle rotatably mounted thereon, a sleeve rotatably mounted on said axle, drive wheels fixed on said axle and said sleeve respectively, a second frame pivotally mounted on said first frame, a marker shaft rotatably mounted on the second frame, and means for transmitting rotary motion from said wheels to said marker shaft, said means comprising a differential having members fixed respectively to the axle and the sleeve and having a differentiating member, a short shaft mounted on said second frame in the vertical and horizontal transverse planes of the pivotal points of said frames, gearing devices operatively connecting said differentiating member with said short shaft, and gearing devices operatively connecting said short shaft and said marker shaft.

1,153,427. COMPOUND FOR WATER-TIGHT JOINTS. JOHN M. FRAZY, Baltimore, Md. Filed Sept. 8, 1914. Serial No. 860,566. (Cl. 106—8.)

The herein-described composition of matter for forming water-tight joints, consisting of sulfur thirty per cent., loam forty per cent. and tar thirty per cent., substantially as described.

1,153,428. FAUCET FOR URNS. CHARLES HARVEY, Kansas City, Mo. Filed Feb. 2, 1914. Serial No. 815,965. (Cl. 137—4.)



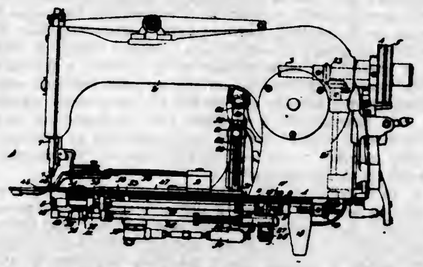
1. In a faucet having a lift valve and a pin connected to move upward and downward with the valve, a rotatable sleeve, and a rib projecting outward from said sleeve and adapted to be caused to engage the upper side of said pin to prevent upward movement thereof.

2. In a faucet having a lift valve and a pin connected to move upward and downward with the valve, a rotatable sleeve, and a rib projecting outward from said sleeve and adapted to be caused to engage the upper side of said

pin to prevent upward movement thereof; said rib having its under surface inclined or beveled at one end.

3. In a faucet the combination of a valve adapted to be moved from its seat by pressure, and a pin movable with the valve, with a rotatable sleeve provided with a rib adapted to be engaged with said pin to prevent valve-unseating movement thereof.

1,153,429. SEWING-MACHINE. PETER HLEB, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Oct. 21, 1914. Serial No. 867,704. (Cl. 112—4.)



1. In a sewing machine, in combination, a reciprocating needle, a shaft formed in separate sections arranged end-to-end, turning means for one of said sections, a bearing for the other of said sections having a fulcrum with its axis transverse to and passing intermediate the adjacent ends of said sections, means for imparting to the second-named section lateral jogging movements upon said fulcrum, a universal coupling intermediate the adjacent ends of said sections, and a loop-taker mounted upon the second-named section of said shaft for coöperation with said needle.

2. In a sewing machine, in combination, a reciprocating needle, a shaft formed in separate primary and secondary sections arranged end-to-end, turning means for the primary section, a bearing for the secondary section having a fulcrum with its axis transverse to and disposed in substantially intersecting relation with the axes of said sections, means for imparting to the secondary section lateral jogging movements upon said fulcrum, a universal coupling intermediate the adjacent ends of said sections, and a loop-taker mounted upon the second-named section of said shaft for coöperation with said needle.

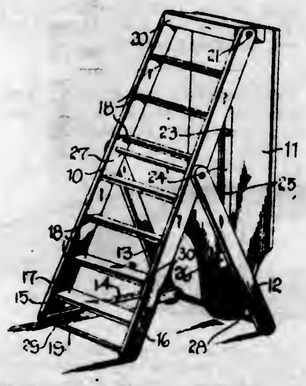
3. In a sewing machine, in combination, a reciprocating needle, a shaft formed in separate sections arranged end-to-end, turning means for one of said sections, a bearing for the other of said sections having a fulcrum with its axis transverse to and passing intermediate the adjacent ends of said sections, means for imparting to the second-named section lateral jogging movements upon said fulcrum, a coupling block disposed intermediate the adjacent ends of said sections and provided with transverse pivotal connections with each section and in angular relation each with the other, and a loop-taker mounted upon the second-named section of said shaft for coöperation with said needle.

4. In a sewing machine, in combination, a reciprocating needle, a shaft formed in separate sections arranged end-to-end, turning means for one of said sections, a bearing for the other of said sections having a fulcrum with its axis transverse to and passing intermediate the adjacent ends of said sections, means for imparting to the second-named section lateral jogging movements upon said fulcrum, a coupling block disposed intermediate the adjacent ends of said sections with which it has transverse tongue-and-slot connections each disposed transversely of the other, and a loop-taker mounted upon the second-named section of said shaft for coöperation with said needle.

5. In a sewing machine, in combination, a reciprocating needle, a shaft formed in separate sections arranged end-to-end and provided at their adjacent extremities each with a diametrical slot, turning means for one of said sections, a bearing for the other of said sections having a fulcrum with its axis transverse to and disposed in substantially intersecting relation with the axes of said sections, means for imparting to said second named section lateral jogging movements upon said fulcrum, a coupling block interposed between the ends of said sections and provided upon its opposite faces with transverse tongues each disposed crosswise of the other and entering the transverse slot of the adjacent shaft section, and a loop-taker mounted upon the second-named section of said shaft for coöperation with said needle.

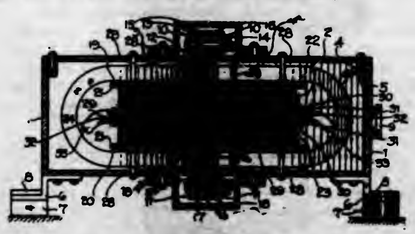
[Claims 6 and 7 not printed in the Gazette.]

1,153,430. COMBINED STEP-LADDER AND IRONING-BOARD. HERMAN HOEGLUND, Hawley, Minn., assignor of one-half to Sven B. Widlund, Hawley, Minn. Filed June 19, 1915. Serial No. 35,163. (Cl. 228—82.)



A combination step-ladder and ironing-board including a ladder body, an ironing-board swingingly attached to the terminal thereof, a pair of supporting legs pivoted to the ladder body, and a foldable brace carried by the legs, said brace being engageable, when folded, with the ladder body for holding the same in position for use as a step-ladder, said brace being also engageable when unfolded and extended, with the ladder body for holding the same in position to act as a support for the ironing-board, and a pivoted brace carried by the ironing-board and engageable with the ladder body for supporting the ironing-board in horizontal position.

1,153,431. INSTRUMENT FOR REPRODUCING AND MAGNIFYING SOUND-WAVES. CLINTON HORACE HULBERT, Manila, Philippine Islands. Filed Jan. 15, 1914. Serial No. 812,298. (Cl. 179—116.)



1. In a device of the character described, a cell comprising two flexible diaphragms secured together throughout their perimeter with the exception of two opposite points, said diaphragms being placed apart a distance equal to a small fraction of the thickness of each diaphragm.

2. In a device of the character described, a cell comprising two flexible diaphragms, a wall joining said diaphragms together throughout their perimeter and two opposite ports formed in said wall, said diaphragms and said wall inclosing a chamber having a thinness, comparing with the thickness of each diaphragm approximately as 10 to 1.

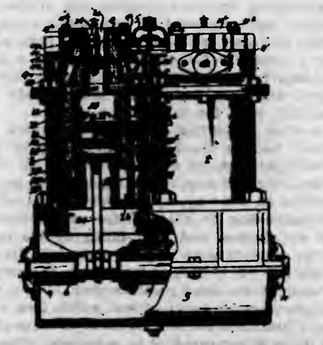
3. In a device of the character described, a cell comprising two flexible diaphragms and a wall joining said diaphragms together so as to form a flat cylindrical chamber between them, two opposite ports being formed in said wall, in combination with magnets on each side of said cell and magnetic poles between said magnets, the thickness of said chamber being approximately equal to the distance between each diaphragm and the nearest pole.

4. In a device of the character described, a cell comprising two flexible diaphragms and a wall joining said diaphragms together so as to form a flat cylindrical chamber between them, two opposite ports being formed in said wall, in combination with permanent magnets, pole pieces for said magnets and magnet coils disposed between the cell and said permanent magnets, the distance between said cell and each of said pole pieces being equal to the distance between said diaphragms.

5. In a device of the character described, a cell comprising two flexible diaphragms and an annular wall joining said diaphragms together throughout their perimeter, thus forming a thin cylindrical chamber within the cell, two opposite ports being formed in said wall, in combination with permanent magnets, pole pieces composed of laminated sheet iron for said magnets and magnet coils disposed between the cell and said permanent magnets, said cell being situated between said pole pieces and means for adjusting said pole pieces relative to said cell, whereby the distance between the cell and one of said pole pieces may be made equal to the thickness of said chamber.

[Claims 6 to 9 not printed in the Gazette.]

1,153,432. INTERNAL-COMBUSTION ENGINE. GEORGE A. ILER, Kirkwood, and THOMAS M. NALON, Atlanta, Ga. Filed Jan. 9, 1913. Serial No. 740,905. (Cl. 123—80.)



1. An internal combustion engine including in combination, a plurality of concentrically-arranged cylinders, one of said cylinders forming a charge-receiving chamber and the other an ignition-chamber communicating with the receiving-chamber, means for automatically controlling communication between the chambers, a plurality of tubular pistons connected to move as a unitary structure and concentrically disposed relatively, there being one in each cylinder, and valve-mechanism common to both cylinders and operative to control the introduction of a mixture into one chamber and the exhaust of gases from the other.

2. An internal combustion engine including in combination, a plurality of concentrically-arranged cylinders, one of said cylinders forming a charge-receiving chamber and the other an ignition-chamber communicating with the receiving-chamber, means for automatically controlling communication between the chambers, a plurality of tubular pistons connected to move as a unitary structure and concentrically disposed relatively, there being one in each cylinder, a crank-shaft connected to the pistons, and valve-mechanism common to both cylinders, directly connected to said crank-shaft and positively driven thereby in predetermined relation to the movement of the pistons, and operative to control the introduction of a mixture into one chamber and the exhaust of gases from the other.

3. An internal combustion engine including in combination, a plurality of concentrically-arranged cylinders, one of said cylinders forming a charge-receiving chamber and the other an ignition-chamber communicating with the receiving-chamber, means for automatically controlling communication between the chambers, a plurality of tubular pistons connected together adjacent their lower ends to move as a unitary structure and concentrically disposed relatively, there being one in each cylinder, a crank-shaft connected to the pistons, and valve-mechanism common to both cylinders, directly connected to said crank-shaft and positively driven thereby in predetermined relation to the movement of the pistons, and operative to control the introduction of a mixture into one chamber and the exhaust of gases from the other.

4. An internal combustion engine including in combination, a plurality of concentrically-arranged cylinders, one of said cylinders forming a charge-receiving chamber and the other an ignition chamber communicating with the receiving-chamber, means for automatically controlling communication between the chambers, a plurality of tubular pistons connected together in spaced relation to perform independent functions and adapted to move as a unitary structure and concentrically disposed relatively, there being one in each cylinder, and valve-mechanism common to both cylinders and operative to control the introduction of a mixture into one chamber and the exhaust of gases from the other.

5. An internal combustion engine including in combination, a casing, a plurality of concentrically-arranged cylinders and forming, respectively, a charge-receiving chamber and an ignition-chamber communicating therewith, a plurality of tubular pistons connected together in spaced relation to perform independent functions in each of said cylinders and movable as a unitary structure, a pendant element extending between said pistons to space them and to divide the casing into independent cylinders, and valve-mechanism common to both cylinders for controlling the introduction of a mixture into said receiving chamber and the exhaust of gases from the other.

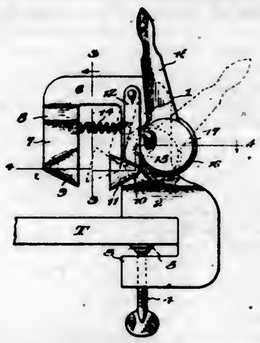
[Claims 6 to 26 not printed in the Gazette.]

1,153,433. NUTCRACKER. JOHN KITTRELL, Durant, Okla. Filed Jan. 4, 1915. Serial No. 404. (Cl. 146—3.)

1. A nut cracker comprising a supporting standard having support engaging means at one end, a depending fixed jaw at the opposite end, a movable jaw having a shank extending at a right angle to the axis of the nut engaging face thereof and pivotally mounted on said standard, said shank having a groove formed in one of its edges, an expansion spring disposed between said fixed jaw and movable jaw, an eccentric closing member for said movable jaw, and a rib thereon for coaction with the aforesaid groove, whereby said movable jaw is held against lateral movement.

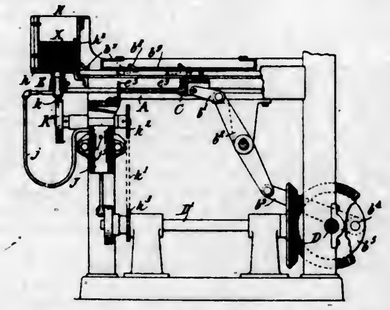
2. A nut cracker comprising a supporting standard having support engaging means at one end, a laterally extending arm integrally formed with the opposite end, a laterally offset depending fixed jaw member formed at the free end of said arm, a movable jaw member having a shank extending at a right angle to the axis of the nut engaging face thereof, pivotally mounted on said standard to swing toward and away from said fixed jaw member in the plane of the offset portion of said jaw member, said shank having a groove formed in one of its edges, a closing member for said movable jaw member, a handle on

one end and an eccentric on the opposite end thereof, said eccentric being pivotally mounted on said standard, an expansion spring disposed between the offset portion of the fixed jaw member and the movable jaw member, where-



by the movable jaw is maintained in contact with said eccentric, and a rib on said eccentric for coaction with the groove in the movable jaw member, whereby said movable jaw is held against lateral movement.

1,153,434. FEEDING MEANS FOR SHEETS. PETER KRUSE, New York, N. Y., assignor to E. W. Bliss Company, Brooklyn, N. Y., a Corporation of West Virginia. Filed Apr. 17, 1915. Serial No. 21,967. (Cl. 113—113.)



1. A sheet feeding means, comprising means for separating a sheet directly from the underside of a stack in the direction of the plane of the sheet, said means comprising a suction device adapted to contact with the underside of a sheet in a stack, and means for moving said suction device in the direction of the plane of the sheet, said suction device, when moved, exercising a tractive effect on the sheet.

2. A sheet feeding means, comprising means for separating a sheet directly from the underside of a stack in the direction of the plane of the sheet, said means comprising a hopper, a suction device adapted to contact with the underside of a sheet in a stack in the hopper, and means for moving said suction device in the direction of the plane of the sheet, said suction device, when moved, exercising a tractive effect on the sheet.

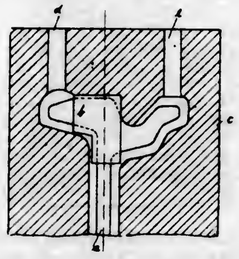
3. A sheet feeding means, comprising means for separating a sheet directly from the underside of a stack in the direction of the plane of the sheet, said means comprising a hopper, a suction device adapted to contact with the underside of a sheet in a stack in the hopper, means for moving said suction device in the direction of the plane of the sheet, said suction device, when moved, exercising a tractive effect on the sheet, and means for preventing more than one sheet passing out of the hopper at a time.

4. A sheet feeding means, comprising means for separating a sheet directly from the underside of a stack in the direction of the plane of the sheet, said means comprising a suction device adapted to contact with the underside of a sheet in a stack, means for moving said suction device in the direction of the plane of the sheet, said suction device, when moved, exercising a tractive effect on the sheet, and means for moving said suction device into contact with the sheet.

5. A sheet feeding means, comprising means for separating a sheet directly from the underside of a stack in the direction of the plane of the sheet, said means comprising a suction device adapted to contact with the underside of a sheet in a stack, and a reciprocating feed bar for moving said suction device in the direction of the plane of the sheet, said suction device, when moved, exercising a tractive effect on the sheet.

[Claims 6 to 8 not printed in the Gazette.]

1,153,435. METHOD OF UNITING RAILWAY-RAILS. FELIX LANGE, Essen-on-the-Ruhr, Germany, assignor to Goldschmidt Thermit Company, New York, N. Y., a Corporation of New York. Filed Dec. 27, 1912. Serial No. 738,799. (Cl. 22—209.)



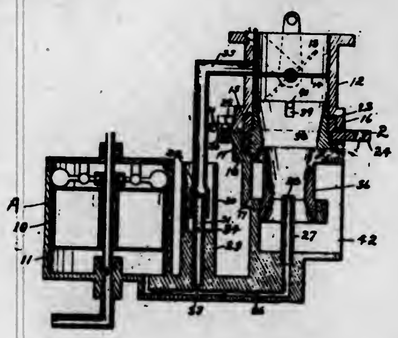
1. A method of uniting railway rails, which consists in inserting between the head portions only of the rails an intermediate piece of metal of such width as to extend across that part only of the heads of the rails which are subjected to wear by the car wheels and of a character corresponding to that of the metal from which the rails are formed, and then fusing said intermediate piece of metal together with the rail ends.

2. A method of uniting railway rails, which consists in inserting between the head portions only of the rails an intermediate piece of metal of such width as to extend across that part only of the heads of the rails which are subjected to wear by the car wheels and of a character corresponding to that of the metal from which the rails are formed, and then filling up the remaining part of the space between the rail ends with liquid iron.

3. A method of uniting rails, which consists in inserting between the head portions only of the rails, an intermediate piece of metal of less width than the head of the rail, and then pouring liquid metal into the space between the rails not occupied by said metal piece, whereby said metal piece is fused in position and the web and foot portions of the rails as well as the outer parts of the head portions of the rails are fused directly together by the liquid metal.

1,153,436. CARBURETER. HAROLD E. MCCRAY, Charles City, Iowa, assignor to Western Motor Appliance Company, Charles City, Iowa. Filed Feb. 9, 1914. Serial No. 817,716. (Cl. 48—150.1.)

1. In a carbureter, a carbureter shell having a discharge passage, a throttle valve in said passage, a fuel supply passage leading to the lower portion of said shell, a receptacle communicating with said last named passage, a float valve in said receptacle, a well, a tube therein having a nozzle formed at its upper end above the normal fuel level in the receptacle, said tube being provided with an opening near the bottom of said well, a restricted passage leading from said tube to the fuel supply passage, and a tube communicating with the interior of said shell between the throttle valve and the discharge end of the discharge passage, said tube being extended into said well downwardly over the nozzle in said well to a point below the normal fuel level in said casing.



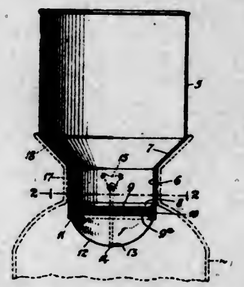
2. In a carbureter a shell, a fuel supply tube, a Venturi tube surrounding the discharge end of said fuel supply tube, a second Venturi tube arranged with its lower end receiving the upper end of said first Venturi tube, and capable of longitudinal adjustment, means for manually vertically adjusting the second Venturi tube said means being adapted to hold said second Venturi tube in such adjusted position during the operation of the engine, said shell being provided with an air supply opening communicating with the Venturi tubes.

3. In a carbureter, a shell, a fuel supply tube extending into said shell, a Venturi tube surrounding the discharge end of the supply tube, a second Venturi tube arranged with its lower end receiving the upper end of the first Venturi tube, and being vertically adjustable, and means for manually adjusting said second Venturi tube from outside the carbureter, said means being adapted to hold such second tube in its adjusted positions against being effected by the operation of the engine.

4. In a carbureter, a carbureter shell having a discharge passage, a throttle valve in said passage, a fuel supply passage leading to the lower portion of said shell, a receptacle communicating with said last named passage, a float valve in said receptacle, a well, a tube therein having a nozzle formed at its upper end above the normal fuel level in the receptacle, said tube being provided with an opening near the bottom of said well, a restricted passage leading from said tube to the fuel supply passage, and a tube communicating with the interior of said shell between the throttle valve and the discharge end of the discharge passage, said tube being extended into said well downwardly over the nozzle in said well to a point below the normal fuel level in said casing, a fuel supply nozzle in said shell communicating with said fuel supply passage, a tube of the Venturi type inclosing said nozzle with the nozzle at the narrowest point of said Venturi tube, and a second Venturi tube surrounding the upper end of said first tube with said upper end approximately at the narrowest part of said second Venturi tube, and means for vertically adjusting said second Venturi tube.

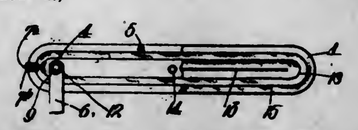
5. In a device of the class described, a carbureter shell having a discharge passage, a throttle valve therein, a fuel supply nozzle in said shell, a fuel supply passage communicating with said nozzle, a well adjacent to said shell, open at its upper end and communicating at its lower end by a restricted passage with said fuel supply passage, a fuel tube communicating with said restricted passage and extending upwardly in said well and having a nozzle open at its upper end, an opening at the bottom of said well, and a tube communicating with said discharge passage between the throttle and the discharge end of said passage and extending into said well and surrounding the upper end of said last named fuel supply tube.

1,153,437. FILTER. HARRY B. MILLER, Boston Corners, N. Y. Filed July 27, 1914. Serial No. 853,844. (Cl. 210—16.)



A filter comprising a relatively large open ended body, a reduced tubular neck, an inclined portion connecting said body and neck, an interior flange located in said neck, a disk of foraminous material engaging said flange and having relatively coarse openings, a sheet of fibrous filtering material covering one surface of said disk, a second disk engaging said fibrous material, a clamping ring frictionally fitting within said neck against said second disk, a cam member extending outwardly from said ring and a bail pivotally connected with said filter and adapted to engage said cam member whereby said disks and said fibrous material are clamped against said flange.

1,153,438. ELECTROLYTIC CELL. EMANUEL E. NORQUIST, Kansas City, Mo., assignor of one-half to Oxygen Gas Company, Kansas City, Mo., a Corporation of Missouri. Filed May 1, 1914. Serial No. 835,587. (Cl. 204—1.)

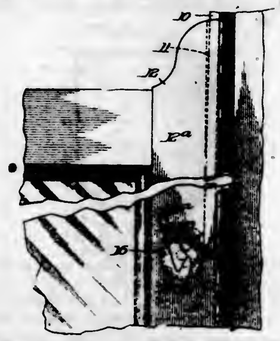


An electrolytic cell, comprising a shell or cathode to contain water and provided with an inturned flange at its upper end, terminating in a depending wall to form a chamber to receive gas liberated from the water, a gas bell in the space inclosed by said wall and spaced from the latter, supporting means secured to the bell and resting on but insulated from the shell, an anode suspended from the bell, in the water in the cathode, a flexible bag-shaped diaphragm inclosing the anode without contact therewith and suspended from the bell, and a flexible tube-shaped diaphragm suspended from the said wall and inclosing the said bag-shaped diaphragm without contact therewith.

1,153,439. SASH-CORD FASTENER. JOHN JOSEPH O'BRIEN, Chicago, Ill. Filed Feb. 1, 1915. Serial No. 5,473. (Cl. 16—16.)

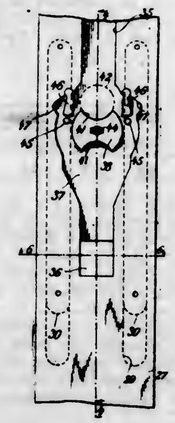
A fastener for sash cords and the like for application to a sash having a substantially circular opening substantially at right angles in the face thereof and having a sash-cord recess in an edge portion thereof, and having an inclined passageway from said recess to such substantially circular sash opening whereby a sash cord or

the like may extend toward the face of the sash from said recess into said sash opening, said fastener comprising a single tongue-like anchoring piece having a curved surface adapted to lie against any portion of the wall of such circular opening extending inward from the face thereof, said anchoring piece having a substantially circular closure rigid therewith and adapted to close such sash opening and lie upon the face of the sash immediately about said opening, said anchoring



piece having a hole for a sash cord or the like relatively close to said closure and adapted to register with said inclined passageway whereby when a sash cord or the like is in said hole and secured against retraction therethrough, said closure will be maintained against the face of the sash and close said opening uniformly in all normal relative positions of said anchoring element in said sash opening.

1,153,440. COIN-OPERATED VENDING-MACHINE. JAMES W. PATTERSON, White Plains, N. Y., assignor to Autosales Gum and Chocolate Company, New York, N. Y., a Corporation of New York. Filed Aug. 22, 1912. Serial No. 716,411. (Cl. 194—75.)



1. In a coin-operated vending machine, a casing provided with two compartments for holding the vendible articles in stacks, an independent ejecting device associated with each compartment and movable for ejecting the articles therefrom, each of said devices being automatically positioned after every operation thereof to eject the next article from the associated magazine, and a single hand-operated coin-carrier normally disconnected from both of said devices and adapted to be freely actuated in opposite directions for connection with either of said devices through the medium of the coin on said carrier.

2. In a coin-operated vending machine, the combination of a casing provided with two compartments for holding the vendible articles in stacks, an independent ejecting mechanism associated with each compartment and having means arranged below the compartment to eject the lowermost article horizontally therefrom, and a single hand-operated coin-carrier normally disconnected from both of said mechanisms and adapted to be freely actuated in opposite directions for connection with either of said mechanisms through the medium of the deposited coin on said carrier.

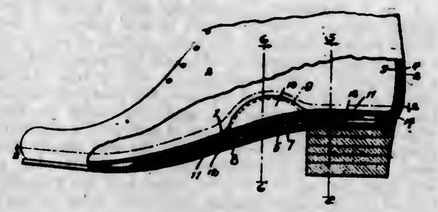
3. In a coin-operated vending machine, the combination of a casing provided with two compartments for holding the vendible articles in stacks, an independent ejecting mechanism associated with each compartment and having a horizontally slidable member arranged below the compartment to eject the lowermost article horizontally therefrom, and a single hand-operated coin-carrier normally disconnected from both of said mechanisms and adapted to be freely actuated in opposite directions for connection with either of said mechanisms through the medium of the deposited coin on said carrier.

4. In a coin-operated vending machine, the combination of a pair of independent ejecting mechanisms having each a member to engage and eject the vendible articles, and a single device normally disconnected from both of said mechanisms and adapted to be manually operated in opposite directions for selective connection with either of said mechanisms through the medium of the deposited coin, whereby either ejecting member may be operated.

5. In a coin-operated vending machine having two compartments for holding the vendible articles in vertical stacks, the combination of a pair of independently movable elements, a coin-carrier rotatable between said elements and normally disconnected therefrom, said carrier being adapted to carry the coin into engagement with one or the other of said elements and thereby operate the same, an ejecting member associated with each compartment for ejecting the articles horizontally therefrom, and independent operative connections between said elements and said ejecting members.

[Claims 6 to 17 not printed in the Gazette.]

1,153,441. ARCH OR INSTEP SUPPORTER. HENRY PIESSENS, Philadelphia, Pa. Filed June 10, 1915. Serial No. 33,228. (Cl. 36—71.)



1. A shoe having an innersole, an outersole, and a counter stiffener, said counter stiffener including a flap passing across the bottom of the shoe between the innersole and outersole, and an instep supporter located between said counter stiffener flap and said innersole.

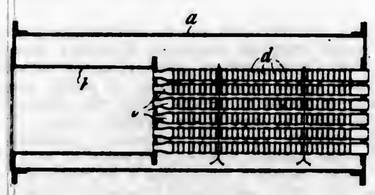
2. A shoe having an innersole, an outersole, and a counter stiffener, said counter stiffener including a flap passing across the bottom of the shoe between the innersole and outersole, an instep supporter located between said counter stiffener flap and said innersole, said counter stiffener and innersole being stitched together.

3. A shoe having an innersole, an outersole, an upper, and a counter stiffener, said counter stiffener including a flap passing across the bottom of the shoe between the innersole and outersole, said upper, counter stiffener and innersole being stitched together.

4. A shoe having an innersole, an outersole, an upper, and a counter stiffener, said counter stiffener including a flap passing across the bottom of the shoe between the innersole and outersole, and an instep supporter located between said counter stiffener flap and said innersole, said upper, counter stiffener and innersole being stitched together.

5. A shoe having an innersole, an outersole, an upper, and a counter stiffener, said counter stiffener including a flap passing across the bottom of the shoe between the innersole and outersole, said upper, counter stiffener and innersole being stitched together there being a break in the stitching at the instep of the shoe, and an instep supporting member secured to the innersole between the latter and the counter stiffener flap and having a lateral extension extending through said break in the stitching.

1,153,442. STEAM-GENERATOR. WILHELM PLATE, Weinheim, Germany. Filed Mar. 24, 1914. Serial No. 826,840. (Cl. 122—145.)

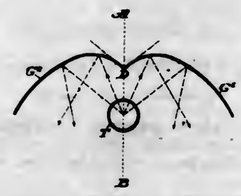


1. A steam generator of the multi-tubular type having cross-tubes traversing the fire tubes vertically so as to enable a rapid circulation of the heated water therein.

2. A steam generator of the multi-tubular type having cross-tubes traversing the fire tubes vertically and being arranged one above the other throughout the whole generator so as to produce water-channels continuously running through the multi-tubular system from bottom to top.

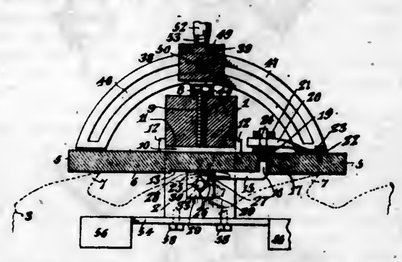
3. A steam generator comprising a boiler, a nest of firetubes traversing said boiler, a plurality of cross tubes mounted in each firetube and extending through the sides thereof, each cross tube of each firetube being arranged in alinement with the corresponding cross tube of the overlying firetubes to provide continuous water channels through the nest of firetubes from the top to the bottom thereof.

1,153,443. REFLECTOR FOR VAPOR-LAMPS. JOSEPH C. POLE, New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Apr. 30, 1910. Serial No. 558,749. (Cl. 240—103.)



The combination with a source of light, of a reflector consisting of two similar truncated segments symmetrically arranged with respect to the source of light, the said segments meeting at a point directly above the said source and presenting to the source reflecting curves which cause the rays returned from the reflector to pass the source of light.

1,153,444. SHAPER FOR SWAGED SAW-TEETH. JEROME B. RICKER, St. Maries, Idaho. Filed June 4, 1914. Serial No. 842,976. (Cl. 76—49.)



1. A saw shaper of the class described including a saw shaper body having a saw receiving opening enlarged at the top to form a way, a gage bar slidable in the way and supported by the walls thereof, said gage bar being provided with a tooth stop, and clamping means mounted on the body for exerting pressure against the gage bar to force the same into frictional engagement with the walls of the way.

2. A saw shaper of the class described including a body provided with a saw receiving opening enlarged at the top to form a way and provided in the upper wall thereof with a groove, a gage bar slidably supported in the way and carrying a tooth stop, a clamping plate extending through the groove and bearing against the gage bar, said plate having projecting terminals engaging the said body, and a screw piercing the upper portion of the body and engaging the clamping plate.

3. A saw shaper of the class described including a body having a saw receiving opening enlarged at the top to form a way, the latter being substantially circular in cross section, a gage bar slidable in the way and supported by the walls thereof, said gage bar being segmental in cross section to conform to the configuration of and be capable of rotary adjustment in the said way and presenting a lower flat face adapted to rest upon the saw teeth, and a tooth stop carried by the gage bar.

4. A saw shaper of the class described including a body having a saw receiving opening, a laterally movable tooth stop arranged to engage the saw teeth, and means for yieldably maintaining the tooth stop in a central position.

5. A saw shaper of the class described including a body having a saw receiving opening, a pivotally mounted tooth stop arranged to move laterally, and means for yieldably maintaining the tooth stop in position for engaging the saw teeth.

[Claims 6 to 19 not printed in the Gazette.]

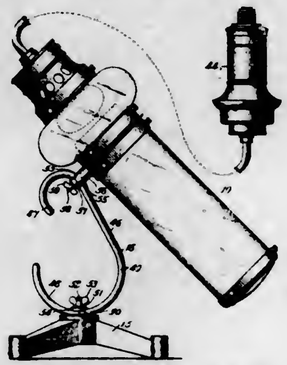
1,153,445. LAMP. JOSEPH T. ROFFY, Chicago, Ill., assignor to Nernst Lamp Company, a Corporation of Pennsylvania. Filed Jan. 14, 1911. Serial No. 602,679. (Cl. 240—41.)

1. A lamp comprising a tube, a lensing system in the tube, a lamp socket having a light source, and an inclosing light emitting globe between the tube and the lamp socket, said globe surrounding the light source.

2. A lamp comprising a lamp socket, a light source carried by the lamp socket, a tube having a lens relatively close to the lamp, and a light emitting globe connecting the tube and lamp socket and surrounding the light source, the lamp socket, lamp and tube having a common axis.

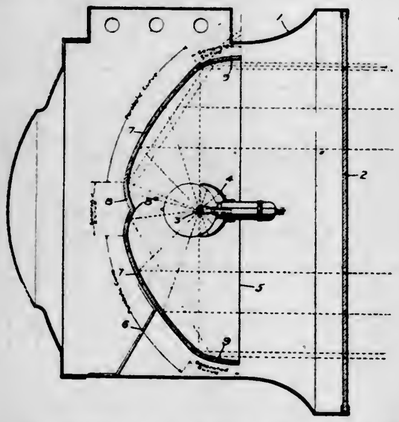
3. In a lamp, a globe having outwardly projecting flanges, a lamp socket connected to one of the flanges of the globe and having a light source extending into the globe, a lensing tube connected to the other flange of the

globe and provided with condensing lenses within the globe and in close proximity to the light source, the lamp



socket, globe and tube being concentric about a common axis.

1,153,446. LAMP AND REFLECTOR. JOSEPH T. ROFFY, Pittsburgh, Pa., assignor to Nernst Lamp Company, a Corporation of Pennsylvania. Filed Dec. 8, 1911. Serial No. 664,592. (Cl. 240—103.)

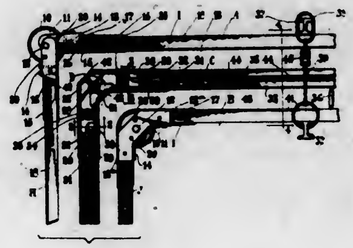


1. The combination of a reflector comprising an intermediate portion of parabolic form and two differently curved portions, and a light source located at the focal point of said parabolic portion, one of said curved portions being formed so as to reflect impinging rays of light upon the other curved portion.

2. The combination of a reflector comprising an intermediate portion of parabolic form and two differently curved portions, and a light source located at the focal point of said parabolic portion, one of said curved portions being formed so as to reflect impinging rays of light upon the otehr curved portion, the other curved portion being formed so that rays of light from the first curved portion will be reflected into space in parallel lines.

3. The combination of a reflector comprising an intermediate portion of parabolic form and two differently curved portions, and a light source located at the focal point of said parabolic portion, one of said curved portions being formed so as to reflect impinging rays of light upon the other curved portion, and a reflector facing the first mentioned reflector and in axial alinement therewith.

1,153,447. MOLD FOR USE IN THE CONSTRUCTION OF CONCRETE BUILDINGS. WILLIAM HENRY ROUGHSEDGE, Ottawa, Ontario, Canada. Filed June 10. 1911. Serial No. 632,810. (Cl. 25—131.)



1. In a concrete mold and in combination, a pair of outer corner members, means for adjustably connecting said outer corner members together, means on each of said outer corner members adapted to loosely receive a plurality of planks or the like which are adapted to be used to mold the wall of the building, a pair of inner corner members, means for adjustably connecting the inner corner members together, and means on each of the inner corner members for holding a plurality of planks or the like, and a collapsible core member comprising a collapsible corner member and loosely held wall molding members held by the collapsible corner members and cam means for expanding the collapsible core member.

2. In a concrete mold and in combination, a pair of outer corner members, means for adjustably connecting the same together, sockets on each of the outer corner members adapted to receive a plurality of planks which are adapted to mold the outer surface of the wall of the building, a pair of inner corner members, means for adjustably connecting the inner corner members together, sockets on said inner corner members adapted to receive a plurality of planks for molding the inner walls of the building and a collapsible core member comprising a corner member having sockets to receive planks or the like and cam means for expanding the collapsible core member.

3. In a concrete mold of the character described, a corner standard adapted to mold the corner, a socket member peripherally adjustable thereon and adapted to receive boards or the like which will mold the surface of the wall.

4. In a concrete mold, a corner post adapted to mold the corner and a pair of angular adjustable socket members supported therefrom and wall molding members held in the socket members.

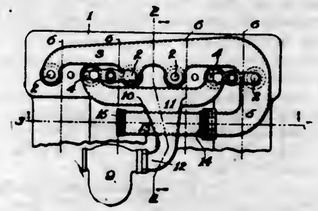
5. In a concrete mold and in combination, a tubular standard adapted to mold corners and having cores at each end, socket members pivoted to the cores and including spaced plates and molding members held between the spaced plates.

[Claims 6 to 9 not printed in the Gazette.]

1,153,448. CHARGE-HEATING ATTACHMENT FOR EXPLOSIVE-ENGINES. WILLIAM H. RUSSELL, St. Clair, Pa. Filed Dec. 3, 1913. Serial No. 804,365. (Cl. 123—122.)

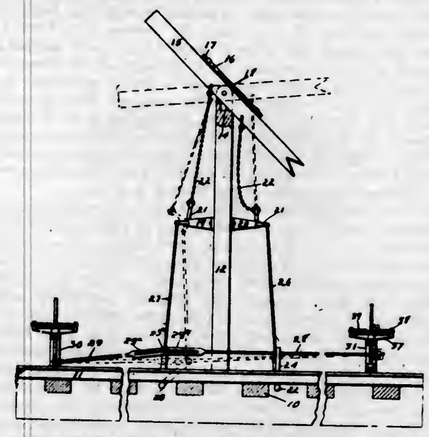
In combination with a carbureter and an explosive engine having exhaust and inlet ports and an exhaust pipe connecting said exhaust ports formed with a return-bend, a charge-heating attachment in the return-bend portion of said exhaust pipe, said attachment comprising a separate integrally formed charge-and-exhaust connection having a

transverse unobstructed exhaust-passage portion, and an annular charge-passage portion surrounding the same, exhaust pipe connections at opposite ends of said transverse portion, and cylinder inlet-port connections and a car-



bureter connection at the opposite ends respectively of said annular charge-passage portion substantially as shown and described.

1,153,449. RAILROAD SIGNAL DEVICE. WILLIAM E. SAUERMAN, Ogden, Iowa. Filed Sept. 21, 1914. Serial No. 862,821. (Cl. 246—48.)



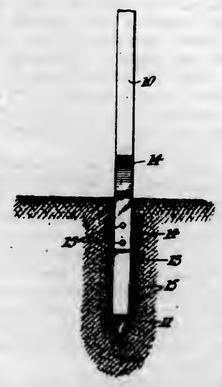
1. In a device of the class described, a post designed to be placed along the roadway of a railroad, an arm pivotally mounted thereon, a plurality of weights mounted on said arm and adapted to move freely past the pivotal point thereof, oppositely extending brackets on said post below said arm, bell crank levers pivoted to the respective brackets, flexible devices secured to the arm on opposite sides of the post and to the respective bell crank levers, rock-shafts, arms thereon, links connecting said arms and the respective bell crank levers, and means whereby passing trains operate said rock-shafts.

2. In a device of the class described, a post designed to be placed along the roadway of a railroad, an arm pivotally mounted thereon, a plurality of weights mounted on said arm and adapted to move freely past the pivotal point thereof, oppositely extending brackets on said post below said arm, bell crank levers pivoted to the respective brackets, flexible devices secured to the arm on opposite sides of the post and to the respective bell crank levers, rock-shafts, arms thereon, links connecting said arms and the respective bell crank levers, rods slidably and pivotally mounted on one of said arms on one of said rockshafts adapted to be extended in opposite directions along the track, engaging devices adapted to be mounted adjacent to the track, pivoted to the respective rods for drawing them away from the post when struck by an approaching train.

3. In a device of the class described, a post designed to be placed along the roadway of a railroad, an arm pivotally mounted thereon, a plurality of weights mounted on said arm and adapted to move freely past the pivotal point thereof, oppositely extending brackets on said post below said arm, bell crank levers pivoted to the respective brackets, flexible devices secured to the arm on opposite sides of the post and to the respectice bell crank levers, rock shafts, arms thereon, links connecting said arms and the respective bell crank levers, rods slidably and pivotally mounted on one of said arms on one of said rock shafts adapted to be extended in opposite directions along the track, engaging devices adapted to be mounted adjacent to the track, pivoted to the respective rods for drawing them away from the post when struck by an approaching train, and yielding means for returning said engaging devices to their original positions after they have been operated.

4. In a device of the class described, an engaging mechanism adapted to be placed on a car comprising an upright rotatably mounted rod, a handle thereon, a pair of members adapted to be mounted at the side of a car, and means for operatively connecting said rod with said members, whereby when the rod is rotated in one direction, one of said members is moved to horizontal position extending away from the car, and when the rod is rotated in the other direction, the other of said members is moved to horizontal position, while the first of said members is adapted to be dropped to depending position.

1,153,450. GUY-ANCHOR. SCHUYLER RENWICK SCHAFF, Louisville, Ky. Filed Sept. 3, 1914. Serial No. 860,010. (Cl. 189—92.)

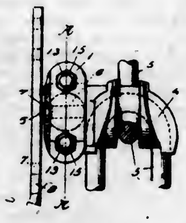


1. A guy anchor including a body portion and an anchor blade, said anchor blade having its lower end rigidly secured to the side of said body portion and having its opposite end extending upwardly and outwardly at an angle to said body portion, said anchor blade being formed of resilient material whereby the upper or free end may move toward the body portion as the anchor is forced into the ground and may swing outwardly into the ground as the anchor is moved in the opposite direction.

2. A guy anchor including a body portion and an anchor blade, said blade including a resilient strip or plate having its lower end rigidly secured to said body portion and having its upper end normally spaced from and movable toward and from said body portion, and a reinforcing strip secured rigidly to said body portion and engaging with the outer surface of said strip or plate along the lower portion of the latter.

3. A guy anchor including a body portion and a plurality of anchor blades each formed of resilient material and having its lower end rigidly secured to said body portion and its upper end spaced from and movable toward and from said body portion, said anchor blades being arranged in pairs on diametrically opposed sides of said body portion, and successive pairs being secured at spaced points along the length of the body portion and upon different sides thereof.

1,153,451. BALL-AND-SOCKET ATTACHMENT FOR CHAINS. HENRY SCHERER, Billings, Mont. Filed Jan. 3, 1914. Serial No. 810,182. (Cl. 74—17.)



1. A ball and socket connection comprising a body block having a longitudinal bore therein with at least one end open, and a slot in one side of said body block open centrally to said bore and extending substantially the length of said bore, a ball within said bore having a neck extending through said slot, the diameter of the ball being greater than the width of the slot, follow blocks on either side of said ball and fastening means passing through said body block and bore engaging the rear walls of said follow blocks to hold the same in fixed relation to said fastening means.

2. A ball and socket connection comprising a body block having a longitudinal bore therein with at least one open end, a slot in one side of said body block open centrally to said bore and extending substantially the length of said bore, a ball within said bore having a neck extending through said slot, the diameter of the ball being greater than the width of the slot, follow blocks on either side of said ball each block having a groove on its rear face, and fastening means passing through said body block and bore to engage said grooves and hold said follow blocks in fixed relation to said fastening means.

3. A ball and socket connection comprising a body block having a longitudinal bore therein with at least one open end, a slot in one side of said body block open centrally to said bore and extending the length thereof, a ball within said bore having a neck extending through said slot, the diameter of the ball being greater than the width of the slot, follow blocks on either side of said ball, and means passing through said body block and bore in a plane substantially perpendicular to the plane of said slot, engaging the rear walls of said follow blocks to reinforce the walls of said body block and hold the follow blocks in fixed relation thereto.

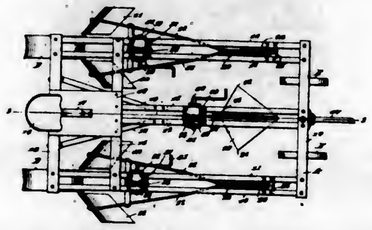
4. A ball and socket connection comprising a body block having a longitudinal bore therein with at least one open end for the reception of a ball, a slot in one side of said body block, extending centrally into said bore and the length thereof, a ball within said bore having a neck extending through said slot, follow blocks on either side of said ball and means passing through said body block and bore engaging the rear walls of said follow block to hold the same in fixed relation to said body block.

5. A ball and socket connection comprising a body block having a longitudinal bore therein with at least one open end for the reception of a ball, a slot in one side of said block extending centrally to said bore and the length thereof, a ball within said bore having a neck extending through said slot, bearing members on either side of said ball, and means passing through said body block and bore to reinforce the walls of said body block.

[Claims 6 and 7 not printed in the Gazette.]

1,153,452. ROAD-LEVELER. FRANCIS M. SETTLE, Wynne Wood, Okla. Filed Mar. 4, 1914. Serial No. 822,384. (Cl. 37—7.)

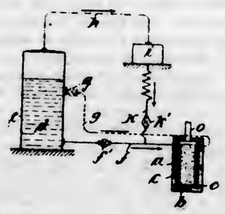
1. A road leveling machine comprising a supporting frame, a forward scraper carried by said frame for moving surplus material from the center of a road toward the sides thereof, rear scrapers carried by said frame and each including scraping blades positioned in spaced relation for gathering surplus dirt removed from the center of a road bed by said forward scraper and causing the same to pass between the scraping blades, and compressing rollers carried by said frame and passing over the dirt passing between the scraping blades of said rear scrapers to compress the same.



2. In a road leveling machine a supporting frame, a forward scraper carried by said frame and including a blade having its side edges extending in diverging relation toward the rear of the frame for moving dirt upon a road bed toward the sides of said frame, rear scrapers carried by said frame upon opposite sides of the forward scraper and each including scraping blades positioned in spaced relation for gathering dirt removed from a road bed by the forward scraper and causing the same to pass between the blades of said rear scrapers, and compressing rollers carried by said frame for passing over material passing between the scraping blades of said rear scrapers to compress the same in a rut formed in a road.

3. In a road leveling machine a frame, a forward scraper carried by said frame and positioned in substantially the transverse center of the frame and having its scraping blade provided with diverging road-engaging edges for moving surplus material from the central portion of a road toward the sides thereof, rear scrapers carried by said frame and positioned adjacent the sides thereof, each including blades positioned in spaced relation with their road-engaging edges extending in diverging relation toward the front of the machine and positioned to gather the material scraped from the central portion of a road by said forward scraper and cause the material to pass between the scraping blades of said rear scrapers and into ruts formed in a road, and compressing rollers carried by said frame and positioned to travel over the material passing between the blades of said rear scrapers to compress the material into ruts formed by vehicle wheels in a road.

1,153,453. APPARATUS FOR UTILIZING THE HEAT OF COKE-CAKES. CARL SEMMLER, Wiesbaden, Germany. Filed Dec. 9, 1913. Serial No. 805,530. (Cl. 122—6.)

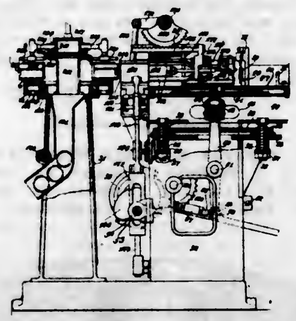


1. Apparatus for cooling coke comprising a receptacle having a jacket and adapted to receive a charge of glowing coke, the receptacle-jacket being adapted to receive a heat-absorbing fluid, means for conveying said fluid through said jacket, and pressure-controlling means adapted to be passed by the fluid subsequent to its passage through the jacket for maintaining the pressure of the fluid inclosed within said jacket at a height that precludes its vaporization, while permitting such vaporization of the fluid after its passage through such pressure-controlling means.

2. Apparatus for cooling coke comprising a receptacle having a jacket and adapted to receive a charge of glowing coke, the receptacle-jacket being adapted to receive a heat-absorbing fluid, means for conveying said fluid through said jacket, and a back pressure valve adapted to be passed by the fluid subsequent to its passage through the jacket for maintaining the pressure of the fluid inclosed within said jacket at a height that precludes its vaporization, while permitting such vaporization of the fluid after its passage through said back pressure valve.

3. Apparatus for cooling coke comprising a base, a jacketed hood removably supported thereby, stationary pipe lines for conducting a heat carrier, and means for connecting the hood-jacket to said pipe lines.

1,153,454. CAN-BODY FORMING AND SOLDERING MACHINE. LEE C. SHARP, Plattsmouth, Nebr., assignor to Bremer & Bruckman, Brunswick, Germany. Filed Aug. 28, 1908, Serial No. 450,609. Renewed July 28, 1915. Serial No. 42,452. (Cl. 113—10.)



1. In a can body former, the combination of devices for applying solder to the edge portion of a blank plate, means for bending the blank plate into the form of a can body with solder in the seam, a step-by-step moving means for receiving the body from said devices, means for moving the body to said step-by-step moving means, means for heating the solder while the body is held by the step-by-step moving means and a driving means common to all of said means and devices.

2. In a can body former, the combination of a magazine for the blank plate, a solder applying device juxtaposed thereto, means for bending the edges of the blank juxtaposed to the solder applying device, means for bending the blank into the form of the can body juxtaposed to the edge bending devices, feeding means adapted to advance the blanks with a step-by-step motion successively to said elements, a step-by-step moving means adapted to receive the can body from the said bending means, devices for transferring the can body to said step-by-step moving means devices for heating the can when the same is held by the step-by-step moving means and a driving means common to all of said means and devices.

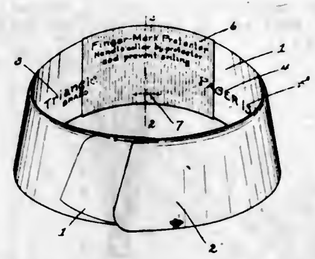
3. In a can body former, the combination of devices for applying solder to a blank plate, means for bending the blank plate into the form of a can body with solder in the seam, a step-by-step moving turret, holders on the turret to receive the can bodies, means for moving the can bodies to the holders, means for heating the can bodies on the holders to melt the solder and a driving means common to all of said means and devices.

4. In a can body former, the combination of a means for bending the blank plate into the form of a can body, a step-by-step moving holder for the can body comprising an outer part and a loose core, means for moving the can body into the holder and means for locking the core against removal as the can body is so moved.

5. In a can body former, the combination of a horn, means for bending the blank plate around the horn to form a can body, a body holder, a plurality of bars arranged to move past the horn to push the can body from the same to the holder, means for periodically moving the bars, said holder comprising an outer part with a loose core and a lock for holding the core while the can body is moving into engagement therewith.

[Claims 6 to 44 not printed in the Gazette.]

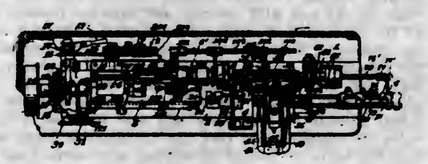
1,153,455. COLLAR. HARRY E. SHUMWAY, Waterford, N. Y., assignor to Van Zandt, Jacobs & Co., Troy, N. Y., a Corporation of New York. Filed May 8, 1913. Serial No. 766,327. (Cl. 2—67.)



1. A finger-protector for fold-collars comprising a piece of transparent material folded upon itself to embrace the band and folded-over top of the collar and having inturned end-flaps to enter between and be retained in position by the top and band of the collar.

2. A finger-protector for fold-collars comprising a strip of transparent material folded upon itself having an inturned flap at its folded end and an inturned flap at its other end, said folded strip being again folded whereby it is adapted to embrace the top and band of a fold-collar and its end-flaps to enter between the band and top of the collar, said protector having on the inner surface of its outer ply negatively printed matter.

1,153,456. STUD-THREADING MACHINE. OSCAR A. SMITH, Cleveland, Ohio, assignor to The National-Acme Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 22, 1914. Serial No. 833,589. (Cl. 10—89.)



1. In a machine of the class described, the combination of a work spindle having an opening at the side thereof, means for pushing a blank into the side of said spindle while a previously fed blank is being operated on, and means for working said blank.

2. In a machine of the class described, the combination of a stationary work spindle having an opening at the side thereof, means for feeding a blank into the side of said spindle while a previously fed blank is being operated on, and means for threading said blank.

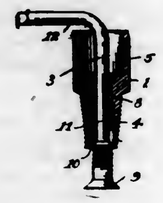
3. In a machine of the class described, the combination of a dead work-carrying spindle having an opening at the side thereof, and sliding means for pushing a blank into the side of said spindle while a previously fed blank is being operated on.

4. In a machine of the class described, the combination of a stationary work spindle having an opening at the side thereof, means for feeding a blank into the side of said spindle while a previously fed blank is being operated on, and threading means for threading said blank and comprising an openable die rotatable continuously in the same direction and adapted to be reciprocated toward and from said work spindle.

5. In a machine of the class described, the combination of a non-rotary work-carrying spindle having an opening at the side thereof, means for feeding a blank into the side of said spindle while a previously fed blank is being operated on, a tool spindle, and means for shifting one of said spindles toward and from the other.

[Claims 6 to 52 not printed in the Gazette.]

1,153,457. PRIMING-CUP. OSCAR A. SMITH, Cleveland, Ohio. Filed Apr. 22, 1914. Serial No. 833,590. (Cl. 137—4.)



1. A priming cup for gas engines comprising a two-part device, each part of an integral structure, one part consisting of a body member having an axial passage therethrough and terminating at one end in a tapered valve seat and at its opposite end in a cylindrical fluid receiving chamber, said passage having its wall provided with threads and one or more laterally extending recesses, and said body having at one end external threads and at its opposite end a wrench receiving portion, and the other integral part consisting of a stem extending through said passage and having a tapered valve for engaging said seat and provided with threads coöperating with said first threads, the opening of the valve being obtained by lowering said valve from the seat in the direction of flow of fluid from said chamber when in normal position and the closing thereof by drawing the valve in the opposite direction.

2. A priming cup for gas engines comprising a body member having an axial passage therethrough and provided at one end with internal and external threads and at its opposite end with a fluid-receiving chamber having thereon a wrench-receiving portion, said body member terminating at its threaded end in a tapered valve seat, and a stem extending through said passage and provided with threads adapted to coöperate with the internal threads of said body and also provided with a valve for engaging said seat, the organization being such that the valve is opened by moving said valve from its seat in the direction of flow of fluid from said fluid-receiving chamber when in normal position.

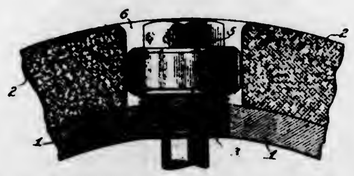
3. A priming cup for gas engines comprising a body member having an axial passage therethrough and provided with internal and external threads at one end thereof and a fluid-receiving chamber having a wrench-receiving portion formed on its outer surface at the opposite end thereof, said body member terminating at its threaded end in a tapered valve seat, and a stem extending through said passage and provided with threads cooperating with the internal threads of said body and terminating in a valve for engaging said valve-seat, the organization being such that the valve is opened by moving said valve from its seat in the direction of flow of fluid from said fluid-receiving chamber when in normal position.

4. A priming cup for gas engines comprising a two-part device, one part consisting of a body member having an axial passage therethrough and terminating at one end in a valve seat, and at its opposite end in a fluid receiving chamber, such body having at one end external threads and at its opposite end a wrench receiving portion, and the other part consisting of a stem extending through said passage and having a valve for engaging said seat, the opening of the valve being obtained by lowering said valve from the seat in the direction of flow of fluid from said chamber when in normal position and the closing thereof by drawing the valve in the opposite direction.

5. A priming cup for gas engines comprising a two-part device, one part consisting of a body member having an axial passage therethrough and terminating at one end in a valve seat and at its opposite end in a fluid receiving chamber, said passage having its wall provided with threads and said body having at one end external threads and at its opposite end a wrench receiving portion, and the other part consisting of a stem extending through said passage and having a valve for engaging said seat and provided with threads coöperating with said first threads, the opening of the valve being obtained by lowering said valve from the seat in the direction of flow of fluid from said chamber when in normal position and the closing thereof by drawing the valve in the opposite direction.

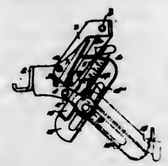
[Claims 6 to 10 not printed in the Gazette.]

1,153,458. CAP FOR FLEXIBLE STAY-BOLTS. BENJAMIN E. D. STAFFORD, Pittsburgh, Pa., assignor to Flannery Bolt Company, Pittsburgh, Pa. Filed June 5, 1915. Serial No. 32,398. (Cl. 85—1.5.)



As a new article of manufacture, a cap for flexible stay bolts consisting of a cylindrical body internally threaded to engage the stay bolt sleeve, and provided with an outer closed end the latter being angular in cross section and of less diameter than the cylindrical portions.

1,153,459. ADJUSTABLE HEMMER. CHARLES STAFFORD, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed June 26, 1913. Serial No. 775,846. (Cl. 112—10.)

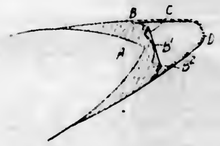


1. In a hemming attachment for sewing machines, a foot, edge curling members carried by said foot and including a curling hook and an arbor embraced thereby, a longitudinally adjustable guide-member provided with an arm, and retaining means secured to said foot and engaging said arm to confine the guide-member against lateral movement, the said retaining means being ineffective at a given point of adjustment of the guide-member.

2. In a hemming attachment for sewing machines, a foot, edge-curling members carried by said foot and including a curling hook and an arbor embraced thereby, a longitudinally adjustable guide-member provided with a spring-arm, a bracket adapted to confine said arm against lateral movement and provided with a clamping foot, a set screw adapted to press said clamping foot upon the guide-member, and means whereby said guide-member may be swung laterally upon said set screw as an axis at a given point of adjustment.

3. In a hemming attachment for sewing machines, a foot, and an arbor carried thereby, a smoothing plate embracing said foot and formed with a curling finger turned at its free end to provide a curling hook to contact with said arbor, an adjustable guide-member connected to said foot and means for confining said guide-member against lateral movement, said means being ineffective at a given point of adjustment of said guide-member.

1,153,460. ARMOR-PIERCING PROJECTILE. HARRY BLAND STRANGE, Blackheath, England, assignor to Messrs. Thos. Firth and Sons, Limited, Sheffield, England. Filed July 1, 1914. Serial No. 848,445. (Cl. 102—28.)



1. A cap for an armor piercing projectile having an annular groove or recess so formed in its front face that the metal on each side of the groove will be cut by a plane normal to the axis of the projectile cutting the groove.

2. A cap for an armor piercing projectile having an annular groove or recess formed in its front face with the metal on each side of the groove extending forwardly to such an extent that a plane normal to the axis of the projectile cutting the groove will cut also the metal on each side of the groove.

3. A cap for an armor piercing projectile having an annular groove or recess so formed in its front face that a plane normal to the axis of the projectile cutting the groove will also cut the metal on each side of the groove, the metal on one side of the groove being hardened and that on the other side left relatively soft.

4. A cap for an armor piercing projectile having an annular groove or recess formed in its front face so positioned and of such dimensions as to divide the front face into distinct central and annular protrusions, and permit one of said proportions to be crushed or compressed into the groove on impact of the projectile.

5. In a cap for an armor piercing projectile, the combination with a central protrusion on the face of the projectile, of an annular protrusion also formed on the face of the cap, one of the protrusions being hardened and the other being left comparatively soft.

[Claim 6 not printed in the Gazette.]

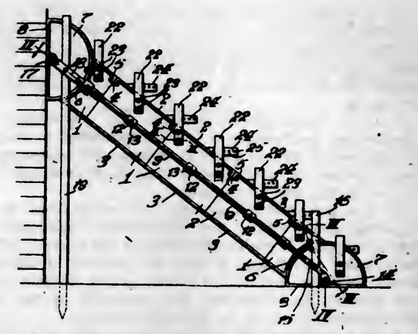
1,153,461. CUTTER FOR CONCAVING-MACHINES. JOHN STROOTMAN, Buffalo, N. Y. Filed Nov. 18, 1914. Serial No. 872,789. (Cl. 12—17.)

1. In combination with a machine of the type described, a rotating stud having a disk-shaped face, a dove-tail slot in said face, cutters having corresponding dove-tail bases to engage in said slot, convex cutting edges on said cutters formed by an outer, beveled surface and an inner semi-cylindrical or semi-conical groove or recess and pins for engaging said cutters and said stud to hold said cutters in place.



2. In combination with a machine of the type described, a driven stud, cutters removably secured to the face of said stud, said cutters being provided with cutting edges curved to conform to the desired degree of concavity to be formed and a lead and centering device carried by and adjustable axially in said stud and concentric with said cutters.

1,153,462. STEP-MOLD. WILLIAM P. STUBBLEFIELD, St. Louis, Mo., assignor of one-third to George Baptiste, St. Louis, Mo. Filed Feb. 26, 1912. Serial No. 680,100. (Cl. 25—118.)



1. In a device of the character described, the combination with adjustably mounted side boards, of panel supporting brackets adjustably mounted on said side boards, said brackets comprising vertical and horizontal branches, and means adjustably connecting each horizontal branch to the vertical branch of an adjacent bracket.

2. In a device of the character described, the combination with adjustably mounted side boards, of panel supporting brackets adjustably mounted on said side boards, said brackets comprising vertical and horizontal branches, and means adjustably connecting each horizontal branch to the vertical branch of an adjacent bracket; said brackets being provided with panel receiving sockets.

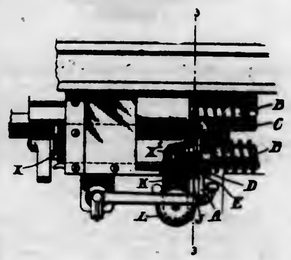
3. In a device of the character described, the combination with spaced side boards, panel supporting brackets adjustably mounted on said side boards, said brackets comprising vertical and horizontal branches and means for adjustably connecting said brackets to said side boards, said vertical branches being provided with sockets adapted to support riser panels of different breadths.

4. A step mold comprising side boards, adjustable brackets mounted on said side boards, each of said brackets comprising a vertical and a horizontal branch, said brackets adapted to be oppositely disposed on said side boards, each of said vertical branches supporting one end of a riser panel, each of said horizontal branches adapted to be secured to a vertical branch of an adjacent bracket.

5. A step mold comprising side boards, adjustable brackets mounted on said side boards, each of said brackets comprising a vertical and a horizontal branch and a clamping arm, said brackets adapted to be oppositely disposed on said side boards, each of said vertical branches adapted to support one end of a riser panel, each of said horizontal branches adapted to be releasably secured to the vertical branch of an adjacent bracket, said clamping arms providing means for securing said brackets to said side boards.

[Claims 6 to 8 not printed in the Gazette.]

1,153,463. TYPOGRAPHICAL MACHINE. HENRY D. TAFT, Rockville Center, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Nov. 5, 1914. Serial No. 870,325. (Cl. 199—7.)



1. In a typographical machine, the combination of distributing mechanism, a group of type or matrices movable through the machine for delivery thereto, and an automatic signal distinct from the distributing mechanism and adapted to be operated by an improper type or matrix in the group.

2. In a typographical machine, the combination of distributing mechanism, a font distinguisher to control the delivery of type or matrices thereto, and an automatic signal distinct from the distributing mechanism and controlled by the font distinguisher.

3. In a typographical machine, the combination of distributing mechanism, a font distinguisher adjustable to different operative positions to control the delivery to the distributing mechanism of type or matrices of different forms or fonts, and an automatic signal distinct from the distributing mechanism and controlled by the font distinguisher in any of its adjusted positions.

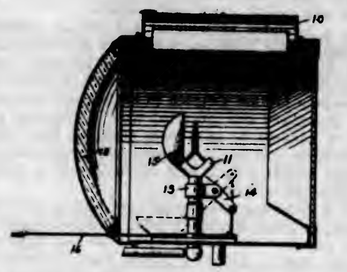
4. In a typographical machine, the combination of distributing mechanism, a group of type or matrices movable through the machine for delivery to the distributing mechanism, and each formed with a notch, an automatic signal distinct from the distributing mechanism, and an actuating device therefor located in the path of movement of the type or matrices and adapted to enter the notches therein; whereby the presence of an improperly notched matrix in the group will engage said device and cause it to operate the signal.

5. In a typographical machine comprising type or matrices of different forms, the combination of distributing mechanism, means for moving the type or matrices through the machine for delivery to the distributing mechanism, an automatic signal distinct from the distributing mechanism, and an actuating device therefor arranged in the path of movement of the type or matrices and adapted to permit the passage of type or matrices of one form and adapted to be engaged by the passing type or matrices of another form so as to operate the signal.

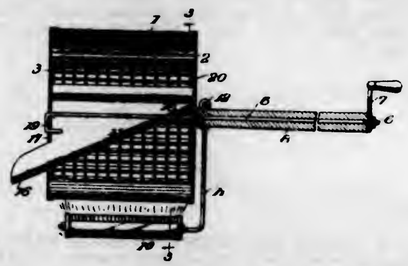
1,153,464. LIGHT-DIMMER. JOHN A. THOMPSON, Des Moines, Iowa. Filed Jan. 26, 1914. Serial No. 814,367. (Cl. 240—45.)

1. A light dimmer, including an obstruction, a fixed member outstanding at an angle to the axis of a burner tube, a member fulcrumed upon said outstanding fixed member, with its longer arm bearing said obstruction, and means attached to the shorter arm of said fulcrumed member for actuating the same, which obstruction is arranged to be brought intermediate the light and its reflector by exerting a pulling action upon said actuating means.

2. A light dimmer, including a fixed arm outstanding at an angle to the axis of a burner tube, a member fulcrumed upon said outstanding arm, said fulcrumed member having a disk at the end of its longer arm, and a flexible member attached to the shorter arm of said fulcrumed member for moving said disk to a point intermediate the light and its reflector.



1,153,465. CORN-POPPER. FRANK A. TRAVER, Milwaukee, Wis. Filed June 15, 1914. Serial No. 845,256. (Cl. 53—4.)



1. A rotary hand supported and operated corn popper having a handle, and a burner carried by and removably attached to the handle.

2. A corn popper comprising a handle, a rotary drum having its hand operated rotating shaft mounted in and carried by said handle, and a burner arranged below and in operative relation with respect to the drum and provided with a supporting bracket removably applied to and carried by said handle.

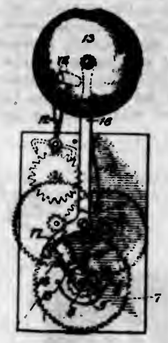
3. A corn popper comprising a handle, a movable popping drum carried by the handle, and a removable burner normally operatively arranged below and with respect to said drum and provided with a supporting bracket having a clamp for securing the same to said handle, said bracket and its clamp and burner being removable from said handle.

4. A corn popper comprising a rotary drum having supporting means and a rotating shaft, said drum having its circumferential wall composed of sheet material having overlapping ends forming a circumferential opening and a guard within the drum for said opening to prevent passage of corn through the opening when the drum is rotated in normal direction and to cause discharge of unpopped corn through said opening when the drum is rotated in abnormal direction.

5. A corn popper comprising a rotary drum and means for rotating the same in either direction, said drum having a longitudinal discharge opening through its circumferential wall, and a guarding deflector within the drum for said opening, said deflector preventing access to the opening from within the drum except under the free edge of the deflector when the drum is rotated in an abnormal direction, said deflector formed by an inwardly-deflected projecting end of said wall.

[Claims 6 to 17 not printed in the Gazette.]

1,153,466. CULINARY TIMING APPARATUS. ALBERT TUREK, Chicago, Ill. Filed Feb. 11, 1915. Serial No. 7,460. (Cl. 58—16.)



1. A timing mechanism, comprising a vibratory hammer, a clock mechanism having operative connection with said hammer, a sound producing means adapted for movement into and out of the zone of vibration of the hammer, and means intermediate of said sound producing means and the clock mechanism for moving said sound producing means into the zone of the hammer, substantially as set forth.

2. A timing mechanism, comprising a vibratory hammer, a clock mechanism having operative connection with said hammer, a sound producing means adapted for movement into and out of the zone of vibration of the hammer, a lever carrying said sound producing means, a manually adjustable operating arm having operative connection with the clock mechanism and adapted in its movement to engage and move said carrying lever, and a stop for limiting the movement of said arm in one direction, substantially as set forth.

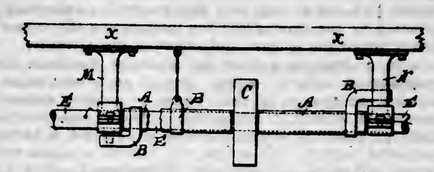
3. A timing mechanism, comprising a vibratory hammer, a clock mechanism having operative connection with said hammer, a sound producing means adapted for movement into and out of the zone of vibration of the hammer, a lever carrying said sound producing means, a manually adjustable operating arm having operative connection with the clock mechanism and adapted in its movement to engage and move said carrying lever, and a stop capable of limited free movement arranged in the path of said operating arm, substantially as set forth.

4. A timing mechanism, comprising a vibratory hammer, a clock mechanism having operative connection with said hammer, a sound producing means adapted for movement into and out of the zone of vibration of the hammer, a lever carrying said sound producing means, a main shaft connected to the clock work by a pawl and ratchet connection, an operating arm carried on said shaft and adapted in its movement to engage and move said lever, substantially as set forth.

5. A timing mechanism, comprising a vibratory hammer, a clock mechanism having operative connection with said hammer, a sound producing means adapted for movement into and out of the zone of vibration of the hammer, a lever carrying said sound producing means, a main shaft connected to the clock work by a pawl and ratchet connection, an operating arm carried on said shaft and adapted in its movement in one direction to engage and move said lever, a fixed stop in the path of said arm, an operating handle and pointer associated with said shaft, and a dial associated with said pointer, substantially as set forth.

1,153,467. SHAFT-SHIELD. HENRY J. TYNAN, Paterson, N. J. Filed Dec. 18, 1914. Serial No. 877,913. (Cl. 64—12.)

1. A sleeve adapted to be placed and to rest upon a rotatable shaft so that the sleeve and shaft may have relative rotative movement, and means applied to the sleeve to prevent it from turning with the shaft, substantially as set forth.



2. A sleeve adapted to be placed and to rest upon a rotatable shaft so that the sleeve and shaft may have relative rotative movement, and means applied to the sleeve to hold it against turning and against lengthwise movement, substantially as set forth.

3. A sleeve adapted to be placed and to rest upon a rotatable shaft, and means projecting from said sleeve and adapted to prevent rotation thereof by contact with a stationary object, substantially as set forth.

4. A sectional sleeve adapted to be placed and to rest upon a rotatable shaft, and a member comprising a clamp to clamp the sections of the sleeve together and an arm adapted to extend into contact with a stationary object and to thereby prevent rotation of the sleeve, substantially as set forth.

1,153,468. STIPPLING-PEN. JAMES H. VAUGHAN, Oakland, Cal. Filed Oct. 19, 1914. Serial No. 867,453. (Cl. 95—101.)



1. In a stippling pen of the character described, the combination with a casing having a hollow cored electromagnet mounted therein, of a spring actuated driving rod extending through said core, a main armature plate secured to said rod which is adapted to be actuated by the magnet, a pen connected with the driving rod, a pair of contact members with which the terminals of the magnet are connected, a switch armature mounted below said contact members adapted to close a circuit through same, and means for automatically lifting the armature disk up into engagement with the contact members when the magnet is deenergized.

2. In a stippling pen of the character described, the combination with a casing having an electromagnet mounted therein, of a main armature plate movable in relation thereto, a spring actuated driving rod connected with the armature, a pen connected with the driving rod, and a switch armature for automatically interrupting the current flow through the magnet and releasing the first named armature.

3. In a stippling pen of the character described, the combination with a casing having a hollow cored electromagnet mounted therein, of a spring actuated driving

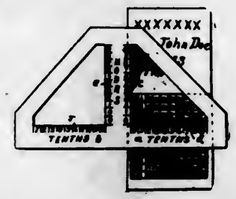
rod extending through said core, a main armature plate secured to said rod and which is adapted to be actuated by the magnet in opposition to the spring, a pen connected with the driving rod, and a switch automatically actuated by the driving rod for interrupting the current flow through the magnet and releasing the armature.

4. In a stippling pen of the character described, the combination with a casing having an electromagnet mounted therein, of a main armature member movable in relation thereto, a driving rod connected and movable with the armature, a pen connected to said rod, a spring connected with the rod exerting its tension in opposition to the pull of the magnet, and a deënergising switch actuated by the movement of the rod.

5. In a stippling pen of the character described, the combination with a casing having an electromagnet mounted therein, of a main armature member movable in relation thereto, a driving rod connected with the armature, a pen yieldingly connected to said rod, a spring connected with the rod exerting its tension in opposition to the pull of the magnet, and an armature switch actuated by the outward movement of the rod to release the main armature.

[Claim 6 not printed in the Gazette.]

1,153,469. TIME-RECKONING DEVICE. WILLIAM G. VIALL, Bridgeport, Conn. Filed Jan. 17, 1914. Serial No. 812,672. (Cl. 235—89.)



1. A device of the class described, formed of a piece of sheet material having a central opening therein and including two inner side straight edge portions bordering the opening and arranged at a right angle to each other, a series of graduations upon the face of each of the said edge portions and including a series of lines arranged at equal distances apart, and a series of numerals marking each of the said spaces one of the said series of numbers representing whole numbers and the other series representing fractions of numbers and adapted to be read with a series of numbers as printed upon a card for the purpose of obtaining the length of an interval of time from indications on a time card.

2. A device of the class described, formed of a piece of sheet material having a central opening therein and including two inner side straight edge portions bordering the openings and of substantially equal distances and which are at a right angle to each other, a series of graduations bordering the said edge portions and including a series of line arranged at equal distances apart and a series of numerals marking each of the said spaces one of the said series reading from 0 to 10 inclusive and adapted to be read with a series of numbers as printed upon a card, the other series of numbers reading from 1 to 10 inclusive and indicating tenths and adapted to be read in connection with a further series of numbers upon the face of the same card and designed to indicate tenths of fractions of an hour.

1,153,470. TRESTLE FOR CARPENTERS' USE. ALLEN P. WAGNER, Fredericksburg, Pa. Filed July 30, 1913. Serial No. 782,062. (Cl. 20—83.)

1. A trestle beam support including a plate member directly engageable with the under face of the beam, an extension formed upon one end of the said plate member disposed for engagement with one end of the beam, a pair of pivoted support members carried by the said plate member at the opposite end thereof from that of the said extension, engaging heads carried upon one extremity of the said support members, the said heads being disposed for engagement at the sides of the said beam, and means including arms pivoted to the said support members for maintaining the heads thereof in engagement with the said beam, as and for the purpose set forth.



2. A trestle beam support including a plate member directly engageable with the under face of the beam, an extension formed integrally with the said plate member upon one end thereof, the said extension being disposed for engagement with one end of the said beam, a pair of duplicate support members pivotally secured to the said plate member, engaging heads formed upon one end of the said support members, the said heads being disposed for engagement with the sides of the said beam, arms pivotally secured to each of the said support members and means carried by one of the said arms adapted to engage the other of the said arms for locking the said support members with their heads in engagement with the said beam, as and for the purpose set forth.

3. A trestle beam support including a plate member, a right-angled extension at one end of said plate member, means upon said extension for detachably fastening said plate member to said beam, legs mounted upon said plate member at the opposite end thereof, said legs being adapted for pivotal movement bodily and in unison longitudinally of said beam, said legs being independently pivoted to move laterally with respect to each other, and means formed upon one extremity of each of said legs, said means being engageable with said beams, for detachably fastening said legs rigid and in adjusted position, as and for the purpose set forth.

1,153,471. CAR-TIME FINDER. GEORGE F. WAKEFIELD, San Jose, Cal. Filed Dec. 28, 1914. Serial No. 879,808. (Cl. 235—89.)



A car time finder consisting of a card upon which are shown a straight line indicating the distance over which the car passes, parallel transverse lines intersecting and extending on opposite sides of the first line, and transverse lines corresponding with the distance traversed by the car in each minute during its scheduled run, and a starting time table block at each end of the first line provided with the scheduled starting time for each car, and an adjustable scale having minute sub-division lines associable with those of the card and with the starting time table blocks whereby, on setting the minute mark of the scale at a station between the terminals corresponding to the period of the day, the time at which a car should have left its starting point in order to arrive at the specified station at such period of the day may be ascertained, and whereby on subsequently setting the minute indication of the scale, next designated by the starting time table block, after the ascertained time, at the starting point the correct time of arrival at the specified station and at the destination may be ascertained, said adjustable scale further having sets of members on the sub-division lines arranged in inverse relation to one another and designating the minutes of the hour.

1,153,472. SCREEN-DOOR PROTECTOR. JUDSON WEBER, Marcus Hook, Pa. Filed Jan. 24, 1913. Serial No. 744,053. (Cl. 20—71.)



The combination with a screen door equipped with complemental upper and lower panels of fine mesh netting of an auxiliary frame removably fixed to and covering the face of the lower panel of the door said auxiliary frame having stretched across its outer face coarse mesh netting the marginal edges of which netting are secured to the frame by strips of molding, said auxiliary frame having extended thereacross between its inner rims in fixed relation, a vertical and a horizontal rod, the vertical rod being disposed immediately adjacent that frame upright opposite the hinged part of the screen door frame which rods lie between and space apart the fine mesh netting of the door and the coarse mesh netting of the auxiliary frame.

1,153,473. ARTIFICIAL BAIT. RICHARD T. WILSON, Hastings, Mich., assignor to Mabel Wilson, Hastings, Mich. Filed Dec. 19, 1914. Serial No. 878,115. (Cl. 43—30.)



1. An artificial bait comprising a pisciform buoyant body having a laterally expanded front end formed with an entering cavity, and means for the attachment of a line to the bait in turn attached to the bait at the inner end or bottom of the cavity.

2. An artificial bait comprising an elongated buoyant body with a laterally expanded front end formed with an entering cavity in substantially axial relation to the elongated body, and a swivel connection for a line in turn connected to the body at the inner end or bottom of the cavity.

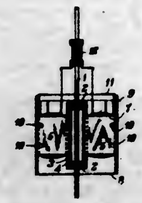
3. An artificial bait comprising an elongated body of buoyant material having one end relatively wide and blunt and tapering toward the other end, the blunt end having an axially disposed entering cavity wide at the entering end and narrowing toward and closed at the inner end, and means for the attachment of a line attached to the body at the inner or narrow end of the cavity.

4. An artificial bait comprising a pisciform body of buoyant material with the front end relatively wide and blunt and there formed with an axially disposed cavity tapering from the outer open end toward the inner end and there provided substantially in line with the longitudinal axis of the body with means for the attachment of a line.

5. An artificial bait comprising a generally pisciform body of buoyant material having the front or head end relatively wide and blunt and there provided with an axially disposed entering cavity having its entering or mouth end relatively wide and from thence narrowing to the inner end and there closed, a swivel connection for a line in turn connected to the body at the inner or bottom end of the cavity substantially in line with the longitudinal axis of the body, and fish hooks fast to the body.

[Claim 6 not printed in the Gazette.]

1,153,474. ARMATURE. THEODORE ABTMEYER, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 22, 1911. Serial No. 628,740. (Cl. 171—207.)



1. An armature for dynamo-electric machines comprising a shaft, a plurality of L-shaped plates diverging laterally therefrom and having laterally extending end portions forming substantially a cylindrical surface, a longitudinally slotted cylinder for engaging the outer end of the said plates, and coils upon the said plates.

2. An armature core for dynamo-electric machines comprising a shaft, a plurality of plates diverging laterally therefrom, and a longitudinally slotted cylinder for engaging the outer end of the said plates.

3. An armature for dynamo-electric machines comprising a shaft, a plurality of L-shape plates carried thereby and diverging laterally therefrom, coils mounted upon the said plates, and a cylinder engaging the outer ends of the plates.

4. An armature for dynamo-electric machines comprising a shaft, a plurality of magnetisable L-shape plates carried thereby and diverging laterally therefrom, and coils mounted upon the said plates.

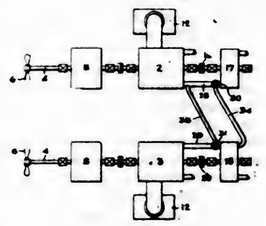
5. An armature for dynamo-electric machines comprising a longitudinally slotted arbor, a plurality of L-shaped diverging plates seated in the slots in the arbor, and coils surrounding the plates.

[Claims 6 to 19 not printed in the Gazette.]

1,153,475. MARINE TURBINE. KARL ALQUIST, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 20, 1915. Serial No. 3,254. (Cl. 121—58.)

1. In a system of ship propulsion, the combination of main turbines arranged to propel the ship at maximum speed, cruising turbines arranged to coöperate with the

main turbines to propel the ship at speeds below the maximum, and means arranged to connect the cruising turbines in series with the main turbines as regards the flow of steam for intermediate speed conditions and to connect the cruising turbines serially as regards the flow of steam and to supply the exhaust therefrom to the main turbines in parallel for lower speeds of the ship.



2. In a system of ship propulsion, the combination of propeller shafts, main turbines arranged to propel the ship at maximum speeds, speed reducing gearing between the turbine and propeller shafts, cruising turbines arranged to be connected to the main turbines and coöperate therewith to propel the ship at speeds below the maximum, releasable couplings between the shafts of the main and cruising turbines, and means arranged to connect the cruising turbines in series with the main turbines as regards the flow of steam for intermediate speeds of the ship and to connect the cruising turbines serially as regards the flow of steam and to supply the exhaust therefrom to the main turbines in parallel for lower speeds of the ship.

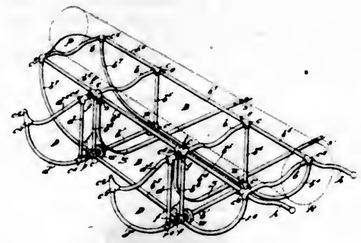
3. In a system of ship propulsion, the combination of main turbines arranged to propel the ship at maximum speed, main and auxiliary nozzles for the turbines, the former being adapted in size and shape to receive live steam and the latter exhaust steam, cruising turbines arranged to coöperate with the main turbines to propel the ship at speeds below the maximum, means arranged to deliver the exhaust from the cruising turbines in parallel to the auxiliary nozzles of the main turbines for intermediate speed conditions, and means arranged to connect the cruising turbines serially as regards the flow of steam and to supply the exhaust therefrom to the auxiliary nozzles of the main turbines in parallel for lower speeds of the ship.

4. In a twin screw system of ship propulsion, the combination of twin propeller shafts, two main turbines for driving the ship at full speed, speed reducing gearing between each turbine and its corresponding propeller shaft, two cruising turbines, releasable couplings for connecting the shafts of the cruising turbines to those of the main turbines, and means for connecting the cruising turbines in series as regards the flow of steam with the main turbines for certain speeds of the ship and for connecting them in series as regards the flow of steam and to exhaust into the main turbines for certain other speeds of the ship.

5. In a system of ship propulsion, the combination of propeller shafts, main turbines coupled thereto for propelling the ship at maximum speed, cruising turbines each having a separate casing and whose rotor is coupled to the respective main turbine shaft for cruising speeds, all of said turbines being provided with nozzles so proportioned as to give the desired work division, means for connecting the cruising turbines to and disconnecting them from the main turbines, conduit means for connecting each cruising turbine in series with a main turbine and for connecting the cruising turbines in series with each other as regards the flow of motive fluid and to exhaust into both main turbines, and valves in said conduit means for controlling the passage of motive fluid therethrough.

[Claims 6 and 7 not printed in the Gazette.]

1,153,476. TRUCK OR CARRIER FOR CYLINDRICAL OBJECTS. NOEL L. ANTHONY, Cranston, R. I. Filed Sept. 26, 1914. Serial No. 863,617. (Cl. 21—65.)



1. In a truck for handling rolls of linoleum or other material, the combination with connected side-frames of runner-like structure having rockers at their ends on which the truck can be up-ended, of rocker-like outriggers extending laterally from the main body of the truck to adapt it to be tilted on its side in depositing the roll onto the floor or in raising it therefrom.

2. In a truck for the purpose specified, the combination with a sled-like frame having a longitudinal recessed seat for a roll of material or the like, of rocker-arms extending laterally from the frame to adapt the truck to be tilted on its side to deposit the roll on the floor and to pry the roll up onto the body of the truck in raising it from the floor.

3. In a truck for handling rolls of material or other cylindrical objects, the combination with a framework comprising connected runner-like side-members having rockers at their ends, of rocker-arms hinged to the framework to fold against the side-members and adapted to be extended laterally therefrom to provide means for rocking the truck on its side and to receive the roll of material in rolling it onto the truck or off onto the floor.

4. In a truck for the purpose specified, the combination with a main frame of sled-like structure having connected side-members formed with rockers at their ends, wheels for supporting the frame to roll on the ground, and outriggers extending laterally from one side of the frame and formed with rockers on which the truck can be tilted on its side to facilitate the raising of a cylindrical object onto the frame or in rolling it off onto the floor.

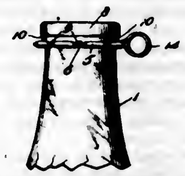
5. In a truck for the purpose specified, the combination with a skeleton framework comprising two parallel runner-like side-members formed with curved rockers at their ends and connected at the top and bottom by spaced cross-members, of outriggers formed with uprights connected to horizontal supports and curved rocker-arms, and means to hinge said outriggers to one of the side-members to adapt them to be extended laterally therefrom or to fold against the side of the truck.

[Claims 6 and 7 not printed in the Gazette.]

1,153,477. DETACHABLE BOTTLE-CAP. GEORGE W. BEADLE, New York, N. Y., assignor of ten one-hundredths to Delaven Smith, Lake Forest, Ill., and ten one-hundredths to Edward P. Russell, Chicago, Ill. Filed Apr. 2, 1915. Serial No. 18,741. (Cl. 215—9.)

1. In a snap closure for a vessel mouth having a holding bead, the combination of a cup shaped member having a resilient flange adapted to be snapped over said bead; and a spring wire rigid with said flange provided with a coiled portion adapted when compressed to expand said flange, substantially as described.

2. In a snap closure for a vessel mouth having a holding bead the combination of a cup shaped member having a resilient flange adapted to be snapped over said bead; and a spring wire rigid with said flange provided with a compressible integral, bent portion adapted when compressed to expand said flange, substantially as described.



3. In a snap closure for a vessel mouth having a holding bead the combination of a cup shaped member having a resilient flange adapted to be snapped over said bead; and a spring wire rigid with said flange provided with a compressible spirally wound integral portion adapted when compressed to expand said flange and to serve as finger holds for readily removing the closure, substantially as described.

1,153,478. PUMP FOR VARIABLE-SPEED HYDRAULIC TRANSMISSION-GEARS. CHARLES BELLENS, Brussels-Ixelles, Belgium. Filed Nov. 22, 1912. Serial No. 732,894. (Cl. 103—44.)



1. A system of primary or secondary pumps for variable speed hydraulic transmission gears with reverse, comprising a series of pumps each having a suction and a delivery orifice, and a suction chamber and delivery chamber for the series of pumps, one of said pumps having a by-pass obturator at the suction and at the delivery orifice, the other pumps of the series each having a by-pass obturator at only one of said orifices, the other orifice being free, and a solid wall isolating said free orifice from the chamber connected with the other orifice, thereby increasing the volumetric and mechanical efficiency of the pumps in preventing leakages.

2. A pump system for variable hydraulic transmission comprising a series of pump units, each having a casing and a rotor therein, a suction orifice leading from the inlet to the rotor, a discharge orifice from the rotor, and a delivery chamber to which the discharge orifice leads, one of said units having a speed obturator at the discharge orifice to connect said orifice with the delivery chamber, or to short circuit with the inlet, and a reversing obturator between the suction orifice and the delivery chamber, and others of the units having a speed obturator at the discharge orifice, and a wall permanently separating the suction orifice and the delivery chamber.

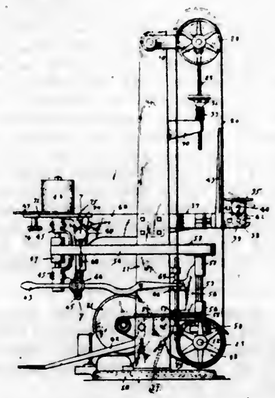
3. A pump system for variable speed hydraulic transmission, comprising pump units each having an inlet chamber, a suction orifice, a discharge orifice, and a delivery chamber to which the discharge orifice leads, and provided with a speed obturator adjacent to one of said orifices and commanding communication with the delivery chamber, the other orifices being free and there being a closed wall separating the delivery chamber from the inlet chamber and located at one side of the said free orifice.

4. A pump system for variable speed hydraulic transmission, comprising a casing, having an inlet chamber and a delivery chamber, a series of pump units each comprising a rotor within the casing, a suction orifice from the inlet chamber to the rotor, a discharge orifice from the rotor to the delivery chamber, one side of the delivery chamber being adjacent to the suction orifice and the other side adjacent to the discharge orifice, certain of said units being each provided with a speed obturator commanding communication between the delivery chamber and one of said orifices the other orifice being free, and a solid wall permanently separating the delivery chamber from the inlet chamber and arranged adjacent the said free orifice.

5. A pump system for variable speed hydraulic transmission, comprising pump units, an inlet chamber for the pump units, each pump unit having a suction orifice, and a discharge orifice, a delivery chamber to which the discharge orifice leads, each pump unit being provided with a speed obturator adjacent to one of said orifices and commanding communication between said orifice and the delivery chamber and said orifice and the inlet chamber, the other orifice being free, and a closed wall adjacent said free orifice and permanently separating the inlet chamber from the delivery chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,153,479. SANDPAPERING-MACHINE. EDWIN F. BRUGLER, Buffalo, N. Y., assignor to E. & B. Holmes Machinery Co., Buffalo, N. Y., a Corporation of New York. Filed Oct. 19, 1914. Serial No. 867,398. (Cl. 51—5.)



1. In a machine of the type described, the combination with a base and upright and a driving-shaft of a sandpapering roll carried by said upright, power connecting means between said sandpapering roll and said driving-shaft normally out of connection, means for throwing the same into connection and means for changing the speed of rotation of said sandpapering roll while the said driving-shaft is in rotation at a constant speed.

2. In a machine of the type described, the combination with a base, upright and driving shaft of a roll sandpaperer and means for driving said sandpapering roll comprising a pulley on the shaft of said sandpapering roll, a friction-disk on said driving-shaft, a friction-pulley for engaging the face of said friction-disk, a shaft for said friction-pulley and a belt-pulley on said shaft and a belt for connecting said last-mentioned pulley with the pulley on the shaft of said roll.

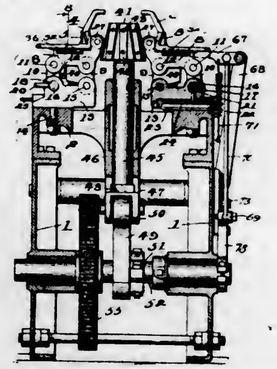
3. In a machine of the type described, the combination with a base, upright and driving-shaft of a sandpapering roll and means for driving said sandpapering roll comprising a pulley on the shaft of said sandpapering roll, a friction-disk on said driving-shaft, a friction-pulley for engaging the face of said friction-disk, a shaft for said friction-pulley, a pivoted yoke carrying the shaft of said friction-pulley, a belt-pulley on said friction-disk shaft and a belt connecting the same with the pulley on said sandpapering roll shaft, and means for throwing said friction-pulley in and out of contact with said friction-disk comprising a spring and rod for normally swinging

said yoke to the non-engaging position, a lever-arm on said yoke, a link-rod connected thereto and a treadle-bar pivoted to said upright and having its inner end pivotally connected to said link and having its outer end provided with a treadle-plate in position for control by the operator.

4. In a machine of the type described, the combination with a base, upright and driving-shaft of a sandpapering roll and means for driving said sandpapering roll comprising a pulley on the shaft of said sandpapering roll, a friction-disk on said driving shaft, a friction-pulley for engaging the face of said friction-disk, a shaft for said friction-pulley and a belt-pulley on said shaft and a belt connecting said last-mentioned pulley with the pulley of said roll, and means for changing the speed of rotation of said sandpapering roll comprising a pivoted lever for moving said friction-pulley axially over a radius of said friction-disk and means for clamping said lever in the desired position of speed adjustment.

5. In a machine of the type described, the combination with a base, upright and driving-shaft of a sandpapering roll and means for driving said sandpapering roll comprising a pulley on the shaft of said sandpapering roll, a friction-disk on said driving-shaft, a friction-pulley for engaging the face of said friction-disk, a shaft for said friction-pulley, a belt pulley on said friction-disk shaft and a belt connecting the same with the pulley on said sandpapering roll shaft, means for throwing said friction-pulley in and out of contact with said friction-disk comprising a spring and a rod for normally swinging said yoke to the non-engaging position, a lever-arm on said yoke, a link-rod connected thereto and a treadle-bar pivoted to said upright and having its inner end pivotally connected to said link and having its outer end provided with a treadle-plate in position for control by the operator, and means for changing and setting the speed in rotation of said roll comprising a hand-lever medially pivoted to said upright, a bifurcated lug on said yoke engaging the inner end of said lever, whereby said yoke may be moved up or down to change the position of said friction-pulley upon a radius of said friction-disk, and means for locking said lever in any determined position for speed regulation.

1,153,480. HOOP EXPANDING AND FLARING MACHINE. EDWIN F. BEUGLER, Buffalo, N. Y., assignor to E. & B. Holmes Machinery Company, Buffalo, N. Y., a Corporation of New York. Filed Mar. 26, 1915. Serial No. 17,219. (Cl. 153—35.)



1. A hoop expanding and flaring machine comprising an annular row of radially movable formers each of which is provided with an outwardly facing forming jaw adapted to engage with the inner side of a hoop, and means for moving said formers in planes at right angles to the axis about which said row of formers is arranged comprising a plurality of pairs of swinging links each pair having two of their corresponding ends mounted on a support while their other corresponding ends are operatively connected with one of said formers.

2. A hoop expanding and flaring machine comprising an annular row of radially movable formers each of which is provided with an outwardly facing forming jaw adapted to engage with the inner side of a hoop, and means for moving said formers in planes at right angles to the axis about which said row of formers is arranged comprising a plurality of pairs of swinging links each pair having two of their corresponding ends mounted on a support while their other corresponding ends are operatively connected with one of said formers, and a spreading cone movable axially within said row of formers and operatively related to the same.

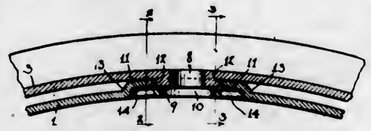
3. A hoop expanding and flaring machine comprising an annular row of radially movable formers each of which is provided with an outwardly facing forming jaw adapted to engage with the inner side of a hoop, and means for moving said formers in planes at right angles to the axis about which said row of formers is arranged comprising a plurality of pairs of swinging links each pair having two of their corresponding ends mounted on a support while their other corresponding ends are operatively connected with one of said formers, a spreading cone movable axially within said row of formers and operating to move the same outwardly, and a spring operating on a link of each pair for moving said formers inwardly.

4. A hoop expanding and flaring machine comprising an annular row of radially movable formers each of which has an outwardly facing jaw adapted to engage the inner side of a hoop, a plurality of radially movable carriages, and means for mounting each of said formers on one of said carriages comprising an upwardly projecting abutment arranged at the inner part of each carriage and engaging with the inner part of one of said formers, and dowels arranged between the opposing faces of said abutments and formers.

5. A hoop expanding and flaring machine comprising an annular row of radially movable formers each of which has an outwardly facing jaw adapted to engage the inner side of a hoop, a plurality of radially movable carriages, and means for mounting each of said formers on one of said carriages comprising an upwardly projecting abutment arranged at the inner part of each carriage and engaging with the inner part of one of said formers, and filling plates adapted to be inserted between said followers and abutments.

[Claims 6 to 20 not printed in the Gazette.]

1,153,481. VEHICLE-WHEEL WITH DEMOUNTABLE RIM. RICHARD S. BRYANT, Cleveland, Ohio, assignor to The Standard Welding Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 13, 1914. Serial No. 871,876. (Cl. 152—21.)



1. As an article of manufacture, a band for vehicle wheels of the demountable rim class, said band being provided with two similar, spaced driving lugs, stamped up from and integral with the material of said band, said lugs being severed from said band along their juxtaposed edges so as to form abrupt shoulders, substantially as decribed.

2. As an article of manufacture, a band for vehicle wheels of the demountable rim class, said band being provided with two similar, spaced driving lugs, stamped up from and integral with the material of said band, said lugs being severed from said bond along their juxtaposed edges so as to form abrupt shoulders, and remaining attached to said band along their remaining edges, substantially as described.

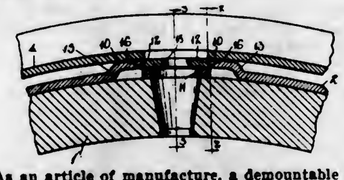
3. In a vehicle wheel, the combination with a wheel-felly and the felly-band thereon; of a demountable rim adapted to be fitted around said felly-band and provided with a driving plate on its inner face, said felly band being provided with two spaced driving lugs adapted to interlock with said plate, said lugs being stamped up from and integral with the material of said band, substantially as described.

4. In a vehicle wheel, the combination with the wheel-felly and the felly-band thereon; of a demountable rim adapted to be fitted around said felly-band and provided with a driving plate on its inner face, said felly band being provided with two similar spaced driving lugs, stamped up from and integral with the material of said band, said lugs being severed from said band along their juxtaposed edges so as to form abrupt shoulders, substantially as described.

5. In a vehicle wheel, the combination with the wheel-felly and the felly-band thereon; of a demountable rim adapted to be fitted around said felly-band and provided with a driving plate on its inner face, said felly band being provided with two similar spaced driving lugs, stamped up from and integral with the material of said band, said lugs being severed from said band along their juxtaposed edges so as to form abrupt shoulders, and remaining attached to said band along their remaining edges, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,153,482. VEHICLE-WHEEL WITH DEMOUNTABLE RIM. RICHARD S. BRYANT, Cleveland, Ohio, assignor to The Standard Welding Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 8, 1915. Serial No. 19,922. (Cl. 152—21.)



1. As an article of manufacture, a demountable rim for a vehicle wheel, said rim being provided with a radially inwardly projecting driving lug, stamped from and integral with the material of said rim, said lug having a transverse edge severed from said rim so as to form an abrupt shoulder, substantially as described.

2. As an article of manufacture, a demountable rim for a vehicle wheel, said rim being provided with a radially inwardly projecting driving lug, stamped from and integral with the material of said rim, said lug having both transverse edges severed from said rim so as to form oppositely facing abrupt shoulders, and remaining attached to said rim along its other edges, substantially as described.

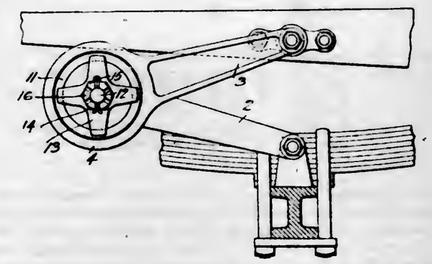
3. In a vehicle wheel, the combination with the wheel felly and the felly-band thereon; of a demountable rim adapted to be fitted around said felly-band, one of said members being provided with a driving lug on its juxtaposed face, stamped from and integral with the material of said member, and the other member being provided with two circumferentially spaced driving lugs adapted to interlock with said first lug, said two lugs being stamped from and integral with the material of said member, substantially as described.

4. In a vehicle wheel, the combination with the wheel felly and the felly-band thereon; of a demountable rim adapted to be fitted around said felly-band, one of said members being provided with a driving lug on its juxtaposed face, stamped from and integral with the material of said member, said lug having both transverse edges severed from said member so as to form oppositely facing abrupt shoulders, and the other member being provided with two circumferentially spaced driving lugs adapted to interlock with said first lug, said two lugs being stamped from and integral with the material of said member and being severed from said member along their juxtaposed edges so as to form abrupt shoulders, substantially as described.

5. In a vehicle wheel, the combination with the wheel felly and the felly-band thereon; of a demountable rim adapted to be fitted around said felly-band, said rim being provided with a radially inwardly projecting driving lug stamped from and integral with the material of said rim, and said felly-band being provided with two circumferentially radially outwardly projecting lugs adapted to interlock with said first lug, said two lugs being stamped from and integral with the material of said band, substantially as described.

[Claim 6 not printed in the Gazette.]

1,153,483. SHOCK-ABSORBER. ANDREW CHRISTIANSON, Butler, Pa. Filed Apr. 25, 1913. Serial No. 763,546. (Cl. 21—105.)



1. A shock-absorber for vehicles, the combination of two members, one connected to the body of the vehicle and the other to the axle, stationary friction plates, rotary friction plates alternating with said stationary friction plates, a detent adapted to engage directly the peripheries of said rotary friction plates and said first member to bring said plates into engagement with said first named member upon the upward movement of said member.

2. In a shock-absorber for vehicles, the combination of two members, one connected to the vehicle-body and the other to the axle, a casing at the inner end of said first named member a friction plate holder having a central hub within said casing and engaged by and movable with said second member in both directions, stationary friction plates carried by said hub, rotary friction plates alternating with said stationary plates, means for holding said plates in frictional contact, and means for bringing said first named member into engagement with said rotary friction plates on the upward movement of said member.

3. In a shock-absorber for vehicles, the combination of two members one connected to the vehicle-body and the other to the axle, the first member having a casing at its inner end, a friction plate holder within said casing and engaged by and movable with said second member in both directions, stationary friction plates carried by said holder, rotary friction plates alternating with said stationary plates, a spring holding said plates in frictional contact, a detent engaging the peripheries of said rotary plates and said first member, whereby said first named member turns said rotary friction plates on the upward movement of said member.

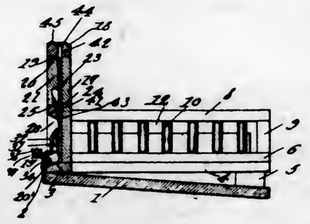
4. In a shock-absorber for vehicles, the combination of two members, one connected to the vehicle-body and the other to the axle, a casing at the inner end of said first named member, said casing having a cam-portion, a friction plate holder in said casing engaged by and movable with said second member in both directions, stationary friction plates on said holder, rotary friction plates alternating with said stationary plates, means for holding said plates in frictional contact, and a roller detent in the cam-portion of said casing.

5. In a shock-absorber; for vehicles, the combination of two members, one connected to the vehicle-body and the

other to the axle, a casing at the inner end of said first member, a friction plate holder in said casing engaged by said second member, a grooved central hub on said holder, stationary friction plates having lugs engaging the grooves in said hub, rotary friction plates surrounding said hub and alternating with said stationary plates, means for holding said plates in frictional contact, and means for locking said first named member to said rotary friction plates upon the upward movement of said member.

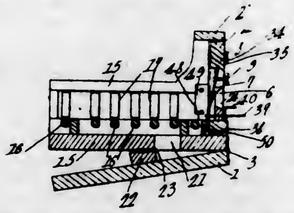
[Claims 6 and 7 not printed in the Gazette.]

1,153,484. SLICING-MACHINE. THOMAS M. DANSBY, Pine Bluff, Ark. Filed Nov. 13, 1914. Serial No. 871,944. (Cl. 146—7.)



In a slicing machine, a base, a frame hinged thereto and having a guide arranged to be swung to various angles relative to the base, anti-frictional rollers carried by the bottom of the guide, anti-frictional rollers carried by one side of the guide, an adjustable material holding member carried by the guide opposite to the last mentioned rollers, and a reciprocatory slicing cutter carried by the frame.

1,153,485. SLICING-MACHINE. THOMAS M. DANSBY, Pine Bluff, Ark. Filed May 8, 1915. Serial No. 26,860. (Cl. 146—7.)



1. In a slicing machine, a base, a frame hinged thereto and having an angularly extending guide for an article to be sliced, a slide guided by said frame and having a cutter, the guide having a lower opening, and a block hinged to the guide to swing within the said opening and to swing under the guide for supporting it above the base.

2. In a slicing machine, a reciprocatory slide having a slicing cutter, a gage member adjustably carried by the slide, a rind cutter slidable through the gage member, the rind cutter having a series of notches, and a latch pivoted to the gage member and engageable in said notches for holding the rind cutter at various adjusted positions.

3. In a slicing machine, a reciprocatory slide having a cutter, a gage member carried by the slide, the gage member and slide having interchangeable means whereby when the gage member is slid longitudinally it will be shifted transversely, a spring connecting the slide and gage member whereby the gage member is moved in one direction when released, and means for moving and holding the gage member against the action of said spring.

4. In a slicing machine, a frame, a slide guided for reciprocatory movement thereby, a slicing cutter and a rind cutter carried by the slide, and a sharpening member carried by the frame and arranged to sharpen both of said cutters.

5. In a slicing machine, a frame, a slide guided for reciprocatory movement thereby, a slicing cutter and a rind cutter carried by the slide, and a sharpening member yieldably carried by the frame and bearing against the slicing cutter, the sharpening member having a slot for receiving the rind cutter to sharpen the same.

[Claim 6 not printed in the Gazette.]

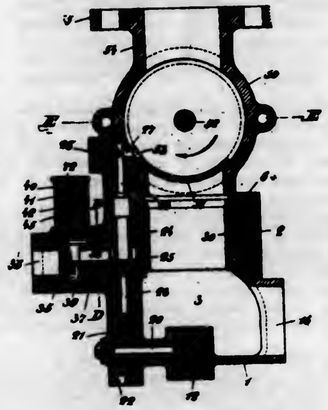
1,153,486. ARTIFICIAL DENTURE. ADOLPHUS E. J. GREGG, Los Angeles, Cal. Filed July 1, 1914. Serial No. 848,467. (Cl. 32—4.)



1. An artificial denture including a body portion, a resilient relatively rigid element thereon, and a relatively soft labiate portion integral with the body portion and embedding the resilient element.

2. An artificial denture including a body portion, a resilient relatively rigid element having an end anchored to the said body portion and provided with a shank projecting beyond the body portion and terminating in a transverse head, and a relatively soft labiate portion forming a continuation of the body portion and embedding the shank and head of the said resilient element.

1,153,487. CARBURETER. FRITZ GREINER, Reinickendorf-Ost, Germany, assignor to Otto Schlick, Berlin, Germany. Filed May 15, 1913. Serial No. 767,805. (Cl. 48—150.3.)



1. In a carbureter the combination with a main mixing device of an auxiliary mixing device and controlling means for the said auxiliary mixing device comprising an adjustable rotary member provided with an eccentric passage and means for adjusting said member so as to vary the level of fuel in the said eccentric passage through which the air is drawn to form the mixture, substantially as set forth.

2. In a carbureter the combination with a main fuel nozzle and an air nozzle of an auxiliary mixing device comprising an auxiliary fuel nozzle located at a lower level with regard to the said main fuel nozzle, an auxiliary mixture conduit, ports, in the said conduit, and located above and around the terminal of the said auxiliary fuel nozzle, an adjustable cylindrical member with an eccentric passage communicating with the ports in the said mixture conduit and an air register adapted to control the flow of air through the said eccentric passage across the fuel located above the terminal of the auxiliary fuel nozzle, substantially as set forth.

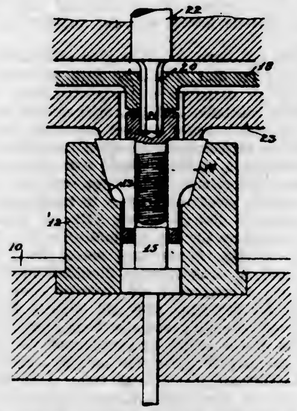
3. In a carbureter the combination with a main mixing device of an auxiliary mixing device, a distributing valve arranged in the main mixture conduit, a casing for the said valve connected with both the main and the auxiliary mixture conduits, a series of air ports of different diameters in the casing, a slide adjustably mounted on the said casing, and provided with a corresponding number of air inlets but of equal diameters adapted to register with the said air ports so that a certain amount of auxiliary air is always admitted to the said casing, substantially as set forth.

4. In a carbureter the combination with a main fuel nozzle of a main air inlet nozzle and a removable bushing slidable transversely into and out of position in the main air duct and means for securing the said inlet nozzle in the said bushing and means for securing the said bushing in the said air duct, substantially as set forth.

5. In a carbureter the combination with a main fuel nozzle of a main air inlet nozzle and a removable bushing slidable transversely into and out of position in the main air duct, an annular flange on the said air inlet nozzle and an annular groove in the said bushing adapted to receive and to seat the air inlet nozzle, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,153,488. HOLLOW OR SOCKET SCREW. HOWARD T. HALLOWELL, Philadelphia, Pa. Filed Dec. 22, 1911. Serial No. 667,885. (Cl. 10—10.)

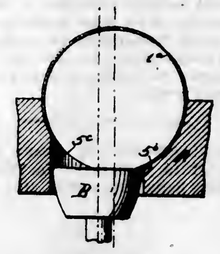


1. The process of making socketed screws, which consists in forming screw blanks with circular recesses or openings, broaching the walls of such recess to a contour other than round, and then threading said blanks.

2. The process of making socketed screws, which consists in forming screw blanks with circular recesses or openings, broaching the walls of such recess to a contour other than round and forcing the metal removed by the broaching operation into the opening or recess of the blank, and then threading said blank.

1,153,489. PROCESS OF MAKING KEY-SEATS ON WIND MUSICAL INSTRUMENTS. PAUL C. HARDY, Elkhart, Ind., assignor to C. G. Conn, Inc., Elkhart, Ind., a Corporation of Indiana. Filed May 8, 1914. Serial No. 837,299. (Cl. 113—116.)

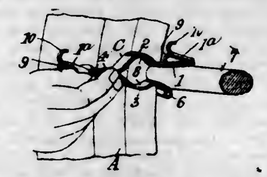
1. The process of forming key seats on cylindrical metal parts of wind musical instruments, and in a plane raised above the cylindrical surface thereof, which consists in forming through the cylindrical wall, a preliminary opening of reduced diameter with its perimeter spaced within and, at different points, varying in distance from the perimeter of the ultimate key opening to be formed, and drawing the marginal portion of the tube about the preliminary opening, into a projecting flange, while restraining the same to correspond to the dimensions of the desired seat.



2. The process of forming key openings and raised key seats surrounding the same in the curved surfaces of metallic wind instrument parts, which consists in forming within the area of the ultimate key opening, a reduced preliminary opening having a perimeter formed to leave between it and the perimeter of the ultimate opening, a depth of metal varying at different points proportionally to the height of different portions of the seat to be formed; and drawing the marginal portion of the tube surrounding said preliminary opening into a projecting flange while restraining the same to correspond to the dimensions of the desired seat.

3. The process of forming a key seat on a cylindrical metal part of a wind musical instrument, in a plane raised above the cylindrical surface and with its axis parallel with but to one side of the diametric plane of the cylindrical wall, which consists in forming a preliminary opening of reduced dimensions, with its perimeter spaced within, and, one the side away from said diametric plane, increasing in distance from the perimeter of the ultimate key opening to be formed, and drawing the marginal portion of the tube which surrounds the preliminary opening into a projecting flange while restraining the same to correspond to the dimensions and position of the desired seat.

1,153,490. DEVICE FOR APPLYING CHAINS TO WHEELS. EARL A. HARRIS, Scranton, Pa., assignor to Alcemo Manufacturing Company, Newark, N. J., a Corporation of New Jersey. Filed Aug. 19, 1912. Serial No. 715,802. Renewed Feb. 23, 1915. Serial No. 10,118. (Cl. 24—84.)



1. Means for applying anti-skid chains to vehicle wheels comprising a holding device adapted to engage a wheel spoke, and be supported thereby, and means carried by said holding device for engaging the chain at each side of the wheel rim.

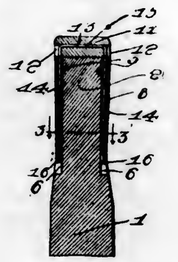
2. A holding device for applying anti-skid chains to vehicle wheels comprising a bar and means for frictionally supporting the bar on a wheel spoke, said bar having end portions adapted to extend radially outward, at the sides of the wheel rim when the bar is upon a spoke, and said end portions having hooks for engaging the chain.

3. A holding device for applying anti-skid chains to vehicle wheels comprising a bar and means for frictionally supporting the bar on a wheel spoke, said bar having end

portions adapted to extend outward at the sides of the wheel rim when the bar is upon a spoke, and said end portions each having two hooks extending in opposite directions circumferentially of the wheel.

4. A holding device for applying anti-skid chains to vehicle wheels comprising a bar having a central bowed portion, and end portions extending at an angle to the body of the bar and in the same direction therefrom, said end portions having hooked ends, and a curved spring clip secured to the bowed portion of said bar, the said spring clip being adapted to encircle and grip a wheel spoke within the bowed portion.

1,153,491. BILLIARD-CUE TIP. FRANK HAYNES, Limon, Colo. Filed Oct. 16, 1913, Serial No. 795,601. Renewed Aug. 10, 1915. Serial No. 44,830. (Cl. 46—9.)

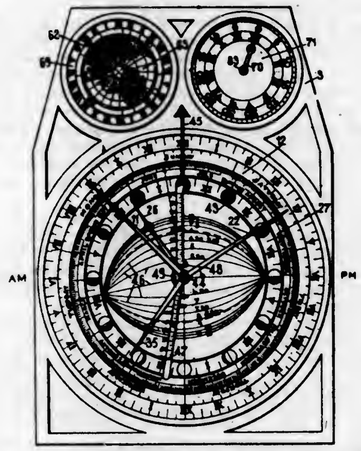


1. A billiard or pool cue comprising a body, said body provided at its forward end with a reduced portion, said reduced portion provided with oppositely-disposed longitudinally-extending grooves extending backward into said body thereby forming pockets, said reduced portion provided with a plurality of rounded sides and a plurality of flat sides, a metallic ferrule conforming in shape to the contour of said reduced portion, said ferrule fitting snugly upon said reduced portion whereby said ferrule will be held in its correct position, and a tip positioned upon the outer end of said reduced portion, said tip provided with parallel spring arms, said arms extending into said grooves and engaging said ferrule for detachably holding said tip in engagement with the outer end of said reduced portion.

2. A billiard or pool cue comprising a body, a reduced portion formed upon the outer end of said body, said reduced portion provided with longitudinally-extending oppositely-disposed grooves, said body also provided with pockets communicating with said grooves and with a shoulder adjacent said reduced portion, a ferrule carried by said reduced portion and engaging said shoulder of said body, a tip positioned upon the outer end of said reduced portion, said tip provided with sockets and with an opening communicating with said sockets, parallel spring arms positioned within said sockets, a bridge integrally connecting said spring arms, said arms normally positioned within the grooves formed in said reduced portion, said parallel arms terminating in outwardly-bent lips adapted to engage the inner end of said ferrule whereby said tip will be held firmly upon the outer end of said reduced portion, and said lips terminating evenly with the outer surface of said ferrule, thereby forming an even wearing surface.

1,153,492. CALENDAR-CLOCK. ULBE SAEKLES HOITINGA, Witmarsum, Netherlands, assignor to Gebroeders Werkhoven, a Firm of Partnership, Witmarsum, Netherlands. Filed Dec. 26, 1912. Serial No. 738,642. (Cl. 58—3.)

1. A calendar clock comprising, in combination, a fixed dial; a rotatable dial concentric with the fixed dial and having curved lines thereon for indicating the time of the rising and setting of the sun; means for rotating the rotatable dial in anticlockwise direction at the rate of once a year; and a graduated rod disposed over said lines.



2. A calendar clock comprising, in combination, a fixed dial; a rotatable dial concentric with the fixed dial and having curved lines thereon for indicating the time of the rising and setting of the sun; means for rotating the rotatable dial in anticlockwise direction at the rate of once a year; a graduated rod disposed over said lines; and means for deviating said rod slightly from side to side.

3. A calendar clock comprising, in combination, a fixed dial; a rotatable dial concentric with the fixed dial and having thereon divisions and sub-divisions; means for rotating the rotatable dial in anticlockwise direction at the rate of once a year; a hand revolving over said rotatable dial in anticlockwise direction and making a revolution a month at a variable speed; and means comprising intermeshing non-circular wheels for revolving said hand.

4. A calendar clock comprising, in combination, a fixed dial; a rotatable dial concentric with the fixed dial and having curved lines thereon for indicating the time of the rising and setting of the sun; means for rotating the rotatable dial in anticlockwise direction at the rate of once a year; a graduated rod disposed over said lines; and means for deviating said rod slightly from side to side, said rod extending radially from approximately opposite sides of the center of rotation of the disk.

5. A clock comprising, in combination, a main clock and adapted to indicate mean solar time; a subsidiary dial movable on its own axis; a hand movable over said subsidiary dial for indicating time thereon; and means for shifting said subsidiary dial back or forth according as to whether solar time is fast or slow.

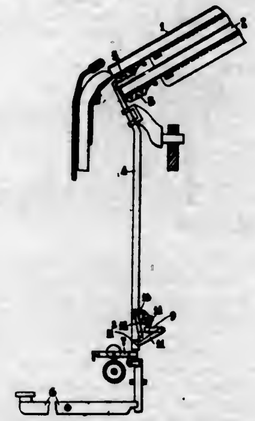
[Claims 6 to 11 not printed in the Gazette.]

1,153,493. TYPOGRAPHICAL COMPOSING-MACHINE. ANTON HOYER, Neukölln-Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed May 23, 1914. Serial No. 840,487. (Cl. 199—7.)

1. In a typographical composing machine, the combination with a plurality of escapement reeds and a corresponding plurality of simultaneously operating devices adapted to actuate them, of a single finger key controlling the operation of all of the said devices, a plurality of members through which the escapement reeds are actuated by their operating devices, and means operative to cause the said members to actuate the escapement reeds in alternation.

2. In a typographical composing machine, the combination with a plurality of escapement reeds and a corresponding plurality of simultaneously operating devices adapted to actuate them, of a single finger key controlling

the operation of all of the said devices, a plurality of members through which the escapement reeds are actuated by their operating devices, and means operative to cause the said members to actuate the escapement reeds in succession.



3. In a typographical composing machine, the combination with a plurality of escapement reeds and a corresponding plurality of simultaneously operating devices adapted to actuate them, of a single finger key controlling the operation of all of the said devices, a shaft partially rotated at each operation of the finger key, a cam on this shaft for each of the escapement reeds and a rod on each such reed moved by the cam into and out of the path of the reed-actuating devices.

4. In a typographical composing machine, the combination with a plurality of escapement reeds, means operative to automatically actuate those escapement reeds, and finger keys controlling the operation of those means, of another finger key, a rocking shaft adapted to be rocked subject to the control of that finger key, a shaft partially rotated at each rock of the rocking shaft, cams fast on the said shaft, lifting devices for the escapement reeds fast to the rocking shaft, and devices on the escapement reeds moved by the cams into and out of the path of the said lifting devices.

5. In a typographical composing machine, the combination with a plurality of escapement reeds, a rocking shaft, means operative to automatically rock that shaft, and a finger key controlling the operation of the said means, of a rotatable shaft partially rotated at each rock of the rocking shaft, lifting devices fast to the rocking shaft adapted to lift the escapement rods, cams fast on the rotatable shaft, and devices on the escapement reeds moved by the cams into and out of the path of the lifting devices.

[Claims 6 to 14 not printed in the Gazette.]

1,153,494. TYPOGRAPHICAL COMPOSING-MACHINE. ANTON HOYER, Neukölln-Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed June 19, 1914. Serial No. 846,013. (Cl. 199—7.)

1. In a typographical composing machine, the combination with a plurality of magazine channels, an escapement for releasing the contents of each channel, an escapement reed actuating each escapement and a single device adapted to actuate all of such reeds, of a finger operatively connected to each escapement reed and movable into and out of the path of the reed-actuating device, and means operative to move the fingers successively out of the said path.

2. In a typographical composing machine, the combination with a plurality of magazine channels, an escapement for releasing the contents of each channel, an escapement reed actuating each escapement and a device adapted to actuate all of such reeds, of fingers operatively connected to the escapement reeds and movable into and out of the path of the reed-actuating device, and means on one finger operative to move another finger out of the said path.



3. In a typographical composing machine, the combination with a plurality of magazine channels, an escapement for releasing the contents of each channel, an escapement reed actuating each escapement and a device adapted to actuate all of such reeds, of fingers operatively connected to the escapement reeds and movable into and out of the path of the reed-actuating device, weights automatically moving the fingers into that path, and automatic means to move the fingers successively out of said path, for the purpose described.

4. In a typographical composing machine, the combination with a plurality of magazine channels, an escapement for releasing the contents of each channel, an escapement reed actuating each escapement and a device adapted to actuate all of such reeds, of fingers operatively connected to the escapement reeds and movable into and out of the path of the reed-actuating device, and a cam on each finger adapted, during its ascent and descent, to engage a cam on another finger, the engagement during the ascent and descent moving respectively different fingers out of the said path.

5. In a typographical composing machine, the combination with a plurality of magazine channels, an escapement for releasing the contents of each channel, an escapement reed actuating each escapement and a device adapted to actuate all of such reeds, of fingers operatively connected to the escapement reeds and movable into and out of the path of the reed-actuating device, weights automatically moving the fingers into that path, and a cam on each finger adapted, during its ascent and descent, to engage a cam on another finger, the engagement during the ascent and descent moving respectively different fingers antagonistically to the weights.

[Claims 6 to 10 not printed in the Gazette.]

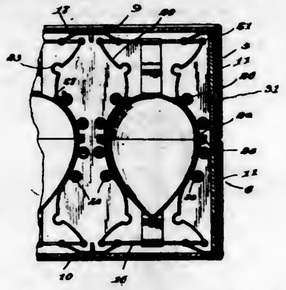
1,153,495. EGG-CRATE. JOHN A. JONES, Rome, N. Y. Filed Nov. 24, 1914. Serial No. 873,786. (Cl. 217—24.)

1. A wire egg crate comprising an upper and lower box-like section, coöperating nest sections projecting inwardly from the top and bottom of the crate, each of said nest sections including a plurality of resilient curved fingers, said fingers having alined offsets, expansible rings arranged within said offsets, and means for locking said crate sections together.

2. An egg nest comprising superimposed sections, each of said sections including a plurality of diametrically opposed resilient fingers, each of said fingers having alined offsets, and an expansible ring having offset portions arranged within the offsets of said fingers.

3. An egg nest comprising superimposed sections, each of said sections including a plurality of curved resilient

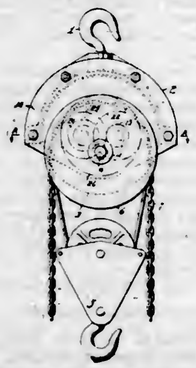
fingers disposed in diametrically opposed relation, a paper cup section arranged in each section, and expansible rings encircling the fingers of each section as and for the purpose described.



4. An egg nest comprising superimposed sections, each of said sections including a plurality of curved resilient fingers disposed in diametrically opposed relation, a flanged paper cup section arranged in each of the nest sections, the adjacent ends of said fingers being flanged to clamp the flanges of the cup sections therebetween, and an expansible ring encircling the fingers of the section and secured thereto as and for the purpose described.

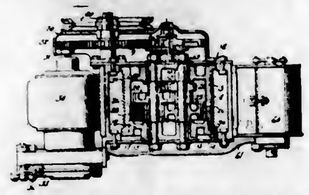
5. A wire egg crate comprising an upper and lower box-like section, ring-like members supported from the top and bottom thereof, nest sections carried by said rings and including a plurality of diametrically opposed resilient curved fingers, each of said fingers having alined offset portions, an expansible ring supported in said offsets, and means for locking said crate sections together.

1,153,496. PORTABLE ROPE HOIST. SAMUEL EDWARD KALBACH, Reading, Pa., assignor to Reading Crane and Hoist Works, Reading, Pa. Filed Mar. 4, 1915. Serial No. 11,972. (Cl. 254—171.)



In a portable, hand operated rope hoist the combination of a housing, a suspending hook therefor, a pair of yokes within the housing, a power shaft, a pinion on said shaft, a pair of studs passing through the housing plates and the yokes, annular bearings on the outer surfaces of said jokes, a hoisting drum mounted on said bearings, an interiorly toothed annular ring secured to the inner surface of the drum and adapted to rotate therewith, a gear wheel mounted on one of the studs and meshing with said toothed ring, a double gear mounted on the opposite stud and meshing with its smaller diameter with said gear wheel, a second double gear mounted on the first named stud and meshing with the first named double gear through its smaller diameter and with the pinion on the power shaft through its greater diameter.

1,153,497. COMBINATION PORTABLE ROPE HOIST. SAMUEL EDWARD KALBACH, Reading, Pa., assignor to Reading Crane and Hoist Works, Reading, Pa. Filed Mar. 4, 1915. Serial No. 11,973. (Cl. 254—168.)



1. In a device of the character described, the combination of a hollow winding drum, a closure plate for one end of said drum, said drum and plate having journaled bearings, a housing for said drum, yokes within the housing on which the drum is rotatably mounted, studs passing through the housing and the yokes, a removable, interiorly toothed ring secured to the inner surface of the drum, a set of gears mounted on the studs and meshing with the toothed ring, a power shaft mounted in one of the yokes, a pinion on said shaft and meshing with the train of gears, a gear wheel on the opposite end of the power shaft, and means including a hand chain wheel and a motor for transmitting power through the power shaft to the drum.

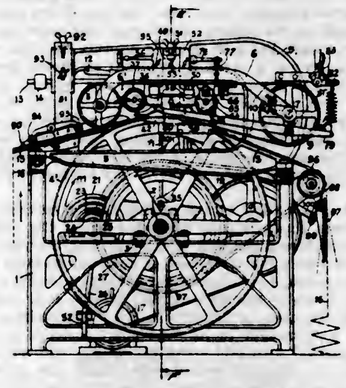
2. The combination of a hollow, exteriorly grooved, open ended hoisting drum, a housing therefor, bearings within the housing on which the drum rotates, a power shaft mounted in the housing, one end of which is within the drum, a pinion on the said inner end of the power shaft, a train of gears mounted within the drum and meshing with the pinion, a toothed ring secured to the inner wall of the drum and in mesh with the train of gears, a gear wheel on the outer end of the power shaft, a motor carried by the housing, a gear wheel on the motor shaft, an intermediate gear wheel meshing with the power shaft gear and the motor shaft gear, and a hand chain wheel carried by said intermediate gear, whereby said drum may be rotated either by hand power through the hand chain wheel or by motor through the intermediate gear.

3. The combination of a hollow hoisting drum, a housing in which the drum is rotatably mounted, a train of gears mounted within the drum and in gear with the interior wall thereof, a power shaft, a pinion on said power shaft in mesh with the train of gears, a motor carried by the housing, a motor shaft, a gear on the motor shaft, gears for transmitting power from the motor shaft to the power shaft and hand operated means for rotating the power shaft independently of the motor.

1,153,498. CUTTING-MACHINE FOR EMBROIDERY. KARL KELLER, Arbon, Switzerland. Filed Feb. 17, 1915. Serial No. 8,913. (Cl. 164—35.)

1. In a cutting-machine for embroidery, a cutting mechanism, two rotary conveyer wheels, one at each side of said cutting mechanism, provided with a rough surface at their periphery and two corresponding tensioned roller-guided, flexible tractive members arranged above said conveyer wheels and pressed down toward the periphery of the latter so as to hold the fabric on both sides for conveniently feeding it to the cutting mechanism when the conveyer wheels rotate, substantially as described.

2. In a cutting-machine for embroidery, a cutting mechanism, two rotary conveyer wheels, one at each side of said cutting mechanism, provided with a rough surface at their periphery and two corresponding tensioned roller-guided flexible pressure belts arranged above said conveyer wheels and pressed down toward the periphery of the latter so as to hold the fabric on both sides for conveniently feeding it to the cutting mechanism when the conveyer wheels rotate, substantially as described.



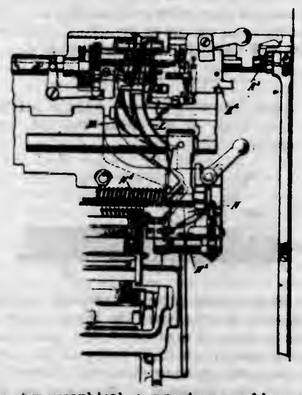
3. In a cutting machine for embroidery, a cutting mechanism comprising a cutter and an adjacent counterpart to form between them a slot for the passage of the non embroidered fabric portion, the cutter consisting of a flexible cutting band fixed on two rollers carried by an adjustable, fixed tool carrier and having controlling means for drawing it successively through the cutting place according to the wear of its cutting edge, substantially as described.

4. In a cutting machine for embroidery, a cutting mechanism comprising a cutter having a concavely curved cutting edge and an adjacent counterpart having a convexly curved operative edge to form a curved slot between said edges for the passage of the non-embroidered fabric portion, substantially as described.

5. In a cutting machine for embroidery, a cutting mechanism comprising a tensioned flexible cutting band and a convex guide piece over which passes said cutting band so as to cause its cutting edge to take a concavely curved form, substantially as described.

[Claims 6 to 22 not printed in the Gazette.]

1,153,499. TYPOGRAPHICAL MACHINE. DAVID S. KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Feb. 21, 1914. Serial No. 820,194. (Cl. 190—7.)



1. In a typographical composing machine, assembling mechanism comprising, in combination, reversing means for the type or matrices movable into and out of operative position, devices for holding said means in one of their positions, and automatic means for returning them to their other position when released by said devices.

2. In a typographical composing machine, assembling mechanism comprising, in combination, the reversing chute B for the type or matrices, the operating arm E^5, the finger key E, and the connected link E^6 provided with the roller E^2 to engage the chute operating arm.

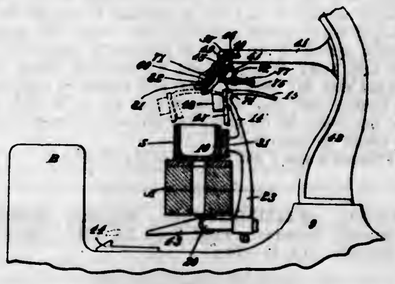
3. In a typographical machine, the combination of a composed line containing reversed and unreversed type or matrices, means for detaching the type or matrices individually from the line, two distributer tubes, one plain and the other rifled, and automatic mechanism independent of the detaching means to receive the detached type or matrices and deliver them into one or the other of the tubes according to whether they are reversed or unreversed.

4. In a typographical machine, the combination of a composed line containing reversed and unreversed type or matrices, means for detaching the type or matrices individually from the line, two distributer tubes, one plain and the other rifled, and automatic mechanism independent of the detaching means to receive the detached type or matrices and deliver them into one or the other of the tubes according to whether they are reversed or unreversed, the said mechanism including a selecting bridge which controls the point of delivery of the type or matrices.

5. In a typographical machine, the combination of a composed line containing reversed and unreversed type or matrices, means for detaching the type or matrices individually from the line, two distributer tubes, one plain and the other rifled, and automatic mechanism independent of the detaching means to receive the detached type or matrices and deliver them into one or the other of the tubes according to whether they are reversed or unreversed, the said mechanism including a distributer bar along which the type or matrices travel and from which they are released at different points corresponding to the location of the distributer tubes.

[Claims 6 to 14 not printed in the Gazette.]

1,153,500. RELEASE MECHANISM FOR SHUTTLES. JOHN W. KILLPATRICK, Lowell, Mass. Filed Sept. 24, 1914. Serial No. 863,327. (Cl. 139—29.)



1. In release devices for shuttle binders having a binder, a frame, a spring actuated protector shaft, binder fingers carried by the protector shaft in such positions as to each bear against a shuttle binder one of said binder fingers having a longitudinal extension with a table at an angle therewith and a bearing slot at the junction of the table and extension, a bracket fixed to the frame, an arm with a hub adjustable on said bracket, an accelerator rod pivoted in the hub having at one end an angular bend forming an accelerator arm adapted to engage the slotted extension of said binder finger, a tongue on the other end of said rod, a bowed support fixed to the hub and having a supporting slot at its free end, a tongue controller spindle having a head pivoted to said tongue and passing through said supporting slot, a split pin which passes through the end of the controller spindle, controller

springs which extend between said bowed support and the split pin and between the bowed support and the head of the controller spindle, together with a pin fixed to said tongue and in engagement with the hub as described.

2. In release devices for shuttle binders having a binder, a frame, a spring actuated protector shaft, binder fingers carried by the protector shaft in such positions as to each bear against a shuttle binder one of said binder fingers having a longitudinal extension, a bracket fixed to the frame, an arm with a hub adjustable on said bracket, an accelerator rod pivoted in the hub having at one end an angular bend forming an accelerator arm adapted to engage the extension of said binder finger, a tongue on the other end of said rod, and tongue controller means as described.

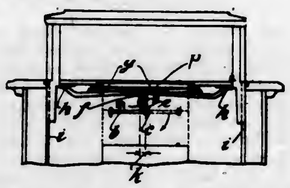
3. In release devices for shuttle binders having a binder, a frame, a spring actuated protector shaft, binder fingers carried by the protector shaft in such positions as to each bear against a shuttle binder one of said binder fingers having a longitudinal extension with a table at an angle therewith and a bearing slot at the junction of the table and extension, a bracket fixed to the frame, an arm with a hub adjustable on said bracket, an accelerator rod pivoted in the hub having at one end an angular bend forming an accelerator arm adapted to engage the slotted extension of said binder finger, a tongue on the other end of said rod, and tongue controller means as described.

4. In release devices for shuttle binders having a binder, a frame, a spring actuated protector shaft, binder fingers carried by the protector shaft in such positions as to each bear against a shuttle binder one of said binder fingers having a longitudinal extension, a bracket fixed to the frame, an arm with a hub adjustable on said bracket, an accelerator rod pivoted in the hub having at one end an angular bend forming an accelerator arm adapted to engage the extension of said binder finger, and a tongue on the other end of said rod as described.

5. In release devices for shuttle binders having a binder, a frame, a spring actuated protector shaft, binder fingers carried by the protector shaft in such positions as to each bear against a shuttle binder one of said binder fingers having a longitudinal extension, a bracket fixed to the frame, a flat piece of metal fixed to the lay and projecting therefrom, an arm with a hub adjustable on said bracket, an accelerator rod pivoted in the hub having at one end an angular bend forming an accelerator arm in engagement with the extension of said binder finger, and a tongue carried by said rod in position to engage the flat piece of metal carried by the lay, said tongue and accelerator arm being so placed and having their faces which engage said flat piece of metal and extension respectively so formed that they will move said extension back from the lay beam on its backward stroke and then allow it to await, as described.

[Claims 6 and 7 not printed in the Gazette.]

1,153,501. WRITING-TABLE. WILHELM KÖNEMANN, Minden, Germany. Filed Sept. 23, 1911. Serial No. 650,995. (Cl. 45—70.)



1. In combination with a writing desk, a movable chest of drawers normally sunk below the top of the desk, two one-armed levers crossing each other and carrying upon their free ends the said chest of drawers, movable pivots for said levers, a pivot common to said two levers, a crank handle pivotally mounted at the writing desk, a pusher rod connected with said crank handle and with said pivot common to said two levers respectively, and a vertical guide for said pivot, substantially as described and shown and for the purpose set forth.

2. In combination with a writing desk, a movable chest of drawers normally sunk below the top of the desk, two one-armed levers crossing each other and carrying upon their free ends the said chest of drawers, movable pivots for said levers, a pivot common to said two levers, a crank handle pivotally mounted at the writing desk, a pusher rod connected with said crank handle and with said pivot common to said two levers respectively, and a vertical guide for said pivot, substantially as described and shown and for the purpose set forth.

3. In combination with a writing desk, a movable chest of drawers normally sunk below the top of the desk, two one-armed levers crossing each other and carrying upon their free ends the said chest of drawers, movable pivots for said levers, a pivot common to said two levers, a crank handle pivotally mounted at the writing desk and that it locks the chest of drawers in the lifted position when it has been brought to its dead point position, a pusher rod connected with said crank handle and with said pivot common to said two levers respectively, and a vertical guide for said pivot, substantially as described and shown and for the purpose set forth.

1,153,502. MANUFACTURE OF OXYGEN. HEINRICH KRIEGSHEIM, New York, N. Y., assignor to The Permutit Company, New York, N. Y., a Corporation of Delaware. Filed Nov. 17, 1914. Serial No. 872,526. (Cl. 23—10.)

1. The process of making oxygen which comprises contacting a hypochlorite solution with an exchange silicate containing a catalytic metal compound and collecting the oxygen produced.

2. The process of making oxygen which comprises contacting a hypochlorite solution with an exchange silicate containing a cobalt compound and collecting the oxygen produced.

3. The process of making oxygen which comprises impregnating an exchange silicate with a solution of a salt of a catalytic metal, removing the excess of the solution, contacting the impregnated silicate with a hypochlorite solution and collecting the oxygen produced.

4. The process of making oxygen which comprises impregnating an exchange silicate with a solution of a cobalt salt, removing the excess of solution, contacting the impregnated silicate with a hypochlorite solution and collecting the oxygen produced.

5. The process of producing oxygen which comprises absorbing chlorin in an alkaline liquid, contacting such liquid with an exchange silicate containing a compound of a catalytic metal and collecting the oxygen produced.

[Claims 6 to 9 not printed in the Gazette.]

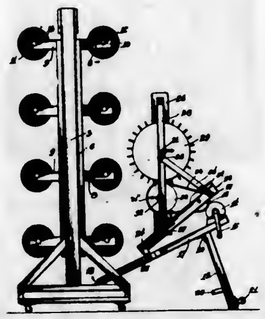
1,153,503. WRAPPING-PAPER PAD. DAVID KUHMARKER, New York, N. Y. Filed Dec. 26, 1914. Serial No. 879,048. (Cl. 11—11.)



1. A pad of wrapping paper, comprising a plurality of sheets of paper, a flexible cover for the pad, and a cutter on the under surface of said cover, the said cutter being secured, along one of its edges only, to the cover, that portion of the cover between the point of securement to the cutter and the free edge of the cover being free to be moved away from the cutting edge of the cutter, substantially as and for the purpose described.

2. A pad of wrapping paper, comprising a plurality of sheets of paper, a cover for said pad, and a cutter carried by said cover intermediate the ends thereof and located on the under surface of said cover, the cutter being secured, along one of its edges only, to said cover, whereby that portion of said cover between the point of securement to the cutter and the free edge of the cover can be rolled backwardly to expose the sheets of the pad without raising the cutter from the pad.

1,153,504. GOODS HOLDING AND COMPUTING APPARATUS. WILLIAM KULPER, Waterloo, Iowa. Filed Aug. 28, 1913. Serial No. 787,168. (Cl. 33—133.)



1. In a goods holding and measuring apparatus, a base, a supporting frame structure pivotally supported on a vertical axis on said base to permit the rolls on the opposite sides of the supporting frame structure to be brought into a delivery position, delivery means, a swinging support for the delivery means on which said delivery means may be moved to a position in proximity to the rolls from which the goods to be delivered is taken, which swinging support comprises a section hinged to the base and a strut section hinged to said first section to rest against the surface on which the base is supported and to be adjustable to vary the height of disposition of the delivery means, and computing and measuring means mounted on said swinging support to derive operative movement from the action of the delivery means and to be adjusted therewith.

2. In a goods holding and measuring apparatus, a base, a supporting frame structure for the rolls of goods rotatably on said base, delivery means, a support for the delivery means comprising a section hinged to said base and a strut section hinged to said first-named section for movement in opposite directions to support the delivery means in and out of the rotative path of said structure, all of said parts so arranged that the delivery means may be brought into proximity to the roll from which the goods is to be delivered and may be adjusted in height, and computing and measuring means carried by the support on which the delivery means is mounted to be operative upon actuation of said delivery means.

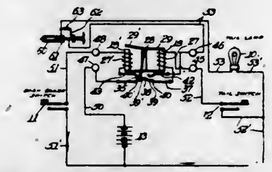
3. In a goods holding and measuring apparatus, a base, a supporting frame structure constructed to receive and hold rolls of goods on opposite sides thereof, a mounting for said frame arranged to permit swinging movement thereof upon a vertical axis to bring the one side or the other into the desired delivery relation, delivery means, a support for the delivery means comprising a section hinged to said base and a strut section hinged to said first-named section for movement in opposite directions to support the delivery means in the proper relation with respect to the roll from which the goods is to be delivered, and computing and measuring means carried by said support to derive operative movement from the delivery means as the goods is taken from the roll.

4. In a goods holding and measuring apparatus, a base, a supporting frame structure constructed to receive and hold rolls of goods mounted to be rotatable on said base, delivery means comprising a support hinged to said base, a driving delivery roll mounted on said support, a driven roller, a computing measuring device mounted to throw substantially the total weight of the driven roller on the driving roller, and a strut section hinged to said hinged support of the delivery means for movement in opposite directions to support the delivery means at the proper operative relation with respect to the roll from which the goods is to be delivered.

5. In a goods holding and measuring apparatus, a base, a supporting frame structure, a mounting for said supporting frame structure so arranged that the frame has turning movement on a vertical pivot, a delivery means carried by said base comprising a section hinged thereto, a driving delivery roller mounted on said hinged section, a driven roller mounted adjacent said delivery roller, a computing and measuring device mounted on the hinged section to throw substantially the total weight of the driven roller on the delivery roller, and a strut section hinged to said first-named section of the delivery means to have movement in opposite directions to permit adjustment of the delivery means at the proper operative relation with respect to the roll from which the goods is to be delivered.

[Claim 6 not printed in the Gazette.]

1,153,505. MEANS FOR DIVIDED CONTROL OF AN ELECTRIC SIGNAL DEVICE. MAURICE LEVISON, Chicago, Ill., assignor to William P. Crockett, Chicago, Ill., and Lee Hammond, Evanston, Ill. Filed July 21, 1913. Serial No. 780,129. (Cl. 171—97.)



1. Means for dividing control of a signal, comprising, in combination, an electro-responsive signal device, two normally open switches located at a signal setting point and a remote signal releasing point respectively, a source of current supply, suitable circuit connections, and relay means alternately connected to one or the other of said switches, said relay means being energized by closure of the switch to which it is connected and then operating to open the circuit connections for the then acting switch and otherwise to close the circuit connections for the then open switch, said relay controlling the circuit connections for the signaling device to close and open its circuit by its operations in response to the respective signal-setting and signal-erasing switches.

2. Means for divided control of an automobile tail lamp, comprising in combination the lamp, a normally open dash-board switch, a normally open tail switch, means of current supply, relay means controlling two relay-switches to close them alternately, whereby one said relay-switch is always closed, a circuit for the relay means including one of the alternately-closed relay switches and the dash switch; another circuit for the relay means including the other relay switch and the full switch, and a lamp circuit including one only of said relay switches, said relay-means when energized by closure of the dash switch opening the relay switch connected with the dash switch and closing the lamp circuit, and when energized by the closure of the tail switch closing the connections for the dash-switch.

3. Means for divided control of an automobile tail lamp comprising in combination a tail lamp, a dash lamp, connected in series therewith, means for closing said series connection upon removal of the dash lamp, a dash switch, a switch remote therefrom, means of current supply, and relay means providing two switches alternately closed by the relay armature, a circuit for said relay means including one said relay switch and the dash switch, a sec-

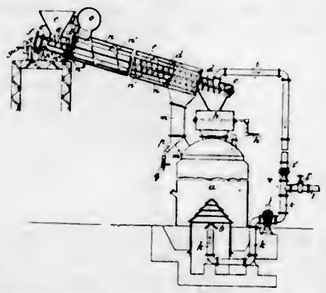
ond circuit for said relay means including the other said relay switch, and a lamp circuit including one of the relay switches.

4. Means for divided control of an electric signal device comprising in combination a relay, said relay having two windings, an armature movable to two alternate positions in response to energization of the respective windings, two relay switches alternately closed by the armature, in its two positions, two normally open manual switches, a signal, means of current supply, a circuit including one normally open hand-switch, a winding of the relay, and one relay switch; another circuit including the other winding, relay switch and hand switch, and a circuit for the signal including one of said relay switches.

5. Means for divided control of an electro responsive signal comprising in combination, a signal; a circuit thereior; and a relay controlling said circuit, said relay having two switches alternately closed by its armature; a signal setting hand switch; a signal erasing hand switch; a relay circuit including one relay switch and one hand switch; a second relay circuit including the other relay switch and the other hand switch, and latching means for yieldingly opposing the opening of either relay-switch.

[Claims 6 to 8 not printed in the Gazette.]

1,153,506. GAS-PRODUCER. OWEN DAVID LUCAS, Westminster, London, England. Filed Mar. 27, 1915. Serial No. 17,538. (Cl. 48—86.)



1. In combination with a gas producer for the use of fuels containing moisture a feed pipe for the moist fuel, a pipe connected with the producer and surrounding the feed pipe for conveying hot gases from the producer to a space between the fuel feed pipe and said surrounding pipe and thus heating it, means for drawing air through the fuel feed pipe and thus saturating the same with moisture during its passage through the fuel pipe, an air locked feeding device between the fuel pipe and the producer, and a pipe for conveying moisture-laden air from the discharge end of the fuel feed pipe.

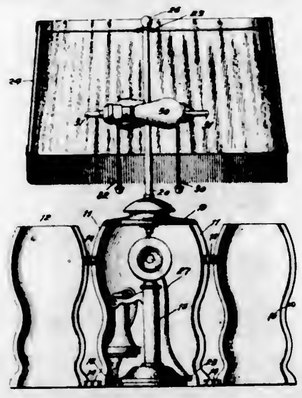
2. In combination with a gas producer, a fuel feed pipe, a feed worm in the fuel feed pipe, means for rotating the feed worm, another pipe for conveying the outgoing gases surrounding the fuel feed pipe, a scraper in the said pipe, means for rotating the scraper, means for drawing air through the fuel feed pipe, and an air locked feeding device between the fuel feed pipe and the producer.

3. In combination with a gas producer, a fuel feed pipe, a feed worm in the fuel feed pipe, means for rotating the feed worm, another pipe for conveying the outgoing gases surrounding the fuel feed pipe, a scraper in the said pipe, means for rotating the pipe, means for drawing air through the fuel feed pipe, and an air locked feeding device between the fuel feed pipe and the producer.

4. In combination with a gas producer, a fuel feed pipe, a feed worm in the fuel feed pipe, means for rotating the feed worm, another pipe for conveying the outgoing gases surrounding the fuel feed pipe, a scraper in the said pipe, means for rotating the scraper, means for drawing air through the fuel feed pipe and leading it to the hearth of the producer, and an air locked feeding device between the fuel feed pipe and the producer.

5. In combination with a gas producer, a fuel feed pipe, a feed worm in the fuel feed pipe, means for rotating the feed worm, another pipe for conveying the outgoing gases surrounding the fuel feed pipe, a scraper in the said pipe, means for rotating the pipe, means for drawing air through the fuel feed pipe and leading it to the hearth of the producer, and an air locked feeding device between the fuel feed pipe and the producer.

1,153,507. COMBINED ELECTROLIER AND TELEPHONE-COVER. JAMES MCINTOSH, New York, N. Y. Filed June 1, 1915. Serial No. 31,449. (Cl. 240—81.)



1. A device of the character described, comprising a substantially cylindrical shell-like cover having a main substantially semi-cylindrical member and two hinged doors adapted to be moved to a position to permit a telephone to be placed in or removed from said main member and to be inclosed within said main member by said doors, a standard extending upwardly from the main member, electric lights supported by said standard, a shade supported by said standard, and means whereby electric connections can be made through the cover to the electric lights and to the telephone.

2. A device of the character described, comprising a shell-like cover having a top and a main substantially semi-cylindrical member and two hinged doors adapted to be moved horizontally and outwardly to a position to permit a telephone to be placed in or removed from said main member and to be inclosed within said main member by said doors, a standard extending upwardly from the top of the main member, and electric lights supported by said standard.

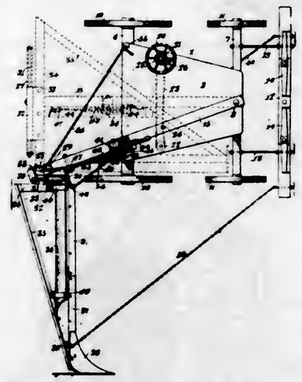
3. A device of the character described, comprising a shell-like vertically disposed cover forming a pedestal and having a main member and swinging means forming a vertical closure for the greater part of its height and adapted to permit a telephone to be placed bodily in or removed from said cover and to be inclosed therein, a standard extending upwardly from the cover, and lighting means supported by said standard.

4. A device of the character described, comprising a shell-like symmetrical and curved cover having a main member and two hinged doors adapted to be moved horizontally to a position to permit a telephone to be placed in or removed from said cover, a standard extending upwardly from the main member, electric lights supported by said standard, and a shade supported by said standard.

5. A device of the character described, comprising a substantially cylindrical shell-like cover having a main member and two oppositely swinging hinged doors adapted to be moved to a position to permit a telephone to be placed in or removed from said main member, said cover being provided with a top and being open at the bottom, a standard extending upwardly from the top of the main member, electric lights supported by said standard, a shade supported by said standard, and means whereby electric connections can be made through the cover of the electric lights.

[Claim 6 not printed in the Gazette.]

1,153,508. GRADING-MACHINE. CHARLES H. MAGNUDER, Shelbina, Mo. Filed Nov. 14, 1914. Serial No. 872,147. (Cl. 37—7.)



1. A grading machine, comprising a vehicle, an elongated scraper, and a support connected to the scraper and carrying the latter by one end, said support being movable crosswise of the vehicle to project the scraper laterally with respect to the vehicle to a position substantially wholly to one side of the vehicle and perpendicular to the line of travel, whereby the scraper will operate on both sides of a ditch or the like with the vehicle traveling at one side of said ditch.

2. A grading machine comprising a vehicle, a carrier having a range of movement thereon laterally of the line of travel of the vehicle, and a scraper mounted at one end on and solely supported by the carrier for adjustment with said carrier to a position substantially wholly to one side of the vehicle.

3. A grading machine comprising a vehicle, an arm thereon pivoted at one end to the vehicle and having a range of movement on the pivot in a direction lateral to the line of travel of the vehicle, and a scraper mounted at one end on the free end of and solely carried by said arm, and movable with the arm to a position substantially wholly to one side of the arm and the vehicle.

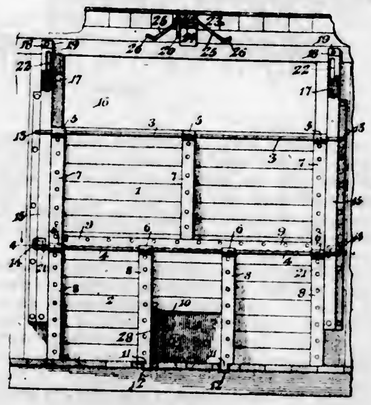
4. A grading machine comprising a vehicle, an arm pivoted at one end to the vehicle near the front of the latter, and said arm being of a length to project to the rear of said vehicle, and a scraper hinged at one end to the rear end of the arm and movable with the latter, said arm having a range of lateral adjustment to project the scraper wholly to one side of the vehicle with said scraper wholly to the corresponding side of the arm.

5. A grading machine comprising a vehicle, an arm pivoted at one end to the vehicle near the front of the latter and extending to the rear of the vehicle, said arm being movable on its pivot in a direction latteral to the line of travel of the vehicle, and a scraper hinged at one end to the free end of the arm and participating in the lateral movements of said arm, the hinge connection being constructed to permit movements of the scraper along the hinge in the direction of the length of the hinge.

[Claims 6 to 19 not printed in the Gazette.]

1,153,509. GRAIN-DOOR. ORIN J. MILLER, Hurdsfield, N. D. Filed Jan. 20, 1914. Serial No. 813,236. (Cl. 20—34.)

1. The combination with a car having a door opening, and guide bars located at opposite sides of the door opening and arranged in spaced relation with the side of the car to form ways, said guide bars being provided at their upper portions with slots or openings, of a door provided at opposite sides with hooks engaging around the guide bars and extending into the said ways, said hooks being provided with projecting lugs normally arranged in a substantially vertical position so as to slide in the ways and adapted to be carried through the slots or openings of the guide bars when the door is swung upwardly.

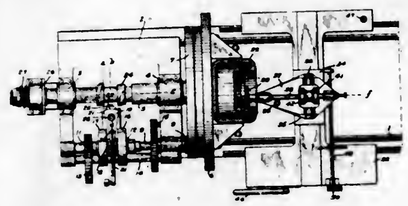


2. The combination with a car having a door opening, and guide bars located at opposite sides of the door opening and arranged in spaced relation with the side of the car to form ways, said guide bars being provided at their upper portions with slots or openings, of a door provided at opposite sides with hooks engaging around the guide bars and extending into the said ways, said hooks being provided with projecting lugs normally arranged in substantially vertical position so as to slide in the guide ways and be carried through the slots or openings when the door is swung upwardly, said lugs being curved and presenting rounded convex faces to the lower end walls of the said slots or openings.

3. The combination with a car having a door opening, of guide bars located at opposite sides of the door opening, said guide bars being provided with upper seats and having slots located below the same, a door composed of upper and lower separable sections, upper and lower pintle rods extending entirely across the door opening and having terminal means for slidably engaging the guide bars, eyes carried by the upper section of the door and receiving the upper pintle rod which is movable upwardly along the guide bars to the said seats, the other pintle rod being provided with rigid means for engaging the slots of the guide bars, and means for rigidly connecting the lower door section with the lower pintle rod, whereby the lower door section is adapted, in swinging, to carry the rigid projecting means into and out of the said slots.

4. The combination with a car having a door opening, of guide bars located at opposite sides of the door opening, said guide bars being provided with upper seats and having slots located below the same, a door composed of upper and lower separable sections, pintle rods extending entirely across the door opening and having terminal hooks engaging around the guide bars, eyes carried by the upper section of the door and receiving one of the pintle rods, the hooks of such pintle rods being adapted to engage with the seats of the guide bars, and means for rigidly connecting the lower door section with the other pintle rod, the hooks of the latter being provided with means arranged to be carried by the swinging movement of the lower door section into and out of the slots of the guide bars.

1,153,510. GRINDING-MACHINE. MOSES MOSLER, Cincinnati, and CARL BARTELS, Hamilton, Ohio, assignors to The Mosler Safe Company, New York, N. Y. Filed July 2, 1915. Serial No. 37,650. (Cl. 51—4.)



1. A grinding machine comprising within its mechanism, an arbor provided with a chuck, bearings in which the arbor may turn and slide, a grinding-wheel adapted to operate upon work held in the chuck, a screw and nut device to serve in moving the arbor endwise during its rotation, and mechanism for reversing the rotary motion of the arbor, combined substantially as set forth.

2. A grinding machine comprising within its mechanism, an arbor provided with a chuck, bearings in which the arbor may turn and slide, a grinding-wheel adapted to operate upon work held in the chuck, a screw and nut device to serve in moving the arbor endwise during its rotation, mechanism for reversing the rotary motion of the arbor, and adjustable collars mounted on the arbor and adapted for the actuation of said reversing mechanism, combined substantially as set forth.

3. A grinding machine, comprising within its mechanism, an arbor provided with a chuck, bearings in which the arbor may turn and slide, a grinding-wheel adapted to operate upon work held in the chuck, a screw and nut device to serve in moving the arbor endwise during its rotation, mechanism for reversing the rotary motion of the arbor, adjustable collars mounted on the arbor and adapted for the actuation of said reversing mechanism, and cams upon said collars adapted to take part in the reversing operation and permit the reversing operation to be controlled by the rotary as well as the endwise movement of the arbor, combined substantially as set forth.

4. A grinding machine comprising within its mechanism, an arbor to carry the work to the ground, a pair of pulleys adapted to rotate said arbor and provided with clutch hubs, a clutch serving to lock a selected one of the pulleys into transmission engagement with the arbor, a lever for throwing the clutch into engagement with either pulley, an arm adapted to move said lever, collars carried by said arbor and adapted to move said arm, and spring wedge mechanism for throwing said arm and lever to an extreme position when the arbor shall have caused the arm to pass the neutral point in its motion, combined substantially as set forth.

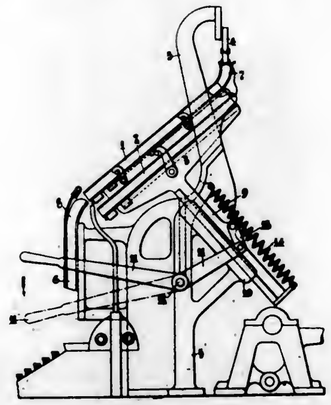
5. A grinding machine comprising within its mechanism, an arbor, a clutch-lever adapted by its oscillations to control the direction of motion of the arbor, a detent aperture in said clutch-lever, a detent collar adapted to enter said aperture and retain the clutch-lever in neutral position, and means for adjusting said detent collar to active or idle position, combined substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,153,511. TYPOGRAPHICAL COMPOSING-MACHINE. CARL MUEHLEISEN, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed June 29, 1914. Serial No. 847,805. (Cl. 199—7.)

1. In a typographical composing machine, the combination with an inclined magazine frame adapted to support a plurality of magazines, of a single slide fast to the magazine frame, of other than cylindrical form in cross section, and a guide fast to the machine frame, in which the slide is capable of moving only in the direction of its length.

2. In a typographical composing machine, the combination with an inclined magazine frame adapted to support a plurality of magazines, of a single slide fast to the magazine frame, of other than cylindrical form in cross section, a guide fast to the machine frame, in which the slide is capable of moving only in the direction of its length, and manual means operative to raise and lower the slide in the guide.



3. In a typographical composing machine, the combination with an inclined magazine frame adapted to support a plurality of magazines, of a single slide fast to the magazine frame, of other than cylindrical form in cross section, a guide fast to the machine frame, in which the slide is capable of moving only in the direction of its length, manual means operative to raise and lower the slide in the guide, and a spring attached to the main frame and to the slide operative to raise the slide in the guide.

4. In a typographical composing machine, the combination with an inclined magazine frame adapted to support a plurality of magazines, and a magazine entrance and assembler plate entrance with which the magazines are capable of being moved successively into operative register, of a single slide fast to the magazine frame, of other than cylindrical form in cross section, a guide fast to the machine frame in which the slide is capable of moving only in the direction of its length, and a lever operative to move the slide in the guide to bring any of the magazines into operative register with the magazine entrance and assembler plate entrance.

5. In a typographical machine, the combination of a plurality of magazines, a supporting frame therefor, movable to bring one or another into operative position, and mechanism for guiding the frame in its movements, said mechanism comprising a single slide or guide fixed to the magazine supporting frame, and means mounted in the machine frame to coöperate with the slide and prevent its turning or twisting during the movement of the supporting frame.

1,153,512. THERMO NON-CONDUCTOR. CARL G. MUENCH, St. Paul, Minn. Filed Mar. 7, 1913, Serial No. 752,614. Renewed Jan. 30, 1915. Serial No. 5,305. (Cl. 154—44.)

1. A thermal non-conductor composed of wood pulp tailings felted into a light, spongy sheet, pressed slightly and dried.

2. A thermal non-conductor composed of wood pulp tailings felted into a sheet or other shape, fire proofed, pressed slightly and dried.



3. A thermal non-conductor composed of wood pulp tailings, water-proofed, felted into a sheet or other shape, pressed slightly and dried.

1,153,513. INCENDIARY PROJECTILE. LEWIS NIXON, New York, N. Y. Filed Nov. 25, 1914. Serial No. 874,001. (Cl. 102—29.)



1. A projectile of the character described, comprising a metal casing containing a mass of highly combustible balls bound together with a combustible binder, a cap closing one end of said casing and provided with a chamber containing a bursting charge for bursting said casing and to scatter said inflammable material, and a fuse carried by said cap and adapted to ignite said bursting charge, substantially as described.

2. A projectile of the character described, comprising a metal casing containing a mass of highly combustible balls bound together with a combustible binder, a cap closing the front end of said casing and provided with a chamber containing a bursting charge for bursting said casing and to scatter said inflammable material, and a fuse closing the front end of said cap and adapted to ignite said bursting charge.

1,153,514. ANTISLAMMING-LATCH FOR OVEN-DOORS. HERBERT BRINKERHOFF NORTH and JOSEPH WILLIAM GIBNEY, New Haven, Conn., assignors to The Sentinel Mfg. Co., New Haven, Conn., a Corporation. Filed July 12, 1915. Serial No. 39,805. (Cl. 126—197.)

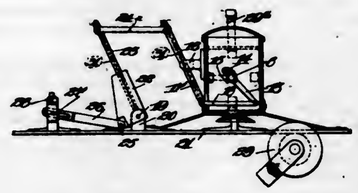


1. In an anti-slamming latch for oven-doors, the combination with a latch, of a keeper provided with a locking-slot for the reception of the latch and with anti-slamming abutments located on opposite sides of the said slot.

2. In an anti-slamming latch for oven-doors, the combination with a latch, of a keeper having a locking-slot for the reception of the nose of the latch and provided with an outer abutment located outside of the said slot but in line therewith, and with an inner abutment located on the inside of the said keeper at a point within the said slot.

3. In an anti-slamming latch for oven-doors, the combination with a latch, of a keeper having a locking-slot for the reception of the nose of the latch, and provided with inner and outer safety abutments located in line with the said slot on opposite sides thereof, and a spring-actuated dog arranged to engage with the latch for yieldingly holding the same in its closed position.

1,153,515. TROLLEY-ACTUATED SWITCH. EDGAR H. OWSLEY, San Jose, Cal. Filed Oct. 19, 1914. Serial No. 867,369. (Cl. 246—54.)



1. In a multiple switch, a shaft extending through each switch, a knife blade for each switch on the shaft, a block pivotally mounted above a trolley wire, a link pivotally connected to one end of said block and slidably mounted at the other end in a standard, said block and link being so positioned as to be rocked when engaged by a trolley wheel of a passing car, means connecting the block with the switch shaft whereby the rocking movement of the block and link will be transmitted to turn the shaft with connected knife blade a quarter of a revolution from one contact in the switch to the other, a casing inclosing each switch and in which each shaft is journaled, means for introducing oil into said casing, and means for conveying a portion of said oil to lubricate the shaft with connected operating levers.

2. In combination with the blade of a switch, a pivoted block, a link pivoted at its inner end to the block adjacent the base of the latter whereby the under faces of the block and link conjointly have a V-shape form, means to pivotally support the outer end of the link, an arm extending upwardly from the block, an arm having connection with the switch blade to actuate the latter, a lever arm pivoted intermediate its ends, and links connecting the ends of the lever arm with the arm of the block and the arm of the switch blade.

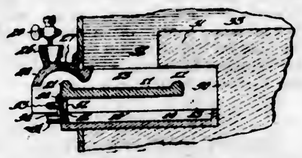
3. In combination with the blade of a switch, an arm having connection with the blade to actuate the latter, a vertical lever arm pivoted intermediate its ends, a link between the lower ends of the first named arm and the lever arm, a vertical pivoted member for actuation by a trolley wheel or the like, and a link between the upper end of said member and the upper end of the lever arm.

4. In combination with a switch actuator, a vertical pivoted weighted substantially L-shaped member having the free end of its base disposed below its pivot so as to be engageable with a trolley wheel or the like whereby to rock the member, and means connecting the member and actuator whereby the member will operate the actuator.

5. In combination with a switch actuator, a vertically rocking substantially L-shaped member having the free end of its base disposed so as to be engageable with a trolley wheel whereby to rock the member, said member being pivoted at its corner so as to be automatically returned to normal upon the trolley wheel passing out of contact with same, and means to operate the actuator from said member.

[Claims 6 and 7 not printed in the Gazette.]

1,153,516. DISTILLATE-BURNER. THOMAS E. POTTS, Los Angeles, Cal., assignor of one-third to Peter Madsen and one-third to Martin Madsen, Los Angeles, Cal. Filed Nov. 9, 1914. Serial No. 871,212. (Cl. 158—91.)



1. A liquid fuel burner comprising a primary fuel pan, a secondary fuel pan having side walls resting on said primary pan and a heating plate extending across between said walls over said primary pan, means for directing the heated gases from said primary pan over the surface of said secondary pan, and independent means for supplying liquid fuel to each of said pans.

2. A liquid fuel burner comprising a primary pan, means for supplying fuel to said pan, side walls for said pan having ledges formed thereon, a secondary pan having secondary side walls adapted to rest on said ledges, a front deflector resting on said secondary side walls and so shaped that it directs an air current across the top of said secondary pan, a rear deflector resting on said secondary side walls and so shaped that it directs the current of air entering between said pans across the top of said secondary pan, and means for supplying liquid fuel to said secondary pan.

3. A liquid fuel burner comprising a primary pan, means for supplying fuel to said pan, side walls for said pan having ledges formed thereon, a secondary pan having secondary side walls adapted to rest on said ledges, a front deflector resting on said secondary side walls and so shaped that it directs an air current across the top of said secondary pan, a rear deflector resting on said secondary side walls and so shaped that it directs the current of air entering between said pans across the top of said secondary pan, a cup formed on said front deflector, said cup having an opening in the bottom thereof extending inwardly to a point over said secondary pan, and means for supplying fuel to said cup.

4. A liquid fuel burner comprising a primary pan, means for supplying fuel to said pan, side walls for said pan having ledges formed thereon, a secondary pan having secondary side walls adapted to rest on said ledges, a front deflector resting on said secondary side walls and so shaped that it directs an air current across the top of said secondary pan, a rear deflector resting on said secondary side walls and so shaped that it directs the current of air entering between said pans across the top of said secondary pan, a damper for closing the air supply opening between the pans, and means for supplying liquid fuel to said secondary pan.

5. A liquid fuel burner comprising a primary fuel pan consisting of a flat plate with a surrounding edge, a similarly formed secondary fuel pan located above said primary fuel pan, and means for independently feeding fuel to each pan.

[Claims 6 to 8 not printed in the Gazette.]

1,153,517. PANEL STOVE-TOP. THOMAS E. POTTS, Los Angeles, Cal., assignor of one-third to Peter Madsen and one-third to Martin Madsen, Los Angeles, Cal. Filed Nov. 9, 1914. Serial No. 871,213. (Cl. 126—211.)



A panel stove top comprising a rectangular frame having an ogee shaped ledge around the inner edge thereof, end plates having a reverse shaped ogee edge on one side and both ends and a square edge on the other side, and a series of intermediate plates each independently supported on said frame and each having square edges on both sides and a reverse shaped ogee on both ends engaging the ledge on the inner edge of the frame.

1,153,518. BOTTLE-CLOSURE. ALBERT D. RAY, Cleveland, Ohio, assignor of one-fourth to Clarence E. Bigelow, Grand Rapids, Mich. Filed Jan. 11, 1915. Serial No. 1,485. (Cl. 215—9.)



1. A bottle having an annular neck bead, a bottle-closing cap having a downwardly-extending non-metallic flange adapted to receive the bottle's neck and upset or thickened by compression around the bottle's neck and below the bead.

2. A bottle having an annular neck bead, a bottle-closing cap having a downwardly-extending non-metallic flange adapted to receive the bottle's neck and upset or thickened by compression around the bottle's neck and below the bead, said flange being coated with an adhesive adapted to retain the flange in said upset condition.

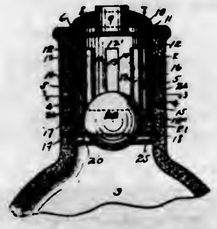
3. A bottle having an annular neck bead, a bottle-closing cap having a downwardly-extending non-metallic crimped flange adapted to receive the bottle's neck and upset or thickened by compression around the bottle's neck and below the bead.

4. A bottle having an annular neck bead, a bottle-closing cap having a downwardly-extending non-metallic crimped flange adapted to receive the bottle's neck and upset or thickened by compression around the bottle's neck and below the bead, said flange being coated with an adhesive adapted to retain the flange in said upset condition.

5. A bottle having an annular neck bead, a bottle-closing cap having a downwardly-extending non-metallic flange with helically-disposed crimps and adapted to receive the bottle's neck and upset or thickened by compression around the bottle's neck and below the bead.

[Claims 6 to 8 not printed in the Gazette.]

1,153,519. NON-REFILLABLE BOTTLE. MERRILL ROBBINS, Adams, N. Y. Filed June 17, 1915. Serial No. 34,618. (Cl. 215—65.)



1. In a non-refilable bottle, a stopper comprising a hollow cylindrical member adapted for insertion in the neck of the bottle, one end of said member being contracted and provided with a discharge opening surrounded by a flange, the other end of said member being reduced and externally threaded, a valve seat-ring screwed on the threaded end of said member, a spherical valve movable in said member and supported by said ring, a cage telescoping said member and serving as a guide for said valve, a perforated guard disposed between said cage and said flange, and a compressible ring encircling said member and engaging an annular groove in the neck of the bottle for holding the stopper in place.

2. A non-refillable bottle, including the bottle-neck having an annular groove between its ends, a stopper comprising a hollow member telescoping the said neck, one end of the said member being reduced in diameter, the other end of said member having a discharge opening closed by a cork, a compressible ring surrounding the reduced portion of said member and engaging the groove in the neck, a seat-ring screwed on to the reduced end of said member, a gravitative spherical valve engaging said ring, and a cage telescoping said member and guiding said valve.

3. The combination with a bottle-neck, of a tubular stopper member inserted in the neck, having at its outer end a discharge opening closed by a cork, and having its inner end threaded, a seat-ring screwed on to the inner end of said member but being free from contact with the said neck, a compressible ring encircling said member intermediate its ends and engaging a groove in said neck for preventing the withdrawal of said member, a slotted thimble lining said member and held in place by said seat-ring, a gravitative valve movable within said thimble, and a perforated guard for limiting the movement of said valve away from the seat-ring.

1,153,520. LISTING DEVICE. ANDREW F. ROSENBERGER, Chicago, Ill. Filed May 28, 1914. Serial No. 841,452. (Cl. 129—16.)



1. The combination with a frame having spaced bearing portions, of a flexible card and means for removably holding said card in said frame, said means being engageable with said bearing portions by bending to temporarily contract its length to less than that of the distance between the bearing portions, said card having a detachable engagement with said holding means, and being engageable with said holding means in either the attached or detached positions of the latter.

2. The combination with a frame having spaced bearing portions, of a flexible card and means for removably holding said card in said frame, said means being engageable with said bearing portions by bending to temporarily contract its length to less than that of the distance between the bearing portions, said card having a detachable engagement with said holding means, and being engageable with said holding means in either the attached or detached positions of the latter, and said holding means being engageable with said frame in either the attached or detached position of the card.

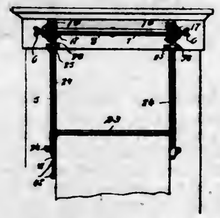
3. The combination with a frame having spaced guide flanges, of means for removably attaching a card to said frame, said means comprising a flexible member having return bent ends forming spaced bearing portions for insertion beneath said guide flanges and offset continuations of said return bent portions adapted to detachably engage the card.

4. The combination with a frame having spaced guide flanges, of means for removably attaching a card to said frame, said means comprising a flexible member having return bent ends forming spaced bearing portions for insertion beneath each of said guide flanges, and inwardly extending continuations of said return bent portions, said continuations being offset and adapted to engage the cards to space the same outwardly from the plane of the bearing portions when the latter are positioned beneath the guide flanges.

5. The combination with a frame having spaced guide flanges, of means for removably attaching a plurality of cards in overlapped position in said frame, said means comprising a flexible member having return bent ends forming spaced bearing portions at each end for insertion beneath said guide flanges, and continuations of said return bent portions, said continuations being offset and adapted to detachably engage the cards for holding the same outwardly from the plane of the bearing portions when the latter are positioned beneath the guide flanges.

[Claims 6 and 7 not printed in the Gazette.]

1,153,521. WINDOW-SHADE DEVICE. FRANK W. ROWE, Oakland, Cal. Filed June 12, 1914. Serial No. 844,725. (Cl. 156—36.)



1. A device of the character described comprising a spring roller provided upon its ends with collars rigidly secured thereto and provided with a plurality of holes, drums mounted on said spring roller and revolubly adjustable thereon by the engagement of screws within selected ones of said holes, brackets disposed below said drums and slidably engaged by shade roller supporting brackets, cables trained about said drums and connected with said shade roller supporting brackets and means connected with said curtain roller brackets for moving them downwardly, said movable brackets being returnable by the tension of said spring roller.

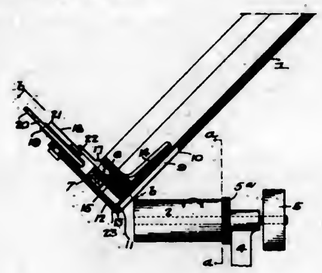
2. In a device of the character described, a spring roller comprising a tubular member provided at its center with a disk, plugs secured within the ends of said tubular member and provided with openings, rods passing through said openings and supported upon fixed brackets, springs connected with said disk and said plugs, collars secured upon the ends of said tubular member and provided upon their peripheries with a plurality of holes, drums mounted on said tubular member, and screws passing through said drums and engaging selected ones of the holes in said last named collars, whereby the tension of the springs may be varied by rotation of said tubular member after the removal of said screw without removing said rods from said supporting brackets.

3. In a device of the character described, a spring roller comprising a tube, a disk secured within and at the central portion of said tube, a plug secured within each end of said tube and provided with an opening, a rod revoluble through each of said openings and provided at its outer end with a squared head engageable with a bracket, a spring connecting said disk with the inner end of each of said rods, a flanged collar secured upon each end of said tube and provided with a plurality of transverse holes, a winding drum mounted on each end of said tube, and a screw extending through each drum and through a selected one of the holes in each collar, whereby upon removal of said screws said tube may be rotated to vary the tension of said springs without shifting the position of an article suspended by flexible members trained about said drums.

1,153,522. MECHANISM FOR TRANSFERRING HAIRS. HERMAN RUDOLF SACK, Philadelphia, Pa., assignor to Radcliffe B. Mills, Philadelphia, Pa. Filed Mar. 19, 1913. Serial No. 755,474. (Cl. 28—21.)

1. The combination of a container for hairs and having a slot therein; gage means operable to permit the

movement of a predetermined number of hairs toward the slot; means for separating hairs adjacent the slot from the other hairs in the container; and means for pushing the hairs through the slot.



2. The combination of a container for hairs having a slot therein; gage means operable to permit the movement of a predetermined number of hairs toward the slot for alinement therewith; means for separating hairs adjacent the slot from the other hairs in the container and for alining said separated hairs with the slot; and means for delivering the alined hair through the slot.

3. The combination of a container for hairs having a slot; a plunger; a gage member operable to permit the movement of a predetermined number of hairs into alinement with the slot; and means for moving said plunger into and out of said slot to successively deliver the alined hairs therethrough.

4. The combination of a container for hairs; a reciprocable plunger bar; a separator; means for moving the separator between the hairs to separate and thereby successively feed a certain number thereof into the path of the plunger; and means for moving the plunger to push said hairs from the container.

5. The combination of a container for hairs; a reciprocable plunger; a reciprocable separator; and means for alternately moving the plunger and the separator to successively feed the hairs into the path of the plunger so that they will be pushed thereby out of said container.

[Claims 6 to 16 not printed in the Gazette.]

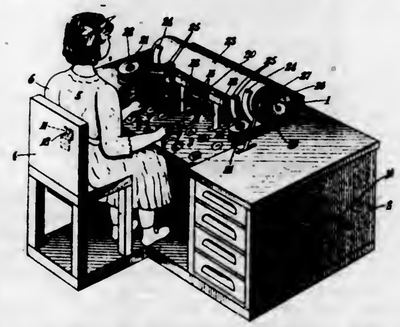
1,153,523. GARMENT. SOLOMON C. SALZENSTEIN, Peoria, Ill., assignor to Chic Mfg. Co., Peoria, Ill., a Corporation of Illinois. Filed May 22, 1912. Serial No. 698,930. (Cl. 2—54.)



1. An apron formed from a flat blank said blank composed of two members constituting the front and rear portions of the apron each member being of substantially the same shape and contour and having an inwardly curved upper end, the two members being secured together at one side near the upper end thereof with the inwardly curved upper ends forming a continuous arc, the line of connection between the two members being disposed at an acute angle to the longitudinal axis of each member, with the longitudinal axis of each member disposed at an angle to each other, the unconnected outer side edge of each member being cut near their upper ends so as to form with the longitudinal axis of its respective member, an angle equal in degree to the angle formed by the line of connection between the members and their longitudinal axes, and coöperating fastening means along said outer side edge of each member for securing them together when the apron is on the wearer.

2. An apron formed from a flat blank, said blank composed of front and rear members cut from identically the same pattern, each member having substantially straight side edges terminating near their upper ends in converging straight edges, the upper edge of each member between the converging edges being curved inwardly, the two members being secured together along adjacent converging edges forming an inverted V-shaped opening between the lower portions of the members, with the inwardly curved upper ends of the members forming a continuous arc when the apron is laid flat, fastening means along the other converging edges of the members whereby said converging edges are detachably secured together, the secured converging edges of both members being disposed at each side of the wearer when the apron is in operative position.

1,153,524. TYPE-WRITING DOLL TOY. MONROE M. SCHWARZSCHILD and BELLE SCHEUER, New York, N. Y. Filed June 29, 1915. Serial No. 36,944. (Cl. 46—40.)



1. In a typewriting doll toy, the combination with a part constructed to simulate a typewriting machine, of movable arm operating devices, means for connecting the arms of a doll thereto, a support for a doll, and actuating means for said arms operating devices.

2. In a typewriting doll toy, the combination with a part constructed to simulate a typewriting machine, of movable arm operating devices, means for connecting the arms of a doll thereto, a support for a doll, mechanism for producing a clicking sound, and actuating means for said arm operating devices and said sound producing mechanism.

3. In a typewriting doll toy, the combination with a part constructed to simulate a typewriting machine, a figure provided with movable arms extending over the key-board portion of the machine, actuating mechanism, and connections from said actuating mechanism to the said movable arms.

4. In a typewriting doll toy, the combination with a part constructed to simulate a typewriting machine, a figure provided with movable arms extending over the key-board portion of the machine, mechanism for producing a clicking sound, actuating mechanism, and connections from said actuating mechanism to said movable arms and to said sound producing mechanism.

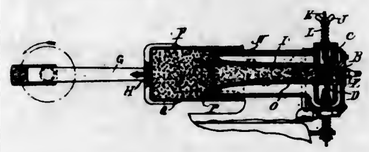
5. In a typewriting doll toy, the combination with a part constructed to simulate a typewriting machine, of vertically movable arm operating devices having portions extending above the key-board portion thereof and provided with means for connecting the arms of a doll thereto, a support for a doll, and actuating means for said arm operating devices.

[Claims 6 to 18 not printed in the Gazette.]

1,153,525. MATCH-IGNITION COMPOSITION. MIKE SHADID, Peoria, Ill. Filed June 13, 1914. Serial No. 844,902. (Cl. 52—5.)

A composition of matter including the following ingredients in substantially the following proportions: gum arabic 10 parts, bicromate of potassium 1.75 parts, antimony sulfid 1.50 parts, glass 3 parts, coal dust 1.25 parts, chlorate of potassium 8 parts, sulfur .50 parts.

1,153,526. COMBUSTION-ENGINE. WILLIAM A. SORG, Minneapolis, Minn., assignor, by mesne assignments, to Frederick G. Bradbury, trustee. Filed Oct. 27, 1911. Serial No. 657,057. (Cl. 123—50.)



1. A combustion engine, comprising, in combination, a piston and cylinder in reciprocable connection, one of said members having a valved end portion adapted to admit air into the space within said members during the intake stroke, and the other members being formed with a long tubular combustion chamber valved to admit a fuel charge and exhaust spent gases and adapted to contain the entire fuel charge before ignition, the inner diameter of said tubular structure being materially less than the diameter of the working space of said piston, whereby the contents of said working space and the mixture charge in said tubular chamber are prevented from mixing before ignition.

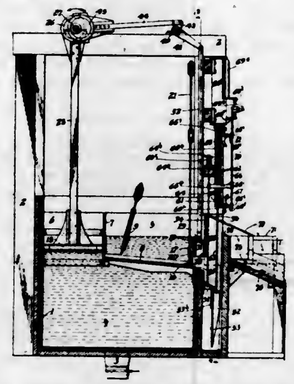
2. A combustion engine, comprising, in combination, a piston and cylinder in reciprocable connection, one of said members having a valved end portion adapted to admit air into the space within said members during the intake stroke and the other member being formed with a long tubular combustion chamber valved to admit a fuel charge and exhaust spent gases, the capacity and shape o fsaid chamber being capable of holding the entire charge of fuel mixture in a stratum separate from the contents of the working space of said piston before ignition, and means for igniting said fuel mixture while in a stratum.

3. A combustion engine, comprising, in combination, a piston and cylinder in reciprocable connection, one of said members having a valved end portion adapted to admit air into the space within said members during the intake stroke and the other member having a long tube forming a combustion chamber leading from the working space of said piston and terminating in a valve chamber, mixture inlet and exhaust valves seated in the frame of said valve chamber, said combustion and valve chambers being adapted to retain an entire charge of fuel mixture in the form of a column previous to ignition and exposing a comparatively small surface area to the contents of said working space to reduce tendency of the fuel charge mixing with air admitted into said working space, said valve chamber being larger in cross sectional area than the adjacent portion of the tube ahead of it, and means for igniting the contents of said valve chamber while the fuel mixture in said tube and the air in said working space remain in separate strata.

4. A combustion engine, comprising, in combination, a piston and cylinder in reciprocable connection, one of said members being valved to admit air therein, and the other of said members being formed with a long tubular combustion chamber valved to admit a fuel charge and exhaust spent gases and adapted to contain substantially the entire fuel charge before ignition, the inner diameter of said chamber being materially less than the diameter of the working space of said piston, whereby the contents of said working space and the mixture charge in said tubular chamber are substantially prevented from mixing before ignition.

5. A combustion engine, comprising, in combination, a piston and cylinder in reciprocable connection, one of said members being valved to admit air therein, and the other of said members being formed with a long tubular combustion chamber valved to admit a fuel charge near one end and exhaust spent gases and adapted to contain substantially the entire fuel charge before ignition, the inner diameter of said chamber being materially less than the diameter of the working space of said piston, whereby a rich fuel mixture is adapted to occur near said fuel ingress valve and a lean fuel mixture near the opposite end of said tubular chamber, and ignition means placed near said fuel ingress valve to ignite the richest fuel mixture first.

1,153,527. DISCHARGING MEANS FOR JIGS. SAMUEL V. TENCH, Lansford, Pa. Filed Nov. 29, 1913. Serial No. 803,650. (Cl. 83—58.)



1. In a jig for separating materials of different specific gravities, as coal and slate, the combination of a receptacle in which the said materials are separated, the said receptacle being provided with a passage-way for the discharge of the heavier material, a reciprocating device for discharging the lighter material, means for reciprocating said device, means in front of said device for supporting it, a plate upon the opposite side of said device which plate is supported upon the walls of the said receptacle, a slidable plate intermediate the first-named plate and said device, the said slidable plate having pin and slot connections with the first-named plate and with the said device whereby when the latter is raised to a position above the first-named plate the intermediate plate is lifted to close the space between said first-named plate and said device and thereby prevent passage of coal over said first-named plate.

2. In an apparatus for separating materials having different specific gravities, the combination of separating means, means for continuously discharging one of said materials from the said separating means, means for lifting the other of said materials from said separating means, means normally out of operation for effecting lifting movement of said lifting member, and gravity acting means for placing the last mentioned means in operation.

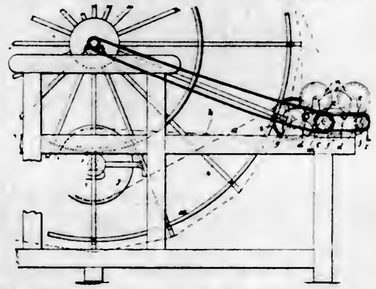
3. In an apparatus for separating materials having different specific gravities from each other, the combination of means for continuously discharging one of the said materials from the said separating means, means for

lifting the other of said materials from said separating means, and means acting automatically to cause lifting movement of the said lifting means at intervals.

4. In an apparatus of the character described, the combination of a receptacle provided with means for causing the separation of coal from slate and stony matter, means for continuously discharging the coal from the said receptacle, a member adapted to be moved at intervals for lifting the slate and stony matter and discharging the same from said receptacle and automatically acting means for causing movement of the said member at intervals for the purpose stated.

5. In a machine of the character described, the combination of means for lifting and discharging slate and other like relatively heavy material from a receptacle after it has been separated from a lighter material, such as coal, said means comprising a gravity actuated tripping member, a power cylinder, means for opening and closing a valve for controlling the passage of a fluid under pressure into said cylinder, a connection between the said tripping device and the said valve opening and closing means whereby movement of the said tripping device under the influence of gravity occasions the opening in one direction of such valve, a device for lifting the slate, etc. to discharge it from the said receptacle, a connection between the said lifting device and a movable member in the said power cylinder, and means intermediate the connection between the said lifting device and the movable member in said power cylinder and the connection between the said tripping device and the said valve controlling means whereby the latter may be actuated by movement of the connection between the said lifting means and the movable member in the said power cylinder.

1,153,528. BEAMING ATTACHMENT FOR WARPING AND BEAMING MACHINES. HUGH WATSON and CHARLES M. WHITTENOUR, Paterson, N. J. Filed June 3, 1914. Serial No. 842,565. (Cl. 28—14.)



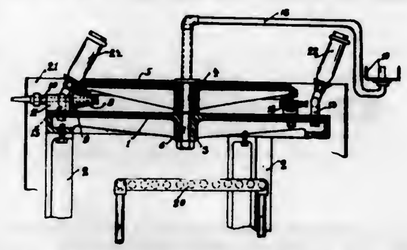
1. In combination, the frame, a supporting structure, a plurality of rotary beams having their axes horisontal and journaled in said structure, means to rotate the several beams including a rotary shaft journaled in the frame parallel with the axes of the beams, said structure being movable in the frame parallel with the axes of the beams and relatively to said shaft, and means to simultaneously move said structure.

2. In combination, the frame, a splined shaft and a rotary screw journaled in the frame parallel with each other, a plurality of rotary beams, a sliding structure movable on said frame parallel with the shaft and screw and including a plurality of pairs of brackets and an elongated member connecting said brackets, each pair of brackets supporting a beam, liberative means to connect said structure with the screw, and gearing, arranged in and movable with one bracket in each pair, operatively connecting said beam with each splined shaft.

3. In combination, the frame, a splined shaft and a rotary screw journaled in the frame parallel with each other, a plurality of rotary beams, a sliding structure movable on said frame parallel with the shaft and screw and including a plurality of pairs of brackets and an elongated member extending parallel with said shaft and screw and having the several brackets each adjustably clamped thereto, each pair of brackets supporting a beam, liberative means to connect said structure with the screw, and gearing, arranged in and movable with one bracket in each pair, operatively connecting each beam with said splined shaft.

4. In combination, the frame having a horizontal fixed guide bar, a longitudinally sliding elongated member supported by the frame, beams, pairs of brackets supporting the beams and secured to said member and slidable on the bar, means to rotate the beams and means to simultaneously move the structure comprising said member and the brackets longitudinally of the bar.

1,153,529. MACHINE FOR PAINTING AND DRYING PROJECTILES. WILLIAM YELLOWLEY, Kingston, Ontario, Canada. Filed Feb. 1, 1915. Serial No. 5,597. (Cl. 91—60.)

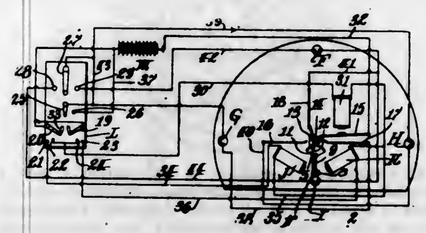


1. In a machine of the character described, a table, a circular frame revolubly mounted thereon and provided with an integral rim having beveled under and upper faces, U frames secured to the table concentric with and a slight distance from the rim of said circular frame, blocks pivotally mounted in said U frames and each provided with an integral pin on its upper face and adapted to be swung inwardly or outwardly in the said U frames, a socket adapted to be threaded into the nose of a projectile rotatably mounted on the said pin and provided with an integral annular beveled collar adapted to frictionally engage the bevel on the upper face of the said circular frame when the said block is swung inwardly on its pivot, means for limiting the outward swing of the said block, and drying means.

2. In a machine of the character described, a table, a circular frame revolubly mounted thereon and provided with an integral arm having beveled under and upper faces, U frames secured to the table concentric with and a slight distance from the rim of said circular frame, blocks pivotally mounted in said U frames and each provided with an integral pin on its upper face and adapted to be swung inwardly or outwardly in the said U frames, a socket adapted to be threaded into the nose of a projectile rotatably mounted on the said pin and provided with an integral annular beveled collar adapted to frictionally engage the bevel on the upper face of the said circular frame when the said block is swung inwardly on its pivot, means for limiting the outward swing of the said block, drying means, and means for holding a paint receptacle revoluble about the said table.

1,153,530. INDICATOR. CHARLES F. ZINN, St. Paul, Minn. Filed July 31, 1913. Serial No. 782,362. (Cl. 177—337.)

1. An indicator for signaling directions in which a vehicle is adapted to move, comprising a dial having a signaling arm, a shaft journaled in said dial and carrying said arm, an armature operatively connected with said shaft in position when influenced magnetically to turn said shaft in either direction, a pair of electromagnets associated with said armature to turn said shaft, an electric circuit in which the coils of said magnets are included adapted to energise either of said magnets according to the right or left direction the vehicle is adapted to move, means for holding said shaft with its arm in median position but permitting it to be turned when said armature is influenced by either of said magnets, auxiliary illuminating signals on said dial, an electrical circuit in which said auxiliary signals are included and a switch with which said circuits are connected adapted to cause the movement of said arm and the operation of said illuminating signals in synchronism.



2. A direction indicator comprising, in combination, a casing having a dial, a shaft journaled in said casing, said shaft having a pinion mounted thereon, a signaling arm carried by said shaft, a stud mounted in said casing, a rod pivotally supported by said stud and having a toothed quadrant meshing with the pinion on said shaft, an armature carried by said rod, electromagnets associated with said armature to turn said shaft, an electric circuit adapted to energise either of said magnets, illuminating signals on said dial, an electric circuit in which said signals are included, and a switch for connecting said circuits to actuate said arm and said signals in synchronism.

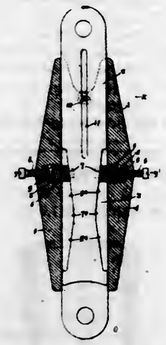
3. A direction indicator comprising in combination, a casing having a dial, a shaft journaled in said casing, a signaling arm carried by said shaft, an armature operatively connected with said shaft, a pair of electro-magnets associated with said armature to turn said shaft, means for locking said shaft in median position and adapted to regulate the movements of said shaft, a single electro-magnet disposed within said casing in juxtaposition to said locking means, and electric circuits in which all of said magnets are included, said circuits being provided with a switch by means of which said single magnet is initially energized to release said locking means and either of said pair of magnets subsequently energized to attract said armature and turn said shaft.

4. A direction indicator comprising in combination, a casing having a dial provided with spaced markings thereon, an illuminating signal disposed adjacent each marking, a shaft journaled in said casing, a signaling arm carried by said shaft, an armature operatively connected with said shaft, a pair of electro-magnets associated with said armature, spring means for locking said shaft in median position and adapted to steady the movements of said shaft, a single electro-magnet disposed within said casing in juxtaposition to said locking means, and electric circuits in which all of said magnets and said illuminating signals are included, said circuits being provided with a connecting switch by means of which said single magnet is initially energized to release said locking means and either of said pair of magnets subsequently energized to cause the movement of said arm and the operation of said illuminating signals in unison.

5. The combination with a direction indicator having a dial provided with a signaling arm, of a shaft journaled in said dial and carrying said arm, a cam on said shaft, an armature operatively connected with said shaft, electromagnets associated with said armature to turn said shaft, a spring arm bearing against said cam for steadying the movements of said shaft, an electric circuit adapted to energise either of said magnets, illuminating signals on said dial, independent members adapted to alternately bear against said cam to assist in returning said shaft to median position, an electric circuit in which said spring arm, said members and said signals are included, and a switch for connecting said circuits to actuate said signaling arm and illuminating signals in unison.

[Claim 6 not printed in the Gazette.]

1,153,531. SHOCK-ABSORBER. FRANK C. ADAMS, Yellow Springs, Ohio, assignor of one-fourth to Harry R. Estel and one-fourth to Solomon Wilson, Yellow Springs, Ohio. Filed Apr. 5, 1915. Serial No. 19,128. (Cl. 21—105.)



1. In a shock absorber, an elongated casing having a guideway extending lengthwise thereof, and having in one end means for attaching it to a part of a vehicle, a bar slidably mounted in said guideway, having a cam surface, and having at one end means for attaching it to another part of said vehicle, the attaching means for said casing and said bar being at opposite ends of said casing, and a yieldable part carried by said casing to engage the cam surface of said slidable bar.

2. In a shock absorber, an elongaated casing having a guideway extending lengthwise thereof, and having at one end means for attaching it to a part of a vehicle, a bar slidably mounted in said guideway, having cam surfaces on both edges thereof, and having at one end means for attaching it to another part of said vehicle, the attaching means for said casing and for said bar being at opposite ends of said casing, said casing having recesses adjacent to the edges of said bar, springs mounted in the respective recesses and parts interposed between said springs and the respective cam surfaces of said bar, and adapted to yieldably engage said cam surfaces.

3. In a shock absorber, an elongated casing having a guideway extending lengthwise thereof, and having at one end means for attaching it to a part of a vehicle, a bar slidably mounted in said guideway, having a cam surface, and having at one end means for attaching it to another part of said vehicle, the attaching means for said casing and said bar being at opposite ends of said casing, a yieldable part carried by said casing to engage the cam surface of said slidable bar, and means to clamp the side walls of said casing against said bar to frictionally resists its movement.

4. In a shock absorber, an elongated casing having means to attach it to a part of a vehicle and comprising side plates and edge pieces secured to said side plates, said parts being arranged to form a guideway, a bar slidably mounted in said guideway and having those edges adjacent to said edge pieces cut away to provide oppositely inclined portions, said edge pieces each having a recess, a shoe mounted on each edge of said slide bar and arranged to engage one of said inclined surfaces when said bar moves relatively to said casing, a spring mounted in each of said recesses and engaging the adjacent shoe to cause the

latter to exert pressure on the inclined portion of said slide bar, which pressure will increase as the slide bar moves away from its normal position.

5. In a shock absorber, an elongated casing having means to attach it to a part of a vehicle and comprising side plates and edge pieces secured to said side plates, said parts being arranged to form a guideway, a bar slidably mounted in said guideway and having those edges adjacent to said edge pieces cut away to provide oppositely inclined portions, said edge pieces each having a recess, a shoe mounted on each edge of said slide bar and arranged to engage one of said inclined surfaces when said bar moves relatively to said casing, a spring mounted in each of said recesses and engaging the adjacent shoe to cause the latter to exert pressure on th inclined portion of said slide bar, which pressure will increase as the slide bar moves away from its normal position, a disk mounted in each of said recesses and bearing upon the end of said spring, and screws mounted in said edge pieces and extending into the respective recesses to engage said disk and regulate the tension of said springs.

[Claims 6 and 7 not printed in the Gazette.]

1,153,532. METHOD OF FORMING ARTIFICIAL-LEG SOCKETS. JOHN T. APGAR, New York, N. Y. Filed Dec. 15, 1914. Serial No. 877,420. (Cl. 3—3.)



1. The method of forming the base-member of sockets for the stumps of amputated limbs, consisting in making a cast of the stump, of molding a form from said cast, of applying a layer of relatively thin perforated leather while wet, to form cast, of applying a layer of fabric to said layer of leather, of applying a layer of raw-hide while wet to said layer of fabric, and baking the mass until dry.

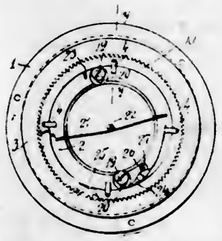
2. The method of producing the base-member of a socket for the stump of an amputated limb, consisting in first applying to the stump superpoed layers of fabric soaked in plaster-of-Paris and water to form a cast, then removing said cast when dry; then molding a form from said cast, then applying a layer of raw-hide while wet to said form, and finally baking the mass until dry.

3. An improved method of forming duplicates of the stumps of artificial limbs, which consists in applying to the stump of the limb layers of fabric to form a cast, and binding the layers together with a plastic material before said cast is removed from the stump.

1,153,533. CLOCK WINDING AND SETTING MECHANISM. SAUL ARONSON, New York, N. Y., assignor to Elmer E. Wilkinson, Brooklyn, N. Y. Filed Dec. 18, 1914. Serial No. 877,951. (Cl. 58—46.)

1. A time piece comprising in combination a base, a case member mounted both for rotary movement with respect to said base and for lateral movement with respect thereto, and a time movement within such case and comprising winding and hand setting mechanism, means operated by lateral movement of such case with reference to said base, for changing from winding action to hand setting action, or vice versa, and means operated by rotary motion of such case for operating the winding mechanism or the hand setting mechanism, alternatively, according to the position of the case with reference to said base.

2. A time piece comprising in combination a base, spring winding means, hand setting means and an operating member for said spring winding and hand setting devices, rotatable and also laterally movable with respect to said base, and means operated by its lateral movement for throwing the spring winding means out of operation and throwing the hand setting means into operation, or vice versa, according to the direction of such lateral movement.



3. A time piece comprising in combination a base, a case member mounted both for rotary movement with respect to said base and for lateral movement with respect thereto, and a time movement within such case and comprising winding and hand setting mechanism, means operated by lateral movement of such case with reference to said base, for changing from winding action to hand setting action, or vice versa, and means operated by rotary motion of such case for operating the winding mechanism or the hand setting mechanism, alternatively, according to the position of the case with reference to said base, and means tending to hold the case member normally in one of its two lateral positions.

4. A time piece comprising in combination a base, spring winding means, hand setting means, and an operating member for said spring winding and hand setting devices, rotatable and also laterally movable with respect to said base, and means operated by its lateral movement for throwing the spring winding means out of operation and throwing the hand setting means into operation, or vice versa, according to the direction of such lateral movement, and means tending to hold the operating member normally in one of its two lateral positions.

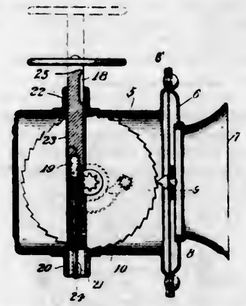
5. A time piece comprising in combination a base, a time movement comprising spring winding means, hand setting means, and a casing inclosing the movement and rotatable and also laterally movable with respect to said base, means operated by rotation of such casing for operating either the spring winding means or the hand setting means, alternatively, and means operated by lateral movement of the case with reference to said base for causing either the spring winding means or the hand setting means to be operated by rotation of said case, according to the direction of lateral movement of such case.

[Claims 6 to 17 not printed in the Gazette.]

1,153,534. AUTOMOBILE-HORN. MICHAEL A. AUFIERO, Brooklyn, N. Y. Filed Sept. 22, 1914. Serial No. 862,906. (Cl. 116—1.)

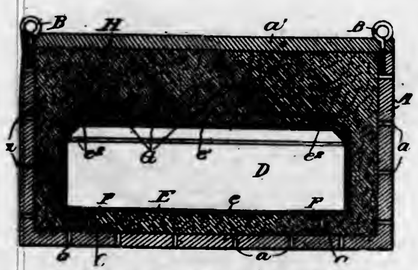
1. In a signal horn, the combination of a casing, a sounding diaphragm forming one end of said casing, a revolving diaphragm actuator rotatably supported in said casing, a pinion for driving said actuator, a one-way clutch connection between said pinion and said actuator, a rack for actuating said pinion, and means for supporting said rack in said casing comprising a guide-sleeve for said rack extending across said casing with its ends projecting beyond the walls of said casing and caps inclosing the ends of said sleeve connected to said casing.

2. In a signal horn, the combination of a casing, a sounding diaphragm forming one end of said casing, a revolving diaphragm actuator rotatably supported in said casing, a pinion for driving said actuator, a one-way clutch connection between said pinion and said actuator, a rack for actuating said pinion, means for supporting said rack in said casing comprising a guide-sleeve for said rack extending across said casing with its ends projecting beyond the walls of said casing, caps inclosing the ends of said sleeve connected to said casing, said rack having one end projecting through one of said caps and provided with a recess in its opposite end, an actuating head on the projected end of said rack, a spring set in said recess in the opposite end of said rack and working against the adjacent cap, and a guide-rod set in said cap and projecting into said recess.



3. In a signal horn, the combination of a casing, a sounding diaphragm forming one end of said casing, a revolving diaphragm actuator rotatably supported in said casing, a pinion for driving said actuator, a one-way clutch connection between said pinion and said actuator, a rack for actuating said pinion, means for supporting said rack in said casing comprising a guide-sleeve for said rack extending across said casing with its ends projecting beyond the walls of said casing, caps inclosing the ends of said sleeve connected to said casing, said rack projecting through the cap at one end of the sleeve and provided with a recess in its projecting portion on the same face thereof as its teeth, whereby oil delivered to the recess will be guided by the sleeve down the rack to lubricate the working parts.

1,153,535. BURIAL-VAULT. GEORGE G. BABICH, New York, N. Y. Filed July 25, 1914. Serial No. 853,182. (Cl. 72—7.)



1. A burial vault comprising an outer casing constituting a mold for forming an inner casing of plastic material to envelop a casket, and a cross-shaped sheet of reinforcing material adapted to be embedded in the plastic material and having its body portion arranged to support a casket, the extending portions of said sheet being bent upwardly at the sides and ends of the casket to project above said casket when the latter is put in place, and to be turned down over the top of the casket for forming a plurality of over-lapping layers of said reinforcing material above said casket before the plastic material is poured into the outer casing.

2. A burial vault comprising an outer casing constituting a mold for forming an inner casing of plastic material to envelop a casket, inner reinforcing means fitted snugly to the top, sides and ends of the casket and comprising a plurality of inverted U-shaped stout wires passed longitudinally and transversely over the top of the casket and down the sides and ends thereof, and outer reinforcing means entirely enveloping the casket.

1,153,536. MOTOR-VEHICLE. WILLIAM BARBER, Brooklyn, N. Y. Filed Aug. 8, 1913. Serial No. 783,744. (Cl. 21—90.)



1. In a motor vehicle, in combination, a frame, normal gage steering wheels, a traction axle mounted on the frame, closely adjacent narrow gage traction wheels rigidly mounted on said axle adapted to rotate in unison, a motor, power transmitting mechanism connecting said motor with said axle, and means associated with the upper part of said frame adapted to permit a trailer to be removably secured thereto and limit the horizontal traverse of the vehicle with respect to the trailer.

2. In a motor vehicle, in combination, normal gage front steering wheels, a single piece traction axle supported at its ends, narrow gage traction wheels fast on said axle to rotate in unison therewith, a drive gear mounted on the axle between the narrow gage traction wheels and independently connected to rotate with said axle, a motor and mechanism forming an actuating connection between the motor and said drive gear.

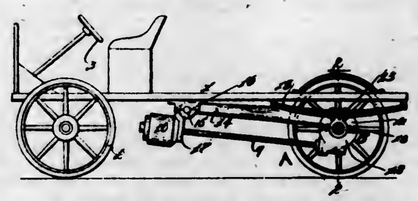
3. In a motor vehicle, in combination, normal gage front steering wheels, a single piece traction axle supported at its ends, narrow gage traction wheels mounted on said axle to rotate in unison therewith, a motor, a gear wheel secured to the traction axle between said wheels, and a power transmitting mechanism between said gear wheel and motor.

4. In a motor vehicle, in combination, normal gage front steering wheels, a single piece traction axle supported at its ends, narrow gage traction wheels fast on said axle to rotate in unison therewith, a motor, a gear for rotating the traction axle, said gear secured to said axle between and independently of the traction wheels, a change speed and reversing gear mechanism for the motor, and power transmitting mechanism between said change speed and reversing gear and the gear for rotating the traction axle.

5. In a motor vehicle, in combination, normal gage front steering wheels, a single piece traction axle supported at its ends, narrow gage traction wheels fast on said axle to rotate in unison therewith, a motor, means secured to the axle and located between the two traction wheels to rotate said axle, mechanism forming an actuating connection between said means and the motor, a housing, and bearings for the axle carried by the housing.

[Claims 6 to 8 not printed in the Gazette.]

1,153,537. MOTOR-VEHICLE. WILLIAM BARBER, Brooklyn, N. Y. Filed July 18, 1914. Serial No. 851,685. (Cl. 21—90.)



1. In a motor vehicle, a body, front steering wheels carried thereby, rear traction wheels, also carried by said

body, an axle therefor, a housing for said axle operating mechanism within said housing for rotating said axle, an arm secured to said housing and extending toward the front end of the body, a pivotal support for the front end of said arm carried by said body said arm having a depending part at its front end, a motor carried by the depending part of said arm, and a shaft connecting said motor and said rear axle driving mechanism.

2. A rear axle assembly for motor vehicles, consisting of a housing, a one-piece rear axle carried thereby, said axle being shorter than the transverse width of the vehicle body, a worm gear carried by said axle, a worm to rotate said gear, wheel hubs secured to said axle, the inner end of each hub extending into the adjacent outer ends of said housing, wheels secured to said hubs, antifriction bearings for said axle within said housing, springs carried by said housing and located in line with said bearings, and means to rotate said worm.

3. In a motor vehicle, a body, front steering and rear traction wheels therefor, an axle of shorter length than the transverse width of the body, and upon the ends of which said traction wheels are mounted whereby said traction wheels are brought into close relationship to each other, a single drive gear directly mounted on the axle between said traction wheels, a housing for said axle and drive gear, and means extending into said housing to actuate said drive gear.

4. In a motor vehicle, a body, front steering and rear traction wheels therefor, an axle of shorter length than the transverse width of the body and upon the ends of which said traction wheels are mounted, whereby said traction wheels are brought into close relationship to each other, a single drive gear directly mounted on the axle between said traction wheels, means engaging said drive gear to rotate said axle, and body supporting springs carried by said axle.

5. In a motor vehicle, a body, front steering and rear traction wheels therefor, an axle of shorter length than the transverse width of the body and upon the ends of which said traction wheels are mounted, whereby said traction wheels are brought into close relationship to each other, a single drive gear directly mounted on said axle between said traction wheels, a housing for said axle and drive gear, means extending into the housing to actuate said drive gear, and springs carried by said housing for supporting the vehicle body.

[Claims 6 to 9 not printed in the Gazette.]

1,153,538. TRACTION-MACHINE. WILLIAM BARBER, Brooklyn, N. Y. Filed Feb. 9, 1915. Serial No. 7,133. (Cl. 21—90.)



1. The combination with a tractor, of a trailer detachably connected thereto, brake mechanism for the trailer and means to apply the brake mechanism coincidently with the detachment of the trailer from the tractor.

2. In a traction machine, a tractor, a trailer, detachable connection between the tractor and trailer, a brake mechanism for the trailer, means to automatically detach the trailer from the tractor, said means operating to apply said brake mechanism.

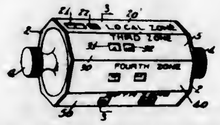
3. In a traction machine, a tractor having a pin or stud, a trailer having a member at the front end thereof to detachably engage said pin or stud, supporting wheels for the rear end of the trailer, a brake mechanism for said wheels, and a supporting leg hinged to the front end of the trailer and connected to said brake mechanism.

4. In a traction machine, a tractor, a trailer detachably connected thereto, supporting wheels for the rear end of the trailer, supporting legs hinged to the front end of the trailer, and connections between said legs and brake mechanism to apply the brake mechanism when said legs are rocked into supporting position.

5. In a traction machine, a tractor, a trailer detachably connected thereto, supporting wheels for the rear end of the trailer, supporting legs hinged to the front end of the trailer and connected to the brake mechanism to apply the latter when said legs are moved into supporting relation with respect to said trailer, said legs also operating, when moved into supporting relation to the trailer, to detach the trailer from the tractor.

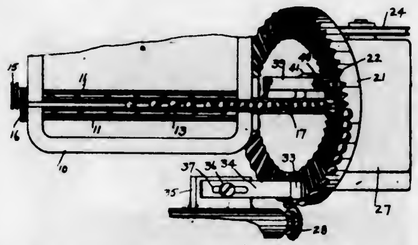
[Claims 6 and 7 not printed in the Gazette.]

1,153,539. PARCEL-POST-RATE INDICATOR. BALTZAR E. BOLLING, Chicago, Ill., assignor to J. K. Stewart Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 16, 1914. Serial No. 861,927. (Cl. 235—87.)



A computing device comprising an exterior casing which is polygonal in cross section; an interior member mounted axially for rotation in such casing, and exterior means for rotating it, the interior member having upon its rotating surface characters arranged in circumferential columns and longitudinal lines of which a plurality of characters in the same longitudinal line are to be consulted simultaneously, the exterior casing having in each of its sides longitudinally alined side apertures for disclosing said characters as said interior element is rotated.

1,153,540. SCREW-SLOTTING MACHINE. TSUNAUSKI Z. CARPENTER, Providence, R. I., assignor to Federal Screw Corporation, Providence, R. I., a Corporation of Rhode Island. Filed Dec. 14, 1912. Serial No. 736,691. (Cl. 10—6.)



1. In a screw slotting machine, a cutter, an inclined guideway, a carrier wheel having a face set at substantially a right angle to the inclination of said guideway, and means in said face for receiving the screw blank direct from said guideway and retaining it in a radial position to be conveyed to said cutter by the rotation of said wheel.

2. In a screw slotting machine, a cutter, an inclined guideway, a carrier wheel having one of its side faces set at substantially a right angle to the inclination of said guideway, a series of radial notches in said face adapted to receive the screw blank direct from the guideway and means for rotating said wheel to present said blanks progressively to said cutter.

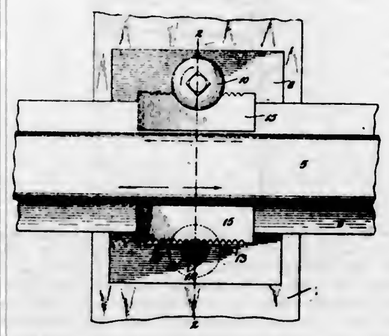
3. In a screw slotting machine, a saw, an inclined guideway, a carrier wheel having the axis on which it is rotated set on substantially the same inclination as that of said guideway, said wheel having radial notches in its face for receiving the screw blank by gravity direct from the guideway, means for rotating said wheel to present said blanks progressively to said saw, the axis of the latter being parallel with that of the carrier, and means for retaining said blanks in said notches while being slotted.

4. A screw slotting machine comprising a guideway for feeding the screw blanks, a carrier wheel having blank receiving notches in its face and an escapement mechanism actuated by the movement of said carrier for controlling the deposit of said blanks in said notches.

5. A screw slotting machine comprising a guideway for feeding the screw blanks, a carrier wheel having notches on its face for receiving said blanks from said guideway, and a feed controlling means actuated by the notches in said wheel as the latter rotates.

[Claims 6 to 10 not printed in the Gazette.]

1,153,541. DEVICE FOR PREVENTING CREEPING OF RAILS. AUGUST J. DINKLAGE, East Orange, N. J. Filed Feb 27, 1915. Serial No. 10,919. (Cl. 238—4.)



1. The combination of a rail having a base, a screw spike adapted to secure said rail in position and means interposed between said spike and rail base whereby said spike is rotated and tightened by the creeping action of the rail and said creeping is checked.

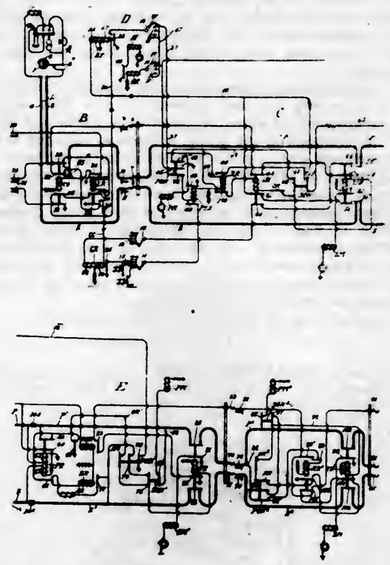
2. The combination of a rail having a base, a screw spike adapted to secure said rail in position, a head on said spike, and means adapted to be wedged beneath said head and to rotate and tighten said spike by the creeping action of the rail whereby said creeping is checked.

3. The combination of a rail having a base, a screw spike adapted to secure said rail in position, a head on said spike, a wedge located between said head and the rail base and a connection between said screw spike and the wedge whereby the latter is jammed beneath said head and the spike is rotated to jam said head upon said wedge by the creeping action of the rail and said creeping is checked.

4. The combination of a rail having a base, a wedge resting upon said base, a member depending from the outer edge of said wedge and engaging the edge of said base, a screw spike adapted to secure said rail in position, a head on said spike adapted to bear on said wedge and coöperating teeth on said depending wedge member and said spike whereby the wedge is jammed beneath said head and the spike is rotated to jam said head against said wedge by the creeping action of the rail and said creeping is checked.

5. An anti-creeping device for railroad rails comprising a wedge provided with teeth and a screw spike provided with teeth arranged to mesh with the teeth of said wedge, said wedge and spike being operated one by the other to check a creeping movement of the rail.

1,153,542. AUTOMATIC TELEPHONE SYSTEM. ALFRED H. DYSON, New York, N. Y., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 9, 1912. Serial No. 719,309. (Cl. 179—18.)



1. A telephone system comprising a group of lines, line selectors for said lines, a master switch for said selectors, a differential starting relay for said master switch, means for closing an energizing circuit through one of its windings upon initiation of a call, whereby an idle line selector is started, a primary relay, and means for including a winding of said primary relay in circuit with the other winding of said differential relay during the selecting operation of said selector to neutralize said differential relay.

2. A telephone system comprising a group of telephone lines, line selectors, said lines being divided into sub-groups and multipled to corresponding sub-groups of contacts of said selectors, a master switch, a differential starting relay for said master switch, a differential group relay for each sub-group of lines, means effective upon initiation of a call over one of said lines to close a circuit through one of the windings of said starting relay and a winding of the corresponding group relay, means for starting an idle one of said line selectors responsive to said starting relay, a double wound primary relay, means for connecting one of the windings thereof in circuit with the other winding of the said group relay upon selection made with the sub-group of the calling line whereby said group relay is de-energized to render said sub-group nonselectable and means for closing the other primary winding in circuit with the other winding of the starting relay to render said starting relay ineffective.

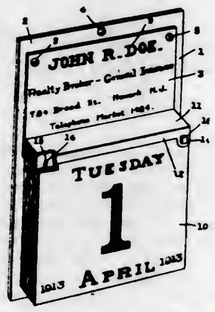
3. A selector switch including bank contacts divided into groups, a coöperating wiper, a primary magnet, a secondary magnet, suitable circuits adapted to cause the operation of said primary magnet to select a group, suitable circuits to cause said secondary magnet to select a contact in the group, suitable circuits adapted to cause said secondary magnet to advance the wiper beyond the last contact of the selected group whereby said wiper is automatically restored, and means for automatically interrupting the release operation of said secondary magnet upon said wiper being advanced beyond said group.

4. A selector switch comprising groups of bank contacts and a coöperating wiper, primary and secondary magnets with suitable circuit arrangements for causing said magnet to advance the wiper to a group and then to a contact in a group, means when a release is desired to cause said secondary magnet to advance the wipers beyond the last contact of the selected group whereby said wipers automatically restore, and an over-run contact included in the release circuit for rendering said secondary magnet inert upon said wiper being advanced beyond said last contact.

5. A telephone system comprising telephone lines, a line selector having terminal contacts for said lines arranged in groups and adapted for selecting a group and then a set of terminals in the group, a common or group contact for each said group, means responsive to the initiation of a call in one of said lines for altering the electrical condition of its group contact to cause selection of its group, means operative upon selection of said group contact to render it unselectable, a directively operable selective switch connected to said line selector, and means responsive to the transmission of impulses over the two sides of the calling line in series for operating said last switch to extend the circuit of the calling line.

[Claims 6 to 13 not printed in the Gazette.]

1,153,543. DAILY-DATE SIGN. JAMES FRANCIS EDDY, Lansdowne, Pa. Filed Mar. 17, 1913. Serial No. 754,676. (Cl. 40—121.)

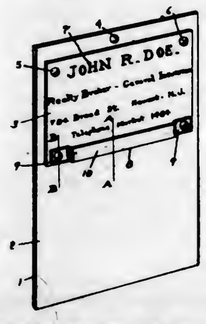


1. The hereindescribed pad for daily date signs, comprising in combination a plurality of leaves, a cap consisting of a piece of sheet material bent longitudinally into channel form with its intermediate portion lying upon the top edges of said leaves and its opposite parallel side flanges lying one in front of and the other behind the upper part of said leaves, the rear flange of the cap having a tongue depending therefrom substantially in the plane of the flange adapted to be exposed for entering a supporting slot by flexing the leaves, and cross-pins extending through said cap flanges and leaves adjacent the opposite ends thereof connecting said flanges and supporting said leaves.

2. The hereindescribed pad for daily date signs, comprising in combination a plurality of leaves, a cap consisting of a piece of sheet material bent longitudinally into channel form with its intermediate portion lying upon the top edges of said leaves and its opposite parallel side flanges lying one in front of and the other behind the upper part of said leaves, the rear flange of the cap having a tongue depending therefrom substantially in the plane of the flange adapted to be exposed for entering a supporting slot by flexing the leaves and having an edge portion adjacent said tongue adapted to engage the wall of the slot as a stop, and cross-pins extending through said cap flanges and leaves adjacent the opposite ends thereof connecting said flanges and supporting said leaves.

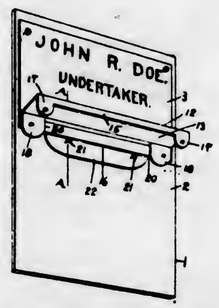
3. The hereindescribed pad for daily date signs, comprising in combination a plurality of leaves, a cap consisting of a piece of sheet material bent longitudinally into channel form with its intermediate portion lying upon the top edges of said leaves and its opposite parallel side flanges lying one in front of and the other behind the upper part of said leaves, said cap extending substantially the entire length of the top edges of the leaves and having a tongue depending from the free edge of its rear flange adapted to be exposed for entering a supporting slot by flexing the leaves and having adjacent said tongue edge portions of said rear flange adapted to seat on the wall of the slot, and cross-pins extending through said cap flanges and leaves between the ends thereof and said seat portions of the rear flange connecting said flanges and supporting said leaves.

1,153,544. DAILY-DATE SIGN. JAMES FRANCIS EDDY, Lansdowne, Pa. Filed July 16, 1913. Serial No. 779,254. (Cl. 40—121.)



In a daily date sign support, the combination with a back or mount, of a hanger strip having at its opposite ends feet secured flatwise to said back or mount and having its middle portion offset away from said back or mount substantially parallel thereto so as to provide transverse portions between said feet and offset portion, whereby the support is adapted to receive a pad having a cap with a rear flange providing adjacent its ends lower edge portions adapted to rest upon said transverse portions of said hanger strip and having intermediate said end edge portions a tongue adapted to hook between the offset portion of the hanger strip and the back or mount.

1,153,545. DAILY-DATE SIGN. JAMES FRANCIS EDDY, Lansdowne, Pa. Filed Oct. 17, 1913. Serial No. 795,624. (Cl. 40—121.)



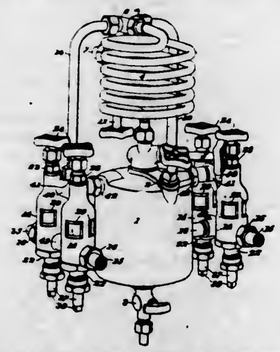
1. The hereindescribed pad for daily date signs, comprising in combination with a plurality of leaves, a cap having opposite parallel flanges one in front of said leaves and the other behind them and an intermediate portion at the top edges of said leaves holding said flanges in spaced relation, said flanges including pairs of opposite ears at the ends of the cap and the rear flange including

a depending tongue between the ears and separated therefrom, said tongue being adapted to hook over a strip or the like while said ears lie against its front, and cross-pins extending one through the opposite ears of each pair and the leaves of the pad so as to connect the cap flanges and support the leaves while leaving the tongue free to be exposed for entering a supporting slot by flexing the leaves.

2. The hereindescribed pad for daily date signs, comprising in combination with a plurality of leaves, a cap having opposite parallel flanges one in front of said leaves and the other behind them and an intermediate portion at the top edges of said leaves holding said flanges in spaced relation, cross-pins extending through said cap flanges and leaves adjacent the opposite ends thereof connecting said flanges and supporting said leaves, the rear flange of the cap including a depending tongue intermediate said cross-pins substantially in the plane of the flange and adapted to be exposed for entering a supporting slot by flexing the leaves, and resilient spurs on said tongue normally projecting inward toward said leaves and upward toward the body of the cap and adapted to project beneath a wall of said supporting slot when the tongue is inserted therein and prevent inadvertent escape of said tongue therefrom.

3. The hereindescribed pad for daily date signs, comprising in combination with a plurality of leaves, a cap having opposite parallel flanges one in front of said leaves and the other behind them and an intermediate portion at the top edges of said leaves holding said flanges in spaced relation, the rear flange including ears depending from its lower edge adjacent its opposite ends, cross-pins extending through said ears and front flange and leaves for connecting said flange and ears and supporting said leaves, the rear flange also including a tongue depending from its lower edge between said ears separate therefrom and depending further than said ears, said tongue being substantially in the plane of the flange and adapted to be exposed for entering a supporting slot by flexing the leaves and ears, and resilient spurs near the free edge of said tongue normally projecting inward toward the leaves and upward toward the body of the cap and adapted to project beneath a wall of said supporting slot when the tongue is inserted therein.

1,153,546. SIGHT-FEED LUBRICATOR. FRANK W. EDWARDS, Chicago, Ill., assignor to The Chicago Lubricator Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 16, 1915. Serial No. 21,729. (Cl. 184—96.)



1. A sight feed lubricator, having a one-piece sight feed pocket provided with a packing-receiving shoulder at its upper portion, and adapted to contain a tubular observation glass, and a pressure applying and glass supporting device arranged in the bottom of the pocket and engaging the observation glass adjustably.

2. A sight feed lubricator, having twin sight feed pockets made in a single piece, and adapted to contain tubular observation glasses, and provided in their bottoms with adjustable glass-supporting cups.

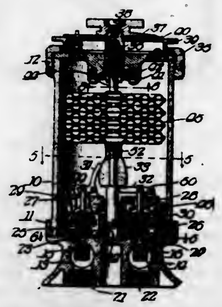
3. A sight feed lubricator, having a one-piece bottle-shaped pocket or body provided with windows, and having a glass-receiving cavity and a glass supporting and tightening means arranged in the bottom of the pocket.

4. A sight feed lubricator, having a one-piece sight feed pocket provided with an oil inlet at its upper end, a down-drop feed tip, an observation glass, an adjustable glass support, windows to expose the glass, a bottom oil outlet, and a steam connection communicating with such outlet.

5. In a sight feed lubricator, the combination with the oil-bowl, and steam supply, of a series of one-piece sight feed pockets, and a steam connection for connecting the pockets with the steam supply and fastening them to the oil-bowl.

[Claims 6 to 13 not printed in the Gazette.]

1,153,547. THERMOSTATIC WATER-VALVE. JAMES J. FINNEY, Chicago, Ill., assignor of three-fourths to Roscoe L. Roberts, Chicago, Ill. Filed Feb. 28, 1913. Serial No. 751,205. (Cl. 236—6.)



1. In a thermostatic water device, a mixture chamber provided with inlets for hot and cold water and an outlet for a mixture of the same, a valve in each inlet, a lever provided with connections for the simultaneous opening and closing of said valves, additional valves in each inlet between the first named valves and the mixing chamber, a thermostatic device within the chamber, and connections from the thermostatic device to the last named valves for moving them simultaneously in opposite directions.

2. In a thermostatic valve, a base having inlets for hot and cold water, a valve in each inlet, a hand lever having connections to both valves for simultaneously opening and closing them, a mixing chamber having inlets connecting to the inlets in the base, a valve in each of the chamber inlets, a thermostatic device in the chamber, and connections from the thermostatic device to the last named valves for moving them.

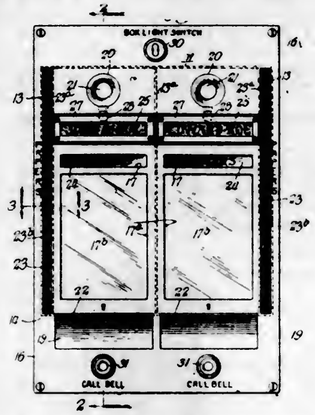
3. In a thermostatic valve, a mixing chamber having inlets for hot and cold water and an outlet nozzle at one side thereof, valves for opening and closing said inlets, thermostatic means for regulating the flow of the water through said inlets, and a handle provided with connections extending around said nozzle to said valves for moving them.

4. In a thermostatic valve, a mixing chamber provided with inlet openings for hot and cold water, a thermostatic device for regulating the flow of water through said openings, and means by which water entering said chamber through said inlets is given a circular movement around said thermostatic device.

1,153,548. LETTER-BOX. ADOLPH W. GAST, Chicago, Ill. Filed Nov. 23, 1912. Serial No. 733,064. (Cl. 232—19.)

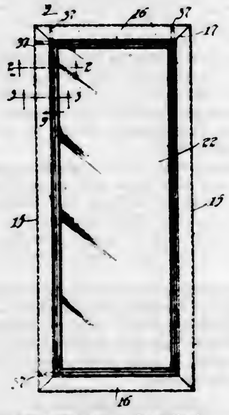
A letter box comprising vertically adjacent compartments, a plate forming the front wall of said compartments, said plate being provided with vertically alined name plate openings, letter-drop openings and window openings, there being an alined set of said openings asso-

ciated with each compartment, transparent plates covering said window openings, said name plate openings each having a plate receiving seat, translucent plate adapted to rest on each of said seats with its front face flush with the face of the front wall plate, an open frame removably securing each of said name plates to said front wall plate, each name plate being provided on its rear face with a



contrasting imprint of the name, a bracket plate, fixed to the back face of the front wall plate, there being one of such bracket plates located in each compartment above the name plate opening, an electric lamp supported in each bracket and adapted to illuminate the interior of each of said compartments and also the rear face of each name plate and a switch in circuit with said lamps fixed to the front wall plate and operable from the outside of said box for controlling said lamps.

1,153,549. METAL DOOR. EDWIN GUSTAFSON, Chicago, Ill., asignor to The Paltridge Metal Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 25, 1914. Serial No. 834,464. (Cl. 189—46.)



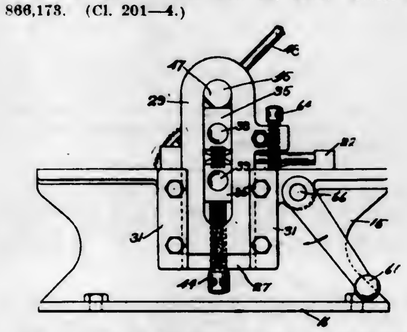
1. A device of the character described comprising a hollow, rectangular frame; a panel for inclusion therein; molding strips overlying said panel carrying lugs; longitudinally movable locking strips provided with coacting locking members within said frame; and screws taking through the edge walls of the frame and engaging said strips to longitudinally move them into locking position to hold the molding and panel in place.

2. A device of the character described comprising a hollow, rectangular frame, provided with slots in its inner edge; a panel for inclusion within said frame; molding strips overlying said panel; longitudinally adjustable lugs within said molding strips; longitudinally movable strips provided with slots coacting and registering with slots within said frame; and screws taking through the outer edge walls of the frame and engaging said strips to move them into locking engagement with the said lugs and out of register with the slots in said frame.

3. A device of the character described comprising a hollow, rectangular frame, provided with a substantially continuous opening in its confronting walls and having transverse slots in its walls near said opening; longitudinally movable strips substantially aid opening having registering slots in its walls; a molding frame provided with tongues projecting through said openings and means movable from the outside of said frame to move the strips to engage said tongues and lock the molding frame.

4. In a device of the character described, the combination of a hollow, rectangular frame providing a shoulder for seating a molding by deflecting part of its inner wall inwardly, and having slots through the walls of the shoulder parts; a molding seated on said shoulder; a strip having slots registering with the slots in aid houlder; a clip longitudinally adjustab.e within said molding having locking lugs for projection through said slots when the latter are in register and a screw passing through the outer edge wall of the frame and engaging said strip to move the latter longitudinally to lock the molding in the frame.

1,153,550. ENGRAVING-MACHINE. GEORGE HAMILTON, Providence, R. I. Filed Oct. 10, 1914. Serial No. 866,173. (Cl. 201—4.)



1. An engraving machine comprising a pair of engraving rolls, a support independent of both rolls for that surface of the work being acted upon by the engraving portion of said rolls, means including the rolls for passing the work and support between said rolls, and means for controlling the position of the support.

2. An engraving machine comprising a pair of rolls having their working faces adapted to receive and act upon the work to be engraved, a supporting arbor for the work, means whereby said rolls may be operated to pass the work and arbor between them, and means for supporting the arbor.

3. In a machine for engraving tubes, a pair of engraving rolls having a working face adapted to receive the work to be engraved, a supporting arbor on which the tubular work may be positioned, and means whereby said rolls may be operated to pass the tube and arbor between them.

4. In an engraving machine, a pair of grooved rolls, one of said rolls being provided with an engraving surface, an arbor for supporting the work while being operated upon, means whereby said rolls may be operated to pass the work and support between them, and means for controlling the axial rotation of the work while being passed between said rolls.

5. In an engraving machine, a pair of grooved rolls, one of which is provided with an engraving surface, an arbor

for supporting the work while being operated upon, means whereby said rolls may be operated to pass the work and support between them, means for securing the work to the arbor, and means on the arbor for guiding the work through the rolls.

[Claims 6 to 8 not printed in the Gazette.]

1,153,551. DUST-GUARD FOR CAR JOURNAL-BOXES. HENRY L. HASKELL, Ludington, Mich. Filed Jan. 8, 1913. Serial No. 740,833. (Cl. 64—22.)



1. A dust guard comprising four segmental guard members having radial tongue and groove joints, the tongues being on the top and bottom members and the grooves in the side members; joint pins arranged in countersunk holes in the top and bottom guard members to engage the said members, said pins being arranged at right angles to the planes of the joints; a wedge shaped closure member; longitudinally slotted blade springs mounted on the top guard member; pins on said closure member engaging said slots; and straps connecting the ends of said closure member to said guard member.

2. A dust guard comprising segmental guard members having radial tongue and groove joints; joint pins connecting adjacent members, said joint pins being arranged at right angles to the planes of the joints, at least one of each pair joined being in sliding engagement with the pin; springs arranged on said pins; a closure member; longitudinally slotted springs mounted on one of said guard members; pins on said closure member engaging said slot; and straps connecting the ends of said closure member with the said guard member.

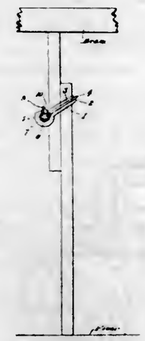
3. A dust guard comprising four segmental guard members having radial interlocking tongue and groove joints, the tongues being on the top and bottom members and the grooves in the side members, said guard members being provided with gasket grooves in their inner edges; headed pins arranged in countersunk holes in the top and bottom guard members to engage the side members, said pins being arranged at right angles to the planes of the joints; springs arranged on said pins to engage the heads thereof; and a sectional gasket arranged in the grooves of said guard members, the gasket sections being provided with beveled joints.

4. A dust guard comprising four substantially equal complementary segmental members having radially disposed interlocking tongue and groove joints, the tongues being on one opposed pair of members and the grooves on the other opposed pair, said members being grooved on their inner edges to provide a gasket seat, pins arranged at right angles to the planes of the joints in counter sunk holes in the tongued guard members to extend through the tongues and driven into the bottoms of the grooves of the other pair of guard members, said members being supported against relative movement longitudinally of the joints by said joint pins, springs arranged on said pins in said countersinks, and a gasket sectioned to correspond to the guard members, the sections being provided with beveled lapping joints arranged so that the gasket joints do not coincide with but are near the guard member joints whereby the guard member joints are lapped by the gasket sections.

5. A dust guard comprising four substantially equal complementary segmental members having radially disposed interlocking tongue and groove joints, the tongues being on one opposed pair of members and the grooves on the other opposed pair, pins arranged at right angles to the planes of the joints in counter sunk holes in the tongued guard members to extend through the tongues and driven into the bottoms of the grooves of the other pair of guard members, said members being supported against relative movement longitudinally of the joints by said joint pins, and springs arranged on said pins in said counter sinks.

[Claims 6 to 8 not printed in the Gazette.]

1,153,552. CLAMP. WILLIAM J. HUNKIN, Cleveland, Ohio, assignor to The Hunkin-Conkey Construction Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 20, 1913. Serial No. 808,021. (Cl. 72—79.)



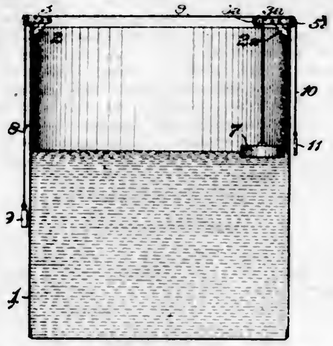
In a clamp of the class described, the combination with a U-shaped bracket, the free ends of the arms thereof being enlarged and provided with bearings, said enlarged portions of the arms also being provided with upwardly and rearwardly inclined slots communicating with the bearings and terminating in the upper edges of the arms, and a transversely extending biting tooth formed on and extending the full length of the inner face of the face of said bracket; of a cam member consisting of a body portion of substantially triangular design in cross section and of a length to fit between the arms of the U-shaped bracket, one face thereof being serrated for its full length, trunnions, projecting laterally from the ends of said cam member to operate loosely in the aforesaid bearings and removable from the bracket through said slots and head portions formed on the ends of the trunnions to guide the latter in the slots of the bracket arms and prevent lateral movement of the cam in the bearings.

1,153,553. TANK-INDICATOR. FRANCIS W. JOHNSTONE, Fort Smith, Ark. Filed Jan. 18, 1915. Serial No. 2,816. (Cl. 73—82.)

1. The combination, with a liquid storage tank or reservoir, of a float therein, a counterweight and a cord directly connecting said float and counterweight, guide pulleys for said cord mounted on the wall of the tank, a level indicator outside the tank, a second cord directly connecting said indicator and counterweight, and guide pulleys for said second cord also mounted on the wall of the tank.

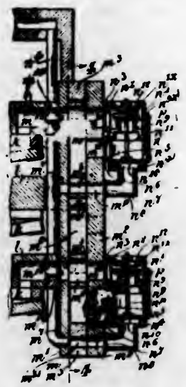
2. The combination, with a liquid storage tank or reservoir, of a float therein, a counterweight external of the tank, a pair of pulleys mounted on the wall of the tank at diametrically opposite points, a cord passing over said pulleys and connected to said float and counterweight, a

level indicator external of the tank on the opposite side from the counterweight, a second pair of pulleys mounted adjacent to said first pair, and an independent cord pass-



ing over said second pair of pulleys and connected to said indicator and counterweight.

1,153,554. PNEUMATIC PIANO-PLAYER ACTION. WALTER A. KRUCK, New York, N. Y. Filed July 24, 1914. Serial No. 852,827. (Cl. 84—178.)



1. A valve-board for pneumatic player actions comprising a front wall, a back wall and spacing strips, said walls being provided with ports for communication with the controlling valves and the player-pneumatics, and sleeves interposed between the front and back walls and forming with such ports conduits through the valve-board.

2. A valve-board for pneumatic player actions comprising a front wall, a back wall and spacing strips, said walls being provided with ports for communication with the tracker-board, the controlling valves and the player-pneumatics, and sleeves interposed between the front and back walls and forming with such ports conduits through the valve-board.

3. The combination with a tracker-board comprising a front wall, a back wall and spacing strips, said walls being provided with ports, connections from certain said ports to the tracker-board, connections from certain of other of said ports to the player-pneumatics, controlling valves communicating with still other of said ports, and sleeves interposed between the front and back walls and forming with some of such ports conduits through the tracker-board for establishing communication between the tracker-board, the controlling valves and the player-pneumatics.

4. The combination of a valve-board having ports for communication with the tracker-board and with the player-pneumatics, a player-pneumatic supporting-board having conduits to establish communication between the valve-board and the player-pneumatics, sleeves interposed between the valve-board and the supporting-board and forming parts of said conduits and also serving as spacing blocks to space the supporting-boards from the valve-board, and connections to the tracker-board lying in the space thus formed between the valve-board and the supporting-board.

1,153,555. AZO DYESTUFFS. HERBERT LEVINSTEIN and JAMES BADDILEY, Manchester, England, assignors to Company of Levinstein Limited, Manchester, England. Filed Jan. 20, 1915. Serial No. 3,389. (Cl. 8—1.)

1. Azo dyestuffs obtainable by combining an aminobenzoylarylenediamin of the homologous series of which aminobenzoylphenylenediamin is the lowest member, at least one molecular proportion of resorcin and a further molecular proportion of an azo dye component of the aromatic series, which dyestuffs are in the form of their sodium salts, dark red to brown powders, soluble in water with usually a reddish color and yielding as reduction products an aminobenzoylarylenediamin, at least one molecular proportion of aminoresorcin and a further molecular proportion of the amino derivative of the additional component used; dyeing cotton generally in yellow to red shades which become exceedingly fast to washing when after treated with formaldehyde.

2. An azo dye, obtainable by combining metaaminobenzoylparaphenylenediamin with two molecular proportions of resorcin, dyeing cotton bright orange which on treatment with formaldehyde becomes redder and very fast to boiling soap and cross-dyeing.

1,153,556. FRICTION LOCKING DEVICE. CHARLES A. LINDSTROM, Pittsburgh, Pa. Filed Mar. 6, 1913. Serial No. 752,529. (Cl. 37—116.)



1. A friction locking device, comprising a rotatable member to be locked, having cam projections, an external member having an internal friction surface, an internal member having segmental projections, and expansible friction members seated between the segmental projections and the said friction surface, and each of said friction members having a lever-forming end portion extending beyond one of the segmental projections and engaged by one of said cam projections, substantially as described.

2. A friction locking device, comprising a rotatable member to be locked, having cam projections, an external member having an internal friction surface, an internal member having segmental projections, expansible friction members seated between the segmental projections and the said friction surface, each of said friction members having a lever-forming end portion extending beyond one of the segmental projections and engaged by one of said cam projections, and also being abutted against the adjacent end of the other projection, substantially as described.

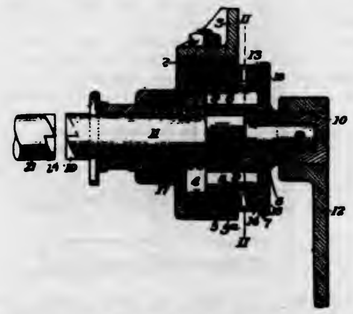
3. The combination of a member to be held against rotation in one direction, an external member having a friction surface, elastic segmental friction elements which coact with said surface and having abutted end portions with beveled engaging surfaces, and engaged with the member to be locked by means of projections which act upon the ends of the friction members, an internal member engaged with the friction elements to effect a relatively free rotation thereof, and means whereby the external member may be held either against rotation or may be permitted to rotate with the member to be locked, substantially as described.

4. The combination of a member to be locked against rotation in one direction and which has cam projections, an external member within which the first named member may rotate and which has a friction surface, means whereby the external member may be held against rotation or may be permitted to rotate, an internal member, expansible friction elements between the two members having abutted end portions whereby the said friction members interact one upon the other and engaged with the said cam projections, and also with the internal member, and means whereby the internal member may be rotated within the external member, substantially as described.

5. The combination of a member to be locked against rotation in one direction and which has cam projections, an external member within which the first named member may rotate and which has a friction surface, means whereby the external member may be either held against rotation or may be permitted to rotate, an internal member, friction elements between the two members, said elements having abutted end portions with wedging contacting surfaces and engaged at their end portions with the said cam projections and also with the internal member, and means whereby the internal member may be rotated within the external member, together with locking means for the internal member, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,153,557. CLUTCH DEVICE FOR PREVENTING REVERSE ROTATION. CHARLES A. LINDSTROM, Pittsburg, Pa. Original application filed Mar. 6, 1913, Serial No. 752,529. Divided and this application filed Sept. 16, 1913. Serial No. 789,995. (Cl. 74—13.)



1. A clutch device, comprising a relatively fixed external member formed with a friction surface on its inner periphery, an internal member mounted to rotate freely in one direction within the external member and also to move longitudinally with respect thereto, radially expansible friction elements interposed between the two members to coöperate with said internal friction surface, and an endwise movable shaft to which the internal member is secured and which has means for expanding the friction elements when rotated in one direction, substantially as described.

2. A friction device, comprising a relatively fixed external member, an internal member mounted to rotate freely within said external member in one direction, and also to move longitudinally thereof, radially expansible friction devices locking the members together upon reverse rotation of the internal member, means for rotating the internal member in the free direction, and means for expanding the friction devices to prevent reverse rotation, substantially as described.

3. A friction-locking device, comprising two members arranged for relative rotation and also for relative longitudinal movement, and radially expansible friction members interposed between the two first named members and actuated by rotary movement of one of said members in one direction to lock the two members against relative rotation in that direction, said friction members being idle upon reverse relative rotation of the two members, together with spring means interposed between the two members, substantially as described.

4. A friction locking device, comprising a relatively fixed external member having an internal peripheral friction surface, an internal member, interposed friction elements between said surface and the internal member, the internal member and the friction elements being freely rotatable in one direction with respect to the external member, and means for actuating the friction elements to expand them outwardly against said internal friction surface to prevent reverse rotation of the internal member, the internal member being also capable of longitudinal movement with respect to the external member, substantially as described.

5. A device of the character described, comprising an endwise movable shaft having a clutch at one end portion and rotating means at the opposite end portion, a relatively fixed member having a friction surface, expansible friction members, movable endwise with the shaft, means for causing said friction members to rotate freely with the shaft in one direction, and means on the shaft for expanding said members outwardly against said friction surface when the shaft is rotated in the reverse direction, substantially as described.

1,153,558. CONVERTIBLE STEP-LADDER AND IRONING-BOARD. JAMES W. MATHENY, Mobile, Ala. Filed Dec. 7, 1914. Serial No. 875,913. (Cl. 228—32.)

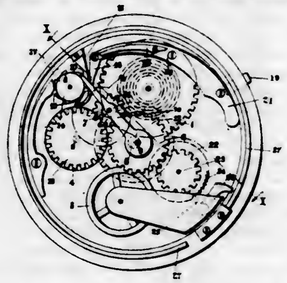


A convertible step-ladder and ironing-table, comprising a ladder platform, a fixed leg frame connected to said platform and carrying a set of steps adapted to fold between the legs thereof to form a table top, a main pivoted leg frame connected to the platform, a pair of rigid braces having a pivotal connection with the fixed leg frame and a movable connection with the main pivoted leg frame whereby said pivoted leg frame is adapted to form a folding step-ladder support and also to from one pair of a set of table legs, a supplemental leg frame pivotally connected with the under side of the platform and adapted to be swung backwardly into engagement with the platform to form a second pair of table legs, said supplemental leg frame being adapted to lie between the main leg frame, means being provided for locking the supplemental leg frame to the main leg frame.

1,153,559. WATCH. HUGO MELOCCO, Budapest, Austria-Hungary. Filed Mar. 2, 1911. Serial No. 611,854. (Cl. 58—130.)

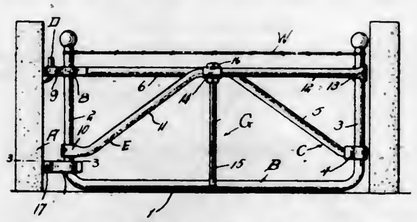
1. Improved time beating mechanism comprising the combination of a watch driving mechanism, a plurality of pivoted arms each carrying a gear wheel, a plurality of wheels each having a different number of teeth mounted on a single shaft of the watch mechanism and each wheel being adapted to gear with a wheel on one of the pivoted arms, means for selecting and bringing one pair of wheels into gear so that a predetermined and variable speed is obtained and means for audibly beating the selected periodicity.

2. Improved time beating mechanism comprising the combination of a watch driving mechanism, a plurality of pivoted arms each carrying a gear wheel, a plurality of wheels each having a different number of teeth mounted on a single shaft of the watch mechanism and each wheel



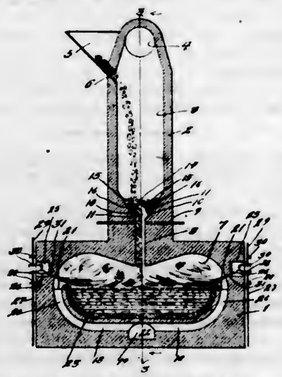
being adapted to gear with a wheel on one of the pivoted arms, means for selecting and bringing one pair of wheels into gear so that a predetermined and variable speed is obtained, a visual indicator showing the selected periodicity and means for audibly indicating such periodicity.

1,153,560. GATE. CALVIN MILLER, Bluffton, Ohio. Filed Mar. 15, 1915. Serial No. 14,492. (Cl. 39—8.)



A gate comprising a substantially U-shaped section constituting the horizontal bottom bar and the end bars of the gate, two members connected at their ends to the end bars of the gate and constituting diagonal brace sections and top bar sections for the gate, a connection between the top bar sections, a brace member extending between said connection and the bottom bar section of the gate, and hinge members for the gate.

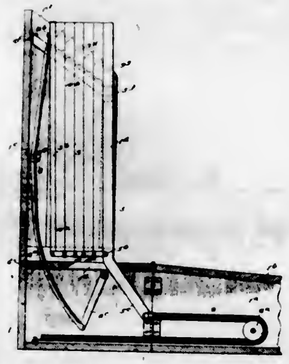
1,153,561. OIL-BURNING SMELTING-FURNACE. OLIVER P. MOORE, Spokane, Wash. Filed May 21, 1915. Serial No. 29,502. (Cl. 75—84.)



1. In a furnace, a refining chamber in communication at the top with a pre-heating chamber; burners at opposite sides of the refining chamber adjacent the top to throw flames over the surface of the bath; flues leading from the side of the refining chamber from points just below the burners and connecting with a discharge flue underneath the floor of such chamber, the relation between the flues and the openings being such as to provide a partial upwardly draft into the pre-heating chamber; and a discharge extending transversely of the furnace and under the floor of the refining chamber for removing the waste gases.

2. In a furnace, a refining chamber having at the top an opening of communication with a pre-heating chamber; burners at opposite sides of the refining chamber adjacent the top thereof to throw flames toward each other and over the surface of the bath; a discharge chamber substantially centrally below the floor of the refining chamber and extending transversely thereof, and having a discharge opening at one side of the furnace; a plurality of flues leading from each side of the refining chamber from a point just below the burners and curving downwardly, inwardly and beneath the floor of the refining chamber, and toward the opposite flues, and communicating with the discharge chamber; the relation between the flues, the discharge chamber and its discharge opening and the opening of communication being such as to provide a partial upward draft into the preheating chamber, said flues constituting means to carry off the waste gases through the discharge chamber and its opening.

1,153,562. FILING APPLIANCE. EMERSON B. MOSELEY, Alliance, Ohio, assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Jan. 13, 1910. Serial No. 537,965. (Cl. 45—2.)



1. In a filing appliance, the combination of a support, a series of leaves arranged to swing from a vertical position to a horizontal position, and vice versa, and relative to each other, a follower pivotally mounted upon said support and comprising a frame and a backing plate provided with a hook member arranged to receive and support the front end leaf of the series of leaves, and means carried by the upper end of the backing plate for securing the upper edge of the front leaf of the series of leaves, the backing plate and frame together.

2. In a filing appliance, the combination of a support, a series of leaves arranged to move relative to said support and to each other, a follower pivotally mounted upon said support and comprising a frame and a backing plate hinged at its lower edge to the frame, means carried by the said plate for supporting the lower end of the front leaf of the series of leaves, and separate means for locking free edges of the plate, the frame, and the front leaf of the series of leaves together.

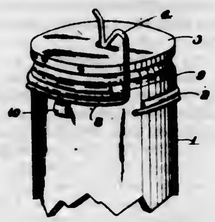
3. In a filing appliance, the combination of a support, a series of leaves pivotally mounted relatively to said support and to each other, and operating means, one for each leaf and connected thereto, swingable on axes coincident with the axes of the said leaves for operating one or more of the leaves.

4. In a filing appliance, the combination of a support, a series of leaves pivotally mounted relatively to said support and to each other, operating means detachably connected with the leaves for operating one or more of said leaves, and means for simultaneously detaching the said operating means from the leaves.

5. In a filing appliance, the combination of a support, a series of leaves pivotally mounted relatively to said support and to each other, and operating means comprising a series of rods, means for hingedly connecting the rods together at their lower ends on axes coincident with the axes of the leaves, and means for detachably connecting the said rods at or near their upper ends to the leaves.

[Claims 6 to 26 not printed in the Gazette.]

1,153,563. JAR-CLOSURE OR THE LIKE. JOHN CHRISTOPHER NICHOL, Perth, Ontario, Canada. Filed Feb. 26, 1915. Serial No. 10,742. (Cl. 215—91.)



1. A jar closure comprising in combination a jar having a peripheral flange extending circumferentially and spirally there-around, a cover fitting said jar top and having a center depression and a clamp having a ring portion extending around said jar below said flange and extending upwardly and diametrically across said jar cover to form a cross bar crimped downwardly intermediate of the length thereof to form a teat bearing upon the center depression of said cover, and abutting means coacting with the upwardly extending portion of the clamp adapted to limit the movement of the clamp.

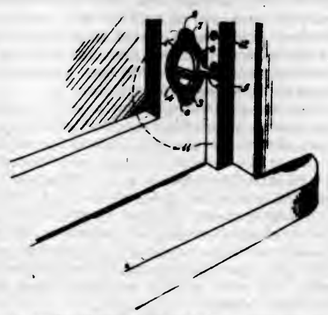
2. A jar closure comprising in combination a jar having a peripheral flange extending there-around with a reinforcing block formed at the upper end thereof, a cover and a spring clamp threaded about said jar below said peripheral flange, and coacting with the said reinforcing block securing said cover in position.

3. A jar closure comprising in combination a jar having a peripheral flange extending spirally there-around and a reinforcing block formed at the upper end of said flange, and a guide boss paralleling said flange therebeneath, a cover and a spring clamp threaded about said jar between said peripheral flange and said guide boss and securing said cover in position.

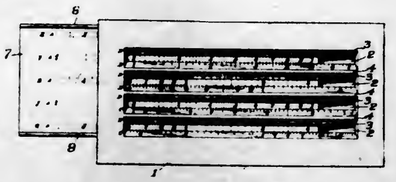
1,153,564. COMBINED WINDOW-SASH HOLDER AND LOCK. JOHN CHRISTOPHER NICHOL, Perth, Ontario, Canada. Filed Feb. 26, 1915. Serial No. 10,743. (Cl. 16—120.)

1. The combination with a window sash and frame thereof, of a plurality of stud screws secured to said frame at intervals throughout the height thereof and a plate of substantially oval shape, and pivotally secured at one end thereof to said sash and having a latch finger projecting outwardly therefrom at each side, one of said latch fingers and the corresponding side of said plate being heavier than the remaining finger and side.

2. In a device of the class described a plate substantially oval ring shape and having a lug formed at each end with an orifice therethrough and a latch finger projecting upwardly from one side and substantially triangular in cross section and a latch finger projecting upwardly from the opposite side and heavier than the aforesaid finger and substantially semi-circular in cross section.



1,153,565. COMPUTING DEVICE. HENRY OBERG, Bridgeport, Conn. Filed Sept. 25, 1914. Serial No. 863,509. (Cl. 235—70.)



1. A computing device having one flat member with logarithmic scales split up in a series of progressive parallel lines thereon and another flat member also having logarithmic scales split up in a series of progressive parallel lines thereon and movable longitudinally and adjustable transversely of the other member, the two members being in substantially the same plane so as to be viewed simultaneously and also coactively arranged as against relative transverse movement while being relatively adjusted longitudinally.

2. A computing device, comprising a flat body member having parallel elongated sight openings in substantially the same plane and whose margins provide scale lines that have logarithmic scales split into progressive lines, there being three scales two of which are of equal length while the third scale is equal in length to the other two, said third scale having four sections while the other two scales each have two sections, the four sections of the third scale alternating with the two sections of the other scales, and another flat member adjustable within said body member and having logarithmic scales also split into a series of progressive lines and simultaneously readable through said openings.

3. A computing device consisting of an elongated and substantially flat body member provided with a lateral spaced series of longitudinal sight openings having logarithmic scales split up in a series of progressive lines at the margins thereof, and a substantially flat slide movable longitudinally through the body member and visible through the sight openings, said slide being also adjustable transversely of the body member and provided with logarithmic scales split up in a series of progressive lines and disposed in a plurality of parallel lines exceeding in number the number of sight openings in the series thereof in the body member and less than the whole number of parallel lines of scales in view at any one time through the sight openings.

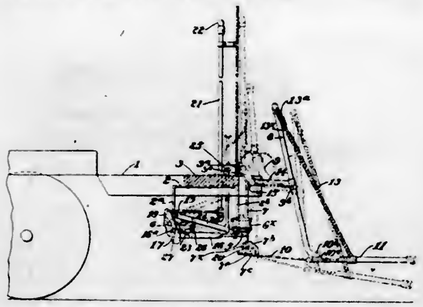
4. A computing device comprising a body member having thereon a plurality of laterally disposed associated logarithmic scales split up in a series of progressive lines, and a slide also having thereon a plurality of laterally dis-

posed logarithmic scales split into a series of progressive lines and movable longitudinally and adjustable transversely of the body member, said slide and body members being coactively arranged to hold the slide against transverse movement while being moved longitudinally and to prevent a plurality of the same scales on the slide in operative relation to the scales of the body member in different transverse adjustments of the slide.

5. A computing device comprising a body member having a longitudinal channel therethrough with sight openings at the surface of the body member communicating with the channel, said channel being open at the ends and provided with laterally displaced sets of marginally located and substantially identical guide means, and a slide provided with guiding means adapted to any set of guiding means in the channel of the body member, the guiding means so constructed as to permit the slide to be moved in the same direction through the channel in any set of guide means, the body member and slide being provided with coöperating scales.

[Claims 6 to 12 not printed in the Gazette.]

1,153,566. FENDER FOR MOTOR-CARS. GEORGE A. PARMENTER, Cambridge, Mass. Filed July 16, 1914. Serial No. 851,337. (Cl. 105—252.)



1. A fender or guard comprising substantially upright bars adapted for attachment to the front of a motor vehicle, a substantially upright fender frame, upper and lower sets of links, each link pivotally connecting respectively with an upright bar and with said fender frame, the upper links comprising curved springs, and a pick up frame forming a rigid extension of said lower links.

2. A fender of the class described comprising a pair of substantially upright members, a fender frame, upper and lower sets of links, each link pivotally connecting respectively with the fender frame and one of said upright members, and means interposed between the upright members and lower links for limiting the downward movement of the latter.

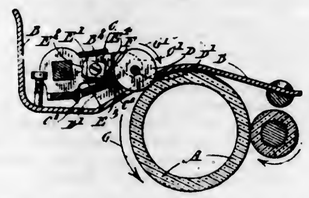
3. A fender of the class described comprising a pair of substantially upright members, a fender frame, upper and lower sets of links, each link pivotally connecting respectively with the fender frame and one of said upright members, and adjustable means interposed between the upright members and lower links for limiting the downward movement of the latter.

4. In a fender of the class described, a pair of supporting bars, a pair of fender supporting members pivotally connected to said bars and having portions extending in rear thereof, and adjustable stops carried by the bars and contacting with said rearwardly extending portions.

5. An apparatus of the class described comprising a pair of substantially upright members, a substantially upright fender frame, upper and lower sets of links, each link pivotally connecting respectively to an upright member and said fender frame, said upper links comprising leaf springs, a pick up frame projecting forwardly from said lower links, and lug and latchet mechanism coöperating with said fender frame to prevent rebound after compression of the leaf springs.

[Claims 6 to 11 not printed in the Gazette.]

1,153,567. FEED-ROLLER OF TYPE-WRITERS. ERIC JULIUS PILBLAD and ARTHUR TOMLINSON, Leicester, England, assignors to Imperial Typewriter Company, Limited, Leicester, England. Filed July 31, 1914. Serial No. 854,276. (Cl. 197—138.)



1. In a typewriter the combination of, a platen, an auxiliary feed-roller bearing thereon, a movable brake-member having a wedging surface bearing on the auxiliary feed-roller in such position that it is drawn in by rotation of the roller in one direction, and wedges it against further rotation, and a yielding control maintaining the wedging surface in contact with the auxiliary feed-roller, substantially as set forth.

2. In a typewriter the combination of, a platen, an auxiliary feed-roller bearing thereon, a pivoted brake-member having a wedging surface bearing on the auxiliary feed-roller in such position as to be thrust away therefrom by rotation in one direction and drawn in to hold the roller by movement in the other direction, and a yielding control maintaining the wedging surface in contact with the auxiliary feed-roller, substantially as set forth.

3. In a typewriter the combination of, a platen, an auxiliary feed-roller bearing thereon, a strut pivoted about an axis parallel with the axis of the auxiliary feed-roller and having a wedging face lying against the said roller in such position that it is drawn in by rotation of the roller in one direction and holds it against further rotation, and a yielding control maintaining the wedging surface in contact with the auxiliary feed-roller, substantially as set forth.

4. In a typewriter the combination of, a platen, an auxiliary feed-roller bearing thereon, a strut pivoted about an axis parallel to the said roller and having a serrated wedging face lying against the roller, the pivotal axis being so disposed that the wedging surface is maintained in position by the weight of the strut, and the strut being of such length that it cannot swing down freely between the auxiliary feed-roller and its own pivot, but is sufficiently short to be drawn down by the said roller on reverse rotation to firmly wedge the roller, substantially as set forth.

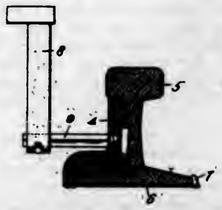
5. In a typewriter the combination of, a platen, a main feed-roller, an auxiliary feed-roller on the delivery side of the main feed-roller, a movable brake member having a wedging surface bearing on the auxiliary feed-roller in such position that it is drawn in by rotation of the roller in one direction and wedges it against further rotation, and a yielding control maintaining the wedging surface in contact with the auxiliary feed-roller, substantially as set forth.

1,153,568. PORTABLE TRACK TRIP DEVICE. CHARLES F. PEEL, New York, N. Y. Filed July 16, 1913. Serial No. 779,319. (Cl. 246—59.)

1. A portable track trip device comprising a body portion having a longitudinal surface formed to engage the under side of the head of the rail and closely engage therewith, a clamp extending around to the other side of the rail for holding said body in position, and a projecting arm for operating a trip member carried by the train.

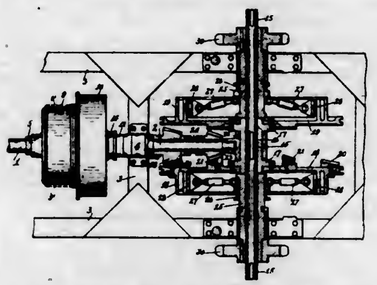
2. A portable track trip device comprising a body portion having a longitudinal surface formed to closely engage a corresponding portion of the surface at one side of the rail, a spring clamp rigidly attached to said body and extending around to the other side of the rail for holding the body in position, and a projecting arm for operating a trip member carried by the train.

3. A portable track trip device comprising a body portion having longitudinal surfaces formed to engage the under side of the head and the top of the flange of the rail, a clamp adapted to extend beneath the rail for holding said body in position, and a projecting arm extending into the path of a trip member carried on the train.



4. A portable track trip device comprising a body or block having a longitudinal surface formed to engage the top of the flange of the rail, a spring clamp extending under the bottom of the rail and having a hooked end engaging the edge of the flange, and a projecting arm adapted to actuate a trip member carried by the train.

1,153,569. CHANGEABLE-SPEED-TRANSMISSION MECHANISM. GOMER W. PRICE, Oakland, Cal., assignor to Henry L. Smith, San Rafael, Cal. Filed Dec. 29, 1914. Serial No. 879,568. (Cl. 74—59.)



1. In changeable-speed transmission-mechanisms, the combination of a shaft; a pinion rotatably mounted on the shaft; means for throwing said pinion into and out of rotating connection with the said shaft; a cross shaft; a gear fixed thereto and co-acting with the pinion on the first named shaft; a clutch drum fixed to said cross-shaft adjacent to the gear thereon; a sleeve rotatable on the cross-shaft and carrying a power transmitting member; and a controllable clutch spider carried by said sleeve and adapted to engage and to relieve the clutch drum.

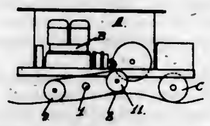
2. In changeable-speed transmission-mechanisms, the combination of a shaft; a pinion rotatably mounted on the shaft; means for throwing said pinion into and out of rotating connection with the said shaft; a cross shaft; a gear fixed thereto and co-acting with the pinion on the first named shaft; a sleeve rotatable on the cross shaft and carrying at one end thereof a power transmitting member; and a controllable friction clutch to throw said sleeve into and out of rotating connection with the cross shaft, one member of said clutch being carried by the gear upon said cross shaft, and the other member being fixed to said sleeve.

3. In changeable-speed transmission-mechanisms, the combination of a shaft; a cross-shaft; a clutch-drum carried by said cross-shaft, said drum carrying a gear; a hub rotatable on the cross-shaft and carrying a power transmitting member; a controllable clutch-spider carried by said hub and adapted to engage and to release the clutch-drum; and a pinion on the first named shaft meshing with the gear on the clutch-drum.

4. In changeable-speed transmission-mechanisms, the combination of a shaft; a cross-shaft; a pair of opposing clutch-drums carried by said cross-shaft, one only of said drums carrying gears of different diameters; a pair of independent hubs rotatable on the cross-shaft, each hub carrying a power transmitting member; independently controllable clutch-spiders, one carried by each hub and adapted to engage and release the clutch-drums independently; independent pinions freely revoluble on the first named shaft, said pinions meshing with the gears on the clutch-drum; and means for severally and selectively making said pinions fast on their shaft.

5. In changeable-speed transmission-mechanism, the combination of a shaft; a rotatable cross-shaft; means for rotating said cross-shaft from the first named shaft; a hub independently rotatable on the cross shaft and carrying a power-transmitting member; and means for throwing said hub into and out of rotating connection with the cross-shaft.

1,153,570. OSCILLATING SELF-LAYING TRACK FOR TRACTION-ENGINES. GOMER W. PRICE, Oakland, Cal., assignor to Henry L. Smith, San Rafael, Cal. Filed Dec. 29, 1914. Serial No. 879,569. (Cl. 21—114.)



1. In a traction engine having a power-plant, the combination of a main axle; independent tread-frames, one on each side of the machine, each of said tread-frames being composed of a lower part and an upper part rigidly connected thereto; a bearing carried by the lower part of each tread-frame, said bearings being journaled on the main axle, one near each end thereof, adapting said tread-frames to independently oscillate about said axle; a sprocket carried at each end of each tread-frame; an endless tread-carrying chain carried by the sprockets of each tread-frame; a series of peripherally tongued and grooved carrying wheels journaled in the lower part of each tread-frame and rolling on the tread-chain; and means for transmitting motion from the power-plant of the traction engine to the tread-chains.

2. In a traction engine having a power-plant, the combination of a main axle; independent tread-frames, one on each side of the machine, each of said tread-frames being composed of a lower part and an upper part rigidly connected thereto; a bearing carried by the lower part of each tread-frame, said bearings being journaled on the main axle, one near each end thereof, adapting said tread-frames to independently oscillate about said axle; braces secured to each tread-frame, one forward of and another rearward of the axis of oscillation; collars journaled on the main axle, one collar being fixed to the inner ends of the braces of each tread-frame; an idler-sprocket carried at the forward end of each tread-frame; a driving-sprocket carried upon a journaled shaft at the rearward end of each tread-frame; means applied to each sprocket for varying its distance from the axis of oscillation of the tread-frames; a bearing on the inner end of each of said driving-sprocket shafts; longitudinally adjustable struts from said bearings to the said collars on the main axle; an endless tread-carrying chain carried by the sprockets of each tread-frame; carrying wheels journaled in the lower part of each tread frame and rolling on the tread-chains; and means for transmitting motion from the power-plant of the traction engine to the driving sprockets.

3. In a traction-engine having a power-plant, the combination of a main-axle; independent tread-frames pivotally mounted upon and adapted to oscillate about said axle, one near each end thereof; a sprocket carried in each end of each tread-frame; an endless tread-carrying chain carried by the sprockets of each tread-frame; means applied to the sprockets for varying their distance from the axis of

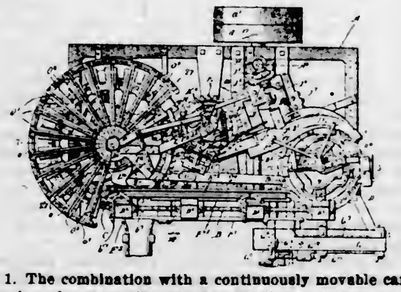
oscillation of the tread-frames; a series of peripherally tongued and grooved carrying and guiding wheels mounted in the tread-frames and rolling on the upper surface of the lower run of the tread-chains; power transmitting devices in the axis of oscillation of the tread-frames; means for transmitting motion from the power-plant of the traction engine to said devices; and means for transmitting motion from said devices to one of the sprockets of each tread-chain to drive said chains.

4. In a traction-engine having a power-plant, the combination of a main axle; independent tread-frames, one on each side of the machine, each of said tread-frames being composed of a lower part and an upper part, the two rigidly connected; a bearing carried by the lower part of each tread-frame, said bearings being journaled on the main-axle, one near each end thereof, adapting said tread-frames to independently oscillate about said axle; a sprocket carried at each end of each tread-frame; an endless tread-carrying chain carried by the sprockets of each tread-frame; carrying wheels mounted in the lower part of each tread-frame and rolling on the upper surface of the lower run of the tread-chain; idler pulleys carried by the upper part of the tread-frames to support the upper run of the tread-chains; power transmitting devices in the axis of oscillation of the tread-frames; means for transmitting motion from the power-plant of the traction engine to said devices; and means for transmitting motion from said devices to one of the sprockets of each tread-chain to drive said chains.

5. In a traction-engine having a power-plant, the combination of a main axle; independent tread-frames, one on each side of the machine, each of said tread-frames being composed of a lower part and an upper part, the two rigidly connected; a bearing carried by the lower part of each tread-frame, said bearings being journaled on the main-axle, one near each end thereof, adapting said tread-frames to independently oscillate about said axle; a sprocket carried at each end of each tread-frame; means applied to the sprockets for varying their distance from the axis of oscillation of the tread-frames; an endless tread-carrying chain carried by the sprockets of each tread-frame; carrying wheels mounted in the lower part of each tread-frame and rolling on the upper surface of the lower run of the tread-chain; idler pulleys carried by the upper part of the tread-frames to support the upper run of the tread-chains; power transmitting devices in the axis of oscillation of the tread-frames; means for transmitting motion from the power-plant of the traction engine to said devices; and means for transmitting motion from said devices to one of the sprockets of each tread-chain to drive said chains.

[Claims 6 to 8 not printed in the Gazette.]

1,153,571. CARTON-MACHINE. CHARLIE REDD, Chicago, Ill., assignor to Isaac Pieser and Charles G. Livingston, Chicago, Ill. Filed Apr. 25, 1911. Serial No. 623,289. (Cl. 93—6.)



1. The combination with a continuously movable carton carrier of a movable rear flap folder adapted to operate upon the cartons carried by different portions of said carton carrier and means for imparting to the operating portion of said folder, a compound movement having two components, one a movement at the same speed with and parallel to the movement of the cartons and the other a rotary movement with reference to the carrier, whereby said operative portion moves down and forward at a greater speed than the cartons to be operated upon.

2. The combination with a carton carrier adapted to move the cartons continuously while their rear flaps are being operated upon, a rear-flap-folder carrier, and means for moving said rear-flap-folder carrier during a portion of its movement parallel with the course of the carton, of a rear flap folder carried by said rear flap folder carrier and means for moving said rear flap folder with reference to its carrier to bring it into engagement with the rear flaps of the cartons carried by different parts of the carton carrier.

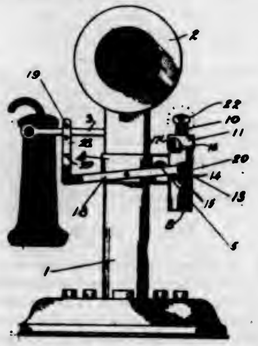
3. The combination with a carton carrier adapted to move the cartons continuously while their rear flaps are being operated upon, a rear-flap-folder carrier, and means for moving said rear flap folder during a portion of its movement parallel with the course of the cartons, of a rear flap folder carried by said rear flap folder carrier, and means for moving said rear flap folder with reference to its carrier and in a direction forward with respect to the movement of each carton carrier.

4. The combination with a carton carrier adapted to move the cartons continuously while their rear flaps are being operated upon, a rear-flap-folder carrier, and means for moving said rear flap folder carrier during a portion of its movement parallel with and in substantially the same speed as the movement of the cartons of a rear flap folder carried by said rear flap folder carrier, and means for moving said rear flap folder with reference to its carrier to bring it into engagement with the rear flaps of cartons carried by different portions of the carton carrier.

5. The combination with a carton carrier adapted to move the cartons continuously while their rear flaps are being operated upon, a rear flap folder carrier, and means for moving said rear flap folder carrier, during a portion of its movement, parallel with the cartons and at substantially the same speed therewith, of a rear flap folder carried by said rear flap folder carrier, and means for moving said rear flap folder forward with reference to its carrier to bring it into engagement with the rear flaps of the cartons carried by different portions of the carton carrier.

[Claims 6 to 92 not printed in the Gazette.]

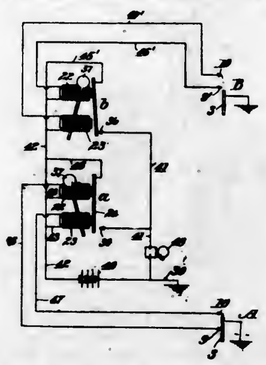
1,153,572. TELEPHONIC APPARATUS. WILLIAM ROHDE, Lincoln, Nebr. Filed Nov. 1, 1913. Serial No. 798,743. (Cl. 179—100.)



1. In combination with a telephone standard or a telephone case, a battery, a casing for the battery, a socket on the casing, a lamp in the socket, a sliding switch in the casing adapted to connect the battery and socket in circuit with each other, a clamp arranged to embrace the standard or case, and a lever mechanism pivotally connected to the clamp, adapted to actuate the switch when the telephone apparatus is put in and out of use.

2. In combination with a telephone set a battery, a casing for the battery, a socket on the casing, a lamp in the socket, a sliding switch in the casing adapted to connect the battery and socket in circuit with each other, a clamp arranged to embrace the set, means for securing the clamp and casing together, a lever mechanism pivoted to the clamp, a plurality of catches on the lever mechanism adapted to be slid on and off the receiver mechanism of the set and the switch, whereby the same may be or may not be connected to work in unison.

1,153,573. SUPERVISORY SYSTEM FOR SPRINKLER-VALVES. WILLIAM A. ROGERS and MCRAE PARKER, Washington, D. C., assignors to W. G. Cornell Company, New York, N. Y., a Corporation of New York. Filed Feb. 6, 1915. Serial No. 6,441. (Cl. 177—382.)



1. The combination with a valve, of electrically operated means for indicating whether the same is open or closed, and means for sounding an alarm when said valve occupies an intermediate position.

2. The combination with a plurality of valves, of electrically operated means for indicating at a central station whether each valve is open or closed, and means for sounding an alarm when any of said valves is moved to an intermediate position.

3. In a supervisory system for valves, the combination with a valve stem, of circuit controlling devices operated thereby, a relay having magnet windings governed by said circuit controlling devices, an alarm circuit controlled by said relay, and an indicating device associated with said relay independent of said alarm circuit and responsive to the presence or absence of current in the windings thereof.

4. In a supervisory system for valves, a relay, a valve, and means governed by said valve for maintaining said relay energized so long as said valve remains in either its open or closed position, and for causing the de-energization of said relay when said valve occupies an intermediate position, and an alarm controlled by said relay.

5. In a supervisory system for valves, an alarm, a circuit therefor, a relay serving when energized to maintain said circuit open a valve, and means governed by said valve for maintaining said relay energized so long as said valve remains in either its open or closed position, and for causing the deënergization of said relay when the valve occupies an intermediate position, and means operating, upon the deënergization of said relay, to close said alarm circuit.

[Claims 6 to 14 not printed in the Gazette.]

1,153,574. MOUTHPIECE FOR CIGARETTES. JOAQUIN ROVIRA, Mainz, and HERMANN AHRLE, Frankfort-on-the-Main, Germany; said Ahrle assignor to said Rovira. Filed Jan. 8, 1915. Serial No. 1,228. (Cl. 131—52.)

1. A mouth piece material for cigarettes consisting of a paper backing and a thin, uniform, continuous layer of cork flour coated thereon.

2. A mouth piece material for cigarettes consisting of a paper backing, a thin, continuous layer of water-proof adhesive coated on the backing, and a thin uniform continuous layer of cork flour coated on said adhesive.



3. A mouth piece material consisting of a paper backing, a thin, uniform, continuous layer of cork flour, and a thin layer of adhesive uniting said backing and said cork flour, said adhesive comprising approximately 100 parts of benzin, 3 to 6 parts of Pará-gum, and 10 parts of a varnish consisting of celluloid dissolved in amyl acetate and acetone.

4. A mouth piece material for cigarettes consisting of a thin, flexible backing and a thin, uniform continuous layer of cork flour coated thereon.

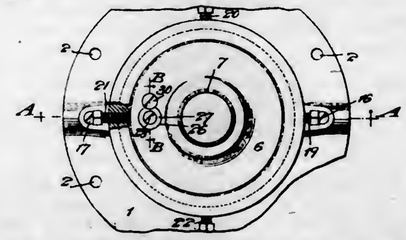
5. A mouth piece material for cigarettes consisting of a thin, flexible backing, a thin, continuous layer of water proof adhesive coated on the backing, and a thin, uniform, continuous layer of cork flour coated on said adhesive.

1,153,575. ELECTRIC-TOOL HANDLE. FRED A. ROWLEY, Sparta, Mich. Filed June 12, 1912. Serial No. 703,320. (Cl. 16—170.)



The herein described tool handle including a body portion having a longitudinal opening extending therethrough and provided at one end with a recess which communicates with the longitudinal opening and has longitudinal grooves in the side walls thereof, a screw extending through the longitudinal opening of the handle and having a head formed with a kerf and seated within the before mentioned recess at the end of the body portion, and a removable plug slidable within the recess, said plug being provided at its inner end with a transverse rib adapted to engage the kerf of the screw and being also formed at its sides with longitudinal ribs for engagement with the side grooves of the recess to lock the plug and screw against rotation.

1,153,576. CIRCULAR LOOM. VERNON ROYLE, Paterson, N. J. Filed Aug. 22, 1914. Serial No. 858,108. (Cl. 139—7.)



1. A weaving pin provided with an external screw thread, a weaving pin carrier embracing the weaving pin and provided with an internal screw-thread in position to engage the screw-thread on the weaving pin for projecting the weaving pin to a greater or lesser extent through the carrier, and means for locking the pin in the desired adjustment.

2. A tubular weaving pin provided with an external screw-thread, a weaving pin carrier adapted to embrace the weaving pin and provided with an internal screw-thread in position to engage the external screw-thread on the pin for projecting the weaving pin to a greater or lesser extent through the carrier, and means for locking the pin in the desired adjustment.

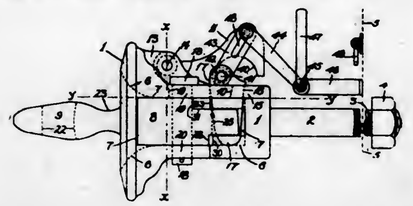
3. A weaving pin, a weaving pin carrier, an element in which the weaving pin carrier is supported and means for adjusting the weaving pin carrier laterally in said element in any desired direction for centering the weaving pin.

4. A weaving pin and its carrier, the carrier being provided with a screw-thread and the pin with a combined gear and thread constructed to register with the thread in the carrier, and a pinion for rotating the pin within the carrier to adjust the pin relative to the carrier.

5. A weaving pin, a weaving pin carrier, the weaving pin and carrier having inter-engaged screw-threads, the thread on the pin being provided with gear or rack teeth, a pinion in position to engage said gear or rack teeth and a stop in position to increase friction on the pinion to lock it and hence the weaving pin against unintentional rotary movement in the weaving pin carrier.

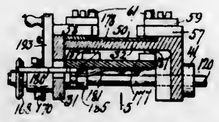
[Claims 6 to 10 not printed in the Gazette.]

1,153,577. RAILWAY-VEHICLE COUPLING. WILLIAM RUNDLE, Johannesburg, Transvaal, South Africa. Filed Sept. 17, 1910. Serial No. 582,538. (Cl. 213—54.)



In a coupling for railway vehicles, in combination, a coupler head, a coupling bar, an engaging member pivoted to the coupler head for engaging said coupling bar, a counterbalance weight which yieldingly maintains the bar in position, a pin for locking the engaging member when it is in engagement with the bar, and means for simultaneously disengaging the locking pin from the engaging member and the weight from the coupling bar, said means comprising a rod or spindle which engages in a curved recess formed in the underside of the counterweight and in a hole formed in the upper end of the locking pin, and a link loosely encircling the rod or spindle between the counterweight and locking pin.

1,153,578. CONSECUTIVE-VIEW APPARATUS. EBERHARD SCHNEIDER, New York, N. Y. Filed Mar. 20, 1909. Serial No. 484,618. (Cl. 88—18.)

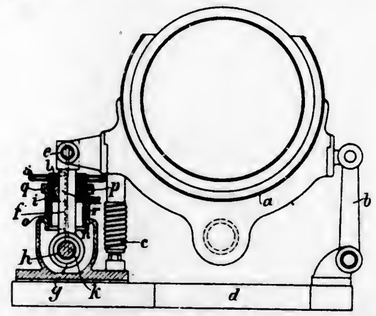


1. In a consecutive view apparatus the combination of a housing having an opening in the front wall thereof and a slot adjacent to said opening, a lens with its field in line with said opening and slot and means to intermittently move a film over the said opening and slot.

2. In a consecutive view apparatus the combination of a housing having an opening in the front wall thereof and slots at opposite sides of said opening, a lens with its field in line with said opening and slots and means to intermittently move a film over the said opening and slots.

3. In a consecutive view apparatus the combination of a housing, a guide plate for the front of the housing having an opening and slots at opposite sides thereof, a lens with its field in line with said opening and slots, and means to intermittently move a film over the opening and slots in said guide plate.

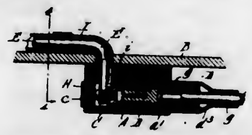
1,153,579. ROTARY KNOTTER WITH DEEPLY-IMMERSED SCREENING-DRUM FOR PAPER-MAKING. CHRISTIAN SEYBOLD and HANS DEHM, Düren, Germany. Filed July 8, 1913. Serial No. 777,814. (Cl. 92—36.)



1. In a rotary knotter of the class described, in combination, a screening drum, a trough, one of said members being capable of oscillating in a closed curve, pendulum supports supporting said oscillating member at one side thereof, spring supports supporting said oscillating member at the other side thereof, a shaft provided with an eccentric, a connecting rod operatively connected to said eccentric and to said oscillating member, and an adjustable bearing for said connecting rod positioned between the ends thereof, whereby the curve of oscillation of said oscillating member may be varied.

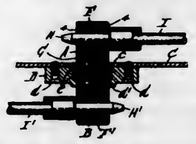
2. In a rotary knotter of the class described, in combination, a screening drum, a trough, one of said members being capable of oscillating in a closed curve, pendulum supports supporting said oscillating member at one side thereof, spring supports supporting said oscillating member at the other side thereof, a shaft provided with an eccentric, a connecting rod operatively connected to said eccentric and to said oscillating member, a threaded sleeve surrounding said connecting rod, a threaded bearing fitting in said sleeve and adjustable with respect thereto, and a bearing ball within said bearing and encircling said connecting rod, said ball being movable in the direction of the length of said rod and being held from rotating with respect thereto.

1,153,580. ELECTRICAL CONNECTOR. CHARLES L. SHEPPY, Buffalo, N. Y., assignor to The Pierce-Arrow Motor Car Company, Buffalo, N. Y. Filed Apr. 23, 1913. Serial No. 762,981. (Cl. 173—363.)



The combination of a block of insulating material having a hole extending longitudinally through the same and having a part adapted to be secured to a support, said block having a transverse hole terminating in said longitudinal hole and extending through said part of the block which is adapted to be secured to a support, a conductor projecting through said transverse hole, a stationary contact member of conducting material secured in said longitudinal hole and provided with means adjacent to one end of said longitudinal hole for making a connection with said conductor, a plug of insulating material for closing said end of the longitudinal hole, a cooperating movable contact member adapted to be inserted into the other end of the longitudinal hole to engage said stationary contact member, an insulating sleeve secured to said movable contact member, a boss on said block extending around said other end of the hole, and a cover tube engaging said boss and said sleeve to form a tight joint between said parts.

1,153,581. ELECTRICAL CONNECTOR. CHARLES L. SHEPPY, Buffalo, N. Y., assignor to The Pierce-Arrow Motor Car Company, Buffalo, N. Y. Filed Apr. 23, 1913. Serial No. 762,982. (Cl. 173—324.)



1. In an electrical connector, the combination with conductors, of two shells of insulating material having open ends facing each other, outwardly projecting flanges on said shells, securing means loosely embracing said flanges and permitting said shells to turn relatively to each other, said shells having holes for the insertion of said conductors, and an electrical connection in said shells between said conductors which connects said conductors in all positions of said shells.

2. In an electrical connector, the combination with conductors, of two shells of insulating material having open ends facing each other, outwardly projecting flanges on said shells, securing means loosely embracing said flanges and permitting said shells to turn relatively to each other, said shells having holes for the insertion of said conductors, and a spring in said shells connecting said conductors in all positions of said shells.

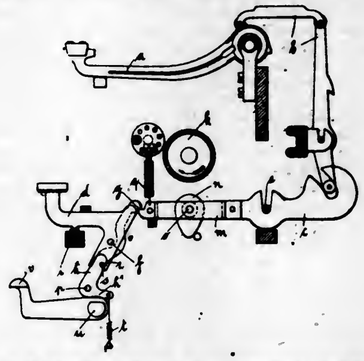
3. In an electrical connector, the combination with conductors, of two shells of insulating material having open ends facing each other, outwardly projecting flanges on said shells, securing means loosely embracing said flanges to permit the adjustment of one shell relatively to the other, said shells having holes for the insertion of said conductors, movable contact pieces in said shells adapted to be engaged by said conductors when inserted through said holes in the shells, and a spring in said shells which engages said contact pieces for pressing the same into engagement with the conductors and which forms an electrical connection between said contact pieces.

4. The combination of two shells of insulating material having open ends facing each other, a support having an opening for the passage of one of said shells, a securing plate attached to said support and having an opening for the pasage of said other shell, the open ends of said shells being secured between said securing plate and said support, said shells having holes for the insertion of conductors, contact pieces in said shells, and a spring in said shells for pressing said contact pieces against said conductors, substantially as set forth.

1,153,582. KEYBOARD-MACHINE. ADOLF STEINER, Berlin, Germany, assignor to Titania Schreibmaschinen Ges. M. B. H., Berlin, Germany, a Corporation of Germany. Filed July 30, 1914. Serial No. 854,119. (Cl. 197—17.)

1. In a key-board machine the combination of keys, operating devices controlled thereby, locking means controlled by said keys for locking said devices in the position of rest and further locking means for said devices coming into action when a key is struck.

2. In a key-board machine, the combination of keys, operating devices controlled thereby, a locking means controlled by said keys for locking said devices in the position of rest, a second locking device for each key, and means connected with the keys for holding the respective second locking device out of action as long as its locking means is in its locking position.



3. In a key-board machine the combination of keys, operating devices controlled thereby, two different locking means for the said devices capable of locking after the completion of a working stroke the one being controlled by the keys and being in action when the keys are released and out of action when the keys are depressed and the other being controlled by the keys so as to be in action when the keys are depressed and out of action when the keys are in the locking position.

4. In a key-board machine the combination of key levers, operating devices controlled thereby, a projection on each of said key levers locking the respective device in its position of rest when the key lever is released but being out of action when the key lever is operated, and pawls, each being connected with and controlled by one of the key levers so as to be in action and lock the respective device when the projections are disengaged and vice versa.

5. In a key-board machine the combination of pivotally mounted key levers, operating devices controlled thereby, a projection on each of said key levers locking the respective device in its position of rest when the key lever is released but being out of action when the key lever is operated, and pawls, each being connected with one of the key levers provided with locking parts, pivotally mounted and controlled by the respective key lever so as to be in action and lock the respective device when the projections are disengaged and vice versa, the pivot of each pawl being farther from its locking part than the pivot of the respective key lever from its projection.

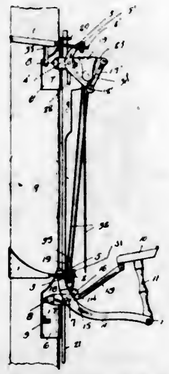
[Claims 6 to 11 not printed in the Gazette.]

1,153,583. STACK-CLIMBER. CHARLES STOOLFIRE, Myrtle Creek, Oreg. Filed Nov. 3, 1914. Serial No. 870,050. (Cl. 227—8.)

1. A stack-climber comprising two clutches, each including two levers connected between their ends by a cross rod, a scaffold carried by the lower levers, a pulley connected with their rod, a pole loosely mounted behind that rod and having a slot loosely engaging the upper rod, an arm near the upper end of said pole, connections between said arm and the outer end of said levers, a pulley carried by said arm, and a rope rove over said pulleys.

2. A stack-climber comprising two clutches whereof each includes a plate having brackets connected by a straight rod, a pair of levers pivoted between their ends on said rod, a band passing around the stack and connections between its ends and the inner ends of said levers; combined with a seat pivotally supported on the outer ends of the lower levers, a brace loosely connected with the seat and lower rod, a pulley carried by said brace, a pole extending loosely behind the lower rod and

upward to the upper rod and having a slot for the reception of said rod, above which it carries an outstanding rigid arm, a brace pivotally connecting said arm with the outer ends of the upper levers, an upper pulley carried by said arm, and a rope rove over said pulleys and hanging within reach of the seat.



3. A stack-climber comprising two clutches whereof each includes a plate having a cross rod, a pair of levers pivoted between their ends on said rod and a band passing around the stack and connected with the inner ends of said levers; combined with a seat supported on the outer ends of the lower levers, a brace connecting the seat and the lower rod, a pulley carried by said brace, foot rests on the lower plate, a pole passing loosely behind both rods, a guide for said pole carried by the upper plate, a bracket carried by the pole between the upper rod and guide, loose connections between said bracket and the outer ends of the upper levers, a pulley carried by said bracket, and a rope rove over said pulleys and hanging within reach of the seat.

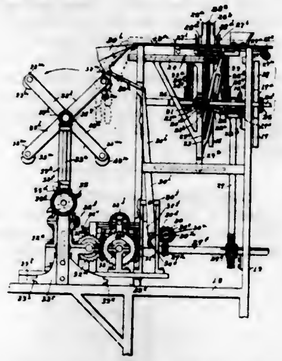
4. A stack-climber comprising two clutches whereof each includes a plate having brackets connected by a cross rod, a pair of levers pivoted between their ends on said rod, and a band passing around the stack and having its ends adjustably connected with the inner ends of said levers; combined with a seat pivotally supported on the outer ends of the lower levers, a brace loosely connecting the seat with the lower rod, a pulley carried by said brace, a pole passing loosely behind both rods and turned outward into an arm, flexible connections between said arm and the lower ends of the upper levers, an upper pulley carried by said arm, stops on the upper plate beneath its band, and a rope rove over said pulleys and hanging within reach of the seat.

1,153,584. SAUSAGE-LINKING MACHINE. RICHARD SWOBODA, Akron, Ohio. Filed Apr. 9, 1914. Serial No. 830,750. (Cl. 17—6.)

1. In a machine of the kind described, the combination of a sausage twisting mechanism, a stick-holder, means to shift the stick-holder laterally with respect to the plane of the movement of the sausages through the twisting mechanism, and means to deliver the sausages from the twisting mechanism to the stick, as the latter is shifted.

2. In a machine of the kind described, the combination of sausage twisting mechanism, a stick-holder, means to reciprocate said holder laterally with respect to the plane of movement of the sausages through the twisting mechanism, and means to deliver the sausages from said twisting mechanism to the stick during the movement of the latter.

3. In a machine of the kind described, the combination of sausage twisting mechanism, a stick holder, means to shift the stick holder laterally, with respect to the plane of the movement of the sausages through the twisting mechanism, and delivery means between said mechanism and the holder to loop the sausages upon and along the stick as the latter is shifted.

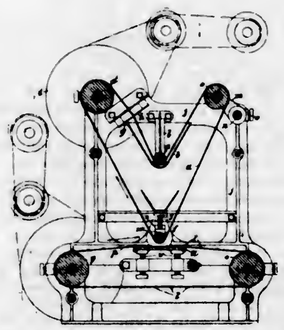


4. In a machine of the kind described, the combination of sausage twisting mechanism, a stick reel, means to shift the reel back and forth, means to turn the reel after each reciprocation to bring another stick into receiving position, and means to deliver sausages from the twisting mechanism to the sticks respectively, as the reel is shifted.

5. In a machine of the kind described, the combination of a sausage twisting mechanism, a multiple stick reel, a laterally reciprocating carrier for the reel, means to reciprocate the carrier, means to turn the reel at the end of each reciprocation, to bring another stick into receiving position, and means to deliver sausages from the twisting mechanism to said stick.

[Claims 6 to 18 not printed in the Gazette.]

1,153,585. BISCUIT-ICING MACHINE. THOMAS VICARS, JOHN VICARS, and EDWARD LYNTON VICARS, Earlestown, England. Filed Feb. 20, 1913. Serial No. 749,607. (Cl. 91—2.)



1. In a biscuit icing machine the combination of an endless traveling icing band passing around a roller and devices for conveying biscuits in an opposite direction underneath that part of the band passing around the roller, the roller being arranged so that the icing band does not parallel to the biscuits, substantially as set forth.

2. In a biscuit icing machine the combination of an endless traveling icing band passing around a roller and an endless traveling biscuit carrier band passing in an opposite direction underneath the icing band around supporting rollers and out of parallelism with respect to the icing band, substantially as set forth.

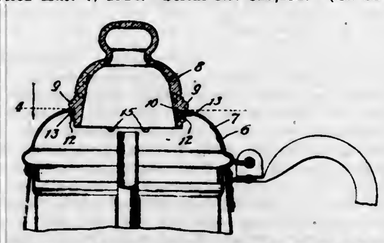
3. In a biscuit icing machine the combination of an endless traveling icing band passing around a roller, devices for conveying biscuits in an opposite direction underneath that part of the band passing around the roller, whereby the portions of the band branching from the biscuit conveying devices form a contacting portion traversing the conveying devices along a single line across the latter, and devices for varying the distance between the icing band and the conveying devices, substantially as set forth.

4. In a biscuit icing machine the combination of a variable speed endless traveling icing band passing around a roller, said band branching upwardly from said roller, said band and biscuit conveying devices being adjustable toward and away from each other at the point of application of the icing during the operation of the machine, and variable speed devices for conveying biscuits in an opposite direction underneath that part of the band passing around the roller, substantially as set forth.

5. In a biscuit icing machine, a frame, an icing trough supported thereby, a plurality of rollers journaled in said frame above and below said trough, an endless band traveling around said rollers, an additional roller journaled in said trough and beneath which said band passes, rollers journaled in the frame beneath the lower portion of said endless band, a second endless band operating around the last mentioned rollers and having the lower roller around which the aforesaid band operates disposed intermediately and transversely of its upper lap whereby the icing carried by the first mentioned band will be scraped on to the biscuit in passing the latter during the movements of the band.

[Claim 6 not printed in the Gazette.]

1,153,586. RECEPTACLE-COVER. WALTER J. VOLLRATH, Sheboygan, Wis., and MAX M. COHEN, Chicago, Ill., assignors to Porcelain Enameling Association of America, Sheboygan, Wis., a Corporation of Wisconsin. Filed Mar. 7, 1914. Serial No. 823,252. (Cl. 53—3.)



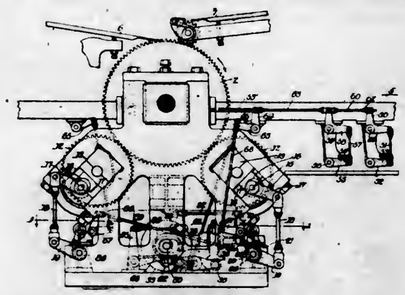
1. A removable cover for closing an opening in a receptacle, comprising a metal section, having a central opening and a glass dome extending into and through said opening, and a spring ring coacting with the inner end of the dome and adjacent surface of said metal section for holding the parts of the cover together.

2. A removable cover for closing an opening in a receptacle, comprising a metal section, having a central opening and a glass dome extending into and through said opening, said parts having coacting recesses and lugs adapted to register as the parts are assembled, and a spring ring coacting with the inner end of the dome and adjacent surface of said metal section for holding the parts of the cover together.

3. A removable cover for closing an opening in a receptacle, comprising a metal section, having a central opening and a glass dome extending into and through said opening, said parts having coacting recesses and lugs adapted to register as the parts are assembled, and spring means engaging the lugs on one part and coacting with the adjacent surface of the other part adapted to hold said parts of the cover together.

1,153,587. PRINTING-PRESS. WALLACE S. WARNOCK, Evanston, Ill. Filed May 8, 1911, Serial No. 625,815. Renewed Apr. 1, 1912. Serial No. 687,779. (Cl. 101—89.)

1. A printing press including a tympan cylinder provided with a gear wheel for operating it that is co-axial therewith; a plurality of printing cylinders each provided with a gear wheel in mesh with the gear wheel upon the tympan cylinder, the tympan cylinder having one portion adapted for individual printing relation with but one of the printing cylinders and another portion adapted for individual printing relation with but the other of the printing cylinders; and mechanism for bringing the printing cylinders into and out of printing relation to the tympan cylinder and operating to enable the printing cylinders to shift in directions substantially co-incident with radii of the tympan cylinder, there being means for so limiting the withdrawal of the printing cylinders from the tympan cylinder as to prevent the gear wheels from becoming out of mesh whereby the printing cylinders are maintained in proper relation to the tympan cylinder when out of action to permit the printing cylinders to be placed in proper printing relation with the tympan cylinder when the printing cylinders are to be brought into action.



2. A printing press including a tympan cylinder; a plurality of printing cylinders, the tympan cylinder having one portion adapted for individual printing relation with but one of the printing cylinders and another portion adapted for individual printing relation with but the other of the printing cylinders; gearing for operating the cylinders at proper relative speeds; and mechanism whereby the printing cylinders may be moved along substantially straight lines of travel in order to bring the printing cylinders and out of printing relation with the tympan cylinder, there being means for limiting the movements of the printing cylinders to prevent the operating gearing from becoming unmeshed.

3. A printing press including a tympan cylinder provided with a gear wheel for operating it that is co-axial therewith; a plurality of printing cylinders each provided with a gear wheel in mesh with the gear wheel upon the tympan cylinder, the tympan cylinder having one portion adapted for individual printing relation with but one of the printing cylinders and another portion adapted for individual printing relation with but the other of the printing cylinders; and mechanism for bringing the printing cylinders into and out of printing relation to the tympan cylinder and operating to enable the printing cylinder to shift in directions that will avoid interference between the meshed gear teeth, there being means for so limiting the withdrawal of the printing cylinders from the tympan cylinder as so prevent the gear wheels from becoming out of mesh, whereby the printing cylinders are maintained in proper relation to the tympan cylinder when out of action to permit the printing cylinders to be placed in proper printing relation with the tympan cylinder when the printing cylinders are to be brought into action.

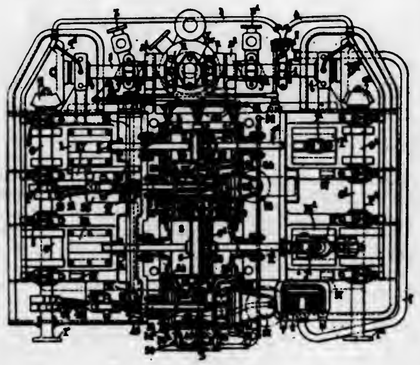
4. A printing press including a tympan cylinder; a plurality of printing cylinders, the tympan cylinder having one portion adapted for individual printing relation with but one of the printing cylinders and another portion adapted for individual printing relation with but the other of the printing cylinders; gearing for operating the cylinders at proper relative speeds; and mechanism whereby the printing cylinders may be moved in directions that will prevent interference between the meshed gear teeth in order to bring the printing cylinders into and out of print-

ing relation with the tympan cylinder, there being means for limiting the movements of the printing cylinders to prevent the operationg gearing from becoming unmeshed.

5. A printing press including a tympan cylinder; a plurality of printing cylinders, the tympan cylinder having one portion adapted for individual printing relation with but one of the printing cylinders and another portion adapted for individual printing relation with but the other of the printing cylinders; mechanism for alternately bringing the printing cylinders into printing relation with the tympan cylinder in a manner to confine each printing cylinder in printing relation with the portion of the tympan cylinder individual thereto; and mechanism for readjusting the printing cylinders to maintain them substantially simultaneously in printing relation with the tympan cylinder whereby printing relation is established between each of the printing cylinders and the portions of the tympan cylinder that were each, in the previous adjustment, individual to but one printing cylinder.

[Claims 6 to 42 not printed in the Gazette.]

1,153,588. STEAM AND OTHER FLUID-PRESSURE ENGINE. WILLIAM WEBBY, London, England. Filed Mar. 17, 1913. Serial No. 754,787. (Cl. 121—41.)

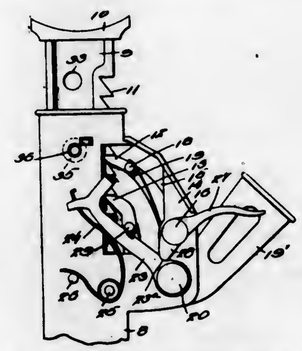


1. In an elastic fluid engine in which double pistons move in opposite directions in each cylinder, the combination of double ports in said cylinders for leading working fluid to and from the space between said pistons, single ports for leading working fluid to and from the ends of said cylinders, a valve for distributing the working fluid, internal passages in said valve for live working fluid, a second set of internal passages spaced alternately with said first-mentioned set for exhausting working fluid, both sets of said passages coöperating in the admission and exhaust of working fluid to and from said double ports substantially as described.

2. In an elastic fluid engine in which double pistons move in opposite directions in each cylinder, the combination of double ports in said cylinders for leading working fluid to and from the space between said pistons, single ports in said cylinders for leading working fluid to and from the ends of said cylinders, a valve for distributing working fluid, internal passages in said valve for live working fluid, a second set of internal passages spaced alternately with said first-mentioned set for exhaust working fluid, both sets of said passage coöperating in the admission and exhaust of the working fluid to and from said double ports, said passages for live working fluid communicating with common ducts leading to said double ports by means of holes in said valve.

3. In an elastic fluid engine in which double pistons move in opposite directions in each cylinder, the combination of double ports in said cylinders for leading working fluid to and from the space between said pistons, single ports in said cylinders for leading working fluid to and from the ends of said cylinders, a valve for distributing working fluid, internal passages in said valve for live working fluid, a second set of internal passages spaced alternately with said first-mentioned set for exhaust working fluid, both sets of said passages coöperating in the admission and exhaust of working fluid to and from said double ports, cross-ducts in said valve intercommunicating with said live working fluid passages, said passages for live working fluid communicating with common ducts leading to said double ports by means of holes in said valve.

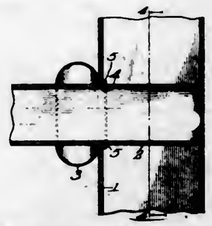
1,153,589. JACK. LE ROY WILLOUR, Ashland, Ohio, assignor to The Ashland Manufacturing Company, Ashland, Ohio, a Corporation of Ohio. Filed Jan. 6, 1913. Serial No. 740,508. (Cl. 254—110.)



1. In a jack of the character described, a standard, a lift element slidably engaging the standard and provided with teeth, a holding pawl pivotally connected with the standard and arranged to engage the teeth, an operating pawl disposed near and below the holding pawl and adapted to engage the teeth, a swinging operating lever pivotally connected with the operating pawl, springs to move the pawls into engagement with the teeth, an approximately T-shaped shifting element pivotally connected with the standard and arranged near one side of the pawls, extensions carried by the pawls and adapted to engage with the transverse and longitudinal portions of the T-shaped shifting element, and arranged wholly upon the outer side thereof, a leaf spring connected with the standard and having one end thereof passing through an aperture in one end of the transverse portion of the T-shaped shifting element, and a pivoted latch adapted to engage with the longitudinal portion of the T-shaped shifting element adjacent the pivot thereof and to fit within a recess formed thereon.

2. In a jack of the character described, a standard provided near its upper end with a housing, a lift bar slidably engaging the standard and provided with teeth arranged adjacent the housing, an upper holding pawl arranged within the housing to engage with the teeth, a lower operating pawl arranged within the housing to engage the teeth, an operating lever pivotally connected with the housing and with the operating pawl, spring means to move the pawls into engagement with the teeth, a shifting lever pivotally connected with the housing and provided near its upper end with an outwardly projecting extension, a spring to move the shifting lever outwardly, means to hold the shifting lever in the inner inactive position, a pin carried by the upper holding pawl and arranged outwardly of and adapted to contact with the lateral extension of the shifting lever, and a second pin carried by the lower operating pawl and arranged outwardly of and adapted to contact with the shifting lever and projecting outwardly beyond the housing whereby both pawls may be simultaneously moved out of engagement with the teeth to drop the lift bar.

1,153,590. METAL BEDSTEAD. JOHN M. ADAMS, Chicago, Ill. Filed Apr. 5, 1911. Serial No. 619,100. (Cl. 5—4.)



1. A hollow member of a bedstead or the like, provided with an opening in the side thereof, a hollow "ornament" and means for securing said "ornament" into the opening in the side of said hollow member, said means comprising an out-turned flange on said "ornament" adapted to enter the opening in said hollow member and to be interlocked with said hollow member within the same by expansion of the portion of said "ornament" on which said flange is formed, substantially as described.

2. A hollow member of a bedstead or the like, provided with an opening in the side thereof, a hollow "ornament" and means for securing said "ornament" into the opening in the side of said hollow member, said means comprising an out-turned flange on said "ornament" and a second bedstead member inserted through said "ornament" into said hollow bedstead member, the flange on said "ornament" being initially smaller than the hole in said hollow member and the hole through the portion of said "ornament" on which said flange is formed being initially smaller than said second bedstead member the relation being such that inserting said second bedstead member through said "ornament" will expand the portion of said "ornament" on which said flange is formed and will interlock said flange with said hollow member within the hole or opening therein in which said "ornament" is secured, substantially as described.

3. A bedstead, comprising a hollow first member, a second member and a hollow "ornament," said hollow first member being provided with a hole in the side thereof and said "ornament" being expansible and having a flange formed thereon initially smaller than the hole in said hollow first member, and said second member inserted through said "ornament" into said hollow first member, the opening through said "ornament" being initially smaller than the end of the second member, the relation being such that inserting said second member through said "ornament" will expand said "ornament" and interlock the flange thereon with the hollow first member around the hole therein within said hollow first member, substantially as described.

1,153,591. LAMP-SOCKET. WILLIAM F. ANKLAM, Detroit, Mich., assignor to C. M. Hall Lamp Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 31, 1914. Serial No. 859,434. (Cl. 240—44.)

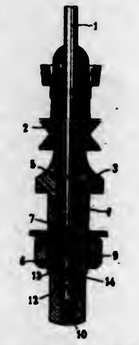


1. A lamp socket, comprising a tubular member formed from a sheet metal blank, having a longitudinal serrated edge portion extended radially outward, a second tubular member telescopically engaging the first named member and maintaining the longitudinal edges thereof adjacent, a flange transversely formed upon the outer member having an edge engageable with the serrations of said radially extended edge portion through relative rotation of the two cylindrical members, and a spring mounted upon one of said cylindrical members exerting a rotative force upon the other, tending to maintain the said edge of the transverse flange engaged with said serrations.

2. A lamp socket, comprising telescopically engaged cylindrical members, a longitudinally extending flange on one of said members, a transversely-extending flange upon the other member apertured for the passage of said longitudinal flange, an edge of the aperture being sharpened and a spring secured to the front surface of the transverse flange, bearing upon the longitudinal flange, tending to maintain the latter pressed against said sharpened edge.

3. A lamp socket, comprising telescopically engaged cylindrical members, the inner one being formed from a sheet metal blank, a longitudinally extending flange upon the inner member projecting through an opening in the outer member, and formed by contiguous portions of the member which projected laterally from opposite edges of the original blank, and a knife edged member carried by the outer cylindrical member, normally engaged by the longitudinal flange of the cylindrical member, the latter being revoluble to disengage the two flanges.

1,153,592. OILLESS SPINDLE. LEIGH S. BACHE, Boundbrook, N. J., assignor to The Graphite Lubricating Company, Boundbrook, N. J., a Corporation of New Jersey. Filed Mar. 6, 1914. Serial No. 822,912. (Cl. 118—25.)



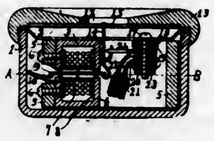
1. A spindle bearing embodying a bolster and step formed of fibrous material impregnated with a lubricant and having a metallic plug embedded in the fibrous material and with its end in contact with the end of the spindle whereby said spindle and plug generates sufficient heat to withdraw lubricant from the fibrous bearing, and a heat insulated adjusting device for moving said plug.

2. A spindle bearing embodying a bolster and step formed of fibrous material impregnated with a lubricant and having a metallic plug embedded in the fibrous material and with its end in contact with the end of the spindle whereby said spindle and plug generate sufficient heat to withdraw lubricant from the fibrous bearing, and a heat insulating adjusting device for moving said plug with reference to the fibrous bearing and spindle blade.

1,153,593. TELEPHONE-RECEIVER. NATHANIEL BALDWIN, Mill Creek, Utah. Filed Mar. 27, 1913. Serial No. 757,220. (Cl. 179—119.)

A telephone receiver embodying a circular permanent magnet divided at one side to provide spaced poles located at the opposite sides of the median plane of the said magnet, U-shaped pole pieces each having one of its limbs resting directly against and secured to one pole of said magnet, the limbs of the pole pieces projecting toward one another beyond the poles of said magnet, an electromagnet secured between the pole pieces, a diaphragm

parallel with said median plane of the permanent magnet, the pole pieces projecting inwardly within said permanent magnet, an armature fulcrumed within the electromagnet and disposed radially of the permanent magnet, a link connecting the inner end of the armature and the diaphragm, and a doubled spring having its ends engaged to the other



end of the armature and the projecting end of that limb of one pole piece which rests against and is secured to the respective pole of the permanent magnet, the spring projecting between the poles of the permanent magnet, whereby the positioning of the pole pieces and spring relative to the permanent magnet provide a compact arrangement.

1,153,594. METHOD OF TREATING TUNGSTEN ORES. FREDERICK M. BECKET, Niagara Falls, N. Y., assignor to Electro Metallurgical Company, Niagara Falls, N. Y., a Corporation of West Virginia. Filed Apr. 8, 1914. Serial No. 830,419. (Cl. 75—17.)

1. The method of preparing ferrotungsten from low-phosphorus ores of the calcium-tungstate type, which consists in mixing therewith an ore of the iron-tungstate type, and smelting the mixture, said ores proportioned to yield a low-phosphorus alloy of the desired tungsten-content.

2. The method of treating ores of the calcium-tungstate type and producing low-phosphorus ferrotungsten, which consists in heating such ore under conditions to reduce the solubility of the contained tungsten, treating it with an acid reagent to increase the ratio of tungsten to phosphorus, mixing with the purified ore an ore of the iron-tungstate type, and smelting the mixture.

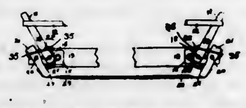
3. In a method of preparing tungsten or ferrotungsten from ores of the calcium-tungstate type, the step which consists in heating the ore under conditions to reduce the solubility of the contained tungsten, and then treating the ore with a suitable solvent to increase the ratio of tungsten to phosphorus.

4. In a method of preparing tungsten or ferrotungsten from ores of the calcium-tungstate type, the step which consists in heating the ore under conditions to reduce the solubility of the contained tungsten, and then treating the ore with an acid reagent under conditions to increase the ratio of tungsten to phosphorus.

5. In a method of preparing tungsten or ferrotungsten from ores of the calcium-tungstate type, the step which consists in heating the ore under conditions to reduce the solubility of the contained tungsten, and then treating the ore with strong sulfuric acid under conditions to increase the ratio of tungsten to phosphorus.

[Claim 6 not printed in the Gazette.]

1,153,595. PICKER-STICK ATTACHMENT FOR LOOMS. FREDERICK BERNIER, Fitchburg, Mass. Filed May 25, 1914. Serial No. 840,739. (Cl. 139—48.)



1. A picker stick having a slot in the lower end, a stud positioned in the said slot, an auxiliary stick pivotally supported adjacent the said picker stick, a loop connecting the upper end of the said auxiliary stick with the said picker stick, the lower end of the said auxiliary stick having a hole, a releasing pin in the said hole, a strap connecting the said pin and the lower end of the said picker stick, a spring, and means for removably connecting the said spring and the said releasing pin.

2. In combination a pair of mating picker sticks having open slots at their lower ends, a single spring, a pair of fixed studs and means interconnecting the ends of the said spring with the said picker sticks, whereby the said studs will be positioned one in each of the said slots suitably to serve as a fulcrum support therefor under normal conditions of operation and which permit of disengaging the said picker sticks from their studs under abnormal conditions of operation.

3. A picker stick having an open slot at the lower end, a fixed stud engaged with the said slot, an auxiliary stick pivotally supported adjacent the said lower end, means inter-connecting the said auxiliary stick and the lower end of the picker stick, a spring operative to normally position the said picker stick, and the said spring being connected to the said auxiliary stick.

4. A picker stick having an open slot at the lower end, a stud positioned in the said slot, an auxiliary stick pivotally mounted and positioned adjacent the said lower end, means interconnecting the upper end of the said auxiliary stick and the said picker stick, and means for connecting the lower end of the said auxiliary stick and the said picker stick and operative to permit the disconnecting of the same under abnormal conditions of operation.

5. A picker stick having an open slot at the lower end, a stud positioned in the said slot, an auxiliary stick pivotally mounted and positioned adjacent the said lower end, a yoke connecting the upper end of the said auxiliary stick and the said picker stick, and a connection for the lower end of the said auxiliary stick and the said picker stick comprising a strap, connected by one end to the said picker stick, a pin connected to the other end of the said strap, and the said auxiliary stick having a hole for the said pin, and a spring having one end removably connected to a portion of the said pin.

[Claims 6 and 7 not printed in the Gazette.]

1,153,596. NON-INFLAMMABLE CELLULOID-LIKE MASS AND PROCESS OF PRODUCTION THEREOF. EMILE BRONNERT, Niedermorschweiler, Germany. Filed Oct. 25, 1911. Serial No. 656,695. (Cl. 106—40.)

1. Production of cellulose-like masses from cellulose formates, which consists in precipitating the cellulose formates as a slimy mass from their solution in formic acid by means of suitable organic precipitating agents, separating the contained solvent and precipitating agent and kneading this mass with a solid water-insoluble solvent and emollient of the cellulose formate while plastic and treating the same to form a solid elastic body.

2. The herein described process of producing a celluloid-like product, which consists in depositing cellulose formates in a tough mass from a solution by means of a suitable precipitating agent, then separating the solvent and precipitating agent from the precipitate thus obtained, and then kneading with a solid water-insoluble solvent and emollient of the cellulose formate while plastic and treating to form a solid elastic body.

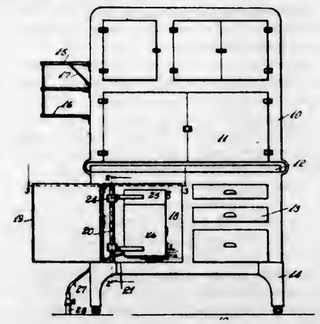
3. In a process of producing a celluloid-like product the step which comprises depositing cellulose formates in a homogeneous plastic mass from a solution by means of a suitable precipitating agent.

4. In a process of producing a celluloid-like product the step which comprises depositing cellulose formates in a tough plastic mass from a solution by means of a suitable organic precipitating agent.

5. The herein described process of producing a celluloid-like product which comprises depositing cellulose formates in a tough mass from a solution by means of a suitable precipitating agent, and kneading with a solid water-insoluble solvent and emollient of the cellulose formate.

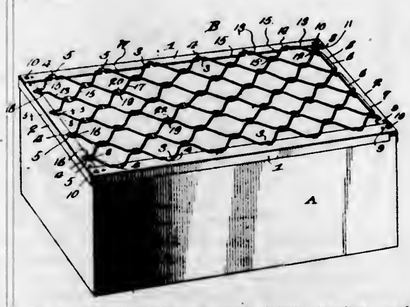
[Claims 6 to 8 not printed in the Gazette.]

1,153,597. COMBINATION KITCHEN-CABINET AND STOVE. WILLIAM BUTTLER, Indianapolis, Ind. Filed Jan. 16, 1915. Serial No. 2,675. (Cl. 126—37.)



A kitchen cabinet including a stove compartment with the upper and lower walls thereof formed of sheet metal with the corresponding lateral edges thereof turned downward to form flanges substantialy L-shaped in cross section, a vertical pivot rod in said compartment with the upper end loosely projecting through the lower part of the upper flange and the lower end projecting through the bottom of the compartment and supported by the lower part of the lower flange, and a stove mounted on said pivot rod so that the stove can be folded into or swung out of said compartment.

1,153,598. PEANUT-PICKER. EDWARD L. CANON, Quitman, Ga. Filed Feb. 6, 1915. Serial No. 6,503. (Cl. 130—30.)



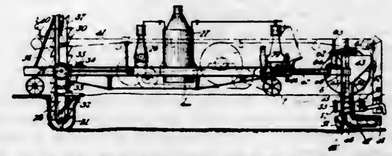
1. In a peanut picker, a wire fabric having meshes therein, cleats engaged with the wires surrounding the meshes adapted to form stem guiding passages in advance of the cleats, and stem snapping means formed integral with the cleats adapted to close the ends of said passages.

2. In a peanut picker, a wire fabric having meshes therein, cleats engaged with the wires surrounding the meshes to provide stem guiding passages at opposite ends of the cleats, and stem snapping means upon the cleats disposed within said passages.

3. In a peanut picker, a wire fabric having meshes therein, flattened portions upon the wires surrounding the meshes adapted to form nut guiding shoulders, cleats engaged with said wires and provided with depressions disposed therebetween, said cleats and flattened portions cooperating to provide stem guiding passages in advance of the depressions in the cleats, whereby the depressions in the cleats are enabled to snap the stems at their juncture with the shells of the nuts.

4. In a peanut picker, a wire fabric having stem guiding passages, cleats engaged with the wires surrounding said passages, and depressed portions upon said cleats interposed between said wires and cooperating with the cleats to cause the above mentioned wires to converge at opposite ends of the cleats and prevent the longitudinal movement of the latter.

1,153,599. CONTINUOUS CONCRETE-PIPE MACHINE. JOHN H. CARR, Alhambra, and ALBERT CLARENCE ROUTHE, Los Angeles, Cal. Filed Sept. 17, 1912. Serial No. 720,816. (Cl. 37—53.)



1. In an apparatus of the character described, mechanism for forming and simultaneously laying pipe, comprising a hopper, an outlet for said hopper, a mandrel within said outlet, means for compressing pipe forming material around the mandrel and out of said outlet, and means for forcing compressed air into the interior of said newly formed pipe to prevent collapse thereof.

2. In an apparatus of the character described, mechanism for forming and simultaneously laying pipe comprising a hopper, an outlet for said hopper, a mandrel within said outlet, means for compressing material around the mandrel and forcing the same out of said outlet, means for depositing covering material around said newly formed pipe, and means coöperating therewith for tamping the material around the pipe as said material is deposited.

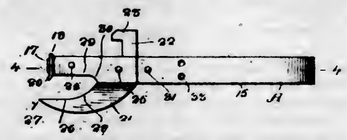
3. In an apparatus of the character described, pipe forming and laying mechanism comprising a hopper, a mandrel in the outlet of the hopper, means for compressing material around the mandrel to form a pipe and ejecting the formed pipe, means for depositing dirt over the pipe, vibratory tampers mounted on the rear of the hopper and means for vibrating said tampers substantially as and for the purpose set forth.

4. In an apparatus of the character described, mechanism for forming and laying pipe comprising a hopper, a mandrel in the outlet of the hopper, means for compressing material around the mandrel to form a pipe and ejecting the formed pipe, a chute in rear of the hopper adapted to receive and deposit material over the pipe, and means for tamping said material around the pipe as the same is being deposited.

5. In an apparatus of the character described, pipe forming and laying mechanism comprising a hopper, a mandrel in the outlet of the hopper, means for compressing material around the mandrel to form a pipe and ejecting the formed pipe, means for depositing dirt over the pipe, vibratory tampers mounted on the rear of the hopper, means for vibrating said tampers, and means entering the hopper adapted to convey compressed air to the interior of the newly formed pipe to prevent collapse thereof.

[Claims 6 to 10 not printed in the Gazette.]

1,153,600. CAN-OPENER. HERBERT M. CASWELL and FIDELLUS SHERER, Oatman, Ariz. Filed May 14, 1915. Serial No. 28,188. (Cl. 30—3.)



1. In a can opener, a handle comprising a strip of metal bent to form an elongated loop, the limbs of which are terminally reduced to form lugs, and a gage plate having

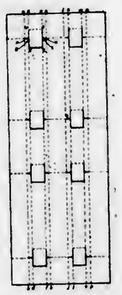
slots engaging said lugs, the latter being bent down on the face of the gage plate.

2. In a can opener, a handle comprising a strip of metal bent to form an elongated loop, the limbs of which are terminally reduced to form lugs, and a gage plate having slots engaging said lugs, the latter being bent down on the face of the gage plate, said gage plate being provided with terminal downwardly extending guide lugs.

3. In a can opener, a handle comprising a strip of metal bent to form an elongated loop, and a blade having a shank provided with a forwardly extending plate secured between the limbs of the handle.

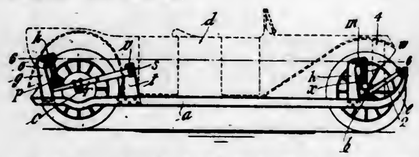
4. In a can opener, a handle consisting of a strip of metal bent to form an elongated loop, and a blade having a shank provided with a forwardly extending plate secured between the limbs; the blade having a cutting edge including a straight forward portion and an upwardly curved rearward portion, and the handle including the limbs and the plate secured therebetween having a recess including a straight forward portion and a rear wall that is curved downwardly to meet the curved portion of the cutting edge.

1,153,601. SHEET-METAL WALL. EDWARD G. CAUGHEY, Sewickley, Pa., assignor of one-half to Edward H. Schane, Youngstown, Ohio. Filed Apr. 8, 1914. Serial No. 830,461. (Cl. 189—34.)



A wall or like structure formed of a single sheet of metal provided with a rectangular flat-bottomed channel, slit longitudinally at opposite points along the margin of the bottom of said channel, and transversely across said channel bottom connecting the longitudinal slits at one end, and slit further transversely across the walls of said channel at points intermediate the length of said longitudinal slits, the said sheet being further bent on a line coincident with the slits across the channel walls, and with the raised side of the sheet inward, the tongue formed by the slitting of the channel bottom as aforesaid overlapping and being secured to the adjacent portion of the channel bottom.

1,153,602. VEHICLE-FRAME. MAURICE S. CHAPIN, Springfield, Mass. Filed Feb. 16, 1914. Serial No. 818,963. (Cl. 21—90.)



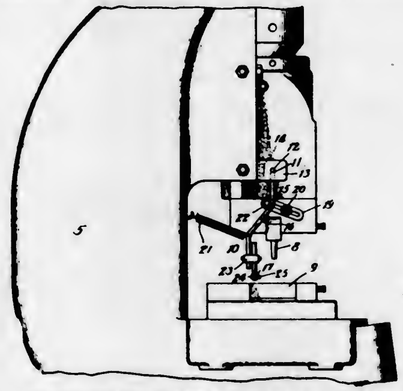
1. In a motor vehicle, a pair of axles, a frame to carry the vehicle body and motor, a spring mounted on each axle and a frame-support secured to each spring on the central longitudinal line of the vehicle, and means of connection between said frame and the supports therefor and comprising a universal joint whereby said frame may have a swinging movement on its supports both in line with and transversely to the axle.

2. In a motor vehicle, a pair of axles, an underslung frame to carry the vehicle body and motor, and a single support for the opposite ends of said frame, said support being located on the central longitudinal line of the vehicle and above the axles, whereby the center of gravity of said frame and body will lie below the plane of the points of support thereof.

3. In a motor vehicle, a pair of axles, a frame extending beneath the axles, a spring carried by each axle, a frame support secured to each spring, a rigid member near each axle extending from side to side of the frame, and a pivotal connection between said supports and said rigid members, said frame supports being located on the central longitudinal line of the frame.

4. In a motor vehicle, a frame to carry the body of the vehicle and a motor, a pair of axles, a member secured to each axle and having a pivotal connection with said frame, and serving to maintain said axles in fixed relation to the frame, while permitting the movement of the frame relative to the axles, a spring carried by each member, a frame support on said springs and means to pivotally suspend said frame on said supports, said suspension means being located on the central longitudinal line of the vehicle, and above the frame thereof.

1,153,603. GUARD FOR PUNCH-PRESSES. PHILEAS T. CHAPLEAU, Chicago, Ill., assignor to American Cutlery Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 15, 1915. Serial No. 2,370. (Cl. 164—107.)



1. The combination with the die-plate and the punch-plunger of a punch-press, of a guard therefor comprising a member supported on a relatively stationary part of the press to be swung across the path traversed by said punch and having a cam surface, and means on said plunger adapted to engage said cam surface for swinging said guard across the path traversed by said punch as the latter descends.

2. The combination with the die plate and the punch-plunger of a punch-press, of guard means comprising clips secured to a relatively stationary part of the press, a guard-proper journaled on said clips to be swung across the path traversed by said punch and having a cam surface, and means on said plunger adapted to engage said cam surface for swinging said guard across the path traversed by said punch as the latter descends.

3. The combination with the die plate and the punch-plunger of a punch-press, of guard means comprising angle-shaped clips secured to a relatively stationary part of the press, a guard-proper journaled on said clips to be swung across the path traversed by said punch and having a cam surface, and means on said plunger adapted to engage said cam surface for swinging said guard across the path traversed by said punch as the latter descends.

4. A guard-proper for the purpose set forth, comprising a yoke-shaped member having its arms, at which it is adapted to be supported to be swung back and forth, formed of sections adjustable lengthwise relative to each other and its cross-bar formed of longitudinally adjustable sections.

5. A guard-proper for the purpose set forth, comprising a yoke-shaped member formed of relatively adjustable sections adapted to permit the arms and cross-bar of said member to be lengthened and shortened to adapt the guard to varying conditions.

[Claims 6 to 8 not printed in the Gazette.]

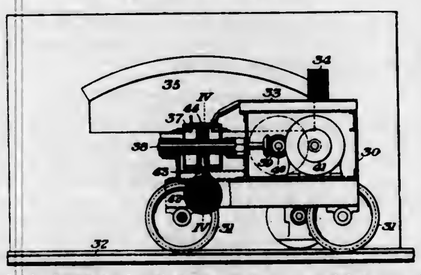
1,153,604. PISTON WITH TWO CUPPED LEATHERS. FRANÇOIS JULES CHAPSAL, Paris, and ALFRED LOUIS EMILE SAILLOT, La Garenne-Colombes, France. Filed Mar. 26, 1914. Serial No. 827,507. (Cl. 121—108.)



1. The combination with a fluid pressure cylinder, of a piston mounted therein having two cupped piston rings turned outwardly toward the ends of the cylinder and forming with the walls of the cylinder and piston an annular chamber, and means operable for each stroke of the piston to equalize the pressure in said chamber with the pressure in that end of the cylinder toward which the piston is moving to reduce the friction of that piston ring which is curved or turned toward such end of the cylinder.

2. The combination with a fluid pressure cylinder, of a piston mounted therein having two cupped flexible piston rings turned outwardly toward the ends of the cylinder, and means operable for each stroke of the piston to reduce the friction of that piston ring which is turned toward the end of the cylinder being approached by the piston.

1,153,605. FURNACE-CHARGING APPARATUS. WILLIAM F. CLARK, Coraopolis, Pa. Filed Oct. 16, 1913. Serial No. 795,461. (Cl. 214—23.)



1. A furnace charging apparatus, comprising a pair of feed rollers of nonmagnetic material, said feed rollers being close to each other and arranged to rotate about a common axis, and a magnet having narrow pole pieces on opposite sides of the axis of the rollers and between the rollers; substantially as described.

2. A furnace charging apparatus, comprising a pair of feed rollers of nonmagnetic material, an axle to which said rollers are secured, there being a narrow space between said rollers, means for rotating said axle, and a magnet having narrow pole pieces on opposite sides of the axle and between the rollers; substantially as described.

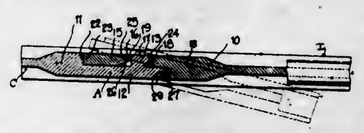
3. A furnace charging apparatus, comprising a carriage adapted to be moved transversely in front of the furnace, a table on said carriage for supporting the blanks to be charged into the furnace, a longitudinal trough, a pair of rollers of nonmagnetic material below the trough and extending into the lower portion thereof, said feed rollers being close to each other and arranged to rotate about a common axis, and a magnet having narrow pole pieces on opposite sides of the axis and between the rollers for drawing the pieces to be charged into contact with the periphery of both rollers; substantially as described.

4. A furnace charging apparatus, comprising a carriage arranged to be moved transversely in front of a furnace to be charged, a table on said carriage for the blanks to be charged into the furnace, there being a longitudinal trough on the carriage for receiving the blank from the table, a pair of feed rollers below the trough and extending into the lower portion thereof, a shaft to which said rollers are secured, there being a narrow space between said rollers, means on the carriage for rotating the shaft, and a magnet having narrow pole pieces on the opposite sides of the axis and between the rollers.

5. A furnace charging apparatus, comprising a carriage arranged to be moved transversely in front of a furnace to be charged, a table on said carriage for the blanks to be charged into the furnace, there being a longitudinal trough on the carriage for receiving the blank from the table, a pair of feed rollers below the trough and extending into the lower portion thereof, a shaft to which said rollers are secured, there being a narrow space between said rollers, means on the carriage for rotating the shaft, and an electromagnet supported on the carriage below the rollers having narrow pole pieces extending upwardly between the rollers on opposite sides of the shaft; substantially as described.

[Claim 6 not printed in the Gazette.]

1,153,606. RAIL-JOINT. EDGAR CONERWAY, Atwood, Tenn. Filed Apr. 10, 1915. Serial No. 20,543. (Cl. 239—8.)



1. The combination with meeting rail terminals of a joint including a pair of coacting joint plates formed integrally with the rail terminals, one of said joint plates being provided with an opening, a transverse locking stud formed on the other locking plate and insertible in said opening, said stud acting to hold the rail terminals against longitudinal movement with respect to each other, and co-acting locking tongues formed on the terminals of the joint plates, there being receiving recesses for these tongues in the terminals of the web portions of the meeting rail ends, said tongues being disposed in said recesses for holding the rail terminals against turning movement about the studs as an axis in both vertical and horizontal planes.

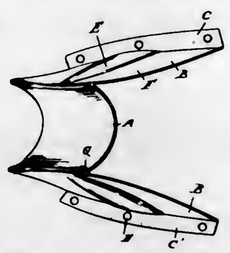
2. The combination with abutting rail terminals having their web portions transversely enlarged, of a joint including a pair of joint plates extending longitudinally from the enlarged portions of the rail webs, said joint plates being adapted to mate, forming a continuation of the enlarged web portions, a locking stud formed on one joint plate and insertible through the other joint plate for holding the rails against longitudinal movement, a locking tongue extending longitudinally from the first mentioned joint plate, there being a recess in the enlarged web portion of the rail carrying the second mentioned joint plate, said tongue being inserted in said recess, there being additional recesses formed in communication with the upper and lower terminals of said first mentioned recess, longitudinally extending lugs formed on said locking tongue and seated in said second

mentioned recesses, and a longitudinally extending locking tongue formed on the second mentioned joint plate, there being a receiving recess formed in the enlarged web portion of the rail which carries the first mentioned joint plate, said last mentioned locking tongue being seated in said last mentioned recess.

3. The combination with meeting rail terminals of a joint including a pair of co-acting joint plates formed integrally with the rail terminals, one of said joint plates being provided with a transverse opening, there being recesses formed in the web portion of each rail adjacent the inner end of the joint plate thereof, a transverse locking stud carried by one joint plate and insertible through the opening in the other joint plate, and longitudinal locking tongues projecting from the outer end of each joint plate, said tongues being seated in said recesses, one of said tongues being adapted to prevent the turning of the joint plates about the stud in a vertical plane and the other of said tongues being adapted to hold the joint plates against turning in a horizontal plane.

4. The combination with meeting rail terminals of a joint, including a pair of co-acting joint plates formed integrally with the rail terminals, one of said joint plates being provided with a transverse opening, the vertical walls of which extend diagonally with respect to the longitudinal axis of the joint plate, and a transverse locking stud extending from the side face of the other joint plate and at an acute angle thereto, the opposed vertical faces of said stud being parallel and being adapted to engage against the vertical walls of said openings in the first mentioned joint plate.

1,153,607. VEHICLE-CHOCK. HENRY P. COPE, Detroit, Mich., assignor to Michigan Stamping Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 17, 1914. Serial No. 862,125. (Cl. 21—8.)



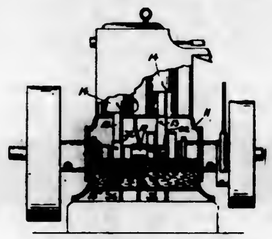
1. A vehicle wheel chock, formed from sheet metal, having a cylindrical concave bearing segment and return-bent portions on opposite sides of said segment and for the complete length thereof, the edges of said return-bent portions extending substantially at right angles to the axis of the cylindrical concave bearing portion and obliquely to the supporting base.

2. A vehicle chock comprising a sheet metal member having a central concave bearing segment, return-bent portions upon opposite sides of said segment and for the complete length thereof, the edges of said return-bent portions extending obliquely to the supporting base, and out-turned flanges at the lower ends of said return-bent portions parallel to the supporting base.

3. A vehicle wheel chock, comprising a member formed from sheet metal having a central cylindrical concave bearing segment, return-bent portions upon opposite sides thereof and for the complete length thereof, the edges of said return-bent portions extending at substantially right angles to the axis of said cylindrical concave bearing segment and obliquely to the supporting base, said return-bent portions being fashioned in cross-section to produce a rigid brace.

4. A vehicle wheel chock, comprising a member formed from sheet metal having a central portion forming a concave bearing segment, return-bent portions on opposite sides thereof and for the complete length thereof, said return-bent portions flaring outward and the edges thereof extending obliquely to the plane of the supporting base, said return-bent portions being corrugated in cross-section to form rigid braces, and outwardly-extending flanges at the lower ends of said return-bent portions parallel to the base.

1,153,608. OILING DEVICE. JAMES MICHAEL CUNNEEN, Jersey City, N. J. Filed Aug. 19, 1913. Serial No. 785,591. (Cl. 184—1.)



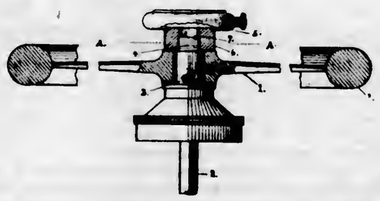
1. The combination with an oil container and an element movable therethrough having a jointed part out of the lubricant, of a receiver immersed in the oil by said element, means for conveying oil from said receiver to said jointed part, and a bucket fitted over the receiver to entrap the oil and supply it to the latter.

2. The combination with a receptacle containing oil and a movable element having a part to be lubricated at a distance therefrom, of a receiver dipped in the oil by said element, means for conveying the oil from said receiver to said distant part, a bucket held in slidable engagement over said casing, and means for spacing the receiver from said bucket.

3. The combination with a vessel holding oil and a movable element to be lubricated outside the oil body, of a casing adapted to receive the oil upon being passed through said body by said element, means for discharging oil from said casing over the outside part of the element, and a laterally-perforated bucket sliding over said casing, the latter having a retaining flange operating to confine the oil below the perforations in the former.

4. The combination with an oil container and an element moved through the same having a remote part to be lubricated, of a receiver plunged into the oil by said element, means for transferring the oil from said receiver to said remote part, and a yieldingly-suspended bucket slidable over said receiver.

1,153,609. AUTOMOBILE TIMEPIECE ATTACHMENT. FRANK M. DALE, Sullivan, Ind., assignor to Motoring Clock Manufacturing Company, Sullivan, Ind., a Corporation of Indiana. Filed Dec. 18, 1914. Serial No. 877,864. (Cl. 224—4.)



1. In combination with a steering wheel of an automobile and the shaft of said wheel, said shaft having an integral portion extending above the hub of the steering wheel, a time piece, and a support for said time piece having means to engage said extended portion of said shaft.

2. In combination with a steering wheel of an automobile and the shaft of said wheel, said shaft having a threaded portion extending above the hub of the steering wheel, a time piece, and a nut for said threaded portion to hold said hub in place on the shaft and also constituting supporting means for said time piece.

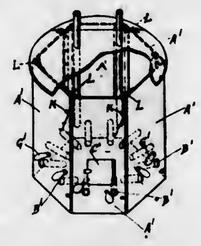
3. In combination with a steering wheel of an automobile and the shaft of said wheel, said shaft having an integral portion extending above the hub of the steering wheel, a time piece having an integral depending attaching member and means of direct engagement between said member and said prolonged portion of said shaft, substantially as described.

4. In combination with a steering wheel of an automobile and its shaft, said shaft having a threaded portion extending above the hub of the steering wheel, a time-piece, a nut fixed to one face of said time-piece and adapted to engage said threaded end portion of the shaft, substantially as described.

5. In combination with a steering wheel and its shaft, such shaft having a threaded portion extending above the hub of the steering wheel, a time piece, said time piece having fixed on one face thereof a nut which engages said threaded end portion and bears against said hub to fasten the time-piece to said shaft and lock the steering wheel in position, substantially as described.

[Claim 6 not printed in the Gazette.]

1,153,610. HOT-BLAST STUMP-BURNER. JULES VERNE DE LAMATER, Vancouver, British Columbia, Canada. Filed Apr. 14, 1913. Serial No. 761,093. (Cl. 110—21.)

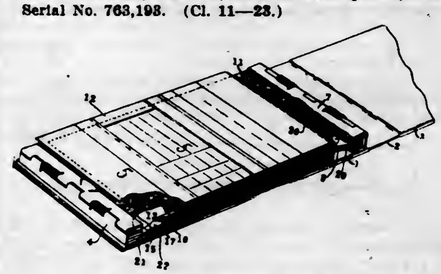


1. A hot blast stump burner comprising a casing designed to surround the stump and having draft orifices therein, said casing comprising a plurality of plates detachably secured together, each of said plates having a strip secured thereto and extending at an angle from and beyond one edge thereof, a cover for disposition upon said casing, and means for directing the draft from said orifices against any desired portion of the stump, as and for the purpose specified.

2. A hot blast stump burner comprising a collapsible casing designed to surround the stumps and having draft orifices therein, said casing comprising a plurality of rectangular plates detachably secured together, each of said plates having a strip attached thereto and extending at an angle from and beyond one edge thereof, a cover extending over the top of the casing, and adjustable means for adjustably directing the draft from the orifices against the base of the stump, as and for the purpose specified.

3. A hot blast stump burner comprising a collapsible casing designed to surround the stump, said casing comprising a plurality of rectangular plates detachably secured together and having each a pair of draft orifices formed therein adjacent the base thereof, each of said plates having a strip secured thereto and extending at an acute angle from and beyond one edge thereof, a cover for said casing, and laterally and longitudinally adjustable pipes for directing the draft from said orifices against the base of the stump, as and for the purpose specified.

1,153,611. MANIFOLDING SALES-BOOK. GEORGE EDMUND DOUGHTY, Caldwell, N. J. Filed Apr. 24, 1913. Serial No. 763,198. (Cl. 11—23.)



1. A manifolding device comprising, in combination, a support, two sets of record sheets, one end of each of said sets connected to said support along lines spaced apart on said support, the opposite end of each set being free and lapping a portion of the other set, the under pad composed of folded sheets each providing an original and a duplicate leaf, and two transfer sheets carried by said support and adapted to be disposed one between an original and a duplicate leaf and the other between a duplicate leaf and the other set of sheets, when in operative position.

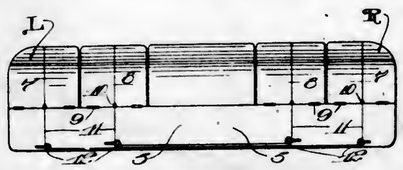
2. A manifolding device comprising, in combination, a support, two sets of record sheets, one end of each of said sets connected to said support along lines spaced apart on said support, the opposite end of each set being free and lapping a portion of the other set, the under pad composed of folded sheets each providing a duplicate and an original leaf, and two transfer sheets carried by said support and adapted to be disposed one between an original and a duplicate leaf and the other between a duplicate leaf and the other set of sheets, when in operative position, said transfer sheets being respectively connected to said support along the lines of connection of said respective sets with said support.

3. A manifolding device comprising, in combination, a support, two sets of record sheets, one end of each of said sets connected to said support along lines spaced apart on said support, the opposite end of each set being free and lapping a portion of the other set, the under pad composed of folded sheets each providing an original and a duplicate leaf, the free ends of said original leaves lying between said line of connection of the folded sheets and the free end of the other set of sheets, and two transfer sheets carried by said support and adapted to be disposed one between an original and a duplicate leaf and the other between a duplicate leaf and the other set of sheets, when in operative position.

4. A manifolding device comprising, in combination, a support, two sets of record sheets, one end of each of said sets connected to said support along lines spaced apart on said support, the opposite end of each set being free and lapping a portion of the other set, the under pad composed of folded sheets each providing an original and a duplicate leaf, the lines of fold of said folded sheets lying at a distance from said line of connection of said other set of sheets, and two transfer sheets carried by said support and adapted to be disposed one between an original and a duplicate leaf and the other between a duplicate leaf and the other set of sheets, when in operative position.

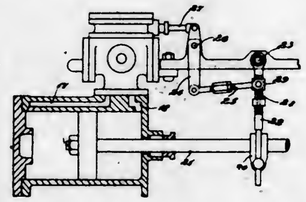
5. A manifolding device comprising, in combination, a support, two sets of record sheets, one end of each of said sets connected to said support along lines spaced apart on said support, the opposite end of each set being free and lapping a portion of the other set, the under pad composed of folded sheets each providing an original and a duplicate leaf, the lines of fold of said folded sheets lying at a distance from said line of connection of said other set of sheets, the free ends of said original leaves lying between said line of connection of the folded sheets and the free end of the other set of sheets, and two transfer sheets respectively connected at one end thereof to said sets and therewith to said support.

1,153,612. AEROPLANE. JAMES P. ERIE, Oakland, Cal. Filed June 17, 1912, Serial No. 704,114. Renewed Feb. 23, 1915. Serial No. 10,119. (Cl. 244—29.)



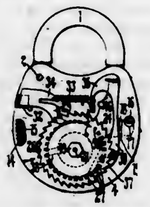
In a device of the class described, a lifting plane comprising a narrow stationary front portion, ailerons hinged to the rear edge of said stationary front portion, said ailerons being of a width greater than the stationary portion and arranged in inner and outer pairs on the opposite ends thereof, the outer pair constituting the rear end corners of the lifting plane, freely movable means directly connecting the outer pair of ailerons and freely movable means directly connecting the inner pair of ailerons to permit free independent differential movement of each pair of ailerons.

1,153,613. VALVE-GEAR FOR DIRECT-ACTING FLUID-PRESSURE ENGINES. ROBERT PETTIGREW FINLAY, West Hartlepool, Durham, England. Filed June 1, 1915. Serial No. 31,636. (Cl. 136—10.)



In a valve gear for a fluid pressure engine, the combination with the engine piston and piston rod, of a reciprocating pilot valve, a reciprocatory distributing valve whose reciprocatory movement is controlled by said pilot valve, a pivoted lever adapted to receive oscillatory movement from said piston rod, a double armed rocking member having an arm connected with said pilot valve, and a link connecting said lever with the other arm of said rocking member, the said link having an adjustable connection with said lever so as to permit the throw of the said pilot valve to be varied.

1,153,614. LOCK. JOSEPH FORSHEIM, Great Neck, and JOSEPH KONIGSBERG, New York, N. Y. Original application filed Jan. 20, 1914, Serial No. 813,237. Divided and this application filed May 8, 1914. Serial No. 837,239. (Cl. 70—111.)



1. A lock, a housed indicator actuated thereby and rendered, by its structure, inoperable when the lock has been operated a predetermined number of times, and lock controlled means for gaining access to tue indicator to render it again operable.

2. A lock, a casing, an indicator therein actuated by the lock to visually indicate the number of times the lock has been operated, said indicator being, by its structure, rendered inoperable when it has been operated a predetermined number of times, and means for locking the indicator to the casing when it has become inoperable to prevent it from being turned from outside the casing.

3. A lock, a casing, an indicator actuated by the lock to visually indicate the number of times the lock has been operated, the said indicator being, by its structure, rendered inoperable when it has been operated a predetermined number of times, a lock controlled removable member and means within said removable member for locking the indicator thereto when it has become inoperable.

4. In a lock, a casing, a removable lock controlled casing member, a rocking plate within the casing arranged to be moved to release the casing member, an indicator ratchet wheel, a retaining pawl mounted on said rocking plate, an actuating pawl and a spring common to the said pawls and plate for holding the two pawls and rocking plate at the limits of their respective movements in one direction.

5. In a lock, a locking mechanism, a perforated indicator wheel actuated thereby and, by its structure, rendered inoperable when the locking mechanism has been operated a predetermined number of times and means for setting the indicator wheel in operable position comprising a stop and a pin arranged to enter a perforation in the indicator wheel and engage the said stop when the wheel has been turned to its operable position.

1,153,615. PIN-RETAINER. JOSEPH FORSHEIM, Great Neck, and JOSEPH KONIGSBERG, New York, N. Y. Filed June 30, 1914. Serial No. 848,223. (Cl. 24—155.)



1. A pin retainer comprising a rectangular casing having alined pin receiving holes through its marginal wall, and a pin retaining element located within the casing comprising a wire bent to form a triangular brace with a free portion projecting into the path of the pin whereby the pin will be cramped between said portion and the inside of the marginal wall of said casing.

2. A pin retainer comprising a rectangular casing having alined pin deceiving holes through its marginal wall, a pin retaining element located within the casing comprising a wire bent to form a triangular brace with a free portion projecting into the path of the pin whereby the pin will be cramped between said portion and the inside of the marginal wall of said casing, and a releasing element projecting exterior to the casing.

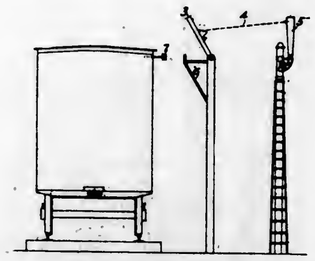
3. A pin retainer comprising a rectangular casing having alined pin receiving holes through its marginal wall, a pin retaining element located within the casing comprising a wire bent to form a triangular brace with a free portion projecting into the path of the pin whereby the pin will be cramped between said portion and the inside of the marginal wall of said casing, and a releasing element projecting exterior to the casing comprising a loop having one end engaging the marginal wall of the casing and its other end engaging the free portion of the pin retaining element.

4. A pin retainer comprising a rectangular casing having alined pin receiving holes through its marginal wall and a pin retaining element comprising a wire bent to form an L-shaped portion, a diagonal portion and a free portion yielding bodily at its junction with the L-shaped portion and the diagonal portion.

5. A pin retainer comprising a rectangular casing having alined pin receiving holes through its marginal wall, a pin retaining element comprising a wire bent to form an L-shaped portion, a diagonal portion and a free portion yielding bodily at its junction with the L-shaped portion and diagonal portion, and a releasing element projecting exterior to the casing through its marginal wall.

[Claims 6 and 7 not printed in the Gazette.]

1,153,616. AUTOMATIC TRAIN OR CAR STOPPING APPARAUS. SARATH KUMAR GHOSH, Seattle, Wash. Filed June 23, 1914. Serial No. 846,872. (Cl. 246—59.)



In automatic train or car stopping apparatus, the combination with the brake pipe, of a valve having one side connected to said pipe and the opposite side opening into the atmosphere, a spring normally acting upon said valve to actuate the latter to open position to bleed the brake pipe, a projection on the casing of the valve, a pin interposed between said projection and the valve and acting to hold the latter in closed position against the action of said spring, a rod pivoted for swinging movement and having one end adapted to strike against said pin to release the valve and mutilate the pin so that the latter will be unfit for further service, and means on said projection to limit the movement of the valve to open position under the action of said spring.

1,153,617. LIGHTNING-ROD. JULIUS F. GOETZ, Hartford, Wis. Filed Dec. 14, 1911. Serial No. 665,863. (Cl. 173—31.)



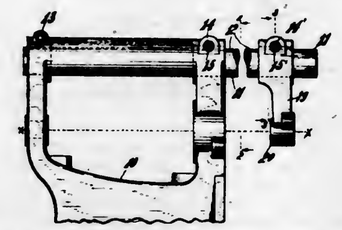
1. A lightning conductor comprising a hollow self-sustaining wire-supporting core formed from a flat strip of flexible material, and an outer surface, inclosing said core, comprising a plurality of wires wound upon the core to form a conductor.

2. A lightning conductor comprising a hollow self-sustaining wire-supporting core formed from a strip of flexible material helically coiled, and an outer surface, inclosing said core, comprising a plurality of helically coiled wires wound upon the core to form a conductor tube.

3. A lightning conductor comprising a hollow self-sustaining wire-supporting core formed from a flat strip of flexible electrical-conducting material helically coiled, and an outer surface, inclosing said core, comprising a plurality of helically coiled wires wound around upon the bearing surfaces formed by the convolutions of the helical coil of the core to form a conductor tube.

4. A lightning conductor comprising a hollow self-sustaining wire-supporting core formed from a flat flexible metal strip helically coiled, and an outer surface, inclosing said core, comprising a plurality of helically coiled wires wound around upon the bearing surfaces formed by the convolutions of the helical coils of the core and across the gaps between the alternate convolutions of the coil to form a conductor tube.

1,153,618. ARM FOR MILLING-MACHINES. JOHN GOETZ, West Allis, Wis., assignor to The Kempsmith Manufacturing Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 13, 1914. Serial No. 824,867. (Cl. 90—11.)



1. In a milling machine, a frame, an adjustable cylindrical arm slidably fitting in the frame and provided with a flat surface lengthwise thereof of uniform depth, a cylindrical pin slidably mounted in the frame through an opening intercepting the opening in which the arm is fitted, said pin being provided with a flat surface at an angle to its axis and fitting against the flat surface of the arm to hold it in position, and an arbor support carried by the arm.

2. In a milling machine, a frame, a cylindrical arm adjustably fitting on the frame and having a flat surface of uniform depth extending lengthwise thereof, a cylindrical pin fitting in the frame and crossing the arm, said pin having a flat surface oblique to the axis thereof, the flat surface of the pin fitting against the flat surface of the arm, means for moving the pin longitudinally into clamping engagement with the arm, and an arbor support carried by the arm.

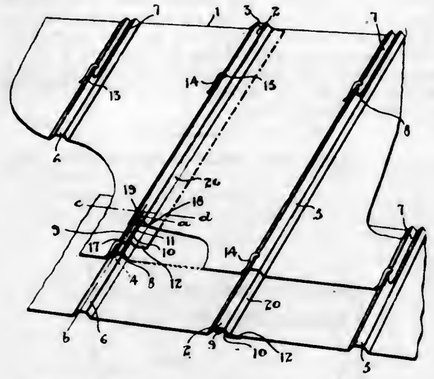
3. In a milling machine, a frame having an arm bearing, a cylindrical arm slidably mounted in the arm bearing and having a flat surface extending lengthwise thereof and of uniform depth, a cylindrical pin slidably mounted in the frame in an opening intercepting the opening in which the arm is fitted and having a longitudinal flat surface oblique to the axis thereof, the flat surface of the pin engaging the flat surface of the arm, screw studs at the ends of the pin, nuts threaded on the screw studs and engaging the opposite sides of the frame for moving the wedge pin longitudinally into and out of clamping engagement with the arm, and an arbor support carried by the arm.

4. In a milling machine, a frame, a cylindrical adjustable arm fitting in the frame and having a flat surface of uniform depth extending lengthwise thereof, a cylindrical pin slidably mounted in the frame and provided with a longitudinal flat surface at an angle to its axis to engage the flat surface of the arm and clamp the arm in place, and an arbor support slidably mounted on the arm and having a similar pin connection therewith.

5. In a milling machine, a frame, a cylindrical arm adjustably fitting in the frame, and provided with a flat surface extending lengthwise thereof and of uniform depth, a cylindrical pin fitting in the frame and crossing the arm with a longitudinal flat surface at an angle to its axis and fitting against the flat surface of the arm, means for moving the pin longitudinally to clamp the arm in place, and an arbor support slidably mounted on the arm and having a similar pin connection therewith.

[Claims 6 to 10 not printed in the Gazette.]

1,153,619. METAL SHINGLE. GEORGE ARTHUR GORDON, Toronto, Ontario, Canada. Filed Oct. 30, 1914. Serial No. 869,360. (Cl. 108—17.)



1. A metal shingle having a plurality of ribs of an inverted channel shape in cross section extending from top to bottom, one of the end ribs having a channel in the top extending the full length thereof and the intermediate rib having a channel in the top extending partway down from the upper edge of the shingle.

2. A metal shingle having a plurality of ribs of an inverted channel shape in cross section extending from top to bottom, one of the end ribs having a channel in the top extending the full length thereof the intermediate rib having a channel in the top extending partway down from the upper edge of the shingle, hook-shaped fastening members secured to said shingles in sealed contact, and holes formed in said shingles adapted to receive the hook-shaped fastening members of the under-lying shingles.

3. A metal shingle having a plurality of ribs of an inverted channel shape in cross section extending from top to bottom, the central rib having a channel formed in the top thereof at the upper end, one of the end ribs having a channel in the top extending the full length thereof, holes formed in said shingles adapted to receive the hook-shaped fastening members of the underlying shingles, and a notch cut in the bottom edge of said shingle at the lower end of the rib formed with the continuous channel, said notch being adapted to fit around the fastening hook on the lower course of shingles.

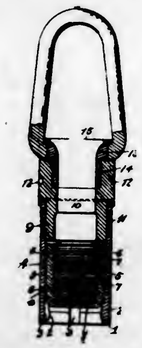
4. A metal shingle having a plurality of ribs of an inverted channel shape in cross section, extending from top to bottom, the rib between the end ribs having a V-shaped channel formed in the center thereof at the upper end, the lower end of said channel being sloped outwardly to merge into the top of said rib, and one of the end ribs having a V-shaped channel in the center extending the full length thereof and adapted to coincide with the V-shaped channel at the upper end of the intermediate rib of underlying shingle of the next lower course.

1,153,620. SHIPPING-CASE FOR EGGS. HARRY C. HACKETT, Kansas City, Mo., assignor of two-thirds to George W. Anderson and Joseph P. Fitzgerald, Kansas City, Mo. Filed Jan. 22, 1914. Serial No. 813,689. (Cl. 229—29.)



In a shipping case for eggs, two boxes, one removably and slidably mounted in the other, and two sets of tubular containers respectively mounted in said boxes and secured to the bottoms thereof, said sets of containers being respectively provided with yielding seats having holes adapted to respectively receive the ends of eggs held in said containers, the containers of one set being disposed respectively in longitudinal alinement, with the containers of the other set, the containers of opposite sets being arranged in pairs, each pair being adapted to contain an egg.

1,153,621. CABLE-GRIP. WILLIAM HUTCHINGS, Eveleth, Minn. Filed Mar. 18, 1909. Serial No. 484,107. (Cl. 24—126.)



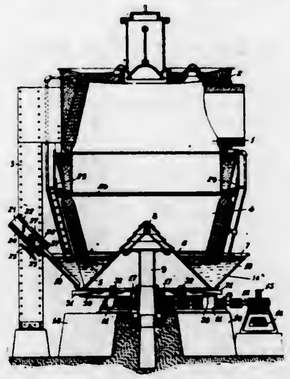
A cable grip comprising a tube having an internally beveled or constricted lower end, with vertial grooves formed at intervals in the beveled or constricted end, a plurality of gripping members having internal teeth and tapering beveled lower ends, said ends adapted to rest upon the constricted end of the tube in order to frictionally force said members together at the bottom, the inner diameter of the gripping members when connected together being less than the diameter at the top of said members, a plurality of elastic bands connecting the several members together, lugs connected to the outer surface of said members adapted to fit and be guided in the grooves in the tube and prevent the members from rotating, and means to sustain the pulling strain secured at the upper end of the tube for confining the gripping members therein.

1,153,622. FIRE-ESCAPE. OTTO IHDE, Topeka, Kans. Filed Oct. 24, 1914. Serial No. 868,423. (Cl. 228—6.)



In a folding ladder of the class described, the combination of a yoke, said yoke formed from a single strand of wire and comprising a central loop having an eye coiled upon each side thereof, said loop being adapted to be attached to a supporting structure, a ladder secured to the lower portions of said eyes, a cable fixedly secured to said eyes contiguous to the base of said loop, the curvatures of said eyes and loop being adapted to retain the elements connected thereto in their correct positions upon the yoke, thereby imparting an even strain to the yoke and thus prevent the same from pulling out of shape when the same is in use.

1,153,623. GAS-PRODUCER. EBENEZER A. W. JEFFERIES, Worcester, Mass., assignor to Morgan Construction Company, Worcester, Mass., a Corporation of Massachusetts. Filed Apr. 1, 1909. Serial No. 487,355. (Cl. 48—66.)



1. In a gas producer, the combination with a combustion chamber, of an ash hopper, an ash pan spaced below said hopper provided with flaring sides inclosing the lower end of said hopper, and a central cone forming a substantially triangular trough for ashes and a stationary narrow blade entering said trough with one edge parallel with and contiguous to the flaring side of said ash pan, with the width of said blade less than the space between the flaring side of the ash pan and the opposing wall of the ash hopper.

2. In a gas producer, a combustion chamber, an ash pan spaced below said chamber provided with an annular trough for ashes triangular in cross section and having flaring sides, means for rotating said pan, a narrow stationary blade entering said annular trough, having parallel edges with one of its edges in contact with the flaring side of the ash pan.

3. In a gas producer, a combustion chamber, an ash pan spaced below said chamber provided with an annular trough for ashes triangular in cross section, a narrow stationary blade entering said trough with one of its edges in contact with the flaring side of the ash pan and means for raising and lowering said blades.

4. A gas producer, having a rotating ash pan, diverging shafts in the same horizontal plane beneath said ash pan, means carried by said shaft for supporting said pan and imparting rotation thereto, means for connecting the inner ends of said diverging shafts, and means for rotating one of said diverging shafts.

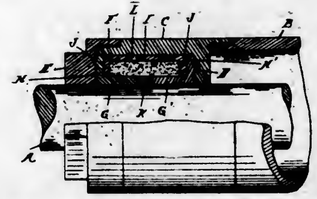
5. A gas producer, having a rotating ash pan, rolls supporting said ash pan, diverging shafts in the same horizontal plane carrying said rolls, a bevel gear on the inner end of each diverging shaft, intermediate pinions connecting said gears, and means for rotating one of said diverging shafts.

[Claims 6 to 18 not printed in the Gazette.]

1,153,624. WATERPROOF SELF-LUBRICATING BEARING FOR PROPELLER-SHAFTS, &c. JEREMIAH P. JOHNSON, Detroit, Mich. Filed Oct. 22, 1914. Serial No. 868,024. (Cl. 64—24.)

1. A shaft bearing, comprising a member having a portion bearing upon the shaft and a recessed portion, a detachable cap for closing said recess and also bearing upon said shaft, a sleeve within said recess having outwardly-extending flanges at the opposite ends thereof, and a co-operating member fitting the outer wall of the recess provided with inwardly-extending flanges, said members constituting a recess for containing the lubricant.

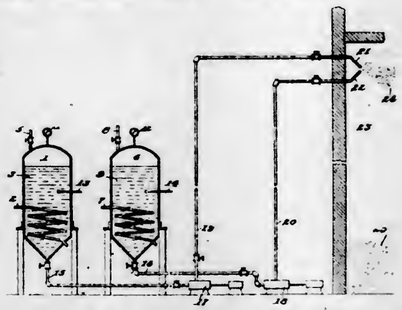
2. A shaft bearing, comprising a recessed member having a portion bearing upon the shaft, a cap for closing said recess and also bearing upon the shaft, and sections within said recess for lining the same and containing lubricant.



3. A shaft bearing, comprising a recessed member having a portion bearing on said shaft, a cap for closing the recess and also bearing upon the shaft, and an inner assembly comprising members respectively fitting the shaft and outer wall of the recess, having oppositely-extending overlapping flanges at their ends and the space within said members being filled with lubricant.

4. A shaft bearing, comprising a recessed member having a portion bearing upon the shaft, a cap for closing said recess and also bearing upon the shaft, a pair of sleeves having a tapering engagement with each other and at their opposite ends outwardly-extending flanges for fitting within the recess, and a member fitting the outer wall of the recess having inwardly-extending flanges overlapping the flanges of said sleeves, the space between said member and sleeves being filled with lubricant.

1,153,625. PROCESS FOR MANUFACTURING SOAP POWDER. EDWIN CUNO KAYSER, Beau Sejour, Island of Jersey, assignor to the Procter and Gamble Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 14, 1912. Serial No. 731,263. (Cl. 87—16.)



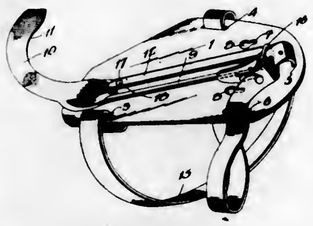
1. The process of producing soap powder, which comprises causing spray of dissolved carbonate of soda or caustic soda, singly or in mixture, to mingle with and react upon spray of fluid fatty acid, and controlling the conditions to obtain directly, as a reaction product, a powdered soap.

2. The process of producing soap powder, which comprises causing spray of dissolved carbonate of soda or caustic soda, produced by nozzle action, to mingle with and react upon spray of fluid fatty acid, produced in the same manner, and controlling the conditions to obtain directly, as a reaction product, a powdered soap.

3. The process of producing soap powder, which comprises causing spray of dissolved carbonate of soda or caustic soda, produced by ejecting from a nozzle solutions

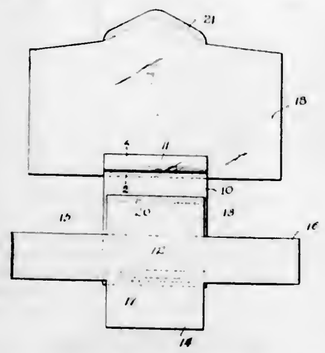
heated above the normal boiling point, to mingle with and react upon spray of fluid fatty acid, and controlling the conditions to obtain directly, as a reaction product, a powdered soap.

1,153,626. PRUNING-KNIFE. JAMES H. KELLER, Covington, Okla. Filed June 18, 1913. Serial No. 774,393. (Cl. 30—9.)



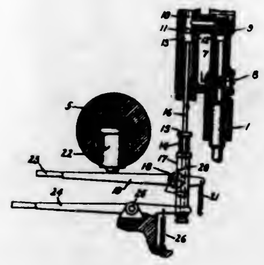
A pruning knife comprising a plate adapted to lie flat upon the palm of the operator's hand, a strap opening being located opposite the position of the operator's little finger and opposite the forefinger and at opposite points within the wrist end of the plate, a screw opening further being located at a point adjacent to said first mentioned strap opening and squarely opposite the position of the operator's third finger, of a flat bar ending at one end in a recurved hook knife a threaded opening being provided near the base of said knife, a stud having a head secured to the end of said bar opposite said hook knife, a strap crosswise secured within said strap openings, a screw within said screw opening and held within said threaded opening, said plate being provided with a plurality of apertures spaced radially relative to said screw opening each communicating with an access opening the head of said stud being adapted to pass through one of said access openings said stud being held within one of said apertures, whereby said bar is adjustably secured with its knife hook projecting beyond the edge of said plate, as and in the manner shown.

1,153,627. MAILING-TUBE. JOHN KLEGER, Marsbland, Oreg., assignor of one-half to C. H. Stockwell, Jr., Klatskanie, Oreg. Filed Apr. 9, 1914. Serial No. 830,735. (Cl. 229—92.)



A mailing receptacle including an oblong body capable of being rolled into tubular form, an envelop device carried by the body, the said envelop device including a substantially rectangular body portion secured intermediate its ends to the body adjacent one end thereof, the said body having its opposite extremities free and providing side flaps, and laterally extending flaps projecting from the longitudinal side edges of the said body portion substantially midway the ends thereof and contiguous to the adjacent end of the said first mentioned body, the said last mentioned flaps being of a width less than the length of the body portion of the envelop device and being adapted to coact with each other and with said first mentioned flaps to completely inclose the article to be mailed, and a substantially rectangular wrapper carried by the extremity of the body opposite the envelop device, the said body being connected substantially midway its ends to one longitudinal edge of the wrapper with the wrapper normally projecting laterally beyond the adjacent end of the body, the wrapper being of a length considerably greater than the width of the body.

1,153,628. COMBINED PUMP AND EMERGENCY GOVERNOR. BERNHARD KRÄMER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Dec. 2, 1912. Serial No. 734,469. (Cl. 123—140.)



1. In a pump, the combination of a cylinder, a plunger therein, suction and discharge valves for the cylinder, means forming a by-pass connecting the discharge side of the pump at a point beyond the discharge valve to a region of lower pressure, a valve for said by-pass, a spring that actively opposes the opening of such valve, and means for suddenly relaxing said spring.

2. The combination with an internal combustion engine, of a pump for supplying liquid fuel thereto having suction and delivery valves, a by-pass valve on the discharge side of the delivery valve controlling the passage of fluid from the delivery to the suction side of the pump, a spring that normally holds the valve against its seat, an abutment for the spring, and means for quickly removing the abutment to relax said spring.

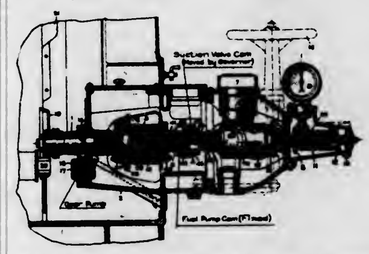
3. The combination with an internal combustion engine, of a pump for supplying fuel thereto comprising a cylinder, a plunger therein, suction and discharge valves for the cylinder, means forming a by-pass connecting the discharge side of the pump at a point beyond the discharge valve to a region of lower pressure, a valve for said bypass, a spring that actively opposes the opening of such valve, and speed responsive means for relaxing said spring when the engine attains excessive speed.

4. The combination with an internal combustion engine, of a pump for supplying it with liquid fuel, said pump having a bypass leading from the delivery to the suction side, a valve for said bypass, a spring for seating said valve, a movable abutment for said spring, a detent for said abutment, and speed responsive means for releasing said detent when the engine attains excessive speed.

5. The combination with an internal combustion engine, of a pump for supplying it with liquid fuel, said pump having a by-pass leading from the delivery to the suction side, a valve for said bypass, a spring for seating said valve, a sleeve on the valve stem serving as an abutment of said spring, a pawl engaging a shoulder on said sleeve, and a speed-responsive device adapted to trip said pawl.

[Claims 6 to 12 not printed in the Gazette.]

1,153,629. CONTROLLING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. BERNHARD KRÄMER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Feb. 10, 1913. Serial No. 747,401. (Cl. 123—179.)



1. In an engine controlling mechanism, the combination of a rotating member, a fuel pump driven by the member, valve means actuated by the member for controlling the pump, means actuated by the member during the starting period for cutting off the air blast used to inject fuel into the engine, a starting valve means actuated by the member, and means for varying the action of the member on the pump valve means and on the starting valve means.

2. In an engine controlling mechanism, the combination of a rotating member, a fuel pump driven by the member, a valve controlling the pump, an actuator for the valve, a valve active during the starting period for cutting off the air blast used to inject fuel into the engine, a starting means, said valves and actuator being moved by the member, and means for varying the effective action of said member on the valves and actuator.

3. In an engine controlling mechanism, the combination of a rotating member, a pump driven by the member, a valve controlling the pump, a valve active during the starting period for cutting off the blast air used to inject fuel into the engine, a starting valve, and cams driven by the member for actuating the valves.

4. In an engine controlling mechanism, the combination of a rotating member, a fuel pump driven by the member, a controlling valve for the pump, a valve active during the starting period for controlling the blast air used to inject fuel into the engine, a starting means, cams driven by the member for actuating the pump valve and said starting means, a speed governor for adjusting one of the cams to vary the action of the pump valve, and a means for adjusting another of the cams to regulate the action of the starting means.

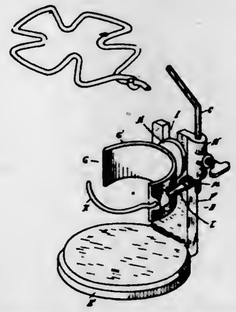
5. In an engine controlling mechanism, the combination of a means supplying fuel to the engine, means for starting the engine, a valve independent of the engine valves for controlling the blast air used to inject fuel into the engine, a shaft that actuates the starting means, and means actuated by the shaft for shutting the blast air valve when the starting means is in operation.

[Claims 6 to 20 not printed in the Gazette.]

1,153,630. TORCH-HOLDER. CHARLES R. LAMBERT, Detroit, Mich., assignor to Clayton & Lambert Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed May 4, 1912. Serial No. 695,037. (Cl. 248—41.)

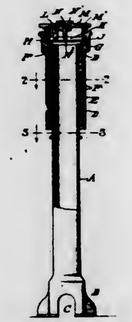
1. In a support for a hand torch, a stand comprising a base, an upright at one side thereof having a vertically slotted bearing, a segmental member extending laterally over said base and having a shank engaging said vertically slotted bearing, and a segment carried by said first mentioned segment and adjustable in relation thereto to clamp the torch.

2. In a support for a torch, a stand comprising a base, an upright at one side thereof, a segmental bearing projecting laterally from said upright and adjustably clamped thereto, and an opposed segment having a threaded shank engaging a socket in said first mentioned segment and having a clamping nut for securing the same to the torch.



3. In a support for a torch, a stand comprising a base, an upright at one side thereof, a segmental bearing projecting laterally from said upright over said base and provided with means for adjustably clamping it to said upright, a second segment adjustable upon said first segment to clamp said torch, a work support having a vertically extending shank, and a socket on one side of said upright with which the shank of said work support is adjustably engaged.

1,153,631. WATER OR GAS BOX. EDWARD S. LANDIS, Reading, Pa. Filed Apr. 1, 1914. Serial No. 828,758. (Cl. 137—13.)

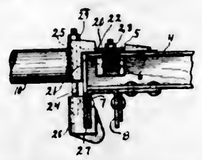


In combination with the box having an annular interior channel near its upper end, the cap fitting upon said box, the lug depending from said cap and away from its center, the lever pivoted to said lug to provide a short free end and a long locking arm to engage the said annular channel of the box, and a screw in the cap engaging the long arm of the lever to secure the said lever in locked position and to effect its release.

1,153,632. AUTOMOBILE-BUMPER. FRIEDRICH LEDERER, Milwaukee, Wis. Filed Dec. 2, 1914. Serial No. 875,063. (Cl. 213—39.)

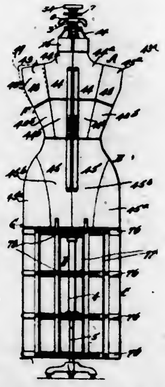
1. In combination, with an automobile having a pair of longitudinally extending frame members, a radiator mounted thereon, studs for securing said radiator to said frame members, and a transverse frame-member connecting said longitudinally extending frame members together, of an automobile bumper comprising a connecting member having vertically extending bores therein, extensions in said connecting members having apertures therein for receiving the studs which secure the radiator to the frame, means for locking the connecting members against lateral vertical movement comprising hook members for engaging the transverse frame member, means slidably mounted in the

bores of said connecting members and secured to said hook members, means for locking said slidably mounted means against movement, and a buffer car carried by said connecting members.



2. In combination, with an automobile having a pair of longitudinally extending frame members, a radiator mounted thereon, studs for securing said radiator to said frame member, and a transverse frame member connecting said longitudinally extending frame members together, of an automobile bumper comprising connecting members, extensions on said connecting members having apertures therein for receiving the studs which secure the radiator to the frame, means for locking the connecting members against lateral and vertical movement comprising hook members for engaging the transverse frame-member, studs connected to said hook members movably connected to the connecting members, means for locking said studs against movement, and a buffer bar carried by said connecting members.

1,153,633. SECTIONAL GARMENT-FORM. ISAAC LEVIN, Brooklyn, N. Y. Filed May 16, 1914. Serial No. 838,936. (Cl. 223—18.)



1. In a garment form, a hip section consisting of relatively fixed and independently movable subdivisions, in combination with longitudinally slotted horizontal straps, each of which is pivoted to the lower part of one of said fixed subdivisions and connected through its slot by an adjusting screw to the lower part of one of said movable subdivisions, and additional slotted straps, each of which is arranged obliquely downward and outward and connected at its upper end to one of said fixed subdivisions and connected through its slot by an adjusting screw to the upper part of one of said movable subdivisions for the purpose set forth.

2. In a garment form, hip-section consisting of relatively fixed subdivisions and independently movable subdivisions, in combination with a bust-section, connections between said bust-section and hip-section for adjusting the latter vertically, longitudinally slotted horizontal straps each of which is pivoted to the lower part of one of said fixed subdivisions and connected through its slot by an adjusting screw to the lower part of one of said movable subdivisions, and additional slotted straps, each of which is arranged obliquely downward and outward and connected at its upper end to one of said fixed subdivisions and connected through its slot by an adjusting screw to the upper part of one of said movable subdivisions for the purpose set forth.

3. A garment-form comprising a plurality of adjustable sections, means to adjust said sections, consisting of a supporting post comprising a plurality of threaded tubes one over the other, one of said tubes being provided with right and left hand threads, nuts carried thereby, links connecting said nuts and the neck portion of said form, another tube being also provided with right and left hand threads and nuts carried thereby, links connecting said nuts and the hip portion of said form, means located at the top of the form to rotate the first named threaded tube, means operable from the top of the form adapted to rotate the other tube, and a threaded tube to move said previously named tubes away or toward each other to adjust the length of the waist portion of the form.

4. In combination with a garment-form having a hip portion and a bust portion adapted for vertical adjustment relative to each other adjustable connecting devices between said hip portion and bust portion, a supporting post therefor consisting of a tubular member, a threaded nut carried thereby, a threaded post engaging said nut, means carried by said threaded post connecting said post and the neck portion of the form, and means to rotate said threaded post whereby said bust and hip portions can be adjusted relative to each other.

5. In combination with a sectional garment-form, an adjustable support consisting of a tube provided with right and left hand threads, a threaded nut carried thereby, a hollow threaded post engaging the said nut, means to rotate same, a plug carried by said tube provided with an angular opening, an angular rod passing loosely through said hollow post and slidably engaging said plug, means to rotate said rod, a thrust-collar carried by said rod and abutting the lower end of said threaded post, a sleeve surrounding said threaded post provided with right and left hand threads, and means to rotate said sleeve.

[Claims 6 to 16 not printed in the Gazette.]

1,153,634. COLLAPSIBLE GARMENT-FORM STAND. ISAAC LEVIN, Brooklyn, N. Y. Filed Nov. 7, 1914. Serial No. 870,727. (Cl. 223—18.)



1. An adjustable standard for garment-forms consisting of a pedestal, a fixed post carried thereby, a tubular post slidably mounted on said fixed post, and adapted for rotation thereupon, a clutch consisting of a plurality of coöperating wedge-blocks rotatably supported by said fixed post, and means within the fixed post to actuate said clutch, said means normally contacting with but not secured to said clutch.

2. An adjustable standard for garment-forms consisting of a pedestal, a fixed post carried thereby, a tubular post slidably mounted on said fixed post, and adapted for rotation thereupon, a clutch consisting of a plurality of cooperating members rotatably supported by said fixed post, a rod contacting with one of said clutch-members, and a treadle carried by the pedestal to actuate said rod.

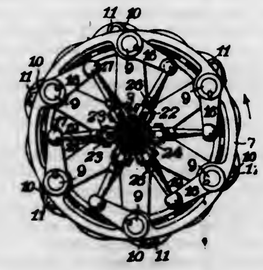
3. An adjustable standard for garment-forms consisting of a fixed tubular post, a tubular post slidably mounted on said fixed post and adapted for rotation thereupon, a clutch carried by said fixed post consisting of a longitudinally movable member adapted for rotation, a cooperating clutch-member adjacent thereto also adapted for rotation, means to prevent longitudinal movement of the last named clutch-member, and means within the fixed post to actuate the longitudinally movable member, said means normally contacting with but not secured to said member.

4. An adjustable standard for garment-forms, consisting of a pedestal, a plurality of slidably connected posts carried thereby, clutches to engage said slidably connected posts, means to release the lower of said clutches, means to lock said lower clutch, a treadle to operate said lower clutch-releasing means, and means to maintain the upper clutch normally locked, said lower clutch being arranged to release the upper clutch when both clutches are brought into contact.

5. An adjustable standard for garment-forms consisting of a pedestal, a fixed post carried thereby, a tubular post slidably mounted on said fixed post, and adapted for rotation thereupon, a clutch consisting of a plurality of cooperating members rotatably supported by said fixed post, a rod contacting with one of said clutch-members, and means to automatically limit the outward movement of said tubular post.

[Claims 6 to 18 not printed in the Gazette.]

1,153,635. FRICTION-CLUTCH. NATHANIEL LOMBARD, Worcester, Mass., assignor to Holyoke Machine Company, Worcester, Mass., a Corporation of Massachusetts. Filed May 18, 1912. Serial No. 698,179. (Cl. 192—5.)



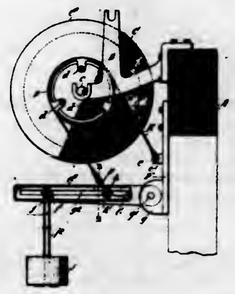
1. In a friction clutch, a driving member and a driven member, one of said members comprising a series of shoes disposed in surrounding relation to the other member, and each of said shoes being pivotally supported at a point offset from its center, and means for constraining the opposing ends of adjacent shoes to move toward or from said other member in unison.

2. In a friction clutch, a driving member and a driven member, one of said members comprising a series of pivotally supported shoes disposed in surrounding relation to the other member, the opposing ends of said shoes being flexibly interlocked, and means for moving said shoes into frictional contact with said other member.

3. In a friction clutch, a driving member and a driven member, one of said members comprising a series of shoes, each of said shoes being pivotally supported at a point offset from its center, and having a flexible interlocking connection at each end with adjacent shoes of the series, and means for moving said shoes into frictional contact with the other member.

4. In a friction clutch, a driving member and a driven member, one of said members comprising a series of pivotally supported shoes adapted to be moved simultaneously into frictional contact with the other member, and means for constraining the opposing ends of said shoes to move toward or from said other member in unison.

1,153,636. BRAKE MECHANISM FOR LOOM LET-OFFS. THOMAS J. LONGDEN, Chelsea, Mass. Filed Jan. 21, 1911. Serial No. 603,824. (Cl. 74—37.)



1. The combination with a suitable support, of a let-off comprising a rotary element mounted on said support, a friction wheel of less diameter than said rotary element and mounted thereon, a bracket mounted on said support, a belt passing partly around said friction wheel and one end of which is attached to said bracket, a lever pivotally attached to said bracket and provided with a slot, a fixed but adjustable pin adapted, when loosened, to slide in said slot and to which slidingly adjustable pin the other end of said belt is attached, and a weight adjustably connected with said lever beyond the sliding point of attachment of said belt to said lever afforded by said pin and slot.

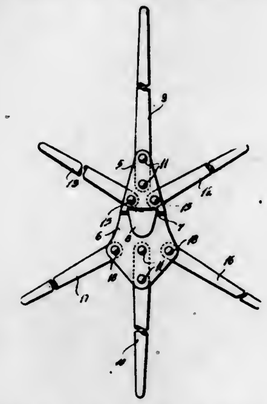
2. The combination with a suitable support, of a let-off comprising a rotary element mounted on said support, a friction wheel of less diameter than said rotary element and mounted thereon, a bracket mounted on said support, a belt passing partly around said friction wheel and one end of which is attached to said bracket, a lever pivotally attached to said bracket and provided with a slot, a flange on said lever, at a distance from said slot, thus providing a groove, a pin or bolt to which the other end of said belt is attached and which pin or bolt is located in said slot so as to be slidingly adjustable therein, a second pin or bolt slidingly adjustable in said slot, a weight suspended from said last-named pin or bolt, and securing nuts on said pins or bolts and which are housed in said groove so that they can be turned only by a special key or wrench.

1,153,637. FOLDING KITE. HARVEY P. LOVEJOY, Los Gatos, Cal., assignor, by direct and mesne assignments, of one-half to Albert L. Hollis and one-half to Arthur C. Carr, San Francisco, Cal. Filed Sept. 21, 1914. Serial No. 862,652. (Cl. 244—22.)

1. In a device of the character described, the combination of the central body member hinged upon its associated half, a catch member correlated with the body member, ribs fixed to the body member and ribs pivotally carried by said bdy member.

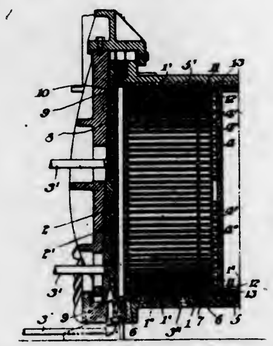
2. In a device of the character described, the combination of a central body member, one half of said central

body member hinged upon its associated half, a catch member correlated with the body member, ribs fixed to



the body member and a plurality of slotted ribs removable from the body member.

1,153,638. PRESS. ANTHONY SAUNDERS MORRIS, Haverford, Pa. Filed Feb. 6, 1915. Serial No. 6,444. (Cl. 100—50.)



1. The combination with a press having a cylinder containing drainage channels, of a screen comprising a ring and bars fixed thereto, said bars being separated by spaces communicating with said channels.

2. The combination with a press having a cylinder containing drainage channels, of a sectional screen comprising rings having separable sections and bars fixed to said sections, said bars extending longitudinally of said cylinder and separated by spaces communicating with said channels.

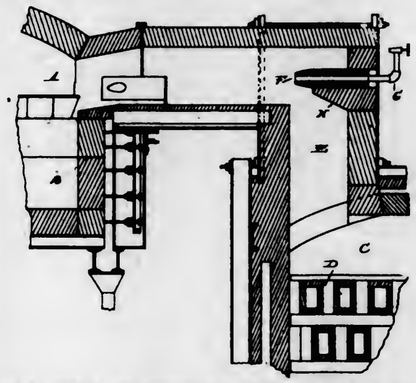
3. The combination with a press having a cylinder containing circular drainage channels and circular seats, of a sectional screen comprising rings having separable sections in said seats and bars fixed to said sections, said bars bearing against said cylinder, extending longitudinally thereof, and separated by spaces communicating with said channels.

4. The combination with a press having a head provided with drainage channels, of a screen comprising bearing means seated in said head and bars fixed to said means, said bars being separated by spaces communicating with said channels.

5. The combination with a press having a head provided with drainage channels, of a ring seated in said head, and spaced bars fixed to said ring.

[Claims 6 to 9 not printed in the Gazette.]

1,153,639. INJECTOR-BURNER FOR FURNACES. ANTON NELLES, Neuenahr, Germany. Filed Sept 2, 1914. Serial No. 862,644. (Cl. 158—7.)



In a furnace, the combination with a combustion chamber, of means exterior to the furnace for preheating the air to support combustion, a conduit through which the preheated air is conducted to the combustion chamber having portions extending at right angles, a nozzle for the admission of gaseous fuel, projecting toward the furnace in the conduit at the juncture of said portions, and communicating with a passage through the conduit wall, and a member projecting from said wall, supporting the nozzle and restricting the conduit adjacent said nozzle.

1,153,640. DIASTASE PREPARATIONS AND METHOD OF MAKING SAME. ISIDOR POLLAK, Vienna, Austria-Hungary. Filed May 11, 1914. Serial No. 837,866. (Cl. 99—1.)

1. In the process of making diastase preparations by leaching malt and concentrating the extract, the improvement which comprises increasing the diastatic activity of said extract by adding a reducing agent thereto.

2. In the manufacture of diastase preparations the step of extracting malt with a solvent containing a small amount of a strong reducing agent, and thereafter concentrating the extract in presence of said added reducing agent.

3. In the manufacture of diastase preparations, the step of concentrating the diastase solution in the presence of a relatively small amount of a strong reducing agent.

4. In the manufacture of diastase preparations, the step of concentrating the diastase solution in the presence of a relatively small amount of a thiosulfate.

5. The process of making diastase preparations, which comprises extracting malt with water containing a small amount of a thiosulfate, and concentrating the extract.

[Claims 6 to 9 not printed in the Gazette.]

1,153,641. MALT EXTRACT AND METHOD OF MAKING SAME. ISIDOR POLLAK, Vienna, Austria-Hungary. Filed May 11, 1914. Serial No. 837,867. (Cl. 99—11.)

1. A process of making diastase preparations, which comprises repeatedly extracting the malt, in the presence of carbonate of lime, thereafter saccharifying the extracted malt at a temperature of 65 to 66° C., separating the wort from the extracted malt, adding the wort to the extract, and evaporating the liquid thus produced in a vacuum, together with a small amount of a strong reducing agent, until the liquid reaches the consistency of the syrup.

2. A process of producing a stable malt extract of high activity which comprises repeatedly extracting the same bulk of malt with successive portions of water, in the continued presence of an agent capable of preventing the accumulation of considerable percentages of free organic

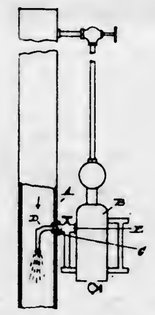
acids, thereafter saccharifying the extracted malt, separating the wort from the spent malt, adding the aqueous extract to the wort, and adding a strong reducing agent, and thereafter concentrating the said mixed liquid, at a relatively low temperature.

3. In the preparation of malt extracts, the step of successively extracting a body of malt with successive quantities of water, in the continued presence of a material capable of preventing accumulation of free acids therein.

4. In the preparation of malt extracts, the step of leaching malt in the continued presence of calcium carbonate.

5. As a new article of manufacture the herein described malt extract, said extract containing a relatively small amount of a salt of sulfoxylic acid.

1,153,642. LUBRICANT-ATOMIZER. GEORGE PRISKEY, Detroit, Mich. Filed Jan. 16, 1913. Serial No. 742,388. (Cl. 184—50.)



1. The combination with a steam pipe, of a lubricant atomizer therein, the atomizer including a nozzle having a discharge end tapering toward its outer extremity, a vertically extending bore, and an opening at the top of the nozzle of smaller size than the bore of the nozzle communicating therewith and with the interior of the steam pipe.

2. In an atomizer, a nozzle having a bore extending therethrough and an opening leading to the top of the nozzle of smaller size than and communicating with the bore, said nozzle having a discharge end provided with a plurality of elongated tapering openings closed at their outer ends.

3. In an atomizer, a nozzle having a bore extending therethrough, and an opening of smaller size than and communicating with the bore leading exteriorly of the nozzle opposite the discharge end of the latter, and a pipe of substantially the same cross sectional area as the said opening extending therefrom to the interior of the nozzle.

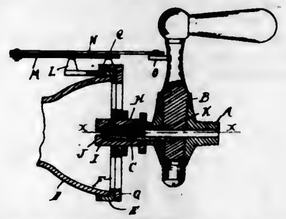
4. In an atomizer, a nozzle having a discharge end formed by a plurality of spaced prongs extending inwardly with their free ends in engagement.

5. In an atomizer, a nozzle having a discharge end formed by a plurality of spaced prongs extending inwardly with their free ends in engagement, the sides of the prongs being beveled and abutting to form a closed point for the nozzle.

[Claims 6 and 7 not printed in the Gazette.]

1,153,643. AUTOMATICALLY-ADJUSTABLE MIXER FOR GAS-BURNER VALVES. ALFRED J. REEDY, Battle Creek, Mich., assignor to A-B. Stove Company, Battle Creek, Mich., a Corporation of Michigan. Filed Mar. 4, 1915. Serial No. 12,151. (Cl. 158—119.)

1. The combination with a gas cock, of a gas discharge nozzle projecting therefrom having its free end split, and longitudinally adjustable through rotative adjustment of the cock, and a member inclosing said nozzle having an outlet alined with that of the nozzle and having a portion of its interior surface tapered adjacent said outlet, longitudinal adjustment of the nozzle toward said outlet serving to reduce the passage through the nozzle through contact of the nozzle extremity with said tapered surface.

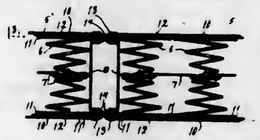


2. The combination with a gas cock, of a nozzle projecting therefrom having its free end split, and means for exerting pressure transversely upon the split end of the nozzle to reduce its discharge area when the cock is rotatively adjusted toward its closed position.

3. The combination with a gas cock, of a nozzle projecting therefrom having its free end split, and a member having an outlet alined with the nozzle outlet and having a tapered surface adjacent said outlets, a relative longitudinal motion of said nozzle and said member being actuated by the valve when the same is rotatively adjusted, whereby the discharge area of the nozzle is reduced through contact with said tapered surface.

4. The combination with a gas cock, of a nozzle projecting therefrom having its free end split and normally contracted means for increasing or decreasing the contraction of the nozzle proportionately as the cock is being closed or opened, an air tube into which said nozzle extends, and means actuated by the cock for varying the supply of air to said tube.

1,153,644. MATTRESS. JOHN E. RILLING, Milwaukee, Wis. Filed Nov. 7, 1914. Serial No. 870,724. (Cl. 5—13.)



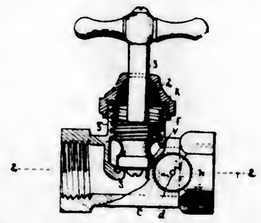
1. A separable mattress comprising a plurality of mattress sections, each of said sections comprising a plurality of springs joined together and upper and lower flexible coverings secured to the upper and lower portions of said springs, eyelets passing through said coverings and through the springs adjacent the side edges of each section, and means passing through the eyelets for securing adjacent sections together to produce a unitary spring mattress.

2. A mattress comprising a plurality of separate mattress sections, each of said sections comprising a plurality of springs and flexible coverings secured to said springs, and means passing through said coverings and through the springs adjacent the bottom and top edges of the sides of adjacent sections to detachably connect said sections together to produce a unitary spring mattress.

1,153,645. STOP AND WASTE COCK. HENRY F. SCHROEDER, Cleveland, Ohio. Filed Feb. 5, 1913. Serial No. 746,269. (Cl. 137—4.)

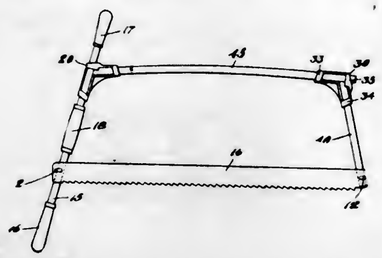
1. In stop and waste cocks, a body having a main water passage and valve seat, a valve chamber and a reciprocable valve opposite said seat, a waste nipple projecting outward from said body between one end and the transverse median line of said body and in the same plane approximately as the valve seat, and a waste valve for said waste nipple.

2. In stop and waste cocks, a chambered body having opposite ends internally screw-threaded and a valve seat and neck on the transverse median line of said body and a waste nipple projecting from the side of said body at one side of said median line beneath the plane of said valve seat, a valve for said valve seat and a valve stem extending through said neck, and a screw valve for said waste-nipple having a central waste passage and an outer finger-gripping member.



3. In a stop and waste cock, a chambered coupling body having a neck and a main valve seat centrally between its ends and a radially-projecting nipple at one side of the longitudinal median line of said body between one of its ends and the valve seat and beneath the plane of said seat, a reciprocable valve within said neck opposite the main valve seat, and a rotatable screw valve for said nipple to control the flow of waste therefrom.

1,153,646. WOOD-SAW FRAME. NATHANIEL H. SHAW, Boston, Mass. Filed Mar. 23, 1914. Serial No. 826,550. (Cl. 145—32.)

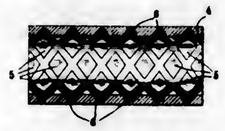


1. As a new article of manufacture the saw-frame herein described comprising a handle-bar having securely arranged thereon handles and means to connect the bar with a blade and a one-piece angular-shaped coupling, a rear end-bar having securely arranged thereon means to connect it with a blade and a one-piece angular-shaped coupling each coupling having a channel arranged beyond the end of the bar upon which it is arranged, said channels being arranged in alinement and a resilient beam, the end-portions of which enter said channels and are frictionally held therein by the force applied when assembled.

2. As a new article of manufacture, the saw-frame herein described comprising a handle-bar having thereon handles, and means to connect it with a blade and a one-piece angular-shaped coupling, a rear end-bar having thereon means to connect it with a blade and a one-piece angular-shaped coupling, and a resilient beam engaging said couplings, each coupling comprising an angularly formed channeled body-portion and straps, the channels being arranged at an obtuse angle and the straps being arranged beyond the ends of the channels and in planes above the bottoms of the channels.

3. As a new article of manufacture, the saw-frame herein described comprising a handle-bar having thereon handles, and means to connect the bars with a blade and a one-piece angular-shaped coupling, a rear end coupling bar having thereon means to connect it with a blade and a one-piece angular-shaped coupling, each coupling comprising a channeled body-portion and straps, the channels in the body-portion being arranged at an obtuse angle and the straps being arranged beyond the ends of the channels and in planes above the bottoms of the channels, the strap at the junction of the two channels being extended over both channels.

1,153,647. SELF-LUBRICATING BEARING. GEORGE O. SMALLEY, Boundbrook, N. J., assignor to The Graphite Lubricating Company, Boundbrook, N. J., a Corporation of New Jersey. Filed July 25, 1913. Serial No. 781,129. (Cl. 64—24.)



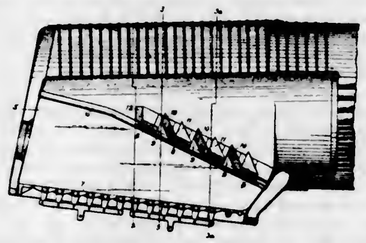
1. A bearing having a shell provided with continuous lubricating grooves formed in parallel spiral threads of coarse pitch from end to end of the bearing and with similarly formed continuous spiral threads of coarse pitch extending in an opposite direction from end to end of the bearing, all of said threads located entirely within the metal of the shell and intersecting each other, and a lubricating material pressed into and filling said grooves.

2. A bearing having a shell provided with two series of continuous right-hand spiral grooves of thread form of coarse pitch and a series of left-hand spiral grooves of thread form of coarse pitch, one of said series of grooves intersecting the other and providing intermediate metallic bearing studs, all of said grooves terminating within the metal of the shell and each of said studs being completely surrounded by the intersecting grooves and a compressed lubricating material filling said grooves.

3. A bearing provided with a right-hand spiral groove of thread form of coarse pitch and a left-hand spiral groove of thread form and of coarse pitch, the pitch of said grooves being the same and said grooves all terminating within the material of the shell, said grooves intersecting each other and providing intermediate the intersections bearing studs, said studs completely surrounded by the intersecting grooves and a compressed lubricating material filling said grooves.

4. A bearing having a shell provided with a series of bearing studs each completely surrounded by a compressed lubricating material and extending in a series of spiral lines of thread form completely about the interior of the shell, the lines of compressed lubricating material surrounding said studs terminating within the bearing shell.

1,153,648. BRICK ARCH FOR BOILER-FURNACES. CLEMENT F. STREET, New York, N. Y. Filed May 22, 1915. Serial No. 29,873. (Cl. 110—87.)



1. In a boiler furnace, the combination with water tubes extending longitudinally from the front of the fire box upwardly and rearwardly, of a brick arch comprising a series of longitudinal rows of bricks supported between adjacent water tubes, some of the bricks being formed of two vertical side walls and a rearwardly and upwardly inclined top wall to provide openings through the arch, the vertical side walls resting upon the water tubes.

2. In a boiler furnace, the combination with water tubes extending longitudinally from the front of the fire box upwardly and rearwardly, of a brick arch comprising a series of longitudinal rows of bricks supported between adjacent water tubes, the alternate bricks of some of the rows being formed of a rearwardly and upwardly inclined top wall and two vertical side walls resting upon the water tubes.

3. In a boiler furnace, the combination with water tubes extending longitudinally from the front of the fire box upwardly and rearwardly, of a brick arch comprising a series of longitudinal rows of bricks supported between adjacent water tubes, some of the bricks being formed of a rearwardly and upwardly inclined top wall and two vertical side walls resting upon the water tubes.

4. In a boiler furnace, the combination with water tubes extending longitudinally from the front of the fire box upwardly and rearwardly, of a brick arch comprising a series of longitudinal rows of bricks supported between adjacent water tubes, some of the bricks being open and some closed, the open bricks being formed of two vertical side walls and a rearwardly and upwardly inclined top wall and having an interspersed relation with the closed bricks.

5. In a boiler furnace, the combination with water tubes extending longitudinally from the front of the fire box upwardly and rearwardly, of rows of bricks supported on said tubes, some of the bricks being formed of two vertical side walls and a rearwardly inclined top wall for providing openings through the arch, the vertical side walls of said bricks resting directly upon the water tubes.

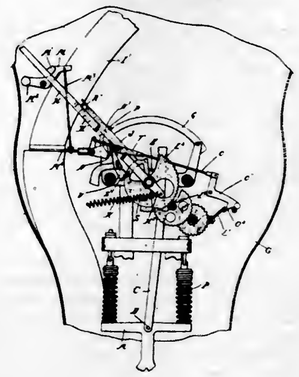
1,153,649. NUT-LOCK. JOHN M. TANNER, Kingsville, Mo. Filed Aug. 21, 1914. Serial No. 859,533. (Cl. 151—5.)



1. A nut lock, in combination with a bolt having a longitudinally extending keyway therein and a nut on said bolt, a key for locking said nut on said bolt formed of a single strand of wire one end thereof being secured in an opening in the nut and the opposite end of said strand of wire being bent to form a hook member for engagement with the keyway, and an intermediate portion of the key being arcuate and embracing the bolt in frictional engagement with the threads, whereby to assist in preventing rotation of the nut.

2. A nut lock, in combination with a bolt having a longitudinal keyway therein and a nut thereon, of a key formed of a single strand of wire having one extremity thereof in pivotal engagement with the nut and the opposite extremity formed to provide a hook for engagement in said keyway, the intermediate portion of said key being arcuate whereby frictional and positive engagement may be had with said bolt.

1,153,650. COIN-CONTROLLED WEIGHING MECHANISM. WILLIAM VANDERZIEL and JOHN TRUEMAN GOODALL, Detroit, Mich., assignors to The Caille Brothers Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 24, 1911. Serial No. 656,513. (Cl. 194—47.)



1. The combination with weighing mechanism, of a stop arm positioned thereby, an independently operated index limited in its movement by said stop arm, a notched segment adjacent to said stop arm, a dog carried by said stop arm for engaging said notched segment normally held in released position, and means on said index operating in advance of the impact thereof against said stop arm for engaging said dog with said notched segment.

2. The combination with weighing mechanism, of a rockable stop arm positioned thereby, a segment adjacent to said stop arm, a dog carried by said stop arm for engaging said segment but normally free therefrom, an independently operated index limited in its movement by said stop arm, and means on said index operating in advance of the impact against said stop arm for engaging said dog with said segment.

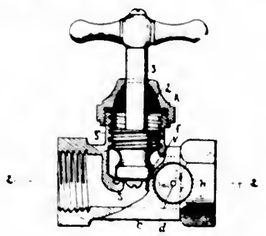
3. The combination with weighing mechanism, of a rockable stop arm positioned thereby, a segment adjacent to said stop arm, a dog carried by said stop arm for engaging said segment, means for normally holding said dog from engagement, an independently operated index limited in its movement by said stop arm, and means carried by said index for causing the engagement of said dog with said segment in advance of the impact of said index against said stop arm.

4. The combination with weighing mechanism, of a rockable stop arm positioned thereby, a notched segment adjacent to said stop arm, a dog carried by said stop arm rockable into engagement with said notched segment, a spring for holding said dog normally out of engagement with said segment, an independently operated index limited in its movement by said stop arm, and means operating in advance of the contact of said index with said stop arm for engaging said dog with said segment and maintaining the engagement thereof until the parts are restored to normal position.

5. The combination with weighing mechanism, of a rockable stop arm positioned thereby, an independently operated index limited in its movement by said stop arm, a gravity actuated latch for holding said index from movement, means operated by the impact of a coin for releasing said gravity latch, a second gravity latch for holding the first mentioned gravity latch from reëngagement, and a gravity actuated means elevated by said index and released upon the registration of said index with said stop arm, said gravity actuated means releasing said second gravity latch.

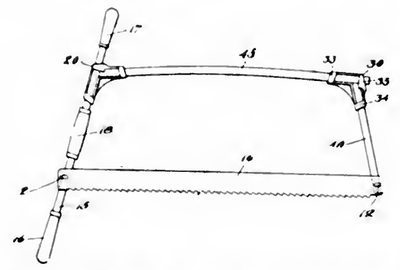
[Claims 6 to 10 not printed in the Gazette.]

2. In stop and waste cocks, a chambered body having opposite ends internally screw-threaded and a valve seat and neck on the transverse median line of said body and a waste nipple projecting from the side of said body at one side of said median line beneath the plane of said valve seat, a valve for said valve seat and a valve stem extending through said neck, and a screw valve for said waste-nipple having a central waste passage and an outer finger-gripping member.



3. In a stop and waste cock, a chambered coupling body having a neck and a main valve seat centrally between its ends and a radially-projecting nipple at one side of the longitudinal median line of said body between one of its ends and the valve seat and beneath the plane of said seat, a reciprocable valve within said neck opposite the main valve seat, and a rotatable screw valve for said nipple to control the flow of waste therefrom.

1,153,646. WOOD-SAW FRAME. NATHANIEL H. SHAW, Boston, Mass. Filed Mar. 23, 1914. Serial No. 826,550. (Cl. 145—32.)



1. As a new article of manufacture the saw-frame herein described comprising a handle-bar having securely arranged thereon handles and means to connect the bar with a blade and a one-piece angular-shaped coupling, a rear end-bar having securely arranged thereon means to connect it with a blade and a one-piece angular-shaped coupling each coupling having a channel arranged beyond the end of the bar upon which it is arranged, said channels being arranged in alinement and a resilient beam, the end-portions of which enter said channels and are frictionally held therein by the force applied when assembled.

2. As a new article of manufacture, the saw-frame herein described comprising a handle-bar having thereon handles, and means to connect it with a blade and a one-piece angular-shaped coupling, a rear end-bar having thereon means to connect it with a blade and a one-piece angular-shaped coupling, and a resilient beam engaging said couplings, each coupling comprising an angularly formed channeled body-portion and straps, the channels being arranged at an obtuse angle and the straps being arranged beyond the ends of the channels and in planes above the bottoms of the channels.

3. As a new article of manufacture, the saw-frame herein described comprising a handle-bar having thereon handles, and means to connect the bars with a blade and a one-piece angular-shaped coupling, a rear end coupling bar having thereon means to connect it with a blade and a one-piece angular-shaped coupling, and a resilient beam engaging said coupling, each coupling comprising a channeled body-portion and straps, the channels in the body-portion being arranged at an obtuse angle and the straps being arranged beyond the ends of the channels and in planes above the bottoms of the channels, the strap at the junction of the two channels being extended over both channels.

1,153,647. SELF-LUBRICATING BEARING. GEORGE O. SMALLEY, Boundbrook, N. J., assignor to The Graphite Lubricating Company, Boundbrook, N. J., a Corporation of New Jersey. Filed July 25, 1913. Serial No. 781,129. (Cl. 64—24.)



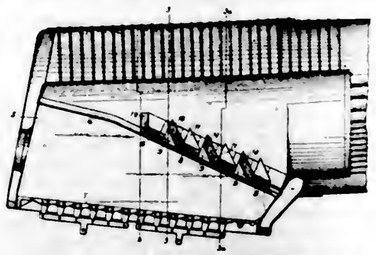
1. A bearing having a shell provided with continuous lubricating grooves formed in parallel spiral threads of coarse pitch from end to end of the bearing and with similarly formed continuous spiral threads of coarse pitch extending in an opposite direction from end to end of the bearing, all of said threads located entirely within the metal of the shell and intersecting each other, and a lubricating material pressed into and filling said grooves.

2. A bearing having a shell provided with two series of continuous right-hand spiral grooves of thread form of coarse pitch and a series of left-hand spiral grooves of thread form of coarse pitch, one of said series of grooves intersecting the other and providing intermediate metallic bearing studs, all of said grooves terminating within the metal of the shell and each of said studs being completely surrounded by the intersecting grooves and a compressed lubricating material filling said grooves.

3. A bearing provided with a right-hand spiral groove of thread form of coarse pitch and a left-hand spiral groove of thread form and of coarse pitch, the pitch of said grooves being the same and said grooves all terminating within the material of the shell, said grooves intersecting each other and providing intermediate the intersections bearing studs, said studs completely surrounded by the intersecting grooves and a compressed lubricating material filling said grooves.

4. A bearing having a shell provided with a series of bearing studs each completely surrounded by a compressed lubricating material and extending in a series of spiral lines of thread form completely about the interior of the shell, the lines of compressed lubricating material surrounding said studs terminating within the bearing shell.

1,153,648. BRICK ARCH FOR BOILER-FURNACES. CLEMENT F. STREET, New York, N. Y. Filed May 22, 1915. Serial No. 29,873. (Cl. 110—87.)



1. In a boiler furnace, the combination with water tubes extending longitudinally from the front of the fire box upwardly and rearwardly, of a brick arch comprising a series of longitudinal rows of bricks supported between adjacent water tubes, some of the bricks being formed of two vertical side walls and a rearwardly and upwardly inclined top wall to provide openings through the arch, the vertical side walls resting upon the water tubes.

2. In a boiler furnace, the combination with water tubes extending longitudinally from the front of the fire box upwardly and rearwardly, of a brick arch comprising a series of longitudinal rows of bricks supported between adjacent water tubes, the alternate bricks of some of the rows being formed of a rearwardly and upwardly inclined top wall and two vertical side walls resting upon the water tubes.

3. In a boiler furnace, the combination with water tubes extending longitudinally from the front of the fire box upwardly and rearwardly, of a brick arch comprising a series of longitudinal rows of bricks supported between adjacent water tubes, some of the bricks being formed of a rearwardly and upwardly inclined top wall and two vertical side walls resting upon the water tubes.

4. In a boiler furnace, the combination with water tubes extending longitudinally from the front of the fire box upwardly and rearwardly, of a brick arch comprising a series of longitudinal rows of bricks supported between adjacent water tubes, some of the bricks being open and some closed, the open bricks being formed of two vertical side walls and a rearwardly and upwardly inclined top wall and having an interspersed relation with the closed bricks.

5. In a boiler furnace, the combination with water tubes extending longitudinally from the front of the fire box upwardly and rearwardly, of rows of bricks supported on said tubes, some of the bricks being formed of two vertical side walls and a rearwardly inclined top wall for providing openings through the arch, the vertical side walls of said bricks resting directly upon the water tubes.

1,153,649. NUT-LOCK. JOHN M. TANNER, Kingsville, Mo. Filed Aug. 31, 1914. Serial No. 859,533. (Cl. 151—5.)



1. A nut lock, in combination with a bolt having a longitudinally extending keyway therein and a nut on said bolt, a key for locking said nut on said bolt formed of a single strand of wire one end thereof being secured in an opening in the nut and the opposite end of said strand of wire being bent to form a hook member for engagement with the keyway, and an intermediate portion of the key being arcuate and embracing the bolt in frictional engagement with the threads, whereby to assist in preventing rotation of the nut.

2. A nut lock, in combination with a bolt having a longitudinal keyway therein and a nut thereon, of a key formed of a single strand of wire having one extremity thereof in pivotal engagement with the nut and the opposite extremity formed to provide a hook for engagement with said keyway, the intermediate portion of said key being arcuate whereby frictional and positive engagement may be had with said bolt.

a series of longitudinal rows of bricks supported between adjacent water tubes, some of the bricks being formed of two vertical side walls and a rearwardly and upwardly inclined top wall to provide openings through the arch, the vertical side walls resting upon the water tubes.

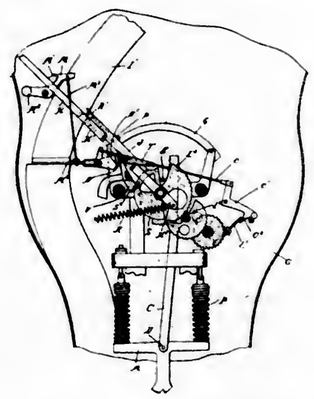
2. In a boiler furnace, the combination with water tubes extending longitudinally from the front of the fire box upwardly and rearwardly, of a brick arch comprising a series of longitudinal rows of bricks supported between adjacent water tubes, the alternate bricks of some of the rows being formed of a rearwardly and upwardly inclined top wall and two vertical side walls resting upon the water tubes.

3. In a boiler furnace, the combination with water tubes extending longitudinally from the front of the fire box upwardly and rearwardly, of a brick arch comprising a series of longitudinal rows of bricks supported between adjacent water tubes, some of the bricks being formed of a rearwardly and upwardly inclined top wall and two vertical side walls resting upon the water tubes.

4. In a boiler furnace, the combination with water tubes extending longitudinally from the front of the fire box upwardly and rearwardly, of a brick arch comprising a series of longitudinal rows of bricks supported between adjacent water tubes, some of the bricks being open and some closed, the open bricks being formed of two vertical side walls and a rearwardly and upwardly inclined top wall and having an interspersed relation with the closed bricks.

5. In a boiler furnace, the combination with water tubes extending longitudinally from the front of the fire box upwardly and rearwardly, of rows of bricks supported on said tubes, some of the bricks being formed of two vertical side walls and a rearwardly inclined top wall for providing openings through the arch, the vertical side walls of said bricks resting directly upon the water tubes.

1,153,650. COIN-CONTROLLED WEIGHING MECHANISM. WILLIAM VANDERZIEL and JOHN TRUEMAN GOODALL, Detroit, Mich., assignors to The Caille Brothers Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 24, 1911. Serial No. 656,513. (Cl. 194—47.)



1. The combination with weighing mechanism, of a stop arm positioned thereby, an independently operated index limited in its movement by said stop arm, a notched segment adjacent to said stop arm, a dog carried by said stop arm for engaging said notched segment normally held in released position, and means on said index operating in advance of the impact thereof against said stop arm for engaging said dog with said notched segment.

2. The combination with weighing mechanism, of a rockable stop arm positioned thereby, a segment adjacent to said stop arm, a dog carried by said stop arm for engaging said segment but normally free therefrom, an independently operated index limited in its movement by said stop arm, and means on said index operating in advance of the impact against said stop arm for engaging said dog with said segment.

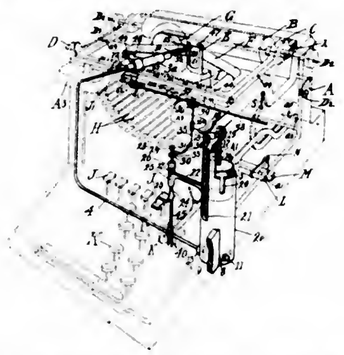
3. The combination with weighing mechanism, of a rockable stop arm positioned thereby, a segment adjacent to said stop arm, a dog carried by said stop arm for engaging said segment, means for normally holding said dog from engagement, an independently operated index limited in its movement by said stop arm, and means carried by said index for causing the engagement of said dog with said segment in advance of the impact of said index against said stop arm.

4. The combination with weighing mechanism, of a rockable stop arm positioned thereby, a notched segment adjacent to said stop arm, a dog carried by said stop arm rockable into engagement with said notched segment, a spring for holding said dog normally out of engagement with said segment, an independently operated index limited in its movement by said stop arm, and means operating in advance of the contact of said index with said stop arm for engaging said dog with said segment and maintaining the engagement thereof until the parts are restored to normal position.

5. The combination with weighing mechanism, of a rockable stop arm positioned thereby, an independently operated index limited in its movement by said stop arm, a gravity actuated latch for holding said index from movement, means operated by the impact of a coin for releasing said gravity latch, a second gravity latch for holding the first mentioned gravity latch from reengagement, and a gravity actuated means elevated by said index and released upon the registration of said index with said stop arm, said gravity actuated means releasing said second gravity latch.

[Claims 6 to 10 not printed in the Gazette.]

1,153,651. TYPE-WRITING MACHINE. GEORGE VOELKER, St. Paul, Minn. Filed Nov. 23, 1909. Serial No. 529,573. (Cl. 197—113.)



1. In a typewriting machine, the combination with a platen and the main typewriting instrumentalities, of a vibratory liner or marker coöperating therewith and a weight controlled actuating device for intermittently vibrating said liner or marker, said device being independent of said main typewriting instrumentalities.

2. In a typewriting machine, the combination with a platen, carriage, keys and key levers, of a liner or marker adapted to vibrate against said platen concurrently with the movement of said carriage and actuating means independent of the carriage and said keys and key levers.

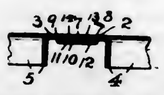
3. In a typewriting machine, the combination of a rotary platen, a vibratory liner or marker, a depressed key and automatic air actuated actuating means for imparting, by a single depression of said key, a succession of printing strokes to said liner or marker concurrently with the rotation of said platen.

4. In a typewriting machine, the combination of a paper carrying platen and air actuated marking or lining instrumentalities controlled by a slidable weight adapted to effect a plurality of imprints on the paper when said weight is slid in one direction.

5. In a typewriting machine, the combination with a platen and the main typewriting mechanism, of a marker or liner, and weight controlled means independent of said main writing mechanism for successively moving said type back and forth.

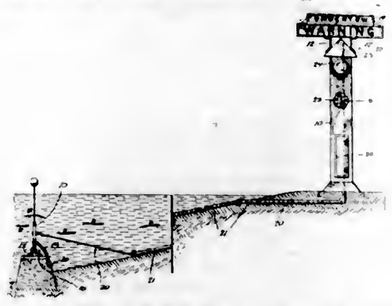
[Claims 6 to 49 not printed in the Gazette.]

1,153,652. BAG-FRAME. BENNO VOM EIGEN, Newark, N. J., assignor to Aug. Goertz & Co., a Corporation of New Jersey. Filed Feb. 2, 1911. Serial No. 606,071. (Cl. 190—49.)



A bag-frame section comprising a main central member having angular marginal end-portions, and a pair of leg-members, each leg-member having an angular marginal end-portion adjacent to and abutting upon an angular marginal end-portion of the main central member, said angular marginal end-portions forming a straight and uninterrupted miter-joint, the said abutting end-portions of said main central member and said leg-member being provided with perforations, a flange extending at a right angle from said main central member, a flange extending at a right angle from each leg-member, the flanges of said leg-members being integrally connected with the flange of said main central member, and a narrow tie-strap extending diagonally across said miter-joint, stud-like rivet-posts extending from said tie-strap, said posts being fitted into the said perforations in the main central member and the respective leg-members and riveted flush with the exterior surface-portions of said main central member and said leg-members, so as to entirely close up said perforations and provide smooth and unobstructed outer surface-portions, substantially as and for the purposes set forth.

1,153,653. UNDERTOW-WARNER INDICATOR-REGISTER. MARTIN M. VOORHEES, Oak Park, Ill. Filed Sept. 4, 1914. Serial No. 860,192. (Cl. 177—339.)



1. An apparatus of the character described comprising a submerged actuating element operated by undertow, and a signaling device controlled by said actuating element.

2. An apparatus of the character described comprising a submerged actuating element operated by undertow, and a signaling device controlled thereby and having an electric gong for sounding an alarm.

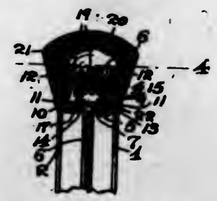
3. An apparatus of the character described comprising a submerged signal actuating element and a remotely located signaling means, controlled by said actuating element.

4. An apparatus of the character described comprising a submerged actuating element and signaling means located on the shore, and a mechanical element connecting said actuating element with said signaling means.

5. An apparatus of the character described comprising a submerged actuating element having a spring for yieldingly holding it against undertow movement of water, an electric gong and support therefor, and an electric switch for making and breaking the circuit of said electric gong, and operated by said actuating element.

[Claims 6 to 11 not printed in the Gazette.]

1,153,654. BAG-FRAME FASTENER. BENNO VOM EIGEN, Newark, N. J., assignor to August Goertz & Co., a Corporation of New Jersey. Filed Dec. 24, 1914. Serial No. 878,862. (Cl. 70—116.)



1. A bag-frame fastener comprising a hollow knob, a post adapted to be secured upon a frame-section, said hollow knob being capable of a pivotal movement independent of and separate from said post, a spring within said knob and in engagement with said post, and means connected with said post and said knob to permit of and limit the pivotal movement of said knob, substantially as and for the purposes set forth.

2. A bag-frame fastener comprising a hollow knob, a post adapted to be secured upon a frame-section said hollow knob being capable of a pivotal movement independent of and separate from said post, a spring within said knob and in engagement with said post, a rearwardly extending projection upon said post, and means connected with said knob extending beneath said projection to permit of and limit the pivotal movement of said knob, substantially as and for the purposes set forth.

3. A bag-frame fastener comprising a hollow knob, a post adapted to be secured upon a frame-section, said hollow knob being capable of a pivotal movement independent of and separate from said post, a finger extending forwardly from said post, a coiled spring within said knob having one end arranged over said finger and its other end in engagement with the wall of said knob, and means connected with said post and said knob to permit of and limit the pivotal movement of said knob, substantially as and for the purposes set forth.

4. A bag-frame fastener comprising a hollow knob, a post adapted to be secured upon a frame-section, said hollow knob being capable of a pivotal movement independent of and separate from said post, a finger extending forwardly from said post, a coiled spring within said knob having one end arranged over said finger and its other end in engagement with the wall of said knob, a rearwardly extending projection upon said post, and means connected with said knob extending beneath said projection to permit of and limit the pivotal movement of said knob, substantially as and for the purposes set forth.

5. A bag-frame fastener comprising a hollow knob, a post adapted to be secured upon a frame-section, a cylindrical box-like element connected with said knob, said element comprising a base having an opening and bounding corner-portions, said post being provided with a forwardly extending projection upon which said corner-portions rest and are in engagement, a spring within said knob and in engagement with said post, and means connected with said post and said knob to permit of and limit the pivotal movement of said knob, substantially as and for the purposes set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,153,655. TELEPHONE-CABLE. KARL WILLY WAGNER, Berlin-Lankwitz, Germany. Filed Feb. 16, 1915. Serial No. 8,641. (Cl. 178—45.)



1. A cable for self inductive load, the insulating cover of which consists of any kind of gutta-percha like material in which the proportion of resin is small.

2. A cable for self inductive load, the insulating cover of which consists of any kind of gutta-percha like material mixed with gutta-percha like material poor in resin.

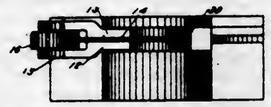
3. A cable for self inductive load, the insulating cover of which consists of any kind of gutta-percha like material mixed with gutta-percha substitutes which are poor in resin.

4. A cable for self inductive load, the insulating cover of which consists of any kind of gutta-percha like material mixed with gutta-gentzsch.

1,153,656. ELECTRIC SWITCH FOR ELEVATORS. FREDERICK N. WAKE, New York, N. Y., assignor to himself, Sterett R. Prevost, J. Maxwell Coote, and Edward F. Fisher, trading under the name of The Specialty Development Co., New York, N. Y. Filed Aug. 21, 1914. Serial No. 857,864. (Cl. 200—27.)

1. In combination, an electric switch and an arm for operating the switch, the arm having a sectional construction, and the sections being a part of the circuit made and broken by the switch.

2. In combination, an electric switch, a bifurcated arm for operating the switch, and connections between the arm and switch whereby the current flows through the arm when the circuit is made.



3. In combination, an oscillating electric switch, an oscillating bifurcated arm for operating the switch, and connections between the arm and the switch whereby the arm forms a part of the circuit when the circuit is made by the switch.

4. A switch having in combination oscillating contact segments, brushes adapted to bear upon the segments, and a bifurcated arm for oscillating the segments, the sections of the arm at their outer extremities being in electrical connection with each other, and at their inner ends in connection each with a segment, whereby when the circuit is made by the switch it includes the sections of the said arm.

5. A door-operated electric switch having an arm, controlled by the movement of the door, for operating the switch, the arm having a sectional construction, the sections being a part of the circuit made and broken by the switch.

[Claims 6 to 8 not printed in the Gazette.]

1,153,657. FUSE-CARRYING CONNECTING DEVICE FOR ELECTRICAL CONDUCTORS. FREDERICK N. WAKE, New York, N. Y., assignor to himself, Sterett R. Prevost, J. Maxwell Coote, and Edward F. Fisher, trading under the name of The Specialty Development Co., New York, N. Y. Filed Oct. 12, 1914. Serial No. 866,235. (Cl. 175—273.)



1. A fuse connector device comprising a casing having external end threads and end notches, removable end plugs in the casing having oppositely disposed transverse slots and a central internally threaded aperture, a fuse connected in circuit with opposite end plugs, keys entering the casing notches and plug slots and preventing independent turning of the plugs in the casing, and end contact caps having internal threads fitting the casing threads, each end cap also having an externally threaded central stud adapted to the internally threaded aperture of the corresponding plug, substantially as described.

2. A fuse connector device comprising a casing having external end threads and end notches, removable end plugs in the casing having oppositely disposed transverse slots and a central internally threaded aperture, a fuse connected in circuit with opposite end plugs, keys entering the casing notches and plug slots and preventing independent turning of the plugs in the casing and relieving the fuse of endwise pressure when opposing contacts are forced together, and end contact caps having internal threads fitting the casing threads and an externally threaded central stud adapted to the internally threaded aperture of the corresponding plug, substantially as described.

3. A fuse connector comprising a casing, end plugs therein, a fuse connected in circuit with opposite end plugs, said casing having end notches and the plugs having opposite transverse peripheral slots, U-shaped one-piece key devices having key limbs entering the casing notches and plug slots and preventing independent turning of the plugs in the casing and removable end contact caps simultaneously engaging the plugs and the casing and adapted for electrical connection with attachments to line wire sections, substantially as described.

4. A fuse connector device comprising a casing, end plugs therein, a fuse connected in circuit with opposite end plugs, said casing having end notches and the plugs having opposite transverse peripheral slots, U-shaped one-piece key devices having key limbs entering the casing notches and plug slots and preventing independent turning of the plugs in the casing and relieving the fuse of endwise pressure when opposing contacts are forced together, and removable end contact caps simultaneously engaging the plugs and the casing and adapted for electrical connection with attachments to line wire sections, substantially as described.

1,153,658. ICE-CHUTE. JAMES C. WARREN, Emporia, Va. Filed Feb. 13, 1915. Serial No. 8,101. (Cl. 235—92.)

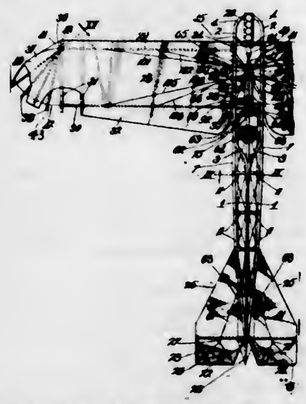


1. In an indicator actuating mechanism comprising in combination a chute adapted to have cakes of ice passed therethrough, an electric circuit including an indicator, a pair of movable electric contact members for said circuit arranged diagonally in opposite sides of said chute and adapted to be operated automatically by a cake of ice in its passage through the chute.

2. In an indicator actuating mechanism comprising in combination a chute adapted to have cakes of ice passed therethrough, an electric circuit including an indicator, a pair of movable contact members spaced apart longitudinally of said chute a distance slightly less than the length of a cake of ice, said members being supported in the opposite sides of the chute and extending beyond the sides into the opening, adapted to be displaced by a passing cake of ice to operate said circuit.

3. In an indicator actuating mechanism comprising in combination a chute adapted to have cakes of ice passed therethrough, an indicator, and a pair of movable contact members spaced apart longitudinally of said chute and at opposite sides thereof, a distance less than the length of a cake of ice, adapted to be displaced by a cake of ice in its passage through the chute to operate said indicator.

1,153,659. AEROPLANE. JOHN WATTS, Kansas City, Mo. Filed July 10, 1912. Serial No. 708,549. (Cl. 244—29.)



1. In an aeroplane, a fuselage, a wing projecting laterally from each side of said fuselage, and cables for operating said wings and connected to the front and rear edges thereof from above and from below, each of the front cables being attached at its opposite ends to the same wing and each of the rear cables being attached at its opposite ends to different wings.

2. In an aeroplane, a fuselage, a wing projecting from each side of the fuselage, a plurality of cables connected to said wings from above and from below and suitably guided upon the fuselage, the lower portions of the cables extending at greater angles to the wings than the upper portions, and means engaging said cables to shift the wings, said means including provision for taking up and paying out the lower portions faster than the upper portions of the cables.

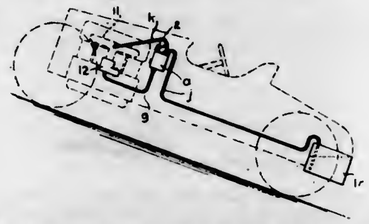
3. In an aeroplane, a fuselage, a wing projecting laterally from the fuselage at each side thereof and capable of swinging in a vertical plane, suitably guided cables, each overlying one wing and underlying the other and connected at its opposite ends to different wings, and compressed-fluid-actuated means for exerting a downward pull on the said underlying ends of the cables.

4. In an aeroplane, a fuselage, a wing projecting laterally from the fuselage at each side thereof and capable of swinging in a vertical plane, suitably guided cables, each overlying one wing and underlying the other and connected at its opposite ends to different wings, and means for reversely warping the rear portions of said wings simultaneously.

5. In an aeroplane, a fuselage, a wing projecting laterally from the fuselage at each side thereof and capable of swinging in a vertical plane, suitably guided cables, each overlying one wing and underlying the other and connected at its opposite ends to different wings, and means for exerting a downward pull on the said underlying end of one of said cables and an upward pull on the opposite end of the same cable.

[Claims 6 to 36 not printed in the Gazette.]

1,153,660. FUEL-SUPPLY APPARATUS FOR INTERNAL-COMBUSTION ENGINES. FREDERICK WEINBERG, Detroit, Mich. Filed Mar. 26, 1915. Serial No. 17,141. (Cl. 158—36.)



1. In an apparatus of the kind described, an inclosed chamber, a second inclosed chamber, a passage leading from the lower portion of said first inclosed chamber to said second inclosed chamber, a nonreturn valve in said passage opening toward said second inclosed chamber, a vacuum producing passage communicating with said first inclosed chamber, apparatus in said first inclosed chamber actuated by the liquid therein adapted to close said vacuum passage and open communication between the air spaces of said chambers or to close said communication and open said suction passage, a passage from said second inclosed chamber to the outer air, an inwardly opening nonreturn valve in said passage, and a supply pipe for gasolene opening into the first named chamber for the purpose described.

2. In an apparatus of the kind described, an inclosed chamber, a second inclosed chamber, a communication between said chambers, a vacuum producing passage opening into said first named chamber, a valve seat in said passage, a valve seat in the communication between said chambers, said valve seats being located one above the other, a single integral piece adapted to actuate both of said valves, and means for reciprocating said piece.

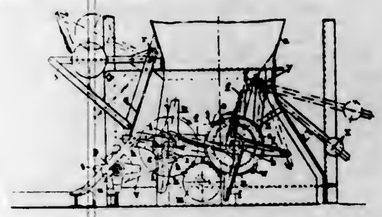
3. In an apparatus of the kind described, a valve actuating piece, an approximately straight spring having its ends secured at points a distance apart less than the length of said spring so that said spring shall be bowed between its ends, said spring being corrugated, said piece engaging said spring intermediate said points for the purpose described.

4. In an apparatus of the kind described, an inclosed chamber, a second inclosed chamber, a communicating passage adapted to convey liquid from the first named chamber to the second chamber, a supply pipe communicating with said first chamber, a vacuum producing passage communicating with said first chamber, a passage extending between the air spaces of said chambers, means for closing said suction passage and opening said communicating passage or closing said communicating passage and opening said suction passage, and a pipe extending through the upper part of said second chamber and extending below the level of the liquid in said chamber.

5. In an apparatus of the kind described, an inclosed chamber, a second inclosed chamber, a communicating passage adapted to convey liquid from the first named chamber to the second chamber, a supply pipe communicating with said first chamber, a vacuum producing passage communicating with said first chamber, a passage extending between the air spaces of said chambers, means for closing said suction passage and opening said communicating passage or closing said communicating passage and opening said suction passage, a pipe extending through the upper part of said second chamber and extending below the level of the liquid in said chamber, a passage adapted to put the upper end of said pipe into communication with the outer air, and an inwardly opening nonreturn valve in said passage.

[Claims 6 to 13 not printed in the Gazette.]

1,153,661. APPARATUS FOR REMOVING ROOTS AND THE LIKE FROM PEAT. JAMES SIDNEY WHITAKER, Dumfries, Scotland, assignor to Wetcarbonising Limited, London, England. Filed Aug. 21, 1913. Serial No. 785,961. (Cl. 44—3.)



1. Apparatus for separating roots and other objects from peat, comprising in combination a moving element, an abutment along which the root or other object is pushed by the moving element until separated from the peat, and diverting means to prevent such objects passing through the apparatus by assuming a position substantially parallel to a plane in which said element moves.

2. Apparatus for separating roots and other objects from peat, comprising in combination coöperating comb-like elements capable of relative movement, and diverting means to prevent such objects passing through the apparatus by assuming a position substantially parallel to planes in which said elements move.

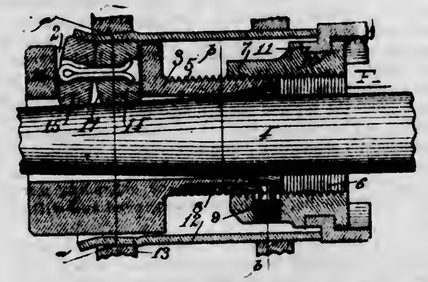
3. Apparatus for separating roots and other objects from peat, comprising in combination a rotating element, a plurality of blades mounted thereon, a plurality of members coöperating in shearing relationship with said blades and diverting means to prevent an object passing through the apparatus by assuming a position substantially parallel to a plane in which said blades move.

4. Apparatus for separating roots and other objects from peat, comprising in combination a plurality of moving blades, a plurality of stationary elements in shearing relationship with said moving elements, and diverting means to prevent an object passing between the stationary elements by assuming a position substantially parallel to a plane in which said blades move.

5. Apparatus for separating roots and other objects from peat, comprising in combination a plurality of moving elements, a plurality of stationary elements in shearing relationship with said moving elements, and diverting means on the moving elements to prevent objects which have one dimension greater than but another dimension less than the distance between adjacent stationary elements passing between such elements by assuming a position substantially parallel to a plane in which the moving elements move.

[Claims 6 to 13 not printed in the Gazette.]

1,153,662. TUBE-EXPANDER. OTTO WIEDEKE, Dayton, Ohio, assignor of one-half to Gustav Wiedeke, Dayton, Ohio. Filed Dec. 12, 1914. Serial No. 876,930. (Cl. 153—82.)



1. In a tube expander, the combination with a roller cage, of an expanding roller of uniform diameter, and a tapered expanding roller, the axial opening in the tapered roller being of greater area than that of the roller of uniform diameter, a common axial support for said rollers, and a mandrel engaging said rollers to expand a tube and bell the end thereof, substantially as specified.

2. In a tube expander, the combination with a roller cage, of an expanding roller of uniform diameter provided with a convex face, a tapered roller having an enlarged axial opening therein, a pin upon which both rollers are mounted and maintained, the tapered roller having a greater extent of movement owing to its greater axial opening, and a mandrel engaging said rollers substantially as described.

3. In a tube expander, the combination with a roller cage, of expanders mounted upon a common pin, one of said rollers being of tapered form and the opening in the axis thereof being increased outwardly whereby said roller may have greater lateral movement on said pin when forced outwardly, and a mandrel engaging said rollers, substantially as described.

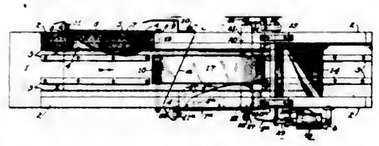
4. In a tube expander, the combination with a roller cage having an exteriorly screw-threaded extension provided with a longitudinal groove in the exterior surface of said extension, an interiorly screw-threaded collar engaging said extension, a guard supported on said collar, and a screw penetrating said collar and entering the longitudinal groove in said extension, of an expanding roller of uniform diameter, and a tapered roller mounted in said cage in alinement one with the other, said rollers being both mounted upon a common pin and said tapered roller having its axial opening of gradually increasing diameter, substantially as specified.

1,153,663. BOILER-TUBE EXPANDER. OTTO WIEDEKE, Dayton, Ohio, assignor of one-half to Gustav Wiedeke, Dayton, Ohio. Filed May 26, 1915. Serial No. 30,533. (Cl. 153—82.)

1. A tube expander comprising a series of elongated expanding members having, when assembled, an axial opening of substantially the length thereof, and a mandrel having a tapered portion engaging said expanding members to spread the same and a recessed portion beyond the terminal of the tapered portion into which said expanding mem-

4. A fuse connector device comprising a casing, end plugs therein, a fuse connected in circuit with opposite end plugs, said casing having end notches and the plugs having opposite transverse peripheral slots, U-shaped one-piece key devices having key limbs entering the casing notches and plug slots and preventing independent turning of the plugs in the casing and relieving the fuse of endwise pressure when opposing contacts are forced together, and removable end contact caps simultaneously engaging the plugs and the casing and adapted for electrical connection with attachments to line wire sections, substantially as described.

1,153,658. ICE-CHUTE. JAMES C. WARREN, Emporia, Va. Filed Feb. 13, 1915. Serial No. 8,101. (Cl. 235—92.)

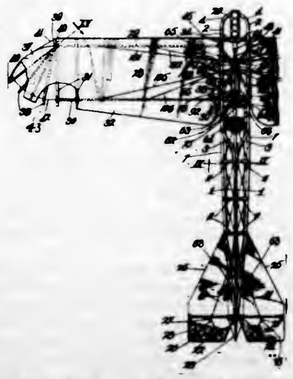


1. In an indicator actuating mechanism comprising in combination a chute adapted to have cakes of ice passed therethrough, an electric circuit including an indicator, a pair of movable electric contact members for said circuit arranged diagonally in opposite sides of said chute and adapted to be operated automatically by a cake of ice in its passage through the chute.

2. In an indicator actuating mechanism comprising in combination a chute adapted to have cakes of ice passed therethrough, an electric circuit including an indicator, a pair of movable contact members spaced apart longitudinally of said chute a distance slightly less than the length of a cake of ice, said members being supported in the opposite sides of the chute and extending beyond the sides into the opening, adapted to be displaced by a passing cake of ice to operate said circuit.

3. In an indicator actuating mechanism comprising in combination a chute adapted to have cakes of ice passed therethrough, an indicator, and a pair of movable contact members spaced apart longitudinally of said chute and at opposite sides thereof, a distance less than the length of a cake of ice, adapted to be displaced by a cake of ice in its passage through the chute to operate said indicator.

1,153,659. AEROPLANE. JOHN WATTS, Kansas City, Mo. Filed July 10, 1912. Serial No. 708,549. (Cl. 244—29.)



1. In an aeroplane, a fuselage, a wing projecting laterally from each side of said fuselage, and cables for operating said wings and connected to the front and rear edges thereof from above and from below, each of the front cables being attached at its opposite ends to the same wing and each of the rear cables being attached at its opposite ends to different wings.

2. In an aeroplane, a fuselage, a wing projecting from each side of the fuselage, a plurality of cables connected to said wings from above and from below and suitably guided upon the fuselage, the lower portions of the cables extending at greater angles to the wings than the upper portions, and means engaging said cables to shift the wings, said means including provision for taking up and paying out the lower portions faster than the upper portions of the cables.

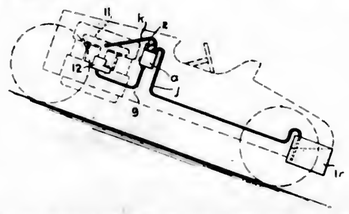
3. In an aeroplane, a fuselage, a wing projecting laterally from the fuselage at each side thereof and capable of swinging in a vertical plane, suitably guided cables, each overlying one wing and underlying the other and connected at its opposite ends to different wings, and compressed-fluid-actuated means for exerting a downward pull on the said underlying ends of the cables.

4. In an aeroplane, a fuselage, a wing projecting laterally from the fuselage at each side thereof and capable of swinging in a vertical plane, suitably guided cables, each overlying one wing and underlying the other and connected at its opposite ends to different wings, and means for reversely warping the rear portions of said wings simultaneously.

5. In an aeroplane, a fuselage, a wing projecting laterally from the fuselage at each side thereof and capable of swinging in a vertical plane, suitably guided cables, each overlying one wing and underlying the other and connected at its opposite ends to different wings, and means for exerting a downward pull on the said underlying end of one of said cables and an upward pull on the opposite end of the same cable.

[Claims 6 to 36 not printed in the Gazette.]

1,153,660. FUEL-SUPPLY APPARATUS FOR INTERNAL-COMBUSTION ENGINES. FREDERICK WEINBERG, Detroit, Mich. Filed Mar. 26, 1915. Serial No. 17,141. (Cl. 158—36.)



1. In an apparatus of the kind described, an inclosed chamber, a second inclosed chamber, a passage leading from the lower portion of said first inclosed chamber to said second inclosed chamber, a nonreturn valve in said passage opening toward said second inclosed chamber, a vacuum producing passage communicating with said first inclosed chamber, apparatus in said first inclosed chamber actuated by the liquid therein adapted to close said vacuum passage and open communication between the air spaces of said chambers or to close said communication and open said suction passage, a passage from said second inclosed chamber to the outer air, an inwardly opening nonreturn valve in said passage, and a supply pipe for gasolene opening into the first named chamber for the purpose described.

2. In an apparatus of the kind described, an inclosed chamber, a second inclosed chamber, a communication between said chambers, a vacuum producing passage opening into said first named chamber, a valve seat in said passage, a valve seat in the communication between said chambers, said valve seats being located one above the other, a single integral piece adapted to actuate both of said valves, and means for reciprocating said piece.

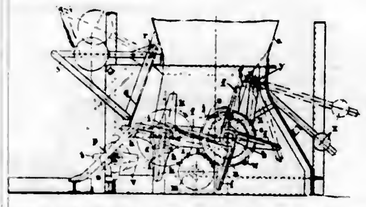
3. In an apparatus of the kind described, a valve actuating piece, an approximately straight spring having its ends secured at points a distance apart less than the length of said spring so that said spring shall be bowed between its ends, said spring being corrugated, said piece engaging said spring intermediate said points for the purpose described.

4. In an apparatus of the kind described, an inclosed chamber, a second inclosed chamber, a communicating passage adapted to convey liquid from the first named chamber to the second chamber, a supply pipe communicating with said first chamber, a vacuum producing passage communicating with said first chamber, a passage extending between the air spaces of said chambers, means for closing said suction passage and opening said communicating passage or closing said communicating passage and opening said suction passage, and a pipe extending through the upper part of said second chamber and extending below the level of the liquid in said chamber.

5. In an apparatus of the kind described, an inclosed chamber, a second inclosed chamber, a communicating passage adapted to convey liquid from the first named chamber to the second chamber, a supply pipe communicating with said first chamber, a vacuum producing passage communicating with said first chamber, a passage extending between the air spaces of said chambers, means for closing said suction passage and opening said communicating passage or closing said communicating passage and opening said suction passage, a pipe extending through the upper part of said second chamber and extending below the level of the liquid in said chamber, a passage adapted to put the upper end of said pipe into communication with the outer air, and an inwardly opening nonreturn valve in said passage.

[Claims 6 to 15 not printed in the Gazette.]

1,153,661. APPARATUS FOR REMOVING ROOTS AND THE LIKE FROM PEAT. JAMES SIDNEY WHITAKER, Dumfries, Scotland, assignor to Wetcarbonizing Limited, London, England. Filed Aug. 21, 1913. Serial No. 785,961. (Cl. 44—3.)



1. Apparatus for separating roots and other objects from peat, comprising in combination a moving element, an abutment along which the root or other object is pushed by the moving element until separated from the peat, and diverting means to prevent such objects passing through the apparatus by assuming a position substantially parallel to a plane in which said element moves.

2. Apparatus for separating roots and other objects from peat, comprising in combination coöperating comb-like elements capable of relative movement, and diverting means to prevent such objects passing through the apparatus by assuming a position substantially parallel to planes in which said elements move.

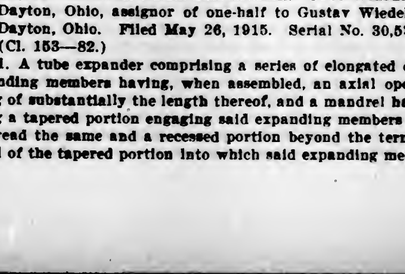
3. Apparatus for separating roots and other objects from peat, comprising in combination a rotating element, a plurality of blades mounted thereon, a plurality of members coöperating in shearing relationship with said blades and diverting means to prevent an object passing through the apparatus by assuming a position substantially parallel to a plane in which said blades move.

4. Apparatus for separating roots and other objects from peat, comprising in combination a plurality of moving blades, a plurality of stationary elements in shearing relationship with said moving elements, and diverting means to prevent an object passing between the stationary elements by assuming a position substantially parallel to a plane in which said blades move.

5. Apparatus for separating roots and other objects from peat, comprising in combination a plurality of moving elements, a plurality of stationary elements in shearing relationship with said moving elements, and diverting means on the moving elements to prevent objects which have one dimension greater than but another dimension less than the distance between adjacent stationary elements passing between such elements by assuming a position substantially parallel to a plane in which the moving elements move.

[Claims 6 to 13 not printed in the Gazette.]

1,153,662. TUBE-EXPANDER. OTTO WIEDEKE, Dayton, Ohio, assignor of one-half to Gustav Wiedeke, Dayton, Ohio. Filed Dec. 12, 1914. Serial No. 876,930. (Cl. 153—82.)



1. In a tube expander, the combination with a roller cage, of an expanding roller of uniform diameter, and a tapered expanding roller, the axial opening in the tapered roller being of greater area than that of the roller of uniform diameter, a common axial support for said rollers, and a mandrel engaging said rollers to expand a tube and bell the end thereof, substantially as specified.

2. In a tube expander, the combination with a roller cage, of an expanding roller of uniform diameter provided with a convex face, a tapered roller having an enlarged axial opening therein, a pin upon which both rollers are mounted and maintained, the tapered roller having a greater extent of movement owing to its greater axial opening, and a mandrel engaging said rollers substantially as described.

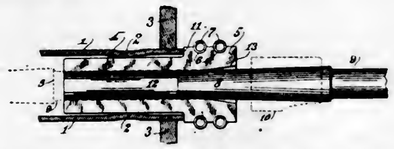
3. In a tube expander, the combination with a roller cage, of expanders mounted upon a common pin, one of said rollers being of tapered form and the opening in the axis thereof being increased outwardly whereby said roller may have greater lateral movement on said pin when forced outwardly, and a mandrel engaging said rollers, substantially as described.

4. In a tube expander, the combination with a roller cage having an exteriorly screw-threaded extension provided with a longitudinal groove in the exterior surface of said extension, an interiorly screw-threaded collar engaging said extension, a guard supported on said collar, and a screw penetrating said collar and entering the longitudinal groove in said extension, of an expanding roller of uniform diameter, and a tapered roller mounted in said cage in alinement one with the other, said rollers being both mounted upon a common pin and said tapered roller having its axial opening of gradually increasing diameter, substantially as specified.

1,153,663. BOILER-TUBE EXPANDER. OTTO WIEDEKE, Dayton, Ohio, assignor of one-half to Gustav Wiedeke, Dayton, Ohio. Filed May 26, 1915. Serial No. 30,533. (Cl. 153—82.)

1. A tube expander comprising a series of elongated expanding members having, when assembled, an axial opening of substantially the length thereof, and a mandrel having a tapered portion engaging said expanding members to spread the same and a recessed portion beyond the terminal of the tapered portion into which said expanding mem-

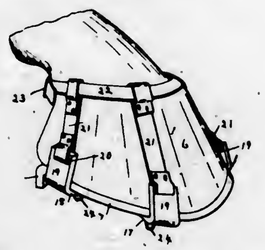
bers contract after the expanding operation, and the diameter of the larger end of said tapered portion being such that the tapered portion may pass through the expanding members when the expanding members are expanded and within the tube.



2. In a tube expander, the combination with an expanding member consisting of a series of elongated jaws enlarged at one end and providing a head for said expanding member, the axial opening in said expanding member beyond said head being of substantially uniform diameter, a mandrel having a tapered portion adapted to engage the axial opening of uniform diameter in expanding said jaws, said mandrel also provided with a peripheral recessed portion beyond the tapered portion adapted to receive said expanding jaws when the tapered portion of the mandrel has completed its expanding operation, and the diameter of the larger end of said tapered portion being such that the tapered portion may pass through the expanding members when the expanding members are expanded and within the tube.

3. In a tube expander, the combination of a series of elongated expanding members terminated each at one end in an enlargement said enlargements combining to form an annular shoulder which engages the end of a tube when the expander is inserted, and the parallel opening of said expander being of uniform diameter beyond said shoulder, a spring surrounding the enlarged end of said expander, a mandrel having a tapered portion which moves the expanding members outward and a recessed portion which permits said expanding members to move inwardly around the mandrel after the completion of the expanding operation, and the diameter of the larger end of said tapered portion being such that the tapered portion may pass through the expanding members when the expanding members are expanded and within the tube.

1,153,664. CALK ATTACHMENT FOR HORSESHOES. JOHN R. WOOD, Herkimer, N. Y. Filed Feb. 7, 1913. Serial No. 746,728. (Cl. 168—30.)

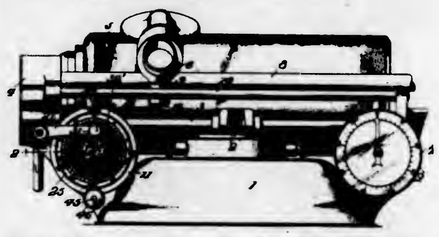


1. In combination with a permanent horseshoe having downwardly projecting front and rear calks, a detachable integrally-formed calk attachment consisting of a rigid cross-shaped frame fitting against the bottom of the horseshoe, the four arms of said cross extending beyond the said shoe and upturned adjacent to the edge thereof, the front calk of said shoe being received between the front pair of arms and the rear shoe calks being received between the rear pair of said arms, the engagement of said up-turned ends of said arms against the shoe edge and of said shoe calks against said arms being adapted to hold said frame from horizontal movement, calks upon said arms adjacent to their outer extremities and flexible means engaging the upper slope of the hoof for detachably holding said cross-shaped frame between the calks of the shoe.

2. In combination with a permanent horseshoe having downwardly projecting front and rear calks, a detachable integrally-formed calk attachment consisting of a rigid cross-shaped frame fitting against the bottom of the horse shoe, the four arms of said cross extending beyond the said shoe and up-turned adjacent to the edge thereof, the front calk of said shoe being received between the front pair of arms and the rear shoe calks being received between the rear pair of said arms, the engagement of said up-turned ends of said arms against the shoe edge and of said shoe calks against said arms being adapted to hold said frame from horizontal movement, calks upon said arms adjacent to their outer extremities and flexible means connected to said up-turned ends of said arms and engaging the upper slope of the hoof for detachably holding said cross-shaped frame between the calks of the shoe.

3. In combination with a permanent horseshoe having downwardly projecting calks, a detachable integrally-formed calk attachment consisting of a rigid cross-shaped frame with its arms outwardly extending therefrom and upturned adjacent to the outer edge of the shoe and recesses between said arms receiving said shoe calks, the inwardly engagement of said up-turned arms against the horseshoe edge and the outwardly engagement of said recesses against the shoe calks being adapted to hold said frame from horizontal movement, calks upon said frame and flexible means connected to said up-turned ends of said arms and engaging the upper slope of the hoof for detachably holding said cross-shaped frame between the calks of the shoe.

1,153,665. CORRECTION DEVICE FOR TALKING-MACHINES. CLINTON E. WOODS, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Feb. 4, 1914. Serial No. 816,568. (Cl. 181—2.)



1. In a device of the character described, the combination of a rotatable disk having instruction characters and a scale thereon, with a talking machine sound-box carriage, operative connections between said carriage and disk whereby the latter is rotated, and a marking device adjustable in approximately a radial line over the surface of said disk.

2. In a device of the character described, the combination of a shaft, a disk mounted on said shaft and having instruction characters and a scale thereon, with a talking machine sound-box carriage, operative connections between said carriage and shaft whereby the shaft is rotated, and a marking device adjustable in approximately a radial line over the surface of the disk.

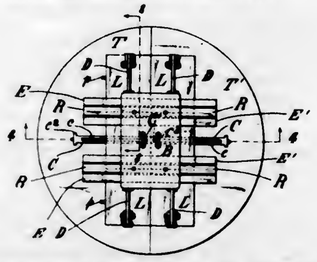
3. In a device of the character described, the combination of a disk having a series of concentric circles thereon and instruction characters in the spaces between the said circles, with a talking machine sound-box carriage, means rotating the disk synchronously with the movement of said carriage, and a marking device adjustable in approximately a radial line over the face of the disk.

4. In a device of the character described, the combination of a disk having a series of concentric circles and approximately radial lines thereon and instruction characters in the spaces between the circles, with a talking machine sound-box, means moving the sound-box along its support and rotating the disk synchronously therewith, and a marking device adjustable in approximately a radial line over the face of said disk.

5. In a device of the character described, the combination of a disk having instruction characters thereon, a talking machine sound-box, means moving the sound-box and rotating the disk synchronously therewith, and a marking device in coöperative relation with said disk.

[Claims 6 to 15 not printed in the Gazette.]

1,153,666. EXTENSION-TABLE. HENRY AMSEL and BENJAMIN REICHARD, New York, N. Y. Filed Dec. 18, 1914. Serial No. 877,890. (Cl. 45—112.)



1. An extension table of the character designated, comprising a base, rail bars rigidly attached thereto, extension bars slidably connected with said rail bars, table top ends rigidly attached to said extension bars, a centralized coupling bar connecting the table top ends, and extension leaves, foldable braces of pivotally united sections connecting said leaves and base, said leaves being adapted to be positioned to form continuations of the table top ends with their inner abutting ends resting upon said coupling bar, or to be folded under said table top ends, for the purpose described.

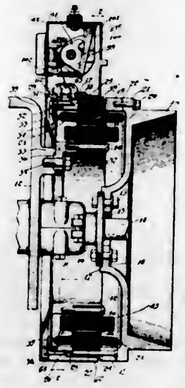
2. In an extension table of the character designated, the combination of a base, rail bars rigidly secured thereto, extension bars slidably connected with said rail bars, table ends rigidly attached to said extension bars, a centralized coupling bar connecting said table top ends, extension leaves of a length equivalent in length to one half the width of the table pivotally attached to the base on either side thereof by foldable braces, and adapted to be positioned to form continuations of the table top ends with their inner abutting ends resting upon said coupling bar or to be seated overlapping each other under said table end tops, said braces being formed of jointed members, and springs acting to hold and maintain said members in folded position, for the purpose described.

1,153,667. POWER GENERATING AND TRANSMITTING SYSTEM. VINCENT G. APPLE, Dayton, Ohio, assignor to The Apple Electric Company, Dayton, Ohio, a Corporation of Ohio. Filed June 2, 1913. Serial No. 771,150. (Cl. 171—252.)

1. The combination with a stationary field magnet frame, of a rotatable armature surrounding said field magnet frame, an imperforate disk extending radially outwardly from one end of the field magnet frame to points beyond the periphery of the armature, and a removable flexible strip carried on the periphery of said disk and extending axially across the periphery of the armature.

2. The combination with a stationary field magnet frame, of a rotatable armature surrounding said field magnet frame, an imperforate disk extending radially outwardly from one end of the field magnet frame to points beyond the periphery of the armature, an arcuate projection extending across the periphery of the armature from the periphery of said disk, commutator brushes carried by said projection and a removable casing member carried on the periphery of said disk, extending axially across the periphery of the armature and secured at its ends to said arcuate projection.

3. The combination with a stationary field magnet frame, of a rotatable armature surrounding said field magnet frame, an imperforate disk extending radially outwardly from one end of the field magnet frame to points beyond the periphery of the armature, an arcuate projection extending across the periphery of the armature from the periphery of said disk and having an opening therein, commutator brushes carried by said projection and extending through said opening, a box like cover carried by said projection and entirely inclosing said brushes, and a strip of sheet metal contacting at one edge with the periphery of said disk and secured at its end to said arcuate projection.



4. The combination with an engine shaft, of an engine casing, a bearing for said shaft carried by the casing, a field magnet frame, surrounding said shaft and carried by the casing, a rotatable armature surrounding said field magnet frame and connected with said shaft, and a commutator positioned on the periphery of said armature at the side adjacent said casing.

5. The combination with an engine casing and engine shaft of a dynamo-electric machine, comprising a stationary field magnet frame secured to the casing and concentric with the shaft, an armature rotatable about the field magnet frame, a commutator on said armature at the end adjacent the frame, a clutch member secured at its periphery to the opposite end of the armature and connected at its center with the engine shaft, a support projecting from the field magnet frame between the engine casing and armature and commutator brushes carried thereby.

[Claim 6 not printed in the Gazette.]

1,153,668. TYPE-WRITING MACHINE. JOHN H. BARR, New York, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Jan. 21, 1915. Serial No. 3,474. (Cl. 197—157.)

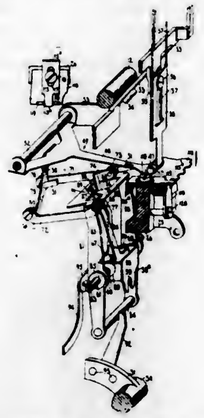
1. In a typewriting machine, the combination of a ribbon vibrator, and means for variably actuating said vibrator, said means comprising two actuators both constantly connected independently of each other to said vibrator.

2. In a typewriting machine, the combination of a ribbon vibrator, two actuators for variably actuating said vibrator, both actuators being constantly connected thereto, and a settable device having an unvarying throw for operating said actuators in alternation.

3. In a typewriting machine, the combination of a ribbon vibrator, a plurality of key operated actuators constantly connected to said vibrator, and means for rendering said actuators separately effective at will.

4. In a typewriting machine, the combination of a ribbon vibrator, a plurality of key operated actuators constantly connected to said vibrator and adapted to throw

said vibrator different extents, and means for rendering said actuators separately effective at will, said means comprising a settable device having an unvarying throw.



5. In a typewriting machine, the combination of a ribbon vibrator, a plurality of key operated actuators constantly connected to said vibrator and adapted to throw said vibrator different extents, and means for rendering said actuators separately effective at will, said means comprising a settable device having an unvarying throw, and a stationary stop for arresting said device at the end of its throw.

[Claims 6 to 58 not printed in the Gazette.]

1,153,669. COMB. WILLIAM S. BECHTOLD, Newark, N. J. Filed Mar. 29, 1915. Serial No. 17,684. (Cl. 132—16.)



1. A comb, comprising a body portion, and two sets of resilient teeth projecting from one edge thereof beyond the body portion, the inner teeth of the respective sets being oppositely curved to provide a single locking space formed between said teeth, contracted contiguously to the body portion and substantially closed near the ends of the teeth to provide a contracted clamping entrance thereto, whereby the hair will be firmly massed and held in the locking space, the teeth forming the same being reinforced by the remaining adjacent teeth.

2. A comb, comprising a body portion, and two sets of resilient teeth projecting from one edge thereof beyond the body portion, the inner teeth of the respective sets being oppositely curved to provide a single locking space formed between said teeth, contracted contiguously to the body portion and substantially closed near the ends of the teeth to provide a contracted clamping entrance thereto, whereby the hair will be firmly massed and held in the locking space, the teeth forming the same being reinforced by the remaining teeth of each set which follow substantially the curvature of said inner teeth.

1,153,670. RAILROAD-TIE. JOHN A. BILAN, Oklahoma, Okla. Filed May 29, 1914. Serial No. 841,812. (Cl. 238—5.)

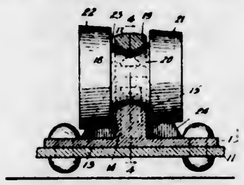


1. A railway tie, including tie members having interlocking oppositely facing shoulders at their longitudinal contacting edges and oppositely presented rail base engaging clips, said clips being in continuation of the upper surfaces of said tie members, said tie members also having recesses in extension of the resultant undercut recesses of said clips, and themselves having oppositely inclined upper surfaces, the bases and elevations thereof terminating at diagonally opposite points of the tie members, and means for the retention of said tie members against lateral separation.

2. A railway-tie including tie-members having interlocking engagement at their longitudinal contacting edges and oppositely presented rail-base clips for oppositely gripping the rail-bases, said tie-members also having recesses in extension of said clips, said clips being in continuation of the upper surfaces of said tie-members and themselves having oppositely inclined upper surfaces, the bases and elevations thereof terminating at diagonally opposite points in the tie-members, and means for the retention of said tie-members against lateral separation.

3. A rail road tie comprising a plurality of tie parts, locking means on each part, rail base clips adapted to grip the rail bases when the locking means are in contact, notches formed on each tie part, and tying bolsters bolted in each notch.

1,153,671. SIDE BEARING. WILLIAM A. BOCK, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed June 12, 1914. Serial No. 844,630. (Cl. 64—64.)



1. A side bearing for cars comprising a member adapted to be secured to a bolster and having a journal bearing, the face of said bearing being curved transversely, rollers disposed on opposite sides of said journal bearing member and a journal by which said rollers are carried, said journal being mounted within said journal bearing and oscillatable with respect thereto.

2. A side bearing for cars comprising a member having a journal bearing, the surface of which is convex, rollers disposed on opposite sides of said journal bearing member, and a journal by which said rollers are carried, the said journal being mounted in said bearing and oscillatable relatively thereto.

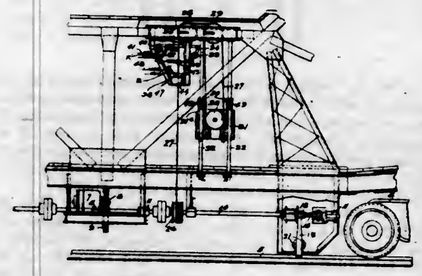
3. A side bearing for cars comprising a member having a journal bearing therein, rollers on opposite sides of said journal bearing member, and a journal by which said rollers are carried, said journal being mounted in said bearing and provided with a concave surface.

4. A side bearing for cars comprising a member having a journal bearing therein, said bearing being provided with a convex surface, rollers on opposite sides of said journal bearing member, and a journal by which said rollers are carried, said journal being provided with a concave surface and mounted in said convexly curved bearing.

5. A side bearing for cars comprising a base plate having a member extended therefrom, said member having a journal bearing formed therein, said bearing having a convex surface, and a roller carrying journal mounted in said bearing, said journal being provided with a concave surface, the radius of which is longer than the radius of curvature of the convex surface of the journal bearing.

[Claims 6 and 7 not printed in the Gazette.]

1,153,672. RAIL-CLAMP FOR TRAVELING-BRIDGES. RAYMOND E. BROWN and EDWARD C. GAINES, Pittsburgh, Pa., assignors to Heyl & Patterson Inc., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 6, 1912. Serial No. 695,517. (Cl. 188—48.)



1. In a rail clamping device for traveling bridges, the combination with a frame, of an electric motor, a shaft driven thereby, weight-applied clamping devices, connections between said shaft and clamping devices, and means for operating said clamping devices by making and breaking the circuit to said motor.

2. In a rail clamping device for traveling bridges, the combination with the frame, of an electric motor, a shaft driven thereby, clamping devices, a weight connected to said shaft, and means for breaking the circuit to said motor whereby said weight is lowered to apply said clamping devices, and means for raising said weight by making the circuit to said motor whereby said clamping devices are released.

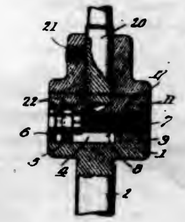
3. In a rail-clamp device for traveling bridges, the combination with the frame, of an electric-motor, a shaft driven thereby, clamping devices, means for operating said clamping devices by the rotation of said shaft, a weight elevated by the rotation of said shaft in releasing said clamps, and means operated by the movement of said weight and inserting resistance into the motor circuit, whereby said weight is held in its elevated position.

4. In a rail-clamp device for traveling bridges, the combination with a frame, of an electric-motor, a shaft driven thereby, clamping devices, means for operating said clamping devices by the rotation of said shaft, a weight elevated by the rotation of said shaft, means operated by the movement of said weight adapted to insert a resistance into the motor circuit, whereby said weight is sustained, means for cutting off the current to motor to allow the weight to fall, means for short circuiting the motor through resistance, and setting the clamps tightly against the rail.

5. In a rail-clamp device for traveling bridges, the combination with the frame, of a motor, a screw-shaft driven thereby, a threaded member engaged by said shaft, a bell-crank connected to said threaded member, clamping-levers, and connections between said bell-crank and said clamping levers.

[Claim 6 not printed in the Gazette.]

1,153,673. BORING-TOOL HOLDER. ELMER J. BRYANT, Woonsocket, R. I., assignor to The Taft Peirce Manufacturing Company, Woonsocket, R. I., a Corporation of Rhode Island. Filed Jan. 19, 1915. Serial No. 3,050. (Cl. 29—108.)



1. In a boring tool holder in combination, a body portion, a rigid clamping jaw formed integral with said body portion, said clamping jaw being of a substantially uniform cross section throughout its length, a movable clamping jaw opposite to said rigid clamping jaw, said movable clamping jaw being provided with a fulcrum at one edge thereof and a clamping face on the opposite edge thereof, said movable clamping jaw being of substantially uniform cross section throughout its length, a plurality of clamping screws for operating said clamping jaw, said body portion being provided with a smooth surface intermediate said clamping jaws, a transversely movable cross head intermediate said clamping jaws and adapted to be seated against said smooth surface when said clamp screws are operated to tighten the movable clamping jaw, a micrometer screw and means carried by said micrometer screw for engaging with said movable cross head to move said cross head when said micrometer screw is turned.

2. In a boring tool holder in combination, a body portion, a fixed clamping jaw carried by said body portion, a shank for supporting said body portion, a transversely movable cross head secured to said body portion, a clamping jaw provided on its lower edge with a longitudinally extending pivotal member and on its upper edge with a longitudinally extending clamping face, and means to swing said clamping jaw on said pivot to lock said cross head in predetermined positions, said pivoted clamping jaw comprising the entire side portion of said tool holder and being of a length substantially equal to the length of said movable cross head.

3. A boring tool holder provided with a shank, a body portion, a movable cross head carried within said body portion, means to lock said cross head in adjusted positions, said parts being constructed and arranged so that when said cross head is in zero position said boring tool holder is a parallel-epiped with a shank on one side thereof, and a tool holder on the opposite side thereof, and the remaining four sides all being substantially plane surfaces.

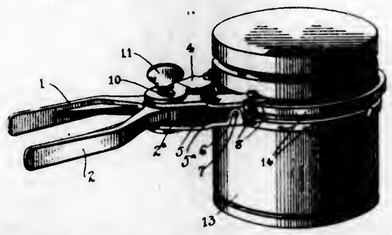
4. In a boring tool holder in combination, a body portion, a shank integral with said body portion, a fixed clamping jaw, a movable clamping jaw, a cross head having a depending member intermediate said clamping jaws, a longitudinal pivot on one edge of said movable clamping jaw, and means to swing said clamping jaw on said pivot to securely clamp said cross head in adjusted positions, said clamping jaw comprising the entire side portion of said tool holder and being of a length substantially equal to the length of said cross head.

5. In a boring tool holder in combination, a body portion, a shank carried by said body portion, a cross head in movable relation to said body portion, means for adjusting said cross head in movable positions, a boring tool holder upon said cross head, said body portion and said cross head forming substantially a parallelepiped bounded by substantially four plane surfaces, there being

substantially no projections extending outwardly from said surfaces when the axis of the boring tool holder and the axis of the shank are alined.

[Claim 6 not printed in the Gazette.]

1,153,674. PISTON-RING PLIERS. DONALD J. CAMPBELL, Muskegon, Mich. Filed Mar. 15, 1913. Serial No. 754,454. (Cl. 81—3.)



1. Piston ring pliers comprising a pair of levers pivoted together between their ends, the ends of the levers on one side of the pivot serving as jaw members of the pliers and the other ends thereof serving as handle members, a pair of gripping levers provided on each of the jaws and pivotally connected thereto, and means for separating the rear ends of said gripping levers to cause their forward ends to grip a piston ring therebetween.

2. Piston ring pliers comprising a pair of levers pivoted together between their ends, the ends of said levers on one side of the pivot forming the jaws of the pliers, while the opposite ends thereof serve as the handle members of the same, a pair of gripping levers on each jaw pivotally connected between their ends to the respective ends of the jaws, the rearwardly extending ends of said gripping levers overlapping the pivot of the pliers, and means for separating the rear ends of each respective pair of gripping levers to cause their forward ends to grip a piston ring.

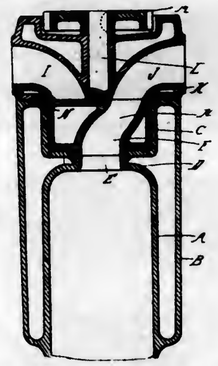
3. Piston ring pliers comprising a pair of levers pivoted together between their ends, the pivot bolt for such connection being tubular, the ends of the levers on one side of the pivot forming the jaws of the pliers while the opposite ends form the handle members thereof, a pair of gripping levers provided for each jaw of the pliers, each pair of levers being pivotally connected between their ends to the respective ends of the jaws and having their rearwardly extending ends overlapping the tubular pivot bolt of the pliers, the ends of one pair of levers embracing the pliers and the ends of the opposite pair of levers embracing the first named levers, a screw thread in the end of one of the first named levers, and a thumb screw extending therethrough, and also adapted to engage the inner lever at the opposite side of the pliers.

4. Piston ring pliers comprising a pair of levers pivotally connected between their ends, the ends of the levers on one side of the pivot forming the jaws of the pliers and the opposite ends of the levers forming the handle members of the same, a pair of gripping levers provided for each jaw and pivotally connected between their ends of the end of the same, a gripping block rotatably mounted on the inner surface of the forward end of each gripping lever, and means for separating the rear ends of each respective pair of gripping levers.

5. Piston ring pliers comprising a pair of levers pivoted together between their ends, the ends of the levers on one side of the pivot forming the jaws of the pliers, and the opposite ends of the levers form the handle members thereof, the ends of said jaws being adapted to separate as the handle members are brought together, a pair of gripping levers provided for each jaw and pivotally connected between the ends to their respective jaws, a gripping block rotatively mounted on the inner surface of each gripping lever, and means for separating the rear ends of each respective pair of gripping levers.

[Claim 6 not printed in the Gazette.]

1,153,675. EXPLOSION-ENGINE. HOWARD E. COFFIN, Detroit, Mich. Filed Apr. 27, 1911. Serial No. 623,676. (Cl. 123—80.)



1. In an explosion engine, the combination with the cylinder of a cylindrical rotary valve arranged external to said cylinder and having a substantially longitudinally-extending passage-way therethrough with an axially arranged port in constant communication with said cylinder, and a valve seat for the opposite side of the valve for receiving the pressure of explosion in said cylinder.

2. In an explosion engine, the combination with the cylinder, of a rotary valve having parallel faces, said valve having a port therethrough concentric to its axis on the face adjacent to said cylinder and eccentric on the opposite face, a head interposed between said valve and cylinder having a port in constant communication with the concentric port in said valve, and a valve seat for the opposite face of said valve having a plurality of ports with which said eccentric port is successively registered.

3. In an explosion engine, the combination with the cylinder, of a cylindrical rotary valve having a port concentric with the axis on the side adjacent to said cylinder and eccentric on the opposite side, a head interposed between said cylinder and valve having a port in constant registration with said concentric port, a water jacket surrounding said cylinder and valve and extending into said head, and a valve seat for the opposite face of said valve having a plurality of ports with which said eccentric port in said valve is successively registered.

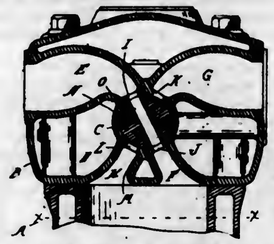
4. In an explosion engine, the combination with the cylinder, of a cylindrical rotary valve having a port concentric with the axis on the side adjacent to said cylinder, and eccentric on the opposite side, a head interposed between said valve and cylinder having a port in constant registration with said axial port in said valve, and a detachable head for said cylinder forming a valve seat having a plurality of ports for successive registration with the eccentric port in said valve.

5. In an explosion engine, the combination with the cylinder, of a cylindrical rotary valve in axial alinement therewith and having a port concentric with the axis on the side adjacent to said cylinder and eccentric on the opposite side, a detachable head for the cylinder forming a valve seat having a plurality of ports therein with which said eccentric port in the valve is successively registered, and a pressure receiving head between said valve and cylinder for shielding the latter from the pressure in the explosion chamber.

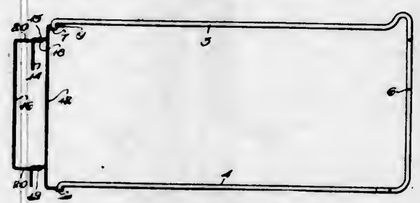
[Claims 6 to 11 not printed in the Gazette.]

1,153,676. EXPLOSION-ENGINE. HOWARD E. COFFIN, Detroit, Mich. Filed Apr. 27, 1911. Serial No. 623,677. (Cl. 123—80.)

In an explosion engine, the combination with the cylinder, of a head therefor having a transversely arranged cylindrical valve seat, a rotary valve in said seat having a single passage therethrough, inlet and exhaust passages leading from said seat to the cylinder, said passages being of the same size at the seat as said single passage through the valve, and diametrically opposite continuations of said inlet and exhaust passages leading out through the opposite side walls of the head, all of said passages and continuations enlarging from the ports in the seat to their opposite ends and said continuations having the walls thereof curved.



1,153,677. CLOTHES-HANGER. ERNEST J. DERAGON, Worcester, Mass. Filed Mar. 5, 1915. Serial No. 12,273. (Cl. 68—34.)

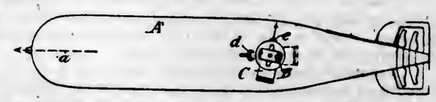


1. A clothes hanger comprising a sheet metal body having its ends bent over to form forwardly projecting upper and lower flanges, each provided with a series of sockets, said body having integral rearwardly projecting upper and lower angular arms struck up therefrom, each arm including a horizontal bearing portion and a vertical pintle portion, a series of two-armed wire frames bent at the inner ends of the arms to form pintles which are journaled in said sockets, and a bracket adapted for attachment to a support, and having forwardly projecting upper and lower apertured ears forming seats for said bearing portions and sockets for said pintle portions, the holder being adapted to swing on the bracket to a position permitting the frames to be closely assembled side by side.

2. A clothes hanger comprising a sheet metal body having its ends bent over to form forwardly projecting socketed upper and lower flanges, said body having integral rearwardly projecting upper and lower angular arms struck up therefrom, each arm including a horizontal flat-sided bearing portion and a vertical flat-sided pintle portion, a series of two-armed wire frames bent at the inner ends of the arms to form pintles journaled in the sockets of said flanges, and a bracket adapted for attachment to a support and formed from a sheet metal blank, said bracket having its ends bent over to form forwardly projecting upper and lower ears upon which said bearing portions rest, and having circular orifices of greater diameter than the width of said pintle portions, and forming sockets therefor, the holder being adapted to swing on the bracket to a position permitting the frames to be closely assembled side by side.

1,153,678. GYROSCOPIC STEERING MECHANISM. WILLIAM DIETER, New York, N. Y., assignor to E. W. Bliss Company, Brooklyn, N. Y., a Corporation of West Virginia. Filed May 1, 1915. Serial No. 25,124. (Cl. 114—24.)

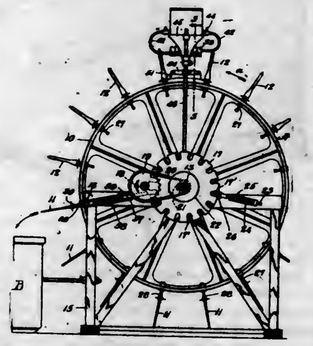
1. In an automobile torpedo, a gyroscopic steering mechanism comprising a gyroscope and controlling means actuated thereby tending to steer the torpedo on a course coincident with the gyroscope axis, the gyroscope having a swivel mounting whereby it may be initially turned to either side for an angle fire, whereby upon launching the torpedo steers a curved course until it points in the direction of the gyroscope axis, and thereupon steers a substantially straight course coinciding with such axis.



2. In a torpedo, a gyroscopic steering mechanism comprising a gyroscope and means for spinning it both mounted to swivel on a vertical axis relatively to the torpedo, and controlling means actuated by the gyroscope and tending to steer the torpedo on a course coincident with the gyroscope axis, whereby for an angle-fire the gyroscope is turned initially to either side, and upon launching the torpedo steers a curved course until it points in the direction of the gyroscope axis, and thereupon steers a substantially straight course coinciding with such axis.

3. In a torpedo, a gyroscope steering mechanism comprising a gyroscope with its fly-wheel and gimbals, and an air driven spinning means therefor, both mounted to swivel on a vertical axis relatively to the torpedo, and an air pipe leading from a source of compressed air to such spinning device and having a swivel connection coincident with said axis, and controlling means actuated by the gyroscope and tending to steer the torpedo on a course coincident with the gyroscope axis, whereby for an angle-fire the gyroscope is turned initially to either side, and upon launching the torpedo steers a curved course until it points in the direction of the gyroscope axis, and thereupon steers a substantially straight course coinciding with such axis.

1,153,679. MACHINE FOR MARKING BOBBINS. WILLIAM ELLIOT, Jr., Lawrence, Mass. Filed Nov. 20, 1914. Serial No. 878,199. (Cl. 91—39.)



1. A machine for marking bobbins, comprising a rotatable carrier, a series of bobbin-holders thereon, a stationary strip of absorbent material arranged to be engaged and traversed successively by the bobbins on said holders, and means arranged to feed a marking fluid to said absorbent strip.

2. A machine for marking bobbins, comprising a rotatable carrier, a series of bobbin-holders thereon, a marking device arranged to be engaged successively by the bobbins on said holders, and bobbin-rotating means arranged to act successively upon the bobbins as the latter traverse the working range of said marking device, said means consisting of an elongated strip of friction material, a movable holder for said strip, and yielding means arranged to act on said holder to keep said strip normally in the path of the bobbins, said strip and holder

being displaceable against the stress of said yielding means by the peripheral surfaces of the bobbins.

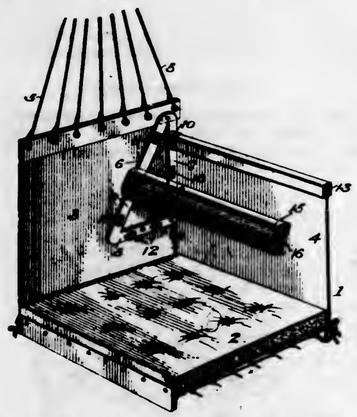
3. A machine for marking bobbins, comprising a rotatable carrier, a series of bobbin-holders thereon, a marking device arranged to be engaged successively by the bobbins on said holders, a bobbin-discharging device arranged to register with the marked bobbins successively as the carrier is rotated, and means arranged to act alternately on said carrier and on said discharging device to rotate said carrier step by step and to impart discharging movement to said discharging device.

4. A machine for marking bobbins, comprising a carrier, a series of bobbin-holders thereon, a stationary elongated marking device and a stationary elongated friction device both arranged to be engaged by the bobbins, said friction device being arranged to cause each bobbin to rotate about its axis in consequence of movement of said carrier, whereby the bobbin has a wiping action upon said marking device.

5. A machine for marking bobbins, comprising a carrier, a series of spindles arranged thereon, and a marking device arranged to coact successively with a series of bobbins arranged on said spindles, said carrier being arranged to tip said spindles sufficiently to render them incapable of retaining the marked bobbins.

[Claim 6 not printed in the Gazette.]

1,153,680. COUCH-HAMMOCK. WILLIAM M. FERBER, Philadelphia, Pa., assignor to J. R. Bunting Bedding Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 3, 1914. Serial No. 864,831. (Cl. 5—61.)



1. In a couch hammock, a wind-guard supporting bar, a head rest, and a triangular bracket adapted to be attached to an end wall of the hammock and parallel therewith and formed with vertical and inclined sides, said sides having within the edges thereof a series of slots, and said bar and rest having on the ends thereof, respectively, members which are adapted to enter any slot of either series of said slots, respectively, and to be held thereby in selected position.

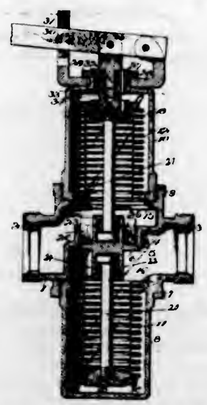
2. In a couch hammock, a wind-guard supporting bar, a head rest, and a triangular bracket adapted to be attached to an end wall of the hammock and parallel therewith and formed with vertical, inclined, and horizontal sides, said sides having within the edges thereof, a series of slots, and said bar and rest having on the ends thereof members which are adapted to enter any slot of either series of slots, respectively, and to be held thereby in selected position.

3. In a couch hammock, a rest for the head or back of the occupant thereof, and brackets on the end members thereof, the latter being adapted to support said rest thereon in vertical, horizontal and inclined adjustments.

4. In a couch hammock, a rest for the head or back of the occupant thereof, and brackets on the end members thereof adapted to support said rest thereon, said brackets being formed with slots in different alined series extending respectively in vertical, horizontal and inclined directions to receive attaching devices on said rest and adapt the latter for vertical, horizontal and inclined adjustments on said end members.

5. In a couch hammock, a bracket on an end member thereof, the same having therein slots in different alined series extending respectively in vertical, horizontal and inclined directions, a wind shield having at the top a cross bar with a pin on the end portion thereof adapted to enter either of the vertically disposed slots in said bracket, and a head rest having on the end portion thereof, a pin adapted to enter either of the slots in the horizontal and inclined sides of said bracket.

1,153,681. BALANCED VALVE. WESTON M. FULTON, Knoxville, Tenn., assignor to The Fulton Company, Knoxville, Tenn., a Corporation of Maine. Filed Aug. 28, 1914. Serial No. 859,061. (Cl. 137—4.)



1. In combination, a valve casing having a valve port and a valve controlling the same, flexible tubular walls arranged one on each side of said valve and connected thereto and each having an effective diameter equal the diameter of said port whereby fluid pressure on said walls balances the fluid pressure on the said valve.

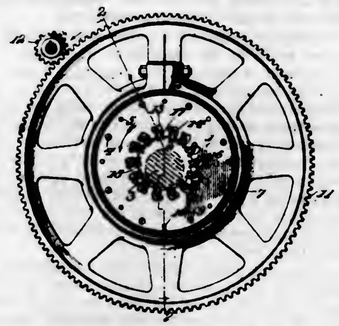
2. In combination, a valve casing having a valve port and a valve controlling the same, flexible tubular walls arranged one on each side of said valve and connected thereto and each having an effective diameter equal the diameter of said port whereby fluid pressure on said walls balances the fluid pressure on the said valve, and means for opening and closing said valve.

3. In combination, a valve casing having a valve port and a valve controlling the same, a flexible corrugated tubular wall connected to said valve and having an effective diameter equal that of said port, and means for balancing fluid pressure on the delivery side of said valve.

4. In combination, a valve casing having a valve port and a valve controlling the same, corrugated expansible and contractible vessels arranged on opposite sides of said valve and in line with said port, and exposed interiorly to fluid pressure in said casing and adapted to balance fluid pressure on both sides of said valve, end closures for the movable ends of said vessels connected to said valve, the opposite ends being stationary, and means for opening and closing said valve.

1,153,682. CUTTING-OFF SAW. GEORGE GORTON, Racine, Wis. Filed Aug. 11, 1909. Serial No. 512,337. (Cl. 29—105.)

1. In a metal cutting off machine, a blade adapted to be rotated by exterior driving means and having a central work receiving opening with pockets at their inner ends opening into said opening, in combination with cutters adapted to said pockets and having inner high duty working points within said opening, and means for rigidly locking said cutters to said blade to sustain the thrust thereof in action and whereby said cutters are rendered removable.

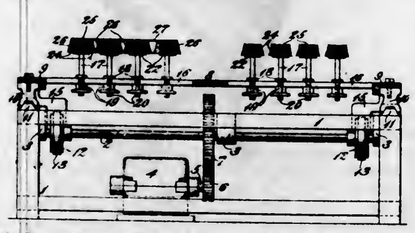


2. In metal cutting off machinery, a blade formed around its outer edge for securing to high speed rotary driving means and having a central work receiving opening, in combination with removable cutters arranged around said opening and having converging inner working points therein, and means rigidly locking said cutters to said blade to distribute the thrust of the cutters in action thereon and whereby the cutters are rendered removable.

3. In metal cutting off machines, a high speed drive for driving "high duty" cutters to their capacity comprising an exteriorly driven rotary blade having a central work receiving opening, in combination with renewable "high duty" cutters arranged around said opening and having inner working points within the opening, and means for locking said cutters to said blade for sustaining the outward thrust thereof while in action, and whereby said cutters are rendered removable.

4. In metal cutting off machinery, a high speed rotary member having a central work receiving opening formed with cutter-thrust sustaining abutments around said opening, in combination with high duty cutters arranged around said openings and having inner working points within the same, and means for removably locking said cutters to said member and whereby the thrust of the cutters in action is sustained by said blade through said abutments.

1,153,683. PAN CLEANING AND GREASING MACHINE. HUGO GOTTSCHALK, Reedsville, Pa., assignor to Gottschalk & Co., Inc., Reedsville, Pa., a Corporation of Delaware. Filed June 9, 1915. Serial No. 33,032. (Cl. 107—7.)



1. In a device of the character stated, a plurality of standards suitably supported and laterally adjustable with respect to each other, means for reciprocating said standards, and brushes removably mounted on the standards.

2. In a device of the character stated, a reciprocating member, a plurality of standards carried by said member and adjustable laterally of the direction of movement thereof, and brushes for said standards removably mounted thereon.

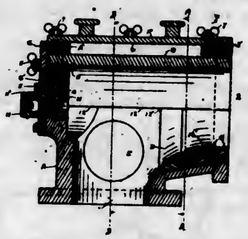
3. In a device of the character stated, a reciprocating member, means for actuating the same, a plurality of standards carried by said member and adjustably mounted thereon, and brushes for said standards removably mounted thereon.

4. In a pan cleaning and greasing machine a reciprocating member, means for actuating the same, a plurality of standards carried by said member, means for adjusting the positions of said standards, and brushes shaped to conform to the shape of the pans removably mounted on the standards.

5. In a pan cleaning and greasing machine, a reciprocating member, means for actuating the same, a plurality of standards carried by said member, means for adjusting the positions of said standards, and brushes on said standards having bristles extending from their edges and with their upper faces free of bristles.

[Claims 6 to 8 not printed in the Gazette.]

1,153,684. SUCTION-MACHINE FOR CONDUITS CONVEYING LOOSE, ABRASIVE, AND DISINTEGRATED MATERIALS. LORNE A. GRIFFIN, Elkhart, Ind. Filed Dec. 4, 1914. Serial No. 875,464. (Cl. 137—75.)



1. In a suction machine for material conveying conduits of the class described the combination of an elbow body, an opening in the rear wall of the elbow, a second opening in said rear wall partially encompassing said opening, a removable segmental wear liner forming the upper half bore of said elbow arranged within same, one end of which liner is arranged within said second named opening and the opposite end thereof extending forward into the discharge opening of the elbow, means for supporting said liner forward of said second named opening, and means for preventing a rearward movement of said liner.

2. In a suction machine for material conveying conduits of the class described the combination of an elbow body, an opening in the rear wall of the elbow, a second opening in said rear wall partially encompassing said opening, a removable segmental wear liner forming the upper half bore of said elbow arranged within same, one end of said liner being arranged within said second named opening and the opposite end thereof extending forward into the discharge opening of the elbow, oppositely disposed and longitudinally extending ledges formed at the elbow interior adapted to support said wear liner, and a cover plate sealing said second named opening, said cover plate serving also to retain said wear liner against rearward movement.

3. In a suction machine for material conveying conduits of the class described the combination of an elbow body, an opening in the rear wall of the elbow, a second opening in said rear wall partially encompassing said opening and provided with oppositely disposed floors, a removable semicylindrical wear liner forming the upper half bore of said elbow arranged therein, one end of said liner being arranged within said second named opening and resting upon said floors the opposite end thereof extending forward into the discharge opening of the elbow, oppositely disposed and longitudinally extending ledges connected with said floors formed at the elbow interior adapted to support said wear liner, and means for sealing said

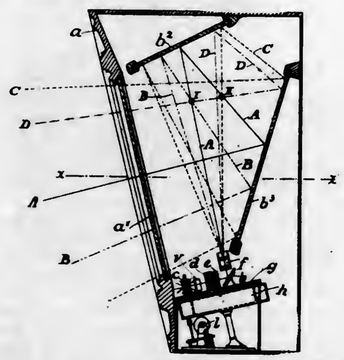
second named opening said means serving also to prevent the rearward movement of said wear liner.

4. In a suction machine for material conveying conduits of the class described the combination of an elbow body provided with suction and discharge openings, a wear liner compartment in said elbow body adjacent the discharge opening, an opening for said compartment, removable wear liners arranged within said compartment and adapted for removal through said compartment opening, means for sealing said compartment opening, and means for preventing the lateral displacement of one of said liners, the other liner being otherwise confined against lateral displacement.

5. In an elbow for material conveying conduits of the class described the combination of an elbow body, an opening of semi crescent formation in the rear wall of the elbow, a compartment in the elbow body adjacent the discharge opening thereof, ledges formed at the elbow interior, extending longitudinally thereof and terminating at said compartment, a semi cylindrical wear liner arranged within said elbow, one end of said wear liner being disposed within the semi crescent opening and the opposite end thereof being disposed within the discharge opening of the elbow, said wear liner being supported upon said ledges, and said wear liner being confined against upward displacement by the elbow, body itself, and means for preventing the rearward movement of said liner said means serving also to seal the opening of semi crescent formation.

[Claims 6 to 13 not printed in the Gazette.]

1,153,685. PROJECTION APPARATUS. JOSEPH GUERZONI and RODOLPHE PECHKRANZ, Geneva, Switzerland. Original application filed May 12, 1911, Serial No. 626,774. Divided and this application filed Oct. 23, 1913. Serial No. 796,846. (Cl. 88—24.)



In a picture projecting apparatus and in combination, a casing, an image producing device located adjacent the bottom of the casing, a mirror fixed adjacent the top of the casing and against which the rays of light from the image producing devices are projected and from which they are reflected toward the said image producing devices, a mirror fixed adjacent the rear wall of the casing and to which the rays of light are reflected from the aforesaid mirror, and from which the rays of light are reflected so as to cross the path in which they are reflected from the image producing devices to the mirror at the top of the casing, and a transparent screen in the front of the casing and to which the rays of light are reflected from the said mirror adjacent the rear of the casing.

1,153,686. POLISH FOR WOODWORK AND METHOD OF PREPARING THE SAME. JOHN BENJAMIN HANCOCK, Buda, Tex. Filed Jan. 22, 1913. Serial No. 743,631. (Cl. 134—24.)

1. Process for preparing a polish consisting in forming a mixture of 42 oz. by measure of water and 3½ oz. by weight of flour of pumice, then forming a second mixture of 1½ oz. by weight of gum camphor and 6½ oz. by measure of spirits of turpentine, adding essential oils to the second mixture, adding the second mixture to the first mixture, adding a mineral oil to the resultant product; then preparing a third mixture of 14 oz. by measure of a binder and water, and adding the third mixture to the mixture of the first and second mixtures, the ingredients being used substantially in the proportions described.

2. Process for preparing a polish consisting in forming a mixture of 42 oz. by measure of water and 3½ oz. by weight of flour of pumice, then forming a second mixture of 1½ os. by weight of gum camphor and 6½ os. by measure of spirits of turpentine, adding essential oils to the second mixture, adding the second mixture to the first mixture, adding 12 os. by measure of petroleum oil to the mixture, adding 28 os. by measure of methylated spirit to the mixture; then preparing a third mixture of 14 os. by measure of whites of eggs and water and adding the third mixture to the mixture of the first and second mixtures, the ingredients being used substantially in the proportions described.

3. Process for preparing a polish consisting in forming a mixture of 42 oz. by measure of water and 3½ os. by weight of flour of pumice, and then forming a second mixture of 1½ os. by weight of gum camphor and 6½ os. by measure of spirits of turpentine, adding essential oils including 1½ oz. by weight of oil of cassia, 1½ oz. by weight of oil of cloves, ½ of an oz. by weight of oil of rosemary, ½ of an oz. by weight of oil of citronella, and ½ of an os. by weight of oil of sassafras to the second mixture, adding the second mixture to the first mixture, adding 12 os. by measure of petroleum oil and 28 oz. by measure of methylated spirit to the resultant mixture; then preparing a third mixture of 14 os. by measure of whites of eggs and water and adding the third mixture to the mixture of the first and second mixtures, the ingredients being used substantially in the proportions described.

4. A polishing compound composed of flour of pumice 3½ oz. by weight, whites of eggs 14 oz. by measure, spirits of turpentine 6½ oz. by measure, gum camphor 1½ os. by weight, oil of cassia 1½ oz. by weight, oil of cloves 1½ os. by weight, oil of sassafras ½ oz. by weight, oil of rosemary ½ oz. by weight, oil of citronella ½ oz. by weight, petroleum oil 12 oz. by measure, methylated spirits 28 os. by measure and water 42 oz. by measure, in substantially the proportions specified.

1,153,687. BATHING-CAP. BERTHA HELLINGA, Amsterdam, Netherlands. Filed Nov. 4, 1014. Serial No. 870,218. (Cl. 2—106.)



1. A bathing cap comprising a body portion and a chamois band secured to said body portion.

2. A bathing cap comprising a body portion, a chamois band secured to the inside of said body portion arranged to extend upwardly on the outside of said body portion, and means for tightening said band.

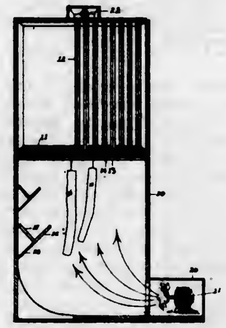
3. A bathing cap comprising a body portion, and a plurality of chamois strips secured to the inside of said body portion.

4. A bathing cap comprising a body portion and a plurality of chamois strips secured to the inside of said body portion, each of said strips having its lower portion free to extend inwardly.

5. A bathing cap comprising a body portion, a chamois band secured to the inside of said body portion, and a plurality of chamois strips carried by said band.

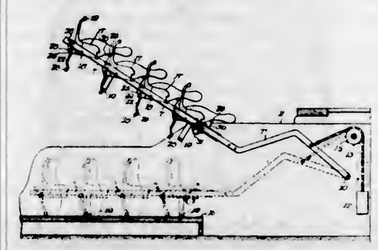
[Claims 6 to 14 not printed in the Gazette.]

1,153,688. CABINET FOR DRYING FILMS, PLATES, AND PRINTS. WALTER P. HENRY, Des Moines, Iowa. Filed Apr. 27, 1914. Serial No. 834,631. (Cl. 34—19.)



A cabinet for drying films, plates and prints composed of a case having a slotted partition below its top, removable spaced vertical print holding frames seated at their bottoms on the top face of the partition and engaged at their tops with the top of the case, film holding means connected to the under face of the partition, and means to supply a current of air to the case at the bottom thereof.

1,153,689. PIN-SETTER FOR BOWLING-ALLEYS. FRANK C. HOBBS, Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill., a Corporation of Delaware. Filed May 3, 1915. Serial No. 25,442. (Cl. 46—54.)



1. In a pin setter for bowling alleys, the combination of a pivoted frame, a movable pocket for each pin on the frame, and independent means for actuating each pocket.

2. In a pin setter for bowling alleys, the combination of a pivoted frame, a plurality of movable pockets, one for each pin, separately mounted on the frame, and independent means for actuating each pocket.

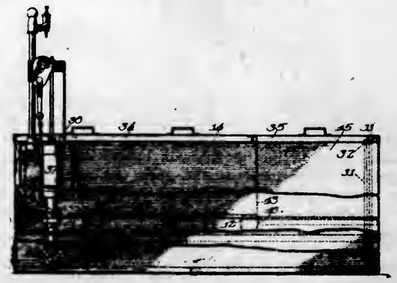
3. In a pin setter for bowling alleys, the combination of a pivoted frame, a plurality of movable pockets, one for each pin, separately mounted on the frame, and individual means for moving each of said pockets independently of the frame.

4. In a pin setter for bowling alleys, the combination of a pivoted frame, a plurality of pockets, one for each pin, on the frame, and individual means for bodily moving each of said pockets relatively to the frame.

5. In a pin setter for bowling alleys, the combination of a pivoted frame, a plurality of pockets, one for each pin, separately mounted on the frame, and individual means for bodily moving each of said pockets relatively to the frame.

[Claims 6 to 27 not printed in the Gazette.]

1,153,690. WASTE-SOAKING TANK. LELAND F. JOHNSON and ANDREW D. WYCKOFF, Fort Wayne, Ind., assignors to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind. Filed May 8, 1913. Serial No. 766,449. (Cl. 91—46.)



1. A waste soaking tank having a partition which forms an oil storage compartment at the bottom, and a waste soaking and waste draining compartment over the storage compartment with a common partition separating them, the walls of the tank forming the walls of the compartment.

2. A waste soaking tank having a partition which forms an oil storage compartment at the bottom, a waste soaking compartment having closable communication through its bottom with the storage compartment, and a waste draining compartment with a screen which separates it from the storage compartment into which it freely drains.

3. A waste soaking tank having a partition which forms an oil storage compartment at the bottom and a waste soaking compartment and a draining compartment above the storage compartment completely filling the upper portion of the tank, the draining compartment being provided with a removable screen separating it from the storage compartment, and a valve in the partition between the soaking compartment and the oil storage compartment.

4. In a waste soaking tank a receptacle forming an oil storage chamber in the bottom thereof, and a single partition member forming both an inclined waste soaking compartment and a waste draining compartment above the oil storage compartment in the receptacle.

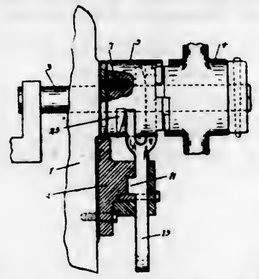
5. In a waste soaking tank, the combination with a receptacle forming an oil storage compartment in the bottom thereof, of a single partition forming an inclined compartment and a draining compartment which fill the receptacle above the oil storage compartment, the compartment having common outer walls.

[Claims 6 to 18 not printed in the Gazette.]

1,153,691. CLUTCH. CHARLES KACHEL, Utica, N. Y. Filed Aug. 25, 1913. Serial No. 786,406. (Cl. 192—9.)

1. In a device of the character described, the combination with power means, of a clutch-block adapted to engage therewith and slidably mounted on a shaft, a shaft carrying the power means and the clutch-block, a plurality of cam-blocks mounted on the clutch-block on opposite sides thereof and in different planes transverse the axis of the clutch-block, a throwout having lugs lying at all times in the path traveled by the cam-blocks when the

clutch-block is engaged, the said cam-blocks having beveled faces adapted when coming into contact with the lugs of the throwout to shift the clutch-block away from the power means, and means adapted to rotate said throwout whereby its lugs are moved past and disengaged from their respectively engaged cam blocks.



2. In a device of the character described, a shaft, a clutch block slidably mounted thereon, cam heads on the clutch block, a throwout having lugs each lying in the normal path of one of the cam blocks whereby the engagement of the cam blocks with the said lugs shifts the clutch block on its shaft and means adapted to move said throwout so that said lugs will rotate in the paths of said cams past said cams.

3. In a device of the character described, a shaft, a clutch-block slidably mounted thereon, cam-blocks on the clutch-block and disposed in different planes transverse the axis of the block, a throwout having lugs adapted to engage each its own cam-block, said lugs lying at all times in the paths traveled by said cam-blocks when the clutch-block is engaged, the said throwout being pivotally mounted whereby the lugs may be swung to clear the ends of the cam-blocks.

4. In a device of the character described, the combination with a slidable clutch-block, of cam-blocks mounted thereon positioned to travel in different paths in the revolution of the clutch-block, a throwout having lugs adapted to engage the cam-blocks in the revolution of the clutch-block and shift the same by the bearing of the cam faces of the blocks upon said lugs, said lugs at all times lying in the paths traveled by the cam-blocks when the clutch-block is engaged, and means adapted to rotate said throwout whereby its lugs are moved past and disengaged from their respectively engaged cam blocks.

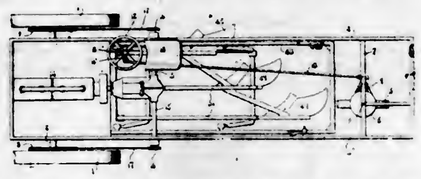
5. In a device of the character described, the combination with a clutch-block slidably mounted on a shaft, of cam-blocks mounted on opposite sides of the clutch-block and positioned to travel in different circles in the revolution of the clutch-block, and a throwout having lugs, one each lying at all times in the path traveled by its respective cam-block when the clutch-block is engaged whereby to shift the clutch-block and means whereby to shift the throwout to disengage the lugs from engagement with the cam-blocks.

[Claims 6 to 13 not printed in the Gazette.]

1,153,692. TRACTOR. HENRY W. KARDELL, St. Louis, Mo. Original application filed May 23, 1913, Serial No. 769,356. Divided and this application filed June 25, 1914. Serial No. 847,347. (Cl. 21—114.)

1. A traction plow comprising traction wheels, a tractor frame adapted to receive a single steering wheel, and a steering device for operating said single steering wheel, combined with an attachment extending rearwardly from the rear of said tractor frame, the said attachment comprising an extension frame detachably secured to the tractor frame and forming a continuation thereof, and a pair of steering wheels supporting said extension frame, the last named steering wheels being operable by said steering device.

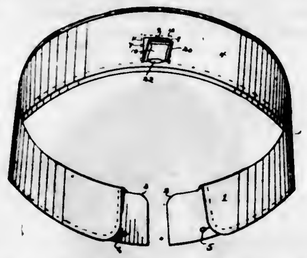
2. A traction plow comprising a main tractor frame, traction wheels and a ground wheel supporting said main tractor frame, said ground wheel being detachably secured to said main tractor frame, combined with an attachment adapted to be substituted for said ground wheel, said attachment comprising an extension frame adapted to form a continuation of said main tractor frame, means for detachably securing said extension frame to said main tractor frame, and a pair of ground wheels supporting said extension frame and adapted to coöperate with said traction wheels to support said main tractor frame.



3. A convertible tractor having a main frame, drive wheels, a ground wheel detachably secured to said main frame, and a steering device for operating said ground wheel, said steering device being detachably secured to said ground wheel; combined with an attachment adapted to be substituted for said ground wheel and adapted to extend from an end of said main frame, said attachment comprising an extension frame adapted to form a continuation of said main frame, means for detachably securing said extension frame to said main frame, a pair of ground wheels supporting said extension frame, and means for attaching said steering device to the last mentioned ground wheels.

4. A convertible tractor comprising a main tractor frame having side sills, traction wheels and a ground wheel supporting said main tractor frame, said ground wheel being detachably secured to said main tractor frame; combined with an attachment adapted to be substituted for said ground wheel, said attachment comprising an extension frame having side sills adapted to form continuation of the side sills of said main tractor frame, and a pair of ground wheels supporting said extension frame and adapted to coöperate with said traction wheels to support said main frame.

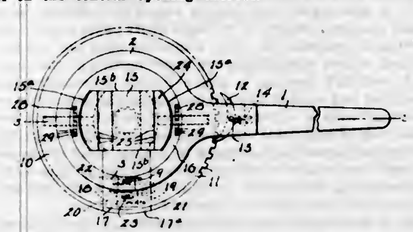
1,153,693. COLLAR. JESSE KAUFMAN, New York, N. Y. Filed Mar. 14, 1913. Serial No. 754,171. (Cl. 2—67.)



A device of the character described comprising a collar having ordinary tabs and button holes formed therein and an additional tab at about mid-length said collar formed integral therewith and means for stiffening said tab adapting it to assist in the securing of said collar, said tab being provided with a button hole and a metallic binding around the free sides of said tab, for the purpose set forth.

1,153,694. AUTOMATIC PIPE-WRENCH. LEWIS KNOX, Queen Junction, Pa. Filed Feb. 27, 1915. Serial No. 11,034. (Cl. 81—63.)

1. A ratchet wrench including a handle having a ring at one end thereof, said ring being formed with a side opening through which a pipe or the like can be inserted, a ratchet wheel journaled upon the ring and formed with a central opening, said ratchet wheel being also provided with a side opening corresponding to the side opening of the ring and adapted to be brought into registry therewith, a block fitted removably within the side opening, a spring pawl mounted upon the handle for engagement with the ratchet wheel, and jaws mounted upon the ratchet wheel so as to act upon a pipe or like member in the central opening thereof.



2. A ratchet wrench including a handle having a ring at one end thereof, said ring being formed with a side opening, a ratchet wheel journaled upon the ring and formed with a central opening, said ratchet wheel being also provided with a side opening corresponding to the side opening of the ring and adapted to be rotated into registry therewith for the purpose of inserting a pipe or like member into the central opening of the ratchet wheel, jaws mounted upon the ratchet wheel for engagement with a pipe or like member in the central opening thereof, a block fitted removably within the side opening of the ratchet wheel, spring latch means for holding the block in position therein, and a pawl mounted upon the handle for engagement with the ratchet wheel.

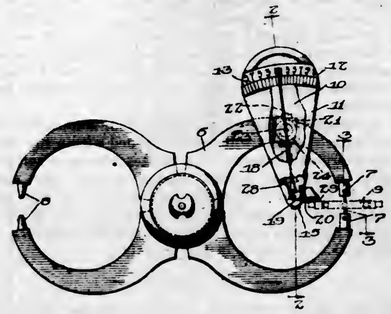
3. A ratchet wrench including a handle having a ring at one end thereof, said ring being formed with a side opening, a ratchet wheel journaled upon the ring and provided with a central opening, said ratchet wheel being also formed with a side opening corresponding to the side opening of the ring and adapted to be rotated into registry therewith for the purpose of moving a pipe into or out of the central opening of the ratchet wheel, a block fitted removably within the side opening of the ratchet wheel, spring actuated latch bolts slidably mounted upon the block for engagement with the ratchet wheel to hold the block in position, means for simultaneously retracting the latch bolts to remove the block or replace it in position, jaws mounted upon the ratchet wheel for engagement with a pipe or like member in the central opening thereof, and a pawl mounted upon the handle for engagement with the ratchet wheel.

4. A ratchet wrench including a handle having a ring at one end thereof, said ring being formed with a side opening, a ratchet wheel journaled upon the ring and formed with a peripheral row of teeth, said ratchet wheel being provided with a central opening and also with a side opening adapted to be rotated into registry with the side opening of the ring for the purpose of moving a pipe into or out of the central opening of the ratchet wheel, a block fitted removably within the side opening of the ratchet wheel and provided with teeth arranged to form a continuation of the teeth thereof, jaws mounted upon the ratchet wheel and arranged to grip a pipe or like member in the central opening thereof, and a pawl mounted upon the handle for engagement with the ratchet wheel.

5. A ratchet wrench including a handle having a pair of spaced rings at one end thereof, said rings being formed with side openings, a ratchet wheel arranged between the rings and formed upon opposite sides thereof with hub portions which are journaled within the rings, said ratchet wheel being formed with a central opening and also with a side opening corresponding to the side openings of the rings and adapted to be rotated into registry therewith for the purpose of moving a pipe or like member into or out of the central opening of the ratchet wheel, a block fitted removably within the side opening of the ratchet wheel, jaws mounted upon the ratchet wheel for engagement with a pipe or like member within the central opening thereof, and a pawl mounted upon the handle for engagement with the ratchet wheel.

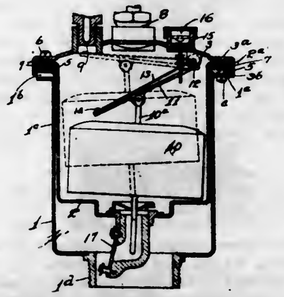
[Claims 6 to 9 not printed in the Gazette.]

1,153,695. WATCHMAKER'S TOOL FOR ADJUSTING BALANCE-WHEELS. LOUIS KOHN, Chicago, Ill. Filed Apr. 15, 1915. Serial No. 21,624. (Cl. 33—203.)



An indicating device comprising a plate having a scale thereon, a guide provided with a knife edge pivotally secured thereto, a pointer adapted to register the movements of said guide, and spring-pressed adjusting means including gripping flanges whereby said plate may be secured in any desired position on the arm of a pair of calipers.

1,153,696. LIQUID-FEEDING DEVICE. EDWARD A. LARSON, Chicago, Ill., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill., a Corporation of Virginia. Filed Mar. 12, 1915. Serial No. 14,027. (Cl. 158—36.)



1. A device for the purpose indicated, comprising a chamber adapted for connection with a low-level liquid supply and with a source of suction, the suction connection comprising a constantly open orifice of comparatively small capacity, said chamber having an atmospheric air vent of large capacity, a valve controlling said vent, a float in the chamber, and a yielding connection between said valve and said float.

2. A device for the purpose indicated, comprising a chamber adapted for connection with a low-level liquid supply and with a source of suction, the suction connection comprising a constantly open orifice of comparatively small capacity, said chamber having an atmospheric vent of large capacity, a valve controlling said vent, a float in the chamber, and yielding means positioned to transmit pressure from the float to the valve in direction for opening the latter.

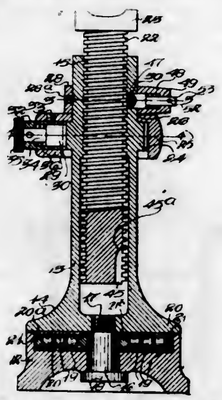
8. A device for the purpose indicated, comprising a chamber adapted for connection with a low-level liquid supply and with a source of suction, the suction connection comprising a constantly open orifice of comparatively small capacity, said chamber having an atmospheric air vent of large capacity, a valve controlling said vent, a lever fulcrumed in the chamber, said valve being connected to said lever near its fulcrum, and a float in the chamber connected to the lever at a point farther from its fulcrum.

4. A device for the purpose indicated, comprising a chamber adapted for connection with a low-level liquid supply and with a source of suction, the suction connection comprising a constantly open orifice of comparatively small capacity, said chamber having an atmospheric air vent of large capacity, a valve controlling said vent, a lever fulcrumed in the chamber, means yieldingly connecting said lever to said valve near its fulcrum, and a float in the chamber connected to the lever at a point farther from its fulcrum.

5. A device for the purpose indicated, comprising two flanged vessels, one of which is suspended within the other, a ring interposed between said flanges having a series of threaded apertures, screws passing through the upper flange into certain of said apertures in the ring, and other screws passing through the lower flange into the other apertures of said ring securing the two vessels together.

[Claim 6 not printed in the Gazette.]

1,153,697. JACK-SCREW. JOHN A. LELAND, Montague, Mass., assignor to Millers Falls Company, Millers Falls, Mass., a Corporation of Massachusetts. Filed Aug. 28, 1914, Serial No. 859,047. Renewed Aug. 6, 1915. Serial No. 44,118. (Cl. 254—98.)



1. A jack screw comprising a pedestal having an upwardly facing bearing face and a central stud bearing, a series of anti-friction bearings supported by said face and practically coextensive therewith, a tubular internally threaded standard having an enlarged base forming a turn-table and provided with a downwardly facing bearing face coextensive with the bearing face of the pedestal and resting on said bearings, a central pivot stud detachably securing the turn-table to the pedestal and journaled in said stud bearing, said stud permitting the separation of the turn-table from the pedestal to render the antifriction bearings accessible, means for rotating the standard, and a lifting screw engaged with the internal thread of the standard, the said pedestal, turn-table and antifriction bearings forming an antifrictional support of greater diameter than the standard, permitting free rotation of the standard, and adapted to adequately resist strains tending to tip the standard in any direction.

2. A jack screw comprising a supporting pedestal, a tubular standard internally threaded at its upper portion and having a turn-table pivotally connected with the pedestal, a fixed ratchet surrounding the upper portion of the standard and fast thereon, a sleeve loosely surrounding the standard and ratchet and movably seated on the upper end of the ratchet, a spring-pressed pawl carried by the sleeve and engaging the ratchet, said sleeve being removable upwardly from the ratchet, an operating lever engaged with said sleeve, a stop detachably secured to the standard above the ratchet and sleeve, and confining the sleeve in its operative relation to the ratchet, and a lifting screw engaged with the internal thread of the standard.

3. A jack screw comprising a supporting pedestal, a tubular standard internally threaded at its upper portion and having a turn-table pivotally connected with the pedestal, a fixed ratchet surrounding the upper portion of the standard and fast thereon, a sleeve loosely surrounding the standard and ratchet and having a laterally projecting ear provided with a socket which is tangential to the sleeve and open at both ends, an operating lever slidable in said tangential socket and adapted to project from either end of said ear, a spring-pressed pawl carried by said sleeve and engaging the ratchet, and a lifting screw engaged with the internal thread of the standard.

4. A jack screw comprising a pedestal, a tubular standard rotatable on the pedestal and internally threaded at its upper end portions, means for rotating said standard, a lifting screw engaged with the internal thread of the standard and formed to be held from rotation by the body to be lifted, said screw being provided in its lower end portion with a groove interrupting the continuity of the thread, and a spring-pressed locking pawl engaged with the upper portion of the standard and adapted to bear inoperatively on the continuous portion of the lifting screw thread to enter said groove when the screw is raised to a predetermined height, said groove and pawl being formed to interlock and prevent a further screw-raising rotation of the standard when the pawl enters the groove, and having oblique faces formed to cause the automatic intermittent displacement of the pawl by the screw when the standard is reversely rotated.

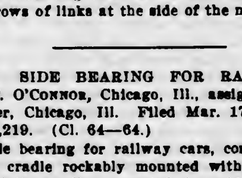
5. A jack screw comprising a supporting pedestal, a tubular standard internally threaded at its upper portion and having a turn-table pivotally connected with the pedestal, a fixed ratchet surrounding the upper portion of the standard and fast thereon, a sleeve loosely surrounding the standard and ratchet and normally seated on the upper end of the ratchet, a spring-pressed pawl carried by the sleeve and engaging the ratchet, said sleeve being removable upwardly from the ratchet, an operating lever engaged with said sleeve, a collar detachably secured to the standard above the ratchet and constituting a stop confining the sleeve in its operative relation to the ratchet, said collar having a radial socket, and the standard having an orifice registering with said socket, a lifting screw engaged with the internal thread of the standard and formed to be held from rotation by the body to be lifted, said screw being provided in its lower end portion with a groove interrupting the continuity of the thread, and a spring-pressed locking pawl movable in said radial socket and in the standard orifice registering therewith, and adapted to bear inoperatively on the continuous portion of the lifting screw thread and to enter said groove when the screw is raised to a predetermined height and prevent a further screw-raising rotation of the standard.

[Claim 6 not printed in the Gazette.]

1,153,698. METALLIC MAT. JOSEPH NATTRASS, Newark, N. J. Filed Apr. 21, 1915. Serial No. 22,743. (Cl. 15—63.)

1. A flexible, metallic mat composed of a plurality of interlocked U-shape links, the two sides of a link having an outwardly curved portion between the open and closed ends thereof, said curved portions of adjacent links contacting with each other and the two sides of a link being pivotally held in the ends of two succeeding links.

2. A flexible, metallic mat composed of a plurality of interlocked U-shape links, the two sides of a link being provided substantially at the middle of their free ends with a bearing or pintle seat and with a corresponding slit extending thereto from an edge of the said sides, and the cross piece of a link being provided with two pairs of slots extending vertically inward from its two edges to provide a central pintle portion adapted to be held in the said bearings of the sides to pivotally attach the links to one another and the entrance slits to said bearings being closed to lock the pintle portion thereon.



3. A flexible, metallic mat composed of a plurality of interlocked U-shape links, the two sides of a link being provided substantially at the middle of their free ends with a bearing or pintle seat and with a corresponding slit extending thereto from an edge of the said sides, and the cross-piece of a link being provided with two pairs of slots extending vertically inward from its two edges to provide a central pintle portion adapted to be held in the said bearings of the sides to pivotally attach the links to one another and the entrance slits to said bearings being closed to lock the pintle portion therein, and a transverse bar adapted to be locked in the bearings of said ends of the last row of links.

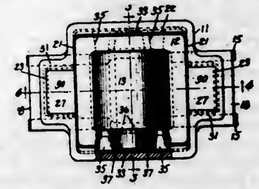
4. A flexible, metallic mat composed of a plurality of interlocked U-shape links, the two sides of a link being provided substantially at the middle of their free ends with a bearing or pintle seat and with a corresponding slit extending thereto from an edge of the said sides, and the cross piece of a link being provided with two pairs of slots extending vertically inward from its two edges to provide a central pintle portion adapted to be held in the said bearings of the sides to pivotally attach the links to one another and the entrance slits to said bearings being closed to lock the pintle portion therein, and a transverse bar provided with pairs of slots extending vertically inward from its edges to provide a central portion adapted to be locked in the bearings in said ends of the last row of links.

5. A flexible, metallic mat composed of a plurality of interlocked U-shape links, the two sides of a link being provided substantially at the middle of their free ends with a bearing or pintle seat and with a corresponding slit extending thereto from an edge of the said sides, and the cross piece of a link being provided with two pairs of slots extending vertically inward from its two edges to provide a central pintle portion adapted to be held in the said bearings of the sides to pivotally attach the links to one another and the entrance slits to said bearings being closed to lock the pintle portion therein, a transverse bar provided with pairs of slots extending vertically inward from its edges to provide a central portion adapted to be locked in the bearings in said ends of the last row of links, and side pieces consisting of a half of a link and attached to alternate rows of links at the side of the mat to finish the same.

1,153,699. SIDE BEARING FOR RAILWAY-CARS. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chicago, Ill. Filed Mar. 17, 1914. Serial No. 825,219. (Cl. 64—64.)

1. A side bearing for railway cars, comprising a base casting, a cradle rockably mounted within said casting, an anti-friction roller mounted in said cradle, and a shaft on which said roller is mounted, said shaft having flattened ends inserted in recesses in the cradle, and the cradle having recesses adjacent the recesses which receive the shaft ends which permit a tool to be inserted therein to upset the adjacent metal and force it against the flattened ends of said shaft to prevent rotation of the latter.

2. A side bearing for railway cars comprising a base casting having depending side flanges adapted to be secured to a side bearing bridge of a truck, said base casting having a hollowed out portion above said flanges, a cradle rockably mounted within said hollowed out portion, said cradle being horizontally arranged in normal position, the hollowed out portion of the base casting being arranged to permit the cradle to be moved to vertical position therein, trunnions extending laterally from said cradle and mounted in bearings provided in the base casting, said trunnions being flattened at one portion and the bearings in the base casting having a restricted opening arranged to permit the insertion and removal of said trunnions when the cradle is in a vertical position.



3. A side bearing for railway cars comprising a base casting having side flanges adapted to be secured to a side bearing bridge of a truck, said base casting having a hollowed out portion above said flanges, a cradle rockably mounted within said hollowed out portion, said cradle being horizontally arranged in normal position, the hollowed out portion of the base casting being arranged to permit the cradle to be moved to vertical position therein, trunnions extending laterally from said cradle and mounted in bearings provided in the base casting, said trunnions being flattened at one portion and the bearings in the base casting having a restricted opening arranged to permit the insertion and removal of said trunnions when the cradle is in a vertical position and removable closure plates for said restricted openings.

4. A roller bearing comprising, in combination: a single piecee base casting having a hollowed out portion and provided with bearings in two opposite walls thereof, each of said bearings having a restricted opening; and a roller-carrying cradle rockably mounted within said casting and arranged horizontally when in normal, operative position, said cradle being provided with laterally extending trunnions, the trunnions being insertible into said bearings through the restricted openings thereof when the cradle is in a vertical position, said bearings retaining the trunnions of said cradle when the latter is in horizontal position, the hollowed out portion of said base casting permitting the cradle to be turned to a vertical position while therein, said cradle being insertible within and removable from said casting while the latter is secured in position on a truck.

1,153,700. ROTATING DEVICE FOR ROCK-DRILLS. CHARLES OTIS PALMER, Cleveland, Ohio. Filed Aug. 26, 1910. Serial No. 579,165. (Cl. 121—10.)



1. In machines of the class described the combination with the actuating cylinder, of a piston in said cylinder, a rotating device consisting of a rifle-bar engaging said piston, a ratchet-wheel loosely mounted upon said rifle-bar, a pawl engaging the ratchet wheel and allowing its rotation in one direction only, a driving engagement consisting of a sleeve on said rifle-bar non-revoluble therewith and engaging said ratchet wheel, and a spring holding said ratchet wheel and sleeve in forced engagement under normal working stress but allowing their disengagement when abnormal torsional stress is applied to separate said engaging parts.

2. In a rock drill the combination with the actuating cylinder, of a piston in said cylinder, a rotating device

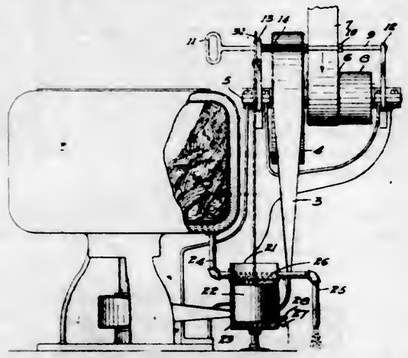
consisting of a rifle-bar engaging said piston, a ratchet-wheel loosely mounted on the rifle-bar, yielding clutch elements interposed between the ratchet-wheel and rifle-bar, a helical spring holding said clutch elements in forced engagement independent of the rotary effort, and means for engaging the ratchet-wheel and allowing its rotation in one direction only.

3. In a machine of the class described, the combination with the actuating cylinder, of a piston in said cylinder, a rotating device consisting of a rifle-bar engaging said piston, a ratchet-wheel loosely mounted on the rifle-bar, rosette teeth on the end of said ratchet-wheel, a rosette collar yieldingly held in engagement with said ratchet-wheel and prevented from rotation on said rifle-bar, and means for preventing said ratchet-wheel from revolving in one direction but allowing it to rotate in the opposite direction.

4. In machines of the class described, the combination with the actuating cylinder, of a piston in said cylinder, a rotating device consisting of a rifle-bar engaging said piston, a ratchet wheel loosely mounted on the rifle-bar, rosette teeth on the end of said ratchet wheel, a rosette collar splined on the rifle-bar, a spring adapted to hold the rosette collar in engagement with the ratchet-wheel, and means for preventing the ratchet wheel from revolving in one direction only.

5. In machines of the class described, the combination with the actuating cylinder, of a piston in said cylinder, a rifle-nut in said piston, a rotating device consisting of a rifle-bar engaging said rifle-nut, a ratchet-wheel peripherally toothed and loosely mounted on the rifle-bar, rosette teeth on the end of said ratchet-wheel, a rosette-collar yieldingly held in forced engagement with the ratchet-wheel, a nut screwed on the rifle-bar, a spring between said nut and rosette collar, and means engaging the peripheral teeth of the ratchet-wheel to prevent its rotation in one direction only.

1,153,701. LAUNDRY-EXTRACTOR. FRANK M. OVERHOLT and FRANK M. STEINER, Minneapolis, Minn. Filed Mar. 8, 1915. Serial No. 12,825. (Cl. 210—35.)



1. The combination, with a centrifugal laundry extractor having a discharge for the waste water thrown out of the clothes, and a power transmitting means for said extractor, of means controlled by the waste water for shifting said transmitting means to stop the machine when the discharge of water falls below a predetermined volume.

2. The combination, with a centrifugal laundry extractor having a discharge for the waste water thrown out of the clothes and a power transmitting means for said extractor, a receptacle arranged to receive the waste water and having a waste cock, and means governed by the decrease in the flow of water to said receptacle for shifting said power transmitting means to stop said extractor.

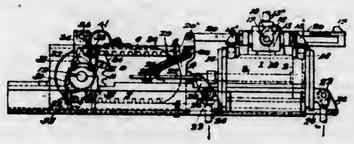
3. The combination, with a centrifugal laundry separator having a discharge pipe for the waste water thrown out of the clothes and a power transmitting means, of a receptacle communicating with said pipe and having a waste valve and a float in said receptacle, means connecting said float with said power transmitting means for locking it in position to transmit power to said separator when a predetermined volume of water is flowing from said separator, said float dropping by gravity and shifting said power transmitting means to stop said separator when the water falls below a predetermined volume.

4. The combination, with a centrifugal extractor having a discharge for the waste water thrown out of the clothes and a power transmitting belt for said extractor, of a shifter bar engaging said belt and means for normally holding it in its idle position, means for locking said bar in the shifted position of said belt for transmitting power therethrough, and means governed by the decrease in the flow of waste water from said extractor for tripping said shifter bar to return said belt to its normal, inactive position.

5. The combination, with a centrifugal laundry extractor having a discharge opening for the waste water thrown out of the clothes and a power transmitting belt, of a spring-actuated shifter bar having means to engage and shift said belt, said bar having notches therein, a locking slide having a slot to receive said bar, one end of said slot engaging a notch in said bar upon the initial movement of said bar to shift the belt to its active position, and means actuated by the waste water discharged from the extractor for first moving said slide to disengage one end of its slot from said bar and engage the opposite end of the slot with the other notch, to temporarily lock said bar, said means moving in the opposite direction to disengage said slide from said bar when the waste water falls below a predetermined volume.

[Claims 6 and 7 not printed in the Gazette.]

1,153,702. CENTERLESS ENGINE. LEVIS PASSMORE, Philadelphia, Pa. Filed Nov. 25, 1914. Serial No. 873,938. (Cl. 74—27.)



1. In an engine, a shaft, a plurality of rotatable members loosely mounted on said shaft, sliding means for rotating the same, dogs carried by said shaft and cooperating means carried by said rotating members whereby a complete rotation of said shaft by the to and fro movement of said sliding means is effected, and pivotal weighting means coöperating with said dogs.

2. In an engine, a plurality of spur wheels, slidable means adapted for rotating the same, a driving shaft on which said wheels are loosely mounted, a plurality of arms mounted on said shaft and fixed thereto, a dog carried on each of said arms, said wheels being provided with means with which said dogs may engage, whereby said arms are adapted to rotate said driving shaft each a half turn, and so successively a full turn, and a device on the frame of the engine adapted to weight said dogs.

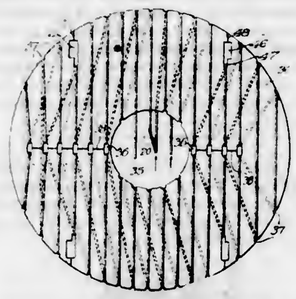
3. In an engine, a plurality of spur wheels, slidable means adapted for rotating the same, a driving shaft on which said wheels are loosely mounted, a plurality of arms mounted on said shaft and fixed thereto, a dog carried on each of said arms, said wheels being provided with means with which said dogs may engage, whereby said arms are adapted to rotate said driving shaft each a half turn, and so successively a full turn, a device on the frame of the engine adapted to weight said dogs, said device being adapted to be reversed and thereby shift the position of said dogs causing a reversal of the engine.

4. In an engine, a plurality of spur wheels, slidable means adapted for rotating the same, a driving shaft on which said wheels are loosely mounted, a plurality of arms mounted on said shaft and fixed thereto, a dog carried on each of said arms, said wheels being provided with means with which said dogs may engage whereby said arms are adapted to rotate said driving shaft each a half turn and so successively a full turn, a device on the frame of the engine adapted to weight said dogs, a movable member on the said slidable means, a pivotal connection for said member and weighting device, the latter being adapted to be overturned for the purpose of reversing the engine, and a stop piece on said weighting device adapted to be supported on said movable member to limit the descent of said weighting member on said dogs.

5. In an engine, a shaft, a plurality of rotatable means loosely mounted thereon for causing rotation of said shaft, slidable means engageable with said rotatable means for rotating the same, each rotatable means being provided with lugs, a double-ended pivoted member for cooperation with each rotatable member and coöperating with said lugs and means mounted on said shaft for carrying said double-ended pivoted member, and weighting means for said double-ended members.

[Claims 6 to 9 not printed in the Gazette.]

1,153,703. ELECTRIC HEATER. SEBRING I. PHELPS, Buchanan, Mich. Filed Apr. 13, 1911. Serial No. 620,872. (Cl. 219—43.)



1. An electric heating device, comprising an integral sheet of insulating material having a relatively long and narrow slit therein, and resistance material wound on said sheet from said slit to the edges of said sheet at opposite sides, said convolutions extending in substantially the same general direction transversely to said slit.

2. An electric heating device, comprising an integral disk of insulating material having therein a diametrically disposed relatively long and narrow slit, and resistance material wound on said sheet from said slit to the edges of said disk which are on opposite sides of the slit.

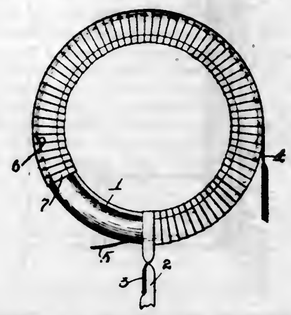
3. An electric heating device, comprising an integral disk of insulating material having an aperture therein and having a slit extending outwardly from said aperture and terminating adjacent to the edge of said disk, and resistance material wound on said disk from said slit and aperture to the edges of said disk which are at both sides of said disk.

4. An electric heating device, comprising a disk of insulating material having a main aperture centrally located therein, a row of smaller apertures in said disk extending between said main aperture and the edge of said disk, said disk having a slit extending along said row and connecting adjacent apertures, and resistance material wound on said disk from said apertures to the edges of said disk which are at both sides of said slits.

5. An electric heating device, comprising an integral disk of insulating material, resistance material wound thereon so that the convolutions of the winding extend in opposite directions transversely to and on opposite sides of a diameter of the disk, said winding beginning near the center of said disk, continuing outwardly in one direction, crossing said diameter and continuing in the reverse direction beyond the starting point, recrossing said diameter and continuing in said first direction to the starting point.

[Claim 6 not printed in the Gazette.]

1,153,704. WRAPPING. FRANK M. PIERCE, Chicago, Ill. Filed Mar. 27, 1913. Serial No. 757,109. (Cl. 150—54.)



1. A wrapping, comprising a continuous strip wound spirally and transversely upon an article of ring form, and a wrapping strip applied adhesively to the folds of said spiral strip to hold the same in fixed relation.

2. A wrapping, comprising a continuous strip wound spirally and transversely in overlapped relation upon an article of ring form, and an adhesive wrapping strip applied to the folds of said spiral strip peripherally of the article wrapped.

3. A wrapping, comprising a continuous strip wound transversely and overlapped in spiral relation upon an article of ring form and having adhesive means securing each of said folds to the preceding fold, and a wrapping strip applied adhesively to the folds of said spiral strip to hold the same in fixed relation.

4. A wrapping, comprising a continuous strip wound spirally and transversely upon an article of ring form, a wrapping strip applied adhesively to the folds of said spiral strip to hold the same in fixed relation, and means wound within said spiral wrapping for tearing said wrapping from the article.

1,153,705. REFRIGERATOR-CAR. MORLEY PUNSHON REYNOLDS, Cleveland, Ohio, assignor to W. S. Tyler Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 24, 1914. Serial No. 858,203. (Cl. 62—19.)

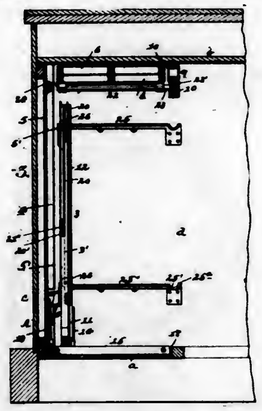
1. A refrigerator car having a movable transverse partition, an ice grate formed of a series of bars and supported at its front end on said partition, and movable means at the rear of said bars for supporting the same in horizontal position and for permitting the same to drop down to a horizontal position at the bottom of the car.

2. A refrigerator car having a movable transverse partition, an ice grate formed of a series of bars and supported at its front end on said partition, and movable stands at the rear of said bars for supporting the same in a horizontal position and for permitting the same to drop down to a horizontal position at the bottom of the car.

3. A refrigerator car having a movable transverse partition, an ice grate formed of a series of bars and supported at its front end on said partition, movable stands at the rear of said bars for supporting the same in a horizontal position, and means connected to said bars and stands for permitting the bar to be raised and be dropped down to a horizontal position at the bottom of said car.

4. A refrigerator car having a movable transverse partition, an ice grate formed of a series of bars and supported at its front end on said partition, movable stands at the rear of said bars for supporting the same in a horizontal

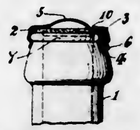
position, and brace rods for supporting the same in a horizontal position, and brace rods pivotally connected to said bars and stands for permitting said bars to be raised and be dropped down to a horizontal position at the bottom of the car.



5. A refrigerator car having a movable transverse partition, an ice grate composed of a plurality of independent sections, each formed of a series of bars and supported at its front end on said partition, movable stands at the rear of each of said sections for supporting the same in a horizontal position, and means connected to said bars and stands for permitting the sections to be raised and be dropped down to a horizontal position at the bottom of said car.

[Claims 6 to 21 not printed in the Gazette.]

1,153,706. BOTTLE-CAP. ISIDOR B. ROSENCRANTZ, New York, N. Y., assignor to The Patent Products Corporation, a Corporation of Delaware. Filed June 27, 1914. Serial No. 847,579. (Cl. 215—10.)



1. A bottle closing cap comprising a resilient disk having a central bulged portion capable of being sprung from outward bulging position to inward bulging position and vice versa, and claws integral with said central portion and depending from the periphery thereof, said claws being separated from each other and the free ends of said claws when the bulge is being sprung outwardly moving toward the center of the bulged portion on which they are arranged and when the bulge is being sprung inwardly said claws moving away from the center of said bulged portion, the disk having an annular series of circumferentially elongated and spaced distortions arranged and adapted to vary its spring power.

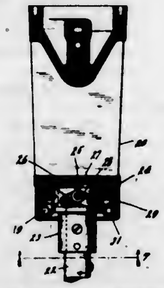
2. A bottle closing cap comprising a resilient disk having a central bulged portion capable of being sprung from outward bulging position to inward bulging position and vice versa, and claws integral with said central portion and depending from the periphery thereof, said claws being separated from each other and the free ends of said claws when the bulge is being sprung outwardly moving toward the center of the bulged portion on which they are arranged and when the bulge is being sprung inwardly said claws moving away from the center of said bulged portion, the disk having a circumferentially discontinuous eccentric distortion arranged and adapted to vary its spring power.

3. A bottle closing cap comprising a resilient disk having a central bulged portion capable of being sprung from outward bulging position to inward bulging position and vice versa, and claws integral with said central portion and depending from the periphery thereof, said claws being separated from each other and the free ends of said claws when the bulge is being sprung outwardly moving toward the center of the bulged portion on which they are arranged and when the bulge is being sprung inwardly said claws moving away from the center of said bulged portion, the disk having an annular series of circumferentially elongated and spaced distortions arranged and adapted to vary its spring power.

4. A bottle closing cap comprising a resilient disk having a central bulged portion capable of being sprung from outward bulging position to inward bulging position and vice versa, and claws itegral with said central portion and depending from the periphery thereof, said claws being separated from each other and the free ends of said claws when the bulge is being sprung outwardly moving toward the center of the bulged portion on which they are arranged and when the bulge is being sprung inwardly said claws moving away from the center of said bulged portion, the disk having adjacent its periphery a series of circumferentially elongated and spaced distortions arranged and adapted to vary its spring power.

5. A bottle closing cap comprising a resilient disk having a central bulged portion capable of being sprung from outward bulging position to inward bulging position and vice versa, and claws integral with said central portion and depending from the periphery thereof, said claws being separated from each other and the free ends of said claws when the bulge is being sprung outwardly moving toward the center of the bulged portion on which they are arranged and when the bulge is being sprung inwardly said claws moving away from the center of said bulged portion, the disk having a circumferential series of spaced distortions no two of which are in the same diametric line of the cap.

1,153,707. VALVE ACTUATING AND ADJUSTING MECHANISM. EDWIN L. RUSSELL, Cleveland, Ohio, assignor to Edward W. Ansted, Connellsville, Ind. Filed Jan. 20, 1911, Serial No. 603,705. Renewed Feb. 8, 1915. Serial No. 6,802. (Cl. 136—7.)



1. The combination of a seat member, a seated member seated thereon and capable of movement along the seat member and movement toward and from the seat member, a driving member, a direct but yielding driving connection between the driving member and seated member tending continuously to drive the seated member along the seat member, and interengaging parts carried by the seated member and driving member whereby, upon movement of the driving member, resistance to movement of the seated member along its seat in excess of the normal strength of the yielding driving connection will cause initial movement of the seated member away from its seat, and movement of the seated member along its seat independent of the driving member under the influence of the yielding driving connection will drive the seated member toward its seat.

2. The combination of a seat member, a rotatable seated member associated therewith, a driving member, a torque-applying spring connecting the seated member and driving member, and interengaging members carried by the driving member and the seated member and interacting under normal stress of the spring, to drive the seated member toward the seat member and, under resistance of the seated member to rotative movement by the driving member, to drive the seated member away from its seat.

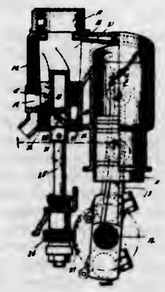
3. The combination of an axially tapered seat member, an axially tapered rotatable seated member associated therewith, a driving member, a torque-applying spring connecting the seated member and driving member, and interengaging members carried by the driving member and the seated member and interacting, under normal stress of the spring, to drive the seated member toward the seat member and, under resistance of the seated member to rotative movement by the driving member, to drive the seated member away from its seat.

4. The combination of a seat member, a seated member yieldingly seated thereon and movable thereon from one position to another, a driving member, a spring driving connection between the driving member and seated member, and an unseating connection between the driving member and seated member.

5. The combination of a seat member, a seated member yieldingly seated thereon and movable thereon from one position to another, a driving member, a spring driving connection between the driving member and seated member, and a cam connection between the driving member and seated member comprising two interacting portions relative movement of which tends to unseat the seated member.

[Claims 6 to 22 not printed in the Gazette.]

1,153,708. VALVE. EDWIN L. RUSSELL, Cleveland, Ohio. Filed Aug. 21, 1911, Serial No. 645,224. Renewed Feb. 8, 1915. Serial No. 6,803. (Cl. 136—7.)



1. In an internal combustion engine, the combination with the combustion chamber, piston and shaft connected therewith, of a circular valve chamber communicating with the combustion chamber, a valve rotatably mounted in said valve chamber and controlling the communication between the valve chamber and combustion chamber, a valve driver connected with said shaft, and a connection between said driver and valve permitting relative rotation and, upon relative rotation only, causing axial shifting of the valve toward or from its seat.

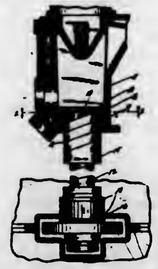
2. In an internal combustion engine, the combination with the combustion chamber, piston and shaft connected therewith, of a valve chamber having a seated communication with the combustion chamber, a valve seated therein and movable both along and away from said seat, a valve driver connected with the shaft, and a yielding connection between said driver and valve such that abnormal resistance of the valve to movement along its seat will cause initial movement of the valve away from its seat.

3. In an internal combustion engine, the combination with the combustion chamber, piston and shaft connected therewith, of a valve chamber having a seated communication with the combustion chamber, a valve seated therein and movable both along and away from said seat, a valve driver connected with the shaft, and a yielding connection between said driver and valve such that only abnormal resistance of the valve to movement along its seat will cause initial movement of the valve away from its seat.

4. In an internal combustion engine, the combination with the combustion chamber, piston and shaft connected therewith, of a tubular tapered valve chamber having a seated communication with the combustion chamber, a tapered rotary valve driver connected with the shaft, a rotatable screw driving connection between the driver and valve whereby rotative advancement of the driver independent of rotative advancement of the valve will move the vale axially away from its seat, and means urging the valve to its seat.

5. In an internal combustion engine, the combination with the combustion chamber, piston and shaft connected therewith, of a tubular tapered valve chamber having a seated communication with the combustion chamber, a tapered rotary valve driver connected with the shaft, a rotatable screw driving connection between the driver and valve whereby rotative advancement of the driver independent of rotative advancement of the valve will move the valve axially away from its seat, and a spring driving connection between the driver and valve urging the valve forward rotatively.

1,153,709. VALVE ADJUSTER AND DRIVER. EDWIN L. RUSSELL, Cleveland, Ohio. Filed Mar. 16, 1912, Serial No. 684,312. Renewed Feb. 8, 1915. Serial No. 6,804. (Cl. 136—7.)



1. The combination of a seat member, a seated member movable both along and away from the seat member, a driving member movable in the direction of movement of the seated member along the seat member, and a spring finger connected at one end to the driving member and at the other end to the seat member and lying at an angle both to the direction of movement of the seated member along the seat member and to the direction of movement of the seated member away from the seat member said spring finger having sufficient stiffness in the direction of movement of the seated member away from the seat member to project said seated member away from its seat when the finger is abnormally stressed by the driving member.

2. The combination of an axially tapered seat, and axially tapered rotary seated member therein, a rotary driving member, and a connection between the driving member and the seated member comprising one or more helical spring fingers anchored at one end to the driving member and anchored at the other end to the seated member.

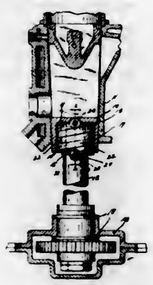
3. The combination of an axially tapered seat, an axially tapered rotary seated member therein, a rotary driving member, and a connection between the driving member and the seated member consisting of a tube of spring metal slit at one end with a multiplicity of helical slots into a plurality of helical spring fingers, said tube and fingers being secured at their opposite ends to the driving member and seated member.

4. The combination of an axially tapered seat, a correspondingly tapered rotary seated member mounted thereon, a rotary driving shaft, and a spring helix having helical portions in contact with other helical portions, one end of said helix being anchored to the seated member and the other end of said helix being anchored to the driving shaft and with the axis of the helix in substantial alinement with the axis of the shaft and seated member.

5. The combination of a seat, a corresponding rotary seated member mounted thereon, a rotary driving shaft, and a spring helix having helical portions in contact with other helical portions, one end of said helix being anchored to the seated member and the other end of said helix being anchored to the driving shaft and with the axis of the helix in substantial alinement with the axis of the shaft and seated member.

[Claim 6 not printed in the Gazette.]

1,153,710. VALVE ADJUSTER AND DRIVER. EDWIN L. RUSSELL, Cleveland, Ohio. Filed Mar. 16, 1912, Serial No. 684,313. Renewed Feb. 8, 1915. Serial No. 6,806. (Cl. 136—7.)

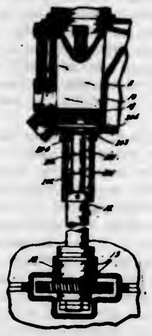


The combination of a seat member, a rotary seated member mounted thereon, a threaded member splined to the seated member and substantially coaxial therewith, a driving shaft, and a spring helix mounted between the threads of the threaded member and anchored at one end to the driving shaft and anchored at the other end to the rotary seated member.

1,153,711. VALVE ADJUSTER AND DRIVER. EDWIN L. RUSSELL, Detroit, Mich. Filed May 4, 1912, Serial No. 695,213. Renewed Feb. 8, 1915. Serial No. 6,805. (Cl. 136—7.)

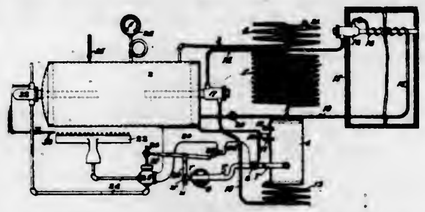
1. The combination of a seat member, a seated member associated rotatably therewith, an axially fixed rotatable driving shaft, and a driving connection between the shaft and seated member comprising two oppositely pitched helical spring members, the turns of each of said members being closely associated and each of said members being secured at one end to the driver and at the other end to the seated member, the adjacent helical faces coacting to lift the valve from its seat.

2. The combination of a seat member, a seated member associated rotatably therewith, an axially fixed rotatable driving shaft, and a driving connection between the shaft and seated member comprising two oppositely pitched helical spring members, each of said spring members comprising a plurality of closely nested helices and each of said helices being secured at one end to the driver and



at the other end to the seated member, the adjacent helical faces coacting to lift the valve from its seat.

1,153,712. REFRIGERATING APPARATUS. EDWIN RUUD, Pittsburgh, Pa., assignor to Ruud Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed May 6, 1912. Serial No. 695,432. (Cl. 62—5.)



1. Refrigerating apparatus comprising a generator, an upright flexible condenser coil connected thereto, a vertically movable receiver to which the flexible coil is connected, counterweight means sustaining the receiver normally elevated but adapted to be overbalanced and the receiver depressed by liquid accumulated in the receiver, a heater for the generator, heater controlling means movable with the receiver, and a refrigerating coil adapted to communicate with the receiver and with the generator.

2. Refrigerating apparatus comprising a generator, a condenser connected thereto, a refrigerator, a refrigerating coil adapted to communicate with the condenser and with the generator, thermostatic valves exposed respectively to the generator and the refrigerator for controlling the passage of fluid from the condenser to the refrigerating coil, and condenser heating means.

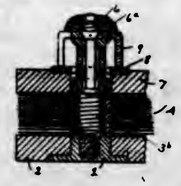
3. Refrigerating apparatus comprising a generator, a condenser, a refrigerating coil adapted to communicate with the refrigerator and with the condenser, a gas burner for the generator, a gas supply pipe leading to the burner, two valves controlling the flow of gas to the burner, means actuated by the condition of the generator contents for actuating one of the valves, and means actuated in part by the product from the condenser and in part by a counterweight for actuating the other of said valves.

4. Refrigerating apparatus comprising a generator, a condenser, a refrigerating coil adapted to communicate with the condenser and with the generator, a gas burner for the generator, and two independent automatically operated valves for controlling the flow of gas to the burner, one valve actuated by the liquid in the generator and the other valve by liquid from the condenser.

5. Refrigerating apparatus comprising a generator, a condenser communicating therewith consisting of an upright flexible coil, a vertically movable receiver connected to the lower end of the condenser, a refrigerating coil, a pipe coiled adjacent to the receiver and connected to the latter and to the refrigerating coil and adapted to compensate for the vertical movement of the receiver, a counterweighted support for the receiver, a heater for the generator, and heater controlling means movable with the receiver.

[Claims 6 to 8 not printed in the Gazette.]

1,153,713. LOOSE-LEAF BINDER. CYRIL SAYERS, Jersey City, N. J. Filed Sept. 15, 1914. Serial No. 861,750. (Cl. 129—13.)



1. A binder post clamp screw having a body portion and a head portion, in combination with a removable filler block and means for securing said filler block to said screw.

2. A binder post clamp screw having a head and a threaded body portion—said head being internally threaded, in combination with a removable filler block and a locking screw—said locking screw being adapted to enter the internally threaded portion of said clamp screw to hold said filler block and said clamp screw together.

3. A binder post clamp screw having a head and a threaded body portion—said body portion having an internal chamber and said head being internally threaded, a locking screw mounted in said clamp screw—said locking screw having a short threaded portion and a long stem portion with retaining means at its lower end; in combination with a removable filler block which is adapted to be clamped and retained in position between said screws.

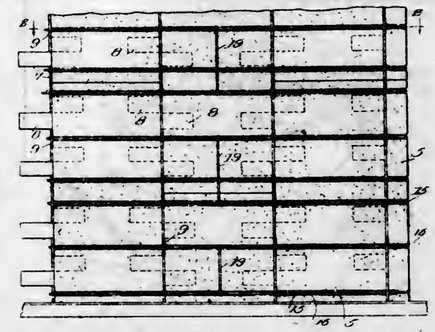
4. A clamp screw having a threaded body portion and a head—said head being internally threaded and having a pair of opposite tangential slots or grooves, in combination with a filler block which is adapted to enter said slots, and a locking screw which is adapted to enter said clamp screw to lock said filler block and said clamp screw together.

5. In a loose leaf binder having two covers and a binder post extending between said covers, a binder post clamp screw having a head and a threaded body portion, in combination with a removable filler block which is adapted to be inserted between the head of said clamp screw and one of said covers, means for locking said filler block in place, said locking means having a limited withdrawal movement—whereby one of said covers may be withdrawn a limited distance to permit the taking out or insertion of leaves without being entirely disconnected.

[Claim 6 not printed in the Gazette.]

1,153,714. BUILDING STRUCTURE. PAMPHILUS SCHMITZ, Phoenix, Ariz., assignor to The Franciscan Fathers of Arizona, Phoenix, Ariz., a Corporation of Arizona. Filed Nov. 9, 1914. Serial No. 871,086. (Cl. 72—46.)

1. A partition comprising a ceiling and a floor plate adapted to be secured to the ceiling and floor respectively of a building, said plate provided with transversely disposed spaced parallel slots, flat metal studs having their opposite ends bent at right angles, said bent ends adapted to be engaged through the slots for securing said studs to the plates, said studs having their opposite edges slit for a distance to provide tabs, the tabs being bent at right angles to project on opposite sides of the studs to provide shoulders, said shoulders occurring in pairs, projections alternating with the pairs of the shoulders along the edges of said studs, certain of the projections at spaced intervals being wider than the remainder, blocks adapted to be disposed at right angles to said studs and between them and adapted to be rested against said shoulders, and retaining wires, said wires adapted to be passed through openings occurring in the outer ends of the projections to bridge the outer surfaces of the blocks, substantially as described.



2. A partition including vertically spaced parallel sheet metal studs, means for detachably securing said studs at their opposite ends to the ceiling and floor of a building, shoulders formed on the edges of said studs and projecting on opposite sides thereof, projections forming extensions on the studs, said projections alternating with said shoulders, said projections provided with openings at their outer ends, certain of the projections at spaced intervals being wider than the remainder, blocks adapted to be disposed between said studs at right angles thereto and against said shoulders in such manner as to have the joint between the blocks occur adjacent the wider projection, and retaining means adapted to be passed through the openings in said projections whereby to bridge said blocks.

3. A stud comprising a flat metallic plate, having its opposite edges slit transversely of the plate for a distance in order to provide tabs, said tabs being bent at right angles to said plate to extend on opposite sides in order to form shoulders, said shoulders occurring in pairs alternating with unbent tabs, the latter forming projections, certain of said projections being wider than others, said projections provided at their outer ends with openings, substantially as described.

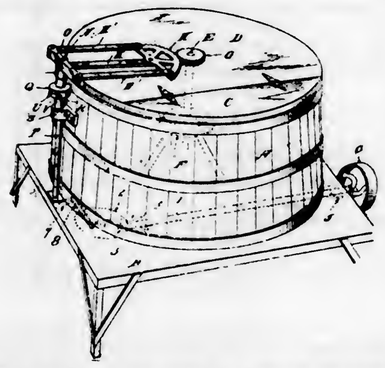
4. A partition including a plurality of spaced studs each having laterally extending shoulders provided adjacent the edges thereof and having a plurality of projections arranged in a common plane therewith, certain of the projections being wider than others, a plurality of blocks arranged between the studs and against the shoulders, with the joints between the blocks occurring adjacent the wider projections, retaining means connected with the narrower projections and extending across the blocks intermediate their ends, and retaining means connected with the wider projections and extending across the blocks adjacent their ends.

1,153,715. GEARING. SIMON E. SCHROEDER, Minier, Ill. Filed Jan. 8, 1913. Serial No. 740,810. (Cl. 74—50.)

1. In a driving mechanism for washing machines, the combination with a main support and a movable support coöperating therewith, of an actuating shaft mounted on said main support, a member mounted on said movable support in alinement with said actuating shaft, a driven shaft also mounted on said movable support, connecting means between said driven shaft and said member, and a clutch having coöperating separable members one on said actuating shaft and one on said member.

2. In a driving mechanism for washing machines, the combination with a main support and a movable support coöperating therewith, of an actuating shaft mounted on said main support, means for oscillating said actuating

shaft, a member mounted on said movable support, a driven shaft also mounted on said movable support, connecting means between said driven shaft and said member, and a clutch having one part mounted on said actuating shaft and a coöperating port mounted on said member, said parts being in engagement in one position of said movable support and separated in another position of said movable support.



3. In a driving mechanism for washing machines, the combination with a main support and a movable support coöperating therewith, of an actuating shaft, a driven shaft mounted on said movable support, a drive gear pivotally mounted in operative relation to said driven shaft, operating parts connected to said drive gear one on each side of its pivot, an operative connection between said actuating shaft and said operating parts for moving said parts simultaneously in opposite directions, and means for oscillating said actuating shaft.

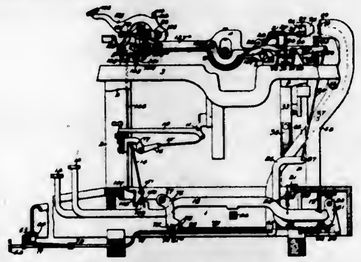
4. In a driving mechanism for washing machines, the combination with a main support and a movable support hinged thereto, of an actuating shaft mounted on said main support, a member mounted on said movable support, a separable clutch connection between said actuating shaft and said member, a driven shaft mounted on said movable support, a pinion carried by said driven shaft, a drive gear pivotally mounted adjacent said pinion and in mesh therewith, a cross-arm connected with said member, and an operating device extending from each end of said cross-arm to and connected with said drive gear on opposite sides of its pivot.

5. In a driving mechanism for washing machines, the combination with a main support and a movable support coöperating therewith, an actuating shaft mounted on said main support, a member mounted on said movable support, a separable clutch connection between said shaft and said member, a cross-arm mounted on said member, a driven shaft mounted on said movable support, a pinion carried by said driven shaft, a segmental drive gear pivotally mounted adjacent said pinion and in mesh therewith, and an oscillating connection between said cross-arm and said drive gear comprising two rods, each of which is pivotally connected to an end of said cross-arm and to said drive gear on the corresponding side of its pivot.

[Claims 6 to 9 not printed in the Gazette.]

1,153,716. TYPE-WRITING MACHINE. GEORGE A. SMITH, Ilion, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Original application filed Feb. 11, 1913, Serial No. 734,091. Divided and this application filed Feb. 12, 1914. Serial No. 818,232. (Cl. 197—176.)

1. In a typewriting machine, the combination of a carriage, a series of pivoted key controlled column selecting stops carried directly thereby and independently movable to operative position, said column selecting stops being relatively adjustable to different column selecting positions, and a coöperative stop with which said key controlled column selecting stops co-act when they are moved to operative position.



2. In a typewriting machine, the combination of a carriage, a series of key controlled column selecting stops pivoted directly on the carriage and independently movable to operative position, said column selecting stops being relatively adjustable to different column selecting positions, a coöperative stop with which said key controlled column selecting stops co-act when they are moved to operative position, and carriage release mechanism actuated to release the carriage by a movement of any of said column selecting stops to operative position.

3. In a typewriting machine, the combination of a carriage, a series of spring-returned key-carrying pivoted column selecting stops carried directly by the carriage and independently movable into and out of operative position, means for affording a relative adjustment between said stops to different column determining positions and for holding the stops against relative movement toward and away from each other in the column determining positions to which they may be adjusted without affecting the operativeness of said stops to move into and out of operative position, and a coöperating stop carried by the frame of the machine.

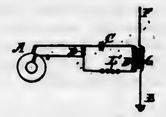
4. In a typewriting machine, the combination of a carriage, and a tabulator mechanism including a pivot rod, a key actuated tabulator stop which receives a pivotal movement on said pivot rod into and out of operative position, co-acting means on the stop and rod for locking the stop against movement along the rod when the stop is turned to one position on the rod and for freeing the stop for adjustment along the rod when the stop is turned to another position, and a coöperative stop with which the key actuated stop is adapted to be brought into coöperative relation, the key actuated stop being movable into and out of coöperative relation with said coöperative stop without releasing the key actuated stop from its locking means.

5. In a typewriting machine, the combination of a carriage and tabulator mechanism including a pivot rod having teeth on only one side thereof, a tabulator stop mounted to turn on said pivot rod, and a spring pressed latch carried by and movable relatively to said stop and which engages the teeth of said pivot rod when the stop is turned to one position, thereby locking the stop against movement along the rod and which latch is automatically freed from said teeth when the stop is turned to another position so that the stop may be adjusted along the rod.

[Claims 6 to 20 not printed in the Gazette.]

1,153,717. MEANS FOR GENERATING AND RADIATING ELECTROMAGNETIC WAVES. GEORG SEIBT, New York, N. Y., assignor to The Radio Telephone Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 25, 1909, Serial No. 514,475. Renewed Aug. 14, 1915. Serial No. 45,571. (Cl. 250—37.)

1. In a system for generating and radiating weakly damped electro-magnetic waves, a source of current and a spark gap, having associated therewith an oscillating circuit having a condenser and inductance in series and a series of auxiliary spark gaps in the oscillating circuit for quenching the oscillations therein, said auxiliary spark gaps being independent of said first mentioned spark gap.



2. In a system for generating and radiating weakly damped electro-magnetic waves, a source of alternating current, a spark gap connected across the terminals thereof, an oscillating circuit, including a condenser and inductance in series and connected in shunt to the spark gap for producing shock excited oscillations therein, and a plurality of auxiliary spark gaps independent of said first mentioned spark gap for quenching the oscillations following the initial or prime shock oscillation.

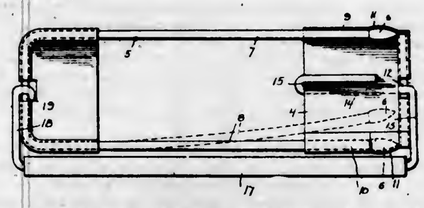
3. In a system for generating and radiating weakly damped electro-magnetic waves, an oscillating circuit, means for producing shock excited oscillations therein including a condenser and inductance in series and auxiliary spark gaps, in the oscillating circuit independent of the shock excited oscillation producing means for quenching the oscillations following each initial or prime shock oscillation.

4. In a system for generating and radiating weakly damped electro-magnetic waves, an oscillating circuit, means for producing oscillations therein including a spark gap and an inductance and a condenser in series and connected up in shunt to the spark gap and an independent auxiliary quenching spark gap arranged in said circuit.

5. In a system for generating and radiating weakly damped electro-magnetic waves, an oscillating circuit, including a condenser and an inductance in series and a spark gap, in combination with an independent auxiliary quenching spark gap arranged in the oscillating circuit.

[Claims 6 to 10 not printed in the Gazette.]

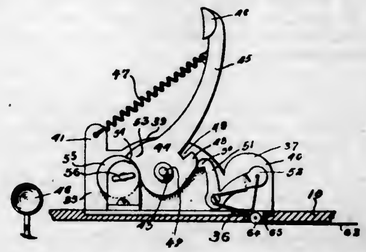
1,153,718. HANDLE. MINNIE E. SILVERTHORN, Cayuga, N. D. Filed Mar. 20, 1915. Serial No. 15,759. (Cl. 224—45.)



1. In a device as set forth, a substantially U-shaped wire having its legs sharpened to form inserting needles, the central portion of the wire of the U-shaped member being offset outwardly forming a bail retaining loop, a plate carried by the apex of said U-shaped wire, said plate provided with an opening engaged over the loop formed in the bight portion of the U-shaped member, a bail wire looped in the bight portion of said U-shaped wire and extending longitudinally of the U-shaped wire and having its free ends bent for supporting a second plate, said second named plate having its marginal sides and edges bent upon itself for forming receiving sockets for the inserting ends of said legs, and a cylindrical handle mounted upon said bail members when in use.

2. In a device of the class described, a substantially U-shaped wire having its legs sharpened to form inserting needles, the bight portion of said U-shaped member provided with a centrally offset bail receiving loop, a plate surrounding the bight portion of the U-shaped member and extending for a short distance downwardly on the legs, said plate provided with an opening to surround the bail loop formed on the bight portion of the U-shaped member, a bail wire connected to the loop in the bight portion of the U-shaped member and extending longitudinally thereof, its free end bent for supporting a second plate, said second named plate having its marginal sides bent upon themselves for forming receiving sockets, the outer extreme end being reduced to prevent the same from movement upon the pin when positioned thereupon, and a handle upon said bail member for carrying the same when in use.

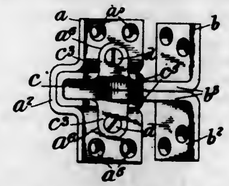
1,153,719. BASE-BALL-GAME APPARATUS. PARKER T. SIMMONS, Attleboro Falls, Mass. Filed May 22, 1914. Serial No. 840,275. (Cl. 46—59.)



1. In an apparatus of the class described, a pitcher device comprising a horizontal foot plate, an integral resilient upstanding plate thereon, an arm having an enlarged base pivoted on the upstanding plate and provided with a ball receiving cup at the outer end, a spring anchored upon the plate and engaging the arm for movement thereof in one direction, the enlargement of the arm having a cam portion at its rear side terminating in a notch at its major radius, a trigger device pivoted on the plate and having a bill to engage the notch and an integral grip portion on the upstanding plate adapted to be grasped with the trigger, as described.

2. In a pitching device a support, an oscillating arm carried thereby, means for oscillating the arm, the arm having a stop portion, a cam device mounted revolubly on the support in the path of the stop portion of the arm, and means to adjust the cam.

1,153,720. HINGE. CHARLES J. SOSS, New York, N. Y., assignor of one-third to Henry Soss and one-third to Samuel Soss, New York, N. Y. Filed Nov. 3, 1914. Serial No. 870,051. (Cl. 16—5.)



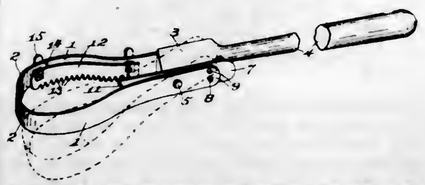
1. In a hinge, a part adapted to be secured in a stationary support, said part being stamped from sheet metal and comprising a box-shaped portion having parallel side portions provided with free edge portions forming laterally directed wings in which are formed recesses back of which are ears cut from the material of said wings and integrally connected with said side portions and provided with screw holes and the length of which is greater than the length of said recesses.

2. A hinge of the class described, comprising a part adapted to be secured in a door frame and a part adapted to be secured to a door, the part which is adapted to be secured in the door frame comprising a box portion having parallel sides provided with free edges having

laterally directed wings provided with recesses inwardly of which are ears provided with screw-holes, and the part which is adapted to be secured to the door frame being provided with an L-shaped arm, a supplemental part adapted to be secured in the part which is adapted to be secured in the door frame in which the L-shaped arm is pivoted, said supplemental part comprising parallel side plates having free edges provided with laterally directed ears adapted to enter said recesses and provided with screw-holes, said side plates being also provided at one of their free edges with inwardly directed lugs.

3. In a hinge, a part adapted to be secured in a stationary support, said part being stamped from sheet metal and comprising a box-shaped portion having parallel side portions provided with free edge portions forming laterally directed wings in which are formed recesses back of which are ears cut from the material of said wings and integrally connected with said side portions and provided with screw holes.

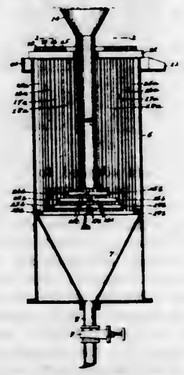
1,153,721. COMPOUND WEEDING AND SCRAPING IMPLEMENT. AUGUSTINE E. STAPLES, Chester, Vt. Filed Oct. 7, 1914. Serial No. 865,501. (Cl. 55—45.)



1. In a weeding implement, a handle, a handle head, a pivot projecting from each side of the head, weed cutters connected with the head by said pivot, and locking lugs projecting from the pivot sides of the head, the pivot movement in one direction being stopped by the lugs and the pivot movement in the other direction being stopped by the handle.

2. A compound weeding implement comprising a handle head having a pair of locking lugs projecting from opposite sides thereof, a resilient weed cutting loop pivoted to the head and having apertures in the ends thereof for engaging the lugs, and a weed cutting blade held in projected position upon the head by said pivot and by one of said lugs, said projecting portion of the blade being supported by one end of the loop with the latter in folded position.

1,153,722. APPARATUS FOR THICKENING SLIMES. WILLIAM ARMOR STEDMAN, Wonder, Nev. Filed Jan. 19, 1915. Serial No. 3,113. (Cl. 210—5.)



1. A device of the class described, comprising a tank, an inlet for matter in solution, vertically arranged means for forming and maintaining paths for the liquid of such solution upwardly through the solid matter in said solution precipitated by gravity, and an outlet for the precipitate.

2. A device of the class described, comprising a tank, an inlet for matter in solution, vertically arranged means for forming and maintaining paths for the liquid of such solution upwardly through the solid matter in said solution precipitated by gravity, and a controllable outlet for said precipitate.

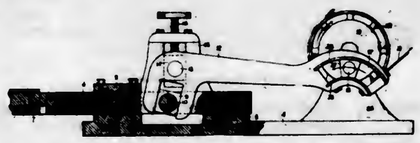
3. A device of the class described, comprising a tank, an inlet for matter in solution, vertically arranged means for forming and maintaining paths for the liquid of such solution upwardly through the solid matter in said solution precipitated by gravity, means for leading off said liquid, an outlet for said precipitate, and means for maintaining a desired relationship of flow between the inlet and outlet to render operation continuous.

4. A device of the class described, comprising a tank, an inlet pipe extending to a predetermined point therein, an outlet pipe, a valve therefor, and a plurality of vertical elements held in said tank and extending from the top thereof to beneath said inlet pipe.

5. A device of the class described, comprising a tank, an inlet pipe extending to a predetermined point therein, an outlet pipe, a valve therefor, a plurality of series of a plurality of vertical elements, each, held in said tank, all of said elements extending beneath said inlet pipe, and the series of elements being extended further downwardly into said tank, successively, from the center of said tank to the walls thereof.

[Claim 6 not printed in the Gazette.]

1,153,723. HEAD-MOTION. WILLIAM ARMOR STEDMAN, Wonder, Nev. Filed Jan. 19, 1915. Serial No. 3,114. (Cl. 74—14.)



1. In a head motion for concentrating tables, an arm mounted to oscillate to and from a line perpendicular to the line of travel of said table, means for varying the working length of said arm, means connecting said arm to the table, and means for oscillating said arm at a variable speed increasing as the arm moves from the perpendicular line and decreasing as it moves toward the same.

2. In a head motion for concentrating tables, a bell-crank lever having one arm associated with the table, the other arm having an arcuated slot, a crank pin engaging the slot, means for actuating the crank pin whereby the shorter arm is oscillated at a variable speed, substantially as and for the purpose set forth.

3. In a head motion for concentrating tables, a bell-crank lever mounted to oscillate, means forming a loose connection between one of said arms of said bell-crank lever and the table, means for varying the length of said arm, the other of the arms of the bell-crank lever having an arcuated slot at the end thereof, a crank pin engaging the slot, and means for actuating the crank pin whereby the bell-crank lever is oscillated at a variable speed substantially as and for the purpose set forth.

4. In a head motion for concentrating tables, a bell-crank lever, one arm of which is loosely connected to the table, the other arm having an arcuated slot, a crank pin engaging said slot, the radius of curvature of said slot being not less than that of the arc of travel of said crank pin, and means for actuating the crank pin.

5. In a head motion for concentrating tables, a bell-crank lever mounted to oscillate and having a long and a short arm, the short arm being bifurcated, a slide block in said bifurcated end, a pin rotatably mounted in said block, a slide bar connecting said pin to the table, the longer arm of the bell crank having an arcuated slot at the end thereof, a crank pin engaging the arcuated slot, the radius of curvature of said arcuated slot being not less than the radius of the arc of travel of said crank pin, and means for varying the distance of the axis of oscillation of said bell-crank lever from the pin in the block engaged in the bifurcated end.

[Claims 6 to 9 not printed in the Gazette.]

1,153,724. PIPE-LINING. ROBERT STOCKER, Brooklyn, N. Y. Filed Mar. 12, 1915. Serial No. 13,974. (Dedicated to the public.) (Cl. 137—75.)



1. A pipe having inner and outer tubular elements, an escape means from the space between the said elements, the said escape means being formed in the wall of one of the tubular elements.

2. A pipe having inner and outer tubular elements, an escape means from the space between the said elements, the said escape means being formed in the wall of one of the tubular elements and corrugations formed in the wall of one of the said tubular elements.

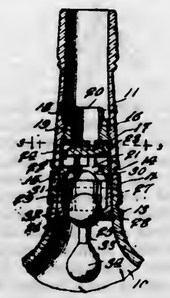
3. A pipe having inner and outer tubular elements, an escape means from the space between the said elements, the said escape means being formed in the wall of one of the tubular elements and corrugations formed in the wall of both of the said tubular elements.

4. A pipe having inner and outer tubular elements, a plurality of holes being formed in the wall of one of the tubular elements and corrugations formed in the wall of one of the said tubular elements.

5. A pipe having inner and outer tubular elements, a plurality of holes being formed in the wall of one of the tubular elements and corrugations formed in the wall of both of the said tubular elements.

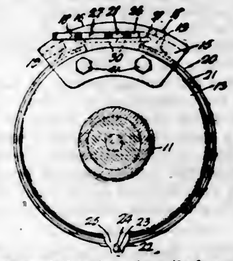
[Claims 6 to 9 not printed in the Gazette.]

1,153,725. NON-REFILLABLE BOTTLE. BERTRAM STONE, West New Brighton, N. Y. Filed July 3, 1914. Serial No. 848,877. (Cl. 215—103.)



In a non-refillable bottle, a bottle body having a neck, a seat member in the neck and providing a valve chamber, a ball valve movable in said chamber and normally interrupting communication between the bottle body and the valve chamber, a shank on the ball valve, a weight on the shank, and a tubular member threaded in the neck and having a lower portion forming a part of said valve chamber, a transverse baffle body carried by said tubular member and interposed between the upper and lower portions thereof, said tubular member having passages to permit of the passage of fluid from the valve chamber into and through the upper portion of the tubular member and thence out through the mouth of the bottle body.

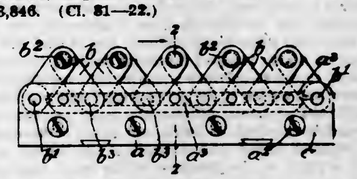
1,153,726. MOTOR-VEHICLE BRAKE. JESSE E. STONE, Sweet Water, Tex. Filed Nov. 25, 1914. Serial No. 873,935. (Cl. 21—8.)



1. In a device of the class described comprising two rotating brake drum elements, oppositely moving brake elements for each drum, a lever adjacent each drum oscillable in a plane parallel to the axis of the drum, said levers having principal arms movable toward each other for braking action, a connection between the levers yieldable to lateral force applied thereto, eccentric connections between each lever and each brake element adjacent respective drums, and an operating rod engaged with the said connections between the levers centrally of the connections, said levers and rods being all operative nearly or quite in a common plane.

2. A device of the class described comprising a drum, a frame piece thereadjacent, a band encircling the drum, an anchorage means therefor, said band having relatively movable ends, an extension piece on the frame piece having a flange concentric with the drum and having longitudinal slots therein alined with the drum, blocks on the band ends having lugs slidable in the slots, said extension piece having a horizontal slot therein, a lever having a disk portion at its inner end engaged oscillably in the slot, and eccentric connections between the disk and said blocks.

1,153,727. MEANS FOR SUPPORTING ARTICLES OF REGULAR OR IRREGULAR FORM. JOHN E. STONEY, Leicester, England. Filed Nov. 24, 1914. Serial No. 873,846. (Cl. 81—22.)



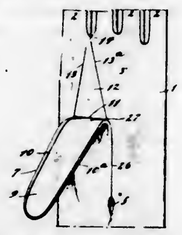
1. In apparatus for holding articles of unequal size or irregular form, the combination of a base, a series of movable bodies in contact with said base, means for retaining said movable bodies with respect to the base while allowing each of them to automatically and separately slide longitudinally thereon, a second set of movable bodies supported by the first set of movable bodies and arranged at a short distance from the base, means for connecting this second set of movable bodies to the base while allowing them to have automatic and separate motion longitudinally with respect to the base and also at right angles thereto, substantially as set forth.

2. In apparatus for holding articles of unequal size or irregular form, the combination of a base, a series of movable bodies consisting of alternate rivets of a chain and the adjacent parts of the links in contact with said base, means for retaining said movable bodies with respect to the base while allowing them to move longitudinally thereon, a second set of movable bodies consisting of the other alternate rivets of the chain and the adjacent parts of the links arranged at a short distance from the base, means for connecting this second set of movable bodies to the base while allowing them to have motion longitudinally with respect to the base and also at right angles thereto, substantially as set forth.

8. In apparatus for holding articles of unequal size or irregular form, the combination of a base having longitudinal grooves therein, a chain arranged in sigzag form, the end rivets of the chain being fixed to the base, other alternate rivets projecting beyond the sides of the chain and the ends of these last mentioned rivets being located in the said longitudinal grooves with capability of sliding therein, substantially as set forth.

4. In apparatus for holding articles of unequal size or irregular form, the combination of a base consisting of a block and side plates each plate having a longitudinal groove therein, a chain having its links arranged in sigzag form, the end rivets of the chain passing through the base, alternate pivots of the chain projecting beyond the sides thereof, and the ends of these pivots being located within the grooves in the side plates, substantially as set forth.

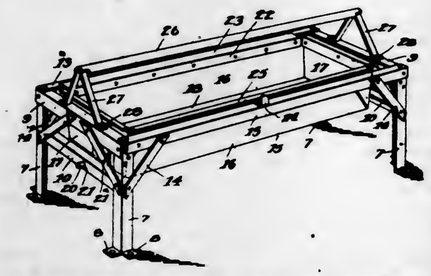
1,153,728. GLOVE. HARRY A. TAYLOR, New York, N. Y. Filed Jan. 12, 1914. Serial No. 811,515. (Cl. 2—9.)



1. A glove made from a blank comprising an intermediate portion constituting the back of the glove and back finger sections, and two side portions constituting the palm of the glove and palm finger sections, one of said side portions having a part integral therewith forming the back of the thumb, said side portions being folded over on the back portion and united to form the fingers and a portion of the palm, and a substantially diamond-shaped insert forming the inner portion of the thumb and completing the palm.

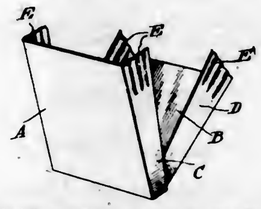
2. A glove made from a blank comprising an intermediate portion constituting the back of the glove and back finger sections, and two side portions constituting the palm of the glove and palm finger sections, one of said side portions having a part integral therewith forming the back of the thumb, said side portions being folded over the back of the thumb and united to form the fingers and a portion of the palm, and an insert forming the inner portion of the thumb and completing the palm, said insert being substantially diamond-shaped and extending lengthwise of the palm to a point at the juncture of the index and middle fingers.

1,153,729. METALLIC FEED-BOX. HARRY M. THAYER, Woodhull, Ill. Filed July 27, 1909. Serial No. 509,889. (Cl. 119—61.)



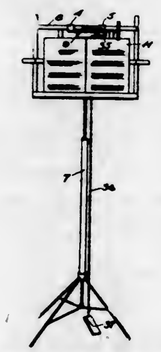
An improvement in metallic feed boxes comprising an open metallic framework provided with end portions having bearings therein, a tilting sheet metal receptacle arranged within the framework, and a reinforcing angle bar mounted longitudinally upon the bottom of the receptacle and provided with integral terminal gudgeons journaled in said bearings.

1,153,730. BRUSH-HOLDING DEVICE. JOHN H. THOMPSON, Greenville, Ohio. Filed Aug. 26, 1914. Serial No. 858,694. (Cl. 91—63.)



A brush holding device comprising two sections having flanges upon the opposite sides only, the upper free end of each flange being provided with corrugations, pivotal pins passing through the flanges a slight distance above corresponding ends, the flanges of one section adapted to swing inside the flanges of the other, the said corrugations being adapted to frictionally engage one another to hold the sections together to form a brush holding receptacle.

1,153,731. MUSIC-LEAF TURNER. DOUGLAS THORNTON, Yonkers, N. Y. Filed Sept. 17, 1914. Serial No. 862,169. (Cl. 84—135.)



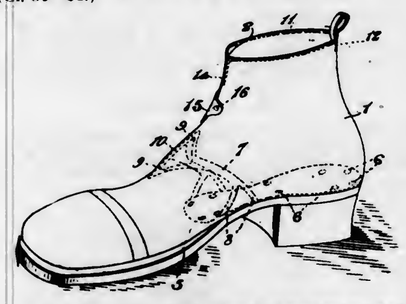
1. In a music leaf turner of the character described, a supporting frame provided with an aperture, a standard formed with a threaded portion extending through said aperture, said standard having a shoulder arranged thereon, a nut engaging said threaded portion for clamping said shoulder against said supporting frame, a plurality of projections extending from said standard, a spring for each of said projections coiled around said standard and having one end connected with said projections, an arm loosely connected with said standard for each of said springs, the outer end of said springs being connected with said arms whereby whenever the said springs are under tension said springs will give said arms a tendency to move a predetermned position, said nut and said standard being adapted to be loosened and rotated for bringing said springs under tension, said nut locking said standard normally against rotation, means for connecting sheet music with said arms, and means for individually releasing said arms.

2. In a music leaf turner of the character described, a supporting base formed with a substantially centrally arranged aperture and a notch on one side, said notch having a square shoulder, a shaft arranged with one end in said aperture, a plurality of swinging arms having

loops surrounding said shaft, said arms being arranged within the same plane as said notch and with one arm pressing against said shoulder, a spring for each of said arms for urging the same toward said shoulder, means for connecting said spring with said shaft, means for locking said shaft in any desired position, means for connecting said arms to sheet music, a single reciprocating shaft arranged opposite said shoulder, and means for moving said shaft so as to force the arm pressing against said shoulder to a position above the shoulder whereby the arm under the action of its spring must swing to the opposite side of said base.

3. In a music leaf turner of the character described, a supporting base provided with a solid body having an aperture substantially centrally thereof, a notch at one end formed with a straight shouldered and a pair of spaced hooks for supporting the base and an arc-shaped runner extending from the ends of said body, a shaft mounted on said body and with one end extending through said aperture, a plurality of swinging arms loosely mounted on said shaft, means for swinging said arms from one side of said base to the other, said shaft being formed with projections engaging said swinging means, adjustable means engaging the end of said shaft which extends through said aperture for locking said shaft against movement, said arms being normally held against swinging movement by said shoulder, and means for releasing said arms from said shoulder.

1,153,732. FOOTWEAR-CLASP. LEROY P. TINDALL, Jesup, Ga. Filed Feb. 23, 1915. Serial No. 10,000. (Cl. 36—51.)



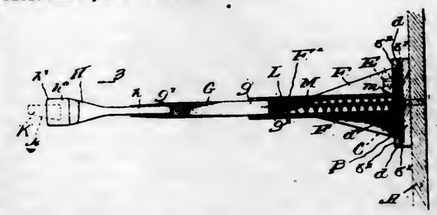
1. A footwear clasp comprising a base member, and integral resilient arms extending from opposite sides of the base member and adapted to extend from the arch to the instep of the shoe.

2. The combination with a shoe of a clasp comprising a base portion, and resilient arms extending from the opposite sides of the base member, said base member being secured between the inner sole and outer sole of said shoe and extending from the heel portion beyond the arch of the shoe to provide an arch supporter and the resilient arms being disposed between the upper and the lining of the shoe terminating at the instep opening.

3. The combination with a shoe of a clasp comprising a base member, and resilient arms extending from the opposite sides of the base member, said base member being secured between the inner sole and outer sole of said shoe and extending from the heel portion beyond the arch of the shoe and the resilient arms being disposed between the upper and the lining of the shoe, said resilient arms terminating in extensions which are normally held in contact with the foot of the wearer by the resiliency of the spring arms.

1,153,733. SKIRT-MARKER. HAZEL E. TOWN, Libby, Mont. Filed Oct. 7, 1914. Serial No. 865,489. (Cl. 33—9.)

1. A skirt marker of the character described, comprising a bracket, a slide adjustably mounted on said bracket, means for holding said slide in the desired position, a socket piece carried by said slide, a spring mounted in said socket piece, a block adapted to slide in said socket piece, and a marker holder having a V-shaped groove in the face thereof adapted to hold the marker crayon, said marker holder being attached to said block and adapted to reciprocate therewith under the action of said spring, substantially as described.



2. A skirt marker of the character described, comprising a bracket, a slide adjustably mounted on said bracket, means for holding said slide in the desired position, a socket piece carried by said slide, a coil spring mounted in said socket piece, a block adapted to slide in said socket piece, a flexible connection attached to the heel of said block and passing through the center of said coil spring and being attached to the base of said slide, thereby holding said block in said socket piece, and a marker holder having a V-shaped groove in the face thereof adapted to hold the marker crayon, said marker holder being attached to said block and adapted to reciprocate therewith under the action of said coil spring, substantially as described.

1,153,734. VACUUM CLEANING APPARATUS. WALTER G. TRAUTMAN, Cleveland, Ohio, assignor to The P. A. Geier Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 10, 1912. Serial No. 702,916. (Cl. 15—60.)



1. In apparatus of the class described, a brush-attachment, comprising two parallel stampings, brush-members secured in each of said stampings, and connecting spring-members adjacent to the ends thereof spacing said stampings at a distance from each other, substantially as set forth.

2. In apparatus of the class described, the combination with a vacuum cleaning nozzle having outwardly flaring lips thereon, of a brush attachment therefor, comprising two metal stampings substantially the length of said nozzle, brush-members secured within said stampings, and terminal connecting springs spacing said stampings apart in position to register with the nozzle opening and adapting the device to be removably attached to said nozzle, substantially as set forth.

3. In apparatus of the class described, a brush-attachment for suction nozzles, comprising two parallel channeled frames, end-lugs provided thereon, brush-members respectively secured therein, and flat connecting springs resiliently uniting said frames adjacent to their ends, adapted to retain them in their adjusted position for use, substantially as set forth.

4. In apparatus of the class described, a brush-attachment for suction nozzles, comprising two channeled sheet-metal stampings, brush-members secured in each of said stampings; said stampings having overlapping ends to form terminal lugs, and connecting springs secured adjacent to the ends of said stampings for resiliently spacing them at a distance from each other, substantially as set forth.

1,153,735. SLEIGH. THOMAS B. TAUB, Eaton Rapids, Mich. Filed May 1, 1915. Serial No. 25,104. (Cl. 21—48.)



1. In combination, sleigh runners, beams connecting the runners in pairs, said beams and runners being connected solely by intercngaging parts readily separable from each other and one pair of sleigh runners being located back of the other, a tongue detachably connected to the forward ends of the front pair of runners, a draw bar detachably connected to the forward ends of the rear pair of runners, a bolster secured to the rear beam, a bolster detachably secured to the front beam, a reach connected to the front bolster and extending through the rear bolster, and a detachable connection between the draw bar and reach.

2. In combination, sleigh runners, standards secured to and projecting upwardly from the runners, beams each provided with a housing at each end, said beams connecting the runners in pairs through the housing receiving substantially the entire body of the standards, the sleigh runners being located one back of the other, a tongue detachably connected to the forward ends of the front pair of runners, a draw bar detachably connected to the forward ends of the rear pair of runners, and means to detachably connect the front and rear beams, including a reach, and means detachably connecting the draw bar to the reach.

3. In combination, sleigh runners, standards secured to and projecting upwardly from the runners, the standards tapering upwardly and terminating in rounded heads, beams each provided with a bell-like housing at each end, said housings tapering outwardly at a greater angle than the standards and said beams connecting the runners in pairs one back of the other with the standards detachably inserted into the housings, a tongue connected to the forward runners, and means connecting the forward and rear pairs of runners.

4. In combination in a sleigh, front and rear pairs of runners spaced apart, upwardly extending tapered standards secured to the runners, a beam interposed between each pair of standards, bell-like housings secured one at each end of each beam and detachably receiving the standards, said housings flaring outwardly at a greater angle than the standards whereby the runners may have a limited pivotal movement with respect to the beams about axes adjacent the upper sides thereof, and means to detachably connect the pairs of runners together.

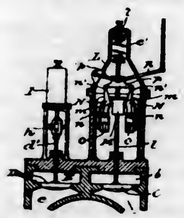
5. In combination in a sleigh runner, a straight bar having an under wearing surface, an upwardly tapering standard secured to and projecting upwardly from the said bar and terminating in a rounded head for detachable connection with a cross beam, and an upwardly curved member secured at the front end of the bar terminating in a head, said head having a substantially rectangular opening therethrough and a narrowed entrance to the opening from the rear of the head for detachable connection with a tongue or draw bar.

[Claims 6 and 7 not printed in the Gazette.]

1,153,736. VALVE FOR STEAM-ENGINES. JOSEF TRYSNA, Haindorf, Austria-Hungary, assignor to Stephen O. Adler, Altoona, Pa. Filed June 20, 1914. Serial No. 846,409. (Cl. 121—103.)

1. A steam engine cylinder provided with an admission valve and an exhaust valve at each end, means for alternately opening and closing the two exhaust valves, valve stems for the admission valves, means engaging the admission valve stems for alternately opening and closing the admission valves, and means slidably mounted on the stems of the admission valves for varying the duration of the open periods of said admission valves.

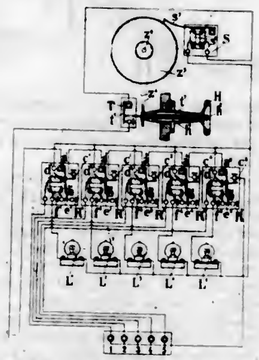
2. A steam engine cylinder provided with an admission valve and an exhaust valve at each end, a rock shaft disposed transversely to the axis of the cylinder, arms projecting laterally from said rock shaft, levers engaged by said arms and which are operatively connected with the exhaust valves to alternately open them, valve stems extending from the admission valves, arms projecting laterally from the rock shaft and carrying latches engaging the valve stems, and tripping devices for separating the latches from the valve stems.



3. A steam engine cylinder provided with admission and exhaust valves, means for opening and closing the exhaust valve, a valve stem for the admission valve, a latch device, means for raising and lowering it, means for connecting the latch device with the valve stem, and an adjustable tripping device engaging the latch device at each opening movement of the admission valve for varying the duration of its open period.

4. In a steam engine an admission valve provided with a valve stem carrying a latch-engaging member, a latch coöperating therewith, means for raising the latch to open the admission valve, and a tripping device adjustable toward and from the valve seat engaging the latch to separate it from the valve stem and allow the valve to close.

1,153,737. BARGAIN-INDICATOR. LODOVICUS J. J. VAN DER HOORN and SJOERD WOUDA, Utrecht, Netherlands. Filed Apr. 11, 1914. Serial No. 831,271. (Cl. 177—337.)



1. In an electric sale apparatus, means for successively indicating a series of prices, means for arresting the indication at any price of the series, a plurality of means operable by the purchasers for actuating the arresting means, and means for signaling an identification of the first of the actuating means to be operated.

2. In an electric sale apparatus, a dial bearing a scale of prices, an index, means for moving the index over the scale, an electromagnet for arresting the index, a plurality of relays each operable by a purchaser for causing energising of the electromagnet, a visual identification sign associated with each relay, and means for displaying the identification sign of the first relay to be operated.

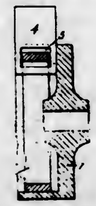
3. In an electric scale apparatus, a dial bearing a scale of prices, an index, a motor for moving the index over the scale to indicate a gradually diminishing price, an electromagnet for arresting the index, a plurality of relays each operable by a purchaser for causing energising of the electromagnet, a visual identification sign associated with each relay, lamps adapted to illuminate the signs, a source of current for the lamps, and means for connecting the source to the lamp associated with the first relay to be operated.

4. In an electric sale apparatus, a dial bearing a scale of prices, an index, means for moving the index over the scale, an electromagnet for arresting the index, a plurality of relays each operable by a purchaser for causing energising of the electromagnet, a visual identification sign associated with each relay, means for displaying the identification sign of the first relay to be operated, and means for rendering the remaining relays inoperative immediately said first relay is operated.

5. In an electric sale apparatus, a dial bearing a scale of prices, an index, a motor for moving the index over the scale to indicate a gradually diminishing price, an electromagnet for arresting the index, a plurality of relays each operable by a purchaser for causing energizing of the electromagnet, a visual identification sign associated with each relay, lamps adapted to illuminate the signs, a source of current for the lamps, means for connecting the source to the lamp associated with the first relay to be operated, and means for rendering the remaining relays inoperative immediately said first relay is operated.

[Claims 6 and 7 not printed in the Gazette.]

1,153,738. ROTATABLE CIRCULAR BRUSH. EUGEN VAN DEVOORDE, Bremen, Germany, assignor to the Firm of Wilh. Kober & Co., Suhl in Türing, Germany. Filed Feb. 7, 1914. Serial No. 817,170. (Cl. 83—64.)



1. A brush, comprising a cylindrical body, and a plurality of scraping members mounted on the body to move radially and swing tangentially to said body.

2. A brush, comprising a cylindrical body having an annular cavity and openings leading from the cavity through the periphery of the body, a plurality of scraping members projecting loosely through the openings into the cavity, whereby they are free to move tangentially to the body, and means for retaining the inner ends of the said members in the cavity so as to permit them to move radially through said openings.

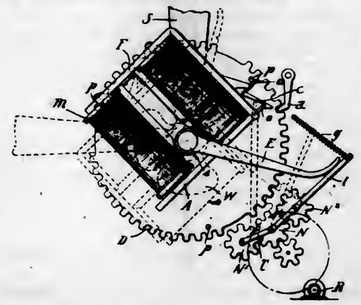
3. A brush, comprising a cylindrical body having an annular cavity and openings in its periphery leading into said cavity, a plurality of scraping members extending loosely through the openings into the cavity, and a retaining member in the cavity and with which the inner ends of each of the scraping members have a sliding connection.

4. A brush comprising a cylindrical body having an annular cavity and openings in its periphery leading to the cavity, a plurality of scraping members extending through the openings into the cavity, the inner ends of the members being provided with openings, and means in the cavity loosely engaging the openings of the said members.

5. A brush comprising a holder having a cavity therein, a split ring located in said cavity, and a scraper plate having a slot therein and supported on the said ring.

[Claims 6 and 7 not printed in the Gazette.]

1,153,739. SEMAPHORE-OPERATING MECHANISM. CHARLES W. WARD, Lakewood, Ohio. Filed Feb. 29, 1912. Serial No. 680,769. (Cl. 246—29.)



1. A semaphore signal comprising a semaphore, and intermittently operating driving means therefor comprising a gear having driving and non-driving portions, and coöperating driving elements, each movable to drive said gear in the same direction, and shifting devices for said driving elements, associated with said semaphore and operative when one element is coacting with the non-driving portion of said gear to cause the other driving element to coact with the driving portion of said gear.

2. A semaphore signal comprising a semaphore, and intermittently operating driving means therefor comprising a mutilated driving gear, and driving pinions driven each in the same direction and engaging said mutilated gear alternately.

3. A semaphore signal comprising a semaphore, and intermittently operating driving means, comprising a driving gear for the shaft mutilated at intervals, and a pair of driving pinions driven each in the same direction and engaging said mutilated gear alternately at points spaced by an interval unequal to the intervals between the mutilated portions of the said driving gear.

4. A semaphore signal comprising an operating shaft, a semaphore carried by the same and intermittent driving means for the same comprising a mutilated driving gear for the shaft, and a pair of driving pinions driven each in the same direction, one of which is normally fixed in position to engage said driving gear, and the other of which is moved to engage said gear when the said fixed pinion is disengaged by juxtaposition to a mutilated portion of the driving gear.

5. A semaphore signal comprising an operating shaft, a semaphore carried by the same, and intermittent driving means for the same comprising a mutilated driving gear for the shaft, and a pair of driving pinions driven each in the same direction, one of which is normally fixed in position to engage said driving gear, and the other of which is normally out of engaging position and adapted to be moved thereto, and means dependent upon predetermined movements of the semaphore to effect the engagement and disengagement of the movable pinion.

[Claims 6 to 9 not printed in the Gazette.]

1,153,740. THERMOMETER FOR BAKERS. ALFRED WATKINS, Hereford, England. Filed Dec. 8, 1914. Serial No. 876,133. (Cl. 73—52.)

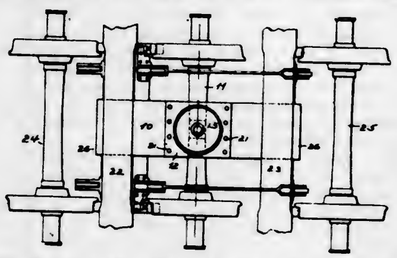
1. Apparatus for determining the relative temperatures of the flour and liquor ingredients of dough, before the same are mixed, so that dough having a desired temperature may result, which comprises a thermometer having an ordinary temperature scale, for indicating the temperature of the flour, and an empirically divided scale, the said scale being parallel and arranged with respect to one another in such a manner that the requisite temperature of the liquor will be indicated by that division on the flour temperature scale which is opposite the division on the empirical scale which bears a number or figure the

same as that of the division on the flour temperature scale indicating the ascertained temperature of the flour.



2. Apparatus for determining the relative temperatures of the flour and liquor ingredients of dough, before the same are mixed, so that dough having a desired temperature may result, which comprises a thermometer having an ordinary temperature scale, for indicating the temperature of the flour, said scale having a fixed index and a second scale empirically divided, said second scale being adjustably movable relatively to the flour scale so that the division on the second scale bearing the number corresponding with the temperature that dough is to have may be brought into register with the said index whereupon the requisite temperature of the liquor will be indicated by that division on the flour temperature scale which is opposite the division on the empirically divided scale which bears a number or figure the same as that of the division on the flour temperature scale indicating the ascertained temperature of the flour.

1,153,741. SIX-WHEEL TRUCK. JOHN C. WHITRIDGE and GEORGE T. JOHNSON, Columbus, Ohio, assignors to The Buckeye Steel Castings Company, Columbus, Ohio. Filed July 20, 1915. Serial No. 40,903. (Cl. 105—244.)



1. In a six wheel truck, the combination of auxiliary bolsters extending transversely of the truck, a main bolster supported at its ends on the auxiliary bolsters and provided with an opening for the passage of the middle axle, the said opening being open at the top, and a removable portion forming a top closure for said opening.

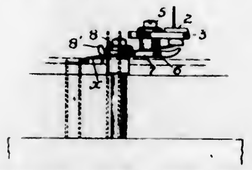
2. In a six wheel truck, the combination of auxiliary bolsters extending transversely of the truck, a main bolster supported at its ends on the auxiliary bolsters and provided with an opening for the passage of the middle axle, the said opening being open at the top, and a removable portion forming a closure for said opening, and the center bearing for the car body.

3. In a six wheel truck, the combination of a main bolster extending lengthwise the truck and provided with a transverse passage way for the middle axle the said passage way being open at the top, auxiliary bolsters forming supports for the ends of the main bolster and a removable center bearing closing the passage way in the main bolster at the top, and having shoulders that engage shoulders on the bolster.

4. In a six wheel truck, the combination of a bolster having a deep center and narrowed ends and provided with a central transverse passage way for the middle axle, the said bolster extending lengthwise the truck, auxiliary bolsters arranged transversely of the truck and supporting the ends of said main bolster and a removable member forming a closure for the top of the transverse opening in the longitudinal bolster, and also carrying the center bearing for the car body.

5. In a six wheel truck, the combination of transverse bolsters and a main bolster extending longitudinally of the truck and having interlocking connection with and carried at its ends by said transverse bolsters, the said main bolster having an opening through same for the passage of the middle axle of the truck.

1,153,742. THREAD-GUIDE. FRANK B. WILDMAN and GEORGE LAWSON BALLARD, Norristown, Pa., assignors to Wildman Mfg. Co., a Corporation of Pennsylvania. Filed Mar. 7, 1913. Serial No. 752,798. (Cl. 66—12.)



1. In combination, a needle guard plate horizontally disposed at right angles to the fed needles and adjustably mounted to be set in different positions circumferentially of the needle row and toward and from the same, and a guide eye adjustably mounted on and located above the guard plate, substantially as described.

2. In combination a needle guard plate horizontally disposed and adjustable toward and from the needle row and adjustable as to angular position in respect to the needles and a guide eye located above the surface of the needle guard plate, and supported by said needle guard plate adjustably, said guard plate having a free space between its inner edge adjacent the needles and the said guide eye for the passage of the thread across said inner edge to the needles.

3. In combination, a needle guard plate, a post supporting the same and rotatably mounted, said post having a connection with the needle guard plate eccentric to its axis to shift the plate along the needle row, said needle guard plate being adjustable in relation to the post toward and from the needles, and a guide eye adjustably mounted on and above the needle guard plate, substantially as described.

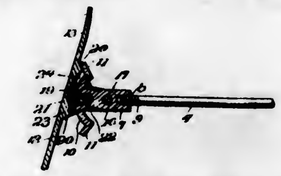
4. In combination, a horizontal needle guard plate, a rotatable post having a screw and slot connection with the needle guard plate eccentrically arranged in relation to the axis of the post, and a guide eye supported on the needle guard plate by a screw and slot connection, substantially as described.

5. A thread guide for knitting machines, consisting of a needle guard plate horizontally disposed with a thread guide eye above the same, said needle guard plate having an upwardly extending guiding projection at the corner of the said plate distant from the guide eye, said projection being formed by turning the corner portion of the plate upwardly, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,153,743. PEDAL. ALEXANDER WINTON and HAROLD B. ANDERSON, Cleveland, Ohio, assignors to The Winton Motor Carriage Company, Cleveland, Ohio. Filed Oct. 31, 1914. Serial No. 869,575. (Cl. 74—81.)

1. The combination with a longitudinally movable controlling member, of a foot pedal pivoted to the free end thereof to swing only in a vertical plane, the said pedal adapted to change its angle to correspond with the changing angle of the foot in contact therewith, and friction means between the controlling member and the pedal to hold the said pedal in any position in which it is left by the foot of the operator.



2. The combination with a longitudinally movable controlling member, of a foot pedal horizontally pivoted to the free end thereof to swing only in a vertical plane, the said pedal arranged to change its angle to correspond with the changing angle of the foot in contact therewith, the pedal and controlling member having abutting shoulders to limit the swinging movement of the said pedal.

3. The combination with a rearwardly extending and upwardly inclined controlling member, of a foot pedal horizontally pivoted to th free end thereof to swing only in a vertical plane, the said pedal arranged to change its angle to correspond with the changing angle of the foot in contact therewith, and friction means between the controlling member and the pedal to hold the said pedal in any position in which it is left by the foot of the operator.

4. A foot pedal comprising a shank, a foot engaging member horizontally pivoted thereto whereby the foot engaging member is movable only in a vertical plane, whereby the said member changes its angle to correspond with the changing angle of the foot in contact therewith, the foot engaging member and shank having abutting shoulders to limit the swinging movement of the pedal, and friction means between the shank and the foot engaging member to hold the said member in any position in which it is left by the foot of the operator.

5. The combination with a horizontally movable controlling member, of a foot pedal pivoted to the free end thereof to swing only in a vertical plane, whereby the said pedal will change its angle to correspond with the changing angle of the foot in contact therewith, and friction means carried by the free end of the controlling member and engaging the pedal to hold the said pedal in any position in which it is left by the foot of the operator.

[Claims 6 to 8 not printed in the Gazette.]

1,153,744. ICE-CREAM CONE. HARRY T. ALLEN, East Orange, N. J. Filed Apr. 19, 1915. Serial No. 22,508. (Cl. 229—1.)



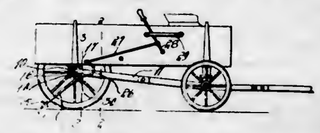
1. An article of the class described comprising a body having the form of a scalene cone and having its wall weakened along lines in planes non-parallel to its base.

2. An article of the class described comprising a hollow body having the form of a scalene cone and having its wall weakened along a line occupying a plane diagonal to the plane of the base of the body.

3. An article of the class described comprising a hollow body having the form of a scalene cone and having its wall weakened by a line of perforations occupying a plane diagonal to the plane of the base of the body, the line of perforations terminating at each end at spaced points in the perimeter of the base of the body.

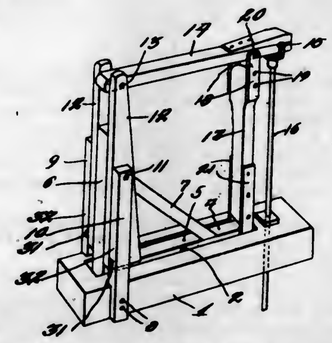
4. As a new article of manufacture, an ice cream cone comprising a hollow body having the form of a scalene cone, the wall of the body being formed with a plurality of lines of perforations, the said lines of perforations extending parallel to each other and nonparallel to the base of the cone.

1,153,745. WAGON-BRAKE. LOUIS R. ALLEN, Sparks, Nebr. Filed July 10, 1913. Serial No. 778,348. (Cl. 21—8.)



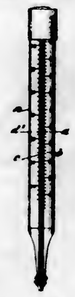
An auxiliary brake for a wagon comprising a transversely disposed shaft, each end of which is formed with a plurality of peripheral reduced portions, shaft supporting clips embracing certain of the reduced portions, clips engaged in certain others of the reduced portions, road engaging poles secured to the last-named clips, means for rotating the shaft within the clips, and U-shaped members having their ends secured to the shaft at opposite sides of certain of the clips with their bight portions disposed below and in engagement with the under sides of the poles.

1,153,746. PUMPING-JACK. CHARLES B. ANDERSON, Bluffton, Ind. Filed June 8, 1915. Serial No. 32,928. (Cl. 74—5.)



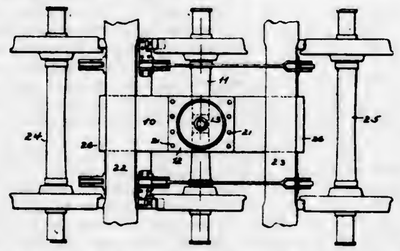
1. In combination, a supporting base, a pair of standards rising upwardly from the base, a pair of levers pivoted between the standards at their upper ends midway between the ends of the levers, an oscillatory member fulcrumed in the base comprising a vertical arm and a horizontal arm, connections between the horizontal arm and the vertical arm for bracing the same, a third lever pivoted between the upper ends of said pair of levers, a link connection between the horizontal arm and the third lever, and loose connections between the vertical arm and the lower ends of said pair of levers, whereby as the oscillatory member is actuated a straight and uniform reciprocation may be imparted to a pump rod which is adapted to be connected to the third lever.

same as that of the division on the flour temperature scale indicating the ascertained temperature of the flour.



2. Apparatus for determining the relative temperatures of the flour and liquor ingredients of dough, before the same are mixed, so that dough having a desired temperature may result, which comprises a thermometer having an ordinary temperature scale, for indicating the temperature of the flour, said scale having a fixed index and a second scale empirically divided, said second scale being adjustably movable relatively to the flour scale so that the division on the second scale bearing the number corresponding with the temperature that dough is to have may be brought into register with the said index whereupon the requisite temperature of the liquor will be indicated by that division on the flour temperature scale which is opposite the division on the empirically divided scale which bears a number or figure the same as that of the division on the flour temperature scale indicating the ascertained temperature of the flour.

1,153,741. SIX-WHEEL TRUCK. JOHN C. WHITRIDGE and GEORGE T. JOHNSON, Columbus, Ohio, assignors to The Buckeye Steel Castings Company, Columbus, Ohio. Filed July 20, 1915. Serial No. 40,903. (Cl. 105—244.)



1. In a six wheel truck, the combination of auxiliary bolsters extending transversely of the truck, a main bolster supported at its ends on the auxiliary bolsters and provided with an opening for the passage of the middle axle, the said opening being open at the top, and a removable portion forming a top closure for said opening.

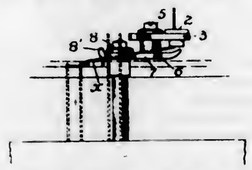
2. In a six wheel truck, the combination of auxiliary bolsters extending transversely of the truck, a main bolster supported at its ends on the auxiliary bolsters and provided with an opening for the passage of the middle axle, the said opening being open at the top, and a removable portion forming a closure for said opening, and the center bearing for the car body.

3. In a six wheel truck, the combination of a main bolster extending lengthwise the truck and provided with a transverse passage way for the middle axle the said passage way being open at the top, auxiliary bolsters forming supports for the ends of the main bolster and a removable center bearing closing the passage way in the main bolster at the top, and having shoulders that engage shoulders on the bolster.

4. In a six wheel truck, the combination of a bolster having a deep center and narrowed ends and provided with a central transverse passage way for the middle axle, the said bolster extending lengthwise the truck, auxiliary bolsters arranged transversely of the truck and supporting the ends of said main bolster and a removable member forming a closure for the top of the transverse opening in the longitudinal bolster, and also carrying the center bearing for the car body.

5. In a six wheel truck, the combination of transverse bolsters and a main bolster extending longitudinally of the truck and having interlocking connection with and carried at its ends by said transverse bolsters, the said main bolster having an opening through same for the passage of the middle axle of the truck.

1,153,742. THREAD-GUIDE. FRANK B. WILDMAN and GEORGE LAWSON BALLARD, Norristown, Pa., assignors to Wildman Mfg. Co., a Corporation of Pennsylvania. Filed Mar. 7, 1913. Serial No. 752,798. (Cl. 66—12.)



1. In combination, a needle guard plate horizontally disposed at right angles to the fed needles and adjustably mounted to be set in different positions circumferentially of the needle row and toward and from the same, and a guide eye adjustably mounted on and located above the guard plate, substantially as described.

2. In combination a needle guard plate horizontally disposed and adjustable toward and from the needle row and adjustable as to angular position in respect to the needles and a guide eye located above the surface of the needle guard plate, and supported by said needle guard plate adjustably, said guard plate having a free space between its inner edge adjacent the needles and the said guide eye for the passage of the thread across said inner edge to the needles.

3. In combination, a needle guard plate, a post supporting the same and rotatably mounted, said post having a connection with the needle guard plate eccentric to its axis to shift the plate along the needle row, said needle guard plate being adjustable in relation to the post toward and from the needles, and a guide eye adjustably mounted on and above the needle guard plate, substantially as described.

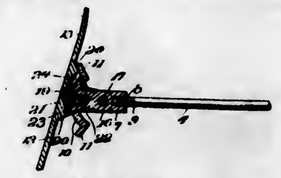
4. In combination, a horisontal needle guard plate, a rotatable post having a screw and slot connection with the needle guard plate eccentrically arranged in relation to the axis of the post, and a guide eye supported on the needle guard plate by a screw and slot connection, substantially as described.

5. A thread guide for knitting machines, consisting of a needle guard plate horizontally disposed with a thread guide eye above the same, said needle guard plate having an upwardly extending guiding projection at the corner of the said plate distant from the guide eye, said projection being formed by turning the corner portion of the plate upwardly, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,153,743. PEDAL. ALEXANDER WINTON and HAROLD B. ANDERSON, Cleveland, Ohio, assignors to The Winton Motor Carriage Company, Cleveland, Ohio. Filed Oct. 31, 1914. Serial No. 869,575. (Cl. 74—81.)

1. The combination with a longitudinally movable controlling member, of a foot pedal pivoted to the free end thereof to swing only in a vertical plane, the said pedal adapted to change its angle to correspond with the changing angle of the foot in contact therewith, and friction means between the controlling member and the pedal to hold the said pedal in any position in which it is left by the foot of the operator.



2. The combination with a longitudinally movable controlling member, of a foot pedal horizontally pivoted to the free end thereof to swing only in a vertical plane, the said pedal arranged to change its angle to correspond with the changing angle of the foot in contact therewith, the pedal and controlling member having abutting shoulders to limit the swinging movement of the said pedal.

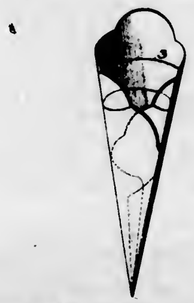
3. The combination with a rearwardly extending and upwardly inclined controlling member, of a foot pedal horizontally pivoted to th free end thereof to swing only in a vertical plane, the said pedal arranged to change its angle to correspond with the changing angle of the foot in contact therewith, and friction means between the controlling member and the pedal to hold the said pedal in any position in which it is left by the foot of the operator.

4. A foot pedal comprising a shank, a foot engaging member horizontally pivoted thereto whereby the foot engaging member is movable only in a vertical plane, whereby the said member changes its angle to correspond with the changing angle of the foot in contact therewith, the foot engaging member and shank having abutting shoulders to limit the swinging movement of the pedal, and friction means between the shank and the foot engaging member to hold the said member in any position in which it is left by the foot of the operator.

5. The combination with a horizontally movable controlling member, of a foot pedal pivoted to the free end thereof to swing only in a vertical plane, whereby the said pedal will change its angle to correspond with the changing angle of the foot in contact therewith, and friction means carried by the free end of the controlling member and engaging the pedal to hold the said pedal in any position in which it is left by the foot of the operator.

[Claims 6 to 8 not printed in the Gazette.]

1,153,744. ICE-CREAM CONE. HARRY T. ALLEN, East Orange, N. J. Filed Apr. 19, 1915. Serial No. 22,508. (Cl. 229—1.)



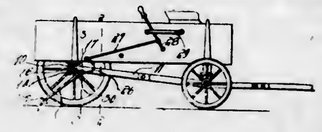
1. An article of the class described comprising a body having the form of a scalene cone and having its wall weakened along lines in planes non-parallel to its base.

2. An article of the class described comprising a hollow body having the form of a scalene cone and having its wall weakened along a line occupying a plane diagonal to the plane of the base of the body.

3. An article of the class described comprising a hollow body having the form of a scalene cone and having its wall weakened by a line of perforations occupying a plane diagonal to the plane of the base of the body, the line of perforations terminating at each end at spaced points in the perimeter of the base of the body.

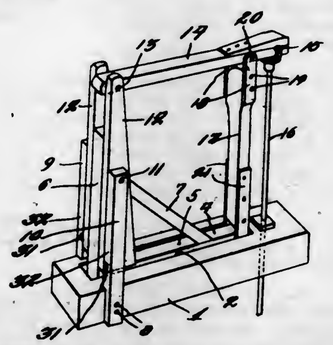
4. As a new article of manufacture, an ice cream cone comprising a hollow body having the form of a scalene cone, the wall of the body being formed with a plurality of lines of perforations, the said lines of perforations extending parallel to each other and nonparallel to the base of the cone.

1,153,745. WAGON-BRAKE. LOUIS R. ALLEN, Sparks, Nebr. Filed July 10, 1913. Serial No. 778,348. (Cl. 21—8.)



An auxiliary brake for a wagon comprising a transversely disposed shaft, each end of which is formed with a plurality of peripheral reduced portions, shaft supporting clips embracing certain of the reduced portions, clips engaged in certain others of the reduced portions, road engaging poles secured to the last-named clips, means for rotating the shaft within the clips, and U-shaped members having their ends secured to the shaft at opposite sides of certain of the clips with their bight portions disposed below and in engagement with the under sides of the poles.

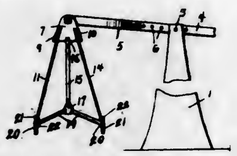
1,153,746. PUMPING-JACK. CHARLES B. ANDERSON, Bluffton, Ind. Filed June 8, 1915. Serial No. 32,928. (Cl. 74—5.)



1. In combination, a supporting base, a pair of standards rising upwardly from the base, a pair of levers pivoted between the standards at their upper ends midway between the ends of the levers, an oscillatory member fulcrumed in the base comprising a vertical arm and a horizontal arm, connections between the horizontal arm and the vertical arm for bracing the same, a third lever pivoted between the upper ends of said pair of levers, a link connection between the horizontal arm and the third lever, and loose connections between the vertical arm and the lower ends of said pair of levers, whereby as the oscillatory member is actuated a straight and uniform reciprocation may be imparted to a pump rod which is adapted to be connected to the third lever.

2. In combination, a supporting base, a pair of standards rising upwardly from the base, a pair of levers pivoted between the standards at their upper ends midway between the ends of the levers, an oscillatory member fulcrumed in the base comprising a vertical arm and a horizontal arm, connections between the horizontal arm and the vertical arm for bracing the same, a third lever pivoted between the upper ends of said pair of levers, a link connection between the horizontal arm and the third lever, and loose connections between the vertical arm and the lower ends of said pair of levers, whereby as the oscillatory member is actuated a straight and uniform reciprocation may be imparted to a pump rod which is adapted to be connected to the third lever, said loose connections consisting of substantially semi-circular cam openings in the lower ends of said pair of levers, laterally extending lugs on the vertically extending arm of the oscillatory member coöperating in said semi-circular cam opening, one edge of the vertical arm of said oscillatory member having transverse grooves, a pin connecting the lower ends of said pair of levers engaging first one then the other of said grooves, and means for limiting the movement of the lower ends of said pair of levers.

1,153,747. POST-PULLER. CLARENCE E. ANGSTER, Wausa, Nebr. Filed Apr. 5, 1915. Serial No. 19,235. (Cl. 254—29.)



In a device of the class described, the combination with a standard, of a lever mounted thereon, the said lever having diverging arms on one end thereof, plates pivotally mounted on said arm, U-shaped clamping members pivotally and slidably mounted on said plates, links pivotally mounted on the plates and additional links pivotally connected to the said first mentioned links and to the adjacent corners of the clamping members and gripping members mounted on the bight portions of the said clamping members.

1,153,748. OPAQUE ENAMEL OR GLAZE COMPOSITION. CARLO BAEZNER, Seelze, near Hanover, Germany, assignor to E. De Haën, Chemische Fabrik List, G. M. B. H., Seelze, near Hanover, Germany. Filed Dec. 20, 1913. Serial No. 808,007. (Cl. 49—21.)

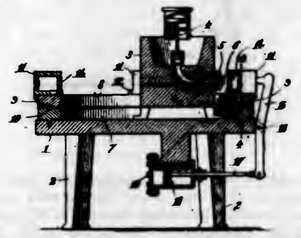
1. An improved opaque enamel or glaze composition comprising a vitrifiable material admixed with sulfid of zinc.

2. An improved opaque enamel or glazed composition comprising a vitrifiable material admixed with sulfid of zinc having luminous properties.

1,153,749. DIE-CASTING MACHINE. JAMES BATE, Detroit, Mich. Filed Dec. 22, 1914. Serial No. 878,573. (Cl. 22—77.)

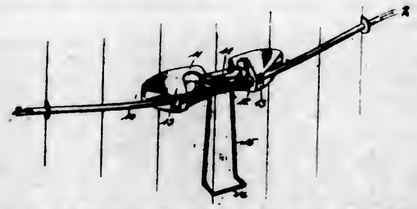
1. In a die casting apparatus, the combination of a support, a die carrier ring mounted to revolve upon the support, said ring being provided at intervals with radial guideways, a metal supplying device disposed upon the support within the space bounded by the ring and provided with a tapered discharge nozzle, molds slidably mounted in said radial guideways and having tapered inlets to receive said tapered nozzle, and means for adjusting the dies inwardly to bring the inlet of a die into engagement with said nozzle.

2. In a casting apparatus, the combination of a support, a rotary ring-shape carrier mounted upon the support and provided with radial guideways, a metal supplying device mounted upon the support within the space bounded by the ring and provided with a tapered discharge nozzle, molds mounted in said radial guideways and each provided with a tapered inlet to receive the tapered nozzle, a lever pivotally mounted upon the support at a point in the path of movement of the rotary



carrier ring, said lever having upwardly and downwardly projecting arms, the former being adapted to engage and shift the die inwardly to receiving position, and means operating upon the lower arm of the lever for moving said lever in its die shifting action.

1,153,750. LADDER FOR STAVE STRUCTURES. EARLE A. BERRY, Kansas City, Mo. Filed Oct. 17, 1914. Serial No. 867,144. (Cl. 228—1.)



1. A ladder structure of the class described comprising,—a lug adapted to receive and retain the ends of a tie hoop, said lug having a projecting portion forming a step, and a loop depending from said projection and also forming a step.

2. A ladder structure of the class described the alternate steps of which are formed of a lug having means adapted to receive and retain the ends of a tie hoop, said lug having a U-shaped projection, the bottom of which U forms a step, and a stirrup secured to the side of the U-shaped projection, forming an additional step.

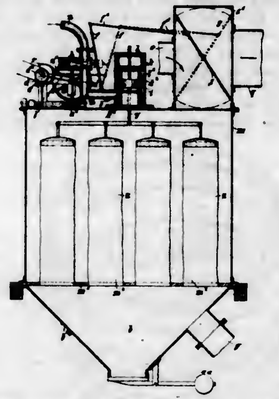
3. A ladder structure of the class described the alternate steps of which are formed by a projection from a lug, and a loop depending from the projection of the lug, said lug having means for engaging and retaining the ends of a tie hoop.

4. A ladder structure of the class described the alternate steps of which are formed by a lug having a substantially horizontal U-shaped projection, the bottom of the U forming a step, and a U-shaped wire loop depending from said projection with the ends of the U loop secured to the sides of the projection, the lower part of said U-shaped loop being bent laterally to form a step substantially as described.

5. The combination with a tie hoop, a lug adapted to receive and retain the ends of the tie hoop, said lug having a substantially horizontal projection forming a step.

1,153,751. APPARATUS FOR CLEANING FILTERS. WILHELM FRIEDRICH LUDWIG BETH, Lübeck, Germany. Filed Dec. 1, 1911. Serial No. 663,313. (Cl. 121—45.)

1. In filter cleaning apparatus of the character described, the combination with a filter supporting member, of a reciprocable motor having a free piston that is directly connected to the filter supporting member and operative to alternately distend and relieve such distension of the filters, and automatic controlling means for causing reciprocation of said motor at predetermined intervals.



2. In filter cleaning apparatus of the character described, the combination with a filter supporting member, and means for alternately submitting the filter chamber to the action of compressed air and a vacuum, of a fluid-actuated motor having a free piston that is connected to the filter supporting member and operative to raise and lower the same to alternately tension and relieve such tension on the filters, and a controller operative to automatically time the operations of said motor and said compressed air and vacuum controlling means.

3. In filter cleaning apparatus of the character described, the combination with a filter supporting member, and valve means for alternately submitting the filter chamber to the action of compressed air and vacuum, of a fluid-actuated motor having a free piston that is connected to said filter supporting member, and automatic controlling means common to said motor and valve, means for causing the motor at timed intervals to distend the filters while the filter chamber is subjected to the action of compressed air and to cause the motor to relieve such distension of the filters while the filter chamber is subjected to vacuum action.

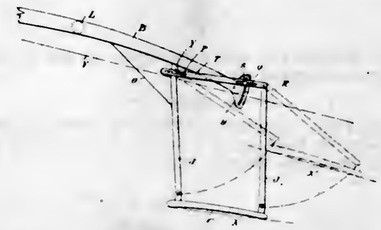
4. In filter cleaning apparatus of the character described, the combination with a filter supporting member, and means for alternately subjecting the filter chamber to compressed air pressure and vacuum, of a reciprocable motor having a free piston that is directly connected to said filter supporting member, and an automatic controller operative to cause reciprocation of the motor in one direction while the filter chamber is subjected to the action of compressed air and to cause reciprocation of the motor in a reverse direction when the filter chamber is subjected to the vacuum action.

5. In an apparatus of the character specified, the combination of a fluid-actuated element, means for supplying motive fluid thereto, and a controller for regulating the fluid supply comprising a valve, a rod connected with the valve and having a pair of opposed projections, and a rotary driving member arranged to engage said projections alternately to shift said rod endwise in opposite directions.

[Claims 6 to 8 not printed in the Gazette.]

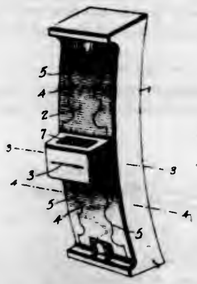
1,153,752. AEROPLANE. AUGUSTE PIERRE BIAIS and JEAN JULES CAMBOU, Bordeaux, and CHARLES MARIE JOSEPH BAILLOD, Colombes, France. Filed Feb. 18, 1914. Serial No. 819,552. Renewed Mar. 13, 1915. Serial No. 14,217. (Cl. 244—29.)

1. In an aeroplane, in combination, independent plane systems at each side of the machine, a fin substantially parallel to each plane, substantially parallel loosely pivoted links supporting said fins, and means for adjusting the pivotal connections for changing the system to or from a parallelogram or quadrilateral thereby to obtain quickly a variation of the angle of inclination between the plane and the fin when the fin moves rearwardly under the action of the wind.



2. In an aeroplane, in combination with means for producing the automatic varying of inclination, of independent plane systems located at each side of the machine and securing the constancy of the center of pressure, said means comprising a plane, a fin, hinged connections therebetween formed by an upper rod adjacent the end of said plane, links suspended from the opposite ends of said rod and pivoted at the corresponding ends of the fin, slots associated with the opposite ends of said rod, a hinge bolt associated with one of said links and projecting through one of said slots of the rod, which latter slides on said bolt, an extension at the end of the plane, an arc shape slot in said extension and extending across the second slot of said rod, means projecting through both crosswise disposed slots and slidable therein so that the aviator may change the shape of the quadrilateral formed by said slotted rod, links, and the fin and means for controlling said links of the quadrilateral from the aviator's seat.

1,153,753. BRAKE-SHOE. CHILTON WITHERS BLUE, Montgomery, Ala., assignor to Janney & Company, Montgomery, Ala. Filed Apr. 22, 1913. Serial No. 762,792. (Cl. 188—82.)



The improved brakeshoe comprising a cast metal body and a thin wrought metal reinforcing plate partly embedded in said body and flush with the back of the same, the said plate having its side edges formed with the dovetail hooks which are curved inward and downward, and embedded in the cast metal as described.

1,153,754. PEN AND PENCIL CLIP. CLARK WILSON BOMAN, Brooklyn, N. Y., assignor to Eagle Pencil Company, New York, N. Y. Filed June 11, 1915. Serial No. 33,580. (Cl. 24—11.)

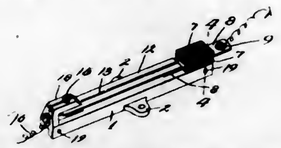
A clip for pens and pencils consisting of a clip proper and a narrow stiff split spring metal ring or band provided with a boss or enlargement serving as a seat upon which the base of the clip is mounted and secured, in combination with the cylindrical body upon which the clip is mounted formed with an annular external groove in which

the ring is received and fits tightly and with an enlargement corresponding to the boss on the ring, in which said



boss is received and held, substantially as and for the purposes hereinbefore set forth.

1,153,755. CIRCUIT-CLOSER FOR FIRE-ALARMS. FRANCIS W. BOST, China Grove, N. C. Filed Aug. 29, 1914. Serial No. 859,236. (Cl. 200—81.)



In a circuit closer, an elongated plate being grooved upon its under surface and having an elongated opening at one end, the end having said opening having an arm integral therewith rising upwardly and having a split portion overlying said opening, a lead terminal carried by said arm adjacent where the same is integral with the plate, a pair of insulating members secured to the other end of said plate, an expansible blade tongue consisting of two sections, one secured between said insulating member and provided with a lead terminal, the other section being connected to the section between the insulating members and provided with a stiffening device, and an element threaded between the parts of the split portion of the arm to cooperate with the stiffened section of the tongue and being adjustable whereby the tongue will act under different temperatures, said plate having ears extending laterally from its longitudinal side, and a skeleton cover plate arching over the insulating members, the expansible tongue, and the split portion of the arm and having ears on its longitudinal side registering with the first ears, including means for connecting the ears to hold the first plate and the cover plate together.

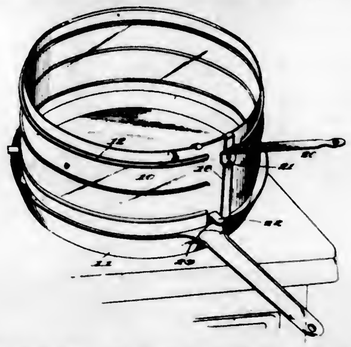
1,153,756. PEN-POINT REMOVER. JOSEPH H. BEMME, Tampa, Fla. Filed Oct. 19, 1914. Serial No. 867,482. (Cl. 120—101.)



The combination with a penholder including inner and outer sleeves having registering slots extending longitudinally from their outer ends, of an ejector mounted on said holder, said ejector comprising a ring slidable on said outer sleeve, an arm extending forwardly from said ring, the free end of said arm being returned upon itself and terminating in a resilient finger with the loop thus formed passing through said slots, and a projection formed inwardly of said arm, whereby when the ejector is retracted, said projection will engage the outer sleeve rearwardly of the slots to bring said finger into engagement with the inner sleeve and retain the device frictionally on the holder.

1,153,757. ATTACHMENT FOR COOKING UTENSILS. FREDERICK J. BRENDING, Brainerd, Minn. Filed Mar. 10, 1914. Serial No. 823,716. (Cl. 53—7.)

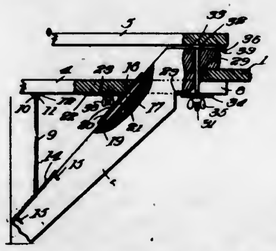
1. An attachment for cooking utensils including an extensible body member formed from a continuous sheet of resilient metal, the terminals of which overlap and are adapted to slide one above the other, whereby the member may be expanded or contracted, and coacting clamping members carried by the terminals of the body member, each clamping member being engageable with the opposed terminal of the body member for holding the terminals in adjusted position, each of said clamping members consisting of a metal bar having terminally formed hooks adapted to embrace the upper and lower edges of the body member terminals, the terminal portions of the body member being rolled to embrace the intermediate portion of the bar members for securing the bar members in position.



2. An attachment for cooking utensils including a flexible body member having its extremities overlapped, transversely extending stripe supported terminally of the member, the extremities of the member being rolled to embrace said strips and the extremities of the strips projecting laterally beyond opposite side edges of the member, the laterally directed terminals of each of said strips being bent toward each other to provide hooks freely embracing the side edges of the member, and a series of transversely spaced annular sockets formed in the said member and each adapted to receive a terminal flange of a cooking utensil.

3. In a device of the character described, the combination with an extensible body member having its terminals adjustably connected, of a series of transversely spaced annular sockets formed in the body member, and means carried by the body member and projecting laterally therefrom in a plane below and upon one side of said series, the said means being adapted to engage the peripheral edge of a cooking utensil with the said body member disposed within the utensil and each of said sockets being adapted to engage the terminal flange of a cooking vessel whereby the body member will support the cooking vessel within the said utensil and in spaced relation thereto.

1,153,758. IRONING-BOARD. CHARLES OTIS BROWN, Minot, N. D. Filed June 22, 1915. Serial No. 35,581. (Cl. 68—10.)

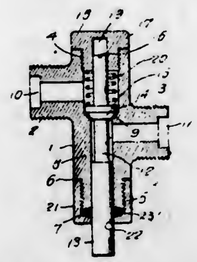


1. An ironing board, comprising a leg adapted to engage a support at its upper end and to stand in inclined position, the leg having a notch in its lower edge and near its upper end for receiving an edge of the support, a board having at one end a longitudinally extending slot for receiving the leg, and of a depth to permit the adjacent end of the board to extend beyond the lower edge of the leg to engage beneath the support, means for clamping the support between the notch and the upper face of the board, a pawl arm pivoted to the under face of the board near the inner end of the notch and depending from the board, said leg having teeth on its upper edge for engagement by the pawl arm, a detachable and adjustable connection between the board and the leg at the lower face of the board and the upper edge of the leg, said connection comprising a plate secured to the upper edge of the leg and having a longitudinal series of openings, and a catch adjustably connected with the under surface of the board, and movable toward and from the leg for engaging one of the openings.

2. An ironing board, comprising a leg adapted to engage a support at its upper end and to stand in inclined position, the leg having a notch in its lower edge and near its upper end for receiving an edge of the support, a board having at one end a longitudinally extending slot for receiving the leg, and of a depth to permit the adjacent end of the board to extend beyond the lower edge of the leg to engage beneath the support, means for clamping the support between the notch and the upper face of the board, a pawl arm pivoted to the under face of the board near the inner end of the notch and depending from the board, said leg having teeth on its upper edge for engagement by the pawl arm, and a detachable and adjustable connection between the board and the leg at the lower face of the board and the upper edge of the leg.

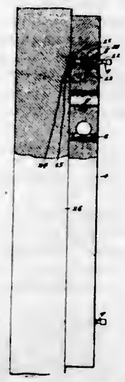
3. An ironing board, comprising a leg adapted to be arranged in inclined position with its upper end resting on a fixed support, a board having a longitudinally extending slot in one end for receiving the leg and adapted to extend beneath the support upon which the leg rests, and a connection between the board and the legs, said connection comprising a catch adjustably connected with the under surface of the board and movable toward and from the leg the leg having openings for engagement by the catch.

1,153,759. FLUID-PRESSURE-CONTROLLING VALVE. JOSEPH BRUNKER and CHARLEY ALBERT MATTMILLER, Helena, Mont. Filed Dec. 31, 1914. Serial No. 879,908. (Cl. 137—4.)



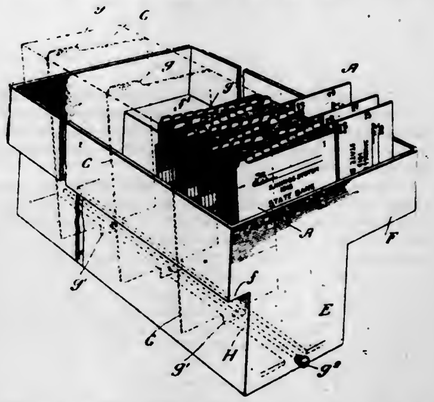
In combination a valve comprising a casing having a vertical bore and having inlet and outlet ports, and a valve seat between the ports, the inlet port being at a higher level than the outlet port, a valve coöperating with the seat, a stem to which the valve is connected, and extending through the casing at the lower end thereof, and extending above the valve, said casing having a guide for the upward extension of the stem above the inlet, a spring arranged between the guide and the valve and normally pressing the valve downwardly, said stem being enlarged below the outlet to fit the bore of the casing tightly to close the same, and a treadle lever pivoted intermediate its ends and having one end in position to engage the downward extension of the stem to lift the stem when the outer end of the treadle is depressed.

1,153,760. SPIRIT-LEVEL. FRANK BUTLER, Oxnard, Cal. Filed Feb. 10, 1915. Serial No. 7,822. (Cl. 33—207.)



A device of the class described, comprising a block provided with spirit tubes in desired relationship therewith and with each other, each end of said block having three bores on the same axis from one edge thereof to the other of progressively increased diameters, a pin provided with a shoulder adjacent one edge of said block and with a reduced member slidable in the bore of least diameter, said pin fitting in the bore of intermediate diameter and the shoulder thereof being within the bore of greatest diameter, said pin projecting beyond said block on the edge adjacent the bore of greatest diameter, a spring in said last named bore coiled around said pin and normally maintaining said shoulder toward the adjacent edge of said block and said reduced member within the bore of least diameter, a guide plate provided with an opening in register with said bore of least diameter, and a guide plate having an opening on the axis of said bores of less diameter than that of said shoulder.

1,153,761. RECORDING AND COMPUTING CARDS AND HOLDER THEREFOR. ALBERT H. CARRILL, Baltimore, Md., assignor to Hart-King System Company, Baltimore, Md., a Corporation of Maryland. Filed Sept. 2, 1914. Serial No. 859,914. (Cl. 129—16.)



1. A recording and computing card for savings systems having on each side of the front face thereof a set of columns divided into spaces containing designations of consecutive dates, amounts due on said dates, and amounts

paid in on such dates, said designations of dates, amounts due and amounts paid being right side up on one side of the card and upside down on the other side thereof.

2. A recording and computing card for savings systems having on each side of the front face thereof a set of columns divided into spaces containing designations of consecutive dates, amounts due on said dates and amounts paid in on such dates, said card having on its upper portion a card number disposed horizontally and another card number disposed vertically whereby the number may be easily read when the card is in either an upright or horizontal position.

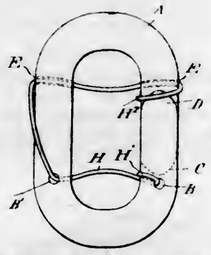
3. A recording and computing card for savings systems having on each side of the front face thereof a set of columns divided into spaces containing designations of consecutive dates, amounts due on the said dates, and amounts paid in on such dates, said designations of dates amounts due and amounts paid being right side up on one side of the card and upside down on the other side thereof, said card having also columns in its middle portion containing designations of consecutive dates, and spaces opposite said dates for entries.

4. A recording and computing card for savings systems having on each side of the front face thereof a set of columns divided into spaces containing designations of consecutive dates, amounts due on the said dates and amounts paid in on said dates, and having also a middle set of columns containing designations of consecutive dates some of which are arranged right side up and others wrong side up and others of said intermediate columns having blank spaces for entries of amounts paid in on any particular date.

5. A holder for a pack of savings system cards, comprising a receptacle for holding the cards in an upright position and another receptacle above that first named and of greater width for holding the cards horizontally.

[Claim 6 not printed in the Gazette.]

1,153,762. OPEN HOOK-LINK. JOHN K. CHAMP, Paris, Ky. Filed Dec. 7, 1914. Serial No. 875,895. (Cl. 59—85.)

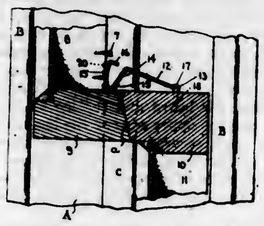


1. An open link having tapering ends, the shank portion of the link opposite one end being apertured, a wire passing through said aperture and holding the two ends of the link so that the opposite faces of the links will be in parallel planes.

2. A link having overlapping ends which are contracted, said link having oppositely disposed apertures formed at right angles to the face of the link and other apertures through the link parallel to the face thereof, a wire passing through and secured in one of the apertures at right angles to the face of the link and extending through the other aperture similarly formed, thence passing through two apertures which are formed parallel to the face of the link and having a resilient hooked end adapted to engage over and hold the overlapping ends of the link together.

1,153,763. ANTIRATTLING SASH-LOCK AND WINDOW-STOP. LEWIS P. CONKLIN, Red Bank, N. J. Filed Mar. 3, 1914. Serial No. 822,189. (Cl. 16—146.)

1. A sash lock made of a single length of strap metal comprising a main flat portion from which extends at an angle a downwardly extending flat section from which is continued an outwardly curved portion ending in a stop ledge said stop ledge in turn ending in a plane in alinement with said main flat portion of the lock.

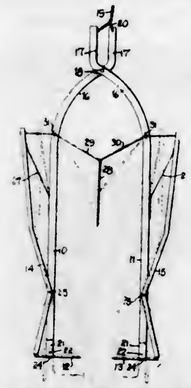


2. A sash lock including a plate provided with a resilient V-shaped beak head presenting a convex outward branch having a ledge in the plane of the plate the opposite end being bent to form a sleeve, and a securing staple within said sleeve.

3. A sash lock made of a plate one end of which is bent to form a resilient V-shaped beak head presenting a convex branch outwardly curved the end of said branch being bent to form a stop ledge, means to removably hold said plate, and a pin in the path of said ledge.

4. The combination with two window sashes of a lock secured to the upper stile of the lower sash and comprising a plate one end of which is bent to form a resilient V-shaped head adapted to drop between the stiles with its vertex, one branch of said V being adapted to contact with the side stile of the upper window sash, means on the upper sash adapted to engage the V of the lock whereby the V-shaped head jams the two sashes.

1,153,764. DERRICK-FORK. GEORGE E. CRUSON, Yountville, Cal. Filed June 7, 1915. Serial No. 32,645. (Cl. 57—41.)



1. A device of the character described including a pair of pivotally united arms, a chain connected to the upper end of one arm, a ring carried by the adjacent end of the other arm, said chain being passed through the ring, article engaging members carried by the lower terminals of the arms, and spring pressed latching means for holding the article engaging members in operative position, said latching means being releasable for releasing the article engaging members.

2. A device of the character described including a pair of pivotally united arms, means connecting the upper terminals of the arms, an article engaging spike pivotally attached to the lower terminal of each arm, latch bars pivoted to the arms adjacent the lower terminals thereof, said latch bars being adapted to engage the outer terminals of the spikes for holding the inner terminals in operative position and against swinging movement, yieldable means carried by the arms and engageable with the latch bars for normally holding the lower terminals thereof in engagement with the spike members, and a flexible member connected to the latch bars, whereby the bars may be swung against the tension of the yieldable means to release the spikes, whereby an article held by the spikes between the lower terminals of the arms, may be released.

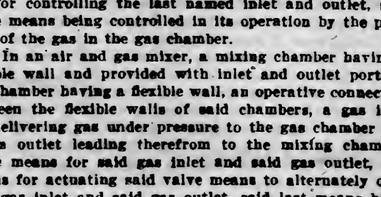
3. A device of the character described including a pair of pivotally united fork arms, a spike member pivotally attached to the lower terminal of each of the arms, a pivoted latch bar mounted upon each arm, a right-angularly extending stub formed on the lower terminal of each latch bar, said stubs being adapted to engage with the outer terminals of the spikes for holding the spikes in operative engagement with an article to be held, leaf springs secured to the fork arms and bearing against the upper terminals of the latch bars for normally holding the studs in engagement with the spikes, guide eyes carried by the fork arms, cables passing through the eyes and connected at their outer ends to the latch bars, and a cable connected to the inner ends of said cables, said last mentioned cable being operable for swinging the latch bars against the tension of the springs to withdraw the stubs from engagement with an article held between the fork arms.

1,153,765. CIRCUIT-BREAKER. JOSEPH CUCULIC, Fiume, Austria-Hungary. Filed June 28, 1913. Serial No. 776,277. (Cl. 175—267.)

1. In a circuit breaker of the class described, a pair of contact brushes, a reciprocating member connected therewith, a spring acting on said reciprocating member for normally holding said brushes in an open position, a catch connected with said reciprocating member, a pivotally mounted stop arranged in said reciprocating member and interlocking with said catch when the catch is in a lowered position for holding the reciprocating member and the brushes in a lowered position whereby the brushes are maintained in a closed position, a pair of magnets, the winding of said magnets being in series with one of said brushes, an armature actuated by one of said magnets, said stop being formed with a projection extending to a point adjacent one of said magnets, and means for holding said armature against actuation until an overload has passed for an appreciable time through the winding of said magnets, said armature being formed with an extension adapted to engage the extension on said stop for moving the stop and thereby release said catch when the armature has been operated, whereby the reciprocating member will be released and said first mentioned spring will cause said brushes to be moved to an open position.

2. In a circuit breaker of the character described, a pair of connecting brushes, a reciprocating member connected therewith, a spring acting on said reciprocating member for normally holding said brushes in an open position, a pivotally mounted catch arranged in said reciprocating member, a stop co-acting with said catch when the catch is in a lowered position for holding the brushes in a closed position, a pivotally mounted member for holding said catch against movement when engaging said stop, a pair of magnets, the winding of said magnets being in series with one of said brushes, an armature actuated by one of said magnets, and means for holding said armature against actuation until an over-load has passed through the winding of said magnet, said armature being formed with an extension arranged to engage and release said pivotally mounted member when the armature has been operated by said magnet, whereby said catch will be released and said first mentioned spring will cause said brushes to be moved to an open position.

1,153,766. APPARATUS FOR MIXING GASES. GUSTAF DALÉN, Stockholm, Sweden, assignor to Svenska Aktiebolaget Gasaccumulator, Stockholm, Sweden. Filed Dec. 28, 1910. Serial No. 599,652. (Cl. 48—184.)



1. In an air and gas mixer, a mixing chamber having a flexible wall and provided with an air inlet and an outlet for the mixed air and gas, a gas inlet for admitting gas under pressure to said chamber, and means controlled by the pressure of the gas to be mixed for periodically actuating said flexible wall of the mixing chamber to produce a partial vacuum in said mixing chamber on one stroke of the diaphragm to draw air into said chamber, and to discharge mixed air and gas therefrom on the other stroke of the diaphragm.

2. In an air and gas mixer, a mixing chamber having a flexible wall provided with valve controlled inlet and outlet ports, a gas chamber having a flexible wall, a connection between said flexible walls, an inlet for delivering gas under pressure to said gas chamber, a conduit connecting the two chambers, and means controlled by the pressure of the gas in the gas chamber to intermittently actuate the said flexible walls whereby to control the entrance of air into the mixing chamber.

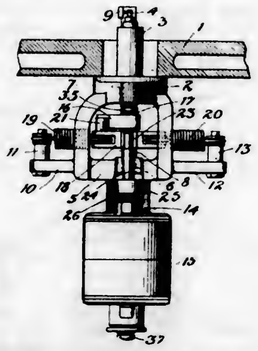
3. In an air and gas mixer, a mixing chamber having a flexible wall and provided with valve controlled inlet and outlet ports, a gas chamber having a flexible wall, a connection between the flexible walls of said chambers, a valve controlled inlet for delivering gas under pressure to said gas chamber, a valve controlled gas outlet conduit connecting the two chambers, and means actuated by the pressure of the gas in the gas chamber for actuating the said flexible walls to produce a partial vacuum in said mixing chamber and thereby draw air into the mixing chamber on one stroke of the flexible walls and alternately open and close the gas inlet and gas outlet conduit.

4. In an air and gas mixer, a mixing chamber having a movable wall and provided with valve controlled inlet and outlet ports, a gas chamber having a movable wall, an operative connection between the movable walls of said chambers, a gas inlet delivering gas under pressure to the gas chamber, and a gas outlet leading therefrom to the mixing chamber, and valve means located within said gas chamber for controlling the last named inlet and outlet, said valve means being controlled in its operation by the pressure of the gas in the gas chamber.

5. In an air and gas mixer, a mixing chamber having a flexible wall and provided with inlet and outlet ports, a gas chamber having a flexible wall, an operative connection between the flexible walls of said chambers, a gas inlet for delivering gas under pressure to the gas chamber and a gas outlet leading therefrom to the mixing chamber, valve means for said gas inlet and said gas outlet, and means for actuating said valve means to alternately open said gas inlet and said gas outlet, said last means being arranged to be controlled in its operation by the gas pressure in the gas chamber.

[Claims 6 to 19 not printed in the Gazette.]

1,153,767. IGNITER MECHANISM FOR INTERNAL-COMBUSTION ENGINES. HARRY RANDOLPH VAN DEVENTER, Sumter, S. C. Filed Jan. 15, 1915. Serial No. 2,498. (Cl. 123—149.)



1. An ignition mechanism for internad combustion engines comprising a frame adapted to be mounted on the engine, an igniter carried by the frame so as to extend into the ignition chamber of the engine, inner and outer bearings carried by the frame, an operating shaft for the igniter journaled in said bearings, a magneto carried on the frame, a trip lever journaled on the igniter shaft between said inner and outer bearings and means for transmitting motion from the trip lever to both said igniter shaft and said magneto shaft.

2. An ignition mechanism for internal combustion engines comprising a frame adapted to be mounted on the engine, an igniter carried by the frame so as to extend into the ignition chamber of the engine, inner and outer bearings carried by the frame, an operating shaft for the igniter journaled in said bearings, a magneto carried on the frame, a trip lever journaled on the igniter shaft between said inner and outer bearings, tension means connected to said trip lever tending to hold it in a given position, means for moving said trip lever against the force of the tension means and tripping the same and means for transmitting motion from said trip lever to both said igniter and magneto shafts.

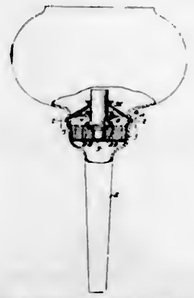
3. An ignition mechanism for internal combustion engines comprising a frame adapted to be mounted on the engine, an igniter carried by the frame so as to extend into the ignition chamber of the engine, inner and outer bearings carried by the frame, an operating shaft for the igniter journaled in said bearings, a magneto carried on the frame, a trip lever journaled on the igniter shaft between said inner and outer bearings, tension means connecting said trip lever with the frame so as to normally hold the lever in a given position relative to the frame, an operating lever carried by said igniter shaft between said inner and outer bearings, tension means connecting the igniter shaft with the frame so as to normally hold the igniter shaft in a given position relative to the frame, means for operating said trip lever and means for transmitting motion from the trip lever to said igniter shaft operating lever and said magneto operating shaft.

4. An ignition mechanism for internal combustion engines comprising a frame adapted to be mounted on the engine, an igniter carried by the frame so as to extend into the ignition chamber of the engine, inner and outer bearings carried by the frame, an operating shaft for the igniter journaled in said bearings, a magneto carried on the frame, a trip lever journaled on the igniter shaft between said inner and outer bearings, tension means tending to hold the trip lever in a given position relative to the frame, means for operating the trip lever engaging it below the igniter shaft and means carried by the trip lever situated above said trip lever operating means for transmitting motion from the trip lever to both said igniter and magneto operating shafts.

5. An ignition mechanism for internal combustion engines comprising a main frame body adapted to be mounted on the engine, an igniter carried by the frame so as to extend into the ignition chamber of the engine, an outward extension on said main frame body, an operating shaft for the igniter, an inner bearing for the igniter shaft situated in the main frame body, an outer bearing for the igniter shaft situated in the said extension, a bracket extending outward from said outward extension, a magneto mounted on the bracket, a trip lever on the igniter shaft intermediate said inner and outer bearings, means for operating the trip lever and means for transmitting motion from said trip lever to both of said operating shafts.

[Claims 6 and 7 not printed in the Gazette.]

1,153,768. STRAINING DEVICE. RICHARD S. DARLING, New York, N. Y., assignor to Paramount Glass Percolator Mfg. Co., New York, N. Y., a Corporation of Delaware. Filed July 15, 1915. Serial No. 40,138. (Cl. 210—16.)



1. In a straining device of the character described, a straining block having openings therethrough, a straining member surrounding said block, and a plurality of locking members arranged in said block for holding the same in position, all of said members being non-metallic.

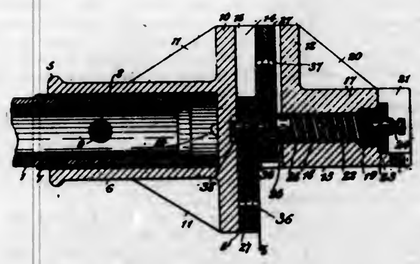
2. In a device of the character described, the combination with a bowl having a groove, of a strainer block arranged in said bowl adjacent said groove, a straining member surrounding said block, a locking member arranged in said block and adapted to be forced into said groove, said locking member pinching said straining medium in said groove, all of said members being non-metallic.

3. In a device of the character described, the combination with a glass bowl having an annular groove, of a porcelain strainer block arranged in said bowl adjacent said groove, a pair of porcelain locking bars slidingly fitted into said block and adapted to be projected so that one end of each block will fit in said groove, means for holding said locking bars in their locked position, and a straining medium for straining the matter passing through said straining block.

4. In a device of the character described, the combination with a bowl having a discharge stem and an enlargement or chamber between the discharge stem and the bowl, said enlargement being provided with an annular groove interiorly, a straining block arranged in said enlargement, said straining block having passageways therethrough and laterally extending grooves, a locking bar arranged in each of said grooves and adapted to be moved so that one end will fit into the groove of said enlargement, a straining member for straining the matter passing through said straining block, and means for holding said locking blocks so that their ends will remain in said groove.

1,153,769. ADJUSTABLE TRACK-GAGE. WINFIELD H. DAVIS, Rutherford, N. J. Filed June 29, 1914. Serial No. 847,888. (Cl. 33—144.)

1. In a gage of the character described, a head provided with an extension, having a contact surface and means defining a chamber, a centrally arranged movable pin arranged to project across said chamber, and a plurality of sliding plates arranged in said chamber and guided in their movement by the walls of said chamber, each of said sliding plates being provided with a pair of apertures for accommodating at different times said pin, whereby any of said plates may be held in an elevated or in a lowered position at will for lengthening and shortening the head as desired.



2. In a track gage of the character described, an integrally constructed head therefor, said head comprising walls defining a chamber and a plurality of stiffening and bracing ribs for said walls, a reciprocating pin arranged to move centrally and axially of the gage, a plurality of slidable plates arranged in said chamber, each of said plates being provided with a pair of apertures for accommodating part of said pin, whereby any of the plates may be locked in an elevated or a lowered position and a pair of pins for limiting the sliding movement of said plates.

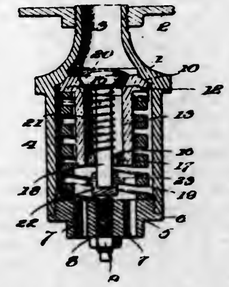
3. In a track gage of the character described, a head therefor, said head comprising a casing formed with a measuring face, a plurality of identically constructed slidable plates arranged in said casing and adapted to be moved to a position in front of said face and from a position in front of said face, each of said plates being formed with a pair of spaced apertures and also with a notched-out portion on each edge, a spring-pressed pin carried by said casing adapted to be inserted into either of said apertures for locking said plates in an operative or an inoperative position, and means carried by said casing engaging the plates at the respective ends of said notched-out portions for supporting the plates independent of said pin when in an operative position.

4. In a track gage of the character described, a head connected with the body of the gage, said head being formed from a single casting and provided with a chamber merging into a measuring face, and a horizontal supporting face, a plurality of slidable plates arranged in said chamber and adapted to slide to a position in front of said measuring face, and means for holding said plates either in said chamber or against said measuring face.

5. In a track gage of the character described, a head connected to the body of the gage and formed with a measuring face and with a supporting face, a plurality of slidable plates arranged in said head and adapted to slide to a position in front of said measuring face and from said position, a sliding pin for locking said plates in either of their positions, stationary supporting pins arranged on each side of said first mentioned pin, each of said sliding plates being formed with an elongated notch on each edge, whereby upper and lower shoulders are provided on each edge of each plate, said shoulders being designed to rest against said supporting pins according to the position of the plates, each of said plates being provided with an aperture substantially in line with each pair of shoulders, said last mentioned apertures being adapted to accommodate said first mentioned pin so as to lock the plates opposite said measuring face or away from said measuring face at will.

[Claims 6 and 7 not printed in the Gazette.]

1,153,770. AUTOMATIC CYLINDER-COCK. EUGENE A. DAYMON, Lima, Ohio. Filed June 2, 1914. Serial No. 842,441. (Cl. 137—32.)



1. A drain cock comprising a valve casing, a relief valve mounted therein and normally seated thereagainst, a normally open drainage valve carried by the relief valve and adapted to seat against the same, and means external to the relief valve and common to both valves for limiting the unseating movement of each valve.

2. A drain cock comprising a valve casing, a normally open drainage valve, a relief valve normally seating against the valve casing and providing a seat for the drainage valve, and means below the relief valve for limiting the opening movement of both valves and permitting simultaneous movements thereof in the same direction but of unequal duration.

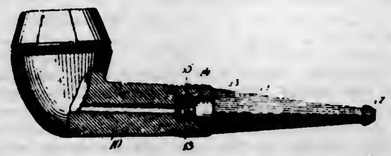
3. A drain cock comprising a valve casing, a relief valve mounted therein, yieldable means for normally holding said valve seated against the valve casing, a drainage valve adapted to seat upon the relief valve, means tending to unseat the drainage valve, and means below the relief valve and carried by the drainage valve for limiting the unseating movement of both valves and successively arresting their movement away from the seating engagement with the casing.

4. A drain cock comprising a valve casing, a relief valve arranged within the casing and normally seated against the same, a drainage valve carried by the relief valve and adapted to seat upon the same, an adjustable stop mounted in the valve casing in the path of movement of the drainage valve to limit the outward movement of said valve in the casing, and a stop carried by the said drainage valve to limit the outward movement of the relief valve and the movement of the drainage valve relative to the relief valve.

5. A drain cock comprising a valve casing, a drainage valve therein, a relief valve seated against the casing and providing a seat for the drainage valve, the two valves being relatively movable, and means carried by one of the valves and engaging the other valve for limiting the relative movement of the valves and also limiting the movement of the relief valve from its seat on the casing.

[Claims 6 and 7 not printed in the Gazette.]

1,153,771. SMOKING-PIPE. LEOPOLD DEMUTH, New York, N. Y. Filed Aug. 15, 1913. Serial No. 784,878. (Cl. 131—12.)



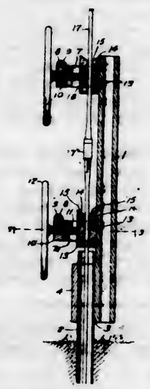
1. A smoking pipe of the character described comprising a bowl provided with a stem section, and a separate stem section, detachable from the first mentioned stem

section, the detachable stem section having an integral tenon at the front end, said tenon being threaded at its front end for a short distance and plain and unthreaded for a material distance in the rear of the threaded portion, there being a front shoulder on the detachable stem section at the base of the unthreaded portion, the first mentioned stem section having a socket with an unthreaded rear portion and a threaded portion inward of the unthreaded portion to correspond with the tenon, the unthreaded portion of the tenon fitting its socket tightly and the opposed front shoulder of the separate stem binding against the opposed end of the stummel when the threaded connection is screwed up.

2. A smoking pipe comprising a bowl provided with a stem section, and a detachable stem section, the latter having an integral tenon, and a front shoulder at the base of the tenon, the said tenon being threaded at the front end only and for a short distance, the remainder of the tenon being tapered and unthreaded, and the first mentioned stem section having a socket with a plain unthreaded rear portion and a threaded portion inward of the plain portion, to correspond with the tenon, the unthreaded portion of the tenon being received wholly in the stummel and the shoulder of the detachable stem section fitting tightly against the rear end of the stem section of the stummel when the mating threads are screwed up.

3. A smoking pipe of the character described, comprising a bowl provided with a fixed stem section, and a second detachable stem section having an integral tenon at the front end, the said tenon being threaded at its front end and plain and unthreaded at the base of the tenon in the rear of the threaded portion, the first mentioned stem section having a socket with an unthreaded rear portion tightly receiving the plain unthreaded portion of the detachable stem section, and the fixed stem section having directly formed thereon an internal thread corresponding with the thread on the tenon.

1,153,772. SIMPLEX ROD-SLIP. JOSEPH B. DUNLAP and WILLIAM D. BRYAN, Tulsa, Okla. Filed Aug. 15, 1914. Serial No. 856,975. (Cl. 24—243.)



1. A device of the character specified comprising a stand having at its lower end a clamp for detachable engagement with the upper end of a well casing, and a pair of clamping devices rigidly connected with the stand in vertical spaced relation, each of the said clamping devices comprising a pair of clamping jaws, and a support for each pair of jaws, said jaws being arranged with one member of each pair adjacent to the stand, and each support having releasable means for forcing the other jaw toward the stand, said clamping devices being adapted to be released and tightened in alternation to permit the lowering of a jointed rod into the casing.

2. A device of the character specified comprising a stand having means for detachably engaging the top of the casing, and clamping devices on the stand, each of the said devices comprising a pair of coöperating T-shaped jaws, the stand having a pair of laterally spaced rigid arms for supporting each pair of jaws, and the jaws being arranged between the arms with one jaw adjacent to the stand, and means detachably connected with each pair of arms for forcing the other jaw toward the first named jaw, said means comprising a nut detachably connected with the arms, and a set screw threaded through the nut and adapted to engage the outermost jaw.

3. A device of the character specified comprising a stand having means for detachably engaging the top of the casing, and clamping devices on the stand, each of the said devices comprising a pair of coöperating T-shaped jaws, the stand having a pair of laterally spaced rigid arms for supporting each pair of jaws, and the jaws being arranged between the arms with one jaw adjacent to the stand, and means detachably connected with each pair of arms for forcing the other jaw toward the first named jaw.

4. In a device of the character specified, a stand having a pair of laterally spaced arms, said arms being vertically grooved on their inner faces and near their outer ends, and the grooves being in register, a nut having ribs for engaging the grooves and having a threaded opening extending toward the stand when the nut is in place, a set screw threaded through the nut, said nut having a transverse opening at its top, and the arms having openings registering therewith, and a bolt passing through the registering openings, and a pair of T-shaped jaws adapted to engage between the arms between the set screw and the stand and to extend above the upper edges of the arms to limit the downward movement of the jaws.

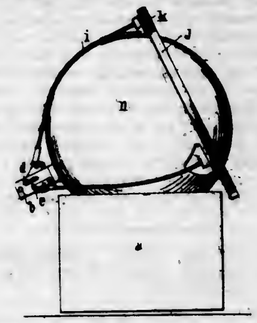
5. In a device of the character specified, a stand having a pair of laterally spaced arms, said arms being vertically grooved on their inner faces and near their outer ends, and the grooves being in register, a nut having ribs for engaging the grooves and having a threaded opening extending toward the stand when the nut is in place, and a pair of T-shaped jaws adapted to engage between the arms between the set screw and the stand and to extend above the upper edges of the arms to limit the downward movement of the jaws.

1,153,773. SASH-HOLDER. QUINT G. EDDINS, Richmond, Va. Filed Jan. 19, 1914. Serial No. 813,024. (Cl. 16—19.)



The combination of a frame, a sash sliding therein, and a spring between the sash and frame, having its ends secured to points on the frame spaced apart a distance less than the length of the spring, whereby a portion of said spring will form a projecting bow above or below the bearing surface of the sash, or both, according to the direction of movement and position of the sash, to hold the same.

1,153,774. SAFETY-ANCHOR FOR SUBMARINE MINES. GIOVANNI EMANUELE ELIA, Paris, France, assignor to Vickers Limited, Westminster, England. Filed Sept. 15, 1914. Serial No. 861,833. (Cl. 102—8.)

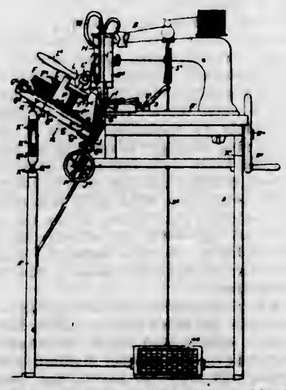


1. A submarine mine provided with an anchor resting on the ground of the sea, an anchor cable connected to the mine body through screw-threaded parts of opposite pitch, a shock member projecting upon the mine over all angles of approach a vessel may assume, and safety devices with which the shock member is connected, the safety devices locking the screw-threaded parts and preventing any movement of rotation of the mine, relative to its anchor cable.

2. A submarine mine provided with an anchor resting on the ground of the sea, an anchor cable connected to the mine body through screw-threaded parts of opposite pitch, a frame mounted on the mine body and projecting thereupon over all angles of approach a vessel may assume, a safety socket forming part of the anchorage cable, articulated caps connected to said safety socket, and ropes or cables connecting said frame to said articulated caps.

3. A submarine mine provided with an anchor resting on the ground of the sea, an anchor cable connected to the mine body through screw-threaded parts of opposite pitch, a frame mounted on the mine body and projecting thereupon over all angles of approach a vessel may assume, articulated caps, ropes connecting said frame to said caps, a socket forming part of the anchorage cable and guided through pins on a hub forming part of the striker, and rupturing screws connecting said articulated caps with said socket.

1,153,775. BOOK-SEWING MACHINE. FERDINAND GAISER, New York, N. Y. Filed July 17, 1913. Serial No. 779,498. (Cl. 112—41.)



1. In a book sewing machine, the combination with a reciprocating sewing needle and coöperating stitch-forming mechanism, of a guideway having a fixed ledge at an acute angle to the line of travel of the sewing needle, and having a bottom approximately at a right angle to the said ledge, a signature carrier mounted to slide step by step on the said guideway and adapted to support superimposed signatures to be sewed together, the signatures having their backs abutting against the said ledge, a spring bar fixed on the said guideway bottom and provided with notches spaced equal distances apart, and a spring-pressed catch on the said signature carrier and adapted to successively engage the said notches.

2. In a book sewing machine, the combination with a reciprocating sewing needle and coöperating stitch-forming mechanism, of a guideway having a fixed ledge at an acute angle to the line of travel of the sewing needle, and having a bottom approximately at a right angle to the said ledge, a needle plate in the said ledge for the needle to pass through, a needle guide on the underside of the said ledge in alinement with the said needle plate and the stitch-forming mechanism to support the needle while the stitch is formed, and a signature carrier mounted to slide step by step on the said guideway and adapted to support superimposed signatures to be sewed together, the signatures having their backs abutting against the said ledge.

3. In a book sewing machine, the combination with a reciprocating sewing needle and coöperating stitch-forming mechanism, of a guideway having a fixed ledge at an acute angle to the line of travel of the sewing needle, and having a bottom approximately at a right angle to the said ledge, a needle plate in the said ledge for the needle to pass through, a needle guide fixed on the under side of the ledge and having an eye and a groove extending from the said eye for receiving the needle to guide the latter to the stitch-forming mechanism, and a signature carrier mounted to slide step by step on the said guideway and adapted to support superimposed signatures to be sewed together, the signatures having their backs abutting against the said ledge.

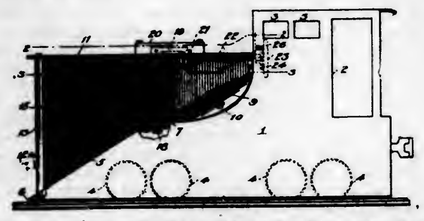
4. In a book sewing machine, the combination with a reciprocating sewing needle and coöperating stitch-forming mechanism, of a guideway having a fixed ledge at an acute angle to the line of travel of the sewing needle and having a bottom approximately at a right angle to the said ledge, a signature carrier mounted to slide step by step on the said guideway and adapted to support superimposed signatures to be sewed together, the signatures having their backs abutting against the said ledge, and an adjustable gage at one end of the said signature carrier to allow shifting of the superimposed signatures prior to starting a new row of stitches.

5. In a book-sewing machine, the combination with a reciprocating sewing needle and coöperating stitch-forming mechanism, of a guideway having a fixed ledge at an acute angle to the line of travel of the sewing needle, and having a bottom approximately at a right angle to the said ledge, a signature carrier mounted to slide step by step on the said guideway and adapted to support superimposed signatures to be sewed together, the signatures having their backs abutting against the said ledge, a bar fixed on the said guideway bottom and provided with notches spaced equal distances apart, a spring-pressed catch on the said signature carrier and adapted to successively engage the said notches, a gage mounted to slide on one end of the said carrier, and means for shifting the said gage lengthwise of the carrier a distance corresponding to one half of the distance between adjacent notches in the said bar.

1,153,776. SNOW-PLOW. GEORGE W. GERHART, Sunbury, Pa. Filed Feb. 10, 1915. Serial No. 7,898. (Cl. 104—51.)

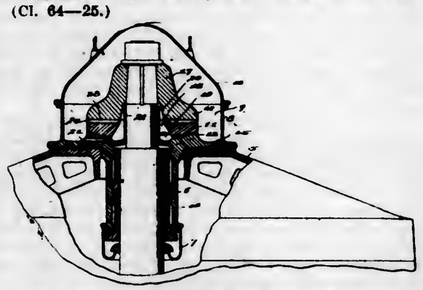
1. In a snow plow the combination with a plow body having an advance upwardly inclined scooping surface, of a vertically arranged rearwardly diverging mold board having its apex adjacent to and directed toward said scooping surface, an adjustable shunting board pivoted vertically in advance of said mold board, a rack and

pinion mechanism for swinging said shunting board, an operating wheel for controlling said mechanism, and means for locking said mechanism in any of its adjusted positions.



2. In a snow plow the combination with a plow body having an advance upwardly inclined scooping surface, of a vertically arranged rearwardly diverging mold-board having its apex adjacent to and directed toward said scooping surface, an adjustable shunting board pivoted vertically in advance of said mold-board, means for locking said shunting board in any of its adjusted positions, a closed top surmounting said scooping and mold-board elements, and stanchions for said top at the front of the structure, serving also as supports for the outer edge of the said shunting board.

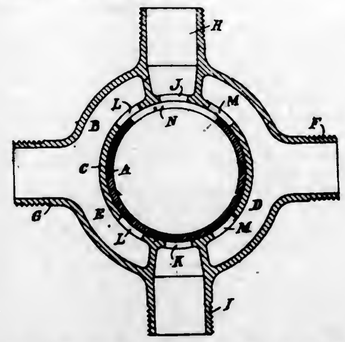
1,153,777. THRUST-BEARING. EUGENE U. GIBBS, York, Pa. Filed Dec. 3, 1913. Serial No. 804,496. (Cl. 64—25.)



1. In a bearing of the class specified, the combination of an oil chamber, a shaft extending thereinto, a disk secured to and rotatable with the shaft in the chamber and having a flat unbroken bearing face and a fixed disk in the chamber having a bearing face in close and direct contact with the face of the rotatable disk and formed with radial channels extending from the periphery fully to the center thereof and of equal depth throughout their full extent, the portions of the bearing face of the fixed disk between the radial channels being inclined from a lower point at one side of each channel toward and terminating in a horizontally flat bearing portion in advance of the next succeeding channel throughout the whole surface, the channels of equal depth throughout their extent supplying a uniform quantity of oil to the outermost, innermost and intermediate portions of each inclined part of the bearing face of the rotatable disk and also permitting an unrestricted circulation of the oil from the said oil chamber into and outwardly from the said radial channels.

2. In a bearing of the class specified, the combination of an oil chamber, a shaft extending thereinto, a disk secured to and rotatable with the shaft in the chamber and having a flat unbroken bearing face and a fixed disk in the chamber having a bearing face in close and direct contact with the face of the rotatable disk and formed with radial channels extending from the periphery fully to the center thereof and of equal depth throughout their full extent, the outer portions of the fixed and rotatable disks including the outer extremities of the radial channels of the rotatable disk being fully and unrestrictedly exposed to the oil chamber and the said disks also having their inner portions forming the wall of an inner oil chamber around the shaft to which the inner extremities of the radial channels are also exposed, the portions of the bearing face of the fixed disk between the radial channels being inclined from a lower point at one side of each channel toward and terminating in a flat bearing face in advance of the next succeeding channel throughout the whole surface of the rotatable disk, the equal depth of the radial channels throughout their full extent supplying a uniform quantity of oil to the outermost, innermost and intermediate portions of the inclined and flat portions of the bearing face of the rotatable disk and also permitting an unrestricted circulation of the oil from the outer to the inner oil chambers and vice versa.

1,153,778. TAP OR COCK. ROBERT RENTON GIBBS, Liverpool, England. Filed Feb. 21, 1914. Serial No. 820,277. (Cl. 137—26.)



1. A water distributing or mixing tap or cock of the rotary plug type, having in combination a body or casing with double circumferential walls disposed with an intervening space between, transverse partitions dividing the said space into separate chambers, said partitions providing ports leading to respective points of discharge, one of the chambers having a hot water intake port and the other chamber a cold water intake port, a hollow plug rotatably mounted in the bore of the inner wall, the inner wall of the chambers being provided with hot and cold water ports in such position that the hollow plug will bring the said ports into separate or collective communication with either of the discharge ports, so that the temperature of the water delivered through the outlets can be controlled.

2. In a water distributing or mixing tap or cock, the combination of a body with double circumferential walls disposed with an intervening space between, transverse partitions diametrically opposite one another dividing the said space into separate chambers for the inflow of cold water and hot water respectively, said partitions providing ports leading to respective points of discharge, a hollow ported plug or spigot adapted to be turned within the bore of the inner wall, the inner wall having ports located in such position that the port in the hollow plug will bring the hot or cold water ports into collective communication therewith with either of the outlet ports, so that the hot and cold water will actually mix within the plug before delivery, or into separate communication therewith so that the hot water alone or cold water alone will be discharged.

3. In a water distributing or mixing tap or cock, the combination with the valve body or casing having double circumferential walls spaced apart, transverse partitions diametrically opposite one another dividing said space into two chambers, inlet pipes for feeding the chambers with hot and cold water respectively, said partitions providing ports leading to respective points of discharge, the inner

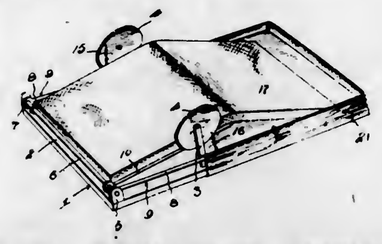
circumferential wall of each chamber having hot and cold water ports, and a hollow valve plug so arranged that it will close the said hot and cold water ports, or bring them into separate or collective communication with either of the outlet ports, so that the temperature of the water delivered through the outlets can be controlled.

4. A water distributing or mixing tap or cock of the rotary plug type having in combination, a body or casing with double circumferential walls disposed with an intervening space, transverse partitions dividing the said space into separate chambers, said partitions having ports in them leading from the bore of the inner wall to the respective points of discharge, a hot water intake port in connection with one of the chambers, a cold water intake port in connection with the other chamber, a hollow plug rotatably mounted in the bore of the inner wall and provided with a single port, and hot and cold water ports in the inner wall of the chambers adjacent to the partitions in such positions that the hollow plug will by means of its single port bring the said hot and cold water chambers into separate or collective communication with either of the discharge ports in the partitions, so that the temperature of the water delivered through the said discharge ports can be controlled.

5. In a water distributing or mixing tap or cock, the combination of the valve body or casing having double circumferential walls spaced apart, of transverse partitions diametrically opposite one another dividing the space into two chambers, said partitions providing radial ports leading from the bore of the inner wall to the respective points of discharge, inlet pipes for feeding the chambers at opposite sides of the partitions with cold and hot water respectively, ports in the inner circumferential wall of the chambers, one at each side of the ported partitions, a hollow valve plug mounted in the bore of the inner wall, and a single port in the hollow plug to bring the ports at each side of the partitions into separate or collective communication with either of the discharge ports in the partitions.

[Claim 6 not printed in the Gazette.]

1,153,779. FENDER. OVELIA M. GOODE, South Bend, Tex. Filed June 9, 1915. Serial No. 33,094. (Cl. 105—127.)



1. A fender comprising a platform, a U-shaped guard frame pivoted to one end of the platform and extending to the opposite end thereof, a U-shaped operating frame pivoted to the pivot of the U-shaped guard frame, a U-shaped frame pivoted to the bight portion of the operating frame and means connecting the operating frame with the guard frame whereby upon precipitation of an object on to the platform the guard frame will be thrown into active position.

2. A fender comprising a platform, a U-shaped guard frame pivoted to one end of the platform, and extending to the opposite end thereof, a U-shaped operating frame pivoted to the pivot of the U-shaped frame, a U-shaped frame pivoted to the bight portion of the operating frame, standards extending upwardly from the sides of the platform, a wheel rotatable on the standard and means connecting the frame to the wheel at diametrically opposite points whereby upon precipitation of an object on the platform, the guard frame will be thrown into active position.

1,153,780. HEEL AND RAND TRIMMER. RUPERT L. GREENLEAF, Brockton, Mass. Filed Dec. 16, 1914. Serial No. 877,552. (Cl. 12—93.)



1. In a device of the character set forth, the combination with a shield, and a lip cutter disposed upon the shield, of means between the shield and the cutter for adjusting the said cutter to and from the shield.

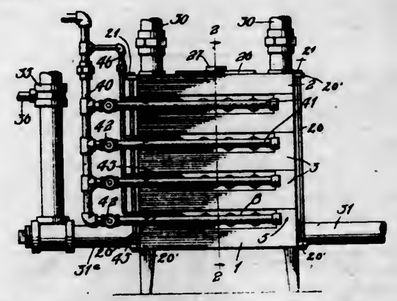
2. In a device of the character set forth, the combination with a shield, and a lip cutter disposed thereon, of means interposed between the shield and the cutter for supporting the cutting lips and adjusting the same to and from the shield.

3. In a device of the character set forth, the combination with a shield, and a lip cutter disposed thereon, of a washer interposed between the shield and the cutter and provided in its edge with recesses having walls engaging the lips of said cutter, said washer being movable relative to the shield whereby the walls of said recesses will raise or lower the cutting lips.

4. In a device of the character set forth, the combination with a shield having recesses in its upper side, and a lip cutter disposed over the shield and having lips adapted to seat in said recesses, of a washer interposed between the shield and the cutter and provided at its edge in its upper side with recesses having walls engaging the lips of the cutter, all of said recesses being deeper at their rear ends than at their front ends.

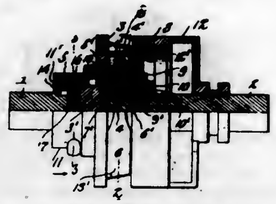
5. In a device of the character set forth, the combination with a shield, and a lip cutter disposed over the shield, of a washer interposed between the shield and the cutter and provided at its edge with recesses having walls engaging the lips of the cutter and provided at diametrically opposite points with arcuate slots, and stops inserted through said slots into the shield.

1,153,781. WATER-HEATER. DAVID HAMILTON, Greensburg, Pa. Filed Nov. 16, 1914. Serial No. 872,434. (Cl. 122—25.)



A water heater comprising a flat hollow water heating section, a U-shaped hollow wall formed integrally with said section, rising from the edge thereof, and communicating throughout its length therewith, said wall having its upper side closed and disposed in a horizontal plane, said closed upper side of the wall being provided with a transverse depression and with an opening communicating with its interior, an additional water heating section resting on said upper edge of the U-shaped hollow wall and having an opening registering with the opening in the upper side thereof, a burner interposed between the two sections and partially surrounded by the hollow wall, an inlet into the first section, and an outlet from the other section, the transverse depression facilitating the discharge of gases from the burner.

1,153,782. SAFETY CLUTCH DEVICE. ELMER ELLSWORTH HANNAH, Estacada, Oreg. Filed Nov. 25, 1913. Serial No. 803,052. (Cl. 192—21.)

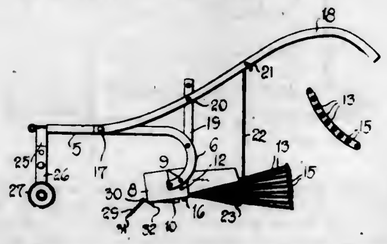


1. The combination with a pair of rotatable elements, of a member arranged between the elements and loosely connected therewith, a collar fixed to one of said elements, compressing springs coöperative with the member and the said collar for tensioning the same relative to each other, a sleeve fixed to the other element, a spring held dog carried by the said member for locking engagement with the sleeve, and means carried by the said other element for engagement with the dog to release the same from the sleeve.

2. The combination with a pair of rotatable elements, of a member arranged between the elements and loosely connected therewith, a collar fixed to one of said elements, compression springs coöperative with the member and the said collar for tensioning the same relative to each other, a sleeve fixed to the other element, a spring held dog carried by the said member for locking engagement with the sleeve, means carried by the said other element for engagement with the dog to release the same from the sleeve, and means for preventing the displacement of the member relative to one of said elements.

3. The combination with a pair of rotatable elements, of a member arranged between the elements and loosely connected therewith, a collar fixed to one of said elements, compression springs coöperative with the member and the said collar for tensioning the same relative to each other, a sleeve fixed to the other element, a spring held dog carried by the said member for locking engagement with the sleeve, means carried by the said other element for engagement with the dog to release the same from the sleeve, means for preventing the displacement of the member relative to one of said elements, and means for preventing displacement of the said member relative to the said sleeve.

1,153,783. HARVESTING-MACHINE. HENRY H. HARRIS, Traverse City, Mich. Filed Jan. 23, 1915. Serial No. 4,026. (Cl. 55—139.)

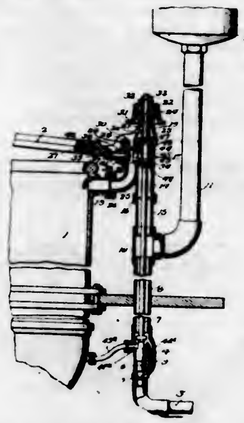


1. In a machine of the character described, a harvesting blade, rearwardly extending wings pivotally mounted on the opposite ends of said blade, a series of flexibly connected directing members loosely mounted at their forward ends upon the blade and extending rearwardly of said wings, said wings at their rear ends being connected to said members, and means adapted for detachable connection to one of said members to dispose the series at a transverse inclination and discharge the harvested vegetables upon either side of the line of movement of the machine.

2. In a harvester of the character described, a harvesting blade, rearwardly extending wings pivotally connected to the ends of said blade, a series of longitudinally disposed rods loosely mounted at their farword ends upon said blade, the outermost rods of the series being mounted upon the rear ends of the respective wings, flexible connections between the rear ends of said rods, and means adapted to be engaged with either of the outermost rods to elevate one of the wings on one side of the series of rods whereby the material is discharged rearwardly from the opposite side thereof.

3. A harvester of the character described including a harvesting blade, rearwardly extending wings pivotally mounted at their forward ends upon the opposite ends of said blade, a series of spaced longitudinally extending rods loosely mounted at their forward ends upon said blade and extending rearwardly of said wings, eyes fixed in the rear ends of said wings and in which the outermost rods are loosely engaged, a link chain connection between the rear ends of said rods, and means adapted to be engaged with either of the outermost rods to elevate the same and the wing connected thereto and dispose the series of rods at a transverse inclination, whereby the material is discharged rearwardly of the machine and at the opposite side thereof.

1,153,784. FLUSHING APPARATUS FOR WATER-CLOSETS. JOHN HEARL, Baltimore, Md., assignor to A. Weiskittel & Son Company, Baltimore, Md., a Corporation of Delaware. Filed July 17, 1915. Serial No. 40,400. (Cl. 4—28.)



1. A flushing apparatus including in combination, a hopper, an upper valve casing connected to said hopper, a lower valve casing, a pipe connecting said valve casings, a supply valve in said lower valve casing, a stem extending through said pipes for operating said valve, a closed tank for storing the flushing water, means for raising the supply valve when the seat is depressed, a horizontally disposed valve for controlling the flushing water, a valve stem therefor, and means carried by the seat for directly engaging the last named stem for closing the valve carried thereby when the seat is depressed.

2. A flushing apparatus including in combination, a hopper, an upper valve casing connected to said hopper, a lower valve casing, a pipe connecting said valve casings, a supply valve in said lower valve casing, a stem extending through said pipe for operating said valve, a closed tank for storing the flushing water, means for raising the supply valve when the seat is depressed, a horizontally disposed valve for controlling the flushing water, a valve stem therefor, means carried by the seat for directly engaging the last named stem for closing the valve carried thereby when the seat is depressed, and a spring for normally holding said last named valve unseated, said valve being moved to full open position by the water.

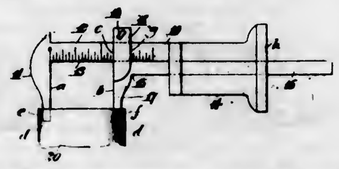
3. A flushing apparatus including in combination, a hopper, an upper valve casing connected to said hopper, a lower valve casing, a pipe connecting said valve casings, a supply valve in said lower valve casing, a stem extending through said pipe for operating said valve, a closed tank for storing the flushing water, means for raising the supply valve when the seat is depressed, a horizontally disposed valve for controlling the flushing water, a valve stem therefor, means carried by the seat for directly engaging the last named stem for closing the valve carried thereby when the seat is depressed, a spring for normally holding said last named valve unseated, said valve being moved to full open position by the water, and a stop pin for holding said valve away from the casing when in full open position.

4. A flushing apparatus including in combination, a hopper, an upper valve casing connected to said hopper, a lower valve casing, a pipe connecting said valve casings, a supply valve in said lower valve casing, a stem extending through said pipe for operating said valve, a closed tank for storing the flushing water, means for raising the supply valve when the seat is depressed, a horizontally disposed valve for controlling the flushing water, a valve stem therefor, means carried by the seat for directly engaging the last named stem for closing the valve carried thereby when the seat is depressed, said last named valve being moved to full open position by the water, and a stop pin for holding the valve away from the casing when in full open position.

5. A flushing apparatus including in combination, a hopper, an upper valve casing connected to the hopper, a lower valve casing, a pipe connecting said valve casings, a supply valve in said lower valve casing, a stem extending through said connecting pipe for operating said supply valve, a spring located outside of said pipe for normally depressing said valve stem, means operated by said seat for raising said valve stem, a closed tank for the flushing water, a flushing valve in said upper valve casing, a stem carrying said flushing valve, said stem being horizontally disposed and said seat having means for directly engaging the stem of said valve for closing the same when the seat is depressed.

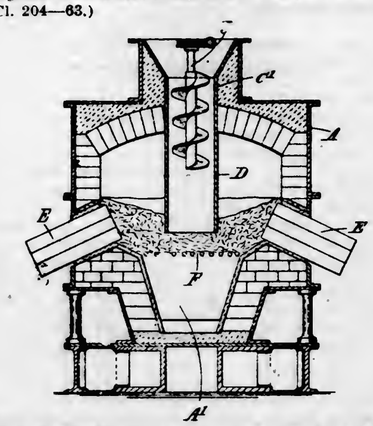
[Claims 6 to 9 not printed in the Gazette.]

1,153,785. COMBINED MICROMETER AND SCALE. VERNIE R. HELIN, Minneapolis, Minn. Filed May 4, 1912. Serial No. 695,121. (Cl. 33—143.)



In a combined micrometer and scale, the combination with a scale member, of a micrometer member slidable on the scale member, a guide head carried by the scale member and projecting to one side of the scale member from an edge thereof, a shank carried by the micrometer member and passing slidably through the said guide head, said shank lying flush with the body of the said scale member, a finger carried by the micrometer member, spaced spring-like guide plates, each plate having one of its ends secured to the said finger, said plates passing across the faces of the scale member, an adjusting screw connecting the free ends of the guide plates for clamping the said micrometer member in an adjusted position on the scale member, and a second finger formed integrally with the said scale member at one end thereof, the finger of the said micrometer member being adapted to lie flush with the said scale member and the said finger thereof.

1,153,786. REDUCTION OF METALLIC OXIDS AND THE LIKE. FRANK WILLIAM HIGHFIELD, Caversham, England. Filed Mar. 15, 1915. Serial No. 14,453. (Cl. 204—63.)



1. In a furnace for the recovery of zinc from an oxidised condition thereof, the combination of a wall of material that is porous to carbon monoxid at the working temperature of the furnace and that divides the said zinc in its oxidized condition from the atmosphere of the furnace, electrically heated carbon adjacent to the said wall to heat it and to provide a furnace atmosphere of carbon monoxid, a grate beneath the carbon to support it, a chamber beneath the grate to receive the reduced metal and a cooling chamber in direct communication with the said receiving chamber.

2. In a furnace for the recovery of zinc from zinc oxid, the combination of a feed tube whose wall is porous to carbon monoxid at the working temperature of the furnace and which is supported to be immersed in an atmosphere of pure carbon monoxid and to have its delivery end in contact with the upper surface of a body of porous carbon, means to heat the said body electrically, a grate within the furnace upon which the body of carbon is supported, a chamber beneath the grate to receive the reduced metal and a cooling chamber in direct communication with the said receiving chamber, but sealed from the open air.

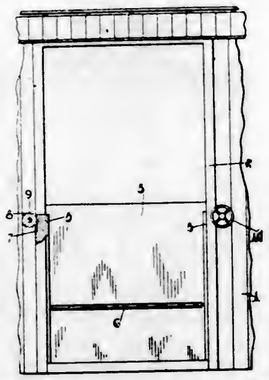
3. In a furnace for the recovery of zinc from an oxidized condition thereof, the combination of a feed tube whose wall is porous to carbon monoxid at the working temperature of the furnace and which is supported to have its delivery end in contact with electrically heated carbon upon a grate within the furnace, means within the feed tube to propel the material therethrough, a chamber beneath the grate to receive the reduced metal and a cooling chamber in direct communication with the said receiving chamber.

4. In a furnace for the recovery of zinc from an oxidised condition thereof, the combination of porous material supported in the hottest part of the furnace, a grate within the furnace beneath the said porous material, means to heat electrically the said material above the grate, means to feed zinc in an oxidised condition on to the said material above the grate, a chamber beneath the grate to receive the reduced metal, a cooling chamber in direct communication with the said receiving chamber and having downwardly depending projections from its roof pierced by conduits for the circulation of a cooling medium and provided with a liquid seal at the outlet for metal.

1,153,787. GRAIN-CAR DOOR. ENOS W. HOGAN, Banning, Ontario, Canada. Filed May 25, 1914. Serial No. 840,906. (Cl. 20—30.)

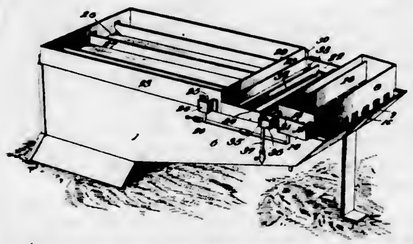
1. A car having a doorway formed therein in combination with vertical stops forming guide ways at each side

of the doorway, and a door slidable vertically in said guide ways, one of the outer stops being vertically movable to rise above the top of the door to enable the latter to swing outwardly.



2. A car having a doorway formed therein in combination with vertical stops forming guide ways at each side of the doorway, and a door slidable vertically in said guide ways, the door being divided horizontally into two parts and both of the outer stops being vertically movable, one to rise above the top of the door and the other at least above the bottom part of the door.

1,153,788. EVAPORATOR. ÉRWIN W. HOLMES, Jeffersonville, Vt. Filed July 16, 1914. Serial No. 851,356. (Cl. 127—9.)



1. An evaporator of the character described, comprising a fire-box having a rearwardly extending inclined flue, an evaporator pan above the fire-box, a tank extending within the inclined rearwardly extending portion of the fire-box and having flues through which the products of combustion pass from the fire-box, passages within the tank adjacent each side and of a height less than that of the tank, means for supplying the raw sap to the said passages, and means for conveying the sap from the tank to the evaporator pan.

2. An evaporator of the character described, comprising a fire-box, a tank above the fire-box, flues passing through the tank and through which the products of combustion pass from the fire-box, vertically disposed passages carried by the inner face of the opposite sides of the tank and of a height less than that of the tank and having outer open ends, and means for supplying the raw sap to the opposite ends of the passages, substantially as shown and described.

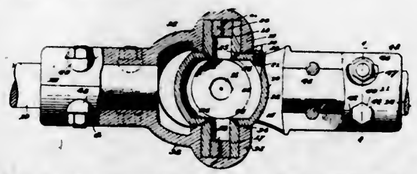
3. An evaporator of the character described, comprising a fire-box, a tank above the fire-box and having flues passing therethrough, through which the products of combustion pass from the fire-box, vertically disposed passages at the opposite sides of the tank and of a height less than that of the tank and having their ends at one end of the tank open, means for supplying the raw sap to the opposite ends of the passages, and means for withdrawing the heated sap from the tank.

4. An evaporator of the character described, comprising a fire-box having a rearwardly and upwardly inclined flue, an evaporator pan above the fire-box adjacent its forward end and having vertical partitions adapted to cause the sap to flow back and forth through the same, a second evaporator pan in rear of the first pan and having like partitions, a tank supported upon the upper end of the rearwardly inclined portion of the fire-box and having a portion extending within the same, horisontally arranged flues extending through the tank intermediate its upper and lower ends, vertically disposed passages at opposite sides of the tank and of a height less than that of the tank above the flues and having their ends open adjacent one end of the tank, means for supplying sap to the passages at the opposite ends, means for conveying sap from the tank to the forward evaporating pan, and means for conveying sap from the opposite side of the said forward evaporator pan and conveying it into the intermediate evaporator pan.

5. An evaporator of the character described, comprising a fire-box having an upwardly inclined rear end, an evaporating pan above the fire-box and having zigzag passages extending longitudinally of the fire-box, an evaporator pan in rear of the first-mentioned pan and having zigzag passages extending transverse the fire-box, a tank resting upon the upper end of the fire-box and having a downwardly extending portion within the inclined rear end of the fire-box and engaging the lower face thereof, flues extending through the tank intermediate its upper and lower edges, vertically disposed passages within the tank adjacent each side and having their ends open adjacent one end of the tank, means for conveying the sap to the closed ends of the said passages, means for supplying the sap from the tank to one side of the forward evaporator pan, means for withdrawing the sap from the opposite side of the said evaporator pan and discharge it into the intermediate evaporator pan adjacent the forward end and means for discharging the sap from the said intermediate pan adjacent its rear edge on the opposite side—substantially as shown and described.

[Claims 6 to 10 not printed in the Gazette.]

1,153,789. UNIVERSAL JOINT. HIRAM F. HOPKINS, deceased, North Girard, Pa., by Clara Hopkins, administratrix, North Girard, Pa. Filed Apr. 4, 1914. Serial No. 829,649. (Cl. 74—19.)



1. A universal joint including a spider consisting of a hollow body member adapted to contain a quantity of lubricant and having a threaded bore leading through the wall thereof, a closure plug for the bore, four quadrantly spaced hollow trunnions formed integral with the body member, closure plugs fitted into the outer terminals of the trunnions, said closure plugs having oil ducts adapted to permit the escape of the lubricant from the body member through the terminal of the trunnions, the cylindrical wall of said trunnions being provided with a plurality or diagonally extending lubricant ducts, and a pair of coupling forks having sockets receiving the trunnions, that portion of each socket contacting with the terminal of a trunnion being lubricated by the lubricant issuing from the duct of the trunnion and closure plug, and the portion of each socket in contact with the cylindrical face of each trunnion being lubricated by lubricant issuing from the diagonally extending oil ducts.

2. A universal joint including a spider consisting of a substantially spherical shaped hollow body member adapted to receive a quantity of lubricant, a plurality of trunnions formed integrally with the body member and extending laterally therefrom at quadrantly spaced points, the surface of the body member being flattened to produce a flat annular bearing surface at the base of each trunnion, there being oil ducts formed in the terminals of each trunnion for supplying a lubricant to the end surface of each trunnion, there being diagonally extending oil ducts formed at the juncture of each trunnion with the body member for conducting lubricant to the cylindrical surfaces of the trunnions and onto the annular bearing surfaces of the body member, and a pair of coupling forks having sockets receiving the trunnions.

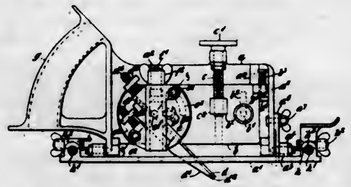
3. A universal joint including a spider consisting of a hollow substantially spherical body member adapted to contain a quantity of lubricant, a plurality of trunnions formed integrally with the body member, said trunnions being hollow, and a flat annular bearing surface formed on the surface of the body member at the base of each trunnion, there being oil ducts leading from the interior of the body member to a point at the junction of the cylindrical faces of the trunnions and the annular bearing surfaces of the body member, whereby lubricant is supplied to both of said faces, each of said trunnions being provided with an oil duct leading to the end face of the trunnion, coupling forks having sockets receiving the trunnions, each of said sockets being provided with a flat bearing surface adapted to engage against the flat bearing surface at the base of the trunnion, there being an annular groove formed at the outer edge of the flat surfaces of each socket member, and an absorbent ring seated in each groove, the said oil ducts, which supply lubricant to the flat bearing surfaces of the body member, being adapted to supply a lubricant to the absorbent rings of the sockets.

4. A universal joint including a hollow spider adapted to receive a lubricant, a plurality of hollow trunnions carried by the spider and communicating at their inner ends interiorly of the spider, plugs fitting within and closing the outer ends of said trunnions, said plugs having lubricant ducts formed therein communicating interiorly of the trunnions, and a pair of coupling forks having sockets receiving and inclosing the outer terminals of the trunnions and said plugs.

5. A universal joint including a hollow spider adapted to receive a lubricant, a plurality of hollow trunnions carried by the spider and communicating at their inner extremities interiorly of the spider, plugs fitting within and closing the outer ends of the trunnions, said plugs having ducts formed therein communicating interiorly of the trunnions, and a pair of coupling forks having sockets inclosing the outer terminals of the trunnions and said plugs, the adjacent end walls of said plugs providing bearing surfaces engaging within the said sockets.

[Claim 6 not printed in the Gazette.]

1,153,790. GROOVING-PLANE AND ANALOGOUS WOODWORKING-TOOL FOR GROOVING, RABBETING, BEADING, AND THE LIKE. JOHN SHIRLEY HOWKINS, Fulham, London, England. Filed May 23, 1914. Serial No. 840,575. (Cl. 145—10.)



1. In a grooving plane or the like, having a working face of the ordinary kind, the combination of a planing iron or cutter tool set at an incline like that of an ordinary plane, a slide or carrier to support the same, side cutters or spurs immediately below the cutting edge of the tool and means for feeding said tool down below the working face of the plane to any desired depth within the range of adjustment, substantially as described.

2. In a grooving plane or the like, having a working face of the ordinary kind, the combination of an inclined planing tool or cutter, a slide or carrier to support the same, means for feeding the tool down into the work, and one or more side cutters separate from the tool itself, having spurs for cutting the walls of the groove or recess, such spurs being arranged just below the cutting edge of the tool, substantially as described.

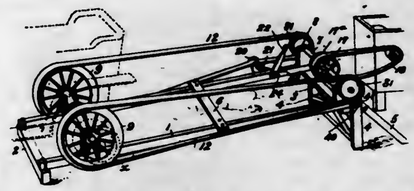
3. In a grooving plane or the like, having a working face of the ordinary kind, the combination of an inclined planing tool or iron for forming the groove or recess, one or more side cutters just below and behind the same having spurs for acting on the walls of such groove or recess, means for clamping the two kinds of cutters together, a slide or holder for carrying the two kinds of tools, and a traversing screw for feeding them down below the face of the plane simultaneously to any desired depth within the range of adjustment, substantially as described.

4. In a grooving plane or the like provided with a working face of the ordinary kind, the combination of a planing iron or cutters to form the groove or recess, a side cutter for acting on the walls of said groove or recess, an adjustable cutter-holder in which said cutters are secured, a pivot or hinge for said holder, and means for adjusting the inclination of the holder in a longitudinal direction in the plane of the tool, substantially as described.

5. In a grooving plane or the like provided with a working face of the ordinary kind, the combination of a planing iron or cutter to form the groove or recess, a side cutter for acting on the walls of said groove or recess, an adjustable cutter-holder in which said cutters are secured, and means for inclining the cutters sidewise for undercut grooving or dovetailing, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,153,791. AUTO POWER-TRANSMITTING JACK. ADOLF F. JOHNSON, El Campo, Tex. Filed Mar. 29, 1915. Serial No. 17,834. (Cl. 21—90.)



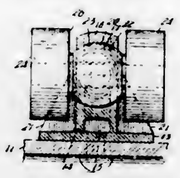
1. The combination with an auto vehicle; of a power jack appliance that comprises side beams, a cross bar connecting one end of each side beam to the other and resting on the ground, said side beams inclining upwardly, legs secured to the other ends of said side beams, anchoring members connected to said legs, journal boxes slidably adjustably mounted on said side beams for adjustment to any position along said side beams, said journal boxes having provision to receive the axle of an auto vehicle, substantially as shown and described.

2. A power jack appliance for automobiles that comprises a body composed of side beams, a cross member that joins one end of the said beams, leg members pivotally connected to the other end of the said beams, means for holding the legs to their extended position, a transverse shaft transversely mounted on that end of the frame having the legs, a pulley on the shaft for receiving a driving belt from one of the driven wheels of the automobile, another pulley on the shaft for receiving a power take-off belt, bearing boxes adjustably mounted on the side beams, and means on the leg end of the frame for anchor-

ing the said end against endwise shifting when the jack appliance is applied for use.

3. A power jack for automobiles comprising a frame composed of a pair of side beams, a cross bar connecting one end of the said side beams, a journal bearing block slidably adjustable on each of the said side beams, a leg member pivotally mounted on the other end of each of the said side beams, means for holding the said legs locked to their extended position, a brace member hingedly connected to each leg member, a shaft transversely journaled on the leg end of the side beams, a pulley on one of the said shafts, an endless belt that takes around the said pulley and is adapted for taking around one of the driven wheels of the automobile and an adjustable belt tightener mounted on one of the said side beams for engaging the said belt.

1,153,792. SIDE BEARING FOR RAILWAY-CARS. GEORGE A. JOHNSON, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed June 12, 1914. Serial No. 844,604. (Cl. 64—64.)



1. A side bearing of the character described comprising a member provided with a journal bearing having a concave bearing surface, rollers disposed on opposite sides of said bearing and a journal by which said rollers are carried, said journal having a convex surface fitting within said bearing to thereby permit the rollers to have a free oscillatory movement.

2. A side bearing of the character described comprising a member provided with a journal bearing having a concave bearing surface, rollers arranged on opposite sides of said bearing, said rollers being carried by a journal having a spherical surface fitting within said bearing whereby the rollers are permitted to oscillate relatively to the journal bearing, and means for limiting the amount of oscillation of said rollers.

3. A side bearing for railway cars, comprising a supporting member having a journal bearing, the surface of said bearing coinciding with the zone of a sphere and a roller-carrying journal mounted in said bearing, said journal having a spherical surface fitting said bearing.

4. A side bearing for railway cars, comprising a member provided with a journal bearing, rollers disposed on opposite sides of said journal bearing, a journal by which said rollers are carried, said journal being mounted in said bearing, means for permitting said rollers to have bodily oscillatory movement relatively to the bearing and abutments on opposite sides of said journal bearing member with which said rollers are adapted to engage to limit the movement thereof.

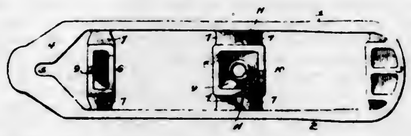
5. A side bearing for railway cars, comprising a member provided with a journal bearing, rollers, a journal by which said rollers are carried, and means providing a universal bearing for said rollers.

[Claim 6 not printed in the Gazette.]

1,153,793. CAST-METAL YOKE FOR RAILWAY DRAFT MECHANISM. GEORGE T. JOHNSON, Columbus, Ohio, assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Filed Jan. 23, 1915. Serial No. 3,965. (Cl. 213—42.)

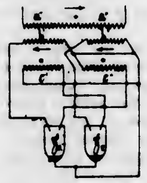
1. In a draft yoke the combination of top and bottom members, and a four sided skeleton abutment located intermediate said members and connected to the latter by webs extending in the direction of the length of said member, the said members, abutment and webs being integral.

2. In a draft yoke the combination of top and bottom members, and a four sided hollow abutment located intermediate said upper and lower members, the said abutment having an integral centrally located partition extending in the direction of the length of the yoke, and connected to the latter by webs, the latter also extending in the direction of the length of the yoke.



3. In a draft yoke, the combination of top and bottom members, a four sided hollow abutment located intermediate said members, centrally located webs connecting the abutment and top and bottom members, and extending lengthwise of said members, and transverse fillets uniting the side margins of the top and bottom members with said webs, all of said parts being cast integral.

1,153,794. MERCURY-VAPOR RECTIFIER AND THE LIKE. JULIUS JONAS, Baden, Switzerland, assignor to Aktiengesellschaft Brown, Boveri & Cie., Baden, Switzerland. Filed Oct. 1, 1914. Serial No. 864,470. (Cl. 175—363.)



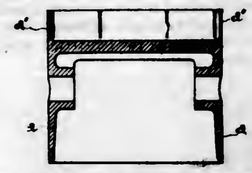
1. In a system of rectification, a plurality of rectifying elements having anode and cathode circuits, a transformer supply therefor, having a plurality of sectionalized secondary windings, superposed on a primary winding, a common connection between each secondary section and each cathode circuit and connections between each secondary section and an anode circuit whereby the active anodes are fed from secondary sections, energized throughout their length by a primary portion having the same axis of magnetization.

2. A system of rectification comprising a polyphase transformer, rectifier elements provided with cathodes and anodes, corresponding in number with the polyphase supply, a plurality of sectionalized secondaries superposed on each primary phase of the transformer, common connections between each secondary section of each phase and the rectifier cathodes and connections between the other ends of the secondary sections of each phase and the rectifier anodes, whereby each active anode is fed from a secondary section energized throughout its length by a primary portion having the same axis of magnetization.

1,153,795. PISTON FOR ENGINES. HENRI VICTOR JULES JOUFFRET, Paris, France. Filed Apr. 10, 1914. Serial No. 830,984. (Cl. 121—104.)

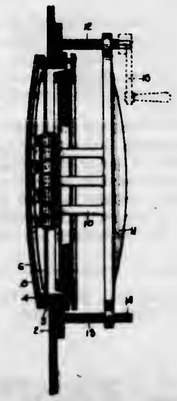
A piston for the cylinder of an engine having at one end an integral hollow extension with a thin yielding wall having an external diameter greater than the diameter of the cylinder in which it is to be fitted and also greater than the external diameter of the remaining portion of the piston, the extension being of truncated

conical form and having a plurality of slots formed longitudinally thereof and continuing through the free end



edge of the same, the said slots terminating short of the body of the piston adjacent to the hollow extension.

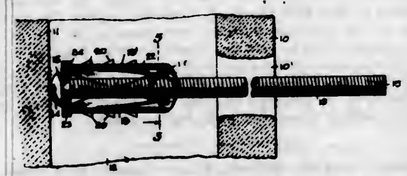
1,153,796. LEAK-STOPPER. GEORGE E. JUPP, New York, N. Y. Filed Nov. 17, 1914. Serial No. 872,637. (Cl. 114—227.)



1. In a device of the character described, a pair of plates, a hinge connecting said plates, a plurality of upstanding arms journaled on the pintle of said hinge, a cross bar rigidly secured to said arms, tension screws arranged on the ends of said cross bar, an annular packing member connected with said plate, said annular packing member being embedded in the plate, and a packing member arranged at the hinged connection of the parts of said plate.

2. In a device of the character described, a pair of plates, a hinge connecting said plates, parts of said hinge being connected by a pintle, said parts being spaced apart, a plurality of upstanding arms extending between said parts and journaled on said pintle, a cross bar rigidly secured to said arms, and tension screws arranged on the ends of said cross bar.

1,153,797. EXPANSION-ANCHOR. JULES EMILE KEGREISZ, New York, N. Y. Filed Apr. 29, 1915. Serial No. 24,677. (Cl. 85—2.4.)



1. In a device of the character set forth, the combination of a threaded bolt having a head at one end and a smooth cylindrical neck portion adjacent the head, a follower journaled loosely upon said neck and having an internal thread adapted for coöperation with the bolt thread, a nut threaded upon the bolt, and a pair of wings pivoted upon said nut, said follower coöperating with the wings to hold them from movement around their pivots.

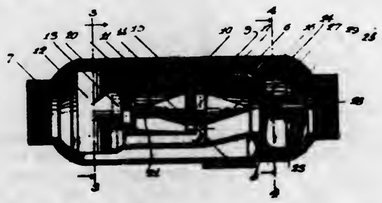
2. In a device of the character set forth, the combination of a bolt, a nut threaded thereon and movable relatively longitudinally of the bolt, and anchoring means pivoted coaxially of each other to said nut and movable laterally from the bolt and outwardly with respect to the same toward the outer end of the bolt into anchoring position.

3. In a device of the character set forth, the combination of a bolt having an external thread, a nut having an internal thread coöperating with the bolt thread and movable relatively thereof along the bolt, a pair of anchoring devices pivoted coaxially of each other upon said nut, and means serving to cause the wings to swing laterally from each other and from the bolt and thence forwardly around their axis into anchoring position.

4. In an expansion anchor, the combination of a threaded bolt, a nut relatively movable along the same, said nut having oppositely disposed lugs extending laterally from the bolt, a pair of anchor wings each having a pair of parallel side portions pivoted upon said lugs around the same pivotal axis, and means adapted to be forced between the wings by the rotation of the bolt to cause the wings to be swung laterally with respect to each other around their axis into anchoring position.

5. In an expansion anchor, the combination of a bolt having a head at one end, a smooth neck portion adjacent the head and a thread extending between the neck portion and the opposite end, a nut mounted upon the threaded portion of the bolt, a pair of anchor wings pivoted upon the nut, a spring acting between the wings tending to force them apart and around their axis, and a member journaled upon the neck portion of the bolt coöperating with the ends of the wings to hold them from rotation.

1,153,798. FLUID-TRACTOR. JOSEPH MARION KING, Jacksonville, Fla. Filed Apr. 27, 1912. Serial No. 693,566. (Cl. 160—1.)



1. A device of the kind described having a mixing-chamber, in line of discharge through said chamber a valve permitting exit of fluids therefrom and closing in response to atmospheric pressure, a liquid-supply passage communicating with said mixing-chamber, and a valve positioned in line of flow from said passage and arranged to admit liquid therefrom to said mixing-chamber and to close in response to fluid pressure in the opposite direction.

2. A device of the kind described having therein an exhaust-passage, a valve susceptible of opening under the influence of fluid pressure within the passage and of closing under the influence of atmospheric pressure, a liquid-supply conduit leading into said passage, a valve arranged to permit flow of liquid from said conduit into said passage and to prevent flow of fluids in the opposite direction in said conduit, and means whereby liquid from said conduit is diffused in said passage in the path of exhaust fluids therein.

3. A device of the kind described having therein an exhaust-passage, a valve susceptible of opening under the influence of fluid pressure within the passage and of closing under the influence of atmospheric pressure, a liq-

uid-supply conduit leading into said passage, a valve arranged to permit flow of liquid from said conduit and to prevent flow of fluids in the opposite direction in said conduit, and a member having a tapered end in the path of flow of liquid from said conduit whereby liquid is diffused in said passage in the path of exhaust fluids therein.

4. A device of the kind described having therein an exhaust-passage, a valve susceptible of opening under the influence of fluid pressure within said passage and of closing under the influence of atmospheric pressure, a liquid-supply conduit and a conduit member communicating therewith and projecting longitudinally into said exhaust-passage, means whereby liquid from said conduit member is diffused in said passage in the path of exhaust fluids therein, and a valve arranged to permit flow of liquid from said conduits into said passage and to prevent flow of fluids in the opposite direction in said conduits.

5. A device of the kind described having therein an exhaust-passage, a liquid-supply conduit and a conduit member communicating therewith and projecting longitudinally into said exhaust-passage, means whereby liquid from said conduit member is diffused in said passage in the path of exhaust fluids therein, and a valve arranged to permit flow of liquid from said conduits into said passage and to prevent flow of fluids in the opposite direction in said conduits.

[Claims 6 to 14 not printed in the Gazette.]

1,153,799. ERASER-TIP FOR LEAD-PENCILS. SAMUEL KRAUS, New York, N. Y., assignor to Eagle Pencil Company, New York, N. Y. Filed Apr. 17, 1915. Serial No. 22,142. (Cl. 120—38.)

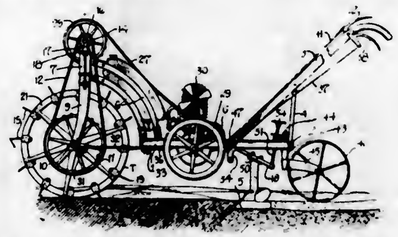


An eraser tip for lead pencils and the like comprising a sheet metal cylindrical tubular sheath A, formed with a screw thread 1 of high pitch throughout that portion of its length which receives the eraser stick and with longitudinal openings 2 in said screw threaded portion; an eraser stick B fitting and capable of longitudinal movement in said sheath; and a narrow metallic screw threaded ferrule or band C which encircles and clasps and is united to the base of the eraser stick and is contained in the sheath A and engages the screw thread in the same, substantially as and for the purposes hereinbefore set forth.

1,153,800. AGRICULTURAL MACHINE. HERMAN H. LARKINS and MANSON R. KEVIL, Princeton, Ky. Filed Jan. 6, 1915. Serial No. 842. (Cl. 21—114.)

1. A device of the character described comprising two sections, a shaft for pivotally engaging the sections whereby the same may be moved one relative to the other, means carried by one of the sections for imparting relative movement thereto, a bar pivotally engaged with the shaft, means carried by the last named section and coacting with the bar for adjusting the same around the shaft, and a member adjustable longitudinally of the bar.

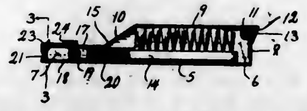
2. A device of the character described comprising a frame, a tubular head carried thereby, a fork provided with a stem disposed through said head, a wheel supported by the fork, a lateral extension carried by the stem provided with bearings, a shaft rotatably supported in the bearings, an operative connection between the shaft and the wheel, an arm projecting laterally from the head and provided with bearings, a second shaft mounted in the bearings of the arm and having a universal joint with the first named shaft, and means for imparting axial rotation to the second named shaft.



3. A device of the character described including a supporting frame comprising hingedly connected sections, a steering wheel carried by one of the sections, handle members carried by a second section, and means coacting with said handle members for controlling the steering wheel.

4. A device of the character described including a supporting frame comprising hingedly connected sections, a steering wheel carried by one of the sections, handle member carried by a second section, endwise movable members carried by the handle members, and an operative connection between each of the endwise movable members and the steering wheel for controlling the movement of the steering wheel.

1,153,801. TOOTH-BRUSH. RUSSELL LEWIS LONG, Morgantown, W. Va. Filed Jan. 4, 1915. Serial No. 425. (Cl. 15—39.)



1. The combination with a casing including hingedly connected sections, and a brush pivotally mounted within the casing and provided with a transverse opening, of a pin carried by one of the sections, the pin being adapted to extend through the opening in the brush when the brush is in an extended position, and a latch plate carried by the other section adapted for engagement with the pin.

2. The combination with a case body and a cover hingedly mounted thereon, of a tooth brush pivoted in the case body and adapted to fold into the same, a spring normally urging the tooth brush to an extended position with relation to the case body, and means for locking the tooth brush in extended position, including an element engaging the brush shank, said means also holding the cover against movement with respect to the case body.

3. The combination with a case body and cover therefor and a spring normally urging the cover to open position, of a tooth brush pivotally mounted within the case and adapted to fold into the same, a spring urging the tooth brush to an extended position with relation to the case body, and a latch to hold the cover in closed position and confine the brush in the case, said latch having a relatively fixed part also coöperating with the brush shank to hold the brush in its extended position and retain the cover in closed position when the brush is extended.

1,153,802. GAME APPARATUS. DANIEL D. LOWERY, Harrisburg, Pa. Filed Mar. 25, 1915. Serial No. 16,920. (Cl. 46—63.)

1. A game apparatus of the class described embracing a game board having radiating lines drawn upon its face to provide spaces to correspond in number with the several States, said spaces being in alternating colors of red, white, and blue, and blocks corresponding in number with the several States, said blocks bearing distinguishing matter to divide them into a number of separate or independent groups.



2. A game apparatus of the class described comprising a game board having radiating lines drawn upon its face to provide spaces to correspond in number to the several States, said spaces being in the alternating colors of red, white and blue, an arrow pivoted to the center of the board to register with either of the respective faces and blocks to correspond in numbers with the spaces, the blocks being of different colors to divide them into separate independent groups.

3. A game apparatus of the class described embracing a flat game board having radiating lines drawn upon its face to provide radiating spaces to correspond in number with the several States, said spaces being in alternating colors of red, white and blue, and each of the spaces having printed in it the name, population, electoral vote and capital of one of the States, an arrow pivoted to the board to register with either of the respective faces and blocks to correspond in number with said spaces, the blocks being of different colors to divide them into a number of independent groups.

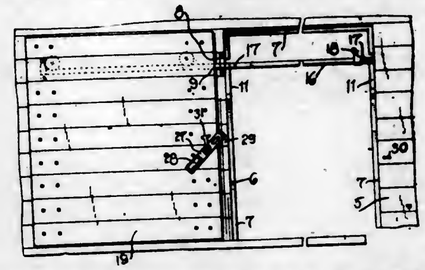
4. A game apparatus of the class described embracing a flat game board having radiating lines drawn upon its face to provide radiating spaces to correspond in number with the several States, said spaces being in alternating colors of red, white and blue, and each of the spaces having printed in it the name, population, electoral vote and capital of one of the States, and some of said spaces having printed in them places of national interest according to the States in which said places are located.

5. A game board having inscribed thereon a plurality of spaced concentric circles increasing in size toward the outer edge of the board, a plurality of lines radiating from the central circle to provide spaces corresponding in number with the several States, said spaces being in alternating colors of red, white, and blue, and blocks bearing distinguishing matter to divide them into independent groups.

[Claim 6 not printed in the Gazette.]

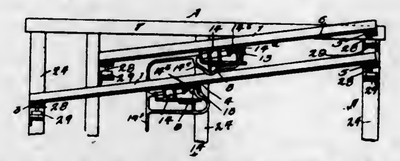
1,153,803. CAR-DOOR. ALBERT R. MCDANIEL, Bayfield, Colo., assignor of one-half to Charles W. McDaniel, Johnstown, Nebr. Filed Apr. 28, 1915. Serial No. 24,539. (Cl. 20—23.)

A door mounting including in combination with the wall having a door opening therein, a stationary track section mounted upon the outer face of said wall at one side of the door opening, sectors pivotally mounted upon the side posts of the door opening for swinging movement, each of said sectors being provided with a slot, a movable track section fixed at its ends to said sectors, pins fixed in the door post disposed in said slot to limit the pivotal movement of the sectors, a door slidably engaged upon the track section and in one position thereof being wholly disposed within the door opening, said door and track section being



movable out of the door opening to dispose the track section in axial alinement with the stationary track section whereby the door may be moved upon the latter track section to its open position, and means for locking the door in its closed position within the door opening.

1,153,804. SCREEN FOR ORES AND COAL AND OTHER MATERIAL. EDWARD S. MCKINLAY, Steamboat Springs, Colo. Filed Jan. 31, 1908, Serial No. 413,702. Renewed Feb. 15, 1915. Serial No. 8,289. (Cl. 83—56.)



1. In a screening mechanism, the combination of a main frame, a series of superposed independent screens each having a frame mounted in said main frame and each longitudinally movable independently of the others, a series of independent elastic fluid-actuated blow-striking hammers each supported on the main frame and adapted to impart with great rapidity impacts to one of said screens, and resilient devices engaging with the screen in opposition to said hammers, the cyclical movements of the hammers being independent of each other, substantially as set forth.

2. A screen mechanism comprising in combination a supporting frame, a screen in the frame arranged to move longitudinally and laterally, an elastic fluid-actuated tool to contact with the screen and impart longitudinal motion thereto, and an elastic fluid-actuated tool to contact with the screen and impart lateral motion thereto, the cyclical movements of the said tools being independent of each other, substantially as described.

3. In a screen mechanism, a supporting frame, a screen in the frame slidable longitudinally and laterally, a block carried by the screen, an elastic fluid tool to engage the block and move the screen longitudinally, a second elastic fluid tool operating independently of the first named tool to move the screen laterally, and resilient devices to return the screen longitudinally and laterally to normal position, substantially as described.

4. In screening mechanism, the combination of a supporting frame, a screen supported on the frame to move edgewise in all directions, a rubber annulus mounted on one of the said parts, a stud carried by the other part and projecting into said annulus, and impact mechanism for moving the screen in two or more directions against the resistance of the rubber annulus.

5. In a screening mechanism, the combination of a main frame, a series of inclined superposed independent screens

each having a frame mounted in the main frame and each longitudinally movable independently of the others, and a series of independent elastic fluid-actuated blow-striking hammers each supported on the main frame and adapted to impart with great rapidity impacts to one of said screens, the cyclical movements of the hammers being independent of each other, substantially as set forth.

1,153,805. SPRAY-NOZZLE. KARL MACDONALD, Swampscott, Mass. Filed Apr. 30, 1914. Serial No. 835,444. (Cl. 137—57.)



1. In a spray nozzle, the combination with a barrel member provided with an axial opening through which a stream of liquid may be discharged, of a spreading member removably held within the outer end of said barrel member and consisting of a series of outwardly and upwardly flared portions whose inner and outer faces are continuous and parallel and whose outer edges lie in a cylindrical surface.

2. In a spray nozzle the combination with a barrel member provided with a central bore for discharge of a liquid, of a spreading member removably held in the outer end of said bore and consisting of a series of outwardly and upwardly flared portions whose inner and outer faces are continuous and parallel, and whose outer edges lie in a cylindrical surface, said spreading member having a central passage progressively decreasing in diameter outwardly.

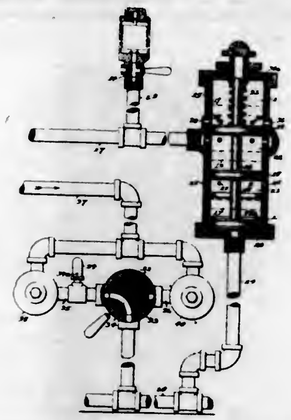
3. A spray nozzle comprising a barrel provided with an axial opening for the discharge of a liquid, a blade rigidly secured at the outer end of the same and wound into the form of a helix and flaring upwardly and outwardly, the inner edge of said helix forming a conical spiral.

4. A spray nozzle comprising a barrel having an axial opening for discharge of a liquid, a sleeve rigidly secured at the outer end of the same, and a blade rigidly secured to said sleeve, projecting in advance thereof and wound helically, and flared upwardly and outwardly to form a spreading member whose outer edge lies in a cylindrical surface.

1,153,806. AIR-BRAKE DEVICE. ERNEST U. MACK, Florence, S. C. Filed Jan. 9, 1915. Serial No. 1,331. (Cl. 188—12.)

1. The combination with the air-brake system of a railway train having a brake cylinder and an auxiliary reservoir under each unit in operative connection throughout the train, of a train signal pipe, a low pressure reducing valve therein, a high pressure reducing valve therein, a valve adapted for communication with either reducing valve, and means operable by the air passing through said high pressure valve for exhausting the air from said brake cylinders.

2. The combination with the air-brake system of a railway train having a brake cylinder and an auxiliary reservoir under each unit in operative connection throughout the train, of a train signal pipe, a low pressure reducing valve therein, a high pressure reducing valve therein, a valve adapted for communication with either reducing valve, and a valve automatically actuated by the air passing through said high pressure valve for exhausting the air from said brake-cylinders.



3. The combination with the air-brake system of a railway train having a brake cylinder and an auxiliary reservoir under each unit in operative connection throughout the train, of a train signal pipe, a low pressure reducing valve therein, a high pressure reducing valve therein, a valve casing, in constant communication with said brake cylinders, a piston in said casing adjacent to the point of said communication, a supplemental piston, and a rod connecting the same with said first named piston, said casing being provided with exhaust ports adapted to be placed in communication with said brake cylinder exhaust when said piston is moved from normal position by the air through said high pressure valve, to exhaust the air from said brake cylinders.

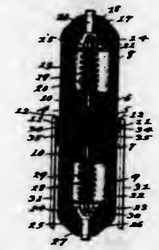
4. The combination with the air-brake system of a railway train having a brake cylinder and an auxiliary reservoir under each unit in operative connection throughout the train, of a train signal pipe, a low pressure reducing valve therein, a high pressure reducing valve therein, a casing in communication with said valve and with said brake cylinders, and provided with exhaust ports adjacent to the point of communication with said brake cylinders, a piston normally arranged between the point of communication with said brake cylinders and with said casing exhaust ports, a supplemental piston in operative connection with said first named piston adapted to be actuated by the air through said high pressure reducing valve to move said first named piston beyond said exhaust ports, whereby said brake cylinders may be exhausted, and means for returning said pistons to normal positions when said low pressure reducing valve is placed in communication with said casing.

5. The combination with the air-brake system of a railway train having a brake cylinder and an auxiliary reservoir under each unit in operative connection throughout the train, of a train signal system, a low pressure reducing valve therein, a high pressure reducing valve therein, a valve adapted for communication with either reducing valve, means operable by the air passing through said high pressure valve for exhausting the air from said brake cylinders, and a manually operable retaining valve interposed between said brake cylinders and said air-operated exhausting means.

[Claims 6 and 7 not printed in the Gazette.]

1,153,807. INK-ERADICATOR. KENNETH WILLIAM MACPHERSON, Palmyra, N. Y. Filed Nov. 11, 1914. Serial No. 871,498. (Cl. 120—36.)

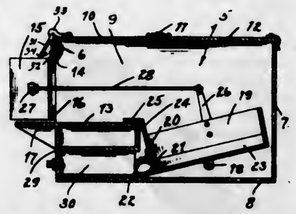
1. A device of the class described, comprising a block provided with an axial bore at each end and an external screw thread at each end, a cup detachably engaged with each threaded end provided with a conical outer end and a discharge bore in said conical end, a rod seated in each axial bore, a conical valve slidably mounted on each rod provided with a stem closely fitting within the respective discharge bore, and a coil spring interposed between each valve and the respective block end.



2. A device of the class described, comprising a block provided with an axial bore at each end and an external screw thread at each end, a cup detachably engaged with each threaded end provided with a conical outer end and a discharge bore in said end, a rod seated in each axial bore, a conical valve slidably mounted on each rod provided with a stem closely fitting within the respective discharge bore and flattened at one side intermediate its ends, and a coil spring interposed between each valve and the respective block end.

3. A device of the class described, comprising a central block, a cup in detachable connection with each end thereof having a discharge bore therein, a valve in each cup provided with a stem projecting beyond said cup, yielding means for maintaining said valves against their seats, a fountain pen cap, spring arms secured thereto and provided with lateral trunnions arranged on the same transverse axis and with ribs adjacent said trunnions, said block having diametrically arranged latteral bores therein adapted to receive the respective trunnions and having slots therein adapted to receive said ribs, whereby said device may be reversed end for end and be locked in each position.

1,153,808. AUTOMATIC NEST-BOX. JOHN T. MASON, Kewanee, Ill. Filed July 13, 1914. Serial No. 850,703. (Cl. 119—47.)



A device of the character described comprising a box, provided in one end with an opening, a pair of doors hinged upon said end and adapted to close said opening, a nest pivoted for rocking movement within said box, the bottom of said nest being provided with a channel leading to an opening in the forward end of the nest, a plate upon the front end of said nest and extending upwardly, a step upon the upper end of said plate, a horizontal partition within said box adjacent said opening and said step, a pair of uprights secured upon said nest, rods connecting said uprights with said doors, and an egg receiving drawer in said box and having its rear opened end disposed adjacent the open front end of said nest whereby an egg laid within said nest will roll forwardly into said drawer when said nest is tilted forwardly by the exit of a hen therefrom.

1,153,809. TRICK WRITING IMPLEMENT. ARTHUR MEYER, Berlin, Germany. Filed May 28, 1914, Serial No. 841,672. Renewed June 23, 1915. Serial No. 35,042. (Cl. 46—41.)



1. A trick writing implement with a stem consisting of separated members, removable caps pushed on at either end and a spring under tension arranged in the interior of the stem, forcing asunder the different members when released.

2. A trick writing implement with a stem consisting of several longitudinal members, two caps keeping together the said members against the tension of a spring, one cap being attached to one of the longitudinal members, the other one being connected to a lead holder.

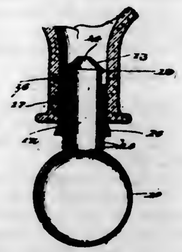
3. A trick writing implement with a stem consisting of several longitudinal members, two caps keeping together the said members against the tension of a spring, one cap being attached to one of the longitudinal members, the other one being shaped as a nib holder.

4. A trick writing implement with a stem consisting of several longitudinal members, two caps keeping together the said members against the tension of a spring, one cap being attached to one of the longitudinal members, the other one being shaped as protecting cap.

5. A trick writing implement with a stem consisting of several longitudinal members, two caps keeping together the said members against the tension of a spring, the spring being connected to the members of the stem.

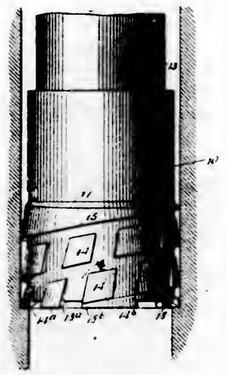
[Claims 6 to 13 not printed in the Gazette.]

1,153,810. MEASURING DEVICE. VICTOR T. MILWARD, Dayton, Wyo. Filed Aug. 4, 1914. Serial No. 855,021. (Cl. 215—15.)



As a new article of manufacture, a measuring device comprising a sleeve-like member, a tubular shank extending through the sleeve-like member and in sliding relation thereto, said tubular member having one end closed and the other end open and provided with an opening a distance from its open end, said opening being formed in the side wall of the shank, a bead on the shank and lying between the open end thereof and said opening, with said bead adapted to abut against the inner end of the sleeve-like member to limit the sliding movement of the shank upon the member in one direction, a transparent bulb-like member on the open end of the shank, and a spring encircling the shank, with one end bearing against the transparent bulb-like member and the other end bearing against the sleeve-like member to normally hold the shank with relation to the sleeve-like member so that the opening in the shank will be closed by the sleeve-like member.

1,153,811. DRIVE-SHOE. GUSTAVUS A. MONTGOMERY, Oilfields, Cal., assignor of one-fourth to James Barnett, Oilfields, Cal. Filed Apr. 29, 1914. Serial No. 835,148. (Cl. 166—9.)



1. A drive shoe for well casings having reaming cutters on the outer side thereof, the cutting edges of which are spirally disposed.

2. A drive shoe for well casings, having a spiral series of reaming cutters obliquely disposed on the outer sides thereof, and oblique notches between and defining the cutters.

3. A drive shoe for well casings, having a spiral series of reaming cutters on the outer side thereof, and a spiral groove, the convolutions of which alternate with the convolutions of the reaming cutters, there being spaces alternating with the cutters and intersecting the said groove.

4. A drive shoe for well casings, having on the front face an annular series of cutting teeth separated by intervening spaces, and on the outer side having lateral reaming cutters, the said reaming cutters being disposed in the form of a spiral series, the said front teeth merging into the forward teeth of the spiral series.

5. A drive shoe for well casings, having on the front face thereof an annular series of cutting teeth, and a plane seat radially inward from the cutting teeth adapted to seat under-reamer elements.

[Claims 6 to 14 not printed in the Gazette.]

1,153,812. ROPE-SOCKET. GUSTAVUS A. MONTGOMERY, Oilfields, Cal., assignor of one-third to Rudolph H. Stichel, Oilfields, Cal. Filed Aug. 26, 1914. Serial No. 858,626. (Cl. 255—26.)

1. A drilling cable socket comprising a shell, a cable head mounted to rotate and slide in the shell, resilient means normally resisting the relative sliding movement of said head and shell, and means for varying the resiliency of the spring adapted to lock said head to the shell.

2. A drilling cable socket comprising a shell, a cable head connecting the cable to the shell, said head being mounted to rotate and slide in the shell, an adjustable plug inclosing the head in the shell, a resilient member positioned between the head and the plug whereby the relative displacement between the shell and the head is controlled, and set screws for locking independently said head to the shell and said plug thereto substantially as and for the purpose set forth.

3. A drilling cable socket comprising a shell, a cable head adapted to connect the cable to the shell, said head being mounted to rotate and slide in the shell, a guide sleeve carried by the cable and mounted to slide and rotate in said shell, an adjustable plug sealing said head in the shell and adapted to lock the same to the shell, whereby the relative movement between the shell and head is prevented, a stuffing box for said sleeve, and cushioning means associated with said head and sleeve for resisting a relative movement between the cable and the shell.

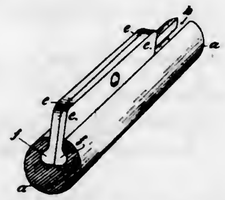


4. A drilling cable socket comprising a shell, a cable head mounted to rotate and slide in the shell, said head having a convex end, the shell having a concave shoulder, a resilient member maintaining the convex end of the head against the concave shoulder of the shell, and means for varying the tension of said resilient member.

5. A drilling cable socket comprising a shell having a through bore enlarged at both ends, a cable head mounted to rotate and slide in the lower enlarged portion of the bore, a plug closing the enlarged end of the bore engaged by the head, a resilient member between the plug and the head, a guide sleeve carried by the cable engaging the enlarged portion of the bore at the upper end, a cap closing the bore and engaging the sleeve, and balancing resilient means within the enlarged bore portion and associated with the sleeve, substantially as and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,153,813. CONDUCTOR-SUPPORT. WILLIAM MORRIS MORDEY, Westminster, London, and JOHN WILLIAM ASTLEY and DOUGLAS BRYCE SAUNDERSON, Prescot, England. Filed Dec. 9, 1913. Serial No. 805,591. (Cl. 191—43.)



1. In electrical conductor supports, the combination of a solid substantially cylindrical wire, with a continuous deep groove, having a relatively large inside portion; a supporting device having a part which lies within the groove, adapted to be entered through the opening of the groove; and means for holding said part in engagement with the groove, adapted also to be entered through the opening of the groove; substantially as set forth.

2. In electrical conductor supports, the combination of a solid substantially cylindrical wire with a continuous deep groove; a supporting device having a part which lies within the groove, adapted to be entered through the opening of the groove, and a wedge device adapted to be entered through this opening of the groove, and when moved so as to engage the former part of the supporting device, holds the same in position in the groove; substantially as set forth.

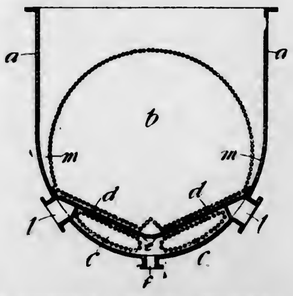
3. In electrical conductor supports, the combination of a solid substantially cylindrical wire with a continuous deep groove; a supporting device having a part which lies within the groove, and a means comprising elongated plates adapted to enter the groove, having their outside surfaces parallel, and wedge shaped on the inside, and adapted at the part in the groove to engage the sides of the same; substantially as set forth.

4. An overhead electrical conductor adapted to be suspended at intervals, of solid practically cylindrical form, having a deep groove in one side or part of it, extending to about the axis of the conductor, and a part within it of greater width than another part at a greater radial distance from the center of the conductor; substantially as set forth.

5. Electrical conductor supports comprising a conductor of practically cylindrical form, having a deep groove in one side or part of it, with a relatively large inside portion; and supporting devices of plate form in two parts, the engaging edge of which is of less width than the narrowest part of the groove of the conductor; said plates when suspending the conductor being parallel, side by side, and their lower engaging edges together practically filling the groove; substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,153,814. STEAM-CONDENSER. DONALD BARNS MORISON, Hartlepool, England. Filed Oct. 17, 1914. Serial No. 867,224. (Cl. 257—28.)



1. Steam condensing apparatus comprising a shell containing a steam condensing chamber provided with condensing tubes, an air receiving chamber in the base of said shell and separated from said condensing chamber by a plate, said plate extending across the condenser to the shell, a steam admission space between the shell and the tubes, said space extending without interruption from the exhaust steam inlet substantially to said plate, and an outlet port or ports from the lowermost portion of said condensing chamber into said air receiving chamber, substantially as described and for the purpose herein set forth.

2. Steam condensing apparatus comprising a shell containing a steam condensing chamber provided with condensing tubes, an air receiving chamber in the base of said shell and separated from said condensing chamber by a plate, said plate extending across the condenser to the shell, a steam admission space between the shell and the tubes, said space extending without interruption from the exhaust steam inlet substantially to said plate, an outlet port or ports from the lowermost portion of said condensing chamber into said air receiving chamber, and a plurality of guide plates arranged to divide the cross section of said steam condensing chamber into a plurality of condensing chambers arranged in parallel, the central steam condensing chamber discharging into a downwardly extending passage, the sides of said passage forming in part the sides of the adjacent condensing chambers, substantially as described and for the purpose herein set forth.

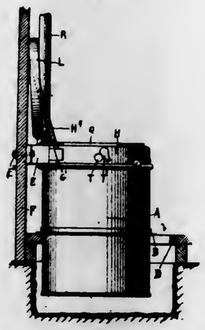
3. Steam condensing apparatus comprising a shell containing a steam condensing chamber provided with condensing tubes, an air receiving chamber in the base of said shell and separated from said condensing chamber by a plate, said plate extending across the condenser to the shell, a steam admission space between the shell and the tubes, said space extending without interruption from the exhaust steam inlet substantially to said plate, an outlet port or ports from the lowermost portion of said condensing chamber into said air receiving chamber and separate outlets from said air receiving chamber for condensate and air, substantially as described and for the purpose herein set forth.

4. Steam condensing apparatus comprising a shell containing a steam condensing chamber provided with condensing tubes, an air receiving chamber in the base of said shell and separated from said condensing chamber by a plate, said plate extending across the condenser to the shell, a steam admission space between the shell and the tubes, said space extending without interruption from the exhaust steam inlet substantially to said plate, an outlet port or ports from the lowermost portion of said condensing chamber into said air receiving chamber, an air outlet at each side of the condenser from the air receiving chamber, and an outlet for condensate at the base of the condenser.

5. Steam condensing apparatus comprising a shell containing a steam condensing chamber provided with condensing tubes, an air receiving chamber in the base of said shell and separated from said condensing chamber by a plate which extends upwardly, the upper extremities joining the shell of the condenser at the sides, a steam admission space between the shell and the tubes, said space extending without interruption from the exhaust steam inlet to the upper extremities of said plate, the lower portion of said plate terminating at the outlet port or ports from the lowermost portion of said condensing chamber into said air receiving chamber, substantially as described and for the purpose herein set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,153,815. SANITARY CLOSET. JOHN W. NELSON and JESSE C. SCOGGINS, Viola, Kans. Filed May 21, 1915. Serial No. 29,576. (Cl. 4—20.)



1. A sanitary closet comprising a bucket having a circumferential beading thereon, a stationary draft box having a grooved flange for the reception of said beading, clamping members hinged to the box and adapted to frictionally engage the circumference of the bucket, means for locking the members in a clamping relation to the bucket, a seat and a lid forming a sealed joint about the same.

2. A sanitary closet comprising a bucket having a circumferential beading thereon, a stationary draft box having a grooved flange for the reception of said beading, grooved and curved clamping members pivotally mounted upon the boxing and engaging the beading upon the bucket, means for locking the members in clamping rela-

tion with the latter, a hinged seat and a lid adapted to fit over the seat and form a tight joint.

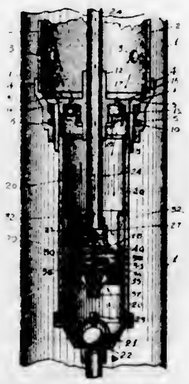
3. A sanitary closet comprising a bucket having a circumferential beading thereon, a stationary draft box having a grooved flange for the reception of said beading, curved and grooved clamping members pivotally mounted upon the box and engaging the beading upon the bucket, means for locking the members in clamping relation with the latter, a seat hinged to the box and adapted to rest upon said clamping members, a flanged lid hinged to the box and adapted to rest upon said clamping members, a flanged lid hinged to the box and adapted to fit over the flanges of the clamping member.

4. A sanitary closet comprising a bucket having a circumferential beading thereon, a stationary draft box having a grooved flange for the reception of said beading, curved and grooved clamping members pivotally mounted upon the box and engaging the beading upon the bucket, means for locking the members in clamping relation with the latter, a seat hinged to the box and adapted to rest upon said clamping members, the upper surface of said box having a curved flange thereon, a flanged lid hinged to the box and adapted to fit over said curved flange upon the latter and about the flanges of said clamping members.

5. A sanitary closet comprising a bucket having a circumferential beading thereon, a stationary draft box having a grooved flange for the reception of said beading, curved and grooved clamping members pivotally mounted upon the box and engaging the beading upon the bucket, means for locking the members in clamping relation with the latter, a seat hinged to the box and adapted to rest upon said clamping members, the upper surface of said box having a curved flange thereon, a flanged lid hinged to the box and adapted to fit over said curved flange upon the latter and about the flanges of said clamping members, said boxing having a vent pipe leading therefrom.

[Claim 6 not printed in the Gazette.]

1,153,816. PUMP. ROBERT M. NICHOLS, San Francisco, Cal., assignor of one-fourth to Thomas Williams, San Francisco, Cal., and one-fourth to Walter S. Chapman, Oakland, Cal. Filed Feb. 11, 1914. Serial No. 819,097. (Cl. 103—70.)



1. The combination, in a double acting pump, of a suitable pump casing; a cylinder having a suitable foot valve therein and detachably secured to the pump casing; an upper head; a hollow piston rod operating through the upper head; means secured to the hollow piston rod arranged to engage and detach the upper head; and a hollow piston secured to the hollow piston rod and arranged to engage the foot valve and to detach the cylinder from the pump casing.

2. The combination, in a double acting pump, of a suitable pump casing; a cylinder detachably secured to the pump casing and having a suitable foot valve with a rectangular extension thereto; an upper head above the cylinder; a hollow piston rod operating through the upper head; means secured to the hollow piston rod and arranged to engage and detach the upper head; and a hollow piston arranged to engage the rectangular extension on the foot valve and to detach and raise the cylinder from the pump casing.

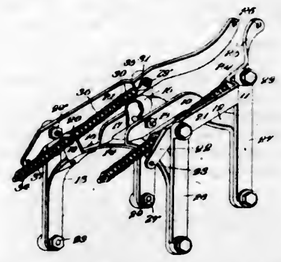
3. The combination, with a double acting pump, of a suitable pump casing; a cylinder detachably secured to the pump casing and having a suitable foot valve on the lower end of the said cylinder with a rectangular extension; an upper head detachably secured above the cylinder and having a vertical slot with a lateral extension thereto; a hollow piston rod operating through the upper head and having a pin thereon arranged to engage the lateral extension of the slot within the upper head and to detach and raise the said head; a hollow piston secured to the lower end of the piston rod and having upper and lower valve seats and ports in the upper seat thereof, said piston being adapted to engage the rectangular extension of the foot valve on the cylinder and to disengage and raise the said cylinder from the pump casing; and a double valve slidably mounted within the hollow piston and arranged to engage the upper seat and close the ports therein during the downward stroke of the piston and to engage the lower seat during the upward stroke of the piston.

4. The combination, in a double acting pump, of a suitable pump casing; a cylinder detachably secured to the pump casing and having a foot valve at the lower end thereof with a rectangular extension thereto; an upper head having a valve therein detachably secured above the cylinder and having a sleeve with a vertical slot having a lateral extension therein; a hollow piston rod operating through the sleeve of the upper head; a suitable pin secured to the hollow piston rod and arranged to engage the lateral extension of the slot within the sleeve of the upper head and to disengage and raise the said upper head; a hollow piston having upper and lower seats therein and ports in the said upper seat; a stem slidably mounted within the hollow piston; a hollow conical valve secured near the upper end of the stem; a solid valve secured near the lower end of the stem, said hollow valve being adapted to close the ports in the upper seats and raise the solid valve from the lower seat during the downward stroke of the hollow piston and to seat the lower valve and remove the upper hollow valve from the upper seat and uncover the ports therein during the upward stroke of the piston; and a hollow rectangular extension secured to the lower end of the hollow piston and adapted to engage the rectangular extension of the foot valve and to disengage the cylinder from the pump casing.

5. The combination, in a double acting pump, of a suitable pump casing; a female coupling secured to the pump casing; a male coupling arranged to engage a female coupling; an upper head having apertures therein and a sleeve thereon, said sleeve being provided with a vertical slot having a lateral extension thereto, the said head being detachably secured to the male coupling; a cylinder rigidly secured to the male coupling; a foot valve rigidly secured to the cylinder and having a rectangular extension thereto; a hollow piston rod operating through the sleeve of the head secured to the male coupling; a pin secured to the piston rod and adapted to engage the lateral extension of the slot within the sleeve of the flange and disengage the same from the male coupling; a hollow piston secured to the piston rod and having an upper and lower seat therein and ports within the said upper seat; a double valve slidably mounted within the hollow piston and adapted to close the ports therein and open the lower valve during the downward stroke of the hollow piston and draw liquid through the upper valve into the cylinder and to force the liquid in the cylinder below the valve into the hollow piston rod; and a hollow rectangular extension secured to the lower end of the hollow piston and arranged to engage the rectangular extension on the foot valve and disengage the cylinder and the male coupling from the female coupling.

[Claims 6 and 7 not printed in the Gazette.]

1,153,817. MOTOR-CYCLE SADDLE. IMMANUEL ALVIN OLIVER, Eden Vale, Cal. Filed July 29, 1913. Serial No. 781,762. (Cl. 208—100.)



1. A motorcycle saddle frame including a frame member adapted for rigid attachment to a seat post, a second frame member adapted for attachment to a saddle, said second frame being secured to the first for longitudinal movement with respect thereto, and adjustable means for limiting said movement.

2. A motorcycle saddle frame including a frame member adapted for rigid attachment to a seat post, a second frame member adapted for attachment to a saddle, said second frame being secured to the first for longitudinal movement with respect thereto, and adjustable means for cushioning said movement.

3. A motorcycle saddle frame including a frame member adapted for rigid attachment to a seat post, a second frame member adapted for attachment to a saddle, said second frame being secured to the first for longitudinal movement with respect thereto, and adjustable means for limiting and cushioning said movement.

4. A motorcycle saddle frame including a frame member adapted for rigid attachment to a seat post, a second frame member adapted for attachment to a saddle, said second frame being secured to the first for longitudinal movement with respect thereto, and adjustable means for limiting and cushioning said movement, said means including guide rods pivoted to one of the frames and movable through perforated ears carried by the other frame, nuts threaded upon the ends of said guide rods, and compression springs surrounding the guide rods and bearing between the first frame and second frame and between the first frame and nuts.

5. A motorcycle saddle frame including a frame member adapted for rigid attachment to a seat post and having pairs of downwardly depending spaced arms, parallel side bars adapted for attachment to a saddle, links pivotally connected by their upper ends to the side bars and by their lower ends to the lower ends of the arms, and cushion means for limiting the swinging movement of said links.

[Claims 6 to 12 not printed in the Gazette.]

1,153,818. COMBINATION SUCKER-ROD SOCKET. EVAN E. OSBORNE, Los Angeles, Cal., assignor of one-half to Walter A. Babb, Santa Monica, Cal. Filed Jan. 14, 1914. Serial No. 812,164. (Cl. 57—9.)

1. A sucker rod socket comprising a case, spring-operated slips in the case to grip a sucker rod, a movable sleeve in the case, and means connecting the sleeve to the slips and normally holding the slips in set position, said connecting means being released by relative movement between the sleeve and case.

2. A sucker rod comprising a case, spring operated slips in the case to grip a sucker rod, a rotatable sleeve in the case, and means connecting the sleeve to the slips and normally holding the slips retracted, said connecting means being released by relative rotation of the sleeve and case.

3. In a grappling tool for sucker rods the combination with a cylindrical case and a shank at the upper end of said case, of an internally beveled member screw-threaded to the lower end of said case having a notched edge to direct the end of a sucker rod within the case as the tool is rotated, and grappling mechanism within the case, said grappling mechanism being retained therein by said beveled member.

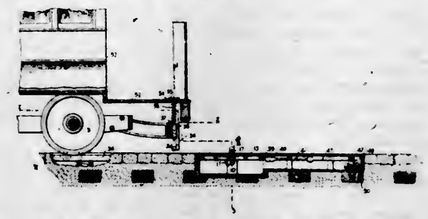


4. In a grappling tool for sucker rods, the combination with a cylindrical case, a shank at the upper end of said case and a notched member at the lower end of said case to direct the sucker rod within the case, of grappling mechanism within the case, and means releasable by relative movement between the casing and grappling mechanism for retaining the grappling mechanism in a set position.

5. In a grappling tool for sucker rods, the combination with a cylindrical case having a shanked head and an internally beveled member at the lower end, of a grappling mechanism within said case provided with slips having downwardly and inwardly slanting faces to seat against the beveled portion of said beveled member, means for retaining the grappling mechanism in a set position, and means for releasing the mechanism from the set position when engaged by the sucker rod.

[Claims 6 to 18 not printed in the Gazette.]

1,153,819. AUTOMATIC RAILWAY-SWITCH DEVICE. RAFAEL I. PARTIDA, Torreon, Mexico. Filed Feb. 19, 1913, Serial No. 749,344. Renewed Mar. 4, 1915. Serial No. 12,109. (Cl. 104—24.)



1. In an automatic railway switch device, a track, a switch point movable relatively to the track, a member mounted to rotate on a vertical axis, means by which the member is adapted to move the switch point, a shaft, gearing connecting the shaft with a member for rotating the latter, a trip member having sliding engagement with the shaft for rotating the latter, a track member, and means operable by the movement of the track member for moving the trip member relatively to the shaft.

2. In an automatic railway switch device, a track, a switch point movable relatively to the track, a shaft having a flattened portion, a trip member having a slot in which the flattened portion of the shaft is disposed,

means by which the rotation of the shaft will move the switch point, a track member, and means operable by the movement of the track member for moving the trip member relatively to the shaft.

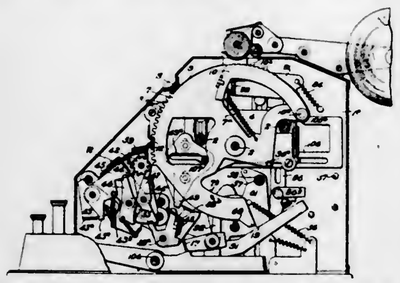
3. In an automatic railway switch device, a track, a switch point movable relatively to the track, a transverse shaft, means by which the rotation of the shaft will move the switch point, a trip member for rotating the shaft, and free to move in one direction relatively to the shaft, a track member, and means by which the track member is adapted to move the trip member relatively to the shaft.

4. In an automatic railway switch device, a track, a switch point movable relatively to the track, a transverse shaft, means by which the rotation of the shaft will move the switch point, a trip member having a slot in which an angular portion of the shaft is disposed, a track member, a second shaft, an arm secured to the second shaft for moving the trip member relatively to the first shaft and a second arm on the second shaft adapted to be operated by the track member.

5. In an automatic railway switch device, a track, a switch point movable relatively to the track, a member mounted to rotate, means by which the member is adapted to move the switch point, a shaft, gearing connecting the shaft with the member for rotating the latter, a trip member having sliding engagement with the shaft for rotating the latter, a track member, a second shaft, an arm secured to the second shaft for moving the trip member, and a second arm secured to the shaft, and adapted to be operated by the track member.

[Claims 6 and 7 not printed in the Gazette.]

1,153,820. ADDING-MACHINE. ELMER E. PATTEN, St. Louis, Mo., assignor to Leo Rassieur, Jr., trustee. Filed Mar. 12, 1914. Serial No. 824,102. (Cl. 235—60.)



1. In a computing machine, the combination of a revoluble item segment mounted for denominational movement, key-operated stops for positioning said segment to indicate a number, keys for operating said stops, and means operable by said keys for revolving said segment, said means being movable laterally in unison with the denominational movement of said segment for the purpose described.

2. In a calculating machine, the combination of a revoluble item segment mounted for denominational movement, stops for limiting the revoluble movement of said segment, means for stepping said segment laterally, and a throwing lever operable by said stops and adapted to rotate said segment, said throwing lever being movable laterally with said segment.

3. In a calculating machine, the combination of item carriers mounted for denominational movement, locking bars for holding said item carriers in unset and set positions, number stops adapted to coöperate with each of said item carriers when it is intermediate said locking bars, keys for operating said number stops to render them effective, and an intermediate stop adapted to limit movement of an item carrier when it is intermediate said locking bars, said intermediate stop being operable from said numeral keys.

4. In a calculating machine, the combination of item carriers mounted for independent movement in one direction and simultaneous denominational movement in another direction, a locking bar for holding said item carriers in unset position, a locking bar for holding said item carriers in set position, an intermediate stop effective upon said item carriers intermediate said locking bars, means for stepping said item carriers successively from the control of said first mentioned locking bar to the control of said intermediate stop, and from the control of said intermediate stop to the control of said second mentioned locking bar, means for releasing said item carriers from said intermediate stop, and number stops adapted to limit the movement of said item carriers when so released.

5. In a calculating machine, the combination of a denominationally movable carriage carrying item carriers, means for stepping said carriage for denominational movement, denominationally arranged accumulator wheels adapted to be actuated by said item carriers, a denominational stop under the control of each of said accumulator wheels, and a stop mounted on said carriage and adapted to coöperate with said denominational stops to limit the denominational movement of said item carriers relative to said accumulator wheels.

[Claims 6 to 31 not printed in the Gazette.]

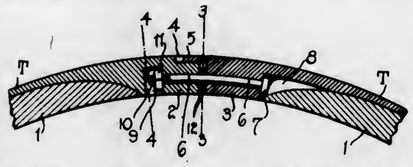
1,153,821. HIGH-VOLTAGE PROTECTION. WALDEMAR PETERSEN, Darmstadt, Germany. Filed Sept. 21, 1914. Serial No. 862,867. (Cl. 175—30.)



1. The combination with a line wire having a choke coil interposed therein, of a branch wire leading from one side of the choke coil, a condenser having one side connected to the branch wire, a ground connection to the other side of the condenser, a resistance branching off from the branch wire and having parallel connection to the choke coil.

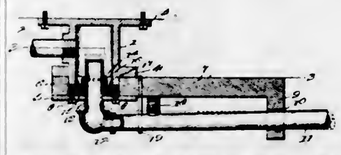
2. The combination with a line wire having a choke coil interposed therein, of a branch wire leading from one side of the choke coil, a condenser having one side connected to the branch wire, a ground connection to the other side of the condenser, a resistance branching off from the branch wire and having parallel connections to the choke coil intermediate the ends of the choke coil whereby a portion of the choke coil is interposed between the resistance connection and the one end of the line wire.

1,153,822. TIRE-TIGHTENER. FRANKLIN A. PETTIBONE, Conewango Valley, N. Y. Filed Feb. 24, 1915. Serial No. 10,264. (Cl. 21—157.)



In combination, a split tire, the peripheral portion of one extremity of the tire being provided with a recess, an extension projecting from the peripheral portion of the adjacent extremity of the tire adapted to be received within the recess, said extension being of a width less than the width of the tire and positioned at substantially the transverse center of the tire, clamping means coacting with the extremities of the tire, and a filler washer adapted to be inserted between the adjacent extremities of the tire, said washer being provided with a radial slot to straddle the clamping means and to engage the opposite marginal portions of the extension, the opposed edges of the slot being inwardly beveled, said radial slot being in communication with the bore of the washer, the beveled edges of the slot radiating from the axial center of the bore of the washer, said beveled edges being arranged for contact with the longitudinal edges of the extension.

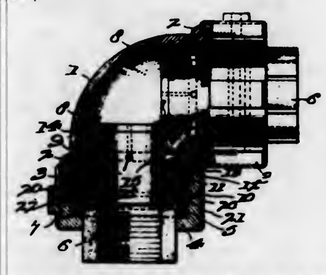
1,153,823. WASHING APPARATUS. WILLIAM S. PIERCE, Franklin, Pa. Filed Nov. 6, 1914. Serial No. 870,650. (Cl. 137—111.)



1. The combination with a casing in communication with a source of fluid supply, and a hollow valve body mounted to reciprocate in said casing and provided with a plurality of fluid passages therein, of a gasket mounted in said casing and coöperating with said fluid passages to close the outlet therethrough, said gasket constructed of a single circular block of resilient material comprising an annular solid base, and an upper portion having normally flaring exterior and interior walls, respectively, for snugly fitting said casing and valve body, said upper portion being formed with a circular V-shaped groove dividing the same to provide an outer tapering annulus, and an inner concentric annulus provided with a beveled upper edge and constructed relatively thick and uniform to counteract the tendency of the pressure to force the material thereof into said fluid passages, substantially as described.

2. The combination with a casing in communication with a source of fluid supply, and a hollow valve body mounted to move in said casing and provided with fluid passage therein, of a gasket mounted in said casing and coöperating with the fluid passages in said valve body to control the outlet therethrough, said gasket constructed of a single circular block of resilient material comprising an annular solid base, and an upper portion having normally flaring exterior and interior walls, respectively, for snugly fitting said casing and valve body, said upper portion being formed with a circular V-shaped groove dividing the same to provide an interior and an exterior annulus to receive the fluid pressure for expanding the same against the respective parts, substantially as described.

1,153,824. PIPE-COUPLING. WILLIAM S. PIERCE, Franklin, Pa. Filed Feb. 20, 1915. Serial No. 9,741. (Cl. 137—34.)



1. In a pipe coupling, the combination of a pair of pipe sections provided one with a plurality of transverse grooves therein, a coupling nut provided with an annular passage connecting said grooves and an opening placing said passage in communication with the atmosphere, an expansible gasket located in said coupling and arranged with its base in communication with said grooves, and a plug for insertion in the opening in said coupling collar to close communication with the atmosphere, substantially as described.

2. In a pipe coupling, the combination of pipe sections providing a chamber adapted to be arranged in communication with the atmosphere, a gasket located in said chamber, and a washer arranged beneath said gasket and provided with transverse channels for conducting away leakage about said gasket to the atmosphere, substantially as described.

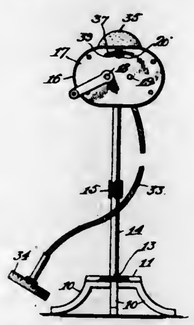
3. In a pipe coupling, the combination of pipe sections providing a chamber adapted to be arranged in communication with the atmosphere, a gasket mounted in said chamber, and a washer located beneath said gasket and provided with beveled under edges and a plurality of transverse channels for conducting away leakage, substantially as described.

4. In a pipe coupling, the combination of pipe sections providing a chamber therebetween, means for coupling said sections together and provided with a passage placing said chamber in communication with the atmosphere, a gasket mounted in said chamber, a washer located beneath said gasket and provided with a plurality of transverse openings leading to said passage for conveying away leakage, and means for closing atmospheric communication, substantially as described.

5. In a pipe coupling, the combination of a pair of pipe sections formed one with transverse grooves therein, means for connecting said sections together and provided with a passage connecting said grooves and an opening for placing said passage in communication with the atmosphere, a plug for closing said opening, a gasket mounted between said pipe sections, and a washer located beneath said gasket and provided with a plurality of transverse channels registering with the grooves in said pipe section for conveying away leakage, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,153,825. CALK-SHARPENING MACHINE. FREDERICK POHLE, Jr., Honesdale, Pa. Filed Feb. 17, 1915. Serial No. 8,781. (Cl. 51—12.)



1. A device of the character described, comprising a plurality of grinding mechanisms, a single means for rotating said mechanisms, and a single means for alternately connecting said grinding mechanisms to said rotating means.

2. A device of the character described, comprising a plurality of grinding mechanisms, a single means for rotating said mechanisms, and a single means operated by the movement of one of said mechanisms for alternately connecting said grinding mechanisms to said rotating means.

3. A device of the character described, comprising a rotating means including a main shaft, a second shaft having a grinding disk mounted thereon, a stub shaft adapted for rotating a tool, and means operated by the movement of one of said shafts for connecting or disconnecting said stub shaft to and from said main shaft.

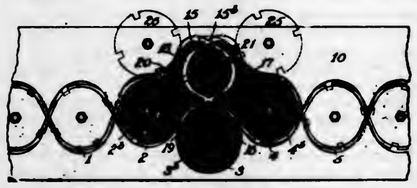
4. A device of the character described, comprising a rotating means including a main shaft, a second shaft having a grinding disk thereon, a sliding stub shaft adapted for rotating a tool, and means operated by the move-

ment of one of said shafts for connecting or disconnecting said stub shaft to and from said main shaft.

5. A device of the character described, comprising a rotating means including a main shaft, a second shaft having a grinding disk thereon, a sliding stub shaft adapted for rotating a tool, and means operated by the movement of one of said shafts for connecting or disconnecting said stub shaft to and from said main shaft, said means embodying a cam-plate for sliding said stub shaft and an arm connected to said cam-plate and one of said shafts.

[Claim 6 not printed in the Gazette.]

1,153,826. BRAIDING-MACHINE. ROBERT C. RAHM, Wyomissing borough, Pa., assignor to Textile Machine Works, Wyomissing, Pa., a Corporation of Pennsylvania. Filed Feb. 16, 1912. Serial No. 678,014. (Cl. 28—4.)



1. A braiding machine having a carrier course comprising linked compound terminals, a fixed series of carrier drive gears including supplemental gears adapted to serve either as carrier transfers for said compound terminals or for passing through the carriers, and a crarrier race-way formed by removably secured top-plate sections whereby the movement of the carriers is variably determined without changing the carrier driving gears.

2. In a braiding machine having a carrier course comprising a series of three intermeshing drive gears; a common-terminal drive-gear in mesh with the intermediate-one of said three gears: and removable plate sections adapted to form angularly arranged linked-terminal race-ways whereby the movement of the carriers is variably determined without changing the carrier driving gears, substantially as set forth.

3. A braiding machine having linked compound-terminals comprising a carrier drive gear arranged out-of-alinement with coöperating adjacent gears, and an interposed carrier drive-gear arranged in mesh with said out-of-alinement and adjacent gears and adapted to serve as a common transfer gear substantially as set forth.

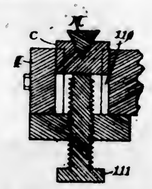
4. A braiding machine having linked compound-terminals comprising a carrier drive gear arranged out-of-alinement with coöperating adjacent gears, and an interposed carrier drive-gear arranged in mesh with said out-of-alinement and adjacent gears and adapted to serve as a common transfer gear, all of said gears having the same number of carrier-engaging horns.

5. A braiding machine having linked compound-terminals comprising a carrier drive gear arranged out-of-alinement with coöperating adjacent gears, and an interposed carrier drive-gear arranged in mesh with said out-of-alinement and adjacent gears and adapted to serve as a common transfer gear, and additional transfer gears arranged to coöperate with said common transfer gear substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,153,827. SETTING-MACHINE. SAMUEL W. REYNOLDS, West Toledo, Ohio. Filed Mar. 3, 1908. Serial No. 418,936. (Cl. 218—3.)

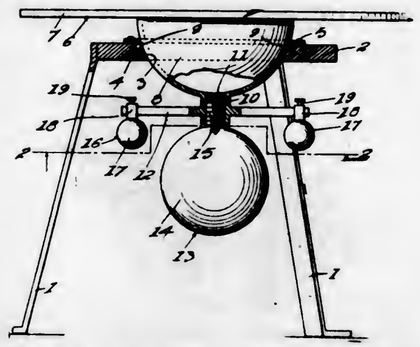
1. In a machine for setting rivets and the like, having an actuating device, and a plurality of rivet setting instrumentalities adapted to register singly with said actuating device, an anvil holder supported in stationary position and with which said rivet instrumentalities are adapted to coöperate successively and an anvil element in the form of a block having a plurality of substantially flat sides and a plurality of annular grooves in its sides, said holder being formed with a recess having sides arranged at an angle to engage any two of the sides of said anvil and changeably support said anvil in stationary position with any of said sides of said anvil in position to register with a setting instrumentality, for the purposes specified.



2. In a machine for setting rivets and the like, having an actuating device, and a plurality of rivet setting instrumentalities adapted to register singly with said actuating device, an anvil holder supported in stationary position and with which said rivet instrumentalities are adapted to coöperate successively, and an anvil element in the form of a block having a plurality of substantially flat sides and a plurality of annular concentric grooves in each of its sides, said holder being formed with a recess having sides arranged at an angle to engage any two of the sides of said anvil and changeably support said anvil in stationary position with any of said sides of said anvil in position to register with a setting instrumentality, for the purposes specified.

3. In a machine for setting rivets and the like having a plurality of rivet setting instrumentalities and a carrier upon which said rivet setting instrumentalities are mounted a single movable anvil instrumentality with which said rivet setting instrumentalities are arranged to coöperate one at a time, said anvil having sides arranged in an equi-lateral triangle, each of said sides being formed with a plurality of concentric annular grooves in its surface, and a holder having a recess formed with sides arranged at an angle corresponding with the angle of the sides of said anvil to engage and hold the anvil stationary with any one of its sides uppermost, for the purposes specified.

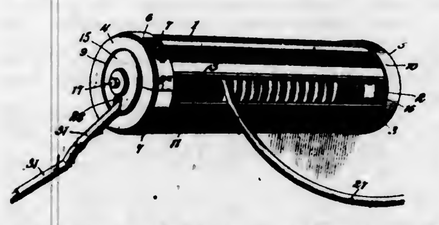
1,153,828. SELF-LEVELING TABLE. JOHN C. RICHMOND, Helper, Utah. Filed Mar. 10, 1915. Serial No. 13,389. (Cl. 114—195.)



1. A table of the character described comprising a ring having a ball race formed therein, legs supporting the ring, a semi-spherical member extending through the ring and resting upon the balls, a table carried by the upper face of said semi-spherical member, a circular interiorly screw threaded collar secured centrally in bottom walls of said semi-spherical member, a plurality of arms radiating from said collar in opposite directions, means slidably adjustable upon said arms for changing the position of the semi-spherical member, a weight having a screw threaded projection formed thereon adapted to engage the internal screw threads of the collar of the semi-spherical member for holding the table level.

2. A self-leveling table of the character described comprising a circular ring, legs supporting the ring, said ring being formed with a ball race, balls in the ball race, a semi-spherical member resting on the balls and extending part way through the ring, a table secured across the top surface of the semi-spherical member, a collar secured centrally to the bottom wall of the semi-spherical member and extending therefrom, a plurality of arms radiating from said collar in opposite directions, weights provided in the collars and slidably mounted on the arms and means for adjusting the weights upon said arms, an enlarged weight provided with a screw threaded projection adapted to be secured to the collar of the semi-spherical member for holding the table level.

1,153,829. TAKE-UP FOR FLEXIBLE ELECTRIC CONDUCTORS. ERNEST F. RUECKERT, Providence, R. I. Filed Dec. 17, 1914. Serial No. 877,768. (Cl. 242—107.)



1. A take-up for flexible electric conductors, comprising a casing having a longitudinally extended outlet, and a winding reel within the casing with means constraining it to maintain a predetermined position and yieldable to a force tending to turn the reel upon its longitudinal axis, said reel being hollow and having a longitudinal slot for the passage of the flexible conductor, said slot terminating at one end of the reel in a portion extended toward the axis of the reel and said end of the reel being exposed at the corresponding end of the casing.

2. A take-up for flexible electric conductors, comprising a casing having a longitudinally extended outlet, and a winding reel within the casing with means constraining it to maintain a predetermined position and yieldable to a force tending to turn the reel upon its longitudinal axis, said reel being hollow and having a longitudinal slot for the passage of the flexible conductor, said slot terminating at one end of the reel in a portion extended toward the axis of the reel and said end of the reel being exposed at the corresponding end of the casing, that end of the longitudinal slot in the reel remote from the exposed end terminating in a portion returned upon the main portion of the slot and defining retaining means for the corresponding portion of the flexible conductor.

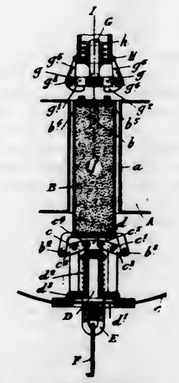
3. A take-up means for flexible electric conductors comprising an elongated casing having a longitudinally extended mouth or outlet, a reel or drum mounted within the casing for turning upon an axis longitudinal of the casing, said drum having a longitudinal slot therein terminating at one end of the reel in a portion extending toward the axis of the reel and at the other end in a portion returned upon and toward the main portion of the slot and defining a locking tongue for a flexible cord carried by the reel, and a spring in the reel or drum normally constraining said reel or drum to a predetermined position and yieldable to turning forces in one direction applied to the reel.

4. A take-up means for flexible electric conductors comprising a cylindrical casing with an elongated longitudinally disposed slot or mouth, heads for the casing with one head having a central non-circular opening therethrough and the other head provided with an enlarged central opening, and a drum having a central shaft extending axially therethrough with a spring surrounding the shaft and connected at the ends to the shaft and drum, respectively, said drum having a longitudinally extended slot in its walls terminating at one end of the drum in a radial extension directed toward the shaft and at the other end into a return portion defining a retaining tongue, said slot being adapted to receive a flexible conductor with a correspouding portion of the conductor lodged behind the tongue and another portion of the conductor within the radial portion of the slot, the shaft having a non-circular end adapted to engage the non-circular passage through the corresponding head of the casing and the drum also having one end adapted to the enlarged opening through the other head of the casing for exposure thereat, and said drum being further provided with a tongue adjacent to the first-named tongue for there retaining the flexible conductor.

5. A take-up means for flexible electric conductors comprising an elongated cylindrical casing with an elongated slot through one side opening at one end of the casing, a removable head for one end of the casing closing the corresponding end of the slot, and a reel or drum adapted to be mounted in the casing for turning movements therein, and of a size to permit a flexible electrical conductor to be wound thereon within the casing, said drum having one end adapted to the removable head and the latter having an opening therethrough of a size to expose the corresponding end of the drum, and said drum being provided with a longitudinal slot for the reception of a flexible conductor, the slot having a radial extension at one end toward the axis of rotation of the drum for the passage of the flexible conductor to the exterior of the casing and the other end of the slot in the drum being shaped to hold the flexible conductor against escape from the drum with the corresponding end of the conductor extending through the elongated mouth of the casing.

[Claims 6 and 7 not printed in the Gazette.]

1,153,830. SUBMARINE MINE. EUGÈNE SCHNEIDER, Paris, France. Filed Apr. 13, 1915. Serial No. 21,161. (Cl. 102—3.)



1. A safety device for submarine mines adapted to be anchored by a cable comprising a contact striking member, a primer holder and spring-pressed means normally holding said primer out of striking distance of the striking member and adapted to be connected with the mine cable, said spring means yielding to the traction of said cable to move the primer holder into striking distance of said striking member.

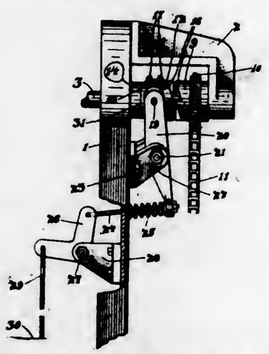
2. A safety device for submarine mines adapted to be anchored by a cable comprising a contact striking member provided with locking means, a primer holder, and yielding means normally holding said primer holder out

of striking distance of said striking member, and adapted to be connected with the mine cable, said means yielding to the traction of said cable to move said holder into striking distance of said striking member and to release said striking means.

3. A safety device for submarine mines adapted to be anchored by a cable, comprising a contact striker, a movable member adapted to support a primer in the path of said striker, a spring-pressed rod having lever connections with said member and having a connection for said cable, said spring adapted to normally hold said member out of firing position and to yield under the traction of the cable to move said member into firing position.

4. A safety device for submarine mines adapted to be anchored by a cable comprising a contact striker having yielding locking means, a movable member adapted to support a primer in the path of said striker, a spring-pressed rod having lever connections with said member and having a connection for said cable, said spring adapted to normally hold said member out of firing position, to yield under traction of the cable to move said member into firing position and release said locking means.

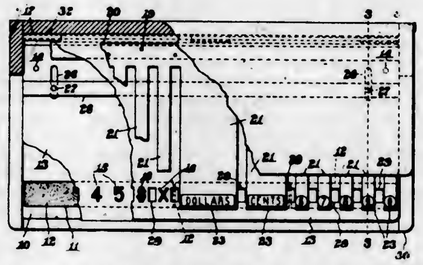
1,153,831. CLUTCH. ALBERTUS O. SLENTZ, Canton, Ohio; Warren E. Slentz administrator of said Albertus O. Slentz, deceased. Filed Aug. 25, 1914. Serial No. 858,478. (Cl. 192—9.)



1. The combination of a supporting frame, a boss mounted upon said frame, and provided with a notch in its outer face, a supporting bracket carried by said frame, a shaft having bearings in said bracket and in said boss, a loose clutch member rotatably mounted upon said shaft, means for continuously rotating said clutch member, a fixed clutch member slidably mounted upon said shaft, a lug upon said fixed clutch member adapted to normally rest within the notch in said boss, means for moving said fixed clutch member into engagement with said loose clutch member, said lug adapted to ride upon the outer face of said boss holding said clutch members in engagement during a complete revolution of said shaft and means for moving said fixed clutch member out of engagement with said loose clutch member when said lug again registers with the notch in said boss.

2. The combination of a supporting frame, a boss mounted upon said frame, and provided with a notch in its outer face, a supporting bracket carried by said frame, a shaft having bearings in said bracket and in said boss, a loose clutch member rotatably mounted upon said shaft, means for continuously rotating said clutch member, a fixed clutch member slidably mounted upon said shaft, a lug upon said fixed clutch member adapted to normally rest within the notch in said boss, a lever mounted upon said supporting frame, the upper extremity of said lever pivotally connected to said fixed clutch member, a spring adapted to normally hold said fixed clutch member out of engagement with said loose clutch member and means for operating said lever to bring said fixed clutch member into engagement with said loose clutch member.

1,153,832. CHECK-PROTECTOR. SAMUEL T. THORSON, Boston, Mass. Filed July 1, 1915. Serial No. 37,767. (Cl. 101—57.)



1. In a device of the class described, the combination of a plate having recesses therein; inking pads in said recesses; a plate superimposed upon said recessed plate with alined perforations over said recesses; a stripper plate superimposed upon said perforated plate with a plurality of openings therein the boundaries of which have the outline of various selected characters; and a plurality of parallel spring members secured to said stripper plate and having a plurality of indenting members grouped in the form of selected characters and adapted to be forced through said openings and perforations into said inking pads.

2. In a device of the class described, the combination of a plate having a plurality of alined recesses therein; inking pads in said recesses; a plate superimposed upon said recessed plate with perforations over said recesses; a stripper plate superimposed upon said perforated plate with a plurality of openings therein, each opening having its boundary conforming to the outline of a selected character; and a plurality of parallel spring members secured to said stripper plate and having a plurality of indenting members grouped in the form of selected characters and adapted to be forced through said openings and perforations into said inking pads.

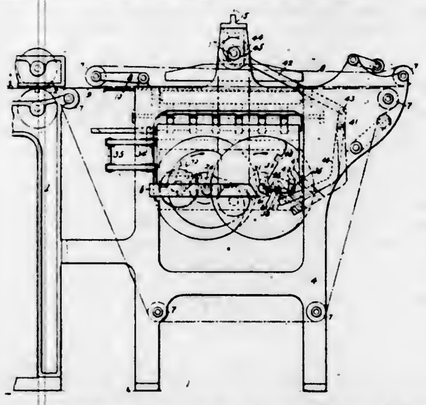
3. In a device of the class described, the combination of a plate having recesses therein; inking pads in said recesses; a plate superimposed upon said recessed plate with alined perforations over said recesses; a stripper plate superimposed upon said perforated plate with a plurality of openings therein; a plurality of parallel spring members at their rear sides secured to said stripper plate and having a plurality of indenting members grouped in the form of selected characters and adapted to be forced through said openings and perforations into said inking pads; and means for pivotally connecting said stripper plate to the rear of said recessed plate.

4. In a device of the class described, the combination of a plate having recesses therein; inking pads in said recesses; a plate superimposed upon said recessed plate with alined perforations over said recesses; a stripper plate superimposed upon and hinged to said perforated plate with a plurality of openings therein; means for locking said perforated plate to said recessed plate; and a plurality of parallel spring members secured to said character plate and having a plurality of indenting members grouped in the form of selected characters and adapted to be forced through said openings and perforations into said inking pads.

5. In a device of the class described, the combination of a plate having recesses therein; inking pads in said recesses; a plate superimposed upon said recessed plate with perforations over said recesses; an adjustable gage secured to the upper face of said perforated plate; a stripper plate superimposed upon said perforated plate with a plurality of openings therein; and a plurality of spring members secured to said stripper plate and having a plurality of indenting members grouped in the form of selected characters and adapted to be forced through said holes and perforations into said inking pads.

[Claims 6 to 8 not printed in the Gazette.]

1,153,833. DELIVERY MECHANISM FOR WEB-PRINTING PRESSES. FREDERICK M. TURCK, New York, N. Y., assignor to The Carter-Crume Company, Limited, Toronto, Canada, a Corporation of Ontario. Filed Oct. 10, 1911. Serial No. 653,806. (Cl. 93—93.)



1. In a sheet delivery device, in combination, folding mechanism for folding a sheet, a delivery device, connected with said folding mechanism comprising a set of rotary screw conveyers disposed to receive folded sheets and convey the same in the direction of the length of said set, and a movable stop device disposed at the side of the conveyer to receive the lateral thrust exerted on said sheets by the rotation of said screw conveyers.

2. In a sheet delivery device, in combination, means for folding a sheet, a delivery device comprising a set of rotatable screw conveyers disposed to receive said sheets and move them in the direction of the length of the conveyer, a stop at the end of said delivery device, and a moving stop disposed to receive the lateral thrust exerted upon the sheets by the rotation of the screw conveyers.

3. In a sheet delivery device, in combination, means for folding a sheet, a delivery device comprising a set of rotatable screw conveyers disposed to receive said sheets, a stop at the end of said conveyers, and a belt moving in the direction of movement of the folded sheets adapted to maintain their alinement.

4. The combination of a device for cutting a printed web into multiple series of sheets, means for separately folding said sheets, means comprising a set of rotatable screw-conveyers disposed to receive and deliver said folded sheets, a support for a plurality of division-cards adjacent said screw-conveyers, and means for feeding said cards thereto for separating said multiple series, substantially as set forth.

5. A sheet delivery device comprising a set of rotatable screw conveyers, means for feeding sheets thereto, means for rotating said conveyers in a direction to advance said sheets, and a belt movable in the direction of the moving sheets adapted to coact and maintain the alinement of their side edges while being carried by said conveyers.

[Claims 6 to 56 not printed in the Gazette.]

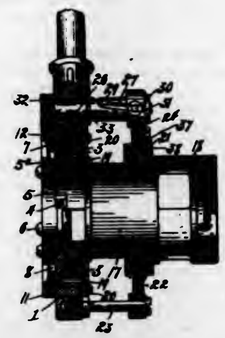
1,153,834. METHOD OF PRODUCING CELLULOSE AND OTHER PRODUCTS. BRUNO MARIA ERNST LORENZ POSSANNER VON EHRENTHAL, Cöthen, Germany, assignor of forty-five one-hundredths to Max von Halle, Hamburg, Germany. Filed Jan. 19, 1914. Serial No. 813,126. (Cl. 92—11.)

1. In the method of producing cellulose and other products, the step which comprises boiling the fibrous material with a weak acid sulfite liquor at a pressure of from 5–6 atmospheres and a temperature not exceeding 125°–130° C., then mechanically disintegrating and washing the substance, digesting it with soda at increased temperature, and finally washing it out.

2. In the method of producing cellulose and other products, the step which comprises boiling the fibrous material with a weak acid sulfite liquor at a pressure of from 5–6 atmospheres and a temperature not exceeding 125°–130° C., then mechanically disintegrating and washing the substance, digesting it with caustic soda at increased temperature and atmospheric pressure, and finally washing it out.

3. In the method of producing cellulose, the step, which comprises boiling fibrous material with a sulfite liquor weak in acid and containing a base just short of sufficient to precipitate said base as monosulfite, said boiling being under a pressure of from 5–6 atmospheres and at a temperature not exceeding 125°–130° C., then mechanically separating the fibers and finally digesting them with soda at an elevated temperature and normal atmospheric pressure.

1,153,835. PIPE-THREADING MACHINE. DAVID C. WALTER, Toledo, Ohio, assignor of one-half to Charles J. Reuscher, Toledo, Ohio. Filed May 10, 1915. Serial No. 27,081. (Cl. 10—120.5.)

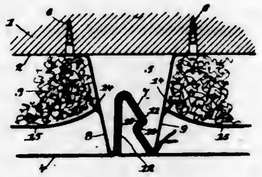


1. In a machine of the class described, a work holder, a die carrying head threaded to said work holder whereby said holder and head have to and fro movements when relatively rotated, a collar rotatably carried by said holder and anchored against rotation relative to the head, said collar having an opening through a part thereof, dies movably carried by the head, a die adjusting plate rotatably carried by the head, a friction band adjustably clamped to the peripheral portion of said cam plate and having a segmental set of rack teeth on its outer periphery, a shaft journaled in a side of said head with its axis parallel to the head axis and having a circularly arranged series of teeth at one end in mesh with the rack teeth on said friction band, said shaft being held against axial movements relative to the head and having one end extending from the head and rotatably projecting through the opening in said collar, said projected end of the shaft having a spiral groove, a pin projecting through a part of said collar and into said groove whereby the pin and groove will operate to effect a turning of the shaft when the shaft is moved through said opening, and a member secured to the extended end of said shaft for coacting with the outer side of said collar to limit the movement of the shaft therethrough in one direction.

2. In a machine of the class described, a chaser carrying head having a recess in the inner side thereof forming an oil reservoir, a lead screw sleeve removably secured to the inner side of said head and having a part at its inner end closing the outer end of said recess.

3. In a machine of the class described, a chaser carrying head having a plurality of recesses in the inner side thereof forming oil reservoirs, and a lead screw sleeve removably secured to the inner side of said head and having flanges projecting from the inner end thereof and closing the outer ends of said recesses.

1,153,836. FURRING-STRIP. JERVIS BENNETT WEBB, Mount Vernon, N. Y., assignor to H. W. Johns-Manville Company, a Corporation of New York. Filed Oct. 24, 1914. Serial No. 868,512. (Cl. 20—4.)



1. In coverings for walls and ceilings, fastening means comprising interlocking members adapted to secure two widths of covering to the wall or ceiling along the line of their adjoining edges, the said fastening means being concealed by the covering.

2. In coverings for walls and ceilings, fastening means comprising interlocking members adapted to secure two widths of covering to the wall or ceiling along the line of their adjoining edges, the said means being concealed by the covering and shaped to hold said covering clear of the wall or ceiling.

3. In coverings for walls and ceilings, fastening means comprising interlocking members adapted to unite two widths of covering along the line of their adjoining edges, one of the members of said fastening means being secured to the wall or ceiling and both members thereof concealed by the covering.

4. In coverings for walls and ceilings, fastening means comprising interlocking members adapted to secure two widths of covering to the wall or ceiling along the line of their adjoining edges, the said means being concealed by the covering and having no contact relation with the outer surface thereof.

5. In coverings for walls and ceilings, fastening means comprising interlocking members adapted to secure two widths of covering to the wall or ceiling along the line of their adjoining edges, the said means being concealed by the covering and having contact relation with the meeting edges only thereof.

[Claims 6 to 17 not printed in the Gazette.]

1,153,837. ACOUSTIC DIAPHRAGM. WILLIAM W. YOUNG, Agawam, Mass., assignor to Frank H. Young, St. Louis, Mo. Filed Sept. 22, 1914. Serial No. 862,914. (Cl. 181—10.)



1. An acoustic diaphragm comprising a disk having a countersink therein, a brace having a part that is centrally located on said disk, and a part that extends from said first-mentioned part away from the disk center, said brace being set into said countersink, and means to secure said brace rigidly and fixedly to said disk to secure the latter rigidly and fixedly to the former.

2. An acoustic diaphragm comprising a disk having a countersink therein, a brace having a part that is centrally located on said disk, and a part that extends from said first-mentioned part away from the disk center, said brace being set into said countersink, and an integument attached to said disk over said brace.

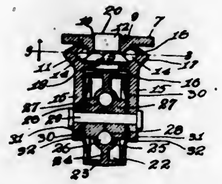
3. An acoustic diaphragm comprising a disk, and a perforated brace for said disk, said disk having rivet elements punched therefrom and passing through the perforations in said brace to retain the latter in place.

4. An acoustic diaphragm comprising a disk, a perforated brace for said disk, said disk having rivet elements punched therefrom and passing through the perforations in said brace to retain the latter in place, and an integument attached to said disk over said brace to assist said rivet elements in rigidly and fixedly securing said brace to said disk.

5. An acoustic diaphragm comprising a disk, a brace for said disk, means to secure said brace to said disk, and a fabric insert between said disk and brace.

[Claims 6 to 8 not printed in the Gazette.]

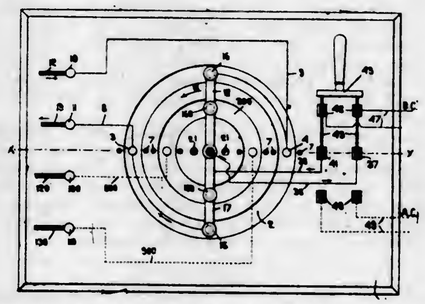
1,153,838. BALL-BEARING CASTER AND THE LIKE. BENJAMIN H. BOWER and OLIVER L. OSBORN, St. Louis, Mo. Filed Apr. 9, 1914. Serial No. 830,831. (Cl. 16—73.)



1. A ball bearing caster or the like comprising a supporting plate having a central conical projection, a cone headed rivet held centrally in the plate, a roll support consisting of two side members and connected together by an integral horizontal wall having a central opening, the upper end provided with a V-shaped annular recess acting as a race way; bearing balls located in the race way and contacting with the inner surface of the recess, the cone head of the rivet and the inclined projection of the plate; and a roll axially mounted in the roll support, substantially as specified.

2. A device of the class described comprising a caster consisting of a roll supporting member and a supporting plate, each provided with inclined surfaces; a cone headed rivet located between the two, bearing balls located between the two and contacting with the inclined surfaces and cone head of the rivet and when so placed interlocking both members together; and a roll axially mounted in the roll supporting member, substantially as specified.

1,153,839. ELECTRICAL THERAPEUTIC APPARATUS. RALPH W. CHAPMAN, Oldtown, Me. Filed May 21, 1915. Serial No. 29,641. (Cl. 219—57.)



1. In a device of the class described, the combination with an annular chamber containing a liquid resistance, of a pair of terminals submerged in said liquid, a carrier rotatably mounted above the chamber and carrying two terminals insulated from each other which extend into said liquid resistance but are adapted to pass over the submerged terminals as the carrier rotates, and means to rotate the carrier in one direction.

2. In a device of the class described, the combination with an annular open-topped chamber containing a liquid resistance, of two terminals submerged in said liquid, a carrier rotatably mounted to turn about the center of said chamber, two terminals insulated from each other sustained by said carrier and extending through the open top of the chamber into the liquid resistance, and means to rotate the carrier.

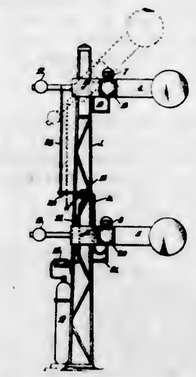
3. In a device of the class described, the combination with a base of insulating material having a circular, annular open-topped chamber therein containing liquid resistance, of two terminals sustained by said base and submerged in said liquid, a carrier rotatably mounted on the base and situated above the chamber, a pair of terminals depending from said carrier through the open top of said chamber into the liquid, and means to rotate the carrier.

4. In a device of the class described, the combination with a ring-like chamber containing liquid resistance, of a terminal submerged in said liquid, a coöperating terminal extending into said liquid, a circuit to which said terminals are connected, and means to cause one of said terminals to traverse the chamber longitudinally thereof, thereby to vary the resistance in the circuit.

5. In a device of the class described, the combination with two concentric annular chambers, each containing liquid resistance, a pair of terminals submerged in the liquid in each chamber, a rotatably-mounted carrier, two pairs of terminals sustained by said carrier, the terminals of one pair extending into the liquid in one chamber and those of the other pair extending into the liquid in the other chamber, and the terminals of each pair being insulated from each other, and means to rotate the carrier.

[Claim 6 not printed in the Gazette.]

1,153,840. RAILWAY SIGNALING SYSTEM. GUSTAF DALÉN, Stockholm, Sweden, assignor to Svenska Aktiebolaget Gasaccumulator, Stockholm, Sweden. Filed July 1, 1911. Serial No. 636,440. (Cl. 246—37.)



1. In railway signaling apparatus, in combination, a support, an automatically operated flash-light lantern positioned upon the support, a source of supply for said lantern, means for connecting the lantern with the source, a semaphore movably mounted upon the support, and means operatively associated with the semaphore for controlling the connection between source and lantern.

2. In railway signaling apparatus, in combination, a semaphore support provided with a pair of semaphores mounted to be arranged in the different positions in order to have different interpretations, a constantly burning gas lantern mounted on the said support and controlled by one of said semaphores, and an automatically operating gas flashlight lantern mounted on the support and being controlled by the other of said semaphores.

3. In railway signaling apparatus, in combination, a support, a plurality of semaphores mounted movably upon the support and adapted to be arranged in different positions to have different interpretations, a constantly illuminated lantern arranged upon the support and associated with one of said semaphores, and an automatically operating flash-light lantern mounted upon the support and controlled by one of the semaphores.

4. In railway signaling apparatus, in combination, a support, a constantly illuminated lantern positioned upon the support, a semaphore provided upon the support, an automatically operating flash-light lantern mounted upon the support, a source of supply for the last mentioned lantern, means for connecting the said lantern with the source, and means operatively associated with the said semaphore for controlling the connection between source and lantern.

5. In railway signaling apparatus, in combination, a support, an automatically operating flash-light lantern mounted upon the support, a movable semaphore provided upon the support and associated with the said lantern, a transparent screen carried by the said semaphore and adapted to intercept the light emitted from the lantern when the former occupies one of its operative positions, a constantly illuminated lantern positioned upon the support, a second semaphore movably mounted upon the support and associated with the second lantern, and a transparent screen provided upon the last mentioned semaphore and adapted to intercept the light emitted from the second lantern when the corresponding semaphore occupies one of its operative positions, the said screens being of different colors.

[Claim 6 not printed in the Gazette.]

1,153,841. DOWELING DEVICE. EDWARD EARLE, Philadelphia, Pa., assignor of one-fourth to John D. Locke, Philadelphia, Pa. Filed July 2, 1912. Serial No. 707,313. (Cl. 77—62.)



1. In a doweling device, the combination with a block having a straight edge, a plane face at right angles thereto, and a series of drill sockets of different diameters parallel with said face and at respectively different distances therefrom, the opposite face of said block being arranged in steps respectively local to said sockets, at different distances from said plane face, said stepped face having lines respectively parallel with the axes of said sockets in a plane at right angles with said plane face, and, chip outlet channels extending in said block transversely to the axes of said sockets and opening into the latter; of a plane guide plate in contact with said plane face and projecting beyond said straight edge of said block at the ends of said sockets; said plate having three slots parallel with said sockets; said plate having graduations representing units of length in the direction of the length of said sockets; two ribs on said block fitted to slide in two of said slots; a clamp screw on said block fitted through the other of said slots; and, a spring washer between said plate and the head of said screw; whereby said plate may be adjusted longitudinally on said block at right angles with respect to the straight edge thereof to limit the depth with which drills may extend through said sockets, by contact of the end of said plate with the drill stock.

2. In a doweling device, the combination with a block having a straight edge, a plane face at right angles thereto, and a series of drill sockets of different diameters parallel with said face and at respectively different distances therefrom, the opposite face of said block being arranged in steps respectively local to said socket, at different distances from said plane face, and lines on said stepped face respectively parallel with the axes of said sockets in a plane at right angles with said plane face; of a plane guide plate in contact with said plane face and projecting beyond said straight edge of said block at the ends of said sockets; said plate having three slots parallel with said sockets; graduations representing units of length

on said plate in the direction of the length of said sockets; two ribs on said block fitted to slide in two of said slots; a clamp screw on said block fitted through the other of said slots; and, a washer between said plate and the head of said screw; whereby said plate may be adjusted longitudinally on said block at right angles with respect to the straight edge thereof to limit the depth to which drills may extend through said sockets, by contact of the end of said plate with the drill stock.

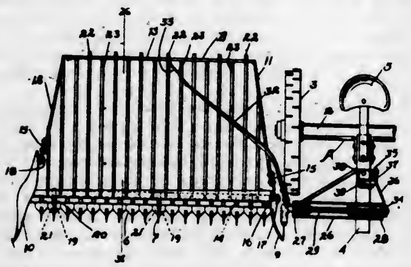
3. In a doweling device, the combination with a block having a straight edge and a plane face at right angles thereto, a series of drill sockets of different diameters parallel with said face and at respectively different distances therefrom, and, the opposite face of said block having lines respectively parallel with the axes of said sockets in a plane at right angles with said plane face; of a plane guide plate in contact with said plane face and projecting beyond said straight edge of said block; said plate having graduations representing units of length in the direction of the length of said sockets; means slidably connecting said block and plate; and, clamping means; whereby said plate may be adjusted longitudinally on said block at right angles with respect to the straight edge thereof to limit the depth to which drills may extend through said sockets.

4. In a doweling device, the combination with a block having a straight edge, a plane face at right angles thereto, and a series of drill sockets at different diameters parallel with said face, and, the opposite face of said block having lines respectively parallel with the axes of said sockets in a plane at right angles with said plane face; of a plane guide plate in contact with said plane face and projecting beyond said straight edge of said block; said plate having graduations representing units of length in the direction of the length of said sockets; means slidably connecting said block and plate; and, clamping means; whereby said plate may be adjusted longitudinally on said block at right angles with respect to the straight edge thereof to limit the depth to which drills may extend through said sockets.

5. In a doweling device, the combination with a block having a straight edge, a plane face at right angles thereto, and a series of drill sockets of different diameters parallel with said face, and, the opposite face of said block having lines respectively parallel with the axes of said sockets in a plane at right angles with said plane face; of a plane guide plate in contact with said plane face and projecting beyond said straight edge of said block; means slidably connecting said block and plate; and, clamping means; whereby said plate may be adjusted longitudinally on said block at right angles with respect to the straight edge thereof to limit the depth to which drills may extend through said sockets.

[Claims 6 to 8 not printed in the Gazette.]

1,153,842. BUNCHING ATTACHMENT FOR MOWING-MACHINES. AUGUST H. ECKARDT, St. Paul, Minn. Filed Oct. 20, 1913. Serial No. 796,200. (Cl. 56—128.)



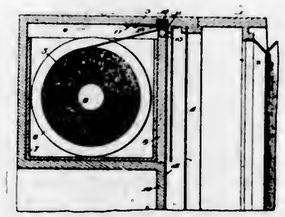
1. A machine for accumulating and dumping grass or other growth back of a cutting machine, comprising, in combination with said machine and its cutting mechanism of a plurality of freely supported runners extending rearwardly back of said cutting mechanism, an accumulating frame hinged back of said cutting mechanism with its rear end resting upon the runners and adapted to swing upwardly, means for raising said frame for the delivery of accumulated cut material from the runners, part of said runners terminating free of said frame and being formed with downwardly turned shoes upon their free ends adapted to ride upon the ground and with upwardly extending guards extending rearwardly toward said frame and adapted to be forced by the accumulation of material on said runners into contact with the inner face of said frame to lock it against accidental raising.

2. Apparatus for catching and depositing an accumulation of grass or other growth back of a mower, comprising, in combination with said mower and its cutter, of a plurality of runners secured back of said cutter, an accumulating frame hinged back of said cutter with its rear end adapted to swing upwardly, and means for raising said frame for the delivery of cut material from said runners, said frame being supported in accumulating position by the rearward ends of the runners and part of said runners terminating free of said frame and being formed with upwardly extending guards adapted to hold said accumulation and to lock said frame against accidental raising.

3. The combination with the cutting mechanism of a mowing machine having an accumulating frame pivotally connected therewith and extending back from said cutting mechanism, of a number of freely supported spring runners adapted to tensionally engage said accumulating frame to prevent its accidental raising, and means for elevating said frame, as and for the purpose specified.

4. An apparatus of the type described comprising, in combination, a mower and its cutter, of a plurality of runners secured back of said cutter, an accumulating frame hinged back of said cutter above said runners and adapted to swing upwardly, means for raising said frame for the delivery of cut material from said runners, and means secured to said cutter and adapted to contact with and lock said frame against accidental raising.

1,153,843. WEB-GUIDE FOR PHOTOGRAPHIC CAMERAS. JOHN S. GREENE, Rochester, N. Y., assignor to Commercial Camera Company, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 7, 1912. Serial No. 682,194. (Cl. 242—76.)



1. In a web feeding device for photographic cameras, the combination with a shaft, of a plurality of guiding rolls mounted to turn thereon in engagement with the web and adapted to slide longitudinally of the shaft and a plurality of springs disposed on opposite sides of the rolls to yieldingly resist such longitudinal movements of the latter.

2. In a web feeding device for photographic cameras, the combination with a shaft, of a plurality of guiding rolls mounted to turn thereon in engagement with the web and adapted to slide longitudinally of the shaft, an abutment on the shaft at each end of each roll and a spring coiled about the shaft between each abutment and the end of the adjacent roll to yieldingly resist movement of the latter longitudinally of the shaft.

3. In a web feeding device for photographic cameras, the combination with a continuous surfaced under guide disposed transversely of the direction of travel of the web and over which the latter is passed, of a plurality of alined guiding members arranged in parallelism with the under guide to bear against the opposite side of the web therefrom, said members being adapted to yield toward and from each other, and means for resiliently resisting such yielding movements.

1,153,844. LINING FOR PEBBLE OR BALL MILLS. HANS A. HANSEN and JOSEPH M. SCHMUESER, Smuggler, Colo. Filed July 21, 1913. Serial No. 780,242. (Cl. 83—9.)



1. In a ball or pebble mill, a casing symmetrically arranged with respect to all planes passing through its axis and a lining of hard material composed of units held in place by wedging action, each of said units having integral therewith an inwardly extending rib arranged longitudinally of the mill, the side edges of said units being formed to lie in planes through the axis of the mill when the units are assembled, each rib being located with one side co-incident with one of the side edges of its unit and the other side of the rib sloping gradually to the surface of the unit, and means inserted between two of said units for retaining the units in close engagement with each other, said last named means being secured to the casing.

2. In a ball or pebble mill, a casing having a cone-shaped portion, a lining for said portion consisting of a series of units extending from the base of the cone to a point near its apex, said units at their base portions being cut away upon each side, and further units placed between the first named units at their cut away portions, the side edges of both series of units lying in planes extending through the axis of the cone whereby they have a wedging action upon each other.

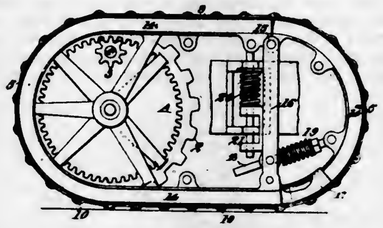
3. In a ball or pebble mill, a casing having a cone shaped portion, a lining for said portion, consisting of a series of concavo-convex units resembling in shape two arrow heads placed point to butt, said units extending from the base of the cone to a point near its apex, and further units shaped like single arrow heads and placed between the base portions of the first named units, the side edges of both series of units lying in planes extending through the axis of the cone whereby they have a wedging action upon each other.

4. In a ball or pebble mill, a casing having a cone shaped portion, a lining for said portion consisting of a series of units extending from the base of the cone to a point near its apex, said units at their base portions being cut away at each side, and further units placed between the first named units at their cut away portions, substantially as described.

5. In a ball or pebble mill, a casing having a cone shaped portion, a lining for said portion consisting of a series of a concavo convex units resembling in shape two arrow heads placed point to butt, said units extending from the base of the cone to a point near its apex, and further units shaped like single arrow heads, and placed between the base portions of the first named units.

[Claims 6 and 7 not printed in the Gazette.]

1,153,845. TRACTION APPARATUS. CLARENCE A. HENNEUSE, San Jose, Cal., assignor, by mesne assignments, of one-third to S. Frame, Benicia, Cal., and one-third to W. J. Benson, San Jose, Cal. Filed Apr. 29, 1913. Serial No. 764,341. (Cl. 21—150.)



1. In an apparatus of the character described, an endless chain composed of links flexibly coupled together, overlapping tread plates, each bolted to a chain link, angle flanges bolted to the tread plates extending upward outside the chain links and forming abutment stops for the ends of the chain link hinge pins.

2. An endless traction chain composed of links with engaging pivot ends and connecting pins, overlapping tread plates each centrally bolted to a link, angle plates riveted to the tread plates in pairs with one member of each extending upward to form stops for the hinge pins, and curved to form ball race members.

3. A traction apparatus of the character described, including an elliptical two-part trackway forming a stationary ball race member, a chain composed of links having angular plates curved to form the opposed ball race member, tread plates fixed to the chain, said plates having one end curved on a radius from the pin centers of the chain links, and the opposite ends having an opposite curve and extending into scraping contact with the first named end of the next contiguous tread plate, means to maintain the two-part trackway in alinement, and guide rods and yielding adjusting means.

4. A traction apparatus of the character described, comprising a trackway having a semicircular end and parallel continuations, a coacting semicircular track member having its upper end pivotally connected with the first-named member, and the lower ends forming telescopic slidable guides, a transverse bar crossing the ends of the first-named member, a vertical rod slidable in guides on said bar, a compressible spring acting thereon, a diagonal bar pivoted to the semicircular track member and slidable in guides on the transverse bar, and a yieldable spring thereon to automatically adjust the length of the trackway, and an endless chain adapted to travel on the trackway and having tread plates with ends curved outwardly to form overlapping joints and traction devices.

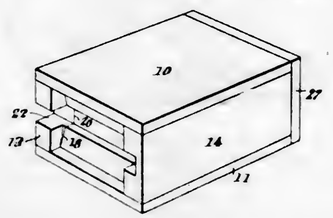
5. A traction device composed of hingedly connected chain links with tread plates, and angle plates bolted thereto and forming movable ball races, a sprocket driving wheel about which the chain passes, a stationary ball race, one portion of which is concentric with the sprocket wheel and parallel extensions therefrom, and a correspondingly curved opposite end having one end pivoted in line with one end of the first-named members, and the other in line with the other end and movable with relation thereto, said unconnected ends being telescoped and slidable to maintain the continuity of the stationary ball race.

[Claims 6 to 9 not printed in the Gazette.]

1,153,846. MOLD FOR TONGUE-AND-GROOVE CONCRETE BLOCKS. JOHN J. HOSTETLER and WILLIAM OLIVER RICE, Clarkton, Mo.; said Hostetler assignor to said Rice. Filed Apr. 12, 1913. Serial No. 760,839. (Cl. 25—121.)

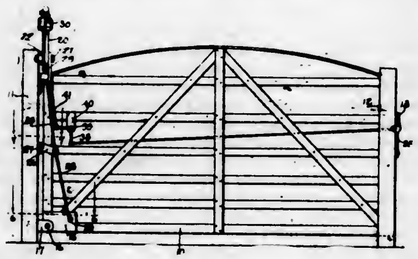
A mold box consisting of a flat bottom, a flat top, a plate forming one end of said box, two sides disposed

with edges in contact with said bottom, top and end plate, one of said sides being formed with configurating tenons intermediate its ends, the other side being formed with grooves, an end plate consisting of a block having oppositely beveled faces upon one side terminating short of a median line, a tongue having a longitudinally straight edge flush with the outer side of said block, and having another longitudinal edge spaced throughout from said block and having its ends spaced from the opposite ends of said block whereby to provide an elongated tenon laterally of said block, said first named side being formed



with a recess, outwardly inclined surfaces formed upon said first named side and terminating in a plane with said recess, and extending in advance of the inner edge of the recess, a tongue formed on said last named side in advance of said inclined surface and having one side flush with the inner edge of said recess, said other side being formed with a recess, said block having its tenon snugly received at its ends into said recesses and having its longitudinal spaced edge disposed within the box and bearing against the inner edges of said recesses to constitute groove forming parts.

1,153,847. GATE. ORLA L. HUFFMAN, Albany, Ind., assignor to T. W. Harper, Moore, Mont. Filed Dec. 15, 1913. Serial No. 806,840. (Cl. 39—13.)



1. A gate, a pair of rear posts spaced apart, means extending inwardly from the lower part of said posts to which the lower rear corner of the gate post is fulcrumed, a lever mounted on the upper part of each rear gate post and extending at a right angle from the gate, a flexible connection between said lever and the gate at a point inside of the fulcrum thereof, and means connected with said gate posts for engaging said connection about midway its length thereof and holding the same at such point inward away from the gate posts.

2. A gate, a pair of rear posts spaced apart, means extending inwardly from the lower part of said posts to which the lower rear corner of the gate post is fulcrumed, a lever mounted on the upper part of each rear gate post and extending at a right angle from the gate, an arm pivoted to the rear gate posts between their ends and extending inwardly, a connection between said lever and the inner end of said arm, and a connection between the inner end of said arm and the gate at a point inward from the fulcrum of the gate.

1,153,848. WIND-SHIELD CLEANER. BENJAMIN C. LORING, Detroit, Mich., assignor, by direct and mesne assignments, to Joseph A. Moross and Rosanna C. Loring, trustees, Detroit, Mich. Filed Oct. 14, 1914. Serial No. 866,617. (Cl. 15—59.)



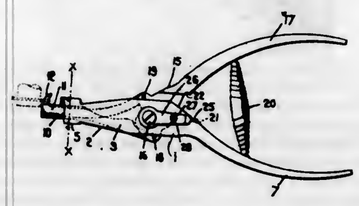
1. A wind shield cleaner comprising a bearing adapted to be detachably secured to a wind shield frame, a rock-shaft journaled in the bearing and having at one end a handle and at the other end a wiper-carrying arm, a wiper composed of a slotted tubular back and a blade engaged therewith, said back and carrying arm having complemental members forming a separable hinge connection between the central portion of the back and the outer end of the arm, one member being slidable on the other to permit the separation of the back from the arm only when the back is swung in a given direction relatively to the arm, and a wiper-confining connection between the bearing and the inner end portion of the wiper back, causing the wiper to swing with the arm, normally preventing the wiper from swinging to position for separation, and separable from the back to permit the separation of the back from the arm.

2. A wind shield cleaner comprising a bearing adapted to be detachably secured to a wind shield frame, a rock-shaft journaled in the bearing and having at one end a handle and at the other end a wiper-carrying arm, a wiper composed of a slotted tubular back and a blade engaged therewith, said back and carrying arm having complemental members forming a separable hinge connection between the central portion of the back and the outer end of the arm, one member being slidable on the other to permit the separation of the back from the arm only when the back is swung in a given direction relatively to the arm, and a confining rod jointed to the bearing and extending therefrom into the inner end portion of the back to cause the back to swing with the arm and prevent the back from swinging to position for separation, said rod having a sliding engagement with the back and being removable therefrom to permit the separation of the back from the arm.

3. A wind shield cleaner comprising a bearing adapted to be detachably secured to a wind shield frame, a rock-shaft journaled in the bearing and having at one end a handle and at the other end a wiper-carrying arm, a wiper composed of a slotted tubular back and a blade engaged therewith, the back being provided with an orifice at its central portion and the arm with a hook slidable in said orifice and formed to permit the separation of the back from the arm only when the back is swung to a given position relatively to the arm, and a confining rod jointed to the bearing and extending therefrom into the inner end portion of the back to cause the back to swing with the arm and prevent the back from swinging to position for separation, said rod having a sliding engagement with the back and being removable therefrom to permit the separation of the back from the arm.

4. A wind shield cleaner comprising a bearing adapted to be detachably secured to a wind shield frame, a rock-shaft journaled in the bearing and having at one end a handle and at the other end a wiper-carrying arm, a wiper composed of a slotted tubular back and a blade engaged therewith, said back and carrying arm having complemental members forming a separable hinge connection between the central portion of the back and the outer end of the arm, one member being slidable on the other to permit the separation of the back from the arm only when the back is swung in a given direction relatively to the arm, and a wiper-confining connection between the bearing and the inner end portion of the wiper back, causing the wiper to swing with the arm, normally preventing the wiper from swinging to position for separation, and separable from the back to permit the separation of the back from the arm, one member being slidable on the other to permit the separation of the back from the arm only when the back is swung in a given direction relatively to the arm, and a wiper-confining connection between the bearing and the inner end portion of the wiper back, causing the wiper to swing with the arm, normally preventing the wiper from swinging to position for separation, and separable from the back to permit the separation of the back from the arm, said rock-shaft, handle and arm being composed of a resilient U-shaped wire rod, the neck portion of which constitutes the rock-shaft, while the handle and arm portions constitute stops coöperating with the bearing in preventing endwise displacement of the rock-shaft.

1,153,849. COTTER-PIN-EXTRACTING TOOL. JOHN W. LOVERING, Sandown, N. H. Filed Nov. 11, 1913. Serial No. 800,420. (Cl. 29—86.2.)



1. A tool of the class described, comprising a body portion, extracting members each of which is movable relatively thereto, and means adapted to move said members longitudinally in opposite directions.

2. A tool of the class described comprising a body portion, extracting members each of which is movable relatively thereto, and means adapted to move said members longitudinally simultaneously in opposite directions.

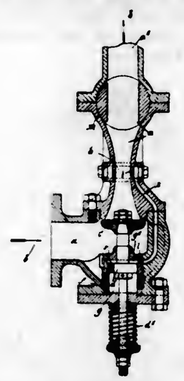
3. A tool of the class described comprising a body portion, a pair of concentrically arranged extracting members mounted in said body and movable relatively thereto, and means adapted to move said members simultaneously in opposite directions.

4. A cotter pin extracting tool comprising a body portion, a movable hooked extracting member, and a thrust member movable relatively thereto and to said body portion, and means for moving said hooked and thrust members longitudinally in opposite directions.

5. A cotter pin extracting tool comprising a body portion, a hooked member slidably mounted in said body portion, a sliding member telescopically arranged in respect to said hook member, a lever connected to said members and adapted to move the same in opposite directions.

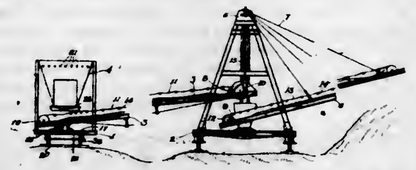
1,153,850. VALVE FOR AUTOMATICALLY STOPPING THE SUPPLY OF LIQUID TO PIPES UPON BREAKING OF THE LATTER. ERNST MEIER, Neubeckum, Germany. Filed Sept. 18, 1913. Serial No. 790,479. (Cl. 137—4.)

A valve for automatically stopping the supply of liquid to pipes upon breaking of the latter, comprising in combination, a valve-chamber having a narrowed double-cone portion therein, a valve-plug in said chamber located in advance of the double-cone portion, a cylinder connected at one end with said chamber in advance of the valve-plug and at the other end with said double-cone portion beyond the valve-plug, the latter communication having considerably narrowed end ports, a spring-pressed piston in said cylinder directly connected with said valve-plug and adapted to keep the latter normally in open position and having a perforation therethrough to permanently connect both cylinder ends, and a stop-cock at the outlet



of the valve-chamber, substantially as and for the purpose set forth.

1,153,851. CONVEYER FOR LEVEE CONSTRUCTION. JAMES MENZIES, New Orleans, La. Filed Apr. 27, 1914. Serial No. 834,717. (Cl. 193—3.)



1. A conveying system comprising a horizontally disposed frame and belt conveyer mounted thereon, a truck for supporting one end of said conveyer, and connections between said frame and truck, permitting a horizontal pivotal movement of the conveyer on the truck, and a relative movement between the conveyer and truck longitudinally of the conveyer, and a truck having connections for pivotally supporting the opposite end of said conveyer.

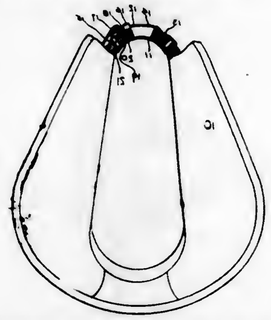
2. A conveying system comprising a horizontally disposed frame and belt conveyer mounted thereon, a truck for supporting one end of said conveyer, and connections between said frame and truck, permitting horizontal pivotal movements of the conveyer on the truck and relative adjustment between the conveyer and truck longitudinally of the conveyer, and a truck for supporting the opposite end of said conveyer having connections for permitting a universal pivotal movement of the conveyer with respect to said last mentioned truck.

3. A conveying system comprising a pair of trucks, a conveyer suspended from a frame mounted on one of said trucks at one end, and at its other end being supported by the remaining truck by connections permitting both a longitudinal and a pivotal horizontal movement of the conveyer with respect to the truck, and a boom conveyer pivotally mounted on the first mentioned truck below the suspended discharge end of said first mentioned conveyer.

1,153,852. HORSE-COLLAR. WEBSTER A. PARR, Indianapolis, Ind., assignor, by mesne assignments, of one-half to Gertrude E. Parr and one-half to Lillian M. Coons, Indianapolis, Ind. Filed Apr. 5, 1915. Serial No. 19,264. (Cl. 54—21.)

1. The combination with the upper ends of a horse collar, of a connecting plate hinged to one end of the collar and having a series of recesses therein, a projecting member

rigidly secured to the other end of the collar which projects through and fits snugly in any one of said recesses in the connecting plate, and clamping lever secured to said last-mentioned end of the collar which is adapted to extend through one of said recesses in the connecting plate and clamp it in locking position.



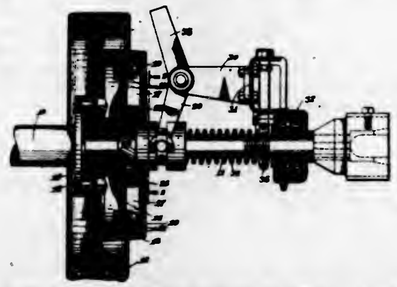
2. The combination with the upper ends of a horse collar, of a connecting plate hinged to one end of the collar and having a series of recesses therein, a projecting member rigidly secured to the other end of the collar which projects through and fits snugly in any one of said recesses in the connecting plate, and a fastening lever mounted in connection with said last-mentioned end of the collar and in such relation to the projecting member that said fastening and projecting member will project through adjacent recesses in said connecting plate and said fastening lever will not only clamp the connecting plate down in locking position, but will coöperate with said projecting member to prevent any relative movement of said connecting plate.

3. The combination with the upper ends of a horse collar, of a connecting plate hinged to one end of the collar and having a series of recesses therein, a projecting member rigidly secured to the other end of the collar which projects through and fits snugly in any one of said recesses in the connecting plate, and a clamping lever secured to said last-mentioned end of the collar and which is adapted to extend through one of said recesses in the connecting plate and clamp it in locking position, said fastening lever having inward extensions arranged so as to elevate and release said connecting plate when the fastening lever is being released.

4. The combination with the upper ends of a horse collar, of a connecting plate hinged to one end of the collar and having a series of recesses therein, a projecting member rigidly secured to the other end of the collar which projects through and fits snugly in any one of said recesses in the connecting plate, a spring plate secured to said last-mentioned end of the collar, and a fastening lever fulcrumed between its ends to said spring plate and adapted to extend through the recess in the connecting plate which is adjacent to the recess through which said projecting member extends for clamping the connecting plate down in locking position and the inner ends of said fastening lever are adapted to coöperate with said spring and hold said fastener in either its locking position or its released position.

5. The combination with the upper ends of a collar, of a metal plate secured to each of said ends, a connecting plate hinged to one of said plates and having a series of rectangular recesses therein, a rectangular projection secured to the plate on the other end of the collar adapted to extend through and fit snugly in any of said recesses in the connecting plate, a spring plate extending through a recess in the plate secured to the last-mentioned end of the collar and secured to the underside of said plate, and a fastening lever fulcrumed between its ends in the end of said spring plate in position to extend through the recess in said connecting plate which is adjacent to the recess through which said rectangular projection extends and said fastening lever having on its inner ends angular extensions which engage the metal plate to which said spring is secured so as to hold said fastening lever in its open or closed position and to release said connecting plate when said fastening lever is being released.

1,153,853. CLUTCH. OTTO G. PFEIFFER, Salt Lake City, Utah, assignor to Utahna Development Company, Salt Lake City, Utah, a Corporation of Utah. Filed Nov. 20, 1911. Serial No. 661,384. (Cl. 192—13.)



1. In a clutch, a pair of clutch members, one of said clutch members having an inside friction surface, a pair of flexible band shoes adapted to expand and engage said friction surface, means for supporting said shoes intermediate their ends on the other clutch member, constructed to permit free movement of said shoes at their points of support toward and from said friction surface, an arm pivoted on the free end of each shoe and loosely engaging the adjacent end of the other shoe, and an actuator loosely engaging said arms, whereby said actuator is loosely connected to the free ends of said shoes for expanding and moving them uniformly along their entire lengths radially toward said friction surface, and said parts being constructed and arranged to equalize the movements of said shoes into engagement with said friction surface and cause them to bear equally on said friction surface.

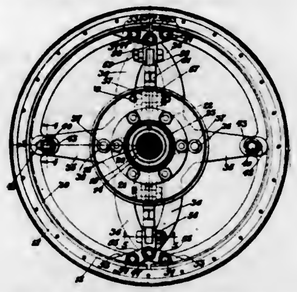
2. In a clutch, a pair of clutch members, a friction drum on one of said members, a band shoe adapted to expand and frictionally engage the inside surface of said drum, an arm on the other clutch member, means for supporting said shoe between its ends on said arm, a lever mounted on one of the free ends of said shoe and bearing against said arm, and a cam member for operating said lever, whereby said arm supports said lever against the thrust of said operating cam member.

3. In a clutch, a pair of clutch members, a friction drum on one of said members, a plurality of band shoes forming together a band or ring and adapted to expand and frictionally engage the inside surface of said drum, arms on the other clutch member, means for supporting said shoes between their ends on said arms, levers mounted on the free ends of said shoes and bearing, at their free ends, against said arms, and means for operating said levers.

1,153,854. CLUTCH. OTTO G. PFEIFFER, St. Louis, Mo., assignor to Utahna Development Company, Salt Lake City, Utah, a Corporation of Utah. Filed July 14, 1913. Serial No. 779,010. (Cl. 192—3.)

1. In a clutch, a pair of clutch members, one of said clutch members having a friction surface, a pair of flexible band shoes adapted to expand and engage said friction surface, means for supporting said shoes intermediate their ends on the other clutch member, constructed to permit free movement of said shoes at their points of support toward and from said friction surface, and means loosely connected to the free ends of said shoes for positively moving them toward and from said friction surface, constructed and arranged to equalize the movements of said shoes into engagement with said friction surface and cause them to bear equally on said friction surface.

2. In a clutch, a pair of clutch members, one of said clutch members having a friction surface, a pair of band shoes adapted to expand and engage said friction surface, means for supporting said shoes intermediate their ends on the other clutch member, constructed to permit free movement of said shoes at their points of support toward and circumferentially of said friction surface, and means loosely connected to the free ends of said shoes for moving them toward and from said friction surface, constructed and arrangd to equalize the movements of said shoes into engagement with said friction surface and cause them to bear equally on said friction surface.



3. In a clutch, a pair of clutch members, one of said clutch members having a friction surface, a pair of band shoes adapted to expand and engage said friction surface, means for supporting said shoes intermediate their ends on the other clutch member, constructed to permit free movement of said shoes at their points of support toward, along, and transversely of said friction surface, and means connected to the free ends of said shoes for moving them toward and from said friction surface, constructed and arranged to equalize the movements of said shoes into engagement with said friction surface and cause them to bear equally on said friction surface.

4. In a clutch, a pair of clutch members, one of said clutch members having a friction surface, a pair of band shoes adapted to expand and engage said friction surface, means for supporting said shoes intermediate their ends on the other clutch member, constructed to permit free movement of said shoes at their points of support, an actuator, and links connecting the free ends of said shoes with said actuator, constructed and arranged to equalize the movements of said shoes into engagement with said friction surface and cause them to bear equally on said friction surface.

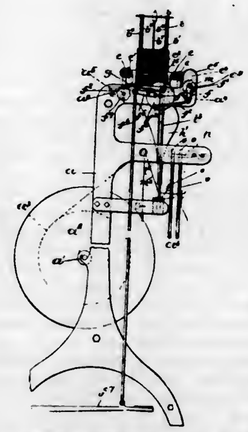
5. In a clutch, a pair of clutch members, one of said clutch members having a friction surface, a band shoe adapted to expand and engage said friction surface, means for supporting said band shoe intermediate its ends on the other clutch member, constructed to permit free movement of said shoe at its point of support toward and from said friction surface, and means connected to the free ends of said shoe for positively moving said shoe toward and from said friction surface, constructed and arranged to equalize the movements of the ends of said shoe into engagement with said friction surface.

[Claims 6 to 20 not printed in the Gazette.]

1,153,855. WARP-DRAWING-IN MACHINE. CHARLES E. BLAIR, Somerville, Mass., assignor to American Warp-Drawing Machine Company, a Corporation of Maine. Filed Dec. 23, 1903. Serial No. 186,801. (Cl. 139—94.)

1. The combination with a magazine for holding a plurality of thin drop-wires in a mass and lying flatly one against another with adjacent drop-wires in non-alinement, of a holder for holding said drop-wires flatly against one another in a condition of alinement and means for causing the transfer of the drop-wires one by one from said magazine to said holder.

2. A warp drawing-in machine comprising a magazine adapted for the reception of a pile of drop-wires arranged in angular position with relation to each other, oppositely acting detents for the discharge of a single drop-wire at the bottom of the pile, and means for operating said detents.



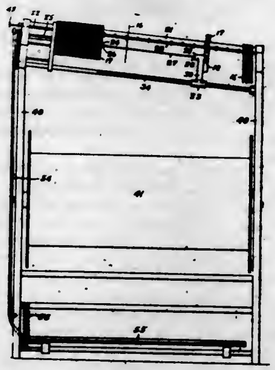
3. A warp drawing-in machine having a magazine provided with means for sustaining a plurality of drop-wires arranged in alternation, and means for successively releasing said drop wires.

4. A warp drawing-in machine having a magazine provided with means for receiving and sustaining a pile of drop-wires, each drop-wire being arranged at an angle to the drop-wire immediately above it, and means for successively releasing said drop wires.

5. A warp drawing-in machine having a magazine provided with means for receiving and sustaining a pile of drop-wires, each drop-wire being arranged at an angle to the drop-wire immediately above it, and means for effecting the discharge of the drop-wire at the bottom of the pile without permitting the discharge of the remaining drop-wires.

[Claims 6 to 61 not printed in the Gazette.]

1,153,856. WARP-DRAWING-IN MACHINE. CHARLES E. BLAIR, Boston, Mass., assignor to American Warp-Drawing Machine Company, a Corporation of Maine. Filed May 8, 1909. Serial No. 494,885. (Cl. 139—94.)



1. In a warp drawing-in machine, the combination with a series of two different forms of drop-wires alternately arranged face to face, and a suspending bar therefor, of means for supporting the bar at an inclination to the horizontal, means for retaining the series and releasing the

drop-wires one by one, and means for receiving the released drop wires and turning them edge to edge.

2. In a warp drawing-in machine, the combination with a series of two different forms of drop-wires alternately arranged face to face, and a suspending bar therefor, of means for supporting the bar at an inclination to the horizontal, means for retaining the series and releasing the drop-wires one by one, and a feeding device for turning the released drop-wires about a vertical axis and advancing them positively to operative position.

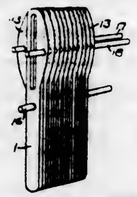
3. In a warp drawing-in machine, the combination with a series of two different forms of drop-wires alternately arranged face to face, and a suspending bar therefor, of means for supporting the bar at an inclination to the horizontal, means for retaining the series and releasing the drop-wires one by one, means for turning the released drop-wires edge to edge and feeding them to operative position, and means for feeding said turning and feeding means in the direction of the growth of the slay.

4. In a warp drawing-in machine, a feed shaft formed with a helix and adapted to extend through a series of drop-wires, and a guide in coöperative relation with said helix adapted to turn the drop-wires edge to edge and guide them in that relation.

5. In a warp drawing-in machine, a helix adapted to extend through and feed the drop-wires, a guide in cooperative relation with the helix adapted to turn and guide the drop wires in edge to edge relation, means for advancing the guide and helix in the direction of the growth of the slay, means for supporting a series of pendent drop-wires in a compact mass and releasing them one by one, and a two-part telescopic shaft including said helix and extending through the mass of drop-wires.

[Claims 6 to 54 not printed in the Gazette.]

1,153,857. DETACHED HEDDLE OR THE LIKE. CHARLES E. BLAIR, Dorchester, Mass., assignor to American Warp-Drawing Machine Company, a Corporation of Maine. Original application filed Dec. 23, 1903, Serial No. 186,301. Divided and this application filed Mar. 12, 1914. Serial No. 824,249. (Cl. 139—14.)



1. As a new article of manufacture, a harness consisting of individual, detached, metallic heddles, each composed of thin, resilient sheet material and each having a holding formation, and means for holding them in the form of an organized harness to present the holding formation in regular alternate variation for successive heddles of the harness.

2. As a new article of manufacture, a harness consisting of individual, detached, metallic heddles, each composed of resilient, thin sheet material, and having each a holding formation, means for holding the heddles in the form of an organized harness, the holding formation being presented in a varying position for successive heddles of the series whereby through the operation of heddle releasing means the heddles may be released singly from the series.

3. As a new article of manufacture, a harness consisting of individual, detached, metallic heddles composed of thin, resilient sheet material, each heddle having its flat face formed to present at some part thereof a holding part, and means for holding said heddles whereby the holding parts of successive heddles are differently positioned and uncovered by the body of the preceding heddle.

4. As a new article of manufacture, an independent detached heddle unsymmetrically formed with reference to a longitudinal central axis whereby a series of said heddles may be held in alternate varying arrangement to present each a holding part uncovered by the preceding heddle, the holding part in successive heddles being positioned on opposite sides of the longitudinal central axis of the heddle.

5. As a new article of manufacture, a harness composed of a series of independent, detached heddles each having a supporting portion and a holding portion, and means for supporting the same in the form of an organized harness with the holding portions of successive heddles out of line and uncovered by the preceding heddle.

[Claims 6 to 28 not printed in the Gazette.]

1,153,858. DETACHED HEDDLE OR THE LIKE. CHARLES E. BLAIR, Dorchester, Mass., assignor to American Warp-Drawing Machine Company, a Corporation of Maine. Original application filed May 8, 1909, Serial No. 474,885. Divided and this application filed Mar. 12, 1914. Serial No. 824,250. (Cl. 139—14.)



1. A harness comprising a series of individual heddles having means to support them in series, said heddles having thread receiving openings and being internally and differentially fashioned to receive means to determine the release of said heddles from the series in accordance with such differential fashioning.

2. A harness comprising a series of individual heddles having differentially arranged openings to receive means to determine the release of said heddles from the series.

3. A harness comprising a series of individual heddles having suspension openings, adjoining heddles of said series having differentially arranged openings to receive means controlling the release of the heddles singly and successively from the series.

4. A harness comprising a series of detached, independent heddles each composed of thin, flat sheet metal and having each a similar exterior, linear contour, but provided each with a releasing aperture, said heddles being assembled in series to present each a holding portion uncovered by a releasing aperture of the preceding heddle.

5. As a new article of manufacture, a harness comprising a series of detached, independent heddles, having each an aperture, and means for assembling the heddles in an alternately varying arrangement to present a holding portion of each heddle uncovered by the releasing aperture of the preceding heddle.

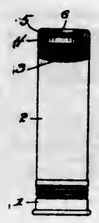
[Claims 6 to 24 not printed in the Gazette.]

1,153,859. PROCESS OF FORMING OPHTHALMIC LENSES. LUCIAN W. BUGBEE, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a Voluntary Association. Filed May 29, 1914. Serial No. 841,944. (Cl. 49—82.1.)



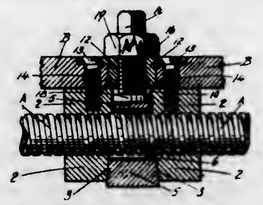
The process of forming an ophthalmic lens blank consisting in coating the two parts thereof with a suitable uniting medium whose fusing point is lower than that of the said parts, heating the parts to the fusing point of said connecting medium, continuing the heating action until the completion of the reaction of the connecting medium, placing the parts with the coated portions thereof in close engagement, and annealing the completed blank.

1,153,860. CARTRIDGE. PAUL BUTLER, Lowell, Mass., assignor to United States Cartridge Company, a Corporation of Massachusetts. Filed Jan. 15, 1914. Serial No. 812,203. (Cl. 102—15.)



A paper cartridge comprising a metallic breech-cup and a paper tube, the said cartridge containing a charge confined therein by a wad held in position by the inturned edge of the paper tube at the muzzle end of the cartridge; combined with a relatively thin disk of water-proofed paper slightly larger in diameter than the cavity at the muzzle end of the cartridge beyond the outer wad, the said disk being concavo-convex in shape.

1,153,861. SCREW ADJUSTING AND LOCKING DEVICE. JOB DUDLEY and HARRY EDWARD PLASTOW, Hamilton, Ontario, Canada, assignors of one-third to Frederick James Highland, Hamilton, Ontario, Canada. Filed May 3, 1915. Serial No. 25,586. (Cl. 90—22.)



1. In a screw adjusting and locking device, a feed-screw, screw-block screwed thereon and apart, a tool rest carriage, a bushing therein secured to the carriage and the blocks, a tapered draw-wedge having an opening therethrough around said screw sufficient for the adjustment of the wedge, and a recess in the upper part thereof, a bolt provided with a head to fit into said recess and adapted to raise the wedge, thereby locking the carriage, and means on the bolt to lock the same.

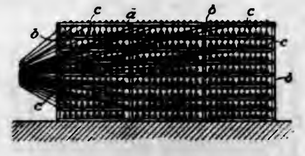
2. In a screw adjusting and locking device, a tool carriage, a feed-screw, blocks having tapered ends opposite one to the other on said feed-screw, a tapered draw-wedge, having a recess in the smaller end portion thereof, said wedge conforming to said tapered ends, and having an opening therethrough around said feed screw to allow adjustment, means to secure the carriage to the blocks, and means on the carriage end in said recess to adjust the wedge thereby locking the carriage to the feed screw.

3. In a screw adjusting and locking device, a screw, screw-blocks having tapered ends opposite one to the other and threaded on the feed screw, a tool carriage, means to secure the carriage to the blocks, a tapered draw-wedge having an opening therethrough around and of larger size than the feed-screw, fitting to and conforming to said tapered ends, and having a recess therein, and adjusting means extending through the carriage and into said recess adapted to adjust said wedge and thereby lock said blocks to said feed-screw.

4. In a screw adjusting and locking device, a screw, screw-blocks having tapered ends opposite one to the other threaded on the screw, a tool carriage, means for securing the carriage to the blocks, and to allow a slight widening of the space between said blocks, a tapered wedge fitting loosely on the feed screw and snugly between said blocks, and means in the wedge and means in and on the rest to engage with the first mentioned means to adjust said wedge and thereby lock the blocks, together with the rest, to the screw.

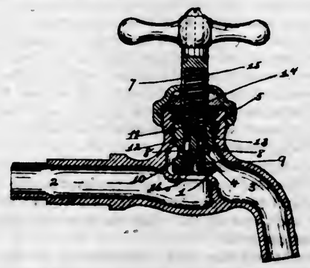
5. In a screw adjusting and locking device, a screw, blocks threaded on the screw and a distance apart, and tapered on their opposite ends, a tapered wedge fitting loosely on the screw and snugly between said blocks, for locking said blocks on said screw.

1,153,862. BOBBIN FRAME OR CREEL FOR WARPING-MACHINES. LOUIS FESSMANN and GEBHARD HAMMERLE, Augsburg, Germany. Original application filed Oct. 30, 1908, Serial No. 460,238. Divided and this application filed Mar. 8, 1912. Serial No. 682,408. (Cl. 242—131.)



The improved frame or creel for warping machines, etc., having converging opposite sides, each side composed of longitudinally-extending horizontal rails and uprights supporting said rails vertically one above the other, said rails and uprights arranged to form a number of compartments in each side, a plurality of upright bobbin or cop-carriers mounted on said horizontal rails in each compartment, each of said carriers adapted to support a group of bobbins or cops side by side in upright position, unwinding-guides supported by said horizontal rails above the said carriers, the intermediate horizontal rails supporting both a series of the said bobbin or cop carriers and the series of guides pertaining to the next lower series of bobbin or cop carriers, outstanding supports d', d', mounted on said rails, and vertical rods d, d, carried by the said supports and around which the yarns change direction after leaving the said guides.

1,153,863. SAFETY-FAUCET. CARL FRANK, Schenectady, N. Y., assignor of one-half to Louis A. Welch, Jr., Schenectady, N. Y. Filed Apr. 17, 1915. Serial No. 22,027. (Cl. 137—4.)

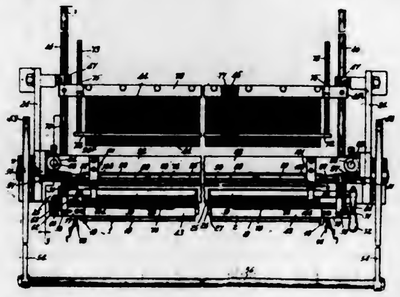


1. A faucet having in combination a main-valve-seat surrounding a main passageway therethrough; a hollow

main-valve provided with an inlet-opening through its seating end and with a lateral outlet-opening communicating with the outlet portion of said main passageway; a bushing secured within said inlet-opening in the main valve and having on its inner end a safety-valve-seat; and a spring-controlled safety-valve movable within said hollow main valve toward and from said safety-valve-seat.

2. A faucet having in combination a main-valve-seat surrounding a main passageway therethrough; a hollow main-valve provided with an inlet-opening through its seating end and with a lateral outlet-opening communicating with the outlet portion of said main passageway; a bushing secured within said inlet-opening in the main-valve and having on its inner end a safety-valve-seat; a safety-valve movable within the hollow main-valve toward and from said safety-valve-seat, said safety-valve having a screw-threaded stem and its seating end provided with means accessible through said bushing, whereby said safety-valve and its stem can be rotated; a nut fitting the stem of said safety-valve in feathered engagement with the hollow main-valve; and a coil-spring interposed between said nut and the inner end-wall of the hollow main-valve.

1,153,864. MACHINE FOR HANDLING TUFT-YARNS FOR CARPET-LOOMS. EDGAR F. HATHAWAY, Dorchester, and CHARLES LEA, Boston, Mass., assignors to American Warp-Drawing Machine Company, a Corporation of Maine. Filed Feb. 18, 1909. Serial No. 478,683. (Cl. 139—94.)



1. The combination with an alining guide for holding separated and in proper order the free ends of the tuft yarns in carpet manufacture, said guide having a series of teeth with intervening spaces to receive the yarns and having also means to close the spaces to prevent exit of the yarns, of a spool, and means for attaching the guide to the spool.

2. The combination with a spool for carrying tuft yarns in carpet manufacture of an alining guide for holding the free ends of the yarns separated and in proper order, said guide having a series of teeth with intervening spaces to receive the yarns and having also means to close the spaces to prevent exit of the yarns, and means carried by the guide for removably attaching the same to the spool.

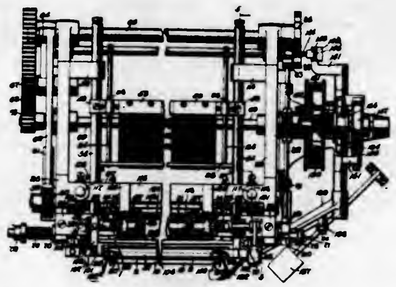
3. The combination with a spool for carrying tuft yarns in carpet manufacture of an alining guide for holding the yarns separated and in proper order while still permitting longitudinal draft thereof, and means for removably fastening said guide to said spool and maintaining the same pressed against the wound on yarns to prevent the unwinding thereof.

4. The combination with a spool for carrying tuft yarns in carpet manufacture, of a comb for holding the yarn ends separated and in proper order, and a resilient attachment device at each end of the comb for securing the same to the ends of the spool.

5. The combination with the spool 5, of the transfer comb 1, the retainer 18, and the attachment device 20 for the comb.

[Claims 6 to 64 not printed in the Gazette.]

1,153,865. MECHANISM FOR HANDLING TUFT-YARNS FOR CARPET-LOOMS. EDGAR F. HATHAWAY, Dorchester, and CHARLES LEA, Boston, Mass., assignors to American Warp-Drawing Machine Company, a Corporation of Maine. Filed Apr. 24, 1909. Serial No. 492,038. (Cl. 139—94.)



1. In a machine for threading tuft yarns for carpet manufacture, the combination with a plurality of needles, tube-holding means, means for guiding the needles prior to the entrance within the tubes, and means for alining the said guiding means.

2. In a machine for threading tuft yarns for carpet manufacture, the combination with a plurality of needles, of a needle guide adapted to advance with the needles toward the tubes and alining means for alining the needle guide prior to the entrance of the needles within the tubes.

3. In a machine for threading tuft yarns for carpet manufacture, the combination with means for holding the tube frame, a plurality of needles, means for moving the needles to pass through the tubes, a shearing member below the path of needle travel, and a needle guide adapted to advance with the needles to a position between the tubes and the shearing member.

4. In a machine for threading tube yarns for carpet manufacture, the combination with tube holding means, of a plurality of needles, means for moving the same, means for holding separated the free ends of the yarns, and means for moving the said yarn holding means after seisure of the yarns by the needles to free the yarns from the same.

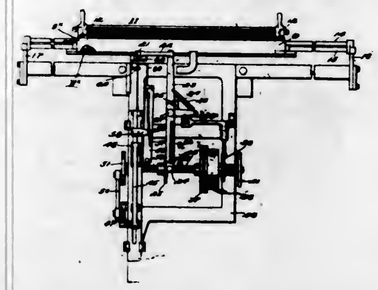
5. In a machine for threading tuft yarns for carpet manufacture, the combination with a holder for the free ends of the yarns, a plurality of needles, means for holding the tubes, means to advance the needles to engage the yarns and draw them through the tubes, and means for giving the holder a yarn-freeing movement after engagement of the needles with the yarns.

[Claims 6 to 19 not printed in the Gazette.]

1,153,866. MECHANISM FOR HANDLING TUFT-YARNS FOR CARPET-LOOMS. EDGAR F. HATHAWAY, Dorchester, and CHARLES LEA, Boston, Mass., assignors to American Warp-Drawing Machine Company, a Corporation of Maine. Filed Feb. 12, 1910. Serial No. 543,419. (Cl. 139—94.)

1. In a machine for tubing tuft yarns for carpet manufacture, the combination with tube holding means of a removable transfer comb for holding the body of tuft yarns in separated condition whereby they may be transferred in separated condition and applied to the machine, means for holding the comb on the machine in an alined relation to the tube holding means to hold the body of yarns taut and separated at the ends of the tubes, thread placing means, and means for causing said thread placing means to take the yarns from the comb and successively place them through successive tubes of the tube frame.

2. In a machine for tubing tuft yarns for carpet manufacture, the combination with tube holding means, yarn holding means for holding the yarns taut and separated and alined with the tubes thereon, a thread placing device, means for causing relative traverse between the thread placing device and yarns, means for alining the thread placing device with the successive tubes and the corresponding yarns and for reciprocatively projecting the same, and means for additionally moving the thread placing device positively to engage the yarns and take them directly from the yarn holding means.



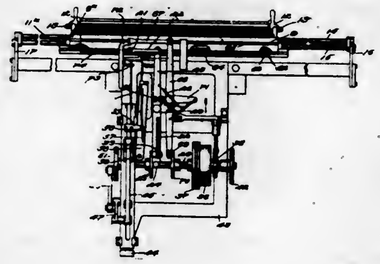
3. In a machine for tubing tuft yarns for carpet manufacture, the combination with means for holding a tube frame of a removable transfer comb or holder applicable to the machine in predetermined relation to the tubes whereby the yarns may be transferred and applied to the machine in a condition of predetermined separation, and maintained in an alined relation to the tubes, a thread placing device, means for causing relative traverse between the thread placing device on the one hand and the yarns and tubes on the other hand to cause the alinement of the thread placing device with successive tubes and the corresponding alined yarns, means for causing the thread placing device to act successively upon the alined yarn strands, and means for causing relative movement between the needle and a given yarn strand to provide for positive engagement of the latter by the former and for the taking of the yarns by the thread-placing device directly from the comb.

4. In a machine for tubing tuft yarns for carpet manufacture, the combination with means for holding a tube frame of a removable transfer comb or holder applicable to the machine in predetermined relation to the tubes whereby the yarns may be transferred and applied to the machine in a condition of predetermined separation, and maintained thereon in an alined relation to the tubes, a thread placing device, means for causing relative traverse between the thread placing device on the one hand and the yarns and tubes on the other hand to cause the alinement of the thread placing device with successive tubes and the corresponding alined yarns, means for causing the thread placing device to act successively upon the alined yarn strands, and means for causing relative movement between the needle and the body of yarn strands to provide positive engagement of a yarn strand by the needle and the taking of the yarn strands by the needle directly from the comb.

5. In a machine for tubing tuft yarns in carpet manufacture, the combination with means for holding a tube frame with its tubes of a removable comb or holder, said holder being applicable to the machine in predetermined relation to the tubes whereby yarns may be transferred and applied to the machine in a predetermined condition of separation and alinement with relation to the spacing of the tubes, yarn placing means, means for alining said yarn placing means with the alined tubes and yarns, and means for successively taking said alined yarn strands from the holder and placing them through the corresponding tubes.

[Claims 6 to 11 not printed in the Gazette.]

1,153,867. MECHANISM FOR HANDLING TUFT-YARNS FOR CARPET-LOOMS. EDGAR F. HATHAWAY, Dorchester, and CHARLES LEA, Boston, Mass., assignors to American Warp-Drawing Machine Company, a Corporation of Maine. Filed Feb. 12, 1910. Serial No. 543,420. (Cl. 139—94.)



1. In a machine for threading tuft yarns for carpet manufacture, the combination with tube holding means, means for holding the body of yarns in separated condition, and in predetermined relation to the corresponding tubes, thread placing means for acting successively upon the yarn strands to place them through the tubes of the tube frame and means for shifting said yarn holding means at each successive action of the thread placing means to insure positive engagement of the yarn strands by the thread placing means.

2. In a machine for threading tuft yarn for carpet manufacture, the combination with tube holding means of means for holding the yarn strands in separated condition and in predetermined relation to the corresponding tubes; a reciprocatory thread placing device; means for causing relative traverse between the said device and the said tubes to bring said thread placing device in alinement with successive tubes; means for imparting a thread taking movement to the said device; and means for shifting said yarn strand holding means with relation to the thread placing device during each thread taking movement of the latter.

3. In a machine for threading tuft yarns for carpet manufacture, the combination with tube holding means of means for holding the yarn strands in separated condition and in predetermined relation to the corresponding tubes; a reciprocatory thread placing device; means for causing relative traverse between the said device and the said tubes to bring said thread placing device in alinement with successive tubes; means for imparting a thread taking movement to the said device; and means for moving the body of yarn strands relatively to the thread placing device during each thread taking movement of the latter.

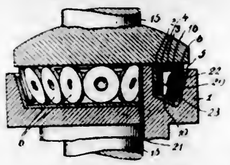
4. In a machine for threading tuft yarns for carpet manufacture, the combination with tube holding means of means for holding the body of yarn strands in separated condition and in predetermined relation to the corresponding tubes; a spool holder; a thread placing device; feeding means for causing a step-by-step movement between the thread placing device on the one hand and the tube frame, yarn holding means and spool on the other hand; means for reciprocating the thread placing device to project the same through succesive tubes after each step-by-step movement; and means for shifting the body of yarn strands near the end of the forward movement of the thread placing device to positively engage the foremost strand thereof with the said device.

5. The method of tubing tuft yarns which consists in holding the yarns in predeterminately separated condition and in predetermined relation to the tubes of a tube frame; engaging each strand or group of strands in succession by a tubing implement; repeatedly shifting the entire body of strands to cause positive engagement of

the selected strand by the implement; placing the selected strand in the tube and repeating the operation with successive tubes and successive strands.

[Claims 6 to 18 not printed in the Gazette.]

1,153,868. ANTIFRICTION-BEARING. WALTER B. LASHAR, Bridgeport, and THOMAS C. LUCE, Stratford, Conn. Filed May 22, 1915. Serial No. 29,724. (Cl. 64—50.)



1. In anti-friction bearings, a sheet steel race comprising a conical race guide and an integral conical bearing track and a substantially cylindrical race sleeve extending upward within said race guide, a series of inclined bearing disks coöperating with said race and each having an outer face provided with a central recess and with a convex surface engaging the conical race guide and having a central projecting retainer hub on its inner face and having conical bearing surfaces coöperating with said bearing track, a retainer sleeve permanently held within said race sleeve and having an integral retainer flange loosely coöperating with said retainer hubs to hold said bearing disks in service position and a support formed with a cast in socket within which said race is permanently secured.

2. In anti-friction bearings, a race comprising a conical race guide and an integral conical bearing track and a substantially cylindrical race sleeve extending upward within said race guide, a series of inclined bearing disks coöperating with said race and each having an outer face provided with a convex surface engaging the conical race guide and having a central projecting retainer hub on its inner face and having bearing surfaces coöperating with said bearing track, a retainer sleeve permanently held within said race sleeve and having an integral retainer flange loosely coöperating with said retainer hubs to hold said bearing disks in service position and a support formed with a cast in socket within which said race is permanently secured.

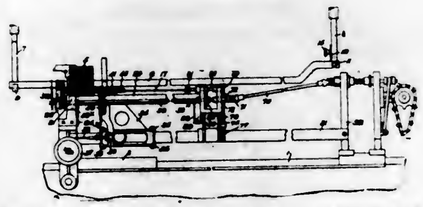
3. In anti-friction bearings, a race comprising a conical race guide and an integral conical bearing track and a race sleeve extending upward within said race guide, a series of inclined bearing disks coöperating with said race and each having an outer face provided with a convex surface engaging the conical race guide and having a central projecting retainer hub on its inner face and having bearing surfaces coöperating with said bearing track and a retainer sleeve permanently held within said race sleeve and having an integral retainer flange loosely coöperating with said retainer hubs to hold said bearing disks in service position.

4. In anti-friction bearings, a sheet metal race comprising a conical race guide and an integral conical bearing track and a race sleeve extending upward within said race guide, a series of inclined bearing disks coöperating with said race and each having a convex outer surface engaging the conical race guide, a central projecting retainer hub on its inner face and having conical bearing surfaces coöperating with said bearing track and a retainer sleeve permanently secured by said race sleeve and having an integral retainer flange loosely coöperating with said retainer hubs to hold said bearing disks in service position.

5. In anti-friction bearings, a race comprising a conical race guide and a conical bearing track and a race sleeve extending upward within said race guide, a series of inclined bearing disks coöperating with said race and each having a convex outer surface engaging the conical race guide, a central projecting retainer hub on its inner face and having bearing surfaces coöperating with said bearing track and a retainer permanently secured by said race sleeve and having a retainer flange loosely coöperating with said retainer hubs to hold said bearing disks in service position.

[Claims 6 to 9 not printed in the Gazette.]

1,153,869. TEXTILE-MACHINE. CHARLES LEA, Boston, Mass., assignor to American Warp-Drawing Machine Company, a Corporation of Maine. Filed Jan. 2, 1912. Serial No. 668,844. (Cl. 139—94.)



1. In a machine for selecting and positioning detached, thread-receiving loom elements, the combination with a rotary releasing device effective when operating in one direction only, and means for imparting a reciprocatory movement of rotation to said device.

2. In a machine for selecting and positioning detached thread-receiving loom elements, the combination with means for holding a plurality of groups of such elements, rotary releasing means coöperating with each group and effective when rotating in one direction only, and means for rotating said releasing means in opposite directions and for successively reversing the direction of rotation of each.

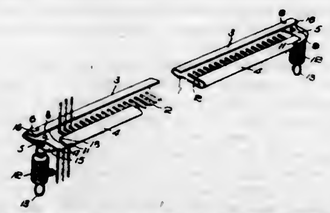
3. In a machine for selecting and positioning detached, thread-receiving loom elements, the combination with a stringer bar of an underlying support for said elements, said support being vertically adjustable to provide for elements of varying lengths.

4. In a machine of the class described, means for holding a plurality of thread-receiving loom elements in compact mass, said means having provision for the reception of elements of varying lengths and means for selecting said elements singly from the mass.

5. In a machine for releasing and positioning drop wires, the combination with means for holding the drop wires in compacted series, of an underlying support and means including a toothed holder providing for vertical adjustment of said support.

[Claims 6 to 24 not printed in the Gazette.]

1,153,870. YARN-HOLDER. CHARLES LEA, Boston, Mass., assignor to American Warp-Drawing Machine Company, a Corporation of Maine. Continuation in part of application Serial No. 533,408, filed Dec. 16, 1909. This application filed July 18, 1912. Serial No. 710,124. (Cl. 139—94.)



1. A holder for tuft yarns having a toothed comb formed of sheet material, a cap having a U-shaped cross section for the teeth of the comb, said cap having a recessed seat at each end and a resilient finger secured at each end of the comb and having a portion adapted to project transversely over the recessed end of the cap.

2. A transfer comb or holder for tuft yarns for transferring the yarns from the spooling machine in separated and prearranged pattern to the tubing machine, comprising a toothed comb between the teeth of which the yarns are adapted to be received, a cap to close the openings between the teeth and a resilient retaining means arranged to overlie transversely an end of the cap.

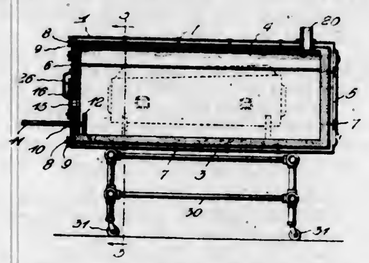
3. A transfer comb or holder for tuft yarns for transferring the yarns from the spooling machine in separated and pre-arranged pattern to the tubing machine, comprising a toothed comb between the teeth of which the yarns are adapted to be received, a cap to close the openings between the teeth and a retaining finger for the cap, the latter being recessed at its end to provide a seat for the finger.

4. A transfer comb or holder for tuft yarns for transferring the yarns from the spooling machine in separated and pre-arranged pattern to the tubing machine, comprising a toothed comb between the teeth of which the yarns are adapted to be received, a cap to close the openings between the teeth and retaining means for the cap, the latter provided with a seat for the retaining means.

5. A holder or transfer device for tuft yarns for transferring the yarns from the spooling machine to the tubing machine while held separated in pre-arranged pattern, comprising a toothed comb between the teeth of which the yarns are adapted to be received, said comb having a turned over bottom edge, a resilient retaining finger seated in the groove formed by the turned over bottom edge, and a single rivet for fastening the finger to the holder.

[Claims 6 to 10 not printed in the Gazette.]

1,153,871. PORTABLE CREMATORY. EDWARD DUDLEY LEWIS, Elmira, N. Y. Filed Nov. 5, 1914. Serial No. 870,449. (Cl. 110—3.)

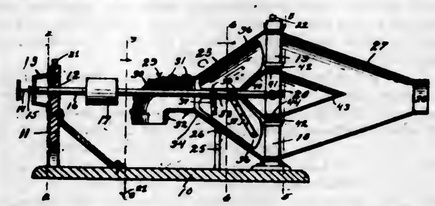


1. The combination with a cremating furnace having a flat substantially horizontal bottom, one end wall of said furnace having an opening contiguous to its lower edge, of a rectilinear hollow handle projecting slidably through said opening, means for supplying fuel to said handle, whereby its inner end constitutes a torch, and a scraping plate carried by said inner end and resting at its lower edge upon the flat bottom of the furnace, for the purpose set forth.

2. The combination with a cremating furnace having a flat substantially horizontal bottom, one end wall of said furnace having an opening contiguous to its lower edge, of a rectilinear handle projecting slidably through said opening and carrying a torch on its inner end, and a scraper likewise carried by said inner end and resting upon the flat bottom of the furnace for the purpose set forth.

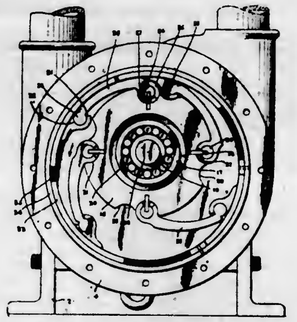
1,153,872. VENTILATOR-FAN. DAVID W. MATSLER, Kingston, Okla. Filed Nov. 11, 1914. Serial No. 871,607. (Cl. 230—11.)

1. A ventilator fan structure comprising a casing tapered at its inlet and outlet ends, a shaft journaled therein, a fan secured on said shaft, and an elbow casing secured on said main casing at its inlet end and comprising two similar sections hinged at one edge and detachably connected at their other edges.



2. A ventilator fan structure comprising a supporting base, an upright secured thereon, a frusto-conical shell having its large end secured by curved plates carried on said upright, a separable elbow casing connected with the smaller end of said shell, a shaft extending through said shell and journaled through said upright, a rotary fan secured on said shaft, a second shell secured to the larger end of said first named shell and terminating in a constricted discharge opening, and means carried by said upright member for deflecting air away from the center of said fan.

1,153,873. ROTARY PUMP. WILLIAM E. SHORE, Toronto, Ontario, Canada, assignor, by direct and mesne assignments, to The Franey-Shore Company, Wilmington, Del., a Corporation of Delaware. Filed Dec. 9, 1912. Serial No. 735,616. (Cl. 103—44.)



1. In a rotary pump, the combination with a cylinder, a rotary piston core eccentrically journaled in said cylinder and piston vanes pivotally connected to said core, of shoe members pivotally secured to the outer ends of said piston vanes, and rotatable means connected to one of said shoe members and engaging the remaining shoes and holding them in fixed relation to the axis of the cylinder.

2. In a rotary pump, the combination with a cylinder, a rotary piston core eccentrically journaled in said cylinder and piston vanes pivotally connected to said core, of shoe members pivotally secured to the outer ends of said piston vanes, and ring members rotatably supported concentric with the cylinder and operatively engaging said shoes and holding them in fixed relation to the axis of the cylinder.

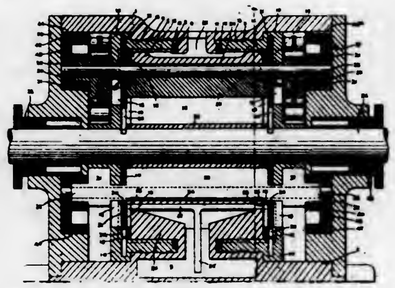
3. In a rotary pump, the combination with a cylinder, a rotary piston core eccentrically journaled in said cylinder and piston vanes pivotally connected to said core, of shoe members pivotally secured to the outer ends of said piston vanes, and heads closing the ends of said cylinder having annular grooves therein concentric with said cylinder and adapted to receive the laterally extending ends of said shoes to hold said shoes in operating contact with the surface of the cylinder.

4. In a rotary pump, the combination with a cylinder, a rotary piston core eccentrically journaled in said cylinder and piston vanes pivotally connected to said core, of shoe members pivotally secured to the outer ends of said piston vanes and having segmental members arranged at the ends thereof, and heads closing the ends of said cylinder and having annular grooves into which the said segmental members extend.

5. In a rotary pump, the combination with a cylinder, a rotary piston core eccentrically journaled in said cylinder and piston vanes pivotally connected to said core, of shoe members pivotally secured to the outer ends of said piston vanes and having segmental members arranged at the ends thereof, annular rings encircling said segmental members and forming a running contact therefor and forming a means for restraining the outward movement of the shoes and piston vanes due to centrifugal force, said rings being rotatively supported in the cylinder casing concentric with the inner cylinder wall.

[Claims 6 to 11 not printed in the Gazette.]

1,153,874. ROTARY COMPRESSOR. WILLIAM SHORE, Toronto, Ontario, Canada, assignor, by direct and mesne assignments, to The Franey-Shore Company, Wilmington, Del., a Corporation of Delaware. Filed Oct. 24, 1912, Serial No. 727,558. Renewed May 10, 1915. Serial No. 27,240. (Cl. 230—30.)



1. In a rotary compressor, a cylinder, a piston core rotatably supported eccentrically within said cylinder and having radial slots extending longitudinally thereof, shoe members arc-shaped in cross section engaging the inner wall of said cylinder, means for supporting said shoe members in fixed relation to the axis of said cylinder, and piston vanes pendantly hinged to said shoe members and extending into the radial slots in said piston core.

2. In a rotary compressor, a cylinder, a piston core rotatably supported eccentrically within said cylinder, rotary members arranged concentric with said cylinder, shoe members rigidly supported from said rotary concentric members and adapted to engage in running contact with the inner wall of said cylinder, and piston vanes pivotally connected to said shoe members and slidably engaging the said piston core.

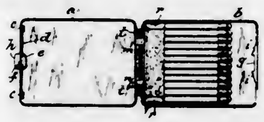
3. In a rotary compressor, a cylinder, a piston core rotatably supported eccentrically within said cylinder and having radial slots, rotary members concentrically journaled at the ends of said cylinder, shoe members arranged in running contact with the surface of said cylinder and rigidly connected to pairs of said rotary members, said shoes being independently rotatable within the cylinder, and piston vanes pivotally connected to said shoes and extending into and sliding in the radial slots in said piston core.

4. In a rotary compressor, a cylinder, a piston core rotatably supported eccentrically within said cylinder, rotary members arranged concentric with said cylinder, spindles extending through said cylinder and each fixedly secured at the ends in independently rotatable pairs of said rotary members, shoe members of arc-shaped cross section rigid with said spindles and engaging the inner wall of said cylinder in a running contact, and piston vanes having end portions encircling the said spindles and the central portions within the cylinder partly encircling said spindles, said piston vanes swinging freely on said spindles and extending into the radial slots in said piston core.

5. In a rotary compressor, a cylinder, a piston core rotatably supported eccentrically within said cylinder, rotary members arranged concentric with said cylinder, piston vanes slidably arranged in radial arrangement in said piston core, said vanes being bored longitudinally from end to end the bored hole cutting through the outer edge of the central portion, spindles extending through and rotatable in the bored holes in said vanes and secured at the ends in independently rotatable pairs of said rotary members in fixed relation to the axis of the cylinder, and arc-shaped shoe members secured to the central portions of said spindles projecting beyond the outer edge of the central portion of said vanes, said shoe members engaging the inner wall of the cylinder in running contact and having end portions of greater width than the shoes.

[Claim 6 to 23 not printed in the Gazette.]

1,153,875. MATCH-BOX. FRANZ A. FULLER, Newark, N. J., assignor to The J. E. Mergott Company, Newark, N. J., a Corporation of New Jersey. Filed Dec. 5, 1912. Serial No. 735,003. (Cl. 206—33.)

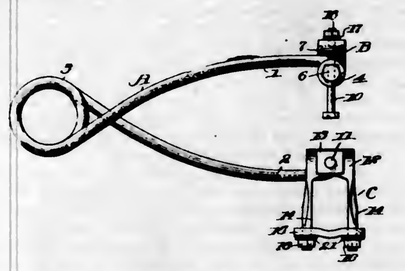


1. As a new article of manufacture, a case, comprising a pair of hinged body sections, means for locking the said body sections in their closed relation, a hinged receiving element or holder pivotally connected with the hinge of said body sections, the said holder and the said body section hinges being each provided with integral engaging stops having engagement with each other when the case is opened to carry the holder in one direction with one of said body sections and to limit the movement of the holder when moved in the direction of the other of said body sections.

2. As a new article of manufacture, a case, comprising a pair of hinged body sections, spring-actuated means for locking said body sections in their closed relation, a receiving element or holder pivotally connected with the hinge of said body sections, said holder having integral tubular extensions formed in opposite directions, said extensions on their outer faces being provided with stops, and the hinged sections of the case having integral tubular extensions, the outer tubular extension of each section being provided with a stop on its inner face to engage with the stops on the outer faces of the tubular extensions of the holder to limit the movement of the holder when the case is opened and to further limit the movement of the holder when moved in the direction of the other body section and a pintle connecting the holder with the body sections.

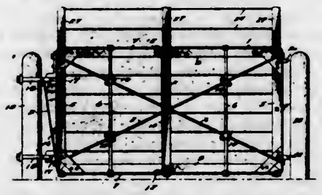
1,153,876. AUTOMOBILE SHOCK-ABSORBER. CHARLES LEE THOMAS, Canisteo, N. Y. Filed Aug. 20, 1914. Serial No. 857,756. (Cl. 21—105.)

A noiseless shock absorber having a spring arm provided with an eyelet member integral with the arm, a fastening device, a bolt passing through the eyelet of the eyelet member and through the fastening device pivotally connecting the member and fastening device, a shock absorbing spring member on said bolt, a nut on said bolt, a vertically disposed bolt member on said device, a shock absorbing spring member on said bolt member, a nut on said bolt member, said nut of said bolt and said nut of said bolt member in addition to serving as fastening means,



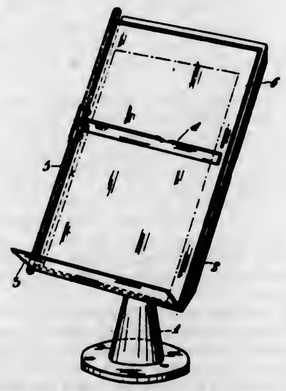
serving as means to tension the shock absorbing spring members.

1,153,877. CONSTRUCTION OF GATES. JOHN D. THRASHER, Effingham, Ill. Filed Jan. 5, 1915. Serial No. 643. (Cl. 256—73.)



A gate of the character specified consisting of a rectangular oblong frame constructed of a single piece of angle iron, a vertical center brace, means for hinging the gate to the gate post, a covering for the frame and a series of keeper bars secured to the frame and spaced slightly in front of the end pieces and center brace, said keeper bars extending above the top of the frame with their upper ends bent downwardly in parallel and spaced relation with the adjacent portions thereof and secured to the top member of the frame for the purpose specified.

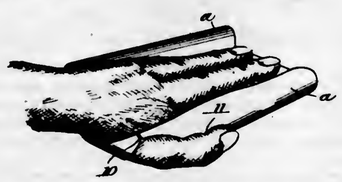
1,153,878. HOLDING DEVICE FOR MANUSCRIPTS, COPIES, AND THE LIKE. CARL GUSTAF KONSTANTIN ROSENBERG, Stockholm, Sweden. Filed Dec. 1, 1913. Serial No. 803,901. (Cl. 120—33.)



In a holding device for manuscripts, "copies" and the like, the combination of a supporting plate, a loose plate of a transparent material adapted to hold the manuscript on to the supporting plate, a bar secured to the transparent plate, and a ruler adapted to slide on the bar on the outside of the plate, substantially as and for the purpose set forth.

REISSUES.

13,977. WASHMITT. LAURA M. HICKS, Bloomington, Ind. Filed July 9, 1915. Serial No. 39,013. Original No. 1,132,475, dated Mar. 16, 1915, Serial No. 868,194. (Cl. 68—8.)



1. A wash mitt of the character described formed of a sheet of metal having a transversely corrugated surface with its edges rolled back to form finger receiving sockets, and with a thumb engaging formation, substantially as set forth.

2. A wash mitt of the character described consisting of a single metal plate having a corrugated surface and formed with integral finger receiving sockets on its edges and with a thumb receiving formation into which the thumb may be inserted, and with a thumb hold consisting of a projecting lip adjacent to said thumb receiving formation adapted to form a bearing for the ball of the thumb to enable the wearer to hold said mitt in place during use, substantially as set forth.

3. A wash mitt of the character described comprising a metal plate having a corrugated rubbing surface and finger receiving sockets, formed by rolling back its side edges at its outer end and formed with a thumb receiving formation with a slit in one side extending to the outside of the device, whereby said formation may be adjusted to the hand of the wearer and secured to the base of the thumb, substantially as set forth.

4. A wash mitt of the character described formed of a sheet of metal with its edges rolled back to receive the outside fingers of the hand and formed with a transversely corrugated surface, one edge having a thumb engaging formation and a projection adjacent thereto on which the ball of the thumb may bear, substantially as set forth.

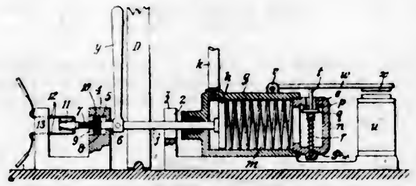
5. A wash mitt of the character described formed of a sheet of metal with its edges turned back to receive the outside edges of the hand, the surface of said wash mitt being corrugated to form a "rubbing" surface, and means on one edge of said wash mitt for engagement with the thumb for retaining said wash mitt in position on the hand when in use, substantially as set forth.

13,978. AUTOMATIC SAFETY-LOCK FOR DOORS. JOHN W. HULME, Jersey City, N. J., assignor to Consolidated Car Heating Company, Albany, N. Y., a Corporation of West Virginia. Filed Apr. 5, 1912. Serial No. 688,766. Original No. 990,877, dated May 2, 1911, Serial No. 585,702. (Cl. 39—94.)

1. In an automatic safety lock for doors, the combination with a door and a locking device, pneumatic devices for operating said door and said locking device supplied from the same supply line, electro-magnetic devices for controlling said door operating and lock operating devices, and means for simultaneously controlling said electro-magnetic devices.

2. In an automatic safety lock for doors, the combination with a door and a lock, of interconnected operating means for simultaneously and automatically actuating both the door and the lock, and for preventing the opera-

tion of one without the other, and interconnected controlling means for simultaneously and automatically controlling the operation of both the door and lock operating means, and for preventing the operation of one of said controlling means without the other.



3. In an automatic safety lock for doors, the combination with a door and a lock, of door operating means and lock operating means, common connections between said two operating means, whereby both operate simultaneously, controlling devices for the door operating means, controlling devices for the lock operating means, and means for actuating said controlling devices simultaneously.

4. In an automatic safety lock for doors, the combination with a door and a lock, of pneumatic means for actuating the door to open and close the same, pneumatic means for actuating the lock, pneumatic connections between said actuating means whereby the lock is released when the door is opened, and simultaneously actuated electro-magnetic controlling devices for said pneumatic actuating means for the door and lock.

5. In an automatic safety lock for doors, the combination with a door and a locking device, pneumatic devices for operating said door and said locking devices, electromagnetic devices for controlling said door operating and lock operating devices, and means for simultaneously controlling said electro-magnetic devices.

6. In an automatic safety lock for doors, the combination with a door and a lock therefor, of power devices for operating said door and lock, and separate devices controlling the operation of said door and lock power devices, said controlling devices being actuated from a source of power separate from that for actuating said door and lock power devices.

7. In an automatic safety lock for doors, the combination with a door and a lock therefor, of power devices for operating said door and lock, separate devices controlling the operation of said door and lock power devices, said controlling devices being actuated from a source of power separate from that for actuating said door and lock power devices, and of a different character.

8. In an automatic safety lock for doors, the combination with a door and a lock therefor, of power devices for operating said door and lock, separate devices controlling the operation of said door and lock power devices, said controlling devices being actuated from a source of power separate from that for actuating said door and lock power devices, and a common means for controlling said controlling devices.

9. In an automatic safety lock for doors, the combination with a door and a lock therefor, of power devices for operating said door and lock, separate devices controlling the operation of said door and lock power devices, said controlling devices being actuated from a source of power separate from that for actuating said door and lock power devices, and a common means for simultaneously controlling said controlling devices.

10. In an automatic safety lock for doors, the combination with a door and a lock, of power devices for operating said door and lock actuated by power from the same source, and separate devices controlling the operation of said door and lock power devices, said controlling devices being actuated from a source of power separate from that for actuating the door and lock power devices.

11. In an automatic safety lock for doors, the combination with a door and a lock, of power devices for operating said door and lock actuated by power from the same source, and separate devices controlling the operation of said door and lock power devices, and operated from a common source of power different in character from the power actuating the door and lock power devices.

12. In an automatic safety lock for doors, the combination with a door and a lock therefor, of power devices for operating said door and lock, and separate devices controlling the operation of said door and lock power devices, said controlling devices being actuated from a source of power separate from that for actuating said door and lock power devices, said lock being provided with means whereby the same may be manually operated.

13. In an automatic locking device for doors, the combination with a door and lock, of operating means for said lock, adapted to be quickly withdrawn from locking position, mechanism for causing the operating means to slowly return to locking position, and means for controlling said mechanism.

14. In an automatic locking device for doors, the combination with a door and lock, of a fluid pressure cylinder connected to operate the lock, provided with means for quickly withdrawing the lock and means carried by the cylinder for causing a slow return of the lock to locked position.

15. In an automatic locking device for doors, the combination with a door and lock, a fluid pressure cylinder, a piston and piston rod, and means for permitting leakage from one side of the piston to the other, to permit a slow return motion of the piston, and means carried by the cylinder for permitting pressure to escape therefrom.

16. In an automatic locking device for car doors, the combination with a door, of a motor for opening and closing the door, a controller therefor, an automatic lock for the door, and means for restoring the lock to locking engagement with the door in the event of the said motor failing to open the door.

17. In an automatic locking device for car doors, the combination with a door, of an operating pressure-motor therefor, means for unlocking the door and admitting pressure to the door motor, and means acting after the admission of pressure to automatically relock the door in the event of the pressure in the motor failing to open it.

18. In an automatic locking device for car doors, the combination with a door, of an operating motor therefor, a lock therefor, independent devices for releasing the lock and admitting power to the motor, and retarded restoring means for the lock permitting the action of the said motor between the releasing and the restoring of the lock.

19. In an automatic locking device for doors, the combination with a door and operating means therefor, of a lock, and automatic unlocking and relocking devices so timed with respect to each other as to permit the said operating means to act on the door.

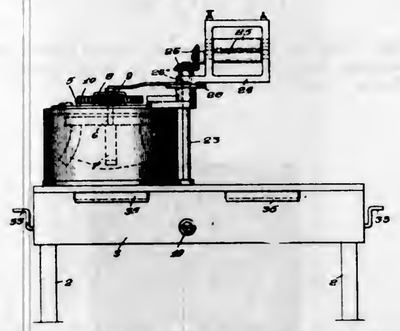
20. An automatic locking device for doors, comprising a fluid pressure cylinder, a piston and piston rod, fluid pressure connections at one side of the piston, a spring at the other side of the piston, means for permitting leakage around the piston, and an automatic valve for relieving the pressure.

21. An automatic locking device for doors, comprising a cylinder and piston, fluid pressure connections at one side of the piston, and an automatic valve at the other side of the piston, means for permitting leakage from one side of the piston to the other and a spring adapted to return the piston after its initial stroke.

13,979. GEARING. WILLIAM W. WINGER, Wolcott, Ind. Filed Jan. 8, 1914. Serial No. 811,092. Original No. 1,070,761, dated Aug. 19, 1913, Serial No. 632,599. (Cl. 74—50.)

1. In a machine of the class described, a supporting frame, a driving shaft, a vertical shaft operated thereby, gearing on said shaft, an operating mechanism supported on said shaft and movable in the arc of a circle around the same, reversing actuating gears mounted on said driving shaft, and means for clutching said gears to the shaft whereby said vertical shaft may be set in motion.

2. In a machine of the class described, a supporting frame, a vertical shaft, an operating mechanism mounted on said vertical shaft and adapted to rotate to different positions relative thereto, means to lock the operating mechanism in different positions on said shaft, a driving shaft, connections including a clutch between the driving shaft and the vertical shaft, and a rod controlling said clutch.



3. In a machine of the class described, a supporting frame, a vertical shaft, an operating mechanism mounted on said shaft and adapted to be swung to different positions relative thereto, said operating mechanism including a shaft extension having a bevel gear thereon, means to lock said operating mechanism in different positions around said vertical shaft, a driving shaft geared to the vertical shaft, clutch mechanism controlling the direction of rotation of said vertical shaft, and a rod controlling said clutch mechanism.

4. In a machine of the class described, a supporting frame, a vertical shaft, operating mechanism mounted on said shaft and adapted to be rotated to different positions relative thereto, means to lock said operating mechanism in different positions radially of said shaft, a drive shaft, gearing between the drive shaft and the vertical shaft, said gearing including a shiftable element for transmitting motion in either direction to said vertical shaft, and a rod controlling said shiftable element, said rod extending longitudinally of the supporting frame.

5. In a machine of the class described, a supporting frame, a horizontal driving shaft, a vertical shaft driven by the driving shaft, a frame member extending radially from the upper end of said vertical shaft and movable in the arc of a circle about said shaft, means on said operating mechanism adapted to receive power from the vertical shaft, clutch controlled driving connections controlling the operation of said vertical shaft and means for controlling said clutch.

6. In a machine of the class described, a supporting frame, a horizontal driving shaft, a vertical shaft driven thereby, an operating mechanism extending radially from the upper end of said vertical shaft and movable in the arc of a circle about said shaft, means on said operating mechanism adapted to receive power from the vertical shaft, means to lock said operating mechanism in different positions, clutch controlled driving connections controllingling the operation of said shaft, a rod extending longitudinally of said frame and controlling the clutch, said rod arranged to be operated from the end of the frame.

7. In a machine of the class described, a supporting frame, a horizontal driving shaft, a vertical shaft driven thereby, an operating mechanism extending radially from the upper end of the vertical shaft, said shaft being the pivotal point about which said operating mechanism rotates, means for locking said operating mechanism in different positions about said shaft, gearing between said operating mechanism and said vertical shaft, and a clutch controlling the transmission of power between said shafts, and means for controlling said clutch.

8. In a machine of the class described, a supporting frame, a horizontal driving shaft, a vertical shaft, means for operating the vertical shaft from the horizontal shaft, a horizontally disposed operating mechanism, a bearing on the vertical shaft for said operating mechanism to adapt said mechanism to be moved in the arc of a circle around said vertical shaft, means for locking the operating mechanism in different adjusted positions, and gearing connecting with said mechanism for transmitting motion thereto from the vertical shaft.

9. In a machine of the class described, a supporting frame, a vertical shaft, a driving shaft, oppositely disposed gears loosely mounted on said driving shaft, an operating mechanism supported from the aforesaid vertical shaft, clutch connections between the vertical and the driving shafts through the aforesaid gears, and means for operating said clutch connections to drive the vertical shaft in either direction.

10. In a machine of the class described, a supporting frame, a horizontal driving shaft journaled in said frame and adapted to be driven from a suitable source of power, a vertical shaft, an operating mechanism supported from the upper end of the vertical shaft and movable about the axis of said shaft, gearing at the upper end of the vertical shaft for driving said operating mechanism, gearing including a clutch connecting the aforesaid shafts and adapted to reverse the movement of the vertical shaft, and a rod controlling the operation of the clutch.

11. In a machine of the class described, a supporting frame, a horizontal driving shaft, a mechanism support extending vertically through said frame and adapted to be driven from the driving shaft, an operative mechanism supported thereon and adapted to rotate about said vertical support, gearing connections between said mechanism and the vertical support, clutch devices coacting with said gearing connections for reversing the operation of said vertical support and means for locking the operating mechanism in adjusted positions about said vertical support.

12. In a machine of the class described, a supporting frame, a driving shaft journaled in said frame and adapted to be driven from a suitable source of power, a vertical shaft, an operating mechanism disposed at right angles to said vertical shaft, a supporting bearing between said mechanism and the vertical shaft to adapt said mechanism to be moved about said vertical shaft and locked in adjusted positions, clutch controlled gearing between the vertical shaft and the driving shaft and a rod connected with said clutch mechanism for reversing the direction of movement of said vertical shaft and the operating mechanism.

13. In a machine of the class described, a driving mechanism comprising a horizontal shaft, a bevel gear loosely mounted on said shaft, a clutch splined to said shaft and adapted to clutch said bevel gear, a vertical shaft and at its lower end a bevel gear in mesh with said first mentioned bevel gear, a crank pin on the upper end of said vertical shaft, a lever arm, a segmental gear on said lever arm, a pinion meshing with said segmental gear and a link connection between said lever arm and said crank pin.

14. In a machine of the class described, a driving mechanism comprising a horizontal shaft, a bevel gear loosely mounted on said shaft, a clutch splined to said shaft and adapted to clutch said bevel gear, a vertical shaft and at its lower end a bevel gear in mesh with said first mentioned bevel gear, a crank pin on the upper end of said vertical shaft, a level arm, a segmenttal gear on said lever arm, a pinion meshing with said segmental gear, and an adjustable link connection between said lever arm and said crank pin.

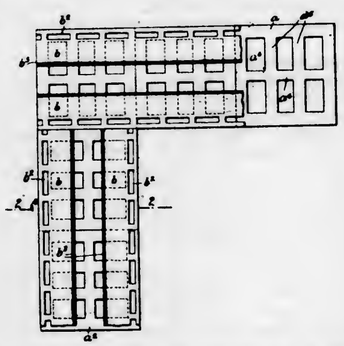
15. The combination of a pivotally supported mechanism adapted to be moved in the arc of a circle, driving gearing adapted for operating the mechanism including a part for imparting opposite directions of rotation to the mechanism elements, part of said gearing being mounted on said member to move therewith, and manually operated means for controlling said gearing.

16. In a machine of the class described, a main frame, a vertical shaft, an operating mechanism having a frame pivotally mounted on said vertical shaft and adapted to be moved to different angular positions relative to the main frame, a power driven element and connections between said power driven element and said operating mechanism to operate the same in its different positions relative to said vertical shaft, said connections including reversing means for actuating the vertical shaft in either direction as desired.

17. In a machine of the class described, a main frame, a vertical shaft, an operating mechanism pivotally mounted on said shaft and adapted to be moved to different angular positions relative thereto, actuating means including a power driven element, said power driven element adapted to be thrown into and out of operative relation with parts of said actuating means for driving said operating mechanism in either direction.

18. In a machine of the class described, a supporting frame, a horizontal driving shaft adapted to be driven from a suitable source of power, a vertical shaft, gearing between said driving shaft and the vertical shaft, an operating mechanism rotatable about said vertical shaft at the upper end thereof, means for locking said mechanism in different operative positions, gears including a clutch mechanism connecting the vertical shaft and the operating mechanism, and a rod connected with said clutch mechanism for reversing the direction of movement of the vertical shaft.

13,980. BINDER FOR HOLLOW TILE BUILDING-BLOCKS. HERBERT H. SMITH, Bay Shore, N. Y. Filed Apr. 3, 1915. Serial No. 19,055. Original No. 1,113,585, dated Oct. 13, 1914, Serial No. 783,093. (Cl. 72—103.)



1. A binder for use in the construction of walls of hollow building tiles or blocks, consisting of a thin strip or strips of sheet material of less transverse width than said walls, and provided adjacent one side edge with slots or openings extending longitudinally thereof and adapted to register with a side wall of said tiles or blocks, the other side edge of said strip or strips being bent upwardly.

2. A binder for use in the construction of walls of hollow building tiles or blocks, consisting of a thin strip or strips of sheet material of less transverse width than said walls, and provided adjacent one side edge with slots or openings extending longitudinally thereof and adapted to register with a side wall of said tiles or blocks, the other side edge of said strip or strips being bent upwardly, and the body portion of said strip or strips being also provided at predetermined intervals with slots or openings extending transversely of the strip.

3. A binder for the hollow building blocks or tiles of a wall structure comprising a relatively continuous strip of sheet material extending across the open ends of a plurality of the blocks whereby to bind a plurality of the blocks together and of less transverse width than the blocks to avoid blocking the air passages through the blocks, said strip having slots in the edge portion thereof registering with the side walls of the blocks and having the inner edge portion thereof bordering the openings in the blocks solid to hold the mortar.

DESIGNS.

47,807. LEVERS LACE. RICHARD LESLIE BIRKIN, Nottingham, England. Filed July 19, 1915. Serial No. 40,774. Term of patent 3½ years.



The ornamental design for Levers lace as shown.

47,808. LEVERS LACE. RICHARD LESLIE BIRKIN, Nottingham, England. Filed July 19, 1915. Serial No. 40,775. Term of patent 3½ years.



The ornamental design for Levers lace as shown.

47,809. LEVERS LACE. RICHARD LESLIE BIRKIN, Nottingham, England. Filed July 19, 1915. Serial No. 40,776. Term of patent 3½ years.



The ornamental design for Levers lace as shown.

47,810. LEVERS LACE. RICHARD LESLIE BIRKIN, Nottingham, England. Filed July 19, 1915. Serial No. 40,777. Term of patent 3½ years.



The ornamental design for Levers lace as shown.

47,811. TATTING-SHUTTLE. ALBERT B. COLLINGBOURNE, Chicago, Ill. Filed June 28, 1915. Serial No. 36,870. Term of patent 3½ years.



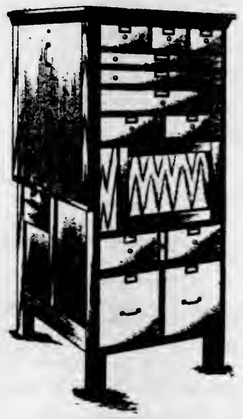
The ornamental design for a tatting shuttle, as shown.

47,812. PERMANENT MAGNET. ELISHA BARTON CUTTEN, Dayton, Ohio. Filed June 9, 1915. Serial No. 33,190. Term of patent 14 years.



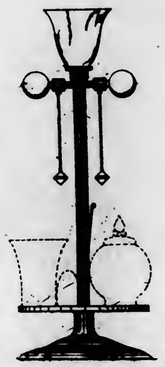
The ornamental design for a permanent magnet, as shown.

47,813. CABINET-DESK. THOMAS J. EDWARDS, Canton, Ohio. Filed Nov. 27, 1914. Serial No. 874,344. Term of patent 7 years.



The ornamental design for a cabinet desk, as shown.

47,814. COMBINED TABLE-LAMP, SIGNAL, AND TRAY. JOHN E. ERICKSON, Minneapolis, Minn. Filed Apr. 12, 1915. Serial No. 20,970. Term of patent 3½ years.



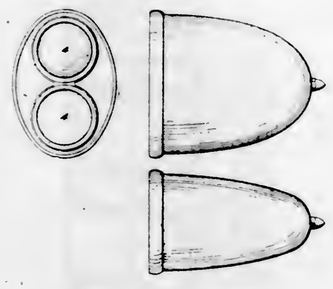
The ornamental design for a combined table lamp, signal and tray, as shown.

47,815. RING. JOHN F. FABER, Brooklyn, N. Y. Filed June 3, 1915. Serial No. 31,998. Term of patent 7 years.



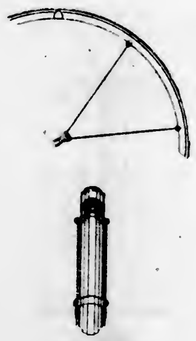
The ornamental design for a ring, as shown.

47,816. LAMP. JONATHAN S. GREEN, Pittsburgh, Pa. Filed July 15, 1913. Serial No. 779,224. Term of patent 14 years.



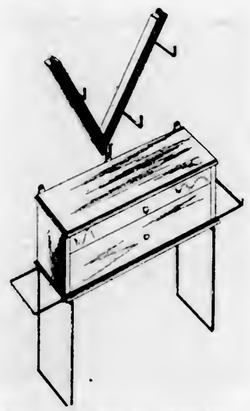
The ornamental design for a lamp as shown.

47,817. MUD-GUARD AND BRACKET THEREFOR FOR A MOTOR-CYCLE OR SIMILAR DEVICE. WALTER R. GREEN, Chicago, Ill. Filed Mar. 20, 1915. Serial No. 15,960. Term of patent 14 years.



The ornamental design for a mud guard and bracket therefor, for a motorcycle or similar device, as shown.

47,818. COMBINATION-DRESSER. ASBURY H. HAMILTON, Brooklyn, N. Y. Filed May 24, 1915. Serial No. 30,205. Term of patent 7 years.



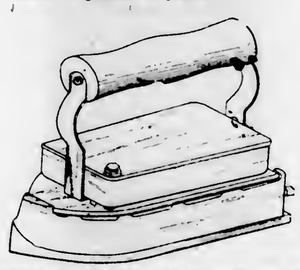
The ornamental design for a combination dresser, as shown.

47,819. BELT. JOHN HANZEL, Columbus, Ohio. Filed June 22, 1915. Serial No. 35,725. Term of patent 7 years.



The ornamental design for a belt, as shown.

47,820. SELF-HEATING SAD-IRON. RALPH E. HART, Fort Wayne, Ind. Filed June 17, 1915. Serial No 34,747. Term of patent 14 years.



The ornamental design for a self-heating sad-iron, as shown.

47,821. TABLE. HARRY HUSKEY, Philadelphia, Pa., assignor to Smith, Kline & French Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 5, 1915. Serial No. 12,432. Term of patent 14 years.



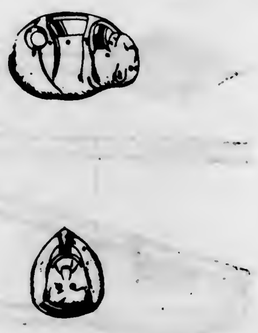
The ornamental design for a table as shown and described.

47,822. BARBER'S SIGN. FRANK P. KEMPF, Jasper, Ind. Filed June 18, 1915. Serial No. 34,946. Term of patent 7 years.



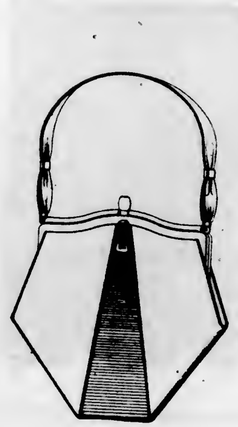
The ornamental design for a barber's sign, as shown.

47,823. WATCH-CHARM. MILTON A. LACEY, Bath, Ill. Filed June 22, 1915. Serial No. 35,693. Term of patent 3½ years.



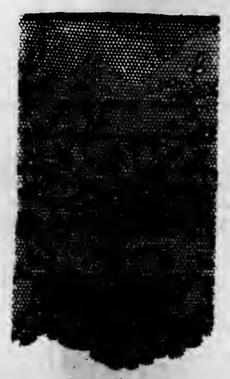
The ornamental design for a watch charm, as shown.

47,824. HAND-BAG OR SIMILAR ARTICLE. HYMAN MARGOLIN, New York, N. Y. Filed Jan. 30, 1915. Serial No. 5,328. Term of patent 3½ years.



The ornamental design for a hand bag or similar article as shown.

47,825. LACE FABRIC. EMILE J. OZANNE, New York, N. Y., assignor to Regina Lace Company, a Corporation of Massachusetts. Filed June 23, 1915. Serial No. 35,958. Term of patent 3½ years.



The ornamental design for a lace fabric, as shown.

47,826. LACE FABRIC. EMILE J. OZANNE, New York, N. Y., assignor to Regina Lace Company, a Corporation of Massachusetts. Filed June 23, 1915. Serial No. 35,959. Term of patent 3½ years.



The ornamental design for a lace fabric, as shown.

47,827. WATER-BAG. CHARLES H. PLACE, Mamaroneck, N. Y., assignor to New York Mackintosh Clothing Company, New York, N. Y., a Corporation of New York. Filed Mar. 16, 1915. Serial No. 14,813. Term of patent 7 years.



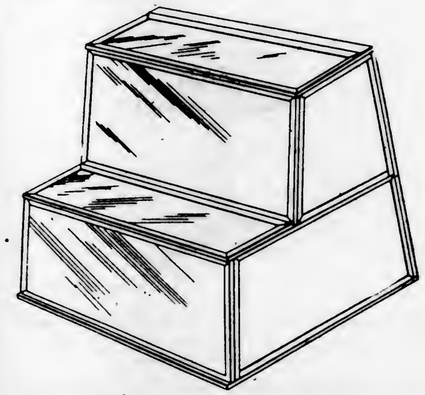
The ornamental design for a water bag, as shown.

47,828. CARD. WILLIAM B. POWELL, Cleveland, Ohio, assignor to The Sherwin-Williams Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 30, 1915. Serial No. 37,387. Term of patent 3½ years.



The ornamental design for a card as shown.

47,829. DISPLAY-CASE. PAUL RAPPAPORT, New York, N. Y. Filed Apr. 30, 1915. Serial No. 25,074. Term of patent 7 years.

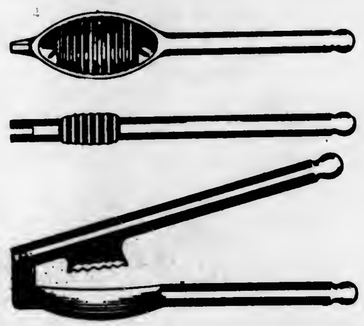


The ornamental design for a display case substantially as shown.

47,830. TIRE. HUGO W. RAYMANN, Portland, Oreg. Filed Feb. 25, 1915. Serial No. 10,635. Term of patent 7 years.

The ornamental design for a tire, as shown.

47,831. NUTCRACKER. BYRON S. ROSENBLATT, Chicago, Ill. Filed June 25, 1915. Serial No. 36,393. Term of patent 7 years.



The ornamental design for a nut-cracker, as shown.

47,832. ORNAMENTED PAPER. HENRY S. SLAYTER, Belmont, Mass. Filed Nov. 24, 1914. Serial No. 873,832. Term of patent 14 years.



The ornamental design for ornamented paper, as shown.

47,833. ORNAMENTED PAPER. HENRY S. SLAYTER, Belmont, Mass. Filed Nov. 24, 1914. Serial No. 873,833. Term of patent 14 years.



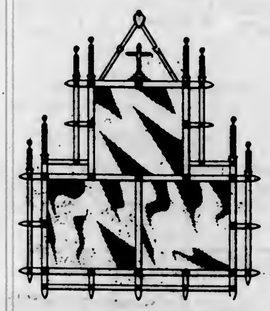
The ornamental design for ornamented paper, as shown.

47,834. ORNAMENTED PAPER. HENRY S. SLAYTER, Belmont, Mass. Filed Nov. 24, 1914. Serial No. 873,834. Term of patent 14 years.



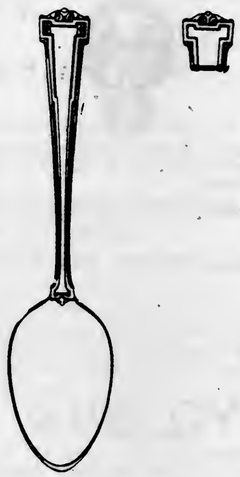
The ornamental design for ornamented paper, as shown.

47,835. PICTURE-FRAME. PAUL SZABO, South Bend, Ind. Filed June 22, 1915. Serial No. 35,691. Term of patent 7 years.



The ornamental design for a picture frame, as shown.

47,836. SPOON, FORK, OR SIMILAR ARTICLE. HENRY L. WALLACE, Wallingford, Conn. Filed June 5, 1915. Serial No. 32,464. Term of patent 3½ years.



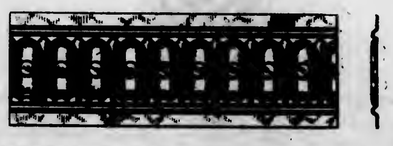
The ornamental design for a spoon, fork or similar article, as shown.

47,837. SPOON, FORK, OR SIMILAR ARTICLE. HENRY L. WALLACE, Wallingford, Conn. Filed June 5, 1915. Serial No. 32,465. Term of patent 3½ years.



The ornamental design for a spoon, fork or similar article, as shown.

47,838. METALLIC BAND OR BORDER. EDWIN L. WHITE, New York, N. Y., assignor to J. H. White Mfg. Co., Brooklyn, N. Y., a Corporation of New York. Filed Apr. 16, 1915. Serial No. 21,922. Term of patent 7 years.



The ornamental design for a band or border as shown.

47,839. EMBLEM OR SIMILAR ARTICLE OF JEWELRY. MOSES WOLFE, New York, N. Y. Filed June 30, 1915. Serial No. 37,390. Term of patent 3½ years.



The ornamental design for an emblem or similar article of jewelry as shown.

47,840. EMBLEM OR SIMILAR ARTICLE OF JEWELRY. MOSES WOLFE, New York, N. Y. Filed June 30, 1915. Serial No. 37,391. Term of patent 3½ years.



The ornamental design for an emblem or similar article of jewelry as shown.

TRADE-MARKS

PUBLISHED SEPTEMBER 14, 1915.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 64,161. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) THE WESTERN CARTRIDGE CO., Alton, Ill. Filed June 13, 1912.

Nublend

Particular description of goods.—Cartridges.
Claims use since the early part of 1909.

Ser. No. 71,120. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE COAST PRODUCTS CO., St. Louis, Mo. Filed June 16, 1913.

COPCO

Particular description of goods.— Canned Vegetables, Dried Fruits, and Glassed or Jarred Fruits.
Claims use since June 1, 1913.

Ser. No. 71,401. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CONSOLIDATED RUBBER TIRE COMPANY, (now by change of name Kelly-Springfield Tire Company of Jersey City, N. J., a Corporation of New Jersey.) Jersey City, N. J., and New York, N. Y. Filed June 27, 1913.

KELLY ANT-SLIP SPRINGFIELD TREAD

Particular description of goods.—Pneumatic Tires.
Claims use since the 1st day of December, 1912.

Ser. No. 75,272. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) VICTOR ELECTRIC COMPANY, Chicago, Ill. Filed Jan. 17, 1914.

COMBISTAT

Particular description of goods.—Appliances or Devices for Applying Electricity to the Body for Therapeutic Purposes.
Claims use since on or about Sept. 1, 1913.

Ser. No. 79,474. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SERGENT & COMPAGNIE, Paris, France. Filed July 1, 1914.

GUELDY

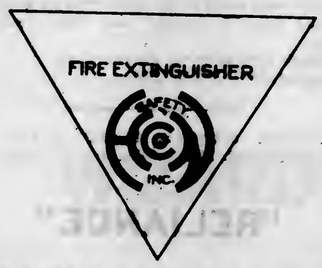
Particular description of goods.—Hygienic Products of Perfumery Extracts and Toilet Waters, Face-Powders, and Pastes.
Claims use since Nov. 8, 1909.

Ser. No. 79,505. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. J. BADENOCH CO., Chicago, Ill. Filed July 2, 1914.



Particular description of goods.—Prepared Mixed Feed for Cattle.
Claims use since June 25, 1914.

Ser. No. 83,617. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HANSEN-NIETER SAFETY CO. INC., New York, N. Y. Filed Dec. 2, 1914.



No claim is made to the words "Fire Extinguishers."
Particular description of goods.—Fire-Extinguishers.
Claims use since about the middle of August, 1914.

Ser. No. 83,610. (CLASS 31. FILTERS AND REFRIGERATORS.) STEINFELD BROS., New York, N. Y. Filed Dec. 31, 1914.

"JEWEL"

Particular description of goods.—Refrigerators.
Claims use since 1893.

Ser. No. 84,176. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) ALVIN H. KELLER, Sioux Falls, S. D. Filed Jan. 28, 1915.



No claim is made herein to the words "Tuberculin Plate," apart from the mark shown in the drawing.
Particular description of goods.—Tuberculin Test-Plates.
Claims use since Aug. 15, 1914.

Ser. No. 84,422. (CLASS 5. ADHESIVE.) BINNEY & SMITH COMPANY, East Orange, N. J., and New York, N. Y. Filed Feb. 10, 1915.



No claim being made to the words "Hay's Marine Glue," "Sets and Stays in Seams," and "Has Tenacity and "Vitality."
Particular description of goods.—Glue.
Claims use since Oct. 1, 1914.

Ser. No. 84,698. (CLASS 2. RECEPTACLES.) JOSEPH E. MENO, Detroit, Mich. Filed Feb. 23, 1915.

"RELIANCE"

Particular description of goods.—Message-Cases or Message-Receptacles for Vessels.
Claims use since Jan. 15, 1914.

Ser. No. 85,351. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THAYER & CO., INC., New York, N. Y. Filed Mar. 23, 1915.



No claim is made to the gears except in connection with the mark shown on the drawing.
Particular description of goods.—Vehicle-Gears.
Claims use since Aug. 2, 1913.

Ser. No. 85,394. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN CECIL CROWE, Detroit, Mich. Filed Mar. 25, 1915.

TRADE MARK



Consisting of the representation of a crow and applicant's name and signature. The words "Trade Mark" and "Detroit, Mich." are disclaimed.
Particular description of goods.—Herb Tablets.
Claims use since Jan. 1, 1914.

Ser. No. 85,552. (CLASS 12. CONSTRUCTION MATERIALS.) TOMPKINS-KIEL MARBLE CO., New York, N. Y. Filed Mar. 30, 1915.

T. K. C CHAMPVILLE

Particular description of goods.—Block and Sawed Marbles, Stone Onyx Serpentine Slate and Mosaic Plaquettes, Granito, Cream, Green and White Marbles for High-Grade Building and Art Marble Work.
Claims use since Dec. 5, 1909.

Ser. No. 85,849. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JABURG BROTHERS, New York, N. Y. Filed Apr. 10, 1915.



Particular description of goods.—Nuts, Corn-Syrup, Doughnut-Flour, Paste Composed of Cornstarch and Sugar for Cake-Fillers, also Almond and Nut Pastes, Creams, Fruit Preserves, Fruit Jellies, Mince-Meat, Powdered Milk, Dried Eggs, Frozen Eggs, Oleomargarin, Oleo Shortenings, Egg Whip-Powder, Meringue-Powder, Angel-Food-Cake Powder, Charlotte-Russe Powder, Custard-Powder, Pudding-Powders, and Pie-Fillers Composed of Cooked Fruits and Powdered Fruits.
Claims use since 1907.

Ser. No. 86,037. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JABURG BROS., New York, N. Y. Filed Apr. 19, 1915.



The words "A Mark of Excellence, Jaburg Bros., New York," being disclaimed, except as associated with the mark as shown.
Particular description of goods.—Wheat-Flour for Baking Purposes, Canned Fruits, Powdered Cocoa, Flavoring Extracts for Food, Dried Fruits, Shelled Nuts, Seeds used in Food, and Spices.
Claims use since Apr. 8, 1915.

Ser. No. 86,310. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) CRESSON-MORRIS COMPANY, Philadelphia, Pa. Filed May 1, 1915.



Particular description of goods.—Steam-Condensers.
Claims use since the 7th day of April, 1915.

Ser. No. 86,343. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE COLORADO POTATO FLAKE AND MFG. CO., Denver, Colo. Filed May 3, 1915.

M and G

Particular description of goods.—Saratoga Chips.
Claims use since Mar. 1, 1913.

Ser. No. 86,416. (CLASS 2. RECEPTACLES.) ONA E. SMITH, San Jose, Cal. Filed May 5, 1915.



No claim being made to the words "Fruit Container" apart from the mark shown on the drawing, nor the container.
Particular description of goods.—Paper Fruit-Container.
Claims use since Mar. 1, 1915.

Ser. No. 86,463. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WIZARD PRODUCTS CO., Chicago, Ill. Filed May 7, 1915.

WIZARD

Particular description of goods.—Stove-Polish, Polishing-Cloths, Mop-Cleaning Preparation, and Carpet-Cleaning Sweeping Compound.
Claims use since the 10th day of December, 1914.

Ser. 86,498. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CROWDER WHITE, Newport News, Va. Filed May 8, 1915.

"EST-ENDA"

Particular description of goods.—Remedies for Kidney, Bladder, and Urinary Disorders, Jaundice, Headache, Neuralgia, Toothache, Dyspepsia, Indigestion, Loss of Appetite, Dizziness, Biliousness, Costiveness, Liver Complaints, Malaria, Chills, Fever, Diarrhea, Inflammatory Rheumatism, Muscular Rheumatism, Sciatic Rheumatism, Rheumatic Gout, Lumbago, Sore Throat, and Chronic Blood and Skin Diseases, and for Lotions, Liniments, Injections for Urinary Troubles, Disinfectants, Tonic Capsules, Hair-Tonics, Sexual Tonic Elixirs and Pills, and Corn-Removers.

Claims use since on or about the 1st of May, 1915.

Ser. No. 86,541. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. C. HEMINGWAY & CO., Syracuse, N. Y. Filed May 11, 1915.

ALPINE

Particular description of goods.—Canned Fruits and Vegetables.

Claims use since Mar. 25, 1883.

Ser. 86,550. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KARL ALBERT PRINZLER, Pittsburgh, Pa. Filed May 11, 1915.

E-Z-LAX

Particular description of goods.—Laxative Tablets or Capsules.

Claims use since Jan. 1, 1912.

Ser. No. 86,664. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. G. GORDON CO., Birmingham, Ala. Filed May 17, 1915.

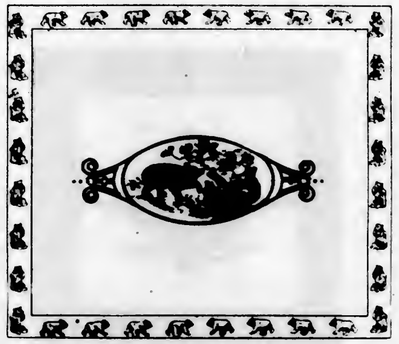


The portrait being that of J. G. Gordon.

Particular description of goods.—A Medicinal Rubbing-Oil for the Relief of Soreness, Cough-Syrup, Liniments, a Medicinal Preparation for the Treatment of Disorders of the Kidneys, a Medicinal Preparation for Relief of Indigestion and Pains in the Stomach, a Medicinal Preparation for Relief of Soreness of the Womb to be Used with a Fountain Syringe, and Stomach, Fever, Blood, and Nerve Tonics.

Claims use since Feb. 15, 1915.

Ser. No. 86,721. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BEAR BROTHERS CO., Chicago, Ill. Filed May 19, 1915.



Particular description of goods.—Dry Pie-Fillings and Meringue-Powders.

Claims use since about January, 1903.

Ser. No. 86,770. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) CARPENTER-MORTON COMPANY, Boston, Mass. Filed May 20, 1915.

COLORITE

Particular description of goods.—Liquid Paints, Varnishes for Coloring and Finishing Straw Goods and Ratan Goods.

Claims use since July 26, 1898.

Ser. No. 86,779. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THOS. J. HAMMOND, Fresno, Cal. Filed May 20, 1915.

POPPY



Particular description of goods.—Figs and Raisins.

Claims use since 1900.

Ser. No. 86,780. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THOS. J. HAMMOND, Fresno, Cal. Filed May 20, 1915.



Particular description of goods.—Figs and Raisins.

Claims use since 1900.

Ser. No. 86,856. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE HYDRAULIC PRESSED STEEL COMPANY, Cleveland, Ohio. Filed May 24, 1915.



The word "Hydraulic" being disclaimed except as shown in conjunction with the other features of the mark.

Particular description of goods.—Automobile-Frames, Side Rails, Brake-Drums, Hub-Flanges, Motor-Pans, Tunnel-Plates, Equalizer-Bars, Step-Hangers, Running-Boards, Lathe-Pans, Hand-Truck Frames, and Axle-Housings.

Claims use since about the 5th day of December, 1914.

Ser. No. 86,858. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) WILLIAM P. KERN, Chicago, Ill. Filed May 24, 1915.

HAR-KER

Particular description of goods.—Polishes for Furniture, Pianos, Bar-Fixtures, Office-Fixtures, Bank-Fixtures, Automobiles, and Carriages.

Claims use since December, 1902.

Ser. No. 86,921. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SANDS-BUCKLEY COMPANY, Pittsburgh, Pa. Filed May 26, 1915.

NU-MINT

No claim being made to the word "Mint" apart from the mark shown in the drawing.

Particular description of goods.—Chewing-Gum.

Claims use since May 1, 1915.

Ser. No. 86,986. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CALIFORNIA FRUIT BEVERAGE COMPANY, Los Angeles, Cal. Filed May 29, 1915.

Tok-C

Particular description of goods.—A Fruit or Artificial-Fruit Syrup Used to Make Non-Alcoholic or Soft Drinks, and Also Such Syrups Ready Mixed With Carbonated Water.

Claims use since Apr. 7, 1915.

Ser. No. 87,076. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHARLES B. KNOX COMPANY, INC., Johnstown, N. Y. Filed June 3, 1915.



Particular description of goods.—Gelatin.

Claims use since Aug. 5, 1913.

Ser. No. 87,077. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHARLES B. KNOX COMPANY, INC., Johnstown, N. Y. Filed June 3, 1915.



Particular description of goods.—Gelatin.

Claims use since June 25, 1913.

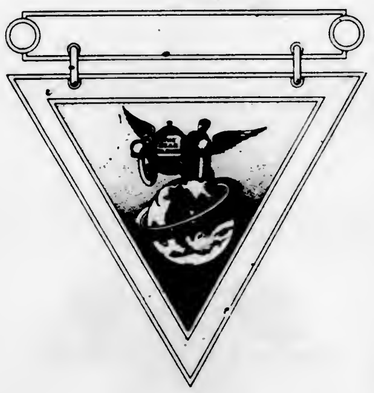
Ser. No. 87,112. (CLASS 15. OILS AND GREASES.) SPEEDOLENE LUBRICANT COMPANY, Malden, Mass. Filed June 4, 1915.

RELIANCE

Particular description of goods.—Lubricants and Lubricating Oils and Greases.

Claims use since May 1, 1915.

Ser. No. 87,113. (CLASS 15. OILS AND GREASES.) SPEEDOLENE LUBRICANT COMPANY, Malden, Mass. Filed June 4, 1915.



Applicant disclaims the words "The Gear Silencer" as any part of its mark.

Particular description of goods.—Lubricants, Lubricating Oils and Greases.

Claims use since May 1, 1915.

Ser. No. 87,135. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) INTERNATIONAL MOTOR COMPANY, New York, N. Y. Filed June 5, 1915.



Particular description of goods.—Cylinders and Crank-Casings.

Claims use since about February, 1913.

Ser. No. 87,154. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MABEL WILHELMINA SHAND, New York, N. Y. Filed June 5, 1915.



"Orminia"

Particular description of goods.—Toilet Articles Consisting of Preparations for Stimulating, Nourishing, and Beautifying the Skin, Muscles, and Hair.

Claims use since June 1, 1913.

Ser. No. 87,161. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BORDEN'S CONDENSED MILK COMPANY, Jersey City, N. J., and New York, N. Y. Filed June 7, 1915.



No claim being made to the words "Selected Milk Pasteurized," "Grade A Milk."

Particular description of goods.—Milk, Cream, and Ice-Cream.

Claims use since Mar. 16, 1915.

Ser. No. 87,193. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) OTIS ELEVATOR COMPANY, Jersey City, N. J., and New York, N. Y. Filed June 8, 1915.



Particular description of goods.—Elevators, Escalators, Railways, Endless Carriers, Inclined Railways, Blast-Furnace Hoists, and Gravity Spiral Conveyers.

Claims use since Mar. 27, 1915.

Ser. No. 87,220. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HARRY M. MANSPEAKER, Oklahoma, Okla. Filed June 10, 1915.



Particular description of goods.—A Treatment for Throat, Lung, Liver, Kidney, and Bladder Diseases.

Claims use since the 5th of June, 1915.

Ser. No. 87,283. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE BRAND MANUFACTURING CORPORATION, Brooklyn, N. Y. Filed June 14, 1915.



No claim being made to the word "Perfection" apart from the mark shown in the drawing.

Particular description of goods.—Vacuum-Cleaners.

Claims use since Apr. 14, 1915.

Ser. No. 87,341. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) FOX CUTLERY CO., Milwaukee, Wis. Filed June 16, 1915.



Particular description of goods.—Razors, Pocket-Knives, Butcher-Knives, Kitchen-Knives, Scissors, and Sheers.

Claims use since Apr. 21, 1884.

Ser. No. 87,359. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CARLSTEN-WILLIAMS COMPANY, Chicago, Ill. Filed June 17, 1915.



No claim is made to the representation of a pneumatic tire and the words "Silver Medal" apart from the other features of the mark as shown in the drawing.

Particular description of goods.—Pneumatic Vehicle-Tires, Including Pneumatic-Tire Casings and Inner Tubes.

Claims use since Feb. 1, 1915.

Ser. No. 87,375. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) TOCH BROTHERS, New York, N. Y. Filed June 17, 1915.

"R.I.W."

REMEMBER IT'S WATERPROOF

R.I.W.

The words "Remember It's Waterproof" are not claimed except as used with other features of the mark shown.

Particular description of goods.—Ready-Mixed Water-Proof Paints for Forming Protective Coatings on Masonry, Concrete, Wood, Metal, and Like Materials for Protection Against Water, Acid, Alkali, Fumes, Rust, or Deterioration.

Claims use since September, 1895.

Ser. No. 87,483. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) S. S. PIERCE CO., Boston, Mass. Filed June 21, 1915.

OVERLAND

Particular description of goods.—Italian Pastes Comprising Spaghetti, Vermicelli, Noodles, Macaroni, and "Alphabets."

Claims use since June 16, 1915.

Ser. No. 87,650. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANCES B. TUCKER, Kansas City, Mo. Filed June 28, 1915.



No claim is made to the exclusive use of the words "Trade Mark" or "Foot Relief."

Particular description of goods.—Foot-Relief Powders.

Claims use since June 26, 1915.

Ser. No. 87,659. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUIE PHILLIPS, New York, N. Y. Filed June 29, 1915.

ENTOL

No claim being made to the words "Trade Mark" except as shown in the drawing.

Particular description of goods.—An Antiseptic Lotion.
Claims use since Apr. 22, 1915.

Ser. No. 87,660. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PURITAN PHARMACEUTICAL CO., St. Louis, Mo. Filed June 29, 1915.

Puritan Beauty

Particular description of goods.—Talcum Powder, Toilet Water, Tooth-Paste, Tooth-Powder, Face-Cream, Face-Powder, Rouge, Nail-Polish, Face-Lotion, Hair-Tonic, Perfume, Deodorant, Hair-Remover, Skin-Bleach, and Eye-Brow Pencils.
Claims use since January, 1909.

Ser. No. 87,706. (CLASS 39. CLOTHING.) GEORGE R. JONES COMPANY, Manchester, N. H. Filed July 2, 1915.

Bobby Boots

No claim being made to the word "Boots" apart from the mark shown in the drawing.

Particular description of goods.—Boots and Shoes Made of Leather or Canvas, with Leather, Felt, or Rubber Soles.
Claims use since May 17, 1915.

Ser. No. 87,721. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) HENRY G. SHERWOOD, Richwood, W. Va. Filed July 2, 1915.

SHERWOOD'S
MAGNETIC FOOT PADS

No claim being made for the words "Magnetic Foot Pads."

Particular description of goods.—Magnetic Foot-Pads.
Claims use since June 15, 1915.

Ser. No. 87,722. (CLASS 15. OILS AND GREASES.) STANDARD OIL COMPANY, Richmond, Cal. Filed July 2, 1915.

CALOL

Particular description of goods.—Fuel-Oil and Road-Oil.
Claims use since the 14th day of May, 1915.

Ser. No. 87,738. (CLASS 12. CONSTRUCTION MATERIALS.) THE KELLEY ISLAND LIME & TRANSPORT COMPANY, Cleveland, Ohio. Filed July 3, 1915.



Said trade-mark consists of a picture of bust or head with the word "Marble" on one side thereof and the word "Lime" on the other.

Particular description of goods.—Lime.
Claims use since about Jan. 1, 1888.

Ser. No. 87,741. (CLASS 12. CONSTRUCTION MATERIALS.) THE KELLEY ISLAND LIME & TRANSPORT COMPANY, Cleveland, Ohio. Filed July 3, 1915.

CRESCENT
BRAND

Said trade-mark consists of a star and crescent, partially surrounded by the words "Crescent Brand." Disclaims the use of the word "Brand" apart from the mark shown in the drawing.

Particular description of goods.—Lime.
Claims use since about Jan. 1, 1890.

Ser. No. 87,749. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FREDERICK A. REUTHER, Detroit, Mich. Filed July 3, 1915.

AUTO-TOWN



Particular description of goods.—A Preparation for the Treatment of Tuberculosis.
Claims use since June 1, 1915.

Ser. No. 87,780. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) IRVING R. LEDERER, Providence, R. I. Filed July 6, 1915.

FLUORON

Particular description of goods.—Soldering-Flux.
Claims use since June 29, 1915.

Ser. No. 87,781. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) METAL STAMPINGS CORPORATION, Streator, Ill. Filed July 6, 1915.

HYGENO

Particular description of goods.—Carpet-Sweepers.
Claims use since Jan. 21, 1915.

Ser. No. 87,796. (CLASS 10. FERTILIZERS.) UNION MEAT CO., Portland, Oreg. Filed July 6, 1915.

BEAVER

Particular description of goods.—Fertilizer.
Claims use since May, 1910.

Ser. No. 87,809. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) MECCA MANUFACTURING & SPECIALTY CO., New York, N. Y. Filed July 7, 1915.

MECCA
400

Particular description of goods.—Automobile-Tires of Rubber and Leather, Inner Tubes, and Piston-Rings.
Claims use since April, 1912.

Ser. No. 87,836. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) AMERICAN CHAIN COMPANY, INCORPORATED, New York, N. Y., and Bridgeport, Conn. Filed July 9, 1915.

A C

Particular description of goods.—Base-Metal Chain.
Claims use since June 29, 1915.

Ser. No. 87,853. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JACOB S. MORSE, Boston, Mass. Filed July 9, 1915.

N.T.E.Co.

Particular description of goods.—Repaired Type-Writers.
Claims use since Mar. 1, 1915.

Ser. No. 87,854. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MASSEY-HARRIS CO., LIMITED, Toronto, Ontario, Canada. Filed July 9, 1915. Under ten-year proviso.

MASSEY-HARRIS

Particular description of goods.—Corn-Binders, Grain-Binders, Reapers, Rakes, Mowers, Hay-Tedders, Hay-Loaders, Disk Harrows, Harrow-Carts, Drag-Harrows, Spring-Tooth Lever-Harrows, Cultivators, Corn-Cultivators, Hoe-Drills, Disk Drills, Show-Drills, Grain and Fertilizer Drills, Manure-Spreaders, Cream-Separators, Root Cutters and Pulpers, Straw-Cutters, Hay and Ensilage Cutters, and Gasolene-Engines.
Claims use since Feb. 11, 1892.

Ser. No. 87,856. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE OHIO BUTTERINE CO., Cincinnati, Ohio. Filed July 9, 1915.

CHURNWELL

Particular description of goods.—Oleomargarin.
Claims use since July 8, 1913.

Ser. No. 87,864. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) FOUR WHEEL DRIVE AUTO CO., Clintonville, Wis. Filed July 10, 1915.



Particular description of goods.—Motor-Driven Trucks.
Claims use since July 14, 1911.

Ser. No. 87,925. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE INTER-STATE GROCER CO. INC., Joplin, Mo. Filed July 14, 1915.

BIG HORN



Particular description of goods.—Rolled Oats, Fruit and Berry Jelly, Chilli Sauce, Tomato Catsup, Canned Gooseberries, Canned Asparagus, Canned Tuna, Dried Prunes, Canned Beans, Canned Beets, Canned Grapes, Canned Spinach, Canned Apple-Butter, Mince-Meat, and Roasted Coffee.
Claims use since Feb. 15, 1910.

Ser. No. 87,927. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE WALTER M. LOWNEY COMPANY, Boston, Mass. Filed July 14, 1915.

Verite

Particular description of goods.—Candy.
Claims use since July 1, 1915.

Ser. No. 87,937. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TEXAS GUM COMPANY, (INC.,) Temple, Tex. Filed July 14, 1915.



Particular description of goods.—Chewing-Gum.
Claims use since the 23d day of June, 1915.

Ser. No. 87,939. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) R. C. WILLIAMS & CO., New York, N. Y. Filed July 14, 1915.



Particular description of goods.—Canned Beef-Stew.
Claims use since September, 1914.

Ser. No. 87,947. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) DBORM NON-HONING PASTOSTROP CO., New York, N. Y. Filed July 15, 1915.

DBORM

Particular description of goods.—Razor-Strops and Dressings therefor.
Claims use since about June 15, 1915.

Ser. No. 87,951. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE NULOMOLINE COMPANY, New York, N. Y. Filed July 15, 1915.

NULOMOLINE

No claim is made for the word "The" used in the said trade-mark.
Particular description of goods.—Nulomoline, a Syrup, a Product of Pure Cane-Sugar.
Claims use since Nov. 1, 1910.

Ser. No. 87,959. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN VANDEN BERG, Mahwah, N. J. Filed July 15, 1915.



Particular description of goods.—Honey.
Claims use since July 2, 1915.

Ser. No. 87,979. (CLASS 32. FURNITURE AND UPHOLSTERY.) CHARLES F. WILEY, Elwood, Ind. Filed July 16, 1915.



No claim being made to "Kitchen Aids Representing Greater Values, Elwood—Ind." apart from the mark shown in the drawing.
Particular description of goods.—Kitchen-Cabinets, Kitchen-Tables, Kitchen-Safes, and Kitchen-Chairs.
Claims use since May 1, 1915.

Ser. No. 88,007. (CLASS 15. OILS AND GREASES.) THE CUDAHY REFINING COMPANY, Chicago, Ill. Filed July 19, 1915.

Shamrock

Particular description of goods.—Lubricating Oils and Greases, Especially so-called "Differential-Grease" and "Transmission-Grease."
Claims use since about the 1st day of July, 1914.

Ser. No. 88,012. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) S. EWART COMPANY, Pittsburgh, Pa. Filed July 19, 1915.

Seco

Particular description of goods.—Dried Fruit.
Claims use since June 1, 1905.

Ser. No. 88,018. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. L. KRAFT & BROS CO., Chicago, Ill., and New York, N. Y. Filed July 19, 1915.

Jitney

Particular description of goods.—Cheese.
Claims use since June 15, 1915.

Ser. No. 88,021. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LA MANNA, AZEMA & FARNAN, New York, N. Y. Filed July 19, 1915.

TERNAY

Particular description of goods.—Sardines.
Claims use since about twenty-five years last past.

Ser. No. 88,028. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SIMMONS & HAMMOND MANUFACTURING CO., Portland, Me. Filed July 19, 1915.



Particular description of goods.—Candy.
Claims use since January, 1914.

Ser. No. 88,032. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TEXAS GUM COMPANY, INC., Temple, Tex. Filed July 19, 1915.

ANGELUS

Particular description of goods.—Chewing-Gum.
Claims use since June 23, 1915.

Ser. No. 88,036. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EVERETT PACKING CO., Everett, Wash. Filed July 20, 1915.

GOLDEN GLOW

Particular description of goods—Canned Salmon.
Claims use since Mar. 29, 1915.

Ser. No. 88,038. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EVERETT PACKING CO., Everett, Wash. Filed July 20, 1915.

GOLDEN WEST

Particular description of goods—Canned Salmon.
Claims use since Oct. 17, 1913.

Ser. No. 88,039. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EVERETT PACKING CO., Everett, Wash. Filed July 20, 1915.

OCEAN SPRAY

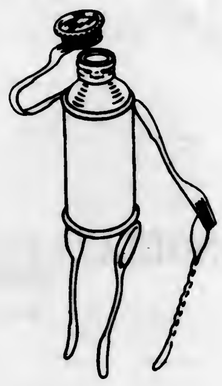
Particular description of goods.—Canned Salmon.
Claims use since Sept. 15, 1913.

Ser. No. 88,073. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GUGGENHIME & COMPANY, San Francisco, Cal. Filed July 21, 1915.

MOSQUE

Particular description of goods.—Dried Fruits.
Claims use since July 12, 1915.

Ser. No. 88,089. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) RECKITTS (U. S. A.) LTD., New York, N. Y., and New Brunswick, N. J. Filed July 21, 1915.



Particular description of goods.—Metal-Polishes.
Claims use since June 28, 1915.

Ser. No. 88,143. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN B. GRAHAM, Boston, Mass. Filed July 23, 1915.

YUALL

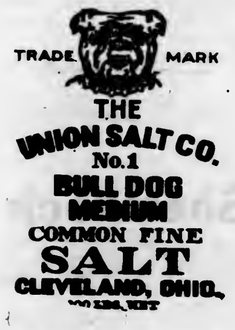
The letters "Yuall," as shown in the accompanying drawing, in plain block letters.
Particular description of goods.—A Chemical Combination for Internal Use for Relief and Cure of Dyspepsia and Stomach Troubles.
Claims use since July 1, 1915.

Ser. No. 88,146. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROME IMPORTING CO., New York, N. Y. Filed July 23, 1915.



The trade-mark consists of a pictorial representation of a statue purporting to be Christopher Columbus upon a raised platform. Partially surrounding the statue are two olive-branches which cross underneath the platform. The printed matter "Oil Superior Quality," "Brand," "Cottonseed Salad Oil Flavored Slightly with Pure Olive Oil. A Compound Packed in N. Y." is not claimed.
Particular description of goods.—Cotton-Seed Salad-Oil Slightly Flavored with Pure Olive-Oil.
Claims use since Apr. 1, 1912.

Ser. No. 88,149. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE UNION SALT COMPANY, Cleveland, Ohio. Filed July 23, 1915.



No claim being made for the reading-matter on the drawing other than the words "Bull Dog."
Particular description of goods.—Salt.
Claims use since July 1, 1915.

Ser. No. 88,315. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARY VENO, Bowden, England. Filed July 30, 1915.

Germolene

Particular description of goods.—An Ointment for Human Use.
Claims use since Jan. 14, 1913.

Ser. No. 88,340. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE PEERLESS TOLEDO BEDDING COMPANY, Toledo, Ohio. Filed July 31, 1915.

WASHTIK

Particular description of goods.—Mattresses.
Claims use since Jan. 26, 1915.

Ser. No. 88,348. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JNO. BOHLANDER, Cincinnati, Ohio. Filed July 29, 1915.



Particular description of goods.—Iodin, Vinum Iodin, Unguentum Iodin, B-Aqua Iodin, B-Iodin Dusting-Powder.
Claims use since June 30, 1915.

Ser. No. 88,350. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BROMO REMEDY CO., Chicago, Ill. Filed Aug. 2, 1915.

Bubbles

The word constituting said trade-mark being in white letters upon a red background.
Particular description of goods.—Foot-Bath Preparations.
Claims use since May 26, 1915.

Ser. No. 88,425. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) UNION BEVERAGE COMPANY, Knoxville, Tenn. Filed Aug. 4, 1915.

JITNEY-COLA

Particular description of goods.—A Carbonated Non-Alcoholic Beverage and Syrup for Making the same.
Claims use since July 3, 1915.

Ser. No. 88,452. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) BARRETT CHANGER CO., Chicago, Ill. Filed Aug. 6, 1915.

Lightning

Particular description of goods.—Change-Making Machines.
Claims use since May 1, 1915.

Ser. No. 88,485. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) VULCAN MINERAL WATER CO. INC., New York, N. Y. Filed Aug. 7, 1915.

VULCAN

Particular description of goods.—Water of an Aperient Nature.
Claims use since the early part of April, 1915.

Ser. No. 88,632. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CHARLES F. THATCHER, Providence, R. I. Filed Aug. 14, 1915.



Particular description of goods.—Non-Alcoholic Tonic Carbonated Beverages.
Claims use since March, 1914.

Ser. No. 88,763. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) FRANKLIN MACVEAGH & COMPANY, Chicago, Ill. Filed Aug. 23, 1915.

GRAPE CHEER

Particular description of goods.—Grape-Juice and a Non-Intoxicating Beverage made from Grape-Juice.
Claims use since June 16, 1915.

TRADE-MARK REGISTRATIONS GRANTED

SEPTEMBER 14, 1915.

105,992. GAMES. MILTON BRADLEY CO., Springfield, Mass.
Filed December 3, 1914. Serial No. 83,035. PUBLISHED JANUARY 26, 1915.

105,993. LIQUID AND POWDER FOR THE DESTRUCTION OF INSECTS. WILLIAM BRANSON, Bloomington, Ill.
Filed September 5, 1913. Serial No. 72,686. PUBLISHED OCTOBER 21, 1913.

105,994. CERTAIN NAMED CUTLERY AND MACHINERY. THE GUS V. BRECHT BUTCHERS' SUPPLY COMPANY, St. Louis, Mo.
Filed May 11, 1914. Serial No. 78,182. PUBLISHED FEBRUARY 2, 1915.

105,995. MONTHLY MAGAZINES. CHAPPLE PUBLISHING COMPANY, Boston, Mass.
Filed January 9, 1915. Serial No. 83,749. PUBLISHED MARCH 23, 1915.

105,996. CERTAIN NAMED GAMES, TOYS, AND SPORTING GOODS. CONTINENTAL RUBBER WORKS, Erie, Pa.
Filed December 10, 1914. Serial No. 83,403. PUBLISHED MARCH 2, 1915.

105,997. RUBBER HEELS AND RUBBER GLOVES. CONTINENTAL RUBBER WORKS, Erie, Pa.
Filed December 19, 1914. Serial No. 83,405. PUBLISHED MARCH 30, 1915.

105,998. AUTOMOBILE TOPS OR COVERS. FORD KNOCK DOWN WINTER TOP CO., Chicago, Ill.
Filed January 21, 1915. Serial No. 83,999. PUBLISHED APRIL 6, 1915.

105,999. SOAP. HENRIETTE GABILLA, Paris, France.
Filed November 18, 1914. Serial No. 82,661. PUBLISHED JANUARY 5, 1915.

106,000. TOILET SOAPS. GOODRICH DRUG CO., Omaha, Nebr.
Filed May 1, 1912. Serial No. 63,237. PUBLISHED JUNE 1, 1915.

106,001. ELECTRIC-LIGHT FIXTURES. GUSTAV A. HARTER, Chicago, Ill.
Filed November 9, 1914. Serial No. 82,486. PUBLISHED MARCH 23, 1915.

106,002. WHEAT-FLOUR. LAWRENCEBURG ROLLER MILLS CO., Lawrenceburg, Ind., and Boston, Mass.
Filed December 28, 1914. Serial No. 83,552. PUBLISHED MARCH 2, 1915.

106,003. GREASELESS MASSAGE FACE-CREAM. J. BAILEY JOHNSON, Pittsburgh, Pa.
Filed December 23, 1914. Serial No. 83,473. PUBLISHED FEBRUARY 9, 1915.

106,004. HAIR-TONIC. JENNIE M. MCRAE, Bisbee, Ariz.
Filed July 30, 1913. Serial No. 72,050. PUBLISHED MARCH 16, 1915.

106,005. COTTON-SEED MEAL. C. L. MONTGOMERY & COMPANY, Memphis, Tenn.
Filed November 9, 1914. Serial No. 82,490. PUBLISHED APRIL 27, 1915.

106,006. DRY CELLS. NATIONAL CARBON COMPANY, Cleveland, Ohio.
Filed December 30, 1912. Serial No. 67,639. PUBLISHED FEBRUARY 2, 1915.

WITHDRAWN

106,007. DRY BATTERIES. NATIONAL CARBON COMPANY, Cleveland, Ohio.
Filed March 23, 1914. Serial No. 76,870. PUBLISHED JUNE 16, 1914.

106,008. WOVEN COTTON PLAIDS. NEUSS HESSLEIN & Co., New York, N. Y.
Filed January 8, 1915. Serial No. 83,734. PUBLISHED MARCH 2, 1915.

106,009. MATTRESSES AND BEDSTEADS. NORTHWESTERN BEDDING AND MANUFACTURING CO., St. Paul, Minn.
Filed August 21, 1914. Serial No. 80,728. PUBLISHED MARCH 2, 1915.

106,010. COMBINED TOOTH-BRUSHES AND DENTAL INSTRUMENTS. PAUL E. E. NUYTS, Roubaix, France.
Filed August 15, 1913. Serial No. 72,359. PUBLISHED DECEMBER 22, 1914.

106,011. CHAMPAGNE AND SPARKLING WINES. LSE. POMMERY, FILS & CIE., Rheims, France.
Filed January 31, 1913. Serial No. 68,242. PUBLISHED MARCH 30, 1915.

106,012. CHAMPAGNE AND SPARKLING WINES. LSE. POMMERY, FILS & CIE., Rheims, France.
Filed January 31, 1913. Serial No. 68,243. PUBLISHED MARCH 30, 1915.

106,013. GAMES. PARKER BROTHERS, Portland, Me., and Salem, Mass.
Filed November 25, 1914. Serial No. 82,912. PUBLISHED MARCH 2, 1915.

106,014. GAMES. PARKER BROTHERS, Portland, Me., and Salem, Mass.
Filed November 25, 1914. Serial No. 82,913. PUBLISHED MARCH 2, 1915.

106,015. PETROLEUM, GASOLENE, LUBRICATING-OIL, AND CUP-GREASE FOR AUTOMOBILES. PHINNY BROS. COMPANY, Oil City, Pa.
Filed August 11, 1914. Serial No. 80,462. PUBLISHED FEBRUARY 23, 1915.

106,016. PREPARATION USED IN AUGMENTING THE ENERGY OF MOTOR-SPIRITS AND IN INTERNAL-COMBUSTION ENGINES. PLAINS OIL COMPANY, Phoenix, Ariz., and Chicago, Ill.
Filed May 1, 1914. Serial No. 77,932. PUBLISHED JANUARY 19, 1915.

106,017. CERTAIN NAMED CONFECTIONS. ROHRER CANDY COMPANY, Bellevue, Ky.
Filed August 20, 1914. Serial No. 80,710. PUBLISHED MARCH 16, 1915.

106,018. FOOD-FLAVOR. THE ROLAND CO., Seattle, Wash.
Filed December 30, 1914. Serial No. 83,595. PUBLISHED MARCH 2, 1915.

106,019. MEDICINE FOR INTERNAL USE FOR DISEASES OF THE KIDNEYS, BLADDER, AND URINARY ORGANS. CARRIE H. RUBEL, Philadelphia, Pa.
Filed October 30, 1912. Serial No. 66,616. PUBLISHED APRIL 6, 1915.

106,020. CERTAIN NAMED TEXTILE AND KNITTED CLOTHING FOR MEN. SILVERBERG AND LINCE, Des Moines, Iowa.
Filed December 16, 1912. Serial No. 67,422. PUBLISHED MARCH 23, 1915.

106,021. INFANTS' AND CHILDREN'S SHOES MADE OF LEATHER. VALLEY SHOE CO., Elizabethville, Pa.
Filed March 27, 1914. Serial No. 77,010. PUBLISHED FEBRUARY 23, 1915.

106,022. LAGER-BEER. VOIGT BREWERY CO., Detroit, Mich.
Filed June 15, 1910. Serial No. 50,314. PUBLISHED AUGUST 19, 1913.

106,023. SNAP-BUTTONS USED AS GARMENT-FASTENERS. WALDES & CO., Prague-Wrschowitz, Austria-Hungary.
Filed April 1, 1912. Serial No. 62,575. PUBLISHED APRIL 13, 1915.

106,024. LIQUID FOODS CONSISTING OF BRAZILIAN AND PARAGUAY TEA. EDWARD L. WOODLEY, Shamrock, Tex.
Filed November 30, 1914. Serial No. 82,992. PUBLISHED APRIL 13, 1915.

106,025. PREPARATIONS FOR THE TREATMENT OF DANDRUFF AND DISEASES OF THE BLADDER AND KIDNEYS. JOHN MELVIN ALEXANDER, Marshalltown, Iowa.
Filed October 31, 1914. Serial No. 82,294. PUBLISHED MARCH 2, 1915.

106,026. LIQUID FOR RESTORING GRAY HAIR TO ITS FORMER COLOR. ELLA M. BENNETT, Boston, Mass.
Filed February 12, 1915. Serial No. 84,478. PUBLISHED APRIL 6, 1915.

106,027. CARDIGAN JACKETS AND JACKETS KNOWN AS SWEATER-COATS. BERGMAN KNITTING MILLS, Germantown, Pa.
Filed April 8, 1915. Serial No. 85,772. PUBLISHED MAY 4, 1915.

106,028. SUBSTANCES FOR THE PREVENTION OF INCRUSTATION IN BOILERS. THE BIRD ARCHER COMPANY, New York, N. Y.
Filed February 3, 1915. Serial No. 84,275. PUBLISHED APRIL 6, 1915.

106,029. HOG-WORM REMEDY. JESSE J. CULP, Warrensburg, Mo.
Filed December 22, 1914. Serial No. 83,457. PUBLISHED MARCH 30, 1915.

106,030. SOLE-LEATHER. J. M. DELANEY & CO., New York, N. Y.
Filed March 25, 1913. Serial No. 69,316. PUBLISHED JUNE 1, 1915.

106,031. PIANOS AND PLAYER-PIANOS. DRACHMANN PIANO CO., Chicago, Ill.
Filed January 2, 1915. Serial No. 83,653. PUBLISHED MARCH 2, 1915.

106,032. COMPOUND FOR CLEANING CARPETS, RUGS, DELICATE FABRICS, INCLUDING WOOL, SILK, LACES, AND COTTON GOODS. JAMES FAHEY, Ludington, Mich.
Filed March 17, 1914. Serial No. 76,713. PUBLISHED JUNE 23, 1914.

106,033. SILK DRESS GOODS. HAAS BROTHERS, New York, N. Y.
Filed February 16, 1915. Serial No. 84,554. PUBLISHED APRIL 13, 1915.

106,034. SILK DRESS GOODS. HAAS BROTHERS, New York, N. Y.
Filed February 26, 1915. Serial No. 84,805. PUBLISHED APRIL 20, 1915.

106,035. ABRASIVE COMPOUND TO BE USED ON RAZOR-STROPS. CHARLES B. PERIOLAT, Chicago, Ill.
Filed January 29, 1915. Serial No. 84,203. PUBLISHED APRIL 6, 1915.

106,036. MACHINISTS' CLAMPS. CHARLES B. PERIOLAT, Chicago, Ill.
Filed February 25, 1915. Serial No. 84,769. PUBLISHED MAY 25, 1915.

106,037. PLANT AND VEGETABLE FOOD. CHARLES F. QUINCY, Center Harbor, N. H.
Filed November 18, 1914. Serial No. 82,672. PUBLISHED MARCH 30, 1915.

106,038. BOATS. JOHN SLADE, New York, N. Y.
Filed January 26, 1915. Serial No. 84,125. PUBLISHED APRIL 6, 1915.

106,039. TOILET CREAMS. SOCIETY SPECIALTY CO. INC., New York, N. Y.
Filed March 12, 1915. Serial No. 85,124. PUBLISHED APRIL 20, 1915.

106,040. PORK SAUSAGE. STEVENSON PACKING COMPANY, Sedalia, Mo.
Filed November 16, 1914. Serial No. 82,632. PUBLISHED MARCH 23, 1915.

106,041. SOFT DRINK. E. CARRÉ COMPANY, Mobile, Ala.
Filed April 13, 1914. Serial No. 77,432. PUBLISHED SEPTEMBER 15, 1914.

LABELS

REGISTERED SEPTEMBER 14, 1915.

18,755.—*Title:* "CAMPBELL'S ELECTRIC SPARK." (For a Cleaning Preparation.) EDWIN C. CAMPBELL, Portland, Oreg. Filed May 26, 1915.

18,756.—*Title:* "CHERRY KOLA." (For a Beverage.) L. O. FULCHER, Mayfield, Ky. Filed May 5, 1915.

18,757.—*Title:* "WARRANTED STRICTLY PURE H & H VERMONT MAPLE SYRUP. H & H PURE FOOD PRODUCTS FOR HEALTH & HAPPINESS. HOFFMAN & HAUCK, WOODHAVEN, N. Y." (For Maple-Syrup.) HOFFMAN & HAUCK, New York, N. Y. Filed July 30, 1915.

18,758.—*Title:* "LINCOLN OINTMENT." (For Ointment.) W. A. LINCOLN, Dayton, Ohio. Filed June 9, 1915.

18,759.—*Title:* "TOEDTMANN'S HONEYPEPPER." (For a Cough Remedy.) FREDRICK CASPER TOEDTMANN, Cleveland, Ohio. Filed February 15, 1915.

18,760.—*Title:* "DR WILLSON'S UMATILLA INDIAN MEDICINE.) (For Medicine.) ELLIS O. WILLSON, Elgin, Oreg. Filed August 5, 1915.

PRINTS

REGISTERED SEPTEMBER 14, 1915.

4,056.—*Title:* "SANITARY MILK BOTTLE LOCK." (For Milk-Bottle Locks.) SANITARY MILK BOTTLE LOCK CO., INC., Portland, Oreg. Filed May 17, 1915.

4,057.—*Title:* "'THE COTTER WITH THE POINT' FACILITATES INSERTION." (For Cotters.) THE WIRE GOODS COMPANY, Akron, Ohio. Filed July 29, 1915.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE KLEMM AND SCHREIBER.

Decided May 4, 1915.

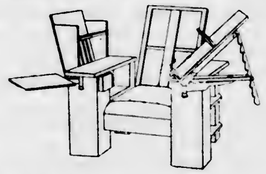
DESIGN—MOVABLE PARTS.

Where a chair has relatively fixed seat, arms, and legs and an adjustable back, book-rest, etc., *Held* that a design patent should not be refused simply because it has moving parts.

ON PETITION.

COMBINATION STUDY-CHAIR.

Messrs. Robb & Robb for the applicants.



NEWTON, *First Assistant Commissioner:*

This is a petition from the rejection by the Examiner of a design claim for a chair having relatively fixed seat, arms, and legs, but an adjustable back, book-rest, etc., the refusal being based on the ground that the device covered has relatively moving parts.

The rejection is appealable to the Board of Examiners-in-Chief; but since the Examiner has joined with applicants in requesting a ruling on this point the petition will be considered on its merits.

I find a divergence in the trend of recent decisions of the Patent Office and those of the courts on this point. *Symons on Patents for Designs*, page 29, correctly gives the substance of the Office decisions as follows:

In *ex parte Smith* (81 O. G., 969; 1897, C. D., 170) it was decided that an atomizer was not proper subject matter for protection under the design statute because of the presence of movable parts which when moved changed the appearance of the device. It apparently was the view of the Commissioner that if the movable handle was removed it would not be objectionable as presented and a patent was subsequently issued on this application for an atomizer body. (Design Patent No. 30,293, De Wane B. Smith.) In the case of *ex parte Tallman* (82 O. G., 337; 1898, C. D., 10) a design patent for a can opener was refused on the ground that the knife forming a part of it was a movable part and when shifted the shape or contour of the article was changed. A patent for a can opener body was subsequently issued on this application. (Design Patent No. 28,232, Tallman.) A pair of tongs consisting of two members of the same shape pivoted together is an operative device and not within the purview of the design laws. (*Kapp*, 83 O. G., 1993; 1898, C. D., 108.) In this case the Commissioner stated:

"If applicants have invented and produced anything that is novel, it is not a pair of tongs, but the shape or configuration of a member or jaw of a pair of tongs. The description and claim should be limited to this."

In the case of *ex parte Adams* (84 O. G., 311) and *ex parte Steck* (98 O. G., 228) a design for truck side frames and for a frame for water towers, respectively, were held not patentable in that they were apparatuses having movable parts.

On the other hand, Judge Brown in *Chandler Adjustable Chair and Desk Co.* v. *Heywood Bros. et al.* (91 Fed. Rep., 163) in passing on Design Patent No. 27,272 held:

The broad proposition advanced by the defendant, that section 4929 of the Revised Statutes was not intended to apply to structures having movable parts, is not supported by the citation of any judicial decision; and, though certain rulings of the Patent Office (*ex parte Tallman*, 82 O. G., 337; *ex parte Adams*, 84 O. G., 311; *ex parte Smith*, 81 O. G., 969; *ex parte Brower*, 1873, C. D., 151) are presented to support this proposition, I am of the opinion that such a construction of the statute calls for an unwarranted and unreasonable limitation of the terms "manufacture" and "any article of manufacture," and leads to absurd and unjust results. For example, such a construction would defeat claims like those in *Burton* v. *Town of Greenville* (3 Fed., 642) and *Britton* v. *Manufacturing Co.*, (61 Fed., 94.)

The design statute, section 4929, provides that—

any person who has invented any new, original, and ornamental design for an *article of manufacture*, * * * may obtain a patent therefor.

There seems to be no good reason for laying down a hard and fast rule that design patents cannot be granted to cover devices with relatively movable parts. It is a well-known fact, for example, that carriage, buggy, and automobile builders are constantly striving to produce graceful and pretty designs for carriages, buggies, and automobiles as entireties, including the wheels. Pump-makers exercise as much invention in producing new and artistic designs for pumps, including their relatively movable handles, as do stoneworkers in producing new designs for tombstones. According to sound principles of construction, the design statute should not be so construed as to deny protection to the former and extend it to the latter unless its terms are clearly to that effect, and they are not.

It is always easier to practise by rules than by the spirit of a statute; but the latter produces more equitable results, and there are no great obstacles in applying the spirit of the design and mechanical sections of the patent statutes to inventions as they are presented to determine whether they fall under one statute or the other. The patentable character-

istics of a design protectable under section 4929 are found weighed and valued by the test of ornament. Those of a mechanical device protectable under section 4886 are recognized by what they contribute to the performance of the function of that device, and the Office should only grant design patents for the former and mechanical patents for the latter unless the device includes both ornamental and useful characteristics, in which case probably both design and mechanical patents may be granted for the same device, just as in some cases separate patents may be granted for a machine and a process practised through the instrumentality of the machine or as separate patents may be granted for a process and its product. (*Ex parte Knothe*, 102 O. G., 1294; 1903, C. D., 42.)

It has been urged that design patents should not be granted on devices with movable parts because those parts may conceivably be so moved as to produce another design. Admitting this to be true, it is only an apparent and not a substantial reason against this practice, for a design patent only purports to cover the device as shown. The decisions are uniform to the effect that modifications must not be illustrated, but patentees must leave to the courts to say what are modifications. (*Ex parte Remington*, 114 O. G., 761; 1905, C. D., 28.) Similarly, it should be left for the courts to determine when relative movement of the parts of a design produces a different design.

In the present case I can see no good reason for refusing a design patent on applicants' chair merely because its back may be raised or lowered or the book-support relatively moved, or even that the parts may be so moved as to produce a different design. It may be, however, that these relatively movable parts are intended primarily to produce a useful result as distinguished from an aesthetic result, and if so the chair should be the subject of a mechanical patent instead of a design patent. I only decide at this time that simply because it has moving parts should not preclude the grant therefor of a design patent, and to the extent indicated the petition is granted.

DECISIONS OF THE U. S. COURTS.

Supreme Court of the United States.

HEALY *v.* SEA GULL SPECIALTY CO.

Decided May 17, 1915.

237 U. S., 479.

Where it appears from the plaintiff's statement that his case is for infringement and arose under the patent laws, the district court has jurisdiction, notwithstanding the fact that he may also rely upon a contract as furnishing the mode in which the damages grounded on infringement should be ascertained.

APPEAL from the District Court of the United States for the Eastern District of Louisiana.

The facts, which involve the jurisdiction of the district court in a case involving infringement of patent, are stated in the opinion.

Mr. Charles Rosen and *Mr. Henry B. Gayley* for appellant.

Mr. Randolph Barton, Jr., with whom *Mr. James E. Zunts* was on the brief, for appellee.

Mr. JUSTICE HOLMES delivered the opinion of the court.

This is a bill in equity brought by the appellants, alleging that Healy is the owner of patents for improvements in boxes and machines for making boxes, and that the Healy Box Corporation is the grantee of the exclusive right to make and use the machines and to make, use and sell the boxes containing the patented improvements. The bill next alleges that the defendant is infringing the patents and will continue to do so unless restrained. Then, anticipating a defense, it sets forth a license to the defendant, a breach of its conditions and a termination of the same. It adds that the license contained a stipulation that in case of any suit for infringement the measure of recovery should be the same as the royalty agreed upon for the use of the inventions, and another for the return of the machines let to the defendant while the license was in force. The bill prays for an injunction against making, using or selling the boxes or machines, for an account of profits received by reason of the infringement, for triple the damages measured as above stated, and for the surrender of the machines. The jurisdiction depended upon this being a case arising under the patent laws, and the district court thinking that it was merely a matter of contract dismissed the bill. In our opinion its decision was wrong.

It may be that the reasoning of *The Fair* v. *Kohler Die & Specialty Co.* (228 U. S., 22; 189 O. G., 1033; 913 C. D., 530) is more consistent with that of Mr. Justice Bradley's dissent in *Hartell* v. *Tilghman*, (99 U. S., 547, 556,) a decision since explained and limited, *White* v. *Rankin*, (144 U. S., 628; 59 O. G., 1606; 1892, C. D., 427,) than with that of the majority, but it is the deliberate judgment of the court and governs this case. As stated there, the plaintiff is absolute master of what jurisdiction he will appeal to; and if he goes to the district court for infringement of a patent, unless the claim is frivolous or a pretense, the district court will have jurisdiction on that ground, even though the course of the subsequent pleadings reveals other more serious disputes. (*Excelsior Wooden Pipe Co.* v. *Pacific Bridge Co.*, 185 U. S., 282; 101 O. G. 2102; 1902, C. D., 655.) Jurisdiction generally depends upon the case made and relief demanded by the plaintiff, and as it cannot be helped, so it cannot be defeated by the replication to an actual or anticipated defense contained in what used to be the charging part of the bill. For the same reason it does not matter whether the validity of the patent is admitted or denied.

As appears from the statement of it, the plaintiffs' case arose under the patent law. It was not affected by the fact that the plaintiffs relied upon a contract as fixing the mode of estimating damages or that they sought a return of patented machines to which if there was no license they were entitled. These were incidents. The essential features were the allegation of an infringement and prayers for an injunction, an account of profits and triple damages—the characteristic forms of relief granted by the patent law. The damages were grounded on the infringement, and the contract was relied upon only as furnishing the mode in which they should be ascertained.

Decree reversed.

Changes in Classification.

(ORDER No. 2,212.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 30, 1915.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 18, Plastics, (Division XV,) change the titles of subclasses 1, Miscellaneous apparatus; 2, Miscellaneous apparatus, Vulcanizable gums, and 3, Miscellaneous apparatus, Pyroxylin, to read, respectively:

1. **Miscellaneous.**
2. **Vulcanizable gums, apparatus.**
3. **Pyroxylin, apparatus.**

In class 24, Buckles, Buttons, Clasps, Etc., (Division XXXV,) change the title of subclass 147, Lacing devices, Studs, Moving, part, to read:

Lacing devices—
Studs—
Hook—
147. Moving-part,

and change the definition of said subclass by canceling the words "except those found in the subclass 149, Lacing devices, Studs, Roller."

In class 49, Glass, (Division XV,) change the title of subclass 15 Miscellaneous, Tools, to read:

15. **Tools.**

In class 140, Wire-Working, (Division XIV,) change the titles of subclasses 97, Applying-wire, Card-clothing, attaching; 98, Applying-wire, Card-clothing, attaching, Making, and 99, Applying-wire, Card-clothing, attaching, Making, Fillet-feeding, to read:

Applying-wire—
97. Card-clothing—
98. Making—
99. Fillet-feeding.

In class 150, Cloth, Leather, and Rubber Receptacles, (Division XL,) abolish subclass 1, Bags, Body construction, with its definition, and give to the title "Bags" the number 1, making it read:

1. **Bags,**

and abolish subclass 13, Mail-bags, Construction, with its definition and give to the title "Mail-bags" the number 13, making it read:

13. **Mail-bags.**

Subclasses 1, Bags, and 13, Mail-bags, above, contain the patents formerly in subclasses 1, Bags, Body construction, and 13, Mail-bags, Construction, respectively, herein abolished.

THOMAS EWING,
Commissioner.

Changes in Classification.

(ORDER No. 2,213.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., June 30, 1915.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 138, Hydraulic Motors, (Division IX,) abolish subclasses—

11. **Chain.**
3. **Rotary—**
12. Feathering,
18. Impact.
Turbines—
4. Bottom-supply,
Turbines—
5. Side-ring supply.
6. Top and side direct-supply
7. Top-ring supply.

The patents formerly contained in these subclasses have been placed for the most part in the new subclasses established hereinafter in classes 138, Hydraulic Motors, and 253, Motors, Fluid. Some from subclass 11, Chain, have been placed in class 193, Conveyers' subclass 6, Endless, Bucket.

In same class change the title of subclass 1, Oscillating, to read:

Oscillating—
1. Expansible chamber.

Some of the patents formerly contained in this subclass have been placed in the new subclasses hereinafter established in class 253, Motors, Fluid

In same class establish subclasses—

Rotary—
19. Expansible chamber,
20. With pump supply.
21. **Tide and wave power plants.**
22. **Pump and motor circuit.**

The patents contained in subclasses 19, 20, and 22 above have been taken for the most part from class 138, Hydraulic Motors, subclass 3, Rotary, and the subclasses thereunder, hereinbefore abolished, and those contained in subclass 21 have been taken from class 253, Motors, Fluid, subclass 3, Tide and wave motors, and the subclasses thereunder, hereinafter abolished.

In class 253, Motors, Fluid, (Division IX,) abolish the existing subclasses and establish in lieu thereof the following subclasses and definitions, the patents contained in these subclasses having been taken for the most part from the subclasses formerly in class 253, Motors, Fluid, and from class 121, Steam Engines, subclass 47, Rotary, and the subclasses thereunder, and class 138, Hydraulic Motors, the subclasses under "Turbines," hereinbefore abolished.

CLASS 253.—MOTORS, FLUID. (IX.)

Subclasses.

36. **Gas-operated—**
37. Atmospheric—
38. Rotary and-supply,
39. Rotary—
79. Center supply—
82. Automatic control,
80. Injected fluid,
Plural shafts—
Series—
83. Reversely rotating—
84. Reaction wheel.
81. Reversing,
Single shaft—
85. Opposed delivery,
86. Opposed supply,
91. Reaction—
92. Serial bucket,
94. Serial bucket,
93. Serial flow,
87. Series—
88. Endwise flow.
90. Jet,
89. Reaction wheel,
95. Single bucket,
57. End supply—
59. Automatic control,
77. Buckets or baffles,
58. Injected fluid,
78. Nozzles or valves,
Plural shafts—
60. Reversing,
61. Series—
62. Reversely rotating—
63. Reversing—
64. Alternately locked,
65. Single shaft—
Double bucket—
75. Intermediate supply,
67. Opposed delivery,
74. Opposed supply,
71. Reëntrant radial flow—
72. Reversing,
Gas-operated—
Rotary—
End supply—
Single shaft—
73. Reversing,
66. Serial flow,
69. Series—
70. Reversing,
68. United delivery,
76. With condensate separator.
40. Peripheral supply—
41. Injected fluid,
Series—
42. Jet—
43. Reversely rotating,
Single shaft—
50. Jet—
52. Automatic control,
55. Center delivery,
56. Plural,
51. Reversing,
53. Serial flow—
54. Reactive delivery,
Opposed delivery—
44. End supply,
45. Endwise flow,
46. Series—
49. Endwise flow,
Jet—
47. Reversing,
48. Peripheral supply.
Grain-weigher type—
15. Oscillating bucket,
Rotary—
Peripheral supply—
Gravity bucket—
16. Intermittent.
1. **Miscellaneous.**

96. Rotary—
Center supply—
Plural shafts—
161. Series—
162. Reversely rotating,
163. Single shaft—
167. Angular vane—
168. Axially movable gate,
169. Pivoted gate,
170. Rotary annular gate,
166. Automatic control,
172. Jet,
173. Reaction—
174. Axially movable gate,
175. Tube wheel,
165. Reversing,
171. Scroll,
164. Series,
141. End supply—
143. Automatic control—
144. Flow operated,
145. Plural shafts—
146. Series—
147. Reversely rotating,
142. Reversing,
148. Single shaft—
153. Angular vane—
154. Axially movable gate,
155. Pivoted gate,
156. Rotary annular gate,
158. Jet—
159. Plural—
160. Rotary annular gate.
149. Opposed delivery,
151. Parallel supply,
157. Scroll,
152. Series,
150. United delivery,
Peripheral supply—
97. Automatic control,
Center delivery—
133. Jet—
134. Peripheral delivery,
117. End delivery—
118. Angular vane—
121. Axially movable gate,
119. Parallel supply,
122. Pivoted gate,
123. Rotary annular gate,
120. Scroll,
129. Jet—
130. Plural—
131. Pivoted gate,

Rotary—
Peripheral supply—
End delivery—
132. Parallel supply,
124. Scroll—
125. Plural—
127. Axially movable gate,
126. Parallel supply,
128. Pivoted gate,
136. Jet—
138. Automatic control—
139. Flow operated,
140. Plural,
137. Reversing,
111. Opposed delivery—
113. Jet—
114. Divided bucket,
115. Double bucket,
116. Staggered bucket,
112. Scroll,
Plural shafts—
100. Jet,
98. Reversely rotating,
99. Series,
135. Scroll,
101. Single shaft—
Angular vane—
102. Opposed delivery—
103. Scroll,
104. United delivery,
Jet—
105. Reversing,
106. Series—
107. End delivery—
109. Angular vane,
110. Jet,
108. Scroll.
Rotary pumps—
Center supply—
Plural shafts—
184. Series—
185. Reversely rotating,
186. Single shaft—
187. Opposed supply—
190. Tangential delivery—
191. Angular vane,
192. Tube wheel,
193. Series—
188. Concentric,
189. Single supply—
194. Angular vane—
195. Tangential delivery—
196. Center delivery,
199. End delivery,
198. End flow,
197. Tangential delivery,
200. Tube wheel,
201.

Rotary pumps—
End supply—
177. Plural shafts—
Series—
178. Reversely rotating,
179. Single shaft—
180. Opposed delivery,
181. Opposed supply,
182. Series,
183. Tangential delivery,
176. Peripheral supply.
Rotary tool-driving—
3. End supply,
2. Peripheral supply.
4. Tide or wave—
13. Endless chain,
8. Float—
11. Pivoted,
9. Tank contained,
10. Vertically guided,
5. Floating,
6. Pendulum—
7. Float,
12. Reciprocating carriage,

Tide or wave—
14. Rotary.
17. Water-operated—
20. Endless chain—
21. Gravity bucket,
18. Float,
19. Oscillating bucket,
22. Rotary—
33. Center supply—
Gravity bucket—
34. Horizontal axis—
35. Intermittent,
31. End supply—
32. Series,
Peripheral supply—
Jet—
24. Automatic control,
25. Plural shafts,
23. Reversing,
26. Single shaft—
27. Gravity bucket—
28. Horizontal axis—
29. Intermittent,
30. Pivoted bucket.

THOMAS EWING,
Commissioner.

Interference Notices

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 20, 1915.

John J. Cook, his heirs, successors, or assigns, take notice:

An interference having been declared by this Office between the application of the Hygienic Fleeced Underwear Company, of 2415–2437 Howard street, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered January 18, 1910, No. 76,434, to John J. Cook, of 350 Broadway, New York, N. Y., and the said John J. Cook being deceased, notice is hereby given that unless his heirs, successors, or assigns shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 27, 1915.

Harry Rosenberg, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Barrett Manufacturing Company, 17 Battery Place, New York, N. Y., for registration of a trade-mark and trade-mark registered March 29, 1910, No. 77,332, to Harry Rosenberg, 279 Dearborn street, Chicago, Ill., and a notice of such declaration sent by registered mail to said Harry Rosenberg at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Harry Rosenberg, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 218—No. 3. TUESDAY, SEPTEMBER 21, 1915. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS

	Page.
ISSUE OF SEPTEMBER 21, 1915	607
NOTICE	607
BRIEFS IN APPEALED CASES	607
INTERFERENCE NOTICE	607
APPLICATIONS UNDER EXAMINATION	608
PATENTS GRANTED	609
REISSUES	855
DESIGNS	858
TRADE-MARKS—REGISTRATION APPLIED FOR	865
TRADE-MARK REGISTRATIONS GRANTED	873
LABELS AND PRINTS	874
DECISIONS OF THE U. S. COURTS—	
Crown Cork & Seal Co. of Baltimore City v. Sterling Cork & Seal Co.	875

ISSUE OF SEPTEMBER 21, 1915.

Patents	716—No.	1,153,879 to No.	1,154,594, inclusive.
Designs	30—No.	47,841 to No.	47,870, inclusive.
Trade-Marks	22—No.	106,042 to No.	106,063, inclusive.
Labels	15—No.	18,761 to No.	18,775, inclusive.
Prints	9—No.	4,058 to No.	4,066, inclusive.
Reissues	7—No.	13,961 to No.	13,967, inclusive.
Total	799		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	5	.....	North Carolina	2	.....
Arizona	1	.....	North Dakota	1	.....
Arkansas	3	1	Ohio	55	1
California	35	2	Oklahoma	4	.....
Colorado	7	1	Oregon	6	2
Connecticut	18	.....	Pennsylvania	54	1
Delaware	1	.....	Rhode Island	5	3
Florida	2	.....	South Carolina	1	.....
Georgia	5	.....	South Dakota	2	.....
Idaho	3	.....	Tennessee	4	.....
Illinois	56	3	Texas	18	.....
Indiana	14	1	Utah	1	1
Iowa	23	.....	Vermont	2	.....
Kansas	7	.....	Virginia	3	.....
Kentucky	4	.....	Washington	14	2
Louisiana	2	1	West Virginia	2	.....
Maine	4	.....	Wisconsin	17	2
Maryland	2	3	Wyoming	1	.....
Massachusetts	39	2			
Michigan	41	1	Alaska, District of	.....	.....
Minnesota	11	2	Canal Zone	.....	.....
Mississippi	1	.....	District of Columbia	6	.....
Missouri	18	5	Hawaii Territory	1	.....
Montana	3	.....	Philippine Islands	.....	.....
Nebraska	3	.....	Porto Rico	.....	.....
Nevada	1	.....	U. S. Army	.....	.....
New Hampshire	2	.....	U. S. Navy	1	.....
New Jersey	38	5			
New Mexico	2	.....	Total to residents of the United States	663	46
New York	112	7			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	2	.....	Mexico	.....	.....
Austria-Hungary	2	.....	Natal	.....	.....
Belgium	1	.....	Netherlands	.....	.....
Bulgaria	.....	.....	New South Wales	.....	.....
British West Indies	.....	.....	New Zealand	1	.....
Canada	8	.....	Norway	2	.....
China	.....	.....	Portugal	.....	.....
Chile	.....	.....	Queensland	.....	.....
Costa Rica	.....	.....	Roumania	1	.....
Cuba	.....	.....	Russia	.....	.....
Denmark	.....	.....	Scotland	1	.....
England	25	.....	South Australia	.....	.....
Finland	.....	.....	Straits Settlements	1	.....
France	6	.....	Sweden	3	.....
Germany	26	.....	Switzerland	.....	.....
Guatemala	.....	.....	Tasmania	.....	.....
India	.....	.....	Victoria	1	.....
Ireland	.....	.....	Western Australia	.....	.....
Italy	.....	.....			
Japan	.....	.....	Total to residents of foreign countries	80	.....
Luxemburg	.....	.....			

Notice.

Classification Bulletin No. 34 is now on sale and may be obtained from the Commissioner of Patents, Washington, D. C., at 10 cents per copy.

Briefs in Appealed Cases.

All briefs filed in this Office should have conspicuously printed thereon a statement designating the particular tribunal of the Patent Office to which the brief is addressed.

Interference Notice

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., August 27, 1915.

Harry Rosenberg, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Barrett Manufacturing Company, 17 Battery Place, New York, N. Y., for registration of a trade-mark and trade-mark registered March 29, 1910, No. 77,332, to Harry Rosenberg, 279 Dearborn street, Chicago, Ill., and a notice of such declaration sent by registered mail to said Harry Rosenberg at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Harry Rosenberg, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner*

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business September 18, 1915.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	June 29	June 28	519
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Apr. 3	June 16	864
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	Aug. 20	Sept. 3	126
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	Apr. 16	Aug. 4	632
167	5. Bookbinding; Harvesters; Jewelry; Music.	June 4	July 19	377
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar. 2	Aug. 23	508
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	July 17	Aug. 2	431
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Apr. 1	Aug. 10	1190
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Feb. 25	Aug. 19	649
235	10. Carriages and Wagons	May 11	July 26	801
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Aug. 2	Aug. 26	136
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	June 17	June 28	749
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	July 13	July 29	522
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Apr. 24	July 21	256
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	May 21	Aug. 7	579
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Apr. 19	July 8	503
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	June 17	July 12	197
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Aug. 11	Aug. 5	271
276	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	Aug. 3	July 19	240
179	20. Artificial Limbs; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Aug. 18	Aug. 4	311

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	June 7	July 20	361
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	July 14	July 13	301
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	May 4	May 25	517
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	June 9	July 17	485
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Aug. 20	Aug. 21	160
106	26. Electricity, Generation; Motive Power.	Mar. 15	May 7	636
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	July 30	July 22	370
65	28. Internal-Combustion Engines	July 3	July 3	414
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	July 12	July 19	328
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	July 12	Aug. 18	251
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	June 14	Aug. 3	319
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	Mar. 13	Aug. 5	729
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	June 28	July 16	279
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	May 24	July 27	330
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	May 8	Aug. 3	781
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	June 4	Aug. 16	739
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Mar. 13	May 24	885
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	May 1	July 13	600
321	39. Water Distribution	June 14	July 12	393
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 24	July 24	968
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	May 27	July 24	422
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	May 17	May 15	803
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Aug. 3	July 6	256

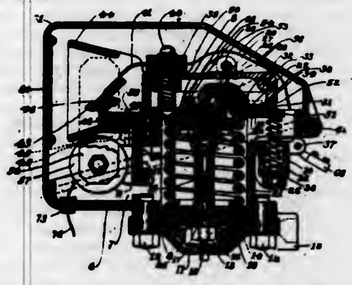
Oldest new case, Feb. 25; oldest amended, May 7.
Total number of applications awaiting action..... 21,290

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	July 12	Aug. 4	953
	Designs	May 3	Aug. 17	557
	Labels and Prints	Sept. 7	Sept. 4	95

PATENTS

GRANTED SEPTEMBER 21, 1915.

1,153,879. PNEUMATIC GOVERNOR. BURTON S. AIKMAN, Chicago, Ill., assignor to National Brake & Electric Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed July 31, 1911. Serial No. 641,417. (Cl. 175—308.)



1. In a fluid pressure governor, a fluid pressure chamber, a pressure controlled plunger, a spring for balancing the pressure upon said plunger, a valve on said plunger having a passage communicating with said chamber, a spring pressed trigger lever exerting a pressure upon said valve to retain the same in closed position, a circuit controlling lever having a catch for limiting the movement of said trigger lever to allow releasing of the valve upon inward movement of the plunger due to a decrease of pressure in the fluid pressure chamber.

2. In a fluid pressure governor, a fluid pressure chamber having a restricted inlet, a pressure controlled plunger, a spring for balancing the pressure upon said plunger, a valve on said plunger having a passage communicating with said chamber, a spring pressed trigger lever exerting a pressure upon said valve to retain the same in closed position, a circuit controlling lever having a catch for limiting the movement of said trigger lever to allow release of the valve upon inward movement of the plunger due to a decrease of pressure in the fluid pressure chamber and means on said plunger to move said circuit controlling lever to release said trigger lever when said plunger moves farther inward, due to release of pressure by opening of the valve.

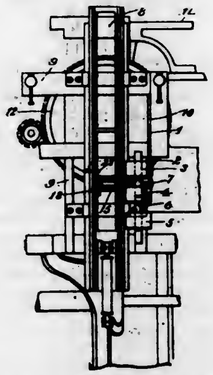
3. In a fluid pressure governor, a circuit controlling lever having an open and a closed position, said lever provided with spring means for biasing the lever toward one of said positions, a trigger for engaging said lever and holding it in one of said positions, said trigger provided with spring means for holding it in engaging position, a movable fluid pressure responsive element for moving said lever, a valve for opening and closing a port controlling the pressure on said element, said trigger having means for governing the position of said valve and a connection between said fluid pressure responsive element and said circuit controlling lever.

4. In a fluid pressure governor, a circuit controlling lever, said lever having spring means tending to move it to the open circuit position, a trigger having a latch for holding said lever in closed circuit position, said trigger having spring means for holding the same in position to hold said lever, a movable fluid pressure controlled element, a fluid pressure chamber communicating with said element, said chamber having a restricted inlet for supplying fluid under pressure thereto, a valve governing an opening in said chamber, said trigger having means for holding said valve in closed position and a connection between said circuit controlling lever and said fluid pressure element.

5. In a fluid pressure governor, a fluid pressure chamber having a restricted inlet, a valve controlling the pressure in said chamber, a movable fluid pressure controlled element, subject to the pressure in said chamber, a spring urging said element against the pressure in said chamber, a circuit controlling lever having a spring tending to move it to the open circuit position, a connection between said lever and said fluid pressure controlled element, said lever being operated by said first spring through said connection and moved to closed circuit position by release of pressure in said chamber, and a trigger having a latch for holding said lever in closed circuit position, said valve being controlled jointly by said trigger and by said fluid pressure controlled element.

[Claims 6 to 21 not printed in the Gazette.]

1,153,880. GALLEY MECHANISM FOR REPEATING AND NON-REPEATING LINE-CASTING MACHINES. CHRISTIAN AUGUSTUS ALBRECHT, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed May 18, 1914. Serial No. 839,185. (Cl. 199—9.)



1. In a typographical machine, the combination of slug casting mechanism, a plurality of galleys movable successively into operative relation thereto, and automatic means for effecting such movement of the galleys after succeeding casting operations; whereby the successive slugs will be delivered to different galleys, for the purpose described.

2. In a typographical machine, the combination of slug casting mechanism, a plurality of galleys movable successively into operative relation thereto, automatic means for effecting such movement of the galleys after succeeding casting operations, and devices for rendering said means active or inactive at will, for the purpose described.

3. In a typographical machine, the combination of slug casting mechanism, a line transporter movable toward and from the same, a plurality of galleys movable successively into operative relation to the casting mechanism, and means controlled by the line transporter for effecting such movement of the galleys.

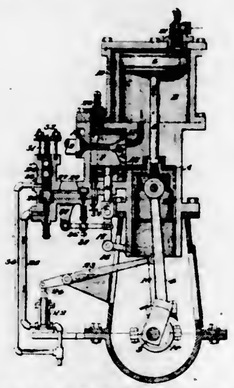
4. In a typographical machine, the combination of slug casting mechanism, a line transporter movable toward

and from the same, a plurality of galleys movable successively into operative relation to the casting mechanism, means controlled by the line transporter for effecting such movement of the galleys, and devices for rendering said means active or inactive, at will.

5. In a typographical machine, the combination of casting mechanism for producing duplicate slugs from the same composed line, a plurality of galleys, and automatic means for moving the galleys to bring them successively into operative relation to the casting mechanism; whereby the duplicate slugs will be delivered to different galleys.

[Claims 6 and 7 not printed in the Gazette.]

1,153,881. COMPOUND INTERNAL-COMBUSTION ENGINE. CHARLES M. ALLEN, San Francisco, Cal. Filed June 16, 1914. Serial No. 845,382. (Cl. 123—36.)



1. In an internal combustion engine, a pair of superposed cylinders of varying diameters, a pair of connected pistons in the cylinders, a combustion chamber interposed between and communicating with the adjacent cylinder ends and having an exhaust, and a slide valve in said chamber having ports which latter in one position of the valve establish communication between both of the cylinders and in another position establish communication between the exhaust and one of the cylinders.

2. The combination in an internal combustion engine, of a pair of superposed cylinders, the upper being of larger diameter than the lower, a pair of connected pistons, one in each cylinder, a cylinder extension forming a primary combustion and valve chamber and having four ports formed therein, one port connecting with the upper end of the lower cylinder, the second port with the lower end of the upper cylinder, the third port with an exhaust pipe, and the fourth with the upper end of the upper cylinder, means for injecting fuel into said chamber, a piston valve in the chamber having a three-way port formed therein adapted to form communication between the several ports, and means for operating said piston valve in conjunction with the connected pistons in the upper and lower cylinders.

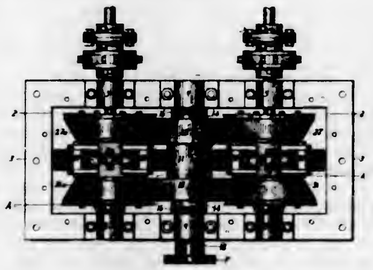
3. The combination in an internal combustion engine, of a pair of superposed cylinders, the upper being of larger diameter than the lower, a pair of connected pistons, one in each cylinder, a cylinder extension forming a primary combustion and valve chamber and having four ports formed therein, one port connecting with the upper end of the lower cylinder, the second port with the lower end of the upper cylinder, the third port with an exhaust pipe, and the fourth with the upper end of the upper cylinder, a check valve mounted in the fourth port, an air inlet valve mounted in the upper cylinder, a piston valve in the primary combustion chamber having a three-way port formed therein adapted to form communication between the several ports, and means for operating said piston valve in conjunction with the connected pistons in the upper and lower cylinders.

4. The combination in an internal combustion engine, of a pair of superposed cylinders, the upper being of larger diameter than the lower, a pair of connected pistons, one in each cylinder, a cylinder extension forming a primary combustion and valve chamber and having four ports formed therein, one port connecting with the upper end of the lower cylinder, the second port with the lower end of the upper cylinder, the third port with an exhaust pipe, and the fourth with the upper end of the upper cylinder, a piston valve in the chamber having a three-way port formed therein adapted to form communication between the several parts, means for operating said piston valve in conjunction with the main connected pistons, a spray nozzle connected with the chamber, a fuel pump, a fuel pressure regulating and compensating chamber interposed between the pump and spray nozzle, a fuel releasing valve interposed between the compensating chamber and the spray nozzle, and means for opening said valve.

5. The combination in an internal combustion engine, of a pair of superposed cylinders, the upper being of larger diameter than the lower, a pair of connected pistons, one in each cylinder, a cylinder extension forming a primary combustion and valve chamber and having four ports formed therein, one port connecting with the upper end of the lower cylinder, the second port with the lower end of the upper cylinder, the third port with an exhaust pipe, and the fourth with the upper end of the upper cylinder, a piston valve in the chamber having a three-way port formed therein adapted to form communication between the several ports, means for operating said piston valve in conjunction with the main connected pistons, a spray nozzle connected with the chamber, a fuel pump, a fuel pressure regulating and compensating chamber interposed between the pump and spray nozzle, a fuel releasing valve interposed between the compensating chamber and the spray nozzle, means connected with the piston valve for opening said valve, means for regulating the lift of said valve, and means for regulating the fuel supply passing through the last named valve and connected spray nozzle.

[Claims 6 to 11 not printed in the Gazette.]

1,153,882. POWER-TRANSMISSION MECHANISM. ANDREW ANDERSON, Portland, Oreg. Filed July 2, 1913. Serial No. 776,976. (Cl. 74—26.)



1. A power transmission mechanism comprising in combination a plurality of elements to be driven, a main driving member adapted to be driven from any power-furnishing mechanism, a pair of intermediate driving members connected with each of the elements to be driven, one of each pair having a positive connection with its element, and one of each pair being an idler, a differential driving mechanism between the driving members of each of said pairs, and means for establishing at will driving connections between said main driving member and the two idler members or the two positively connected members of said pairs of intermediate driving members.

2. A power transmission mechanism comprising in combination a plurality of elements to be driven, a main driving member adapted to be driven from any power furnishing mechanism, a pair of intermediate driving members connected with each of the elements to be driven, one of each pair having a positive connection with its element, and one of each pair being an idler, a differential driving mechanism between the driving members of each of said pairs, means for establishing at will driving connections between said main driving member and the two idler members or the two positively connected members of said pairs of intermediate driving members, and means for holding a part of either of said differential driving mechanisms, whereby it operates to transmit motion in an opposite direction from one of said driving members to the other.

3. A power transmission mechanism comprising in combination a plurality of elements to be driven, a main driving member adapted to be driven from any power furnishing mechanism, a pair of intermediate driving members for each of the elements to be driven each of said members being movably mounted and adapted to be moved into and out of driving engagement with said main driving member, one of said members of each pair being an idler, a differential driving mechanism between the intermediate driving members of each pair, means for moving said pairs of intermediate driving members to put one or the other of each pair in driving engagement with said main driving member, and means for putting said differential mechanism into operation to transmit motion in an opposite direction from one of said members to the other.

4. A power transmission mechanism, comprising in combination with two elements to be driven, a main driving member adapted to be driven from an engine, two bodily movable driving members connected respectively with the elements to be driven and movable into and out of driving engagement with said main driving member, means for so moving the same, two loose elements also adapted to be moved into and out of driving engagement with said main driving member, a differential mechanism connecting each of said loose elements with a movable driving member, and means for holding a part of each differential mechanism whereby it operates to drive the loose and movable members between which it is located in opposite directions, substantially as described.

5. In a power transmission mechanism, a main driving member adapted to be power driven, a main driving shaft, two driving members mounted on said shaft, one fixed thereto and the other loose thereon, a differential mechanism disposed between said two driving members and adapted to turn therewith, means for holding said differential mechanism at will, whereby it operates to transmit motion in a different direction from one of said driving members to the other, and means for putting either of said two driving members into driving engagement with said main driving member.

[Claims 6 to 9 not printed in the Gazette.]

1,153,883. PROCESS FOR TREATING PULP FOR MAKING PAPER AND LIKE MATERIALS. HERMAN ARLEDTER, Frodsham, England. Filed July 25, 1910. Serial No. 573,764. (Cl. 92—6.)

1. The improvement in the process of treating pulp for use in the manufacture of paper and the like, which consists in beating or disintegrating the raw materials in a closed space submitted alternately to pressure and vacuum.

2. The improvement in the treatment of pulp for making semi-liquid paper-pulp, which consists in disintegrating the raw material; passing the same through a chamber under alternate pressure and vacuum; and adding chemicals in said chamber, whereby the material is converted wholly or partially from mechanical pulp into semi-liquid cellulose pulp ready for the paper-making machine.

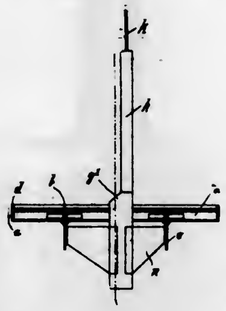
3. The improvement in the process of manufacturing paper and the like, which consists in beating or disintegrating the raw materials or mechanical pulp in a hermetically sealed space under alternate pressure and vacuum; giving the materials a circulating current; and at the same time adding bleaching materials.

4. The improvement in the process of reducing pulp to a semi-liquid condition for making paper or the like, which consists in heating or disintegrating the raw materials in a hermetically sealed space under alternate pressure and vacuum, and adding materials for changing the color or hue of the paper simultaneously.

5. The improvement in the process of manufacturing semi-liquid pulp, which consists in treating mechanical pulp in a hermetically sealed space; adding raw materials and water requisite for obtaining the necessary color; adding sizing or weighting materials while the stuff is still in the closed space and exposed to alternate pressure and vacuum; and beating or disintegrating the same, whereby a semi-liquid pulp is formed which in the ordinary paper-making machinery will be converted at once into colored, sized and weighted paper.

[Claims 6 to 8 not printed in the Gazette.]

1,153,884. SCAFFOLD. HEINRICH BADE, JR., Wunstorf, Germany. Filed June 2, 1915. Serial No. 31,752. (Cl. 20—81.)



1. In a scaffold, the combination of a platform; a stiff frame-work supporting the platform; a substantially vertical support extending upwardly from a point slightly to one side of the center of the platform and secured to the framework; and a rope secured to said support.

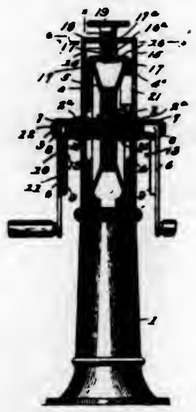
2. In a scaffold, the combination of a platform provided with a central opening for the passage of a plummet; a support on said platform to one side of the opening and formed with a box coaxial with the opening; and a rope secured to said support just above the platform and guided by said support a distance approximately three-fourths the width of the platform.

3. In a scaffold for taking up workmen and material when building shafts, the combination of a platform; eccentrically arranged means on and above the platform for suspending the platforms, and for fastening the suspending rope; centrally arranged means on the underside of the platform for the passage of a plummet, and means for connecting together and stiffening all the parts of the scaffold.

4. In a scaffold of the kind as described, the combination of a U-shaped ring, of another angular ring located upon the said U-shaped ring, floor plates arranged on the said angular ring, transverse girders, a pair of rails arranged eccentrically on and extending vertically upwardly from the bottom, sheet metal plates attached to the joining parts of the said rails, extending downwardly through the bottom and having its parts below the bottom broadened, another rail, embraced by the broadened portions of the sheet metal plates, means for stiffening the bottom, and means within the pair of rails for fastening and guiding the rope, substantially as described.

5. In a scaffold of the kind as described the combination of a U-shaped iron ring *a*, a flanged iron ring *d*, floor planks *c*, transverse girders *b*, a pair of flanged rails *h*, sheet metal plates *g'*, a rail *g* sheet metal stiffening plates *o*, radially extending ties *n*, a central plummet *i*, a rope *k*, a bolt *l* for fastening and a sleeve *m* for guiding the rope, all substantially as described.

1,153,885. NAVIGATIONAL SOUNDING APPARATUS. DANIEL BALLAUF, Washington, D. C.; Adolph W. C. Wurdeman administrator of said Daniel Ballauf, deceased. Filed Aug. 31, 1911, Serial No. 646,957. Renewed June 28, 1915. Serial No. 36,917. (Cl. 242—156.)



1. In a navigational sounding apparatus, the combination of a frame, a cable reel mounted therein having a cable groove and relatively widely extended peripheral friction surfaces at the sides of the groove, a brake block extending across the cable groove and having shoes arranged to respectively engage the said peripheral friction surfaces, a radially positioned rotatable threaded-rod engaging an abutment on the frame and having a loose threaded engagement with the block, and radially arranged stationary guides for the brake block positioned at the sides and ends thereof to hold it against circumferential or axial movement, substantially as set forth.

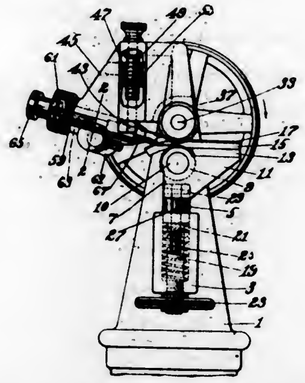
2. In a navigational sounding apparatus, the combination of a frame, a cable reel mounted therein having a cable groove and relatively widely extended peripheral friction surfaces at the sides of the groove, a brake block extending across the cable groove and having shoes arranged to respectively engage the said peripheral friction surfaces, a radially positioned rotatable threaded rod engaging an abutment on the frame and having a loose threaded engagement with the block midway between the shoes whereby they are acted upon with equal pressure, and radially arranged stationary guides for the brake block positioned at the sides and ends thereof to hold it against circumferential or axial movement, substantially as set forth.

1,153,886. SOLE-SLOTTING MACHINE. JOHN MILTON BENJAMIN, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 14, 1911. Serial No. 608,534. (Cl. 12—17.)

1. A machine of the class described having, in combination, a knife having its edge formed to cut a V-shaped groove in a piece of stock, means for supporting said stock, and means for feeding said stock, said feeding means comprising a roll having a central section to engage the portion of the stock which is removed by the knife and spaced sections arranged to engage the uncut stock on both sides of said knife.

2. A machine of the class described having, in combination, a knife, a feed roll, means for rotating said feed roll, an idle supporting roll, a supporting table, said roll and table being adjustable in unison, and yielding means for supporting said roll and table.

3. A machine of the class described having, in combination, a knife having its edge shaped to cut a groove in a piece of stock, means for supporting said stock, and means for feeding said stock, said feeding means comprising members for engaging the stock at each side of the knife and a member having its periphery formed to correspond to the shape of the knife edge and arranged to engage that portion of the stock which is removed by the knife.



4. A machine of the class described having, in combination, a knife having its edge shaped to cut a groove in a piece of stock, yielding means for supporting said stock, and means for feeding said stock, said feeding means comprising members for engaging the stock at each side of the knife and a member having its periphery formed to correspond to the shape of the knife edge and arranged to engage that portion of the stock which is removed by the knife.

5. A machine of the class described having, in combination, a grooving knife, a stock supporting table, a stock supporting roll carried by said table, a feed roll comprising end members arranged to engage the stock on each side of the knife and a central member having its periphery formed to correspond to the shape of the edge of the knife and arranged to engage that portion of the stock which is removed by said knife, yielding means for causing said feed roll and supporting roll to approach each other, and means for actuating said feed roll.

[Claims 6 to 17 not printed in the Gazette.]

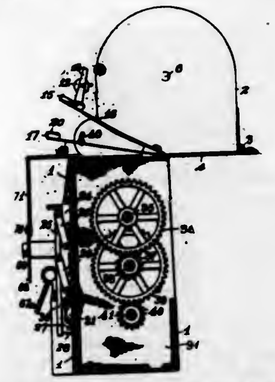
1,153,887. KINETOGRAPH. THOMAS H. BLAIR, Northboro, Mass., assignor to Whiting Manufacturing Company, Northboro, Mass., a Corporation of Massachusetts. Filed Nov. 29, 1909. Serial No. 530,302. (Cl. 88—17.)

1. In a kinetograph, a coil of film, means for imparting an intermittent movement to the film as it is delivered from said coil, means for positively rotating the coil to deliver the film therefrom, and means for controlling said rotating mechanism by the tension imparted to the film during its feeding movement.

2. In a kinetograph, a coil of film, coil rotating mechanism to deliver film therefrom, and means for controlling the action of said coil rotating mechanism by the tension of the film.

3. In a kinetograph, the combination with a coil of film, of means for rotating said coil to deliver the film therefrom, a spring actuated yielding mechanism operated by the tension of said film, and means operated by said yielding mechanism for controlling the action of said coil rotating mechanism.

4. In a kinetograph, intermittently rotating sprocket wheels for engaging the edges of the film and a guideway for the film leading to said sprocket wheels, comprising a fixed plate having a surface in alinement with the peripheries of said sprocket wheels and a movable plate having its edges pivotally connected by links with said fixed plate, whereby said movable plate is held parallel with said fixed plate.



5. In a kinetograph, a pair of sprocket wheels adapted to engage the edges of the film, a guideway for the film leading to said sprocket wheels, comprising a pair of plates pivotally connected by links, whereby said plates are maintained parallel, and a roll carried by one of said plates arranged to crowd the film against said sprocket wheels.

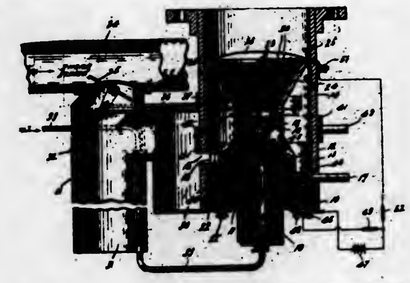
1,153,888. END-PLAY DEVICE FOR ROTARY ENGINES. ROBERT W. BOTT, Minneapolis, Minn. Filed Oct. 22, 1914. Serial No. 868,009. (Cl. 74—14.)

1. An end play device for rotary machines, comprising, in combination, a shaft having limited end play, a socket supported in substantially co-axial alinement with said shaft, a cam movably mounted to slide in said socket, a ball normally at the top of the cam surface, and a revoluble element connected with said shaft and having an end surface bearing upon said ball, whereby as said revoluble element is turned by said shaft, said ball rides from normal position at the top of said cam surface to the bottom and then back to the top, thereby imparting an even longitudinal reciprocation to said shaft.

2. Means for maintaining an even to and fro end play motion in the journal of a rotary machine, comprising a shaft having limited end play, a socket immovably supported adjacent an end of said shaft, a cam movably supported to slide longitudinally in said socket and having an outward thrust surface set at an angle to the shaft axis, a compression spring interposed between the inner end of said socket and said cam adapted to cushion the cam, a ball adapted to roll upon said thrust surface and a rotary element connected to revolve with said shaft and having a bearing surface adapted to press against said ball in said socket to roll said ball upon said thrust surface and impel the shaft to one end of its limit of play, said cam surface being shaped so that normally, the ball starts rolling as the shaft moves outwardly, from the bottom of the space between the cam surface and rotary element to the top and back again to the bottom, thereby imparting a smooth reciprocating endwise motion to the shaft.

3. Means for maintaining a to and fro lateral motion in the journal of a rotary machine, comprising, a shaft having limited end play, a socket immovably supported adjacent an end of said shaft, a cam movably supported to slide longitudinally in said socket and having an end thrust surface, an adjusting device threaded through said socket and connected with said cam to regulate the amount of thrust movement imparted by said thrust surface, a compression spring in said socket and against which said cam is adapted to cushion, a ball adapted to roll upon said thrust surface and a rotary element connected to revolve with said shaft and having a bearing surface adapted to press against said ball in said socket to roll said ball upon said thrust surface and impel the shaft to one end of its limit of play.

1,153,889. CARBURETING METHOD. TURNER D. BOTTOME, Indianapolis, Ind. Filed Nov. 13, 1912. Serial No. 731,104. (Cl. 48—212.)



1. The method of carbureting air, which comprises heating air and liquid fuel to a temperature just short of the point at which ebullition of the fuel occurs at the pressure to which the fuel is subjected, reducing the pressure on the fuel to produce volatilization, heating the volatilized fuel to counterbalance the heat absorption due to the latent heat of vaporization, and mixing the volatilized fuel with the heated air.

2. The method of carbureting air, which comprises heating liquid fuel to a temperature just short of the point at which ebullition of the fuel occurs at the pressure to which the fuel is subjected, reducing the pressure on the fuel to produce volatilization, heating the volatilized fuel to counterbalance the heat absorption due to the latent heat of vaporization, and mixing the volatilized fuel with air.

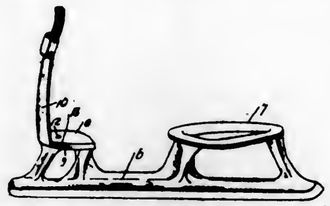
3. The method of carbureting air, which comprises heating air and liquid fuel to a temperature just short of the point at which ebullition of the fuel occurs at the pressure to which the fuel is subjected, reducing the pressure on the fuel to produce volatilization, and mixing the volatilized fuel with the heated air.

4. The method of carbureting air, which comprises heating liquid fuel to a temperature just short of the point at which ebullition of the fuel occurs at the pressure to which the fuel is subjected, reducing the pressure on the fuel to produce volatilization, and mixing the volatilized fuel with air.

5. The method of carbureting air, which comprises heating air and liquid hydrocarbon fuel to a temperature just short of the point at which ebullition of the fuel occurs at the pressure to which the fuel is subjected, reducing the pressure on the fuel to produce volatilization, heating the volatilized fuel to a sufficiently high temperature to produce "cracking" of the hydrocarbon fuel, and mixing the volatilized fuel with the heated air.

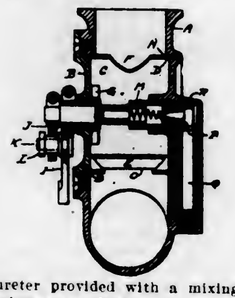
[Claims 6 to 11 not printed in the Gazette.]

1,153,890. SKATE. HOWARD HESSE BOWMAN, Owen Sound, Ontario, Canada. Filed Feb. 27, 1915. Serial No. 10,960. (Cl. 46—63.)



In combination in a skate, a heel plate having a horizontal recess, of an ankle supporting standard curved to fit the shoe, a tapered right angular extension at the base thereof said extension adapted to enter said recess until said standard abuts the heel plate and means for locking said standard in position comprising a vertical screw passing through the heel plate and said extension and elongated upper edges on said heel plate adapted to be bent over to limit any pivotal movement of said standard.

1,153,891. CARBURETER. WILLIAM L. BREATH, New York, N. Y. Filed Sept. 10, 1913. Serial No. 789,185. (Cl. 48—155.1.)



1. A carbureter provided with a mixing chamber and with oil and air passages leading thereto, means for manually controlling the flow of oil and air through said passages respectively, and means for automatically restricting the oil passage upon increase of rapidity of flow therein and enlarging the passage upon decrease of rapidity of flow therein, for the purpose set forth.

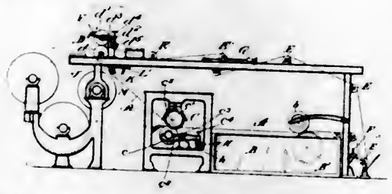
2. In a carbureting apparatus, a fuel pipe containing a graduating valve adapted to be actuated by changes in the rapidity of flow of the fuel in the pipe, the valve being moved to restrict the passage upon increase of rapidity of flow and to enlarge the passage upon decrease of rapidity of flow, in combination with a manually controlled graduating valve in said pipe, an air duct into which said pipe opens, and a manually controlled valve in said air duct.

3. In a carbureter, a throttle valve comprising an open ended tube having air and mixture openings in opposite sides, in combination with a casing having concentric circular grooves in opposite sides, in which the ends of the throttle respectively fit and turn.

1,153,892. MACHINE FOR MAKING PAPER. NATHAN H. CARPENTER, Coshocton, Ohio. Filed May 28, 1915. Serial No. 31,001. (Cl. 92—49.)

1. In a paper-making machine, the combination of an endless felt or apron which receives the wet pulp, draw rolls engaging the felt and driving it, and a pair of press rolls between which the felt passes with the paper web, one of which is provided with suction mechanism for drawing water from the felt and pulp, and the other of which is pressed yieldingly against the combined press and suction roll.

2. In a paper-making machine, the combination of an endless felt or apron which receives the wet pulp, draw rolls engaging the felt and driving it, means for adjusting the pressure of the draw rolls, a pair of press rolls between which the wet felt passes with the pulp, one of which is provided with suction mechanism for drawing water from the felt and pulp, and the other of which is pressed yieldingly against the combined press and suction rolls, and means for adjusting the pressure exerted by said rolls on the felt and paper.



3. In a paper-making machine, the combination of an endless felt which receives the wet pulp, draw rolls engaging the felt and driving it, a pair of press rolls between which the wet felt passes with the paper, means for adjusting the pressure exerted between the press rolls, means for adjusting the pressure exerted between the draw rolls, and mechanism for driving the press rolls and draw rolls provided with devices for varying the speed of the draw rolls relatively to that of the press rolls.

4. In a paper-making machine, the combination of an endless felt which receives the wet pulp, draw rolls engaging the felt and driving it, press rolls between which the felt passes with the paper, a drier interposed between the draw rolls and press rolls, and an adjustable tension roll bearing on the felt near the drier for varying the position of the felt relatively to the drier.

5. In a paper-making machine, the combination of a felt, a drier mounted to move in proximity to the felt, a roller engaging the felt near the drier, and means for adjusting the position of said roller to vary the distance between the felt and the drier at the point of transfer of the paper from the felt to the drier.

[Claims 6 to 11 not printed in the Gazette.]

1,153,893. SLEEVE-PROTECTOR. FRED B. CONINE, Clifton, Tex. Filed June 14, 1913. Serial No. 773,656. (Cl. 2—18.)

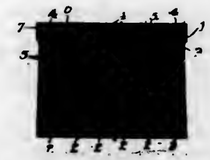


1. A sleeve protector comprising an expansible wrist band, an eccentric shaped flange carried by and projecting outwardly from the band intermediate its ends, and a liquid holding pocket formed on the flange.

2. A sleeve protector comprising an expansible wrist band, an eccentric shaped flange carried by and projecting outwardly from the band intermediate its ends, and a water retaining pocket formed on the flange adjacent its wide portion.

3. A sleeve protector comprising an expansible wrist band, an eccentric-shaped flange carried by and projecting outwardly from the band intermediate its ends, and a water retaining pocket formed on the flange and gradually deepening toward the wide portion of said flange.

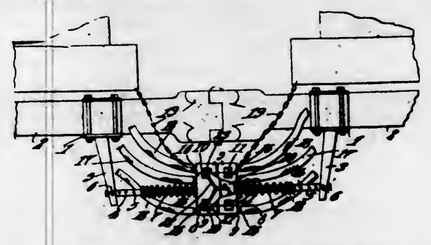
1,153,894. BLACKBOARD-ERASER. RICHARD A. COSTELLO, Chicago Heights, Ill. Filed Jan. 12, 1914. Serial No. 811,548. (Cl. 15—65.)



1. In an eraser, the combination with a foundation piece, of a plurality of rubbing strips squared at their upper edges and a plurality of rows of stitching one row on each side of each strip engaging the said strip at a point slightly removed from its squared edge and passing upwardly therethrough and through the foundation piece.

2. In an eraser, the combination with a foundation piece, of a plurality of rubbing strips secured at their upper edges and a plurality of rows of stitching one row on each side of each strip engaging the said strip at a point slightly removed from its squared edge and passing upwardly therethrough and through the foundation piece, a finishing piece above the foundation piece and a row of stitching passing through the finishing piece, the foundation piece and the outer part of the rubbing strips adjacent to their upper edges to secure the said elements in proper relative positions.

1,153,895. HOSE-COUPLING. JAMES A. CUNNINGHAM, Independence, Kans. Filed June 19, 1915. Serial No. 35,042. (Cl. 188—13.)

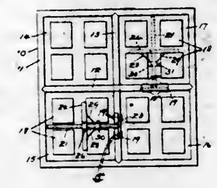


1. In a hose connector, a pair of heads adapted to abut against one another, means for yieldably supporting said heads, detachable sections attached to said heads and arranged to aline with one another, the heads having coöperating means for guiding the heads into abutment with one another, the heads and sections having bores adapted to be brought into communication, and said heads and sections having means for the attachment of hose sections thereto to communicate with said bores.

2. In a hose connector, a pair of upright heads adapted to abut against one another, means for yieldably supporting said heads, the opposite sides of the head having coöperating guiding means for guiding the heads into alinement when they abut one against the other, and detachable sections carried by the upper and lower ends of the heads, the heads and sections having bores adapted to be brought into communication when the heads abut against one another, and the heads and sections having means for the attachment of hose sections thereto.

1,153,896. LINE-UP REGISTER-GAGE. JOSEPH C. DITTRICH, New York N. Y. Filed Nov. 19, 1913. Serial No. 801,895. (Cl. 101—166.)

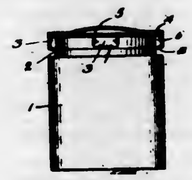
1. In a line-up register gage, a retaining bar adapted to rest upon the frame of a chase, a register bar pivotally secured to the retaining bar whereby the gage bar may be disposed upon either side of the retaining bar by a hinge movement and a guide adjustably secured upon the registering bar, said guide having extended arms at either side of the registering gage whereby the position of type forms in the chase may be adjusted by the guide, substantially as shown and described.



2. In a line-up register gage, the combination of a retaining bar adapted to rest upon the frame of a printer's chase, with a registering bar pivotally hinged to the retaining bar so that the gage is reversibly secured to the central portion of the retaining bar, and a guide bar slidably and removably mounted upon the register bar, and arranged in parallel relation with the retaining bar, means for rigidly securing the guide bar at any desired point upon the register bar, whereby the positions of the type-forms in the chase may be adjusted by adjusting the form relatively to the guide bar, and means for disposing the retaining bar in alinement with the frame of the chase, substantially as shown and described.

3. In a line-up register gage, the combination with a retaining bar adapted to rest upon the frame of a printer's chase, of a register bar pivotally hinged at the central portion of the retaining bar, and on the upper side portion thereof, whereby the register bar may be reversibly disposed upon either side of the retaining bar, and a guide bar removably and adjustably disposed upon the register bar, and arranged in parallel relation to the retaining bar, and means for securing the guide bar at any desired position upon the register bar whereby forms of type or plates for printing may be lined up and gaged, substantially as shown and described.

1,153,897. CLOSURE FOR CONTAINING VESSELS. JOHN E. DOLDT, Portland, Me., assignor to National Metal Seal Corporation, Boston, Mass., a Corporation of Maine. Filed May 28, 1913. Serial No. 770,323. (Cl. 215—85.)



1. In combination with a container having relatively short spaced lugs about its mouth each lug having an upwardly beveled lower face and having lateral cam surfaces sloped toward each other from opposite ends of the lug, a closure for said container having relatively long resilient lips disposed for progressive engagement with said lateral cam surfaces of the lugs, said lips terminating in an inwardly directed edge disposed for engagement with the under faces of said lugs whereby to draw said closure downwardly and inwardly on to the container.

2. In combination with a container having spaced lugs about its mouth, each lug having an upwardly beveled lower face and having lateral cam surfaces sloped toward each other from opposite ends of the lugs, a closure for said container having depending resilient lips disposed for progressive engagement with said lateral cam surfaces of the lugs, said lips terminating in an inwardly

directed edge disposed for engagement with the under faces of said lugs and said inner edges disposed substantially in the line of a chord whereby to draw the closure downwardly and inwardly on to the container as it is tightened.

3. In combination with a container having relatively short spaced lugs about its mouth, each lug having an under bearing surface and a lateral engaging portion rounded both upwardly and laterally, a closure for said container comprising a cap having a depending skirt, and relatively long resilient lips extending inwardly from said skirt, the inner edges of said lips meeting and forming a juncture with the edge of the skirt.

4. In combination with a container having relatively short spaced lugs about its mouth, each lug having an under bearing face and having a lateral engaging face, a closure for said container comprising a cap having a depending skirt, and relatively long inwardly directed resilient lips on said skirt, each lip substantially in the form of a segment and connected to said skirt at its ends in truss relation thereto.

5. In combination with a container having relatively short spaced lugs about its mouth, each lug having an under bearing face and having a lateral engaging portion, a closure for said container having relatively long resilient lips disposed for progressive engagement with said lateral faces of the lugs, said lips each terminating in an inwardly directed edge disposed for engagement with the under faces of said lugs whereby to draw said closure downwardly and inwardly on to the container.

[Claim 6 not printed in the Gazette.]

1,153,898. NUT-LOCK. JAMES V. DUCKETT, Hillside, Colo. Filed May 2, 1914. Serial No. 835,988. (Cl. 151—11.)



The combination with a bolt having a longitudinal groove therein, of a nut provided on the under surface thereof about the opening with a semi-annular recess, said nut also provided with a tortuous way extending tangentially from one end of the recess and thence at right angles to one edge of the nut, said way being of a depth similar to the depth of the recess, a locking element removably mounted in and conforming to the contour of the recess and way, said way preventing lateral and longitudinal movement of said element in said recess, the inner end of the locking element being bent inwardly to form a tooth for engagement with the groove for preventing rotation of the nut, and the outer end of the locking element projecting beyond the side of the nut to form a gripping piece for facilitating the disengagement of the element from the nut.

1,153,899. PLAYING-CARDS. ELI V. ELCOUIN, Detroit, Mich. Filed Nov. 30, 1914. Serial No. 874,648. (Cl. 46—25.)



1. A deck of cards for use in playing a card game of base ball, including a plurality of suits and a plurality of like cards in each suit, one of said suits having indicia thereon representing the different kinds of balls that are pitched during a game; another suit having indicia thereon representing balls that are hit during a game, and another suit having indicia thereon representing the different players in a game.

2. A deck of cards for use in playing a card game of base ball, including a pitcher's suit, a batter's suit, and a fielder's suit, each suit having a plurality of like cards and the cards of all of said suits having indicia thereon representing the different balls, players and plays of a baseball game.

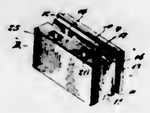
3. A deck of cards for use in playing a card game of baseball, including a pitcher's suit of twenty cards, a batter's suit of twenty cards, and fielder's suit of twenty cards, each suit having a plurality of like cards and the cards of all of said suits having displayed thereon pictorial representations of players and devices used by players in the game of baseball.

4. A deck of cards for use in playing a card game of baseball, including a pitcher's suit of twenty cards displaying thereon pictorial representations of the various kinds of balls pitched during a game, said suit having a plurality of like cards; a batter's suit of twenty cards displaying thereon pictorial representations of balls that can be hit during a game, location of the field to which a ball is hit, and the number of bases a batter is entitled to; and a fielder's suit of twenty cards displaying thereon pictorial representations of players in the field, said batter's and fielder's suit having a plurality of like cards.

5. A deck of cards for use in playing a card game of baseball including a plurality of suits and a plurality of like cards in each suit, the cards of one suit having indicia on both sides thereof representing the different kinds of balls that are pitched during a game; the cards of another suit having indicia on both sides thereof representing the balls that are hit during a game, and the cards of another suit having indicia on both sides thereof representing the different players in a game.

[Claim 6 not printed in the Gazette.]

1,153,900. BUILDING-BLOCK. FREDRICK B. FAIRBANK, Detroit, Mich. Filed June 28, 1911. Serial No. 635,776. (Cl. 72—30.)



In a wall construction, cementitious blocks, each block having a tongue in spaced relation to one margin of the block on the top and one end face thereof, a groove in the plane of the tongue on the bottom and other end face of the block, whereby one or similar molds can be used for producing said blocks, the upper and lower faces of each block having a centrally disposed longitudinal trough parallel to the adjacent tongues and grooves connected by vertical run-ways extending through the body of each block adjacent to the ends thereof with a greater amount of material between said run-ways than the material between the ends of the block and said run-ways, and cooperating with said trough in receiving vertical and horizontal metallic reinforcing tie rods and cementitious material adapted to bind said blocks together, and each block having a vent channel extending from the top to the bottom thereof between the plane of the trough and the front face of the block and in parallelism with said vertical runways.

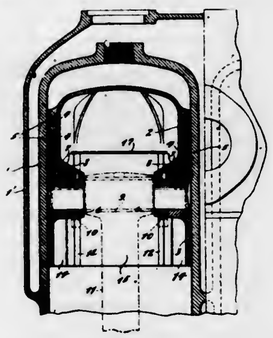
1,153,901. INDICATING DEVICE FOR NUMBERING-MACHINES. WILLIAM A. FORCE, New York, N. Y. Filed Aug. 3, 1914. Serial No. 854,782. (Cl. 101—185.)

In a numbering machine having a plurality of actions, revoluble disk setting means, an apertured cover plate over said setting means through the aperture of which a portion of the setting means projects and is visible, indicator symbols on the top face and edge of the setting means adapted to be successively exposed through the aperture



in the plate whereby the setting of the machine may be determined while either sitting or standing.

1,153,902. PISTON. GUSTAVE E. FRANQUIST, New Brunswick, N. J. Filed Aug. 1, 1914. Serial No. 854,484. (Cl. 74—85.)



1. In combination with the cylinder of an internal combustion engine, a piston comprising a head and a sleeve, said sleeve being automatically circumferentially compressible under the pressure exerted by the cylinder walls upon said sleeve when said piston expands.

2. In combination with a cylinder for an internal combustion engine, a piston comprising a head and a sleeve integral therewith, said sleeve being automatically compressible under the pressure exerted by the cylinder wall upon said sleeve when said piston expands.

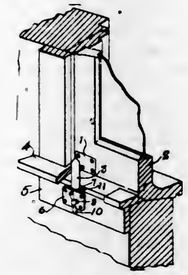
3. A piston for internal combustion engines, having a head and a sleeve integral therewith, said piston having a circumferential slot therein separating a portion of said sleeve from said head and longitudinal grooves in said piston joining said circumferential slot, forming a section of said sleeve capable of bodily movement relative to the remainder of said sleeve.

4. A piston for internal combustion engines, comprising a head and a sleeve integral therewith, said piston having a circumferential slot therein dividing a portion of said sleeve from said head, longitudinal ribs formed on the inner peripheral surface of said sleeve, said ribs having longitudinal grooves therein, joining said circumferential slot.

5. A piston for internal combustion engines, comprising a head and a sleeve integral therewith, said piston having a circumferential slot therein on a level with the rearmost piston ring, and ribs on the interior surface of said sleeve extending from the bottom of said sleeve to said slot, said ribs having longitudinal grooves therein joining the ends of said circumferential slot.

[Claims 6 to 11 not printed in the Gazette.]

1,153,903. FRICTION-HINGE. WILLIAM L. FOSTER, Dayton, Ohio. Filed May 10, 1915. Serial No. 26,053. (Cl. 16—111.)



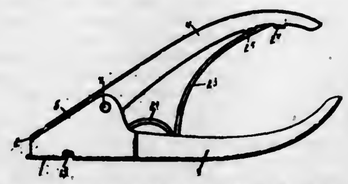
1. The combination, with a window or door frame having a recess and a sash mounted in said frame, of a hinge member secured to said sash and having a hinge pin, a second hinge member mounted in said recess in said frame and having a part arranged to receive said hinge pin, said part having a clamping action to grip said pin, and an actuating device mounted on the face of said frame and operatively connected with the clamping part of said second hinge member.

2. The combination, with a window or door frame and a sash mounted therein, said frame having a recess beneath said sash and in alinement with one of the vertical edges thereof, of a hinge member comprising a face plate mounted on said frame in front of said recess, and a clamping device mounted in said recess, an actuating device mounted on said face plate and connected with said clamping device, and a second hinge member comprising a plate secured to said sash and having a pin extending downwardly from said sash and rotatably mounted in said clamping device.

3. A casement adjusting hinge comprising a hinge member having a hinge pin, a second hinge member comprising a clamping device having a socket to receive said hinge pin, an attaching plate to support said clamping device with its socket in alinement with said hinge pin, and an actuating device extending through said attaching plate and operatively connected with said clamping device.

4. The combination, with a window or door frame and a sash mounted therein, of a hinge member comprising a face plate secured to said frame, a split sleeve formed integral with said face plate and mounted in said window or door frame in substantial alinement with a vertical edge of said sash, an actuating device for said split sleeve mounted on said face plate, a second hinge member comprising a plate secured to said sash and having a pin extending downward through said frame and journaled in said split sleeve.

1,153,904. BUTTON-REMOVER. JAMES D. FREEMAN, Kalamazoo, Mich., assignor of one-third to John F. Muffley, Kalamazoo, Mich. Filed June 10, 1915. Serial No. 33,377. (Cl. 218—27.)



1. In a structure of the class described, the combination of a pair of jaws provided with channel-shaped handles and slotted to receive the shank of a button, the slot of the lower jaw being T-shaped, said lower jaw having

upwardly projecting side flanges between which the upper jaw is disposed, said upper jaw having downwardly projecting side flanges with inturned button engaging members spaced to form the shank slot of the upper jaw, a jaw pivot disposed through said side flanges of said jaws, a wedge-shaped tongue having a central notch in its forward end slidably mounted on the lower jaw between its said side flanges and supported laterally thereby, said lower jaw having inwardly projecting retaining lugs disposed above said tongue, said tongue having opposed side notches and said upper jaw having lugs on its side flanges engaging said notches whereby the tongue is reciprocated by the rocking of the jaws on their pivot, a staple holding member having forwardly projecting fingers adapted to engage the top of a staple, said fingers being beveled on their under sides and converged rearwardly on their inner sides, said member being provided with an upwardly projecting shank adapted to slide between the button engaging members of the upper jaw, a bowed spring arm connected to said shank of said staple holding member and provided with a shoe portion at its rear end slidably disposed within the handle of the lower jaw, and a spring mounted on the handle of the upper jaw to engage said arm whereby said staple holding member is moved forwardly as the jaws are separated and retracted as they are closed, said spring being also adapted to close said jaws.

2. In a structure of the class described, the combination of a pair of jaws provided with handles and slotted to receive the shank of a button, the slot of the lower jaw being T-shaped, said lower jaw having upwardly projecting side flanges between which the upper jaw is disposed, said upper jaw having downwardly projecting side flanges with inturned button engaging members spaced to form the shank slot of the upper jaw, a jaw pivot disposed through said side flanges of said jaws, a wedge-shaped tongue having a central notch in its forward end slidably mounted on the lower jaw between its said side flanges and supported laterally thereby, said lower jaw having inwardly projecting retaining lugs disposed above said tongue, said tongue having opposed side notches and said upper jaw having lugs on its side flanges engaging said notches whereby the tongue is reciprocated by the rocking of the jaws on their pivot, a staple holding member having forwardly projecting fingers adapted to engage the top of a staple, said member being provided with an upwardly projecting shank adapted to slide between the button engaging members of the upper jaw, a bowed spring arm connected to said shank of said staple holding member, and a spring mounted on the handle of the upper jaw to engage said arm whereby said staple holding member is moved forwardly as the jaws are separated and retracted as they are closed, said spring being also adapted to close said jaws.

3. In a structure of the class described, the combination of a pair of jaws provided with handles and slotted to receive the shank of a button, the slot of the lower jaw being T-shaped, said lower jaw having upwardly projecting side flanges between which the upper jaw is disposed, said upper jaw having downwardly projecting side flanges with inturned button engaging members spaced to form the shank slot of the upper jaw, a jaw pivot disposed through said side flanges of said jaws, and a wedge-shaped tongue having a central notch in its forward end slidably mounted on the lower jaw between its said side flanges and supported laterally thereby, said lower jaw having inwardly projecting retaining lugs disposed above said tongue, said tongue having opposed side notches and said upper jaw having lugs on its side flanges engaging said notches whereby the tongue is reciprocated by the rocking of the jaws on their pivot.

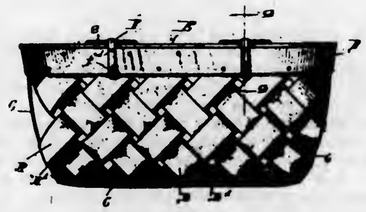
4. In a structure of the class described, the combination of a pair of pivoted jaws provided with handles and slotted to receive the shank of a button, said lower jaw having upwardly projecting side flanges between which the upper jaw is disposed, said upper jaw having downwardly projecting side flanges with inturned button engaging members spaced to form the shank slot of the upper jaw, a tongue slidably mounted on the lower jaw to reciprocate across the slot thereof and operatively connected to said upper jaw so that the tongue is reciprocated by the rocking of the jaws on their pivot, a staple holding member having forwardly projecting fingers adapted to engage the top of a staple, said fingers being beveled on their under sides and converged rearwardly on their inner sides, said member being provided with an upwardly projecting shank adapted to slide between the button engaging members of the upper jaw, a bowed spring arm connected to said shank of said staple holding member and provided with a shoe portion at its rear end slidably disposed on the handle of the lower jaw, and a spring mounted on the handle of the upper jaw to engage said arm whereby said staple holding member is moved forwardly as the jaws are separated and retracted as they are closed, said spring being also adapted to close said jaws.

5. In a structure of the class described, the combination of a pair of pivoted jaws provided with handles and slotted to receive the shank of a button, said lower jaw having upwardly projecting side flanges between which the upper jaw is disposed, said upper jaw having downwardly projecting side flanges with inturned button engaging members spaced to form the shank slot of the upper jaw, a tongue slidably mounted on the lower jaw to reciprocate across the slot thereof and operatively connected to said upper jaw so that the tongue is reciprocated by the rocking of the jaws on their pivot, a staple holding member having forwardly projecting fingers adapted to engage the top of a staple, said fingers being beveled on their under sides and converged rearwardly on their inner sides, said member being provided with an upwardly projecting shank adapted to slide between the button engaging members of the upper jaw, an arm connected to said shank of said staple holding member, and a spring mounted on the handle of the upper jaw to engage said arm whereby said staple holding member is moved forwardly as the jaws are separated and retracted as they are closed.

[Claims 6 to 20 not printed in the Gazette.]

1,153,905. [WITHDRAWN.]

1,153,906. BASKET OR RECEPTACLE. JAMES A. GREENLEE, Chicago, Ill., and HERMAN WEGWART, Burlington, Wis. Filed May 23, 1914. Serial No. 840,467. (Cl. 217—122.)

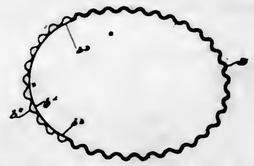


1. A receptacle comprising a plurality of inner and outer braided bodies and having areas wherein the inner and outer bodies are braided with each other.

2. A receptacle comprising a plurality of inner and outer braided bodies and having areas wherein the inner and outer bodies are braided with each other, and hoops secured to the upper edges of said bodies.

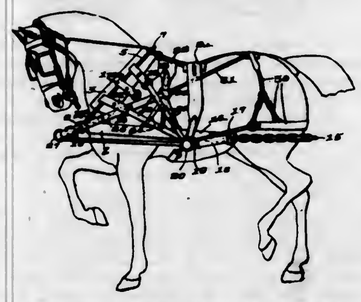
3. A receptacle comprising a substantially rectangular shaped outer body and a correspondingly shaped inner body disposed therein, said inner and outer bodies comprising separate braided splints that interlock with each other at the corners of said receptacle, and hoops secured to the upper edges of said bodies.

1,153,907. HAT SWEAT-BAND. FRED E. HALBERT, San Diego, Cal. Filed July 13, 1914. Serial No. 850,660. (Cl. 2—32.)



A sweat-band, having an inner layer of soft material and an outer layer of rigid strengthening material, said rigid layer being bent to form rigid transverse head-engaging corrugations throughout its entire length, and said soft inner layer being provided throughout its length, except in the part thereof intended to rest against the forehead of the wearer, with transverse corrugations coincident with the corrugations of said rigid strengthening layer.

1,153,908. TWO-COLLAR HARNESS. LUTHAN WHITTEN HAMMOND, Venice, N. Y. Filed Jan. 6, 1913. Serial No. 740,558. (Cl. 54—18.)



1. In a harness, a hame collar, and a breast collar, the hame collar including a body open at the throat and hames, the sides of the breast collar extending below the ends of the body, and the lower ends of the hames extending outside and in front of the breast collar and below the lower ends of the collar body, traces, and tugs connected to the hame collar, the breast collar and to the traces, substantially as and for the purpose described.

2. In a harness, a hame collar, a breast collar, tugs connected to the hame collar, the rear ends of the breast collar constituting tugs, traces connected to the tugs and equalizing means between each trace and the tugs on one side of the harness, said means including a ring to which the tugs are connected, the tugs of the breast collar being slidably connected to the traces in the rear of the ring and looped forwardly and secured to the ring, substantially as and for the purpose specified.

3. In a harness, a collar including hames, traces, tugs connected to the collar and to the traces, a neck yoke and hold back straps connected to the lower ends of the hames to be supported thereby and to the neck yoke and also to the harness in the rear of the collar to be supported by the harness in the rear of the collar, substantially as and for the purpose set forth.

4. In a harness, a hame collar, and a breast collar, the hame collar including a body open at the throat and hames, the sides of the breast collar extending below the ends of the body, and the lower ends of the hames extending outside and in front of the breast collar and below the lower ends of the collar body, traces, tugs connected to the hame collar, the breast collar and to the traces, and neck yoke and hold back straps secured to, and supported by, the lower ends of the hames, substantially as and for the purpose described.

5. In a harness, a hame collar including a body and hames and a breast collar, the hame collar being open at its lower end for permitting the use of the breast collar, and the breast collar being designed to pass below the lower ends of the body of the hame collar and the hames extending below the ends of the hame collar body and in front of, and to the outside of, the breast collar, tugs connected to the hame collar and the breast collar, traces connected to the tugs, a neck yoke and hold-back straps each including two branches one connected to the neck yoke and the other to one hame and both being connected to the harness in the rear of the hame collar, substantially as and for the purpose described.

[Claims 6 to 8 not printed in the Gazette.]

1,153,909. GARMENT. WELLINGTON R. HANES, Chicago, Ill. Filed Mar. 15, 1915. Serial No. 14,325. (Cl. 2—140.)



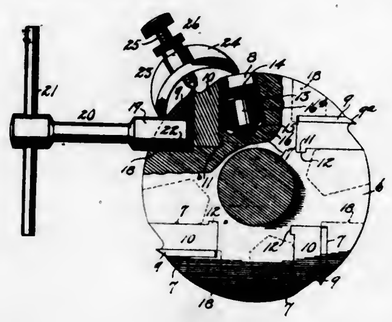
A garment of the character described, comprising a pair of members connected at a medial line at the front from approximately the waist portion to and under the crotch, said members having leg portions adapted to partially surround the front portions of the legs of the wearer and having an inwardly projecting portion at the juncture of the leg portions to fit under the crotch, an adjustable fastening device at or about the waist portion thereof, and means for securing the leg portions in place at various points throughout the length thereof, including a pair of straps extending from the outer edges of the members diagonally downward to the inner edges thereof to draw the outer edges of the members over the hips of the wearer and to assist in holding in place the crotch portion of the garment.

1,153,910. ROTARY CUTTER-HEAD. ELMER HARROLD, Leetonia, Ohio, assignor to The Crescent Machine Company, Leetonia, Ohio. Filed Apr. 11, 1910. Serial No. 554,765. (Cl. 144—230.)

1. A cutter head having a longitudinally extending seat, there being a plurality of sockets communicating with each side of said seat, the sockets at one side of the seat extending at an acute angle thereto, while the sockets on the other side extend through the wall of the seat at approximately right angles thereto; substantially as described.

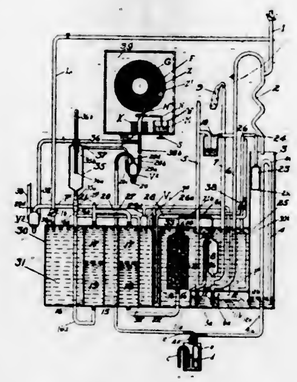
2. A cutter head having a longitudinally disposed seat, a knife located in said seat, a keeper for the knife in said seat extending approximately the full length of the knife, there being a plurality of tangential openings extending through the cutter head into said seat at the knife side thereof, said openings being arranged to form bearings for a knife adjusting wrench, means for holding the

keeper against the knife throughout approximately the full length thereof to frictionally hold the knife in position while adjusting, said means being also arranged to



lock the knife in its adjusted position within the seat; substantially as described.

1,153,911. GAS-ANALYZING APPARATUS. JOSEPH W. HAYS and CHARLES W. HAYS, Chicago, Ill. Filed July 17, 1913. Serial No. 779,547. (Cl. 23—3.)



1. A gas analyzer consisting of connected gas measuring and absorber vessels, a liquid chemical in said absorber vessel and means for periodically bringing said liquid chemical to normal level.

2. A gas analyzer consisting of connected gas measuring and absorber vessels, a liquid chemical in said absorber vessel and automatic means for periodically bringing said liquid chemical to predetermined normal level.

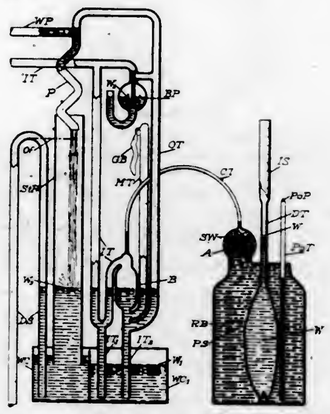
3. A gas analyzer consisting of connected gas measuring and absorber vessels, a liquid in said absorber vessel and automatic means for periodically adding to or subtracting from said liquid an amount equal to any increase or decrease in the volume of said liquid.

4. A gas analyzer consisting of connected gas measuring and absorber vessels, a liquid in said absorber vessel, means for passing gas back and forth between said vessels and automatic means for periodically bringing said liquid to predetermined normal level when the gas is returned from the absorber vessel to the measuring vessel.

5. A gas analyzer consisting of connected gas measuring and absorber vessels, a liquid in said absorber vessel, a tube connected with said absorber vessel, a liquid in said absorber vessel and said tube and means for periodically bringing the liquid in said tube to normal level.

[Claims 6 to 25 not printed in the Gazette.]

1,153,912. GAS ABSORBING AND INDICATING APPARATUS FOR GAS-ANALYZERS. JOSEPH W. HAYS and CHARLES W. HAYS, Chicago, Ill. Original application filed July 17, 1913, Serial No. 779,547. Divided and this application filed Sept. 14, 1914. Serial No. 861,738. (Cl. 23—3.)



1. A gas analyzer consisting of gas measuring and absorber vessels; a chemical in said absorber vessel; a tube sealed into said absorber vessel and a distensible bag within said vessel attached to said tube.

2. A gas analyzer consisting of connected gas measuring and absorber vessels; a liquid chemical in the absorber vessel; a tube sealed in said absorber vessel; a distensible bag within said vessel attached to said tube and a liquid in said bag and said tube.

3. A gas analyzer consisting of connected gas measuring and absorber vessels; a liquid chemical in the absorber vessel; a tube sealed into said absorber vessel; a distensible bag within said absorber vessel attached to said tube; a liquid in said bag and said tube and means for forcing gas from said measuring vessel into said absorber vessel, displacing said liquid chemical thereby deflating said bag and expelling the liquid therefrom into said tube.

4. A gas analyzer consisting of connected gas measuring and absorber vessels; a liquid chemical in said absorber vessel; a tube sealed into said vessel; a distensible bag within said vessel attached to said tube; a liquid in said bag and said tube; means for forcing gas from said measuring vessel into said absorber vessel thereby displacing said liquid chemical, deflating said bag and displacing said liquid and means for measuring the quantity of liquid so displaced.

5. A gas analyzer consisting of connected gas measuring and gas absorber vessels; a chemical in the absorber vessel; a distensible bag in said absorber vessel; a fluid in said bag; an exterior connection with said bag; means for forcing gas from said measuring vessel into said absorber vessel, deflating said bag and thereby applying pressure to the fluid in said bag, and means for measuring the pressure applied to said fluid.

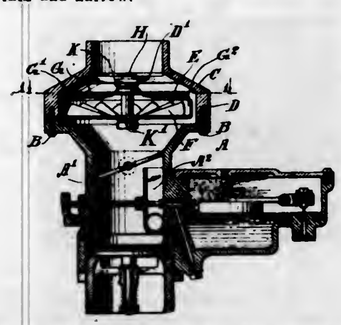
[Claims 6 to 13 not printed in the Gazette.]

1,153,913. MIXING DEVICE. FORREST A. HEATH, Jersey City, N. J., assignor, by mesne assignments, to George Whysall, Marion, Ohio. Original application filed May 15, 1909, Serial No. 496,266. Divided and this application filed Nov. 2, 1910. Serial No. 590,266. (Cl. 48—180.)

1. A mixing device for gas and air comprising a fan and a screen secured thereto and parallel therewith.

2. A mixing device for gas and air comprising a rotatable fan and a rotatable screen in a plane parallel with the fan and adjacent thereto.

3. A mixing device for gas and air comprising a fan mounted so as to rotate and a movable member upon the rear side of the fan and adjacent thereto, said member comprising commingling elements spaced from the blades of the fan, which commingling elements are comparatively long, thin and narrow.

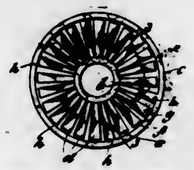


4. A mixing device for gas and air comprising a fan mounted to rotate, and chopping or commingling elements movable therewith and extending outwardly from the central portion of the fan, said commingling elements being spaced from the fan blades and being of a comparatively long, thin and narrow material, such as wire or the like.

5. A mixing device for gas and air having a member comprising a fan and spaced wires extending outwardly from the central portion of the member.

[Claims 6 to 12 not printed in the Gazette.]

1,153,914. MIXING DEVICE. FORREST A. HEATH, Jersey City, N. J., assignor, by mesne assignments, to New Jersey Carbureter Company, Jersey City, N. J., a Corporation of New Jersey. Filed June 29, 1910, Serial No. 569,524. Renewed Feb. 19, 1915. Serial No. 9,420. (Cl. 48—180.)



1. A rotary member for mixing devices having fan blade elements arranged along its length in stepped relation with openings between the elements.

2. A rotary member for mixing devices having sets of fan blade elements, a succeeding fan blade element having a portion at one side of the surface of the fan blade element which precedes the same, which portion is offset to segregate mixture which has been in contact with said surface from the rest of the mixture.

3. A rotary member for mixing devices having sets of fan blade elements around its axis, the blade elements of each set being arranged in stepped relation to one another and provided with openings or spaces therebetween.

4. A rotary member for mixing devices having a hub and carried thereby sets of fan blade elements, each element having a cutting edge which projects beyond the face of the fan blade element preceding the same and openings or spaces between said element through which mixture segregated by the portion can pass.

5. In a mixing device a rotary carrier having a number of fan blade elements the blade elements being arranged one behind the other in the direction of transit of the mixture and so that a portion of the mixture which engages one of the blade elements will be segregated by the succeeding blade element and pass behind the same.

[Claims 6 to 8 not printed in the Gazette.]

1,153,915. MIXING DEVICE. FORREST A. HEATH, Jersey City, N. J., assignor, by mesne assignments, to George Whysall, Marion, Ohio. Filed Sept. 2, 1910, Serial No. 580,177. Renewed Feb. 19, 1915. Serial No. 9,421. (Cl. 48—180.)



1. A mixing device for hydrocarbon engines comprising a casing and a rotatable fan member therein by which the mixture passes and outwardly extending disintegrating or cutting elements which are located at the opposite sides of the fan and rotatable therewith.

2. A mixing device for hydrocarbon engines comprising a casing and a rotatable blade propeller member therein by which the mixture passes and meshes secured to opposite sides of the propeller blades and rotatable therewith.

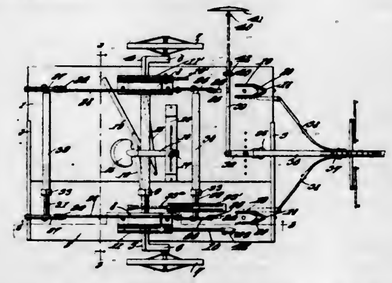
3. A mixing device for hydrocarbon engines comprising a rotatable blade propeller having spaced parallel meshes or screens secured thereto and rotatable therewith.

4. A mixing device comprising a rotatable member having propelling blades for causing rotation of the member and rotatable with the blades outwardly extending disintegrating wire members which are located in the path of the mixed fuel and air which pass the propelling blades, the said outwardly extending members being spaced apart and located at different points along the axis of rotation of the rotatable member.

5. A mixing device comprising a rotatable member having blades and means carried by the member for engaging particles of fuel in the mixture passing over the blades, said means having wire members which extend toward the periphery, said members arranged so that they traverse the mixture at different points along its path.

[Claims 6 to 9 not printed in the Gazette.]

1,153,916. DITCHING-MACHINE. EVEND T. HEGGLAND, Mina, Nev. Filed Dec. 29, 1914. Serial No. 879,509. (Cl. 97—12.)



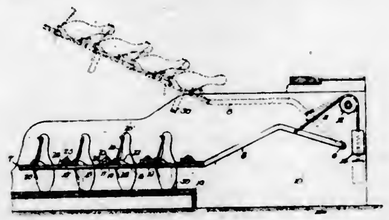
1. In a ditching machine, a body, a longitudinal depending guide carried thereby, a packer movable vertically within the guide, and a plow share carried by the forward end of the packer.

2. In a ditching machine, a body, a guide comprising depending aprons carried thereby, a vertically adjustable packer mounted between the said aprons, and a plow share carried by the forward end of the packer, the upper end portion of the plow share projecting above the packer, and the body having an opening through which the upper end portion of the share passes.

3. In a ditching machine, a body, a guide comprising an inverted channel member having its back secured to the bottom of the body, a packer mounted for vertical movements within the said channel, adjusting means carried by the body and connected to the packer, and a plow share having its upper end portion slidable through the body and including rearwardly projecting side wings secured over the forward end portion of the packer.

4. In a ditching machine, a body comprising laterally adjustable sections, an extensible arch axle constituting telescoping sections journaled to the respective sections of the body, ground wheels journaled to the remote ends of the axle sections, coöperating means carried by one body section and one axle section for oscillating the axle, a ditch-forming device carried by each body section, means carried by each body section and operatively connected to the corresponding ditch-forming device to raise and lower the same, and a shaft comprising telescoping sections connecting said means.

1,153,917. BOWLING-ALLEY PIN-SETTER. FRANK C. HOBBS, Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill., a Corporation of Delaware. Filed May 27, 1915. Serial No. 30,780. (Cl. 46—54.)



1. In a pin-setter for bowling alleys, the combination of a frame and a plurality of pin pockets, each of said pockets having fixed guides to engage the pin at different points lengthwise thereof to position the pin on the alley bed.

2. In a pin-setter for bowling alleys, the combination of a frame and a plurality of pin pockets, each of said pockets having fixed guides to engage the body of the pin at different points lengthwise thereof to position the pin on the alley bed.

3. In a pin-setter for bowling alleys, the combination of a frame and a plurality of pin pockets, each of said pockets having fixed guides to engage the pin at different points lengthwise and peripherally thereof to position the pin on the alley bed.

4. In a pin-setter for bowling alleys, the combination of a frame and a plurality of pin pockets, each of said pockets having an upwardly projecting fixed guide to engage the upper portion of the pin and assist in positioning the pin upon the alley bed.

5. In a pin-setter for bowling alleys, the combination of a frame and a plurality of pin pockets, each of said pockets having a downwardly extending fixed guide to engage the pin.

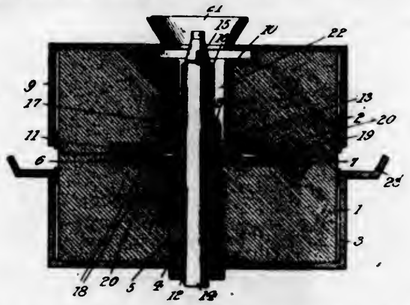
[Claims 6 to 17 not printed in the Gazette.]

1,153,918. GRINDING-MILL. PAUL G. HOLLSTEIN, Carlstadt, N. J., assignor to J. M. Lehmann Company, New York, N. Y. Filed May 15, 1915. Serial No. 28,246. (Cl. 83—7.)

1. A grinding mill composed of a lower bed having a cylindrical central recess, an upper runner having an opposed cylindrical central recess, corrugated metallic disks accommodated within said recesses and forming an annular clearance therebetween that gradually increases in height toward the center of the disks, a rotary shaft carrying the runner, and tapering curved arms secured to said shaft and accommodated within said clearance.

2. A grinding mill comprising a bed having a central recess, a runner having a central recess, corrugated disks accommodated within said recesses and having opposed chamfered faces to form an inner annular clearance of wedge-shaped cross section therebetween, and tapering curved arms revoluble through said clearance.

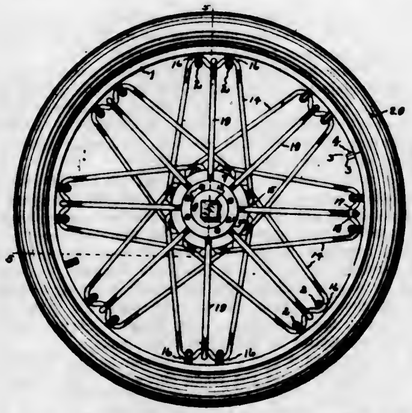
3. A grinding mill comprising a bed provided with a central recess, a runner provided with a central inlet passage and a surrounding recess, corrugated disks accommodated within said recesses and having opposed chamfered faces to form an inner annular clearance of wedge-shaped cross section therebetween, and tapering curved arms revoluble through said clearance.



4. A grinding mill comprising a centrally apertured bed having an upper recess, a runner provided with a central inlet passage and a lower recess, a bearing accommodated within the bed-aperture, a shaft engaging said bearing and extending into the inlet passage, means for operatively connecting said shaft to the runner, corrugated disks accommodated within said recesses and having opposed chamfered faces to form an inner annular clearance of wedge-shaped cross section therebetween, and tapering curved arms carried by the shaft and extending into said clearance.

5. A grinding mill comprising a centrally apertured bed having an upper recess, a runner provided with a central inlet passage and a lower recess, a bearing accommodated within the bed-aperture, a neck on said bearing that extends into the inlet passage, a shaft engaging said bearing and protruding beyond the neck into said inlet passage, means for operatively connecting the shaft to the runner, corrugated disks firmly seated within said recesses and having opposed chamfered faces to form an inner annular clearance of wedge-shaped cross section therebetween, a collar fast on the protruding shaft-end, a hood on said collar loosely surrounding the bearing-neck, and tapering curved arms extending from said hood into said clearance.

1,153,919. VEHICLE-WHEEL. ARTHUR C. HOPKINS, Sioux Falls, S. D., assignor of one-half to William J. Buttschau, Sioux Falls, S. D. Filed Mar. 1, 1915. Serial No. 11,419. (Cl. 21—69.)



1. The combination of a wheel rim, a hub having an annular groove formed therein with recesses opening on said groove, a cylindrical cap on the hub, an annulus threaded on the cylindrical cap, a plurality of metallic strands connected with the rim and hub, a plurality of metallic strands connected with the rim and annulus, said cylindrical cap being revoluble for moving the annulus longitudinally of the hub, and devices mounted on the cylindrical cap for engaging in said groove and recesses for normally preventing relative movements of the cylindrical cap and hub.

2. The combination of a wheel rim, a hub, an annulus carried by the hub, a plurality of spoke members each being substantially of U-shape connecting the hub and rim, a plurality of second spoke members each being removably mounted on one of the first named spoke members and connected with the annulus, and means for moving the annulus longitudinally of the hub.

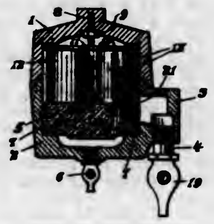
3. The combination of a wheel rim, a hub, an annulus carried by the hub, a plurality of spoke members each being substantially of U-shape connecting the hub and rim, a plurality of second spoke members each being removably mounted on one of the first named spoke members and connected with the annulus, means for moving the annulus longitudinally of the hub, and means for maintaining the annulus in stationary relation with the hub after it has been moved longitudinally thereof.

4. The combination of a wheel rim provided with detents arranged in pairs, a hub, an annulus carried by the hub, a plurality of metallic strands substantially of U-shape each being mounted upon a pair of said detents and connected with the hub, a plurality of second metallic strands each having a part disposed between a pair of detents in engagement with one of said first named metallic strands, and having a part connected with the annulus, and means for moving the annulus longitudinally of the hub.

5. The combination of a wheel rim provided on its inner side with detents arranged in pairs, a hub, an annulus carried by and adapted to be moved longitudinally of the hub, a plurality of strands substantially of U-shape each being bent between its ends to provide outwardly curved portions and a depressed part intermediate said curved portions, each of said U-shaped strands being mounted with its ends in engagement with the hub, its outwardly curved portions being in engagement with a pair of the detents of the wheel rim, and a plurality of second metallic strands, each being mounted upon a depressed part of a first named metallic strand and connected with said annulus.

[Claims 6 to 9 not printed in the Gazette.]

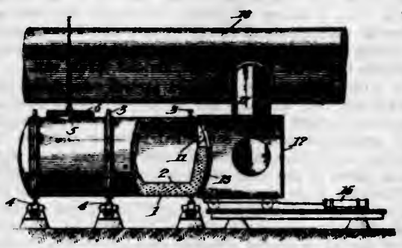
1,153,920. FILTER. JOHN HOTCHKISS, Sebring, Ohio. Filed May 3, 1915. Serial No. 25,340. (Cl. 210—11.)



1. In a filter, the combination of a casing, a filter stone located in the lower portion of the casing and spaced from the bottom thereof, a spindle located above the filter stone and in contact with said filter stone, scraper blades rotatably mounted upon the spindle, said scraper blades spaced apart at their inner edges and from the spindle, a supply pipe provided with an inclined passage, said passage located above the filter stone, a chambered flange, the chamber thereof communicating with the chamber of the main casing, said chamber extended above the upper face of the filter stone.

2. In a filter of the class described, the combination of a filter casing, a filter stone located within the casing and spaced from the bottom thereof, a spindle adjustably connected to the upper portion of the filter casing, said spindle located above the filter stone, a chambered flange located at one side of the filter casing, the chamber of said flange communicating with the chamber of the filter casing, convexo-concave scraper blades rotatably mounted upon the spindle and above the filter stone, the lower ends of said scraper blades adapted for contact with the upper face of the filter stone, said scraper blades spaced apart at their inner vertical edges, and a supply pipe located above the filter stone.

1,153,921. CONVERTER FOR TREATING MATTE. WILLIAM H. HOWARD, Garfield, Utah. Filed Mar. 2, 1914. Serial No. 821,925. (Cl. 75—3.)



1. A converter for treating molten metal which comprises a horizontal cylindrical shell mounted to rotate on its horizontal axis and having its discharge opening for smoke and gases in one end near its upper side and eccentric to its axis, and a stationary hood into which said opening discharges.

2. A converter for treating molten metal which comprises a horizontal cylindrical shell mounted to rotate on its horizontal axis and having its discharge opening for smoke and gases in one end near its upper side and eccentric to its axis, in combination with a cylindrical stationary hood concentric with said shell and inclosing said opening at all positions of the shell.

3. A converter for treating molten metal which comprises a horizontal cylindrical shell mounted to rotate on its horizontal axis and having its discharge opening for smoke and gases in one end near its upper side and eccentric to its axis, in combination with a cylindrical stationary hood having double walls forming a water jacket and telescoping over the end of said shell.

4. A converter for treating molten metal which comprises a horizontal cylindrical shell mounted to rotate on its horizontal axis and having its discharge opening for smoke and gases in one end near its upper side and eccentric to its axis, in combination with a cylindrical stationary hood having double walls forming a water jacket and telescoping over the end of said shell, and means for backing off said hood from said shell.

1,153,922. TOY RAILWAY. FRANK J. HUMMEL, Pittsburgh, Pa. Filed Feb. 25, 1915. Serial No. 10,486. (Cl. 246—36.)



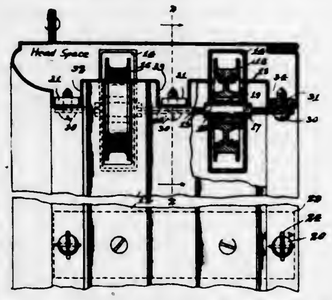
1. A toy railway and signaling system comprising two conductors with which the cars make moving contact, one of which is electrically continuous and the other divided into block sections, one at least of said conductors being a track rail, a common wire extending along the railway, signals for the sections, each signal being biased to the

clear position and comprising a motor for moving it to the stop position, the motor for each signal being connected between the common wire and the corresponding section of the divided conductor, a source of propulsion and signal-operating current connected between said common wire and said continuous conductor, a car having insulated contacts adapted to make contact with said two conductors respectively, and said car having a propelling motor whose terminals are connected respectively with said contacts.

2. A toy railway and signaling system comprising track rails one at least of which is divided into block sections, a third rail electrically continuous throughout the system but insulated from the said divided track rail, a common wire extending along the railway, signals for the sections, each signal being biased to the clear position and comprising a motor for moving it to the stop position, the terminals of each motor being connected with the common wire and the corresponding section of the divided track rail, a source of current connected between said common conductor and the third rail, and a car adapted to travel on the track and to form an electrical connection between the third rail and the divided track rail.

3. A toy railway and signaling system comprising three conductors two of which are electrically continuous and the other divided into block sections, a source of signaling and propulsion current connected between the two continuous conductors, signals for the sections each signal being biased to the clear position and comprising a motor for moving it to the stop position, the motor for each signal being connected between one continuous conductor and the corresponding section of the divided conductor, a car having insulated contacts adapted to make contact respectively with the other continuous conductor and the sections of the divided conductor, and said car having a propelling motor whose terminals are connected respectively with said contacts.

1,153,923. PULLEY FRAME AND MOUNTING. OSLA H. IMAN, Chicago, Ill., assignor to Voightmann & Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 16, 1914. Serial No. 872,342. (Cl. 16—17.)



1. In a pulley frame, the combination of a pulley, a pair of resilient mating frame members provided with opposed adjaceht faces located substantially at the axis of said pulley, a shaft for said pulley interposed between said mating frame members and having its ends of suitable size to slightly separate said mating frame members, and means for securing said mating frame members together to hold said opposed adjacent faces of said mating members substantially in contact with each other to resiliently grasp the ends of said shaft between said members to prevent its rotation.

2. In a pulley frame, the combination of a rotatable pulley, a pair of resilient similar mating frame members provided with opposed adjacent faces located substantially at the axis of said pulley, a shaft for said pulley having two cylindrical ends interposed between said mating frame members, said mating frame members being suitably conformed to admit the ends of said shaft and to interlock with said ends to prevent axial movement of said shaft, said members being forced together in intimate contact with each other to resiliently grasp said cylindrical ends and prevent rotary movement of said shaft.

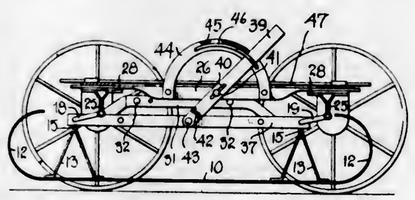
3. In a pulley bearing frame, the combination with the pulley, of a relatively stationary shaft therefor, and a pair of mating frame members adapted to be secured together so as to completely surround said pulley and to meet substantially at the axis of said shaft, the said members being formed with a pair of opposed recesses adapted to meet together and grasp the end of said shaft and prevent rotation thereof, said members having interlocking engagement with said shaft to limit the endwise movement thereof.

4. In a pulley bearing member, the combination of a pulley, a relatively stationary shaft therefor, and a pair of similar pressed metal mating frame members adapted to be secured together and to meet at substantially the axis of said shaft, the said members being so shaped as to include and surround said pulley when secured together, and also being provided with two pairs of opposed recesses adapted to engage the ends of said shaft and prevent rotation thereof, the outer ends of said recesses forming abutments to limit the endwise movement of said shaft in said frame.

5. In a metal window frame, the combination of a head adapted to extend over the weight-box outwardly beyond the side stile of the window, said head being provided with an aperture therein, a pulley adapted to enter said aperture, a frame for said pulley detachably hung from and secured to said head, and means for securing said frame to the extension to said head.

[Claims 6 to 8 not printed in the Gazette.]

1,153,924. SLEIGH ATTACHMENT FOR PERAMBULATORS. ADELBERT J. INGERSOLL, Niles Center, Ill. Filed Mar. 13, 1915. Serial No. 14,174. (Cl. 21—96.)

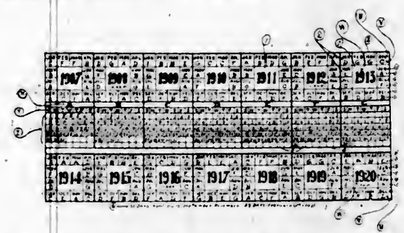


The combination with a wheeled vehicle body, of a pair of sled runners, a crank axle at each terminal of each runner, said crank axles being swingingly connected to the vehicle body, sleeve members slidably receiving the adjacent portions of the adjacent crank axles of the two runners, means for securing the crank axles in adjusted position within the sleeves, whereby the runners may be secured in adjusted, transversely spaced relation to each other, and a lineally adjustable member secured at its forward end to the front crank axle of one runner and at its rear end to the rear crank axle of the other runner.

1,153,925. FOOD COMPOUND. ROBERT GEORGE JACKSON, Tacoma, Wash. Filed Sept. 10, 1914. Serial No. 861,111. (Cl. 99—11.)

The herein described food compound for human consumption including oats 20% and wheat 20%, the said ingredients being ground whole into cut granules including the bran hulls thereof finely comminuted wheat 20%, prime wheat bran 20% and pure ground flax 20%, all of said ingredients being thoroughly mixed or commingled together substantially as and for the purpose set forth.

1,153,926. DATE-FINDER AND CALENDAR. JOSEPH H. JOHNSTON, Portland, Oreg. Filed Mar. 19, 1913. Serial No. 755,345. (Cl. 40—123.)



A date finder comprising a suitable base having on its face separate divisions designated for use in connection with different years, each of said divisions having a relatively large central area bearing in paramount prominence the date of an individual year, and separate smaller areas bordering said large central area to set off the latter, designations of the months and certain index characters in said smaller areas, and calendars corresponding in number to and appropriately indexed to accord with said index characters.

1,153,927. CAP. MAYER KATCHER, New York, N. Y. Filed Feb. 6, 1915. Serial No. 6,656. (Cl. 2—118.)



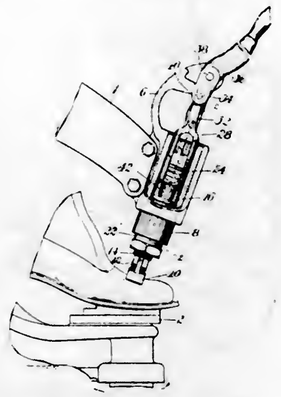
1. A cap of the type described, including a main or body member having a general rectangular outline with inclined ends terminating in lower tapered portions arranged to overlap the back end of said main or body member, said tapered terminals extending in opposite directions, and means for the retention of said terminals in such position.

2. A cap of the type described, including a main body member having a general rectangular outline with inclined ends extending downward in tapered terminals, said terminals having apertures in their extreme ends, one of said terminals having a relatively enlarged opening contiguous to one of said apertures and said body member having buttons or fastenings, one of said tapered terminals extending through said enlarged opening and said terminals overlapping the back of the cap and extending in opposite directions, and having their lessened apertures engaging said fastenings.

3. A cap of the type described, including a main body portion having a general rectangular outline, with inclined ends extending downwardly in tapered terminals, said terminals being arranged to extend one through the other and to overlap the back of the cap, said tapering terminals extending in opposite directions, and an additional rectangular member applied over said body member at the front, said body member being provided with fastenings engaging said tapered terminals and said additional rectangular member.

4. A cap of the type described, including a member of general rectangular outline, with downwardly tapered terminals at its ends arranged to extend in opposite directions and overlie the back of the cap, said member also having a puckering string rove through its bottom edge, and said tapered terminals having apertures in their extreme ends, one of said terminals having additionally an enlarged opening, and fastenings applied to the first referred to member for engaging said tapered terminals.

1,153,928. SHOE-HOLDING JACK. FRANK BYCROFT KEALL, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 20, 1913. Serial No. 743,107. (Cl. 12—127.)



1. In a shoe holding jack the combination of a shoe clamp, an actuating member, and connecting mechanism between said clamp and said member for causing said clamp during a portion of the movement of said member to move into engagement with the shoe and thereafter during another portion of the movement of said member to apply a predetermined pressure to the shoe regardless of its size or thickness.

2. In a shoe holding jack the combination of a shoe clamp, an actuating member, connecting mechanism between said clamp and said member for causing said clamp during a portion of the movement of said member to move into engagement with the shoe and thereafter during another portion of the movement of said member to apply a predetermined pressure to the shoe regardless of its size or thickness, and means whereby the degree of pressure may be varied.

3. In a shoe holding jack the combination of a shoe clamp, an actuating member having an operative movement of predetermined extent and having a lost motion connection with said clamp, means operating during a portion of the movement of said member to move said clamp into engagement with the shoe, and means between the actuating member and the clamp, acting from a predetermined point in the operative movement of said actuating member, to drive said clamp.

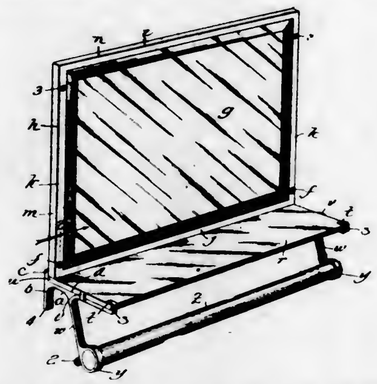
4. In a shoe holding jack the combination of a shoe clamp, an actuator having an operative movement of predetermined extent, connections between said clamp and actuator for moving the clamp into engagement with the shoe, said connections including a light spring through which the movement of the actuator is transmitted, a strong spring, and means for establishing a driving connection through said strong spring between said actuator and said clamp at a predetermined point in the operative movement of said actuator.

5. In a shoe holding jack the combination of a shoe clamp, an actuator having an operative movement of predetermined extent, means controlled by said actuator for moving said clamp into engagement with the shoe, mechanism including a clutch arranged to effect during said clamping movement a driving connection between said actuator and said clamp, and means for rendering said

clutch inoperative during a predetermined portion of the operative movement of said actuator.

[Claims 6 to 9 not printed in the Gazette.]

1,153,929. MIRROR AND SHELF SUPPORTING FRAME. HELEN KEARNS and WILLIAM D. MARTIN, Chicago, Ill., assignors to Helen Kearns and William J. Kearns, Chicago, Ill., doing business under the firm-name of W. J. Kearns Mirror Company. Filed Feb. 28, 1914. Serial No. 821,831. (Cl. 45—97.)



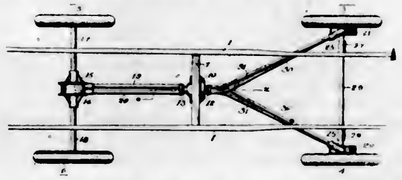
1. In a device of the class described, the combination of a plurality of brackets each comprising in its construction a horizontal shelf-supporting arm, a rear upwardly projecting arm extending above the shelf-engaging top surface of each horizontal arm and adapted to be secured to a mirror frame, a shelf mounted upon the horizontal arms of said brackets, and a mirror frame secured to the rear upwardly projecting arms of the brackets and having its bottom edge in abutting engagement with the rear marginal top surface of the shelf and adapted to secure the engaged portion of the shelf between the bottom edge of the upright main mirror frame and the horizontal bracket arms, said mirror frame having vertical channels into which the said upwardly projecting arm portions of the brackets extend.

2. In a device of the class described, the combination of a plurality of brackets each comprising in its construction a horizontal shelf-supporting arm, a rear upwardly projecting angular arm integral with and extending above the shelf-engaging top surface of the horizontal arm of each of said brackets, respectively, said upwardly projecting arms each having a horizontal portion extending over and in parallel relation to the corresponding horizontal arm and provided with a space between said angular portion and said horizontal arm, a shelf mounted upon the top surfaces of the horizontal arms and having its rear edge extending beneath the angular portions of the rear angular upper arms of said brackets, and a mirror frame secured to the upwardly projecting rear arm portions of the bracket members and having a bottom flange extending between the angular portions of the rear upwardly projecting arms of the brackets and the rear edge of the shelf and in abutting engagement with the top surface of the shelf.

3. In a device of the class described, the combination of a plurality of brackets each comprising in its construction a horizontal shelf-supporting arm, a rear upwardly projecting angular arm extending above the shelf-engaging top surface of each horizontal arm, said upwardly projecting arm having a horizontal portion extending over the top rear surface portion of the corresponding horizontal arm and provided with a space between said angular portion and said horizontal arm, a shelf mounted upon the top surfaces of the horizontal arms and having its rear edge extending beneath the angular portions of the rear angular upper arms of said brackets, and a mirror frame secured to the upwardly projecting rear arm portions of the bracket members and having a bottom flange extending between the angular portions of the rear upwardly projecting arms of the brackets and the rear edge of the shelf and in abutting engagement with the top surface of the shelf.

4. In a device of the class described, the combination of a plurality of brackets each comprising in its construction a horizontal shelf-supporting arm having a rear upwardly projecting angular arm extending above the shelf-engaging top surface of the horizontal arm, said upwardly projecting arm having a horizontal portion extending over the top rear surface portion of the horizontal arm and provided with a space between said angular portion and said horizontal arm, a front upwardly projecting finger on the horizontal arm of each bracket, each of said fingers having an angular top portion extending over the top surface of the horizontal arm and provided with a space between said angular portion and said top surface, a shelf mounted upon the top surfaces of the horizontal arms and having its front margin located beneath and in engagement with the angular top portions of said fingers, the rear edge of said shelf being in position to extend beneath the horizontal portions of said rear upwardly projecting angular arms of said brackets, and a mirror frame secured to the upwardly projecting rear arm portions of the bracket members and having a bottom flange extending between the angular portions of the rear upwardly projecting arms of the brackets and the rear edge of the shelf and in abutting engagement with the top surface of the shelf.

1,153,930. FLUID-POWER TRANSMISSION. ARCHIBALD T. KEENE, Chicago, Ill., assignor, by direct and mesne assignments, to Keene Hydraulic Transmission Company, a Corporation of Arizona. Filed Mar. 30, 1914. Serial No. 828,331. (Cl. 21—90.)



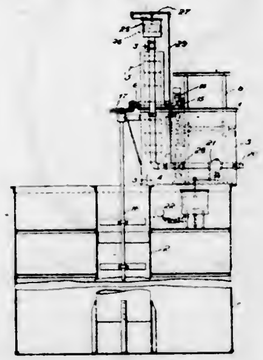
1. In a system of fluid power transmission for motor vehicles, the combination of a main frame, a wheel and axle associated with said frame, a fluid motor associated with said wheel and axle, a tubular flexible joint having fixed and oscillatory members, the fixed member being attached to the aforesaid main frame, a plurality of hollow connecting members associated with the motor and an oscillatory member of the joint, and means for effecting a circulation of motive fluid through said joint, hollow connecting members and motor, substantially as set forth.

2. In a system of fluid power transmission for motor vehicles, the combination of a main frame, a front axle associated with said frame and having an end pivot yoke, a fluid motor pivotally mounted in said yoke, a tubular flexible joint having fixed and oscillatory members, the fixed member being attached to the aforesaid main frame, a plurality of hollow connecting members associated with the motor and an oscillatory member of the joint, and means for effecting a circulation of motive fluid through said joint, hollow connecting members and motor, substantially as set forth.

3. In a system of fluid power transmission for motor vehicles, the combination of a main frame, front and rear wheels associated with said frame, a series of fluid motors associated with said wheels, a tubular flexible joint disposed intermediate of the front and rear motors, and having fixed and oscillatory members, the fixed member being attached to the main frame, a plurality of hollow connecting members associated with the motors and the oscillatory members of the joint, and means for effecting a circulation of motive fluid through said joint, hollow connecting members and motors, substantially as set forth.

4. In a system of fluid power transmission for motor vehicles, the combination of a main frame, front and rear axles and wheels associated with said frame a pair of fluid motors pivoted in the ends of the front axle, a second pair of fluid motors operatively connected in an individual manner to the rear pair of vehicle wheels, a tubular flexible joint disposed intermediate of the front and rear motors and having fixed and oscillatory members, the fixed member being attached to the main frame, a plurality of hollow connecting members associated with the motors and the oscillatory members of the joint, and means for effecting a circulation of motive fluid through said joint, hollow connecting members and motors, substantially as set forth.

1,153,931. WATER-SOFTENING APPARATUS. LOUIS D. KINZIG, Dayton, Ohio, assignor to Northern Water Softener Co., a Corporation of Maine. Filed Feb. 6, 1914. Serial No. 816,898. (Cl. 210—19.)



1. In a water treating apparatus, a water supply pipe, means for maintaining a constant head at the discharge orifice in said pipe, a chemical supply pipe, and means controlled by the discharged water for maintaining a constant head of chemical in the chemical supply pipe.

2. In a water treating apparatus, a water wheel, a water supply pipe delivering water to the wheel, means for maintaining a constant head in the aforesaid pipe, a chemical supply pipe, a cup surrounding the inlet end of the chemical supply pipe and having its mouth lying above the highest point of said inlet end, and means for supplying chemical to said cup at a rate in excess of the rate of flow through the chemical pipe.

3. In a water treating apparatus, a water chamber having a discharge orifice, a chemical chamber lying in proximity to the water chamber, a water wheel in said water chamber, a chemical conveyer in said chemical chamber, a driving connection between the water wheel and the chemical conveyer, a cup in position to receive chemical from the conveyer and having a submerged delivery orifice, and a constant-head device for supplying water to the water wheel.

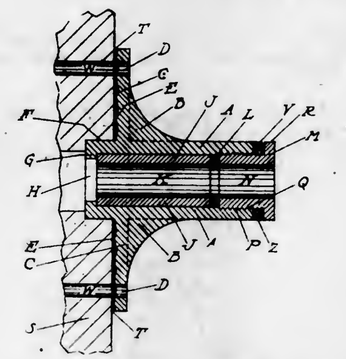
1,153,932. PACKING-BOX FOR MANTLES, &c. ELMER L. KNOBLER, Gloucester City, N. J., assignor to Welsbach Light Company, Gloucester City, N. J., a Corporation of New Jersey. Filed Jan. 27, 1912. Serial No. 673,760. (Cl. 206—68.)

1. A packing box for mantles, comprising a tubular casing having an inserted mantle supporting ring, said ring having an outer friction surface provided with means to operatively engage the casing in one direction of movement but to permit free movement in the opposite direction.



2. A packing box for mantles comprising a tubular casing having an inserted mantle supporting ring, said ring having a downwardly extending flange, said flange having outwardly turned portions which frictionally engage the inner surface of the casing and hold the ring in place; substantially as described.

1,153,933. STUFFING-BOX. JACOB FRANK KNORR, Patchogue, and CIPRIANO ANDRADE, Jr., New York, N. Y. Filed Jan. 7, 1915. Serial No. 1,059. (Cl. 137—115.)



1. A stuffing box comprising a main body with a cylindrical bore and an interior thread at the front end of said bore; reinforcing webs; a flange with bolt holes and concentric corrugations on its back; an extension of the main body back from the flange; a shoulder at the back end of said extension; a removable hollow cylinder of anti-friction material tightly fitting within the main body and seating against the said shoulder; a packing ring disposed against the front end of the hollow cylinder; a gland with an exterior thread fitting the interior thread above mentioned adapted to compress said packing ring and external nut faces; and a lock nut disposed between the front end of the main body and the nut portion of the gland.

2. A stuffing box comprising a main body with a cylindrical bore and an interior thread at the front end of said bore; a flange with concentric corrugations on its back; a shoulder at the back end of the cylindrical bore; a removable hollow cylinder of anti-friction material tightly fitting within the main body and seating against the said shoulder; a packing ring disposed against the front end of the hollow cylinder; a gland with an exterior thread fitting the interior thread above mentioned adapted to compress the said packing ring and external nut faces; and a lock nut disposed between the front end of the body and the nut portion of the gland.

1,153,934. PROCESS OF TREATING SUGAR-CANE. TENNANT LEE and ALLAN B. MONKS, Dedham, Mass., assignors, by mesne assignments, to Zalmon G. Simmons, Kenosha, Wis., Andrew W. Preston, Swampscott, Mass., and Bradley W. Palmer, Boston, Mass., trustees, known as Simmons Sugar Limited. Filed Aug. 26, 1912. Serial No. 717,096. (Cl. 92—14.)

1. In a process of treating sugar-cane, the steps which consist in drying and concentrating the fibrous tissue and digesting the same in a liquor containing as essential constituents caustic soda and sodium chlorid.

2. In a process of treating sugar-cane, the steps which consist in drying and concentrating the fibrous tissue and digesting the same in a liquor containing as essential constituents caustic soda and sodium chlorid, and recovering the wax from the digestion liquor.

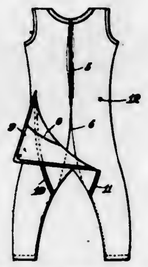
3. In a process of treating sugar-cane, the steps which consists in drying and concentrating the fibrous tissue and digesting the same in a liquor containing as essential constituents caustic soda, sodium chlorid, and oxy-chlorin compounds.

4. In a process of treating sugar-cane, the steps which consist in drying and concentrating the fibrous tissue and digesting the same in a liquor containing as essential constituents caustic soda, sodium chlorid, and oxy-chlorin compounds, and recovering the wax from the digestion liquor.

5. The process of treating sugar-cane, which consists in disintegrating the cane, and digesting the fibers in an alkaline cell liquor prepared by electrolyzing a sodium chlorid solution.

[Claims 6 to 10 not printed in the Gazette.]

1,153,935. UNION GARMENT. ANNA L. LIPPITT, Grand Rapids, Mich. Filed Jan. 4, 1915. Serial No. 355. (Cl. 2—144.)



1. A union garment comprising a body portion and connected leg portions, the inner sides of the leg portions adjacent their junction with the body portion being formed by extensions of the material at the inner sides of the legs, which extensions are folded around between the legs from one side of the garment to the other, thereby forming folds at the inner edges of the legs and constituting a crotch free from transverse seams.

2. A union garment comprising two body sections having leg portions, said sections being each folded longitudinally and secured together at the front and rear and being provided each with a lateral extension, said extensions being folded around at the lower portion of the body from one side of the garment to the other, thereby forming a crotch free from transverse seams, and said extensions being fastened together at their adjacent edges to form an external flap.

3. A union garment comprising two sections folded longitudinally and secured together at the front and rear, said sections being provided at the front at their inner edges with extensions folded around to the rear of the garment and forming a crotch free from transverse seams, and said extensions being secured together to form a flap at the rear of the garment.

4. In a union garment, the combination of two sections folded longitudinally and connected together at their adjacent edges so as to leave a back opening, said sections being provided each on its front with a lateral extension, and said extensions being folded rearwardly around to the rear to form a crotch free from transverse seams, and having their adjacent edges connected together to form a flap at the rear of the garment, and means for connecting said flap detachably in closed position over the opening.

5. In a union garment, the combination of two complementary sections comprising each a leg and a body portion, said sections being folded longitudinally and having their adjacent edges secured together at the front and back, extensions on the inner front edges of said sections folded rearwardly to the back and having their inner adjacent edges secured together to form a rear flap, and means for fastening said flap detachably in closed position.

[Claims 6 to 9 not printed in the Gazette.]

1,153,936. ANTISKIDDING-CHAIN FOR VEHICLE-WHEELS. JAMES P. MCGARRY, South Boston, Mass. Filed Apr. 14, 1914. Serial No. 831,749. (Cl. 152—14.)



1. An anti-skidding device comprising a chain having a portion adapted to surround a spoke and having another portion adapted to surround the rim of a wheel, and a coupling constructed and arranged to connect in a non-sliding manner any one of several points in one of said portions to any one of several points in the other of said portions.

2. An anti-skidding device for wheels, comprising a chain having a loop on one end through which said chain may pass, a coupling detachably engaged with the standing part of said chain, such part having provisions with which said coupling may be engaged at other points, and means forming a part of the chain adapted to be passed around the rim of a wheel and to be engaged with said coupling at any one of a number of points.

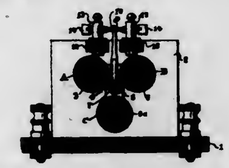
3. A tire chain having at one end a link through which the chain may pass freely, and a coupling detachably connected with a link of the chain near said end link, and constructed to be so engaged with any other link, and said coupling including a hook adapted to be connected with a link at or near the opposite end of the chain.

4. An anti-skidding tire chain composed of links and having at one end a link large enough to permit the other links to pass freely through it, a shackle detachably connected with an intermediate link of the chain, and a hook carried by said shackle and adapted to be connected with any link near the opposite end of the chain to that with which the large link is connected.

5. In combination with a wheel, an anti-skidding chain comprising a standing part formed as a bight surrounding a spoke of the wheel, a link secured to such standing part, a running part passing freely through said link and movable through the same, and a coupling detachably connected with a link of the standing part and engageable with one of several links of the running part.

[Claims 6 and 7 not printed in the Gazette.]

1,153,937. TRANSMITTING TELEGRAPH-RELAY. THANE H. MAINS, Dallas, Tex. Filed Sept. 22, 1913. Serial No. 791,057. (Cl. 175—327.)

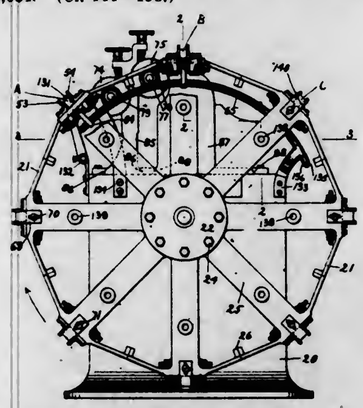


1. In a telegraph relay, the combination with a polarized magnet, of armature members magnetized by the poles of said magnet and a pair of field magnets between which the armature members oscillate, one of the field-magnets being differentially wound, its coils being respectively in series with those of the polarized magnet and other field-magnet, and the two series circuits being in parallel with each other in another circuit.

2. In a telegraph relay, the combination with a polarized magnet, of armature members magnetized by the poles of said magnet, and a pair of field-magnets between which the armature members oscillate, one of the field magnets being differentially wound, its coils respectively being in series with those of the polarized magnet and other field-magnet, and two series circuits being in parallel with each other in another circuit, the polarity created by the polarized magnet winding being opposite to that created by the winding with which it is in series, and the polarity of the single wound field-magnet being opposite to that of the polarized magnet.

3. In a telegraph relay, the combination with a polarized magnet, of armature members deriving polarity from said magnet, and a pair of field magnets between which the armature members oscillate, both field magnets being differentially wound, and each carrying also an additional winding, the coils of each differential winding being designed to neutralize each other as regards magnetic effect when both are energized one coil of each differential winding being in circuit with the polarized magnet winding and the other coil of the differential winding of each field magnet being in series with the additional winding of the other field magnet, and a key included in the circuits last specified.

1,153,938. TENON-CUTTING MACHINE. ZENO MARTELL, Bedford, Ohio. Filed Oct. 5, 1914. Serial No. 865,034. (Cl. 144—198.)



1. In a tenon cutting machine, tenon forming devices, corner cutting and finishing devices comprising transversely movable corner cutters and longitudinally movable corner cutters, mechanism to actuate said devices, and a carrier adapted to present blanks successively to said tenon forming and said corner cutting and finishing devices.

2. In a tenon cutting machine, corner cutting and finishing devices comprising a pair of transverse corner cutters, a pair of levers by which said transverse corner cutters are carried, means to swing said levers in unison to reciprocate said transverse corner cutters, a pair of longitudinal corner cutters, and means to reciprocate said longitudinal corner cutters.

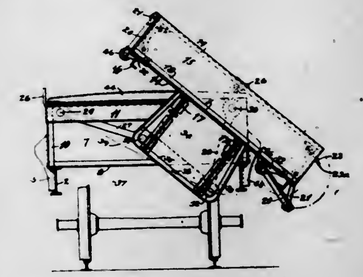
3. In a tenon cutting machine, corner cutting and finishing mechanisms, comprising a movable blank carrier, a pair of transverse corner cutters normally in inoperative position out of the path of a blank supported on said carrier, means to shift said cutters into operative position, means to reciprocate said cutters while in operative position, longitudinal corner cutters, and means to reciprocate said longitudinal corner cutters.

4. In a tenon cutting machine, corner cutting and finishing mechanisms, comprising a movable blank carrier, a pair of transverse corner cutters, a slide on which said cutters are carried normally holding said cutters in inoperative position out of the path of a blank supported on said carrier, means to shift said slide and bring the cutters into operative position, and means to reciprocate said cutters on said slide while in operative position.

5. In a tenon cutting machine, corner cutting and finishing mechanisms, comprising a movable blank carrier, a pair of transverse corner cutters, a pair of levers on which said cutters are carried, a slide on which said levers are fulcrumed normally holding said cutters in inoperative position out of the path of a blank supported on said carrier, means to shift said slide and bring the cutters into operative position, and means to swing said levers in unison to reciprocate the cutters while in operative position.

[Claims 6 to 16 not printed in the Gazette.]

1,153,939. DUMP-CAR. JAMES S. MARTIN, Dormont borough, Pa., assignor of one-half to William C. Boyd, McKees Rocks, Pa. Filed July 21, 1914. Serial No. 852,268. (Cl. 105—191.)



1. A dump car, comprising a frame, and a side dumping body mounted in said frame in such manner that when moving to dumping position a point on one side of the longitudinal center of said body moves in an upwardly extending arc around a center on the same side of the body and a point on the opposite side of the longitudinal center of the body moves in an independent and downwardly extending arc around a corresponding center on its side of the body, the sides of the car body being so arranged that the downwardly moving side drops down and under the car body as it tilts.

2. A dump car, comprising a frame, a side dumping body, and a pair of links at each end of said body, each link at one end being pivotally connected to a point on one side of the body and at its opposite end being pivotally connected to a point on the same side of the frame, said links being so arranged that when the car body is swung thereon one side moves downwardly and the other side moves upwardly, the sides of the car body being so ar-

ranged that the downwardly moving side drops down and under the car body as it tilts.

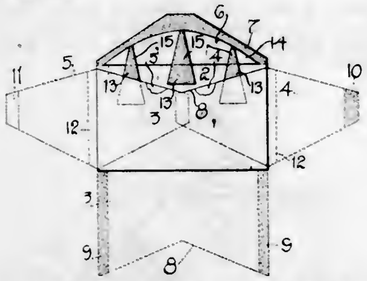
3. A dump car, comprising a frame, a side dumping body, and a pair of links at each end of said body, the links of each pair being free of connection to each other and lying on opposite sides of the longitudinal center of the car, said links at one of their ends being pivotally connected to the body and at their opposite ends being pivotally connected to the frame, the links at each end of the car body being inclined in opposite directions, whereby when the car body is swung one side moves upwardly and the other side moves downwardly, the sides of the car body being so arranged that the downwardly moving side drops down and under the car body as it tilts.

4. In a dump car, a side dumping body, movable sides for said body, and links connecting two points near the top and bottom edges of said sides to said body and so arranged that the top and bottom edges of said sides respectively move in independent arcs around centers on the ends of the car body, each said center being on the same side of the longitudinal center of the car body as the arc described around said center, one arc extending outwardly from the car body, and the other arc extending inwardly from the car side.

5. In a dump car, a side dumping body, movable sides for said body, means for connecting said sides to said body so arranged that the top and bottom edges of said sides respectively move in independent arcs, the upper edge of the side moving outwardly and downwardly, and the lower edge of the side moving inwardly, whereby the side drops down and under the car body.

[Claims 6 to 9 not printed in the Gazette.]

1,153,940. SAFETY-ENVELOP. CHRIST MILLER, Westbrook, Minn. Filed May 29, 1915. Serial No. 31,217. (Cl. 229—80.)

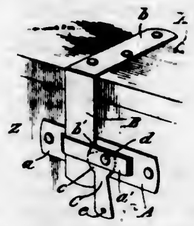


1. A safety envelop having a body, a back flap, end flaps and a sealing flap, the back flap extending over the end flaps and being caused to adhere thereto, the sealing flap being adapted to lie over the back flap when folded down upon the envelop, the sealing flap being provided with a plurality of tabs having adhesive on one side and adapted when the sealing flap is closed to be disposed within the envelop and to be stuck to the inner faces of the end flaps, said tabs being joined to the sealing flap by relatively small readily frangible joining portions.

2. In an envelop, a body portion, end flaps, a back flap and a sealing flap, the back flap closing over both of the end flaps, the sealing flap being provided inward of its free margin with a plurality of tabs connected to the sealing flap by readily frangible portions, these tabs being provided upon their outer faces with adhesive whereby said tabs may be caused to adhere to the back of the envelop when the sealing flap is closed and thus indicating unauthorized opening of the sealing flap.

3. A safety envelop having an outer thickness formed with a body, a back flap, end flaps and sealing flaps, and an inner lining comprising a body, a back flap and a sealing flap, the inner lining being secured with adhesive to the outer thickness, the inner lining being caused to adhere to the end flaps by adhesive applied at the bases of the end flaps upon the outer faces thereof, the space between the back flap and the inner lining forming a pocket, the sealing flap formed upon the inner lining being less in depth than the sealing flap formed by the outer thickness and being provided with a plurality of sealing tabs coated with adhesive on one face and connected to the body portion of the flap by readily frangible necks, said flaps being insertible between the outer lining and the inner lining of the back flap and being caused to adhere thereto whereby to prevent the opening of the envelop without breaking the tabs.

1,153,941. FASTENER FOR CRATES, BOXES, &c. GEORGE C. D. MILLER, New York, N. Y., assignor to Cary Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Jan. 25, 1912. Serial No. 673,300. (Cl. 70—3.)



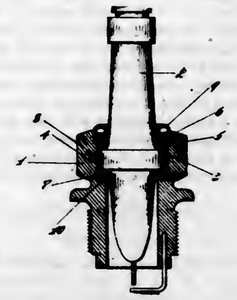
1. In a hasp fastener, the combination with a keeper, of a flat metal hasp provided in one edge thereof with a notch, and a flat metal latch positioned in the same transverse plane with said hasp, said latch being pivoted at its upper end to the keeper so as to swing by gravity and in an edgewise direction relative to the hasp upon the insertion of the latter into the keeper, said pivoted end of the latch being provided with a cam edge eccentric to the pivot and adapted for engagement with the notch in the hasp.

2. In a hasp fastener, the combination with a keeper, of a flat metal hasp provided in one edge thereof with a notch, and a flat metal latch positioned in the same transverse plane with said hasp, said latch being pivoted at its upper end to the keeper so as to swing by gravity and in an edgewise direction relative to the hasp upon the insertion of the latter into the keeper, said latch being provided at its pivoted end with a shoulder and with a cam edge which is eccentric to the pivot, the latch being free to swing into a position for the shoulder to lie in the path of the hasp and, upon the introduction of the hasp into the keeper, said latch will return by gravity for the cam edge thereof to interlock with the notch in the hasp.

3. In a hasp fastener, a keeper embodying a flat metal plate slitted longitudinally and bent between said slitted portion to produce a slot in the back of the plate and an offset on the front thereof, combined with a hasp insertible into the keeper between the plate and the front offset therein, and a headed latch pivoted to the offset part of the keeper, said head of the latch being opposite to the slot in the back of the plate and positioned in the transverse plane of the hasp upon the introduction of the latter into the keeper.

4. In a hasp fastener, the combination of a keeper, a hasp plate insertible into the keeper, said hasp plate being provided in one edge thereof with a notch, and a latch pivoted to the keeper, said latch depending from the pivot for the weighted part of the latch to lie below said pivot, said latch being provided with an edge eccentric to the pivot and provided, also, with a shoulder which, in the disengaged position of the latch, is in the path of the hasp plate, said eccentric edge portion of the latch being arranged to enter the notch of the hasp plate for locking the latter within the keeper.

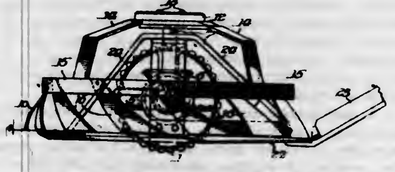
1,153,942. SPARK-PLUG. DAVID B. MILLS, Montclair, N. J., assignor to Pasha Spark Plug Company, a Corporation of New Jersey. Filed Feb. 28, 1911. Serial No. 821,634. (Cl. 123—169.)



1. In a spark plug, in combination, an outer shell having an interior ledge, an inner shank of insulating material having an upper shoulder and having a lower shoulder which is adapted to rest upon said ledge, the upper end of said shell above the upper shoulder of said shank being curned in and back toward itself and peened down until the original outer face of the turned portion acts against said shoulder, whereby strains of expansion of said shank are distributed between the upper and lower bends of said inturned portion.

2. In a spark plug, in combination, an outer shell having an interior ledge, an inner shank of insulating material having an upper shoulder and having a lower shoulder which is adapted to rest upon said ledge, upper and lower gaskets of soft material for said shoulders, the upper end of said shell above said upper shoulder being rolled in and back toward itself and peened down until the original outer face of the rolled in portion acts against said shoulder, and a protecting washer of hard material interposed between the gasket which rests on said upper shoulder and the recurved portion of said shell.

1,153,943. LAWN-MOWER. HUBERT H. MONTAGUE, Traverse City, Mich. Filed Mar. 9, 1914. Serial No. 823,415. (Cl. 56—19.)



1. In a lawn-mower, the combination of a fixed blade having a horizontally disposed cutting edge extending at an angle with respect to the direction of movement of the lawn-mower, and a coöperating horizontally revolving knife which contacts with and projects beyond said cutting edge at an acute angle therewith and is gradually drawn inward relatively thereto during a portion of the revolution of said knife.

2. In a lawn-mower, the combination of a fixed blade having a horizontally disposed cutting edge extending at an angle with respect to the direction of movement of the lawn-mower, and a coöperating revolving knife having a vertical axis of revolution, said knife contacting with said fixed blade and having its cutting edge approximately tangential to a circle having the axis of revolution of said knife as its center.

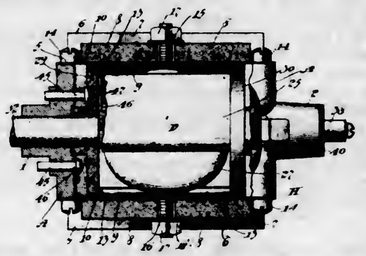
3. In a lawn-mower, the combination of a fixed blade having a horizontally disposed, continuously curved, cutting edge extending at an angle with respect to the direction of movement of the lawn-mower, and a series of knives mounted to contact with said fixed blade and to revolve in a circular path above said blade, said knives having a vertical axis of revolution eccentric of said curved cutting edge.

4. In a lawn-mower, the combination of a fixed blade having a horizontally disposed, continuously curved, cutting edge extending at an angle with respect to the direction of movement of the lawn-mower, and a series of knives mounted to contact with said fixed blade and to revolve in a circular path above said blade, said knives having a vertical axis of revolution eccentric of said curved cutting edge and said knives each having its cutting edge arranged approximately tangential to said circular path.

5. In a lawn-mower, the combination of a longitudinally, curved fixed blade inclined upwardly and outwardly from its back to its cutting edge, and a series of downwardly extending revolving knives having the cutting edges extending transversely of the edge of said blade at an acute angle thereto and in contact therewith.

[Claim 6 not printed in the Gazette.]

1,153,944. MAGNETO-GENERATOR. THOMAS W. MORGAN, Waterloo, Iowa, assignor to Wilbur W. Marsh, Waterloo, Iowa. Original application filed Mar. 26, 1912, Serial No. 686,205. Divided and this application filed Oct. 27, 1913. Serial No. 797,378. (Cl. 123—149.)



1. In a magneto generator, the combination of a frame, an armature journaled in said frame and inclosed by the latter, said armature being provided with a recess therein, and two pins slidably mounted in said frame, one of said pins when the armature is rotated in one direction being adapted to engage the recess when a maximum current is generated in the armature, and the other of said pins being adapted when the armature is rotated in the other direction to engage the recess when a maximum current is generated in the armature.

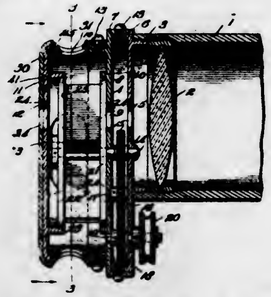
2. In a magneto generator, the combination of a frame, an armature journaled in said frame and inclosed by the latter, said armature being provided with a recess substantially conical, and a pin slidably mounted in said frame and having a rounded head thereon adapted to be brought into engagement with said recess, the shape of the head and recess causing the head to ride out of the recess upon rotation of the armature.

3. In a magneto generator of the class described, the combination of a frame, an armature rotatable in and inclosed by said frame, field magnets mounted on the frame in relation to said armature, a freely movable pin mounted in the end of said frame on each side of the axis of rotation of the armature and corresponding to the position wherein the maximum current is developed in said armature depending upon the direction of rotation thereof, and a depression in the end of said armature adapted to be engaged by either of said pins depending upon which one is actuated.

1,153,945. ATTACHMENT FOR TELESCOPES. HENRY C. MUSTIN, U. S. Navy. Filed Jan. 16, 1915. Serial No. 2,740. (Cl. 88—32.)

1. In a telescope the combination of an objective; movable means coacting therewith adapted to permit air and

light to pass therethrough to prevent water from touching said objective; and means for moving said first mentioned means, substantially as described.



2. In a telescope the combination of an objective and rotating means coacting therewith adapted to prevent water from contacting with said objective, said means being provided with a plurality of apertures, substantially as described.

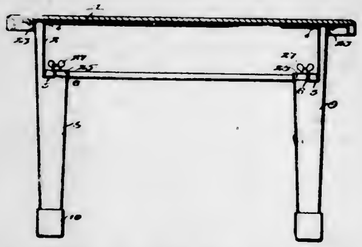
3. In a telescope the combination of an objective; rotating means provided with vanes and an aperture coacting with said objective; and means to rotate said rotating means substantially as described.

4. In a telescope the combination of an objective; means provided with an aperture through which an object may be viewed co-acting with said objective; and rotating means adapted to move past said aperture, substantially as described.

5. An attachment for telescopes having an aperture through which an object may be viewed; rotating means adapted to occult said aperture; and means to rotate at a high speed said rotating means, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,153,946. FURNITURE. ENOCH OHNSTRAND, Syracuse, N. Y., assignor to U. S. Steel Furniture Company, Syracuse, N. Y., a Corporation of New York. Filed Nov. 15, 1912. Serial No. 731,534. (Cl. 45—48.)



1. In furniture, the combination with a hollow leg having a recess in its side at its upper end, of two angularly arranged side pieces having abutting outwardly-turned flanges at their proximate ends bearing against the inner face of the leg opposite the recess.

2. In furniture, the combination with a hollow leg having a recess in its side at its upper end, of two angularly arranged side pieces connected together at their corners, and a rib extending from the corner and abutting the inner face of the leg opposite the recess.

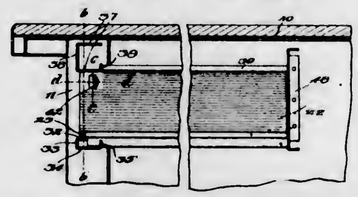
3. In furniture, the combination with a hollow leg having a recess in its side at its upper end, of two angularly arranged side pieces connected together and fitting in said recess, the inner faces of said side pieces being engaged by shoulders projecting upwardly from the bottom of the recess between the side pieces.

4. In furniture, the combination with a hollow leg having a recess in its side at its upper end, of two angularly arranged side pieces secured together at their corners and fitting in said recess, shoulders projecting upwardly from the bottom of said recess to engage the inner faces of said side pieces, and means connecting said side pieces with the inner face of said leg opposite the recess to strengthen the wall of the leg in proximity to said recess.

5. In furniture, the combination with a hollow leg having a recess in its side at its upper end, of two angularly arranged side pieces secured together at their corners and fitting in said recess, shoulders projecting upwardly from the bottom of said recess to engage the inner faces of said side pieces, and means connecting said side pieces with the inner face of said leg opposite the recess to strengthen the wall of the leg in proximity to said recess, said means embodying outwardly-projecting and abutting flanges on the side pieces.

[Claims 6 to 12 not printed in the Gazette.]

1,153,947. FURNITURE. ENOCH OHNSTRAND, Syracuse, N. Y., assignor to U. S. Steel Furniture Company, Syracuse, N. Y., a Corporation of New York. Filed May 7, 1913. Serial No. 766,033. (Cl. 45—77.)



1. A drawer suspension comprising suitable supporting means, a pair of guide members each formed from a single piece of sheet metal having a vertically arranged body portion, a portion extending inwardly from the body portion to coöperate with the bottom of the drawer, a portion extending downwardly from the last-named portion, and a portion extending outwardly from the downwardly-extending portion to a point in a plane with the outer face of the body portion.

2. A drawer suspension comprising a suitable supporting means, a pair of guide members each formed from a single piece of sheet metal having a vertically arranged body portion, a portion turned inwardly from the upper part of the body portion to coöperate with the top of a drawer, a portion turned inwardly at the lower part of the body portion, a portion turned downwardly from the inwardly-turned portion to provide a lateral guide for the drawer and a portion turned inwardly from the lower part of the lateral guide portion to coöperate with the bottom of the drawer.

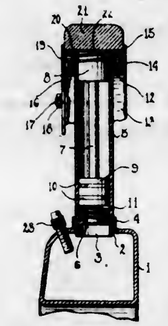
3. A drawer suspension comprising a suitable supporting means, a pair of guide members each formed of a single piece of sheet metal having a vertically arranged body portion, a portion extending inwardly from the lower part of the body portion, a portion turned downwardly from the inwardly-turned portion to provide a lateral guide for the drawer, a portion turned inwardly from the lower part of the lateral guide portion to cooperate with the bottom of the drawer, a lip being formed on the sheet metal strip in alinement with the lateral guide portion and being deflected outwardly to provide an inclined portion, facilitating the introduction of the drawer.

4. In a drawer suspension, the combination with a pair of drawer supports of a strike bar arranged between them, said strike bar having an upper portion forming the bottom of the drawer opening and a lower portion connected at its forward part to the forward part of the upper portion and extending in rear of the upper portion, being provided with an upwardly-turned flange which is spaced at its ends from the front supports to form a shoulder, and a pair of guide members each secured to one of the front supports and above the strike bar, having an inwardly-extending portion for coöperation with the bottom of the drawer, said inwardly extending portion being substantially in a plane with the top of the strike bar, and said guide member also having a portion extending downwardly therefrom to coöperate with one of the shoulders at an end of the flange on the lower portion of the strike bar.

5. In a drawer suspension, the combination with a pair of front supports, of a strike bar connecting the supports and having shoulders in proximity thereto, and guide members each interlocking with one of the supports, and having a portion alined with the top face of the strike bar and a portion engaging the shoulder to prevent inward movement of the lower part of the guide member.

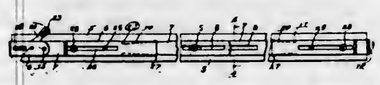
[Claims 6 to 9 not printed in the Gazette.]

1,153,948. WHEEL. HECTOR V. PANNECOUCKE and HUGO SCHAEFER, Detroit, Mich. Filed Dec. 5, 1914. Serial No. 875,575. (Cl. 152—31.)



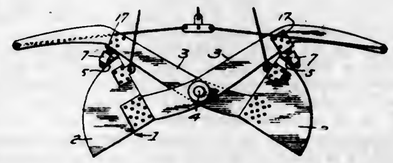
In a vehicle wheel, a hollow hub constituting an air reservoir, tubular spokes in communication with said hollow hub and having the outer ends provided with shoulders and screwthreaded and the inner ends thereof partially closed, a felly connecting the outer ends of said spokes and seated on the shoulders thereof, nuts screwed on the outer ends of said spokes against said felly, flanges at the edges of said felly, a retaining ring detachably connected to one of said flanges in coöperating with the other flange in providing a peripheral channel, piston rods movable in said spokes, piston heads carried by each piston rod, shoes at the outer ends of said piston rods, a tire upon said shoes in the peripheral channel of said wheel, and a compression spring between one of said piston heads and the partially closed end of each spoke, and a compression spring encircling the other piston head between the shoe and the nut of each spoke, said springs coöperating with said piston heads in cushioning said shoes.

1,153,949. SHADE-HANGER. ZOEL PERRAULT, Reeds Ferry, N. H. Filed May 9, 1914. Serial No. 837,491. (Cl. 156—23.)



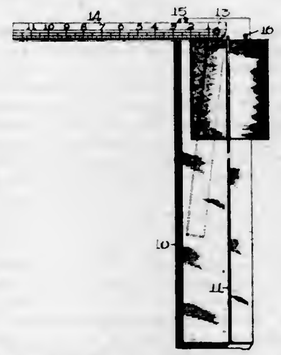
A shade hanger including a pair of slidably connected relatively movable casing engaging members, each of which is reduced to provide shoulders, shade supporting brackets slidably mounted on the reduced portions of said members and having tongues extending therefrom for abutment with said shoulders for limiting the movement of said brackets in one direction, and means for engaging said members with the window casing.

1,153,950. CLAM-SHELL-DREDGER-BUCKET BUFFER. PETER PETERSON, San Francisco, Cal. Filed Mar. 24, 1915. Serial No. 16,582. (Cl. 37—30.)



A dredger bucket, a plate secured thereto and having a portion concaved to conform to the curvature of said bucket, said plate having rigid therewith a casing divided into compartments, a movably mounted cap common to all of said compartments, a rod for each compartment loosely mounted in the bottom thereof and springs around said rods and interposed between the inner face of the cap plate and the bottom walls of the compartments, the springs around each rod having their coils oppositely inclined, said casing being provided at the bottom of each compartment with an opening permitting access to the spring and allowing for the escape of water, etc.

1,153,951. SCORING DEVICE. LEVI N. PLANTE, Auburn, Mass., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed June 28, 1911. Serial No. 635,783. (Cl. 93—58.)



1. As an article of manufacture, a scoring device comprising a plate having a raised longitudinal rib on the surface thereof and provided with stops on opposite sides of said rib near one end thereof having their contact faces alined transversely of the latter for positioning a card with respect to said rib by contact with the same edge of the card so that the movement of the latter transversely of the rib is unlimited by the stops, in combination with a scoring stick having a recess of a formation complementary to that of the rib and adapted to traverse the same.

2. As an article of manufacture, a device for scoring cards comprising a plate having a semi-cylindrical rib projecting from the surface thereof and having a scale arranged at right angles to said rib near one end thereof and constituting a guide for the edge of a card to be scored, in combination with a scoring stick having a recess of a formation complementary to that of the rib and adapted to traverse the same.

3. As an article of manufacture, a scoring device comprising a plate having a raised rib therealong and having a scale pivoted to the plate near one end of the rib and said plate having a stop for limiting the motion of said scale to a position in which the edge thereof is at right angles to the rib.

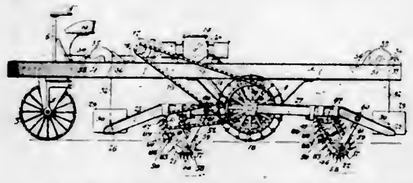
4. As an article of manufacture, a scoring device comprising a flat plate having a raised rib therealong and hav-

ing a scale pivoted to the flat surface of the plate near one end of the rib, said plate having a stop for limiting the motion of said scale to a position in which the edge thereof is at right angles to the rib, said plate also having another stop on the side of the rib opposite the scale and in line with said edge of the scale.

5. As an article of manufacture, a scoring device comprising a plate having a raised integral rib on the surface thereof and provided with means on opposite sides of said rib near one end adapted to position the edge of the card to be scored through joint contact with the same edge thereof so that the movement of the card transversely of the rib is unlimited by said means, in combination with a scoring stick having a recess of a formation complementary to that of the rib and adapted to traverse the same.

[Claims 6 and 7 not printed in the Gazette.]

1,153,952. CULTIVATOR. JESSE R. PORTER, Buffalo, N. Y. Filed July 22, 1912. Serial No. 710,743. (Cl. 37—24.)



1. A cultivator comprising a carriage, and a digger mounted on said carriage and comprising an endless digging member, upper and lower wheels around which said digging member passes, a driving shaft connected with the upper wheels, a spindle supporting the lower wheels, a radius frame connecting the said shaft and spindle and having an upper section which is hung on said shaft and provided with ribbed guide arms, a lower section secured to the spindle and provided with grooved guide arms which receive the ribs of the upper arms, and means for adjusting the upper and lower arms relatively to each other comprising an adjusting rod engaging one end with one of said arms while its opposite end is provided with a screw thread, and a nut mounted on the other guide arm and receiving the threaded end of said rod, said grooved arm being split lengthwise and the parts thereof on opposite sides of the split being connected by clamping screws.

2. A cultivator comprising a carriage, and a digger mounted on said carriage and comprising a plurality of transverse digger bars, links connecting corresponding ends of the digger bars and forming with the latter an endless belt, upper and lower wheels around which said belt passes, a shaft secured to said upper wheels, a spindle supporting said lower wheels, means for operating said belt so that its operative bars move rearwardly, a radius frame connecting said shaft and spindle, and means for causing the digger bars to project laterally from said links during their downward and rearward movement and to retract during the initial part of the upward movement of the same.

3. A cultivator comprising a carriage, and a digger mounted on said carriage and comprising a plurality of transverse digger bars, links connecting corresponding ends of the digger bars and forming with the latter an endless belt, upper and lower wheels around which said belt passes, a shaft secured to said upper wheels, a spindle supporting said lower wheels, a radius frame connecting said shaft and spindle, means for operating said belt so as to move the operative bars rearwardly, and means for causing the digger bars to project laterally from said links comprising a controlling track mounted on the radius frame and arranged adjacent to the operative stretch of said belt and extending tangentially relatively to said spindle, and controlling arms arranged on the inner edges of said digger bars and engaging said controlling track, said track having a gap adjacent to the lower rear side of said spindle.

4. A cultivator comprising a carriage, and a digger mounted on said carriage and comprising a plurality of transverse digger bars, links connecting corresponding ends of the digger bars and forming with the latter an endless belt, upper and lower wheels around which said belt passes, a shaft secured to said upper wheels, a spindle supporting said lower wheels, a radius frame connecting said shaft and spindle, and means for causing digger bars and blades to project laterally from said links comprising controlling tracks arranged adjacent to the operative and inoperative stretches of said belt, and controlling arms arranged on the inner edges of said digger bars and adapted to engage said controlling tracks, said radius frame being constructed of upper and lower adjustably connected sections, said front controlling track being mounted on the lower section of the radius frame and said upper and lower rear controlling track sections being mounted respectively on the upper and lower sections of the radius frame.

1,153,953. BOILER-CLEANER. EDMUND RANKIN, Lincoln, Ill. Filed July 26, 1915. Serial No. 42,082. (Cl. 122—389.)



1. A boiler cleaner comprising a skimmer pipe, a vertically swinging support for said pipe, and a pivotal connection between the support and the pipe intermediate the ends of the latter, and floats connected to the skimmer pipe.

2. A boiler cleaner comprising a vertically swinging support, and a float-balanced skimmer pipe pivotally connected intermediate its ends to the support.

3. A boiler cleaner comprising an outlet pipe, a hollow arm pivotally coupled to said pipe to swing in a vertical plane, a skimmer pipe pivotally coupled intermediate its ends to the outer end of the hollow arm to swing in a vertical plane, and floats connected to the skimmer pipe.

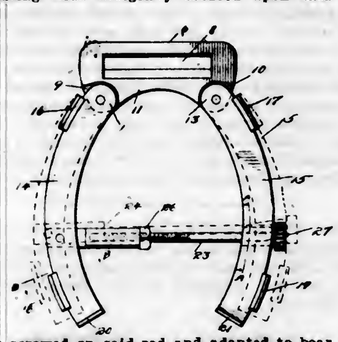
4. A boiler cleaner comprising an outlet pipe, a hollow arm pivotally coupled to said pipe to swing in a vertical plane, a T-coupling swivelingly connected to the outer end of the hollow arm, a skimmer pipe composed of alined sections connected at their inner ends to the T-coupling and extending in opposite directions therefrom, and floats connected to said sections.

5. A boiler cleaner comprising a skimmer pipe, a vertically swinging support for said pipe, and a pivotal connection between the support and the pipe intermediate the ends of the latter, caps mounted on the outer ends of the skimmer pipe, said ends being open and the caps having sockets at their outer ends provided with side openings, and floats connected to the sockets.

1,153,954. ICE-CREEPER. AUGUST REISS, Medford Station, N. Y. Filed May 11, 1914. Serial No. 837,826. (Cl. 168—30.)

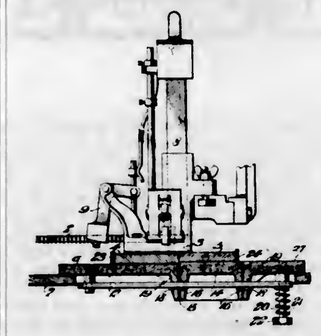
1. An overshoe for horses comprising a straight toe piece, said toe piece having an arcuate inner edge, said toe piece being cut away at opposite ends to provide pivotal bearings, two segmental wings pivotally secured upon said pivotal bearings flush with said toe piece, said wings adapted to continue the curvilinear outline of said arcuate edge, a pair of securing clamps secured upon said wings at their innermost ends, and adjustable means for holding said wings in adjusted relation.

2. In a device of the kind described in combination a straight toe piece, a pair of side wings pivotally secured at one end upon said toe piece, a stud secured upon one of said wings, an internally-threaded sleeve pivotally secured upon said stud, a rod projecting through the other of said wings and being screw threaded at its extremity, the screw-threaded end of said rod engaging said sleeve, an operating head integrally secured upon said rod, a



lock-nut screwed on said rod and adapted to bear against said sleeve, and clamps carried by said wings.

1,153,955. ATTACHMENT FOR MACHINES FOR DRIVING FASTENERS. THOMAS B. RICE, Jr., Philadelphia, Pa. Filed June 6, 1914. Serial No. 843,327. (Cl. 1—15.)



1. In a device of the character stated, a rigid platen, a platen movably supported in suitable relation to said rigid platen, one of said platens having its face normally above the face of the other and having a guiding edge, and yielding guiding means arranged to bear against the members to be united, and to hold their edges abutting and to hold the edge of one of said members in contact with said guiding edge.

2. In an attachment for machines for driving fasteners, a rigid platen, a platen yieldingly supported to have its face normally above the face of the rigid platen and having a guide-edge, and yielding guide-means arranged to bear against the members to be united to hold their joining edges together.

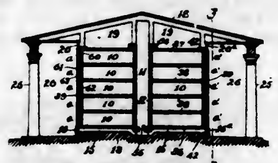
3. In an attachment for machines for driving fasteners, a rigid platen, a platen yieldingly supported to have its face normally above the face of the rigid platen and having a straight guide-edge, and yielding guides arranged to have their guide-portions at opposite sides of said guide-edge and adapted to bear against the outer edges of the members to be united to hold their joining edges together.

4. In an attachment for machines for driving fasteners, a rigid platen, a platen yieldingly supported to have its face normally above the face of the rigid platen and having a guide-edge, yielding lateral guides at opposite sides of said guide-edge, a hopper adapted to have the members to be united stacked within it and having a discharge opening, and a plunger slidable across the bottom of said hopper and in alinement with the discharge opening.

5. In an attachment for machines for driving fasteners, a rigid platen, a platen movable in its relation to the latter and formed with a guide-edge, means for yieldingly and resiliently supporting said movable platen to normally maintain its upper face above that of the rigid platen, and springs suitably secured on opposite sides of the guide-edge and having ends adapted to bear against the outer edges of the members to be united.

[Claims 6 to 11 not printed in the Gazette.]

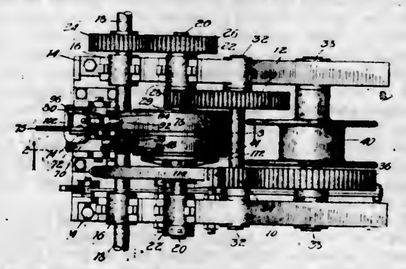
1,153,956. MAUSOLEUM. DANIEL M. ROTHENBERGER, Reading, Pa., assignor of one-third to Francis F. Seidel, Reading, Pa. Filed Sept. 18, 1914. Serial No. 862,277. (Cl. 72—7.)



1. A mausoleum having crypts arranged in tiers and provided with exterior ventilating spaces above, below, and in the rear of the tiers; the rear wall of the tiers having independent conduits one for each crypt, each crypt having a sloping floor and a drain opening in the plane thereof leading into its respective conduit and a ventilating opening in the upper portion of its rear wall also leading into the same conduit, means at the lower end and means at the upper end of said conduits to contain disinfectant, said means being open to the surrounding spaces.

2. In a mausoleum, a foundation, a roofed structure, crypt tiers between and spaced from the foundation and roof to provide ventilating spaces communicating with the outer atmosphere, said crypt tiers being in parallel series with a ventilating passageway between their rear walls, disinfectant containing receptacles open at their upper ends and arranged on the rear walls of said tiers and within the intermediate ventilating passageway, disinfectant containing receptacles adjacent the upper walls of said tiers, the rear walls of said tiers having independent ventilating and draining conduits one for each tier, and said conduits opening into the bottom portions of said receptacles.

1,153,957. COMBINATION AUTOMATIC AND LOWERING BRAKE FOR HOISTING-MACHINES. FRED A. RUNDLE, Harvey, Ill., assignor to Whiting Foundry Equipment Company, Harvey, Ill., a Corporation of Illinois. Filed May 19, 1913. Serial No. 768,456. (Cl. 74—37.)

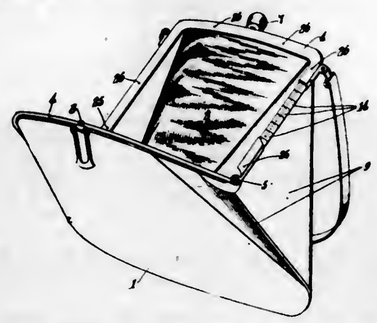


1. In a device of the class described, the combination of a shaft normally tending to rotate in a given direction, a pair of rigidly connected pulleys on said shaft, a brake band on one of said pulleys, means for automatically operating said brake to prevent rotation of said shaft in said given direction, a second brake band on the other of said

pulleys, a lever for applying said last mentioned brake band, and means operated by the said lever for releasing the automatically controlled brake band.

2. In a device of the class described, the combination of a shaft normally tending to rotate in a given direction, a pair of rigidly connected pulleys on said shaft, a brake band on one of said pulleys, means for automatically operating said brake band to prevent rotation of said shaft in said given direction, and permitting a free rotation of said shaft in the opposite direction, a second brake band on the other of said pulleys, a hand lever for applying said brake band, and means carried by said lever for releasing the automatically controlled brake band.

1,153,958. HAND-BAG, &c., AND METHOD OF FRAMING THE SAME. LOUIS ALBERT SAMSTAG, New York, N. Y. Filed May 7, 1915. Serial No. 26,608. (Cl. 150—29.)



1. The herein described process of applying channeled frames to articles of flexible material, which consists in clamping separate binding units of stiff material having a smooth exterior around and upon small portions of a raw edge of the flexible material to form a substantially continuous smooth inner frame or binding, inserting said inner frame or binding into the channel of an exterior frame member and securing said inner frame or binding against accidental removal from the exterior frame member and without closing the channel of the exterior frame.

2. The herein described process of applying channeled frames to articles of flexible material, which consists in clamping separate binding units of stiff material having a smooth exterior successively and progressively around and upon small portions of a raw edge of the flexible material, said units being in contact with each other, and forming a substantially continuous inner frame or binding, inserting said inner frame or binding into the channel of an exterior frame member, and securing said inner frame or binding and said exterior frame member together.

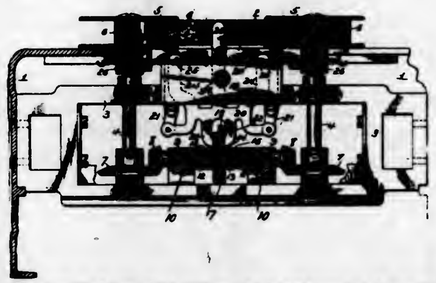
3. The herein described process of applying channeled frames to lined articles of flexible material, which consists in bringing the raw edges of the body material and lining together, and clamping separate binding units of stiff material around and upon the raw edges of the body material and lining substantially continuously along said edges to clamp the body material and lining together and form an inner frame or binding, inserting said inner frame or binding into the channel of a channeled exterior frame member, and riveting the inner frame or binding and said exterior frame together.

4. The herein described process of applying channeled frames to articles of flexible material, which consists in clamping separate binding units of stiff material having a smooth exterior around and upon small portions of a raw edge of flexible material, and overlapping each of said units upon an adjacent unit, to form a continuous stiffened inner frame or binding having a substantially smooth and continuous exterior, inserting said inner frame or binding into the channel of an exterior channeled frame, and securing it therein.

5. The herein described process of applying channeled frames to articles of flexible material, which consists in clamping separate binding units of stiff material having a smooth exterior around and upon small portions of raw edges, to form a substantially continuous inner frame or binding having a substantially smooth and uniform exterior, and clamping corner units upon said edge at sharply angular portions thereof, to form continuations of the adjacent portions of said inner frame or binding, inserting said inner frame or binding into the channel of an exterior channeled frame member, and securing it therein.

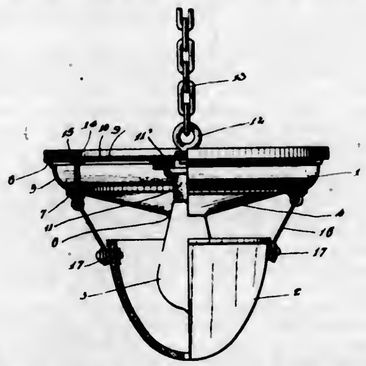
[Claims 6 to 15 not printed in the Gazette.]

1,153,959. TYPE-WRITING MACHINE. MARSHALL BIDWELL SARGENT and ARVID EMANUEL KARLBERG, Indianapolis, Ind., assignors to The Stenotype Company, Indianapolis, Ind. Filed Oct. 9, 1914. Serial No. 865,887. (Cl. 197—160.)



The combination with ribbon reels, gearing for actuating the same, and clutch devices coöperable with said gearing, of a fixed block, a shifting yoke for the clutch devices supported by said block, said yoke having arms projecting upwardly through said block and movable therein, said arms having notches near their upper ends, horizontal control levers pivoted at one end to a fixed support and projecting over said block and guided in the notches in the yoke arms, automatically operable controlling means for said control levers, and springs connected with said levers and a fixed support and tending to move said levers toward said automatically operable controlling means for actuating the shifting yoke.

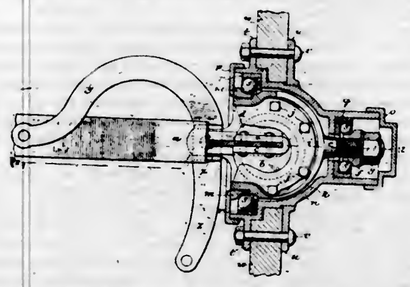
1,153,960. LIGHTING-FIXTURE. EARNST J. SCHWEITZER and ROBERT G. WAGNER, Los Angeles, Cal. Filed Dec. 22, 1914. Serial No. 878,475. (Cl. 240—78.)



1. In a lighting fixture, a canopy having an inverted frusto-conical reflector formed with a central opening, the reflector being flattened adjacent its outer edge, an upstanding shell formed integrally with the flattened portion and provided with an interior shoulder extending around the same, a socket supporting member within the shell in engagement with said shoulder, means connecting the socket supporting member to the flattened portion of the reflector, and a socket.

2. In a lighting fixture, a canopy having a reflector in the form of an annulus with a concave reflecting surface, a shell formed integrally on the rim of the annulus and projecting upwardly therefrom, said shell being provided with an interior shoulder, a socket supporting member within the shell engaging said shoulder, and means projecting through the reflecting surface and engaging with the socket supporting member, and a socket connected to said socket supporting member.

1,153,961. STEERING-GEAR FOR MOTOR-VEHICLES. JOHN M. SCOTT, Racine, Wis. Filed Dec. 16, 1911. Serial No. 666,204. (Cl. 21—142.)



1. In steering gear for motor vehicles, the combination of an axle having a horizontally disposed circular plate fixed to the end thereof, a wheel spindle having a segmental bearing fitting over and adapted to turn on the rim of said plate, said plate and bearing being formed with interfitting tongues and grooves concentric with their vertical axes and the bearing being provided with a detachable segmental cap for confining the plate therein, and a recessed wheel hub rotatably mounted on said spindle and extending inwardly over and surrounding said plate and bearing.

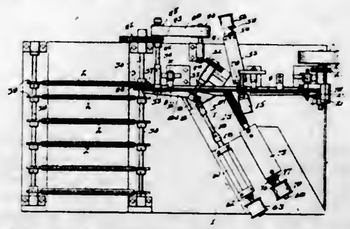
2. In steering gear for motor vehicles, the combination of an axle having a horizontally disposed substantially circular pivot bearing plate, a wheel spindle having a segmental bearing fitting over and adapted to turn on the rim of said plate, one of said parts being formed on one side thereof with a curved tongue concentric with its axis and fitting into a corresponding groove in the other part, and a recessed wheel hub rotatably mounted on said spindle and extending inwardly over and surrounding said plate and bearing.

3. In steering gear for motor vehicles, the combination of an axle provided at the end with a substantially circular horizontally disposed and concentrically tongued plate, a spindle having a segmental concentrically tongued bearing fitted to engage with and turn on the tongued rim of said plate and provided with a detachable cap for securing it in place thereon, and a recessed wheel hub rotatably mounted on said spindle and extending inwardly over and surrounding said plate and bearing.

4. In steering gear for motor vehicles, the combination of an axle provided at the end with a substantially circular horizontally disposed plate, a spindle provided with a segmental bearing secured in engagement with and adapted to turn on the rim of said plate and provided with a ball bearing adjacent to its outer end and formed around and below said segmental bearing with a quarter spherical extension terminating at its inner end in a ball bearing surrounding the axle, and a hollow wheel hub provided with ball bearings surrounding those on said spindle and provided at its inner end with a removable flanged ring extending inwardly over the inner ball bearings.

5. In steering gear for motor vehicles, the combination of an axle provided at the ends with substantially circular horizontal tongued and grooved bearings, wheel spindles having eccentric tongued and grooved segmental bearings secured and adapted to turn horizontally on the rims of said circular bearings, said spindles being also provided with ball bearings, the inner bearings surrounding the ends of the axle, hollow wheel hubs inclosing said spindles and bearings and provided on opposite sides of the central vertical planes of the wheels with ball bearings surrounding the ball bearings on the spindles and operating arms rigidly attached to inwardly projecting extensions of the spindles.

1,153,962. TOBACCO-STEMMING MACHINE. JAMES P. SCOVILL, Wyoming, Ohio, assignor of one-half to C. H. Foster, Troy, N. Y. Filed Feb. 24, 1908. Serial No. 417,546. (Cl. 131—57.)



1. In a tobacco stemming machine, a stem gripping carrier, a stem finding and tip stripping mechanism consisting of rotating pin points disposed obliquely relative to the carrier and rotating in the general direction of carrier travel to advance the leaf and adapted to initially puncture and strip the leaf against the grain upon each side of the stem near the tip.

2. In a tobacco leaf stemming machine, a tip gripping carrier, and mechanism disposed obliquely relative to the carrier rotating in the general direction of carrier travel but at a lower speed, and adapted to transiently interpose leaf puncturing and stripping points to the passage of the gripped leaf upon opposite sides of the stem at the ungripped portion of the tip.

3. In a tobacco leaf stemming machine, comprising main stripper, a tip gripping leaf carrier holding one end of the leaf throughout the stripping, and mechanism disposed obliquely relative to the carrier and operating upon one side of the carrier in the same general direction of travel to advance the leaf, but moving slower to interpose tearing points upon each side of the tip of the stem during its passage, whereby the leaf is initially stripped at its tip against the grain and delivered to said main strippers.

4. In a tobacco leaf stemming machine comprising main strippers, a tip gripping leaf carrier holding one end of the leaf throughout the stripping, and mechanism disposed obliquely relative to the carrier and operating upon one side of the carrier in the general direction of carrier travel to advance the leaf, but moving slower to angularly interpose tearing points upon each side of the tip of the stem during its passage, whereby the leaf is initially stripped at its tip against the grain and delivered to said main strippers.

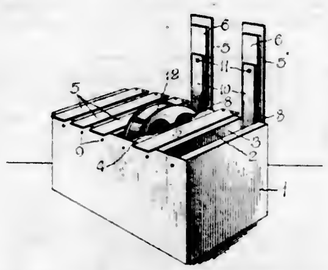
5. In a tobacco stemming machine, a stem gripping carrier, a relatively angularly disposed pair of rotary members, having a plane of rotation obliquely disposed relative to the carrier having the same general direction of travel, and having tearing points adapted to operate upon opposite sides of the stem and impart an initial strip of the leaf against the grain while the leaf is being advanced to other stripping instrumentalities.

[Claim 6 to 17 not printed in the Gazette.]

1,153,963. FILM-REEL HOLDER. AUGUST E. SENGSTOCK, Detroit, Mich. Filed Jan. 27, 1915. Serial No. 4,600. (Cl. 206—52.)

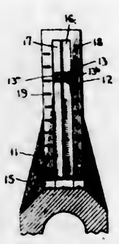
A film reel holder comprising a casing, transverse partitions providing compartments within said casing adapted

to contain film reels, individual hinged lids for the compartments of said casing adapted to overlie said partitions and project from the front wall of said casing to facilitate opening said lids and projecting from the rear wall of said casing to engage said wall and limit the opening movement of said lids, and flexible straps in the compartments of said casing approximately the width of



each compartment and connected to said lids intermediate the ends thereof and to the inner side of the front wall at the upper edge thereof and adapted to conform to the peripheries of reel holders placed thereon, whereby said lids are closed by film reels descending by gravity into the compartments of said casing.

1,153,964. GUN-SIGHT. SAMUEL D. SHEPARD, Friendship Heights, Md., and MAURICE SHAPPIRIO, Washington, D. C. Filed Feb. 16, 1915. Serial No. 8,675. (Cl. 33—51.)



1. The combination with a firearm, of a front sight of T-shape, and a rear sight provided with a longitudinal view slot and a vertical series of openings of different shapes which are indicative of different distances and each coöperative with the horizontal portion of the front T-shaped sight.

2. The combination with a firearm, of a front sight, and a rear sight provided with a view slot and a plurality of openings of different shape which are indicative of different distances and each coöperative with the front sight so as to facilitate positioning of the gun for the range desired.

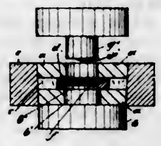
3. In a firearm, a front sight including a horizontal portion and a rear sight provided with a longitudinal view slot and a thin strip dividing the same and adapted to be brought into a visual intersection at various points along the horizontal portion of the front sight to form a sighting cross at such points of intersection.

4. A sighting member for firearms composed of a plate provided with a longtiudinal view slot having smooth side edges and a series of openings spaced from said slot and indicative of different distances.

5. A sighting device member for firearms composed of a plate provided with a longitudinally disposed view slot having smooth side edges and a series of openings of different shape spaced from said slot and indicative of different distances.

[Claims 6 to 13 not printed in the Gazette.]

1,153,965. APPARATUS FOR EMBOSSING THE RIMS OF DISKS. MAX SINGEWALD, Leipsig, Germany. Filed Apr. 18, 1914. Serial No. 832,961. (Cl. 101—150.)



1. In apparatus for the purpose set forth, the combination of a matrix having a work-holding cavity, dies movable in said matrix to and from said cavity, means for locking said dies in said matrix, and a stamp movable in said cavity, having on its face a protuberance whereby it first acts on the central part of the work placed in said cavity, and squeezes material from said central part outward toward said dies.

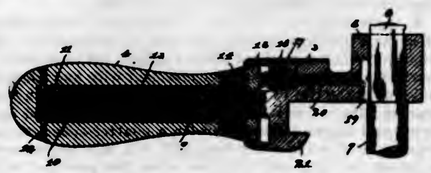
2. In apparatus for the purpose set forth, the combination of a matrix having a work-holding cavity, dies movable in said matrix to and from said cavity, means for locking said dies in said matrix, and a stamp movable in said cavity, having on its face a spherical protuberance whereby it first acts on the central part of the work placed in said cavity, and squeezes material from said central part outward toward said dies.

3. In apparatus for the purpose set forth, the combination of a matrix having a work-holding cavity, dies movable in said matrix to and from said cavity, means for locking said dies in said matrix, and a series of stamps adapted to enter said cavity successively, said stamps having on their faces spherical protuberances of different diameters, whereby each stamp in turn acts on the central part of the work in said cavity, and squeezes material from said central part outward toward said dies.

4. In apparatus for the purpose set forth, the combination of a matrix having a work-holding cavity, dies movable in said matrix to and from said cavity, means for locking said dies in said matrix, a series of stamps adapted to enter said cavity successively, said stamps having on their faces spherical protuberances of different diameters, whereby each stamp in turn acts on the central part of the work in said cavity and squeezes material from said central part outward toward said dies, and another stamp with a flat face adapted to enter said cavity after the last of the previously mentioned series of stamps.

5. In apparatus for the purpose set forth the combination of a matrix having a work-holding cavity and die apertures disposed about said cavity giving access to the latter, a stamp adapted to enter said cavity, having on its face a protuberance whereby it first acts on the central part of the work and squeezes material outward from said central part, a flat-faced die adapted to enter said cavity after the first mentioned die, and a plurality of sets of dies adapted to be successively inserted into said die apertures, the several sets having intaglio impressions of like character but of different depths.

1,153,966. HANDLE OR LEVER. ANTON SINNES, Chicago, Ill. Filed Aug. 7, 1914. Serial No. 855,565. (Cl. 74—33.)



1. A removable handle for operating a valve or analogous stem, comprising, in combination, a one-piece socket member provided with a transverse aperture adapted to slidably receive the end of said stem, said stem and socket

being suitably conformed to prevent relative rotary movement and to prevent angular movement in the plane of the axis of the stem, said socket being provided with a radial outwardly projecting stalk threaded at its outer end, a tubular handle piece surrounding said stalk and having threaded engagement with said outer threaded end of said stalk, said handle being free to rotate upon said stalk and thus cause relative axial movement thereof, due to said threaded engagement, a radially extending plunger slidably mounted within said socket member intermediate the inner end of said handle and said stem, and provided at its inner end with a head conformed to fit the stem, and at its other end adapted to be engaged by the inner end of said handle to perfect longitudinal movement of said plunger when said handle piece is rotated upon the stalk, and means associated with said plunger for effecting a withdrawal thereof when said handle piece is moved outwardly with reference to said stalk.

2. The combination of a non-circular operating stem and a removable handle for said stem, comprising a rigid socket piece transversely apertured to slidably fit said stem, a handle piece having screwed engagement with and axially rotatable on said socket piece, and a clamping member adapted to be forced into engagement with said stem by the axial movement of said handle piece, caused by its rotation on said socket piece said socket and clamp-member together constituting a spanner-like part adapted to interlock with and rotate said stem.

3. The combination of an operating stem and a removable handle for said stem, comprising a rigid integral socket member adapted to fit spanner-wise on said stem, a handle piece axially rotatable on, carried by, having screwed engagement with said socket piece and adapted to be advanced inwardly toward said stem by the rotation of said handle upon said socket piece, and a clamping member interposed between said handle and stem slidably mounted in said socket piece and adapted to be forced into engagement with said stem by an inward movement of said handle piece.

4. A removable handle for imparting rotary movement to the stem of a valve or analogous mechanism comprising in combination a rigid socket member transversely apertured to slidably receive and interlock with the end of said stem, a hand-piece projecting from said socket member at right angles to the axis of the stem axially rotatable upon said socket member and having screw engagement therewith, whereby rotation of said hand-piece on said socket member causes axial movement of said hand-piece relative to said socket member, and a clamping member carried by said socket member and adapted to slide therein in a direction parallel to the axis of said hand-piece, said clamping member being adapted to be forced into engagement with the stem by axial movement of said hand-piece.

5. A removable handle for operating the stem of a valve or analogous mechanism comprising in combination a rigid socket member transversely apertured to slidably fit over said stem, and provided with a projecting stalk, a hand-piece surrounding, axially rotatable upon said stalk, and having screw engagement therewith whereby rotation of said hand-piece causes an axial movement thereof relative to said socket member, and a clamping member interposed between said hand-piece and said stem and adapted to slide in said socket member, whereby rotation of said hand-piece on the socket causes said clamping member to be forced into engagement with said stem.

[Claim 6 not printed in the Gazette.]

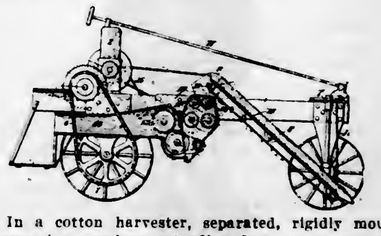
1,153,967. AUTOMATIC WAGON-BRAKE. THEEHARMON M. SMITH, Wax, Ky. Filed July 13, 1914. Serial No. 850,763. (Cl. 21—9.)

In combination with the running gear of a wagon having its tongue pivoted forwardly of its rear end, a brake mechanism comprising pulleys mounted upon the forward end of the reach rod, a cable secured upon the rear end of the tongue, extending over one of said pulleys and connected with the brake beam, a pair of pulley blocks secured, one upon the brake beam and the other upon the rear axle, and a second cable secured upon the rear end of said tongue, passing over the other of said pulleys,



trained about the pulleys in said blocks and having its other end connected with one of said blocks.

1,153,968. COTTON-HARVESTER. WILLIAM F. SPECK, Frenchmans Bayou, Ark. Filed Nov. 7, 1910. Serial No. 591,067. (Cl. 56—6.)



1. In a cotton harvester, separated, rigidly mounted boll engaging members extending from front to rear of the line of travel of the machine and having rigidly mounted teeth projecting angularly from said members and said members operable to straddle a row of plants and engage and strip the bolls as the machine is moved along, substantially as described.

2. In a cotton harvester, the combination with two separated rigid members operable to straddle a row of plants and extending from the front of the machine rearwardly, of boll engaging teeth fixedly mounted on the inner longitudinal edges of said members at an angle thereto, the teeth of the opposite members extending toward one another, substantially as described.

3. In a cotton harvester, the combination with rigidly mounted members extending longitudinally in the line of travel of the machine and having fixed teeth on the inner longitudinal edges of said members, the teeth of the opposite members projecting toward one another and adapted to engage and gather the bolls as the harvester is moved along the row, of means for continuously stripping the bolls from the toothed members and conveying them rearwardly to suitable receiving means, substantially as described.

4. In a cotton harvester, the combination with fixed members at the front of the machine operable to straddle a row of plants, of fixed teeth on the inner longitudinal edges of said members, the teeth of the opposite members extending toward one another angularly to the line of draft and adapted to engage the cotton bolls, said rows of teeth converging from the front toward the rear of said members, substantially as described.

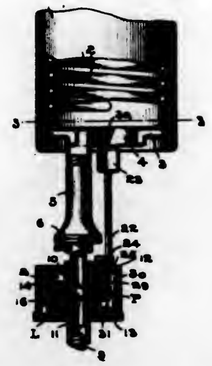
5. In a cotton harvester, the combination with fixed members having teeth projecting from their longitudinal edges at an angle to the line of draft, said members converging from their front toward their rear ends and extending upwardly and rearwardly at an angle between the horizontal and the vertical and conveying means adjacent each of said toothed members and extending substantially parallel to the length thereof for taking the cotton bolls from said members and delivering them to suitable receiving means, substantially as described.

[Claim 6 not printed in the Gazette.]

1,153,969. GAS-LIGHTER. ERNEST H. STUETS, Philadelphia, Pa. Filed Oct. 27, 1914. Serial No. 868,833. (Cl. 236—4.)

1. The combination with a boiler to be heated, a burner for heating the same, a gas supply pipe communicating

with the burner, a pilot tube communicating with the gas supply pipe, a valve in the pilot tube, a valve in the gas supply pipe, two electro-magnets controlling the movement of the last-mentioned valve, an electro-magnet controlling the movement of the valve in the pilot tube and connected in circuit with one of said first-mentioned magnets, a thermostat on the boiler controlling contacts normally apart, said contacts included in an electric circuit with the magnets, whereby the valve in the gas supply pipe is closed by the action of one of the first-mentioned magnets when the temperature of the water in the boiler reaches a pre-determined degree, substantially as described.



2. The combination with a boiler to be heated, a main burner for heating the same, having an opening therein, a gas supply pipe communicating with the burner, a pilot tube communicating with the gas supply pipe and terminating below the opening in the main burner, a valve in the gas supply pipe, a valve in the pilot tube past which a small amount of gas is permitted to flow when the valve is closed, a segment on the first-mentioned valve, two electro-magnets, pivoted armatures moved by the electro-magnets and engaging the segment, one of said electro-magnets adapted to move the valve to open position, and the other to move the valve to closed position, manually operated pulls connected to the armature, an electro-magnet controlling the movement of the valve in the pilot tube and connected in circuit with one of said first-mentioned magnets, a thermostat on the boiler controlling electric contacts normally apart, electric contacts controlled by one of said pulls and together when the gas supply valve is open, said last-mentioned contacts in circuit with the contacts controlled by the thermostat, and in circuit with the magnet for turning the first-mentioned valve to closed position, substantially as described.

3. The combination with a boiler to be heated, a main burner for heating the same, having an opening therein, a gas supply pipe communicating with the burner, a pilot tube communicating with the gas supply pipe and terminating below the opening in the main burner, a valve in the gas supply pipe, a valve in the pilot tube past which a small amount of gas is permitted to flow when the valve is closed, a segment on the first-mentioned valve, two electro-magnets, pivoted armatures moved by the electro-magnets and engaging the segment, one of said electro-magnets adapted to move the valve to open position, and the other to move the valve to closed position, manually operated pulls connected to the armature, an electro-magnet controlling the movement of the valve in the pilot tube and connected in circuit with one of said first-mentioned magnets, a thermostat on the boiler controlling electric contacts normally apart, electric contacts controlled by one of said pulls and together when the gas supply valve is open, said last-mentioned contacts in circuit with the contacts controlled by the thermostat, and in circuit with the magnet for turning the first-mentioned valve to closed position, and electric switches included in electric circuits with the first-mentioned electro-magnets, substantially as described.

1,153,970. IMITATION WOOD. DANIEL MANSON SUTHERLAND, Jr., Trenton, N. J., assignor to The Agasote Millboard Co., Ewing township, N. J., a Corporation of New Jersey. Filed Mar. 29, 1912. Serial No. 687,185. (Cl. 106—31.)

1. As a new article of manufacture, compressed fiber impregnated with red gum, substantially as and for the purpose described.

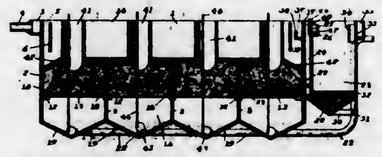
2. As a new article of manufacture, compressed fiber impregnated with red gum and boric acid, substantially as and for the purpose described.

1,153,971. SOLDERING-IRON. JOHN SWIERGOCKI, Chicago, Ill. Filed Aug. 21, 1914. Serial No. 857,832. (Cl. 158—26.)



In a device of the class described, a soldering tip having a socket at its inner end forming a heating chamber, the walls of said chamber being grooved to provide discharge openings for the products of combustion, a feed pipe having one end fitted in the socket and the opposite end screw-threaded, a casing screwed upon said screw-threaded end and having a peripherally flanged heat shield and an interior mixing chamber, a perforated partition at one end of said chamber having a central aperture, and a series of air inlets, a fuel supply pipe extending through the central aperture and a perforated oscillatory plate controlling the air inlets.

1,153,972. APPARATUS FOR PURIFYING SEWAGE OR THE LIKE. GEORGE W. SWINBURNE, East Orange, N. J., assignor to Sterilization Company, a Corporation of New Jersey. Filed Nov. 16, 1912. Serial No. 731,700. (Cl. 210—18.)



1. The combination of a reservoir having an upper sedimentation chamber and a lower reduction chamber communicating with each other, means for supplying sewage to the sedimentation chamber, means for discharging sludge from the reduction chamber, means for discharging effluent from each of said chambers independent of the other and of said sludge discharge means, and means for varying the ratio between said effluent discharges from the chambers.

2. The combination of a reservoir having an upper sedimentation chamber and a lower reduction chamber communicating with each other, means for supplying sewage to the sedimentation chamber, means for discharging sludge from the reduction chamber, means for causing an artificial circulation from the upper chamber to the lower one, and means for varying said artificial circulation.

3. The combination of a reservoir having an upper sedimentation chamber and a lower reduction chamber communicating with each other, means for supplying sewage to the sedimentation chamber, means for discharging

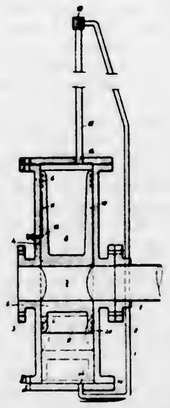
sludge from the reduction chamber, means for discharging effluent from each of said chambers independent of the other and of said sludge discharge means, and an adjustable weir for varying the ratio between said effluent discharges from the chambers.

4. The combination of a reservoir having an upper sedimentation chamber and a lower reduction chamber communicating with each other, means for supplying sewage to the sedimentation chamber, means for discharging sludge from the reduction chamber, means for discharging effluent from said sedimentation chamber independent of the said reduction chamber, effluent discharge means leading from the reduction chamber independent of the said sedimentation chamber and the said sludge discharge means to substantially the level of the sedimentation chamber, and means at said level for varying the ratio between the volumes of said effluent discharges from the chambers.

5. The combination of a reservoir having an upper sedimentation chamber and a lower reduction chamber communicating with each other, means for supplying sewage to the sedimentation chamber, means for discharging sludge from the reduction chamber, an outlet weir for said sedimentation chamber, effluent discharge means leading from the reduction chamber independent of the said sedimentation chamber and the said sludge discharge means, a weir in said reduction chamber effluent discharge means at substantially the same level as the outlet weir of the sedimentation chamber, and means for adjusting one of said weirs to vary the ratio between the volumes of said effluent discharges from the chambers.

[Claims 6 to 19 not printed in the Gazette.]

1,153,973. WELL-TUBE-CLOSING APPARATUS. VIRGILIU TACIT and VALERIU PUSCARIU, Bucharest, Roumania. Filed Oct. 31, 1913. Serial No. 798,569. (Cl. 166—15.)



1. A well tube closing apparatus comprising a cylinder having inlet and outlet openings, a well tube in communication with the inlet, a piston within the cylinder reciprocable across said openings, the piston in one position closing said openings and being formed with a throughway therein adapted to be brought into communication with the openings in the cylinder and means for supplying a pressure fluid to the cylinder to actuate the piston, substantially as described.

2. A well tube closing apparatus comprising a cylinder having inlet and outlet openings disposed between the ends of the cylinder, a piston within the cylinder, extending across said openings, and formed with a throughway normally in communication with the inlet and outlet openings of the cylinder, and means for supplying fluid pressure to the cylinder to actuate the piston to move the throughway from communication with said openings and close the openings in the operation of the piston, substantially as described.

3. A well tube closing apparatus comprising a cylinder having inlet and outlet openings disposed between its ends, a piston within the cylinder, extending across said openings, and formed with a throughway positioned nearer one end of the piston than the other and normally in communication with the inlet and outlet openings of the cylinder, said piston cutting off communication between the inlet and the cylinder in one position, and means for supplying pressure fluid to the cylinder to actuate the piston to close the inlet and outlet openings of the cylinder, substantially as described.

4. A well tube closing apparatus comprising a cylinder having inlet and outlet openings, a piston within the cylinder reciprocable across said openings, an unobstructed throughway formed in the piston and laterally inclosed by a solid wall forming part of the piston, means for moving the piston in one direction to bring said throughway into communication with the openings in the cylinder, and fluid pressure means for moving the piston in the other direction to entirely close said openings.

1,153,974. INSECTICIDE AND PROCESS OF PREPARING SAME. LOUIS TERRY, Pine Bluff, Ark., assignor of one-fourth to Edwin J. Kerwin, one-fourth to Elizabeth Thompson, and one-fourth to Mary E. Steele, Pine Bluff, Ark. Filed Mar. 25, 1914. Serial No. 827,086. (Cl. 167—6.)

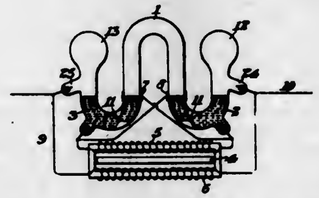
1. The process of preparing a liquid insecticide which consists in combining tobacco, soda and water, in substantially the proportions specified, *i. e.*, twelve pounds of tobacco, two pounds of soda and sixty-five gallons of water, boiling the mixture until the liquid therein is reduced approximately eight per cent., and expressing the liquid from the resulting mass.

2. A liquid insecticide resulting from the boiling of tobacco, soda and water, in substantially the proportions specified, *i. e.*, twelve pounds of tobacco, two pounds of soda and sixty-five gallons of water, until the liquid in the mixture is reduced approximately eight per cent., substantially as described.

1,153,975. ELECTRICALLY-INSULATING COMPOUND. ORLANDO VENNING THOMAS, Penang, Straits Settlements. Filed Apr. 7, 1911, Serial No. 619,466. Renewed Aug. 17, 1915. Serial No. 46,013. (Cl. 106—15.)

An electrically insulating compound composed of ground mica washed free of salt or alkaline substances, resin and resin oil.

1,153,976. MERCURY-VAPOR APPARATUS. PERCY H. THOMAS, Upper Montclair, N. J., assignor to Cooper Hewitt Electric Co., Hoboken, N. J., a Corporation of New Jersey. Original application filed Sept. 12, 1912, Serial No. 719,924. Divided and this application filed Nov. 1, 1913. Serial No. 798,663. (Cl. 176—42.)



1. A mercury vapor lamp comprising a light-giving portion, two receiving chambers, a body of mercury between each of said chambers and said vapor path, thus separating them and two leading-in wires adapted to connect with each of said mercury bodies, one or both leading-in wires connecting according to the pressure in the light-giving portion.

2. A W-shaped tube with mercury sealing the lower angles thereof, means for applying a high voltage alternating current to the mercury in said lower angles, means for overcoming the electrodes surfaces resistance of said mercury and means adapted to bypass said first named means, said last named means being responsive to the variations of the pressing back of the mercury in the lower angles, resulting from the increase of vapor pressure from operation.

1,153,977. BOOT-TOP. CHARLES TWEEDIE, Jefferson City, Mo. Filed Dec. 10, 1914. Serial No. 876,404. (Cl. 36—2.)



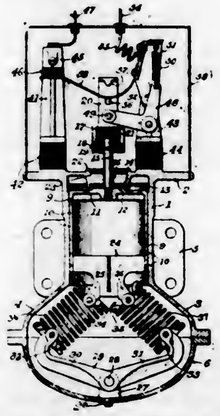
1. A boot-top to be worn over a low shoe, said boot-top having full length quarters following the general lines of the upper portion of a high boot, the lower edges of said boot-top being arranged to coincide with the edges of the sole of the shoe around the heel and along the sides of the shank, and the front and back lower portions of said boot-top being sprung in a sufficient amount to make the lower edges of such portions closely hug the shoe, and a strap connecting the lower side edges of the boot-top, said strap being arranged to lie beneath and fit the shank of the shoe from the breast of the heel to the points where the lower edges of the boot-top intersect the edges of the sole.

2. A boot-top to be worn over a shoe, said boot-top having full length quarters following the general lines of the upper portion of a high boot, the lower edges of said boot-top being arranged to coincide with the edges of the sole of the shoe along the sides of the shank, and the back lower portion of said boot-top being sprung in a sufficient amount to make the lower edges of the heel portion closely hug the shoe, and a connecting strap sewed to the lower side edges of the boot-top where they coincide with the edges of the sole, said strap being arranged to fit snugly beneath the shank of the shoe and draw in said lower side edges.

3. A boot-top to be worn over a shoe, said boot-top having full length quarters following the general lines of the upper portion of a high boot, the lower edges of said boot-top being curved to coincide with the arched edges of the sole of the shoe along the sides of the shank, and the lower portion of the front of said boot-top being sprung in a sufficient amount to make the lower edges of the front portion of the boot-top closely hug the shoe, and a strap connecting the lower side edges of the boot-top, said strap having curved ends to conform to the concave shank of the shoe and which ends are sewed to the lower curved edges of the boot-top where they coincide with the concave edges of the sole.

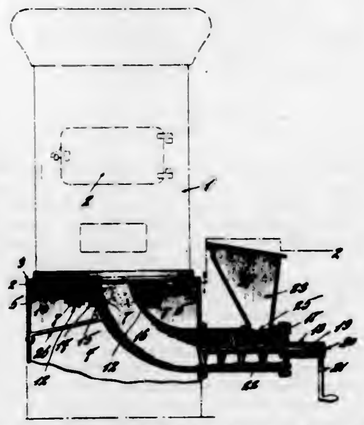
4. A boot-top to be worn over a shoe, said boot-top having quarters following the general lines of the upper portion of a high boot, the lower edges of said boot-top coinciding with the edges of the sole of the shoe along the sides of the shank, said boot-top having a side opening and a front seam, a strip of material along said front seam for stiffening it lengthwise, the lower portion of said front seam being sprung in a sufficient amount to make the lower edges of the boot-top closely hug the shoe in front, and a strap connecting the lower side edges of the boot-top, said strap having ends shaped to conform to the shape of the shank of the shoe and which ends are sewed to the lower edges of the boot-top where they coincide with the edges of the sole.

1,153,978. ELECTRICAL CONTROLLER. FRANK W. VAN NESS, Milwaukee, Wis., assignor, by mesne assignments, to Richmond Radiator Company, New York, N. Y., a Corporation of Delaware. Filed Apr. 18, 1910. Serial No. 556,093. (Cl. 175—288.)



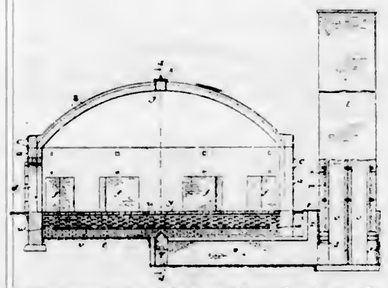
In an electrical controller, the combination of a bell crank lever provided with a pivot, a rocker pivoted adjacent the pivot of the bell crank lever and in the same general direction from the pivot of the bell crank lever in which one of the arms of the bell crank lever extends, a spring connected to the end of that arm of the bell crank lever and extending substantially in line therewith and connected with the rocker at a point remote from its pivot, a flexible switch member carried by the rocker, a contact for said switch member, a reciprocatable yoke member embracing said flexible switch member and provided with means to contact with said flexible switch member when the yoke is reciprocated in either direction, one of said means being adapted to hold said flexible switch member against said contact, and the other of said means being adapted to force said flexible switch member away from said contact when stuck thereto, said yoke member being pivotally connected with said bell crank lever, and means adapted to reciprocate said yoke member.

1,153,979. UNDERFEED FIRING DEVICE. ORVILLE VIRDEN, St. Louis, Mo. Filed Apr. 11, 1913. Serial No. 760,541. (Cl. 110—45.)



The improved underfeed firing device for furnaces, the same being composed of a fixed fire-grate and frame having a rectangular opening therein, a series of long and shorter grate-bars mounted to rotate within said rectangular opening, there being a smaller rectangular opening thus left centrally of the said first-mentioned rectangular opening; a rectangular flat, smooth dead-plate and feed-tube frame fixed within said central smaller rectangular opening, and having bearings in which the inner ends of the said shorter grate-bars are journaled, and also having a central feed-tube opening which is surrounded by the said rectangular dead-plate; a feed-tube connected to said feed-tube opening and extending downwardly and outwardly through the furnace ash-pit; and means for forcing fuel inwardly through the said feed-tube.

1,153,980. KILN. ANTON VOGT, Racine, Wis., assignor to E. C. Teichtonius Manufacturing Co., Racine, Wis., a Corporation of Wisconsin. Filed Dec. 3, 1913. Serial No. 804,367. (Cl. 25—145.)



1. A kiln comprising a substantially circular wall, surmounted by an arched top and provided at intervals with fire openings and interior flues extending upwardly from said openings, a stack, a main radial flue leading from the center of the kiln to the stack, a cross flue intersecting the inner end of the main flue, and extending therefrom to the circular wall on opposite sides thereof, a lower series of flues above and parallel with the main flue having imperforate side walls and opening into the top of the cross flue, a false floor laid over said series of flues, an upper series of flues above the false floor parallel with the lower flues with which they communicate at their outer ends through openings in the false floor next to the circular wall of the kiln, and an open-work floor laid over the upper series of flues and having its openings distributed throughout its entire area and communicating with the several flues next below it.

2. A kiln comprising a substantially circular wall surmounted by an arched top and provided at intervals with furnaces or fire openings and interior flues extending upwardly therefrom and opening into the upper part of the kiln, a stack at one side of the kiln, a radial flue leading from the central part of the kiln into the stack, a transverse flue extending diametrically across the kiln from side to side thereof and opening into the radial flue at its inner end, a lower series of flues having imperforate side walls extending across the kiln above and parallel with said radial flue and opening into the top of said transverse flue, an upper series of flues extending across the kiln above and parallel with those of the lower series and having open-work side walls through which they communicate with one another, a false floor or partition between said lower and upper series of flues having openings through which the upper flues communicate with lower flues at their ends next to the wall of the kiln, and an open-work floor over the upper series of flues having its openings distributed throughout its entire area and communicating with the several flues next below it.

3. A kiln comprising a circular wall surmounted by an arched crown and provided at intervals with furnaces or fire openings and interior flues leading upwardly therefrom into the upper part of the kiln, a stack at one side of the kiln, a radial flue leading from the central part of the kiln into the stack, a transverse flue extending entirely across the kiln and communicating with the inner end of the radial flue, a lower series of flues extending across the kiln above and parallel with said radial flue and opening into the top of said transverse flue, an upper series of flues extending across the kiln above and parallel with those of the lower series, and having perforated side walls through which they communicate with one another, a false floor or partition between said lower and upper series of flues formed with openings through which they communicate with one another at their outer ends and adjacent to said transverse flue, and an open-work floor over the upper series of flues having its openings distributed throughout its entire area and communicating with the several flues below it.

4. A kiln comprising a circular wall surmounted by an arched crown and provided at intervals with furnaces and interior flues leading upwardly therefrom into the upper part of the kiln, a stack at one side of the kiln, a radial flue leading into said stack, a cross flue intersecting the radial flue at its inner end and provided at its outer ends with auxiliary furnaces, a lower series of flues above and parallel with the radial flue and opening into the upper part of the transverse flue, an upper series of flues parallel with said radial flue, a partition between the upper and lower series of flues formed with openings through which they communicate with one another at their outer ends, and an open-work floor over the upper series of flues.

5. A kiln comprising a wall surmounted by an arched crown and provided at intervals with fire openings and interior flues leading upwardly from said openings into the upper part of the kiln, a stack located at one side of the kiln, a radial flue leading from the central part of the kiln through its base into the stack, a transverse flue opening into the inner end of the radial flue and provided at the ends with furnaces, floor flues arranged above and parallel with the radial flue and leading into the upper part of the transverse flue, an open-work floor over said floor flues, and an auxiliary furnace opening into the lower part of the stack.

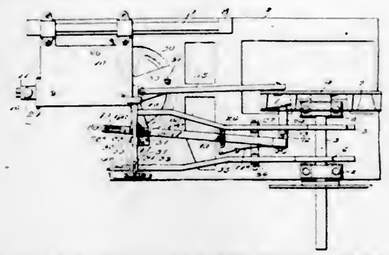
1,153,981. THREAD-CUTTING TOOL. WILLIAM W. VOSPER, Toledo, Ohio, assignor to The Toledo Pipe Threading Machine Company, Toledo, Ohio, a Corporation of Ohio. Filed June 21, 1915. Serial No. 35,314. (Cl. 10—120.)



In a tool of the class described, a compact die head having a central opening which is restricted adjacent to the inner end of the head to form an internal shoulder, said head also having a coaxial tubular extension at its inner end and having its outer end provided with a plurality of radially disposed recesses which extend into said shoulder, said extension being restricted in cross-section relative to the head and having peripheral teeth to form a toothed journal to rotatably carry a ratchet handle, dies mounted in said recesses and braced at their inner ends against lateral strains by the walls of the por-

tions of the recesses disposed in said shoulder, and a collar removably secured to the outer end of the head and coacting with the dies to retain them in the recesses.

1,153,982. SAW-SHARPENING MACHINE. MATHIAS WAGNER, Atlanta, Ga. Filed Jan. 13, 1915. Serial No. 2,054. (Cl. 76—35.)



1. In a saw sharpening machine, the combination of a frame, a shaft mounted on the frame, a wheel on the shaft, cams rotatable with said shaft, a saw support, a rod on the frame, a sliding frame mounted on the rod and carrying a file to engage the teeth of a saw on the saw support, a connecting arm between the wheel and the slide to reciprocate said slide, a series of levers between one of the cams and the slide to rock said slide on the rod and the file carried thereby in direction of the saw tooth being sharpened, and a system of levers, one of which engages the under side of the slide to rock the latter on the rod and the file upwardly and away from the saw tooth, one of the latter on the rod system of levers being operated upon by one of the cams.

2. In a saw sharpening machine, the combination of a frame, a shaft mounted in the frame, a wheel on said shaft, cams rotated when said shaft is rotated, a guide bar, a slide slidably mounted on the guide bar, standards extending from the slide, one of said standards having a socket, the other said standard having oppositely disposed lugs formed with threaded openings, screws fastened through said openings, an adjustable socket member mounted in the standard and with which the screws engage to hold the end of the file and adjust the latter toward and from the slide, a connection between said slide and the wheel, a support to receive a saw, being operated on by the file, means for rotatably adjusting the said support, means in the support for vertically adjusting a saw, means including a system of levers, one of which bears on the slide to force the file in contact with the tooth being sharpened, said levers being operated by one of the cams, a second system of levers, one of which engages under the slide to elevate the latter and operable by one of the cams, a pawl for rotating the saw, and means between one of the cams and the pawl for operating the latter.

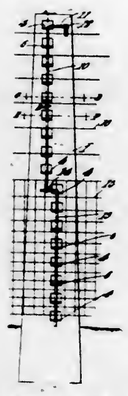
3. In a saw sharpening machine, the combination of a frame, a saw support mounted on the frame, means for adjusting the saw vertically, means for angularly adjusting the saw on the support, a slide for carrying a file, means for reciprocating the slide, a pivoted lever engaging the side of the slide to elevate the file from a saw tooth, means for operating said pivoted lever, a second pivoted lever for lowering the slide to bring the file into contact with the saw tooth, a lever and post to operate said second mentioned lever, and a spring to relieve the strain on the slide when same is lowered.

4. In a saw sharpening machine, the combination of a frame, a shaft mounted on the frame, a wheel carried by the shaft, a saw support on the frame, a slide carrying a file, a connection between the slide and the wheel to reciprocate said slide, an arm to elevate the slide, a lever connected to the arm, a cam on the shaft to operate the lever, a second arm engaging the upper surface of the slide to lower the latter, a second lever for operating the second mentioned arm, a cam on the shaft for operating the second mentioned lever, a lever mounted on the frame to move at right angle to the movement of the aforesaid levers, a horizontal slide between said horizontal lever and the cam on the wheel to oscillate said horizontal lever, a pawl on the opposite end of said horizontal lever, means for mounting said pawl to move horizontally and laterally, gages on the horizontal lever against which the pawl engages, a spring between one of said gages and the pawl to hold the latter in angular position, and a spring for operating said horizontal lever to return it to normal position after the saw has been moved.

5. In a saw sharpening machine, the combination of a frame, a saw support mounted on the frame, means for adjusting the saw vertically, means for angularly adjusting the saw on the support, a tiltable file carrying slide, means for reciprocating the slide, means for tilting the slide to elevate the file from the saw tooth, means for tilting the slide in the reverse direction to bring the file into contact with the saw tooth, and means to relieve the strain on the slide when same is brought into contact with the saw tooth.

[Claims 6 to 9 not printed in the Gazette.]

1,153,983. FENCE-POST. EMMET T. WARREN, Dyersville, Iowa. Filed Mar. 6, 1915. Serial No. 12,573. (Cl. 256—52.)

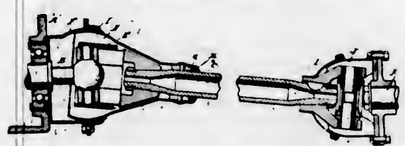


1. The combination with a metal post, of upper and lower non-alining series of outstanding ears upon the post, certain of the ears of each series having apertures therein, the remaining ears of each series having slots extending thereinto, a downwardly and outwardly inclined tongue extending below each of said slots, a rod insertible through the apertures and slots in the ears of each series, a radial arm at the upper end of each rod, the lower portion of the upper rod constituting means for lapping the arm of the lower rod, and means on the post for engaging the arm of the upper rod to hold said rod against removal from the ears.

2. The combination with a metal post, of upper and lower non-alining series of outstruck ears upon the post, certain of the ears of each series having apertures therein, there being slots extending into the remaining ears of each series, inclined tongues extending from the slotted ears and partly under the slots, said tongues having forked terminals, a wire retaining rod insertible longitudinally through the apertures and slots in the ears of each series, a radial arm at one end of each rod, one end of one rod constituting means for lapping the arm of the other rod thereby to hold said arm in position under one of the ears to prevent withdrawal of the rod, and means outstruck from the post for engaging the arm of the other rod to hold said rod against withdrawal from its ears.

3. The combination with a metal post, of upper and lower non-alining series of outstruck ears upon the post, certain of the ears of each series having apertures therein, there being slots extending into the remaining ears of each series, inclined tongues extending from the slotted ears and partly under the slots, said tongues having forked terminals, a wire retaining rod insertible longitudinally through the apertures and slots in the ears of each series, a radial arm at one end of each rod, one end of one rod constituting means for lapping the arm of the other rod thereby to hold said arm in position under one of the ears to prevent withdrawal of the rod, means upon the post for engaging the arm on the other rod to hold said rod against withdrawal from the ears, the forked terminals of the tongues constituting means for frictionally engaging the respective rods.

1,153,984. PROPELLER-SHAFT. FRANK E. WATTS, Detroit, Mich., assignor to Hupp Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 8, 1914. Serial No. 876,104. (Cl. 74—10.)



The combination with two rotating members, of an inclined hollow shaft transmitting rotation between said members, universal joints between said members and said hollow shaft, and housings respectively inclosing said joints, the passage through the shaft having direct communication through the shaft extremities with said housings, the inclination of the hollow shaft being utilized to produce a flow of lubricant from the upper to the lower housing.

1,153,985. STABLE COMPOUNDS CONTAINING HYDROGEN PEROXID AND PROCESS OF MAKING THE SAME. FRIEDRICH WILHELM WEBER, Perth Amboy, N. J., assignor to The Roessler & Hasslacher Chemical Co., New York, N. Y., a Corporation of New York. Filed Dec. 9, 1913. Serial No. 805,523. (Cl. 23—10.)

1. The process of manufacturing stable compounds containing hydrogen peroxid, consisting in combining hydrogen peroxid with a substance containing one or more amido groups in the presence of a gelatinous stabilizing agent.

2. The process of manufacturing stable compounds containing hydrogen peroxid, consisting in combining hydrogen peroxid with a substance containing one or more amido groups in the presence of an extract of carrageen moss.

3. The process of manufacturing a stable compound containing hydrogen peroxid, consisting in combining hydrogen peroxid with urea in the presence of an extract of carrageen moss.

4. As an article of manufacture a solid, stable compound comprising hydrogen peroxid and a substance containing one or more amido groups, protected by a fine coat of a gelatinous stabilizing agent.

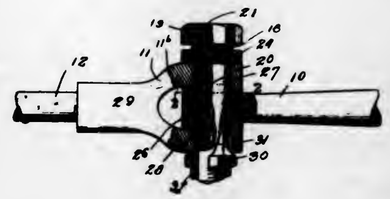
5. As an article of manufacturing a solid, stable compound comprising hydrogen peroxid and a substance containing one or more amido groups, protected by a fine coat carrageen moss.

[Claim 6 not printed in the Gazette.]

1,153,986. BEARING. RAYNARD L. WHITNEY, Elmira, N. Y. Filed Oct. 16, 1914. Serial No. 867,011. (Cl. 74—17.)

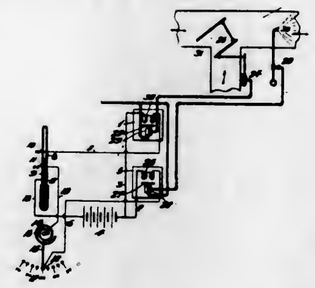
1. In a connection of the class described, a yoke, a bolt having an enlarged smooth cylindrical portion revoluble in one arm of the yoke, an intermediate tapered portion and an outer reduced threaded portion in snug engagement in an opposite arm of the yoke, a bored element revoluble in the yoke, a member engaged in said element having a tapered inner portion fitted snugly on the tapered part of the bolt, and means to adjust the bolt longitudinally and secure it in adjusted position.

2. In a connection of the class described, a bolt having an upper threaded portion, an adjacent smooth cylindrical part inwardly thereof, an intermediate tapered portion and a lower threaded portion, nuts engaged with the threaded portions of the bolts, and a bushing member interiorly tapered, for the purposes described.



3. In a connection of the class described, a bifurcated yoke member having a smooth bored opening through one arm, a concentric smaller threaded opening through the other; a member revoluble between the arms, having a bore larger than said smaller opening; a split bushing member snugly and revolubly engaged in said revoluble member and having a tapered opening therethrough with its larger end toward said smooth bore of the yoke; a bolt member having a reduced threaded outer end engaged in said threaded opening, an intermediate tapered part on the bolt snugly fitted in the bushing, a smooth cylindrical portion engaged snugly and revolubly in the smooth bored arm of the yoke, a threaded portion on the bolt outwardly of said cylindrical part and forming a continuation of said part, a head at the larger extremity of the bolt and nuts engaged on each threaded part of the bolt outwardly of the yoke, and bearing against respective arms.

1,153,987. APPARATUS FOR AUTOMATICALLY CONTROLLING RELATIVE HUMIDITY. FRANK D. WINDELL, Philadelphia, Pa., assignor of one-half to Henry Lewis Williams, Pittsburgh, Pa. Filed June 10, 1914. Serial No. 844,382. (Cl. 98—39.)



1. An apparatus for regulating the humidity of the atmosphere of an inclosure consisting of means for supplying humidity changing medium, hygroscopic means for controlling the amount of said supply by the percentage of humidity in the inclosure within a predetermined range of temperature, and means in suitable connection with said hygroscopic means for limiting the admission of the supply of humidity changing medium within predetermined degrees of temperature.

2. In an apparatus for regulating the humidity of the atmosphere of an inclosure, consisting of means for sup-

plying humidity changing medium, hygroscopic means for controlling the amount of such supply by the percentage of relative humidity of the supply, and thermostatic means in suitable connection with the hygroscopic means for limiting the admission of the supply of humidity changing medium within predetermined degrees of temperature.

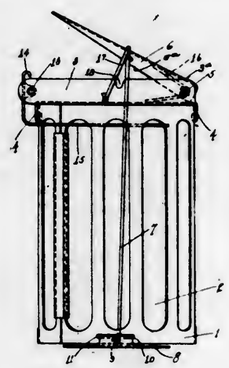
3. An apparatus for regulating the humidity of the atmosphere of an inclosure, consisting of means for supplying a temperature changing medium, means for supplying humidity changing medium, hygroscopic means for controlling the supply of humidity changing medium, and means for controlling the temperature changing medium and connected with the hygroscopic means for limiting the admission of the supply of humidity changing medium.

4. An apparatus for regulating the humidity of the atmosphere of a space, consisting of an air humidifier, electric means for controlling the output of humidity of the same within the bounds of predetermined temperatures, and hygroscopic means changeable in shape under the direct influence of humidity and forming an adjustable make-and-break part of the circuit of said humidity controlling means and connected to control the same.

5. An apparatus for regulating the humidity of the atmosphere of a space, consisting of an air humidifier, thermostatic means for limiting admission of a supply of humidity at a predetermined minimum temperature, and hygroscopic means connected to control such limited supply.

[Claims 6 to 17 not printed in the Gazette.]

1,153,988. RODENT-TRAP. JACOB MILO WOLFE, Lathrop, Cal. Filed Aug. 22, 1914. Serial No. 858,049. (Cl. 43—23.)



1. A device of the character described comprising a cage, a cross piece at one end of said cage, upturned edges on said cross piece, a spring pressed detent pivotally mounted between said edges at one end, said detent being adapted to move between said upturned edges on said cross piece, rods hooked to either side of said detent, jaws on the opposite end of said cage, said rods being connected with said jaws, and a catch and releasing member pivotally mounted on said cross piece and engageable with said detent, as described.

2. A device of the character described comprising a cage, a cross piece at one end of said cage, said cross piece having upturned edges forming a channel, a spring pressed detent hinged between said upturned edges at one end thereof, said detent having upturned edges movable between the upturned edges of said cross piece, jaws hinged to the opposite end of said cage, rods connecting said detent with said jaws, and a pivoted catch and releasing member engageable with said detent, as described.

1,153,989. RAIL. JAMES C. WOODS, Lockport, N. Y., assignor of one-third to William H. Wright, Jr., North Tonawanda, N. Y., and one-third to Samuel H. Pettit, Lockport, N. Y. Filed Mar. 13, 1915. Serial No. 14,138. (Cl. 239—16.)

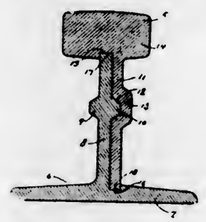


1. A two-part continuous rail comprising a base member and a locking member, said base member comprising two lateral flanges and a web, said locking member comprising a supplementary web and an outwardly extending lock flange, the web of said base member being provided with a longitudinal rib and the supplementary web of said locking member being provided with a groove for receiving said rib, and means for lockingly engaging the parts of said rail.

2. A two part continuous rail comprising a base member and a locking member, said base member comprising two lateral flanges and a web, said locking member comprising a head, a supplementary web and an outwardly extending lock flange, one of said lateral flanges being provided with a recess, said head having a groove adjacent to said supplementary web for engaging the upper edge of the web of said base member, said lock flange engaging the recess in the flange of said base member, whereby the members of the rail will be lockingly engaged.

3. A two part continuous rail comprising a base member and a locking member, said base member comprising two lateral flanges and a web, one of said lateral flanges being provided with a recess, said locking member comprising a supplementary web and an outwardly extending lock flange engaging with the recess of said lateral flange, the web of said base member being provided with a longitudinal rib and the supplementary web of said locking member being provided with a groove for receiving said rib, and means for lockingly engaging the parts of said rail.

1,153,990. RAIL. WILLIAM H. WRIGHT, deceased, by William H. Wright, Jr., executor, North Tonawanda, and JAMES C. WOODS, Lockport, N. Y., assignors of one-third to Samuel H. Pettit, Lockport, N. Y. Filed Mar. 13, 1915. Serial No. 14,195. (Cl. 239—16.)



A continuous rail comprising, a base member and a locking member, said locking member overlapping the joints between two sections of base members, said locking member being formed with the head of the rail and a supplementary web, said supplementary web being formed with a longitudinal groove, said base member being formed with a flange and a web, a longitudinal ridge formed on the web of said base member and engaging the groove of said supplementary web, the head of the rail being formed with a groove in its under side for receiving the upper edge of the web of the base member, the flange of said base member being provided with a groove for the reception of the lower edge of the supplementary web of said locking member, whereby the said members may be lockingly engaged.

1,153,991. WINTER AND SUMMER ICE-RUN. ELLIS G. WOOD, Hudson, N. Y., assignor to Gifford-Wood Company, Hudson, N. Y., a Corporation of New York. Filed July 10, 1915. Serial No. 39,163. (Cl. 57—18.)

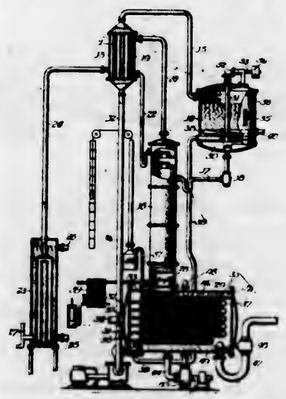


1. In an ice run, the combination of means forming an ice runway, and side members pivoted thereto, one on each side of the same, adapted to form vertical side walls at the sides of the runway in one position, and to present inwardly and upwardly inclined outer surfaces in another position of the same, substantially as set forth.

2. In an ice run, the combination of longitudinal and cross members constituting an ice runway and L-shaped side members pivoted thereto, one on each side of the same, each of said members being pivoted at the inner end of a flange to the runway, so that the same may rest on the runway, with the other flange constituting a vertical side wall, in one position, the member resting on the runway in inverted position, to present sloping inner and outer surfaces, in its other position, substantially as set forth.

3. In an ice run, the combination of a runway comprising transverse members and longitudinal metallic members having rounded upper ice supporting surfaces, supported on said transverse members, and side members pivoted to said transverse members, comprising angular bars, positioned to be supported in one position in such manner as to present vertical walls at the sides of the runway, and to be swung about their pivots into another position in which they are adapted to form additional ice supporting surfaces, substantially as set forth.

1,153,992. DISTILLATION. ADOLPH WOOLNER, Jr., Peoria, Ill. Original application filed Nov. 3, 1910, Serial No. 590,571. Divided and this application filed June 27, 1914. Serial No. 847,573. (Cl. 195—15.)



1. The method of distilling, which consists in distilling the volatile constituents from the fermented mash, and concentrating the resulting slop by passing the same in a thin film over a heated surface, the vapor developed by said concentration being substantially free from qualities which would tend to injure the flavor of the mash and being employed to effect such distillation, substantially as described.

2. The method of distilling, which consists in distilling the volatile constituents from said mash, and concentrating the resulting slop by circulating the same for an extended period rapidly in a thin film over a heated surface, the vapor resulting from such concentration being substantially free from objectionable qualities which would tend to injure the developed flavor and being employed to effect said distillation, substantially as described.

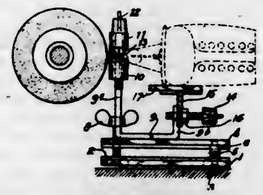
3. The method of distilling, which consists in distilling the volatile constituents from the mash, and concentrating the resulting slop by applying the same in the form of a heavy rain to a heated surface, the vapor resulting from such concentration being substantially free from objectionable qualities which would tend to injure the developed flavor and being employed to effect said distillation, substantially as described.

4. The method of distilling, which consists in distilling the volatile constituents from the mash, and concentrating the resulting slop by projecting the same forcibly against a heated surface, the vapor resulting from such concentration being substantially free from objectionable qualities which would tend to injure the developed flavor and being employed to effect said distillation, substantially as described.

5. The method of distilling, which consists in continuously distilling the volatile constituents from the mash, continuously concentrating the resulting slop by applying the same with force against a heated surface, and continuously withdrawing a portion of such slop, the vapor resulting from such concentration being substantially free from objectionable qualities which would tend to injure the developed flavor and being employed to effect said distillation, substantially as described.

[Claim 6 not printed in the Gazette.]

1,153,993. SKATE-CLAMP. LEWIS WILEY BARKER, Fredericton, New Brunswick, Canada. Filed June 11, 1915. Serial No. 33,620. (Cl. 51—7.)



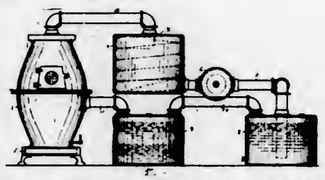
1. In a device of the character described, a base plate, a plate carried thereby and adapted to have its inclination varied, means for varying the inclination of the said plate, clamping means carried by the second mentioned plate, vertically adjustable supporting plates mounted in back of the said clamping means, and means for securing the said supporting plates in adjustment.

2. In a device of the character described, a base plate, a plate mounted above the base plate and hingedly connected thereto at its back edge, means for raising or lowering the front of the second mentioned plate, U-brackets carried by the said second plate and having their outer arms extended, clamping means carried by the extended outer arms of the said brackets, T brackets slidably mounted on the shorter arms of the said U brackets and adapted to be adjusted vertically, supporting plates carried by the said T brackets, and means for securing the said T brackets in vertical adjustment.

3. In a device of the character described, a base plate, ball bearings mounted in said base plate and projecting beyond the lower face thereof, a plate mounted above the base plate and hingedly connected thereto at its back edge, means for raising or lowering the front of the second

mentioned plate, U brackets carried by the said second plate and having their outer arms extended, clamping means carried by the extended outer arms of the said brackets, T brackets slidably mounted on the shorter arms of the said U brackets and adapted to be adjusted vertically, supporting plates carried by the said T brackets, and means for securing the said T brackets in vertical adjustment.

1,153,994. FUEL-ECONOMIZER. WALTER E. BENNETT, Houston, Tex. Filed Aug. 2, 1913. Serial No. 782,567. (Cl. 110—49.)



1. In a fuel economizer, the combination with a combustion chamber, of a gas pipe leading therefrom, a cooling chamber through which said pipe passes, a current generator communicating with the pipe for creating a suction therethrough, two other tanks, the former of which is provided to contain water and the latter of which is provided to contain water and fuel oil, said pipe extending into one of said two tanks and its end being immersed in the water contained therein, a pipe extending from said last mentioned tank and extending down into the other of said two tanks and having its end immersed in the water therein, a discharge pipe leading from said last mentioned tank into the combustion chamber and discharging the gas conveyed thereby into said chamber, and a nozzle carried by the inner end of said discharge pipe.

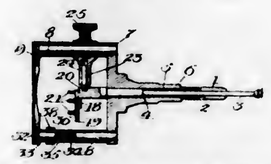
2. In a fuel economizer, the combination with a combustion chamber, of a tank provided to contain water, a fluid conduit leading from said combustion chamber and extending down into said tank and into the water contained therein, a chamber in which a section of said conduit is coiled provided to contain water for cooling the gas passing through the conduit, a means for creating a suction through said conduit, a fuel tank, a fluid conduit leading from the first mentioned tank and extending down into said fuel tank, a fluid conduit leading from said fuel tank and discharging into the combustion chamber and a discharge nozzle within the combustion chamber carried by the discharge end of the last mentioned fluid conduit.

3. In a fuel economizer, the combination with a combustion chamber, of a water containing tank, a fluid conduit leading from said combustion chamber and extending down into said tank and into the water contained therein, a section of said conduit being coiled and a chamber inclosing said coiled section and provided to contain water for cooling said coil, a suction fan communicating with said conduit and creating a current therethrough, a fuel tank, a fluid conduit leading from the first mentioned tank and extending through into said fuel tank, a fluid conduit leading from said fuel tank and discharging into the combustion chamber, a nozzle carried by the discharge end of said conduit, said nozzle having a plurality of discharge orifices through which the fuel is discharged into the combustion chamber.

1,153,995. CHUCK. HELGE A. BORRESEN, Marquette, Mich., assignor to Max W. Zabel, trustee, Chicago, Ill. Filed Oct. 14, 1907. Serial No. 397,327. (Cl. 29—107.)

1. A chuck adapted to support a cylindrical element mounted upon a shaft, comprising a front plate having a plurality of different sized apertures, means for centrally locating any desired aperture, and a centering device, said centering device being adapted to engage the shaft and press the cylindrical element against the front plate, said front plate and centering device coöperating to hold the said work in place.

2. A chuck adapted to support a cylindrical element mounted upon a shaft, comprising a front plate having an aperture, and a centering device having a plurality of differentiated centers, said centering device being adapted to engage the shaft and press the cylindrical element against the front plate, said front plate and centering device cooperating to hold the said work in place.



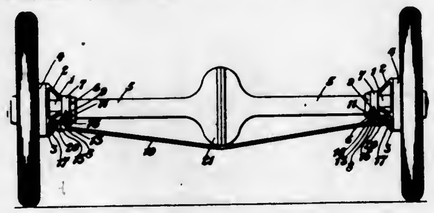
3. A chuck adapted to support a cylindrical element mounted upon a shaft, comprising a front plate provided with an eccentrically mounted disk having a plurality of different sized apertures adapted for location centrally of said front plate, and a centering device, said centering device being adapted to engage the shaft and press the cylindrical element against the front plate, said front plate and centering device coöperating to hold the said work in place.

4. A chuck comprising a hollow arbor, a transversely extending platform on the end of said arbor, hollow columns extending from the face of said platform, a face plate, rods extending rearwardly from said face plate adapted to slide in said hollow columns, means provided in said platform adapted to engage and hold said rods in a plurality of positions, and longitudinally adjustable means projecting from the hollow in said arbor adapted to hold work to said face plate.

5. In a chuck having a hollow arbor, a face plate having a centrally located aperture carried by and in front of said arbor, a spring actuated member extending from the hollow in said arbor toward said face plate, a depression in said spring actuated member in the axial line of said chuck, a disk carried by said spring actuated member revolving over the axial line of said chuck, having centering appliances attached to its outer face, adapted to be brought successively in the axial line of said chuck, and having projections upon the opposite face of said disk in line with said centering appliances, adapted to engage the depression in said spring actuated member.

[Claims 6 to 12 not printed in the Gazette.]

1,153,996. REAR-AXLE TRUSS. ADOLPH R. BROCKSMITH, St. Louis, Mo. Filed Dec. 7, 1914. Serial No. 875,745. (Cl. 21—5.)



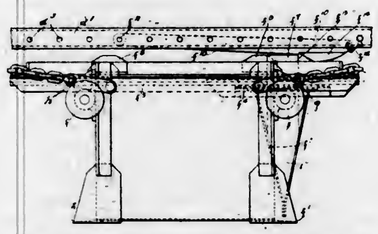
1. The combination with outer housing members, inner housing members extending into said outer housing members, elements fastening said outer and inner housing members together and extending beyond the outer surface of said outer members, and enlarged portions on said inner housing members in connection with each other, of clamping brackets clamping said outer housing members upon the inner housing members and having their inner edges bearing against said elements whereby inward movement of said brackets is prevented, depending projections on the outer edges of said clamping brackets, reinforcing walls uniting said depending projections with the inner portions of said brackets, and a truss rod having its ends connected to said depending portions between said walls and having its central portion engaging against said enlarged portions of said inner housing members.

2. In an axle truss, a clamping bracket comprising an arcuate strap, round threaded projections on the ends of said strap, a coöperating member having an arcuate portion, flat portions on the ends of said arcuate portion having holes through which said round threaded projections extend, a depending projection integral with said arcuate portion, wall portions integral with said depending projection and with said arcuate portion, and a passage in said depending projection intermediate of said wall portions.

3. In an axle truss, a clamping bracket comprising a lower member including an arcuate portion, adapted to bear against the axle-housing, flat projections on the ends of said arcuate portion provided with holes, a depending projection integral with one edge of said arcuate portion, parallel wall portions integral with said depending projection and with said arcuate portion and extending from said projection to points adjacent to the opposite edge of said arcuate portion, a depending flange integral with the opposite edge of said arcuate portion, a passage in said depending projection intermediate of said wall portions, an arcuate strap arranged to embrace the axle-housing, round threaded projections on the ends of said strap extending through the holes in said flat portions, and nuts threaded on said projections below said flat portions.

4. The combination with telescoping axle-housing members, and clamping brackets clamped around the outer housing member effectively to compress the same upon the inner housing member, of a depending projection at the outer edge of each of said clamping brackets, parallel wall portions integral with each of said depending projections extending toward the inner edges of said brackets, passages in said depending projections intermediate of said wall portions, a rod extending between said wall portions and through said passages, clamping nuts on said rod adjustable to hold said rod tight between said brackets, and means on the outer telescoping members preventing said clamping brackets from slipping toward each other.

1,153,997. TWO-WAY BUCKET EXCAVATOR. MORTON G. BUNNELL, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Mar. 22, 1909. Serial No. 485,065. (Cl. 37—39.)



1. An excavator comprising a bucket or scoop, a runway therefor, means including clutch mechanism having a catch located at a predetermined point on the runway for expelling the load from the bucket by the backward motion thereof after passing said catch, means for varying the position of said catch on the runway, and means on the bucket to engage said catch, for releasing said mechanism.

2. An excavator comprising a bucket or scoop, a runway therefor, a movable back therefor, means including clutch mechanism having a catch located at a predetermined point on the runway for operating said back to expel the load from the bucket by the backward motion thereof after passing said catch, means for varying the position of said catch on the runway, and means on the bucket to engage said catch for releasing said mechanism.

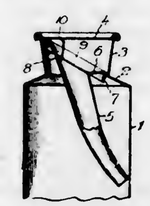
3. An excavator comprising a bucket or scoop, a runway therefor, an ejector therefor, means including clutch mechanism having a catch located at a predetermined point on the runway for operating said ejector by the backward motion of the bucket after passing said catch, means for varying the position of said catch on the runway, and means on the bucket to engage said catch for releasing said mechanism.

4. An excavator comprising a bucket or scoop, a movable back therefor, a support having a hook for causing the back to stand still while the bucket moves backward, means for holding said support stationary adjacent the path of travel of the bucket, means for adjusting the hook in different positions to vary the dumping position, and means on the bucket for automatically releasing the said hook when the load is entirely discharged.

5. An excavator comprising a runway provided with a hook, a bucket or scoop adapted to travel on said runway, a movable back for said bucket or scoop, means on the back adapted to be caught and held by the said hook, means for adjusting the hook in different positions to vary the dumping position, and means on the bucket for engaging said hook to release the same from the back.

[Claims 6 to 14 not printed in the Gazette.]

1,153,998. POURING-SPOUT FOR CANS. AMOS G. CANBY, Detroit, Mich. Filed Nov. 28, 1913. Serial No. 803,399. (Cl. 221—24.)



1. The combination with a receptacle having a pouring opening with an outwardly flared flange surrounding it, of a spout, a base obliquely disposed on the inner end of the spout and provided with an outer flange adapted to frictionally engage the opening flange to secure the spout in pouring position and to frictionally engage the flange to support the spout when inverted, a finger pull tongue forming a part of the spout base, and a cover to seal the opening, and inclose the inverted spout and base and engage said finger pull tongue to retain said spout base seated on the opening flange.

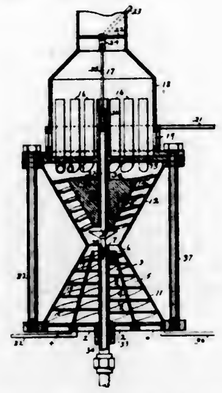
2. The combination of a receptacle having a pouring outlet with an outwardly flared flange encircling it, with a spout, a flared base on the inner end of the spout having an opening coincident with the spout opening formed by cutting out and bending up a finger pull tongue from the body of the base, a double coned flange on the base adapted to engage the pouring outlet flange frictionally in either pouring or inverted position and hold the spout in pouring or inverted position, and a cover adapted to engage the finger pull tongue of the spout base and inclose the inverted spout and base so that the base of said spout is squarely seated on the flared flange of said receptacle.

1,153,999. CARBURETER. JOHN C. CARPENTER, Houston Heights, Tex. Filed Apr. 1, 1912. Serial No. 687,855. (Cl. 48—155.1.)

1. In a device of the character described, the combination with a fuel duct; of a plurality of air passages concentric with said fuel duct; a carbureting chamber, adjacent to said fuel duct and air passages, and arranged to receive fuel and air, respectively, therefrom; and a flange projecting inwardly from the wall of said carbureting chamber.

2. In a device of the character described, the combination with a fuel duct; of a plurality of air passages, each surrounding said fuel duct; a carbureting chamber, adjacent to said fuel duct and air passages, and arranged to receive fuel and air, respectively, therefrom; and a

flange projecting inwardly from the wall of said carbureting chamber.



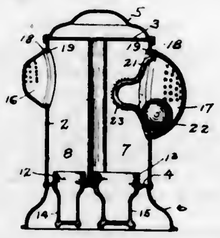
3. In a device of the character described, the combination with a carbureting chamber; of an air passage arranged to discharge into said carbureting chamber; a fuel nozzle mounted in said air passage and arranged to discharge into said carbureting chamber; a plurality of spiral partitions spanning said air passage and arranged to impart rotation bodily to the air passing said fuel nozzle; and a flange projecting inwardly from the wall of said carbureting chamber.

4. In a device of the character described, the combination with an air passage; of a fuel nozzle mounted therein; a flared carbureting chamber, having its smaller end adjacent to said air passage and fuel nozzle and arranged to receive air and fuel, respectively therefrom; and a flange projecting inwardly from the wall of said carbureting chamber and forming therewith a receptacle for receiving the heavier fuel particles.

5. In a device of the character described, the combination with an air passage; of a fuel nozzle mounted therein; a flared carbureting chamber, having its smaller end adjacent to said air passage and fuel nozzle, and arranged to receive air and fuel, respectively, therefrom; a means for bodily rotating said air column about said fuel nozzle so that the fuel discharged from said nozzle shall be subjected to centrifugal force and discharged from said nozzle in a diverging spray; and a means provided upon the wall of said carbureting chamber for receiving the heavier particles of fuel spray and retaining the same until they are further vaporized.

[Claims 6 to 14 not printed in the Gazette.]

1,154,000. SALT AND PEPPER SHAKER. CHARLES A. CONGER, Oakland, Cal. Filed Aug. 21, 1912. Serial No. 716,204. (Cl. 65—45.)



1. A salt and pepper shaker comprising a cylindrical body, flat top and bottom closing plates permanently secured thereto, a tortuously curved partition frictionally engaging the sides of the body and dividing the body into two compartments of unequal size, a hollow base secured to said body and elevating said bottom closing plate, said body being provided adjacent the top with diametrically disposed apertures of unequal size, the larger aperture registering with the larger compartment, and substantially hemispherical protuberances permanently secured to said body and covering said apertures, said protuberances being provided at the upper portions only with discharge perforations.

2. A salt and pepper shaker comprising a glass cylinder provided with beads at the top and bottom, a cylinder of ductile material crimped to said top bead a base of ductile material crimped to said bottom bead, a bottom closing plate between said base and said glass cylinder, a top plate closing the top of the ductile cylinder, a partition dividing the compound cylinder into two compartments, a discharge portion for each compartment arranged on the ductile cylinder, and filling means for each compartment.

3. A salt and pepper shaker comprising a body, a partition dividing said body into two compartments, said body being provided with two outlets communicating respectively with said compartments, a crusher adapted to crush the material in the outlet of one of said compartments as the material is shaken from said compartment through said outlet and means for holding said crusher stationary as the material is shaken from the other compartment through its outlet.

4. A salt and pepper shaker comprising a body, a partition dividing said body into two compartments, an outlet in one of said compartments, an aperture in the other compartment, a perforated discharge protuberance fitting in said aperture, a flange and a bead on said protuberance engaging the edge of said aperture and holding said protuberance in position on the body, a wire guard seated in said bead within said protuberance, and a ball confined by said guard within said protuberance adapted to crush the material as it is shaken through said protuberance from the compartment with which said protuberance communicates, said guard being provided with two inwardly projecting portions between which said ball is adapted to be held against movement, while the material in the compartment with which the said outlet communicates is shaken through said outlet.

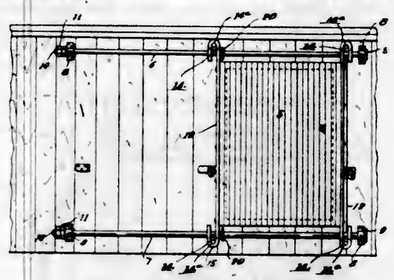
5. A device of the character disclosed comprising a base, a receptacle body mounted upon said base, a bottom receptacle wall, a partition resting upon said bottom receptacle wall and extending longitudinally of said receptacle body, said partition being greater in width than the diameter of said receptacle body, said partition being bowed to reduce its direct transverse dimension so that it may fit within said receptacle body with its side edges engaging the receptacle body wall under tension, a top receptacle wall resting upon the upper edge of said partition, a cap, said cap engaging said top wall, said cap and top wall being crimped to the top of said receptacle body so as to draw said wall tightly against the upper edge of said partition, said receptacle being provided with an outlet in its upper portion at each side of said partition.

[Claims 6 to 8 not printed in the Gazette.]

1,154,001. DOOR-HANGER. WILBUR COSS and WILLIAM STOCKHILL, Glassport, Pa. Filed Jan. 28, 1915. Serial No. 4,895. (Cl. 16—7.)

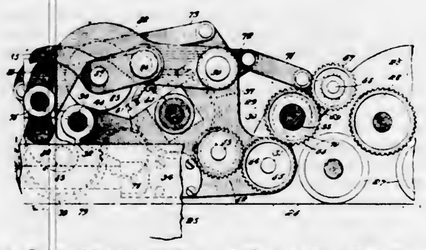
1. The combination with a car or the like structure having an opening and a door for closing said opening, of hangers secured to said door and formed of metal slotted adjacent their ends, said hangers at this point being bent over in substantially U shape, rails arranged on said car in proximity to said door opening, rollers carried by said hangers and formed with extensions, said extensions adapted for engagement with the said hangers at the apex of the bent over portions of said hangers for supporting said door on said rails.

2. In a hanger for sliding doors for box cars or the like, having supporting rails, comprising metallic bands secured to the side edges of a door, said bands adjacent their ends, being slotted and the band at this point bent over in substantially U shape, rollers carried by said bands and having extensions adapted to seat in the apex of the bent over



portions of said bands, said rollers engaging the said rails for supporting said doors thereon.

1,154,002. PRINTING-PRESS. SAMUEL CRUMP, Montclair, and ADIN W. HILSINGER, Orange, N. J., assignors to The Crump Company, New York, N. Y., a Corporation of New York. Filed Mar. 13, 1915. Serial No. 14,056. (Cl. 101—73.)



1. In combination with a printing press, means for removing ink or color by a transfer process from a surface thereof comprising an impervious uninking composition roller, means for rotating the same, means for placing the same in operative connection with the surface to be cleaned, a receptacle containing a solvent of ink in which said roller is partly submerged, and a scraper blade to engage the surface of said roller at the side thereof leaving the solvent so that the roller may present a clean dry surface to the surface from which it is to transfer.

2. In combination with a printing press, means for removing ink or color by a transfer process from a surface thereof comprising an impervious uninking composition roller, means for rotating the same, means for placing the same in operative connection with the surface to be cleaned, a receptacle containing a solvent of ink in which said roller is partly submerged, and a scraper blade to engage the surface of said roller at the side thereof leaving the solvent so that the roller may present a clean dry surface to the surface from which it is to transfer, said scraper blade having a deflected edge forming a broad hook portion to engage the said roller.

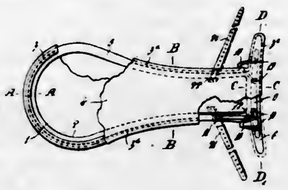
3. In combination with a printing press, means for removing ink or color by a transfer process from a surface thereof comprising an impervious uninking roller, means for rotating the same from the driving mechanism of the press, means for placing said roller in operative connection with the surface to be cleaned and also relieving the same therefrom, a receptacle containing a solvent of ink in which said roller is partly submerged, a scraper-blade to engage, clean and dry the surface of said roller at the side thereof leaving the solvent, and means for placing said blade in engagement with said roller and disengaging the same therefrom.

4. In combination with a printing press, means for removing ink or color by a transfer process from a surface thereof comprising an impervious uninking roller, means for rotating the same, means for placing the same in operative connection with the surface to be cleaned, a receptacle containing a solvent of ink in which said roller is partly submerged, and a scraper blade to engage the surface of said roller at the side thereof leaving the solvent so that the roller may present a clean dry surface to the surface from which it is to transfer.

5. In combination in a printing press having composition inking rollers, an impervious uninking composition draw-off roller in operative connection with one of the inked surfaces of the press, means for rotating said roller, a receptacle containing a solvent of ink in which said roller is partly submerged, and a scraper blade to engage the surface of said roller at the side thereof leaving the solvent so that the roller may present a clean dry surface to the surface from which it is to transfer.

[Claims 6 to 18 not printed in the Gazette.]

1,154,003. RIDING-SADDLE. HARRY WOOD DOWNING, Christchurch, New Zealand. Filed Oct. 20, 1911. Serial No. 655,690. (Cl. 54—44.)



1. A saddle consisting of a lower layer of green-hide, formed to the desired shape by stretching while wet over a suitably shaped block, a saddle tree superimposed upon said layer, and an upper layer of green-hide superimposed on said saddle tree and lower layer, and formed to the shape thereof by stretching while wet thereover, the edges of said layers of green-hide being secured together.

2. A saddle consisting of a lower layer of green-hide of the desired form, a saddle tree superimposed thereon and an upper layer of green-hide superimposed on said saddle tree and lower layer, the edge of one layer being turned around the edge of the saddle tree, the edge of the other layer being turned around the turned-over edge of the first layer, and the edges of the layers being secured together.

3. In a saddle of the kind described, a saddle tree, and superposed layers of green-hide stretched upon said tree, the edges of the lower layer being turned around the edge of the tree, and the edge of the upper layer being turned around the edge of the lower layer, the said edges being then secured to the tree by stitching, as set forth.

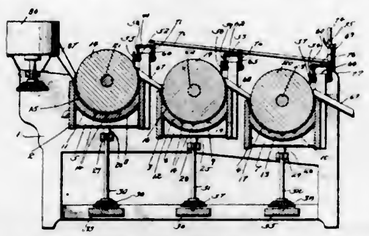
4. A saddle consisting of a lower layer of green-hide of the desired form, a saddle tree superimposed thereon, an upper layer of green-hide superimposed on said saddle tree and lower layer, and a metallic reinforcing plate for a portion of said saddle tree, held in position thereon entirely by one of the green-hide layers, the edge of one layer being turned around the edge of the saddle tree, the edge of the other layer being turned around the turned-over edge of the first layer, and the edges of the layers being secured together.

1,154,004. MACHINE FOR GRINDING PIGMENTS. MATHEW DOMNICK DUFFY and BARTLEY PATRICK COSTELLO, Cincinnati, Ohio. Filed July 15, 1914. Serial No. 851,113. (Cl. 83—14.)

1. A pigment grinder consisting of a series of horizontally disposed cylindrical grinders having smooth surfaces and semi-cylindrical removable beds, and water cooled supports for said beds.

2. A pigment grinder consisting of a series of horizontally disposed cylindrical grinders having smooth surfaces and semi-cylindrical removable beds, and water cooled supports for said beds, said supports being vertically adjustable.

3. A pigment grinder consisting of a series of horizontally disposed cylindrical grinders having smooth surfaces and semi-cylindrical removable beds; water cooled supports for said beds, said supports being vertically adjustable, and vertical shafts upon which said supports are mounted.

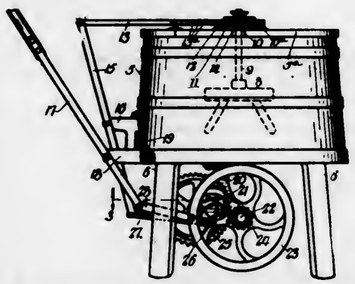


4. A pigment grinder consisting of a series of horizontally disposed cylindrical grinders having smooth surfaces and semi-cylindrical removable beds, water cooled supports for said beds, said supports being vertically adjustable, and vertical shafts upon which said supports are mounted, said shafts being the means whereby said supports are adjusted.

5. A pigment grinder consisting of a series of horizontally disposed cylindrical grinders having smooth surfaces and semi-cylindrical removable beds, water cooled supports for said beds, said supports being vertically adjustable, and vertical shafts upon which said supports are mounted, said shafts being the means whereby said supports are adjusted, and said cylinders being arranged in stepped relation.

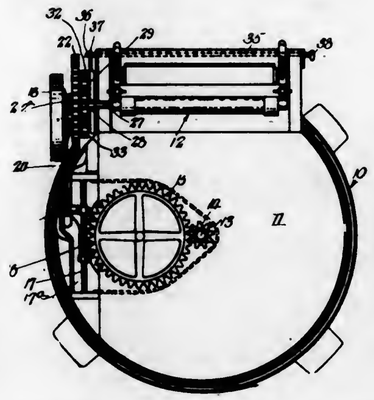
[Claims 6 to 23 not printed in the Gazette.]

1,154,005. OPERATING MECHANISM FOR WASHING-MACHINES. WILLIAM H. GEORGE, Fairfield, Iowa, assignor to The Dexter Company, Fairfield, Iowa, a Corporation of Iowa. Filed Apr. 16, 1914. Serial No. 832,162. (Cl. 74—50.)



An operating mechanism for washing machines and the like, comprising in combination with a support having an operating shaft rotatively carried thereby, a prime moving lever fulcrumed to the side of said support, a second lever fulcrumed to said support adapted to oscillate in a plane parallel to the plane of oscillation of said prime moving lever, a device intermediate said second lever and said operating shaft for imparting a rotary, alternating movement to said shaft, a fly wheel having a toothed hub rotatively carried by said support, a gear also carried by said support and adapted to mesh with the toothed hub of said fly wheel, means intermediate said gear and said second mentioned lever for transposing the continuous, rotary movement of said gear into an oscillatory movement of said lever, said means comprising a crank pin on said gear, a pitman rod pivotally connected at one end to said crank pin and having its opposite end pivotally connected to said second mentioned lever and a link pivotally connected at one end to said pitman rod at a point intermediate the ends thereof and at its opposite end to said prime moving lever.

1,154,006. GEARING. WILLIAM H. GEORGE, Fairfield, Iowa, assignor to The Dexter Company, a Corporation of Iowa. Filed July 1, 1914. Serial No. 848,377. (Cl. 74—50.)

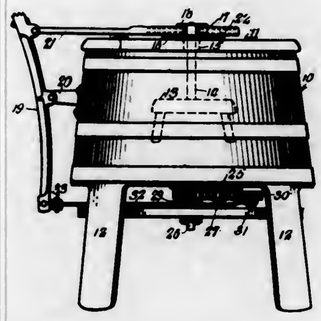


1. In a gearing of the class described, in combination with an alternating, rotary, upright shaft and a second horizontal shaft continuously rotative in either direction, a power driven, common drive gear located in a vertical plane at right angles to said second shaft, a reciprocating rack bar, a pitman connecting said power driven gear with said rack bar, means operatively connecting said rack bar with said first named shaft, a pinion fixed to said drive gear, an oscillating plate mounted in a vertical plane parallel to and adjacent to the plane of said drive gear, an operating gear for driving said horizontal shaft mounted co-axially with the axis of oscillation of said plate, a driven gear on said horizontal shaft engaged by said operating gear, transmission gears rotatively mounted on said oscillating plate in the plane of said operating gear, one of said transmission gears engaging said operating gear directly, an intermediate gear connecting the other transmission gear with said operating gear, and means for oscillating said plate to bring either of said transmission gears into engagement with the pinion on said drive gear.

2. In a gearing of the class described, in combination with an alternating, rotary, upright shaft and a second horizontal shaft continuously rotative in either direction, a power driven, common drive gear located in a vertical plane at right angles to said second shaft, a reciprocating rack bar, a pitman connecting said power driven gear with said rack bar, means operatively connecting said rack bar with said first named shaft, a pinion fixed to said drive gear, an oscillating plate mounted in a vertical plane parallel to and adjacent to the plane of said drive gear, an operating gear for driving said horizontal shaft mounted co-axially with the axis of oscillation of said plate, a driven gear on said horizontal shaft engaged by said operating gear, transmission gears rotatively mounted on said oscillating plate in the plane of said operating gear, one of said transmission gears engaging said operating gear directly, an intermediate gear connecting the other transmission gear with said operating gear, and a controlling device for said plate comprising a shaft with its axis of rotation parallel to the axes of rotation of the gears carried by said plate, means operatively connecting said shaft with said plate and a crank remote from said plate for rotating said shaft.

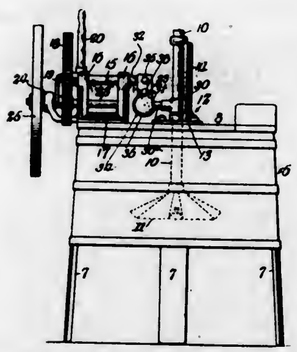
1,154,007. OPERATING MECHANISM FOR WASHING-MACHINES. WILLIAM H. GEORGE, Fairfield, Iowa, assignor to The Dexter Company, a Corporation of Iowa. Filed June 29, 1914. Serial No. 847,879. (Cl. 74—50.)

An operating mechanism for washing machines and the like, comprising, in combination with a support having a horizontal bottom wall, an upright shaft carried by said support, a prime moving lever fulcrumed to the side of said support, means intermediate said lever and said operating shaft for communicating an alternating rotary motion to said operating shaft, a base board fixed to the bottom of said support, a bracket plate attached to said base board, depending vertical studs fixed to said bracket



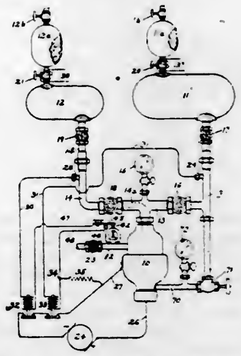
plate, a fly wheel having a toothed hub rotatively mounted on one of said studs, a gear wheel meshing with said toothed hub rotatively mounted on the other stud between said base board and said fly wheel, and means operatively connecting said gear wheel to said prime mover adapted for continuously rotating said gear wheel.

1,154,008. OPERATING MECHANISM FOR WASHING-MACHINES. WILLIAM H. GEORGE, Fairfield, Iowa, assignor to The Dexter Company, Fairfield, Iowa, a Corporation of Iowa. Filed Dec. 10, 1914. Serial No. 876,480. (Cl. 74—14.)



A gearing of the kind described, comprising the combination of an operating shaft capable of both vertical reciprocating movement and alternating rotary movement, a continuously rotatable horizontal shaft in the plane of said operating shaft, the end of said horizontal shaft adjacent the operating shaft being flattened at diametrically opposite sides, a crank arm pivoted to the flattened end of said horizontal shaft and capable of oscillating movement toward and from said operating shaft, said crank arm comprising two sections adapted to be attached together in a plane parallel to the planes of the flattened sides of said shaft, said sections being constructed to form, when so attached, a spherical socket at one end of said arm and a fork at the other end thereof, and a horizontal radial arm fixed to said operating shaft, said arm having at its free end a spherical head bearing in the spherical socket of said crank arm.

1,154,009. APPARATUS FOR PRODUCING GASES. ROBERT H. GODDARD, Worcester Mass. Filed Jan. 4, 1915. Serial No. 348. (Cl. 204—1.)



1. An apparatus for producing gas by electrolysis comprising a single comparatively small electrolysis chamber formed of two heavy rigid cast portions screw-threaded together, a pair of tanks of relatively large capacity, normally-open heavy pipe connections from said tanks to said chamber, means for closing all external passages from said tanks and chamber, and a circuit for passing a current of electricity through said chamber, the gases thereby produced being collected in said tanks under pressure generated by the evolution of the gases in a closed apparatus.

2. An apparatus for producing gases by electrolysis comprising an electrolysis chamber, a plurality of gas receiving tanks, concentrically arranged connections leading from said chamber to said tanks and permitting a flow of gas therethrough in one direction and a flow of electrolyte in the opposite direction, means independent of said tanks for filling said apparatus with electrolyte, a plurality of valves for closing all external passages from said tanks and chamber, and a circuit for passing a current of electricity through said chamber whereby after said valves are closed the evolution of gases in said chamber will take place under excessive pressure.

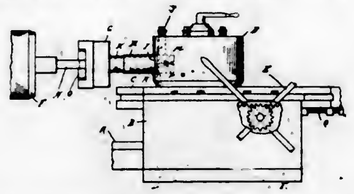
3. In an apparatus for producing gas by electrolysis, an electrolysis chamber, gas-receiving tanks connected therewith, a circuit for passing a current of electricity through the electrolyte in said chamber, and a shunt circuit controlling means for automatically interrupting said current when the surface of the electrolyte in the apparatus falls below a predetermined level, the electrolyte itself forming a part of said shunt circuit.

4. An apparatus for producing gases by electrolysis, comprising an electrolysis chamber, a pair of gas-receiving tanks, connections from said chamber to said tanks arranged to convey different gases to different tanks, an electric circuit connected to pass current through the electrolyte in said chamber, and means to break said circuit whenever the electrolyte falls below either one of two predetermined points in said apparatus, each fixed with relation to one of said tanks.

5. In an apparatus for producing gases by electrolysis, an electrolysis chamber, gas-collecting tanks connected therewith, an electric circuit for passing a current of electricity through the electrolyte in said chamber, and means for automatically interrupting said current when the surface of the electrolyte in the apparatus falls below a predetermined level, said means comprising a relay in the electric circuit energized by current in a shunt circuit containing a terminal positioned at said level and insulated from said apparatus, the electrolyte in the apparatus constituting part of the shunt circuit and permitting flow therethrough whenever said terminal in the shunt circuit is covered by the electrolyte.

[Claims 6 to 8 not printed in the Gazette.]

1,154,010. TOOL-HOLDER. CHARLES GRUNBAUCH, Detroit, Mich., assignor of one-half to Nelson J. Seaver, Detroit, Mich. Filed Apr. 28, 1913, Serial No. 764,106. Renewed Feb. 15, 1915. Serial No. 8,291. (Cl. 10—89.)

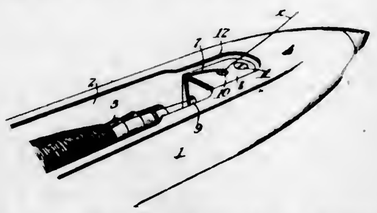


1. The combination of a support held against rotary and longitudinal movement, telescoping members, one of said members being connected to said support against movement, a die-head carried by the other member, and a connection between said members permitting a free forward movement of the member carrying the die-head in a spiral path, the pitch of the spiral path being proportioned in accordance with the stresses transmitted to the die-head to cause the resistance to the forward feeding of the die-head to approximate the angle of friction, for the purpose described.

2. The combination of a support held against rotary and longitudinal movement, telescoping members, one of said members being connected to the support against movement, a die-head carried by the other member, and a connection between said members permitting a free forward movement of the member carrying the die-head in a spiral path, comprising a projection upon one of said members and a spiral guide upon the other member, the pitch of the spiral guide being proportioned in accordance with the stresses transmitted to the die-head to cause the resistance to the forward feeding of the die-head to approximate the angle of friction, whereby binding of the projection in the spiral guide is prevented during the working operation.

3. In a lathe, the combination with a turret held against longitudinal travel, a sleeve secured to said turret against longitudinal and rotary movement, a die-head having a shank engaging said sleeve, and a connection between said shank and sleeve permitting a free longitudinal travel of the shank within the sleeve in a spiral path, comprising diametrically opposed rollers upon the one, there being spiral slots in the other within which said rollers are arranged, the pitch of the slots being proportioned in accordance with the stresses transmitted to the die-head to cause the resistance to the forward feeding of the die-head to approximate the angle of friction, thereby avoiding binding of the rollers within the slots during the working operation.

1,154,011. SELF-THREADING LOOM-SHUTTLE. FRED A. GUILLETTE, Taunton, Mass. Filed May 14, 1913. Serial No. 767,731. (Cl. 139—46.)



1. A self-threading shuttle provided on the upper side of its head with a horizontal member having therein a top delivery eye, at one end of its bottom recess with a vertical member having a receiving eye whose horizontal axis is at right angles to the vertical axis of the top delivery eye, and at the top with a threading slit connecting the two eyes, and an upstanding inclined guide sleeve lying between and connecting the said two eyes, the said guide sleeve also having a side threading slot in open communication with the threading slit exposed in the top of the shuttle head.

2. A self-threading shuttle including an angular member provided with a threading slit exposed at the top of the shuttle head and within the bobbin recess, and an upstanding guide sleeve arranged obliquely within the angle of said member and having its delivery eye disposed in the plane of the vertical longitudinal center of the shuttle body and at the top of the shuttle head, said sleeve being provided with a side threading slot in open communication with said slit.

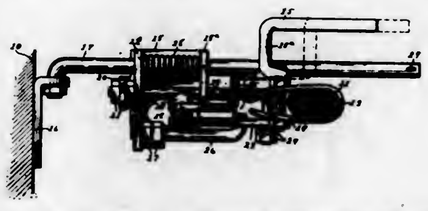
3. A self-threading shuttle including an angular member provided with an angular threading slit exposed at the top of the shuttle head and disposed at one side of the plane of the vertical longitudinal center of the shuttle body, and a guide sleeve arranged obliquely within the angle of said member and having its top delivery eye disposed at the top, and centrally between the sides, of the shuttle body, said sleeve being provided with a side threading slot in open communication with said slit.

4. In a loom shuttle, the combination with a shuttle body, of an angular member provided with an angular slit and having top and bottom terminal eyes, an upstanding guide sleeve for the filling thread arranged within the angle of said member and communicating with said top and side terminal eyes, and a friction ball loosely housed within said sleeve.

5. A self-threading guide for loom shuttles comprising an angular bracket member having a threading slit, and a guide sleeve fitted within the angle of said bracket member and having a side threading slot.

[Claim 6 not printed in the Gazette.]

1,154,012. FOOT-LEVER-HOLDING MECHANISM. EMMETT SIDNEY HARDEN, Casey, Iowa. Filed Mar. 15, 1915. Serial No. 14,427. (Cl. 74—81.)



1. A device of the class described, comprising, in combination with the foot-lever of an automobile, a member adapted to be secured to and for movement with the shank of said foot-lever, an operating lever fulcrumed on said member, a rod secured to the frame of the automobile, a clamping plate through which said rod passes, yielding pressure devices acting to hold said clamping plate in clamping engagement on said rod, and means connected with said operating lever to hold said clamping plate out of clamping engagement, against the action of the yielding pressure devices.

2. A device of the class described, comprising, in combination with the foot-lever of an automobile, a member adapted to be secured to the shank of said foot-lever, an operating lever fulcrumed on said member, a rod pivoted at one end to the automobile frame, a clamping plate slidingly mounted on said rod, yielding pressure devices acting to hold said clamping plate in clamping engagement on said rod, and means connected with said operating lever for holding said clamping plate out of clamping engagement, against the action of the yielding pressure devices.

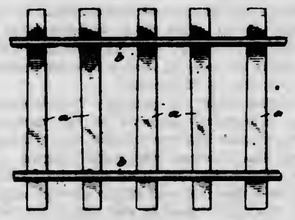
3. A device of the class described, comprising, in combination with the foot-lever of an automobile, a member adapted to be secured to the shank of said foot-lever, an operating lever of bell-crank form fulcrumed on said member, a rod secured at one end to the automobile frame, a clamping plate slidingly mounted on said rod, yielding pressure devices acting to hold said clamping plate in clamping engagement with said rod, and toggle levers connected with said operating lever for overcoming the action of the yielding pressure devices at times.

4. A device of the class described, comprising, in combination with the foot-lever of an automobile, a rod pivotally secured at one end to the automobile frame, a clamping plate slidingly mounted on and adapted for frictional engagement with said rod, a spring coiled around said rod and tending to hold said clamping plate in clamping engagement therewith, a collar secured to and movable with the shank of the foot-lever, an operating lever fulcrumed on said collar, and toggle levers pivoted on said collar and connected with said operating lever, said toggle levers adapted to exert pressure on said clamping plate to overcome the action of said spring.

5. A device of the class described, comprising, in combination with the foot-lever of an automobile, a member fixed against longitudinal movement, a member secured to and movable with said foot-lever, a clamping member tending to clamping engagement with said fixed member, and pivotally secured to said securing member, whereby movement of said foot-lever in one direction is prevented, and means for throwing said clamping member out of clamping engagement.

[Claims 6 to 10 not printed in the Gazette.]

1,154,013. RAILROAD-TIE. JOSEPH ELEUTERIO HATTON, Brooklyn, N. Y. Filed Jan. 2, 1913. Serial No. 739,587. (Cl. 238—1.)



1. In the construction of a railroad track bed, wedge shaped ties, laid alternately with the wide ends opposite the narrow ends, substantially as described.

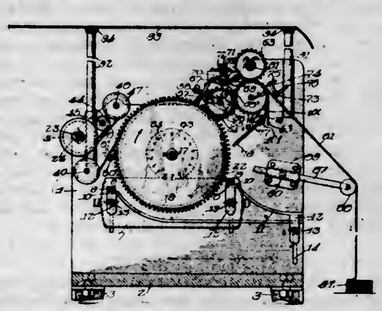
2. In the construction of a railroad bed, the combination of wedge shaped ties, with the broad ends alternately laid opposite each other, with fixed rails, substantially as described.

1,154,014. FIGURE TOY. JAMISON O. HAWKINS, Louisville, Ky. Filed July 7, 1915. Serial No. 38,503. (Cl. 46—45.)



A toy of the class described comprising a wheeled supported axle, a casing attached to the axle and having a weight mounted therein, a figure supported by the casing, a horizontal resilient bar supported by the hands of the figure and having balls connected to each end thereof, and means for propelling the toy.

1,154,015. MACHINE FOR PASTING, TRIMMING, AND CUTTING WALL-PAPER. NESTOR HEADLAND, Chicago, Ill. Filed Jan. 10, 1913. Serial No. 741,862. (Cl. 91—14.)



1. In a device of the kind described and in combination, a suitable frame, a paper supply roll, said roll provided with adjustable flanges at one end, means for resiliently maintaining said flange in braking contact with the paper carried by said roll, a removable receptacle, a paste roll arranged with a portion in said receptacle, a plurality of paper alining rolls arranged between the paper supply roll and said paste roll, each of said rolls provided with a detachable flange at one end, means for actuating said paste roll and drawing the paper thereover at a speed relatively different to the speed of the roll, means for regulating the amount of paste applied, and means for trimming the pasted paper.

2. In a device of the kind described and in combination, a suitable frame, a paper supply carrier, a paste receptacle, an adjustable support therefor provided with means for elevating the receptacle to its support by a transverse movement of the receptacle, comprising a pair of brackets arranged at each side of the frame, each pair of brackets provided with parallel inclined extensions to one side of the frame, arranged to engage a coöperating part on the receptacle, a paste applier, means for actuating said applier, and feeding the paper thereto, adjustable means for regulating the amount of paste applied, trimming mechanism, and means for guiding and piling the pasted and trimmed paper.

3. In a device of the kind described and in combination, a suitable frame, a paper supply roll, resilient means for retarding the rotation of said supply roll, a detachable paste receptacle, a paste roll, paper alining rolls arranged between the paper supply roll and said paste roll, one of said alining rolls formed in a series of sections, and provided with an adjustable flange at one end, means for actuating said paste roll, and means coöperating therewith for drawing the paper thereover at a relatively different speed than the surface speed of the paste roll, a cutting roll, a plurality of cutters arranged to coöperate therewith to trim the edges of the paper after the paste has been applied thereto, and adjustable means for piling the pasted paper, comprising a roll and means for adjustably supporting said roll.

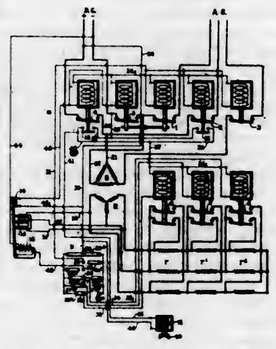
4. In a device of the kind described and in combination, a suitable frame, a paper carrier, a paste receptacle, an adjustable support therefor provided with means for elevating the receptacle to its support by a transverse movement of the receptacle, comprising a pair of brackets arranged at each side of the frame, each pair of brackets provided with parallel inclined extensions to one side of the frame, arranged to engage a coöperating part on the receptacle, a paste roll, means for actuating said roll and drawing the paper thereover at a relatively different speed than the speed of the face of the roll, a cutting roll provided with a suitable face, a plurality of rotary cutters arranged to coöperate therewith, and adjustable means for piling the pasted paper.

5. In a device of the kind described and in combination, a suitable frame, a paper supply roll, adjustable resilient

means for normally retarding the movement thereof, an adjustable paste receptacle, a paste roll, paper alining rolls arranged between the paper supply roll and the paste roll, said alining rolls formed in a series of sections and provided with an adjustable flange at one end, and a fixed flange at the other end, means for rotating said paste roll, and means coöperating therewith for drawing the paper thereover at a speed relatively different than the speed of the face of the roll, a cutting roll provided with a suitable face, a paste distributing roll arranged between said paste roll and said cutting roll, and arranged to cooperate with the cutting roll, a plurality of rotary cutters arranged to coöperate with said cutting shoulder, and provided with means for adjustably carrying the same, and adjustable means for applying the pasted paper in a series of folds, including roll and supporting means therefor.

[Claims 6 to 11 not printed in the Gazette.]

1,154,016. DYNAMIC-BRAKING CONTROLLER. CLARK T. HENDERSON, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 2, 1913. Serial No. 793,065. (Cl. 172—179.)



1. The combination with an alternating current motor, of alternating and direct current sources, means operable to connect said motor to said alternating current source for running, means operable to connect said motor to said direct current source for dynamic braking but tending to disconnect said motor therefrom and holding means for said last mentioned means responsive to the dynamic braking current.

2. The combination with an alternating current motor, of direct current and alternating current sources, means for connecting said motor to said alternating current source for running and means for connecting said motor to said direct current source for dynamic braking, said last-mentioned means being maintained effective by the dynamic braking current and automatically interrupting the direct current connections when the dynamic braking current falls below a certain limit.

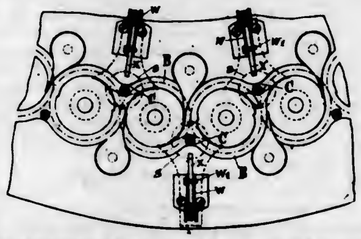
3. The combination with an alternating current motor, of separate sources of current, means for connecting said motor to one of said sources for running, electro-responsive means for connecting said motor to the other of said sources for dynamic braking, said electro-responsive means when deënergized tending to disconnect said motor from said latter source, manual means for controlling said electro-responsive means at will, and means governed by the dynamic braking current for maintaining said electro-responsive means effective for dynamic braking independently of said manual means.

4. In an alternating current motor controller, in combination, a switch for effecting stator connections for dynamic braking, and a retaining magnet for said switch energized by the dynamic braking current generated in the rotor circuit.

5. The combination with an alternating current motor, of a source of alternating current, a source of direct current, means for connecting said motor to said sources selectively for running and for dynamic braking, an electrically controlled mechanical brake for said motor to be energized from said source of direct current and controlling means for said brake including an electro-responsive device responsive to the dynamic braking current of said motor to maintain said brake inoperative until said motor is substantially brought to rest.

[Claims 6 to 12 not printed in the Gazette.]

1,154,017. BRAIDING-CARRIER. ALBERT HENKELS, Langerfeld, near Barmen, Germany. Filed Aug. 6, 1913. Serial No. 783,355. (Cl. 28—24.)



1. A tensioning device comprising a hollow carrier having slots, a collar surrounding the carrier said collar having flanges adjacent the lower end thereof, means extending through the flanges for connecting the collar and carrier, means carried by the collar for supporting a bobbin, elastic means in the carrier for controlling the tension of the thread from the bobbin, and means for adjusting the collar with relation to the carrier.

2. A tensioning device comprising a hollow carrier shaft having slots, a bobbin supported on the carrier, elastic means in the carrier for controlling the tension of the thread from the bobbin, adjustable means extending through the carrier and engaging one end of the elastic means for connecting one end of the elastic means to the carrier, and means for moving the adjustable means vertically of the carrier.

3. A tensioning device comprising a hollow carrier shaft, a collar carried by the shaft, said collar having enlargements, a spring embracing the hollow shaft, one end of the spring adapted to engage the enlargements of the collar for holding the same in an adjusted position, elastic tensioning means in the hollow carrier shaft, means for forming a connection between the tensioning means and collar, and means engaging the collar for moving the same longitudinally of the hollow carrier shaft.

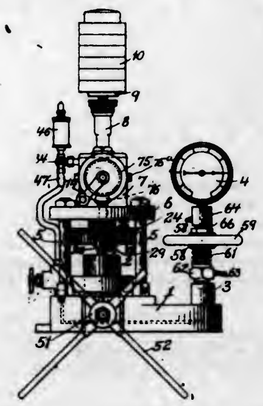
4. A tensioning device comprising a hollow carrier shaft, a collar carried by the shaft, resilient means embracing the carrier for holding the collar in adjusted position, elastic tension means in the hollow carrier shaft, means for connecting the tensioning means and the collar, and means engaging the collar for adjusting the tension of the elastic tensioning means.

1,154,018. DEAD-WEIGHT GAGE-TESTER. FRANK H. HOPKINS, Somerville, Mass., assignor to American Steam Gauge and Valve Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed Jan. 22, 1913. Serial No. 743,521. (Cl. 73—51.)

1. A gage tester, comprising a chamber containing transmission fluid, a weight-actuated piston operating in said chamber, a second piston having a different area from the first piston operated by such fluid, a second chamber, a third piston operating in said chamber having a differen area from the two first-named pistons and connected to the second piston, said second chamber being in communication with the gage to be tested.

2. A gage tester, including a plurality of chambers, one of which is in communication with the gage to be tested.

and all of which contain a pressure-transmitting fluid, weight-operated means for producing a pressure on one of said chambers, and intermediate means between said chamber and that chamber which is in communication with the gage for transmitting a modified pressure to the gage.



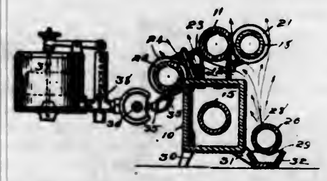
3. A gage tester, comprising chambers containing transmission fluid means for mounting a gage in condition to admit such fluid and means for applying pressure to such fluid by direct action of a weight, and means for multiplying by a known factor the pressure so produced in its transmission to the gage being tested.

4. A gage tester, comprising communicating chambers of different areas containing a transmission fluid, a weight-actuated piston in one of said chambers, a fluid-actuated piston in the other of said chambers, a third chamber containing transmission fluid, and a piston contained in said third chamber, and mechanically operated by the second-named piston, the last-named chamber being in communication with the gage being tested.

5. A gage tester, including in its construction a plurality of chambers, two of which are in mutual communication and one of which is separate from the said two chambers and is in communication with the gage, mechanically connected pistons of different areas contained respectively in the non-communicating chambers, and a third piston of still a different area contained in one of the communicating chambers and having means for supporting a weight.

[Claims 6 to 29 not printed in the Gazette.]

1,154,019. OIL AND WATER BURNER. EDWARD A. HORNBOSTEL and JOHN CAREY, Des Moines, Iowa. Filed Mar. 10, 1913, Serial No. 753,425. Renewed Feb. 15, 1915. Serial No. 8,629. (Cl. 158—56.)



1. In a device of the class described, a boiler body provided with a water inlet, a superheater in communication with said boiler body, a mixing chamber in communication with said superheater, an oil pocket in the lower portion of said mixing chamber, a burner in communication with said mixing chamber, and means for automatically regulating the level of oil within said pocket.

2. In a device of the class described, a boiler body, means for automatically feeding water and regulating its level within said boiler body, a horizontal pipe extending through said boiler body having a downwardly extending end, a superheater in communication with the boiler body, a mixing chamber in communication with said superheater, an oil pocket in said mixing chamber, means for automatically feeding oil and regulating its level within said pocket, and a burner in communication with said mixing chamber.

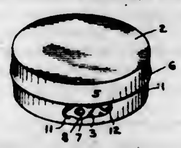
3. In a device of the class described, a boiler body, means for automatically feeding water and regulating its level within said boiler body, a horizontal pipe extending through said boiler body having a downwardly extending end, a superheater in communication with and above the boiler, a mixing chamber adjacent to the upper corner of one side of the boiler and in communication with said superheater, an oil pocket in said mixing chamber, means for automatically feeding oil and regulating its level within said pocket, and a burner in communication with said mixing chamber, said burner being designed to heat the opposite side of the boiler body from the one to which the mixing chamber is adjacent at a point above the water level within said boiler body.

4. In a device of the class described, a boiler body, automatic means for feeding water and regulating the level of the same within the said boiler body, a burner adjacent to the lower edge of one side of said boiler body and in a plane above the bottom of said boiler, a horizontal air passage through the boiler having a downwardly extending portion at one end, and means for feeding a mixture of oil vapor and superheated steam to said burner.

5. In a device of the class described, a boiler body, a super-heater connected therewith, automatic means for feeding water and regulating the level of the same within the said boiler body, a burner adjacent to the lower edge of one side of said boiler body and in a plane above the bottom of said boiler, a horizontal air passage through the boiler having a downwardly extending portion at one end, means for feeding a mixture of oil vapor and superheated steam to said burner, said means comprising a horizontal mixing tube, an oil pocket within the bottom of said tube, and means for automatically feeding oil and controlling the level of the same within said pocket, one end of said tube being in communication with the superheater and the other in communication with the burner.

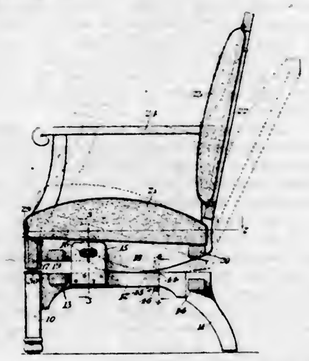
[Claim 6 not printed in the Gazette.]

1,154,020. BOX. JOHN M. HOTHERSALL, New York, N. Y., assignor to John Q. A. Whittemore and Charles Whittemore, Boston, Mass. Filed Dec. 22, 1913. Serial No. 808,227. (Cl. 220—6.)



In a box, the combination of a cover and the body of the box, the cover having a flange, the flange having a flaring edge, the body of the box having a relatively large opening, a lever opener, the said lever opener having an enlarged portion, a stud struck up from the metal of the enlarged portion of the lever opener, the said stud extending through the said opening and having a flattened head of relatively larger diameter to secure the stud in the side wall in the body of the box and to seal the large opening of the box, the lever opener having a semi-circular end, a flange extending semi-cylindrically around the semi-circular end of the lever for engaging the flaring portion of the flange of the cover, and a finger piece at the other end of the lever.

1,154,021. CHAIR. GEORGE HUNSINGER, New York, N. Y., assignor to George Hunsinger & Son, New York, N. Y., a Firm. Filed June 22, 1914. Serial No. 846,423. (Cl. 155—31.)



1. A chair comprising a base, a lock plate secured to and extending upwardly from one side of the base, a seat frame adapted to rock upon the said base, means for yieldingly connecting the seat frame and base, a device passing through the side of the seat frame and adapted to engage with the said lock plate when the seat frame is in a forward position to lock the parts together and make the use of the chair that of an ordinary one, the said device being also adapted to rest upon the said lock plate when the seat frame is in a rearward position to make the chair a reclining one.

2. A chair comprising a base, a lock plate secured to and extending upwardly from one side of the base, a seat frame adapted to rock on the said base, means for yieldingly connecting the said seat frame to the base, and a pin passing through the side of the said seat frame and adapted to enter a slot provided for this purpose in the said lock plate, when the seat frame is in a forward position to lock the parts together and make the use of the chair that of an ordinary one, and also to rest upon the top of the said lock plate when the seat frame is in a rearward position to make the chair a reclining one.

3. A chair comprising a base, a lock plate secured to and extending upwardly from one side of the base, a seat frame adapted to rock on the said base, means for yieldingly connecting the said seat frame to the base, a pin passing through the side of the said seat frame and adapted to enter a slot provided for this purpose in the said lock plate, when the seat frame is in a forward position to lock the parts together and make the use of the chair that of an ordinary one and also to rest upon the top of the said lock plate when the seat frame is in a rearward position to make the chair a reclining one, and means when the seat frame is in its reclining position for preventing the same from tilting forward in front at the side opposite to that on which it is supported by the said pin.

1,154,022. WALL-PAPER ROLL. HERBERT C. JARVIS, Toronto, Ontario, Canada. Filed Feb. 16, 1915. Serial No. 8,674. (Cl. 206—59.)

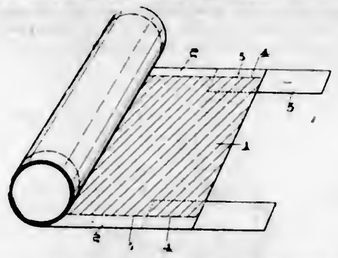
1. A roll of wall paper in which the selvages are partly severed from the roll.

2. A roll of wall paper in which the selvages are partly severed from the roll in combination with a band of paper gummed around each end of the roll.

3. A roll of wall paper in which the selvages are partly severed from the roll by a series of clean cuts alternating with narrow uncut portions.

4. A roll of wall paper in which the selvages are partly severed from the roll by a series of clean cuts alternating with narrow uncut portions in combination with a band of paper gummed around each end of the roll.

5. A roll of wall paper in which the selvages are in the main severed from the roll in combination with means



covering the exposed portions of the selvages and securing them to the roll.

[Claim 6 not printed in the Gazette.]

1,154,023. EXTENSION-TABLE. ISAAC KARISH, Chicago, Ill. Filed Feb. 14, 1914. Serial No. 818,818. (Cl. 45—9.)

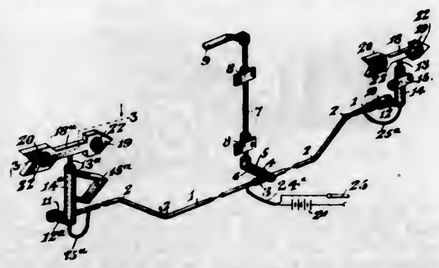


1. An extension table, comprising a sectional top, table leaves adapted to be concealed beneath said top when the same is in closed position, pivotal connections between said table leaves and the table to permit raising and lowering of the table leaves and to retain said leaves elevated, and means for actuating said pivotal connections simultaneously to elevate all of the leaves at one time and adapted then to be retracted to permit lowering of certain ones thereof independently of the others.

2. An extension table, comprising table leaves adapted to be contained and concealed therein, blocks pivoted to said table leaves and to the table to raise and lower the table leaves when actuated and to retain said leaves elevated, and mechanism for simultaneously operating all of said blocks to elevate all of the table leaves at one time and adapted then to be retracted to permit lowering of certain of said leaves independently of the others.

3. An extension table, comprising table leaves adapted to be contained and concealed therein, blocks pivoted to said table leaves and to the table to raise and lower the table leaves when actuated and to retain said leaves elevated, arms for moving said blocks to elevate the table leaves, and a lever for actuating all of said arms simultaneously and for retracting said arms to their initial position independently of the blocks and table leaves to permit lowering of certain of said leaves independently of the other.

1,154,024. AUTOMOBILE DIRECTION SIGNAL OR INDICATOR. ZACHARIAH KEOUGH, Los Angeles, Cal. Filed Sept. 3, 1913. Serial No. 787,932. (Cl. 116—31.)



1. A direction indicator for automobiles, comprising rotatable members located at opposite ends of the vehicle,

each member having simultaneously operable spaced light giving means with different light characteristics, and operating means for the rotatable members connected to both for the simultaneous actuation thereof.

2. A direction indicator for automobiles, comprising elongated direction-indicating members each rotatable on an axis perpendicular to its length and said members being located at opposite ends of the vehicle, each member having simultaneously operable light giving means, spaced apart in the direction of the length of said member, and operating means for the rotatable indicating members connected to both for the simultaneous actuation thereof, the spaced light giving means having different light characteristics to indicate the direction of intended movement of the vehicle.

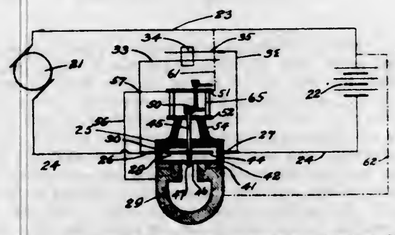
3. An automobile direction signal or indicator comprising arrow-like members each disposed in a substantially horizontal position and mounted on a vertical shaft or spindle, one member at the front and the other at the back of an automobile, and means for operating the shafts so as to shift the arrow-like members in substantially horizontal planes and in unison toward the same side of the vehicle, said arrow-like members each being provided with differently colored light-giving means at the head and tail portions thereof.

4. A direction signal or indicator for automobiles, comprising indicating means provided with differently colored light giving means spaced apart in a substantially horizontal plane in fixed relation one to the other, said indicator being shiftable in a horizontal plane to reverse the order of the spaced lights with reference one to the other and to the automobile.

5. An automobile direction signal or indicator comprising an arrow-shaped body provided with a vertically arranged support about the axis of which the arrow is movable in a horizontal plane, said arrow having electric lamps located in the head and tail portions thereof with bull's eye lenses on opposite sides for the escape of light therethrough, and means for shifting the arrow into different positions in a horizontal plane.

[Claims 6 and 7 not printed in the Gazette.]

1,154,025. ELECTRIC METER. CHARLES F. KETTERING, Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co., a Corporation of Ohio. Filed May 29, 1912. Serial No. 700,487. (Cl. 171—34.)



1. In an electrical measuring instrument having circuit connections; a normal circuit for electrical current through the measuring instrument; elements of conductive material forming part of the measuring instrument but removed from the normal circuit of the current; and means electrically connecting said elements and the circuit connections.

2. In an electrical measuring instrument, an electric circuit adapted to pass current through said instrument; elements forming parts of said instrument and conductively connected with said circuit; and a low resistance element connecting said parts with the circuit external to the measuring instrument.

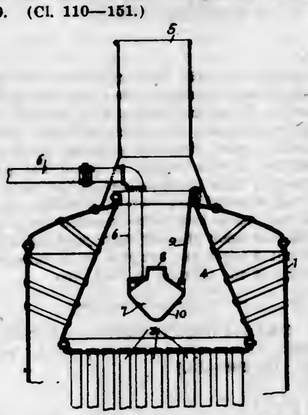
3. In an electrical measuring instrument having an armature, the combination of auxiliary elements conductively connected to said armature; and means for preventing injurious short-circuits from passing through said auxiliary elements when circuits of this sort tend to pass through said elements.

4. In an electric meter having an armature, circuit connections therewith; a shunt circuit external to said meter and connected with said circuit connections; auxiliary meter elements having conductive connection with said armature, and means connected with said elements and the shunt circuit, whereby short-circuits tending to pass through said auxiliary elements will be shunted around said elements.

5. In a mercury meter, comprising a mercury chamber; an armature positioned therein, and having a bearing on the lower wall thereof; a registering mechanism comprising a gear train having conductive connection with the mercury chamber; and means for preventing injurious short circuits through said gear train and said bearing when circuits of this sort tend to pass therethrough.

[Claims 6 to 10 not printed in the Gazette.]

1,154,026. EXHAUST-NOZZLE. CHARLES B. KING and CLARENCE B. WESTON, Marion, Ohio, assignors to The Marion Steam Shovel Company, Marion, Ohio, a Corporation of Ohio. Filed Oct. 25, 1913. Serial No. 797,239. (Cl. 110—151.)



1. The combination, with a boiler having vertical flues, a stack arranged above said flues and spaced away therefrom, and an uptake arranged within said boiler and connecting said flues with said stack, of an exhaust pipe leading into said uptake and discharging into said stack, the discharge end of said pipe being arranged between the base of the stack and the flues at a point remote from the base of the stack and substantially centrally of the flues, and a deflector arranged in alinement with the discharge end of said exhaust pipe between the same and said flues to deflect the products of combustion toward the walls of said up-take on all sides of said deflector and equalize the draft through the several flues.

2. The combination, with a boiler having vertical flues, a stack supported by said boiler above said flues and in substantial alinement therewith, and a housing within said boiler connecting said flues with said stack, of a deflector arranged within said housing near said flues and in alinement with the base of said stack to direct the products of combustion toward the wall of said housing on all sides of said deflector and cause the draft through said stack to be distributed substantially equally to the several flues.

3. The combination, with a boiler having flues, a stack supported above said flues, and a housing connecting said flues with said stack, of a combined nozzle and deflector supported within said housing below said stack and directed toward the stack, and an exhaust pipe communicating with said nozzle.

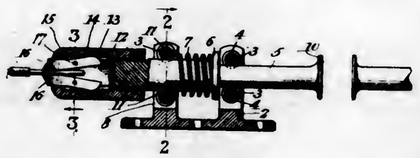
4. The combination, with a boiler having flues, a stack supported above said flues, and a housing connecting said

flues with said stack, of an exhaust pipe extending into said boiler at the upper end thereof and having a portion extending downward into said housing, a nozzle carried by said downwardly extending portion of said exhaust pipe and having its discharge opening directed toward said stack.

5. The combination, with a boiler having vertical flues, and a stack supported by said boiler above said flues, of a hollow deflector interposed between said stack and said flues, and means for causing steam to circulate in said deflector.

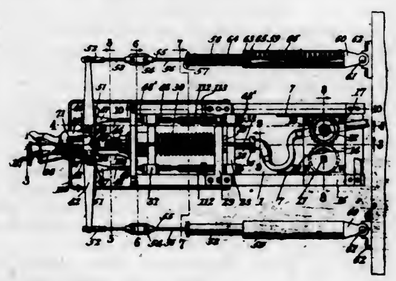
[Claims 6 to 10 not printed in the Gazette.]

1,154,027. AUTOMATIC ELECTRICAL-WIRE COUPLING FOR CARS. HOWARD S. KIMMEL, Tiffin, Ohio. Filed Oct. 10, 1914. Serial No. 866,121. (Cl. 173—332.)



An automatic electric wire connector for use upon trains, comprising a spring-pressed rod having a slotted end, a portion of the rod rearward of the slot being circumferentially threaded, pins mounted in the walls of the slotted portion, jaws pivotally mounted upon said pins within the slot, a cap having a chambered portion of greater diameter than the diameter of the slotted end of the rod which is positioned therein, a portion of the interior of the cap being interiorly threaded for engagement with the threads upon the rod, said jaws being convexed upon their outer edges and adapted to be engaged by the marginal wall of the opening in said cap.

1,154,028. TRAIN-PIPE COUPLING. HOWARD S. KIMMEL, Tiffin, Ohio. Filed Oct. 10, 1914. Serial No. 866,122. (Cl. 188—13.)



1. An automatic apparatus for regulating the valves in fluid pressure train pipes comprising, in combination with the stem of a valve, a pipe, a gear wheel fixed to said stem, a movable carriage, a coupler head connected to the latter, means actuated by the movement of the latter for causing said gear wheel to rotate to open the valve, and means for holding the valve in an open position.

2. An automatic apparatus for regulating the valves in fluid pressure train pipes comprising, in combination with the stem of a valve, a pipe, a gear wheel fixed to said stem, a movable carriage, a coupler head connected to the latter, a rack bar in mesh with the gear wheel, said rack bar forming means for moving the latter in one direction to cause the valve to open, and means for locking the valve in an open position.

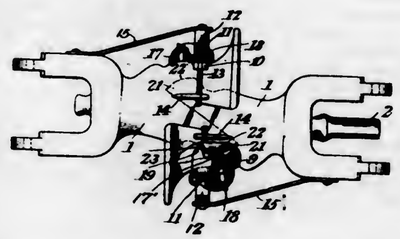
3. An automatic apparatus for regulating the valves in fluid pressure train pipes comprising, in combination with the stem of a valve, a pipe, a gear wheel fixed to said stem, a movable carriage, a coupler head connected to the latter, a rack bar in mesh with the gear wheel, said rack bar forming means for moving the latter in one direction to cause the valve to open, and means actuated by the movement of the carriage in one direction for locking the valve open.

4. An automatic apparatus for regulating the valves in fluid pressure train pipes comprising, in combination with the stem of a valve, a pipe, a gear wheel fixed to said stem, a movable carriage, a coupler head connected to the latter, a rack bar in mesh with the gear wheel, said rack bar forming means for moving the carriage in one direction to cause the valve to open, a tilting locking lever actuated by the movement of the carriage in one direction, and a spring-pressed catch engaged by said locking member to hold the valve in an open relation.

5. An automatic apparatus for regulating the valves in fluid pressure train pipes comprising, in combination with the stem of a valve, a pipe, a gear wheel fixed to said stem, a rack bar in mesh with the gear wheel, a buffer carried by the rack bar, a spring-pressed carriage adapted to contact with said buffer and move the rack bar in one direction to open the valves, a coupler head connected to the carriage, means actuated and held by the carriage for holding the valve open, and means for holding the carriage in a locking position.

[Claims 6 to 15 not printed in the Gazette.]

1,154,029. FLUID-PRESSURE COUPLING-HEAD. HOWARD S. KIMMEL, Tiffin, Ohio. Filed Oct. 12, 1914. Serial No. 866,312. (Cl. 188—13.)

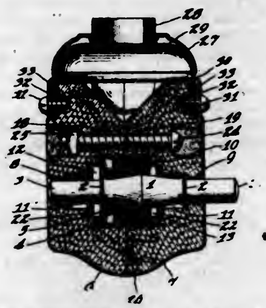


1. A coupling device for fluid pressure pipes comprising coupler heads, each of which has a flaring end which is recessed, the wall of the flaring portion being provided with a slot, said coupler having a convexed portion and shoulder upon one side thereof, a yoke fixed to each head and a pin carried by the yoke, a clamping member pivotally mounted upon said pin and movable in said slot and having a projecting portion extending into the recess of the head, a lug, a spring engaging the clamping member, the projecting portion of the clamp being in the path of and adapted to be struck by the convexed edge of a coupler head as two similar coupler heads come together, and said lug being adapted to engage a shoulder upon the coupler head.

2. A coupling device for fluid pressure pipes comprising coupler heads, each of which has a flaring end which is recessed, the wall of the flaring portion being provided with a slot, said coupler having a convexed portion and a shoulder upon one side thereof, a yoke fixed to each head and a pin carried by the yoke, a clamping member having a cam edge and pivotally mounted upon said pin and movable in said slot and having a projecting portion extending into the recess of the head, said clamping member having a curved slot, a pin secured to the opposite walls of the slot and passing through said curved slot, a lug projecting from the clamping member, a spring fastened to the yoke and engaging the cam edge of the clamping

member and adapted to normally hold the lug within the slot when the heads are uncoupled.

1,154,080. ELECTRIC SWITCH. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed June 19, 1911. Serial No. 634,147. (Cl. 175—284.)



1. In a multi-circuit electric switch, an insulating base having a substantially closed chamber therein, a snap switch mechanism carried in said base including a contactor movable across said chamber, and a plurality of terminal contacts mounted on said base at opposite sides of said chamber.

2. In a multi-circuit electric switch, an insulating base having a substantially closed rectangular chamber therein, a snap switch mechanism mounted within said chamber including a contactor reciprocable across the same, and a plurality of sets of parallel terminal contacts carried by said base at opposite ends of said chamber.

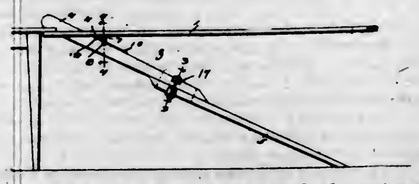
3. In an electric switch, an insulating base having a substantially closed chamber therein, a snap switch mechanism including a contactor within and movable across said chamber, a plurality of sets of contacts carried by said base on opposite sides of said chamber and extending without the same, and means without said chamber connecting certain of said opposite contacts.

4. In a pendent electric switch, a two-part insulating base having complementary recesses on its adjacent faces forming a substantially closed central chamber and an open end recess, a push-button operated switch mounted within said chamber and having its operating member extending through opposite ends thereof, a pair of terminal contacts carried by each of said base parts to be engaged by said switch mechanism in its opposite extreme positions, and means in said end recess connecting certain of said opposite contacts together.

5. In an electric switch, a divided insulating base having substantially flat adjacent faces, a snap switch mechanism inclosed between the parts of said base and having an operating member extending therethrough, and insulating means carried by and bridging the adjacent faces of said base substantially around said switch mechanism.

[Claims 6 and 7 not printed in the Gazette.]

1,154,031. IRONING-BOARD. CORNELIUS W. KLIEWER, Midland, Cal. Filed Mar. 29, 1913. Serial No. 757,563. (Cl. 68—10.)



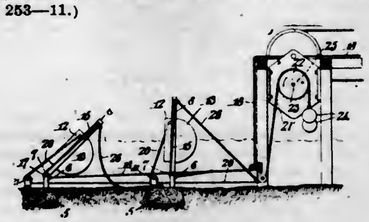
The combination with an ironing board, of a rectangular loop secured to and extending downwardly from the under face thereof, a supporting leg having a transversely extending groove in which the lower bar of said loop is located, the said leg being so arranged that it will extend at an acute angle to the board when it is operative, and a plate secured to the leg and overlying the said bar of the loop to prevent its displacement from the groove, the upper end of the said plate adjacent the intersection of the leg and the board being bent at right angles to the body of the plate and embedded in the said legs.

1,154,032. AUTOGRAPHIC REGISTER. ALBERT KRAUTH, Hamilton, Ohio, assignor to Krauth & Benninghofen, Hamilton, Ohio, a Copartnership composed of Albert Krauth and Christian Benninghofen. Filed July 1, 1912. Serial No. 706,974. (Cl. 211—33.)



In an autographic register, a pair of co-acting paper feeding rolls, one journaled in confined bearings and the second yielding axially urged toward the other, a pair of intermeshing gears of the same relative pitch diameter, one fixed to each roll, a driving gear of a pitch diameter equal in circumference to a prescribed interval length of paper to be fed, connecting with said gears in train, a two-part crank handle connecting with said driving gear, one part movable radially upon the second, and an abutment projecting into the path of said movable handle part adapted to interrupt the handle motion at a point corresponding to the limit of a functioning cycle of said driving gear.

1,154,033. WAVE-MOTOR. JOSEPH LACHANCE, Los Angeles, Cal. Filed Sept. 28, 1914. Serial No. 863,980. (Cl. 253—11.)



1. In a wave motor, a driven mechanism, a plurality of vanes each comprising a frame mounted for oscillatory movement, a buoyant gate slidably mounted in each of said frames, and a connection between each of said gates and said driven mechanism, substantially as described.

2. In a wave motor, a driven mechanism, a plurality of vanes each comprising a frame pivoted at its lower end of oscillatory movement, a buoyant gate slidably mounted in each of said frames, and a power cable connecting each of said gates with said driven mechanism, substantially as described.

3. In a wave motor, a driven mechanism, a plurality of vanes each comprising a frame pivoted at one end for oscillatory movement, a buoyant gate mounted in each of said frames for sliding movement toward and away from said pivoted ends, a pulley adjacent the pivoted end of each of said frames, and a flexible cable connected at one end to each of said gates and passing over said pulleys and connected at its opposite end to said driven mechanism, substantially as described.

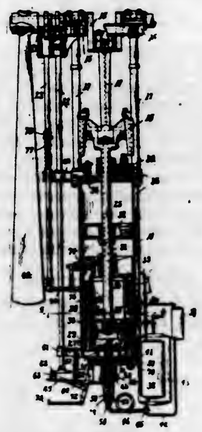
4. A wave motor comprising a plurality of vanes mounted for oscillation and connected to driven mechanism, each of said vanes comprising a frame pivoted at its lower end, a pair of vertically extending guides on each of said frames, pulleys adjacent the upper and lower ends of said

frames, a gate for each of said frames adapted to slide within said guides, and a float mounted upon each gate, and cables connected to the upper end of each of said gates and passing over said pulleys whereby said gates may be slid within the said guides, substantially as decribed.

5. In a wave motor, a driven mechanism, a plurality of vanes mounted for oscillatory movement and connected to operate said driven mechanism, each of said vanes comprising a rectangular frame provided at its lower end with pintles for pivotally mounting the same, pulleys on said pintles, said frames being provided with vertically extending guides, pulleys adjacent the upper ends of said frames and communicating with said guides, gates slidably mounted within said guides, and cables connected to the upper end of each of said gates and passing over said pulleys for sliding said gates, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,154,034. ENGINE. CHRISTOPHER J. LAKE, Bridgeport, Conn. Filed Mar. 26, 1912. Serial No. 686,361. (Cl. 123—4.)

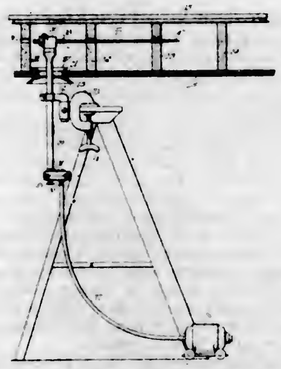


1. In an engine of the class described, the combination of an explosive cylinder, a chamber surrounding the same, perforated heat radiating disks mounted therein, vertically arranged pipes extending through the disks, means for feeding both air and water into the chamber to be heated to form steam, a main valve to feed the fuel to the explosion cylinder, a needle valve within the main valve for controlling the supply of fuel to the main valve, means for automatically operating both the main valve and needle valve, an air compressor cylinder in alinement with the main cylinder, connections from the air compressor cylinder to the steam generating cylinder, a single piston rod for both cylinders and having pistons to operate in the two alined cylinders.

2. In an engine of the class described, the combination of a compression cylinder and an explosion cylinder in alinement with each other, a piston rod passing through both cylinders, a piston within each cylinder and mounted upon the rod, means for operating the one piston in one direction by gas explosions, means for operating the same piston in the opposite direction by steam, a steam generating cylinder around the explosion cylinder, valve and pipe connections from the compression cylinder to the steam cylinder and explosion cylinder, means for feeding air into the said steam generating cylinder to be heated, a main valve and pipe connection for controlling the supply of fuel and heated air to the explosion cylinder, a needle valve within the main valve for controlling the supply of fuel to the main valve, means for automatically operating both the main valve and needle valve.

3. In an engine of the class described, the combination of a compression cylinder and an explosion cylinder in alinement with each other, a piston rod passing through both cylinders, a piston within each cylinder and mounted upon the rod, means for operating the one piston in one direction by gas explosions, means for operating the same piston in the opposite direction by steam, perforated heat radiating disks mounted therein, vertically arranged pipes extending through the disks, a steam generating cylinder around the explosion cylinder, valve and pipe connections from the compression cylinder to the steam cylinder and explosion cylinder, means for feeding air into said steam cylinder to be heated, means for feeding a small quantity of water into the steam cylinder at the point of intake for compressed air, a main valve and pipe connection for controlling the supply of fuel and heated air to the explosion cylinder, a needle valve within the main valve for controlling the supply of fuel to the main valve, and means for automatically operating both the main valve and needle valve.

1,154,035. METHOD OF PERFORATING SEPARATED OBSTRUCTIONS IN HOLLOW WALLS. ALBERT R. LOCKE, Chicago, Ill. Filed Jan. 15, 1913. Serial No. 742,090. (Cl. 144—92.)



1. The process of drilling alining holes through a series of joists or like relatively narrow, widely spaced obstructions located in the interspace between planar surfaces of a hollow wall, or the like, which consists in perforating the wall between joists, inserting angled drilling mechanism through said perforation and positioning it to work in substantial parallelism with the planar surfaces of the wall, drilling holes by means of a bit through three or more forward obstructions by the addition thereto of threaded sections after each obstruction has been drilled through, thereby forming a rigid threaded guide as long as the span of three obstructions, and constituting part of said angled drilling mechanism, and thereafter continuing the rotation of the bit by power applied rotatively thereto by a flexible shaft, thereby causing the guide by its constant thread engagement with two or more obstructions, to advance itself and so to move the bit from a perforated obstruction across the interspace between obstructions to that next in advance thereof.

2. Steps in the art of drilling alining openings through a series of joists, in the interspace between planar surfaces of a hollow wall, which consists in drilling alining holes in three or more joists by means of a rigid tool having a plurality of connectable screw threaded sections forming when joined a stem long enough to span said three joists, by applying thereto axial pressure and also rotation; and thereafter rotating said tool, substantially without axial pressure thereon, to advance said tool through engagement of its thread with the edges of the perforations made in the engaged joists.

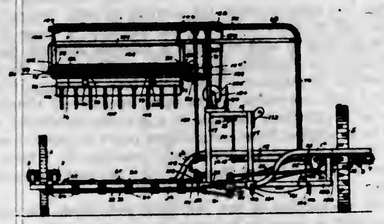
3. The process of drilling alining holes through a series of joists or like relatively narrow, widely spaced obstructions located in the interspace between planar surfaces of a hollow wall or the like, which consists in perforating the wall between joists, to form an aperture less in diameter than the space between joists, inserting angled drilling mechanism through said aperture, drilling a hole into the rearward obstruction bounding the inter-joist space, backing the drill mechanism into said hole and drilling holes through three or more forward obstructions by means of a bit carried by a joined rigid guide which when extended has a length sufficient to span three obstructions and thereafter advancing said rigid guide, guiding the latter by its engagement with the apertures in two or more of the obstructions and successively drilling alining holes in more remote forward obstructions.

1,154,036. TABLE-PAD. COLEMAN C. LYDON, Minneapolis, Minn. Filed Apr. 8, 1914. Serial No. 830,388. (Cl. 65—53.)



A table pad made up of a pair of sections connected by a hinge joint and having an oilcloth covering secured to said sections and extending across the hinge joint thereof, the said sections having a clearance space between the hinge joint and oil cloth and into which clearance space the oilcloth, at the hinge joint, is adapted to be folded in a loose condition.

1,154,037. HARVESTER. SAMUEL J. MARQUARDT, Monroeville, Ind. Filed Apr. 1, 1912. Serial No. 687,313. (Cl. 56—22.)

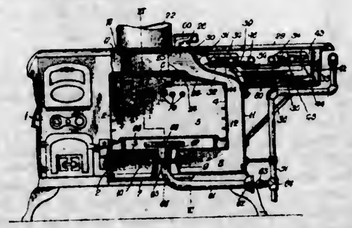


1. In a harvester, the combination with a main frame, of an upright frame secured to the main frame and including a pair of parallel vertically disposed guide bar, and a connecting bar having one end projecting beyond the guide bars, a sliding frame mounted on and guided by the vertical bars, a reel journaled in said sliding frame beneath the end of the connecting bar and means supported from the projecting end of the connecting bar to raise and lower the sliding frame.

2. In a harvester, the combination with a main frame, of an upright frame secured to the main frame and including a pair of parallel vertically-disposed guide bars, and a connecting bar having one end projecting beyond the guide bars, a sliding frame mounted on and guided by the vertical bars and extending beneath the projecting end of the connecting bar, a reel journaled in said sliding frame beneath said projecting end of the connecting bar, a winding drum mounted on the main frame, idler pulleys mounted on the vertical frame, two of the pulleys being located over respective ends of the reel, and hoisting ropes trained over said pulleys and each connected at one end to the sliding frame and at the other end to the reel.

3. In a harvester, a main frame, a vertical frame including a pair of vertical members and a cross member overhanging the vertical members at one end, a sliding frame mounted on and having a portion located beneath the over-hanging end of the cross member and guided by the vertical members, a reel journaled in the sliding frame beneath the over-hanging end of the cross-member, a stirrup depending from the sliding frame and having the reel journaled therein in one side thereof, a driving shaft extending through the stirrup and sliding frame, a beveled gear fixed to the reel within the stirrup and a second beveled gear supported on the bottom of the stirrup and meshing with the first beveled gear, the second gear being splined to the driving shaft.

1,154,038. COMBINATION COAL AND GAS RANGE. HENRY C. MAUL, Detroit, Mich., assignor to The Michigan Stove Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 28, 1914. Serial No. 859,022. (Cl. 126—36.)



1. In a combination coal and gas range, an oven surrounded on the top, end and bottom by smoke flues for coal, a walled opening through the bottom smoke flue for the entrance of external air, a gas supply pipe in such opening, a gas burner removable from said supply pipe, said burner being of a larger diameter than said opening and located above the bottom plate of said oven, leaving a free air space between said burner and said oven bottom.

2. In a combination coal and gas range, an oven surrounded on the top, end and bottom with smoke flues for coal, a smoke flue on the back of said oven connected to the bottom smoke flue and a smoke exit in the top of said range, the oven having an opening through the back wall in said back smoke flue, a chamber, containing gas burners, located over said smoke flue above the oven, and open to the air of the room, a direct damper opening from the smoke flue above said oven into the smoke flue back of the oven, an equalizing damper under the stove top connecting said smoke flue with said burner chamber and thence with the air of the room, a walled opening through the bottom smoke flue, and an oven gas burner located above the oven bottom.

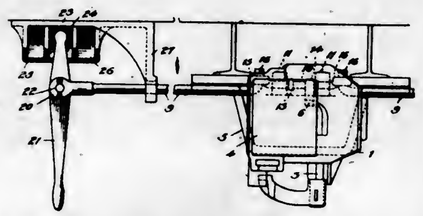
3. A combined coal and gas range comprising a stove structure, an oven having a hollow tapering opening through its bottom, a closure supported within the conical opening below the level of the oven bottom allowing radiated heat from the conical sides of the opening to be radiated into the oven.

4. In a combination coal and gas range having top and end smoke flues, a burner chamber under the stove top and having a wall over the top and end smoke flues, said wall having concave end portions restricting the top flues and a convex portion intermediate the concave portions of said wall and provided with an opening, a door normally closing said opening, said convex portion of said wall increasing the cross sectional area of said top flue to compensate for the restricted portions of said flue, whereby said top flue has the conduit capacity of said end flue, and a burner above each concave portion of said wall.

5. In a combination coal and gas range, a substantially rectangular oven having top and end flues with the top of

said oven depressed between said top and end flues, a burner chamber under the stove top and having a wall in parallelism with the depressed portion of said oven top, said chamber wall having a convex intermediate portion provided with an opening, a door normally closing said opening, and a burner above said chamber wall at each side of the convex portion thereof.

1,154,039. COUPLING-OPERATING MECHANISM. ISAAC H. MILLIKEN, Aspinwall, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 12, 1915. Serial No. 7,675. (Cl. 213—59.)



1. In mechaniam of the character indicated, the combination with a coupler which is mounted upon a railway vehicle so as to be capable of lateral movement at its outer end with respect to said vehicle, of a locking device for maintaining the parts of the coupler in coupled relation, means for actuating the locking device to cause it to assume an unlocked position, and means for moving the coupler laterally in either direction, each of said means being rotatably movable on a common axis and involving means common to both.

2. In mechanism of the character indicated, the combination with a coupler which is adapted to be connected to a railway vehicle so as to be capable of swinging movements with respect thereto, of a locking device for maintaining the parts of the coupler in coupled relation, and means extending toward the side of the car for swinging the coupler in either direction, said means being rotatable upon an axis extending in its direction of length to cause an unlocking movement of said locking device.

3. In mechanism of the character indicated, the combination with a coupler involving a locking device for maintaining the parts of the coupler in coupled relation, of means movably mounted on said coupler for actuating the locking device to cause it to assume an unlocked position, said means involving a plurality of members having a jointed connection, and said jointed connection involving a member having an aperture provided with opposite segmental walls which flare in opposite directions.

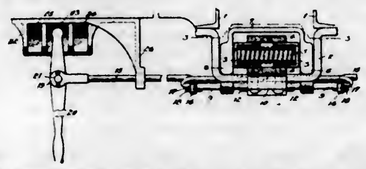
4. In mechanism of the character indicated, the combination with a coupler involving a locking device for maintaining the parts of the coupler in coupled relation, of rotatable means for actuating the locking device to cause it to assume an unlocked position, said means involving a plurality of members having a jointed connection, one of said connected members being mounted on the coupler, and said jointed connection involving a member having an aperture formed with a flaring segmental wall.

5. In mechanism of the character indicated, the combination with a carrier iron, of a coupler mounted on a railway vehicle so as to be capable of lateral movement with respect to said carrier iron, of means for moving said coupler laterally, said means involving a lever which is adapted to engage a plurality of fulcra.

[Claims 6 to 14 not printed in the Gazette.]

1,154,040. COUPLING-CONTROLLING MECHANISM. ISAAC H. MILLIKEN, Aspinwall, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 26, 1915. Serial No. 17,129. (Cl. 213—42.)

1. In mechanism of the character indicated, the combination with a laterally movable coupler, of yielding means for centralizing said coupler, releasable means for operatively connecting said coupler and centralizing means, and means operatively connected to said releasable means and to said coupler and adapted both to actuate said releasable means to free the coupler from the control of said centralizing means and to shift said coupler laterally.



2. In mechanism of the character indicated, the combination with a laterally movable coupler, of yielding means for centralizing said coupler, releasable means for operatively connecting said coupler and centralizing means, and rotatable and slidable means operatively connected to said releasable means and to said coupler and adapted by one of said movements to free the coupler from the control of said centralizing means and by the other of said movements to shift the coupler laterally.

3. In mechanism of the character indicated, the combination with a laterally movable coupler, of yielding means for centralizing said coupler, releasable means for operatively connecting said coupler and centralizing means, means for actuating said releasable means to free the coupler from the control of said centralizing means, and means whereby said releasable means after having been actuated to release the coupler from the control of the centralizing means are prevented from returning to normal position until the coupler is in central position, said releasable means and said means for actuating the same being operatively connected so as to be relatively movable in a manner permitting said actuating means to move toward normal position independently of a corresponding movement of said releasable means.

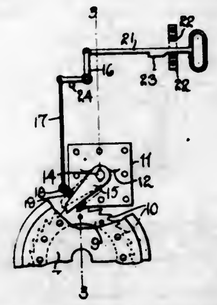
4. In mechanism of the character indicated, the combination with a laterally movable coupler, of yielding means for centralizing said coupler, releasable means for operatively connecting said coupler and centralizing means, a rod operatively connected to said releasable means and to said coupler and adapted to actuate said releasable means to free the coupler from the control of said centralizing means and to shift said coupler laterally, a lever pivotally connected to said rod, and a fulcrum member having a plurality of fulcrum points with which said lever is adapted to be successively brought into engagement, said rod and said releasable means being operatively connected so as to be relatively movable in a manner permitting said lever to be shifted from one fulcrum point to another while said releasable means occupies a position in which the coupler is released from the control of the said centralizing means.

5. In mechanism of the character indicated, the combination with a laterally movable coupler, of yielding means for centralizing said coupler, releasable means for operatively connecting said coupler and centralizing means, a rotatable and slidable rod extending toward the side of the car and operatively connected to said releasable means and to said coupler and adapted by a rotary movement to actuate said releasable means to thereby free the coupler from the control of said centralizing means and also adapted by a sliding movement to shift the coupler laterally.

[Claims 6 to 16 not printed in the Gazette.]

1,154,041. MINE-CAR BRAKE. CLYDE E. MORGAN, Holdenville, Okla. Filed June 24, 1915. Serial No. 36,097. (Cl. 188—46.)

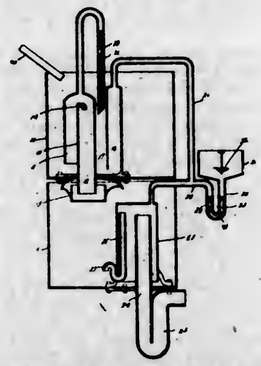
1. The combination with a vehicle wheel, of a brake ring fixed thereto, a brake dog pivotally mounted at one end, a pin loosely engaged in the free end of said dog, operating means connected to said pin to raise or lower the free end of the dog with respect to the brake ring, and a spring arranged upon said pin bearing upon the dog to yieldingly hold the same in braking engagement with the ring.



2. The combination with a vehicle wheel, of a brake ring fixed upon one face thereof provided with ratchet teeth, a brake dog pivotally mounted at one of its ends, a bell crank lever, an operating rod connected to one arm of said lever, a pin loosely engaged in the free end of the dog, a connecting rod between said pin and the other arm of the bell crank lever to raise or lower the free end of the dog with respect to the brake ring, and a coil spring arranged upon said pin and bearing upon the dog to yieldingly hold the free end thereof in braking engagement with the ratchet teeth on said ring.

3. The combination with the spaced vehicle wheels, of a brake ring fixed to the outer face of each wheel, brake dogs pivotally mounted at one of their ends, and means for raising and lowering the dogs including bell crank levers, a pin loosely mounted in the free end of each dog, connecting rods between the pins and one arm of the respective levers, a rod connecting the other arms of said levers, springs on said pins to yieldingly hold the free ends of the dogs in engagement with the brake rings, an operating bar connected to the latter arm of one bell crank lever adapted to actuate said levers to simultaneously raise or lower the free ends of the brake dogs, and means for retaining the operating bar in one position to hold the dogs out of engagement with the brake rings.

1,154,042. AUTOMATIC LIQUID-WEIGHING APPARATUS. LAWRENCE N. MORSCHER, Lawrence, Kans., assignor to himself and Irving Hill, a Copartnership. Filed June 10, 1913. Serial No. 772,860. (Cl. 137—106.)



1. In an apparatus of the class described, the combination of a receiving tank, an automatic siphon discharge therefor, a measuring tank arranged to receive the discharge from the first tank, a siphon discharge for the measuring tank, and a pressure-controlled venting-device associated with the measuring tank and with the siphon of the receiving tank and subjected to pressure produced by liquid within the measuring tank, whereby operation of the venting device due to increase of liquid within the measuring tank will break the siphon of the receiving tank and establish the siphon of the measuring tank.

2. In an apparatus of the class described, the combination of a receiving tank, an automatic siphon discharge therefor, a second tank arranged to receive the discharge from the first tank, an automatic siphon discharge for the second tank, a pressure-controlled venting-device independent of the density of the material passing through the tanks but pressure-controlled by the accumulation of material in the second tank, said venting device having a venting connection with the automatic siphon of the first tank.

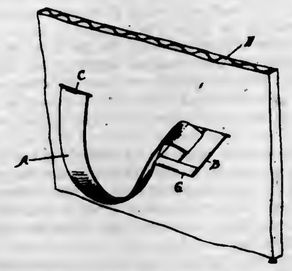
3. In an apparatus of the class described, the combination of a receiving tank, an automatic siphon discharge therefor, a second tank arranged to receive the discharge from the receiving tank, a siphon discharge for the second tank, and a liquid-seal counterpoise interconnected with the siphon of the second tank and subjected to pressure of liquid within the second tank, said liquid-seal counterpoise also being connected to the siphon of the first tank to vent said siphon upon the release of the liquid-seal counterpoise.

4. In an apparatus of the class described, the combination of a receiving tank, an automatic siphon discharge therefor, a second tank arranged to receive the discharge from the receiving tank, a siphon discharge for the second tank, and a liquid-seal counterpoise subjected to pressure of the siphon of the second tank, said liquid-seal counterpoise also being connected to the siphon of the first tank to vent said siphon upon the release of the liquid-seal counterpoise.

5. In an apparatus of the class described, the combination of a receiving tank, an automatic siphon discharge therefor, a second tank arranged to receive the discharge from the receiving tank, a trapped siphon discharge for said second tank, and a liquid-seal counterpoise subjected to pressure of liquid within the second tank and connected to the siphons of both tanks, the connection between said liquid-seal counterpoise and the siphon of the first tank venting, said siphon upon the release of the liquid-seal counterpoise, and the connection between said liquid-seal counterpoise and the siphon of the second tank venting said last-named siphon to establish flow therethrough upon the venting of the siphon of the first tank.

[Claims 6 to 15 not printed in the Gazette.]

1,154,043. HANDLE FOR PAPER BOXES. LAWRENCE D. MORTON, Sandusky, Ohio, assignor to The Hinde & Dauch Paper Company, Sandusky, Ohio, a Corporation of Ohio. Filed Jan. 15, 1915. Serial No. 2,380. (Cl. 229—52.)



1. An attachable handle for paper cartons and similar articles, comprising a flexible tape or strap, and a flat member secured to the end of the tape adapted for insertion through a slit in the wall of the carton to draw the tape therethrough, said member being of lesser width and greater length than the slit and centrally attached to said tape to form a bearing surrounding the slit.

2. An attachable handle for paper cartons and similar articles, comprising a flexible tape or strap, and a flat member attached to the end of said tape adapted for insertion through a slit in the paper wall, said member being of lesser width and greater length than the slit and the attachment of the tape thereto being in the central longitudinal plane thereof.

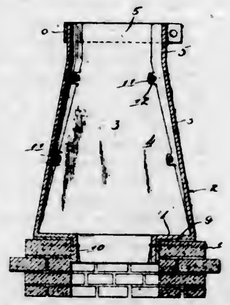
3. An attachable handle for cartons and similar articles, comprising a flexible tape or strap and a member in the form of a thin flat plate, to which said strap is attached in the central longitudinal plane thereof, said member being insertible through a slit in the paper wall, and when a tension is placed on said strap, forming a bearing surrounding said slit and extending beyond the opposite ends thereof.

4. An attachable handle for paper cartons, comprising a flexible tape or strap and a member attached to the end of said strap, comprising a central core around which the strap is wrapped and a member folded about said core and clamping the strap thereto, the opposite edges of said member meeting in the central plane and forming a slit for the outward passage of the tape.

5. An attachable handle for paper cartons and similar articles, comprising a flexible tape or strap and a member attached to the end of said tape comprising a core member about the center of which the tape is wrapped and a member folded about said core and clamping the tape thereto, forming a central slit for the outward passage of the tape, and the ends of said core member being folded over the ends of the outer member.

[Claim 6 not printed in the Gazette.]

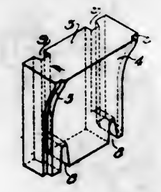
1,154,044. CHIMNEY-HOOD. GEORGE M. MURRAY, West Duluth, Minn. Filed July 30, 1914. Serial No. 854,150. (Cl. 72—88.)



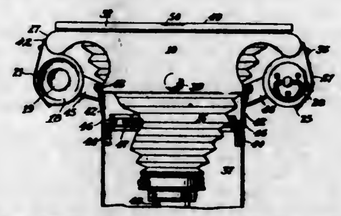
A chimney hood comprising a plurality of duplicate hood sections, each hood section consisting of a blank form cut to converge toward each end from a point adjacent one end, the several sections being arranged vertically, edge to edge, whereby to form the completed hood, apertured locking tongues formed upon one of the longitudinal edges of each section, the said tongues underlapping the adjacent hood section in assembling the hood to aline said apertures with corresponding apertures formed in the hood section next adjacent thereto, means fitting the alined apertures to lock the several sections together, each section being inwardly bent at its widest point to form a shoulder for engagement with the chimney top, an extension formed by again bending each section downwardly to fit within the chimney to thus form a retaining means for the hood at the base thereof and a means whereby the several sections are held together and a band arranged to embrace the hood at its opposite end to provide an additional fastening means, substantially as described.

1,154,045. BACK FOR FIREPLACES. FRANKLIN P. NALS and EPHRAIM J. HUDNALL, Birmingham, Ala. Filed Mar. 23, 1914. Serial No. 826,663. (Cl. 126—130.)

A fireback for fireplaces formed along its bottom with horizontal grooves and at its back with vertical grooves communicating with the horizontal grooves, whereby when the fireback is in its operative position, flues will be formed leading from the hearth beneath the grate and upward between the fireback and the rear wall of the chimney flue, and opening into the chimney flue at a point opposite the direct outlet of the fireplace for the products of combustion.



1,154,046. FOLDING CAMERA. BENJAMIN J. NASIEF, Rochester, N. Y. Filed Oct. 28, 1914. Serial No. 869,153. (Cl. 95—32.)



1. In a folding camera, the combination, with a body adapted to hold a film-strip extended in the focal plane, bellows attached to the body, and a folding support for holding the bellows in extended position; of film-roll holders movably connected with the body and movable toward and from each other in a portion of the space, in front of the focal plane, occupied by the bellows when extended.

2. In a folding camera, the combination, with a body adapted to hold a film-strip extended in the focal plane, bellows attached to the body, and a folding support for holding the bellows in extended position; of film-roll holders movably connected with the body and movable toward and from each other in a portion of the space, in front of the focal plane, occupied by the bellows when extended, and connections, between the roll-holders and said folding support, for causing the holders and the support to be moved in unison in folding or unfolding the camera.

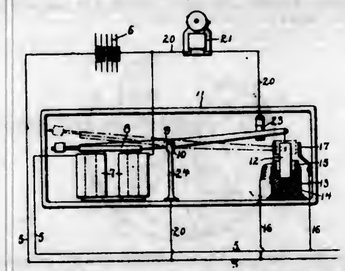
3. In a folding camera, the combination, with a body adapted to hold a film-strip extended in the focal plane, bellows attached to the body, and a folding support for holding the bellows in extended position; of film-roll holders pivoted to the body and movable toward and from each other in a portion of the space, in front of the focal plane, occupied by the bellows when extended, and guides, for the film-strip, substantially coincident with the pivotal axes of the roll-holders.

4. In a folding camera, the combination, with a body adapted to hold a film-strip extended in the focal plane, bellows attached to the body, and a folding support for holding the bellows in extended position; a film-roll holders pivoted to the body and movable toward and from each other in a portion of the space, in front of the focal plane, occupied by the bellows when extended; the pivotal connections between the roll-holders and the body comprising concentric tubular members with lateral openings for the passage of the film-strip.

5. In a folding camera, the combination, with a body adapted to hold a film-strip extended in the focal plane, bellows attached to the body, and a folding support for holding the bellows in extended position; of film-roll holders pivoted to the body and movable toward and from each other in a portion of the space, in front of the focal plane, occupied by the bellows when extended; the roll-holders having lateral openings, for the insertion and removal of film-reels, and light-tight closures for said openings.

[Claims 6 to 11 not printed in the Gazette.]

1,154,047. RAILWAY-CROSSING ALARM. GEORGE NEVILLE, Vancouver, British Columbia, Canada. Filed Nov. 8, 1912. Serial No. 730,178. (Cl. 246—23.)



1. In a railway crossing alarm, a normally open electric circuit, a source of electric energy in said circuit, and a signal in a shunt to said circuit, an electro magnetic switching device in said circuit, operative upon the closing of said circuit for bringing said signal into operative condition and means for delaying the opening of the circuit of the switching device after the circuit has been restored at its normally open place, said last named means including a dash pot, the piston of which is connected to said switching device, the cylinder of which is free to move with said switching device, and having limited movement under the influence of gravity, and means coöperative with said dash pot for closing said electric circuit.

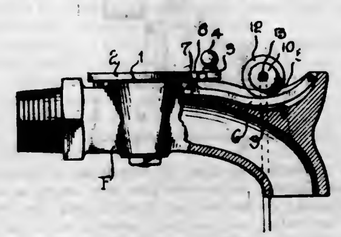
2. In a railway crossing alarm, the combination with the railway track, of an electric circuit, a circuit closing contact in one of the rails of the track arranged to be closed upon the passage of a train over it, and said contact being connected in said electric circuit, a source of electric energy in said circuit and a signal in a shunt to said circuit, said circuit, an electro-magnetic switching device in said circuit operative upon the closing of said track contact for bringing said signal into operative condition, and means for delaying the opening of the circuit after the vehicle has passed over the rail contact, said last named means comprising a dash pot, the piston of which is connected to said switching device, the cylinder of which is free to move with said switching device, and having limited movement under the influence of gravity, and means coöperative with said dash pot for closing said electric circuit.

3. A railway crossing alarm, comprising the combination with the track, of an electric circuit, and a source of electric energy in said circuit, a train operated circuit closer and a magnet also in said circuit, a contact lever having an armature coöperating with said magnet, a signal, a signal circuit arranged as a shunt from the electro-magnet circuit and closable by said contact lever, a second shunt circuit to the main circuit, and means governed by the movement of said lever and closing of said second shunt circuit for delaying the opening of the circuit after the vehicle has passed over the original opening contact, said last named means including a dash pot, one element of which is connected to and movable with said lever and the other element of said dash pot having vertical movement under its own weight with relation to the first-mentioned element of the dash pot, said second shunt circuit having one terminal connected to said vertically movable element of the dash pot, and a fixed contact to which the other terminal of said second shunt circuit is connected, said fixed contact adapted to be engaged by said second mentioned element of the dash pot when the same is elevated.

4. A railway crossing alarm, comprising the combination with a train operated circuit closing contact, an electro-magnet, a source of energy, and an electric circuit including the aforesaid parts, of a signal, and a signal operating switch device including a lever having an armature portion coöperative with said electro magnet, operative connections between said lever and said signal, and means for delaying the opening of the magnet circuit after the vehicle has passed over the circuit closer of the same, said means comprising a dash pot, one element of which is connected and movable with said lever, the other element of which is free to move on said first mentioned element subject to the retarding influence of the dash pot action, and a guide for said second element of said dash pot whereby when said magnets are energized to shift said lever, said dash pot will move with said lever as a whole, and the second element of said dash pot will then move with relation to the first element of the dash pot under the influence of gravity in said dash pot guide, and a connecting shunt to said magnet circuit connected with said second element of said dash pot and with a fixed contact for effecting the delaying action, substantially as shown and for the purposes described.

5. In a railway crossing alarm, the combination with an electric circuit normally open at a predetermined place and adapted to be closed at such place, a source of electric energy in said circuit and a signal in a shunt to said circuit, an electro magnetic switch device including electro magnets in said circuit, a switch lever operated by said magnet said switch lever being in said shunt and a switch contact coöperative with said lever also in said shunt, and means for delaying the opening of the circuit through said electro magnet and said shunt after said electric circuit has been opened at the normally open place, said last named means comprising a dash pot the piston of which is connected to said lever, and the cylinder of which is free to move with said lever and piston and having limited movement under the influence of gravity, and an electrical connection between said circuit and said dash pot.

1,154,048. FAUCET. ALONZO W. OARE, Herrick, Ill. Filed Dec. 23, 1914. Serial No. 878,721. (Cl. 137—7.)

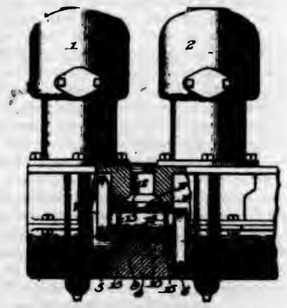


1. In combination with a faucet having a projecting valve stem and having a depression, a locking means positioned within said depression and normally in operative engagement with the stem, and means for forcing the locking means within the depression for releasing the stem.

2. A faucet including a projecting valve stem and having a depression in a face thereof, a disk carried by the projected portion of the valve stem and provided with a recess, a dog pivotally engaged within the depression, means for normally maintaining a portion of said dog exteriorly of the depression and within the recess of the disk, and means for forcing the disk within the depression for disengaging the dog from the disk.

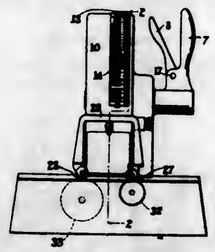
3. In combination with a faucet provided with locking means, an element adapted to be suspended from said faucet, and means carried by the element engageable with the locking means of the faucet for releasing said locking means when the element is in operative engagement with the faucet.

1,154,049. BEARING. HERBERT F. OBERDORFELL, Chicago, Ill. Original application filed June 8, 1912, Serial No. 702,553. Divided and this application filed Jan. 10, 1913. Serial No. 741,165. (Cl. 64—10.)



Means for preventing leakage longitudinally of a shaft consisting of a shaft, a bearing, two annularly enlarged washer-shaped portions upon said shaft, a bearing portion forming part of said bearing between said enlarged portions, and recesses in said bearing for said enlarged portions having a diameter larger than the said annular portion, said annular bearing portions having a sliding fit with the opposite sides of their associated recess to thereby prevent the leakage aforesaid.

1,154,050. PRINTING-MACHINE. EDMUND OCUMPAUGH, 2d, Rochester, N. Y., assignor to Defiance Machine Company, Rochester, N. Y., a Corporation of New York. Filed Jan. 23, 1914. Serial No. 813,874. (Cl. 101—57.)

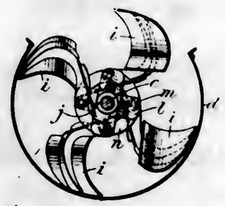


1. In a printing-machine, the combination, with printing-means adapted to impress any of a series of characters selectively, of mechanism, for actuating the printing-means, comprising two manually-operable members adapted to be gripped simultaneously by the hand and movable laterally, to cause a selective operation, and toward each other, to cause an impressing operation.

2. In a printing-machine, the combination, with printing-means adapted to impress any of a series of characters selectively, of mechanism for actuating the printing-means, comprising a rocking member, two grip-members carried thereby and movable toward and from each other, and connections, between said parts and the printing-means, through which the rocking movement of said rocking member is translated into a selective operation of the printing-means, while the relative movement of the grip-members is translated into an impressing operation of the printing-means.

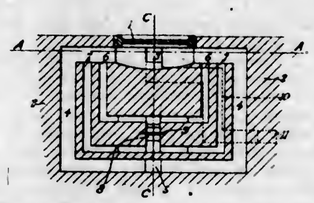
3. In a printing-machine, the combination, with printing-means adapted to impress any of a series of characters selectively, and comprising a type-wheel and a platen, of a casing inclosing the printing-means, a rock-shaft mounted horizontally in the casing and projecting at one side thereof, a gear-segment carried by said shaft, a pinion meshing with the gear-segment and connected with the type-wheel, an arm projecting upwardly from the rock-shaft, a lever pivotally mounted on the rock-shaft so as to move toward and from said arm, a plunger within the rock-shaft coöperating with said lever, and mechanism connecting said plunger with the platen, whereby the platen may be moved toward the type-wheel when the lever is pressed toward the arm.

1,154,051. CONCRETE-MIXER. JOHN SWITZER OWENS, London, England, assignor to John Malan De Mendoza ver Mehr, London, England. Filed Jan. 31, 1911. Serial No. 605,773. (Cl. 83—73.)



In a mixing machine the combination with a frame of a normally fixed mixing receptacle supported thereby, a revoluble shaft passing axially through said receptacle, a sleeve mounted on said shaft and constrained to rotate therewith, radially projecting spaced apart lugs arranged in pairs upon said sleeve, a stop-web formed between said lugs, arms each having a pivotal support between said lugs at one side of the web, an angularly disposed abutment formed at one end of said arms and projecting therefrom so as to contact with said web, mixing blades carried by the lower portions of said arms, springs having their inner ends fixed to said lugs and their free ends bearing against the mixing blades to hold the abutments at the end of the arms in contact with the stop-webs, and the mixing blade normally out of contact with the interior surface of the receptacle, and means for rotating said mixing blades.

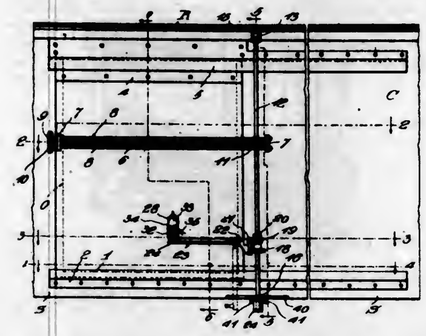
1,154,052. GLASS-FURNACE. WILLIAM WINDLE PILKINGTON, Prescot, England; Sarah Louisa Pilkington, Richard Austin Pilkington, and Alfred Cecil Pilkington, executors of said William Windle Pilkington, deceased, assignors to Pilkington Brothers, Limited, St. Helens, England. Filed Mar. 8, 1912. Serial No. 682,372. (Cl. 158—7.)



1. In a furnace for heating pots from which glass is drawn, the combination with a pair of gas passages adapted to supply gas to one inlet port of the furnace, a gas supply conduit capable of conducting gas to the said passages, and a single passage continuously supplying air to the said port of the furnace, of a valve adapted to connect one of the gas passages to the gas supply conduit and simultaneously therewith disconnect the other one therefrom so that it will remain idle, and vice versa.

2. In a furnace for heating pots from which glass is drawn, the combination with a pair of gas passages adapted to supply gas to the furnace, and a gas supply conduit capable of conducting gas to the said passages and a valve adapted to connect one of the gas passages to the gas supply conduit and simultaneously therewith disconnect the other one therefrom, and vice versa, of an air supply passage and a passage connected with the said air supply passage and adapted to supply a small quantity of air to the particular gas supply passage which for the time being is disconnected from the gas supply.

1,154,053. OPERATING MECHANISM FOR CAR-DOORS. MIELLE HODGES PRIDDY, Fresno, Cal., assignor of two-fifths to Harry M. McKee, Fresno, Cal. Filed Dec. 21, 1914. Serial No. 878,432. (Cl. 39—92.)



1. The combination with a sliding door, of a horizontal rigid rack bar secured to the outer side thereof and having rigid brackets projecting laterally from its two ends, a truss rod extending through said brackets and lying parallel to the rack bar, an upright shaft disposed between the rod and the rack bar, a gear on said shaft and meshing with the teeth of said bar, and means to rotate the shaft.

2. The combination with a sliding door, of a horizontal rigid rack bar secured to the outer side thereof and having rigid brackets projecting laterally from its two ends, a truss rod extending through said brackets and lying parallel to the rack bar, an upright shaft disposed between the rod and the rack bar, a gear on said shaft and located directly above the truss rod, whereby the latter prevents downward movement of said gear, and means to rotate said shaft, the gear being meshed with the teeth of the rack bar.

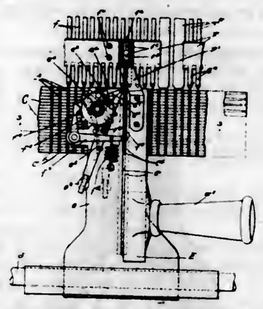
3. The combination with a sliding door, of a horizontal rigid rack bar secured to the outer side thereof and having rigid brackets projecting laterally from its two ends, a pair of parallel horizontal truss rods spaced one above the other and having their ends secured to said brackets, said rods being also spaced from and lying parallel to the rack bar, an upright shaft disposed between said rack bar and the truss rods, a gear on said shaft and lying between the two truss rods, and means to rotate said shaft.

4. The combination with a sliding door, a rack secured thereto, a gear meshing with said rack, a revolubly mounted shaft upon which said gear is secured, a second gear secured to said shaft, a collar loosely mounted on the shaft adjacent the second gear, a substantially L-shaped ratchet member pivoted at its angle to said collar, one end of said member being adapted for engagement with the teeth of the second gear, a lever pivoted to the other end of said member to swing toward the second gear, and means to lock said lever against such swinging movement.

5. The combination with a sliding door, a horizontal rack secured thereto, a gear meshing with said rack, an upright revolubly mounted shaft upon which said gear is secured, and a lever connected to the lower end portion of said shaft to oscillate horizontally, said lever being also mounted to swing downwardly, of a plate in which the lower end of said shaft is revolubly mounted, a second plate lying upon the first named plate and having an opening through which the shaft projects, and a pair of ears depending from the second plate and straddling the first plate, the lever being adapted to be swung downwardly behind the second plate.

[Claims 6 and 7 not printed in the Gazette.]

1,154,054. COMPOSING MECHANISM FOR TYPOGRAPHS. WILLIAM A. READE, Cleveland, Ohio, assignor to The Ludlow Typograph Company, Cleveland, Ohio, a Corporation of Maine. Filed Nov. 12, 1910. Serial No. 591,948. (Cl. 199—5.)



1. In mechanism of the class described, the combination of a suitable support; a plurality of laterally tapered matrix bars longitudinally movable thereon, adjacent bars having their tapered ends oppositely disposed and bearing similar series of matrices but arranged in reverse order; an upwardly extending projection on each of said bars; a frame movable across said bars and having a series of transversely disposed teeth adapted to engage the projections thereon to variously aline the matrices on said bars; and a plate detachably secured to said frame so as to extend along such teeth, said plate bearing two series of designating characters corresponding respectively with the matrices borne by adjacent bars.

2. In mechanism of the class described, the combination of a suitable support, a plurality of matrix bars movable thereon; a member movable longitudinally of said bars and detachably engaging therewith, whereby successive bars may be brought and left in desired position with reference to a fixed transverse line; and a plate detachably secured adjacent to the path of travel of said member, said plate bearing a series of designatings characters corresponding with the matrices on said bars.

3. In mechanism of the class described, the combination of a suitable support, a plurality of matrix bars movable thereon; a frame movable across said bars; a transversely disposed member mounted on said frame so as to be movable longitudinally of said bars and adapted to engage therewith, whereby successive bars may be brought and left in desired position with reference to a fixed transverse line; and a plate detachably secured to said frame adjacent to the path of travel of said member, said plate bearing a series of designating characters corresponding with the matrices on said bars.

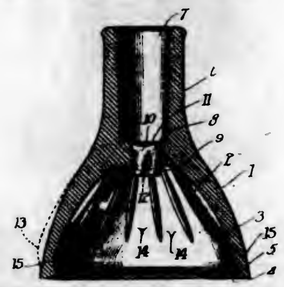
4. In mechanism of the class described, the combination of a suitable support, a plurality of matrix bars movable thereon; an upwardly extending projection on each of said bars; an open frame movable across said bars; a transversely disposed member mounted on one side of said frame so as to be movable longitudinally of said bars, said member extending within the opening in said frame and detachably engaging the projections on said bars, whereby successive bars may be brought and left in desired position with reference to a fixed transverse line; a series of transversely disposed teeth along the other side of said frame adapted to engage the projections on said bars; and a plate detachably secured to said frame so as to extend along such teeth and adjacent to the path of travel of said member, said plate bearing a series of designating characters corresponding with the matrices on said bars.

5. In mechanism of the class described, the combination of a suitable support; a plurality of laterally tapered matrix bars longitudinally movable thereon, adjacent bars having their tapered ends oppositely disposed and bearing similar series of matrices but arranged in reverse order; a member movable longitudinally of said bars and detachably

engaging therewith, whereby successive bars may be brought and left in desired position with reference to a fixed transverse line; and a plate detachably secured adjacent to the path of travel of said member, said plate bearing two series of designating characters corresponding respectively with the matrices borne by adjacent bars.

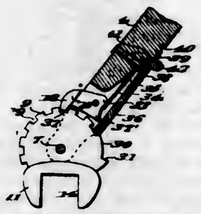
[Claims 6 to 18 not printed in the Gazette.]

1,154,055. FORCE-CUP. GEORGE C. REEVES, Chicago, Ill. Filed July 31, 1912. Serial No. 712,464. (Cl. 4—1.)



A force cup of the class described, comprising a concave elastic body, and a plurality of ribs extending downwardly along the inner concave surface of said body and spaced uniformly apart, said ribs being tapered toward the edge or rim of the concave body and terminating short of said rim, and that portion of the body between the ribs being thicker than the part below said ribs.

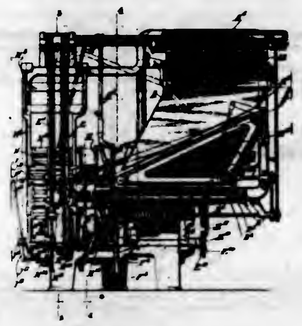
1,154,056. RATCHET-WRENCH. GEORGE C. REID, Labonte, Wyo. Filed Nov. 29, 1913. Serial No. 803,780. (Cl. 81—59.)



A wrench having a forked end, a wrench head having a segmental shank pivoted between the arms of said forked end, the said shank being provided with peripheral teeth and with a smooth surface which terminates in a shoulder, a dog pivoted between the said forked end and having a head and one of its corners formed with a tooth, a spring for holding either the head or the tooth in engagement with the periphery of the shank, a sliding latch member, said latch member including a spring element having its body provided with a longitudinal lug which is provided with beveled sides that are adapted to be received in beveled ways between the forked members at the end of the wrench, said latch having one of its edges provided with a transverse lip, and one of the edges of the wrench being provided with spaced depressions to receive the said lip and to sustain the latch either in contact with the dog and in engagement between two of the teeth or the shoulder of the shank of the wrench head or out of engagement with the said teeth of the shoulder of the said shank.

1,154,057. TYPOGRAPHICAL MACHINE. JOHN R. ROGERS, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Jan. 7, 1914. Serial No. 810,750. (Cl. 199—7.)

1. In a typographical machine, the combination of a plurality of upright magazines arranged one behind another and having their lower ends terminating in the same fore-and-aft transverse plane, a raceway having a series of matrix channels, and a supporting frame therefor, the said supporting frame being mounted to slide horizontally in the machine frame to locate the raceway beneath one or another of the magazines.



2. In a typographical machine, the combination of a plurality of upright magazines arranged one behind another and having their lower ends terminating in the same fore-and-aft transverse plane, a raceway having a series of matrix channels, a supporting frame for the raceway mounted to slide horizontally in the machine frame to locate it beneath one or another of the magazines, and a conveyer belt carried by the supporting frame and arranged within the channeled raceway.

3. In a typographical machine, the combination of a plurality of upright magazines arranged one behind another and having their lower ends terminating in the same fore-and-aft transverse plane, a raceway having a series of matrix channels, a supporting frame for the raceway mounted to slide horizontally in the machine frame to locate it beneath one or another of the magazines, a conveyer belt carried by the supporting frame and arranged within the channeled raceway, and means for driving the belt in any of the different positions of the supporting frame.

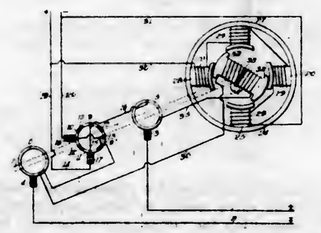
4. In a typographical machine, the combination of a plurality of upright magazines arranged one behind another and having their lower ends terminating in the same fore-and-aft transverse plane, a raceway having a series of matrix channels, a supporting frame for the raceway mounted to slide horizontally in the machine frame to locate it beneath one or another of the magazines, a conveyer belt carried by the supporting frame and arranged within the channeled raceway, and driving means for the belt adapted to maintain their operative connection therewith during the movement of the supporting frame.

5. In a typographical machine, the combination of a plurality of upight magazines arranged one behind another and having their lower ends terminating in the same fore-and-aft transverse plane, a raceway having a series of matrix channels, a supporting frame for the raceway mounted to slide horizontally in the machine frame to locate it beneath one or another of the magazines, and a series of escapements carried by the supporting frame and adapted to control the delivery of the matrices from the selected magazine to the raceway.

[Claims 6 to 54 not printed in the Gazette.]

1,154,058. RECTIFIER. LEE R. ROGERS, Chicago, Ill. Filed Jan. 28, 1915. Serial No. 3,895. (Cl. 171—253.)

1. A rectifier having supply conductors connected to a source of alternating current supply, delivery conductors, a motor provided with a plurality of field poles so wound and connected as to produce opposite polarities in adjacent poles, said field windings being connected to said delivery conductors and said motor having an armature provided with two pole-elements insulated from each other and wound to produce like poles at the outer ends of the armature, means for constantly maintaining electric connection between the supply conductors and the armature windings, whereby the polarity of the outer ends of the armature changes with each phase of the cycle, and commutating means operated by the motor armature for connecting the positive and negative supply conductors during each phase of the cycle to the positive and negative delivery conductors respectively.



2. A rectifier having supply conductors connected to a source of alternating current supply, delivery conductors, a motor provided with a plurality of field poles so wound and connected as to produce opposite polarities in adjacent poles, said field windings being connected to said delivery conductors and said motor having an armature provided with two pole-elements insulated from each other and wound to produce like poles at the outer ends of the armature, means for constantly maintaining electric connection between the supply conductors and the armature windings, whereby the polarity of the outer ends of the armature changes with each phase of the cycle, and connecting means for connecting said supply conductors directly to said delivery conductors, said connecting means including collector rings constantly in electric connection with said delivery conductors, means for alternately connecting the different supply conductors to the conductive segments of the commutator ring, and means mechanically operated by the motor armature for producing relative rotation between the commutator ring and its brushes.

3. A rectifier comprising alternating current, supply conductors, delivery conductors, two collector rings in electric connection with said supply conductors, a commutator ring comprising conductive segments insulated from each other, one set of conductive segments being electrically connected to one of said collector rings and the other set electrically connected to the other collector ring, means for electrically connecting the delivery conductors to different conductive segments of the commutator ring, and means for rotating said commutator ring at a speed bearing a constant ratio to the rate of change of phase in the supply conductors, said rotating means consisting of a motor having a bi-polar rotor and a quadri-polar field, the field poles being excited by windings connected to the delivery conductors and so wound that adjacent poles will have opposite polarity, the poles of the rotor being excited by coils connected respectively to the collector rings and so wound that the outer ends of the rotor poles will have the same polarity.

4. A rectifier comprising two collector rings, alternating current supply conductors connected thereto, delivery conductors each provided with a brush, a commutator ring coöperating with said brushes, the conductive segments of said commutator being connected alternately to said collector rings and driving means for said commutater, said driving means being a quadri-polar motor having a rotor provided with two poles, the field poles having exciting coils so wound and connected to the delivery conductors that adjacent poles will have opposite polarities, the rotor poles being so wound and connected to the supply conductors that the outer ends of the rotor poles will have the same polarity.

1,154,059. FOOD PRODUCT. CLAUDE A. J. ROSELL, New York, N. Y., assignor to Turco-Halvah Company (Inc.), New York, N. Y., a Corporation of New York. Filed Mar. 10, 1915. Serial No. 13,342. (Cl. 99—11.)

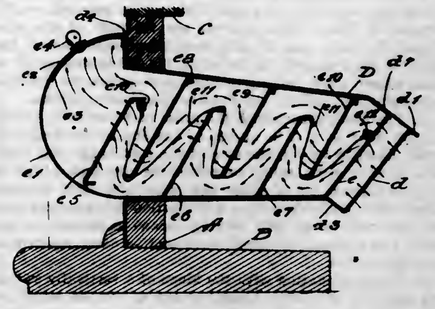
1. A food product containing maize oil, ground oleaginous seed and sweetening agent in proportions to form a solid friable compound.

2. A food product containing maize oil, ground oleaginous seed, corn syrup and sucrose in proportion to form a solid friable compound.

3. A food product containing maize oil, ground sesame seed, corn syrup and sucrose in proportion to form a solid friable compound.

4. A food product containing maize oil, ground sesame seed, ground peanuts, corn syrup and sucrose in proportion to form a solid friable compound.

1,154,060. WINDOW-VENTILATOR DUST-COLLECTING MECHANISM. NILA M. ROSENDAHL, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Jan. 30, 1911. Serial No. 605,349. (Cl. 98—33.)



1. A window ventilator dust catching mechanism comprising a zigzag strip of cloth, and means coöperating therewith, serving to cause the air to follow the zigzag course of the cloth.

2. A window ventilator dust catching mechanism comprising a zigzag strip of cloth, and means coöperating therewith, serving to cause the air to follow the zigzag course of the cloth, said means including a series of perforated plates.

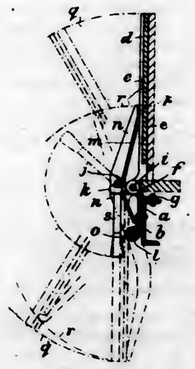
3. A window ventilator dust catching mechanism comprising a zigzag strip of cloth, and means coöperating therewith, serving to cause the air to follow the zigzag course of the cloth, said means comprising a series of plates which deflect the air and hold said cloth in position.

4. A window ventilator dust-catching mechanism arranged for causing the air to zigzag up and down in passing through the ventilator, said mechanism comprising a zigzag strip of cloth arranged for dividing the air into upper and lower currents, and upper and lower plates holding the cloth in position, said upper plates alternating with the lower plates and providing passages for successively impinging the air current against the cloth.

5. A window ventilator dust-catching mechanism arranged for causing the air to zigzag up and down in passing through the ventilator, said mechanism comprising a flexible sheet of porous material arranged for dividing the air into upper and lower currents, and means providing inlets for both of said currents of air.

[Claims 6 and 7 not printed in the Gazette.]

1,154,061. CAR-DOOR HINGE AND FASTENER. PEDRO CELESTINO SACCAGGIO, Talleres, Ferro Carril Sud, Argentina, assignor to J. Stone & Company Limited, Deptford, England. Filed Jan. 26, 1914. Serial No. 814,396. (Cl. 16—106.)



1. The combination with the hinge of a vertically swinging car door, of a strut hinged at one end to the wagon at some distance from the fulcrum of the said hinge, the other end of said strut being connected to the door in such manner as to allow the hinge and strut to turn about their respective axes and means for holding said strut and with it the door in the closed position.

2. The combination with the hinge of a vertically swinging car door, of a strut hinged at one end to the wagon at some distance beyond the axis of the said hinge, the other end of said strut being connected to the door hinge in such a manner as to allow the hinge and strut to turn about their respective axes, a projection on the fixed part of the door hinge and locking means mounted on the strut and adapted to engage with and be disengaged from said projection.

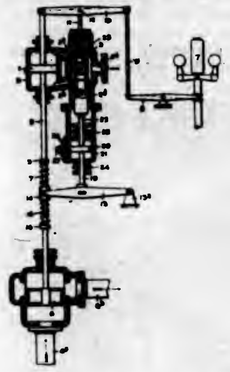
3. The combination with the hinge of a vertically swinging car door, of a strut hinged at one end to the wagon at some distance from the axis of the said hinge, the other end of said strut being connected to the hinge in such a manner as to allow the door and strut to turn simultaneously about their respective axes, a projection on the fixed part of the door hinge and a locking cam rotatably mounted on the strut and adapted to be engaged with and disengaged from said projection.

4. The combination with the hinge of a vertically swinging car door, said hinge comprising a forked member pivoted to the fixed hinge part on the wagon, of a rigid strut hinged at one end to the wagon at some distance below the axis of the door hinge, and slidably connected at the other end to the hinge in such a manner as to allow the door and strut to turn simultaneously about their respective axes, a projection on the fixed part of the door hinge, a locking cam rotatably mounted on the strut and adapted to engage with said projection, and a lever connected with said cam and adapted to disengage the latter from said projection.

5. The combination with the hinge of a vertically swinging car door, said hinge comprising a forked member pivoted to the fixed hinge part on the wagon, of a rigid strut hinged at one end to the wagon at some distance below the axis of the door hinge, the other end of said strut having lugs, said lugs loosely and slidably embracing the hinge part on the door in such a manner as to allow the door and strut to turn simultaneously about their respective axes, a projection on the fixed part of the door hinge, and a locking cam rotatably mounted on the strut and adapted to engage with said projection.

[Claims 6 and 7 not printed in the Gazette.]

1,154,062. SPEED-GOVERNING MECHANISM. FREDERICK SAMUELSON, Rugby, England, assignor to General Electric Company, a Corporation of New York. Filed Mar. 7, 1914. Serial No. 823,219. (Cl. 121—112.)



1. A governing mechanism for prime movers comprising a fluid admitting valve means, a motor for actuating it, a pilot valve controlling the motor, a governor for the pilot valve, and a device that tends to prevent overtravel of the motor, in combination with a ported sleeve that surrounds the pilot valve and through whose ports fluid flows to the motor, means moving in response to load changes on the prime mover for adjusting the position of the sleeve with respect to the pilot valve in a direction tending to retard the shutting off of the fluid by the valve, and means for retarding the movement of such adjusting means.

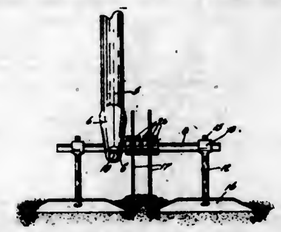
2. A governing mechanism for prime movers comprising a fluid admitting valve means, a motor for actuating it, a pilot valve controlling the motor, a governor for the pilot valve, and a follow-up device, in combination with a ported sleeve that surrounds the pilot valve and through whose ports fluid flows to the motor, a lever yieldingly connected at one end to the piston rod, a connection between said lever and the ported sleeve, a pivot for said lever, and means for retarding the movement of said lever.

3. A governing mechanism for prime movers comprising a fluid admitting valve means, a motor for actuating it, a pilot valve controlling the motor, a governor for the pilot valve, and a follow-up device, in combination with a ported sleeve that surrounds the pilot valve and through whose ports fluid flows to the motor, a lever yieldingly connected at one end to the piston rod, a connection between said lever and the ported sleeve, a pivot for said lever, and a dash pot for retarding the movement of said lever.

4. A governing mechanism for prime movers comprising valve means for admitting motive fluid to the prime mover, a motor for actuating said means having a piston and a piston rod, a pilot valve for the motor, a speed governor, a floating lever, means connecting the lever to the governor, the pilot valve and the piston rod, a movable ported seat for the pilot valve, a lever, a pivot or fulcrum for the lever, means for yieldingly connecting the lever to the piston rod, means connecting the lever to said seat, and means for retarding the movements of the lever.

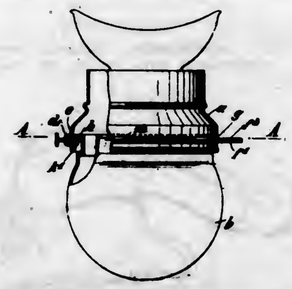
1,154,063. FENDER FOR CULTIVATORS. PHILIPP SCHMITT, Port Orchard, Wash. Filed Mar. 30, 1914. Serial No. 828,118. (Cl. 97—13.)

The combination with a ground-working implement, of a guard plate, said plate having its lower edge normally parallel with the ground and having the forward portion thereof of increased side elevational area relative to the rear end, the upper edge of the guard plate being inclined rearwardly and downwardly, said plate having an elongated opening in the forward end with the major axis arranged in a direction transverse to the major axis of the guard, said plate adapted to be loosely mounted on said implement, and spacing collars arranged to limit the lateral movement of said plate on said implement,



said plate adapted to be bodily moved relative to said element to compensate for unevenness of the ground.

1,154,064. DEVICE FOR SECURING BELLS, GLOBES, CHIMNEYS, OR THE LIKE TO LAMPS. LUDWIG SEVERIN, Hagen, Germany. Filed Sept. 2, 1913. Serial No. 787,721. (Cl. 240—115.)

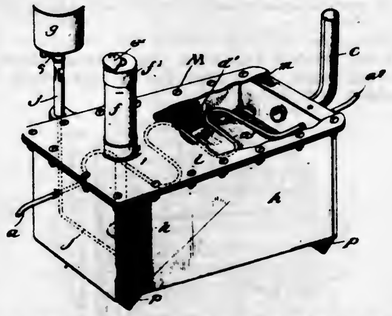


In combination with a lamp shade having an annular flange adjacent its upper edge, and a lamp casing having a slot in one of the walls thereof, a lamp shade fastening means comprising a resilient clamping member having right angled end portions extending through the slot, said clamping member having eyes intermediate its length, set screws extending through the casing and through the eyes of the clamping member, a portion of each screw extending beyond the plane of the clamping member and engaging the annular flange of the shade, said set screws adapted to support the rear portion of the shade and at the same time adjust the tension of the clamping member.

1,154,065. TANK-HEATER. THEODORE SHAVER, Ireton, Iowa; Elisabeth Shaver administratrix of said Theodore Shaver, deceased. Filed Dec. 31, 1914. Serial No. 879,929. (Cl. 126—360.)

1. A tank heater comprising a box adapted to be submerged in the water to be heated and forming an internal heating chamber, said box having a down draft air inlet pipe projecting a distance above the box and having an elevated top inlet opening and depending a distance into the box and at its lower end having an air outlet opening, an outlet pipe from said box having an elevated discharge opening, a burner in the box located immediately below said air outlet opening, whereby the burner flame will be spread by the air from said outlet opening, and water circulating means carried by the box and exposed to the heat generated by said burner.

2. A tank heater comprising a water tight box adapted to be submerged in the water to be heated, said box having a well rising therefrom and at its lower end opening thereinto, a closure for the upper end of said well provided with an air inlet tube depending through the well and into the interior of the box, a discharge flue from the box having an elevated discharge opening, a burner in the box, located immediately below the lower end of said tube to receive the down draft of air therefrom and a water circulating conduit extending through the box with its portion within the box exposed to the heat of the burner, substantially as described.



3. A tank heater comprising a box adapted to be submerged in the water to be heated and provided with a vertical well rising from an opening through the box top, a removable closure for the upper end of said well having an air inlet opening and a depending air tube, said tube being removable with said closure, a burner in the box arranged below said well, a discharge pipe extending from the interior of the box to an elevated point, and a water circulating coiled pipe in the box and opening into the exterior of the box and arranged above and exposed to the heat of said burner, said air tube extending down between the convolutions of said pipe and having its lower discharge end arranged directly above said burner.

4. A tank heater comprising a box having a water circulating pipe extending longitudinally therethrough, a partition in the box forming an air chamber and heat directing walls below said pipe, a burner in one end portion of the box, and means for maintaining a draft through said box to support combustion.

5. A tank heater comprising a longitudinally elongated box having a longitudinally inclined removable top, a longitudinally inclined water circulating pipe extending throughout the length of the upper portion of said box with its ends open to the exterior thereof, said pipe within the box formed with oppositely extending lateral loops, an air supply pipe carried by said top and rising therefrom, an outlet pipe from the rear end of the interior of the box to an elevated point, a burner in the lower portion of the front end of the box below said water circulating pipe and provided with a fuel supply pipe extending to an elevated point at the exterior of the box, and means within the box to the rear of said burner and below the portion of the water circulating pipe to the rear of the vertical plane of the burner to form the longitudinal flue in which said circulating pipe is arranged, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

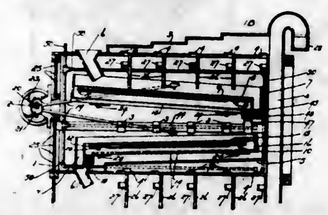
1,154,066. SHOE-LACE FASTENER. CHARLES B. SMITH, Crafton, Pa. Filed Mar. 1, 1915. Serial No. 11,421. (Cl. 24—121.)



A fastener for lacings or strings adapted to be secured to a shoe upper, and comprising a hollow shank formed with a head at its outer end, and a flange near its inner

end, said shank adjacent said flange being provided with transverse alining openings, a finger detachably mounted in said openings and having a portion projecting therefrom, a spring arranged within said hollow shank and having one end engaging said finger whereby the said finger is tensioned toward the shoe upper, that portion of the shank below said flange adapted to be upset, whereby the said fastener is secured to the said shoe upper.

1,154,067. FLOUR PURIFIER AND DRIER. GEORGE T. SMITH, Dallas, Tex. Filed Feb. 3, 1913. Serial No. 745,869. (Cl. 83—38.)



1. A flour purifier comprising a series of units, a series of sieves movable in each unit, a casing for said units having slots in one end for the admission of air and an air trunk closing the other end, and means in each unit for forcing a slight draft of air through said sieves uniformly throughout each unit, consisting of an air box mounted on said casing and communicating with said air trunk, a branch air trunk for each unit connected with the first mentioned air trunk, valves for said branch air trunk, and means for regulating said valves.

2. A flour purifier comprising a series of units, a series of sieves movable in each unit, a casing for said units having slots for the admission of air, a main air trunk, branch air trunks for each unit connected to said main air trunk for forcing slight drafts of air through said sieves and uniformly throughout each unit, and means for regulating the draft through said air trunks.

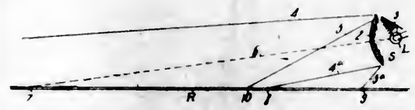
3. A flour purifier having a casing constructed into a series of units, reciprocating sieves swingingly mounted in each unit for moving partially ground wheat and flour in relatively thin layers, a chute for each sieve, an air trunk for each unit, vertical partitions extending across the upper part of the casing for each unit for causing even distribution of the air draft throughout each unit, said casing having slots for the admission of air, valves for controlling the passage of air through said trunks, a deposit chamber attached to said partitions and operatively disposed relative to said valves for determining the force of said air drafts through said passages.

4. A flour purifier comprising a series of units, a casing therefor, reciprocating sieves and chutes swingingly mounted on each unit, air trunks for forcing slight air drafts through each sieve, said casing having slots for the admission of air therethrough, a plurality of partitions vertically disposed in said casing for the even distribution of the air drafts throughout each unit, and valves for said air trunks, said branch air trunks being connected to said main air trunk and coöperating with said partitions, and means in connection with said partitions for determining the force of air passing through said valves.

5. A flour purifier having a series of units, a casing therefor, reciprocating sieves and chutes swingingly mounted in each unit for moving partially ground wheat and flour in relatively thin layers, means for creating a slight draft of air uniformly and through each sieve throughout each unit, means for controlling and distributing the draft in each unit consisting of vertically disposed partitions, a valve coöperating with each partition, and a deposit chamber carried by each partition operatively disposed relative to each valve for determining the force of the draft through each valve.

[Claims 6 to 22 not printed in the Gazette.]

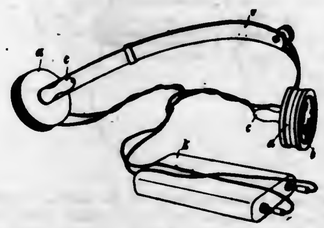
1,154,068. SIGNAL. CLARENCE S. SNAVELY, Edgewood borough, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed May 2, 1914. Serial No. 835,868. (Cl. 240—93.)



1. A signal comprising a source of light, a lens for projecting direct rays from said source for indicating at long range, and a plane reflector located at an angle to said lens and having a light diffusing surface for projecting rays from said source toward said lens for indications at short range.

2. A signal comprising a source of light, a lens for projecting direct rays from said source for indicating at long range, and a reflector located at an angle to said lens and having a light diffusing surface for projecting light from said source toward said lens for indicating at short range.

1,154,069. AUDIPHONE. CELESTIN SORET, Havre, France. Filed Oct. 5, 1912. Serial No. 724,192. (Cl. 179—107.)



1. In a magnetic audiphone, the combination of two audiphones each constituted by a receiving microphone and a transmitting telephone connected together in one and the same case the parts of which serve to connect together the parts of the said microphone and telephone and means for supporting each audiphone at the ear of the user.

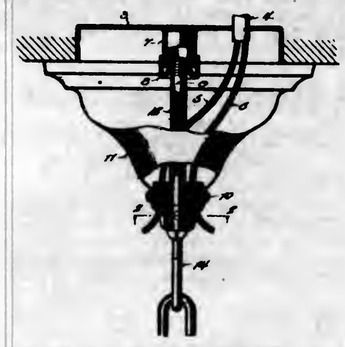
2. In a magnetic audiphone, the combination of two audiphones each constituted by a receiving microphone and a transmitting telephone connected together in one and the same case, which comprises a vibrating receiving plate and members for transmitting the sound to a transmitting plate arranged at the side of the ear-piece communicating with the ear, the ear-pieces of each audiphone being adapted to fit the ear so as to enable them to adhere to the ears naturally.

1,154,070. ELECTRIC-LIGHTING FIXTURE. PETER W. SPANCHER, Milwaukee, Wis. Filed May 15, 1915. Serial No. 28,305. (Cl. 240—85.)

1. An electric-lighting fixture-loop comprising a canopy fitting centrally counter-bored block of insulating material through which to extend an attaching-screw and provided with passages for current distribution wires, together with a screw insulating sleeve seated in the counterbore of said block.

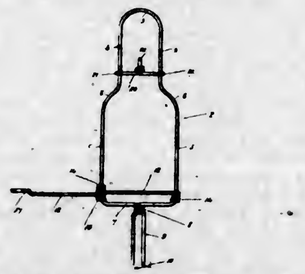
2. An electric-lighting fixture-loop comprising a canopy-fitting block of insulating material having a central bore through which to extend an attaching-screw, passages for current distribution wires and recesses for pivot-ends of a hanger; and a screw-insulating sleeve extending from the block.

3. An electric-lighting fixture-loop comprising a centrally counterbored canopy fitting block through which to extend an attaching-screw and provided with passages for



current distribution wires, together with a screw-insulating sleeve seated in the counterbore of said block.

1,154,071. LANTERN-HOLDER. JOAB STANFIELD and STEPHEN O. STANFIELD, Orange, Cal. Filed Apr. 29, 1915. Serial No. 24,717. (Cl. 240—89.)



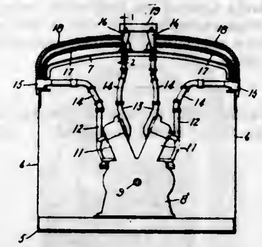
1. A lantern holder comprising a wire frame having at its bottom a crossbar and a spike for engaging with the ground, said frame having also a loop at its top, means for retaining the upper part of a lantern in the said loop, and curved bars connected to the lower part of the frame and adapted to retain the lantern on the crossbar.

2. A lantern holder comprising a wire frame having at its bottom a crossbar and a spike for engaging with the ground, said frame having also at its top a loop and parallel side portions, a link having guides slidable vertically on the said side portions and having a crosspiece at its middle part and being adapted to engage with the upper part of the lantern, and curved bars connected to the lower part of the frame and adapted to retain the lantern on the crossbar.

1,154,072. RADIATOR FOR MOTOR-CARS. HENRY W. STOCK, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed May 29, 1912. Serial No. 700,407. (Cl. 123—174.)

1. In a vehicle, the combination of an internal combustion engine located within the vehicle and having a fluid cooling system, a radiator made in two principal parts or sections located at opposite sides of the vehicle, receiving and delivering connections between each of said sections and said cooling system, so that the fluid from the latter may pass through them and give up heat, and, in addition, an overflow receptacle common to both sections of the radiator and located above them which is adapted to receive fluid temporarily forced upward from the radiator by movement of the vehicle or by steam generation in the fluid cooling system of the engine.

2. In a vehicle, the combination of an internal combustion engine having its cylinders arranged in sets and also having a cooling system for each set located within the vehicle, a radiator for each system outside the vehicle, receiving and delivering connections between each radiator and the corresponding cooling system, and, in addition, an overflow tank on the roof of the vehicle that is connected to both of them and is arranged to receive fluid expelled therefrom as a result of the generation of steam or of surging otherwise brought about and subsequently to return it.



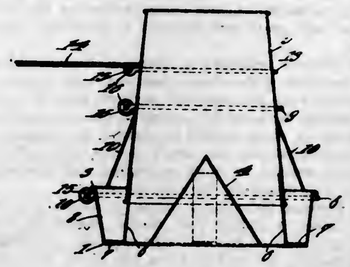
3. In a vehicle, the combination of an internal combustion engine carried thereby and having a fluid cooling system, a radiator comprising headers and connecting conduits located outside of said vehicle, receiving and delivery connections between said radiator and said cooling system, and, in addition, an overflow tank located above the radiator and connected to one of its headers through a relatively restricted opening.

4. In a vehicle, the combination of an internal combustion engine carried thereby and having a fluid cooling system, a radiator comprising headers and connecting conduits arranged in sets located outside of the vehicle, there being a baffler in one of the headers between the sets to distribute the fluid to the conduits and reduce the effects of surging, receiving and delivery connections between said radiator and said cooling system, and, in addition, an overflow tank located above the radiator and connected thereto at separate points.

5. In a vehicle, the combination of an internal combustion engine carried thereby and having a fluid cooling system, a radiator located on the roof of the vehicle and comprising two sections each with a plurality of headers connected by radiating conduits, receiving and delivery connections between said radiator and said cooling system, and, in addition, an overflow tank located above two of said headers and in open communication with both.

[Claims 6 and 7 not printed in the Gazette.]

1,154,073. HOG-FEEDER. CHARLES H. STOCKING, Audubon, Iowa. Filed Oct. 5, 1914. Serial No. 865,179. (Cl. 119—52.)



1. An animal feeder embodying an annular trough, a circular bin having its lower end entering the trough and supported therein, inclined dividing rods between the rim of the trough and the sides of the bin, and means for

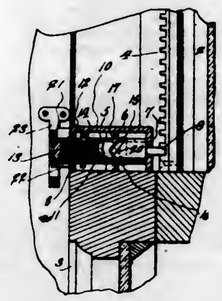
adjustably supporting the said rods in order that they may be slid around the trough.

2. An animal feeder embodying a pan, a circular bin supported therein and upstanding therefrom, rings mounted upon the rim of the pan and the bin, and rods having their terminals slidably engaging the said rings.

3. An animal feeder embodying a pan, a circular bin supported therein and upstanding therefrom, expansible rings mounted upon the rim of the pan and the bin, and inclined rods having terminal eyes slidably engaging the said rings.

4. An animal feeder embodying a pan having an inclined rim, an upwardly tapered bin supported above the bottom of the pan, rings embracing the rim of the pan and the bin, and inclined rods having terminal eyes slidably engaging the said rings.

1,154,074. FASTENER. EUGENE M. STRONG, Boise, Idaho. Filed Oct. 31, 1914. Serial No. 869,687. (Cl. 16—145.)



1. A fastener, including a casing, a sliding bolt, a sleeve receiving said bolt, said sleeve being slidably and rotatably mounted and provided with reverse spiral grooves, and studs carried by the bolt and engaging said grooves and adapted on rotation of the sleeve to transmit sliding motion to the bolt.

2. A fastener including a casing, a sleeve slidably and rotatably mounted therein and provided with reverse spiral grooves, a bolt slidably mounted in said sleeve, a spring inclosed within the sleeve for normally projecting the bolt, and studs carried by the bolt and engaging the slots in the sleeve for transmitting sliding motion to the bolt upon the rotation of said sleeve.

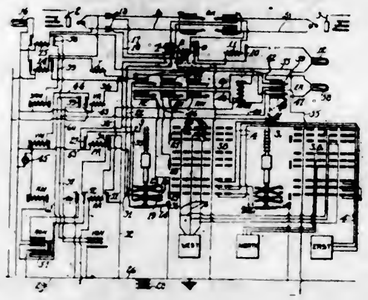
3. A fastener including a casing, a sleeve slidably and rotatably mounted in the casing and provided with reverse spiral slots and notches communicating with the ends thereof, a bolt slidably mounted in said sleeve, a spring within the sleeve to hold the bolt and sleeve in projected and normal positions, and studs carried by the bolt and engaging said slots and adapted to interlock with said notches.

4. A fastener including a casing, a sliding and rotary sleeve provided with reverse cam slots and notches communicating with the terminal portions thereof, a sliding bolt, a spring for normally projecting the bolt and retracting the sleeve, studs carried by the bolt and engaging said slots for transmitting the rotary motion of the sleeve into rectilinear motion to effect projection and retraction of the bolt, and means for turning the sleeve.

5. A fastener including a casing, a sliding and reciprocating sleeve, a sliding bolt, means, including cam elements upon one of the last-named parts, for imparting sliding motion to the bolt when the sleeve is rotated, a spring for normally projecting the bolt and retracting the sleeve, a projection upon the sleeve, and means adapted for engagement with said projection for rotating said sleeve.

[Claim 6 not printed in the Gazette.]

1,154,075. TELEPHONE SYSTEM. JOHN A. TAGGART, Rochester, N. Y., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Original application filed Dec. 29, 1913, Serial No. 809,148. Divided and this application filed Jan. 11, 1915. Serial No. 1,483. (Cl. 179—27.)



1. In a telephone system, the combination of a cord circuit, an automatic trunking switch, a relay to connect said switch to said cord circuit, said switch comprising a plurality of groups of contacts, each having a plurality of sets of contacts, each set of contacts being connected to an outgoing trunk and the groups of contacts extending to the different exchanges, one exchange for each group, a key for starting the actuation of the automatic switch, and devices operated by the key for actuating the switch to first pick out a desired group and then to make connection with the first idle set of contacts of the group.

2. In a telephone system, the combination of a cord circuit, an automatic trunking switch, a relay to connect said switch to said cord circuit, said switch having contacts arranged in separate groups, each corresponding with an exchange to which connection may be made through trunk circuits, each group of contacts comprising a plurality of sets of contacts, one for each of the trunks extending to the corresponding exchange, a selecting key for starting the actuation of the automatic switch and operating it to pick out one of the groups of contacts according to the selection effected by the switch, and devices for actuating the automatic switch in the selected groups to pick out the first idle trunk circuit of said group.

3. In an automatic telephone system, a plurality of subscribers' lines, a plurality of cord circuits grouped into an operator's position, each cord circuit comprising an answering plug, a calling plug and a supervising relay, a plurality of automatic trunking switches for each operator's position, each trunking switch having a plurality of groups of contacts, one for each exchange to which connection is to be made, and means to energize said relay to disconnect said automatic switch from said cord circuit.

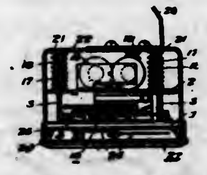
4. In an automatic telephone system, the combination of a plurality of automatic trunking switches for each operator's position, each trunking switch having a plurality of groups of contacts, one for each exchange to which connection is to be made, each group of contacts having a plurality of sets of contacts, one for each trunking circuit, extending to the corresponding exchange, corresponding contacts of the several automatic switches being multiplied together, and a single selecting switch for each position for connecting a desired automatic switch with a first selected group of contacts and thus extending the connection to a selected exchange, devices for actuating the desired automatic switch to make connection with the first idle set of contacts of said group, a cord circuit for each automatic switch, said cord circuit comprising an answering and a calling plug and means to connect said automatic switch to said answering plug, and means to disconnect said answering plug from said calling plug.

5. In a telephone system, the combination of a plurality of cord pairs, an automatic cranking switch connected

with each cord pair for extending the connection when desired to one of several exchanges, each automatic switch having a plurality of groups of contacts corresponding to said exchange and each group comprising a plurality of sets of contacts, one for each trunk extending to the corresponding exchange, a selecting key for actuating a desired one of the automatic switches to establish connection with the group of contacts determined by the selection of the key, and devices for moving the selected automatic switch to connect with the first set of idle contacts of said group.

[Claims 6 to 16 not printed in the Gazette.]

1,154,076. CLOCK. WILLIAM H. THOMPSON, Memphis, Tenn., assignor to Thompson Electric Clock Company, Memphis, Tenn., a Corporation of Tennessee. Original application filed Oct. 28, 1914, Serial No. 869,014. Divided and this application filed Mar. 15, 1915. Serial No. 14,489. (Cl. 58—53.)



1. In a clock, the combination with a case, of a removable movement having a dial plate which bears against and is arrested by the front part of the case, and whose rear or inner part is free from the case, and cushioning and shock absorbing spring means carried by, and self-contained with, the movement and interposed between the rear part of the movement and the case, serving to normally hold the dial plate against the front part of the clock, said movement being adapted to be bodily removed, with the cushioning means, from said case.

2. In a clock, the combination with a case, of a movement having a dial plate which bears against and is arrested by the front part of the case, and whose rear or inner part is free from the case, retaining guides carried by the frame of the movement at the rear thereof, and coil springs surrounding said retaining guides and bearing against the case, whereby the movement is spring-cushioned in the case.

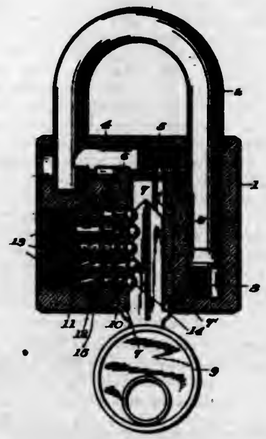
3. In a clock, the combination with a case, of a movement having a dial plate which bears against and is arrested by the front part of the case, and whose rear or inner part is free from the case, retaining guides carried by the rear of the frame of the movement, and coil springs surrounding said retaining guides, the inner coils of said springs being engaged with the guides and the remaining portions of the springs being loose on the guides, adapted for relative movement thereon, and bearing against the case, whereby the movement is spring-supported in said case.

4. In a clock, the combination of a case, movement frame plates, pillars interposed between the frame plates and having a screw connection with one of them, retaining guides having a screw connection with said pillars, and coil springs surrounding said retaining guides and bearing against the other of said frame plates and against the case, whereby the frame plates are spring-supported in the case and the joints of the guides and pillars are locked.

5. In a clock, the combination with a case, of a movement having a dial plate which bears against and is arrested by the front part of the case, and whose rear or inner part is free from the case, said movement comprising frame plates, pillars connecting the frame plates, shouldered retaining guides projecting freely from the rear of the frame plates and engaged with the pillars at their inner ends, and coil springs surrounding said retaining guides, the inner coils of said springs being located between the shoulders of the retainers and the frame plates and the remaining portions of the springs being loose on the guides, adapted for relative movement thereon, and bearing against the case, whereby the movement is spring-supported in said case and the joint between the retainers and pillars is locked.

1,154,077. [WITHDRAWN.]

1,154,078. LOCK. JAMES ROSS UPTON, Peoria, Ill. Filed Mar. 8, 1915. Serial No. 12,737. (Cl. 70—96.)



1. A cylinder lock including in combination, a bolt, a cylinder having means thereon for actuating the bolt, said cylinder being adapted to be actuated by key, said cylinder and the lock having a plurality of recesses or sockets normally in alinement, a plurality of pin tumblers mounted in said recesses or sockets and normally held toward said cylinder, and means provided in connection with said recesses or sockets and said pin tumblers to prevent the sealing of the recesses or sockets upon the application of a lubricant to said lock.

2. A cylinder lock including in combination, a bolt, a cylinder having means thereon for actuating the bolt, said cylinder being adapted to be actuated by key, said cylinder and the lock having a plurality of recesses or sockets normally in alinement, a plurality of pin tumblers mounted in said recesses or sockets and normally held toward said cylinder, said pin tumblers having passages so as to permit the escape of air and lubricant to prevent the sealing of said recesses or sockets upon the application of a lubricant to the lock.

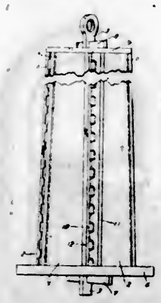
3. A cylinder lock including in combination, a bolt, a cylinder having means thereon for actuating the bolt, said cylinder being adapted to be actuated by key, said cylinder and the lock having a plurality of recesses or sockets normally in alinement, a plurality of pin tumblers mounted in said recesses or sockets and normally held toward said cylinder, said pin tumblers having longitudinal passages and also having transverse passages so as to permit the escape of air and lubricant to prevent the sealing of said recesses or sockets upon the application of a lubricant to the lock.

4. As an article of manufacture, a pin tumbler of cylindrical shape adapted to be mounted in a socket or recess in the lock and having a longitudinal passage so that when a lubricant is applied to said lock, the recess or socket in which the pin tumbler is mounted, will not be sealed.

5. As an article of manufacture, a pin tumbler of cylindrical shape having its edges beveled so that by placing tumblers in juxtaposition to each other, an annular pas-

sage therearound is provided, said pin tumbler also having a longitudinal passage, said passages providing means for preventing the sealing of the sockets and recesses on the application of a lubricant to the lock.

1,154,079. CLOSURE FOR JOINTS OF SECTIONAL COLLAPSIBLE CORES. JOHN B. WALKER, Birmingham, Ala. Filed Feb. 27, 1915. Serial No. 11,098. (Cl. 22—171.)



1. In a joint for collapsible core barrels, a plurality of spaced inwardly inclined projections along the adjacent edges of the barrel sections, the projections on one core section being disposed opposite and adapted to partially close the spaces between the projections on the other core section, substantially as described.

2. In a joint for collapsible core barrels, a series of inturned fingers along each side edge of a barrel section, the fingers on one section edge being disposed opposite the spaces between the fingers of an adjacent section edge, and the ends of the fingers on each section being spaced from the other section.

3. In a venting joint closure for collapsible cores, a series of fingers disposed along each core section edge at the joint, the fingers along the spaced edges of a joint being disposed in staggered relation and in different planes.

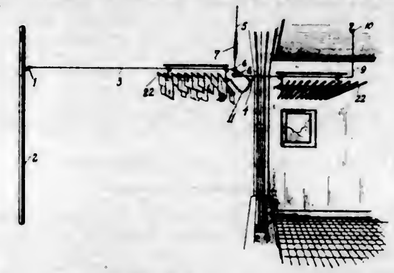
4. The combination, with a sectional core and means to contract the sections toward each other, of a venting joint closure for the sections when expanded formed by a series of spaced fingers, the fingers on one section being disposed opposite to and being narrower than the opposite spaces between fingers on the other section, and one set of fingers being disposed to the outside of the other set of co-acting fingers, substantially as described.

5. A joint closure for collapsible core barrels comprising two co-related sets of fingers which extend only part way across the joint when the barrel is expanded and are substantially of equal width and taper outwardly in thickness, the fingers of one set being disposed opposite to the spaces between the opposite set of fingers, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

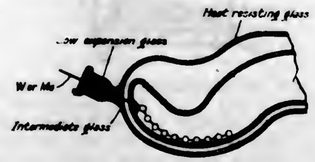
1,154,080. CLOTHES-DRIER. ALOYS WAYDITCH, New York, N. Y. Filed Apr. 15, 1914. Serial No. 832,064. (Cl. 68—12.)

The combination with a clothes line, of a multitude of racks consisting each of a pair of flexible hangers, a pole passed through the lower ends of said hangers underneath the clothes line parallel to the same, transverse clothes pins removably attached to said pole, adapted to take up the clothes, a guard rod supported by the upper ends of said hangers, superposed to the clothes line and parallel therewith, adapted to prevent the clothes becom-



ing entangled with the clothes line, and means for attaching said racks to one another.

1,154,081. LEADING-IN CONDUCTOR. EZECHIEL WEINTRAUB, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 14, 1912. Serial No. 697,192. (Cl. 176—50.)

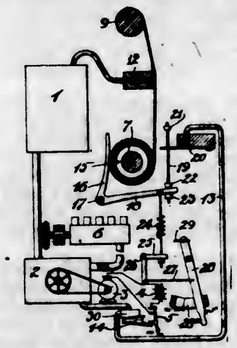


1. A container, at least one region of which consists of boro-silicate glass having a coefficient of expansion of about 3 to 5×10^{-6}, and a tungsten conductor sealed therein.

2. An evacuated container, one region at least of which consists of a magnesium boro-silicate, and a tungsten conductor sealed in said silicate.

3. The combination of a sodium-magnesium boro-silicate glass, having a coefficient of expansion of about 3.5 to 4.5×10^{-6} and a tungsten conductor sealed therein and adhering at its surface to said glass.

1,154,082. AUTOMATIC STOP FOR POWER-DRIVEN PLAYER MECHANISMS. FRANK C. WHITE, Meriden, Conn., assignor to The Wilcox & White Company, Meriden, Conn., a Corporation of Connecticut. Filed Nov. 28, 1914. Serial No. 874,370. (Cl. 84—166.)



1. In an automatic power-driven mechanical player mechanism, an exhauster, an electric motor for driving said exhauster, an electric motor circuit, a switch therein, music-roll mechanism, a wind motor for driving the same, said wind motor being in communication with said exhauster, said music-roll mechanism including a winding spool, a driving connection between said wind motor and winding spool, reversing means therefor, a power-pneumatic arranged to coöperate with said circuit switch to throw off the same, with means for automatically putting said power-pneumatic in communication with said exhauster when the winding spool is empty.

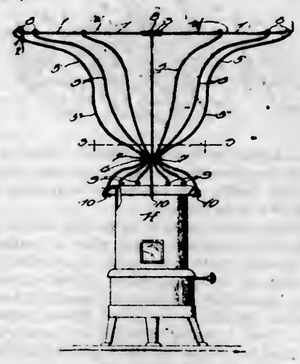
2. In an automatic power-driven mechanical player mechanism, an exhauster, an electric motor for driving said exhauster, an electric motor circuit, a switch therein, music-roll mechanism, a wind motor for driving the same, said wind motor being in communication with said exhauster, said music-roll mechanism including a winding spool, a driving connection between said wind motor and winding spool, reversing means therefor, a power-pneumatic arranged to coöperate with said circuit switch to throw off the same, with means for automatically putting said power-pneumatic in communication with said exhauster when the winding spool is empty, comprising a duct leading to said power-pneumatic, said power-pneumatic being distended when said duct is closed, a yielding valve to normally close said duct, and means for automatically opening said valve, comprising a movable member arranged adjacent to said winding spool, a notch in that part of the winding spool arranged to carry a note-sheet and in front of said movable member, a movable lever connected with said reversing means and with said movable member through the medium of a spring, said movable member being arranged to vary the tension of said spring, a connection between said movable member and said valve, the tension of said spring being sufficient to overbalance the resistance of said yielding valve when said lever is in one position, whereby when the winding spool is empty the movable member may drop into said notch and permit said spring to open said valve, whereby said power-pneumatic will be collapsed to throw off said switch.

3. In an automatic power-driven player mechanism, an action chest, a wind motor, an exhauster in communication with both the wind motor and action chest, an electric motor for driving said exhauster, an electric motor circuit and a switch therefor, music-roll mechanism including a tracker and a note-sheet winding spool and spindle, a driving connection between said motor and said spindle, reversing means therefor, a deep notch in the face of the winding spool and in that part thereof designed to be covered by a note-sheet when the player is in operation, a movable member adjacent to said notch and arranged to project therein when a note-sheet has been withdrawn from over the notch on said winding spool, a movable operating lever connected with said reversing means and having a playing position, and a re-roll position, a spring connection between said movable member and lever, a switch-operating power-pneumatic, a connection from said power-pneumatic to said exhauster, said connection being normally closed and said power-pneumatic distended, with means controlled by said movable member for putting said power-pneumatic in operative communication with said exhauster to cause the collapse of said pneumatic to throw said switch, open the motor circuit and stop the motor.

4. In an automatic power-driven player mechanism, an action chest, a wind motor, an exhauster in communication with both the wind motor and action chest, an electric motor for driving said exhauster, an electric motor circuit and a switch therefor, music-roll mechanism including a tracker and a note-sheet winding spool and spindle, a driving connection between said motor and said spindle, reversing means therefor, a deep notch in the face of the winding spool and in that part thereof designed to be covered by a note-sheet when the player is in operation, a movable member adjacent to said notch and arranged to project therein when a note-sheet has been withdrawn from over the notch on said winding spool, a movable operating lever connected with said reversing means and having a playing position, and a re-roll position, a spring connection between said movable member and lever, a switch-operating power-pneumatic, a connection from said power-pneumatic to said exhauster, said connection being normally closed and said power-pneumatic distended, with means controlled by said movable member for putting said power-pneumatic in operative communication with said exhauster to cause the collapse of said pneumatic to throw said switch, open the motor circuit and stop the motor, said lever being movable to a position to relieve the tension on the spring connection between it and said movable member when said lever stands in the playing position.

5. In an automatic power-driven player mechanism, an exhauster, an electric driving motor, a motor circuit and a switch therefor, a switch-operating power-pneumatic normally distended, a connection from said power-pneumatic to said exhauster, said connection being normally closed, music winding mechanism including a winding spool and a winding arbor, a wind motor operated by said exhauster to drive said spool and arbor, a connection between said motor and said spool and arbor, means for reversing the direction of drive of said spool and arbor, means for putting said power-pneumatic in communication with said exhauster when said winding spool is empty, including a lever pivotally mounted adjacent to the peripheral face of that part of the roll arranged to be covered by a note-sheet, a deep notch in that part of the roll adjacent to said lever, a reversing lever for said reversing means, a spring connection between said lever and said manually movable device, a controlling valve spring-pressed so as to be normally closed, a connection between said valve and said lever, the tension of the spring connection between said manually operable member and said lever being insufficient to overcome the tension of the valve when said lever is in one position and being sufficient to overbalance the tension of said valve when said lever is in another position.

1,154,083. CLOTHES-RACK. MARIE W. YELA, Kendallville, Ind. Filed Apr. 5, 1915. Serial No. 19,350. (Cl. 126—332.)



1. A foldable clothes rack comprising an annular supporting member, a plurality of arms slidably connected therewith and extending radially therefrom, chains connecting all of said arms except two, means for fastening said free arms together, supporting means for said arms rigidly connected therewith, and means for clamping said supporting means to a support.

2. A foldable clothes rack comprising an annular supporting member, a plurality of arms slidably connected therewith and extending radially therefrom, chains connecting all of said arms except two, means for fastening said free arms together, supporting rods connected with the outer ends of said arms, means for connecting said supporting rods, and means for detachably connecting said rods with a support.

3. A foldable clothes rack comprising vertically spaced annular supporting members, a plurality of arms slidably connected with the uppermost member and extending ra-

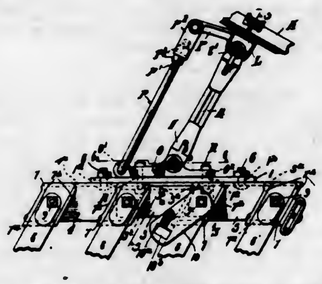
dially therefrom, chains connecting all of said arms except two, means for fastening said free arms together, supporting rods secured at one end to the outer ends of said arms, the other ends of said rods being slidably connected with the lowermost annular supporting member, and support engaging feet secured to the last named ends of said rods whereby the rack is held securely to a support.

4. A foldable clothes rack comprising a supporting member, arms slidably connected therewith and extending radially therefrom, chains connecting all of said arms except two, means for fastening said free arms together, supporting rods fixedly connected with the outer ends of said arms, said rods being provided at their free ends with support engaging feet.

5. A foldable clothes rack comprising a supporting member, a plurality of spaced arms slidably connected therewith and extending radially therefrom, supporting rods connected with the outer ends of said arms, said rods being provided at their free lower ends with support engaging legs, some of said legs being longer than others and provided at their extremities with securing hooks, the shorter legs being provided with feet for bearing on a support and coöperating with the hooks of the other legs to clamp the rack securely to a support.

[Claims 6 to 10 not printed in the Gazette.]

1,154,084. CULTIVATOR. WILLIAM L. BEALL, Albion, Mich., assignor to Gale Manufacturing Company, Albion, Mich. Filed Sept. 17, 1914. Serial No. 862,212. (Cl. 97—44.)



1. The combination with a cultivator frame, of a harrow attachment comprising beams, extensible plow frames provided with teeth, and means for adjusting said plow frames relative to said beams.

2. The combination with a cultivator frame, of a harrow attachment comprising a plurality of beams pivotally connected to said cultivator frame for vertical and horizontal movement, carrying plates pivotally connected to said beams, means for adjusting the angle of the carrying plates relative to the beams, plow frames provided with teeth and means provided between the plow frames and carrying plates for adjusting the angle of the plow frames relative to the surface of the ground.

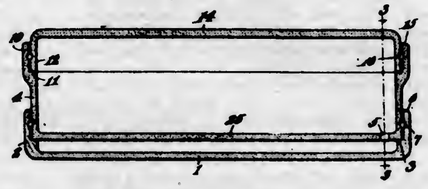
3. The combination with a cultivator frame, of a harrow attachment comprising beams, extensible plow frames provided with teeth, and means for adjusting said plow frames and teeth relative to the line of draft and also to the surface of the ground over which the device is traveling.

4. The combination with a cultivator frame, of a harrow attachment comprising beams, plow frames provided with teeth and connected with said beams, said plow frames each consisting of a flat plate, a main angle bar, and subsidiary angle bars adjustably secured between said flat plate and main angle bar.

5. The combination with a cultivator frame, of a harrow attachment comprising beams pivotally connected to said cultivator frame, and plow frames provided with teeth secured to said beams, each of said plow frames consisting of a flat plate, a main angle bar and subsidiary angle bars, longitudinally extending slots provided in said subsidiary angle bars, apertures provided in said flat plate and main angle bar, and means passing through said slots and said apertures for securing said plate and bar together.

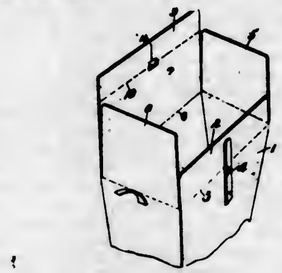
[Claims 6 to 9 not printed in the Gazette.]

1,154,085. CEMENT BURIAL-VAULT. THOMAS BERRY and WILLIAM BREYMAIER, Bucyrus, Ohio. Filed Dec. 10, 1913. Serial No. 805,825. (Cl. 72—7.)



A mortuary receptacle comprising a false bottom having an upstanding flange provided with an internal shoulder; a case resting on the shoulder and spaced from the flange to define a slot, the case including a main bottom spaced from the fake bottom, the case having an upstanding flange provided with an internal shoulder; and a lid resting on the shoulder of the case and spaced from the flange of the case to define a slot, the flange of the false bottom and the case proper, and the flange of the case and the lid, having oppositely disposed grooves opening into the respective slots, the sets of grooves being spaced equally from the respective shoulders, and the case being removable, whereby when the lid rests upon the shoulder of the flange of the false bottom, the groove of the lid will be disposed opposite to the groove in the flange of the false bottom.

1,154,086. PAPER PAIL OR BOX. CHARLES T. BLOOMER, Newark, N. Y. Filed Mar. 25, 1912. Serial No. 686,031. (Cl. 229—25.)



A four sided paper pail, the front wall having a relatively short stub flap, the side walls having flaps adapted to fold over the mouth of the pail, the stub flap being foldable over the respective edges of the side flaps, the rear wall having closure flaps to fold over the side and stub flaps, the rear closure flap having a supplemental flap at its free end and an aperture at the basal line of the supplemental flap extending into both the closure and supplemental flaps, and a bendable tongue attached to the outer face of the front wall and projecting above the mouth of the pail, the projecting portion of the tongue and the stub flap being of approximately equal length, whereby when the side flaps are folded over the mouth of the pail, the rear closure flap may be swung upon the stub flap in order that the free end of the tongue may be readily started through the said aperture, and so that the stub flap may then be folded over the side flaps to permit the rear closure flap to swing to closed position.

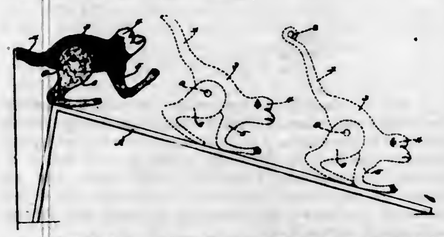
1,154,087. DOOR-BRACE. NATHANIEL BOHANNON, Chase City, Va. Filed May 18, 1915. Serial No. 28,874. (Cl. 20—38.)



1. A door brace consisting of a pair of flat bars having overlapping inner ends standing on edge and pivotally connected, each of said bars being twisted substantially midway of its length whereby the outer portions of the bar are parallel with the pivot of said bars and are at right angles to the inner portions, the outer extremities of said bars being serrated to positively engage the stile and rail of a door.

2. A door brace consisting of a pair of flat bars having overlapping inner ends pivotally connected, and having their intermediate portions twisted so that one part of each bar stands at substantially right angles to the remaining portion of said bar, one of said bars having a lug adapted to engage the top surface of the other member and to serve as a stop for limiting the movement of the bars in one direction.

1,154,088. GRAVITY TRAVELING TOY. JOSEPH T. BRENEMAN, Lancaster, Pa. Filed June 21, 1915. Serial No. 35,287. (Cl. 46—40.)



1. A hopping toy adapted to travel down an incline by the force of gravity and comprising a body portion and a rear portion, these two parts being pivotally connected at a point slightly to the rear of the center of gravity of the former, said body portion being provided with a fulcrum about which the body may rock.

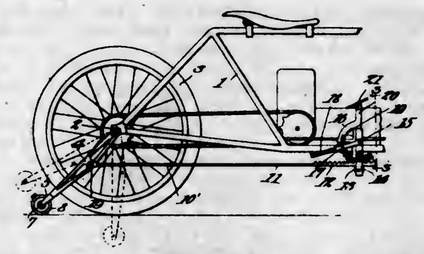
2. A gravity hopping toy comprising a body portion and a pair of legs pivotally connected thereto at a point to the rear of the center of gravity of said body portion, said body portion being provided with a fulcrum about which the body may rock and said legs carrying lugs adapted to strike against the body portion of said fulcrum in their extreme forward position.

3. A hopping toy comprising a body portion and a pair of legs pivotally connected thereto at a point slightly to the rear of the center of gravity of the body portion, said legs carrying integral lugs adapted to strike against the body portion in their extreme forward position, and said body portion being provided with a fulcrum about which it may rock, in combination with an inclined surface down which said toy travels.

4. A hopping toy comprising a body portion and a pair of legs pivotally connected thereto at a point to the rear of the center of gravity of the body portion, said body portion being provided with a fulcrum on which it may rock and said legs being provided with a stop limiting the upward movement of said body portion.

5. A hopping toy comprising a body portion and a pair of legs pivotally connected to the body portion at a point to the rear of the center of gravity of the body portion, lugs integral with said legs and adapted to strike against the body portion provided with a fulcrum about which it may rock on the forward movement of said legs, and a stop integral with said legs, limiting the upward movement of said body portion with relation to said legs, and transmitting to said legs the force of the impact of the body therewith to kick said legs forward.

1,154,089. BALANCING ATTACHMENT FOR MOTOR-CYCLES. ROBERT FRANCIS BRYANT, Los Angeles, Cal. Filed Jan. 29, 1915. Serial No. 5,085. (Cl. 208—78.)



1. The combination with a bicycle, of a balancing device therefor, including a wheel carrying frame pivotally connected to the hub of the rear wheel of the bicycle, an auxiliary frame connected to the bicycle frame, a pivoted segment carried thereby, means operated by the segment for swinging the wheel carrying frame into or out of contact with the ground, manually controlled means for actuating the segment, teeth upon the segment, and a pawl mounted on the auxiliary frame for engaging the teeth to lock the segment in selected position.

2. The combination with a bicycle, of a frame pivotally connected to the hub of the rear wheel of the bicycle, an auxiliary frame connected to the frame of the bicycle, a segment pivotally mounted upon the auxiliary frame, separate treadle carrying levers connected to the segment and disposed at angles to each other, means operated by the segment for swinging the pivoted frame into or out of engagement with the ground, and coöperating means upon the segment and the auxiliary frame for locking the segment in selected position.

3. The combination with the frame, rear axle and rear wheel of a bicycle, of a balancing device therefor, including a wheeled frame swingingly connected to the hub, a rod connected to the wheeled frame and extending forwardly of the bicycle, an auxiliary frame connected to the bicycle frame, a segment mounted therein for oscillation, coöperative means carried by the segment and the forward end of the rod whereby the rod is reciprocated as the segment is oscillated, manually controlled means for operating the segment, said segment being provided with a plurality of teeth upon one side thereof, and a spring actuated pawl mounted in the auxiliary frame and disposed to engage the teeth to lock the segment in selected position.

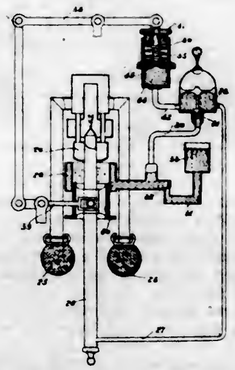
4. The combination with the frame, rear axle and rear wheel of a bicycle, of a balancing device therefor, including a wheeled frame swingingly connected to the hub, a rod connected to the frame and extending forwardly of the bicycle, an auxiliary frame connected to the bicycle frame, a segment mounted therein for oscillation, co-

operative means carried by the segment and the forward end of the rod whereby the rod is reciprocated as the segment is oscillated, two treadle carrying levers connected to the segment, said levers being at approximate right angles to each other, and coöperative means carried by the segment and the auxiliary frame for locking the segment in selected position.

5. The combination with the frame, rear axle and rear wheel of a bicycle, of a balancing device therefor, including a wheeled frame swingingly connected to the hub, a rod connected to the wheeled frame and extending forwardly of the bicycle, an auxiliary frame connected to the bicycle frame, a segment mounted therein for oscillation, cooperative means carried by the segment and the forward end of the rod whereby the rod is reciprocated as the segment is oscillated, two treadle carrying levers connected to the segment, said levers being at approximate right angles to each otner, said segment being provided with a plurality of teeth upon one side thereof, and a spring actuated pawl mounted in the auxiliary frame for engaging the teeth to lock the segment in selected position.

[Claims 6 and 7 not printed in the Gazette.]

1,154,090. HYDROCARBON-VAPOR LAMP. MIROSLAW BRYLINSKI, Brussels, Belgium. Filed May 8, 1913. Serial No. 766,368. (Cl. 158—36.)



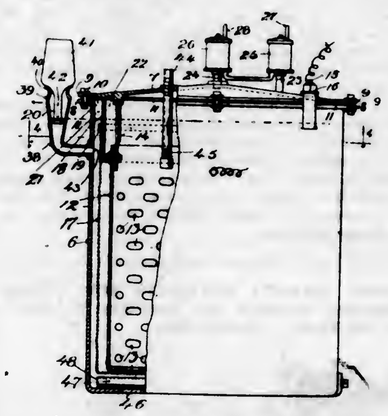
1. In a hydrocarbon vapor lamp, the combination of a closed pressure controlling reservoir, a vaporizing chamber, an open supply reservoir, a pipe connecting said vaporizing chamber with said supply reservoir, a suction valve in said pipe, resilient means for retaining under pressure the liquid to be vaporized, and means for obtaining the necessary pressure for insuring the circulation of the vapors and of the liquid by forcing a portion of the hydrocarbon contained in said vaporizing chamber into said closed reservoir by the action of the vapor apparatus.

2. In a hydrocarbon vapor lamp, the combination of a supply reservoir open to the atmosphere, a vaporizing reservoir, a pipe having a suction valve connecting said vaporizing reservoir with said supply reservoir, a closed pressure controlling reservoir, means for keeping under pressure the liquid in said pressure controlling reservoir to be vaporized, means for obtaining the desired pressure for insuring the circulation of the vapors and of the liquid by forcing a portion of the hydrocarbon contained in said vaporizing reservoir into said closed reservoir through the action of the vapor, and means for interrupting the delivery of hydrocarbon when the pressure in the reservoir containing hydrocarbon under pressure reaches a predetermined height.

3. In a hydrocarbon vapor lamp, the combination of a supply reservoir, a heated reservoir, a pipe having a suction valve connecting said supply and heated reservoirs, a closed reservoir, means for keeping under pressure the liquid to be vaporized, means for obtaining the necessary pressure by forcing into said closed reservoir through the action of the vapor a portion of the hydrocarbon contained in said heated reservoir, and means for effecting communication with the atmosphere in the reservoir in which the vapor is generated whereby the delivery of the hydrocarbon is interrupted.

4. In a hydrocarbon vapor lamp, the combination of an open supply reservoir, a vaporizing reservoir, a pipe having a suction valve connecting said vaporizing and supply reservoirs, a closed pressure controlling reservoir, means for keeping under pressure the liquid to be vaporized, means for obtaining the necessary pressure for insuring the circulation of the vapors and of the liquid by forcing into said closed pressure controlling reservoir through the action of the vapor a portion of the hydrocarbon contained in said vaporizing reservoir, and means for withdrawing from the action of the burner the reservoir in which is generated the vapor that produces the delivery or impulsion of the hydrocarbon thereby interrupting the delivery of the hydrocarbon from said supply reservoir.

1,154,091. ELECTROLYTIC APPARATUS. JOHN B. BURDETT, Chicago, Ill., assignor to Davis-Bournonville Company, New York, N. Y., and Chicago, Ill., a Corporation of New York. Filed Oct. 29, 1912. Serial No. 728,387. (Cl. 204—5.)



1. In an electrolytic apparatus, electrodes arranged one inside the other, a porous diaphragm interposed between said electrodes, a supply pipe connection extending through the wall of the outer electrode and means extending into said supply pipe to a point below and controlled by the normal level of the electrolyte within said electrode for regulating the supply of electrolyte through said supply connection.

2. In an electrolytic apparatus, an inner and an outer electrode, a porous diaphragm interposed therebetween, a supply connection through the side wall of the outer electrode, a supply source associated with said connection and having a delivery end extending into said connection and to a point below to be sealed by the normal level of electrolyte within the electrode.

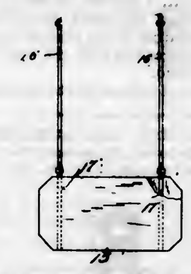
3. In an electrolytic apparatus, an inner and an outer electrode, a porous diaphragm interposed therebetween, and a supply connection extending through the side wall of the outer electrode, and a supply pipe extending into said connection and having its delivery mouth below the normal level of electrolyte contained in said electrode.

4. In an electrolytic apparatus, electrodes arranged one inside the other, a porous diaphragm interposed therebetween, a cover for the outer electrode having a depending flange said porous diaphragm being attached to and supported by said depending flange, said flange depending into the outer electrode and forming separated chambers in the upper end of said electrode, and a safety outlet pipe extending through the said cover and having its inner end immersed in the electrolyte when standing at normal level.

5. In an electrolytic apparatus, electrodes arranged one inside the other, a cover for the outer electrode, said cover having a depending flange extending into said electrode to a point intermediate the electrodes to form separated chambers in the upper end of said outer electrode, a porous diaphragm interposed between the electrodes, said diaphragm being attached to and supported by said flange, said diaphragm extending above the upper edge of the inner electrode.

[Claims 6 to 10 not printed in the Gazette.]

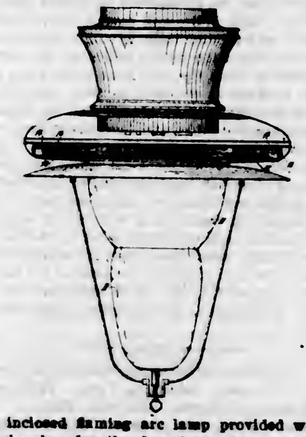
1,154,092. ELECTRODE FOR ELECTROLYTIC CELLS. JOHN B. BURDETT, Chicago, Ill., assignor to Davis-Bournonville Company, New York, N. Y., and Chicago, Ill., a Corporation of New York. Filed Oct. 29, 1912. Serial No. 728,388. (Cl. 204—5.)



1. An electrode for electrolytic cells comprising a pair of metal plates arranged in parallel relation adjacent each other, and circuit terminal rods or poles having extensions interposed between said plates and extending transversely thereacross, and homogeneously connected thereto, said plates being longitudinally crimped or corrugated.

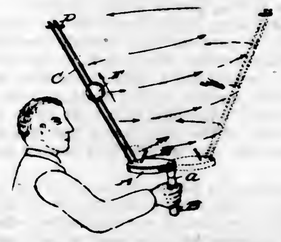
2. An electrode for electrolytic cells comprising a pair of metal plates arranged in parallel relation adjacent each other, and circuit terminal rods or poles having extensions interposed between said plates and extending transversely therecross, and homogeneously connected thereto.

1,154,093. INCLOSED FLAMING-ARC LAMP. TITO LIVIO CARBONE, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed July 28, 1911. Serial No. 641,145. (Cl. 176—52.)



In an inclosed flaming arc lamp provided with a condensing chamber for the deposition therein of the products of combustion, a hose of wire gauze within the condensing chamber in the path of the circulating gases, containing blocks of moisture absorbing material, substantially as described.

1,154,094. CLIMBING-BALL TOY. HARRY L. CASSARD, Philadelphia, Pa. Filed July 21, 1915. Serial No. 41,106. (Cl. 46—61.)



1. A gyratory toy comprising a base plate, an eccentric handle, parallel guides rising from said plate, and a rolling body tracking upon said guides.

2. A gyratory toy comprising a base plate, an eccentric handle, parallel guides rising from said plate, a rolling body tracking upon said guides, and a retaining device located on the base plate for holding the rolling body in position.

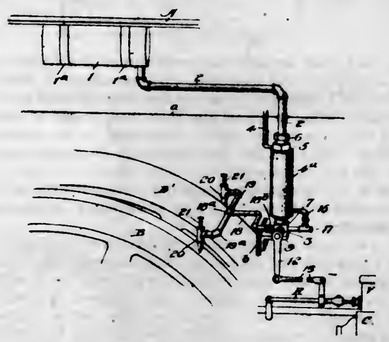
3. A gyratory toy comprising a base plate, an eccentric handle, parallel guides rising from said plate, and a rolling body tracking upon said guides, the guides being arranged at an inclination to the plane of the base plate.

4. A gyratory toy comprising a basic seat for a rolling body, an eccentric swiveling handle, parallel guides rising from the basic seat, and a freely rolling body tracking on the guides.

5. A gyratory toy comprising a basic support with eccentric swiveling handle, a guide fixed to the basic support, and a ball rising and falling on said guide from centrifugal action.

[Claim 6 not printed in the Gazette.]

1,154,095. LUBRICATING DEVICE. THOMAS J. CLAYTON, Port Arthur, Tex. Filed Aug. 12, 1914. Serial No. 856,358. (Cl. 184—3.)



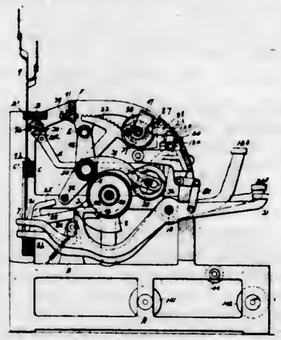
1. In a lubricating device, a lubricant conduit which leads to the part to be lubricated, an intermittently actuated valve which controls the flow of the lubricant through the lubricant conduit, a conduit for steam which incloses the lubricant conduit and delivers thereinto at a point between the valve and the part to be lubricated, and means for operatively connecting the valve with a moving part of the machine.

2. In a lubricating device, the combination of a lubricant conduit, a valve casing having a valve chamber and a delivery chamber and provided with ports which connect the lubricant conduit with the valve chamber of the casing and the valve chamber with the delivery chamber thereof, a steam conduit which discharges into the delivery chamber of the casing, a valve having ports which alternately register with the port leading from the lubricant conduit to the valve chamber, and means for actuating the valve from a moving portion of the machine.

3. In a lubricating device, the combination of a lubricant conduit, a valve for intermittently controlling the flow of lubricant through the conduit, a valve casing having a valve chamber and a delivery chamber which connects therewith, a steam conduit which incloses the lubricant conduit and is provided with a jet which enters the delivery chamber of the valve casing, and means for operatively connecting the valve with a moving part of the machine.

4. In a lubricating device, the combination of a lubricating conduit which leads to the part to be lubricated, a valve casing interposed in the lubricating conduit, said valve casing provided with ports and having a valve chamber provided with end caps, and a delivery chamber, a cut off cock interposed in the lubricant conduit between the valve casing and the point to be lubricated, and a steam conduit having a jet which enters the delivery chamber of the valve casing.

1,154,096. CASH-REGISTER. JOSEPH P. CLEAL, Toronto, Ontario, Canada, assignor to Michigan Cash Register Company, Detroit, Mich. Filed July 9, 1910. Serial No. 571,115. (Cl. 235—15.)



1. In a cash register, the combination of a register pinion, a lock bar and segmental rack suspended to swing on anyone of a plurality of axes, a key adapted to cause them to change axes, to throw the rack into or out of engagement with the pinion and a companion lever coupled to said key with a pin and slot connection to provide lost motion, the said companion lever being adapted to delay actuation of the lock bar and segmental rack until the said key has caused a change of the axis of swinging, substantially as described.

2. In a cash register, the combination of a register pinion, a lock bar and segmental rack suspended to swing on anyone of several axes, so that the rack will be in mesh or out of mesh with the pinion, a key adapted to swing the lock bar and to cause a change of axes, and a companion lever adapted to engage against the lock bar, the said companion lever having a lost motion coupling to said key and adapted to delay the swinging of the lock bar until the axis of rotation has been changed, substantially as described.

3. In a cash register, the combination of a registering pinion, a rack or member adapted to actuate the same, a key, a companion lever having a lost motion coupling therewith, the two latter being adapted by reason of said lost motion coupling to communicate and allow actuation of said rack or member on the return stroke of the key only after its disengagement from the registering pinion, and means for engaging or disengaging the rack or member from the registering pinion, substantially as described.

4. In a cash register, the combination of a lock bar suspended to swing on any one of several axes, a key adapted to cause the lock bar to change axes, a companion lever having a lost motion coupling with said key, a hook portion on said companion lever adapted to engage over the lock bar and prevent overthrow of the bar, the said companion lever being adapted by reason of said lost motion coupling to delay the actuation of the lock bar until change of axes is effected, substantially as described.

5. In a cash register, the combination of a key, a companion lever, pivotally connected with said key, a pin and slot connection controlling the relative movement of the key and companion lever, a shaft suspended to oscillate on a center eccentric to its own axis, a lock bar oscillatory on said shaft and adapted to be actuated by said key and companion lever, a segmental rack connected with and actuated by said lock bar, a register pinion, a retaining pawl for the register pinion, and means controlling the oscillatory shaft, for oscillating it and thereby throwing the rack into and out of engagement with the register pinion, substantially as described.

[Claims 6 to 45 not printed in the Gazette.]

1,154,097. INDICATOR FOR AUTOMOBILE-RADIATORS. FRED B. COREY, Edgewood, Pa. Filed Mar. 19, 1915. Serial No. 15,425. (Cl. 73—82.)

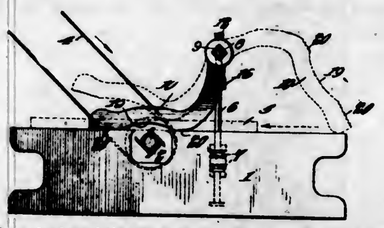


1. In an indicator for attachment to automobile radiators, a tubular body, an operatively connected float and indicating means, said indicating means being within said tubular body, said tubular body having a portion through which the said indicating means indicates, the distance of the said indicator from the said float being such that the indicator is held above the said portion when the water level within the radiator is normal and is displayed at said portion when the said water level drops below the safe operating level.

2. In an indicator attachment for automobile radiators, a tubular body closed at the lower end and extending into the water in the said radiator, an operatively connected float and indicating means both within the said tubular body, said tubular body having a portion through which the said indicating means indicates, an orifice below the water level in the said radiator, the area of the said orifice being small compared to the cross sectional area of the said tubular body, and a second orifice above the normal water level.

1,154,098. GUARD FOR WOODWORKING MACHINERY. OLIVER H. COURSON, Memphis, Tenn. Filed Sept. 19, 1912. Serial No. 721,295. (Cl. 144—251.)

1. In a device of the class described, in combination with a cutter, a rod mounted near the cutter, a sleeve rotatable on said rod, a finger normally loosely mounted upon said sleeve, extending over the cutter and bearing upon the stock, means for tightening said finger upon said sleeve, and coacting means upon said rod and sleeve adapted to increase the pressure of the finger upon the stock.



2. In a device of the class described, in combination with a cutter, a rod mounted near the cutter, a sleeve rotatable on said rod, a finger normally loosely mounted upon said sleeve, extending over the cutter and upon the stock, means for tightening said finger upon said sleeve, and a weight carried by the rod and adapted to impart pressure to said finger.

3. In a device of the class described, the combination with a cutter of a rod mounted near the cutter, a sleeve rotatable upon said rod, a finger normally loosely rotatable on said sleeve and extending over the cutter and bearing upon the stock, means for securing said finger against rotation, an arm rotatable upon said rod and carrying an adjustable weight, and means permitting the engagement of said arm and said sleeve whereby said weight is adapted to increase the pressure of the finger upon the stock.

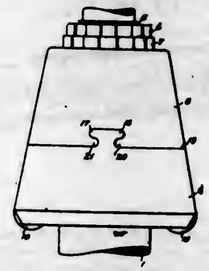
1,154,099. GROUND-CONNECTOR. WILLIAM H. CURRY, Lake City, Iowa. Filed Feb. 25, 1913. Serial No. 750,643. (Cl. 173—81.)



A ground connector comprising a pointed cylindrical plug, a threaded nipple formed integral with one extremity of and of a diametes less than said plug so as to form a shoulder at their juncture, a conducting wire secured to said threaded nipple, a tube encircling said wire and having screw-threaded engagement with said nipple, said tube having one extremity tightly engaging the shoulder formed at the juncture of the nipple with the extremity of said plug, and a handle having detachable engagement with one end portion of said tube.

1,154,100. CRUSHER-MANTLE. GEORGE F. DE WEIN, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed Dec. 24, 1913. Serial No. 808,908. (Cl. 83—10.)

1. In a crusher, a mantle comprising a plurality of sections each having diametrically opposite locking projections extending in opposite directions relative to a diameter and formed to tend during operation to draw the sections together.



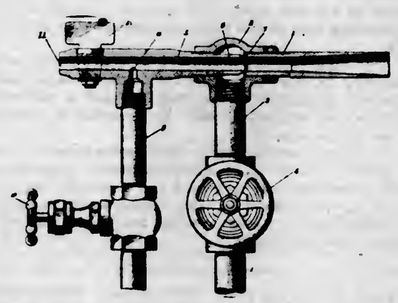
2. In a crusher, a mantle comprising a plurality of sections each having diametrically opposite locking projections extending in opposite directions relative to a diameter, and the projections on adjacent sections extending in opposite directions relative to each other and formed to tend during operation to draw the sections together.

3. In a crusher, a mantle comprising a plurality of sections, one of said sections having a pair of diametrically opposite T-shaped extensions coacting with similarly formed recesses in the adjacent section and formed to tend during operation to draw the sections together.

4. In a crusher, a mantle comprising a plurality of sections, the adjacent ends of said sections being formed with diametrically opposite coacting T-shaped extensions and recesses for preventing axial separation of said sections and formed to tend during operation to draw the sections together.

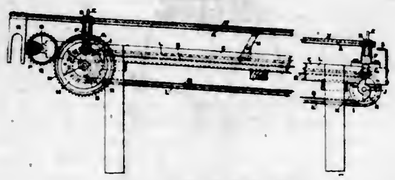
5. In a crusher, a mantle comprising a plurality of co-axial sections having parallel plane adjacent end surfaces formed perpendicular to the axis of said sections, the adjacent ends of said sections being formed with diametrically opposite interlocking projections for preventing axial separation of the sections and formed to tend during operation to draw the sections together.

1,154,101. OIL-BURNER. JESSE DITSON, Littleton, Colo., assignor to The J. Geo. Leyner Engineering Works Company, Littleton, Colo., a Corporation of Colorado. Filed Jan. 13, 1913. Serial No. 741,668. (Cl. 158—76.)



In an oil burner, a casing having a chamber therein, a pipe for admitting compressed air to said chamber, an air conveying pipe projecting into said chamber, the outer end of said pipe being open to the atmosphere, an oil inlet pipe leading into the lower side of said air conveying pipe, and a diverging nozzle adjustably secured in said casing, the inner end of said nozzle being slightly separated from the inner end of said air conveying pipe.

1,154,102. APPARATUS FOR CLEANING AND SEPARATING SEEDS AND GRAIN. FREDERICK MALCOLM DOSSOR, Doncaster, England. Filed Dec. 2, 1914. Serial No. 875,187. (Cl. 130—15.).



1. A seed and grain separator comprising, in combination, a flat inclined sieve, an endless traveling belt mounted beneath the sieve and adapted to receive and deliver the material passing through the sieve, and a common selective means whereby the sieve may be given either an upright jumping motion or a longitudinal oscillating motion, so that different classes of seeds and grain requiring different treatment can be dealt with on a single sieve, substantially as herein set forth.

2. A seed and grain separator comprising, in combination, a flat inclined sieve, an endless traveling belt mounted beneath the sieve and adapted to receive and deliver the material passing through the sieve, a common selective means whereby the sieve may be given either an upright jumping motion or a longitudinal oscillating motion, so that different classes of seeds and grain requiring different treatment can be dealt with on a single sieve, and a lid or cover in close proximity to the sieve for the purpose of checking the downward progress of the material on the sieve and thereby keeping the material longer on the sieve and bringing it into more frequent contact with the sieve to insure effective separation substantially as herein set forth.

3. A seed and grain separator comprising, in combination, a flat inclined sieve, an endless traveling belt mounted beneath the sieve and adapted to receive and deliver the material passing through the sieve, a common selective means whereby the sieve may be given either an upright jumping motion or a longitudinal oscillating motion, so that different classes of seeds and grain requiring different treatment can be dealt with on a single sieve, a lid or cover in close proximity to the sieve for the purpose of checking the downward progress of the material on the sieve and thereby keeping the material longer on the sieve and bringing it into more frequent contact with the sieve to insure effective separation, and the pivoted and weighted automatic sieve clearer or clearers carried by the belt chains and operating on the under or non-working face of the sieve, substantially as herein set forth.

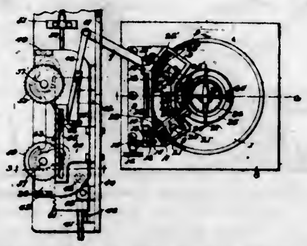
4. The combination with a sieve, of means for imparting a jumping or vibratory motion comprising cams, spring controlled spindles actuated thereby, and a detachable reducing shoe adapted to vary the jumping or vibratory motion of the same.

5. The combination with a sieve, of means for giving the same a longitudinal oscillating motion comprising a shaft, a counter-shaft, a pulley and wheel on the shaft, cranks, a spur wheeel on the counter-shaft, supporting the crank, and a forked arm on the frame adapted to engage with the crank.

1,154,103. AUTOMATIC STEERING MECHANISM. KENNEDY DOUGAN, Minneapolis, Minn. Filed Apr. 18, 1910. Serial No. 556,171. (Cl. 172—282.)

1. In a dirigible object, the combination with a rudder, of a primary rudder-actuating mechanism including continuously and oppositely rotated elements, a secondary mechanism controlling said rotated elements, said secondary mechanism including continuously and oppositely rotated elements, and a constant director controlling the rotated elements of the secondary mechanism.

2. In a dirigible object, a motion-translating mechanism having a step-by-step motion, a rudder actuated thereby, a mechanical controlling element for starting and directing said mechanism, a motion-translating mechanism having a step-by-step movement adapted to control said controlling element, a constant director, and means goverened by said director for starting and directing the second said mechanism.



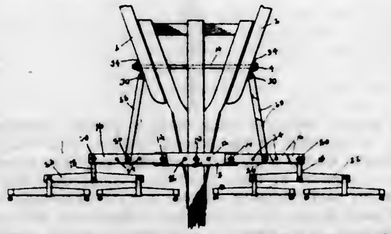
3. In a mechanism of the character described, the combination with a rudder, of a step by step moving rudder actuating mechanism, a step by step moving controlling mechanism for the rudder actuating mechanism, and a magnet needle controlling the latter mechanism.

4. In a mechanism of the character described, the combination with a rudder, of a primary rudder actuating mechanism including continuously and oppositely rotative elements, a secondary mechanism controlling the oppositely rotative elements of the primary mechanism, the secondary mechanism including continuously and oppositely rotative elements, and a magnetic needle controlling the oppositely rotative elements of the secondary mechanism.

5. In a boat, torpedo, or other dirigible object, a motion-translating mechanism having a step-by-step movement, a rudder actuated thereby, a mechanical controlling element for starting and directing said mechanism, a motion-translating mechanism having a step-by-step movement adapted to control said controlling element, a magnetic needle, means for damping the oscillation of the needle, and means controlled by the needle for starting and directing the second said mechanism.

[Claims 6 to 10 not printed in the Gazette.]

1,154,104. DRAFT-EQUALIZER. ALONZO GREEN DUNNUCK, Stockton, Kans. Filed Feb. 1, 1915. Serial No. 5,431. (Cl. 21—76.)



1. In a draft equalizer, the combination of a pair of draft members, a pole having its rear end carried by said members, a bar pivoted intermediate its ends to said pole, draft levers having their inner ends pivoted to the outer ends of said bar, and a rigid draft link extending rearward from each of said levers, each link being pivotally connected at its forward end to one of said levers intermediate the ends of the latter and having its rear end pivotally connected to one of said draft members.

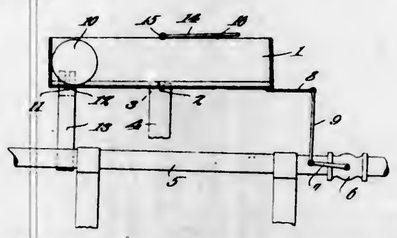
2. In a draft equalizer, the combination of a pair of draft members, a pole having its rear end carried by said members, a bar pivoted intermediate its ends to said pole, draft levers pivoted to the outer end of said bar, a rigid link extending rearward from each of said levers, each link being adjustably pivoted at its forward end to one of said levers intermediate the ends of the latter, and means providing a horizontal pivotal connection between the rear end of each of said links and one of said draft members respectively.

3. In a draft equalizer, the combination of a pair of draft members, a pole having its rear end carried between said members on a horizontal axis, draft equalizing means mounted on said pole, and a pair of rigid links extending rearward on opposite sides of said pole the front ends of said links being pivoted adjustably to said equalizing means, and the rear end of each link being pivotally connected to one of said draft members for both vertical and horizontal movement about the axis of said pole.

4. In a draft equalizer, the combination of a pair of draft members, a pole, a horizontal bolt carried by said members and pivotally supporting the rear end of said pole between said members, draft equalizing means mounted on said pole, a pair of rigid links extending rearward on opposite sides of said pole and having their forward ends pivotally connected to said equalizing means, and means for connecting the rear ends of said links to the opposite ends of said bolt and permitting both vertical and horizontal pivotal movement of said links about the axis of said bolt.

5. In a darft equalizer, the combination of a pair of draft members, a pole having its rear end carried between said members on a horizontal axis, a bar pivoted intermediate its ends to said pole, draft levers pivoted to the outer ends of said bar, a rigid draft link extending rearward from each of said levers, each link being pivotally connected at its forward end to one of said levers intermediate the ends of the latter, and means for connecting the rear ends of each of said links to one of said draft members for horizontal pivotal movement and for vertical movement about the axis of said pole.

1,154,105. MARINE GOVERNOR. NOËL DUPUIS, Aberdeen, Wash. Filed Feb. 20, 1915. Serial No. 9,632. (Cl. 121—113.)

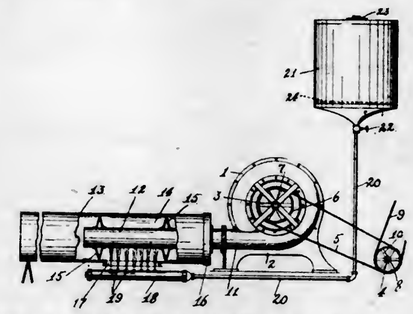


A marine governor comprising a trough fulcrumed intermediate its ends, a weight movable within the trough between the ends thereof, means for operatively connecting the trough with a controlling valve, and a pivoted member carried by the trough and adapted to be swung into the same for holding the weight adjacent one end of the trough.

1,154,106. AIR-BLAST-HEATING APPARATUS. FERDINAND EPHRAIM, San Francisco, Cal. Filed Jan. 8, 1914. Serial No. 810,936. (Cl. 34—18.)

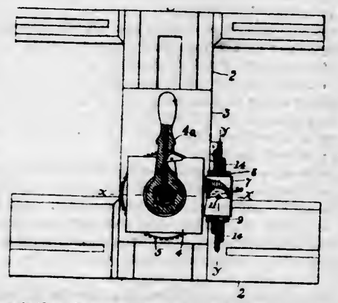
1. An apparatus for the described purpose, the same comprising a casing provided with air inlets and an air outlet, a fan in said casing, means for imparting rotation to said fan, an air tube extended from the air outlet of the motor, a shell provided with an open discharge outlet end surrounding said tube and within which the tube terminates at a distance from the open discharge end thereof and provided with a heat opening in the wall thereof, and means for supplying heat through said opening onto the air tube extended within the shell surrounding the air tube.

2. An apparatus for the described purpose, the same comprising a casing provided with an air outlet conduit, a fan in said casing, means for imparting rotation to said fan, an air tube extended from the air outlet conduit, a slotted shell having an open discharge end and provided with a heating chamber into which said tube extends and terminates a distance from the discharge end thereof, a hydrocarbon burner situated beneath the slotted portion of the said shell for directing a heating flame onto the air tube within the same, a reservoir for a liquid fuel, a pipe connection between the reservoir and the said burner, and a hand actuated valve for regulating the flow of the liquid fuel to the burner.



3. In an apparatus for the described purpose, the combination with a blower casing provided with air inlets and an outlet conduit, a rotary fan situated therein for drawing air into the casing and expelling the same therefrom under pressure, power mechanism for imparting rotation to said fan, an air tube extended from the air outlet of the casing, a slotted shell having an open discharge end, said shell surrounding said air tube and into which the air passing therethrough discharges, the said air tube terminating within the shell a distance from the open discharge end thereof, and a burner situated beneath the slotted portion of the shell for directing heat onto the air tube extended therein.

1,154,107. DIAMETER-STOP FOR LATHES. WINTHROP LINCOLN FAY, Dexter, Me. Filed May 15, 1915. Serial No. 28,457. (Cl. 29—48.)



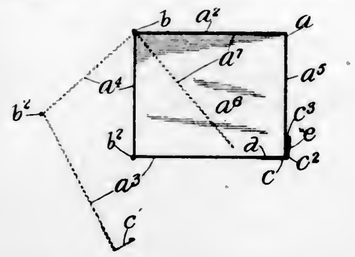
1. In a lathe the combination of a lathe turret having a horizontally disposed spur gear at the base thereof, a slide, a horizontally disposed stop cylinder journaled in the slide adjacent to the base of the turret, a pinion journaled in the slide in engagement with said gear, a pair of beveled gears in engagement with each other, one being connected with said pinion and the other being secured to and surrounding said stop cylinder and stop screws carried by said stop cylinder.

2. In a lathe, the combination of a lathe turret having a horizontally disposed spur gear at the base thereof, a slide, a horizontally disposed stop cylinder journaled in the slide, a pinion journaled in the slide vertically above said stop cylinder and in engagement with said gear, a pair

of beveled gears in engagement with each other, one being connected with the under side of said pinion and the other being secured to and surrounding said stop cylinder and stop screws carried by said stop cylinder.

3. In a lathe, the combination of a lathe turret having a horizontally disposed spur gear at the base thereof, a slide, a horizontally disposed stop cylinder journaled in the slide, a pinion journaled in the slide adjacent to the base of the turret, a collar on one end of said stop cylinder and a nut on the opposite end for retaining the same in place, a pinion journaled in the slide vertically above the stop cylinder and in engagement with said gear, a pair of beveled gears in engagement with each other, one being on the under side of said pinion and formed integral therewith and the other being secured to and surrounding said stop cylinder and stop screws carried by said stop cylinder.

1,154,108. MEASURING DEVICE. JOHN J. FLAHERTY, New York, N. Y. Filed Mar. 19, 1915. Serial No. 15,440. (Cl. 107—19.)



1. A measuring device of the class described, comprising a box open at the top and composed of a back, a front, a bottom and two sides, one side being hinged to one side edge of the back and being provided with a supplemental back member adapted to swing within the box and with said hinged side, and the front being hinged to the free edge of the hinged side.

2. A measuring device, comprising a container open at the top and provided with a hinged side portion, and a supplemental back member adapted to swing with said hinged side portion, and means for securing the hinged side portion in a closed position.

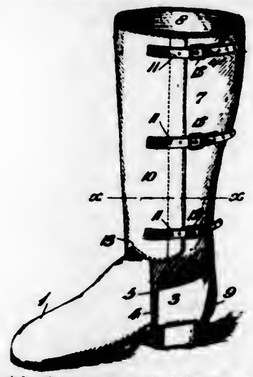
3. A measuring device of the class described, comprising a container open at the top, said container being provided with a side portion which is hinged to the back portion thereof, a supplemental back member connected with the hinged side portion and adapted to swing therewith within the container, and a front hinged to the free edge of the hinged side portion, and means for securing the hinged parts in a closed position.

4. A measuring device of the class described, comprising a container having side wall portions hinged together and to a back wall member, a supplemental back wall member secured to one of the hinged side wall portions and adapted to swing therewith and within the container, and means for holding the hinged side wall portions in a closed position.

5. A measuring device of the class described, comprising a container open at the top and part of the body walls of which are stationary with other parts hinged thereto, and a supplemental plate member connected with the hinged part or parts and adapted to swing therewith within the container.

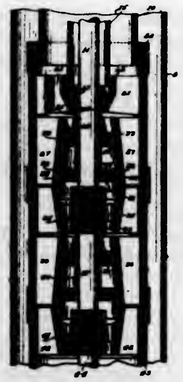
1,154,109. COMBINED SHOE AND LEGGING. THOMAS A. FLANNIGAN, Philadelphia, Pa. Filed May 24, 1915. Serial No. 29,953. (Cl. 36—50.)

A combined shoe and legging, comprising a vamp and a tongue extending upwardly therefrom, back foxings connected with the vamp along their front edges and having extensions to form the sides of the legging, with their rear edges connected, a flap carried by one of the sides of the legging to overlap the other side with the lower edge of that portion which extends around the front of the leg terminating at a point above the natural break of the foot at the top of the instep, and means for connecting the flap with the overlapped side, the seams connecting the back



foxings with the vamp each lying in an approximately vertical plane passing through said point, to provide flexibility at the instep and permit a tight engagement around the ankle.

1,154,110. ROTARY PUMP. OSCAR C. GOERIZ, Oakland, Cal. Filed Sept. 25, 1912, Serial No. 722,247. Renewed July 27, 1915. Serial No. 42,235. (Cl. 103—43.)



1. A rotary pump comprising a discharge casing, a discharge pipe connected with said casing, a smaller pipe connected with said casing, a runner adjacent said casing, a shaft to which said runner is connected, a bearing for the shaft within the discharge casing, a bearing for the shaft within the smaller pipe, and a foraminous filter surrounding the shaft to allow water to pass to and to prevent gritty particles from having access to said bearings, as described.

2. A rotary pump comprising a discharge casing, a discharge pipe connecting therewith, a runner adjacent the casing, a shaft extending through said casing to which the runner is secured, a bearing in the casing for the shaft, a second pipe connected with said casing and surrounding the shaft, a bearing within the latter pipe for the shaft, means to adjust the alinement of said bearing, and a screen bushing to prevent the access of grit to said shaft and the bearings therefor, as described.

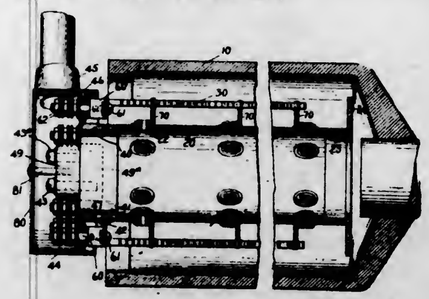
3. In a rotary pump, a discharge casing, a runner adjacent said casing, a shaft to which the runner is secured, a discharge pipe, a smaller pipe surrounding the shaft, a bearing for said shaft within the smaller pipe, said bearing having equalizing passages for the escape of water from said pipe, and a foraminous filter surrounding the shaft to permit water to pass into the inner pipe and to prevent grit from passing thereinto, as described.

4. In a rotary pump, a discharge casing, a runner, a shaft therefor, a bearing for the shaft, said casing and bearing having passage ways to permit the escape of water without passing over the bearing surface, a foraminous bushing surrounding the shaft adjacent the bearing, and a foraminous filter around the bushing to prevent the access of grit to the bearing surface.

5. In a rotary pump, a discharge casing, a shaft to which the runner is secured, a bearing in the discharge casing for said shaft, said casing and bearing having passages for the escape of water to the low pressure side thereof, and a foraminous filter to prevent the access of gritty particles to said bearing on the high pressure side thereof, as described.

[Claims 6 to 8 not printed in the Gazette.]

1,154,111. ELECTRIC HEATER. WILLIAM S. HADAWAY, Jr., New Rochelle, N. Y. Filed Sept. 26, 1913. Serial No. 791,935. (Cl. 219—37.)



1. An electric heater comprising a stationary support, a heat generator secured to and extending from said support, and means for adjusting the connection between the support and the heat generator, whereby the inclination of the generator axis may be varied as desired.

2. An electric heater comprising a stationary support, a hollow cylindrical heat generator, and means for adjustably securing the heat generator to the support only at one end, whereby the inclination of the generator axis may be varied as desired.

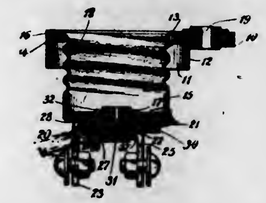
3. An electric heater comprising a stationary support, a ring having an annular flange, a cylindrical heat generator secured at one end to said annular flange and extending outwardly therefrom, and means for adjustably securing the ring to the stationary support whereby the ring may be tilted and inclination of the generator axis varied as desired.

4. An electric heater comprising a stationary support, a ring having a perforated annular flange, a perforated sheet metal cylinder mounted on the ring and extending coaxially therewith in one direction therefrom, a resistance element supported by said metal cylinder, and an adjustable connection between the ring and the support whereby the metal cylinder may be adjusted as to the inclination of its axis.

5. An electric heater comprising a stationary ring, a ring or collar adjustably connected thereto and having a perforated annular flange, a plurality of terminal members extending axially of the ring through the perforations in said flange, a perforated sheet metal cylinder mounted on the flange and extending coaxially therewith in one direction, and a resistance element supported and insulated from the outer surface of the metal cylinder, said adjustable connection between the rings being arranged to permit the adjustment of the cylinder with respect to the inclination of its axis.

[Claims 6 to 11 not printed in the Gazette.]

1,154,112. SOCKET FOR ELECTRIC HEATER UNITS. WILLIAM S. HADAWAY, Jr., New Rochelle, and JOSEF AMON, New York, N. Y. Filed Sept. 26, 1913, Serial No. 791,936. Renewed July 21, 1914. Serial No. 852,315. (Cl. 173—339.)



1. A fixture comprising a triangular metal base having a centrally located circular aperture and an annular flange at the aperture, a cup-shaped socket having helically corrugated side walls arranged to provide internal screw-threads, a top flange and an aperture in the bottom; a terminal having an annular base secured to the bottom of the socket and an attaching member for a circuit conductor, a second terminal, insulating washers located respectively in the bottom of the socket and over the annular base on the first named terminal, and a central rivet for attaching the second terminal to the socket and clamping the insulating washers in position to electrically separate the central rivet and the second terminal from the socket; relatively rigid insulating washers adapted to clamp the socket flange between them and shaped to substantially conform to the base plate, and hollow rivets for attaching the washers at the corners of the triangular base.

2. A fixture comprising a polygonal metal base having a centrally located aperture and a flange at the aperture, a socket arranged to provide internal screw threads and having a top flange and an aperture in the bottom, a terminal secured to the bottom of the socket, a second terminal, insulating washers located respectively in the bottom of the socket and between the terminals and a rivet for mechanically attaching the second terminal to the socket and clamping the insulating washers in position; relatively rigid insulating washers adapted to clamp the socket flange between them and shaped to substantially conform to the base plate, and hollow rivets for attaching the washers at the corners of the polygonal base.

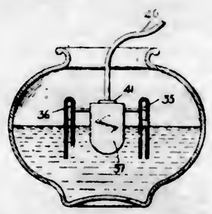
3. A fixture comprising a triangular base having an aperture, a cup-shaped socket materially smaller and extending through the aperture in the base and arranged to provide internal screw threads and having a top flange and aperture in the bottom, terminals having perforated bases, the base of one being secured to the bottom of the socket, insulating washers for spacing the terminals apart and a central rivet for attaching the terminals to the socket and clamping the insulating washers in position, and means for mechanically attaching the socket flange to the base and electrically separating between the parts.

4. A fixture comprising a triangular metal base having an aperture, a cup-shaped socket having helically corrugated side walls arranged to provide internal screw-threads, a top flange and an aperture in the bottom, a perforated terminal secured to the bottom of the socket, a second terminal; means for attaching the second terminal to the socket and electrically separating it therefrom, and means for securing the socket flange to the base and electrically separating between the parts.

5. A fixture comprising a polygonal metal base having a centrally located circular aperture, a cup-shaped socket having helically corrugated side walls arranged to provide internal screw threads, means for mechanically connecting the socket to the base and electrically separating between them, and a pair of terminal members both of which are secured to the socket and one of which is electrically separated from the socket.

[Claims 6 to 8 not printed in the Gazette.]

1,154,113. HUMIDIFIER. WILLIAM S. HADAWAY, Jr., New Rochelle, N. Y. Filed Oct. 23, 1913. Serial No. 796,764. (Cl. 219—38.)



1. A humidifier comprising a heater, a capillary agent adapted to gradually transfer small quantities of liquid from a relatively large body of liquid to the heater, and means for maintaining the heater at a substantially constant distance above the surface of the large body of liquid.

2. A humidifier comprising a heater, a wick adapted to transfer liquid from a relatively large body of liquid to the heater and means for maintaining a substantially constant relation between the position of the heater and the surface of the large body of liquid, whereby the wick may dip into the liquid.

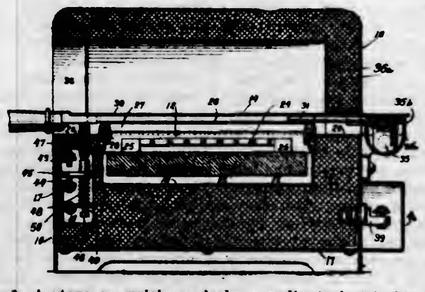
3. A humidifier comprising an electric heater having a metal sheath, a wick suspended from the sheath and arranged to transfer liquid to the heater and a float for maintaining a fixed relation between the position of the heater and the surface of the liquid.

4. A humidifier comprising a heater, a float adapted to support the heater above the surface of the liquid and a wick in contact with the heater and dipping into the liquid.

5. A humidifier comprising an electric heater, a float adapted to support the heater above the surface of the liquid and a wick in contact with the heater and dipping into the liquid.

[Claims 6 to 9 not printed in the Gazette.]

1,154,114. STOVE. WILLIAM S. HADAWAY, Jr., New Rochelle, N. Y. Filed Apr. 17, 1914. Serial No. 832,411. (Cl. 219—37.)



1. A stove comprising a body, a radiant electric heater secured thereto and an armored electric heater pivotally connected with the body and adapted to be swung when in service to a position adjacent to the radiant heater.

2. A stove comprising an exposed electric heater adapted to operate at a high temperature, and a flat armored electric heater pivotally connected to the stove and adapted to be used alternately with the exposed heater and to operate at a relatively low temperature.

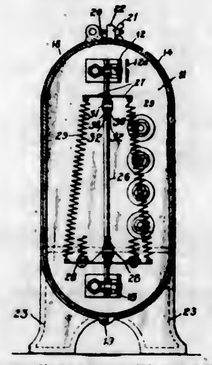
3. A stove comprising a body having a high-temperature exposed radiant electric heater, and a flat, protected relatively low-temperature electric heater adapted to be placed over the exposed heater and to be used alternately therewith.

4. A stove comprising a body having a high temperature exposed radiant electric heater secured to the body and a flat armored relatively low-temperature electric heater hinged to the body and adapted to be swung over the exposed heater and to be used alternately therewith.

5. A stove comprising a high temperature heater, a relatively low temperature heater hinge-connected and adapted to lie over the high temperature heater when in use, and means dependent upon the position of the low temperature heater for energizing the high temperature heater.

[Claims 6 to 17 not printed in the Gazette.]

1,154,115. ELECTRIC HEATER. WILLIAM S. HADAWAY, Jr., New Rochelle, N. Y. Filed May 14, 1914. Serial No. 838,443. (Cl. 219—34.)



1. A heating appliance comprising a pair of spaced elliptical end members, interposed parallel bus-bars secured to the end members and insulated therefrom, and heater units comprising flat metal plates secured to and insulated from the bus-bars in the central longitudinal plane of the appliance, supports insulated from the plates and extending laterally from the surfaces thereof and resistance conductors extending in zigzag formation on each side of the plates, secured to the lateral supports thereon and electrically connected to the bus-bars; and removable foot projections having square body portions adapted to be mounted near the top and bottom of the end member and to project laterally therefrom to constitute supporting brackets for the appliance.

2. A heating appliance comprising a pair of spaced end members in parallel planes, interposed parallel bus-bars, and heater units comprising flat metal plates secured to and insulated from the bus-bars in the central longitudinal plane of the appliance, supports secured to and insulated from the plates and extending from opposite surfaces thereof, and resistance conductors extending in a zigzag formation on each side of the plate secured to the lateral supports thereon and electrically connected to the bus-bars.

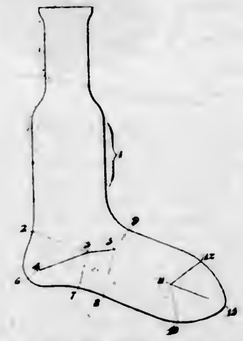
3. A heating appliance comprising a pair of spaced elliptical end members, interposed parallel bus-bars secured to the end members and insulated therefrom, and heater units comprising flat metal plates secured to and insulated from the bus-bars in the central longitudinal plane of the appliance, supports insulated from the plates and extending laterally from the surfaces thereof and resistance conductors extending in zigzag formation on each side of the plates, secured to the lateral supports thereon and electrically connected to the bus-bars.

4. A heating appliance comprising a frame having a pair of spaced end members and substantially parallel bus-bars mechanically connecting the end members, and a plurality of heating units comprising a metal plate and resistance conductors supported on opposite sides of and insulated from the plate, said plate being adapted to be removably secured and electrically connected to the bus-bars.

5. A heater unit comprising a metal plate, a plurality of supports comprising angle strips having one arm secured to the plate and one arm extending outwardly from the plate, hollow rivets securing the supports in pairs on opposite sides of the plate, and a resistance conductor carried by the supports and extending in a zigzag path on one side of the plate through one of the hollow rivets to the opposite side and in a zigzag path thereon.

[Claims 6 to 10 not printed in the Gazette.]

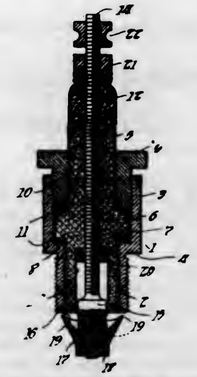
1,154,116. MANUFACTURE OF HOSIERY. EMIL A. HIBNER, Allentown, Pa. Filed Aug. 25, 1913. Serial No. 786,379. (Cl. 66—4.)



1. The process of manufacturing seamless hosiery which consists in knitting a heel pocket upon a limited series of needles by knitting a narrowed and widened web on said series; continuing the widening operation by increasing the series of active needles with production of a widened web under the instep; and thereupon completing the instep and toe of the pocket in the usual way.

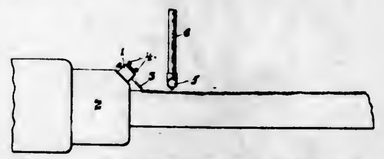
2. In seamless hosiery, the combination of the fashioned heel pocket with a diagonal suture at either side, and a widened web under the instep extending up the side of the same to a suture which forms a prolongation of that at the side of the heel pocket.

1,154,117. SPARK-PLUG. AMOS N. HOAGLAND, Oxford, N. J. Filed Aug. 2, 1911. Serial No. 641,905. (Cl. 123—169.)



In a spark plug, an outer shell of conducting material, and having a central longitudinal aperture, an insulator within the aperture in the said shell, said insulator being provided with a longitudinal aperture enlarged at its inner end, a stem passing through the aperture in said insulator, and a nut on the said stem fitting within the enlargement of said aperture, said stem being enlarged beyond the said nut to substantially close the aperture in the insulator, a shoulder on said stem, and a point bearing member carrying a plurality of spark points removably secured to said stem and abutting against said shoulder, substantially as set forth.

1,154,118. METHOD OF ORNAMENTING BRICKS. FRANK A. HOILES, Alliance, Ohio. Filed Jan. 5, 1915. Serial No. 572. (Cl. 25—1.)

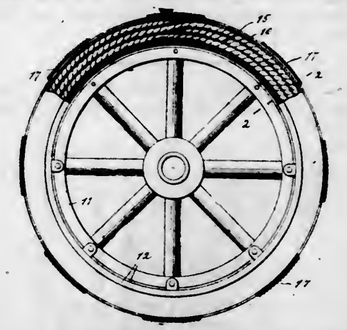


1. The method of ornamenting brick consisting of shaping the material into rectangular form, plowing the face into furrows, subjecting the furrowed face to a jet of steam, cutting the form into bricks and hacking the bricks while still moist with the furrowed faces adjacent each other and a separating sheet located between the furrowed faces of the brocks.

2. The method of ornamenting brick consisting in shaping the material into form, roughening the face of said form, subjecting said roughened face to a jet of steam, cutting said form into bricks after subjecting the same to a jet of steam, hacking said bricks while still moist, placing a separating and ornamenting strip between tiers of bricks with their roughened faces adjacent each other.

3. The method of ornamenting brick consisting in shaping the material into form, roughening the face of said form, subjecting said roughened face to a jet of steam, cutting said form into bricks after subjecting the same to a jet of steam, hacking said bricks while still moist, placing a separating and ornamenting strip between tiers of bricks with their roughened and steam treated faces adjacent each other.

1,154,119. RESILIENT TIRE. DANIEL M. KAMPLER, New York, N. Y., assignor of forty-seven and one-half one-hundredths to Josef Rosenwasser, New York, N. Y. Filed Apr. 2, 1915. Serial No. 18,647. (Cl. 152—8.)

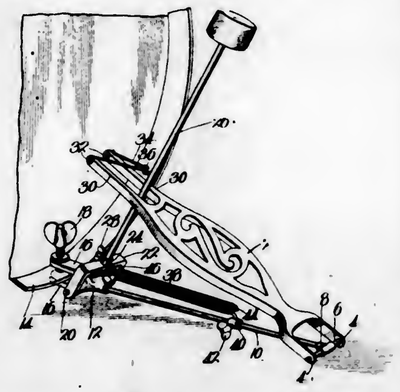


1. A tire comprising an annular sheet metal casing, means for securing said casing to a wheel rim, and a flexible filling within the casing, said filling being composed of a plurality of rope-windings which are arranged in a series of overlying rows, that contact with the inner walls of the casing.

2. A tire comprising an annular sheet metal casing, means for securing said casing to a wheel rim, and a flexible filling within the casing, said filling being formed of a coil of rope the strands of which are composed of hemp and cotton.

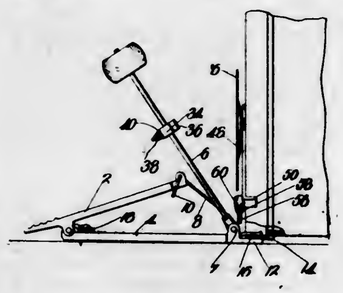
3. A tire comprising a casing, a strap surrounding the casing, a series of spaced shoes that project sidewise over the strap, and bolts connecting the shoes to the casing at both sides of the strap.

1,154,120. DRUM-PEDAL. GLENN KENDRICK, Kansas City, Mo. Filed Mar. 6, 1913. Serial No. 752,314. (Cl. 84—10.)



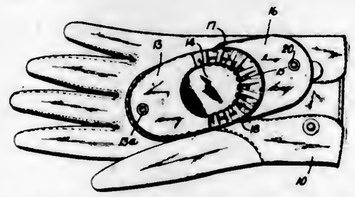
A drum pedal of foldable construction consisting of a rod, a drum clamping member secured on one end of the rod, a cross piece secured at the other end of the rod, a pedal pivoted at its rear end to said rod through the said cross piece and adapted to swing from an operative position overlying the rod to an inoperative or folding position beneath the rod and substantially parallel therewith, said pedal having its front or free end longitudinally forked, a yoke astride and pivoted to opposite sides of the drug clamping member, a drum beating member secured at its lower end to said yoke and extending through and adapted for swinging longitudinally within the forked end of the pedal when the latter occupies its operative position and adapted to extend substantially parallel with and lie above the rod when the pedal underlies the same, a link pivotally and detachably connecting the drum beating member and the front ends of the forked portion of the pedal, and a spring extending substantially parallel with the rod and connecting the same with said yoke for the purpose of withdrawing the same after each sounding of the drum by the drum beating member.

1,154,121. DRUM-PEDAL. GLENN KENDRICK, Kansas City, Mo. Filed May 10, 1913. Serial No. 766,843. (Cl. 84—10.)



A drum pedal comprising a floor rest member provided with a drum clamping member at its front end and with upstanding ears adjacent the drum clamping member, a drum beating member pivoted to and between said ears, a pedal above and projecting rearwardly beyond the floor member and pivoted near its rear end to the latter and terminating substantially rearwardly of said ears, and a link 8 pivoted at its front end to the drum beating member near the lower end of the same and at its rear end to the front end of the pedal, and provided with a crank arm 10 extending downwardly and adapted to strike and be arrested by the front end of the pedal substantially as and for the purpose set forth.

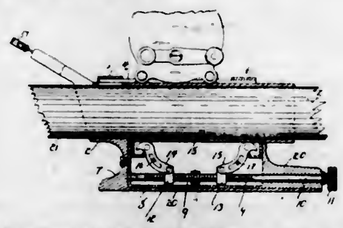
1,154,122. PURSE. JOSEPH A. KOVESY, New York, N. Y. Filed Aug. 27, 1914. Serial No. 858,820. (Cl. 150—37.)



1. A coin purse for a glove comprising a flat elliptical coin pocket adapted to be secured to the glove near its edges at one end and with its other end detached, extending when open from the fingers toward the wrist portion of the glove and having a relatively small central opening protected by a flange extending completely around the opening and fulled at the detached end to prevent the loss of coins when the hand of the glove wearer is raised, and an outer flap adapted to be secured transversely to the palm of the glove and adapted to be folded over the coin pocket, the free end of said coin pocket being adapted to be folded over the body of the coin pocket with the flap.

2. A coin purse for a glove comprising a flat elliptical coin pocket having a central opening and adapted to be secured near one end at its edges to the palm of the glove and with its opposite end free, and an outer flap having an inner and outer pocket adapted to be secured transversely to the palm of the glove and arranged to be folded over the coin pocket, the free end of said coin pocket being adapted to be folded over the body of the coin pocket with the flap, the outer pocket of said flap being available when the purse is closed.

1,154,123. FISH-LINE-REEL HOLDER. HENRY E. MANNINO, New Haven, Conn. Filed Mar. 12, 1915. Serial No. 13,901. (Cl. 43—37.)



1. A fish line reel holder comprising a tubular portion, means mounted on said tubular portion for connecting a fish line reel with the upper side thereof, a recessed handle extending below said tubular portion, and locking means mounted in the recess in the handle and extending into the tubular portion.

2. A fish line reel holder comprising a tubular portion, means for connecting the fish line reel with the upper side of said tubular portion, a handle extending below said tubular portion said handle formed with a recess opening into the tubular portion, a right and left hand screw in said recess, links connected with said screw and adapted to be moved thereby, and a follower adapted to be raised and lowered by said links.

1,154,124. ADVERTISEMENT DEVICE. SIDNEY CHARLES MARTIN, Dulwich Village, England. Filed June 5, 1914. Serial No. 843,174. (Cl. 46—40.)

1. In a display device of the class described, a flexible rim, and a sheet bearing a surface design stretched across and closing the rim, the rim and the sheet being flexible in a direction parallel to the plane of the sheet.



2. In a display device of the class described, a flexible rim, a sheet of fabric bearing a surface design, stretched across and closing the rim, the rim being flexible in a direction parallel to the plane of the sheet.

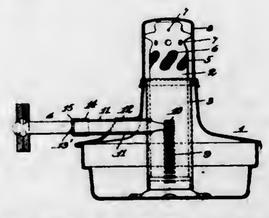
3. A display device comprising a flexible rim, a sheet of flexible material, bearing a surface design, stretched across and closing the rim, and means for flexing the sides of the rim in a direction parallel to the plane of the sheet.

4. A display device comprising a rim having relatively movable sides, a sheet of fabric stretched across and closing the latter, the rim being capable of elongation in a direction parallel to the plane of the sheet and at an oblique angle to the threads of the fabric.

5. A display device of the class described comprising a flexible rim, a sheet of flexible material, bearing a surface design, stretched across and closing the rim, an operating member, and connecting rods connecting the operating member with opposite sides of the rim to cause the latter to be flexed in a direction parallel to the plane of the sheet upon actuation of the said member.

[Claims 6 to 12 not printed in the Gazette.]

1,154,125. ALCOHOL-LAMP. CHARLES NELSON, New York, N. Y., assignor to S. Sternau & Company, a Copartnership composed of Sigmund Sternau and Lionel Strassburger, Brooklyn, N. Y. Filed Apr. 11, 1914. Serial No. 831,253. (Cl. 158—72.)



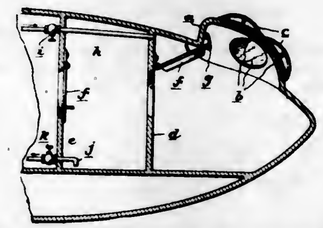
1. A lamp having a controlling shaft or spindle, a groove in the shaft or spindle, a sleeve surrounding the shaft and having its end turned into the groove to prevent longitudinal movement of the shaft.

2. A lamp having a controlling shaft or spindle, a groove in the shaft, a bearing for the shaft, a thimble on the bearing having its end projecting into and engaging the groove to prevent longitudinal movement of the shaft.

3. A lamp having a controlling shaft or spindle, a groove in the shaft, a bearing for the shaft, a thimble on the bearing, a lip on the thimble for engagement with the groove, a perforation in the bearing, and an indentation in the thimble for engagement with the perforation.

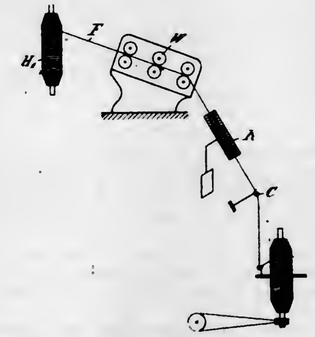
4. A lamp comprising a font, a controlling shaft, a peripheral groove in the shaft, a bearing for the shaft, a cavity in the font for receiving the bearing, means for securing the bearing to the wall of the cavity, the end of the bearing being turned over into the groove to prevent longitudinal movement of the shaft.

1,154,126. SUBMARINE VESSEL. JOSEPH T. PARKER, Washington, D. C. Filed June 2, 1915. Serial No. 31,786. (Cl. 114—16.)



A submarine vessel provided with a supplemental conning tower compartment in its forward end, a conning tower communicating therewith and arranged on the upper side of the vessel and provided with look-out windows, air-lock means being provided between said compartment and the main compartment of the vessel, said means embodying separated partitions set back a distance from the tower and forming an air and water-tight chamber to the rear of the tower chamber, the innermost partition being provided with a normally closed door and the forward partition being provided with a door and means for holding the same open, and means for supplying fresh air past the normally closed door.

1,154,127. APPARATUS FOR NEUTRALIZING ELECTRIC CHARGES IN FIBROUS MATERIALS. PAUL RASEHORN, Halensee, near Berlin, and GUSTAV GROSSMANN, Charlottenburg, Germany, assignors to Siemens & Halske, A.-G., Berlin, Germany, a Corporation of Germany. Filed Jan. 15, 1913. Serial No. 742,309. (Cl. 175—264.)



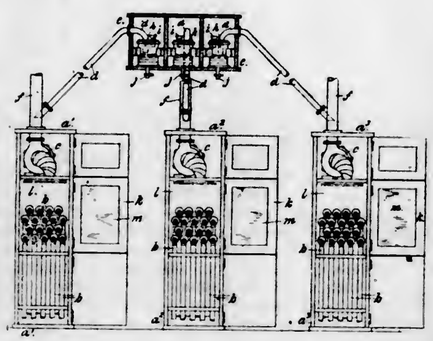
1. In combination with a machine for working fibrous material, a source of ionizing rays for neutralizing the electric charges of fibrous material passing through said machine, and an electrode for collecting and carrying off said charges, said source being located between said material and said electrode.

2. In combination with a machine for working fibrous material, a source of ionizing rays for neutralizing the electric charges of fibrous material when passing through said machine, and an electrode for collecting the electric charges from said fibrous material, said source of rays being applied to said electrode in the form of a coating and placed between said fibrous material and said electrode.

3. In combination with a machine for working fibrous material, a source of ionizing rays for neutralizing the electric charges of fibrous material when passing through said machine, and a perforated electrode for collecting the electric charges from said fibrous material by means

of the interposed ionized air, said perforated electrode being placed in the form of a screen between said neutralizing means and said fibrous material.

1,154,128. APPARATUS FOR INDICATING FIRES IN COMPARTMENTS AT A DISTANCE. WILLIAM RICH, Liverpool, England. Filed Nov. 10, 1914. Serial No. 871,289. (Cl. 23—3.)



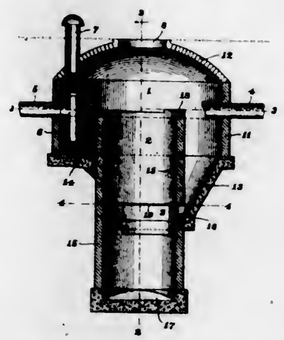
1. In a system of detecting fire in compartments, rooms or spaces, at a distance, a pipe terminal station apparatus having an air moving apparatus adapted to cause air to pass through the pipes between the compartments, rooms or spaces, and the terminal apparatus; and a second or main terminal station apparatus connected by a pipe with a part of the aforesaid pipe terminal station apparatus, into which the said air is delivered by the air moving means; and an indicating means in the latter main terminal station apparatus whereby smoke or carbonic acid gas passing with the air to this apparatus, will be indicated and observed here; substantially as set forth.

2. In a system of detecting fire in compartments, rooms or spaces, at a distance, a multiple pipe terminal station apparatus having an air moving apparatus adapted to cause air to pass through the pipes between the compartments, rooms or spaces, and this terminal apparatus; and a second or main terminal station apparatus connected with the part of the aforesaid pipe terminal station apparatus, into which the said air is delivered by the air moving means, and comprising a chemical detecting or indicating means, by which the introduction of smoke or carbonic acid gas passing from the pipe terminal station to this said chemical means produces a change, and effects the indication of the presence of same; substantially as set forth.

3. In a system of detecting fire in compartments, rooms or spaces, at a distance; the combination of a plurality of pipes extending between the compartments, rooms, or spaces, at a distance, and a pipe terminal station in a part of which the ends of the said pipes open; an air moving apparatus adapted to create a partial vacuum within the chamber or spaces within which the open ends of the pipes are located; a pipe communicating between the part of the pipe terminal station apparatus to which the air moving means forces the air, and a second or main terminal indicating station apparatus, containing liquid, which will change in the presence of smoke or carbonic acid gas; substantially as set forth.

4. In a system of detecting fire in compartments, rooms, or spaces at a distance, the combination of a plurality of pipes *b*; pipe terminal station apparatus as a^1, a^2, a^3, an electrically operated fan *c* in the said station apparatus; a discharge conduit *f*; a main indicating terminal station apparatus, as *e*, having a plurality of liquid containing vessels *h*; and a pipe *d* extending between each of the said pipes *f* and the vessels *h*; substantially as set forth.

1,154,129. SEWAGE-DISPOSAL APPARATUS. GEORGE L. ROBINSON and EDWARD L. WAGNER, New York, N. Y., assignors to The New York Sewage Disposal Company, a Corporation of New York. Filed Mar. 11, 1915. Serial No. 13,686. (Cl. 210—18.)



1. In a sewage disposal apparatus, the combination of a settling tank provided with an outlet at one side and an open inlet connection oppositely disposed thereto and at about the normal water level in said tank, and a sludge tank of smaller cross section located within the settling tank and having an opening through its walls connecting with the lower portion of the settling tank.

2. In a sewage disposal apparatus, the combination of a settling tank provided with an outlet at one side and an open inlet connection oppositely disposed thereto and at about the normal water level in said tank, and a sludge tank of smaller cross section located within the settling tank and having an opening through its walls connecting with the lower portion of the settling tank, the bottom wall of the settling tank adjacent said openings being inclined downwardly and inwardly to meet the wall of the sludge tank at the lower edge of said opening.

3. In a sewage disposal apparatus, the combination of a settling tank provided with inlet and outlet connections oppositely disposed and at substantially the same level, and a sludge tank of smaller horizontal dimensions than the settling tank located within the same open at the top and having an opening through its walls connecting with the lower portion of the settling tank on the inlet side only of said settling tank, the upper edge of the sludge tank wall being somewhat higher than the inlet and outlet connections, and the bottom of the sludge tank being at a considerably lower level than the opening from the settling tank.

4. In a sewage disposal apparatus, the combination of a settling tank provided with inlet and outlet connections oppositely disposed and at substantially the same level, and a sludge tank of smaller horizontal dimensions than the settling tank located within the same open at the top and having an opening through its walls connecting with the lower portion of the settling tank on the inlet side only of said settling tank, the upper edge of the sludge tank wall being somewhat higher than the inlet and outlet connections and having a raised lip on the inlet side, and the bottom of the sludge tank being at a considerably lower level than the opening from the settling tank.

5. In a sewage disposal apparatus, the combination of a settling tank provided with inlet and outlet connections oppositely disposed and at substantially the same level, and a sludge tank of smaller horizontal dimensions than the settling tank located within the same open at the top and having an opening through its walls connecting with the lower portion of the settling tank on the inlet side only of said settling tank, the upper edge of the sludge tank wall being somewhat higher than the inlet and outlet connections and having a raised lip on the inlet side, and the bottom of the sludge tank being at a considerably lower level than the opening from the settling tank, the bottom wall of the settling tank adjacent to said openings being inclined downwardly and inwardly to meet the wall of the sludge tank at the lower edge of said opening.

[Claims 6 to 15 not printed in the Gazette.]

1,154,130. CIRCUIT-CLOSING DEVICE. FRANCIS M. ROSENFELD, New York, N. Y., assignor to Import Sales Company, a Corporation of New York. Filed Jan. 15, 1915. Serial No. 2,303. (Cl. 175—282.)



1. In a portable electric lamp, a battery inclosing casing, a fixed guide secured to and substantially flush with the exterior surface of said casing and provided with an opening therethrough, a fixed contact member located in said opening and connected to one terminal of the battery circuit and a slidable contact member mounted on said guide in juxtaposition to said fixed contact member and normally insulated therefrom, but adapted when operated to contact therewith.

2. In a portable electric lamp, a battery inclosing casing, a fixed guide secured to and substantially flush with the exterior surface of said casing and provided with an opening therethrough, a fixed contact member located in said opening and connected to one terminal of the battery circuit and a slidable contact member mounted on said guide in juxtaposition to said fixed contact member and provided with an indentation in the surface thereof adjacent to said fixed contact member, whereby the slidable contact member is normally insulated from the fixed contact member, said slidable contact member being adapted when operated to contact with the fixed contact member.

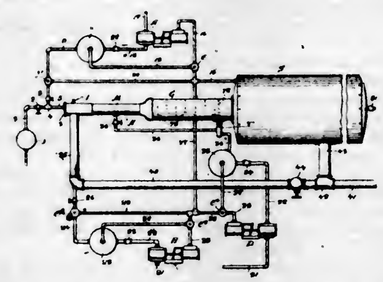
3. In a circuit closing device, a fixed guide provided with an opening, a fixed contact member located in said opening, and a slidable contact member mounted on said guide in juxtaposition to said fixed contact member, and normally insulated therefrom, said slidable contact member being provided with a projection on the surface thereof adjacent the fixed contact member and adapted to contact therewith when the slidable contact member is operated, and to rest in said opening to lock the slidable contact member in operated position.

4. In a circuit closing device, a fixed guide provided with an opening, a fixed contact member located in said opening, and a slidable contact member mounted on said guide in juxtaposition to said fixed contact member, and normally insulated therefrom, said slidable contact member being provided with a projection on the surface thereof adjacent the fixed contact member and adapted to contact therewith when the slidable contact member is operated, and to rest in said opening to lock the slidable contact member in operated position, said fixed guide being provided with another opening in which said projection is adapted to rest to lock the slidable contact member in normal position.

1,154,131. INTERNAL-COMBUSTION STEAM-GENERATOR. GEORGE H. SANDS, Electra, Tex. Filed Aug. 11, 1914. Serial No. 856,217. (Cl. 60—31.)

1. In a steam generator, a gas combustion chamber having fuel and air inlets, a mixing chamber into which the ignited gas is discharged from said combustion chamber, a water injector nozzle arranged to spray water directly into the ignited gas in the mixing chamber, a generating chamber into which the resultant mixture is discharged, and a series of reversely arranged deflecting baffles in said generating chamber.

2. In a steam generator, a gas combustion chamber having fuel and air inlets, a mixing chamber into which the ignited gas is discharged from said combustion chamber, a water injector nozzle arranged to spray water directly into the ignited gas in the mixing chamber, tanks for containing air, water and fuel under pressure in communication with said combustion and mixing chambers, independent air, water and fuel pumps, and independent controlling valve mechanism for each pump controlled by the pressure in the respective tanks for regulating the feed of air, water and fuel to said combustion and mixing chambers.

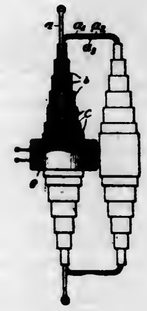


3. The combination with a steam generator, of a plurality of tanks in communication therewith one adapted to contain air, another water and another fuel under pressure, independent pumps for forcing said elements into said tanks under pressure, steam pipes leading from the generator to each of said pumps for independently operating the latter, and a controlling valve for each pump controlled by the pressure in the tank with which the respective pump is associated.

4. In a steam generator, a gas combustion chamber having fuel and air inlets, a mixing chamber into which the ignited gas is discharged from said combustion chamber, a fuel heating coil in said combustion chamber, a superheating chamber surrounding said coil, and a water injector nozzle arranged to spray water directly into the ignited gas in the mixing chamber.

5. In a steam generator, a gas combustion chamber having fuel and air inlets, a fuel heating coil in said chamber, a mixing chamber into which the ignited gas is discharged from said combustion chamber, a superheating chamber surrounding said fuel heating coil, a steam pipe leading to said superheating chamber, a circulator in said steam pipe, and a water injector nozzle arranged to spray water directly into the ignited gas in the mixing chamber.

1,154,132. HIGH-TENSION TRANSFORMER. CARL SCHRADER, Halensee, near Berlin, Germany, assignor to Siemens & Halske, A. G., Berlin, Germany, a Corporation of Germany. Filed Dec. 2, 1910. Serial No. 595,277. (Cl. 171—124.)



1. In a transformer of the character described, the combination with a primary winding, comprising a coil having a suitable number of turns, two insulating sleeves disposed on said coil substantially parallel and adjacent to each other, magnetic material surrounding the insulated portion of the said primary winding and a secondary winding disposed on said magnetic material.

2. In a transformer of the character described, the combination with a primary winding comprising a coil having a suitable number of turns, two insulating sleeves each surrounding said coil and placed substantially parallel and adjacent to each other, an iron core surrounding one of said sleeves midway between its ends and a secondary winding mounted on said iron core.

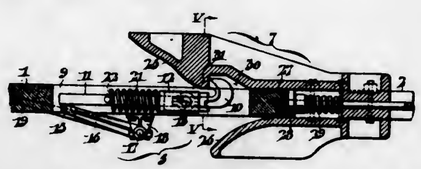
3. In a transformer of the character described, the combination with a primary winding consisting of a plurality of turns, an insulating sleeve comprising a number of alternately arranged concentric cylinders of insulating material and metal, a second insulating sleeve built up similarly to said first named sleeve, said sleeves surrounding said turns of said primary winding and being placed substantially in parallel and adjacent to each other, an iron core surrounding one of said sleeves midway between its ends, a secondary winding mounted on said iron core, whereby the other sleeve insulates the portion of said primary winding located outside of said core from said secondary winding and core.

4. In a transfermer of the character described, the combination with a primary winding consisting of a coil having a suitable number of turns, an insulating sleeve comprising a number of alternately arranged concentric cylinders of insulating material and metal, a second insulating sleeve built up similarly to said first mentioned sleeve, said two insulating sleeves being disposed on said coil substantially in parallel and adjacent to each other, an iron core surrounding one of said sleeves midway between its ends, a secondary winding mounted on said iron core, whereby an insulation is secured between the portion of said primary winding located outside of said core and said secondary winding and core.

5. In a transformer of the character described, the combination with a primary winding consisting of a coil of a suitable number of turns, an insulating sleeve surrounding said turns of said coil, a secondary insulating sleeve also surrounding said coil, said sleeves being placed adjacent to each other and substantially in parallel, an iron core disposed on each of said sleeves midway between its ends and a secondary winding mounted on each of said iron cores and being connected in series with each other.

[Claim 6 not printed in the Gazette.]

1,154,133. AUTOMATIC COUPLING DEVICE FOR FERRIES. WILLIAM HARRIS SELTZER, Philadelphia, Pa. Filed Nov. 27, 1914. Serial No. 874,180. (Cl. 114—231.)



1. In an automatic coupling device for ferries, the combination of guide members mounted upon the bridge of a ferry slip, said guide members having a recess for the reception of the edge of the ferry boat deck; cam surfaces adapted to guide the said deck into the said recess; and means for coupling the said boat to the said bridge.

2. In an automatic coupling device for ferries, the combination of guide members mounted upon the bridge of a ferry slip, said guide members having a recess for the reception of the edge of the ferry boat deck; cam surfaces for guiding the said deck into the said recess; coupling means carried by the said ferry boat and adapted to automatically engage within the said recess.

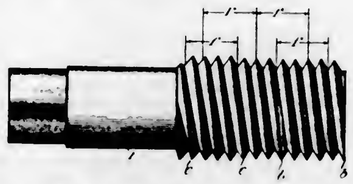
3. In an automatic coupling device for ferries, the combination of guide members mounted upon the bridge of the ferry slip, said guide member having a recess for the reception of the edge of the ferry boat deck; cam surfaces for guiding the said deck into the said recess, coupling means carried by the said ferry and adapted to automatically engage within the said recess; and buffers mounted in the said recess and adapted to be engaged by the said deck to absorb the shock of impact in landing.

4. In an automatic coupling device for ferries, the combination of guide members mounted upon the bridge of the ferry slip, said guide members having a recess for the reception of the edge of the ferry deck; cam surfaces for guiding the said deck into the said recess; coupling means carried by the said ferry boat and adapted to automatically engage within an offset in the said recess.

5. In an automatic coupling device for ferries, the combination of coupling hooks pivotally mounted upon the deck of a ferry boat; guide members mounted upon the bridge of a ferry slip and adapted to receive and guide the said hooks; locking ledges comprised by the said guide members; and means for forcing the said hooks into engagement with the said ledges.

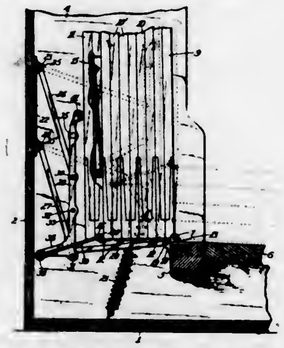
[Claims 6 to 8 not printed in the Gazette.]

1,154,134. METHOD OF FORMING BOLT-NUTS. WILLIAM E. SHARP, Chicago, Ill., assignor to Grip Nut Company, Chicago, Ill., a Corporation of Illinois. Original application filed Nov. 8, 1913, Serial No. 799,868. Divided and this application filed Mar. 5, 1914. Serial No. 822,592. (Cl. 10—86.)



The method of forming a bolt nut, consisting in preparing a swaging mandrel, with a section thereof corresponding to the normal standard thread on the nut, and another section thereof varying therefrom, and forcing a nut on sad mandrel to a point where a part of the nut is forced upon said modified part of the mandrel, whereby a section of the threaded portion of the nut is normal, and another section thereof varies therefrom.

1,154,135. FILING APPLIANCE. ELLIS T. SILVIUS, Indianapolis, Ind., assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Dec. 26, 1912. Serial No. 738,730. (Cl. 45—2.)



1. A filing appliance equalizer including a case, two links pivoted to the case, an abutment bar pivotally connected to the two links, a coupling link pivoted to the bar, a lever pivoted to the case, and a link pivoted to the lever and to the bar.

2. A filing appliance equalizer including a supporting plate, an abutment bar, two links pivotally connected to the plate and also to the bar at points equi-distant apart, a roller mounted on one end portion of the bar, and a coupling link mounted on the opposite end portion of the bar.

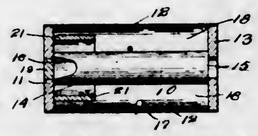
3. A filing appliance including a case comprising an upright back, a plurality of filing leaves hingedly connected together and pivotally supported forward of the back, and a plurality of links pivotally supported on the back and having an abutment bar connected thereto and guided thereby parallel to the back, the bar being normally retained in shifting contact with the rearmost one of the leaves.

4. A filing appliance including an upright support, an abutment bar mounted uprightly on the support to move parallel thereto and from or toward the support, a plurality of filing leaves connected together and pivotally supported to stand uprightly against the abutment bar, and a link for connecting the bar with the lower end of one of the leaves.

5. A filing appliance including a case comprising an upright back provided with an upright movable parallel abutment, and a plurality of filing leaves connected together for relative pivotal movement, the forward one being pivotally supported in the case forward of the back, the rearward one of the leaves being connected at its lower end with and slidably engaging the abutment.

[Claims 6 to 15 not printed in the Gazette.]

1,154,136. PUZZLE. ANTONIO P. SIMAO, Lowell, Mass., assignor of one-seventh to Ramon Rodriguec, one-seventh to Filicissimo C. Silva, one-seventh to Evaristo L. Rosa, one-seventh to Carroll L. Pingree, and two-sevenths to Manoel E. Mello, Lowell, Mass. Filed Feb. 10, 1914. Serial No. 817,906. (Cl. 46—41.)



1. A device of the class described comprising a circular bottom and top, a sheet metal cylindrical outer side portion therearound, the top having an opening therethrough, and a sound-absorbent cylindrical member concentric with the opening and having a lateral opening within the device.

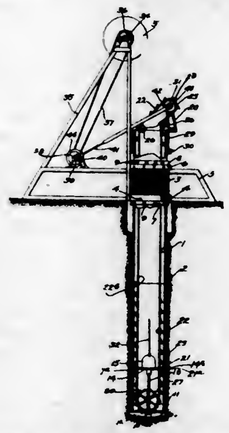
2. A puzzle of the class described, comprising an opaque receptacle having an apertured end, a cylindrical member carried by said end in registry with the opening, having a transversely inclined inner termination, and having a lateral opening in the direction of said inclination, for the purpose described.

3. A device of the class described comprising a cylindrical can element having an apertured end and a cylindrical member leading therefrom, having a lateral outlet at its inner part, and a circular baffle member carried by the end of the can opposite said open end, spaced between the wall of the can and said cylindrical member.

1,154,137. DEVICE FOR SINKING FOUNDATION-TUBES. HENRY SLETTEN and ALEXANDER N. LIDELL, Minneapolis, Minn. Filed June 12, 1914. Serial No. 844,670. (Cl. 255—4.)

1. The combination with an extensible sectional foundation tube having means for detachably connecting the sections thereof, of a motor applied to the lower tube section, a motor driven boring tool working below said tube, an extensible conveyer working in said extensible tube, a support for the upper portion of said conveyer, applied to the upper tube section, and connections for driving said conveyer.

2. The combination with an extensible sectional foundation tube having means for detachably connecting the sections thereof, of a motor applied to the lower tube section, a motor driven boring tool working below said tube, an extensible conveyer working in said extensible tube, a support for the upper portion of said conveyer applied to the upper tube section, a relatively fixed base support, and connections between said base support and said sectional tube for forcing the same and the parts carried thereby, bodily downward.



3. The combination with an extensible sectional foundation tube having means for detachably connecting the sections thereof, of a motor applied to the lower tube section, a motor driven boring tool working below said tube, an extensible conveyer working in said extensible tube, a support for the upper portion of said conveyer applied to the upper tube section, a relatively fixed base support, connections between said base support and said sectional tube for forcing the same and the parts carried thereby, bodily downward, and means for driving said conveyer, comprising a driving wheel on said base support, a driven wheel on said conveyer support, and a telescopical extensible driving shaft connecting said driving and driven gears, and serving to transmit motion to said conveyer in different adjustments of the said sectional tube.

4. The combination with a foundation tube, of a motor in the lower end of said tube, an extensible motor driven boring tool working below the lower end of said tube, and coöperating interlocking devices on said motor support and the interior of the lower section of said tube arranged to be interlocked by rotation in a direction reverse from the operative direction of rotation of said boring tool and to be separated when said motor support is rotated in the other direction, whereby the said tool, motor and support may be detached from and moved upward out of said tube.

5. The combination with a sectional foundation tube having means for detachably connecting the sections thereof, of a motor detachably connected to the lower section of said tube, a motor-driven boring tool working below said tube, an extensible conveyer working in said tube, a support in the upper end of said conveyer detachably applied to the upper tube section, and means for driving said conveyer.

[Claims 6 and 7 not printed in the Gazette.]

1,154,138. COMPOSITE VENEER AND METHOD OF MAKING SAME. HARRISON L. STALEY, Martinsville, Ind., and WALTER B. SIMMONS, Richmond, Va., assignors to Wilts Veneer Company, Richmond, Va., a Corporation of North Carolina. Filed May 7, 1915. Serial No. 26,521. (Cl. 20—89.)

1. The method herein described of making a composite box board consisting in adhesively fastening to the opposite faces of a single thin flexible sheet of wood under

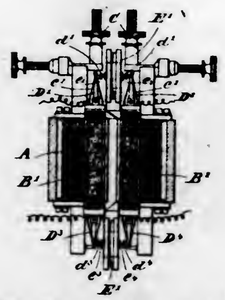
heavy pressure tough flexible absorbent sheets of paper, the pressure being sufficient to force the glue into the paper and wood and cause the fibers of the paper to substantially fill the interstices of the wood surface.



2. An article of manufacture consisting of a single ply of flexible wood veneer having adhesively fastened to each of its opposite faces a sheet of tough flexible absorbent paper, the paper being forced into intimate contact with the wood surface, for the purposes set forth.

3. An article of manufacture consisting of a single ply of wood thin enough to readily flex and having adhesively fastened to each of its opposite faces a sheet of tough flexible paper, the paper extending over the entire area of the wood and being forced into intimate contact with the surface of the wood, whereby the wood sheet will be reinforced on both sides and be thereby prevented from warping and also splitting when flexed.

1,154,139. TELEGRAPH OR TELEPHONE RELAY. CURT STILLE, Zehlendorf-West, near Berlin, Germany. Filed Mar. 21, 1914. Serial No. 826,319. (Cl. 179—171.)



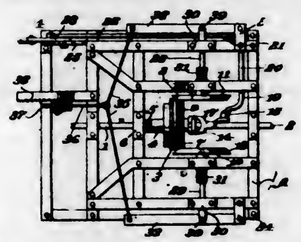
1. In a relay the combination of an electromagnet producing a strong magnetic field, two coils suspended in the said field and adapted to be rotated in opposite directions by a change of the strength of the field, arms carried by said coils and fixed microphones subjected to the pressure of the said arms substantially as described.

2. In a relay the combination of an electromagnet producing a strong magnetic field, two coils suspended in the field and adapted to be rotated in opposite directions, arms carried by the coils, and a plurality of fixed microphones each subjected to the pressure of an arm of the coils respectively substantially as described.

3. In a relay the combination of an electromagnet producing a strong magnetic field, two coils suspended in the field and adapted to be rotated in opposite directions, symmetrically arranged arms carried by the coils, and a plurality of fixed microphones each subjected to the pressure of an arm of the coils respectively substantially as described.

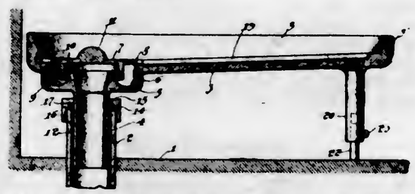
1,154,140. TRANSMISSION-GEARING FOR AUTOMOBILES. ARTHUR R. STROUVELLE and LEWIS T. MASON, Clovis, N. Mex. Filed Aug. 27, 1913. Serial No. 786,925. (Cl. 74—26.)

In transmission gearing, a driving shaft, a driven shaft in line therewith, a driving wheel clutched to the driving shaft, a driven wheel keyed to and slidable along the driven shaft, means for shifting said driven wheel longitudinally of its shaft, oppositely arranged transmission wheels shiftable in a direction at right angles to said shafts and adapted to simultaneously engage both the driving and the driven wheels, expansion springs encircling the shafts of said transmission wheels and acting to press said wheels away from the driving and driven wheels, and manually controlled means for simultaneously shifting both transmission wheels toward and away



from each other comprising levers connected with the shafts of said transmission wheels, a manually controlled lever, and links connecting the last named lever and the first named levers.

1,154,141. REFRIGERATOR DRAIN-PAN OR THE LIKE. RICHARD TAIT, Jr., eq. Chicago, Ill., assignor to Enterprise Plumbing Supply Co., Chicago, Ill., a Corporation of Illinois. Filed May 9, 1913. Serial No. 766,536. (Cl. 182—13.)

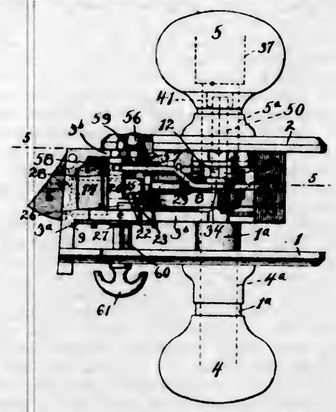


In a device of the kind described, the combination of a vertically extending drain pipe having an exteriorly threaded portion at one end thereof, of a relatively oblong drip pan provided with a discharge pipe, said discharge pipe being of a diameter substantially less than the diameter of the drain pipe to facilitate the ready positioning of the drain pipe within the discharge pipe, a flanged clamping ring provided with an interiorly threaded portion and with a beveled face inward from the threaded portion, said ring being threaded on the exteriorly threaded end of the drain pipe and surrounding the discharge pipe, a ring of packing material arranged between said first mentioned clamping ring and its flange and the end of the drain pipe, said clamp ring being adapted to tightly compress the ring of packing material against the end of the drain pipe, and the beveled face of the clamping ring to force the packing ring inwardly against the sides of the drain pipe, whereby a gas tight joint is formed between the pipes and a vertically sliding adjustable connection provided to support the drip pan at one end and a leg projecting from the drip pan at the opposite end and carrying an adjustable extension, whereby the pan can be vertically adjusted to any desired height.

1,154,142. LOCK. ERNEST L. TEICH, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Sept. 26, 1914. Serial No. 863,638. (Cl. 70—92.)

1. In a lock, a latch bolt, a dead bolt, means controlled by a key of one class for operating said latch bolt only, means controlled by keys of second and third classes for operating said dead bolt and including means controlled by a key of one of said last-named classes for blocking retraction of said dead bolt through keys of the other of said classes.

2. In a lock, a latch bolt, a dead bolt, means controlled by a key of one class for operating said latch bolt only, means controlled by keys of second and third classes for operating both said dead bolt and said latch bolt and including means controlled by a key of one of said last-named classes for blocking retraction of said dead bolt through keys of the other of said classes.



3. In a lock, a latch bolt, a dead bolt, means controlled by a key of one class for operating said latch bolt only, means controlled by a key of a second class for operating said dead bolt and for blocking the retraction of said latch bolt by a key of the first class when said dead bolt is projected by a key of said second class, and means controlled by a key of a third class for operating said dead bolt and for blocking its subsequent retraction by keys of the other of said classes.

4. In a lock, a latch bolt, a dead bolt, means controlled by a key of one class for operating said latch bolt only, means controlled by a key of a second class for operating both said dead and latch bolts and for blocking the retraction of said latch bolt by a key of said first class when said dead bolt is projected by a key of the second class, and means controlled by a key of a third class for operating both said dead and latch bolts and for blocking the subsequent retraction of said dead bolt and of said latch bolt by keys of the other classes.

5. In a lock, bolt mechanism including a latch bolt and a dead bolt, a cylinder lock, means controlled through said cylinder lock by one class of keys for operating said latch bolt only, means controlled through said cylinder lock by a second class of keys for operating said dead bolt and said latch bolt also, and means controlled through said cylinder lock by a third class of keys for operating said dead and latch bolts and for blocking the subsequent retraction of said dead bolt by the operation of a key of the second class.

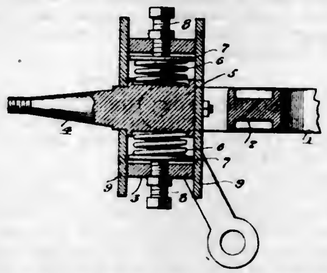
[Claims 6 to 10 not printed in the Gazette.]

1,154,143. AXLE-MOUNT. FRANK MACVICAR, Syracuse, N. Y. Filed Dec. 20, 1913. Serial No. 807,983. (Cl. 21—141.)

1. In combination, an axle, a frame pivotally connected to the axle to turn about a vertical axis, a stub axle mounted in such frame and adapted to have a horizontal movement and cushioning means between opposite sides of the stub axle and the ends of the frame.

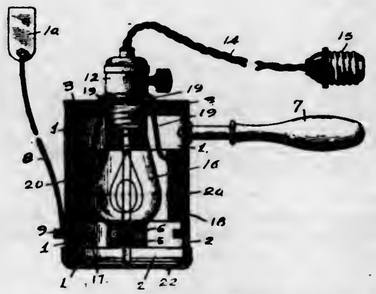
2. In combination, an axle, a frame pivotally connected with the axle to turn about a vertical axis, a stub axle having a head which is mounted in the said frame to move horizontally, cushioning means between opposite sides of the stub axle head and the ends of the frame, and means detachably connected to the head of the stub axle for closing opposite sides of the frame.

3. In combination, an axle, a frame having pivotal connection with the axle to turn about a vertical axis, a stub axle mounted in the frame to move horizontally, cushioning devices at opposite sides of the stub axle, adjusting



screws threaded into opposite ends of the frame and adapted to regulate the effective tension of the cushioning devices.

1,154,144. THERMO-ELECTRIC DEVICE FOR THERAPEUTICS. JAMES B. WAGONER, deceased, Los Angeles, Cal., by Alma M. Wagoner, special administratrix, San Francisco, Cal. Filed Aug. 31, 1914. Serial No. 860,109. (Cl. 174—177.)



1. In a thermo-electro device for therapeutics, the combination of a cylindrical shell formed of two semi-circular members of opposite polarity insulated from each other; a transformer secured around the shell; suitable connections between the secondary of the transformer and each of the semi-circular members.

2. In a thermo-electro device for therapeutics, the combination of a cylindrical shell formed of two semi-circular members of opposite polarity insulated from each other; a transformer secured around the shell; suitable connections between the secondary of the transformer and each of the semi-circular members; and a suitable fabric secured to the lower end of the shell and arranged to act as a dielectric.

3. In a thermo-electro device for therapeutics, the combination of a circular transformer comprising primary and secondary coils; suitable electrical connections secured to the primary and arranged to connect the said primary with a suitable source of electrical energy; a cylindrical shell within the transformer and formed of two semi-circular members electrically connected to the opposite ends of the secondary of the transformer; an electrode connected to one of the semi-circular members; and a suitable fabric secured to the lower end of the transformer and arranged to act as a dielectric.

4. In a thermo-electric device for therapeutics, the combination of a cylindrical shell formed of two semi-circular members of opposite polarity insulated from each other; a transformer secured around the shell; an insulated head secured within one end of the shell; an electric switch secured within the insulated head and having electrical connections to the primary of the transformer; suitable electrical connections secured to the switch by means of which the same may be connected to a suitable source

of electrical energy; suitable connections between each semi-circular member and the secondary of the transformer; an electrode secured to one of the semi-circular members; a handle secured to the shell; and a suitable fabric secured to the bottom of the shell and arranged to act as a dielectric.

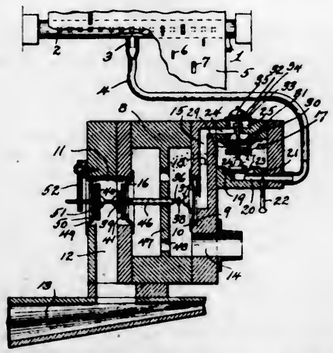
1,154,145. PROCESS FOR THE PRODUCTION OF NITROGEN. ROGER WILLIAM WALLACE and EUGENE WASSMER, London, England. Filed June 17, 1912. Serial No. 704,144. (Cl. 23—10.)

1. The method of producing nitrogen for commercial purposes from a mixture of gases containing carbon monoxid and nitrogen, which consists in oxidizing the carbon monoxid into carbon dioxid with an excess of air, eliminating the carbon dioxid by treatment with ammonia solution to form ammonium carbonate and thereafter passing the mixture of gases containing nitrogen and oxygen through a chamber containing phosphorus.

2. The method of producing nitrogen for commercial purposes which consists in passing phosphorus vapors into a chamber or tower containing material on which the phosphorus may condense, and thereupon passing a current of a gaseous mixture of oxygen and nitrogen through said chamber to cause the formation of anhydrids of phosphorus and to render the nitrogen available.

3. The method of producing nitrogen for commercial purposes which consists in passing phosphorus vapors into a chamber or tower containing material on which the phosphorus may condense, thereupon passing a current of a gaseous mixture of oxygen and nitrogen through said chamber to cause the formation of anhydrids of phosphorus and nitrogen and passing these products through a water tower to combine with the anhydrids of phosphorus to produce acids of phosphorus to produce acids of phosphorus and to leave the nitrogen free, substantially as described.

1,154,146. PIANO-PLAYER. EUGENE C. WAMELINK, Cleveland, Ohio. Filed Jan. 30, 1911. Serial No. 605,372. (Cl. 84—168.)



1. In a piano player, a device operated by pneumatic force for speaking each note, said pneumatic force varying in intensity with the pumping and with the speaking of the notes, mechanism including motor means operated by outside air for controlling each device, and governing means acting upon and controlling said motor means and simultaneously with the operation thereof directly producing predetermined variations in the operation of said device in accordance with the volume of outside air admitted to the motor means and in addition to the variations produced by changes in the pneumatic force.

2. In a piano player, a device operated by pneumatic force for speaking each note, said pneumatic force varying in intensity with the pumping and with the speaking of the notes, mechanism including a single motor means operated by outside air for controlling each device, and governing means acting upon and controlling said motor means and simultaneously with the operation thereof directly producing predetermined variations in the operation of said device in accordance with the volume of outside air admitted to the motor means and in addition to the variations produced by changes in the pneumatic force.

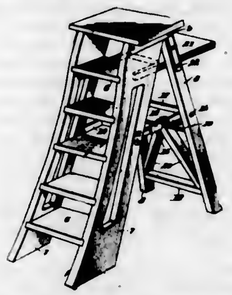
3. In a piano player, a power pneumatic operated by pneumatic force for speaking each note, said pneumatic force varying in intensity with the pumping and with the speaking of the notes, mechanism including motor means operated by outside air for controlling each power pneumatic, and governing means acting upon and controlling said motor means and simultaneously with the operation thereof directly producing predetermined variations in the operation of said power pneumatic in accordance with the volume of outside air admitted to the motor means and in addition to the variations produced by changes in the pneumatic force.

4. In a piano player, a power pneumatic operated by pneumatic force for each note to be spoken, said pneumatic force varying in intensity with the pumping and with the speaking of the notes, valve mechanism for controlling the operation of the power pneumatic, a single motor means operated by outside air for operating each valve mechanism, and governing means acting upon and controlling said motor means and simultaneously with the operation thereof directly producing variations in the operation of said power pneumatic in accordance with the volume of outside air admitted to the motor means and in addition to variations produced by changes in the pneumatic force.

5. In a piano player, a power pneumatic operated by pneumatic force one for each note to be spoken, said pneumatic force varying in intensity with the pumping and with the speaking of the notes, valve mechanism comprising a melody note valve and an accompaniment note valve, a single motor means operated by outside air for operating said valve mechanism, governing means acting upon and controlling said motor means so as to cause a variation in the volume of air admitted to the motor means to operate either the melody note valve or the accompaniment note valve, and means for varying the volume of outside air admitted to the motor means.

[Claims 6 to 26 not printed in the Gazette.]

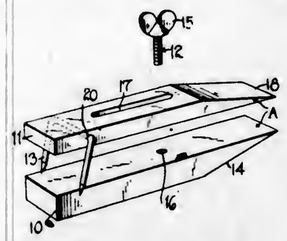
1,154,147. LADDER. GEORGE T. WARREN, Sr., Charleston, S. C. Filed May 7, 1915. Serial No. 26,446. (Cl. 228—15.)



The combination with a ladder, and props hinged thereto, of a shelf pivoted between the props, and a folding brace connecting the ladder and props, one member of the brace having a cross bar arranged to strike the lower end of the shelf and hold the same upright when in folded position.

1,154,148. DOOR-CHECK. WILLIAM J. WEST, Clay City, Wash. Filed May 26, 1915. Serial No. 30,597. (Cl. 16—79.)

1. A door check including a lower block section, an upper block section mounted for longitudinal adjustment upon the lower block section, means for holding the block sections in adjusted relation, and a floor engaging member for holding the check against movement with respect to the sill of the door.



2. A door check including a lower block section, an upper block section, said sections being adapted for longitudinal adjustment with respect to each other, means for holding the block sections in adjusted relation, and a floor engaging member carried by one of the sections for holding the block against movement away from the sill of the door.

3. A door check including a lower block section, an upper block section, said sections being adapted for longitudinal adjustment with respect to each other, the forward end of each section being beveled to provide a wedge face, whereby one end of the block is wedge shaped and is adapted to be inserted between a door and a sill, said upper section being provided with a longitudinal slot, a set screw passing through the slot and into engagement with the lower block section, the head of the screw being engageable with the upper section for holding the two sections in longitudinal adjusted position, and a floor engaging member carried by one of the sections for holding the block against movement away from the sill.

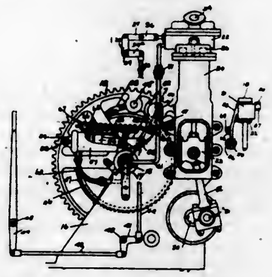
4. A door check including a block consisting of an upper block section and a lower block section, means for securing the sections in longitudinal adjusted relation to each other, the forward end of each section being tapered, whereby the forward end of the block constitutes a wedge adapted to be inserted between a door and sill, and a substantially U-shaped floor engaging member having its bight portion extending transversely through one of the block sections and having the terminals of its arms pointed for engagement with the floor, whereby the block is held against movement away from the sill.

5. A door check including a wedge-shaped block member, adapted to be engaged between the door and the sill thereof, and a substantially U-shaped floor engaging member having its bight portion extending transversely through the block and having the terminals of its arms pointed for engagement with the floor, whereby the block is held against movement away from the sill.

1,154,149. ENGINE AND FRICTION-CLUTCH CONTROL. CLARENCE B. WESTON, Marion, Ohio, assignor to Ball Engine Company, Erie, Pa., a Corporation of Pennsylvania. Filed Jan. 20, 1915. Serial No. 3,360. (Cl. 121—120.)

1. In an engine and friction clutch control, the combination of an engine; a fluid actuated clutch comprising a driving member driven by the engine and a driven member; a controlling valve chest having a steam and exhaust port leading to the engine and a port connected with the fluid actuated clutch; and a controlling valve operating in said chest and over said ports and adapted to control the flow of steam to the engine and to the fluid actuated clutch and to exhaust the steam from the clutch by way of the exhaust port.

2. In an engine and friction clutch control, the combination of an engine; a fluid actuated clutch comprising a driving member driven by the engine and a driven member; a controlling valve chest having reversing ports leading therefrom to the engine and a port leading to the clutch; and a reversing controlling valve operating on said ports and adapted to reverse the engine by reversing the steam through said ports, said controlling valve also controlling the port leading to the clutch.



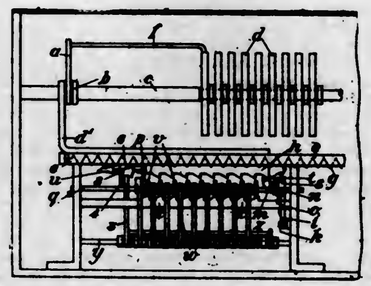
3. In an engine and friction clutch control, the combination of an engine; a fluid actuated clutch comprising a driving member driven by the engine and a driven member; a controlling valve chest having two steam ports for the engine; an exhaust port and a port connected with the clutch; and a valve operating from said ports and adapted to couple the steam passages alternately with the exhaust passage and to control the clutch port.

4. In an engine and friction clutch control, the combination of an engine; a fluid actuated clutch comprising a driving member driven by the engine and a driven member; a controlling valve chest having two steam ports for the engine; an exhaust port and a port connected with the clutch; and a valve operating over said ports and adapted to couple the steam passages alternately with the exhaust passage and to control the clutch port, and having a sequence of closing permitting the closing of the ports of the engine prior to the closing of the clutch port.

5. In an engine and friction clutch control, the combination of an engine; a clutch comprising a driving member driven by the engine and a driven member; a controlling device for the engine adapted to stop and reverse the engine; and a single controlling means controlling the clutch and the controlling device.

[Claim 6 not printed in the Gazette.]

1,154,150. CALCULATING-MACHINE. HELGE ALLAN WIBERG, Stockholm, Sweden, assignor to Aktiebolaget Adderator, Stockholm, Sweden. Filed Aug. 25, 1913. Serial No. 786,613. (Cl. 235—63.)



1. In a calculating machine having a stand, a plurality of calculating wheels and keys for operating said wheels, a carriage mounted to slide on said stand transversely to said keys; means tending to displace said carriage in one

direction, means arresting the carriage in a certain position, said arresting means being released by the operation of any one of said keys.

2. In a calculating machine having a stand, a plurality of calculating wheels and keys for operating said wheels, a carriage mounted to slide on said stand transversely to said keys; a spring tending to displace said carriage in one direction, means for connecting the carriage with any one of said wheels, a ratchet device for arresting the carriage when pushed against said spring out of engagement with all of said calculating wheels.

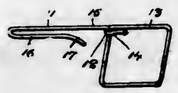
3. In a calculating machine having a stand, a plurality of calculating wheels and keys for operating said wheels, a carriage mounted to slide on said stand transversely to said keys; a spring tending to displace said carriage in one direction, means for connecting the carriage with any one of said wheels, a ratchet device for arresting the carriage when pushed against said spring out of engagement with all of said calculating wheels; and means actuated by any one of said keys for releasing said ratchet device.

4. In a calculating machine having a stand, a plurality of calculating wheels and keys for operating said wheels, a carriage mounted to slide on said stand transversely to said keys; a spring tending to displace said carriage in one direction, means for connecting the carriage with any one of said wheels, a ratchet device for arresting the carriage when pushed against said spring out of engagement with all of said calculating wheels, a lever having a member engaging with all of the keys, said lever contacting with said ratchet device so as to release it when oscillated by any one of said keys.

5. In a calculating machine having a stand, a plurality of calculating wheels and keys for operating said wheels, a carriage mounted to slide on said stand transversely to said keys; a spring tending to displace said carriage in one direction, means for connecting the carriage with any one of said wheels, a revoluble shaft in said stand and provided with a plurality of shoulders positioned so as to correspond with the keys, said shaft being axially displaceable between two extreme positions, one with the shoulders registering with the keys and the other position not.

[Claims 6 to 10 not printed in the Gazette.]

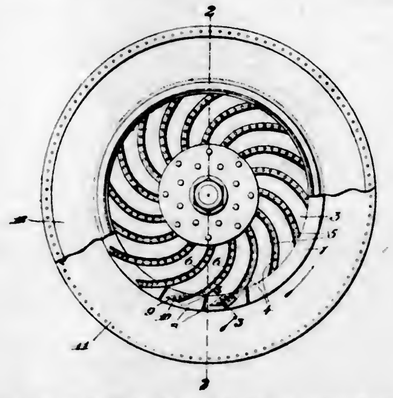
1,154,151. WHIP-HOLDER. CLAUDE H. WILLIAMS, Catawissa, Pa. Filed Dec. 3, 1913. Serial No. 804,464. (Cl. 24—261.)



A whip holder comprising a single length of wire terminally bent at one end to form spaced horizontally disposed strands defining a clip, one of the strands being extended beyond the other and bent downwardly at a right angle to the plane of the clip, said right angular portion being further bent to provide a clamp having parallel strands, the wire at the termination of the top side being bent back upon itself to surround the juncture of the clip strand with said right angular portion and disposed in horizontal alinement with one of said parallel strands, whereby when a whip is positioned in the clip the downward pull will tend to tighten the clamp portion.

1,154,152. CENTRIFUGAL FAN-WHEEL. EUGENE B. WILLIAMS, Boston, Mass., assignor to B. F. Sturtevant Company, Boston, Mass., a Corporation of Massachusetts. Filed June 25, 1914. Serial No. 847,265. (Cl. 230—11.)

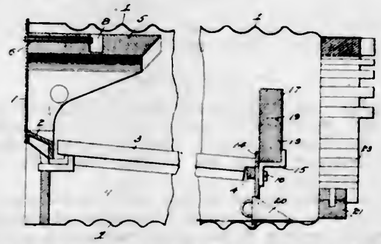
1. A centrifugal fan wheel, having, in combination, a supporting back disk, a series of rearwardly inclined blades having a curvature which is approximately the involute of a circle for the greater portion of their depth, and a curvature of comparatively small radius at their inner portions and having inner peripheral edges tapering from a maximum diameter at the inlet side of the wheel to a minimum diameter at the back disk to provide a frusto-conical intake chamber within the blades.



2. A centrifugal fan wheel, having, in combination, a supporting back disk, a series of rearwardly curved blades having inner peripheral edges tapering from a maximum diameter at the inlet side to a minimum diameter at the back disk, an annular ring secured to the intake ends of the blades, and annular rings fitting within notches formed in the peripheral edges of the blades and secured to the blades.

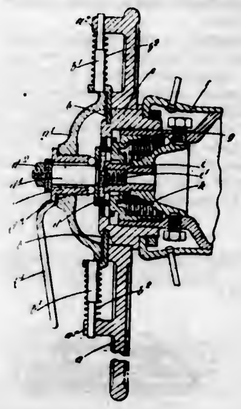
3. A centrifugal fan wheel, having, in combination, a supporting back disk, a series of rearwardly curved blades having a curvature approximately the involute of a circle for the greater portion of their depth and which merges with a circle of comparatively small radius at the inner portion of the blades, a frusto-conical intake chamber within the blades, the largest diameter of which is at the intake side of the wheel, an annular ring secured to the intake ends of the blades, notches formed in the outer peripheral edges of the blades, and annular rings fitting within the notches and secured to the blades.

1,154,153. MARINE-FURNACE EQUIPMENT. ALFRED B. WILLOUGHBY, Philadelphia, Pa. Filed Oct. 27, 1913. Serial No. 797,622. (Cl. 110—95.)



In a furnace, the combination with a front, a dead plate extending across the front, and supports mounted on the dead plate, a one piece refractory arch having its terminals mounted on the supports and having its central portion extending inwardly from the supports and provided with a centrally lined recess disposed substantially midway between the front and back edges of the arch, the arch further having an opening extending from the recess through the front; and a single supporting means for preventing inward movement of the arch comprising a straight bolt held in said opening and extending through the front, the head of said bolt bearing against the front, and a nut on the bolt within the recess and engageable with the front wall of the recess.

1,154,154. SPANNER OR WRENCH. WALTER WRIGHT, Stoke Park, Coventry, England, assignor to The Dunlop Rubber Company, Limited, Aston Cross, near Birmingham, England. Original application filed Oct. 22, 1911, Serial No. 656,290. Divided and this application filed July 18, 1913. Serial No. 779,681. (Cl. 81—53.)



1. For use with a detachable vehicle wheel in which a nut for retaining the outer or detachable hub on the inner hub is normally prevented from rotating by a locking member engaging therewith, a tool or spanner comprising in combination means which engage with said nut to enable it to be rotated, spring actuated means which prevent longitudinal movement of the spanner on the nut, and a cup-shaped member axially movable by rotation which disengages said locking member from the nut.

2. For use with a detachable vehicle wheel in which a nut for retaining the outer or detachable hub on the inner hub is normally prevented from rotating by a locking member engaging therewith, a tool or spanner in combination with flat faces which engage with flat faces on the nut, spring actuated locking devices on said spanner which prevent longitudinal movement of the spanner on the nut, and a movable cup-shaped member on said nut to disengage said locking member from the nut.

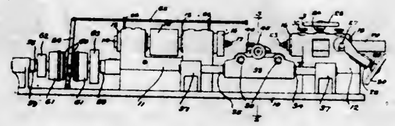
3. For use with a detachable wheel in which a nut for retaining the outer hub on the inner hub is normally prevented from rotating by a locking member engaging therewith, a spanner comprising in combination means whereby the spanner can be locked on the nut, a rotary sleeve carried by said spanner, a member connected to the sleeve and adapted to disengage said locking member from the nut and antifriction balls interposed between said sleeve and the member connected thereto.

4. For use with a detachable vehicle wheel in which a nut for retaining the outer hub on an inner hub is normally prevented from rotating by a locking member engaging therewith, a spanner comprising in combination, means whereby the apanner can be locked on the nut, a rotary externally screw threaded sleeve, a bridge piece on said spanner, provided with a screw threaded hole to receive said sleeve, a spindle mounted in and connected at one end to said sleeve, a cup shaped member secured to the other end of said spindle and antifriction balls interposed between said sleeves and the cup-shaped member.

5. For use with a detachable vehicle wheel in which the outer hub is retained in position by a nut that is normally prevented from rotating by a locking member engaging therewith, a spanner comprising spring controlled sliding bolts adapted to engage a groove in said nut, a rotary externally screw threaded sleeve, a bridge piece on said spanner provided with a screw threaded hole to receive said sleeve, a spindle mounted in and connected at one end to said sleeve, a cup-shaped member carried at the other end of said spindle and antifriction balls interposed between said sleeve and the cup-shaped member.

[Claims 6 and 7 not printed in the Gazette.]

1,154,155. LATHE OR THE LIKE. LUCIEN I. YEOMANS, Chicago, Ill., assignor to Amalgamated Machinery Corporation, Chicago, Ill., a Corporation of New York. Filed July 19, 1915. Serial No. 40,538. (Cl. 82—2.)



1. A machine of the character described having, in combination, a bed, a head stock and a tail stock formed in an integral casting, a pair of bearing sleeves in the head stock, a pair of bearing sleeves in the tail stock, spindles mounted in the respective sleeves, two pairs of sleeves mounted on opposite sides of the machine bed, all of said sleeves being of stock material and occupying recesses in the mentioned casting and secured therein by fusible metal, a pair of guide-rods having their ends supported in the bearing sleeves on said bed, said rods being formed of stock shafting, and a carriage comprising a support having bearing sleeves embedded in its opposite sides and surrounding said guide-rods for supporting and guiding the carriage.

2. A machine of the character described having, in combination, a bed, a head stock, a tail stock, said head stock having a bearing sleeve therein, a spindle rotatably mounted in said sleeve, a bearing sleeve in said tail stock, a spindle movably mounted in the latter sleeve, bearing sleeves mounted on the bed, guide-rods having their ends supported in the latter sleeves, all of said sleeves being formed of stock material and occupying recesses in their respective supports and secured therein by fusible metal, said guide-rods being formed of stock shafting, and a suitable tool carriage slidably mounted on said guide-rods.

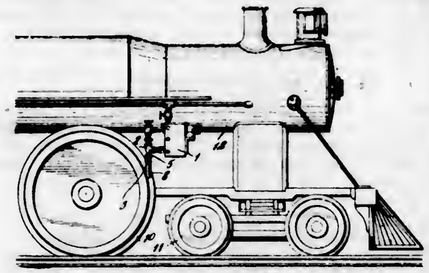
3. A machine of the character described having, in combination, a bed, a head stock, a tail stock, bearing sleeves in the head stock and the tail stock, respectively, spindles in the respective bearing sleeves, two pairs of alined bearing sleeves at opposite sides of said bed supported in lugs rising from the bed, all of said bearing sleeves occupying recesses in their respective supports and secured therein by fusible metal, two guide-rods, each having its ends supported in the two bearing sleeves at one side of the bed, and a suitable tool carriage mounted to slide on said guide-rods.

4. A machine of the character described comprising, in combination, a head stock, a tail stock, bearing sleeves mounted respectively in the head stock and the tail stock, spindles mounted in the respective sleeves, said sleeves occupying recesses in their supports and secured therein by fusible metal, and a suitable tool support mounted between the head stock and the tail stock.

5. A machine of the character described comprising, in combination, a bed, a head stock, a tail stock, spindles mounted respectively in the head stock and the tail stock, two pairs of lugs located at opposite sides of the bed, a bearing sleeve in each lug, said sleeves occupying openings in the lugs and secured therein by fusible metal, two guide-rods each having its ends supported in one pair of said sleeves, and a suitable tool carriage mounted to slide on said guide-rods.

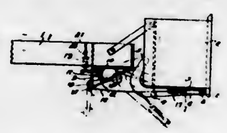
[Claims 6 to 13 not printed in the Gazette.]

1,154,156. FLANGE-OILER. ANTON ALBERTSON, Minot, N. D. Filed Mar. 6, 1915. Serial No. 12,643. (Cl. 184—3.)



A device of the class described comprising a lubricant containing tank, a pipe for feeding lubricant from said tank, a distributing pipe, an elbow threaded upon said feeding pipe, a nut threaded upon said pipe and adapted to be brought into binding engagement with the upper edge of said elbow for locking said elbow in a set position relative to said feeding pipe, said distributing pipe being secured to said elbow, a self-adjusting sleeve slidably mounted upon said distributing pipe and adapted to engage the flange of a wheel of a locomotive, and said adjusting nut adapted to hold said distributing pipe in a position for discharging lubricant direct against the outer face of the flange of the wheel at an angle of approximately forty-five degrees.

1,154,157. TRIPPING DEVICE FOR SHOVEL-DIPPER DOORS. FRANK H. ARMSTRONG, Vulcan, Mich. Filed July 21, 1914. Serial No. 852,132. (Cl. 37—16.)



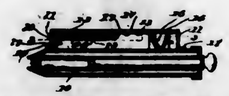
1. The combination with a dipper having a door and a latch therefor and mounted for movement so as to occupy either an upright position or a lateral position, of means for withdrawing the latch when the dipper occupies its lateral position, comprising a weight, a catch for maintaining the weight in a relatively elevated position, connections for withdrawing the said latch arranged so as to be operated by the said weight when it is released, and means for releasing the said catch to permit the weight to fall and operate the connections to withdraw said latch, the parts being arranged so that the movement of the dipper to substantially upright position serves to return the weight to its original position with respect to the catch and dipper.

2. The combination with a dipper having a door and a latch therefor and mounted for movement so as to occupy either an upright or a lateral position, of means for withdrawing the latch when the dipper occupies its lateral position comprising a pivoted laterally extending arm provided with a weight, a catch for maintaining the arm with its weight in its laterally extending position, connections between the arm and the said latch, and means for releasing the said catch to permit the arm to swing downwardly under the influence of the weight and release the said latch, the movement of the dipper to upright position serving to return the said arm with its weight to its original position with respect to the catch and dipper.

3. In combination, a dipper mounted for movement so as to occupy either an upright or a lateral position, a door hinged to the dipper and constituting the bottom thereof, a latch which locks automatically when the door is closed, a pivoted arm provided with an operating weight and extending laterally when the dipper occupies its lateral position, a connection from the arm to the said latch, a catch for maintaining the arm in its lateral position, and means for withdrawing the catch to permit the weight to swing the said arm and withdraw the said latch, the said catch being adapted to automatically reengage when the dipper moves to its vertical position and the door is latched.

4. The combination with a dipper having a door and a latch therefor, and mounted for movement so as to occupy either an upright or a lateral position, of a weighted arm which occupies an upright position when the dipper is in its upright position, an automatic catch which holds the arm against movement with respect to the dipper as the dipper and arm are moved to their lateral positions, means for releasing the catch, and connections between the said latch and the arm whereby the latch is withdrawn as the weighted arm swings to its upright position.

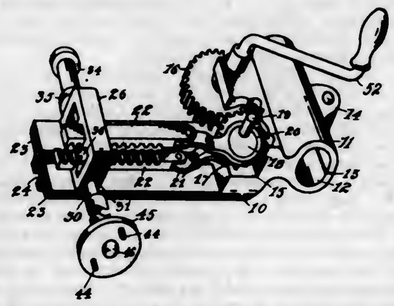
1,154,158. CIGAR-CUTTER. CORD ASENDORF, Jr., Savannah, Ga. Filed Sept. 5, 1914. Serial No. 860,386. (Cl. 131—38.)



1. In a device of the character described, a casing having an opening therein, a cup in the casing and having the opening communicating therewith, a blade, guides in the casing, said blade having sliding engagement with the guides whereby the blade can be moved across the opening in the casing, an exterior handle formed at one end of the blade, and a bead on the casing and providing a recess at one end thereof, said recess normally receiving said handle when the blade is in closed position.

2. In a device of the character described, a casing having an opening therein, a cup in the casing and having the opening communicating therewith, a blade, guides in the casing, said blade having sliding engagement with the guides whereby the blade can be moved across the opening in the casing, an exterior handle formed at one end of the blade, a bead on the casing and providing a recess at one end thereof, said recess normally receiving said handle when the blade is in closed position, and means for holding the blade in closed position in the casing.

1,154,159. BIT FOR VALVE-GRINDERS. ASA ASHWORTH, Salamanca, N. Y. Filed July 12, 1915. Serial No. 39,232. (Cl. 51—4.)

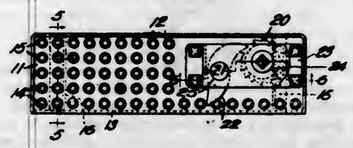


1. A valve grinder comprising a frame, a spindle rotatively mounted in said frame, mechanism to rotatively reciprocate said spindle in said frame, a disk shaped spanner bit having a central opening removably engaged by said spindle, and a central projection on the end of said spindle to bear against the center of said spanner bit in said opening when reciprocally rotating the same.

2. A valve grinder comprising a frame, a spindle rotatively mounted on said frame, mechanism to rotatively reciprocate said spindle, a disk-shaped bit end on said spindle for engaging the valve, projections on said disk-shaped bit for engaging in spaced openings in the valve to turn said valve, and a curved projection central of said disk to bear on the center of said valve during the process of grinding.

3. A valve grinder comprising a frame, a spindle rotatively mounted on said frame, mechanism to rotatively reciprocate said spindle, a flattened end to said spindle having a central projection, a spanner bit having spaced projections thereon to engage in similarly spaced openings in the valve, said spanner bit having a slotted stem with a central opening therein to receive said flat spindle end and the central projection of said spindle in said slot and central opening, and a central rounded projection on the lower side of said tip to bear continuously on the center of the valve top during the grinding of said valve.

1,154,160. BRAKE-STEP. WILLIAM S. ATWOOD, Montreal, Quebec, Canada. Filed Nov. 9, 1914. Serial No. 871,055. (Cl. 188—52.)



1. A brake step comprising a flanged tread plate burred on the upper surface, and flanged brackets supporting said plate, and welded thereto.

2. A brake step comprising a flanged plate of stamped sheet metal, annular burs formed on the tread surface of said plate, and flanged brackets of stamped sheet metal welded to said plate.

3. A brake step comprising a perforated tread plate of stamped sheet metal, having an upstanding flange on the three sides, and a depending flange on the fourth side, annular burs surrounding the perforations, a plurality of flanged brackets of stamped sheet metal welded to the tread plate.

4. A brake step comprising an apertured tread plate, supporting brackets therefor, an apertured strap carried by said plate, a ratchet wheel having the hub thereof journaled in the apertures of the plate and strap, and a trunnioned pawl having the trunnions thereof journaled in the plate and strap apertures.

5. In a brake step, a perforated tread plate of stamped sheet metal having an upstanding flange on three sides, and a depending flange on the fourth side, annular burs surrounding certain of said perforations, brackets of stamped sheet metal welded to said plate, an apertured strap bolted to the plate and a brake ratchet and pawl journaled between said plate and strap in the apertures thereof.

1,154,161. FIRE-EXTINGUISHING LIQUID. JONAS W. AYLSWORTH, East Orange, N. J., assignor, by mesne assignments, to Pyrene Manufacturing Company, a Corporation of Delaware. Filed May 25, 1909. Serial No. 498,358. (Cl. 23—5.)

1. A fire-extinguishing liquid consisting of carbon tetra-chlorid having dissolved therein a halogenized aromatic hydrocarbon having a boiling point much higher than that of the carbon tetra-chlorid, substantially as described.

2. A fire-extinguishing liquid consisting of carbon tetra-chlorid having dissolved therein a halogenized substitution benzene derivative having a boiling point much higher than that of the carbon tetra-chlorid, substantially as described.

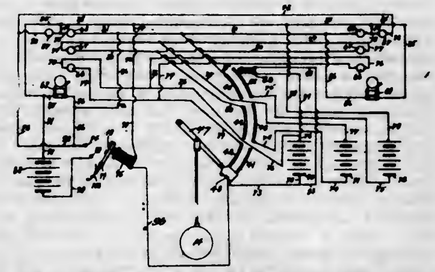
3. A fire-extinguishing liquid consisting of carbon tetra-chlorid having dissolved therein a perchlorinated organic radical having a boiling point much higher than that of the carbon tetra-chlorid, substantially as described.

4. A fire-extinguishing liquid consisting of carbon tetra-chlorid having dissolved therein a substance having a boiling point much higher than that of the carbon tetra-chlorid and serving to retard the rate of volatilization of the latter, and having mixed therewith a metallic salt adapted to coat the charred carbon of the substance burned after all volatile matter is expelled and retard its burning, substantially as described.

5. A fire-extinguishing liquid consisting of carbon tetra-chlorid having dissolved therein a substance having a boiling point much higher than that of the carbon tetra-chlorid and serving to retard the rate of volatilization of the latter, and having mixed therewith finely divided sodium tungstate, substantially as described.

[Claims 6 to 29 not printed in the Gazette.]

1,154,162. SIGNAL APPARATUS. DAVID BAKER, Los Angeles, Cal. Filed July 16, 1914. Serial No. 851,416. (Cl. 177—351.)



1. Signal apparatus including a float, spaced pairs of contact bars, a contact piece adapted to bridge the contact bars, operative connections between said float and said contact piece, signals, means for supplying electric current, conductors between said means and one of each of the pairs of contact bars, conductors leading from the other one of each of the pairs of contact bars to the signals, conductors leading from the signals to said means, a second means for supplying electric current, a warning signal, contacts, a conductor connecting the second means and one of the contacts, a conductor connecting the other of the contacts and the warning signal, a conductor connecting the second means and the warning signal, a spring-pressed switch adapted to bridge the contacts, an electromagnet adapted to hold the switch away from the contacts, and conductors connecting the electromagnet to the contact piece and to the conductors leading from the first mentioned signals.

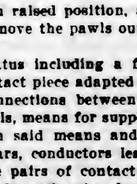
2. Signal apparatus including a float, spaced pairs of contact bars, a contact piece adapted to bridge the contact bars, operative connections between said float and said contact piece, signals, means for supplying electric current, conductors between said means and one of each of the pairs of contact bars, conductors leading from the other one of each of the pairs of contact bars to the signals, conductors leading from the signals to said means, a second means for supplying electric current, a warning signal, contacts, a conductor connecting the second means and one of the contacts, a conductor connecting the other of the contacts and the warning signal, a conductor connecting the second means and the warning signal, a spring-pressed switch adapted to bridge the contacts, an electromagnet adapted to hold the switch away from the contacts, conductors connecting the electromagnet to the contact piece and to the conductors leading from the first mentioned signals, rack bars, spring-pressed pawls on the float adapted to engage the rack bars

to hold the float in raised position, and means connected with the pawls to move the pawls out of engagement with the rack bars.

3. Signal apparatus including a float, spaced pairs of contact bars, a contact piece adapted to bridge the contact bars, operative connections between said float and said contact piece, signals, means for supplying electric current, conductors between said means and one of each of the pairs of contact bars, conductors leading from the other one of each of the pairs of contact bars to the signals, conductors leading from the signals to said means, a second means for supplying electric current, a warning signal, contacts, a conductor connecting the second means and one of the contacts, a conductor connecting the other of the contacts and the warning signal, a conductor connecting the second means and the warning signal, a spring-pressed switch adapted to bridge the contacts, an electromagnet adapted to hold the switch away from the contacts, conductors connecting the electromagnet to the contact piece and to the conductors leading from the first mentioned signals, an audible signal, conductors connecting the audible signal to the conductors leading to and from one of the first mentioned signals, and conductors connecting the audible signal to the conductors leading to and from the warning signal.

4. Signal apparatus including a float, means for holding the float when it is raised in position, spaced pairs of contact bars, a shaft, an arm mounted loose on the shaft and provided with a contact piece adapted to bridge the contact bars, operative connections between the shaft and the float, a second arm secured to the shaft, a pivotally mounted finger on the second arm, a spring for holding the finger against the first mentioned arm, means to limit the movement of the first mentioned arm, signals, means for supplying electric current, conductors between said means and one of each of the pairs of contact bars, conductors leading from the other one of such of the pairs of contact bars to the signals, conductors leading from the signals to said means, a second means for supplying electric current, a warning signal, contacts, a conductor connecting the second means and one of the contacts, a conductor connecting the other of the contacts and the warning signal, a conductor connecting the second means and the warning signal, a spring-pressed switch adapted to bridge the contacts, an electromagnet adapted to hold the switch away from the contacts, and conductors connecting the electromagnet to the contact piece and to the conductors leading from the first mentioned signals.

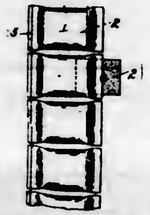
1,154,163. DISPENSING-RECEPTACLE FOR PASTE, &c. LEON H. BALLOU, Lockport, N. Y. Filed Oct. 2, 1911. Serial No. 652,385. (Cl. 221—60.)



1. In a receptacle of the character described, the combination with a flexible tube adapted to be readily collapsed by external pressure to compress material therein, of a substantially rigid neck connected with one end of the flexible tube and provided with a lateral discharge opening, a cup-shaped valve fitting snugly within the neck to prevent the passage of material between the same and the inner wall of the neck and longitudinally movably mounted therein to cover and uncover the lateral discharge opening and having its closed end arranged lowermost, an outer cap rotatably mounted upon the neck with a lateral opening to be moved into and out of registration with the first named discharge opening, and a coil spring disposed between the cap and cup-shaped valve and extending into the cup-shaped valve to be prevented from coming into contact with material held in the tube.

2. In a receptacle of the character described, the combination with a flexible tube, of a substantially rigid neck connected with one end of the tube and provided with an exterior shoulder and a lateral discharge opening, an outer cap having screw threaded engagement with the neck and provided with a lateral discharge opening which is so located that it is brought into registration with the first named discharge opening when said cap is screwed down to have clamping engagement with the exterior shoulder, a cup-shaped valve fitting snugly within the neck and slidable therein to cover and uncover the first named discharge opening, said valve being arranged with its closed end innermost, and a coil spring disposed between and having its ends attached to the heads of the cap and cup-shaped valve.

1,154,164. METHOD OF MANUFACTURING TORPEDOES. WALTER C. BECKWITH, Fostoria, Ohio. Filed Apr. 9, 1915. Serial No. 20,818. (Cl. 246—20.)



1. The closing of an end of each of a plurality of railway torpedo cases by stitching across such end and continuing the stitching from one case to another to connect the cases in chain form, then filling each of the connected cases through the open end thereof with an explosive compound and then closing the open ends of the cases.

2. The closing of an end of each of a plurality of railway torpedo cases by stitching across such end and continuing the stitching from one case to another to connect the cases in chain form, then filling each of the connected cases through the open end thereof with an explosive compound, then closing the open ends of the cases and afterward dipping the chain of filled cases into a waterproofing solution.

3. The closing of the end of each of a plurality of railway torpedo cases by stitching across such end and continuing the stitching from one case to another to connect the cases in chain form, then filling the cases through the open ends thereof with an explosive material, and then closing the open ends of the cases by stitching.

4. The closing of the end of each of a plurality of railway torpedo cases by stitching across such end and continuing the stitch from one case to another to connect them in chain form, then filling the cases through the open ends thereof with an explosive compound, then closing the open ends of the cases by stitching, and then dipping the chain of filled cases into a waterproofing solution.

5. The closing of the end of each of a plurality of railway torpedo cases by stitching across such end and continuing the stitch from one case to another to connect them in chain form, then filling the cases through the open ends thereof with an explosive compound, then closing the open ends of the cases by stitching, then dipping the chain of filled cases into a waterproofing solution, permitting them to dry and then severing the stitching connection between the cases preparatory to securing the cases to holding members.

1,154,165. RAILWAY-FUSEE. WALTER C. BECKWITH, Fostoria, Ohio. Filed June 3, 1915. Serial No. 31,929. (Cl. 102—24.)

1. In a fusee of the class described, a tube having a closed end, a plurality of crossed strips of a sheet-like material inserted into the open end of said tube and forming a plurality of cells, and an inflammable compound filling said tube and cells and being exposed at the open end of the tube.



2. In a fusee of the class described, a tube having a closed end, a plurality of crossed strips of pasteboard, celluloid, or the like inserted into the open end portion of the tube in contact at their outer edges with the tube wall, said strips coöperating to form a plurality of cells and an inflammable compound disposed in said tube and extending out through said cells and filling the same substantially as described.

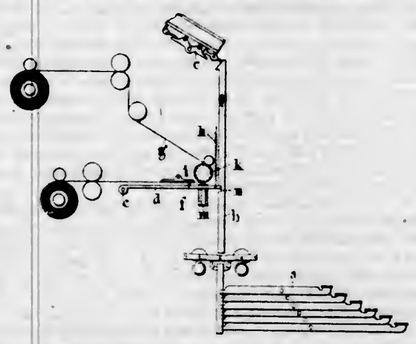
3. In a fusee of the class described, a tube having a closed end, an inflammable compound filling said tube and exposed at the open end thereof, and a member embedded in the compound at the open end of the tube and having a plurality of passages lengthwise therethrough and containing said compound, said member being of a material and nature to adapt it to burn down as rapidly as the compound in the tube.

4. In a fusee of the class described, a tube having a closed end, an inflammable compound filling said tube and exposed at the open end thereof, a member embedded in the compound at the open end of the tube, said member having a plurality of spaced sheet-like partitions of inflammable material which coöperate to form a plurality of passages entirely through the member lengthwise thereof and containing said compound.

5. In a fusee of the class described, a tube having a closed end, an inflammable compound filling said tube and exposed at the open end thereof, and a plurality of sheet-like parts of inflammable material arranged in angular relation and embedded in the compound at the open end of said tube and coöperating with each other and with the tube wall to form a plurality of passages lengthwise through the open end portion of the tube, said passages containing the compound with which the tube is filled.

[Claims 6 and 7 not printed in the Gazette.]

1,154,166. TYPOGRAPHICAL MACHINE. BRUNO BLOCH, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Dec. 10, 1913. Serial No. 805,723. (Cl. 199—7.)



1. Alternative perforated strip mechanism for operating a machine fitted to be operated through a manually operated key board, consisting of a perforated strip, means for advancing it with a step by step motion; releasing studs moved toward the said strip after each advance; means for so moving them and causing one of them to pass through the respectively opposite perforation; and means by which the movement of that passing through actuates the respective key mechanism of the machine.

2. Alternative perforated strip mechanism for operating a machine fitted to be operated through a manually operated key board, consisting of a perforated strip; means for advancing it with a step by step motion; releasing studs moved toward the said strip after each advance; means for so moving them and causing one of them to pass through the respectively opposite perforation; means for moving all the studs away from the strip before each advance of the latter; and means by which the movement of that passing through actuates the respective key mechanism of the machine.

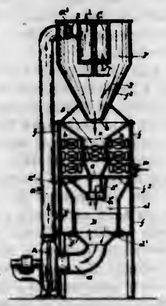
3. Alternative perforated strip mechanism for operating a machine fitted to be operated through a manually operated key board, consisting of a perforated strip; means for advancing it with a step by step motion; releasing studs moved toward the said strip after each advance; levers carrying the said studs; means for so moving the said levers and studs and causing one of the studs to pass through the respectively opposite perforation; means by which the respective lever operates the respective member of the key mechanism synchronously with the passage of the stud through the perforation; and means for returning the levers without affecting the unoperated members of the key mechanism.

4. Alternative perforated strip mechanism for operating a machine fitted to be operated through a manually operated keyboard, consisting of a perforated strip; means for advancing it with a step by step motion; releasing studs moved toward the said strip after each advance; levers carrying the said studs; a frame supporting the said levers and oscillated vertically by the strip feeding means; means for so moving the said levers and studs and causing one of the studs to pass through the respectively opposite perforation; means by which the respective lever operates the respective member of the key mechanism synchronously with the passage of the stud through the perforation; and means for returning the levers without affecting the unoperated members of the key mechanism.

5. In a typographical machine, the combination of a series of escapement actuating devices, a corresponding series of operating members connected therewith and each provided with a releasing pin, means tending to operate all of the said members simultaneously, and a perforated strip mechanism to coöperate with the releasing pins of the operating members and allow the operation thereby of one or another of the escapement actuating devices according to the location of the perforation in the strip.

[Claims 6 to 9 not printed in the Gazette.]

1,154,167. PROCESS OF DRYING JEWELRY. FRANCIS P. BOLAND, Providence, R. I. Filed Apr. 10, 1915. Serial No. 20,544. (Cl. 34—24.)



1. The process of absorbing moisture from the surfaces of articles of jewelry and the like, which consists in placing the articles in a suitable container, continuously drawing or sucking moving dry absorbent medium through or

between the articles in the container, so as to absorb or take up the moisture, discharging the said moisture-laden absorbent medium, evaporating the moisture from the continuously circulating absorbent medium, and finally removing the then dried articles from the container.

2. The process of continuously absorbing moisture from the surfaces of articles of jewelry and the like contained in a suitable receptacle, consisting in mechanically subjecting the articles to a current of heated, dry sawdust drawn or sucked through or between the articles to absorb the moisture, discharging the moisture-charged sawdust into a heating chamber, heating the moving, moisture-charged sawdust to evaporate moisture therefrom, continuously repeating said steps in a circulatory manner without interruption, and removing the then dried articles from the receptacle.

3. The process of absorbing moisture in a continuous manner from the surfaces of suitably mounted articles of jewelry and like goods, which consists in drawing or sucking heated, dry absorbent matter through or between the mounted moist articles to engage the latter and absorb the moisture therefrom, withdrawing the moisture-laden absorbent from the goods being acted upon, passing the moisture-charged absorbent through a heated chamber to evaporate said moisture therefrom, and mechanically drawing or sucking the re-heated, dry, absorbent matter, together with the heated auxiliary air, through or between the goods.

1,154,168. FISH-HOOK. JOSEPH S. BOSSERMAN, Sedalia, Mo. Filed Dec. 11, 1913. Serial No. 806,032. (Cl. 43—30.)



1. An artificial bait of the character described comprising a shank, hooks carried by said shank, a disk rigidly mounted upon said shank, a hood mounted upon said shank, a plate mounted upon said shank, means passing through said plate and hood into said disk for securing said hood and plate to said disk, said hood being provided with cut-out edge portions permitting the points of the hooks to extend beyond the edges of said hood when said hood is compressed by the fish taking the bait.

2. An artificial bait of the character described comprising a shank, hooks carried by said shank, a disk rigidly mounted upon said shank, and a hood rigidly secured to said disk, said hood terminating short of the points of said hooks and forming a yieldable protector for said hooks and the space between the same.

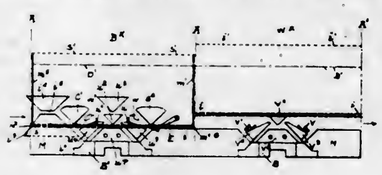
3. An artificial bait comprising a shank, hooks carried by said shank, and a hood connected with said shank and formed of a single piece of yieldable material, terminating short of the points of said hooks and forming a continuous protector for the hooks and space between the same and having a greater diameter at its free edge than the distance between the points of said hooks.

4. An artificial bait comprising an attaching element, hooks extending from said attaching element, and a hood forming a continuous protector for the points of the hooks and the space between the points of the hooks, said hood being formed of a single piece of yieldable material and rigidly connected with said carrying element and having its free edge portion terminating short of the points of said hooks.

5. An artificial bait comprising a carrying element, hooks extending from said carrying element, and a continuous protector for said hooks formed of a single piece of yieldable material rigidly connected with said carrying element and terminating short of the points of said hooks and being of greater diameter at its free edge than the distance between the points of said hooks.

[Claim 6 not printed in the Gazette.]

1,154,169. AUTOMATIC CIRCULAR-KNITTING MACHINE FOR PRODUCING SPLIT-FOOT HOSIERY. GEORGE P. BOSWORTH, Central Falls, R. I. Filed June 2, 1913. Serial No. 771,157. (Cl. 66—24.)



1. In an automatic circular knitting machine, the combination of a needle-cylinder provided with a plurality of suitably arranged series of needles, including the medium or suture needles, a pair of main stitch-cams, a pair of main needle-elevating picks disposed above the main stitch-cams, a pair of secondary stitch-cams disposed opposite said main stitch-cams, a pair of auxiliary picks for elevating the suture needles only, said picks mounted for movement above the secondary stitch-cams, needle-deflecting guard cams, and means for automatically positioning said secondary stitch-cams, auxiliary picks and guard cams for action, whereby, in coöperation with the needle-cylinder moving in a rotary-reciprocatory manner, as in split-foot knitting, the suture needles are caused to be alternately engaged by the auxiliary picks and raised above and past the secondary stitch-cams without knitting and then deflected by the guard cams to the lower path to engage the corresponding main stitch-cam on the other side of the machine and knit.

2. In an automatic circular knitting machine, the combination with a needle-cylinder provided with a substantially semi-circular row of long-butt needles, a similarly arranged opposite row of short-butt needles, and medium butt or suture needles mounted between the end needles of said rows respectively, of a pair of mounted main stitch cams, a swinging, needle-elevating main pick located over each of said main stitch-cams, a pair of secondary stitch-cams for knitting engagement with the long-butt needles only, the last-named cams capable of being moved in and out relatively to the needle-cylinder, a pair of swinging needle-elevating auxiliary picks for the suture needles, said picks being located over the respective secondary stitch-cams and movable bodily with them, a pair of needle-depressing or widening picks located with relation to the auxiliary picks, a pair of spaced apart needle-deflecting guard-cams, and means for automatically placing said secondary stitch and guard cams and auxiliary picks in the knitting and non-knitting positions at prearranged points in the cycle of operations.

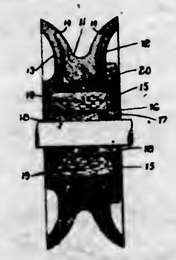
3. In an automatic circular knitting machine having a needle-cylinder provided with suitably arranged long, short and medium-butt or suture needles, the combination therewith of diametrically opposed sets of main and secondary stitch-cams, main and auxiliary picks for the main and secondary stitch-cams, respectively, said picks constructed and arranged to elevate the said medium-butt needles only while the cylinder is reciprocating in producing the high-splice and split-foot portions of a stocking, needle-deflecting guard cams, and means for automatically placing said secondary stitch and guard cams and auxiliary picks in knitting position.

4. In an automatic circular knitting machine having a needle-cylinder provided with suitably arranged long, short and medium-butt or suture needles, the combination therewith of diametrically opposed sets of main and secondary stitch-cams, main and auxiliary picks for the main and secondary stitch-cams, respectively, said set of auxiliary picks constructed and arranged to raise only each medium butt needle, according to the direction of rotation of the cylinder, without casting the loop or loops therefrom, and secondary guard-cams adapted to deflect said medium-butt needle back to the lower plane so as to knit its loops into the web upon the needle's engagement with the corresponding main stitch-cam.

5. In an automatic circular knitting machine having a needle-cylinder provided with long, short and medium butt needles, and a main cam-block having a pair of main stitch-cams and a needle-deflecting main pick mounted over each stitch-cam, the combination therewith of a secondary cam-block, a pair of laterally spaced stitch-cams fixed to the latter block, each of said secondary stitch-cams having its inner face grooved or recessed for the free passage of the butts of the short-butt needles, a spring-pressed auxiliary pick extending into the needle-path and located over each of the respective stitch-cams to be engaged and actuated only by the medium-butt needles to elevate the latter without knitting, a pair of laterally spaced guard cams positioned on the secondary cam-block, adapted to deflect the elevated medium butt needles back to the lower needle-path, said needle in its movement being caused to engage one of the said main stitch-cams on the opposite side of the machine and knit its loop into the web of the juncture line thereof.

[Claims 6 to 16 not printed in the Gazette.]

1,154,170. TROLLEY-WHEEL. CHARLES M. BRENNAN, Bridgeport, Conn. Filed June 2, 1915. Serial No. 31,767. (Cl. 64—26.)



1. A trolley wheel comprising a body having a lubricant reservoir formed therein and one flange formed integral therewith, a removable flange, a tread between the flanges and a bearing sleeve having internal slots which communicate with the lubricant reservoir.

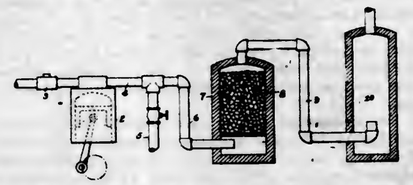
2. A trolley wheel comprising a body having a lubricant reservoir formed therein and one flange formed integral therewith, a removable flange, a tread between the flanges and a bearing sleeve having internal slots extending in opposite directions from the ends past the center and openings from the slots communicating with the reservoir.

3. A trolley wheel comprising a body having a lubricant reservoir formed therein, a screw thread thereon and a flange formed integral therewith, a tread threaded to engage the body, a removable flange also threaded to engage the body, and means for retaining said flange and the tread in place.

4. A trolley wheel comprising a body having a lubricant reservoir formed therein, a left-hand thread formed thereon and a flange formed integral therewith, a tread and a removable flange having threaded engagement with the body, and a right-hand nut by which the tread and removable flange are locked in place.

5. A trolley wheel comprising a body having an integral flange, a lubricant reservoir, an external left-hand thread and a reduced right-hand thread outside the left-hand thread, a tread and a removable flange engaging the left-hand thread, and a nut engaging the right-hand thread by which the tread and removable flange are locked in place.

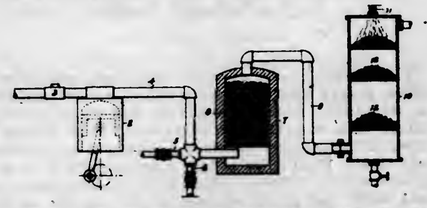
1,154,171. PROCESS OF MAKING NITROGEN AND CARBON DIOXID. ROY H. BROWNLEE and ROY H. UHLINGER, Pittsburgh, Pa., assignors, by mesne assignments, to American Nitro-Products Company, Pittsburgh, Pa., a Corporation of Delaware. Filed Apr. 7, 1913. Serial No. 759,381. (Cl. 23—10.)



1. The process of making carbon dioxid and nitrogen consisting in mixing a suitable carbonaceous substance and air, effecting combustion of the mixture in a suitable combustion chamber, passing the products of combustion through a mass of highly heated refractory material to effect complete combustion of the mixture and thus produce a maximum amount of carbon dioxid.

2. The process of making carbon dioxid and nitrogen consisting in mixing a suitable carbonaceous substance with an amount of air in excess of the amount necessary to effect complete combustion, effecting combustion of the mixture in a suitable combustion chamber, adding a sufficient amount of suitable carbonaceous substance to completely combine with the excess of oxidizing gas to produce a maximum amount of carbon dioxid, and then passing such mixture through a mass of highly heated refractory material.

1,154,172. PROCESS OF MAKING NITROGEN AND CARBON DIOXID. ROY H. BROWNLEE and ROY H. UHLINGER, Pittsburgh, Pa., assignors to American Nitro-Products Company, Pittsburgh, Pa., a Corporation of Delaware. Filed Aug. 31, 1914. Serial No. 859,274. (Cl. 23—10.)



1. The process of making carbon dioxid and nitrogen consisting in adding fuel gas to the products of combustion of an internal explosion engine and effecting combustion of the mixture by passing it through a mass of highly heated refractory material with just sufficient air to effect complete reaction of the gases to produce a maximum proportion of carbon dioxid, and then separating the carbon dioxid and nitrogen.

2. The process of making carbon dioxid and nitrogen consisting in adding fuel to the products of combustion of a carbonaceous substance and effecting combustion of the mixture by passing it through a mass of highly heated refractory material with just sufficient air to effect complete reaction of the gases to produce a maximum proportion of carbon dioxid, and then separating the carbon dioxid and nitrogen.

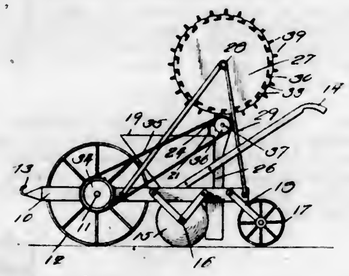
3. The process of making carbon dioxid and nitrogen consisting in mixing a suitable carbonaceous substance with an amount of air in equivalent proportions to support eventual complete combustion of the mixture and exploding the mixture in an internal combustion engine, adding fuel gas to the products of combustion, and then effecting subsequent complete combustion of the mixture by passing it through a mass of highly heated refractory

material with just sufficient air to effect complete reaction of the gases to produce a maximum proportion of carbon dioxid, and then separating the carbon dioxid and nitrogen.

4. The process of making carbon dioxid and nitrogen consisting in mixing a suitable carbonaceous substance and air, effecting combustion of the mixture in a suitable chamber, adding fluid fuel to the products of combustion and effecting subsequent combustion of the mixture by passing it through a mass of highly heated refractory material with just sufficient air to effect complete reaction of the gases to produce a maximum proportion of carbon dioxid.

5. The process of making carbon dioxid and nitrogen consisting in mixing a suitable carbonaceous substance and air, effecting combustion of the mixture in an internal combustion engine, adding fluid fuel to the products of combustion and effecting subsequent complete combustion of the mixture by passing it through a mass of highly heated refractory material with just sufficient air to effect complete reaction of the gases to produce a maximum proportion of carbon dioxid.

1,154,173. PLANT-SETTING MACHINE. SOLOMON L. BRYANT, Mount Airy, N. C. Filed Oct. 5, 1914. Serial No. 865,102. (Cl. 55—121.)



1. A device of the character described comprising a frame, ground wheels thereon, a furrow opener supported on said frame, a presser wheel on said frame, a water supply tank on said frame above said furrow opener, a valve in the bottom of said tank a chute disposed adjacent said tank, a shaft adjacent said chute and driven by said ground wheels, a rotary drum, plant holding clamps on said drum, and means actuated by the rotation of said shaft for releasing said clamps successively and simultaneously opening said valve, said plants and the water passing through said chute onto the ground.

2. A device of the character described comprising a frame having ground wheels journaled thereon, a revoluble drum, a plurality of clamps on said drum adapted to retain plants, a rotary shaft driven by said ground wheels, means carried by said shaft for rotating said drum step by step, and a laterally extending finger on said shaft engaging said clamps successively for releasing the plants.

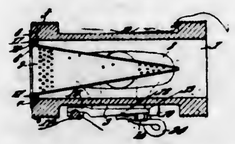
3. A device of the character described comprising a frame supported upon ground wheels, a furrow opener and a presser wheel carried by said frame, a tank supported on said frame and provided at its bottom with an opening, a chute disposed adjacent said tank and having said opening discharging thereinto, a vertically movable rod in said tank and provided with a valve seating within said opening, a pivoted lever connected with said rod, a revoluble shaft driven by said ground wheels, a finger on said shaft engaging said lever during every revolution for opening said valve, a rotary drum above said chute, means on said drum for carrying plants, means operated by said shaft for moving said drum step by step to bring the plants carried thereby successively over said chute, and means actuated by said shaft for releasing said plants.

1,154,174. COMPOSITION OF MATTER FOR WEIGHTING SILK YARNS AND FABRICS. EMILE BUTTE, Warren Point, N. J. Filed June 15, 1915. Serial No. 34,237. (Cl. 8—13.)

1. The herein-described composition of matter, consisting of the reaction products of sodium carbonate, hydrochloric acid, granulated sugar, sulfuric acid and water, substantially in the proportions described and for purposes specified.

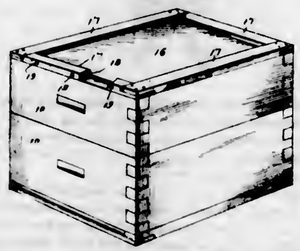
2. A composition of matter for the weighting of silk yarns and fabrics consisting of the reaction products of Na_2CO_3, HCl, sugar, H_2SO_4, and water in the proportions of 1 pound Na_2CO_3, 1 pint HCl, 6 oz. sugar, 2½ tablespoonfuls H_2SO_4 and 1 pint water.

1,154,175. STRAINER. SAMUEL HENRY CARBIS, Freeport, Pa. Filed Apr. 16, 1915. Serial No. 21,704. (Cl. 137—5.)



In a device of the character described, a casing having a hopper provided with an outlet spout, the end of the spout having a valve seat, a shank adjustably engaged to the spout and having a loop, the loop terminating in a spring finger coöperating with the valve seat, and a valve pivoted to the hopper to swing in the plane of the valve seat between the valve seat and spring finger, the valve being wedge-shaped to wedge between the valve seat and spring finger.

1,154,176. BEEHIVE. FRANCIS DANZENBAKER, Norfolk, Va. Filed Nov. 30, 1914. Serial No. 874,747. (Cl. 6—1.)

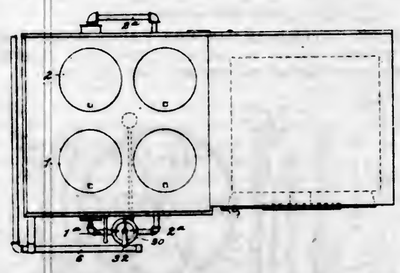


1. As an improvement in beehives, the combination of a hive wall, and a frame-supporting ledge consisting of a metal strip that has a portion extending inwardly from the inner surface of the hive wall, and a portion that extends upwardly and outwardly, the wall having a correspondingly inclined cut or kerf to receive such upwardly and outwardly extending portions.

2. As an improvement in bee hives, the combination of a hive wall, and a frame-supporting ledge consisting of a metal strip that has a portion extending inwardly from the inner surface of the hive wall and a portion that extends upwardly and outwardly, the wall having a correspondingly inclined cut or kerf to receive such upwardly and outwardly extending portions, and nails passing into the hive wall at points where they also pass through said upwardly and outwardly inclined portions.

3. A bee hive member comprising a framed flat plate, the frame consisting of bars on all four sides of the plate, a greater space being provided on one side of the plate than on the other, and an end bar being perforated so that communication is provided between such space and the outside of the bar whereby bees may pass between the inside and outside of the hive.

1,154,177. VALVE FOR GAS-BURNERS. FOREST V. DETWILER, Grand Rapids, Mich. Filed May 7, 1915. Serial No. 26,498. (Cl. 158—115.)



1. The combination of a plurality of main burners and a relatively fixed pilot burner, a main valve having a plurality of ports, one for each main burner, said valve having a by-pass to the pilot burner, a normally closed flash valve controlling said by-pass, and a member on the main valve and movable therewith and having projections corresponding in number to said ports and arranged to engage and open said flash valve as each port is opened.

2. The combination with a main multiple-way valve, of a by-pass, a normally closed flash valve therein, and a spider fixed on the stem of the main valve and movable therewith and having projections corresponding in number and position to the ways therein, and arranged to strike and open the flash valve when any of said ways are opened.

3. A valve comprising a casing having an inlet, and an outlet, a partition dividing the casing into two chambers, said partition having a by-pass extending through the same, a main rotary valve disk in one of said chambers between the inlet and the outlet, and having a port which may be registered with the outlet, a flash valve in the by-pass extending through said partition, and a projection carried by the main valve stem in the other chamber and arranged to strike and open the flash valve when the main valve is opened.

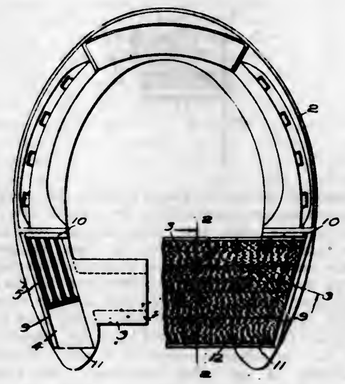
4. A multiple way valve comprising a casing having an inlet, and a series of outlets arranged in an arc, a by-pass communicating with the inlet side of the casing, a flash valve in said by-pass and within the casing, a rotary valve disk in the casing, between the inlet and the outlets and having a circular series of ports one or more of which may be registered with the said outlets, and a spider carried by the rotary valve and having a series of projections arranged to successively strike and open the flash valve as the respective outlets are opened.

1,154,178. HORSESHOE. JAMES A. DOLAN, Hartford, Conn. Filed Apr. 13, 1915. Serial No. 21,016. (Cl. 168—13.)

1. A horse shoe comprising a body provided with a transverse portion at the heel, the branches of the body having longitudinally extending grooves extending below the lower surface of said transverse portion, and a tread member connected with said transverse portion and overlying the heel ends of the branches, and pads in said grooves to be engaged by the terminal portions of the tread member.

2. A horse shoe comprising a body, the branches of the body having longitudinally extending grooves extending below the lower surface thereof, said branches also having flanges extending across the fronts and outer sides of the respective grooves.

3. A horse shoe comprising a body, the branches of the body having projections near their heel ends, extending toward each other, and said branches having longitudinally extending grooves extending below the lower surfaces of said projections.

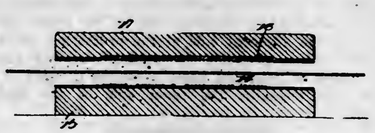


4. A horse shoe comprising a body, the branches of the body having projections near their heel ends, extending toward each other, and said branches having longitudinally extending grooves extending below the lower surfaces of said projections, said branches also having flanges extending across the fronts and outer sides of the respective grooves.

5. A horse shoe comprising a body, the branches of which are provided at their heel ends with projections extending toward each other, the under surfaces of the projections being flat and said branches having grooves extending part way of their length near the heel ends thereof, the grooves being extended below said flat surfaces, pads fitted in the grooves, and a tread member interlocked with said projections and overlying said pads.

[Claim 6 not printed in the Gazette.]

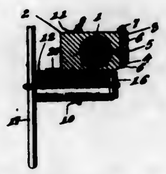
1,154,179. METHOD OF MAKING ELECTROTYPE EMBOSSING-DIES. DOSSA D. EVINS, Waco, Tex. Filed Apr. 24, 1914. Serial No. 834,255. (Cl. 204—8.)



1. A method of forming an embossing die for embossing material in imitation of a fabric, which consists in placing the fabric to be imitated upon a properly prepared wax surface, in applying a smooth surfaced body against the fabric, in exerting high pressure against the body to force the wax into and through the interstices of the fabric and against the body, in removing the body and fabric from the wax impression formed, and in then electroplating the impression to produce the die.

2. A process of forming a printing and embossing die for printing and embossing material in imitation of a fabric, which consists in placing the fabric to be imitated face down upon a properly prepared wax surface, in applying a smooth surfaced metallic plate against the outer face of the fabric, in applying high pressure against the plate to force the wax into and through the interstices of the fabric and into engagement with the plate, in removing the plate and fabric, and in then electroplating the impression so formed to produce the die, those portions of the wax engaging the plate forming the portions of the wax impression which, when electroplated, form the printing surface of the die.

1,154,180. CULTIVATOR-CUFF. ROBERT E. FORRESTER, Burleson, Tex. Filed Sept. 14, 1911. Serial No. 649,389. (Cl. 97—11.)



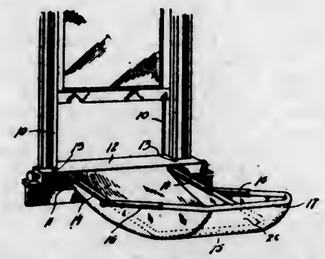
A clamp for cylindrical beams and the like comprising a body portion constituting two jaws which are formed integral at one side, said jaws having semi-circular grooves formed in their confronting faces for receiving the beam, said clamp having a U-shaped clamping bolt extending through the integral portions of the jaws, said clamping bolt having a bight portion adapted to engage a member lying in a recess in one of the jaws to hold said member in engagement with such jaw, whereby said member may be adjusted relatively to said recessed jaw independently of any other adjustment, the free portions of said jaws having registering apertures therein, and a clamping bolt extending through said apertures and serving to clamp the jaws securely on the beam.

1,154,181. SHOE-POLISHING DEVICE. DONALD F. FRADETTE, Buffalo, N. Y., assignor to Louise E. Fradette, Buffalo, N. Y. Filed Dec. 21, 1914. Serial No. 878,274. (Cl. 15—16.)



A shoe polishing device comprising two body plies of fibrous material overlying each other, a protecting sheet of material impervious to moisture arranged adjacent to the inner side of one of said plies and secured at its longitudinal edges to the correspouding edges of said plies, a pad arranged adjacent to the inner side of the other ply and secured to the adjacent side of the protecting sheet and provided with a plurality of openings forming pockets, and a filling of polishing paste arranged in each of said pockets and engaging the inner side of the adjacent body ply.

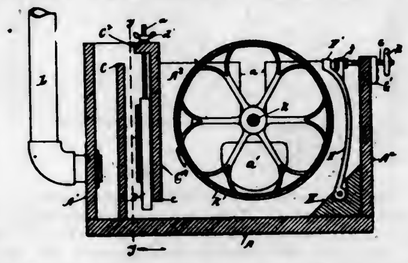
1,154,182. WINDOW-TROUGH. CHAUNCEY M. FRARY, Warsaw, Ind. Filed Nov. 30, 1914. Serial No. 874,814. (Cl. 20—70.)



1. A rain guard for a window comprising a window frame engaging member, a foldable frame carried by the window engaging member, and a water proof bag carried by the frame.

2. A rain guard for a window comprising a member adapted to be secured to the window ledge inwardly of the window, a frame mounted on the window engaging member and projecting within the room, said frame being adjustable and foldable, and a water proof fabric secured to the frame and disposed to catch rain or snow which would pass through the open window.

1,154,183. CYLINDER-VAT FOR PAPER-MAKING MACHINES. ANTON A. GEHRLEIN, Erie, Pa. Filed May 28, 1915. Serial No. 30,976. (Cl. 92—43.)

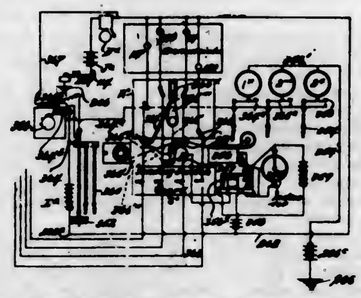


1. In a cylinder-vat of a paper machine, the combination of a rotary screen mounted therein, of a gate supporting-head at one side of said screen, a series of independently adjustable gates mounted upon said gate head, a vertical plate mounted in said vat at the opposite side of said screen, and means to move the upper edge of said plate toward and from said screen, substantially as described.

2. In a cylinder-vat of a paper machine, the combination of a rotary screen mounted within said vat, a vertical plate hinged in said vat near the bottom thereof having the upper edge thereof curved toward said screen-drum, and means to move the upper edge of said plate toward and away from said cylinder, substantially as described.

3. In a cylinder-vat, of a paper machine, the combination of a rotary screen mounted within said vat, a curved plate mounted within said vat adjacent to the upwardly moving side of said screen, so that the upper edge of said plate will be nearer said screen than any other portion of said plate, said plate having a narrow vertical surface at its upper edge, and screw mechanism adapted to position the upper edge of said plate with relation to said screen, substantially as set forth.

1,154,184. ELECTRIC SIGNALING APPARATUS. FELIX BENEDICT HERZOG, New York, N. Y.; Henrietta Herzog executrix of said Felix Benedict Herzog, deceased. Original application filed July 12, 1889, Serial No. 317,369. Divided and this application filed Nov. 5, 1907. Serial No. 400,898. (Cl. 177—364.)



1. In a signaling system, two or more central stations; each comprising suitable apparatus connected to circuit controlling apparatus at various outlying stations, a limited number of such outlying stations connected to both

of the central stations, and circuits arranged in multiple acting as such connections, substantially as described.

2. In a signaling system, two or more central stations; each comprising suitable apparatus connected to circuit controlling apparatus at various outlying stations, a certain number of the outlying stations being constructed to produce a variety of effects at a central station and being connected to both of the central stations, as to some of their effects merely, and circuits arranged in multiple acting as such connections, substantially as described.

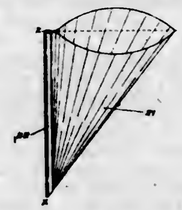
3. In the central station of a signaling system, a series of indicating devices corresponding to various outlying stations connected to the said central station only; together with another series of indicating devices connected with outlying stations which are also connected to a second central station, substantially as described.

4. Two or more central stations connected by a special circuit, the said stations being also connected through two or more intermediate signaling station circuits, substantially as described.

5. In a signaling system, two or more central stations each having street boxes connected thereto, and at one of said central stations circuit connections and controllers constructed and arranged to operate any desired street box of the system connected with said central station and, simultaneously, one or more boxes connected to another station.

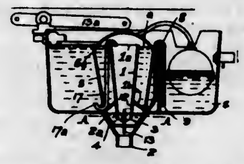
[Claims 6 to 23 not printed in the Gazette.]

1,154,185. COLLAPSIBLE DRINKING-CUP. OTIS A. HOLLIS, Pittsburgh, Pa. Filed Feb. 3, 1914. Serial No. 816,203. (Cl. 229—55.)



In a collapsible drinking cup having a substantially conical shape, the combination of a flexible waterproof blank adapted to form the walls of the cup, with a metal clamp running from bottom to top of the cup and closing the seam in said flexible material, the metal clamp being adapted to form a support for the cup when full, and a core about which it may be wound or folded when empty, substantially as described.

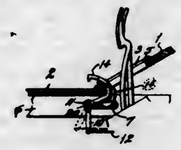
1,154,186. SIPHON FLUSHING-CISTERN. JAMES HOLT, Wallasey, England. Filed Apr. 11, 1912. Serial No. 690,033. (Cl. 4—5.)



1. In a flushing apparatus a divided cistern, a stand pipe in the cistern, a flush pipe secured to the cistern and in communication with the stand pipe, said flush pipe having a flared extremity, a bell substantially housing the stand pipe, a trough positioned in the flared portion of the flush pipe, said trough having inclined walls adapted to engage the flared walls of the flush pipe whereby the trough is supported in the flush pipe, one end of the stand pipe extending into the trough and terminating below the water level thereof, an air pipe extending through the bottom of the trough, one end of the said air pipe terminating at a point above the water level of the trough, said pipe adapted to provide communication between the stand pipe and flush pipe, and means for moving the bell vertically causing water to flow through the flush pipe.

2. In a flushing apparatus, a cistern, a stand pipe in the cistern, a flush pipe secured to the cistern, said flush pipe having a flared extremity, a trough positioned in the flared portion of the flush pipe, means extending through the trough for establishing communication between the stand pipe and flush pipe, a bell substantially housing the flush pipe, a silencing pipe having one of its ends positioned under one edge of the bell and its opposite end extending over the upper edge of the stand pipe, substantially as described.

1,154,187. LAMP-ADJUSTING PEDAL MECHANISM. DAVID C. KITCHINO, Valley Mills, Tex. Filed May 10, 1915. Serial No. 27,004. (Cl. 240—61.)



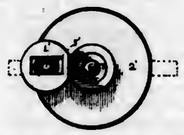
1. As an article of manufacture, a lamp adjusting pedal mechanism including, a pair of pedals, a rock shaft, a sleeve rotatively confined on the shaft, one of said pedals being fixed on the shaft and the other pedal being fixed on the sleeve, hangers supporting the shaft and adapted to be attached to the sills of an automobile, an arm fixed on the shaft, and a second arm fixed on the sleeve, said pedals being positioned on their parts so as to lie at the bottoms of the usual pedal slots of an automobile and having arcuate depressible portions concentric to their pivot points.

2. The combination with the floor, sills and foot board of an automobile and the pedal slots of the foot board; of an attachable lamp adjusting mechanism including; a pair of hangers constructed to be attached to the sills; a shaft rotatively mounted in the hangers, said hangers and shaft being disposed under the floor and foot board; a sleeve rotatively confined on the shaft; a lamp operating on the shaft; a second lamp operating arm fixed on the sleeve; a pedal fixed on the shaft; a second pedal fixed on the sleeve; the pedals projecting through the foot board slots.

3. The combination in a lamp adjusting pedal mechanism of a pair of of pedals, a rock shaft, a sleeve rotatively confined on the shaft, one of said pedals being fixed on the shaft and the other pedal being fixed on the sleeve, hangers constructed to be attached to an automobile below the floor thereof, said hangers supporting the shaft, an arm fixed on the sleeve, and a second arm fixed on the shaft, said pedals being positioned on their parts so as to lie in the usual pedal slots of an automobile floor and having curved depressible portions.

4. The combination with the floor, sills and foot board of an automobile and the pedal slots of the foot board; of an attachable lamp displacing mechanism including a pair of hangers constructed to be attached to the sills; a shaft rotatively mounted in the hangers, said hangers and shaft being disposed under the floor and foot board; a sleeve rotatively confined on the shaft; a lamp operating arm fixed on the shaft; a second lamp operating arm fixed on the sleeve; a pedal fixed on the shaft; a second pedal fixed on the sleeve; the pedals projecting through the foot board slots; and means for fastening either pedal in a depressed position.

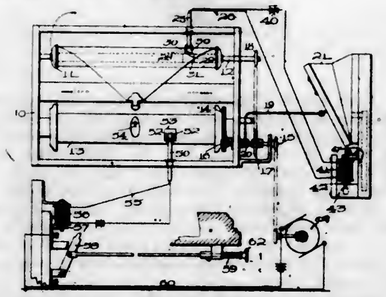
1,154,188. ANTIFRICTION HAND-SUPPORT. OLIVER C. KNIPE, Palo Alto, Cal. Filed June 17, 1914. Serial No. 845,718. (Cl. 120—54.)



1. A ball bearing writing device comprising a ring to be worn on a finger of the hand, a slotted ball cup secured thereto, the slot being longer than and less in width than the ball diameter and in a line with the axis of the ring, and a ball in the slot projecting therethrough to engage a writing surface.

2. A ball bearing ring for easing writing, comprising a ring to be worn on a finger, and a plate secured thereto by a swivel joint carrying at a point eccentric to the axis of the joint a single ball free to rotate and caged in the plate.

1,154,189. REROLLING MECHANISM FOR MUSICAL INSTRUMENTS. JOHN F. MACKIN, Philadelphia, Pa., assignor, by mesne assignments, to Lawrence Maxwell, Cincinnati, Ohio. Filed Apr. 21, 1910. Serial No. 556,658. (Cl. 84—166.)



1. As an article of manufacture, a non-conducting music spool for a musical instrument, said spool having a metallic electrical conducting plate thereon located entirely between the ends of the spool so as to be covered by the music sheet at all times during playing and to be uncovered by the sheet only when the sheet is substantially unwound from the spool.

2. The combination with a non-conducting rotatable take-up spool having a metallic contact piece thereon, of a pivoted arm having two electric terminals thereon insulated from each other and engaging the sheet on the spool, a circuit connected with said terminals, and means in said circuit for controlling the stopping of the rotation of said spool.

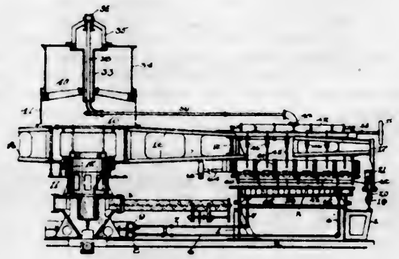
3. In a musical instrument, the combination of a music spool, a take-up spool, a note sheet, a shaft, and means for connecting the shaft either with the take-up spool or the music spool, with electro magnetic means supported independent of the note sheet whereby when the note sheet is unwound from the music spool the said connecting means will be operated to connect the shaft with the music spool, and electro-magnetic means independent of the note sheet whereby when the note sheet leaves the take-up spool the shaft will be stopped.

4. In a musical instrument, the combination of a music spool having a metallic contacting member thereon in position to be covered by the music sheet at all times when the latter is wound upon the spool, a pair of contact members insulated from each other in position to engage the said contact member when the music sheet is unrolled therefrom, and means electrically controlled thereby for re-enrolling the sheet on the spool.

5. In a musical instrument, the combination of a motor, a music spool, pneumatic means for connecting the motor with the music spool to rewind the sheet thereon, electromagnetic means for controlling the operation of said pneumatic means, an electrical circuit for energizing the electro magnetic means having two terminals normally insulated from each other and located in position to engage the music spool, and means on the music spool for electrically connecting said terminals when the music sheet is unrolled therefrom and they come into contact therewith.

[Claims 6 to 13 not printed in the Gazette.]

1,154,190. MECHANISM FOR FEEDING PULPS. WILLIAM R. MACKLIND, Cleveland, Ohio, assignor to George A. Martin, trustee, Cleveland, Ohio. Original application filed Aug. 10, 1912, Serial No. 714,323. Divided and this application filed Oct. 2, 1913. Serial No. 793,049. (Cl. 127—9.)



1. In drying mechanism, the combination of an annular drying table; feeding means movable in a circular path over said table and adapted to deposit thereon a layer of the material to be dried; and connections leading from the central axis of said table to said means adapted to supply such material under pressure to the latter.

2. In drying mechanism, the combination of an annular drying table; feeding means movable in a circular path over said table and adapted to deposit thereon a layer of the material to be dried; and means for supplying such material to said feeding means under a substantially constant pressure of considerable amount.

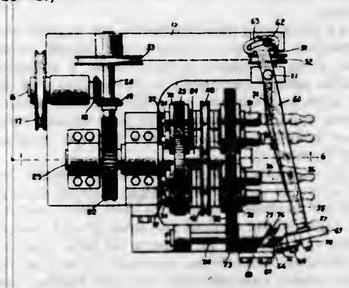
3. In drying mechanism, the combination of an annular drying table; feeding means movable in a circular path over said table and adapted to deposit thereon a layer of the material to be dried; connections leading from the central axis of said table to said feeding means, and means adapted to supply such material to said connections under a substantially constant pressure of considerable amount.

4. In drying mechanism, the combination of an annular drying table; feeding means movable in a circular path over said table and adapted to deposit thereon a layer of the material to be dried; connections leading from the central axis of said table to said feeding means; and means adapted to supply such material to said connections under a substantially constant head, said last-named means including a stand-pipe having an over-flow of predetermined elevation, and a pump for forcing the material into said stand-pipe.

5. In mechanism of the class described, the combination of an annular drying table; feeding means movable in a circular path over said table and adapted to deposit thereon a layer of the material to be dried; connections leading from the central axis of said table to said feeding means; and means adapted to supply such material to said connections under a substantially constant head, said last-named means including a supply-tank, a stand-pipe having an over-flow of predetermined elevation leading back to said tank, and a pump for forcing the material from said tank into said stand-pipe.

[Claims 6 to 17 not printed in the Gazette.]

1,154,191. MACHINE FOR FORMING ROLLS ON RUBBER NIPPLES. JEREMIAH L. MAHONEY, New Haven, Conn. Filed Oct. 14, 1914. Serial No. 866,570. (Cl. 18—5.)



1. A machine of the character described comprising, in combination, a traveling and rotating form, a shaft, a rotatable actuator for said shaft, a section of flexible shafting connecting one end of said shaft with said actuator, means for adjustably supporting the opposite end of said shaft to hold the same at a variable angle to the direction of travel of said form, and a forming roller on said shaft and engaging said form.

2. A machine of the character described comprising, in combination, a traveling and rotating form, a rotating forming roller engaging said form, a pivoted arm extending longitudinally of said roller for supporting the same at an angle to the direction of travel of said form, and means for clamping said arm in adjusted position.

3. A machine of the character described comprising, in combination, a traveling and rotating form, a shaft, a rotatable actuator for said shaft, a section of flexible shafting connecting one end of said shaft with said actuator, a pivoted arm extending longitudinally of said shaft for adjustably supporting the opposite end thereof to hold the same at a variable angle to the direction of travel of said form, means for clamping said arm in adjusted position, and a forming roller on said shaft and engaging said form.

4. A machine of the character described comprising, in combination, a plurality of chucks, forms carried by said chucks, bead forming means, means for relatively moving said chucks and bead forming means to move said forms successively into operative relationship to said bead forming means, and means for automatically operating said chucks to clamp said forms when in operative relationship to said bead forming means and to release the same after passing out of operative relationship therewith.

5. A machine of the character described comprising, in combination, a plurality of chucks, forms carried by said chucks, bead forming means, means for relatively moving said chucks and bead forming means to move said forms successively into operative relationship to said bead forming means, a cam plate, and means carried by said chucks and engaged and disengaged by said cam plate for operating said chucks to clamp and release said forms.

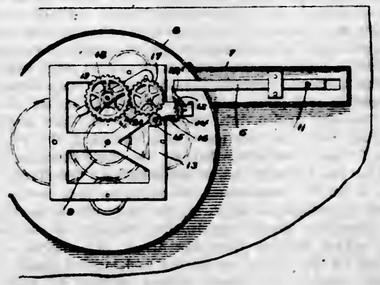
[Claims 6 to 28 not printed in the Gazette.]

1,154,192. WRENCH. GEORGE IGNATIUS MARLAND, Dookie, Victoria, Australia. Filed July 9, 1915. Serial No. 38,917. (Cl. 81—139.)



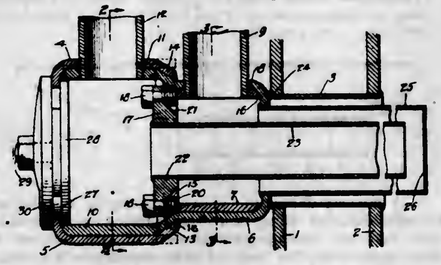
A wrench, consisting of a shank, having a fixed jaw, a handle end, and an intermediate series of ratchet teeth; a casing, including a jaw, slidingly encompassing said shank, and having a rectangular slot formed in its upper wall; a pawl pivoted within said casing; a spring for causing said pawl to yieldingly engage said teeth; and a pin swiveled at its inner end to said pawl, and at its other end terminating in a rectangular shank portion, normally fitting within said slot, and having a rotatable operating head, whereby when said pin is elevated and rotated by said head, the said pawl is held disengaged from said teeth, substantially as described.

1,154,193. TIME-CONTROLLED SWITCH FOR ELECTRIC LIGHTS. WILLIAM C. MARROW, Narragansett Pier, R. I., and JOHN M. BIDDLE, Washington, D. C. Filed Mar. 8, 1915. Serial No. 12,894. (Cl. 161—27.)



A mechanism for making electrical contacts comprising a pair of fixed contacts, a slidable bar having a switch plate therein adapted to contact with and close an electrical circuit through said fixed contacts, clock mechanism, a spring-actuated finger for moving said bar and switch plate into closed contact with said fixed contacts, a trigger for holding said finger out of actuating contact with said movable switch, a normally dormant gear on said clock mechanism connected with said trigger, and means connected with the clock mechanism for actuating said trigger actuating gear at a predetermined time.

1,154,194. HEADER. EDWARD C. MEIER, Phoenixville, Pa. Filed May 27, 1915. Serial No. 30,759. (Cl. 122—362.)



1. A header, comprising two sections, each section composed of a single metal sheet, the intermediate portions of the respective sheets constituting the ends of the header, one section smaller than the other, the smaller section fitting within the larger section and secured thereto, and a ring fitting within the larger section and against which the edge of the smaller section bears, substantially as described.

2. A header, comprising two sections, each section composed of a single metal sheet, the intermediate portions of the respective sheets constituting the ends of the header, one section smaller than the other, the smaller section having its edge flared outwardly and located inside of the larger section, the larger section having its edge bent inwardly upon the outwardly bent edge of the smaller section, substantially as described.

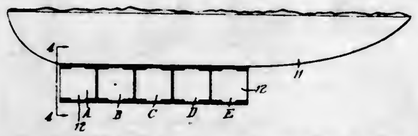
3. A header, comprising two sections, each section composed of a single metal sheet, the intermediate portions of the respective sheets constituting the ends of the header, one section smaller than the other, the smaller section having its edge flared outwardly and located inside of the larger section, the larger section having its edge bent inwardly upon the outwardly bent edge of the smaller section, and a ring fitting within the larger section and against which the edge of the smaller section bears, substantially as described.

4. A header, comprising two sections, each section composed of a single metal sheet, the intermediate portions of the respective sheets constituting the ends of the header, one section smaller than the other, the smaller section having its edge flared outwardly and located inside of the larger section, the larger section having its edge bent inwardly upon the outwardly bent edge of the smaller section, a ring secured in the outwardly flared portion of the smaller section, a plate removably secured to said ring, said plate having a central opening therein, and an open ended tube secured in said plate, said smaller section having an opening therein, and a tube secured in said last-mentioned opening, said last-mentioned tube inclosing the first-mentioned tube, extending beyond the first-mentioned tube and having a closed end, substantially as described.

5. A header, comprising two sections, each section composed of a single metal sheet, the intermediate portions of the respective sheets constituting the ends of the header, one section smaller than the other, the smaller section having its edge flared outwardly and located inside of the larger section, the larger section having its edge bent inwardly upon the outwardly bent edge of the smaller section, a ring fitting within the larger section and against which the edge of the smaller section bears, a ring secured in the outwardly flared portion of the smaller section, a plate removably secured to said ring, said plate having a central opening therein, and an open ended tube secured in said plate, said smaller section having an opening therein, and a tube secured in said last-mentioned opening, said last-mentioned tube inclosing the first-mentioned tube, extending beyond the first-mentioned tube and having a closed end, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,154,195. FLOATING DEVICE FOR VESSELS. ANGELO MICELI, Boston, Mass., assignor to Angelo Miceli Unsinkable Vessel Company, Boston, Mass., a Corporation of Massachusetts. Filed Nov. 7, 1914. Serial No. 870,889. (Cl. 114—68.)



1. A floating device for vessels comprising a series of recesses disposed along the sides thereof, a collapsible fluid container arranged within each of said recesses, a fluid supply pipe for each of said containers, a folding casing arranged about each of said recesses, each of said casings adapted to be folded over its respective recess, said casings being open at the end thereof, and collapsible means extending across the open ends of said casings adapted to protect the collapsible containers within said casings.

2. A floating device for vessels comprising a series of recesses disposed along the sides thereof, a collapsible fluid container arranged within each of said recesses, a fluid supply pipe for each of said containers, a casing disposed over each of said recesses, said casings each consisting of a pair of horizontally disposed members pivoted to the side of the vessel, one above and the other beneath each of said recesses, a vertically disposed member pivotally connected at opposite ends to the outer free ends of said horizontally disposed members, and means extending from points adjacent the outer free ends of one of said horizontally disposed members to points on said vessel below the inner ends of said horizontally disposed members adapted to limit the upward movement of said members.

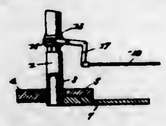
3. An emergency floating device for vessels having, in combination, sectional rectangular folding casings arranged along the sides of said vessel, a collapsible and inflatable member arranged to occupy each of said sections when said sections are unfolded, and means extending from opposite corners of the ends of said rectangular casings adapted to protect the inflated members contained therein.

4. An emergency floating device for vessels having, in combination, a series of folding casings arranged end to end and in close proximity to each other, means to lock said casings folded against the sides of said vessel, means adapted to limit the movements of said casings during the unfolding thereof, an inclosure formed in the sides of said vessel adjacent each of said folding casings, a collapsible member normally contained within each of said inclosures and adapted to be inflated to fill the casings adjacent to their respective inclosures, and means extending across the outer ends of the outermost casings adapted to confine the inflatable members within said casings when the same are inflated.

5. An emergency floating device for vessels having, in combination, a series of folding casings open at opposite ends and arranged end to end, means constructed and arranged to lock said casings folded against the sides of said vessels, means adapted to limit the movements of said casings during the unfolding thereof, a collapsible member constructed and arranged to be inflated to fill each of said casings, and means extending across the outer ends of the end casings of said series adapted to confine said collapsible members therein when inflated.

[Claims 6 to 8 not printed in the Gazette.]

1,154,196. CLUTCH DEVICE. JESSE C. MOORE, Mountain View, Okla. Filed Jan. 21, 1914. Serial No. 813,487. (Cl. 192—9.)

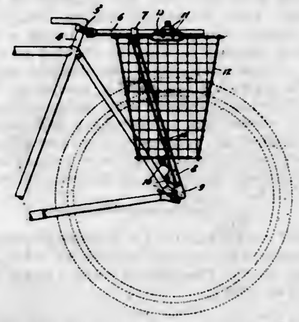


1. In combination with a hollow drive shaft of a drilling machine, of a clutch mechanism therefor comprising a disk secured to said drive shaft, said disk being provided with a radial depression, a shifting shaft mounted in said drive shaft, a crank arm secured to said shifting shaft and provided with an offset portion adapted to be seated in said depression and a shifting lever engaging said shifting shaft for shifting said offset portion into and out of said depression.

2. In combination with a hollow drive shaft of a drilling machine, said shaft having a lateral recess which communicates with the interior thereof, of a clutch mechanism therefor comprising a disk secured to said drive shaft and provided with a radial depression, a shifting shaft mounted in said drive shaft and provided with an annular channel, a crank arm secured to one end thereof, said crank arm being provided with an offset portion adapted to be seated in the depression and a shifting lever having a portion thereof passing through the recess in the drive shaft and engaging the walls of the annular channel for shifting said offset portion into and out of said depression.

1,154,197. LUGGAGE-CARRIER. ALVIN J. MUSSELMAN, Chicago, Ill., assignor to Cycle Mfg. & Supply Company, Chicago, Ill., a Corporation of South Dakota. Filed Jan. 14, 1914. Serial No. 812,067. (Cl. 224—32.)

1. In combination with a bicycle, a bar extending rearwardly from the seat-post, struts extending downwardly therefrom to maintain the same substantially horizontal, and containers supported by the bar and depending therefrom on the two sides of the wheel.



2. In combination with a bicycle, a bar extending rearwardly from the seat-post and clamped thereto at its forward end, struts extending downwardly therefrom to maintain the same substantially horizontal, and containers supported by the bar and depending therefrom on the two sides of the wheel, and having their depending portions bearing against the said struts.

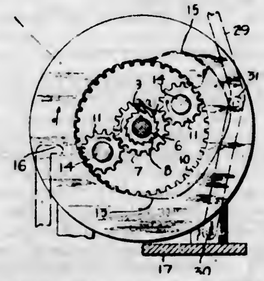
3. In combination with a bicycle, a bar extending rearwardly from the seat-post, struts extending downwardly therefrom and engaging the ends of the bicycle-axle to maintain the bar substantially horizontal, and containers supported by the bar and depending therefrom on the two sides of the wheel, and having their depending portions bearing against the said struts.

4. In combination with a bicycle, a bar extending rearwardly from the seat-post, struts extending downwardly therefrom to maintain the same substantially horizontal, containers, each having a loop on its inner, upper edge, and a clamp on the bar engaging the loops to support the containers in depending position on the two sides of the wheel of the bicycle.

5. In combination with a bicycle, a bar extending rearwardly from the seat-post, struts extending downwardly therefrom to maintain the same substantially horizontal, containers, each having a loop on its inner, upper edge, a clamp on the bar engaging the loops to support the containers in depending position on the two sides of the wheel of the bicycle, and means to clamp the lower ends of the containers to the struts.

[Claim 6 not printed in the Gazette.]

1,154,198. MECHANICAL MOVEMENT. ROBERT E. NAUMBURG, New York, N. Y. Filed Sept. 12, 1914. Serial No. 861,443. (Cl. 74—34.)



1. In a mechanical movement, the combination of coaxial driving and driven gears, an intermediate idle gear revoluble about said axis, means for limiting the revolution of the idle gear, and a flywheel connected with the driven gear.

2. In a mechanical movement, the combination of coaxial driving and driven gears, an intermediate idle gear revoluble about said axis, a flywheel connected with the driven gear, and means for limiting the forward revolution of the idle gear.

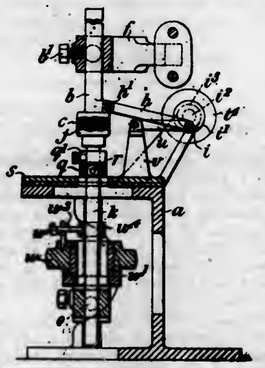
3. In a mechanical movement, the combination of coaxial driving and driven gears, an intermediate idle gear revoluble about said axis, a flywheel connected with the driven gear, and a cushioned stop for limiting revolution of the idle gear.

4. In a mechanical movement, the combination of coaxial driving and driven gears, an intermediate idle gear revoluble about said axis, a flywheel connected with the driven gear, means for limiting the revolution of the idle gear in each direction, and suitable means controllable by the revolution of the idle gear.

5. In a mechanical movement, the combination of coaxial driving and driven gears, an intermediate idle gear revoluble about said axis, a flywheel connected with the driven gear, a stop arranged to hold said idle gear against forward revolution and permitting the same to revolve backward with the driven gear when the speed of the latter exceeds the speed of the driving gear, and suitable means controllable by the revolution of the idle gear.

[Claims 6 to 14 not printed in the Gazette.]

1,154,199. APPARATUS FOR THE PRODUCTION OF TORIC OR TOROIDAL SURFACES OF SPECTACLE AND EYEGLASS LENSES. HARRY NEWBOLD, Holywell, St. Albans, England. Filed Aug. 11, 1913. Serial No. 784,218. (Cl. 51—3.)



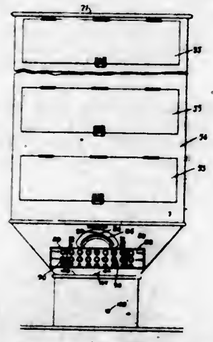
1. A machine for grinding toric or like surfaces of lenses comprising a main frame, a lens carrying rod pivotally mounted on said frame and adapted to be oscillated and be freely movable vertically, means for oscillating said rod, a grinding tool mounted upon the upper end of a revoluble spindle, and means for oscillating the said spindle.

2. A machine for grinding toric or like surfaces of lenses comprising a main frame, vertical posts provided upon said frame, a bracket loosely mounted upon said vertical posts, a support pivotally mounted in said bracket, a lens carrying rod mounted in said support, means for oscillating said rod, a revoluble spindle located beneath said rod, a spherical grinding tool mounted upon the upper end of said spindle, and means for oscillating said spindle.

3. A machine for grinding toric or like surfaces of lenses comprising a main frame, a bracket loosely mounted for vertical movement on said frame, a support pivotally mounted in said bracket, a lens carrying rod having its upper end secured in said support, means connected to the lower end of said rod for oscillating the same, a revoluble spindle located beneath said rod, a spherical grinding tool mounted upon the upper end of said spindle and adapted to coöperate with said oscillating lens holder, and means for oscillating said spindle.

4. A machine for grinding toric or like surfaces of lenses, comprising a main frame, vertical posts provided in said frame, a bracket loosely mounted on the posts near their upper ends, a support pivotally mounted on said bracket, a lens carrying rod carried by said support, means for oscillating said rod, a subsidiary bracket mounted on said posts near their lower ends, a subsidiary support pivotally mounted in said subsidiary bracket, a spindle loosely mounted in said subsidiary support, an annular flange provided upon said subsidiary bracket, a pulley loosely mounted on said flange, a stud provided upon said pulley, a pin provided upon said spindle adapted to be engaged by said stud, for rotating said spindle, a spherical grinding tool mounted upon the upper end of said spindle, and means for oscillating said spindle.

1,154,200. MACHINE FOR INSERTING STAYS IN CORSETS. EUGENE E. NORTON, Bridgeport, Conn. Filed Aug. 13, 1913. Serial No. 784,574. (Cl. 223—59.)



1. In a machine of the character described, the combination with a plurality of magazines, of mechanism for ejecting a stay from a predetermined magazine and mechanism for inserting an ejected stay in a corset pocket.

2. In a machine of the character described, the combination with a plurality of magazines, of mechanism for ejecting two stays successively from a predetermined magazine, and mechanism for inserting said stays simultaneously in corset pockets.

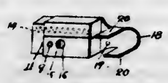
3. In a machine for inserting stays in corsets, the combination with a plurality of magazines and receivers into which the stays drop, of reciprocating ejectors and means for actuating a predetermined ejector to cause the ejection of a stay from the corresponding receiver.

4. In a machine of the character described, the combination with a magazine, of means for ejecting stays therefrom and means for inserting said stays in corset pockets.

5. In a machine of the character described, the combination with a magazine, of means for ejecting two stays successively therefrom and means for inserting the said stays simultaneously in corset pockets.

[Claims 6 to 96 not printed in the Gazette.]

1,154,201. SPARK-PLUG CONNECTOR. ARTHUR H. OCHS, Louisville, Ky. Filed Dec. 21, 1914. Serial No. 878,279. (Cl. 173—269.)



A connector comprising a hollow outer member open at one end and having a plurality of diametrically opposed perforations in its upper and lower walls, a second member adapted to slide therein and open at its inner end, said inner member having a pair of diametrically opposed slots adapted to register with certain of said perforations, a pin passing through said registering slots and perforations and adapted to hold said members in operative relationship while permitting relative longitudinal movement thereof, said inner member having a pair of diametrically opposed perforations adapted to register with others of said first named perforations only when the members are in a given position, said inner member having a longitudinal compartment, an expansible spring positioned within said compartment and bearing respectively against the ends of said members, and a tongue extended from the rear of the outer member having means for the attachment thereto of an electrical conductor.

1,154,202. RAILROAD-CAR CONSTRUCTION. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Oct. 9, 1914. Serial No. 865,811. (Cl. 105—108.)



1. In a railroad car, the combination with a truck bolster, a body bolster and a spring plank, of a king pin secured to the body bolster passing through the truck bolster and engaging the spring plank, said king pin swivelly connecting the truck and body bolsters.

2. In a railroad car, the combination with a body bolster, a truck bolster and spring plank of an upper center bearing secured to the body bolster, the said center bearing having a downwardly projecting member passing through the truck bolster, said member being yieldingly held against horizontal movement by the spring plank.

3. In a car, the combination with body and truck bolsters and spring plank, of a king pin extending from the body bolster through a relatively enlarged hole in the truck bolster and having its lower end operatively swivelly connected with the spring plank.

4. In a railroad car, the combination with the bolsters and spring plank, of an upper bolster bearing plate and a sleeve, the upper bolster bearing plate having a downward projection passing through the truck bolster and loosely engaging the sleeve.

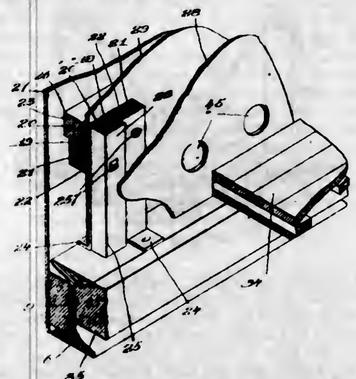
5. In a railroad car, the combination with the bolsters and spring plank, of an upper bolster bearing plate and a sleeve, the upper bolster bearing plate having a downward projection passing through the truck bolster and loosely engaging the sleeve, the sleeve being loosely mounted on the spring plank.

[Claims 6 to 11 not printed in the Gazette.]

1,154,203. BUILDING CONSTRUCTION. CALEB D. PAGE, Greeley, Colo., assignor to Page Portable Buildings Company, Greeley, Colo., a Corporation of Colorado. Filed Nov. 4, 1910. Serial No. 590,606. (Cl. 189—34.)

1. In building construction, the combination with a base frame, of studs rising therefrom and each comprising a sheet metal member having a ⌐ shape throughout its length, two wooden members extending from one end to the other of said metal member and fitting the angles thereof, means permanently securing said wooden members to the ⌐ shaped member and sheathing secured to one of the wooden members.

2. In building construction, the combination with a base frame, of studs rising therefrom and each comprising a sheet metal member having a ⌐ shape, two wooden members fitting the angles of and permanently secured to the ⌐ shaped member, one wooden member extending beyond the ⌐ shaped member, and sheathing secured to said projecting wooden member.



3. In building construction, the combination with a base frame, of studs rising therefrom and each comprising a sheet metal member having a ⌐ shape, two wooden members fitting the angles of the ⌐ shaped member and rivets extending through both wooden members and the body of the ⌐ shaped member for permanently connecting said parts, one wooden member extending beyond the ⌐ shaped member, and sheathing secured to the projecting wooden member of each stud.

4. In building construction, the combination with a base frame, of studs rising therefrom, girths secured to the studs, each girth being a unitary structure formed of a ⌐ shaped sheet metal member, two wooden members fitting the angles of the ⌐ shaped member and rivets extending through both wooden members and the central portion of the ⌐ shaped member for permanently connecting them together, and sheathing secured to the wooden members of the girths.

5. In building construction, the combination with a base frame, of studs rising therefrom, girths on the outside of the studs and secured thereto, said studs and girths each being formed of a sheet metal ⌐ shaped member and two wooden members fitting the angles of the ⌐ shaped member, the wooden member on the outside of each girth and on the inside of each stud projecting beyond the sheet metal member, an interior sheathing secured to the projecting wooden member of each stud, and an exterior sheathing secured to the projecting wooden member of each girth.

[Claim 6 not printed in the Gazette.]

1,154,204. KNOCKDOWN BUILDING. CALEB D. PAGE, Greeley, Colo., assignor to Page Portable Buildings Company, Greeley, Colo., a Corporation of Colorado. Filed Nov. 25, 1910. Serial No. 594,038. (Cl. 189—2.)



1. In a knock-down building, the combination with studs, of a plurality of similar sheets forming the walls of the building, each sheet being of a length to extend from one stud to the next adjacent stud and said sheets being arranged in rows, one above the other, with the edges of the sheets overlapping, means to detachably secure the ends of the sheets to the studs and multiple key bolt fastenings extending longitudinally of the overlapping edges of the sheets and securing them to each other.

2. In a knock-down building, the combination with studs, of a plurality of similar sheets forming the walls of the building, each sheet being of a length to extend from one stud to the next adjacent stud, and said sheets being arranged in rows one above the other, and multiple key bolt fastening devices to secure the sheets to the studs and to each other.

3. In a knock-down building, the combination with studs, of a plurality of similar sheets forming the walls of the building, each sheet being of a length to extend from one stud to the next adjacent stud, and said sheets being arranged in rows one above the other, and multiple key bolt fastening devices to secure the sheets to the studs and to each other, each fastening device comprising an angle-shaped member and a plurality of pins extending through one leg thereof and each provided with a head secured to the other leg thereof.

4. In a knock-down building, the combination with studs, of a plurality of similar sheets forming the walls of the building, and multiple key bolt fastening devices to secure the sheets to the studs and to each other, each fastening device comprising an angle-shaped member, a plurality of pins extending through one leg of said member and provided with tapering ends, each pin having a head secured to the other leg, and keys engaging the pins.

5. In building construction, the combination with a plurality of sheets constituting the walls of the building and arranged with their edges overlapping, of a multiple key bolt fastening extending the length of each overlapping edge and connecting the sheets.

[Claims 6 to 16 not printed in the Gazette.]

1,154,205. POURING-SPOUT CAN. STEPHEN PILAROWSKI, Detroit, Mich., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 24, 1913. Serial No. 802,662. (Cl. 221—11.)



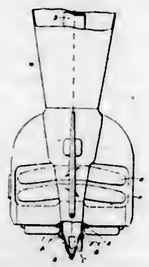
1. The combination of a can having a paper wall, the latter having an integral portion oscillatable outwardly about one side thereof, and a sheet metal member secured to another side of said portion, said portion of the paper wall and sheet metal member forming a pouring spout when the same are swung outwardly, substantially as specified.

2. A dispensing package of the character described comprising a can having a paper end wall provided with an integral, substantially sector-shaped portion oscillatable outwardly about one radial side thereof and having a substantially sector-shaped sheet metal member secured to the other radial side thereof, said sector-shaped portion and the sheet metal member forming a pouring spout when swung outwardly, substantially as specified.

3. A dispensing package of the character described comprising a can having a paper end wall, said wall having an integral, substantially sector-shaped portion thereof oscillatable outwardly about one radial edge and having a substantially sector-shaped sheet metal member secured to the other radial edge, said sheet metal member having projections near each end of its arcuate edge to limit the inward and outward movements thereof, substantially as specified.

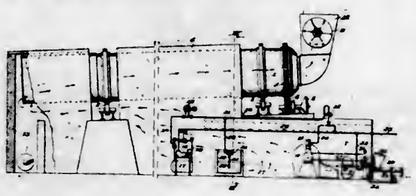
4. A dispensing package comprising a paper end wall, said wall having partly cut out therefrom a substantially sector-shaped portion thereof one side of which is left integral with the said end wall, and a substantially sector-shaped sheet metal member secured to the free radial edge of the sector-shaped portion by bent portions of the metal within which is clamped the said free edge, the said integral and sheet metal portion and member being adapted to hinge and turn together outward and inward on the said integral side, and to form a closure and a pouring spout for the said package.

1,154,206. DEVICE TO PREVENT THE ADMISSION OF WATER INTO THE INTERIOR OF THE HOLLOW SHAFT OF A TORPEDO'S PROPELLER. CHARLES RADIGUER, St.-Denis, Seine, France, assignor to The Societe Anonyme Des Etablissements Delaunay-Belleville, St.-Denis, Seine, France, a Corporation of France. Filed June 21, 1915. Serial No. 35,293. (Cl. 114—20.)



Device insuring fluid-tightness of the hollow shaft serving for the exhaust of the motive fluid of self-propelled torpedoes, characterised by the fact that the hollow shaft is terminated by a cone or by a pyramid provided upon its lateral surfaces, with openings adapted to be closed by external hinged valves integral with the hollow shaft.

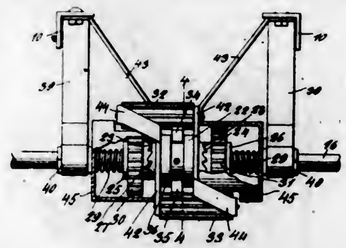
1,154,207. THERMOSTATIC CONTROL OF FURNACES. JOHN HENRY ROBERTS, Chicago, Ill. Filed Apr. 12, 1913. Serial No. 760,677. (Cl. 237—2.)



1. The herein-described method of regulating the volume of a current of gases of combustion under substantially constant temperature-conditions, which consists in thermostatically regulating the fuel-supply and the air for fuel-combustion in accordance with the temperature of the gas-current, and effecting a simultaneous adjustment of the volume of the gas-current by controlling the admission of air thereto beyond the combustion zone.

2. Apparatus for regulating the volume of a current of gases of combustion under substantially constant temperature-conditions, comprising means for thermostatic regulation of the fuel-supply and the air for fuel-combustion in accordance with the temperature of the gas-current, in combination with means for simultaneously controlling the admission of air to said gas-current beyond the combustion zone.

1,154,208. PROPULSION MECHANISM. GEORGE W. RUNDLE, Spokane, Wash. Filed Dec. 7, 1914. Serial No. 875,926. (Cl. 74—54.)

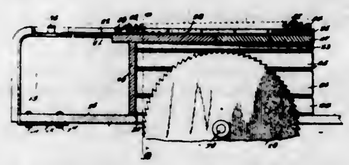


1. A driving mechanism comprising an axle, a clutch member fast on the axle and having teeth at its ends, said teeth being oppositely arranged respectively, clutch members loosely and slidably mounted on the axle on opposite sides of the first mentioned clutch member and having teeth engageable with the teeth thereof, toothed gears on the second mentioned clutch members, pinions in mesh respectively with the toothed gears, racks in mesh respectively with the pinions, and means for reciprocating the racks.

2. A driving mechanism comprising an axle, a clutch member fast on the axle and having teeth at its ends, said teeth being oppositely arranged respectively, clutch members loosely and slidably mounted on the axle on opposite sides of the first mentioned clutch member and having teeth engageable with the teeth thereof, toothed gears on the second mentioned clutch members, pinions in mesh respectively with the toothed gears, racks in mesh respectively with the pinions, said racks being connected to travel together, and means for reciprocating the racks.

3. A driving mechanism comprising an axle, a clutch member fast on the axle and having teeth at its ends, said teeth being oppositely arranged respectively, clutch members loosely and slidably mounted on the axle on opposite sides of the first mentioned clutch member and having teeth engageable with the teeth thereof, toothed gears on the second mentioned clutch members, pinions in mesh respectively with the toothed gears, racks in mesh respectively with the pinions, means for reciprocating the racks, channeled guides for the racks, supports for the guides, and supporting means for the aforesaid pinions carried by said supports.

1,154,209. SAW-GUARD. JOHN L. RUSHTON, Muscatine, Iowa. Filed Aug. 11, 1914. Serial No. 856,294. (Cl. 143—159.)



1. The combination of a sawing table, tracks extending above said table and in spaced relation thereto, a housing slidably carried by said tracks, said housing comprising side walls formed of a plurality of slidably connected sections positioned in superposed relation, an end wall for said housing, a longitudinally extending bar carried by said end wall and resting upon the inner end portions of the upper sections of said side walls, a cross bar connecting the forward end portions of the upper sections of said side walls, and resilient means connecting said longitudinally extending bar with the forward end portions of said track to yieldably hold said housing in a normal position.

2. A saw guard comprising tracks, a housing slidably connected with said tracks, said housing comprising side walls formed of sections positioned in superposed relation and slidably connected, a cross bar connecting the forward end portions of said side walls, a rear wall, a longitudinally extending bar carried by said rear wall and resting upon the inner end portions of said side walls and engaging said cross bar, and resilient means having one end portion connected with said longitudinally extending bar and its opposite end portion connected with said tracks to yieldably hold said housing in a normal position, the sections of said side walls having independent sliding movement with respect to the ones above them and carrying with them said rear wall and longitudinally extending bar.

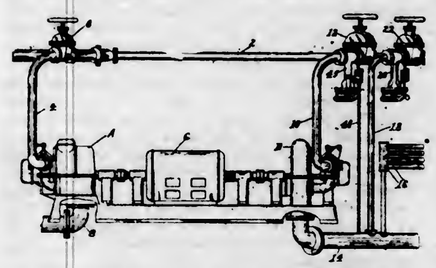
3. A saw guard comprising supporting tracks, a housing slidably connected with said tracks and comprising side walls formed of a plurality of slidably connected sections positioned in superposed relation, an end wall engaging said side walls and moving with said side walls, and means for yieldably holding said housing in a normal position.

4. In a saw guard, a housing comprising side walls formed of a plurality of slidably connected sections, a rear wall, a cover formed of forward and rear sections, the forward cover section being secured to the upper sections of the side walls and the rear cover section being secured to said rear wall and slidably engaging the upper sections of said side walls, means for slidably mounting said housing, and means for yieldably holding said housing in a normal position.

5. A saw guard including a housing comprising side walls formed of a plurality of sections positioned in superposed relations, means for slidably connecting the sections of each side wall, a rear wall for said housing moving with a selected set of the sections of said side walls, means for slidably mounting said housing and means connected with said rear wall for yieldably holding said housing in a normal position.

[Claim 6 not printed in the Gazette.]

1,154,210. HEATING AND POWER-PRODUCING SYSTEM. JOSEPH V. SANTRY, Boston, Mass., assignor to Charles W. E. Clarke, Brookline, Mass. Filed Feb. 2, 1915. Serial No. 5,801. (Cl. 121—118.)



1. The combination of a steam supply, a steam heating system, a steam engine connected to said supply and said heating system to receive steam from said supply and deliver exhaust steam to said heating system, means operative automatically to control the flow of steam to said engine in accordance with the requirements of the heating system, and a source of power operating in parallel with said engine.

2. The combination of a steam supply, a steam heating system, a steam engine connected to said supply and said heating system to receive steam from said supply and deliver exhaust steam to said heating system, means operative automatically to control the flow of steam to said engine in accordance with the requirements of the heating system, a source of power operating in parallel with said engine, and direct connections between said supply and said heating system including pressure responsive means operative automatically when the engine fails to supply the desired quantity of steam to the heating system to deliver steam directly from said supply to said heating system.

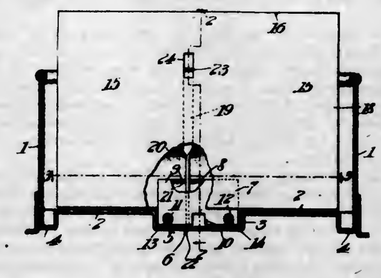
3. The combination with a high pressure steam supply and a low pressure heating system, of a steam engine connected to said supply and heating system to receive its steam from said supply and deliver exhaust steam to said heating system, means for controlling the flow of steam to said engine in accordance with the requirements of the heating system, a second steam engine, a common load driven by said engines and governing means for the engines operative to cause the second engine to aid in carrying the load only when the first engine is unable to carry the load at the required speed.

4. The combination with a high pressure steam supply and a low pressure heating system, of a steam engine connected to said supply and said heating system to receive its steam from said supply and deliver exhaust steam to said heating system, means for controlling the flow of steam to said engine in accordance with the requirements of the heating system, a second steam engine, a common load driven by said engines and independent speed governors for said engines, the governor for the first engine being set at a higher speed than the governor for the second engine.

5. The combination of a steam supply, a steam heating system, a steam engine arranged to receive steam from said supply and deliver exhaust steam to said heating system, a valve responsive to changes in pressure in the heating system arranged to control the supply of steam to said engine in accordance with the requirements of the heating system, direct connections between said supply and said heating system including a pressure reducing valve operative automatically, when the engine fails to supply the desired quality of steam to the heating system, to deliver steam directly from said supply to said heating system, a second steam engine, a common load driven by said engines and speed governing means for the engines operative to cause the second engine to aid in carrying the load when the first engine is unable to carry it at the required speed.

[Claims 6 to 10 not printed in the Gazette.]

1,154,211. DRAWER-FOLLOWER. ADOLF H. SCHAFFERT, Youngstown, Ohio, assignor to The General Fireproofing Company, Youngstown, Ohio, a Corporation of Ohio. Filed Mar. 31, 1915. Serial No. 18,849. (Cl. 129—28.)



1. A drawer follower comprising in combination with the drawer, a slide mounted within the drawer bottom, a folded plate member rigid with said slide, and a locking element housed inside of the folded plate member and engaging the drawer bottom.

2. A drawer follower comprising in combination with the drawer, a slide mounted within the drawer bottom, a folded plate member rigid with said slide, and a locking element housed inside of the folded plate member and having a ratchet engagement with the drawer bottom.

3. A drawer follower including in combination with a drawer having keeper means and guide means arranged therein, a rigid slide member shiftably mounted on said guide means, a follower back carried by said slide mem-

ber, and means slidable within said slide member and follower back for engaging said keeper means.

4. A drawer follower including in combination with a drawer having a central longitudinal channel provided with keeper means, guide means arranged in said channel, a rigid slide member shiftably mounted on said guide means, a follower back carried by said slide member, and means operable within said slide member and follower back for engaging said keeper means.

5. A drawer follower including in combination with a drawer having keeper means, oppositely arranged guide rods arranged therein, a rigid slide member having slidable bearing sleeves mounted on said guide rods, a follower back carried by said slide member, and means operable within said slide member and follower back for engaging said keeper means.

[Claims 6 to 11 not printed in the Gazette.]

1,154,212. DISPENSING-CONTAINER. JOSEPH W. SCHLOSS and MEYER W. SCHLOSS, New York, N. Y., assignors to Castlebone Company, a Corporation of New York. Filed Dec. 31, 1914. Serial No. 879,840. (Cl. 206—52.)



1. A dispensing container for coreless rolls of material, comprising a closed package inclosing the roll, having a slot therein through which the loose end of the roll is adapted to pass, and a pair of spaced finger openings in the top face of the box affording access to the interior and exterior peripheries of the roll to rotate the same.

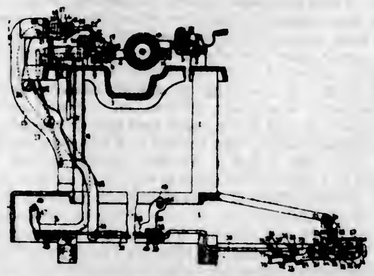
2. A dispensing container for coreless rolls of material, comprising a closed package inclosing the roll, having a slot therein through which the loose end of the roll is adapted to pass, a pair of spaced finger openings in the top face of the box affording access to the interior and exterior peripheries of the roll to rotate the same, and a cover for the top face of said package covering said finger openings.

3. A dispensing container for flat annular coreless rolls of material, comprising a closed package inclosing the roll having a slot therein through which the loose end of the roll is adapted to pass, and having a centrally disposed opening and an opening spaced therefrom in the top face of the package affording access to the inner and outer peripheries of said roll.

4. A dispensing container for flat annular coreless rolls of material, comprising a closed package inclosing the roll having a slot therein through which the loose end of the roll is adapted to pass, and having a centrally disposed opening and an opening spaced therefrom in the top face of the package affording access to the inner and outer peripheries of said roll, and a cover for covering the top face of said package.

5. In combination with a flat coreless roll of featherbone and the like, a dispensing container therefor comprising a box formed from a flat blank cut and folded to provide a six-sided rectangular closed package having a movable end wall through which the roll is inserted into the box, one of the faces of said box having openings therein affording access to the inner and outer peripheries of said roll, and a cover for said last named face forming a part of said blank and integral with one of the side walls of said package.

1,154,213. TYPE-WRITING MACHINE. CHARLES E. SMITH, New York, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Mar. 6, 1915. Serial No. 12,511. (Cl. 197—177.)



1. In a typewriting machine, the combination of a carriage, column stops, denominational stops, tabulator keys for bringing the denominational and column stops into coöperative relation, said keys having a uniform extent of movement for denominational selection, controlling means for variably arresting the movements of said keys with reference one to another for columnar selection, and means which enable said controlling means to be shifted into or out of operation.

2. In a typewriting machine, the combination of a carriage, column stops, denominational stops, tabulator keys for bringing the denominational and column stops into coöperative relation, said keys having a uniform extent of movement for denominational selection, controlling means for variably arresting the movements of said keys with reference one to another for columnar selection, means which enable said controlling means to be shifted into or out of operation, carriage releasing means, and automatically operating means for variably actuating said carriage releasing means in accordance with the variation in the extents of movement of said keys.

3. In a typewriting machine, the combination of a carriage, column stops which vary in length, denominational stops, tabulator keys for bringing the denominational and column stops into coöperative relation, said keys having a uniform extent of movement for denominational selection, controlling means for variably arresting the movements of said keys with reference one to another for columnar selection so that one key controlled stop will co-act with one column stop and another key controlled stop will co-act with another column stop, and means which enable said controlling means to be shifted into or out of operation.

4. In a typewriting machine, the combination of a carriage; and tabulating mechanism operable as a denominational selector or as a columnar selector as may desired, said mechanism comprising a series of tabulator keys, a series of stops controlled thereby, said keys having a uniform extent of movement for denominational selection only and having a variable extent of movement relatively one to another for columnar selection only, means for variably arresting different keys so that different keys may select different columns, and controlling means operable at will for throwing said arresting means into and out of operation.

5. In a typewriting machine, the combination of a carriage; and tabulating mechanism operable as a denominational selector or as a columnar selector as may be desired, said mechanism comprising a series of keys, a series of stops controlled thereby, said keys having a uniform extent of movement for denominational selection only and having a variable extent of movement relatively one to another for columnar selection only, means for variably arresting different keys so that different keys may select different columns, means operable at will for throwing said arresting means into and out of operation, carriage releasing means, and automatically operating means for variably actuating said carriage releasing means in accordance with the variation in the extents of movements of said keys.

[Claims 6 to 68 not printed in the Gazette.]

1,154,214. FLYING-MACHINE. WILLIAM E. SOMMERVILLE, Coal City, Ill. Filed Nov. 4, 1910. Serial No. 590,621. (Cl. 244—12.)



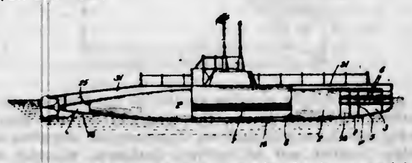
1. A flying machine comprising a motor, an upper main plane, a lower main plane, a pair of rear planes, a movable front plane, the outer ends of the upper plane being curved upwardly, a fin extending upwardly from the center of said upper main plane, a movable rear plane, and means whereby said movable planes may be moved in unison in opposite directions.

2. A flying machine comprising a motor, an upper main plane, a lower main plane, a pair of rear planes, a movable front plane, the outer ends of the upper plane being curved upwardly, a central fin extending longitudinally of said machine and projecting upwardly from the central portion of said upper main plane, a movable rear plane, and means whereby said movable planes may be moved in unison in opposite directions.

3. A flying machine comprising a motor, an upper main plane, a lower main plane, a pair of rear planes, a movable front plane, the outer ends of the upper plane being curved upwardly, a fin extending upwardly from the center of said upper main plane, a movable rear plane, means whereby said movable planes may be moved in unison in opposite directions, and hand operated means whereby the effective wind area of said upper plane may be varied.

4. A flying machine comprising a motor, an upper main plane, a lower main plane, a pair of rear planes, a movable front plane, the outer ends of the upper plane being curved upwardly, a central fin extending longitudinally of said machine and projecting upwardly from the central portion of said upper main plane, a movable rear plane, means whereby said movable planes may be moved in unison in opposite directions, and hand operated means whereby the effective wind area of said upper plane may be varied.

1,154,215. HULL CONSTRUCTION OF SUBMARINE BOATS. LAWRENCE Y. SPEAR, Quincy, Mass., assignor to Electric Boat Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 13, 1911, Serial No. 614,067. Renewed Feb. 27, 1915. Serial No. 11,070. (Cl. 114—16.)



1. A hull construction for submarine boats, comprising a double hulled midship section consisting of an inner strong hull and an outer weak hull, and single strong hull sections forward and aft of said midship section, the center line of the volume of the inner strong hull of the midship section lying above the center line of the volume of the forward and aft strong hull sections, and the upper contour of the strong hull midship section rising above the upper contours of the forward and aft sections, said single strong hull sections forming continuations of the weak hull of said midship section; substantially as described.

2. A hull construction for submarine boats, comprising a double hulled midship section consisting of an inner strong hull and an outer weak hull, single strong hull sections forward and aft of said midship section, the center line of the volume of the inner strong hull of the midship section lying above the center line of the volume of the forward and aft strong hull sections, and the upper contour of the strong hull midship section rising above the upper contours of the forward and aft sections, said single strong hull sections forming continuations of the weak hull of said midship section; substantially as described.

3. A submersible boat comprising an inner hull in greater part approximately cylindrical but having a rectangular under portion embraced by the cylindrical portion, an outer hull, and bracing between said inner and outer hulls uniting both hulls to render said inner hull resistent to exterior pressure.

4. In a submersible boat, a double hull section comprising a strong hull, a weak hull surrounding said strong hull, completing the contour of said section and providing an inter-hull space below and at the sides of said strong hull for use as ballast tanks which are completely filled with water during deep submergence, and a strong tank located in and occupying a portion of said inter-hull space; substantially as described.

5. A submersible boat comprising a strong hull designed to withstand the pressure of deep submergence, a weak hull affording main ballast tanks without said strong hull, and a superstructure open to the sea built upon said strong hull and separated from said main ballast tanks.

[Claims 6 to 18 not printed in the Gazette.]

1,154,216. VEHICLE WHEEL-RIM. WILLIAM F. STENGEL, Akron, Ohio, assignor of one-half to John Benker, Akron, Ohio. Filed Apr. 30, 1915. Serial No. 24,915. (Cl. 152—21.)



1. A vehicle wheel rim comprising a pair of members overlapping each other horizontally and spaced radially apart to provide an annular recess between them, said members capable of lateral separation, coupling members carried by one member and engaging the other member for holding said rim members in assembled relation, a circumferentially-movable ring arranged in said annular recess and adapted when shifted to release said coupling members for permitting separation of the parts of the rim.

2. A vehicle wheel rim comprising two parts, one adapted to telescope the other, the opposing walls of the two members being spaced apart radially to provide an annular recess between them, said members capable of being laterally separated, a plurality of coupling members carried by one member and engaging the other member for holding said members in assembled relation, and a circumferentially-shiftable ring positioned in said recess and adapted to release said coupling members for permitting lateral movement of one member.

3. A vehicle wheel rim comprising a pair of members capable of being laterally separated, a plurality of coupling members carried by one portion of the rim and engaging the other for holding said rim members in assembled relation, an inwardly-projecting stud on each of said coupling members and a circumferentially-shiftable ring carried by one member and provided with lugs adapted

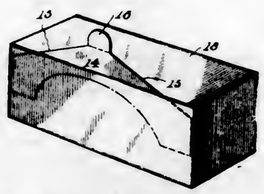
to engage said studs when said ring is shifted in one direction for releasing said coupling to permit lateral separation of the rim members.

4. A vehicle wheel rim comprising a pair of rim members capable of being laterally separated, said members having overlapping portions adapted to be arranged in spaced relation to provide a circumferential channel, coupling members carried by one rim portion and engaging the other for holding the rim members in assembled relation, studs carried by said coupling members projecting into said channel, a circumferentially-shiftable ring mounted in said channel and provided with portions for engagement with studs whereby when said ring is shifted said coupling members are shifted to permit lateral separation of the ring members.

5. A vehicle wheel rim comprising a pair of rim-forming members having overlapping portions spaced apart to provide a circumferential channel, a plurality of coupling members on one rim member adapted to engage in recesses in the other member for coupling the two members together, a circumferentially-shiftable ring mounted in said channel provided with portions adapted to engage said coupling members to move them to their inoperative position, said ring provided with portions adapted to be engaged by a lever for shifting the same, and a fulcrum pin mounted on one rim member in juxtaposition to said last named portion of said ring.

[Claims 6 to 9 not printed in the Gazette.]

1,154,217. SEALED WRAPPED PACKAGE AND OPENER THEREFOR. JOHN STOGDELL STOKES, Moorestown, N. J., assignor to Stokes & Smith Company, Summerdale, Pa., a Corporation of Pennsylvania. Filed Aug. 9, 1915. Serial No. 44,463. (Cl. 229—51.)



1. A sealed wrapped package, comprising a box and a wrapper completely enveloping all the exterior walls thereof and sealing the same, and a wrapper-severing device completely inclosed by the said wrapper and having a finger-grasping portion lying between a wall of the box and the wrapper, said finger-grasping portion being accessible only upon rupture of that portion of the wrapper adjacent the same.

2. A sealed wrapped package, comprising a box and a wrapper completely enveloping all the exterior walls thereof and sealing the same, and a wrapper-serving device completely inclosed by the said wrapper and having a finger-grasping portion lying between a wall of the box and the wrapper, said finger-grasping portion being accessible only upon rupture of that portion of the wrapper adjacent the same, and the said wrapper having a suitable mark indicating the position of the said finger-grasping portion.

1,154,218. DEMOUNTABLE RIM. JOSEPH J. STOSICK, South Milwaukee, Wis. Filed May 26, 1915. Serial No. 30,585. (Cl. 152—21.)

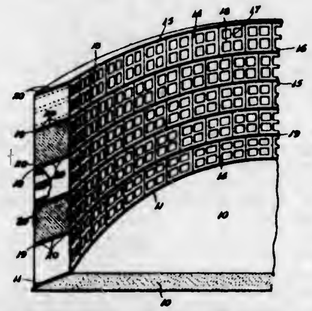
1. In a vehicle wheel, the combination of an inner rim, a detachable outer rim, a plurality of interfitting and interlocking lugs on said rims to hold said rims against radial and lateral movement with respect to each other, and a forked locking plate detachably secured to one of said rims for slidably engaging one set of lugs to hold the same against movement whereby all the lugs will be locked against movement.

2. In a vehicle wheel, the combination, with the felly, of an inner rim mounted thereon, a plurality of outwardly projecting lugs having beveled and tapered contacting surfaces secured to the inner rim, a demountable outer rim, a plurality of depending wedge lugs having beveled and tapered contacting surfaces secured to the outer rim, the wedge lugs on said rims adapted to register and interfit with each other to secure the outer rim to the inner rim against radial and lateral movement, and means for preventing rotary movement of said rims with respect to each other comprising a plate having a forked lug-receiving end adapted to slidably engage and hold one set of lugs between its bifurcations to thereby lock said lugs against movement whereby all the lugs will be locked against movement.



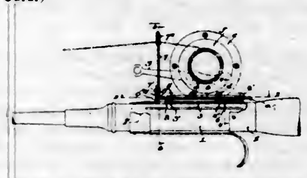
3. In a vehicle wheel, the combination, with the felly, of an inner rim mounted thereon, a plurality of outwardly projecting lugs having beveled and tapered contacting surfaces secured to the inner rim, a demountable outer rim, a plurality of depending wedge lugs having beveled and tapered contacting surfaces secured to the outer rim, the wedge lugs on said rims adapted to register and interfit with each other to secure the outer rim to the inner rim against radial and lateral movement, and means for preventing rotary movement of said rims with respect to each other comprising a plate detachably secured to one of said rims and having a forked lug-receiving end adapted to slidably engage and hold one set of lugs between its bifurcation to thereby lock said lugs against movement whereby all the lugs will be locked against movement, one of the bifurcations of said plate being shorter than the other whereby the outer rim may be removed on a partial removal of said plate.

1,154,219. VENTILATED BUILDING STRUCTURE. HALVER R. STRAIGHT, Adel, Iowa. Filed Dec. 9, 1912. Serial No. 735,856. (Cl. 72—6.)



A substantially circular ventilated building structure, formed of hollow blocks, the tops and bottoms thereof being parallel and of uniform thickness and the sides also being parallel and of uniform thickness, whereby said blocks are adapted to be made on a tile making machine, the ends of said blocks being parallel with each other but formed at such angles relative to the tops and bottoms, that when the ends are upright the tops and bottoms will incline downwardly, said blocks being laid in rows one on top of the other with the ends of the blocks forming smooth vertical surfaces or walls and the tops and bottoms of the blocks inclining downwardly and outwardly, layers of material, such as cement, between the rows of blocks and binding wires or rods being arranged to co-act with the inclined tops and bottoms of the blocks to prevent the wires or rods from shearing out the cement on account of internal pressure.

1,154,220. AUTOMATIC LINE-WINDING ATTACHMENT FOR REELS. CHARLES TOEPFER, Milwaukee, Wis. Filed Oct. 19, 1914. Serial No. 867,331. (Cl. 242—84.4.)



1. A reel adapted to be carried by a rod stock comprising a frame having a foot, a stock supporting saddle upon which the foot is pivotally mounted, whereby rock of the reel frame upon a horizontal plane relative to the rod-stock axis is had, a line guide lever fulcrumed to the saddle forwardly of the reel frame, and actuating means connecting the lever and foot, whereby rock of the frame foot will impart vibratory movement to said lever.

2. A casting reel comprising a rod stock, a reel frame pivoted thereto, an oscillatory line guiding lever in pivotal union with the stock, and actuating means for the lever carried by the reel frame, whereby rock of the frame upon its pivot will cause vibratory movement of levers.

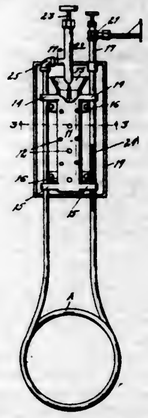
3. A reel adapted to be carried by a rod stock comprising a frame, a foot carried thereby, a stock-supported saddle upon which the foot is pivotally mounted, to permit rock of the frame upon a horizontal plane relative to the rod-stock axis, the pivot being rearwardly disposed with relation to the reel frame, an ear extending upwardly from the saddle, a short and long armed line guiding lever in pivotal union with the ear, and a finger extending from the foot engageable with the short arm of said lever whereby said lever is vibrated coincident to movement of the reel-frame.

4. A reel adapted to be carried by a rod-stock comprising a frame, a foot carried thereby, a stock-supported saddle upon which the foot is pivotally mounted, whereby same frame is rendered oscillatory upon a horizontal plane relative to the rod stock axis, the pivot being rearwardly disposed with relation to the reel frame, an ear extending upwardly from the saddle, a short and long armed line guiding lever in pivotal union with the ear, and actuating means connecting the lever and foot, whereby the oscillatory movement of the foot will impart a vibratory movement to the lever.

1,154,221. OIL-BURNER. LLOYD A. UNGLES, Des Moines, Iowa. Filed Mar. 16, 1915. Serial No. 14,829. (Cl. 158—58.)

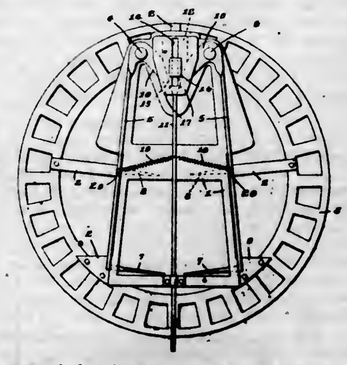
1. In an oil burner, a burner tube, a fuel supply tube slidably mounted on said burner tube and formed into a coil in front of the burner tube, a burner nozzle on said supply tube arranged to discharge into said burner tube, said tube being arranged to discharge at last on said coil, said supply tube being slidably mounted on the burner tube to permit of varying the distance of the coil from the burner tube.

2. In a device of the class described a burner tube open at both ends, said burner tube being provided with pairs of oppositely extending lugs, a fuel supply tube having one end extending beyond said outer end of said burner tube, and being slidably extended through the lugs on one side of said burner tube, then formed into a coil in front of the discharge end of the burner tube, then slidably extended through the lugs on the opposite side of said burner tube, a fuel nozzle on one end of said supply tube arranged to discharge into said burner tube, said fuel nozzle and part of said supply tube adapted to be extended beyond the outer end of said burner tube, and adapted to be mounted in the wall of a furnace or the like for supporting the



device on said wall, said last described portion of the supply tube and said nozzle being provided with parts at their outer ends capable of being removed for permitting the insertion of the nozzle and the supply tube into the openings in a wall.

1,154,222. WOMAN'S HAT-FASTENER. SHERIDAN A. VAN HORN, Syracuse, N. Y., assignor of forty-nine one-hundredths to Mathew Hall, Syracuse, N. Y. Filed May 29, 1913. Serial No. 770,582. (Cl. 132—25.)



1. A woman's hat fastener comprising a frame adapted to be inserted in the hat, a pair of opposing jaws carried by the frame, an operating member common to both jaws and having a handle located on the outside of the hat, the operating member being movable in a direction transversely of the movement of the jaws, and a spring connecting the jaws and the operating member and arranged to pull the jaws into operative position and to act on the operating member to move the same to its starting position, substantially as and for the purpose set forth.

2. A woman's hat fastener comprising a frame adapted to be inserted in the hat, opposing pivoted jaws having prongs for entering the hair of the wearer, the jaws being movable on their pivots toward and from each other and having angularly arranged arms extending toward each other, an operating member arranged between the jaws and movable in a direction transversely of the movement

of the jaws and having means for coacting with said arms to rock the jaws on their pivots when said member is moved in one direction, and springs for moving the jaws to their closed positions, the springs connecting the jaws and the operating member and being movable from one side to the other of a straight line passing through the points of securement of the springs and the jaws, substantially as and for the purpose set forth.

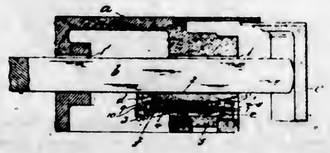
3. A woman's hat fastener comprising a frame adapted to be inserted in the hat, opposing pivoted jaws having prongs for entering the hair of the wearer, the jaws being movable on their pivots toward and from each other and having angularly arranged arms extending toward each other, an operating member arranged between the jaws and movable in a direction transversely of the movement of the jaws and having a cam for coacting with said arms to rock the jaws on their pivots, and springs for moving the jaws to their closed positions, the springs connecting the jaws and the operating member and, being movable from one side to the other of a straight line passing through the points of securement of the springs and the jaws, and the cam having seats for engaging said arms when the jaws are in open position for preventing movement of the jaws by the springs substantially as and for the purpose described.

4. A woman's hat fastener comprising a frame adapted to be inserted in the hat, opposing movable jaws pivoted to the frame and movable toward and from each other, the jaws having inwardly extending arms, an operating member movable crosswise of the direction of the movement of the jaws and having a cam coacting with said arms, the cam having diverging surfaces, and spring means tending to move the jaws toward each other, substantially as and for the purpose specified.

5. A woman's hat fastener comprising a frame adapted to be inserted in the hat, opposing movable jaws pivoted to the frame and movable toward and from each other, the jaws having inwardly extending arms, an operating member movable crosswise of the direction of movement of the jaws, and having a cam coacting with said arms, the cam having diverging surfaces, and springs tending to move the jaws toward each other, the springs connecting the jaws and the operating member and being movable from either side to the other of a straight line connecting the points of securement of the springs and the jaws, substantially as and for the purpose set forth.

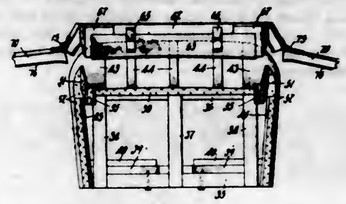
[Claims 6 to 8 not printed in the Gazette.]

1,154,223. CHAFING-PLATE. CHARLES T. WESTLAKE, St. Louis, Mo., assignor to Commonwealth Steel Company, St. Louis, Mo., a Corporation of New Jersey. Filed Feb. 20, 1915. Serial No. 9,758. (Cl. 213—3.)



In a chafing-plate for a bar movable against and cooperative therewith, the said plate having an acute angled face on its underside, a fixed block having a face corresponding to and adapted to bear against the said face of the plate, a series of interlocking obtuse angled teeth formed transversely on the said faces respectively, and means for automatically moving the said plate longitudinally forward at an acute angle, and at the same time toward the said bar at an obtuse angle, so that the teeth of the said plate are raised from engagement with, and over-ride the engaged teeth of the said block, to be reengaged with the succeeding teeth of the latter by the said bar.

1,154,224. CLAMP FOR FORMING SHEET-METAL SHAPES. NICHOLAS M. WILLEY, Detroit, Mich. Filed Feb. 11, 1915. Serial No. 7,612. (Cl. 153—11.)



1. A clamp for one piece pressed sheet metal shapes comprising one element, the outer surface of which conforms to the inner surface of the desired metal sheet, and another element the inner surface of which conforms to the outer surface of the desired metal sheet, one of the elements comprising a plurality of members, means for connecting one of the members to the first mentioned element to swing vertically thereon, and means for pivotally connecting another of the members to the first mentioned member so as to allow the second member to swing in respect to the first member at an angle to the plane in which the first mentioned member swings on the first mentioned clamp element.

2. A clamp for pressed sheet metal shapes comprising a base, and two clamping elements the outer surface of one of which conforms to the inner surface of the desired metal sheet and the inner surface of the other of which conforms to the outer surface of the sheet, means for pivotally connecting the first mentioned element to the base to allow the former to swing on the latter in a vertical plane, the second mentioned element comprising a plurality of members, means for pivotally connecting one of the members to the first mentioned element to allow the former to swing on the latter in a vertical plane, means for pivotally connecting another of the members to the pivoted member to allow the former to swing on the latter at an angle to the plane in which the said pivoted member swings on the first mentioned clamp element.

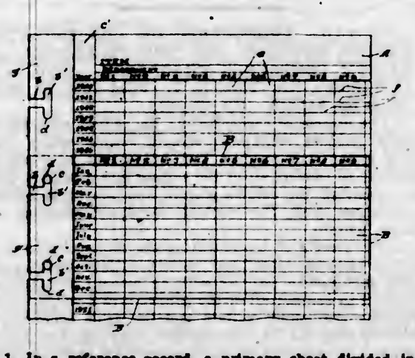
3. A clamp for pressed sheet metal shapes comprising a base, and two clamping elements the outer surface of one of which conforms to the inner surface of the desired metal sheet and the inner surface of the other of which conforms to the outer surface of the sheet, means for pivotally connecting the first mentioned element to the base to allow the former to swing on the latter in a vertical plane, the second mentioned element comprising a main member and two wing members, means for pivotally connecting the main member to the first mentioned element to allow the former to swing on the latter in a vertical plane, means for pivotally connecting the wing members to the main member to allow the former to swing on the latter in planes inclined to the plane in which the main member swings on the first mentioned element.

4. A clamp for pressed sheet metal shapes comprising a base, and two clamping elements the outer surface of one of which conforms to the inner surface of the desired metal sheet and the inner surface of the other of which conforms to the outer surface of the sheet, means for pivotally connecting the first mentioned element to the base to allow the former to swing on the latter in a vertical plane, the second mentioned element comprising three members, means for pivotally connecting the several members whereby two of the members may swing in respect to the third, means for pivotally connecting the third member to the first mentioned element whereby the said third member, and the other two members, may swing in respect to the first mentioned element at an angle to the plane in which one of the other two members swings in respect to the third member.

5. A clamp for pressed sheet metal shapes comprising a base, and two clamping elements the outer surface of one of which conforms to the inner surface of the desired metal sheet and the inner surface of the other of which conforms to the outer surface of the sheet, means for pivotally connecting the first mentioned element to the base to allow the former to swing on the latter in a vertical plane, the second mentioned element comprising a main member and two wing members, means for pivotally connecting the main member to the first mentioned element to allow the former to swing on the latter in a vertical plane, means for pivotally connecting the wing members to the main member to allow the former to swing on the latter in planes inclined to the plane in which the main member swings on the first mentioned element, and means for securing the wing members to the first mentioned clamp element to hold the clamp closed upon the sheet of metal.

[Claims 6 to 10 not printed in the Gazette.]

1,154,225. REFERENCE-RECORD. GORDON WILSON, Chicago, Ill. Filed May 22, 1914. Serial No. 840,177. (Cl. 11—19.)



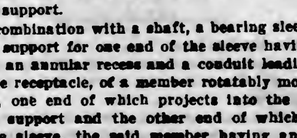
1. In a reference record, a primary sheet divided into columns arranged to receive figures or data relating to the yearly condition of any department of an organization or business, said primary sheet being folded upon itself so as to form a reinforced binding-flap for use in any loose-leaf binder, a superimposed secondary sheet divided into columns corresponding with those of the primary sheet and arranged to receive figures or data relating to the monthly condition of said department, said secondary sheet being slidably adjustable upon said primary sheet so as to permit said sheets to register with each other at any predetermined point, and means whereby said sheets may be secured together.

2. In a reference record, a primary sheet divided into columns arranged to receive figures or data relating to the yearly condition of any department of an organization or business, said primary sheet being folded upon itself so as to form a reinforced binding-flap for use in any loose-leaf binder, a secondary sheet divided into columns corresponding with those of the primary sheet and arranged to receive figures or data relating to the monthly condition of said department, said secondary sheet being superimposed upon and of smaller vertical dimensions than the primary sheet and being slidably adjustable thereon so as to permit said sheets to register with each other at any predetermined point, and means whereby said sheets may be secured together.

1,154,226. REGISTER FOR POOL OR BILLIARD TABLES. MORTON L. ADLER, New York, N. Y. Filed July 1, 1913. Serial No. 776,778. (Cl. 235—92.)

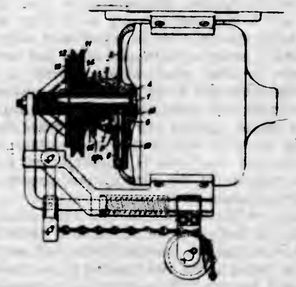
1. A ball game-table comprising in combination a register for registering the number of games played, and a plurality of actuating means arranged on said table in position to be operated by the weight of the balls only when the same are assembled to start a new game.

2. A ball game-table comprising in combination a register for registering the number of games played, a plurality of actuating means arranged on said table in position to be simultaneously operated by the weight of the balls when the same are assembled to start a new game.



3. A ball game table comprising in combination a register, a plurality of actuators therefor on said table, and means requiring the simultaneous operation of all of said actuators to effect the operation of said register.

1,154,227. SHAFT-BEARING. WILFRED BARNES, Jr., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 8, 1910. Serial No. 586,073. (Cl. 64—24.)



1. The combination with a shaft, a bearing sleeve therefor, a support for one end of the sleeve having an oil receptacle, an annular recess and a conduit leading therefrom to the receptacle, of a member rotatably mounted upon the sleeve and projecting into the recess in the sleeve support and having inclined longitudinal passages leading to the said recess.

2. The combination with a shaft, a bearing sleeve therefor, and a support for one end of the sleeve having an oil receptacle, an annular recess and a conduit leading therefrom to the receptacle, of a member rotatably mounted on the sleeve and projecting into the recess in the sleeve support, the said member overhanging one end of the sleeve and having passages inclined to its axis and extending from the said overhanging portion to the recess in the sleeve support.

3. The combination with a shaft, a bearing sleeve therefor, and a support for one end of the sleeve having an oil receptacle, an annular recess and a conduit leading therefrom to the receptacle, of a member rotatably mounted on the sleeve, one end of which projects into the recess in the sleeve support and the other end of which extends beyond the sleeve, the said member having an annular groove adjacent to the end of the sleeve and passages that are inclined to the axis thereof and extend from the said groove to the annular recess in the sleeve support.

4. The combination with a shaft, a bearing sleeve therefor and a support for one end of the sleeve having an oil receptacle, annular recesses at the respective sides of said receptacle and conduits leading from said recesses to the receptacle, of a member rotatably mounted on the sleeve and having an annular groove and inclined longitudinal passages leading therefrom to one of the recesses in the sleeve support.

1,154,228. BOOT-SCRAPER. PAUL H. BAUMAN, Battle Creek, Mich. Filed June 7, 1915. Serial No. 32,568. (Cl. 15—2.)



1. In a scraper, the combination with a support of a scraper blade, a bracket secured on the under side of said support and having downwardly projecting flanges with opposed holes therein, rods on which said blade is mounted disposed to reciprocate in said holes and having notch-like keepers on their under sides adapted to engage the outer flange when the blade is retracted against the edge of the support, projecting springs arranged on said rods and seated against the inner bracket flanges, said rods being provided with rests for the outer ends of the springs whereby the blade is projected and supported in a spaced relation to the edge of the support when said keepers are disengaged, and a blade spring arranged to engage said rods and hold them yieldingly downward to engage and retain said keepers in engagement.

2. In a scraper, the combination with a support of a scraper blade, a bracket secured on the under side of said support and having downwardly projecting flanges with opposed holes therein, rods on which said blade is mounted disposed to reciprocate in said holes and having notch-like keepers on their under sides adapted to engage the outer flange when the blade is retracted against the edge of the support, and projecting springs arranged on said rods and seated against the inner bracket flanges, said rods being provided with rests for the outer ends of the springs whereby the blade is projected and supported in a spaced relation to the edge of the support when said keepers are disengaged.

3. In a scraper, the combination of a scraper blade, a supporting bracket, rods on which said blade is mounted arranged to reciprocate in said bracket and having keepers adapted to engage with the bracket when the blade is retracted, said keepers being engaged and disengaged by the movement of said rods laterally, a spring arranged to project said blade when said keepers are disengaged, and a spring for retaining said keepers in engagement.

4. In a scraper, the combination of a scraper blade, a supporting bracket, rods on which said blade is mounted arranged to reciprocate in said bracket and having keepers adapted to engage with the bracket when the blade is retracted, said keepers being engaged and disengaged by the movement of said rods laterally, and a spring arranged to project said blade when said keepers are disengaged.

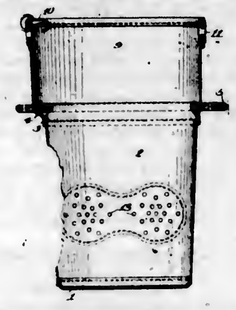
5. In a scraper, the combination of a supporting bracket, a scraper blade mounted to reciprocate on said bracket, means for retaining said scraper blade in its inoperative position adapted to be released by lateral movement of the blade, and a spring for projecting and yieldingly retaining said blade in its operative position.

1,154,229. FEED-BAG. DAVID J. BOWEN, Brooklyn, N. Y., assignor of one-half to George Bonawitz, Brooklyn, N. Y. Filed Nov. 11, 1914. Serial No. 871,476. (Cl. 119—66.)

1. A feed bag, in combination with a plane spiral spring the inner coil of said spring being secured to the top of said bag and supporting means secured to the outer coil of said spring.

2. A feed bag of flexible fabric having a hem at the top edge thereof, in combination with a plane spiral spring the inner coil of which is secured in said hem and the outer coil of which is provided with diametrically opposite eyes.

3. A feed bag comprising, in combination, a bag proper with a bottom; a side portion with a hem; a plane spiral spring the inner coil of which is inserted in said hem and the outer coil of which is provided with eyes; and an extending side portion secured to the top of the bag proper which is adapted to be folded together as a cover and a



snap catch connection for securing said cover portion together.

1,154,230. PRODUCTION OF CONCENTRATED RADIUM RESIDUES AND THE SEPARATION OF RADIUM COMPOUNDS THEREFROM. OTTO PAUL CURT BREDT, New York, N. Y. Filed June 26, 1914. Serial No. 847,515. (Cl. 23—13.)

1. The process of concentrating the radium contents in sulfate residues containing radium sulfate which comprises fusing such residues with an amount of alkali insufficient to convert all of the sulfate into a soluble form and removing the soluble sulfate and the acids soluble constituents from the insoluble residue containing the radium sulfate.

2. The process of concentrating the radium contents in sulfate residues containing radium sulfate which comprises fusing such residues with an amount of alkali insufficient to convert all of the sulfate into a soluble form, removing the soluble sulfate and the acids soluble constituents from the insoluble residue containing the radium sulfate, and repeating the process until the radium sulfate remaining in the insoluble residue has reached the desired concentration.

3. The process of concentrating the radium contents in sulfate residues containing radium and barium sulfates which comprises fusing such residues with an amount of an alkali sufficient to convert about 95% of the sulfate into a soluble form, and removing the soluble sulfate and the acid-soluble barium compounds from the radium sulfate-containing residues.

4. The process of concentrating the radium contents in sulfate residues containing radium and barium sulfates which comprises fusing such residues with an amount of an alkali sufficient to convert about 95% of the sulfate into a soluble form, removing the acid-soluble sulfate and the soluble barium compounds from the insoluble radium sulfate-containing residues and repeating the process until the radium sulfate remaining in the insoluble residue has reached the desired concentration.

5. The process of concentrating the radium contents in sulfate residues containing radium sulfate which comprises fusing such residues with an amount of an alkali carbonate fusion mixture insufficient to convert all of the sulfate into carbonate, and removing the resulting soluble sulfate and acid-soluble carbonate.

[Claims 6 to 21 not printed in the Gazette.]

1,154,231. PROCESS OF CONCENTRATING RADIUM ORES AND RESIDUES. OTTO PAUL CURT BREDT, New York, N. Y., assignor of three-fifths to Radium Therapy Corporation, New York, N. Y., a Corporation of New York. Filed Dec. 30, 1914. Serial No. 879,691. (Cl. 23—13.)

1. The process of treating radium-containing ores and residues which comprises boiling the same with a sufficient amount of concentrated sulfuric acid to dissolve the radium in the form of bi-sulfate, and precipitating the dissolved radium as sulfate from such solution, substantially as described.

2. The process of treating radium-containing ores and residues which comprises boiling the same with a sufficient amount of concentrated sulfuric acid to dissolve the radium in the form of bi-sulfate, and precipitating the dissolved radium as sulfate from such solution by cooling, substantially as described.

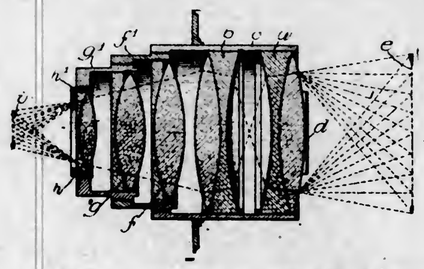
3. The process of treating radium and barium-containing ores and residues which comprises boiling the same with concentrated sulfuric acid to dissolve the barium in the form of bi-sulfate and continuing the process until the radium also is dissolved in the form of bi-sulfate, and then precipitating the dissolved radium as sulfate from the resulting solution, substantially as described.

4. The process of treating radium-containing ores and residues which comprises boiling the same with sulfuric acid in amount insufficient to dissolve all the soluble sulfates as bi-sulfates, precipitating the dissolved sulfates with water, again boiling the undissolved residue with sulfuric acid to dissolve a further amount of the soluble sulfate as bi-sulfate, and precipitating the dissolved sulfates therefrom, substantially as described.

5. The process of treating radium-sulfate-containing ores and residues which comprises boiling the same with a relatively small amount of sulfuric acid to dissolve part of the more soluble sulfates than radium sulfate, separating the solution, repeating the boiling with sulfuric acid until the radium has been dissolved as bi-sulfate along with other sulfates, and precipitating the radium sulfate and other sulfates from such solution with water, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,154,232. APPARATUS FOR PRODUCING A ROUND OR RELIEF EFFECT BY PHOTOGRAPHY. HAGAR BOLTON BYRON, Chicago, Ill., assignor, by mesne assignments, of one-third to A. H. Adams, Ada E. Pickard, and J. L. Jackson, Chicago, Ill. Filed Feb. 16, 1912. Serial No. 677,933. (Cl. 88—57.)

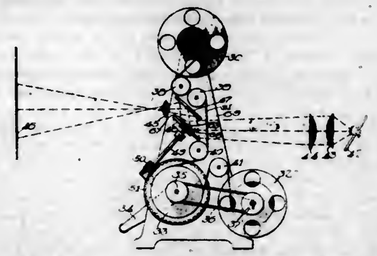


An objective, comprising two compound achromatic lenses, one or more plano-convex compound lenses for reducing the image to the desired size, and a ray intercepter associated with one of said achromatic lenses.

1,154,233. KINETOGRAPHIC APPARATUS. HAGAR BOLTON BYRON, Chicago, Ill., assignor, by mesne assignments, of one-third to A. H. Adams, Ada E. Pickard, and J. L. Jackson, Chicago, Ill. Filed Feb. 24, 1912. Serial No. 679,622. (Cl. 88—16.8.)

1. A kinetographic apparatus, comprising means for moving a picture film, means for directing light through such film, a rotating mirror comprising a plurality of rocking members, a shaft having a spherical bearing member, means connected with said rocking members and bearing against said bearing member, and means for rocking said rocking members as said shaft rotates.

2. A kinetographic apparatus, comprising means for moving a picture film, means for directing light through such film, a rotating mirror comprising a plurality of rocking members, a shaft having a spherical bearing member, means connected with said rocking members and bearing against said bearing member, and cam mechanism for rocking said rocking members as said shaft rotates.



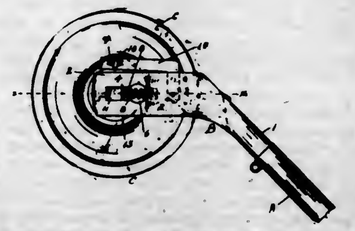
3. A kinetographic apparatus, comprising means for moving a picture film, means for directing light through such film, a rotating mirror comprising a plurality of rocking members, a shaft having a spherical bearing member, means connecting with said rocking members and bearing against said bearing member, cylindrical cams connected with said rocking members and rotating therewith, and means coacting with said cams for rocking said rocking members as the shaft rotates.

4. A kinetographic apparatus, comprising means for moving a picture film, means for directing light through such film, a rotating mirror comprising a plurality of rocking members, a shaft having a slotted spherical head and a ball within said head, means connected with said rocking members and bearing against said ball, and means for rocking said rocking members as said shaft rotates.

5. A kinetographic apparatus, comprising means for moving a picture film, means for directing light through such film, a rotating mirror comprising a plurality of rocking members, a shaft having a slotted spherical head and a ball within said head, means connected with said rocking members and bearing against said ball, cylindrical cams connected with said rocking members and rotating therewith, and means coacting with said cylindrical cams for rocking said rocking members.

[Claims 6 and 7 not printed in the Gazette.]

1,154,234. TROLLEY. GEORGE O. BURWELL, Salt Lake City, Utah, and CHARLES M. KURTZ, Bellevue, Pa. Filed Sept. 19, 1914. Serial No. 862,611. (Cl. 191—61.)



1. In a trolley the combination of a harp; an axle mounted therein; a wheel carried on said axle; annular grooves in the web portion of said wheel; springs secured at one end to said harp and having longitudinally disposed diamond shaped slots in their free end portions; and detachable contact shoes carried in said slots and held in bearing contact against said wheel and within said grooves by said springs to carry electric current from a line wire to said harp.

2. In a trolley the combination of a harp; a wheel mounted therein having annular grooves in the web portion thereof; flat springs having one end of each secured

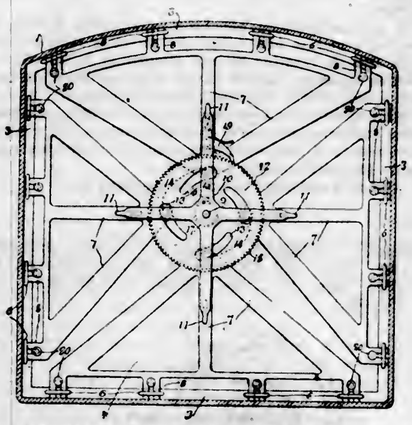
to said harp and provided with a diamond shaped slot in their other ends; and contact points having one portion diamond shaped to pass freely through said diamond shaped slots and a cone shaped larger portion connected to said diamond shaped portion which contact points are held in said annular grooves by said springs.

3. In a trolley the combination of a harp; an axle mounted therein; a wheel mounted on said axle having annular grooves therein; and spring held detachable contact shoes adapted to bear in said grooves above the said axle.

4. In a trolley the combination of a harp having an inclined portion and horizontal arms; a wheel having annular grooves in the web portion thereof mounted in said arms; flat springs having one end of each secured to an adjacent one of said arms and adapted to conduct electricity; a detachable contact shoe carried in the free end of each of said springs and bearing against said wheel within one of said grooves at a point between the axle of said wheel and the point on the periphery of said wheel where it bears against the line wire.

5. In a trolley the combination of a harp; a wheel mounted therein having annular grooves cut in the web portion thereof; springs secured on the inner side of the arms of said harp with the free ends above the arms of the harp and provided with longitudinal slots therein; and detachable contact points carried by said springs within said slots and bearing against said wheel within said annular grooves.

1,154,235. LOCK FOR GRAVE-VAULTS. MANUEL E. COBB, Marion, Ohio, assignor of one-half to Ralph T. Lewis, Marion, Ohio. Filed July 6, 1915. Serial No. 38,081. (Cl. 27—7.)



1. A grave vault having an opening, a closure for said opening, said vault having a part arranged substantially parallel with said closure and provided with an aperture, a staple carried by said closure and arranged to extend through said aperture when said closure is in its closed position, a locking member mounted on said closure within the vault and capable of longitudinal movement to cause one end thereof to enter said staple, and means to move the other end of said locking member toward said closure, thereby causing said locking member to fulcrum on the edge of the apertured part of said vault and draw said closure toward said vault.

2. A grave vault having an end opening and provided with inwardly extending portions having openings therein, a closure for said vault having staples adapted to extend through the openings in said portions, locking members mounted on said closure within said vault and having parts adapted to enter the respective staples, and means for first imparting longitudinal movement to said locking members to cause said parts to enter said staples and for then moving the inner ends of said locking members toward said closure to cause the locking members to fulcrum on the inner edges of said inwardly extending portions and to draw said closure toward said inwardly extending portions of said vault.

3. A grave vault having an end opening and provided with inwardly extending portions having apertures therein, said inwardly extending portions having their inner faces beveled toward the body of the vault, a closure for the open end of said vault, staples secured to said closure and extending through the respective openings in said inwardly extending portions, locking members mounted on said closure and having their inner ends spaced away therefrom, and means for first imparting an outward movement to said locking members to cause the same to enter said staples and for then moving the inner ends of said locking members toward said closure to rock said locking members about the beveled edge of the inwardly extending portions of said vault.

4. A grave vault having an end opening and provided with inwardly extending flanges arranged adjacent to said end opening and provided with apertures, a closure for the end of said vault, staples secured to said closure and adapted to extend through the openings in the respective flanges, a screw-threaded stud journaled in said closure, a disk mounted on said screw-threaded stud, having cam surfaces and supported normally at a point remote from said closure, locking devices supported at their inner ends by said disk and having parts engaging the cam surfaces of said disk, the outer ends of said locking members being supported adjacent to the respective flanges, and means for first imparting rotary movement to said disk to move said locking members longitudinally into engagement with the respective staples and for then moving said disk toward said closure to rock said locking members about the edges of said flanges.

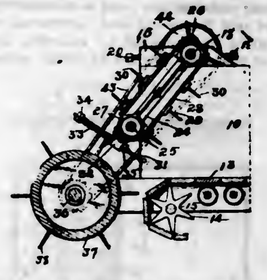
5. A grave vault having an end opening and provided with inwardly extending flanges arranged adjacent to said end opening and provided with apertures, a closure for the end of said vault, staples secured to said closure and adapted to extend through the openings in the respective flanges, a screw-threaded stud journaled in said closure, a disk mounted on said screw-threaded stud, having cam surfaces and supported normally at a point remote from said closure, locking devices supported at their inner ends by said disk and having parts engaging the cam surfaces of said disk, the outer ends of said locking members being supported adjacent to the respective flanges, a spring secured to and coiled about said stud, and spring and said disk having coöperating parts to cause the disk to rotate with the stud during the first portion of the rotary movement of the stud, and said spring being adapted to yield to permit the separation of such parts during the further rotation of said stud, whereby said locking members are first moved outwardly into engagement with the respective staples and then rocked about the edges of the respective flanges.

[Claims 6 and 7 not printed in the Gazette.]

1,154,236. MANURE-SPREADER. WILLARD J. COOK, Des Moines, Iowa. Filed Mar. 29, 1910. Serial No. 552,264. (Cl. 111—40.)

1. In a manure spreader, the combination of a wagon body, an apron on the bottom of the wagon body, an unloading device over the apron, comprising a toothed rake device above the discharge end of the apron extended downwardly and rearwardly and designed to engage the body of material on the apron, and also designed when operated to have said rake device tear the material apart and deliver said portions of it that have been torn apart from the body of the material in a downward and rearward direction, and a spreading cylinder so arranged with relation to the apron and the delivering device that it will be protected by the said delivering device from direct contact with any of the material on the apron, and said spreading cylinder being so arranged that the material

delivered to it by the delivering device will strike upon its upper portion and be thrown upwardly and rearwardly when the spreading cylinder is being rotated.



2. In a manure spreader, the combination of a wagon body to support the material, a spreading cylinder arranged at the discharge end of said body and in position to be out of engagement with the material resting upon the body, means for rotating it in a direction with its top moving rearwardly away from the body, and an unloading device in position above the discharge end of the body and in position to engage material on the body, means for moving the forward portion of said unloading device downwardly to deliver material from the body on the spreading cylinder, means for yieldingly supporting the unloading device so that the part thereof adjacent to the spreading cylinder may move upwardly in a direction away from the discharge end of the body, and adjustable means for limiting the movement of the unloading device toward the discharge end of the body.

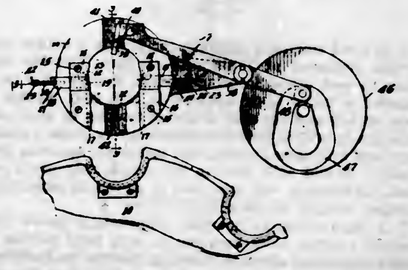
3. In a manure spreader, the combination of a wagon body, a spreading cylinder arranged at the discharge end of said wagon body, means for rotating it in a direction with its top moving rearwardly away from the body, and an unloading device for moving material from the body to the spreading cylinder, said unloading device being located above the spreading cylinder and being capable of movement toward and from the spreading cylinder, said unloading device being also provided with teeth for engaging material, means for moving the teeth at the forward portion of the unloading device in a downward direction to deliver material to the spreading cylinder, and a spring pressure device for yieldingly holding the unloading device in a direction toward the spreading cylinder.

4. In a manure spreader, the combination of a wagon body to support the material, a spreading cylinder arranged at the discharge end of said body and in position to be out of engagement with the material resting upon the body, means for rotating it in a direction with its top moving rearwardly away from the body, and an unloading device in position above the discharge end of the body and in position to engage material on the body, means for moving the forward portion of said unloading device downwardly to deliver material from the body on the spreading cylinder, means for yieldingly supporting the unloading device so that the part thereof adjacent to the spreading cylinder may move upwardly in a direction away from the discharge end of the body, a spring pressure device for yieldingly holding the unloading device in a direction toward the discharge end of the body, and means for adjusting the tension of said spring pressure device.

5. In a manure spreader, the combination of a wagon body to support the material, a spreading cylinder arranged at the discharge end of said body and in position to be out of engagement with the material resting upon the body, means for rotating it in a direction with its top moving rearwardly away from the body, and an unloading device in position above the discharge end of the body and in position to engage material on the body, means for moving the forward portion of said unloading device downwardly to deliver material from the body on the spreading cylinder, means for yieldingly supporting the unloading device so that the part thereof adjacent to the spreading cylinder may move upwardly in a direction away from the discharge end of the body, and means for adjusting the unloading device forwardly and rearwardly relative to the discharge end of he body.

[Claims 6 to 17 not printed in the Gazette.]

1,154,237. CAN-HEAD-FEEDING MACHINE. JAMES W. DIXON, Chicago, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 28, 1911. Serial No. 666,240. (Cl. 113—114.)



1. A device for feeding articles from a stack, one at a time, including, in combination: a substantially horizontally arranged open-ended stack holder adapted to support the articles vertically on edge; a feeding member adapted to flex the endmost article of the stack relative to and away from the the end of the stack, said member being movable back and forth across one edge of the end of the stack, and also having means to engage the edge of the article; means for moving said feeding member transversely to the axis of the stack to feed the article so engaged; and means for pushing the stack in a substantially horizontal direction toward he point where the articles are separated one by one from the stack.

2. In a device for feeding can heads and similar articles from a stack one at a time, in combination, a stack holder having a perforated head through which the heads are adapted to pass, a lever pivoted adjacent said head, a finger pivotally mounted on said lever and oscillatable in a plane perpendicular to the plane of the adjacent can head, said finger being adapted to cut out one head at a time from the stack and movable over the end of the stack, and means for oscillating said lever.

3. In a device for feeding can heads and similar articles from a stack one at a time, a horizontally disposed stack holder comprising a vertical plate at one end, said plate having a recess therein conforming in shape and size to the can heads, a lever pivoted adjacent said plate and having a yieldingly mounted finger thereon adapted to be moved back and forth over the end of the stack and cut out one head at a time.

4. In a device for feeding can heads and similar articles from a stack one at a time, in combination, a horizontally disposed stack holder comprising a plate at one end having a recess therein through which the can heads are adapted to pass, a stop for preventing more than the outermost head in the stack from being moved beyond said recess, movable means for preventing accidental downward movement of said outermost head in its projected position, and means for pushing the outermost head downwardly.

5. In a device for feeding can heads and similar articles from a stack one at a time, in colination, a horizontally disposed stack holder comprising a plate at one end having a recess therein through which the can heads are adapted to pass, a stop for preventing more than the outermost head in the stack from being moved beyond said recess, movable means for preventing accidental downward movement of said outermost head in its projected position, means for pushing the outermost head downwardly, and means for forcing the stack toward said stop.

[Claims 6 to 15 not printed in the Gazette.]

1,154,238. MACHINE FOR STAMPING SAND MOLDS. ALEXANDER T. DRYSDALE, Burlington, N. J. Filed June 5, 1915. Serial No. 32,412. (Cl. 22—27.)



1. A mold stamping machine, comprising a hollow body portion composed of a plurality of parts movable relatively to each other, a spring tending to draw said parts together, a letter block mounted in said body portion to slide inward and outward, a spring tending to draw said letter block inward, said last-named spring being stronger than said first-named spring, and means for applying fluid pressure within said body to move said body parts outward relatively to each other and to move said letter block outward relative to the body.

2. A mold stamping machine, comprising a hollow body portion, a letter block mounted in said body portion to slide inward and outward, a spring tending to draw said letter block inward, and means for applying fluid pressure within said body to move said body parts outward relatively to each other and to move said letter block outward relative to the body.

3. A mold stamping machine, comprising a hollow body portion composed of a plurality of parts movable relatively to each other, a letter block mounted in said body portion to slide inward and outward, a spring tending to draw said letter block inward, and means for applying fluid pressure within said body to move said body parts outward relatively to each other and to move said letter block outward relative to the body.

4. A mold stamping machine, comprising a hollow body portion, a letter block mounted in said body portion to slide inward and outward, a spring tending to draw said letter block inward, and means for applying fluid pressure within said body to move said letter block outward relative to the body.

5. A mold stamping machine, comprising a hollow body portion, a letter block mounted in said body portion to slide inward and outward, a spring tending to draw said letter block inward, and means for applying fluid pressure within said body to move said letter block outward relative to the body.

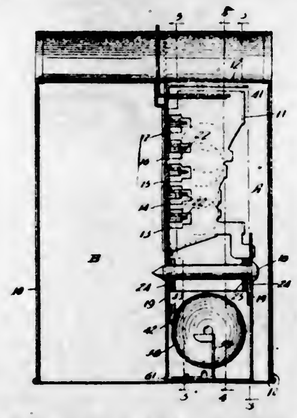
[Claims 6 to 13 not printed in the Gazette.]

1,154,239. COIN-REGISTERING MECHANISM. WILLIAM P. DUN LANY, Maywood, Ill., assignor to Charles W. Shonk Company, Chicago, Ill., a Corporation of Illinois. Filed July 18, 1913. Serial No. 779,664. (Cl. 235—100.)

1. A coin registering mechanism including, in combination: a casing having a coin-receiving slot therein; a fixed, graduated coin-receiving chute; an oscillatable frame movable away from said chute and having a plurality of independently operable triggers adapted to be tripped by the coins; register wheels; and means engaged and moved by said triggers when the latter are set by a coin for rotating the register wheel amounts corresponding to the value of the coin being registered, substantially as specified.

2. A coin registering mechanism including, in combination: a casing having a coin-receiving slot therein; register wheels; a stationary, graduated coin-receiving chute; an oscillatable frame movable away from said chute and having a plurality of elements thereon, the number of said elements corresponding to the number of different size coins to be registered; and pivoted levers engaged by said elements and adapted to rotate the register wheels, substantially as specified.

3. A coin registering mechanism including, in combination: a casing; a graduated coin-receiving chute within said casing and fixed relatively thereto, said chute having a plurality of slots; register wheels; an oscillatable frame movable away from said chute and having a plurality of independently operable elements thereon, said elements being adapted to pass through the slots in the chute and to be actuated by coins therein; and pawl and ratchet devices intermediate said frame and said register wheels for operating the latter and engaged by elements on the frame when any of the same are set by coins, substantially as specified.

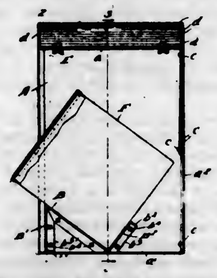


4. A coin registering mechanism including, in combination: a casing having a slot therein; a stationary, graduated coin-receiving chute, said chute having a plurality of transverse slots therein; registering mechanism; levers having pawls thereon for actuating said registering mechanism; and an oscillatable frame movable away from said chute and having a plurality of pivoted elements thereon normally in inoperative position, said elements being so located that they pass through said slots in the chute when the frame is oscillated, said elements being moved to operative position by coins in said chute and when in operative position adapted to engage said levers and move the latter, substantially as specified.

5. A coin registering mechanism including, in combination: a casing; a fixed, graduated coin-receiving chute therein; register wheels having ratchets thereon; pivoted levers having pawls thereon engaging said ratchets; and an oscillatable frame movable away from said chute and having a plurality of pivoted triggers thereon normally in inoperative position and adapted to be set by coins in said chute when the frame is oscillated past the same, substantially as specified.

[Claims 6 to 22 not printed in the Gazette.]

1,154,240. SECTIONAL DISPLAY-CABINET. ALLAN L. EATON, Austin, Ill., assignor to Charles W. Shonk Company, Chicago, Ill., a Corporation of New Jersey. Filed Dec. 23, 1912. Serial No. 738,113. (Cl. 211—14.)



In a display case of the character described, a section comprising two flanged sheet metal end pieces secured together by a longitudinal shelf, the latter having a vertically extending front portion, a downwardly and rearwardly inclined intermediate portion and an upwardly and rearwardly inclined inner portion, said shelf forming means for supporting cans in an inclined position, substantially as specified.

1,154,241. EYEGLASSES. JOSEPH FRIEDLANDER, New York, N. Y. Filed Mar. 14, 1910. Serial No. 549,143. (Cl. 88—50.)



1. Eyeglasses having a bridge with lateral extensions, levers pivotally mounted upon said bridge extensions, nose clips associated with said levers, springs controlling said levers to force said clips normally toward each other, and chambers encompassing said springs, each of said springs having an end secured to one of said bridge extensions and an end adjustably secured to one wall of said chambers, whereby the tension of said springs can be varied.

2. Eyeglasses having a bridge, levers pivotally mounted upon said bridge and having chambers therein, springs in said chambers, and secured respectively to said bridge and a wall of said chambers, and nose clips carried by said levers, said chambers having openings to permit said springs to be secured to said bridge.

3. Eyeglasses having a bridge provided with posts, levers having barrels provided with openings movably receiving said posts, nose clips carried by said levers, and springs mounted in said barrels upon said posts, said springs having ends secured to said barrels and ends secured to said bridge, said barrels having openings through which said last-mentioned ends of said springs pass.

4. Eyeglasses having a bridge provided with posts, levers having openings receiving said posts, whereby said levers are pivotally mounted upon said bridge, said levers having walls forming a chamber encircling said posts, and springs mounted upon said posts and adjustably secured to said chambers, said springs having ends secured to said bridge.

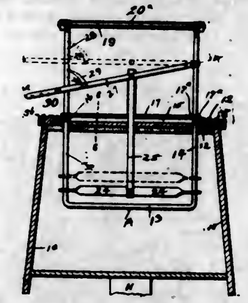
5. Eyeglasses having a bridge provided with end extensions having posts, levers pivotally mounted upon said end extensions, by means of said posts, barrels carried by said levers and encompassing said posts, and springs mounted upon said posts and engaging said end extensions and said barrels, said posts having heads extending laterally toward the walls of said barrels.

[Claims 6 to 24 not printed in the Gazette.]

1,154,242. WASHING-MACHINE. SAMUEL J. GOFF, Dallas, Iowa. Filed June 4, 1914. Serial No. 843,097. (Cl. 68—15.)

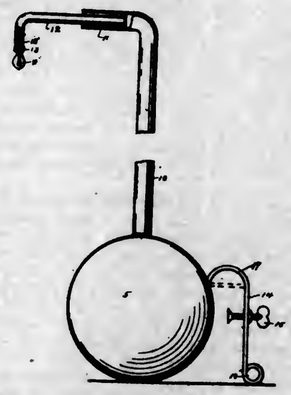
1. In a device of the class described, a tub body, a hinged cover thereon, an agitating device comprising a shaft rotatably mounted in the cover, a horizontal member within the tub body and upright members fixed to said shaft and adapted to tilt when the shaft is rocked, means for imparting reciprocatory motion to the upper ends of said upright members, a clamp slidably mounted on said upright members within the tub, a rod pivoted to said clamp and extended upwardly through the cover, a lever pivoted at one end to one upright member above the cover, means on the other end of said lever for engaging the other upright member at different points thereon for locking the lever against upward movement.

2. In a device of the class described, a tub body, a hinged cover thereon, an agitating device comprising a shaft rotatably mounted in the cover, a horizontal member within the tub body and upright members fixed to said shaft and adapted to tilt when the shaft is rocked, means for imparting reciprocatory motion to the upper ends of said upright members, a clamping bar slidably mounted on said upright members within the tub, a rod secured to said



clamping bar and slidably mounted in the tub cover, means mounted on one of the upright members for raising and lowering said clamping bar, and means on said last mentioned means for engaging the other upright member at different points thereon for preventing upward movement of said clamping bar.

1,154,243. ADJUSTABLE LAMP FOR BEDS. ABRAHAM GOLDKNOPF, New York, N. Y. Filed Aug. 5, 1914. Serial No. 855,182. (Cl. 240—8.5.)

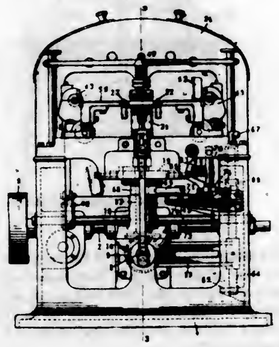


A device of the character described comprising a cylinder, a battery contained therein, a lamp adjustably supported thereon, and means for securing the whole to a bed, said means having its lowermost end extending to the plane of the lowermost side of said cylinder and cooperating therewith to support said cylinder upon a surface as and for the purpose set forth.

1,154,244. AUTOMATIC STOP-MOTION FOR CAN-BODY-FORMING MACHINES. CHARLES W. GRAHAM, Rome, N. Y., assignor to American Can Company, a Corporation of New Jersey. Filed Jan. 28, 1910. Serial No. 540,566. (Cl. 113—113.)

1. In a machine of the character described, in combination: a constantly moving part; a blank feeding means; a

clutch connection between said part and the feeding means; a lever for moving the clutch into and out of operative position; a second moving part; a gravity member adapted to establish operative connection between said clutch moving lever and said second moving part; devices for holding the gravity member normally out of operative position; and automatically operative, electrically controlled means for operating said devices to release the gravity member to cause the latter to establish operative connection between said second moving part and the clutch moving lever, the operation of said means being dependent upon that of the feeding means, substantially as specified.



2. In a machine of the character described, in combination: a constantly moving part; a blank feeding means; a clutch connection between said part and the feeding means; a lever for moving the clutch into and out of operative position; a second moving part; a gravity member adapted to establish operative connection between said clutch moving lever and the second moving part; devices for holding the gravity member normally out of operative relation; and automatically operative means for controlling the position of said devices and adapted to operate the latter to thereby release and permit the gravity member to establish operative connection between said second moving part and the clutch moving lever, the operation of said automatically operative means being dependent upon that of the feeding means, substantially as specified.

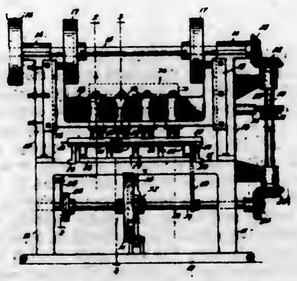
3. In a machine of the character described, in combination: a constantly moving part; a blank feeding means; a clutch connection between said part and the feeding means; a lever for moving the clutch into and out of operative position; a second moving part; a gravity member adapted to establish operative connection between said clutch moving lever and said second moving part; devices for holding said gravity member normally out of operative relation; and means governing the movements of said devices, substantially as specified.

4. In a machine of the character described, in combination: a constantly moving part; a blank feeding means; a clutch connection between said part and the feeding means; means for moving the clutch into and out of operative position; a reciprocating member; a gravity member adapted to establish operative connection between said clutch moving means and said reciprocating member; devices for holding said gravity member normally out of operative relation; and electrically controlled means adapted to operate said devices to thereby release the gravity member and permit the latter to establish operative connection between said reciprocating member and the clutch moving means, the operation of said electrically controlled means being dependent upon that of the feeding means, substantially as described.

5. In a machine of the character described, in combination: a constantly moving part; a blank feeding means; a clutch connection between said part and the feeding means; means for moving the clutch into and out of operative position; a second, normally, constantly moving part; a gravity member adapted to establish operative connection between said clutch moving means and said second moving part; devices for holding said gravity member normally out of operative relation; and automatically operative means controlling said devices and adapted to operate the latter and thereby release the gravity member and permit the latter to establish operative connection between said second moving part and the clutch moving means, substantially as specified.

[Claims 6 to 16 not printed in the Gazette.]

1,154,245. CAN-END AND GASKET ASSEMBLING MACHINE. CHARLES W. GRAHAM, Huntington, N. Y., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 16, 1912. Serial No. 736,900. (Cl. 113—80.)



1. In a machine for cutting and applying gaskets to container closures, means for cutting a gasket and assembling it on a closure, said means including a male and female die relatively axially movable, the male die carrying the gasket when cut and arranged to deposit it on a closure when one is placed between the male and female dies, in combination with means for feeding container closures successively, and at the intervals between the die-punching operations, into line between the said male and female dies, substantially as specified.

2. In a machine for cutting and applying gaskets to container closures, means for cutting a gasket and assembling it on a closure, said means including a male and female die relatively axially movable, the male die carrying the gasket when cut and arranged to deposit it on a closure when one is placed between the male and female dies, and means for feeding gasket material between the male and female dies, in combination with means for feeding container closures successively, and at the intervals between the die-punching operations, into line between the said male and female dies, substantially as specified.

3. A machine of the character described for cutting and applying gaskets to container closures comprising, in combination: a gasket material feeder; coöperating gasket cutting members relatively movable toward and from each other, one of said members being adapted to carry a cut gasket with it; means for positioning a closure in alinement with said cutting members when the same are separated; and mechanism for operating said gasket carrying member so that it will deposit a gasket on the closure, substantially as specified.

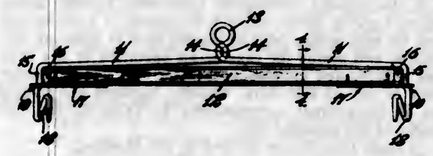
4. In a mechanism for cutting and applying gaskets, in combination: a female die; a cutting male punch coöperating with the female die and adapted to cut an annular gasket from gasket material; means for feeding container closures successively, and at the intervals between the die-punching operations, into line between the said die and punch; and mechanism for causing the die-punching

devices to have alternately a long punching stroke, and a shorter stroke for applying the gasket to the positioned container closure.

5. A machine of the character described for cutting and applying gaskets to container closures comprising, in combination: means for cutting an annular gasket from a strip of gasket material, said means including a compound punch and die, the compound punch comprising a perforating member adapted to retain and carry with it an annular cut gasket, and an annular cutting member adapted to serve as a stripper to remove a gasket from the perforating member and deposit said gasket on a container closure; and mechanism for moving said punch and die relatively toward and from each other, substantially as specified.

[Claims 6 to 29 not printed in the Gazette.]

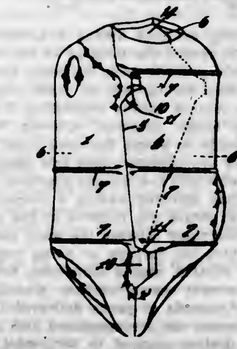
1,154,246. WHIFFLETREE. THOMAS F. GREGORY, Henning, Tenn., assignor to William B. Carson, St. Louis, Mo. Filed May 25, 1914. Serial No. 840,658. (Cl. 21—78.)



1. In a whiffle-tree comprising a spreader bar and a metal yoke arranged alongside thereof with its ends bearing against and passing around the ends of said spreader bar, end plates secured to the end portions of the spreader bar on the side opposite said yoke, the outer ends of said plates extending beyond the ends of said spreader bar and embracing the ends of said yoke, and the ends of said yoke being offset laterally to form kinks bearing against said plates and terminating in attaching means for a harness.

2. In a whiffle-tree comprising a spreader bar having notched ends, and a metal yoke arranged with its ends passing around the ends of said spreader bar and fitting in said notches, end plates secured to the end portions of the spreader bar on the side opposite said yoke, the outer ends of said plates extending beyond the ends of said spreader bar and embracing the ends of said yoke, and the ends of said yoke having kinks bearing against said plates and terminating in attaching means for a harness.

1,154,247. DOLL-MOLD. SAMUEL HASKELL, New York, N. Y., assignor to Fair and Carnival Trading Co. Inc., New York, N. Y., a Corporation of New York. Filed Sept. 14, 1914. Serial No. 861,533. (Cl. 18—42.)



1. A mold for doll-bodies, consisting of a plurality of body-members, a projection carried by each body-member adjacent one end thereof, said projections being adapted to aline and form a support when said mold-members are assembled, and a one-piece shoulder-member supported by said projections.

2. A mold for doll-bodies consisting of a plurality of body-members, provided at the upper ends thereof with a curved wall, a projection carried by each body-member adjacent the curved wall carried thereby, and a one-piece shoulder-member supported by said projections, said shoulder-member having a curved top surface adapted to engage the curved walls carried by the body-members.

3. A mold for doll-bodies consisting of a plurality of body-members, provided at the upper ends thereof with a curved wall, a projection carried by each body-member adjacent the curved wall carried thereby, a one-piece shoulder-member supported by said projections, said shoulder-member having a curved top surface adapted to engage the curved walls carried by the body-members and a core-print carried by said shoulder-section, provided with a central opening adapted to form a head-opening in the doll-body.

1,154,248. CHECK-PROTECTOR. LOUIS W. JADERSTROM, Des Moines, Iowa. Filed Feb. 16, 1915. Serial No. 8,648. (Cl. 101—67.)



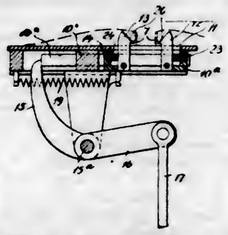
1. In a device of the class described a lower check protector member having storage compartments and provided also with a groove for receiving type set in printing position, an upper check protector having a platen and an ink pad, the platen and ink pad being so located with relation to the sides and ends of the upper member, that when said upper member is placed directly above the lower member in one position the ink pad will be above the receptacle for type in printing position, and the platen will be above the storage compartment, whereas when the upper member is turned end for end the platen will be above the receptacle for type in printing position.

2. In a device of the class described, a lower check protector member having storage compartments and provided also with a groove for receiving type set in printing position, an upper check protector having a platen and an ink pad, the platen and ink pad being so located with relation to the sides and ends of the upper member that when said upper member is placed directly above the lower member in one position the ink pad will be above the receptacle for type in printing position, and the platen will be above the storage compartment, whereas when the upper member is turned end for end the platen will be above the receptacle for type in printing position, a coacting means on said upper and lower check protector members adapted, in one of their positions to lock said members together, and in another position to serve as stops for properly positioning said members with relation to each other.

1,154,249. MACHINE FOR USE IN APPLYING CLAMPS TO STRIPS OF FABRIC. KARL F. JENSEN, South River, N. J., assignor to Hermann Aukam & Co., New York, N. Y., a Corporation of New York. Filed Oct. 22, 1913. Serial No. 796,719. (Cl. 112—7.)

1. Clamp applying apparatus comprising a support for clamp-strips, two independent clamp-strip-gripping means, one such gripping means arranged to hold one clamp strip, the other such gripping means arranged to hold another clamp strip, one such gripping means movable toward and from the other and arranged in its movement toward such other gripping means to carry a clamp strip held by it toward a clamp strip held by such other gripping

means, and operating means for such movable gripping means.

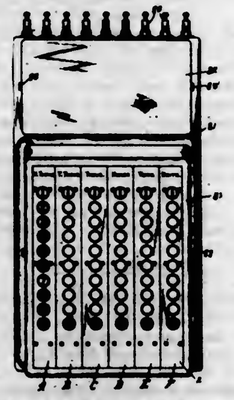


2. Clamp applying apparatus comprising a support for clamp strips, clamp-holding dogs projecting through openings in such support and arranged in pairs, one dog of each pair being movable toward and from the other dog of that pair, and a movable support to which each of such movable dogs is secured, and means for moving said movable support, whereby the movable dogs may be moved toward and from the other dogs.

3. Clamp applying apparatus comprising a support for clamp strips, spring-actuated clamp-holding dogs projecting through openings in such support and arranged in pairs, one dog of each pair being movable toward and from the other dog of that pair and a movable support to which each of such movable dogs is secured and means for moving said movable support whereby the movable dogs may be moved toward and from the other dogs, each of such dogs having an inclined upper face and adapted to yield when downward pressure is exerted against such face, and then to spring forward when such pressure is released.

4. Clamp applying means comprising a table, a slide mounted to move beneath such table, pivoted spring-actuated dogs mounted on such slide and projecting through openings in said table, other spring-actuated dogs secured to said table and likewise projecting through openings thereof, and means for operating said slide.

1,154,250. OPERATOR'S CALLING DEVICE. WILLIAM KAISLING, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 19, 1912. Serial No. 721,170. (Cl. 179—90.)



1. An impulse transmitter comprising a rectangular elongated base having an angularly disposed forward portion, impulse mechanism provided with terminals supported on top the rear end of said base and a key-board including impulse control keys provided with terminals supported on said angularly disposed portion of said base, and connections extending from the terminals of the said keys to the terminals of the said impulse mechanism through the said base.

2. An impulse transmitter comprising a hollow elongated rectangular base having an angularly disposed forward end, impulse mechanism provided with terminals secured to the rear end of said base, and a keyboard provided with terminals and including impulse control keys supported on top the angularly disposed portion of the base and connections extending from the terminals of said keys to the terminals of said impulse mechanism through the hollow of said base.

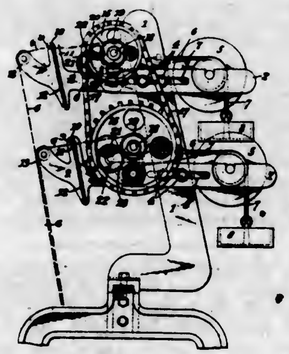
3. An impulse transmitter comprising impulse mechanism, impulse control keys, a spring motor for said mechanism, a winding magnet for said motor, and means for causing an operation of the winding magnet and impulse mechanism responsive to actuation of any of said keys.

4. An impulse transmitter comprising impulse mechanism, a spring motor for said mechanism, a winding magnet for said motor, impulse control keys, and means for causing operations of the winding magnet and impulse mechanism corresponding to the number of said keys actuated.

5. An impulse transmitter comprising impulse mechanism, a spring motor for said mechanism, a winding magnet for said motor, impulse control keys of different digit values, and means for causing an operation of the winding magnet and impulse mechanism responsive to actuation of any of said keys, whereby impulses are adapted to be transmitted corresponding in value to the digit value of the actuated key.

[Claims 6 to 15 not printed in the Gazette.]

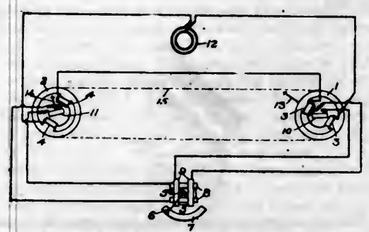
1,154,251. KNITTING-MACHINE. JAMES KENYON, Sidney, N. Y., assignor to Julius Kayser & Co., New York, N. Y., a Corporation of New York. Filed Jan. 9, 1915. Serial No. 1,303. (Cl. 66—33.)



1. In a knitting machine having a plurality of warp beams, devices to retard the rotation of the beams, regulating devices interposed between the warp beams and the needles with which the threads or yarns engage and by which they are rotated, means connecting the regulating devices of the beams together, whereby the relative amounts of threads or yarns delivered from the respective warp beams are predetermined and means to determine the angle at which the threads approach the needles.

2. In a knitting machine having a plurality of warp beams, devices to retard the rotation of the beams, regulating devices interposed between the warp beams and the needles with which the threads or yarns engage and by which they are rotated, means connecting the regulating devices of the several beams together, whereby the relative amounts of threads or yarns delivered from the respective warp beams are predetermined and supports for the regulating devices adapted to horizontal adjustment forwardly and rearwardly, whereby the relative amounts of threads or yarns delivered from the respective warp beams are predetermined and the angle at which the threads or yarns approach the needles regulated.

1,154,252. RANGE-FINDER. ABSALOM M. KENNEDY, West Orange, N. J. Filed Jan. 27, 1913, Serial No. 744,412. Renewed July 28, 1915. Serial No. 42,455. (Cl. 177—351.)



1. Range finding apparatus, comprising an indicating instrument subject to the influence of two opposing electrical forces, and means including a finder having two relatively movable electrical elements coöperative to vary the electrical forces acting on said instrument in accordance with the variation in the angular relation of said elements of the finder.

2. Range finding apparatus, comprising a meter adapted to measure the proportion between two variable electromotive forces and having a movable range indicating member, and means comprising a source of electromotive force and a finder having two relatively movable electrical elements coöperating with each other and with said source of electromotive force to vary the proportion of the electromotive forces in said meter and to thereby cause the same to indicate the ranges.

3. Range finding apparatus, comprising a meter having means to measure the proportion between two variable electromotive forces and having a scale calibrated in units of length and an indicating member relatively movable with respect to said scale and coöperating therewith to indicate the range directly, and means comprising a source of electromotive force and a finder having two relatively movable electrical elements coöperative with each other and with said sources of electromotive force to vary the proportion of the electromotive forces in said meter as the displacement between the two relatively movable electrical elements of the respective finders varies.

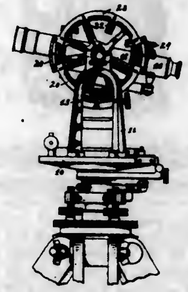
4. Range finding apparatus, comprising a meter having means to measure the proportion between two variable electromotive forces and having a scale calibrated in units of length and an indicating member relatively movable with respect to said scale and coöperative therewith to indicate the range directly, and means comprising a source of electromotive force and a finder having two relatively angularly movable electrical elements coöperative with each other and with said source of electromotive force to vary the proportion of the electromotive forces in said meter as the sines of the angles of displacement between the two relatively movable electrical elements of the respective finders.

5. A range finder, comprising a pair of finders embodying relatively movable electrical elements, a source of electric current connected to certain of said elements, the latter modifying said current according to the relative positions occupied by the finders, and an indicator having a movable index responsive to such modifications of the current, and operative thereby to indicate the range directly.

[Claims 6 to 11 not printed in the Gazette.]

1,154,253. STADIA-TRANSIT. WILLIE L. E. KEUFFEL, Hoboken, N. J., assignor to The Keuffel & Esser Company, Hoboken, N. J., a Corporation of New Jersey. Filed Dec. 10, 1913. Serial No. 805,821. (Cl. 33—46.)

1. In an instrument of the character set forth, the combination with a support and telescope provided with stadia wires and mounted to oscillate on said support, of associated elements, one being on the support and the other moving with the telescope, said elements having scales and coacting indexes, said scales being disposed at different points around the axis of movement of the telescope, one of said scales being graduated in terms of horizontal constants varying with each angle of inclination of the telescope, a second of said scales being graduated in terms of vertical constants varying with each angle of inclination of the telescope, and a third of said scales being graduated in terms of angular displacement.



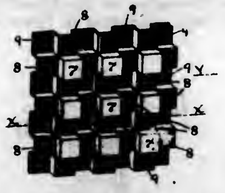
2. In an instrument of the character set forth, the combination with a support and a telescope provided with stadia wires and mounted to oscillate on said support, of a vertical circle fixed to the telescope and having its center coincident with the center of oscillation of said telescope, a guard ring extending over the circle and having cut out portions exposing the two vertical arcs of said circle and a horizontal arc of the same, one of said vertical arcs having a scale thereon graduated in terms of horizontal constants varying with each angle of inclination of the telescope, an element carrying an index for said scale carried by the guard ring, the other vertical arc of the circle having a scale thereon graduated in terms of vertical constants varying with each angle of inclination of the telescope, a second element having an index for said second scale carried by the guard ring, the horizontal exposed arc of the circle having a third scale graduated in terms of angular displacement, and an element carrying a third index for said third scale.

3. In a structure of the character set forth, the combination with a support and telescope provided with stadia wires and mounted to oscillate on said support, of a vertical circle having its center coincident with the axis of oscillation of the telescope and fixed to said telescope, said circle having a scale on one arc graduated in terms of horizontal constants varying with each angle of inclination of the telescope, and having a second scale on another arc graduated in terms of vertical constants varying with each angle of inclination of the telescope, separate elements carrying indexes for the said scales, securing means for the elements permitting their adjustment and normally holding them against movement, a third arc of the circle having a third scale graduated in terms of angular displacement, and a third element having an index for said third scale.

1,154,254. SHEET-METAL PANEL-WORK. MAURICE LACHMAN, New York, N. Y., assignor to Universal Electric Welding Company, New York, N. Y., a Corporation of New York. Filed Nov. 5, 1900. Serial No. 536,347. (Cl. 113—116.)

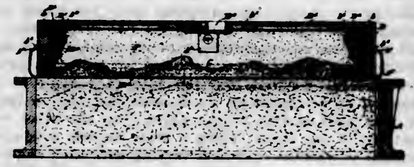
1. The method of forming a raised panel in sheet metal, consisting in providing closed openings within the body of the metal and disposed at each corner of the desired panel, folding the metal in parallel lines along two sides of the openings and then folding the metal in parallel lines along the other sides of the openings until the openings close.

2. The method of forming a multiplicity of panels within a body of sheet metal, consisting in providing a blank of sheet metal with a multiplicity of square openings within the body and one at each corner of each desired panel, folding the metal in parallel lines along two sides of all the openings and then folding the metal transverse to said first folds along the other sides of the openings, whereby a plurality of rows of individual panels lying in three different parallel planes.



3. The method of forming a raised panel within a body of sheet metal, consisting in providing a blank of sheet metal with a multiplicity of square openings one at each corner of the proposed panels, the sides of said openings being equal to the desired depth or height of the panel, folding the metal along the sides of the openings in parallel lines at two of the corners and then folding the metal transversely thereto along the sides of the openings in the other corners whereby a plurality of duplicate, square panels are formed within the body of the blank.

1,154,255. MOLD. FRANK F. LANDIS, Waynesboro, Pa. Filed Jan. 6, 1915. Serial No. 879. (Cl. 25—118.)



1. The combination, with a mold, of a matrix comprising a box containing shiftable material, the inner sides of said box having soft material upon their faces, a frame within said box having a soft material upon its outside faces, and a flexible sheet clamped between the soft faces of the box and frame, substantially as set forth.

2. The combination, with a mold, of a matrix comprising a box, a flexible sheet secured within the box to cover the face of the matrix, and a removable cover for the top of said box for securing the material therein during the reversing of the position of said matrix, substantially as set forth.

3. The combination, of a mold having a matrix, and a curing plate both supported by means of slidable wedges, substantially as set forth.

4. The combination, in a mold, of a curing plate supported in one side thereof by means of wedges, a matrix for forming the face of the block, and means for handling the block after the mold is removed therefrom, consisting of a jointed plate upon which the face of the block covered by the matrix may be placed, and after the mold is removed the other side of said plate may be turned against the curing plate on the side of the block and said block turned on to said curing plate and the matrix then removed from the face to enable said block to cure upon its side, substantially as set forth.

5. In a mold for forming concrete blocks, the combination, of the main mold box for containing the bulk of the concrete mixture, a box for containing the matrix and the mixture for the face of the block, and a thin plate fitted to cover said matrix box and retain said mixture for the face of the block while said matrix box is being placed in position on the top of said mold, said plate adapted to be removed after said matrix has been placed in position, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,154,256. PROCESS FOR MOLDING SHEETS OF FIBROUS MATERIALS. EDMOND LANHOFFER, Poissy, France. Filed Mar. 25, 1913. Serial No. 756,884. (Cl. 18—56.)



1. Method of molding material in a matrix consisting in placing a layer of the material to be molded on said matrix, projecting a shower of relatively small bodies on to the exposed surface of said layer, collecting said bodies as they run down from said surface, and raising said bodies to a place from whence they may redescend on to said exposed surface.

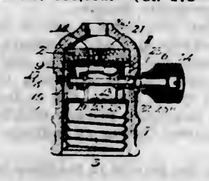
2. Method of molding material in a matrix consisting in placing a layer of the material to be molded on said matrix, projecting a continuous shower of relatively small bodies on to a line extending from side to side of said layer, and moving said layer longitudinally during the operation of said shower.

3. Method of molding material in a matrix consisting in placing a layer of the material to be molded on said matrix, supporting said matrix and said layer in an inclined position and projecting a continuous shower of relatively small bodies on to the exposed surface of said layer in a direction about perpendicular to the plane containing said surface.

4. Method of molding material in a matrix consisting in placing a layer of the material to be molded in said matrix, projecting a continuous shower of relatively small bodies on to a line extending obliquely from side to side of said layer, and moving said layer continuously in the direction of its length during the operation of said shower.

5. Method of molding material in a matrix consisting in placing a layer of the material to be molded in said matrix, supporting said layer and said matrix in such a position that they are inclined from side to side, projecting a continuous shower of relatively small bodies on to the exposed surface of said layer over a line extending obliquely from side to side of said layer, said shower being arranged to fall about perpendicularly to the plane containing said surface, and moving said layer continuously in the direction of its length during the operation of said shower.

1,154,257. COMBINED REMOVABLE-KEY SINGLE-PIECE SHELL AND AUTOMATICALLY-INTERLOCKING SHELL AND SWITCH-MECHANISM SOCKET. HARRY W. LAWRENCE, Denver, Colo. Filed May 12, 1914. Serial No. 838,092. (Cl. 173—362.)



1. A lamp-socket, comprising an integral shell having a keyhole, a unitary switch-mechanism adapted to automatically lock itself within said shell when inserted, an operating shaft in alinement with said keyhole and extending thereinto to form part of the locking means, and a quick-detachable key in said keyhole on said shaft.

2. In a socket, an integral monolithic structure shell provided with a switch key receiving key-hole, a switch within said shell having a resiliently mounted actuating shaft extending into said key-hole and arranged to lock said switch to said shell, and a switch key fitting the key-hole of said shell and arranged to be removably locked to said switch shaft.

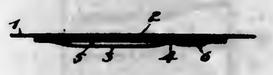
3. In a socket, the combination of an outer shell member made of one piece of any suitable insulating material, and provided with an axial bore, and a key-hole extending through said shell into said bore, and a key-way extending from the end of said shell along said bore to said key-hole, with a switch mechanism fitting in said shell and provided with a switch controlling shaft having a resilient reciprocal movement, and arranged to project resiliently and slidably into said keyway and into said key-hole thereby to lock said mechanism to said shell, the end of said switch shaft that projects into said key-hole being provided with key members whereby it may be turned, a removable key fitting said key-hole, and means for locking said key to the key members of said switch shaft.

4. In a removable key, one piece shell socket, the combination of a one piece outer shell member provided with a reinforced key-hole, with a switch mechanism arranged to be slidably inserted in said shell and provided with a switch shaft extending beyond the surface of the switch mechanism, said shaft having a reciprocal movement in said switch mechanism of enough stroke to allow it to be moved into said mechanism far enough to allow said mechanism to be inserted in said shell, a spring arranged in said mechanism to hold said shaft normally at the outward end of its resilient movement, said shaft being arranged to spring resiliently into said reinforced key-hole when said mechanism is inserted in said shell, and thereby automatically to lock said mechanism to said shell against accidental displacement, keying members on the outer end of said shaft, and a separate and removable key fitting said reinforced key-hole and provided with means including an axial aperture arranged to allow it to fit over the end of said shaft, and key locking means arranged to lock it to said shaft whereby said key can be applied to said key-hole and shaft and the switch mechanism manipulated to turn on or off the light when said key can be removed from said socket.

5. In lamp socket switch mechanism, the combination of a socket having a key-hole, a switch operating shaft in said socket having an endwise movement, a spring for holding said shaft at the limit of its endwise movement in one direction to normally project into said key-hole, and a detachable key for turning said shaft.

[Claims 6 to 14 not printed in the Gazette.]

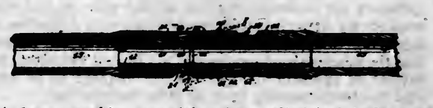
1,154,258. POCKET FOR COATS, SHIRTS, AND THE LIKE. ABRAM J. LEWIS, New York, N. Y. Filed June 14, 1915. Serial No. 33,889. (Cl. 2—15.)



1. A pocket for a garment comprising a base fabric, a broad main pocket section secured thereto and forming the outer wall of a main pocket open at its top and of substantially the width of the broad pocket section, a supplemental pocket section superimposed on the broad main pocket section and secured thereto at its bottom and sides and also along a line intermediate its sides whereby two outer pockets are formed open at the top, the upper edge of said supplemental pocket section being below the upper edge of the broad main pocket section and extending obliquely from the top of the intermediate line of connection toward both edges whereby the upper edge of the broad main pocket section acts as a backing and guide to afford easy access to both of the outer pockets.

2. A pocket construction for a garment comprising a base fabric, a broad main inner pocket section and a supplemental outer pocket section of the same width as the main section and having its upper edge folded double and inclined below the level of the upper edge of the main section and forming a double thickness of material for the outer section, means for securing the side and bottom edges of said inner and outer pocket sections to the base fabric, means for securing an intermediate part of the outer pocket section to the inner pocket section to thereby form two outer pockets and leave a broader inner pocket extending across the back of the two outer pockets and inner and outer fastening elements secured to the inner and outer sections, the outer fastening element being secured through the dougble thickness of the outer section below the inclined edge.

1,154,259. HOSE-COUPLING. CLAUS H. LIGHT, Des Moines, Iowa. Filed Mar. 17, 1913. Serial No. 755,026. (Cl. 137—28.)



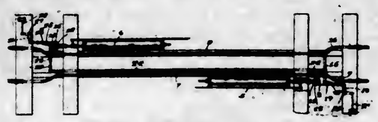
A hose coupler, comprising two cylindrical body portions designed to be locked in alinement with each other, and having coacting shoulders on their adjacent ends for forming a telescopic connection, said bodies each being provided with notches in opposite sides of its outer surface, flat loops, arranged to rest in notches in both body portions, said notches being extended longitudinally beyond the ends of the loops received therein, a shoulder on one end of each loop, a spring secured to each body portion and extending across a portion of the notch and across a part of the end of the spring, and adapted to engage the shoulder on said end when the spring is in its position received in the notches, for holding the spring against being tilted upwardly in any way, and adapted to be released from engagement with said shoulder by being pressed downwardly into the space in the notch between the spring and the wall of the notch farthest from the abutting ends of the body portions.

1,154,260. COMBINED PAPER-WEIGHT AND BILL-FILE. BEN LITSCHER, Davenport, Iowa. Filed Sept. 15, 1914. Serial No. 861,863. (Cl. 129—23.)



As a new article of manufacture, a combined paper weight and bill holding member comprising a base, uprights on said base and a retaining member formed of a single piece of flat spring-like metal bent adjacent its medial portion to be formed into a U-shape, with the said member lying between said uprights and secured to the base and by its formation providing spring-like arms, one in juxtaposition to each upright, said arms having their body portions normally spaced from the uprights and at their upper ends formed to provide angular offsets, with the apices of the portions of said arms forming the angular offsets normally abutting against said uprights.

1,154,261. DUMP-CAR, THOMAS R. MCKNIGHT, Aurora, Ill., assignor to Western Wheeled Scraper Company, Aurora, Ill., a Corporation of Illinois. Filed July 27, 1914. Serial No. 853,441. (Cl. 105—190.)



1. The combination with a dump-car having dumping cylinders for dumping the car at one side or the other respectively and means connected with said cylinders for supplying compressed air thereto, of valves for controlling the admission of compressed air to said cylinders, and means whereby said valves may be simultaneously opened or closed.

2. The combination with a dump-car having dumping cylinders for dumping the car at one side or the other respectively and means connected with said cylinders for supplying compressed air thereto, of valves for controlling the admission of compressed air to said cylinders, and devices at opposite sides of the car adapted to be actuated to simultaneously open or close both valves.

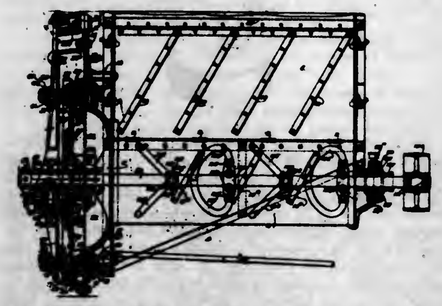
3. The combination with a dump-car having dumping cylinders for dumping the car at one side or the other respectively and means connected with said cylinders for supplying compressed air thereto, of valves for controlling the admission of compressed air to said cylinders, and devices at opposite ends of the car adapted to be actuated to simultaneously open or close both valves.

4. The combination with a dump-car having dumping cylinders for dumping the car at one side or the other respectively and means connected with said cylinders for supplying compressed air thereto, of valves for controlling the admission of compressed air to said cylinders, levers adjacent to the opposite ends of the car, means connected with said levers respectively for opening or closing said valves when said levers are actuated, and means for actuating said levers simultaneously.

5. The combination with a dump-car having dumping cylinders for dumping the car at one side or the other respectively and means connected with said cylinders for supplying compressed air thereto, of valves for controlling the admission of compressed air to said cylinders, levers adjacent to the opposite ends of the car, means connected with said levers respectively for opening or closing said valves when said levers are actuated, and bell-crank levers connected with said first-mentioned levers for actuating the same.

[Claims 6 and 7 not printed in the Gazette.]

1,154,262. STRAW-BRUISER. WALLACE F. MACGREGOR and ALVA C. FOSTER, Racine, Wis., assignors to J. I. Case Threshing Machine Company, Racine, Wis., a Corporation. Filed June 24, 1911. Serial No. 635,224. (Cl. 146—26.)



1. The combination with the machine frame, of a rotary, straw-bruising disk having teeth on its face, and an inclosing casing therefor comprising an inner section fixed to said frame and having teeth coöperating with the teeth of said disk, an outer casing section movable axially to and from said inner section, and a swinging support mounted on the frame for carrying said outer section when the latter is shifted from said inner section.

2. The combination with a machine frame, of a rotary, straw-bruising disk having teeth on its face, and an inclosing casing therefor comprising an inner section fixed to said frame and having teeth coöperating with the teeth of said disk, an outer casing section movable axially to and from said inner section, and a shaft whereon said disk is mounted, journaled in said outer section and movable axially therewith.

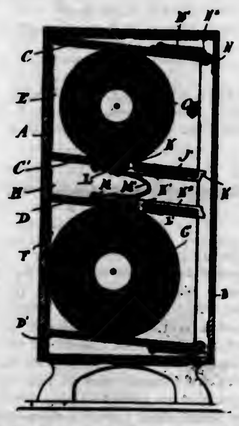
3. In an apparatus of the character described, the combination with the machine frame, of a rotary straw bruising disk having teeth on its face and an inclosing casing for said disk comprising circular inner and outer sections detachably secured together at the periphery of said casing, said inner section being fixed to said frame and having teeth coöperating with the teeth of said disk, a shaft whereon said disk is mounted journaled in said outer section, said outer section, said disk and said shaft being movable in axial direction to afford access to said teeth, and a shiftable support mounted on the frame for carrying said movable parts when the latter are shifted.

4. The combination with the machine frame, of a rotary straw-bruising disk, a housing for said disk comprising a fixed section on one side of the disk, a section on the opposite side of the disk movable axially to and from said first-mentioned section, means for detachably connecting said sections, and a swinging support for carrying said movable section when the latter is disconnected from said fixed section.

5. In an apparatus of the character described, a housing comprising an inner fixed section having projecting teeth, an outer section removably secured to said inner section, an intermediate revoluble disk provided with teeth coöperating with the teeth of the fixed section of the housing and a support projecting from the body of the machine for sustaining said outer section of the housing when moved away from said inner section.

[Claims 6 to 17 not printed in the Gazette.]

1,154,263. PHONOGRAPH-RECORD CABINET. HOWARD T. MAURER, Philadelphia, Pa. Filed Oct. 17, 1914. Serial No. 867,222. (Cl. 211—16.)



1. A record cabinet including an apartment having inclined guideways, a latch device for holding a record in a guideway from gravital discharge, while permitting it to project sufficiently to be grasped for removal, and a spring pressed detent roller for holding the record in the latter-named position.

2. A music record cabinet including a compartment having inclined guide ways for supporting records in an edgewise position, pivotally mounted spring controlled latches for holding the records in normal position and permitting of their release and travel to a partially projected position, and yieldably mounted rollers for engaging the partially projected disks and holding them from discharge while permitting them to be withdrawn.

3. A music record cabinet including a compartment having inclined guideways, pivotally mounted latches for holding records within said guideways against discharge while permitting of the release thereof for travel by gravity to a partially projected position, and a spring controlled detent for holding the records in the latter-named position, said detent comprising a spring pressed roller.

4. A record holding cabinet, a casing having an inclined partition, walls therein forming upper and lower compartment with an intervening space, said compartments having record receiving guideways, pivoted latch levers within said space, said levers having stops projecting therefrom through the adjacent posts and arranged to engage the records to hold the same from travel by gravity in the inclined guide-ways, a spring acting upon each pair of levers for holding the latches projected, and detaining devices arranged at the front of each compartment, and each comprising a pivotally supported roller adapted to engage and hold a partially projected record from discharge, and spring means for holding the roller in projected position.

1,154,264. RAIL-BOND. GUSTAV A. MERET, Worcester, Mass., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed Apr. 8, 1912. Serial No. 689,202. (Cl. 173—278.)



A rail bond comprising a conductor and terminals on the ends of the conductor, said terminals being coated with metal of the same chemical composition, having the same fusing point and having the same electrical conductivity as the metal in the rails to which the bonds are applied, the metal coating of the terminals being united therewith, and electrically welded to the track rails.

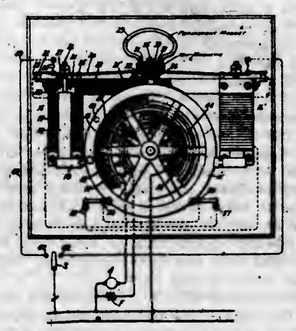
1,154,265. BOLT AND NUT THEREFOR. THOMAS MILLER, Craig, Miss. Filed Oct. 28, 1913. Serial No. 797,764. (Cl. 85—1.)



1. A nut and bolt structure comprising a bolt, a sleeve arranged thereon, a key way in said bolt, a key way in the sleeve registering with the key way in the bolt, a locking pin position in said key ways whereby relative movement of the bolt and sleeve is prevented, and a nut position on said sleeve and adapted to overlie the locking key, the sleeve being of a thickness whereby the diameter of the nut receiving portion of the structure is materially increased beyond the diameter of the bolt.

2. A nut and bolt structure comprising a threaded bolt, a sleeve interiorly and exteriorly threaded, the threaded portion of the bolt receiving said sleeve, a key way in the bolt, a key way in the sleeve registering with the key way in the bolt, a locking key in said key ways, and a nut threaded on the exterior threads of the sleeve adapted to overlie and inclose the locking key, the sleeve being of a thickness whereby the diameter of the nut receiving portion of the structure is materially increased beyond the diameter of the bolt.

1,154,266. CIRCUIT-CONTROLLER. EDWIN J. MURPHY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 28, 1912. Serial No. 706,862. (Cl. 171—229.)



1. A controller for electric circuits comprising a movable controlling member of magnetic material, electromagnetic devices adjacent thereto for rotating the same in opposite directions, a magnetic element in close proximity to the member and forming part of the magnetic circuit of said devices, a reciprocating core for each device included in the magnetic circuit with the adjacent portion of the magnetic element and member so as to magnetically grip the member and move the same when the winding with which it is associated is energized.

2. A controlling device for electric circuits comprising a rotary member of magnetic material, electromagnetic devices on opposite sides thereof for moving the same in each direction, a bar of magnetic material extending between the two devices in close proximity to the member to form a part of the magnetic circuit of said devices, two reciprocating cores one for each electromagnetic device included in the magnetic circuit with the adjacent portions of the bar and member so as to magnetically grip the member and rotate the same when the magnet is energized, and a switch associated with each core for controlling the electromagnetic device.

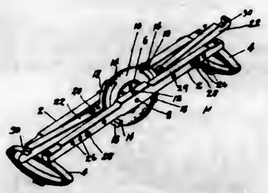
3. A controller for electric circuits comprising a rotary member of magnetic material, electromagnetic devices on diametrically opposite sides thereof for rotating the same in opposite directions, a bar of magnetic material extending between the two devices in close proximity to the member to form a part of the magnetic circuit of said devices, a reciprocating core for each device included in the magnetic circuit with the adjacent portion of the bar and member so as to magnetically grip the member and rotate the same when the winding of the device with which it is associated is energized.

1,154,267. SHOCK-ABSORBING DEVICE. SCOTT B. O'DONNELL, Kansas City, Mo., assignor of one-half to James S. Strong, Kansas City, Mo. Filed Feb. 25, 1914. Serial No. 821,072. (Cl. 21—101.)

1. The combination with a vehicle having a yielding cushioning means intermediate the vehicle body and the axle, of an auxiliary cushioning member, and connections between said cushioning means and auxiliary member whereby a leverage action is exerted upon the latter for all vibratory movements of the former.

2. The combination with a vehicle having a spring intermediate the vehicle body and the axle, of an auxiliary cushioning member, and a lever connected with said spring and provided with contacting members embracing

opposite sides of said auxiliary member, said lever being arranged to exert pressure upon said auxiliary member through one or the other of said contacting members for every relative approaching or separating movement of the body and axle.



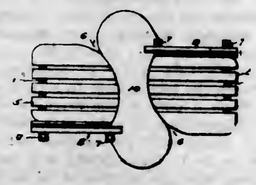
3. The combination with a vehicle having a spring intermediate the vehicle body and the axle, of an auxiliary cushioning member, a lever connected with said spring and provided with contacting members embracing opposite sides of said auxiliary cushioning member, said lever being arranged to exert pressure upon said auxiliary member through one or the other of said contacting members for every relative approaching or separating movement of the body and axle, and means permitting variation of the leverage action of said lever.

4. The combination with a vehicle having springs intermediate the vehicle body and axle and at opposite sides of said body, of a single auxiliary cushioning member, contact members embracing opposite sides of said auxiliary member, and means connected with said contact members and operated by all relative approaching and separating movements of said body and axle for causing said auxiliary member to coöperate in the cushioning action of said springs.

5. The combination with a vehicle having springs intermediate the vehicle body and axle and at opposite sides of said body, of a single auxiliary cushioning member, contact members embracing opposite sides of said auxiliary member, and connections between said contact members and both of said springs whereby said auxiliary member is caused to coöperate therewith for all vibrations of either spring.

[Claims 6 to 12 not printed in the Gazette.]

1,154,268. PARK-BENCH. GEORGE A. PARKER, Hartford, Conn., assignor of one-half to Franklin G. Whitmore, West Hartford, Conn. Filed Apr. 3, 1913. Serial No. 758,579. (Cl. 155—3.)



1. A park bench having a frame, legs supporting the frame, a seat fastened to the frame, a back on one side of the frame near one end of the seat, a back on the other side of the frame near the other end of the seat, and a table supported by and tying together the inner ends of the backs, said table on each side extending beyond the back by which it is supported and in front of the back on the opposite side.

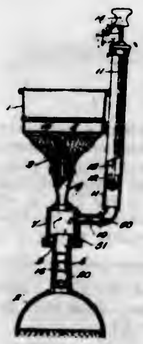
2. A park bench having a frame, legs supporting the frame, a seat fastened to the frame, a back on one side of the frame near one end of the seat, a back on the other side of the frame near the other end of the seat, a table supported by and tying together the inner ends of the backs, said table on each side extending beyond the back by which it is supported and in front of the back on the opposite side, and said seat being recessed at the front edges beneath said projecting portions of the table.

3. A park bench having a frame, legs supporting the frame, a seat fastened to the frame, two backs, one fastened to one side of the frame on one side of the middle and the other fastened to the other side of the frame on the other side of the middle, and a table supported by and tying together the inner ends of the backs, said table extending obliquely with relation to the seat and to the backs and projecting on each side beyond the edge of the seat and in front of the back on the opposite side.

4. A park bench having a frame, legs supporting the frame, a seat fastened to the frame, two back supports fastened to one side of the frame at one side of the middle and two back supports fastened to the other side of the frame at the other side of the middle, back rails fastened to the back supports, and a table supported by the back rails and tying together the inner ends of the backs, said table extending diagonally across the seat and projecting on each side beyond the edge of the seat and in front of the back on the opposite side.

5. An open air bench having a frame, four legs supporting the frame, seat strips fastened to the top of the frame, back supports on opposite sides of the frame on opposite sides of the middle, back rails connecting the back supports, a table extending between and secured to the inner back supports and supported by the back rails, said table projecting on each side over the edge of the seat in front of the back that is on the opposite side, and said seats being recessed on the edges beneath the projecting portions of the table.

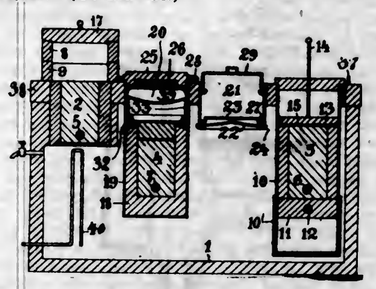
1,154,269. BOTTLE-FILLING APPARATUS. SAMUEL THOMAS PENNA, Avon-by-the-Sea, N. J. Filed Dec. 7, 1914. Serial No. 875,891. (Cl. 226—9.)



1. In an apparatus for filling a bottle provided with a check valve in its neck, the combination of a reservoir; a filling head provided with a chamber adapted to fit a bottle neck; a connection between said reservoir and head; a valve controlling said connection; an air pump; a connection between the chamber of said head and said pump; a valve in said last named connection; and means adapted to be operated by hand for opening and closing said first named valve to permit liquid to fill said chamber and neck, whereby upon operating said pump said check valve will be lifted and said liquid will pass into said bottle; substantially as described.

2. In an apparatus for filling a bottle provided with a check valve in its neck, the combination of a reservoir; a valve located in the bottom of said reservoir; means for opening and closing said valve; a connection controlled by said valve leading from said reservoir; a bottle filling head provided with a chamber adapted to fit a bottle neck and secured to said connection; a second connection leading from the chamber of said bottle filling head; an air pump joined to said second connection; and a check valve in said second connection; substantially as described.

1,154,270. ELECTRICALLY-HEATED KITCHEN-RANGE. OSKAR SØLID and KRISTIAN PETTERSEN, Sarpsborg, Norway. Filed Nov. 4, 1914. Serial No. 870,225. (Cl. 219—35.)



1. A cooking range comprising a water tank, a cover thereon, an electrically heated body supported by the cover and projecting into the tank and operating simultaneously to support a cooking utensil and to heat the water in the tank.

2. A cooking range comprising a water tank, a cover thereon, an electrically heated body supported by the cover and projecting into the tank and operating simultaneously to support a cooking utensil and to heat the water in the tank, and a hood mounted on the cover above said body and forming a cooking chamber above the cover.

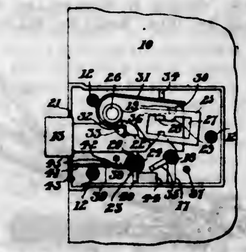
3. A cooking range comprising a water tank, a cover thereon, an electrically heated body supported by the cover and projecting into the tank and operating simultaneously to support a cooking utensil and to heat the water in the tank, and a cooking chamber above said body comprising a plurality of separate superposed annular bodies and a cover resting thereon.

4. A cooking range comprising a tank, a cover thereon, a vessel suspended from the cover, and a plurality of electrically heated bodies mounted in the vessel and relatively displaceable to form a cooking chamber between them.

5. A cooking range comprising a tank, a cover thereon, a vessel suspended from the cover, and a plurality of electrically heated bodies mounted in the vessel and relatively displaceable to form a cooking chamber between them, said bodies having sufficient frictional engagement with the vessel to maintain them in position.

[Claims 6 and 7 not printed in the Gazette.]

1,154,271. DOOR-LOCK. JOSEPH SEDLACEK, Binghamton, N. Y. Filed Mar. 25, 1915. Serial No. 16,884. (Cl. 70—78.)



1. A lock comprising a casing having a key-hole slot, a longitudinally slidable bolt within said casing, an operating key, a stop post within said casing adjacent the said key-hole slot and at one side thereof, and a key-controlled spring-pressed stop catch within said casing adjacent the opposite side thereof.

2. A lock comprising a casing having a key-hole slot therein, a sliding bolt within the casing, a key for said lock adapted for insertion through the said slot, a key stop within said casing and positioned at one side of said slot, a spring-pressed longitudinally slidable catch at the opposite side of said slot, and operating means for the said catch.

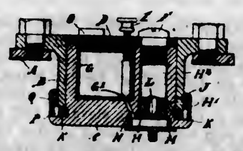
3. A lock comprising a casing having a key-hole slot therein, a slidable bolt mounted within said casing, an operating key for the said bolt, rigid key-removal preventing means at one side of the said slot, and a key-controlled spring-pressed key removal preventing catch arranged at the other side thereof.

4. A lock comprising a casing having a key-hole slot therein, a slidable bolt mounted within said casing an operating key for the said bolt, rigid key-removal preventing means at one side of the said slot, a yieldable key-removal preventing catch arranged at the other side thereof, rack teeth upon one side of the said catch, and a latch key for the said catch having end prongs adapted for engaging the said rack teeth when positioned within the said casing.

5. A lock comprising a casing having a key-hole slot therein, an operating key for the said lock, a reciprocating bolt within the said casing, rigid means adapted for the prevention of the removal of the said key from the casing when the bolt is in its unlocked position, and a key-controlled spring-pressed shiftable catch normally positioned in the removing path of movement of the said key when the bolt is projected.

[Claim 6 not printed in the Gazette.]

1,154,272. MARINE MINE. EMIL SENDRA and RAIMUND SAUTER, London, England. Filed Feb. 27, 1915. Serial No. 11,019. (Cl. 102—3.)



1. A marine mine having a cavity therein, a device within said cavity, a soluble connection between said mine and device, and means within said device for predetermining the time of destruction of said soluble connection, whereby the device is completely released from said cavity to permit entrance of water thereinto to destroy the buoyancy of the mine.

2. A marine mine having a cavity therein, a casing extending into said cavity, a soluble connection between said casing and mine, a container within said casing containing a solvent for said connections, means of communication between said container and the soluble connection, and means for controlling the time of passage of the solvent from the container to the connection.

3. A marine mine having a cavity therein, a casing extending into said cavity and having a channel, a soluble connection between said casing and mine, said casing adapted to contain a solvent for said connection, means for controlling the passage of solvent through said channel, and a soluble diaphragm between said channel and connection adapted to be acted on by the solvent.

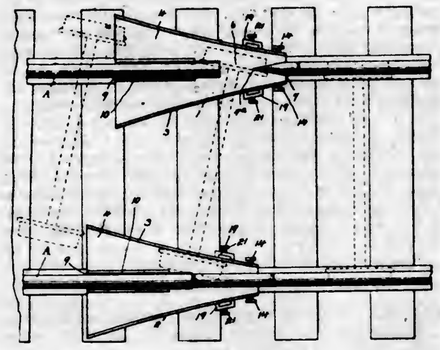
4. A marine mine having a cavity therein, a casing extending into said cavity and having a channel, a soluble connection between said casing and mine, a container within said casing adapted to contain a solvent for said connection and provided with an aperture adapted to coincide with the channel in the casing, a valve for controlling the passage of solvent through said channel, a hollow plug communicating with said channel, a soluble diaphragm communicating with said plug, and means for conveying the solvent from said plug to the soluble connection when said diaphragm has been dissolved by said solvent.

5. A marine mine having a cavity therein, a casing extending into said cavity, a soluble connection between said casing and mine, the casing being adapted to contain a solvent for said connection, means of communication for said solvent between the casing and the soluble connection,

and a soluble diaphragm normally obstructing the passage of the solvent through said means of communication.

[Claims 6 and 7 not printed in the Gazette.].

1,154,273. RERAILER. EZRA SMYTH, Portland, Oreg., assignor of one-half to Frances E. McIntosh, Portland, Oreg. Filed Aug. 19, 1914. Serial No. 857,533. (Cl. 104—163.)



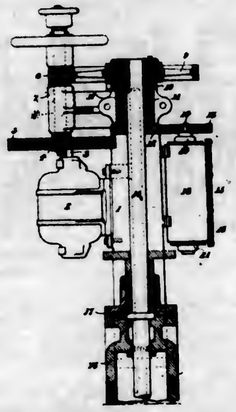
1. A re-railing device, including complemental inclined members of substantially triangular outline, one of said inclined members having a rounded upper surface, a rail-receiving slot in its longitudinal median plane, upstanding flanges along its lateral edges, and an upraised tongue-forming portion at its tapering elevated end, in alinement with said slot, said tongue-forming portion having its inner end tapered to an apex terminating contiguous to the inner end of said slot, the opposite end of said tongue-forming portion projecting from the elevated end of said inclined member for resting upon an adjacent rail, the upper surface of said tongue-forming portion also being rounded, the companion inclined member having a central longitudinal slot terminating a short distance from its tapering end, and an upraised upper-surface-rounded portion, with one end extending from said slot, the opposite end of said upraised portion projecting from the elevated tapering end of the inclined member and forming a tongue resting upon an adjacent rail.

2. A device of the type described, including an inclined member for the transference of a derailed car to the rails, said inclined member being adapted to stride the rail-head and having at its elevated end lateral keepers, angle plate-like members with their lower ends adapted to rest upon the base of the rail and their upper portions received by said keepers, and holding screws engaging said angle plate-like members and threaded into said inclined members.

1,154,274. LIMIT-CONTROLLER FOR MOTORS. GEORGE J. STUART, Bellevue, Pa., assignor to The Pittsburgh Valve, Foundry and Construction Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 1, 1913. Serial No. 798,658. (Cl. 172—152.)

1. In a limit controller for electric motors, an electric motor, a switch in circuit with the motor, means for automatically opening the switch, means for releasably holding the switch closed, a limit device driven by the motor and arranged to mechanically release the said holding means and means whereby the limit device may be reversed at will prior to its release of the holding means.

2. In a limit controller for electric motors, an electric motor, a switch in circuit with the motor, means for automatically opening the switch, means for releasably holding the switch closed, mechanism moved by the motor for directly releasing the said holding means and means whereby the limit device may be reversed at will prior to its release of the holding means.



3. In a limit controller for electric motors, an electric motor, a switch in circuit with the motor, means for automatically opening the switch, means for releasably holding the switch closed, means driven by the motor and independent of electric current for releasing the said holding means and means whereby the said mechanism may be reversed at will prior to its release of the holding means.

4. In a limit controller for electric motors, an electric motor, a switch in circuit with the motor, means for automatically opening the switch, means for releasably holding the switch closed, a limit device driven by the motor and arranged to mechanically release the said holding means, means for reversing the motor, means for automatically resetting the switch when the motor has moved the limit device in the reverse direction and means whereby the said mechanism may be reversed at will prior to its release of the holding means.

5. In a limit controller for electric motors, an electric motor, a switch in circuit with the motor, means for automatically opening the switch, means for releasably holding the switch closed, a limit device driven by the motor and arranged to mechanically release the said holding means, and means whereby the motor may be reversed at will prior to the release of the holding means.

[Claims 6 to 19 not printed in the Gazette.]

1,154,275. DEVICE FOR STRETCHING WIRE AROUND WOODEN PIPES. GEORGE W. SUTHERLAND, Newport, Wash. Filed Aug. 19, 1914. Serial No. 857,577. (Cl. 254—67.)



1. A wire stretching device including a head having a threaded extension and having an opening through the head and through the threaded extension through which the end of the wire may be passed, a hollow handle having a beveled toothed wheel rotatably connected therewith, said wheel having a hub provided with a threaded bore which engages with the threaded extension of the head, a lever having a cam head arranged within the hollow candle and adapted to engage with the wire end, and means for rotating the beveled tooth wheel to reciprocate the threaded member of the head within the hollow handle.

2. In a wire stretcher as herein described, a headed member provided with a lip and being formed with an angularly disposed tubular threaded extension, the head having an opening communicating with the bore of the tubular extension and the said openings being adapted to receive one end of a wire which may be passed through the tubular extension, a hollow handle having a toothed wheel rotatably connected therewith, said wheel having a threaded bore which receives the threaded tubular member of the head, a lever having a cam head arranged within the handle and adapted to engage with the wire projecting through the tubular member of the head to within the handle, a second lever pivotally secured to the handle, a toothed wheel carried by the said second lever and intermeshing with the first-mentioned toothed wheel, and a dog carried by the second lever and adapted to engage between the teeth of the wheel thereon.

3. The herein-described construction of wire stretcher, including a hollow handle made up of two mating sections and having one of its ends formed with an internal annular bead, the said handle having a longitudinal opening and ears arranged upon the opposite walls of the opening, a lever pivoted between the ears, said lever having a cam head provided with teeth, the bore of the handle opposite the lever being also formed with teeth, a toothed wheel having its outer face provided with a hub and its inner face provided with an annular angular extension which is arranged within the tubular handle and engaged by the bead thereof, the bore of the hub being threaded, a lever having a bifurcated end pivotally connected with the handle, a toothed wheel meshing with the first mentioned toothed wheel arranged within the bifurcation of the lever, an arcuate dog having two engaging faces pivoted within the bifurcation of the handle, a spring for the dog, and the said dog adapted to be engaged between the teeth of the wheel carried by the lever, a threaded member coacting with the threads in the bore of the hub of the first-mentioned wheel, a head for the member, and an offset lip upon the head, said member and head being provided with a wire-receiving opening.

1,154,276. PARCEL-POST ENVELOP. HARRY A. TRUSCOTT, Washington, D. C. Filed Nov. 10, 1914. Serial No. 871,371. (Cl. 229—74.)

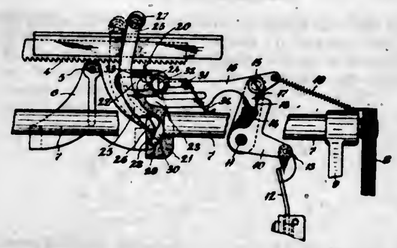


1. An envelop comprising front and back portions, a fold line therebetween, a reinforcement coextensive in length with the fold line and comprising a strip of flexible material, said strip being folded medially to provide flaps which bear against said front and back portions on opposite sides of said fold line, the ends of said strip being provided with notches at the terminals of the fold line, and a tying member including a portion extending along the bight of the fold line and engaging said notches, said tying member having a portion projecting beyond the outer surface of the fold line for attaching the envelop to an object.

2. An envelop comprising front and back portions, a fold line therebetween, a reinforcement comprising a linear strip of flexible material folded medially to provide flaps which are gummed at the fold line, the fold lines of the walls and reinforcement being provided with registering openings and said reinforcement having notches at its ends in register with the fold line thereof, and a tying member inclosed between the flaps of the reinforcement and extending along the fold line thereof, said tying member having terminal portions engaging said recesses and a portion projecting exteriorly through said openings for attaching the envelop to an object.

3. An envelop comprising front and back portions, a fold line therebetween, a reinforcement comprising a strip of flexible material folded medially to provide flaps which bear against said front and back portions on opposite sides of said fold line, and a tying member having portions extending along and on both sides of said fold line and engaged on the outer side of said fold line and thence extended to form an element for attaching the envelop to an object.

1,154,277. BACK-SPACING DEVICE FOR TYPE-WRITING MACHINES. ANTHONY UTZ, Hartford, Conn., assignor to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed Sept. 22, 1914. Serial No. 862,880. (Cl. 197—91.)



1. A back spacing device for typewriting machines, comprising a bell crank lever, an operating rod connected to the end of its horizontally arranged member, an arm arranged to co-axially rock with the bell crank lever, a pawl lever pivotally connected to the end of the arm and having a downwardly extended lug against which the vertical member of the bell crank lever acts, a pin at the pawl end of the lever, a pawl on the lever adapted to engage the feed rack of the carriage and a plate vertically movable with the carriage relative to the stationary rocking center of the bell crank lever and the arm, and having a cam slot in which the pin extends.

2. A back spacing device for typewriting machines, comprising a bell crank lever, an operating rod connected to the end of its horizontally arranged member, an arm arranged to co-axially rock with the bell crank lever, a pawl lever pivotally connected to the end of the arm and having a downwardly extended lug against which the vertical member of the bell crank lever acts, a pin at the pawl end of the lever, a pawl on the lever adapted to engage the feed rack of the carriage and a plate vertically movable with the carriage relative to the stationary rocking center of the bell crank lever and the arm, and having a cam slot in which the pin extends, a latch pivoted to the cam-slot plate having its tail end controlled by acting on a stationary part of the machine and a ledge at its other end adapted to overlap a part of the cam slot, whereby the pin of the pawl lever is, during the first part of its movement, controlled with the carriage in lower case printing position and left free with the carriage set for upper case printing.

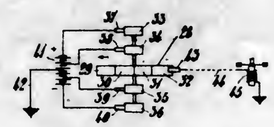
3. A back spacing device for typewriting machines, comprising a bell crank lever, an operating rod connected to the end of its horizontally arranged member, an arm arranged to co-axially rock with the bell crank lever, a pawl lever pivotally connected to the end of the arm and having a downwardly extended lug against which the vertical member of the bell crank lever acts, a pin at the pawl end of the lever, a pawl on the lever adapted to engage the feed rack of the carriage, a spring connected to the other end of the pawl lever and a plate vertically movable with the carriage relative to the stationary rocking center of the bell crank lever and the arm, and having a cam slot in which the pin extends.

4. A back spacing device for typewriting machines, comprising a bell crank lever, an operating rod connected to the end of its horizontally arranged member, an arm arranged to co-axially rock with the bell crank lever, a pawl lever pivotally connected to the end of the arm and hav-

ing a downwardly extended lug against which the vertical member of the bell crank lever acts, a pawl at one end of the lever adapted to engage the teeth of the carriage rack and means for holding the pawl away from the rack during the first part of the feeding movement of the lever when the carriage is set for lower case printing and inoperative when the carriage is set for upper case printing.

5. In a typewriting machine, a back space pawl adapted to act on the carriage feed rack, means for actuating the pawl to set the carriage back and means for preventing the pawl from engaging with the rack during the first part of its forward feeding movement when the carriage is in lower case printing position and leaving the pawl free to act when the carriage is in upper case position.

1,154,278. METHOD OF AND MEANS FOR REDUCING LINE CAPACITY. EMIL HENRIK WIDEGREN and KLAS AUGUST WIDEGREN, Alby, Sweden. Filed Dec. 20, 1913. Serial No. 807,916. (Cl. 178—69.)



1. Method of reducing the influence of the line capacity in actuating electric apparatus at a distance by means of pulsations obtained from a source of continuous electric current, consisting in transmitting through an electric line positive and negative pulsations of a strength required for influencing a receiving apparatus, transmitting through said line, between said pulsations, other pulsations of the same polarity as the following pulsation capable of influencing the receiving apparatus, and so suiting the said intermediate pulsation as to their strength that they are not capable of influencing the receiving apparatus but on the other hand capable of partaking in the discharging and recharging of the line before the next following pulsation capable of influencing the receiving apparatus is transmitted, substantially as and for the purpose set forth.

2. A system of transmitting intelligence including a transmitting station-connected electrically through a line with a receiving station, a receiving apparatus at the latter station, a source of continuous current at the transmitting station, a rotating commutator at the same station, means for transmitting alternately through the commutator positive and negative pulsations capable of influencing the receiving apparatus, and means for transmitting through the commutator between said pulsations other positive and negative pulsations not capable of influencing the receiving apparatus.

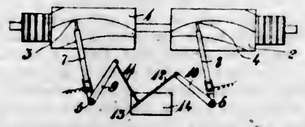
3. A system of transmitting intelligence including a transmitting station connected electrically with a receiving station, a receiving apparatus at the latter station, a source of continuous current at the transmitting station, a rotating commutator at the same station, means for connecting some of the bars of said commutator alternately with the negative and the positive terminals of the current source, and means for connecting other bars of the commutator alternately with points of the current source having lower potential than said terminals.

4. A system of transmitting intelligence including a transmitting station connected electrically through lines with a receiving station, a receiving apparatus at the latter station, a source of continuous current at the transmitting station, a rotating commutator at the same station, sliding brushes bearing against said commutator, means for connecting alternately by pairs, bars of the commutator with the positive and negative terminals of the current source, said means being responsive to pulsations capable of influencing the receiving apparatus, and means for connecting alternately by pairs, other bars of the commutator with points of the current source of lower potential than said ends, the latter means being responsive to pulsation not capable of influencing the receiving apparatus but of discharging and recharging the lines.

5. A system of transmitting intelligence including a transmitting station connected electrically through lines with a receiving station, a receiving apparatus at the latter station, a source of continuous current at the transmitting station, a rotating commutator at the same station, sliding brushes bearing against said commutator, means connecting alternately by pairs, bars of said commutator with the positive and the negative terminals of the current source for transmitting through the lines pulsations capable of influencing the receiving apparatus, and means connecting alternately by pairs, other bars of said commutator with points of the current source of lower potential than the said terminals for transmitting through the lines between said pulsations other pulsations not capable of influencing the receiving apparatus but of discharging and recharging the lines.

[Claim 6 not printed in the Gazette.]

1,154,279. TRANSMITTER FOR ELECTRIC WRITING-TELEGRAPHS. EMIL HENRIK WIDEGREN and KLAS AUGUST WIDEGREN, Alby, Sweden. Filed Dec. 20, 1913. Serial No. 807,918. (Cl. 178—18.)



1. A transmitter for electric writing telegraphs including a rotary commutator adapted to emit pulsating currents, a brush bearing on said commutator, a holder carrying said brush, said holder being arranged to swing in a plane essentially parallel to the axis of the commutator, a hand operated writing pen, and a mechanical connection between the pen and the said holder.

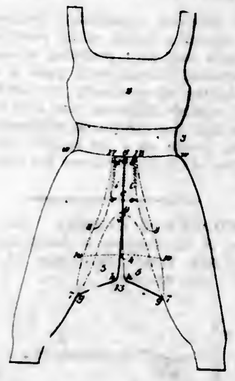
2. A transmitter for electric writing telegraphs, including a rotary commutator adapted to emit pulsating currents, brushes bearing on each side of said commutator, a holder for each of said brushes, said holders being arranged to swing in planes essentially parallel to the axis of the commutator, a hand operated writing pen, and mechanical connections between the pen and the said holders.

3. A transmitter for electric writing telegraphs, including a rotary commutator having curve-shaped commutator bars, a brush bearing on said commutator, a holder carrying said brush, said holder being arranged to swing in a plane essentially parallel to the axis of the commutator, a hand operated writing pen, and a mechanical connection between the pen and the said holder.

4. A transmitter for electric writing telegraphs including a table, a pen movable on said table, a rotary commutator, brushes bearing on said commutator, holders carrying said brushes, said holders being arranged to swing in a plane essentially parallel to the axis of the commutator, and mechanical connections between the pen and the said holders.

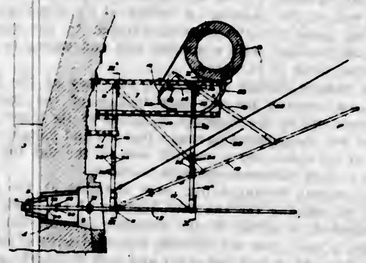
1,154,280. UNDERGARMENT. ANNA WYLIE, Rockville Center, N. Y. Filed Dec. 27, 1912. Serial No. 738,818. (Cl. 2—144.)

1. A union undergarment divided on the median line from the back of the waist down to and through the crotch, the placket being closed by a web of resilient elastic fabric narrow at its upper end and substantially wider at its lower end, and extending from the waist line well down toward the hips, the lateral margins of which are attached to or near to the placket edges, a V-shaped gore inserted in th elower front gap of the crotch opening having its lateral margins attached to the inner margins of the leg portions of the garment along the leg seams, and having a free opening between the bottom edge of the placket guard and the rear transverse edge of the crotch gore, substantially as specified.



2. A union undergarment divided on the median line from the back of the waist down to and through the crotch, the placket being closed by a web of resilient elastic fabric, narrow at its upper end and substantially wider at its lower end, and extending from the waist line well down below the hips, the lateral edges of which are attached to the placket adjacent the edges of the latter, and adapted by its contractile character to draw the placket edges together without overlapping them, substantially as specified.

1,154,281. FURNACE-BOTTING APPARATUS. JOHN T. BATES, Pittsburgh, Pa. Filed Aug. 19, 1914. Serial No. 857,511. (Cl. 75—193.)



1. A furnace botting apparatus comprising a swinging botting arm, depending levers to which said botting arm is pivoted, a support for said levers, and means connecting said levers and lever support whereby the rear end of the botting arm is lifted in the backward swinging movement of the arm while the botting end thereof is moved in a substantially horisontal plane.

2. A furnace botting apparatus comprising a swinging botting arm, depending levers to swich said botting arm is pivoted, a support for said levers, means connecting said levers and lever support whereby the rear end of the botting arm is lifted in the backward swinging movement of the arm while the botting end thereof is moved in a substantially horisontal plane, and means for actuating said botting arm.

3. A furnace botting apparatus comprising a hollow botting bar, a swinging arm to which said bar is pivotally fastened, means on said arm for holding the bar in lengthwise alinement with the arm, depending levers to which said arm is pivotally secured, and flexible means leading to the rear end of said botting bar to maintain circulation of a cooling medium within the hollow botting bar while the botting bar is moving into and out of botting position.

4. A furnace botting apparatus comprising a botting bar, a swinging arm to which said bar is pivotally fastened, means on said arm for holding the bar in lengthwise alinement with the arm and depending levers to which said arm is pivotally secured.

5. A furnace botting apparatus comprising a botting bar, a swinging arm to which said bar is pivotally fastened, means on said arm for holding the bar in lengthwise alinement with the arm, depending levers to which the swinging arm is pivoted, a support for said levers and means on said support coacting with the levers, whereby the swinging arm is lifted in its backward swinging movement while the botting end of said bar is moved in a substantially horisontal plane.

[Claims 6 to 8 not printed in the Gazette.]

1,154,282. PROCESS OF RENDERING PAPER BOTTLES LIQUID-TIGHT. GEORGE W. BEADLE, Bayonne, N. J., assignor to Single Service Package Corporation of America, New York, N. Y., a Corporation of New Jersey. Filed Nov. 8, 1912, Serial No. 730,800. Renewed Mar. 9, 1915. Serial No. 13,219. (Cl. 91—70.)



1. The process of coating paper vessels, which consists in subjecting said vessels to heat to drive out a portion of the contained moisture and to shrink said vessels; then immediately subjecting said vessels to a liquid coating bath; draining said vessels of their surplus liquid while maintaining the latter in a fluid condition; rotating said vessels on their axes during the draining operation to secure an even coating; and subjecting the thus coated vessels to a cooling bath, substantially as described.

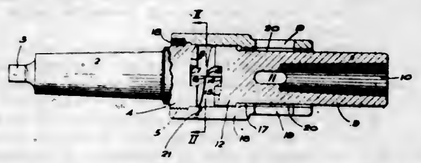
2. The process of coating paper vessels, which consists in subjecting said vessels to heat to drive out a portion of the contained moisture and to shrink said vessels; then subjecting said vessels to a liquid coating bath; draining said vessels of their surplus liquid; rotating said vessels on their axes during the draining operation to secure an even coating; and subjecting said vessels to a cooling bath while rotating the vessels on their axes, substantially as described.

3. The process of coating paper vessels, which consists in subjecting said vessels to heat to drive out a portion of the contained moisture and to shrink said vessels; then subjecting said vessels to a liquid coating bath; draining said vessels of their surplus liquid; rotating said vessels on their axes during the draining operation to secure an even coating; and only partially immersing said vessels in a water bath while rotating said vessels on their axes to impart a smooth surface, substantially as described.

4. The process of coating open ended paper bottles with paraffin, which consists in first subjecting the same to heat to drive out a portion of the moisture contained in said bottles and to shrink the parts; then dipping said bottles in a molten bath of paraffin; then passing said coated bottles through a heated chamber while draining off the surplus paraffin and rotating said bottles on their longer axes; and finally only partially immersing said coated and drained bottles while in a horisontal position in a water bath while rotating the same on their longer axes, substantially as described.

5. The step in finishing paraffin coated paper bottles consisting in partially immersing the said bottles in water while the coating is still soft and simultaneously rotating said bottles, substantially as described.

1,154,283. CHUCK. JAMES L. BERNARD, Beaver, Pa. Filed Apr. 20, 1915. Serial No. 22,582. (Cl. 29—141.)



1. A chuck comprising a shank having a screw threaded end, an annular sleeve having internal screw threads engaging the screw threaded end of said shank, a pin to prevent relative movement of the shank and sleeve, a socket mounted in said sleeve to rotate and move axially lengthwise, and jaws on the opposite ends of said shank and socket arranged to engage and positively connect the socket to the shank in using the chuck.

2. A chuck comprising a shank having a screw threaded end, an annular sleeve having internal screw threads engaging the screw threaded end of said shank, a socket mounted in said sleeve to rotate and move axially lengthwise, and jaws on the opposite ends of said shank and socket arranged to engage and positively connect the socket to the shank in using the chuck.

3. A chuck comprising a shank having a recess therein, a socket mounted in said recess to rotate and move axially lengthwise, and jaws on the inner end of the recess and adjacent end of said socket arranged to engage and positively connect the socket to the shank in using the chuck.

1,154,284. SHOCK-ABSORBER. WILLIAM N. BORDER, Dunlap, Mo. Filed Oct. 24, 1914. Serial No. 868,434. (Cl. 21—105.)

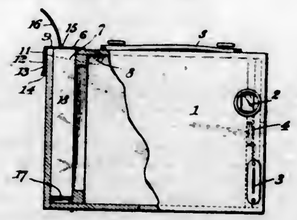


1. A shock absorber comprising means for connecting it to the axle of an automobile, adjustable means for connecting it to the frame or body of an automobile, a yoke swiveled to the body connections, a pair of stay rods slidably mounted through the yoke, a plate mounted upon the opposite ends of the stay rods, a second plate slidable on the stay rods between the yoke and the first mentioned plate, a second pair of rods slidably mounted through the two plates, and a coil spring mounted between the two plates.

2. A shock absorber comprising a plurality of stay rods, a plurality of plates connecting said stay rods, a coil shock absorbing spring mounted between said plates and encircling a portion of said stay rods, a yoke mounted upon the opposite end of a portion of said stay rods having a circular aperture therethrough, a swivel bolt mounted through said aperture, a sleeve riveted to said swivel bolt in such manner as to allow swivel play thereof, a goose neck bolt adjustably threaded into said sleeve, locking means locking said goose neck bolt to said sleeve and connecting means upon the opposite end of said goose neck bolt adapted to attach the same to the body of a vehicle.

3. A shock absorber comprising reciprocating plate means, plate retaining means, shock absorbing means between said plate and said retaining means, a yoke, a swivel bolt mounted through said yoke, a sleeve riveted to said bolt having an internally threaded end portion, an adjustable member threaded into said sleeve, locking means locking said last mentioned member to said sleeve, and connecting means upon the opposite end of said adjustable member adapted to connect the same to the body of a vehicle.

1,154,285. FILM-PACK CAMERA. CARL BORNMANN, Binghamton, N. Y., assignor to Ansco Company, a Corporation of New York. Filed Apr. 28, 1915. Serial No. 24,406. (Cl. 95—19.)



1. A camera having a film pack chamber at the focal plane, an opening for the introduction of the pack at the upper end of the chamber, a spring at its lower end, a cover for the opening provided with a narrow slot and means to lock the cover when closed.

2. A camera having a film pack chamber at the focal plane, an opening for the introduction of the pack in the upper end of the chamber, a spring at its lower end, a swinging cover for the opening pivoted to the camera body and provided with a narrow slot and means to lock the cover when it is closed.

3. A camera having a film pack chamber at the focal plane, an opening for the introduction of the pack at the upper end of the chamber, a spring at its lower end, a cover for the opening having a flat top and flanges upon three of its sides and a narrow slot in the flat top and means to lock the cover when it is closed.

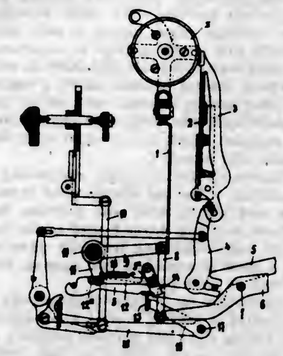
4. A camera having a film pack chamber at the focal plane, an opening for the introduction of the pack into the chamber, a spring in the chamber opposite the said opening, a cover for the opening provided with a narrow slot and means to lock the cover and hold it closed against the stress of the spring when the pack is in position.

5. A camera having a film pack chamber at the focal plane, an opening for the introduction of the pack into the chamber, a spring within the chamber opposite said opening adapted to be put under stress by the insertion of the pack, a cover for the opening provided with a narrow slot and means to lock and hold the cover shut against the stress of the spring when the pack is in position.

1,154,286. ACCENT MECHANISM FOR TYPE-WRITERS. THEODOR EUGEN BUSCHMANN, Chemnitz, Germany, assignor to the Firm of Wanderer-Werke, vorm. Winklhofer & Jaenicke, A. G., Chemnitz, Germany. Filed Mar. 27, 1913. Serial No. 757,244. (Cl. 197—83.)

1. In a typewriting machine having a universal bar and platen shifting mechanism, a key lever having a notch over said universal bar and normally acting as a dead key lever in one position of the platen, and notch closing means actuated from the platen shifting means when the platen is in another position and causing said key lever to act as a live key lever.

2. In a typewriting machine having a universal bar and platen shifting mechanism, a key lever and means on said lever moved into and out of operative relation to said universal bar by the shifting mechanism.



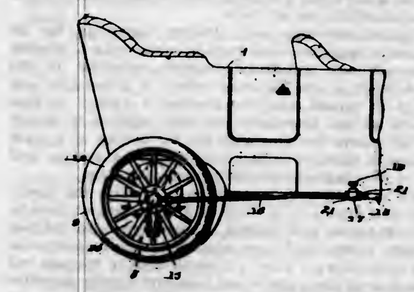
3. In a typewriting machine having a universal bar and platen shifting mechanism, a key lever having a notch located opposite the universal bar, a lever pivoted to the key lever and operating as a notch filler and means to connect said lever to the shifting mechanism, whereby said pivoted lever is moved into and out of operative position over the universal bar.

4. In a typewriting machine having a carriage shifting mechanism, and a universal bar, a special type lever with a recess adapted to permit the depression of the said lever without depressing the universal bar, an adjustment piece on the type lever adapted to fill out the recess and to cause the said type lever to act as a normal type-lever, and a shift key adapted to put the adjustment piece into or out of normal operating position.

5. In a typewriting machine having a carriage shifting mechanism and a universal bar, a special type lever having a recess therein adapted to permit the depression of the said lever without depressing the universal bar, an adjustment piece to cause said lever to act as a normal type-lever, a shift key, and a system of levers attached thereto and to the adjustment piece adapted to put the adjustment piece out of operation on depressing the shift key.

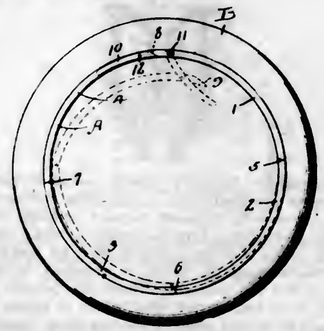
[Claims 6 and 7 not printed in the Gazette.]

1,154,287. SINGLE-WHEEL EMERGENCY-TRUCK. URA BUTCHER, Athens, Ohio. Filed Sept. 18, 1914. Serial No. 862,380. (Cl. 21—5.)



A single wheel emergency truck for automobiles comprising an axle beam having an offset wheel spindle, a wheel journaled on the spindle, a bearing on the beam, an adjustable axle clip connected with the beam and a brace rod connected with the outer end of the spindle and having a clamp.

1,154,288. COLLAPSIBLE RIM. WALTER B. CHRISTOPHER, Birmingham, Ala., assignor of one-half to Cad C. Baxter, Birmingham, Ala. Filed Nov. 27, 1914. Serial No. 874,296. (Cl. 152—21.)



In a demountable rim for vehicle wheels, the combination with a wheel, of a rim embodying a circular series of hingedly connected sections, and a pair of arcuate levers pivotally attached to the side edges of the terminal sections and adapted to move the extremities thereof into and out of alinement, said levers lying between the outer and inner peripheral lines of the sections to which they are attached when said sections are in alinement, said levers also overlapping the joint between the last named sections and bearing against the side edges thereof.

1,154,289. PROCESS OF CONCENTRATING DILUTE NITRIC ACID. EMIL COLLETT, Christiania, Norway, assignor to Norsk Hydro-Elektrisk Kvaelstofaktieselskab, Christiania, Norway. Filed Mar. 27, 1913. Serial No. 757,252. (Cl. 23—1.)

1. The process of concentrating dilute nitric acid, which comprises vaporizing said acid, introducing the vapors into a drying apparatus, introducing a drying agent at the top of the apparatus, and introducing a cooling agent into said apparatus between the point where the vapors enter the latter and the point where the vapors escape.

2. The process of concentrating dilute nitric acid, which comprises vaporizing said acid, introducing the vapors into a drying apparatus, and introducing a cooling agent into said apparatus between the point where the vapors enter the latter and the point where the vapors escape, and regulating the amount and temperature of the drying agent to maintain the temperature in the drying zone at the desired degree.

3. The process of concentrating dilute nitric acid, which comprises vaporizing said acid, introducing the vapor into a drying apparatus, and introducing cold sulfuric acid into the drying apparatus between the point where the vaporized nitric acid enters the latter and the point where the vapors escape.

4. The process of concentrating dilute nitric acid, which comprises vaporizing said acid, introducing the vapors into a drying apparatus, and introducing cold sulfuric acid into the drying apparatus between the point where the vaporized nitric acid enters the latter and the point where the vapors escape, and regulating the amount and temperature of the sulfuric acid to maintain the temperature in the drying zone at the desired degree.

5. The process of concentrating dilute nitric acid, which comprises vaporizing said acid, introducing the vapors into a drying apparatus, and introducing a mixture of cold sulfuric acid and nitric acid into the drying apparatus between the point where the vaporized nitric acid enters the latter and the point where the vapors escape.

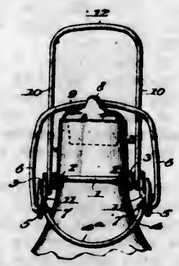
[Claims 6 and 7 not printed in the Gazette.]

1,154,290. BOTTLE-CLOSURE. HENRY CREMER, Chicago, Ill. Filed Dec. 21, 1914. Serial No. 878,440. (Cl. 215—65.)



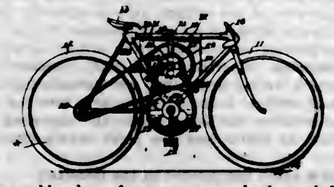
A bottle-closure having a tubular casing covered by a lid which is provided with an aperture communicating with a downwardly directed tubular passage, the free end thereof extending into the tubular casing, said casing being in its interior provided with an upwardly directed sinuous passage, which is arranged to have its upper and free end contorted around the tubular passage from the lid in coöperative relationship to arrest the air, the lower end of said sinuous passage being incorporated in a diaphragm portion or enlarged so as to form a diaphragm, which is secured to an inwardly projecting offset, formed by a tubular extension tapering in step-shape, downwardly from the base of the casing, to build exteriorly projecting offsets, said diaphragm portion forming in connection with casing and lid a receptacle through which the liquid flows when discharged from the bottle, and by which the liquid is held to blockade the passages by an attempt of refilling, substantially for the purpose set forth.

1,154,291. BOTTLE-CLOSURE. HENRY CREMER, Chicago, Ill. Filed Mar. 15, 1915. Serial No. 14,610. (Cl. 215—41.)



The combination of a bottle with a bottle closure comprising a stopper engaged with a bail, an adjusting lever formed with a loop or eye engaging the extremities of said bail, said adjusting lever having its ends journaled in recesses or eyes at the side of the bottle neck, and a carrying handle in combination with a lever, said lever engaging the adjusting lever and acting thereon with contrary effect to said adjusting lever, substantially for the purpose set forth.

1,154,292. BICYCLE TRANSMISSION. THOMAS J. CRIMMS, Clearwater, Fla. Filed Dec. 17, 1913. Serial No. 807,340. (Cl. 208—17.)

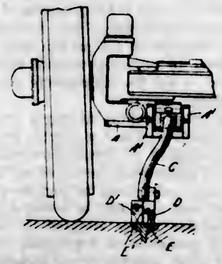


1. In a bicycle a frame a rear wheel carried by said frame, a sprocket wheel carried by said rear wheel, a driving sprocket carried by said frame, a journal bracket carried by said frame, said journal bracket comprising a bearing, arms extending from said bearing and having their end portions provided with clamp sections engaging said frame, securing leaves hinged to said arms and cooperating with said clamp sections to secure said journal bracket to said frame, a shaft journaled in said bearing, sprocket wheels carried by said shaft, a sprocket chain connecting said driving sprocket with one of the sprocket wheels of said shaft, and a sprocket chain connecting the remaining sprocket wheel of said shaft with the sprocket wheel of said rear wheel.

2. An attachment for a bicycle comprising a journal bracket including a bearing sleeve, arms extending from said sleeve and having their end portions formed into clamp sections, securing leaves hinged to the end portions of said arms and coöperating with the clamp sections of said arms, a shaft journaled in said bearing, and sprocket wheels carried by said shaft.

3. An attachment for a bicycle comprising a journal bracket including a bearing sleeve, arms extending from said sleeve having their end portions provided with clamp sections, securing leaves carried by said arms and cooperating with said clamp sections, a shaft journaled in said bearing, means carried by said shaft for permitting said shaft to be rotated, and means for permitting rotary motion to be transmitted from said shaft.

1,154,293. ELECTRICALLY-PROPELLED ROAD-VEHICLE. EDWARD CROSS, Rotherham, England. Filed June 6, 1914. Serial No. 843,546. (Cl. 191—40.)



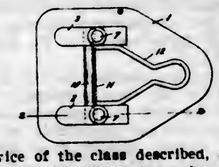
1. Current-collecting and steering apparatus for an electrically propelled road vehicle comprising a pivoted spring-controlled member operatively connected to the stud axle of a steering road wheel, a detachable arm adapted to engage with the member, and a runner or shoe mounted on the detatchable arm and adapted to engage with the groove and also with the flat portion of a track rail substantially as set forth.

2. Current-collecting and steering apparatus for an electrically propelled road vehicle comprising a pivoted spring-controlled member operatively connected to the stud axle of a steering road wheel, a detachable arm adapted to engage with the member, a runner or shoe mounted on the detachable arm and adapted to engage with the groove and also with the flat portion of a track rail, and a catch or trigger pivoted to the member and adapted to engage and retain the detachable arm.

3. In an electrically propelled road vehicle the combination of a stud axle, a plate or bracket secured thereto, lugs mounted on said bracket, a member pivoted between said lugs, a detachable arm adapted to engage said member, a removable pin passing through holes in the lugs and acting to hold the member and arm out of their operative positions, a catch or trigger pivoted to said member, a spring acting to press the member and the catch downward relatively to the lugs and a runner or shoe mounted on the detachable arm and adapted to engage with the groove and with the flat portion of a track rail substantially as set forth.

4. In current-collecting and steering apparatus for an electrically propelled road vehicle the combination with an arm operatively connected to the stud axle of a steering road wheel of a shoe having two portions D D′ shaped and disposed in the manner set forth so that one portion engages with the groove of the track rail and the other makes electrical contact with the table or flat portion thereof.

1,154,294. PAPER-PERFORATOR. ALEXANDER DOM and CHESLEY DOM, Cincinnati, Ohio, assignors to The Samuel C. Tatum Company, Cincinnati, Ohio, a Corporation of Ohio. Filed June 7, 1915. Serial No. 32,527. (Cl. 164—91.)



1. In a device of the class described, a base, bearings relatively spaced on said base, each provided with a throat slot, a shaft journaled in said bearings having a groove longitudinally therein, a punch member for each bearing, each movably supported in its bearing to intercept the throat slot thereof and normal to said shaft having a tooth transversely formed within its circumference, meshing with said shaft groove and curved flank surfaces at opposite sides of the tooth each approximately of a radius equal to that of the shaft adapted to alternately shoulder upon said shaft confining the punch movements.

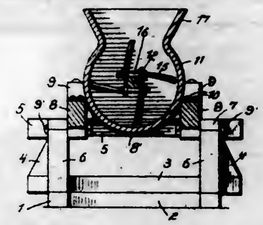
2. In a device of the class described, a base, bearing members relatively spaced on said base each provided with a throat slot, a shaft journaled in said bearing members having a groove longitudinally therein, a movable punch member within a bearing member having a tooth meshing with said shaft groove with an angular shaft shouldering tooth clearance surface adjacent a tooth flank for confining the punch movement and wedge-like clamping the punch between shaft and bearing.

3. In a device of the character described, a punch having an upper notch and a lower notch in its side, the upper side of the upper notch and the lower side of the lower notch being concave, but the other sides of the notches being so shaped that a single tooth is formed by the material of the punch left between the notches, a shaft having a longitudinal slot and extending into the notches in the punch with the tooth received in the slot, and the concave sides of the notches being arcs of radius substantially equal to that of the shaft, whereby they form upper and lower stops, respectively, against the shaft, for the punch when said punch is depressed or raised by rotation of the shaft with the tooth engaging in the slot, and means for operatively supporting said punch and said shaft.

4. In a device of the class described, comprising a frame structure, a shaft journaled in said frame structure having a groove longitudinally therein, a punch member movable within said frame structure and normal to said shaft having a tooth transversely formed therein meshing with said shaft groove, and curved flanked surfaces at opposite sides of the tooth, each approximately of a radius equal to that of the shaft, adapted to alternately shoulder upon said shaft confining the punch movements.

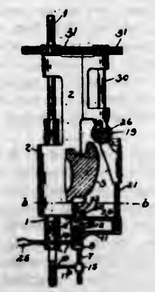
1,154,295. CONCRETE-MIXER. JOSEPH H. DUBEPO, Presque Isle, Me. Filed Jan. 25, 1913. Serial No. 744,061. (Cl. 88—73.)

In a mixing trough, a shaft polygonal in cross section, blades detachably and adjustably secured to the shaft, the blades being arranged in pairs, the blades of one pair extending at a right angle to the blades of the pair next adjacent thereto, the blades of each pair being engageable with the shaft at substantially diametrically opposite points, the inner terminal of each blade extending beyond that face of the shaft against which it is secured, fastening elements extending through the blades of each pair, the fastening elements being directly engageable with opposite faces of the shaft at substantially diametrically opposite points for facilitating adjustment of the blades



longitudinally on the shaft, and means to lock the fastening elements immovable subsequent to an adjusting of the blades, as and for the purpose set forth.

1,154,296. GAGING AND REVERSING MEANS FOR DRILLING AND TAPPING MACHINES. RAYMOND W. EGAN, Cincinnati, Ohio. Filed May 17, 1912. Serial No. 697,999. (Cl. 10—136.)



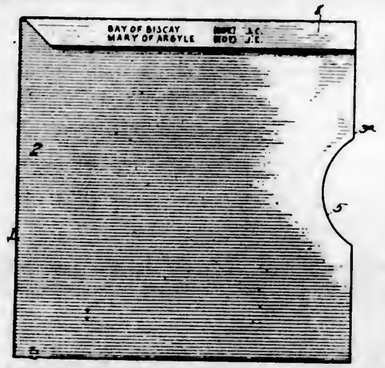
1. In a machine of the class described, the combination with a head-stock carrying a rotatable and longitudinally movable spindle, and a manually controlled reversing mechanism for reversing the direction of rotation of the spindle, of a bracket supported on the head-stock, a gage supported in the bracket, a stop carried on the gage and adjustable longitudinally thereof, an arm supported on said manual controlling means and adapted to co-act with said gage, and actuating means for the arm, all substantially as described.

2. In a machine of the class described, the combination with a head-stock carrying a rotatable and longitudinally movable spindle, and a manually controlled mechanism for reversing the direction of rotation of the spindle, of a bracket supported on the head-stock, a graduated gage supported in the bracket, a stop carried on the gage and adjustable longitudinally thereof, an arm supported on said manual controlling means and adapted to co-act with said gage and actuating means for the arm, all substantially as described.

1,154,297. FILING-ENVELOP FOR PHONOGRAPH DISK RECORDS AND OTHER FILING PURPOSES. JOHN P. EISENHAUER, Port Huron, Mich. Filed May 7, 1913. Serial No. 766,228. (Cl. 129—16.)

1. A filing envelop of the class described consisting of a single sheet of paper folded centrally to form two side walls and a connecting bend which closes the rear end of the envelop, the front end of the envelop being open for the insertion and removal of a disk or other record, said side walls being united at their side edges to close the envelop at said points, said envelop being provided at one of its closed side edges with a narrow longitudinal ex-

teriorly arranged identification flap adapted to be either folded against the envelop or arranged in a projecting position.



2. A filing envelop of the class described consisting of a single sheet of paper folded centrally to form two side walls and a connecting bend which closes the rear end of the envelop, the front end of the envelop being open for the insertion and removal of a disk or other record, said side walls being united at their side edges to close the envelop at said points, said envelop being provided at one of its closed side edges with a narrow longitudinal flap formed integral with one of the side walls of the envelop and projecting therefrom and adapted to be folded against the envelop.

3. A filing envelop consisting of a single piece of flexible material folded to form two side walls and a connecting bend which closes the rear end of the envelop, the front end of the envelop being open, one of the side walls being provided at its side edges with narrow longitudinal flaps secured to the other side wall, the latter side wall being provided at one of its side edges with an outturned exteriorly arranged narrow longitudinal flap extending along one of the closed side edges of the envelop and adapted to bear identification matter.

4. A filing envelop open at one edge and closed at the other edges and provided at one of its closed edges with an integral extension identification flap extending along such closed edge and located beyond the side walls of the envelop without cutting the said side walls.

1,154,298. COKE-OVEN. KARL ELLINGEN, Bochum, Germany, assignor to Dr. C. Otto & Comp. Ges. mit Beschr. Haftung, Bochum, Germany, a Corporation of Germany. Filed June 13, 1913. Serial No. 773,418. (Cl. 202—4.)



1. A coke-oven having heating walls containing combustion flues provided with means for supplying them with air to support combustion and with means for supplying them with one kind of gaseous fuel, in combination with members for regulating the quantity of such gaseous fuel thus supplied, and means for supplying a different kind of gaseous fuel to the combustion flues by way of said members when desired.

2. A coke-oven having a heating wall with a combustion flue therein, passages for supplying said flue with air to support combustion, and a fuel gas channel communicating with said flue by an opening, in combination with a hollow valve member extending into said channel and adapted to coöperate with said opening and connected with another source of fuel gas which it may supply to the combustion flue through said opening either simultaneously with or independently of the gas supplied to said channel.

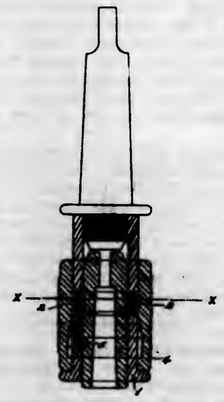
3. In a coke-oven, the combination with a coking chamber, a tunnel below the same, combustion flues in the heating walls of the oven, and means for supplying said flues with air and fuel gas respectively, of an upwardly-extending valve member operable from said tunnel for regulating the supply of said fuel gas, and means in said tunnel for supplying a different kind of fuel gas through said valve member.

4. In a coke-oven, the combination of a coking chamber, a vertical combustion flue at one side thereof, a gas channel beneath said flue and communicating therewith by one or more openings through the bottom of the flue, passages at opposite sides of the lower part of said flue, one for air and the other for fuel gas, the former communicating with the flue above the bottom thereof and the latter communicating with said gas channel, tubular members extending upward into said channel and provided with valve portions to coöperate with said openings, and a separate fuel gas supply connected with the lower ends of said tubular members.

5. A coke oven having a coking chamber with a heating wall containing a combustion flue, a chamber communicating with said combustion flue, a longitudinal gas-supply channel communicating with said chamber, and gas-supply members entering said chamber and serving to control the communication between the same and the combustion flue.

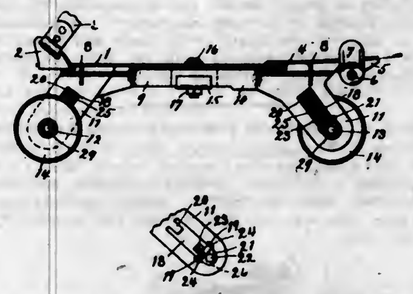
[Claims 6 to 17 not printed in the Gazette.]

1,154,299. DRILL-CHUCK. WILLIAM FARQUHARSON, Greenock, Scotland. Filed Nov. 10, 1914. Serial No. 871,249. (Cl. 29—145.)



In a drill chuck, in combination, a tubular element adapted to receive a drill or drill holder provided on its external periphery with three flats, said tubular element formed with three openings, three co-axial segmental pads each fitting an opening in said element and each in surface engagement with a flat, the drill or drill holder being held against both rotary and axial movement relatively to said element exclusively by said pads, and a sleeve surrounding said tubular element and capable of telescoping in relation to said element into and out of engagement with said pads, substantially as and for the purpose set forth.

1,154,300. ROLLER-SKATE. MAX FINKLESTEIN, Springfield, Mass. Filed Nov. 22, 1913. Serial No. 802,401. (Cl. 46—51.)



1. The combination, in a roller skate, with the frame of such skate, such frame consisting in part of slotted hangers, of blocks slidingly mounted in said hangers, axles mounted in said blocks, the latter being cut out to permit said axles to bear on the closed bottoms of the hanger slots, resilient members arranged to force said axles normally against said closed bottoms, and rollers mounted on said axles.

2. The combination, in a roller skate, with the frame of such skate, such frame consisting in part of slotted hangers, of blocks slidingly mounted in said hangers, axles mounted in said blocks, the latter being cut away to permit said axles to bear on the closed bottoms of the hanger slots, resilient members in said slots above said blocks and adapted to force the latter downwardly and normally to cause said axles to bear on said closed bottoms, and rollers mounted on said axles.

3. In a roller skate, a hanger apertured to form an underneath bearing for an axle, a block for the axle, such block being arranged in sliding relation to said hanger, and cut out at the bottom to clear said bearing and permit the axle in the block to bear thereon, a resilient member bearing on said hanger and on said block, and an axle receivable in said block and bearing and normally retained by said resilient member, acting through said block, in said bearing.

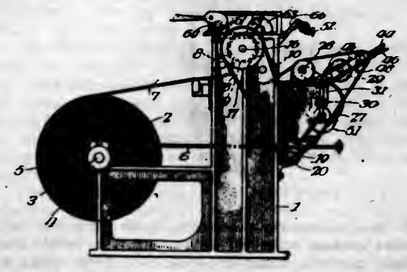
4. The combination, in a roller skate, with the frame of such skate, such frame consisting in part of slotted hangers, of blocks arranged to slide in the slots in said hangers, such blocks being grooved to receive the longitudinal edges of said slots, resilient members interposed in said slots between the tops thereof and said blocks, axles mounted in said blocks, and rollers mounted on said axles, the arrangement of parts being such that the bottoms of said slots ride away from said axles when said resilient members are compressed.

5. The combination, in a roller skate, with the frame of such skate, such frame consisting in part of slotted hangers, of grooved blocks arranged to slide in the slots in said hangers, the longitudinal edges of said slots being received in the grooves in said blocks, and each of said grooves being wider than the thickness of each of said edges, resilient members interposed in said slots between the tops thereof and said blocks, axles mounted in said blocks, and rollers mounted on said axles.

[Claims 6 to 8 not printed in the Gazette.]

1,154,301. MACHINE FOR SLITTING, PERFORATING, AND REWINDING PAPER. JOHN C. FOGARTY, Green Bay, Wis. Filed Feb. 7, 1914. Serial No. 817,200. (Cl. 164—65.)

1. In a machine of the class described, means for supporting a roll of paper to be rewound in smaller rolls, means for supporting and rotating a rewinding core, whereby the paper is fed continuously from the unwinding to the rewinding roll, means for interposing a second rewinding core against the traveling sheet of paper between said rolls, and means for severing said sheet between said rewinding cores.



2. In a machine of the class described, means for supporting a roll of paper to be rewound in smaller rolls, means for supporting and rotating a rewinding core, whereby the paper is fed continuously from the unwinding to the rewinding roll, means for moving a rotating pasted core against the traveling sheet of paper, whereby the latter tends to adhere to said pasted core, and means for severing said sheet between said rewinding cores, whereby the winding of one roll is completed and the winding of the other roll is begun, simultaneously.

3. A machine of the class described, comprising a support for a roll of paper, a support for a plurality of rewinding cores, arranged preferably in alinement and having a total length equal to the width of the roll to be unwound, a plurality of slitting knives arranged to sever the traveling band of paper into a number of narrow bands corresponding to the number of rewinding cores, means for moving a second alined series of cores against said bands of paper, means for applying paste to said second series of cores, whereby said traveling bands tend to adhere thereto, and means for simultaneously severing all of said bands immediately after said cores have been brought into contact therewith, whereby the rewinding on the first set of cores is completed and is simultaneously begun on the second set of cores.

4. In a machine of the class described, a rotating frame having means for carrying a plurality of alined series of rewinding cores arranged substantially parallel to each other around the circumference of a circle, whereby said series of cores may be brought to the winding position in succession by rotating said frame, and means for continuously rotating whatever series of cores are arranged in rewinding position, including means for causing the next successive series of cores to begin rotating before the last series stops rotating.

5. In a machine of the class described, a rotating frame having means for carrying a plurality of alined series of rewinding cores arranged substantially parallel to each other around the circumference of a circle, whereby said series of cores may be brought to the winding position in succession by rotating said frame, means for continuously rotating whatever series of cores are arranged in rewinding position, including means for causing the next successive series of cores to begin rotating before the last series stops rotating, means for supporting a roll of paper in position to be fed to said rewinding cores, and means for slitting said paper during its travel from said roll to one of said rewinding cores.

[Claims 6 to 11 not printed in the Gazette.]

1,154,302. LINOTYPE ATTACHMENT. ALBERT A. FROEHLICH, Toledo, Ohio. Filed Oct. 23, 1914. Serial No. 868,314. (Cl. 199—7.)

1. In an assembler mechanism of the class described, a matrix guiding assembler chute spring, and a matrix tru-

ing tongue carried by said spring for yielding movements relative thereto and being more easily moved from normal position than the chute spring and without disturbing the normal position of the spring.



2. In an assembler mechanism of the class described, a matrix guiding assembler chute spring, a matrix truing tongue pivotally suspended from said chute spring at a point above its lower end for forward swinging movements relative thereto, and spring means for resisting a forward swinging of said tongue relative to the chute spring, said tongue being more freely moved from normal position than the chute spring.

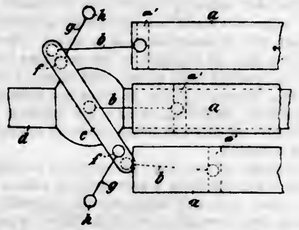
3. The combination with the assembler chute spring in a mechanism of the class described, of a separate piece matrix guiding tongue yieldingly projecting from said spring into the path of movement of the matrices to the receiver portion of said mechanism.

4. In an assembler mechanism of the class described, an assembler chute spring, and a guide tongue pivotally depending from the front side of said spring and extending below its lower end.

5. In an assembler mechanism of the class described, an assembler chute spring having transversely spaced forwardly projecting guide spurs at its lower end, and a guide tongue yieldingly depending from the front side of said spring and having its lower end extending down between said spurs and below the lower end of the spring.

[Claims 6 to 9 not printed in the Gazette.]

1,154,303. INTERNAL-COMBUSTION MOTOR. WILHELM FROEHLICH, Wannsee, near Berlin, Germany. Filed Jan. 26, 1915. Serial No. 4,559. (Cl. 121—25.)

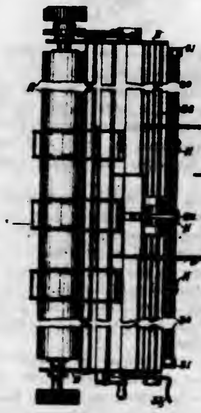


1. In a motor of the character described, the combination with a shaft, a plurality of cylinders arranged about and extending parallel to the shaft, a wabbling ring mounted on the shaft, and pistons in the cylinders connected with said ring, of means for maintaining the ring and shaft in proper relation and counteracting the tangential reaction of the ring comprising a link extending at an angle to the length of the shaft and having its ends respectively connected with the ring and frame of the motor.

2. In a motor of the character described, the combination with a shaft, a plurality of cylinders arranged about and extending parallel to the shaft, a wabbling ring mounted on the shaft, and pistons in the cylinders connected with said ring, of two links extending at an angle to the shaft and each connected at one end with the motor frame and at the other end with said ring, the connections between the links and ring being at diametrically opposite points, substantially as and for the purpose specified.

3. In a motor of the character described, the combination with a shaft, a plurality of cylinders arranged about and extending parallel to the shaft, a wabbling ring mounted on the shaft, and pistons in the cylinders connected with said ring, of means for maintaining the ring and shaft in proper relation and counteracting the tangential relation of the ring comprising a link extending at an angle to the length of the shaft and having its ends respectively connected with the ring and frame of the motor by ball and socket joints.

1,154,304. CARRIAGE FOR RECORDING-MACHINES. CLYDE E. W. GARDNER, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Original application filed Nov. 13, 1909, Serial No. 527,787. Divided and this application filed May 25, 1915. Serial No. 30,337. (Cl. 197—176.)



1. The combination with a frame, of a carriage and platen movable thereon, a threaded shaft parallel to said frame and movable with relation thereto, flat sided nuts adjustable on said shaft and adapted to serve as stops, and means tending normally to hold said shaft against said frame whereby the nuts will be prevented from turning.

2. The combination with a frame, of a carriage and platen movable thereon, a threaded shaft parallel to said frame, arms carrying said shaft so pivoted as to bring said shaft against said frame, springs tending to draw said shaft toward the frame, and a plurality of nuts on said shaft having their opposite sides flattened whereby when in contact with the frame they cannot be accidentally turned and displaced.

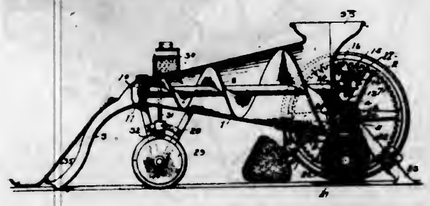
3. In a recording machine, the combination with a laterally movable paper carriage, of tabulator stop elements, the one comprising a screw-threaded rod or shaft and nuts thereon, and the other an abutment member to engage the nuts; one such element being mounted on the carriage and the other on the fixed frame or support; together with means for locking the nuts through their engagement with a part on the shaft-supporting structure between which part and the nuts there is relative movement transverse the shaft for unlocking purposes.

4. In a recording machine, the combination with a laterally movable paper carriage, of tabulator stop elements, the one comprising a screw-threaded rod or shaft and flat-sided nuts thereon and the other an abutment member to engage the nuts; one such element being mounted on the carriage and the other on the fixed frame or support; together with means for locking the nuts through engagement of their flat sides with a part on the shaft supporting structure between which part and the nuts there is relative movement transverse the shaft for unlocking purposes.

5. In a recording machine, the combination with a laterally movable paper carriage, of tabulator stop elements, the one comprising a screw-threaded rod or shaft and bevel-ended nuts thereon, and the other a spring-held abutment member to engage the nuts; one such element being mounted on the carriage and the other on the fixed frame or support; together with means for locking the nuts through their engagement with a part on the shaft-supporting structure between which part and the nuts there is relative movement transverse the shaft for unlocking purposes.

[Claims 6 and 7 not printed in the Gazette.]

1,154,305. CRACK-FILLING MACHINE. JOSEPH F. GOETZ, Dayton, Ohio. Filed Mar. 16, 1914. Serial No. 825,149. (Cl. 114—224.)



1. In a device of the character described, a main frame adapted to be moved over the surface operated upon, and a prod arm carried by the main frame, a pyramidal head positioned with a flat face lowermost on said arm and engaging in a crack in said surface, the main frame gaging the depth of the engagement of the head.

2. In a device of the character described, a main frame adapted to be moved over the surface operated upon, a prod arm carried by the main frame and engaging a crack in the said surface, and a brush also carried by the main frame and operating in the path of the prod arm.

3. In a device of the character described, a main frame adapted to be moved over the surface operated upon, a prod arm carried by the main frame, a compressible pyramidal head carried by the arm and engaging a crack in the said surface.

4. In an apparatus as described, means for expelling the contents of the crack operated upon, means for sweeping the crack, and means for thereafter depositing plastic material in the crack.

5. In a device of the character described, a container for plastic material, a substantially V shaped discharge nozzle therefor adapted to discharge a ribbon like body of material edgewise into the crack operated upon.

[Claims 6 to 25 not printed in the Gazette.]

1,154,306. VACUUM-INDICATOR. GEORGE F. GRAY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 7, 1912. Serial No. 719,191. Renewed Feb. 23, 1915. Serial No. 10,121. (Cl. 175—30.)



1. The combination with an evacuated vessel containing electrodes, of means for holding a body of mercury in said vessel exposed to the pressure in said vessel, and means responsive to the increase in pressure due to impairment of the vacuum in said vessel for bringing said mercury into electrical connection with said electrodes.

2. The combination with an evacuated vessel containing electrodes, of means for holding a body of mercury normally out of electrical connection with said electrodes and exposed to the pressure in said vessel, an evacuated chamber having a capillary opening sealed by said body of mercury, and contacts in electrical connection with said electrodes mounted in said chamber in position to be bridged by mercury forced into said chamber by abnormally high pressure in said vessel.

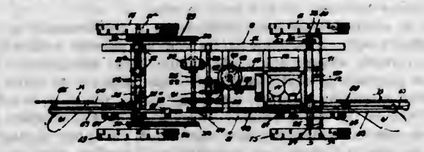
3. The combination with an evacuated metal vessel having two electrodes mounted therein and spaced away from the walls of said vessel to form spark gaps, of contacts connected to said electrodes and mounted to form between them a discharge path of greater resistance than said spark gaps, and means responsive to abnormally high pressure in said vessel for electrically connecting said contacts.

4. The combination with an evacuated vessel containing electrodes, of a receptacle in said vessel containing a mobile conducting liquid exposed to the pressure of the residual gases in said vessel, an evacuated chamber having a capillary opening submerged in said conducting liquid, and means whereby the entrance of said conducting liquid through said opening into said chamber electrically connects said electrodes.

5. The combination with an evacuated vessel having electrodes therein, of a bulb containing mercury exposed to the pressure in said vessel, an evacuated chamber secured to said bulb and having a capillary opening to said receptacle near the center of said receptacle, and contacts electrically connected to said electrodes and mounted in said chamber in position to be bridged by mercury forced from said receptacle into said chamber through said opening by increase in pressure in said vessel.

[Claims 6 to 11 not printed in the Gazette.]

1,154,307. PLOW. WILLIAM W. GREEN, Niles, Mich. Filed June 22, 1914. Serial No. 846,501. (Cl. 97—50.)

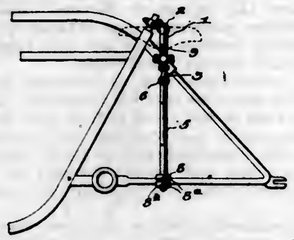


1. In a power plow, a motor driven, wheeled structure having two rear drive wheels and a front driven wheel in line with one of the rear drive wheels, plows and raising mechanism therefor at the ends of said structure, said plows pointed toward each other and trailing adjacent the front driven wheel and rear drive wheel in line therewith, said plows being disposed relative to said alined front and rear drive wheels in such manner that said alined wheels may travel in a furrow and the plow cut the next furrow.

2. In a power plow, a motor driven, wheeled structure having two rear drive wheels and a front drive wheel in alinement with one of said rear drive wheels, alined plows, one secured to said structure at each end thereof and pointed toward the other, operating means for raising and lowering said plows and means for holding said plows in raised position, said plows being disposed relative to said alined drive wheels in such manner that said alined drive wheels may travel in a furrow and one plow cut a next adjacent furrow.

3. In a power plow, a four wheeled structure, a motor carried by said structure and drive mechanism between said motor and three of the wheels of said wheeled structure and including reversing mechanism for reversing the direction of travel of the plow, two of said drive wheels being in alinement with each other, oppositely pointing, alined plows secured to the ends of said structure, and plow raising and lowering mechanism, said plows being disposed relative to said alined drive wheels in such manner that said alined wheels may travel in a furrow and the plow cut a next adjacent furrow.

1,154,308. TWIN-SADDLE ATTACHMENT FOR MOTOR-CYCLES. RAYMOND G. HANNA, New York, N. Y. Filed Nov. 17, 1914. Serial No. 872,630. (Cl. 208—111.)



1. A twin saddle attachment comprising transversely extending saddle supporting means, saddle posts adjustably mounted thereon, bracing members pivotally attached to the ends of the saddle supporting means, bracing members attached to and adjustable relative to the first-mentioned bracing members to allow for adjustment of the device to different sizes of cycle frames, and having clamping means engaging the cycle frame.

2. A saddle attachment comprising a transversely-extending seat supporting member of inverted U-form at its central portion, opposite seats mounted thereon, means for clamping the aforesaid seat-supporting member either rearwardly or forwardly of the seat post of the cycle, and bracing means supporting the ends of the seat-supporting member from the cycle frame.

3. A saddle attachment comprising a transversely-extending seat supporting member, means for adjustably mounting seats thereon, means for adjustably fastening the seat supporting member to the cycle saddle post, and adjustable bracing means pivotally engaging the outer ends of the seat supporting member and adjustably engaging lower portions of the cycle frame.

4. A saddle attachment comprising a transversely extending member, a clamp at its central portion adapted to reversibly engage the cycle saddle post, obliquely-disposed members pivotally mounted to the ends of the transversely extending member, clamping means adapted to be fastened to the lower framework of a cycle, and supporting means to which the last-mentioned clamping means are secured and having an adjustable connection with the obliquely-disposed members, substantially as described.

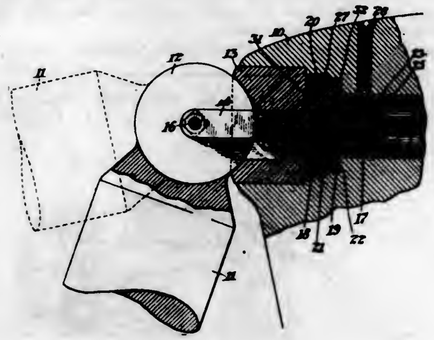
5. A twin saddle attachment comprising a transversely extending member, independently adjustable saddle supporting means mounted thereon, longitudinally adjustable means clamping the transversely extending member to the cycle, vertically adjustable supporting means having a pivotal connection with the outer ends of the transversely extending member, and adjustable clamping means mounted to the lower ends of the aforesaid vertically adjustable means to fasten same to the cycle frame, substantially as described.

[Claim 6 not printed in the Gazette.]

1,154,309. SOCKET-JOINT. JOSEPH F. HELLER, Woodhaven, N. Y. Filed Feb. 5, 1915. Serial No. 6,214. (Cl. 211—13.)

1. In a ball and socket joint, a ball member, a socket member, a rod pivotally connected to one member, a pin secured in and extending transversely from said rod, a casing associated with the other member, said casing having an opening to receive said rod and a slot communicating with the said opening to receive the said pin, and a friction member movably mounted in said casing, said friction member also having a slot in which said pin is adapted to lie and in which it is locked when the slot in the casing and the slot in the friction member are not in alinement.

2. In a ball and socket joint, a ball member, a rod pivotally connected thereto, a pin secured in and extending transversely from said rod, a socket member, a casing associated therewith, the said casing having an opening to receive said rod and a slot communicating with said opening to receive said pin, a friction member movably mounted in said casing, the said friction member also having an opening to receive said rod, and a slot communicating with the opening in the friction member to receive said pin and within which the pin is adapted to lie and is locked when the slot in the casing and the slot in the friction member are not in alinement.



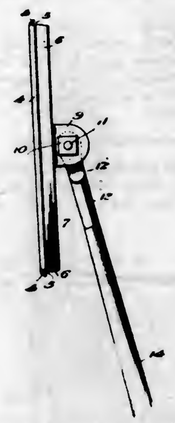
3. In a ball and socket joint, a ball member, a rod pivotally connected thereto, a pin secured in and extending transversely from said rod, a socket member, a casing associated therewith, a cap removably connected to said casing and having an opening to receive said rod and a slot communicating with the opening to receive said pin, and a friction member movably mounted in said casing, the said friction member also having an opening to receive said rod and a slot communicating therewith and adapted to receive said pin and within which the pin is locked when the slot in the casing and the slot in the cap are not in alinement.

4. In a ball and socket joint, a ball member, a rod pivotally connected thereto, a pin secured to and extending transversely from the said rod, a socket member, a casing associated therewith, a cap removably connected to said casing and forming one head thereof, the said cap being provided with an opening to receive said rod and a slot communicating with the opening to receive the said pin, a friction disk within said casing and bearing against the said cap, a friction washer also within the casing and bearing against the friction disk, the said friction disk being provided with an opening to receive said rod and with a slot communicating with its opening to receive the said pin, which is adapted to lie therein and to be locked in position when the slot in the casing and the slot in the friction disk are not in alinement, means for yieldingly maintaining said friction disk and friction washer in contact with each other and with said cap, and means for varying the tension at which said friction disk and friction washer are held against each other and against said cap.

5. In a ball and socket joint, a ball member, a rod pivotally connected thereto, a lock pin secured in and extending transversely from the said rod, a socket member, a casing associated therewith, a cap having an opening therein to receive the said rod and slot to receive the said lock pin, a washer within the casing having a slot to receive the said lock pin, a second washer within the casing of relatively yielding material, and a spring for normally maintaining the washers in frictional engagement to maintain the said rod and ball member in operative relationship to the socket member.

[Claims 6 and 7 not printed in the Gazette.]

1,154,310. FLY-CATCHER. WILLIAM A. HEMENWAY and ORA E. HEMENWAY, Cottage Grove, Oreg. Filed Nov. 20, 1914. Serial No. 873,285. (Cl. 43—1.)



In a fly catcher, a holder for sticky fly paper comprising an open frame having inclined walls, re-bent lips, and a channel between the walls and lips, and a back having an inclined flange adapted to frictionally engage the inclined walls and to have its edge received in the channels aforesaid, said back and frame being adapted to hold a piece of sticky fly paper therebetween and the edges of the inclined walls to press the paper into the channel and against the rebent lip.

1,154,311. MECHANICAL INTERRUPTER FOR ELECTRICAL IGNITION SYSTEMS. GOTTLOB HONOLD, Stuttgart, Germany, assignor to the Firm of Robert Bosch, Stuttgart, Germany. Filed May 22, 1914. Serial No. 840,173. (Cl. 123—166.)



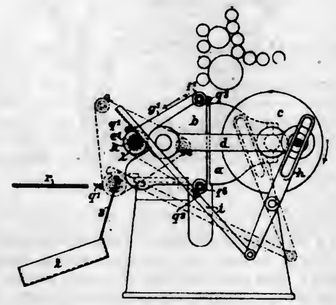
1. In a rotary mechanical interrupter for electrical ignition systems, normally engaged interrupter electrodes one of which is mounted for disengagement from the other, a spring tending to hold the electrodes in engagement, and a resilient abutment which is disengaged from the relatively movable electrode when the electrodes are engaged and which is engaged by the relatively movable electrode only upon excessive movement thereof.

2. In a rotary mechanical interrupter for electrical ignition systems, an interrupter electrode mounted on a pivot, a coöperative interrupter electrode, a spring tending to hold the electrodes in normal relation, a rigid abutment, and a damping member interposed between the abutment and the pivoted electrode and being out of engagement with the latter when the electrodes have their normal relation.

3. In a rotary mechanical interrupter for electrical ignition systems, an interrupter electrode mounted on a pivot, a coöperative interrupter electrode, a spring tending to hold the electrodes in normal relation, and a damping spring which is stiff compared with the other spring and which is normally out of engagement with the pivoted electrode when the electrodes have their normal relation.

4. In a rotary mechanical interrupter for electrical ignition systems, an interrupter electrode mounted on a pivot, a coöperative interrupter electrode, a spring tending to hold the electrodes in normal relation, a rigid abutment, and a flat spring fastened to the abutment and extending to a position in proximity to, but out of engagement with, the pivoted electrode when the electrodes have their normal relation, in order to damp only the excessive movements of the pivoted electrode relatively to the coöperative electrode.

1,154,312. AUTOMATIC SHEET FEEDING AND DELIVERY MECHANISM FOR PLATEN-PRESSES. JOSEF HORN, Kötzschenbroda, near Dresden, Germany, assignor to the Firm of Maschinenfabrik Rockstroh & Schneidernachf. Aktiengesellschaft, Heidenau, near Dresden, Saxony, Germany. Filed Aug. 16, 1913. Serial No. 785,020. (Cl. 101—13.)



1. In a platen printing press, the combination with a bed-plate and an oscillating or rocking platen, of endless sheet conveying devices including gripper members, rollers on the sides of the said platen and over which the said endless sheet conveying devices travel and move with the platen, means for actuating the platen, and means for driving the said endless sheet conveying devices.

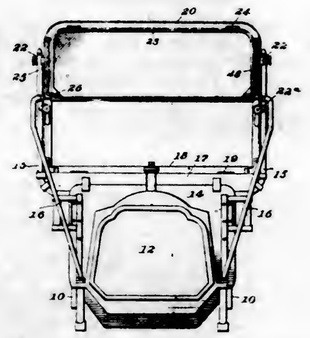
2. In a platen printing press, the combination with a bed-plate and an oscillating or rocking platen, of endless conveyer bands, grippers attached to the said endless conveyer bands in predetermined spaced positions, rollers on both sides of the said platen and over which the said endless conveyer bands travel and also move with the said platen, means for actuating the platen, and means for driving the said endless conveyer bands.

3. In a platen printing press, the combination with a bed-plate and an oscillating or rocking platen, of frames associated with the platen, rollers mounted on the said frames, endless conveyer bands adapted to travel over the said rollers, grippers secured on the said endless conveyer bands, means for actuating the platen, means for driving the said endless conveyer bands, and means whereby the frames during a predetermined portion of its stroke are moved by the said platen.

4. In a platen printing press, the combination with a bed-plate and an oscillating or rocking platen, of endless conveyers, grippers secured to the said endless conveyers, means for adjusting the position of the said grippers according to the size of the sheet to be printed, rollers and drive pulleys carried by the said platen and over which the said endless conveyers travel, and means for intermittently actuating the said drive pulleys to move the said endless conveyers and grippers to feed sheets to be printed to the press.

5. In an automatic feeding and delivery mechanism for platen-presses, the combination with an oscillating or rocking platen, of frames separately arranged from the platen mentioned, devices for permanently and positively conveying the sheet to be printed upon around the periphery of said frames, and means for combining the movement of the frames with that of the platen, substantially as and for the purpose specified.

1,154,313. WIND-SHIELD FOR MOTOR-VEHICLES. RUSSELL HUFF, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed July 30, 1910. Serial No. 574,715. (Cl. 21—148.)



1. In a wind shield for motor vehicles, the combination with a lower section, and an upper section adapted to fold against said lower section, of a sash pivoted to said upper section, a bracket pivoted to said sash for sustaining the sash in an inclined open position, said bracket being adapted to lie against said upper section when said sash is in closed position, means for securing said bracket in position, and supporting means pivotally connected with said sections at points on opposite sides of the pivotal connection between the sections.

2. In a wind shield for motor vehicles, the combination with a lower section, and an upper section adapted to fold against said lower section, of a sash pivoted to said upper section, a bracket pivoted to said sash for holding the sash in open and closed positions, said bracket being adapted to lie against said upper section when the sash is in closed position, means for securing said bracket in position, and supporting means pivotally connected with said sections at points on opposite sides of the pivotal connection between the sections.

3. In a wind shield for motor vehicles, the combination with a lower section, and an upper section adapted to fold against said lower section, of a sash pivoted to said upper section, a bracket pivoted to said sash for holding the sash in open position, said bracket being adapted to lie against one of said sections when the sash is closed, means for securing said bracket in different positions, and supporting means pivotally connected with said sections at points on opposite sides of the pivotal connection between the sections.

4. In a wind shield for motor vehicles, the combination with an upper folding section, of a sash pivoted within said section and adapted to open forwardly therefrom, a bracket to sustain the sash in open position, said bracket being adapted also to retain the sash in closed position and to lie against the forward face of the section when the latter is in such closed position, and means, attached to said upper section at a fixed point, adapted to be secured to said bracket at a plurality of points on the latter for the purpose of securing the sash.

5. In a wind shield for motor vehicles the combination with a swinging sash and a frame therefor, of a bracket arranged wholly in front of said frame and having a frictional joint connection with said sash, and means attached to said frame and adapted to engage and hold said bracket at a plurality of points on the latter.

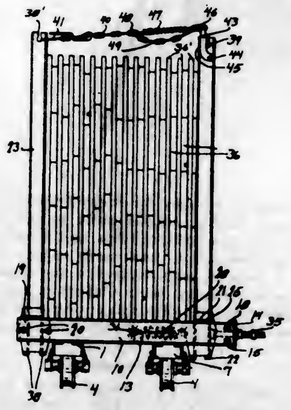
[Claims 6 to 15 not printed in the Gazette.]

1,154,314. POLYHYDROCOLCHICIN. ERNST HUG, Grenzach, Germany, assignor to The Hoffmann-La Roche Chemical Works, New York, N. Y., a Corporation of New York. Filed May 22, 1914. Serial No. 840,174. (Cl. 23—24.)

1. Polyhydrocolchicin.

2. Polyhydrocolchicin being when dry an amorphous, brittle, almost colorless mass melting at approximately 100° C. and containing hydrogen approximating four atoms thereof in excess of the number of hydrogen atoms contained in colchicin.

1,154,315. DRYING-KILN-TRUCK TAKE-UP. ADAM H. IRVING, Spokane, Wash., and DANIEL R. TANNER, La Grande, Oreg. Filed Jan. 19, 1915. Serial No. 3,073. (Cl. 34—26.)



1. In a drying kiln shrinkage take-up means, mechanism for supporting the material to be kilned, and automatically acting means exerting a substantially constant follow up pressure at different points along the material during shrinkage and irrespective of the extent or variation of reduction of volume thereof, substantially as described.

2. In a drying kiln shrinkage take-up means, mechanism for supporting the material to be kilned, and a plurality of independently acting devices exerting a follow up pressure on the material during shrinkage reduction of volume thereof, substantially as described.

3. In a drying kiln shrinkage take-up means, mechanism for supporting a stack of bodies to be kilned, means supporting the stack on one side thereof, and a plurality of independently and automatically acting devices engaging the stack on the opposite side to maintain a substantially constant pressure on the stack during shrinkage and irrespective of the extent or variation of reduction of volume thereof, substantially as described.

4. In a drying kiln shrinkage take-up device, a dry kiln truck for supporting the material to be kilned and provided with fixed stakes, and movable stake devices for maintaining the material between said stakes under substantially constant pressure during shrinkage and irrespective of the extent or variation of reduction of volume of the material, substantially as described.

5. In a drying kiln shrinkage take-up device, a dry kiln truck for supporting a stack of material to be kilned and provided with fixed stakes for engaging the stack on one side thereof, and spring actuated movable stake devices engaging the stack on the opposite side thereof to maintain the interposed stack under substantially constant pressure during shrinkage and irrespective of the extent or variation of reduction of volume thereof, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,154,316. PUMP. ELMER E. IZER, Pomona, Cal., assignor to Pomona Manufacturing Company, Pomona, Cal., a Corporation of California. Filed Aug. 19, 1914. Serial No. 857,602. (Cl. 103—82.)



1. In a pump, a valve supporting member having an inner and an outer seat formed thereon, and a clapper adapted to make a tight closure with said seats, said seats being frusto-conical in shape the generating cones thereof being tangent to spheres having the same center.

2. In a pump, a valve supporting member having an inner and an outer seat formed thereon, and a clapper adapted to make a tight closure with said seats, said seats being frusto-conical in shape the apex of each generating cone coinciding with the axis of the valve below the seat.

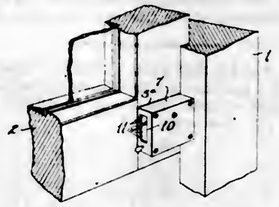
3. In a pump, a bucket having an inner and outer seat formed thereon and having a fluid passage extending therethrough between said seats, a rod secured in said bucket, a valve slidably mounted on said rod and so shaped as to make a tight closure with said seats, said seats being frusto-conical in shape each of the generating cones thereof having its apex located on the axis of said bucket and below the seat.

4. In a pump, a plurality of buckets movable along a single axis each bucket having an inner and an outer seat formed thereon and a fluid passage extending through the bucket between the seats, a rod for each bucket said rods consisting of concentric tubes each secured rigidly in its bucket, and a clapper for each bucket sliding on the rod of that bucket and adapted to make a tight closure with the seats of that bucket, the seats of each clapper being tangent to spheres having a common center located in the said axis.

5. In a pump, a plurality of buckets movable along a single axis each bucket having an inner and an outer seat formed thereon and a fluid passage extending through the bucket between the seats, a rod for each piston, said rods consisting of concentric tubes each secured rigidly in its bucket, and a clapper for each bucket sliding on the rod of that bucket and adapted to make a tight closure with the seat of that bucket, the seats of each clapper being frusto-conical and tangent to spheres having a common center located in said axis.

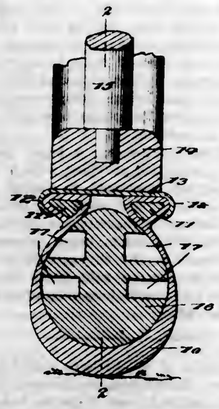
1,154,317. WINDOW-HOLDER. OSCAR JOHNSON, Starks, Wis. Filed Oct. 8, 1914. Serial No. 865,649. (Cl. 16—122.)

A sash holder including a base plate adapted to be secured to the sash, a housing applied thereto and having an opening at each end thereof, one end thereof being also formed with a slot having one edge thereof serrated, a bell crank lever pivotally mounted upon the base plate, one arm of the bell crank lever terminating in a spring extension which passes through the slot of the housing so as to engage the serrated edge thereof and terminates in a finger-piece, while the opposite arm of the bell crank lever terminates in a laterally projecting nose which extends through one of the end openings of the housing and is adapted to engage the window casing to lock the sash against sliding movement, a tension spring having one end thereof connected to the second mentioned arm of the bell crank lever while the opposite end thereof passes through the opening in that end of the housing provided



with the slot, and a finger piece applied to the said end of the spring and arranged in an opposed relation to the finger piece at the extremity of the spring extension of the bell crank lever, the tension spring serving to swing the bell crank lever into inoperative position as soon as the spring extension is released from engagement with the serrated edge of the slot.

1,154,318. TIRE-FILLER. HARRY J. S. KEIM, Catasauqua, Pa. Filed June 2, 1914. Serial No. 842,418. (Cl. 152—5.)



1. A core for a tire formed of resilient material and of uniform texture with the central portion continuous, said core having a series of concentrically arranged relatively large cavities of uniform size and opening laterally and located near the inner portion of the core, and a series of other concentrically arranged cavities alternately large and small in diameter, the smaller cavities of the outer series being located in radial alinement with the inner cavities and the larger cavities of the outer series arranged in staggered relation to the inner series of cavities and all of the cavities terminating at the continuous central portion, whereby the resiliency of the tire is increased and the weight decreased.

2. A core for a tire formed of resilient material and of uniform texture and egg-shaped transversely and adapted to be inclosed in the shoe of an automobile tire with the smaller portion of the core directed inwardly, said core having a continuous central portion and a series of concentrically arranged relatively large cavities of uniform size and opening laterally and located near the inner smaller portion of the core, and a series of other concentrically arranged cavities alternately large and small in diameter and located substantially midway of the core,

the smaller cavities of the outer series being located in radial alinement with the inner cavities and the larger cavities of the outer series arranged in staggered relation to the inner series of cavities, the inner ends of all of the cavities terminating at the continuous central portion, whereby the major portion of the material of the core is contained within the larger outer portion and the cavities contained in the inner smaller portion of the core to increase the resiliency of the tire and decreasing its weight.

1,154,319. CABLE-HANGER. JOSEPH KENNEDY, New York, N. Y., assignor to The Clements Company, a Corporation of New York. Filed Aug. 19, 1913. Serial No. 785,503. (Cl. 248—33.)

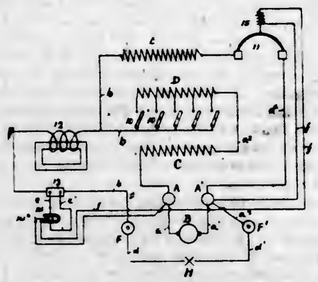


1. A cable clamp, comprising a band adapted to partially surround a cable and provided with a U-shaped slot, and a hooked portion arranged to engage a wire, said hooked portion being provided with a laterally projecting tongue having wings arranged to be passed through said slot, said wings being adapted to spring outwardly and engage said band to lock the clamp in position.

2. A cable clamp, comprising a band adapted to partially surround a cable and provided with a U-shaped slot, and a hooked portion arranged to engage a wire, said hooked portion being formed with a laterally projecting tapered tongue having flaring wings adapted to be passed through said slot, said wings being arranged to spring out and form shoulders for engagement with said band to lock the clamp in position.

3. A cable clamp, comprising a band adapted to partially surround a cable and provided with a U-shaped slot, and a hooked portion arranged to engage a wire, said hooked portion being formed with a laterally projecting tapered tongue having flaring wings adapted to be passed through said slot, said wings being arranged to spring out and form shoulders for engagement with said band to lock the clamp in position, said clamp when locked constituting a single continuous loop including within it both the cable and the wire.

1,154,320. ELECTRIC WELDING APPARATUS. OTIS ALLEN KENYON, Hastings-upon-Hudson, N. Y., assignor to Johannes Kjekstad and Wilhelm Schenstrom, New York, N. Y. Filed Oct. 29, 1912. Serial No. 728,337. (Cl. 219—8.)



1. An electric welding system comprising an electric circuit, a resistance in said circuit which is equivalent to the resistance of the welding arc, a second or branch circuit connected to the first circuit and which includes and is closed by the striking of the welding arc, an adjustable resistance common to both circuits, a reactor in said second circuit, and means for automatically cutting out the equivalent resistance when the arc is struck and the circuit closed through the reactor.

2. An electric welding system comprising an electric circuit, a resistance in said circuit which is equivalent to the resistance of the welding arc, a second or branch circuit which includes and is closed by the striking of the welding arc, an adjustable resisttance common to both circuits, and means for automatically cutting out the equivalent resistance of the first circuit when the arc is struck and the second circuit closed.

3. An electric welding system comprising an electric circuit connected to the circuit of the welding arc, a resistatnce in said first circuit in parallel with and equivalent to the resistance of the welding arc, a second circuit connected to the first circuit and including the welding arc, said second circuit being closed by the striking of the arc, a reactor in said second circuit, and an automatic switch in said first circuit arranged to cut out the aforesaid equivalent resistance when the arc is struck thereby leaving the reactor in circuit with the welding arc so long as the latter is closed.

4. An electric welding system comprising an electric circuit connected to the circuit of the welding arc, a resistance in said first circuit which is equivalent to the resistance of the welding arc, a second circuit including the welding arc which is closed by the striking of said arc, automatic means for cutting out the equivalent resistance in the first circuit when the second circuit is closed, and an adjustable resistance common to both circuits which can be set before the arc is struck.

5. An electric welding system comprising an electric circuit connected to the circuit of the welding arc, a resistance in said first circuit in parallel with the welding arc, a second circuit connected to the said first circuit and including the welding arc, means for cutting out the resistatnce of the first circuit by the striking of the arc in the second circuit, and a manually adjustable resistance common to both circuits which can be set before the arc is struck to the desired resistance of the welding arc.

[Claim 6 not printed in the Gazette.]

1,154,321. MOTOR-VEHICLE. HENRY KINNEL, Seattle, Wash. Filed Aug. 22, 1914. Serial No. 858,010. (Cl. 21—47.)

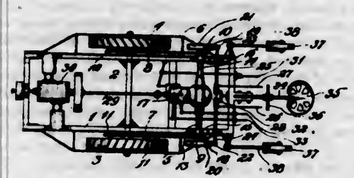


1. In a motor vehicle of the class described, the combination with a vehicle body, of a caterpillar-like propelling device disposed beneath said vehicle body and articulated therewith in a manner to adapt such propelling device to engage with a road-bed at all times irrespective of changes in the distance between said road-bed and the said vehicle body, said propelling device embodying a rectangular frame, two shafts rotatably mounted on said frame and adapted to maintain uniform spacing irrespective of the relative heights of said shafts from a horizontal plane, a plurality of sprocket wheels mounted at equidistant and corresponding points on each of said shafts, sprocket chains disposed each to engage with and travel on corresponding one of the sprocket wheels of said two shafts, a plurality of cross-bars extended crosswise of said sprocket chains and parallel with and near each other, said cross-bars being each secured to corresponding links of each of said sprocket chains and each having an outwardly projecting portion that is adapted to penetrate and engage with a road-bed, a motor disposed on said vehicle body, and controllable means for transmitting rotary motion from said motor to said sprocket wheels of said propelling device.

2. A motor vehicle of the class described which embodies a motor mounted on the body of said vehicle, a propelling mechanism disposed beneath the body of said vehicle, connecting rods each having one of its ends articulated with the bottom of the body of said vehicle while each of their other ends is articulated with said propelling device and controllable means for communicating motion from said motor to the movably operative parts of said propelling mechanism.

3. In a motor driven sled, runners and a body, and a propelling device embodying a rectangular frame, a pair of shafts rotatably-mounted on said frame and adapted to maintain uniform spacing irrespective of the relative heights of said shafts from a horizontal plane, sprocket wheels on said shafts, sprocket chains engaging the wheels on said shafts, cross bars extending crosswise of the sprocket chains parallel with each other, said cross-bars being secured to corresponding links of the sprocket chains and having outwardly-projecting portions adapted to penetrate and engage with a road-bed, and driving means for said sprocket wheels.

1,154,322. TRACTOR. CHARLES B. KLEIN, Los Angeles, Cal. Filed Dec. 22, 1913. Serial No. 808,296. (Cl. 21—114.)



1. A tractor comprising a frame, a wheeled axle formed to support said frame above the center of the wheels, a pair of idlers for the rear of said frame, a plurality of drawheads depending from said frame forward of the axle and below the center of said wheels, a motor, variable speed transmission means for said wheels, and means to govern said speed transmission to control the relative speeds of said wheels.

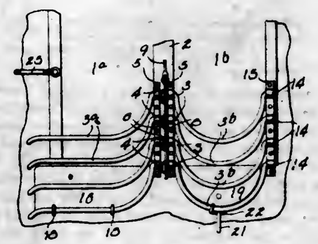
2. A tractor comprising an axle, wheels journaled on said axle, a frame, a propelling mechanism for said wheels, draw heads on said frame and forward of said axle and extending below the center of said axle, said draw heads having a plurality of holes provided in that portion of said drawheads which extends below said axle center, and a means in said holes for fastening thereto the drag bar of an implement.

3. A tractor comprising an axle, a pair of traction wheels journaled thereon, a frame connected centrally of its length to said axle, a pair of idlers for the rear of said frame, an implement drawing means attached to said frame forward of the axle, a propelling mechanism for said wheels, and means to govern the relative speeds of said wheels whereby to control the direction of travel of said tractor.

4. A tractor comprising an axle, a pair of wheels journaled on said axle, a frame connected centrally of its length to said axle, a pair of idlers for the rear of said frame, a plurality of draw heads depending from said frame, a means to drive said wheels and means to govern the relative speeds of said wheels whereby to control the direction of said tractor, and an invertible seat attached to the rear of said frame.

1,154,323. MAIL-BAG CATCHER AND DELIVERER. FRED B. KNOFF, Union City, Okla. Filed June 23, 1915. Serial No. 35,814. (Cl. 258—19.)

1. A device of the character described including a collapsible cage constructed to be mounted upon the side of a car and formed of a series of spaced and transversely disposed bars, bearings within which the bars are journaled, said bars having corresponding portions thereof bent laterally for coöperation with each other to form a cage when swung outwardly, and means for simultaneously rotating the bars to collapse the laterally bent portions thereof against the car or swing them outwardly into operative position.



2. A device of the character described including a collapsible cage adapted to be mounted upon the side of a car and formed of a series of spaced and transversely disposed bars, bearings within which the bars are journaled, said bars having corresponding portions thereof deflected laterally for coöperation with each other to provide a cage when swung outwardly into operative position, crank arms rigid with the bars, an upright bar engaging the several crank arms, and means for moving the upright bar to rotate simultaneously all of the transverse bars and swing the outwardly deflected portions thereof against the side of the car or outwardly into operative position.

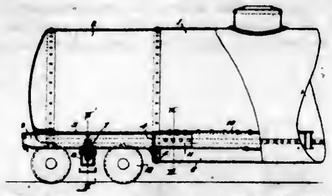
3. A device of the character described including a collapsible cage constructed to be mounted upon the side of a car and formed of a series of spaced and transversely disposed bars, bearings within which the bars are journaled, said bars having corresponding portions thereof deflected laterally for coöperation with each other to form a cage when swung outwardly into operative position, a swinging bottom plate connected to the lowermost bar so as to move therewith, crank arms rigid with the bars, an upright bar engaging the several crank arms, and means for moving the upright bar to rotate simultaneously all of the transverse bars and either collapse the laterally deflected portions thereof against the side of the car or swing them outwardly into operative position.

4. A device of the character described including a collapsible cage constructed to be mounted upon the side of a car and formed of a series of spaced and transversely disposed bars, bearings within which the bars are journaled, said bars having corresponding portions thereof deflected laterally for coöperation with each other to provide a cage when swung outwardly, means for simultaneously rotating all of the bars to collapse the laterally deflected portions thereof against the side of the car or swing them outwardly into operative position, a swinging trap door for the bottom of the cage, a trip lever upon the trap door, and a latch member upon the lowermost transverse bar of the cage for coöperation with the trip lever to hold the trap door normally in a raised position.

5. A device of the character described including two upright series of corresponding bearings, spaced and transversely disposed bars journaled within the bearings, the portions of the bars between the bearings being deflected outwardly for coöperation with each other to form a cage when swung outwardly into operative position, and the ends of the bars being extended beyond one set of bearings and correspondingly deflected outwardly for coöperation with each other to provide a second cage when swung outwardly, means for simultaneously rotating the bars to collapse the laterally deflected portions thereof or swing them outwardly into operative position.

[Claims 6 and 7 not printed in the Gazette.]

1,154,324. TANK-CAR. WILLIAM J. KNOX, Dubois, Pa. Filed Feb. 12, 1914. Serial No. 818,265. (Cl. 105—264.)



1. In combination in a tank car, a pair of trucks at the ends of the car with draft sills and body bolsters, a tank comprising a shell cylindrical in cross section and of substantially uniform horizontal diameter from end to end, the lower portion of the shell at each end being set in to provide a space for the draft sills, body bolsters and trucks, and partial heads at the inner ends of the said set in portions of the shell and on the inner sides of the inner wheels of the trucks, the central portion of the tank between the partial heads extending down below the said body bolsters and below the upper portions of the wheels.

2. In combination in a tank car, a pair of trucks at the ends of the car with draft sills and body bolsters, a tank comprising a shell cylindrical in cross section and of substantially uniform diameter from end to end, the lower portion of the shell at each end being set recurved in to provide a space for the draft sills, body bolsters and trucks, partial heads at the inner ends of the said set in portions of the shell and on the inner sides of the inner wheels of the trucks, and a center sill extending from one partial head to the other and lying inside the tank, the central portion of the tank between the partial heads extending down below the said body bolsters and below the upper portions of the wheels.

3. In combination in a tank car, a pair of trucks at the ends of the car with draft sills and body bolsters, a tank comprising a shell cylindrical in cross section and of substantially uniform diameter from end to end, the lower portion of the shell at each end being set in to provide a space for the draft sills, body bolsters and trucks, partial heads at the inner ends of the said set in portions of the shell and on the inner sides of the inner wheels of the trucks, and a center sill extending from one partial head to the other in alinement with the draft sills and lying inside the tank, the central portion of the tank between the partial heads extending down below the said body bolsters and below the upper portions of the wheels.

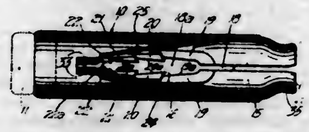
4. In combination in a tank car, a pair of trucks, body bolsters and draft sills carried thereby and a tank comprising a central cylindrical portion terminating short of the two trucks and extending down below the tops of the wheels thereof and below the body bolsters and having partial heads at its lower ends adjacent the said wheels, and particylindrical end portions of the same diameter horizontally as the central portion but having pockets or recesses on their lower sides to receive the said trucks, body bolsters and draft sills.

5. In combination in a tank car, a pair of trucks, body bolsters and draft sills carried thereby and a tank comprising a central cylindrical portion terminating short of the two trucks and extending down below the tops of the wheels thereof and below the body bolsters and particylindrical end portions with the lower sides thereof cut away, plates provided with downwardly projecting ends closing the said cut out portions with the downwardly projecting ends constituting partial heads for the said central portion of the tank, the said plates being formed so as to provide spaces for the reception of the body bolsters and draft sills.

[Claims 6 to 11 not printed in the Gazette.]

1,154,325. PENCIL-SHARPENER. HENRY LA CAESE, Los Angeles, Cal. Filed Dec. 22, 1913. Serial No. 808,066. (Cl. 120—93.)

1. A pencil sharpener, comprising a hollow cylindrical body having a hollow tapered end portion, the whole body having a longitudinal slit through one of its walls from end to end and a spring portion formed in the opposite portion of the body wall so that the body may be resiliently compressed about a pencil, and a plurality of knife edges formed on opposite edges of said longitudinal slit in the tapered portion of the body, the edges on each side of the slit being justaposed end to end.



2. A pencil sharpener, comprising a hollow cylindrical body having a hollow tapered end portion, the whole body having a longitudinal slit through one of its walls, from end to end and a spring portion formed in the opposite portion of the body wall so that the body may be resiliently compressed about a pencil, and a plurality of knife edges formed on opposite edges of said longitudinal slit in the tapered portion of the body, the edges on each side of the slit being juxtaposed end to end with one end of each cutting edge overhanging the adjacent end of the adjoining cutting edge.

3. A pencil sharpener, comprising a hollow cylindrical body having a hollow tapered end portion, the whole body having a longitudinal slit through one of its walls, from end to end and a spring portion formed in the opposite portion of the body wall so that the body may be resiliently compressed about a pencil, and a plurality of knife edges formed on opposite edges of said longitudinal slit in the tapered portion of the body, each cutting edge being diagonal to a plane determined by the longitudinal axis of the body and by any point in the edge, so that each edge is in position to effect a shearing cut on a pencil, the edges of each side of the slit being juxtaposed end to end with one end of each cutting edge overhanging the adjacent end of the adjoining cutting edge.

4. In a pencil sharpener, a hollow cylindrical body having a longitudinal cutting edge, said cutting edge being formed of a plurality of individual cutting edges arranged substantially longitudinally end to end and formed directly on the body, the individual cutting edges being separated by transverse slits and one end of each individual edge overhanging the adjacent end of the adjacent edge.

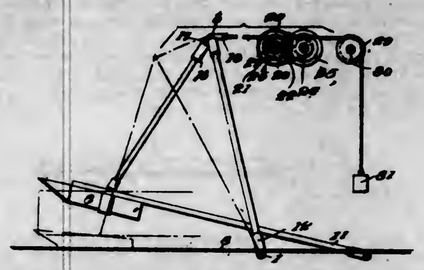
5. In a pencil sharpener, a hollow cylindrical body with a hollow conical portion, the conical portion having a longitudinal slit with a cutting edge on one side thereof, said cutting edge being formed directly on the body and comprising a plurality of individual cutting edges arranged substantially longitudinally end to end, each cutting edge being slightly diagonal to the longitudinal axis of the body, and the cutting edges being separated by transverse slits in the body making an acute angle with the individual cutting edges at their ends toward the larger end of the conical body portion.

[Claim 6 not printed in the Gazette.]

1,154,326. WAVE-MOTOR. HENRY J. LAWRENCE, Long Beach, Cal. Filed Aug. 27, 1913. Serial No. 786,872. (Cl. 253—11.)

1. In a wave motor, a power transmitting element, a wave impact member arranged, upon receiving impact, to render the said element idle, a lever mounted at its lower end for rocking movement and connected with the said impact member, a second lever similarly mounted and to which the power transmitting element is connected, the levers being arranged in crossed relation, and operative connection between the upper ends of the said levers.

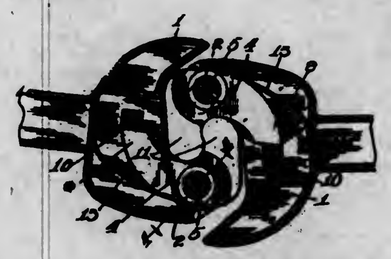
2. In a wave motor, a power transmitting element, a wave impact member arranged, upon receiving impact, to render the said element idle, a lever mounted at its lower end for rocking movement and connected with the said impact member, a second lever similarly mounted and to which the power transmitting element is connected, and operative connection between the upper end of the said levers, the said levers differing in length and being arranged in crossed relation.



3. In a wave motor, a rocking lever member, a second rocking lever member arranged in crossed relation to the first mentioned member, a wave impact member carried by the second mentioned rocking lever member, a rod extending between the free ends of the said lever members, and a power transmitting element connected to the free end of the first mentioned rocking lever member.

4. In a wave motor, a lever member mounted at its lower end for rocking movement, a second lever member arranged in crossed relation with respect to the first-mentioned member and mounted at its lower end for rocking movement, a wave impact member carried by the second-mentioned lever member at its upper end, a connecting rod pivotally connected to the upper ends of said lever members, and a power transmitting element connected to the upper end of the first-mentioned lever.

1,154,327. RAILWAY-COUPLING. JOSEPH H. LE COMPTE, Maywood, Ill., assignor of one-third to Peter T. Pauls and one-third to Edward Kowaleski, Chicago, Ill. Filed Oct. 13, 1913. Serial No. 794,805. (Cl. 213—65.)

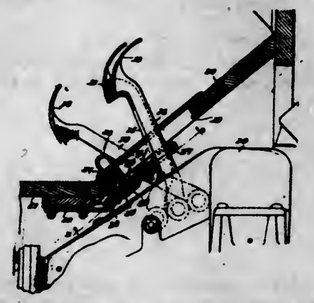


In a coupler of the class described, a draw head, a lock-lak knuckle therein, a coupler pin, a pivot pin for said knuckle, a slot in said draw head disposed in a line tangential to a circle of which the locking pin is the center and receiving said knuckle pivot pin, whereby the latter is permitted to change the position of the center of rotation of the knuckle, and means engaging said knuckle to return the same to initial position when strain thereon is removed.

1,154,328. AUTOMATIC REGULATOR AND SAFETY APPLIANCE FOR THE CONTROL OF MOTOR-VEHICLES. HENRY J. LYMAN, Newfield, N. J. Filed June 30, 1914. Serial No. 848,293. (Cl. 74—61.)

1. The combination with a clutch pedal and a service brake pedal, of independent means for automatically locking the clutch pedal in position to hold the clutch in inactive position and for locking the brake pedal in service position, and a member movable to cause successive release of both of said locking means.

2. The combination with a clutch pedal and a service brake pedal, of independent means for automatically locking the clutch pedal in position to hold the clutch in inactive position and for locking the brake pedal in service position and means for successively releasing said locks, said means including independent carriages supporting the locks and movable toward and away from the pedals, one of said carriages being movable to move the other, and a releasing member extending from such carriage.



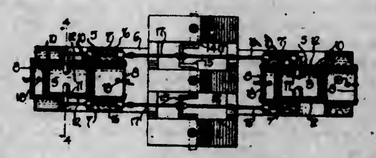
3. The combination with a combined clutch and gear shift pedal which, in middle position, holds the transmission in neutral position, of a lock for automatically securing such pedal in middle position when swung to such position, and means independent of the pedal for releasing such lock.

4. The combination with swingingly mounted, spring held brake and clutch pedals, of locking plates simultaneously or independently movable across the path of such pedals to automatically lock them in place, and means operable by movement of a single member for releasing both locking plates.

5. The combination with swingingly mounted, spring held brake and clutch pedals, of a supporting bracket, carriages slidably mounted on the bracket, springs tending to draw the carriages in one direction, and locking plates secured to the carriages and held against the sides of the pedals by such springs, whereby movement of the pedals beyond the ends of the locking plates permits them to move into the return path of the pedals.

[Claims 6 to 9 not printed in the Gazette.]

1,154,329. INTERNAL-COMBUSTION ENGINE. ROBERT H. MCCARTHY, Madelia, Minn. Filed Sept. 26, 1914. Serial No. 863,682. (Cl. 123—56.)

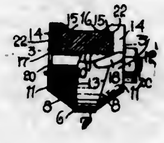


1. In an internal combustion engine, opposed engine cylinders, a piston to operate in each of said cylinders, each cylinder being provided with a water jacket, a transversely disposed wrist pin centrally connected to each piston and projecting from opposite sides thereof, each of the cylinders being provided in each end with an intake port and an exhaust port, an engine shaft provided with spaced cranks, thrust rods rigidly connected to the ends of each wrist pin and movably disposed through the walls of the water jacket of the engine cylinder, and connecting rods pivotally connected at one of their ends to said thrust rods, the connecting rods which are connected to the thrust rods on each side of the engine being pivotally connected at their other ends to the respective cranks of the engine shaft.

2. In an engine of the character described, opposed cylinders, a piston to operate in each of said cylinders and provided with wrist pins, the cylinder wall having longitudinal slots in opposite sides through which said

wrist pins extend, each of the cylinders being provided with a water jacket, longitudinal rods slidably mounted in the walls of the water jackets and connected at one of their ends to said wrist pins, a power shaft having spaced cranks extending upon the same side of its axis, and connecting rods between the slide rods on each side of the engine and the respective cranks to reciprocate the pistons in the same direction within the respective cylinders.

1,154,330. HORSESHOE-CALK. FRANK MACEY, Govans, Md. Filed July 6, 1915. Serial No. 38,241. (Cl. 168—34.)



1. A detachable horseshoe calk comprising a pyramidal-shaped body, clamping members for engagement upon opposite sides of the shoe coöperating with said body to force the same into frictional engagement with the bottom face of the shoe, and means holding said clamping members and the calk body in assembled relation and permitting of their relative longitudinal movement.

2. A detachable horseshoe calk including a pyramidal-shaped calk body, clamping members for engagement upon opposite sides of the shoe to coöperate with the opposite faces of said body and force the same into frictional engagement with the bottom face of the shoe, and means extending through the calk body and the clamping members to hold the same in assembled relation, said clamping members being provided with means whereby the same may be adjusted longitudinally upon said connecting means with respect to the calk body.

3. A detachable horseshoe calk including a pyramidal-shaped calk body having a base of a width substantially equal to the width of the shoe, clamping members adapted for engagement upon opposite sides of the shoe and co-operating with the opposite faces of the calk body to force the same into frictional engagement with the bottom face of the shoe, a bolt extending through the clamping members and the calk body to hold the same in assembled relation, and a nut threaded upon one end of said bolt.

4. A detachable horseshoe calk including a calk body having opposite convergently inclined faces, clamping members also having inclined faces to co-act against the respective inclined faces of said calk body, said body being provided with a bolt receiving opening and each of the clamping members having a longitudinal slot to coincide with said opening, a bolt extending through said opening and slots, and a nut engaged upon said bolt to force the clamping members into engagement upon opposite edges of the shoe and cause said members to exert a wedging action against the calk body to force the same into biting frictional engagement with the bottom face of the shoe.

5. A detachable horseshoe calk including a calk body provided with a bolt receiving opening, clamping members each having a longitudinal slot, a bolt extending through said opening and slots, said clamping members being shiftable upon the bolt longitudinally of the calk body, and a nut threaded upon said bolt to force the clamping members into engagement against the opposite edges of the shoe, said clamping members and the calk body being provided with co-acting means whereby said body is forced into biting frictional engagement with the bottom face of the shoe.

[Claims 6 to 9 not printed in the Gazette.]

1,154,331. TOY. HARRY J. MITCHELL, Wilmerding, Pa. Filed Oct. 27, 1913. Serial No. 797,438. (Cl. 46—59.)

1. A toy of the character described comprising a barrel, and base plate carried by said barrel, an up-standing perforated plate carried by said base plate and having its opening formed in alinement with said barrel, a figure pivotally connected with said base plate, means for yieldably holding said figure in a standing position with its head extending through the opening of said perforated plate, a signal carried by said base plate and operated by said figure being moved to a sitting position, and means carried by said barrel for striking the head of said figure to drive said figure to a sitting position.



2. A toy of the character described comprising a barrel, a base plate carried by said barrel, a perforated up-standing plate carried by said base plate, pivot ears carried by said base plate to the rear of said up-standing plate, a pivot pin carried by said pivot ears and a cross bar pivotally connected with said pivot pin, a spring mounted upon said pivot pin and having one end portion engaging said base plate and its other end portion engaging said cross bar for yieldably holding said cross bar in a normal position, a figure carried by said cross bar with its head extending through the opening of said up-standing plate when said cross bar is in a normal position, a signal carried by said base plate to the rear of said figure, and means carried by said barrel for striking said figure to knock the same out of a normal position and into engagement with said signal to operate the same.

3. A toy of the character described comprising a base plate, a perforated up-standing plate carried by said base plate, a figure pivotally connected with said base plate, means for yieldably holding said figure in a normal position with its head extending through the opening of said up-standing plate, a barrel carried by said base plate in alinement with the opening of said up-standing plate, a plunger slidably mounted in said barrel, an abutment carried by the inner end portion of said plunger, a spring carried by said plunger between said abutment and the inner end of said barrel, and means for drawing said plunger through said barrel against the tension of its spring, whereby when said plunger is released, the spring will cause its inner end to be thrown into engagement with the head of said figure.

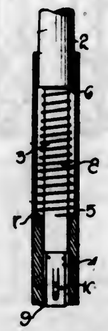
4. A toy of the character described comprising a base plate, a perforated plate carried by said base plate, a signal carried by said base plate, a figure pivotally connected with said base plate, means for yieldably holding said figure in an upright position with its upper end portion extending forwardly through the perforation of said perforated plate, and means for striking said figure from an upright position to a seated position in contact with said signal.

1,154,332. PENHOLDER. MARCUS J. MITCHELL, Youngstown, Ohio. Filed Apr. 26, 1915. Serial No. 24,056. (Cl. 120—101.)

1. A pen holder including a shank having a reduced end portion, a cap permanently mounted upon the extremity of said reduced portion, said cap being formed of metal split to provide yieldable pen engaging sections, and a resilient tongue, the extremity of the tongue being formed to provide a laterally projecting head, a sleeve slidably mounted upon and surrounding the shank and cap, a spring inclosed within the sleeve and surrounding the shank and urging the sleeve outward against the stop.

2. A pen holder including a shank, a cap mounted upon the extremity of the shank, a longitudinally bowed pen engaging spring projecting beyond the surface of the cap, the end of the spring being disposed within a slit in the cap, a sleeve surrounding the shank and cap and longitudinally slidable thereon, and a spring surrounding the shank and disposed within the sleeve and urging said sleeve to a projected position.

3. A pen holder, a shank having a reduced portion, a cap mounted upon the extremity of the reduced portion, said cap being split to provide a longitudinally extending tongue having a laterally extending head forming a stop and also being split to form a longitudinally extending outwardly bowed resilient tongue, a sleeve surrounding the body of the shank and the reduced portion thereof and said cap and longitudinally slidable upon the shank, the bore of said sleeve being enlarged at its rear end and a helical spring surrounding the reduced portion of the shank and bearing against the sleeve and inclosed thereby and urging the sleeve into a position against said stop, and a resilient pen ejecting member carried upon said cap.



4. In a pen holder of the character described, a shank, a sleeve slidingly mounted thereon, a spring inclosed within the sleeve and surrounding the shank and urging the sleeve outward, and a yieldable stop carried upon the extremity of the shank and normally projecting laterally to engage the sleeve but movable inward to permit the relative movement of the shank and sleeve in a direction to permit the detachment of the shank and sleeve.

1,154,333. MACHINE-SHOP WORK-SUPPORT. CHARLES A. OFFLITER, St. Louis, Mo. Filed Apr. 1, 1914. Serial No. 828,825. (Cl. 29—89.)



1. A machine shop work support comprising a base, a work holder, means for mounting said work holder on said base constructed and arranged to permit said work holder to move vertically, swing angularly, and rotate on said base, and means for concurrently moving said work holder vertically and angularly.

2. A machine shop work support comprising a base, a work holder, means for mounting said work holder on said base constructed and arranged to permit said work holder to move vertically, swing angularly, and rotate on said base, means for raising said work holder, means operated during the raising of said work holder constructed and arranged to swing it from a vertical to a horizontal position, and means for locking said work holder in raised position.

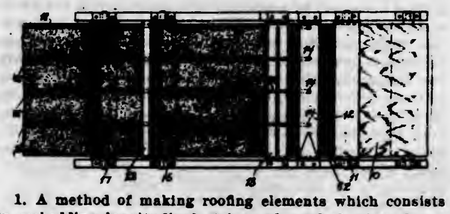
3. A machine shop work support comprising a base, a work holder, means for mounting said work holder on said base constructed and arranged to permit said work holder to move vertically, swing angularly, and rotate on said base, means for moving said work holder vertically, means operated during vertical movement of said work holder constructed and arranged to swing it angularly, and means for locking said work holder against rotation.

4. A machine shop work support comprising a base, a work holder, means for mounting said work holder on said base constructed and arranged to permit said work holder to move vertically, swing angularly, and rotate on said base, means for raising said work holder, means operated during the raising of said work holder constructed and arranged to swing it from a vertical to a horizontal position, and means for locking said work holder against movement in either of its positions.

5. A machine shop work support comprising a base, a work holder, means for mounting said work holder on said base constructed and arranged to permit said work holder to move vertically and swing on said base, means operating during vertical movement of said work holder constructed to swing said work holder, and means for locking said work holder in raised position.

[Claims 6 to 16 not printed in the Gazette.]

1,154,334. METHOD OF MAKING ROOFING ELEMENTS. FREDERICK C. OVERBURY, Montclair, N. J., assignor to Flintkote Manufacturing Company, Rutherford, N. J., a Corporation of New Jersey. Filed Jan. 21, 1915. Serial No. 3,481. (Cl. 154—2.)



1. A method of making roofing elements which consists in embedding longitudinal stripes of crushed mineral material in the adhesive coating of a sheet of roofing material, and then cutting said sheet transversely to form strips having said stripes crosswise thereon.

2. A method of making roofing elements, which consists in applying an adhesive to the face of an elongated fibrous sheet, embedding lines of crushed mineral material in said adhesive to form longitudinal stripes, and then cutting said sheet transversely to form sections of the same width and length.

3. A method of making roofing elements, which consists in applying an adhesive to the face of an elongated fibrous sheet, embedding lines of crushed mineral material in said adhesive to form longitudinal stripes, and embedding crushed mineral material of another color in the uncoated portions of said adhesive to form intervening bands.

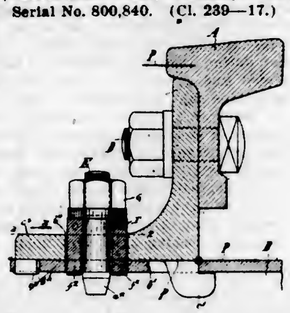
4. A method of making roofing elements, which consists in applying an adhesive to the face of an elongated fibrous sheet, embedding lines of crushed mineral material in said adhesive to form longitudinal stripes, embedding crushed mineral material of another color in the uncoated portions of said adhesive to form intervening bands, and cutting said sheet transversely into shingle strips.

5. A method of making roofing elements, which consists in applying an adhesive to the face of an elongated fibrous sheet, embedding lines of crushed mineral material in said adhesive to form longitudinal stripes, embedding crushed mineral material of another color in the uncoated por-

tions of said adhesive to form intervening bands, and cutting said sheets into sections each having said stripes and bands crosswise of its length.

[Claims 6 to 14 not printed in the Gazette.]

1,154,335. GUARD-RAIL ATTACHMENT. CLEMENS PAHL, Essen-Ruhr West, Germany. Filed Nov. 13, 1913. Serial No. 800,840. (Cl. 239—17.)



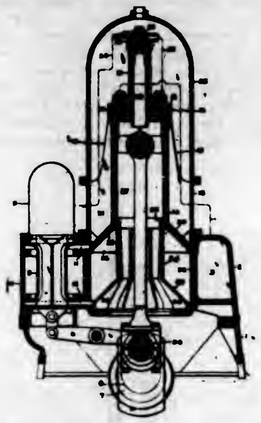
1. A guard rail attachment for permanent ways, comprising a supporting angle rigidly connected with the guard rail, the horizontal limb of said angle resting on a sleeper and being provided with a hook, said hook extending through an aperture in the sleeper so as to engage beneath the sleeper and facing in the direction of the running rail, the other extremity of said horizontal limb engaging directly with the sleeper so as to transmit any side thrust from said angle to said sleeper, the abutment surfaces between said angle and said sleeper running parallel to the longitudinal direction of the angle.

2. A guard rail attachment for permanent ways comprising a supporting angle rigidly connected with the guard rail; the horizontal limb of said angle resting on a sleeper and being provided with a hook, said hook extending through an aperture in the sleeper so as to engage beneath the sleeper and facing in the direction of the running rail, the other extremity of said horizontal limb engaging directly with the sleeper so as to transmit any side thrust from said angle to said sleeper, the abutment surfaces between said angle and said sleeper running parallel to the longitudinal direction of the angle; and holding-down means between said angle and the sleeper.

3. A guard rail attachment for permanent ways, comprising a supporting angle rigidly connected with the guard rail, the horizontal limb of said angle resting on a sleeper and being provided with a hook, said hook extending through an aperture in the sleeper so as to engage beneath the sleeper and facing in the direction of the running rail, the other extremity of said horizontal limb engaging directly with the sleeper so as to transmit any side thrust from said angle to said sleeper, the abutment surfaces between said angle and said sleeper running parallel to the longitudinal direction of the angle; a holding-down bolt for said angle engaging beneath said sleeper, said bolt having lateral play in the angle and the sleeper, whereby the bolt will be subjected to tension alone and transmitting the vertical thrust from said angle to said sleeper.

1,154,336. COMBINED SCAVENGING-PUMP AND COMPRESSOR. OTTO F. PEARSON, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Dec. 26, 1913. Serial No. 808,649. (Cl. 230—82.)

1. In an apparatus of the character described, the combination with a pair of pistons comprising a tubular member which forms one of them, an inclined web member surrounding it and having a peripheral portion which forms the other, a cylinder for the tubular piston member and a cylinder for the other, said last named cylinder comprising a stationary member in telescopic relation with the tubular piston member, a second stationary member surrounding it, and means associated with the stationary members forming heads for the cylinder.



2. In an apparatus of the character described, the combination of a trunk piston, a second piston carried by the trunk of the first, a stationary tubular member which projects into said trunk and forms a head and inner cylinder for the second piston, an outer cylinder for the second piston, a cylinder for the trunk piston, valve means for the cylinders, and a driving means for the pistons.

3. In an apparatus of the character described, the combination of a trunk piston, a second piston which comprises a peripheral portion and an inclined web that connects it to the trunk of the first, an outer cylinder for the second piston, a member comprising a tubular portion that is in telescopic relation with said trunk and forms a part of a cylinder for the second piston and has an inclined web which supports said portion and forms a cylinder head, a cylinder for the trunk piston, an inclined web for supporting it that also forms a head for the second cylinder, valve means for the cylinders, and driving means for the pistons.

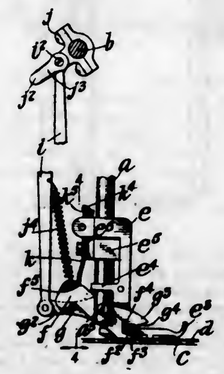
4. In a combination, a cylinder, a piston movable therein which has a central opening, a tubular member which makes a sliding fit with the wall of said opening and forms one wall of a cylinder for the piston, a connecting rod for driving the piston that extends through the member, a shaft connected to the rod, and valve means for the cylinder.

5. In a combination, a base, a receiver mounted thereon, a cylinder located in the receiver, a trunk piston, a web attached to the trunk and forming a second piston, a hollow member supported by the receiver which is in telescopic relation with said trunk and has a web forming a cylinder head, a cylinder for the trunk piston which is supported by the receiver and has a web that forms one head for the first named cylinder, valve means for the cylinders, and a driving means for the pistons.

1,154,337. PICOT-CUTTING ATTACHMENT FOR SEWING-MACHINES. WILLIAM L. PIRACH, New York, N. Y., assignor of one-fifth to Max Grundfast, New York, N. Y. Filed Sept. 22, 1914. Serial No. 862,931. (Cl. 112—6.)

1. The combination with the presser foot bar of a hemstitch sewing machine of the usual rock shaft and presser foot bracket attachment having two presser feet, the lower end of said bar being also provided with a vertical slot, and two blades pivoted in said slot and operating between said feet, one of said blades being in operative connection with the rock shaft and the other being provided with a tensional connection rearwardly of the presser foot bar, and means for throwing the last named blade in a raised position.

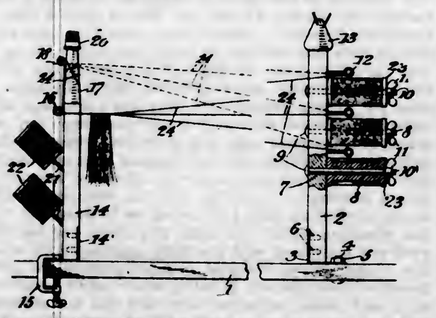
2. The combination with the presser foot bar of a hemstitch sewing machine having the usual rock shaft and presser foot bracket attachment provided with two presser feet, of two blades pivoted to said bar and operating between said feet one of said blades being in operative connection with the rock shaft and the other being provided with a tensional connection rearwardly of the presser foot bar, and a tensionally operated part pivotally supported rearwardly of the presser foot bar and adapted to hold the last named blade in a raised position above the bottom surface of the presser feet.



3. The combination with the presser foot bar of a hemstitch sewing machine having the usual rock shaft and two presser feet, of two blades pivotally supported and operating between said feet one of said blades being in operative connection with the rock shaft and the other being provided with a tensional connection rearwardly of the presser foot bar, and a tensionally operated lock device pivoted rearwardly of said bar and adapted to be turned into position to hold the last named blade above the operative surface of the presser feet.

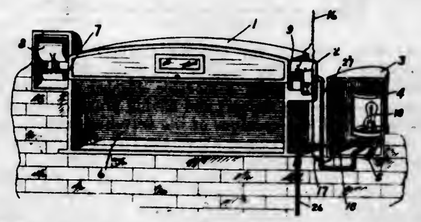
4. The combination with the presser foot bar of a hemstitch sewing machine having the usual rock shaft and two presser feet, of two blades pivotally supported and operating between said feet, one of said blades being in operative connection with the rock shaft and the other being provided with a tensional connection rearwardly of the presser foot bar, and means for raising the front end of the last named blade and holding the bottom edge thereof above the bottom surface of the presser feet.

1,154,338. WEAVING-FRAME FOR HAIR-GOODS. ARON RAUCH, New York, N. Y. Filed Sept. 13, 1913. Serial No. 789,588. (Cl. 132—24.)



In a weaving apparatus of the class described, a vertical frame member the top of which is provided with a vertical loosely mounted, rotatable head sleeve having a thread attaching device connected therewith, said frame member being also provided below said head sleeve with a thread guide and attaching device, and said head sleeve being held against rotation by securing the threads to the thread attaching device connected with said head sleeve, turning said sleeve to wind the threads thereon and passing said threads over the attaching device on said sleeve and under the guide and attaching device below said sleeve.

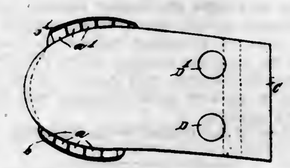
1,154,339. BAKER'S-OVEN LIGHT. CHARLES ROBSON, Philadelphia, Pa. Filed Apr. 30, 1912. Serial No. 694,049. (Cl. 240—5.)



1. In a baker's oven the combination of a door frame having a rigid lateral extension provided with an opening, a door hinged to said frame and having a pintle on one side of the extension, a crank arm on said pintle arranged opposite the opening, a base extending through said opening and attached to said extension, a switch arm pivoted to the base to one side of the extension and provided with a fork engaging the crank arm in two directions, and a switch contact attached to the base and arranged on the side of the extension opposite the pivotal point of the switch arm, substantially as described.

2. In a baker's oven light the combination of a housing, a fixture arranged in the housing and provided with a threaded opening, a gas way alined with the opening, a pipe, and circuit connections and a terminal plug arranged in the pipe and projecting toward the fixture whereby the fixture can be employed interchangeably with a gas burner or an electric lamp, substantially as described.

1,154,340. HEEL-CUSHION FOR BOOTS AND SHOES. ORRIN M. ROLFE, Lowell, Mass. Filed July 26, 1915. Serial No. 41,860. (Cl. 36—37.)

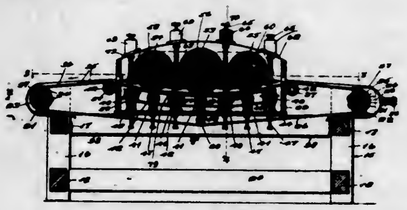


1. A heel-cushion comprising a top-plate of spring sheet-material having at its side edges downwardly curved fingers integral with said plate, and a wearing plate having upturned side edges outside of the lower ends of said fingers, said plates being secured to each other near their front ends.

2. A heel cushion comprising a top plate of spring sheet-material having at its side edges downwardly curved fingers integral with said plate, and a wearing plate of spring-sheet material, having upturned side edges outside the lower ends of said fingers, said plates being secured to each other near their front ends.

3. A heel cushion, comprising a top-plate of spring sheet steel having at its side edges downwardly curved fingers integral with said plate, and a wearing plate of spring sheet steel on which the lower ends of said fingers rest said wearing plate having upturned side edges outside the lower ends of said fingers, said plates being secured to each other near their front ends.

1,154,341. MACHINE FOR TREATING LEATHER. CARLETON RUHE, Olean, N. Y. Filed June 24, 1915. Serial No. 36,045. (Cl. 149—19.)



1. In a machine for treating leather, a supporting structure, a traveling support connected therewith and provided with openings, a movable member arranged beneath the traveling support and having prongs adapted to operate within the openings of the traveling support, and a movable brush arranged above the traveling support to contact with the leather or stock carried thereby.

2. In a machine for treating leather, a supporting structure, a traveling support connected therewith and provided with openings and adapted to receive thereon the leather or stock to be treated, a movable member provided with elements adapted to operate through the openings in the traveling support to contact with the leather or stock and hold it from moving with relation to the traveling support, a movable brush arranged near and above the traveling support to contact with the leather or stock thereon, means to drive the traveling support, and means to drive the movable brush.

3. In a machine for treating leather, a supporting structure, a traveling support to receive the leather or stock thereon, a movable member arranged near the traveling support and having prongs to contact with the stock for preventing it from slipping upon the traveling support, and a movable brush arranged near the traveling support to contact with the leather thereon.

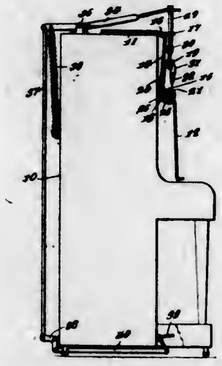
4. In a machine for treating leather, a supporting structure, an endless conveyer connected therewith and provided with openings, a roll arranged beneath the upper portion of the endless conveyer and carrying prongs adapted to extend through and beyond the openings in the endless conveyer, and a rotatable brush arranged near and above the endless conveyer.

5. In a machine for treating leather, a supporting structure, a traveling support provided with openings and adapted to receive the leather thereon, a rotatable member arranged beneath the traveling support and having prongs adapted to extend through and beyond the openings of the traveling support, means to vertically adjust the rotatable member with relation to the traveling support, and a movable brush arranged near and above the traveling support.

[Claims 6 to 16 not printed in the Gazette.]

1,154,342. MUSIC-LEAF TURNER. CARL FRED SAMMET, Annandale, N. J., assignor to Emil Sammet, Annandale, N. J. Filed June 29, 1914. Serial No. 848,007. (Cl. 84—17.)

1. A device of the character described comprising a supporting strip, a supporting bracket carried by said strip, a guide carried by said strip and provided with a rectangular opening, pivotally mounted leaf engaging arms, a pin connected with said supporting strips and having its outer end portion provided with an opening positioned above the opening of said guiding strip, a stem passing through the opening of said pin and having its lower end portion flattened to conform to the contour of said guide and twisted to cause the stem to rotate when moved longitudinally, an arm extending from the lower end portion of said stem, a finger carried by said arm for engaging said leaf engaging arms and cause the same to be swung from one position to another, when said stem is moved downwardly, and means for moving said stem.



2. A device of the character described comprising a supporting element, a guide provided with a rectangular opening, attaching means for said supporting element provided with an opening formed in alinement with the opening of said guide, leaf engaging arms pivotally connected with said supporting element, a stem passing through the opening of said attaching element and rotating therein, the lower end portion of said stem being flattened and twisted and passed through the opening of said guide to cause the stem to rotate and move longitudinally, means extending from said stem for engaging said leaf engaging arms to hold the same when said stem is moved downwardly, and means for moving said stem.

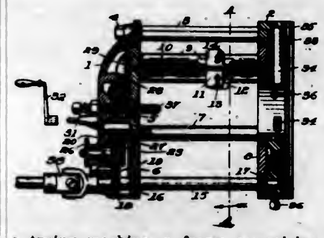
3. A device of the character described comprising a support, pivotally mounted leaf engaging means, a guide positioned above said leaf engaging means and provided with a rectangular opening, an attaching member provided with an opening positioned above the opening of said guide, means for turning said leaf engaging means slidably mounted in the openings of said guide and securing means, said turning means being twisted to cause the turning means to rotate when moved vertically, and means for moving the stem.

4. A device of the character described comprising a support, pivotally mounted leaf engaging arms, one of said arms being provided with a heel to cause the same to be moved by a second arm when the second arm is moved to an adjusted position and to cause a third arm to be moved by the first mentioned arm when the first mentioned arm is moved to an adjusted position, means for turning said arms, and means for actuating said last mentioned means.

5. A device of the character described including a supporting strip having its free end bent to form a foot, a supporting bracket, a guiding strip carried by said supporting strip and having its lower end bent to form a foot extending above the foot of said supporting strip and having its upper end portion bent to form a guide, a pivot pin passing through said teeth and connecting said supporting bracket with said supporting strip, leaf engaging arms mounted upon said pivot pin, plates mounted upon said pin between said leaf engaging arms and having their inner end portions connected with said supporting strip, a securing pin connected with the upper end portion of said supporting strip and having its forward end portion extending beyond the same, said guide and the forward end portion of said pin being provided with openings, a rod slidably mounted in said openings and positioned to cause the rod to rotate when moved longitudinally, and means connected with said rod for engaging said leaf engaging arms and swing the same to an adjusted position when the pin is moved downwardly.

[Claim 6 not printed in the Gazette.]

1,154,343. TRUING-MACHINE. JAMES SAUNDERS, Dayton, Ohio, assignor to Walter C. Dunn, Wyoming, Ohio. Filed June 11, 1915. Serial No. 33,467. (Cl. 82—4.)



1. In a truing machine, a frame comprising chucking and centering means, a revolving tool carrier journaled within said frame and comprising a tool post and a lead screw for moving the tool post, and driving mechanism whereby said tool carrier may be rotated in one direction and said lead screw may be rotated continuously in either direction.

2. In a truing machine, a frame comprising chucking and centering means, a revolving tool carrier journaled within said frame and comprising a tool post and a lead screw for moving the tool post, driving mechanism for said tool carrier, and clutch controlled driving mechanism for said lead screw whereby the latter may be rotated continuously in its bearings or its rotation stopped while the rotation of said tool carrier may continue.

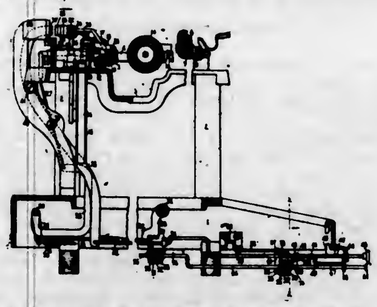
3. In a truing machine, a frame, a revolving tool carrier journaled within said frame, a tool post mounted within said tool carrier, a lead screw for said tool post, driving mechanism for said tool carrier, continuous driving mechanism for said lead screw, and means whereby the direction of rotation of said lead screw may be reversed while said tool carrier is revolving.

4. In a truing machine, a frame, a revolving tool carrier journaled within said frame, a tool post mounted within said tool carrier, a lead screw for said tool post, driving mechanism for said tool carrier, continuous driving mechanism for said lead screw, clutch controlled means whereby the direction of rotation of said lead screw may be reversed or its rotation stopped at the will of the operator while said tool carrier is revolving.

5. In driving mechanism for the lead screw of a truing machine, a gear journaled concentric with the center of rotation of a tool carrier, driving mechanism for said gear, a clutch whereby said driving mechanism may be disconnected from said gear, and means whereby said gear may be prevented from rotating.

[Claims 6 to 8 not printed in the Gazette.]

1,154,344. TYPE-WRITING MACHINE. CHARLES E. SMITH, New York, N. Y., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed May 4, 1915. Serial No. 25,675. (Cl. 197—177.)



1. In a typewriting machine, the combination of a carriage; and tabulator mechanism comprising a series of movable tabulator stops all having a uniform throw of a given extent at one time and a uniform throw of a different extent at another time, a series of tabulator keys for said stops, and controlling means operable at will to regulate the extent of uniform throw that said stops may receive, said controlling means comprising a plurality of individually operable arresting members, and a separate key for each of said members.

2. In a typewriting machine, the combination of a carriage; and tabulator mechanism comprising a series of movable tabulator stops all having a uniform throw of a given extent at one time and a uniform throw of a different extent at another time, a series of tabulator keys for said stops, controlling means operable at will to regulate the extent of uniform throw that said stops may receive, and carriage releasing means variably actuated in accordance with the variation in the throw of said stops, said releasing means including a plurality of interponents, and means for moving said interponents individually into operative position.

3. In a typewriting machine, the combination of a carriage; and tabulator mechanism comprising a series of movable tabulator stops all having a uniform throw of a given extent at one time and a uniform throw of a different extent at another time, a series of key controlled push rods which control said stops, limiting stops on said push rods, arresting means which co-act with the limiting stops on said push rods, and key controlled means for regulating said arresting means and thereby determining the different extents of movement that may be given to said tabulator stops.

4. In a typewriting machine, the combination of a carriage; and tabulator mechanism comprising a series of movable tabulator stops all having a uniform throw of a given extent at one time and a uniform throw of a different extent at another time, a series of key controlled push rods which control said stops, limiting stops on said push rods, arresting means which co-act with the limiting stops on said push rods, key controlled means for regulating said arresting means and thereby determining the different extents of movement that may be given to said tabulator stops, and carriage releasing means actuated by said push rods variably in accordance with the variation in the throw of said tabulator stops, said carriage releasing means comprising a plurality of interponents, and key controlled means for moving said interponents individually into coöperative relation with said push rods.

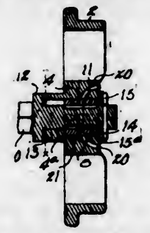
5. In a typewriting machine, the combination of a carriage; and tabulator mechanism comprising column stops, a series of movable selecting stops all having a uniform throw of a given extent at one time and uniform throw of a different extent at another time, a series of key controlled push rods which control said selecting stops, limiting stops on said push rods, a plurality of arresting bars coöperative with said limiting stops to control the extent of throw that may be given the selecting stops, and key controlled means for controlling said arresting bars.

[Claims 6 to 15 not printed in the Gazette.]

1,154,345. BUSHING FOR MINE-CAR WHEELS. CHRIST A. SPECHT, Punxsutawney, Pa., assignor of one-half to George L. Schicker, Punxsutawney, Pa. Filed July 13, 1915. Serial No. 39,709. (Cl. 105—67.)

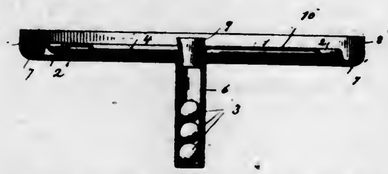
1. The combination of a car wheel formed with a hub having an enlarged axial opening extending into the same from one end thereof, the opening being reduced at the opposite end of the hub, the enlarged opening being provided at the sides thereof with longitudinal grooves while the reduced opening is provided at one side thereof with a notch, and a tubular bushing fitted removably in the enlarged opening of the hub and having a bore of the same size as the reduced opening of the hub, said bushing being provided upon the exterior thereof with longitudinal wings adapted to engage the before mentioned grooves, and being adapted to be driven out of position by a tool inserted in the before mentioned notch.

2. The combination of a car wheel formed with a hub having an enlarged axial opening therein, the sides of the opening being provided with longitudinal grooves, a tubular bushing fitted removably within the enlarged opening of the hub and formed with wings engaging the before mentioned grooves, said wings being recessed, and a radially disposed locking plunger mounted within the hub for engagement with the recess of one of the wings to lock the bushing in position within the hub.



3. The combination of a car wheel formed with a hub having an enlarged axial opening entering the same from one end thereof and a reduced axial opening entering the same from the opposite end thereof, the enlarged opening being provided in the sides thereof with longitudinal grooves while the reduced opening is provided at one side thereof with a notch, a tubular bushing fitted removably in the enlarged opening and having a bore of the same size as the reduced opening and in registry therewith, said bushing being provided with wings adapted to enter the longitudinal grooves of the enlarged opening and being adapted to be driven out of position by a tool inserted in the notch of the reduced opening, and a radially disposed locking plunger mounted within the hub for engagement with one of the wings of the bushing to retain the bushing in position.

1,154,346. GAME APPARATUS. HUGO W. SPEYER, Union township, Union county, N. J. Filed Feb. 2, 1915. Serial No. 5,617. (Cl. 46—41.)



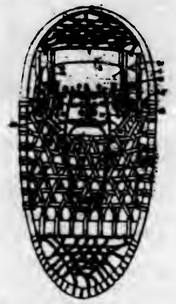
1. A game apparatus comprising a tiltable plate, a grooved track formed on said plate, a gutter surrounding the track, a hollow stem depending from the plate, means for establishing communication between the track and stem, and a ball adapted to engage the track.

2. A game apparatus comprising a tiltable plate, a grooved endless track formed thereon, a gutter surrounding the track, a hollow stem depending centrally from the plate, a by-pass connecting the track with the hollow stem and a ball adapted to engage the track, said hollow stem constituting conjointly a pocket for the ball and a handle for the plate.

3. A game apparatus comprising a tiltable plate having a pair of convex head sections and an intervening concave neck section, a paralleling grooved track formed on the plate, a gutter surrounding the track, a hollow stem depending centrally from the plate, a by-pass connecting the track with the hollow stem and a ball adapted to engage the track.

1,154,347. SNOW-SHOE. GOLDWIN S. SPRAGUE, Newton, Mass. Filed Jan. 18, 1915. Serial No. 2,810. (Cl. 46—67.)

1. In a snow shoe the combination of a pair of metal bushings mounted on the toe cord at each side of the toe hole and provided on their outer ends with arms by which they are secured to the filling and against rotation, and on their inner ends with flanges, a foot binding comprising a toe cap and a heel strap, metal staples surrounding each bushing having threaded ends passing through the toe cap and a nut on each staple end whereby the toe cap is pivotally secured to the toe cord and sidewise movement thereof limited.



2. In a snow shoe the combination of a pair of metal bushings mounted on the toe cord at each side of the toe hole and provided on their outer ends with arms by which they are secured to the filling and against rotation, and on their inner ends with flanges, a foot binding comprising a toe cap and a heel strap, metal staples surrounding each bushing having threaded ends passing through the toe cap and a nut on each staple end, the said heel strap being secured to the toe cord independently of the toe cap and then passed through apertures in the rear edge of the toe cap whereby the two parts of the foot binding are independently pivoted to the toe cord and the heel strap at the same time conforms to the foot of the wearer.

3. In a snow shoe foot binding a toe cap comprising a foot plate, vamp plates superimposed at their outer edges on the foot plates, ear plates superimposed at their outer edges on the vamp plates, and means for securing together the superimposed edges of the said plates.

4. In a snow shoe foot binding a toe cap comprising a foot plate, vamp plates superimposed at their outer edges on the foot plates, ear plates superimposed at their outer edges on the vamp plates and overlying the outer portion of the vamp plates, means for securing together the superimposed edges of the said plates, metal eyelets at the opposing free edges of the vamp plates, and a lacing for the eyelets.

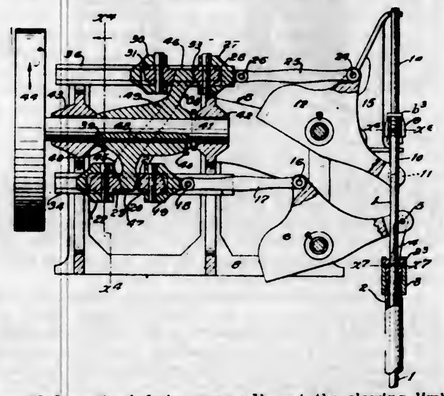
5. In a snow shoe foot binding a toe cap comprising a foot plate, vamp plates superimposed at their outer edges on the foot plates, ear plates superimposed at their outer edges on the vamp plates and overlying the outer portion of the vamp plates, and metal rivets passing through and securing said superimposed edges of the said plates.

[Claims 6 and 7 not printed in the Gazette.]

1,154,348. PUMP-HEAD. HUDSON F. STORY, Highland, Cal., assignor of one-half to John D. Boley, Highland, Cal. Filed July 16, 1913. Serial No. 779,395. (Cl. 103—62.)

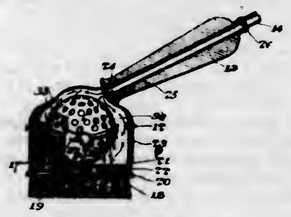
1. The combination with two sucker rods, of a shaft provided with a cam having a superior cusp and an inferior cusp and having a load-lifting limb between the superior and inferior cusps for 180° of its diameter, said cam being provided with a returning limb extending from the superior cusp substantially half way to the inferior cusp in an accelerating limb and extending from thence to the inferior cusp in a slowing limb, said cam being provided at the inferior cusp adjacent the slowing limb with a rest face, and said cam being provided with an up-stroke valve-closing limb extending from the rest face to the lifting limb; and means operatably connecting the cam to said sucker rods.

2. The combination with two sucker rods, of a shaft provided with a cam having a superior cusp and an inferior cusp and having a load-lifting limb between the superior and inferior cusps for 180° of its diameter, said cam being provided with a returning limb extending from the superior cusp substantially half way to the inferior cusp in an accelerating limb and extending from thence to the inferior cusp in a slowing limb, said cam being



provided at the inferior cusp adjacent the slowing limb with a rest face and with an upstroke valve-closing limb extending from the rest face to the lifting limb, and said cam being thickened at the superior cusp to form a reversing face and thickened at the inferior cusp to form a node; and means operatably connecting the cam to said sucker rods.

1,154,349. DISH-WASHER. ATARASHI TANAKA, Los Angeles, Cal. Filed Feb. 8, 1915. Serial No. 6,862. (Cl. 15—51.)

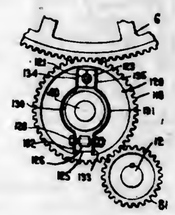


A dish washer comprising a receptacle, a brush having a perforated back detachably secured in the mouth of said receptacle, a loose spherical box of such a size as to turn freely in said receptacle and to receive soap, and water inlet means for passing water into said receptacle, said water inlet means being so arranged that the entering water turns said box.

1,154,350. SAFETY DEVICE FOR TIME-CLEARERS ON NAPPERS. CHARLES P. R. THIEL, North Andover, Mass., assignor to Davis & Furber Machine Co., North Andover, Mass., a Corporation of Massachusetts. Filed Jan. 2, 1914. Serial No. 810,067. (Cl. 26—19.)

1. In combination with a napping machine comprising a cylinder having rotatable napping rollers and time clearers therefor and means actuated from said cylinder to drive said time clearers in a definitely timed relation to said napping rollers, of yieldable means interposed between said driving means and said time clearers adapted to disengage said driving means therefrom in case the rotation of the time clearers is obstructed and means for maintaining said timed relation upon reëngagement of said driving means.

2. In combination with a napping machine comprising a cylinder having rotatable napping rollers and time clearers therefor and means actuated from said cylinder to drive said time clearers in timed relation thereto, of yieldable means interposed between said driving means and said time clearers adapted to disengage said driving means therefrom in case the rotation of the time clearers is obstructed, comprising a rotatable driving member and a rotatable driven member, and yieldable interlocking means adapted normally to cause said members to rotate in unison but adapted to permit the disengagement thereof in case the rotation of the clearers is obstructed, said interlocking means being adapted to maintain the proper timed relation between the napping rollers and the time clearers.



3. In combination with a napping machine comprising a cylinder having rotatable napping rollers and time clearers therefor and means actuated from said cylinder to drive said time clearers in timed relation to said napping rolls, of yieldable means interposed between said driving means and said time clearers adapted to disengage said driving means therefrom in case the rotation of the time clearers is obstructed comprising a rotatable driving member revolubly mounted upon the shaft of a time clearer, a driven member rigidly secured to said shaft and interlocking means carried by one of said members adapted to engage the other member to cause said driving and driven members to rotate in unison and in proper timed relation to the rotation of said napping rolls and means adapted to permit the disengagement of said interlocking means in case the rotation of the clearer is obstructed and to retain said interlocking means free from subsequent engagement with said member.

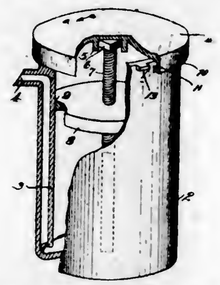
4. In combination with a napping machine comprising a cylinder having rotatable napping rolls and time clearers therefor, means actuated from said cylinder to drive said clearers in definitely timed relation to said napping rolls including a rotatable driving member and a rotatable driven member, means connecting said members comprising a shaft journaled in the web of one of said members eccentrically of the axis thereof and having upon one end an interlocking pawl adapted detachably to engage a recess in the other member positioned to maintain said timed relation, and squared at its opposite end, a pair of springs mounted upon said web and embracing a squared end of the shaft whereby the pawl normally is retained yieldably in interlocking engagement with said recess, or if disengaged therefrom by overload will be retained from further engagement therewith.

5. In combination with a napping machine comprising a cylinder having rotatable napping rolls and time clearers therefor, means actuated from said cylinder to drive said time clearers in definitely timed relation to said napping rolls consisting of rotatable driving members and rotatable driven members, means for detachably connecting said members comprising a shaft journaled in the web of one of said members eccentrically of the axis thereof and having upon one end an interlocking pawl adapted to engage a recess in the other rotatable member, positioned to maintain said timed relation, said shaft being squared at its opposite end, a pair of springs mounted upon said web and embracing the squared end of said shaft whereby the pawl will be retained yieldably in interlocking engagement with said recess or if disengaged therefrom by overload will be retained from further engagement there-

with, and means for simultaneously adjusting the tension of both springs.

[Claim 6 not printed in the Gazette.]

1,154,351. CONTAINER AND DISPENSER. JULES TOURNADRE, San Francisco, Cal. Filed Nov. 17, 1914. Serial No. 872,659. (Cl. 221—79.)



1. A dispenser comprising a container having an interior tubular ridge leading from the bottom to the top of the container, a plunger notched to receive the rib and having a central threaded aperture, a screw threaded through said aperture and having a polygonal head, and a cap for the container having a central depending socket to receive and fit the screw head so as to allow the cap to be connected to the screw ready to rotate the latter by merely placing he socket on top of the head.

2. A dispenser comprising a container having an interior tubular ridge leading from the bottom to the top of the container, a plunger notched to receive the rib, a cap on the container and means to rotate the screw from the cap, said ridge serving as a conduit for the dispenser contents and also acting to prevent rotation of the plunger.

1,154,352. METHOD OF SEALING CLOSURES. HARRY E. TOWNSEND, Brooklyn, N. Y., assignor to Anchor Cap & Closure Corporation, Brooklyn, N. Y., a Corporation of New York. Filed June 13, 1914. Serial No. 844,887. (Cl. 113—2.)

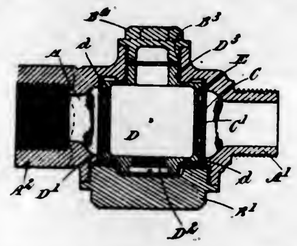


1. The method of sealing a package that has a rigid wall container and a metallic cap equipped with a beading and a gasket adapted to form a seal upon the side wall of the container which consists in placing the cap upon the container, compressing the beading and gasket of the cap radially inward, and then applying pressure to the beading and gasket in a direction at right angles to the radial pressure.

2. The method of sealing a package that has a rigid wall container and a metallic cap equipped with a beading and a gasket adapted to form a seal upon the side wall of the container which consists in placing the cap upon the container, reducing the diameter of the beading and gasket of the cap, and then reducing the vertical thickness of the beading and gasket.

3. The method of sealing a package that has a rigid wall container and a metallic cap equipped with a beading and a gasket adapted to form a seal upon the side wall of the container which consists in placing the cap upon the container, applying pressure horisontally to the beading until the clearance between the inclosed gasket and the container is reduced, and then applying pressure vertically to the beading to cause a radial inward flow of gasket material upon the wall of the container to effect the seal.

1,154,353. LUBRICATOR. CHARLES CHEERS WAKEFIELD, London, England. Filed Jan. 5, 1915. Serial No. 569. (Cl. 184—55.)



1. In a lubricator, the combination of, a perforated lubricant-container placed in the conduit through which the working fluid of the mechanism to be lubricated passes, and a layer of absorbent material surrounding the perforated container and covering all the perforations in the container-wall for the purpose set forth.

2. In a lubricator the combination of, a perforated lubricant container placed in the conduit through which the working fluid of the mechanism to be lubricatted passes, and a layer of worsted surrounding the perforated container and covering all the perforations in the container wall, for the purpose set forth.

3. In a lubricator the combination of, a perforated lubricant container placed in the conduit through which the working fluid of the mechanism to be lubricated passes, and a layer of absorbent material surrounding the perforated container which perforations are few in number, for the purpose set forth.

4. In a lubricator the combination of, a perforated lubricant container placed in the conduit through which the working fluid of the mechanism to be lubricated passes, a layer of absorbent material surrounding the perforated container and covering all the perforations in the container wall, and an outer perforated retaining-member for the absorbent layer, for the purpose set forth.

5. In a lubricator the combination of, a perforated lubricant-container placed in the conduit through which the working fluid of the mechanism to be lubricated passes, a layer of absorbent material surrounding the perforated container and covering all the perforations in the container wall, and an outer perforated retaining-member for the absorbent layer, the perforations in this retaining-member being staggered relatively to those in the container, for the purpose set forth.

[Claims 6 to 13 not printed in the Gazette.]

1,154,354. ELECTRIC CONNECTOR. EDWIN F. WAKEFIELD, Chagrin Falls, Ohio. Filed Aug. 27, 1913. Serial No. 786,821. (Cl. 173—269.)



1. A connector for electric conductors comprising a tubular portion, and parts integral therewith and extending alongside each other substantially transversely of the tubular portion, one of said parts having an opening for a conductor and the other adapted to engage the end of the conductor.

2. A connector for electric conductors comprising a tubular portion, a portion integral therewith and extending substantially transversely of the tubular part, said last named portion having an opening through which the end of a conductor is adapted to be inserted, and a third portion bent adjacent the transversely extending portion and adapted to engage a portion of the conductor extending through said opening.

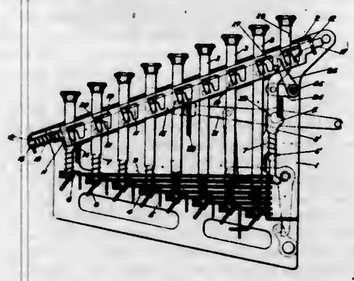
3. A connector for electric conductors formed from a piece of flexible metal and comprising a tubular portion, and two parts extending substantially alongside each other, one of said parts having an opening for a conductor and the other having a spur which projects toward the opening and is adapted to engage the conductor.

4. A connector for electric conductors formed from a piece of flexible metal and comprising a tubular portion, and two parts extending substantially alongside each other, one of said parts having an opening for a conductor and the other having a spur which projects toward the opening, and means for holding said part having the spur in said tubular part.

5. A connector for electric conductors comprising a tubular portion, two parts extending substantially transversely of the tubular portion, and including an inner part having an opening for a conductor and an outer part extending over the outer side of said part having the opening, and teeth projecting from one edge of the tubular part and adapted to be bent inwardly over said other part.

[Claims 6 and 7 not printed in the Gazette.]

1,154,355. KEYBOARD FOR COMPUTING-MACHINES. CHARLES WALES, New Haven, Conn., assignor to The White Adding Machine Company, New Haven, Conn., a Corporation of Connecticut. Filed July 10, 1913, Serial No. 778,329. Renewed Nov. 11, 1914. Serial No. 871,631. (Cl. 235—130.)



1. In a keyboard, the combination of a series of keys, a flexible shutter holding any manually depressed key in depressed position, a lock shutter holding the other keys against depression when one key is depressed, and movable into and out of operative position, means for locking said lock shutter in non-operative position, means for releasing all keys controlled by either of said shutters, and a single actuater for said means.

2. In a keyboard, the combination of a series of keys, means for preventing the depression of a second key when one is already in depressed position, the depressed key actuating said means but not restrained thereby, means for throwing said preventing means into and out of operation, and flexible means for holding any of said keys, when actuated, in depressed position.

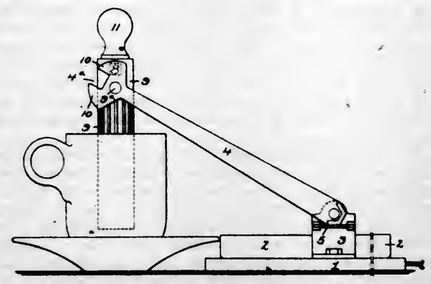
3. In a keyboard, the combination of a plurality of series of keys, means for preventing the depression of a second key of any series when one key of that series is already depressed, the depressed key actuating said means but not restrained thereby, means for throwing said preventing means into and out of operation, flexible means for holding any of said keys, when actuated, in depressed position, and means for simultaneously releasing the flexible means from the depressed keys of all of said series.

4. In a keyboard, the combination of a plurality of series of keys, a plurality of flexible shutters for holding any of said keys in depressed position, a plurality of locking shutters each preventing the depression of a second key in its series when any key of that series is already in depressed position, the depressed key actuating said shutter but not restrained thereby, and having a co-operating position and a non-coöperating position, means normally tending to move said locking shutters to one of said positions, means for manually throwing said locking shutters into the other of said positions, and means for mechanically holding said locking shutters in non-operative position.

5. In a keyboard, the combination of a plurality of series of keys, a plurality of flexible shutters for holding any of said keys in depressed position, a plurality of locking shutters each preventing the depression of a second key in its series when any key of that series is already in depressed position, the depressed key actuating said shutter but not restrained thereby, and having a co-operating position and a non-coöperating position, means normally tending to move said locking shutters to operative position, means for manually throwing said locking shutters into non-coöperating position, and means for mechanically holding said locking shutters in non-coöperative position.

[Claims 6 to 11 not printed in the Gazette.]

1,154,356. ELECTRICAL HEATER FOR LIQUIDS. UTLEY WEDGE, Ardmore, Pa. Filed Feb. 28, 1914. Serial No. 821,677. (Cl. 219—41.)



1. The combination, in an electric heater for beverages, of the heating element, a swinging support upon which said heating element is pivotally mounted, and a pivotal mounting for said support whereby the heating element, while maintaining a vertical position, can be swung into and out of a cup containing the beverage to be heated.

2. The combination, in an electric heater for beverages, of the heating element, a swinging support upon which said heating element is pivotally mounted, a pivotal mounting for said support which permits the heating element to be swung into or out of the cup containing the beverage to be heated, and means whereby the swinging movement of the support is caused to open and close the circuit through the heating element.

3. The combination, in an electric heater for beverages, of the heating element, and a support therefor comprising a base, a carrying element pivoted at its lower end to said base and at its upper end to the heating element, whereby said heating element can always maintain a vertical position irrespective of the swinging movement of the carrier upon its pivot, said carrier being of greater length than the heating element, whereby, when the carrier occupies a vertical position, said heating element will be supported free from contact with the base.

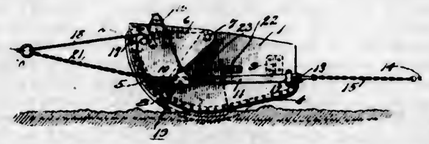
4. The combination, in an electric heater for beverages, of a heating element, arms from which said heating element is pivotally suspended so as to hang vertically, a base having standards upon which said arms are pivotally mounted, and yielding means for retaining said arms either in the vertical position or in a position inclined in respect to the vertical.

5. The combination, in an electric heater for beverages, of the heating element, arms upon which said heating element is pivotally mounted so as to hang in a vertical position, a base having standards upon which said arms

are p ivotally mounted, and a cup seated on said base and serving to receive the drip from the heater when the latter is not in action.

[Claim 6 not printed in the Gazette.]

1,154,357. EXCAVATING APPARATUS. CYRUS R. WEST, Dawson, Yukon Territory, Canada. Filed Dec. 2, 1914. Serial No. 875,154. (Cl. 37—19.)



1. An excavating device of the class described comprising a receptacle, a movable shovel connected thereto, draft means connected to the shovel for moving the same in one direction for excavating action, and means for initially actuating the shovel in the opposite direction to remove the same out of the path of the discharging load and subsequently tilting the receptacle in the direction of movement of said receptacle by the draft means for the removal of the contents of said receptacle.

2. An excavating device of the class described comprising a receptacle, a movable shovel connected thereto, forward draft means connected to the shovel for drawing the shovel into excavating position, and rear draft means operatively connected to the shovel and adapted to counteract the forward draft whereby to initially raise the shovel out of the path of the discharging load and subsequently cause tilting of the receptacle to discharge its contents.

3. An excavating device of the class described comprising a receptacle, a movable shovel connected thereto, draft means connected to the shovel and receptacle for drawing the former into excavating position and moving the receptacles, means connected to the shovel for moving the same out of excavating position, and means separate from the shovel actuating means for tilting the receptacle and coacting with the means aforesaid but normally inactive until the shovel has been moved into the inoperative position aforesaid.

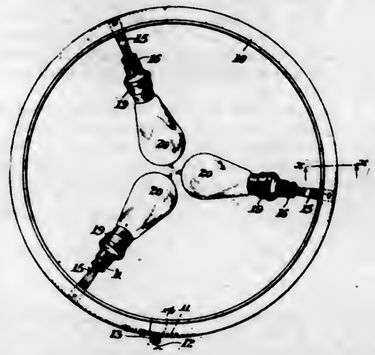
4. An excavating device of the class described comprising a receptacle, a movable shovel connected thereto, draft means connected to the shovel for drawing the same into excavating position and moving the receptacle, means connected to the shovel for moving the same out of excavating position, separate means for tilting the receptacle coacting with the means aforesaid, and draft means to which the means for moving the shovel out of excavating position and the receptacle tilting means are connected adapted to initially actuate the former and subsequently the latter.

5. An excavating device of the class described comprising a receptacle, a shovel pivotally connected thereto, forward draft means including a draw bar connected to the shovel, rear draft means, a lifting member connected at one end to the draw bar and at its other end to the rear draft means, a tilting member operatively connected at one end to the shovel and at its other end to the rear draft means, and means arranged laterally of the rear draft connection and coöperating with the lifting member rendering the latter operative prior to action of the tilting member whereby to cause actuation of the shovel upon application of stress to the rear draft means for removal of said shovel out of the path of the discharging load preliminary to the tilting of said receptacle.

[Claims 6 to 10 not printed in the Gazette.]

1,154,358. DEVICE FOR SUSPENDING SHADES OR BOWLS IN LIGHTING-FIXTURES. EDWIN L. WHITE, New York, N. Y., assignor to J. H. White Mfg. Co., Brooklyn, N. Y., a Corporation of New York. Filed Oct. 10, 1914. Serial No. 865,982. (Cl. 240—91.)

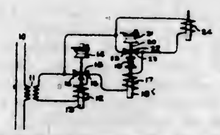
1. In a lighting fixture, a ring of thin metal having an inturned lower edge to receive the rim of a bowl and severed at one point whereby sufficient spring is given to allow the ends of the ring to be sprung apart for the insertion of the bowl, a connecting link secured to the ring on its inner surface adjacent one end and projecting beyond said end, the other end of said ring overlapping said link in such matter that the two ends of the ring contact forming a continuous uniform outer surface, and means for securing the ends of the ring in such position.



2. In a lighting fixture, the combination of a shade or bowl, a ring to receive the rim of the same, spaced arms each secured at one end to said ring, a stud secured to the free end of each arm for attachment of a lamp socket, suspending chains connected to said arms, said ring being severed at one point, and a link secured within said ring adjacent one end by which the ends of said ring are joined in a separable manner.

3. In a lighting fixture, the combination of a shade or bowl, a ring to receive the rim thereof, spaced arms each secured at one end to said ring, a stud secured to the free end of each arm for attachment of a lamp socket, suspending chains connected to said arms, said ring being severed at one point, a link secured within said ring adjacent one end and projecting therefrom, a screw-threaded pin secured at one end to said projecting portion of said link, the other end of said ring having a hole adapted to receive said screw-threaded pin, and a nut adapted to be screwed upon said pin after the pin has been passed through said hole.

1,154,359. PROTECTIVE DEVICE. DAVID BASCH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 17, 1913. Serial No. 774,092. (Cl. 175—270.)



1. A time limit device for controlling an electric circuit comprising time limit trip mechanism operative to open the circuit at a definite and uniform time interval after being set in operation, and inverse time limit means responsive to an abnormal condition in said circuit for setting said mechanism in operation after a period of time which is an inverse function of the extent of such abnormal condition.

2. The combination with an automatic switch for opening an electric circuit, of means responsive to current in the circuit and movable into operative position in a period of time which is an inverse function of the current and a time limit trip mechanism set in operation by said means to trip said switch open a certain period of time after said means reaches operative position.

3. A time limit device for controlling an electric circuit comprising a time limit tripping relay for opening the circuit and normally independent of conditions in said circuit, an inverse time limit relay directly responsive to absormal conditions in the circuit, and connections for setting said time limit relay in operation when said inverse time limit relay reaches operative position.

4. A time limit device for controlling an electric circuit comprising a time limit tripping relay having a normally open energizing circuit, and an inverse time limit relay responsive to an abnormal condition in the electric circuit for closing said energizing circuit after a period of time inversely dependent on the extent of such abnormal condition.

5. A time limit device for controlling an electric circuit comprising time limit trip mechanism operative to open the circuit a certain time interval after being set in operation, and inverse time limit means for setting said mechanism in operation, said means being quickly responsive to an abnormal condition which exceeds a predetermined limit and responsive to an abnormal condition within said limit after a period of time which is an inverse function of the extent of said abnormal condition.

[Claims 6 to 9 not printed in the Gazette.]

1,154,360. BOOT OR SHOE. AUGUST C. BECKER, Elkins, W. Va., assignor of one-half to O. A. Knapp, Elkins, W. Va. Filed Dec. 12, 1914. Serial No. 876,915. (Cl. 36—17.)



1. In a structure of the class described, the combination of an upper, a combined insole and welt of uniform thickness, said insole being provided with a continuous fold embracing the edges of said upper, said upper being secured in said fold by a row of stitches through one wall of the fold and the edge of the uper and by a row of stitches through both walls of the fold and the edges of the upper, the portion of the insole on the outside of said fold constituting the welt, a filler arranged within the recess of the insole formed by said fold, and an outer sole attached to the welt portion of said insole.

2. In a boot or shoe, the combination of an upper, a combined insole and welt, said insole being provided with a continuous fold embracing the edges of said upper, said upper being secured in said fold by a row of stitches through one wall of the fold and the edge of the upper and by a row of stitches through both walls of the fold and the edges of the upper, the portion of the insole on the outside of said fold constituting the welt, a filler arranged within the recess of the insole formed by said fold, and an outer sole attached to the welt portion of said insole.

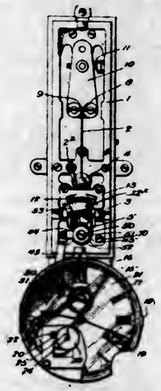
3. In a boot or shoe, the combination of an upper, a combined insole and welt of uniform thickness, provided with a fold embracing the edges of said upper, said upper being secured in said fold by stitches through both walls of the fold and the edges of the upper, the portion of the insole on the outside of said fold constituting the welt, a filler arranged within the recess of the insole formed by said fold, and an outer sole attached to the welt portion of said insole.

4. A boot or shoe comprising an upper and a combined insole and welt of uniform thickness, the edges of said upper being embraced in a continuous fold in said insole and secured therein by a row of stitches through one wall of the fold and the edge of the upper and by a row of stitches through both walls of the fold and the edges of the upper, the portion of the insole on the outside of said fold constituting the welt.

5. A boot or shoe comprising an upper and a combined insole and welt, the edges of said upper being embraced in a fold in said insole and secured by a row of stitches through one wall of the fold and the edge of the upper and by a row of stitches through the fold and the edge of the upper, the portion of the insole on the outside of said fold constituting a welt.

[Claim 6 not printed in the Gazette.]

1,154,361. THERMOSTAT. DAVID BELDEN, Auburn, N. Y., assignor to Jewell Manufacturing Company, Auburn, N. Y., a Corporation of New York. Filed Mar. 28, 1914. Serial No. 828,048. (Cl. 236—7.)



1. The combination with a thermostat having an adjusting mechanism for varying the operation of the thermostatic element, of a clock mechanism provided with a time mechanism and an actuating mechanism controlled thereby constructed to effect a plurality of similar operations of the adjusting mechanism, at intervals, winding mechanism for the time mechanism, separate winding mechanism for the said actuating mechanism, indicating mechanism operatively connected with the winding mechanism for said actuating mechanism, for indicating the number of operations of the adjusting mechanism thereby, and operative connections between the said actuating mechanism and said adjusting mechanism.

2. The combination with a thermostat provided with an adjusting mechanism for varying the operation of the thermostatic element, and a hand operated device for actuating said adjusting mechanism, of a clock mechanism operatively connected with said thermostat and provided with a time movement, and an actuating mechanism controlled thereby operative connections between said actuating mechanism and the adjusting mechanism for the thermostatic element and adjusting mechanism for varying the extent of movement of the adjusting mechanism for the thermostatic element, operatively connected with said hand operated device.

3. The combination with a thermostat provided with an adjusting mechanism for varying the operation of the thermostatic element, and a hand operated device connected with said adjusting mechanism, of a clock mechanism secured to the thermostat and provided with a time mechanism and an actuating mechanism controlled thereby, operative connections between said actuating mechanism and the aojusting mechanism for the thermostatic element, including relatively movable parts, means for normally holding said relatively movable parts in fixed relation and a connection between the hand operated device and one of the said parts for temporarily separating and adjusting the said relatively movable parts.

4. The combination with a thermostat provided with an adjusting mechanism for varying the operation of the thermostatic element, and a hand operated device connected with said adjusting mechanism, of a clock mechanism secured to the thermostat and provided with a time mechanism and an actuating mechanism controlled thereby, operative connections between said actuating mechanism and the adjusting mechanism for the thermostatic element, including relatively movable parts, and clutch

members for connecting the same, means for holding said clutch members normally in engagement and a connection between one of said clutch members and said hand operated device for separating said clutch members and adjusting said relatively movable parts.

5. The combination with a thermostat provided with an adjusting mechanism for varying the operation of the thermostatic element, and a hand operated device connected with said adjusting mechanism, of a clock mechanism secured to the thermostat and provided with a time mechanism and an actuating mechanism controlled thereby, operative connections between said actuating mechanism and the adjusting mechanism for the thermostatic element, including relatively movable parts and friction clutch members for connecting said parts, a spring normally holding said clutch members in engagement with each other, said hand operated device being connected with one of said clutch members for disengaging said clutch members and adjusting said relatively movable parts.

[Claims 6 to 10 not printed in the Gazette.]

1,154,362. FABRIC-CLASP. LEE E. BEREBAUM, Chicago, Ill. Filed May 16, 1913. Serial No. 768,009. (Cl. 24—248.)



1. A device of the character described, comprising a rear member and a front member hinged together and each provided on its free end with a clamping jaw, the jaw of the rear member located in front of the jaw of the front member when the latter is in closed position, and within the circumferential path of the jaw of the front member when the latter is moved from open to closed position, and a manually operable disengaging lever movably connected to the front member for separating said members.

2. A device of the character described, comprising a rear member and a front member hinged together, and each provided on its free end with a clamping jaw, the jaw of the rear member located in front of the jaw of the front member when the latter is in closed position, and within the circumferential path of the jaw of the front member when the latter is moved from open to closed position, and a disengaging means for separating said members yieldingly secured to the free end of the front member.

3. A device of the character described, comprising a rear member and a front member hinged together, and each provided on its free end with a clamping jaw, the jaw of the rear member located in front of the jaw of the front member when the latter is in closed position, and within the circumferential path of the jaw of the front member when the latter is moved from open to closed position, a disengaging means for separating said members, pivoted in the jaw of the front member, and means for yieldingly returning said disengaging member to normal, closed, position.

4. A device of the character described, comprising a rear member and a front member hinged together and each provided on its free end with a clamping jaw, the jaw of the rear member located in front of the jaw of the front member when the latter is in closed position and within the circumferential path of the jaw of the front member when the latter is moved from open to closed position; an elastic tongue carried by one of said member adapted to separate the members when the jaws have been disengaged and means carried by the device to disengage the members.

5. A device of the character described, comprising a rear member and a front member hinged together and each provided on its free end with a clamping jaw, the jaw of the rear member located in front of the jaw of the front member, when the latter is in closed position, and within the circumferential path of the jaw of the front member, when the latter is moved from open to closed position; supplementary jaws, consisting of a nesting elevation and depression carried, respectively, by said members and means, carried by the front member for separating said members.

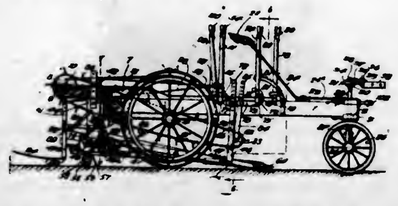
[Claims 6 and 7 not printed in the Gazette.]

1,154,363. PROCESS OF PREPARING OLIVES AND PRODUCT THEREOF. FRED G. BERESFORD, Corning, Cal., assignor to Maywood Packing Co., Corning, Cal., a Corporation of California. Filed Feb. 3, 1915. Serial No. 5,895. (Cl. 99—5.)

1. The process of preparing olives consisting in first subjecting them to an alkaline solution to neutralize the acid and astringent qualities, washing and subjecting the product to a saline solution until permeated thereby, and finally drying and desiccating the fruit to an arid, anhydrous condition.

2. As an article of manufacture, olives submitted successively to alkaline and saline solutions and finally dehydrated to an approximately anhydrous and desiccated condition.

1,154,364. WEED-CUTTING MACHINE. OSCAR HJALMAR BJUR, Kennewick, Wash. Filed Nov. 2, 1914. Serial No. 869,813. (Cl. 97—25.)



1. In a machine of the character specified, a main frame having a radial flange provided with a cutting edge, wheels for supporting the rear end of the frame, cutting mechanism for separating the top layer of soil between the cuts made by said flanges, an endless carrier above the cutting mechanism for receiving the soil and conveying it rearwardly, and dropping mechanism supported at the rear of the frame for receiving the cut soil from the conveyer, and manually operated means for operating the dropper mechanism.

2. A machine of the character specified, comprising a main frame, wheels for supporting and guiding the frame, a shaft arranged transversely of the frame intermediate the ends thereof, means connected with the frame for supporting the shaft, means for adjusting the shaft vertically with respect to the frame, a crank shaft journaled at the rear of the frame below the same and having a series of cranks, said cranks being spaced apart angularly at equal distances, a bar for each crank, each bar having a bearing for engaging the crank and having at its front end a longitudinally extending slot through which the first-named shaft extends, a driving connection between the crank shaft and the wheels, and a cutting blade at the front end of each bar, each of the cutting blades being approximately triangular and having its base forward and sharpened to cut, dropping mechanism at the rear of the frame, means for operating the dropping mechanism, and a conveyer for receiving the cut soil from the blades and delivering it to the dropper.

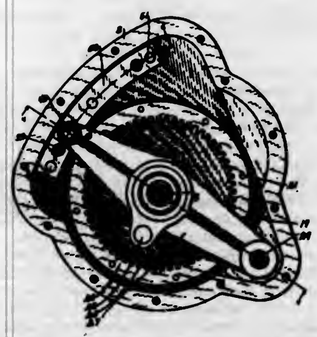
3. A machine of the character specified, comprising a main frame, wheels for supporting and guiding the frame, a shaft arranged transversely of the frame intermediate the ends thereof, means connected with the frame for supporting the shaft, means for adjusting the shaft vertically with respect to the frame, a crank shaft journaled at the rear of the frame below the same and having a series of cranks, said cranks being spaced apart angularly at equal distances, a bar for each crank, each bar having a bearing for engaging the crank and having at its front end a longitudinally extending slot through which the first-named shaft extends, a driving connection between the crank shaft and the wheels, and a cutting blade at the front end of each bar, dropping mechanism at the rear of the frame, means for operating the dropping mechanism, and a conveyer for receiving the cut soil from the blades and delivering it to the dropper.

4. A machine of the character specified, comprising a main frame, wheels for supporting and guiding the frame, a shaft arranged transversely of the frame intermediate the ends thereof, means connected with the frame for supporting the shaft, means for adjusting the shaft vertically with respect to the frame, a crank shaft journaled at the rear of the frame below the same and having a series of cranks, said cranks being spaced apart angularly at equal distances, a bar for each crank, each bar having a bearing for engaging the crank and having at its front end a longitudinally extending slot through which the first-named shaft extends, a driving connection between the crank shaft and the wheels, and a cutting blade at the front end of each bar, each of the cutting blades being approximately triangular and having its base forward and sharpened to cut.

5. A machine of the character specified, comprising a main frame, wheels for supporting and guiding the frame, a shaft arranged transversely of the frame intermediate the ends thereof, means connected with the frame for supporting the shaft, means for adjusting the shaft vertically with respect to the frame, a crank shaft journaled at the rear of the frame below the same and having a series of cranks, said cranks being spaced apart angularly at equal distances, a bar for each crank, each bar having a bearing for engaging the crank and having at its front end a longitudinally extending slot through which the first-named shaft extends, a driving connection between the crank shaft and the wheels, and a cutting blade at the front end of each bar.

[Claims 6 to 8 not printed in the Gazette.]

1,154,365. VARIABLE-SPEED GEARING. HOWARD E. BLOOD, Kalamazoo, Mich. Filed Mar. 9, 1914. Serial No. 823,291. (Cl. 74—58.)



1. In a gearing, the combination of driving and driven shaft members, a control shaft supported for rotative and longitudinal adjustment, an arm on said control shaft supporting said driving shaft for longitudinal and lateral adjustment, coacting gears on said driving and driven members, a control clutch for the driving member, a second arm on said control shaft, a control clutch shifting lever pivotally mounted on said arm, an actuating lever pivotally mounted on said control shaft, said control shaft being provided with an arm constituting a stop and support for said actuating lever, and a link connecting said actuating lever to said shifting lever, the control clutch being released by the movement of the actuating lever prior to its engagement with said stop arm, said control shaft being shifted longitudinally by the continued movement of said actuating lever.

2. In a gearing, the combination of driving and driven shaft members, a control shaft supported for rotative and longitudinal adjustment, an arm on said control shaft supporting said driving shaft for longitudinal and lateral adjustment, coacting gears on said driving and driven members, a control clutch for the driving member, an actuating lever pivotally mounted on said control shaft, said control shaft being provided with an arm constituting a stop and support for said actuating lever, and connections from said actuating lever to said control clutch whereby the control clutch is released by the initial movement of the actuating lever prior to its engagement with said stop arm, said control shaft being shifted longitudinally by the continued movement of said actuating lever.

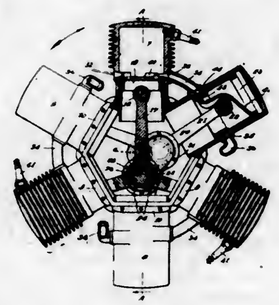
3. In a gearing, the combination of driving and driven shaft members, coacting clutch members on said shaft members, a casing provided with a bearing for said driven member, a control shaft supported for rotative and longitudinal movement, said casing being provided with a bearing for the inner end of said control shaft and having a forwardly projecting arm thereon provided with a second bearing for said control shaft, bearing rollers for the outer end of said control shaft, an arm on said control shaft supporting said driving member for lateral and longitudinal adjustment, an internal gear on said driven member, a gear on said driving member, a gear carried by said arm meshing with said gear on said driving member, a locking member on said arm, a coacting keeper member, a control clutch for said driving member, an arm on said control shaft provided with a bearing for said driving member disposed on the outer side of said control clutch, an actuating lever for said control shaft, and connections from said lever to said control clutch whereby the control clutch is released during the initial movement of the actuating lever and the control shaft actuated by the continued movement thereof.

4. In a gearing, the combination of driving and driven shaft members, coacting clutch members on said shaft members, a control shaft supported for rotative and longitudinal movement, an arm on said control shaft supporting said driving member for longitudinal and lateral adjustment, an internal gear on said driven member, a gear on said driving member, a gear carried by said arm meshing with said gear on said driving member, a locking member on said arm, a coacting keeper member, a control clutch for said driving member, an actuating lever for said control shaft and connections from said actuating lever to said control clutch whereby the control clutch is released during the initial movement of the actuating lever and the control shaft actuated by the continued movement thereof.

5. In a gearing, the combination of driving and driven members, coacting clutch members on said shaft members, a casing provided with a bearing for said driven member, a control shaft supported for rotative and longitudinal movement, said casing being provided with a bearing for the inner end of said control shaft and having a forwardly projecting arm thereon provided with a second bearing for said control shaft, bearing rollers for the outer end of said control shaft, an arm on said control shaft supporting said driving member for longitudinal and lateral adjustment, an internal gear on said driven member, a gear on said driving member, a gear carried by said arm meshing with said gear on said driving member, a locking member on said arm, a coacting keeper member, an arm on said control shaft provided with a bearing for said driving member disposed on the outer side of said control clutch, an actuating lever for said control shaft and connections from said actuating lever to said control clutch whereby the control clutch is released during the initial movement of the actuating lever and the control shaft actuated by the continued movement thereof.

[Claims 6 to 21 not printed in the Gazette.]

1,154,366. INTERNAL-COMBUSTION ENGINE. ROBERT A BLUMM, Seattle, Wash., assignor to Valveless Engine Corporation, Seattle, Wash., a Corporation of Washington. Filed July 28, 1914. Serial No. 853,574. (Cl. 123—44.)



1. In an engine of the class described, the combination with a crank case, of a plurality of engine cylinders secured to said crank case, pump cylinders each secured to said crank case in a position between adjacent ones of said engine cylinders, oppositely disposed inlet and exhaust ports in the engine and pump cylinders, passageways connecting the exhaust ports of the pump cylinders to the inlet ports of the engine cylinders, a carbureter connected with said crank case by suitable means to form a gas chamber, pipes connecting said pump cylinders with said gas chamber whereby gas may be drawn into said pump cylinder inlet ports, pistons provided in said engine cylinders, a fixed crank shaft, and connecting rods articulating said pistons with said crank shaft whereby explosions within said cylinders may operate to move said pistons to rotate said crank case together with said cylinders.

2. In an engine of the class described, the combination with a rotatably mounted crank case, of a plurality of engine cylinders secured to said crank case, pistons provided in said engine cylinders, pump cylinders each secured to said crank case between adjacent ones of said engine cylinders, each of said pump cylinders being connected with a source of supply of explosive gas, pistons provided in said pump cylinders, oppositely disposed inlet and exhaust ports in the engine and pump cylinders, passageways connecting the exhaust ports of the pump cylinders to the inlet ports of the engine cylinders, and a fixed crank shaft provided in said crank case and connected with all of said pistons whereby said crank case and said cylinders may be rotated.

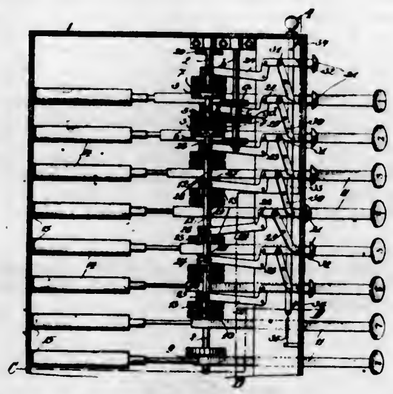
3. In an engine of the class described, the combination with a rotatably mounted crank case, having a plurality of engine cylinders and a plurality of pump cylinders secured thereto, of pistons provided in each of said cylinders, a fixed crank shaft, connecting rods extending between said crank shaft and each of said pistons, pipes connecting each of said pump cylinders with a source of supply of explosive gases, and oppositely disposed inlet and exhaust ports in the engine and pump cylinders, passageways connecting the exhaust ports of the pump cylinders to the inlet ports of the engine cylinders.

4. In an engine of the class described, the combination with a rotatable crank case, of a fixed crank shaft disposed to extend through said crank case, a plurality of engine cylinders secured to said crank case, a plurality of pump cylinders each secured to said crank case between adjacent ones of said engine cylinders, pistons provided in said engine cylinders and in said pump cylinders, connecting rods disposed to connect each of said pistons with said crank shaft, a carbureter, communicating means connecting said carbureter with said crank case and forming a gas chamber, pipes connecting said pump cylinders and said gas chamber, oppositely-disposed inlet and exhaust ports in the engine and pump cylinders, and passageways connecting the exhaust ports of the pump cylinders to the inlet ports of the engine cylinder.

5. In an engine of the class described, the combination of a crank case having a plurality of engine cylinders and a plurality of pump cylinders secured thereto said pump cylinders each being provided with ports that are connected with a source of supply of explosive gases and with exhaust ports, oppositely-disposed inlet and exhaust ports in the engine cylinders, passageways between the engine cylinder inlet ports and the pump cylinder exhaust ports, pistons disposed to reciprocate in each of said pump cylinders each of said pistons being provided with a port near its lower end and being further provided with an angularly disposed partition whereby a charge of explosive gases may be admitted above the top of said piston when it is withdrawn toward the center of said crank case and which gases may be discharged through said port into one of said engine cylinders through the passageways when said piston is at the limit of its outward movement, a fixed crank shaft, and connecting rods articulating said pistons and said crank shaft.

[Claims 6 to 9 not printed in the Gazette.]

1,154,367. ADDING APPARATUS. JOHANNES BOSA-CONRELMANN, Oustinettingen, Germany. Filed Jan. 29, 1913. Serial No. 744,866. (Cl. 235—82.)

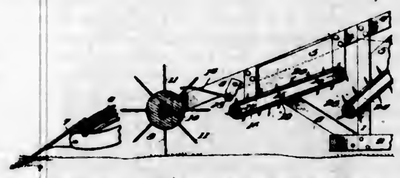


1. In an adding apparatus, in combination, counting mechanism comprising an axle having toothed wheels mounted thereon, a second axle, pairs of toothed wheels mounted on said second axle, keys for rotating said pairs of wheels, an intermediate axle, intermediate toothed wheels slidingly mounted thereon, said wheels being adapted to be moved into and out of intermeshing relation with said first mentioned and said second mentioned wheels, and keys for actuating said intermediate wheels.

2. In an adding apparatus, in combination, counting mechanism comprising an axle having toothed wheels mounted thereon, a second axle, pairs of toothed wheels mounted on said second axle, keys for rotating said pairs of wheels, an intermediate axle, intermediate toothed wheels slidingly mounted thereon, said wheels being adapted to be moved into and out of intermeshing relation with said first mentioned and said second mentioned wheels, and keys for actuating said intermediate wheels, said last mentioned keys being provided with coacting means whereby actuation of any one of the keys will restore the preceding key to its normal position.

3. In an adding apparatus, in combination, counting mechanism comprising an axle having toothed wheels mounted thereon, a second axle, pairs of toothed wheels mounted on said second axle, keys for rotating said pairs of wheels, an intermediate axle, intermediate toothed wheels slidingly mounted thereon, said wheels being adapted to be moved into and out of intermeshing relation with said first mentioned and said second mentioned wheels, keys for actuating said intermediate wheels, and means for restoring any one of said keys to its normal position.

1,154,368. PEANUT-HARVESTER. WILLIAM T. BOYD, Scranton, Tex. Filed June 11, 1914. Serial No. 844,589. (Cl. 55—51.)



1. The combination of a plow, a revolving rake running on the ground in rear of the plow to pick up vines and carry them up over and to the rear, a conveyer disposed in rear of and spaced from the rake, and stripping fingers interposed between the rake and the conveyer and projecting forwardly over the rake.

2. The combination of a revolving rake, a conveyer disposed in rear of and spaced from the rake, and a transverse series of longitudinal stripping fingers bridging the space between the conveyer and the rake and inclined downwardly from a point over the rake to a point immediately over the front lower end of the conveyer and arranged alternately with the pins of the rake.

3. The combination of a frame comprising downwardly inclined side bars, a revolving rake mounted in and extending between the lower front ends of said side bars and including a series of radial pins, a conveyer mounted between the side bars in rear of and spaced from the rake, a cross bar secured rigidly between the side bars adjacent the forward end of the conveyer and above the same, and stripping fingers extending upwardly and forwardly from said bar between the pins of the rake and having their forward free ends disposed near the axial body of the rake.

4. The combination of a wheeled frame, a plow carried by said frame, a caster-supported frame arranged in rear of the wheeled frame, a revolving rake mounted in the front end of said caster-supported frame, a conveyer mounted in said frame, stripping fingers bridging the space between the conveyer and the revolving rake, and means whereby the same conveyer and the revolving rake may be actuated from the wheeled frame.

1,154,369. CLEANING APPLIANCE. TILLIE J. BROWNING, Philadelphia, Pa. Filed Mar. 31, 1915. Serial No. 18,231. (Cl. 137—70.)



1. A cleaning appliance comprising a brush, a rigid stick, a spring connecting the brush and stick and permitting the brush to flexibly yield relatively to the stick, and a rigidifying device adapted to be moved into and out of position to render the spring substantially unyielding.

2. A cleaning appliance comprising a brush, a rigid stick, a spring connecting the brush and stick and permitting the brush to flexibly yield relatively to the stick, and a rigidifying device slidable longitudinally relatively to the stick and adapted in one position to prevent the spring from substantially yielding and in another position to permit the spring to yield.

3. A cleaning appliance comprising a brush, a rigid stick, a spring connecting the brush and stick and permitting the brush to flexibly yield relatively to the stick, a rigidifying device slidable longitudinally relatively to the stick and adapted in one position to prevent the spring from substantially yielding and in another position to permit the spring to yield, and automatically-operating manually-releasable means to hold the rigidifying device in its retracted position.

4. A cleaning appliance comprising a brush, a rigid stick, a spring connecting the brush and stick and permitting the brush to flexibly yield relatively to the stick, a rigidifying device slidable longitudinally relatively to the stick and adapted in one position to prevent the spring from substantially yielding and in another position to permit the spring to yield, and means to prevent the withdrawal of the rigidifying device from the stick and to hold said device in its retracted position.

5. A cleaning appliance comprising a brush, a rigid stick, a spring connecting the brush and stick and permitting the brush to flexibly yield relatively to the stick, and a rigidifying device adapted to be moved into and out of position to connect the stick and brush and hold them in rigid relationship.

[Claims 6 and 7 not printed in the Gazette.]

1,154,370. COMBINED SLEIGH AND WAGON. THOMAS BURKE, New York, N. Y. Filed Apr. 24, 1915. Serial No. 23,595. (Cl. 21—96.)



1. In combination with a sled having runner shod sides, pairs of oppositely disposed downwardly and rearwardly inclined grooved guides supported by said sides, the front ends of said grooves being horizontal, axles having ends engaged with said guides, wheels carried by the axles, a connecting bar between the axles, a lever fulcrumed upon the frame, and a link between lever and connecting bar so that the wheels may be lower below or raised above the runners at will.

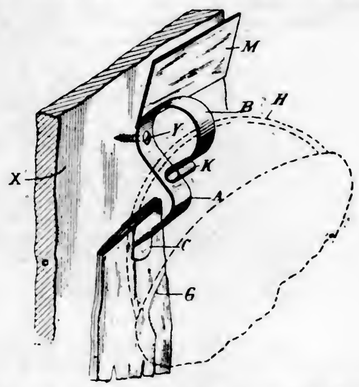
2. In combination with a sled having runner shod sides, pairs of positively disposed downwardly and rearwardly inclined grooved guides supported by said sides, the front ends of said grooves being horizontal, axles having ends engaged with said guides, wheels carried by the axles, a connecting bar between the axles, a lever fulcrumed upon the front end of said frame, and a link between lever and connecting bar so that the wheels may be lowered below or raised above the runners at will.

3. In combination with a sled having runner shod sides, pairs of oppositely disposed downwardly and rearwardly inclined grooved guides supported by said sides, the front ends of said grooves being horizontal, axles having ends engaged with said guides, wheels carried by the axles, a connecting bar between the axles, a lever of the first class fulcrumed upon the front of the sled, and a link between one end of the lever and the connecting bar, the lever and link being so proportioned and positioned that a movement of the lever through substantially 180° raises the wheels above the runners with the axles in the horizontal part of the grooves or lowers the wheels below the runners, there being further a stop attached to the sled below the outer end of the lever when the wheels are in their lowermost position.

1,154,371. HAT AND CAP HOLDER. TIMOTHY J. BURKE, Middletown, N. Y. Filed Feb. 2, 1914. Serial No. 815,293. (Cl. 24—81.)

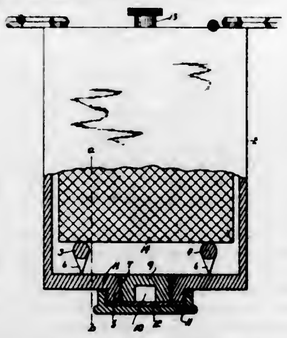
A device of the character described, composed of a single strip of resilient sheet metal formed to comprise a spring arch clip adapted to be mounted on a plane supporting surface with one end lying flat against the surface, a spring ring forming a continuation of the arch at the other end and having a hole offset toward the arch from

the point of tangency between the ring and the supporting surface, whereby an attaching screw extending through



the hole tends to flatten the arch and place the clip under tension.

1,154,372. BATTERY-CELL. AUGUSTUS P. BURRITT, Ozone Park, N. Y. Filed June 11, 1915. Serial No. 33,500. (Cl. 204—53.)



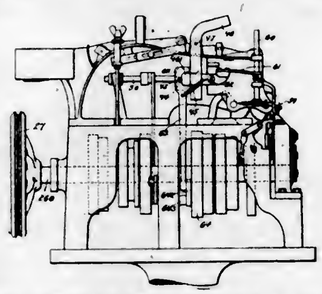
1. A battery cell provided near its bottom with integral transverse arches upon which battery plates may rest.

2. A battery cell formed near its bottom with integral transverse arches the main portions of which stand above the bottom of the cell, said cell provided at its upper end with an inlet opening and in its bottom with a central threaded opening, an externally threaded collar around said opening, a threaded plug adapted to be entered into said central opening, a threaded closure cap applied to said neck and a sealing disk within said cap.

1,154,373. PRESSER-FOOT. JOHN CALLAHAN, Lynn, Mass. Original application filed Dec. 29, 1903, Serial No. 186,958. Divided and this application filed May 8, 1905. Serial No. 259,283. (Cl. 112—13.)

1. The combination of a work-support, stitching mechanism, presser-operating mechanism to force a presser against the work-support and work held thereon, a presser disconnectible from said operating mechanism through the agency of the operator, and provisions for automatically reconnecting said presser with its operating mechanism by the movement of the latter.

2. The combination of a work-support, a presser, operating mechanism therefor including a lever and a reciprocating link having a disconnectible pin and slot engagement, yielding means tending to hold said link and lever in operative connection, means under the control of the operator for disconnecting the same, and provisions for retaining the same out of operative connection, said provisions being constructed and arranged to permit automatic re-connection thereof when the operating mechanism is in a predetermined position relative to the presser.



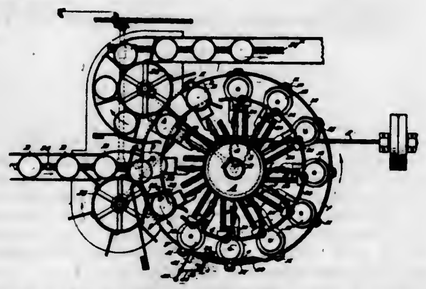
3. The combination of a work support, a presser, and operating mechanism for the presser comprising in part a reciprocable member, mechanism for reciprocating such member, and a member connected to the presser, one of said members having a recess and the other a projection arranged to enter the recess and engage alternately the opposite sides thereof, such sides being abrupt to the line of motion of the projection, whereby driving movement is imparted from one of said members to the other.

4. The combination of a work-support, a presser, a bar carrying the presser, a member connected to the bar, operating mechanism for the bar and presser comprising in part a reciprocable member, one of said members having a recess and the other a projection arranged to enter the recess and engage the opposite sides thereof alternately and in a manner such as to cause motion, and means actuable by the operator for separating said projection from the recess to disconnect the presser bar from the operating mechanism.

5. The combination of a work-support, a presser, and operating mechanism therefor, comprising in part a reciprocating member, an intermediate member suitably connected with the presser; one of said members having a projection and the other having a notch adapted to receive said projection, and also having surfaces extending from said notch adapted to engage said projection and permit the same to slide thereon when it is out of the notch; and yielding means drawing said members together.

[Claims 6 to 8 not printed in the Gazette.]

1,154,374. SYRUPING-MACHINE. ANTONIO CERRUTI, San Francisco, Cal. Filed Oct. 10, 1911. Serial No. 653,858. (Cl. 226—9.)



1. A can syruping machine, consisting of a can support turning about a vertical axis, having means for holding an open top can, and means for tilting the support toward and from its vertical axis and means for syruping the can operated by the tilting of the can.

2. A can syruping machine, consisting of means for supporting and for moving a can continuously, means for tilting the can, and means for syruping the can operated by the tilting of the can.

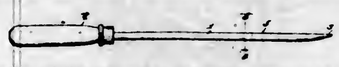
3. A can syruping machine, consisting of means for supporting and for moving a can continuously, means for tilting the can, and means for syruping the can operated by the tilting of the can about a center external to the same.

4. A syruping machine, consisting of means for supporting and moving a can continuously, means operated by the can supporting means for tilting the can, and means for syruping the can, first by tilting the can in one direction and then tilting it in the opposite direction.

5. A can syruping machine, consisting of means for supporting and closing the mouth of the can, means operated by the can supporting means for tilting the can, and means for syruping the can, including valveless appliances operated by first tilting the can in one direction and then tilting it in the opposite direction and then righting the can.

[Claims 6 to 33 not printed in the Gazette.]

1,154,375. KNIFE-SHARPENER. PHILETUS M. CHURCH, Saginaw, Mich., assignor to National Service Selling Company, Saginaw, Mich., a Corporation of Michigan. Filed Feb. 15, 1915. Serial No. 8,230. (Cl. 76—84.)



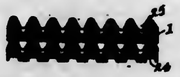
A device of the character described comprising an elongated body portion substantially semi-circular in cross section, said body portion tapering toward its outer end, the upper face of said body portion being concaved to form a pair of extending edges and a handle at one end of said body portion.

1,154,376. PIPE-REPAIRING DEVICE. ALEXANDER CLAIBORNE, Palms, Cal., assignor to Western Pipe & Steel Company of California, Los Angeles, Cal., a Corporation of California. Filed Apr. 4, 1914. Serial No. 829,704. (Cl. 137—33.)



A pipe repairing device comprising a strap adapted to encircle the pipe and having its ends overlapped and secured together, a nut inside said strap, a screw threaded in said nut and passing through both ends of said strap, a filler block adapted to fit over said leak being restrained by said screw, and a metal angle iron member between said screw and said filler block.

1,154,377. COMPRESSION-RHEOSTAT. EMERSON L. CLARK, Lakewood, Ohio, assignor to National Carbon Company, Cleveland, Ohio, a Corporation of New Jersey. Filed Mar. 17, 1913. Serial No. 754,708. (Cl. 219—51.)



1. In a compression rheostat, a plurality of piles, rods for transmitting pressure to said piles and flexible means coöperating with said rods to compress the piles.

2. In compression rheostat, a plurality of piles, means for transmitting pressure thereto, and a flexible cable for applying force to said means.

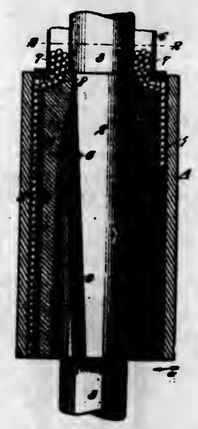
3. In a compression rheostat, a plurality of resistance elements arranged in a plurality of piles, compression members, rods connected to said members, pulleys secured to the rods, and flexible means passing around the pulleys for compressing the piles.

4. In a compression rheostat, a plurality of resistance elements arranged in a plurality of piles, compression members and flexible means attached to the said compression members to simultaneously compress the piles.

5. A resistance element having a plurality of corrugations on one side and alining grooves on the other, said corrugations varying in depth from one end to the other.

[Claims 6 to 11 not printed in the Gazette.]

1,154,378. CYLINDER-GRINDER. LEONARD E. CLAWSON, San Francisco, Cal. Filed Mar. 30, 1915. Serial No. 18,070. (Cl. 51—4.)



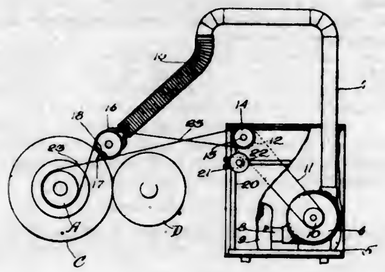
1. A grinding tool for the interior of cylinders comprising a revoluble head with a vertical axis coincident with that of the cylinder to be ground, said head having diagonally disposed open ended channels from end to end, grinding balls movable through the channels of the head, with their surfaces contacting with the interior of the cylinder, and means to constantly advance the balls between the head and cylinder.

2. A cylinder grinding tool comprising a vertically journaled head axially coincident with the cylinder to be ground, open ended channels extending diagonally from end to end of the head, grinding balls movable by gravitation through the said channels, and peripherally contacting with the cylinder and means to deliver balls continuously to the channels.

3. In a cylinder grinding tool, a vertically journaled head axially revoluble within the cylinder, open ended guide channels extending diagonally from end to end of the head, balls movable by gravitation through the channels with their surfaces in contact with the cylinder interior, a source of supply above the head with inclined passages through which the balls are continuously delivered to the channels.

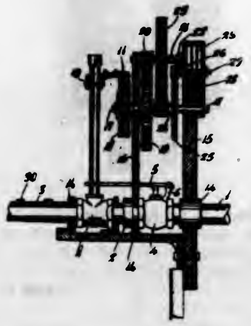
4. In a cylinder grinding tool, a vertically journaled head axially revolubie within the cylinder to be ground, dovetailed open ended channels extending diagonally from end to end of the head, guides fitting said channels and having grooves in the surfaces, balls movable by gravitation through the grooves with their surfaces in contact with the cylinder interior, said guides being interchangeable to fit the channels to cylinders of different sizes.

1,154,379. DRIVING DEVICE FOR PNEUMATIC DUST-REMOVERS. NELSON CLOUETTE, Pemacook, N. H., assignor to William Firth, Chestnut Hill, Mass. Filed Mar. 3, 1913. Serial No. 751,708. (Cl. 19—15.)



Apparatus of the class described comprising a carriage, a drive pulley thereon, a belt on said drive pulley adapted to be driven from the machine under operation, the reaches of said belt being crossed, and a rotary stripping brush having a pulley located between the crossed reaches of said belt whereby said pulley may be moved toward and from said drive pulley on said carriage while remaining in driving engagement with said belt.

1,154,380. IRRIGATION APPARATUS. WALTER H. COLES, Troy, Ohio. Filed Apr. 17, 1915. Serial No. 22,039. (Cl. 137—66.)



1. In an irrigation device of the character described, in combination with a sprinkler pipe mounted so as to rotate, a means for rotating said pipe adapted to be energized by turning the pipe to starting position, and means in connection therewith for shutting off the water from the pipe at a given point.

2. In an irrigation device of the character described, in combination with a sprinkler pipe mounted so as to rotate, means operated by a falling weight for rotating said pipe and means in connection therewith for shutting off the water from the pipe at a given point.

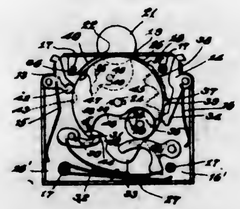
3. In an irrigation device of the character described, in combination with a sprinkler pipe mounted so as to rotate, a means for rotating said pipe adapted to be energized by turning the pipe to starting position, means in connection therewith for shutting off the water from the pipe at a given point, and means for retarding the action of the rotating means so that it imparts very slow rotation to the pipe.

4. In an irrigation device of the character described, in combination with a sprinkler pipe mounted so as to rotate, means operated by a falling weight for rotating said pipe, means in connection therewith for shutting off the water from the pipe at a given point, and means for retarding the weight operated means so that it imparts very slow rotation to the pipe.

5. In an irrigation device of the character described, in combination with a sprinkler pipe mounted so as to rotate, a weight operated segment connected to said pipe, and a governing device to retard the motion of the segment to very slow rocking, a ratchet connection between the governing device and the segment, and means operated by said segment for turning off the water from said pipe.

[Claims 6 to 12 not printed in the Gazette.]

1,154,381. AUTOMATIC COIN-OPERATED LOCK. DENYS W. CORBET, New York, N. Y., assignor, by mesne assignments, to Autosales Gum and Chocolate Company, New York, N. Y., a Corporation of New York. Filed Nov. 12, 1910. Serial No. 591,971. Renewed Mar. 2, 1912. Serial No. 681,251. (Cl. 194—65.)



1. In a coin-operated lock, the combination with a movable locking bolt, of a rotatable coin-carrier for receiving the coin through a suitable entrance opening; means for rotating the coin carrier to convey the coin away from said opening and to effect the movement of said bolt into unlocking position; latching means for locking the coin carier in operated position to prevent the withdrawal of the coin; and key actuated means for releasing siad latching means to permit rotation of said coin-carrier back to normal position to carry the coin back into said coin-entrance opening for ready removal.

2. In a coin-operated lock, a casing; a rotatable coin carrier having a coin pocket; means wholly within said casing for rotating said carrier to convey said coin pocket into closed position within said casing; means adapted to engage said coin-carrier for locking said coin pocket in said closed position; a locking bolt for a receptacle closure; means actuated by the movement of said coin carrier for moving said bolt into unlocking position; and means for unlocking said coin carrier to permit the retraction of the parts.

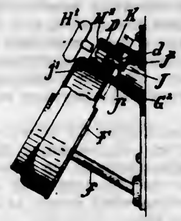
3. In a coin-actuated lock, one or more bolts normally in locking position; a wall providing a coin slot; bolt actuating mechanism having spring means tending to cause movement to unlock each of said bolts; latch mechanism holding said bolt actuating mechanism against unlocking movement; and means operated by the insertion of the proper coin through said slot to release said latch mechanism to cause the automatic unlocking of said bolts without other manual manipulation.

4. In a coin-actuated lock, a wall providing a coin slot; movable means for automatically conveying the proper coin inserted through said slot away from said slot; means for closing said coin slot; and bolt releasing mechanism automatically operated in response to the insertion in said coin slot of the proper coin without the manual manipulation of other parts.

5. In a coin-operated lock, a closure; spring actuated means releasable upon the insertion of the proper coin and automatically movable when released to secure said coin within the lock; and locking means for said closure automatically unlocked by said spring actuated means by reason of the said movement thereof.

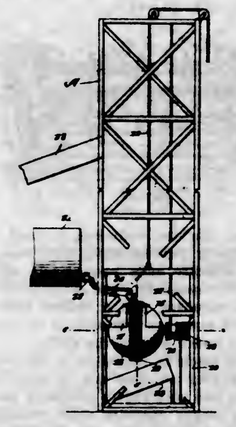
[Claims 6 to 28 not printed in the Gazette.]

1,154,382. WATCH AND CLOCK HOLDING CASE. JOHN COUNTRA, Elizabeth, N. J. Substitute for application Serial No. 623,987, filed Apr. 28, 1911. This application filed June 25, 1913. Serial No. 775,815. (Cl. 224—4.)



A case for holding a time piece, comprising in combination, an integrally formed head and body having an aperture at the front and back thereof, a transparent closure for said front aperture, a cover for said back aperture, said cover serving as a clamping means for retaining the time piece in position, a base adapted to support said head and body, means for locking said head and body to said base, and a supplemental support extending from said body to said base.

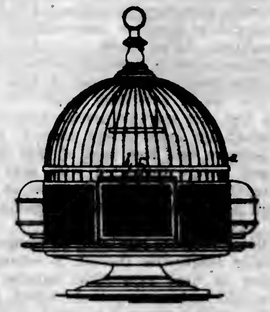
1,154,383. CONCRETE-MIXER. EDWARD H. COWAN, East Cleveland, Ohio. Filed Jan. 12, 1915. Serial No. 1,823. (Cl. 82—73.)



1. An apparatus of the class described comprising a hoisting tower, a frame movable within the tower throughout the extent thereof, a hollow drum journaled for rotation in said frame and having sections forming doors hinged thereto, a coiled water tube concentrically disposed about said drum between the door sections and having one end opening into the drum, a water tank located without the tower and having a discharge spout movable into a position for supplying water to the coil, and means for simultaneously raising and lowering the frame and rotating the said drum.

2. An apparatus of the class described comprising a hoisting tower, a frame movable within the tower throughout the extent thereof, a hollow drum journaled for rotation in said frame and having sections forming doors hinged thereto, a coiled water tube concentrically disposed about said drum between the door sections and having one end opening into the drum, a water tank located without the tower and having a discharge spout movable into a position for supplying water to the coil, means for simultaneously raising and lowering the frame and rotating the said drum, a delivery chute extending from the tower near the uppermost point thereof, and a trough located within the frame for communication with the chute on the arrival of the frame at the upper end of the tower.

1,154,384. RELIEF ORNAMENT AND METHOD OF MAKING THE SAME. JOSEPH M. CRUCET, New York, N. Y. Filed Feb. 19, 1915. Serial No. 9,342. (Cl. 154—2.)



1. In a relief ornament the combination with a wire mesh and a series of wires backing the mesh, of a composition relief ornament arranged on the mesh, and a second plastic composition disposed onto the back of the ornament forming a homogeneous mass to lock the ornament to the mesh and the wires.

2. In a relief ornament the combination with a wire mesh article, of a composition relief ornament arranged on the article, a jewel embedded in the ornament, and a composition united to the back of the ornament and the mesh for fastening the ornament.

3. The method of fastening composition relief ornaments to a foraminous object, which consists in heating the back of the ornament after it is molded, and then pressing the same on to the object so that the back of the ornament will engage the interstices of the object.

4. The method of fastening composition of whiting relief ornaments to a foraminous object, which consists in heating the back of the ornament after it is molded, then pressing the same onto the object so that the back of the ornament will interlock in the interstices of the object, and then heating another batch of the whiting composition disposing it on the back of the article to unite with the back of the ornament.

1,154,385. PRESSURE-CONTROLLING VALVE. THOMAS W. DAVIS, Elizabeth, N. J. Filed Aug. 6, 1914. Serial No. 855,382. (Cl. 236—25.)



1. In a radiator pressure regulator, an elongated casing, a valve movable lengthwise thereof, a heat expansible member in said casing extending longitudinally thereof and having a free part movable upon contraction and expansion substantially transversely thereof, and means

of connection between said valve and the free part of said member whereby movement transverse of the casing is transformed into movement in a direction substantially longitudinally thereof, substantially as set forth.

2. In a radiator pressure regulator, an elongated casing, a valve movable lengthwise thereof, a substantially U-shaped member of heat expansible material in said casing, supported therein at one end and having its opposite free end movable upon expansion and contraction substantially transversely of said casing, and means of connection between said valve and free end of said member whereby movement transverse of the casing is transformed into movement in a direction substantially lengthwise thereof, substantially as set forth.

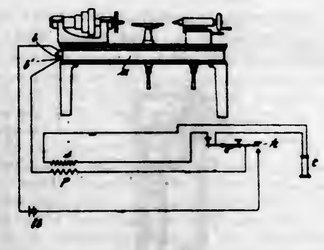
3. In a radiator pressure regulator, an elongated casing, a valve movable lengthwise thereof, a heat expansible member in said casing extending longitudinally thereof and having a free part movable upon contraction and expansion substantially transversely thereof, and a bell crank lever between said free part of said member and said valve and loosely connected with said valve and serving to transform movement transverse of the casing into movement substantially lengthwise thereof, substantially as set forth.

4. In a radiator pressure regulator, an elongated casing, a valve movable lengthwise thereof, a substantially U-shaped member of heat expansible material extending lengthwise in said casing, supported therein at one end and having its opposite free end movable upon expansion and contraction substantially transversely of said casing, and a bell crank lever between said free part of said member and said valve and loosely connected with said valve and serving to transform movement transverse of the casing into movement substantially lengthwise thereof, substantially as set forth.

5. In a radiator pressure regulator, an elongated casing, a valve movable substantially lengthwise thereof, a heat expansible member extending longitudinally of the casing and having a free part movable upon expansion and contraction in a direction substantially transverse thereof, means interposed between said free part of said member and said valve for transforming the transverse movement into movement substantially lengthwise of the casing, a float in said casing, and means whereby said float is supported from said heat expansible member, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,154,386. MEANS FOR SUPERVISION OF MACHINE AND TOOL WORK. PATRICK B. DELANY, South Orange, N. J. Filed Mar. 9, 1911. Serial No. 613,418. (Cl. 179—77.)



1. Means for supervising from a distance the operation of a plurality of tools or machines, comprising the combination with the tools or machines of microphone contacts mounted upon appropriate parts thereof, switches or keys corresponding respectively with the sets of microphone contacts and grouped at a distant office, a source of current and circuit connections connecting the several microphone contacts with their respective keys and means at the distant office for rendering manifest the microphonically transmitted vibrations of said tools or machines.

2. Means for supervising from a distance the operation of a plurality of tools or machines, comprising the combination with the tools or machines of microphone contacts mounted upon appropriate parts thereof, means for isolating the microphone contacts from air vibrations, switches or keys corresponding respectively with the sets of microphone contacts and grouped at a distant office, a source of current and circuit connections connecting the several microphone contacts with their respective keys and means at the distant office for rendering manifest the microphonically transmitted vibrations of said tools or machines.

3. A method of manifesting the vibrations of a distant operating machine or tool, consisting in causing said vibrations to microphonically set up current undulations or pulsations in an electric circuit and converting said undulations into corresponding sounds at a point distant from the machine or tool.

4. A method of supervising the operation of a plurality of machines, consisting in electrically transmitting to a distant office vibrations produced by the machine while in operation and there rendering the vibrations of the respective machines independently manifest.

5. A method of supervising the operation of a plurality of machines, consisting in electrically transmitting to a distant office vibrations produced by the machines while in operation and there rendering the vibrations of the respective machines audibly independently manifest.

[Claim 6 not printed in the Gazette.]

1,154,387. CONCRETE-MOLDING MACHINE. CHARLES M. DOLEN, Mooresville, Ind. Filed Mar. 7, 1914. Serial No. 823,130. (Cl. 25—41.)



1. A molding machine including a mold comprising a long and relatively narrow shell, two end members secured to the opposite ends respectively of the shell, a plurality of yokes secured to the exterior of the shell between the end members, and a hollow stiffening bar secured to the end members and also to all the yokes opposite the normal under side of the shell.

2. A molding machine including a long and relatively narrow mold having an open top, a pallet on the mold closing the top, two rock-shafts rotatably mounted on the exterior of the longer opposite sides respectively of the mold, and two series of clamp arms fixedly secured to the rock-shafts, a series to each, each arm having a lug thereon for engaging the pallet.

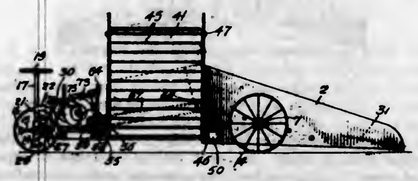
3. A molding machine including a long and relatively narrow mold having an open top, a pallet on the mold closing the top, two rock-shafts rotatably mounted on the exterior of the two longer opposite sides respectively of the mold, two series of clamp arms fixedly secured to the rock-shafts, a series to each and adapted to engage the pallet, and means for connecting the rock-shafts together for simultaneously turning them in opposite directions.

4. In a molding machine, the combination of two frame arches having each a central vertical guide bar fixedly secured to and extending downward from the arch, a mold rotatably supported upon the arches above the guide bars, a table having two slides that embrace and are movably guided by the bars respectively, two rack-bars connected to the table adjacent to the slides, two gear segments pivotally supported and engaging the rack-bars respectively, each segment having an operating arm, and a horizontally arranged foot-bar connected to the ends of the two operating arms.

5. In a molding machine, the combination of two frame members, two journal boxes mounted upon said members respectively, a mold having two end members, two trunnions fixed to the end members respectively and rotatively mounted in said boxes respectively, a controlling arm having a hub that is fixedly connected to one of said trunnions, the hub having two projections on opposite sides thereof respectively, and a dog connected to one of said frame members and adapted to be moved to separately engage said projections.

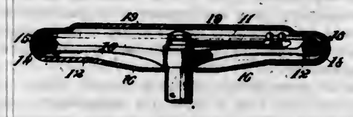
[Claims 6 and 7 not printed in the Gazette.]

1,154,388. SNOW-REMOVING DEVICE. OTTO MAGNUS ECKARDT, Dover, N. J. Filed July 30, 1914. Serial No. 854,071. (Cl. 37—25.)



In a snow removing machine comprising a platform having a scoop at its front end, wheels journaled on an axis transverse to the platform intermediate the ends thereof, a rear axle, wheels on the axle to swing on vertical axes, a common means for moving the wheels and an adjustable connection between the rear end of the platform and the rear axle for varying the inclination of the platform, said connection comprising arch bars at the rear of the platform and having depending rack bars, the axle having guides for the bars, a shaft journaled longitudinally of the axle and having pinions for engaging the rack bars, the guides having openings through which the pinions extend, and means for oscillating the shaft.

1,154,389. PROTECTIVE DEVICE FOR STEERING-WHEELS. THOMAS E. FOGALSANO, San Francisco, Cal. Filed May 12, 1915. Serial No. 27,656. (Cl. 70—90.)



A protective device for the steering wheels of automobiles including a pair of hingedly connected guard members formed with portions adapted to loosely receive the steering wheel rim, packing lining the interior of said portions to engage the top, bottom and periphery of the steering wheel rim so as to support the device entirely from the steering wheel rim and to maintain same otherwise out of contact with the steering wheel and to also permit the device to freely rotate about said wheel without turning the latter, and means to lock the members together.

1,154,390. OILING AND CLEANING DEVICE FOR GUNS. CHARLES H. FOSTER, Washington, D. C. Filed Sept. 17, 1914. Serial No. 862,130. (Cl. 42—91.)

1. In a device of the character stated, a liquid-container having a spraying head at one end, a conduit for air under pressure entering the opposite end of such container, and means for supporting and longitudinally moving and guiding such container within the bore of a gun.

2. In a device of the character stated, a liquid-container having a spraying nozzle at one end formed with apertures in its periphery, a conduit for air and having a curved and perforated portion within said container, and means for supporting and guiding such container within the bore of the gun.

3. In a device of the character stated, a liquid-container having a spraying nozzle at one end, an air-pipe connected to the other end of said container, a cylindrical brush upon said pipe to the rear of said container and adapted to slidably fit in the bore of a gun, and an air-conduit connected to said air-pipe.

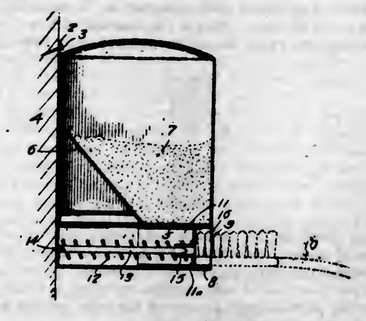


4. In a device of the character stated, a liquid container having a spraying nozzle, an air-pipe connected to said container, a brush having a slidable fit in the bore of the gun and secured upon said air pipe to the rear of said container, an air-conduit connected to the air-pipe and provided with an outlet to the rear of said brush, and a gate adapted to be secured in the breech of the gun to close the same and having the air-conduit passing through it.

5. In a device of the character stated, a liquid container having at one end a spraying head formed with peripheral perforations adapted to throw radial jets, and an air-pipe entering the other end of the container and having the portion within the latter curved and foraminated.

[Claims 6 to 8 not printed in the Gazette.]

1,154,391. TOOTH-POWDER DISPENSER. ROBERT D. GEE, Blackfoot, Idaho. Filed Aug. 15, 1914. Serial No. 856,948. (Cl. 221—62.)



1. A tooth powder dispenser, comprising a receptacle provided with an opening in its bottom near the front of the receptacle and having an inclined false bottom or partition at the rear of the opening for directing the powder to the opening, said receptacle having an extension at its under side for receiving a tooth brush, a casing fitting the extension and acting as a valve for closing the opening, said casing having a transverse partition near its front end for engagement by the brush, a spring normally pressing the casing outwardly into closed position, and a spike rigid with the rear end of the extension and extending through the valve casing, the front of the spike being pointed and being below the opening of the powder receptacle and extending to the front end of the said opening, said spike being designed to spread the bristles.

2. A tooth powder dispenser, comprising a receptacle having an opening in its bottom and near the front thereof, and having an extension on its bottom for receiving a tooth brush, the extension being open at the front of the receptacle, a valve in the extension and movable longitudinally thereof and adapted to close the opening, said valve having means for engagement by a tooth brush to

move the valve from beneath the opening, a spring normally pressing the valve outward, and a spike rigid with the rear end of the extension and extending longitudinally of the extension to near the front thereof for spreading the bristles of the tooth brush when it is inserted, the valve having an opening through which the spike extends.

1,154,392. SANITARY POULTRY-ROOST. ELIJAH J. HAGAN, Brush, Colo. Filed May 13, 1915. Serial No. 27,893. (Cl. 119—25.)

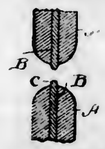


1. A roost composed of a trough adapted to contain liquid, and a perch having a wick extending therethrough and removably supported on the trough, with means for preventing lateral or longitudinal displacement.

2. A roost composed of a trough adapted to contain liquid, and a perch having a wick extending therethrough and removably supported on the trough, with means for preventing lateral or longitudinal displacement, a notched support for said roost, and means for preventing the roost from endwise movement on the support.

3. A roost comprising a trough adapted to contain a liquid and having flanged ends, and a perch having a wicking extending therethrough, said perch having a transverse kerf to receive the upper edge of one of the ends to prevent endwise movement of the perch, and a spanner having downwardly bent ends to rest upon and embrace the edges of the trough to prevent lateral displacement.

1,154,393. ELECTRODE FOR ARC-LIGHTS. CHARLES W. HILL, Lakewood, Ohio, assignor to National Carbon Company, Cleveland, Ohio, a Corporation of New Jersey. Filed Aug. 25, 1911. Serial No. 645,915. (Cl. 176—121.)



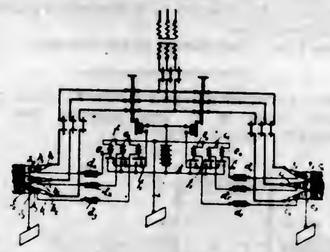
1. An electrode for flaming arc lamps, having a body portion of flaming material and a good conducting portion of substantially pure carbon more resistant to the action of the arc than is said body portion, whereby the said good conducting portion extends beyond the body portion as the electrode is consumed in the lamp.

2. An electrode for flaming arc lamps, consisting of an outer shell of flaming material and a core of substantially pure, good conducting carbon more resistant to the action of the arc than is said shell, whereby the core extends beyond the shell as the electrode is consumed in the lamp.

3. In a flaming arc lamp, two electrodes for supporting an arc, one of said electrodes having a center of substantially pure, good conducting carbon, and the other having an electrode consisting of an outer shell of flaming material and a central core of substantially pure carbon, said core being more resistant to the action of the arc than said shell, whereby the core contacts with the conducting center of the other electrode when the arc is ruptured and the electrodes are moved together.

1,154,394. SAFETY CONNECTION FOR ELECTRIC MAINS. MARTIN HÖCHSTÄDTER, Berlin, Germany, assignor to Siemens-Schuckertwerke G. M. B. H., Berlin, Germany, a Corporation of Germany. Filed July 25, 1911. Serial No. 640,476. (Cl. 175—294.)

1. In an electric supply system, the combination, with a cable line and section switches interpolated therein, of an electrically conducting layer in the insulation of each main conductor in the cable line, and grounded disconnecting means operatively connected with each section switch and electrically connected with the one or more electrically conducting layers for automatically opening the section switches at the ends of a cable section in which a fault occurs.



2. In an alternating current supply system, the combination, with a cable line, and section switches interpolated therein, of grounded, electromagnetically controlled, disconnecting means for opening each of the said section switches, and an electrically conducting layer in the insulation of each main conductor of the cable line connected with said disconnecting means, the current due to the potential difference between the one or more layers and the ground normally preventing said disconnecting means operating.

3. In an electric supply system, the combination, with a cable line and section switches interpolated therein, of disconnecting means comprising a grounded auxiliary source of current for opening each section switch, and an electrically conducting layer in the insulation of each main conductor of the cable line connected with said disconnecting means.

4. In an electric supply system, the combination, with a cable line and section switches interpolated therein, of disconnecting means comprising a grounded auxiliary source of current for opening each section switch, an electrically conducting layer in the insulation of each main conductor of the cable line connected with said disconnecting means, and a choking device interpolated between each electrically conducting layer and the appertaining disconnecting means.

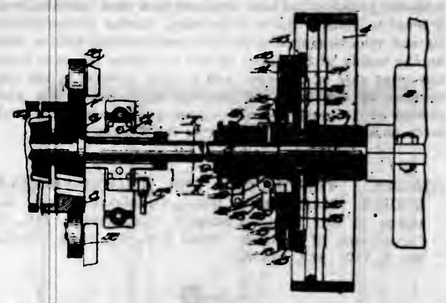
5. In a permanently grounded electric supply system, the combination, with a cable line comprising a plurality of individual cables having a common grounding conductor, and a plurality of sets of section switches interpolated in the line, of disconnecting means comprising a grounded auxiliary source of current for opening each section switch, and an electrically conducting layer in the insulation of each individual cable of the cable line connected with said disconnecting means.

[Claims 6 to 9 not printed in the Gazette.]

1,154,395. CLUTCH DEVICE. BENJAMIN HOLT, Stockton, Cal. Filed Nov. 23, 1911. Serial No. 661,896. (Cl. 192—7.)

1. In a power transmission, the combination with abutting driving and driven shafts with their proximate ends supported one by the other against independent lateral displacement, said shafts being free to move into an inclined position with relation to each other about a center common to the proximate ends of the shafts sufficiently to permit one shaft to shift transmission of power to different gears, of a clutch embodying relatively movable clamping members fixed on one of said shafts to rotate in unison therewith and having radial friction faces, an annular clamped member having radial friction faces with which the faces on the clamping members coöperate, and a universal joint connection between the clamped member and the other one of said shafts, arranged concentrically about the center common to the proximate

ends of the two shafts about which said shafts are free to change their relative angular position.



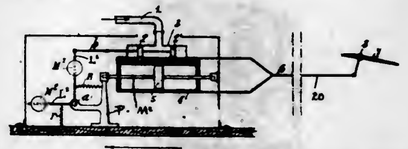
2. In a power transmission, the combination with driving and driven shafts having abutting proximate ends and a ball and socket connection between the shafts whereby the axis of one shaft may be inclined to the axis of the other sufficiently to permit one shaft to shift transmission of power to different gears and the shafts rotated independently, of a clutch embodying relatively movable clamping members fixed against angular movement on one of said shafts and having radial friction faces, an annular clamped member with which the clamping members coöperate, and a universal joint connection between the clamped member and other shaft arranged concentrically with relation to the ball and socket joint between the shaft and radially outside of the clutch member.

3. In a power transmission, the combination with driving and driven shafts, a ball and socket connection between the shafts whereby the proximate ends of the shafts are mutually supported against relative lateral movement, one shaft may be inclined with respect to the other sufficiently to permit said shaft to shift transmission of power to different gears and the shafts rotated independently, of a clutch embodying relatively movable clamping members on one shaft arranged concentrically with relation to the ball and socket connection and having radial friction faces, an annular clamped member located between and with which the clamping members coöperate, a ring rigidly connected with the other shaft and surrounding the clamping and clamped members, and a universal joint connection between said ring and clamped member whereby the clutch members when clamped together will move in unison with the shaft on which the clamping members are mounted when the angle of the shafts with relation to each other is changed.

4. In a power transmission, the combination with driving and driven shafts having abutting proximate ends mutually supported against independent lateral movement, whereby said shafts may be inclined with relation to each other sufficiently to permit one shaft to shift transmission of power to different gears and rotated independently, relatively movable clutch members mounted on one of said shafts to rotate in unison therewith, a ring mounted on the other of said shafts to rotate in unison therewith and surrounding the clutch members, an annular clamped member with which the clamping members coöperate having slot bearings in its peripheral portion arranged longitudinally of the shafts and projections on said ring extending into said slot bearings to form a universal joint connection between the clamped member and ring whereby the shafts may be inclined with relation to each other with the clutch members in either clamping position or with the clutch members free from each other to permit of the independent rotation of the shaft.

1,154,396. AUTOMATIC STABILIZING APPARATUS FOR AEROPLANES. LOUIS ADOLPHE HAYOT, Beauvais, Oise, France. Filed Aug. 18, 1912. Serial No. 714,773. (Cl. 244—29.)

1. In stabilizing apparatus for aeroplanes, the combination with stabilizing means, of an auxiliary motor for operating the same, an angular lever having a great amount of inertia pivotally mounted on the aeroplane, an adjustable weight on each arm of the lever and a connection from said lever to said motor whereby the latter operates the stabilizing means in accordance with movements of said lever.



2. In stabilizing apparatus for aeroplanes, the combination with stabilizing means, of an auxiliary motor for operating the same, a fixed pivot carried by the aeroplane, an angular two armed lever having a great amount of inertia and oscillatable about said pivot in unstable equilibrium, an adjustable weight on each arm of the lever and a connection from one arm of said lever to said auxiliary motor whereby the latter operates the stabilising means in accordance with the oscillations of the lever about its pivot.

3. In stabilizing apparatus for aeroplanes, the combination with stabilizing means, of an auxiliary motor for operating the same, an angular lever having a great amount of inertia pivotally mounted on said aeroplane and oscillatable in unstable equilibrium, an adjustable weight on each arm of the lever, a connection from said lever to said motor whereby the latter operates said stabilising means in accordance with the oscillations of said lever, and yielding means for automatically restoring said lever to a position of equilibrium.

4. In stabilising apparatus for aeroplanes, the combination with stabilising means, of an auxiliary motor for operating the same, an angular two armed lever having a great amount of inertia pivotally mounted on said aeroplane and oscillatable in unstable equilibrium, weights adjustably carried on the arms of said lever, and a connection from one arm of said lever to said auxiliary motor whereby the latter operates said stabilizing means in accordance with the oscillations of said lever.

5. In stabilizing apparatus for aeroplanes, the combination with stabilising means, of an auxiliary motor for operating the same, an angular two armed lever having a great amount of inertia pivotally mounted on said aeroplane and oscillatable in unstable equilibrium, weights adjustably carried on the arms of said lever, a connection from one arm of said lever to said auxiliary motor whereby the latter operates said stabilising means in accordance with the oscillations of said lever, and springs connected with said last mentioned arm and adapted to restore said lever to a position of equilibrium.

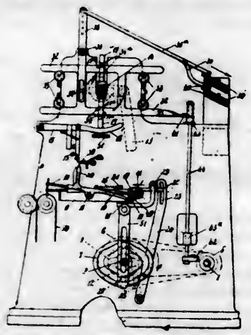
[Claim 6 not printed in the Gazette.]

1,154,397. TAMBOUR-FRAME-MOVING MECHANISM FOR EMBROIDERING-MACHINES. GUSTAV HÜBNER, Plauen, Germany. Filed Mar. 26, 1912. Serial No. 686,266. (Cl. 112—7.)

1. In a device of the character described, a frame, needle levers mounted on said frame, means to intermittently vibrate said levers, a transverse bar having a recess, said levers adapted to engage said recess and be retained in the adjustment effected by the pattern card, adjusting arms adapted to operate the embroidery frame and one armed levers adapted to communicate movement from said needle levers to said adjusting arms.

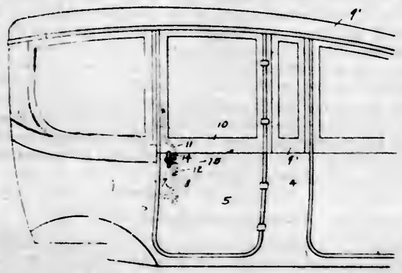
2. In a device of the character described, a frame, a driving shaft journaled on said frame, a driven shaft, speed controlling means connected with said driving shaft and said driven shaft, a vertical bar, a cam on said driven shaft longitudinally reciprocating said vertical bar, a rocking needle lever actuated by said vertical bar, guide rollers, a horizontally movable frame mounted on said guide rollers, means by which said rocking needle lever

controls the reciprocations of said movable frame, including a vertically adjustable and oscillatory bar connected to said movable frame and means connecting said movable frame with the tambour frame.



3. In a device of the character described, a driving shaft a driven shaft, adjustable sprocket wheels on one of said shafts, means to connect and disconnect said adjustable wheels with said shaft, cams on said driven shaft a rod suitably journaled at its lower end and having a slot in its upper end and an inclined rigid projection spring-held against one of said cams, a recessed transverse bar lifting needle levers, pushers on said needle levers, hook-levers actuated by said pushers, horizontal levers 15, rock arms 15^a, pivoted on said horizontal levers and engaged by said hook levers, an oscillating bar 17 said levers 15 operating to control the vertical position of the oscillating bar 17, a rod actuating the tambour frame and means operatively connecting said oscillating bar with said rod for actuating the tambour frame, as herein set forth.

1,154,398. LATCH FOR VEHICLE-DOORS. MATTHEW R. HULL, Connersville, Ind., assignor to Rex Buggy Company, Connersville, Ind., a Corporation of Indiana. Filed June 21, 1915. Serial No. 35,416. (Cl. 21—125.)



1. A vehicle door in two transversely divided members, a latch on the lower member comprising a bolt, a spring to shoot the bolt, and a lever to withdraw the bolt, in combination with a lever pivoted at its upper end to the upper door-member and engaging said first lever below, a cam against which said last lever is held by said latch-spring and manually operated means to rock the cam.

2. A vehicle door in two transversely divided members, a latch on the lower member comprising a bolt, a spring to shoot the bolt and a lever to withdraw the bolt said lever having a lateral projection at its end remote from the bolt, in combination with a rock-shaft passing through the door, a handle on its outer end, a cam on its inner end and a second lever pivoted at its upper end to the upper door-member and contacting at its lower end with the lateral projection of the first lever and bearing against said cam.

3. A vehicle door in a plurality of transversely divided members, a latch on the lowest member comprising a bolt, a spring pressing the bolt normally to a shot position, and a lever to retract the bolt having a lateral projection at its end remote from the bolt, in combination with a cam on the inside of the door, means to rotate the cam from the outer side of the door and a lever pivoted to the top member of the door and bearing against the cam and slotted at its lower end, the lateral projection of the first lever passing through the slot in the second lever.

1,154,399. VENTILATOR FOR CLOSED-VEHICLE BODIES. MATTHEW R. HULL, Connersville, Ind., assignor to Rex Buggy Company, Connersville, Ind., a Corporation of Indiana. Filed June 21, 1915. Serial No. 35,417. (Cl. 16—6.)



1. In a ventilator, a frame, a sash mounted therein to swing on its lower end, and a spring stop secured to the frame at the upper end of the sash, said stop limiting the opening of the sash and pressing against it to eliminate looseness and rattle in closed and open positions.

2. In a ventilator, a frame, a sash mounted in the frame to swing on its lower end, a spring stop secured to the frame at the upper end of the sash said stop limiting the opening of the sash and pressing against it to eliminate looseness and rattle in closed and open positions and means for adjusting the stop out of the way of the sash for the removal of the latter from the frame.

3. In a ventilator, a frame, a sash mounted in the frame to swing on its lower end and having an inwardly projecting pull at its upper end, a U-shaped spring stop secured by one stem and having its other stem bearing elastically against said sash pull and means on the stop to limit the swing of the sash while maintaining said elastic bearing.

4. In a ventilator, a frame, a sash mounted in the frame to swing on its lower end and having a projecting pull at its upper end, a U-shaped spring stop secured by one stem and having its other stem bearing against said sash pull, means on the stop to limit the swing of the sash and means for adjusting the stop out of interference with the sash pull.

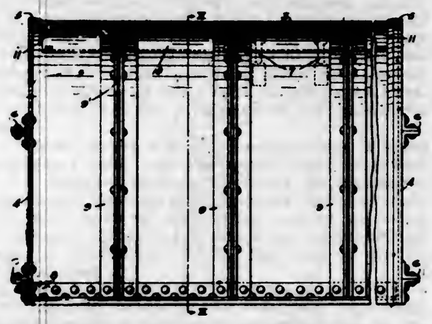
1,154,400. ANNEALING-BOX. PERCY E. HUNTER, Pittsburgh, Pa. Filed June 18, 1915. Serial No. 34,829. (Cl. 148—14.)

1. An annealing box having an inner top-supporting frame secured to the inner bottom portions of the sides and extending across and along underneath the top, and spaced inwardly thereof.

2. An annealing box having an inner top-supporting frame secured to the inner bottom portions of the sides and extending across and along underneath the top, spaced inwardly thereof and adapted to allow expansion and contraction of portions of the shell.

3. An annealing box having a top-supporting frame secured to the inner bottom portions of the sides and extending across and along underneath the top with an intervening space but unconnected therewith.

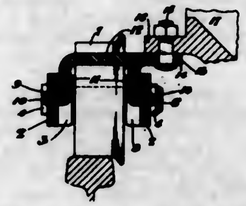
4. In combination with an annealing box having ends, sides, and an arched top; inner framing members secured to the inner bottom portions of the sides extending continuously across underneath the top, and provided with a longitudinal top-supporting member.



5. In combination with an annealing box having ends, sides, and an arched top; inner framing members secured to the inner bottom portions of the sides extending continuously across underneath the top, and provided with a longitudinal top-supporting member secured to the top at its ends.

[Claims 6 and 7 not printed in the Gazette.]

1,154,401. CONVEYING-LINK CONSTRUCTION. WILLIS T. HURST, Pittsburgh, Pa., assignor to Pittsburgh Coal Washer Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 20, 1915. Serial No. 15,848. (Cl. 193—8.)



1. The combination with a pair of longitudinally slotted links, of an arched supporting bridge member having laterally extending lugs engaging said slots.

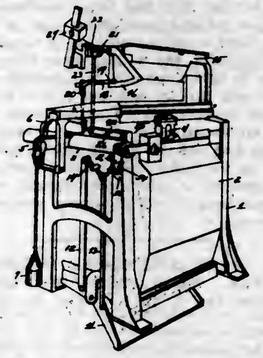
2. The combination with a pair of longitudinally slotted links, of a supporting bridge member provided with a lateral integral supporting attachment and having laterally extending lugs engaging said slots.

3. The combination with a pair of separated links of the type disclosed, each having a longitudinal slot at its middle portion, of an intervening bridge member having an upper supporting and attaching body portion provided with downwardly extending arms having laterally projecting portions engaging said slots.

4. The combination with a pair of separated links of the type disclosed, each having a longitudinal slot at its middle portion, of an intervening bridge member having an upper supporting and attaching body portion provided with downwardly extending arms having laterally projecting portions engaging said slots and a lateral apertured extension of said body portion.

1,154,402. AUTOMATIC SCALE. JOHN LOWELL JENKINS, St. Johnsbury, Vt., assignor to E. & T. Fairbanks & Company, St. Johnsbury, Vt., a Corporation of Vermont. Filed Feb. 19, 1912. Serial No. 678,625. (Cl. 73—175.)

1. In a scale, the combination with the frame and the scale beam, of a bracket upon the frame, a shaft journaled in the bracket, an arm fixed to the shaft, a roll upon the arm engaging the beam, a weight attached to the shaft, and a stop carried by the shaft adapted to engage the bracket, for the purpose described.



2. In a scale, the combination with the frame and a scale beam, of a bracket, a shaft journaled in said bracket, a sleeve upon the shaft having arms extending transversely therefrom and angularly in relation to each other, a roll upon one arm for engaging the beam, a counterweight carried by the other arm, a weight fixed to the shaft, and a stop carried by the sleeve adapted to engage the bracket, for the purpose described.

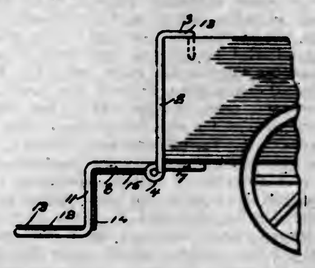
3. In an automatic scale, the combination with a cut-off gate, of a shaft by which said gate is pivotally suspended, a collar and a bracket arranged upon the shaft, a weight carried by said bracket, and a connection between the bracket and the collar.

4. In an automatic scale, the combination with a cut-off gate, of a shaft by which said gate is pivotally suspended, a collar and a bracket arranged upon the shaft, said bracket having an arm connected to the collar, and a weight carried by said bracket.

5. In an automatic scale, the combination with a cut-off gate, of a shaft by which said gate is pivotally suspended, a collar and a bracket arranged upon the shaft, said bracket having a transversely extending portion, a connection between said portion and the collar, and a weight carried by said bracket.

[Claims 6 to 16 not printed in the Gazette.]

1,154,403. CONVERTIBLE CHAIR AND STEP. MELISA JANE JONES, Enterprise, Ala. Filed Aug. 11, 1914. Serial No. 856,191. (Cl. 155—21.)



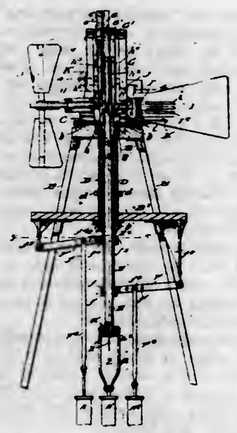
1. A convertible chair and step comprising a hanger, a member pivotally connected intermediate its ends to said hanger, a bent portion carried by said member arranged to form a body support, and a bent portion formed upon said first-named bent portion forming a front support, said member being of such length as to form a rear chair support.

2. A device of the character described comprising a flat member, a hook-shaped part formed at one end of said member, a second flat member fulcrumed intermediate its

ends at the opposite end of said first-named member, a rightangular bent portion formed upon said second-named member, and a rightangular portion formed upon said first-named rightangular portion.

3. A convertible chair and step comprising a U-shaped hanger, a hook offset formed at the bight of said hanger, a U-shaped tread member consisting of an angle-iron part formed at its bight and a prop integrally connected at right angles to said angle-iron part, eyelets formed upon the limbs of said hanger, said prop formed from the limbs of said tread member, eyelets formed upon the limbs of said prop intermediate its ends, a headed pin passed through said first and last-named eyelets, said first-named limbs being on the outer side of said second-named limbs, a backing secured to said prop arranged to overlie the limbs of said hanger, and a backing secured upon said angle-iron member.

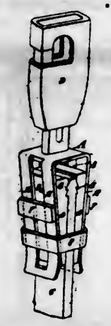
1,154,404. CRANK AND LEVER MECHANISM FOR WINDMILLS. HENRY KALLIS, Wessington Springs, S. D. Filed Jan. 9, 1914. Serial No. 811,172. (Cl. 74—5.)



1. In a structure of the character described the combination of a plurality of cranks, a rotating platform upon which the said cranks are mounted, inner and outer guide tubes depending from the said platform and the outer one of which is stationarily held at its upper and lower ends, adjusting screws working through the outer guide tube and against the inner guide tube whereby to center the latter, a plurality of telescoping transmission tubes depending through the guide tubes and independently movable, connections between the upper ends of said transmission tubes and the cranks, and connections at the lower ends of the said transmission tubes whereby their movement may be independently utilized.

2. In a structure of the character described, the combination of a plurality of cranks, telescoping transmission tubes depending below the said cranks, said tubes being independently connected at their upper ends to the said cranks and having their lower ends terminated in stepped relation, guides through which the tubes are mounted to independently move, a support which carries the guides, levers fulcrumed at their outer ends to the support adjacent the lower ends of certain of the transmission tubes, yokes loosely surrounding the lower ends of the said tubes and to which the inner ends of the levers are connected, and connecting arms having adjustable connections intermediate the ends of the said levers whereby the movements of the said tubes may be independently utilized.

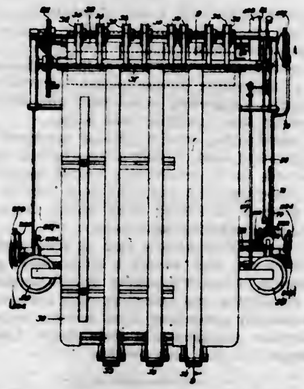
1,154,405. CLAMP. WILLIAM D. KENNEDY, Oakland, Cal., assignor of one-half to George L. Wallace, Oakland, Cal. Filed Mar. 29, 1915. Serial No. 17,831. (Cl. 24—263.)



1. A clamp including a U-shaped member, a clamping member encircling the arms of said member, each of the arms being longitudinally slotted, a pair of wedge-shaped gripping members between the arms, and means on the gripping members engaged in the slots to guide the members, said clamping member extending over the side edges of the members so as to coact with the guiding means to prevent lateral movement of the gripping members.

2. A clamp including a U-shaped member, a clamping member encircling the arms of said member, each of the arms being longitudinally slotted, a pair of wedge-shaped gripping members between the arms, and means on the gripping members engaged in the slots to guide the members, said clamping member extending over the side edges of the members so as to coact with the guiding means to prevent lateral movement of the gripping members, the free ends of the U-shaped member being turned outwardly so as to restrict movement of the clamping member in one direction.

1,154,406. SHEET-FEEDING MACHINE. HOWARD K. KING, Philadelphia, Pa., assignor to Chambers Brothers Company, a Corporation of Pennsylvania. Continuation in part of application Serial No. 790,169, filed Sept. 17, 1913. This application filed Jan. 24, 1914. Serial No. 814,096. (Cl. 101—33.)



1. Means for feeding a bank of sheets comprising a feed drum, a friction element operatively connected therewith, a coöperating friction element and means for rocking the same, means for controlling the coöperation of said friction elements comprising a sheet actuated detector.

2. A sheet feeding device comprising a drum, actuating means therefor comprising friction elements, means for causing a varying efficiency of engagement between the said coöperating friction elements controlled by a sheet actuated calipering device.

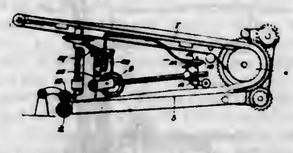
3. A sheet device for feeding a bank of sheets comprising a drum, actuating means therefor comprising friction elements, means for controlling the efficiency of engagement between the said coöperating friction elements comprising a sheet actuated calipering device, means for adjusting the calipering device with respect to the thickness of the bank of sheets permitted to pass beneath the same.

4. A sheet feeding device for feeding a bank of sheets comprising a drum, actuating means therefor comprising friction elements, means for controlling the efficiency of engagement between the said coöperating friction elements comprising a sheet actuated calipering device and means for adjusting the position of the calipering device with respect to its distance from the front edge of the forwardmost sheet.

5. Means for feeding a bank of sheets comprising a drum, actuating means therefor comprising coöperating friction elements, pneumatically operated means for controlling the coöperation of said elements and a sheet detecter for controlling the air pressure on the pneumatically operated device.

[Claims 6 to 60 not printed in the Gazette.]

1,154,407. SHEET-FEEDING MACHINE. HOWARD K. KING, Philadelphia, Pa., assignor to Chambers Brothers Company, a Corporation of Pennsylvania. Original application filed Jan. 24, 1914, Serial No. 814,096. Divided and this application filed Sept. 4, 1914. Serial No. 860,204. (Cl. 101—36.)



1. In a sheet feeder, the combination with means for operating the combing rolls, of a pile drag, means for feeding a bank of sheets forward to the combing rolls, and means for relieving the pressure of the pile drag on the sheets during the forward feed of the latter.

2. In a sheet feeder, the combination with means for operating the combing rolls, of a pile drag resting on the sheets, means for feeding a bank of sheets forward to the combing rolls, and means for relieving the pressure of the pile drag on the sheets during the forward feed of the latter.

3. In a sheet feeder, the combination with means for operating the combing rolls of a pile drag, means for feeding a bank of sheets forward to the combing rolls, and means for relieving the pressure of the pile drag on the sheets at regular intervals during the forward feed of the latter.

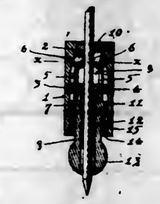
4. In a sheet feeder, the combination with means for operating the combing rolls of a pile drag, means for feeding a bank of sheets forward to the combing rolls, means for applying pressure to the pile drag, and means for relieving said pressure during the forward feed of the sheets.

5. In a sheet feeding machine, a sheet supporting table, sheet actuating means, a pivotally supported bracket, a presser foot connected therewith and a supporting wheel or roller for the bracket.

[Claim 6 to 17 not printed in the Gazette.]

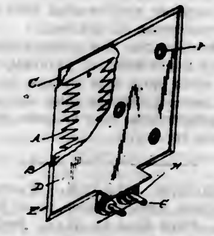
1,154,408. SCARF-PIN RETAINER. NATHANIEL M. KRASNER, Buffalo, N. Y. Filed Nov. 18, 1914. Serial No. 872,794. (Cl. 24—155.)

1. A pin retainer of the type described comprising a cylindrical body portion having its interior cylindrical except at its upper portion which is cone-shaped, a member rigidly secured therein having borings to receive the stems of friction pins, friction pins having their stems sliding in said borings the upper ends of which friction pins are adapted to contact with said cone-shaped surface of said body portion, a sliding member within said body portion engaging against the stems of said friction pins and a spring for forcing said sliding member upwardly in said body portion.



2. A pin retainer of the type described comprising a body portion, a disk and sleeve member within said body and held rigidly therewith, having borings to receive the stems of friction pins and centrally bored to receive the pin to be held, friction pins slidably held in said borings, a sliding member in said body engaging the stems of said friction pins and a spring for forcing said sliding member upwardly within said body.

1,154,409. ELECTRICAL HEATING UNIT. FRANK KUHN and FRANK E. SHAILOR, Detroit, Mich., assignors to American Electrical Heater Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 16, 1909. Serial No. 523,016. (Cl. 219—37.)



1. A flat heating unit, comprising a flat resistance element, flat insulation upon opposite sides of the resistance, a flat armor inclosing the resistance and insulation and firmly clamping the insulation and resistance therebetween, and plug engaging terminals carried by and insulated from said armor and forming with the latter, the resistance and the insulation a unitary structure.

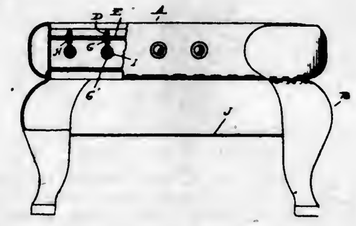
2. A flat heating unit, comprising a flat resistance element, flat insulation upon opposite sides of the resistance, a flat armor inclosing the resistance and the insulation and firmly clamping the resistance and insulation therebetween, said armor having a projection, and plug engaging terminals rigidly carried by said projection and insulated therefrom, said resistance, armor and terminals forming a unitary structure.

3. A flat heating unit, comprising a flat resistance element, flat insulator plates upon opposite sides of said resistance, armor plates parallel to the insulator plates positioned upon opposite sides of the latter and united to each other at the margins thereof, a plurality of spaced hollow rivets passing through said insulator plates and armor plates to prevent buckling thereof, and plug engaging terminals carried by said armor plates and forming a unitary part of the heating unit.

4. A flat heating unit, comprising a flat resistance element, flat insulator plates upon opposite sides of said resistance, armor plates parallel to the insulator plates positioned upon opposite sides of the latter and united to each other at the margins thereof, and rigid plug engaging

terminals carried by said armor plates and forming a unitary part of the heating unit, and an intermediate stay for clamping the armor against the inner structure, said stay passing through the insulator plates and avoiding the resistance.

1,154,410. ELECTRIC HEATER. FRANK KUHN and FRANK E. SHAILOR, Detroit, Mich.; said Shailor assignor to said Kuhn. Filed Jan. 31, 1914. Serial No. 815,748. (Cl. 219—19.)

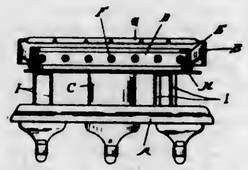


1. In an electric heater, the combination with a grid frame comprising a plurality of parallelly-arranged bars and connecting cross bars, of a resistor in the form of a helical coil extending parallel to the longitudinal bars beneath the same and in the central plane thereof, the diameter of the coil being greater than the thickness of the bars, and insulated supports for said resistor from said bars.

2. In an electric heater, the combination with a bar, of a resistor, and a hanger for supporting said resistor from said bar, said hanger having a portion apertured to receive said resistor and twisted into a plane transverse to the central plane of said bar.

3. In an electric heater, the combination with a grid frame comprising a plurality of parallelly-arranged bars and connecting cross bars, of a resistor in the form of a helical coil of greater thickness than the bars, extending parallel to the longitudinal bars beneath the same and in the central plane thereof.

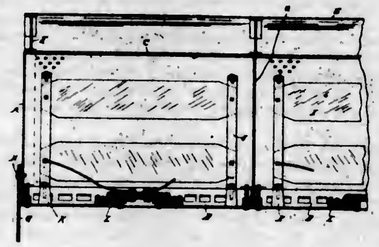
1,154,411. ELECTRIC HEATER. FRANK KUHN and FRANK E. SHAILOR, Detroit, Mich.; said Shailor assignor to said Kuhn. Filed June 11, 1914. Serial No. 844,456. (Cl. 219—19.)



1. In an electric heater, the combination with a base, a ring spaced there above, spaced standards for supporting said ring upon said base and a heating unit extending across within said ring, of a removable reflector plate insertible between said standards and legs upon said reflector plate for supporting the same from said base substantially in the plane of the lower edge of the ring.

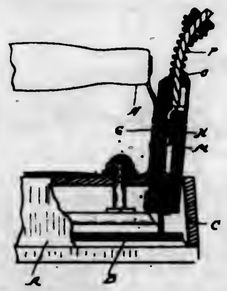
2. In an electric heater, the combination with a base, a ring spaced there above, spaced standards for supporting said ring upon said base and a heating unit extending across within said ring, of a removable reflector plate insertible between said standards and legs upon said reflector plate for supporting the same from said base substantially in the plane of the lower edge of the ring, said reflector plate having shoulders on its opposite sides adapted to abut against said standards to properly position the parts.

1,154,412. ELECTRICAL HEATER. FRANK KUHN and FRANK E. SHAILOR, Detroit, Mich.; said Shailor assignor to said Kuhn. Filed July 1, 1914. Serial No. 848,369. (Cl. 219—34.)



An electrical heater, comprising sections each having an end head, a supporting bracket therefor, a perforated casing extending from said head, an electrical heating element within said casing, and intermediate heads for connecting said sections to produce heaters of varying lengths.

1,154,413. CONNECTOR FOR ELECTRICALLY-HEATED INSTRUMENTS. FRANK KUHN and FRANK E. SHAILOR, Detroit, Mich., assignors to American Electrical Heater Company, Detroit, Mich., a Corporation of Michigan. Filed July 9, 1914. Serial No. 849,937. (Cl. 219—25.)



1. In an electrically heated instrument, the combination with a heating unit having a projecting terminal, of a casing for inclosing said unit apertured for the passage of said terminal, a flexible conductor having a clamping engagement with said terminal, a sectional insulator for embracing said terminal and adjacent portion of said flexible conductor, a handle detachably engaging said casing, and a housing for said sectional insulator secured to said handle.

2. In an electrically heated instrument, the combination with a heating unit having a terminal projecting therefrom, of a casing inclosing said unit and apertured for the passage of said terminal, a flexible conductor having a clamping engagement with said terminal, a sectional insulator for embracing said terminal and clamping said flexible conductor, and a housing for telescopically engaging said sectional insulator to inclose the same and to maintain a clamping engagement thereto.

3. In an electrically heated instrument, the combination with a heating unit having a terminal projecting therefrom, of a casing for inclosing said unit apertured for the passage of said terminal, a flexible conductor having a clamping engagement with said terminal, insulator blocks for embracing said terminal and clamping the adjacent portion of said flexible conductor, a handle detachably engaging said casing, and a housing mounted on said handle and telescopically engageable with said insulator blocks to inclose and protect the same.

4. In an electrically heated instrument, the combination with a heating unit having a projecting terminal, of a casing apertured for the passage of said terminal, a flexible conductor having a clamping engagement with said terminal, insulator blocks for embracing said terminal and clamping said conductor, a handle detachably engaging said casing, a housing for said insulator blocks telescopically engageable therewith, and a flexible resilient guard for said flexible conductor secured to and projecting from said housing.

5. In an electrically heated instrument, the combination with a heating unit having a projecting terminal, of a casing for said unit, a flexible conductor having a clamping engagement with said terminal, a channeled insulator block for protecting said terminal and adjacent portion of the flexible conductor, a metallic housing for inclosing said insulator, and a detachable handle for said case upon which said housing is mounted.

1,154,414. ELECTRICALLY-HEATED SOLDERING-IRON. FRANK KUHN and FRANK E. SHAILOR, Detroit, Mich.; said Shailor assignor to said Kuhn. Filed Aug. 21, 1914. Serial No. 857,845. (Cl. 219—28.)



1. The combination with a hollow spool member, of a resistor wound thereupon and insulated therefrom, and a tool of the same cross-section throughout substantially its entire length, having a shank portion fitting within said hollow spool in heat-conducting contact therewith, and provided with a projecting portion having a heat-dissipating surface for preventing overheating of the resistor.

2. The combination of a hollow spool member having an integral head at one end thereof, a detachable head having a threaded engagement with the opposite end of said spool, said head having a cut-away portion, a hollow shank connected to said detachable head, a resistor wound upon said spool and insulated therefrom, terminal conductors for said resistor projecting outward through said cut-away portion of the head and said hollow shank, an armor surrounding said resistor upon said spool, and a tool having a shank extending into said spool in heat-conducting contact therewith.

3. The combination with a hollow spool, of a resistor wound thereupon and insulated therefrom, a hollow shank extending from said spool, terminals for said resistor extending through said hollow shank, a hollow handle mounted upon said shank and spaced therefrom for a substantial distance to form heat insulation, and a tool having a shank portion engaging said hollow spool and an outwardly projecting portion forming a heat-dissipating surface.

4. In an electrically heated tool, the combination with the heating unit, of a hollow shank projecting therefrom, terminals for said unit extending outward through said shank, a hollow handle surrounding said shank and spaced therefrom, and mountings upon opposite ends of said handle for securing the same to said shank, the terminals extending to the mounting upon the outer end of said handle.

5. In an electrically heated tool, the combination with the heating element, of a hollow shank projecting therefrom, terminals for the heater extending through said hollow shank, a hollow handle surrounding said shank and spaced therefrom, a collar at the inner end of said handle forming a mounting on said shank, an insulator block within said handle for engaging the outer end of said shank, and terminal contacts mounted upon said insulator block for connecting the terminals of the heating element with the external conductor.

[Claims 6 to 8 not printed in the Gazette.]

1,154,415. HANDLE AND TERMINAL CONNECTION FOR ELECTRICALLY-HEATED INSTRUMENTS. FRANK KUHN and FRANK E. SHAILOR, Detroit, Mich.; said Shailor assignor to said Kuhn. Filed Sept. 28, 1914. Serial No. 863,817. (Cl. 219—21.)



1. The combination with a hollow shank having terminal conductors passing therethrough, of an insulating terminal block mounted upon the end of said shank, a hollow handle for receiving said shank and terminal block, and a nut within said handle and spaced from the ends thereof for engaging a threaded portion of said shank.

2. The combination of a tubular shank, of terminal conductors passing therethrough, a threaded collar at the end of said shank, an insulator terminal block mounted upon said collar, a shoulder on said shank, a ferrule abutting against said shoulder, a hollow handle for receiving said terminal block and a portion of said shank having its inner end fitting within said ferrule, and a nut within said hollow handle engaging said threaded collar.

3. The combination with a tubular shank, of terminal conductors passing therethrough, a threaded collar at the end of said shank, a terminal block mounted on said collar and connected to said conductors, a shoulder on said shank, a ferrule abutting against said shoulder, a hollow handle for receiving said block and a portion of the shank, a nut engaging a counterbore in the outer end of said handle and engageable with said threaded collar, and a hollow plug for filling the end of said counterbore.

4. The combination with a hollow shank, of a threaded collar at the end of said shank and recessed in its end, a terminal block engaging the recess in said collar, a flexible conductor connected to said terminal block and extending outward therefrom, a hollow handle adapted to receive said terminal block and a portion of said shank, a nut in said hollow handle for engaging said threaded collar, and an apertured plug for closing the end of said hollow handle and forming an outlet orifice for the passage of said flexible conductor.

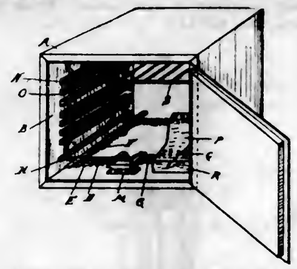
5. The combination with a hollow handle, of a tubular shank extending into the handle, conductors passing through said shank, an insulating terminal block mounted upon the shank within the handle, and an apertured plug inserted in the outer end of the handle inclosing the insulating block and providing an outlet orifice for conductors extending from said block.

[Claim 6 not printed in the Gazette.]

1,154,416. ELECTRICALLY-HEATED OVEN. FRANK KUHN, Detroit, Mich. Filed Oct. 31, 1914. Serial No. 869,551. (Cl. 219—35.)

1. An electrically heated oven, comprising a casing, a frame formed of cross-bars fitting within the oven in a plane parallel to the bottom thereof, said cross-bars having projecting ends abutting against the walls of the

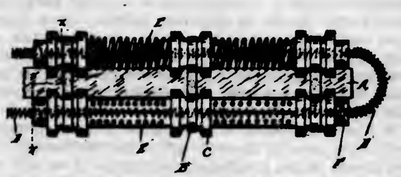
casing, and a naked resistor extending around the margin of the frame substantially adjacent to said cross-bars and carried thereby.



2. An electrically heated oven comprising an oven casing having a door, a frame supported within said casing, a heating unit supported by said frame, and a shield upon said frame having a down-turned flange normally adjacent the door for protecting the heating unit.

3. An electrically heated oven, comprising a casing, a frame slidably detachably suspended within said casing and provided with insulator supports, a naked resistor suspended from said insulator supports in a plane parallel to the bottom of the casing, terminal contacts for said naked resistor, and stationary contacts carried by said casing, said terminal and stationary contacts being adapted to engage each other when the unit is in place.

1,154,417. ELECTRICAL HEATER. FRANK KUHN, Detroit, Mich. Filed Nov. 21, 1914. Serial No. 873,294. (Cl. 219—67.)



1. An electrical heater, comprising an alined series of insulator spools, a resistor extending through said series and supported thereby, the difference of potential between the ends of the resistor between adjacent spools being slight, and a plurality of guards surrounding the resistor, extending between adjacent insulator spools and supported thereby, to be insulated from each other.

2. In an electrical heater, the combination with a series of alined insulator spools, of a resistor threaded through said spools and supported thereby, and a plurality of open guards surrounding said resistor, extending between adjacent spools and supported thereby so as to be insulated from the resistor and each other, the resistance of the resistor between adjacent spools being slight, thereby producing a slight difference of potential between the ends of the resistor between said spools.

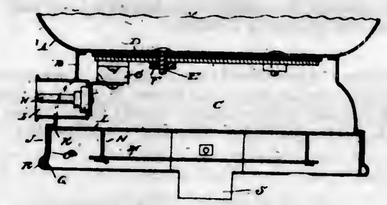
3. In an electrical heater, the combination with a series of insulator spools, of a resistor threaded through said spools and supported thereby, and a plurality of open guards surrounding sections of the resistor, concentric therewith and extending between adjacent spools, the ends of said guards being seated upon said spools to be supported thereby, the difference of potential between the ends of the sections of the resistor surrounded by said guards being slight.

4. In an electrical heater, the combination with a series of insulator spools, of a resistor threaded through said spools and directly supported thereby, a guard surrounding said resistor extending between adjacent spools, the difference of potential between the ends of the resistor surrounded by said guard being slight, and projections on said spools upon which the ends of said guard are sleeved and supported.

5. In an electrical heater, the combination with a supporting bar, of a series of insulator spools, brackets attached to said supporting bar and bent to embrace said spools, a resistor threaded through said spools, an open guard surrounding said resistor extending between adjacent spools, and lugs projecting from the ends of said spools upon which the ends of said guard are sleeved.

[Claims 6 to 8 not printed in the Gazette.]

1,154,418. ELECTRICALLY-HEATED COOKING UTENSIL. FRANK KUHN and FRANK E. SHAILOR, Detroit, Mich., assignors to American Electrical Heater Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 12, 1915. Serial No. 20,893. (Cl. 219—43.)



1. An electrically heated utensil, comprising a depending skirt, a heating unit secured to the bottom of said vessel within the space inclosed by said skirt, a false bottom secured within said skirt below said unit, and a split ring for holding said false bottom in position.

2. An electrically heated utensil, comprising a vessel having a depending skirt, a heating unit secured to the bottom of said vessel within said skirt, a closure for the space within said skirt, and means for securing said closure also constituting the support for said utensil.

3. An electrically heated utensil, comprising a vessel having a depending skirt, a heating unit within the space inclosed by said skirt, a closure for the bottom of said skirt, a split ring for securing said closure, and supporting feet mounted on said split ring and secured thereby.

4. An electrically heated utensil, comprising a vessel having a depending skirt forming a chamber beneath the bottom of the vessel, a heating unit within said chamber, a bottom closure for said chamber, a split ring for securing said bottom closure within said skirt, and a plurality of feet secured to said split ring and connected by the latter to said utensil.

5. An electrically heated utensil, comprising a vessel having a depending skirt with a groove therein, a heating element in the chamber within said skirt, a bottom closure for said chamber, a split ring for fitting within said skirt with its ends abutting, and detents on said ring for engaging said groove.

[Claims 6 to 8 not printed in the Gazette.]

1,154,419. CEMENT-APPLYING MACHINE. WILLIAM F. LAUTENSCHLAGER, Cincinnati, Ohio. Filed Apr. 6, 1914. Serial No. 829,898. (Cl. 91—40.)

1. In a machine for applying cement to the margin of flexible material, the combination of means for feeding the material lengthwise of the margin, and cement-applying means acting solely on said margin and movable crosswise of said margin for applying cement thereto.

2. In a cement applying machine of the character described, the combination of material-feeding means operable for feeding the material in a given direction, and a rotary cement-applying part operable solely on the margin of the material crosswise of said given direction.

3. In a machine for applying cement to the margin of flexible material, the combination of a material-feeding wheel, and a rotary cement-applying brush acting solely on said margin, the axes of rotation of said wheel and brush extending in different directions and having closest approach to a point nearest to said margin.

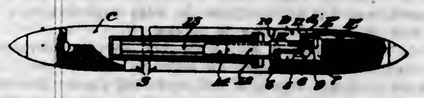
4. In a machine for applying cement to the margin of flexible material, the combination of material-feeding means, a rotary cement-applying part operable on said margin crosswise of said margin, and a pivoted material-support for the margin of the material yieldable in a direction substantially parallel to the path of rotation of the cement-applying part.



5. In a cement applying machine for cementing the margin of flexible material, the combination of material-feeding means acting on the material adjacent to its edge for feeding the same lengthwise of its margin, a pivoted support for the margin of the material, a rotary cement-applying part operable on said margin, and means for rotating said cement-applying part in a direction crosswise of said margin, said cement-applying part having a cement-applying portion between the material-contact portions of said material-feeding means and the pivot of said material-support.

[Claims 6 to 70 not printed in the Gazette.]

1,154,420. SHUTTLE. EMMANUEL LA VALLEE, Pawtucket, R. I., assignor to Lorraine Manufacturing Company, a Corporation of Rhode Island. Filed Mar. 2, 1914. Serial No. 821,969. (Cl. 139—27.)



A shuttle having a spindle receiving cavity and a recess extending in line with said cavity and having imperforate side walls having grooves, in combination with a spindle holder removably contained within said recess and cavity and comprising a base having side walls and a locking tooth member, a pin extending through said side walls to engage with said grooves, a socket member pivotally mounted on said pin and having a tubular spindle socket open at its rear end, a spindle slidable in said socket and having a tooth to engage with the locking tooth member at one edge and a cam adapted to ride against said tooth member to effect such engagement between the tooth of said spindle and the tooth member.

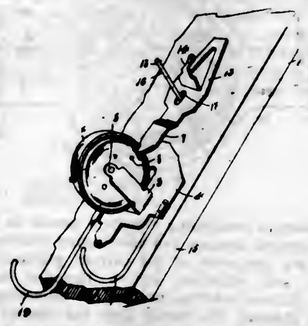
1,154,421. BURNER-TIP. HOWARD LYON, Gloucester City, N. J., assignor to Welsbach Light Company, Gloucester City, N. J., a Corporation of New Jersey.



Filed Apr. 13, 1915. Serial No. 21,027. (Cl. 67—94.)

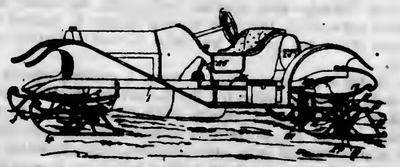
A burner tip, having an upper bowl portion and a depending leg, the bowl having its interior wall converging downwardly to meet the edges of the orifice or passage in the leg, the said passage having its least cross-sectional dimension at the said orifice and being of gradual increasing diameter from that point toward its lower end; substantially as described.

1,154,422. COMBINED DOOR-BELL AND MAIL-RECEIVER. JAMES A. MCDONALD, Fort Worth, Tex., assignor to J. D. Zook, Fort Worth, Tex. Filed Feb. 4, 1915. Serial No. 6,033. (Cl. 24—66.)



A combined signaling device and a mail receiver and holder comprising a bell rigidly mounted, sounding devices for said bell, a clamp pivotally mounted on said bell and having an arm projecting within said bell and provided with a segment rack, said signaling device having gearing operatively connected to said rack, and a spring attached to said bell and to said arm.

1,154,423. MOTOR-SLEIGH. FRANK J. MATHEWS, Brill, Wis. Filed Nov. 17, 1914. Serial No. 872,569. (Cl. 21—47.)



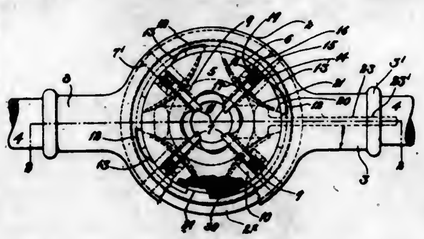
1. In a runner attachment for vehicles, the combination of runners, spaced guide standards carried by said runners, body engaging members movable between said standards for adjusting the vehicle body with respect to the runners, and supporting levers pivotally mounted upon the standards and having an arm movably connected with the body supporting members whereby to raise and lower the same.

2. In a runner attachment for vehicles, the combination of runners, spaced guide standards carried by said runners, body engaging members movable between said standards for adjusting the vehicle body with respect to the runners, supporting levers pivotally mounted upon the standards and having an arm movably connected with the body supporting members whereby to raise and lower the same, and means interposed between the body supporting members and the runners for yieldingly holding the former during adjustment of the same.

3. In a runner attachment for vehicles, the combination of runners, spaced guide standards carried by said runners, body engaging members movable between said standards for adjusting the vehicle body with respect to the runners, supporting levers pivotally mounted upon the standards and having an arm movably connected with the body supporting members whereby to raise and lower the same, springs interposed between the body of the supporting members and the runners for yieldingly holding the former, the body supporting members aforesaid having chan-

nels formed therein, a bearing carried by the lifting levers engaging in the channel of the body supporting members, and operating means for actuating the lifting levers and holding the same at adjusted positions.

1,154,424. DIE-STOCK. ERNEST A. OAKES, Seymour, Conn. Filed Jan. 13, 1914. Serial No. 811,846. Cl. 10—122.)



1. A die-stock comprising a body, a carrier in the body having a central opening and also having chambers opening into the periphery of the carrier, plungers in said chambers, and adjusting screws threaded into said plungers, chasers abutting against the adjusting screws, extending through the carrier into the central opening thereof, the body having reliefs to receive said plungers on a predetermined movement of the carrier, said carrier being turnable in the body whereby the plungers can be moved opposite the reliefs, the body having holes to obtain access to said screws.

2. A die stock comprising a body, a carrier mounted in the body for turning movement, chasers supported by the carrier for movement radially of the body, and springs acting between their ends against the respective chasers, the carrier having apertures to receive the springs, and said springs bearing against the walls of the respective apertures opposite their points of thrust against the respective chasers and tending constantly to move said chasers outwardly, the body having reliefs to receive the chasers when the carrier has been turned a certain distance.

3. A die stock comprising a body, a rocking carrier in the body, chasers supported by the carrier for movement radially of the body, plungers slidingly supported by the carrier, means for preventing rotation of the plungers, and screws tapped into said plungers, for adjusting the respective chasers, the body having reliefs to receive said plungers when the carrier has been turned to a certain position in the body.

4. A die stock comprising a body, a rocking carrier in the body, chasers supported by the carrier for movement radially of the body, plungers slidingly supported by the carrier, means for preventing rotation of the plungers, and screws tapped into said plungers, for adjusting the respective chasers, the body having reliefs to receive said plungers when the carrier has been turned to a certain position in the body, said body also having openings through it to obtain access to the respective screws.

5. A die stock comprising a body, a rocking carrier in the body, chasers supported by the carrier for adjusting movement toward and from the center of the carrier, means acting against the respective chasers and tending constantly to force them outwardly, the body having reliefs to permit retraction of the chasers when the carrier has been turned in the body a certain distance, and an adjustable support for each chaser mounted on said carrier and movable therewith.

[Claims 6 to 8 not printed in the Gazette.]

1,154,425. CAR-ROOF. JOHN E. O'BRIEN and CHARLES HARTER, St. Louis, Mo. Filed Sept. 19, 1914. Serial No. 862,506. (Cl. 106—5.)

1. As a new article of manufacture, a car roof covering comprising a body of self-hardening plastic material in which is embedded a reinforcing fabric, which body of plastic material with the embedded fabric is of sufficient size to cover the entire roof and caps formed of self-hardening plastic material having reinforcing fabric embedded therein, which caps are located in the center of said roof and are adapted to receive the car roof running board saddles.



2. As a new article of manufacture, a car roof covering comprising a single section of fabric of sufficient size to cover the entire roof, a body of self-hardening plastic material in which said fabric is embedded, the edges of said roof covering being extended downward so as to overlie the upper portions of the car body superstructure, and the central portion of said roof being provided with caps adapted to receive the car roof running board saddles.

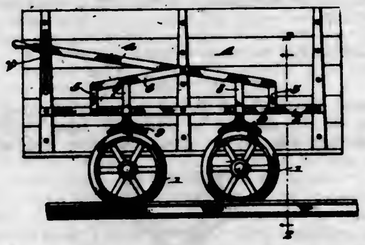
3. A car roof covering comprising a single section of fabric of sufficient size to cover the entire roof, a body of self-hardening plastic material in which said fabric is embedded, there being a series of openings formed in the central portion of said covering to accommodate the running board saddles, and upwardly projecting caps rigidly fixed to the roof covering around said openings, said caps being formed of sections of fabric embedded in self-hardening plastic material.

4. A car roof covering comprising a single section of fabric of sufficient size to cover the entire roof, a body of self-hardening plastic material in which said fabric is embedded, there being a series of openings formed in the central portion of said covering to accommodate the running board saddles, upwardly projecting caps rigidly fixed to the roof covering around said openings, said caps being formed of sections of fabric embedded in self-hardening plastic material, and said roof covering being provided with depending edges which overlie the ends of the roof boards and a portion of the car body superstructure to which the roof covering is applied.

5. The combination with a car roof covering comprising a single section of fabric of sufficient size to cover the entire roof, and a body of self-hardening plastic material, in which said fabric is embedded of a series of running board saddle caps projecting upwardly from said roof covering, the edges of which caps are bonded to said covering.

[Claim 6 not printed in the Gazette.]

1,154,426. BRAKE. ELLIS F. OSNER, Gowen City, Pa. Filed Apr. 23, 1914. Serial No. 833,885. (Cl. 188—60.)

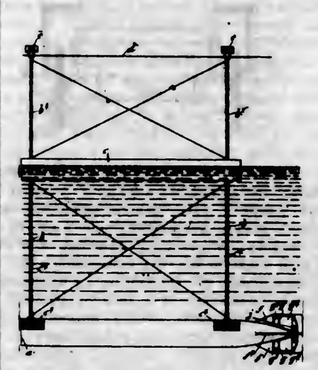


1. The combination with a vehicle and wheels thereon, of friction shoes, links connected therewith, two levers pivotally connected at one end to the vehicle, pivotally connected with each other, and pivotally connected to the links, one of said levers of greater length than the other, having a handle whereby it is operated to simultaneously apply the brakes to the wheels.

2. In a brake, the combination with a car body, having wheels thereon, of a post and a standard connected to the car body, levers pivoted to the post and standard and to each other, links pivotally connected to the levers, and friction shoes connected to the links and adapted to be brought into engagement with the wheels upon the actuation of one of the levers.

3. In a brake, the combination with a car body having wheels thereon, of a post, a standard pivotally connected to the car body, levers pivotally connected to the post, a standard, links pivotally connected to the levers and normally held in a vertical position, brake shoes carried by the links adapted to be brought into engagement with the wheels upon the movement of the levers, said levers adapted to impart motion to said links causing them to assume a diagonal position.

1,154,427. DIRIGIBLE TORPEDO. MARIUS PAUL OTTO, Paris, France. Filed Nov. 18, 1913. Serial No. 801,595. (Cl. 114—21.)

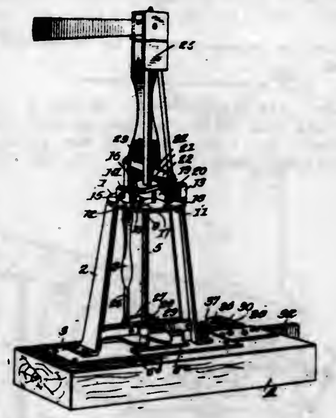


1. A torpedo capable of being steered from a distance by means of electric waves, comprising in combination a float, supports extending therefrom in an upward and in a downward direction, a torpedo body carried by the lower supports at a determined distance below water level, an antenna carried by the upper supports, luminous signals on the latter supports, electric conductors within the supports extending from the torpedo body to the antenna and vice versa, and means projecting laterally from the torpedo body and adjustably secured to said float for imparting transverse stability to the latter.

2. A torpedo capable of being steered from a distance by means of electric waves, comprising in combination a float, hollow supports extending therefrom in an upward and in a downward direction, a torpedo body carried by the lower supports at a determined distance below water level, an antenna carried by the upper supports, luminous signals on the latter supports, electric conductors within the supports extending from the torpedo body to the antenna and vice versa, longitudinal planes projecting laterally from the torpedo body and connections from said planes to the float, for the purpose of imparting transverse equilibrium to the float.

1,154,428. SWITCH-STAND. SMITH F. PHILIPS, El Paso, Tex. Original application filed Sept. 20, 1913, Serial No. 790,918. Divided and this application filed June 3, 1914. Serial No. 842,661. (Cl. 104—25.)

1. In a switch stand, the combination with the operating shaft journaled in vertical position in the stand and connected with the points for moving the points when the shaft is oscillated, of an arm rigidly connected with the shaft at the table of the stand, a switch lever pivoted to the arm for swinging movement into and out of engagement with the notches of the table for holding the shaft with the points in open or closed position, a rock lever pivoted to the stand, a block connected with one arm of the lever for sliding movement on the table adjacent to the notch engaged by the switch lever when the points are closed, a cross pin at the inner end of the lever, the arm having a groove for receiving the pin to limit the upward movement of the lever, said block having an opening for receiving the pin when the lever is in register with the notch with the points closed, a locking plate connected at one end with the switch points, a casing in which the other end of the plate engages, said plate and casing having openings registering when the points are in closed position, a locking pin for engaging the openings to lock the plate, and a connection between the pin and the other arm of the rock lever for moving the pin from the openings when the switch points are moved to open from closed position.

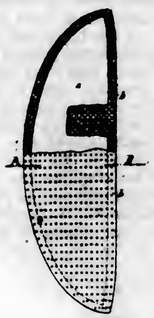


2. In a switch stand, the combination with the operating shaft journaled vertically in the stand and connected with the points for moving the same when the shaft is oscillated, of a lever mounted to swing into and out of horizontal position and connected with the shaft for oscillating the shaft, said stand having notches for receiving the lever to hold the points open or closed, a rock lever pivoted at the stand, a locking plate connected with the points, a guide in connection with the stand, the plate being movable in the guide, said guide and plate having openings registering when the points are closed, a locking pin for engaging the openings, a connection between one arm of the rock lever at the stand and the locking pin for moving the pin into the openings when the locking lever is moved in one direction, a block slidable on the stand adjacent to a notch, said lever having a cross pin and the block an opening for engagement by the pin when the lever moves into register with the said notch, the other arm of the rock lever being connected to the block, said block being moved by the lever when it engages with the notch in a direction to engage the locking pin with the openings.

1,154,429. HEEL-STIFFENER FOR BOOTS AND SHOES. ANDREAS PITTROFF, Dresden, Germany. Filed May 28, 1914. Serial No. 841,535. (Cl. 36—68.)

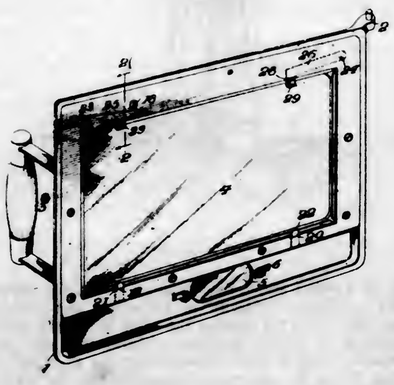
In a heel stiffener for boots and shoes, the combination with a stiffened middle-part, of two outer covers made of water-proof material entirely closed at the edges of said

middle-part, and having fine perforations provided within said covers for allowing a softening fluid to pass through



them for the impregnation of the middle-part to be softened.

1,154,430. GAS-RANGE DOOR. MINARD A. POSSONS, Cleveland, Ohio, assignor to American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Filed Mar. 3, 1915. Serial No. 11,864. (Cl. 126—200.)



1. The combination with an oven door having a central opening, a ledge surrounding the opening, a glass panel resting upon the ledge, stationary lugs carried by one side of the door and extending through the ledge and movable members carried by the opposite side of the door and adapted to extend over the panel, substantially as shown and described.

2. The combination with an oven door having a central opening, a ledge surrounding the opening on the inner face, inwardly extending lugs carried by the door and extending over the ledge on one side of the opening and movable members carried by the door and extending over th ledge on the opposite side of the opening.

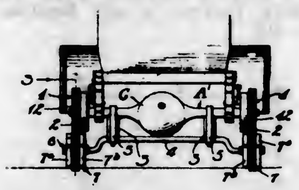
3. The combination with an oven door having a lining formed of sheet-metal and having a ledge formed thereon for supporting a glass panel and lugs carried by the inner face of the lining and extending over the ledge for securing the panel within the ledge in the lining.

4. The combination with an oven door, of a sheet metal lining secured to the inner face of the door and having a ledge formed therein for receiving a glass panel, stationary lugs carried by the inner face of the lining and extending over the ledge on one side of the opening and pivoted members carried by the lining and adapted to swing outwardly over the ledge on the opposite side of the opening.

5. The combination with an oven door having a central opening, a sheet metal lining stamped from a single sheet and having a ledge formed on the inside of the opening in the door, a glass panel resting within the ledge, stationary lugs carried by the inner face of the lining and extending over the ledge on one side of the opening and pivoted lugs carried by the lining and extending over the opening on the opposite side thereof.

[Claims 6 to 10 not printed in the Gazette.]

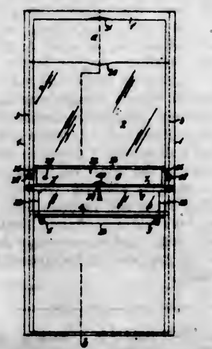
1,154,431. RUNNER ATTACHMENT FOR AUTOMOBILES. FRED L. RAMSDELL, Hayward, Wis. Filed Apr. 26, 1915. Serial No. 23,915. (Cl. 21—47.)



1. An attachment for converting an automobile into a power sleigh, consisting of a pair of parallel vertically oscillatory runners, each having propelling means, an arched shaft having horisontally end portions on which the two runners are pivotally mounted, and clamps for securing said shaft to the rear automobile axle.

2. An attachment for converting an automobile into a power sleigh, consisting of a pair of parallel vertically oscillatory runners each having propelling means, an arched shaft having horizontal end portions on which the two runners are pivotally mounted, saddle blocks interposed between the rear automobile axle and said arched shaft, and clamps passing around the axle, the saddle blocks, and the arched shaft.

1,154,432. AUTOMATIC SASH-RAISING MECHANISM. ARTHUR DANIEL RAWLINGS and ERNEST JOHN RAWLINGS, Clapham, London, England. Filed Dec. 23, 1914. Serial No. 878,787. (Cl. 16—148.)



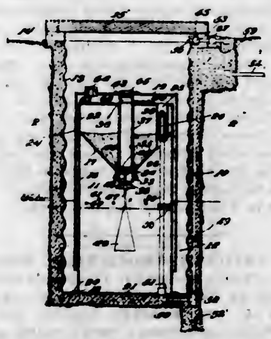
1. In mechanism for automatically raising the sash of a window of a motor car or other vehicle the combination of a protective case of D-shape in cross-section hingeably secured to the center of the door, a spring-actuated roller having its shaft mounted in bearings at the ends of said hinged case, fusee-barrels fixed to said roller and provided with helical flanges extending close to the inner walls of said case, guide pulleys carried by the lower part of the sash, and a cord passing under said guide pulleys and secured at its ends to said fusee-barrels, substantially as described.

2. In mechanism for automatically raising the sash of a window of a motor car or other vehicle the combination of a protective case of D-shape in cross-section, hingeably secured to the center of the door, a spring-actuated roller having its shaft mounted in bearings at the ends of said hinged case, a braking device acting on said spring-actuated roller, means for releasing said braking device, fusee-barrels fixed to said roller and provided with helical flanges extending close to the inner walls of said case, guide pulleys carried by the lower part of the sash, and a cord passing under said guide pulleys and secured at its ends to said fusee-barrels, substantially as described.

3. In mechanism for automatically raising the sash of a window of a motor car or other vehicle the combination of a spring-actuated roller, a ratchet wheel fixed to the shaft on which said roller is mounted, a ratchet engaging with said ratchet wheel, a braking device acting on said spring-actuated roller, means for releasing said braking device, fusee barrels fixed to said spring-actuated roller, a cord secured at its ends to said fusee barrels and wound thereon, and guide pulleys for said cord carried by the lower part of the sash, substantially as described.

4. In mechanism for automatically raising the sash of a window of a motor car or other vehicle the combination of a spring-actuated roller, a hinged cover or case for said roller, a ratchet wheel fixed to the shaft on which said roller is mounted, a ratchet engaging with said ratchet wheel, a multi-coil spring band bearing on said roller and anchored at one of its ends to the case covering the roller, a lever pivoted to said case, operatively connected to the free end of said multi-coil spring band and adapted by its movement to expand said multi-coil spring band, fusee barrels fixed to said spring-actuated roller, a cord secured at its ends to said fusee barrels and wound thereon, and guide pulleys for said cord carried by the lower part of the sash, substantially as described.

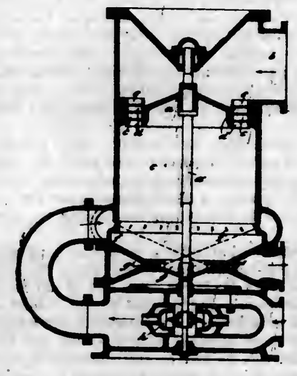
1,154,433. ACETYLENE-GAS GENERATOR. WILLIAM M. REECE, Ottumwa, Iowa. Filed Feb. 3, 1914. Serial No. 816,231. (Cl. 48—53.1.)



1. In an acetylene gas generator, a carbid hopper having its lower portion conical and formed with a discharge opening at the apex, a sleeve surrounding the discharge opening and depending from the lower end of the hopper, a second sleeve supported vertically within the hopper in line with the discharge opening thereof and spaced at its lower end from the lower end of the hopper, a valve mounted in the second sleeve and adapted to project above the hopper and to have its lower end extend across the space formed between the two sleeves, a second valve suspended below the first-mentioned sleeve and adapted to close the lower end thereof, a stem adjustably supporting the second valve and adjustably connected to the first-mentioned valve, and a float attached to the lower end of the stem.

2. In an acetylene gas generator, a carbid hopper having its lower portion made conical and formed at the apex with a discharge opening, a sleeve in line with the discharge opening and depending from the lower end of the hopper, a conical band surrounding the sleeve and joined at its upper end to the lower end of the hopper, a second sleeve supported within the hopper in vertical line with the discharge opening thereof and spaced at its lower end from the first-mentioned sleeve and connected at its upper end to the top of the hopper, a tubular valve mounted in the second sleeve and adapted to project above the hopper in one position and to extend across the space between the two sleeves in another position, a stem provided at its lower end with a float and having adjustable connection at its upper end with the tubular valve, and a second valve adjustably connected with the stem and disposed below the first mentioned sleeve and adapted to close the lower end thereof.

1,154,434. ROTARY CONDENSER AND SELF-CONDENSING TURBINE. EDMUND SCOTT GUSTAVE REES, Stafford, England. Filed Jan. 26, 1912. Serial No. 673,560. (Cl. 230—14.)



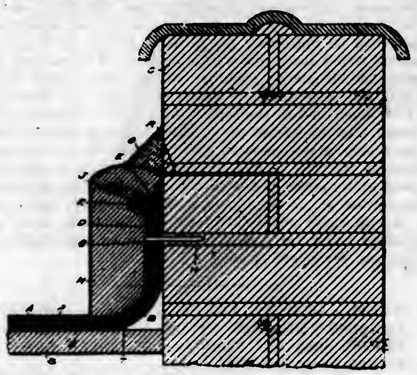
1. An ejector condenser, air pump or compressor, comprising an entraining chamber connected with the space to be evacuated, an ejector wheel, spraying nozzles connected with a supply of liquid under pressure and adapted to direct sprayed liquid across the entraining chamber into the rim of the ejector wheel, and a stationary expanding duct to which the ejector wheel delivers.

2. An ejector condenser, air pump or compressor, comprising an entraining chamber connected with the space to be evacuated, a rotary ejector wheel, a ring of stationary nozzles adapted to discharge jets of liquid across the entraining chamber into the ejector wheel, said nozzles being arranged in mutually inclined pairs whereby the jets of liquid are converted into sheets of spray, and a stationary expanding duct to which the ejector wheel delivers.

3. An ejector condenser, air pump or compressor, comprising an entraining chamber connected with the space to be evacuated and having at its lower end a tapering annular passage, an ordinary jet or stationary ejector, having a neck or throat at its upper end, communicating with the lower end of the entraining chamber, a rotating ejector wheel interposed between the said passage and the throat of the stationary ejector, and a ring of stationary nozzles adapted to discharge jets of liquid across the said chamber into the ejector wheel.

4. An ejector condenser, air pump or compressor, comprising an ordinary jet or stationary ejector, a horizontally rotating ejector wheel having peripheral blades and means for directing the entraining liquid diametrically across the face of the wheel and into its interior, substantially as described.

1,154,435. FLASHING FOR PARAPET-WALLS. FELIX D. RENAUD, Chicago, Ill. Filed May 29, 1915. Serial No. 31,178. (Cl. 108—26.)



1. In combination with a roof and a parapet wall, a roofing laid on the roof and turned up at the parapet wall, a lath disposed against the outer side of the turned up portion of the roofing and secured to the turned up portion and to the parapet wall, an outwardly extending flange on the lath, a block disposed on the roofing and against the lath, the block having a recess in which the flange is disposed.

2. In combination with a roof and a parapet wall, a roofing laid on the roof and turned up at the parapet wall, a lath disposed against the outer side of the turned up portion of the roofing, a block disposed on the roofing and against the lath, and means for holding the block in said position.

3. In combination with a roof and a parapet wall, a roofing laid on the roof and turned up at the parapet wall, a lath disposed against the outer side of the turned up portion of the roofing and secured to the turned up portion and to the parapet wall, an outwardly extending flange on the lath, a block disposed on the roofing and adjacent the parapet wall and secured to the said roofing, there being a recess in the block in which the flange is cemented.

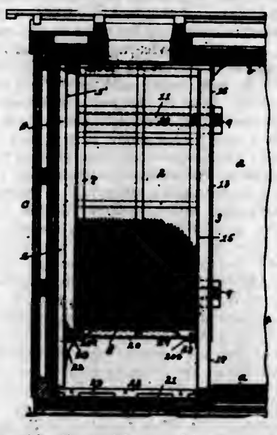
4. In combination with a roof and a parapet wall, a roofing laid on the roof and turned up at the parapet wall, a lath disposed against the outer side of the turned up portion of the roofing and secured to the turned up portion and to the parapet wall, an outwardly extending flange on the lath, a block disposed on the roofing, and against the lath, the block having a recess in which the flange is disposed, and water-proofing material disposed on the block, the water-proofing material extending outwardly and downwardly, and connecting the parapet wall with the top of the block at a distance from the wall.

5. A flashing block having its bottom curved upwardly at one side with a recess at its said side spaced from its bottom and with the top of the block extending over the recess and beyond the vertical plane at the said side of the block.

1,154,436. REFRIGERATOR-CAR. MORLEY PUNSHON REYNOLDS, Cleveland, Ohio, assignor to The W. S. Tyler Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 24, 1914. Serial No. 868,407. (Cl. 62—19.)

1. The combination with a refrigerator car, of a collapsible ice bunker comprising ice bars adapted to be swung upward against the end wall of said car, side frames adapted to be swung against said ice bars, and a bulkhead adapted to be moved against said side frames, whereby said bars, frames and bulkhead will assume vertical positions when collapsed against said end wall.

2. The combination with a refrigerator car, of a collapsible ice bunker comprising ice bars adapted to be swung upward against the end wall of said car, side frames having wire fabric walls and adapted to be swung against said ice bars, and a bulkhead having a wire fabric wall and adapted to be moved against said side frames, whereby said bars, frames and bulkhead will assume vertical positions when collapsed against said end wall.



3. The combination with a refrigerator car, of a collapsible ice bunker comprising ice bars adapted to be swung upward against the end wall of said car, side frames adapted to be swung against said ice bars, and a bulkhead having rollers operating on tracks for permitting the same to be moved against said side frames, whereby said bars, frames and bulkhead will assume vertical positions when collapsed against said end wall.

4. The combination with a refrigerator car, of a collapsible ice bunker comprising ice bars adapted to be swung upward against the end wall of said car, side frames having wire fabric walls and adapted to be swung against said ice bars, and a bulkhead having a wire fabric wall and having rollers operating on tracks for permitting the same to be moved against said side frames, whereby said bars, frames and bulkhead will assume vertical positions when collapsed against said end wall.

5. The combination with a refrigerator car, of a collapsible ice bunker comprising ice bars adapted to be swung upward against the end wall of said car, side frames adapted to be swung against said ice bars, and a bulkhead adapted to be moved against said side frames, whereby said bars, frames and bulkhead will assume vertical positions when collapsed against said end wall, said parts being so arranged as to be locked in their open positions by the ice bars in their normal position.

[Claims 6 to 8 not printed in the Gazette.]

1,154,437. ARTILLERY-PROJECTILE. EMILE RIMAILHO, Paris, France, assignor to Compagnie Des Forges Et Acieries De La Marine Et D'Homecourt, Paris, France. Filed July 18, 1914. Serial No. 851,776. (Cl. 102—29.)

1. A projectile, comprising a casing having an explosive chamber therein, a plurality of rings bearing on the outer surface of said casing, means for holding said rings on said casing, each of said rings being recessed on opposite faces, the recesses of adjacent rings registering with each other, and a ball in each pocket formed by complemental recesses.

2. A projectile, comprising a casing having an explosive chamber therein, a plurality of rings bearing on the outer surface of said casing and upon each other, means for holding said rings on said casing, each of said rings being recessed on opposite faces, the recesses of adjacent rings registering with each other and jointly forming pockets, and a ball in each of said pockets.

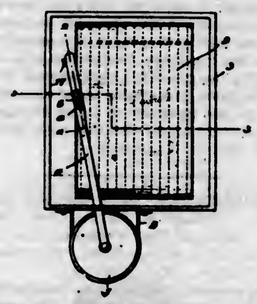
3. A projectile, comprising a casing having an explosive chamber therein, a plurality of rings bearing on the outer surface of said casing and upon each other, means for holding said rings on said casing, each of said rings being recessed on opposite faces, the recesses in one face being in planes between the planes of the recesses in the other face of each of said rings, and the recesses in adjacent rings jointly forming pockets, and a ball in each of said pockets.



4. A projectile, comprising a casing having an explosive chamber therein, and reduced in diameter for a portion of its length, a plurality of rings bearing on the outer surface of said casing, a plurality of rings bearing against the rings in the position of said reduced portion of said casing, said rings being recessed on adjacent faces to form pockets, and a ball in each of said pockets.

5. A projectile, comprising a casing having an explosive chamber therein, said casing and chamber being reduced in diameter in the forward portion thereof, a series of balls held in the outer surface of said projectile and adapted to be distributed laterally thereof in the explosion of said projectile, and a supplemental series of balls held within said first named series, forwardly of the enlarged portion of said casing, whereby said supplemental balls will be driven forwardly of said projectile in the explosion thereof.

1,154,438. RECORDER. FRED G. ROSE, Rocky Ford, Colo. Filed Nov. 21, 1914, Serial No. 878,369. Renewed Aug. 5, 1915. Serial No. 43,875. (Cl. 234—30.)



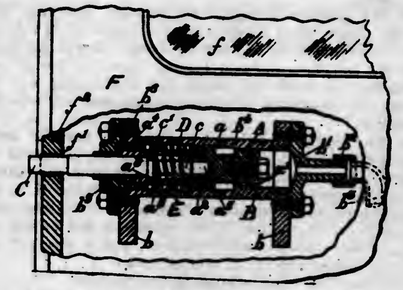
1. In combination with the hand of a speedometer, tachometer, or the like, of a recorder therefor comprising a casing through which said hand passes, a record sheet, clock mechanism for feeding said sheet, means for making a visible mark on said sheet, and means whereby the clock mechanism and last mentioned means can be simultaneously rendered inoperative, said means including a plunger adapted to be depressed by said hand.

2. A recorder comprising a record sheet, a hand movable over said sheet, an ink distributer carried by one end thereof, clock mechanism for feeding said sheet, and a plunger actuated by said hand when in normal position for simultaneously stopping said clock mechanism and elevating said ink distributer out of contact with said sheet.

3. An automatic stop for the feed mechanism, of a record sheet, of a recorder comprising in combination with a marking hand having an inclined under surface of a plunger having an inclined upper end adapted to coöperate with the upper surface of the hand and its lower end adapted to engage a moving portion of the feed mechanism upon the hand reaching its normal position.

4. A recorder comprising in combination a record sheet, a pair of rolls over which said sheet travels, a clock mechanism for turning one of the rolls, a marking hand movable over said sheet, a plunger having one end provided with an inclined surface adapted to coöperate with said hand for forcing said plunger into a position to stop said clock mechanism, and a coil spring for returning said plunger to normal position.

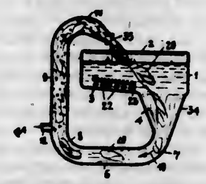
1,154,439. LOCK FOR VEHICLE-DOORS. ARTHUR JAMES SCHOLFIELD, Ridge Bank, Todmorden, and JOHN RICHARD REDMAN, Sandbed, Hebden Bridge England. Filed Dec. 8, 1913. Serial No. 805,275. (Cl. 70—14.)



1. In a door lock, the combination, with a cylinder, a piston slidable therein and controlled by fluid pressure and provided with a guide for the locking bolt; of a main spring operating to slide the piston in one direction, a locking bolt slidable longitudinally in the said guide independently of the piston, and an auxiliary spring operating to press the said bolt forwardly in its guide and permitting it to move rearwardly without sliding the said piston.

2. In a door lock, the combination, with a cylinder, a piston slidable in the cylinder and controlled by fluid pressure, and a sleeve secured to the piston and provided with a guide for the locking bolt; of a main spring operating to slide the piston in one direction, a locking bolt slidable in the said guide independently of the piston and provided with an abutment which limits its forward movement in the guide, and an auxiliary spring arranged in the said sleeve between the said abutment and the piston and permitting the locking bolt to slide rearwardly without sliding the piston.

1,154,440. MACHINE FOR TREATING MATERIALS WITH A LIQUID. FRANZ SCHUBERT, Hamburg, Germany. Filed Mar. 5, 1913. Serial No. 752,122. (Cl. 8—19.)



1. The described machine for treating materials with a liquid, comprising a trough, a channel leading from the bottom of the trough, said channel extending downwardly below the bottom of the trough then laterally and upwardly and discharging into the said trough, the channel

forming a continuous and unobstructed passage; and a pipe for introducing compressed air into the upwardly projecting portion of said channel.

2. The described machine for treating materials with a liquid, comprising in combination, a trough, a channel starting from said trough the other end of which returns to said trough, the returning end of said channel having a longitudinal mouth at right angles to the longitudinal opening of said channel starting from said trough, a pipe for introducing compressed gas entering the return part of said channel, substantially as, and for the purpose, set forth.

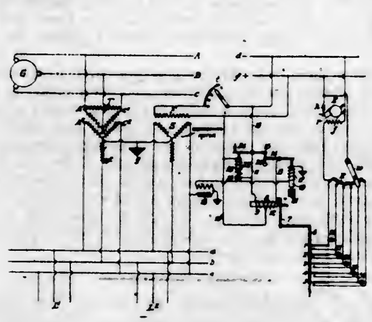
3. The described machine for treating materials with a liquid, comprising in combination, a channel containing said liquid and materials and starting from a fill opening to which its other end returns, a pipe for introducing compressed air which enters the return portion of said channel, and a sieve device adapted to be introduced through the fill opening and to catch the material circulating in said channel, substantially as, and for the purpose, set forth.

4. The machine described for treating materials with liquid, comprising a trough having a funnel in its bottom, the bottom inclining toward the funnel, means for heating the trough, a channel leading from the funnel and extending up above the trough and discharging into the same, and means for admitting compressed air into the channels.

5. The herein described apparatus for treating materials with a liquid, comprising an open top elongated receptacle, a channel extending downward from the bottom of the receptacle at one end thereof, then laterally in the direction of the side opposite from which it started, then upwardly above the top of the receptacle and having its end curved over the said receptacle, and a pipe for admitting compressed air to said channel.

[Claims 6 to 9 not printed in the Gazette.]

1,154,441. TRANSFORMER REGULATION. EDMUND O. SCHWEITZER, Chicago, Ill. Filed Dec. 7, 1910. Serial No. 596,058. (Cl. 171—119.)



1. In combination, alternating-current supply mains having a substantially constant electro-motive force impressed thereupon, load circuit mains, a transformer comprising primary and secondary windings connected to said supply and said load mains, respectively, said transformer being so constructed as to secure sufficiently high magnetic leakage to limit the current on accidental short circuit to a safe value and thereby prevent disruption of the transformer, a rotary condenser, such as a synchronous motor connected across said load circuit mains, means for over-exciting the field of said synchronous motor to cause the same to draw leading current sufficient to correct the leakage of the transformer at a given load, and a regulating device controlled by the voltage on said load mains for regulating the field strength of said rotary condenser to a proper degree.

2. In combination, three-phase supply mains having a substantially constant alternating electro-motive force impressed thereupon, three-phase load mains, transformer means including primary windings connected to the supply mains, and secondary windings connected to the load mains, cores for said windings, said windings being spaced apart on said cores to cause relatively high magnetic leakage between said windings, and thereby to limit short circuit current to a safe value, load devices connected to said load mains, a three-phase rotary condenser having means to over-excite the field thereof connected to said load mains, and a voltage-controlled regulator for governing the field excitation of said rotary condenser to correct the magnetic leakage in the transformer regardless of the value of the load.

1,154,442. TIRE-TOOL. FRANK SEVISON, Muncy, Pa. Filed Dec. 23, 1914. Serial No. 878,715. (Cl. 152—27.)



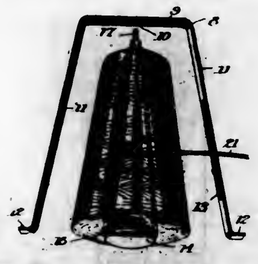
1. A tool for repairing tires, comprising two pivotally united handled members terminating in jaws, each jaw having at the front end a curved spur, the spurs of the respective jaws being positioned on the same side face of the tool and being curved oppositely in outward lateral directions to space the pointed ends of the spurs a distance apart to adapt them to simultaneously embed themselves in the material of a tire at opposite sides of a cut or puncture to distend the same without entering the spurs in the cut or puncture.

2. A tool for repairing tires, comprising two pivotally united handled members having jaws at the forward ends, said jaws terminating in front ends disposed inwardly toward each other, each jaw having a plurality of curved spurs on a face of the tool, the spurs on the two jaws being on the same face of the tool, the spurs on the one jaw curving laterally outward in the opposite direction from those on the other jaw and the spurs on the respective jaws having their pointed ends spaced, in the closed position of the jaws, a distance apart to adapt them to be embedded in the material of a tire at opposite sides of a cut or puncture to distend the same without entering the tool in said cut or puncture.

1,154,443. HOLDER FOR TAPE-WOUND CONES AND THE LIKE. ROBERT S. SHARP, New York, N. Y., assignor to National Tape Company, Inc., New York, N. Y., a Corporation of New York. Filed Feb. 10, 1914. Serial No. 817,754. (Cl. 242—141.)

1. A holding-structure including in combination, a base-member provided with an approximately central recess and with side recesses, an arch-member upstanding from the base-member and having its ends angulated to engage in said side recesses, and a supporting member rotatably disposed in said central recess and connected at its upper end to said arch-member.

2. A holder including in combination, a base-member provided with a central recess and having an upstanding circumferential flange provided with recesses; an arch-member comprising converging vertical portions one of which is provided with an elongated slot and both of which are provided with angulated ends adapted to engage in the flange-recesses, and a horizontal portion provided with an aperture intermediate its juncture with said vertical portions; and a cone-supporting member removably disposed in said central recess and having its upper end extending into said aperture and rotatively sustained by the arch-member.

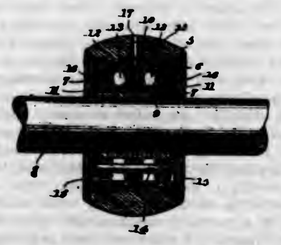


3. A holder including in combination, a base-member provided with a central recess having a substantially vertical wall and having an upstanding circumferential flange provided with recesses; an arch-member comprising converging vertical portions one of which is provided with an elongated slot and both of which are provided with angulated ends adapted to engage in the flange-recesses, and a horizontal portion provided with an aperture intermediate its juncture with said vertical portions; and a cone-supporting member removably disposed in said central recess and having its lower end provided with a relatively cylindrical portion adapted to present a surface substantially parallel to the vertical wall of said recess and having its upper end extending into said aperture and rotatively sustained by the arch-member.

4. A holder including in combination, a base-member provided with a central recess and a screw-hole communicating with the recess and having a circumferential flange provided with recesses; an arch-member provided with outstanding portions adapted to extend into said flange-recesses; a cone-supporting member having its lower end disposed in said central recess and its upper end connected to the arch-member and rotatably sustained thereby; and a tubular tape-wound cone rotatively supported on said cone-supporting member.

5. A holder including in combination, a base-member provided with a central recess and a screw-hole communicating with the recess and having a circumferential flange provided with recesses; an arch-member provided with outstanding portions adapted to extend into said flange-recesses; a tapered cone-supporting member having its lower end disposed in said central recess and its upper end connected to the arch-member and rotatably sustained thereby; and a tubular tape-wound cone rotatively supported on said cone-supporting member.

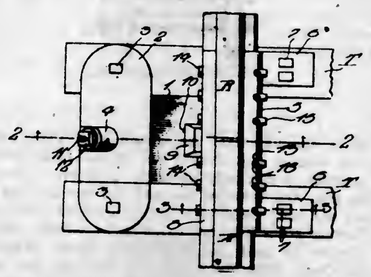
1,154,444. BALL-BEARING. CARL A. SHELLBERG, Elgin, Ill. Filed Dec. 29, 1914. Serial No. 879,520. (Cl. 64—30.)



1. A ball bearing comprising outer and inner revoluble members, sleeves fitted within the outer member and upon the inner member, a plurality of rings concentrically disposed about the sleeve on the inner member and having holes at intervals therein registering with each other, bearing balls interposed between the rings, the said rings being formed with sockets communicating with the holes and receiving the bearing balls, and bolts passed transversely through the rings at points between certain of the bearing balls for connecting the said rings in unison, the said balls being of a size to protrude beyond the inner and outer peripheries of the rings for contact with the sleeves.

2. A ball bearing comprising outer and inner revoluble members, sleeves fitted within the outer member and upon the inner member, a plurality of rings concentrically disposed about the sleeves on the inner member and having holes at intervals therein registering with each other, bearing balls interposed between the rings, the said rings being formed with sockets communicating with the holes and receiving the bearing balls, bolts passed transversely through the rings at points between certain of the bearing balls for connecting the said rings in unison, the said balls being of a size to protrude beyond the inner and outer peripheries of the rings for contact with the sleeves, and cheek plates detachably connected to opposite ends of the outer member and disposed concentrically about the inner member.

1,154,445. RAIL CHAIR AND FASTENER. JAMES E. SHOPE, Connellsville, Pa. Filed Dec. 7, 1914. Serial No. 875,908. (Cl. 238—6.)



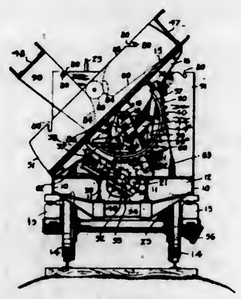
The combination with the meeting ends of a pair of rails, a rigid fish plate contacting with one side thereof, having means for attachment to a cross tie, said rigid plate having a longitudinal groove in its inner side adjacent said rail, connecting with a series of openings which tapered toward the outer side of said rails, a movable fish plate contacting with the outer side of said rails, means for moving said movable plate toward the rigid plate, said movable plate having a longitudinal groove in its inner side adjacent said rails connecting with a series of openings which are of the same size throughout their length, pins tapering to one end for a portion of their length and of the same size throughout the remaining portion, said tapered ends adapted to be inserted in the tapered openings in the rigid fish plate with their uniform portions in the alined openings in the movable plate and in the openings through the track rails, and means in conjunction with the outer ends of said pins for preventing their removal.

1,154,446. DUMPING-CAR. WILLIAM D. SKIDMORE, Pelham, N. Y. Original application filed Apr. 9, 1914, Serial No. 830,744. Divided and this application filed Nov. 3, 1914. Serial No. 870,071. (Cl. 105—191.)

1. In a dumping car, the combination with running gear, end frames, means adapted to pivotally support said body upon said running gear, and means adapted when in one position to maintain said body horizontal and when in another position to allow said body to tilt; of means adapted to tilt the said body, and means adapted to elevate a side wall of the said body as the same is tilted, said means comprising an extension on said side wall ful-

crumed in one of said end frames, and means adapted to depress the inner end of said extension, the point of engagement between the said depressing means and the said extension moving along said extension as the body is tilted.

2. In a dumping car, the combination with running gear, end frames, a car body pivotally supported upon said running gear and between said end frames, and sides for said car body provided with extensions pivotally mounted in said end frames, of means adapted to tilt said body from its horizontal position and means adapted to elevate one of said sides as the car body tilts, comprising a roller upon the end of the car body adapted to bear upon the inner ends of the said extensions of said sides and to depress said inner ends and thereby elevate the outer ends bearing the sides.



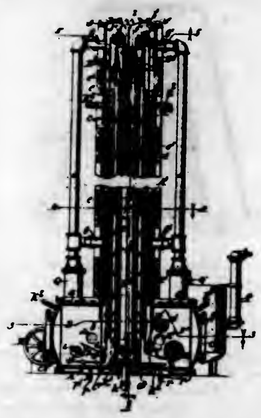
3. In a dumping car, the combination with running gear, end frames, one of said end frames being provided with notches, a car body pivotally supported upon said running gear and between the said end frames, and sides for said car body, said sides being provided with extensions having studs adapted to pivotally engage with the said notches in said end frame; of means adapted to tilt said body from its horizontal position and means adapted to elevate one of said sides as the car body tilts, comprising a device upon the end of the car body adapted to bear upon the inner ends of the said extensions and to depress said inner ends and thereby elevate the outer ends bearing the sides.

4. In a dumping car, the combination with running gear, end frames, each of said end frames being provided with a notch, a car body pivotally supported upon said running gear and between the said end frames, and sides for said car body, said sides being provided with studs adapted to pivotally engage with the notches in said end frames; of means adapted to tilt said body from its horizontal position and means adapted to elevate one of said sides as the car body tilts, comprising a device upon the end of the car body adapted to bear upon the inner ends of the said extensions and to depress said inner ends and thereby elevate the outer ends bearing the sides.

5. In a dumping car, the combination with running gear, end frames, one of said end frames being provided with notches, a car body pivotally supported upon said running gear and between the said end frames, and sides for said car body, said sides being provided with extensions having studs adapted to pivotally engage with the said notches in said end frame; of means adapted to tilt said body from its horizontal position, means adapted to elevate one of said sides as the car body tilts, comprising a device upon the end of the car body adapted to bear upon the inner ends of the said extensions and to depress said inner ends and thereby elevate the outer ends bearing the sides, and supports against which the inner ends of said extensions are adapted to bear when said side walls are elevated.

[Claims 6 to 11 not printed in the Gazette.]

1,154,447. IMPREGNATING APPARATUS. OLIVER S. SLEMPER, Buffalo, N. Y., assignor to Buffalo Foundry & Machine Company, Buffalo, N. Y., a Corporation of New York. Filed Nov. 17, 1910. Serial No. 592,836. (Cl. 91—46.)



1. An impregnating device comprising a vacuum chamber, a tank for holding an impregnating fluid arranged within said vacuum tank, means for supplying an article to be impregnated to said tank and arranged within said chamber and outside of said tank, means for receiving the impregnated article from said tank and arranged within said chamber and outside of said tank and guiding means which are arranged within the tank and around which said article is adapted to pass while moving from the supplying and receiving means outside of the tank.

2. An impregnating apparatus comprising a vacuum casing adapted to be connected with an exhausting device, a tank for holding an impregnating liquid arranged in said casing, and a baffle arranged within said casing and projecting from said casing into said tank and forming inlet and outlet throats for the passage of the article to be treated.

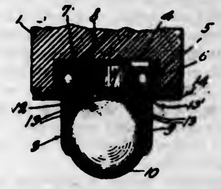
3. An impregnating apparatus comprising a casing having an inlet chamber, an outlet chamber, upright wells connected at their lower ends with said chambers, respectively, a tank adapted to hold an impregnating liquid communicating at its upper end with said wells, and means for moving a sheet like material from said inlet chamber upwardly through one of said wells, thence downwardly and upwardly through said tank, and thence downwardly through the other well into said outlet chamber.

4. An impregnating apparatus comprising a casing having an inlet chamber, an outlet chamber, upright wells connected at their lower ends with said chambers, respectively, a tank adapted to hold an impregnating liquid communicating at its upper end with said wells, means for heating the interior of said casing, and means for moving a sheet like material from said inlet chamber upwardly through one of said wells, thence downwardly and upwardly through said tank, and thence downwardly through the other well into said outlet chamber.

5. An impregnating apparatus comprising a casing having an inlet chamber, an outlet chamber, upright wells connected at their lower ends with said chambers, respectively, a tank adapted to hold an impregnating liquid communicating at its upper end with said wells, and means for moving a sheet like material from said inlet chamber upwardly through one of said wells, thence downwardly and upwardly through said tank, and thence downwardly through the other well into said outlet chamber comprising supporting rollers arranged in the casing at the lower ends of said wells and tank and at the upper ends of said wells.

[Claims 6 to 10 not printed in the Gazette.]

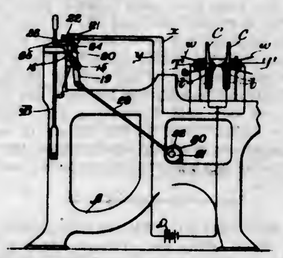
1,154,448. BALL-CASTER. RALPH HERBERT SLEICHER, Troy, N. Y., assignor to The Hospital Appliance Company, Troy, N. Y., a Corporation of New York. Filed Jan. 30, 1915. Serial No. 5,196. (Cl. 16—151.)



1. A ball caster, including a tubular shank having an enlarged ball housing, a ball mounted in the housing, a ball bearing surrounding and carried by the shank and having its outer circumference greater than the circumference of the ball housing, and an apertured attaching plate loosely fitting upon the housing and coöperating with the ball bearing to hold the caster against longitudinal movement.

2. A ball caster, including a tubular shank having an enlarged ball housing, a ball mounted in the housing, an inner ball race surrounding and fixed to the shank, an outer ball race of greater diameter than the exterior of the housing balls between the races, and an apertured attaching plate loosely fitting about the housing and abutting the outer ball race.

1,154,449. STOP-MOTION FOR LOOMS. JOSEPH J. SMITH, Cambridge, Mass., assignor to William Firth, Chestnut Hill, Mass. Filed Dec. 19, 1914. Serial No. 878,026. (Cl. 139—91.)



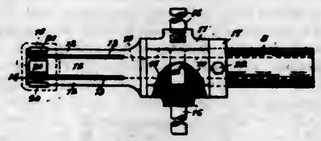
1. A stop motion comprising a vibratory shipper actuator having a pivoted actuator arm, coöperating magnetic holding means on said actuator and arm, means to sustain and guide said arm in its inoperative movement, and an electric circuit in connection with one of said magnet members and having circuit closing means.

2. A stop motion comprising a vibratory member having a magnet, a pivoted actuator arm carried by said member and having an armature to coöperate with said magnet, means to sustain said arm whereby said magnet may effect mechanical contact with said armature at the limit of its movement in the inoperative direction, said magnet having an electric circuit provided with circuit closers.

3. A stop motion of the nature described comprising a vibrator member having a magnet, means for vibrating said vibrator from a going part of a loom, a puller arm pivotally mounted on said vibrator below said magnet and having an armature to coöperate therewith, and an electric circuit in connection with said magnet and having circuit closers.

4. A stop motion of the nature described comprising a bracket having a shaft, a guide arm adjustably mounted on said shaft, a vibrator mounted to swing on said shaft and having a magnet, a puller arm pivotally mounted on said vibrator below said magnet and having an armature, said puller arm sustained and guided by said guide arm, means for effecting the operation of said vibrator and an electric circuit including said magnet and having circuit closers.

1,154,450. WORK-HOLDER FOR MACHINE-TOOLS. MICHAEL SMOLENSKY, Cleveland, Ohio. Filed June 5, 1915. Serial No. 32,280. (Cl. 29—121.)

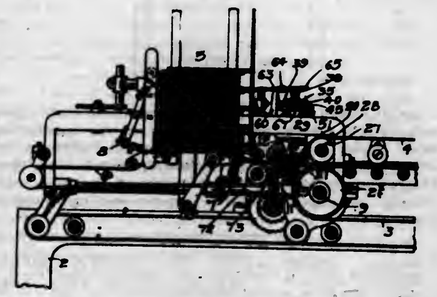


1. A work holder comprising a fixed shank having a conical head at the front end thereof and shaped at the rear end to fit in a socket, a sleeve adjustable along the shank and having expansible fingers bearing against said head and adapted to be expanded thereby to gripping contact with the inside of a hollow piece of work, and means to hold the sleeve at adjustment.

2. A work holder comprising a supporting shank having a conical head at the front end, and a sleeve screwed on the shank and split lengthwise to form a plurality of expansible fingers surrounding and bearing against said head and adapted to be expanded thereby, and means to hold the sleeve at adjustment on the shank.

3. A work holder comprising a shank having a conical head at the front end, a sleeve screwed on the shank and having expansible work gripping fingers bearing upon said head and adapted to be expanded thereby and a set collar on the shank, behind the sleeve, to hold the same in adjusted position.

1,154,451. COUNTER FOR BLANKS. EDWIN GUSTAVE STAUDE, Minneapolis, Minn. Filed May 7, 1912. Serial No. 695,718. (Cl. 93—93.)



1. The combination, with a ratchet wheel, and means for operating the same, of a slide having lugs to engage the teeth of said wheel, a lever pivotally connected with said slide, a rocking arm having a recess wherein said lever is pivoted at a point intermediate to its ends, means yieldingly resisting the oscillation of said lever in said recess, means for positively limiting the stroke of said lever, and means actuated by the passage of a blank for rocking said arm.

2. The combination, with a standard having a flanged upper end and a shaft journaled therein, of a ratchet wheel loosely mounted on said shaft, means secured on said shaft and having frictional engagement with said ratchet wheel for turning the same, a slide arranged to reciprocate on said flanged end and having lugs to engage the teeth of said ratchet wheel, and means actuated by the movement of a blank for reciprocating said slide to alternately engage said lugs with the teeth of said wheel.

3. In a counting mechanism comprising rotatable members one of which has continuous movement and the other intermittent movement, stop-mechanism for holding the intermittently moving member and including a pawl and

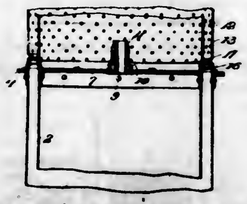
ratchet escapement operatively connected with the intermittently moving member, and means adapted to be operated by a box-blank and operatively connected with the pawl and ratchet escapement to engage one pawl of the escapement with the ratchet as the other pawl is disengaged from the ratchet, substantially as described.

4. In a counting mechanism comprising rotatable members one of which has continuous movement and the other intermittent movement, stop-mechanism for holding the intermittently moving member and including a ratchet wheel connected with the intermittently moving member and a slidable bar having teeth to alternately engage the ratchet wheel, and means adapted to be actuated by a box-blank and operatively connected with said bar to reciprocate the same to bring its teeth in alternation into engagement with the ratchet, substantially as described.

5. In a counting mechanism comprising rotatable members, stop-mechanism for holding one of said members from continuous movement and including a pawl and ratchet escapement operatively connected with said member, a pair of continuously revoluble rolls arranged for the passage of a box-blank between them, and means connecting one of said rolls with the pawl and ratchet escapement to engage one pawl of the escapement with the ratchet as the other pawl is disengaged from the ratchet, substantially as described.

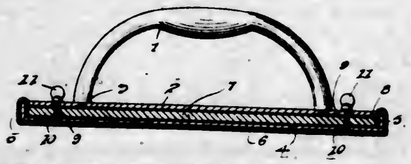
[Claim 6 not printed in the Gazette.]

1,154,452. OIL-BURNER. LOUIS STOCKSTROM, St. Louis, Mo., assignor to American Stove Company, St. Louis, Mo., a Corporation of New Jersey. Filed July 3, 1914. Serial No. 848,759. (Cl. 158—88.)



An oil burner comprising wick tubes having their upper ends beveled, combustion tubes, one of the combustion tubes having an inwardly drawn beading adjacent its lower end and having an outwardly flared lower end adapted to correspond with the bevel of the wick tube, whereby the combustion tubes are centered on the wick tubes.

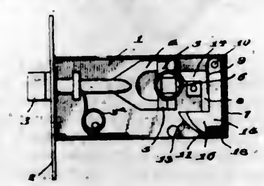
1,154,453. COMBINATION PLASTERER'S IMPLEMENT. AZARIAH D. STRATTON, Omaha, Nebr. Filed Oct. 9, 1914. Serial No. 865,925. (Cl. 72—136.)



1. In a trowel, a plate, a handle secured to said plate intermediate its sides and ends, said plate having apertures adjacent the handle, a shoe having its sides and edges turned upwardly, a cover arranged under the shoe and having its edges engaged over the upturned edges of the shoe, a float to fit within said shoe, and its outer edges to engage the covering carried by said shoe, said float having apertures therein to correspond with the apertures in said plate, means placed through said apertures for holding said parts in an assembled position.

2. In a trowel, a plate substantially rectangular, said plate having a channel formed thereon, and having apertures therein, a shoe having its ends and sides turned upwardly, a cover arranged over said shoe and its ends to be bent over the upturned edges of the shoe, a float adapted to seat within the shoe and tightly wedge said covering against the upturned edges of the shoe, said float provided with apertures to correspond with the apertures in the plate, and means placed through said apertures for holding said plate and float and shoe in an assembled position.

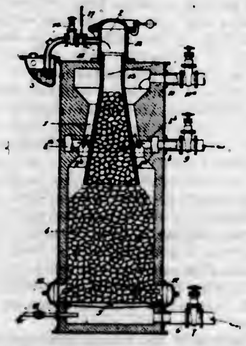
1,154,454. LOCK. GEORGE N. STRICKLAN, Savannah, Ga. Filed Apr. 20, 1915. Serial No. 22,692. (Cl. 70—29.)



1. In a lock, a casing, a spring projected latching bolt slidably mounted therein and having a yoke end straddling the knob cylinder, a spring actuated and key operated locking plate having parallel extensions adapted to be arranged in the path of both of the legs of the yoke and means for securing said locking plate in operative locking position, said means being actuated by a key to release the locking plate.

2. In a lock, a casing, a spring projected latching bolt slidably mounted therein, a knob cylinder having lateral arms, a yoke head on said latching bolt straddling the knob cylinder, a slidably mounted locking plate having lateral extensions adapted to be arranged in the path of the legs of the yoke head, said locking plate being provided with an L-shaped slot and one of said extensions having a cam face adapted to be engaged by a key tang, a spring for moving the locking plate in one direction for carrying the extension out of the path of the legs of the yoke head, a pivoted locking dog having a pin fitted within the L-shaped slot, said dog having a key-operated extension and a spring for throwing the pin of the locking dog into engagement with the short leg of the L-shaped slot to secure the locking plate in operative latching bolt locking position.

1,154,455. METHOD OF PRODUCING COMBUSTIBLE GASES. HUGO STRACHE, Vienna, Austria-Hungary. Filed Feb. 12, 1915. Serial No. 7,756. (Cl. 48—202.)



1. A method of producing a gas composed of distillation gases and water gas, consisting in consecutively producing coal distillation gases by hot blasting coal contained in a distilling chamber arranged in the generator, accumulating said distilling gases in the distilling chamber, forming water gas by steam blasting and displacing the said distillation gases by the water gas which is displaced by the combustion gases of the following hot blasting operation, substantially as described.

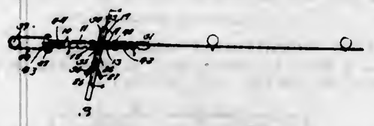
2. A method of producing a gas composed of distillation gases and water gas, said method consisting in producing coal distillation gases by hot blasting coal contained in a distilling chamber arranged in the generator, accumulating said distilling gases in the distilling chamber while the gas outlet valve from said chamber is closed, forming then water gas by steam blasting and displacing the said distillation gases by the water gas formed into the gas outlet piping which is at the time open and which during the following hot blasting operation is held open until the producer gas still contained in the distilling chamber is displaced by the combustion gases, substantially as described and for the purpose set forth.

3. A method of producing a gas composed of distillation gases and water gas, said method consisting in producing coal distillation gases by hot blasting coal contained in a distilling chamber arranged in the upper part of the generator, accumulating said distilling gases in the distilling chamber and in a free space of suitable dimensions arranged above the same while the gas outlet valve from said chamber and space is closed, opening the gas outlet valve and forming then water gas by steam blasting, driving thereby the said distillation gases into the outlet piping, and closing the valve of said piping in the next period of hot blasting until the producer gas contained in the distilling chamber is displaced by the combustion gases, substantially as described.

4. A method of producing gas, which consists in generating coal distillation gases by hot blasting, then generating water gases by steam blasting, and in accumulating the mixed gases in a closed chamber, and in driving the mixed gases out of the said chamber with the succeeding hot blast, until a test flame in connection with the discharge pipe will no longer burn.

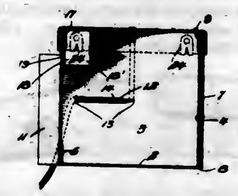
5. A method of producing gas, which consists in consecutively producing coal distillation gases by hot blasting, and in forming water gas by steam blasting, and in displacing the mixed gases by the succeeding hot blasting, until a test flame in connection with the discharging gas no longer burns.

1,154,456. WIRE-STRETCHER. ROMA C. STURDEVANT, Weldon, Iowa. Filed June 24, 1913. Serial No. 775,571. (Cl. 254—72.)



A wire stretcher comprising a bar having notches in each side edge, the notches in one edge being staggered with respect to those in the other edge, a frame slidable on said bar, an operating lever including spaced portions embracing the bar and frame and pivotally connected to opposite sides of the frame respectively and further having alined slots adjacent each side edge of the bar, spring pawls slidably mounted between the spaced portions of the lever adjacent the side edges of the bar respectively, each of said pawls comprising a stem having its inner end forked, a roller journaled between the arms of said forked end adapted to engage in the notches in the adjacent edge of the bar, and the trunnions of said rollers being extended through the alined slots of the lever, spring means constantly tending to move said stems toward the bar to engage the rollers in the respective notches, a pivot rod mounted on the lever and connecting the space portions thereof, a pair of pawl operating levers each formed from a length of wire bent to produce double loops at one end of each lever, one of the loops of one lever being pivoted on said pivot rod and the other end connected to the adjacent spring pawl, a rocker arm pivoted between the portions of said lever and having one end connected to the other spring pawl, and one of the loops of the other pawl operating lever being pivotally engaged over the pivot rod, a link connecting the other loop of the last named lever with said rocker arm, and means for attaching one end of the bar to a fixed part and the opposite end to the frame of a wire clamp.

1,154,457. HAT-BOX. ADELAIDE TAYLOR, Stevens Point, Wis. Filed May 6, 1915. Serial No. 26,348. (Cl. 229—16.)



1. A hat box comprising a bottom wall, side walls secured to three of the edges of the bottom wall, a lip secured to the other edge thereof and extended upward, to form a door stop, doors hingedly connected to the free ends of two of said side walls, said doors being of a height less than the height of said side walls, a strip connecting said side walls above said doors, a stop extending below said strip and a closure for the upper end of said box.

2. A hat box comprising a bottom wall, side walls secured to three of the edges of the bottom wall, a lip secured to the other edge thereof, doors hingedly connected to the free ends of two of said side walls, said doors being of a height less than the height of said side walls, a strip connecting said side walls above said doors, a removable top for closing the upper end of said box, and a reinforcing strip secured to the inner face of said cross bar and extending below said cross bar to form a stop for said doors at the upper ends thereof, the lip secured to said bottom forming a stop for the lower end thereof.

3. A hat box consisting of a bottom wall, side walls secured to three of the edges of said bottom wall and separated from each other, two of said side walls being provided at one end with overlapping flaps adapted to overlap each other and the other side wall of the box to form a reinforced wall of triple thickness, doors hinged at one side to the free edges of said sides and adapted to close the open side of said box, said doors being of less height than said sides to which they are connected terminating short of the upper ends thereof, and a connecting strip arranged between said sides above said doors.

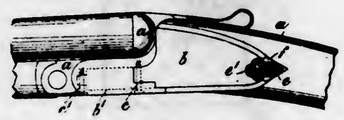
4. A hat box consisting of a bottom wall, side walls secured to three of the edges of said bottom wall and separated from each other, two of said side walls being provided at one end with overlapping flaps adapted to overlap each other and the other side wall of the box to form a reinforcing wall, doors hinged at one side of the free edges of said flap carrying sides and adapted to close the open side of said box, said doors being of less height than said sides to which they are connected terminating short of the upper ends thereof, a connecting strip arranged between said sides above said doors, and a reinforcing strip for said connecting strip arranged on the inner face thereof and having right angularly extending arms at its opposite ends positioned to engage the inner faces of the sides to which the doors are connected.

5. A hat box consisting of a bottom wall, side walls secured to three of the edges of said bottom wall and separated from each other, two of said side walls being provided at one end with overlapping flaps adapted to overlap each other and the other side wall of the box to form a reinforcing wall, doors hinged at one side to the free edges of said flap carrying sides and adapted to close the open side of said box, said doors being of less height than said sides to which they are connected terminating short of the upper ends thereof, a connecting strip arranged between

said sides above said doors, and a reinforcing strip for said connecting strip arranged on the inner face thereof and having right angularly extending arms at its opposite ends positioned to engage the inner faces of the sides to which the doors are connected, said reinforcing strip being wider than the strip with which it is connected and with its lower edge extending below the lower edge of said connecting strip.

[Claims 6 and 7 not printed in the Gazette.]

1,154,458. BREECH-LOADING SMALL-ARM. LESLIE B. TAYLOR and FREDERICK HUGHES, Birmingham, England; said Hughes assignor to said Taylor. Filed Apr. 24, 1914. Serial No. 834,235. (Cl. 42—69.)



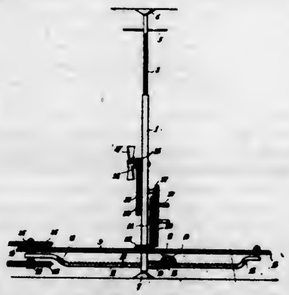
1. A breech-loading small arm having a plate movable into position to close the recess in its side for the lock mechanism, a slidably-mounted secondary plate to which the first-named plate is hinged, and means for holding the said first-named plate in such position.

2. A breech-loading small arm having a dove-tailed groove formed in the side of its body adjacent the recess for the lock mechanism, a plate movable into position to close said recess, a secondary plate to which the first-named plate is hinged slidably fitted in said groove, and means for holding the said first-named plate in such position.

3. A breech-loading small arm having a plate hinged to the side of its body for movement into position to close the recess for the lock mechanism, a turn button having its stem rotatably mounted in one end of the plate and provided upon its inner end with a catch, one edge of which is beveled, a plate with which the first-named plate coacts to hold the latter in such position, and a beveled projection arranged in said recess for engagement with the beveled edge of said catch, to partially open the said first-named plate.

4. A breech-loading small arm having a plate hinged to the side of its body for movement into position to close the recess or the lock mechanism, lock mechanism carried by said plate for movement therewith into said recess, and means carried by said plate for holding it in such position.

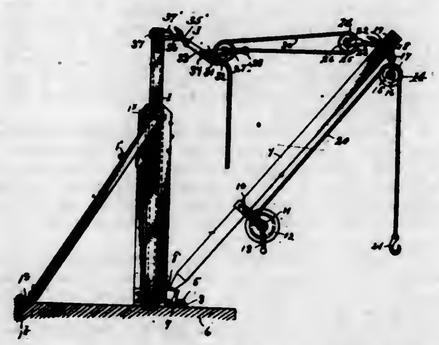
1,154,459. MINING-MACHINE. BENIGNO VIVIANI, Monessen, Pa. Filed June 23, 1914. Serial No. 846,849. (Cl. 125—14.)



1. In a mining machine, the combination of a supporting standard, a rack bar shiftable lengthwise and angularly movable in a plane perpendicular to said standard and supported and guided by the latter, a rotary cutter journaled on one end of said rack bar, a sprocket wheel having a fixed relation to said cutter, an idler sprocket wheel journaled on the other end of said rack bar, a driving sprocket wheel journaled on said standard, a chain driven by the last named sprocket wheel and passing around the other sprocket wheels, actuating means for said driving sprocket wheel mounted on said standard, and means for shifting said rack bar.

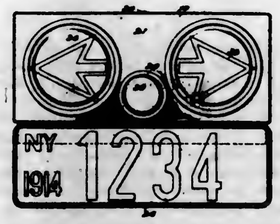
2. In a mining machine, the combination of a supporting standard formed with a guideway extending transversely through the same, a rack bar shiftable lengthwise and angularly movable in a plane perpendicular to said standard and movable through the guideway therein, a rotary cutter journaled on one end of said rack bar, a sprocket wheel having a fixed relation to said cutter, an idler sprocket wheel journaled on the other end of said rack bar, a driving sprocket wheel journaled on said standard, a chain driven by the last named sprocket wheel and passing around the other sprocket wheels, actuating means for said driving sprocket wheel mounted on said standard, and means for shifting said rack bar.

1,154,460. DERRICK APPARATUS. THOMAS B. WALSTON, Williamsport, Ohio. Filed Apr. 9, 1915. Serial No. 20,272. (Cl. 212—58.)



A derrick apparatus comprising an apertured plate adapted to be fastened to a fixed object and provided with a socket member projecting above the same, a derrick post passing through the aperture of the plate, a boom having universal bearing in said socket member, and tackle block and cable connections between the boom and post.

1,154,461. GUIDE-SIGNAL FOR AUTOMOBILES. EDGAR A. WALZ, Jr., New York, N. Y. Filed July 28, 1914. Serial No. 853,749. (Cl. 240—22.)



1. In a direction indicator for vehicles, a casing, spaced transparent bull's eye set in openings in the front wall of the casing, inwardly directed flanges surrounding the bull's eyes, reflectors mounted in the casing, one at the rear of each bull's eye and projecting closely within the adjacent flange to form with the bull's eye a substantially light proof chamber, and an electric light bulb mounted within each reflector, each bull's eye being formed of colored glass with a portion of its inner face coated with an inner layer of paint of the color of the glass and an outer layer of white paint.

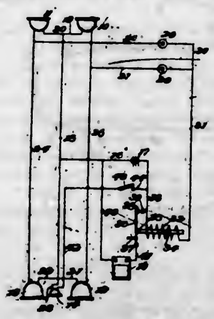
2. A direction indicator for vehicles including a casing open at its front, a hinged closure for the casing provided with spaced circular openings, inwardly directed flanges surrounding the openings, bull's eyes mounted in the openings with the flanges projecting inwardly beyond them, reflectors mounted in the casing and having peripheral outwardly directed flanges adapted, when the closure is shut, to be spaced from the inwardly directed flanges thereof, lights mounted in the reflectors, and shutter rings having body portions adapted to seat within the inwardly directed flanges of the closure when the latter is shut and having outwardly directed peripheral flanges secured to the outwardly directed flanges of the reflectors, the shutter rings being free of connection except with the reflectors, whereby the closure may be opened and shut without affecting the reflectors or lights therein.

3. In a direction indicator for vehicles, a casing, a transparent bull's eye set in an opening in one wall of the casing, and a light in the casing to project its rays through the bull's eye, the bull's eye being formed of colored glass with a portion of its inner face coated with overlying layers of paint of different colors, the outer layer being a reflector of light.

4. In a direction indicator for vehicles, a casing, a transparent bull's eye set in an opening in one wall of the casing, and a light in the casing to project its rays through the bull's eye, the bull's eye being formed of colored glass with a portion of its inner face coated with overlying layers of paint of different colors, the outer layer of such paint being white.

5. In a direction indicator for vehicles, a casing, a transparent bull's eye set in an opening in one wall of the casing, and a light in the casing to project its rays through the bull's eye, the bull's eye being formed of colored glass with a portion of its inner face coated with overlying layers of paint of different colors, the outer layer of such paint being white and the inner layer of such paint being the color of the glass employed.

1,154,462. WIRING SYSTEM. EDGAR A. WALZ, Jr., New York, N. Y. Original application filed July 28, 1914, Serial No. 853,749. Divided and this application filed Feb. 2, 1915. Serial No. 5,713. (Cl. 177—337.)

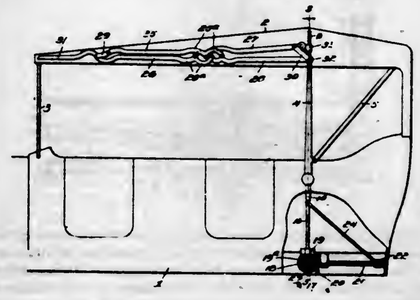


1. The combination with signal devices and a common circuit therefor, of a relay in the circuit, a second circuit closed by the closing of the relay, and an additional signal device in the second circuit, the relay being arranged to close only upon passage of current through the common circuit of sufficient strength to energise all signal devices therein.

2. In direction signaling systems for vehicles, a pair of independent front signals, a pair of independent rear signals, a circuit common to one signal of each pair, a second circuit common to the other signals, means for selectively closing such circuits, an audible signaling device in a circuit common to both circuits, and resistance operated means controlling the sounding of such signal, whereby the signal will remain silent unless all signals in either of the first circuits are energised.

3. In direction signaling systems for vehicles, a pair of independent front signals, a pair of independent rear signals, a circuit common to one signal of each pair, a second circuit common to the other signals, means for selectively closing such circuits, an additional signaling device in a circuit common to both circuits, and resistance operated means controlling the energization of said additional signal, whereby such additional signal will not be energized unless all signals in one or the other of the first circuits are energized.

1,154,463. VEHICLE TOP-OPERATING MECHANISM. DELTON CHARLES WATT and FREDERICK AUGUSTUS GERARSON, Barre, Vt. Filed Feb. 11, 1914. Serial No. 818,093. (Cl. 21—62.)



1. In a folding vehicle top, the combination of front and rear pairs of levers having their opposing ends oppositely curved, the upper rear lever having its forward portion pivotally connected to the rear portions of the front pair of levers a short distance from their rear extremities and the lower rear lever having its forward portion pivotally connected to the rear extremities of the front pair of levers, links connecting the outer ends of both pairs of levers and means for imparting movement to the levers whereby they receive parallelogrammatic movement and the front levers are caused to fold upon the rear levers.

2. In a folding vehicle top, the combination of pivoted top supports, extensions carried by said supports, a cross bar, links connecting the extremities of the cross bar with the extensions of the top supports and means for imparting a reciprocating movement to the cross bar to effect a raising or a lowering of the top.

3. In a folding top for vehicles, the combination of a pivoted top support, extensions carried by said support, a cross bar, links connecting the extremities of the cross bar with the extensions of the top support, a longitudinally arranged screw connected with the cross bar to effect a reciprocating movement thereof and means for imparting a rotary movement to such screw to effect a raising or a lowering of the top.

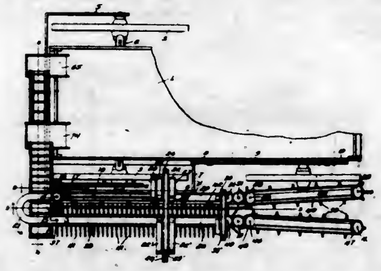
4. In combination a vehicle top adapted to be extended or contracted and raised or lowered, a system of levers connected with the top to effect an extension or a contraction thereof, standards supporting the top and pivotally connected with the vehicle body to effect a raising or a lowering of the top, shafts mounted upon said standards and having screw thread connection with the system of levers, means for imparting a pivotal movement to the standards, other means for imparting a rotary movement to the said shafts and operating means for simultaneously actuating both the standards and shafts whereby the top may be extended and raised, or contracted and lowered at one and the same operation.

5. In combination with a vehicle body having hollow sides, a top therefor, standards constituting supports for the top and pivotally connected to the vehicle body, a shaft mounted in the hollow sides of the vehicle body, a second shaft in the standards, a connection between said

first and second mentioned shafts, a system of levers and links having connection at one end to the front portion of the top and having connection at their opposite end to said second shaft, and means for imparting a simultaneous movement of said shafts.

[Claim 6 not printed in the Gazette.]

1,154,464. STALK-HEADER AND ENSILAGE-CUTTER. WILLIAM WELCH, Haskell, Tex., assignor of one-fourth to Fidellia D. Welch, Haskell, Tex. Filed Dec. 14, 1911, Serial No. 665,801. Renewed Feb. 12, 1915. Serial No. 7,867. (Cl. 146—11.)



1. In a machine of the character described, stalk gathering and carrying means including an endless chain supported in an approximately horizontal plane, horisontally disposed fingers extending from the links of the chain, a guide bar terminally supporting the fingers said guide bar being adjacent to and spaced from one lead of the chain, a longitudinally disposed spiked roller supported for rotation beneath the chain in position to engage the stalks and to pull the stalks downwardly until the heads rest on the fingers that are terminally supported by the guide bar, thereby alining the heads with respect to the supporting chain, a cutter to sever the heads from the stalks after being alined, and means for actuating the chain, the cutter and the spiked roll.

2. In a machine of the character described, stalk gathering and carrying means including an endless chain supported in an approximately horizontal plane, the links of said chain being provided with laterally extending fingers, a guide bar terminally supporting the fingers, said guide bar being adjacent to and spaced from one lead of the chain, stalk severing means, means for pulling downwardly the stalks carried between the fingers of the chain until the heads rest upon the fingers and are thereby supported in proper alinement, means for severing the heads thus alined from the stalks and means for chopping the stalks that are being pulled downward.

3. In a machine of the character described, stalk gathering and carrying means including an endless chain supported in a horizontal plane, the links of said chain being provided with laterally extending fingers, a guide bar terminally supporting the fingers, said guide bar being adjacent to and spaced from one lead of the chain, stalk severing means arranged below the carrier chain near the front thereof, means operating on the stalks carried by the chain to pull said stalks downwardly while in transit, cutting means for severing the heads, which arrest the downward movement of the stalks by impinging on the fingers of the carrying chain, the means operating to pull the stalks downwardly being constructed and arranged to continue operatively in engagement with the stalks after the heads have been severed, and means for chopping the stalks while being pulled downward.

1,154,465. HACKSAW-HOLDER. HENRY N. WELLS, Riverhead, N. Y. Filed July 8, 1915. Serial No. 38,632. (Cl. 145—31.)

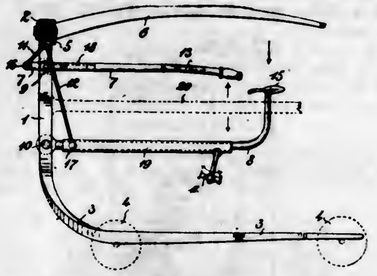
1. The herein described hack saw holder comprising relatively fixed and stationary parallel plates, a handle secured to the stationary plate, a plurality of yokes embracing said plates and secured rigidly to one of them, said plates being spaced to admit a saw blade between them, means between the plates to determine the depth of cut of the saw, and a wedge plate fitted against one of the frame plates and within the yokes serving to clamp the frame plates and saw between them in firm position.



2. In a hack saw holder, the combination of a pair of spaced parallel plates, a handle secured to one of the plates, a plurality of U-shaped yokes extending over the two plates and bearing against the outer faces thereof, means locking the yokes to one of the plates, a gage plate between the two frame plates and having its lower edge parallel to the lower edges of the frame plates, a binding member between one leg of each yoke and the adjacent frame plate, and means acting through the handle serving to cause said binding member to lock the saw in position with its upper edge against said gage plate.

3. In a hack saw holder, the combination of a pair of spaced parallel frame plates, a plurality of U-shaped yokes embracing said plates, fixed pins rigidly securing the yokes to one of the plates, a handle secured to the last mentioned plate and having a bore extending therethrough, the space between the plates being adapted to receive a saw blade, a wedge plate lying between the movable frame plate and the free legs of the yokes, said wedge plate having a series of wedges coöperating with the yokes, and means extending between the handle bore serving to cause the wedge plate to bind the saw in firm position between the main frame plates.

1,154,466. FLYING-MACHINE. FRANZ WELS, Vienna, Austria-Hungary. Filed Feb. 11, 1913. Serial No. 747,775. (Cl. 244—20.)

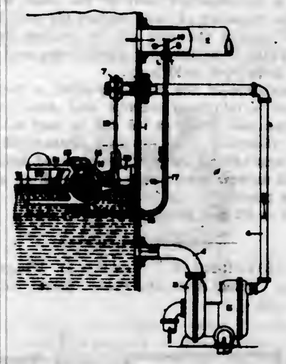


1. In a flying machine the combination of a frame; wings fulcrumed on the frame; levers fulcrumed on the frame; and means connecting said levers and wings, and the points of connection of said means being on opposite sides of said lever fulcrums, substantially as described.

2. In a flying machine the combination of a frame; wings fulcrumed on the frame; a lever fulcrumed on the frame; a saddle mounted on said lever; a hand operated lever fulcrumed on the frame at a point above the fulcrum of the first named lever; and means connecting said levers and wings, and the points of connection of said means being on opposite sides of said lever fulcrums, substantially as described.

3. In a flying machine the combination of a frame, rocking wings, two levers fulcrumed in the frame, studs projecting laterally from such levers and adapted to turn around the longitudinal axes of such levers, means for connecting such studs to the wings whereby simultaneous movements of the two levers in opposite directions act to move the wings in the same direction.

1,154,467. MEANS FOR REGULATING THE SUPPLY OF LIQUID TO VAPOR-GENERATORS. JAMES WILKINSON, Boston, Mass., assignor to General Electric Company, a Corporation of New York. Continuation of application Serial No. 669,529, filed Jan. 5, 1912. This application filed Feb. 6, 1912. Serial No. 675,850. (Cl. 103—86.)



1. In combination, a boiler, a source of liquid supply therefor, a conduit discharging vapor from the boiler, and means responsive to changes in the rate of flow of vapor through the conduit for progressively increasing the amount of liquid per unit of time delivered by said source to the boiler as said rate of flow increases and for progressively reducing the supply of liquid per unit of time as said rate of vapor flow decreases.

2. In combination, a vapor generator, means suplying liquid thereto, a conduit for discharging vapor from the generator, means movable in response to changes in the rate of flow of the vapor in the discharge conduit and after it leaves the generator for progressively varying the amount of liquid admitted to the generator from said supply means, and means responsive to changes in level of the liquid in the generator which acts in opposition to movable means.

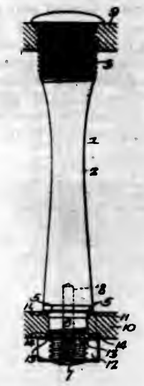
3. In combination, a vapor generator, means supplying liquid thereto, a conduit for discharging vapor from the generator, means for creating a pressure difference, the value of which varies with changes in the rate of flow of vapor through the conduit, means responsive to said pressure difference for progressively increasing the amount of liquid admitted to the generator as said rate of flow of vapor increases, and for progressively decreasing the supply as said rate decreases, and a device acted upon by the body of liquid in the generator for modifying the action of said pressure responsive means.

4. In combination, a boiler, a feed pump therefor, a conduit discharging vapor from the boiler, means for creating a pressure difference that varies with changes in the rate of flow of vapor through the conduit, means responsive to said pressure difference for progressively increasing the effective delivery of liquid by the pump to the boiler as said rate of flow increases and progressively decreasing it as said rate of flow decreases, and a device responsive to changes in level of the liquid in the boiler for preventing said pressure responsive means from admitting liquid after a predetermined level has been reached.

5. In combination, a boiler, a feed pump therefor, a conduit discharging vapor from the boiler, a movable member whose position progressively changes with changes in the rate of flow of vapor through the conduit, a controller for the pump arranged to progressively increase its output as said rate of flow increases and to progressively decrease it as said rate of flow decreases, and a device for transmitting movements of the member to the controller.

[Claims 6 to 24 not printed in the Gazette.]

1,154,468. STAY-BOLT. HENRY V. WILLE, Philadelphia, Pa., assignor to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 4, 1914. Serial No. 860,214. (Cl. 85—15.)



1. The combination of an inner and an outer plate of a boiler, the inner plate having a threaded opening and the outer plate having a plain opening and having a seat surrounding said latter opening; a stay bolt having a thread at one end adapted to the threaded opening in the inner plate and having a seat portion at the opposite end arranged to bear against the seat of the outer plate and having a threaded extension beyond the seat extending through the plain opening; and means, independent of the plate, for holding the bolt to its seat.

2. The combination of an inner and an outer plate of a boiler, or other container, the inner plate having a threaded opening, the outer plate having a plain opening; a beveled seat surrounding the opening; a stay bolt having a threaded portion at one end adapted to the threaded opening of the inner plate and having a seat portion at the opposite end; a reduced threaded portion beyond the seat extending through the plain opening in the outer plate; and a nut, on the outside of the outer plate, mounted on the reduced threaded portion of the bolt.

3. The combination of an inner and an outer plate of a boiler, or other container, the inner plate having a threaded opening, the outer plate having a plain opening and having one beveled seat on the inner side and another beveled seat on the outer side, both surrounding said plain opening; a stay bolt having a threaded portion at one end adapted to the threaded opening in the inner plate and having a beveled seat adapted to the inner beveled seat of the outer plate and having a reduced portion extending through the plain opening; and a nut mounted on the reduced threaded portion and having a beveled projection adapted to the beveled seat on the outer surface of the outer plate.

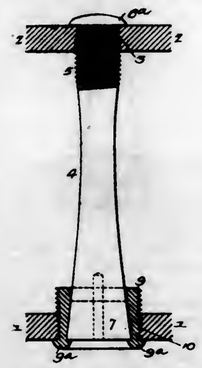
4. A stay bolt having a threaded portion at one end of a given diameter and having a reduced body portion and an enlarged portion at the other end less in diameter than the threaded portion so as to pass through the threaded hole in the plate in which the threaded portion is to be mounted, said enlarged portion having a seat section; and a reduced threaded portion beyond the seat section arranged to receive a nut for confining one end of the bolt to a plate.

1,154,469. STAY-BOLT. HENRY V. WILLE, Philadelphia, Pa., assignor to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 4, 1914. Serial No. 860,215. (Cl. 85—15.)

1. The combination of a stay bolt having a threaded portion at one end and a seat portion at the opposite end; two plates, one having a threaded opening to receive the threaded portion of the plate, the other having a large

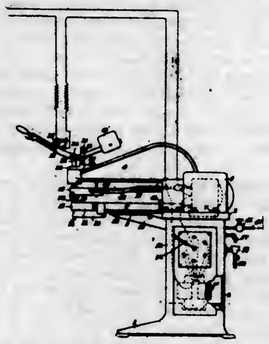
threaded opening; and a bushing mounted in the threaded opening and having a seat for the seat portion of the bolt, the bushing extending beyond the plate and beyond the bolt and flanged over the bolt to hold said bolt to its seat.

2. The combination of a stay bolt having a threaded portion at one end and a beveled seat portion at the opposite end; two plates, one having a threaded opening to receive the threaded portion of the bolt, the other having a large threaded opening; and a bushing mounted in the threaded opening and having a beveled seat for the seat portion of the bolt, the bushing extending beyond the end of the bolt and beyond the plate and flanged over the bolt and plate, holding the bolt to its seat.



3. The combination of an inner and an outer plate of a boiler, the inner plate having a threaded opening; a bushing in the outer plate having a tapered seat; with a stay bolt having a thread at one end adapted to the threaded opening of the inner plate; and a tapered head adapted to the tapered seat of the bushing, the bushing being beaded over the head, holding the head in steam tight contact with its seat.

1,154,470. ELECTRIC WELDING-MACHINE. WILLIAM C. WINFIELD and ALBERTIS C. TAYLOR, Warren, Ohio, assignors to The Winfield Electric Welding Machine Company, Warren, Ohio, a Corporation. Filed June 9, 1911. Serial No. 632,211. (Cl. 219—4.)



1. In a welding machine of the class described, a cylindrical-welding electrode and an electric-current conducting support therefor comprising an extended body narrowed in width to substantially the diameter of said electrode, and means to fasten said electrode upon said body.

2. In a welding machine of the class described, a welding contact-pin and a support therefor comprising a narrow arm and a clamping yoke of band metal removably secured to said arm.

3. In a machine of the class described, a welding contact pin, and a supporting member therefor comprising a tapering extension having a concaved end to seat said pin, and a relatively thin clamping yoke for said contact-pin fastened to said extension.

4. In a machine of the class described, a welding contact pin, and a supporting member for said contact-pin comprising a flat tapering body of the same width relatively as the diameter of said contact-pin and having an end face to engage the side of the contact-pin, a reinforcing clamping yoke for said contact-pin, and means to fasten said yoke upon said body.

5. In a machine of the class described, a welding contact-pin, and a relatively narrow and deep copper arm having a concaved recess at its end to seat said contact-pin, and a clamping yoke for said contact-pin made of band metal and having leg portions engaged with the side faces of said narrow arm, and bolts to tighten and fasten said yoke in place.

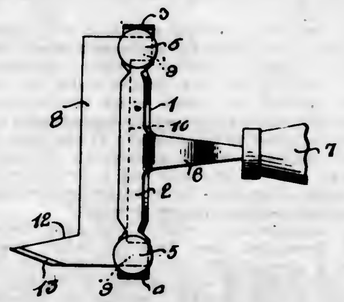
[Claims 6 to 23 not printed in the Gazette.]

1,154,471. MOTOR-BOAT. WILLIAM H. WOLCOTT, Helson, Wash. Filed Sept. 30, 1914. Serial No. 864,305. (Cl. 115—39.)



In a motor boat, the combination of a boat hull shaped to form a plurality of tunnels extending in a fore and aft direction, steps at the forward ends of said tunnels, propelling means comprising an engine located forward of said steps, a plurality of rearwardly sloping propeller shafts passing through said steps, and a propeller working in each of said tunnels.

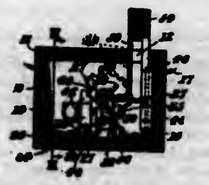
1,154,472. POTATO-PEELER. KANEICHI YAKUSHIJI, Paradise, Mont. Filed Apr. 5, 1915. Serial No. 19,244. (Cl. 146—7.)



1. A potato peeler comprising a T-shaped blade supporting frame having the ends of the head thereof bent inwardly to form blade receiving clamps, set screws operating in said clamps, a handle attached to the shank of said frame, the head of said T-shaped frame between the bent ends thereof being laterally twisted and the shank of said frame offset, and a blade having rearwardly extending arms at its opposite ends for insertion in said clamps with a cutting edge arranged between said arms.

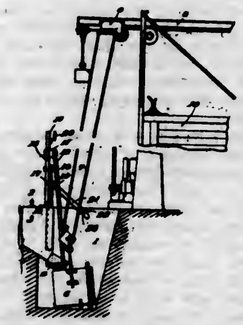
2. A potato peeler comprising a shank having a handle secured to one end, a head extending transversely from the other end of said shank, said head having oppositely disposed notches in its side edges near its ends, the ends of said head being twisted laterally at the portion between said notches and bent downwardly and then inwardly to form the spaced arms of blade receiving clamps, the upper arms thereof being provided with screw threaded apertures, set screws operating in said apertures, spacing blocks mounted on the lower arms of said clamps, and a blade having its rear edge sharpened and provided with rearwardly extending arms at its opposite ends, said arms being disposed between the top faces of said blocks and the lower end of said set screws.

1,154,473. ELECTRIC SNAP-SWITCH. JULIAN ZAKRZEWSKI and JOHN KARASINSKI, Detroit, Mich. Filed Apr. 26, 1915. Serial No. 24,021. (Cl. 175—291.)



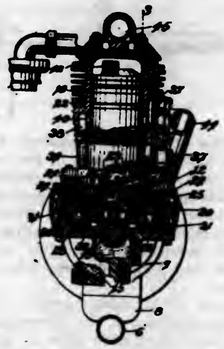
A snap switch comprising a casing, a frame mounted therein, a shaft journaled in the frame, normally separated terminal contacts between the said shaft and frame, a star wheel journaled upon the said shaft and having its arms provided with a path of movement in the plane of the said contacts, a ratchet wheel connected to the said star wheel, a pinion plate journaled upon the said shaft, an engaging pawl for the said ratchet wheel pivoted to the said plate, the said pawl being U-shaped and having opposite notches therein, and the said pinion plate being provided with a notch in its base portion, a looped curved wire spring having a central portion secured within the said pinion plate notch and with its free ends engaging the said pawl notches and a shiftable actuating rack for the said pinion plate.

1,154,474. HOISTING AND DUMPING MECHANISM. FRANKLIN E. ARNDT, Galion, Ohio, assignor to The Galion Iron Works and Manufacturing Company, Galion, Ohio. Original application filed Apr. 8, 1914, Serial No. 830,469. Divided and this application filed Mar. 23, 1915. Serial No. 16,397. (Cl. 193—29.)



In an apparatus of the character described, the combination of a pit, a base disposed adjacent the mouth of the pit, a frame hinged to the base for movement in a vertical plane relative to the base, a partition wall carried by the said frame, a spout within the pit, a cut-off within the pit, levers mounted upon the frame above the partition wall, and connections between said levers and the cut-off and the spout respectively.

1,154,475. EXPLOSIVE-ENGINE. CHARLES E. BAKER and EVERETT M. DE LONG, Hartford, Conn., assignors, by mesne assignments, to The New Britain Machine Company, New Britain, Conn., a Corporation of Connecticut. Filed July 8, 1910. Serial No. 570,949. (Cl. 137—82.)



1. A casing having an intake chamber and a main chamber, the latter divided into valve and outer chambers, a bearing rising from the floor of said intake chamber, a valve located in said valve chamber, a stem projecting from the valve into said bearing, a spring to force the valve against its seat, a plate closing the valve chamber and receiving the thrust of said spring, and means for adjustably positioning the plate.

2. A casing having an intake chamber and a main chamber, the latter being divided into valve and outer chambers, a bearing rising from the floor of the intake chamber, a valve located in the valve chamber, a spring to force the valve against its seat, a plate located within the main chamber and closing the valve chamber and receiving the thrust of said spring, means for adjustably positioning said plate, a stem projecting from the valve into said bearing, and a stem projecting from the opposite side of said valve into said plate.

3. A casing having an intake chamber and main chambers, the latter being each divided into valve and outer chambers, a bearing projection rising from the floor of the intake chamber, valves located in each of said valve chambers to control the inlets to the main chambers, stems projecting from each of the valves into said bearing projection, and means for forcing the valves against their seats.

4. A casing having an intake chamber and main chambers, the latter being each divided into valve and outer chambers, a bearing projection rising from the floor of said intatke chamber, valves located within each of the valve chambers, a valve stem projecting from one valve into said bearing projection, a stem projecting from the opposite valve into the stem of the first mentioned valve, and means for forcing the valves against their seats.

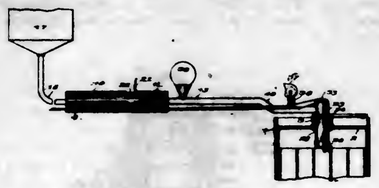
5. A casing having closed valve chambers located therein, valves oppositely located in said chambers to control flow of fluid, a stem projecting from one of said valves, a stem projecting from the opposite valve and having a bearing in the first mentioned stem, means for forcing the valves to their seats, and means arranged to adjust the pressure upon the valves when said chambers are closed.

[Claims 6 to 9 not printed in the Gazette.]

1,154,476. FILLING DEVICE. HARRY S. BENJAMIN, Rochester, N. Y. Filed Dec. 9, 1912. Serial No. 735,678. (Cl. 226—16.)

1. In a device of the class described, the combination with a discharge member having a pocket therein, of a float arranged in said pocket, and a retainer for holding

the float in the pocket comprising a rubber sleeve fitting over the discharge member and having a cross piece confining the float in the pocket.



2. In a device of the class described, the combination with a hollow hand piece formed of two members, one of which is provided with an enlarged chamber adjacent to the other, a flexible tube extending through said chamber, a tube compressor arranged in said chamber and having an operating portion pivotally mounted on the compressor and within the chamber and extending to the exterior of the hand piece, and a rigid delivery tube extending from the hand piece.

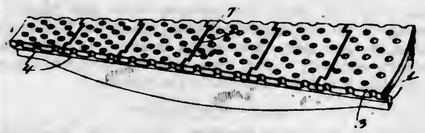
3. In a device of the class described, the combination with a hand piece formed of two telescoping hollow members, one of which is provided with an enlarged chamber opening laterally and the other of which is provided with an interior annular shoulder, of a rigid delivery tube having one end fitting in the last mentioned member and provided with a nipple in proximity to the annular shoulder, a flexible tube extending through the first named handle member and secured to the nipple to which it is held by the shoulder, and a tube compressor arranged in said chamber and having an operating portion extending through the lateral opening.

4. In a device of the class described, the combination with a substantially cylindrical discharge member made of non-conducting material and having a downwardly opening pocket in its lower end and a bore extending from the pocket centrally through said member to the upper end thereof, of a float made of non-conducting material, arranged within said pocket and having a stem extending through the central bore, a discharge tube of a non-conducting material connected to the discharge member, said discharge member having a passageway which communicates with the discharge tube and opens at one side of the discharge member above the pocket, a hand piece rigidly secured to the other end of the discharge tube, a flexible tube connected with the hand piece, a conducting piece carried by the upper end of the stem, a pair of contacts arranged on the discharge member and adapted to be electrically connected by said contact, and a signaling circuit connected to said contacts.

5. In a device of the class described, the combination with a hand piece having a suitable supply connected thereto, of a discharge member connected to said hand piece and carrying a float, a suction device for withdrawing liquid by way of said discharge member, and a signaling device controlled by said float.

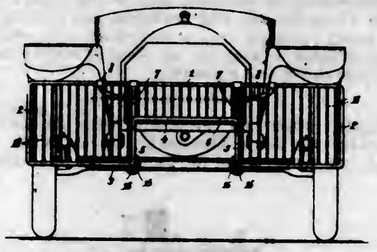
[Claim 6 not printed in the Gazette.]

1,154,477. GRATE. LEO J. BINDER, Spokane, Wash. Filed Dec. 15, 1913. Serial No. 806,853. (Cl. 126—168.)



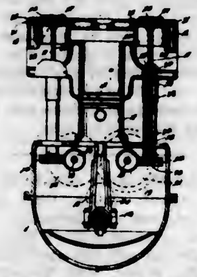
In a grate bar, a frame comprising diverging side bars, cross bars connecting said side bars, fuel supporting sections mounted on said frame, said sections having diverging depending flanges formed on the under side thereof and engaging the outer faces of the side bars, and means for connecting said sections at their adjacent ends.

1,154,478. FENDER. RUFUS D. BRADDY, Anaconda, Mont. Filed July 3, 1915. Serial No. 37,835. (Cl. 105—38.)



The combination with the front axle of an automobile, of fender supports fastened thereto and each comprising an upwardly inclined arm and a downwardly inclined arm, the latter having a loop at its forward end, a fender body having a jointed connection with the upper arms of said supports and having backwardly extending loops slidable in the loops of the lower arms of said supports, shoulders at the rear ends of the last named loops, and coiled expansion springs encircling the relatively slidable loops of the supports and fender body and interposed between said shoulders and the fender body.

1,154,479. ROTARY VALVE FOR GAS-ENGINES. GEORGE BURTON BRINEY, Greenfield, Ind. Filed May 14, 1912. Serial No. 697,231. (Cl. 123—80.)



1. In an engine including a working cylinder, a piston reciprocable in the cylinder, a crank shaft operable by the piston and valves respectively controlling the inlet and exhaust of fuel into and from the cylinder, each of said valves including an apertured shaft, a valve head supported by the shaft, means for driving the shaft from said crank shaft, and means coacting with the aperture of each valve shaft for lubricating the valve, its adjuncts and said crank shaft.

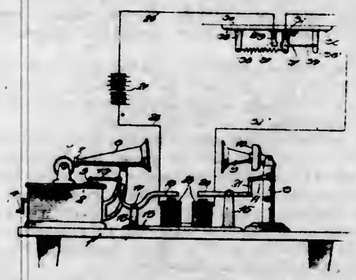
2. In an engine including a working cylinder, a piston reciprocable in the cylinder, a crank shaft operable by the piston and valves respectively controlling the inlet and exhaust of fuel into and from the cylinder, each of said valves including an apertured shaft, a valve head supported by the shaft, means for driving the shaft from said crank shaft, means for supporting each valve shaft to eliminate friction upon the valves, and means coacting with the aperture of each valve shaft for lubricating the valve, its adjuncts and said crank shaft.

3. In an engine including a working cylinder, a piston reciprocable in the cylinder, a crank shaft operable by the piston and valves respectively controlling the inlet and exhaust of fuel into and from the cylinder, each of said valves including an apertured shaft, a valve head supported by the shaft, means for driving the shaft from said crank shaft, and a casing for each valve having openings formed therein, the upper face of each valve being provided with a recess communicating with respective openings for the lubrication of the valve, its adjuncts and said crank shaft.

4. In an engine including a working cylinder, a piston reciprocable in the cylinder, a crank shaft operable by the piston and valves respectively controlling the inlet and exhaust of fuel into and from the cylinder, each of said valves including a shaft provided with a longitudinally extending aperture, a valve casing formed with apertures communicating with the shaft aperture in forming a coacting means for lubricating the bearings of said shaft, and means connecting said valve shafts and said crank shaft for driving each of the former from the latter.

5. In an engine, a working cylinder, a piston reciprocable in the cylinder, a crank shaft operable by the piston, valve casings adjacent the cylinder and in communication therewith, an apertured shaft mounted in each casing, bushings supporting each shaft, an inverted cup valve carried by each shaft to control communications between the casings and the cylinder, an aperture being formed in each casing to communicate with the aperture of the valve shaft in conducting a lubricating agent to each of the bushings and in directing the surplus to said crank shaft, and drive means between each of the valve shafts and said crank shaft.

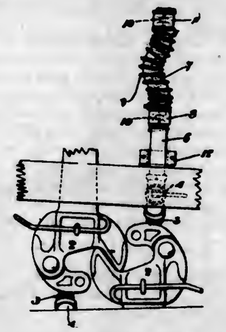
1,154,480. FIRE-ALARM. ROBERT L. BRINKLEY, Winston-Salem, N. C. Filed Jan. 11, 1915. Serial No. 1,681. (Cl. 179—5.)



1. A fire alarm comprising a telephone and a normally idle graphophone, the graphophone being adapted to announce to the telephone, the location of the fire when set in motion, an operating member to be actuated to set the graphophone in motion, and a circuit closing member to close the circuit of the telephone, in combination with a base disposed between the telephone and the graphophone, a pair of spaced standards rising from said base, a pair of substantially horizontal levers fulcrumed to said standards, a connection between one lever and the operating member of the graphophone, a second connection between the other lever and the circuit closing member of the telephone, electro-magnetic means on the base below the levers and adapted to operate the same when energized, an electric circuit including said electro-magnetic means and a source of current, and a fire operated circuit loser likewise included in said circuit.

2. A device designed to be used in connection with a telephone and a graphophone, the graphophone being arranged with its transmitting horn in alinement with the receiving horn of the telephone, whereby the graphophone is adapted to announce a message to the telephone when set in motion, comprising a base, a pair of spaced standards rising from said base, a horizontal lever fulcrumed intermediately of its ends to one of said standards, a link pivotally connected to the outer end of said lever and adapted at its other end for pivotal connection with the circuit controlling arm of said telephone, a lever fulcrumed intermediately of its ends to the other standard, the inner end of said lever being substantially horizontal and the outer end being bent upwardly whereby to form substantially a bell crank lever, a link pivotally connected at one end to the outer end of said bell crank lever, means for connecting the other end of the link to the starting member of the graphophone, and electro-magnets secured to said base, one being arranged beneath the inner ends of each of said levers.

1,154,481. PROTECTING DEVICE FOR AIR-BRAKE-PIPE COUPLINGS. JACOB M. BUZARD, Pittsburgh, EVERSON P. COLE, Coraopolis, and FRANK H. HASLAGE, Pittsburgh, Pa. Filed Apr. 2, 1915. Serial No. 18,740. (Cl. 188—13.)

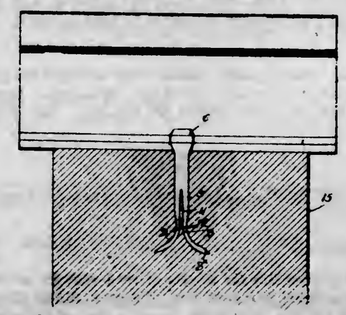


1. In a protecting device for air brake couplings, the combination with a rigid conducting pipe, of an outer coupling pipe and terminal, a support therefor permitting longitudinal movement of the coupling pipe, a hose coupling device on the inner end of the coupling pipe and the outer end of the conducting pipe each provided with a lug, a connecting hose section connected at each end with said coupling device, and a coiled spring surrounding the hose section and having its end portions engaging said lugs and coiled around the pipes beyond said coupling devices.

2. In a protecting device for air brake couplings, the combination with a rigid conducting pipe, of an outer coupling pipe and terminal adapted for longitudinal, lateral and vertical movement, a hose section connecting the rear end of the coupling pipe with the front end of the conducting pipe, a coiled spring adapted to be depressed on backward movement of the coupling terminal and to expand to return said terminal to normal position, and a helical spring depending from the car framing provided with a looped terminal loosely engaging the coupling pipe and adapted to move laterally and vertically with it and to provide for longitudinal movement therein.

1,154,482. SPIKE. JOHN M. BYRD, Hazlehurst, Ga. Filed Feb. 26, 1915. Serial No. 10,781. (Cl. 85—28.)

1. A spike including a pair of anchoring prongs, and a cutting edge formed between said prongs.



2. A spike including a shank having an inwardly directed longitudinal slot, and grooves formed in alinement with said slot extending longitudinally of the shank to

define a cutting edge and terminating at a point intermediate the inner extremities of the prongs and the opposite end of the shank.

3. A spike including a shank having an inwardly directed longitudinal slot defining a pair of anchoring prongs, the inner extremities of said prongs being reduced in thickness and the inner surfaces of the outer ends being beveled downwardly and outwardly, said shank having opposed grooves extending longitudinally thereof in alinement with the slot and defining a cutting edge disposed between the prongs.

4. A spike including a shank having an inwardly directed slot at one end defining a pair of anchoring prongs, a head at the opposite end of said shank, said shank having opposed grooves correspondingly inclined with relation to the opposite faces of the shank and converged to define a cutting edge between the inner ends of the prongs.

5. A spike including a shank having an inwardly directed longitudinal slot defining a pair of anchoring prongs, and having opposed grooves defining a concaved cutting edge disposed between the prongs.

[Claims 6 and 7 not printed in the Gazette.]

1,154,483. DRILL-JAR. ANDREW S. CALHOUN, East Liverpool, Ohio. Filed Oct. 13, 1914. Serial No. 866,451. (Cl. 255—27.)



In a device of the class described, a tubular stock having a plurality of lateral vent slots and with a tool socket at one end and a guide aperture at the other end, a mandrel operating through said guide aperture and having a lateral enlarged tip, said mandrel and its tip being of less length than the interior of the stock, whereby the guide aperture will be automatically cleared of obstructions in event of the breakage of the mandrel, and means for coupling an operative member to said mandrel.

1,154,484. RESILIENT TIRE FOR ROAD-VEHICLES. WILLIAM HAZELWOOD CARMONT, Kingston, England. Filed Feb. 26, 1914. Serial No. 821,214. (Cl. 152—5.)



1. A resilient tire for wheels of road vehicles consisting of a stretchable cover of tire rubber, a filling of softer rubber inside the stretchable cover, a ring of suitable material within the inner edges of the stretchable cover, the softer rubber being positioned between the ring and inner surface of the cover so that when the ring, soft rubber and the stretchable cover are positioned on the rim of a wheel and the cover is tightened at its inner edges to secure it to the rim of the wheel, the side walls of the cover having action on the soft rubber to force it toward the tread surface of the cover and so compress same while the action of tightening the stretchable cover will cause a stretch on the side walls of the cover due to the compression of the soft rubber.

2. A resilient tire for wheels of road vehicles comprising a stretchable cover of tire rubber, a rib of the same material as said cover formed on the tread surface of the latter, said rib being formed with a plurality of alined openings therein at regular intervals, a ring of suitable material within the inner edges of the stretchable cover and adapted to fit over the rim of the wheel, a filling of softer rubber inside the stretchable cover, studs formed by the soft rubber filling and projecting through the openings in the rib of said cover, and clencher members for securing the stretchable cover, soft rubber filling, and ring in position on the rim of the wheel and for tightening the stretchable cover around said soft rubber filling and ring, whereby said filling becomes compressed within the stretchable cover and the studs are forced beyond the tread surface of the rib, said cover being stretchable to constantly exert tension upon the soft rubber.

1,154,485. TRACING-CLOTH. ROBERT CLAY, Cheadle, England. Filed June 6, 1914. Serial No. 843,560. (Cl. 26—2.)

1. The method of producing a tracing cloth with a surface which will take or absorb ink by roughening the surface with a very finely engraved pattern surface substantially as described.

2. The method of producing a tracing cloth with a surface which will readily take or absorb ink consisting in roughening the surface by embossing the surface with a very finely engraved roller substantially as described.

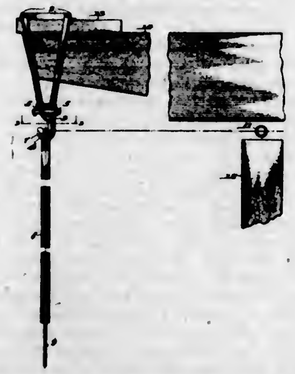
3. The method of producing a tracing cloth which will readily take or absorb ink consisting in roughening the surface by embossing with a roller engraved with very fine lines substantially as described.

4. As a new article of manufacture a tracing cloth with a roughened embossed surface which will readily take or absorb ink substantially as described.

5. As a new article of manufacture a tracing cloth embossed upon one side to roughen the surface to cause it to readily take up or absorb ink substantially as described.

[Claim 6 not printed in the Gazette.]

1,154,486. HANGER FOR POLISHED-ROD ADJUSTERS FOR WELLS. THOMAS COX, Oakland, Cal., assignor to John F. Lucey, Los Angeles, Cal. Filed Jan. 23, 1915. Serial No. 4,011. (Cl. 255—18.)



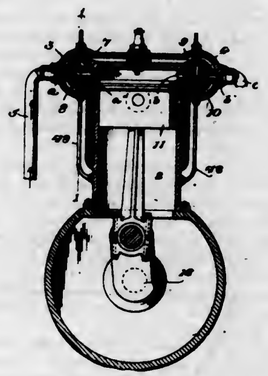
1. The hanger for well polished rod adjuster consisting of an open frame adapted to be slipped over the end of a walking-beam, said frame converging from top to bottom and provided at the bottom with a suspension hook.

2. The hanger for well polished rod adjuster consisting of an open frame adapted to receive the end of a walking-beam and to rest freely upon the beam and provided at its lower end with an open-faced hook having its journal-bearing face substantially coincident with a line passing centrally and vertically through the hanger-frame.

3. The hanger for well polished rod adjuster consisting of an open frame formed of upright side bars converging front and rear, from top to bottom, horizontally disposed bars connecting the ends of the side bars, and a casting connected to the lower end of the frame and provided with a journal-bearing for the suspension of the polished rod adjuster.

4. The hanger for well polished rod adjuster consisting of a member for attachment to a walking beam, and a pendant from said member formed with a journal-bearing face disposed substantially coincident with a line passing centrally and vertically through said member and horizontally through the center-bearing of the beam when the beam is in its horizontal position.

1,154,487. ROTARY-VALVE INTERNAL-COMBUSTION ENGINE. JAMES R. COYLE, Huntsville, Ala., assignor of one-fourth to John J. Friedel, North Chattanooga, Tenn. Filed Jan. 4, 1915. Serial No. 406. (Cl. 123—80.)

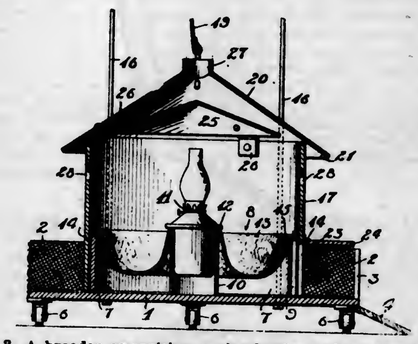


In an internal combustion engine, a cylinder having oppositely disposed offstanding valve casings at its outer end, each valve casing having diametrically opposed ports, a rotary valve mounted in each valve casing and having a diametrical port, a crank shaft, a spur gear secured to the crank shaft, an idle gear wheel in mesh with the spur gear, a second gear wheel connected with the idle gear wheel to rotate therewith, two gear wheels of larger diameter than the second gear wheel and in mesh therewith, sprocket wheels connected with the two gear wheels, other sprocket wheels connected with the stems of the valves and sprocket chains connecting the sprocket wheels, whereby for each four cycles of the crank shaft the valves make a one-fourth revolution.

1,154,488. BROODER. PEARL DANIELL, Lawton, Okla. Filed Mar. 4, 1915. Serial No. 12,042. (Cl. 119—32.)

1. A brooder comprising a base plate, concentric annular walls rising from said plate and spaced apart forming a brooder chamber and a runway, said walls having openings therein for the passage of the chicks, a lamp support mounted centrally within the brooder chamber, a hover blanket connected with said lamp support and engaged with the inner upright wall, said blanket depending into said chamber, and a vertically movable hood mounted over said hover chamber.

2. A brooder comprising a base plate, concentric annular walls rising from said plate and spaced apart forming a brooder chamber and a runway, said walls having openings therein for the passage of the chicks, a lamp support mounted centrally within the brooder chamber, a hover blanket connected with said lamp support and engaged with the inner upright wall, said blanket depending into said chamber, a vertically movable hood mounted over said hover chamber, a hood having a cone shaped top with openings therein, and a cone shaped deflector depending from the top of said hood and of smaller diameter.

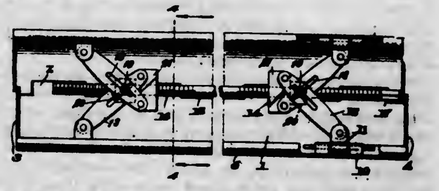


3. A brooder comprising a circular base plate, annular upright walls mounted on said base plate and spaced laterally from each other, said walls having openings therein, a lamp socket disposed centrally on said base plate within the inner wall, a hover blanket engaged at its center with said lamp socket and provided at its outer edge with an annular member adapted to engage the upper edge of said inner wall, said blanket being of greater diameter than the diameter of said inner wall, standards rising from said base plate outside of said inner wall and converging toward their upper ends, a pulley supported by the converging ends of said standards, a hood slidably engaged with said standards, and a flexible element connected with said hood and passing over said pulley.

4. A brooder comprising a base plate mounted on rollers, annular concentric walls rising from said base plate and spaced from each other, said inner wall having an opening therein, a standard rising from said base plate, a hood supported by and mounted for vertical movement on said standard, a cone shaped deflector depending from the top of said hood and heating means mounted within said inner wall.

5. A brooder comprising a base plate, an upright wall rising therefrom and having an opening therein, inverted U-shaped standards having the free ends of their legs secured to said base plate and their cross bars intersecting each other at a point above said wall, a hood slidably mounted on said standards, and means for raising and lowering said hood.

1,154,489. BOOKBINDER. THEODOR DANIELS, Brooklyn, N. Y. Filed Nov. 27, 1914. Serial No. 874,832. (Cl. 129—35.)



A binder comprising sections, levers pivoted to the sections and having slots, a pin received in the slots, a

block carrying the pin, a shaft upon which said block is screw-threaded, and another block slidably mounted on the shaft and to which the inner ends of the levers are pivoted.

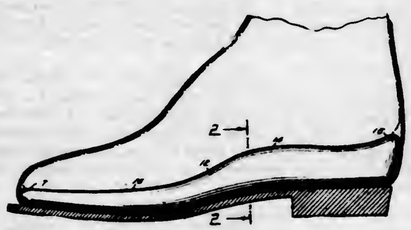
1,154,490. GOLF-CLUB. ROBERT HOBART DAVIS, New York, N. Y. Filed Feb. 5, 1915. Serial No. 6,279. (Cl. 46—4.)



1. A golf club comprising a back, and a resilient face plate united at one end to the said back and having at the free end thereof bearing contact with the back, to accommodate itself to the yielding of the intermediate portion in response to a blow.

2. A golf club having a resilient face plate, and a relatively rigid back plate, the two being united at one end, one of said plates having a protuberant element impinging against the opposed face of the other plate to afford bearing contact therewith adjacent to the free end of the face plate and permitting a movement of the face plate relatively to the back plate at the point of contact.

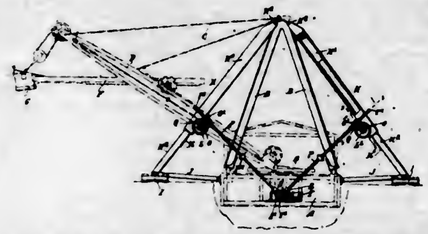
1,154,491. ORTHOPEDIC CUSHION. LOUIS DE OLIVA DEOL, New York, N. Y. Filed May 15, 1915. Serial No. 28,374. (Cl. 36—71.)



1. A device as characterized which may be attached to the shoe if desired, comprising an air-filled cushion having continuous, yielding walls, said cushion having a relatively thin forward portion and a relatively thick rear portion, the side walls of said rear portion being reinforced to restrain the same from collapsing vertically.

2. As an article of manufacture, a device as characterized having a yielding wall forming an air-filled chamber, being arranged to form a relatively thin forward portion and a relatively thick rear portion, said rear portion having at the inner edge of said device a raised portion to fit beneath, for supporting, the arch of the foot, and vertical walls for said rear portion said walls being strengthened to restrain the crushing effect thereon.

1,154,492. POWER-SPUD FOR DREDGES. EARL W. DOTTEN, Aitkin, Minn. Filed Oct. 26, 1911, Serial No. 656,940. Renewed May 5, 1914. Serial No. 836,558. (Cl. 37—18.)



1. A dredging or similar machine provided with spuds on opposite sides of the machine, each spud being made of an upper and lower section slidable one upon the other, the lower section being provided with a rack, a pinion mounted on the upper section and engaging the rack of the lower section, a worm wheel on the shaft of the said pinion, a worm carried by the upper spud section and meshing with the worm wheel, and a driven shaft upon which the worm is mounted to slide and with which said worm turns.

2. A dredging or similar machine provided with spuds on opposite sides of the machine, each spud being made of an upper and a lower section slidable one on the other, a rack on the lower section, a pinion in mesh with the said rack, a pinion shaft carrying the said pinion and journaled on the upper spud section, a worm wheel on the said shaft, a bearing mounted to swing on the said pinion shaft, a driven shaft, and a worm mounted to turn with and to slide on the said driven shaft, the said worm being carried by the said bearing.

3. A dredging or similar machine provided with spuds on opposite sides of the machine, each spud being made of an upper and a lower section telescoping one in the other, a rack on the lower section, a pinion in mesh with the said rack, a pinion shaft carrying the said pinion and journaled on the upper spud section, a worm wheel on the said shaft, a driven shaft, a worm mounted to turn with and to slide on said driven shaft, said worm being mounted to swing, a motor on the machine, and a gearing connecting the motor shaft with the said driven shaft.

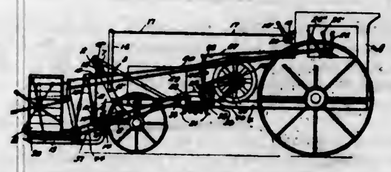
4. In a dredge or similar machine, a hull, shears mounted on the hull, spuds each formed of an upper and a lower section slidable one on the other, the upper section having its upper end pivoted to the upper end of the shears and the lower section having a rack, a pinion mounted on the lower end of the upper section and meshing with the rack of the lower section, a driven shaft, and gearing for operating the pinion from the driven shaft, the member of the gearing carried by the shaft being slidably mounted thereon.

5. In a dredge boat, in combination a deck, an upright frame mounted on said deck, a pair of spuds pivotally connected to said frame, each spud comprising a supporting arm and an extensible arm fitted in telescopic relation to said supporting arm, means to extend and retract said extensible arm mounted at the end of said supporting arm from which said extensible arm extends, power means mounted on said deck, and an extensible shaft having connections with said first mentioned means and said power means, one of said connections comprising a pivoted bearing whereby the extensible arm may be extended or retracted at different angular positions of said spud.

[Claim 6 not printed in the Gazette.]

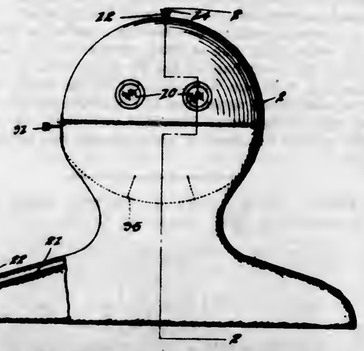
1,154,493. GRAIN-HEADER. ALBERT B. DETGAS, St. Cloud, Minn. Filed Jan. 15, 1915. Serial No. 2,454. (Cl. 56—100.)

In combination with a tractor having a frame and also having a motor provided with a driving shaft projecting from one side of the frame, a header binder mechanism having bracket arms, and also having a frame provided with a pair of shafts, one having hooks and knuckles pivotally secured to said bracket arms, a pair of carrier arms secured to the frame of the tractor and extending forwardly therefrom, bars carried by said carrier arms, a pair of brackets pivotally connected to the lower ends of said bars and provided with bars for one of said shafts of the header binder, a winch mounted in bearings in the upper ends of said bars, cables connected to said winch and other hooks of the other shaft, raising and lowering means for



the header binder, levers connected to said raising and lowering means and pivotally mounted on said bars, means to operate said levers, controlling devices for the header binder, levers mounted on the tractor and connected to said controlling devices, driving mechanism for the header binder, supporting brackets therefor secured on one side of the tractor frame, power transmitting means between said driving mechanism and said motor shaft, a clutch element of said driving mechanism and a lever mounted on the tractor and connections between said lever and said clutch element to actuate the latter.

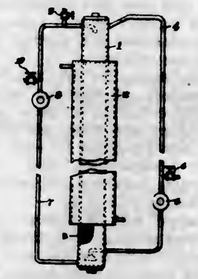
1,154,494. HELMET. CHARLES MATTHIEU EDELHAUSEN, Long Island City, N. Y. Filed July 8, 1914. Serial No. 848,831. (Cl. 128—42.)



1. A device of the class described comprising a helmet, having an upper and lower section, said sections each formed of an inner and outer wall, a plurality of reinforcing plates positioned between the inner and outer walls of the upper section, an inlet valve projecting into the outer wall of said upper section, means carried by the upper section for controlling the passage of air from between the walls thereof to the interior of the helmet, said lower section secured to the upper section and formed of a flexible resilient material adapted to press against the shoulders of the wearer, means for separating the lower section from the upper section, said lower section having its inner and outer walls connected at their lower edges and provided with air escape openings, said inner wall provided with openings, through which air exhaled by the party using the helmet escapes into the space between the walls, a flap valve arranged over said openings preventing air from being inhaled therethrough, and means in the upper section of said helmet for spacing the front of the helmet from the head positioned therein.

2. A device of the class described comprising a helmet including an upper section formed of inner and outer walls, means between said inner and outer walls for reinforcing the same, an inlet valve projecting into the outer wall of said upper section to control the entrance of air through the chamber formed by the inner and outer walls of said section, means mounted in the upper section for controlling the passage of air from between the walls thereof to the interior of the helmet, a lower section secured to said upper section and formed of a flexible resilient material adapted to press against the shoulders of a person wearing said helmet, means for separating said lower section from the upper section, said lower section being formed with inner and outer walls having their lower edges connected and provided with air escape openings, said helmet being provided with openings in its inner walls through which air exhaled by the party using the helmet escapes into the space between the walls, a flap valve arranged over said openings preventing air from being inhaled therethrough, the lower section adapted to engage the back of the head positioned in said helmet, and means for spacing the front of the helmet from the head positioned therein.

1,154,495. PROCESS OF ADDING HYDROGEN TO FATTY ACIDS, FATTY ESTERS, AND OTHER UNSATURATED COMPOUNDS. CARLETON ELLIS, Montclair, N. J. Filed Apr. 5, 1912. Serial No. 688,814. (Cl. 87—12.)



1. The process of treating organic material containing normally liquid or solid unsaturated compounds which comprises thermally decomposing a potential catalyst in contact therewith in the presence of a hydrogen-containing gas, under suitable thermal conditions, whereby hydrogen is added to said unsaturated compounds.

2. The process of treating organic material containing normally liquid or solid unsaturated compounds which comprises thermally decomposing a potential catalyst of a metallo-organic nature—whereby an active metallic body is derived—in contact therewith in the presence of hydrogen, under suitable thermal conditions, whereby hydrogen is added to said unsaturated compounds.

3. The process of treating organic material containing normally liquid or solid unsaturated compounds which comprises thermally decomposing a potential catalyst of a metallo-organic nature—whereby an active metallic body in a state of extreme subdivision is derived—in contact therewith in the presence of a hydrogen-containing gas, under suitable thermal conditions, whereby hydrogen is added to said unsaturated compounds.

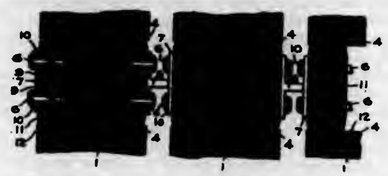
4. The process of treating organic material containing normally liquid or solid unsaturated compounds which comprises thermally decomposing nickel carbonyl—whereby nickel in a state of extreme sub-division is derived—in contact therewith in the presence of a hydrogen-containing gas, under suitable thermal conditions, whereby hydrogen is added to said unsaturated compounds.

5. The process of treating oily and fatty material containing unsaturated compounds which comprises thermally decomposing nickel carbonyl—whereby active nickel material in a state of extreme sub-division is derived—in

contact therewith in the presence of hydrogen, whereby hydrogen is added to said unsaturated compounds.

[Claims 6 to 18 not printed in the Gazette.]

1,154,496. SLOT-CLOSING DEVICE FOR DYNAMO-ELECTRIC MACHINES. WILLIAM L. R. EMMET, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 25, 1911. Serial No. 656,643. (Cl. 171—252.)



1. A slot closing device for dynamo electric machines comprising laminations of magnetic material arranged transversely to the device as a whole, metal rods, insulation surrounding said rods, said laminations being mounted upon and held together by said rods, and means for slightly separating said laminations from one another.

2. A slot closing device for dynamo electric machines comprising laminations of magnetic material arranged transversely to the device as a whole, metal rods, insulation surrounding said rods, said laminations being mounted upon and held together by said rods, and means provided on said laminations for slightly separating said laminations from one another.

3. A slot closing device for dynamo electric machines comprising laminations of magnetic material arranged transversely to the device as a whole, metal rods, and insulation surrounding said rods, said laminations being mounted upon and held together by said rods, and having indentations and protuberances, said protuberances on one lamination fitting into the said indentations on the adjacent lamination.

4. The combination with a dynamo electric machine having coil retaining slots, of slot closing devices formed of laminations of magnetic material, said laminations being curved in the plane of said devices, and means for slightly separating said laminations from one another.

5. The combination with a dynamo electric machine having coil retaining slots, of slot closing devices formed of laminations of magnetic material, said laminations being curved in the plane of said devices, and means provided on said laminations for slightly separating said laminations from one another.

[Claims 6 to 11 not printed in the Gazette.]

1,154,497. WHEEL. JAMES FRANCIS EVANS, Martinsburg, W. Va. Filed Oct. 2, 1914. Serial No. 864,653. (Cl. 152—20.)

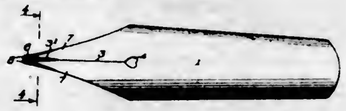


1. In a vehicle wheel, a hollow wheel body having an annular air chamber and annular channels, in combination with a flexible tire having marginal annular beads fitting into said channels, tire holding hoops encircling said beads and lying in said channels, and clamping bands encircling said hoops, each of said bands being divided and provided with interlocking shoulders at its extremities.

2. A vehicle wheel having annular channels, flexible joint forming rings in air tight engagement with the bottoms of said channels in the outer periphery thereof, a flexible tire having marginal annular beads fitting into said channels, and tire holding hoops encircling said beads and lying in said channels.

3. A vehicle wheel provided with annular channels in the outer periphery thereof, in combination with a flexible tire having marginal annular beads fitting into said channels, tire holding hoops encircling said beads and lying in said channels, each of said hoops being divided and having its end portions in overlapping relation to each other, and clamping bands encircling said hoops.

1,154,498. GOLD PEN. WILLIAM I. FERRIS, Westfield, N. J., assignor to L. E. Waterman Company, New York, N. Y., a Corporation of New York. Filed Apr. 8, 1915. Serial No. 19,913. (Cl. 120—109.)



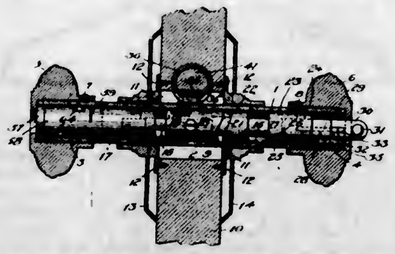
1. A pen having a split tip and formed with writing points on its obverse and reverse sides, the edges of the slit of the tip being beveled toward each other on the reverse side of the pen for insuring a free flow of ink when the reverse point is used.

2. A pen having a split tip provided with a coarse writing point on its under side and a fine writing point on its upper side, the tip being more flexible under pressure when the under point is used, the edges of the slit of the tip on the upper surface being beveled to provide an open passage through which ink flows to the upper tip when the latter is used.

3. A double-pointed pen having a split tip and formed with coarse and fine writing points on the under and upper sides, each half of the tip being formed of iridium extending from one writing point to the other.

4. A double-pointed pen having a split tip and formed with coarse and fine writing points on the under and upper sides, each half of the tip being formed of iridium extending from one writing point to the other, the edges of the slit of the upper side of the pen being beveled from the fine writing point inwardly to provide an open passage for the free flow of ink when the fine writing point is used.

1,154,499. LOCK. JOHN A. FISCHER, Memphis, Tenn. Filed Sept. 2, 1914. Serial No. 859,811. (Cl. 70—91.)



1. A locking mechanism of the class described including in combination a spindle, a locking bolt located above said spindle, means positioned within said spindle and adapted to engage the said locking bolt, said means comprising a shaft, a slidable member mounted upon said shaft and having a cam slot therein, and means secured on said shaft including a stud adapted to work in the said cam slot for moving the slidable member so as to prevent the movement of the locking bolt.

2. A locking mechanism of the class described including in combination a spindle, a locking bolt located above said spindle, the said locking bolt comprising a sleeve having oppositely disposed notches therein, means positioned within said spindle and adapted to engage the said locking bolt, said means comprising a shaft, a slidable member mounted upon said shaft, and having studs projecting therefrom, and means secured to said shaft including a cam for moving the slidable member carrying the studs into engagement with the notches formed in the sleeve so as to prevent the movement of the locking bolt.

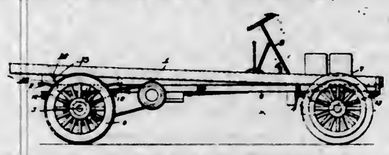
3. A locking mechanism of the class described including in combination, a spindle, a locking bolt connected to said spindle, means positioned within the said spindle for operating the locking bolt, the said means constituting the connection between the latter and the spindle, a key locking mechanism provided in said spindle and connected to the aforesaid means, and a locking means provided in said spindle and adapted to engage the said aforesaid means to prevent the operation of the key locking mechanism when the key is inserted.

4. A locking mechanism of the class described including in combination a spindle, a locking bolt connected to said spindle, means positioned within the said spindle for operating the locking bolt, the said means constituting the connection between the latter and the spindle and comprising a shaft, a movable member positioned on said shaft, a locking means provided in said spindle and extending through the knob thereof adapted to operate the said movable member and lock the locking bolt against movement, and a key locking mechanism connected to the said shaft and adapted to be locked against operation by the aforesaid locking means.

5. A locking mechanism of the class described including in combination a spindle, a locking bolt connected to said spindle, means positioned within the said spindle for operating the locking bolt, the said means constituting the connection between the latter and the spindle, a key locking mechanism provided in said spindle, a key mechanism provided in said spindle and connected to the aforesaid means and to the other locking means provided in said spindle, and adapted to lock the locking bolt against movement and the key mechanism against operation.

[Claims 6 to 8 not printed in the Gazette.]

1,154,500. MOTOR-VEHICLE. PHILIP FORSCHLER, New Orleans, La., assignor to Philip Forschler Wagon and Manufacturing Company, New Orleans, La. Filed Nov. 14, 1914. Serial No. 872,137. (Cl. 21—90.)



1. The combination in a motor vehicle, of front and rear axles, a load-carrying frame, a motor-carrying frame; said frames being movable vertically, each independently of the other, and the motor-carrying frame being arranged within the load-carrying frame and extending rearwardly below the same, spring connections between the load-carrying frame and the axles, other spring connections between the motor-carrying frame and the axles, and rear and front retainers and guides respectively comprising vertically-disposed spaced members connected with one frame and an anti-friction roller movable between said spaced members and carried by the other frame.

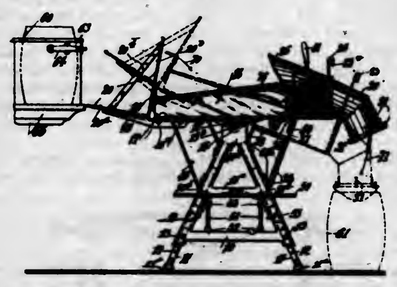
2. The combination in a motor vehicle, of front and rear axles, a load-carrying frame, a motor-carrying frame; said frames being movable vertically, each independently of the other, and the motor-carrying frame being arranged within the load-carrying frame and extending rearwardly below the same, spring connections between the load-carrying frame and the axles, other spring connections between the motor-carrying frame and the axles, and rear and forward devices for guiding and retaining the frames against lateral deflection or play incidental to the upward and downward movements of said frames.

3. The combination in a motor vehicle, of front and rear axles, a load-carrying frame, a motor-carrying frame; said frames being yieldingly supported on the axles and movable independently each of the other, and manually operated means constructed and arranged on one movement thereof to lock the frames together and on another movement to render the frames free to move independently each of the other.

4. The combination in a motor vehicle, of front and rear axles, a load-carrying frame, a motor-carrying frame: said frames being yieldingly supported on the axles and movable independently each of the other, a rack carried by one frame, a spur gear intermeshed with said rack and carried by the other frame and having ratchets, dogs also carried by said frame and arranged to coöperate with the ratchets, and means for operating said dogs.

5. The combination in a motor vehicle, of front and rear axles, a load-carrying frame, a motor-carrying frame; said frames being yieldingly supported on the axles and movable independently each of the other, a rack carried by one frame, a spur gear intermeshed with said rack and carried by the other frame and having ratchets, a lever mounted on said frame and having dogs arranged to coöperate with the ratchets, a rod extending through the lever, and springs interposed between the lever and abutments on the rod.

1,154,501. FOOD-INSPECTING DEVICE. HUGH M. FOSTER, New York, N. Y. Filed Oct. 22, 1914. Serial No. 868,027. (Cl. 130—32.)



1. An inspecting device of the character described, comprising a tilting holder adapted to simultaneously receive and retain a certain quantity of goods in spread-out position for inspection, all of the goods being simultaneously and individually visible, means for supporting the said holder, comprising a horizontal portion adapted to support the holder in inspecting position, and an inclined portion for supporting the holder in inclined or tilted position, and releasable means adapted to retain the same in non-tilted position upon the said horizontal support, the said support adapted to be carried by the weight of the goods therein into tilted position upon the said inclined support upon release of the said releasable means.

2. An inspecting device of the character described, comprising a tilting holder adapted to receive a certain quantity of goods to be inspected and to retain the same in spread-out position for inspection, all the goods being simultaneously and individually visible, and a goods container support, having an unobstructed emptying end, pivoted at the entrance end of the said holder and at a stationary point above the bottom of the said holder, the said support being adapted to be tilted into container-emptying position into the said holder.

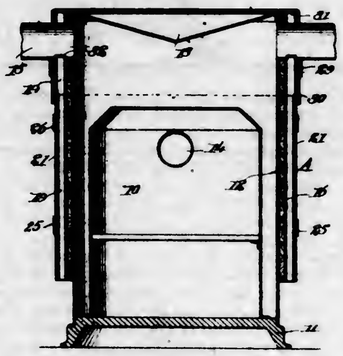
3. An inspecting device of the character described, comprising a tilting holder having a slotted bottom adapted to receive a certain quantity of goods to be inspected and to retain the same in spread-out position for inspection, all the goods being simultaneously and individually visible, a front wall, side-walls converging toward the discharge end of the holder, a goods support having an unobstructed emptying end pivoted to the upper edge of the rear wall of said holder, the said support being adapted to be tilted into container-emptying position into

the said holder, and releasable means retaining the said holder in non-tilted position, the said holder being adapted to be tilted by the weight of the goods therein upon release of the said releasable means.

4. An inspecting device of the character described, comprising a tilting holder having a slotted bottom adapted to receive and retain a certain quantity of goods in spread-out position for inspection, all the goods being simultaneously and individually visible, a front wall, side walls converging toward the discharge end of the holder, a spout at said discharge end of the holder, a gate for said spout, a goods support, having an unobstructed emptying end, pivoted to the upper edge of the said front wall, standards supporting the holder, a horizontal support carried by said standards adapted to support the holder in inspecting or non-tilted position, an inclined support carried by the said standards adapted to support the said holder in tilted position, and releasable means operable from one of said standards, adapted to retain the said holder in non-tilted position, the said holder adapted upon release of the said releasable means to be tilted to rest upon the said inclined support.

5. An inspecting device of the character described, having a slotted bottom adapted to receive and retain a certain quantity of goods in spread-out position for inspection, all the goods being simultaneously and individually visible, a front wall, side walls converging toward the discharge end of the holder, a spout at said discharge end of the holder, a gate for said spout, a goods support, having an unobstructed emptying end, pivoted to the upper edge of said front wall, said holder being overbalanced at its discharge end by the weight of the goods therein, and a leaf spring hand-lever having a toothed projection in the path of the holder, for retaining the holder in non-tilted position, and movable outwardly for releasing the same, the said holder upon release being adapted to be tilted to rest upon the said inclined support.

1,154,502. FURNACE. MAC L. FOX, Columbiaville, Mich. Filed Apr. 15, 1914. Serial No. 832,075. (Cl. 126—114.)

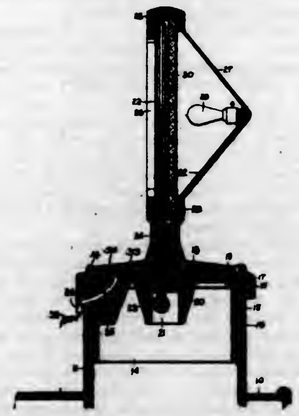


1. A furnace comprising a heater, an inner casing inclosing said heater and forming a hot air chamber, a heat insulating covering placed about said inner casing, an outer casing placed about said heat insulating covering and forming therewith an air space having a closed upper end and an open lower end, and pipes leading from said chamber through said heat insulating covering and outer casing and provided with openings communicating with the space between said insulating covering and outer casing.

2. A furnace comprising a heater, an inner casing inclosing said heater and forming a hot air chamber, hot air pipes leading from said chamber, an asbestos covering inclosing said inner casing, an outer casing inclosing said asbestos covering and forming therewith an air space having a closed upper end and open lower end, said hot air pipes being each provided with an opening communicating with said air space for permitting air in said space to be drawn into said hot air pipes to cause a circulation in the air space.

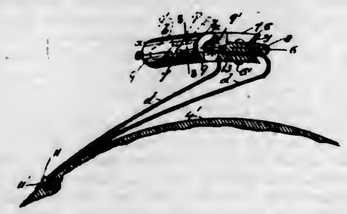
3. A furnace comprising a heater, an inner casing inclosing said heater and forming a hot air chamber, an outer casing placed about said inner casing and forming therewith an air space, having a closed upper end and an open lower end, and hot air pipes leading from said inner casing through said outer casing, each of said pipes being provided with an opening communicating with the space between said inner and outer casings.

1,154,503. RADIATOR THERMOMETER-CAP. DONNELLY P. FRASER, New York, N. Y. Filed Dec. 9, 1914. Serial No. 876,249. (Cl. 73—52.)



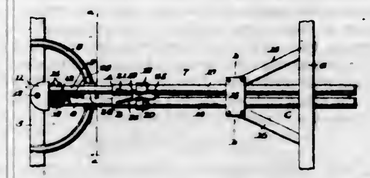
In a thermometer cap for radiators, the combination of relatively fixed and movable sections, the movable section being hinged upon a horizontal pivot adjacent the edge of the fixed section, temperature indicating means carried by the movable section, an electric lamp carried by the movable section to illuminate the temperature indicating means, and coöperating pairs of contacts carried by the fixed and movable sections respectively and insulated therefrom, the contacts carried by the fixed section being curved on arcs of circles concentric with the axis of the hinge aforesaid and projecting into sockets of the movable section whereby the current is completed through the lamp when the cap is closed, substantially as set forth.

1,154,504. VEHICLE WHEEL-TIRE. AVERY W. GANO, Carrollton, Ill. Filed Jan. 20, 1913. Serial No. 748,137. (Cl. 152—8.)



In combination with a wheel, of a tread surrounding the rim of the wheel, said tread comprising a plurality of similar links, each of said links including an arched member comprising a central web and sides formed with the web, the said sides having one of their ends projecting beyond the web and having the inner faces thereof formed with angular slots that open to the outer face of said link, the web extending beyond the opposite ends of the sides and having its end provided with lateral trunnions to be received within the slots in the projecting sides of the co-acting ends of the said links, each of said links having a longitudinally disposed pocket arranged below its trunnion, a spring member received within the pocket and secured to the link, and the said spring having its free end engaging with the rim of the wheel.

1,154,505. WAGON-GEAR. WALDO P. GENTLE, Hepler, Kans. Filed Mar. 12, 1915. Serial No. 13,954. (Cl. 21—39.)



1. In a wagon gear, front and rear axles, a reach bar pivotally connected with the front axle and supported in fixed relation to the rear axle, said bar comprising telescopic sections, a clamp embracing said bar, and a spring pressed pivoted locking element supported by said clamp for adjustment within registering apertures in said sections to retain the latter in adjusted position.

2. In a wagon gear, front and rear axles, a reach bar pivotally connected with the front axle and supported in fixed relation to the rear axle, said bar comprising telescopic sections, a clamp embracing said bar and adjustable longitudinally thereon, and a spring pressed pivoted locking element supported by said clamp for engagement within registering apertures in said sections to retain the latter in adjusted position.

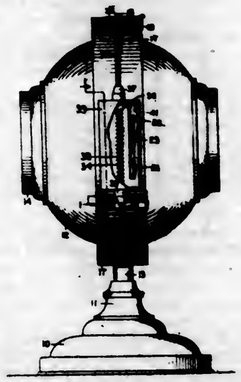
3. In a wagon gear, front and rear axles, a reach bar pivotally connected with the front axle and supported in fixed relation to the rear axle, and comprising spaced parallel pipes, said pipes including telescopic sections, a duplex ring-like clamp embracing said pipes, a spring pressed locking element carried thereby, and said element having branches terminating in hooks for engagement with in registering apertures in said sections for locking the latter in adjusted positions.

4. In a wagon gear, front and rear axles, a fifth wheel, a reach bar connecting said axles, a member pivotally connecting the forward end of said bar to the front axle, a rod adjustably connected with said member and extending rearwardly therefrom in parallelism with said bar, and a wear plate of corresponding configuration to said bar mounted on the rod and embracing said bar between the latter and said fifth wheel.

5. In a wagon gear, front and rear axles, a fifth wheel, a reach bar connecting said axles and comprising spaced parallel pipes, a member pivotally connecting the forward ends of said pipes with the front axle, a rod adjustably associated with said member and disposed between said pipes in parallelism therewith, and a duplex semicylindrical member mounted on said rod, embracing said pipes and disposed therebetween and said fifth wheel for the purpose specified.

1,154,506. SANITARY SUGAR-CONTAINER. WILLIAM GOLDFARB, New York, N. Y. Filed Mar. 11, 1915. Serial No. 13,682. (Cl. 211—8.)

1. In a sugar container, the combination of a hollow casing having a removable cap for introducing sugar, a frusto-conical drum journaled for rotation within the casing, a series of spaced blades carried by the periphery of said drum, means to rotate the drum step-by-step to an extent equal to the spaces between the blades, said casing having an opening at one side along which the blades pass, and a shutter normally closing said opening and movable away from the same by the operation of the drum rotating means.



2. In a sugar container, the combination with a hollow casing and a drum rotatable therein, said drum carrying a series of spaced blades and the casing having an opening in one side along which said blades pass, of shutter mechanism including a ring surrounding the drum and a shutter carried by the ring and normally closing said opening, and means to give the ring a partial rotation at each forward step-by-step movement of the drum whereby the shutter is removed from in front of the opening.

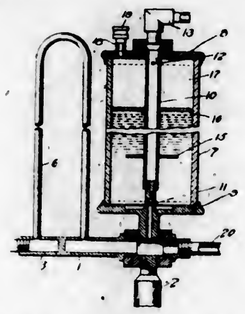
3. In a sugar container, the combination with a casing comprising front and rear portions connected together forming a channel having a cylindrical wall, said wall having a discharge opening at one side, and a drum journaled within the casing and having a flange extending into the channel and a series of blades connected to the flange and movable therewith along said cylindrical wall in front of the opening, of means to rotate the drum and blades step-by-step causing a single blade to pass the opening at each step, shutter mechanism normally closing the opening, and means to cause the shutter mechanism to clear the opening at each step-by-step movement of the drum.

4. In a sugar container, the combination with a container comprising front and rear portions connected together forming a cylindrical channel portion and a drum journaled for rotation around the axis of the casing, said drum including a series of blades movable in the channel and sweeping along the inner cylindrical surface thereof, said casing furthermore including a discharge opening on one side over which said blades move, of shutter mechanism comprising a ring surrounding the drum, a shutter on one side of the ring and a lug carried by the other side of the ring, said lug having a hole extending radially therethrough, and an actuator serving to cause step-by-step rotation of the drum in a single direction and simultaneous and oscillatory movement of the shutter mechanism.

5. In a sugar container, the combination of a casing having a discharge opening in one side and a vertical slot in the opposite side, a drum journaled for rotation within the casing on an axis transverse to the diameter extending from the opening to the slot, an actuator including a finger extending inwardly through said slot and serving to cause step-by-step rotation of the drum in a single direction, said drum having a series of spaced blades movable in front of said opening in succession, and shutter mechanism including a ring surrounding the drum and a shutter secured to one side of the ring and normally closing said opening and having a lug secured to the other side of the ring through which said finger projects whereby at each reciprocation of the actuator the ring will be given an oscillation around the axis of the drum.

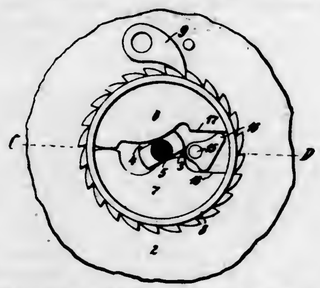
[Claim 6 not printed in the Gazette.]

1,154,507. FILTER. WILLIAM E. GORTON, St. Joseph, Mo., assignor of one-half to William F. Hoffman, St. Joseph, Mo. Filed Apr. 10, 1914. Serial No. 831,031. (Cl. 83—47.)



In a device of the character described, in combination, a stand, a cylindrical shell, a cover closing one end of said shell, a pipe depending from the bottom of said cover and projecting centrally and vertically into said shell, said pipe terminating short of the opposite end of said cylinder, a bottom cover closing the opposite end of said shell, a cylindrical stub formed upon said bottom cover being provided with means for making connection with said pipe whereby to clamp said covers tight, an integral hollow piece formed upon said bottom cover, means for conducting air into said hollow piece, said stub having a channel communicating with said hollow piece and having air-ejecting ports, said pipe having ports at its upper end, and a series of horizontal baffles of varying diameters formed upon said pipe.

1,154,508. BRAKE FOR USE ON HOISTING DEVICES. HERMANN GRAUMÜLLER, Berlin, Germany. Filed Mar. 27, 1914. Serial No. 827,709. (Cl. 57—116.)



1. A brake for hoists, comprising a drum rotatable in one direction, a pair of blocks within the drum and arranged to be moved into frictional engagement therewith, a shaft passing through the drum, a cam on the shaft centrally engaging the inner surfaces of the blocks, a driving member, a projection on the latter extending within the drum between the blocks and coöperating with the cam to move said blocks into frictional contact with the inside of the drum.

2. A brake for hoists comprising a drum rotatable in one direction, a pair of blocks within the drum having contact at one end with each other and with the inner surface of the drum, a shaft passing through the latter, a cam on the shaft having contact with the blocks, a driving member, and a projection on the latter extending into the drum and into contact with the other ends of the blocks.

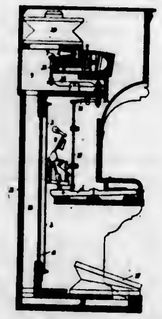
3. A brake for hoists, comprising a drum rotatable in one direction, a pair of blocks arranged within the drum and in frictional contact therewith, said blocks having curved end faces and inner curved surfaces between said ends, a shaft passing through the drum, a cam on the shaft in contact with said curved surfaces of the blocks, a driving member, and a projection on the latter extending into the drum and in contact with said end faces.

4. A brake for hoists, comprising a drum rotatable in one direction, a pair of blocks arranged within the drum in frictional contact therewith and in contact with each other at one end, a shaft passing axially through the drum, a cam on the shaft centrally engaging said blocks, a driving member, a pivoted cam on said member extending within the drum in engagement with the blocks at one end and coöperating with the cam to push the blocks into frictional contact with the inside of the drum.

5. A brake for hoists, comprising a drum rotatable in one direction, a pair of blocks within the drum having contact with each other at one end and with the inner surface of the drum, a shaft passing through the drum, a cam on the shaft in contact with the blocks, a driving member alongside the drum, and a pivoted cam on the said member extending into the drum and into contact with the other ends of the blocks.

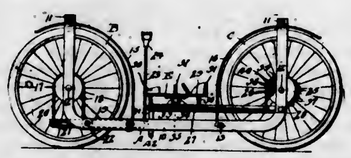
[Claim 6 not printed in the Gazette.]

1,154,509. REED-ORGAN COMBINED WITH PIANOFORTE. JAMES BAILLIE HAMILTON, London, England. Filed May 25, 1915. Serial No. 30,323. (Cl. 84—55.)



A reed organ combined with a pianoforte having a wind-chest, one wall, or part of one wall, of which is constituted by the sound-board, or belly, of the pianoforte; substantially for the purpose hereinbefore explained.

1,154,510. SKATE. WILLIAM B. HARRELL, Baldwin, Fla. Filed Dec. 15, 1914. Serial No. 877,384. (Cl. 46—51.)

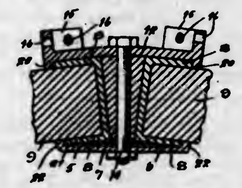


1. A skate comprising a rigid frame, front and rear wheels journaled therein, a drum loosely supported upon the journal of the rear wheel, a ratchet wheel fixed to the rear wheel internally of the drum, a pivoted pawl arranged interiorly of the drum and engageable with the ratchet wheel, a yoke pivoted to the frame and extended forwardly to a point between the front and rear wheels, a flexible band connected to the yoke and drum and trained about a portion of the periphery of the latter, means connected with the frame and the drum for tensioning the latter, and a foot stirrup pivotally supported upon the yoke.

2. A skate comprising a rigid frame, front and rear wheels journaled therein, a drum loosely supported upon the journal of the rear wheel, a ratchet wheel fixed to the rear wheel internally of the drum, a pivoted pawl arranged interiorly of the drum and engageable with the ratchet wheel, a yoke pivoted to the frame and extended forwardly to a point between the front and rear wheels, a flexible band connected to the yoke and drum and trained about a portion of the periphery of the latter, means connected with the frame and the drum for tensioning the latter, a foot stirrup pivotally supported upon the yoke, and means for braking the front wheel and controlled by the user of the skate.

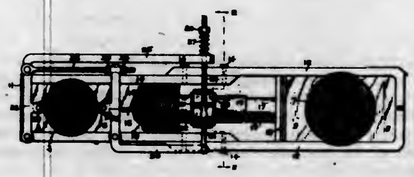
3. A skate comprising a rigid frame, front and rear wheels journaled therein, a drum loosely supported upon the journal of the rear wheel, a ratchet wheel fixed to the rear wheel internally of the drum, a pivoted pawl arranged interiorly of the drum and engageable with the ratchet wheel, a yoke pivoted to the frame and extended forwardly to a point between the front and rear wheels, a flexible band connected to the yoke and drum and trained about a portion of the periphery of the latter, means connected with the frame and the drum for tensioning the latter, a foot stirrup pivotally supported upon the yoke, means for braking the front wheel and controlled by the user of the skate, and means for cushioning the toe and heel portions of the stirrup.

1,154,511. SILO. OLE HARSTAD, Montevideo, Minn., assignor to John O'Connor, Montevideo, Minn. Filed July 10, 1914. Serial No. 850,203. (Cl. 217—4.)



In a silo construction, a foundation, a plurality of angled braces secured to said foundation, channel irons extending upward from the foundation and spaced from each other forming guideways, wedge shaped strips between the facing sides of the channel irons and secured to said angled braces, horisontally extending boards having their ends seated in the guideways of the channel irons and means for securing the channel irons to the angled braces.

1,154,512. BEARING-ADJUSTER. JOHN T. HAY, Union City, Ohio. Filed June 8, 1914. Serial No. 843,731. (Cl. 74—17.)



1. The combination with a rotary shaft having cylindrical sides and also having a cam portion, of a pair of bearing-brasses disposed on opposite sides of the cylindrical portion of the shaft, means to move the bearing-brasses toward the shaft, and means contacting with the cam portion of the shaft for actuating said bearing-brass moving means.

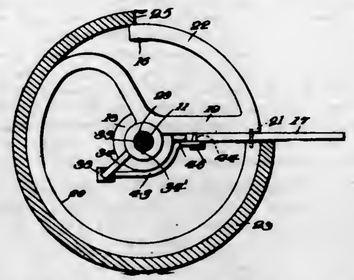
2. In a journal for rotary shafts, a pair of bearing-brasses disposed upon opposite sides of the shaft, screw means to move the bearing-brasses toward the shaft, a wheel through which said screw means passes, pawls making driving contact with said wheel, and means contacting with the shaft for actuating the pawls.

3. In a journal for rotary shafts, a pair of bearing-brasses disposed on opposite sides of the shaft, screw means at right angles to the shaft to move the bearing-brasses toward the shaft, a wheel through which said screw means passes, pawls making driving contact with said wheel, and means comprising a lever contacting with the shaft and connected with the pawls to actuate the pawls.

4. The combination in a pitman with the cross-head and crank-pins, of a pair of bearing-brasses for each pin disposed on opposite sides of the pin in each case, screw means extending longitudinally of the pitman to move both inner bearing-brasses toward their respective pins, a wheel through which said screw passes, pawls making holding contact with said wheel, and means contacting with one of the pins for actuating the pawls.

5. The combination in a pitman with the cross-head and crank-pins, of a pair of bearing-brasses for each pin disposed on opposite sides of said pins, screw means extending longitudinally of the pitman to move both inner bearing-brasses toward their respective pins, a wheel through which said screw passes, pawls making holding contact with said wheel, and means comprising a lever contacting with one of said pins and connected with the pawls to actuate said pawls.

1,154,513. SAFETY DEVICE FOR SWITCH-STANDS. CHARLES W. HOLDERBAUM and HARRY KRAFT, Warren, Ark. Filed Jan. 7, 1913. Serial No. 740,679. (Cl. 246—41.)



1. A safety switch stand including a fixed table provided with spaced notches, a casing over the table having a slot between said notches, a shaft extending through the table and operatively connected to the switch, a collar keyed upon the shaft and provided with a radial arm and an arcuate arm adapted to close the casing slot, the free ends of which are spaced apart, an operating lever pivoted intermediate its ends between the free ends of said arms and movable to extend in horizontal position between the arms to pass along the slot of the casing or in vertical position to seat in one of the notches of the table, a sleeve rotatable about the shaft, a signal, and actuating means co-acting between the lever and signal.

2. A safety switch stand including a switch operating shaft, a housing surrounding a portion of the shaft, a collar carried by the shaft and resting upon the bottom of the housing, a radially extending arm formed integrally with the collar and having an arcuate extension bearing against the inner peripheral face of the housing, an arcuate arm also formed integrally with the collar and bearing throughout the greater portion of its length against the inner peripheral face of the housing, the free end of said arcuate arm terminating in slightly spaced relation to that portion of the radial arm adjacent the arcuate extension, a switch operating lever pivotally connected intermediate its ends to the free end of the radial arm, the housing having its peripheral wall provided with a circumferentially extending slot and having its base provided with radial slots to permit swinging of the lever

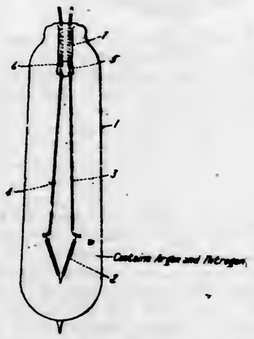
horizontally and at predetermined points vertically, the arcuate arm of the collar and the arcuate portion of the radial arm at all times forming a closure for the circumferential slot of the housing during horizontal swinging movement of the lever.

3. A switch stand including a circular table, a switch operating shaft extending concentrically through the table, a collar carried by said shaft and having arcuate arms forming the marginal wall for the table, said arms, at one point, being spaced apart, a lever mounted between the spaced apart portions of said arms and movable horizontally to turn the shaft, a housing surrounding the table and peripherally slotted to permit horizontal movement of the lever, the arcuate arms forming closures for the slot in all positions of the lever, a signal, and actuating means coöperating between the lever and signal.

4. In a safety switch stand, a member having stops spaced apart and notches spaced apart, a switch rod rotatively supported, a signal support rotative independently of said switch rod, an operating lever movable relative to said switch rod and adapted to alternately engage in said notches, and connecting means including a link between said lever and signal support, said link being deflected laterally to cause it to be limited in its movement in one direction by the switch rod and detachably engaged with the operating lever and adapted to be seated between said spaced stops when in one position to lock the signal support from movement.

5. In a safety switch stand, a member having stops spaced apart and notches spaced apart, a switch rod rotatively supported and carrying a collar, a signal support rotative independently of said switch rod, an arm carried by said signal support, an operating lever movable relative to said switch rod and adapted to alternately engage in said notches, and connecting means including a link between said lever and the arm of said signal support, said link being deflected intermediate its ends to cause it to engage said collar to limit its movement in one direction and detachably engaged with the operating lever and adapted to be seated between said spaced stops, whereby the signal support is locked from movement in either direction.

1,154,514. INCANDESCENT LAMP. RICHARD JACOBY, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed June 27, 1914. Serial No. 847,715. (Cl. 176—16.)



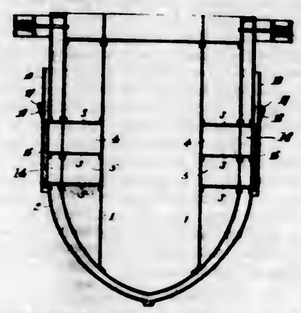
1. The combination of an envelop, a glower of refractory metal mounted therein, means for supplying energy thereto, and a mixture of argon and nitrogen surrounding said glower.

2. The combination of an envelop, a tungsten filament mounted therein, means for supplying energy thereto, and gaseous mixture consisting largely of argon and a small amount of nitrogen surrounding said filament.

3. An incandescent lamp, comprising a globe, a tungsten filament located therein, current conductors for said filament, and a gas filling at relatively considerable pressure for said globe, comprising nitrogen and argon.

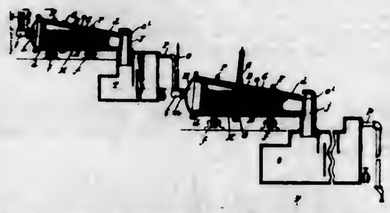
4. An incandescent lamp comprising a transparent envelop, a gaseous filling comprising argon and about 0.1% to 10% of nitrogen in said envelop, and a tungsten glower therein proportioned in size to operate at an efficiency higher than the efficiency said glower would have in a vacuum if operated so as to have the same useful life.

1,154,515. SHIP'S BALLASTING APPARATUS. ABRAHAM KAPLAN, Brooklyn, N. Y. Filed Apr. 23, 1915. Serial No. 23,448. (Cl. 114—125.)



An improved hull for boats comprising an inner wall, an outer wall, partitions subdividing the space between the walls into upper and lower compartments, doors for establishing communication between the upper compartments and the atmosphere, means for simultaneously operating said doors, said means comprising a longitudinally extending bar having a link connection with each of said doors, and means for moving said bar vertically.

1,154,516. PROCESS OF REFINING HYDROCARBONS. EDWARD D. KENDALL, Elizabeth, N. J., assignor of one-third to Louis T. Haggin, Closter, N. J., Margaret V. Haggin and Allan McCulloh, New York, N. Y., and H. Esk. Moller, Montclair, N. J., executors of James B. Haggin, deceased, and one-third to estate of William A. Megrath, Brooklyn, N. Y. Filed Apr. 29, 1912. Serial No. 694,018. (Cl. 196—26.)



1. The process of refining liquid hydrocarbons which consists in bringing together regulated quantities of the hydrocarbon and sulfuric acid, smearing the mixture over regulated and restricted surfaces, bringing said smeared surfaces into forcible contact with each other, thereby causing the acid and distillate to thoroughly commingle together.

2. The process of refining liquid hydrocarbons which consists in bringing together regulated quantities of the hydrocarbon and sulfuric acid, causing regulated and restricted amounts of the said mixture to be forcibly thrown together to thoroughly commingle the ingredients of the mixture.

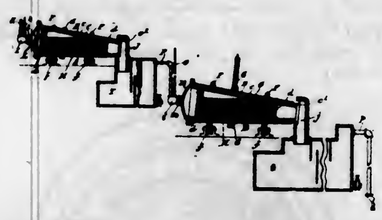
3. The process of refining liquid hydrocarbons which consists in causing regulated quantities of hydrocarbon and sulfuric acid to be brought together and to be spread upon regulated and restricted surfaces, said surfaces being forcibly brought together, thereby commingling the acid and distillate, separating the hydrocarbon from the acid, passing the hydrocarbon mixed with water downward then upward to thoroughly commingle the same, separating the water from the hydrocarbon, feeding the hydrocarbon so separated with a solution of alkali by causing the mixture of hydrocarbon and alkali to flow downward and then upward in contact with each other.

4. The process of refining liquid hydrocarbons which consists in bringing together regulated quantities of the hydrocarbon and sulfuric acid, spreading the mixture upon regulated and restricted surfaces, rubbing said surfaces together, partially separating the sulfuric acid from the hydrocarbon, collecting the distillate so treated and mixing the same with a second supply of sulfuric acid, spreading said mixture upon regulated areas and bringing said surfaces in contact with one another to commingle the same and then separating the sulfuric acid from the hydrocarbon.

5. The process of refining liquid hydrocarbons which consists in bringing together regulated quantities of the hydrocarbon and sulfuric acid, spreading the mixture upon regulated and restricted surfaces, causing the said surfaces to forcibly contact with one another, to partially commingle the acid with the hydrocarbon, partially separating the sulfuric acid from the hydrocarbon, bringing together the partially treated distillate with a second supply of sulfuric acid, spreading the said mixture upon regulated and restricted surfaces, forcibly bringing said surfaces into contact, separating the sulfuric acid from the distillate, passing water into the distillate, causing the mixture to move downward and then upward to thoroughly commingle the same and then separating the water from the hydrocarbon.

[Claim 6 not printed in the Gazette.]

1,154,517. APPARATUS FOR REFINING HYDROCARBONS. EDWARD D. KENDALL, Elizabeth, N. J., assignor of one-third to Louis T. Haggin, Closter, N. J., Margaret V. Haggin and Allan McCulloh, New York, N. Y., and H. Esk. Moller, Montclair, N. J., executors of James B. Haggin, deceased, and one-third to estate of William A. Megrath, Brooklyn, N. Y. Filed Apr. 29, 1912. Serial No. 694,019. (Cl. 196—26.)



1. In an apparatus for refining hydrocarbons, a rotating vessel containing movable balls, a perforated end piece at each end of the vessel, connections at one end of the vessel for supplying respectively hydrocarbon and sulfuric acid, a hooded funnel extending over the other end of the vessel communicating with a settling tank.

2. In an apparatus for refining hydrocarbons, a conical rotating vessel arranged with its lower side horizontal, a perforated disk secured within each end of the vessel, movable balls between said end pieces, a cover for one end of said vessel and outside of the perforated end piece, a pipe connected to said cover, an oil supply pipe and a sulfuric acid supply pipe connected to the first mentioned pipe, a hooded funnel extending over the opposite end of said vessel, communicating with a settling tank.

3. In an apparatus for refining hydrocarbons, conical rotating vessels arranged in series each having its lower side horizontal, a perforated plate within each end of each of said vessels, movable balls in each vessel between said plates, a cover closing one end of each of said vessels, supply connections secured to each cover for delivering material to be refined and supplying sulfuric acid to each vessel, hoods extending over the other ends of each vessel, communicating respectively with settling tanks.

4. In an apparatus for refining hydrocarbons, a conical rotating vessel arranged with its lower side horizontal, a perforated plate within each end of said vessel, movable balls in the vessel between said plates, a cover closing one end of said vessel, connections secured to said cover for supplying hydrocarbon and sulfuric acid to the vessel, a hooded funnel extending over the other end of the vessel in communication with a settling tank, a closed vessel in communication with the settling tank having a partition dividing said vessel into two compartments, perforated diaphragms in each compartment, an additional supply pipe connected to said vessel and an outlet pipe connected to the same.

1,154,518. TOP FOR RECEPTACLES. WILLIAM G. KENDALL, Newark, N. J. Filed June 6, 1914. Serial No. 843,524. (Cl. 221—62.)

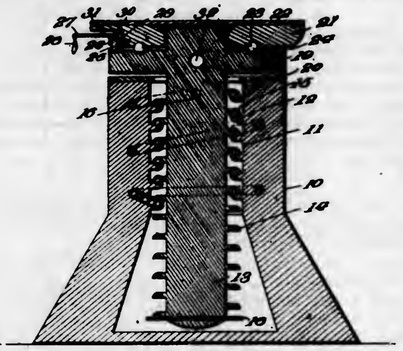


1. A sifter cap for receptacles including a cap proper formed with a central, undercut recess providing an annular chamber and with perforations in the space encircled by the chamber, a pin extending inwardly across the chamber, a closure plate secured for turning movement within the recess and provided with perforations movable into alinement with the perforations of the cap, an upstanding annular flange formed upon said plate and engaging against the free edge of the flange of the cap, an operating arm extending radially from the plate through a slot formed in the cap in spaced relation to the pin, and a helical spring seated between the flanges of the cap and plate and engaging by one end against the arm and by the other against the pin.

2. A sifter cap for receptacles including a body adapted for attachment to the neck of a receptacle and provided in its outer face with a circular recess having a perforated bottom wall, the peripheral wall of said recess being cut-away to provide an annular undercut chamber surrounding the recess, and a closure member including a circular body portion seating upon the bottom wall of the recess and having an upstanding peripheral flange forming a wall for the chamber, said closure member being provided with perforations movable into alinement with those of the bottom wall of the recess, means for rotating the closure member, and means within the chamber for normally holding the closure member in closed position.

3. A sifter cap for receptacles including a cap proper having an upstanding peripheral flange provided at its free edge with an inturned annular shoulder, the cap within the line of the shoulder being perforated, and the cap proper, together with its flange and shoulder, forming an inwardly open annular chamber, a closure member seated within the flange and upon the cap proper with perforations movable into alinement with those of the cap proper, said closure member being provided with an upstanding peripheral flange extending at its upper end against the annular shoulder to close the chamber, and means located within the chamber for normally holding the closure member with its perforations out of alinement with the perforations of the cap proper.

1,154,519. JACK-SCREW. DAVID S. LANSDOWNE, Mulvane, Kans. Filed Oct. 8, 1914. Serial No. 865,743. (Cl. 254—98.)

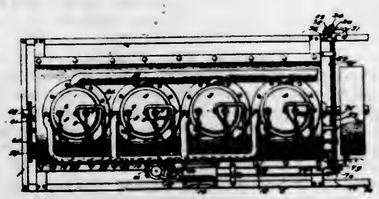


1. A device of the character described including a base, a screw operatively connected with the base and provided with a collar having a racked formed therein, a head mounted to turn upon the screw, said head being cut away to receive a pawl, and a pawl mounted within said cut away portion of the head and disposed to normally engage said rack for connecting the head with said collar, the said pawl being provided with an arm extending laterally of the head upon one side thereof.

2. A device of the character described including a base, a screw operatively connected therewith and provided with a collar having a rack formed therein, a head mounted to turn upon the screw, said head being recessed upon its inner face to receive a pawl, a pawl detachably mounted within said recess, a spring bearing between the head and the pawl and disposed to normally maintain the pawl in engagement with said rack for operatively connecting the head with said collar, and an operating arm formed on said pawl and arranged to extend laterally of the head upon one side thereof.

3. A device of the character described including a base, a plunger adjustable upon the base and provided with a collar, a head confronting the collar and having an opening formed therein freely receiving the adjacent terminal of the plunger, anti-friction devices interposed between the collar and the head, a wear plate connected to one side of the head and closing the opening formed therein at its outer end, the anti-friction devices supporting the head with said plate disposed in spaced relation to the adjacent terminal of the plunger, and a pawl mounted upon the head and adapted to engage the collar for holding the head stationary relative to the collar, the said pawl having an operating arm formed thereon projecting upon one side of the head.

1,154,520. AUTOMOBILE-STARTER. FRED N. LIVINGSTON, Seattle, Wash. Filed June 8, 1914. Serial No 843,806. (Cl. 123—180.)



1. In starting apparatus for explosive motors, the combination with a motor, of means for introducing a starting charge thereto, an auxiliary valve for controlling introduction of the starting charge to the motor, a cam device for actuating said auxiliary valve, means for actuating said cam device, and means for controlling the operation of said actuating means in accordance with the positions of the inlet and exhaust valves of the motor.

2. In starting apparatus for explosive motors, the combination with a motor, of means for introducing a starting charge thereto, an auxiliary valve for controlling introduction of the starting charge to the motor, a cam device for actuating said auxiliary valve, means for actuating said cam device, and means associated with the inlet and exhaust valves of the motor and coöperating with said cam device, whereby to control the operation of the cam device in accordance with the positions of the inlet and exhaust valves.

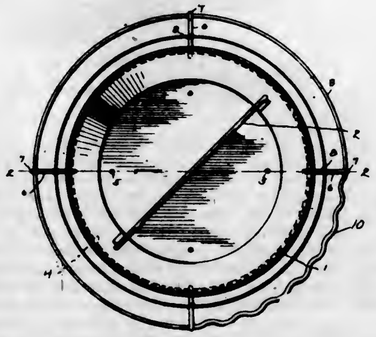
3. In starting apparatus for explosive motors, the combination with a motor, of means for introducing a starting charge thereto, an auxiliary valve for controlling introduction of the starting charge to the motor, a cam sleeve for actuating said auxiliary valve, an operating rod with which said cam sleeve is associated, and a yieldable connection between said cam sleeve and said rod.

4. In starting apparatus for explosive motors, the combination with a motor, of means for introducing a starting charge thereto, an auxiliary valve for controlling introduction of said starting charge to the motor, a cam sleeve for actuating said auxiliary valve, an operating rod upon which said cam sleeve is mounted, a yieldable connection between said cam sleeve and said rod, and locking devices associated with the inlet and exhaust valves of the motor and coöperating with said cam sleeve for controlling operation of the latter in accordance with the positions of the inlet and exhaust valves.

5. In starting apparatus for explosive motors, the combination with a motor, of a pump for introducing a starting charge thereto, a hand-operated device for actuating said pump, means for controlling introduction of the starting charge to the motor, means controlled by said hand-operated device for actuating said controlling means in synchronism with the delivery of the starting charge from the pump, and means also controlled by said hand-operated device for firing said charge.

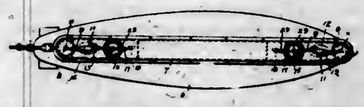
[Claims 6 to 14 not printed in the Gazette.]

1,154,521. DISH-PAN. ANNIE B. LLOYD, Keithsburg, Ill. Filed Feb. 19, 1915. Serial No. 9,470. (Cl. 141—11.)



A dish pan comprising a shallow receptacle, a wash pan secured to the receptacle and having its side wall spaced from and extending above the side wall of the receptacle, arms secured to the side wall of the receptacle and extending therefrom to a point above the upper edge of the wash pan, an annular rod secured to the arms at a point between the upper edge of the receptacle and the upper edge of the wash pan, and another annular rod secured to the arms at a point above the upper edge of the wash pan, a portion of said other rod being bent to provide a plurality of relatively spaced recesses.

1,154,522. MEANS FOR LOCATING SUBMARINE BOATS. HENRY LOTZ, Lawrence, Mass. Filed May 29, 1915. Serial No. 31,273. (Cl. 114—16.5.)



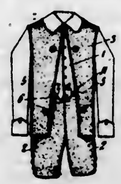
1. In a buoy, a body, an electric lamp arranged in the upper portion of said body, a buoy line attached to the lower end of said body, a source of electro-motive force pivotally supported in said body, a normally open electrical circuit connecting said source of electro-motive force with said lamp, and means operable by said buoy line to close said circuit.

2. In a buoy, a body, a source of electro-motive force supported in said body, an electric lamp in the upper portion of said body, a buoy line secured to the lower end of said buoy, a normally open electrical circuit connecting said source of electro-motive force with said lamp, means for closing said electrical circuit to light said lamp, and a flexible member connecting said circuit closing means and said buoy line.

3. In a buoy, a body, a shaft rotatably mounted in said body, a source of electro-motive force supported upon said shaft, a lamp arranged in the upper portion of said buoy, a buoy line attached to said buoy, a normally open electrical circuit connecting said source of electro-motive force with said lamp, a pair of spaced contact plates arranged in said circuit, a frusto-conical circuit closing member adapted to engage said contact plates to close said circuit, and a flexible element connecting said circuit closing member with said buoy line.

4. In a buoy, a body, an electric lamp arranged in the upper portion of said body, a buoy line attached to the lower end of said body, a source of electro-motive force arranged in said body, a normally open electrical circuit connecting said source of electro-motive force with said lamp, and means operable by said buoy line to close said circuit.

1,154,523. CHILD'S GARMENT. JULIUS L. LUBELL, New York, N. Y. Filed Mar. 4, 1915. Serial No. 12,018. (Cl. 2—97.)

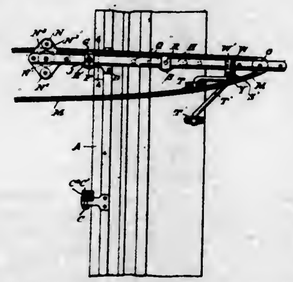


1. In a garment of the character described, an upper body portion having a waist-band, a lower garment adapted to be fastened to the said waist-band, and a depending forward portion provided on the said upper garment, extending partially across the front of said garment, of a configuration adapted to represent the lower edge of a vest, the said depending vest-shaped portion adapted to be placed out of view within the said lower garment, or in view outside of the said lower garment.

2. In a garment of the character described, an upper body portion having a waist-band provided with a cut-out portion extending partially across the front of the said garment, a depending portion within the said cut-out portion of a configuration adapted to represent the lower edge of a vest, a lower body garment, and fastening means extending around the said waist-band adapted to secure the said lower body garment to the said upper body garment, the said depending vest-shaped portion adapted to be placed out of view within the said lower garment, or in view outside of the said lower garment.

3. In a garment of the character described, an upper body garment having sleeves and a collar, a waist-band on the upper garment, a lower body garment adapted to be fastened to the waist-band of said upper body garment, a depending forward portion provided on the said upper body garment of a configuration to represent the lower edge of a vest, sleeves on the said upper body garment, a collar on the said upper body garment, and an outer garment having a plain neck-band, and provided with armholes adapted to fit over the said body garment, the sleeves of the said upper body garment adapted to extend through the armholes of the said outer garment, the collar of the said upper body garment adapted to lie outside the plain neck-band of the said outer garment, and the said depending vest-shaped portion of the upper body garment adapted to be placed out of view within the said lower body garment and in view outside of the said lower body garment.

1,154,524. CLOTHES-LINE APPARATUS. JAMES T. MCDONOUGH, New York, N. Y. Filed Nov. 21, 1914. Serial No. 873,344. (Cl. 68—12.)



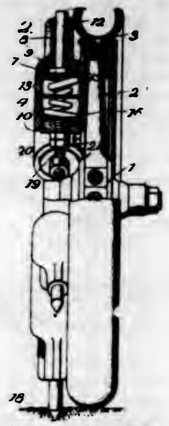
1. A clothes line apparatus consisting of a bracket member adapted to be fastened to the frame of a window, a swinging clothes line bar pivotally mounted upon said member, pulleys mounted upon the bar and about which an endless rope is adapted to pass, means upon the bar for taking up slack in the rope, a bracket member pivotally mounted upon the frame, a slotted socket member in said bracket member and adapted to receive said bar, and a set screw carried by the socket of the bracket member and adapted to engage the socket member receiving said bar.

2. A clothes line apparatus consisting of a bracket member adapted to be fastened to the frame of a window, a pivotal pin mounted thereon, a disk having an apertured shank portion pivotally mounted upon said pin, a screw projecting from said disk, an apertured clothes line bar and an apertured plate through which said screw passes, said plate having angled portions extending about said bar and its ends bearing against the face of the disk, a nut upon the screw, pulleys journaled upon the bar, a clothes line passing about said pulleys, a slack takeup device adjustably mounted upon the bar and having a boss about which the line passes, a pivotal socket mounted upon the frame of the window, and a screw carried by the socket and designed for engagement with the socket member receiving said bar.

1,154,525. ANTISKIDDING AND TRACTION APPLIANCE FOR VEHICLE-WHEELS. JOHN MCMULLEN, Butte, Mont. Filed Sept. 23, 1913. Serial No. 791,431. (Cl. 21—212.)

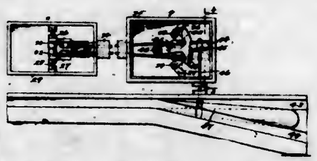
1. A device of the class described comprising radially disposed tubular casings having the outer portions of their bores reduced relative to the inner portions of the same, and an intermediate portion between said inner and outer portions, webs extending between the casings and adapted to be secured to the spokes of a wheel, plungers slidably fitted in the outer reduced portions of the bores of the casings and projecting through the outer

ends of the same, heads at the inner ends of the plungers adapted to seat within the intermediate portions of the bores of the casings, washers in the inner larger portions of the bores of the casings bearing against said heads, closures for the inner ends of the casings, washers within the casings against said closures, springs housed within the casings and extending between said washers, and tension adjusting devices mounted in the closures and bearing against the respectively adjacent washers.



2. A device of the class described comprising radially disposed tubular casings, webs extending between the casings and adapted to be secured to the spokes of a wheel, plungers slidably mounted in the casings and projecting through the outer ends of the same, and means housed within the casings for yieldably holding the plungers projected.

1,154,526. SWITCH-SHIFTER. AMBROSE MCVEY, Wilmington, Del. Filed Aug. 24, 1914. Serial No. 858,403. (Cl. 104—24.)

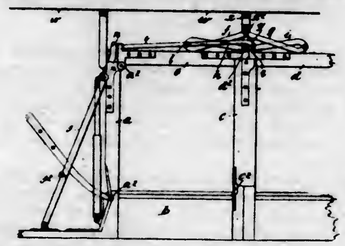


1. A switch operating device, comprising a pivoted switch, a lever connected thereto, a bell-crank lever on each side of said lever adapted to bear on the respective side thereof, a tripping dog in operative connection with each bell-crank lever, said switch and lever being movable independently of said bell-crank levers, and means carried by a car for tripping either of said dogs to correspondingly move said switch.

2. A switch operating device, comprising a pivoted switch, a lever connected thereto, a bell-crank lever on each side of said lever adapted to bear on the respective side thereof, said lever being movable independently of said bell-crank levers, a tripping dog in operative connection with each bell-crank lever, means for maintaining said bell-cranks and dogs in normal positions, and means carried by the car for tripping either of said dogs to correspondingly move said switch.

3. A switch operating device, comprising a pivoted switch, a lever connected thereto, a bell-crank lever on each side of said lever adapted to bear on the respective side thereof, a tripping dog in operative connection with each bell-crank lever, said switch being movable independently of said bell-crank levers, means carried by a car for tripping either of said dogs to correspondingly move said switch, and means for guiding said tripping means to the respective dogs.

1,154,527. FOLDABLE-HOOD FITTINGS OF VEHICLES. ROBERT MEDLEY, Manchester, England. Filed Apr. 30, 1914. Serial No. 835,558. (Cl. 21—14.)



1. In foldable hood fittings of vehicles for the purpose of carrying and rearwardly projecting the hoop stick of the middle pillar, the combination with the middle pillar and forward and rearward cant-rails pivoted to the middle pillar and foldable upon one another, of an opening and closing frame composed of a set of four links, two of said links forming the lower corner of said frame being pivoted to the summit of the middle pillar, the other two links forming the upper corner of the frame being pivoted to the hoop stick, the remaining unattached corners of the frame resting upon the tops of the two foldable cant-rails, substantially as described.

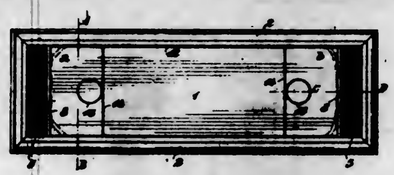
2. In foldable hood fittings of vehicles for the purpose of carrying and rearwardly projecting the hoop stick of the middle pillar, the combination with the middle pillar and forward and rearward cant-rails pivoted to the middle pillar and foldable upon one another, of an opening and closing frame composed of four links two of which are pivoted to the middle pillar and the other two of which are pivoted to the hoop stick, and each two of which are pivotally jointed to each other each side the middle pillar to cross each other at this point of pivoting in reverse manners, the jointed ends of the links resting loosely on the tops of the forward and rearward cant-rails respectively, substantially as described.

1,154,528. COMBINATION RESILIENT CLIP AND ARTICLE-HOLDER. CHARLES W. MEGUIAR, Sonora, Ky. Filed Apr. 23, 1914. Serial No. 833,944. (Cl. 24—73.)



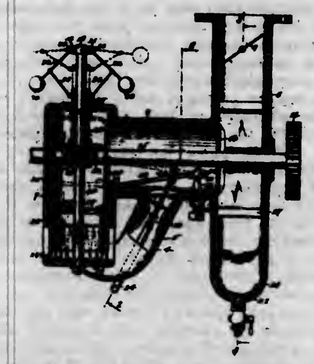
A clip of the type set forth composed of two members, one of which is flat and serves as a base, and the other of which is formed as a loop and serves as a holder for a pencil or the like, the base member being longer than the loop member, and an arcuate relatively narrow bend connecting the members at one end of the clip, the other ends of the members being free, the loop member having regular curvature between its free end and the end adjoining said bend whereby it is of convexo-concave form in relation to said base, the loop member extending for a distance from said bend in substantially parallel relation to said base and throughout the remainder of its length in diverging relation to said base whereby the pencil or similar object fitted within the loop of the loop member is subject to frictional pressure at the forward side of the bend, at the middle point of the loop and at the outer end of the base member.

1,154,529. GAME-TABLE. LUIS MELUSEI, Buenos Aires, Argentine. Filed Apr. 10, 1915. Serial No. 20,462. (Cl. 46—61.)



A game, comprising a smooth oblong board, a frame surrounding the board forming lateral flanges, a pocket extending across the table at each end of the board, a cross piece having a series of apertures mounted in front of each pocket, elastic cushions arranged along the lateral flanges and between the apertures, a target ring marked on the board in front of the apertures, a small disk and a plurality of larger disks for sliding into the proximity of the target, and transverse balk lines extending across the board near the targets.

1,154,530. CARBURETER. HARRY CARROLL MERRIAM and LORNE MARTIN YORK, Edmonton, Alberta, Canada. Filed Mar. 20, 1915. Serial No. 15,725. (Cl. 123—123.)



1. In combination with the manifold intake of an internal combustion engine; a carbureter, comprising a liquid fuel supply, a main air supply, a fan for mixing said fuel and air and delivering the mixture to said manifold intake under pressure, means for actuating said fan, and means actuated by said fan actuating means for providing an auxiliary air supply in increasing quantity as the speed of the engine increases.

2. In combination with the manifold intake of an internal combustion engine; a carbureter, comprising a liquid fuel supply, a main air supply, a shaft, means for actuating the same, a supplemental shaft in operative connection with said first named shaft, a sleeve slidable on said supplemental shaft, speed controlled means for moving said sleeve, a piston carried by said sleeve, and a housing for said piston provided with tapered openings therethrough controlled by said piston.

3. In combination with the manifold intake of an internal combustion engine; a carbureter, comprising a casing, a liquid fuel supply pipe, a main air supply, a shaft, means for actuating the same, a piston controlling said air supply, means operable by said shaft for moving said piston, a valve for said fuel supply pipe, a pivoted lever, in pivotal connection with said piston operating means, and in pivotal connection with said fuel control valve, and means for adjusting the pivotal support of said lever to vary the relationship between said fuel supply pipe and said valve therefor.

4. In combination with the manifold intake of an internal combustion engine, a carbureter, comprising a casing divided into three compartments, one of which is the air supply, another of which connects with said intake, and the third of which joins said first two, an air control piston in one compartment, a fan in said second compartment, a liquid fuel pipe in said third compartment, and means for simultaneously opening said air and said fuel supply in the degree of increase in speed of said fan.

1,154,531. NON-REFILLABLE BOTTLE. EDWARD J. MORIN, Wynot, Nebr. Filed Nov. 4, 1914. Serial No. 870,282. (Cl. 215—108.)



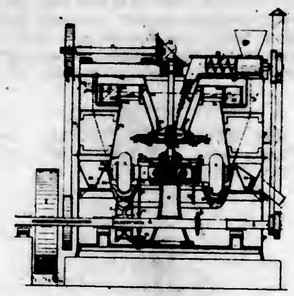
1. A bottle comprising a short neck, a relatively long neck rising from within said short neck and having a weakened portion at its point of connection therewith to permit the long neck to be broken off at this point, a stopper adapted for interchangeable engagement within said necks, and a locking element carried by the stopper for locking the latter in position within either of said necks.

2. A bottle comprising a short neck, a relatively long neck rising from within said short neck and having a weakened portion at its point of juncture therewith to permit said long neck to be broken off at this point, a stopper adapted for interchangeable engagement within said necks, a locking element on said stopper for engagement with said long neck, and said element being adjustable on said stopper to accommodate said short neck when the stopper is used in connection therewith.

3. A bottle comprising a short neck, a relatively long neck rising from within said short neck and having a weakened portion at its point of connection therewith to permit said neck to be broken off at this point, a stopper adapted for interchangeable engagement within said necks, each of the necks being formed with an annular groove, an open ring-like locking element surrounding said stopper and having divergently disposed fingers for engagement within said grooves, and said element being adjustable on said stopper to accommodate the short neck subsequent to the breaking off of the long neck from the bottle.

4. A bottle comprising a short neck, a relatively long neck rising from within said short neck and having a weakened portion at its point of connection therewith to permit said long neck to be broken off at this point, a stopper adapted for interchangeable engagement within said necks, said stopper having spaced reduced portions forming shoulders, an open ring-like element adapted to be interchangeably seated upon said shoulders and having diverging fingers for engagement within annular grooves formed in said necks, an annular shoulder formed in the short neck above the groove therein and having diametrically opposed slots communicating therewith to permit said fingers to enter said groove, and a lug rising from the shoulders on the stopper for rotating the element therewith.

1,154,532. GRINDING OR CRUSHING MACHINERY. ARTHUR HARRIMAN MOSS, Misterton, Gainsborough, England. Filed Feb. 8, 1915. Serial No. 6,834. (Cl. 83—45.)



1. In a grinding or crushing mill, the combination with a substantially horizontal grinding ring having a concaved upper face, and means for rotating said ring, of grinding rollers rotatable on swiveling shafts and resting in the depression in the upper face of the grinding ring, and tension means acting on the swiveling shafts to vary the pressure of the grinding rolls against the grinding ring, said means acting in a direction inclined to the vertical and opposite the direction of rotation of the adjacent portion of the grinding ring.

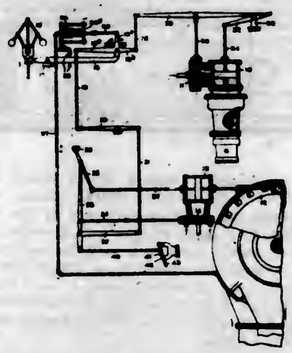
2. In a grinding or crushing mill, the combination of three or more supporting rollers, a substantially horizontal grinding ring supported directly and solely on said rollers, means for driving one of the supporting rollers to rotate the grinding ring including a shaft on which the supporting roller is mounted and that extends past the axis of the grinding ring, grinding rollers coöperating with the grinding ring, and connections between one of the grinding rollers and the section of the aforesaid driving shaft of the supporting roller that extends beyond the axis of the grinding ring for positively rotating the grinding roller.

3. In a grinding or crushing mill, the combination with a grinding ring and coacting grinding rollers, of an inclosing casing, a guide plate dividing the interior of the casing above the grinding means into an inner and an outer chamber, an exhaust fan for creating a current of air from the inner to the outer chamber, a second guide plate extending up from the periphery of the grinding ring and to a point above the lower edge of the first said guide plate, and separated from the first said plate by an annular space, and means for feeding material to be ground to the grinding ring.

4. In a grinding or crushing mill, the combination with a grinding ring and coacting grinding rollers, of an inclosing casing, a guide plate dividing the interior of the casing above the grinding means into an inner and an outer chamber, an exhaust fan for creating a current of air from the inner to the outer chamber, a second guide plate extending up from the periphery of the grinding ring and to a point above the lower edge of the first said guide plate, a receptacle for ground material within the outer chamber of the casing adjacent the grinding ring and having its inner wall extended over said second guide plate into the space between the guide plates, and means for feeding material to be ground to the grinding ring.

1,154,533. GOVERNING MECHANISM FOR TURBINES. SANFORD A. MOSS, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Apr. 9, 1914. Serial No. 830,781. (Cl. 121—118.)

1. In a turbine having a high pressure valve mechanism and a low pressure valve mechanism, a regulating means therefor comprising a governor, a governor lever, a lever connected between its ends to the governor lever so as to be moved thereby, means for connecting one end of said lever to the high pressure valve mechanism and the other end to the low pressure valve mechanism, and means responsive to the pressure in an intermediate stage for tilting said lever.



2. In a turbine having a high pressure valve mechanism, a low pressure valve mechanism and motors for operating the same, a regulating means therefor comprising a governor, a governor lever, a three arm lever, means connecting the governor lever to the three arm lever so that the governor lever may move the same, means for controlling the motors operated from the ends of two of said arms, a movable abutment responsive to the pressure in an intermediate stage, and means for connecting it to the third arm of said lever.

3. In a turbine having a valve mechanism for controlling the admission of high pressure steam, a ring valve controlling the passage of steam therethrough and a conduit through which low pressure steam may be admitted or extracted, a regulating mechanism therefor comprising a governor, a governor lever, a three arm lever, means connecting the governor lever to the three arm lever at the point where the arms join so that the governor lever may move the same, a motor for the valve mechanism, a pilot valve therefor, a second motor for the ring valve, a pilot valve for the second motor, means connecting two of the arms of the three arm lever to the pilot valves so as to operate the same when the three arm lever is moved by the governor lever, a movable abutment responsive to changes in pressure, and means connecting the movable abutment to the third arm of the lever.

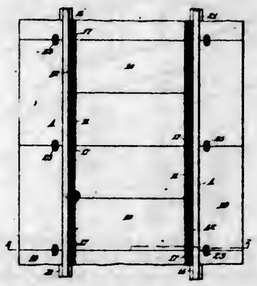
4. In a mixed pressure or extraction turbine, the combination of a high pressure valve mechanism, a low pressure valve mechanism, a pressure responsive device, a three arm lever, means operatively connecting two of said arms to the high and low pressure valve mechanisms respectively, and the third arm to the pressure responsive device, a floating lever, a link connecting the floating lever from an intermediate point to the three arm lever, a primary governor connected to one end of said floating lever, and an emergency governor connected to the other end thereof.

5. In a turbine having a high pressure valve mechanism and a low pressure valve mechanism, a regulating means therefor comprising a governor, a lever operatively connected between its ends to the governor so as to be moved thereby, means for connecting one end of said lever to the high pressure valve mechanism and the other end to the low pressure valve mechanism, and means responsive to the pressure in an intermediate stage for tilting said lever.

[Claims 6 to 8 not printed in the Gazette.]

1,154,534. RAILROAD GRADE-CROSSING. HARRY E. MUCHNIC, Atchison, Kans. Filed July 14, 1915. Serial No. 39,876. (Cl. 104—14.)

1. A railroad crossing comprising a plurality of metal plates extending transversely between the rails of the track and supported at their ends on the rail flanges, a plurality of plates adjacent to the outer sides of the rails and supported at one side by the outer flanges of the rails, and means for securing the plates to the cross ties.



2. A railroad crossing comprising a plurality of metal plates extending transversely between the rails of the track and supported at their ends above the cross ties and out of contact therewith by the rail flanges, a plurality of longitudinally extending plates adjacent to the outer sides of the rails and supported at one side by the outer flanges of said rails, and means for securing each plate solely to the cross ties.

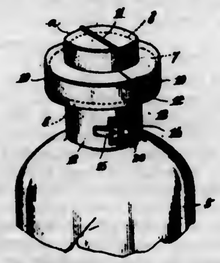
3. A railroad-crossing comprising a plurality of metal plates extending transversely between the rails of the track and supported by depending flanges on the ends of said plates bearing on the rail flanges, a plurality of plates adjacent to the outer sides of said rails and supported on the outer rail flanges by a depending flange, and means for securing the plates to the cross ties of the track independently of the rails.

4. A railroad crossing comprising a plurality of metal plates extending transversely between the rails of a track and supported only at their ends on the rail flanges, and means for securing said plates to the cross ties.

5. A railroad crossing comprising a plurality of metal plates extending transversely between the rails of the track and supported at their ends on the rail flanges, the ends of said plates being depressed to provide clearance for the wheel flanges of passing trains, a plurality of plates adjacent to the outer sides of the rails and supported at one side by the outer flanges of the rails, and means for securing the plates to the cross ties.

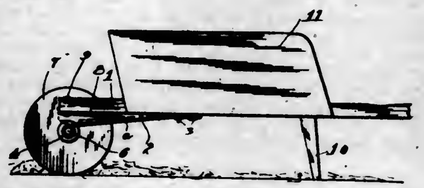
[Claims 6 to 9 not printed in the Gazette.]

1,154,535. BOTTLE ATTACHMENT. GEORGE J. MUNSCHY, New York, N. Y. Filed July 22, 1914. Serial No. 852,514. (Cl. 215—33.)



In a bottle attachment, a cap comprising hingedly connected sections adapted to be placed over the mouth of the bottle and embrace the neck portion thereof, a substantially U-shaped keeper terminally secured to the exterior of one of the sections adjacent its meeting edge, a latch constructed from a single length of material into substantially U-form, one of the limbs of said latch being secured to the other section and projecting beyond the meeting edge thereof, a spring interposed between the limbs for yieldably supporting the other of said limbs, and a projection extending inwardly from said keeper for interchangeable engagement with a series of apertures in the said yieldably supported limb when the sections are operatively associated.

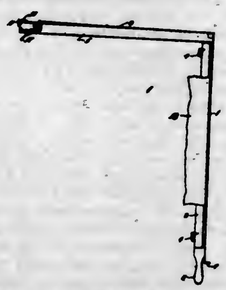
1,154,536. WHEELBARROW. GEORGE S. NICHOLS, Freeport, Me. Filed June 15, 1914. Serial No. 845,273. (Cl. 21—68.)



1. The combination with a wheelbarrow having side bars, of a pair of flat sheet metal springs secured to the under sides of the bars between the ends of the latter, the free ends of said springs being formed into pintle bearings for the pintles of the wheel, a second pair of springs secured to the front ends of the side bars their free ends extending downwardly and resting upon the upper face of the first mentioned springs intermediate their ends forming a compound spring for the barrow when in use.

2. The combination with a wheelbarrow, of a pair of flat springs secured to the side bars intermediate their ends, the free ends formed into bearings adapted to be secured around the pintles of the wheel and disposed on opposite sides thereof, a second pair of springs rigidly secured to the ends of said bars their free ends extending inwardly and downwardly and resting upon the upper face of the first mentioned springs adapted to form a compound spring for the barrow when in use.

1,154,537. NEWSPAPER-HOLDER. WALTER OBERG, St. Edward, Nebr. Filed Jan. 8, 1915. Serial No. 1,145. (Cl. 129—35.)



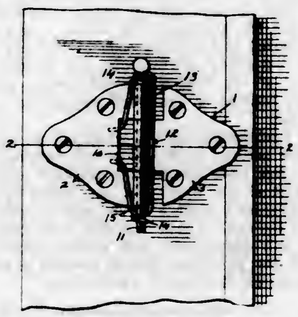
1. A newspaper holder comprising a frame having a top and a side portion, a spring-pressed flap carried by said side portion, a plurality of stepped superimposed springs carried by said top portion, extensions formed integral with said springs, flexible release means carried by said top portion for engagement successively with said spring extensions and manually operable means carried by said side portion and connected to said flexible release means for actuating the same.

2. A newspaper holder comprising a frame having a top and a side portion, a spring-pressed flap carried by said side portion, a plurality of stepped superimposed springs carried by said top portion, extensions carried by said springs, a sliding iron carried by said top portion adjacent said spring extensions, a spring connecting said sliding

iron and top portion for normally retaining the former member in normal position, a lug carried by said sliding iron for engagement successively with said extensions whereby said superimposed springs may be moved successively and manually operable means carried by said side portion and connected to said sliding iron for actuating the same.

3. A newspaper holder comprising a frame having a top and a side portion, a spring-pressed flap carried by said side portion, a plurality of stepped superimposed springs carried by said top portion, extensions carried by said springs, a slotted sliding iron carried by said top portion, a guide pin carried by said top portion and projected through the slotted portion of said sliding iron, a spring connecting said sliding iron and top portion for normally retaining the former member in normal position, a lug carried by said sliding iron for engagement successively with said extensions whereby said superimposed springs may be moved successively, a slide provided with a handle carried by said side portion and connection between said handle and the said sliding iron.

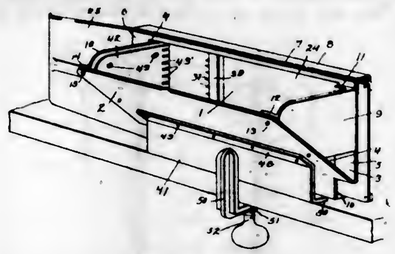
1,154,538. HINGE. WILLIAM NATHANIEL OFFUTT, Sr., Medford, Oreg. Filed Sept. 2, 1914. Serial No. 859,878. (Cl. 16—25.)



In combination, a pair of hinge butts, one of said butts comprising a triangular body, a tongue extending from one of the edges of the body, an angular leaf formed at the free end of the tongue, said leaf being of a width equal to the length of the side edge of the body on which the tongue is formed, hinge barrels formed on the leaf on opposite sides of the tongue, the coöperating hinge butt comprising a triangular body, a pair of spaced tongues formed on one edge of the body, said tongues being separated a distance equal to the width of the tongue on the first mentioned body, an angular leaf formed at the free terminals of the last mentioned tongues, a hinge barrel formed on the leaf between the tongues, a hinge pin extending through the hinge barrels, a spring, said spring being looped around the opposite ends of the hinge pin, a bar connecting the loops, inwardly extending arms on the loops projecting toward the center of the triangular body provided with the two tongues and hooks on the ends of the inwardly extending arms engaging beneath the body and between the tongues.

1,154,539. POTATO-STRIPPER. EDWIN N. OLSON, Bellingham, Wash. Filed July 3, 1915. Serial No. 37,875. (Cl. 146—7.)

1. A device of the class described comprising, a trough having one of its sides opened and having its opposite side inclined, a plate mounted within the trough and adjacent one end of the trough, and having one of its edges projecting through the open side and provided with a plurality of spaced slots, and a cutter carrying plate slidable across the open side of the trough and provided with a plurality of spaced cutters alining with the slots in the plate, and a vertically disposed knife associated with the cutter carrying plate and resting upon the first mentioned cutters.



2. A device of the class described comprising, a trough having one of its sides open, guide plates slidable across the opened side of the trough and having connection with each other and arranged in offset relation, a cutter plate associated with the guide and lying flush with one of the guide plates and disposed beyond the other guide plates, U-shaped cutters carried by said cutter carrying plates, a vertically disposed knife carried by the cutter carrying plate and overlying the U-shaped cutters, and a plate located within the trough and having one end projecting through the open side of the trough and provided with a plurality of spaced slots, the said slots in the end of the plate being alined with the U-shaped cutters.

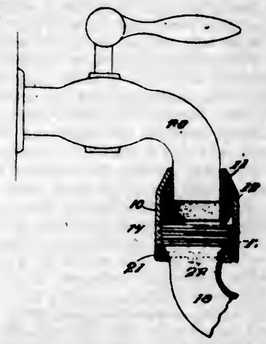
3. A device of the class described comprising a trough having one of its sides provided with an opening, guideways formed on the trough and located above and below the opening, guide plates slidable within the guides and across the opening and arranged in offset relation and connected to each other, a cutter plate associated with the guide plates, cutters carried by the cutter carrying plates, a plate located within the trough and having one end projecting through the opening in the side of the trough and provided with a plurality of slots, said slots in the plate being alined with the cutters on the cutter carrying plates, a vertically disposed knife associated with the cutter carrying plates and overlying the first mentioned cutters, and a manipulating handle carried by one of the guide plates.

4. A device of the class described comprising, a trough having one of its sides open, guideways formed on the trough and located above and below the open side, guide plates slidably mounted within the guideways and slidable across the open side and connected to each other, a plurality of cutters carried by the guide plates, one of the plates having a longitudinally extending rib formed thereon, and having one of its terminals extended angularly, and a plate located within the trough and having one end extending through the opening in the open side of the trough and provided with a plurality of slots, the said slots being arranged in alinement with the said cutters.

1,154,540. PIPE-COUPLING. WALTER E. OSTER and STANISLAW TEMPINSKI, Chicago, Ill. Filed July 7, 1914. Serial No. 849,499. (Cl. 137—28.)

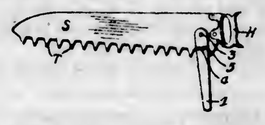
1. A device of the character described including a shell formed with a substantially frusto conical wall at one extremity thereof, a gasket arranged within the shell and provided with substantially frusto conical walls adjacent its opposite extremities, one of said walls being adapted to contact with the similarly inclined wall of the shell, a bearing ring having a substantially frusto conical wall arranged to engage the other similarly inclined wall of the gasket, and a pipe section connected to the shell and arranged to engage said bearing ring.

2. A device of the character described including a shell, a gasket arranged within the shell, a bearing ring disposed to engage the gasket, a pipe section screw threaded to engage the shell and arranged to engage said bearing ring, and a locking ring freely connected with the screw threads of the shell and arranged to engage said pipe section upon one side of the screw threads thereof.



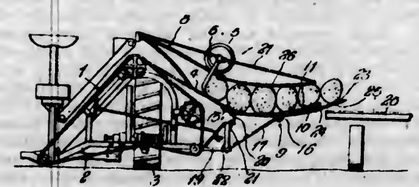
3. A device of the character described including a frusto conical shell internally screw threaded adjacent its larger end, a centrally bored gasket fitting within the shell, said gasket being provided medially with a straight circumferential wall seating against the wall of the body of the shell and being further provided with frusto conical ends one engaging within the frusto conical end of the shell, a substantially frusto conical bearing ring seating against the other frusto conical end of the gasket, and an externally screw threaded pipe section fitting within the screw threaded extremity of the shell and engaging said bearing ring.

1,154,541. SPLITTING ATTACHMENT FOR ICE-SAWS. THOMAS A. PACETTY, Columbus, Ga. Filed Feb. 8, 1915. Serial No. 6,853. (Cl. 83—62.)



An ice splitting attachment for saws comprising a wedge-shaped cutting blade having an aperture at the thick end thereof, and an arcuate slot extending transversely of said end at points spaced inwardly from said aperture, and means for connecting said blade to a saw.

1,154,542. LOADING ATTACHMENT TO BINDERS. GEORGE H. PALLADY, Allerton, Iowa. Filed Oct. 19, 1914. Serial No. 867,390. (Cl. 56—126.)



1. The combination with the deck of a binder, of a supplemental deck secured to and extending laterally from the aforesaid deck, and a fixed supporting bar carried by the binder frame upon which the supplemental deck rests slidably.

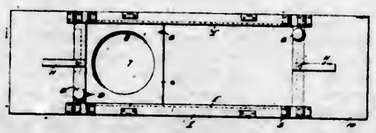
2. The combination with the deck of a binder, of a series of outstanding arms secured thereto and extending laterally therefrom, and a fixed horizontally disposed supporting bar carried by the binder frame upon which said arms rest in slidable relation.

3. The combination with the deck of a binder, of a supplemental deck secured to and extending laterally from the aforesaid deck, a fixed supporting bar carried by the binder frame upon which said supplemental deck rests slidably, and a pressure rod overlying the supplemental deck to retain the same in contact with the supporting bar when the machine is in operation.

4. The combination with the deck of a binder and the shield thereover, of a series of outstanding arms extending laterally from said deck and secured thereto at their inner ends, a series of upright spring pressed fingers located at the outer ends of the arms, a pressure rod overhanging the arms, and means carried by the binder frame upon which said arms rest in slidable relation.

5. The combination with the deck of a binder, of an inner supplemental deck section secured to and projecting laterally from the aforesaid deck, an outer laterally swinging supplemental deck section hinged to and rising from the outer end of the inner section, spring means normally retaining the outer section in substantially upright position, and stop means carried by one of said sections to limit the outward movement of the outer laterally swinging section.

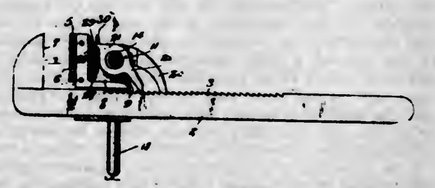
1,154,543. BABY-WALKER. MARGUERITE PASSERIEUX, St. Louis, Mo. Filed May 22, 1912. Serial No. 698,948. (Cl. 155—45.)



1. A baby walker comprising a frame, a centerpiece slidably mounted thereon, bells mounted upon the frame and located at the end of the path of movement of the centerpiece, and hammers carried by the centerpiece and adapted to strike the bells when the centerpiece arrives at the ends of its path of movement in the frame.

2. A baby walker comprising a frame element, a centerpiece element slidable upon said frame element, a bell carried by one of said elements, and a hammer carried by the other of said elements, the said hammer and bell being adapted to be brought into engagement with each other during the sliding movement of the centerpiece relative to the frame.

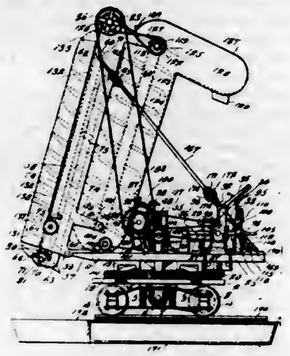
1,154,544. WRENCH. CARL I'EDERSEN, Fort Wayne, Ind. Filed Apr. 9, 1915. Serial No. 20,258. (Cl. 81—139.)



In a wrench, a stationary jaw having a toothed shank, a movable jaw including a carriage mounted upon the shank, said carriage including a pocket, a shaft journaled in the side walls of the pocket, the portion of the shaft in the pocket having reversely arranged cam members, two dogs, each of said dogs having its body portion reduced to provide contacting faces to permit the engaging end of one of the dogs being disposed forward and in a line with the active end of the other dog, each of said dogs having their bodies provided with openings equaling the respective cam members upon the shaft and receiving the said cam members, springs co-acting with the dogs for forcing their engaging ends into contact with the teeth of the shank, and one of the dogs having an angular finger-piece extending through the pocket in the carriage to per-

mit of the swinging of said dog to bring the same into contact with the other dog to raise both of the dogs out of engagement with the teeth of the shank, and a handle for the shaft.

1,154,545. DIGGING-MACHINE. DANIEL A. PENEDO, Bisbee, Ariz. Filed Aug. 18, 1914. Serial No. 857,401. (Cl. 37—24.)



1. In a machine of the class described, a platform, standards pivoted at their lower ends to said platform at one edge of the latter and formed with longitudinal bores, and grooves in the confronting faces thereof, rack bars slidably mounted in said bores, a shaft journaled in said standards, pinions on said shaft meshing with said rack bars, vertical rods parallel with said bars and spaced apart, a connection between the lower end of each rod and the adjacent rack bar, a shaft journaled in the upper ends of said rods and having the opposite extremities thereof disposed in said grooves, a shaft journaled in the lower ends of said bars, rollers keyed upon said shafts, an endless conveyer belt trained about said rollers, means for rotating said first shaft to raise and lower said bars, rods and conveyer belt, and means for swinging said standards to move the conveyer to any desired angle.

2. In a machine of the class described, a platform, standards pivoted at their lower ends to said platform at one edge of the latter and formed with longitudinal bores, and grooves in the confronting faces thereof, rack bars slidably mounted in said bores, a shaft journaled in said standards, pinions on said shaft meshing with said rack bars, vertical rods parallel with said bars and spaced apart, a connection between the lower end of each rod and the adjacent rack bar, a shaft journaled in the upper ends of said rods and having the opposite extremities thereof disposed in said grooves, a shaft journaled in the lower ends of said bars, rollers keyed upon said shafts, an endless conveyer belt trained about said rollers, means for rotating said first shaft to raise and lower said bars, rods and conveyer belt, and manually operable means for swinging said standards to move the conveyer to any desired angle.

3. In a machine of the class described, a platform, standards pivoted at their lower ends to said platform at one edge of the latter and formed with longitudinal bores, and grooves in the confronting faces thereof, rack bars slidably mounted in said bores, a shaft journaled in said standards, pinions on said shaft meshing with said rack bars, vertical rods parallel with said bars and spaced apart, a connection between the lower end of each rod and the adjacent rack bar, a shaft journaled in the upper ends of said rods and having the opposite extremities thereof disposed in said grooves, a shaft journaled in the lower ends of said bars, rollers keyed upon said shafts, an endless conveyer belt trained about said rollers, means for rotating said first shaft to raise and lower said bars, rods and conveyer belt, bearings carried by the rear edges of said standards, trunnions journaled in said bearings and projecting laterally therefrom, blocks fastened to said trunnions, nuts within said blocks, rods threaded through said nuts, means supporting the lower ends of said rods, and means for rotating said rods to swing said standards.

4. In a machine of the class described, a platform, standards pivoted at their lower ends to said platform at one edge of the latter and formed with longitudinal bores, and grooves in the confronting faces thereof, rack bars slidably mounted in said bores, a shaft journaled in said standards, pinions on said shaft meshing with said rack bars, vertical rods parallel with said bars and spaced apart, a connection between the lower end of each rod and the adjacent rack bar, a shaft journaled in the upper ends of said rods and having the opposite extremities thereof disposed in said grooves, a shaft journaled in the lower ends of said bars, rollers keyed upon said shafts, an endless conveyer belt trained about said rollers, means for rotating said first shaft to raise and lower said bars, rods and conveyer belt, bearings carried by the rear edges of said standards, trunnions journaled in said bearings and projecting laterally therefrom, blocks fastened to said trunnions, nuts within said blocks, rods threaded through said nuts, means supporting the lower ends of said rods, a hand operated shaft, gear connections between said last shaft and rods whereby the rods will be rotated in like directions in the rotation of the shaft, and means for rotating said shaft.

5. In a machine of the class described, a platform, standards having their lower ends secured to said platform at one edge of the latter and formed with longitudinal bores, and grooves in the confronting faces thereof, rack bars slidably mounted in said bores, a shaft journaled in said standards, pinions on said shaft meshing with said rack bars, vertical rods parallel with said bars and spaced apart, a connection between the lower end of each rod and the adjacent rack bar, a shaft journaled in the upper ends of said rods and having the opposite extremities thereof disposed within said grooves, a shaft journaled in the lower ends of said bars, rollers keyed upon said shafts, an endless conveyer belt trained about said rollers, a second conveyer disposed in a plane parallel with said conveyer belt and adapted to receive the material therefrom, and means for rotating said first shaft to raise and lower said bars, rods and conveyer belt.

[Claims 6 to 11 not printed in the Gazette.]

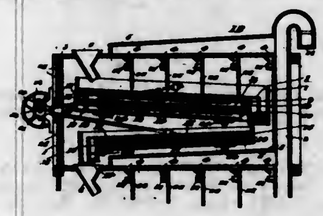
1,154,546. CEMENT BUILDING-BLOCK. FRANK ELWOOD PETRAS, Indianapolis, Ind., assignor of one-half to J. D. Eastman, Indianapolis, Ind. Filed Jan. 28, 1915. Serial No. 4,857. (Cl. 72—30.)



1. A wall including a monolithic portion and a hollow portion, and composed of similar rectangular-shaped concrete blocks arranged to break joints in superimposed layers, each block having on its surface a wide continuous bond-receiving groove extending over one horisontal face and both ends and communicating with a longitudinal extending row of vertical openings, the latter being of less width than the groove and both receiving poured cement which forms the monolithic portion, said hollow portion of the wall being formed by providing in each block two parallel series of vertically-disposed, longitudinally-elongated slots arranged in staggered and overlapped relation and also by forming in one or more horisontal faces of the block a deep longitudinal channel of a width to intersect the slots of both rows, whereby the two portions of the wall will be connected by necks of relatively small cross-sectional area extending in a substantially longitudinal direction when the block is viewed in plan.

2. A concrete building block of rectangular formation having on both ends and one horisontal face a relatively-wide, continuous, binder-receiving groove, a longitudinal row of vertical binder receiving openings of less width than said groove into which they open at their upper ends, the block being also formed with two parallel longitudinal rows of vertical ventilating slots located between said row of vertical openings and one side face of the block, said slots of both rows being intersected by a single, relatively-deep ventilating channel extending from end to end of the block in its upper horisontal face and the slots in the two rows being arranged in staggered and overlapping relation to provide between them a plurality of connecting necks of relatively small cross sectional area extending in a longitudinal direction when the block is viewed in plan.

1,154,547. PROCESS OF PURIFYING FLOUR DURING THE MANUFACTURE THEREOF. GEORGE THOMAS SMITH, Fort Worth, Tex. Filed May 23, 1912. Serial No. 699,219. (Cl. 83—42.)



1. The herein-described process of purifying flour containing impurities lighter in weight than flour, which consists in moving said flour and impurities in a relatively thin layer and simultaneously forcing a slight draft of air uniformly throughout said moving layer for lifting and carrying away said lighter impurities from said flour.

2. The herein-described process of purifying flour containing impurities lighter in weight than flour during the manufacture thereof, consisting in the repeated partial grinding of the wheat until the wheat is reduced to flour, moving and agitating the broken wheat and the flour and separating the flour from the broken wheat after each grinding, forcing a slight draft of air uniformly throughout the mass of moving broken wheat and flour and throughout the completely reduced and separated flour between each grinding while the wheat and flour are being agitated and separated for lifting and carrying away said lighter impurities and leaving the flour.

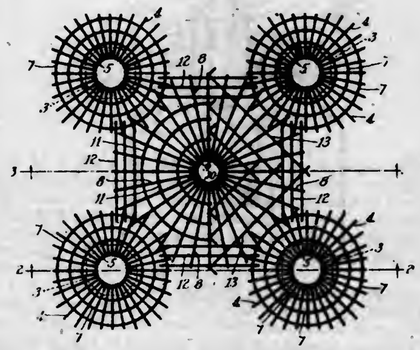
3. The herein-described process of purifying flour which consists in the gradual reduction of the wheat into flour and the impurities into fine powder lighter in weight than flour by grinding until the wheat is reduced to flour, moving the mass of partly ground wheat and flour and impurities and separating the flour from the partially ground wheat after each grinding, and simultaneously forcing a slight draft of air uniformly throughout the mass of moving material, said draft being constant and of sufficient strength only to lift and carry away said lighter impurities without moving the flour.

4. The herein-described process for removing impurities which are lighter in weight than flour from flour and partially ground wheat which consists in repeated partial grindings of wheat until the wheat is reduced to flour and the impurities to a fine powder, moving and grading the partially ground wheat in masses of relatively thin layers, separating the flour from the partially ground wheat and simultaneously forcing a slight draft of air throughout each layer of wheat and flour while being moved and graded for lifting and carrying away said light and finely powdered impurities out of the flour.

5. The herein-described process of removing impurities from flour and ground wheat which consists in repeated partial grindings of the wheat until all of the wheat is entirely reduced to flour and the impurities to a fine powder which is lighter in weight than flour, moving the mass of partially ground wheat and flour and impurities in relatively thin layers and moving and grading the same a number of times after each grinding and separating the flour therefrom and simultaneously forcing a slight draft of air throughout each layer during the entire process of moving and grading and separating for lifting and carrying away said impurities from the flour.

[Claims 6 to 9 not printed in the Gazette.]

1,154,548. REINFORCED CONCRETE CONSTRUCTION. EDWARD SMULSKI, Newton Highlands, Mass. Filed Jan. 8, 1913. Serial No. 740,763. (Cl. 72—15.)



1. In a concrete slab construction, the combination with a supporting column of reinforcing members diverging from the axis of the column, each of said members having a reverse bend near the column and presenting a portion near the upper surface of the slab, and a portion near the lower surface of the slab extending across and serving as a compression reinforcement for the juncture of the slab with the column.

2. In a concrete slab construction, the combination with a supporting column of reinforcing members diverging from the axis of the column, each of said members having a reverse bend near the column and presenting a tension reinforcement near the upper surface of the slab, and a compression reinforcement portion near the lower surface of the slab, said diverse bend having a depth substantially greater than the thickness of the member for anchoring the same with extensive bond and bearing in the concrete.

3. In a concrete slab construction, the combination with a supporting column of reinforcing members diverging from the axis of the column, each of said members having a reverse bend near the column and presenting a tension reinforcement portion near the upper surface of the slab, and a prolonged compression reinforcement portion near the lower surface of the slab.

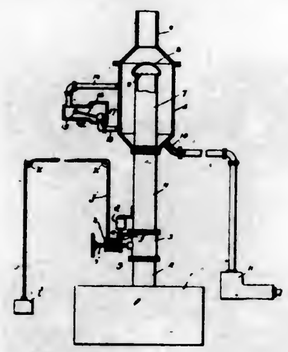
4. In a concrete slab construction, the combination with a supporting column of reinforcing members diverging from the axis of the column, each of said members having a reverse bend near the column and presenting a portion near the upper surface of the slab and a portion near the lower surface of the slab extending across and serving as a compression reinforcement for the juncture of the slab with the column; and other reinforcing members arranged transversely of said diverging members and circumferentially of said column axis.

5. In concrete construction, the combination with supporting columns, of an intermediate slab, reinforcing members in said slab diverging from the axis of the column, each of said members having a reverse bend near the column and presenting tension and compression portions near the upper and lower surfaces respectively of the slab and prolonged away from said column; other reinforcing members arranged transversely of said diverging members and circumferentially of said column axis; a series of reinforcing members diverging from a central point in

said slab between said columns and reinforcing members arranged transversely of said diverging members and circumferentially of said central point.

[Claims 6 and 7 not printed in the Gazette.]

1,154,549. SAFETY APPLIANCE FOR STEAM-ENGINES. HOWARD M. ST. JOHN, Passaic, N. J. Filed June 5, 1914. Serial No. 843,264. (Cl. 136—15.)



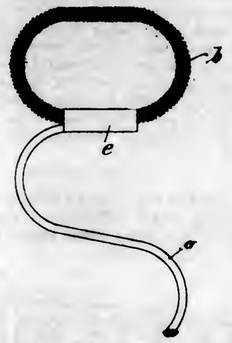
1. In combination, a water separator, a steam supply pipe leading therefrom, a tank adjacent said separator, a pipe leading from the separator to the tank, a rock shaft mounted in the tank, an arm extending from the rock shaft, a float on the end of the arm, a contact arm on the shaft outside the tank, two contacts on the outside of the tank with which the opposite ends of the contact arms coöperate to close a circuit, a rotating valve including a stem in the steam supply pipe, means including a weight for closing the valve when water raises the float in the tank and brings the contact arms in touch with the two contacts, and means including a solenoid, wires and a battery for releasing the valve to allow the weight to close the latter when the water rises in the tank and the contact arms and contacts close the circuit.

2. In combination, a water separator, a steam supply pipe leading therefrom, a tank adjacent said separator, pipes leading from the separator to the tank, a rock shaft mounted in the tank, an arm extending from the rock shaft, a float on the end of the arm, a contact arm on the shaft outside the tank, two contacts on the outside of the tank with which the opposite ends of the contact arms coöperate to close a circuit, a rotating valve including a stem in the steam supply pipe, a drum and ratchet wheel on the stem, a cable passing around the drum, a weight on the cable, a solenoid including a core adjacent the valve, a pivoted pawl engaging the ratchet, said core pivoted to the pawl, wires leading from the solenoid to the two contacts, and a battery connected to one of said wires, whereby when the float rises the circuit will be closed and lift the pawl and the weight will operate to close the valve.

1,154,550. COLLAR-SUPPORT. PAUL HERMANN THORANDT, Lichterfelde, near Berlin, and ALFRED KOHN, Charlottenburg, Germany. Filed Mar. 12, 1914. Serial No. 824,222. (Cl. 2—91.)

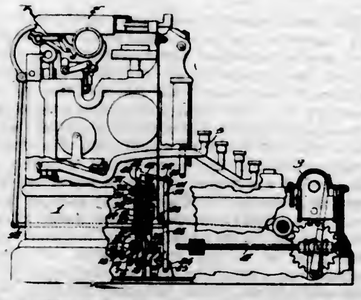
1. A collar support comprising a body portion composed of an elastic material capable of longitudinal compression and a yielding eyelet at each end of the body portion and positioned in the same plane as the body portion, said eyelets being composed of spiral springs of different elasticity from the body portion and both ends of each spring connected to said body portion.

2. A collar support comprising a resilient compressible body portion, a plurality of flexible, elastic terminals secured to the body portion, each of said terminals being composed of spiral springs, and a collar positioned within



the terminal and operating to join the ends of the spiral spring and to secure said spring to the body portion.

1,154,551. TYPE-WRITER CALCULATING ATTACHMENT. FERDINAND JOSEPH TILLMAN, St. Louis, Mo. Filed May 3, 1911. Serial No. 624,823. (Cl. 235—62.)



1. In combination with an ordinary typewriting machine having a series of number key levers, a calculating mechanism register mounted in said machine and having totalizer wheels, a series of devices geared to said wheels each adapted to operate the latter to a different extent, pistons carried by said devices, a cylinder surrounding each of said pistons, a compressed air supply for actuating said pistons in said cylinders and a valve for each of said cylinders to control the admission of pressure thereto, each of said valves being located beneath and adapted to be actuated by the depression of a particular number key-lever.

2. In combination with an ordinary typewriting machine, a calculating mechanism register having totalizing wheels, a series of devices geared to said wheels for actuating them, pistons connected to said devices, cylinders surrounding said pistons, a compressed air supply connected to each of said cylinders, valve means for controlling the entrance of air pressure from said supply to each of said cylinders, and a series of number keys for actuating said valve means.

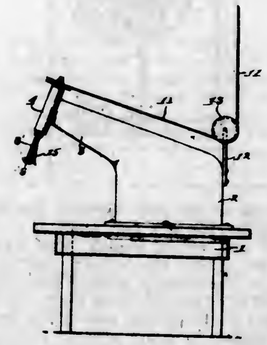
3. In a calculator, the combination with a register having totalizer wheels, of selective means for determining the extent of movement of said totalizing wheels, said selective means comprising a series of rack bars and a shaft adapted to be actuated by said bars, compressed air means for operating said selective means, and key levers for controlling said compressed air means, each of said rack bars being independently controlled.

4. The combination with an ordinary typewriting machine having key levers, of calculating mechanism including registering mechanism, power mechanism operated by compressed air, and controlled by said key levers, each of said key levers actuating a single valve, said power mechanism being adapted to operate said registering mechanism.

5. The combination with an ordinary typewriting machine having numberal key levers, of a calculating attachment coöperable with said key levers and comprising registering mechanism, means operated by fluid pressure for operating said registering mechanism, and means interposable between said key levers and said fluid pressure means whereby the calculating attachment may be made operative and inoperative at will.

[Claims 6 to 10 not printed in the Gazette.]

1,154,552. MOISTENING-MACHINE. WILLIAM C. TINGLE, Washington, Mo. Filed Apr. 15, 1914. Serial No. 832,119. (Cl. 12—1.)



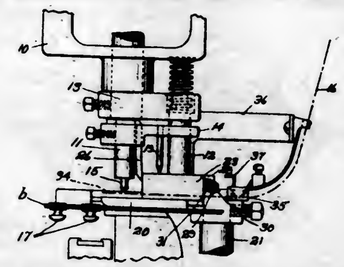
1. A machine for wetting only a limited portion of a shoe sole consisting in means directly engaging with the sole acted on for advancing it during a wetting operation, and means discharging adjacent the point of engagement of the advancing means with the sole for wetting the sole during its advancement.

2. A wetting machine for treating leather and like materials including a suitable support, a shaft, means on the shaft and directly engaging with the material acted on to advance it during a wetting operation, means discharging adjacent the point of engagement of the advancing means with the sole for wetting the material in a defined path, and means to drive the shaft.

3. In a machine for treating leather and the like materials, a body portion, an arm extending at an angle to said body, a shaft mounted for rotation at the free end of said arm, means operating to rotate said shaft, a corrugated wheel rotatable with said shaft and engageable with the material acted upon, the rotation of said wheel when in engagement with said material being adapted to advance the latter, a nozzle engageable with the material acted upon adjacent the said wheel, and means for supplying moisture to the material through said nozzle, during its advancement, as and for the purpose set forth.

4. A wetting machine for treating leather and the like materials including a body portion, an arm extending at an angle to said body portion, a hollow head at the free end of said arm, a sleeve rotatable within said head, a shaft carried by said sleeve and adjustable relatively to the said head, means actuatable to rotate said shaft, a corrugated wheel rotatable with said shaft and engageable with the material acted upon to advance the same during a wetting operation, a nozzle carried by said head and disposed adjacent said wheel, said nozzle being engageable with the said material, and means for supplying liquid to said nozzle to wet the material during its advancement, as and for the purpose set forth.

1,154,553. LACING-STUD-SETTING MACHINE. EDWARD E. WAKEFIELD, Providence, R. I., assignor to Hallyard Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Sept. 24, 1914. Serial No. 863,250. (Cl. 218—17.)



1. In a machine for applying studs to shoe uppers, means for feeding an upper, means for feeding a reinforcing strip a distance substantially equal to the feeding movement of the upper, a cutter member mounted to move with said strip feeding means, a second coöperating cutter member, and means for automatically adjusting said cutter members relative to each other.

2. In a machine for applying studs to shoe uppers, a plunger for feeding the shoe upper, means for feeding a reinforcing strip a distance substantially equal to the feeding movement of the upper, a cutter member mounted to move with said strip feeding plunger, a second coöperating cutter member, means for applying studs and severed sections of said strip to the upper and means for automatically adjusting said cutter members relative to each other.

3. In a machine for applying studs to shoe uppers, means for feeding an upper, means for feeding a reinforcing strip a distance substantially equal to the feeding movement of the upper, a cutter member mounted to move vertically with said strip feeding means, a second coöperating cutter member held against vertical movement, and spring actuated means for automatically adjusting said cutter members relative to each other to compensate for wear.

4. In a machine of the class described the combination with means for setting lacing studs, of a presser foot for holding the work while being operated upon, a presser foot spindle, a member actuated by said spindle in said presser foot, a cutter plate in said member through which the tape is fed, a second cutter plate coöperating with said first plate to sever the tape into predetermined lengths and means for adjusting said plates relative to each other.

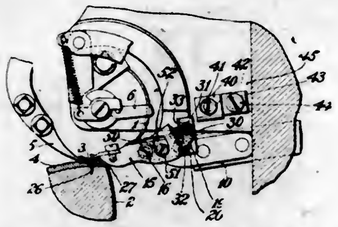
5. In a machine of the class described the combination with means for setting lacing studs, of a presser foot for holding the work while being operated upon, a presser foot spindle, a member actuated by said spindle to slide in said presser foot, a cutter plate in said member through which the tape is fed, a second cutter plate coöperating with said first plate to sever the tape into predetermined lengths, and spring actuated means for automatically adjusting said plates relative to each other to compensate for wear of said plate.

[Claim 6 not printed in the Gazette.]

1,154,554. INSEAM SHOE-SEWING MACHINE. FRANK H. WARREN, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 9, 1913. Serial No. 740,945. (Cl. 112—20.)

1. An inseam shoe sewing machine having, in combination, stitch forming devices including a curved hook needle, means for feeding the work, a tack pulling tool, mechanism operating to bring the tack pulling tool into engagement with a tack and against the shoe, said tack

pulling tool when brought against the shoe being deflected by the shoe and operating when so deflected to pull the tack, means for holding the tack pulling tool in its deflected position when the shoe is fed, and means acting automatically to release said holding means before the tack pulling tool is again moved toward the shoe.



2. An inseam shoe sewing machine having, in combination, stitch forming devices including a curved hook needle, means for feeding the work, a back gage, a back gage slide moved toward and from the work during the cycle of stitch forming operations, a tack pulling tool pivotally supported by the back gage slide and having an inclined work engaging surface which slides over the shoe when the slide is moved toward the shoe and deflects the tack pulling tool and causes it to pull a tack from the shoe, and a device for holding the tack pulling tool in its deflected position when the shoe is fed.

3. An inseam shoe sewing machine having, in combination, stitch forming devices including a curved hook needle, a tack puller, mechanism operating to bring the tack puller into engagement with a tack, and means operated by contact with the shoe for moving the tack puller to pull the tack.

4. An inseam shoe sewing machine having, in combination, stitch forming devices including a curved hook needle, a back gage slide moved toward and from the work during each cycle of stitch forming operations, and a tack pulling tool supported by the back gage slide and having an inclined work engaging surface which slides over the shoe when the slide is moved toward the shoe and deflects the tack pulling tool and causes it to pull a tack from the shoe.

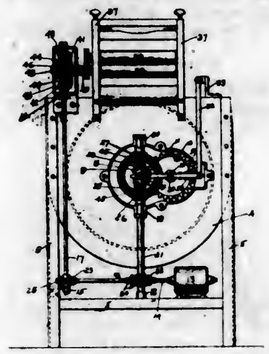
5. An inseam shoe sewing machine having, in combination, stitch forming devices including a curved hook needle, a back gage moved toward and from the work during each cycle of stitch forming operations, a tack puller mounted on the back gage, and means operated by contact with the shoe for moving the tack puller with relation to the back gage to pull tacks.

[Claims 6 to 14 not printed in the Gazette.]

1,154,555. GEARING. FRANK V. WIDDER, Chicago, Ill. Filed Sept. 27, 1912. Serial No. 722,773. (Cl. 74—50.)

1. In a device of the class described, the combination with a driving member, of a gear rotatable in both directions, a bevel gear connected thereto, bevel pinions freely mounted on the driving member and engaging with the beveled gear on diametrically opposite sides thereof, both of said pinions being provided with clutch teeth, a clutch member splined to the driving member and having teeth on each end adapted to engage with the teeth of the pinions, a pivoted lever to move the clutch member into engagement with the teeth of either one of the pinions and into neutral position, means carried by the said rotatable gear intermittently to engage the lever after not more than a complete rotation of the gear in either direction for moving the clutch member automatically in either direction.

2. In a device of the class described, the combination with a driving member, of a gear rotatable in both directions, a bevel gear connected thereto, bevel pinions freely mounted on the driving member and engaging with the beveled gear on diametrically opposite sides thereof, both of said pinions being provided with clutch teeth, a clutch member splined to the driving member and having teeth on each end adapted to engage with the teeth of the pinions, a pivoted lever to move the clutch member into engagement with the teeth of either one of the pinions and into neutral position, means on the rotatable gear intermittently to engage the lever for moving the clutch member automatically in either direction, and a lever for manually controlling the operation of the lever regardless of said automatic means.



3. In a device of the class described, the combination with a driving member, of a gear rotatable in both directions, a bevel gear secured thereto, bevel pinions freely mounted on the driving member and engaging with the beveled gear on diametrically opposite sides thereof, both of said pinions being provided with clutch teeth, a clutch member splined to the driving member and having teeth on each end adapted to engage with the teeth of the pinions, a pivoted lever to move the clutch member into engagement with the teeth of either one of the pinions and into neutral position, a gear meshing with the first mentioned gear having a fixed lateral projection carried thereby, and a spring mounted on each side of the lever in position to be engaged by the projection of said gear to reverse the clutch member.

4. In a device of the class described, the combination with a driving member, of a gear rotatable in both directions, a bevel gear secured thereto, bevel pinions freely mounted on the driving member and engaging with the beveled gear on diametrically opposite sides thereof, both of said pinions being provided with clutch teeth, a clutch member splined to the driving member and having teeth on each end adapted to engage with the teeth of the pinions, a pivoted lever to move the clutch member into engagement with the teeth of either one of the pinions and into neutral position, a gear meshing with the first mentioned gear having a lateral projection carried thereby, a spring mounted on each side of the lever in position to be engaged by the projection of said gear to reverse the clutch member, and a manually operable lever in connection with the pivoted lever to move the latter and to move the clutch member independently of the automatic engagement thereof by the projection of the gear.

5. In a device of the class described, the combination with a driving member, of a gear rotatable in both directions, a bevel gear secured thereto, bevel pinions freely mounted on the driving member and engaging with the beveled gear on diametrically opposite sides thereof, both of said pinions being provided with clutch teeth, a clutch member splined to the driving member and having teeth on each end adapted to engage with the teeth of the pinions, a pivoted lever to move the clutch member into engagement with the teeth of either one of the pinions and into neutral position, a gear meshing with the first mentioned gear having a lateral projection carried thereby, a spring mounted on each side of the lever in position to be engaged by the projection of said gear to reverse the clutch member, a manually operable lever in connection with the

pivoted lever to move the latter and to move the clutch member independently of the automatic engagement thereof by the projection of the gear, and means for positioning the manual lever to hold the other lever and the clutch member in neutral position or in engagement with either of the driving pinions.

1,154,556. HOSE-SUPPORTER. BERTHA S. ALSOP, New York, N. Y. Continuation in part of application Serial No. 485,078, filed Mar. 22, 1909. This application filed Oct. 13, 1911. Serial No. 654,469. (Cl. 241—1.)



1. A stocking supporter comprising two parallel, independently adjustable strips having coöperating fastening devices at the ends to adapt them to form bands to encircle the leg and stocking immediately above and below the knee respectively, flexible tapes connecting said strips at the points forming the sides of the bands and devices adjacent the upper ends of said tapes above the edge of the upper strip for attachment to corset straps.

2. A stocking supporter comprising two spaced bands for completely encircling the leg and stocking immediately above and below the knee respectively and elastic tapes connecting the bands at opposite sides thereof and means for attaching said bands to corset straps.

3. A stocking supporter comprising two independently complete bands for encircling the leg and stocking immediately above and below the knee respectively, tapes connecting the bands at opposite sides thereof and attaching devices elastically connected to the upper band for attachment to the corset straps.

4. A stocking supporter comprising two independently complete bands for encircling the leg and stocking immediately above and below the knee and each consisting of an inelastic velvet front strip and an elastic rear strip and flexible tapes connecting the bands at opposite sides adjacent the junction of the elastic and inelastic strips.

5. A stocking supporter comprising two independently complete bands each consisting of an elastic rear strip and an inelastic front strip, elastic tapes connecting the inelastic strips at the sides of the bands and means at the upper ends of the tapes for attachment to corset straps.

[Claims 6 to 20 not printed in the Gazette.]

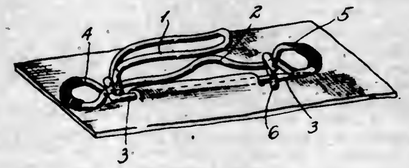
1,154,557. SUGAR PRODUCT AND METHOD OF PRODUCING THE SAME. JOHN JAMES ARMSTRONG, Honolulu, Hawaii, assignor of one-half to Alexander G. Hawes, Honolulu, Hawaii. Filed Dec. 13, 1913. Serial No. 806,420. (Cl. 127—6.)

1. The process of preparing raw sugar for shipment which consists of heavily compressing the raw sugar into the form of large blocks to materially reduce the volume per unit of weight of said sugar and to form a protective shell-like surface on said blocks.

2. As a new article of manufacture, a dense, homogeneous mass of raw sugar in the form of a relatively large block having a hard skin-like protective surface of the same material.

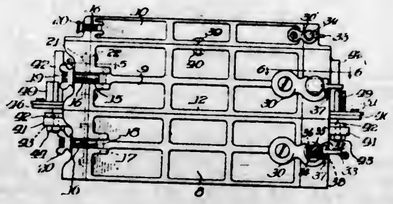
1,154,558. HOOK AND EYE. MARGARET C. AVERA, Los Angeles, Cal. Filed July 25, 1911, Serial No. 640,427. Renewed May 17, 1915. Serial No. 28,769. (Cl. 24—86.)

1. As a new article of manufacture, a member of a hook and eye fastener, comprising a single piece of resilient wire bent to form a body portion having securing eyes formed at each end thereof, said wire at one end adjacent one of the securing eyes also being bent to form a pin receiving hook, and at the end opposite the receiving hook being bent to form an eye engaging hook, one end of said wire terminating in a pin adapted to engage the pin receiving hook, said body portion also formed with a hump adapted to coöperate with the eye receiving hook when the same engages an eye member.



2. As a new article of manufacture, a member of a hook and eye fastener comprising a single piece of resilient wire bent to form a body portion formed of a single bar of wire, having securing eyes formed at each end thereof, whereby said eyes may be secured by means of thread to a garment in the usual manner, said wire at one end adjacent one of the securing eyes also being bent to form a pin receiving hook, one end of said wire terminating in a pointed pin adapted to engage the pin receiving hook.

1,154,559. SNAP-FLASK. OTTO R. BERGER, Cleveland, Ohio. Filed Mar. 6, 1914. Serial No. 822,818. (Cl. 22—107.)



1. A snap flask comprising separate side and end members, and a releasable locking hinge for said members comprising perforated projections at the end of one member and projections with pivot pins to receive the perforations at the end of the other member, each of said members being formed at the ends with a projection to aline the members with respect to each other when they are at right angles with the pins inserted in the perforation and being free from engagement with each other when the members are rotated oppositely, whereby the pins and perforations may be freely engaged and disengaged.

2. A snap flask comprising separate side and end members, one of which is formed at the end with spaced perforated lugs, and a projection between them forming a continuation of the inner face of the member, and the other member being provided with spaced lugs having pins projecting therefrom adapted to enter the perforations of the lugs of the other member and with a projection between the lugs whose rear face forms an extension of the inner side of the member, the said projections of the members being adapted to abut when the members are at right angles to each other with the pins of one member in the perforated lugs of the other, and the said projections being disposed to contact with the side of the other members to limit the movement of the members to a position at right angles to each other in one direction of movement but to permit the opposite rotation of the said members to a point where these lugs will not engage each other, thereby permitting the members to be separated by moving the perforated lugs out of engagement with the pins.

3. A snap flask comprising a pair of side and a pair of end members, means to connect one side and one end member together at right angles to each other, a sepa-

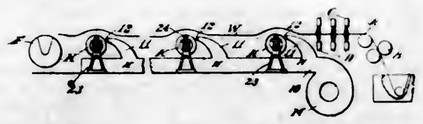
rable locking hinge for connecting the two side and end members previously connected together, which is divided by backward rotation and a lateral movement of the parts in this rotated position, and a releasable locking latch affixed to the members for connecting the said connected pairs together at the corner opposite the hinge connection.

4. A snap flask comprising separate side and end members, means to releasably connect each side member with an end member and at right angles thereto, a releasable locking hinge for connecting the two members thus formed when they are at right angles, which is divided by backward rotation and a lateral movement of the parts in this rotated position, and a releasable locking latch for securing the hinged members together.

5. In a flask, the combination of separable side and end members, of a hinged connection therefor comprising lugs at the ends of the side and end members, the lugs of one of the members being each provided with a perforation and the lugs of the other member being each provided with a projection adapted to be inserted through the perforations and a locking projection on each of the members adapted to permit the lateral movement of one member with respect to the other when they are in one position and to prevent the lateral movement when they are at right angles to each other.

[Claims 6 and 7 not printed in the Gazette.]

1,154,560. DRYING-MACHINE. ASA T. BRYANT, Lawrence, Mass. Filed Jan. 23, 1915. Serial No. 4,004. (Cl. 34—48.)



1. In a machine for drying paper having delivery and receiving mechanism, the combination of one or more air delivery ducts having mouths in proximity to and under a plane between the delivery and receiving mechanism, with means for blowing air through said ducts, and curved deflecting means adjoining and below the mouth of each duct.

2. In a machine for drying paper having delivery and receiving mechanism, the combination of one or more air delivery ducts having mouths in proximity to and under a plane between the delivery and receiving mechanism, with means for blowing air through said ducts, and curved deflecting means adjoining and below the mouth of each duct together with one or more deflecting battens attached to each deflecting means.

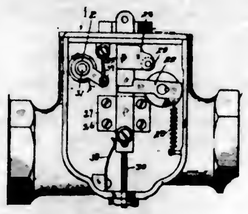
3. In a machine for drying a web having delivery and receiving mechanism, the combination of one or more air delivery ducts having mouths in proximity to and under the web, with means for blowing air through said ducts, and adjustable deflecting means adjoining and below the mouth of each duct, together with a pivoted adjustable lower lip for each mouth.

4. In a machine for drying paper having delivery and receiving mechanism, the combination of one or more air delivery ducts having mouths in proximity to and under a plane between the delivery and receiving mechanism, with means for blowing air through the mouths of said ducts, and a revoluble deflecting cylinder which carries one or more battens of different forms adjoining and below the mouth of each duct.

5. In a machine for supporting a web having delivery and receiving mechanism, the combination of one or more air delivery ducts having mouths in proximity to and under said web, with means for blowing air through the mouths of said ducts, and a vertically adjustable revoluble cylinder adjoining and below the mouth of each duct, each cylinder having on its curved surface one or more battens of different forms.

[Claims 6 and 7 not printed in the Gazette.]

1,154,561. GAS-SHUT-OFF VALVE. GEORGE L. BURLINGAME, Chicago, Ill. Filed May 19, 1913. Serial No. 768,682. (Cl. 137—92.)



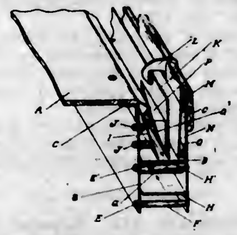
1. A shut-off valve comprising a gate, a manually operable device operatively associated with the gate for closure thereof, automatic gate closing mechanism operable without operating said manually operable device while so associated, and a device comprising a fusible member for normally holding said mechanism inoperative, the operation of said manually operable device directly closing said gate without disturbing any of said automatic gate closing mechanism.

2. A shut-off valve comprising a gate, an arm connected thereto, a manually operable member B for operating said arm and gate to close the valve, automatic gate closing mechanism operable without operating said manually operable member B, a device comprising a fusible member for normally holding said mechanism inoperative, the operation of said manually operable member B directly closing the valve without affecting said automatic mechanism.

3. A shut-off valve comprising a pivotally supported gate, a holding means comprising an arm and a fusible member, a gate actuating element 33 normally held ineffective by said holding means, a manually operable slidably mounted member, an arm 22 carried by said gate, engaging means carried by said manually operable member for engaging and directly forcing said gate arm to close the valve without actuating said holding means or gate actuating element 33.

4. A shut-off valve comprising a valve gate, a device comprising a fusible member, a gate actuating spring member normally held ineffective by said device, a manually operable member normally operatively related to said gate for closing said valve gate, said device and gate actuating spring, and said manual member independently operable for closing the valve gate without disturbing the other.

1,154,562. TABLE FOR MAIL AND THE LIKE. JAMES T. COWLEY, Scituate, Mass., assignor to The Lamson Company, (formerly Lamson Consolidated Store Service Company,) Boston, Mass., a Corporation of New Jersey. Filed Sept. 9, 1912. Serial No. 719,357. (Cl. 101—80.)



1. In a mail handling table, in combination, a platform and mechanism for moving sorted mail pieces in a determined path operatively disposed with respect to said platform, means for normally tilting said mail pieces toward one definite and determined side of said path, and means adapted to co-act with gravity for thereafter maintaining said pieces inclined with respect to the horizontal, said last mentioned means co-acting with said first mentioned means, when the latter is tilting a mail piece, to prevent a flat-wise disposition of said piece even at such time.

2. In a mail handling table, in combination, a platform and mechanism, including a movable part, for advancing mail pieces along a determined path operatively disposed with respect to said platform, said mechanism having a guide for normally tilting said mail pieces toward one definite and determined side of said path, and substantially stationary means adapted to co-act with gravity for immediately thereupon supporting, and maintaining so supported, said mail pieces inclined to said movable part.

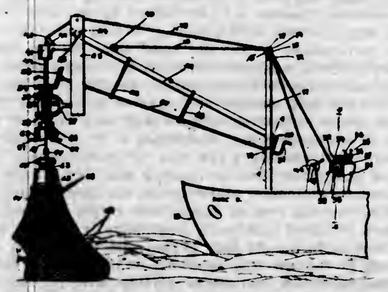
3. In a mail handling table, in combination, a platform and mechanism for moving mail pieces in a determined path operatively disposed with respect to said platform, said mechanism including a support against which said mail pieces may lean at an angle to the horizontal, means for inclining said pieces toward said support, and means for substantially preventing up-ending of said mail pieces.

4. In a facing or sorting table, in combination, a platform and mechanism for moving articles in a determined path operatively disposed with respect to said platform, said mechanism including a plate inclined to the horizontal against which said articles may lean, a belt for conveying said articles and article tilting means overhanging a portion, at least, of said belt, for directing said articles over toward said plate, said tilting means having a surface thereof sloped up at an angle to a vertical plane passing through the edge of the belt which is adjacent said plate, an upper portion of said surface being nearer to said plane than is a lower portion of said surface.

5. In a facing or sorting table, in combination, a platform and mechanism for moving articles in a determined path operatively disposed with respect to said platform, said mechanism including a plate inclined to the horizontal against which said articles may lean, a belt for conveying said articles, and article tilting means overhanging a portion at least of said belt, for directing said articles over toward said plate, said plate having a ledge overhanging a portion of the articles leaning theretoward.

[Claims 6 to 8 not printed in the Gazette.]

1,154,563. CASTING DEVICE FOR FISH-NETS. HOWARD F. DORSEY, Lockport, La. Filed Oct. 30, 1911. Serial No. 657,632. Renewed Mar. 11, 1914. Serial No. 824,046. (Cl. 43—9.)



1. The combination in a device such as described, of a supporting member, an adjustable boom carried thereby, a rotary casting head supported by the boom, and means for rotating said head.

2. The combination in a device such as described with a supporting member, of a boom carried thereby, a rotary casting member secured to the boom, a shaft journaled in the boom and means for rotating the shaft and causing the rotation of the casting member therewith.

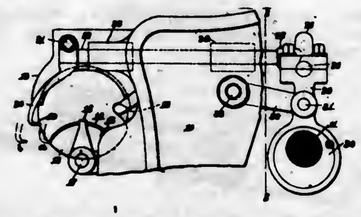
3. The combination with a supporting member in a device such as described, of an adjustable boom, a head secured to the boom, a rotary casting member carried by the head, a shaft journaled upon the boom, means for rotating the shaft and means for rotating the casting member upon the rotation of the shaft.

4. The combination with a supporting member comprising a pair of uprights, a boom pivoted between said uprights, a shaft carried by the boom, a cross head carried by the boom, a casting member rotatable upon the cross head, means rotatably connecting the casting member with the shaft, arms formed upon the casting member and a net supported by the arms.

5. The combination in a device such as described, of a rotatable casting member, means for rotating said casting member, a head, a net secured to the head, arms formed upon the head and engaging the casting member and a supporting rod for said net movable through the casting member.

[Claims 6 to 8 not printed in the Gazette.]

1,154,564. LOOP-SPREADER FOR SEWING-MACHINES. EDWARD ERICKSON, Lynn, Mass., assignor to Victor Shoe Machinery Co., Boston, Mass., a Corporation of Massachusetts. Filed July 17, 1914. Serial No. 852,094. (Cl. 112—20.)



1. In a sewing machine, the combination of a needle, a loop spreader, an eccentric, a link actuated thereby, a pivot for the link intermediate said eccentric and its outer end, and connections between the outer end of said link and the spreader.

2. In a sewing machine, the combination of a needle, a loop spreader, a rock shaft to carry the spreader, an eccentric; a link actuated thereby movable in a plane at an angle to the plane of the rock shaft, and connections between the link and the rock shaft.

3. In a sewing machine, the combination of a needle, a rock shaft, a spreader actuated by the rock shaft to open the loop on the needle, an eccentric, a link connecting the eccentric and the rock shaft, and a pivot for the link whereby the rock shaft is moved longitudinally.

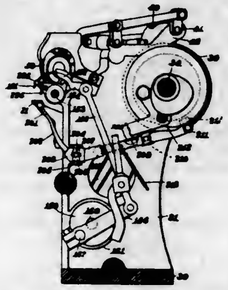
4. In a sewing machine, the combination of a needle, a rock shaft mounted to slide longitudinally, a spreader secured to the rock shaft to open the loop on the needle, a stud carried by the rock shaft and at an angle thereto, an eccentric, a link connecting the eccentric and the stud, and a pivot on the link whereby the rock shaft is moved longitudinally.

5. In a sewing machine, the combination of a needle, a rock shaft mounted to slide longitudinally, a spreader secured to the rock shaft to open the loop on the needle, a stud carried by the rock shaft and at an angle thereto, an eccentric, a link connecting eccentric and the stud, and a link pivotally connected at one end to said eccentric link and having its opposite end pivoted on a fixed part of the machine.

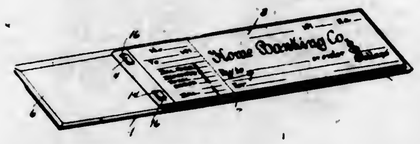
1,154,565. COMBINED NEEDLE-CARRIER AND LOOP-HOLDER FOR SEWING-MACHINES. EDWARD ERICKSON, Lynn, Mass., assignor to Victor Shoe Machinery Co., Boston, Mass., a Corporation of Massachusetts. Original application filed Dec. 28, 1912, Serial No. 739,056. Divided and this application filed July 17, 1914. Serial No. 852,096. (Cl. 112—120.)

1. In a sewing machine, an oscillating needle carrier, a hook projecting from said carrier, and a looper for carrying the thread around said needle and hook.

2. In a sewing machine, an oscillating carrier having a needle and a hook projecting therefrom, said hook projecting beyond the point of the needle, and a looper having means for moving it around both the needle and said hook.



1,154,566. POCKET CHECK-BINDER. WILLIAM G. EXLINE, Cleveland, Ohio. Filed Aug. 27, 1913. Serial No. 786,906. (Cl. 129—25.)



1. In a fastener for detachably securing paper pads to binders, a soft flexible metal strip, slitted in parallel longitudinal lines adjacent to its extremities and each pair of parallel slits connected by a transverse slit intermediate of their ends, the material thus separated therefrom bent upwardly and downwardly at opposite ends of each pair of slits from the body of said strip to form tongues, the extremities of said strip extending beyond the outer tongues.

2. In a fastener for detachably securing paper pads in binders, a flexible metal strip, slitted in pairs of parallel longitudinal lines and in transverse lines intermediate of the ends of the pairs of parallel slits, adjacent to the extremities of said strip, the flat material thus separated therefrom, bent in opposite direction and at right angles to said strip to form transversely placed tongues, the tongues nearest the extremities of said strip, being longer than the other tongues.

3. In a fastener for the purpose described, a flat flexible metal strip slitted in parallel longitudinal lines near each end and each slitted portion transversely slitted, thus forming tongues; the tongues at each end of the fastener extending upwardly and the remaining tongues extending downwardly.

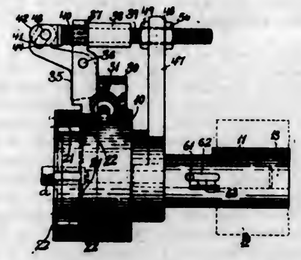
4. The combination with a perforated pad and a binder comprising a back portion, stiffening member and a flexible lining of a fastening device therefor, comprising a flexible metal plate, arranged transversely of the binder, downwardly bent integral tongues on said strip passing through and bent under said stiffening member and upwardly bent integral tongues on said strip inserted through said lining, said upwardly bent portions of said strip positioned near its outer ends and near the edges of said binder and the outer edges of said back portion cemented over the extremities of said strip, the said upwardly extending tongues adapted to pass through the perforations in said pad and to be bent thereover.

5. In a fastener for connecting rigidly a paper pad and a binding therefor, a flexible body therefor and an upwardly extending integral device adjacent to each end for engaging the pad and downwardly extending integral devices spaced inwardly from the upwardly extending devices for attachment to said binding.

[Claims 6 to 8 not printed in the Gazette.]

1,154,567. [WITHDRAWN.]

1,154,568. SELF-OPENING DIE. CORNELIUS J. HARRINGTON, Boston, Mass., assignor to Harrington Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Mar. 7, 1914. Serial No. 823,112. (Cl. 10—96.)



1. A self-opening die comprising a die body having a radially extended segment, chasers mounted in said die body, a cam ring having means for operating the chasers, a spring for rotating said cam ring to open the chasers, a latch carried by the cam ring exteriorly of the die body to lock the cam ring to the segment on said die body, and means for releasing the latch including a member centrally located in the die body to be engaged by the work.

2. A self-opening die comprising a die body having a boss or segment extending from its periphery, chasers mounted in said die body, a cam ring located in a groove on said die body and having means for operating the chasers, a spring for rotating said cam ring to open the chasers, a latch carried by the cam ring exteriorly of the die body to lock the cam ring to said boss or segment on the die body, a movable member arranged in the die body to be engaged by the work, and connections between said member and the latch for releasing the latch.

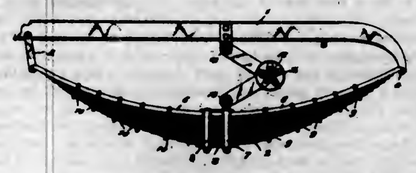
3. A self-opening die comprising a die body having a boss or segment extending from its periphery, chasers mounted in said die body, a cam ring in the die body having means for operating the chasers and also having a radially extending arm, a spring for rotating said cam ring to open the chasers, a latch carried by the arm of the cam ring exteriorly of the die body to lock the ring to the boss or segment of the die body with the chasers in closed position, a member arranged in the axis of the die body and moveable longitudinally, an arm projecting radially from said member and adapted to oscillate thereabout, and a connection between said latch and said arm.

4. A self-opening die, comprising a die body, approximately radial chasers, a cam ring for operating said chasers, a spring for partially rotating said ring to open the chasers, an adjustable keeper on the die body, a latch carried by the cam ring to engage said keeper and hold the chasers in closed position, a longitudinally movable member located in the die body in line with the work, a slide carried by the cam ring exteriorly of the die body for operating said latch, and means rotatable with the cam ring and connecting said slide and said member.

5. A self-opening die, comprising a die body, approximately radial chasers, a cam ring for operating said chasers, a spring for partially rotating said ring to open the chasers, a keeper on the die body, a latch pivoted to the cam ring to engage the keeper and hold the chasers in closed position, a slide movable longitudinally of the die body and mounted on the cam ring exteriorly of said die body, a pin and slot connection between the latch and the slide, and work-operated means for moving said slide to release the latch.

[Claims 6 to 10 not printed in the Gazette.]

1,154,569. SUSPENSION DEVICE FOR VEHICLES. EDWARD V. HARTFORD, Deal, N. J. Filed Mar. 1, 1912. Serial No. 680,849. (Cl. 21—103.)



1. A suspension device for vehicles comprising a plurality of leaves having its longest leaf of greater thickness than the remaining leaves and provided with means for securing it to one portion of a vehicle, a multiplicity of leaves much thinner than the master leaf and of progressively decreasing length, disposed upon the convex surface of said master leaf means for connecting all the leaves at their center and additional means for connecting a plurality of the leaves at a plurality of points intermediate their center and ends.

2. A spring comprising a master-leaf and a plurality of very thin supplemental leaves progressively shorter than said master-leaf and clipped thereto, so as to insure positive co-action therewith, said supplemental leaves being disposed beneath said master-leaf, the arrangement thereof being such as to render certain said supplemental leaves operative in sequence, the number brought into action and the extent of operation being governed by the impact delivered to the spring.

3. A suspension device for vehicles comprising a master-leaf adapted to be pivoted to a vehicle at one end, its other extremity having a link connection with said vehicle part, a plurality of supplemental leaves of much thinner material and progressively shorter than said master-leaf, disposed upon one surface thereof means for maintaining all of said leaves in frictional contact, said means consisting of a plurality of clips disposed intermediate of the ends of said master spring, whereby the oscillation of said spring and the movement of its component leaves with relation to each other, and the frictional resistance therebetween, will be governed by the force of an impact delivered thereto, and means for modifying the vibration of the spring under certain conditions.

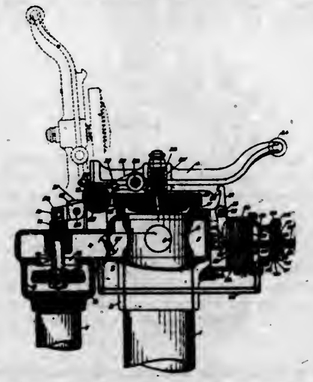
4. A spring for vehicles comprising a master-leaf, and a multiplicity of progressively shorter and thinner leaves of greater individual resiliency than said master-leaf and disposed upon one surface thereof, whereby the period of oscillation of the component spring will be a modified component of the leaves brought into operation by the force of an impact upon the spring.

5. A suspension device for vehicles, comprising a master leaf adapted to be pivoted to the vehicle at one end, its other extremity having a link connection with said vehicle part, a plurality of supplemental leaves of thinner material and progressively shorter than said master leaf, and means for maintaining all of said leaves in engagement, said means consisting of a pair of clamps located intermediate of the ends of said master leaf and embracing all of said leaves, and a plurality of clips of graduated sizes located intermediate of each end of said master leaf and said centrally located clamps, said clips being supported by said master leaf and embracing certain of said supplemental leaves, said clamps and said clips coöperating to maintain all of said leaves in close frictional contact.

[Claims 6 to 8 not printed in the Gazette.]

1,154,570. PNEUMATIC-DESPATCH-TUBE APPARATUS. CHARLES P. HIDDEN, Winchester, Mass., assignor to The Lamson Company, Boston, Mass., a Corporation of New Jersey. Filed Nov. 23, 1912. Serial No. 733,078. (Cl. 243—14.)

1. Pneumatic transmission apparatus comprising a member having a bias for a determined position with respect to other parts of said apparatus, and time element mechanism for controlling the return of said member to said position after displacement therefrom, said mechanism including an instrumentality, displaceable in a given direction by fluid pressure, means to supply said fluid pressure, and coöperating vacuum forming means having a vacuum forming chamber therein provided with auxiliary means to admit pressure fluid at a determined rate to said chamber and co-acting with said instrumentality when the latter is moved in a given direction, for retarding said movement to time the return of said member, said mechanism also including means to hold said member against return to said position thereof until said instrumentality has reached a determined point in its path of travel in said given direction.



2. Pneumatic transmission apparatus comprising a valve having a bias for a determined position with respect to other parts of said apparatus, and time element mechanism for controlling the return of said valve to said position after displacement therefrom, said mechanism including an instrumentality displacement in a given direction by fluid pressure means to supply said fluid pressure, and coöperative vacuum forming means having a vacuum forming chamber therein provided with auxiliary means to admit pressure fluid at a determined rate to said chamber and co-acting with said instrumentality, when the latter is moved in a given direction, for retarding such movement to time the return of said valve, said mechanism also including means to hold said valve against return to said position thereof until said instrumentality has reached a determined point in its path of travel in said given direction.

3. A transmission system comprising a source of compressed air, a member having a bias for a determined position, and time element mechanism for controlling the return of said member to said position after displacement therefrom, said mechanism including an instrumentality displaceable in a given direction by compressed air from said source of the same and coöperating vacuum forming means co-acting with said instrumentality when the latter is moved in a given direction, for retarding such movement to properly time the same.

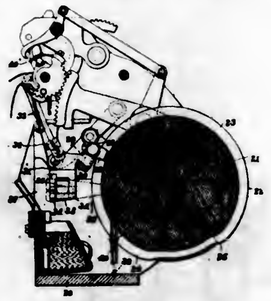
4. A transmission system comprising a source of compressed air, a valve having a bias for a determined position, and time element mechanism for controlling the return of said member to said position after displacement therefrom, said mechanism including a latch and an instrumentality for actuating said latch, said instrumentality being adapted for displacement by compressed air from said source of the same, and coöperating vacuum forming means co-acting with said instrumentality when the latter is moved in a given direction, for retarding such movement to properly time the same.

5. In pneumatic despatch tube apparatus, a transmission tube and means for establishing a propulsive fluid pressure in said tube, in combination with a coöperating time element mechanism for said apparatus, said mechanism comprising a part movable by said fluid pressure and

means for retarding, by an opposing fluid pressure of opposite sign, a movement of said part, and means controlled by said mechanism and co-acting with a part of said fluid pressure establishing means to dis-establish said propulsive fluid pressure after said movable part has traveled a determined distance while subjected to the action of said retarding means.

[Claims 6 and 7 not printed in the Gazette.]

1,154,571. LOOPER MECHANISM FOR SEWING-MACHINES. LAWRENCE E. JOHNSON, Winthrop, and EDWARD ERICKSON, Lynn, Mass., assignors to Victor Shoe Machinery Co., Boston, Mass., a Corporation of Massachusetts. Filed Apr. 24, 1914, Serial No. 834,528. Renewed Feb. 18, 1915. Serial No. 9,211. (Cl. 112—20.)



1. In a shoe-sewing machine, the combination with a looper; of a support therefor adapted to be tilted in curved paths the planes of which are perpendicular to each other and consisting of two arms angularly disposed relatively to each other, one of said arms being provided with a substantially vertical cylindrical boss at the end thereof; a block provided with a pivot member positioned in said cylindrical boss; two alined rollers on opposite sides of said block; another roller on an intermediate face of said block; and a revoluble member having a peripheral cam path acting upon the intermediate roller and peripheral cams acting upon said alined rollers.

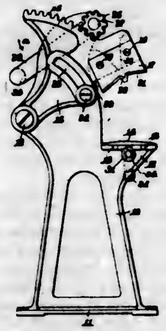
2. In a shoe-sewing machine, the combination with a looper; of a support therefor adapted to be tilted in curved paths the planes of which are perpendicular to each other and provided with a rearwardly extending arm; a block pivotally mounted upon said arm with its pivot extending transversely of said arm and in the same vertical plane therewith; a revoluble member having a cam provided with a peripheral cam path and a peripheral cam throw; and oppositely disposed alined rollers and an intermediate roller perpendicular to the axis of said alined rollers respectively mounted on said block and coacting with said peripheral cam throw and said peripheral cam path.

3. In a shoe-sewing machine, the combination with a looper; of a support therefor adapted to be tilted in curved paths the planes of which are perpendicular to each other and provided with a rearwardly extending arm; a block pivotally mounted upon said arm with its pivot extending transversely of said arm and in the same vertical plane therewith; a revoluble member having a cam provided with a peripheral cam path and a peripheral cam throw; and rollers mounted on said block and coacting with said cam path and throw, the roller in said cam path having a curved periphery.

4. In a shoe-sewing machine, the combination with a looper; of a two-part support therefor connected together by a horisontal pin and adapted to be tilted in curved paths the planes of which are perpendicular to each other, said support being provided with a rearwardly extending arm; a block pivotally mounted upon said arm with its pivot in the same plane with and at an angle to said pin; a revoluble member having a cam provided with a peripheral cam path and a peripheral cam throw; and rollers mounted on said block and coacting with said cam path and throw to move said looper in an orbit.

5. In a shoe-sewing machine, the combination with a looper; of a bifurcated support therefor; an oscillating member having a flattened end positioned in said bifurcated support and connected thereto by a pivot pin perpendicular to the axis of said support; a block provided with a pivotal shank positioned in said support in the same vertical plane with said pivot pin but at an angle thereto; rollers on said block perpendicular to each other; and cam members coacting with said rollers for simultaneously moving said support about its pivot and said oscillating member about its axis.

1,154,572. SHOE-HEEL-REDUCING DEVICE. LAWRENCE E. JOHNSON, Winthrop, and EDWARD ERICKSON, Lynn, Mass.; said Erickson assignor to Victor Shoe Machinery Company, Boston, Mass., a Corporation of Massachusetts. Filed Mar. 27, 1915. Serial No. 17,945. (Cl. 12—42.)



1. In a device of the class described, the combination of a frame having a forwardly extending work supporting shelf; a member pivoted to the rear of said frame and adapted to be moved toward said support; a knife on the side face of said pivoted member with its cutting edge perpendicular to the pivot of said member; adjustable means at the edge of said work support for positioning the work; and means for moving said member about its pivot and causing said knife to coact with said support.

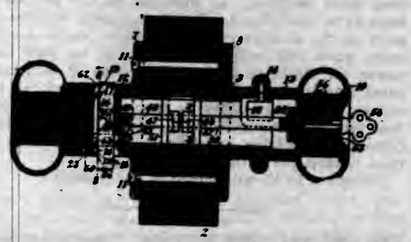
2. In a device of the class described, the combination of a work support; a pivoted member movable toward said support and provided with a gear segment; a pinion meshing therewith; means for revolving said pinion; and a knife on a side face of said member with its cutting edge below the under side of said member and adapted to coact with the upper face of said work support at some distance from its edge.

3. In a device of the class described, the combination of a work support; a pivoted member movable toward said support and provided with a gear segment; a pinion meshing therewith; means for revolving said pinion; a stop extending through a slot in said member to limit the upward movement thereof; and a knife on a side face of said member perpendicular to the pivot thereof adapted to coact with the upper face of said work support at some distance from its edge.

4. In a device of the class described, the combination of a work supporting member; a removable plate of soft metal thereon; a cutting knife; a pivoted member supporting said knife with its pivot perpendicular to the cutting edge of said knife; and means for moving said member to bring said knife into coacting relation with said plate.

5. In a device of the class described, the combination of a work supporting member; a removable plate of soft metal thereon; a cutting knife; a pivoted member supporting said knife with its pivot perpendicular to the cutting edge of said knife and having a slot therein; a stop member in said slot; and means for moving said knife into coacting relation with said plate.

1,154,573. DOOR-LOCK. WILLIAM F. KEMBLE and CHARLES R. UNDERHILL, Yonkers, N. Y. Filed Aug. 3, 1908. Serial No. 446,585. (Cl. 70—91.)



1. A door-lock, comprising inner and outer door knobs, door-latching means, and controlling means between said knobs and the door-latching means for permitting said door-latching means to be operated by either of said knobs at times and for preventing the operation of said door-latching means by either of said knobs at other times, said controlling means including a single sliding element for controlling all of said relations, which element in all of its positions is adapted to be brought into operative relation with both knobs.

2. A door-lock, comprising inner and outer door-knobs, door-latching means, and controlling means between said knobs and the door-latching means for bringing either of said knobs into operative relation with said door-latching means and for putting either of said knobs out of operative relation with said means, said controlling means embodying between the knobs and the door-latching means connecting devices mounted to turn about the axis of the knobs and having no movement lengthwise of said axis.

3. A door-lock, comprising inner and outer door-knobs, door-latching means, and controlling means between said knobs and the door-latching means for bringing the inner knob only or both of said knobs into operative relation with said door-latching means and for putting both of said knobs out of operative relation with said means said controlling means including a single push-pin controlling all of said relations.

4. A door-lock, comprising inner and outer door-knobs, door-latching means, and controlling means between said knobs and the door-latching means for bringing the inner knob only or both of said knobs into operative relation with said door-latching means and for putting both of said knobs out of operative relation with said means said controlling means including a single push-pin at the inner side of the door and controlling all of said relations.

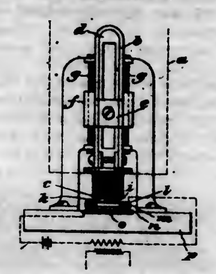
5. A door-lock, comprising inner and outer door-knobs, door-latching means, and controlling means between said knobs and the door-latching means for bringing the inner knob only or both of said knobs into operative relation with said door-latching means and for putting both of said knobs out of operative relation with said means said controlling means including a single push-pin carried by the inner knob and controlling all of said relations.

[Claims 6 to 15 not printed in the Gazette.]

1,154,574. REPEATER. CHARLES D. LANNING, Dorchester, Mass. Filed Dec. 13, 1905. Serial No. 291,581. (Cl. 179—171.)

1. In a telephonic apparatus, a variable resistance medium comprising an annular electrode having an annular convex face and a coöperating annular electrode having an annular concave face of greater curvature.

2. In a telephone apparatus, a receiving circuit, a magnet therein, a variable resistance medium comprising an annular electrode having a convex surface and a coöperating annular electrode having a concave surface of greater curvature, the convex and concave surfaces of said electrode bearing one upon the other, an armature in magnetic relation to said magnet and connected with one of said electrodes for varying the pressure contact between them and hence the conductivity thereof.



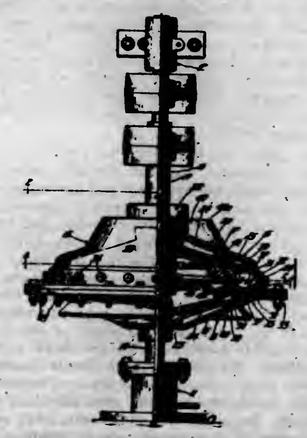
3. In a telephone apparatus, a receiving circuit, a magnet therein, a variable resistance medium comprising a pair of annular electrodes, one having a convex surface bearing against the surface of the other electrode, and an armature in magnetic relation to said magnet and connected with one of said electrodes for varying the pressure contact between them and hence the conductivity thereof.

4. In a current varying instrument a fixed annular electrode, a movable annular electrode, one of said electrodes having a convex bearing surface, an armature to said movable electrode, a magnet adapted by its action upon said armature to maintain said electrodes in contact, and means to vary the magnetic pull of said magnet.

5. In a current varying instrument a magnet, a movable electrode, a fixed annular electrode between the movable electrode and the magnet, and a magnet connection between the movable electrode and the magnet passing through the said annular electrode.

[Claims 6 to 17 not printed in the Gazette.]

1,154,575. CENTRIFUGAL SEPARATOR. JEAN MCCALLUM, Hurley, N. Mex., assignor of two-ninths to Willis W. Jourdin and two-ninths to Arnold W. Harris. Filed Mar. 11, 1914. Serial No. 823,886. (Cl. 83—87.)



1. In a device of the character described, a rotatable member including a chamber radially open and unobstructed toward the axis of said member, means for supplying pulp or the like to a separation zone at the inner part of said chamber, means for continuously agitating the pulp in the separation zone at the inner part of said

chamber so that the heavier particles are continuously freed to be centrifugally thrown into the outer parts of the chamber to form a mass of consolidated material occupying said chamber and extending inwardly to said separating zone, means for continuously restrictedly discharging said solid cake or consolidated mass of heavy particles embodying a restricted orifice at outer part of said chamber, whereby the consolidated mass of heavy particles is maintained continuously between the separation zone and discharge orifice, and means independent of the pulp agitating means whereby independent fluid is applied in the form of strong jets at the outer part of said consolidated mass, immediately adjacent to the discharge orifice, said means being adapted to deliver the jets substantially outwardly and with such force as to break up the consolidated mass immediately in front of the orifice without breaking up the mass as a whole.

2. In a device of the character described, a rotatable member including a chamber radially open and unobstructed toward the axis of said member, means for supplying pulp or the like to a separation zone at the inner part of said chamber, means for continuously agitating the pulp in the separation zone so that the heaviest particles are continuously freed to be cetrifugally thrown into the outer parts of the chamber to form a mass of consolidated material occupying said chamber and extending inwardly to said separating zone, means forming a discharge orifice for continuously restrictedly discharging said consolidated mass of heavy particles from the outer part of said chamber whereby the consolidated mass of heavy particles is maintained continually between the separation zone and discharge orifice, and means independent of the pulp agitating means whereby independent fluid is applied in the form of strong jets at the outer part of said consolidated mass, immediately adjacent to the discharge orifice, said means directing the jets substantially outwardly and being adapted to break up the outer portion only of the consolidated mass.

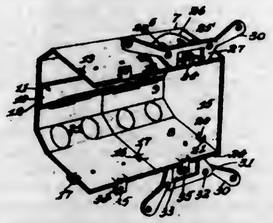
3. In a device of the character described, a rotatable member including a chamber with a discharge orifice at its outer periphery, said chamber being radially open and unobstructed toward the axis of said member, means for supplying pulp or the like to a separation zone at the inner part of the said chamber, means for continuously agitating the pulp in the separation zone at the inner part of the chamber, said means acting on the pulp directly at the inner part of the chamber so that the heavier solid particles of the pulp are continuously freed to be centrifugally thrown into the outer part of said chamber to form therein a consolidated mass of heavy particles, and means independent of said agitating means for fluidising the consolidated mass to facilitate its discharge, said means embodying means for applying jets of fluid to the outer peripheral portions of the mass directed toward the discharge orifice.

4. In a device of the character described, a member including an annular chamber rotatable about an axis, said chamber being radially open and unobstructed toward said axis, said chamber having axially spaced walls converging toward each other at the outer periphery of the chamber, there being restricted outlet orifices at the outer periphery of the chamber, the inner periphery of the chamber being entirely open, means for supplying pulp or the like to the inner open periphery of the chamber, mechanical means to continuously agitate the pulp at the inner open periphery of the chamber so that the heavier solid particles are freed to be centrifugally thrown outwardly into the outer portions of the chamber to form a consolidated mass of heavy particles, and means independent of the pulp agitating means for continuously fluidising the outer peripheral portions of said consolidated mass, said means including means for injecting jets of fluid into the outer portions of said chamber at the converging walls of the chamber, said jets being directed outwardly toward the discharge orifices.

5. In a device of the character described, a member including an annular chamber rotatable about an axis, said chamber being radially open and unobstructed toward said axis, its axially spaced walls adjacent its inner periphery diverging outwardly from each other to approximately the center of the chamber and then converging toward each other the outer periphery of the chamber, there being restricted outlet orifices at the outer periphery of the chamber, means for feeding pulp to the open inner periphery of the chamber, a rotating scrubber wheel immediately adjacent the open inner periphery of the chamber adapted to agitate the pulp over the whole of the open inner periphery, so that the heavier particles are freed to be centrifugally thrown outwardly into the outer parts of the annular chamber to form therein a consolidated mass, and means independent of the pulp feeding means for fluidising the outer portions of said consolidated mass to facilitate its discharge through the outlet orifices, said means including means for injecting jets of fluid into the outer portions of said chamber at points in the outer converging walls thereof and in outward directions toward the outlet orifices.

[Claims 6 to 12 not printed in the Gazette.]

1,154,576. SWITCH-BOX. CYRIL C. MAISON and ROLAND H. ROBINSON, St. Louis, Mo., assignors to Allino Switch Box Manufacturing Company, a Corporation of Missouri. Filed Feb. 24, 1914. Serial No. 820,473. (Cl. 247—5.)



1. A switch box comprising a body portion consisting of two sections the contacting edges arranged to overlap, the edges of the sides of said sections provided with hooks and slots whereby one body portion may be attached to the other; adjustable detachable fastening devices whereby the box is secured in position against the wall, and elongated projecting ears radiating from the fastening member, substantially as specified.

2. A device of the class described comprising a switch box composed of two sections, the contacting edge of each arranged to overlap, integral perforated lugs formed on the face of each section, a hook formed on the side edge of one section and a slot on the side edge of the companion section, an adjustable detachable fastening member provided with elongated slots and a pair of radiating integral elongated ears which ears are adapted to be broken off as desired depending on the position in which the box is to be located, substantially as specified.

3. An article of the class described comprising a switch box consisting of a body portion composed of two sections the contacting edges arranged to overlap, hooks and slots arranged in the sections whereby said sections may be ganged together, detachable sides provided with hooks and ears by which the sides are held in place against the box in combination with detachable adjustable fastening members having angular extending ears for holding the box in position in the wall, the side ears being arranged to be broken off when not desired yet keeping the fastening member intact, substantially as specified.

4. A switch box comprising a body portion consisting of two members the contact edges arranged to overlap, a pair of adjustable detachable fastening members located on the upper and lower sides of the body portion, said fastening members having a pair of elongated fastening slots by which the same is adjusted in position and right angular section forming a part of the fastening member; and a pair of elongated projecting ears formed on the angular extension, substantially as specified.

1,154,577. VALVE. ALFRED A. BRITT, Detroit, Mich. Filed Apr. 13, 1914. Serial No. 831,513. (Cl. 137—4.)



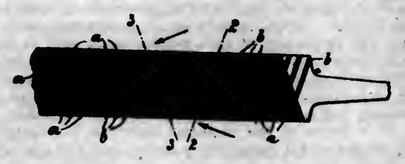
1. In a device of the character described, a body provided with a valve seat and an annular flange encircling the valve stem, a divided valve stem comprising upper and lower interlocking portions, the lower portion being screw threaded to engage the screw threaded shank of a valve head and provided with a flange adapted to bear against the lower face of the annular flange of the body portion, the upper portion of said valve stem having a flange adapted to bear against the upper face of the annular flange, means integral with the annular flange to hold the stem sections together, a valve head having a screw threaded shank to receive the threaded end of the valve stem, means to secure the valve shank against rotation upon the stem while admitting of its reciprocation thereon, and means for manually rotating the stem, whereby the valve may be raised or seated.

2. In a device of the character described, a body provided with a valve seat, a bonnet having an annular flange with a seat on each side of the flange to receive the disks of a jointed valve stem, an annular collar integral with the flange, projecting from each side of the latter and bent to overlap the disks of the valve stem whereby the parts are connected together, a jointed valve stem, consisting of a lower screw-threaded stem portion, designed to engage the screw-threaded shank of a valve and provided with a disk seated against the underside of the flange and the upper coöperating interlocking stem portion, provided with a disk seated against the upper side of the flange, means for manually rotating the jointed stem, a valve heaving a screw-threaded shank engaging the screw-threaded portion of the stem, and means to secure the shank against rotation upon the valve stem.

3. In a device of the character described, a body portion provided with a valve seat, a bonnet portion secured to the body formed with an annular flange having a bevel faced seat on each side of the flange to receive disks carried by a valve stem, a valve stem comprising two sections connected together, each section having a bevel faced disk respectively adapted to be seated on opposite sides of the annular flange, overlapping portions integral with the flange adapted to secure the disks of the valve stem in contiguous relation to their seats while permitting free rotation of the stem, a handle fitted to one section of the stem to provide for its manual rotation, the other section of the stem being screw-threaded to engage the shank of a valve disk, a valve disk provided with a screw-threaded shank engaged by the valve stem, and means to secure the shank against rotation upon the stem that it may reciprocate on the stem upon rotating the latter to open and close the ports through the valve body.

4. In a device of the character described, a body portion provided with a valve seat, a bonnet portion secured to the body formed with an annular flange having a bevel faced seat on each side of the flange to receive a coöperating bevel shaped flange carried by the respective sections of a jointed valve stem, the valve stem comprising two sections, one of said sections being formed with a squared socket to receive the squared end of the connecting section, whereby the sections may be rotated together while providing for a slight lengthwise adjustment relative to each other, each section having an integral bevel-shaped flange adapted to be seated respectively on opposite sides of the annular flange, means integral with the annular flange overlapping the respective flanges of the stem sections, whereby the stem sections are held in connected relation, a valve head connected with the stem, and means for rotating the stem, whereby the valve may be opened or closed.

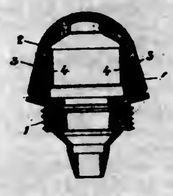
1,154,578. FILE OR LIKE CUTTING-TOOL. WILLIAM HENRY DENLEY, Birmingham, England, assignor of one-half to Benjamin Makin, Sheffield, England. Filed May 20, 1911. Serial No. 628,557. (Cl. 29—78.)



1. A file or like cutting tool having a series of milled teeth integral with the file and extending entirely across the file in an inclined direction, and a series of inclined grooves disposed in an oppositely inclined direction across the file, and intersecting the milled teeth at an acute angle.

2. A file or like cutting tool having a series of milled teeth integral with the file and extending entirely across the file in an inclined direction at an angle of about 60 degrees to 80 degrees to the edges of the file, and presenting an inclined cutting edge when the file is reciprocated longitudinally, and a series of grooves disposed in an oppositely inclined direction at substantially the same angle as the teeth and intersecting the same at an angle of about 60 degrees to 20 degrees.

1,154,579. SHELL-FUSE. ERNST FABER, Berlin, Germany, assignor to Rheinische Metallwaaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany, a Corporation of Germany. Filed June 2, 1915. Serial No. 31,777. (Cl. 102—36.)

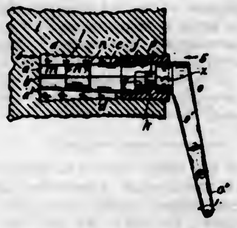


In a shell fuse the combination with the fuse body of a fuse cover, a groove on the inside of the cover, a groove on the outside of the fuse body, a spring locking ring engaging the said grooves and a second ring connected with the fuse cover by means removable from the outside of the cover so as to disconnect the second ring from the cover.

1,154,580. WALL-SOCKET AND BOLT. WILBERT C. FAWKES, Portland, Oreg., assignor, by direct and mesne assignments, of two-thirds to Leslie H. Fawkes and one-third to Ellis E. Hermann, Portland, Oreg. Filed Jan. 8, 1914. Serial No. 811,109. (Cl. 85—2.4.)

1. In a device of the character described, a longitudinally divided socket comprising a socket-head and a shank, the shank part of each member being split to provide laterally expansible anchor portions; one part of the socket being provided with a wedge shaped lug (or lugs) and the other with a corresponding cavity (or cavities) to hold the socket parts against longitudinal movement upon

each other; and a conical wedge element inserted in the socket.



2. In a device of the character described, a longitudinally divided socket comprising a socket-head and a shank, the shank part of each member being split to provide laterally expansible anchor portions; means for locking the parts of the socket against longitudinal movement upon each other; and a conical wedge element inserted in the socket and made of harder material than the socket.

3. In a device of the character described, a longitudinally divided socket comprising a socket-head and a shank, the shank part of each member being split to provide laterally expansible anchor portions; means for locking the parts of the socket against longitudinal movement upon each other; and a conical wedge element inserted in the socket and whose sides are of different inclination than that of the bore of the socket.

4. In a device of the character described, a longitudinally divided socket comprising a socket-head and a shank, the shank part of each member being split to provide laterally expansible anchor portions; means for locking the parts of the socket against longitudinal movement upon each other; a conical wedge element inserted in the socket; and a bolt having locking engagement with the socket-head and only removable therefrom when lifted to vertical position.

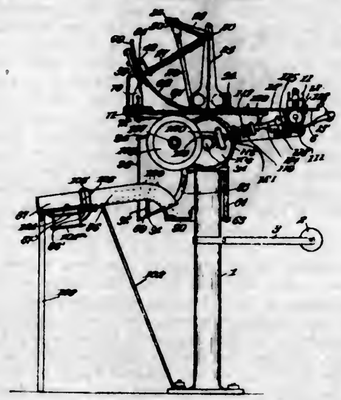
5. In a device of the character described, a longitudinally divided socket comprising a socket-head and a shank, the shank part of each member being split to provide laterally expansible anchor portions; means for locking the parts of the socket against longitudinal movement upon each other; the shank having a tapering bore; a wedge element comprising a nut non-rotatably held in the socket-head, and a screw-bolt threaded in such nut and formed with a conical wedge-end for expanding the anchor portions of the shank of the socket by the inward movement of the screw bolt.

[Claims 6 to 8 not printed in the Gazette.]

1,154,581. MACHINE FOR CUTTING AND FOLDING CLOTH TUBING. CLARETT BIRDELL GRESSON, Fairfield, Iowa, assignor to Fred L. Hunt, Fairfield, Iowa. Filed Dec. 18, 1912. Serial No. 737,548. (Cl. 223—15.)

1. In a machine of the class described, roller means for material operated upon provided with a gear wheel, a shaft provided with a gear wheel in mesh with said gear wheel, a slidable gear wheel on said shaft, in combination with a driven member frictionally engaged by said slidable gear, and means to yieldingly maintain said slidable gear wheel in frictional engagement with said driven member, said latter means comprising a frame extending transversely of the shaft in which and through which said shaft is journaled, rod means on which said frame is slidably mounted, and spring means on said rod means exerting pressure against said frame to maintain said slidable gear in frictional engagement with the driven member.

2. In a machine of the class described, roller means for material operated upon provided with a gear wheel, a shaft provided with a gear wheel in mesh with said gear wheel, a slidable gear wheel on said shaft, in combination with a driven member frictionally engaged by said slidable gear, means to yieldingly maintain said slidable gear wheel in frictional engagement with said driven members, said latter means comprising a frame in which said shaft is journaled, rod means on which said frame is slidably mounted, spring means on said rod means exerting pressure against said frame, a shaft member for said slidable gear mounted in said frame, and a nut adjustable on said shaft member.



3. In a machine of the class described, cutter means, means to advance material to said cutter means, and means to spread said material during advancement to the cutter means having material-engaging members interior of the material, one member being movable relatively to the other member during said advancement.

4. In a machine of the class described, cutter means, means to advance material to said cutter means, means to spread said material during advancement to the cutter means having material-engaging members, one of said members movable relatively to the other member during said advancement, and means to release said spreading means preparatory to engagement by the advancing means.

5. In a machine of the class described, means for the spreading of material having an elongated rod and material spreading fingers of less length than the rod at the discharge end of the rod to provide for accumulation of material on the rod in advance of the fingers, said fingers adapted to normally assume a position out of spreading relation with the material, and means operating to spread the fingers at predetermined times, whereby the fingers operate to alternately spread and release the material so that the material may accumulate on the said rod and then be spread and subsequently the spread material advanced without interference by the spreading fingers.

[Claims 6 to 40 not printed in the Gazette.]

1,154,582. HYDRANT. ALBERT HALLOWELL, Lowell, Mass., assignor to William S. Lamson, Lowell, Mass.; Mary A. Lamson executrix of said William S. Lamson, deceased. Filed May 20, 1912. Serial No. 698,407. (Cl. 137—13.)



1. In a hydrant, a casing, an inlet valve therein having ported stationary and rotary members, a flange formed concentrically on the rotary member and having stop shoulders, a projection on the casing engageable with said shoulders, a cam on one side of the flange and having an operative part and a rest part, a waste valve in the casing and having movement radially with respect to the axis of said inlet valve and being engaged with said rest part of the cam when the inlet valve is open and by said operative part of said cam when the inlet valve is closed.

2. In a fire hydrant the combination with a casing of means for conducting water to said casing, an inlet valve for controlling the flow of water through said casing, said valve having ported stationary and movable members, means for limiting the movement of said movable member, a cam carried by said movable member and comprising a part eccentric thereto and a part concentric therewith, said casing having a waste passage formed therein and a valve for said passage, said valve comprising a plunger projecting within said casing, said plunger having a transverse groove thereacross with which the edge of said cam engages in such manner that the valve is held in its closed position by the concentric part of the cam when the inlet valve is open and is held in its open position by the eccentric part of the cam when said inlet valve is closed.

1,154,583. BINDING-POST FOR ELECTRICAL CONDUCTORS. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 24, 1913. Serial No. 750,258. (Cl. 173—259.)



1. The combination with a screw binding post, of an inverted cup-shaped washer centrally penetrated thereby, said washer being of soft metal and yieldable centrally under the pressure of said screw to be thereby shaped to and clamped against an inclosed conductor terminal.

2. The combination with a screw binding post, of a clamping washer centrally penetrated thereby, said washer having a depending peripheral flange and a flat soft metal top, the central portion of said top being depressible by said screw to clamp a conductor against said peripheral flange and to be itself clamped between such conductor and said screw.

3. The combination with a screw binding post, of a soft metal clamping washer centrally penetrated thereby, said washer being peripherally supported and centrally unsupported to yield centrally downward and peripherally outward under pressure of said screw for thereby shaping to and closely clamping upon a conductor coiled therein.

4. The combination with a screw binding post, of a soft metal clamping washer centrally penetrated thereby, said washer having a depending peripheral flange and being yieldable to the pressure of said screw to spread and in spreading to shape about and firmly clamp the conductor to be secured.

1,154,584. COMBINED WAIST-LINE SUPPORTING AND ADJUSTING MEANS FOR GARMENTS. GEORGE J. MILLER, Baltimore, Md., assignor to Wise Brothers, Baltimore, Md., a Firm composed of Edward H. Wise, Leo H. Wise, and Henry E. Wise. Filed Jan. 28, 1915. Serial No. 4,814. (Cl. 2—143.)

1. The combination with a garment having a waist-band, of a strap having its opposite ends secured to the waist-band, said strap also being secured to the band between its opposite ends to form two loops, and means for drawing the said two loops toward each other to shorten the distance between said opposite ends.

2. A garment having a suspender-engaging strap secured in a looped condition thereto and tape-ends depending from spaced-apart points on the looped strap for shortening the latter and adjusting the garment about the waist.



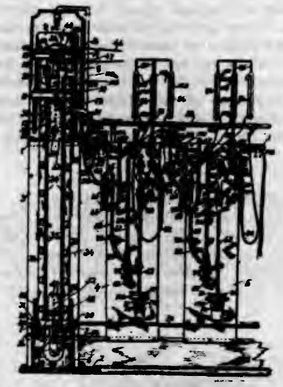
3. A garment having the opposite ends of a suspender-engaging strap secured thereto and formed into a loop, and two tape ends projecting from the strap from opposite sides of a point midway between the two attached ends of the strap said tape-ends when drawn together and tied serving to adjust the garment about the waist.

4. The combination with a garment, of a strap having its opposite ends secured to the garment near the upper edge of the latter said strap also being secured to the garment between its ends to form two loops and a tape-end projecting from each loop of the strap which ends when drawn together will adjust the garment about the waist.

5. The combination with a garment, of a strap having its opposite ends secured to the garment said strap having spaced-apart perforations and a tape having its ends projecting through the two perforations in the strap said ends when drawn together serving to adjust the garment about the waist.

[Claim 6 not printed in the Gazette.]

1,154,585. MERCURY-PUMP. DENNIS JOSEPH O'BRIEN, San Francisco, Cal., assignor, by mesne assignments, to Straight Filament Lamp Company, a Corporation of New York. Filed Dec. 26, 1905, Serial No. 293,885. Renewed Apr. 29, 1911. Serial No. 624,145. (Cl. 230—15.)



1. An apparatus of the character described comprising a mercury-pump, an individual reservoir therefor, a supply of mercury, a flexible discharge-tube connecting said supply with said individual reservoir, and a float operating to shut off the mercury by carrying up the delivery end of said tube.

2. A mercury-pump of the character described comprising two barometric tubes, one adapted to discharge into the other, a supply-tube, and traps connected with the tubes whereby the mercury is relieved of its impurities during its passage through the pump.

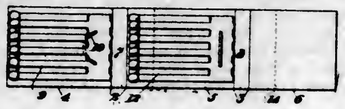
3. An apparatus of the character described comprising a mercury-pump made of suitable tubing, an individual reservoir for said pump, a main reservoir supplying the mercury to the individual reservoir, and traps in the tubing, the arrangement being such that the mercury in each instance is drawn from the bottom of the main reservoir, individual reservoirs and traps, thereby making the pump self-cleaning.

4. In a mercurial pump, an individual reservoir therefor, a supply tank connected therewith, a flexible discharge tube located within the reservoir, a perforated bulb connected to said tube, and a float operating to shut off the mercury by carrying said bulb up.

5. In a mercurial pump, an individual reservoir therefor, a supply of mercury, a flexible discharge tube connecting said supply with said individual reservoir and being located within the reservoir, a perforated bulb, and a float attached to said bulb.

[Claims 6 to 16 not printed in the Gazette.]

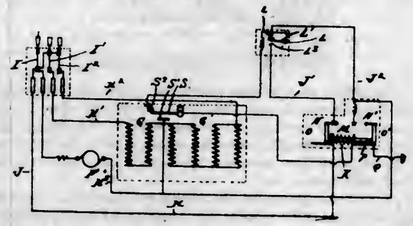
1,154,586. BOOK-MATCH. LUCIAN E. PARKER, Wadsworth, Ohio, assignor to The Ohio Match Company, Wadsworth, Ohio, a Corporation of Ohio. Filed Nov. 27, 1914. Serial No. 874,205. (Cl. 206—29.)



1. Book matches, comprising a foldable strip including a closing flap or cover, a card of matches having a series of match splints and integral body portion applied to the inside of said foldable strip, and a metallic staple comprising a head and spaced prongs, having its prongs passed through said strip and engaging the body portion of said card of matches and clenched to fixedly and immovably secure the card of matches upon said strip, the head of said staple being arranged transversely upon the outside of said strip and serving as a clip to engage the free end of the closing flap to hold the strip in folded condition.

2. Book matches, comprising a foldable strip including a closing flap or cover, a card of matches having an integral body portion applied to the inside of said foldable strip, and a metallic staple comprising a head and spaced prongs, having its prongs passed through said strip and engaging the body portion of said card of matches and clenched for fixedly and immovably securing said card of matches in place upon the strip and having its head arranged transversely on the outside of said strip and offset from the prongs of the staple and extending longitudinally of the strip and adapted to engage the free edge of the closing flap or cover to hold the book in folded condition.

1,154,587. HEATING SYSTEM. HARRY S. WILLIAMS, Detroit, Mich., assignor, by direct and mesne assignments, of one-half to Peter Smith Heater Company, Detroit, Mich., a Corporation of Michigan, and one-half to Consolidated Car-Heating Company, Albany, N. Y. Filed Sept. 22, 1913. Serial No. 790,982. (Cl. 219—20.)



1. In a heating system, the combination with air heating means, of power-driven means for propelling and distributing the heated air, an electric control circuit for starting and stopping said power-driven, air-propelling means, said circuit having two branches, and a thermostat for alternatively closing said branches to respectively start and stop said power-driven means.

2. In a heating system, the combination with air heating means, of an electric motor fan for propelling and distributing the heated air, a circuit for said motor having a manually-operable switch, a control circuit having two branches, a thermostat for alternatively closing the branches of said control circuit respectively in the high and low limits of its adjustment, and means operated by the closing of the respective branches for starting and stopping said motor.

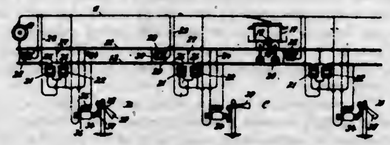
3. In a heating system, the combination with air heating means, of an electric motor fan for propelling and distributing the heated air, a circuit for said motor having a manually-operable switch, a control circuit having two branches, a thermostat for alternatively closing the branches of said control circuit respectively in the high and low limits of its adjustment, and means operated by the closing of the respective branches for starting and stopping said motor, said means including spaced contacts connected with the said branches, and a solenoid having a core carrying circuit controlling devices and adapted to move the same alternately into and out of operative engagement with the said contacts.

4. In a heating system, the combination with air heating means, of power-driven means for propelling and distributing the heated air, an electric control circuit for starting and stopping said power-driven air-propelling means, said circuit having two branches, and a thermostat for alternatively closing said branches to respectively start and stop said power-driven means, and means for cutting out the air heating and the electric control circuit to enable the apparatus to be operated without heating the air.

5. A heating system including a heater circuit, electric air heater means in said circuit, an electric motor fan also in said circuit for propelling and distributing the heated air, a control circuit for the said heater circuit, said control circuit having branches, a thermostat for closing said branches respectively in the high and low limits of its adjustment, and means operable on the closing of either of said branches for opening or closing the heater circuit.

[Claims 6 to 13 not printed in the Gazette.]

1,154,588. ELECTRIC SIGNALING SYSTEM. SAMUEL MARSH YOUNG and FITZHUGH TOWNSEND, New York, N. Y., assignors to said Young. Filed Nov. 21, 1903. Serial No. 182,079. (Cl. 246—36.)



In a signaling system for electric railways, a plurality of track circuits each of which includes an inductive device comprising a core and a winding which is connected with one line of rails of the track circuit, an electrical connection between adjacent inductive devices and the opposite line of rails, and a second winding on each inductive device traversed by an alternating signaling current of higher potential than an alternating signaling current traversing the first winding of the inductive device.

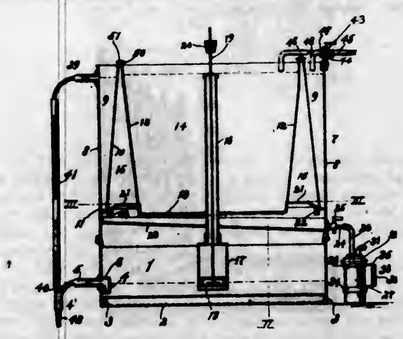
1,154,589. CIGARETTE-CONTAINER. MEYER WOLF, New York, N. Y. Filed Nov. 19, 1914. Serial No. 872,898. (Cl. 206—41.)

1. A cigarette container comprising a box body, a lid hinged thereto, a cigarette receiver of substantially less length than the box and placed therein with its closed end adjacent to the hinged end of the box, means connecting the receiver with the box lid and box body and limiting the outward movement of the body and lid when the same have opened into an angular relationship, and a partition within the receiver midway between and parallel to the sides thereof and of a length substantially greater than that of the receiver and approximating that of the body and lid and extending from the bottom of the receiver to a point substantially beyond the open end thereof and affording a support for two parallel rows of cigarettes.



2. A cigarette container comprising a box body, a lid hinged thereto, a cigarette receiver of substantially less length than the box and placed therein with its closed end adjacent to the hinged end of the box, means connecting the receiver with the box lid and box body and limiting the outward movement of the body and lid when the same have opened into an annular relationship, and a partition within the receiver midway between and parallel to the sides thereof, the edges of the partition being notched at intervals to form two sets of flanges which are bent respectively in opposite directions and secured to the adjacent inside walls of the receiver.

1,154,590. WATER-STILL. CALVIN D. CRANE, Dayton, Ohio. Filed Apr. 15, 1914. Serial No. 831,934. (Cl. 203—5.)



1. In a water still, the combination of a boiler, a condenser above the boiler comprising inner and outer separated water compartments and an intermediate condensing space communicating directly with the boiler and having an outer condensing wall next to the outer water compartment and an inner condensing wall next to the inner water compartment said condensing walls being immediately over the boiler, means for collecting the condensation from the said condensing walls, cold water feeding devices independent of each other for separately feeding cold water to the said inner and outer water compartments, means for independently regulating the feed of water through the said independent water feeding devices, a wasteway leading from one of the water compartments, and a warm water feed leading from the other water compartment to the boiler; substantially as specified.

2. In a water still, the combination of a boiler, a condenser above the boiler comprising an outer compartment for cold water, an inner compartment for warmer water and an intermediate condensing space communicating with the boiler, means for collecting the condensation from the walls of the said condensing space, a wasteway leading from the outer cold water compartment, a warmer water feed leading from the surface of the inner water compartment to the boiler, independent cold water feed devices delivering separately to the said water compartments, and means for independently regulating the feed of cold water to the said compartments, the bodies of water in the said water compartments being kept separate; substantially as specified.

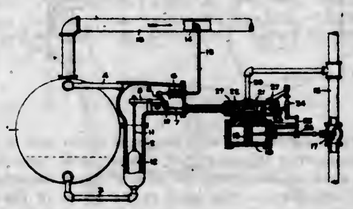
3. In a water still, the combination of a boiler, a condenser above the boiler comprising an outer compartment for cold water, an inner compartment for warmer water and an intermediate condensing space communicating with the boiler, means for collecting the condensation from the walls of the said condensing space, a wasteway leading from the outer cold water compartment, a warmer water feed tube leading from the surface of the inner water compartment to the boiler, a float within the boiler, a stem leading from the said float through the said feed tube to a point above the water in the inner compartment, a sliding indicating device on the said stem above the feed tube, means for feeding a regulated quantity of cold water, substantially equal to the amount of condensation, to the inner water compartment, and independent means for freely feeding a greater amount of cold water to the outer water compartment and thence to the said wasteway, the bodies of water in the said water compartments being kept separate; substantially as specified.

4. In a water still, the combination of a boiler, a condenser above the boiler comprising an outer compartment for cold water, an inner compartment for warmer water and an intermediate condensing space communicating with the boiler and tapering to a narrow upper end, gas-escape openings from the narrow upper end of the condensing space, means for collecting the condensation from the walls of the said condensing space, a wasteway from the outer water compartment, means for feeding a small quantity of cold water to the inner water compartment and means for freely feeding a larger quantity of cold water to the outer water compartment and thence to the wasteway, the bodies of water in the said water compartments being kept separate; substantially as specified.

5. In a water still, the combination of a boiler, a condenser directly above the boiler comprising an outer compartment for cold water, an inner compartment for warmer water and an intermediate condensing space communicating with the boiler, means for collecting the water of condensation, a wasteway from the outer water compartment, a separable water feeding device having a delivery for the inner compartment and a separate delivery for the outer compartment and separately regulative valves for said two deliveries; substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,154,591. AUTOMATIC FEED-WATER REGULATOR. AUSTIN R. DODGE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 12, 1912. Serial No. 677,002. (Cl. 137—101.)



1. In combination, a vapor generator, a means for supplying liquid thereto to be vaporised, a regulator for said means, a lever for actuating the regulator, a means sensitive to changes in the rate of flow of vapor from the generator for moving the lever, a fulcrum for the lever, and a device sensitive to variations in the level of the liquid in the generator for changing the position of the fulcrum.

2. In combination, a vapor generator, a means for supplying liquid thereto to be vaporised, a regulator for the said means, a lever, a means sensitive to changes in the rate of flow of vapor from the generator which acts on

one end of the lever, a connection from the lever to the regulator, an adjustable fulcrum for the lever, and a device sensitive to variations in the level of the liquid in the generator for changing the position of the fulcrum.

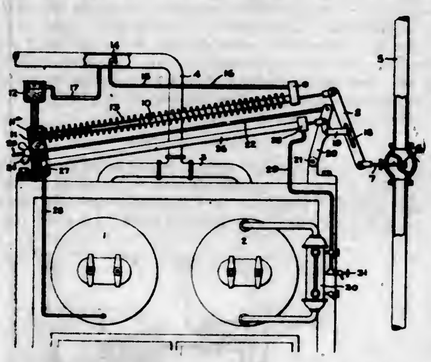
3. In combination, a vapor generator, a means for supplying liquid thereto, a valve controlling the means, a motor for actuating the valve, a pilot valve for the motor, a follow-up device for the motor, a floating lever for moving the pilot valve and to which the stem of the valve is connected, a device responsive to changes in the rate of flow of the vapor issuing from the generator, a device responsive to changes in level of the liquid in the generator, and means connecting each of said devices to the floating lever.

4. In combination, a vapor generator, means supplying liquid thereto, a regulator therefor, a discharge main for the generator, an agent located in the main which creates a pressure that varies with changes in the rate of flow of vapor through the main, a diaphragm which is exposed on one side to the pressure of the vapor generated and on the other to a higher pressure due to the action of the agent, and means connecting the diaphragm with the regulator.

5. In combination, a vapor generator, means supplying liquid thereto, a regulator therefor, a discharge main for the generator, an agent located in the main which creates a pressure that varies with changes in the rate of flow of vapor through the main, a diaphragm which is exposed on one side to the pressure of the vapor generated and on the other to a higher pressure due to the action of the agent, means connecting the diaphragm with the regulator, and a means responsive to changes of level of the liquid in the generator for modifying action of the diaphragm on the regulator.

[Claims 6 to 11 not printed in the Gazette.]

1,154,592. FEED-WATER REGULATOR. AUSTIN B. DODGE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 20, 1912. Serial No. 737,868. (Cl. 236—13.)



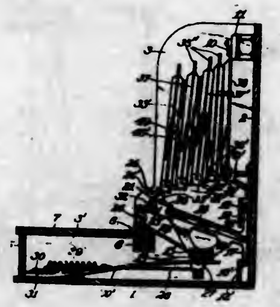
1. The combination with a steam boiler and a steam main connected therewith, of a feed water pipe for the boiler, a valve controlling the flow of water therethrough, means responsive to the level of the water in the boiler for regulating said valve, and means responsive to the rate of flow of steam from the boiler for also regulating said valve, said last named means comprising an expansible tube having its opposite ends connected to the main through a device which creates a pressure different which is proportional to the rate of flow of steam therethrough.

2. The combination with a steam boiler and a steam main connected therewith, of a feed water pipe for the boiler, means for regulating the flow of water through said pipe, and means responsive to the rate of flow of steam through the main for controlling said regulating means, comprising a tube of expansible material, pipes connecting the ends of said tube with the main, and means therein associated with the pipes for creating a pressure difference which bears a definite relation to the rate of flow of steam through the main.

3. The combination with a steam boiler and a steam main connected therewith, of a feed water pipe therefor, a valve controlling the flow of water therethrough, a floating lever connected to said valve, an expansion tube responsive to variations in the water level in said boiler connected to said lever, and a second expansion tube also connected to said lever, said second tube being inclined and having its two ends connected into the main through a device which creates a pressure difference on the tube proportional to the rate of flow of steam through the main whereby said tube will tend to fill with water of condensation and will be exposed to the temperature of the steam to a greater or less extent according to the rate of flow.

4. The combination with a steam boiler and a steam main connected therewith, of a feed water pipe therefor, a valve controlling the flow of water through the same, an inclined tube of expansible material connected to said valve, an impact nozzle in the steam main connected with the upper end of said tube, and a pipe connecting the lower end of said tube with said main whereby said tube will tend to fill with water of condensation, the level of which will depend upon the rate of flow of steam through the main.

1,154,593. FILING APPLIANCE. EMERSON B. MOSELEY, Alliance, Ohio, assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Nov. 30, 1910. Serial No. 594,817. (Cl. 45—2.)



1. A filing appliance including a case, a plurality of bill-holding leaves normally arranged face to face in upright position and linked together at their lower ends, one end leaf being connected to the case and the opposite end leaf of the plurality being yieldingly supported in the case, and means imparting a movement of separation to the leaves while in upright position.

2. A filing appliance including a case, a plurality of bill-holding leaves having link-connections between them, the rear-most leaf being secured to the case, the foremost leaf having pivots, a cross-head connected with the pivots, movable means for guiding the crosshead in an inclined plane, and means for normally forcing the crosshead and movable guiding means upwardly.

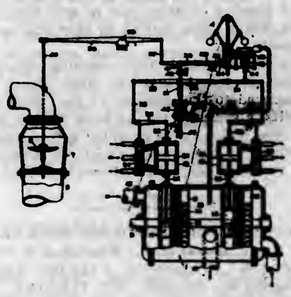
3. A filing appliance including a plurality of bill-holding leaves, connections between the leaves permitting relative pivotal and also lateral movements thereof, means for supporting the rearmost one of the leaves, the leaves being movable from upright to prone position and vice versa, and adjustable means connected with the foremost one of the leaves and permitting the relative lateral movements of the leaves for drawing the lower portions of adjacent leaves apart when in upright position.

4. A filing appliance including a plurality of leaves normally arranged in upright position and linked together at their lower ends, means for supporting an end one of the plurality of leaves in upright position, a movable support for the opposite end one of the plurality of leaves, a yielding guide for said support, and means for imparting a movement of separation to the lower ends of the leaves while in upright position.

5. In a filing appliance, the combination with a case, a guide mounted in the case and movable upward or downward, and means for normally forcing the guide upward yieldingly, of a crosshead mounted movably on the guide, pivot-bearings mounted on the crosshead, and a plurality of bill-holding leaves having link-connections between them, one of the leaves being connected to the case and another one of them being connected to the pivot-bearings.

[Claims 6 to 17 not printed in the Gazette.]

1,154,594. REGULATING DEVICE FOR MIXED-PRESSURE TURBO-COMPRESSORS. RICHARD H. RICE, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed July 23, 1914. Serial No. 852,753. (Cl. 137—144.)



1. The combination with an air compressor, driven by a mixed pressure turbine, of a device responsive to variations in volume of the air passing through said compressor, high pressure and low pressure valves for said turbine, and means whereby said valves are simultaneously operated by said device.

2. The combination with an air compressor, driven by a mixed pressure turbine, of a device responsive to variations in volume of the air passing through said compressor, high pressure and low pressure valves for said turbine, operative connections between said device and said valves, whereby both valves are operated simultaneously, and a speed responsive device also connected to said valves, and operating them simultaneously.

3. The combination with an air compressor, driven by a mixed pressure turbine, of a volume governor in the intake of said compressor, high pressure and low pressure valves for said turbine, actuating mechanism for operating said valves simultaneously, and connections between said actuating means and said governor.

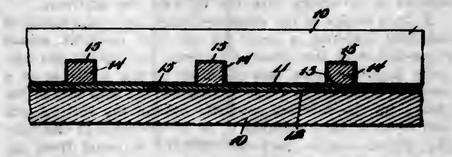
4. The combination with an air compressor, driven by a mixed pressure turbine, of a speed governor driven by said turbine, a volume governor in the intake of said compressor, high pressure and low pressure valves for said turbine, actuating mechanism for operating said valves simultaneously, and operative connections between said actuating means and both of said governors.

5. The combination with an air compressor, driven by a mixed pressure turbine, of a speed governor driven by said turbine, a volume governor in the intake of said compressor, high pressure and low pressure valves for said turbines, actuating mechanism for operating said valves simultaneously, operative connections between said actuating means and both of said governors, and means for varying the pressure ratio between said high pressure and low pressure valves.

[Claims 6 to 11 not printed in the Gazette.]

REISSUES.

13,981. PROTECTIVE COVERING FOR CONCENTRATOR-TABLES AND METHOD OF APPLYING THE SAME. EVERETT A. BAYLIS, Madera, Mexico, assignor to J. A. McMahon, El Paso, Tex. Filed May 25, 1914. Serial No. 840,965. Original No. 1,057,579, dated Sept. 3, 1912, Serial No. 577,131. (Cl. 83—89.)



1. The combination with a concentrator table; of a cover therefor comprising canvas painted on one side with "P. & B." paint and stretched over and secured to said table, the painted side being undermost, a second coat of said paint covering the upper side of said canvas, riffles secured to said table on top of said cover, and a third coat of said paint covering said riffles and cover.

2. The process of preparing a concentrator table which consists in coating a canvas cover with a paint capable of resisting the actions of potassium cyanid and alkaline solutions, applying the canvas to the table with the painted side down, stretching and securing the canvas to the table, applying a second coat of the same paint to the stretched canvas, securing riffles on top of said cover, and finally applying a third coat of the same paint.

3. A concentrator table having a protective covering comprising a woven textile fabric impregnated with a resistant paint including maltha.

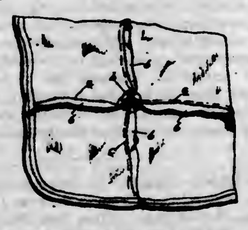
4. A concentrator table having a protective covering comprising canvas impregnated with a resistant paint including maltha.

5. A concentrator table having a protective covering comprising a woven textile fabric coated on both sides with a resistant paint including maltha.

6. A concentrator having a homogeneous surface covering including a paint containing maltha, exposed to direct contact with the material being concentrated.

7. The process of preparing a concentrator table which consists in coating a woven textile fabric cover with a resistant paint including maltha, applying the cover to the table with the painted side down, stretching and securing the cover to the table, and applying a second coat of the same paint to the stretched cover.

13,982. MATTRESS. JOHN L. HEFFNER, Peoria, Ill. Filed June 29, 1914. Serial No. 848,107. Original No. 1,029,928, dated June 18, 1912, Serial No. 671,801. (Cl. 5—13.)



1. In a device of the class described the combination of the filling material, a cover for said filling material, means for pulling the cover down into the filling material at a number of places to form tufting centers, and means intermediate of the tufting centers for taking up the cover to reduce the size of the said cover, said taking up means extending in a linear direction across the cover and interrupted adjacent the tufting centers whereby full-

ness is provided in the covering at the tufting centers to be drawn down into the filler.

2. In a mattress the combination of the filling material, a cover for said filling material having dimensions in excess of the completed mattress, means for pulling the cover down into the filler material at a number of places to form tufting centers, means adjacent and removed from the tufting centers for taking up the cover so as to reduce the size of the cover to correspond with the size of the completed mattress and to produce fullness at the tufting centers to be drawn into the filler of the mattress.

3. In a device of the class described, the combination of the filler material, a cover for the filler material, means connected with the covering material for pulling the covering material down into the body of the mattress at a number of places to form tufting centers and means for taking up the covering material around the tufting centers so as to leave fullness to be drawn down at the tufting centers and to hold the covering material from expansion.

4. In a device of the class described the combination of a filler material, a covering for the filler material, spaced means for drawing the covering material down into the filler material to form tufting centers, folds in the covering material extending between tufting centers, and means for locking the folds to prevent opening of the folds, said means and folds terminating short of the tufting centers.

5. In a device of the class described the combination of a filler material, a covering for the filler material, means for drawing the covering material down into the filler to form tufting centers, folds in the covering material extending away from the tufting centers and means extending lengthwise of the folds for locking the folds against unfolding, said means and folds terminating short of the tufting centers.

6. In a mattress, top and bottom coverings folded at intervals longitudinally and transversely intermediate the sides and ends, the sides of each fold being stitched together its entire length except short interruptions in the stitches at the crossing points sufficient to provide a fullness adapted to be drawn down into the filler of the mattress.

7. In a mattress, top and bottom coverings folded at intervals longitudinally and tranversely, said folds being sewed together with short interruptions in the stitches at the centering points sufficient to provide a fullness adapted to be drawn down into the filler of the mattress, said folds being stitched on a gradually curved line, gradually digressing from the edge of the fold from the centering points to the intermediate point between said centers.

8. In a device of the class described, the combination of a filling material, a covering for said filling material, means for taking up at spaced intervals, and reducing the normal size of the covering, both on longitudinal and transverse lines to provide a fullness at points intermediate the take-up intervals, and means for drawing the fullness of the material into the filler between the take-up intervals.

9. In a mattress, in combination, side coverings, top and bottom coverings, means for taking up, at spaced intervals both longitudinally and transversely, the material of said top and bottom coverings into a fold and securing same against unfolding, whereby the material may be drawn into the filler to prevent stretching of the covering, and to provide fullness to be drawn down into the mattress, and means for drawing the fullness thereinto.

13,983. GARMENT. EDMUND C. HEYN, Catonsville, Md., assignor to The B. V. D. Company, New York, N. Y., a Corporation of Delaware. Filed July 10, 1915. Serial No. 39,194. Original No. 1,113,992, dated Oct. 20, 1914, Serial No. 796,871. (Cl. 2—96.)

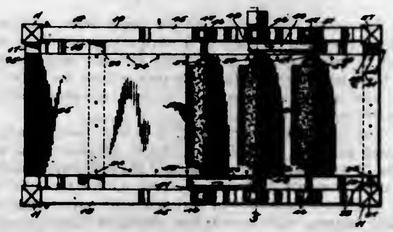
1. A connecting means for upper and lower garments, comprising a tab connecting the two garments together, said tab when the garments are connected, overlapping the upper part of the space afforded by a longitudinal slit formed in said upper garment, means for securing one end of the tab to one of said two garments, fastening means carried by said tab and complementary fastening means on the adjacent garment in that portion registering with the tab when the garments are in wearing position.



2. An upper garment formed with opposing longitudinally extending slits, fastening means permanently located near the upper marginal end of the slits, and complementary fastening means carried by the lower garment in those portions registering with the tabs when the garments are in wearing position, one of said two coöperating fastening means being carried by tabs attached to one of said garments.

3. An undershirt formed with opposing longitudinally extending slits opening through the lower edge of the garment, tabs secured to the garment at the upper marginal end of the slits, a series of button holes formed longitudinally of the tabs, and drawers provided with a longitudinal series of buttons on those portions of the drawers registering with the tabs when the garments are in wearing positions.

13,984. MACHINE FOR BRUSHING SOLE-LEATHER. CARLETON EUMS, Olean, N. Y. Filed July 6, 1915. Serial No. 38,876. Original No. 1,112,163, dated Sept. 29, 1914, Serial No. 831,522. (Cl. 149—15.)



1. In a machine of the character described, a supporting structure, a support connected therewith to receive the leather thereon, an intermediate rotatable brush arranged above and near the support to engage with the leather thereon, outer rotatable brushes arranged above and near the support upon opposite sides of the intermediate brush to engage with the leather, and means to rotate all of the brushes in the same direction and the intermediate brush at a greater rate of speed than the outer brushes.

2. In a machine of the character described, a supporting structure, a support connected therewith and adapted to receive the leather thereon, an intermediate rotatable brush arranged above and near the support to engage with the leather, outer rotatable brushes arranged above and near the support to engage the leather, means to rotate the intermediate brush, and speed reducing gearing between the intermediate brush and the outer brushes to drive the outer brushes in the same direction with the intermediate brush and at a less rate of speed.

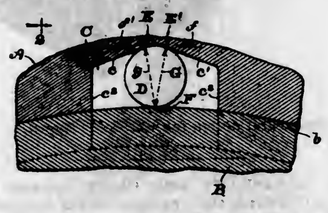
3. In a machine of the character described, a supporting structure, a resilient bed arranged near the supporting structure, means connecting one end portion of the resilient bed with the supporting structure, so that the opposite end portion thereof is free to be swung in a vertical plane, a roll connected with the supporting structure and arranged near and below the vertically movable end portion of the resilient bed, a flexible element connected with the vertically movable end portion of the resilient bed and with the roll to be wound thereon, means to turn the roll and hold the same in a desired position against movement, a rotatable brush arranged near and above the resilient bed to engage with material traveling thereon, and means to rotate the brush.

4. In a machine of the character described, a supporting structure, a resilient bed arranged near the same, vertically adjustable means connecting one end of the bed with the corresponding end of the supporting structure, a second vertically adjustable means arranged near and spaced a substantial distance from the first named vertically adjustable means, and connecting the bed and the supporting structure, a drum connected with the supporting structure, and arranged near and below the opposite end of the resilient bed, a flexible element connected with this end of the resilient bed, and with the drum to be wound upon the drum, means to turn the drum and hold the same in a desired position, a rotatable brush arranged near and above the resilient bed to engage material traveling thereon, and means to rotate the brush.

5. In a machine of the character described, a resilient bed adapted to be approximately horizontally arranged vertically, adjustable means connected with the opposite ends of the resilient bed to hold the same against upward movement, adjustable means engaging the resilient bed between its ends to move the same upwardly and positively hold that portion of the bed with which the same engages against vertical movement, a rotatable brush arranged above and near the resilient bed, and means to drive the brush.

13,985. [WITHDRAWN.]

13,986. NUT-LOCK. EDWARD W. TAYLOR, Salt Lake City, Utah. Filed Dec. 21, 1914. Serial No. 878,453. Original No. 1,024,107, dated Apr. 23, 1912, Serial No. 642,708. (Cl. 151—23.)



1. A nut lock comprising in combination an externally threaded member and a member provided with an internally threaded bore engaged by said externally threaded member, one of said members being provided with a groove located adjacent the other member and extending parallel to the longitudinal central axis thereof, said groove having oppositely inclined bottom surfaces, and a pin located in said groove and engaging at one side against both of said inclined bottom surfaces along separated lines of contact and at its opposite side against the other threaded member.

2. A nut lock comprising in combination an externally threaded member, and a member provided with an internally threaded bore engaged by said externally threaded member, one of said members being provided with a groove located adjacent the other member and extending parallel to the longitudinal central axis thereof, said groove having bottom surfaces oppositely inclined at an angle of substantially 70° to a radial plane extending through the longitudinal central axis of said threaded members and a pin located in said groove and engaging at one side against both of said inclined bottom surfaces along separated lines of contact and at its opposite side against the other threaded member.

13,987. SHEET-METAL FRAME. CONRAD A. JOHNSON, Jamestown, N. Y. Filed Feb. 18, 1915. Serial No. 9,186. Original No. 1,076,767, dated Oct. 28, 1913, Serial No. 737,115. (Cl. 156—14.)



1. In a sheet metal frame, a rail having a portion of one side thereof substantially W-shape in cross section forming separate lengthwise channels and an intermediate rib, and a clamping bar having spaced lengthwise flanges insertible in said channels, one of said flanges frictionally engaging with one side of said rib.

2. In a sheet metal frame, a rail having a portion of one side thereof substantially W-shape in cross section forming inner and outer lengthwise channels and an interposed lengthwise rib, the side of the rib adjacent the outer channel being undercut, and a clamping bar having spaced lengthwise flanges seated in said channels, one of the flanges frictionally engaging the undercut side of the rib.

3. A sheet metal frame formed of side rails, each rail provided with a plurality of longitudinally extending channels comprising an intermediate wall, the outer of said channels converging inwardly toward the inner channel, whereby the intermediate wall overlies a portion of the outer channel, the inner of said channels adapted to receive the marginal portion of a panel, and a retaining strip having an arm in each channel, the arm in the outer channel extending beneath the overlying portion of said intermediate wall to frictionally engage therewith to prevent removal of the panel.

4. A sheet-metal frame formed of side rails, each rail provided with a pair of longitudinally extending channels embodying an intermediate wall, a panel having a marginal portion in the inner of said channels, and a retaining strip having an arm in each channel, the parts so formed and arranged that tension upon the panel tending to draw the arm in contact therewith from its position in the inner channel interlocks the other arm more positively with said intermediate wall to prevent removal of the panel.

5. A sheet metal frame comprising closed tubular rails having a pair of substantially parallel channels embodying an interposed rib, said channels formed by depressing adjacent portions of one side of the rails toward the opposite side, the inner of said channels adapted to receive the marginal portion of a panel, and a retaining strip having an arm in each channel, the arm in the outer channel adapted to frictionally engage said intermediate rib to prevent removal of the panel.

6. A sash comprising channel metal rails connected together, a bridge member connecting the legs of each channel metal rail and having a longitudinal bead of substantially circular cross section, and a locking member having a straight portion adapted to clamp the marginal edge of a screen against one of said legs and terminating in spring jaws adapted to engage with said bead.

7. A sash comprising channel metal rails connected together, each rail having one leg terminating in a substantially rightangular abutment portion, a bridge member connecting said legs and having a longitudinal bead, and a locking member having curved spring jaws adapted to engage with said bead, and having a straight portion connecting said jaws and extending obliquely along said jaws, said straight portion adapted to clamp the marginal edge of a screen against said abutment portion.

8. A sash comprising channel metal rails connected together, each rail having one leg terminating in a substantially rightangular abutment portion, a bridge member connecting said legs and having a longitudinal bead, a screen member having a marginal edge bearing against said abutment portion, a rod carried by said marginal edge and bearing against said bridge member, and a locking member having spring jaws engaging said longitudinal rib and having a portion bearing against said rod and clamping the same against said bridge member, and having a portion between said clamping portion and said jaws bearing against said screen and clamping the same to said abutment portion.

DESIGNS.

47,841. CUT PILE FABRIC. NICHOLAS ALBRECHT, Philadelphia, Pa., assignor to Fred Pearson & Company, Incorporated, Manayunk, Pa. Filed July 14, 1915. Serial No. 39,909. Term of patent 7 years.



The ornamental design for a cut pile fabric, as shown.

47,842. CUT PILE FABRIC. NICHOLAS ALBRECHT, Philadelphia, Pa., assignor to Fred Pearson & Company, Incorporated, Manayunk, Pa. Filed July 14, 1915. Serial No. 39,910. Term of patent 3½ years.



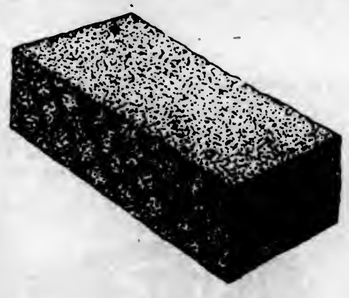
The ornamental design for a cut pile fabric, as shown.

47,843. CUT PILE FABRIC. NICHOLAS ALBRECHT, Philadelphia, Pa., assignor to Fred Pearson & Company, Incorporated, Manayunk, Pa. Filed July 14, 1915. Serial No. 39,911. Term of patent 3½ years.



The ornamental design for a cut pile fabric, as shown.

47,844. BRICK. BYRD W. BALLOU, Buffville, Kans. Filed May 26, 1915. Serial No. 30,691. Term of patent 14 years.



The ornamental design for a brick, as shown.

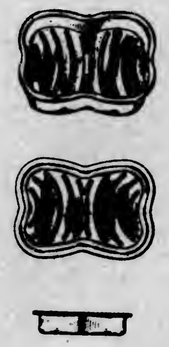
47,845. GREASE-CUP AND OILER. JAMES D. CORCORAN, Cleveland, Ohio, assignor to The Corcoran-Seidel Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 15, 1914. Serial No. 851,179. Term of patent 3½ years.





The ornamental design for a grease cup and oiler, as shown.

47,846. DISH. JOHN P. EUSTIS, Newton, Mass. Filed May 17, 1915. Serial No. 28,768. Term of patent 7 years.



The ornamental design for a dish as shown.

47,847. STOCKING. BORRÁLA SKILLI GOSSTOLA, South Bend, Ind. Filed Mar. 25, 1915. Serial No. 17,060. Term of patent 7 years.



The ornamental design for a stocking, as shown.

47,848. LAMP-BOX. FRED C. HANSEL, Kansas City, Mo. Filed Apr. 3, 1915. Serial No. 19,060. Term of patent 14 years.



The ornamental design for a lamp box, as shown.

47,849. SAFETY-FIRST SIGN. ROBERT B. HILL and CHARLES E. ROBINSON, Houston, Tex. Filed Feb. 23, 1915. Serial No. 10,145. Term of patent 3½ years.



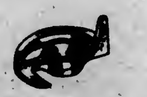
The ornamental design for a safety first sign, as shown.

47,850. BOTTLE-OPENER. JOSEF HUTTER, New York, N. Y. Filed July 7, 1915. Serial No. 38,627. Term of patent 3½ years.



The ornamental design for a bottle opener, as shown and described.

47,851. ANTIRATTLING DEVICE. HANS HOLDEN JENSEN, Milwaukee, Wis. Filed Apr. 5, 1915. Serial No. 19,385. Term of patent 14 years.





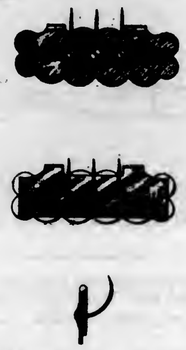
The ornamental design for an anti-rattling device, as shown.

47,852. PENHOLDER. JOHN H. KULOW, Buffalo, N. Y. Filed Oct. 21, 1914. Serial No. 867,913. Term of patent 3½ years.



The ornamental design for a penholder substantially as shown.

47,853. HAT-FASTENER. WILLIAM J. LEWIS, Flint, Mich. Filed Apr. 30, 1915. Serial No. 25,072. Term of patent 14 years.



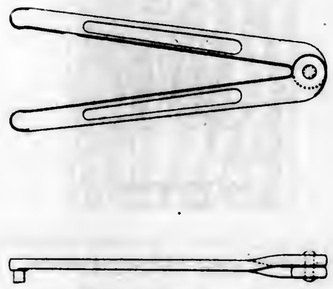
The ornamental design for a hat fastener, as shown.

47,854. AUTOMOBILE-HOOD. D MC RA LIVINGSTON, New York, N. Y. Filed Dec. 21, 1914. Serial No. 878,444. Term of patent 7 years.



The ornamental design for an automobile hood, as shown.

47,855. FACE SPANNER-WRENCH. CLIFFORD A. MARTIN, New York, N. Y., assignor to J. H. Williams & Co., Brooklyn, N. Y., a Corporation of New York. Filed Nov. 14, 1914. Serial No. 872,261. Term of patent 7 years.



The ornamental design for a face spanner wrench as shown.

47,856. BEDSTEAD-TRIMMING. JOHN J. NASH, Waterbury, Conn., assignor to American Pin Company, Waterbury, Conn. Filed Nov. 10, 1914. Serial No. 871,411. Term of patent 7 years.



The ornamental design for a bedstead trimming, as shown.

47,857. BEDSTEAD-TRIMMING. JOHN J. NASH, Waterbury, Conn., assignor to American Pin Company, Waterbury, Conn. Filed Nov. 10, 1914. Serial No. 871,412. Term of patent 7 years.



The ornamental design for a bedstead trimming, as shown.

47,858. BEDSTEAD-TRIMMING. JOHN J. NASH, Waterbury, Conn., assignor to American Pin Company, Waterbury, Conn. Filed Nov. 17, 1914. Serial No. 872,669. Term of patent 7 years.



The ornamental design for a bedstead trimming, as shown.

47,859. BOWL FOR FOUNTAIN-SYRINGES. ROBERT B. NEWCOMB, Amarillo, Tex. Filed Apr. 9, 1915. Serial No. 20,340. Term of patent 7 years.



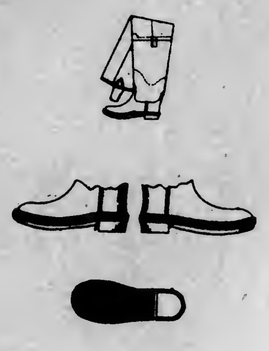
The ornamental design for a bowl for fountain syringes, as shown.

47,860. BUTTON-HEAD. JAMES A. PALMER, Cranston, R. I., assignor to Parks Bros. & Rogers, Providence, R. I., a Firm composed of William C. Parks, Brooklyn, N. Y., and Everett I. Rogers, Providence, R. I. Filed Aug. 27, 1914. Serial No. 858,982. Term of patent 14 years.



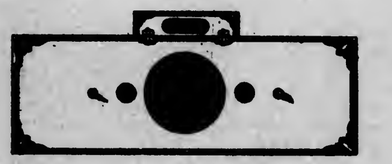
The ornamental design for a button head as shown.

47,861. RUBBER BOOT. FRED B. PAYNE, Middletown, Conn., assignor to Goodyear Rubber Company, Middletown, Conn., a Corporation. Filed May 14, 1915. Serial No. 28,218. Term of patent 14 years.



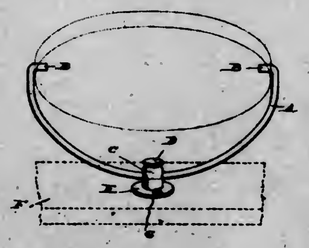
The ornamental design for a rubber boot, as shown.

47,863. CALENDAR-FRAME. HARRY G. QUIRY, Shelbyville, Ind. Filed June 18, 1915. Serial No. 34,929. Term of patent 7 years.



The ornamental design for a calendar frame, as shown

47,868. MIRROR-STAND. PERCY R. SHAMON, Boston, Mass., assignor to Portland Sales Company, Boston, Mass., a Corporation of Massachusetts. Filed May 22, 1913. Serial No. 769,304. Term of patent 7 years.



The ornamental design for a mirror stand as shown and described.

47,864. TAG. WALDEN W. SHAW, Chicago, Ill., assignor to Walden W. Shaw Livery Co., Chicago, Ill., a Corporation of Maine. Filed Mar. 23, 1915. Serial No. 16,492. Term of patent 7 years.



The ornamental design for a tag, as shown.

47,865. TAG. WALDEN W. SHAW, Chicago, Ill., assignor to Walden W. Shaw Livery Co., Chicago, Ill., a Corporation of Maine. Filed Mar. 23, 1915. Serial No. 16,493. Term of patent 7 years.



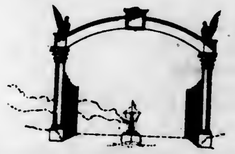
The ornamental design for a tag, as shown.

47,866. COMBINED SALT AND PEPPER SHAKER. STEPHEN STANTON, Middletown, Conn. Filed May 24, 1915. Serial No. 30,207. Term of patent 14 years.



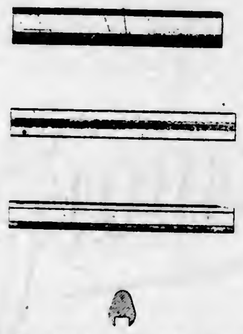
The ornamental design for a combined salt and pepper shaker, as shown.

47,867. SOUVENIR EMBLEMATIC GATE. ALVIN R. TETERS, Boise, Idaho. Filed Mar. 30, 1915. Serial No. 18,193. Term of patent 3½ years.



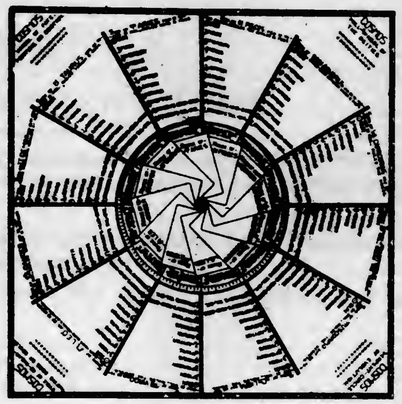
The ornamental design for souvenir emblematic gate, as shown.

47,868. TUBING FOR WIND-SHIELD FRAMES. WILLIAM H. THOEMING, Detroit, Mich., assignor to Vanguard Manufacturing Company, Detroit, Mich., a Corporation of Illinois. Filed Apr. 11, 1913. Serial No. 760,553. Term of patent 7 years.



The ornamental design for tubing for wind shield frames.

47,869. GAME-CHART. ALBERT FRANKLIN FIELDS, Alhambra, Cal. Filed July 2, 1915. Serial No. 37,777. Term of patent 14 years.



The ornamental design for a game chart, as shown.

47,870. POCKET FLASH-LIGHT. HARRY M. KORETZKY, New York, N. Y. Filed Jan. 29, 1915. Serial No. 5,150. Term of patent 14 years.



The ornamental design for a pocket flash light, as shown.

TRADE-MARKS

PUBLISHED SEPTEMBER 21, 1915.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 75,285. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GUNNS LIMITED, West Toronto, Ontario, Canada. Filed Jan. 19, 1914. Under ten-year proviso.

Gunns

Which consists of the word "Gunns."

Particular description of goods.—Pork Products—Namely, Bacon, Lard, Pork-Loin, Fresh Pork-Shoulder, Short-Cut Pork, Sausages—Eggs, Cheese, and Poultry.

Claims use on pork products—namely, bacon, lard, pork-loin, fresh pork-shoulder, short-cut pork, and sausages—eggs, cheese, and poultry since 1875.

Ser. No. 81,521. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE MOREY MERCANTILE COMPANY, Denver, Colo. Filed Sept. 28, 1914.

SOLITAIRE

Particular description of goods.—Soda-Fountain Syrups—Namely, Banana, Caramel, Celery, Champagne, Red Tame Cherry, Wild Cherry, Wild-Cherry Phosphate, Chocolate, Claret Phosphates, Coffee, Cream-Soda, Crême-Mint, Ginger, Ginger-Ale, Grape, Lemon, Limeade, Maple, Nectar-Cream, Orange, Orangeade, Peach, Pineapple, Raspberry, Root-Beer, Sarsaparilla, Sherbet, Strawberry, Vanilla, Crushed Berries, Crushed Nuts, Crushed Pineapple, Whole Raspberries, Crushed Strawberries, Whole Strawberries, Rock-Candy, Pineapple Cubes, Fountain-Cocoa, National Sundae, Chop-Suey, Fig-Nut Suey, Crushed Quince; Grape-Juice, and Cider.

Claims use since Aug. 7, 1914.

Ser. No. 82,953. (CLASS 39. CLOTHING.) E. A. GUINZBURG, New York, N. Y. Filed Nov. 28, 1914.

WATER LILY

Particular description of goods.—Bath-Towels.
Claims use since 1897.

Ser. No. 83,191. (CLASS 47. WINES.) JULIUS WILE, SONS & Co., New York, N. Y. Filed Dec. 9, 1914.

·ESTRELLA·

Particular description of goods.—Port-Wine.
Claims use since March, 1903.

Ser. No. 83,711. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) THE SAFETY WIRE GAS GLOBE CO., Columbus, Ohio. Filed Jan. 7, 1915.

PROTECT A LITE

No claim being made to the representation of the mantle-protector apart from the mark shown in the drawing.

Particular description of goods.—Mantle-Protectors of Wire Mesh for Gas, Gasolene, and Acetylene Burners.
Claims use since Dec. 30, 1914.

Ser. No. 84,538. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PINELLAS PARK SYRUP COMPANY, Wilmington, Del., and Pinellas Park, Fla. Filed Feb. 15, 1915.

SUNLIGHT

Particular description of goods.—Sugar-Cane Syrup.
Claims use since Jan. 6, 1915.

Ser. No. 84,958. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE H. N. FISH CO., Boston, Mass. Filed Mar. 5, 1915.



Exclusive of the words "The Hall Mark of Merit," "Boston, Mass."
Particular description of goods. — Confectionery—Namely, Candy.
Claims use since on or about July 1, 1914.

Ser. No. 85,680. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BELLE D. SMITH, Newark Valley, N. Y. Filed Apr. 3, 1915.

Shure-Whip

Particular description of goods.—A Preparation to Assist in the Whipping of Thin Cream.
Claims use since November, 1914.

Ser. No. 85,889. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BELMONT CANDY CO., INC., Memphis, Tenn. Filed Apr. 12, 1915.

BEAN SHOOTER

Particular description of goods.—Candy.
Claims use since Jan. 25, 1915.

Ser. No. 86,113. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) W. L. HAND SPECIALTY CO., INC., New York, N. Y. Filed Apr. 22, 1915.

EGG WHITE SPAR



The trade-mark consists of the words "Egg White Spar" in red letters associated with a hand, likewise printed in red.

Particular description of goods.—Angel-Food, Icings, Kisses, Meringues, Nougat, Marshmallows, Cream Centers, Ornamental Icings, Whipped Cream, Ice-Cream, Cocoanut Macaroons, Almond Macaroons, Biscuits, Crackers, Cakes, Breads, Snaps, Jumbles, and Candies.
Claims use since March, 1912.

Ser. No. 86,682. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STEELE-WEDELES COMPANY, Chicago, Ill. Filed May 17, 1915.

WITCH

Particular description of goods.—Canned Fruits, Canned Vegetables, Canned Salmon, Canned Oysters, Icing-Sugar, Fruit Preserves, Peanut-Butter, Spaghetti, Olives, Cocoa, Tea, Coffee, Pickles, Salad-Dressing, Relishes, Cloves, Ginger, White Pepper, Black Pepper, Allspice, Caraway-Seed, Celery-Seed, Mustard-Seed, Poppy-Seed, Cassia, and Pickling Spices.
Claims use since 1895.

Ser. No. 86,762. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHAPIN & COMPANY, INCORPORATED, Hammond, Ind. Filed May 20, 1915.

BATTLE AXE

Particular description of goods.—Mixed Feeds for Horses, Cattle, and Farm-Stock.
Claims use since May 4, 1915.

Ser. No. 86,880. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) COLLINS COMPANY, San Antonio, Tex. Filed May 25, 1915.

WHITE FAWN



Particular description of goods.—Fish, Oysters, Rolled Oats, and Wheat-Flour, Buckwheat-Flour, and Pancake-Flour, Spices, Teas and Coffees, Mince-Meat, Compound Lard, Cocoanut Desiccated, Jams, Jellies, Fruit Preserves, Pickles, Olives, Tomato Catsup, Salad-Dressing and Sauces, Table-Syrups, Vinegar, and Dried Fruits.
Claims use since Apr. 17, 1913.

Ser. No. 86,911. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE MILES MANUFACTURING CO., Jackson, Mich. Filed May 26, 1915.

SIMPLEX

Particular description of goods.—Concrete-Mixers.
Claims use since Sept. 29, 1903.

Ser. No. 86,947. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WARD BAKING COMPANY, New York, N. Y. Filed May 27, 1915.

SOUTHERN PRIDE

Particular description of goods.—Bread, Loaf-Cake, and Salt-Rising Bread.
Claims use since Apr. 1, 1915.

Ser. No. 86,948. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WARD BAKING COMPANY, New York, N. Y. Filed May 27, 1915.

KUKUNO

Particular description of goods.—Loaf-Cake and Nut-Bread.
Claims use since Apr. 1, 1915.

Ser. No. 86,997. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OGDEN PACKING & PROVISION CO., Ogden, Utah. Filed May 29, 1915.

SEGO LILY

Particular description of goods.—Lard, Bacon, Hams, Boiled Hams, Canned and Fresh Fruits.
Claims use since about 1907.

Ser. No. 87,108. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) REDBANKS ORCHARD CO., Visalia, Cal. Filed June 4, 1915.

OLD MISSION

Particular description of goods.—Table-Grapes, Fresh.
Claims use since Apr. 10, 1915.

Ser. No. 87,210. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WHITE RIVER CREAMERY CO., Muncie, Ind., and Cincinnati, Ohio. Filed June 9, 1915.



No claim is being made by it to the words "White River" apart from the mark shown on the drawing.
Particular description of goods.—Butter.
Claims use since the month of May, 1909.

Ser. No. 87,277. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) BENJAMIN F. KLEIN, Cleveland, Ohio. Filed June 12, 1915.

NITROLIERS

Particular description of goods.—Electric-Lighting Fixtures.
Claims use since about the 29th day of May, 1915.

Ser. No. 87,323. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SEBASTIEN ABRAHAM CORNELLE DUDOK VAN HEEL, Naarden, Netherlands. Filed June 15, 1915.



No claim is made to the exclusive use of the words "Van Heel's Condensed Milk" and "Sweetened," which appear on said drawing.
Particular description of goods.—Condensed Milk.
Claims use since June 29, 1914.

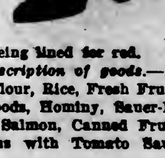
Ser. No. 87,367. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL POULTRY & EGG CO., Atchison, Kans. Filed June 17, 1915.

NATIONAL

Particular description of goods.—Dressed Poultry.
Claims use since the 21st day of August, 1911.

Ser. No. 87,502. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MAYFIELD COMPANY, Tyler, Tex. Filed June 22, 1915.

RED SLIPPER



The slipper being lined for red.
Particular description of goods.—Pepper Sauce, Dried Fruits, Wheat-Flour, Rice, Fresh Fruits, Spices, Flavoring Extracts for Foods, Hominy, Sauer-Kraut, Canned Vegetables, Canned Salmon, Canned Fruits, Canned Oysters, Pork and Beans with Tomato Sauce, Seeded Raisins, Mince-Meat.
Claims use since Jan. 1, 1915.

Ser. No. 87,511. (CLASS 12. CONSTRUCTION MATERIALS.) THE UPSON COMPANY, Lockport, N. Y. Filed June 22, 1915.



The trade-mark consisting of an insert of blue centrally located between layers of the material.

Particular description of goods.—Artificial Lumber.

Claims use since Dec. 15, 1911.

Ser. No. 87,596. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) STANDARD EMULSION CO., New York, N. Y. Filed June 25, 1915.



Said trade-mark consisting of the representation of a swinging sign-board hung from the arm of a vertical support and displaying white letters on a red background the words "The Russell Prepared Green Bone." Applicant hereby disclaims the words "Prepared Green Bone" apart from the mark as shown in the drawing.

Particular description of goods.—A Preparation of Particular Service in the Dietetic Treatment of Wasting Diseases.

Claims use since June 10, 1915.

Ser. No. 87,599. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE SHERWIN-WILLIAMS CO., Cleveland, Ohio. Filed June 25, 1915.



No claim being made to the words "Brighten Up" and "White" apart from the mark shown in the drawing.

Particular description of goods.—A White Paint for General Use.

Claims use since May 1, 1915.

Ser. No. 87,731. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CABELL COMPANY, Baltimore, Md. Filed July 8, 1915.



Particular description of goods.—Flavoring Extracts for Foods, Vegetable Coatings for Cakes, Desiccated Eggs, Egg Substitutes, Prepared Flour for Making Cake and Bread, and a Malt Preparation for Making Bread.

Claims use since May, 1914.

Ser. No. 87,740. (CLASS 12. CONSTRUCTION MATERIALS.) THE KELLEY ISLAND LIME & TRANSPORT COMPANY, Cleveland, Ohio. Filed July 3, 1915.

NORTH ★ BRAND

Disclaims the use of the word "Brand" apart from the mark shown in the drawing. The trade-mark consists of a star surrounded by the words "North Brand."

Particular description of goods.—Lime.

Claims use since about Jan. 1, 1887.

Ser. No. 87,770. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ENGELKE & FEINER MFG. CO., St. Louis, Mo. Filed July 6, 1915.

E&F

Particular description of goods.—Cornmeal, Cream-Meal, and Pearl-Grits.

Claims use since about May 1, 1915.

Ser. No. 87,824. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) JAMES B. DUNHAM, Wenona, Ill. Filed July 8, 1915.

"NEVERSSLIP"



No claim being made to the exclusive use of the word "Neverslip."

Particular description of goods.—Umbilical-Cord Ligatures and Veterinary-Surgeon Ligatures and Sportsmen's Sterile Cord.

Claims use since Feb. 1, 1915.

Ser. No. 87,899. (CLASS 38. PRINTS AND PUBLICATIONS.) NATIONAL NEWS COMPANY, Boston, Mass. Filed July 12, 1915.



Particular description of goods.—Weekly Newspapers.

Claims use since June 12, 1915.

Ser. No. 87,916. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) A. W. ROSEN & Co., New York, N. Y. Filed July 13, 1915.

ROSCO

Particular description of goods.—Electric Lamps and Parts Thereof, Spark-Plugs, Lamp-Adapters, Plugs and Sockets, and Terminals.

Claims use since between two and three years.

Ser. No. 87,928. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE P. MARINER, Philadelphia, Pa. Filed July 14, 1915.

WILMAR

Particular description of goods.—Peanut-Butter.

Claims use since March, 1908.

Ser. No. 88,015. (CLASS 17. TOBACCO PRODUCTS.) JAMES B. HARRISON, Syracuse, N. Y. Filed July 19, 1915.

55

Particular description of goods.—Cigars.

Claims use since about the 1st day of June, 1910.

Ser. No. 88,140. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) G. CASALE & SONS, Brooklyn, N. Y. Filed July 23, 1915.

SEASHORE PEBBLES

Particular description of goods.—Candies.

Claims use since Jan. 1, 1914.

Ser. No. 88,207. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) F. W. STERLING, Los Angeles, Cal. Filed July 26, 1915.



Particular description of goods.—Dish-Washers.

Claims use since July 14, 1915.

Ser. No. 88,244. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) R. P. ANDREWS PAPER COMPANY, Washington, D. C. Filed July 28, 1915.

APCO

Particular description of goods.—Sealing-Machines and Stapling-Machines.

Claims use since Mar. 1, 1915.

Ser. No. 88,249. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) JERSEY LEATHER COMPANY, Camden, N. J. Filed July 28, 1915.



Particular description of goods.—Patent-Leather.

Claims use since Jan. 1, 1906.

Ser. No. 88,256. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) PEERLESS KID COMPANY, Camden, N. J. Filed July 28, 1915.



Particular description of goods.—Leather Toppings.
Claims use since June 1, 1913.

Ser. No. 88,257. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) PHOSPHO-GINGER COMPANY, Raleigh, N. C. Filed July 28, 1915.

Phospho-Ginger

Particular description of goods.—A Non-Alcoholic Tonic Syrup Beverage Colored with Burnt Sugar and Sold as a Soft Drink.
Claims use since Nov. 1, 1914.

Ser. No. 88,316. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE YOUNGSTOWN SHEET & TUBE COMPANY, Youngstown, Ohio. Filed July 30, 1915.

COPPEROID

Particular description of goods.—Iron and Steel Wire Nails.
Claims use since Feb. 15, 1915.

Ser. No. 88,356. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JAMES J. DOHERTY CO., Boston, Mass. Filed Aug. 2, 1915.

Jani's

Particular description of goods.—Whisky.
Claims use since July 1, 1913.

Ser. No. 88,395. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) OMIN CO., New York, N. Y. Filed Aug. 3, 1915.



Containing the portraits of the aforesaid members of the firm, E. M. Sekunna and C. Chakraberty.
Particular description of goods.—A Nerve-Tonic.
Claims use since July, 1914.

Ser. No. 88,424. (CLASS 37. PAPER AND STATIONERY.) EDWARD G. SOLTMANN, Jr., New York, N. Y. Filed Aug. 4, 1915.

AUTOXPNs

Particular description of goods.—Blank Books.
Claims use since July 21, 1915.

Ser. No. 88,434. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JACKSON DRUG CO., Wildwood, N. J. Filed Aug. 5, 1915.

"21 B"

Particular description of goods.—Medicinal Tablets Which are Used as a Remedy for Stomach and Liver Ailments.
Claims use since July 5, 1913.

Ser. No. 88,495. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE CAPEWELL HORSE NAIL COMPANY, Hartford, Conn. Filed Aug. 9, 1915.



Particular description of goods.—Horse-Nails.
Claims use since about May 1, 1915.

Ser. No. 88,496. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE CAPEWELL HORSE NAIL COMPANY, Hartford, Conn. Filed Aug. 9, 1915.

EARLY BIRD

Particular description of goods.—Horse-Nails.
Claims use since about May 1, 1915.

Ser. No. 88,602. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) UNITED WINE & TRADING CO., New York, N. Y. Filed Aug. 13, 1915.



The exclusive use of the words "New York" being disclaimed.
Particular description of goods.—Whisky, Gin, Brandy, and Kohm.
Claims use since September, 1899.

Ser. No. 88,754. (CLASS 37. PAPER AND STATIONERY.) THE JOSEPH DIXON CRUCIBLE COMPANY, Jersey City, N. J. Filed Aug. 23, 1915.

ELDORADO

Particular description of goods.—Lead-Pencils.
Claims use since 1901.

Ser. No. 88,788. (CLASS 47. WINES.) P. J. MURRAY & COMPANY, INC., Holyoke, Mass. Filed Aug. 24, 1915.

Valley Queen

Particular description of goods.—Wine.
Claims use since Jan. 1, 1909.

TRADE-MARK REGISTRATIONS GRANTED

SEPTEMBER 21, 1915.

106,042. CERTAIN NAMED MEDICINES AND TOILET PREPARATIONS. The De Pree Chemical Company, Holland, Mich.
Filed March 3, 1913. Serial No. 68,813. PUBLISHED DECEMBER 22, 1914.

106,043. EGG-CRATES. Seralpha A. Buck, Monroe, Wash.
Filed August 12, 1914. Serial No. 80,479. PUBLISHED MAY 18, 1915.

106,044. PREPARATION FOR THE TREATMENT OF SCOURS IN ALL LIVE STOCK AND POULTRY. Belle Payne Elwood, Gouverneur, N. Y.
Filed November 28, 1914. Serial No. 82,963. PUBLISHED APRIL 13, 1915.

106,045. CERTAIN NAMED CUTLERY AND MACHINES AND PARTS THEREOF. The D. Eugster Importing Company, Inc., New York, N. Y.
Filed November 27, 1914. Serial No. 82,932. PUBLISHED MARCH 16, 1915.

106,046. PREPARED ROOFING. Evansville Paint & Varnish Co., Evansville, Ind.
Filed December 21, 1914. Serial No. 83,436. PUBLISHED APRIL 20, 1915.

106,047. MOTION-PICTURE FILMS. Excelsior Feature Film Co. Inc., New York, N. Y.
Filed January 26, 1915. Serial No. 84,118. PUBLISHED APRIL 20, 1915.

106,048. MOPS, BROOMS, AND FLOOR-BRUSHES. A. G. Jacobus' Sons Incorporated, Verona, N. J.
Filed April 14, 1914. Serial No. 77,475. PUBLISHED JUNE 8, 1915.

106,049. TRADE JOURNAL PUBLISHED PERIODICALLY. Robert S. Kennedy, New York, N. Y., assignor to Cyclecar & Motorette, a Firm composed of J. Leo Sauer, New York, N. Y., and Harold N. Condict, East Orange, N J.
Filed October 7, 1913. Serial No. 73,254. PUBLISHED DECEMBER 16, 1913.

106,050. CHOCOLATE-FLAVORED POPCORN. Mathias J. Laux, St. Louis, Mo.
Filed January 9, 1915. Serial No. 83,763. PUBLISHED APRIL 13, 1915.

106,051. UTERINE WAFER, INDICATED IN CERVICAL INFLAMMATIONS, VAGINITIS, VULVITIS, LEUCORRHEA, ULCERATIONS, MENSTRUAL DISORDERS, DISPLACEMENTS, &c. Luyties Pharmacy Company, St. Louis, Mo.
Filed March 18, 1914. Serial No. 76,742. PUBLISHED MAY 18, 1915.

106,052. FLESH-REDUCER. Madelmne S. C. Vacy Lyle, San Francisco, Cal.
Filed May 8, 1915. Serial No. 86,483. PUBLISHED JUNE 8, 1915.

106,053. CORNMEAL, GRITS, CORN CHOPS, MIXED FEED, HOMINY FEED, HOMINY FEED MEAL, UNBOLTED CORNMEAL. Marsh Commission Company, Pine Bluff, Ark.
Filed June 6, 1913. Serial No. 70,913. PUBLISHED JULY 28, 1914.

106,054. RHEUMATISM LINIMENT. John Norris, Canon City, Colo.
Filed January 11, 1915. Serial No. 83,779. PUBLISHED MARCH 16, 1915.

106,055. CERTAIN NAMED FRESH FRUITS AND BERRIES. Rogue River Fruit & Produce Association, Medford, Oreg.
Filed February 28, 1914. Serial No. 76,254. PUBLISHED MARCH 16, 1915.

106,056. PREPARATION FOR THE TREATMENT OF CORNS, BUNIONS, AND WARTS. Samuel Schwarz, Newark, N. J.
Filed December 15, 1914. Serial No. 83,309. PUBLISHED MARCH 23, 1915.

106,057. COFFEE. Robert G. Thomas, New York, N. Y.
Filed May 22, 1913. Serial No. 70,566. PUBLISHED MARCH 31, 1914.

106,058. MAGAZINE ISSUED WEEKLY. Tradesmen's Publishing Co., St. Louis, Mo.
Filed August 24, 1914. Serial No. 80,772. PUBLISHED APRIL 6, 1915.

106,059. LUBRICATING-OIL. U S Gun Oil Co., Houston, Tex.
Filed December 11, 1914. Serial No. 83,237. PUBLISHED FEBRUARY 2, 1915.

106,060. OPTICAL LENSES FOR SPECTACLES AND EYEGLASSES. Woodard, Clarke & Co., Portland, Oreg.
Filed January 11, 1915. Serial No. 83,788. PUBLISHED APRIL 6, 1915.

106,061. HOLLOW-TILE BUILDING-BLOCKS. New York Clay Products Company, Van Deventers, N. J., and New York, N. Y.
Filed December 19, 1914. Serial No. 83,414. PUBLISHED APRIL 13, 1915.

106,062. RESTORING COLOR OF HUMAN HAIR. John N. Kohlerman, Baltimore, Md.
Filed December 9, 1914. Serial No. 83,174. PUBLISHED JANUARY 26, 1915.

106,063. BUTTER. Springfield Creamery Co., Springfield, Mo.
Filed December 23, 1914. Serial No. 83,497. PUBLISHED MARCH 2, 1915.

LABELS

REGISTERED SEPTEMBER 21, 1915.

18,761.—*Title:* "ALEXANDER SOLE LEATHER." (For Sole-Leather.) ALEXANDER BROTHERS, Philadelphia, Pa. Filed July 10, 1915.

18,762.—*Title:* "FRUIT NECTAR." (For a Flavoring Compound.) BEECHET & RICHTER COMPANY, Minneapolis, Minn. Filed January 22, 1915.

18,763.—*Title:* "MERMAID SUPREME." (For Canned Tuna.) COAST FISHING COMPANY, Los Angeles, Cal. Filed August 30, 1915.

18,764.—*Title:* "MME. COBURN'S MARYLAND MINT CORDIAL." (For Cordial.) R. W. COBURN, Baltimore, Md. Filed May 5, 1915.

18,765.—*Title:* "MME. COBURN'S GENUINE SOUTHERN MINT JULEP." (For Mint Julep.) R. W. COBURN, Baltimore, Md. Filed May 5, 1915.

18,766.—*Title:* "DOUBLE CROSS." (For Coffee.) DWINELL-WRIGHT COMPANY, Boston, Mass. Filed August 24, 1915.

18,767.—*Title:* "FRANK'S QUALITY MEAT-TREATS." (For Meat Preparations.) L. FRANK & SON COMPANY, Milwaukee, Wis. Filed May 28, 1915.

18,768.—*Title:* "JACKSON SQUARE." (For Coffee and Chicory Compound.) IMPORTERS COFFEE CO., LTD., New Orleans, La. Filed March 30, 1915.

18,769.—*Title:* "ESCHAROL." (For a Medical Preparation.) LATO PHARMACAL COMPANY, Elizabeth, N. J., and New York, N. Y. Filed June 3, 1915.

18,770.—*Title:* "PHYTOFORM." (For a Tonic.) LATO PHARMACAL COMPANY, Elizabeth, N. J., and New York, N. Y. Filed June 3, 1915.

18,771.—*Title:* "PURINA BRAN BREAD." (For Bran-Bread.) RALSTON PURINA COMPANY, St. Louis, Mo. Filed August 28, 1915.

18,772.—*Title:* "CLOVER." (For Garter-Elastic.) SMITH WEBBING COMPANY, Pawtucket, R. I. Filed May 20, 1914.

18,773.—*Title:* "HENLEY." (For Garter-Elastic.) SMITH WEBBING COMPANY, Pawtucket, R. I. Filed May 20, 1914.

18,774.—*Title:* "WINDSOR." (For Garter-Elastic.) SMITH WEBBING COMPANY, Pawtucket, R. I. Filed May 20, 1914.

18,775.—*Title:* "WALLA WALLA VALLEY BRAND." (For Fresh Apples.) VALLEY FRUIT & PRODUCE ASS'N., Walla Walla, Wash. Filed November 11, 1914.

PRINTS

REGISTERED SEPTEMBER 21, 1915.

4,058.—*Title:* "A DAINTY BREAKFAST." (For Wheat Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed August 24, 1915.

4,059.—*Title:* "ALWAYS GOOD—ALL WAYS." (For Sausage.) THOS. CUSACK COMPANY, Chicago, Ill. Filed August 27, 1915.

4,060.—*Title:* "ASK DAD, HE KNOWS." (For Cigarettes.) THOS. CUSACK COMPANY, Chicago, Ill. Filed August 30, 1915.

4,061.—*Title:* "WHY ARE THEY SOLD IN EVERY CLUB AND HOTEL?" (For Cigarettes.) THOS. CUSACK COMPANY, Chicago, Ill. Filed August 30, 1915.

4,062.—*Title:* "ZANZIBAR PAINT." (For Paint.) THE GLOBE PAINT COMPANY, Cleveland, Ohio. Filed April 5, 1915.

4,063.—*Title:* "M. D. HARRIS & CO. KNOWN ALL OVER LAND, SHIRT MAKERS." (For Shirts.) MORRIS D. HARRIS, New York, N. Y. Filed February 10, 1915.

4,064.—*Title:* "HEATHERBLOOM." (For Petticoats.) A. G. HYDE & SONS, New York, N. Y. Filed August 27, 1915.

4,065.—*Title:* "KING PHILIP MILLS LINE OF NAINSOOKS." (For Nainsooks.) KING PHILIP MILLS, Fall River, Mass. Filed June 28, 1915.

4,066.—*Title:* "KNOCKS THE DEVIL OUT OF YOUR CORNS." (For Corn Cures.) OMEGA CORN CURE MEDICINE CO., Milwaukee, Wis. Filed July 10, 1915.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

U. S. Circuit Court of Appeals—Sixth Circuit.

CROWN CORK & SEAL CO. OF BALTIMORE CITY v. STERLING CORK & SEAL CO.

Decided October 16, 1914.

217 F. R., 381.

1. PATENTS—ADOPTION FROM ANOTHER ART.

Having gone into another art and adopted a device therefrom and adapted it to this art, the patentee could not thereafter get a valid patent covering broadly another adoption from the same art for similar purpose. There remained open for the later patent only the adaptation, not the adoption.

2. SAME—CONSTRUCTION OF CLAIMS.

Only when necessary to make the claims of a patent operative, or in case of ambiguity apparent on the face of the claims, or induced by their study in connection with the specification and prior art, is a court permitted to read in an element not named therein in order to narrow a claim so as to make valid one otherwise invalid.

3. SAME—CONSTRUCTION—EFFECT OF PROCEEDINGS IN PATENT OFFICE.

The effect of the rejection of a claim by the Patent Office and an amendment is not necessarily a limitation; but, even if so, it may not affect the claim in the particular involved in a subsequent litigation, and the exact thing done must be examined from all sides, and especially in connection with the point later in controversy, before its effect can be interpreted. (See note to *Novelty Glass Mfg. Co.* v. *Brookfield*, 95 C. C. A., 530.)

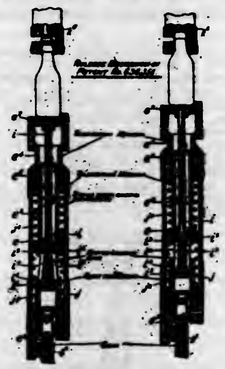
APPEAL from the District Court of the United States for the Northern District of Ohio; John M. Killits, judge.

Suit in equity by the Crown Cork & Seal Company of Baltimore City against the Sterling Cork & Seal Company. Decree for defendant, (210 Fed., 28,) and complainant appeals. Reversed in part.

STATEMENT OF THE CASE.

This was the usual infringement suit, brought by the appellant, as plaintiff, based on two patents—one granted to Painter, No. 638,354, December 6, 1899 (application filed October 28, 1898), for a machine for automatically sealing bottles, and one granted to Painter and Hawkins, February 20, 1900, No. 643,973, for an apparatus for automatically supplying to the former machine the crowns which it attached to bottles. These crowns are shallow metal caps containing a thin cork disk, and the two machines, coöperating rapidly and automatically, place these disks upon the tops of and over the bottles, and then, under very heavy pressure, form the edges down over the top of the bottle-neck and so make an air-tight closure. The district court thought that neither patent was infringed, and dismissed the bill. The two patents are so distinct that they require separate consideration.

Painter's patent is designed to meet a problem presented by the fact that bottles, supposedly alike, are not precisely of the same height, and that, if such a machine is adjusted to give a pressure of (say) 700 pounds in sealing a bottle of the standard height, it will fail properly to close a bottle which is a trifle short, and it will crush a bottle which is a trifle high. The accompanying sketch shows his solution. The bottle was supported by a stand,



which, with each revolution of the machine, was raised a certain distance by a supporting-cam. The stand consisted of three telescoping members. The upper bottle-holding member is provided with a long rod carrying, at its bottom, a piston-shaped device adapted to enter the extreme bottom telescoping member or socket. Such entry, however, is normally prevented by locking dogs, which prevent telescoping and make the two members a unit in resisting pressure. An outer case serves as a third telescoping member, within which the bottle-supporting member passes downwardly whenever the bottom piston is permitted to enter the receiving-socket. Within this case, and interposed below a shoulder on the upper member and above a sliding disk or horizontal portion, which normally is held rigid by the upper end of the locking dogs, but which may descend when these dogs are unlocked at the lower end, there is interposed a spring, known as the "spring under predetermined compression" (which we shall call the "upper spring"). It will be seen from the accompanying sketch that this horizontal disk or diaphragm which is the lower end of the part marked c^4, primarily receives and carries the entire thrust of the sealing operation, and does so through this upper spring; and it is evident that if this spring is set so that it will not be further compressed until it receives a pressure of more than

(say) 700 pounds, all the parts named will at first be held in rigid, relative position, but that when this pressure is exceeded, and this spring yields very slightly, the dog-retaining piston, at the lower end of the rod, will descend correspondingly, the dogs will swing inwardly, the locking engagement will disappear, and, thereupon, if nothing further was provided, the entire upper part of the device, including the supporting-stand and its rod, with the upper spring and the part e^6 and the dogs, would fall until stopped by the bottom of the receiving-socket, and these parts would then have to be raised until the dogs could again spring into locking position to be ready for the next operation. To accomplish this resetting automatically, Painter provides a further spring, under suitable compression, but somewhat less than in the upper spring, and the bottom of the part, e^5, is supported in the casing by this resetting-spring. The result is that, as soon as by the yielding of the upper spring the dogs have been unlocked, the entire thrust is transferred to the lower spring, which gives a yielding resistance thereto, and then, as soon as the pressure is relieved, sufficiently elevates the upper parts and resets the device. The secondary resistance interposed by this spring to the thrust, thereby preventing the parts from being telescoped farther than is necessary and avoiding a collapse, seems an important function, though it receives no mention in the specification.

Of the three claims sued upon under this patent, 4, 5, and 6, it is sufficient to quote claim 6, which is as follows:

Claim 6.—In a pressure-limiting mechanism for bottle-sealing machines, a bottle-support, a compound cylinder, a spring between the two members thereof held under a predetermined compression, a tripping device for automatically releasing said predetermined compression, consisting of a pair of tripping-dogs pivoted to one member of said compound cylinder, and means carried by the other member of said compound cylinder for actuating the dogs, whereby said compound cylinder will become automatically shortened as a whole when the predetermined compression is reached and the pressure applied to the bottle resting thereon be automatically released, substantially as described.

Diagram Defendant's Machine.



The defendant uses the device shown by the accompanying diagram. It is sufficient to say that it has all the parts called for by the claim, accomplishing all the contemplated results, but that they are in such different form and arrangement, and reach their ultimate result under such variant conditions, that the question of infringement depends upon the breadth of equivalency allowed to the claims; and this necessarily brings us to the prior art.

The Painter patent in suit was not his first attempt to solve the problem. He had found another solution, by his patent No. 609,209, of August 16, 1898. This may fairly be called similar, in general construction and operation, to the patent in suit, excepting that the piston carried by the bottom of the rod was more truly a piston and rested upon a body of oil which filled the casing below that point. When the pressure overcame the resistance of the upper spring and the piston rod moved downward slightly, it opened ports in this piston and thereupon the piston would slowly descend as the pressure continued and as the liquid passed to the other side. The supposed breadth and scope of this invention are indicated by claim 1, which is as follows:

Claim 1.—In combination in a bottle-sealing machine, a pressure-applying head, a table or rest for the bottle, means for moving one of said parts relatively to the other to obtain the desired pressure, and means for automatically limiting the application of pressure when a predetermined degree is reached, irrespective of the length of stroke of the movable part, substantially as described.

Mr. J. Q. Rice and *Mr. R. H. Parkinson* for the appellant.

Mr. C. P. Byrnes and *Mr. G. H. Parmelee* for the appellee.

Before WARRINGTON and DENISON, Circuit Judges, and EVANS, District Judge.

DENISON, *C. J.*, (after stating the facts as above:)

It is familiar knowledge that, either on account of the injury to the material handled or on account of the breakage of the machine on an unexpected resistance, it has been common in many arts to provide a pitman or plunger which would exert force rigidly up to a predetermined point, and, if the resistance was not overcome, would then yield. The record informs us that this method of treatment has been so common and the plan which is devised for one situation is often so adaptable to other situations that the Patent Office maintains, in its classification list and under the class "Machine elements," a subclass known as "Pitman—Longitudinally yieldable." Yielding resistance by hydraulic cylinder, or by air cylinder, or by springs, were different principles invoked in the different forms. The conception which lay at the bottom of plaintiff's 1898 patent, viz., that he could go to the yielding plunger art, or to some specific art, and adopt a yielding plunger as an element of a bottle-sealing machine, was a meritorious conception. It may have entitled him to a broad monopoly upon any use of a yielding plunger in that association (as was apparently secured to him by the first claim of his 1898 patent). That question is not before us, and we do not mean to intimate any opinion; but, however that may be, having had this conception in 1898 and having received a patent, he could not have another patent in 1899 which would do more than cover the improvement which he then discovered. Having gone into the yielding plunger art, and adopted and adapted the hydraulic cylinder yielding plunger into and for a bottle-sealing machine, and having thus bridged over whatever gap there was between bottle-sealing machines and yielding plungers, and having thus incorporated the two arts together, he could not the next year adapt a mechanical trip-yielding plunger to bottle-sealing machine use and then get a valid patent covering any kind of a mechanical trip-yielding plunger when used in a bottle-sealing machine. Yet this is, in effect, his present position, and must be his position to succeed. There remained open for

his 1899 patent only his adaptation, not his adoption. Judge Killits happily expressed this thought in his opinion below, when he said:

But, when Painter patented the mechanism alleged to be infringed in this case, the art of bottle-sealing by crowns had already invaded the art of yielding pitman, of which the known forms were many, and had made an appropriation therefrom. Whatever may be the merits of his invention, we find nothing in his grant which shuts the door of opportunity to some other inventor to go to the yielding plunger art for an old device of this character.

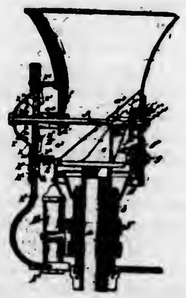
Defendant's structure is, speaking broadly, a reproduction of the pressure-relief mechanism or yielding plunger which was shown by the now expired patent to Penfield, April 22, 1890, No. 426,315, as part of a brick-machine. The parts in defendant's device are the same in number, form, shape, and arrangement as in Penfield (with the exception of the resetting-spring hereafter mentioned). The Penfield structure was probably intended to prevent breaking the machine, which was of great weight and strength, when there was a large stone in the brick-mold; and to adapt this machine to handling glass bottles required changes in details and very nice machining and adjustment. Whether these changes and this adaptation involved invention, and entitled the defendant to a patent, is a question not involved, except somewhat collaterally. It has no direct bearing on the inquiry whether the patent in suit is entitled to a sufficiently broad construction to include the defendant's form. It is sufficient to say that, for the reasons we have stated, Painter's second patent, which, to be valid, must be confined to the general type of resisting spring and mechanical trip which he shows, cannot cover another type of yielding plunger, the different typical character of which is demonstrated by its development from the older art, instead of from Painter's patented improvement.

Another feature with reference to this patent requires attention. So far as the record informs us, the lower spring, having the double function of furnishing secondary resistance and resetting the device, was quite new in this association, and it seems to give distinct and meritorious character to Painter's device, above and beyond the credit due him for devising an efficient form of mechanical trip. Apparently, he would have been entitled to a patent securing to him the use of this double-function spring in combination with any suitable form and arrangement of the other elements. In this aspect of the invention, it has been appropriated by defendant, who was apparently compelled to add Painter's resetting-spring to the Penfield brick-machine in order to make it satisfactory for the desired purpose. This feature of the case leaves us dissatisfied with a conclusion of non-infringement, if any reasonable construction of the claim permits the inclusion of this resetting-spring as a characterizing element; but we are convinced that such construction cannot be given without doing violence to settled rules. Only when necessary to make the claims operative, or in case of ambiguity apparent on the face of the claims, or induced by their study in connection with the specification and prior art, is a court permitted to read in an element not expressly named therein, in order to narrow a claim, so as to make valid one otherwise invalid. (*McCarty* v. *Lehigh Co.*, 160 U. S., 110.) This court has applied this rule, and has refused thus to narrow a claim, and confine it to what turned out to be the real invention, in many cases, (see *National Co.* v. *Gratigny*, 213 Fed., 463, 467,) and we have, for that purpose, limited a claim beyond its apparent scope only in cases like *Lamb Co.* v. *Lamb Co.* (120 Fed., 267, 269,) when it contained some general term of reference which was capable of being so narrowed by interpretation without importing an element distinctly foreign.

In the Painter patent in suit we can find no room for a suggestion of inoperativeness or uncertainty which would justify such interpretative treatment. All the twelve other claims of the patent, not selected for this suit, refer to the machine as a whole. One of them expressly includes this secondary or lighter spring as an element, and others contain phrases which might be construed as referring to that spring; but each of these twelve claims is, in other respects, so limited that, very likely, plaintiff was well advised in not bringing suit upon them. In distinction from the other twelve, each of the three claims sued upon is confined to the "pressure-limiting mechanism" of the machine, and directed only to the pressure-limiting function, apparently with the distinct purpose that these claims might be broad enough to cover Painter's pressure-limiting mechanism, no matter in what general association it was put. The "pressure-limiting function" is finished before this secondary spring begins to operate, and to read the secondary spring into these claims would be to say that a pressure-limiting mechanism, described as consisting of certain parts, included a part which was not named and which had no share in limiting the pressure. This is an impossible conclusion. If this suit were directed against a device which had no such secondary spring, but in which the telescoping cylinders completely collapsed when the dogs were tripped, and in which the table must, each time, be manually raised and reset, we would be compelled to find that infringement of these three claims was not avoided by the omission of this resetting-spring. It is not improbable that the patentee and his solicitor regarded this secondary spring as of importance only where there was a series of sealing-machines working in very rapid succession, as shown in the specification and as specified in the only claim which names the resetting-spring, and that the patentee purposely drafted these three claims so that they would be broad enough to cover a slower device which should be reset by hand. To narrow them now by a limitation which the patentee refused to have would be to trifle with the patent contract. So far as the decree below finds non-infringement of the Painter patent, it must be affirmed.

The other patent in suit concerns a more complicated structure. The crowns come to the sealing-machine in a confused mass and are poured into a hopper. Before these can be fed to the sealing mechanism through a suitable chute, it is necessary that they be arranged so that each will be

presented in exactly the same position at the receiving end of the chute, and especially that they must all be the same side up. It was common to put buttons or rivets, in a mass, in a hopper, and, in connection with agitating them, assort and select and present them, so that they would pass through a suitably-shaped delivery chute. In a broad sense, this was the same operation desired for crowns for bottles; but the record is convincing that the peculiar character of these crowns so far required special treatment as to leave abundant room for invention in adapting to their manipulation the general features of construction used for handling buttons and rivets. The constructions involved are shown by the accompanying cuts. The single claim in suit, No. 2, is given in the margin.[1] Referring to this claim and the drawing of the patent, the hopper and its inclined bottom are apparent; the external chamber of the claim is marked E.



In the form shown, it is a short cylinder with horizontal axis, which cylinder is a part of the frame or body of the structure, and carries, centrally, a suitable box or hub for a revolving shaft. Carried by and rotating on this shaft is what the claim calls a "receptacle or cage." The farther or outer side of this cage is closed by a dome-shaped cap, *k*. The side adjoining the hopper (or, more accurately, adjoining the external chamber, E, here considered as part of the hopper) has a central opening surrounding the rotating shaft, and through which the closures may pass from the chamber, E, into the rotating cage. By reason of the inclined bottom of the hopper and the comparatively-separated chamber, E, it follows that the crowns are not presented to the selecting mechanism in a large mass, or pressed by the weight of those in the hopper, but that comparatively few continually come down and fall over against the rotating side of the cage. This is provided with lifters or wings, which pick up the crowns from the bottom of the chamber, E, and carry them up to a higher position, from which they slide through the opening in the side of the cage into its interior. Here the comparatively few which enter at a time are tumbled, and in the periphery of the tumbling-cage are passages or openings such that, whenever a crown is presented in proper position, it will fall out of the cage through the opening or passage and into the surrounding channel which leads to the delivery-chute. The defendant's device is generally similar, but different in some respects. It clearly has the hopper, and there is an inclined hopper-bottom and a rotating receptacle or cage, which, on the side away from the hopper, is more or less completely closed, which has an opening on the side toward the hopper, and which contains, away from its center and toward its periphery, passages suitable for receiving the crowns in one position only and for leading them to a surrounding channel-way. Crowns in limited



quantity fall from the hopper up against the interior surface of the rotating cage, when it is in the position shown. They are then impelled by inclined wings on the cage to fall through into the interior of the cage, where they are tumbled until they go out through the passage-ways. The distinctions which are claimed to be vital and to avoid the charge of infringement, when the claim is construed so as to save its validity, are three. It is said that the device does not contain the "external chamber" of the claim, that the rotating cage is not closed upon one side, and that the rotating cage does not have a central opening in the opposite side. As collateral to the lack of the external chamber, it would follow that there could be no inclined hopper-bottom adapted to lead the crowns to the external chamber, and there could be no cage rotating within such chamber.

As to the first subject-matter, it is said that defendant's device is all one unitary hopper leading down to and against the interior surface of the rotating cage, and that the inclined part, marked "2," at the bottom of the upper wider portion, is only an agitator operated by cam 4, preventing the crowns from arching at the hopper-opening and delivering them down more slowly to the bottom of the hopper. We think it not very material to decide whether this plate 2 is or is not the "inclined hopper bottom" of the claim. The external chamber of the claim is not defined therein. So far as the terms of the claim go, the chamber may be directly below

[1] Claim 2.—In an automatic feeding apparatus for bottle-sealing machines, a hopper for the indiscriminate reception of the crowns or closures, a chamber external to said hopper, an inclined bottom to said hopper adapted to leading the closures to said external chamber, and a receptacle or cage rotating within said external chamber, having one side closed and a central opening in the side adjoining said hopper, adapted to receive the crowns or closures indiscriminately from the hopper, and containing in its periphery suitably-formed passages such that the crowns or closures can pass therethrough in one position only, whereby, by the tumbling action of said cage, the crowns or closures are changed in position therein until they present themselves in proper position to pass through said passages to a surrounding channelway, substantially as described.

the hopper as well as at the side; and it is no distortion of the ordinary meaning of the words used to assume that plate 2 or plates 2 and 6 constitute the hopper bottom, and that everything below that point is an external chamber. We get the same result, however, if we assume that plate 16 is the inclined hopper-bottom. Even then, all of chamber 3 which is above the extreme bottom and below the partition 6, and which is at the left of an undefined line connecting the external bottom-point of 16 to some point in partition 6, responds to the general idea of such external chamber. It is a chamber, and it is external to the main part of the hopper structure—that part which is permitted to operate as a hopper. If the phrase "external chamber" is treated as meaning merely a suitable passage-way which will receive from the inclined hopper-bottom a limited number of crowns and permit them, as they accumulate, to lie over against the face of the rotating cage, so that they will there constitute only a shallow pile (and this construction does no violence to the words used), then the defendant employs this feature.

As to the next point, it is quite fair to say that the defendant's rotating cage is closed on the side away from the hopper. There are openings, not clearly shown in the drawing, such that this side could not be called closed for all purposes; but, as used in this connection, the word merely contrasts with the open condition on the other side. "Open" and "closed" mean "open" so that the crowns will fall in, and "closed" so that they will not fall out, and with this natural and reasonable interpretation this side of the defendant's cage is closed. The fact that the closing-plate does not usually rotate with the cage is not important.

The contention that the opening on the hopper side of the rotating cage is not central of the cage is not tenable. True, the exact center on this side of the cage is closed by the shaft and its box, and the opening is an annular one surrounding this box or shaft-hub; but exactly the same thing is true of the patent in suit, and, in both cases, this opening is relatively central with reference to the extreme diameter of the cage.

It being thus apparent that, upon a fair and natural construction of the claim language, there is infringement, the inquiry must be whether the state of the art or the Patent Office proceedings import into the language such limitations as to require the contrary result. Our study of earlier patents, as proved in this case, shows no anticipation (indeed, no complete anticipation is claimed); and we find nothing justifying any further claim limitations than were required during the progress of the application through the Patent Office; and so we come to the question, as the really vital one in the case, what the effect was of the various rejections and amendments. On this question it is as important not to exaggerate as it is not to minimize. Where there has been a rejection, followed by an amendment, it is natural to think of the net result as a limitation; but it may be or may not be. Not infrequently it is a mere expedient for overcoming the Examiner's unfounded objection, or it only makes more clear to him the real meaning of the claim as it already existed, or, if a limitation, it is in some particular which is wholly without effect as to the point involved in the subsequent litigation where the proceedings are under examination; indeed, sometimes, the amendment is, in that particular, if not generally, a distinct broadening of the claim. The exact thing done must be examined from all sides, and especially in connection with the point later in controversy, before its effect can be interpreted. We therefore approach the study of the Patent Office proceedings from this point of view: Assuming that the claim language, with reference to what is said to be the missing or the variant element, might otherwise properly be thought to read upon defendant's structure, did the applicant, before the grant of the patent, acquiesce in a construction which, as to this particular feature, is more limited? If so, the patentee is bound by that limited construction; otherwise, not.

First, as to the external chamber: Did anything occur by which the applicant agreed to a definition of this chamber as one on the side of the lower part of the hopper and with a clear and absolute line of demarcation between the two, rather than as merely a suitable passage-way leading from the inclined hopper-bottom and presenting at its farther edge only the bottom of a sloping pile of crowns? The claims which involve this external chamber appeared in the original application as 1 and 2. One of them named this part as—

> a passage for supplying the crowns from the hopper to the cage

and the other named it as—

> an auxiliary chamber adapted to receive the crowns from the hopper.

These claims were rejected on reference to patents to Muslar, Gillette, and Bennett. Thereupon applicant canceled these claims and substituted four others, each of which contained, in some form, as an element, this external chamber, but in no one was there any restriction upon its location, size or shape. Neither did any one of the four claims carry any restriction upon the form or construction of the rotating, selecting-cage, excepting that it rotated in the external chamber and was provided with exit-passages. The rejection was repeated upon the same references. These claims were canceled, and two new claims were submitted. Each of these included a reference to "a chamber external to the hopper." These were again rejected. The applicant asked an explanation of the rejection, and the Examiner pointed out that—

> Bennett discloses a hopper and chamber external to the hopper, an inclined bottom to the hopper for feeding to the external chamber and a selecting cage in the external chamber, an exterior portion of the cage forming part of the front wall of the chamber.

To this statement applicant responded with an argument pointing out the distinctions between his device and Bennett's. He insisted that Bennett had no selecting-cage, in applicant's use of the phrase, and had only a notched disk which picked up buttons directly from the mass in the bottom of the hopper, and pointed out that in both the references the

articles did not pass into a selecting-cage to be tumbled, and said:

> In applicant's case, they pass in a mass into the interior of what is truly termed a rotating cage, and they are selected by passing through the pockets from the inside outward. This construction is the gist of applicant's invention, which enables it to successfully select and fit the crowns. * * * Thus neither Bennett nor Gillette really use a selecting cage. * * * The claims now presented have also the element of a rotating selecting cage, having one side closed and the other open.

Accompanying this argument was the claim now in suit, and it was thereupon allowed. It differed from and was more limited than the claims which had been rejected, not at all with reference to the external chamber, which was claimed in the same general language which had been continually used, but in the provision that the rotating cage should have one side closed and should have a central opening in the opposite side, and that it should be adapted to receive crowns indiscriminately from the hopper, and that it should have in its periphery suitably-formed selective openings.

This history demonstrates that no limitation upon the form or location of the element, which was sometimes called an external chamber and was sometimes called an intermediate passage, was, at any time, put upon the claim as the result of any rejection. The patent to Bennett is not included in the record. We must, therefore, take at their face value statements regarding it made by the application record. The two other patents cited, Muslar and Gillette, disclose nothing corresponding to the external chamber. However, since it was said to be contained in Bennett, and this was not denied by applicant, we must assume that it was. It follows that there is no patentable novelty in this external chamber alone, considered as a passage-way which would present crowns to selecting mechanism in such a way as to prevent clogging; and the same conclusion would seem to follow as to the hopper with inclined bottom in connection with the external chamber or passage-way; but it does not follow that there could be no invention in combining these two elements with a new form of a selecting-cage adapted to receive and tumble and select the closures fed through the hopper and intermediate chamber.

When we trace the rotating cage through the history of the claim amendments, we find that it was at first named broadly as merely a rotary, selecting-cage. Then, in the four claims, it was limited to a selecting-cage rotating within the external chamber and containing exit-passages. After these claims were rejected, the two next presented tendered a less limited description of the selecting-cage, providing only that it should form one wall of the external chamber, but without any limitation upon its interior shape, construction, or operation. Then, when the Office pointed out that Bennett was thought to have a rotating cage responding to these two broadened claims, applicant presented the argument already quoted, insisting that the Bennett device had no rotating, selecting-cage in the sense in which the claim used the term, and for greater certainty and better distinction pointing out that the rotating cage, which was to be an element of the combination in the patent being solicited, should be centrally open at one side, so that crowns could pass in a mass into its interior and be there tumbled, being kept in by the closed opposite side of the cage and being allowed exit only through suitable peripheral passages. The Examiner, representing the government, acquiesced in this view, and a patent issued. Certainly there is, in this course of conduct, nothing limiting the claim to that form of central opening in one side of the cage or to that form of closing the opposite side of the cage which the drawings show. The proceeding, as a whole, shows that applicant in the end insisted that it was new to combine in one structure the hopper with the inclined bottom, the external chamber or intermediate passage leading from the inclined bottom to the selecting-cage, and a rotating, selecting-cage which had an interior cavity where a comparatively small number of the articles would be tumbled, which would receive these articles through a central side opening, which was closed upon the other side and which had suitable exit-openings, and shows that the Patent Office yielded to this insistence and issued the patent; and we can find nothing tending to limit the claim in any particular which will serve to distinguish the defendant's device. No one had before combined such a hopper and such a passage-way with such a selecting tumbler-cage. The combination successfully met the peculiar difficulties of handling this material; and even though there might have been no invention in selecting and combining these three elements, if all had been old, yet there was sufficient novelty in this cage itself, so that a patent for the combination of this cage with the other two elements necessary to make it satisfactorily do this work, although the other elements were old, was a valid patent.

It is not fully accurate to say that the selecting-cage of the patent rotates "in the external chamber," and this descriptive phrase must be read with reference to the actual structure to which it refers. As the claims are worded in some of the amendments, this rotating cage forms one side of the external chamber. It is not wholly wrong to say that a rotating disk, which forms one side of the chamber, and so is one part of the chamber, rotates in the chamber. The function of the patent consisted in so relating the chamber and the cage that the crowns were passed slowly into the cage, so that it would contain only a few at a time. This was new, and we are not inclined to give the word "in" its most precise meaning; but even if we should, and should say, as defendant argues, that the cage of the patent rotates "in the external chamber" only by means of its vanes or lifters, which project into the chamber so as to contact with the crowns which lie at its extreme edge, and, therefore, that defendant's cage must be found to project into the chamber in the same way, it would not alter the result. Defendant also has vanes or wings projecting beyond the chamber-surface of the cage, and so projecting and rotating in the chamber. The projection is slight, but it is sufficient to reach and affect the adjacent crowns. They are not lifted up and carried over, just as in the patent in suit, but they are pushed along, or agitated, and caused to fall over, with practically the same result.

Construed as we think the claim should be, no one of the distinctions between it and defendant's structure is material, and there should be the usual decree for injunction and accounting. In this particular, the decree below is reversed, and, for that purpose, the case is remanded, with costs.

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 218—No. 4. TUESDAY, SEPTEMBER 28, 1915. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF SEPTEMBER 28, 1915	881
CHANGES IN CLASSIFICATION	881
ADVERSE DECISIONS IN INTERFERENCE	881
EXAMINERS' LETTERS AND AMENDMENTS	881
APPLICATIONS UNDER EXAMINATION	882
PATENTS GRANTED	883
REISSUES	1132
DESIGNS	1134
TRADE-MARKS—REGISTRATION APPLIED FOR	1141
TRADE-MARK REGISTRATIONS GRANTED	1153
TRADE-MARK REGISTRATIONS RENEWED	1153
LABELS AND PRINTS	1154
DECISIONS OF THE U. S. COURTS—	
Mahle Printing Press & Mfg. Co. v. Whitlock Printing Press & Mfg. Co.	1155
ADJUDICATED PATENTS	1157
CHANGES IN CLASSIFICATION	1158

ISSUE OF SEPTEMBER 28, 1915.

Patents	736	No. 1,154,595 to No. 1,155,330, inclusive.
Designs	36	No. 47,871 to No. 47,906, inclusive.
Trade-Marks	7	No. 106,064 to No. 106,070, inclusive.
Labels	7	No. 18,776 to No. 18,782, inclusive.
Prints	4	No. 4,067 to No. 4,070, inclusive.
Reissues	2	No. 13,988 to No. 13,989, inclusive.
Total	792	

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	6	.....	North Carolina	3	.....
Arizona	2	.....	North Dakota	3	.....
Arkansas	3	.....	Ohio	60	4
California	42	1	Oklahoma	7	.....
Colorado	9	.....	Oregon	5	.....
Connecticut	16	.....	Pennsylvania	63	2
Delaware	1	.....	Rhode Island	3	.....
Florida	2	.....	South Carolina	2	.....
Georgia	1	.....	South Dakota	4	.....
Idaho	.....	.....	Tennessee	4	.....
Illinois	70	.....	Texas	7	1
Indiana	15	1	Utah	2	.....
Iowa	15	.....	Vermont	4	.....
Kansas	8	.....	Virginia	5	1
Kentucky	10	.....	Washington	11	.....
Louisiana	6	.....	West Virginia	6	.....
Maine	4	.....	Wisconsin	28	.....
Maryland	14	1	Wyoming	1	.....
Massachusetts	51	.....			
Michigan	16	1	Alaska, District of	.....	.....
Minnesota	11	.....	Canal Zone	.....	.....
Mississippi	3	.....	District of Columbia	2	.....
Missouri	17	.....	Hawaii Territory	.....	.....
Montana	1	.....	Philippine Islands	.....	.....
Nebraska	9	.....	Porto Rico	.....	.....
Nevada	1	.....	U. S. Army	.....	.....
New Hampshire	1	.....	U. S. Navy	.....	.....
New Jersey	34	.....			
New Mexico	1	.....	Total to residents of the United States	695	18
New York	106	6			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Counties.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	.....	.....	Netherlands	.....	.....
Belgium	.....	.....	New South Wales	1	.....
British India	.....	.....	New Zealand	4	.....
British West Indies	.....	.....	Norway	.....	.....
Canada	17	.....	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	.....	.....
Cuba	1	.....	Scotland	3	.....
Denmark	.....	.....	South Australia	.....	.....
England	6	.....	Spain	.....	.....
Finland	.....	.....	Sweden	.....	.....
France	6	.....	Switzerland	4	.....
Germany	33	.....	Transvaal, South Africa	.....	.....
Guatemala	.....	.....	Victoria	1	.....
India	.....	.....	Western Australia	.....	.....
Ireland	.....	.....			
Italy	1	.....	Total to residents of foreign countries	77	.....
Luxemburg	.....	.....			
Mexico	.....	.....			

Changes in Classification.

(ORDER No. 2,221.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 16, 1915.

It is hereby directed that class 50, Fluid-Pressure Regulators, be transferred from Division IX to Division XVIII, to take effect immediately.

THOMAS EWING,
Commissioner.

Adverse Decisions in Interference.

PATENT No. 1,037,538.

On August 23, 1915, a decision was rendered that Walter S. Rockey and Hilliary Eldridge were not the first inventors of the subject-matter covered by claims 12 and 17 of their Patent No. 1,037,538, subject, "Process of refining copper," and no appeal having been taken within the time allowed such decision has become final.

Examiners' Letters and Amendments.

Examiners are directed to recite in each letter in an application the date of the action by the applicant to which it is a reply, and applicants are requested to indicate in their actions on an application the date of the last Office letter.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business September 25, 1915.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended.	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	July 1	July 8	544
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Apr. 7	July 3	861
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	Sept. 7	Sept. 4	101
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	Apr. 16	Aug. 21	621
167	5. Bookbinding; Harvesters; Jewelry; Music.	June 4	July 27	373
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar. 2	Aug. 27	502
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	July 21	Aug. 2	425
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Apr. 9	Aug. 16	1188
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Mar. 1	Aug. 19	601
235	10. Carriages and Wagons	May 24	July 28	801
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Aug. 18	Sept. 14	132
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	July 2	July 8	721
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	July 22	July 31	525
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Apr. 29	Aug. 13	263
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	May 25	Aug. 16	568
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Apr. 19	July 9	514
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	June 17	Aug. 18	187
227	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Aug. 13	Aug. 13	299
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	Aug. 6	July 19	238
79	20. Artificial Limbs; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Aug. 25	Aug. 24	280
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	June 12	July 22	370
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	July 20	July 16	308
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	May 19	June 10	507
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	June 12	July 22	480
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Aug. 20	Aug. 19	150
106	26. Electricity, Generation; Motive Power.	Mar. 15	May 28	649
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Aug. 2	July 26	350
65	28. Internal-Combustion Engines	July 10	July 17	413
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	July 12	July 19	355
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	July 26	Aug. 25	244
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	June 23	Aug. 16	303
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	Mar. 20	Aug. 20	741
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	July 3	July 26	366
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	July 12	July 27	315
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	May 8	Aug. 19	776
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	June 9	Aug. 24	753
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Mar. 22	May 26	876
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	May 20	July 24	561
321	39. Water Distribution	June 14	July 10	388
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Apr. 3	July 30	962
126	41. Railway Draft Appliances; Resilient Tires and Wheels.	May 27	July 26	422
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	May 18	June 1	806
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Aug. 9	July 6	265

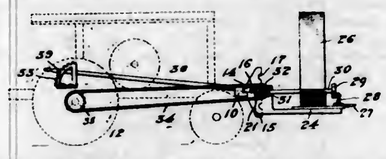
Oldest new case, Mar. 1; oldest amended, May 26.
Total number of applications awaiting action..... 21,141

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	July 24	Aug. 6	1013
	Designs	May 14	Sept. 10	447
	Labels and Prints	Sept. 7	Sept. 4	110

PATENTS

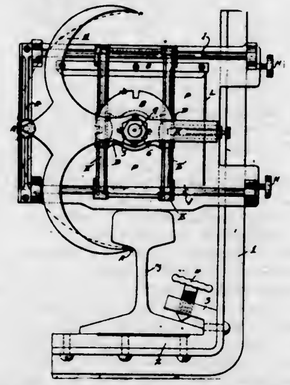
GRANTED SEPTEMBER 28, 1915.

1,154,595. HEADER ATTACHMENT FOR ENGINES. JAMES A. BAKER, Mutual, Okla. Filed May 6, 1914. Serial No. 836,720. (Cl. 56—100.)



In an attachment for traction engines, a frame bar, bearing brackets adjustable along said frame bar and each provided with a plurality of bearings, a shaft supported in a bearing of each bracket, bracket arms extending forwardly from said shaft and fixed thereon, a header platform supported on said arms, header mechanism carried by said platform, a lever fixed to said shaft, a quadrant adapted for attachment to an engine, a latch on said lever coöperating with the quadrant, and means to drive the header.

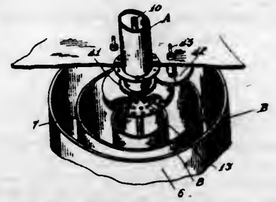
1,154,596. CONTOUR-RECORDER. CHARLES W. BALDRIDGE, Chicago, Ill. Filed Oct. 20, 1913. Serial No. 796,248. (Cl. 33—23.)



1. In a contour recorder, the combination with a head and guides therefor holding the same for straight line sliding movements in two directions of a common plane, of a stylus projecting from, carried by and movable with said head, a tracer carried by said head but mounted for pivotal movements in respect thereto around the axis of said stylus and provided with a plurality of tracing points, and means for locking said tracer to said head in different pivotally adjusted positions.

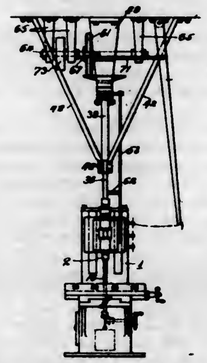
2. The combination with a frame having means for supporting a tracing sheet, of an upright supporting said frame with freedom for vertical adjustments, and provided with means for attachment to a rail with the said frame in position to hold the tracing sheet in a plane at a right angle to the rail, horizontal guides on said frame, a carriage mounted for sliding movements on said horizontal guides and having vertical guides, a cross-head mounted for sliding movements on said vertical guides, a stylus carried by said cross-head, a tracing lever attached to said cross-head and mounted for pivotal adjustments around the axis of said stylus, said tracing lever having a plurality of tracing points located equidistant from the axis of said stylus, and means for locking said lever in different pivotally adjusted positions, corresponding to the different positions in which the several tracing points will be brought to a common relatively fixed point.

1,154,597. SYSTEM OF SEPARATING SEWAGE. JOHN P. BALL, Chicago, Ill. Filed July 21, 1913. Serial No. 780,116. (Cl. 233—19.)



In a system for separating sewage, a basin provided with a series of concentrically arranged chambers, each of which is provided with a controllable discharge, a revolubly mounted closed tank placed within the inner chamber of the basin, said tank being provided with concentrically arranged partitions depending from the upper end of the tank, the successive partitions being of increasing depth from the tank center toward the sides thereof, an axially arranged conduit extending through the top of said tank and arranged to deliver the sewage to be treated concentrically at a point in proximity to the lower end of the innermost depending partition, and means whereby the upper end of each compartment intermediate of the depending partitions of the tank may be separately drained to a compartment of the basin.

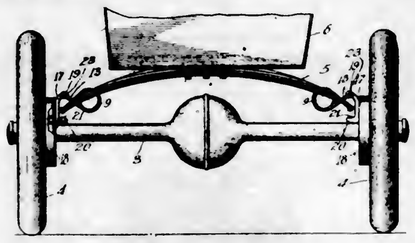
1,154,598. FRICTIONAL GEARING. WILLIAM H. BARKWILL, Akron, Ohio, assignor to Die Sinking and Machine Co., Akron, Ohio, a Corporation of Ohio. Filed July 24, 1914. Serial No. 852,833. (Cl. 74—26.)



The combination with a frame, of a shaft journaled in said frame, a friction driving gear carried by said shaft, a friction disk having its axis at right angles to said driving gear and provided with a centrally-disposed boss

naving a frusto-conical opening terminating in a shouldered recess, a hollow spindle having a frusto-conical end fitted in said boss and having its interior extremity threaded, a shouldered screw fitted in the extremity of the spindle and having its shouldered portion lying in the recess, a sleeve slidably mounted in said frame and surrounding the hollow spindle, an anti-friction bearing between the sleeve and boss, and means to reciprocate said sleeve and cause the disk to engage the driving gear.

1,154,599. SHOCK-ABSORBER. CLIFFORD V. BATES, Chicago, Ill. Filed Nov. 30, 1914. Serial No. 874,655. (Cl. 21—50.)



1. A supplemental spring for motor vehicles, comprising two spring coils having their inner convolutions joined together, and arms extending from the outer convolutions for connecting said coils to relatively movable parts of a vehicle.

2. A supplemental spring for motor vehicles, comprising two spring coils having their inner convolutions rigidly connected, and arms extending from their outer convolutions and means at the ends of said arms for connecting the same to relatively movable parts of a vehicle.

3. A supplemental spring for motor vehicles, comprising two spring coils having their inner convolutions rigidly connected, and arms extending from their outer convolutions and provided with inturned ends having their axes parallel with the axes of said coils.

4. A supplemental spring for motor vehicles, comprising two separated coils having their inner convolutions rigidly connected and arms extending from the outer convolutions and in different planes, said arms having inturned ends.

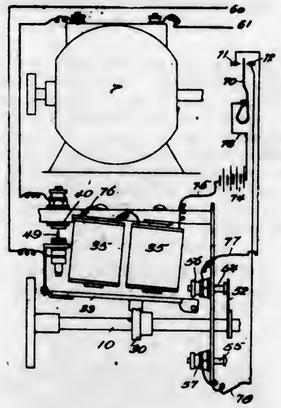
5. A supplemental spring for motor vehicles, comprising two separated coils of unequal strength and having their inner convolutions rigidly connected and arms extending from the outer convolutions for connecting said coils to relatively movable parts of a vehicle.

[Claims 6 and 7 not printed in the Gazette.]

1,154,600. DAMPER-CONTROLLING APPARATUS. DAVID BELDEN, Auburn, N. Y., assignor to Jewell Manufacturing Company, Auburn, N. Y., a Corporation of New York. Filed Mar. 28, 1914. Serial No. 828,049. (Cl. 236—4.)

1. In a damper controlling apparatus, the combination with a shaft provided with damper actuating devices, of an electric motor, a circuit therefor, gearing connecting said shaft and motor, circuit controlling devices in the motor circuit including a movable contact, the said shaft being at all times free to rotate under the power of the motor, a rotary disk operatively connected with the motor and provided with a notch having a radial face and a face angularly disposed thereto, an armature lever operatively connected with said movable contact and provided with a projection for engaging the notch and periphery of the disk, said projection having faces substantially parallel with the faces of said notch, an electromagnet for operating said armature lever, a thermostat and connections between said thermostat and said magnet, whereby faint actions of the thermostat will cause partial rotary movements of said disk and will progressively move said armature lever toward a position to close said motor circuit.

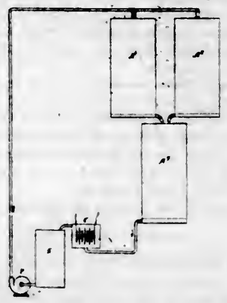
2. In a damper controlling apparatus, the combination with a shaft provided with damper actuating devices, of an electric motor, a circuit therefor, gearing connecting said shaft and motor, circuit controlling devices in the motor circuit including a movable contact, the said shaft being at all times free to rotate under the power of the motor, a rotary disk operatively connected with the motor and provided with a notch having a radial face and a face angularly disposed thereto, an armature lever operatively connected with said movable contact and provided with a projection having angularly disposed faces and adapted to simultaneously engage the opposite faces of said notch, an electromagnet for operating said armature lever, a thermostat and connections between said thermostat and said magnet whereby faint actions of the thermostat will cause partial rotary movements of said disk and progressively move said armature lever toward a position to close said motor circuit.



3. In a damper controlling apparatus, the combination with a shaft provided with damper actuating devices, of an electric motor, a circuit therefor, gearing connecting said shaft and motor, circuit controlling devices in the motor circuit including a movable contact, the said shaft being at all times free to rotate under the power of the motor, a rotary disk operatively connected with the motor and provided with a notch having a radial face and a face angularly disposed thereto, an armature lever operatively connected with said movable contact and provided with a projection for engaging the notch and periphery of the disk, said projection having faces substantially parallel with the faces of said notch, an electromagnet for operating said armature lever, a thermostat and connections between said thermostat and said magnet and a retarding device operatively connected with the motor and constructed to be brought into effective action only at high speed thereof.

4. In a damper controlling apparatus, the combination with a shaft provided with damper actuating devices, of an electric motor, a circuit therefor, gearing connecting said shaft and motor, circuit controlling devices in the motor circuit including a movable contact, the said shaft being at all times free to rotate under the power of the motor, a rotary disk operatively connected with the motor and provided with a notch having a radial face and a face angularly disposed thereto, an armature lever operatively connected with said movable contact and provided with a projection for engaging the notch and periphery of the disk, said projection having faces substantially parallel with the faces of said notch, an electromagnet for operating said armature lever, a thermostat and connections between said thermostat and said magnet and a centrifugal brake on a shaft operatively connected with the motor adapted to be brought into action only at high speed thereof.

1,151,601. EXTRACTION, PURIFICATION, AND ELECTROLYTIC PRECIPITATION OF METALLIC ZINC FROM SMELTER-FUMES, ZINC ORES, AND THE LIKE. OTTO BEST, San Francisco, Cal. Filed Sept. 16, 1911. Serial No. 649,719. (Cl. 204—15.)



1. In the extraction of metallic zinc from zinc fumes, or the like, the preliminary step of obtaining a zinc salt suitable for forming the electrolyte, which comprises subjecting the fumes to a purifying roast, in the presence of sulfates, at a low temperature, thereby rendering the fumes filterable, and leaching with a small excess of sulfuric acid; substantially as described.

2. In the extraction of metallic zinc from zinc fumes, or the like, the preliminary step of obtaining a zinc salt suitable for forming the electrolyte which comprises roasting the fumes in the presence of sulfates at a low temperature leaching with a small excess of sulfuric acid and purifying the solution thus obtained with zinc oxid and sodium sulfid; substantially as described.

3. In the extraction of metallic zinc from zinc fumes, or the like, the preliminary step of obtaining a zinc salt suitable for forming the electrolyte which comprises roasting the fumes in the presence of sulfates at a low temperature and leaching with a small excess of sulfuric acid, purifying the solution obtained with zinc oxid and sodium sulfid, and precipitating the pure zinc sulfate solution with lime to form zinc hydrate gypsum mixture; substantially as described.

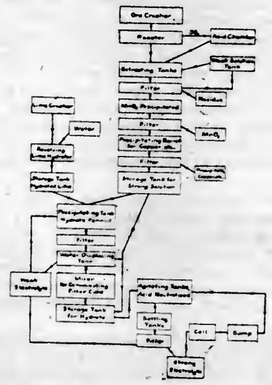
4. In the extraction of metallic zinc from zinc fumes, or the like, the preliminary step of obtaining a zinc salt suitable for forming the electrolyte which comprises roasting the fumes in the presence of sulfates at a low temperature and leaching with a small excess of sulfuric acid, purifying the solution obtained with zinc oxid and sodium sulfid, precipitating the pure zinc sulfate solution with lime to form zinc hydrate gypsum mixture and washing said mixture with water to get rid of the soluble impurities; substantially as described.

5. In the extraction of metallic zinc from zinc fumes, or the like, the process which comprises roasting the fumes in the presence of sulfates at a low temperature and leaching with a small excess of sulfuric acid, purifying the solution obtained, precipitating the pure zinc sulfate solution with lime to form zinc hydrate gypsum mixture, washing said mixture with water to get rid of the soluble impurities, electrolyzing the pure zinc sulfate obtained and thereby depositing zinc on the cathode and forming sulfuric acid at the anode, pumping the acid zinc sulfate solution over the mixture of zinc hydrate and gypsum to neutralize the sulfuric acid, and returning the neutralized solution to the cell; substantially as described.

[Claim 6 not printed in the Gazette.]

1,154,602. HYDROMETALLURGY OF ZINC. OTTO BEST, San Francisco, Cal. Filed Mar. 26, 1913. Serial No. 756,993. (Cl. 75—18.)

1. In the recovery of zinc from ores and other materials containing the same in an acid-soluble form, the method of obtaining a solution which comprises extracting the zinc with sulfuric acid, and treating the resulting solution before separation from the undissolved material with lime in amount insufficient to precipitate the zinc; substantially as described.



2. In the recovery of zinc from ores and other materials containing the same in an acid-soluble form, the method of obtaining a solution which comprises extracting the zinc with sulfuric acid, and treating the resulting solution before separation from the undissolved material with finely divided unslaked lime in amount insufficient to precipitate the zinc; substantially as described.

3. In the recovery of zinc from ores and other materials containing the same, the method of obtaining a solution which comprises roasting the material, extracting the roasted material while still hot from the roasting step with sulfuric acid of such strength as to give a sulfate solution of a specific gravity within the range of 1.2 to 1.4, and treating the resulting solution before separation from the undissolved material with lime in amount insufficient to precipitate the zinc; substantially as described.

4. In the recovery of zinc from ores and other materials containing the same, the method of obtaining a solution which comprises roasting the material, lixiviating it with sulfuric acid, treating the resultant product with lime before filtration, filtering out the solution, washing the residue and collecting the filtrate and washwater separately; substantially as described.

5. In the recovery of zinc from ores and other materials containing the same, the method of obtaining a solution which comprises roasting the material, lixiviating it with sulfuric acid, treating the resultant product with lime before filtration, filtering out the solution, and treating it with calcium permanganate in the presence of lime, so as to precipitate as dioxid any manganese present in the solution; substantially as described.

[Claims 6 to 32 not printed in the Gazette.]

1,154,603. TAPPING APPARATUS. REINHOLD BETTERMANN, Johnstown, Pa. Filed Mar. 25, 1915. Serial No. 16,854. (Cl. 10—147.)



1. Tapping apparatus comprising a tap, a screw-threaded lead spindle axially secured thereto, an internal expansible nut revolubly mounted on said lead spindle, the threads of the tap, nut and spindle being of the same pitch.

2. Tapping apparatus comprising a short tap, a threaded lead spindle axially secured to the forward end thereof, a nut exteriorly tapered and mounted on said lead spindle, said nut being provided with internal expansibly threaded portions and with exterior threads on its outer tapered portion, all the threads being of the same pitch.

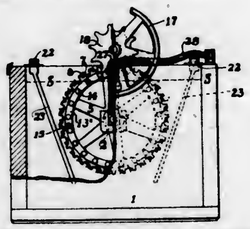
3. A tap provided with a screw-threaded portion of smaller diameter than its body projecting from its forward end, a threaded lead spindle axially secured to said portion by an internally threaded sleeve, an externally tapered nut mounted on said lead spindle and provided with collapsible internally threaded portions adapted to fit the thread thereof, the tapered portion of said nut being externally threaded, all of the threads aforesaid being of the same pitch.

4. A tapping apparatus comprising a tap, a threaded lead spindle secured longitudinally and axially thereto, a nut mounted on said lead spindle provided with an externally threaded tapered portion and with a plurality of internally threaded portions adapted to be contracted into or expanded out of engagement with the threads of the lead spindle aforesaid, all of the threads being of the same pitch.

5. In a tapping apparatus comprising a threaded tap and a threaded lead spindle secured axially to the forward end thereof, of a nut mounted on said lead spindle provided with a plurality of internally threaded clamping jaws mounted in said nut, and means for moving said clamping jaws into and out of engagement with the thread of said lead spindle, all the threads aforesaid being of the same pitch.

[Claims 6 and 7 not printed in the Gazette.]

1,154,604. ELECTROPLATING DEVICE. HERMANN R. BOISSIER, Great Neck, N. Y. Filed June 1, 1914. Serial No. 842,032. (Cl. 204—11.)



1. In an electro-plating device, a revoluble cathode-carrying frame or rack comprising a shaft; a pair of wheels secured to said shaft—the rims of said wheels being provided with a plurality of recesses or notches; a corresponding plurality of springs secured to said rims and adapted to press toward one side of said notches, whereby a plurality of rods or bars may be held in longitudinal arrangement with relation to said shaft.

2. In an electro-plating device, a revoluble cathode-carrying frame or rack comprising a shaft; a pair of wheels secured to said shaft—the rims of said wheels being provided with a plurality of recesses or notches; a corresponding plurality of springs secured to said rims and adapted to press toward one side of said notches and means for bodily adjusting said springs to and from the sides of said notches.

3. In an electro-plating device, a revoluble cathode-carrying frame or rack comprising a shaft; a pair of wheels secured to said shaft; a plurality of springs secured to the rims of said wheels, all of said parts except said springs being covered with a coating of insulating material—whereby a plurality of rods or similar articles to be plated may be held in the plating solution and revolved with only the contact springs of the holding device subject to the action of the current.

4. An electro-plating device comprising a tank; a pair of socket pieces secured to inner opposite sides of said tank; a revoluble cathode-carrying rack or frame; bearing blocks for the axis of said frame—said bearing blocks being removably held in and supported by said socket pieces; a gear mounted on said frame concentric with its axis; a drive shaft mounted on said tank and a gear on said shaft—said drive shaft being slidable in its bearings to bring said gears into and out of mesh with each other.

5. In a plating device, the combination of the following elements: a tank; a pair of socket pieces secured on inner opposite sides of said tank; a revoluble cathode-carrying rack or frame supported by said socket pieces; a gear mounted on said frame or rack by means of which it is turned; a shaft mounted on said tank and a gear on said shaft—said shaft being slidable endwise in its bearing to bring said gears into and out of mesh with each other and having an annular groove formed therein and a locking pin adapted to enter said groove to lock said shaft in a position with said gears in mesh.

[Claims 6 and 7 not printed in the Gazette.]

1,154,605. VALVE-GRINDING DEVICE. SEYMOUR A. BOSTWICK, Boston, Mass., assignor of one-third to Clarence A. Glentworth and one-third to Harold M. Bater, Boston, Mass. Filed June 5, 1915. Serial No. 32,445. (Cl. 51—4.)



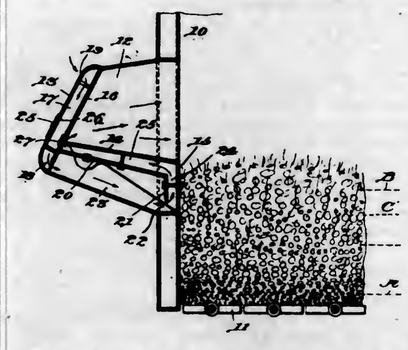
1. A valve grinding device having, in combination, a stock, a tool holder mounted to rotate relatively to said stock, teeth on said tool holder, a pair of rods constructed and arranged to reciprocate transversely of said tool holder, and teeth formed upon one of said rods adapted to mesh with the teeth upon said holder.

2. A valve grinding device having, in combination, a stock, a tool holder rotatably mounted in said stock, teeth on said tool holder, a rack constructed and arranged to reciprocate in said stock transversely of said holder and at one side thereof, the teeth of said rack being adapted to mesh with the teeth of said holder, a guide rod arranged upon the opposite side of the axis of said tool holder from said rack, means for connecting one end of said rack with the adjacent end of said rod, and means to reciprocate said rod and said rack.

3. A valve grinding device having, in combination, a rotatable tool holder, a gear on said tool holder adapted to rotate therewith, a stock adapted to receive portions of said tool holder, said stock having a casing adapted to surround and inclose said gear, a pair of rods slidably mounted in said casing transversely of said tool holder, teeth formed upon the inner face of one of said rods adapted to mesh with the teeth of said gear, and means to reciprocate said rods transversely of said holder whereby an oscillatory motion may be imparted to said tool holder.

4. A valve grinding device having, in combination, a stock having a cylindrical chamber formed therein and open at one end, a cylindrical casing formed integral with said stock adjacent the open end of said cylindrical chamber, a grip secured adjacent to the closed end of said stock, a tool holder having a cylindrical stem adapted to fit the cylindrical chamber in said stock, a gear on said tool holder adapted to rotate within said cylindrical casing, said cylindrical stem having an annular recess formed therein, a screw in said stock adapted to project into said annular recess and retain said holder within said stock, a rack constructed and arranged to reciprocate transversely of said cylindrical casing, the teeth of said rack engaging the teeth of said gear, a rod constructed and arranged to reciprocate in said cylindrical casing in parallel relation to said rack, and means operatively connecting said rod to said rack adapted to simultaneously reciprocate said rod and said rack transversely of said tool holder.

1,154,606. FUEL-BURNING APPARATUS. HARRISON B. BOZARD, La Crosse, Wis. Filed Mar. 11, 1915. Serial No. 13,674. (Cl. 110—175.)



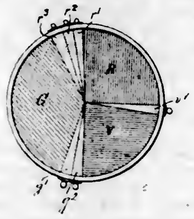
1. A fuel burning apparatus having a chambered outer wall formed of spaced upwardly and downwardly extending outer and inner plates, the outer plate having an opening through which communication between the chamber and the external air may be had, and an opening being provided from said chamber at one end thereof, and a devious passage extending from said opening inward toward the combustion chamber and then outward whose exit is contiguous to said inner plate and is formed between the front edge of a horisontally extending plate and said inner plate whereby air entering said outer wall chamber passes vertically between the plates thereof and thence horisontally in opposite directions and is finally discharged to the combustion zone of the apparatus.

2. A fuel burning apparatus comprising a fire pot, a fuel feeding opening leading into said fire pot, and a devious air passage leading from outside the apparatus contiguous to said feed opening and into the combustion zone, the terminal portion of said passage extending horisontally outward and the exit therefrom being at its outer end, said devious passage being formed by spaced plates in the lower part of the feed opening, said plates being placed one above another, the terminal portion of the passage being beneath the uppermost plate and extending forwardly away from the fire pot and leading to an exit opening at the outer end of such terminal portion.

3. A fuel burning apparatus comprising a fire pot, a fuel feeding opening leading into said fire pot, and a devious air passage leading from outside the apparatus contiguous to said feed opening and into the combustion zone, the terminal portion of said passage extending horisontally outward and the exit therefrom being at its outer end, said devious passage being formed by spaced plates in the lower part of the feed opening, said plates at their inner end having a downwardly projecting flange, one of which forms a vertical prolongation of the fire pot.

4. A fuel burning apparatus comprising a fire pot, a feed pouch leading into the fire pot having its outer end closed by a chambered door having inner and outer walls, the chamber within the door being in communication with the external air and with the interior of the pouch, and spaced plates in the lower part of the pouch, one above the other, the upper plate having its front edge spaced from the inner wall of the door providing a discharge opening for heated air that delivers the air above the uppermost plate into the feed pouch.

1,154,607. SCREEN FOR COLOR PHOTOGRAPHY. CHARLES L. A. BRASSEUR, New York, N. Y. Filed Mar. 7, 1908. Serial No. 419,814. (Cl. 95—81.5.)



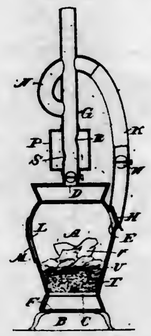
1. The combination with a trichromatic color-filter, of means for varying the effective area of one or more of the color areas.

2. A sectored trichromatic color-filter, combined with opaque removable sectors for covering and thus varying the effective area of one or more of the sectors of said filter.

3. In combination, a color filter, divided into a plurality of light transmitting areas, radiating from a common point, each of said areas being colored differently than the other areas, and means for rendering a portion of any one of said areas opaque, said means being so formed that the ratio between the area of the opaque portion and the light transmitting area will be constant at different distances from the said common point, whereby the filter, when arranged for any particular condition, may be employed with different sized diaphragms without rearrangement.

4. In combination, a color filter, divided into a plurality of sector shaped areas radiating from a common point, each of said areas being colored differently than the other areas, and sector shaped members for varying the effective area of any of said areas, said sector shaped members radiating from said common point when in operative position.

1,154,608. HEATING APPARATUS. MICHAEL H. BRENNAN, Devils Lake, N. D., and JOHN J. BRENNAN, Girardville, Pa. Filed Dec. 18, 1913. Serial No. 806,490. (Cl. 110—58.)



1. The combination with a fire chamber having two openings in its upper portion and adapted to be otherwise closed, of a main pipe fitted to one of said openings and

leading to a chimney, a branch pipe fitted to the other opening and communicating with the main pipe, and a second branch pipe in the form of a loop communicating at both ends with the main pipe, the junction of the first branch pipe with the main pipe being opposite to and in horisontal alinement with the junction of one end of the second branch pipe with the main pipe.

3. The combination with a fire chamber having two openings in its upper portion and adapted to be otherwise closed, of a main pipe fitted to one of said openings and leading to a chimney, a branch pipe fitted to the other opening and communicating with the main pipe, a second branch pipe in the form of a loop communicating at both ends with the main pipe, the junction of the first branch pipe with the main pipe being opposite to and in horizontal alinement with the junction of one end of the second branch pipe with the main pipe, and means for shutting off the first branch pipe and the main pipe when desired.

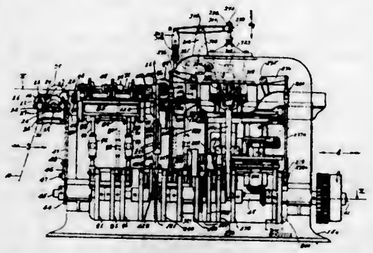
3. The combination with a fire chamber having two openings in its upper portion and adapted to be otherwise closed, of a main pipe fitted to one of said openings and leading to a chimney, a branch pipe fitted to the other opening and communicating with the main pipe, and a second branch pipe in the form of a loop communicating at both ends with the main pipe, said loop being arranged on the opposite side of the main pipe from the first branch pipe and coöperating therewith to regulate the current therethrough.

1,154,609. METHOD OF INCREASING THE ENERGY OF A FLUID-MOTOR IN MOTOR-DRIVEN TORPEDOES. MICHEL BRUNIQUEL, Paris, France. Filed July 21, 1914. Serial No. 852,218. (Cl. 60—3.)

1. The process of increasing the energy supplied to a motor driven by compressed fluid which consists in subjecting such fluid while on its way to the motor, to the heat of a suitable fuel in combustion while injecting hydrogen peroxid into the sphere of combustion.

2. The process of increasing the energy supplied to a motor driven by compressed fluid which consists in burning a suitable fuel in such fluid while on its way to the motor, and simultaneously mingling hydrogen peroxid with the same, whereby the temperature is suitably controlled while a suitable proportion of oxygen is supplied to prevent resultant impairment of combustion.

1,154,610. BOX-MAKING MACHINE. CHARLES BURNHAM, Los Angeles, Cal., assignor to Burnham Basket Company, a Corporation of California. Original application filed Aug. 22, 1911, Serial No. 645,323. Divided and this application filed Nov. 29, 1912. Serial No. 734,155. (Cl. 153—1.)



1. The combination of means for supporting a long strip of binding metal in a roll-like form, means for drawing the binding metal from the roll and for providing a slack portion in said binding metal, means for positively feeding a determined length of the binding metal, means for adjusting said feeding means to vary the extent of feed, means for folding the binding metal lengthwise substantially V-shaped in cross-section, means for tilting the folded binding metal to change its position, means for cutting the binding metal transversely, means for reforming one end of the binding metal, a rectangular anvil, means for moving the cut and folded binding metal against the anvil and bending the binding metal about the anvil on three sides thereof, independent means independent of each other and movable at right angles to the first-mentioned bending means in the same horisontal plane but in opposite directions for bending the binding metal about the remaining side of the anvil and for causing the ends thereof to overlap, means for holding the binding metal to the anvil, and means for applying the folded and bent binding to an object.

2. The combination of means for supporting binding metal, means for positively feeding a determined length of the binding metal, means for adjusting said feeding means to vary the extent of feed, means for folding the binding metal lengthwise, means for tilting the folded binding metal to change its position, means for cutting the binding metal transversely, means for reforming one end of the binding metal, a rectangular anvil, means for moving the cut and folded binding metal against the anvil and bending the binding metal about the anvil on three sides thereof, independent means independent of each other and movable at right angles to the first-mentioned bending means in the same horisontal plane but in opposite directions for bending the binding metal about the remaining side of the anvil and for causing the ends thereof to overlap, means for holding the binding metal to the anvil, and means for applying the folded and bent binding to an object.

3. The combination of means for supporting a long strip of binding metal, means for positively feeding a determined length of the binding metal, means for folding the binding metal lengthwise, means for tilting the folded binding metal to change its position, means for cutting the metal binding transversely, means for reforming one end of the binding metal, an anvil, means for moving the cut and folded binding metal against the anvil and bending the binding metal about a part of the anvil, means independent of each other and movable in opposite directions one in advance of the other for bending the binding metal about the remaining portion of the anvil and for causing the ends thereof to overlap, means for holding the binding metal to the anvil, and means for applying the folded and bent binding metal to an object.

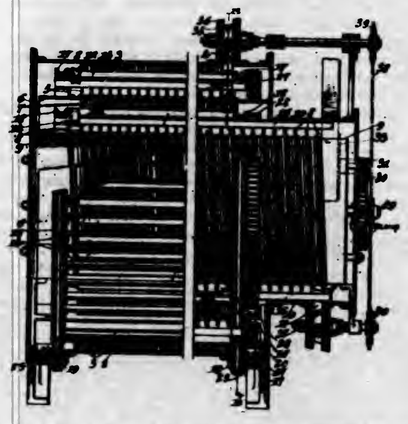
4. The combination of means for supporting binding metal, means for positively feeding a determined length of the binding metal, means for folding the binding metal lengthwise, means for tilting the folded binding metal to change its position, means for cutting the metal binding transversely, an anvil, means for moving the cut and folded binding metal against the anvil and bending the binding metal about a part of the anvil, means comprising independent parts movable in opposite directions one part in advance of the other for bending the binding metal about the remaining portion of the anvil and for causing the ends thereof to overlap, means for holding the binding metal to the anvil, and means for applying the folded and bent binding metal to an object.

5. The combination of means for supporting binding metal, means for folding the binding metal lengthwise, means for tilting the folded binding metal to change its position, means for cutting the binding metal transversely, an anvil, means for moving the cut and folded binding metal against the anvil and bending the binding metal about a portion of the anvil, and independent means including oppositely moving jaws one moving in advance of the other for bending the binding metal about the remaining portion of the anvil.

[Claims 6 to 82 not printed in the Gazette.]

1,154,611. CONTINUOUS CAN-COOKING RETORT. FRANK W. BURPEE, South Bellingham, Wash. Filed July 25, 1914. Serial No. 853,227. (Cl. 126—272.)

1. A continuous cooking retort for cans comprising an outer cylindrical casing, inner cylindrical shells concentrically disposed within said outer casing and spaced apart from each other, the innermost shell being of greater length than the remainder, said outer casing having a reduced extension over the projecting end of said inner shell, a plurality of can moving frames disposed between said shells, spiral trackways carried by said shells and said outer casing and pitched alternately in opposite directions, means for admitting cans into said outer casing adjacent to one end thereof, means for delivering cans from said outer casing at said reduced extension, and transferring elements carried by said can moving frames intermediate said shells for transferring the cans as they reach the ends of the retort whereby the movements of the cans will be back and forth from end to end of the retort and toward the axis of the same, and means for imparting motion to the can moving frames.

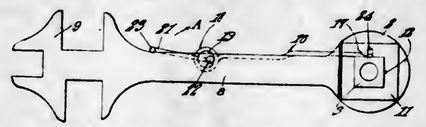


2. A continuous cooking retort for cans, comprising the combination with a stationary cylindrical retort to which steam is admitted, said retort disposed on a substantially horizontal axis, of cylindrical partitions supported concentrically within the retort the innermost cylindrical partition being extended beyond the outer shell at one end and having an inclosing cylinder connecting it to the end of the main part of the retort, a coil secured to the inside of the shell of the retort forming a track for the cans, a similar track secured to the inside and to the outside of the intermediate partition and a coil secured to the outside of the inner partition the adjacent coils being angled in opposite directions, can supporting and moving frames rotatably mounted in the interspace between the shell and the outer partition and between the partitions, said frames comprising rings and lengthwise disposed bars, roller wheels supporting said frames, means for rotating said frames, a rotatable valve delivering cans through the outer shell of the retort at one end, provision for allowing the cans to transfer from the end of one coil track to the end of the next track within it, a rotatable valve for delivering the cans from the end of the inner track to without the retort, and means, coöperative with the can moving frames for rotating the exit and the outlet valve.

3. A continuous cooking retort for cans comprising the combination with an outer shell or casing to which steam is admitted, of a series of can tracks arranged as concentric coils within the chamber about an axis which is substantially horizontal means for supporting the track of a series concentrically within the other, said supporting means including inner shells, the innermost shell being of greater length than the others, said casing having a reduced extension into which said inner shell projects, the track of one coil of a series being angled in a direction opposite to the track of the next succeeding coil, means for successively delivering the cans into the chamber, means for moving the cans along the coil tracks, means for permitting the cans to pass from one end of one track to the end of the next track within it, and means at the extension end of said casing for delivering the cans from the chamber.

4. A continuous cooking retort for cans which comprises the combination with a cylindrical casing to which steam is admitted, the axis of said casing being horisontally disposed, of a series of cylindrical frames concentrically supported within the retort, coils secured to the outer shell of the retort and to the concentric frames, the adjacent coils being oppositely angled, means for delivering cans into the retort and onto the track formed by the outer coil, rotatable means for carrying the cans around the coils, means permitting the transference of the cans from the end of one coil onto the end of the next coil within it, the innermost cylindrical frame being of greater length than the others and said casing having a reduced extension into which said inner frame projects, and means at said extension for delivering the cans from the retort.

1,154,612. WRENCH. TILMON J. CALHOON, Monroe, La. Filed Feb. 26, 1915. Serial No. 10,804. (Cl. 81—10.)

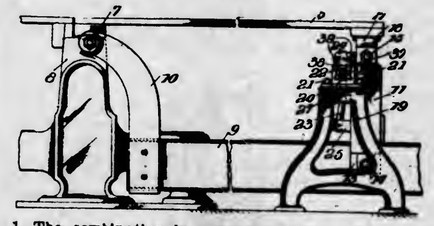


1. In a device of the class described, a wrench comprising a handle, a laterally off-set arm projecting from the handle, and a head on the arm, the head being provided with an opening, and being disposed approximately parallel to the arm; a longitudinally movable releasing member one end of which moves close to one edge of the opening and approximately parallel thereto, the releasing member being offset intermediate its ends to coact with the handle; and handle carried means whereon the rear end of the releasing member is movably supported.

2. In a device of the class described, a wrench comprising a handle and a nut receiving head; a releasing member movable longitudinally of the handle and adapted to coact with the head, the releasing member including an eccentric strap; and an eccentric pivoted to the handle and coacting with the strap.

3. In a device of the class described, a wrench comprising a handle and a nut receiving head; a releasing member movable longitudinally of the handle and comprising an eccentric strap; an eccentric pivoted on the handle and coacting with the strap, the eccentric comprising a lateral projection co-acting at different times with spaced parts of the wrench to define the advanced and retracted positions of the releasing member.

1,154,613. SHAKE-HEAD CONNECTION. BENJAMIN DENVER COPPAGE, Wilmington, Del. Filed Apr. 20, 1915. Serial No. 22,616. (Cl. 92—45.)



1. The combination in a paper-making machine, of a shake-frame; a bar carried thereby; means for raising and lowering said shake-frame; and means for vibrating said shake-frame including a bifurcated member that engages around said bar.

2. The combination in a paper-making machine, of a shake-frame; a bar carried thereby; means for raising and lowering said shake-frame; and means for vibrating said shake-frame including an open loop member that engages around said bar.

3. The combination in a paper-making machine, of a shake-frame; a bar carried thereby; means for raising and lowering said shake-frame; and means for vibrating said shake-frame including an elongated hook member that engages around said bar.

4. The combination in a paper-making machine, of a shake-frame; means for raising and lowering said shake-frame; a rotary member; connections between said member and shake-frame including an elongated hook member that engages around a part of said shake-frame.

5. The combination in a paper-making machine, of a shake-frame; means for raising and lowering said shake-frame; a rotary member; connections between said member and shake-frame including an elongated hook member that engages around a part of said shake-frame and means for varying the effective length of said connections.

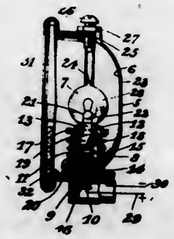
[Claims 6 to 12 not printed in the Gazette.]

1,154,614. LADDER. MAURICE CROFTS, Sydney, New South Wales, Australia. Filed Aug. 18, 1914. Serial No. 857,332. (Cl. 228—5.)



In a ladder, the combination with the main side rails, of a double transverse bar secured adjacent to the lower ends of said side rails and extending therebetween and projecting beyond the sides thereof and forming a rung of the ladder, of a pair of supplementary side rails arranged on the outer side of the said main rails between the projecting ends of said transverse bars and extending beyond the lower ends thereof, a pair of transverse bars extending across the lower end of the ladder and having their ends pivotally secured to said supplementary side rails, and a link bar pivotally secured between the rigidly connected transverse bars at one end and at its other end pivotally connected between the pivotal transverse bars centrally of their length.

1,154,615. SAFETY-LAMP. HENRY CSANYI, New York, N. Y., assignor to Maxivolt Primary Battery Co., New York, N. Y., a Corporation of New Jersey. Filed Dec. 9, 1914. Serial No. 876,287. (Cl. 240—17.5.)



1. In an electric lamp, in combination, a case including a lens, an incandescent lamp bulb within said case, a contact mounted in said case to close the circuit through said bulb, a spring tending to move said bulb to open the circuit at said contact, and a translucent member in the path of the rays from said bulb between a wall of the lamp and said bulb, and normally preventing said spring from opening the circuit at said contact.

2. In an electric lamp, in combination, a case including a lens, an incandescent lamp bulb within said case, a contact mounted in said case to close the circuit through said bulb, a spring tending to move said bulb to open the circuit at said contact, conducting the current of the lamp circuit, and a rigid member between a wall of the lamp and said bulb and normally preventing said spring from opening the circuit at said contact.

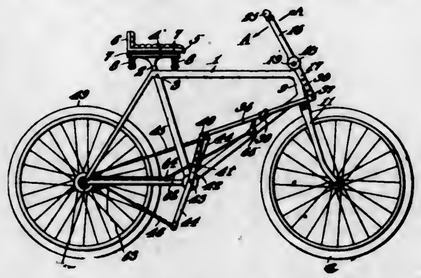
3. In an electric lamp, in combination, a case including a lens, an incandescent lamp bulb within said case, a contact mounted in said case to close the circuit through said bulb, a spring tending to move said bulb to open the circuit at said contact, conducting the current of the lamp circuit, and a translucent member in the path of the rays from said bulb between a wall of the lamp and said bulb and normally preventing said spring from opening the circuit at said contact.

4. In an electric lamp, in combination, a case including a lens, a lamp bulb in said case having a neck with a contact in the lamp circuit, a freely movable collar on said neck, a spring conducting the current of the lamp circuit, retaining said collar and tending to move the same to open the lamp circuit at said contact, and a rigid relatively weak and fragile part between said bulb and a wall of said case resisting said spring and maintaining the circuit through the lamp.

5. In an electric lamp, in combination, a case, an incandescent lamp bulb, a neck with a contact in the lamp circuit, a collar on said neck, a rigid unyielding part retained between a wall of said lamp and said bulb opposite said neck, a spring retaining said collar and compressible by said collar to permit the positioning of said rigid part, and a yielding contact in the lamp circuit having a spring compressible by said neck contact when said rigid part is being positioned, and maintaining the circuit closed after said rigid part is positioned.

[Claims 6 to 12 not printed in the Gazette.]

1,154,616. VEHICLE. BERT L. DAVIS, Wichita, Kans. Filed Aug. 28, 1913. Serial No. 787,183. (Cl. 208—20.)

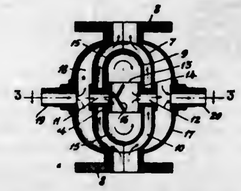


1. In a vehicle of the class described, a frame; a lever mounted on the frame; a ground wheel journaled on the frame; means for connecting the lever with the ground wheel to impart propelling motion to the ground wheel; a multi-part flexible shaft journaled partly in the frame and partly in the lever; a steering wheel carried by one member of the multi-part shaft; a handle mounted to tilt on the lever; and means for operatively connecting the handle with the other member of the multi-part shaft to impart rotation to the multi-part shaf and to effect a shifting of the steering wheel.

2. In a vehicle of the class described, a frame; a lever mounted on the frame; a ground wheel journaled on the frame; means for connecting the lever with the ground wheel to impart propelling motion to the ground wheel; a multi-part flexible shaft journaled partly in the frame and partly in the lever; and a steering wheel carried by one member of the multi-part shaft.

3. In a vehicle of the class described, a frame; a lever fulcrumed on the frame; a shaft comprising coöperating members, one of which members is journaled on the frame, the other of which members is journaled in the lever; a hinge joint uniting the members of the shaft and concentric with the fulcrum of the lever; a steering wheel operatively connected with the frame-carried member of the shaft; a ground wheel carried by the frame; and means for connecting the ground wheel with the lever.

1,154,617. HEATER FOR INTERNAL-COMBUSTION ENGINES. WILLIAM P. DEPPE, Bay Shore, N. Y. Filed Apr. 16, 1914. Serial No. 832,209. (Cl. 257—241.)



1. A heater for gaseous fuels comprising a tubular member, the ends of which are open and of like diameter, the intermediate portion between the ends being of larger diameter, a hollow cylindrical member within the intermediate portion of said tubular member and spaced therefrom to leave an annular channel for the passage of gaseous fuel, an outer jacket inclosing the intermediate portion of said tubular member and transversely extending pipes connecting the hollow cylindrical member and the jacket whereby heating fluid may be passed simultaneously through said jacket and said hollow cylindrical member for heating both the inside and outside surfaces of said annular passage.

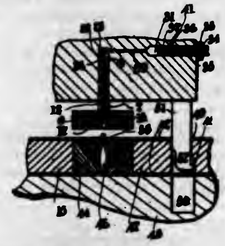
2. A heater for gaseous fuels comprising a tubular member having an enlarged middle portion and two end portions, the end portions being substantially alike but of less diameter than the middle portion, a hollow cylindrical member located between the ends and within the enlarged portion of said tubular member and spaced therefrom to form an annular channel for the passage of gaseous fuel, an outer jacket member inclosing the enlarged middle portion of said tubular member and spaced therefrom to form a chamber, pipes passing transversely of said annular channel for holding said hollow member in place and to establish communication between the interior thereof and said jacket chamber and pipe nipples opening into said jacket chamber whereby heating fluid may be passed simultaneously through the latter and through said hollow cylindrical member for heating both sides of said annular channel.

3. A heater for gaseous fuels, adapted to be inserted between the carbureter and manifold of an internal combustion engine, comprising a member having flanged tubular ends for connecting the same to the carbureter and manifold respectively to form a continuous, approximately straight passage therebetween for the fuel gases, said tubular ends being integral with an intermediate cylindrical portion of larger diameter, a hollow cylindrical, closed ended bulbuous member, within said intermediate portion of said member between the tubular ends, and spaced therefrom to leave an annular channel, the area of which is substantially equal to the area of said tubular ends, a jacket surrounding said intermediate portion of said member and pipes adapted for passing heating fluid simultaneously through said jacket and said inner bulbous member for heating and vaporising the gaseous fuel passing through said channel.

4. A heater for gaseous fuels, adapted to be inserted between the carbureter and manifold of an internal combustion engine, comprising a tubular member of enlarged diameter at its middle portion, the ends being flanged and adapted to be connected to the carbureter and manifold respectively to form a continuous, approximately straight passage for the fuel gases, a hollow cylindrical bulbous member with convex ends, disposed within the enlarged middle portion of said tubular member and spaced therefrom to leave an annular channel, pipes extending across said annular channel adapted to support the bulbous member in position and communicating with the interior thereof, a jacket member surrounding the enlarged middle portion of said tubular member, said pipes, connected with the bulbous member, being adapted to communicate with the jacket cavity and nipples opening into said jacket, said pipes and nipples being adapted for the passage of heating fluid simultaneously through said jacket and the inner bulbous member whereby the sheet of gaseous fuel passing in said annular channel is heated inside and out.

5. A heater for gaseous fuels, adapted to be inserted between the carbureter and manifold of an internal combustion engine, comprising a cylindrical tubular member the ends of which are of reduced diameter and provided with means for securing the member to the carbureter and manifold respectively to form a continuous, approximately straight passage therebetween for the passage of the fuel gases, a hollow convex ended cylindrical member within said tubular member and spaced therefrom to form an annular channel the area of which is substantially the same as the area of the reduced ends of said tubular member, an inclosing jacket for said tubular member extending from the ends of reduced diameter and swelling out over the member and spaced therefrom to form a chamber therebetween and pipe connections between said chamber and the inner hollow cylindrical member whereby heating fluid, such as exhaust gases, may be simultaneously passed therethrough for heating and vaporizing the gaseous fuel.

1,154,618. MACHINE FOR EMBOSSING SEAMLESS KNIFE-HANDLES. ROBERT EMMET DEVINS, Hamilton, Ontario, Canada. Filed June 1, 1914. Serial No. 842,188. (Cl. 113—44.)



1. In a machine for embossing seamless knife handles, the combination with a lower hydraulic ram, a table mounted thereon, said table reciprocated by the hydraulic ram, and the head of the machine, of suitable embossing dies holding the handle blank, a vertical aperture in the head of the machine, an upper hydraulic ram having a suitable stem extending into the aperture, and a passageway through the ram and stem, a spring actuated valve in the stem, a sleeve freely mounted in the passageway in the stem, an enlarged head therefor having an orifice communicating with the interior of the sleeve, and radial slots in the upper surface of the head extending to the orifice therein.

2. In a machine for embossing seamless knife handles, the combination with a lower hydraulic ram, a table mounted thereon, said table reciprocated by the hydraulic ram, and the head of the machine, of suitable embossing dies holding the handle blank, a vertical aperture in the head of the machine, an upper hydraulic ram having a suitable stem extending into the aperture, and a passageway through the ram and stem, a spring actuated valve in the stem, the head of the machine having a cross passageway extending from its exterior to the aperture therein, and a spring actuated valve in said passageway

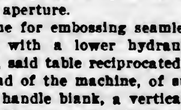
closing against back pressure upon the upper ram moving upwardly in the aperture.

3. In a machine for embossing seamless knife handles, the combination with a lower hydraulic ram, a table mounted thereon, said table reciprocated by the hydraulic ram, and the head of the machine, of suitable embossing dies holding the handle blank, a vertical aperture in the head of the machine, an upper hydraulic ram having a suitable stem extending into the aperture, and a passageway through the ram and stem, a spring actuated valve in the stem, the head of the machine having a cross passageway extending from its exterior to the aperture therein, and a spring actuated valve in said passageway closing against back pressure upon the upper ram moving upwardly in the aperture, and means upon the upward movement of the upper hydraulic ram for expelling the air in the aperture therethrough.

4. In a machine for embossing seamless knife handles, the combination with a lower hydraulic ram, a table mounted thereon, said table reciprocated by the hydraulic ram, and the head of the machine, of suitable embossing dies holding the handle blank, a vertical aperture in the head of the machine, an upper hydraulic ram having a suitable stem extending into the aperture, and a passageway through the ram and stem, a spring actuated valve in the stem, the head of the machine having a cross passageway extending from its exterior to the aperture therein, and a spring actuated valve in said passageway closing against back pressure upon the upper ram moving upwardly in the aperture, a sleeve freely mounted in the passageway in the stem, an enlarged head therefor having an orifice communicating with the interior of the sleeve, and radial slots in the upper surface of the head extending to the orifice therein.

5. In a machine for embossing seamless knife handles, the combination with a lower hydraulic ram, a table mounted thereon, said table reciprocated by the hydraulic ram, and the head of the machine, of divided embossing dies adapted to hold the handle blank between them, one of the dies secured to the table and the other laterally movable in relation to the table and provided with a protuberance on the outer wall of such aperture, and a depending lever secured to the head of the machine and having an offset lower end adapted to enter the slot in the movable die for moving the same laterally upon the operation of the machine.

1,154,619. SLIDE-RULE. CARL F. DIECKMANN, Chicago, Ill., assignor to Eugene Dietzgen Company, Factory, Chicago, Ill., a Corporation of Illinois. Filed Oct. 19, 1914. Serial No. 867,271. (Cl. 235—70.)



1. In a side rule, the combination of a slide, a base having a flat upper surface parallel to the plane of the rule, a guide for said slide seated on the flat upper surface of the base, and a leaf spring arranged on edge and extending, in the main, longitudinally of the rule, said spring being fastened at one end to the base and at the other end to the guide whereby the guide is held in contact with the upper surface of the base but permitted to slide thereon for frictionally holding the slide.

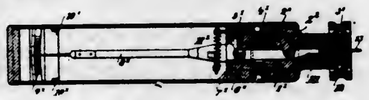
2. In a slide rule, the combination of a slide, a base having a flat upper surface parallel to the plane of the rule, a guide for said slide seated on the flat upper surface of the base, and a leaf spring arranged on edge and extending in the general direction of the length of the rule, one end of the spring being embedded in the base and the other end embedded in the guide, and one of the parts being slotted for permitting lateral movement of the spring, to permit the guide to yield and slide along the surface of the base when pressed by the slide.

3. In a slide rule, the combination of a slide, a base, a rule for guiding said slide, and a flat spring for securing said rule to said base and permitting transverse movement of said rule, said spring being arranged on edge, and the major portion thereof terminating beneath the bottom of said rule, said spring rising at one point up into said rule and being there securely fastened, the base being slotted to permit transverse movement of the spring where it rises into the rule, and the other end of the spring being fastened to the base, substantially as described.

4. In a slide rule, the combination of a slide, a base having a flat upper surface, a guide seating upon said surface, a leaf spring embedded in the base and extending longitudinally thereof, the base being slotted adjacent to the spring for a portion of the length thereof to permit the spring to move laterally, the laterally moving end of the spring extending up into and being fastened to the guide, whereby the guide is held in frictional contact with the slide and is prevented from leaving its seat upon the flat upper surface of the base.

5. In a slide rule, in combination, a base, a slide, a separate rule mounted upon said base for guiding said slide, said base having a longitudinal slot lying beneath said rule, a leaf spring arranged on edge, one portion of said spring lying within said slot and projecting upward at its end into and through the rule and being fastened to said rule, the remaining portion of said spring being securely fastened to the base and an ear projecting transversely from said spring at the bottom thereof at the slotted portion of the base and underlying a portion of the base, said ear being slidable upon the under surface of the base for preventing the rise of said spring.

1,154,620. MEASURING APPARATUS. BERTHOLD EITNER, Reinickendorf, near Berlin, Germany, assignor to Deutsche Waffen- und Munitionsfabriken, Berlin, Germany. Filed Sept. 12, 1913. Serial No. 789,518. (Cl. 33—172.)



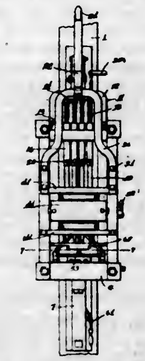
1. In a measuring apparatus, the combination with a pointer, a shaft carrying the pointer, said shaft being provided with a plane face, calipers movably mounted relatively to said shaft and having an engaging member provided with a knife edge resting upon said face, a spring for moving the pointer in one direction, and a stronger spring operative upon the calipers for extending the same and moving the pointer in the opposite direction.

2. In a device of the character specified, the combination with a pointer, spring means for moving the pointer toward one limit of its movement, a shaft carrying the pointer and provided with a plane face, calipers movable relatively to said shaft, an engaging member controlled by said calipers and provided with a knife edge resting upon said plane face, and spring means stronger than the pointer spring operative upon and associated with the said calipers and said knife edge for extending the calipers and moving the pointer against the action of its spring.

3. In a device of the character specified, the combination with a pointer, a shaft carrying the pointer, said shaft being provided with a plane face extending through the axis of the shaft, an extensible member provided with a knife edge for engaging said plane face laterally of the axis of the shaft and moving the pointer in one direction upon the extension of such member, a spring for moving the pointer in the opposite direction and a stronger spring for extending said extensible member.

1,154,621. PUNCHING-MACHINE. CHARLES A. ELTON, Moodys, Okla. Filed Sept. 21, 1914. Serial No. 862,776. (Cl. 164—91.)

1. A machine for punching nail holes in horse shoes including a movable support for the horse shoes acted upon, a plurality of punch bars having tapering ends, means for operating the bars, and means for elevating the support to vary the size of the holes punched.



2. A machine for punching nail holes in horse shoes including a plurality of reciprocable punch bars, support means for the several bars, a first lever directly engaging the said support means, and a second lever engaging the first lever, the said second lever being actuatable to operate the first lever, as and for the purpose set forth.

3. A machine for punching nail holes in horse shoes including a plurality of movable punch bars, support means for the several bars, spring means normally maintaining the support means in its uppermost position, a plurality of levers actuatable to move the said support means against tension of said spring means, and an adjustable shoe support arranged beneath said punch bars, as and for the purpose set forth.

4. A machine for punching nail holes in horse shoes including a plurality of punch bars, means engageable with and movable relatively to the punch bars for moving the latter relatively to each other, means for actuating the several bars, and support means for the horse shoes acted upon, said support means being bodily movable in a horizontal plane and adjustable vertically relatively to the punch bars, as and for the purpose set forth.

5. A machine for punching nail holes in horse shoes including a plurality of punch bars, a supporting plate for the horse shoes acted upon, an auxiliary supporting plate movable relatively to the said first mentioned supporting plate, and means for moving the punch bars relatively to the respective plates, as and for the purpose set forth.

[Claims 6 to 16 not printed in the Gazette.]

1,154,622. SECTIONAL PARTITION. JOHN P. FANGEL, Boston, Mass.; Elna F. Fangel, executrix of said John P. Fangel, deceased, assignor to Albert Johnson, East Boston, Mass. Filed Mar. 7, 1910. Serial No. 547,781. (Cl. 20—4.)



1. In a sectional partition, a plurality of detachable and interchangeable sections, each comprising a panel portion having a permanently-attached pilaster-member at each end thereof, and a coupling member interposed between and having a detachable tongue and groove connection with the opposed faces of the pilaster-members of adjacent sections, combined with a sectional base, a detachable connection between the sectional base and the bottoms of the coupled sections of the partition, and means, concealed by the superposed sections of the partition, to lock together the sections of the base.

2. In a sectional partition, a plurality of detachable and interchangeable sections each comprising a panel portion having a permanently-attached pilaster-member at each end thereof, and a coupling member interposed between and having a detachable tongue and groove connection with the opposed faces of the pilaster-members of adjacent sections, combined with a sectional base, means to lock the sections thereof together, and a detachable tongue and groove connection between the said base and the coupled sections of the partition.

3. In a sectional partition, a plurality of detachable and interchangeable sections each comprising a panel portion having a permanently-attached pilaster-member at each end thereof, and a coupling member interposed between and having a detachable tongue and groove connection with the opposed faces of the pilaster-members of adjacent sections, combined with a base having a detachable tongue and groove connection with the bottoms of the coupled sections of the partition, said base having a longitudinal groove in its bottom face, and a guide strip adapted to be secured to the floor and fitting into said bottom groove to position and retain the base in place.

4. In a sectional partition, a plurality of detachable, reversible and interchangeable sections each comprising a panel portion having permanently attached and similar posts at each end thereof, the inner and outer faces of the posts forming like pilaster-members, a coupling member of cruciform cross-section filling the space between and having a detachable tongue and grooved connection with the opposed faces of the end posts of adjacent sections, the opposite faces of said coupling member which abut against the posts being alike, the inner and outer faces of the coupling member exposed between the coupling posts forming a continuation of the inner and outer faces of said posts, and making thereby a complete pilaster at the back and front of the partition, and means for holding the coupling member and adjacent section together.

5. In a sectional partition, a plurality of detachable and interchangeable sections each comprising a panel portion having a permanently-attached pilaster-member at each end thereof, and a coupling member interposed between and having a detachable interlocking connection with the opposed faces of the pilaster-members of adjacent sections, combined with a detachable clamp to engage and clamp together the upper ends of a pair of pilaster-members and the interposed coupling member.

[Claims 6 to 8 not printed in the Gazette.]

1,154,623. OUTER SOLE FOR SHOES. WILLIAM FOWLER, Cincinnati, Ohio, assignor of one-half to Charles H. Krippendorf, Cincinnati, Ohio. Filed May 3, 1915. Serial No. 25,375. (Cl. 36—25.)



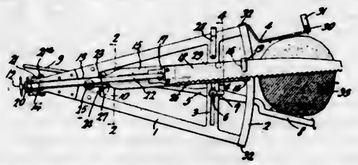
1. A leather outer sole for shoes having a shank portion from the flesh side of which a split of leather has been cut, leaving said shank porton of uniform thickness throughout, and of less thickness than adjacent portions of the sole.

2. A leather outer sole for shoes having a shank portion from the flesh side of which a split of leather has been cut, leaving said shank portion of uniform thickness throughout and of less thickness than adjacent portions of the sole, said cut terminating at the breast of the heel and at the ball of the shank.

1,154,624. TREE-FELLING DEVICE. ORREL AUGUSTUS GOOCH, East Machias, Me., assignor to Forest King Machine Company, Machias, Me., a Corporation of Maine. Filed Apr. 3, 1914, Serial No. 829,324. Renewed July 13, 1915. Serial No. 39,700. (Cl. 143—61.)

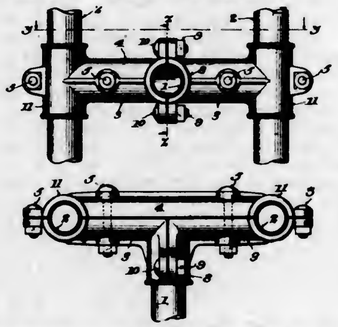
A tree-felling device embodying a portable frame lying in a horizontal plane and having a jaw projecting from

one end to engage one side of a tree trunk, means carried by the frame for engaging the opposite side of the tree trunk and coöperating with the said jaw to clamp the tree trunk, a carrier arm fulcrumed upon the frame opposite the said end thereof and arranged for oscillatory movement in a horizontal plane upon the frame with its



free end projecting to the said end thereof, a saw lying in the horizontal plane and guided for reciprocatory movement along the carrier arm, an upstanding shank carried by the said jaw and having a horizontal guide at its upper end projecting angularly away from the vertical plane of the said jaw, the guide having an open slot to receive the saw when it is swung above the said jaw.

1,154,625. STANCHION-SUPPORTING FRAME. WILLIAM GUTENKUNST, Milwaukee, Wis. Filed Mar. 22, 1915. Serial No. 16,026. (Cl. 189—86.)

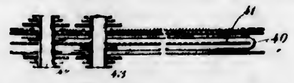


1. In a device for connecting the upper front end of a division member of a stanchion supporting frame with two vertical members of such frame, consisting in the combination with such division member and a vertical member, of a clamping member provided near its respective ends with a semi-circular sleeve adapted to partially surround one side of both of said vertical members, two additional clamping members each provided at one end with semi-circular sleeves adapted to partially surround the opposite sides of said vertical members, each of said additional clamping members being provided at their opposite ends with semi-circular sleeves, which taken together form a tubular nipple for the reception of the upper front end of said division member, and means for securing all of said clamping members together and in rigid contact with said frame members.

2. In a device for connecting the upper front end of a division member of a stanchion supporting frame with two vertical members of such frame, consisting in the combination with such division member and a vertical member, of a clamping member provided near its respective ends with a semi-circular sleeve adapted to partially surround one side of both of said vertical members, two additional clamping members each provided at one end with semi-circular sleeves adapted to partially surround the opposite sides of said vertical members, each of said additional clamping members being provided at their opposite ends with semi-circular sleeves, which taken together form a tubular nipple for the reception of the upper front end of said division member, a plurality of bolts and nuts for securing all of said clamping members together and in rigid contact with said frame members.

3. In a device for connecting the upper front end of a division member of a stanchion supporting frame with two vertical members of such frame, consisting in the combination with such division and a vertical member, of a clamping member provided at its ends and at intermediate points between its ends with a plurality of bolt holes, and near its respective ends with a semi-circular sleeve adapted to partially surround one side of both of said vertical members, two additional clamping members each provided with a plurality of bolt holes registering with the holes in the opposite clamping member, and at one end with semi-circular sleeves adapted to partially surround the opposite sides of said vertical frame members, each of said additional clamping members being provided at their opposite ends with semi-circular sleeves, which taken together form a tubular nipple for the reception of the upper front end of said division member, and a plurality of bolts and nuts for securing all of said clamping members together and in rigid contact with said frame members.

1,154,626. TERMINAL FOR ELECTRIC APPARATUS. WILLIAM S. HADAWAY, Jr., New Rochelle, N. Y. Filed Aug. 4, 1914. Serial No. 854,932. (Cl. 219—63.)



1. A terminal structure comprising a flat conducting ribbon having a perforated overturned end, an insulating strip on each side of the conducting ribbon, a sheet metal armor surrounding the insulation and having an aperture opposite the perforated end of the ribbon, and a hollow terminal rivet extending through the overturned end of the ribbon and through the aperture in the armor, insulated from the armor and adapted to hold the parts in position.

2. A terminal structure comprising a conductor having a perforated end, insulation on each side of the conductor, a sheet metal armor surrounding the insulation and having an aperture opposite the perforated end of the conductor, and a hollow terminal rivet extending loosely through the aperture in the armor and arranged to clamp the parts in position and make electrical contact with the conductor.

3. A terminal structure comprising a perforated conductor, a perforated reinforcing member, insulation between the conducting member and the reinforcing member, and a terminal rivet extending through the perforated members, clamping the parts together and in electrical contact only with the conductor.

4. A terminal structure comprising a conducting member, a reinforcing metal member, a flanged internally-threaded sleeve extending through the reinforcing and conducting members and insulated from the reinforcing member, and a terminal screw extending into the sleeve, said sleeve being riveted over on one end to make electrical contact with the conductor and clamp the parts together.

5. A terminal structure comprising a flat conductor having a perforated over-turned end, a reinforcing metal member having an aperture registering with the perforations of the conductor, and insulated from the conductor, and a terminal rivet in close contact with the conductor and extending loosely through the aperture in the reinforcing member and insulated therefrom.

[Claim 6 not printed in the Gazette.]

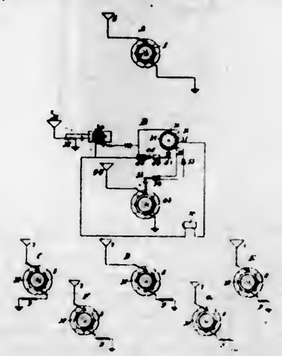
1,154,627. CAN. ELMER E. HALL, Chicago, Ill., assignor of one-half to William R. Schmidt and one-half to L. W. Hall, Chicago, Ill. Filed June 22, 1911. Serial No. 634,762. (Cl. 128—47.)

In a device of the class described, a case including a base and a side wall, the side wall being struck inwardly to form a circumscribing reinforcing rib on the inner face of the side wall and to form a circumscribing groove on the outer face of the side wall, the side wall being provided with an upright, open, drainage notch intersecting the rib; a cover having a stud adapted to enter the notch and to traverse the groove; a collapsible cup including



frusto-conical sections, one of which is secured to the base, the side wall of the case being of greater height than any section of the cup and the stud coöperating with the groove to space the cover from the section when the cup is collapsed; and an outlet for the cup.

1,154,628. WIRELESS SELECTIVE SYSTEM AND APPARATUS. JOHN HAYS HAMMOND, Jr., Gloucester, Mass. Filed Feb. 23, 1910. Serial No. 545,415. (Cl. 250—15.)



1. In a wireless selective system and apparatus the combination with a sending station provided with means for propagating impulses, of a receiving station comprising a tuning coil, a prime mover operatively connected with said tuning coil, a controller in circuit with said prime mover and a source of power, and means operatively connected with said controller and controlled by the tuning coil circuit, whereby impulses transmitted through the tuning coil may be utilized to actuate said controller.

2. In a wireless selective system and apparatus the combination with a sending station provided with means for propagating impulses, of a receiving station comprising a tuning coil, a solenoid operatively connected with said tuning coil, a controller in circuit with said solenoid and a source of power, a solenoid operatively connected with said controller and controlled by the circuit containing the tuning coil, and means for regulating the movement of said solenoid.

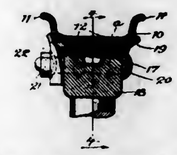
3. In a wireless selective system and apparatus the combination with a sending station comprising means for propagating impulses and a receiving station, of a relay station intermediate said sending and receiving stations said relay station comprising an oscillatory transformer and means controlled by impulses received from the sending station for actuating said transformer to vary the wave lengths in pre-determined order.

4. In a wireless selective system and apparatus a relay station comprising a receiving circuit, having a controller therein, and a sending circuit having an oscillatory transformer for varying the wave lengths or characteristics, and means controlled by said controller for operating the oscillatory transformer.

5. In a wireless selective system and apparatus a relay station comprising a receiving circuit, having a controller therein and a sending circuit having an oscillatory transformer therein, means operatively connected to the transformer in circuit with the controller for varying the wave lengths propagated by said transformer and means in shunt circuit with the receiving circuit for actuating the controller.

[Claims 6 to 11 not printed in the Gazette.]

1,154,629. DEMOUNTABLE RIM. CHESTER C. HARBRIDGE, Detroit, Mich., assignor to Detroit Demountable Rim Co., Detroit, Mich., a Corporation of Michigan. Filed Nov. 19, 1913. Serial No. 801,784. (Cl. 152—21.)



1. The combination of a demountable tire rim, which is split transversely at one point, so that its ends may be flexed, a guide on the inner face and extending longitudinally of the rim, having members secured to said ends respectively, and a slide movable longitudinally of the rim in both of said members for securing the rim ends against relative lateral movement.

2. The combination of a demountable tire rim, which is split diagonally and transversely at one point, so that its ends may be flexed, a guide on the inner face and extending longitudinally of the rim, having members secured to said ends respectively, and a slide movable longitudinally in both of said members to secure the rim ends against relative lateral movement, the guide-members having diagonal ends conterminous with the rim ends.

3. The combination with a wheel-body comprising a band having a slot therein, of a demountable rim having integral tire-holding flanges, and which is split transversely at one point, so that its ends may be flexed, a guide extending longitudinally of the rim and extended inwardly to pass into the slot in the band having members secured to said ends and having a way or slot therein, and a slide fitting and movable longitudinally in said way or slot in the guide to secure the rim ends against relative lateral movement.

4. The combination of a demountable tire rim, provided with tire-holding flanges and which is split transversely at one point, so that its ends may be flexed, a guide on the inner face and extending longitudinally of the rim, comprising members secured to said ends respectively, and a slide fitting and movable longitudinally in said members to secure the rim ends against relative lateral movement, said slide and members being interfitting to secure the rim-ends against relative radial movement.

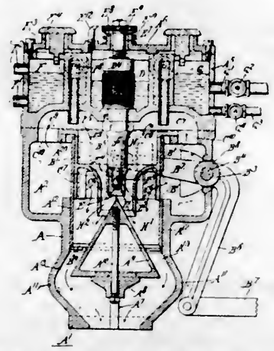
5. The combination of a demountable rim which is split diagonally and transversely at one point, so that its ends may be flexed, a guide on the inner face and extending longitudinally of the rim, comprising members secured to said ends respectively, and a slide fitting and movable longitudinally in both of said members to secure the rim ends against relative lateral movement, said members and slide being interfitting to secure the rim ends against relative radial movement, the contiguous ends of said members being conterminous with the rim ends.

[Claims 6 to 14 not printed in the Gazette.]

1,154,630. CARBURETER. WILLIAM H. C. HIGGINS, Jr., Laporte, Ind., assignor to M. Rumely Company, Laporte, Ind., a Corporation of Indiana. Filed Apr. 1, 1912. Serial No. 687,722. (Cl. 48—150.1.)

1. A carbureter comprising a cylindrical mixing chamber, air intake and mixture discharge ports surrounding either end thereof, an auxiliary air intake port intermediate them, and a conical deflector closing one end of said chamber and forming one side of the mixture discharge port.

2. A carbureter comprising a mixing chamber made up of a plurality of cylinders mounted one upon the other, one of them slidable, the other rotatable, registering ports in said cylinders controlled by their respective movements, and a mixture discharge port controlled only by said slidable cylinder.



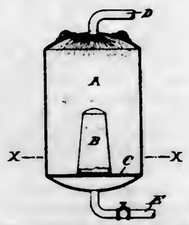
3. A carbureter comprising a vacuum chamber made up of a plurality of movable cylinders mounted one upon the other, one rotatable, the other slidable each with respect to the other, a fixed air intake port at one end of one of said cylinders, a mixture diacharge port at the opposed end of the other cylinder, auxiliary registering intake ports in the walls of said cylinders.

4. A carbureter comprising a cylindrical mixing chamber, an annular air supply passage surrounding the upper end thereof, fixed air intake ports leading from said passage and discharging axially into said chamber, auxiliary air intake ports leading from said passage and discharging radially into said chamber, a mixture discharge port at the other end of the chamber, and a water supply located above said fixed air intake port.

5. A carbureter comprising a cylindrical mixing chamber, an annular air supply passage surrounding the upper end thereof, fixed air intake ports leading from said passage and discharging axially into said chamber, auxiliary air intake ports leading from said passage and discharging radially into said chamber, a mixture discharge port at the other end of the chamber, and a priming fluid supply located above said fixed air intake port.

[Claims 6 and 7 not printed in the Gazette.]

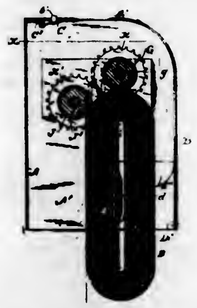
1,154,631. APPARATUS FOR THE TREATMENT OF TEXTILE FIBERS WITH LIQUIDS. JOSEF HIRSCHBERGER, Jersey City, N. J. Filed Dec. 10, 1910. Serial No. 596,615. (Cl. 8—18.)



1. A keir comprising a vat capable of containing textile fabrics, a perforated bottom for holding the fabric contents, a non-perforated closed conical receptacle so situated as to downwardly decrease the interior area of the vat, means for introducing a liquid on the top of the fabric and means for removing the liquid from the bottom of the keir only after it has passed by gravity from the top of the fabric to the bottom thereof.

2. A keir capable of containing textile fabrics, the bottom area of the textile container being less than the upper area, the decreased area being caused by a non-perforated closed conical receptacle within the keir, comprising a liquid holding receptacle perforated means for supporting the fabric during the downward flow of a liquid through the fabric, means for admitting liquid at the top, and means for removing the liquid at the bottom after its passage through the fabric by gravity, the decreased area being such that the downward flow of the liquid will allow of a thorough penetration of the textile fabric without its entanglement.

1,154,632. PAPER-CABINET. FRANK H. HOBERG, Green Bay, Wis. Filed Apr. 2, 1914. Serial No. 828,959. (Cl. 211—29.)



1. The combination with a cabinet open at the bottom and adapted to receive and support an oval rolled package of paper, of a set of parallel rollers located in the upper portion of said cabinet and adapted for vertical movement therein, one of said rollers being located in a position to bear upon the top of a paper package supported in said cabinet and the other roller being in a position to bear upon said package near the top, and means for transmitting motion from one of said rollers to the other.

2. The combination with a cabinet open at the bottom and adapted to receive and support an oval rolled package of paper, of a set of parallel rollers located in the upper portion of said cabinet and adapted for vertical movement therein, one of said rollers being located in a position to bear upon the top of a paper package supported in said cabinet and the other roller being in a position to bear upon said package near the top, and means for transmitting motion from one of said rollers to the other, together with means for actuating one of said rollers from the exterior of the cabinet.

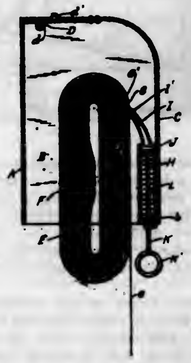
3. The combination with a paper cabinet, adapted to receive and support an oval package of paper therein, which comprises a continuous strip partially severed at the top of the package by slits substantially parallel with but offset from each other, a roller mounted in said cabinet and adapted to bear progressively upon the top of the package and upon the outer sheet thereof in space between the offset slits, another roller in motion transmitting connection with the first mentioned roller and adapted to bear upon the opposite end portion of the outer sheet from that upon which the first mentioned roller bears, substantially as described.

4. The combination with an inclosing cabinet provided with a vertically movable rotary starting roller adapted to bear upon a paper package between end slits and at one side of an offset slit in such package, whereby the rotation of said starting roller will cause the end of the sheet to drop on that side of the offset slit on which the roller bears, together with an actuating roller in gear connection with the starting roller and adapted to bear upon the package on the opposite side of said offset slit.

5. The combination with a cabinet adapted to receive oval paper packages, of a set of plates loosely mounted and adapted to slide vertically upon the interior faces of the end walls of said cabinet, a set of rollers journaled in said plates and adapted to bear upon a package of paper within the cabinet adjacent to the top of the package, motion transmitting connections between said rollers adapted for roller rotation in opposite directions, whereby one of said rollers will actuate the end of a sheet on the package downwardly on one side thereof and the other of said rollers will actuate the other end of the sheet downwardly on the opposite side of the package when said rollers are rotated.

[Claims 6 to 8 not printed in the Gazette.]

1,154,633. PAPER-FEEDING CABINET. FRANK H. HOBERG, Green Bay, Wis. Filed Apr. 2, 1914. Serial No. 828,960. (Cl. 211—29.)



1. A paper feeding cabinet provided with means for developing an air blast therein to initially dislodge a sheet of paper from a package contained within the cabinet.

2. A paper feeding cabinet provided with an air compressing chamber, and a nozzle connected with said chamber adapted to deliver air in the direction of the upper portion of a paper package in said cabinet.

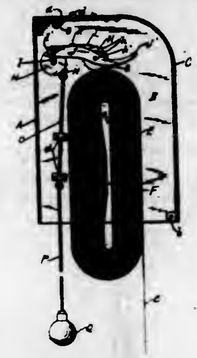
3. The combination with the walls of a paper feeding cabinet, of an air compressing chamber therein, a movable piston in said chamber, a spring for actuating said piston in one direction, a nozzle adapted to deliver air from said chamber across the upper portion of said cabinet, and means for actuating said piston from the exterior in opposition to the tension of the spring.

4. The combination with the walls of a paper feeding cabinet, of an air compressing chamber therein, a movable piston in said chamber, a spring for actuating said piston in one direction, a nozzle adapted to deliver air from said chamber across the upper portion of said cabinet, and means for actuating said piston from the exterior in opposition to the tension of the spring, said nozzle being provided with a flattened and tapered outlet adapted for air delivery in the form of a thin stream of air along the face of a rolled paper package near its upper end.

1,154,634. FEEDING-CABINET. FRANK H. HOBERG, Green Bay, Wis. Filed Apr. 17, 1914. Serial No. 832,415. (Cl. 211—20.)

1. A device for starting sheets from rolled paper packages, comprising the combination with a holder for paper rolls having an open bottom for sheet delivery, of a frictional bearing member located in the upper portion of said holder and adapted to rest upon the top portion of a package supported by the holder, and means for manually reciprocating said member to dislodge the upper ends of the sheets from the roll and permit them to fall through said open bottom.

2. A device for starting sheets from rolled paper packages, comprising the combination with a cabinet having a sheet delivery opening in its bottom, of a holder adapted to hold partially slitted paper rolls with the slit at the upper portion of the roll, a frictional bearing member connected with the walls of the cabinet and adapted to rest upon the top portion of a package supported by the holder, and means for manually reciprocating said member upon the roll adjacent to the slit therein, to dislodge the upper ends of the sheets successively and cause them to fall through the opening in the bottom of the cabinet.



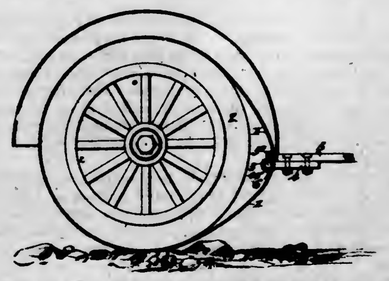
3. A device for starting sheets from rolled paper packages, comprising the combination with a holder for paper rolls, provided with a sheet delivery aperture at its lower end, of a movable sheet starter having a sheet gripping surface and supported in part by a package on said holder, means for reciprocating said roller upon the surface of the roll, and means for holding the roll against rotation.

4. The combination with a package holder designed to support partially slitted rolled packages of paper, of a sheet starter supported to bear upon the package in the rear of the slit, said starter being adapted to prevent the end of the sheet upon which it bears from dropping by gravity, and means for manually reciprocating the sheet starter to deliver said end of the sheet downwardly.

5. The combination with a package holder open at the bottom and designed to support partially slitted rolled paper packages and having a stationary member adapted to engage in said slit, of a crank, a swinging carrier member connected with said crank and adapted to be reciprocated thereby, a frictionally surfaced starting device carried by said member in a position to swing into contact with the paper package adjacent to the slit, and means for manually operating said crank.

[Claims 6 to 8 not printed in the Gazette.]

1,154,635. TRACTOR ATTACHMENT FOR MOTOR-VEHICLES. FRANCIS J. HOBSON, Phoenix, Ariz. Filed Mar. 30, 1915. Serial No. 18,119. (Cl. 21—150.)



1. In a motor vehicle, the combination with the wheel, the running board and guide brackets on the said board

that project therefrom in the direction of the wheel; of an idler roller endwise removably mounted in the said guides, means on the guides for locking the roller from endwise movement and an endless traction belt passing around the wheel and the said roller.

2. In a motor vehicle; the combination with a tractor wheel, the running board, and a pair of spaced guide brackets secured to the running board and projecting therefrom in the direction of the wheel, said brackets each having a transverse bearing aperture; of an idler roller journaled in the bearing apertures of the brackets and adapted for having endwise movement through the said brackets, and a traction belt that takes around the wheel and the said roller, and means comprising pivoted cap members on the brackets for closing the bearings to hold the idler roller against endwise movement.

1,154,636. DRILL. WALTER ROY HOCKABOUT, Palo Alto, Cal. Filed Dec. 31, 1914. Serial No. 879,905. (Cl. 255—61.)



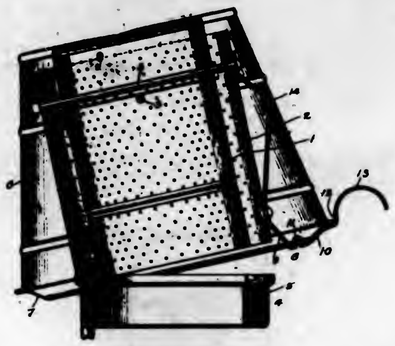
A rotary drill having a straight shank substantially elliptical in cross section and provided with two wide V-shaped longitudinal grooves along opposite edges thereof, arranged symmetrically with respect to and on opposite sides of the plane defined by the minor axis of the ellipse and the longitudinal axis of the drill, so as to form a contracted central axial portion, and two outwardly diverging longitudinal side portions, said side portions being ground at the end of the shank so as to present two flat faces disposed in perpendicular planes, said planes intersecting in a line parallel to the minor axis of said ellipse.

1,154,637. BLUE-FLAME OIL-BURNER. RUDOLPH HOFFMAN, Chicago Heights, Ill., assignor to Sears, Roebuck and Company, Chicago, Ill., a Corporation of New York. Filed May 5, 1915. Serial No. 25,878. (Cl. 158—90.)

1. An oil burner having, in combination, a combustion tube, a bracket secured to the lower portion of said tube, said bracket comprising a drum seat and a handle, a projection extending outwardly from said tube above said bracket, said bracket and projection being formed from an integral piece of sheet-metal, and a drum having an inwardly extending annular flange adapted to rest upon said seat, said drum being adapted to rest against said projection.

2. An oil burner having, in combination, a combustion tube, a bracket secured to the lower portion of said tube, said bracket comprising a drum-support and a handle, a drum adapted to rest upon said support, and supplemental means attached to the combustion tube for supporting the drum.

3. An oil burner having, in combination, a combustion tube, a bracket secured to the lower portion of said tube, said bracket comprising a drum-support and a handle, a drum adapted to rest upon said support, and supplemental means attached to one of the before-mentioned elements for supporting the drum.

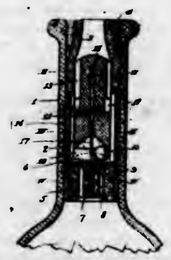


4. An oil burner having, in combination, a perforated combustion tube, a bracket secured to the lower portion of the tube, said bracket comprising a drum seat and a handle, a projection extending outwardly from said tube above the bracket, said bracket and projection being formed from an integral piece of sheet-metal, and a drum mounted upon said seat and resting against the projection.

5. An oil burner having, in combination, a perforated combustion tube, an arm secured to the lower portion of the tube, a drum seat integral with the arm, a handle integral with the drum seat, a spacer integral with the arm and located above the drum seat, and a drum mounted on the seat and resting against the spacer.

[Claims 6 to 9 not printed in the Gazette.]

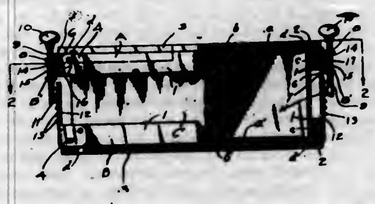
1,154,638. BOTTLE-VALVE. GILBERT JACKSON, New York, N. Y. Filed Apr. 23, 1913, Serial No. 763,124. Renewed Feb. 19, 1915. Serial No. 9,419. (Cl. 215—62.)



1. The combination with a bottle neck, of an upwardly opening valve therein, a retainer normally resting on said valve to hold it in closed position, a plug disposed above said retainer and having its lower face cone shaped, and a centrally disposed rod freely shiftable vertically in apertures in said valve and plug and acting when in its lowermost position to lock said retainer between said valve and said cone surface and when shifted to its uppermost position by the inversion of the bottle permitting said retainer to seek the center of said cone surface to permit said valve to open.

2. The combination with a bottle neck, of an upwardly opening valve therein, a filling block providing a valve seat therefor, a plug disposed above said filling block at a distance to leave a chamber therebetween and having its lower face cone-shaped, a ball in said chamber normally resting on said valve and fitting between the same and said cone surface at substantially the edge of the latter, and a centrally disposed rod freely shiftable vertically in apertures in said valve and plug and acting when in its lowermost position to lock said ball between said valve and said cone surface and when shifted to its uppermost position by the inversion of the bottle permitting said ball to seek the center of said cone surface to permit said valve to open.

1,154,639. MEANS FOR USE IN SEALING FIBER BOXES, CARTONS, AND THE LIKE. JOHN C. JOHNSON, St. Louis, Mo. Filed Mar. 1, 1915. Serial No. 11,196. (Cl. 93—2.)



1. In a box-sealing device, a pair of coöperating members adapted to engage a box on opposite sides thereof, and means carried by said members for detachably fastening the same together in operative position with a box therebetween, said means including a yielding engaging-member slidably mounted on one of said members.

2. In a box-sealing device, a pair of coöperating members adapted to engage a box on opposite sides thereof, said members each comprising a frame having a fixed bottom section and when engaging a box being oppositely disposed relatively to each other, and means carried by said members for detachably fastening the same together in operative position with a box therebetween, said means including a yielding engaging-member slidably mounted on one of said frames.

3. In a box-sealing device, a pair of coöperating members adapted to engage a box on opposite sides thereof, said members each comprising a frame having a fixed bottom section and when engaging a box being oppositely disposed relatively to each other, and means for detachably fastening said members together in operative position with a box therebetween, said means including a toothed plate on one of said frames and a yielding hooked-bar slidably mounted on the other of said frames and adapted to engage with the teeth of said plate.

4. In a box-sealing device, a pair of coöperating members adapted to engage a box on opposite sides thereof, said members each comprising a frame having a fixed bottom section and when engaging a box being oppositely disposed relatively to each other, and means for detachably fastening said members together in operative position with a box therebetween, said means including a toothed plate on one of said frames, a bar-supporting plate on the other of said frames, a hooked-bar slidably carried by said second plate, a fixed transverse pin on said bar, and a spring coiled on said bar between said second plate and said pin, said bar being adapted to yieldingly engage with the teeth of said first plate.

5. In a box-sealing device, a pair of coöperating members adapted to engage a box on opposite sides thereof, said members each comprising a frame having a fixed bottom section and when engaging a box being oppositely disposed relatively to each other, and means for detachably fastening said members together in operative position with a box therebetween, said means including a toothed plate fixed on one of said frames, a bar-supporting plate hinged on the other of said frames, a yielding hooked-bar slidably carried by said second plate, and means for yieldingly holding said second plate and its carried bar against hinged movement relatively to said last-mentioned frame.

[Claims 6 to 8 not printed in the Gazette.]

1,154,640. PROCESS OF PRODUCING AMMONIA. WALTER S. LANDIS, Niagara Falls, N. Y., assignor to American Cyanamid Company, Nashville, Tenn., a Corporation of Maine. Filed Feb. 4, 1915. Serial No. 6,167. (Cl. 23—21.)

1. The process of making ammonia from commercial calcium cyanamid, or lime nitrogen, which consists in suitably applying heat to a solution of said cyanamid to bring it to a reacting temperature, and then lessening the applied heat to permit the reaction to proceed under its own evolved heat, substantially as described.

2. The process of making ammonia from commercial calcium cyanamid, or lime nitrogen, which consists in feeding said cyanamid to a vessel containing water to form a solution and to free acetylene gas; removing said gas from said vessel; applying sufficient heat to said solution to free ammonia therefrom; and then lessening said heat to permit the reaction to proceed exothermically, substantially as described.

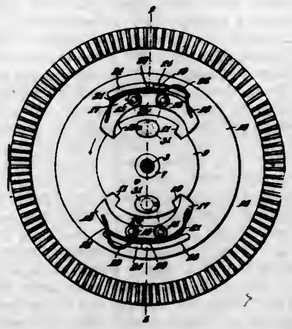
3. The process of making ammonia from calcium cyanamid which consists in raising the temperature of a solution of said cyanamid to the reacting temperature by subjecting said solution to an intermittent action of steam for predetermined periods; and permitting the reaction to proceed exothermically, substantially as described.

4. The process of making ammonia from commercial calcium cyanamid, or lime nitrogen, which consists in feeding said cyanamid to a vessel containing water, agitating the mixture, thereby forming a slurry; subjecting said slurry to the action of steam at intervals; and permitting the reaction to proceed exothermically between said intervals, substantially as described.

5. The process of making ammonia from commercial calcium cyanamid, or lime nitrogen, which consists in feeding said cyanamid to a vessel containing water, agitating the mixture, thereby forming a slurry; subjecting said slurry to the action of steam at intervals; permitting the reaction to proceed exothermically between said intervals; and removing the evolved ammonia before admitting fresh steam, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,154,641. DIFFERENTIAL GEARING. JOHN ALBERT LANG, Carthage, N. C. Filed Apr. 25, 1914. Serial No. 834,538. (Cl. 74—7.)



1. In a differential gearing, a pair of individually rotatable ratchet wheels; a shaft mounted to rotate with each ratchet wheel; a pair of side disks between the ratchet wheels and having arcuate openings; pawls carried by the side disks and coacting with the ratchet wheels; and a driven member rotatably mounted between the side disks, the rotatable member having transverse projections engaged in the opening to form an operative connection between the driven member and the side disks, the projections being movable in the openings into and out of coacting relation with respect to the pawls.

2. In a differential gearing, a pair of individually rotatable ratchet wheels; a shaft mounted to rotate with each ratchet wheel; a pair of side disks between the ratchet wheels; pawls carried by the side disks and coacting with the ratchet wheels; a driven member rotatably mounted between the side disks, the rotatable member having transverse projections movable with respect to the side disks and adapted to engage the side disks to form an operative connection between the driven rotatable member and the side disks, the projections being movable with the driven member with respect to the disks to cause the projections to be disposed in and out of actuating relation with respect to the pawls.

3. In a differential gearing, a pair of ratchet wheels; a shaft connected with each ratchet wheel; a pair of carrying members; pawls on the carrying members and coacting with the ratchet wheels; a driven member including a combined means for operatively connecting the driven member with the carrying members and for holding the pawls in engagement with the ratchet wheels; and resilient auxiliary retaining mechanisms forming operative connections between the ratchet wheels and the carrying members, the resilient auxiliary retaining mechanisms being releasable under excessive torsional strains in opposite directions.

4. In a device of the class described, a pair of ratchet disks; shafts individual to the ratchet disks; a pair of side disks located between the ratchet disks and provided with arcuate slots; pawls on the side disks and coacting with the ratchet wheels; springs engaging the pawls and comprising bowed portions extended across the slots; and a driven member located between the side disks and comprising lateral projections movable in the slots and adapted to engage the bowed portions of the springs.

1,154,642. PERCUSSION-DRILL. CHARLES L. LAWTON, Hancock, Mich. Filed Feb. 23, 1915. Serial No. 9,839. (Cl. 255—55.)



1. A percussion drill comprising a movable support, a drill bar carried by said support and arranged to form a drilled hole, means for moving the support backward from the hole, and movable clutch means arranged in one position to allow the drill bar to be withdrawn from the support, and in another position serving to transmit force from the support to the drill bar whereby the latter may be drawn backward from the hole with the support, said clutch means, when in the last mentioned position, allowing the drill bar to be turned about its own axis at will as it is being withdrawn, whereby obstructions may be avoided, said clutch means having an edge extending transversely of and arranged to engage the drill bar.

2. A percussion drill comprising a movable casing, a support for the casing, a drill bar carried by said casing, said drill bar including a shank and a cutting bit, the latter being arranged to cut a hole of greater diameter than the shank, means for moving the casing backward from the hole, and a tiltable clutch ring arranged in one position to allow the drill bar to be withdrawn from the casing, and in another position serving to transmit force from the casing to the drill bar whereby the latter may be drawn backward from the hole with the casing, said clutch ring, when in the last mentioned position, allowing the drill bar to be turned about its own axis at will as it is being withdrawn, whereby the cutting bit may be made to avoid obstructions.

3. A percussion drill comprising a movable casing, a support for the casing, a drill bar carried by said casing, said drill bar including a shank and a cutting bit, the latter being arranged to cut a hole of greater diameter than the shank, means for moving the casing backward from the hole, a tiltable clutch ring arranged in one position to allow the drill bar to be withdrawn from the casing, and in another position serving to transmit force from the casing to the drill bar whereby the latter may be drawn backward from the hole with the casing, said clutch ring, when in the last mentioned position, allowing the drill bar to be turned about its own axis at will as it is being withdrawn, whereby the cutting bit may be made to avoid obstructions, and manually operable means for tilting the clutch ring in one direction.

4. A percussion drill comprising a movable casing, a support for the casing, a drill bar carried by said casing, said drill bar including a shank and a cutting bit, the latter being arranged to cut a hole of greater diameter than the shank, means for moving the casing backward from the hole, a tiltable clutch ring arranged in one position to allow the drill bar to be withdrawn from the casing, and in another position serving to transmit force from the casing to the drill bar whereby the latter may be drawn backward from the hole with the casing, said clutch ring, when in the last mentioned position, allowing the drill bar to be turned about its own axis at will as it is being withdrawn, whereby the cutting bit may be made to avoid obstructions, manually operable means for tilting the clutch ring in one direction, and resilient means for returning the clutch ring to its previous position.

5. A percussion drill comprising a movable casing, a support for the casing, a drill bar carried by said casing, said drill bar including a shank and a cutting bit, the latter being arranged to cut a hole of greater diameter than the shank, means for moving the casing backward from the hole, a tiltable clutch ring arranged in one position to allow the drill bar to be withdrawn from the casing, and in another position serving to transmit force from the casing to the drill bar whereby the latter may be drawn backward from the hole with the casing, said clutch ring, when in the last mentioned position, allowing the drill bar to be turned about its own axis at will as it is being withdrawn, whereby the cutting bit may be made to avoid obstructions, resilient means tending to hold the clutch ring in the position wherein the drill bar is free to be drawn through said clutch ring, and manually operable means for tilting the clutch ring against the force of the resilient means.

[Claims 6 to 25 not printed in the Gazette.]

1,154,643. PROCESS OF MAKING PRINTING-PLATES. EMIL LEITNER, Hoboken, N. J., assignor to Powers Photo-Engraving Company, New York, N. Y., a Corporation of New York. Filed Jan. 26, 1914. Serial No. 814,534. (Cl. 101—205.)

1. The process of making a printing plate which comprises sensitizing the surface of the plate, exposing said surface to light action through a negative, developing said surface after it is exposed, applying to parts of said surface by means of a brush a medium soluble in a given solvent, applying to said developed surface an acid resist insoluble in said solvent, applying said solvent to dissolve said soluble medium and to remove said resist where it overlies said medium to expose the surface of the plate, deep etching said exposed portions of the plate, and further preparing said plate for printing.

2. The process of producing a printing plate which comprises sensitizing the surface of the plate, exposing said surface to light action through a negative, developing said surface after it is exposed, applying to parts of said surface by means of a brush a pigmentous medium soluble in a given solvent, applying to said developed surface an acid resist insoluble in said solvent, applying said solvent to dissolve said soluble medium and to remove said resist where it overlies said soluble medium to expose the surface of the plate, deep etching said exposed portions of the plate, and further preparing said plate for printing.

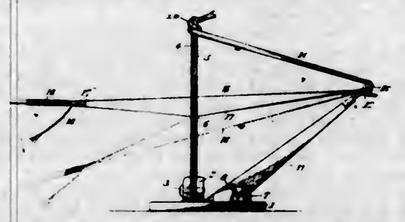
3. The process of making a printing plate which comprises sensitising the surface of the plate, exposing said surface to light action through a negative, developing said surface after it is exposed, applying to parts of said surface by means of a brush a medium soluble in water, applying to said surface an acid resist, applying water to said surface to dissolve said medium and to remove said resist where it overlies said medium to expose the surface of the plate, deep etching said exposed portions of the plate, and further preparing said plate for printing.

4. The process of making a printing plate which comprises sensitising the surface of the plate, exposing said surface to light action through a negative, developing said surface after it is exposed, applying to parts of said surface by means of a brush a pigmentous medium soluble in water, applying to said surface an acid resist, applying water to said surface to dissolve said medium and to remove said resist where it overlies said medium to expose the surface of the plate, deep etching said exposed portions of the plate, and further preparing said plate for printing.

5. The process of making a printing plate which comprises sensitising the surface of the plate, exposing said surface to light action through a half tone negative, developing said surface after it is exposed, applying to parts of said surface by means of a brush a medium soluble in a given solvent, applying to said developed surface an acid resist insoluble in said solvent, applying said solvent to dissolve said soluble medium and to remove said resist where it overlies said medium to expose the surface of the plate, deep etching said exposed portions of the plate, and applying a half tone etch to the surface of said plate.

[Claims 6 to 12 not printed in the Gazette.]

1,154,644. LOOM. LUIZ C. LOBATO, Lowell, Mass. Filed Dec. 5, 1914. Serial No. 875,625. (Cl. 139—12.)



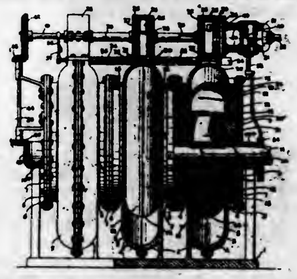
1. In a loom, the combination of a loom reed having openings and slots alternatively arranged to receive the warp and weft threads, a shuttle constituting a former upon which the weft thread is wound and interweaved with the warp thread, and means for holding and guiding said warp threads.

2. In a loom, the combination of a loom reed having openings and slots alternatively arranged to receive the warp and weft threads, a shuttle constituting a former upon which the weft thread is wound and interweaved with the warp thread, and means for holding and guiding said warp threads, said means consisting of a tension bar and a warp clamp or guide carried by said bar.

3. In a loom, the combination of a loom reed having openings and slots alternatively arranged to receive the warp and weft threads, a shuttle constituting a former upon which the weft thread is wound and interweaved with the warp thread, said shuttle having a hand receiving portion, and means for holding and guiding said warp threads.

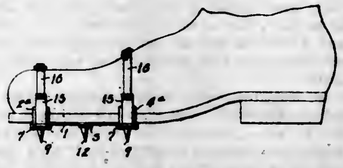
1,154,645. ROTARY ENGINE. THOMAS GEORGE MCGONIGLE, Lambton Mills, Ontario, Canada. Filed Nov. 30, 1912. Serial No. 734,300. (Cl. 123—8.)

1. In a rotary engine, a casing having a circular expansion chamber, a rotor eccentrically journaled within said expansion chamber, a hollow shaft journaled eccentrically within said expansion chamber and extending transversely therethrough, a piston vane secured to said hollow shaft and having a water passage therein, communicating with the hollow shaft and extending outwardly to the end and returning to said shaft, a hollow casing encircling the end of said shaft extending beyond the main casing and having communication with the passage in said shaft through openings therein, a water jacket inclosing said expansion chamber, and a circulation pipe leading from the hollow casing encircling the shaft to said water jacket.



2. In a rotary engine, a plurality of circular casings each having a circular expansion chamber, a shaft extending transversely through said casings, rotors eccentrically journaled within said casings, radial piston vanes arranged within said casings and secured to said shaft and extending through said rotors, valve casings secured to said main casings and each having a pair of ports therein, ports in said main casing leading from the ports in said valve casings to the expansion chambers and arranged one at each side of the point of contact between the rotors and the wall of the expansion chambers, hollow cylindrical valves arranged in said valve casings, a hollow shaft extending between and rigidly connecting said rotary valves and adapted to convey the expansile fluid to said valves, means for rotating said hollow shaft, and means for directing the exhaust from said expansion chambers.

1,154,646. ICE-CREEPER. JAMES MACVANE, Providence, R. I., assignor of one-half to William B. Carpenter, Providence, R. I. Filed Jan. 30, 1915. Serial No. 5,194. (Cl. 36—62.)

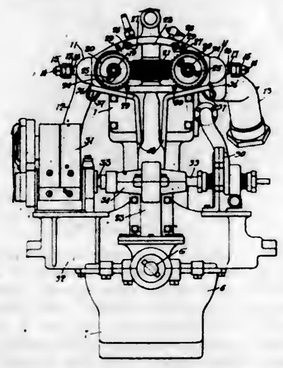


1. An ice creeper including a stock provided upon opposite sides thereof with corresponding laterally projecting arms, the said arms upon one side of the stock terminating in sole engaging lugs, transversely disposed slides mounted upon the stock and extending under the laterally projecting arms, said slides terminating in sole engaging lugs which have an opposed relation to the before mentioned sole engaging lugs of the stock, metal straps extending under the stock and connected to the slides and arranged and constructed to produce a binding engagement with the stop, and strap connections between the metal straps and the sole engaging lugs of the slides.

2. An ice creeper including a stock formed upon opposite sides thereof with corresponding laterally projecting arms, one set of the arms terminating in sole engaging lugs, transversely disposed slides mounted under the stock and extending under the lateral arms thereof, said slides terminating in sole engaging lugs having an opposed relation to the before mentioned sole engaging lugs of the stock, teeth carried by the slides, means for lock-

ing the slides in an adjusted position, metal strap members extending under the stock and connected to the slides and arranged and constructed to produce a binding engagement with the stock, and strap connections between the metal straps and the sole engaging lugs of the slides.

1,154,647. EXPLOSIVE-ENGINE. CYRUS E. MEAD, Dayton, Ohio, assignor to The Mead Engine Company, Dayton, Ohio, a Corporation of Ohio. Filed Apr. 28, 1911. Serial No. 623,846. (Cl. 121—97.)



1. In an explosive engine, the combination, with a body portion having a cylinder and provided with valve chambers, and a port connecting each chamber with the cylinder, of a rotary inlet valve having a through-and-through port and mounted in one of said chambers, a rotary exhaust valve also having a through-and-through port and mounted in the other of said chambers, a rotative device mounted on each valve, and a shaft rotatively connected with the engine shaft, extending between said rotative devices on the valve and connected therewith to rotate said valves.

2. In an explosive engine, the combination, with a body portion having a cylinder and provided with valve chambers, and a port connecting each chamber with the cylinder, of a rotary inlet valve having a through-and-through port and mounted in one of said chambers, a rotary exhaust valve also having a through-and-through port and mounted in the other of said chambers, a gear on each valve, and a shaft having one end extending between said gears and carrying a gear which meshes with each of said valve gears.

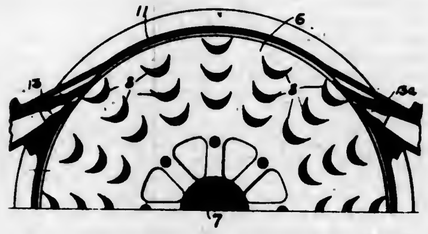
3. In an explosive engine, a body portion having a cylinder and provided with valve chambers arranged on opposite sides of and communicating with said cylinder, a rotary plug valve mounted in each of said valve chambers to control the communication between the same and said cylinder and having parts projecting beyond the end of said body portion, a gear mounted on the projecting part of each of said valves, a gear arranged between and meshing with the first-mentioned gears, and a housing secured to said engine and inclosing said gears.

4. In an explosive engine, a body portion having a cylinder and provided with valve chambers arranged on opposite sides of and communicating with said cylinder, a rotary plug valve mounted in each of said valve chambers to control the communication between the same and said cylinder and having parts projecting beyond the end of said body portion, a gear mounted on the projecting part of each of said valves, a gear arranged between and meshing with the first-mentioned gears, said body portion having a longitudinally projecting flange extending about said gears, a cap, and means for securing said cap to the outer end of said flange.

5. In an explosive engine, the combination, with a body portion having a cylinder and provided with valve chambers communicating with said cylinder, and a rotary valve mounted in each of said chambers, of rotative devices connected with the respective valves, and a shaft rotatively connected with the engine shaft, extending between said rotative devices and connected therewith to rotate said valves.

[Claims 6 to 11 not printed in the Gazette.]

1,154,648. FLUID-PRESSURE TURBINE. CARL J. MELLIN, Schenectady, N. Y. Filed Dec. 5, 1914. Serial No. 875,574. (Cl. 121—60.)



1. In a fluid pressure turbine, the combination of a casing, a tangential admission nozzle for the fluid, a plurality of rotatable disks rigidly secured together with narrow spaces between the same and having a central exhaust outlet, and bucket distance pieces having deflecting surfaces rigidly secured between said disks.

2. In a fluid pressure turbine, the combination of a casing, a plurality of rotatable disks rigidly secured together with narrow spaces between the same, and distance pieces secured between said disks and having surfaces disposed at an angle to the direction of the fluid for deflecting the same to other surfaces.

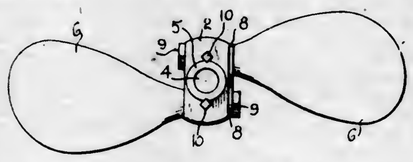
3. In a fluid pressure turbine, the combination of a casing, a plurality of rotatable disks rigidly secured together with narrow spaces between the same, and bucket pieces between said disks and having outer inclined surfaces and inner inclined surfaces adapted to deflect the fluid.

4. In a fluid pressure turbine, the combination of a casing, a plurality of rotatable disks rigidly secured together with narrow spaces between the same, and bucket pieces secured in radial rows between said disks.

5. In a fluid pressure turbine, the combination of a casing, a rotatable shaft, a plurality of disks rigidly secured together and mounted upon said shaft, a tangential nozzle for delivering fluid through the spaces between the disks, and a plurality of rows of bucket pieces rigidly secured in the spaces between said disks and having inclined surfaces for deflecting the fluid from one bucket to another.

[Claims 6 to 10 not printed in the Gazette.]

1,154,649. PROPELLER. ANTHONY E. MILLER, Detroit, Mich. Filed Nov. 21, 1914. Serial No. 873,350. (Cl. 170—163.)



1. An adjustable propeller comprising a head adapted to be attached to a driving shaft and having transversely extending bores, oppositely disposed propeller blades having shanks insertible into said bores and rotatable therein, gears mounted each on one of the shanks and intermeshing with each other whereby to communicate the rotation of one blade to the other blade, and means for holding the blades set in any rotatably adjusted position.

2. An adjustable propeller comprising a head adapted to be attached to a driving shaft, oppositely disposed propeller blades having shanks rotatably mounted in said head whereby the blades may be rotated upon their longer axes, intermeshing sector gears fixedly mounted upon said shanks, and set screws passing through the head engaging the shanks and holding the blades in their angularly adjusted positions.

3. An adjustable propeller comprising a head adapted to be attached to a driving shaft and having transversely extending bores, oppositely disposed propellers having reduced shanks insertible into said bores and rotatable therein, sector gears mounted on the shanks and intermeshing with each other, nuts engaging the ends of the shanks and bearing against the head, and set screws holding the shanks in their adjusted positions.

1,154,650. CONNECTING-ROD BEARING. WILLIAM CAMPBELL MOORE, Detroit, Mich. Filed Jan. 20, 1915. Serial No. 3,406. (Cl. 74—17.)



1. The combination with a crank pin, and connecting rod bearings, of a longitudinally divided sleeve in said bearings, and a divided bushing on said crank pin in said sleeve movable longitudinally thereof.

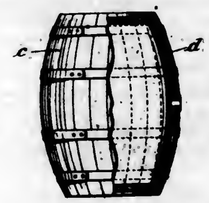
2. The combination with a crank pin and connecting rod bearings, of a longitudinally divided sleeve common to all of said bearings therein, and a transversely and longitudinally divided bushing on said crank pin in said sleeve, the parts of which bushing are movable longitudinally in opposite directions upon said pin in contact with said sleeve.

3. The combination with a crank pin and a pair of connecting rods formed with end bearings and provided with bearing caps, one of said connecting rods being forked at its bearing end to embrace the bearing end of the other rod, of a longitudinally split sleeve extending through all of said bearings, and surrounding the crank pin, and a bushing on the pin supporting the sleeve and adjustable therein to take up the lost motion caused by wear between the bushing and pin.

4. The combination with a pair of connecting rods having end bearings and bearing caps, one of said connecting rods being forked at its bearing end to embrace the bearing end of the other rod, of a split sleeve extending through all the said bearings and forming a member upon the exterior of which the embraced rod turns, said sleeve being interiorly tapered, an exteriorly tapered bushing in said sleeve divided longitudinally and adapted to be moved longitudinally in contact with the tapering surface of the sleeve to adjust the same into contact with the crank pin extending therethrough.

5. The combination with a pair of connecting rods having end bearings and caps for said bearings, one of said rods being forked at its bearing end to embrace the bearing end of the other rod, of a longitudinally split sleeve extending through all of said bearings, said sleeve having a bore of greatest diameter intermediate its ends forming inclined surfaces extending inwardly from the ends, and a bushing comprising a pair of split members each exteriorly tapered to engage the tapering surfaces of the sleeve and adapted to be adjusted in contact therewith longitudinally toward and from each other to adjust the same into contact with a crank pin adapted to extend therethrough.

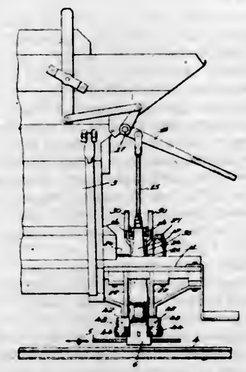
1,154,651. METHOD OF COATING WITH ALUMINIUM. ERIKA MORF, Zurich, Switzerland, assignor, by mesne assignments, to Metals Coating Company of America, Boston, Mass., a Corporation of Massachusetts. Filed May 12, 1913. Serial No. 766,940. (Cl. 91—70.2.)



1. The method of coating a receptacle with aluminium, which consists, while heating the receptacle to be coated, of coating the surfaces with a pore-filling material, then spraying aluminium onto the surfaces thus coated, and finally cooling the thus coated receptacle.

2. The method of coating a receptacle with aluminium, which consists, while heating the receptacle to be coated, of coating the surfaces with paraffin, then spraying aluminium onto the surfaces thus coated, and finally cooling the thus coated receptacle.

1,154,652. GRIP FOR CABLE-CARS. ALMON E. NORRIS, Cambridge, Mass. Filed Mar. 22, 1911, Serial No. 616,177. Renewed Mar. 24, 1915. Serial No. 16,756. (Cl. 104—130.)



1. In a cable grip for cable cars, the combination with a grip-supporting frame, of two gripping jaws pivoted thereto, a roll sustained by one of said jaws for rotative movement about a vertical axis, said roll having a diameter greater than the width of the grip whereby when the jaws are closed the periphery of the roll extends beyond both sides of the grip.

2. In a cable grip for cable cars, the combination with a grip-supporting frame, of two gripping jaws pivoted thereto, one of said jaws having a lug on each side thereof, and a roll rotatably mounted in each lug to rotate about a vertical axis, the periphery of said rolls projecting beyond the side of the grip.

3. In a cable grip for cable cars, the combination with a pair of gripping jaws, one of said jaws having a lug on each side thereof, of a roll rotatably mounted in each lug to rotate about a vertical axis, each roll having a diameter greater than the width of the jaws when the latter are closed.

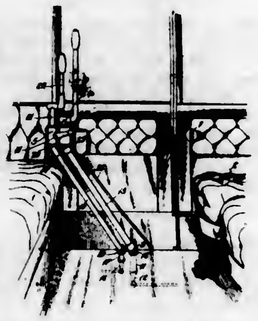
4. In a cable grip, the combination with a car, of a grip-supporting frame thereon, means to sustain said frame

for swinging movement laterally of the car about a horizontal axis, and means tending at all times to maintain the frame in a central position.

5. In a cable grip, the combination with a car, of a grip-supporting frame thereon, means to sustain said frame for swinging movement in a direction laterally of the car, and a yielding centering device acting on said frame and tending to maintain it in a central position.

[Claims 6 to 18 not printed in the Gazette.]

1,154,653. STEERING AND CONTROLLING SYSTEM FOR AUTOMOBILES. ALBERT W. PATTISON, Detroit, Mich., assignor to Grinnell Electric Car Co., Detroit, Mich., a Corporation of Michigan. Filed Oct. 13, 1913. Serial No. 794,822. (Cl. 21—90.)



1. In a motor vehicle having a front seat and a back seat, controlling and steering means permanently attached to the vehicle and adapted to be swung in a plane longitudinally of the car, and locking means for securing them in either forward or back position, the controlling and steering means being operable from either seat for manipulating the vehicle in either forward or backward direction.

2. In a motor vehicle having a front seat and a back seat, steering and controlling means permanently connected to the vehicle and adapted to be shifted into operative relation to either seat whereby the vehicle may be operated in either direction from either seat, and locking means for securing the controlling and steering means in either position.

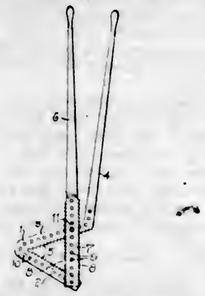
3. In a motor vehicle, a front seat and a back seat, locking plates each fixed to the vehicle adjacent a seat, a single controlling and steering mechanism permanently connected to the vehicle and adapted to be shifted into operative relation to either seat, and to afford control of the vehicle in direct or reverse drive from either seat, and a locking member in the mechanism for engaging either locking plate and holding the mechanism in operative relation to the companion seat.

4. In a motor vehicle having a front and rear seat, a single steering and controlling mechanism consisting of a base plate secured to the vehicle intermediate the seats, a fitting, links that are adapted to couple the fitting and base, and to swing in an arc, means for locking the fitting adjacent either seat, and controlling and steering levers carried by the fitting and articulated by flexible connections with controlling and steering shafts.

5. In a motor vehicle having a front seat and a back seat, a base supported on the vehicle intermediate the seats, a pair of parallel links pivoted to the base to swing in an upright plane, a fitting pivotally secured to the upper end of the links, a steering handle, a rock arm, flexible connections extending from the steering handle through the fitting to the rock arm, a controlling handle, a controlling rock arm, flexible connections extending from the handle through the fitting to the controlling rock arm, and means for securing the fitting adjacent either seat.

[Claims 6 to 10 not printed in the Gazette.]

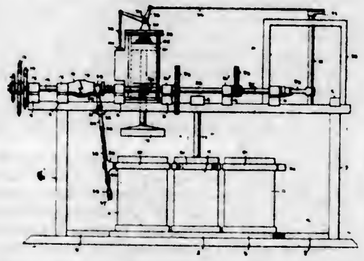
1,154,654. PIPE-WRENCH. ARLO E. RICE, Marcus, Iowa. Filed July 24, 1915. Serial No. 41,711. (Cl. 81—94.)



1. A wrench of the character described, comprising an angular jaw formed on the inside edge of the angle with teeth, said jaw being also formed with apertures extending transversely therethrough, a handle connected to said jaw, another handle, a prong connected to said last-named handle, and embracing the jaw and formed with teeth and with transversely extending apertures adapted to register with the apertures of the jaw, and a pivot bolt insertible in the registering apertures of the jaw and prong, for the purpose specified.

2. A wrench of the character described, comprising an angular jaw embodying two members each of which is formed with apertures extending transversely therethrough, a handle connected to said jaw, the jaw being disposed in offset relation to the handle, another handle, a prong formed on one end of said last-named handle and embracing said jaw and formed on its edges with teeth, said prong being also formed with apertures extending transversely therethrough and adapted to register with the apertures of the jaw, and a pivot bolt insertible in the registering apertures of the prong and jaw, as and for the purpose set forth.

1,154,655. COTTON PACKING OR BALING DEVICE. PALEY KNOX RICHARDSON, Mangum, Okla. Filed Nov. 5, 1914. Serial No. 870,358. (Cl. 100—25.)



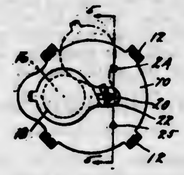
1. A cotton packing device comprising a frame, a rotating table mounted in said frame, a plurality of packing boxes carried by the table, a plunger to pack cotton within said boxes, a cylinder, a piston in the cylinder to operate said packing plunger, a plurality of shafts, coöperating gears carried by the shafts, and means operated by certain of said gears to feed steam to the upper or lower part of the cylinder to operate said plunger and combined manual and automatic means adapted to stop the plunger operating means.

2. A cotton packing device comprising a rotating table, a plurality of packing boxes thereon, each packing box having a lever operating attachment, a packing plunger to successively pack cotton in said packing boxes, an operating cylinder for said plunger, a valve mechanism to alternately feed steam to the upper and lower parts of the cylinder to operate said packing plunger, driving mechanism connected to said valve means, and a lever connected to said driving mechanism adapted to be operated by said attachments on said packing boxes to automatically stop said packing mechanism.

3. A cotton packing device comprising a frame, a two part driving shaft mounted on the upper portion of said frame, a clutch mechanism coöperating therewith, a plurality of variable sized sprockets carried by one of said parts to provide a variable speed for said shaft, a gear on the other of said parts, a second shaft, a gear thereon meshing with the gear of the first shaft, a segmental gear on said second shaft, a third shaft, a cog wheel thereon adapted to be intermittently rotated by said segmental gear, a packing plunger, an operating cylinder for said plunger, and means connected to said third shaft to introduce steam alternately into the ends of said cylinder to raise and lower said plunger.

4. A cotton packing device comprising the combination with a rotating table, a plurality of packing boxes carried thereby, a plunger to pack cotton into said boxes, an operating cylinder for the plunger, and a valve mechanism intermittently admitting steam to the upper and lower end of the cylinder, of a two part shaft, a clutch mechanism connecting said parts, a throw off lever for said clutch, means carried by the packing boxes to operate said lever when the table is rotated, means coöperating with said shaft for intermittently operating said valve mechanism and a plurality of variable sized driving sprockets on said shaft.

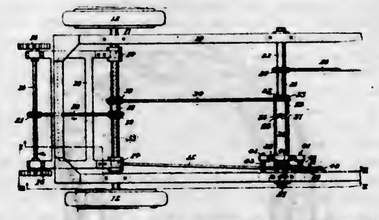
1,154,656. MILK-BOTTLE PROTECTOR. HENRY P. ROBERTS, Boston, Mass. Filed Dec. 18, 1913. Serial No. 807,472. (Cl. 215—14.)



1. A closure for milk bottles and like receptacles, including a cap plate having an outlet opening therein, a T-stud projecting from the cap plate at one side of the outlet opening, said closure plate being formed with an elongated slot to receive the head of the T-shaped stud and said head being normally disposed at an angle to the slot so as to engage the top of the closure plate and hold the said plate in a frictional engagement with the cap plate during a sufficient range of movement to admit of the closure plate being swung over or away from the outlet opening, the closure plate being detachable from the cap plate when it is swung beyond the usual range of movement to bring the slot thereof into alinement with the head of the T-shaped stud.

2. A closure for milk bottles and the like, including a cap plate having an outlet opening therein, a T-shaped stud projecting from the cap plate at one side of the outlet opening, a closure plate formed of spring metal and pivotally mounted upon the base of the T-shaped stud so as to be swung over and away from the outlet opening of the cap plate, the closure plate being provided with an elongated slot adapted to receive the head of the T-shaped stud when swung into alinement therewith to admit of the closure plate being detached from the cap plate, and stops projecting from the cap plate to limit the usual swinging movement of the closure plate in opening and closing the outlet of the cap plate, said closure plate being adapted to be sprung outwardly and swung over the top of one of the stops to bring the slot thereof into alinement with the head of the T-shaped stud when it is desired to detach the closure plate from the cap plate.

1,154,657. HILL-CLIMBING DEVICE. JOZZEF ROMANCZAK, Pittock, Pa. Filed Apr. 30, 1915. Serial No. 24,986. (Cl. 21—90.)



1. A vehicle frame, shiftable auxiliary traction wheels, a power shaft, clutch means between the said power shaft and wheels and simultaneously operating means for said clutch means and shifting means for the said wheels.

2. A device of the class described comprising a vehicle frame having an axle and a power shaft transversely carried thereby, a frame swingingly mounted upon the said axle, auxiliary spiked traction wheels carried by the said frame, a clutch sleeve freely journaled upon the said power shaft, operative connections between the said sleeve and wheels, a long clutch sleeve non-rotatably mounted upon the said power shaft, and means for shifting the said sleeves into clutching engagement with each other.

3. A device of the class described comprising a vehicle frame, an axle carried thereby, an auxiliary frame pivoted to the said axle, auxiliary traction wheels journaled in the said pivoted frame, a power shaft having terminal cylindrical portions and an intermediate squared portion, a clutch sleeve journaled upon the inner one of said cylindrical portions, operative connections between the said clutch sleeve and the said traction wheels, a coöperating clutch member slidably mounted upon the said squared portion, a clamp bracket journaled to the said clutch member, clutch releasing compression springs connected between the said clamp member and vehicle frame.

4. A device of the class described comprising a vehicle frame, an axle carried thereby, an auxiliary frame pivoted to the said axle, auxiliary traction wheels journaled in the said pivoted frame, a power shaft having terminal cylindrical portions and an intermediate squared portion, a clutch sleeve journaled upon the inner one of said cylindrical portions, operative connections between the said clutch sleeve and the said traction wheels, a coöperating clutch member slidably mounted upon the said squared portion, a clamp bracket journaled to the said clutch member, clutch releasing compression springs connected between the said clamp member and vehicle frame, a clutch shifting sleeve journaled upon the outer cylindrical portion of the power shaft and having an outer cam face, a fixed clamp member having a corresponding cam face operatively positioned adjacent the said clutch operating sleeve, a clamp secured to the said operating sleeve and an operating lever pivotally connected to the said clamp.

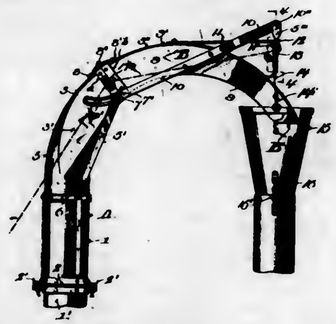
5. A motor vehicle frame having a rear axle and a power shaft transversely supported thereby, auxiliary traction wheels swingingly carried by the said axle, a clutch sleeve journaled upon the said power shaft, operative connections between the said clutch sleeve and traction wheels, clutching means between the said power shaft and clutch sleeve, an operating lever for the said clutching means, automatic releasing means for the said clutching means.

[Claim 6 not printed in the Gazette.]

1,154,658. DISTRIBUTER-ELBOW. AUGUST ROSENTHAL, West Allis, Wis. Filed Oct. 19, 1914. Serial No. 867,287. (Cl. 193—21.)

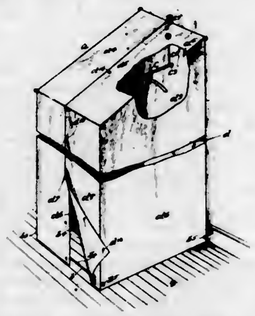
1. An elbow of the character described comprising a throat section and a mouth section having a hinge connection, a band carried by the mouth section and terminating in an upstanding post above the outlet of the mouth section, straps connected to the mouth section and throat

section, and having end portions fastened to the post, an oscillating bar carried by the post, and distributer pipe suspending means carried by the bar.



2. An elbow comprising a throat section and a mouth section having a hinge connection, a brace carried by the mouth section and terminating in an upstanding supporting post, locking straps rigidly connected to the post and adjustably connected to the throat section for locking the mouth section in an adjusted position relative to the throat section, a bar pivotally connected to the post, and distributer pipe suspending means carried by the bar.

1,154,659. WARDROBE. CARL A. SCHLACHTER, Manson, Iowa. Filed June 23, 1914. Serial No. 846,770. (Cl. 45—118.)



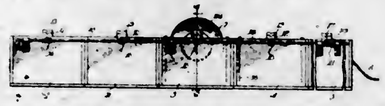
1. A wardrobe, comprising a frame, means for connecting the same with a suitable support, a rod for maintaining said frame in position and serving as a support for a plurality of garment hangers, a fabric envelop draped on said frame, and a supplemental frame suspended by and maintaining said envelop in shape.

2. A wardrobe, comprising upper and lower frames, a fabric envelop connecting said frames, means for connecting said envelop with said frames detachably, said detachable means also serving as connecting means for the frame members, and means for suspending said upper frame from a suitable support.

1,154,660. PLATING-MACHINE. LOUIS SCHULTE, Chicago, Ill., assignor to Electro Chemical Products Association, Chicago, Ill. Filed July 23, 1913. Serial No. 780,746. (Cl. 204—11.)

1. A machine of the character described comprising a plurality of tanks, a tube carrier adapted to be inserted successively into said tanks, means whereby said tube carrier is tilted when mounted in a tank, and means for tilting said tube carrier in the opposite direction when transferring the same from one tank to the next.

2. A machine of the character described comprising a plurality of tanks, and a tube carrier adapted to be successively inserted into said tanks, said tube carrier including a rotatable shaft, and a plurality of independent tube holders loosely carried thereby and rotated by said shaft, said tube holders each having means for independently supporting each of a plurality of tubes.



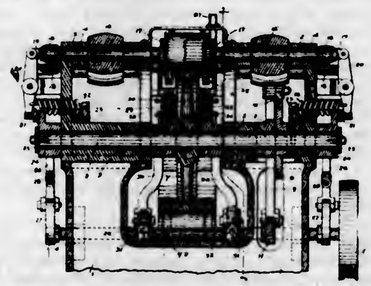
3. A machine of the character described comprising a plurality of tanks, a tube carrier adapted to be successively inserted into said tanks, said tube carrier including a rotatable shaft, a rotatable framework including a plurality of independent tube holders loosely carried thereby and rotated by said shaft, a pinion carried by said shaft, and an annular gear carried by said framework, said tube holders each having means for independently supporting each of a plurality of tubes.

4. A machine of the character described comprising a plurality of tanks, a tube carrier adapted to be successively inserted into said tanks, said tube carrier including a rotatable shaft, a rotatable framework loosely carried thereby and rotated by said shaft, a pinion carried by said shaft, an annular gear carried by said framework, and tube supporting devices forming a fixed part of said rotatable framework.

5. A machine of the character described comprising a plurality of tanks, a tube carrier adapted to be successively inserted into said tanks, said tube carrier including a rotatable shaft, a rotatable framework loosely carried thereby and rotated by said shaft, a pinion carried by said shaft, an annular gear carried by said framework, and tube supporting devices forming a fixed part of said rotatable framework, said tube supporting devices being insulated throughout the major portion of their exposed surfaces.

[Claims 6 to 20 not printed in the Gazette.]

1,154,661. COMBINED FLANGING AND HEADING MACHINE. LEE C. SHARP, Plattsmouth, Nebr., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 4, 1909. Serial No. 531,442. (Cl. 113—14.)



1. In a can-body flanging and heading machine, a carrier-wheel having peripheral pockets adapted to receive can-bodies and heads, means for intermittently advancing the wheel to bring the pockets successively to a series of operating positions, pairs of revoluble chuck-plates arranged on opposite sides of the carrier-wheel at each of the operating positions, means for directing can-bodies into the pockets before the same reach the first operating position, means for directing can-heads into the pockets between the first and second operating positions, means for moving the chuck-plates axially toward and away from the carrier-wheel, flanging-rollers and seaming-rollers mounted so that the axes thereof are movable in paths concentric to the axis of the carrier-wheel, and means for simultaneously moving all of said rollers to engage the flanging rollers with the can-body at the first operating position and to engage the seaming rollers with the can-heads at the subsequent operating positions.

2. In a can-body flanging and heading machine, an intermittently movable shaft, carrying devices mounted thereon, means for directing can-bodies and heads into said carrying devices, rotating elements arranged at a series of positions adjoining the successive carrying devices, and flanging rollers and seaming rollers arranged adjacent to said rotating elements and adapted to coöperate therewith to flange the can-bodies and seam the heads upon the flanged bodies, the said flanging rollers and seaming rollers being disposed in the path of the can-bodies and being movable in a direction concentric with said path to engage them with the can-bodies and heads.

3. In a machine of the class described, a series of carrying devices mounted so as to move in a circular path, means for actuating said carrying devices to bring the same successively to like positions, a series of elements rotating in planes parallel with the path of the carrying devices and movable axially toward and away from the carrying devices, a series of rollers adapted to coöperate with said rotating elements in acting upon the cans, and means for moving said rollers concentrically to the path of the carrying devices and maintaining said rollers at fixed distances apart to carry the same into and out of operative relation with the rotating elements.

4. In a machine of the class described, a carrier-wheel having a rim in which are formed a series of pockets opening radially outward, the said pockets being adapted to receive can-bodies and heads, a series of rotating chuck-plates arranged in pairs at the sides of the carrier-wheel, means for moving the chuck-plates axially toward and away from the wheel, means for moving the carrier-wheel to bring can-bodies contained in the pockets successively between each pair of the chuck-plates, a series of rollers arranged inside the rim of the carrier-wheel and intersecting the path of the can-bodies in the wheel pockets so that in passing the rollers said can-bodies are moved radially outward in the pockets, and means for moving the rollers concentrically with the wheel toward and away from the chuck-plates.

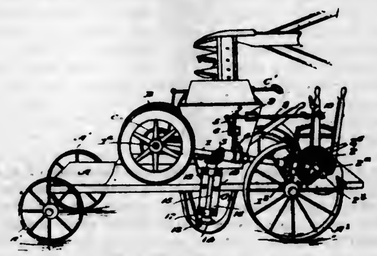
5. In a machine of the class described, a carrier-wheel having a rim in which are formed a series of pockets opening radially outward and adapted to receive can-bodies, a series of rotating chuck-plates arranged in pairs at the sides of the carrier-wheel, means for moving the carrier-wheel to bring can-bodies contained in the pockets successively between each pair of the chuck-plates, means for moving the chuck-plates axially toward and away from the can-bodies, and a series of rollers adapted to coöperate with the chuck-plates in acting upon the can-bodies, the said rollers being arranged inside the rim of the carrier-wheel so that in engaging the cans they tend to raise the same out of the carrier-wheel pockets.

[Claims 6 to 24 not printed in the Gazette.]

1,154,662. COMBINED MOTOR-VEHICLE AND MOWER. PETER E. SHIRK, Blue Ball, Pa. Filed Aug. 29, 1910. Serial No. 579,462. (Cl. 56—33.)

1. In a harvesting machine, the combination with a wheel-supported frame, a motor, traction wheels, a transmission shaft for connecting said motor and traction wheels, and clutch mechanism for connecting and disconnecting said transmission shaft and said traction wheels, of a cutter-drive shaft disposed in substantially vertical position between said motor and said traction wheels; a driving connecting-member between said cutter-drive shaft and said transmission shaft; means for connecting said driving member with said transmission shaft to be driven thereby; a pitman-disk mounted on the opposite end of said cutter-drive shaft; cutter mechanism disposed on said frame; and an operating member connecting said pitman-disk and said cutter mechanism.

2. In a harvesting machine, the combination with a wheel-supported frame, a motor, traction wheels, a transmission shaft mounted on one side of said frame and connecting said motor and traction wheels, a two-speed drive gear, a reversing gear, and clutch mechanism coacting with said transmission shaft and said traction wheels, of a cutter drive shaft mounted substantially vertically on said frame and in alinement with said transmission shaft; a driving member slidably mounted on said transmission shaft; a driving member mounted on the end of said cutter drive shaft; clutch mechanism for connecting and disconnecting said members; a pitman-disk mounted on the end of said cutter drive shaft opposite said driving member; cutter mechanism mounted on said frame in juxtaposition to said pitman-disk; and a member connecting said pitman-disk and said cutter mechanism whereby the latter may be raised out of operative position without disconnecting said cutter mechanism from said pitman-disk.



3. In a harvesting machine, the combination with a wheel-supported frame, a motor, traction wheels, a transmission shaft mounted on one side of said frame and connecting said motor and traction wheels, a two-speed driving gear, a reversing gear, and clutch mechanism coacting with said transmission shaft and said traction wheels, of a supporting member vertically mounted on one side of said frame in alinement with said transmission shaft; a cutter drive shaft mounted vertically in bearings on said support; a beveled gear mounted on one end of said cutter drive shaft; a beveled gear slidably mounted on said transmission shaft between said motor and said traction wheels; a clutch member for connecting and disconnecting said gears; a pitman-disk mounted horizontally on the opposite end of said cutter drive shaft; supporting members mounted on said frame opposite said cutter drive shaft support; cutter drive mechanism carried by said supporting members; means mounted on said frame for raising and lowering said cutter mechanism; and a rod connecting said pitman-disk and said cutter mechanism whereby the latter may be raised out of operative position without disconnecting said pitman-disk and said cutter mechanism.

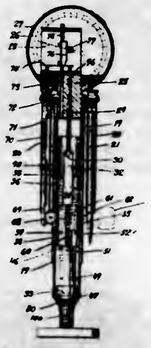
1,154,663. SCLEROSCOPE. WILLIAM F. SHORE, New York, N. Y., assignor to The Shore Instrument & Manufacturing Company, a Corporation of New York. Filed May 27, 1914. Serial No. 841,342. (Cl. 73—51.)

1. An apparatus for testing the hardness of a solid body, comprising in combination a striker, means for lifting the same, means for releasing said striker from its lifting means, permitting said striker to impinge and rebound from the said solid body, means for arresting the striker when it has reached its greatest height by reason of the rebound and mechanical means in said apparatus for permanently registering the rebound of the striker.

2. An apparatus for testing the hardness of a solid body, comprising in combination a striker, means for lifting the same, means for automatically releasing said striker from its lifting means, permitting said striker to impinge and rebound from the said solid body, means for arresting the striker when it has reached its greatest height by reason of the rebound and mechanical means in said apparatus for registering the rebound of the striker.

3. An apparatus for testing the hardness of a solid body, comprising in combination a striker, means for lifting the same, means for automatically releasing said

striker from its lifting means, permitting said striker to impinge and rebound from the said solid body, means for arresting the striker when it has reached its greatest height by reason of the rebound and mechanical means for permanently registering the rebound of the striker in said apparatus.

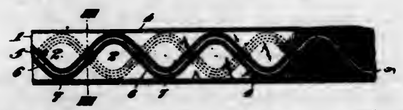


4. An apparatus for testing the hardness of a solid body, comprising in combination a striker, means for lifting the latter a given distance, means for releasing the striker from its lifting means when said striker has reached its highest position, permitting the striker to impinge and rebound from said body, and means for arresting the striker when it has reached its greatest height by reason of the rebound.

5. An apparatus for testing the hardness of a solid body, comprising in combination a striker, means for lifting the latter a given distance, means for releasing the striker from its lifting means when said striker has reached its highest position, permitting the striker to impinge and rebound from said body, a clutch mechanism, and a plurality of balls in said clutch mechanism for arresting the striker when it has reached its greatest height by reason of the rebound.

[Claims 6 to 12 not printed in the Gazette.]

1,154,664. METHOD OF MAKING REINFORCING-BARS. EDWIN E. SLICK, Westmont borough, Pa. Original application filed Aug. 28, 1913, Serial No. 787,067. Divided and this application filed Jan. 22, 1914. Serial No. 813,627. (Cl. 80—60.)



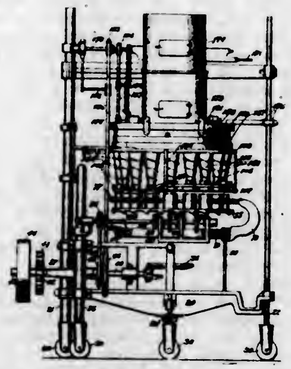
1. The method of making a ribbed bar of general rectangular cross-section, which consists in first forming in a box pass a wider bar with slightly concave sides, then axially revolving same about one-quarter turn, then subjecting it to rolling compressive action in the direction of its greater width to form a bar of dimensions desired and at the same time forming zig-zag ribs on its two opposite surfaces.

2. The method of making a ribbed bar by rolling, which consists in forming a blank of greater width and substantially the same thickness, with the ends of its cross-section slightly convex and the sides of the same slightly concave, then compressing said ends toward each other in a box pass and at the same time forming ribs thereon.

3. The method of rolling a ribbed bar, which consists in forming a blank whose cross-section is of greater width than, and of substantially the same thickness as, the finished bar, the sides of said blank being formed slightly concave, then compressively rolling the same to reduce said width and at the same time form ribs thereon.

4. The method of rolling a ribbed bar in box passes, which consists in forming a blank whose cross-section is of greater width than, and of substantially the same thickness as the finished bar, the sides of the cross-section of said blank being slightly concave and the ends thereof slightly convex, then compressively rolling the same to reduce said width and at the same time form zig-zag ribs on two opposite sides thereof.

1,154,665. CAN-FILLING MACHINE. CHESLEY T. SMALL, St. Louis, Mo. Filed Jan. 15, 1914. Serial No. 812,236. (Cl. 226—9.)



1. In a can filling machine, the combination with a plurality of traveling measures, of means for supporting cans, discharge nozzles, connections of flexible material between said nozzles and measures, and means for reciprocating said nozzles to secure a tight joint between the said nozzles and the mouth of the can to be filled.

2. In a can filling machine, the combination with a plurality of traveling measures, of means for supporting cans, discharge nozzles, flexible connections between said nozzles and measures, telescopic funnels of rigid material within said flexible connections, and means for reciprocating said nozzles to form a tight joint between said nozzles and the mouths of the cans to be filled.

3. In a can filling machine, the combination with a plurality of traveling measures, of means for supporting cans, discharge nozzles, flexible funnels connecting said measures and nozzles, and means for reciprocating said nozzles to form a tight joint between said nozzles and the mouths of the cans to be filled.

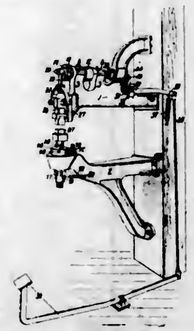
4. In a can filling machine, the combination with a plurality of traveling measures, of means for supporting cans, discharge nozzle, flexible funnels connecting said measures and nozzles, telescopic funnels of rigid material within said flexible funnels, and means for reciprocating said nozzles to secure a tight joint between said nozzles and the mouths of the cans to be filled.

5. In a can filling machine, the combination with a plurality of traveling measures, of means for supporting cans, discharge nozzles, flexible funnels connecting said nozzles and measures, radially disposed pivoted arms carrying said discharge nozzles, and means for actuating said arms to reciprocate said nozzles.

[Claims 6 to 29 not printed in the Gazette.]

1,154,666. POWER-HAMMER. HENRY COLLIER SMITH, Detroit, Mich. Filed Nov. 20, 1914. Serial No. 873,113. (Cl. 78—39.)

1. A device for striking blows comprising a driving shaft, a rod movable longitudinally in respect to the driving shaft, a guide extending transversely of the driving shaft and secured to rotate therewith, a crank-arm movable in said guide transversely of the driving shaft, a crank-pin carried by said arm, a link pivoted to the rod and to the crank-arm whereby longitudinal movement of the rod in respect to the driving shaft is made to cause a transverse movement of the crank-arm in respect to said driving shaft, a blow-striking member, a connecting rod for transmitting movement from the crank-pin to the blow-striking member, and manually operable means for moving the rod longitudinally of the shaft whereby the stroke of the blow-striking member may be varied while the driving shaft is in motion.



2. A device for striking blows comprising a driving shaft, a rod movable longitudinally in respect to the driving shaft, a guide extending transversely of the driving shaft and secured to rotate therewith, a crank-arm movable in said guide transversely of the driving shaft, a crank-pin carried by said arm, a link pivoted to the rod and to the crank-arm whereby longitudinal movement of the rod in respect to the driving shaft is made to cause a transverse movement of the crank-arm in respect to said driving shaft, a blow-striking member, a connecting rod for transmitting movement from the crank-pin to the blow-striking member, manually operable means for moving the rod in a direction such as to cause the crank-pin to move away from the axis of the shaft, means tending to move the rod in the opposite direction whereby the crank-pin is caused to move back toward the axis of the shaft when the manually operable means is allowed to become inoperative, and means for limiting the said backward movement of the crank-pin.

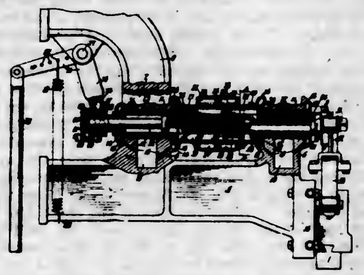
3. A device for striking blows comprising a driving shaft, a rod movable longitudinally in respect to the driving shaft, a guide extending transversely of the driving shaft and secured to rotate therewith, a crank-arm movable in said guide transversely of the driving shaft, a crank-pin carried by said arm, a link pivoted to the rod and to the crank-arm whereby longitudinal movement of the rod in respect to the driving shaft is made to cause a transverse movement of the crank-arm in respect to said driving shaft, a blow-striking member, a connecting rod for transmitting movement from the crank-pin to the blow-striking member, manually operable means for moving the rod longitudinally of the shaft whereby the stroke of the blow-striking member may be varied while the driving shaft is in motion, a spring tending to move the rod in one direction, and means for limiting the movement that may be imparted to the rod by the spring.

4. A device for striking blows comprising a driving shaft, a rod movable longitudinally in respect to the driving shaft, a guide extending transversely of the driving shaft and secured to rotate therewith, a crank-arm movable in said guide transversely of the driving shaft, a crank-pin carried by said arm, a link pivoted to the rod and to the crank-arm whereby longitudinal movement of the rod in respect to the driving shaft is made to cause a transverse movement of the crank-arm in respect to said driving shaft, a blow-striking member, a connecting rod for transmitting movement from the crank-pin to the blow-striking member, manually operable means for moving the rod in a direction such as to cause the crank-pin to move away from the axis of the shaft, a spring tending to move the rod in the opposite direction whereby the crank-pin is caused to move back toward the axis of the shaft when the manually operable means is allowed to become inoperative, and means for limiting the said backward movement of the crank-pin whereby the crank-pin is prevented from passing beyond the axis of the driving shaft.

5. A device for striking blows comprising a driving shaft, a rod movable longitudinally in respect to the driving shaft, a guide extending transversely of the driving shaft and secured to rotate therewith, a crank-arm movable in said guide transversely of the driving shaft, a crank-pin carried by said arm, a link pivoted to the rod and to the crank-arm whereby longitudinal movement of the rod in respect to the driving shaft is made to cause a transverse movement of the crank-arm in respect to said driving shaft, a blow-striking member, a connecting rod for transmitting movement from the crank-pin to the blow-striking member, manually operable means for moving the rod in a direction such as to cause the crank-pin to move away from the axis of the shaft, means tending to move the rod in the opposite direction whereby the crank-pin is caused to move back toward the axis of the shaft when the manually operable means is allowed to become inoperative, and means for limiting the said backward movement of the crank-pin whereby the crank-pin is prevented from passing beyond the axis of the driving shaft.

[Claims 6 to 19 not printed in the Gazette.]

1,154,667. POWER-HAMMER. HENRY COLLIER SMITH, Detroit, Mich. Filed Nov. 20, 1914. Serial No. 873,114. (Cl. 78—39.)



1. A device for striking blows comprising a rotatable driving shaft, means for applying force to the driving shaft to cause it to rotate, a crank shaft supported thereby and rotatable in respect thereto, the axis of said crank shaft being parallel to and offset from that of said driving shaft, a member movable longitudinally of the driving shaft, said member and said crank shaft being so arranged that longitudinal movement of the member causes rotative movement of the crank shank, a crank pin carried by said crank shaft, the axis of said pin being offset from the axis of the crank shaft, a blow-striking member operatively connected to said crank pin, and manually operable means for moving the longitudinally movable member while the driving shaft is rotating whereby the axis of the crank pin is caused to recede from that of the driving shaft to increase the stroke of the blow-striking member.

2. A device for striking blows comprising a rotatable driving shaft, means for applying force to the driving shaft to cause it to rotate, a crank shaft supported thereby and rotatable in respect thereto, the axis of said crank shaft being parallel to and offset from that of said driving shaft, a member movable longitudinally of the driving shaft, said member and said crank shaft being so arranged that longitudinal movement of the member causes rotative movement of the crank shaft, a crank pin carried by said crank shaft, the axis of said pin being offset from the axis

of the crank shaft, a blow-striking member operatively connected to said crank pin, manually operable means for moving the longitudinally movable member while the driving shaft is rotating whereby the axis of the crank pin is caused to recede from that of the driving shaft to increase the stroke of the blow-striking member, and means for normally holding the crank pin in position such that its axis is alined with that of the driving shaft.

3. A device for striking blows comprising a rotatable driving shaft, means for applying force to the driving shaft to cause it to rotate, a crank shaft supported thereby and rotatable in respect thereto, the axis of said crank shaft being parallel to and offset from that of said driving shaft, a member movable longitudinally of said driving shaft and rotatable therewith, said member and said crank shaft being so arranged that longitudinal movement of the member causes rotative movement of the crank shaft, a crank pin carried by said crank shaft, the axis of said pin being parallel to the axis of said crank shaft and offset therefrom the same distance the axis of the crank shaft is offset from the axis of the driving shaft, a blow-striking member operably connected to the crank pin, means tending to move the longitudinal movable member in one direction to cause the axis of the crank pin to approach that of the driving shaft, means for limiting the movement of the crank pin in the direction stated, and manually operable means for moving the longitudinally movable member in the opposite direction while the driving shaft is rotating whereby the axis of the crank pin is caused to recede from that of the driving shaft and the stroke of the blow-striking member is increased.

4. A device for striking blows comprising a rotatable driving shaft having a chamber formed therein, means for applying force to the driving shaft to cause it to rotate, a crank shaft supported thereby and rotatable in respect thereto, the axis of said crank shaft being parallel to and offset from that of said driving shaft, a rod movable longitudinally of said driving shaft and rotatable therewith, the rod and crank shaft including inter-engaging surfaces located in the chamber and so arranged that longitudinal movement of the rod causes rotative movement of the crank shaft, a crank pin carried by the crank shaft, the axis of said pin being parallel to the axis of said crank shaft and offset therefrom the same distance the axis of the crank shaft is offset from the axis of the driving shaft, a blow-striking member operably connected to the crank pin, means tending to move the rod in one direction to cause the axis of the crank pin to approach that of the driving shaft, means for limiting the movement of the crank pin in the direction stated, and manually operable means for moving the rod in the opposite direction while the driving shaft is in rotation whereby the axis of the crank pin is caused to recede from that of the driving shaft and the stroke of the blow-striking member is increased.

5. A device for striking blows comprising a rotatable driving shaft having a chamber formed therein, means for applying force to the driving shaft to cause it to rotate, a crank shaft supported thereby and rotatable in respect thereto, the axis of said crank shaft being parallel to and offset from that of said driving shaft, a rod movable longitudinally of said driving shaft and rotatable therewith, the rod and crank shaft including interengaging surfaces located in the chamber and so arranged that longitudinal movement of the rod causes rotative movement of the crank shaft, a crank pin carried by the crank shaft, the axis of said pin being parallel to the axis of said crank shaft and offset therefrom the same distance the axis of the shank shaft is offset from the axis of the driving shaft, a blow-striking member operably connected to the crank-pin, means connected to the rear end of said rod, in respect to which the rod is rotatable for imparting longitudinal movement to the rod, means tending to move the last mentioned means in one direction whereby the axis of the crank-pin is caused to approach that of the driving shaft, means for limiting the movement of the crank-pin in the direction stated, and manually operable means for moving the rod in the opposite direction while the driving shaft is in rotation, whereby the axis of the crank-pin is caused to recede from that of the driving shaft and the stroke of the blow-striking member is increased.

[Claims 6 to 24 not printed in the Gazette.]

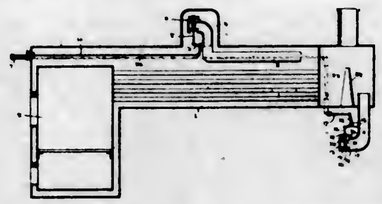
1,154,668. CATHETER-USER'S STANDARD APPARATUS. JAMES F. SPALDING, Kansas City, Mo. Filed Apr. 25, 1912. Serial No. 693,248. (Cl. 128—28.)



1. In an apparatus of the character described, a standard, a bracket secured to said standard, oppositely-disposed loops on said bracket, a supply case, hooks on the supply case to enter said oppositely-disposed loops and means carried by the loops to engage said hooks and reliably secure them from accidental displacement.

2. In an apparatus of the character described, a standard, a bracket secured to said standard, oppositely-disposed loops on said bracket, a supply case, hooks on said supply case to enter the loops, and thumb-screws carried by said loops to engage the hooks, substantially as described.

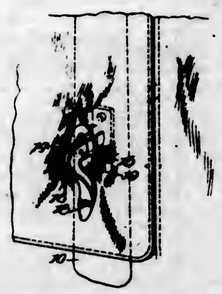
1,154,669. DRAFT-REGULATOR FOR LOCOMOTIVES. HARRY F. STAUFFER, Dubois, Pa. Filed June 27, 1913. Serial No. 776,044. (Cl. 110—155.)



A draft regulator for locomotives, comprising a pipe secured in the smoke box of a locomotive, and communicating with the outside atmosphere, a valve in said pipe to regulate the admission of air therethrough, and means connecting said valve with the throttle lever of a locomotive, whereby when the throttle valve is opened, said air valve will be simultaneously opened to admit a volume of air proportional to the steam consumed.

1,154,670. DEVICE FOR SECURING CURTAINS. FRANK SWICKARD, Franklin Grove, Ill. Filed Dec. 24, 1914. Serial No. 878,867. (Cl. 24—212.)

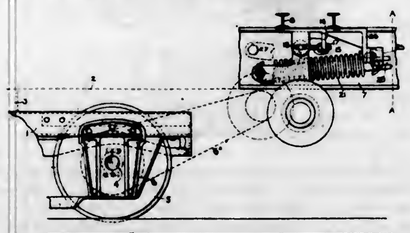
1. A fastener adapted to engage an opening in a curtain or the like, comprising a pillar of substantially oval-form in cross-section, means for supporting the pillar on the part to which the curtain is secured, and an elbow-shaped lever flanged on its edge to form a channeled face and pivoted to said pillar with its flanges embracing the same, a portion of the channeled face of said lever being contracted to cause the same to bind on the pillar in the forward movement of said lever to its fastening position.



2. A fastener adapted to engage an opening in a curtain or the like, comprising a pillar of substantially oval-form in cross-section, means for supporting the pillar on the part to which the curtain is secured, and an elbow-shaped lever flanged on its edges to form a channeled face and pivoted to said pillar, a portion on the channeled face of said lever being contracted to cause the same to bind on the pillar in the forward movement of said lever to its fastening position.

3. A fastener adapted to engage an opening in a curtain or the like, comprising a pillar of substantially oval-form in cross-section, means for supporting the pillar on the part to which the curtain is secured, and an elbow-shaped lever formed of sheet metal and flanged on its edges to form a channeled face and pivoted to said pillar, a portion of the channeled face of said lever being contracted to cause the same to bind on the pillar in the forward movement of said lever to its fastening position.

1,154,671. GENERATOR MOUNTING AND DRIVE FOR RAILWAY-CARS. WILLIAM I. THOMSON, Newark, N. J., assignor to Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Sept. 10, 1914. Serial No. 860,971. (Cl. 105—238.)



1. In car-lighting apparatus, in combination, a unitary device comprising a distorted spring and means limiting the return of said spring toward undistorted condition and adapted to permit further distortion thereof.

2. In car-lighting apparatus, in combination, a unitary device comprising a distorted spring and means limiting the return of said spring toward undistorted condition and adapted to permit further distortion thereof, said means comprising a member extending lengthwise of the spring.

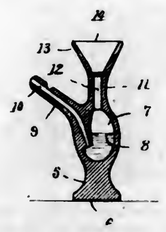
3. In car-lighting apparatus, in combination, a unitary device comprising a distorted coiled spring and means comprising a member extending through said spring limiting the return of said spring toward undistorted condition and adapted to permit further distortion thereof.

4. In car-lighting apparatus, in combination, a coiled spring, a pair of members between which said spring is stretched and a member extending longitudinally of said spring connected with one of said first members and having a slotted connection with the other of said first members, limiting the extent of contraction of said spring.

5. In car-lighting apparatus, in combination, a car truck; a generator driven from an axle of said truck; a spring urging said generator away from said axle; and means adapted to prevent the return of said spring to free undistorted condition irrespective of the position of said generator.

[Claims 6 to 13 not printed in the Gazette.]

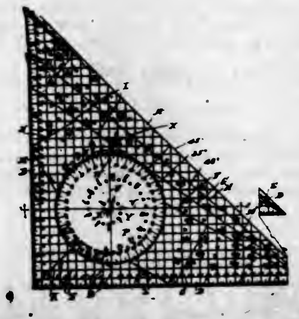
1,154,672. WHISTLE. RICHARD TIKIJIAN, Waterbury, Conn. Filed July 20, 1915. Serial No. 40,829. (Cl. 46—46.)



1. A whistle of the class described, the same comprising a body portion including a base, a central chamber adapted to contain water and having a perforated top portion, a conical extension and neck around the perforations, a mouth piece projected from the side of the body and extended into the chamber and below the water line thereof.

2. A whistle of the class described, the same comprising a body portion including a base, a central chamber adapted to contain water, a projected mouth piece having an air inlet extending into the lower portion of the water chamber and below the water line, a neck upon the top of the body having an upwardly and outwardly extended flange, an opening through the neck and into the chamber, and a perforated inclosure covering the opening of the neck.

1,154,673. DRAFTING IMPLEMENT. CLAIR L. VAN NESS, Akron, Ohio. Filed July 19, 1913. Serial No. 779,993. (Cl. 33—1.)



1. A drafting utensil of polygonal contour including a circular protractor, the utensil and protractor being provided with circles determining orifices arranged spirally from a center point in the protractor.

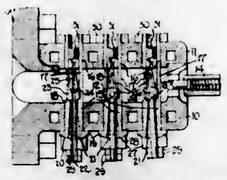
2. A drafting triangle having a bodily contained rotary circular protractor, the triangle protractor being provided with orifices for striking circles.

3. A transparent drafting triangle provided with appropriately colored guide lines crossing at right angles to each other and with a circular protractor graduated from a zero starting point reversely to 180° and provided

with diagrammatic guide lines to aline with those of the triangle.

4. A transparent drafting triangle provided with appropriately colored guide lines crossing at right angles to each other and with a circular protractor graduated from a zero starting point reversely to 180° and provided with diagrammatic guide lines to aline with the edges of the triangle, the triangle and protractor being provided with appropriately designated orifices arranged spirally from the center of the protractor.

1,154,674. INSULATING-HEAD. CLAIR L. VAN NESS, Akron, Ohio. Filed May 16, 1914. Serial No. 839,046. (Cl. 18—13.)



1. An insulating head comprising a wire die and a wire guider, the opposed terminals of which are disposed in parallelism, and means whereby the longitudinal axis of one member may be shifted bodily and swingingly with respect to the like axis of the other member whereby to displace both ends of the first member.

2. An insulating head comprising a wire die and a wire guider, the opposed terminals of which are disposed in parallelism, means whereby the longitudinal axis of one member may be shifted bodily and swingingly with respect to the like axis of the other member, and means for maintaining the two members in fixed relation to each other whereby to displace both ends of the first member

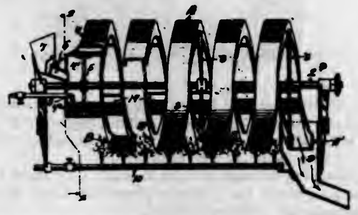
3. An insulating head comprising a wire die, and a wire guider bodily and swingingly adjustable relative to the die whereby to displace both ends of the guider.

4. An insulating head comprising a relatively fixed wire die, and a wire guider arranged for bodily and swinging adjustments relative to the die whereby to displace both ends of the guider.

5. In an insulating head, a body having an insulating chamber therein, a wire-guider and a die mounted in the body at opposite sides of the chamber, and means for bodily and swingingly adjusting the guider independently of the die to compensate for side pressure against the same within the chamber whereby to displace both ends of the guider.

[Claims 6 to 14 not printed in the Gazette.]

1,154,675. MACHINE FOR TREATING VEGETABLE PRODUCTS FOR CANNING. EDWARD J. VAUDREUIL, Eau Claire, Wis., assignor to International Canning Machinery Co., Owen, Wis. Filed Dec. 10, 1914. Serial No. 876,410. (Cl. 146—14.)



1. A machine for treating vegetables comprising a driven inwardly extending U-shaped spiral conveyer, means for initially feeding batches of material to said conveyer whereby said batches are discharged into the lower sections of the first flight of the same, and means for collecting the batches at the opposite end of said conveyer.

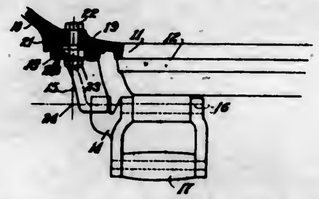
2. A machine for treating products comprising a driven conveyer the flights of which are U-shaped in cross-section and extending inwardly to form cups at the lower portions of said conveyer flights, means for introducing batches of fluid and solid matter into the lower portion of the first flight of said conveyer, and means for agitating the batches coincident to their travel through said conveyer.

3. A mechanism for treating vegetable products comprising a spiral conveyer the flights of which are U-shaped in cross-section and extending inwardly, a valve-controlled fluid supply nozzle in communication with the first flight of said conveyer, a valve-controlled pulse supply nozzle in communication with said first flight, and a receiver at the discharge end of said conveyer.

4. A machine for treating products to be canned comprising a driven spiral conveyer, the flights of which are U-shaped in cross-section and extended inwardly to form cups at the lower portions of said conveyer flights, nozzles arranged to effect communication between the lower portion of the first flight of said conveyer, means for causing intermittent feed from the nozzles to the first flight of the conveyer coincident to each rotation thereof.

5. A machine for treating products to be canned comprising a driven spiral conveyer the flights of which are U-shaped in cross-section and extended inwardly to form cup sections at the lower portions of said conveyer flights, means for intermittently introducing fluid in measured quantities to the lower cup sections of the first flight of said conveyer, means for intermittently introducing a measured quantity of the product to be canned into the cup sections of said first flight, whereby batches are successively introduced into said cup sections with each revolution of the conveyer, and means for collecting the measured batches at the opposite end of said conveyer.

1,154,676. LATCH-MOUNTING. ARTHUR W. WALKER, Malden, Mass. Filed Jan. 26, 1914. Serial No. 814,312. (Cl. 70—15.)



1. The combination, with a wall and a door, of a latch, including a member mounted on the wall and having a base, the base and said wall being adapted to bear upon each other in various positions along a surface of cylindrical curvature; and means to fix the two together in said various positions; the latch member supported by said base being approximately in a plane passing through the axis of said curvature and parallel to the door when closed, whereby the corresponding various positions of the said latch member form a line of adjustability substantially perpendicular to the said plane.

2. The combination, with a wall and a door, of a latch, including one member on the wall and another member on the door and adapted to engage therewith, one of these being adjustably mounted on its support; there being a curved surface between it and its supports whereon the adjustment may occur; and means to clamp it to its support to prevent movement at said surface; the center of said curvature being approximately in a plane passing parallel to the closed door through the point of engagement between the two members of the latch, whereby the said position of engagement, when adjusted, is adjusted in a direction approximately perpendicular to the said plane of the door.

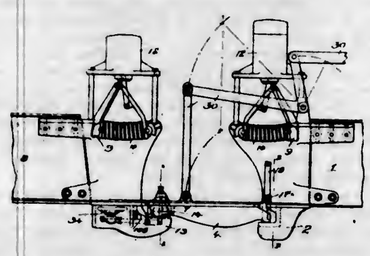
1,154,677. HYPODERMIC SYRINGE. JOHN HARRISON WHITE, Granite City, Ill. Filed Sept. 12, 1914. Serial No. 861,409. (Cl. 128—25.)



1. An improved hypodermic syringe comprising a barrel open at one end, a hypodeamic needle fixed in the other end of said barrel, a protecting case hermetically sealed over said needle, a hollow plunger of substantially the length of said barrel, and a projecting seal detachably secured to the outer end of said plunger, whereby a predetermined quantity of a liquid can be hermetically sealed in said plunger, quickly opened, poured into said barrel and discharged, and the pushed-in plunger thereby incapacitate the hypodermic syringe for further injections.

2. An improved hypodermic syringe comprising a plain cylindrical barrel open at its rear end, a needle secured to the front end of the barrel, a protecting case attached by a fragile fastening over the needle, a plain cylindrical hollow plunger of substantially the length of the barrel, fitting operatively therein and open at its rear end only like an ampul, and a fragile seal hermetically closing the rear end of said plunger and adapted to be broken in order to discharge the contents of the plunger into the barrel, substantially as described.

1,154,678. TRANSIT DEVICE. NORMAN WHICHELLO and HARRY SAWYER, Muskegon, Mich. Filed Sept. 29, 1913. Serial No. 792,419. (Cl. 104—180.)



1. In a mounted track system, transversely movable track section and a stationary track section, said track sections adapted to be brought into proximity with each other, shoes extending from the proximate ends of the track sections, a bridge member movably connected to the end shoe of one of the track sections, means for centering the bridge member relatively to the end shoe of the other track section, and means for raising and lowering said bridge member out of and into bridging relation between said track sections.

2. In a monorail track system, a stationary and a transversely movable track section, a bridge member for connecting the proximate ends of said track sections, said bridge member movably mounted upon one of said track sections, means for centering said bridge member relative to the other said track sections and operating means for raising and lowering said bridge member into and out of connecting relation between the proximate ends of said track section.

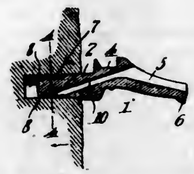
3. In a monorail track system, a stationary and a transversely movable track, shoes extending from the proximate ends of the said tracks, a bridge member pivotally mounted on the end shoe of one of the tracks, bridge member centering devices and means for raising and lowering said bridge member into and out of engaging relation with the proximate end of the other track and said centering devices.

4. In a monorail track system, a stationary and a transversely movable track having a clearance space between the proximate ends thereof when in proximate alinement, a bridging member movably mounted on one of said tracks, alining devices for said bridge member when in bridging relation, and means for moving said bridging member to bridge said clearance space.

5. In a monorail track system, relatively movable tracks, a bridge member secured to one of said tracks, safety buffers arranged at the ends of each track to prevent trolleys from running off the open ends of either track, means for raising and lowering the bridge member out of and into connecting relation with the proximate end of the adjacent track, and means for moving said safety buffers out of and into safety position.

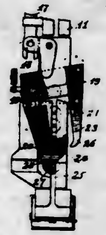
[Claims 6 to 34 not printed in the Gazette.]

1,154,679. SAP-SPOUT. CLARANCE E. WHITCOMB, Richford, Vt. Filed Nov. 12, 1914. Serial No. 871,744. (Cl. 47—11.)



A sap spout, comprising an angular shaped body having a plug portion at one end, a trough portion at its opposite end and an intermediate bucket-supporting portion, said trough portion terminating at a point in vertical alinement with the bucket portion, said plug portion being annularly reduced terminating in oppositely disposed lugs in vertical alinement, said plug portion having an obliquely arranged passage extending from the under side of the reduced portion thereof to the upper end of the trough, the upper end of the trough being in a horizontal plane with the top face of the reduced portion of said plug.

1,154,680. FASTENER-ESCAPEMENT FOR BUTTON-ATTACHING MACHINES. FRANKLIN R. WHITE, Waterbury, Conn., assignor to Patent Button Company, Waterbury, Conn., a Corporation of Connecticut. Filed Jan. 26, 1915. Serial No. 4,454. (Cl. 218—13.)



1. In a machine of the class described, a chute, a fastener receiving table, means adapted to singly release the fasteners, and means mechanically connected to and operating in conjunction with the said releasing means adapted to engage the fasteners as they reach the fastener receiving table and to hold the same momentarily stationary thereon.

2. In a button attaching machine, an inclined fastener chute, a fastener receiving table adapted to receive fasteners therefrom, a fastener releasing mechanism for singly releasing the fasteners within said chute, and means mechanically connected to and operating in conjunction with the said fastener releasing mechanism adapted to engage the released fastener as it reaches the fastener receiving table and to hold the same momentarily stationary thereon.

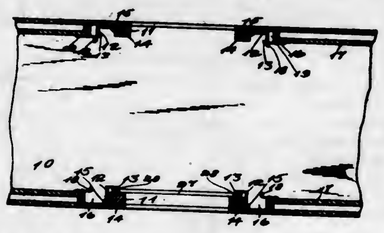
3. Means for feeding fasteners to the anvil of a button attaching machine, comprising, an inclined fastener chute, a fastener receiving table therebelow and means extending above the runway within said chute adapted to singly release the fasteners located therein, said means provided with a hooked lower extremity adapted to move above the fastener receiving table and to hold the released fasteners stationary thereon during the attachment of the preceding one.

4. A fastener escapement mechanism for button attaching machines comprising spaced superposed tongue and lip members, defining a passage way therebetween adapted to singly release fasteners located within a fastener chute, one of said members provided with a spaced finger adapted to engage the released fastener and hold the same momentarily stationary subsequent to its discharge from the lower extremity of said chute.

5. In a button attaching machine, an inclined fastener chute, a receiving chute located below the lower extremity thereof, a reciprocating fastener feeding slide adapted to advance fasteners across said fastener receiving chute, automatically operated means for singly releasing the fasteners located within said chute adapted to singly deliver the same to and upon said receiving chute, and automatically operated means mechanically connected to and operating in conjunction with said reciprocating fastener feeding slide adapted to engage the released fasteners upon their discharge into said fastener receiving chute and adapted to hold the same stationary during the attachment of the preceding fastener and prior to the impingement of the reciprocating fastener feeding slide thereagainst.

[Claims 6 to 10 not printed in the Gazette.]

1,154,681. CAR-DOOR. AARON W. WILSON and IRWIN E. RICE, Casper, Wyo. Filed Mar. 28, 1914. Serial No. 827,904. (Cl. 20—32.)



1. The combination with a structure having spaced upstanding posts forming a door opening therebetween, of substantially vertical horizontally swinging rails formed L-shaped in horizontal cross-section arranged adjacent the posts, and provided at their free edges with laterally extending flanges, means to pivotally connect the corresponding opposite edges of the rails with the posts so that the rails may be swung horizontally and the flanges thereof brought to positions over-lapping the inner sides of the posts, and a plurality of door sections vertically movable with relation to the rails and arranged between the posts and the rails and having near their opposite ends transverse slots to receive the flanges of the rails whereby the rails are locked in the inner position while the door sections are in the closed position.

2. The combination with a wall of a car provided with a door opening and having substantially vertical recesses formed upon its inner side adjacent the opposite sides of the opening; of substantially vertical horizontally swinging rails pivotally mounted within said recesses and adapted for movement into and out of them and provided near their free edges with laterally extending flanges to be moved into proximity with the opening; and vertical door sections provided with transverse grooves to receive the flanges whereby the rails are locked against lateral movement.

1,154,682. WEB-CHANGING DEVICE. FREDERICK W. WOOD, Kansas City, Mo. Filed Mar. 8, 1915. Serial No. 13,021. (Cl. 84—161.)



1. In a web changing device, a movable support having means for supporting and rotating two web supporting rollers comprising a playing roller and a rewinding roller, guiding means on which said support may be shifted to alternately bring said rollers into rewinding and playing positions, means for operating the said rotating means to rotate the playing roller when the rollers are in the playing positions, and means for operating the rotating means to rotate the rewinding roller when the rollers are in the rewinding position.

2. In a web changing device, a movable support having means for supporting and rotating two pairs of web supporting rollers, each pair comprising a rewinding roller and a playing roller, guiding means on which the support may be shifted to alternately bring said pairs of rollers from a rewinding to a playing position, means for rotating the playing roller of each pair when it is in the playing position, and means for rotating the rewinding roller of each pair when it is in the rewinding position.

3. In a web changing device, a movable support, a pair of rotary devices rotatably mounted on said support and adapted to respectively engage and rotate two playing rollers, a second pair of rotary devices rotatably mounted on said support and adapted to engage and rotate respectively two rewinding rollers, guiding means upon which said support may be shifted to alternately bring the first named rotary devices into the playing position and to alternately bring the other two rotary devices into the rewinding position, means for rotating the first named rotary devices when they are in the playing position, and means for rotating the other two rotary devices when they are in the rewinding position.

4. In a web changing device, a support, two gear wheels rotatably mounted thereon and having means for respectively engaging and rotating two playing rollers, two rewinding gear wheels rotatably mounted on said support and adapted to engage and rotate respectively two rewinding rollers, guiding means upon which said support is movable so as to alternately bring the first named gear wheels into the playing position and to alternately bring the rewinding gear wheels into a rewinding position, a driving shaft, a pinion secured to said driving shaft and adapted to engage with the first named gear wheels when they are in the playing position, a second driving shaft, and two pinions secured to the second driving shaft and adapted to respectively engage said rewinding gear wheels when they are in the rewinding positions.

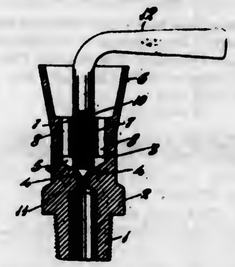
5. In a web changing device, two rollers adapted to support and alternately wind thereon a web, supporting means upon which said rollers may be alternately shifted to two positions, means for rotating one of said rollers when the support is in one of said positions, and means for rotating the other roller when said support is shifted to the other position.

[Claims 6 to 21 not printed in the Gazette.]

1,154,683. PRIMING-CUP. JEROME J. AULL, Cincinnati, Ohio, assignor to The Lunkenheimer Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Oct. 19, 1914. Serial No. 867,267. (Cl. 137—4.)

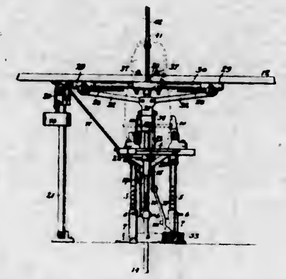
1. In a priming cup, a cup portion and an outlet portion, a plug to screw into the cup portion, a valve stem to screw into the plug, and cutaway portions in the periphery of the plug to form passageways in the plug to conduct priming fluid from the cup to the outlet.

2. In a priming cup, a cup portion, a chamber portion, a valve seat in the base of the chamber portion, a plug to screw into the chamber portion, a valve stem to screw



into the plug, and cutaway portions in the periphery of the plug to form passageways in the plug to conduct priming fluid from the cup portion to the valve seat.

1,154,684. MACHINE FOR MAKING BARRELS. EDWIN F. BEUGLER, Buffalo, N. Y., assignor to E. & B. Holmes Machinery Company, Buffalo, N. Y., a Corporation of New York. Filed Jan. 23, 1913. Serial No. 743,695. (Cl. 147—4.)

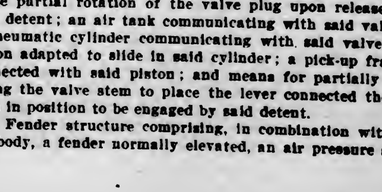


A barrel making machine comprising a support for the assembled staves, a draw cable having a central loop shaped part adapted to surround the staves, and means for drawing apart the ends of the cable comprising two cable slides, a guide rod on which said slides are guided, a bracket carrying said guide rod and adjustable toward and from said stave support, a vertically movable toggle slide, toggle links connecting said toggle slide with said cable slides, an upright guide rod on which said toggle slide is guided and which is connected with said adjustable bracket, a base on which said stave support is mounted and with which the upright guide rod is adjustably connected, a treadle pivotally mounted on said base, and a link connecting said treadle with said toggle slide.

1,154,685. CONVERTIBLE CHAIR AND BED. HENRY BITTEL, San Francisco, Cal. Filed May 12, 1914. Serial No. 838,044. (Cl. 155—6.)

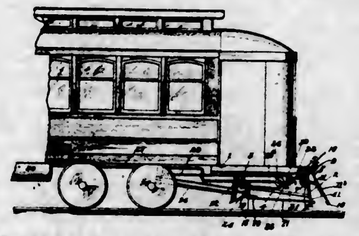
1. In a device of the class described, a supporting base forming a seat frame, a cushion for said frame, a back hinged at its lower end to said supporting base and capable of being adjusted to a plane parallel therewith, a cushion for said back, said back cushion adapted when said back is in a substantially vertical position to overlie the rear edge of said seat cushion, a pair of cushion members detachably carried by said supporting base and forming chair arms, said arms adapted when said back is adjusted to a position approximately parallel with the seat for positioning one between the seat cushion and the back cushion and one at the forward edge of the seat cushion for providing a continuous cushion bed surface.

2. In a device of the class described, a supporting base forming a chair seat, a chair back hinged at its lower end to said supporting base and capable of being adjusted to a plane parallel thereto, a support for telescoping beneath said chair seat and capable of movement beneath said back when the same is in its last mentioned position, a rack carried by said chair back, a rack carried by said support, said racks being arranged one above the other in different vertical planes and with their teeth disposed toward each other, and a suitable rotatably mounted gear for engaging either of said racks for operating respectively said hinged back and said support independently of each other.



3. In a device of the class described, a supporting base forming a chair seat, a chair back hinged at its lower end to said supporting base and capable of being adjusted to a plane parallel thereto, a support for telescoping beneath said chair seat and capable of movement beneath said back when the same is in its last mentioned position, a rack carried by said chair back, a rack carried by said support, said racks being arranged one above the other in different vertical planes and with their teeth disposed toward each other, a suitable rotatably mounted gear for engaging either of said racks for operating respectively said hinged back and said support independently of each other, and a spring locking member releasable on the movement of said shiftable gear into engagement with the rack on said support for engaging the rack associated with said chair back to lock the same in its adjusted position.

1,154,686. STREET-CAR FENDER. HENRY W. BODENDIECK, Springfield, Ill. Filed May 7, 1910. Serial No. 560,096. (Cl. 105—255.)



1. The combination of a car platform; an oscillative transverse shaft beneath the car platform; arms on said shaft having sockets; a guard-frame; arms on the guard-frame having fingers fitting in the sockets of the arms on said shaft; a lever on said shaft; a spring connected with said lever and effective to hold the guard-frame in its extended position; a valve provided with an oscillative plug and a valve stem; a lever on the stem of said valve; a detent connected with the lever on said oscillative shaft and engaging the lever on the valve stem; a spring connected with the lever on the valve stem and effective to cause partial rotation of the valve plug upon release of said detent; an air tank communicating with said valve; a pneumatic cylinder communicating with said valve; a piston adapted to slide in said cylinder; a pick-up frame connected with said piston; and means for partially rotating the valve stem to place the lever connected therewith in position to be engaged by said detent.

2. Fender structure comprising, in combination with a car body, a fender normally elevated, an air pressure sys-

tem, normally restrained means for applying the pressure in said system to positively lower said fender, mechanism for releasing said means, and a device for diverting the air under pressure in said system and nullifying the effect thereof.

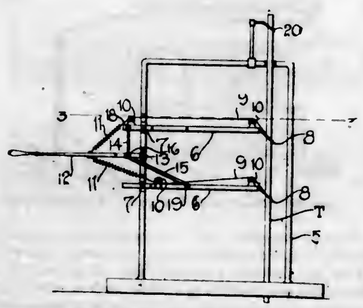
3. Fender structure comprising, in combination with a car body, a fender normally elevated, an air pressure system, normally restrained means for applying the pressure in said system to positively lower said fender, mechanism for releasing said means, a device for diverting the air under pressure in said system and nullifying the effect thereof, said means in normal position and said device in operative position being effective to segregate the actually effective air under pressure and exhaust the same.

4. In a car fender the combination of a pick-up frame; pneumatic means adapted to project and retract the pick-up frame; and one valve effective to control the supply of air to said pneumatic means to project the pick-up frame and likewise effective to control the supply of air to said pneumatic means to retract the pick-up frame.

5. The combination of an air reservoir; a pneumatic cylinder; a piston adapted to slide in said cylinder; means for supplying air from said reservoir to both ends of said cylinder; a pick-up frame directly connected with said piston; a single valve effective to control the compressed air going to both ends of said cylinder and controlling the exhaust of air from both ends of said cylinder and normally set to exhaust air from the rear end of said cylinder and admit compressed air into the forward part of said cylinder, to normally keep the pick-up frame in its retracted position; a yielding guard frame; connecting devices connecting the guard frame with said valve in such manner that pressure against the guard frame will operate the valve to exhaust air from the forward part of the cylinder and admit compressed air into the rear part of the cylinder to project the pick-up frame forwardly; and valve operating means effective to operate said valve to exhaust air from the rear end of the cylinder and admit compressed air to the front end of the cylinder to retract the pick-up frame and hold it in its retracted position.

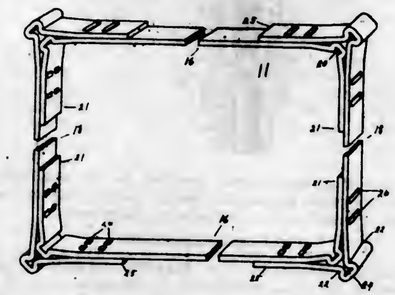
[Claims 6 to 10 not printed in the Gazette.]

1,154,687. PIPE-LIFTER. JOHN F. BOGLE, Bushnell, Nebr. Filed Apr. 7, 1915. Serial No. 19,825. (Cl. 254—31.)



A pipe lifting mechanism including spaced lifting levers pivotally mounted adjacent to one of their ends, clutch dogs on the other ends of said levers for gripping engagement with a pipe, a cable connected to each of said dogs, guides for said cables mounted on the levers, an operating lever pivoted at one of its ends, springs connecting the other ends of said cables to the operating lever whereby the gripping dogs are alternately released when the operating lever is manipulated, relatively long and short brace rods having a common point of pivotal connection to said lever in spaced relation to its fulcrum and adapted for reversible pivotal connection to the lifting levers, the shorter rods being disposed at one side of the pivot of the lifting lever and contiguous thereto and the longer brace rods being connected to the other lifting lever at a point at a relatively greater distance from its pivot whereby the pipe may be raised or lowered when the operating lever is manipulated.

1,154,688. COLLAPSIBLE SPACING-FRAME. DAMON BALE, Louisville, Ky., assignor to Standard Sanitary Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Apr. 26, 1915. Serial No. 24,008. (Cl. 229—6.)



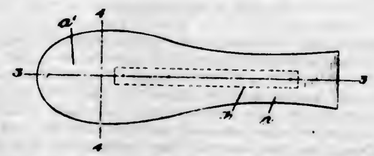
A collapsible spacing frame comprising a plurality of rectilinear members, each of said members having a transverse crease near each end thereof forming a terminal flap which may be flexed on said creased line, the ends of certain of said members being overlapped on the ends of the others and said flaps secured to the opposing members in such relationship that the creases of said lapped members will register, and the overlapped member having an expanded portion over said line of flexure forming a lateral reinforcement.

1,154,689. ARMOR. WAKEMAN BRADLEY, Detroit, Mich. Filed May 19, 1915. Serial No. 29,232. (Cl. 89—36.)



A body armor comprising a one-piece metallic chest protector having integral shoulder straps for suspending said armor from the shoulders upon the chest or back of the body, a neck portion at the upper edge of the chest protector and between the shoulder straps thereof and adapted to protect the neck, armpit portions at the side edges of said chest protector, a stomach portion below said chest protector, upwardly bent and rounded leg pieces at the lower edge of said stomach portion, and straps carried by the side edges of the stomach portion and adapted to be buckled around the body to coöperate with said shoulder straps in retaining the armor on the body.

1,154,690. SHANK FOR SHOES. HARRY G. CALEF, Haverhill, Mass. Filed July 28, 1915. Serial No. 42,417. (Cl. 36—76.)



1. A shank stiffener for shoes consisting of a flexible sheet of stiffening material adapted to extend from the rear end of the shoe over the shank, and having its heel-portion molded to provide a convex upper surface and a concave under surface.

2. A heel-seat support for shoes consisting of a sheet of flexible stiffening material formed to fit the heel of the shoe, and molded so that it is concave on the side adapted to be placed next the heel portion of the sole, and convex on the opposite side, to provide a raised edge for yieldingly supporting the edge-portion of the heel seat, when it is leveled.

1,154,691. NUT-LOCK. MASON P. CARPENTER, Hickory Ridge, Ark., assignor to Allie May Carpenter, Hickory Ridge, Ark., Price M. Carpenter, Blytheville, Ark., Frank O. Hadley and P. H. Cullen, St. Louis, Mo., and H. J. Parks, East St. Louis, Ill. Filed June 28, 1913, Serial No. 776,363. Renewed July 6, 1915. Serial No. 38,260. (Cl. 151—14.)



1. A nut lock, comprising in combination an element having an inclined face and through which there is a bolt hole, a washer, a lug having an inclined face carried by said washer and arranged to engage the inclined face of said element to move the washer internally relative to the bolt when moved longitudinally of the bolt against said element, and a tooth on the lug carried by the washer to engage the bolt when the washer is moved laterally.

2. A nut lock, comprising in combination an element having an inclined face and through which there is a bolt hole, a washer having an inclined face arranged to coact with the inclined face of said element, to move the washer laterally relative to the bolt when moved longitudinally of the bolt against said element, a tooth carried by the washer to embed in the bolt when the washer is moved laterally, and a nut provided with means for engagement with said washer to prevent rotation of the nut relative to the washer.

3. A nut lock, comprising a pair of washers, an inclined face carried by each of said washers and arranged to coact to move the washers laterally relative to each other when moved longitudinally of a bolt, against each other, as when a nut is being screwed onto the bolt, and a tooth carried by one of the washers, adjacent its inclined face to engage the bolt, when said washer is moved laterally as stated.

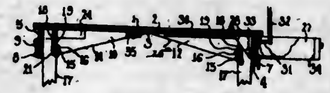
4. In a nut lock, a washer having a pair of oppositely located inclined faces, one of which faces is between the two faces of the washer and the other projects beyond the body of the washer, and a rigid bolt-engaging device interposed between said inclined faces.

5. In a nut lock, a washer having a bolt-opening, one dimension of which is in excess of the diametrical dimension of the bolt to be employed therewith, oppositely arranged inclined faces carried by the washer in line with the longest dimension of said opening, and a rigid bolt-engaging device carried by the washer between said inclined faces.

[Claim 6 not printed in the Gazette.]

1,154,692. FOLDING TABLE. FRANK R. DEHULLU, Detroit, Mich. Filed Feb. 1, 1915. Serial No. 5,392. (Cl. 45—116.)

A portable table comprising hinged top sections, side and end boards carried thereby, the end boards having inclined edges merging into the hinged edges of the top sections and adapted to abut when said top sections are folded, legs detachably connected to said side and end boards and adapted to be housed between said hinged top sections and held against the inner side of one of said top sections when detached, means adapted to hold said



top sections folded, and means carried by the top section containing the table legs to facilitate carrying said table.

1,154,693. COLLAPSIBLE FOLDING WARDROBE. THEODORE DOUCET, Indianapolis, Ind., assignor of one-half to O. M. Peet, Minneapolis, Minn. Filed Dec. 31, 1913. Serial No. 809,782. (Cl. 45—118.)

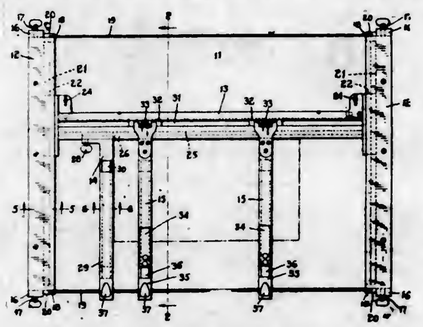


1. A folding wardrobe comprising a central frame member integrally formed in a single plane having a portion provided with a hook for attachment to the wall, a portion extending at right angles thereto and horizontally when the frame is in position for supporting the clothes, and a portion spaced from said horizontal portion, auxiliary frame members hinged to the clothes supporting portion of the central member, wall curtains connected with the auxiliary members, and a canopy or top extending over said spaced portion of the central frame and connected with said wall curtains for holding the hinged frame members and the wall curtains in proper position relative to the central member.

2. A folding wardrobe comprising an integral central frame member for attachment to the wall and for supporting the clothes, said member having spaced portions extending outwardly from the wall when attached thereto, auxiliary frame members hinged to the central frame member in the plane of the clothes supporting portion thereof, wall curtains slidably connected with the auxiliary members, and a canopy connected with said wall curtains and extending over the central frame member for holding the hinged frame members and the wall curtains in proper position relative to the central member.

3. A folding wardrobe comprising an integral central frame member of triangular form, a hook at the top of the shortest leg for attaching the frame to the wall, an intermediate leg extending horizontally outwardly from the wall when so attached and providing the support for the clothes, a pair of rectangular auxiliary frames hingedly connected to said horizontal member, wall curtains slidably connected with the respective auxiliary members, and a canopy extending over the longer side of the triangular frame and connected with said wall curtains at the sides and back only, said canopy operating to hold the auxiliary frames and the wall curtains supported thereby in proper position relative to the general frame member and permitting the wall curtains to be slid upon the auxiliary frames so as to fully expose the intermediate portion of the central frame and the clothes hung thereon from the side.

1,154,694. REGISTER-GAGES AND GRIPPERS FOR JOB-PRESSES. CASIMIRO FERRO, Ansonia, Conn. Filed June 9, 1915. Serial No. 33,170. (Cl. 101—22.)



1. A device of the character described comprising side bars adapted for attachment to a platen, a back gage adjustable on said bars, an extensible end gage adjustable on the back gage, and means for locking said gages in position after adjustment.

2. A device of the character described comprising side bars adapted for attachment to a platen, a back gage adjustable on said bars, an extensible end gage adjustable on the back gage, and extensible grippers adjustable on the back gage.

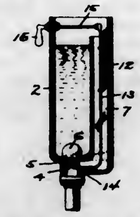
3. A device of the character described comprising side bars adapted for attachment to a platen, tympan retaining strips, blocks attached to the platen and having sockets for said strips, a back gage adjustable on said bars, an end gage adjustable on the back gage and adjustable grippers carried by the back gage.

4. A device of the character described comprising side bars adapted for attachment to a platen and provided with grooves widest at their inner ends, a back gage having tenons with enlargements engaging said grooves and a groove in its front face widest at its inner end, an end gage having a tenon with an enlargement engaging the last mentioned groove, and means for securing said gages in place after adjustment.

5. A device of the character described comprising side bars adapted for attachment to a platen and provided with grooves widest at their inner ends, a back gage having tenons with enlargements engaging said grooves and a groove in its front face widest at its inner end, and an extensible end gage having a tenon with an enlargement engaging the last mentioned groove.

[Claims 6 to 9 not printed in the Gazette.]

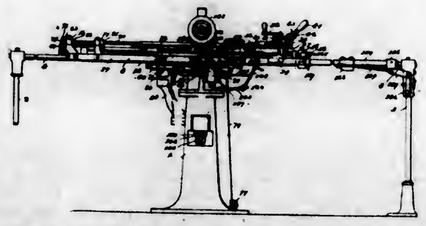
1,154,695. FLUSH-TANK CONTROL. HAROLD M. FAIRLEBEN, San Francisco, Cal. Filed Apr. 6, 1915. Serial No. 19,464. (Cl. 4—5.)



1. The combination with a tank having a discharge outlet passage, a loose ball seated on said outlet and an integral overflow passage opening into the discharge passage below the ball, of a guide secured to the tank above the overflow inlet and depending into said overflow passage, a rod engaging said guide and having its lower end curved upwardly into a foot disposed beneath said ball, a lever connected to said rod and extending through the wall of the tank above the level of the overflow inlet and a handle connected to the lever.

2. The combination with a tank having a discharge outlet passage spaced from the side walls of the tank, a loose ball seated on said outlet, of an overflow passage formed integral with a side wall of the tank and extending laterally at its lower end into the discharge passage below the ball, a guide secured to the wall of the tank above the overflow inlet and depending into said overflow passage, a rod arranged in the overflow passage and engaging said guide and having its lower end bent to lie below said ball and means for raising said rod to unseat said ball.

1,154,696. POLISHING-MACHINE. JOHN F. GAIL, Kenosha, Wis. Filed Feb. 6, 1914. Serial No. 816,937. (Cl. 51—4.)



1. In a polishing machine, the combination with a main frame, of a reciprocatory carriage mounted thereon, a work support carried by said carriage, a polishing wheel, a bed roller for holding the work in engagement with said polishing wheel and means for actuating said parts.

2. In a polishing machine, the combination with a main frame, of a reciprocatory carriage mounted thereon, a plurality of work supports carried by said carriage, a polishing wheel, a spring actuated bed roller for holding the work yieldably in engagement with said polishing wheel and means for actuating said parts.

3. In a polishing machine, the combination with a main frame, of a reciprocatory carriage mounted thereon, a plurality of work supporting spindles carried by said carriage, a polishing wheel, a bed roller for holding the work yieldably in engagement with said polishing wheel, means for partially turning the spindles at predetermined intervals in the travel of the carriage and means for actuating said various parts.

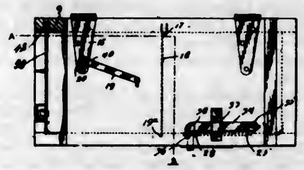
4. In a polishing machine, the combination of a main frame, a reciprocatory carriage mounted thereon, a series of work supports on said carriage for holding contemporaneously a plurality of objects to be polished, a polishing member, means for holding the objects in engagement with said polishing member, automatic means for reciprocating said carriage and automatic means for rotating said objects.

5. In a polishing machine, the combination with a main frame, of a traveling carriage mounted thereon, pinion and rack mechanisms for operating said carriage, a series of adjustably mounted work supporting members on said carriage for holding a plurality of objects to be polished, a polishing wheel mounted above said carriage, means for holding the objects in engagement with said wheel as they pass by the latter, and means for turning said objects at predetermined intervals in the travel of said carriage.

[Claims 6 to 24 not printed in the Gazette.]

1,154,697. FOLDING BOX. FULOP GEZA, Dayton, Ohio. Filed Mar. 14, 1914. Serial No. 824,736. (Cl. 217—14.)

1. A folding box including a bottom, a front wall hinged thereto, a rear wall hinged to the bottom, a lid hinged to said rear wall, a pair of end walls hinged to the front wall, shoulders on the inner face of the rear wall, spring controlled locking arms carried by the end walls and adapted to engage said shoulders for connecting the end walls and rear walls together when the said walls are extended, and means for shifting said arms out of engagement with said shoulders.



2. A folding box comprising a bottom, a lid, front, rear and end walls hinged together, said rear, front, one end wall and bottom being each provided with an opening, means carried by the lid and adapted to extend through said end wall, bottom, front and rear walls, and means carried by the other end wall and engaging in said means for locking the said walls, bottom and lid together when the box is folded.

3. A folding box including a front wall and a lid, said lid having an opening, a pivoted locking member carried by the front wall and adapted, when moved to one position, to project through said opening, a hook carried by said lid and engaging in the projecting end of said member, and means carried by said member and projecting through said wall to enable the shifting of said member.

1,154,698. NUT-LOCK. CHARLES GILBERT HAWLEY, Chicago, Ill., assignor to K. Nut Co., Chicago, Ill., a Corporation of Illinois. Filed Sept. 24, 1912. Serial No. 722,026. (Cl. 151—21.)



1. A nut lock of the class described, provided with a threaded bolt hole, a thin middle portion angularly disposed to the bolt hole, projecting portions disposed on alternate faces and opposite sides of the nut, said projecting portions rising from lines spaced from the bolt hole center but within the bolt circle, as and for the purpose specified.

2. A nut lock having a centrally arranged threaded bolt hole and comprising a flat thin central portion of substantially uniform thickness angularly disposed to the bolt hole, abutment ribs projecting from opposite faces of the nut and disposed at opposite sides thereof, the said abutment ribs meeting the central portion of the nut at a distance from the center of the bolt hole, less than the radius thereof, as and for the purpose specified.

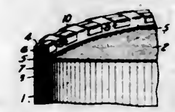
3. A nut lock having a centrally arranged threaded bolt hole and comprising a flat, thin, central portion of substantially uniform thickness angularly disposed to the bolt hole, abutment ribs projecting from opposite faces of the nut and disposed at opposite sides thereof, the said abutment ribs meeting the central portion of the nut at a distance from the center of the bolt hole less than the radius thereof, the outer edge of said projecting rib and the opposite nut edge both being in the same plane which is at right angles to the bolt hole and the nut being adapted by forceful contact with a home nut to be bent or distorted slightly and thereby to clamp the bolt and to prevent unintentional rotation of the nut.

4. A threaded bolt and a home nut in position thereon, said nut having an upper chamfered edge, in combination with a nut lock having a threaded opening, the central portion of said nut lock being of substantially flat uniform thickness and angularly disposed to the threaded opening, a transverse wedging abutment rib on its lower face, inclined to meet the thin central portion within the bolt hole, said inclined rib adapted to engage the home nut at substantially the same time as the oppositely inclined portion of the lower face and to be wedgingly forced against the home nut, as and for the purpose specified.

5. The herein described nut lock having a centrally arranged threaded bolt hole and comprising conversely arranged opposite nut faces, each face comprising an outwardly inclined major portion and an outwardly oppositely inclined smaller portion, the two portions meeting on lines spaced from the bolt hole center and at a distance therefrom less than the bolt hole radius, the outer edges of the inclined faces being in a single plane substantially perpendicular to the longitudinal axis of the bolt hole.

[Claims 6 to 8 not printed in the Gazette.]

1,154,699. FIBER KEG OR BARREL. JAMES C. HERON and WILLIAM J. CLARK, Pittsburgh, Pa. Filed Sept. 19, 1914. Serial No. 862,519. (Cl. 229—67.)

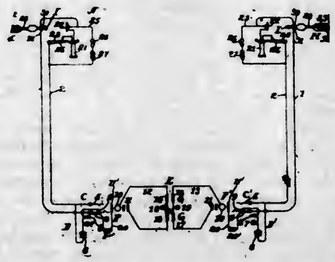


1. A receptacle, comprising a paper body formed of a plurality of plies wound upon each other, a cup-shaped cap having a rim or wall fitting snugly within the end portion of the paper body and having portions bent over and around the end edge of the body and lying on the outer surface thereof, and a thin sheet metal member extending continuously around the circumference of the body and held between the paper plies and projecting from the end of the body, said member having portions bent inwardly over the rim or wall of the end cap or head.

2. A receptacle, comprising a paper body formed of a plurality of plies wound upon each other, a thin sheet metal end cap or head therefor, and a thin sheet metal member wound between the plies of the body and having portions bent inwardly over the peripheral portions of the end cap or head, the outer edge of said end cap or head having a series of tongues bent outwardly over and embracing the end edge of the body.

3. A receptacle, comprising a paper body formed of a plurality of plies wound upon each other, a thin sheet metal end cap or head therefor, and a thin sheet metal reinforcing member wound between the plies of the body, the periphery of said end cap or head being provided with a series of circumferentially spaced tongues bent over and around the end edge of the body and intervening portions abutting the end edge of the body, said reinforcing member having a series of circumferentially spaced tongues bent inwardly over said intermediate portions of the end cap or head.

1,154,700. TELEPHONE APPARATUS. AUGUST J. KEMPIEN, St. Paul, Minn. Filed Mar. 6, 1909. Serial No. 481,752. (Cl. 179—72.)



1. In combination with a telephone line circuit, a branch in connection with said circuit, a signal in said circuit, and hand operable means auxiliary to the talking and signaling apparatus of said circuit in said branch for operating said signal over said circuit.

2. In combination with a telephone line circuit, a signal connected with said line circuit at the central station, a cord plug circuit adapted to be put into connection with said line circuit, a signal contained in said cord plug circuit and a branch at the subscriber's station adapted to be connected with the line circuit, said branch having an auxiliary device which is hand operable adapted to influence the operation of one of said signals.

3. In combination with a telephone line circuit, a cord plug circuit, a signaling lamp adapted to be connected with said line circuit and cord plug circuit at a central station, dimming resistance adapted to be circuited with said lamp and means for throwing said dimming resistance into or cutting it out of operation, for the purposes specified.

4. In combination with a telephone line circuit, a cord plug circuit, a signaling lamp adapted to be thrown into connection with said circuits at a central station, a branch in the line circuit at a subscriber's station, dimming resistance contained in said branch and means for throwing in or cutting out of operation said dimming resistance, for the purposes specified.

5. In combination with a telephone line circuit, a cord plug circuit, a signaling lamp adapted to be connected with said circuits at a central station, a branch associated with said line circuit at a subscriber's station, a dimming resistance composed of a conductor having a positive temperature correction in said branch and means for throwing in or cutting out of operation said dimming resistance, for the purposes specified.

[Claims 6 to 23 not printed in the Gazette.]

1,154,701. PROCESS OF PRODUCING TUNGSTEN FILAMENTS. ERNST AUGUST KRÜGER, Seehausen, Altmark, Germany. Filed Aug. 25, 1913. Serial No. 786,488. (Cl. 176—132.)

The process of producing a filament of tungsten or tungsten alloy, which consists in forming, by pressure, a rod consisting of a mixture of powdered tungsten with a small proportion of carbon and boracic acid or other boron compound, heating said rod to a temperature of about 1000 to 1200° C. at which the particles cake together, then heating the rod to incandescence by electric current in a stream of hydrogen, and then reducing the rod to wire by mechanical treatment.

1,154,702. BOTTLE-CASE. GUST LANGSETH, Minneapolis, Minn., assignor to Washburn-Crosby Company, Minneapolis, Minn., a Corporation. Filed Nov. 5, 1914. Serial No. 870,397. (Cl. 217—6.)



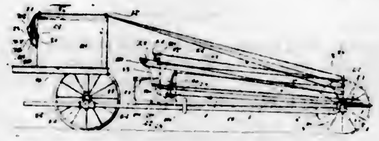
1. A bottle case comprising an integral casing member having a series of bottle-holding compartments therein each opening through the end of the casing along a common diametrical line, a pin, and means for removably holding said pin along said diametrical line and above the bottles in the casing by means of which said bottles are secured in the compartments.

2. A bottle case comprising an integral casing member having a series of cylindrical bottle-holding compartments therein each opening through the end of the casing along a common diametrical line, a series of notches being formed in one end wall and the partition walls between said compartments along said diametrical line, retaining members secured to the partition walls above said notches, a pin insertible through said notches and beneath said retaining members for securing the bottles within the case, and means for removably locking the pin in position.

3. A bottle case comprising an integral casing member having a series of cylindrical bottle-holding compartments therein each opening through the end of the casing along a common diametrical line, a series of notches being formed in one end wall and the partition walls between said compartments along said diametrical line, retaining members secured to the partition walls above said notches, a pin insertible through said notches and beneath said retaining members for securing the bottles within the case, and a semicircular head on said pin adapted to pass through said end notch and to fit within the mouth of the end compartment when the pin is rotated to lock the pin in position.

4. A bottle case comprising an integral casing member having a series of cylindrical bottle-holding compartments therein each opening through the end of the casing along a common diametrical line, a series of notches being formed in one end wall and the partition walls between said compartments along said diametrical line, retaining members secured to the partition walls above said notches, a pin insertible through said notches and beneath said retaining members for securing the bottles within the case, and a semicircular head on said pin adapted to pass through said end notch and to fit within the mouth of the end compartment when the pin is rotated to lock the pin in position, the side walls of said end compartment being notched to provide access to said semicircular head.

1,154,703. CONTROLLING MECHANISM FOR TRACTION-DRIVEN HEADERS. ALBERT O. LEE, Minneapolis, Minn. Filed Apr. 18, 1913. Serial No. 761,990. (Cl. 21—137.)



1. The combination with a front vehicle and a rear vehicle coupled thereto, of an actuating latch lever for the front vehicle located in front of said rear vehicle, yielding means tending to move said latch lever in one direction, a vibratory latch operating member on said latch lever, and a pair of oppositely acting cables attached to said vibratory latch operating member and extended rearward to said rear vehicle, and adapted to be given differential rearward movements to vibrate said latch operating member and to be given simultaneous and equal rearward movements to move said lever against the tension of its yielding actuated means.

2. The combination with a rear wheeled vehicle, a front wheeled vehicle and a pole connecting the same, of an actuating lever in said front vehicle mounted on said pole and provided with latch mechanism including an intermediately pivoted latch operating rocker, cable guides carried with said front vehicle ahead of said lever, a spring tending to move said lever rearward, a pair of cables attached to the opposite ends of the latch controlling rocker of said lever, said cables being extended forward over said cable guides and thence rearward through guides on said rear vehicle, and a floating hand piece attached to the rear ends of said cable and adapted to be held in the hand and thereby moved bodily rearward and to be given angular movement to thereby control the latch of said lever and the forward and rearward movements of said lever.

1,154,704. CLOTHES-LINE PROP. SACKVILLE G. LEYSON, Syracuse, N. Y. Filed Apr. 3, 1915. Serial No. 18,809. (Cl. 68—12.)

1. A clothes-line prop comprising a body part, having a slotted tapering end portion, a member telescoping in the body and carrying means for engaging the clothesline, a collar fitted around the body having a tapering bore therein to accord with the slitted tapering end portion of the said body and constituting a wedging means for the slotted tapered end, and means carried by the collar for holding the slotted end of the body in its contracted position for retaining the telescoped parts in different positions of adjustment.



2. A clothes-line prop, comprising a body having tube telescoping therewith, means for holding the tube in different positions of adjustment, a plug carried by the tube having clearance space therein, a line engaging hook secured to the plug, a spring associated with the hook, to prevent the accidental displacement of the hook from the line, fastened to the plug and passing through the clearance space, whereby the spring is permitted to yield outwardly through the clearance space to allow the line to be attached to the hook and whereby said spring is prevented from being permanently bent.

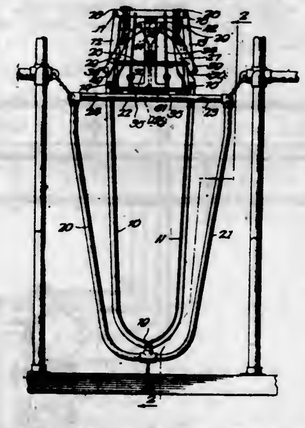
3. A clothes-line prop, comprising a body, a tube telescoping with the body, means for retaining the telescoping tube in different positions of adjustment, a plug secured to the tube, the said plug having an aperture therein, a line inclosing and retaining means carried by the plug comprising a guard spring inserted within the aperture and an engaging hook having a shank part extending within the aperture and bearing against the spring to constitute an anchoring means therefor.

1,154,705. MACHINE FOR REELING SKEINS. EMORY J. LIPPS, Fountain Hill borough, Pa. Filed May 14, 1915. Serial No. 27,987. (Cl. 242—53.)

In combination, a frame, a rotary member on which to wind the material, another rotary member geared with the first member to rotate in unison therewith and having an eccentric wrist-pin, and a thread-guiding member arranged to reciprocate parallel to the axis of rotation of the first rotary member and having a contact way engaged by said wrist-pin, said contact way having its end portions laterally offset relatively to each other and each extending substantially at right angles to the path of movement of the thread-guiding member and having its intermediate portion oblique to said path.

1,154,706. STANCHION. DANIEL J. LOVE, Carlisle, Iowa. Filed Jan. 15, 1915. Serial No. 2,325. (Cl. 119—147.)

1. In a cattle stanchion the combination of two uprights pivotally connected at one end, each of said uprights comprising jointed members, the upper ends of which members are spaced, a member extending across the said space and pivotally connected with the upright members, means tending normally to move the uprights in a direction toward each other, a guide for the cross member, means for moving the cross member with respect to the guide and the said uprights to move the latter away from each other and against the stress of the first recited means, and means operating automatically to lock the uprights against separation.



2. In a cattle stanchion the combination of two uprights pivotally connected at one end, each of said uprights comprising jointed members, the upper ends of which members are spaced, a member extending across the said space and pivotally connected with the upright members, means tending normally to move the uprights in a direction toward each other, a guide for the cross member, means for moving the cross member with respect to the guide and the said uprights to move the latter away from each other and against the stress of the first recited means, guides for the uprights, and means operating automatically to lock the uprights against separation.

3. In a cattle stanchion the combination of two uprights pivotally connected at one end, each of said uprights comprising jointed members, the upper ends of which members are spaced, a member extending across said spaced and pivotally connected with the upright members, means tending normally to move the uprights in a direction toward each other, a guide for the cross member, means for moving the cross member with respect to the guide and the said uprights to move the latter away from each other and against the stress of the first recited means, the second recited means embodying an arm projecting between the uprights to be shifted by the animal, and means operating automatically to lock the uprights against separation.

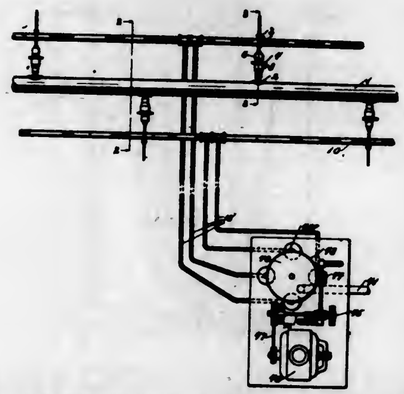
4. A cattle stanchion embodying two uprights movable toward and from each other, each of said uprights comprising spaced jointed members, means tending normally to move the members toward each other, a member pivotally connected with portions of the said uprights and operating when moved in one direction with respect to the uprights to separate them against the stress of the said means, and means for actuating the last recited member, the last recited means embodying provisions for maintaining the last recited member in a position to maintain the uprights separated.

5. A cattle stanchion embodying two uprights movable toward and from each other, each of said uprights comprising spaced jointed members, means tending normally to move the members toward each other, a member pivotally connected with portions of the said uprights and operating when moved in one direction with respect to the uprights to separate them against the stress of the said means, and means for actuating the last recited member, the last recited means embodying provisions for main-

taining the last recited member in a position to maintain the uprights separated, and also embodying a portion adapted to be positioned to be shifted by the animal.

[Claims 6 to 14 not printed in the Gazette.]

1,154,707. SPRAYING DEVICE AND MEANS FOR CONTROLLING THE SAME. DANIEL M. LUEHRS, Toledo, Ohio, assignor to McCreery Engineering Company, Toledo, Ohio. Filed Feb. 19, 1909. Serial No. 478,797. (Cl. 137—58.)



1. In a spraying device, the combination of a group of spray heads; valve disks therefor; pistons carried by said valve disks; suitable cylinders for receiving said pistons within which the same are adapted to reciprocate; connections between said cylinders and a source of pressure fluid to supply pressure fluid to said pistons for forcing said valve disks yieldingly into place in the spray heads, whereby such valves may yield to pressure from within said spray heads to permit a spray discharge; suitable cocks for controlling the fluid supply to said cylinders; and mechanism for controlling the said spray heads in groups, all coacting substantially as described and for the purpose specified.

2. In a spray device for a multiple nozzle structure, the combination of a suitable spray head; a disk valve closing the end thereof; a piston directly connected to said valve; means of supplying fluid pressure to said piston to hold the said valve yieldingly in position, whereby such valve may yield to pressure from within said spray head to permit a spray discharge; and means for relieving said fluid pressure to permit said valve to open and discharge freely to flush and clear the same, coacting for the purpose specified.

3. In a spray device for a multiple nozzle structure, the combination of a suitable spray head; a disk valve closing the end thereof; a motor directly connected to said valve; means of supplying fluid pressure to said motor to hold the said valve yieldingly in position, whereby such valve may yield to pressure from within said spray head to permit a spray discharge; and means for relieving said fluid pressure to permit said valve to open and discharge freely to flush and clear the same, coacting for the purpose specified.

4. In a multiple nozzle structure, the combination of a spray head, a valve disk comprising a parabolic curved surface extending into the said spray head and a lateral right angle flange beyond the head; a piston motor connected directly to said valve; and means of supplying fluid thereto under pressure to regulate the said valve and hold it yieldingly in place, whereby such valve may yield to pressure from within said spray head to permit a spray discharge, coacting for the purpose specified.

5. In a spraying device, the combination of a suitable water-main, spray heads connected therewith with movable disk valves therefor, means for applying pressure to said valves to hold them yieldingly in position to permit a spray discharge from said main, and means for relieving said pressure periodically to permit the opening and flushing of said spray heads, all coacting substantially as described and for the purpose specified.

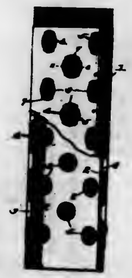
[Claims 6 and 7 not printed in the Gazette.]

1,154,708. FASTENING DEVICE. PATRICK CHARLES MCCORMICK, Mackinac Island, Mich. Filed June 30, 1915. Serial No. 37,327. (Cl. 54—21.)



A fastening device comprising two members, one of said members including a hook and the second of said members comprising a flat body portion provided with a bar projecting from an end thereof, and a plurality of arms extending laterally from the bar and terminating in inwardly disposed extensions, said bar being positioned adjacent a side of the flat body portion, the arms being of a length substantially equal to the width of the flat body portion, the spaces between the free extremities of the inwardly disposed extensions and the adjacent bar serving as entrance openings for the hook.

1,154,709. WELL-STRAINER. JOSEPH H. MCEVOY, Houston, Tex. Filed Sept. 24, 1912. Serial No. 722,146. (Cl. 166—6.)



1. In a well strainer, the combination of a pipe section provided with an aperture having an annular shoulder, of a plug seated upon said shoulder within said aperture, said plug having an annular rabbet at its other end to receive an upset portion of said pipe section.

2. A strainer plug provided with an annular rabbeted end, and slits extending entirely across said plug at one end and terminating short of the wall of the plug at the other end.

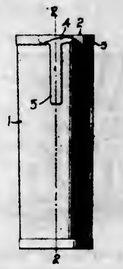
3. A strainer plug comprising a cylindrical body having an annular rabbet formed at one end and slits extending entirely across said rabbeted end and downwardly through said plug, said slits terminating short of the circumferential wall of said plug at its other end.

4. In a well strainer, the combination with a pipe section provided with stepped openings of a plug arranged within said opening having an annular rabbet at its outer end, said plug being secured within said opening by swaging the adjacent wall of said opening within the rabbet of said plug.

5. A strainer plug provided with an annular rabbeted outer end and slits extending entirely across said outer end, said slits terminating short of the circumferential wall of said plug at its inner end forming strainer bars having a thickness equal to the length of the plug.

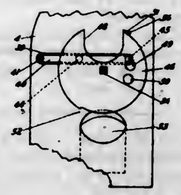
[Claims 6 to 8 not printed in the Gazette.]

1,154,710. CONTAINER. WILLIAM MANGOLD, Baltimore, Md. Filed Mar. 8, 1915. Serial No. 12,895. (Cl. 229—51.)



A container comprising a body having one end open and having an exterior coating of material yieldable to pressure, a movable closure member for the open end of said body provided with an annular flange overlying the body, and a substantially T-shape member, the head of said member being positioned between the annular flange and the adjacent portion of the body and frictionally held in said position, the stem of said member being of a length to project beyond the flange, the edges of the head serving to separate the flange of the cover from the body upon movement of the member around the body.

1,154,711. COIN VENDING-MACHINE. GEORGE E. MESSINGER, Birmingham, Ala. Filed Dec. 28, 1914. Serial No. 879,390. (Cl. 194—93.)

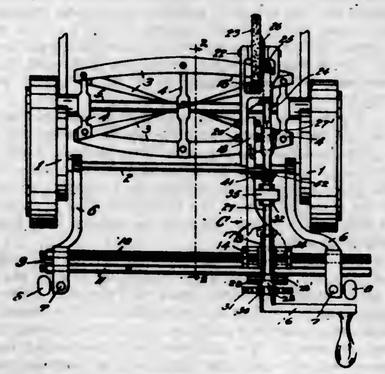


A spurious coin detecting means for coin vending machines, comprising a coin chute, a rotatable disk in said chute having a coin notch in its periphery, said chute having its outer wall cut away to leave partially exposed a coin seated in said notch, a detector arm disposed transversely across the disk notch when in its coin receiving position, a projection on the arm disposed in the path of the coin and adapted to engage the coin as soon as said disk is moved and before the coin has moved from under said side opening in the chute, a detent on the arm, a plurality of stops arranged on the disk and all adapted when engaged by the detent to arrest the disk while the coin is exposed, and means to yieldingly hold the detector arm to its work, substantially as described.

1,154,712. LAWN-MOWER GRINDER. ISRAEL MEYER, Seattle, Wash. Filed Oct. 19, 1914. Serial No. 867,288. (Cl. 51—8.)

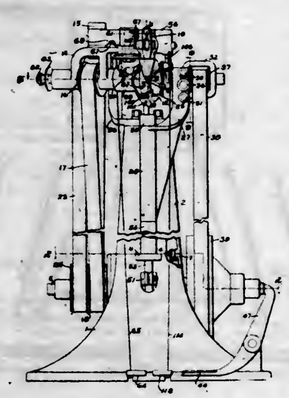
1. In a lawn-mower grinding machine, the combination of a carriage, an emery wheel, a shaft therefor, a swivel journal-box supported by the carriage and affording a bearing for an end of the shaft, means to regulate the elevation of the free end of the shaft, and indicating devices influenced by said shaft for adjusting said regulating means.

2. In a lawn-mower grinding machine, a carriage having an extensible arm hingedly connected thereto, an emery wheel, shafts for driving said wheel, and journaled in boxes respectively provided on the carriage and said arm, means to propel the carriage, and a driving means



for operating both the carriage-propelling means and the shaft.

1,154,713. INSEAM-TRIMMING MACHINE. WILLIAM C. MEYER, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 3, 1910. Serial No. 585,028. (Cl. 12—82.)



1. An inseam trimming machine, having in combination, a trimming knife, means for feeding the shoe, a rotary shaft supporting the trimming knife, a frame pivotally supported upon the machine frame and having a slotted horizontal plate projecting therefrom, the frame having the shaft journaled therein, a slide block seated in the slot, a rotary stud shaft mounted in the machine frame and having an eccentric portion engaging with the slide block, means under control of the operator for rotating the stud shaft in one direction, and means for automatically rotating the stud shaft in the opposite direction whereby the trimming knife may be moved to reduce the depth of cut and returned automatically to its normal position, substantially as described.

2. An inseam trimming machine, having, in combination, a rotary trimming knife, a guide overlying the knife beyond the cutting point, and means for adjusting the guide relatively to the cutting edge of the trimming knife to vary the depth of cut made by the trimming knife, substantially as described.

3. An inseam trimming machine, having in combination, a rotary trimming knife, a shaft supporting the

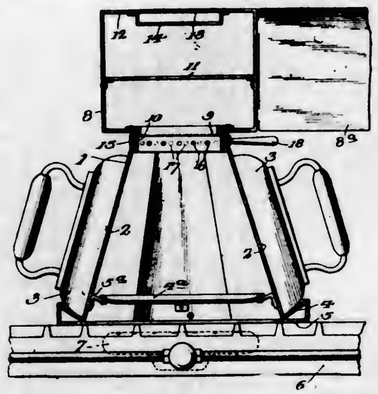
trimming knife, means for feeding the shoe, a flat spring guide supported adjacent the cutting edge of the trimming knife, a stationary bracket retaining the opposite ends of the flat spring in position, and means mounted on the bracket for relatively moving the ends of the spring to secure different degrees of curvature of the spring and vary the distance between the spring guide and the cutting edge of the trimming knife, substantially as described.

4. An inseam trimming machine, having in combination, a rotary trimming knife, means for feeding the shoe, a guide mounted rigidly upon the machine frame and adapted to bear upon the upper side of the inseam, and a sole guide supported to oscillate in a vertical plane and having a spring pressed pin adapted to bear upon the under side of the inseam beneath the channel flap, substantially as described.

5. An inseam trimming machine, having in combination, a rotary trimming knife, means for feeding the shoe, a guide rigidly mounted upon the machine frame and adapted to bear upon the upper side of the inseam, the guide being provided with an edge lifting recess in its lower or working face adjacent to the projecting inseam, and a sole guide mounted below the first guide and adapted to bear upon the sole and the under side of the inseam, substantially as described.

[Claims 6 to 34 not printed in the Gazette.]

1,154,714. COMBINATION SAD-IRON HEATER AND COOKING UTENSIL. DICEY MILLER, Bennington, Vt. Filed May 26, 1915. Serial No. 30,642. (Cl. 126—227.)



1. A device of the character described comprising a body constructed of sheet metal and designed to form an annular and inclined support for sad irons, and an annular horizontal supporting base, the sides of said body providing sad iron rests and heating surfaces therefor, and a deflector plate secured to the body adjacent the base thereof for directing the heated gases against said heating surfaces, substantially as set forth.

2. A device of the character described comprising a body of pyramidal design constructed of sheet metal and having an integral outwardly and upwardly turned portion forming an annular support for sad irons said annular support having an integral downwardly and inturned portion forming a supporting base for the body, the sides of said body providing sad iron rests and heating surfaces therefor and the upper end of said body being formed with an open neck, a deflector plate secured to the body adjacent the base for directing the heated gases against said heating surfaces, a cooking utensil detachably mounted on the body at the neck thereof to receive the heated gases therefrom, and a draft regulator disposed between said body and the cooking utensil, substantially as set forth.

1,154,715. STALL EQUIPMENT. FREDERICK W. MOLDENHAUER, Oconomowoc, and SIDNEY E. JONES, Hustisford, Wis., assignors to Wisconsin Stable Equipment Company, Oconomowoc, Wis. Filed Oct. 29, 1914. Serial No. 869,192. (Cl. 119—27.)



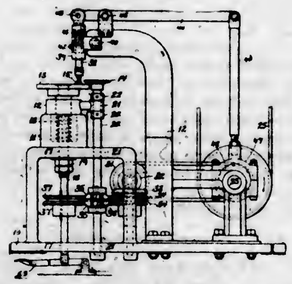
1. The combination of a stall having a manger sill and an overhead stanchion supporting bar, a post connecting the supporting bar and manger, the post being provided with an intermediate rearwardly disposed bowed portion, and a cup secured to said rearwardly disposed bowed portion.

2. The combination of a series of stalls having a manger, an overhead supporting bar, stanchion members connecting the overhead bar and manger sill, parallel posts extending from the sill portion of the manger to the overhead bar intermediate of the stanchions, the posts being provided with an intermediate rearwardly disposed bowed portion, and a cup fitted to said bowed portion whereby said cup is positioned rearwardly of the manger.

3. The combination of a stall having a manger, an overhead supporting bar alined with the manger sill, and stanchions carried by said bar, with a pair of supporting posts intermediate of the stanchions, said pair being bowed rearwardly relative to the manger, and a cup detachably secured to the bowed portion of the posts whereby the latter is positioned clear of the manger between a companion pair of stanchions.

4. A stall equipment comprising a post having an outwardly bowed portion forming a bucket seat and a bucket provided with fastening means for engaging the post to retain the bucket to the seat.

1,154,716. MACHINE FOR PREPARING INSOLES. JAMES N. MOULTON, Haverhill, Mass., assignor to Walpole Shoe Supply Company, Boston, Mass., a Corporation of Maine. Filed Oct. 26, 1911, Serial No. 656,949. Renewed July 8, 1915. Serial No. 38,781. (Cl. 12—20.)



1. In a machine for preparing insoles, coöperative members one of which is adapted to tuck the reinforcing material into the angle behind the lip, and the other to engage the opposite side of the sole, means for causing said members to act with continuous, varying pressure upon the sole, and driven means for feeding the sole.

2. In a machine for preparing insoles, coöperative members one of which is adapted to tuck the reinforcing material into the angle behind the lip, and the other to engage the opposite side of the sole, a feeding member engaging the outer side of the lip opposite said tucking member, and means for causing said tucking member to act continuously upon the sole with varying pressure and to move to and from engagement with the lip.

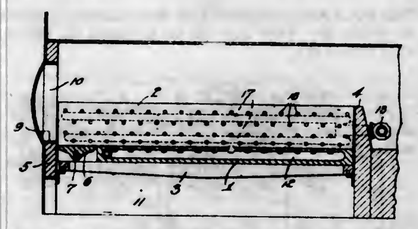
3. In a machine for preparing insoles, a work support, a member adapted to tuck the reinforcing material into the angle behind the lip of the insole, means for feeding the insole, and means for causing said tucking member to bear continuously upon the flat part of the sole behind the lip, and to move thereon toward and from the lip, said means being adapted to increase the pressure of said tucking member when it moves toward the lip, and to decrease the pressure when said member moves away from the lip.

4. In a machine for preparing insoles, a rotatable work support, a member adapted to tuck the reinforcing material into the angle behind the lip, a rotatable feeding member adapted to engage the outer side of the lip, means for driving said work-support and feeding member frictionally and continuously, and pressure means for causing said tucking member to bear continuously upon the flat part of the sole behind the lip, said pressure means being adapted to alternately increase and decrease the pressure of said tucking member and move said member toward and from the lip.

5. In machine for preparing insoles, a work-support, a member adapted to tuck the reinforcing material into the angle behind the lip, a member for engaging the outer side of the lip to brace the work against the stress of said tucking tool upon the lip, and means for moving said tucking member toward and from the lip and for holding the same continuously against the flat part of the sole.

[Claim 6 not printed in the Gazette.]

1,154,717. FURNACE. WILLIAM J. A. MUIRHEAD, Seattle, Wash. Filed Oct. 22, 1914. Serial No. 867,581. (Cl. 110—74.)

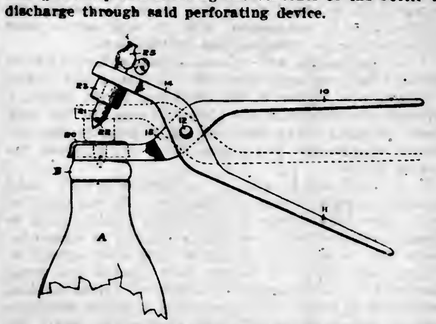


In a furnace, the combination of two side members having air passages communicating with air inlet and outlet openings, a plurality of parallel bed members arranged between the side members and being substantially rectangular in cross-section, each of said bed members having an air passageway and further provided with alined transverse openings communicating with said air passage-ways, air distributing outlets in the side and bed members communicating with the said passage-ways, a nipple connection between the adjacent transverse openings of the bed members, and fluid supply means connected to said bed members.

1,154,718. BOTTLE-CAP PERFORATOR AND REMOVER. JAMES R. NEFF, Indianapolis, Ind. Filed July 12, 1915. Serial No. 39,429. (Cl. 7—1.)

1. A device of the above described class comprising a pair of hinged members terminating in jaws, means on one jaw for temporarily supporting a bottle, and means carried by the other jaw for perforating the cap on the bottle while the latter is being supported in the device when the two jaws are made to approach each other by an oscillatory movement about said hinge.

2. A device of the above described class comprising a pair of hinged members terminating in jaws, means on one jaw for temporarily supporting a bottle, and a hollow perforating device carried by the other jaw for perforating the cap and allowing the contents of the bottle to discharge through said perforating device.

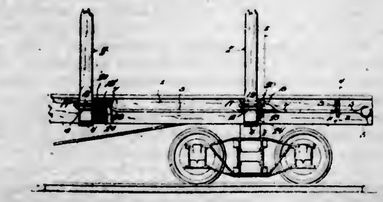


3. A device of the above described class comprising a pair of hinged members terminating in jaws, means on one jaw for temporarily supporting a bottle, a hollow perforating device carried by the other jaw for perforating the cap and allowing the contents of the bottle to discharge through said perforating device, and means for limiting the insertion of said perforating device into the bottle.

4. A device of the above described class comprising a pair of hinged members terminating in jaws, means on one jaw for temporarily supporting a bottle, a hollow perforating device carried by the other jaw for perforating the cap and allowing the contents of the bottle to discharge through said perforating device, and means for controlling the discharge of the contents of the bottle.

5. A device of the above described class comprising a pair of hinged members terminating in jaws, means carried by one jaw for temporarily supporting a bottle and for removing the cap from the bottle neck, and a perforating device carried by the other jaw for perforating the cap and retaining it during the removal of the cap from the bottle neck by a prying movement of the bottle supporting jaw.

1,154,719. CAR-STAKE POCKET. PETER NIKOLAI, Mellen, Wis. Filed July 24, 1915. Serial No. 41,622. (Cl. 105—173.)



1. In combination with a car provided with stake pockets, stake clamping plates for the pockets, means for locking the plates in clamping positions, and a hand operated lever equipped with a branch, the lever and branch having operating connections with the plate holding means.

2. In combination with a stake pocket provided with stake holding means, a lever for operating the stake holding means, a rest for the free portion of the lever, means carried by the lever and engaging the rest to prevent longitudinal movement of the lever in one direction, and means carried by the rest and engaging the lever to normally prevent vertical movement of the lever in one direction.

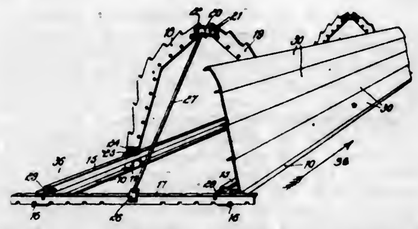
3. In combination with a stake pocket, a pivot bolt extending laterally from one side thereof, a holding cam mounted on the pivot and provided with a shoulder, an arm swiveled to the opposite side of the pocket, a clamping plate swiveled to the outer end of said arm and normally extending across the front of the pocket, a latching arm

swiveled to the plate, and provided with an end hook for engaging the shoudler of the cam, means for holding the latching arm in engagement with the cam, and a hand operated lever for releasing said holding means.

4. In combination with a stake pocket, a clamping plate having a swiveled connection with one side of said pocket, a holding cam carried by the other side of the pocket, a latching arm carried by the plate and engaging the cam, means engaging the latching arm for locking the cam and arm in engagement, and a hand lever for releasing the locking means.

5. In combination with a car provided with stake pockets, the pockets being arranged in pairs and provided with stake holding means, one of the pockets being so disposed relative to the car that a passage is formed between said pocket and said car, a hand lever carried by the car and extending through said passage and being connected to and adapted to release the stake holding mechanism of one of the pockets, and a branch extension from said lever connected to and adapted to operate the stake holding mechanism of the other pocket.

1,154,720. CULVERT-CORE. CLIFFORD OLDER, Springfield, CHARLES M. SLAYMAKER, Ottawa, and HARRY E. BILGER, Springfield, Ill. Filed May 20, 1912. Serial No. 698,377. (Cl. 25—131.5.)



1. In a device of the class described, the combination of notched supporting ribs, a plurality of sheet-metal shingles with inturned lips adapted to engage the notches of the ribs, a top shingle adapted to ride upon the tops of the supporting ribs, and means associated with the top shingle for longitudinally spacing the supporting ribs.

2. In a device of the class described, a pair of lower base members, a pair of upper base members, beveled supporting blocks beveled from front to back attached to the upper and lower base members, corresponding blocks engaging each other, a spacing bar adapted to interlock with the ends of the base members to determine the distance between the lower base members, a plurality of interchangeable supporting ribs with notched peripheries detachably mounted upon the upper base members, a stiffening brace connecting one of the supporting ribs with the spacer bar, a top shingle adapted to ride upon the tops of the supporting ribs, means associated with the top shingle for longitudinally spacing the supporting ribs, and a plurality of overlapping sheet-metal shingles of curved contour, each shingle being provided with an inturned lip adapted to engage the notches on the peripheries of the supporting ribs.

1,154,721. FOOD PRODUCT AND METHOD OF MAKING THE SAME. VAN CLEAVE ALBERT PARROTT, Sumter, S. C. Filed Oct. 6, 1914. Serial No. 865,318. (Cl. 99—11.)

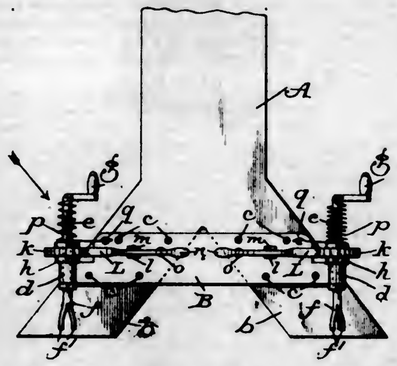
1. A food product containing eggs, eatable oil and gelatin, and in which the eggs are held in emulsion in said gelatin.

2. The herein described process of preparing a food product consisting of combining the yolk of eggs with an eatable oil, and combining the resultant mixture with sufficient gelatin to form an emulsion.

3. A food product comprising an egg ingredient and an eatable oil in combination with an acid, a preservative, and gelatin.

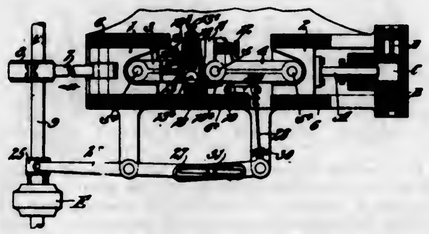
4. A mayonnaise dressing containing eggs, oil and gelatin, the oil content of which dressing being in the approximate ratio of one-half pint of oil to each egg.

1,154,722. SACK-HOLDER FOR GRAIN-CHUTES. CHARLES EDWARD PENROD, Concord township, Miami county, Ohio. Filed July 13, 1914. Serial No. 850,637. (Cl. 83—26.)



A bag holder comprising a bracket, a shaft revolubly mounted in said bracket and having a forked lower end, a ratchet wheel rigidly mounted on said shaft, a coiled spring surrounding said shaft and adapted to be connected at its ends respectively to said shaft and to a fixed support, and a spring pressed pawl adapted to engage the said ratchet wheel.

1,154,723. VARIABLE-FEED PUMP. GEORGE D. POGUE, St. Louis, Mo. Filed July 27, 1914. Serial No. 853,404. (Cl. 123—140.)



1. A variable feed pump provided with a piston or plunger-operating mechanism that moves the piston positively on its suction stroke and on its discharge stroke, said mechanism comprising a connecting element which moves the piston positively on its suction stroke and on its discharge stroke, and means for shifting said connecting element with relation to the part that actuates it on the displacement stroke of the piston operating mechanism so as to interrupt the movement of the piston and thus vary the supply from the pump.

2. A variable feed pump provided with a piston-operating mechanism that comprises a connecting element which causes the piston to be moved positively on its discharge stroke, and a movable or adjustable means for shifting said connecting element or rendering it inoperative on the displacement stroke of the pump sooner or later on the forward stroke of the member which actuates said connecting element so as to vary the supply from the pump.

3. A variable feed pump provided with a plunger-operating mechanism that comprises a connecting element which imparts a positive movement to the piston on its discharge stroke, and a movable or adjustable tripping device arranged in such a manner that said connecting element will be shifted relatively to the part that actuates it on the displacement stroke of the pump sooner or later in the forward stroke of the primary actuating member of said plunger-operating mechanism.

4. A variable feed pump provided with a piston-operating mechanism that comprises a toggle joint, the members that constitute said joint being so arranged that they are substantially in longitudinal alinement with each other on the suction stroke of the piston, so as to positively move the piston and means for causing said toggle members to move out of alinement with each other sooner or later on the displacement stroke of the piston-operating mechanism so as to regulate the supply from the pump.

5. A variable feed pump provided with a piston-operating mechanism that comprises a connecting element, and a tripping device arranged in such a manner that it will be engaged by said connecting element sooner or later during the forward stroke of the part that actuates it and thus render said connecting element inoperative during the displacement stroke of the piston operating mechanism.

[Claims 6 to 28 not printed in the Gazette.]

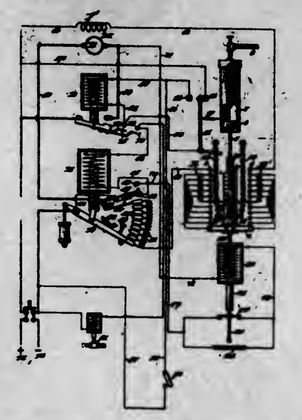
1,154,724. RAIL JOINT AND FASTENER. RICHARD G. POWELL, Lewistown, Pa. Filed Aug. 6, 1913. Serial No. 783,435. (Cl. 239—6.)



The combination with abutting rails, of rail fastening means including a base plate extending under and constituting a support for the rails, a fish plate integral with one side of the base plate and having an inwardly extending rail engaging projection, there being matching recesses within the meeting ends of the rails for the reception of the projection, a cleat integral with that side of the base plate remote from the fish plate, said cleat being of gradually increasing thickness toward one end and having a longitudinal portion overhanging the base plate, a fish plate having a tapered base insertible between the rails and the cleat, said cleat and fish plate coöperating to deflect the fish plate inwardly against the rails, there being an opening within the cleat near each end thereof and a series of corresponding angular recesses within the outer side edge of the base of the fish plate engaging the cleat, any of said recesses in said fish plate being adapted to be brought into register with the openings in the cleat, pins insertible through the registering openings and recesses thereby to lock the movable fish plate against withdrawal from above the base, the walls of the openings and recesses in the cleat and movable fish plate respectively being obliquely disposed, all portions of the pins located within the cleat and the fish plate being in direct engagement with the walls of the openings and recesses in which they are mounted.

1,154,725. REGULATOR. GUY R. RADLEY, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Dec. 18, 1911. Serial No. 666,537. (Cl. 171—229.)

1. In combination, a circuit controlling device movable to progressively effect a plurality of circuit variations and means acting automatically upon movement of said device from normal position to restrict its range of movement thereafter but permitting freedom of movement of said device in opposite directions within its restricted range.



2. In combination, a circuit controlling device having two ranges of movement, on opposite sides of a certain position thereof and tending to assume one extreme position and automatically controlled means restricting the movement of said device to the range between said intermediate position and its other extreme position.

3. In combination, a circuit controlling device operable within certain limits to effect certain circuit variations and operable in the same direction within other limits to reëstablish the original connections and automatically controlled means to restrict the movement of said device to the range between said last mentioned limits.

4. In combination, a circuit controlling device movable through one range to effect certain circuit variations and through another range to reëstablish the original connections and means automatically operating upon movement of said device through said first range to restrict its subsequent operation to said second range.

5. In combination, a circuit controlling device movable through one range to effect certain circuit variations and through another range to effect other circuit variations, and means operating automatically upon movement of said device through said first range to restrict its operation to said second range.

[Claims 6 to 21 not printed in the Gazette.]

1,154,726. PRESSING-BOARD. FREDERICK C. RAMLOW, Chicago, Ill. Filed Apr. 5, 1915. Serial No. 19,161. (Cl. 68—10.)

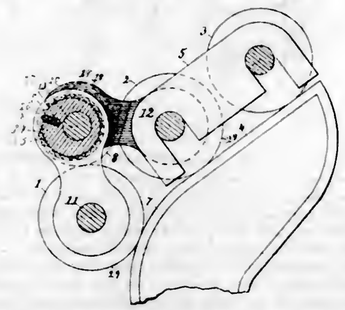


1. The combination of a foraminated bottom plate having a downwardly projecting flange adjacent to but spaced from its edge, providing an outwardly and downwardly facing angle, a tacking strip arranged in said angle and secured to said flange, a pad consisting of a bottom fabric arranged over said foraminated bottom plate and a fabric covering the edges of said bottom fabric, said covering being disposed against and secured to the outer face of said tacking strip, a filling of sawdust and excelsior, the excelsior being arranged at the edges of the pad and the sawdust in the body of the same, the edges of the pad being arranged to project beyond the edge of the bottom plate, and a support for said bottom plate whereby it is held in an elevated position.

2. The combination of a foraminated bottom plate, a pad consisting of a suitable fabric covering and a filling of sawdust and excelsior, the excelsior being arranged at the edges of the pad and the sawdust in the body of the same, the edges of the pad being arranged to project beyond the bottom plate.

3. The combination of a foraminated bottom plate, a pad consisting of a suitable fabric covering and a filling of sawdust and excelsior, the excelsior being arranged at the edges of the pad which are curved, and the sawdust in the body of the same.

1,154,727. INK-DISTRIBUTING ROLLER FOR PRINTING-PRESSES. JAMES W. REEVES, Seattle, Wash., assignor to S. S. Barash, Seattle, Wash. Filed Mar. 29, 1915. Serial No. 17,629. (Cl. 101—79.)



1. In a device of the character described, a pair of inking rollers mounted in yoke bearings; a third inking roller mounted alongside one of the first named rollers in bearings independent thereof; antifriction rollers on the shafts of the inking rollers and tracks for them to travel on; pairs of links having knuckle joints and connected with the shafts of the said third roller and the roller adjacent thereto, and an ink distributing roller mounted on a shaft at the knuckle joint of the said links and fitted for longitudinal reciprocating movement, whereby the reciprocating roller may rise and fall to remain in contact with its two adjacent rollers in passing over curved tracks.

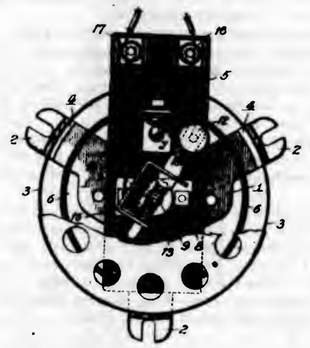
2. In a device of the character described, an ink distributing roller; a shaft therefor; a pair of links serving as a bearing for each end of the shaft, the opposite ends of the links fitted for concentric connection with two adjacent inking rollers; and eccentric cams interposed in the bearings of the distributing roller.

3. In a device of the character described, an ink distributing roller; link bearings to connect it with adjacent inking rollers; an eccentric cam serving as a bearing in each link; notches in the inner periphery of the link around the cam and a spring impelled detent to the cam to engage the said notches.

1,154,728. RHEOSTAT. THOMAS RHODES, Chicago, Ill. Filed Dec. 26, 1914. Serial No. 879,009. (Cl. 219—56.)

1. In a rheostat, the combination of an insulating support a ring shape resistance element formed in the main of a resistance wire wound into an open series of convolutions, a rolling contact element having contact with the inner wall of said resistance element, a centrally arranged revoluble shaft, an arm slidingly associated with said shaft and carrying at its outer end the rolling contact element aforesaid, and means for yieldingly forcing said arm outward, substantially as set forth.

2. In a rheostat, the combination of an insulating support, a ring shape resistance element formed in the main of a resistance wire wound into an open series of convolutions, a rolling contact element having contact with the inner wall of said resistance element, a centrally arranged revoluble shaft, an arm slidingly associated with said shaft and carrying at its outer end the rolling contact element aforesaid, and a spring encircling said arm and adapted to force the same outwardly, substantially as set forth.



3. In a rheostat, the combination of an insulating support, a ring shape resistance element formed in the main of a resistance wire wound into an open series of convolutions, a rolling contact element having contact with the inner wall of said resistance element, a centrally arranged revoluble shaft formed in spaced and alined sections, a yoke connecting said sections together, a guide bracket associated with said yoke, an arm slidingly mounted in said bracket and carrying at its outer end the rolling contact element aforesaid, and means for yieldingly forcing said arm outward, substantially as set forth.

4. In a rheostat, the combination of a supporting frame, a reticulated inclosing casing carried by said frame, an insulating slab mounted on said frame, a ring shaped resistance element formed in the main of resistance wire wound in a flat open series of convolutions, a rolling contact element having contact with the inner wall of said resistance element, a centrally arranged revoluble shaft, an arm slidingly associated with said shaft and carrying at its outer end the rolling contact element aforesaid, and means for yieldingly forcing said arm outward, substantially as set forth.

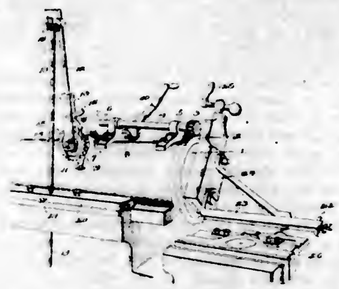
5. In a rheostat, the combination of a supporting frame, a reticulated inclosing casing carried by said frame, an insulating slab mounted on said frame, a ring shaped resistance element formed in the main of a resistance wire wound into a flat open series of convolutions, a rolling contact element having contact with the inner wall of said resistance element, a centrally arranged revoluble shaft, an arm slidingly associated with said shaft and carrying at its outer end the rolling contact element aforesaid, and a spring encircling said arm and adapted to force the same outwardly, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,154,729. SHAPER ATTACHMENT. CHARLES B. RUMSEY, Tuscaloosa, Ala. Filed Dec. 26, 1914. Serial No. 879,176. (Cl. 90—38.)

1. The combination of a shaper having an endwise and angularly movable cutter head, a stationary standard vertically adjustable in the shaper frame, a rocking arm mounted on and reciprocable with the shaper, means on the standard with which said arm slidingly engages and by which it is rocked as it reciprocates, and mechanism driven by said oscillating member for adjusting the shaper head angularly, substantially as described.

2. A shaper attachment comprising, in combination, a gear fast on the shaper head and concentric therewith, a shaft reciprocable with the shaper head, a worm drive for said shaft, a pawl and ratchet drive mechanism for the worm drive, said ratchet mechanism comprising an oscillatory pawl bearing member, a stationary standard through which said member passes with a loose sliding fit and by means of which it is rocked when the shaper head reciprocates, and a gear on said shaft meshing with the gear on said shaper head.



3. A shaper attachment comprising, in combination, with a reciprocatory and rotatable shaper head, a gear concentric with said head, a shaft journaled on the shaper, a gear on said shaft meshing with the gear on the shaper head, a countershaft journaled on the shaper reciprocable with the shaper head, a worm on said shaft, a worm wheel on the first mentioned shaft meshing with said worm, a ratchet wheel on the worm shaft, an oscillatory pawl bearing member, a pawl thereon adapted to engage the ratchet wheel, and a stationary standard having a slotted member through which said oscillatory member passes loosely and by means of which it is rocked when the shaper head reciprocates, substantially as described.

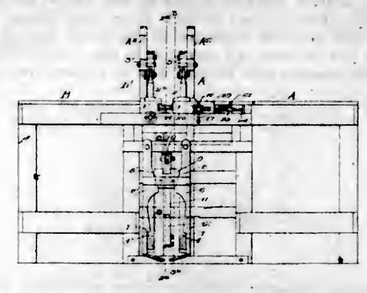
4. In an attachment for shapers, the combination with a reciprocatory shaper, its bed frame and a shaper head angularly adjustable in said shaper, of a vertical standard, means to mount said standard for vertical adjustment in the frame, a swivel head on the standard, an arm in slidable engagement with the swivel head, a transverse shaft journaled on the shaper and on which the lower end of said arm is journaled, a reversible pawl mounted on said arm, a ratchet wheel fast on said shaft and adapted to be driven in either direction by said pawl, bearings for said shaft which are mounted on said shaper, a worm on said shaft, a second shaft also reciprocable with the head carrying a worm wheel at one end meshing with said worm and a small gear at the other end, and a large gear meshing with said latter gear and mounted fast on the head and concentric therewith, substantially as described.

5. A shaper attachment comprising, in combination, a gear fast on the shaper head and concentric therewith, a shaft reciprocable with the shaper head, a worm drive for said shaft, a pawl and ratchet drive mechanism for the worm drive, said ratchet mechanism comprising an oscillatory pawl bearing member, a stationary standard through which said member passes with a loose sliding fit and by means of which it is rocked when the shaper head reciprocates, a gear on said shaft meshing with the gear on said shaper head, means to disconnect the worm drive from said pawl and ratchet driving mechanism, and means to operate the worm drive by hand, substantially as described.

1,154,730. VENEER-JOINTING MACHINE. HENRY REMER, Brockport, N. Y. Filed July 25, 1912, Serial No. 711,490. Renewed Aug. 20, 1915. Serial No. 46,527. (Cl. 144—279.)

1. In a veneer jointing machine, the combination with two tables arranged in horizontal alinement and two supporting work clamps located between the tables, of means for bodily adjusting one of said clamps relatively to the other in a direction transversely of the tables.

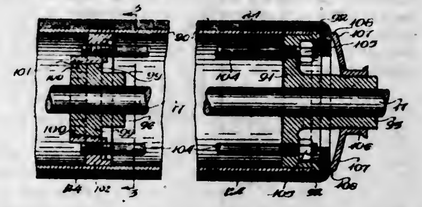
2. In a veneer jointing machine, the combination with two separated supports, and separate clamps arranged between them, each adapted to receive a strip of veneer, and having parts movable to engage and disengage said strips, of treadles connected to said movable parts, means for locking the treadles in operative position, and means for simultaneously releasing said treadles.



3. The combination of two clamps adapted to hold separate sheets of veneer with their ends in juxtaposition, of means for adjusting said clamps relatively to each other, to swing the veneer sheets to bring their abutting ends into parallelism, move said sheets longitudinally to cause their adjacent ends to abut, and to effect a transverse shifting movement of one of said sheets relatively to the other, for the purpose of matching grain marks in the respective sheets.

4. In a veneer jointing machine, the combination with a suitable frame, of two veneer sheet clamps, comprising stationary and movable members, treadles on the frame, and connections between the latter and the movable members of the clamps extending in rear of the frame, latch members cooperating with said treadles for holding the clamps in closed position and means for simultaneously releasing said treadles to permit said clamps to open.

1,154,731. MANGLE-ROLL. EMILY M. SAUNDERS, Boston, Mass. Filed Jan. 23, 1915. Serial No. 3,914. (Cl. 68—9.)



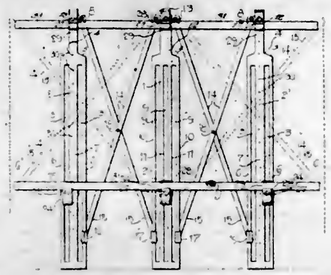
1. In a mangle, a roll composed of a shaft, end heads secured to the shaft, intermediate expansible heads secured to the shaft, a hollow cylindrical body supported by said heads, means for expanding the intermediate heads against the inner surface of the body, and a cloth cover on said body.

2. In a mangle, a roll composed of a shaft, end heads secured to the shaft, intermediate expansible heads secured to the shaft and comprising hubs having inclined guides and segmental supporting blocks movable on said guides, tension rods engaged with said end heads, and supporting blocks, and means for adjusting said rods endwise to press the supporting blocks outwardly against the cylindrical body.

1,154,782. CURTAIN-STRETCHER. PETER SCHWOMEN, Aurora, Ind. Filed Apr. 2, 1914. Serial No. 829,110. (Cl. 45—24.)

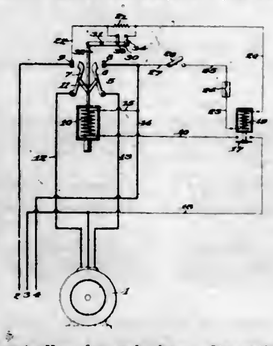
A curtain stretcher including spaced parallel sections, the outermost of said sections having a longitudinal slot formed upon opposite sides of its center and the center section being provided with a central slot and side slots arranged upon each side of the center slot, perforated ears projecting inwardly from one end of each

of the other sections, additional perforated ears projecting from the opposite sides of one end of the center section, slidable members carried by said slotted sections, connecting bars pivoted to each other, each having one of its ends pivotally connected to one of the ears of the section and its other end connected to one of said slidable members whereby said sections may be adjusted laterally



with respect to each other, fixed clamping members carried by said sections, movable clamping members carried by the body of said sections and movable within the central slot of the center section and within the outer slots of the outer sections, and spaced parallel bars carried by the movable and fixed sections whereby one of said bars may be adjusted laterally with respect to the other.

1,154,733. CIRCUIT-CONTROLLER. ARTHUR SIMON, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 27, 1911. Serial No. 662,678. (Cl. 175—294.)



1. In a controller for polyphase alternating current circuits, in combination, means controlling the continuity of circuit and a plurality of electro-responsive devices dependent on different phases of the circuit for energization thereof and upon one another for continued energization, said means being operable by certain of said devices but only upon response of all and being dependent for retention in circuit closing position upon continued energization of all of said devices.

2. In a circuit controller for polyphase alternating current circuits, in combination, means controlling the continuity of circuit, and a plurality of electro-responsive devices including an operating device for said means, and another device controlling said former device, said devices being dependent upon different phases of the circuit for energization thereof and said controlling device being responsive independently of said operating device but dependent for continued energization upon response and continued energization of said operating device.

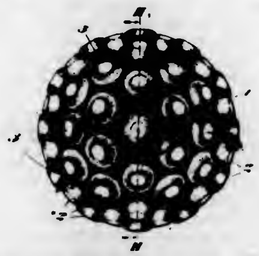
3. In a controller for polyphase alternating current circuits, in combination, means controlling the continuity of circuit, a plurality of electro-responsive devices including an operating device for said means, said devices being dependent upon different phases for energization thereof and said operating device being further dependent for initial energization upon response of another of said devices and means controlling the energizing circuit of the latter device to render maintenance thereof dependent upon response of said operating device within a limited period following response of said latter device.

4. In a polyphase circuit controller, in combination, a plurality of electro-responsive switches responsive successively to close all phases of the circuit, the operating windings of said switches being dependent for their energization upon the voltage conditions in the different phases of the circuit, means controlling the energizing circuit of the first responding switch to open the same after a temporary period and means operated by the last responsive switch to render said former means ineffective.

5. In a polyphase circuit controller, in combination, a plurality of electro-responsive switches responsive successively to close all phases of the circuit, the operating windings of said switches being dependent for their energization upon the voltage conditions in the different phases of the circuit, means adapted to open the energizing circuit of the first responsive switch but having a time element, permitting response of the last responsive switch under normal conditions and means operated by the last responsive switch for rendering said former means ineffective.

[Claims 6 to 10 not printed in the Gazette.]

1,154,734. DROP-BALL. EDWIN E. SLICK, Westmont borough, Pa. Filed July 14, 1915. Serial No. 39,756. (Cl. 22—66.)



1. A metal drop ball provided with a plurality of integral projections disposed on its surface.

2. A metal drop ball provided with a plurality of integral projections of the general shape of a truncated cone with fillets at their bases and roundings on their exterior edges.

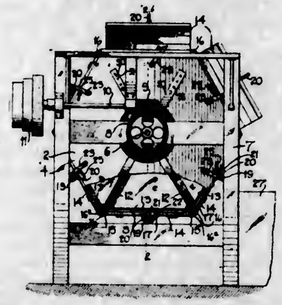
3. A metal drop ball provided with a plurality of integral projections of the general shape of a truncated cone with fillets at their bases and roundings on their exterior, irregularly disposed on the surface of the ball.

4. A metal drop ball provided with a plurality of integral projections irregularly disposed on the surface of the ball.

1,154,735. PHOTOGRAPHIC-PRINTING APPARATUS. SIMON A. SMITH, Burlington, Vt. Filed Nov. 23, 1914. Serial No. 873,545. (Cl. 95—73.)

1. In a photographic printing apparatus of the character described, a carrier movable in a closed path and adapted to support a negative and a sensitised sheet, means mounted within the carrier for automatically subjecting the negative and sheet to the action of actinic light during a predetermined portion of the movement of the carrier, and means for illuminating the negative and sheet by a non-actinic light during a further portion of the movement of the carrier.

2. In a photographic printing apparatus of the character described, a carrier movable in a closed path, means mounted upon the carrier for supporting a negative and a sensitised sheet therein, means for automatically subjecting the negative and sensitized sheet to the action of actinic light during a portion of the movement of the carrier, means for automatically illuminating the negative and sensitised sheet with non-actinic light during a portion of the movement of the carrier, and means for automatically opening said closing means when the negative and the sheet are illuminated by a non-actinic light.



3. In photographic printing apparatus of the character described, a printing frame, means for carrying said frame bodily along a predetermined path, means carried with the printing frame for automatically illuminating the printing frame with a white light during a portion of its travel and means for illuminating the printing frame with a red light during another portion of its travel.

4. In photographic printing apparatus of the character described, a rotatable carrier divided into a plurality of compartments, a printing frame forming the end of each of said compartments, illuminating means carried by each compartment, means for rotating the carrier, and means for energising the lighting means during a predetermined part of said rotation.

5. In photographic printing apparatus of the character described, a rotatable carrier divided into a plurality of compartments, a printing frame forming the outer end of each compartment, a white lamp and a red lamp disposed in each of the compartments, means for energising the white lamps in each of said compartments during a predetermined angular rotation of the carrier, and means for energising the red lamps during another predetermined part of the rotation of the carrier.

[Claims 6 to 15 not printed in the Gazette.]

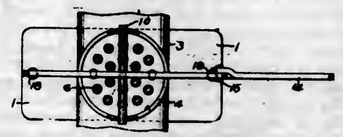
1,154,736. COMBINATION STATIONERY DEVICE. OSCAR STANKEY, East St. Louis, Ill. Filed Dec. 18, 1914. Serial No. 877,921. (Cl. 120—97.)



1. A device of the character described comprising a casing, a closure for said casing, said casing provided with a slot intermediate its upper and lower ends, a pair of resilient arms fixed to the inner wall of said casing in proximity to said slot, a sleeve arranged about said arms, a rod having one end adjustably mounted in said sleeve, the lower end of said rod engaging the upper of said resilient arms, said rod extending upwardly through said closure, and a handle formed at the upper end of said rod for operating the same substantially as described.

2. In a device of the character described, a pen extracting device including a casing, said casing provided with an arcuate slot, a pair of resilient arms fixed to said casing above and below said slot, a sleeve arranged about said arms, a rod adjustably connected to said sleeve and having one end in engagement with the upper of said resilient arms, said rod serving to move said resilient arms toward each other to grip a pen point, substantially as described.

1,154,737. VULCANIZING APPARATUS. WILLIAM F. STEARNS, Exeter, N. H. Filed Oct. 12, 1914. Serial No. 866,271. (Cl. 18—18.)



1. A vulcanizing device complete in itself, comprising an anvil or abutment member constructed and arranged to receive the article to be vulcanized and constituting a permanent part of said device, an abutment opposing member having an open cup adapted to receive the vulcanizing, heat-supplying liquid, and spring-means connecting said members together in operation, thereby effecting continuous spring-pressure upon the article to be vulcanized throughout the vulcanizing area and action, said pressure means constituting a permanent connection between said abutment member and abutment opposing member.

2. A vulcanizing device complete in itself, comprising an anvil or abutment member constructed and arranged to receive the article to be vulcanized, an abutment opposing member, having an open cup adapted to receive the vulcanizing, heat-supplying liquid, and spring-means connecting said members together in operation, thereby effecting continuous spring-pressure upon the article to be vulcanized throughout the vulcanizing area and action.

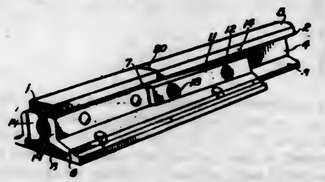
3. A vulcanizing apparatus comprising in combination an anvil or abutment member, an abutment opposing member, at least one of said members having provision for heating the same, a lever mounted for rocking movement upon one of said members, said lever having arms extending oppositely from its pivot, and means for connecting each of said arms directly to the other member and thereby to apply pressure thereto whereby through said pressure lever the pressure may be equalized.

4. A vulcanizing apparatus comprising in combination an anvil or abutment member, an abutment opposing member, at least one of said members having provision for heating the same, a lever mounted upon one of said members and having arms extending oppositely from its pivot, and springs connecting each of said arms directly to the other member, thereby to apply continuous spring pressure thereto during the vulcanizing operation.

5. Vulcanizing apparatus comprising in combination, an anvil or abutment member, a heating member formed as a cup having heat-conveying projections, and spring means connecting said members to compress the work therebetween.

[Claims 6 to 13 not printed in the Gazette.]

1,154,738. INSULATED RAIL-JOINT. CHARLES E. STEVENS, Lenexa, Kans. Filed Nov. 13, 1914. Serial No. 871,928. (Cl. 239—5.)



1. In an insulated rail joint, the combination with meeting rails, of joint members having individual chairs

for the separate rails, fish plates on the separate chairs, having portions extending in opposite directions along the separate spaced rails, insulated wedge blocks located between the extensions and rails, and insulated bolts, each attaching the fish plate of one joint member and the extension of the other joint member and interposed wedge blocks to a rail.

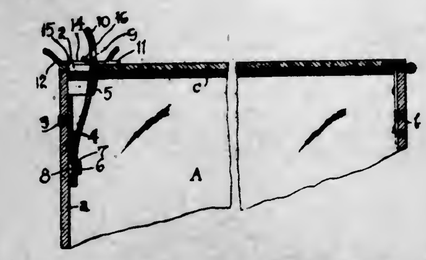
2. In an insulated rail joint, the combination with meeting rails, of joint members each comprising a fish plate having a portion lying against one of the rails and spaced from the other rail, wedge blocks located between the spaced portion of each fish plate and the adjacent rail, insulating sheets located between the flared fish plate portions and the wedge blocks, an insulating parting post between the ends of the rails, and insulated means for securing the fish plates and wedge blocks to the rails.

3. In an insulated rail joint, the combination with meeting rails, of joint members each having a chair located beneath one of the rails and spaced from a like chair on the other joint member, and having a fish plate integral with the chair and comprising an extension having a flared inner surface spaced from the web of the meeting rail, wedge blocks located between the spaced fish plate members and the rail webs, insulating sheets located between the wedges and fish plate members, and insulated bolts holding the fish plates to the rails.

4. In an insulated rail joint, the combination with meeting rails, of joint members each having an integral chair projected beneath one of the rails and spaced from a like chair on the mating joint member, a fish plate integral with each chair comprising a portion adapted for contact with a rail supported on the integral chair and an inclined portion set out from the contacting part to form a shoulder and having a flared inner face, wedge blocks located between the flared fish plate members and the rails, insulation sheets located between the wedge blocks and flared fish plate members, bolts clamping opposite fish plates and blocks to the rails, and means insulating each of the bolts from one of the fish plates.

5. In an insulated rail joint, the combination with meeting rails, of joint members, each having a chair projected beneath one of the rails and having an extension from one edge, with the chair and extension spaced from the opposite rail and from like parts on the mating joint members, a fish plate on each chair having a body part and an extension outset from the body part, and having a flared inner face lying along the opposite rail, insulated wedge blocks located between the fish plate extension and the adjacent rails, and insulated bolts extending through the body member of one fish plate, the wedge block, the rail and the extension of the opposite fish plate.

1,154,739. CONTAINER-LATCH. MATHEW H. STOLL, La Crosse, Wis. Filed Jan. 2, 1915. Serial No. 133. (Cl. 70—82.)

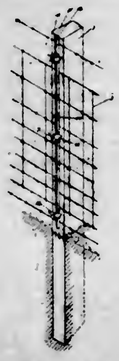


1. The combination with a container and a lid, the lid having an opening adjacent its free edge, of a keeper mounted upon the lid and having a lug projecting from the rear wall of the opening and extending over the opening, the front wall of said opening being vertical, and a resilient hasp mounted upon the front wall of the box and extending upward above the top thereof, said hasp being resiliently urged toward the hinged side of the lid and adapted to be disposed through the opening in the lid when the lid is closed, the hasp being formed adjacent its upper end with an opening for the reception of the lug, and the hasp below said opening being imperforate and having a width approximately equal to the width of the opening in said lid whereby said hasp when the lid is closed shall obstruct the entrance of light into the box through said opening.

2. As a container fastening means, a keeper plate having an opening at its middle, the front wall of the opening being straight and the rear wall of the opening being formed with a deflected upwardly projecting lug, the front edge of the plate being formed with an outwardly extending wing providing a finger-hold and the rear edge of the plate being also formed with an upwardly and rearwardly extending wing forming a finger-hold, a latch coacting with the keeper plate and including a hasp formed of a resilient bowed strip, the hasp being formed with an opening for engaging a first named lug on the keeper plate, said opening being disposed a sufficient distance below the upper extremity of the hasp as to cause the extremity of the hasp to project above the wings on said keeper plate.

3. As a container fastening means, a keeper plate having an opening, the front wall of the opening being vertical, and the rear wall of the opening being formed with an upwardly deflected projecting lug, the front edge of the plate being formed with an outwardly extending wing forming a finger-hold, a latch coacting with the keeper plate and including a hasp formed of a resilient bowed strip, the hasp being formed with a single opening for engaging the lug on the keeper plate, the opening being disposed a sufficient distance below the upper extremity of the hasp as to cause the extremity of the hasp to project above the wing on said keeper plate, the hasp below said opening having a width equal to the length of the opening in the keeper plate and being imperforate.

1,154,740. FENCE-POST. WALTER C. STUBER, Tremont, Ill., assignor of one-third to John Stuber and one-third to William Pfiederer, Tremont, Ill. Filed Dec. 12, 1914. Serial No. 876,781. (Cl. 256—52.)

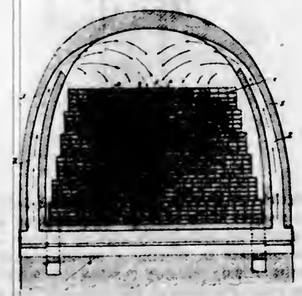


1. A fence post including a body portion having a longitudinal reinforcement therein and provided with an intermediate convex projection with grooves on either side thereof, anchoring members connected to said reinforcement and projecting through said convex projection and having apertures in their outer ends, a clamping member adapted to be positioned over said convex projection and having apertures adapted to receive said anchoring members and locking members adapted to be passed through the apertures in the anchoring members, to hold said clamping member in position, said clamping member being formed of angle iron so that its edges engage in the grooves on either side of said convex projection.

2. A fence post comprising a body portion of plastic material, having a longitudinal reinforcement embedded therein, and having one of its faces formed with an intermediate convex projection with grooves on either side thereof, anchoring members embedded in said body portion and connected to said longitudinal reinforcement, said anchoring members projecting through said convex projection and having apertures in their outer ends, a clamping member having slots therein, adapted to receive said anchoring members, and locking means adapted to pass through the apertures in said anchoring members to hold said clamping member to the post, said clamping member being shaped so that its edges correspond to and engage in the grooves on either side of said convex projection, whereby the fence will be crimped therein.

3. A fence post comprising a body portion of plastic material having a longitudinal reinforcement embedded therein and having one of its faces formed with an intermediate convex projection with grooves on either side thereof, anchoring members embedded in said body portion, said anchoring members being in the form of bars having their inner ends bent around said longitudinal reinforcement, their outer ends projecting through said convex projection and having apertures therein, a clamping member having slots therein adapted to receive said anchoring members, and locking means in the form of wedges adapted to pass through the apertures in said anchoring members to hold said clamping member to the post, said clamping member being shaped so that its edges engage in the grooves on either side of said convex projection whereby the fence will be clamped therein.

1,154,741. PROCESS OF MANUFACTURING BRICKS. EMORY E. TROWBRIDGE, Kansas City, Kans. Filed Apr. 1, 1915. Serial No. 18,464. (Cl. 25—157.)

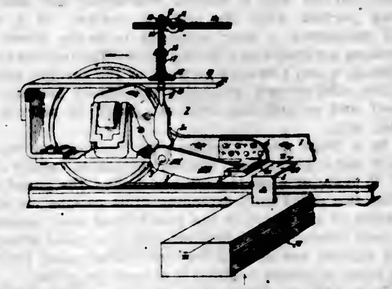


1. A process of manufacturing bricks which consists in forming the green bricks having one or more grooves upon one lateral face of each brick, drying the green bricks, setting them in a kiln in a plurality of vertical slightly spaced apart rows, the superimposed horizontal rows of bricks setting over the grooves of the row beneath whereby heat passages are formed between the vertical and horizontal rows, heating the kiln and causing the gases of combustion to travel through said passages both vertically and horizontally to obtain a uniform heating of the brick.

2. A process of manufacturing bricks which consists in forming the green bricks with a plurality of grooves upon one lateral face of each brick, drying the green bricks, setting them in a kiln in a plurality of vertical slightly spaced apart rows, the superimposed horizontal rows of bricks setting over the grooves of the row beneath whereby heat passages are formed between the vertical and horizontal rows, the bricks of the horizontal rows being offset to overlap the rows beneath to more effectively tie the bricks together, heating the kiln and causing the gases of combustion to travel through said passages both vertically and horizontally to obtain a uniform heating of the brick.

3. A process of manufacturing brick which consists in forming a groove on a face of each green brick, drying the green bricks, setting them in a kiln with the grooved face uppermost, and forming vertical and horizontal rows of bricks, the grooved portions serving as horizontal heat passages between the superimposed bricks, and then water-smoking and burning the bricks while so positioned in said kiln.

1,154,742. RAILWAY-TRAFFIC-CONTROLLING APPARATUS. JAMES M. WALSHOW, Englewood, N. J., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Nov. 4, 1913. Serial No. 799,146. (Cl. 246—59.)



1. In combination, a railway track, a vehicle adapted to travel thereon, an arm pivotally mounted on the vehicle the upper surface of which arm normally slopes upwardly from the horizontal in the direction opposite to the usual direction of movement of the vehicle, means on the vehicle operated by said arm when swung downwardly from such normal position, and a trip located in the trackway and adapted to co-act with said upper surface of the arm to swing the arm downwardly.

2. In combination, a railway track, a vehicle adapted to travel thereon, an arm pivotally mounted on the vehicle the upper surface of which arm normally slopes upwardly from the horizontal in the direction opposite to the usual direction of movement of the vehicle, means on the vehicle operated by said arm when swung downwardly from such normal position, and a hook-shapd trip located in the trackway the under surface of the hook being adapted to engage the said upper surface of the arm to swing the arm downwardly.

3. In combination, a railway track, a vehicle adapted to travel thereon, an arm pivotally mounted on the vehicle and extending rearwardly from the pivotal point, means on the vehicle operated by said arm when swung downwardly, and means located in the trackway for swinging said arm downwardly.

4. In combination, a railway track, a vehicle adapted to travel thereon, an arm pivotally mounted on the vehicle and extending rearwardly from the pivotal point, means on the vehicle operated by said arm when swung downwardly, means located in the trackway for swinging said arm downwardly, and a member on the vehicle located in front of the pivotal point of the arm and having an edge adapted to cut snow and ice.

5. In combination, a railway track, a vehicle adapted to travel thereon, a member on the vehicle adapted to be moved downwardly, means on the vehicle controlled by said downward movement of the member, means located in the trackway for moving said member downwardly, and a second member on the vehicle located in front of said first member and having an edge adapted to cut obstructions on the trackway.

[Claim 6 not printed in the Gazette.]

1,154,743. EYEGLASS-MOUNTING. LEO F. ADT, Albany, N. Y. Filed Jan. 6, 1910. Serial No. 536,711. (Cl. 88—50.)



1. In a finger piece eyeglass mounting the combination with a support having a bearing thereon, and a guard lever having a bearing turning in engagement with the support, of a spring for positioning the guard embodying

a coil located in front of the turning axis of the guard and an arm extending rearwardly from the coil and cooperating with the guard in rear of its turning axis.

2. In a finger piece eyeglass mounting the combination with a support comprising a bridging portion, a lens attaching portion and a portion connecting the lens attaching portion with the bridging portion, of a nose guard embodying a lever arranged to swing above the connecting portion, and a spring for positioning the guard embodying a coil arranged in front of the turning axis of the lever and an arm extending rearwardly beneath the support and coöperating with the guard in rear of its turning axis.

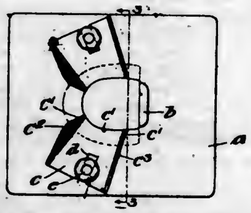
3. In a finger piece eyeglass, the combination with a support and a guard lever pivoted thereon to extend from front to rear, of a spring for positioning the guard embodying two rearwardly extending arms passing on opposite sides of the pivot of the guard lever and connected by a bend forwardly of the pivot, one arm being arranged to act against one of said first mentioned parts and the other being arranged to slidably engage the other.

4. In a pair of finger piece eyeglasses, the combination with the lenses, a bridge or equivalent member for connecting the lenses together, nose gripping members having pivotal connection with the said bridge member, springs for actuating the said nose gripping members to cause them to grip the nose of a wearer, one end of each of the said springs being in contact with the fixed part of the eyeglasses and extending thence forwardly and transversely of the plane of the lenses, thence inwardly and rearwardly, and the other end of each of the said springs having operative connection with the said nose gripping members, and means for detachably securing the said springs in position.

5. In a finger piece eyeglass mounting the combination with a support for the lenses comprising a bridging portion, a lens attaching device and a connecting portion between the bridging portion and the lens attaching device, of a guard embodying a lever mounted to turn above the connecting portion and having its forward end extending downwardly in front of the connecting portion, and a spring for positioning the guard embodying a coil arranged behind the downwardly extending portion of the guard lever and in front of the turning axis of the latter, and an arm extending rearwardly from the coil beneath the support and coöperating with the guard in rear of its turning axis.

[Claims 6 and 7 not printed in the Gazette.]

1,154,744. HEEL-BUILDING FORM. ARTHUR H. BRADSTREET, Haverhill, Mass. Filed Jan. 15, 1915. Serial No. 2,316. (Cl. 12—50.)

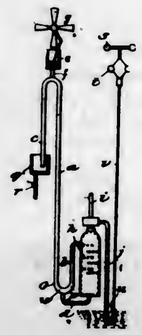


1. A heel-building form comprising a horizontally disposed support, a pair of form-members for engaging opposite sides of a heel, each member consisting of a sheet-metal plate adapted to rest on, and to be removably connected to said support, and having end-portions bent into upright relation thereto, to provide fingers having engaging edges for the side and rear end-portions of the lifts, and means to secure said plates to said support.

2. A heel-building form comprising a horizontally disposed support and a pair of form-members for engaging opposite sides of a heel, each member consisting of a sheet-metal plate adapted to rest on, and to be removably connected to said support, and having end-portions bent into upright relation thereto, to provide fingers having engaging edges for the side and rear end-portions of the lifts, said end-portions being bent on lines which extend divergently from the lift-engaging edge of the plate, whereby the edges of said fingers incline outwardly as they extend upwardly.

3. A heel-building form-member comprising a sheet-metal plate having its end-portions bent into upright relation to the intermediate portion, on lines which extend divergently from one edge-portion, to provide lift-engaging edges which incline back from the edge of said intermediate portion, the latter being adapted and arranged to be secured onto a support.

1,154,745. METHOD OF AND APPARATUS FOR ELEVATING FLUIDS BY ELASTIC-FLUID PRESSURE. RALPH C. BROWNE, Salem, Mass., assignor of one-half to John C. Sherman, Brookline, Mass., and one-half to Browne Apparatus Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 21, 1908, Serial No. 468,554. Renewed June 19, 1915. Serial No. 35,140. (Cl. 103—84.)



1. The method of raising fluids by elastic fluid pressure to a height greater than that of a continuous column of the fluid operated on sufficiently high to balance such pressure, which consists in flowing a working fluid through a loop, simultaneously causing the heavier fluid to collect in said loop until the passage therethrough for the working fluid is closed, and immediately displacing the collected fluid by pressure of the working fluid applied downwardly on the upper surface thereof, thereby forming a composite column made up of alternate masses of the fluid operated on and the lighter working fluid.

2. The method of raising fluids by elastic fluid pressure to a height greater than that of a continuous column of the fluid operated on sufficiently high to balance such pressure, which consists in forming a composite column made up of alternate masses of the fluid operated on and a lighter, more elastic working fluid, by causing the fluid operated on to collect below the admission point of the working fluid and obstruct the working fluid.

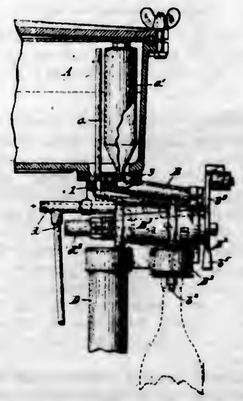
3. The method of raising fluids by elastic fluid pressure to a height greater than that of a continuous column of the fluid operated on sufficiently high to balance such pressure, which consists in causing a relatively light elastic working fluid to flow through a conduit, and continuously admitting quantities of the heavier fluid, under approximately equal pressure with the working fluid, into the lowest point of such conduit, until the latter is sealed to the flow of the working fluid to obstruct intermittently the flow of working fluid.

4. The method of elevating fluids by elastic fluid pressure to heights greater than the hydrostatic head of the fluid operated on sufficient to equalise such pressure, which consists in causing a relatively light elastic working fluid to flow downwardly and then upward through a continuous conduit and causing quantities of the heavier fluid to be admitted continuously to the lowest point of such conduit, both such fluids being acted on by an equal impelling force, in such manner that the heavier fluid is entrapped in the lowest part of the conduit until it has accumulated sufficiently to close the conduit, whereupon it is acted upon on its upper surface by the full pressure of the working fluid and is carried by the latter through the conduit in the form of detached masses or plugs.

5. The method of elevating fluids by elastic fluid pressure to heights greater than the hydrostatic head of the fluid operated on sufficient to equalise such pressure, which consists in forcing a relatively light working fluid through a conduit, and forcing the heavier fluid under a pressure equal to that of the working fluid continuously into such conduit at a point thereof lower than the admission point of the working fluid, in such manner that the heavier fluid is entrapped until it close the conduit and is carried by the latter through the conduit in the form of detached masses or plugs.

[Claims 6 to 27 not printed in the Gazette.]

1,154,746. BOTTLE-FILLING DEVICE. JOSEPH H. CHAMP, Cleveland, Ohio. Filed Apr. 7, 1909. Serial No. 488,494. (Cl. 226—15.)

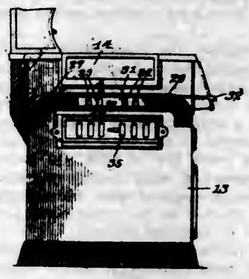


1. In a device of the character described, the combination of a bottle mouth-piece; a duct connected with said mouth piece for supplying a counter-pressure to a bottle to be filled; a duct for supplying liquid to said bottle; a closed chamber supplied with a fluid under a pressure lower than said counter-pressure and higher than atmospheric pressure; a duct connecting said chamber with said mouth-piece; and a valve arranged and constructed to close said last-named duct during the filling of liquid into said bottle and to open said duct after such filling has ceased substantially as set forth.

2. In a device of the character described, the combination of a bottle mouth piece; a liquid reservoir; a duct connected with said mouth piece for supplying a counter-pressure to a bottle to be filled; a chamber supplied with fluid under a pressure less than said counter-pressure and higher than atmospheric pressure; ducts respectively connecting said liquid reservoir and said chamber with said mouth piece; and a valve controlling said ducts, said valve being adapted to close the duct to said chamber, while the duct to said reservoir is open and, upon closing said reservoir duct, to open said chamber duct, substantially as set forth.

3. In a device of the character described, the combination of a bottle mouth-piece; a liquid reservoir; a duct connected with said mouth-piece for supplying a counter-pressure to a bottle to be filled; a closed chamber disposed at a higher level than said bottle; a duct connecting said chamber with said mouth piece; and a valve closing said last-named duct during the filling of liquid into said bottle and adapted to open said duct after filling has ceased, substantially as described.

1,154,747. STOVE. JAMES G. DUNCAN, Omaha, Nebr., assignor of one-half to himself, and one-half to Charles H. Cook, Oak Park, Ill. Filed Aug. 17, 1914. Serial No. 857,117. (Cl. 126—15.)



1. In a stove, the combination of a fire-box, a grate at the bottom of the fire-box, headers extending across the ends of the grate and opening into the fire-box at the grate below the fuel-bed, a channel-iron secured along the front wall of the firebox above the grate forming a duct along the wall communicating at its ends with the said headers, and a plate extending across said channel-iron separating the duct into two divisions, said duct being provided with ports opening to the atmosphere on opposite sides of the division plate.

2. In a stove, the combination of a fire-box, a grate at the bottom of the fire-box, headers extending across the ends of the grate and opening into the fire-box at the grate below the fuel-bed, and a channel-iron secured along the outer face of the wall of the fire-box above the grate forming a duct communicating at its ends with the said headers and opening at an intermediate point to the atmosphere.

3. In a stove, the combination of a fire-box, a grate at the bottom of the fire-box, headers extending across the ends of the grate inside of the fire-box and having a plurality of openings therefrom at the grate below the fuel-bed, a channel-iron secured to the outer face of the wall of the fire-box above the grate forming two separate ducts leading to and communicating with said headers respectively, and a damper adapted to close suitable openings leading into said ducts from the atmosphere, said damper being adapted to equalise at all times the air inlet into said two ducts.

1,154,748. SPECULUM. SOLA B. DUNN, Chicago, Ill. Filed July 26, 1913. Serial No. 781,341. (Cl. 128—27.)



1. In a speculum, the combination with two pairs of pivotally connected jaws, of teeth plates supported by the free ends of corresponding jaws, means for supporting the jaws upon the head of an animal in operative relation to the mouth, a latch having downwardly projecting teeth pivotally connected to the upper jaw of each pair, a projection on the lower jaw of each pair extending beyond its pivotal connection with the upper jaw, a fixed tooth

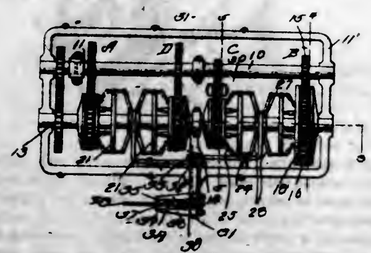
on each of said projections with which engage the teeth on the latch pivoted to the corresponding upper jaw to hold the jaws in adjusted position, a locking device for positively retaining each latch in locked position, and means for limiting the movement of each locking device to position it in its most effective locking engagement with the latch.

2. In a speculum, the combination with two pairs of pivotally connected jaws, of teeth plates supported by the free ends of corresponding jaws, means for supporting the jaws upon the head of an animal in operative relation to the mouth, a latch having downwardly projecting teeth pivotally connected to the upper jaw of each pair, a projection on the lower jaw of each pair extending beyond its pivotal connection with the upper jaw, a fixed tooth on each of said projections with which engage the teeth on the latch pivoted to the corresponding upper jaw to hold the jaws in adjusted relation, and a locking device for positively retaining each latch in engagement with the corresponding fixed tooth, said device comprising means for limiting the locking movement thereof.

3. In a speculum, the combination with two pairs of pivotally connected jaws, of teeth plates supported by the free ends of corresponding jaws, means for supporting the jaws upon the head of an animal in operative relation to the mouth, a latch having downwardly projecting teeth pivotally connected to the upper jaw of each pair, a projection on the lower jaw of each pair extending beyond its pivotal connection with the upper jaw, a fixed tooth on each of said projections with which engage the teeth on the latch pivoted to the corresponding upper jaw to hold the jaws in adjusted relation, a cam pivotally mounted on each of said projections in position to engage the adjacent latch and positively retain the same in locked engagement with the corresponding fixed tooth, and a forwardly projecting curved finger piece on each cam for actuating the same and limiting the locking movement thereof.

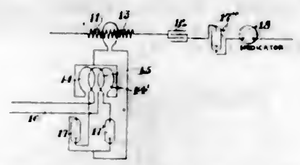
4. In a speculum, the combination with two pairs of pivotally connected jaws, of teeth plates supported by the free ends of corresponding jaws, means for supporting the jaws upon the head of an aimal in operative relation to its mouth, a latch having downwardly projecting teeth pivotally connected to the upper jaw of each pair, a projection on the lower jaw of each pair extending beyond its pivotal connection with the upper jaw, said projection having an opening through which the latch on the corresponding upper jaw extends, a fixed tooth on each projection at the bottom of the opening therein with which engage the teeth on the latch pivoted to the corresponding upper jaw, a cam pivotally mounted in the bifurcated end of each projection in position to engage the adjacent latch and positively retain the teeth thereon in locked engagement with the underlying fixed tooth, and a forwardly projecting upwardly curved finger piece for actuating the same and for swinging the same into locking position through the action of gravity.

1,154,749. DISK-CLUTCH TRANSMISSION. WALTER L. FEE, Moline, Ill. Filed Jan. 22, 1914. Serial No. 813,794. (Cl. 192—7.)



In a clutch mechanism, the combination of a shaft, a member to be clutched rotatable and slidable on the shaft, a friction disk fixed on the shaft; on one side of the member, a second friction disk slidable on the shaft on the other side of the member, spring means interposed between the member and each disk for normally holding said disks out of operative relation to the member, and means for moving the splined disk against the member to in turn force the latter against the fixed disk and whereby the member is locked to both of said disks, said means comprising socketed projections on the outer side of the second named friction disk, a member slidable on said shaft and having projections thereon slidable in respective sockets of the projections, levers pivoted on said member at diametrically opposite points, links connecting corresponding ends of said levers with the second named friction disk, and means for rocking said levers to slide the friction disk on the shaft.

1,154,750. AMPLIFYING ELECTRICAL IMPULSES. REGINALD A. FESSENDEN, Brant Rock, Mass. Filed Mar. 11, 1911. Serial No. 613,760. (Cl. 179—170.)



1. The combination with a prime circuit carrying feeble electric impulses of an amplifying circuit carrying alternating current and containing an inductance and capacity, said amplifying circiut being tuned to the frequency of said alternating current, fixed means inductively associating said circuits, and a rectifier in said amplifying circuit.

2. The combination with a prime circuit carrying feeble electric impulses of an amplifying circuit alternating current and containing an inductance and capacity, said amplifying circuit being tuned to the frequency of said alternating current, fixed means inductively associating said circuits, an indicating device and a rectifier in said amplifying circuit.

3. The combination with a prime circuit carrying feeble electric impulses to be amplified, of an amplifying circuit carrying alternating current and containing an inductance and capacity, said amplifying circuit being tuned to the frequency of said alternating current, and fixed means inductively associating said circuits, said means comprising a split circuit having oppositely arranged rectifiers in its respective branches.

4. The combination with a prime circuit carrying feeble electrical impulses to be amplified, of an amplifying circuit carrying alternating current and containing an inductance and capacity, said amplifying circuit being turned to the frequency of said alternating current, fixed means inductively associating said circuits, said means comprising a split circuit having oppositely arranged rectifiers in its respective branches, and an indicating device in said amplifying circuit.

5. The combination with a prime circuit carrying feeble electrical impulses to be amplified, of an amplifying circuit carrying alternating current and containing an inductance and capacity, said amplifying circuit being tuned to the frequency of said alternating current, fixed means inductively associating said circuits, said means comprising a split circuit having oppositely arranged rectifiers in its respective branches, and a rectifier in said amplifying circuit.

[Claim 6 not printed in the Gazette.]

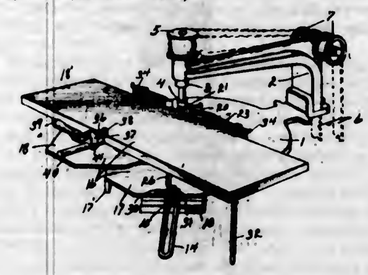
1,154,751. CAP-REMOVER AND COVER. FRANK REED FISHER, Springfield, Ill. Filed Oct. 12, 1914. Serial No. 866,397. (Cl. 215—53.)

1. The combination of a receptacle, a cap fitting on the receptacle, a securing device securing the cap on the receptacle, and a cup-shaped remover adapted to surround and slide on the cap and adapted to disengage the securing device from the cap.



2. The combination of a receptacle, a cap fitting on the receptacle, a securing device securing the cap on the receptacle, and a cup-shaped remover adapted to disengage the securing device from the cap and also adapted to engage with the cap to keep the cap in the remover; the cap and the remover together serving as a removable cover for the receptacle.

1,154,752. ROUTING-MACHINE. ALVAH JUDSON FOSTER, Syracuse, N. Y. Filed Aug. 10, 1914. Serial No. 856,026. (Cl. 144—136.)



1. In a routing machine, the combination of a rotary grooving tool, a work-supporting table movable radially to the axis of said tool and adjustable about separate axes parallel with the first-named axis, but at different distances therefrom to cause one side of the groove to be cut at an agle to the other side.

2. In a routing machine, the combination of a rotary grooving tool, a carriage slidable radially to the axis of the tool, a plate mounted on the carriage to swing about an axis parallel with, but a short distance to one side of the first-named axis, and a separate plate mounted on the first-named plate to swing about an axis parallel with, but some distance from both of the other axes, and provided with means for supporting the work.

3. In a routing machine, the combination of a rotary grooving tool, a main supporting frame, a carriage guide journaled on the frame co-axial with the tool, a carriage slidable radially of and upon said guide and provided with an adjustable stop coöperating with the guide for limiting the movement of the carriage in one direction, a plate mounted on the carriage to move therewith and fulcrumed on the adjustable stop to swing laterally, and a separate plate journaled on the first-named plate to swing laterally relatively to the carriage and provided with means for supporting the work.

4. In a routing machine, the combination of a rotary routing tool, a carriage movable radially of the axis of the tool, a support for the carriage, a plate mounted on the carriage to move therewith and having an independent lateral movement about an axis parallel with but at one side of the axis of the tool and a work supporting table pivoted to the first named plate to swing about an axis also parallel with and at one side of the axis of the tool and provided with a guide flange.

5. In a routing machine, the combination of a main supporting bed having an overhanging bracket, a vertical spindle journaled on the bracket and provided with a routing tool, a carriage journaled on the bed co-axial with the spindle, a carriage movable radially of and upon the guide, a stop adjustably mounted on the carriage and coöperating with the guide to limit the movement of the carriage in one direction, and a work holder mounted on the carriage and provided with a work-supporting plate adjustable about an axis parallel with, but some distance to one side of the axis of the tool.

[Claim 6 not printed in the Gazette.]

1,154,753. COTTER-KEY. ROY W. FOUTS, Dawson, Nebr. Filed Jan. 25, 1915. Serial No. 4,206. (Cl. 74—8.)



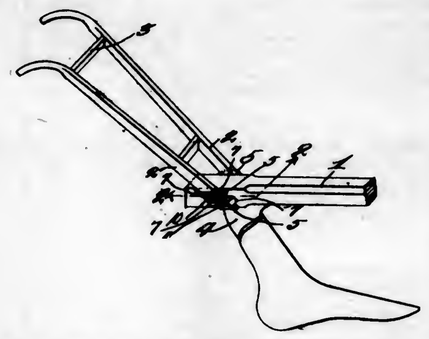
1. A cotter pin comprising a circular head having a pair of oppositely disposed prongs, one being longer than the other, the shorter prong substantially midway of its length being bent slightly outwardly the longer prong approximately midway of its length being bent outwardly in the opposite direction, said bend being greater than the bend of the shorter prong thereby causing the two prongs to automatically separate after passing through a cotter pin receiving opening of a shaft, the free end of the shorter prong being beveled upon its outer face, the longer prong near its free end portion being bent at an obtuse angle to the portion beyond the first bend and in an opposite direction, so as to fully overlie the end of the shorter prong, so as to guide the longer and shorter prongs through a receiving opening, said longer prong upon its inner face adjacent the second bend being provided with a notch or recess into which the free portion of the shorter prong is received, the inner face of the longer prong from substantially adjacent the first bend being gradually tapered toward and into the notch or recess, so that the shorter prong will enter the notch or recess evenly, said notch or recess constituting means to insure that the portion beyond the second bend will overlie the extremity of the shorter prong, the outer face of the longer prong adjacent its extremity being beveled.

2. A cotter pin comprising a head and having a pair of oppositely disposed prongs, one being longer than the other, the shorter prong substantially midway of its length being bent slightly outwardly, the longer prong being bent substantially midway of its length forming a portion extending at an obtuse angle to the base of the longer prong, the angularly disposed portion having an end part forming an additional length beyond the shorter prong with its extremity overlying the shorter prong and extending at an obtuse angle to the first angularly disposed portion, one face of the longer prong adjacent its second bend having a recess to receive the shorter prong, the outer surfaces of both prongs adjacent their extremities being beveled.

1,154,754. CLAMPING DEVICE FOR PLOW STOCKS AND HANDLES. WILEY N. GANDY, Athens, La. Filed Apr. 20, 1915. Serial No. 22,597. (Cl. 97—15.)

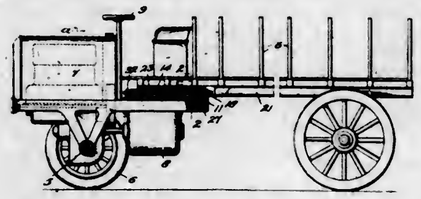
1. In combination, a plow beam, a pair of handles therefor having their lower converged ends arranged adjacent to and upon opposite sides of the beam toward its rear end, plates adjacent the outer faces of the handle, staples passing through said plates, the handles, and the beam and provided with threaded means to hold the parts together, said plate being U-shaped and having enlarged

angularly extending ends and engaging opposite edge portions of the handles, said enlarged angular ends having elongated teeth, which together with the angular ends relieve the strain upon the staples and hold the handles firmly in place.



2. In combination, a plow beam, a pair of handles therefor having their lower converged ends arranged adjacent to and upon opposite sides of the beam at its rear end, plates adjacent the outer faces of the handles and being angularly U-shaped to conform to the angular disposition of the handle, said U-shaped plate having enlarged angularly extending ends engaging opposite edge portions of the handle, said enlarged angular end having elongated teeth embedding into the beam, which together with the angular ends relieve the strain and hold the handles firmly in place, and staples passing through said plates, the handles, and the beam and provided with threaded means to hold the parts together.

1,154,755. MOTOR-VEHICLE. OTTO GARDNER, Hoboken, N. J., assignor to Gem Construction Co., a Corporation of New Jersey. Filed June 25, 1914. Serial No. 847,240. (Cl. 21—114.)



1. In combination with the overlapping end portions of a load carrying vehicle frame and a tractor frame; of means for connecting the said overlapping end portions together and including a movable jaw carried by one of said end portions, and a head carried by the other of said end portions, said jaw and said head being further adapted to interfit and to interlock one with the other when the movable jaw is adjusted into one position and to disengage one from the other when the movable jaw is adjusted into another position.

2. Means for connecting together the overlapping end portions of a tractor frame and a load carrying vehicle frame, and comprising a pair of members carried by the said overlapping end portions, said members being constructed and arranged so as to interfit and to interlock one with the other, said jaw and said head being further adapted to interfit and to interlock one with the other when the movable jaw is adjusted into one position and to disengage one from the other when the movable jaw is adjusted into another position, one of said members being superimposed on one of the overlapping end portions, and the other depending from the other of said overlapping end portions.

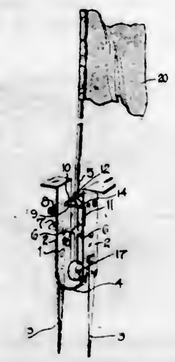
3. In a device for connecting a tractor frame to a load carrying vehicle frame, a pair of jaw members, one of which is stationary and the other movable, and means for adjusting the movable jaw member with respect to the stationary jaw member for the purpose set forth.

4. In a device for connecting a tractor frame to a load carrying vehicle frame, a pair of angular shaped jaw members, one of which is stationary and the other movable, and means for adjusting the movable jaw member with respect to the stationary jaw member for the purpose set forth.

5. In a device for connecting a tractor frame to a load carrying vehicle frame, a pair of angular shaped undercut jaw members, one of which is stationary and the other movable, and means for adjusting the movable jaw member with respect to the stationary jaw member for the purpose set forth.

[Claims 6 to 12 not printed in the Gazette.]

1,154,756. SIGNALING DEVICE. ALBIN M. GEORGESON, Hamberg, N. D. Filed Dec. 5, 1914. Serial No. 875,690. (Cl. 116—12.)

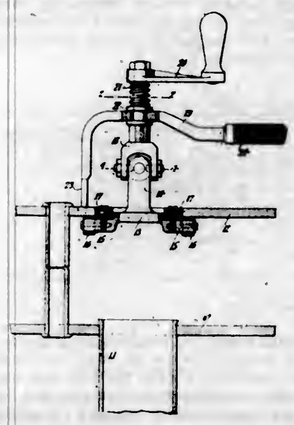


1. A signaling device of the character described comprising a base member, anchoring means therefor, an elongated member pivotally supported by the base member, a stop carried by the elongated member coacting with the base member for limiting the movement of the elongated member in opposite directions, and locking means carried by the base member capable of automatic engagement with the stop for maintaining the elongated member at the limit of its movement in one direction.

2. A signaling device of the character described comprising a base member, anchoring means therefor, an elongated member pivotally supported by the base member, a stop carried by the elongated member coacting with the base member for limiting the movement of the elongated member in opposite directions, locking means carried by the base member capable of automatic engagement with the stop for maintaining the elongated member at the limit of its movement in one direction, and a counterbalance carried by one extremity of the elongated member.

3. A device of the character described comprising a base member substantially U-shape in form, an elongated member provided with trunnions adjacent one extremity thereof, said trunnions being rotatably supported by the side portions of the base member, one of said trunnions being formed into a crank provided with engaging means, a stop carried by the elongated member coacting with the base member for limiting the movement of the elongated member in opposite directions, and a stop member carried by the base capable of automatic engagement with the stop for maintaining the elongated member at the limit of its movement in one direction.

1,154,757. GASKET-SEAT CLEANER. AUGUST P. GERALD, Jersey City, N. J. Filed Mar. 5, 1913. Serial No. 752,049. (Cl. 82—64.)



1. An apparatus of the class described including a head adapted to be positioned adjacent to one surface of a wall, means upon the opposite surface of the wall for rotating said head, and means for resiliently pressing said head toward said wall.

2. An apparatus of the class described, including a cutter head adapted to be positioned adjacent one surface of a wall, a standard adapted to project through said wall, and a support in engagement with the opposite surface of said wall and resiliently connected to said standard.

3. An apparatus of the class described, including a cutter head adapted to be positioned adjacent one surface of a wall, a standard adapted to project through said wall, a support in engagement with the opposite surface of said wall and connected to said standard, and means including a universal joint for rotating said standard and said head.

4. An apparatus of the class described including a lever having one end adapted to serve as a fulcrum and the opposite end as a handle, a shaft rotatably mounted in said lever, a head having a standard connected to said shaft, and cutters upon the face of said head toward said lever.

5. An apparatus of the class described including a lever having one end adapted to serve as a fulcrum and the opposite end as a handle, a shaft rotatably and tiltably mounted in said lever, a head having a standard connected to said shaft, and cutters upon the face of said head toward said lever.

[Claims 6 to 13 not printed in the Gazette.]

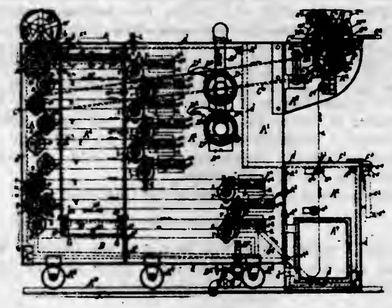
1,154,758. APPARATUS FOR THE TREATMENT OF CLOTH. DAVID GRAHAM, Worcester, Mass. Filed June 6, 1911. Serial No. 631,555. (Cl. 26—31.)

1. A machine for treating cloth, comprising a casing, means for propelling a web of cloth through the casing, and means within the casing for passing water vertically in proximity to the cloth and exposed thereto, but out of contact therewith whereby the cloth is subjected to the vapors given off by the water.

2. A machine for treating cloth, comprising a casing, means for feeding a web of cloth therethrough in separated stretches, and means within the casing for passing a body of water in proximity to the cloth but out of contact therewith whereby the cloth is subjected to the vapors given off by the water.

3. A cloth treating apparatus of the character described, comprising a chamber, means for feeding a web of cloth therethrough in a loose untensioned state, and means within the chamber for chilling the cloth, and means for subjecting the cloth to a dampening medium.

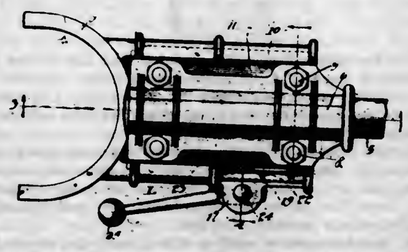
4. A cloth treating apparatus of the character described, comprising a chamber, means for feeding a web of cloth therethrough in a loose untensioned state, and means in the chamber for blowing a current of chilled air over the cloth and for hydrating the same.



5. A cloth treating apparatus of the character described, comprising a chamber, means for feeding a web of cloth therethrough in a loose untensioned state in a plurality of separated superimposed layers, means for blowing a current of chilled air over said layers, and hydrating means inside said chamber.

[Claims 6 to 32 not printed in the Gazette.]

1,154,759. TROLLEY-POLE BASE. CHARLES E. GIBBING, Mansfield, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Mar. 2, 1914. Serial No. 821,853. (Cl. 191—64.)



1. The combination with a trolley pole supporting member having guideways, of a trolley pole consisting of a hollow pipe, means to clamp the pipe slidable in said guideways having a lateral notch therein, and a lever having a cam portion adapted to engage in the notch of the clamping means and to hold the means in the supporting member.

2. The combination with a trolley base having a movable supporting member formed with longitudinal guideways, a trolley pole with a hollow base, members to clamp the hollow trolley pole slidable in the guideway with a notch in one edge thereof, and a lever pivoted to the supporting member having a cam portion adapted to engage the notch of the members for clamping the trolley pole for releasably holding the said members and the pole against movement in the supporting member.

3. The combination of a trolley fork having a supporting member, flanges on said supporting member forming longitudinal guide ways, a trolley pole, means clamped on the end of said trolley pole having guides which slide in the guide ways in said flanges, one of said guides having a notch in its edge, and a lever pivoted on said supporting member adjacent said notched guide and having a cam portion adapted, when the lever is rotated in one direction, to enter the notch and lock said clamping means on the trolley pole against movement in said guide ways.

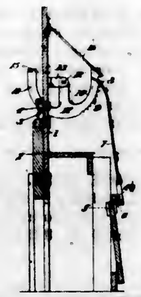
4. The combination of a trolley fork having a supporting member, flanges on said supporting member forming longitudinal guide ways, a trolley pole, a pair of plates clamping the trolley pole between them, guides carried

by one of said plates to slidingly fit said guide ways, one of said guides having a notch in its edge, a rotary cam positioned to engage the notch and lock the plates against movement, and a weighted operating lever for said cam.

5. The combination of a trolley fork having a supporting member, flanges on said supporting member forming longitudinal guide ways, a trolley pole, a pair of plates clamping the trolley pole between them, guides carried by one of said plates to slidably fit said guide ways, one of said guides having a notch in its edge, a rotary cam positioned to engage the notch and lock the plates against movement, a weighted operating lever for said cam, and a contact spring positioned between said supporting member and one of said plates.

[Claims 6 and 7 not printed in the Gazette.]

1,154,760. SELF-SORTING HOG-HOUSE DOOR. WILLIAM LEE GILLILAN, Potosi, Wis. Filed May 17, 1915. Serial No. 28,701. (Cl. 119—1.)



1. The combination with an outer door and means for holding it open, of an inner door, and means operated by the opening of the inner door for automatically releasing the outer door after the inner door has been opened a predetermined number of times.

2. The combination with an outer door and means for holding it open, of an inner door, and adjustable means operated by the opening of the inner door for releasing the outer door after the inner door has been opened a predetermined number of times.

3. The combination with a sliding door and means for holding it open, of a flap door, and means operated by the opening of the flap door for releasing the sliding door after the flap door has been opened a predetermined number of times.

4. The combination with a vertically sliding door, of means for supporting said door in raised open position, another door, and means operated by the opening of the latter door for releasing the sliding door when the second door has been opened a predetermined number of times.

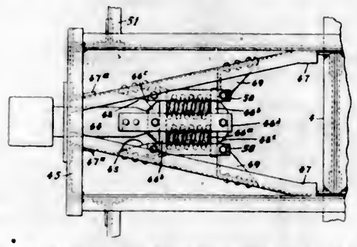
5. The combination with a vertically sliding door, of means for supporting said door in raised open position, a flap door, and means operated by the opening of said flap door for releasing the sliding door when said flap door has been opened a predetermined number of times.

[Claims 6 to 10 not printed in the Gazette.]

1,154,761. DUMPING-CAR. JOHN M. GOODWIN, Spokane, Wash. Original application filed Feb. 5, 1907, Serial No. 355,815. Divided and this application filed May 13, 1910. Serial No. 561,064. (Cl. 213—42.)

1. In a railway car, two central sills spaced apart and continuous from end to end of the car; a cross member connecting the ends thereof; a draw-bar centrally positioned between the ends of the sills; and means for securing the draw-bar in position adapted to transmit strains on the draw-bar to said center-sills lengthwise thereof, said means comprising two oppositely diverging bars, each extending from said cross member, centrally thereof, to one of the sills.

2. In a railway car, two spaced-apart center-sills, a draw-bar having followers, and two bars diverging from said draw-bar toward the sills and adapted to transmit the draft and coupling strains thereto, in combination with bearing blocks having inclined bases secured to said diverging bars and adapted to provide fore and aft bearings for said followers.



3. In a railway car, two longitudinal sills and a draw-bar centrally located between the same, two bars diverging from said draw-bar toward the sills and respectively secured thereto, in combination with fore and aft followers on said draw-bar, separate fore and aft bearing blocks having inclined bases secured respectively on the diverging bars and adapted to form abutments for said followers and tie-straps uniting the apices of the rearward blocks with the forward blocks.

4. In a dumping car having two spaced apart center-sills and a cross member joining the ends thereof, the combination of two bars secured to and diverging from the central region of said cross member between the sills and secured at their divergent ends respectively to said sills, bearing blocks with inclined bases secured to each of said diverging bars and draw-bar followers adapted to engage said blocks.

5. In a railway car two longitudinally extending sills, a cross sill secured to adjacent ends of the longitudinal sills, a draw bar extending through the cross sill, two diagonally extending bars each of which is secured at one end to the cross sill on one side of the draw-bar and at the other end to one of the longitudinally extending sills and front and rear bearing blocks for the followers of the draw-bar secured to the diagonal bars.

[Claim 6 not printed in the Gazette.]

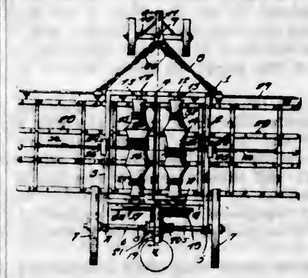
1,154,762. METHOD OF PRODUCING TANNING COMPOSITIONS FROM WASTE SULFITE-CELLULOSE LIQUOR. JOHANNES J. GROSS, Hamburg, Germany. Filed Nov. 7, 1913. Serial No. 799,678. (Cl. 149—4.)

1. A method of producing tanning compositions from waste sulfite-cellulose liquor, consisting in treating the liquor in a warm state with hydrochloric acid (HCl) and sulfuric acid (H_2SO_4), and adding thereto potassium chromate (K_2CrO_4) thereby eliminating the remaining lime (Ca), substantially as and for the purpose set forth.

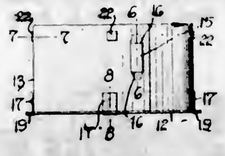
2. A method of producing tanning compositions from waste sulfite-cellulose liquor, consisting in treating the liquor in a warm state with hydrochloric acid (HCl) and sulfuric acid (H_2SO_4), adding thereto potassium chromate (K_2CrO_4) thereby eliminating the remaining lime (Ca), concentrating the liquor to about 20° Bé., cooling it with an admission of air, filtering off the precipitate then falling, and concentrating the liquor to any desired consistency, substantially as and for the purpose set forth.

1,154,763. DRAG FOR MULTIPLE HARROWS. GUNDER H. GUNDERSON, Fairchild, Wis. Filed May 4, 1914. Serial No. 836,289. (Cl. 55—93.)

The combination with a drag including a frame, of shafts rotatably supported upon the frame, drums fixed to the shafts and comprising outer and intermediate drum sections, a wheeled axle supporting the rear of the frame, means carried by the axle for rotating the drums, a harrow disposed under the frame and including an intermediate section and outer sections hingedly connected, cords windable upon the drum sections for moving the intermediate section of the harrow from engagement with the ground simultaneously with the swinging of the outer sections of the harrow from engagement with the ground.



1,154,764. PARCEL-POST MAILING-CASE. WILLIAM H. HAMMOND, Clifford, Mass. Filed Nov. 18, 1914. Serial No. 872,838. (Cl. 229—12.)



1. A nest box for mailing cases, comprising a bottom and a side wall, and clips holding the side wall to the bottom, each of said clips at one end being inwardly bent and extending through a slot in the side wall and then being bent down upon the inside face of the side wall, the other extremity of the clip passing down through the bottom and then being bent outward and engaged against the under face of the bottom.

2. In a device of the character described, adjacent sheets of material extending at right angles to each other, and pliable clips holding said sheets in engagement, each clip having one end inserted through a slot in one of said sheets and bent down against the face of the sheet, the other end of the clip extending through the other sheet and having its extremity bent against the face of said last named sheet.

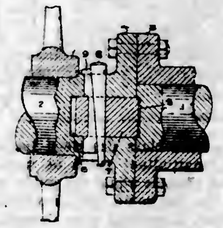
3. A nest box for mailing cases comprising a bottom, a side wall, and transversely extending strips dividing the interior of the case into compartments, clips holding the side wall to the bottom, clips holding the overlapping ends of the side wall together, and clips holding the ends of the transverse walls into engagement with the side wall.

1,154,765. SEED-POTATO CUTTER. THOMAS J. HARRISON, Julesburg, Colo. Filed June 10, 1914. Serial No. 844,266. (Cl. 146—11.)



A seed potato cutter comprising a rotatable drum having radially extending potato lifters and carriers, a pair of arcuate plates disposed on opposite sides of the upper portion of the drum and having their curved edges inclined inwardly, a knife on which the carriers force the potatoes to cut them in pieces, means for guiding the potatoes on to the knife, a pair of rotatable disks disposed at the entrance end of the device, for engagement with the potatoes lifted by the carriers to brush off all but one of the potatoes and means for simultaneously driving the drum and the disks.

1,154,766. SHAFT-COUPLING. MAX HARTWIG, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Jan. 29, 1914. Serial No. 815,305. (Cl. 64—13.)



1. The combination with two abutting shaft sections, one having a recess and the other a socket in alinement therewith, of a locking member located in said socket and adapted to slide therein, and means for thrusting it into said recess and withdrawing it therefrom.

2. The combination with two abutting shaft sections, one having a recess and the other a socket in alinement therewith, of a locking member located in said socket and adapted to slide therein, and means engaging with one of said sections for moving said locking member into and out of engagement with said recess.

3. The combination with two abutting shaft sections, one having a central recess and the other a socket in axial alinement therewith, of a locking member sliding in said socket, and means carried by the socketed section for moving said locking member into and out of engagement with said recess.

4. The combination with two abutting shaft sections, one having a central recess and the other a socketing axial alinement therewith of a locking member sliding in said socket and provided with a transverse slot, and a wedge passing transversely through a slot in said shaft and engaging with the slot in the locking member.

5. The combination with two abutting shaft sections, one having a central recess and the other a socket in axial alinement therewith and a transverse slot intersecting said socket, of a locking member in said socket sliding into and out of said recess, and adapted to be withdrawn with its end flush with the end of said shaft section, a transverse slot in said locking member, and a wedge and gib fitting into said slots and adapted when in one position to hold said locking member in engagement with said recess and when reversed to hold said member withdrawn.

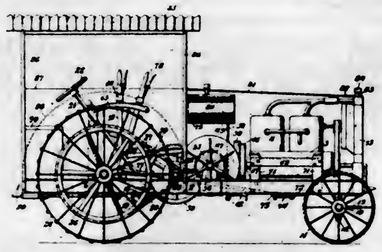
[Claims 6 and 7 not printed in the Gazette.]

1,154,767. TRANSMISSION MECHANISM. HENRY J. HEIDER, Carroll, Iowa, assignor to Heider Mfg. Co., Carroll, Iowa. Filed May 9, 1914. Serial No. 837,440. (Cl. 74—26.)

1. The combination with a frame, of a motor movably mounted thereon, driving means actuated by the motor, driven elements adapted to be engaged by said driving means, means for moving the motor for governing the relation between said driving means and driven elements to regulate the speed of said means, and elements for operating the driven means for controlling the engagement between said driven elements and driving means.

2. A machine of the class described including a main frame, a motor slidable longitudinally of the main frame and carrying and actuating a gear element, a transverse shaft, spaced gear elements fixed to the transverse shaft and located at opposite sides of the motor actuated gear element, means for moving the motor for adjusting the gear element thereof radially with respect to the spaced

gear elements, and shifting mechanism for moving the transverse shaft lengthwise to carry the said spaced gear elements into and out of engagement with the motor actuated gear element.



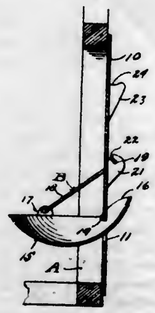
3. A machine of the class described including a main frame having a longitudinal guide or way, a subframe mounted upon and slidable along the guide or way, a motor mounted on the subframe and provided at the back with a gear element, a coacting gear element, and operating mechanism for moving the subframe and the motor for adjusting the motor actuated gear element radially with respect to the coacting gear element, said operating mechanism comprising a transverse lever fulcrumed on the main frame, means for connecting the transverse lever with the subframe, and an operating lever connected with the transverse lever.

4. A machine of the class described including a main frame having a longitudinal guide or way, a subframe slidable along the guide or way, a motor mounted on the subframe and carrying and actuating a gear element, a coacting gear element, and operating mechanism for moving the subframe and the motor for adjusting the motor actuated gear element radially with respect to the coacting gear element, said operating mechanism being provided with means for disconnecting the subframe from it to permit the subframe and the motor to be removed from the main frame.

5. A machine of the class described including a main frame provided at its front portion with a longitudinal guide or way, a subframe slidable along the guide or way, a motor mounted on the subframe and carrying at the back and actuating a gear element, said gear element being disposed transversely of the machine, a transverse shaft mounted on the main frame in rear of the subframe, spaced gear elements journaled on the transverse shaft at opposite sides of the motor actuated gear element, and operating mechanism connected with the subframe for sliding the same.

[Claims 6 to 11 not printed in the Gazette.]

1,154,768. STOCK-TROUGH. JOHN HEROLD, Lewiston, Nebr. Filed July 13, 1914. Serial No. 850,776. (Cl. 119—63.)



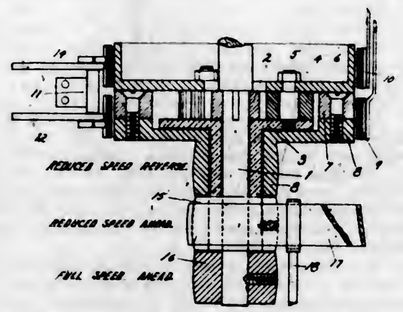
1. A stock trough comprising a supporting structure, a trough pivoted on the structure, a bail pivoted to the trough, and projections on the structure at different elevations selectively engageable by the bail to support the trough in either horizontal or vertical position.

2. A stock trough comprising a supporting structure, a trough pivoted on the structure, a bail pivoted to the trough, and projections on the opposite side of the structure from the pivot of the bail engageable by the latter to support the trough in either vertical or horizontal position.

3. A stock trough comprising a supporting panel having an opening therein, a trough pivotally supported by the panel and including a spout constantly projecting through said opening, a bail having its arms connected to the trough and slidable through openings in the panel, and projections on the panel at different elevations and selectively engageable by the arm connecting portions of the bail to support the trough in horizontal or vertical position.

4. A stock trough comprising a supporting panel having an opening therein, a trough pivotally supported by the panel and including a spout constantly projecting through said opening, a bail having its arms connected to the trough and slidable through openings in the panel, and tongues struck from said panel and selectively engageable by the arm connecting portion of the bail to support the trough in either horizontal or vertical position.

1,154,769. PLANETARY GEARING. HARRY HERTZBERG, Denver, Colo. Filed Oct. 6, 1914. Serial No. 865,336. (Cl. 74—34.)



1. In gearing of the class described, a driving member, a sun gear secured thereto, an internal gear, intermediate gears meshing with the sun gear and internal gear, a carrier for the intermediate gears, a brake element on the carrier, a brake element on the internal gear, and a rotating member secured to the carrier as a means for transmitting power.

2. In gearing of the class described, a driving member, a sun gear secured thereto, an internal gear, intermediate gears meshing with the sun gear and internal gear, a carrier for the intermediate gears, a brake element on the carrier, a brake element on the internal gear, a rotating member secured to the carrier, a rotating member secured to the internal gear, a rotating member secured to the driving member, a shifting element slidably secured and coöperating with the said members.

3. In gearing of the class described, a driving member, a sun gear secured thereto, an internal gear, intermediate gears meshing with the sun gear and internal gear, a carrier for the intermediate gears, a carrier for the internal gear, said internal gear having external teeth, a second internal gear, intermediate gears meshing with the external teeth and second internal gear, a carrier for second intermediate gears, a carrier for second internal gear, brake elements on the intermediate gear carriers, brake elements on the internal gears and brake mechanism coöperating with each element.

4. In gearing of the class described, a driving member, a sun gear secured thereto, an internal gear, intermediate gears meshing with the sun gear and internal gear, a carrier for the intermediate gears, a carrier for the internal gear, said internal gear having external teeth, a second internal gear, intermediate gears meshing with the external teeth and second internal gear, a carrier for second intermediate gears, a carrier for second internal gear, brake elements on the intermediate gear carriers, brake elements on the internal gears, a brake mechanism coöperating with each element, and a rotating member secured to each carrier.

5. In gearing of the class described, a driving member, a sun gear secured thereto, an internal gear, intermediate gears meshing with the sun gear and internal gear, a carrier for the intermediate gear, a carrier for the internal gear, said internal gear having external teeth, a second internal gear, second intermediate gears meshing with the external teeth and second internal gear, a carrier for second intermediate gears, a carrier for second internal gear, brake elements on the intermediate gear carriers, brake elements on the internal gears, a brake mechanism coöperating with each element, a rotating member secured to each carrier, a driven shaft, a slidable member attached thereto, engaging any rotating member and means for sliding the same.

1,154,770. BLASTING-CARTRIDGE. PAUL HEYLANDT, Berlin, Germany, assignor to Firm Maschinen- und Apparate-Fabrik A. R. Ahrendt & Co., Berlin, Germany. Filed Mar. 25, 1915. Serial No. 16,928. (Cl. 102—6.)



1. In a live cartridge of the character described, a cartridge case, a pervious member dividing the case into two chambers, a charge of carboniferous material in one of said chambers, and a liquid oxygenous gas charge positioned in the other chamber and adapted to seep through the pervious member into contact with the first mentioned charge.

2. In a live cartridge of the character described, a cartridge case constructed of substantially non-heat-conducting material, a pervious member dividing the case into two chambers, a charge of carboniferous material in one of said chambers, and a liquid oxygenous gas charge positioned in the other chamber and adapted to subject the carboniferous charge to severe cold and then to seep through the pervious member into contact with the same.

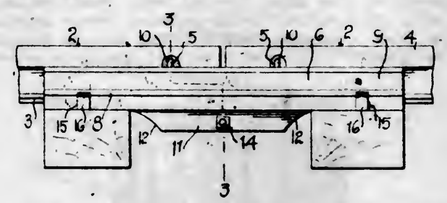
3. In a live cartridge of the character described, a cartridge case, a pervious member dividing the case into two chambers, a charge of comminuted carboniferous material in one of said chambers, and a liquid oxygenous gas charge positioned in the other chamber and adapted to seep through the pervious member into contact with the first mentioned charge.

4. In a live cartridge of the character described, a cartridge case, a pervious member dividing the case into upper and lower chambers, a charge of carboniferous material in the lower chamber, and a liquid oxygenous gas charge positioned above the first mentioned charge in the upper chamber.

5. In a live cartridge of the character described, a cartridge case, a bag of pervious material mounted within the case, a charge of carboniferous material in said bag, and a charge of liquid oxygenous gas positioned within the case in contact with the bag and adapted to seep through the latter.

[Claim 6 not printed in the Gazette.]

1,154,771. RAIL-JOINT. JAMES M. HINKLE and JOHN S. COOPER, Somerset, Ky. Filed Apr. 14, 1915. Serial No. 21,879. (Cl. 239—10.)



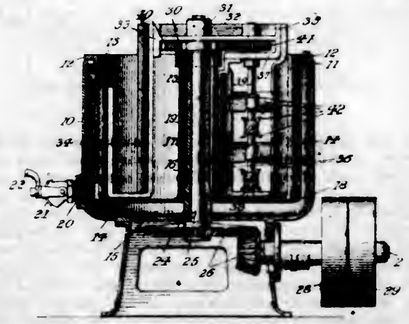
1. The combination with a rail having a base flange formed with oppositely disposed upwardly and inwardly beveled faces, of oppositely disposed complementary fish plates formed to embrace the base flange of the rail and confront each other below the rail, each of said fish plates having a vertical web, an outwardly and downwardly extending web, the under face of which is inclined to contact with and have wedging engagement with the upper face of the corresponding base flange, and a horizontal web, the horizontal web engaging beneath the base of the rail and means disposed below the rail for urging said fish plates toward each other and against the rail, the upper edge of the vertical web of each fish plate engaging beneath the head of the rail and being formed with a plurality of studs, the rail being formed upon the under face of its head with a plurality of stud-receiving vertically extending recesses, the outer faces of which are inclined outward and downward, whereby upon the forcing of the fish plates toward each other the vertical flanges of the fish plates will be urged into wedging engagement between the base flange of the rail and the head to thereby clamp the fish plates into wedging engagement with the base and head of the rail.

2. The combination with a rail having a base flange formed with oppositely disposed upwardly and inwardly beveled faces, of oppositely disposed complementary fish-plates formed to embrace the base flange of the rail and confront each other below the rail, each of said fish-plates having a vertical web, an outwardly and downwardly extending web, the under face of which is inclined to contact with and have wedging engagement with the upper face of the corresponding base flange, and a horizontal web, the horizontal web being adapted to engage beneath the base of the rail, the upper edge of the vertical web of each fish-plate being provided with a plurality of studs, and the under face of the horizontal web being provided with a longitudinally extending thickened web less in width than the width of the horizontal web and terminating short of its outer edge face and perforated for the passage of a bolt the portions of the horizontal web overhanging the longitudinally extending web acting to protect the ends of the bolt from moisture, the rail being formed upon the under face of its head with a plurality of stud-receiving vertically extending recesses whereby upon the forcing of the fish-plates toward each other and in contact with the rail, the studs on the upper edge of the vertical flange of each fish-plate will be forced into engagement with the recesses in the head of the rail.

1,154,772. MELTING-KETTLE. PAUL G. HOLLSTEIN, Caristadt, N. J., assignor to J. M. Lehmann Company, New York, N. Y. Filed Jan. 16, 1915. Serial No. 2,698. (Cl. 107—35.)

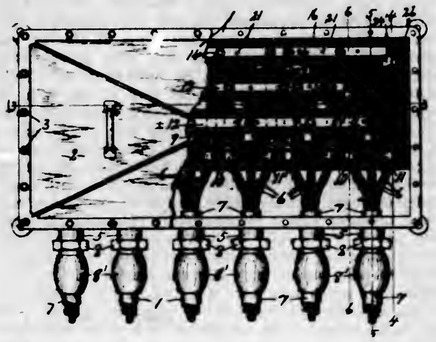
1. A device of the character described, comprising a jacketed vessel, a rotatable shaft extending axially therethrough, a traverse on the shaft, a U-shaped stirrer suspended from the traverse and rotatable around the shaft-axis, a spindle stepped into the bottom of the stirrer and into the traverse and rotatable around the shaft-axis and likewise around its own axis, and inclined vanes carried by the spindle and accommodated within the clearance of the U-shaped stirrer.

2. A device of the character described, comprising a cylindrical casing having an inner tube, a vessel fitted within the casing and having an outer tube that encompasses the inner tube, a heating jacket formed between casing and vessel, said jacket extending likewise between the tubes, a rotatable shaft extending centrally through the casing-tube, a traverse on the shaft, a U-shaped stirrer



suspended from the traverse, a spindle stepped into the traverse and into the bottom of the stirrer, inclined vanes carried by the spindle, a gear wheel fast on the outer tube, and a gear wheel on the spindle that meshes into the first named gear wheel, whereby the rotation of the shaft will effect a rotation of the stirrer and of the spindle around the axis of the shaft, and likewise a rotation of the spindle around its own axis.

1,154,773. JUNCTION-BOX. SCOTT A. HUNTINGTON, Syracuse, N. Y. Filed Feb. 18, 1913. Serial No. 749,081. (Cl. 247—15.)

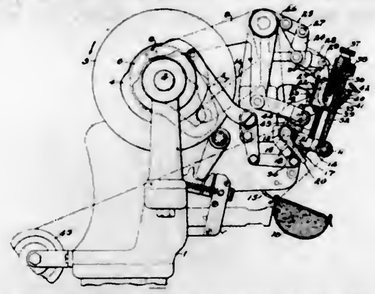


1. In combination with a water-tight junction box having cable openings in one side and a cover for the front, insulator-plates secured in spaced relation one over the other to the back of the box, bus-bars secured in spaced relation and in parallelism to the front face of the front plate so as to face the cover, conducting bars clamped between said plates and each provided with a pair of binding posts extending through openings in the front plate, cable terminals each connected to one of the binding posts, and pivoted conducting members connecting the other binding posts to their respective bus-bars.

2. In combination with a water-tight junction box and a cover therefor, the box being provided with cable openings in one side, insulator-plates secured in spaced relation one to the other to the back of the box, bus-bars secured side by side in spaced relation to the front face of the front plate, said front plate being provided with forwardly projecting partitions between adjacent bus-bars, and conducting bars clamped between and by said plates and each provided with a pair of binding posts projecting through openings in the front plate, one of the binding posts of each conducting bar being electrically connected to its corresponding bus-bar in front of the front plate, and cable terminals connected to the other binding posts.

3. In combination with a water-tight junction box having cable openings in one side and a cover for the front thereof, insulator-plates secured in spaced relation one over the other to the back of the box, parallel bus-bars secured to the front face of the front plate at different distances from the side of the box having the cable openings, the bus-bar nearest such side being the neutral bar, electric conducting cross-bars clamped by and between said plates and extending to opposite sides of the neutral bus-bar, each cross-bar having a binding post extending through the front plate between the neutral bus-bar and side of the box having the cable openings and provided with a terminal connection for one of the cables, the opposite end of each bar being provided with a binding post extending through the front plate and electrically connected to its corresponding bus-bar.

1,154,774. CHAIN-STITCH SHOE-SEWING MACHINE. ARTHUR ERNEST JESSAM, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 2, 1910. Serial No. 580,171. (Cl. 112—20.)



1. A chain stitch shoe sewing machine, having, in combination, stitch forming mechanism, a thread supply, a take-up, an auxiliary take-up coöperating with the take-up to control the thread given up by the take-up and exerting a light strain on the thread as compared with the strain exerted in setting a stitch, and means for preventing the auxiliary take-up from acting during the time the thread is being pulled from the thread supply.

2. A chain stitch shoe sewing machine, having, in combination, stitch forming mechanism, a thread supply, a positively actuated take-up, a yielding auxiliary take-up coöperating with the take-up to control the thread given up by the take-up and exerting a light strain on the thread as compared with the strain exerted in setting a stitch, and means for preventing the action of the auxiliary take-up while the thread is pulled from the thread supply, whereby the action of all yielding means, which would tend to steal thread, is prevented.

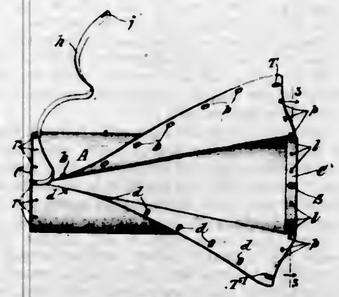
3. A chain stitch shoe sewing machine, having, in combination, stitch forming mechanism, a thread supply, a take-up having a positive action on the thread, a yielding auxiliary take-up coöperating with the take-up to control the thread given up by the take-up and exerting a light strain on the thread as compared with the strain exerted in setting a stitch, and means for locking the auxiliary take-up during the time the thread is being pulled from the thread supply, whereby the thread is relieved from the action of all yielding means tending to steal thread.

4. A chain stitch shoe sewing machine, having, in combination, stitch forming mechanism, a thread supply, a take-up having a positive action on the thread, a spring-pressed auxiliary take-up, and means independent of the action of the thread and operating in timed relation to the stitch forming mechanism for retracting the auxiliary take-up against the tension of its spring during that part of the cycle of stitch forming operations when the thread is pulled from the thread supply.

5. A chain stitch shoe sewing machine, having, in combination, stitch forming mechanism, a thread supply, a take-up, a spring-pressed auxiliary take-up, and means for retracting and locking the auxiliary take-up against the tension of its spring during a part of the stitch forming operation.

[Claims 6 to 26 not printed in the Gazette.]

1,154,775. CONTAINER FOR GOODS IN TRANSIT. HENRY H. JOHNSON, Summit, N. J. Filed May 4, 1915. Serial No. 25,664. (Cl. 150—52.)



1. A container adapted for goods in transit, which comprises two end-pieces, and a flexible side-piece wrapped around them and of sufficient width throughout its length to permit its side edges to overlap one another throughout their length; one of said end-pieces having a rigid boundary to which a corresponding end edge of the flexible wrapper is connected; means for securing together said overlapping side edges of the wrapper, and also the wrapper-end-edge and the end-piece rigid boundary.

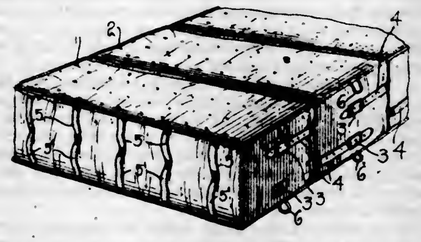
2. In a container, the combination with a flexible wrapper, of a separate end-piece having a rigid boundary, around which the end-edge of the wrapper is to be wrapped to bring its side edges together to close the container, and means for securing the wrapper end-edge to said end-piece and the wrapper side-edges to each other.

3. In a container, the combination with a flexible wrapper, of a separate end-piece having a rigid boundary around which the end-edge of the wrapper is to wrapped to bring its side edges together to close the container, intermeshing registering means between the meeting side-edges of the wrapper, and between the end-edge of the wrapper and said end-piece; and a locking-strap by which the side-edges of the wrapper are locked together and the wrapper is locked to the end-piece.

4. In a container, the combination with a flexible wrapper, of two separate end-pieces around which the end-edge of the wrapper is to be wrapped to bring its side-edges together to close the container; one of the end-pieces being permanently secured to the end edge of the wrapper which is wrapped around it; the other end-piece having a rigid boundary, the lower part of which is permanently secured to the lower part of the end-edge of the wrapper which is wrapped around it; and a detachable pin-and-hole registering and locking means between the upper part of such end-piece and the parts of the end-edge of the wrapper which are wrapped around it.

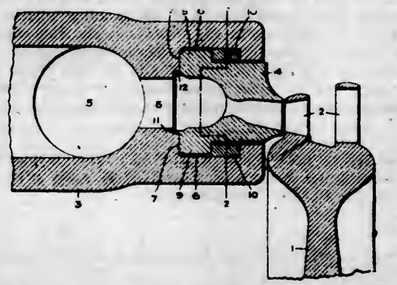
5. In a container, the combination with a flexible wrapper, of two end-pieces separate from the wrapper but connected thereto, and around which the end edges of the wrapper are to be wrapped to close the container; staples and eyelets in the meeting side-edges of the wrapper; a locking strap secured at one end to the container near one end thereof, and adapted to be threaded through said staples; and means for locking the free end of the strap to a part near the other end of the container.

1,154,776. MATTRESS. WILLIAM EVANS JOSEPH, Hemlock, Ohio. Filed July 27, 1914. Serial No. 853,369. (Cl. 5—13.)



A mattress including a plurality of separate sections and means for detachably connecting the sections, said means including a plurality of loops attached to the side walls of the sections at the meeting terminals thereof, said loops being arranged in upper and lower horizontal series, the loops of one section being adapted to lie between the loops of the next adjacent section, the upper horizontal series of loops of the adjoining sections being horizontally alined, and the lower horizontal series of the adjoining sections being horizontally alined, a strap passing through the two upper series of loops of the adjoining sections, a strap passing through the two series of lower straps of the adjoining sections, and buckles secured to the side walls of the mattress section for securing the terminals of the straps thereto, the buckles for the upper strap being secured to one section and the buckles for the lower strap being secured to the other section.

1,154,777. ATTACHING MEANS FOR NOZZLES. WALTER KIESER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Feb. 21, 1914. Serial No. 820,327. (Cl. 121—57.)



1. In a nozzle fastening means, a holding member having an undercut groove, a nozzle member having a flange projecting into the undercut portion of said groove, said nozzle member and flange being of lesser dimension than the groove, means carried by one of said members and coöperating with the other for centering and guiding the nozzle member with relation to the groove so that it is spaced from the opposite sides thereof, and means for holding the flange of the nozzle member against the bottom surface of the groove.

2. In a nozzle fastening means, a holding member having an undercut groove, a nozzle member having a flange projecting into the undercut portion of said groove, said nozzle member and flange being of lesser dimension than the groove, means carried by one of said members and coöperating with the other for centering and guiding the nozzle member with relation to the groove so that it is spaced from the opposite sides thereof, and yielding means for holding the flange of the nozzle member against the bottom surface of the groove.

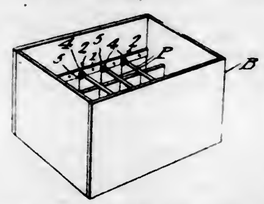
3. In a nozzle fastening means, a holder having an undercut groove and a centering groove, a nozzle having a flange projecting into the undercut portion of said groove, said nozzle and flange being of lesser dimension than the groove, projections carried by the nozzles and cooperating with the centering groove for guiding and centering the nozzles, and yielding members for holding one surface of the flange against a surface of the groove.

4. In a nozzle fastening means, a holder member having an undercut groove, a nozzle member having a flange projecting into the undercut portion of said groove, said nozzle member and flange being of lesser dimension than the groove, spaced means carried by one of said members and engaging the other for centering the same, and yielding means for holding at least one surface of the flange against a surface of the groove.

5. In combination, a holder having an undercut groove, a plurality of nozzles each having a flange that projects into the groove for holding it, the flanges of two adjacent nozzles also serving as spacing devices, means for positioning the nozzles in the groove so that they are spaced from the sides thereof, and means for forcing the said flanges against the bottom of the groove.

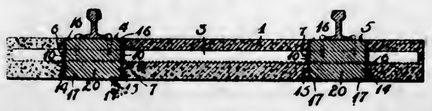
[Claim 6 not printed in the Gazette.]

1,154,778. PARTITION-HOLDER FOR BOXES. FRED S. KNAPP, Omaha, Nebr. Filed Nov. 27, 1914. Serial No. 874,260. (Cl. 217—22.)



A partition holder for boxes, embodying a strip adapted to be secured to the inner side of a box wall and having notches in its lower edge, and outstanding tongues and wings bent therefrom at the upper ends and side edges of the notches, respectively, the tongues being disposed in a plane arranged longitudinally of and at right angles with the strip and the wings being disposed in planes arranged transversely of and at right angles with the strip.

1,154,779. COMPOSITE RAILWAY-TIE. WILLIAM H. KNICKREHM, Somonauk, Ill. Filed May 25, 1915. Serial No. 30,376. (Cl. 238—3.)



1. A reinforcing frame for composite railway ties comprising a pair of laterally spaced angle bars, two pairs of cross bars connecting said angle bars, said pair being spaced apart the distance the track rails are to be spaced, the members of each pair being spaced apart and having plates secured thereto, a rail cushioning element mounted between each pair of cross bars, and means on said plates for engaging said elements to hold them in operative position.

2. A reinforcing frame for composite railway ties comprising a pair of laterally spaced angle bars, two pairs of cross bars connecting said angle bars, said pairs being spaced apart the distance the track rails are to be spaced, the members of each pair being spaced apart and having plates secured thereto, said plates having inturned flanges at their upper and lower ends, a rail cushion disposed between each pair of plates and engaged by said flanges whereby they are held in operative position.

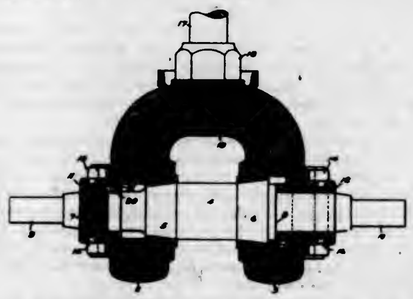
3. A reinforcing frame for composite railway ties comprising a pair of laterally spaced angle bars, two pairs of cross bars connecting said angle bars, said pairs being spaced apart the distance the track rails are to be spaced, the members of each pair being spaced apart and having plates secured thereto, said plates having inturned flanges at their upper and lower ends, a rail cushion disposed between each pair of plates and having recesses in their upper and lower faces to receive said plate flanges whereby said cushions are held in operative position.

4. A reinforcing frame for composite railway ties comprising a pair of laterally spaced angle bars, two pairs of cross bars connecting said angle bars, said pairs being spaced apart the distance the track rails are to be spaced, the members of each pair being spaced apart and having plates secured thereto, said plates having inturned flanges at their upper and lower ends, a rail cushion disposed between each pair of plates and having recesses in their upper and lower faces to receive said plate flanges whereby said cushions are held in operative position, the recesses in the upper face of said cushions being deeper than the thickness of the flanges to position the upper face of the cushion above the flanges.

5. A reinforcing frame for composite railway ties comprising a pair of laterally spaced angle bars, two pairs of cross bars connecting said angle bars, said pairs being spaced apart the distance the track rails are to be spaced, the members of each pair being spaced apart and having plates secured thereto, said plates having inturned flanges at their upper and lower ends, a rail cushion disposed between each pair of plates having recesses in their upper and lower faces to receive said plate flanges whereby said cushions are held in operative position, the lower flanges of said plates being wider than their upper flanges.

[Claims 6 and 7 not printed in the Gazette.]

1,154,780. CROSS-HEAD. GUSTAF L. KOLLBERG, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a Corporation of Delaware. Filed Dec. 14, 1914. Serial No. 877,812. (Cl. 121—106.)



1. In combination, a bifurcated body having a pair of branches, means connecting said branches, means having screw-threaded coaction with said connecting means for clamping together one of said branches and said connecting means, and means for clamping together at engaging surfaces the other of said branches and said connecting means, said clamping means including circumferential wedge surfaces coaxial with said connecting means and said wedge surfaces placing entirely under compression the portions of said clamping means lying between said wedge surfaces and said engaging surfaces.

2. In combination, a bifurcated body having a pair of branches, a pin connecting said branches, a nut having screw-threaded coaction with said pin for clamping one of said branches to said pin, and a second nut having screw-threaded coaction with the other of said branches for clamping the same to said pin.

3. In combination, a bifurcated body having a pair of branches, a pin having a plurality of tapered portions, a nut having screw-threaded coaction with said pin for clamping one of said branches to at least one of said tapered portions, and a second nut having screw-threaded coaction with the other of said branches for clamping the same to at least one of said tapered portions.

4. In combination, a bifurcated body having a pair of branches, a piston rod and reach rods subjecting said body to alternate tension and compression stresses in the direction of the length of said branches, a pin connecting said branches, and circumferential wedge means coaxial with said pin and located at each of said branches for separately clamping together said pin and branches.

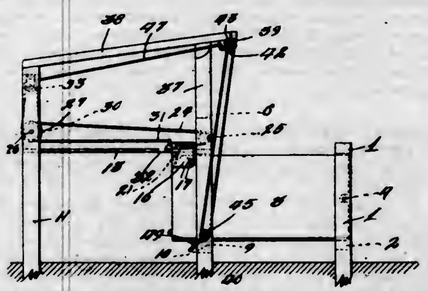
1,154,781. BROOM-BRIDLE. LYDIA J. KOPISCHKE, Vernon Center, Minn. Filed June 12, 1915. Serial No. 33,765. (Cl. 15—23.)



1. A broom bridle, comprising an adjustable collar, straps secured at one end to said collar, rings secured to the other ends of said straps, binding members adapted to extend through the broom head and designed to connect the rings in pairs on opposite sides of the head, and a band connected to the rings and adapted to extend around the broom head, the band being provided with means whereby it may be varied in size, for the purpose specified.

2. A broom bridle comprising an adjustable collar, straps arranged in two sets and secured at one end to the collar on opposite sides thereof, the other ends of said straps being provided with eyes, two sets of rings connected respectively to the eyes of the straps, links formed with eyes through which the rings pass, the links forming a band adapted to extend around the head of a broom, and provided with means whereby said band may be tightened around the broom head, binding members carried by one set of rings and designed for detachable hooked engagement with the other rings and to extend through the broom head, and another band secured to the straps intermediate of the ends of the latter and also provided with means whereby it may be tightly clamped around the head of the broom.

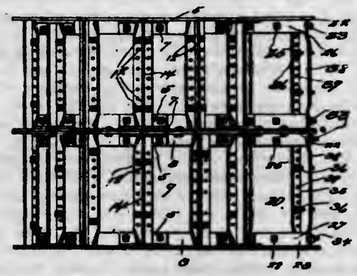
1,154,782. GATE-OPERATING MEANS. EDWARD H. KOTILA, Frederick, S. D. Filed Apr. 8, 1915. Serial No. 19,987. (Cl. 39—28.)



1. In combination with a sliding gate, a hanger post in which the gate slides, a standard spaced apart from the hanger post and provided with a winding drum and a plurality of pulleys above the drum, a guide rail connecting the standard and the hanger post on which the gate is mounted, a pulley journaled in the hanger post, a cable having its opposite ends connected to the gate, and one portion of the cable passing over the pulley of the hanger post, and the major portion of the cable wound about and connected to the drum, and means operated from either side of the gate and coöperating with the pulleys on the standard for rotating the drum in one direction or the other, for opening or closing the gate.

2. In combination with a sliding gate, a hanger post in which the gate slides, a standard spaced apart from the hanger post and provided with a winding drum and a plurality of pulleys above the drum, a guide rail connecting the standard and the hanger post on which the gate is mounted, a pulley journaled in the hanger post, one end of the gate having a metallic housing having an arch portion adjacent the upper portion of the gate, a loop connected to the arched portion of the housing at one end, a latch dog spring held and being mounted in the other end of the arch of the housing, the guide rail having a notch to receive the latch dog, a cable having one end connected to the loop of the housing and passing over the pulley of the hanger post and having its major portion wound about and connected to the drum, and its other end connected to the latch dog, and means operated from either side of the gate and coöperating with the pulleys of the standard for rotating the drum to thereby first release the latch and then open the gate.

1,154,783. SILO-MOLD. JOHN KRUZICK, Winamac, Ind. Filed Jan. 25, 1915. Serial No. 4,204. (Cl. 25—124.)



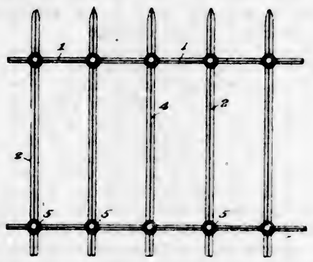
A silo mold comprising inner and outer concentric walls, said walls having correspondingly constructed offset extension walls conforming in contour to each other, designed to mold a hollow offset extension wall to the silo, each of the offset extension walls consisting of upper and lower strips angular in cross section, plates connecting the upper and lower strips, reinforcing strips T-shaped in cross section connecting the adjacent edge portions of said plate and having their upper and lower ends disposed between the strip and said plates, and a connecting strap between the upper strips of the offset extension walls, the T-shaped strips of one of the extension walls having their upper and lower ends slotted to receive the vertical flanges of the angular upper and lower strips.

1,154,784. METALLIC STRUCTURE AND PROCESS OF MAKING THE SAME. MAURICE LACHMAN, New York, N. Y. Filed Dec. 17, 1914. Serial No. 877,639. (Cl. 219—10.)

1. The method of producing metallic structures comprising intersecting members consisting in forming an opening at the edge of one of the members corresponding in shape to the other member, passing the other member through said opening so that the outer edges of the intersecting members lie in the same plane, superposing a fastener over the intersections in contact with the edges thereof around the intersections and electrically welding said fastener to said members.

2. The method of producing metallic structures comprising intersecting members consisting in forming an open-

ing at the edge of one of the members corresponding in shape to the other member, passing the other member through said opening whereby the outer edges of the intersecting members lie in the same plane and electrically welding a third member to said edges at the intersection of said members.



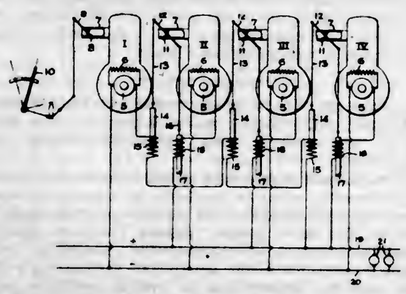
3. The method of producing metallic structures comprising intersecting members consisting in forming an opening at the edge of one of the members, passing the other member through said opening whereby the outer edges of said intersecting members lie in the same plane and locking said members together by a superimposed member at the intersection integrally united with the edges of the intersecting members.

4. The method of producing metallic structures comprising intersecting members consisting in forming an opening at the edge of one of the members corresponding in shape to the other member, passing the other member through said opening whereby the outer edges of the intersecting members lie in the same plane, superposing a third member on said members at the intersections and securing said third member to said intersecting members whereby the intersecting members are locked to each other.

5. The method of producing metallic structures comprising intersecting members consisting in forming an opening at the edge of one of the members corresponding in shape to the other member, passing the other member through said opening whereby the outer edges of the intersecting members lie in the same plane, superimposing a ridged button on said members whereby the ridge thereof intersects said members at points around the intersection and electrically welding said button to said members at such intersecting points to lock the members to each other.

[Claims 6 to 10 not printed in the Gazette.]

1,154,785. CONTROLLING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. HERMANN LEMP, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Apr. 8, 1914. Serial No. 830,517. (Cl. 105—17.)



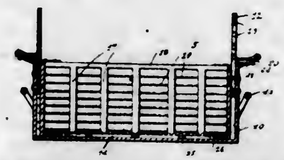
1. In combination, a pilot engine and one or more additional engines, said engines being independently supported and arranged to drive a common load, regulators for said engines, a means for directly moving the regulator of the pilot engine and fluid pressure means driven by the pilot engine and by said additional engines and responsive to the speed thereof for actuating the remaining regulators, said means being responsive to the action of the pilot engine and to the modifying action of the said additional engines.

2. In combination, a pilot engine and one or more additional engines, said engines being arranged to drive a common load, regulators for said engines, a device for moving the regulator of the pilot engine, fluid actuated means for moving each of the remaining regulators, and means driven by the pilot engine and also by the said additional engines for creating fluid pressures that act differentially on said fluid actuated means.

3. In combination, a pilot engine and one or more additional engines, said engines being arranged to drive a common load, regulators for all of the engines, a device for moving the regulator of the pilot valve independently of the other regulators, a means driven by and responsive to the speed of the pilot engine which creates a force tending to move all of the remaining regulators in the same sense and to the same degree, and an individual means for each of said additional engines which is driven by and responds to the speed thereof to create a force which coöperates with the force created by said pilot engine means to determine the final setting of its regulator.

4. In combination, a pilot engine and one or more additional engines, said engines driving a common load, regulators for all of the engines, a device for moving the regulator of the pilot valve independently of the other regulators, a pump driven by the pilot engine whose pressure varies with changes of speed thereof, a pump driven by each of said additional engines whose pressure varies with changes of speed thereof, and a means for moving the regulator of each of said additional engines which is responsive to the pressure developed by its pump and that of the pilot engine.

1,154,786. CLOTHES-BOILER. WILLIAM LINDBERG, Miles City, Mont. Filed Aug. 11, 1914. Serial No. 856,290. (Cl. 68—30.)

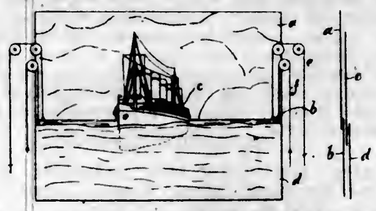


The combination with a receptacle having upstanding bars at its ends provided with vertically spaced openings, of a basket movable vertically in the receptacle, handles on the ends of the basket consisting of side bars, spaced transverse bars supported by the side bars, a plunger slidably supported by the transverse bars, one of the transverse bars having sockets formed therein, a bowed spring having its ends fixed in the sockets and rigidly connected to the plunger, said spring serving to normally hold the plunger engaged in selected openings in the upstanding bars.

1,154,787. APPARATUS FOR PRODUCING ILLUSIONARY EFFECTS. LANGDON MCCORMICK, New York, N. Y. Filed Dec. 20, 1913. Serial No. 807,891. (Cl. 46—70.)

1. Apparatus for producing illusionary effects in which screens are used, one of which is movable in relation to others, the representation of an object, say a picture on a screen, being positioned between the screens so as to be exhibited to a greater degree when the said movement is in one direction and to a lesser degree when movement is in the other direction.

2. In an apparatus for producing illusionaly effects, the combination of a fixed screen; movable screens in proximity of the fixed screen; and a representation of an object associated with the screens and adapted to be variably covered by the movement of the movable screens.

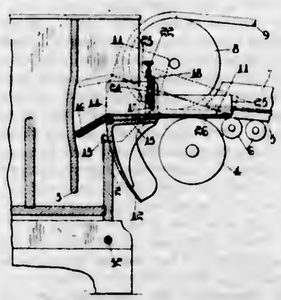


3. In an apparatus for producing illusionary effects, the combination of a plurality of movable screens; and a representation of an object associated with the sreens and adapted to be variably covered by the movement of the movable screens.

4. In an apparatus for producing illusionary effects, the combination of a plurality of movable screens; and a movable representation of an object associated with the screens and adapted to be variably covered by the movement of the movable screens.

5. In an apparatus for producing illusionary effects, the combination of a plurality of movable screens; and a representation of an object associated with the screens and adapted to be variably covered by the movement of the variable screens, said representation of the object being adapted to be shortened and lengthened.

1,154,788. FLOW-REGULATOR FOR PAPER-MAKING MACHINES. LESTER S. MCCURDY, Thorold, Ontario, Canada. Filed June 19, 1914. Serial No. 846,108. (Cl. 92—44.)



1. In paper making machinery the combination of a flow box; a traveling mold; deckle straps coöperating with said mold; a sluice way having the forward edge of its bottom reaching to a point close to and above the upper surface of the mold and between the deckle straps and its rear end adapted to receive stock from the flow box; and means for supporting said sluice way so that it may be tilted to varying angles to the horisontal on an imaginary axis located substantially at the aforesaid forward edge.

2. In paper making machinery the combination of a flow box; a traveling mold; a curved breast piece forming an overfall for the stock flowing from the box; a sluice way secured to said breast piece in fixed relationship thereto and having the forward edge of its bottom reaching to a point close to and above the mold; and means for supporting said sluice way and breast piece so that they may be adjusted to raise the breast piece and tilt the sluice way on a stationary imaginary axis located substantially at the aforesaid forward edge, the said breast piece being suitably fitted to the front of the flow box to prevent leakage.

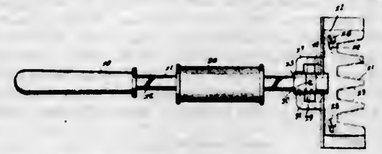
3. In paper making machinery the combination of a flow box; a traveling mold; deckle straps coöperating with said mold; a breast piece vertically adjustable to vary the overfall for the stock; and a sluice way adapted to discharge on to the mold between the deckle straps movable to follow the breast plate and tiltable to vary its angle to the aforesaid mold on an imaginary axis at its forward edge.

4. In paper making machinery the combination of a flow box; a traveling mold; a breast piece vertically adjustable to vary the overfall for the stock; a sluice way movable to follow the breast plate and tiltable to vary its angle to the aforesaid mold; a strainer board secured to the breast piece; and a partition with which the rear edge of said strainer board contact as the breast piece rires and falls.

5. In paper making machinery the combination of a flow box; a traveling mold; a curved breast piece forming an overfall for the stock flowing from the box; a sluice way secured to said breast piece in fixed relationship thereto and having the forward edge of its bottom reaching to a point close to and above the mold; means for supporting said sluice way and breast piece so that they may be adjusted to raise the breast piece and tilt the sluice way on an axis located substantially at the aforesaid forward edge, the said breast piece being suitably fitted to the front of the flow box to prevent leakage; a strainer board secured to the breast piece; and a partition with which the rear edge of said strainer board contacts as the breast piece rises and falls, said partition being curved to correspond with the curved path followed by the rear edge of the strainer board.

[Claims 6 to 12 not printed in the Gazette.]

1,154,789. TRIMMER. ANDREW MCNISH, New Suffolk, N. Y. Filed June 13, 1913. Serial No. 773,501. (Cl. 30—13.)

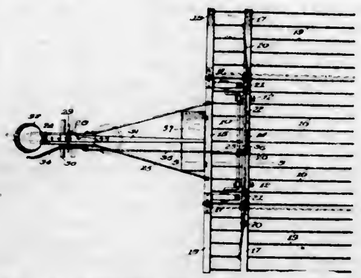


1. A trimmer including a handle, a shaft the one end of which is revolubly mounted in said handle, said shaft being provided with a serpentine way in the periphery thereof, and a reduced outer end, a finger bar, a sleeve formed on said finger bar and a yoke member carried by said finger bar, having an opening formed therein registering with the opening in said sleeve, a second sleeve fixedly carried on said reduced end between said sleeve and the opening in said yoke member, a segment formed on the outer periphery of said sleeve, a cutter bar mounted for oscillation on said finger bar and having the rear end thereof extended, a rack bar formed on said rear end for engagement with said segment, an elongated sleeve slidably mounted on said shaft and a stud formed on the inner periphery of said sleeve for engagement in said groove for rotating said shaft and imparting motion to said cutter bar.

2. A trimmer including a handle, a shaft the one end of which is revolubly mounted in said handle, said shaft being provided wtih a serpentine way in the periphery thereof and a reduced outer end, a finger bar, a sleeve formed on said finger bar, a yoke member disposed rearwardly from said finger bar and having an opening therein alining with the opening in said sleeve, a second sleeve fixedly mounted on said reduced end, a segment formed on the outer periphery of said sleeve, teeth formed on said segment, a cutter bar provided with slots in proximity to the opposite ends thereof, said cutter bar mounted for oscillation on said finger bar, a set screw extending through said sleeve and having engagement with said finger bar for limiting the movement of said cutter bar, the rear end of said cutter bar being extended, a rack bar formed on said extended end adapted for meshing engagement with the teeth of said segment, an elongated sleeve

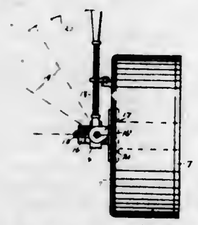
slidably mounted on said shaft, a stud formed on the inner periphery of said sleeve for engagement in said groove whereby to rotate said shaft for imparting movement to said cutter bar, and a handhold arranged on said sleeve for facilitating the operation of the latter.

1,154,790. RAKE. CHARLES J. MALLETT, Kempner, Tex., assignor of one-fourth to Frank C. Higginbotham, Holland, Tex., and one-fourth to Russell H. Whigham, Kempner, Tex. Filed July 7, 1914. Serial No. 849,411. (Cl. 56—66.)



A hay rake comprising a wheeled rake frame, a support mounted behind the said frame, braces connecting the support with the rake frame, a fork having its stem swiveled in the support and rising above the same, a wheel carried by the fork, a draft tongue mounted on the support and located to the rear of the rake frame, said draft tongue having an aperture through which the upper end of the fork stem loosely passes, said draft tongue being provided with a seat standard and pivoted on the fork stem and revoluble about said stem as an axis, a seat on said standard, means to hold said tongue in directions pointing to and from the rake selectively, and pedal means at the upper end of the standard engageable when traveling in either direction by the feet of a person in said seat.

1,154,791. MECHANICAL RELEASING MEANS FOR ELECTRIC BRAKES. GEORGE MATTHEW MARR, New York, N. Y. Filed Feb. 26, 1914. Serial No. 821,348. (Cl. 74—70.)



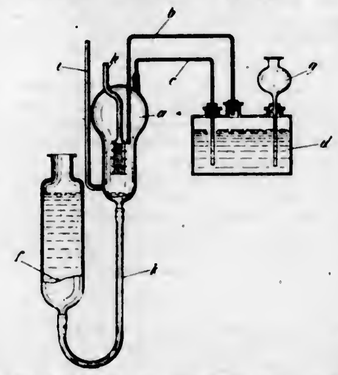
1. An electric brake having a magnet, a movable armature, a spring for securing an operative pressure of said armature and a mechanical means arranged closely adjacent to the exterior of said brake and adapted to rapidly release the operative pressure of said armature and of said spring by the same movement as and for the purpose set forth.

2. An electric brake, having a magnet, a movable armature, a spring for securing an operative pressure upon said armature, an adjustable block for obtaining a pressure upon said spring and a mechanical means for rapidly releasing said block and the pressure upon said spring, as and for the purpose set forth.

3. An electric brake, having a magnet, a movable armature, a spring for urging said armature away from said magnet, an adjustable block for supporting said spring and obtaining an operative pressure therein and an adjustable cam adapted to free said block and the pressure of said spring as and for the purpose set forth.

4. An electric brake, having a magnet, a movable armature for said magnet, a resilient means urging said armature into an operative condition, a block for adjusting the pressure of said resilient means, a cam for operating said block and a lever connected to said cam and adapted to partially rotate said cam, and a means adapted to retain said lever in a predetermined position, as and for the purpose set forth.

1,154,792. APPARATUS FOR ANALYZING GASES. OTTO MATZERATH, Aachen, Germany. Filed Oct. 9, 1914. Serial No. 865,934. (Cl. 23—3.)

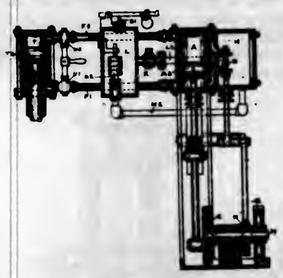


1. In an apparatus for analyzing gas, comprising a measuring vessel, an absorption-vessel and a hydraulic pumping device for forcing the gas to be analyzed from the measuring vessel into the absorption-vessel and sucking back the non-absorbed gas-remainder from the latter vessel into the first-mentioned one, two constantly open ducts connecting the measuring vessel, which is provided with a gas introducing pipe with the absorption-vessel containing the absorbing liquid, one of these ducts having one of its ends extending through the top end of the measuring vessel to a certain extent into the same and having the other end detachably fastened to and ending at the top-wall of the absorption-vessel, and the other duct having one end attached to and ending at the top of the measuring vessel and the other end air-tightly guided through the top-wall of the absorption-vessel and extending into the same to a point near the bottom of this vessel.

2. In an apparatus for analyzing gas, comprising a measuring vessel, an absorption-vessel and a hydraulic pumping device for pressing the gas to be analyzed from the measuring vessel into the absorption-vessel and sucking back the non-absorbed gas-remainder from the latter vessel into the first-mentioned one, two constantly open ducts connecting the measuring vessel, which is provided with a gas introducing pipe, with the absorption-vessel containing the absorbing liquid, one of said ducts ending below the top-surface of the absorbing liquid and leading a part of the gas to be analyzed through this liquid, and the other one ending above and leading a part of the gas against the surface of the absorbing liquid and serving to draw back the non-absorbed gas-remainder into the measuring vessel when the pumping device is correspondingly operated.

1,154,793. COMPRESSED-AIR SYSTEM FOR OPERATING PNEUMATIC TOOLS. CHARLES OTIS PALMER, Cleveland, Ohio. Filed Apr. 20, 1907. Serial No. 369,258. (Cl. 125—14.)

1. In combination with an air compressor cylinder and piston therein, of a tool cylinder and piston therein, fluid pressure connections between the ends of said cylinders forming thereby two closed compartments, an equalizer chamber, ports connecting the equalizer chamber with both of said compartments, an equalizer valve controlling both of said ports, means to reciprocate the compressor piston and means operatively timed with the compressor piston to operate said valve to open the chamber to each of said compartments alternately.



2. The combination with an air compressor cylinder and piston therein, of a tool cylinder and piston therein, fluid pressure connections between the ends of said cylinders forming thereby two closed compartments, an equalizer chamber, ports connecting the equalizer chamber with both ends of the compressor cylinder, an equalizer valve controlling said ports, means to reciprocate the compressor piston and means operatively timed with the compressor piston for operating said valve to establish communication between said equalizer chamber and each end of the compressor cylinder alternately.

3. The combination with an air compressor cylinder and piston therein, of a pneumatic tool cylinder and piston therein, fluid pressure connections between the ends of said cylinders forming thereby two closed compartments, a high pressure chamber, a low pressure chamber, ports connecting both of said chambers with both of said compartments, an equalizer valve controlling all of said port connections, means for reciprocating the compressor piston and positively operating said valve to interchange the chamber connections to said compartments reversely at each stroke of the compressor piston.

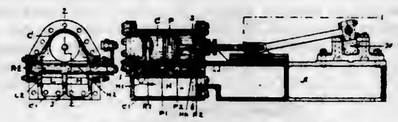
4. In a system of the class described the combination with an air compressor cylinder, of a pneumatic tool cylinder, reciprocating pistons in said cylinders, tubes connecting the ends of said cylinders forming thereby two closed compartments, a high pressure equalizer chamber, a low pressure equalizer chamber, equalizer ports connecting both of said chambers with both ends of said compressor cylinder, an equalizer valve controlling all of said ports, and means for reciprocating said compressor piston and operating said equalizer valve to simultaneously connect the high pressure chamber to the high pressure end of the compressor cylinder and the low pressure chamber to the low pressure end of the compressor cylinder at each stroke of the compressor piston.

5. In a compression air system the combination with a pneumatic tool cylinder, of an air compressor cylinder, reciprocating pistons in said cylinders, fluid pressure connections between the ends of said cylinders forming thereby two closed compartments, controller faucets in said fluid pressure connections, an equalizer air chamber, ports connecting both ends of said compressor cylinder with the equalizer chamber, an equalizer valve controlling both of said ports, a driving shaft, and means for positively reciprocating said compressor piston and operating said equalizer valve from said shaft to establish communication between said equalizer chamber and each end of the compressor cylinder alternately.

[Claims 6 to 13 not printed in the Gazette.]

1,154,794. COMPRESSED-AIR APPARATUS FOR OPERATING PNEUMATIC TOOLS. CHARLES O. PALMER, Cleveland, Ohio. Filed Sept. 17, 1907. Serial No. 393,386. (Cl. 125—14.)

1. In a closed pneumatic tool system, the combination with an air compressor cylinder and the cylinder of a reciprocatory pneumatic tool, of fluid pressure connections between the ends of said cylinders, a high pressure chamber and a low pressure chamber interposed in said connections, and valve mechanism for interchanging said chambers in said connections.



2. In a closed pneumatic tool system, the combination with an air compressor cylinder and the cylinder of a reciprocatory pneumatic tool, of fluid pressure connections between the ends of said cylinders, a high pressure chamber and a low pressure chamber interposed in said connections, and valve mechanism for interchanging said chambers to simultaneously include said high pressure chamber in one of said connections and said low pressure chamber in the other of said connections.

3. In a closed pneumatic tool system, the combination with a compressor cylinder and the cylinder of a reciprocatory pneumatic tool, of fluid pressure connections between the ends of said cylinders, said parts constituting an oscillating system, a high pressure chamber and a low pressure chamber interposed in said connections, and valve mechanism for interchanging the connection of said high pressure chamber with one side of said system during the pressure stroke of said compressor on that side and for completing the connection of said low pressure chamber with the other side of said system simultaneously.

4. In a closed pneumatic tool system, the combination with an air compressor cylinder and piston and the cylinder of a reciprocatory pneumatic tool, of fluid pressure connections between the ends of said cylinders, said parts constituting an oscillating system, a high pressure chamber and a low pressure chamber interposed in said connections, and positively actuated valves for interchanging the connection of said high pressure chamber with the compression side of said system and said low pressure chamber with the other side of said system in each direction of movement of said compressor piston.

5. In a closed pneumatic tool system, the combination with an air compressor cylinder and piston and the cylinder of a reciprocatory pneumatic tool, of fluid pressure connections between the ends of said cylinders, said parts constituting an oscillating system, a high pressure chamber and a low pressure chamber interposed in said connections, valve ports included in the connections with said chambers, double ported valve mechanism coöperating with said valve ports for interchanging the connection of said high pressure chamber with the compression side of said system and said low pressure chamber with the other side of said system in each direction of movement of said compressor piston.

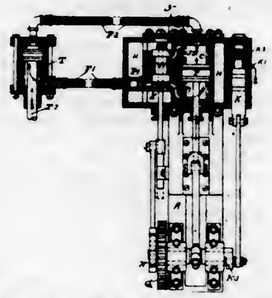
[Claims 6 to 24 not printed in the Gazette.]

1,154,795. COMPRESSED-AIR APPARATUS FOR OPERATING PNEUMATIC TOOLS. CHARLES OTIS PALMER, Cleveland, Ohio. Original application filed Aug. 21, 1909, Serial No. 514,029. Divided and this application filed Apr. 18, 1914. Serial No. 832,920. (Cl. 230—32.)

1. The combination in an air pulsator of a pulsator cylinder, a reciprocatory piston therein dividing the air space into two compartments, means to reciprocate said piston, an equalizer chamber, ports connecting it with both ends of said cylinder, an equalizer valve controlling both of said ports, means to positively operate said valve from a moving part of the pulsator to open said ports alternately and in time with the pulsator piston, and motor pressure connections opening into the said air compartments on both sides of the pulsator piston.

2. The combination in an air pulsator of a pulsator cylinder, a reciprocatory piston therein dividing the air space into two compartments, means to reciprocate said piston,

an equalizer chamber, ports connecting it with both ends of said cylinder, an equalizer valve controlling both of said ports, means to positively operate said valve from a moving part of the pulsator to open said ports alternately and in time with the pulsator piston, motor pressure connections opening into the said air compartments on both sides of the pulsator piston, an auxiliary air compressor, pressure connections between the compressor cylinder and the above described air inclosure, and means to operate said compressor to introduce air into the inclosure.



3. The combination in an air pulsator of a pulsator cylinder, a reciprocatory piston therein dividing the air space into two compartments, means to reciprocate said piston, an equalizer chamber, ports connecting it with both ends of said cylinder, an equalizer valve controlling both of said ports, means to positively operate said valve from a moving part of the pulsator to open said ports alternately and in time with the pulsator piston, a motor pressure connection in one of said connecting ports, and a motor pressure connection in the end of the pulsator cylinder that is opposite from that of said port connection.

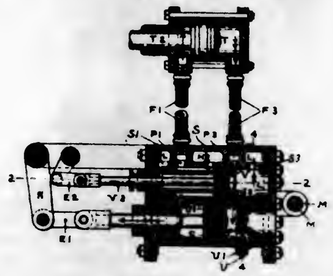
4. The combination in an air pulsator of a pulsator cylinder, a reciprocatory piston therein dividing the air space into two compartments, means to reciprocate said piston, an equalizer chamber, ports connecting it with both ends of said cylinder, a spool shape equalizer valve controlling both of said ports, means to reciprocate said piston and to positively operate said valve to open said ports alternately and in time with the pulsator piston, said means comprising a crank shaft, a main crank and a valve crank thereon, a driving connection between said piston and main crank, a driving connection between the equalizer valve and the valve crank, motor pressure connections opening into the compartments on opposite sides of the pulsator piston, an auxiliary air compressor, pressure connections between the auxiliary compressor cylinder and the above described inclosure, and means to operate said auxiliary compressor to introduce air into the said inclosure.

5. The combination in an air pulsator of a pulsator cylinder and piston therein, an equalizer chamber and ports connecting it with both ends of said cylinder, a spool shape equalizer valve controlling both of said ports, means to reciprocate said piston and to positively operate said valve from a moving part of the pulsator to open said ports alternately and in time with the pulsator piston, a motor pressure connection opening in one of said connecting ports, and a motor pressure connection in the end of the pulsator cylinder that is opposite from said port connection.

[Claim 6 not printed in the Gazette.]

1,154,796. COMPRESSED-AIR APPARATUS FOR OPERATING PNEUMATIC TOOLS. CHARLES OTIS PALMER, Cleveland, Ohio. Filed Aug. 21, 1909. Serial No. 514,029. (Cl. 125—14.)

1. In apparatus of the class described the combination of a gas compressor cylinder and piston therein, of a tool cylinder and piston therein, passageways connecting the ends of said cylinders forming thereby two closed compartments, an equalizer air chamber, ports connecting said air chamber with both of said compartments, an equalizer valve controlling said ports, means to reciprocate said piston and valve comprising two rockers journaled on the front end of the compressor cylinder, links connecting the inside ends of the rockers with the piston rod and valve stem respectively, a crank-shaft journaled on the rear end of the cylinder, a piston crank on one end of the crank-shaft and a valve crank on the other end, a valve rod and a connecting rod joining the outside ends of the said rockers with their respective cranks.



2. The combination with a gas compressor cylinder and piston therein, of a tool cylinder and piston therein, passageways connecting the ends of said cylinders forming thereby two closed compartments, a high pressure equalizer chamber, a low pressure equalizer chamber, ports connecting both of said equalizer chambers with both of said compartments, an equalizer valve controlling said ports, means for reciprocating the compressor piston and valve consisting of two rockers journaled on the front end of the compressor cylinder, links connecting the rockers with the piston and valve stems respectively, a crank shaft journaled on the back end of the cylinder, piston and valve cranks on said shaft, a valve rod and a connecting rod connecting the said cranks with their respective rockers.

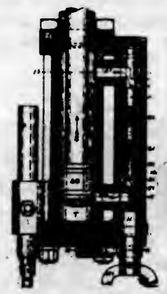
3. In apparatus of the class described the combination of an air compressor cylinder and piston therein, of a tool cylinder and piston therein, passageways connecting the ends of said cylinders forming thereby two closed compartments, an equalizer chamber, ports connecting the equalizer chamber with both of said passageways, an equalizer valve controlling said ports, means to reciprocate the compressor piston, and means operatively timed with the compressor piston to first close said valve at the end of each stroke and then to open said valve to establish communication between said equalizer chamber and each of the passageways alternately at each stroke of the compressor piston.

4. In apparatus of the class described the combination of an air compressor cylinder and piston therein, of a tool cylinder and piston therein, passageways connecting the ends of the compressor and tool cylinders forming thereby two closed compartments, an equalizer chamber, ports connecting the equalizer chamber with both of said passageways, an equalizer valve controlling said ports and passageways, means to reciprocate the compressor piston, and means for operating said valve in coöperative conjunction with the compressor piston to close the valve at the end of each stroke and to again open the valve when the pressure in the compartment reaches that of the equalizer chamber.

5. The combination with an air-compressor cylinder and piston therein, of a tool cylinder and piston therein, passageways connecting the ends of said cylinders forming thereby two closed compartments, a high pressure equalizer chamber, a low pressure equalizer chamber, ports connecting both of said chambers with both of said passageways, an equalizer valve controlling said ports, means for reciprocating the compressor piston, and means for positively operating said equalizer valve from a moving part of the compressor to close said valve at the end of the piston stroke, and then to open said valve to interchange said chambers with said passageways reversely at each stroke of the compressor piston.

[Claims 6 and 7 not printed in the Gazette.]

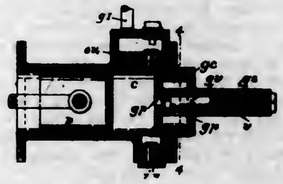
1,154,797. PNEUMATIC TOOL. CHARLES OTIS PALMER, Cleveland, Ohio. Filed Nov. 6, 1911. Serial No. 658,659. (Cl. 125—14.)



1. In a pneumatic tool of the class described, the combination with a tool cylinder having a piston therein, of front and back ports opening into the tool cylinder on opposite sides of the piston, a rotary plug or hand valve positioned parallel with said cylinder and running through said ports, notches in said plug registering with said ports, a bypass passing through said hand valve at each of said ports and reversely acting check valves in said bypasses, substantially as described.

2. In a pneumatic tool of the class described the combination with a tool cylinder having a piston therein, of front and back ports opening into the tool cylinder on opposite sides of the piston, port valves in both of the ports, a bypass through each port valve, a check valve in each bypass formed to slide lengthwise in said port valve and adapted when in one closed position of the port valve to be opened by pressure from within the cylinder only, and when in the opposite closed position of the port valve to be opened by pressure from without the cylinder only, the said port valves being reciprocal in their action, substantially as described.

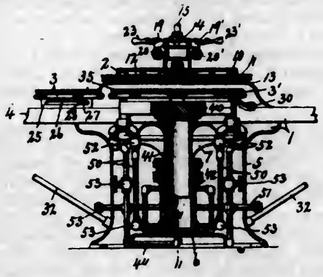
1,154,798. GOVERNOR FOR AIR-COMPRESSORS. CHARLES OTIS PALMER, Cleveland, Ohio. Filed July 29, 1912. Serial No. 712,022. (Cl. 230—24.)



1. In apparatus of the class described the combination with an air compressor cylinder, and piston therein, of a compressed air chamber, a governor passage connecting said chamber and cylinder, a branch passage opening communication between the atmosphere and said governor passage, a valve adapted to slide in said branch passage and to be opened by pressure within said governor passage when the pressure in the governor passage exceeds that of the atmosphere by a predetermined amount.

2. The combination with an air compressor cylinder, of a compressed air chamber, a governor passage connecting said chamber and cylinder, a branch passage opening communication between the atmosphere and said governor passage, a governor valve adapted to slide in said branch passage, and to control said governor passage, a spring of predetermined tension holding said valve closed when the pressure in said governor passage is below the maximum, but allowing the opening of said governor valve when the pressure in said governor passage exceeds the atmospheric pressure by the tension on said spring, substantially as and for the purpose set forth.

1,154,799. STEAM GARMENT-PRESSING MACHINE. THEODORE D. PALMER, Syracuse, N. Y., assignor to T. D. Palmer Company, Syracuse, N. Y., a Corporation. Filed Dec. 18, 1911. Serial No. 666,452. (Cl. 68—9.)



1. In a steam clothes pressing machine, a stationary press-head having a perforated press-plate and a superposed steam chamber, separate non-rotatable bucks movable to and from a position under the press plate and each provided with a steam chamber, and fluid-pressure-operated means for raising either buck into pressing coaction with the press head.

2. In a steam clothes pressing machine, a press head and an underlying buck both disposed in substantially horizontal planes and each provided with a steam chamber, one of the pressing elements being slidable into and out of registration with the other, pipe connections between the steam chambers, and fluid-pressure-operated means for moving one of such elements into pressing coaction with the other element when registering with each other.

1,154,800. PROCESS OF FORMING DOUBLE NITRIDS. SAMUEL PEACOCK, Chicago, Ill., assignor, by mesne assignments, to Agricultural Research Corporation, New York, N. Y., a Corporation of New York. Filed May 31, 1913. Serial No. 770,933. (Cl. 204—31.)

1. The process of fixing atmospheric nitrogen which consists in heating in the presence of said nitrogen a suitable oxid mixed with a higher carbid and to a temperature sufficient to produce a double nitrid, substantially as described.

2. The process of fixing atmospheric nitrogen which consists in heating in an atmosphere containing said nitrogen, an oxid mixed with a higher carbid of a non-metal and to a temperature sufficient to produce a double nitrid containing said non-metal, substantially as described.

3. The process of fixing atmospheric nitrogen which consists in providing a mixture of silica, a suitable oxid and carbon; and heating said mixture in an atmosphere of nitrogen to a temperature sufficient to first form a higher carbid of silicon, and then to form a double nitrid containing silicon, substantially as described.

4. The process of fixing atmospheric nitrogen which consists in providing a mixture of silica, calcium oxid and carbon; and heating said mixture to a temperature sufficient to produce a double nitrid of calcium and silicon, substantially as described.

5. The process of fixing atmospheric nitrogen which consists in heating in the presence of said nitrogen a suitable oxid mixed with a higher carbid to a temperature sufficient to produce a double nitrid, while sweeping said nitrogen over said mixture to reduce the partial pressure of the evolved carbon monoxid gas, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,154,801. VOLATILE ALUMINUM COMPOUNDS AND PROCESS OF PRODUCING SAME. SAMUEL PEACOCK, Philadelphia, Pa., assignor, by mesne assignments, to Agricultural Research Corporation, New York, N. Y., a Corporation of New York. Filed Apr. 18, 1914. Serial No. 832,809. (Cl. 23—13.)

1. The process of producing a volatile aluminum carbo-nitrid, which consists in preparing a mixture of alumina carbon; and subjecting said mixture in an atmosphere containing free nitrogen to a temperature sufficient to produce said volatile carbo-nitrid, and collecting said volatile product substantially as described.

2. The process of producing a volatile aluminum carbo-nitrid which consists in preparing a mixture of alumina and carbon; subjecting said mixture in an atmosphere containing nitrogen to a temperature sufficient to produce said carbo-nitrid, and recovering the latter in a medium devoid of chemically active oxygen, substantially as described.

3. The process of producing a volatile aluminum carbo-nitrid which consists in preparing a mixture of alumina and carbon; subjecting said mixture in an atmosphere of producer gas to a temperature sufficient to produce said carbo-nitrid, and recovering the latter in a medium devoid of chemically active oxygen, substantially as described.

4. The process of producing a volatile aluminum carbo-nitrid, which consists in preparing a mixture of alumina carbon; and subjecting the same in an atmosphere containing free nitrogen to a temperature sufficient to produce said carbo-nitrid thereby causing a carbon-monoxid to be evolved while maintaining the partial pressure of the carbon-monoxid present below 400 millimeters of mercury, and collecting said volatile carbo-nitrid substantially as described.

5. The herein described new product containing chemically combined carbon, nitrogen and aluminum the same being volatile at 1550° C., capable of forming a white powder and its hydrolytic product capable of producing a white precipitate with soluble silver and lead salts, as well as producing ammonia when subjected to the action of water at 200° C., substantially as described.

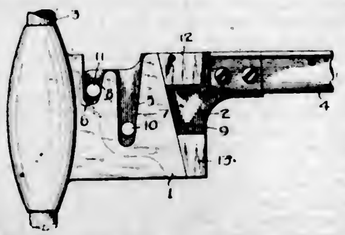
[Claim 6 not printed in the Gazette.]

1,154,802. PROCESS OF SMELTING ZINC. SAMUEL PEACOCK, Philadelphia, Pa., assignor, by mesne assignments, to Agricultural Research Corporation, New York, N. Y., a Corporation of New York. Filed Apr. 18, 1914. Serial No. 832,815. (Cl. 75—153.)

1. The process of smelting zinc which consists in mixing a carbid with zinc oxid in the proportions of one equivalent of carbid to a plurality of equivalents of zinc oxid, and raising the temperature sufficient to cause a smelting reaction, substantially as described.

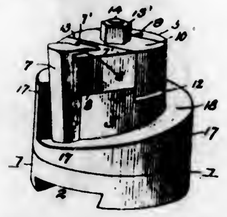
2. The process of smelting zinc which consists in mixing silicon carbid with zinc oxid in the proportions of one equivalent of silicon carbid to three equivalents of zinc oxid, and raising the temperature sufficiently to cause a smelting reaction, substantially as described.

1,154,803. BED-JOINT. GEORGE B. PETTIT, Brooklyn, N. Y. Filed Dec. 11, 1914. Serial No. 876,611. (Cl. 5—55.)



A bed joint comprising a post member comprising a plate having horizontally spaced recesses extending downward from its top to different depths, and having their outer sides inclined downward and inward toward the post, the recess nearer the post being of substantially less depth than the outer recess, the outer end of the plate being inclined in the reverse direction, in combination with a side rail member having pins spaced horizontally and at different heights to bear against the inclined sides of the recesses, and spaced shoulders having inclined faces to bear against said inclined end face of the plate.

1,154,804. TOOL-HOLDER. GEORGE STANLEY RADFORD, Bridgeport, Conn. Filed July 10, 1915. Serial No. 39,076. (Cl. 82—37.)



1. A tool holder, comprising a base, a split sleeve carried thereby adapted for holding a cutting tool in upright position, means for clamping the sleeve to the tool, said means also serving to hold the sleeve in position, and a collar surrounding the lower end of the sleeve providing a base for the cutting tool.

2. A tool holder for lathes, comprising a base, a split sleeve carried thereby adapted for holding a cutting tool in upright position and having lugs or jaws at its upper end extended around the sides of the tool adjacent to its upper end, for the purpose specified, means for clamping the sleeve to the tool, said means also serving to hold the sleeve in position upon the base, and a rotatable collar having an upper spirally formed end providing a rest for the tool.

3. A tool for lathes, comprising a base having a central cylindrical post, a split sleeve mounted upon the base and surrounding said post having obliquely arranged grooves in the opposed faces of the slot thereof, a cutting tool of uniform cross sectional diameter throughout its length having ribs adapted to fit within said grooves, means for clamping the sleeve to the tool, and a rotatable collar mounted upon the base and surrounding the lower end of said split sleeve, said collar having an upper spirally formed end providing a rest for the base of the tool, substantially as and for the purpose specified.

4. A tool holder for lathes, comprising a base adapted to be mounted upon the cross slide of the lathe, a split sleeve mounted thereon adapted for holding a cutting tool in upright position and obliquely with respect to the vertical axis of the holder, said tool being of uniform cross sectional diameter throughout its length, a collar mounted upon the base surrounding the lower end of said sleeve providing a rest for the tool, said collar having a spirally formed upper end, and means for clamping the opposed faces of the split sleeve to the tool.

5. A tool holder for lathes, comprising a base adapted to be mounted on the cross slide of the lathe, a split sleeve mounted thereon adapted for holding a cutting tool in upright position, a bridge for engaging said split sleeve, said bridge serving to clamp the sleeve to the tool and to hold said sleeve upon the base, and a collar rotatably mounted upon the base having an upper spiral edge providing a support for the tool, substantially as and for the purpose specified.

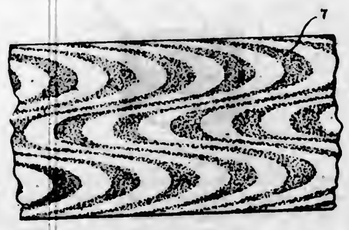
[Claims 6 to 12 not printed in the Gazette.]

1,154,805. EGG SUBSTITUTE AND METHOD OF MAKING IT. BLANCHE RAY, Citronelle, Ala. Filed Mar. 11, 1915. Serial No. 13,688. (Cl. 99—11.)

1. The herein described composition of matter for use as an egg substitute, comprising yams successively boiled, baked and pulverized, and a flavoring agent, substantially in the proportions stated.

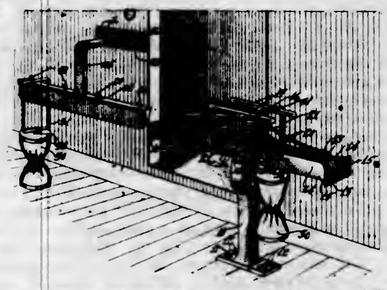
2. The herein described method of producing an egg substitute, which consists in peeling yams, boiling them until thoroughly cooked, then drawing them in a slow oven until crisp, then pulverizing the dried yams, and finally adding a flavoring agent to the powdered substance.

1,154,806. METHOD OF PRODUCING MATERIAL FOR ORNAMENTAL WOODWORK. DILLARD REDMON, Baltimore, Md. Filed Sept. 2, 1914. Serial No. 859,874. (Cl. 144—277.)



The method of producing material for ornamental woodwork, consisting in the uniting and compressing of layers of veneer of varied colors to provide a plank having corrugated upper and lower faces, cutting the same diagonally to form a pair of segments, matching of said segments in reverse position and cutting layers longitudinally therefrom.

1,154,807. MAIL-CATCHER. JOSEPH S. RICHESON, Oronoco, Va., assignor of one-half to Charles H. Clements, Oronoco, Va. Filed July 30, 1914. Serial No. 854,123. (Cl. 258—17.)



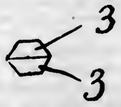
1. In a mail catcher a station device comprising a standard, a trough carried by said standard, bridges extending above said trough upon opposite sides thereof and extending parallel to the same, inclined lifting arms carried by said trough upon opposite sides of said bridges, and abutment lugs carried by said trough adjacent the outer ends of said lifting arms.

2. In a mail catcher a station device including a supporting trough, lifting arms carried by said trough and inclined upwardly toward their inner ends, abutment lugs carried by said trough adjacent the outer ends of said lifting arms, and suspending bridges extending above said trough and having their upper end portions extending parallel to said trough.

3. In a mail catcher a station device comprising a supporting element, lifting arms carried by said supporting element and inclined toward their inner ends, and suspending bridges positioned upon opposite sides of said supporting element and having their upper end portions extending parallel to said supporting element.

4. In a mail catcher a station device including a trough, bridges extending above said trough, arms extending above said trough and inclined upwardly toward their inner ends, and abutment carried by said trough adjacent the outer ends of said arms.

1,154,808. METHOD OF JOINING METAL BY WELDED RIVETS. ADOLPH F. RIETZEL, Charlestown, R. I., assignor to Universal Electric Welding Company, New York, N. Y., a Corporation of New York. Original application filed Sept. 16, 1909, Serial No. 517,972. Divided and application filed June 14, 1913, Serial No. 773,586. Divided and this application filed July 14, 1914. Serial No. 850,842. (Cl. 219—10.)



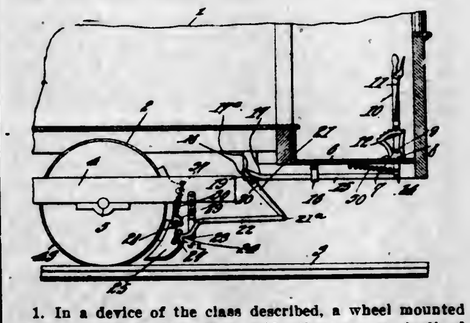
1. The method of welding two pieces of metal together, consisting in inserting a welding blank between the pieces and in holes in the meeting portions of said pieces and pressing the two pieces together while the blank is heated to welding temperature.

2. The method of electrically welding two pieces of metal together, consisting in inserting a welding blank between the pieces and in holes in the meeting portions of said pieces and pressing the two pieces together while the blank is heated to welding temperature in an electric current.

3. The method of uniting two pieces of mental, consisting in perforating both of them, inserting a welding blank between the pieces in the holes therein and of a form to partially only enter said holes and then pressing the pieces together while the blank is heated to welding temperature.

4. Composite metal work having its elements united by a welding piece located between the elements and welded in holes in the meeting portions of said elements.

1,154,809. EMERGENCY-SHOE. FERNAND E. RIVIERE, New Orleans, La., assignor of forty-eight one-hundredths to Leon Salmon, New Orleans, La. Filed Nov. 27, 1914. Serial No. 874,246. (Cl. 188—65.)



1. In a device of the class described, a wheel mounted vehicle; a fixed, depending guide thereon; an inclined plunger mounted to move longitudinally through the guide in direct contact therewith; a wheel engaging shoe pivoted to the plunger; and means for advancing the plunger to lower the shoe; the plunger being provided with means engaging the shoe to prevent a movement of the shoe in one direction with respect to the plunger, thereby to hold the shoe against tilting with respect to the wheel, when the shoe is elevated.

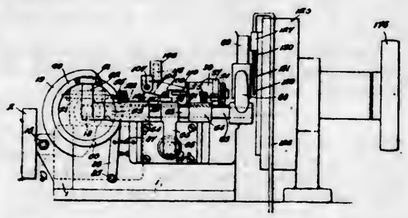
2. In a device of the class described, a wheel mounted vehicle; a plunger carried thereby; means for actuating the plunger; and a wheel and track-engaging shoe pivotally assembled with the plunger, the plunger being provided with a goose neck adapted to receive the upper end of the shoe.

3. In a device of the class described, a wheel mounted vehicle; a guide carried thereby; a plunger mounted to move in the guide and including a goose neck engaging the guide to support the plunger; means for actuating the plunger to move the goose neck off the guide; and a wheel and track engaging shoe pivotally assembled with the plunger, the goose neck being adapted to receive the upper end of the shoe.

4. In a device of the class described, a wheel mounted vehicle; a plunger carried thereby; and a wheel and track-engaging shoe pivotally assembled with the plunger; the plunger comprising a goose neck adapted to receive the upper end of the shoe when the shoe is tilted, and comprising a finger engaging the shoe to support the shoe when the shoe is elevated; and means for actuating the plunger.

5. In a device of the class described, a wheel mounted vehicle; a guide carried thereby; a plunger mounted to move in the guide; means for actuating the plunger; and a track-engaging shoe assembled with the plunger; the plunger comprising a goose neck adapted to rest upon the guide to uphold the shoe, and comprising a finger engaging the shoe to limit the tilting movement of the shoe in one direction, the goose neck being adapted to ride off the guide and being adapted to receive the upper end of the shoe when the shoe is tilted out of engagement with the finger.

1,154,810. MACHINE FOR FEEDING AND SWAGING BULLETS. CHARLES HENRY AUGUSTUS FREDERICK LOCKHART ROSS, Balnagown Castle, county of Ross, Scotland. Filed June 24, 1914. Serial No. 847,115. (Cl. 86—8.)



1. In a bullet blank feeding machine the combination of a holding means for feeding bullet blanks to a swaging machine; means for forcing said blanks out of said holding means after the swaging operation; and means for feeding bullet blanks one at a time to said holding means, substantially as described.

2. In a bullet blank feeding machine the combination of a holding means for feeding bullet blanks to a swaging machine; means for moving said holding means toward and from said swaging machine; means for forcing said blanks out of said holding means after the swaging operation; and means comprising a reciprocating hopper for feeding bullet blanks one at a time to said holding means, substantially as described.

3. In a bullet blank feeding machine the combination of a holding means for feeding bullet blanks to a swaging machine; means for forcing said blanks out of said holding means after the swaging operation; and means comprising a hopper, an arm carrying said hopper, and a shaft on which said arm is mounted for feeding bullet blanks one at a time to said holding means, substantially as described.

4. In a bullet blank feeding machine the combination of a driving shaft; a cam mounted on said shaft; a slide provided with a roller operated by said cam; a chuck mounted on said slide; means associated with said chuck automatically forcing the swaged blanks out of said chuck; a second cam mounted on said shaft; a hopper adapted to feed bullet blanks one at a time to said chuck; and connections between said second cam and said hopper for imparting a reciprocating motion to said hopper, substantially as described.

5. In a bullet blank feeding machine the combination of a driving shaft; a cam mounted on said shaft; a slide operated by said cam; a chuck mounted on said slide; a second cam mounted on said shaft; a hopper adapted to feed bullet blanks one at a time to said chuck; and connections comprising a shaft, a spring pressed arm, and an oscillating supporting arm between said second cam and said hopper for imparting a reciprocating motion to said hopper, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,154,811. VALVE. WILL R. SAVAGE, Omaha, Nebr. Filed Nov. 1, 1912. Serial No. 729,193. (Cl. 137—4.)



1. In a valve, a valve body having a seat and two bored portions each arranged within the body and spaced from the walls of the body and disposed at a right angle to each other, a stem rotatable in each bored portion, each stem having a spiral gear, said gears meshing with each other, and a valve member carried by one stem whereby upon operation of the other stem the valve member may be moved toward and away from said seat.

2. In a valve, a body having a seat, a valve for engagement with the seat, a longitudinally disposed valve stem having a low pitch threaded connection with the valve body, a spiral gear fixed on said stem in fixed relation to the low pitch thread thereof, another stem journaled in the body against longitudinal movement and disposed at a right angle to and extending past the longitudinal stem, and a spiral gear fixed on the second mentioned stem and meshing with the spiral gear on the longitudinal stem and maintained in a fixed plane at a right angle to the spiral gear on the longitudinal stem whereby, upon rotation of the second mentioned stem, the longitudinal stem and the spiral gear carried thereby are shifted backward and forward across the second mentioned stem and the valve moved toward and away from the seat and held in their different adjustments.

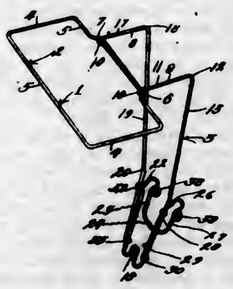
3. In a valve, a body having a seat, a valve for engagement with the seat, a longitudinallily disposed valve stem having a low pitch threaded connection with the valve body, a spiral gear on said stem in fixed relation to the low pitch thread portion of the stem, a transverse stem journaled in the valve body at a right angle to the longitudinal stem, a spiral gear on the transverse stem in mesh with the spiral gear of the longitudinal stem and which is maintained against movement laterally of the longitudinal axis of the valve stem and the spiral gear carried thereby, whereby upon rotation of the transverse stem the longitudinal stem and the spiral gear carried thereby are moved forward and backward across the transverse stem and the valve moved toward and away from said seat and held by the low pitch thread connection with the body in its adjusted positions.

4. In a valve, a body having a seat, a disk adapted for engagement with said seat, a valve stem carrying said disk and mounted for rotatable and longitudinal movement to shift the disk toward and away from the seat, and means to rotate the same to shift the disk to open and closed positions and to coöperate with the mounting means of the disk-carrying stem and to assist the latter in holding the disk in open and closed positions.

5. In a valve, a body having a seat, a disk adapted to engage the seat, a valve stem carrying said disk and provided with a threaded portion engaging a similarly threaded portion of the body, a driving stem journaled in the body, and means between the stems coacting with the screw threaded connection between the valve stem and body to effect rotation of the valve stem, and a consequent movement of the disk toward and from said seat and assist the threaded connections between the valve carrying stem and the body to hold the disk in adjusted positions.

[Claims 6 to 13 not printed in the Gazette.]

1,154,812. DOUGHNUT-DRAINER. LYDA M. SCHULTZ, Dorchester, Wis. Filed Oct. 16, 1914. Serial No. 866,960. (Cl. 53—8.)



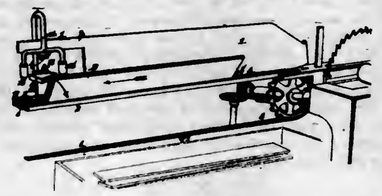
A doughnut basket supporting frame comprising an upper rectangular portion having laterally extending parallel arms having coiled connections with said rectangular portion, said arms merging into substantially vertical arms, said frame being constructed of a single length of wire, one of said substantially vertical arms of the frame extending downwardly and bent to form a loop to engage upon the inner face of the flange of a pan, the wire of one side of said loop being bent to form an eye through which the opposite substantially vertical arm passes, the wire of the frame beyond said eye being bent to form a second loop to engage upon the exterior of the flange of said pan, said second loop having oppositely disposed coils to engage under the bead of the flange of the pan, thereby preventing upward displacement of the frame, the wire of the frame beyond the second loop being bent to form a second eye through which the substantially vertical arm first mentioned as merging into the first loop extends, and the wire of said frame beyond the second eye and the substantially vertical arm which passes through the first eye terminating in eyes to receive the opposite sides of the first loop.

1,154,813. NUT-LOCK. CHARLES H. SELLERS, Eugene, Oreg. Filed Nov. 11, 1914. Serial No. 871,550. (Cl. 151—48.)



The combination with a rail joint having bolts and nuts for securing the fish plates to the rails, and said nuts having annular projections provided with peripheral teeth, of a spring plate having an opening through which one of the bolts pass, the opposite end of the plate being enlarged and provided with a round opening, to receive the annular tooth projection of the nut for the adjacent bolt, the said head being split in a line with one of the longitudinal edges, and the said split portion extended outwardly to provide an arcuate finger, and the inner end of said finger being enlarged to provide the finger with a tooth which is adapted to co-act with one of the teeth of the annular projection of the nut.

1,154,814. SUCCESSIVE AND SELECTIVE ASSORTER. GEORGE ANDREWS SMITH, South Hill, Va. Filed June 14, 1913. Serial No. 773,685. (Cl. 214—6.)



1. In a board assorter, the combination with means for moving the boards in a procession in a linear direction, of a series of mechanical devices located at different places along the line of procession for engaging the boards throwing out boards of predetermined widths at the different locations to pile the boards in separate piles and means for passing boards of greater and less widths than the selected width by the selected places.

2. In a board assorter, means for moving the boards in a procession in a linear direction, a series of means located at different places along the line of procession for throwing out boards of predetermined widths at the different locations to pile the boards in separate piles, and means coöperative with the aforesaid means for passing boards of greater or less width than the predetermined widths past said throwing out means and rendering said throwing out means inoperative.

3. In a board assorting machine, a table having a longitudinal fence on one side inclined to the vertical, a conveyer for conveying the boards along said table seriatum, and a plurality of sets of throwing out devices located at different places along the line of travel of said boards for throwing out boards of predetermined widths at predetermined places while boards of greater or less widths pass by.

4. In a board assorting machine, a table, means for passing boards on edge along said table in procession, a series of stations along the line of procession, and means at each station for throwing boards of predetermined width out of the procession, said throwing out means arranged in progressive order from one end of the machine to the other whereby boards of greatest width will be ejected at one end of the machine and boards of least width ejected at the other end of the machine, and means for adjusting said throwing out means whereby a throwing out device may be adjusted to throw out boards of a greater or less width than the normal width for which the respective throwing out device is designed to operate.

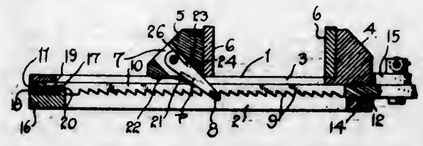
5. An assorting apparatus including a table, means for passing boards along said table in a procession, a set of ejecting stations along the line of procession, an ejecting mechanism at each station, said ejecting mechanisms including devices projected in the path of travel and located a predetermined distance above the bed of the table whereby to throw out of the procession boards of predetermined widths at predetermined places, said ejecting mechanism also including means coöperative with said projecting device for rendering the same non-operative on boards of greater width than the predetermined width to be ejected or thrown out.

[Claims 6 to 9 not printed in the Gazette.]

1,154,815. VISE. CARL A. SODERBERG, West Lynn, Mass. Filed Mar. 18, 1915. Serial No. 14,165. (Cl. 81—30.)

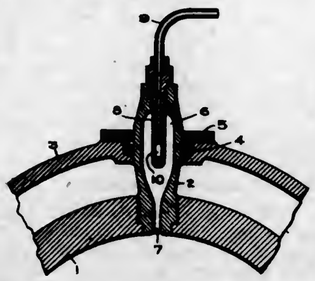
1. A device of the character described comprising a body provided with depending marginal flanges and with an elongated opening at substantially its transverse center, a stationary jaw carried by the body, a movable jaw mounted upon the body and coacting with the stationary jaw, a pawl carried by the movable jaw and projecting through the slot of the body, parallel rack members positioned beneath the body and provided with teeth on the under surfaces thereof, said pawl of the movable jaw co

acting with said rack members, cross members connecting the opposite extremities of the rack members, one of said connecting portions projecting beyond an extremity of the body, means carried by said projected extremity coacting with the adjacent end of the body for imparting movement to the rack members in one direction, means coacting with the opposite connecting portion of the rack members for imparting movement to the members in an opposite direction, a plate connecting the flanges adjacent said last named extremity of the rack members and on which rests said last named connecting portion, and an upstanding lug carried by said plate and extending between the rack members.



2. A device of the character described comprising a body provided with depending marginal flanges and with an elongated opening at substantially its transverse center, a stationary jaw carried by the body, a movable jaw mounted upon the body and coacting with the stationary jaw, a pawl carried by the movable jaw and projecting through the slot of the body, parallel rack members positioned beneath the body and provided with teeth on the under surfaces thereof, said pawl of the movable jaw coacting with said rack members, cross members connecting the opposite extremities of the rack members, one of said connecting portions projecting beyond an extremity of the body, means carried by said projected extremity coacting with the adjacent end of the body for imparting movement to the rack members in one direction, means coacting with the opposite connecting portion of the rack members for imparting movement to the members in an opposite direction, a plate connecting the flanges adjacent said last named extremity of the rack members and on which rests said last named connecting portion, and an upstanding lug carried by said plate and extending between the rack members, said last named movable means for the rack members comprising an expansible member interposed between the lug of the plate and the opposite face of the adjacent connecting portion of the rack member.

1,154,816. METHOD OF AND MEANS FOR FEEDING FLUID COMBUSTIBLE TO INTERNAL-COMBUSTION ENGINES. KARL STEINBECKER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Sept. 7, 1911. Serial No. 648,018. (Cl. 123—33.)



1. The method of introducing a charge of liquid combustible into an internal combustion engine cylinder, which consists in compressing air in the cylinder and in a communicating chamber having an outlet portion with a constricted passage between it and the cylinder, and delivering the charge to the outlet portion of the chamber, thus exposing the rear surface of the charge to and causing it to be ignited by the heat of the compressed air in the chamber, the higher pressure due to the combustion and rise in temperature of the contents of the chamber acting to force the charge through the passage into the cylinder.

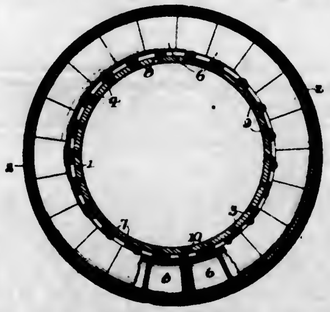
2. The method of operating an internal combustion engine which consists in compressing air in the engine cylinder and a chamber communicating with the cylinder by a constricted outlet to a degree sufficient to ignite the fuel charge by the heat due to compression, and delivering a liquid fuel charge into the chamber at substantially the time of greatest compression so that the charge practically fills said outlet and its rear surface or portion is ignited by the heated air in the chamber, the resultant rise of pressure in the chamber due to the combustion therein acting on the rear of the charge to forcibly eject the remainder of the charge through the outlet into the hot compressed air in the cylinder.

3. The method of introducing a charge of fuel into an internal combustion engine of the high compression type having a cylinder and a chamber which communicates with the clearance space of the cylinder through a restricted passage, which consists in introducing the fuel into the passage so that it substantially fills the same after the engine piston has substantially completed its compression stroke and compressed the air in the cylinder and chamber to a pressure so high that its temperature is above that of the ignition temperature of the fuel whereby the rear portion of the charge of fuel will be ignited by the air in the chamber and force the charge of fuel through the passage into the cylinder.

4. The combination with an internal combustion engine cylinder, of a plug connected thereto, said plug having a chamber formed therein which communicates with the cylinder through a constricted nozzle-like mouth, and a fuel nozzle projecting from a point outside the plug to a point well within the chamber and adjacent to said constricted nozzle-like mouth, said fuel nozzle having a cavity formed therein within the chamber for storing a charge of fuel.

5. A device for carrying out the method herein described, comprising an engine cylinder, a plug having a screw-threaded end that is secured in the wall of the engine cylinder, said plug containing a chamber provided with a constricted nozzle-like mouth opening out through the screw-threaded end into the cylinder, and a fuel supply nozzle secured in the opposite end of the plug, said nozzle extending into the chamber and having a longitudinal passage through it provided with an enlarged cavity near its tip for storing a charge of fuel.

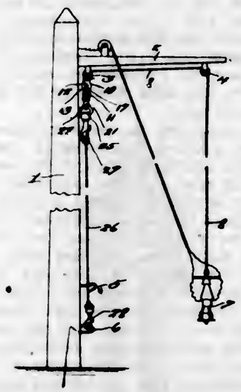
1,154,817. MULTIPLE-CHAMBER PNEUMATIC TIRE. JESSEE WEBB TURNER, Kirksville, Mo. Filed July 28, 1914. Serial No. 853,739. (Cl. 152—22.)



1. In a pneumatic tire, a casing, a demountable rim provided with a circularly arranged series of valve openings or ports therethrough, of a circular series of separate and independent pneumatic bags placed end to end within the tire casing and sufficient in number to permit the closing of a gap when formed by a collapsed bag, and filling tubes each having its own individual air inlet valve mounted in the rim opening or port, said tubes loosely connecting the individual bags with the rim to thereby permit a bodily endwise movement of the bags within the casing.

2. In a pneumatic tire, a rim having a circular series of valve openings therethrough, a casing mounted on the rim, a series of separate and independent air bags arranged end to end within the casing and each having an elongated filling tube or neck terminating in an air inlet valve removably mounted in one of the rim apertures; said valves at their outer ends being adapted to connect with a compressed air supply.

1,154,818. ELECTRIC-LIGHT HANGER AND ADJUSTER FOR MAST-ARMS. ROBERT W. VAN DORN, Saratoga Springs, N. Y. Filed Jan. 16, 1915. Serial No. 2,669. (Cl. 240—68.)

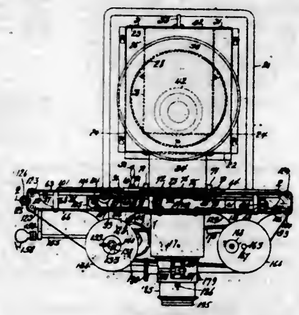


1. In combination with a mast having a lateral arm provided with pulleys, a rope or cable passing over the pulleys and having at one end a lamp, a hook adjacent the lower portion of the mast, and a staple spaced apart below the hook; an anchoring connecting means at the lower end of the cable adjustably connected thereto comprising a rope clamp having an eye engageable with said hook, and an auxiliary connection between the eye and the staple.

2. In combination with a mast having a lateral arm provided with pulleys, a rope or cable passing over the pulleys and having at one end a lamp, a hook adjacent the lower portion of the mast, and a staple spaced apart below the hook; an anchoring connection adjustably connected to the lower end of the cable or rope comprising a rope clamp having rope biting means to prevent slipping of the rope and provided with an eye at its lower portion engageable with said hook, an auxiliary connection comprising a snap hook having a swivel and link connection wtih said eye and adapted to engage said staple, said snap hook adapted to be connected to an extra rope whereby the lamp may be lowered, which extra rope is designed to be connected to the staple.

3. In combination with a mast having a lateral arm provided with pulleys, a rope or cable passing over the pulleys and having at one end a lamp, a hook adjacent the lower portion of the mast, and a staple spaced apart below the hook; an anchoring connection adjustably connected to the lower end of the cable or rope, which anchoring connection includes a rope clamp of horse shoe shape comprising two parts, one embedded in the other, and one having rope biting means to prevent slipping of the rope and provided with an eye at its lower portion engageable with said hook, said anchoring connection including an auxiliary connection consisting of a snap hook having a swivel and link connection with said eye and adapted to engage said staple, said snap hook adapted to be connected to an extra rope whereby the lamp may be lowered, which extra rope is designed to be connected to the staple.

1,154,819. COMBINED STEREOPTICON AND PANORAMIC PROJECTING-MACHINE. FREDERICK H. WHITE, New York, N. Y., assignor of one-half to William W. Westcott, New York, N. Y. Filed June 13, 1914. Serial No. 844,891. (Cl. 88—18.)



1. In a machine of the character described the combination of a lamp house, a lens for the lamp house to project pictures of a film, means to intermittently move the film and means to continuously move the film.

2. In a machine of the character described the combination of a lamp house, lenses coacting with the lamp house to project the pictures of a film, a pair of rollers journaled in the machine, a pair of bands for said rollers, annular frames connecting the ends of the bands, a reciprocating element in the machine, connections between said element and the band to reciprocate the latter, the annular frames permitting light to pass therethrough when in alinement with the optical axis of the lenses, and means connected between said element and picture film to move the latter.

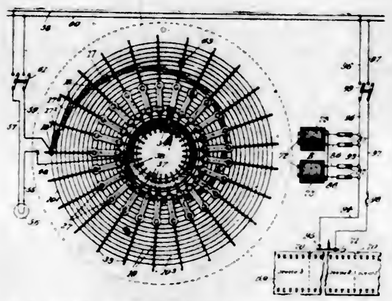
3. In a machine of the character described, the combination of a lamp house, lenses for the machine, a pair or rollers journaled in the machine, a pair of bands for the said rollers, a pair of annular frames connecting the ends of said bands, a slide bar guided in the machine, and means connected to the slide bar to move a film past the said lenses and connections between the slide bar and the said bands to move the latter into proper position for the pictures on the film, the frames when in alinement with the optical axis of the lenses enabling the light rays from the lamp house to project said pictures, and to shut off said light rays when the film is being moved.

4. In a machine of the character described, the combination of a lamp house, lenses coacting with the lamp house, a pair of rollers journaled in the machine, a pair of bands for said rollers, annular frames connecting the ends of the bands, a slide bar guided in the machine, a lug with an opening extending from one of the annular frames, a pin extending from the slide bar engaging said opening, the said frames permitting light rays to pass therethrough when in alinement with the optical axis of the lenses, a block extending from said slide bar, and a gripping finger pivoted in said block located to engage openings in a film.

5. In a machine of the character described the combination of a lamp house, lenses coacting with the lamp house, transparent guide plates, each having a pair of guide strips, each guide strip on one of the plates contacting with its accompanying guide strips on the other plate to form guide means for the edges of a film and means to move the film.

[Claim 6 not printed in the Gazette.]

1,154,820. LIGHT-REGULATING DEVICE FOR FILM-PRINTING MACHINES. GEORGE WHITE, Jersey City, N. J. Filed June 6, 1914. Serial No. 843,585. (Cl. 177—350.)



1. In a device of the character described, a plurality of spaced parallel conductors, resistances intermediate said conductors, a plurality of conductive bars extending across said conductors and spaced therefrom, means located intermediate said conductors and bars for conductively connecting a selected conductor with a selected bar, and an electric lamp interpolable between said conductors and bars.

2. In a device of the character described, a plurality of spaced parallel conductors, resistances intermediate said conductors, a plurality of conductive bars extending across said conductors and spaced therefrom, a card located intermediate said conductors and bars and having a plurality of metallic eyelets, each eyelet being adapted to conductively connect a selected conductor with a selected bar, and an electric current consuming device interpolable between said conductors and bars.

3. In a device of the character described, a plurality of spaced parallel conductors, resistances intermediate said conductors, a plurality of conductive bars extending across said conductors and spaced therefrom, a card located intermediate said conductors and bars and having a plurality of metallic eyelets, each eyelet being adapted to conductively connect a selected conductor with a selected bar, a movable member adapted to be conductively connected to consecutive bars, and an electric lamp interpolable between said conductive rings and said movable member.

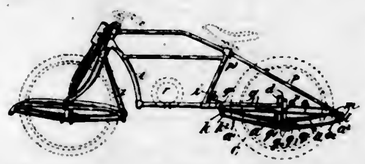
4. In a device of the character described, a plurality of spaced concentric conductive rings, resistances between said rings, a plurality of conductive bars extending radially across said rings and spaced therefrom, a non-conductive card interposed between said rings and bars, a plurality of eyelets provided in said card, each eyelet being adapted to conductively connect a selected ring with a selected bar, a movable member adapted to be conductively connected to consecutive bars, and an electric lamp interpolable between said rings and said movable member.

5. In a device of the character described, a plurality of spaced concentric conductive rings, resistances between said rings, a plurality of conductive bars extending radially across said rings and spaced therefrom, an exchangeable non-conductive card interposed between said rings and bars, a plurality of eyelets in said card, each eyelet being adapted to conductively connect a selected ring with a selected bar, contact buttons connected to said bars, an additional conductive ring, a bridge adapted to connect consecutive buttons to said additional ring, and a lamp interpolated between said first named rings and said additional ring.

[Claims 6 to 11 not printed in the Gazette.]

1,154,821. SPRING-FRAME FOR MOTOR-CYCLES AND LIKE MACHINES. SAVILLE WHITINO, St. Kilda, Victoria, Australia. Filed July 29, 1914. Serial No. 853,884. (Cl. 208—94.)

1. A spring suspension for the rear wheels of motor cycles and like machines comprising in combination a pivotal rear fork, bearing members at the free end thereof for the wheel axle, a pair of laminated leaf springs, clamps attached to said springs, means connecting the clamps to the pivotal fork, a pair of rear stays, and means for securing the ends of the laminated springs to the main frame of the machine and rear stays respectively.

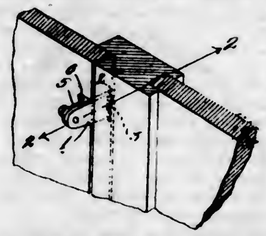


2. A spring suspension for the rear wheels of motor cycles and like machines comprising in combination, a pivotal rear fork, bearing members at the free end thereof for the wheel axle, a pair of laminated leaf springs, clamps attached to the said springs, a pivotal connection between the clamps and bearing members, a pair of rear stays, and means for securing the ends of the laminated springs to the main frame of the machine and rear stays respectively.

3. A spring suspension for the rear wheels of motor cycles and like machines comprising in combination, a pivotal rear fork, bearing members at the free end thereof for the wheel axle, a pair of laminated leaf springs, clamps attached to the said springs, a pivotal connection between the clamps and bearing members, a pair of rear stays, means for securing the ends of the laminated springs to the main frame and rear stays respectively and straining rods pivoted at one end to the main frame and at the other to the end of the rear stays.

4. A spring suspension for the rear wheels of motor cycles and like machines comprising in combination a pivotal rear fork, slotted bearings at the free ends thereof for the wheel axle, a pair of laminated leaf springs, a rocker pin extending from each slotted bearing, a rocking block upon each rocker pin and resting on each spring, means for clamping together each spring and its rocking block, a pair of rear stays, means for securing the ends of the laminated springs to the main frame and rear stays respectively and straining rods pivoted at one end to the main frame and at the other to the end of the rear stays.

1,154,822. DOOR SECURER, HOLDER, OR FASTENER. ORSON H. WILLARD, Cottage Grove, Oreg. Filed Mar. 11, 1915. Series No. 13,612. (Cl. 16—8.)



1. A door securer comprising a body plate having a lateral flange at one end, said flange being formed with teeth and designed to engage the door jamb, an abutment plate pivoted to the other end of the body plate and provided with a lateral flange at its free end extending in opposite direction to the disposition of the flange of the body plate, and designed to engage the interior surface of the door, said lateral flange of the abutment plate being provided with curved cam surface and provided with teeth where it engages the door face, the adjacent faces of the abutment plate and the body plate having interengaging protrusions and depressions to hold the abutment plate in different adjusted positions, said pivot having yielding means to permit the abutment plate to yield when moved.

2. A door securer comprising a body plate having a lateral flange at one end having teeth designed to engage the door jamb, an abutment plate pivoted to the other end of the body plate and provided with a lateral flange at its free end extending in the opposite direction to the disposition of the flange of the body plate and being curved concentrically with its pivot, said curved lateral flange having serrations designed to engage the interior surface of the door, said body plate having a plurality of depressions arranged concentrically about the pivot of the abutment plate, said abutment plate having a pair of lugs designed to engage any two opposite depressions to hold the abutment plate in adjusted positions, a pivot pin for pivoting the abutment plate to the body plate, and a coil spring on said pivot pin between its head and the abutment plate to hold said lug in engagement with two of the depressions.

1,154,823. POT-HEAD CONNECTOR. PAUL F. WILLIAMS, Chicago, Ill., assignor to G. & W. Electric Specialty Co., Chicago, Ill., a Corporation of Illinois. Filed Oct. 9, 1907. Serial No. 396,583. (Cl. 173—363.)



1. A pot head connector comprising a base, top and intermediate insulating members, mating terminals carried by the top and the base members, and coupling devices interlocking with the intermediate member and adapted to connect the terminals carried by said top and base members.

2. A pot head connector comprising top and base members made of insulating material, mating terminals adapted to be connected together carried by said top and base members, an intermediate member also made of insulating material and located between the top and base members, said intermediate member being adapted for rotation relatively to said top and base member, metallic coupling devices carried by the intermediate member and adapted to connect said terminals upon the rotation of said intermediate member.

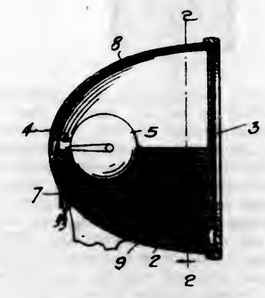
3. A pot head connector comprising top and base members, an intermediate member between the same, metallic terminals for the top and base members, one of said terminals having a threaded projecting end, and the other having a socket, and coupling devices carried and controlled by the intermediate member, said coupling devices comprising a ring 12 threaded to engage one of said terminals and a plug member 11 adapted to fit into the socketed terminal and having a threaded socket capable of receiving the threaded end of said other terminal, whereby said terminals are firmly connected together by turning said intermediate member.

4. A pot head connector comprising a tubular base member 1, a conical top 3 having an overhang 5, an intermediate member 2 having an overhang 4, a metallic terminal 6 arranged within the upper end of the base 1, and having its lower end socketed to receive the cable conductor and also having a socket formed in its upper end, a coupling member 11 fitted into the socket at the upper end of said terminal 6, said coupling member having its upper end inclined or conical shape, and provided with a threaded socket, a ring 12 fitted over the conical end of member 11, and its lower end interiorly threaded and engaging the upper threaded end of the terminal 6, said ring 12 being carried by, and arranged to rotate with the intermediate member 2, and a metallic terminal 13 carried by the head 3 and having a socket 14 adapted to receive the overhead wire and also having its lower end 15 threaded so as to fit the threaded socket at the upper end of the member 11.

5. A device of the class specified, comprising a tubular member 1, a relatively movable member at the upper end of said tubular member, and a cover or top member above said relatively movable member, terminals carried by the tubular and top members, and connecting devices carried and actuated by the relatively movable member and adapted to connect said terminals.

[Claims 6 to 17 not printed in the Gazette.]

1,154,824. HEADLIGHT. ROLAND F. WILSON, Denver, Colo. Filed Oct. 13, 1914. Serial No. 866,429. (Cl. 240—41.)



1. In a headlight, a concave reflector the inner surface of which is at one side of a plane passing through the axis of the reflector light absorbent, and at the opposite side of the same light reflective.

2. In a head light, a concave reflector the inner surface of which is below the horizontal plane passing through the axis of the reflector light-absorbent, and above the same light-reflective.

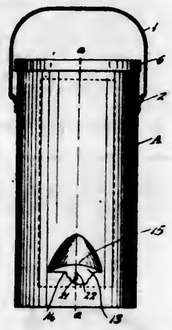
3. In a head light, a concave reflector comprising an outer shell, and an inner shell composed of two component parts one of which is removable, the surface of the said removable part of the inner shell, and the surface of the outer shell normally covered thereby, differing with respect to their effect upon light-rays impinging theron.

4. In a head-light, a concave reflector comprising an outer shell, and an inner shell composed of two component parts one of which is removable, the surface of the said removable part of the inner shell, and the surface of the outer shell normally covered thereby, being respectively light-reflective and light absorbent.

1,154,825. CHICKEN-WATERING FOUNTAIN. GUY WINKLE, Cincinnati, Ohio. Filed Aug. 6, 1914. Serial No. 855,402. (Cl. 119—77.)

1. In a chicken watering fountain and in combination; an inverted side fountain, having a centrally positioned opening through one of its ends, a perforation through the side thereof near said perforated end, and another perforation through the side thereof a little above said first mentioned perforation when said fountain is in an inverted position; an interally-threaded, flange-headed bushing fitted into said opening; and a threaded bolt adapted to screw into said bushing; the flange of said

bushing being adapted to engage the margin of said opening into which it is fitted, to which opening said flange is securely soldered; said bolt being adapted to prevent water from escaping from said fountain through said bushing; the lowermost of said perforations through the side of said fountain being adapted to afford an outlet for the water within said fountain; and said uppermost of said perforations through the side of said fountain being adapted to admit air into said fountain and thereby cause the water within said fountain to flow out of said fountain through said lowermost perforation through the side thereof.

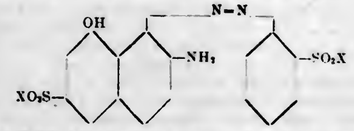


2. In a chicken fountain and in combination; an outside shell having an opening through the bottom and another opening through the side thereof; an inverted tub-shaped cap fitted and attached to the margin of said opening through the bottom thereof; an inverted inside fountain having perforations one above another through the side thereof seated on said tub-shaped cap; alining openings through the inverted bottom of said cap and the inverted top of said fountain; any suitable stopper for said alining openings; a cup positioned between and attached to said shell and said fountain directly beneath said opening through the side of said shell and said perforations through the side of said fountain; and supports between and for said shell and said fountain.

3. In a chicken fountain and in combination; an outside shell having an opening through the bottom and another opening through the side thereof; an inverted tub-shaped cap fitted and attached to the margin of said opening through the bottom thereof; an inverted inside fountain having perforations one above another through the side thereof seated on said tub-shaped cap; alining openings through the inverted bottom of said cap and the inverted top of said fountain; any suitable stopper for said alining openings; a cup positioned between and attached to said shell and said fountain directly beneath said opening through the side of said shell and said perforations through the side of said fountain; any suitable filler between said shell and said fountain; and supports between and for said shell and said fountain.

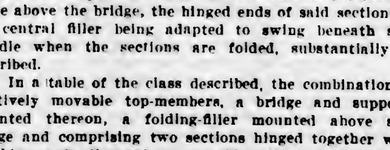
1,154,826. RED WOOL DYESTUFFS AND PROCESS OF MAKING SAME. OTTO WULFF, Höchst-on-the-Main, Germany, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Oct. 17, 1914. Serial No. 867,196. (Cl. 8—1.)

1. As new products, the dyestuffs of the formula:



wherein "X" stands for a metal, being red powders, readily soluble in water, very little soluble in alcohol, insoluble in ligroin and pertoleum and dyeing wool in an acid bath red tints of great fastness to light.

2. As a new product, the dyestuff of the formula:



being a red powder, readily soluble in water, very little soluble in alcohol, insoluble in ligroin and pertoleum and dyeing wool in an acid bath a red tint of great fastness to light.

3. As a new process, the manufacture of a red wool-dyestuff by combining diazotized ortho-anilin-sulfonic acid with 2-amino-8-naphthol-6-sulfonic acid in acid solution.

1,154,827. EXTENSION-TABLE. MAX WURM, Brooklyn, N. Y. Filed Aug. 11, 1914. Serial No. 856,276. (Cl. 45—9.)



1. In a table of the class described, the combination of relatively movable top-members, a folding-filler comprising two sections hinged together with the hinge-axis disposed to one side of the center line of the table when the sections are folded, and swinging-arms mounted to swing on an axis disposed to the other side of said center line and the said sections being pivoted between said swinging-arms with the pivotal axis disposed upon the same side of said center line as said hinge-joint when the filler is folded, substantially as described.

2. In a table of the class described, the combination of relatively movable top-members, a folding-filler comprising two sections hinged together with the hinge-axis disposed to one side of the center line of the table when the sections are folded, and swinging-arms mounted to swing on an axis disposed to the other side of said center-line and the said sections being pivoted between said swinging-arms with the pivotal axis disposed upon the same side of said center-line as said hinge-joint when the filler is folded and between said filler hinge-joint and said center-line, substantially as described.

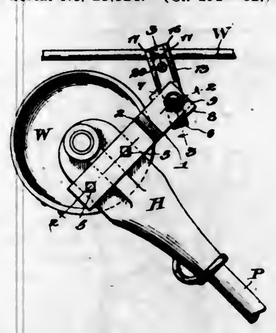
3. In a table of the class described, the combination of relatively movable top-members, a bridge and a spindle mounted transversely above said bridge, a folding-filler mounted on said spindle to one side of the bridge, a central folding-filler mounted above said bridge and comprising two sections hinged together and one of said sections being pivoted on a horizontal axis capable of being raised and lowered to permit said sections to turn in the shallow space above the bridge, the hinged ends of said sections of the central filler being adapted to swing beneath said spindle when the sections are folded, substantially as described.

4. In a table of the class described, the combination of relatively movable top-members, a bridge and supports mounted thereon, a folding-filler mounted above said bridge and comprising two sections hinged together with the hinge-axis disposed to one side of the center-line of the table when the sections are folded, swinging-arms mounted to swing on an axis disposed to the other side of said center-line and the said folding-filler being pivoted between said swinging-arms with its pivotal axis disposed upon the same side of said center-line as said hinge-joint when the filler is folded, the said swinging-arms being adapted to be supported by said supports when said filler sections are unfolded in horizontal position, substantially as described.

5. In a table of the class described, the combination of relatively movable top-members, a bridge and spaced supporting-uprights mounted lengthwise the bridge, swinging-arms pivoted to said supports, a folding-filler mounted above said bridge between said supports and comprising sections hinged together, said swinging-arms being pivotally connected with one of said sections, a spindle mounted on said supports and extending across the bridge and projecting to the outside of each support, a folding-filler mounted on each end of said spindle outside of the support and adapted when unfolded to slide toward said central filler and rest upon the adjacent support, and means for sustaining on said supports the said central filler when the same is unfolded into horizontal position, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,154,828. SLEET-CUTTER FOR TROLLEY-WIRES. WILLIAM H. AHRENS, Canandaigua, N. Y. Filed May 3, 1915. Serial No. 25,524. (Cl. 191—62.)



1. A sleet remover for trolleys comprising an attaching bracket having a scraping head pivotally mounted therein, and means for limiting the pivotal movement of said head.

2. A sleet remover for trolleys comprising an attaching bracket, a head pivotally mounted in said bracket, a scraping element removably mounted in said head, and means carried by said bracket for limiting the swinging movement of said head in both directions.

3. A sleet remover for trolleys comprising an attaching bracket composed of clamping jaws each having longitudinally spaced inturned support engaging lips spaced laterally from the inner faces of the jaws, set screws piercing said jaws opposite said lips, a scraping member pivotally mounted between said jaws, and means on said jaws for limiting the movement of said scraper member in opposite directions.

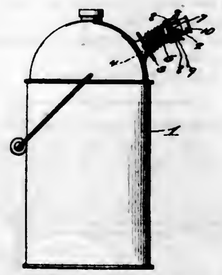
4. A sleet remover for trolleys comprising an attaching bracket composed of clamping jaws each having longitudinally spaced inturned support engaging lips spaced laterally from the inner faces of the jaws, set screws piercing said jaws opposite said lips, a scraping member pivotally mounted between said jaws and cross bars connecting said jaws at the opposite edges thereof for limiting the swinging movement of said scraping member.

5. A sleet remover for trolleys comprising an attaching bracket, a head pivotally mounted in said bracket and having laterally spaced upwardly extending arms with a socket in said head between said arms, a heart-shaped scraping member having a depending stud at the bottom thereof adapted to engage said socket, said member fitting between the arms of said head, and means for detachably and rigidly securing said member to said arms.

[Claim 6 not printed in the Gazette.]

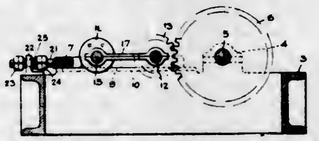
1,154,829. RESILIENTLY-ATTACHED BUT REMOVABLE CAP FOR OIL-CANS. ALBERT E. AINSLIE, Brashear, Mo. Filed Jan. 25, 1915. Serial No. 4,195. (Cl. 221—6.)

1. In combination with an oil can having an outlet spout, a closure fitting the open end of the spout and provided with diametrically oppositely disposed arms extending substantially parallel to the sides of the spout, said arms being bent upon themselves and extending back toward the closure forming hooks substantially in parallelism to the arms, a washer frictionally secured on said spout and having a notch formed adjacent the spout, a coil spring wound about the spout having one end anchored in the notch, the spout constituting means to hold said end in said notch, several of the coils at the other end of the spring being expanded sufficiently and engaging between the arms and the hook tending to draw the arms toward the spout and acting to exert equal pressure on the closure to hold the same tight against the spout, the tensioning action of the spring being adjustable, by increasing and decreasing the number of coils engaging the hooks of the arms.



2. In combination with an oil can having an outlet spout, a closure fitting the open end of the spout and provided with oppositely disposed arms having elongated hooks, a washer frictionally secured on said spout and having a notch formed therein adjacent the spout, a coil spring wound about the spout having one end anchored in the notch, while several of the coils at the other end of the spring may be adjustably connected to the elongated hooks.

1,154,830. MEANS FOR GRINDING OR POLISHING GEARS. KARL ALQUIST, Schenectady, N. Y. Filed Mar. 4, 1914. Serial No. 822,509. (Cl. 51—4.)



1. An apparatus for polishing gears comprising a plurality of supports movable relative to each other, means for mounting gears thereon so that the same may mesh and one may be driven through the other, and means comprising a shaft having a weight eccentrically disposed thereon for rapidly moving said supports toward and away from each other to vary the distance between the centers of the gears.

2. An apparatus for polishing gears comprising a frame, means for mounting a gear on said frame, a second frame movably mounted on the first named frame, means for mounting a gear on the movable frame so that the same may mesh with a gear on the first named frame whereby gears mounted on the frames may be driven one through the other, and means for rapidly moving the second named frame to vary the distance between the centers of gears mounted theron.

3. An apparatus for polishing gears comprising a main frame, means for mounting a gear on said frame, an auxiliary frame carried by the main frame and arranged to reciprocate thereon, means for mounting a gear on the auxiliary frame so that it may mesh with a gear on the main frame whereby gears mounted on the frames may be

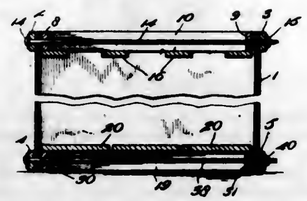
driven one through the other, a shaft carried by the auxiliary frame, and an eccentric mounted on the shaft whereby when said shaft is revolved the eccentric will cause the frame to reciprocate.

4. In an apparatus for polishing gears, the combination of a pair of frames which are movable relative to each other, means for mounting gears thereon so that they are in mesh and one may be driven through the other, means whereby said gears may be loaded, and a shaft comprising eccentric means for rapidly moving the frames relative to each other to produce a vibratory motion of the gears in the plane of their axes.

5. In an apparatus for polishing gears, the combination of a pair of frames which are movable relative to each other, means for mounting gears thereon so that they are in mesh and one may be driven through the other, means whereby said gears may be loaded, a shaft comprising eccentric means for rapidly moving the frames relative to each other to produce a vibratory motion of the gears in the plane of their axes, and means for limiting the extent of said vibratory motion.

[Claim 6 not printed in the Gazette.]

1,154,831. KNOCKDOWN CRATE. OLIVER B. ANDREWS, Chattanooga, Tenn. Filed Mar. 3, 1915. Serial No. 11,725. (Cl. 217—43.)

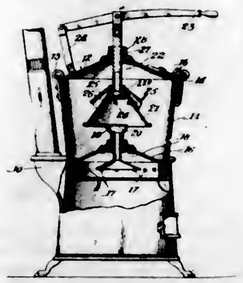


1. In a knock down crate the combination of a collapsible body portion; a pair of oppositely disposed bracing strips secured to the outer top edges of said body portion; a second pair of oppositely disposed bracing strips secured to the outer bottom edges of said body portion; a top closure comprising a frame having a pair of bracing strips fitting the inside of the top opening of said body portion parallel and in close proximity to said first named pair of strips; readily removable fastening and pivoting members passing through said first and last named pairs of strips; a bottom closure having a pair of bracing strips fitting the interior of the bottom end of said body portion and located parallel and in close proximity to said second named pair of outer strips; and readily removable securing members passing through said interior and exterior bottom bracing strips, substantially as described.

2. In a knock down crate the combination of a collapsible body portion made from a single sheet of material; a pair of oppositely disposed bracing strips secured to the outer top edges of said body portion; a second pair of oppositely disposed bracing strips secured to the outer bottom edges of said body portion; a top closure comprising slats and a frame having a pair of bracing strips fitting the inside of the top opening of said body portion parallel and in close proximity to said first named pair of strips; readily removable fastening and pivoting members passing through said first and last named pairs of strips; a bottom closure having a pair of bracing strips comprising slats on their upper edges, said strips fitting the interior of the bottom end of said body portion and located parallel and in close proximity to said second named pair of outer strips, each of said top and bottom closures being provided with cross strips adapted to contact with that portion of the inner wall of said body portion which lies between said outside strips; and readily removable securing members passing through said interior and exterior bottom bracing strips, substantially as described.

3. In a knock down crate the combination of a body portion comprising a single piece of paper sheet material creased at the corners of the crate to permit folding, and secured together at its meeting ends to form an open ended four sided tubular member; a pair of bracing strips secured flush with the top edge of said member on outer opposing sides; a rectangular frame fitting the interior of the top of said tubular member, having a pair of bracing strips parallel and in close proximity to said outer strips, and having a pair of bracing strips on the interior of the wall between said outer strips; readily detachable pivoting fasteners passing through said outer strips and their corresponding interior strips, whereby said top closure may be readily removed or pivotally secured in place; a second pair of outwardly disposed bracing strips located opposite each other on the lower end of said tubular member; a bottom closure having a pair of bracing strips parallel and in close proximity to said outer strips; readily removable fastening means passing through said bottom strips; and said bottom closure also provided with bracing strips fitting the interior of the bottom walls between the outside strips, substantially as described.

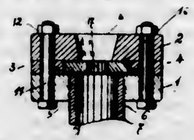
1,154,832. WASHING-MACHINE. ISAAC HILL ARNOLD, Animas, N. Mex. Filed Sept. 5, 1913. Serial No. 788,291. (Cl. 68—19.)



1. In a washing machine, the combination with a boiler, a false bottom for the boiler, a vertically movable tube passing through the false bottom and having enlargements, respectively above and below the same, a plunger within the boiler above the false bottom.

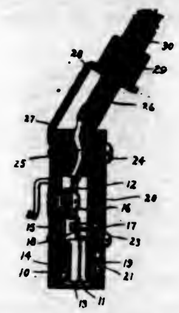
2. In a washing machine, the combination of a boiler, a false bottom for the boiler, a vertically movable tube passing through the false bottom and having enlargements, respectively above and below the same, a wooden bushing through which said tube passes, a plunger within the boiler above the false bottom, and means for reciprocating the plunger.

1,154,833. SPRAYING DEVICE. CHARLES H. BAKER, Pittsburgh, Pa. Filed Aug. 31, 1914. Serial No. 859,491. (Cl. 137—80.)



A spraying device comprising a pair of head plates having central alining openings therein, spacing members therebetween, means to secure said head plates and spacing members together, the opening in the top head plate being rectangular in plan and tapering and the opening in the other head plate being enlarged and threaded for engagement with a supply pipe and a discharge controlling device consisting of a sliding bar arranged between the plates and spacing members, said bar having a plurality of openings of various sizes therein adapted to register with the aforesaid alining openings of the head plates, a handle member at one end of said bar for operating the same and limiting the movement thereof in one direction and means at the opposite end of the bar to limit the movement of the latter in the opposite direction.

1,154,834. ATTACHING-PLUG. HENRY PRICE BALL, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed July 19, 1910. Serial No. 572,690. (Cl. 173—332.)

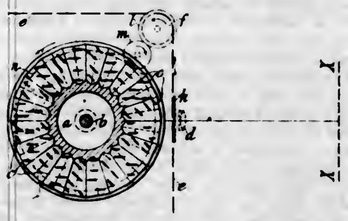


1. An attaching plug for electric conductors comprising an insulating casing, a two part socket within the casing, a flat spring secured on the outside of the casing, and means comprising a freely movable insulating member for transmitting the pressure from the spring to the socket.

2. An attaching plug for electric conductors comprising an insulating casing having an opening therethrough, a two part socket within the casing, a flat spring member secured on the outside of the casing and having a resilient portion over said opening and a member interposed between the socket and the spring for transmitting pressure from the spring to the socket.

3. An attaching plug for electric conductors comprising an insulating casing having openings therethrough, a plurality of two part sockets within the casing, and a flat spring member secured on the outside of the casing, said member having flat resilient portions adjacent the openings, and a movable element in each opening between the spring and the socket to press the parts of the sockets together.

1,154,835. CINEMATOGRAPHIC APPARATUS. WALTHER BAUERSFELD, Jena, Germany, assignor to the Firm of Carl Zeiss, Jena, Germany. Filed Dec. 20, 1913. Serial No. 808,005. (Cl. 88—16.8.)

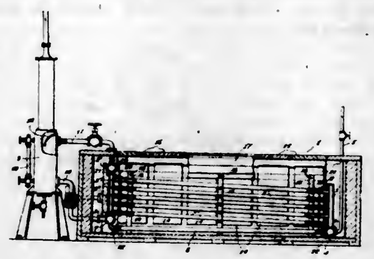


1. In a cinematographic apparatus the combination with a constantly moving film of a constantly moving reflector drum, which is provided at its periphery with a set of evenly spaced central reflectors, each such central reflector containing three plane reflecting surfaces, which are perpendicular to one another.

2. In a cinematographic apparatus the combination with a constantly moving film of a constantly moving reflector drum, which is provided at its periphery with a set of evenly spaced central reflectors, consisting each of two separate parts, a simple reflecting prism and a ridge prism, both of which parts are fixed to the said drum.

3. In a cinematographic apparatus the combination with a constantly moving film of a constantly moving reflector drum, which is provided at its periphery with a set of evenly spaced central reflectors, consisting each of two separate parts, a simple reflecting prism and a ridge prism, fixed to the said drum, and adjustable glass wedges being disposed in the space between the two sets of prisms, adapted to vary the optical length of the path of light.

1,154,836. ICE-MACHINE. JACOB H. BECKMAN, Seattle, Wash. Filed Aug. 7, 1912. Serial No. 713,791. (Cl. 62—157.)

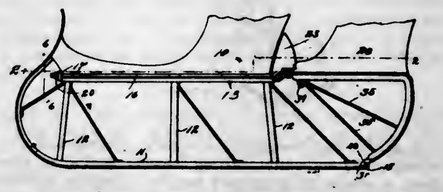


1. In an ice machine, a brine cooler comprising spaced horizontally disposed headers, vertically disposed headers supported on and communicating with said first named headers, inclined pipes extending between and communicating with said vertical headers, an outlet chamber communicating with all of said vertical headers at one end of the brine cooler, and a return passage for the fluid between said horizontal headers.

2. In an ice machine, a brine cooler comprising a plurality of units arranged side by side, each unit comprising a pair of vertically disposed headers and a vertical series of inclined pipes connected to and communicating with said headers, a separating chamber arranged above said units and communicating with the headers at one end thereof, said separating chamber being adapted to be partially filled with a liquefied refrigerant, whereby the upper portion will be free to permit of the ready release of the gas from the liquid state, and a horizontally disposed header communicating with the lower end portions of the other headers of said units.

3. In an ice machine, a brine cooler comprising a plurality of units arranged side by side, each unit comprising end vertically disposed headers and a vertical series of pipes communicating with said headers and extending upwardly from one to the other thereof, a horizontal bar disposed above the series of pipes of each unit and coöperating with the adjacent bar to form a support for ice molds, and stands for the pipes mounted on a base support and secured to the respective horizontal bar.

1,154,837. CUTTER ATTACHMENT. ALBIN E. BERGLUND, Motley, Minn. Filed Mar. 2, 1915. Serial No. 11,553. (Cl. 21—48.)

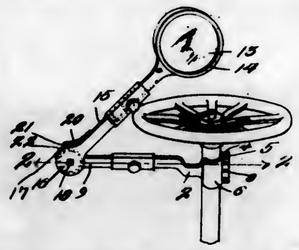


1. An attachment for a cutter comprising a frame disposed at the rear of the body of the cutter, means carried by the frame and detachably engaged around the body

of the cutter for holding the frame in position, and means carried by the frame detachably engaged with the rear of the runners of the cutter for supporting the frame.

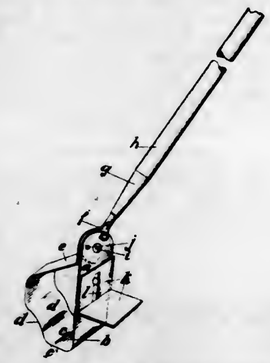
2. An auxiliary seat attachment for a cutter comprising a frame including downwardly and forwardly extending supports, and a seat, means detachably connecting the supports with the rear of the runners of the cutter, bars extending longitudinally on each side of the body of the cutter, means detachably connected to the forward ends of the bars, means detachably connected to the rear ends of the bars, a guard carried by the rear connecting means, and means carried by the frame for detachably connecting the frame to the rear ends of said bars.

1,154,838. SIGHTING-SHADE. HARRY L. BEST, SR., Davis, W. Va. Filed Mar. 11, 1915. Serial No. 13,709. (Cl. 21—148.)



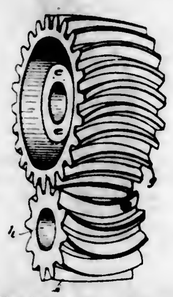
In combination with a sighting eye shade having an extension provided at one end with a flanged disk, the flange of which is provided with an aperture, a bracket arm having adjustable connections to a steering column, one end of the bracket arm being provided with a disk formed with an annular flange engaging within the flange of the disk of the extension, the flange of the disk of the bracket arm having transverse notches in its periphery, means for pivoting the disks together, and a spring device secured to the extension and provided with a lug extending through the aperture of the flange of the disk of the extension arm and designed to engage the notches of the flange of the disk of the bracket arm to hold the extension and the shade in adjusted positions.

1,154,839. GARDEN-TOOL. JOHN WESLEY BIGFORD, Toronto, Ontario, Canada. Filed May 20, 1915. Serial No. 29,341. (Cl. 97—28.)



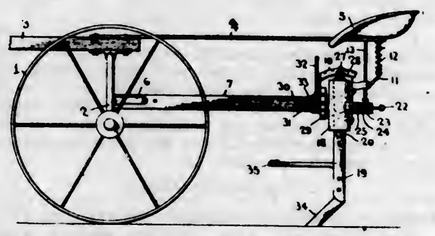
A garden tool comprising a vertical cutting member, a substantially-horizontal cutting member extending therefrom, a substantially-inclined member extending upwardly from the horisontal member, a connecting member extending from the inclined member in the direction of the vertical member, means for connecting the blade to the handle, said means comprising a lug extending upwardly from the connecting member in parallelism with the vertical member, a shank, and bolts passing through the shank and said lug and vertical member to adjustably connect the blade to the shank, and a guide adjustably connected to the vertical cutting member to maintain the uniformity of the depth of the cut.

1,154,840. CURVED TEETH FOR GEARS. PAUL BÖTTCHER, Gross Flottbeck, near Hamburg, Germany. Filed Feb. 3, 1913. Serial No. 746,029. (Cl. 74—41.)



Curved gear-teeth for racks and pinions comprising teeth with sides in form of sections of a conical shell surface, and forming at the convex and concave sides of the tooth conical surfaces, similarly disposed to the pitch line as of equal radii.

1,154,841. CULTIVATOR. FRIEDRICH BRAUNE, Clifton, Tex. Filed Mar. 31, 1913. Serial No. 757,914. (Cl. 97—35.)



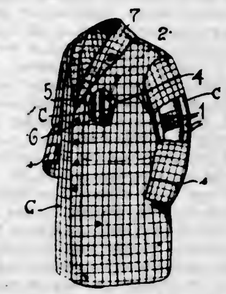
1. In a cultivator, a beam, sleeves on the beam, a shovel standard slidable vertically in the sleeves, said standard having stops, and a spring-pressed pin on the sleeves arranged to engage the stops of the standard.

2. In a cultivator, a wheeled axle, a beam connected thereto, seat bar supported on the axle, a seat on said seat bar, a shovel standard carried by said beam, an arm, means connecting said arm to said beam, a spring connecting said arm to said seat bar, and a screw threaded in said arm and engaging said seat bar to move said beam and said seat bar apart against the tension of the spring.

3. In a cultivator, a wheeled axle, a seat bar thereon, beams pivoted to the axle, arms carried by the beams, springs connecting the arms to said seat-bar, screws carried by the arms for causing said beams to move away from said seat-bar, and vertically and radially adjustable shovel standards carried by the second beams.

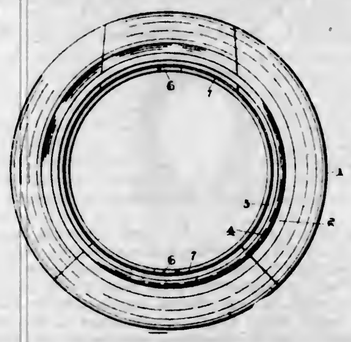
1,154,842. GARMENT. WILLIAM PAUL BUTUSOV, Biloxi, Miss., assignor of one-half to Julius M. Lopez, Biloxi, Miss. Filed Feb. 6, 1915. Serial No. 6,513. (Cl. 9—20.)

As a new article of manufacture, a garment including sleeves having their outer ends open, said garment from the waist-line to the neck, and the sleeves being doublewalled to afford a single compartment, the inner walls of the sleeves having their inner extremities secured directly to the inner wall of the body portion of the garment, a



source of compressed air carried by the garment and in communication with the compartment, and means for controlling the delivery of the compressed air within the compartment.

1,154,843. TIRE-MOLD CORE. JOSEPH HERBERT COFFEY and JOSEPH HERBERT COFFEY, Jr., Toronto, Ontario, Canada, assignors of one-half to Gutta Percha and Rubber Limited, Toronto, Canada. Filed Mar. 28, 1915. Serial No. 16,370. (Cl. 18—45:)



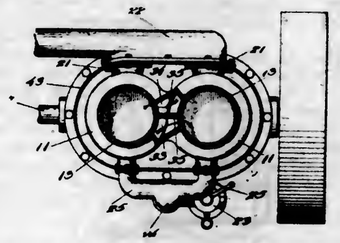
1. A sectional tire core having an annular web formed with lateral annular outwardly facing shoulders and a coned inner surface; rings adapted to fit over said shoulders; and an inner coned ring adapted to engage the coned inner surface of the web to press the aforesaid shoulders against their rings.

2. A sectional tire core having an annular web T-section forming lateral annular outwardly facing shoulders and having its inner surface coned; rings adapted to fit over said shoulders; and an inner coned ring adapted to engage the coned inner surface of the web to press the aforesaid shoulders against their rings.

3. A sectional tire core having an annular web formed with lateral annular outwardly facing shoulders and a coned inner surface; rings adapted to fit over said shoulders; an inner coned ring adapted to engage the coned inner surface of the web to press the aforesaid shoulders against their rings; and pivoted latches adapted to releasably hold said inner ring in place when the core is set up.

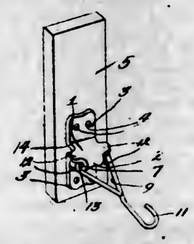
4. A sectional tire core having an annular web formed with a lateral annular outwardly facing shoulder and a coned inner surface; a ring adapted to fit over said shoulder; and an inner coned ring adapted to engage the coned inner surface of the web to press the aforesaid shoulder out against its ring.

1,154,844. INTERNAL-COMBUSTION ENGINE. ORLANDO JAMES COLE, Coxs Creek, Ky. Filed Aug. 27, 1912. Serial No. 717,282. (Cl. 123—59.)



In an engine of the character described, the combination with a pair of explosion cylinders provided near their lower ends with pumping cylinders, pistons mounted to operate in the explosion cylinders and having flanges operating within the pumping cylinders, gas supply conduits communicating with the interior of the pumping cylinders and having horizontal portions extending across the upper ends of the explosion cylinders and beyond the same for a substantial distance, a jacket surrounding the top of the explosion cylinders and the upper portions of the gas conduits and extending downwardly about the explosion cylinders, valve casings passing through the top of the jacket, the horisontal portions of the gas supply conduits and having screw-threaded engagement with the top of the explosion cylinders, inwardly opening check valves carried by the valve casings, air supply conduits passing through the top of the jacket and leading into the outer ends of the horisontal portions of the gas supply conduits, inwardly opening check valves controlling the passage of air through the air supply conduits, adjustable cut off valves arranged within the air supply conduits, and means for connecting the pumping cylinders with a carbureter for supplying fuel thereto.

1,154,845. SUSPENSION DEVICE. WILLIAM COOPER, Hampton Springs, Fla. Filed Oct. 28, 1914. Serial No. 869,055. (Cl. 5—32.)

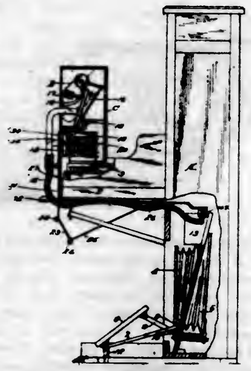


A suspension device comprising an arch having opposite side portions provided with laterally extending ears designed to be secured to a support, the curve of the arch being convexed or curved upwardly from the ends of the arch to the center thereof and toward the support in a transverse direction of the arch, and a suspension eye or loop triangular in contour having a horizontal straight bar designed to rock or ride upon the convexed bearing surface, said arch having lateral lugs to engage the sides of the suspension eye or loop to prevent lateral swinging of the eye.

1,154,846. DISAPPEARING PLAYING ATTACHMENT FOR PIANOS. WILLIAM F. DEITEMEIER, San Francisco, Cal. Filed Oct. 12, 1914. Serial No. 866,223. (Cl. 84—191.)

1. The combination with a keyboard musical instrument and a pneumatic power plant arranged in the case of the instrument, of a pneumatic playing structure connectible

with said plant and adapted to be mounted above the keys of the instrument for actuating the same and for removal therefrom to permit access to the keys for manual playing.



2. The combination with a keyboard musical instrument and a pneumatic power plant contained therein, of a structure including key-operating pneumatics coördinate with the plant, and means connecting said structure and the case of the instrument, said structure being thereby adapted for arrangement over the keys for actuating the same and adapted for removal from the playing position.

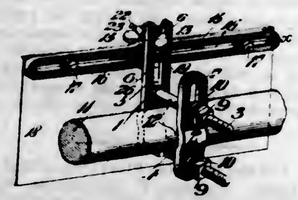
3. The combination with a keyboard musical instrument and a pneumatic power plant, of a structure including key-operating pneumatics coördinate with the plant, and means connecting said structure and the case of the instrument, said structure being thereby adapted for arrangement over the keys for actuating the same and adapted for removal from the playing position to a concealed position below the key-table of the instrument and supported there in an upright position by said means.

4. In combination with a keyboard musical instrument and a pneumatic power plant permanently contained therein, a stack of web-controlled, key-operating pneumatics adapted for communication with said plant and connected to the case of the instrument so as to be folded to and from a playing position over the keys.

5. In combination with a keyboard musical instrument and a pneumatic power plant located entirely therein, a stack of web-controlled, key-operating pneumatics adapted for communication with said plant and connected to the case of the instrument so as to be folded to and from a playing position over the keys from and to a concealed position below the key-table.

[Claims 6 to 13 not printed in the Gazette.]

1,154,847. LICENSE-TAG SUPPORT. CHARLES D. DE VORE, Philadelphia, Pa., assignor to John C. Vogel, Philadelphia, Pa. Filed May 3, 1912. Serial No. 694,975. (Cl. 40—128.)



1. In a device of the character stated, the combination of a carrier adapted to have a license tag affixed thereto, said carrier comprising a body portion, a lug on said body extending rearwardly therefrom, with a bar having a vertical slot extending therethrough in which the lug is seated and with the wall of which the lug engages to prevent turning of the body, a fastening device slidable in said slot and engaging the body and the bar for detachably securing the parts together, whereby the body portion and tag may be adjusted and locked in the different positions, and means to support the bar in operative position.

2. In a device of the character stated, a carrier adapted to be affixed to a license tag, said carrier comprising a body portion having an opening therethrough, a lug on said body portion, with a bifurcated bar adapted to receive said lug, a fastening device passing through said opening and detachably securing said body portion to said bar, and means to support said bar in operative position.

3. In a device of the character stated, the combination of a carrier adapted to be affixed to a license tag, said carrier comprising a body portion having an opening therethrough, a lug on said body portion, a fastening device adjustably mounted in said opening, a bifurcated bar adapted to engage said fastening device and said lug, a roughened surface on said bar, means on said body portion co-acting with said roughened surface, and means to support said bar in operative position.

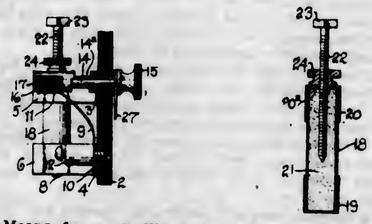
4. In a device of the character stated, a carrier adapted to be affixed to a license tag, said carrier comprising a body portion having an opening therethrough, an adjustable fastening device permanently located in said opening, an arm having a slot adapted to receive said fastening device, means to prevent turning movement between said carrier and said arm, and means to secure said arm to a suitable support.

1,154,848. PNEUMATIC TIRE. HUGH S. DEW, De Walt, and WILLIS H. MINTON, Missouri City, Tex. Filed July 31, 1914. Serial No. 854,251. (Cl. 152—18.)



A tire of the character described, including an outer casing, an inner inflatable tube, a sheath formed of flexible impenetrable material, interposed between the casing and tube and surrounding the sides and tread of said tube, the edges of said sheath terminating in resilient annular beads which form a continuation of the sheath, and a flexible apron connecting said beads, and forming with the sheath a complete envolop for the tube.

1,154,849. MEANS FOR CONTROLLING ELECTRIC CURRENT. CLIFFORD R. ENGLAND, McKeesport, Pa., assignor of one-half to Robert E. Stone, McKeesport, Pa. Filed May 26, 1915. Serial No. 30,647. (Cl. 219—58.)



1. Means for controlling electric current including a base, oppositely disposed metallic resilient clips mounted thereon adapted to be electrically connected in an interrupted circuit with a source of energy, a resistance element detachably mounted between the clips and adapted to electrically connect said clips, and a switch mounted upon the base which when shifted into one position will short circuit the clips and resistance element and when shifted in the other direction will permit the passage of current through the clips and resistance element.

2. Means for controlling electric current including a base, oppositely disposed metallic clips mounted thereon and adapted to be electrically connected in an interrupted circuit with a source of energy, a resistance element detachably mounted between the clips and adapted to electrically connect said clips and comprising a cartridge having metallic caps with which the clips electrically engage, a granular resistance material contained within the cartridge with which one of the caps electrically engages, a terminal longitudinally movable through and having electrical engagement with the other cap and through the granular filling of the cartridge, and a switch mounted upon the base which when shifted into one position will short circuit the clips and resistance element and when shifted in the other direction will permit the passage of current through the clips and resistance element.

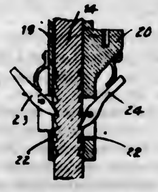
3. Means for controlling current including a resistance element, means for adjustably varying the resistance of said element, spaced conductors and means for connecting said conductors through said resistance element or directly connecting the conductors and cutting out the resistance element, said means comprising a shiftable conductive member electrically connected to one terminal of said resistance element and to one of said conductors, said member having thereon an insulating portion, and a contact member connected to the other of said conductors and having electrical engagement with the shiftable member or with said insulating portion thereof.

4. Means for controlling current including a base, binding posts mounted upon the base, oppositely disposed clips mounted upon said base and each electrically connected to one of said binding posts, a resistance element detachably mounted upon said clips and electrically connected through said clips to the binding posts, and means for short circuiting the resistance element comprising a shiftable member having a conductive and a non-conductive portion, the conductive portion of said member being disposed between one of said binding posts and the corresponding clip, and a resilient contact member connected to the other binding post and adapted to engage both the conductive and non-conductive portion of the shiftable member.

5. Means for controlling electric current including a base, oppositely disposed metallic resilient clips mounted thereon, binding screws mounted upon the base and electrically connected to said clips, said binding screws adapted to be electrically connected in an interrupted circuit with a source of energy, a resistance element detachably engaged by said clips and adapted to electrically connect them, and a switch mounted upon the base which when shifted into one position will electrically connect the binding posts and short circuit the clips and resistance element and when shifted in the other direction will cause the passage of current through the clips and resistance element.

[Claim 6 not printed in the Gazette.]

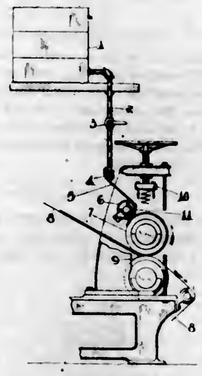
1,154,850. VERTICALLY-ADJUSTABLE HINGE. ORLEY R. FELLS, Spokane, Wash. Filed Aug. 25, 1914. Serial No. 858,511. (Cl. 16—113.)



1. A gate adjusting means comprising vertical members carried by the gate post, one of the members being provided with teeth on its faces, members slidably mounted on the vertical members, each pivotally connected with one end of the gate, means carried by the lower of the slidable members for lifting the members, and means carried by said lower member for holding the member in different adjusted positions.

2. The combination with a gate post, of vertical bars secured to and spaced from the post, members vertically slidable on the bars and hinged to the gate, one of the slidable members carrying pivoted spring pressed pawls, ratchet teeth carried by the bar for engagement of the pawls, and a pivoted lever mounted on said slidable member and carrying a pivoted pawl for engagement of certain of the ratchet teeth for moving the said slidable member vertically on the bar.

1,154,851. PROCESS OF BLEACHING GROUND WOOD-PULP. EDWARD P. FOLEY, Thorold, Ontario, Canada. Filed Apr. 19, 1915. Serial No. 22,528. (Cl. 92—40.)



1. A process of bleaching wood pulp and the like which consists in forming a thin sheet of pulp, applying a thin film of bleach thereto, and forming a sheet consisting of a plurality of plies of said treated pulp.

2. A process of bleaching wood pulp and the like which consists in forming a thin sheet of pulp, applying pressure thereto to squeeze out surplus water, applying a thin film of bleach thereto, and forming a sheet consisting of a plurality of plies of said treated pulp.

3. A process of bleaching wood pulp and the like which consists in forming a thin sheet of pulp, applying a thin film of bleach thereto and forming a sheet consisting of a plurality of plies of said treated pulp by winding said treated pulp spirally on a roll.

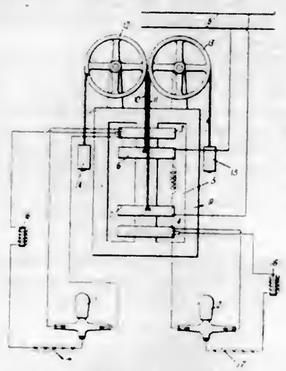
4. A process of bleaching wood pulp and the like which consists in forming a thin sheet of pulp, applying pressure thereto to squeeze out surplus water, applying a thin film of bleach thereto, and forming a sheet consisting of a plurality of plies of said treated pulp by winding said treated pulp spirally on a roll.

5. A process of bleaching wood pulp and the like which consists in forming a layer of pulp on a felt apron, leading the apron and pulp between a bed roller and a press roll on which latter the pulp is wound, and applying a thin film of bleach to the pulp as it is wound on the press roll.

1,154,852. SYSTEM OF CURRENT DISTRIBUTION. CHARLES LE G. FORTESCUE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 21, 1912. Serial No. 705,014. (Cl. 171—253.)

1. The combination with a transformer comprising two secondary coils and two primary coils that are disposed and movably mounted between the secondary coils, of two

current rectifiers that are independently connected to the secondary coils, one of them being connected to one of said coils and the other to the other coil.



2. The combination with a transformer comprising a core, and primary and secondary coils surrounding a part of said core, the primary coils being disposed and movably mounted between the secondary coils, of two current rectifiers that are independently connected to the secondary coils, one of them being connected to one of said coils and the other to the other coil.

1,154,853. SEAL FOR BOTTLES AND THE LIKE CONTAINERS. MORDECAI P. FREEBEY, Los Angeles, Cal. Filed Oct. 9, 1912. Serial No. 724,859. (Cl. 215—10.)

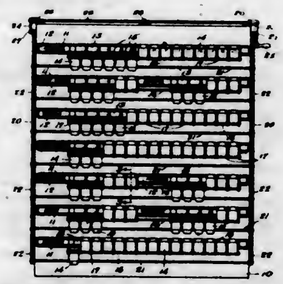


1. In a bottle closure, a metal disk with a vertically corrugated rim extending, when in position over the mouth of the bottle, downward and approximately at right angles to said disk; said rim being divided into two sections by vertical incisions extending from the edge of said rim upward through approximately two-thirds of the corrugated portion thereof; the smaller section of said rim embracing approximately one-third of the circumference of the entire rim; said smaller section having a flange extending along its entire length immediately below its corrugated portion; said flange having integral therewith a neck extending downward from and midway of its edge and terminating in a finger-piece; said neck and finger-piece being normally, when in use, against the neck of the bottle, and providing means, on being pulled outwardly, for lifting said smaller section of said corrugated rim away from close contact with the bottle mouth whereby to break the hold of and cause the release automatically of the larger section of said rim without tearing said rim or otherwise impairing the closure for further use.

2. In a bottle closure, a metal body having a crimped edge extending at approximately right angles to the axis of the body, and two vertical incisions extending approximately through two-thirds of the crimped portion and providing a portion equal to approximately one-third of the circumference of the edge and separate from such remaining crimps, but coöperating therewith to hold said body on bottle, said separate portion having integral with and below the line of its crimps a flange forming an extension of said edge and lying normally when in use against a bottle neck, said flange having centrally thereof and integral therewith a tang, extending vertically from the said flange and arranged to be pulled outwardly to release the crimps of said separate portion whereby to cause the remaining crimps automatically to disengage from the bottle.

3. In a bottle closure, a metal body having for the greater part of its circumference a crimped edge extending approximately at right angles to the axis of said body, and a flange integral with and forming an extension of said body, said flange having crimps coöperating with the crimps on said edge to hold said body on a bottle, said crimps being in line with the crimps of said edge, but separated therefrom by vertical incisions extending approximately two-thirds of the distance through said crimped edge; said flange having a finger-piece integral therewith and lying normally when in use against a bottle neck, and arranged to be pulled outwardly to release only the crimps on said flange whereby to destroy the hold of and cause the release automatically of the crimps on said edge without tearing the body.

1,154,854. TALLY DEVICE. THOMAS I. FREEBURN, Winchester, Mass. Filed Mar. 20, 1915. Serial No. 15,780. (Cl. 40—61.)

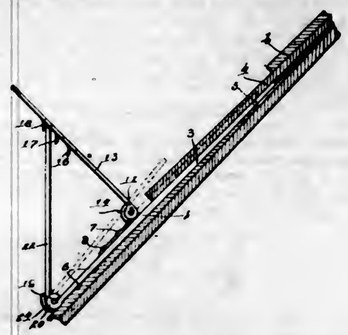


1. A tally device comprising a supporting element, an indicating element including a series of freely movable hinged drops mounted upon said supporting element, one of said elements bearing a series of numerals arranged to be concealed respectively by said drops when the latter are up, and exposed to view when said drops are down, said drops being arranged to cross their top vertical center sufficiently to remain in number concealing position against said supporting element, and means arranged to move said drops, or as many of them as are in exposing position, to concealing position.

2. A tally device comprising a base, a plurality of parallel series of hinged drops mounted thereon, each of said drops being free to move from a predetermined initial position to a predetermined tally-indicating position, and vice versa, a movable grid including a plurality of parallel bars arranged to engage all the said drops of the several said series respectively, and means connecting said grid and base to guide said grid so as to move said drops, or any number of them, from said tally-indicating position to said initial position.

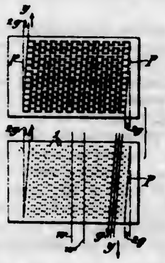
1,154,855. FOLDING SHINGLE-BRACKET. BENJAMIN GALLUP, Norwich, Conn. Filed Jan. 22, 1914. Serial No. 813,793. (Cl. 20—86.)

1. A device of the character described including a tapered base plate, a supporting board pivotally connected thereto substantially intermediate the ends thereof, a pintle connection formed upon the enlarged end of said plate, by slitting the same upwardly at points adjacent the longitudinal edges thereof, and by rolling the portions adjacent the edges upon themselves, a brace for adjustable engagement with said board pivotally mounted in the pintle connection, and a stop for limiting the outward movement of the brace formed by bending the portion of the plate intermediate the slits upwardly and arcuately.



2. A device of the character described comprising a relatively flat base plate, the forward end of the plate having its upper and lower surfaces tapered toward each other for facilitating the engagement of the plate with adjacent shingles, means on the plate for engagement with the shingles for preventing sliding movement of the plate, a pintle carrying element carried by the upper surface of the plate at a point substantially intermediate the ends thereof, a supporting board pivotally connected to said pintle carrying element, stop members formed by bending portions of said pintle carrying element upwardly and arcuately, said stop members limiting the accidental rearward movement of the supporting board, a pintle carrying connection formed on the enlarged end of the plate, a brace mounted between said last mentioned pintle connection, a stop for limiting the outward swinging movement of the brace formed on the enlarged end, said brace being adaptable for adjustable engagement with said supporting plate.

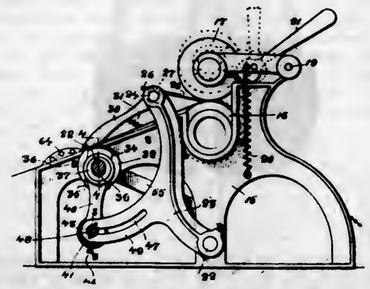
1,154,856. CARD-CLOTHING. EDWIN GRAF, Rüti, Switzerland. Filed May 7, 1914. Serial No. 837,044. (Cl. 19—2.)



1. Card clothing for top flats with rib, open or other setting, in which the first pins of the rows running perpendicularly to the lateral edge of the fabric are arranged along a line oblique to the said edge of the fabric whereby the formation of gaps in the direction of working is prevented.

2. Card clothing for top flats, in which the end pins of the rows running perpendicularly to the lateral edge of the fabric are arranged along a pair of parallel lines oblique to the said edge of the fabric and the remainder of the pins are arranged on a series of spaced lines parallel to said pair of oblique lines, the lateral displacement between one end of each of such lines and the other being a distance equal to an integral number of times the space between said series of lines.

1,154,857. PLAITING-MACHINE. THOMAS F. HAGERTY, New York, N. Y. Filed Oct. 2, 1914. Serial No. 864,684. (Cl. 223—44.)



1. In a plaiting machine, a frame, coacting feed and pressure rollers, a rock shaft having arms extending therefrom, one of said arms being provided with an arcuate slot, a shaft carried by said arms, a blade carried by said shaft and extending between the rollers, a bearing pin adjustably mounted in the arcuate slot, an eccentric mounted upon and adjustable about the axis of the bearing pin, a driven shaft having an eccentric, and a pitman connecting the last named eccentric with the eccentric on the bearing pin to provide for the primary adjustment of the arms carrying the blade carrying shaft and the positioning of the latter with respect to the rollers.

2. In a plaiting machine, a frame, coacting rollers, rocking members carrying a blade carrying shaft, one of said rocking members having an arcuate slot, a shouldered pin adjustable in said slot, an eccentric adjustable about the axis of said pin, a driven shaft, an eccentric adjustable with respect to the driven shaft to vary the throw of said eccentric, and a link connection between the last named eccentric and the eccentric which is adjustable about the axis of the pin; the adjustment of the eccentric about the axis of the pin providing for the primary adjustment of the rocking members to vary the position of the blade with respect to the rollers, and the adjustment of the eccentric on the driving shaft providing for the varying of the throw of the rocking members without resorting to exchange of cams.

1,154,858. PROCESS AND SUBSTANCE FOR PURIFYING GAS. JOSEPH C. HECKMAN, Avalon borough, Pa. Filed Mar. 2, 1915. Serial No. 11,649. (Cl. 48—224.)

1. A filtering material for gas, consisting of a colloidal mass containing "granulated" blast-furnace slag as a fluffing material mixed with a substance having an affinity for sulfur.

2. A filtering material for gas consisting of a colloidal mass containing "granulated" blast-furnace slag as a fluffing material mixed with hydrated oxid of iron.

1,154,859. GAS-PURIFYING MATERIAL. JOSEPH C. HECKMAN, Avalon borough, Pa. Filed Mar. 9, 1915. Serial No. 13,146. (Cl. 48—224.)

1. A new product of manufacture consisting of "granulated" blast furnace slag permeated with hydrated sesquioxid of iron.

2. A new product of manufacture produced by passing coal mine water through a bed of "granulated" blast furnace slag.

3. A new product of manufacture produced by passing coal mine water through a bed of blast furnace slag, whereby the sulfid of iron in the water combines with the oxid of lime in the slag to form hydrated sesqui-oxid of iron deposited in the pores of the slag.

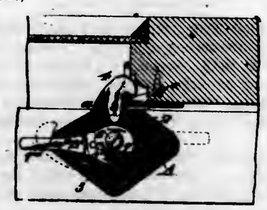
1,154,860. ADJUSTABLE LIFE-JACKET. GEORGE W. HENDRY, San Francisco, Cal. Filed May 22, 1915. Serial No. 29,791. (Cl. 9—17.)



1. A life jacket composed of a series of independent floats arranged in pairs, the adjacent floats of adjacent pairs being located at relatively widely separated points, means to flexibly connect all of the floats, interengaging means borne by the end floats and located on the outer vertical confronting side edges of said end floats, a ring borne by each of the floats and located on the front faces of the same, and cords passed through all of the rings for adjusting the floats independently of said interengaging means.

2. A life jacket composed of a series of independent floats arranged in pairs, the adjacent floats of adjacent pairs being located at relatively widely separated points, means to flexibly connect all of the floats, interengaging means borne by the end floats and located on the outer vertical confronting side edges of said end floats, a ring borne by each of the floats and located on the front faces of the same, and a pair of cords for adjusting the floats independently of said interengaging means, said cords having one end secured to the rings adjacent the respective end floats and passed around the jacket and through the rings and terminating at the opposite respective jacket ends.

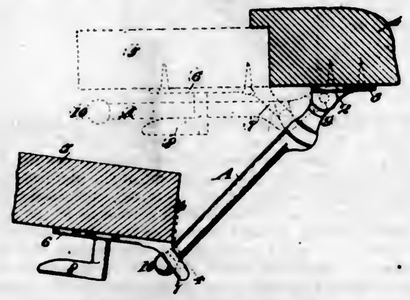
1,154,861. WINDOW-LOCK. ELLERY M. HOAGLAND, San Francisco, Cal., assignor of one-fourth to I. J. Kohler, Seattle, Wash., and one-fourth to A. C. Hicks, San Francisco, Cal. Filed Mar. 22, 1915. Serial No. 16,077. (Cl. 16—30.)



1. A window lock consisting of a base plate, a pivot pin thereon, a reversible latch turnably mounted on the pivot pin, said latch having a slot formed therein to receive the pin, a reversible lever turnably mounted on the pivot pin, and a connecting pin on each side of the lever, the pin on the side of the lever nearest the latch engaging in the slot thereof for establishing an operative connection between the latch and lever.

2. A safety lock for sliding sash, comprising a base plate having a raised circular center, a latch plate having a circular portion, a hook extended to one side thereof, said hook having a thickened lug guided and turnable in contact with the raised center, a cam slot formed in the circular portion of said latch plate, a pivot pin about which the latch-plate is turnable, a lever pivoted and turnable upon said central pin, a pin carried by said lever at one side of the pivot pin and engaging with the cam slot in the plate beneath whereby the latch plate is first turned from an unlocked position to a point of engagement with a catch, said lever being provided wtih a shoulder adapted to act against the periphery of the latch plate to force the hook into engagement with said catch, and a slot in the base plate into which the thickened lug of the latch plate is drawn and locked by the action of the cam.

1,154,862. SAFETY-BOLT FOR DOORS. ELLERY M. HOAGLAND, San Francisco, Cal., assignor of one-fourth to I. J. Kohler, Seattle, Wash., and one-fourth to A. C. Hicks, San Francisco, Cal. Filed Mar. 22, 1915. Serial No. 16,078. (Cl. 16—81.)



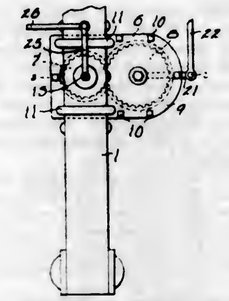
1. A safety lock for doors comprising a plate fixed to the door and having an outwardly turned, channeled end, an offset bar, a plate fixed to the door casing in line with the first named plate and having sockets, pivot pins in the end of the bar turnable and reversible in said sockets to change the parallelism of the bar with relation to the door, said bar being flattened to enter the slot in the channeled plate and slidable in the enlarged interior portion of the channel to allow the door to be partially opened, a stop at the end of the bar engageable with the channeled slot to limit the door opening, and a post turnable in the first named plate having a transverse extension at its upper end adapted to extend above and lock the bar.

2. A safety lock of the character described, including a cylindrical bar flattened and having transverse grooves near its inner end, said portion being curved out of line of the bar, a channeled casing plate with lugs having slots extending upwardly from the bottom, pivot pins fixed in the bar and adapted to enter and turn in the slots, a companion plate fixed to the door near its edge having an angular extension outwardly with a hole through which the bar is slidable and an open slot through which the grooves of the bar may pass to engage or disengage the bar, and a locking device consisting of a post turnable in the door plate and having an arm adapted to extend across the bar when the door is closed.

1,154,868. DIRIGIBLE AUTOMOBILE-HEADLIGHT. JOHN G. HOLICKY, Willoughby, Ohio. Filed June 24, 1915. Serial No. 36,014. (Cl. 240—62.)

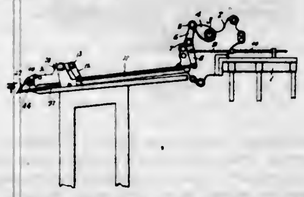
1. A dirigible automobile headlight, including a casing, a pair of intermeshing gear wheels journaled within the casing, means for mounting the casing upon the lower side of a frame member of an automobile, a lamp bracket formed with a stem which passes loosely through the frame member and casing and is keyed to one of the gear wheels, a bearing block applied to the upper side of the frame member, a collar projecting from the stem and cooperating with the bearing block to provide a bearing for the support of the lamp, a nut fitted upon the lower end of the stem for adjusting the bearing, and an operative connection between the other gear wheel and the steering gear of the automobile.

2. A dirigible automatic headlight, including a casing having an open top, a removable cover plate for the casing, a pair of intermeshing gear wheels journaled within the casing, fastening members clamping the casing to the lower side of a frame member of an automobile and also serving to retain the cover plate in position, a bearing block on the upper side of the frame member, a lamp bracket formed with a stem which passes loosely through the frame member and casing and is keyed to one of the gear wheels, a collar upon the stem which coöperates with the before mentioned bearing block to provide a bearing for the lamp bracket, a nut applied to the end of the stem for adjusting the bearing, and an operative connection between the opposite gear wheel and the steering gear of the automobile.



3. A dirigible automobile headlight, including a casing, a small gear wheel journaled within the casing, a large gear wheel journaled within the casing and meshing with the small gear wheel, means for mounting the casing upon one side of a frame member of the automobile, a lamp bracket formed with a stem which passes loosely through the frame member and the casing, said stem also extending axially through the small gear wheel and being keyed thereto, a ball bearing for the same arranged upon the opposite side of the frame member, a nut applied to the end of the stem for adjusting the ball bearing, and an operative connection between the large gear wheel and the steering gear of the automobile, the ratio between the large gear wheel and the small gear wheel causing the lamp to turn more quickly than the vehicle wheels.

1,154,864. SHEET-STRAIGHTENING AND SLOW-DOWN DEVICE. ARTHUR J. HUGHES and RICHARD E. JONES, Pearl River, N. Y., assignors to Dexter Folder Company, Pearl River, N. Y., a Corporation of New York. Filed Sept. 5, 1914. Serial No. 860,413. (Cl. 101—36.)



1. In a machine of the character described an oscillatory arm provided with a movable extension, yieldable means tending normally to hold said arm and extension in fixed relation to each other, sheet-feeding means partaking of all the movements of said extension, and sheet controlled means for limiting the forward movement of the sheet feeding means.

2. In a combined slow down and sheet straightener for paper feeding machines, an oscillatory arm, a reciprocatory sheet-engaging instrumentality, an extension or lever having spaced pivotal connections with said sheet engaging instrumentality and oscillatory arm respectively, means for limiting the relative movement in one direction between said oscillatory arm and extension or lever, yieldable means for resisting such relative movement in the opposite direction, and sheet controlled means for limiting the forward movement of said sheet engaging instrumentality.

3. In a machine of the character described, a movable arm provided with two independently movable extensions, yieldable means normally tending to hold each of said extensions in fixed relative position with respect to said arm, sheet engaging means permanently connected to one of said extensions, means for connecting said sheet engaging means to one of said extensions to limit the movement of said feeding means relatively to the other extension, and sheet actuated means for limiting the forward movement of said other extension.

4. In a machine of the character described, an arm mounted to swing about an axis, an extension pivotally connected to said arm, sheet engaging means permanently connected to said extension, a second extension pivotally connected to said arm, means for connecting said sheet engaging means to the second mentioned extension to permit only a limited relative forward movement of said sheet-engaging means with respect to the second extension, a rack bar pivotally connected at one end to the second extension, and a sheet controlled pawl for blocking the forward movement of said rack bar.

5. In a machine of the character described an arm mounted to swing about an axis, an extension pivotally connected to said arm, sheet-engaging means permanently connected to said extension, a second extension pivotally connected to said arm, means for connecting said sheet-engaging means to the second mentioned extension to permit only a limited relative forward movement of said sheet-engaging means with respect to the second extension, a rack bar pivotally connected at one end to the second extension, a link pivotally mounted at one end, said pawl being swingingly mounted in the other end of said link, a bifurcated member rigid with said link, and a fixed bar or rod extending between the forks of said bifurcated member, said bar being of suitable size to permit a limited angular movement of said bifurcated member.

[Claims 6 to 18 not printed in the Gazette.]

1,154,865. POCKET FOR POOL-TABLES. GUSTAV A. JAEGER, Morrison, Ill. Filed June 3, 1913, Serial No. 771,517. Renewed Jan. 9, 1915. Serial No. 1,454. (Cl. 46—12.)



1. A pocket for pool tables comprising an arcuate member adapted to be secured to the rails of a table and provided with a recess in its outer face at its lower edge, a plurality of spaced projections on the vertical wall of said recess, a pocket provided with straps at its open end through which said projections extend, a band disposed to be secured to the arcuate member flush with the outer face thereof and lie within said recess, and a woven fabric arranged between the band and the straps and held against the straps by the band.

2. A pocket for pool tables comprising an arcuate member adapted to be secured to the rails of the table and provided in its upper edge with a groove throughout its length, a pocket secured to the arcuate member, a shield disposed to extend within the pocket and having a portion overlying the upper face of the arcuate member and extending within said groove, and a transversely tapered ring inserted in the groove to maintain the shield against displacement.

3. A pocket-iron for pool tables consisting of an arcuate body having end extensions for attachment to the rails of the table and provided at its upper side with an arcuate groove to receive the edge of the shield and in its lower edge with a recess in its outer face to receive the outer edge of the pocket.

1,154,866. POTENTIAL-TRANSFORMER. OTTO W. LUNNON and EARL HARVEY, Denver, Colo. Filed Jan. 27, 1913. Serial No. 744,551. (Cl. 171—124.)



1. A transformer as specified, consisting of a laminated core comprising two groups of contacting metal strips, a primary coil surrounding the core, a secondary coil surrounding the primary coil, the portions of said groups of strips without the coils being bent in opposite directions around the adjacent portions of the coils, the ends of the strips of each group overlapping one another in alternate order, and supplemental core strips between the primary and secondary coils in contact with the strips of the main core.

2. A transformer comprising a main laminated core, primary and secondary coils surrounding said core one within the other, oppositely positioned supplemental core strips interposed between the primary and secondary coils, said main and supplemental core strips being bent around the coils with their ends overlapping in alternate order.

3. In a transformer as specified, the combination with primary and secondary coils, one surrounding the other, of a main laminated core extending through the inner coil, and opposite suplemental laminated cores interposed between the primary and secondary windings, said supplemental cores being bent in opposite directions around the coils, the ends of their strips overlapping in alternate order, one half of the strips composing the main core being bent around over the adjacent supplemental strips, while the remaining strips are bent around those of the opposite supplemental strips, the ends of each half of the strips overlapping in alternate order.

4. A transformer comprising a primary and secondary coil, one around the other, a laminated core extending through the inner coil, the halves of its strips being bent in opposite directions around the coils, and supplemental cores interposed between the primary and secondary coils, and in contact with the main cores, for producing a counter magnetic field.

5. In a transformer as specified, a laminated core, primary and secondary coils surrounding the core one over the other, flexible non-conducting material between the core and inner coil, between the primary and secondary coils, and upon the secondary coil, oppositely arranged supplemental cores extending between the primary and secondary coils, the half of the main core strips and the adjacent supplemental strips being bent in opposite directions from each other to surround the adjacent portions of the coils, and a band for holding said strips in their bended positions.

1,154,867. CONCRETE REVETMENT. JAMES MCGILLIVRAY, Sacramento, Cal. Filed Jan. 7, 1915. Serial No. 934. (Cl. 61—30.)



1. A revetment consisting of upwardly extending tiers of concrete slabs, said tiers being spaced apart to leave expansion joints between them, and reinforcing members passing through said slabs and crossing said joints in directions deviating from those through the slabs, and means for connecting in said joints the parts of the reinforcing members lying between longitudinally adjacent slabs to like parts of such members lying between proximate longitudinally adjacent slabs.

2. A revetment consisting of upwardly extending tiers of concrete slabs, said tiers being spaced apart to leave expansion joints between them, reinforcing members passing through said slabs transversely of said tiers and crossing said joints at an angle to their general direction, and upwardly extending anchoring cables passing through said slabs.

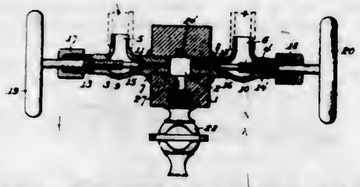
3. A revetment consisting of upwardly extending tiers of concrete slabs joined together by transversely extending reinforcing members and upwardly extending cables traversing the slabs of each tier and being anchored in some slabs while passing freely through others for the purpose specified.

4. In a revetment an upwardly extending tier of horizontally disposed slabs and anchoring cables passing upwardly through said tier, a part of said slabs being rigidly fixed to said cables while said cables pass freely through holes in the intermediate slabs.

5. In a revetment the combination with reinforcing members of concrete slabs having said members molded rigidly thereto and intermediate slabs through which said members pass freely for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

1,154,868. EMULSIFIER. CLYDE D. MCHENRY, Martins Ferry, Ohio. Filed Nov. 24, 1913. Serial No. 802,825. (Cl. 137—26.)

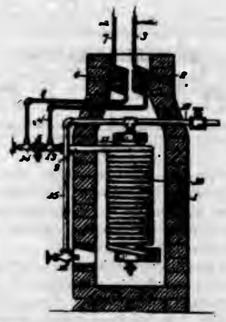


1. An emulsifier comprising a body having a mixing chamber therein, valve casings attached to said body having inlet ports therein and having relatively smaller outlet passages which communicate with said chamber at diametrically opposite points whereby jets of fluids are introduced into said chamber in impinging relation, needle-valves controlling said passages, and a nozzle through which fluid is discharged from said chamber, said nozzle being located in a different plane from said valve casings and having a passage therethrough of relatively small capacity, and a needle valve directed through said body in line with the last mentioned passage for controlling the latter.

2. An emulsifier comprising a body having a mixing chamber therein, valve casings attached to said body

having inlet ports therein and having relatively smaller outlet passages which communicate with said chamber at diametrically opposite points whereby jets of fluids are introduced into said chamber in impinging relation, needle-valves controlling said passages, and a nozzle through which fluid is discharged from said chamber, said nozzle being located in a different plane from said valve casings and having a passage therethrough of relatively small capacity, a needle valve directed through said body in line with said last mentioned passage for controlling the latter, and a tubular extension formed on said body and disposed in concentric encircling relation to the outer end of said nozzle.

1,154,869. GAS-GENERATING APPARATUS. CLYDE D. MCHENRY, Martins Ferry, Ohio. Filed Feb. 9, 1914. Serial No. 817,410. (Cl. 48—94.)



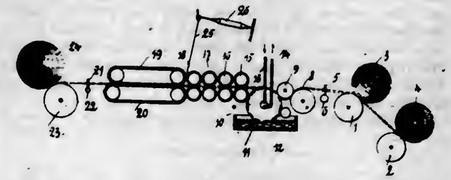
1. A gas generating apparatus comprising a furnace, means located outside said furnace for producing an emulsion of oil and water, means for controlling the proportions of said fluids emulsified, means whereby said fluids are conducted under pressure to the emulsifier, a pipe coil to which the emulsion is delivered from said emulsifier, said coil being located within said furnace, and an expansion chamber in which the gases generated within said coil are expanded and superheated.

2. A gas generating apparatus comprising a furnace, means located outside said furnace for producing an emulsion of oil and water, means for controlling the proportions of said fluids emulsified, means whereby said fluids are conducted under pressure to the emulsifier, the last mentioned means including coils located in said furnace and in which said fluids are preheated, a pipe coil through which the emulsion gravitates from said emulsifier, said coil being located within said furnace, and an expansion tank of relatively large cross sectional area to which the gases generated within said coil are delivered and in which they are expanded and superheated.

3. A gas generating apparatus comprising a furnace, means located outside said furnace for producing an emulsion of oil and water, means for controlling the proportions of said fluids emulsified, means whereby said fluids are conducted under pressure to the emulsifier, the last mentioned means including coils located in said furnace and in which said fluids are preheated, a pipe coil through which the emulsion gravitates from said emulsifier, said coil being located within said furnace, and an expansion tank of relatively large cross sectional area to which the gases generated within said coil are delivered and in which they are expanded and superheated, said tank being encircled by said coil and communicating at its lower end with the lower end of said coil.

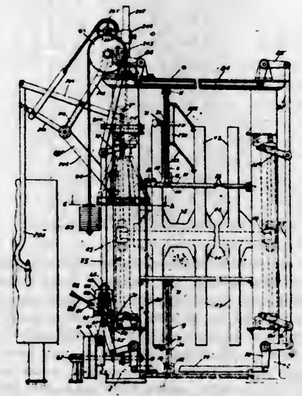
1,154,870. METHOD OF IMPROVING THE ROVING PRODUCED ON A CARDING-ENGINE. HERMANN MALY, Guben, Germany. Filed July 3, 1913. Serial No. 777,227. (Cl. 19—13.)

1. A method of improving the roving produced on a carding machine consisting in stretching and rubbing it, then wetting and warming it and removing from it the surplus moisture and then rubbing it again.



2. A method of improving the roving produced on a carding engine, consisting in stretching and rubbing it, then wetting and warming it, then removing excess of moisture and dividing it into strands, adding twisted thread to each of said strands, joining said strands again and finally rubbing them altogether, as set forth.

1,154,871. EMBROIDERY-MACHINE. FRANK MARSCHALEK, West New York, N. J. Filed Mar. 26, 1914. Serial No. 827,283. (Cl. 112—7.)



1. In a machine of the class described, the combination with supporting means, of a series of independent work supporting frames located one behind another, a series of sets of needles and borers likewise located one behind another, means for shifting the needles and borers into and out of the work, and means for shifting said needles and borers in transverse paths relatively to the frames.

2. In a machine of the class described, the combination with supporting means, of a series of independent work supporting frames located transversely of the supporting means, a series of sets of needles and borers likewise located transversely of the supporting means, means for shifting the needles and borers into and out of the work, and means for shifting said needles and borers in transverse paths relatively to the frames.

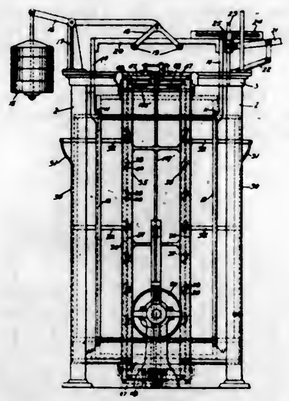
3. In a machine of the class described, the combination with supporting means, of work supporting frames carried thereby and located one behind another, a plurality of sets of needles and borers, each set comprising a plurality of needles and borers for each frame, means for shifting the needles and borers into and out of the work, and means for shifting the needles and borers in transverse paths relatively to the work supporting frames.

4. In a machine of the class described, the combination with supporting means, of two sets of work supporting frames carried thereby, one set located above the other and the frames of each set being located one behind another, two series of needles and borers comprising two sets located one above the other, each set comprising a plurality of needles and a plurality of borers for each frame, and means for shifting the needles and borers into and out of the work.

5. In a machine of the class described, the combination with supporting means, of two sets of work supporting frames carried thereby, one set located above the other and the frames of each set being located one behind another, two series of needles and borers comprising two sets located one above the other, each set comprising a plurality of needles and a plurality of borers for each frame, and means for simultaneously shifting all of the needles and borers into and out of the work.

[Claims 6 to 45 not printed in the Gazette.]

1,154,872. EMBROIDERY-MACHINE. FRANK MARSCHALEK, West New York, N. J. Filed Apr. 22, 1914. Serial No. 833,595. (Cl. 112—7.)



1. In a machine of the class described, the combination with supporting means, of a series of work frames each of substantially the width of and arranged transversely of the length of the supporting means and carried thereby and located one behind another, needle and borer mechanism, means for shifting the needles and borers and the work relatively to each other so that such needles and borer will penetrate the work and means for shifting said work frames in transverse planes relatively to the path of movement of the needles and borers.

2. In a machine of the class described, the combination with supporting means having greater length than width, of a series of work frames carried thereby and located one behind another transversely of the supporting means, needle and borer mechanism, means for shifting the needles and borers and the work relatively to each other so that such needles and borers will penetrate the work, and means for simultaneously shifting all of said work frames in transverse planes relatively to the path of movement of the needles and borers.

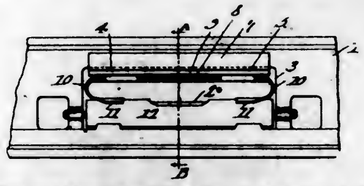
3. In a machine of the class described, the combination with supporting means, of a plurality of detachable work frames each of substantially the width of and arranged transversely of the length of the supporting means and carried thereby and located one behind another, needle and borer mechanism, means for shifting the needles and borers into and out of the work, and means for simultaneously shifting all of said work frames in transverse planes relatively to the path of movement of the needles and borers.

4. In a machine of the class described, the combination with supporting means, of a plurality of work frames each of substantially the width of and arranged transversely of the length of the supporting means, needle and borer mechanism comprising a series of needles and a series of borers for said frame, the needles and borers being located respectively one above another, means for shifting the needles and borers into and out of the work, and means for shifting said work frame and said needles and borers relatively to each other in transverse planes.

5. In a machine of the class described, the combination with supporting means, of a plurality of work frames each of substantially the width of and arranged transversely of the length of the supporting means, and carried thereby, needle and borer mechanism comprising two series of needles and borers, the needles and borers of each series being located respectively one above another, means for shifting the needles and borers into and out of the work, and means for shifting said work frame and said needles and borers relatively to each other in transverse planes.

[Claims 6 to 61 not printed in the Gazette.]

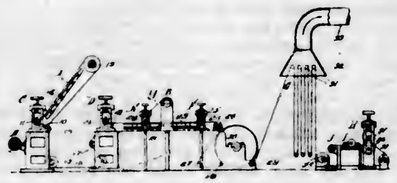
1,154,873. SPIRIT-LEVEL. IRVING W. MASON, Aberdeen, Wash. Filed Nov. 6, 1914. Serial No. 870,628. (Cl. 33—211.)



1. The combination with a spirit level, of a holder adapted to straddle a portion of the body of the spirit level, means for binding said holder against a portion of said body, and a mirror supported by the holder directly opposite the vial of the spirit level.

2. An attachment for spirit levels, including a holder, means thereon for straddling a portion of the body of the spirit level, a mirror supported by the holder, there being an opening within the holder through which a portion of the mirror is exposed, and means for detachably securing the holder to the body portion of a spirit level.

1,154,874. COATING APPARATUS. JAMES MEADE, Stoughton, Mass. Filed Feb. 21, 1911. Serial No. 610,022. (Cl. 154—37.)



1. In an apparatus for making doubled waterproof fabric, the combination with a source of fabric-supply, of means for applying a coating to one face of the fabric, means for adjusting the distance of the applying means toward and from the fabric to vary the thickness of the coating, heating means acting upon the fabric after the co-operation of the applying means therewith, a second coating-applying means for coöperation with the previously coated surface of the fabric, means for adjusting the last-named coating-applying means with respect to the fabric, a second source of fabric-supply, and means for pressing the fabric from the second source against the multiply coated surface of the fabric from the first-named source.

2. In an apparatus for making doubled waterproof fabric, the combination with a source of fabric-supply, of means of applying a coating to one face of the fabric, means for adjusting the distance of the applying means toward and from the fabric to vary the thickness of the coating, heating means acting upon the fabric after the co-operation of the applying means therewith, a second coating-applying means for coöperation with the previously coated surface of the fabric, means for adjusting the last-named coating-applying means with respect to the fabric, a second source of fabric supply, a plurality of independent means for pressing the fabric from the second source against the multiply coated surface of the fabric from the first-named source, and means for adjusting the pressure of each of said pressure means.

3. In an apparatus for making doubled waterproof fabric, the combination with a source of fabric-supply, of means for applying a coating to one face of the fabric, means for adjusting the distance of the applying means toward and from the fabric to vary the thickness of the coating, heating means acting upon the fabric after the co-operation of the applying means therewith, a second coating-applying means for coöperation with the previously coated surface of the fabric, means for adjusting the last-named coating-applying means with respect to the fabric, a second source of fabric-supply, a plurality of independent means for pressing the fabric from the second source against the multiply coated surface of the fabric from the first-named source, means for adjusting the pressure of each of said pressure means, and heating means acting upon the doubled fabric between the pressure means.

4. In an apparatus for making doubled waterproof fabric, the combination with a source of fabric-supply, of means for applying a coating to one face of the fabric, means for adjusting the distance of the applying means toward and from the fabric to vary the thickness of the coating, heating means acting upon the fabric after the co-operation of the applying means therewith, a second coating-applying means for coöperation with the previously coated surface of the fabric, means for adjusting the last-named coating-applying means with respect to the fabric, a second source of fabric-supply, a plurality of independent means for pressing the fabric from the second source against the multiply coated surface of the fabric from the first-named source, means for adjusting the pressure of each of said pressure means, and combined heating and tension-compensating means acting upon the doubled fabric between the pressure means.

5. In an apparatus for making doubled waterproof fabric, the combination with a source of fabric-supply, of means for applying a coating to one face of the fabric, means for adjusting the distance of the applying means toward and from the fabric to vary the thickness of the coating, heating means acting upon the fabric after the co-operation of the applying means therewith, a second coating-applying means for coöperation with the previously coated surface of the fabric, means for adjusting the last-named coating-applying means with respect to the fabric, a second source of fabric-supply, and successive pairs of light and heavy doubler-rolls operating to press the fabric from the second source against the multiply coated fabric from the first-named source.

[Claims 6 to 13 not printed in the Gazette.]

1,154,875. METHOD OF COATING FABRICS. JAMES MEADE, Stoughton, Mass. Filed Nov. 20, 1911. Serial No. 661,228. (Cl. 154—40.)

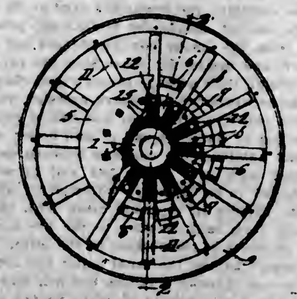


1. The method of coating fabric which consists in applying a comparatively shallow coating of waterproof substance to the face of a layer of the fabric, partially drying the shallow coating, applying a comparatively deep coating to the thinly coated face, and pressing a second layer of fabric against this coated surface.

2. The method of coating fabric which consists in applying a comparatively light coating of waterproof substance to the face of a layer of the fabric, applying a comparatively heavy coating to the lightly coated face, successively pressing a second layer of the fabric against this coated surface, and drying the coated fabric between the applications of pressure.

3. The method of coating fabric which consists in applying a comparatively light coating of waterproof substance to the face of a layer of fabric, applying a comparatively heavy coating to the lightly coated face, applying a second layer of fabric to the coated surface, successively subjecting the doubled fabric to comparatively light pressures, drying the doubled fabric between the applications of pressure, further applying comparatively heavy pressure to the doubled fabric, and drying a greater area of the fabric between the applications of light and heavy pressure.

1,154,876. AUTOMOBILE-WHEEL. WILLOUGHBY S. MILLER, Reading, Pa. Filed June 24, 1915. Serial No. 36,126. (Cl. 152—45.)



1. In a spring wheel, a tubular hub; ribs extended lengthwise of the hub and spaced circumferentially of the hub to define seats; spring holding means on the ribs; side plates mounted on the hub; a rim; spokes entering between the plates and having their outer ends secured to the rim; springs engaged at their outer ends with the spokes and engaged at their inner ends with the spring holding means; securing elements uniting the plates between the spokes; and wedge-shaped guides mounted on the securing elements, the smaller ends of the guides being received in the seats, independently of the spring holding means, thereby to prevent a swinging of the guides on the securing elements and an engagement between the smaller ends of the guides and the springs.

2. In a device of the class described, a hub; guides surrounding the hub; side plates; securing elements connecting the side plates with the guides; a rim; spokes attached at their outer ends to the rim, the inner ends of the spokes being provided with transverse heads, the inner faces of the side plates being equipped with enlarged openings in which the ends of the heads are movably received; and springs interposed between the heads and the hub.

3. In a device of the class described, a hub; a rim; side plates assembled with the hub and provided in their inner faces with radial side openings; spokes provided with transverse heads having extensions slidably received in the guide slots, the ends of the heads bearing against the inner faces of the side plates beyond the guide slots; and springs interposed between the heads of the spokes and the hub.

1,154,877. SMOKE-CONSUMING FURNACE. CHAUNCEY H. MOORE, Bellwood, Pa., assignor of one-fourth to George L. Holtzapple, one-fourth to Frank M. Weaver, and one-fourth to Robert A. Holden, Bellwood, Pa. Filed Feb. 26, 1915. Serial No. 10,706. (Cl. 110—30.)

1. In a smoke consumer and spark arrester, the combination with a furnace having a boiler and the usual smoke box, of a chamber extending longitudinally beneath the boiler throughout substantially the entire length thereof and communicating with the smoke box, said boiler form-

ing a closure wall for said chamber, means for feeding the products of combustion from the smoke box to the chamber, and means for burning the products of combustion in said chamber throughout the entire length thereof whereby to provide an auxiliary and supplemental heater for the boiler.



2. In a furnace having an ash pit, the usual combustion chamber, boiler and smoke box, of a chamber beneath the boiler outside of the combustion chamber and communicating at one end with the smoke box, and at its opposite end with the ash pit, means for forcing the products of combustion from the smoke box to the ash pit through said chamber, and means for consuming the products of combustion during their passage through said chamber.

3. In a smoke consumer and spark arrester, the combination with a boiler, a fire-box at one end of said boiler, and a smoke box at the other end of said boiler, of a supplemental and auxiliary fire chamber beneath said boiler communicating with said smoke box and in which the smoke is adapted to be burned, a water-jacket about said auxiliary fire-chamber in communication with the boiler, and a passage from said chamber to the fire box for returning the products of combustion to the latter.

4. In a furnace having the usual boiler and combustion chamber, a second chamber arranged beneath said boiler, a water-jacket about said second chamber having communication with the boiler, means for delivering the products of combustion from said first chamber to the second chamber, and means for consuming the products of combustion in said second chamber.

5. In a furnace having the usual combustion chamber and boiler, of a smoke box having a diaphragm extending downwardly and forwardly and substantially separating said smoke box into two vertical chambers, one of said chambers being immediately in front of said boiler, and the other of said chambers being in communication with a smoke stack, a damper on said diaphragm adapted to control communication between said chambers, a second combustion chamber arranged beneath the boiler, a passage leading from said first chamber of the smoke box to said second combustion chamber, means in said passage for forcing the products of combustion through said passage into said second chamber, and means in said second chamber for burning the products of combustion therein.

[Claims 6 and 7 not printed in the Gazette.]

1,154,878. SAFETY-ENVELOP. WILLIAM J. NORRIS, Reynoldsville, Pa. Filed Sept. 16, 1914. Serial No. 862,048. (Cl. 229—78.)

1. An envelop fastener comprising a plate to be secured to the body of the envelop at a point adjacent the position occupied by the closing flap and provided with a loop struck from the body thereof in a manner to form a slot therethrough, a plate to be connected with the closing flap of the envelop and provided with a spring tongue bent from the metal thereof, and all of said parts so arranged that the spring tongue may be inserted through the loop as the flap is brought to the closed relation and the free end of said tongue will abut against the metal of the body portion at an edge of the slot and at a point beneath the loop thereof.

2. An envelop fastener comprising a plate to be connected with the closing flap of an envelop and provided with a locking extension, a plate to be secured to the body of the envelop having a loop struck from the body thereof in a manner to provide a slot therethrough, the locking extension adapted to be inserted through the loop as the flap is brought to the closed position, and a spring tongue struck from the body portion of the extension to project therefrom and with the parts in the closed relation to abut at its free end against the metal of the body plate at an edge of the slot therethrough when the flap has been brought to the closed relation.



3. An envelop fastener comprising a plate provided with a locking extension, spurs struck from the body of said plate to be penetrated through the flap of the envelop and clenched thereagainst, a second plate having a loop struck therefrom to project from the surface and to provide a slot through the body portion of the plate, spurs formed from the metal of said plate to be penetrated through one side of the body portion of the envelop on that side against which the flap closes and to clench thereagainst to secure said second plate in place, the locking extension adapted to be inserted through the loop and to rest against the face of said second plate member as the flap is brought to the closed position, and a spring tongue struck from the body portion of the extension to be resiliently held to project therefrom and with the parts in the closed relation to abut at its free end against the metal of the body plate and an edge of the slot.

4. A safety envelop comprising a body portion and flap cut and folded from a single sheet of material, a plate to be connected with the closing flap of the envelop and provided with a locking extension, a second plate having a loop struck from the body thereof in a manner to provide a slot therethrough, the folded edges and seams of said body portion so arranged that they overlap at a common point, spurs provided to extend from said second plate member and to be penetrated through the overlying flaps of the body portion and clench thereagainst to mount the plate thereon and to secure the seams of the envelop, and a spring tongue struck from the locking extension of said first plate member to abut against said second plate member when the flap is brought to the closed relation in such a manner as to preclude manual release thereof.

5. A safety envelop comprising a body portion and closing flap cut and folded from a single sheet of material in such a relation that the several forming flaps of the body portion overlap at a point on the rear side of the envelop, a plate provided with a locking extension, spurs formed from the body portion of said plate to be received through the flap of the envelop and clenched thereagainst to secure the plate in place, a second plate having a loop struck from the body thereof in a manner to provide a slot therethrough and having the metal at one of the edges of the slot bent above the surface of the plate to provide an engaging catch, spurs struck from the body portion of said second plate to be received through the several overlying portions of the body of the envelop to mount the plate thereon and to secure said overlapping portion in a closed relation, the locking extension adapted to be inserted through the loop as the flap is brought to the closed position, and a spring tongue struck from the body portion of the locking extension to project therefrom and to abut at its free end against the catch provided on said second plate.

1,154,879. LANTERN-CARRIER. ALFRED F. OLSON, Vermillion, S. D. Filed Jan. 18, 1915. Serial No. 2,909. (Cl. 104—146.)



1. A device of the class described including a track, a carrier movable along the track and provided with a lantern-receiving hook the mouth of which opens upwardly, a latch mounted on the carrier and arranged to close the mouth of the hook, and fixed means located at a point of the track in the path of the latch and arranged to automatically release the lantern from the hook.

2. A device of the class described including a track, a carrier movable along the track and provided with a lantern supporting hook, and a spring actuated latch lever mounted on the carrier and provided with a lug arranged to confine a lantern therein, said lug being beveled at its upper edge and provided at its lower edge with a shoulder.

3. A device of the class described including a track, a carrier movable along the track and provided with a lantern supporting hook, and a spring actuated lever mounted on the carrier and provided with spaced projecting lugs embracing the hook and located at opposite sides thereof in position for confining a lantern within the said hook.

4. A device of the class described including a track, a carrier movable along the same and provided with means for supporting a lantern, a spring actuated latch lever mounted on the carrier and arranged to retain the lantern in the supporting means, and a fork arranged in the path of the carrier and composed of spaced sides having diverging portions arranged to engage the carrier and the lever and adapted to open the latter and release the lantern.

5. A device of the class described including a track, a carrier movable along the same and provided with a hook adapted to receive the bail of a lantern, a latch lever pivotally mounted at an intermediate point on the carrier and provided at one of its arms with means for confining the lantern in the hook, a spring arranged to urge the other arm outwardly for maintaining the lever in its engaging position, and a fork located in the path of the carrier and having portions arranged to engage the said carrier and the spring actuated arm of the lever to compress the spring and release the lantern.

[Claim 6 not printed in the Gazette.]

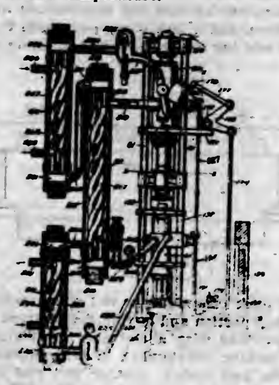
1,154,880. POWER-GENERATING SYSTEM. JOHN PATTEN, Baltimore, Md. Filed Mar. 18, 1912. Serial No. 684,554. (Cl. 60—1.)

1. The method of employing carbon dioxid, as a medium for converting heat into work, which consists in successively compressing the carbon dioxid, heating it, expanding it in an engine, and cooling it, and wherein the lowest pressure during these operations is not substantially less than critical pressure.

2. The method of employing carbon dioxid, as a medium for converting heat into work, which consists in successively compressing the carbon dioxid, heating it, expanding it in an engine, and cooling it, and wherein the temperature at the beginning of the compression is substantially the critical temperature.

3. The method of employing carbon dioxid, as a medium for converting heat into work, which consists in successively compressing the carbon dioxid, heating it, expanding it in an engine, and cooling it, and wherein the pressure during these operations is not substantially less than critical pressure and the temperature is not substantially less than critical temperature.

4. The method of employing carbon dioxid as a medium for converting heat into work, which consists in successively compressing the carbon dioxid from substantially critical temperature and pressure, heating it by the absorption of heat from a relatively hotter body, expanding it in an engine to a pressure above critical pressure and a temperature above critical temperature, exhausting it to substantially critical pressure, and cooling it to substantially critical temperature.



5. The method of employing carbon dioxid, as a medium for converting heat into work, which consists in successively compressing the carbon dioxid, heating it, expanding it in an engine, and cooling it, utilizing the exhaust from the engine to heat the compressed fluid, the temperatures and pressures throughout the cycle of operation being such that more than one fourth of the heat supplied to the compressed fluid is received from the fluid exhausted by the engine.

[Claim 6 not printed in the Gazette.]

1,154,881. HOLLOW NAIL. GUIDO PESENTI, Paris, France, assignor to Mario Pesenti, Paris, France. Filed May 15, 1914. Serial No. 838,747. (Cl. 85—10.)



1. A hollow or tubular nail, intended to receive a movable head, consisting of a hollow member provided with a shoulder near its mouth and a reinforcing ring swaged around the extremity of the hollow member, and bearing against the said shoulder.

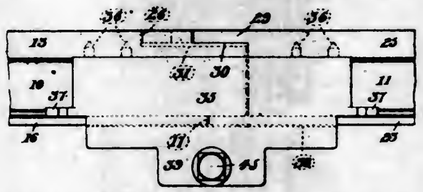
2. A hollow or tubular nail consisting of an internally tapped hollow member, but with an internal non-tapped portion near its mouth and having a larger diameter than the tapped portion, and provided with an external reinforcing shoulder, a reinforcing ring swaged around the extremity of the hollow member, and bearing against the said shoulder, and a removable head provided with a screw threaded shaft for engagement with said hollow member.

1,154,882. RAIL-JOINT. FRANK PIETRUSZA, Arnold City, Pa. Filed Mar. 19, 1915. Serial No. 15,449. (Cl. 239—8.)

1. A rail joint comprising two inter-engaging rail ends complementally formed and having side sockets in the tread portions thereof, fish plates oppositely positionable upon the said rail ends and having projections extending into the said sockets and further having longitudinal side slots within which the base flanges of the rail ends are seated, central depending lugs carried by the said plates provided with perforations therethrough, and inter-engaging securing clamps carried by the said lugs and extending through said perforations.

2. A device of the class described, comprising rail ends having complementally formed projections and receiving

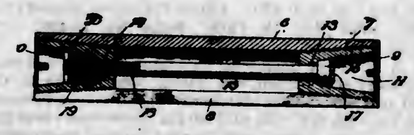
portions upon each of the same and being further provided with inwardly projecting sockets upon the lower sides of the rail treads, fish plates provided with spaced projecting lugs positionable within said sockets and having inwardly projecting longitudinal flanges seated upon the base flanges of said rails, depending lugs upon said fish plates provided with central perforations, a bolt positioned through one of said lug perforations and having a threaded bore, and a lock screw positioned through the other one of said lug perforations and engaging within the said bore.



3. A rail joint comprising a rail end provided with a cut-away tread portion and having the adjacent portion of the tread provided with a slot and an enlarged socket, a resilient packing countersunk in said cutaway portion and said slot and socket, another rail end having the web and the adjacent underneath portion of the tread cut-away forming a tread extension terminating in a rounded head and a connecting reduced neck portion, the said head, neck and tread portion of said last-named rail end being positionable within the socket and slot and upon the cut-away tread portion and the aforesaid packing of the first-named rail end when the ends of the webs of the said rails are in alining abutment with each other.

4. A rail joint comprising a rail end provided with a cut-away tread portion and having the adjacent portion of the tread provided with a slot and an enlarged socket, a resilient packing countersunk in said cut-away portion and said slot and socket, the end portion of the base flange of said rail being cut-away, opposite projecting curved lugs formed at the bottom and at the end of the web thereof forming a head portion in substantial alinement with the base flange of the carrying rail, another rail end having the web and adjacent underneath portion of the tread cut-away forming a tread extension terminating in a rounded head and a connecting reduced neck portion, the base flanges of said second-named rail end having a central socket adjacent the web of the said rail and having a communicating forwardly positioned slot in alinement with the said web, the said head, neck and tread portion of said last named rail end being positionable within the socket and slot and upon the cut away tread portion and the aforesaid packing of the first-named rail end when the ends of the webs of the said rails are in alining abutment with each other, and at which time the base flanges are in engagement with each other, with the web head seated within the said base flange socket.

1,154,883. WRIST-PIN. JOHN H. FORTMAN, Pascagoula, Miss. Filed July 21, 1913. Serial No. 780,319. (Cl. 74—38.)



1. In an expansible wrist pin, a split tubular body, expanding cones fitted in the ends of the body, and a bolt fitted through the said cones and extending axially of the body.

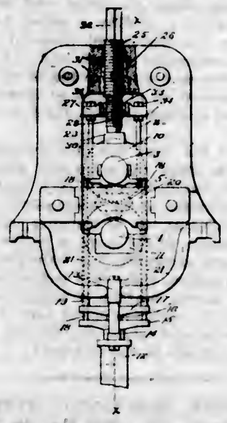
2. In an expansible wrist pin, a split tubular body, expanding cones fitted in the ends of the body, a bolt fitted through the said cones and having a head at one end bearing against one of the cones, and a nut threaded upon the bolt at the other end thereof and bearing against the other cone.

3. In an expansible wrist pin, a split tubular body, expanding cones fitted in the ends of the body, the said cones being formed each with a conical recess, a bolt fitted through the minor ends of the cones and provided at one end with a conical head fitting in the recess in one of the cones, and a nut threaded upon the other end of the bolt and of conical form and seating in the recess in the other cone.

4. In an expansible wrist pin, a split tubular body, expanding cones fitted in the ends of the body, the body at its ends being interiorly threaded and conical and the cones being exteriorly threaded, the cones being provided at their outer ends with means for the engagement of a wrench or the like, whereby they may be adjusted within the ends of the body, and a tie-bolt extending between the cones and provided with a nut adjustable thereon to lock the cones after adjustment.

5. In an expansible wrist pin, a split tubular body interiorly flared at its opposite ends and having the walls of its flared portions threaded, an expanding cone threaded into each end of the body, each cone being provided in its major end with a tapered seat, a tie bolt fitted through the minor ends of the cones and having a conical head fitting the tapered seat of one cone, and a conical nut threaded onto the other end of the tie bolt and seating within the conical seat in the other cone.

1,154,884. ROLLING-MILL. JOHANN PUPPE, Breslau, Germany. Filed Aug. 30, 1911, Serial No. 646,856. Renewed Aug. 4, 1915. Serial No. 43,706. (Cl. 80—56.)



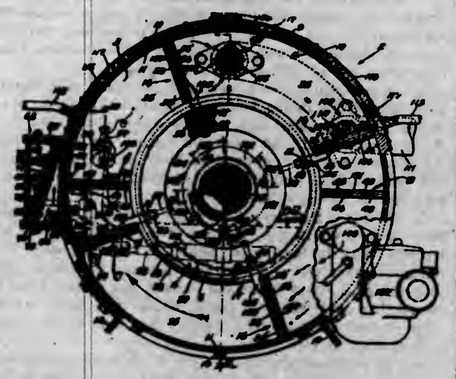
A rolling mill of the character described, having a frame, two horizontal rolls disposed one above the other in said frame, the lower roll having a fixed journal, the upper roll adapted to slide in said frame toward and away from the lower roll, vertical rolls disposed laterally on each side of said horizontal rolls and adapted to slide vertically in said frame, adjustable supports for said upper horizontal roll and said vertical rolls, a screw threaded in said frame and adapted when operated to positively move said journal of the upper horizontal roll downward, the lower end of said screw being threaded into a cross arm connected with said vertical rolls, the pitch of said lower end being suitably proportioned to the pitch of the screw portion in said frame to cause said screw to move said vertical rolls downward with said upper horizontal roll in fixed speed relation thereto.

1,154,885. REMOVABLE BRACED SHIPPING CANCASE. GEORGE J. RECORD, Conneaut, Ohio. Filed Dec. 8, 1914. Serial No. 876,108. (Cl. 229—138.)

A shipping case for cans consisting of a wooden body provided with an inner metal band for the lower end of said body, an outer metal band opposite the said inner band and means for holding said bands together on the intervening wood, the said inner band being provided with a can supporting bottom extending across the space within said band, the said bottom and band acting as one piece and having an intervening inwardly and upwardly bent part whereby the weight of a can on said bottom transmits an outward pressure to said band causing it to bind against the wood.



1,154,886. ROTARY ENGINE. FRANK JAY RICHARDS, Los Angeles, Cal., assignor of forty-nine one-hundredths to Don M. Brockway, Los Angeles, Cal. Filed Dec. 22, 1913. Serial No. 808,292. (Cl. 123—14.)



1. A rotary engine comprising a cylinder and a rotor mounted to rotate in said cylinder, piston blades formed on said rotor, an outer annular chamber in said cylinder in which said blades travel, an annular lubricating chamber formed between said outer annular chamber and the axis of the rotor and in the place of rotation of said rotor, and a passage formed in said piston blades to afford communication between said lubricating chamber and the working faces of said outer annular chamber whereby said working faces will be lubricated from said lubricating chamber.

2. A rotary internal combustion engine comprising a casing forming an outer annular chamber and an inner annular chamber, a rotor mounted to rotate having a disk member adapted to travel in said inner annular chamber, and a plurality of piston blades on the periphery of said disk member and adapted to travel in said outer annular chamber, said inner annular chamber being adapted to be filled with lubricant, and means to feed said lubricant from said inner annular chamber to the working faces of said outer annular chamber.

3. A rotary internal combustion engine comprising a casing forming an outer annular chamber and an inner annular chamber, a rotor mounted to rotate in said casing having a disk member adapted to travel in said inner annular chamber and a plurality of piston blades formed on the periphery of said disk member and adapted to travel in said outer annular chamber, said inner annular chamber being adapted to be filled with lubricant, an annular opening between said outer and inner annular chambers in which the disk member of said rotor is adapted to rotate, packing means for said annular opening to provide a non-leak fit between said inner and outer chambers, and means to feed the lubricant from said inner annular chamber to the working faces of said outer annular chamber through said piston blades.

4. A rotary internal combustion engine comprising a casing forming an outer annular chamber and an inner annular chamber, a rotor mounted to rotate in said casing having a disk member adapted to travel in said inner annular chamber and a plurality of piston blades formed on the periphery of said disk member and adapted to travel in said outer annular chamber, said inner annular chamber being adapted to be filled with lubricant, an annular opening between said outer and inner chambers in which the disk member of said rotor is adapted to rotate, packing means for said annular opening to provide a non-leak fit between said inner and outer chambers, and a passage in said piston blades to afford communication between said inner chamber and the working faces of said outer chamber whereby said working faces will be lubricated from said inner chamber.

5. A rotary internal combustion engine comprising an outer annular chamber and an inner annular chamber, a disk member mounted to rotate in said inner annular chamber, a plurality of piston blades formed on the periphery of said disk member and adapted to travel in said outer annular chamber, said inner annular chamber being adapted to be filled with lubricant, an annular opening between said outer and inner annular chambers in which the outer edge of said disk member is adapted to travel, packing means for said annular opening to provide a non-leak fit between said inner and outer chamber, an annular recess in said packing means adapted to contain lubricant and presenting a lubricating face to the disk member traveling in said annular opening, and means to feed lubricant from said inner chamber to said annular recess and the working faces of said outer annular chamber.

[Claims 6 to 24 not printed in the Gazette.]

1,154,887. PICTURE-HANGER. JASPER NEWTON RICKLES, Altoona, Ala. Filed June 4, 1914. Serial No. 842,978. (Cl. 40—145.2.)



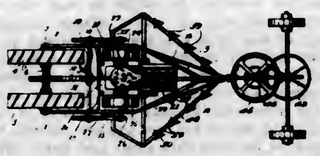
1. A picture hanger including a hanger frame having guides, a hanger plate secured to the hanger frame and projecting above the same and provided with a fixed toothed jaw for hooking over and engaging the picture molding at the top thereof, a slidable clamping member mounted on the said guides and having teeth to engage the picture molding at the bottom thereof, and spring actuated means for automatically moving the slidable clamping member into engagement with the molding.

2. A hanger or holding bracket including a frame having guides, a plate secured to the frame and provided with a fixed jaw for hooking over and engaging a molding at one side, a movable clamping member provided at opposite sides with means for slidably engaging said guides, said clamping member being also provided with means for engaging the molding at the other side, and springs disposed on the guides and arranged to urge the clamping member forwardly toward the fixed jaw.

3. A picture hanger including a hanger frame provided with spaced guides, a hanger plate secured to the hanger frame and provided with means for hooking over and engaging the top of the picture molding, and a clamping member slidable along the guides and provided between the same with projecting means for engaging beneath the picture molding, said clamping member being also provided between the guides with a nail receiving opening.

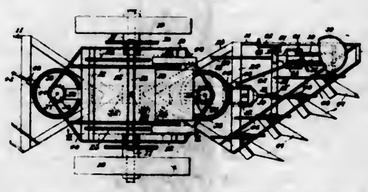
4. A picture hanger including a hanger frame, a hanger plate rigidly secured at its lower portion to the hanger frame and having its upper portion bent rearwardly and shaped to fit a picture molding, and a fixed jaw secured to the plate at the upper end thereof and provided with engaging teeth projecting below the plane of the rearwardly bent portion of the hanger plate, and a slidable clamping member mounted on the hanger frame and coöperating with the hanger plate to grip the molding.

1,154,888. AGRICULTURAL MACHINE. MICHAEL SAMEL, Lorain, Ohio. Filed July 31, 1914. Serial No. 854,367. (Cl. 97—30.)



An agricultural implement comprising a frame, propelling means therefor, steering means therefor, a pair of downwardly outwardly and forwardly inclined supports secured to the sides of said frame, an angularly shaped frame engaged at one end with said supports, one bar of said frame being extended vertically and provided with registering openings and a lever connected to the angular frame and adjustably connected to said bar and capable of elevating and lowering the frame, ground working implements, and yokes for securing the ground working implements to the frame.

1,154,889. MOTOR-PLOW. MICHAEL SAMEL, Cherry Valley, Pa. Filed June 7, 1915. Serial No. 32,648. (Cl. 97—50.)



1. A motor plow comprising a carriage, an axle secured beneath the carriage, a king bolt extending through the bottom of the carriage and the said axle, a board and brace strip pivoted to the said bolt at opposite sides of the said axle, V-shaped members secured to the said board and extending in opposite directions therefrom, and triangular plow frames fixed to the opposite outer ends of the said V-shaped members and brace strip.

2. A motor plow comprising a carriage, an axle secured beneath the carriage, a king bolt extending through the bottom of the carriage and the said axle, a board and brace strip pivoted to the said bolt at opposite sides of the said axle, V-shaped members secured to the said board and extending in opposite directions therefrom, triangular plow frames fixed to the opposite outer ends of the said V-shaped members and brace strip, oppositely positioned plows upon the same corresponding sides of the said frames, the plows of one frame being operatively positioned when those of the other frame are in their inoperative elevated position, individual steering means for each of the said frames, automatically positioned ground wheels for the said frames, and adjustable depth regulating guide wheels upon the said frames.

3. A device of the class described comprising a carriage having an axle and traction wheel journaled upon the said axle, a motor upon the said carriage, operative connections between the said motor and wheels, a king bolt for the said carriage extending through the axle thereof, a tiltable mounted supporting means pivotally attached to the said bolt, and quadrilateral plow frames fixedly secured to the opposite ends of the said supporting means and projecting over the opposite ends of the said carriage.

1,154,890. ANTISLIPPING DEVICE FOR SHOES. CHARLES W. SAUER, Jr., Elisabeth, N. J. Filed Sept. 14, 1914. Serial No. 861,692. (Cl. 36—63.)



1. A device of the character described including sole clamps, heel clamps, an instep bridge, a tongue adjustably connected to said bridge, resilient connections between said sole clamp and said tongue, and resilient connections between said heel clamps and said bridge.

2. An anti-slip device as set forth including sole clamps, heel clamps, an instep bridge, a tongue adjustably overlapping said bridge, rigid means connecting said heel clamps, semi-rigid and resilient means connecting said sole clamps, resilient connections between said sole clamps and said tongue, and resilient connections between said heel clamps and said bridge.

3. An anti-slip device as set forth including sole clamps, heel clamps, an instep bridge, a tongue adjustably overlapping said bridge, rigid means connecting said heel clamps, semi-rigid and resilient means connecting said sole clamps, a chain connected to each sole clamp, a spring connecting each chain to said tongue, a spring carried by each heel clamp, and a chain connecting each of last said springs to said bridge.

4. The combination with a pair of forward sole clamps resiliently separated, of a heel clamp, an instep bridge resiliently connected to said heel clamp, an apertured tongue resiliently connected to said forward clamps, and a buckle portion pivoted to said instep bridge and adapted to coöperate with said apertured tongue in order to maintain the longitudinal adjustment of the device.

5. The combination with a pair of sole clamps, of semi-rigid and resilient means connecting said clamps, a rearwardly directed tongue, semi-rigid and resilient connections between said tongue and each of said clamps, a heel clamp, an instep bridge, semi-rigid and resilient connections between the last mentioned clamp and bridge, means pivoted on said instep bridge and adjustably coacting with said tongue, and resilient means operable on said pivoted means intending to hold it in its adjusted position.

[Claim 6 not printed in the Gazette.]

1,154,891. FRICTION-CLUTCH. MATTHEW C. SHARPNACK, Prescott, Ariz. Filed Aug. 17, 1914. Serial No. 857,046. (Cl. 192—8.)

1. In a clutch, the combination with a shaft, of a clutch member revolubly mounted on said shaft and adapted to be shifted longitudinally thereof, and yieldable means fastened to the clutch member and connected to the shaft through which rotary movement is transmitted between the shaft and clutch member.

2. In a clutch, the combination with a shaft, of a clutch member mounted in revoluble relation to the shaft and reciprocal thereon, and a coiled spring forming a yieldable connection between the clutch member and the shaft, whereby rotary movement of the clutch member will be transmitted to the shaft.

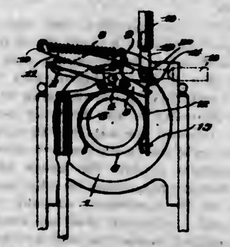
3. In a clutch, the combination of a shaft, a sleeve keyed on said shaft to slide longitudinally thereon, a clutch member revolubly mounted on said sleeve, and a coiled spring wound around the sleeve having one end attached to the sleeve and its opposite end secured to the clutch member.



4. In a clutch, the combination with a shaft, of a clutch member mounted in revoluble relation to the shaft and reciprocal thereon, and a tensioned yieldable member fastened to the clutch member and connected to the shaft and adapted to exert a yieldable pull between the shaft and the clutch member.

5. In a clutch, the combination of a shaft, a sleeve keyed on said shaft to slide longitudinally thereon, a clutch member revolubly mounted on said sleeve, and a yieldable member connecting said sleeve and clutch member, through which rotary movement is transmitted between the shaft and clutch member.

1,154,892. PHOTOGRAPHIC-SHUTTER OPERATOR. BENJAMIN A. SLOCUM, Rochester, N. Y. Filed Sept. 4, 1914. Serial No. 860,168. (Cl. 161—26.)



1. A photographic shutter operator embodying means adapted to effect the opening and closing of a shutter, and an element having a high capillary attraction and readily destructible by a liquid for causing such means to act.

2. A photographic shutter operator embodying means adapted to effect the opening and closing of a shutter, an element readily destructible by a liquid for causing said means to act, and means associated with said operating means for supplying liquid to said element.

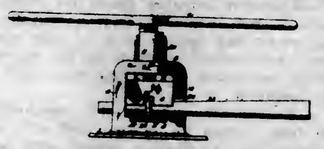
3. A photographic shutter operator comprising a motor member for operating the shutter, and an element having a high capillary attraction and readily destructible by a liquid for holding said motor member against action.

4. A photographic shutter operator comprising a motor member for operating the shutter, an element readily destructible by a liquid for holding said motor member against action and a drop forming device for supplying a drop of liquid to the readily destructible element.

5. A photographic shutter operator comprising a motor member for operating the shutter, an element readily destructible by a liquid for holding said motor member against action, and a drop forming device for supplying a drop of liquid to the readily destructible element comprising a container having a restricted outlet.

[Claims 6 and 7 not printed in the Gazette.]

1,154,893. RING-EXPANDING PRESS. LAWRENCE W. SWEM, West Liberty, Iowa, assignor to E. L. Webb & Co., West Liberty, Iowa, a Corporation of Iowa. Filed Jan. 5, 1915. Serial No. 605. (Cl. 29—8.)

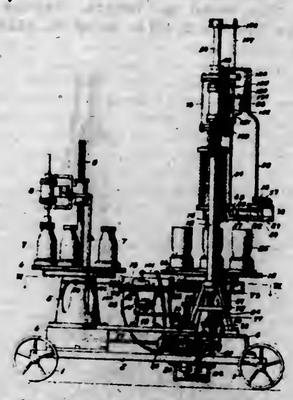


1. In a ring-press a press frame having a base adapted to support a swage-block, side-standards perforated to admit a ring-mandrel and allow a limited vertical movement thereof, and a screw-receiving yoke, a screw threaded in said yoke, a hand-lever therefor, a pressure-block slidably mounted between said standards, one or more springs to hold said block in contact with the screw, the block having a central recess or socket for the end of the screw, and a gap at the under side, to receive the upper part of a ring mounted on said mandrel, and means adapted to hold the swage-block in position.

2. In a ring-press, a press frame having a base adapted to support a die or swage-block, and provided with upraised lugs, a die-keeper having a hole therein to receive the die, and with downwardly bent sides fitting between said base-lugs.

3. In a ring-press, a press-frame having a base adapted to support a swage-block or die, and provided with upraised lugs, and a die-keeper having an off-center hole therein to receive the die, and with downwardly bent flanges fitting between said lugs, whereby the same keeper may serve for a double-matrix die, as described.

1,154,894. GLASS-FORMING MACHINE. WILLIAM S. TEEPLE, Wellsburg, W. Va. Filed Nov. 7, 1913. Serial No. 799,724. (Cl. 49—5.)



1. In a glass-forming machine, the combination of a rotatable table, means for moving said table intermittently, a fluid-pressure glass cutter, a reciprocatory rod for locking said table, fluid pressure means for moving said rod, a single valve for controlling the operation of said cutter and the reciprocation of said rod, and means operated by the reciprocation of said locking rod for setting said table-moving means in operation.

2. In a glass-forming machine, the combination of a rotatable table, means for moving said table intermittently, a fluid pressure glass cutter, a reciprocatory rod for locking said table, fluid pressure means for moving said rod, a single valve for controlling the operation of said cutter and the reciprocation of said rod, valve collars secured to said rod, a valve casing inclosing said collars, and pipes connecting through said casing a source of fluid supply to said table moving means, whereby

the reciprocation of said locking rod becomes effective to set said table moving means in operation.

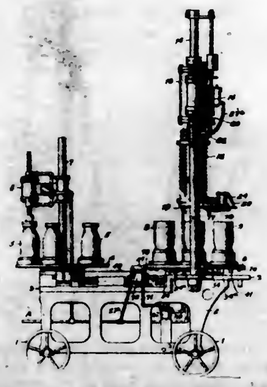
3. In a glass-forming machine, the combination of a rotatable table, means for moving said table intermittently, fluid-pressure actuated shears for cutting glass, fluid-pressure actuated table locking mechanism, a single valve for controlling the operation of said shears and mechanism, and means operated by the movement of the locking mechanism for setting said table moving means in operation.

4. In a glass-forming machine, the combination of a rotatable table, means for moving said table intermittently, shears for cutting glass, fluid-pressure means for operating said shears, a reciprocatory rod for locking said table, fluid-pressure means for moving said rod, a single two-position valve effective in one position to permit a flow of motive fluid to said shear-operating and rod-moving means and in the other position to afford an outlet for the fluid previously let to said two means, and means rendered effective after the release of said locking rod for setting said table-moving means in operation.

5. In a glass-forming machine, the combination of a rotatable table, means for moving said table intermittently, glass-cutting shears, fluid-pressure means for operating said shears and including a cylinder and a piston head, table-locking mechanism, fluid-pressure means for operating said mechanism, a two-position valve effective in its alternate positions to permit the flow of fluid to and afford paths of escape of fluid from the opposite ends of said shear cylinder and furthermore to permit the flow of fluid to and afford a path of escape from said lock-operating mechanism, and means rendered effective after the release of said locking mechanism for setting said table-moving means in operation.

[Claims 6 to 9 not printed in the Gazette.]

1,154,895. GLASS-WORKING MACHINE. WILLIAM S. TEEPLE, Wellsburg, W. Va. Original application filed Nov. 10, 1913, Serial No. 799,724. Divided and this application filed Feb. 2, 1914. Serial No. 815,995. (Cl. 49—14.)



1. In a glass-forming machine, the combination of a rotatable table, means including a fluid pressure cylinder and a reciprocatory piston therein for rotating said table intermittently, a glass cutter, means including a fluid pressure cylinder for operating said cutter, a starting valve for controlling the flow of pressure fluid to said cutter cylinder, a compound valve comprising a casing and a two-position longitudinally-movable plunger, conduits leading from opposite ends of said table-moving cylinder to said valve casing, said plunger valve in its opposite positions placing said conduits alternately in communication with a source of fluid supply and with an exhaust passageway, and means whereby the movement of said plunger is controlled by the movement of said glass cutter.

2. In a glass-forming machine, the combination of a rotatable table, means including a fluid pressure cylinder for rotating said table intermittently, a glass cutter, means including a fluid pressure cylinder for operating said cutter, a starting valve controlling the flow of pressure fluid to said cutter cylinder, a compound valve comprising a casing and a two-position plunger movable by pressure fluid, said compound valve controlling the flow of pressure fluid to and from said table moving cylinder, and a pressure fluid passageway between said casing and said cutter cylinder, whereby the pressure fluid let to the cutter cylinder moves said plunger after the cutter is set in operation.

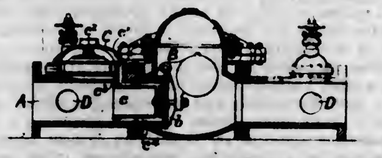
3. In a glass-forming machine, the combination of a rotatable table, means including a fluid pressure cylinder and a reciprocatory piston therein for rotating said table intermittently, shears for cutting molten glass, means including a fluid pressure cylinder and a reciprocatory piston therein for operating said shears, a starting valve for controlling the flow of pressure fluid to said shear-operating cylinder, a compound pressure-controlling member comprising a casing and a two-position valve therein, conduits leading from opposite ends of said table-moving cylinder to said valve casing, said valve in its opposite positions, placing said conduits alternately in communication with a source of fluid supply and with an exhaust passageway, and means whereby the movement of said valve is controlled by the movement of said shears.

4. In a glass-forming machine, the combination of a rotatable table provided with a plurality of latch-engaging detents, a movable latch for engaging said detents and thereby locking said table, a reciprocatory rod for turning said table, a plurality of rod-engaging detents secured to said table, said rod in its inactive stroke moving to a stationary position beyond the range of engagement with the next detent engageable thereby, and a latch releaser operable by the movement of said rod while advancing from said stationary position into engagement with the rod-engaging detent beyond which it moved on its preceding return stroke.

5. In a glass-forming machine, the combination of a rotatable table provided with a plurality of latch-engaging detents, a movable latch for engaging said detents and thereby locking said table, a reciprocatory rod for turning said table, a plurality of rod-guarding detents secured to the table and disposed one adjacent to each of said rod-engaging detents, said rod in its inactive stroke moving to a stationary position beyond the range of engagement with the next detent engageable thereby, and a latch-releaser operable by the movement of said rod while advancing from said stationary position into engagement with the rod-engaging detent beyond which it moved on its preceding return stroke.

[Claim 6 not printed in the Gazette.]

1,154,896. METER SYSTEM. JAMES A. TILDEN, Boston, Mass. Filed Nov. 11, 1912. Serial No. 730,547. (Cl. 73—167.)



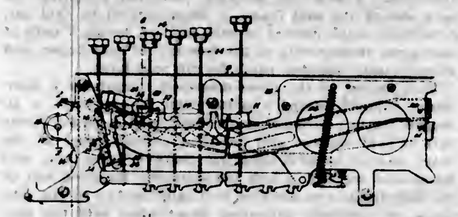
1. In combination, a conduit, a resistance device therein, a meter provided with a passage opening into the conduit at opposite sides of the resistance device, and a valve having a portion movable in the conduit and cooperating with the meter-passage and being adapted to open and close the conduit and in closing the conduit to obstruct the meter-passage.

2. A conduit, a valve having a movable portion situated in the conduit, a meter having a passage connected with the conduit, and a resistance device in the conduit, said resistance device and meter-passage extending into proximity with the same movable portion of the valve, whereby the relation of flow through the resistance device and meter-passage is varied.

3. A meter system comprising a conduit, a resistance-tube of less diameter than the conduit, a meter having a passage opening into the conduit at opposite extremities of the resistance-tube, and a check-valve provided with a movable member which in its closed position is situated in close proximity to one end of the resistance-tube.

4. A conduit, a valve and a resistance device in the conduit, and a meter having a passage connected with the conduit, said passage being located within and extending along said conduit toward the valve and one of the walls of the passage being furnished by the resistance device.

1,154,897. CALCULATING-MACHINE. JOSEPH ABRAM TURCK, Chicago, Ill., assignor to Felt & Tarrant Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 9, 1911. Serial No. 653,562. (Cl. 235—82.)



1. In prime-actuating mechanism for a key-driven calculating-machine, in combination: a column of denominational driving-keys; a swinging column-member co-acting with the keys and driven by them severally to swing a distance proportioned to their respective values; rotary numeral-wheel mechanism; and an oscillating member intermediate said driven column-member and said numeral-wheel mechanism and acting to transmit definitely to the numeral-wheel mechanism the power imparted to the column-member by the keys.

2. In prime-actuating mechanism for a key-driven calculating-machine, in combination: a column of denominational driving-keys; a swinging column-member co-acting with the keys and driven by them severally to swing a distance proportioned to their respective values; rotary numeral-wheel mechanism; and an oscillating cam-member intermediate said driven column-member and said numeral-wheel mechanism and acting by repeated camming impulses to transmit definitely to the numeral-wheel mechanism the power imparted to the column-member by the keys.

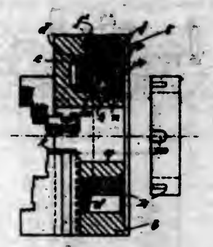
3. In prime-actuating mechanism for a key-driven calculating-machine, in combination: a column of denominational driving-keys; a column-member co-acting with the keys and driven by them severally in proportion to their respective values; rotary numeral-wheel mechanism; and a cam-member intermediate said driven column-member and said numeral-wheel mechanism and acting by repeated camming impulses to transmit definitely to the numeral-wheel mechanism the power imparted to the column-member by the keys.

4. In a calculating machine the combination of a numeral wheel and an actuating mechanism therefor, the latter embracing a series of keys, cam devices adapted to rotate the numeral wheel, and means whereby the keys may act upon and control said devices.

5. In a calculating machine a numeral wheel in combination with a segment and lever having cam faces, a series of keys for said lever, devices operated by said cam faces and acting to rotate the numeral wheel.

[Claims 6 to 8 not printed in the Gazette.]

1,154,898. CHUCK. ERNST UHLIG and KURT RAUCH, Gera-Untermhaus, Germany. Filed June 6, 1914. Serial No. 843,563. (Cl. 29—127.)



1. In a chuck the combination of a housing having a cylindrical wall and a tubular boss within said wall, the latter having radial bores, jaws radially movable in said housing, gear wheels mounted in said radial bores having necks, means in said housing connecting said wheels to said jaws, for radial movement of the latter, and a detachable slotted ring fitting around said tubular boss, partly embracing the necks of said gear wheels with its slots, thereby retaining said wheels in said bores.

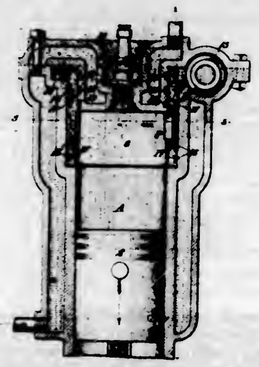
2. In a chuck the combination of a housing having a cylindrical wall and a tubular boss within said wall, the latter having radial bores, toothed jaws radially movable in said housing, bevel wheels mounted in said radial bores having necks, a rotatable disk in said housing having a spiral thread on one face, engaging said toothed jaws, and bevel teeth on the other face, engaging said bevel wheels, whereby said jaws can be radially moved, and a detachable slotted ring fitting around said tubular boss, partly embracing the necks of said bevel wheels with its slots, thereby retaining said wheels in said bores.

3. In a chuck the combination of a housing having a cylindrical wall and a tubular boss within said wall, the latter having radial bores and the boss having recesses in its outer circumference, toothed jaws radially movable in said housing, bevel wheels mounted in said radial bores, having necks, and gudgeons on said necks entering said recesses, a rotatable disk in said housing, having a spiral thread on one face, engaging said toothed jaws and bevel teeth on the other face engaging said bevel wheels, whereby said jaws can be radially moved and a detachable slotted ring fitting around said tubular boss, partly embracing said necks with its slots and preventing axial movement of said wheels.

4. In a chuck the combination of a housing having a cylindrical wall and a tubular boss within said wall, the latter having radial bores, jaws radially movable in said housing, gear wheels mounted in said radial bores having necks, means in said housing connecting said wheels to said jaws, for radial movement of the latter, a detachable slotted ring fitting around said tubular boss, partly embracing the necks of said gear wheels with its slots retaining said wheels in said bores, and a flange between said ring and the wall of said housing, covering the interior of the latter.

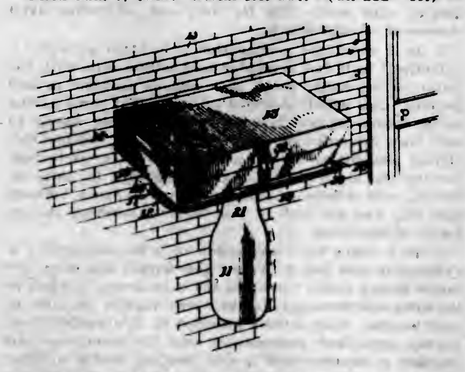
5. In a chuck the combination of a housing having a cylindrical wall and a tubular boss within said wall, the latter having radial bores and the boss having recesses in its outer circumference, toothed jaws radially movable in said housing, bevel wheels mounted in said radial bores, having necks, and gudgeons on said necks entering said recesses, a rotatable disk in said housing, having a spiral thread on one face, engaging said toothed jaws and bevel teeth on its other face engaging said bevel wheels, whereby said jaws can be radially moved, and a detachable ring fitting around said tubular boss, having slots whereby it engages said necks and makes a bayonet joint therewith.

1,154,800. ROTARY VALVE. WILLIAM VON HACHT, CHARLES R. TAYLOR, and WILLIAM F. CLEWS, Sonoma, Cal. Filed Dec. 9, 1914. Serial No. 876,305. (Cl. 123—80.)



In combination, a cylinder having a piston chamber and a valve chamber being in the form of a counter-bore to the piston chamber to provide a shoulder at the junction of the chambers, the top of the cylinder being further provided with a worm gear chamber concentric with the valve chamber and a tangential worm pinion chamber communicating with the gear chamber, a piston operable in the piston chamber, a sleeve valve terminating substantially at the shoulder and arranged in the valve chamber for rotary movement, the inner face of the sleeve valve being substantially in alinement with and forming a continuation of the inner wall of the piston chamber, an integral peripheral worm gear formed on the upper edge of the valve and operating in the gear chamber, a worm pinion journaled horizontally in the pinion chamber and meshing with the worm gear for rotating the same, and a cylinder head having a central portion extending down into the valve to the opening thereof, the center of the head depending portion being formed with a plug-receiving opening and the under face of the portion being flat whereby, with the insetting of the valve, a substantially uninterrupted interior wall is provided for the explosion of the gases.

1,154,900. COMBINED MAIL-BOX AND MILK-BOTTLE HOLDER. FRANK T. WAKEFIELD, Fairhaven, Pa. Filed Jan. 7, 1915. Serial No. 957. (Cl. 232—41.)



1. A device of the class described comprising in combination with a receptacle having a perforation therethrough, a bottle engaging supporting frame secured beneath the bottom thereof, a shiftable lock bar upon said frame, a finger carried by the bar and projecting through the said bottom perforation, and coacting latch and catch members lockingly mounted within said receptacle with respect to said finger and perforation.

2. In combination with a support having a perforation therethrough, a milk bottle rack secured to the said support and having an open end, a bar shiftably positioned spanning the said open end, a finger carried by the said bar and projecting within said perforation, a latch pivoted to said support shiftable transversely over said perforation, and an engaging catch for the said latch.

3. A device of the class described comprising in combination with a receptacle having a bottom provided with a perforation and an end provided with a slot, a bottle supporting rack secured to the said bottom and having an open end, a shiftable closing bar for the said end, a finger upon said bar projecting within the said perforation, a latch pivoted to the upper face of said bottom shiftable across the said perforation and having a free end projecting outwardly through the said slot, and a pivoted catch carried by the inner face of an end wall of said receptacle and shiftable in the path of movement of the said latch.

4. A device of the class described comprising a support, a U-shaped frame mounted upon said support and spaced therefrom, a lock bar shiftably mounted spanning the open end of the said frame, a finger carried by said bar, a shiftable latch carried by said support having a path of movement transversely of the free end of said finger, and an automatic engaging catch for the said latch.

5. A device of the class described comprising a horizontal support having a perforation therethrough, a U-shaped frame positioned in parallel relation to the lower side of said support and having the inner edges of the sides thereof beveled, securing posts between the said frame and support, a lock bar spanning the open end of the said frame and movable vertically on two of the said posts, an upwardly extending finger upon said bar projecting within the said perforation, a latch pivoted to the upper face of the said support and having a path of movement across the said perforation and provided with a projecting handle at its free end and with a laterally projecting stop arm, a pivoted catch automatically engageable with the said arm when the latch is in its locked position over the said perforation, and an operating handle for the said catch.

1,154,901. FIRE-POT FOR HOT-AIR HEATING-FURNACES. JOHN R. WILLEMIN, Akron, Ohio. Filed Feb. 12, 1915. Serial No. 7,726. (Cl. 126—146.)



1. A fire pot for furnaces and stoves provided in the wall thereof with an upwardly-extending air cell and a slot establishing communication between said cell and the interior of said fire pot, and a rocking member in said cell.

2. A fire pot for furnaces and stoves provided in the wall thereof with an upwardly-extending air cell and a slot establishing communication between said cell and the interior of said fire pot, and a horizontal revoluble member in said cell.

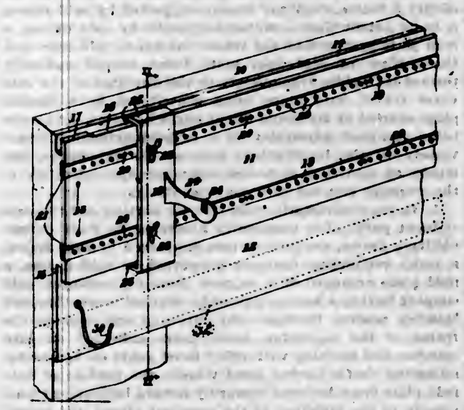
3. A fire pot for furnaces and stoves provided in the wall thereof with an upwardly-extending air cell and a slot establishing communication between said cell and the interior of said fire pot, and a pair of coacting cleaning members in said cell.

4. A fire pot for furnaces and stoves provided in the wall thereof with an upwardly-extending air cell and a slot establishing communication between the said cell and the interior of said fire-pot, and a horizontally rocking damper in said cell arranged to control the passage of air through said slot.

5. A fire pot for furnaces and stoves provided in the wall thereof with an upwardly-extending air cell and a slot establishing communication between said cell and the interior of said fire pot, and a pair of horizontally rocking dampers in said cell arranged to control the passage of air through said slot.

[Claims 6 to 15 not printed in the Gazette.]

1,154,902. COMBINED SHADE-ROLLER AND CURTAIN-HANGER. GEORGE WIESOLTI, Cleveland, Ohio. Filed May 15, 1915. Serial No. 28,855. (Cl. 156—23.)



1. A device of the class described comprising a shade roller bracket supporting board including a main body portion, a lower extension carried thereby, said main body portion being provided with upper and lower longitudinal grooves, the front wall of the upper slot being cut away to provide end shoulders, spaced bars secured to said board, outwardly directed knobs formed on said bars and arranged in relatively close spaced relation, shade roller brackets including angle ends adapted to be received in said groove, shade roller supporting arms carried by said brackets, thumb screws carried by said supporting bracket adapted to engage the bars between the knobs to prevent movement of the bracket relatively to the supporting board when the screws are slightly loosened.

2. A device of the class described comprising in combination with a bracket supporting board and spaced bars secured to said board with outwardly directed knobs carried by said bars, a shade roller supporting bracket slidably mounted on said board and thumb screws carried by said bracket adapted to engage said bars between said knobs to hold the brackets immovable relative to said board.

1,154,903. BONDING DEVICE FOR RAILS. ALFRED A. ZIEGLER, Boston, Mass. Filed June 28, 1913. Serial No. 775,276. (Cl. 173—262.)

1. A support for bonding wires intermediate their terminal rail connections, including tie bolts for securing the fish plates in rail engaging position, the heads of one or more of said bolts being formed in the surface next the fish plate with channels to receive the intermediate portions of said bonding wires, the surface with which the heads of the bolts engage closing said channels to form a bond wire receiving opening open only at the ends and through which the wires may be threaded without disturbing the bolts.



2. A support for bonding wires intermediate their terminal rail connections, including tie bolts for securing fish plates in rail engaging position, the heads of one or more of said bolts being formed in the surfaces next the fish plates with channels to receive the intermediate portions of said bonding wires, one wall of each of said channels being of irregular formation to increase the size of the channel ends with respect to the central portion thereof.

1,154,904. CLAMP. FOREE BAIN, La Grange, Ill., assignor to Charles A. Allen, Jr., La Grange, Ill. Filed Mar. 23, 1914. Serial No. 826,461. (Cl. 24—250.)



In a clamp, the combination of a supporting arm terminating at one end in a semi-circular jaw, a corresponding semi-circular jaw pivoted to the outer end of the first mentioned jaw and having a slotted extension adapted to coact with the supporting arm, said supporting arm having a through opening formed therein adjacent the end of the aforesaid extension, a stem pivoted within the aforesaid opening in the arm and arranged when swung into one of its extreme positions to engage the slot formed in the aforesaid extension, and a spring pressed washer on said stem adapted to engage the slotted extension and resiliently hold the said jaws in clamping position.

1,154,905. STRAND-GUIDE FOR ROPE-MAKING MACHINES. JOHN S. BARNES and NATHAN E. SHERWOOD, Detroit, Mich.; said Barnes assignor to said Sherwood. Filed June 24, 1913. Serial No. 775,588. (Cl. 28—2.)

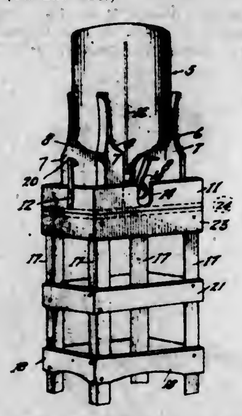
In a device such as described, a strand guide adapted to be supported by the strands to be twisted and including a frusto-conical body having spaced longitudinal guide grooves therein for receiving the strands to be twisted, and a central longitudinal bore formed therein and extending therethrough, a depending handle attached to the strand guide, a weight attached to the handle for holding the strand guide against rotation, and hooks in the end

of the strand-guide at the inner ends of the longitudinal grooves, the hooks being adjustable in the inner end of



the strand guide for engaging the strands in said grooves and regulating the tension thereof.

1,154,806. BOTTLE-CRATE. LAURENCE J. BRAKLEY, Santa Monica, Cal. Filed Sept. 12, 1913. Serial No. 789,540. (Cl. 217—36.)

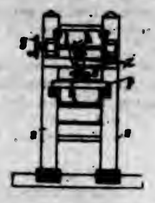


1. A bottle crate, comprising a base having a plurality of vertical supports mounted thereon adapted to fit the shoulders of an inverted bottle, side bars to said base, an inclosure formed of a plurality of spaced bars, one end adapted to fit within said base, and means to latch said base and said inclosing member in fixed relation to form a crate for a bottle supported therein.

2. A bottle crate, having a plurality of recessed blocks adapted to engage the shoulders of a bottle, cushions on said engaging edges, a base to support said blocks having side bars, one of said bars being slotted to accommodate a movable faucet operable in conjunction with said bottle, an inclosing member having uprights adapted to fit within the side bars on said base and said recessed blocks, means to secure said bars in fixed relation to a top plate for said bars, and latching means to lock said inclosing member in fixed relation to said base member to form a crate for an inclosed bottle.

1,154,907. ELECTROSTATIC SEPARATOR FOR SORTING OUT THE CONSTITUENT PARTS OF COMMODITIES ACCORDING TO THEIR PERMEABILITY. ALDO BRIOLINI, Agordo, and PIETRO RIBONI, Naples, Italy. Filed Apr. 25, 1914. Serial No. 834,428. (Cl. 83—49.)

1. In an electrostatic separator for sorting out the constituent parts of a commodity according to their permeability a frame, conveyer drums supported by said frame, a badly conducting conveyer supported by said drums, a field plate arranged on the frame and above said conveyer, the surface of said field plate being inclined upwardly toward both sides transversely to the direction of the conveyer travel, the length of said field plate corresponding approximately to the distance between said conveyer drums.



2. In an electrostatic separator for sorting out the constituent parts of a commodity according to their permeability a frame, conveyer drums supported by said frame, a badly conducting conveyer supported by said drums, a field plate arranged on the frame and above said conveyer, the surface of said field plate being curved upwardly toward both sides transversely to the direction of the conveyer travel the length of said field plate corresponding approximately to the distance between said conveyer drums.

3. In an electrostatic separator for sorting out the constituent parts of a commodity according to their permeability a frame, conveyer drums supported by said frame, a badly conducting conveyer supported by said drums, a field plate arranged on the frame and above said conveyer, the surface of said field plate being curved upwardly toward both sides transversely to the direction of the conveyer travel, said plate being constituted by a flexible plate carried at its longitudinal edges by arms, said arms being arranged adjustably on a support extending transversely to the longitudinal axis of the apparatus, the length of said field plate corresponding approximately to the distance between said conveyer drums.

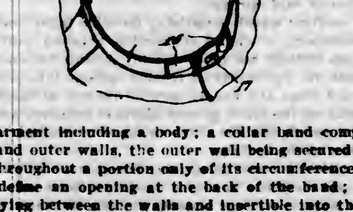
4. In an electrostatic separator for sorting out the constituent parts of a commodity according to their permeability a frame, conveyer drums supported by said frame, a badly conducting conveyer supported by said drums, a field plate arranged on a support above the conveyer, said support having a nut at both ends, vertical screw-threaded spindles passing through said nuts and arranged on the frame of the separator, bevel gears arranged on said spindles and meshing with other bevel gears on horizontal adjusting shafts having hand wheels, the surface of said field plate being inclined upwardly toward both sides transversely to the direction of the conveyer travel, the length of said field plate corresponding approximately to the distance between said conveyer drums.

5. In an electrostatic separator for sorting out the constituent parts of a commodity according to their permeability a frame, conveyer drums supported by said frame, a badly conducting conveyer supported by said drums, a field plate arranged on a support above the conveyer, said support having a nut at both ends, vertical screw-threaded spindles passing through said nuts and arranged on the frame of the separator, bevel gears arranged on said spindles and meshing with other bevel gears on horizontal adjusting shafts having hand wheels, the surface of said field plate being curved upwardly toward both sides transversely to the direction of the conveyer travel, the length of said field plate corresponding approximately to the distance between said conveyer drums.

[Claim 6 not printed in the Gazette.]

1,154,908. FRONT-WHEEL-CENTERING DEVICE. FRANK Y. BOWLAND, Pasadena, Cal., assignor to F. B. Meadors, Pasadena, Cal. Filed Mar. 17, 1914. Serial No. 825,411. Renewed July 27, 1915. Serial No. 42,238. (Cl. 21—200.)

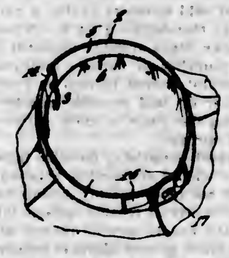
1. A front wheel centering device, adapted to be secured to the front axles of an automobile and to put a spring tension upon the equalizing rod of said automobile whenever said rod is moved from the central position, comprising a bracket secured to said axle and extending over said rod, a bolt secured in said bracket, a pair of springs on either side of said bolt each having one end secured to one side of said bolt, a pair of sliding straps having slots engaging said bolt, hooks connecting the other end of said springs to said straps, and means on said rod for sliding one of said straps and putting tension on one of said springs whenever said rod is moved from its central position.



2. A front wheel centering device, adapted to be secured to the front axle of an automobile and to put a spring tension upon the equalizing rod of said automobile whenever said rod is moved from the central position, comprising a bracket secured to said axle and extending over said rod, a bolt secured in said bracket, a pair of springs on either side of said bolt each having one end secured to one side of said bolt, a pair of sliding straps having slots engaging said bolt, hooks connecting the other end of said springs to said straps, and a member secured to said rod having projections engaging the slots in said sliding straps.

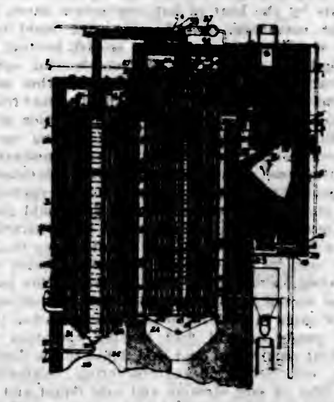
3. A front wheel centering device, adapted to be rigidly secured to the front axle of an automobile and to put a spring tension on the equalizing rod connecting the front wheels whenever said rod is moved from its central position, comprising a bracket made up of flat straps and secured to said axle, one of said straps having one end formed in a U-shape directly over said rod, a bolt passing through holes in each leg of said U-shaped portion, a pair of sliding straps directly over said rod and on either side of said bolt having open slots in one end engaging said bolt, the other end of each strap being turned up, and an intermediate slot formed between said turned up end and said open slot, a pair of tension springs each connecting the bolt with one of said upturned ends, and a member rigidly secured to said rod having a projection on either end thereof which extend up and slide in said intermediate slots.

1,154,909. COLLAR-BAND. WILLIAM J. DAVIDSON, Hartford, Conn. Filed Nov. 2, 1914. Serial No. 869,945. (Cl. 2—41.)



A garment including a body; a collar band comprising inner and outer walls, the outer wall being secured to the body throughout a portion only of its circumference thereby to define an opening at the back of the band; a stiffener lying between the walls and insertible into the band through the opening; a tab secured at one end to the body, the other end of the tab being extended across the lower edge of the stiffener at the opening and being prolonged between the stiffener and the outer wall, the tab and the outer wall having studholes; and a stud mounted in the studhole of the tab and extended through the studhole of the outer wall, the stud being movable with the tab independently of the stiffener and abutting at its inner end against the stiffener.

1,154,910. METHOD OF GENERATING STEAM. HENRY L. DOHERTY, New York, N. Y. Filed Nov. 15, 1911. Serial No. 660,452. (Cl. 122—1.)



1. The process of generating steam which comprises forming hot combustion gases, heating water with such gases in two stages, passing the gases in heat interchanging relationship with water in each of said stages to form relatively hot and cool zones therein, maintaining the temperature of the gases in the first stage at a point where they will cause substantial settlement of contained impurities in such stage and preheat the water therein, conducting such preheated water to the hotter zone of the second stage, conducting water from the cooler zone of the second stage past the hotter zone of the first stage to the cooler zone thereof, collecting and discharging impurities which settle out in the second stage and conducting away the steam formed in the second stage.

2. The process of generating steam which comprises heating water with hot combustion gases in two successive stages, the gases being conducted in heat-interchanging relationship with such water in each such stage to form relatively hot and cool zones in such water, conducting steam away as formed from the hot zone of the second stage, conducting water from the cooler zone of the second stage to the cooler zone of the first stage, conducting water from the hotter zone of the first stage to the hotter water of the second stage and eliminating impurities of the water from the cooler zone of the first stage.

3. The process of generating steam which comprises forming hot combustion gases in a suitable furnace, maintaining separate columns of water whereby the gases may heat such water in two stages, passing the gases in heat interchanging relationship over the second column to form relatively hot and cool zones therein, then passing such gases in heat interchanging relationship over the first column to form relatively hot and cool zones therein, conducting the water from the hottest zone of the first column to the hottest zone of the second column, simultaneously conducting water from the coolest zone of the second column past the hottest zone of the first column to the coolest zone thereof, eliminating settled impurities from the coolest zone of said first column and collecting steam generated in the second column.

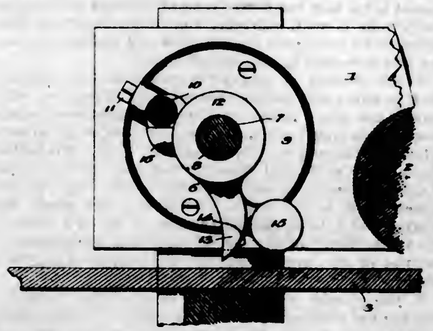
4. The process of treating water for raising steam which comprises generating hot combustion gases in a suitable furnace and heating water therewith in two separate stages, passing the gases to the second stage at a temperature sufficient to generate steam, dividing the gases after they have passed said second stage into two streams, conducting one such stream to the first stage at a temperature sufficient to cause settlement of impurities in the water

thereof, and conducting the gases of the other stream to a point outside either heating stage, conducting the water from said first stage after it has been heated by said first stream of gases to the second stage, conducting water from the second stage to the first stage after it has been traversed by the gases direct from said furnace, and collecting the steam generated in said second stage.

5. In the generation of vapor from liquid containing dissolved salts by the heat of hot combustion gases, the process which comprises, first, heating said liquid to a temperature of 284° F. or above, and, second, heating the so-treated liquid to evaporation, the said heating operations being carried out by forming hot combustion gases by burning fuel with preheated air, establishing heat-transferring relationship between the said hot combustion gases and liquid that has undergone the first heating operation, and accelerating the velocity of said combustion gases while the same are in heat-transferring relationship with said liquid during the said second heating operation so that the quantity of heat abstracted from said gases during said second heating operation will be restricted to that which will leave sufficient heat in said gases to preheat the air used in burning said fuel and to carry out said first heating operation, dividing the combustion gases from the said second heating operation into two streams, the volume of gases in the first of said streams being that required to supply to said first heating operation the quantity of heat required to heat said liquid to the desired temperature, establishing heat-transferring relationship between the first of said streams and said liquid and between the second of said streams and the air required to burn said fuel.

[Claims 6 to 19 not printed in the Gazette.]

1,154,911. GUARD FOR WOODWORKING-MACHINES. TRACY W. DOOLITTLE, Endicott, N. Y., assignor to William F. Donley, Binghamton, N. Y. Filed Nov. 2, 1914. Serial No. 869,723. (Cl. 143—157.)

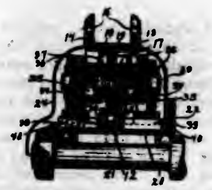


1. A guard of the kind described comprising a plurality of freely swinging dogs, a shaft on which the dogs are mounted, means for mounting the shaft above a feedway or table, and a bar arranged adjacent to such shaft in the path of the swinging movements of the dogs to limit their movement in one direction to normally operative substantially vertical positions, and to limit the movement of the dogs and to support them when swung in the opposite direction.

2. A guard of the kind described comprising a plurality of freely swinging dogs, each dog being provided on its rear face adjacent to the engaging surface of the dog, with a protuberance constituting a weight, a shaft on which the dogs are mounted, means for mounting the shaft above a feedway or table, and a bar arranged forward of such shaft in the path of the swinging movements of the dogs to limit their movements in one direction to normally operative substantially vertical positions, and to limit the movement of the dogs and support them when swung in the opposite direction.

3. A guard of the kind described comprising a plurality of freely swinging dogs, each dog being provided on its rear side with a curved bearing surface and with a protuberance constituting a weight, a shaft on which the dogs are mounted, means for mounting the shaft above a feedway or table, and a bar arranged forward and above such shaft in the path of the swinging movements of the dogs to limit their movements in one direction to normally substantially vertical positions and to limit the movement and support the dogs when swung in the opposite direction.

1,154,912. RESILIENT WHEEL. JOHN B. DRAHONOVSKY, Milwaukee, Wis., assignor of one-half to Peter Lesch, Milwaukee, Wis. Filed Aug. 19, 1914. Serial No. 857,439. (Cl. 152—45.)



1. A resilient wheel comprising inner and outer hub members, a pair of rings slidably mounted upon said inner hub members, means for preventing rotation of the rings upon said members comprising a key, a plurality of tension springs interposed between said rings and fixedly secured thereto at their ends, and means on the other of said movable members and said rings, for permitting the rings to move outwardly against the action of said springs.

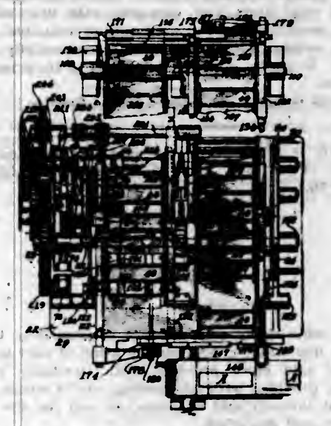
2. A resilient wheel comprising movable inner and outer hub members, one of said members having a depending flange, the other of said members having a pair of flanges forming a guideway therebetween for the depending flange of the other member, bearing cups carried by said depending flange, a ring on either side of said bearing cup holding flange, bearing cup holding members carried by said rings, bearings disposed in the cups formed by said cup holding members, and resilient means fixedly secured to the rings, whereby movement of the movable members will cause the rings to move outwardly against the action of said springs.

3. A resilient wheel comprising movable inner and outer hub members, one of said members having a depending flange, the other of said members having a pair of flanges forming a guideway therebetween for the depending flange of the other member, rings slidably mounted upon one of said members, a plurality of springs interposed between said rings and fixedly secured thereto at their ends, and means on the other of said movable members and said rings for permitting the rings to move outwardly against the action of said springs.

4. A resilient wheel comprising movable inner and outer wheel members, a sliding connection between said members, rings slidably but non-rotatably mounted upon one of said members, a plurality of tension springs interposed between said rings and fixedly secured thereto at their ends, and means on the other of said movable members and said rings for permitting the rings to move outwardly against the action of the springs.

5. A resilient wheel comprising movable wheel members, one of said members having a flange provided with a plurality of apertures, rings slidably but non-rotatably mounted upon the other of said members, a plurality of horizontally disposed tension springs interposed between said rings and fixedly connected thereto at their ends and passing through the apertures in said flange, and means on said flange and said rings for permitting the rings to move outwardly against the action of said springs.

1,154,913. MACHINE FOR PRESSING AND FINISHING PLUG-TOBACCO. ROBERT B. DULA, Tarrytown, N. Y. Filed Jan. 2, 1914. Serial No. 810,007. (Cl. 131—14.)



1. In a plug tobacco pressing and finishing machine, a mold-box, means for feeding plugs and separating finishing plates thereinto, to form a pack of plugs, means for feeding in pressure plates so as to abut the end plugs of the pack, means for compressing the plugs in the mold box after a predetermined number of plugs have been deposited therein, and means for latching said pressure plates to maintain the compression of said pack.

2. In a plug tobacco pressing and finishing machine, a movable mold box open at both ends, means for feeding plugs into said box and for feeding a pair of end pressure plates into the box so as to form a pack of plugs between said pressure plates in said box, means for compressing the plugs in the mold box after a predetermined number of plugs have been fed thereinto, and means for latching the said plates in the mold box respectively at the opposite ends of the mold box to maintain the plugs under compression.

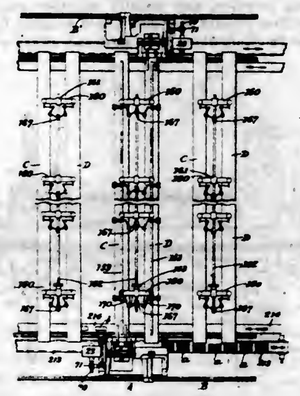
3. In a plug tobacco pressing and finishing machine, a hopper having a receiving point for receiving plugs, and having a discharge outlet for the plugs to be pressed, a mold box movable beneath said hopper, means for feeding plugs from the hopper into the mold box, a plunger having yielding means, and reciprocating means for imparting pressure through said yielding means to said plunger for compressing the plugs in the mold box after a number of plugs have been deposited therein, said yielding means permitting said reciprocating means to continue its downward movement in each stroke after the plunger has been stopped by the tobacco within the mold.

4. In a plug tobacco pressing and finishing machine, a hopper for receiving plugs to be pressed, a plurality of movable mold-boxes, means for moving the mold-boxes successively beneath the hopper, means for feeding plugs into the said mold-boxes, means for compressing the plugs in the mold-boxes in succession after a predetermined number of plugs have been fed thereinto, and means carried by each mold-box for maintaining the plugs therein under compression.

5. In a plug tobacco pressing and finishing machine, a hopper for receiving the plugs to be pressed, a hopper for containing separating plates to be placed between said plugs, a plurality of movable mold boxes, means for feeding plugs and separating plates to the mold-boxes successively, means for compressing the plugs in each mold box after a predetermined number of plugs and plates have been fed thereinto, means carried by each mold-box for maintaining the plugs under compression, and means for removing the mold boxes successively away from said hopper.

[Claims 6 to 59 not printed in the Gazette.]

1,154,914. APPARATUS FOR PRESSING AND FINISHING PLUG-TOBACCO. ROBERT B. DULA, Tarrytown, N. Y. Filed Feb. 19, 1914. Serial No. 819,729. (Cl. 131—14.)



1. In an apparatus for pressing plug tobacco, the combination with a plurality of spaced horizontal conveyers, means for automatically filling mold boxes adapted to travel past the receiving ends of said conveyers and to stop in line with any one of them to place a succession of filled mold boxes thereon, and pressure means above each conveyer for simultaneously subjecting the plugs in all the mold boxes on said conveyer to sustained compression.

2. In an apparatus for pressing plug tobacco, the combination with a plurality of spaced horizontal conveyers, means including a device for feeding plugs of tobacco singly to a mold box and a plunger for pressing said plugs as they enter said box, said means adapted to travel past the receiving ends of said conveyers and to be stopped in line with any one of them to place a succession of filled mold boxes thereon, and pressure means above each conveyer for simultaneously subjecting the plugs in all the mold boxes on said conveyer to sustained compression.

3. In a system for pressing plug tobacco, the combination of means for feeding plugs to a form box and pressing each plug as it enters said box, means for transporting filled boxes from the pressing means and supporting them, and pressing means above the transporting means for simultaneously subjecting the plugs thereon to sustained compression.

4. In a system for pressing plug tobacco, the combination of means for feeding plugs to a form box and pressing each plug as it enters said box, means for transporting filled boxes from the pressing means and supporting them, pressing means above the transporting means for simultaneously subjecting the plugs in all the boxes thereon to sustained compression, and means for ejecting the plugs from each box after compression.

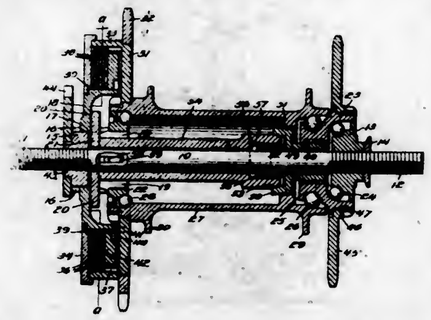
5. In a system for pressing plug tobacco, the combination of two sets of means each including mechanism for feeding plugs to a form box and pressing each plug as it enters said box, duplicate parallel carriers traveling in opposite directions each for transporting filled boxes from one of said means and supporting said boxes, and pressing means above each transporting means for simultaneously subjecting the plugs in all the boxes thereon to sustained compression.

[Claims 6 to 36 not printed in the Gazette.]

1,154,915. COASTER-BRAKE FOR MOTOR-CYCLES. FREDERICK S. ELLETT, Elmira, N. Y. Filed June 26, 1912. Serial No. 706,110. (Cl. 208—57.)

1. In a coaster brake, the combination of a stationary member, a hub, a driving member for the hub, a bearing for one end of the hub carried by said stationary member,

a bearing for the other end of the hub carried by said driving member, a friction disk carried by said hub exteriorly of said bearings, a non-rotatable friction disk, a member adapted to be moved axially and rotated by said driving member, and axially movable non-rotatable means actuated by said last-mentioned member for moving one of said friction disks into gripping engagement with the other.



2. In a coaster brake, the combination of a stationary axle member, a driving member rotatably mounted on said axle member, a hub, a bearing on said axle member for one end of the hub, a bearing on said driving member for the other end of said hub, means carried by one end of said hub forming an annular chamber, a non-rotatable member forming a closure at the inner circumference of said chamber, a friction disk carried by said means, a second friction disk arranged along side of said first mentioned disk and carried by said non-rotatable member, and means extending through the interior of said hub for moving said non-rotatable member axially to move one of said friction disks against the other.

3. In a coaster brake, the combination of a stationary axle member, a driving member rotatably mounted on said axle member, a hub, a bearing for one end of said hub on said stationary member, a bearing for the other end of said hub on said driving member, a wheel carried by said hub at one end thereof and having an axially extending flange, a plate secured to said flange and forming with said wheel an annular chamber arranged exteriorly of said bearings, a friction disk in said chamber and carried by said wheel, a non-rotatable member, a second friction disk carried by said non rotatable member and arranged in said chamber, a sleeve surrounding said axle member within the hub and connected with said non-rotatable member, and means actuated by said driving member for moving said sleeve axially to press one of said friction disks against the other.

4. In a coaster brake, the combination of a stationary axle member, a driving member rotatably mounted on said axle member and having a sprocket wheel secured thereto, a member adjustably mounted on said axle member, means for holding said last mentioned member against rotation, a hub, bearings for said hub arranged at the ends thereof, a wheel mounted on said hub and provided with an axially extending flange, a removable plate secured to said flange for forming with said wheel an angular chamber, a plurality of friction disks carried by said wheel within said chamber, a non rotatable member having an axially extending flange adjacent said chamber, a plurality of friction disks carried by said last mentioned member and alternately arranged with respect to said first mentioned friction disks, and means for moving said non-rotatable member axially to press said friction disks into gripping engagement.

5. In a coaster brake, the combination of a stationary axle member, a driving member rotatably mounted on said axle member and having a sprocket wheel secured thereto, a stationary member mounted on said axle member and provided with radial slots, a hub, bearings for said hub, an axially movable member, a plurality of friction disks carried by said hub, a plurality of friction disks alternately arranged with respect to said first mentioned disks and carried by said axially movable member, a second axially movable member having arms projecting through said slots and engaging said first mentioned axially movable member, and means actuated by said driving member for moving said second axially movable member to press said friction disks into gripping engagement.

[Claims 6 and 7 not printed in the Gazette.]

1,154,916. CABLE-CLAMP. ISRAEL EVANS, Lenoir City, Tenn. Filed Mar. 2, 1915. Serial No. 11,500. (Cl. 24—136.)



1. A cable clamp comprising a substantially U-shaped block, a dog slidable between the arms of said block, the arms of said block provided with co-axially openings, said dog provided with an opening, and a wedge member arranged through said openings, as and for the purpose set forth and described.

2. A cable clamp comprising a substantially U-shaped block, the arms of said block provided with co-axial openings, a dog slidable between the arms of said block, said dog provided with a substantially wedge-shaped opening, a wedge member arranged through said openings to operate said dog, the body of said wedge member being split whereby its lower ends may be bent to lock the same, as and for the purpose set forth and described.

1,154,917. RESILIENT OR CUSHION HEEL. GEORGE H. P. FOSTER, Chicago, Ill. Filed Feb. 10, 1913. Serial No. 747,277. (Cl. 36—36.)



1. A shoe having secured to the outer surface of its heel seat a clip comprising a plate contacting substantially throughout with the heel seat and a portion projecting from said plate downwardly and rearwardly of the heel seat, leaving a space between it and the heel seat, a heel having extending downwardly and rearwardly from its upper surface a cavity arranged to fit and receive the last-named portion of the clip, and additional means for securing the heel to the shoe.

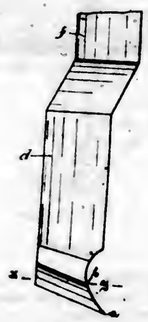
2. A clip for the purpose specified, comprising a plate having a portion adapted to fit against the heel seat of a shoe and having another portion in the form of a prong extending downwardly and rearwardly from said plate portion, said prong portion having its rear end constructed with converging sides.

3. A clip for the purpose specified comprising a circular plate having a part thereof adapted to fit against the under side of a shoe and having its remaining portion made in the form of a prong for insertion into a heel cavity.

4. A clip for the purpose specified comprising a circular plate having a substantially semi-circular portion thereof adapted to fit against the under side of the heel seat of a shoe and such end having its upper surface made concave and provided with upwardly extending points, said plate having its remaining portion made into the form of a prong for insertion into a heel cavity.

5. A clip for the purpose specified comprising a circular plate having a substantially semi-circular part thereof made to fit the underside of the heel seat of a shoe and having its remaining portion made in the form of a prong extending obliquely from the surface which is to fit against the under side of the heel seat so as to afford a space between the under side of the heel seat and said prong when the clip is secured to the shoe, the side of the plate opposite the side which is to be applied to the shoe being flat and circular.

1,154,918. METHOD FOR FORMING PARALLEL FACES ON THE ENDS OF RAILS AND OTHER OBJECTS TO BE BUTT-WELDED. HANS GOLDSCHMIDT and WALTER BREWITT, Essen-on-the-Ruhr, Germany, assignors to Goldschmidt Thermit Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 26, 1913. Serial No. 791,921. (Cl. 90—24.)



1. The method of forming parallel faces on adjacent ends of rails and other objects to be united, consisting in reciprocating a double inclined edge cutting tool between the surfaces to be united and feeding the tool during its reciprocation through said objects until the surfaces are cut to substantial parallelism.

2. The method of forming parallel faces on adjacent ends of rails and other objects to be united, consisting in reciprocating a double inclined edge cutting tool in a straight line between the surfaces to be united and feeding the tool during its reciprocation through said objects until the surfaces are cut to substantial parallelism.

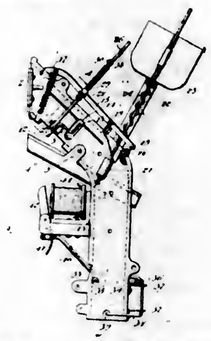
1,154,919. COIN-DETECTOR. CLIFFORD H. GREEN, Grand Rapids, Mich., assignor to National Piano Manufacturing Company, Grand Rapids, Mich., a Corporation of Illinois. Filed Jan. 7, 1915. Serial No. 914. (Cl. 194—102.)

1. In a device of the class described, a chute having an escape opening, an irregular shaped member adapted in one position to prevent a coin from passing down through said chute beyond said escape-opening when the latter is open and in another position to open said chute and close the passage through said escape-opening, and means for moving said member.

2. In a device of the class described, a chute having an escape-opening, a crescent shaped member adapted in one position to prevent a coin from passing down through said chute beyond said escape-opening when the latter is open and in another position to open said chute and close the passage through said escape-opening, and means for moving said member.

3. In a device of the class described, a chute having an escape-opening, an adjustable plate secured to the chute for regulating the size of the opening, a movable escapement controlling both the coin escape-opening and the chute opening, and means for moving said escapement.

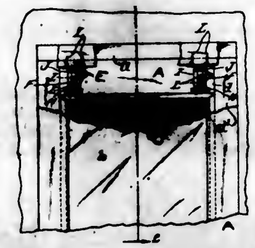
4. In a device of the class described, a chute having an escape-opening, an adjustable plate secured to the chute for regulating the size of the opening, a movable escapement having a crescent-shaped member controlling both the escape-opening and the chute opening, and means for moving said escapement.



5. In a device of the class described, a chute having an escape-opening, a crescent shaped pivotal member which in one position closes the chute and opens the coin escape-opening and in another position opens the chute and closes the escape opening, and means for moving said crescent shaped member on its pivot.

[Claims 6 to 18 not printed in the Gazette.]

1,154,920. HANGER FOR SCREEN AND STORM SASHES. HIRSH GREENFIELD, Chicago, Ill. Filed July 19, 1915. Serial No. 40,691. (Cl. 16—48.)



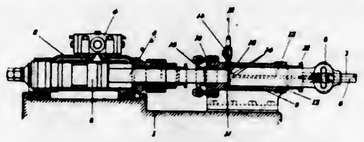
1. In a hanger, of the kind described, a base plate provided with a depending finger, said finger adapted to receive a pin at its lower end, in combination with an additional base plate provided with a table and said table provided with an aperture therethrough adapted to receive said depending finger, and a pin adapted to engage with the said lower end of said depending finger, to secure said finger in said aperture.

2. In a hanger for screen and storm sash a base plate adapted to be secured to a window sash, a depending finger integral with said base plate and extending downward and outward therefrom, in combination with an additional base plate adapted to be secured to said screen and storm sash, a table integral with said additional base plate and said table provided with an aperture therethrough adapted to fit loosely on said depending finger to permit said table to be moved on said finger, said table and finger in relative position to draw said additional base plate into a predetermined relative position to said first named base plate when said table is adjacent to said first named base plate, and means to secure said table on said finger.

1,154,921. PERCUSSIVE DRILL. CHARLES C. HANSEN, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 21, 1912. Serial No. 726,892. (Cl. 255—49.)

1. In combination, a drill cylinder, its piston, a drill piston rod attached thereto and having a shoulder on the

forward part, a cylinder surrounding said piston rod and coöperating with said shoulder to form a pump, a passage from said pump cylinder for conveying fluid to the hole and means for admitting fluid to said pump cylinder.

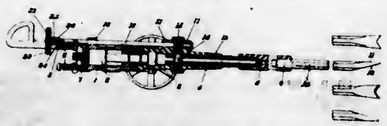


2. In combination, a drill cylinder, its piston, a drill piston rod attached to said piston having a forward portion of larger diameter having a shoulder, a cylinder surrounding said piston rod and coöperating with said shoulder to form a pump, a passage leading through said rod from said pump cylinder and adapted to supply fluid to the hole, and means to supply fluid to said pump cylinder.

3. In combination, a drill cylinder, its piston, a drill piston rod attached to said piston, a hollow drill steel secured to said piston rod, a shoulder on said piston rod, a cylinder surrounding said rod and coöperating with said shoulder to form a pump, a passage for conveying fluid from said pump through said piston rod to said hollow steel, a passage for admitting fluid to said pump cylinder, and a check valve controlling said passage.

4. In combination, a drill cylinder, its piston, a drill piston rod attached thereto and having a shoulder on its forward part, a hollow drill steel secured to said piston rod, a fixed guide for the piston rod comprising a cylinder, said cylinder surrounding said rod and coöperating with said shoulder to form a pump, a passage through the piston rod to convey fluid from said pump to the drill steel, and means for admitting fluid to said pump cylinder.

1,154,922. COAL-MINING MACHINE. CHARLES C. HANSEN, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 12, 1912. Serial No. 736,253. (Cl. 121—20.)



1. In a coal cutter, a cylinder, a piston, a bit shaft operated by said piston and rotatably mounted in said cylinder, means to rotate said shaft and means to yieldably secure said shaft in predetermined positions.

2. In a coal cutter, a cylinder, a hammer piston, a bit shaft rotatably mounted in said cylinder and adapted to be struck by said piston, means to rotate said shaft, and means to yieldably secure said shaft in predetermined positions.

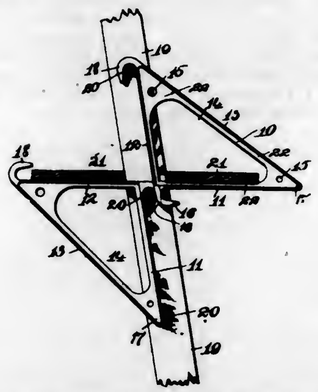
3. In a coal cutter, a cylinder, a piston, a bit shaft rotatably mounted in said cylinder and adapted to be operated by said piston, means to rotate said shaft and means to yieldably secure said shaft in four determined positions of rotation.

4. In a coal cutter, a cylinder, a piston, a bit shaft rotatably mounted in said cylinder and adapted to be operated by said piston, a gear wheel surrounding said shaft and having longitudinal sliding connection therewith, a pinion engaging said gear wheel, an operating shaft for said pinion, a handle pivotally connected to said operating shaft and means to hold said handle in alinement with said shaft to operate the shaft or lowered to yieldably hold said shaft in position.

5. In a coal cutter, a cylinder, its piston, a bit shaft operated by said piston, a gear wheel on said shaft, a pinion engaging said gear wheel and having half its number of teeth, means for rotating said pinion and means for yieldably locking said rotating means at desired points in its revolution.

[Claims 6 and 7 not printed in the Gazette.]

1,154,923. LADDER-BRACKET. HOLDEN HOLDEN, East Newark, N. J. Filed Apr. 6, 1915. Serial No. 19,568. (Cl. 20—85.)



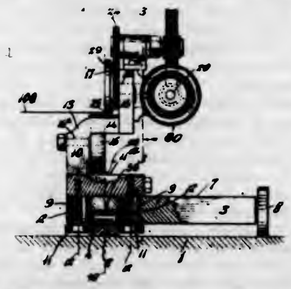
1. A bracket comprising an open triangular frame having hooks on two of its sides, the hooks pointing in the same direction circumferentially.

2. A bracket comprising an open triangular frame having hooks on two of its outer side edges, one of said hooks pointing along the edge to which it is secured and the second hook pointing along the edge to which it is secured and toward the corner in rear of the first hook.

3. A bracket comprising an open frame that is substantially of right-angled triangular form having a hook on its base and pointed toward the juncture of the base and the hypotenuse and having a hook on its perpendicular arm pointing toward the juncture of the base and the perpendicular.

4. A bracket comprising an open frame that is substantially of right-angled triangular form having an outwardly disposed hook at the juncture of the base and the perpendicular and pointing toward the juncture of the base and the hypotenuse, the frame having a second hook at the juncture of the hypotenuse and the perpendicular, the second hook pointing toward the juncture of the base and the perpendicular.

1,154,924. SHEET-METAL CUTTER. CHARLES J. HOLUB, Newport, Ky., assignor to The Williamson Heater Company, Cincinnati, Ohio, a Corporation of Ohio. Filed June 5, 1914. Serial No. 843,136. (Cl. 164—77.)



1. In a sheet metal cutter for operating on an irregular pattern track, a truck, a cutter frame pivoted on the truck, cutters on the frame, the plane of the cutting edges being in radial alinement with the pivot point, the disk bearing portion of said frame being free to swing relative to the truck and being guided by the track.

2. In a sheet metal cutter for operating on a table having an irregular pattern track, a truck rolling in the table and guided by the track, a cutter frame, the forward portion of which is pivoted to the truck, cutters on said frame with the cutting edges in rear of and in line with the pivot, and guide rollers for the trailing portion of said frame operating through slots in the truck, the coincident line of said pivot and cutting edges passing midway between said frame guide rollers.

3. A sheet metal cutter for operating on an irregular or curved pattern track, comprising a truck, and a trailing cutter frame pivoted to swing radially on the truck, the free end being guided by the track.

4. A sheet metal cutter for operating on an irregular or curved pattern track, comprising a truck, a trailing cutter frame radially pivoted on the truck, the free end being guided by the track, and cutters on said frame providing an inclined cutting edge.

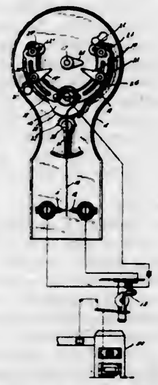
5. In a sheet metal cutter for operating on a table bearing a curved or irregular pattern track, a truck rolling on the table and track, a cutter frame, cutter disks thereon providing a cutter edge, said frame being pivoted on the truck with said cutter edge extending radially to the arc of the frame swing, and means on the frame engaging the track to swing the frame on the truck whereby the cutting edge travels tangential to the curvature of the track.

[Claims 6 to 13 not printed in the Gazette.]

1,154,925. DISINFECTING COMPOSITION. ALEXANDER S. HOROVITZ, Passaic, N. J. Filed Jan. 14, 1914, Serial No. 812,035. Renewed Jan. 23, 1915. Serial No. 4,078. (Cl. 167—3.)

The herein described disinfecting composition consisting of green potassium soap forty-five parts by weight, aqueous solution of formaldehyde forty-one parts by weight, and alcohol thirteen and one-half parts by weight.

1,154,926. TIME-CONTROLLED THERMOSTAT. CHARLES E. JEWELL, Auburn, N. Y., assignor to The Honeywell Heating Specialty Company, Wabash, Ind., a Corporation of Indiana. Filed Feb. 18, 1914. Serial No. 819,563. (Cl. 236—7.)



1. In a time-controlled thermostat, the combination with a thermostatc member, of a shiftable carrier therefor, a time-train, an operating member carried by said time-train through a cycle, and members associated with said carrier to be alternately engaged by said operating member to shift the carrier from one normal position to another and return, but free from contact therewith between such points of engagement whereby the carrier may be manually adjusted.

2. In a time-controlled thermostat, the combination of a time-train, an operating member rotated thereby, a thermostatic member, a carrier for said thermostatic member provided with a pair of arms arranged upon opposite sides of the axis of the operating member and provided with portions arranged to be alternately engaged by the operating member to shift the carrier from one normal position to another and return, said portions being free from contact with the operating member between such points of engagement whereby the carrier may be manually adjusted.

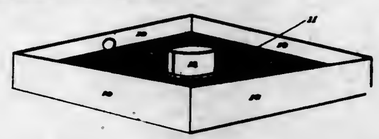
3. In a time-controlled thermostat, the combination of a time-train, an operating member rotated thereby, a thermostatic member, a carrier for said thermostatic member provided with a yoke arranged upon opposite sides of the axis of the operating member; two arms one mounted on each portion of the yoke, and a finger mounted on each arm, one of said members being adjustable toward and from the axis of the operating member and the other adjustable angularly around the said axis, one of the members of each pair arranged to be engaged by the operating member to shift the carrier from one normal position to another and return.

4. In a time-controlled thermostat, the combination of a time-train, an operating member rotated thereby, a movable yoke extended upon opposite sides of said operating member, and two members for alternate engagement by the operating member, each mounted upon an arm of the yoke and adjustable laterally and angularly relative to the operating member, and a thermostatic element carried by said yoke.

5. In a time-controlled thermostat, the combination of a time-train, an operating member movable by said time-train through a cycle, a shiftable carrier, for two arms carried by said carrier in the path of said operating member to be operated thereby to shift said carrier in opposite directions respectively, said arms and said operating member being relatively adjustable to vary both the time and the extent of their engagement, and a thermostatic element and a coöperating contact one of which is mounted on said carrier so that the temperature at which said thermostatic element and contact engage and disengage is varied by the shifting of said carrier.

[Claims 6 to 12 not printed in the Gazette.]

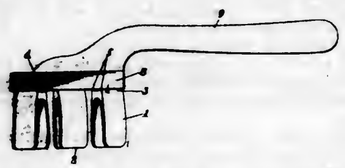
1,154,927. INCUBATOR-TRAY. JOHN H. KATE, Des Moines, Iowa, assignor of one-half to Ed. J. Raymond, Des Moines, Iowa. Filed Dec. 6, 1913. Serial No. 804,986. (Cl. 119—43.)



1. A reversible incubator tray including an outer frame, an inner frame secured to the outer frame and extending from points midway of the depth of the outer frame to the adjacent outer side edges of the frame, netting secured on the interior of the outer frame and engaged over the inner side edges of the inner frame so as to be supported by said edges in one position of the frame, and a tubular member secured to the center of the netting which has similar open ends and which is secured to the netting central of its length so that the member will be projected equal distances below the outer frame in either normal or reversed position of the outer frame.

2. A reversible incubator tray including an outer frame, netting secured on the interior of the outer frame, and a tubular member secured to the center of the netting which has similar open ends and which is secured to the netting central of its length so that the member will be projected equal distances below the outer frame in either normal or reversed position of the outer frame.

1,154,928. STIPPLE-BRUSH. HENRY R. KINDT, Floral Park, N. Y. Filed Nov. 10, 1914. Serial No. 871,287. (Cl. 101—28.)



1. A stipple unit for a stipple brush, comprising a pair of approximately parallel leaves connected at one end and having their outer ends provided with stippling edges.

2. A stipple unit for stipple brushes, comprising a pair of approximately parallel leaves of flexible material connected integrally at one end, and provided with means for attaching the unit to a brush head, the outer ends of said leaves having stippling edges.

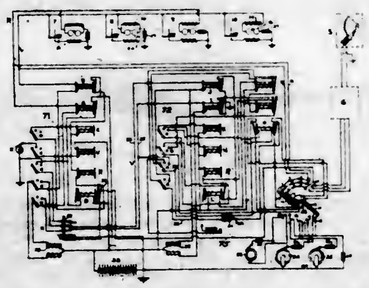
3. A stipple unit for stipple brushes comprising a pair of approximately parallel leaves, of flexible material, having a body portion connecting them at one end, said body portion having separated contact edges for engaging a brush head, and a recessed portion between said contact edges.

4. A stipple unit for stipple brushes comprising a pair of approximately parallel leaves, connected at one end by a body portion, said body portion being provided with contact edges substantially in line with the said leaves, for engaging a brush head, and being recessed between said contact edges.

5. A stipple brush comprising a brush head, and a plurality of flexible leaves extending therefrom, and provided at their outer ends with stippling edges.

[Claims 6 to 10 not printed in the Gazette.]

1,154,929. SIGNALING SYSTEM. OSCAR M. LEICH and CHARLES E. HAGUE, Rochester, N. Y., assignors, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed Feb. 17, 1905. Serial No. 246,193. (Cl. 179—17.)



1. A signaling system comprising two or more distinct electric circuits entering a switching station, switching mechanism at said station for interconnecting said circuits, a sub-station having a signal connected to one of said electric circuits, two or more sub-stations having signals connected to a remaining circuit, electromagnetic means operated from the first aforesaid sub-station to operate said switching mechanism to connect the circuit of said first aforesaid sub-station to a remaining circuit having a plurality of sub-stations, a plurality of line contacts on said switching mechanism for each of said remaining circuits having a plurality of sub-stations, the line contacts for each said circuit connected in multiple arrangement, generating mechanism for furnishing different characters of current selectively to operate signaling mechanism of party line sub-stations, and a ringing relay for breaking both sides of the line and for interconnecting generating mechanism with said multiple contacts.

2. In an automatic exchange system for party line telephones, exchange mechanism for connecting subscribers' lines, multiple line contacts provided in said exchange mechanism for each party line subscriber's circuit, ringing mechanism, electromagnetic mechanism for associating ringing mechanism with said multiple line contacts, switch contacts and means for causing a definite electrical condition thereof whereby normally a circuit when in use will appear "busy" to any other circuit attempting connection therewith, and prevent such connection, and switching means associated with said exchange mechanism, to suspend the operation of said "busy" switch contacts when a calling party line subscriber's apparatus calls a party line subscriber's apparatus on the same line.

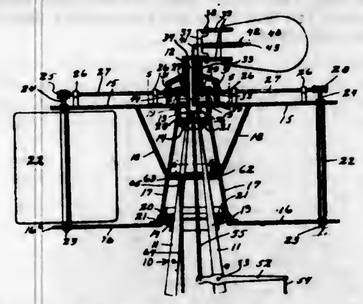
3. A signaling system comprising two or more distinct electric circuits entering a switching station, switching mechanism at said station for interconnecting said circuits, a sub-station having a signal connected to one of said electric circuits, two or more sub-stations having signals connected to a remaining circuit, electromagnetic means operated from the first aforesaid sub-station to operate said switching mechanism to connect the circuit of said first aforesaid sub-station to a remaining circuits having a plurality of substations, a plurality of line contacts on said switching mechanism for each of said remaining circuits having a plurality of substations, the line contacts for each said circuit connected in multiple arrangement, generating mechanism for furnishing different characters of current selectively to operate signaling mechanism of party line sub-stations, and electromagnetic mechanism for breaking both sides of the line and for interconnecting generating mechanism with said multiple contacts.

4. A signaling system comprising two or more distinct electric circuits entering a switching station, switching mechanism at said station for interconnecting said circuits, a sub-station having a signal connected to one of said electric circuits, two or more sub-stations having signals connected to a remaining circuit, electromagnetic means operated from the first aforesaid sub-station to operate said switching mechanism to connect the circuit of said first aforesaid sub-station to a remaining circuit having a plurality of substations, a plurality of line contacts on said switching mechanism for each of said remaining circuits having a plurality of substations, the line contacts for each said circuit connected in multiple arrangement, generating mechanism for furnishing different characters of current selectively to operate signaling mechanism of party line sub-stations, and electromagnetic mechanism comprising a relay and serial ringing contacts for interconnecting generating mechanism with said multiple contacts.

5. A signaling system comprising two or more distinct electric circuits entering a switching station, switching mechanism at said station for interconnecting said circuits, a sub-station having a signal connected to one of said electric circuits, two or more substations having signals connected to a remaining circuit, electromagnetic means operated from the first aforesaid sub-station to operate said switching mechanism to connect the circuit of said first aforesaid sub-station to a remaining circuit having a plurality of substations, a plurality of line contacts on said switching mechanism for each of said remaining circuits having a plurality of substations, the line contacts for each said circuit connected in multiple arrangement, generating mechanism for furnishing different characters of current selectively to operate signaling mechanism of party line substations, and a ringing relay for interconnecting generating mechanism with said multiple contacts.

[Claims 6 to 29 not printed in the Gazette.]

1,154,930. AUTOMATIC WINDMILL. LINCOLN MIGHT, Battleford, Saskatchewan, Canada. Filed Oct. 13, 1914. Serial No. 866,460. (Cl. 170—25.)



1. A wind mill comprising a tower, a head thereon, a wheel journaled on said tower, a plurality of vertically disposed vanes secured on shafts journaled through said wheel, horizontally disposed shafts journaled on said wheel, gear connections between said first and last named shafts, a pair of beveled pinions upon the inner ends of said second named shafts and revoluble thereon, a head revoluble on said first named head and provided with two gears meshing with the sets of said pairs of gears, and means for locking either set of said pairs of gears upon said second named shafts whereby said vanes will be rotated selectively one-half or one entire rotation during the rotation of said wheel.

2. A wind mill comprising a tower, a wheel journaled on said tower, a plurality of vertically disposed vanes revoluble on said wheel, a head revoluble on said tower and provided with two gears, shafts having gear connection with said vanes, inner and outer beveled pinions on said shafts meshing with the gears on said head, said pinions being revoluble on said shafts, and means for locking either set of pinions upon their shafts, said means comprising a manually shiftable clutch member.

3. A wind mill comprising a tower, a wheel journaled on said tower, a plurality of vertically disposed vanes revoluble on said wheel, a head revoluble on said tower and provided with two gears, shafts having gear connection with said vanes, inner and outer beveled pinions on said shafts meshing with the gears on said head, said pinions being revoluble on said shafts, and means for locking either set of pinions upon their shafts, said means comprising a collar shiftable and splined upon each of said shafts, outwardly spring pressed pins carried upon said collar and engageable within holes in the opposed sides of said pinions, and a lever for shifting each of said collars.

4. A wind mill comprising a tower, a wheel journaled on said tower, a plurality of vertically disposed vanes revoluble on said wheel, a head revoluble on said tower and provided with two gears, shafts having gear connection with said vanes, inner and outer beveled pinions on said shafts meshing with the gears on said head, said pinions being revoluble on said shafts, and means for locking either set of pinions upon their shafts, said means comprising a collar shiftable and splined upon each of said shafts, outwardly spring pressed pins carried upon said collar and engageable within holes in the opposed sides of said pinions, a lever for shifting each of said collars, a ring engaging said levers, a rod connected with said ring and extending downwardly along said tower, and a manually movable control lever connected with said rod.

1,154,931. BOTTLE. HORACE E. MILLER, Newark, N. J., assignor to The Silicocks-Miller Company, South Orange, N. J., a Corporation of New Jersey. Filed Feb. 14, 1914. Serial No. 818,841. (Cl. 206—2.)

1. A bottle comprising a transparent substantially colorless celluloid or other pyroxylin integral body having a beaded upper edge and a bottom secured to the lower end thereof by celluloid cement, said bottom being of celluloid or other pyroxylin material and having a vertical peripheral portion fitting a lower vertical wall surface of said body.



2. A bottle comprising a transparent substantially colorless celluloid or other pyroxylin integral body having a bottom secured to the lower end thereof by celluloid cement, said bottom being of celluloid or other pyroxylin material and having a vertical peripheral portion closely fitting within the lower end of said body, and said bottom being dished upwardly and its said vertical portion having at its lower edge a laterally extending flange.

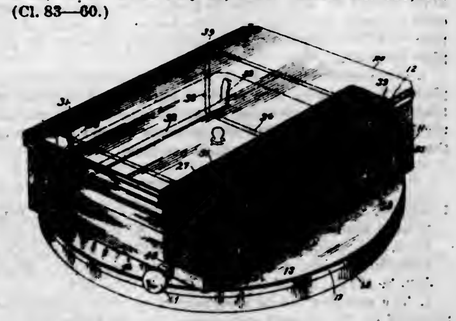
3. A bottle comprising a transparent substantially colorless celluloid or other pyroxylin integral body having a bottom secured to the lower end thereof by celluloid cement, said bottom being of celluloid or other pyroxylin material and having a vertical peripheral portion fitting a lower vertical wall surface of said body, and said bottom being dished upwardly into the lower end of the body of the bottle and having a mat surface adapted to receive writing or the like.

4. A bottle comprising a transparent substantially colorless celluloid or other pyroxylin cylindrical integral body having a beaded-over upper edge, and a bottom dished upwardly into the lower end of said body and having a mat surface adapted to receive writing or the like.

5. A bottle comprising a transparent celluloid or other pyroxylin cylindrical integral body having a beaded-over upper edge, and a bottom dished upwardly into the lower end of said body and having a mat surface adapted to receive writing or the like.

[Claim 6 not printed in the Gazette.]

1,154,932. ASH-SIFTER. CHRISTIAN F. NOLTE, New York, N. Y. Filed July 25, 1914. Serial No. 853,142. (Cl. 83—60.)



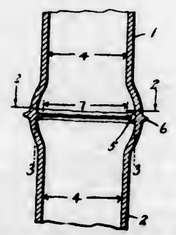
1. In a device of the character described, a sifter, a plurality of bars having cleat portions pressed therefrom, said bars forming a seat for said sifter, rods pivotally connected together by said bars said cleat portions of said bars embracing said rods, and means for rocking said rods

2. In a device of the character described, a sifter, a plurality of bars having cleat portions pressed therefrom, said bars forming a seat for said sifter, rods pivotally connected together by said bars, said cleat portions of said bars embracing said rods, the latter having shoulders pressed therefrom and engaging said bars for positioning the same on the rods, and means for rocking said rods.

3. A device of the character described, comprising a metal casing having a base provided with a part adapted to fit about a receiver and with an interior opening, a lid hinged to said casing, a sifter, a plurality of bars having cleat portions pressed therefrom, said bars forming a seat for said sifter, rods pivotally connected together by said bars, said cleat portions of said bars embracing said rods, and means for rocking said rods.

4. A device of the character described, comprising a metal casing having a base provided with a part adapted to fit about a receiver and with an interior opening, a lid hinged to said casing, a sifter, a plurality of bars having cleat portions pressed therefrom, said bars forming a seat for said sifter, rods pivotally connected together by said bars, said cleat portions of said bars embracing said rods, the latter having shoulders pressed therefrom and engaging said bars for positioning the same on the rods, and means for rocking said rods.

1,154,933. ELECTRICALLY-WELDED TUBING AND PROCESS OF MAKING THE SAME. KUNO PEISELER, Preussen, Germany, assignor to Thomson Electric Welding Company, Lynn, Mass., a Corporation of Massachusetts. Filed Oct. 24, 1914. Serial No. 868,493. (Cl. 219—10.)



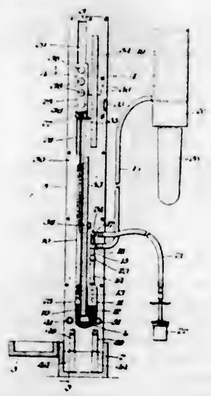
1. The process of electrically welding pipe or tube sections consisting in expanding the abutting ends of the sections, passing an electric heating current from one section to the other across the abutting ends and applying pressure longitudinally thereof to weld the sections together, whereby the bur on the inside of the pipe at the joint will not protrude beyond the diameter of the pipe sections.

2. Electricaly welded pipe or tubing having sections butt welded to each other and expanded at the welded ends whereby the diameter at the bur on the inside of the pipe will be at least equal to the inside diameter of the pipe sections.

3. An electrically welded pipe or tube comprising a plurality of pipe or tube sections butt-welded together at their ends, said ends being expanded whereby the bur on the inside of the pipe will not protrude beyond the line of the diameter of the pipe or tube sections.

1,154,934. SPHYGMOMANOMETER. CHARLES J. PILLING, Lansdowne, Pa., and GEORGE S. WHITE, Los Angeles, Cal., assignors to George P. Pilling and Son Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 9, 1915. Serial No. 1,277. (Cl. 177—351.)

1. The combination of a support, a mercury manometer mounted on the support and having an indicating tube receiving a column of mercury and having means to supply pressure thereto and thereby elevate the mercury column, a wire extending down into said indicating tube and having its lower end above the normal level of the mercury, means operative to adjust said wire vertically within said tube, means to indicate different positions of adjustment of said wire relatively to the level of said mercury, an electric circuit including the mercury in said manometer and said wire, said circuit being normally open between said mercury and said wire, and a translating device included in said circuit.



2. The combination of a support, a mercury manometer mounted on the support and having an indicating tube receiving a column of mercury and having means to supply pressure thereto and thereby elevate the mercury column, a wire extending down into said indicating tube and having its lower end above the normal level of the mercury, means operative to adjust said wire vertically within said tube, an electric circuit including the mercury in said manometer and said wire, said circuit being normally open between said mercury and said wire, and a translating device included in said circuit.

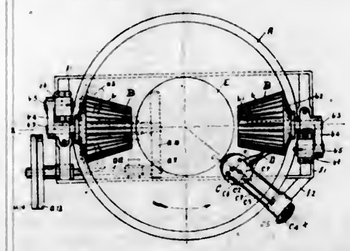
3. The combination of a support, a mercury manometer mounted on the support and having an indicating tube receiving a column of mercury and having means to supply pressure thereto and thereby elevate the mercury column, a plurality of electrical conducting wires insulated from each other and extending down into said indicating tube and having their lower ends arranged at different distances above the normal level of the mercury, each wire having an electrical translating device connected thereto, said wires being secured in fixed relation to each other and being bodily movable, means operative to bodily adjust said wires vertically within said tube, and an electric circuit including said wires and said devices in parallel and said mercury, said circuit being normally open between said wires and said mercury.

4. The combination of a support, a mercury manometer mounted on the support and having an indicating tube receiving a column of mercury and having means to supply pressure thereto and thereby elevate the mercury column, a plurality of electrical conducting wires insulated from each other and extending down into said indicating tube and having their lower ends arranged at different distances above the normal level of the mercury, each wire having an electrical translating device connected thereto, said devices having characteristics which distinguish them from each other, said wires being secured in fixed relation to each other and being bodily movable, means operative to bodily adjust said wires vertically within said tube, and an electrical circuit including said wires and said devices in parallel and said mercury, said circuit being normally open between said wires and said mercury.

5. The combination of a support, a mercury manometer mounted on the support and having an indicating tube receiving a column of mercury and having means to supply pressure thereto and thereby elevate the mercury column, a vertically adjustable carriage on said support, a wire secured to said carriage and extending downwardly therefrom into said indicating tube and having its lower end above the normal level of the mercury, an electric circuit including the mercury in said manometer and said wire, said circuit being normally open between said mercury and said wire, and a translating device mounted on said carriage and included in said circuit.

[Claims 6 to 11 not printed in the Gazette.]

1,154,935. ROTARY ROLLER-PAN. CARL PLETSCHER, Saginaw, Mich., assignor to Werner & Pfleiderer Company, Saginaw, Mich. Filed Apr. 19, 1915. Serial No. 22,452. (Cl. 107—33.)



1. In a rotary roller pan, the combination of a circular pan rotating around a vertical shaft and having a plain working surface slanting in straight line upward from the circumference toward the center of the pan with corrugated conical rollers working thereon and turning loosely around horizontal resilient axles, a loose reel turning vertically to the working surface of the pan and having the outline of its circular part so curved as to be adapted to turn over the material worked by the conical rollers, a shaft vertical to the working surface of the pan and around which the reel loosely turns, a plow-like scraper following in outline closely the curved outline of the reel, an arm carrying the shaft around which the reel turns, and the scraper, and fixed to the frame work of the machine, and appliances adapted to adjust the position of the reel and scraper in regard to the working surface of the pan and arranged at the arm carrying them.

2. In a rotary roller pan, the combination of a circular pan provided at its circumference with a vertical rim and having a plain inclined working surface slanting upward from the circumference to the center of the pan, a steeper annular part at the upper edge of the working surface and a flat circular top, with a mushroom-like cap covering the latter and forming a continuation of the annular part, means for rotating the pan, a vertical shaft around which it revolves, a tube fixed in the center of the top of the pan and holding it in position on the shaft, conical corrugated rollers working parallel to and extending nearly across the whole width of the working surface, horizontal resilient shafts arranged at the framework of the machine and around which the rollers loosely turn by means of the material passing beneath, curved loose reels for turning over the material worked by the rollers, shafts arranged vertical to the working surface and around which the reels are rotated by means of the material passing thereon, stationary plow-like scrapers the outline of which follows closely the curved outline of the reels, arms carrying the scrapers and the shafts holding the reels, and fixed to the framework of the machine, and appliances arranged at these arms and adapted to adjust simultaneously the position of the reels and of the scrapers in regard to the working surface.

1,154,936. BED-SPRING. GEORGE G. POWERS, Chicago, Ill., assignor to Union Wire Mattress Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 5, 1914. Serial No. 816,660. (Cl. 5—40.)

1. In a wire mattress, the combination of a frame, a fabric, tension springs connecting the ends of the fabric to the frame, cross bars adapted to rest on the bed, yielding means connecting the bars and frame, supporting straps connecting the bars, and yielding means underlying the fabric and supported by the straps, substantially as described.



2. In a wire mattress, the combination of a frame, a fabric, tension springs connecting the ends of the fabric to the frame, cross bars adapted to rest on the bed rails, tension springs connecting the bars and frame, flexible supporting straps connecting the bars, and yielding means underlying the fabric and supported by the straps, substantially as described.

3. In a wire mattress, the combination of a frame, a fabric, tension springs connecting the ends of the fabric to the frame, cross bars adapted to rest on the bed rails adjacent the two ends of the frame, tension springs connecting the bars and frame, flexible supporting straps connecting the bars, and compression springs underlying the fabric and supported by the straps, substantially as described.

4. In a wire mattress, the combination of a frame, a fabric, tension springs connecting the ends of the fabric to the frame, cross bars adapted to rest on the bed rails adjacent the two ends of the frame, tension springs connecting the bars and frame, flexible supporting straps connecting the bars, cross rods extending between the straps, and compression springs underlying the fabric above the rods and supported by the straps, substantially as described.

5. In a wire mattress, the combination of a frame including side rails and end members pivotally connected, a fabric, tension springs connecting the ends of the fabric to the end members of the frame, cross bars adapted to rest on the bed rails, tension springs connecting the cross bars and end members, flexible supporting straps connecting the cross bars, cross rods extending between the straps and detachably connected thereto, and yielding means underlying the fabric above the rods and supported by the straps, the side rails adapted to swing downwardly upon the rods to compress the yielding means between the rods and fabric, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,154,937. PIPE-COUPLING. RICHARD EDWARD ROBERTSON, Kelburn, New Zealand. Filed Aug. 13, 1914. Serial No. 856,597. (Cl. 137—88.)



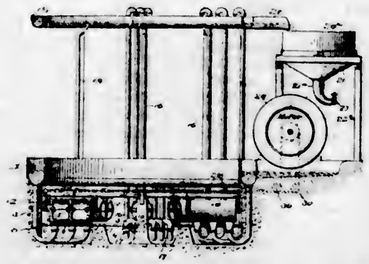
1. In a coupling for the purpose described herein, a casing having a hemispherical interior, a hollow ball fitting the said hemispherical interior, a cup leather making an air tight joint between the ball and the casing, a flange in the interior of the casing defining an opening, a flanged ring fitting the opening, and a spring in compression between the ring and the cup.

2. In a coupling for the purpose described herein, a socket having a hemispherical interior, a hollow ball fitting the said hemispherical interior, a cup leather making an air tight joint between the ball and the socket, an expansion ring in the cup leather, a follower having a circumferential groove for retaining the said ring, a cap screwed into the socket, a flange in the interior of the cap defining an opening, a flanged ring fitting the opening, and a spring in compression between the flanged ring and the follower.

3. In a coupling for the purpose herein described, a socket having a hemispherical interior, a hollow ball fitting the said hemispherical interior, a cup leather making an air tight joint between the ball and the socket, an ex-

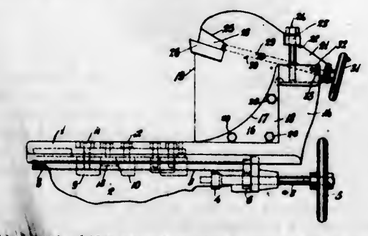
panaion ring in the cup leather, a follower screwed into the ball and having a circumferential groove for retaining the said ring, a ring screwed into the interior of the socket and forming a continuation of the hemispherical interior of the socket, a cap screwed into the cap defining an opening, a flange in the interior of the socket, a flanged ring fitting the opening, and a spring in compression between the flanged ring and the follower.

1,154,938. MECHANICAL SYSTEM FOR ELEVATING LIQUIDS. FRANCISCO SALA, Caibarien, and JESUS VAZQUEZ, Yaguajay, Cuba. Filed Apr. 17, 1913. Serial No. 761,813. (Cl. 103—50.)



A mechanical system for elevating liquid comprising in combination, a liquid reservoir in the shape of a ring shaped channel, a series of tubes adapted to discharge liquid from said reservoir by the action of gravity, a circular horizontally disposed platform provided with a series of groups of flexible tubes having their ends secured to said discharge tubes, equally spaced upon said platform, each of said groups comprising a plurality of hose units desposed in parallel relation, said elevating tubes connected to the other end of each of said flexible tubes and a check valve provided for said elevating tubes, and rollers adapted to compress a series of tubes simultaneously the exposed surface of each of said hose units having a length less than the space between adjacent units whereby the water therein is forced through said check valves into said elevating pipes.

1,154,939. NARROW TOOL-SUPPORT. WILLIAM SCHELLENBACH, Hartwell, and WILLIAM LODGE and NICHOLAS D. CHASD, Cincinnati, Ohio, assignors to The Lodge & Shipley Machine Tool Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Jan. 8, 1913. Serial No. 740,802. (Cl. 82—36.)



A tool-rest of the nature disclosed combining a traveling base, a narrow plate-like upright tool support on said base the front edge of which is formed with a notch extending clear through the plate, the upper surface defining the notch being tapered, a taper wedge block in the notch, a screw shaft swiveled in the block and extending rearwardly through the plate, and a rotatable nut on the rear end of the screw exterior of the plate and held against longitudinal movement by the rear portion of the plate, enabling the ready release of the engagement between the wedge-block and a tool clamped thereby within the notch.

1,154,940. EGG AND CREAM BEATER. ERNST M. C. SCHMIDT, Tarrytown, N. Y. Filed Sept. 4, 1914. Serial No. 860,282. (Cl. 107—41.)



1. A device of the character described comprising a beater frame having a perforated dasher of unbroken contour, S-shape in transverse section with its oppositely presented longitudinal sides conforming approximately to the circular path of travel of the sides concentric with the axis of rotation, secured to the beater frame, means supporting the beater frame and means for revolving the latter.

2. A device of the character described comprising a beater frame having a perforated dasher of unbroken contour, S-shape in transverse section and formed with broad flattened longitudinal sides, approximately parallel, secured to the beater frame, means supporting the beater frame and means for revolving the latter.

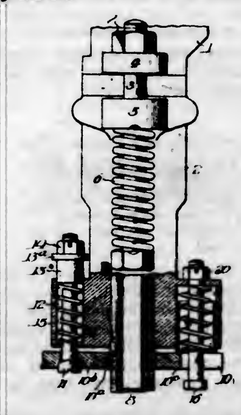
3. A device of the character described comprising a handle having a U-shaped inwardly extending offset at its lower end formed with a recess in its lower arm and apertures in its arms in alinement with the recess, an outwardly projecting rotatable mounting located on the handle above the offset, an inverted U shaped outer frame formed with upwardly extending arms overlapped within the recess of the offset at their ends, a driven bevel gear formed with spaced lugs and seated against the lapped ends of the outer frame and against the lower arm of the offset, an inner frame conforming in shape to the outer frame, formed with a web seated against the driven bevel gear between its lugs, downwardly diverging arms and parallel extremities, a perforated dasher of S shape in transverse section and of unbroken contour, having staggered slots and secured by its side faces to the parallel extremities of the inner frame, a headed pin securing the web of the inner frame, the driven bevel gear wheel, and overlapped arms to the arms of the offset, a pivot pin mounted in the web of the outer frame having ears to which the dasher is secured, and a driving bevel gear wheel mounted on the rotatable mounting and meshing with the driven bevel gear wheel.

1,154,941. SHACKLE FOR DRILLS, &c. MATHER W. SHERWOOD, Franklin, Pa., assignor to Chicago Pneumatic Tool Company, Chicago, Ill., a Corporation of New Jersey. Filed Nov. 24, 1913. Serial No. 802,719. (Cl. 78—44.5.)

1. In combination with a drill socket and a drill bit therein, a spring-pressed tilting gripping member provided with a hole through which said bit passes for frictionally gripping the same.

2. In combination with a drill socket and a drill bit therein, means for frictionally gripping the bit, comprising a bar pivotally connected with the drill socket and provided with a hole through which the bit passes.

3. In combination with a drill socket and a drill bit therein, means for frictionally gripping the bit, comprising a bar pivotally connected with the drill socket and provided with a hole through which the bit passes, and a yielding means acting on the bar to cant the same and thereby grip the bit.

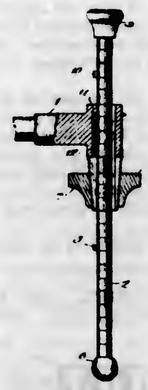


4. In combination with a drill socket and a drill bit therein, means for frictionally gripping the bit, comprising a bar pivotally connected at one end with the drill socket and provided in the middle portion with a hole through which the bit passes, and a yielding means acting on the other end of the bar to cant the same and thereby grip the bit.

5. In combination with a drill socket and a drill bit therein, means for frictionally gripping the bit comprising a bar provided with a hole through which the bit passes, a bolt which depends from the drill socket and on which one end of the bar is pivoted, and a yielding means acting on the other end thereof to cant the same and thereby grip the bit.

[Claims 6 to 11 not printed in the Gazette.]

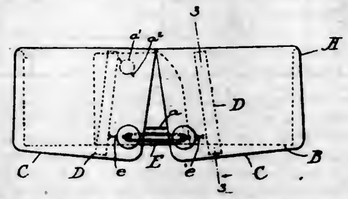
1,154,942. DENTAL FACE-BOW. GEORGE B. SNOW, Long Beach, Cal., assignor to The Snow Dental Company, Buffalo, N. Y. Filed June 2, 1915. Serial No. 31,770. (Cl. 32—1.)



1. In a dental face bow, condyle bars sliding longitudinally in sleeves in T pieces attached to the bow ends, and provided with spurs projecting laterally from their surfaces and passing into longitudinal grooves in the said sleeves or abutting against their ends when the condyle bars are partially rotated and moved longitudinally; substantially as described.

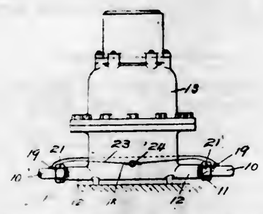
2. In a dental face bow, condyle bars sliding longitudinally in T pieces attached to the bow ends, and provded with spurs projecting laterally from their surfaces and passing into longitudinal grooves in the said sleeves or abutting against the ends thereof; said sleeves having chambers formed therein in which the middle one of the said spurs will be capable of rotation when it is contained therein; substantially as described.

1,154,943. SOFT FOLD-OVER COLLAR. RACHEL SUDIAH, New York, N. Y. Filed Feb. 2, 1914. Serial No. 815,877. (Cl. 2—91.)



As a new article of manufacture, a turned-over soft collar embodying a substantially up-standing neck-band and a turned-over portion, said collar being provided at each end of the turned-over portion with a substantially upright strip of substantially rigid material, of different material from that composing the body of the collar, said strips being entirely separate and distinct from each other, and approximately of the same length as the height of the turned-over portion of the collar and positioned in pockets located between the plies of said collar, the turned-over portion being in height substantially the same as the height of the neck-band of the collar, whereby the lower ends of the supporting strips are adapted to rest upon the shirt bosom or collarbone of the wearer for the purpose of maintaining said turned-over portion in extended position and simultaneously supporting the neck-band against sagging.

1,154,944. COUPLING. CHARLES A. TILLY, New York, N. Y. Filed Jan. 27, 1914. Serial No. 814,690. (Cl. 137—28.)

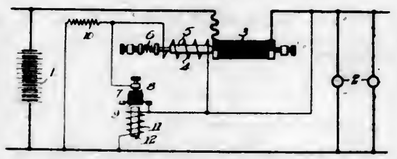


The combination with a meter including a casing having oppositely extending threaded nipples; of a coupling nut on each of said nipples provided with a transverse aperture at its periphery and having a flanged end, a flanged pipe coupled to each of said nipples by said nuts thereon and provided with a transversely apertured ear, and a filament passed through the apertures in said coupling nuts and apertures of said ears with the ends thereof joined and sealed, said filament passing around the meter.

1,154,945. AUTOMATIC ELECTRIC REGULATOR. EDWIN B. H. TOWER, Jr., Milwaukee, Wis., assignor, by mesne assignments, to The United States Light and Heating Company, a Corporation of Maine. Filed Apr. 10, 1912. Serial No. 689,905. (Cl. 171—229.)

1. Regulating means for an electric circuit provided with an operating electro-magnet for controlling said regulating means, and means for controlling the energization of said electro-magnet, said last mentioned means including a container for a granular resistance material, granular resistance material normally compressed in said

container, and means responsive to electrical conditions in the circuit to be controlled for increasing or decreasing the compression on said granular resistance material upon slight variations in said electrical conditions, whereby said regulator will be caused to respond to minute variations in the circuit to be controlled.

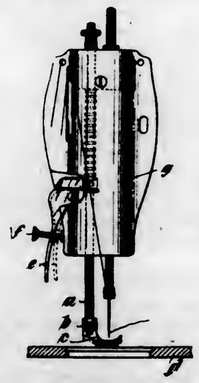


2. An electromagnetically operated carbon disk rheostat and means for increasing the sensitiveness thereof, said means including a mass of finely divided carbon normally under pressure, connected in a shunt circuit around the operating electro-magnetic winding for said rheostat, and means for releasing the pressure on said mass by minute increments, whereby the energization of said winding may be varied in response to infinitesimal movements of said pressure releasing means.

3. A regulator comprising a regulating medium, a controlling winding for varying the same, a granular resistance device connected in a shunt circuit around said winding to divert current therefrom, said device consisting of a receptacle having as one wall thereof, a flexible diaphragm of magnetic material and means for moving said diaphragm to vary said granular resistance, and to agitate the granules.

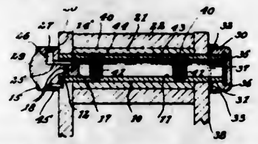
4. In a car lighting system, a regulator including a series of carbon blocks adapted to be connected in series in the circuit to be regulated, operating means for varying the pressure exerted on said blocks, said means including an electromagnetic winding and means for increasing the sensitiveness of said regulator, said means including a mass of finely divided carbon normally under pressure connected in a shunt circuit around the operating electro-magnetic winding for said regulator, and means for releasing the pressure on said mass by minute increments, whereby the energization of said winding may be varied in response to infinitesimal movements of said pressure-releasing means.

1,154,946. SEWING-MACHINE. THEKLA TROTT, Berlin, Germany. Filed Mar. 19, 1909. Serial No. 484,389. (Cl. 112—13.)



In an ordinary household sewing machine, a presser foot comprising a foot portion and an integral shank portion, said shank portion being provided with an elongated open ended slot, the closed end of which is located at a predetermined distance below the normal attaching point for the presser foot whereby the presser foot is adapted for attachment at the normal point for ordinary sewing or at or near the bottom of said slot for special work such as darning.

1,154,947. SELF-LUBRICATING SPRING-BOLT. DANIEL H. TWAITS, Chicago, Ill. Filed Dec. 22, 1913. Serial No. 808,163. (Cl. 64—27.)



1. In a spring bolt, the combination of a tubular member, forming the shank of the bolt, a head having a portion integral therewith and extending into the tubular member and closing the end of the same, means extending through the wall of the tubular member and engaging said portion of the head within the tubular member, and lubricating passages leading into and from the interior of the bolt.

2. In a spring bolt, the combination of a tubular member forming the shank of the bolt and having a cylindrical bore, a head having a cylindrical male portion extending into the end of the tubular member and tightly fitting the same, a pin extending through the wall of the tubular member and into the male portion of the head, a removable closure for the other end of the bore, and lubricant outlet means for the bolt.

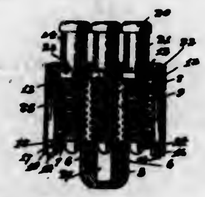
3. In a spring bolt, the combination of a tubular member forming the shank of the bolt, a head having a male portion integral therewith, an enlarged angular portion, said male portion adapted to enter the end of the tubular portion, and a pin extending through the end of the tubular portion and said male portion, said tubular member having an opening for admitting lubricant and lubricant outlet means.

4. In a spring bolt, the combination of a tubular member having a cylindrical bore and an open end, said open end being squared off at right angles to the axis of the member, an angular head having a male portion and a shoulder squared off at right angles thereto, the male portion adapted to enter the inner end of the tubular portion, said shoulder adapted to abut the squared off end of the tubular portion, and a pin extending through the tubular portion and through the male portion, said tubular member having an opening for admitting lubricant and lubricant outlet means.

5. In a spring bolt, the combination of a tubular member, an angular head having a male portion adapted to enter and close the end of the tubular member, and two pins passing through the end of the tubular member and through said male portion, said pins being adjacent and at an angle with each other, said tubular member having an opening for admitting lubricant and lubricant outlet means.

[Claims 6 to 11 not printed in the Gazette.]

1,154,948. VEHICLE-WHEEL. JOHN R. VICKERY, Chicago, Ill. Filed Feb. 10, 1912. Serial No. 676,800. (Cl. 152—8.)



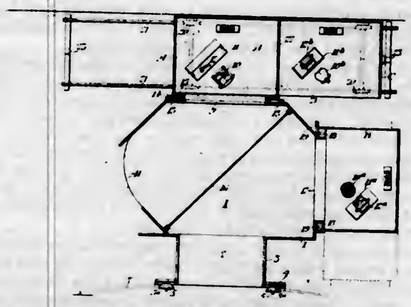
1. In a vehicle wheel, a hollow rim structure comprising an inner peripheral band adapted to be secured to the felly, chambered side walls at their inner edges stepped upon the edge portions of said inner peripheral band, and a sectional outer peripheral band the sections of which have integral radial extensions passing through the chambers of said side walls and secured to said inner peripheral band, in combination with spring-pressed plungers slidably mounted in registering apertures in said peripheral bands and unitedly constituting the tread portion of the wheel.

2. In a vehicle wheel, a hollow rim structure comprising an inner peripheral band adapted to be secured to the felly, chambered side walls at their inner edges stepped upon the edge portions of said inner peripheral band, and a sectional outer peripheral band the sections of which have integral radial extensions occupying the chambers of said side walls and terminating in threaded ends passed through holes in the edge portions of said inner peripheral band, and nuts engaging said threaded ends in combination with spring-pressed plungers slidably mounted in registering apertures in said peripheral bands and unitedly constituting the tread portion of the wheel.

1,154,949. COMPOUND OF VANADIUM AND SELENIUM. FELIX VON OEFELE, New York, N. Y. Filed May 20, 1913. Serial No. 768,794. (Cl. 23—13.)

A chemical compound formed of vanadium and selenium, the atoms of which are in direct combination, without intervening oxygen atoms, said compound having the property of being directly soluble in the liquids of animate beings.

1,154,950. THEATRICAL APPLIANCE. ALEXANDER WAYRICH, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Oct. 18, 1913. Serial No. 795,891. (Cl. 46—70.)



1. In an illusionary apparatus, the combination of a darkened room having a window in the front side, a frame surrounding said window and projecting outwardly therefrom a sufficient distance to materially restrict the range of vision of an observer looking into said window, a window in the rear side of said room in line with the first window, a stage located behind said last-named window, a plate glass mirror vertically disposed in said room and extending diagonally thereacross between said windows, a third window in said room substantially at right angles to the first-named windows, a second stage behind said last-named window, and apparatus for successively lighting said stages, said rear window being of a size and in a position to form a border to limit the range of view of each stage.

2. In an illusionary apparatus, the combination of a darkened room provided with a front window having a casing of sufficient depth to materially restrict the range of vision from the view point of a spectator and also reduce the amount of light entering said window, rear and side windows in said room, scenes located behind said last-named windows, a vertical, diagonally disposed mirror in said room invisible to a spectator looking through said front window, and mechanism for alternatively lighting said scenes, one of said last-named windows being continuously visible to the spectators during the changing of the lighting of the scenes, and forming a border limiting and defining the range of view of each scene as it is lighted.

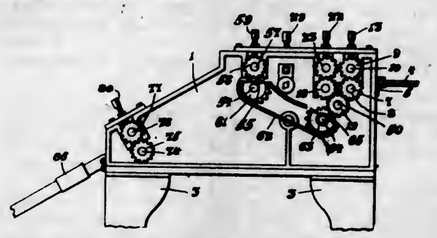
3. In an illusionary apparatus, the combination of a darkened room provided with a front window having a casing extending rearwardly therefrom, said casing having considerable depth to reduce the amount of light entering said window and to restrict the range of view of an observer looking through the window into said room, rear and side windows in said room, scenes located behind said last-named window, a vertical, diagonally disposed mirror in said room invisible to a spectator looking through said front window, mechanism for alternatively lighting said scenes, and a series of lights located adjacent to said front window and forming blinders to obscure the view through said window in a lateral direction.

4. In an illusionary apparatus, the combination of a darkened room provided with a front window having a casing of considerable depth, rear and side windows in said room, scenes located behind said last-named windows, a vertical, diagonally disposed mirror in said room invisible to a spectator looking through said front window, mechanism for alternatively lighting said scenes, a frame of translucent material surrounding one of said windows, and means to transmit light through said translucent material, and cause said frame to appear as a continuously illuminated frame surrounding each scene as the latter is lighted.

5. In an apparatus of the character described, the combination of a darkened room having openings at its front, rear and one side, a stationary booth at the side opening, booths movable alternately to a position behind the rear opening, a diagonal transparent mirror between said front and rear openings, and means for alternately lighting the booths at said rear and side openings.

[Claims 6 to 26 not printed in the Gazette.]

1,154,951. SHEET-METAL-FORMING MACHINE. CLARENCE A. WEIRICH, Canton, Ohio. Filed Apr. 6, 1915. Serial No. 19,435. (Cl. 164—49.)



1. A machine of the character described, comprising side frames, feed rolls journaled in said side frames, splitting rolls journaled in said side frames, beyond said feed rolls, a shear mounted between said side frames beyond said splitting rolls, a second pair of feed rolls journaled in said side frames beyond said shear, an inclined chute mounted between said side frames beyond said second feed rolls, means for intermittently operating said shear and means for intermittently operating all of said rolls in unison.

2. A machine of the character described, comprising side frames, feed rolls journaled in said side frames, splitting rolls journaled in said side frames beyond said feed rolls, a shear mounted between said side frames beyond said splitting rolls, a second pair of feed rolls journaled in said side frames beyond said shear, an inclined chute mounted between said side frames beyond said second feed rolls, means for intermittently operating said shear and means for intermittently operating all of said rolls in unison, and corrugating rolls journaled in said side frames at the lower extremity of said chute.

3. A machine of the character described, comprising side frames, feed rolls journaled in said side frames, splitting

rolls journaled in said side frames beyond said feed rolls, a fixed shear blade mounted between said side frames beyond said splitting rolls, a movable shear blade mounted for reciprocation between said side frames and adapted to coact with said fixed shear blade, a second pair of feed rolls journaled in said frames beyond said shear blade, means for intermittently operating said movable shear blade, means for rotating said feed rolls and splitting rolls in unison, and means for intermittently stopping said rolls during the operation of said shear blade.

4. A machine of the character described, comprising side frames, feed rolls journaled in said side frames, splitting rolls journaled in said side frames beyond said feed rolls, a fixed shear blade mounted between said side frames beyond said splitting rolls, a movable shear blade adapted to coact with said fixed shear blade and mounted for reciprocation between said side frames, a second pair of feed rolls journaled in said side frames beyond said shear blade, a cam shaft mounted between said side frames, means for continuously rotating said cam shaft, cams mounted upon said cam shaft and adapted to intermittently operate said movable shear blade and means for intermittently operating said rolls in unison.

5. A machine of the character described, comprising side frames, feed rolls journaled in said side frames, splitting rolls journaled in said side frames beyond said feed rolls, a fixed shear blade mounted between said side frames beyond said splitting rolls, a movable shear blade adapted to coact with said fixed shear blade and mounted for reciprocation between said side frames, a second pair of feed rolls journaled in said side frames beyond said shear blade, a cam shaft mounted between said side frames, means for continuously rotating said cam shaft, cams mounted upon said cam shaft and adapted to intermittently operate said movable shear blade, means for operating said rolls in unison and means for intermittently stopping said rolls during the operation of said movable shear blade.

[Claims 6 and 7 not printed in the Gazette.]

1,154,952. FILM-FIRE-PREVENTION SHUTTER FOR MOTION-PICTURE MACHINES. JOHN T. WELLS, Newport, Ky., assignor to The Edwards Manufacturing Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Oct. 5, 1914. Serial No. 865,131. (Cl. 88—19.4.)



1. In a device of the class described, a anormally closed fire-prevention shutter disposed in relation to the light exposure of the film, a rotary member having speed ratio with the film travel, and worm mechanism functioning under predetermined speed influence of said rotary member for operating the shutter.

2. In a device of the class described, a normally closed fire-prevention shutter disposed in relation to the light exposure of the film, a rotary member having speed ratio with the film travel, and worm mechanism functioning under predetermined speed influence of said rotary member to open and hold open the shutter at a predetermined rate of film travel, and means positively closing the shutter when the rate of film travel decreases.

3. In a device of the class described, a fire-prevention shutter disposed in relation to the film light exposure, a rotary member having speed ratio with the film travel, normalizing means for the shutter, and coördinating pitch members rendered operative by the speed influence of said member for overcoming the normalizing tension and moving the shutter.

4. In a device of the class described, a fire-prevention shutter movably disposed in relation to the film light exposure, a shutter pivot, a member movable in speed ratio with the film, and coördinating pitch members connecting said members and shutter and rendered operative or inoperative by the speed of said member.

5. In a device of the class described, a fire-shutter for the film, means normally closing the shutter, a member having speed ratio with the film travel, and coördinating pitch members entraining the shutter with said film feed member, the pitch angle being such that the shutter is held closed at danger film speeds and progressively opened at safety speeds.

[Claims 6 to 19 not printed in the Gazette.]

1,154,953. ELECTRICAL HEATING DEVICE. EDWIN L. WIEGAND, Youngstown, Ohio. Filed Sept. 24, 1914. Serial No. 863,302. (Cl. 219—25.)



1. In a device of the character described, the combination, with a metallic member having a bottom and walls, of a mass of vitrified, insulating material in said member and making close contact with said bottom and walls, a metallic border overlying and partially submerged in said material and following the contour of said walls, an electric conductor submerged in said material and forming a heating element, and a cover member secured over said material and fitting inside said walls.

2. In a device of the character described, the combination, with a metallic base member having walls, and a securing boss spaced from said walls, of a mass of vitrified electrically insulating material contained in said base between said boss and said walls, a metallic border overlying and partially submerged in said vitrified material and following the contour of said walls, an electric conductor submerged in said vitrified material, a cover member overlying said vitrified material and said border, and means securing said cover to said boss.

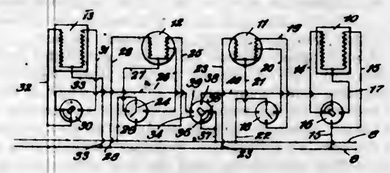
3. In a device of the character described, the combination, with a hollow metallic member having one side open and the remaining sides closed, of a mass of vitrified, electrically-non-conducting material in said member and making close mechanical contact with its interior, a conductor submerged in said material and supported, inclosed, and insulated thereby, a cover member removably applied to said first member, and a sheet metal edge ring partially submerged in said plastic material and breaking the joint between said members.

4. In a device of the character described, the combination, with a metallic base member having a heating face and walls projecting in the opposite direction from said heating face and defining a recess, an electric conductor in said recess and spaced from the boundaries thereof, electrically insulating, heat conducting material in said recess and surrounding said conductor, a cover for said base member, and a hollow shell adapted to fit against the top of said walls and to inclose said cover.

5. In a device of the character described, the combination, with a metallic base member having a heating face and walls projecting in the opposite direction from said heating face and defining a recess, the upper part of said walls being rabbeted, electrical heating devices in said recess, and a hollow shell adapted to embrace the rear part of said base member, said shell having a depending skirt adapted to be received in such rabbet.

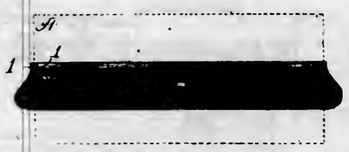
[Claim 6 not printed in the Gazette.]

1,154,954. ELECTRIC RANGE. ROGER WILLIAMS, Bogota, N. J., assignor to Simplex Electric Heating Company, Cambridge, Mass., a Corporation of Massachusetts. Filed Oct. 1, 1912. Serial No. 723,345. (Cl. 219—37.)



An electric range having a plurality of separate electric heaters, and service connections for supplying current to said respective heaters, including means for automatically cutting off the current from certain of said heaters when the current is turned on to other of said heaters, whereby the maximum demand on the range is limited to less than its total current capacity.

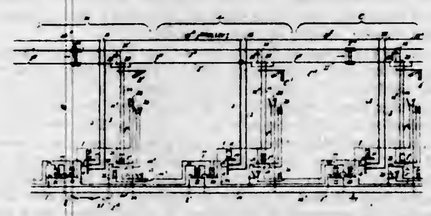
1,154,955. STRUCTURAL TUBING. WAYNE WILLS, Chicago, Ill., assignor, by mesne assignments, to American Seating Company, a Corporation. Filed Mar. 20, 1911. Serial No. 615,775. (Cl. 189—34.)



1. A structural element consisting of an integral open tube with the edge portions of the material of which the tube is formed meeting and projecting in a flange, the walls of the tube diverging in substantially V-shaped form in cross section from the flange and the extremities of the divergent parts merging by curves into a flattened curved wall located opposite said flange whereby the tube may be readily bent into curved forms.

2. A metal tube consisting of a strip of metal bent into the form of an open tube with the edge portions of the strip meeting and projecting in a flange and with the walls of the tube diverging in substantially V-form in cross section from the flange and the extremities of the divergent parts merging by curves into a flattened curved wall located opposite said flange, said tube being curved in a plane passing through said flange and substantially bisecting the cross section of the tube.

1,154,956. ELECTRIC TRAIN-CONTROL SYSTEM. ERNST WOLTMANN, New York, N. Y., assignor to Automatic Train Stop Company, a Corporation of Maine. Filed Feb. 19, 1909. Serial No. 478,869. (Cl. 246—36.)



1. An electric railway system comprising a sectional power conductor, switches normally joining the ends of the sections of said conductor in an unbroken series, switch operating devices and electric circuits for controlling said devices, said circuits including circuit opening parts, auxiliary electric circuits including electro-magnetic appliances for controlling said circuit opening parts, said auxiliary circuits each including two branches, means for altering the circuit conditions in one of said branches when a train passes a determined point and means for altering the circuit conditions in the other of said branches when a second train approaches to within less than a determined distance from the point first mentioned.

2. An electric railway system comprising a sectional power conductor, switches normally joining the ends of the sections of said conductor in an unbroken series, switch operating devices and electric circuits having current normally flowing therethrough for controlling said devices, said circuits including circuit opening parts, auxiliary electric circuits including electro-magnetic appliances for controlling said circuit opening parts, said auxiliary circuits each including two branches, means for altering the circuit conditions in one of said branches when a train passes a determined point and means for altering the circuit conditions in the other of said branches when a second train approaches to within less than a determined distance from the point first mentioned.

3. An electric railway system comprising a sectional power conductor, switches normally joining the ends of the sections of said conductor in an unbroken series, switch operating devices and electric circuits for controlling said devices, said circuits including circuit opening parts, auxiliary electric circuits, through which current normally flows, including electro-magnetic appliances for controlling said circuit opening parts, said auxiliary circuits each including two branches, means for altering the circuit conditions in one of said branches when a train passes a determined point and means for altering the circuit conditions in the other of said branches when second train approaches to within less than a predetermined distance from the point first mentioned.

4. An electric railway system comprising a sectional power conductor, switches normally joining the ends of the sections of said conductor in an unbroken series, switch operating devices and electric circuits for controlling said devices, said circuits each having two branches and each branch having a set of contact making elements therein, a set of elements in one branch and a set of elements in the other branch being operable substantially in unison, one set of elements closing the circuit through one branch while the other opens circuit through the other branch, means for operating the number of sets of elements associated with one circuit from a determined point along the track, and means for interrupting the circuit when a train approaches within less than a determined distance of said point.

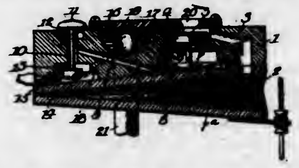
5. An electric railway system comprising a sectional power conductor, switches having a bias to open position, electrically operated devices for holding said switches normally closed, the ends of the respective sections of said conductor being normally electrically joined together by said switches in an unbroken series, a series of circuits each of which includes a solenoid through which currents normally flow, said devices being held in operative position by the action of said solenoids, and means including a plurality of normally energized relays and contact making parts controlled by said relays, for simultaneously altering circuit conditions in a determined number of the circuits aforesaid, whereby a determined plurality of the said switches may move to open position.

[Claims 6 to 12 not printed in the Gazette.]

1,154,957. PNEUMATIC MUSICAL INSTRUMENT. HARRY J. ANDERSON, Chicago, Ill. Original application filed Oct. 28, 1911, Serial No. 657,296. Divided and this application filed Feb. 14, 1912. Serial No. 677,474. (Cl. 84—178.)

1. In an automatic musical instrument in combination, a primary valve, a secondary valve, an integral block supporting said valves provided with pouch chambers, pouches mounted in said chambers, for operating said valves and a pneumatic directly attached to said block.

2. An automatic musical instrument comprising an integral block, having a windway, primary and secondary valve pouch chambers in said block pouches mounted in said chambers and passages connecting said windway with said pouch chambers.



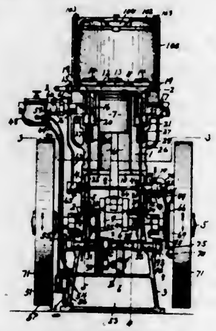
3. In an automatic musical instrument in combination, a block having a longitudinal windway, a secondary valve chest in said block and a cover piece closing both said chest and said windway.

4. In an automatic musical instrument, a block having an open longitudinal windway in its top and a series of valve chests also opening at the top of said block, and a single cover plate for said windway and said chests, said plate being provided with ports for connection with said chests.

5. In an automatic piano player, a block having a groove in its upper face to act as a windway, said block also being provided with a series of primary and secondary pouch chambers, and also having straight passages connecting said pouch chambers with said windway.

[Claims 6 to 24 not printed in the Gazette.]

1,154,958. INTERNAL-COMBUSTION ENGINE. ROBERT J. BALZ, Syracuse, N. Y., assignor of one-half to Gertrude C. Meyer, Syracuse, N. Y. Filed Apr. 9, 1914. Serial No. 830,610. (Cl. 123—113.)



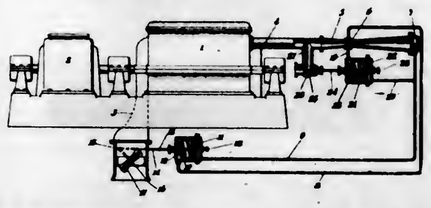
1. In an internal combustion engine having a cylinder, a piston, a crank shaft actuated by the piston, a cam shaft actuated by the crank shaft, a fuel inlet valve and exhaust valve both actuated by the cam shaft, a throttle valve, a centrifugally operated member and means actuated thereby for operating the throttle valve to govern the speed of the engine, and means coöperating with the actuating means for the exhaust valve and actuated by the speed governing mechanism for holding the exhaust valve open when the speed of the engine exceeds a certain limit.

2. In combination with a crank shaft of an internal combustion engine having a fuel inlet port and an exhaust port, separate valves controlling such ports, a speed governing mechanism comprising a throttle valve controlling the passage of fuel to the inlet port, a centrifugally operated member actuated by the crank shaft, and means actuated by said member for operating the throttle valve.

3. In a four cycle internal combustion engine, a cylinder having an inlet port and an exhaust port, a piston, a crank shaft actuated by the piston, self-closing valves for said ports, means actuated by the crank shaft for opening said valves at regular intervals and speed governing means comprising a throttle valve controlling the passage of fuel to the inlet port, a centrifugally operated member actuated by the crank shaft, a rock shaft having a crank arm engaged by the centrifugally operated member for rocking said shaft when the speed of the engine reaches a certain limit, a lever on the rock shaft, and means for transmitting motion from the lever to the throttle valve.

4. In an internal combustion engine, a cylinder having an inlet port and an exhaust port, a piston movable in the cylinder, self-closing valves for said ports, a crank shaft actuated by the piston, a cam shaft actuated by the crank shaft, separate rock arms actuated by the crank shaft for opening said valves, a detent movable into and out of holding engagement with the rock arm which actuates the exhaust valve, a centrifugally operated member driven by the crank shaft, and means actuated by said member for forcing the detent into holding engagement with said rock arm to hold the exhaust valve open when the speed of the engine reaches a certain limit.

1,154,959. REGULATING MEANS FOR CENTRIFUGAL COMPRESSORS. OTTO BANNER, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 25, 1912. Serial No. 727,649. (Cl. 230—24.)



1. In combination with a centrifugal compressor, having an intake and a discharge line, a demand measuring device in said discharge line and means operated from said demand measuring device, for serially choking the intake of the compressor and exhausting the discharge line of the compressor as the demand decreases.

2. In combination with a centrifugal compressor having an intake and a discharge line, a demand measuring device in said discharge line, a valve for choking said intake, means operated from said measuring device to close said valve as the demand decreases, a valve for exhausting said discharge line, and means operated from said measuring device to open said discharge line valve as the demand decreases, said discharge line valve operating means operating at a lower demand than said intake choking device.

3. In combination with a centrifugal compressor having an intake and a discharge line, a demand measuring device in said discharge line, an intake choking valve having a motor operated from said demand measuring device arranged to close said valve as the demand decreases below a predetermined point, and a discharge exhausting valve for said compressor, having a motor arranged to open said discharge valve at a demand lower than that at which said intake closing motor operates.

4. In combination with a centrifugal compressor having an intake and a discharge line, a Venturi tube, a valve for closing the intake of said compressor, a valve for exhausting the discharge of said compressor, motors for operating said valves comprising cylinders and pistons therein, and connections from the said tube to one end of each of said cylinders and from the discharge of said tube to the other ends of said cylinders, the piston in the intake valve motor being arranged to operate at a greater difference in pressure in the ends of its cylinder than the piston in the discharge valve motor.

5. In combination with a centrifugal compressor having an intake and a discharge line, a demand measuring device in said discharge line, means operated from said demand measuring device, for serially choking the intake of the compressor and exhausting the discharge line of the compressor as the demand decreases, a fluid pressure engine operatively connected with said compressor, and means for conveying the exhaust fluid from the discharge line to said engine.

[Claims 6 to 8 not printed in the Gazette.]

1,154,960. NUT-PROTECTOR. SAMUEL BARUCH, New York, N. Y. Filed July 28, 1914. Serial No. 853,580. (Cl. 137—28.)

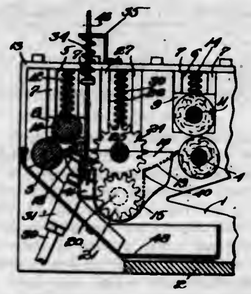


1. A device of the class described including a casing formed of a plurality of similar sections, each section being formed of sheet metal and including end wall portions and a peripheral wall portion terminating in substantially radially disposed flanges, perforated lugs or ears at the opposite ends of both of said flanges, one flange of each section being narrower than the opposite flange of the other section by an amount substantially equal to twice the thickness of the metal forming said sections whereby the lugs or ears of one flange fit between those of the opposed flange and the perforations come into registry, a wire extending through the perforations, and a seal secured to said wire and preventing the withdrawal of the latter.

2. A coupling protector including two casing sections, each having outwardly extending terminal flanges each having perforated ears or lugs substantially at right angles to the plane of the flange, the flange of one section being narrower than the opposed flange of the other section whereby it may engage with said opposed flange between the ears or lugs of the latter and with the perforations in the ears or lugs of one flange in registry with the perforations in the ears or lugs of the other, a wire extending through the registering perforations, and a seal connecting the ends of said wire.

3. A coupling protector including two similar casing sections each having oppositely disposed outwardly extending terminal flanges, one flange of each section being slightly wider than the opposed flange of the same section and each flange having at its opposite ends two substantially parallel perforated ears or lugs, and means for holding said sections together with the wider flange of each section engaging with the narrower flange of the other section, said means including a wire extending through the registering perforations of said lugs or ears and a seal connecting the ends of said wire.

1,154,961. SOLE FLEXING AND TEMPERING MACHINE. GEORGE BASLER, Lynn, Mass., assignor to Basler Machinery Company, Lynn, Mass., a Corporation of Maine. Filed Sept. 12, 1913. Serial No. 789,455. (Cl. 91—17.)



1. In a machine of the class described, means to feed a sole through the machine, means to flex the sole during such feeding, and means to apply moistening liquid positively and forcibly to the convexed portion of the sole during such feeding action, in combination with means actuated by the sole fed therethrough to control automatically the supply of tempering fluid.

2. In a machine of the class described, means to feed a sole through the machine, means to flex the sole during such feeding, and means to apply moistening liquid positively to the convexed portion of the sole during such feeding action, said feeding and applying means comprising a felt roll in contact with the convexed portion of the sole during said feeding and flexing, in combination with a swinging plate actuated by the sole to control the supply of tempering fluid proportionately to the length of each sole so fed.

3. In a machine of the class described, a liquid supply, means to feed leather soles therethrough, means to open progressively the pores of said leather while being fed through said liquid supply, means to apply forcibly the liquid by a felt roll to the sole at that point where the pores are stretched open, and a swinging plate to normally keep the liquid supply closed, over which plate soles are fed to the machine temporarily displacing the plate from its normal closing position.

1,154,962. FLOW-CONTROLLING VALVE FOR CONDUITS. LEWIS C. BAYLES, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J., a Corporation of New Jersey. Filed Feb. 5, 1914. Serial No. 816,815. (Cl. 137—4.)



1. A reversible flow controlling valve for a conduit, comprising oppositely beveled valve seats having annular ports therein, positioned across said conduit, a spring plate valve positioned between said seats and adapted to close either port but arranged to be resiliently held out of contact with both during normal flow.

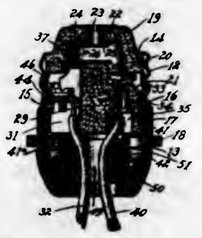
2. As an article of manufacture, a reversible flow controlling valve for a conduit comprising two adjacent sections adapted to be secured to connecting pipe ends, each of said sections having in its adjacent opening a slightly conical valve seat having an annular port through its outer edge, a projection at the center of one of said seats fitting a corresponding depression in the other and a plate valve having internal spring arms engaging said projection and held between said seats so that said valve is in contact with neither valve seat.

3. As an article of manufacture, a reversible flow controlling valve for a conduit comprising two adjacent sections adapted to be secured to connecting pipe ends, each of said sections having in its adjacent opening a slightly conical valve seat having an annular port through its outer edge, a projection at the center of one of said seats fitting a corresponding depression in the other, a plate valve having internal spring arms engaging said projection and held between said seats so that said valve is in contact with neither valve seat, a leak port through said seat from one side to the other and means for securing the sections together.

1,154,963. SEPARABLE ATTACHMENT-PLUG. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 21, 1908. Serial No. 463,764. (Cl. 173—343.)

1. In a separable plug; a body comprising a base, a cup-shaped contact member surrounding the lower end

of said base and carrying a binding terminal and an end contact secured to said base and carrying a second binding terminal; and a shell for receiving said body, said shell comprising a contact sleeve for engaging said cup-shaped contact and an inner contact for engaging said end contact.



2. In a separable plug; a shell comprising a conductor sleeve screw threaded at its upper end, an insulating block within said sleeve and projecting beyond the end thereof, an outer end contact carried by said block, an inner contact carried by said block and electrically connected with the outer end contact, an insulating ring carried within the upper end of said sleeve and an insulating ring carried by the lower end of said sleeve outside the same; and a body insertible into said shell and having contacts for engaging said sleeve and said inner contact, and binding terminals carried by said body.

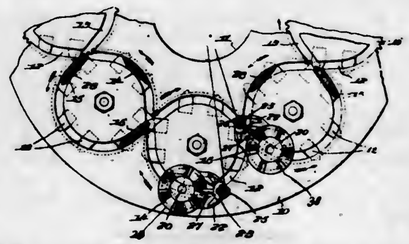
3. An attachment plug comprising a screw shell having at its forward end an insulating head carrying a contact plate and a contact spring connected therewith, an inner shell, an insulating block within said shell carrying a contact plate adapted to engage the contact spring, means for detachably securing the shells together and electrical connections.

4. A screw shell having at its forward end an insulating head, a contact plate on the outer side of said head, a contact spring on the inner side thereof and an electrical connection between said contact plate and contact spring.

5. An attachment plug comprising an outer member having at its forward end an insulating head carrying a contact plate and a contact spring connected therewith, an inner member comprising an inner shell and an insulating block carrying a contact plate adapted to engage the contact spring, means for detachably connecting said members together and electrical connections.

[Claims 6 to 10 not printed in the Gazette.]

1,154,964. BRAIDER MECHANISM. FRANK BENTLEY, Watertown, Mass., assignor to Simplex Wire & Cable Company, Cambridge, Mass., a Corporation of Massachusetts. Filed Mar. 4, 1912. Serial No. 681,371. (Cl. 28—4.)



1. A braiding machine, comprising two sets of thread holders mounted for relative movement in opposite orbital directions, with reference to the central braiding column or core around which their threads are braided, means on said thread holders to prevent their rotation in respective non-orbital directions, and means permitting rotation of each thread holder in the same direction as its orbital movement, and means coöperating with said holders for exerting tension on thread unwound therefrom, whereby the unwinding of thread from said holders during the brading operation exerts a substantially uniform tension.

2. A brading machine, comprising two sets of carriers mounted for movement in opposite directions in intersecting closed tortuous orbits, about the central braiding columns or cores around which the threads are braided, thread holders rotatably mounted on each of said carriers, said holders and said carriers having provision for unwinding to feed the thread out for braiding under tension on said columns, each set being arranged so that the unwinding direction of thread holder rotation is in the same direction as the orbital movement of its carrier.

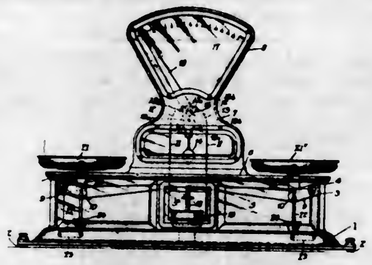
3. A braiding machine, comprising two sets of carriers mounted for movement in intersecting tortuous orbital circuits in opposite directions, thread holders mounted for rotation on each of said carriers, and coöperative escapement means on said holders and said carriers for intermittently feeding out the thread as required during the braiding, the retarding means on the thread holders for said two sets of carriers facing in opposite directions and the escapement means coöperative therewith being correspondingly formed to permit the opposite rotation of the thread holders for unwinding in the same direction as their orbital movement.

4. A braiding machine, comprising two sets of thread holders mounted for orbital movement in opposite directions in thread braiding relation, to the central braiding column or core around which the threads are braided, and each of said holders also mounted for rotation on its own axis in the same direction as its orbital movement.

5. A braiding machine, comprising two sets of thread holders movable in opposite orbital directions about the central braiding column or core around which their threads are braided, said holders and their coöperating mechanism being constructed and arranged to have an unwinding axial movement of all said thread holders in the same direction with reference to their orbital movement, so that one set of holders will have an unwinding axial movement opposite from that of the other set of holders.

[Claims 6 and 7 not printed in the Gazette.]

1,154,965. SCALE. HARRY S. BENDEN, Toledo, Ohio, assignor to Toledo Scale Company, Toledo, Ohio, a Corporation of New Jersey. Filed Dec. 19, 1912. Serial No. 737,596. (Cl. 73—29.)

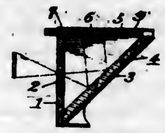


1. In a weighing machine, a pair of scale beams, scale pans mounted thereon, a pendulum weight offsetting means pivoted intermediate said beams, a pair of segments separately adjustable annularly with relation to said pendulum, an indicator carried by the pendulum, and a chart with which the indicator coöperates.

2. In a weighing scale, a pair of scale beams, scale pans mounted thereon, a pendulum weight-offsetting means pivoted intermediate said beams and above the same, a pair of segments angularly adjustable about the axis of the pendulum, adjusting screws for individually adjusting the same with relation to the pendulum, ribbons connected at their lower ends to the ends of the scale beams and passing over said segments, an indicator chart and a hand mounted upon the pendulum structure and coöperating with the chart.

3. In a weighing scale, a pair of scale beams, scale pans carried thereby, a single weight offsetting pendulum coöperating with both of the scale beams, a pair of oppositely disposed segments removably secured to said pendulum and angularly adjustable about the axis thereof, separate adjusting means for each of said segments whereby it may be individually adjusted relatively to the pendulum and the other segment, indicating means carried by the pendulum, and means for connecting the segments with the scale beams.

1,154,966. FINDER FOR CAMERAS. STANLEY BROWN, Garden City, N. Y. Filed Jan. 20, 1915. Serial No 3,214. (Cl. 88—1.5.)



1. In a photographic camera, a reflecting finder the image glass whereof is adjustable forwardly and rearwardly.

2. A photographic finder in which a level and the finder are supported upon the same structure and moved as a unit, the image glass of the finder being adjustable forwardly and rearwardly.

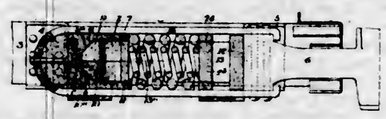
3. A photographic finder the image glass of which is adjustable forwardly and rearwardly, an index to determine the degree of its movement and harmonious markings for the adjusting of the camera lens.

4. A photographic finder the image glass of which is adjustable forwardly and rearwardly, an index to determine the degree of its movement, a level, and harmonious markings for the adjustment of the camera lens.

5. In a photographic finder, a reflecting finder supported upon a movable device adapted to quarter rotation about the axis of the camera lens as a center, so that the axis of the finder lens is in the same vertical plane as the axis of the camera lens in both positions of the camera.

[Claim 6 not printed in the Gazette.]

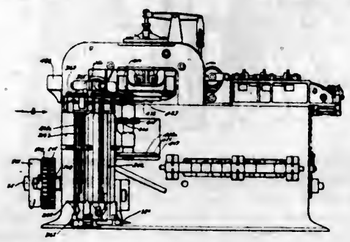
1,154,967. FRICTION DRAFT-RIGGING. CLINTON A. TOWER, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 19, 1911. Serial No. 622,059. (Cl. 213—64.)



1. In a friction draft rigging, a friction member having friction surfaces of arcuate form, a plurality of superposed segmental friction members having a rotative sliding frictional contact with said surfaces, and spring and follower devices adapted to engage opposite ends of the friction elements, the friction surfaces on the said member being arranged to force the friction elements into frictional contact with each other; substantially as described.

2. In a friction draft rigging, a friction member having oppositely inclined friction faces of arc shape in horizontal section, a plurality of friction shoes movable relatively to the friction member each of which has an inclined friction face engaging one of the inclined friction faces of the friction member, springs and followers for moving the friction shoes in opposite directions and for forcing them against the inclined faces of the friction member, the last named inclined faces being adapted to wedge the friction shoes against each other to cause a sliding frictional engagement therebetween as they move in opposite directions.

1,154,968. FEEDING MECHANISM FOR BOX-MAKING MACHINES. CHARLES BURNHAM, Los Angeles, Cal., assignor to Burnham Basket Company, a Corporation of California. Filed Nov. 29, 1912. Serial No. 734,156. (Cl. 101—41.)



1. In a box-making machine, the combination of two independent magazines for holding body material, means for removing the body material from the magazines in succession and holding them crosswise, together with means for elevating the material simultaneously or independently in the magazines and for automatically controlling the elevating means.

2. In a box-making machine, the combination of means for holding box material in two stacks, two independent mechanisms for each stack elevating at different times the same stack, means for picking up the box material in succession from the holding means and transferring the same crosswise, and means for automatically controlling the elevating means.

3. In a box-making machine, the combination of two independent magazines for holding veneer shooks, means for removing the shooks or veneer from the magazines in succession and holding them crosswise, a carrier for transferring the shooks, together with means for elevating the veneer independently or simultaneously in the magazines.

4. The combination of a magazine having a holding element as a part thereof, a follower movable in said magazine and adapted to hold a stack of veneer, means for detachably holding the holding element in position, means for actuating the follower, together with supplemental means for feeding the veneer of the same stack in the magazine after the follower has ceased to feed, said supplemental means being independent of the follower.

5. The combination of a magazine for holding box material in a stack, a follower movable in said magazine to support the stack, means for actuating the follower, together with supplemental means entirely independent of the follower for feeding the box material in the magazine from the same stack.

[Claims 6 to 88 not printed in the Gazette.].

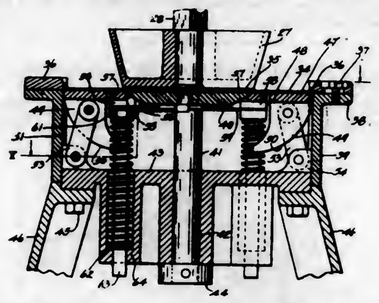
1,154,969. BOX-MAKING MACHINE. CHARLES BURNHAM, Los Angeles, Cal., assignor to Burnham Basket Company, a Corporation of California. Filed May 14, 1914. Serial No. 838,518. (Cl. 93—51.)

1. In a box-making machine, the combination of means adapted to hold shooks crosswise and to form the shooks into box form, and stapling mechanism coöperating with the box-forming means for fastening the shooks together.

2. In a box-making machine, the combination of means adapted to hold shooks crosswise to form the shooks into box form, and means coöperating with the box-forming means for fastening the shooks together.

3. In a box-making machine, the combination of die mechanism, a plunger, stapling mechanism movable with the plunger, a power driven element, and means whereby shooks may be held crosswise and made into box form

and the shooks stapled together by said mechanism during the same movement of said power driven element.

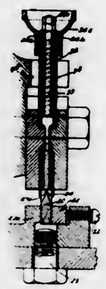


4. In a box-making machine, the combination of a support, a vertically movable die base, a plurality of wings having their inner edges yieldingly held to fit snugly about the outer edge of said die base, links connecting the wings to said support, guides having the edges thereof guided by said support, and plunger mechanism coöperating with said base and wings to form shooks into box form.

5. In a box-making machine, the combination of a support, a vertically movable die base, a plurality of wings having their inner edges yieldingly held to hug snugly about the outer edge of said die base and have a wiping action therewith, guides held to the wings and having the edges thereof guided by said support, and means coöperating with said base and wings to form shooks into box form.

[Claims 6 to 22 not printed in the Gazette.]

1,154,970. METAL-STRIP-BENDING MECHANISM. CHARLES BURNHAM, Los Angeles, Cal. Filed Dec. 9, 1914. Serial No. 876,295. (Cl. 153—25.)



1. The combination of a reciprocatory head having a plate-like member provided with a rib, a plurality of thin stationary and reversible blade-like members forming an alining and centering means for a metal strip, and a yieldingly held intermediate member coöperating with the reciprocatory member to fold the strip lengthwise and to eject the folded strip from between the centering members.

2. The combination of a reciprocatory head having a plate-like member provided with a rib, a plurality of fixed thin blade-like reversible members forming an alining and centering means for a metal strip, said reversible members being arranged in pairs with the edges of one pair being beyond the other pair, and a yieldingly held bar-like member coöperating with the reciprocatory member to fold the strip lengthwise and to eject the folded strip from between the centering members.

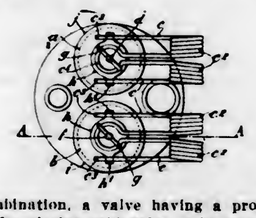
3. The combination of a reciprocatory head having a plate-like member provided with a rib, four blade-like members arranged in pairs and having the lower edges of one pair above the others and forming an alining and centering means for a metal strip, and a yieldingly held bar-like member located centrally of the plate-like members and coöperating with the reciprocatory member to fold the strip lengthwise and to eject the folded strip from between the centering members.

4. The combination of a movable head having a member provided with a rib lengthwise thereof, a plurality of stationary and reversible members forming an alining and centering means for a metal strip, and a yieldingly held intermediate member coöperating with the movable member and two of the fixed members to fold the strip lengthwise and to eject the folded strip from between the centering members.

5. The combination of a movable head having a member provided with a rib lengthwise thereof, means for adjustably holding said member and head, four fixed members forming an alining and centering means for a metal strip, said members being arranged in pairs with the edges of one pair being beyond the edges of the other pair and forming relatively different widths of channels, and a yieldingly held member coöperating with the movable member and two of the fixed members to fold the strip lengthwise and to eject the folded strip from between the fixed members.

[Claims 6 to 23 not printed in the Gazette.]

1,154,971. VALVE-SPRING. GEORGES HENRI MARIUS CANTON, PIERRE GEORGES UNNÉ, and EMILE JEAN JULES SALMSON, Billancourt, France. Original application filed Mar. 29, 1912, Serial No. 687,011. Divided and this application filed Nov. 27, 1912. Serial No. 733,765. (Cl. 137—32.)



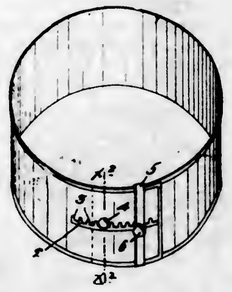
1. In combination, a valve having a projecting stem, and means for closing said valve, said means comprising a spring formed of an integral strand having intermediately oppositely wound coaxial coils remote from the valve, intermediate arms extending from adjacent parts of said coils, respectively, and bent to form a loop engaging said valve stem, terminal arms tensioned by engagement with the casing of said valve, and means for retaining said loop in position.

2. In combination, a valve having a projecting stem and lugs projecting from the valve casing, and means for closing said valve, said means comprising a spring formed of an integral strand having intermediate oppositely wound co-axial coils remote from the valve, intermediate arms extending from adjacent parts of said coils, respectively, and bent to form a loop engaging said valve stem, and terminal arms frictionally engaging the lugs projecting from the valve casing.

3. In combination, a valve having a projecting stem, a pin passing through said stem at right angles to its axis, a valve casing having lugs projecting therefrom, and means for closing said valve, said means comprising a spring formed of a strand having intermediate oppositely wound co-axial coils remote from the valve, intermediate arms extending from adjacent parts of said coils, respectively, and bent to form a loop engaging said valve stem and pressing against said pin, and terminal arms tensioned by frictionally engaging the lugs projecting from the valve casing.

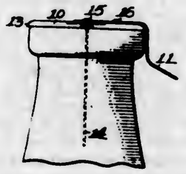
1,154,972. ADJUSTABLE CAKE-HOLDING BAND. AMANDA C. CARLSON, Cannon Falls, Minn. Filed July 27, 1914. Serial No. 853,318. (Cl. 91—60.)

1. A circumferentially expansible and contractible cake-holding band having overlapped ends, one of said ends being provided with a slot having lock notches, and the other of said ends having a headed stud, the body of which projects through said slot for interlocking engagement with any one of said notches by edgewise movements of the overlapped ends of the band, with respect to each other, and a loop mounted on the band for holding the overlapped ends thereof against edgewise movement, with respect to each other, and arranged to slide completely around the band to loosen the cake.



2. A circumferentially expansible and contractible cake-holding band having overlapped ends, and means including a scraping loop for holding the overlapped ends of the bands together, said scraping loop arranged to slide completely around the band to loosen the cake.

1,154,973. BOTTLE-COVER. FRANK A. CHENETTE, Worcester, Mass. Filed Jan. 15, 1915. Serial No. 2,477. (Cl. 215—34.)



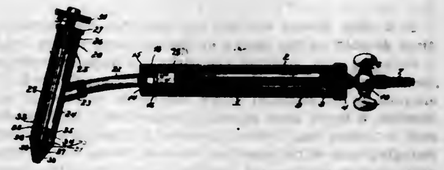
1. As an article of manufacture, a temporary closure for a milk bottle or the like consisting of a substantially flat circular plate adapted to rest directly on the top of the bottle, having a projecting arm by which it can be tilted on the edge of the bottle top as a fulcrum, and provided with means extending downwardly therefrom into the bottle for yieldingly resisting the tilting of the plate and returning it to place.

2. As an article of manufacture a temporary closure for a bottle comprising a flat sheet metal top plate, a holding means therefor consisting of a piece of wire secured to the under side of the top plate near the center and extending down therefrom in the form of two arms in spaced relation to each other and diverging outwardly at their lower ends, and a radial lever arm rigid with the plate and located at right angles to the plane of the two wire arms.

3. As an article of manufacture a temporary closure for a bottle comprising a flat top plate having a plurality of wire arms secured to the underside thereof and extending down therefrom in spaced relation to each other and diverging outwardly at their lower ends, and an arm extending downwardly from one edge of the plate and outwardly by which the plate can be tipped on the upper edge of the bottle neck as a pivot; said wire arms constituting means for yieldingly resisting the tipping action and forcing the plate back into position when said extending arm is released.

4. As an article of manufacture a bottle closure consisting of a substantially circular flat cap having an arm projecting downwardly from one edge and then outwardly, whereby by downward pressure on the end of the arm the cap can be swung on the edge of the top of the bottle as a pivot when placed thereon, and yielding means connected with said bottle closure and extending inside the bottle in position to engage the inner surface of the neck for drawing the cap down on the bottle after it is tipped and released.

1,154,974. WELDING-TORCH. BURR CUSTER, Marion, Ind. Filed Mar. 28, 1914, Serial No. 828,012. Renewed Mar. 22, 1915. Serial No. 16,266. (Cl. 158—109.)



1. In a welding torch, the combination with a tubular handle portion provided therein with gas and oxygen diffusing means and a mixing chamber, of a head communicating with said mixing chamber, a revoluble jet cone attached to the lower end of said head and provided with a plurality of jet ducts differing in size, and means for turning said cone to bring any of said jet ducts into communication with said head.

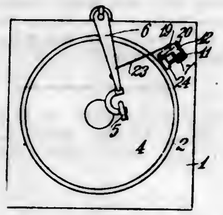
2. In a welding torch, the combination with a tubular handle portion, means for discharging gas thereinto, a diffusing device within said tubular handle and communicating with the interior thereof, a pipe for oxygen communicating with said diffusing device, and a mixing chamber communicating with said diffusing device, of a tubular head, a pipe connecting said tubular head with the mixing chamber of the tubular handle, an adjustable jet cone attached to the lower end of said tubular head and having a plurality of jet ducts differing in size, and means for adjusting said cone to bring any one of said jet ducts into communication with the interior of the head.

3. In a welding torch, the combination with a tubular head and means for discharging mixed gas and oxygen thereinto, said head having a single duct at one end, of a revoluble jet cone attached to said head and provided with a plurality of jet ducts differing in size, and means for turning said cone to bring any one of said jet ducts into communication with the duct in the end of the head.

4. In a welding torch, the combination with a tubular head and means for discharging mixed gas and oxygen thereinto, said head having a single outlet duct at its lower end, of a partition near the lower end of said head, said partition having a plurality of small ducts, a rod passing through said head and provided at its upper end with operating means, and a jet cone secured to said rod and having a bearing on the end of said head, said jet cone having a plurality of jet ducts different in capacity.

5. In a welding torch, the combination of a tubular handle portion provided with a mixing chamber, a diffusing device in said handle adjacent to the mixing chamber and comprising a block having two sets of transverse ducts, said block also having longitudinal ducts connecting one set of transverse ducts with the interior of the handle and said block having another set of longitudinal ducts connecting the same transverse ducts with the mixing chamber, means for discharging gas into said handle, a pipe for conveying oxygen to the other set of transverse ducts in the block, and said block having longitudinal ducts connecting the last-mentioned transverse ducts with the mixing chamber, and a torch head connected with the mixing chamber.

1,154,975. DEVICE FOR AUTOMATICALLY STOPPING THE TURN-TABLE OF A PHONOGRAPH. WILLIAM CUTHBERTSON, Pittsfield, Mass. Filed Jan. 26, 1915. Serial No. 4,455. (Cl. 74—46.)



1. A stop device for talking machines comprising, a plate secured to the casing of the machine, a turn table, a swinging arm movable thereover, an angularly shaped member pivotally attached to said plate, a pointer device adapted to be adjusted along the upper surface of said member, a brake lever pivotally connected to said member and a connecting device between the pointer and the swinging arm of the machine, whereby when the swinging arm reaches the inward position of its travel the brake lever will be automatically brought into engagement with the turn table and the turn table brought to a standstill.

2. A stop device for talking machines comprising, a member pivotally secured to the casing of the machine, a turn table, a swinging arm movable thereover, a brake lever attached to said member, a pointer movable over a scale on said member, and connecting means between the arm of the machine and the pointer, whereby when the pointer is set to a previously designated mark on the scale, the brake lever will be automatically thrown into engagement with the turn table at the termination of the inward swing of the arm.

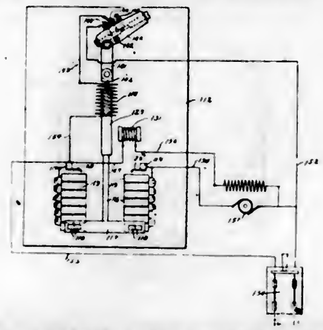
3. An automatic stopping device for a talking machine, comprising in combination with the turn table thereof, a lever member pivotally secured to the casing of the machine, stops to limit the outward and inward movements of said member, a brake lever pivotally attached to the inner end of said member and to which a frictional brake pad is secured, a compression spring extending between the brake lever and said lever member, a threaded rod, a pointer attached thereto whereby the pointer may be moved into different positions, a swinging arm and a connection extending from the pointer to the swinging arm of the machine, whereby when the pointer is set to a predetermined position and the swinging arm is at the inward limit of its travel, the frictional pad will be automatically thrown against the turn table and the turn table stopped, as described.

1,154,976. CONTROLLER FOR ELECTRIC MOTORS. HENRY H. CUTLER, Milwaukee, Wis. Filed Feb. 10, 1902. Serial No. 93,387. Renewed June 15, 1907. Serial No. 379,178. (Cl. 172—288.)

1. In an electric controller in combination, a resistance controlling member, an operating member therefor, said resistance controlling member being released from said operating member when the latter is in normal position, means for holding said resistance controlling member against return movement after operation by said operating member, and a single electroresponsive winding for successively moving said operating member in the same direction to cause it to connect with and operate said resistance controlling member in a step by step manner.

2. In an automatic accelerating device for electric motors, in combination, a resistance varying element, means operable to impart a step by step movement thereto, a solenoid having a movable plunger for operating said means, a switch operated by a moving part to energize and deënergize said solenoid at intervals and means automatically locking said switch against further operation upon movement of said resistance varying element to a predetermined position.

3. In an automatic accelerating device for electric motors, in combination, a resistance varying element biased toward initial position, said element being provided with a series of ratchet teeth, means for imparting a step by step movement to said element including a pawl adapted to engage the ratchet teeth of said element, means for disengaging said pawl from said ratchet teeth after each step of operation of said element and an electromagnet for holding said element against return movement.

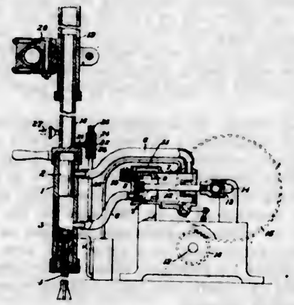


4. In a controller for electric motors, in combination, a supporting base, a rectilinearly movable contact member mounted thereon, a solenoid mounted upon said base and having a movable plunger, a member pivoted to a fixed part and operatively connected to said solenoid plunger and a pivoted pawl carried by said pivoted member to cooperate with said ratchet teeth on said contact member, said solenoid plunger upon successive reciprocations thereof operating said pivoted member to impart a step by step movement to said contact member.

5. In a controller for electric motors, in combination, a supporting base, a rectilinearly movable contact-carrying member mounted thereon, a solenoid mounted upon said base and having a movable plunger, a member pivoted to a fixed part and operatively connected to said solenoid plunger, a pivoted pawl carried by said pivoted member to coöperate with said ratchet teeth, said solenoid plunger upon successive reciprocations thereof operating said pivoted member to impart a step by step movement to said contact carrying member and means for disengaging said pawl from said ratchet teeth when said pivoted member is in normal position.

[Claims 6 to 11 not printed in the Gazette.]

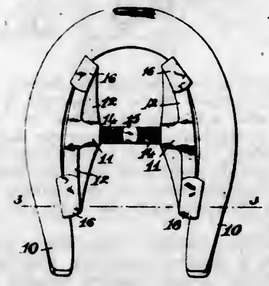
1,154,977. PULSATORY TOOL. CLARENCE A. DAWLEY, Plainfield, N. J., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Original application filed May 13, 1908, Serial No. 432,018. Divided and this application filed Mar. 26, 1912. Serial No. 686,433. (Cl. 255—42.)



1. In combination, a tool comprising a cylinder and its piston, a feed cylinder therefor, a piston in said feed cylinder, a pulsator for operating said tool, means for conveying fluid under pressure produced by said pulsator to said feed cylinder and means to retain the conveyed fluid in said feed cylinder.

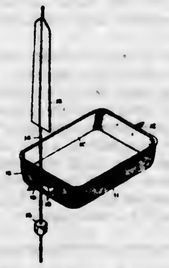
2. In combination, a tool comprising a cylinder and its piston, a feed cylinder therefor, a piston in said feed cylinder, a pulsator for operating in said tool and means for conveying fluid under pressure produced by said pulsator to said feed cylinder, comprising a passage containing a check valve.

1,154,978. HORSESHOE ATTACHMENT. PETER DECH, West Orange, N. J., assignor of one-half to Henry G. Rollpiller, West Orange, N. J. Filed Dec. 18, 1912. Serial No. 737,363. (Cl. 168—30.)



A horseshoe attachment comprising two members, each member consisting of one piece with lips at the ends of its upper outer edge and lugs at the ends of its lower outer edge, the outer edge between the ends being convex and adapted to lie opposite the inner concave edge of the horseshoe, the outer edge of the member being of slightly larger radius than the inner edge of the shoe to permit a limited spring of the member, each member having a substantially central screw-threaded perforation, and a screw to fit in the perforations and having a portion to be engaged by a tool whereby the screw can be operated to force the members to their sprung positions and to lock the screw against turning by the friction of the resistance of the members to the springing force.

1,154,979. ELECTRICAL MEASURING INSTRUMENT. ALFARADO L. R. ELLIS, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 1, 1914. Serial No. 864,368. (Cl. 171—95.)



1. In an electrical measuring instrument the combination with a movable member of a counterbalancing arm, and a spring member operatively related to said movable member and having apertures through which said arm extends.

2. In an electrical measuring instrument, the combination with a movable member of a counterbalancing arm, and means for securing said arm to said movable member comprising a spring member having apertures through which said arm extends, the registering diameters of said apertures being adapted to be altered by varying the relative positions of the apertures.

3. In an electrical measuring instrument, the combination with a movable member of a counterbalancing arm, and means for securing said arm to said movable member comprising a spring member having apertures through which said arm extends, the normal resilient character of said spring member being such that said arm is securely held in said apertures.

4. In an electrical measuring instrument, the combination with a movable member of a counterbalancing arm, and means for securing said arm to said movable member comprising a spring member having apertures of a greater diameter than that of said arm through which said arm extends, said arm being firmly held in said apertures by the normal resilient character of said spring member but being adapted to be moved freely through said apertures when the relative position of the apertures is varied to increase the effective registering diameters of said apertures with respect to said arm.

5. In an electrical measuring instrument, the combination with a movable member of a counterbalancing arm, and means for securing said arm to said movable member comprising a spring member mounted on said movable member and having extending ears with apertures therein through which said arms extends, the registering diameters of said apertures being adapted to be altered by varying the relative positions of the apertures.

[Claims 6 to 10 not printed in the Gazette.]

1,154,980. PROCESS FOR THE MANUFACTURE OF AGGLOMERATES. ALPHONSE EXBRAYAT, Paris, France. Filed June 22, 1914. Serial No. 846,552. (Cl. 75—73.)

1. The process of agglomerating ore, coal and the like, which comprises adding the same to a liquid containing dissolved fucine or gelose and an alkali, mixing, molding into blocks, and drying the same.

2. A process of agglomerating ore, coal and the like, which comprises adding the same to a liquid containing dissolved fucine or gelose and an alkali, mixing, molding into blocks, and drying the same, passing the blocks through a bath containing sea weeds dissolved in soap solution, and again drying.

3. A process of agglomerating ore, coal and the like, which comprises adding the same to a liquid containing dissolved fucine or gelose and an alkali, mixing, molding into blocks, and drying the same, passing the blocks through a bath containing sea weeds dissolved in soap solution, again drying, and thereafter passing the blocks through a bath of an aluminum salt, to precipitate an insoluble aluminium soap as a waterproofing agent.

4. A process of agglomerating ores, coal and the like, which comprises mixing the same with a solution containing caustic soda, a tarry material, an oxidizing agent, and dissolved sea weed.

1,154,981. TUBE-MILL. WILLIAM FENNELL, Southam, near Rugby, England. Filed Apr. 25, 1913, Serial No. 763,524. Renewed June 2, 1915. Serial No. 31,792. (Cl. 83—9.)



1. The combination with a tube mill of a large number of loose freely movable grinding bodies each made of a length that is equal to a fraction only of the radius of the mill but is of greater length than diameter and has an open ended passage extending lengthwise therethrough and a hole in its peripheral surface of less width than that of the surface adjacent to said hole, substantially as and for the purposes set forth.

2. The combination with a tube mill of a large number of loose freely movable hollow grinding bodies each made of a length that is equal to a fraction only of the radius of the mill but is of greater length than diameter and has a hole extending laterally entirely through its peripheral wall.

3. The combination with a tube mill of a large number of loose freely movable hollow grinding bodies each made of a length that is equal to a fraction only of the radius of the mill but is of greater length than diameter and has in its peripheral surface an elongated hole of less width than the portions of the surface adjacent thereto.

4. The combination with a tube of a large number of loose freely movable hollow grinding bodies each made of a length that is equal to a fraction only of the radius of the mill but is of greater length than diameter and has in its peripheral surface an elongated hole that is inclined to its longitudinal axis and is of less width than the portions of the surface adjacent thereto.

5. The combination with a tube mill of a large number of loose freely movable hollow grinding bodies each made of a length that is equal to a fraction only of the radius of the mill but is of greater length than diameter and has in its peripheral surface an elongated hole that extends completely through its wall and is of less width than the portions of the surface adjacent thereto.

[Claims 6 to 11 not printed in the Gazette.]

1,154,982. TUBE-MILL. WILLIAM FENNELL, Southam, near Rugby, England. Filed June 12, 1913. Serial No. 773,189. (Cl. 83—9.)



1. The combination with a tube mill of a number of loose freely movable hollow grinding bodies each made of a length that is equal to a fraction only of the radius of the mill but is of greater length than diameter and has in its peripheral surface a plurality of holes the width or diameter of each of which is less than the width of adjacent portions of the said peripheral surface.

2. The combination with a tube mill of a number of loose freely movable hollow grinding bodies each made of a length that is equal to a fraction only of the radius of the mill but is of greater length than diameter and has a plurality of holes extending completely through its wall, the width or diameter of each hole being less than the width of adjacent portions of the peripheral surface of said wall.

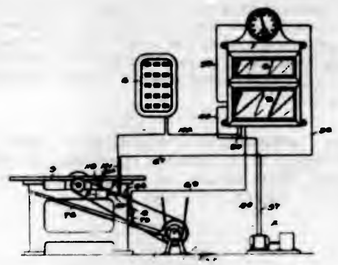
3. The combination with a tube mill of a number of loose freely movable hollow grinding bodies each made of a length that is equal to a fraction only of the radius of the mill but is of greater length than diameter and has a plurality of elongated holes extending partly around and completely through its peripheral wall.

4. The combination with a tube mill of a number of loose freely movable hollow grinding bodies of uniform external cross sectional dimensions throughout their length, each of said bodies being made of a length that is equal to a fraction only of the radius of the mill but is of greater length than diameter and having a plurality of holes extending through its peripheral wall at an angle to the open ended hole extending centrally and longitudinally through the longest dimension of the body.

5. The combination with a tube mill of a number of loose freely movable hollow grinding bodies of uniform cross section throughout their length, each of said bodies being made of a length that is equal to a fraction only of the radius of the mill but is of greater length than diameter and consists of a tube of sheet material divided longitudinally and having holes extending through its wall.

[Claims 6 to 8 not printed in the Gazette.]

1,154,983. MACHINE-EFFICIENCY RECORDER. HENRY R. FORD, Buffalo, N. Y. Filed Nov. 27, 1914. Serial No. 874,176. (Cl. 234—1.5.)



1. An apparatus for recording the efficiency of machines, comprising a support for a record-chart, a marker cooperating with said support, means for holding said marker in normal position to record the inactive periods of the machine, means for automatically moving the marker to another position to record the running periods of the machine, and means for automatically moving the marker to a third position to record the rate of output of the machine.

2. An efficiency recorder, comprising a support for a record-chart, a marker coöperating with said support, separate electric circuits, magnets included in said circuits, respectively, a main armature controlling said marker and coöperating with one of said magnets, a supplemental armature acting on said main armature and coöperating with the other magnet, said supplemental armature having a limited idle movement relative to the main armature to produce a partial stroke thereof, and means for controlling said circuits.

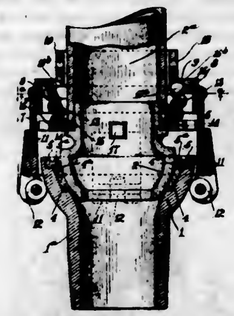
3. An efficiency recorder, comprising a support for a record-chart, a marker coöperating with said support, separate electric circuits, magnets included in said circuits, respectively, a main armature controlling said marker and coöperating with one of said magnets, a supplemental armature member carried by said main armature and coöperating with the other magnet, said member being idly movable on the main armature to a limited extent, and means for controlling said circuits.

4. An efficiency recorder, comprising a support for a record-chart, a marker coöperating with said support, separate electric circuits, magnets included in said circuits, respectively, a main armature controlling said marker and coöperating with one of said magnets, a button slidably mounted on said main armature opposite the core of the other magnet, and means for controlling said circuits.

5. In a machine-efficiency recorder, the combination of a chart-support, a coöperating marker, an electric circuit, an electromagnet in said circuit controlling said marker, and means for controlling said circuit comprising a switch member, a rotary trip-device constructed to intermittently engage said switch member, a worm shaft, gearing for transmitting motion from said worm-shaft to said trip-device, and a friction wheel operatively connected with said worm shaft and adapted to be actuated by the material passing through the machine.

1,154,984. PIPE-JOINT. CHARLES FORTH, Ottawa, Ontario, Canada. Filed May 22, 1913. Serial No. 769,133. (Cl. 137—88.)

1. In a pipe joint, the combination of a socket member provided with an external spherically curved bearing surface, a ball member seated in the socket member and rockable therein universally, a surrounding frame, antifriction rollers mounted on said frame on horizontal transverse axes extending in a general circumferential direction and engaging said external bearing surface of the socket member, and a spring acting on the surrounding frame and ball member respectively and serving to hold the antifriction rollers in yielding engagement with the bearing surface and thus maintaining the members of the bearing in fluid-tight connection while permitting their universal relative movement.



2. In a pipe joint, the combination of a socket member provided with an external spherically curved bearing surface, a ball member seated in the socket member and rockable therein universally, a surrounding frame, antifriction rollers mounted in said frame on transverse axes extending in a general circumferential direction and engaging said bearing surface, said rollers being concaved so as to conform to the curvature of the bearing surface in a circumferential direction, and a spring acting on the frame and ball member respectively and tending to hold said parts in yielding engagement.

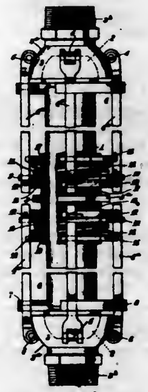
3. In a pipe joint, the combination of a socket member provided on its interior with an annular gasket seat sloping outwardly, a stiff gasket ring provided with an inner curved bearing surface, said ring being mounted in the seat, with its inner bearing surface projecting beyond the internal surface of the socket member, and said ring having on its outer edge at its inner side, an annular surface inclined outwardly at an angle to the slope of the seat, a confining nut screwed into the open end of the socket member and having in its inner end, an annular recess provided with a sloping surface adapted to engage the inclined surface on the gasket ring, said engaging surfaces acting, when the nut is screwed into the socket member, to draw the gasket ring back and seat the same permanently in final position in its annular seat, a ball member extending into the socket member in contact with the projecting bearing surface of the gasket ring, and means for maintaining said members in operative relations.

4. In a pipe joint, the combination of a socket member provided on its interior with an annular gasket seat, a stiff gasket ring provided with an inner curved bearing surface, said ring being mounted in the seat with its inner bearing surface projecting beyond the internal surface of the socket member, and said ring having on its outer edge at its inner side, an annular surface inclined outwardly, a confining nut screwed into the open end of the socket member and having on its inner end an annular surface corresponding in inclination to the inclined surface on the nut, and adapted to engage said surface, said engaging surfaces acting, when the nut is screwed into the socket member, to draw the gasket ring back and seat the same permanently in final position in its annular seat, a ball member extending into the socket member in contact with the projecting bearing surface of the gasket ring, and means for maintaining said members in operative relations.

5. In a pipe joint, the combination of a socket member, a ball member rockable therein, a surrounding frame loosely engaged with the socket member, and a coiled spring acting between the frame and ball member to draw the ball member and socket member together, said spring being so frictionally interlocked at its ends with said frame and ball member, that the ends of the spring may be disengaged by a relative circumferential movement of said latter parts.

[Claims 6 and 7 not printed in the Gazette.]

1,154,985. PIPE-JOINT. CHARLES FORTH, Boston, Mass. Filed Sept. 20, 1913. Serial No. 790,826. (Cl. 137—88.)



1. In a pipe joint, the combination of a hollow central section provided with ball members, hollow socket members applied to the ball members, confining members engaging the socket members respectively and extending inwardly toward each other, and an annular adjusting device rotatively mounted on the central section and operatively connected with said confining members for adjusting the latter.

2. In a pipe joint, the combination of a hollow central section provided with ball members, hollow socket members applied to the ball members, external confining members engaging the socket members respectively, springs engaging the confining members respectively, and a common adjusting means rotatively mounted on the central section and engaging said springs.

3. In a pipe joint, the combination of a hollow central section provided with ball members, hollow socket members applied to the ball members, confining members engaging the socket members respectively, springs engaging the confining members, movable seats for the springs, and a common adjusting device for said seats.

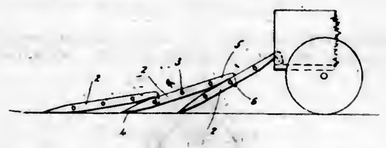
4. In a pipe joint, the combination of a hollow central section provided with ball members, hollow socket members applied to the ball members, confining members engaging the socket members respectively and extending inwardly toward each other, spiral springs bearing at their inner ends against the confining members respectively, threaded movable washer plates forming seats for the outer ends of the springs, and a threaded adjusting sleeve encircling the central section and having screw engagement with said washers.

5. In a pipe joint, the combination of a hollow central section provided with ball members, socket members applied thereto, confining members engaging the socket members and provided with bearing plates surrounding the central section, an annular adjusting device also surrounding the central section and provided with right and left hand screws, threaded washer plates engaging with said screws respectively, and springs seated between the bearing plates and washer plates.

1,154,986. SKID. JOHN P. FRANK, Danville, Ky. Filed May 10, 1915. Serial No. 27,048. (Cl. 57—18.)

1. A skid or skid member, comprising a pair of side bars, and crossbars secured between them, the middle portions of the side bars being parallel to each other and the

end portions at one end being inclined inwardly and provided with hooks adapted to drop between the side bars of a skid of the same width and engage pivotally with one of its crossbars.



2. A skid or skid member, comprising a pair of side bars, and crossbars secured between them, the middle portions of the side bars being parallel to each other and the end portions at the front end being inclined inwardly and provided with hooks adapted to drop between the side bars of a similar skid of the same width and engage pivotally with one of its crossbars, and the end portions at the rear end of the skid being tapered and extended laterally or broadened on the inner sides of the side bars to form runners and bearing surfaces adapted to engage with the inwardly inclined front end portions of the similar skid.

1,154,987. ATTACHING-LINK. NARA D. GOFF, Clinton, Iowa. Filed Feb. 16, 1914. Serial No. 818,902. (Cl. 24—241.)



1. An attaching link composed of a spring wire member having resilient end-loops and an elongated, reduced middle portion, the ends of the wire being turned outward to form engaging studs and spaced apart in the reduced middle portion, and a band or collar member having two holes for receiving said studs and slotted in a plane different from the plane of the holes for permitting the stud of either end-loop along to be disengaged from said collar, for engaging with a ring or link and then reëngaged in a hole in said collar.

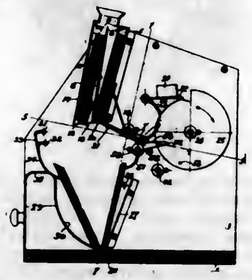
2. An attaching link composed of a spring wire member having enlarged resilient end-loops and an elongated, reduced middle portion, the ends of the wire being turned outward to form engaging studs and spaced apart in the reduced middle portion, and a band or collar member having two holes for receiving said studs and opposite end-slots in a plane different from the plane of the holes for permitting the studs of the end-loops to be disengaged from said collar, for engaging with a ring or link and then reëngaged with the holes in said collar.

3. An attaching link composed of a spring wire member having resilient end-loops and an elongated, reduced middle portion, the ends of the wire being turned outward to form engaging studs and spaced apart in the reduced middle portion, and a band or collar member having two holes for receiving said studs and a longitudinal slot in a plane different from the plane of the holes for inserting or removing the spring wire member and permitting either end-loop alone to be engaged with a separate ring or link.

1,154,988. CARD-SHUFFLER. CHARLES T. HALL, Buffalo, N. Y. Filed Jan. 26, 1914. Serial No. 814,304. (Cl. 46—55.)

1. A card shuffler comprising a receptacle, means for delivering the cards successively into said receptacle, and means for tipping the cards from one side of said receptacle to the other, comprising two shifting members arranged on the same side of the receptacle and adapted to engage the cards on the adjacent side of the receptacle and shift the same to the opposite side of the receptacle, and means for operating said shifting members periodically and differentially.

2. A card shuffler comprising a receptacle, means for delivering the cards successively into said receptacle, and means for tipping the cards from one side of said receptacle to the other, comprising two front shifting fingers arranged adjacent to the front side of the receptacle and adapted to engage the cards on this side of the receptacle and shift the same to the rear of the receptacle, two front rock shafts each carrying one of said front shifting fingers, two tappet arms each secured to one of said rock shafts, two rotatable trip wheels each provided with an annular row of tappets adapted to engage one of said tappet arms for moving the respective shifting arm away from the cards, and springs for moving said shifting fingers toward said cards when the tappet arms clear said tappets.



3. A card shuffler comprising a receptacle, means for delivering the cards successively into said receptacle, and means for tipping the cards from one side of said receptacle to the other, comprising two front shifting fingers arranged adjacent to the front side of the receptacle and adapted to engage the cards on this side of the receptacle and shift the same to the rear of the receptacle, two front rock shafts each carrying one of said front shifting fingers, two tappet arms each secured to one of said rock shafts, two rotatable trip wheels each provided with an annular row of tappets adapted to engage one of said tappet arms for moving the respective shifting arm away from the cards, and springs for moving said shifting fingers toward said cards when the tappet arms clear said tappets, said trip wheels being rotated differentially so that the shifting fingers are operated irregularly.

4. A card shuffler comprising a receptacle, means for delivering the cards successively into said receptacle, and means for tipping the cards from one side of said receptacle to the other, comprising two front shifting fingers arranged adjacent to the front side of the receptacle and adapted to engage the cards on this side of the receptacle and shift the same to the rear of the receptacle, two front rock shafts each carrying one of said front shifting fingers, two tappet arms each secured to one of said rock shafts, two rotatable trip wheels each provided with an annular row of tappets adapted to engage one of said tappet arms for moving the respective shifting arm away from the cards, springs for moving said shifting fingers toward said cards when the tappet arms clear said tappets, a rear shifting finger arranged adjacent to the rear side of said receptacle, a rear rock shaft carrying said rear finger and provided with a tappet arm, a rotatable member provided with a tappet adapted to engage said rear tappet arm and adapted to shift the same away from said receptacle, and a spring for moving said rear shifting finger toward said receptacle.

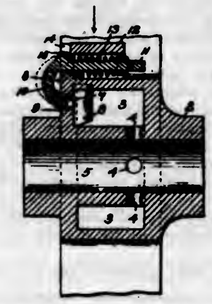
5. A card shuffler comprising a receptacle, means for delivering the cards successively into said receptacle, and means for tipping the cards from one side of said receptacle to the other, comprising two front shifting fingers arranged adjacent to the front side of the receptacle and adapted to engage the cards on this side of the receptacle and shift the same to the rear of the receptacle, means for operating said front shifting fingers differentially, and a single rear shifting finger arranged adjacent to the rear wall of the receptacle and adapted to shift the cards forwardly in the same.

1,154,989. BREWING PROCESS. BONIFACE HEHLS, Kansas City, Mo. Filed June 19, 1914. Serial No. 846,187. (Cl. 195—32.)

1. The process of splitting grains longitudinally, and subjecting the same to heated sparging liquid.

2. The process of opening the husks of grain longitudinally to expose the mealy contents, forming a uniform filter-bed with said grains, and subjecting the same to a sparging liquid ranging from 156–162.5 degrees F. (55 to 58 degrees R.).

1,154,990. MINE-CAR WHEEL. WILBUR D. HOCKENSMITH, Penns Station, Pa., assignor to Hockensmith Wheel & Mine Car Company, Penns Station, Pa., a Corporation of Pennsylvania. Filed Mar. 6, 1913. Serial No. 12,562. (Cl. 64—26.)

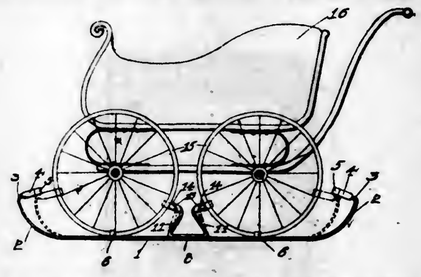


1. In a self-oiling wheel, the combination of a wheel hub provided with an oil chamber in communication with the hub bore and with a filling opening for the chamber extending through an external wall of the latter, said wall formed with a second opening parallel with the filling opening and with an offset in the outer end of said second opening, a stem movable longitudinally in said second opening, a stopper projecting laterally from the stem and adapted to close the filling opening, and a spring for opposing longitudinal movement of the stem, the stem having a lug adapted to enter the offset of said second opening when the stopper is closed and adapted when the latter is withdrawn to bear on the outer wall of the oil chamber through which said openings are formed, thereby permitting the stem to be rotated and at the same time holding the stopper clear of the filling opening and of the chamber wall through which the openings are formed.

2. In a self-oiling wheel, the combination of a wheel hub provided with an oil chamber in communication with the hub bore and with a filling opening for the chamber extending through an external wall of the latter, the hub formed with an extension at one side of the oil chamber and with a passage in said extension which is parallel with the filling opening, said passage being open through the same external face of the oil chamber as the filling opening and with an offset in the outer end of the passage, a stem movable longitudinally and adapted to rotate in said passage, a stopper carried by the stem and adapted to coöperate with the filling opening, and a spring for opposing movement of the stem in a direction to remove the stopper from said opening, the stem having a lug adapted to enter the offset in said passage and also adapted when withdrawn and upon rotating the stem to bear on the outer wall of the hub, thereby holding the stopper clear of said wall and of the filling opening.

1,154,991. RUNNER FOR BABY-CARRIAGES. ERNEST W. JOHNSON, Little Falls, Minn. Filed Nov. 12, 1914. Serial No. 871,775. (Cl. 21—96.)

A device of the class described comprising an elongated body, said body provided with upwardly bowed ends terminating in integral hooks, a bracket carried at the central portion of said body, said bracket comprising a body fixedly secured to said elongated body, said body of said bracket provided with upwardly extending converging arms terminating in angularly extending fingers, said fingers terminating in hooks, said bracket being adapted to be positioned between a pair of wheels, said arms and upwardly bowed ends being adapted to be sprung toward



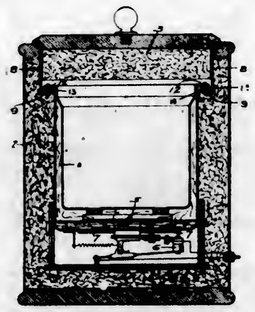
a vertical position so as to allow said hooks to engage a pair of wheels, whereby the resiliency of said bracket and bowed ends will cause the hooks to remain in engagement with a pair of wheels for causing the body to form a sled runner.

1,154,992. APPARATUS FOR ELECTRICALLY IGNITING MINERS' SAFETY-LAMPS. VICTOR ERNEST JOYCE, London, England. Filed July 24, 1914. Serial No. 852,948. (Cl. 175—116.)

1. In a safety-lamp igniter, the combination, with a cylindrical casing provided with a partition which separates its end portions into two chambers, for a lamp and for an electricity generator respectively, the lamp chamber having a single lateral opening for the introduction and removal of the lamp, and the generator chamber having on one side a means for effecting the working of the generator; of a cylindrical sleeve slidable longitudinally on the casing and normally closing the said lateral opening and preventing the generator from being operated when slid so as to uncover the said lateral opening.

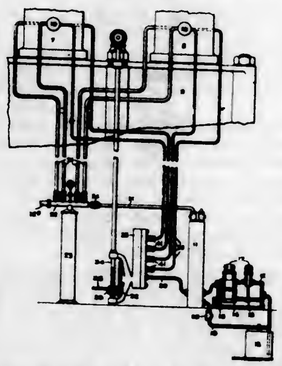
2. In a safety-lamp igniter, the combination, with a cylindrical casing provided with a partition which separates its end portion into two chambers, for a lamp and for an electricity generator respectively, the lamp chamber having a single lateral opening for the introduction and removal of the lamp, and the generator chamber having on one side a means for effecting the working of the generator; of a cylindrical sleeve slidable longitudinally on the casing and normally closing the said lateral opening and preventing the generator from being operated when slid so as to uncover the said lateral opening, and a plug or plate secured in the lamp chamber and provided with valved gas outlet holes having covers formed of wire gauze.

1,154,903. COOKER. ARTHUR J. KERCHER, Berkeley, Cal., assignor to Berkeley Electric Cooker Company, Berkeley, Cal., a Corporation of California. Original application filed Nov. 13, 1911, Serial No. 659,894. Divided and this application filed Nov. 29, 1912. Serial No. 733,983. (Cl. 220—48.)



A cooker comprising a heat insulating casing having an opening at the top, a metallic ring extending downwardly into said casing, a metallic receptacle of less diameter than said ring arranged within the casing, the upper end of the receptacle lying adjacent and spaced apart from said ring and attached thereto and a ring of heat insulating material arranged between said ring and receptacle, whereby said receptacle is thermally insulated from said ring.

1,154,994. FUEL-SUPPLY SYSTEM FOR ENGINES. OSKAR LASCHE, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Feb. 10, 1914. Serial No. 817,815. (Cl. 123—136.)



1. The combination with a high compression internal combustion engine having separate points of fuel injection, of a blast air bottle, a fuel tank, a pipe connecting the tank to the bottle, a plunger pump arranged to deliver fuel to the tank against the pressure of the blast air in amounts sufficient to supply the demands of the engine, a measuring pump for each of said points of injection, said pumps receiving fuel in common from the tank and delivering it independently to said fuel injection points, and means for varying the amount of fuel delivered by each pump to the point of consumption, and means connecting the blast air bottle to each fuel injection point.

2. The combination with a high compression multi-cylinder internal combustion engine having a fuel injector for each cylinder, of a blast air bottle, a tank, a pipe connecting the tank to the bottle, a pump for supplying fuel to the tank against the pressure of the blast air, measuring pumps which receive fuel in common from the pressure tank and deliver it independently to the injectors, means for simultaneously driving the measuring pumps, means for changing the effective delivery of the latter pumps, and means connecting the blast air bottle to the fuel injectors.

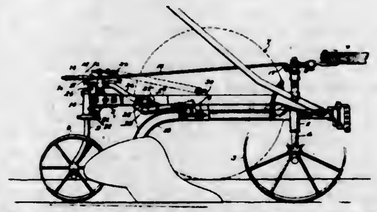
3. The combination of a high compression internal combustion engine, an injector for introducing fuel into the combustion chamber thereof, a fuel tank, a tank containing a gas under pressure for forcing fuel through the injector, a connection between the tanks for subjecting the fuel in the first tank to the gas pressure, a pump for supplying fuel to the fuel tank against the gas pressure, a measuring pump that receives fuel under pressure from the fuel tank and delivers it to the injector, and means for varying the amount of fuel delivered by the measuring pump.

4. The combination of a multi-cylinder internal combustion engine, a fuel injector for each cylinder, a tank, a pump for supplying fuel thereto and maintaining a suitable pressure, a measuring device comprising a plurality of geared pumps all of which receive their fuel in common from the tank, each of said pumps delivering a measured quantity of fuel to its corresponding injector, a means common to the pumps for driving them, and means for varying the speed of the pumps to regulate their delivery.

5. The combination of an internal combustion engine, a fuel injector therefor, a tank containing fuel under pressure, a main pump for supplying fuel thereto, a measuring pump which receives high pressure fuel from the tank and delivers it to the injector, driving means for the pumps, and a by-pass on the discharge side of the measuring pump for controlling its effective delivery to the injector.

[Claims 6 to 8 not printed in the Gazette.]

1,154,995. PLOWING-MACHINE. ALEXUS C. LINDGREN, Moline, Ill., assignor to Moline Plow Company, a Corporation of Illinois. Filed Nov. 29, 1913. Serial No. 803,695. (Cl. 97—74.)



1. In a plowing machine, the combination of a frame, a plow sustained thereby and movable upwardly to an inoperative position for transporting the machine, a sustaining wheel mounted on the frame and movable to vary its angle relatively to the line of travel of the machine, and means for automatically moving said wheel to vary its angle when the plow is raised to inoperative position, said means acting to hold the wheel in its changed position while the plow is in inoperative position for transportation.

2. In a plowing machine, the combination of a frame, a plow sustained thereby and movable upwardly to inoperative position for transportation, a sustaining wheel mounted on the frame and movable toward the land to vary its angle relatively to the line of travel, and means operating automatically on the upward movement of the plow to inoperative position, to shift the sustaining wheel toward the land and retain it in its changed position.

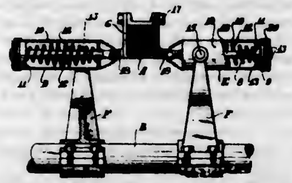
3. In a plowing machine, the combination of a frame, a plow sustained thereby and movable up and down, a rear sustaining wheel mounted on the frame, and means for automatically swinging said wheel toward the land when the plow is raised.

4. In a plowing machine, the combination of a frame, a plow sustained thereby and movable up and down, a rear sustaining wheel mounted on the frame and movable to change its angle relatively to the line of travel of the machine, and means for controlling the movements of said wheel, said means operating when the plow is down to hold the wheel inclined toward the furrow, and operating when the plow is raised to turn the wheel toward the land.

5. In a plowing machine, the combination of a frame, a plow sustained thereby and movable up and down, a swiveling sustaining wheel mounted on the frame, and means controlled by the up and down movements of the plow for positively swiveling said wheel.

[Claims 6 to 14 not printed in the Gazette.]

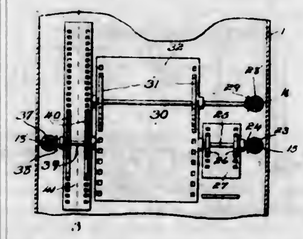
1,154,996. SHOCK-ABSORBER. ERNEST E. MALONE, Ottawa, Ontario, Canada. Filed June 10, 1914. Serial No. 844,324. (Cl. 21—105.)



1. In a shock absorber and in combination, a leaf spring, an axle, a cylinder having its axis extending transversely of the direction of movement of the parts, a bracket connected to the axle and supporting the cylinder with freedom to swing about a transverse axis, a piston in the cylinder, a piston rod, and means pivotally connecting the piston rod with the leaf part in such a way that as the parts are moved toward each other the cylinder will be swung about its transverse axis.

2. In a shock absorber and in combination, two parts movable relatively to each other, a cylinder having its axis extending transversely of the direction of movement of the parts, resilient suspending means, a bracket connected to one part and supporting the cylinder with freedom to swing about a transverse axis, a piston in the cylinder, a piston rod and means pivotally connecting the piston rod with the opposite part to that to which the bracket is connected in such a way that as the parts are moved toward each other the cylinder will be swung about its transverse axis.

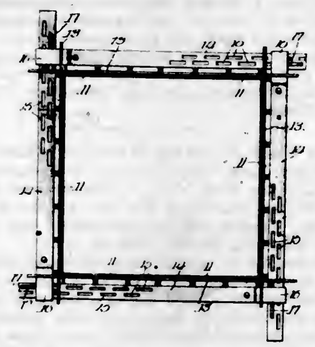
1,154,997. CALENDAR. JACKSON MARION MARKHAM, Williamsville, Mo. Filed July 20, 1914. Serial No. 851,938. (Cl. 40—109.)



A device of the type described, including legend-bearing members and intergeared shafts, said legend-bearing members indicating the month, day and date and being equipped with racks, and one shaft of each set of said intergeared shafts being equipped with mutilated pinions, said racks and said mutilated pinions being intergeared for coaction.

1,154,998. MOLD FOR CONCRETE COLUMNS. CHARLES LOUIS MEYER, Omaha, Nebr. Filed Mar. 12, 1915. Serial No. 13,906. (Cl. 25—131.)

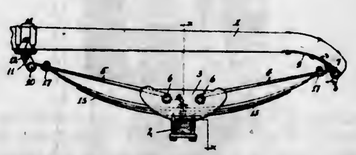
1. A mold for concrete structures, adjustable as to cross sectional form and comprising a plurality of channel beams of uniform size disposed in edge-to-edge contact around a longitudinal axis, the flanges of said channel beams having laterally registering apertures, stringer rods or wires slidably mounted in registering groups of said apertures and serving to bring and hold said units in correct lateral registration, and means for bonding said channel beams together laterally.



2. A mold for concrete structures, adjustable as to cross sectional form and comprising a plurality of channel beams of uniform size disposed with their channel sides outward and in edge-to-edge contact around a longitudinal axis, the outwardly extending flanges of said channel beams having laterally registering apertures spaced at intervals throughout the length of the structure, stringer rods or wires slidably mounted in registering groups of said apertures and serving to bring and hold said units in correct lateral registration, and tie-bars embracing the edges of said flanges and bonding said channel beams together.

3. In an adjustable mold for concrete structures, the combination of a group of channel beams of uniform size disposed in edge-to-edge contact around a longitudinal axis, the flanges of said channel beams having laterally registering apertures, a second like group of channel beams disposed in longitudinal alinement with said first named group and abutting the latter endwise, the flanges of said second group likewise having laterally registering apertures, channel-shaped cleats nested within and lapping the abutting ends of the beams of said groups, the flanges of said cleats having apertures registering with the apertures in the flanges of said beams, stringer rods or wires slidably mounted in the registering apertures of said beams and cleats, and means for bonding the beams of said groups together laterally.

1,154,999. VEHICLE-SPRING. JAMES J. MORAN, Maricopa, Cal., assignor of one-half to William J. Schultz, Maricopa, Cal. Filed Jan. 23, 1915. Serial No. 3,924. (Cl. 21—101.)



1. A vehicle-spring structure comprising a pair of alined rigid connecting bars; a clip secured upon the vehicle axle; pivotal connections between the adjacent ends of the connecting bars and the clip; a direct pivotal connection between the other end of one of said bars and the vehicle frame; a yielding shackle connection between the other end of the other bar and the vehicle frame; a spring connected at its middle with said clip and having its ends bearing up under said connecting bars to control their movements; and freely playing guides connecting the ends of the spring with said bars.

2. A vehicle-spring structure comprising a channeled guide clip secured to the vehicle axle; a pair of alined rigid connecting bars, the adjacent ends of which lie within the guide clip; pivotal connections between the adjacent ends of said bars and the clip; a direct pivotal connection between the other end of one of said bars and the vehicle frame; a yielding, shackle connection between the other end of the other bar and the vehicle frame; a spring lying within the guide clip at its middle portion and secured thereto, said spring having its ends bearing up under said connecting bars to control their movements; and freely playing guides connecting the ends of the spring with said bars.

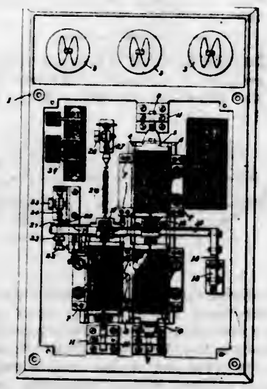
1,155,000. ART OF GLASS MANUFACTURING. OTIS A. MYGATT, Paris, France, assignor to Holophane Glass Company, New York, N. Y., a Corporation of New Jersey. Original application filed Nov. 1, 1910, Serial No. 590,140. Divided and this application filed Feb. 12, 1913. Serial No. 748,021. (Cl. 49—79.)

1. The process of making glass inclosures which consists in forcing a plurality of layers of glass of different tints or colors into a mold having raised and depressed portions constituting a design and then subjecting the article to a uniformly applied acid bath to cause the tints or colors of the underlying layers of glass to be exposed through and softly blended with the partially destroyed exterior layers.

2. The process of making glass inclosures which consists in forcing a plurality of layers of glass of different tints or colors into a mold having raised and depressed portions constituting a design and then removing portions of the outer layers by a uniformly applied disintegration process.

3. The process of making ornamental glassware which consists in producing a glass body comprising at least two layers of different colors, the outer layer having thereon extensions and depressions constituting a design, and then applying a disintegration process uniformly over the entire surface of said outer layer to remove a portion of the same thus exposing in varying degree the underlying layer and producing a blending of the colors of the said layers.

1,155,001. APPARATUS FOR REGULATING THE FIELD DENSITY OF ELECTRIC GENERATORS. GEORGE SPENCER NEELEY, St. Louis, Mo., assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed Aug. 15, 1910. Serial No. 577,361. (Cl. 171—229.)



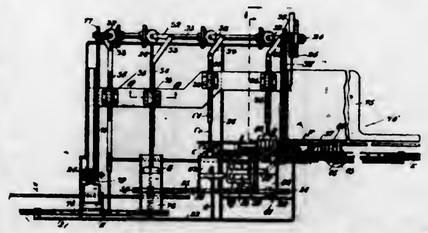
1. A regulating device comprising in combination a flexibly mounted arm provided with a contact, a second contact adapted to coöperate therewith, a first electromagnet mounted at one side of said arm, a second electromagnet mounted on the opposite side of said arm, said electro-magnets tending to move said arm in opposite directions, mechanical tension means operating on said arm independently of said electro-magnets and tending to move said arm toward said first mentioned electro-magnet, and a third electro-magnet adapted to coöperate with said arm to move the same away from said first electro-magnet against the influence of said mechanical tension means.

2. A regulating device comprising the combination of a flexibly mounted arm provided with a contact, another contact adapted to coöperate with said first mentioned contact, an armature mounted on said arm, a first electromagnet mounted at one side of said arm and adapted to attract said armature but having no mechanical connection with said arm, a second electro-magnet mounted at another side of said arm but having no mechanical connection therewith and adapted to coöperate magnetically with said armature, a second armature mounted on said arm intermediate its free end and said first mentioned armature, a third electro-magnet having magnetic coöperation with said second armature whereby it operates to move said arm against the influence of said first electro-magnet, and a yielding pressure means coöperating with said arm independently of said electro-magnets and adapted to restrain said arm against movement in accordance with the influence of said third electro-magnet.

3. A regulating device comprising the combination of a flexibly mounted arm, an electrical contact member carried thereby, a second contact member with which said first mentioned contact member is adapted to coöperate electrically, a first electro-magnet adapted to coöperate magnetically with said arm but having no mechanical connection therewith, a yielding pressure means having mechanical connection with said arm independently of said first electro-magnet, said first electro magnet and said yielding pressure means operating to swing said arm to close said contacts, a second electro-magnet, and a third electro-magnet adapted to coöperate with said arm to move the same to open said contacts.

4. A voltage regulator comprising a fixed contact, a flexibly supported movable contact member associated therewith, resilient means urging said contacts together, opposing electromagnets located upon opposite sides of said movable member but having no mechanical connection therewith, and a third electromagnet opposing said resilient means.

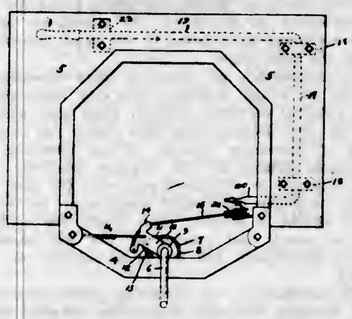
1,155,002. CIGARETTE PACKING AND SEALING MACHINE. DIMITRIOS PANTAZI, New York, N. Y. Filed Jan. 28, 1915. Serial No. 4,930. (Cl. 93—6.)



1. In a device of the character described, three conveyers carrying trays, one into which the cigarettes are laid by hand, one into which the cardboard box is laid by hand, and one which conveys the closed cardboard box to a sealing apparatus, hands controlled by rotating eccentrics for pushing the cigarettes into the box, for shutting the box, for pushing the closed box from one conveyer to the other and for pressing the closed box into the sealing apparatus, spring controlled means for pushing the box out of the sealing apparatus after the accomplishment of the operation, and means for transmitting the power received from an engine to all moving parts in such a way that they move and stop alternately as required.

2. In a device of the character described, a frame, a main shaft mounted at the back of said frame and receiving the power from an engine by a pulley mounted on said main shaft, a secondary shaft actuated by means of sprocket wheels and chains from the main shaft, sprocket wheels and chains intermittently actuated by means of a pair of pawls attached to a bar at the end of a connecting rod attached by its other end to an eccentric sheave rotated by said secondary shaft, trays on said chains intermittently actuated, supported by guide rails, for taking up the cigarettes, and for taking up the cigarette boxes, so arranged around the said chains as to stop exactly before hands controlled by sliding rods passing through guide boxes mounted on a table fastened to the frame, rails to hold down and let go the flaps of the cigarette boxes at the required positions, a cross piece fastened to the frame and so shaped as to close the lid of the cigarette boxes when passing under said cross piece, hands to push the cigarettes from one tray into the cigarette boxes on another tray, to close the box and to push the box from one tray upon another tray, sprocket wheels and chain with trays to receive the closed boxes and to convey them to a sealing apparatus, substantially as set forth in the specification.

1,155,003. ACTUATING MEANS FOR MOTOR-STARTERS. JOHN A. PARKINSON, Sioux City, Iowa. Division in part of application Serial No. 791,663, filed Sept. 24, 1913. This application filed July 2, 1914. Serial No. 848,674. (Cl. 123—185.)



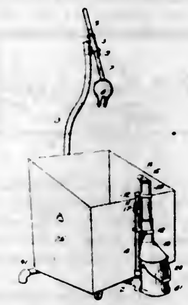
In an automobile motor-strater having a ratchet-wheel mounted on the main-shaft and a retractable radial arm provided with a pawl to engage the ratchet-wheel, the combination of an upright shaft mounted upon the dash and having a lateral arm on its lower end and a horizontal lever formed on its upper end and normally disposed substantially in parallelism with the dash, a link between said arms, and shock-absorbing means interposed between the dash and lever.

1,155,004. POULTRY-PICKING FRAME. HOWARD C. PIERCE, Worcester, Mass. Filed Aug. 4, 1914. Serial No. 855,064. (Dedicated to the public.) (Cl. 17—30.)

1. A poultry picking frame, comprising a base having uprights secured thereto, a sleeve adjusted to one of said uprights having an adjustable handle slidably arranged therein, said handle provided with a series of recesses and having a bifurcated hook suspended therefrom, and a dog adjusted to said sleeve for locking said handle, substantially as specified.

2. A poultry picking frame, comprising a base, uprights, one of which is channeled and provided with a dog, and a support, one of said uprights secured at one end of said base and the channeled upright secured at the other end, said last mentioned upright receiving in the channel a support provided with a series of recesses having secured thereto a collar, to which is movably adjusted a tube provided with a shield and a hook at its upper end, said dog adapted to engage said recesses for elevating and lowering said support in said channel, substantially as specified.

3. A poultry picking frame, comprising a base, having uprights secured thereto, a sleeve adjusted to one of said uprights having an adjustable handle slidably arranged therein, said handle provided with a series of recesses and having a bifurcated hook suspended therefrom, a dog adjusted to said sleeve for locking said handle, and means for supporting the head of the fowl in a fixed position, substantially as specified.

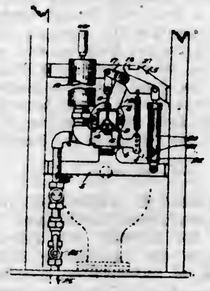


4. A poultry picking frame, comprising a base, uprights, one of which is channeled and provided with a dog, and a support, one of said uprights secured at one end of said base and the channeled upright secured at the other end, said last mentioned upright receiving in the channel the support provided with a series of recesses having secured thereto a collar, to which is movably adjusted a tube provided with a shield and a hook at its upper end, said dog adapted to engage said recesses for elevating and lowering said support in said channel, and means for supporting the feet of the fowl in a fixed position, substantially as specified.

5. The combination of a support, a receptacle, and means for suspending a fowl on the support in an inclined position, whereby when the fowl is lanced, its blood will drain into the receptacle.

[Claims 6 to 10 not printed in the Gazette.]

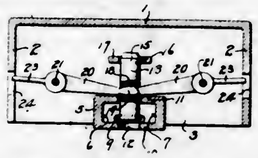
1,155,005. FLUSHING APPARATUS. ROMEO POSSI, Oakland, Cal. Filed Sept. 22, 1914. Serial No. 862,032. (Cl. 137—93.)



In a structure of the character described, a supporting bracket of substantially I-shape having an arm projecting interally from the vertical member, a valve casing secured to the vertical member of the bracket and provided with inlet and outlet openings, a valve in the casing for closing the outlet opening, a lever pivoted between its ends to the bracket with one end of the lever overlying the valve casing, a connection between the valve and said superposed terminal of the lever, a spring connecting the opposite terminal portion of the lever to the lateral arm of the bracket to seat the valve, a dash pot connected to the base of the bracket, a piston connected to the lever adjacent the spring and operable in the dash pot to oppose the force of the spring, a hand crank for rocking

the lever to unseat the valve, and a stop lug arranged on the top portion of the bracket over the lever terminal to which the spring is connected for limiting the rocking of the lever.

1,155,006. AUTOMATIC COUPLING DEVICE. WALTER RACHALS, Youngstown, Ohio. Filed May 24, 1915. Serial No. 30,183. (Cl. 213—50.)



1. An automatic coupling device including a flanged car body having a draw head housed inside of the flanged body and projecting inwardly from an end wall thereof, a coupling pin element working in the head, and lever means for operating said coupling pin element from the side of the car body.

2. An automatic coupling device including a flanged car body having a draw head formed in an end thereof and provided with side openings, a coupling pin element associated with said draw head, and means for operating said coupling pin element comprising lever members pivotally carried by and housed within the flanged car body, and having their inner ends engaging with said coupling pin element, and their opposite ends exposed through said openings.

3. An automatic coupling device including a hollow flanged car body having a draw head housed inside of the hollow flanged body and projecting inwardly from one end wall thereof, a coupling pin element working in the head, and oppositely located levers connecting at a common point with the coupling pin, and operable from either side of the car body.

4. An automatic coupling device including a hollow flanged car body having a draw head formed therein, guide means adjacent to said draw head, a coupling link, a vertically slidable pin for automatically engaging said coupling link, and oppositely arranged manually controlled levers engaging with said pin for lifting the same in the draw head and guide.

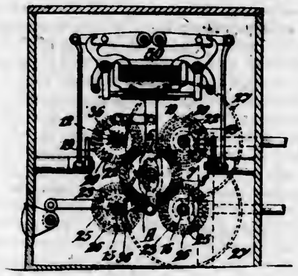
5. An automatic coupling device including a flanged car body having a draw head housed inside of the flanged body and projecting inwardly from an end wall thereof, guide means also formed from an end wall of the car body adjacent the draw head, a coupling pin vertically slidable in the draw head and guide means, and coupling pin operating means carried by and housed within the car body, and operable from either side thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,155,007. AUTOMATIC EMBROIDERING-MACHINE. HIPPOLYT SAURER, Arbon, Switzerland. Filed June 19, 1911. Serial No. 633,962. (Cl. 112—7.)

1. In mechanism for transmitting movements to the embroidery frame of embroidering machines; the combination which comprises an actuating shaft composed of alined sections and reversing mechanism between them, means for imparting movement to said shaft, and only two parallel shafts driven from said shaft for imparting movement to the embroidery frame for one of its components of movement, the movements imparted to the actuating shaft being in the same direction and through the same angle.

2. In mechanism for transmitting movements to the embroidery frame of an embroidering machine, the combination which comprises an actuating shaft composed of two alined sections and reversing mechanism between them, whereby said sections have equal and opposite rotation, means for imparting rotation to one of the sections, and only two parallel shafts driven from said shaft for imparting movement to the embroidery frame for one of its components of movement, the movements imparted to the actuating shaft being in the same direction and through the same angle.



3. In mechanism for transmitting movements to the embroidery frame of an embroidering machine, the combination which comprises an actuating shaft composed of two alined sections and reversing mechanism between them whereby said sections have equal and opposite rotation, cam-actuated pawl and ratchet mechanism for imparting a step by step rotation to one of the sections, and only two parallel shafts driven from said shaft for imparting movement to the embroidery frame for one of its components of movement, the movements imparted to the actuating shaft being in the same direction and through the same angle.

4. In combination, an actuating shaft consisting of a plurality of alined sections, reversing mechanism between adjacent sections, different sized gear wheels secured on each section, only two shafts for each component of movement parallel to the actuating shaft, gear wheels slidable but not rotatable relatively to said shafts arranged to selectively gear with the gear wheels on the sections, differential mechanism between the parallel shafts, a member from which the embroidery frame is moved and rotated by the last named differential mechanism, and means to actuate one of the sections.

5. In combination, an actuating shaft consisting of alined sections, reversing mechanism between the sections, different sized gear wheels secured on each section, only two shafts for each component of movement parallel to the actuating shaft, gear wheels slidable and not rotatable relatively to said two shafts and arranged to selectively gear with the gear wheels on the sections, differential mechanism between the parallel shafts, a member rotated by the last named differential mechanism from which the embroidery frame is actuated and means for actuating one of said sections step-by-step.

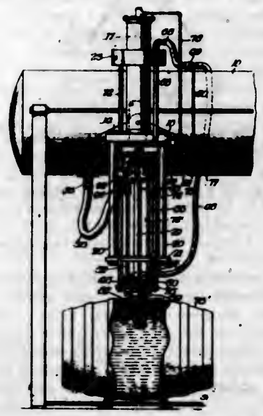
[Claim 6 not printed in the Gazette.]

1,155,008. BEER-RACKING APPARATUS. SIMON SCHLANGEN and NICHOLAS SCHLANGEN, Chicago, Ill. Filed May 7, 1914. Serial No. 836,908 (Cl. 226—10.)

1. In a racking apparatus, the combination with a filling tube, and means for moving the same into and out of the package to be filled, of a valve controlling said filling tube at its lower end, and automatic means for closing said valve as the lower end of the tube emerges from the package.

2. In a racking apparatus, the combination with a filling tube, and means for moving the same into and out of the package to be filled, of a valve controlling said filling tube at its lower end, automatic means for closing said valve as the lower end of the tube emerges from the package, and a vent passage communicating with said filling tube above said valve.

3. In a racking apparatus, the combination with a filling tube, and means for moving the same into and out of the package to be filled, of a valve controlling the upper end of said tube, a valve controlling the lower end of said tube, an atmospheric vent in said tube between said valves, automatic means for closing said upper valve prior to the withdrawal of said tube from the package, and automatic means for closing said lower valve as the lower end of the tube emerges from the package.



4. In a racking apparatus, the combination with a filling tube, and means for moving the same into and out of the package to be filled, of a valve controlling the upper end of said tube, a valve controlling the lower end of said tube, a vent passage communicating with the upper end of said tube just below said upper valve, a check valve in said passage, automatic means for closing said upper valve at the beginning of the withdrawal movement of said tube, and automatic means for closing said lower valve as the lower end of said tube emerges from the package.

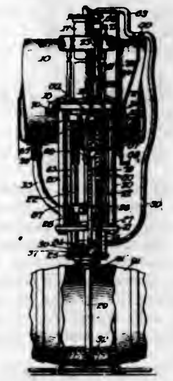
5. In a racking apparatus, the combination with a filling tube, and means for moving the same into and out of the package to be filled, of a valve controlling the upper end of said tube, a valve controlling the lower end of said tube, automatic means for opening said upper valve at the completion of the entering movement of said tube, automatic means for closing said upper valve at the beginning of the withdrawal movement of said tube, automatic means for opening said lower valve at the completion of the entering movement of said tube, automatic means for closing said lower valve at the completion of the withdrawal movement of said tube, a vent passage communicating with said tube between said valves, and a check valve in said passage.

[Claims 6 to 18 not printed in the Gazette.]

1,155,009. BEER-RACKING APPARATUS. SIMON SCHLANGEN and NICHOLAS SCHLANGEN, Chicago, Ill. Filed May 18 1914. Serial No. 839,200. (Cl. 226—10.)

1. In a racking apparatus, the combination with a filling tube, and means for moving the same into and out of the package to be filled, of a pipe serving to permit flow of a counter-pressure medium from the package and also to trap sufficient liquid to fill, by back-flow therefrom, the space in the package caused by the withdrawal of the filling tube, a cut-off valve in said pipe located at a point above the liquid trapped therein, and an atmospheric vent in said pipe also located at a point above the liquid trapped therein and operative when said cut-off valve is closed.

2. In a racking apparatus, the combination with a filling tube, and means for moving the same into and out of the package to be filled, of a pipe serving to permit flow of a counter-pressure medium from the package and also to trap sufficient liquid to fill, by back-flow therefrom, the space in the package caused by the withdrawal of the filling tube, a cut-off valve in said pipe located at a point above the liquid trapped therein, an atmospheric vent in said pipe also located at a point above the liquid trapped therein and operative when said cut-off valve is closed, a valve at the lower end of said pipe, and automatic means for opening said last named valve during the package-entering movement of said filling tube and for closing the same during the withdrawal movement of said filling tube.



3. In a racking apparatus, the combination with a filling tube, and means for moving the same into and out of the package to be filled, of a pipe serving to permit flow of a counter-pressure medium from the package and also to trap sufficient liquid to fill, by back-flow therefrom, the space in the package caused by the withdrawal of the filling tube, a cut-off valve in said pipe located at a point above the liquid trapped therein, an atmospheric vent in said pipe operative when said cut-off valve is closed, a valve at the lower end of said pipe, and automatic means for opening and closing said last named valve at any predetermined point in the package-entering and withdrawal movements of said filling tube, respectively.

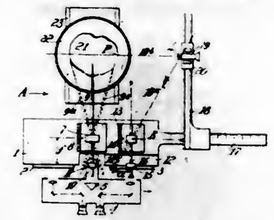
4. In a racking apparatus, the combination with a filling tube, and means for moving the same into and out of the package to be filled, of a pipe serving to permit flow of a counter-pressure medium from the package and also to trap sufficient liquid to fill, by back-flow therefrom, the space in the package caused by the withdrawal of the filling tube, a cut-off valve in said pipe located at a point above the liquid trapped therein, an atmospheric vent in said pipe operative when said cut-off valve is closed, a valve at the lower end of said pipe, and automatic means controlled by said filling tube actuating means for opening and closing said last named valve at any predetermined point in the package-entering and withdrawal movements of said filling tube, respectively.

5. In a racking apparatus, the combination with a filling tube, and means for moving the same into and out of the package to be filled, of a pipe serving to permit flow of a counter-pressure medium from the package and also to trap sufficient liquid to fill, by back-flow therefrom, the space in the package caused by the withdrawal of the filling tube, a cut-off valve in said pipe located at a point above the liquid trapped therein, an atmospheric vent in said pipe operative when said cut-off valve is closed, a valve at the lower end of said pipe, a spring normally holding said last named valve closed, and means actuated by said filling tube actuating means serving to open said last named valve and to

permit its closure by said spring at any predetermined point in the package-entering and withdrawal movements of said filling tube, respectively.

[Claims 6 to 11 not printed in the Gazette.]

1,155,010. APPARATUS FOR PLASTICALLY REPRODUCING OBJECTS. WILLY SELKE, Berlin, Germany. Filed Dec. 14, 1910. Serial No. 597,380. (Cl. 41—25.)



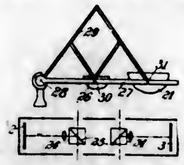
1. An apparatus for plastically reproducing an object with the aid of two phototheodolitic photographs of the said object comprising optical observing instruments, means for moving the said photographs and the said optical observing instruments relatively to one another for directing the said instruments on corresponding points of the said photographs, a plurality of movable carriers of directional lines and means for transmitting positively the said relative movement to said movable carriers.

2. An apparatus for plastically reproducing an object with the aid of two phototheodolitic photographs of the said object, which photographs lie in one plane, comprising optical observing instruments, means for moving the said photographs and the said optical observing instruments relatively to one another for directing the said instruments on corresponding points of the said photographs, three movable carriers of directional lines and means for transmitting positively the said relative movement to two such carriers, the latter carriers being rotatable about adjustable points, the third carrier containing a mark, being displaceable in the direction parallel to the photographs and being adapted to coact with one of the said two other carriers.

3. An apparatus for plastically reproducing an object with the aid or two phototheodolitic photographs of the said object, which photographs lie in one plane, comprising optical observing instruments, means for moving the said photographs and the said optical observing instruments relatively to one another for directing the said instrument on corresponding points of the said photographs, three movable carriers of directional lines and means for transmitting positively the said relative movement to two such carriers, the latter carriers being rotatable about adjustable points, the third carrier containing a mark, being displaceable in the direction parallel to the photographs and being adapted to coact with one of the said two other carriers, the dependency of the angular movements of this latter carrier on the relative movements of the observing instrument and the photograph, which both pertain to this carrier, being variable.

4. An apparatus for plastically reproducing an object with the aid of two phototheodolitic photographs of the said object, which photographs lie in one plane, comprising optical observing instruments, means for moving the said photographs and the said optical observing instruments relatively to one another for directing the said instruments on corresponding points of the said photographs, three movable carriers of directional lines and means for transmitting positively the said relative movement to two such carriers, the latter carriers being rotatable about adjustable points, the third carrier containing a mark, being displaceable in the direction parallel to the photographs and being adapted to coact with one of the said two other carriers, the distance between the plastic reproduction and the photographs being variable.

1,155,011. PROCESS OF PLASTICALLY REPRODUCING OBJECTS. WILLY SELKE, Berlin, Germany. Original application filed Dec. 14, 1910, Serial No. 597,380. Divided and this application filed Jan. 11, 1912. Serial No. 670,575. (Cl. 33—174.)



1. Process for the plastic reproduction of an object from two stereoscopic measuring photograms, consisting in presenting by means of a binocular observing instrument a spatial image of the object and in feeling over the said spatial image by means of a real, movable measuring mark disposed in the object space, which mark is combined with a device adapted for the plastic reproduction of the said object.

2. In an apparatus for the plastic reproduction of an object two stereoscopic measuring photograms of the said object, a real, movable measuring mark, optical means for producing from the said photograms a spatial image of the said object and for observing simultaneously the said spatial image and the said mark, which latter is disposed in the object space, and means for plastically reproducing the said object, the said mark and the said latter means being adapted to coöperate.

3. In an apparatus for the plastic reproduction of an object two stereoscopic measuring photograms of the said object, a real, movable measuring mark, two objectives, each adapted to form an image of the said mark, optical means for simultaneously producing from the said photograms a spatial image of the said object and from the said mark images a spatial image of the said mark and for observing simultaneously the said two spatial images thus produced and means for plastically reproducing the said object, the said mark and the said latter means being adapted to coöperate.

4. In an apparatus for the platic reproduction of an object two stereoscopic measuring photograms of the said object, a real, movable measuring mark, a microscope-stereoscope for producing from the said photograms a spatial image of the said object, the said mark being disposed in the object space, a binocular telescope for observing the said mark, the said stereoscope and the said telescope having their oculars in common, and means for plastically reproducing the said object, the said mark and the said latter means being adapted to coöperate.

1,155,012. ANTITOXIN-SYRINGE. RICHARD SLEE, Swiftwater, Pa., assignor of one-half to F. S. Banks & Company, New York, N. Y. Filed Nov. 4, 1913. Serial No. 799,062. (Cl. 128—25.)

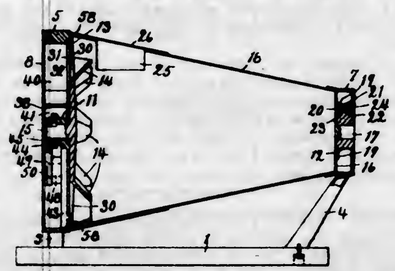


1. In a syringe, the combination with a body or barrel, a piston in the body, a shoulder at one end of the barrel and a washer encircling the barrel and resting against the shoulder, of a cylindrical collar surrounding the barrel, a peripheral flange on the collar, said flange having openings therein, finger pieces projecting from the flange, and a plate covering the end of the barrel and retaining the piston in place, said plate having fingers which project through the openings, said fingers being bent over to prevent withdrawal of the fingers from the openings.

2. In a syringe, the combination with a body or barrel, a piston in the barrel, a removable piston rod and means for engaging the same with the piston, a shoulder on the barrel, a washer engaging the shoulder, of a collar carried on the barrel, a flange on the collar, said collar and flange being split, finger pieces on the flange, the said flange having openings therein, a plate covering the end of the barrel and retaining the piston in place, said plate having a circular opening for the passage of the piston rod and acting as a bearing therefor, axially extending arms on the plate, said arms entering the openings and being bent to secure the barrel, collar and plate together.

3. In a syringe, the combination with a body or barrel, a piston in the barrel, a removable piston rod and means for engaging the same with the piston, a shoulder on the barrel, a washer engaging the shoulder, of a collar carried on the barrel, a flange on the collar, said collar and flange being split, finger pieces on the flange, the said flange having openings therein, a plate covering the end of the barrel and retaining the piston in place, said plate having a circular opening for the passage of the piston rod and acting as a bearing therefor, axially extending arms on the plate, said arms entering the openings and being bent in such a manner as to prevent the removal of the plate by direct pull.

1,155,013. SUGAR-DISPENSER. WALTER A. SMITH and THOMAS L. FLYNN, Springfield, Mass. Filed July 31, 1914. Serial No. 854,271. (Cl. 221—97.)



1. A sugar dispenser comprising a conical container rotatable on a horizontal axis and provided inside against the vertical wall at the large end with a receptacle, such wall having an opening therein between the axial center and periphery thereof and at the edge of which said receptacle is located, and a delivery member, outside of said wall but adjacent to the outer surface thereof with which said receptacle is adapted to be brought into communication through said opening.

2. A sugar dispenser comprising a conical container rotatable on a horizontal axis and provided inside against the vertical wall at the large end with receptacles, such wall having openings therein between the axial center and periphery thereof and at the edges of which said receptacles are arranged, an exterior delivery member with which said receptacles are adapted to be brought sequentially into communication through said openings, said delivery member being adjacent to the outer surface of said wall, and means to rotate said container intermittently.

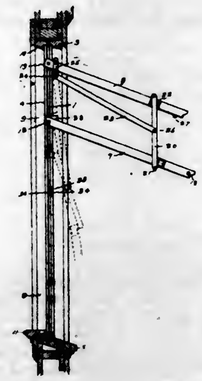
3. A sugar dispenser comprising a conical container rotatable on a horizontal axis and provided inside against the vertical wall at the large end with receptacles, such wall having openings therein between the axial center and the periphery thereof and at the edges of which said receptacles are arranged, an exterior delivery member with which said receptacles are adapted to be brought sequentially into communication through said openings, said delivery member being adjacent to the outer surface of said wall, means to rotate said container intermittently, and means to prevent said container from being rotated except in one direction.

4. A sugar dispenser comprising a conical container rotatable on a horizontal axis and provided inside against the vertical wall at the large end with receptacles, such wall having openings therein between the axial center and the periphery thereof and at the edges of which said receptacles are arranged, an exterior delivery member with which said receptacles are adapted to be brought sequentially into communication through said openings, said delivery member being adjacent to the outer surface of said wall, means to rotate said container, and means to hold said container at whatever point in its rotation it may be left by said rotating means.

5. In a sugar dispenser, a container rotatable on a horizontal axis, and provided inside against the vertical wall at one end with a receptacle which consists of a bottom member and a side member only, such wall having an opening therein between the axial center and the periphery thereof and at the edge of which said receptacle is located.

[Claims 6 to 20 not printed in the Gazette.]

1,155,014. WINDOW. ARTHUR C. SOULE, San Francisco, Cal., assignor of one-half to William B. Thurman, Madera, Cal. Filed Nov. 4, 1913. Serial No. 799,249. (Cl. 20—42.)



1. A window including a frame, two sashes operative in said frame, connecting arms pivoted to both of said sashes, and swing arms pivoted to said connecting arms and the window frame.

2. A window including a frame, sashes operative in said frame, connecting arms pivoted to both of said sashes, a fulcrum pivot for said arms attached to said frame and having a prescribed movement outward from said frame.

3. A window including a frame, grooves in said frame, two sashes operative in said frame, pivots on said sashes engaging said grooves, connecting arms pivoted to both of said sashes, and swing arms pivoted to said frame and to said connecting arms.

4. A window including a frame, upper and lower sashes pivotally and slidably engaging said frame, connecting arms pivoted to both of said sashes, and swing arms pivoted to said connecting arms, and the said frame.

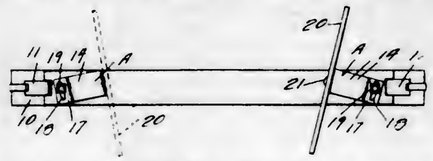
5. A window including a frame, grooves in said frame; a lower sash having pivots near the bottom engaging said grooves; an upper sash having pivots near the top engaging said grooves; connecting arms having one end pivoted above the center of the lower sash, and the opposite end pivoted below the center of the upper sash, and swing arms pivoted near the top of said frame, and near the center of said connecting arms.

[Claim 6 to 12 not printed in the Gazette.]

1,155,015. HAY-RACK ATTACHMENT FOR WAGON-BOLSTERS. LEVI E. STUMP, Chanute, Kans. Filed Mar. 22, 1915. Serial No. 16,113. (Cl. 21—54.)

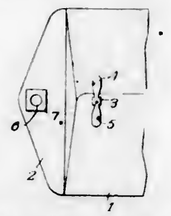
A hay rack attachment for wagon bolsters comprising a base having recesses in its ends adapted to detachably receive the standards of the bolster, brackets mounted on said base, each of said brackets being substantially V-shape and having the free ends of its arm terminating in laterally directed portions, the laterally directed portion of the outermost arm being provided with an elongated slot, a bolt carried by the base and engaged through said

slot, and a bolt carried by the base and engaged through the laterally directed portion of the inner arm, whereby



the bracket can be adjusted into different angular relations with respect to the longitudinal axis of a wagon.

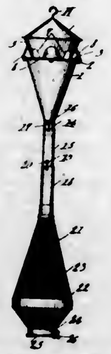
1,155,016. MERCHANDISE-ENVELOP. WILLARD E. SWIFT, Worcester, Mass., assignor to United States Envelope Company, Springfield, Mass., a Corporation of Maine. Filed Mar. 13, 1914. Serial No. 824,519. (Cl. 229—78.)



1. A merchandise envelop, having an opening in its closing flap, and provided with a metallic fastener comprising a sheet metal plate having a pair of prongs formed along its edge by means of converging slits on opposite sides of its center, said prongs being inserted through the body portion of the envelop and clenched upon the inside of the same, with the portions of said plate beyond the base portions of said prongs adapted to lie parallel and in substantial juxtaposition when bent upwardly for insertion through the opening of said closing flap.

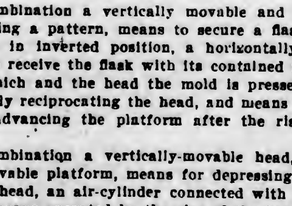
2. A merchandise envelop, having an opening in its closing flap, and provided with a metallic fastener comprising a sheet metal plate having a pair of prongs formed along its edge by means of converging slits on opposite sides of its center, said prongs being bent on lines at oblique angles to said edge and inserted through the body portion of the envelop and clenched upon the inside of the same, with the portions of said plate beyond the base portions of said prongs adapted to lie parallel and in substantial juxtaposition when bent upwardly for insertion through the opening of said closing flap.

1,155,017. BIRD-TRAP. JOHN A. TOOLEY, Shreveport, La. Filed Feb. 2, 1915. Serial No. 5,753. (Cl. 43—24.)



A bird trap, including a decoying chamber having a lower trap door, a funnel-shaped member attached to said chamber below said trap door, a captivity chamber below the funnel-shaped member and having a lower door, and a tubular guiding member connecting the spout of the funnel-shaped member and the upper portion of the captivity chamber.

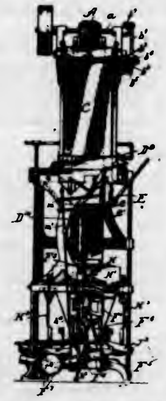
1,155,018. PISTON-PACKING. GEORGE S. TOWNE, Oakland, Cal. Filed June 1, 1915. Serial No. 31,356. (Cl. 154—45.5.)



1. A packing for piston rods or the like comprising a body formed of alternate parallel layers of canvas and rubber disposed at an angle to all the faces of the body, and a protecting surface on opposite faces of said body and formed of alternate parallel layers of canvas and rubber.

2. A packing for piston rods or the like comprising a body formed of alternate parallel layers of canvas and rubber disposed at an angle to all the faces of the body and the canvas being cut on the bias, and a protecting surface on opposite faces of said body and formed of alternate parallel layers of canvas and rubber, the canvas being cut on the bias.

1,155,019. MOLDING-MACHINE. HENRY TSCHERNING, Freeport, Ill., assignor to Arcade Manufacturing Company, Freeport, Ill., a Corporation of Illinois. Filed July 24, 1911. Serial No. 640,185. (Cl. 22—30.)



1. In combination a vertically movable and revoluble head carrying a pattern, means to secure a flask to the head when in inverted position, a horizontally-movable platform to receive the flask with its contained mold and between which and the head the mold is pressed, means for vertically reciprocating the head, and means for automatically advancing the platform after the rise of the head.

2. In combination a vertically-movable head, a horizontally-movable platform, means for depressing and elevating the head, an air-cylinder connected with the platform and means operated by the rise of the head for admitting air thereto to advance the platform, and means for cutting off the air when the platform reaches its forward position.

3. In combination a vertically-movable head, a horizontally-movable platform adapted to receive the molds, means for depressing and elevating the head, an air-cylinder connected to the platform, an air-valve to control the admission of air thereto, a finger pivoted to the stem of said air-valve by a rule-joint, in position to be engaged by a part movable with the head, whereby the descent of the head, will not operate the valve but its ascent will admit air to advance the platform.

4. In combination a vertically-movable head, a horizontally-movable platform beneath the same to receive the molds, means for depressing and elevating the head and means for automatically advancing the platform upon the rise of the head, sand-dropping means, a lever for controlling the operation thereof, and means for returning the platform upon the movement of said lever.

5. In combination a vertically-movable head, a horizontally-movable platform, means for depressing and elevating the head, an air-cylinder connected with the platform and means operated by the rise of the head for admitting air thereto to advance the platform, sand-dropping means, a lever for controlling the operation thereof, a second air-valve which admits air to the opposite end of the cylinder when said lever is operated.

[Claims 6 to 19 not printed in the Gazette.]

1,155,020. SALIVA-EJECTOR. LEANDER VAN ORDEN, Alameda, Cal. Filed Oct. 6, 1913. Serial No. 793,726. (Cl. 32—33.)



1. In a saliva ejector, a siphon, a flexible guard attached to the suction end of said siphon.

2. In a saliva ejector, a siphon, a guard swiveled to the suction end of said siphon.

3. In a saliva ejector, a siphon having a laterally perforated suction end, a flexible guard attached to said siphon and inclosing the said perforated end.

4. In a saliva ejector, a siphon having a laterally perforated suction end, a clip extending through said perforation, and a flexible hood engaging said clip and inclosing the suction end of said siphon.

5. In a saliva ejector, a siphon having a laterally perforated suction end, a clip extending through said perforation, a hood of flexible material having a center opening, and a recess adjacent to said opening engaging said clip.

1,155,021. ELECTRIC-METER BRUSH. ROGER S. WHITE, Washington, D. C. Filed July 26, 1913. Serial No. 781,313. Renewed Feb. 27, 1915. Serial No. 11,068. (Cl. 200—23.)



1. In a motor-operated meter, an armature having a commutator, bearings for the armature permitting endplay and rotary movement of the same, brushes for engaging the commutator, and means for causing the brushes to move with the commutator when the armature plays endwise in its bearings under working conditions.

2. In a motor-operated meter, an armature having a commutator, bearings for the armature permitting endplay and rotary movement of the same, brushes for engaging the commutator, and means for causing the brushes to move with the commutator when the armature plays endwise in itse bearings, under working conditions comprising movable brush-supporting means connected to the armature spindle.

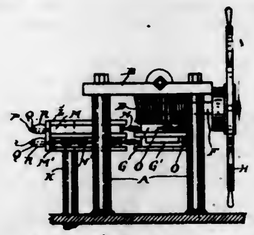
3. In a motor-operated meter, an armature having a commutator, bearings for the armature permitting endplay and rotary movement of the same, brushes for engaging the commutator, and a pivotally mounted supporting member for said brushes operatively related to the armature spindle so as to move therewith when the spindle plays endwise in its bearings.

4. In a motor-operated meter, an armature having a commutator and mounted for rotary and axial movement, brushes for engaging the commutator, and a pivotally mounted supporting member for said brushes having an arm engaging the armature spindle.

5. In a motor-operated meter, an armature having a vertically arranged spindle and a commutator and mounted for axial and rotary movement, brushes for engaging the commutator, a supporting member for the brushes movable vertically and connected to the spindle, and a sustaining spring for said member.

[Claims 6 and 7 not printed in the Gazette.]

1,155,022. SHIP STEERING-GEAR. NOAH WILKINSON, Lewiston, Me., assignor of one-half to Ara Cushman, Jr., Auburn, Me. Filed June 9, 1915. Serial No. 33,016. (Cl. 114—155.)



1. In a ship steering apparatus, a supporting frame, a shaft operated worm mounted therein, two gears mounted therein and adapted to mesh with said worm, pulleys operable contemporaneously with said gears, said pulleys being mounted in different planes, a rudder operating lever provided with grooves in different planes and transmitting cables secured to said pulleys and operating lever.

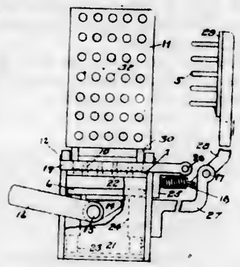
2. In a ship steering apparatus, a supporting frame, a shaft operated worm mounted therein, two gears mounted therein and adapted to mesh with said worm, pulleys operable contemporaneously with said gears, said pulleys being mounted in different planes, a rudder operating lever provided with grooves in different planes and transmitting cables secured to said pulleys and operating lever, the ends of said cables being yieldingly mounted in said rudder operating lever.

3. In a ship steering apparatus, a supporting frame, a shaft operated worm mounted therein, two gears mounted therein and adapted to mesh with said worm, means for adjusting the gears relative to the worm, pulleys operable contemporaneously with said gears, said pulleys being mounted in different planes, a rudder operating lever provided with grooves in different planes and transmitting cables secured to said pulleys and operating lever.

1,155,023. CAPSULE-ASSEMBLING MACHINE. BENJAMIN THOMAS WINCHESTER, Windsor Hills, Md., assignor, by mesne assignments, to Sharp and Dohme, Baltimore, Md., a Corporation of New Jersey. Filed July 10, 1911. Serial No. 639,242. (Cl. 128—32.)

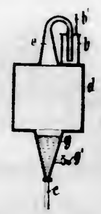
In a machine for assembling capsules the combination with a hollow base having a perforated top to receive the male capsule parts, of a platform in the base below said perforations; a plate hinged so as to swing over the top and having perforations for the female capsule parts which are brought into register with the perforations in the top; a pin plate having a plurality of pins,—said plate being movable from the upper side downwardly toward the top to project the pins into the male part re-

ceiving perforations of the top; a backing plate also movable downwardly toward said top to engage the female capsule parts that are in register with said perforations



and means for moving the platform upwardly toward the top of the base to push the male capsule parts upwardly into the female parts.

1,155,024. WATER-SUPPLY SYSTEM. CARL WOLF, Schweinsburg-on-the-Pleisse, Germany. Filed Mar. 1, 1915. Serial No. 11,349. (Cl. 103—86.)



1. In a water supply system, the combination with a riser pipe, and a pump for forcing water through the latter, of a back pressure device for actuating the mechanism for automatically controlling the operation of the pump, comprising a closed tank communicating with the pipe and provided with a small overflow pipe adapted to throttle the flow of water through the riser pipe.

2. In a water supply system, the combination with a riser pipe, and a pump for forcing water through the latter, of a back pressure device for actuating the mechanism for atuomatically controlling the operation of the pump, comprising a closed tank communicating with the pipe and provided with a small overflow pipe adapted to throttle the flow of water through the riser pipe, and means to increase the throttling action of the overflow-pipe.

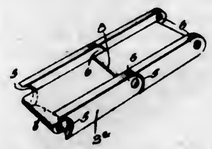
3. In a water supply system, the combination with a riser pipe, and a pump for forcing water through the latter, of a back pressure device for actuating the mechanism for automatically controlling the operation of the pump, comprising a closed tank having a funnel on its under side through which it communicates with the pipe, and a throttling overflow pipe communicating with the tank through the top thereof.

4. In a water supply system, the combination with a riser pipe, and a pump for forcing water through the latter, of a back pressure device for actuating the mechanism for automatically controlling the operation of the pump, comprising a closed tank communicating with the pipe and provided with a small overflow-pipe having a contracted discharge end, whereby the flow of water in the riser pipe is throttled by the overflowing of the tank.

5. In a water supply system, the combination with a riser pipe, and a pump for forcing water through the latter, of a back pressure device for actuating the mechanism for automatically controlling the operation of the pump, comprising a closed tank communicating with the pipe and provided with a small overflow-pipe having a contracted discharge end, and an automatically operated valve in said end adapted to throttle the flow of water from the tank.

[Claims 6 and 7 not printed in the Gazette.]

1,155,025. RUBBER-TREAD FLEXIBLE ARMOR FOR PNEUMATIC TIRES. CLINTON L. WOLFE, Brooklyn, N. Y. Filed June 7, 1913. Serial No. 772,324. (Cl. 152—17.)



1. An armor for pneumatic tires comprising a circumferentially united series of individual armor-pieces capable of relative angular movement in the plane of the wheel; said pieces being constructed with radially reduced intermediate portions and circumferentially extending lateral enlargements projecting radially, both inward and outward from the intermediate portions, to form seats for an inner inflatable tire and an outer cushioning tread, said lateral enlargements being constructed with radially interlocking arcuate hinging abutments and the reduced intermediate portions of the armor pieces breaking joints with the lateral enlargements, whereby the pieces are interlocked in the direction of the axis of the wheel.

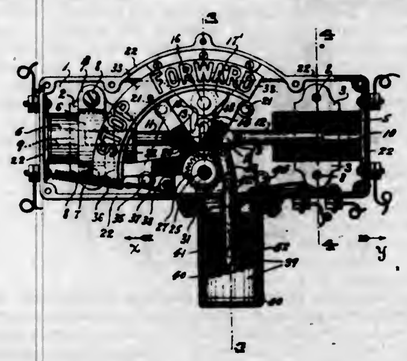
2. An armor for pneumatic tires comprising a circumferentially united series of individual armor-pieces capable of relative angular movement in the plane of the wheel; said pieces being constructed with radially reduced intermediate portions and circumferentially extending lateral enlargements projecting radially, both inward and outward from the intermediate portions, to form seats for an inner inflatable tire and an outer cushioning tread, said lateral enlargements being constructed with radially interlocking arcuate hinging abutments and the reduced intermediate portions of the armor pieces breaking joints with the lateral enlargements, whereby the pieces are interlocked in the direction of the axis of the wheel, the means for circumferentially uniting the pieces comprising hinging connections concentric with the arcuate hinging abutments.

3. An armor for pneumatic tires comprising a circumferentially united series of individual armor-pieces capable of relative angular movement in the plane of the wheel; said pieces being constructed with radially reduced intermediate portions and circumferentially extending lateral enlargements projecting radially, both inward and outward from the intermediate portions, to form seats for an inner inflatable tire and an outer cushioning tread, said lateral enlargements being constructed with radially interlocking concave and convex hinging abutments and the reduced intermediate portion on the piece carrying the concave abutments protruding in between the convex abutments of the next piece, and pintles passing through the enlargements carrying said convex abutments and through the said inter-protruding reduced portions and thereby tying the pieces together.

1,155,026. SIGNALING DEVICE FOR VEHICLES. WILSON D. CRAIG WRIGHT, Philadelphia, Pa. Filed July 29, 1914. Serial No. 853,814. (Cl. 177—327.)

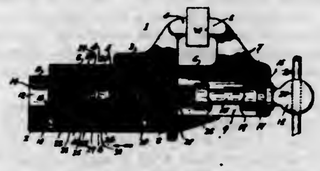
In a signaling device a casing, a pair of oppositely facing solenoids provided with movable armature pieces, a connecting-piece between the outer ends of said armature pieces, said connecting-piece having a centrally disposed vertical slot, a segmental gear pivotally mounted in said casing, a stud on said segmental gear adapted to enter said slot, a stop on each side of said segmental gear for limiting its oscillation, a shaft, an indicating pointer

mounted on said shaft, one end of said indicating pointer having a weight for normally maintaining and returning



said indicating pointer in vertical position, and a pinion on said shaft meshing with said segmental gear.

1,155,027. ADJUSTABLE VISE. WILSON D. CRAIG WRIGHT, Philadelphia, Pa. Filed Nov. 23, 1914. Serial No. 873,468. (Cl. 81—33.)



1. An adjustable vise comprising a stationary clamp-member and a movable clamp-member slidably related thereto, said movable clamp-member having a rotatable shaft connected therewith, an externally screw-threaded portion at the inner free end of said shaft, a guide block having a longitudinal cylindrical opening into which said shaft extends, a nut-piece slidably arranged in said cylindrical opening, said screw-threaded portion of said shaft entering said nut-piece, expansible arms extending rearwardly from said nut-piece, and means carried by said shaft for expanding said expansible arms to move the same into binding relation to the walls of said cylindrical opening to lock said nut-piece in fixed relation to said guide-block, said means being brought into operation by turning said shaft.

2. An adjustable vise comprising a stationary clamp-member and a movable clamp-member slidably related thereto, said movable clamp-member having a rotatable shaft connected therewith, an externally screw-threaded portion at the inner free end of said shaft, a guide block having a longitudinal cylindrical opening into which said shaft extends, a nut-piece slidably arranged in said cylindrical opening, said screw-threaded portion of said shaft entering said nut-piece, expansible arms extending rearwardly from said nut-piece, and means carried by said shaft for expanding said expansible arms to move the same into binding relation to the walls of said cylindrical opening to lock said nut-piece in fixed relation to said guide-block, said means comprising a wedge-piece mounted on said shaft, said wedge-piece being brought into operation by turning said shaft.

3. An adjustable vise comprising a stationary clamp-member and a movable clamp-member slidably related thereto, said movable clamp-member having a rotatable shaft connected therewith, an externally screw-threaded portion at the inner free end of said shaft, a guide block having a longitudinal cylindrical opening into which said shaft extends, a nut-piece slidably arranged in said cylindrical opening, said screw-threaded portion of said shaft entering said nut-piece, expansible arms extending rearwardly from said nut-piece, and means carried by said shaft for expanding said expansible arms to move the same into binding relation to the walls of said cylindrical opening to lock said nut-piece in fixed relation to said guide-block, said means being brought into operation by turning said shaft.

4. An adjustable vise comprising a stationary clamp-member, a movable clamp-member having a stock-portion slidably related to said stationary clamp-member, a guide-block having a longitudinal cylindrical opening arranged in fixed relation to said stationary clamp-member, said stock-portion of said movable clamp-member having an open channel in its under side adapted to straddle said guide-block, a shaft rotatably connected with said movable clamp-member and its stock-portion, an externally screw-threaded portion at the inner free end of said shaft, a nut-piece having internal screw-threads slidably arranged in said cylindrical opening, said screw-threaded portion of said shaft engaging the threads of said nut-piece, expansible arms extending rearwardly from said nut-piece, and means carried by said shaft for expanding said expansible arms to move the same into binding relation to the walls of said cylindrical opening to lock said nut-piece in fixed relation to said guide-block, said means being brought into operation by turning said shaft.

5. An adjustable vise comprising a stationary clamp-member, a movable clamp-member having a stock-portion slidably related to said stationary clamp-member, a guide-block having a longitudinal cylindrical opening arranged in fixed relation to said stationary clamp-member, said stock-portion of said movable clamp-member having an open channel in its under side adapted to straddle said guide-block, a shaft rotatably connected with said movable clamp-member and its stock-portion, an externally screw-threaded portion at the inner free end of said shaft, a nut-piece having internal screw-threads slidably arranged in said cylindrical opening, said screw-threaded portion of said shaft engaging the threads of said nut-piece, expansible arms extending rearwardly from said nut-piece, and means carried by said shaft for expanding said expansible arms to move the same into binding relation to the walls of said cylindrical opening to lock said nut-piece in fixed relation to said guide-block, said means comprising a wedge-piece mounted on said shaft, said wedge-piece being brought into operation by turning said shaft.

[Claims 6 to 9 not printed in the Gazette.]

1,155,028. SHIP. WILLIAM McGEE YOUNG, Victoria, British Columbia, Canada. Filed Feb. 14, 1914. Serial No. 818,721. (Cl. 114—0.5.)

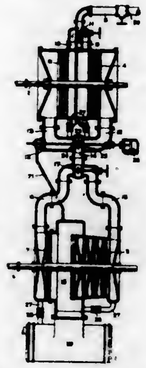


1. A ship having a hold, and an air jacket surrounding the hold in a fore and aft as well as in a transverse direction, and being formed by the outer skin or plate of the ship and the inner skin or hold plates, hollow hatches on the hold communicating with the air jacket and forming a continuous air passage therewith, and an air plant arranged to deliver air at a suitable temperature to the said jacket surrounding the hold.

2. A ship having a bottom and an inner bottom, a deck, an inner horizontal flooring in the hold of the ship extending from the stern portion of the bow thereof at the bottom thereof, slightly above the inner bottom, vertical walls at each end of said flooring, said walls forming the end walls of the hold, a ceiling for the hold extending

slightly below the deck having hatchways therein, deck coamings and coamings on the ceiling of the hold, hatches having lower and upper plates resting respectively on the different coamings and distanced from one another, and an air plant for delivering air at a suitable temperature and circulating it around the hold.

1,155,029. MARINE TURBINE. KARL ALQUIST, Schenectady, N. Y. Filed Apr. 16, 1914. Serial No. 832,229. (Cl. 121—58.)



1. The combination of a high pressure turbine having a group of forward and a group of reversing elements, a low pressure turbine connected in series therewith, a conduit for conveying motive fluid to the high pressure turbine having a branch leading to each group, and a single valve arranged in said conduit for directing the flow to either or both of said branches without at any time interrupting the flow, so that there is at all times a supply of low pressure motive fluid available for the low pressure turbine.

2. The combination of a plurality of shafts, a turbine unit for each shaft having a group of forward and a group of reversing elements, conduits connecting the turbine units in series, and valve means for controlling the flow of motive fluid to each unit arranged to direct the flow to either or both groups of each unit without at any time interrupting the flow.

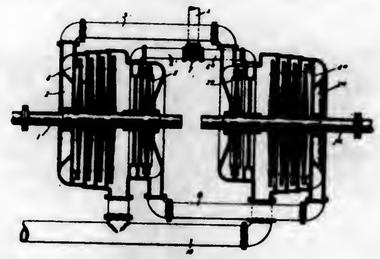
3. The combination of a high pressure turbine unit and a low pressure turbine unit, each having a group of forward and a group of reversing elements, a branched conduit for conveying motive fluid to the respective groups of the high pressure unit, a branched conduit for conveying motive fluid from the high pressure unit to the respective groups of the low pressure units, and valve means associated with each branched conduit for directing the flow to either group or dividing the flow between the two groups without at any time interrupting the flow.

4. The combination of a high pressure turbine unit and a low pressure turbine unit, each of which has a forward and a reversing section, a conduit for conveying motive fluid to the high pressure unit having a branch leading to each section thereof, a conduit for conveying motive fluid from the high pressure unit to the low pressure unit having a branch leading to each section of the low pressure unit, and valve means associated with each conduit for directing the flow to either section or dividing the flow between the two sections of the respective units without at any time interrupting the flow.

5. The combination with a high pressure turbine having forward and reversing sections exhausting at an intermediate pressure, and valve means for directing the flow to either of said sections, of a low pressure turbine which receives the exhaust therefrom, a condenser connected to the low pressure turbine, and means for connecting one of said high pressure turbine sections to the condenser when the motive fluid is being directed to the other.

[Claims 6 to 8 not printed in the Gazette.]

1,155,030. MARINE TURBINE. KARL ALQUIST, Schenectady, N. Y. Filed Aug. 31, 1914. Serial No. 859,361. (Cl. 121—58.)



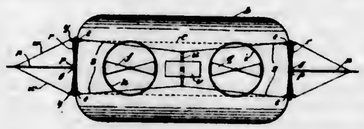
1. The combination of two shafts, a high pressure turbine element and a low pressure turbine element connected to each shaft and adapted to drive it in opposite directions, and conduits connecting the high pressure element of each shaft to the low pressure element of the other.

2. In combination, two turbines each having a high pressure portion and a low pressure portion bladed to run in opposite directions, means for admitting motive fluid to the high pressure portion of either turbine, and conduits connecting the exhaust of the high pressure portion of each turbine to the low pressure portion of the other.

3. The combination with two shafts adapted to drive propellers at opposite ends of a boat, of a turbine for driving each shaft comprising a high pressure portion and a low pressure portion bladed to run in opposite directions, and conduit means connecting the exhaust of the high pressure portion of each turbine to the low pressure portion of the other.

4. The combination with two shafts adapted to drive propellers at opposite ends of a boat, of a high pressure turbine element and a low pressure turbine element connected to each shaft, each high pressure element being arranged for forward drive when its propeller is at the bow of the boat and each low pressure element being arranged for forward drive when its propeller is at the stern of the boat, means for admitting high pressure motive fluid to each high pressure portion, and conduits connecting the exhaust of the high pressure element of each shaft to the low pressure element of the other.

1,155,031. STEERING APPARATUS FOR AIRSHIPS. LOUIS C. BADEAU, New York, N. Y. Filed June 24, 1910. Serial No. 568,758. Renewed Feb. 20, 1915. Serial No. 9,745. (Cl. 244—10.)



1. A machine for aerial navigation comprising in combination, means for supporting the machine in the air, means for propelling the machine through the air, a vertical rudder for acting on the air to alter the course of the machine, a laterally movable support substantially without deflecting effect upon the air to which the inner end of said rudder is pivoted on a vertical axis, and means for laterally moving said support in either horizontal direction and swinging said rudder in the opposite direction.

2. A machine for aerial navigation having a propeller, a vertical rudder adjacent and in line with the propeller, a vertical pivot for said sudder at its end adjacent the propeller, a support substantially without deflecting effect upon the air by means of which the pivoted end of said rudder may be moved bodily laterally in either horisontal direction, and means for laterally shifting the pivoted end of the rudder in one direction and swinging the rudder in the opposite direction.

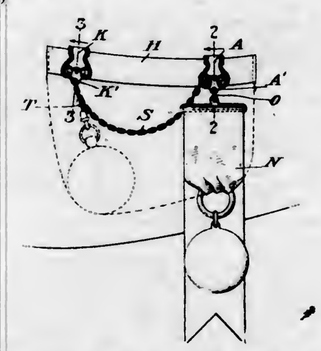
3. In an air-ship, the combination of propelling means, vertical rudders in line with said propelling means, one in front and one in rear thereof, laterally movable supports to which the inner portions of said rudders are pivoted on vertical axes, means for laterally moving said supports, and means for swinging said rudders, whereby the supports may be moved laterally and in opposite directions and each rudder swung oppositely to the direction of movement of its support.

4. In an air-ship, the combination of a forward rudder and a rearward rudder, propellers disposed between said rudders, and means whereby said rudders may be bodily shifted laterally in opposite directions and simultaneously swung about vertical axes adjacent their inner ends in a direction opposite to the direction of bodily shifting.

5. In an air-ship, the combination of a horizontal guide, a support movable horizontally on said guide, a vertical rudder, and a vertical pivot suporting said rudder on said support and constraining the rudder to swing in horizontal directions only.

[Claims 6 to 10 not printed in the Gazette.]

1,155,032. FOB-GUARD. HERMAN A. BAER, Shickshinny, Pa. Filed Mar. 27, 1915. Serial No. 17,419. (Cl. 24—3.)



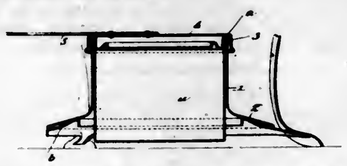
1. A fob guard for watch pockets comprising a clasp for attachment to the edge of a pocket and a fob connected thereto, a member adapted to engage over the edge of a pocket and connections between said member and clasp said member adapted to be connected to a watch within the pocket.

2. A fob guard for watch pockets comprising a clasp and means for securely fastening the same over the edge of a pocket, a fob connected to said clasp, a member fitted over the edge of a pocket and connected to said clasp, and a watch chain connected to said member.

3. A fob guard for watch pockets comprising a clasp and means for securely fastening the same over the edge of a pocket, a fob connected to said clasp, a hook-shaped member adapted to be fitted over the edge of a pocket, a chain connecting said member and clasp, and a watch chain secured to the member.

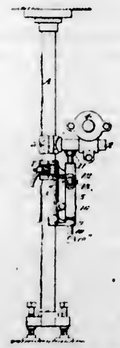
1,155,033. LAMP ATTACHMENT FOR CULINARY ARTICLES. HENRY PRICE BALL, New York, N. Y., assignor to S. Sternau & Company, (a Copartnership composed of Sigmund Sternau & Lionel Strassburger,) Brooklyn, N. Y. Filed Sept. 24, 1914. Serial No. 863,417. (Cl. 126—43.)

1. The combination with a utensil having a lamp ring or stand, of a shell with an internal diameter less than the diameter of the ring opening, and having a skirt of a greater diameter than said ring resting on said ring, and a lamp carried by said shell and having a flange engaging with the upper edge thereof, said lamp extending downward into said ring opening.



2. The combination with a utensil having a lamp ring or stand, of a shell with an internal diameter less than the diameter of the ring opening, and having a skirt of greater diameter than said ring resting on said ring, a lamp carried by said shell and having a flange engaging with the upper edge thereof, said lamp extending downward into said ring opening, and an extinguisher supported on the lamp, said extinguisher having a flange engaging the shell.

1,155,034. ADJUSTING DEVICE FOR ROCK-DRILLS. ABRAHAM L. BOLSON, Mason, Nev. Filed July 20, 1914. Serial No. 851,914. (Cl. 254—119.)



1. In combination with a vertical support, a carriage vertically movable on said support, vertically adjustable means borne by the carriage and engageable beneath and with a mechanism adapted to be slidably secured to the support and also locked thereto for raising or lowering the mechanism while the carriage remains stationary and means for actuating the first named means step by step and for automatically locking same following each actuation.

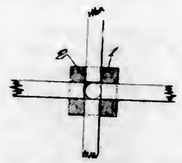
2. In combination with a vertical support, a vertically adjustable carriage on the support, means to rigidly secure the carriage to the support, vertically adjustable means borne by the carriage and engageable with a mechanism adapted to be slidably secured to the support and also locked thereto to raise or lower the mechanism, and means associated with the carriage for raising or lowering said vertically adjustable means at spaced intervals of time and therewith the mechanism while the carriage remains stationary.

3. In combination with a vertical support, a carriage adjustable on the support and having means to lock same rigid on the support and means associated with the carriage and movable independently thereof and engageable with a mechanism adapted to be slidably secured to the support and also locked thereto for periodically raising or lowering the mechanism while the carriage remains stationary.

4. In combination with a vertical support, a carriage slidable on the support, means to lock the carriage to the support, and a raising and lowering device on the carriage engageable beneath a mechanism that is adapted to be slidably mounted on the support, said mechanism being capable of being locked to the support whereby the

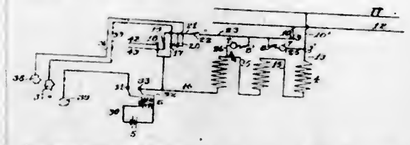
mechanism upon release of its lock may be raised by said device then locked to the support, the device lowered, the carriage unlocked and raised, relocked to the support and the device again raised to further elevate the mechanism upon further unlocking of the latter.

1,155,035. CONSTRUCTION-BLOCK. TUFFEL L. BOSTWICK, Burlington, Vt. Filed June 12, 1914. Serial No. 844,743. (Cl. 46—35.)



The combination with a plurality of cubes, each having an aperture in each face thereof and extending entirely therethrough, of dowels of uniform diameter insertible desired distances into any of said apertures and adapted to constitute connections between the cubes.

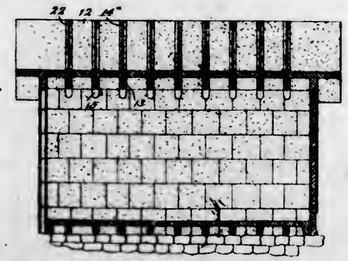
1,155,036. ELECTROTHERAPEUTIC APPARATUS. SAULSBURY BROOKS, Jr., and CHARLES R. ANDERSON, Los Angeles, Cal. Filed June 9, 1913. Serial No. 772,531. (Cl. 174—177.)



1. In electro-therapeutic apparatus, a continuous current circuit, an applicator connected with each side of said circuit, resistance in said circuit, a secondary relatively strong interrupted circuit having one side connected with one side of the first circuit, and an applicator connected with the other side of the secondary circuit.

2. In electro-therapeutic apparatus, a continuous current circuit, an applicator connected with each side of said circuit, resistance in said circuit, a secondary relatively strong interrupted circuit having one side connected with one side of the first circuit, an applicator connected with the other side of the secondary circuit, and circuit-closing means connected in the side of the first circuit that is free from connection with the secondary circuit whereby the continuous current circuit may be cut out without affecting the interrupted current circuit.

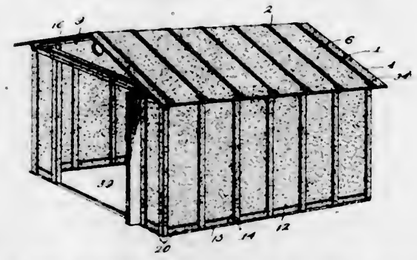
1,155,037. CONCRETE BUILDING. WALTER C. BROUGHTON, Kansas City, Mo. Filed July 2, 1913. Serial No. 777,047. (Cl. 108—1.)



1. In a roof construction of the character described, a plurality of slabs, each consisting of a roof section having a marginal lip at one side and an off-set at its opposite side, the lip on one slab being adapted to fit into the off-set of the adjoining slab, a rafter member integral with each roof section, and a metal case embracing each rafter member and having a margin extending above the bottom of the off-set in its respective slab to engage the lip on the companion slab, substantially as described.

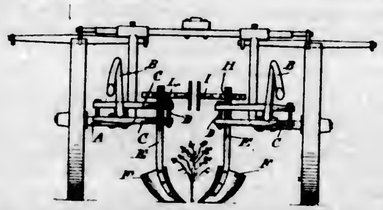
2. A roof construction of the character described, consisting of a plurality of slabs each of which embraces a roof section having a marginal lip at one side and an off-set at its opposite side, the lip on one slab being adapted to fit loosely into the off-set on the adjoining slab to leave a groove, a rafter member integral with each roof section, a metal case embracing each rafter member and having a margin extending above the bottom of the off-set in its respective slab to engage the lip on the companion slab, tie-rods extending transversely through the roof sections and having their terminals bent into hooks extending into the grooves aforementioned, and bolts engaging said hooks, for the purpose described.

1,155,038. CONCRETE BUILDING. WALTER C. BROUGHTON, Kansas City, Mo. Filed Feb. 16, 1914. Serial No. 819,088. (Cl. 108—1.)



A roof structure comprising spaced truss members each of which consists of an inverted V-body and a lower chord connecting the end portions of the V-body, the latter having rabbeted seats on its opposite longitudinal edge portions and each seat being formed with a gutter, integral end extensions projecting from the body in a plane above the seats thereof, oppositely extending lateral stops integral with the end extensions and being disposed in a plane above the body seats, and roof slabs engaging in opposite seats of adjacent truss members and having their lower edges recessed to receive the lateral stops, the latter supplementing the slabs to complete the latter whereby the roof edge is uninterrupted and the slab surfaces between the truss members unobstructed.

1,155,039. ATTACHMENT FOR SCRAPERS. JAMES F. BROWN, Bokhoma, Okla. Filed Feb. 23, 1915. Serial No. 9,992. (Cl. 97—9.)



An attachment for scrapers comprising, in combination with a frame having a drop axle handle upon the frame, parallel clamping members engaging said handles upon either side, screws adapting the members to be held at different angles to the axle, said members having registering apertures therein, an apertured scraper standard mounted in said registering apertures, a perforated bar mounted in the aperture of the standard, a pin carried by the latter and designed to hold the bar in different positions, and a plate at the inner end of the bar.

1,155,040. JOURNAL-BOX. PERRY BROWN, Coraopolis, Pa. Filed Sept. 27, 1912. Serial No. 722,753. (Cl. 64—23.)



1. The combination in a journal box, of a casing on the side of the box running longitudinally of the box, a lid hinged to said casing at one side thereof, a bolt passing through said lid and through the casing, a detachable cam washer on said bolt rotatable with said lid as the lid is opened and closed, a non-rotatable cam washer on said bolt, and a spring in said casing holding the said cam washers in coöperative relationship, whereby when the lid is opened one of the said cam washers rotates with respect to the other and forces said other cam washer against the spring.

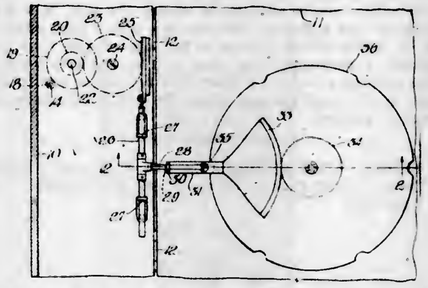
2. The combination in a journal box, of a casing on the side of the box running longitudinally of the box, a lid hinged to said casing at one side thereof, a bolt passing through said lid and through the casing and forming the pivot of the hinge, a cam washer on said bolt, said lid and said cam washer having co-acting surfaces causing the same to move in unison as the lid is opened and closed, a second cam washer on said bolt movable longitudinally of the bolt with respect to the other cam washer but non-rotatably held on the bolt, and a spring in said casing holding the said cam washers in coöperative relationship, whereby when the lid is opened one of the said cam washers rotates with respect to the other and forces said other cam washer against the spring.

3. The combination in a journal box, of a casing on the side of the box running longitudinally of the box, a lid hinged to said casing and having an irregular shaped recess around its pivotal point, a bolt passing through said lid and through the casing, a cam washer on said bolt having a projection entering the irregular recess in the lid and thereby moving with said lid as the lid is opened and closed, a non-rotatable cam washer on said bolt movable longitudinally of the bolt, and a spring in said casing holding the said cam washers in coöperative relationship, whereby when the lid is opened one of the said cam washers rotates with respect to the other and forces said other cam washer against the spring.

1,155,041. INDICATOR MECHANISM FOR RESTRICTIVE VOTING. JAMES A. BUTLER, Winthrop, Mass., assignor to American Voting Machine Company, Boston, Mass., a Corporation of Maine. Filed Dec. 26, 1912. Serial No. 738,770. (Cl. 235—51.)

1. Apparatus of the kind described, comprising a member having connections arranged to lock a registering mechanism for selective registering, an operating device for said member, and indicating means connected to be controlled by said operating device, having provision consisting of legible characters respectively distinctive of selective classes of registration to disclose conspicuously the character of selective registration for which the apparatus is set, by bringing a selected one of said characters into view or distinctive position.

2. Apparatus of the kind described, comprising a locking bar having connections arranged to restrictively control a registering mechanism, means for moving said bar endwise, and a visual indicator in geared connection with said means having provision consisting of legible characters respectively distinctive of selective classes of registration to indicate the character of restrictive registering for which the apparatus is set, by bringing a selected one of said characters into view or distinctive position.



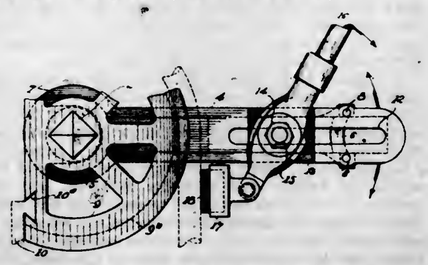
3. Apparatus of the kind described, comprising a locking bar having connections arranged to lock a registering mechanism for restrictive registering, a threaded member for moving said bar endwise, operating means for turning said member, and an indicating disk in geared connection with said operating means having provision to conspicuously indicate the character of restrictive registering for which the apparatus is set.

4. Apparatus of the kind described comprising a locking bar for setting a registering mechanism for restrictive registering, operating means for said bar, an indicator, and connecting means from said operating means to said indicator including a reciprocating rack and a swinging arm having a connection therewith permitting angular displacement for the purpose stated.

5. Apparatus of the kind described comprising a locking bar for setting a registering mechanism for restrictive registering, means for moving said bar endwise, an operating device, and an indicator to denote the character of restrictive registration, said operating device and indicator being mounted, one on a casing of the apparatus and the other on a door thereof with connecting means adapted to remain in operative relation as the door is swung.

[Claim 6 not printed in the Gazette.]

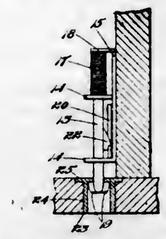
1,155,042. PIPE-BENDER. OMER CARON and GEORGE SUPRENANT, Maisonneuve, Quebec, Canada. Filed Feb. 23, 1915. Serial No. 9,786. (Cl. 153—46.)



In combination in a pipe bender of the character described; a fixedly mounted post having a lower rounded portion, an upper squared portion, and an intermediate rounded portion; a beam revolubly mounted on the intermediate rounded portion of the said post and provided with a slot near its outer end; a bracing and supporting beam therefor provided on its lower end with a fork which straddles the lower rounded portion of the said post, and

on its upper end with pins which fit into bores in the said beam; a pair of blocks mounted above and below the said beam, at the slotted portion thereof; a sleeve mounted on the upper one of said blocks; a securing pin passed through said blocks and sleeve; a bending lever revolubly mounted on said sleeve; a bending foot pivotally connected to the inner end thereof; a block revolubly mounted therein; an annularly grooved bending form provided with a squared bore fixedly mounted on the squared portion of the said post, the said form being provided at each end with a recess adapted to receive the head of a pipe securer; and a pipe securer provided with a head adapted to fit snugly into the recess of the said bending form and having a forwardly bent arm with an integral vertical pin adapted to extend a short distance along, and to one side of, the bending form when the said securer is in operative position.

1,155,043. CHAIR-LOCK. CASSIUS S. CILLEY, Salem, Mass. Filed July 1, 1914. Serial No. 848,384. (Cl. 155—33.)



1. A device for securing a piece of furniture to the floor comprising a floor member composed of a plate there being a recess beneath an edge of the plate and an opening adjacent said edge, a hook member movably mounted on the piece of furniture and adapted to pass through said opening into said recess and engage the under side of said edge of the plate, movable means to draw the hook member and floor member forcibly together when in engagement with each other and a spring acting upon the hook to raise it above the floor when the hook member and floor member are disengaged from each other.

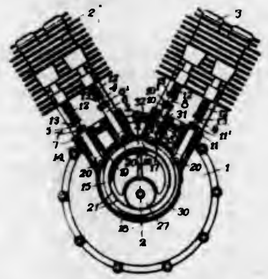
2. A device for securing a piece of furniture to the floor comprising a member secured to the floor there being a recess beneath an edge of the plate and an opening adjacent said edge, a hook member slidably and rotatably mounted on the piece of furniture, said member being movable downward through the opening into the recess adjacent the edge of the plate and rotatable to engage the under side of said edge of the plate and when disengaged therefrom being movable up out of contact with the floor, and a swinging cam adapted to engage said hook member when said hook member and floor member are in engagement with each other whereby said two members may be drawn into tightened relation with each other.

3. A device for securing a piece of furniture to the floor comprising a socket member inserted in the floor having a recess portion, a head consisting of a pair of inwardly extending flange portions with a slot therebetween, above said recess portion, a hook member having a winged end, a support on the piece of furniture on which said hook member is slidably and rotatably mounted, said hook member being movable downward to enable the said winged end to be inserted through the slot into the recess in the said socket member, and rotatable to cause the said winged end to engage with the head at the sides of the slot after it has entered said recess and when disengaged from said head being movable out of contact with the floor, a spring to hold said hook member normally in a position out of contact with the floor, and a cam engaging said hook member whereby when the hook member and socket member are in engagement with each other the said two members may be drawn into tightened relation to each other.

4. A furniture locking device comprising a supporting member adapted to be secured to furniture, a locking member slidably and rotatably mounted in said supporting member, a wing carried by said locking member, a hollow floor plug adapted to be secured to the floor, said floor plug having a pair of inwardly extending flanges with a slot therebetween, the mounting of said locking member being such as to permit the said wing to be moved relatively to the piece of furniture into a position to engage the floor plug and to be rotated to engage the same, and a swinging cam engaging said locking member and operating to draw it away from said floor plug so as to fix said parts in rigid position when locked.

5. A furniture locking device comprising a supporting member adapted to be secured to a chair leg, a locking member slidably and rotatably mounted in said supporting member, a wing carried by said locking member, a hollow floor plug adapted to be secured to the floor and to lie flush with its surface, said floor plug having a pair of inwardly extending flanges with a slot therebetween for the reception of said wing by which the chair is secured to the floor, a spring to hold said locking member normally in a position out of contact with the floor, and a cam engaging said locking member and securing it against rotation by which the chair leg may be positively drawn to the floor and rigidly held in position thereon.

1,155,044. VALVE-CONTROLLING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. LYMAN H. COBB, Fitchburg, Mass., assignor to Mary Elizabeth Johnson, trustee, Fitchburg, Mass. Filed Jan. 31, 1913. Serial No. 745,325. (Cl. 123—91.)



1. In an internal combustion engine, a crank casing, a crank shaft journaled in said crank casing, an annular rotatably mounted valve operating member surrounding said crank shaft and eccentric thereto, and having an internal gear thereon, and a pinion carried by said crank shaft and meshing with said internal gear.

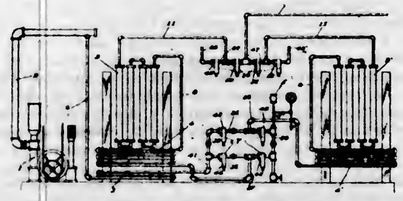
2. In an internal combustion engine, a pair of cylinders disposed at an acute angle, a common crank casing therefor, a crank shaft journaled in said casing, a bearing formed on said crank casing surrounding said crank shaft and eccentric thereto, an annular member journaled on said bearing, and having an internal gear, a pinion on said crank shaft meshing with said internal gear, and cams on the periphery of said annular member for actuating the valves of said cylinders.

3. An internal combustion engine including a ring-shaped member with one edge of its internal face provided with gear teeth and the other edge of said face finished to form a cylindrical bearing surface, the external face of said member being provided with a cam, a pinion engaging the gear teeth to drive said member and cam, a bearing engaging the bearing surface of the ring-shaped member to support it, and valve-operating means projecting normally into the path of the cam to be moved thereby.

4. An internal combustion engine including a crank case, a cylindrical flange carried by the crank case and having its outer surface finished to form a bearing, a ring-shaped member having an internal bearing surface and rotatably mounted upon said cylindrical flange, the external face of the ring-shaped member being provided with a cam, valve-operating means projecting normally into the path of the cam, and means for driving the ring-shaped member.

5. An internal combustion engine including a crank case, a cylindrical flange carried by the crank case and having its outer surface finished to form a bearing, an internal gear wheel with its gear teeth located at one edge of its internal face, the other edge of said face being finished to form a bearing surface to fit over the flange on the crank case, the external face of the gear wheel being provided with a cam, valve-operating means driven by the cam, and a pinion to drive the gear wheel.

1,155,045. APPARATUS FOR PRODUCING OXYGEN. BENJAMIN H. CRAM, Baltimore, Md. Filed May 25, 1915. Serial No. 30,295. (Cl. 23—10.)



1. In an apparatus for making oxygen by decomposition and regeneration of an oxygen compound, a retort for the oxygen compound, means for heating the retort, means for passing heated air and superheated steam alternately through the retort, valves for alternating the path of the air and steam and automatic means for operating the valves, equalising the period and maintaining the sequence of operation.

2. In an apparatus for making oxygen by decomposition and regeneration of material containing oxygen, a plurality of retorts for the material containing oxygen, means for leading heated air and superheated steam alternately to the retorts, a manifold, means connecting the retorts to the manifold, a condenser, means connecting the manifold to the condenser, an exhaust outlet for the manifold, valves in the manifold for controlling the passages from the retorts, and automatic means for operating the valves and determining their sequence of operation whereby steam and oxygen are led to the condenser and the air is permitted to escape.

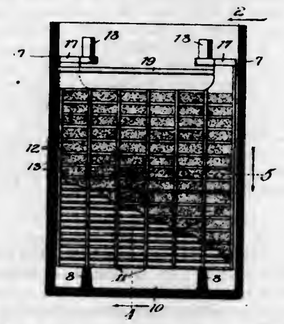
3. In an apparatus for making oxygen by the decomposition and regeneration of an oxygen compound, retorts for the oxygen compound, an exhaust manifold, pipes leading from each retort to the exhaust manifold, a condenser, a pipe leading from that manifold to the condenser, a supply manifold, means for superheating steam and air and leading them to the retorts, means in the supply manifold for controlling the passage of steam and air to the retorts whereby the retorts are alternately supplied with superheated steam and hot air, valves in the exhaust manifold, and automatic means for operating the valves in both manifolds and controlling the sequence of operation of said valves, whereby the air admitted to each retort in turn is permitted to escape into the outside air, and the steam and oxygen combined are led to the condenser.

4. In an apparatus for making oxygen by decomposition and regeneration of an oxygen compound, retorts for the oxygen compound, means for heating the retorts, means for passing heated air and steam alternately through the retorts, means for alternating the paths of the air and steam, and automatic means for operating said means, equalizing the period and maintaining the sequence of operation.

5. In an apparatus for making oxygen by decomposition and regeneration of an oxygen compound, retorts for the oxygen compound, means for heating the retorts, means for passing heated air and steam alternately through the retorts, means for alternating the path of the air and steam, automatic means for operating said means, equalising the period and maintaining the sequence of operation, a condenser, a compressor and refrigerating means for cooling the gas after it has been compressed.

[Claims 6 to 12 not printed in the Gazette.]

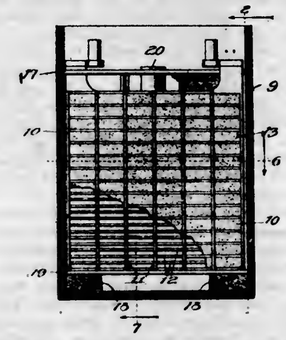
1,155,046. STORAGE BATTERY. WALTER A. CROWDUS, Chicago, Ill., assignor of one-half to Atkinson, Mentzer & Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 7, 1914. Serial No. 823,127. (Cl. 204—29.)



1. In a storage-battery, a couple comprising positive and negative ribbed grids holding the active material, or material to be rendered active, said grids presenting projections on their opposite faces, and a one-piece thin wooden separator-forming diaphragm confined by the projections centrally between opposing grids and having the grain of the wood extending crosswise of said projections.

2. A storage-battery grid comprising a frame containing vertical ribs of successively relatively greater and lesser widths and cross-ribs on opposite sides of the frame converging from the opposite edge-portions of the wider ribs to those of the narrower ribs, said wider ribs forming spacing face-projections on the grid, for the purpose set forth.

1,155,047. STORAGE BATTERY. WALTER A. CROWDUS, Chicago, Ill., assignor of one-half to Atkinson, Mentzer & Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 7, 1914. Serial No. 823,128. (Cl. 204—29.)



1. In a storage-battery of the character described, grids carrying the active material, or material to be rendered active, insulating grooved bars spacing the grids apart and interlocking them in their spaced relation, a filler of ground wood, substantially devoid of gums and acids, in the spaces between grids, and a liquid electrolyte absorbed in said filler and operating to swell the latter and tighten it in the spaces against the gird-surfaces to lock said material against dislodgment.

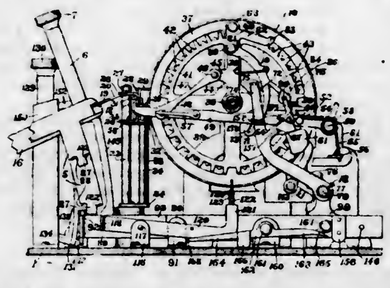
2. In a storage-battery of the character described, grids carrying the active material, or material to be rendered

active, and having vertical ribs projecting on the opposing grid-faces, and grooved insulating bars into the grooves of which the opposite ribs extend to space the grids apart and interlock them in their spaced relation.

3. In a storage-battery of the character described, grids carrying the active material, or material to be rendered active, and having vertical ribs projecting on the opposing grid-faces, insulating bars of general I-beam shape into the grooves of which the opposite ribs extend to space the grids apart and interlock them in their spaced relation, said bars dividing the spaces between grids into sections, and a filler of coarsely-ground wood, substantially devoid of gums and acids, in said sections.

4. In a storage-battery of the character described, a jar having perforated mud-bridges in its bottom forming a reservoir, grids carrying the active material, or material to be rendered active, seating on said bridges, a plate of insulating material covering said reservoir, absorbent filler in the spaces between grids, and a similar filler at the outer sides of said bridges having capillary union with the filler above it in said spaces.

1,155,048. CALCULATING-MACHINE. LEVI I. DARBY, Newark, and CHARLES N. WALSH, East Orange, N. J., assignors to Darby Machine Company, a Corporation of New Jersey. Filed Dec. 4, 1912. Serial No. 734,856. (Cl. 235—59.)



1. In a machine of the character specified, in combination with a depressible key-lever, a rotatably arranged recording or indicating disk, a disk-operating mechanism adapted to be actuated during the downward stroke of the key-lever and thrown into engagement with the recording or indicating disk to rotate the latter in a forward direction, and an auxiliary means coöperating with said key-lever acting independent of the said downward stroke of the key-lever for maintaining the disengagement of the disk-operating mechanism during the downward stroke of the said key-lever, but causing the engagement of said mechanism with the recording or indicating disk at the end of the downward stroke of the key-lever and rotating the recording or indicating disk in a rearward direction during the return-stroke of the key-lever.

2. In a machine of the character specified, in combination with a depressible key-lever, a rotatably arranged recording or indicating disk, means adapted to be actuated by a depressed key-lever for holding said disk against movement at the end of the stroke of the key-lever, a disk-operating mechanism adapted to be actuated during the downward stroke of the key-lever and thrown into engagement with the recording or indicating disk to rotate the latter in a forward direction, and an auxiliary means coöperating with said key-lever acting independent of the said downward stroke of the key-lever for maintaining the disengagement of the disk-operating mechanism during the downward stroke of the said key-lever, but causing the engagement of said mechanism with the recording or indicating disk at the end of the downward stroke of the key-lever and rotating the recording or indicating disk in a rearward direction during the return stroke of the key-lever.

3. In a machine of the character specified, in combination with a depressible key-lever, a rotatably arranged recording or indicating disk, a disk-operating mechanism adapted to be actuated during the downward stroke of the key-lever and thrown into engagement with the recording or indicating disk to rotate the latter in a forward direction, a releasing or setting means adapted to be brought into engagement with said disk-operating mechanism, and an auxiliary means coöperating with said key-lever acting independent of the said downward stroke of the key-lever for maintaining the disengagement of the disk-operating mechanism during the downward stroke of the said key-lever, but causing the engagement of said mechanism with the recording or indicating disk at the end of the downward stroke of the key-lever and rotating the recording or indicating disk in a rearward direction during the return-stroke of the key-lever.

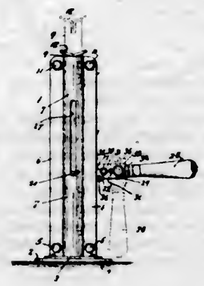
4. In a machine of the character specified, in combination with a depressible key-lever, a rotatably arranged recording or indicating disk, means adapted to be actuated by a depressed key-lever for holding said disk against movement at the end of the stroke of the key-lever, a disk-operating mechanism adapted to be operated during the downward stroke of the key-lever and thrown into engagement with the recording or indicating disk to rotate the latter in a forward direction, a releasing or setting means adapted to be brought into engagement with said disk-operating mechanism, and an auxiliary means coöperating with said key-lever acting independent of the said downward stroke of the key-lever for maintaining the disengagement of the disk-operating mechanism during the downward stroke of the key-lever, but causing the engagement of said mechanism with the recording or indicating disk at the end of the downward stroke of the key-lever and rotating the recording or indicating disk in a rearward direction during the return-stroke of the key-lever.

5. In a machine of the character specified, in combination with a depressible key-lever, a rotatably arranged recording or indicating disk, and a peripherally-toothed wheel-like member coöperating with said recording or indicating disk to rotate the latter, an operating mechanism adapted to be actuated during the downward stroke of the key-lever, said mechanism comprising a pivotally-disposed and spring-controlled lever adapted to be actuated by the downward stroke of the key-lever, a pivotally mounted arm, a link-connection between said arm and said lever, a swing-member pivotally connected with said arm, a pull-arm connected with said swing-member, an oscillatory lever in engagement with said swing-member for producing the active engagement of said pull-arm with the peripheral teeth of said wheel-like member during the downward stroke of the key-lever to rotate said wheel-like member and the recording or indicating disk in a forward direction, and means coöperating with said key-lever and the said oscillatory lever for maintaining the disengagement of said pull-arm with the peripheral teeth of said wheel-like member during the downward stroke of the key-lever, but causing the engagement of said pull-arm with the peripheral teeth of said wheel-like member at the end of the downward stroke of the key-lever and rotating said wheel-like member and the recording or indicating disk in a rearward direction during the return-stroke of the key-lever.

[Claims 6 to 10 not printed in the Gazette.]

1,155,049. LIFTING-JACK. LEVI I. DARBY, Newark, N. J. Filed Apr. 1, 1915. Serial No. 18,440. (Cl. 254—109.)

1. In a lifting-jack a casing, a lift-stem slidably supported in said casing, a lift-dog pivoted to the lower end of said lift-stem having a tooth projecting from each side thereof, a lever-member for oscillating said lift-dog, a pair of pivoted check-bars mounted within said casing so as to permit said lift stem to move between the same and provide at their inner marginal edges with a series of ratchet teeth between which said lift-dog is arranged so that its oppositely extending teeth coöperate with the ratchet-teeth of said respective check-bars, an inter-connecting pull-spring for moving said check-bars normally toward and in contact with said lift-dog, said lift-dog being further provided with an upwardly and a downwardly extending releasing-cam adapted respectively to remove said respective check bars from operative relation to the teeth of said lift-dog when said releasing-cams are carried into engagement with said check-bars by an additional or abnormal swing or oscillation of said lever-member.



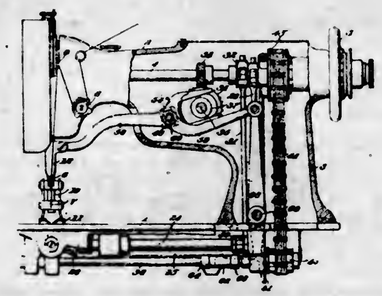
2. In a lifting-jack a casing, a lift-stem slidably supported in said casing, a lift-dog pivoted to the lower end of said lift-stem having a tooth projecting from each side thereof, a lever-member for oscillating said lift-dog, a pair of pivoted check-bars mounted within said casing so as to permit said lift-stems to move between the same and provided at their inner marginal edges with a series of ratchet-teeth between which said lift-dog is arranged so that its oppositely extending teeth coöperate with the ratchet-teeth of said respective check-bars, an inter-connecting pull-spring for moving said check-bars normally toward and in contact with said lift-dog, said lift-dog being further provided with an upwardly and a downwardly extending releasing-cam adapted respectively to remove said respective check-bars from operative relation to the teeth of said lift-dog when said releasing-cams are carried into engagement with said check-bars by an additional or abnormal swing or oscillation of said lever-member, a fixed stop-member for limiting the normal oscillation of said lever-member in one direction, and a removable stop-member for limiting the normal oscillation of said lever-member in the opposite direction, but permitting when removed an abnormal oscillation of said lever-member for the operation thereby of said releasing-cams, and means for limiting the upward and downward movement of said lift-stem.

3. In a lifting-jack a casing, a lift-stem slidably supported in said casing, a lift-dog pivoted to the lower end of said lift-stem having a tooth projecting from each side thereof, a lever-member for oscillating said lift-dog, a pair of pivoted check-bars mounted within said casing so as to permit said lift stem to move between the same and provided at their inner marginal edges with a series of ratchet-teeth between which said lift-dog is arranged so that its oppositely extending teeth coöperate with the ratchet-teeth of said respective check-bars, an inter-connecting pull-spring for moving said check-bars normally toward and in contact with said lift-dog, said lift-dog being further provided with an upwardly and a downwardly extending releasing-cam adapted respectively to remove said respective check-bars from operative relation to the teeth of said lift-dog when said releasing-cams are carried into engagement with said check-bars by an additional or abnormal swing or oscillation of said lever-member, and means for limiting the upward and downward movement of said lift-stem.

4. In a lifting-jack a casing, a lift-stem slidably supported in said casing, a lift-dog pivoted to the lower end of said lift-stem having a tooth projecting from each side thereof, a lever-member for oscillating said lift-dog, a pair of pivoted check-bars mounted within said casing so as to permit said lift-stem to move between the same and provided at their inner marginal edges with a series of ratchet-teeth between which said lift-dog is arranged so that its oppositely extending teeth coöperate with the ratchet-teeth of said respective check-bars, an inter-connecting pull-spring for moving said check-bars normally toward and in contact with said lift-dog, said lift-dog being further provided with an upwardly and a downwardly extending releasing-cam adapted respectively to remove said respective check-bars from operative relation to the teeth of said lift-dog when said releasing-cams are carried into engagement with said check-bars by an additional or abnormal swing or oscillation of said lever-member, a fixed stop-member for limiting the normal oscillation of said lever-member in one direction, and a removable stop-member for limiting the normal oscillation of said lever-member in the opposite direction, but permitting when removed an abnormal oscillation of said lever-member for the operation thereby of said releasing-cams, and means for limiting the upward and downward movement of said lift-stem.

5. In a lifting-jack a casing, a lift-stem slidably supported in said casing, a lift-dog pivoted to the lower end of said lift-stem having a tooth projecting from each side thereof, a lever-member for oscillating said lift-dog, a pair of pivoted check-bars mounted within said casing so as to permit said lift-stem to move between the same and provided at their inner marginal edges with a series of ratchet-teeth between which said lift-dog is arranged so that its oppositely extending teeth coöperate with the ratchet-teeth of said respective check-bars, an inter-connecting pull-spring for moving said check-bars normally toward and in contact with said lift-dog, said lift-dog being further provided with an upwardly and downwardly extending releasing-cam adapted respectively to remove said respective check-bars from operative relation to the teeth of said lift-dog when said releasing-cams are carried into engagement with said check-bars by an additional or abnormal swing or oscillation of said lever-member, and means for limiting the upward and downward movement of said lift-stem.

1,155,050. SEWING-MACHINE. GEORGE M. EAMES and JOHN S. FINCH, Bridgeport, Conn., assignors to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Dec. 14, 1911. Serial No. 665,643. (Cl. 112—4.)



1. In a sewing machine, the combination with fabric-feeding and stitch-forming mechanisms including a main-shaft, a loop-taker shaft provided with a loop-taker and a spiral-gear, a loop-taker actuating shaft operatively connected at one end with said main-shaft and at its opposite end provided with a spiral-gear, the latter coacting with the spiral-gear carried by said loop-taker shaft to transmit to said loop-taker stitch-forming movements, a needle carrying-bar, a needle and means for imparting to the latter jogging movements, of connections including said loop-taker actuating shaft for transmitting to one of said spiral-gears movements in directions transverse to the axis of said coacting spiral-gear, whereby the movement of said loop-taker is accelerated and retarded to maintain its proper timing with respect to the movements of said needle in different lateral positions.

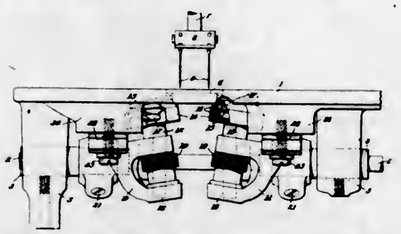
2. In a sewing machine, the combination with fabric-

feeding and stitch-forming mechanisms including a main shaft, a loop-taker-actuating shaft, a loop-taker shaft provided with a loop-taker, a needle and a needle-carrying bar, the latter having movements first in one and then in the other of two vertical planes, of means including a needle-vibrating cam actuated from said main shaft and an oscillating cam shaft for giving to said loop-taker-actuating shaft movements in the direction of its length, whereby the movements of said loop-taker are accelerated and retarded to maintain a given timing of said loop-taker with respect to the movements of said needle in different vertical planes.

3. In a sewing machine, the combination with fabric-feeding and stitch-forming mechanisms including a main shaft, a loop-taker-actuating shaft, a loop-taker shaft provided with a loop-taker, a needle and a needle-carrying bar, the latter having movements first in one and then in the other of two vertical planes, of means including a needle-vibrating cam actuated from said main shaft, an oscillating cam shaft, and a sleeve mounted on said loop-taker-actuating shaft for giving to said last mentioned shaft movements in the direction of its length, whereby the movements of said loop-taker shaft are controlled to maintain a given timing of said loop-taker with respect to the stitch-forming movements of said needle in different vertical planes.

4. In a sewing machine, the combination with a vertically reciprocating needle and needle-jogging means for imparting to the needle lateral movements, of a loop-taker actuating shaft, means for imparting thereto operative turning movements, means for imparting to said shaft endwise movements corresponding in frequency with the needle-jogging movements, a loop-taker shaft, a loop-taker operatively connected therewith and having its axis of movement substantially coincident with that of said loop-taker shaft, and means including spiral gears mounted directly upon said actuating and loop-taker shafts whereby both movements of the former are transmitted to the latter in turning movements.

1,155,051. SEWING-MACHINE. GEORGE M. EAMES, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Feb. 28, 1914. Serial No. 821,701. (Cl. 112—29.)



1. In a sewing machine, the combination with a stitch-forming mechanism including a cloth-plate and a loop-taker shaft carrying a loop-taker provided with a thread-bobbin arranged in a plate substantially parallel with said cloth-plate, of a loop-taker supporting bracket mounted to turn on a stationary part of the sewing machine and normally secured against accidental movement.

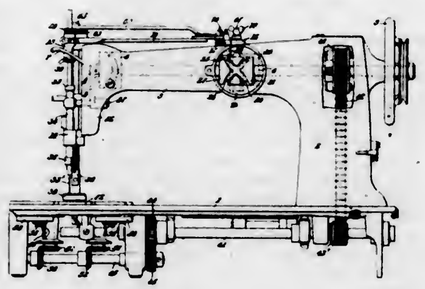
2. In a sewing machine, the combination with a stitch-forming mechanism including a looper-actuating shaft, a cloth-plate and a loop-taker shaft carrying a loop-taker provided with a thread-bobbin arranged in a plane substantially parallel with said cloth-plate, of a loop-taker supporting bracket mounted to turn on an axis corresponding to the axis of said looper-actuating shaft and normally secured against accidental movement, said supporting bracket being capable of adjustments in directions transverse to its swinging movements.

3. In a sewing machine, the combination with a stitch-forming mechanism including a cloth-plate and a loop-taker shaft carrying a loop-taker provided with a thread-bobbin arranged in a plane substantially parallel with said cloth-plate, of a loop-taker supporting bracket mounted to turn on a stationary part of the sewing machine and normally secured against accidental movement, the securing surface of said supporting bracket being convex for the purpose set forth.

4. In a sewing machine, the combination with a stitch-forming mechanism including a looper-actuating shaft, a cloth-plate, a loop-taker shaft provided with a gear and carrying a loop-taker provided with a thread-bobbin arranged in a plane substantially parallel with said cloth-plate, and a gear-member coacting with the gear carried by said loop-taker shaft to drive said loop-taker, of a loop-taker supporting bracket mounted to turn upon an axis arranged substantially in line with the axis of said loop-taker shaft-driving gear-member.

5. In a sewing machine, the combination with a stitch-forming mechanism including a looper-actuating shaft, a cloth-plate and a loop-taker shaft carrying a loop-taker provided with a thread-bobbin arranged in a plane substantially parallel with said cloth-plate, of a loop-taker supporting bracket mounted to turn upon an axis corresponding substantially with the axis of said looper-actuating shaft and its turning point provided with a slot corresponding substantially to the diameter of said looper-actuating shaft.

1,155,052. OVERSEAMING SEWING-MACHINE. GEORGE M. EAMES and JOHN S. FINCH, Bridgeport, Conn., assignors to The Singer Manufacturing Company, a Corporation of New Jersey. Filed May 21, 1914. Serial No. 839,928. (Cl. 112—4.)

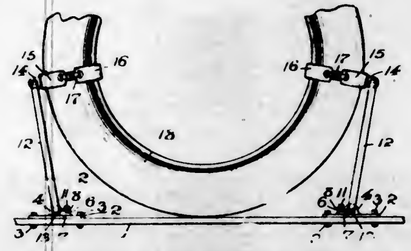


1. In an overseaming sewing machine, the combination with a stitch-forming mechanism including multiple loop-takers, and a needle-carrying bar and needle coöperating with each of said loop-takers to form stitches, of means for giving to said loop-takers complete and fractional stitch-forming movements for each complete stitch-forming movement of said needle.

2. In an overseaming sewing machine, the combination with a stitch-forming mechanism including multiple loop-takers, a needle-carrying bar and needle coöperating with each of said loop-takers to form stitches, and means for giving to said needle reciprocating and oscillatory movements in a given path only, of means for giving to said loop-takers complete and fractional stitch-forming movements for each complete stitch-forming movement of said needle.

3. In an overseaming sewing machine, the combination with a stitch-forming mechanism including multiple loop-takers, a needle-carrying bar and needle coöperating with each of said loop-takers to form stitches and means including coacting gear members for giving to said needle reciprocating and oscillatory movements, of means for giving to said loop-takers complete and fractional stitch-forming movements for each complete stitch-forming movement of said needle.

1,155,053. TIRE OR SHOE HOLDER FOR AUTOMOBILES. FREDERICK W. EHRLICH, Newark, N. J., assignor to E. A. Whitehouse Mfg. Co., a Corporation of New Jersey. Filed Jan. 4, 1912. Serial No. 669,421. (Cl. 224—29.)



1. In a tire-carrier, the combination with a pair of "split" receiving sockets adapted to be spaced apart and alined with each other on the running board or other convenient part of an automobile, of a pair of standards, said standards each having a foot-piece extending at right angles from its lower end and adapted to be received in said receiving sockets to pivotally and adjustably mount said standards so that their upper ends may be swung away from or toward each other, clamp-screws for binding said "split" receiving sockets about said foot-pieces to rigidly hold said standards in desired adjusted positions, tire-embracing devices pivotally connected with the upper ends of said standards so as to be adjustable to the tire to be embraced thereby and to the angular disposition of said standards when adjusted to the diameter of said tire, and means for holding said tire-embracing devices in engagement with said tire.

2. In a tire-carrier, the combination with a pair of "split" receiving sockets adapted to be spaced apart and alined with each other on the running board or other convenient part of an automobile, of a pair of standards, said standards each having a foot-piece extending at right angles from its lower end and adapted to be received in said receiving sockets to pivotally and adjustably mount said standards so that their upper ends may be swung away from or toward each other, clamp-screws for binding said "split" receiving sockets about said foot-pieces to rigidly hold said standards in desired adjusted positions, tire-embracing devices and means for holding said tire-embracing devices in engagement with said tire.

1,155,054. FRICTION-SURFACE AND METHOD OF FORMING SAME. PAUL H. FRANS, Dolgeville, N. Y., assignor to Daniel Green Felt Shoe Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 21, 1914. Serial No. 878,328. (Cl. 91—68.)



1. The method of forming friction surfaces from a felt fabric, which consists in shrinking the felt fabric to form, then impregnating the shrunk felt fabric with a solution of resinous substances, and finally drying under pressure the impregnated fabric.

2. The method of forming friction surfaces from a felt fabric, which consists in shrinking the felt fabric to form, then impregnating the shrunk felt fabric with a heated solution of resinous substances, and finally drying under pressure the impregnated fabric.

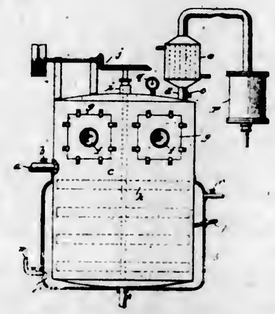
3. The method of forming friction surfaces from a felt fabric, which consists in shrinking the felt fabric to form, then impregnating the shrunk felt fabric with a solution of resinous substances comprising shellac and rosin, and finally drying under pressure the impregnated fabric.

4. The method of forming friction surfaces from a felt fabric, which consists in shrinking the felt fabric to form, then impregnating the shrunk felt fabric with a heated solution or resinous substances comprising shellac and rosin, and finally drying under pressure the impregnated fabric.

5. The method of forming friction surfaces from a felt fabric, which consists in shrinking the felt fabric to form, then impregnating the shrunk felt fabric with a solution of resinous substances composed of shellac cut with alcohol and rosin cut with turpentine, and finally drying under pressure the impregnated fabric.

[Claims 6 to 8 not printed in the Gazette.]

1,155,055. PROCESS OF MANUFACTURING CHURNED PRODUCTS FROM MILK AND CREAM. CHESTER EARL GRAY, Eureka, Cal. Original application filed Dec. 13, 1910, Serial No. 597,028. Divided and this application filed Dec. 31, 1912. Serial No. 739,475. (Cl. 31—66.)



1. The process of manufacturing butter from cream, which consists in removing the incorporated free oxygen, then sterilizing the oxygen freed liquid and churning the same under non-oxidizing conditions.

2. The process of manufacturing butter from cream, which consists in removing the incorporated free oxygen, then producing butter by churning the oxygen freed cream under non-oxidizing conditions.

3. The process of manufacturing butter from cream, which consists in subjecting the cream to rarefied conditions, agitation and heat to withdraw the free oxygen, then reducing the temperature and churning the product under non-oxidizing conditions to produce butter.

4. The process of manufacturing products from milk and cream, which consists in subjecting the milk and cream to rarefied conditions and heat to withdraw the free oxygen, restoring to the liquid substantially the percentage of liquid carried off as vapor in the process, and in churning the product.

5. The process of manufacturing products from milk and cream, which consists in heating the same under rarefied conditions while subjected to agitation and withdrawing the freed oxygen, then heating the same under pressure to a sterilizing temperature, then cooling and finally churning the product without the incorporation of free oxygen therein.

[Claims 6 to 8 not printed in the Gazette.]

1,155,056. REPRODUCTION OF ANIMATED PICTURES. WILLIAM FRIESE-GREENE, Hove, Brighton, England, assignor to Friese-Greene Patents, Limited, London, England. Filed July 17, 1912. Serial No. 710,054. (Cl. 88—16.4.)

1. A process for the reproduction of animated pictures in colors with the aid of moving color filters

caused to pass successively through the optical field, said process comprising the provision between any two successive projections of a prolonged dark period of greater duration than the period occupied by a projection plus a normal dark interval, but of less duration than twice the period occupied by a projection and a normal dark interval taken together.



2. A process for the reproduction of animated pictures in colors with the aid of moving color filters caused to pass successively through the optical field, and wherein the periods of projection are of different lengths for different colors, said process comprising the provision between any two successive projections of a prolonged dark period of greater duration than the longest period of projection plus the dark interval immediately following such longest projection, but less than twice the longest period of projection plus the immediately following dark interval.

3. A process for the reproduction of animated pictures in colors with the aid of moving color filters caused to pass successively through the optical field, said process comprising the provision between any two successive exposures of a prolonged dark period of greater duration than the period occupied by an exposure plus a normal dark interval, but of less duration than twice the period occupied by an exposure and a normal dark interval taken together.

4. A process for the reproduction of animated pictures in colors with the aid of moving color filters caused to pass successively through the optical field, said process comprising the provision between any two successive exposures of a prolonged dark period of greater duration than the period occupied by an exposure plus a normal dark interval, but of less duration than twice the period occupied by an exposure and a normal dark interval taken together, the periods of exposure are of different lengths for different colors, said process comprising the provision between any two successive exposures of a prolonged dark period of greater duration than the longest period of exposure plus the dark interval immediately following such longest exposure but less than twice the longest period of exposure plus the immediately following dark interval.

5. For projecting animated pictures in colors, a positive transparency film whereof the picture sections are colored alternately or otherwise with primary colors with dark sections of picture length interposed at intervals.

[Claims 6 and 7 not printed in the Gazette.]

1,155,057. TREATMENT OF CORK. MAX GRUNZWEIG, Ludwigshafen-on-the-Rhine, Germany, assignor to the Firm of Armstrong Cork and Insulation Company, Pittsburgh, Pa. Filed June 30, 1915. Serial No. 37,363. (Cl. 252.)

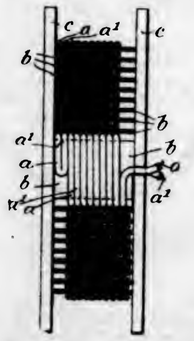
1. A method to increase suddenly the volume of cork particles at temperatures above 100° C. which consists in heating the cork suddenly to the said temperatures.

2. A method to increase suddenly the volume of cork particles at temperatures above 100° C. which consists in placing sufficiently moist cork particles in a chamber previously highly heated and agitating the cork.

3. The method of expanding cork particles which consists in suddenly heating them to a temperature below 200° C.

1,155,058. ELECTRICAL RESISTANCE. CHARLES E. HAY, Ilford, and HERBERT W. SULLIVAN, London, England. Filed Sept. 1, 1914. Serial No. 859,605. (Cl. 219—63.)

1. An electrical resistance, having a plurality of superposed cylindrical windings connected in series and insulated from each other, the positive reactance in each winding from the innermost decreasing until the zero reactance point is reached, and additional windings each having a successively increasing negative reactance.



2. An electrical resistance, having a plurality of superposed cylindrical windings connected in series and insulated from each other, the positive reactance in each winding from the innermost decreasing until the zero reactance point is reached, additional windings each having a successively increasing negative reactance, so that the sum of the reactance positive and negative equals zero.

3. In an electrical resistance, the combination of a number of concentric cylindrical tubes made of insulating material, a bifilar wire, the wires of which are joined at one end, wound upon each tube and forming a layer thereon, the other and loose ends of said wires being brought out for adjustment and connected in series, the innermost layer of the windings having a pre-calculated positive reactance and each successive layer having a less positive reactance until the zero reactance point is reached, after which the layers have a negative reactance, each successive layer having a more negative reactance, so that the sum of the reactance positive and negative equals zero, substantially as shown and described.

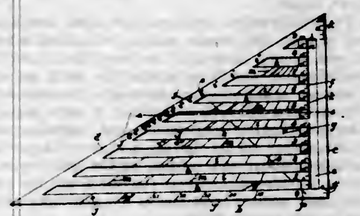
4. In an electrical resistance, the combination of a number of concentric cylindrical tubes made of insulating material, a bifilar wire, the wires of which are joined at one end, wound upon each tube and forming a layer thereon, end cheeks, a slot in one end cheek through which the other and loose ends of said wires are brought out for adjustment and connected in series, the innermost layer of the windings having a pre-calculated positive reactance and each successive layer having a less positive reactance until the zero reactance point is reached, after which the layers have a negative reactance, each successive layer having a more negative reactance, so that the sum of the reactances positive and negative equals zero, substantially as shown and described.

1,155,059. DRAFTSMAN'S TOOL. LEWIN J. HEATHCOTE, Baltimore, Md. Filed Oct. 19, 1914. Serial No. 867,311. (Cl. 33—104.)

1. A draftsman's tool comprising a plate having two right angle bars and an inclined bar connecting said two right angle bars whereby to form a triangle and said plate also having a series of bars and slots of uniform width.

2. A draftsman's tool comprising a plate having two sides at right angles and an inclined side connecting the ends of the two right angle sides one of said right angle sides being provided with a scale,—said plate also having a series of lines extending across it in an inclined direction from the outer edge of one of the right angle sides and converging at a point adjacent to the angle formed by the joinder of the inclined side and one right angle side.

3. A draftsman's tool comprising a plate having a series of bars and slots and two edges at right angles to each other said plate also having a line across it from the upper edge of the lowermost bar and at one corner of the lowermost slot.

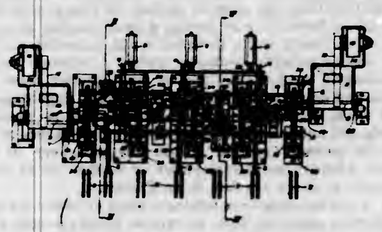


4. A draftsman's tool comprising a triangular shaped plate having two right angle edges and an inclined edge and also having a slot along one of said right angle edges to form two parallel bars and the bar at the inner side of said slot having a scale along the slot edge.

5. A draftsman's tool comprising a plate having two right angle edges and a slot parallel with one of said edges to form parallel bars, the bar at the inner side of the slot having a scale and said plate also having a series of parallel bars and slots that extend at right angles with respect to the scale bar.

[Claims 6 and 7 not printed in the Gazette.]

1,155,060. SAWING-MACHINE. DAVID HEGGIE, Lorain, Ohio, assignor to National Tube Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Jan. 21, 1915. Serial No. 3,526. (Cl. 29—70.)



1. In a conveyer, the combination with a series of lengthwise parallel conveyer chains, said series of chains having a saw at each side thereof and means for intermittently actuating said chains in transferring materials supported thereon from one to the opposite end thereof, of lifting troughs arranged to lift materials from said chains into cutting engagement with said saws, means for actuating said lifting troughs, a roller table between the ends of said series of chains, arranged to move materials supported on said chains lengthwise in positioning said materials on the chains and means for actuating said roller table.

2. In a conveyer, the combination with a series of lengthwise parallel conveyer chains, said series of chains having a saw at each side thereof and means for intermittently actuating said chains in transferring materials supported thereon from one to the opposite end thereof, of lifting troughs arranged to lift materials from the chains into cutting engagement with said saws, means for actuating said lifting troughs, a roller table between the ends of said series of chains arranged to move materials supported on said chains lengthwise, a stop to engage the end of the lengthwise moving materials in positioning said materials on the chains, and means for actuating said roller table.

3. In a conveyer, the combination with a series of lengthwise parallel conveyer chains, said chains having saws adjacent to two diagonally opposite corners of the series of chains, and means for intermittently actuating said chains in transferring materials supported thereon from one to the other end thereof, of a sectional lifting trough extending lengthwise opposite each of said saws, means for actuating said troughs to lift materials from the chains into cutting engagement with the saws and a roller table extending lengthwise parallel with said sectional lifting troughs, arranged to move materials supported on said chains lengthwise to position the materials thereon.

4. In a conveyer, the combination with a series of lengthwise parallel conveyer chains having saws adjacent to two diagonally opposite corners of said series of chains, and means for intermittently actuating the chains in transferring materials supported thereon from one to the other end thereof, of sectional lifting troughs extending lengthwise opposite said saws, means for actuating said troughs to lift materials from the chains into cutting engagement with said saws and a roller table extending lengthwise parallel with said sectional lifting troughs, said table being arranged to move materials supported on said chains lengthwise to position the materials thereon and a stop to engage the end of the lengthwise moving materials.

5. In a conveyer, the combination with a series of lengthwise parallel notched conveyer chains having saws adjacent to two diagonally opposite corners of said series of chains, and means for intermittently actuating said chains in transferring materials supported thereon from one to the other end thereof, of sectional lifting troughs extending lengthwise opposite said saws, means for actuating said troughs to lift materials from the notched chains into cutting engagement with the saws and a roller table extending between and lengthwise parallel with said sectional lifting troughs, said troughs being arranged to move materials supported on said chains lengthwise to position the materials thereon and an adjustable stop to engage the end of the materials.

[Claims 6 to 9 not printed in the Gazette.]

1,155,061. MACHINE-GUN. AUGUST ALBERT KARL HEINEMANN, Berlin, Germany, assignor to Deutsche Waffen- und Munitionsfabriken, Berlin, Germany. Original application filed Aug. 7, 1913, Serial No. 783,471. Divided and this application filed Feb. 25, 1914. Serial No. 820,806. (Cl. 89—42.)



1. In a gun, the combination of a muzzle, and means located adjacent to the discharge end thereof and arranged to permit a free expansion in one direction of the gases escaping from said muzzle after firing a shot and to arrest the expansion of said gases in the opposite direction whereby a bucking of the muzzle is prevented.

2. In a gun, the combination of a muzzle and means located beneath the same and extending forwardly beyond the discharge end of said muzzle, said means being arranged to permit a free expansion in an upward direction of the gases escaping from said muzzle after firing a shot and to arrest the expansion of said gases in a downward direction whereby a bucking of the muzzle is prevented.

3. In a gun, the combination of a muzzle, a sleeve surrounding said muzzle at a distance at the discharge end thereof and a trough-shaped projection extending from said sleeve below and in front of said discharge end against which the gases escaping from said muzzle after firing a shot are arranged to impact whereby a bucking of the muzzle is prevented.

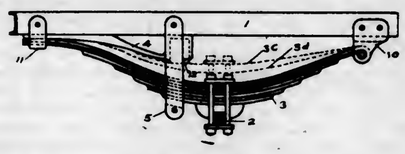
4. In a gun, the combination of a muzzle, a detachable sleeve surrounding said muzzle at a distance at the discharge end thereof and provided in its upper portion with a radially disposed escape aperture and a trough-shaped projection extending from said sleeve below and in front of said discharge end against which the gases escaping

from said muzzle after firing a shot are adapted to impact whereby bucking of the muzzle is prevented, said gases being free to escape through said aperture.

5. In a gun, the combination of a muzzle, a projection located below and in front of the discharge end thereof, said projection being arranged to permit a free expansion in an upward direction of the gases escaping from said muzzle after firing a shot and to arrest the expansion of said gases in a downward direction whereby bucking of the muzzle is prevented, means for connecting said projection with said mussle, a ring located on said means and pivotal connecting means extending from said ring.

[Claim 6 not printed in the Gazette.]

1,155,062. MOTOR-VEHICLE SPRING-MOUNTING. CHARLES L. HEISLER, Schenectady, N. Y. Filed Jan. 9, 1912. Serial No. 670,172. (Cl. 21—50.)



1. The combination with an axle and a vehicle supported thereby, of a main spring comprising a long and short end section formed of a plurality of flat flexible spring leaves, a vehicle frame, means for coupling the spring to said frame, and a safe flexure limit member attached to said vehicle and adapted to engage the long section of the spring and aid the spring in giving an increasing resistance to support a corresponding increase of load, to cause the spring to bend gradually under load and remain within its safe flexure limits.

2. The combination with an axle and a vehicle supported thereby, of a main spring comprising a long and short end section formed of a plurality of flat flexible spring leaves, a vehicle frame, means for coupling the spring to said frame, a safe flexure limit member attached to said vehicle and adapted to engage the long section of the spring and aid the spring in giving an increasing resistance to support a corresponding increase of load, to cause the spring to bend gradually under load and remain within its safe flexure limits; and means adapted to attach the axle to said spring at a point between the long and short end sections thereof.

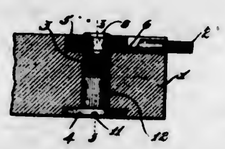
3. The combination with an axle and a vehicle supported thereby, of a flat leaf spring attached near its middle to the axle, of a main-frame mounted upon the spring, and connected thereto; a safe flexure limit member attached to said vehicle, and arranged to prevent unsafe and excessive flexure of the spring, and which will cause it to gradually bend to a form pre-determined by said limit member and with an increasing resistance which opposes a corresponding increase of load, a cushion bumper attached to said vehicle, and arranged at some distance horizontally from said axle in a manner to cause the remaining portion of the spring, that is not in contact with the limit member, to resiliently carry the extreme maximum load with safety, because of the advantageous leverage given to the spring by the location of said bumper.

4. The combination, with an axle and a vehicle supported thereby, of a main spring comprising a long and short end section formed by a plurality of flat flexible spring leaves, a vehicle frame attached to and supported by said spring, means for coupling the spring to the frame, a safe flexure limit member attached to said vehicle and adapted to engage with the long end section of the main spring and aid it in giving an increasing resistance to support a corresponding increase of load, and to cause the spring to bend gradually under load and remain within its safe flexure limits, the opposite short end section of the main spring being formed and adapted to engage with said means for coupling, and a plurality of flat flexible spring leaves forming the long end section extending under the limit member for a major portion of said long end section's length.

5. The combination, with an axle and a vehicle supported thereby, of a main spring, comprising a long and short end section formed of a plurality of flat flexible spring leaves, means for attaching the main spring to an axle between said sections, a vehicle frame mounted upon the spring and connected thereto; a safe flexure limit member attached to said vehicle and engaging with the long end section of the spring, a cross-spring coupled to the opposite, short end section, of the main spring with the axle interposed between the cross spring and said flexure limit member, and means for attaching said cross spring to the vehicle frame.

[Claims 6 to 8 not printed in the Gazette.]

1,155,063. PIGTAIL-BRUSH. JOHN HETHERINGTON, Newark, N. J., and CHARLES E. CHAPIN, New York, N. Y.; said Hetherington assignor to said Chapin. Filed Jan. 17, 1911, Serial No. 603,063. Renewed May 1, 1915. Serial No. 25,808. (Cl. 200—26.)



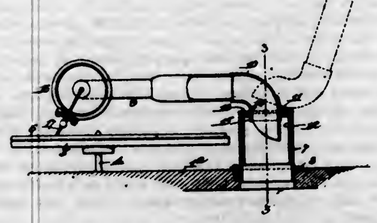
1. A pig-tail brush comprising a block of easily frangible conducting material, such as carbon, having a hole therethrough, a terminal post having a head bearing upon one side of said block and a threaded shank extending through said hole, a metallic conductor having a terminal portion surrounding said shank, and a nut screwed upon said shank and pressing said conductor terminal tightly against said block, said shank being constructed to be expanded within but not below said nut into locking relation to said nut by pressure exerted within the periphery of said shank, whereby no strains either of vertical or of lateral pressure or shock are left in said block.

2. A pig-tail brush comprising a block of easily frangible conducting material, such as carbon, having a hole therethrough, a terminal post having a head bearing upon one side of said block and having a threaded shank extending through said hole and hollowed out at its end within said threaded portion to provide a relatively thin thread-carrying wall, a flexible conductor having a terminal portion surrounding said shank, and a nut screwed upon said shank and pressing said conductor terminal tightly against said block, said thread-carrying wall being outwardly forced in and above said nut into retaining relation thereto.

3. A pigtail brush comprising a block of easily frangible conducting material such as carbon having a hole therethrough near one end and with a recess in said block larger than said hole at each end thereof and having a lateral hollowed extension from one of said recesses through one side of said block, a metallic terminal post extending through and fitting in said hole in said block and having a head lying in and wholly contained in the recess at one side of said block, said post having a screw-threaded end lying substantially within the recess at the other side of said block, a flexible conductor having a terminal portion lying in said latter recess and the said lateral extension from said recess and surrounding said terminal post, a nut having a threaded hole therein and screwed upon the threaded end of said post over said latter terminal and holding the same upon the bottom of said recess and entirely inclosed within said recess, the threaded end of said terminal post being hollowed out whereby a relatively thin wall is left at the extreme upper edge of said terminal post, the metal of said thin wall at the extreme upper end of said post being outwardly forced whereby the pressure exerted by said outwardly upset end is transmitted to said nut in a direction radial to said post.

4. A pigtail brush comprising a block of easily frangible conducting material such as carbon, having a hole therethrough near one end and with a recess in said block larger than said hole at each end thereof and having a lateral hollowed extension from one of said recesses through one side of said block, a metallic terminal post extending through and fitting in said hole in said block and having a head lying in and wholly contained in the recess at one side of said block, said post having a screw-threaded end lying substantially within the recess at the other side of said block, a flexible conductor having a terminal portion lying in said latter recess and the said lateral extension from said recess and surrounding said terminal post, a nut having a threaded hole therein and screwed upon the threaded end of said post over said latter terminal and holding the same upon the bottom of said recess and entirely inclosed within said recess, said nut having a slot in its upper face communicating with said hole in the nut, the threaded end of said terminal post being hollowed out whereby a relatively thin wall is left at the extreme upper edge of said terminal post, the metal of said thin wall at the extreme upper end of said post being outwardly forced and partly into the said slot in said nut, whereby the pressure exerted by said outwardly upset end is transmitted to said nut in a direction radial to said post and the metal forced into said slot locks the nut from accidental removal.

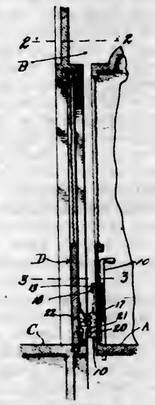
1,155,064. TONE-ARM CONNECTION FOR TALKING-MACHINES. WILLIAM H. HOSCHKE, New York, N. Y., assignor to Crescent Talking Machine Company, Inc., a Corporation of New York. Filed Jan. 3, 1914. Serial No. 810,144. (Cl. 181—3.)



In a talking machine the combination with a sound diffuser, and a sleeve communicating therewith, of a tubular sound arm, an extension to the arm, an end plate for the extension, a hinge carried by the end plate and attached to the tone arm, an opening in the end plate through which the end of the tone arm projects, a skirt carried by the end plate and forming a close contact with the end of the tone arm, and a flange on the extension, said flange resting on the sleeve.

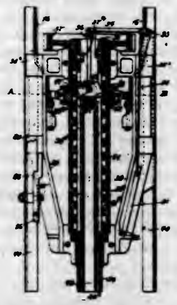
1,155,065. CONTROLLING MECHANISM FOR ELEVATOR-CARS. ALBERT W. HUBBEL, New York, N. Y. Filed Nov. 2, 1914. Serial No. 869,913. (Cl. 187—47.)

The combination with an elevator car, an elevator shaft, and a landing door; a controller mounted on the car, a vertically movable rack bar slidably mounted on the car and connected to said controller, a detent pivoted to the elevator adjacent said landing door, a roller on said detent engaging the surface of said door, said door being provided with a cam portion, a guide strip carried by said door, and a second roller on said detent engaging the inside of said guide strip, whereby said detent is moved



into and out of operative position as the door is opened and closed.

1,155,066. MACHINE FOR LEVELING COAL IN BEE-HIVE COKE-OVENS. JOHN H. HUHN, Fairmont, W. Va. Filed Mar. 5, 1910. Serial No. 547,441. (Cl. 193—19.)



1. In a coal leveling machine, the combination substantially as hereinbefore described, of a movable truck; a vertical frame mounted on the truck; a suitable yoke arranged to be raised and lowered within suitable guides at one end of the vertical frame; a hollow cylindrical, or leveling shaft, provided with slotted openings on either side at the top, rotating in bearings in the yoke; means for rotating the leveling shaft within the yoke; a hollow sleeve surrounding the leveling shaft, and rotating loosely in the yoke around the shaft; leveling arms attached to the bottom of the leveling shaft, arranged to be spread laterally; a vertically moving shaft or plunger within the leveling shaft for spreading or closing the leveling arms; a cross-head attached to the top of the plunger, the ends of which slide in the slotted openings in the leveling shaft, and move in a spiral pathway in the interior of the sleeve whereby when the sleeve is held stationary, the shaft is rotated, the plunger is raised or lowered by the movement of the cross-head, and means for preventing the sleeve from rotating and causing the plunger to ascend or descend within the leveling shaft, and its lower end to engage with and close or spread the leveling arms.

2. In a coal leveling machine, the combination, substantially as hereinbefore described, of a movable truck; a vertical frame mounted on the truck; a suitable yoke arranged to be raised and lowered within suitable guides at one end of the vertical frame; a hollow cylindrical, or

leveling shaft, provided with slotted openings on either side at the top, rotating in bearings in the yoke; means for rotating the leveling shaft within the yoke; a hollow sleeve surrounding the leveling shaft; and rotating loosely in the yoke around the shaft; leveling arms attached to the bottom of the leveling shaft, arranged to be spread laterally; a vertically moving shaft or plunger within the leveling shaft for spreading or closing the leveling arms; a cross-head attached to the top of the plunger, the ends of which slide in the slotted openings in the leveling shaft; and move in a spiral pathway in the interior of the sleeve, whereby when the sleeve is held stationary the shaft is rotated, the plunger is raised or lowered by the movement of the cross-head; means for preventing the sleeve from rotating and causing the plunger to ascend or descend within the leveling shaft, and its lower end to engage with and close or spread the leveling arms, and means for raising the yoke and its contained mechanism, substantially as described.

3. In a coal leveling machine the combination, substantially as hereinbefore described, of a movable truck; a vertical frame mounted on the truck; a suitable yoke arranged to be raised and lowered within suitable guides at one end of the vertical frame; a hollow cylindrical, or leveling shaft, provided with slotted openings on either side at the top, rotating in bearings in the yoke; a gear wheel at the top of said shaft engaging with suitable driving mechanism for rotating the leveling shaft within the yoke; a hollow sleeve surrounding the leveling shaft, and rotating loosely in the yoke around the shaft; leveling arms attached to the bottom of the leveling shaft, arranged to be spread laterally; a vertically moving shaft or plunger within the leveling shaft for spreading or closing the leveling arms; a cross-head attached to the top of the plunger, the ends of which slide in the slotted openings in the leveling shaft, and move in a spiral pathway in the interior of the sleeve whereby when the sleeve is held stationary, the shaft is rotated the plunger is raised or lowered by the movement of the cross head, and means for preventing the sleeve from rotating and causing the plunger to ascend or descend within the leveling shaft, and its lower end to engage with and close or spread the leveling arms, and means for raising the yoke, and its contained mechanism, substantially as described.

4. In a coal leveling machine the combination with a vertical frame carrying leveling mechanism, of a yoke arranged to slide thereon, a device connected with the yoke arranged to engage with and limit movement of the yoke upon the frame, and means for disengaging the same from the yoke at will.

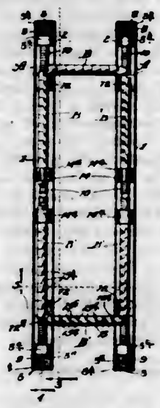
5. In a coal leveling machine, the combination with a vertical frame carrying leveling mechanism, of a yoke arranged to slide thereon, a dog pivoted upon the frame, arranged to engage therewith and limit the downward movement of the sliding yoke upon the frame, a spring for keeping the dog in an extended position and in engagement with the yoke, and a lever for retracting the same at will.

[Claims 6 to 9 not printed in the Gazette.]

1,155,067. BINDER. WILLIAM GIFFORD JONES, Oak Park, Ill., assignor to Accounting Devices Company, Evanston, Ill., a Corporation of Illinois. Filed Jan. 29, 1915. Serial No. 4,991. (Cl. 129—41.)

1. In a binder, the combination of a pair of cover-sections, a pair of hollow clamping-members having their inner sides adapted to clamp the leaves and said members being provided near their rear edges with lateral openings and bearings thereat for flexible posts, right-and-left threaded screw-rods disposed within said clamping-members near the front edges thereof, flexible binding-posts passing about said bearings and having their end-portions housed within said clamping-members back of said screw-rods, and nuts on said screw-rods connected with the extremities of said flexible binding-posts.

2. In a binder, the combination of a pair of cover-sections, a pair of hollow clamping-members connected therewith and of elongated cross-section to lie in the same plane with the cover-sections in their closed condition, said clamping-members having binding-post bearings at their inner sides, flexible binding-posts extending through said bearings and connecting the clamping-members and having end-portions extending into the clamping-members, nuts within the clamping-members and attached to the ends of the flexible binding-posts, and actuating screw-rods for the nuts journaled in said clamping-members and disposed between the cover-sections and the housed portions of the binding-posts.



3. In a binder, the combination of a pair of hollow clamping-members of elongated cross-section and provided at their inner sides near their rear edges with longitudinal slots, bearings extending across said slots, flexible binding-posts connecting the clamping-members and extending about said bearings and into the clamping-members, nuts having rearwardly-extending portions to which the ends of the binding-posts are attached, and actuating screw-rods journaled in said clamping-members in front of the housed portions of the binding-posts.

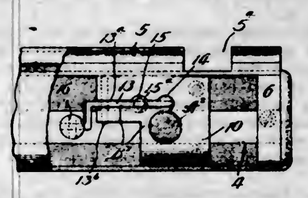
4. In a binder, the combination of a pair of cover-sections, a pair of hollow clamping-members of elongated cross-section and lying in the planes of the cover-sections, when the cover-sections are closed, hinge-connections between the cover-sections and clamping-members, nuts movable longitudinally within the clamping-members, actuating screw-rods journaled in the clamping-members and disposed in the rear of said hinge-connections, flexible binding-posts having portions extending through lateral openings into said clamping-members and disposed in the rear of said actuating screw-rods and attached to rearward extensions of said nuts, and bearings at said openings in said clamping-members about which said flexible posts pass.

5. In a binder, the combination of hollow clamping-members equipped at their inner sides with bearings arranged in oppositely-disposed pairs, chain binding-posts each composed of a single series of close-jointed links of substantially circular cross-section and extending about said bearings and into the clamping-members, and take-up mechanisms in said clamping-members to which the extremities of said chains are attached.

[Claims 6 to 21 not printed in the Gazette.]

1,155,068. BINDER. WILLIAM GIFFORD JONES, Oak Park, Ill., assignor to Accounting Devices Company, Evanston, Ill., a Corporation of Illinois. Filed Jan. 29, 1915. Serial No. 4,992. (Cl. 129—12.)

1. In a binder, the combination with a lower clamping-member equipped with a binding-post rising therefrom, and an upper clamping-member having a post-receiving perforation, of a plug within said upper clamping-member provided with a post-bore and an intersecting inclined ball-bore, a lever pivotally mounted within said plug and adapted to elevate said ball, and a push-button pivotally connected with said lever and projecting through the upper wall of the upper clamping-member and serving to actuate said lever.



2. In a binder, the combination with a hollow clamping-member having a post-receiving perforation therethrough, of a plug therein insertible from the end of the clamping-member and having a vertical post-bore registering with said perforation and having also an inclined ball-runway intersecting said post-bore, a lever mounted in said plug and having upper and lower furcations engaging said ball, a thumb-piece for said lever accessible from the top side of said hollow clamping member, and a coil spring disposed in a socket in said plug and confined between said lever and the upper wall of the clamping-member and serving normally to force said ball to the locking position.

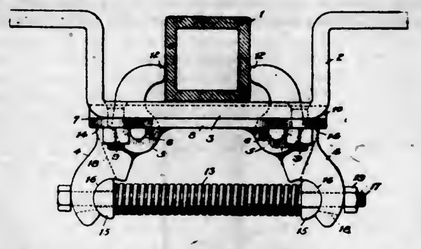
3. In means of the character set forth, the combination of a tubular binding-member provided with a vertical post-receiving perforation, of a plug in said binding-member insertible from the end of the clamping-member and provided with a registering post-receiving perforation and an intersecting inclined runway, a ball in said runway, a lever pivoted in a longitudinal slot in said plug and having upper and lower furcations engaging said ball, a spring confined in a socket in said plug and engaging said lever between the ball and the lever pivot and having its upper end bearing against the upper wall of said tubular binding-member, and a push-button pivotally connected with said lever and projecting through a vertical perforation in the upper wall of said clamping-member.

4. In a binder, a hollow clamping-member comprising a sheet-metal member bent into hollow form, the edge portions of the metal being left separated at the inner side of the hollow member to afford a longitudinal slot, the metal at the inner edge of the hollow member being curved to form a hinge-eye, end-caps closing the ends of said hollow member, and plugs within said hollow member equipped with locking-devices and having perforations registering with vertical perforations extending through said hollow member.

5. In a binder, a hollow clamping-member comprising a sheet-metal member bent into hollow form, the metal at the inner edge of the hollow member being curved to form a hinge-eye, and the edges of the sheet-metal member being separated to provide a longitudinal slot at the inner side of the hollow member, plugs secured in the hollow member some distance from the ends thereof, posts secured in said plugs and projecting upwardly through said slot, and end-caps for the hollow member.

1,155,069. COUPLING-CENTERING DEVICE. WILLIAM KELSO, Pittsburgh, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 8, 1915. Serial No. 26,755. (Cl. 213—42.)

1. In a device of the character indicated, the combination with a coupler carrier which is adapted to supportingly engage a car coupler so as to permit the latter to shift laterally with respect to said carrier in either direction from a central position, of a plurality of independently movable levers pivotally connected to said carriers and adapted to be actuated by said coupler, spring means interposed between said levers, and means whereby when the coupler upon shifting laterally actuates one of said levers another of said levers is restrained from rotation to thereby energise the said interposed spring means between such levers.



2. In a device of the character indicated, the combination with a coupler carrier which is adapted to supportingly engage a car coupler so as to permit the latter to shift laterally with respect to said carrier in either direction from a central position, of a plurality of independently movable levers mounted on the carrier, and spring means interposed between said levers below said carrier, each of said levers being adapted to engage the coupler and each being movable by said coupler in but a single direction and being movable by said spring means in the opposite direction.

3. In a device of the character indicated, the combination with a coupler carrier which is adapted to supportingly engage a car coupler so as to permit the latter to shift laterally with respect to said carrier in either direction from a central position, of a plurality of independently movable levers pivotally connected to said carrier, one arm of each of said levers extending upwardly above the coupler supporting face of said carrier and the other arm of each extending downwardly, and a spring interposed between the downwardly extending arms of said levers and adapted to be energized when either of said levers is actuated independently of the other.

4. In a device of the character indicated, the combination with a coupler carrier which is adapted to supportingly engage a car coupler so as to permit the latter to shift laterally with respect to said carrier in either direction from a central position, of means located below the coupler engaging face of the carrier constituting connections whereby levers may be pivotally connected to said carrier, a plurality of levers extending above and below the coupler engaging face of the carrier aforesaid, and adapted to be engaged and actuated by the coupler, and a laterally extending spring interposed between the lower portions of said levers.

5. In a device of the character indicated, the combination with a coupler carrier which is adapted to supportingly engage a coupler and which is provided on its under side with means whereby a plurality of levers may be pivotally connected to said carrier, of a plurality of levers pivotally connected to said carrier and each of which extends both above and below the coupler engaging face of said carrier, a spring interposed between said levers below the said carrier, and means for preventing said levers from rotating simultaneously in the normal operation of the device.

[Claims 6 and 7 not printed in the Gazette.]

1,155,070. FILLING-TUBE FOR GASOLENE-RECEPTACLES. LOUIS KRASLER, Chicago, Ill. Filed Sept. 24, 1914. Serial No. 863,282. (Cl. 220—121.)

1. In a filling tube of the character described, the combination of an outer tube provided with openings in its wall below its outer end, and a relatively short inner tube having an external flange about its inner end fitting and secured in the outer tube below said openings to close them to the interior of the outer tube and forming an air passage between the tubes.

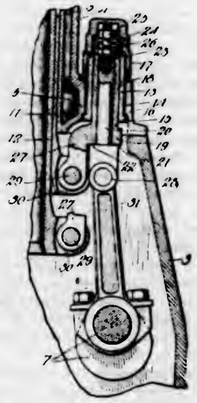
2. In a filling tube of the character described, the combination of an outer tube provided with openings in its wall below its outer end, and a relatively short inner

tube having an external flange about its inner end fitting and secured in the outer tube below said openings to close them to the interior of the outer tube, and air-passage-forming ribs extending outwardly from the flange.



3. In combination with a holder of the character described, a filling tube supported to depend therein and comprising an outer tube having a gauze-covered inner end, gauze-covered openings near said end, and gauze-covered openings toward its outer end, and a relatively short inner tube having an external flange about its inner end fitting and secured in the outer tube below said last-named openings therein to close them to the interior of the outer tube, and air-passage-forming ribs extending outwardly from the flange.

1,155,071. CONNECTING MEANS FOR INTERNAL-COMBUSTION MOTORS. CHARLES Y. KNIGHT, Chicago, Ill. Filed Jan. 25, 1915. Serial No. 4,082. (Cl. 121—97.)



1. In an internal combustion engine, the combination of a port controlling element; an eccentric shaft; a vertical guide parallel with the path of travel of the port controlling element and substantially directly over the eccentric shaft; a member slidably mounted in the guide and operatively connected with the eccentric shaft; and a laterally extending arm on said member operatively connected with the port controlling element.

2. In an internal combustion engine, the combination of a port controlling element; a guide parallel with and at one side of the path of travel of the port controlling element; an eccentric shaft substantially opposite one end of said guide; a member slidably mounted in said guide and having one of its ends operatively connected with said eccentric shaft and said port controlling element.

3. In an internal combustion engine, the combination of a port controlling element, an eccentric shaft; a guide adjacent the port controlling element; and a member made up of two parts secured together and slidably mounted in said guide, one of said parts being operatively connected with the eccentric shaft and the other of said parts being connected with the port controlling element.

4. In an internal combustion engine, the combination of a port controlling element; an eccentric shaft; a guide adjacent the port controlling element; a member made up of two parts and slidably mounted in said guide, one of said parts being operatively connected with the eccentric shaft and the other of said parts being connected with the port controlling element; and a detachable connection between the two parts of said member.

5. In an internal combustion engine, the combination of a port controlling element; an eccentric shaft; a guide adjacent the port controlling element; a member made up of two parts and slidably mounted in said guide, one of said parts being operatively connected with the eccentric shaft and the other of said parts being connected with the port controlling element; and a detachable connection between the two parts of said member, there being a point in said detachable connection weaker than any other point in the members between the eccentric shaft and the port controlling element.

[Claims 6 to 12 not printed in the Gazette.]

1,155,072. GARMENT-CLASP. WALDEMAR KOPS, New York, N. Y. Filed Apr. 23, 1913. Serial No. 762,976. (Cl. 24—227.)



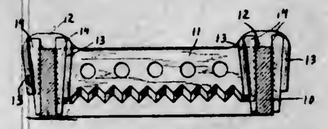
1. A clasp comprising a plate, a hook bent to form an incomplete circle and attached thereto, a second plate and a curved tongue connected thereto substantially equal in length to the diameter of the curved portion of the hook and having an opening forming an eye therein with which the said hook is adapted to engage.

2. A clasp comprising a plate, a hook bent to form an incomplete circle and attached thereto, a second plate and a curved tongue connected thereto substantially equal in length to the diameter of the curved portion of the hook and having an opening forming an eye therein with which the said hook is adapted to engage, and when the parts are engaged the end of the hook and the convex side of the tongue lie on the same side of the plates to which the said hook and tongue are attached.

3. A clasp comprising a plate, a hook bent to form an incomplete circle and attached thereto, a second plate and a curved tongue connected thereto and extending therefrom a distance substantially equal to the diameter of the circle in which the said hook is formed and having an opening forming an eye substantially equal in length to the radius of the circle on which the said hook is formed so that when the parts of the clasp are associated and the outer surface of the hook engages the fabric to which the eye plate is attached, the end of the tongue having the eye therein engages the fabric to which the said hook plate is attached to prevent the separation of the parts except when moved to a position at a relatively large angle to one another.

1,155,073. SAND-BAR FOR MOLDERS' FLASKS. ERNEST KRUMM, Milwaukee, Wis. Filed July 1, 1912. Serial No. 706,846. (Cl. 22—111.)

1. A sand retaining bar for flasks provided with hooks at its ends to receive the side pieces of a flask section, flanges projecting from the hook members on opposite sides of the openings thereof and at an angle with relation to each other, and wedge blocks fitting between the flanges and the side pieces of the flask.



2. A sand retaining bar for molders' flasks, comprising a bar member provided with flanged hook-like ends, the flanges on opposite sides of the openings of the hook-like ends being converging with relation to each other, and wedge blocks for fitting between the flanges and the part engaged by the hook-like ends.

1,155,074. AIR-OPERATED FIGURE. LEWIS A. MAPEL, St. Louis, Mo. Filed June 19, 1915. Serial No. 35,142. (Cl. 46—14.)



1. A device of the character described, comprising a vertical shaft, a body mounted on said vertical shaft and capable of being rotated thereon in a horizontal plane, and connected spiral arms of unequal weight pivoted upon said body and normally standing in general upright position and which are capable of being rotated in vertical planes and of imparting a horizontal rotary movement to said body when said body is moved through the air.

2. A device of the character described comprising a body, and connected spiral arms of unequal weight pivoted upon said body and normally standing in general upright position and which are capable of swinging movements in vertical planes.

3. A device of the character described, comprising a body portion, a vertical shaft revolubly supporting said body portion, a horizontal rod journaled in said body portion, two spiral arms attached to said rod and extending in opposite directions therefrom, and means for securing said first-named rod to a support.

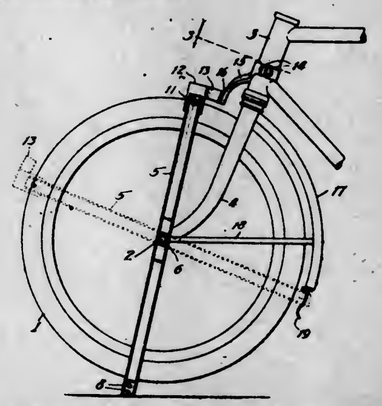
1,155,075. [illegible] ARTHUR V. HERMBRACH, Chicago, Ill. Filed [illegible] 1914. Serial No. 11,389. (Cl. 208—75.)

WITHDRAWN

1. A bicycle support for supporting the front wheel and locking the steering gear of a bicycle, comprising, in combination, a frame arranged to extend upon opposite sides of the wheel and over its periphery, said frame being pivoted upon the wheel axle, and locking means upon said frame for engaging rigid counterpart locking means upon the bicycle frame when said supporting frame is in position to support said bicycle.

2. A bicycle support, comprising, in combination, a frame pivotally mounted upon the axle of the forward wheel of a bicycle, said frame consisting of supporting means adapted when in supporting position to extend downwardly upon opposite sides of the wheel and over its top, and counterpart locking means, upon said supporting frame and the bicycle frame respectively, in position to become engaged when said supporting frame is in a supporting position, to lock the steering gear against rotation.

3. A bicycle support, comprising, in combination, a frame pivotally mounted upon the axle of the forward wheel of a bicycle, said frame consisting of supporting means adapted when in a predetermined operative position to extend downwardly upon opposite sides of the wheel and over its top, locking means upon said supporting frame for engaging counterpart locking means upon the bicycle frame to lock the steering gear against rotation, counterpart locking means upon said bicycle frame for engaging said locking means upon said supporting frame when the latter is in a supporting position, and means for normally holding said supporting frame in a non-supporting and non-locking position.



4. A bicycle support, comprising, in combination, a frame pivotally mounted upon the axle of the forward wheel of a bicycle, said frame consisting of supporting members located upon opposite sides of the wheel, said members being connected at opposite ends, locking means upon one end of said frame for engaging counterpart locking means upon the bicycle frame for locking the steering-gear against rotation when the supporting frame is in a supporting position, and means for engaging said frame to normally hold it in a non-supporting position.

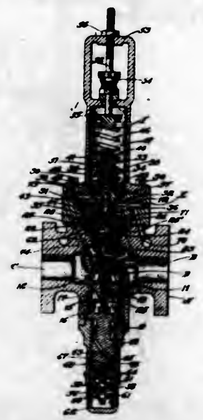
5. A bicycle support for supporting the front wheel of a bicycle and locking the steering-gear, comprising, in combination, a frame having rigidly connected supporting members located upon opposite sides of the wheel, said supporting members being pivoted between their ends upon the wheel axle, locking means upon said frame for engaging rigid stationary counterpart means upon the bicycle frame when said supporting frame is in a predetermined supporting position, stationary means upon the bicycle frame for engaging said locking means when said supporting frame is in a supporting position, and yielding means for normally holding said supporting frame in a non-supporting position.

1,155,076. FEED-PRESSURE REGULATOR. GEORGE S. MELCHER, Sharon, Mass., assignor to Charles W. McConnel, Boston, Mass., Elden Macleod, Westwood, Mass., and Fannie B. Look, Northampton, Mass., trustees doing business under the name of The Mason Regulator Company. Filed Dec. 2, 1914. Serial No. 876,180. (Cl. 103—91.)

1. An excess feed pressure regulator comprising a body having a single flexible diaphragm which has an exposed pressure area on each side thereof, the exposed area of one side being subjected throughout to feed line pressure and the exposed area of the other side being subjected throughout to initial pressure, an auxiliary valve controlled by the movement of said flexible diaphragm, a main valve controlled by said auxiliary valve, and mechanism coöperating with the initial pressure on said diaphragm for exerting an additional pressure thereon.

2. An excess feed pressure regulator comprising a body

having a single flexible diaphragm which has an exposed pressure area on each side thereof, the exposed area of one side being subjected throughout to feed line pressure and the exposed area of the other side being subjected throughout to initial pressure, an auxiliary valve controlled by the movement of said flexible diaphragm, a main valve controlled by said auxiliary valve, mechanism coöperating with the initial pressure on said diaphragm for exerting an additional pressure thereon, and means for regulating the amount of pressure exerted by said additional pressure mechanism.



3. An excess feed pressure regulator comprising a body having a single flexible diaphragm therein, said diaphragm having an exposed area on one side subjected to feed line pressure and an exposed area on the other side subjected to initial pressure, an auxiliary valve operated in one direction by the feed pressure on said diaphragm, a spring coöperating with the initial pressure on the other side of said diaphragm to operate said valve in the other direction, a main valve controlled by said auxiliary valve, and means for regulating the pressure exerted by said spring.

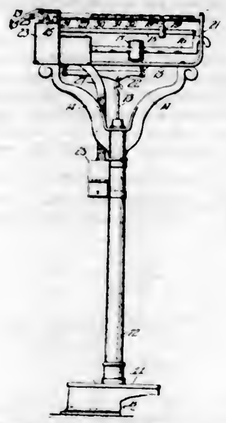
4. An excess feed pressure regulator comprising a body having a flexible diaphragm therein subjected to feed line pressure on one side and to initial pressure on the other side, a main valve, an auxiliary valve, said flexible diaphragm being on one side of said auxiliary valve, pressure mechanism on the other side of said auxiliary valve, and intermediate mechanism by which pressure is transmitted from the pressure mechanism to the diaphragm.

5. An excess feed pressure regulator comprising a body having a flexible diaphragm subjected to feed line pressure on one side and to initial pressure on the other side, a main valve, an auxiliary valve, said flexible diaphragm being on one side of said auxiliary valve, pressure mechanism on the other side of said auxiliary valve, and intermediate mechanism by which pressure is transmitted from the pressure mechanism to the diaphragm, said intermediate mechanism being capable of moving relatively to the auxiliary valve.

[Claims 6 to 17 not printed in the Gazette.]

1,155,077. COIN-OPERATED WEIGHING-SCALE. BERTIS E. MILLS, Chicago, Ill., assignor to Mills Novelty Co., Chicago, Ill., a Corporation of Illinois. Filed Oct. 1, 1913. Serial No. 792,829. (Cl. 194—84.)

1. In a weighing-scale, a scale-beam comprising lower and upper members, a slotted tube extending above said upper member, a rotatable rod housed in said tube and provided with weight-indications normally displayed at the slot, a weight on the lower beam-member and a weight on the upper beam-member, a spring-pressed locking member normally engaging the beam to lock it against movement, a bell-crank pivotally connected at one end with said locking-member and terminating at its opposite end in a pawl, and means connected with said rod for rotating it to turn the indications thereon out of their display-position, and operating to trip said bell-crank to withdraw said locking-member from the beam to unlock it.



2. In a weighing-scale, a scale-beam comprising lower and upper weight-carrying members, a rod provided with normally-displayed weight-indications and rotatably supported above the upper beam-member, a spring-pressed arm having a slot in its upper end and a finger normally engaging the beam to lock it against movement, a bell-crank pivotally connected at one end with said arm at its slot and terminating at its opposite end in a pawl, and a hood secured on said rod and operating by turning it to rotate the rod to turn the indications thereon out of display-position and engage said pawl to turn the bell-crank and depress the arm to withdraw the finger from the beam and unlock it.

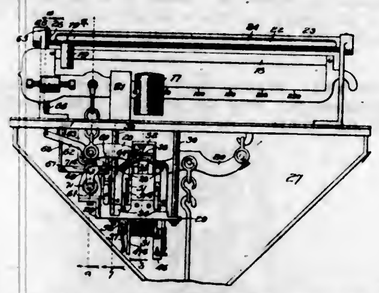
3. In a weighing-scale, a scale-beam comprising lower and upper weight-carrying members, a rod provided with normally-displayed weight-indications and rotatably supported above the upper beam-member, a spring-pressed locking-member normally engaging the beam to lock it against movement, a bell-crank pivotally connected at one end with said locking member and terminating at its opposite end in a pawl, a spring-retracted ratchet-carrying hood secured on said rod and operating by turning it to rotate the rod to turn the indications thereon out of display-position and engage said pawl to turn the bell-crank and depress said locking member from the beam to unlock it, and a push-rod-operated pawl-device coöperating with said ratchet to hold it and release it for permitting the parts to return to normal position.

1,155,078. COIN-OPERATED WEIGHING-SCALE. HERBERT S. MILLS, Chicago, Ill. Filed May 7, 1914. Serial No. 836,993. (Cl. 194—84.)

1. In a weighing-scale, a poising scale-beam, a rod rotatably supported apart from said beam and provided with weight-indications normally out of their display-position, means normally preventing said scale from weighing an object, means connected with said rod for rotating it on the insertion of a coin to turn the indications thereon into and out of their display position, means operating to render inoperative the weighing-preventing means, and arresting mechanism coöperating with said rod-rotating means to temporarily hold the rod, in turning, with said indications in their display-position.

2. In a weighing-scale, a poising scale-beam, a rod rotatably supported apart from said beam and provided with weight-indications normally out of their display-position,

a tube housing said rod and having a slot for the display of said indications, a locking-device normally preventing poising of said beam to weigh an object on the scale-platform, means connected with said rod for rotating it on the insertion of a coin to turn the indications thereon in said tube, means operating to render inoperative the weighing-preventing means, and arresting mechanism actuated by said rod-rotating means to temporarily and releasably hold the rod, in turning, with said indications in their display-position at said slot.



3. In a weighing-scale, a scale-beam comprising lower and upper members, an operating-lever connected with the scale-beam, a rod rotatably supported apart from said beam and provided with weight-indications, weights on the beam-members, a locking-device normally engaging said operating-lever, and means operative on the insertion of a coin connected with said rod for rotating it to turn the indications thereon into and out of their display-position and operating to withdraw the locking-device from said operating-lever.

4. In a weighing-scale, a scale-beam comprising lower and upper members, an operating-lever connected with the scale-beam, a rod rotatably supported apart from said beam and provided with weight-indications, a tube housing said rod and having a slot for the display of said indications, a locking-device normally engaging said operating-lever, and means operative on the insertion of a coin for rotating said rod to turn the indications thereon into and out of their display-position on said tube and operating to withdraw the locking-device from said operating-lever.

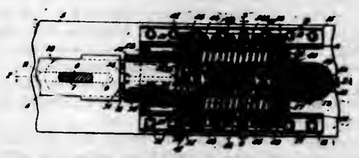
5. In a weighing-scale, a scale-beam comprising lower and upper members, an operating-lever connected with the scale-beam, a rod rotatably supported apart from said beam and provided with weight-indications normally out of their display-position, a tube housing said rod and having a slot for the display of said indications, a spring-pressed locking device normally engaging said operating-lever, means for rotating said rod on the insertion of a coin to turn the indications thereon into and out of their display-position in said tube, means operating to withdraw the locking-device from said operating lever, and arresting-mechanism coöperating with said rod-rotating means to temporarily hold the rod, in turning, with said indications in their display-position at said slot.

[Claims 6 and 7 not printed in the Gazette.]

1,155,079. DRAFT-RIGGING FOR RAILWAY-CARS. WILLIAM H. MINER, Chazy, N. Y. Filed Apr. 18, 1914. Serial No. 832,689. (Cl. 213—64.)

1. In a draft rigging for railway cars, in combination, draft members, upper and lower stop members having vertical openings therein and secured between the draft members, a shell having a spring cage, and friction shell mounted between the draft members, compression resisting elements within the shell, a draw-bar, and means operatively connecting the draw-bar to the compression resisting elements, the spring cage of the shell being received in the vertical openings in the stop members, and secured against longitudinal movement therein.

2. In a draft rigging for railway cars, in combination, draft members, upper and lower stop members having vertical openings therein and secured between the draft members, a shell having a spring cage, and friction shell mounted between the draft members, compression resisting elements within the shell, a draw-bar, and means operatively connecting the draw-bar to the compression resisting elements, the spring cage of the shell being received in the vertical openings in the stop members, and secured against longitudinal movement therein, the friction shell extending forwardly of said openings and being received between the upper and lower stop members.



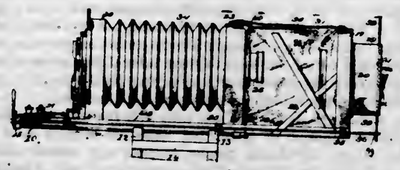
3. In a draft rigging for railway cars, in combination, draft members, stop members, a draft gear shell secured against longitudinal movement in the stop members, a draw-bar, draft links, a key connecting the draft links to the draw-bar, and a rear key connecting the draft links to each other, a rear follower engaged by the rear key and supported thereby, compression resisting elements within the shell, the shell being provided with lateral rearwardly opening slots for the reception of the rear key and by which it is supported.

4. In a draft rigging for railway cars, the combination with draft members, of upper and lower stop members secured thereto and having openings therein, a friction shell having a spring cage connected thereto, the spring cage being received in said openings in the stop members and engaging the edges thereof and the friction shell being extended beyond said openings and between the front portions of said upper and lower stop members, whereby the shell and cage is held stationary, friction devices within said shell, springs within said cage, a rear follower, a draw bar, means connecting said rear follower with the draw bar, the lower one of said stop members being detachably secured to the draft members whereby upon removal of said stop member the shell and cage may be removed.

5. In a draft rigging for railway cars, in combination, draft members, a draft gear shell secured against longitudinal movement between said draft members, a draw-bar, a rear follower, a draft yoke slidingly connected to the draw-bar and engaging the rear follower, compression resisting elements in the shell, the shell having a vertical opening to receive the rear follower.

[Claims 6 and 7 not printed in the Gazette.]

1,155,080. VIGNETTER FOR CAMERAS. SELEST E. MOINE, Tulia, Tex. Filed May 23, 1912. Serial No. 699,276. (Cl. 95—66.)



1. An attachment for cameras comprising an apertured cut-off slide, means for adjusting said slide, a plurality of bendable blending plates, means for detachably supporting said blending plates one at a time at their lower portions on said slide, and means operating against the upper portion of said plates for adjusting the same toward and away from said slide.

2. An attachment for cameras comprising an apertured cut-off slide, means for adjusting said slide, a socket upon said slide spaced below the aperture thereof, a plurality

of blending platea detachably supported one at a time in said socket.

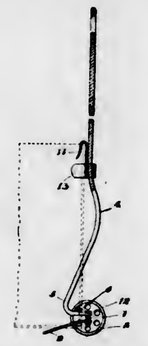
3. The combination with a camera including a supporting frame a lens holder and a support for a sensitised medium of bars slidable relative to said frame and extending in advance of the same, a casing carried by said bars, a blending plate carried by said casing, a shut-off plate carried by said bars, means for coupling said shut-off plate to said lens holder, another shut-off plate carried by said casing and bars and slidable relative to said first-mentioned shut-off plate, and a hood connected to said casing and said lens holder.

4. A camera including a base frame and a lens holder, clips carried by said lens holder, a U-shaped rod engaging said clips, bars slidably engaging said frame and extending in advance of the same, a casing supported upon said bars, a blending plate supported in said casing, and a hood connected to said casing and detachably coupled to said lens holder and supported by said rod.

5. A camera including a base frame and a lens holder, bars slidably connected to said base frame and extending in advance of the same, a support connected to said bars and carrying a blending plate, braces between said support and bars, a hood connected to said support and to said lens holder, and obliquely directed supporting members connected to said braces and to said bars and operating to maintain said hood in distended position.

[Claims 6 to 8 not printed in the Gazette.]

1,155,081. PORTAGE DEVICE FOR ASH-CANS AND THE LIKE. GEORGE MORR, Richmond Hill, N. Y. Filed May 4, 1915. Serial No. 25,679. (Cl. 21—65.)



1. A portage device for ash cans and the like comprising a yoke, composed of separated arms, forwardly bent to form lateral retaining means, continuing into a medial, longitudinal handle bar, a base supporting bail at the free ends of said yoke, and a combined laterally extending upper support and hook slidably mounted upon said handle bar.

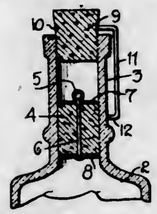
2. A portage device for ash cans and the like comprising a yoke whose opposite arms are mounted on wheels, said arms being forwardly bent to form lateral retaining means, a forwardly extended base supporting bail, a handle, and an upper support adjustable upon said handle.

3. A portage device for ash cans and the like comprising a yoke composed of separated arms, forwardly bent to form lateral retaining means, supporting wheels therefor, a forwardly extended base supporting bail, arranged transversely with relation to the arms of said yoke, a medial handle bar continuing longitudinally from said yoke, a laterally arranged curved support slidable upon said handle bar, and an engaging hook carried by said curved support.

4. In a portage device for ash cans and the like, comprising a yoke whose separated arms merge into a medial, longitudinal handle bar, the combination of a curved cross-piece having a recess to slidably engage said handle bar, a recess closing plate secured to said cross-piece, and an engaging hook carried by said plate; together with wheels and base supporting means connected with the free ends of said yoke arms.

5. A portage device for ash cans and the like, comprising a yoke whose separated arms merge into a medial, longitudinal handle bar, having upper retaining means, said arms being forwardly bent to form lateral retaining means, and the terminal portions of said arms extending rearwardly from their bent portions, a shaft connected to said terminal portions, and lying substantially in a transverse plane in intersecting relation with the longitudinal axis of the handle bar, wheels on said shaft, and a base supporting bail extending forwardly therefrom.

1,155,082. POISON-BOTTLE. MERVIN MOSTOLLER, Stoyestown, Pa. Filed Apr. 21, 1915. Serial No. 22,909. (Cl. 215—113.)



1. The combination with a bottle having a neck, of a plurality of stoppers disposed within the neck, one of said stoppers being located at the mouth of the bottle, and means disposed on the exterior of the said last named stopper whereby the other stopper may be removed.

2. The combination with a bottle having a neck, of a stopper having the same diameter as the neck and normally disposed entirely within the neck, and a stopper normally disposed in the mouth of the bottle normally entirely disconnected and spaced from the first-named stopper and carrying means upon its exterior whereby the first named stopper may be engaged and removed.

3. The combination with a bottle having a neck, of a stopper having the same diameter as the neck and normally disposed entirely within the neck, said stopper having an eye, and a stopper closing the mouth of the bottle and normally entirely disconnected and spaced from the first-named stopper and having attached thereto a shank provided with a hook engageable with the eye.

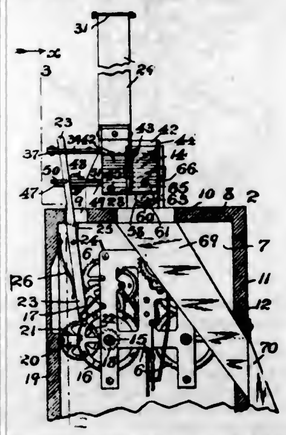
4. The combination with a bottle having a neck, a stopper having the same diameter as the neck and normally disposed entirely therein, said stopper having an eye attached to its upper end, and a stopper attached to the mouth of the bottle and having a member attached thereto and normally disposed exteriorly of the bottle neck, said member having a hooked extremity engageable with said eye to engage the first named stopper.

5. The combination with a bottle having a neck, of a stopper normally disposed entirely within the neck and having an eye, and a stopper normally closing the mouth of the bottle and entirely withdrawable therefrom, and a member hook-shaped at one end, the other end of said member encircling the second named stopper and embedded in the material thereof.

[Claim 6 not printed in the Gazette.]

1,155,083. EXHIBITOR. JOHN J. MOUAWAD, Newark, N. J. Filed Mar. 3, 1915. Serial No. 11,711. (Cl. 40—36.)

1. An exhibitor comprising a casing provided with a window, a train of gears within said casing, a receptacle mounted upon said casing in which cards bearing reading matter are stacked, said receptacle being provided in one side with a card-ejecting opening, an ejector having a portion extending into and movable in said receptacle for ejecting a card into the opening in the side of said receptacle, a card-receiver located at the side of said receptacle and in communication with said opening, said receiver being located also back of the window of said casing, and an angularly disposed element forming part of said card-receiver, and mechanism for raising an ejected card from said angularly disposed element vertically back of said window, both the said ejector and said mechanism being actuated from said train of gears.



2. An exhibitor comprising a casing provided with a window, a train of gears within said casing, a receptacle mounted upon said casing in which cards bearing reading matter are stacked, said receptacle being provided in one side with a card-ejecting opening, an ejector having a portion extending into and movable in said receptacle for ejecting a card into the opening in the side of said receptacle, a card-receiver located at the side of said receptacle and in communication with said opening, said receiver being located also back of the window of said casing, and an angularly disposed element forming part of said card-receiver, and mechanism for raising an ejected card from said angularly disposed element vertically back of said window, both the said ejector and said mechanism being actuated from said train of gears, consisting of a pinion coöperating and actuated from said train of gears, a toothed wheel in mesh with said pinion, a projection extending from said toothed wheel, and a lever fulcrumed in said casing with which said projection is adapted to be brought into active engagement.

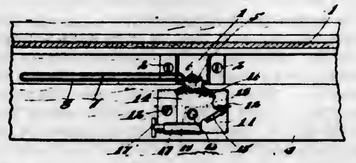
3. An exhibitor comprising a casing provided with a window, a train of gears within said casing, a receptacle mounted upon said casing in which cards bearing reading matter are stacked, said receptacle being provided in one side with a card-ejecting opening, an ejector having a portion extending into and movable in said receptacle for ejecting a card into the opening in the side of said receptacle, a card-receiver located at the side of said receptacle and in communication with said opening, said receiver being located also back of the window of said casing, and an angularly disposed element forming part of said card-receiver, and mechanism for raising an ejected card from said angularly disposed element vertically back of said window, both the said ejector and said mechanism being actuated from said train of gears, consisting of a pinion coöperating and actuated from said train of gears, a toothed wheel in mesh with said pinion, a projection extending from said toothed wheel, and a lever fulcrumed in said casing with which said projection is adapted to be brought into active engagement, for moving said lever in one direction, and a spring within said casing in engagement with said lever for returning said lever to its normal initial position.

4. An exhibitor comprising a casing provided with a window, a train of gears within said casing, a receptacle in which cards bearing reading matter are stacked, means for mounting said receptacle above said casing, said receptacle being provided with a plunger-receiving opening and a card-ejecting opening, a card-receiver at the side of said receptacle back of the said window and beneath the said card-ejecting opening, a pinion coöperating with and actuated from said train of gears, a toothed wheel in mesh with said pinion, a projection extending from said toothed wheel, a lever fulcrumed in said casing with which said projection is adapted to be brought in active engagement for moving said lever in one direction and actuating said plunger to eject a card from said receptacle into said card-receiver, a spring within said casing in engagement with said lever for returning said lever and the card-ejecting plunger to their normal initial positions, and means also actuated from said lever for presenting the ejected card within the card-receiver in reading position back of the window.

5. An exhibitor comprising a casing provided with a window, a receptacle in which cards bearing reading matter are stacked, means for mounting said receptacle upon the casing, said receptacle being provided with a plunger-receiving opening and a card-ejecting opening, an inclined element connected with said receptacle-mounting means, said inclined element being provided with a card-receiver at the side of said receptacle back of the said window and beneath the said card-ejecting opening, a card-ejecting plunger slidably disposed in said plunger-receiving opening of said receptacle for ejecting a card from said receptacle into said card-receiver, a bracket connected with said inclined element, a link oscillatorily mounted upon said bracket, a bar pivotally connected with said link, and a card engaging finger connected with said bar and movably disposed within the card-receiver adapted to be brought into engagement with the ejected card in said card-receiver for bringing said card into reading position back of the window, and a time-controlled means for actuating said plunger and also said oscillatorily mounted link.

[Claims 6 to 12 not printed in the Gazette.]

1,155,084. WINDOW-SASH LOCK. NILS G. NELSON, Oak Park, Ill., assignor to Walter H. Grimm, Chicago, Ill. Filed Feb. 28, 1913, Serial No. 751,276. Renewed Sept. 14, 1914. Serial No. 861,705. (Cl. 16—30.)



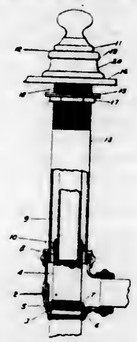
1. In a sash lock, the combination with the upper and lower sashes of a window, of an elongated member pivoted at one end to said upper sash, said elongated member consisting of two parallel portions united at their outer ends, one of said portions being provided with an elongated slot; an oscillatory member on said lower sash; and a projection on said member having a T-formed outer end adapted to engage said slot in said elongated member when the latter is in horizontal position, relative movement of said sashes, when said T-formed projection is in engagement with said elongated member, causing oscillation of said elongated member toward vertical position and interlocking of said projection with said elongated member, substantially as described.

2. In a sash lock, the combination with the upper and lower sashes of a window, of an elongated slotted member hinged at one end to said upper sash; a hook member also on said upper sash adjacent the pivoted end of said elongated member; an oscillatory member on said lower sash; a projection on said oscillatory member having a T-formed outer end adapted to engage said slot in said elongated member, when said oscillatory member is moved to one position and when said elongated member is in horizontal position, relative movement of said sashes, when said T-formed projection is in engagement with said elongated member, causing oscillation of the latter toward vertical position in a plane substantially perpendicular to said

projection and interlocking of said projection with said elongated member; and an engaging flange on said oscillatory member adapted, when the latter is turned to another position, to engage said hook member on said upper sash to lock said sashes against any relative movement, substantially as described.

3. In a sash lock, the combination with the upper and lower sashes of a window, of a plate mounted upon the meeting rail of the upper sash, a hook extending from said plate toward the meeting rail of the lower sash, an elongated slotted member pivoted at one end to said plate to swing in a plane parallel with the window panes, a lever arm secured to the lower sash, said lever arm being pivoted to swing in a horizontal plane, a flange upon said lever-arm adapted in one position of said lever-arm to engage beneath said hook to lock the sashes in closed position, and a projection of said lever arm having a head with which said slotted member slidably inter-locks in another position of said lever-arm.

1,155,085. BATH OR BASIN WASTE. WILLIAM G. NEWTON, New Haven, Conn., assignor to The Peck Bros. & Co., New Haven, Conn., a Corporation. Filed July 30, 1914. Serial No. 854,055. (Cl. 4—24.)



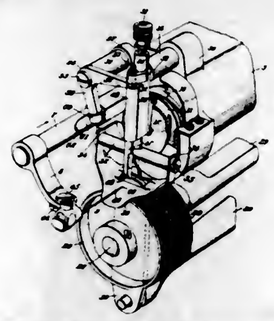
1. A bath or basin waste having a tubular valve stem provided with external threads at its lower end, the diameter of the threaded portion greater than the external diameter of the stem, a tubular valve sleeve internally threaded throughout its length and turned onto the threaded portion of the valve stem, said sleeve externally threaded at its lower end and an internally threaded valve ring applied to the lower end of said sleeve.

2. A bath or basin waste having a tubular valve stem provided with external threads at its lower end, the diameter of the threaded portion greater than the external diameter of the stem, a tubular valve sleeve internally threaded throughout its length and turned onto the threaded portion of the valve stem, said sleeve externally threaded at its lower end and an internally threaded valve ring having seating surfaces at opposite ends applied to the lower end of said sleeve.

3. A bath or basin waste having a tubular valve stem provided with external threads at its lower end, the diameter of the threaded portion greater than the external diameter of the stem, a tubular valve sleeve internally threaded throughout its length and turned onto the threaded portion of the valve stem, said sleeve externally threaded at its lower end, an internally threaded valve ring, and a lock nut threaded on said stem above said sleeve and adapted to be turned into engagement with the upper end of said sleeve, whereby the sleeve is locked to the stem.

4. A bath or basin waste comprising a pipe threaded at its upper end, a bonnet attached to the upper end of said pipe, said bonnet formed at its upper end with an outwardly and downwardly extending flange, a shell surrounding said bonnet over which the flange extends, said shell formed on opposite sides with upwardly projecting lugs which extend inside the flange and upon which the bonnet bears.

1,155,086. NEEDLE-GUARD FOR SEWING-MACHINES. DONALD NOBLE, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Oct. 31, 1913. Serial No. 798,400. (Cl. 112—29.)



1. In a sewing machine, the combination with fabric feeding and stitch-forming mechanisms including a needle-carrying bar, a needle and coacting loop-taker, of a needle-guard and needle-guard controlling member, the latter, through suitable connections including a bell-crank lever operated by said needle-carrying-bar acting to hold said needle against accidental lateral vibration at the time its point is entering the fabric.

2. In a sewing machine, the combination with fabric feeding and stitch-forming mechanisms including a needle-carrying bar arranged in a plane corresponding substantially to the plane in which the fabric is fed to the action of the stitch-forming mechanism, a needle and coacting loop-taker, of a needle-guard and needle-guard controlling member, the latter through suitable connections, acting synchronously with and in a part parallel to the path of movement of said needle-bar to permit said needle-guard to hold said needle against accidental lateral vibration at the time its point is entering the fabric.

3. In a sewing machine, the combination with fabric feeding and stitch-forming mechanisms including a needle-carrying bar, a needle and coacting loop-taker, of a needle-guard and needle-guard controlling member, the latter formed integral with said needle-bar and through suitable connections, acting to hold said needle against accidental lateral vibration at the time its point is entering the fabric.

4. In a sewing machine, the combination with fabric feeding and stitch-forming mechanisms including a needle-carrying bar, a needle, a stationary needle-deflecting element and a loop-taker, of a needle-guard and needle-guard controlling member, the latter, through suitable connections, acting to hold said needle against accidental lateral vibration at the time its point is entering the fabric.

5. In a sewing machine, the combination with fabric feeding and stitch-forming mechanisms including a needle-carrying bar, a needle, a stationary needle deflecting element and a loop-taker, of a needle-guard and needle-guard controlling member, the latter carried by said needle-bar and, through suitable connections, acting synchronously with and in a path parallel to the path of movement of said needle to hold the latter against accidental lateral vibration at the time its point is entering the fabric.

[Claim 6 not printed in the Gazette.]

1,155,087. STEAM-HEATED LAST. WILLIAM H. O'CONNOR, Horseheads, N. Y. Filed July 13, 1915. Serial No. 39,634. (Cl. 12—129.)

1. The combination with a last for boots and shoes having a chamber therein extending into the toe, of a pipe extending through said chamber approximately into the toe of the last.

2. The combination with a last for boots and shoes having a chamber therein extending into the toe, of a pipe extending to approximately the end of said chamber in the toe of the last, and removable from said last.

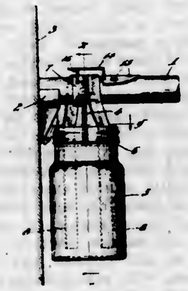
3. The combination with a last for boots and shoes having a chamber therein extending into the toe and closed at its upper end by a removable plug, having an inlet and outlet therein, of a pipe connected to said plug, and extending through said chamber to approximately the end thereof, in the toe of the last.



4. In a last for boots and shoes, having a chamber therein conforming to the outer shape of the last, a removable plug fitted into the upper end of said chamber inlet, inlet and outlet passages therein and a pipe adapted to conform to the inner configuration of said chamber, attached to said plug and registering with the inlet passage therein, and extending through said chamber to the lower end thereof.

5. The combination with a last for boots and shoes having a steam chamber therein, of a pipe extending through said chamber and having a discharge end approximately at the extremity of said chamber which is nearest the sole of the last.

1,155,088. VERMIN-EXTERMINATOR FOR POULTRY-PERCHES. AUGUST ERHARD ODMARK, Muskegon, Mich. Filed July 30, 1914. Serial No. 854,004. (Cl. 119—25.)



1. In a device of the character described, the combination of a perch; an insecticide container arranged below said perch, said container having an inlet opening at its upper side; a wick encircling said perch at a point directly above said container and having its ends immersed in the insecticide contained in said container; and grooves in the upper side of said receptacle leading to said inlet opening, substantially as described.

2. In a device of the character described, the combination of a perch; an insecticide container arranged below said perch; a wick encircling said perch and having its ends immersed in the insecticide contained in said container; and means for securing said wick ends to said container, substantially as described.

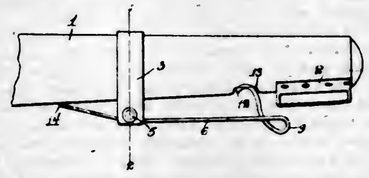
3. In a device of the character described, the combination of a perch; an insecticide container open at its upper end; a closure for said end of said container; and a wick encircling said perch and having its ends passing through openings provided in said closure for immersion in the insecticide contained in said container, substantially as described.

4. In a device of the character described, the combination of a perch; a wick encircling said perch and having its ends immersed in an insecticide; and a protector plate arranged at the upper side of said perch over the encircling portion of said wick, substantially as described.

5. In a device of the character described, the combination of a perch; a wick encircling said perch and having its ends immersed in an insecticide; a protector plate arranged at the upper side of said perch over the encircling portion of said wick; and a prong on said plate engaging the adjacent portion of said wick to lock the same in position, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

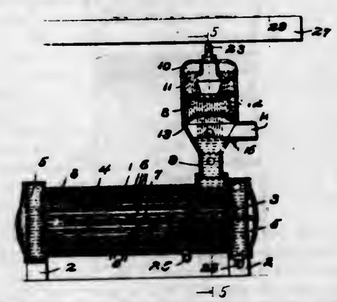
1,155,089. NECK-YOKE ATTACHMENT. ALLEN A. OGDEN, Wolbach, Nebr. Filed Aug. 4, 1913. Serial No. 782,944. (Cl. 21—77.)



1. In combination, a neck-yoke provided with a recess, a band mounted on the neck-yoke adjacent the recess, a supporting pin carried by the band, and a spring retaining element mounted on the pin, said element being bent at each end to yieldingly engage the neck-yoke, one end of the element fitting the recess aforesaid for the purpose specified.

2. A strap fastening device for neck-yokes including a detachable band, a spring arm composed of a single strand of wire carried by the said band, an engaging tongue formed from the said wire strand at one end thereof adapted to normally engage the said yoke for fastening a strap thereto, coils formed from the said wire strand for generating sufficient spring tension to support the said tongue into engagement with the said yoke, and an extension formed from the said wire strand upon the opposite end thereof from that of the said tongue adapted to engage the said yoke for additionally supporting the tongue into engagement therewith, as and for the purpose set forth.

1,155,090. CONDENSING APPARATUS. OSCAR PATRIC OSTBERGREN, Brooklyn, N. Y., assignor of one-half to Edwin Lundgren, New York, N. Y. Filed Oct. 18, 1913. Serial No 795,818. (Cl. 261—2.)



1. The combination with a cooler, of a condenser located on top of the cooler, means for maintaining the cooler and the lower portion of the condenser full of water with a

fixed water level in the condenser, means for forcing the water from the bottom of the cooler into the condenser, means for directing steam into the condenser over the water level in the path of the water therethrough, a means governed by the pressure in the condenser for regulating the speed of the said forcing means, substantially as described.

2. The combination with a cooler, of a condenser in communication therewith, means for drawing water from the cooler and spraying the same into the condenser, means for directing steam into the condenser in the path of the spray and means governed by the pressure in the condenser for regulating the spray, substantially as described.

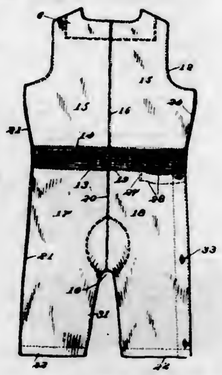
3. The combination with a cooler, of a condenser located on top of the cooler, means for maintaining the cooler and the lower portion of the condenser full of water with a fixed water level in the condenser, a pipe connecting the bottom of the cooler with the top of the condenser, a pump for circulating water therethrough, means in the condenser compelling the water to fall in a spray therethrough, means for directing steam into the condenser over the water level into the path of said spray, and means governed by the pressure in the condenser for regulating the speed of said pump, substantially as described.

4. The combination with a cooler, of a condenser located on top of the cooler, means for automatically maintaining the cooler and the lower portion of the condenser full of water with a fixed water level in the condenser, a pipe connecting the bottom of the cooler with the top of the condenser, a pump for forcing water from said cooler to said condenser, means in the condenser compelling the water to fall in a spray therethrough, means for directing steam into the condenser into the path of said spray, and means controlled by the pressure in the condenser for regulating the speed of said pump, substantially as described.

5. In a device of the class described, a cooler, a superimposed condenser in communication therewith, a pump and connections for drawing water from said cooler and injecting the same into said condenser, a motor for driving said pump, means for directing steam into said condenser, a chamber, a float therein, a barometric column having its lower end in communication with said chamber and its upper end in communication with said condenser, an operative connection between said float and said motor whereby variation of pressure within said condenser will control the operation of said motor, substantially as described.

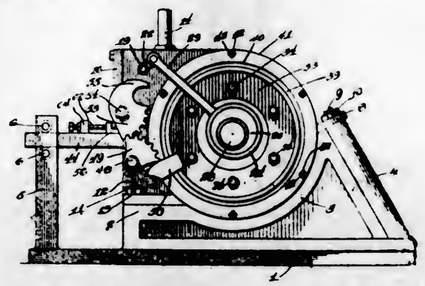
[Claims 6 to 8 not printed in the Gazette.]

1,155,091. MAN'S UNION SUIT. ISIDOR PANITZ, Baltimore, Md. Filed Dec. 26, 1914. Serial No. 879,000. (Cl. 2—144.)



A union under suit for mens wear of non-elastic material consisting of a body and drawer legs together, and having a front vertical opening in the body part, an elastic band 13, extending across the back of said body part, one of the legs provided with a vertical side-opening, and an inelastic band 23, one end of which is secured in the vertical side-seam of the body part and extends therefrom horizontally next below said elastic back-band to which latter it is attached and said inelastic band having a crease or fold 26, crosswise and stitched to form a sort of hinge, and the free end of said band secured across the top of one-half part of one back leg-piece whose vertical free edge 30, closes in contact with the vertical edge 29.

1,155,092. ROTARY ENGINE. CHRISTEN PETERSEN, Davenport, Iowa. Filed Jan. 16, 1914. Serial No. 812,544. (Cl. 121—70.)



1. In a slow-speed rotary engine, a cylinder having inlet and exhaust ports, piston packing rings in said cylinder, a rotary piston in said cylinder, packing rings on said piston engaging said cylinder rings, a shaft carrying the piston, said piston having a peripheral cavity between said rings forming with said cylinder a steam space and provided with a thrust abutment projecting into said space and engaging said cylinder, a cylinder abutment disposed between said inlet and exhaust ports and slidable into said cavity into engagement with said piston, and means operated by said piston for retracting and restoring said cylinder abutment, substantially as described.

2. In a slow-speed rotary engine, a cylinder having inlet and exhaust ports, a rotary piston revoluble in said cylinder and having a peripheral cavity forming with said cylinder a steam space and provided with a thrust abutment projecting into said space and engaging said cylinder, a cylinder abutment disposed between said inlet and exhaust ports and slidable into said cavity into engagement with said piston, a shaft supported solely by said piston and extending through the open ends of said cylinder, and means connected to one of the extended extremities of this shaft operable to control the admission of steam into said steam space.

3. In a slow speed rotary engine, an open ended cylinder having inlet and exhaust ports, a rotary piston revolubly mounted in said cylinder and having a peripheral cavity forming with said cylinder a steam space and provided with a thrust abutment projecting into said space and engaging said cylinder, a cylinder abutment slidably disposed between said inlets and exhaust ports to enter said cavity and engage said piston, shafts above and below said abutment, means carried by one of said shafts to control movement of said abutment, means carried by each of said shafts for mutual engagement, and means carried by said piston for successive contact with each of last said means in retracting and restoring said abutment.

4. In a slow speed rotary engine, an open ended cylinder having inlet and exhaust ports, a rotary piston revolubly mounted in said cylinder and having a peripheral cavity forming with said cylinder a steam space and provided with a thrust abutment, projecting into said space and engaging said cylinder, a cylinder abutment slidably disposed between said inlets and exhaust ports to enter said cavity and engage said piston, shafts above and below said abutment, means carried by one of said shafts to control movement of said cylinder abutment, means carried by each of said shafts for mutual engagement, fixed means on said piston in advance of said piston abutment in the direction of rotation for successive contact with each of last said means in retracting and restoring said abutment, a shaft supported solely by said piston to extend through the open ends of said cylinder, and means operable by said extended shaft to control the admission of steam into said steam space.

5. In a slow speed rotary engine, an open ended cylinder, inlet and exhaust ports therefor, a rotary piston revolubly mounted in said cylinder and having a peripheral cavity forming with said cylinder a steam space, a valve chamber formed in said cylinder and connected with said space by said inlet, a swinging valve mounted in said chamber and covering in its path said inlet, a shaft supported solely by said piston and extending through the open ends of said cylinder, and eccentric means linking said valve to the movement of said shaft to control admission of steam into said steam space.

[Claims 6 to 12 not printed in the Gazette.]

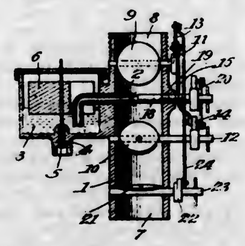
1,155,093. CEREAL FOOD PRODUCT. ISAAC PIESER and CHARLES G. LIVINGSTON, Chicago, Ill. Filed Jan. 11, 1915. Serial No. 1,598. (Cl. 99—11.)

1. A blended cereal food product consisting essentially of oat meal flour and wheat gluten flour in substantially the proportions specified.

2. A blended cereal food product consisting essentially of oat meal flour and wheat gluten flour in the proportion, by weight, of 6 parts of the former to 4 parts of the latter.

3. A blended cereal food product consisting essentially of 6 parts, by weight, of oat meal flour and 4 parts, by weight, of wheat gluten flour having a protein content of upward of 35%.

1,155,094. MIXTURE-PRODUCING DEVICE AND SPEED-GOVERNOR. EMIL PODLEŠÁK, Tiffin, Ohio. Filed Mar. 22, 1913. Serial No. 756,082. (Cl. 123—123.)



1. The combination of an engine provided with a speed responsive device; a carbureter for the engine including an air conduit having fuel feeding device and air valve therein; and means, controlled by the speed responsive device, whereby said valve is actuated only when the speed of the engine is less than a predetermined normal speed.

2. A carbureter for an engine including a throttle valve, an air inlet valve, and a speed responsive device connected with the throttle valve and with the air inlet valve to move the latter toward closed position after the throttle valve is in full open position.

3. A carbureter for an engine including a throttle valve, an air inlet valve, fuel feeding means intermediate said valves, a device for uniting the valves and including a lost motion connection, and means operating through the device to control the action of the throttle during ordinary speed changes and to move the air inlet valve toward closed position upon an abnormal decrease in speed.

4. The combination of an engine, a carbureter connected therewith, and a speed responsive device controlling the carbureter, said carbureter including an air inlet valve, and a connection between the valve and speed responsive device whereby the valve is moved toward closed position as the speed of the engine drops below a predetermined point.

5. The combination of an engine having a carbureter connected therewith and means controlling the carbureter, said carbureter comprising a fuel spraying nozzle, throttle and air inlet valves at opposite sides thereof, and a connection between the valves for permitting simultaneous movement thereof during average speed changes, and independent movement of the air inlet valve during a drop in speed below a predetermined point.

[Claims 6 to 11 not printed in the Gazette.]

1,155,095. ELECTRICAL MEASURING INSTRUMENT. WILLARD E. PORTER, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 25, 1914. Serial No. 863,475. (Cl. 171—95.)



1. In an electrical measuring instrument, the combination with a movable element of a counterbalancing arm and a counterweight arm, and a spring operatively related to said element and adapted to firmly maintain said counterbalancing arm and said counterweight arm in their respective positions.

2. In an electrical measuring instrument, the combination with a movable element of a counterbalancing arm and a counterweight arm positioned substantially at right angles to each other, and a single flat spring operatively related to said element and adapted to firmly maintain each of said arms in its proper adjusted position.

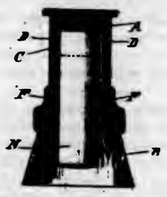
3. In an electrical measuring instrument, the combination with a movable element of a counterbalancing arm and a counterweight arm positioned substantially at right angles to each other, a nut threaded on said counter weight arm, and a spring operatively related to said element and acting on said counterbalancing arm and on said nut whereby each of said arms is firmly maintained in its proper position.

4. In an electrical measuring instrument, the combination with a movable element of two counterbalancing arms positioned substantially at right angles to each other, and a spring carried by said element and adapted to secure each of said arms in its proper position with respect to the element.

5. In an electrical measuring instrument, the combination with a movable member having a longitudinal hole in one end thereof, of a counterweight arm adapted to extend into said hole, a nut threaded on said arm, and resilient means for maintaining the nut in a fixed position with respect to said member.

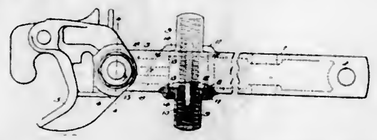
[Claims 6 to 18 not printed in the Gazette.]

1,155,096. SHAVING-BRUSH. RALPH ELIJAH REAMES, Dent, Minn. Filed Jan. 15, 1915. Serial No. 2,428. (Cl. 15—38.)



A shaving brush comprising a hollow cylindrical handle having an annular groove in one end with bristles secured therein, a shell with circumferential threads engaging the threads of the handle, said shell having grooves formed in the inner surface thereof at points diametrically opposite each other, a disk with integral fingers projecting therefrom and engaging said grooves and their inner ends outwardly bent at angles and adapted to engage the inner end of the hollow handle.

1,155,097. DRAFT APPLIANCE FOR RAILWAY-VEHICLES. WILLIAM J. REGAN, Pittsburgh, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 8, 1915. Serial No. 26,772. (Cl. 213—42.)



1. In a draft appliance for railway vehicles, the combination with a coupler head having a rearwardly extending projection and a plurality of rearwardly opening pockets, there being a pocket above and a pocket beneath said projection, of a coupler stem having arms extending into said pockets and having interlocking connection with said projection, means passing through said arms and projection for connecting said coupler head and coupler stem, and coupler centralising means maintained in assembled position by said stem and said projection.

2. In a draft appliance for railway vehicles, the combination with a coupler head having a rearwardly extending projection, of a coupler stem rigidly connected to said head, and centralising means for yieldingly controlling the position of said head and stem, said centralising means being maintained in assembled position by said stem and said rearwardly extending projection of said head.

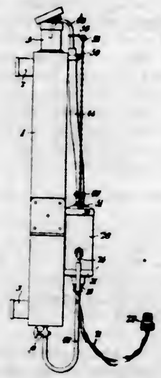
3. In a draft appliance for railway vehicles, the combination with a coupler stem and a coupler head having a rearwardly extending projection, of a spring, and relatively movable followers engaging the opposite ends of said spring and projecting outwardly beyond the corresponding sides of said stem, said followers being adapted to be engaged and guided by said stem and said rearwardly extending projection of said head.

4. In a draft appliance for railway vehicles, the combination with a coupler head having a rearwardly extending projection provided with rearwardly extending stops, of a coupler stem rigidly connected to said head and having forwardly extending stops, followers projecting outwardly beyond the corresponding sides of said stem and adapted to have overlapping engagement with said stops, and a spring interposed between said followers.

5. In a draft appliance for railway vehicles, the combination with a coupler head having rearwardly extending stops formed with inclined faces, of a coupler stem rigidly connected thereto and having forwardly extending stops formed with inclined faces, followers projecting beyond the corresponding sides of said stem and having inclined faces which respectively engage the inclined faces of the stops of said stem and head, and a spring interposed between said followers.

[Claim 6 not printed in the Gazette.]

1,155,098. ELECTRICALLY-OPERATED WATER-HEATER FOR AUTOMOBILE-RADIATORS. EDWIN M. ROSENBLUTH, Philadelphia, Pa. Filed Jan. 2, 1915. Serial No. 3. (Cl. 219—38.)



1. A water heater including an electric heating unit having a closed casing and terminals for connection with an energizing circuit; a casing forming a water chamber surrounding said electric heating unit and having a water inlet tube near the bottom thereof and a water outlet tube at the top thereof; a heat insulating casing including an outer shell surrounding said water chamber, in spaced relation therewith; both of said tubes being in rigid relation with both of said casings; a flexible water inlet tube extending from said rigid inlet tube; a flexible water outlet tube extending from said rigid outlet tube and having at the upper end thereof a hook shaped nozle; and a flexible mechanical connection between said heater casing and said hook nozle, of less length than said flexible water outlet tube; whereby said heater is suspended from said hook nozle without strain upon said flexible tube connections.

2. A water heater including an electric heating unit having terminals for connection with an energizing circuit; a casing forming a water chamber surrounding said electric heating unit and having a water inlet tube near the bottom thereof and a water outlet tube at the top thereof; both of said tubes being in rigid relation with said casing; a flexible water outlet tube extending from said rigid outlet tube and having at the upper end thereof a hook shaped nozle; and a flexible mechanical connection between said heater casing and said hook nozle, of less length than said flexible water outlet tube; whereby said heater is suspended from said hook nozle without strain upon said flexible tube connections.

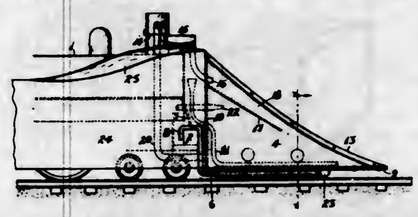
3. A water heater including an electric heating unit having terminals for connection with an energizing circuit, a casing forming a water chamber surrounding said electric heating unit and having a water inlet tube and a water outlet tube; both of said tubes being in rigid relation with said casing; and a flexible water outlet tube extending from said rigid outlet tube and having at the upper end thereof a hook shaped nozle; whereby said heater is suspended from said hook nozle without strain upon said flexible tube connections.

4. A water heater including an electric heating unit having terminals for connection with an energizing circuit; a casing forming a water chamber surrounding said electric heating unit and having a water inlet, at the bottom thereof, and a water outlet at the top thereof; and means arranged to maintain a current of water to, through and from said chamber, including a flexible water outlet tube extending from said outlet and having at the upper end thereof a hook shaped nozle whereby said heater may be suspended and through which the water is discharged.

5. A water heater including a heating unit; a casing forming a water chamber surrounding said unit and having a water inlet at the bottom thereof and a water outlet at the top thereof; and a water outlet tube leading from said casing outlet and having a hook nozle whereby said heater may be suspended and through which the water is discharged.

[Claims 6 to 10 not printed in the Gazette.]

1,155,099. SNOW-PLOW. ANDREW RYAN, Knob, Cal., assignor of one-half to Arthur M. Dean, Redding, Cal. Filed June 26, 1915. Serial No. 36,566. (Cl. 104—103.)



1. In combination with a steam locomotive having a damper in its smoke-stack, a snow plow adapted to be attached to said locomotive, a rod to which said base is secured and having a hooked portion adapted to engage a transverse beam in front of the locomotive to which the cow catcher is normally attached, a pipe leading from said smoke stack below said damper into the interior of said plow, a pipe leading from the lower portion of said interior and discharging into the smoke-stack above said damper.

2. In combination with a steam locomotive having a damper in its smoke-stack, a snow plow adapted to be attached to said locomotive, a curved rod to which said base is secured and having hooked portions adapted to engage a transverse beam in front of the locomotive to which the cow catcher is normally attached, a pipe leading into the interior of said plow from said smoke-stack below said damper, a pipe leading from the lower portion of said interior and discharging into the smoke-stack above said damper, and a rod connected to the lower portion of the snow plow and adapted to slide upon the rails if the plow is depressed.

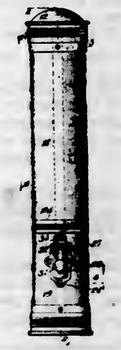
3. In combination with a steam locomotive having a damper in its smoke-stack, a snow plow adapted to be attached to said locomotive comprising a forwardly pointed base, an upwardly pointed rear wall, a central downwardly and forwardly extending ridge uniting the points of said base and rear wall, means for securing the plow to the locomotive, a forwardly and downwardly extending partition from said rear wall, a pipe leading from said smoke stack below said damper, branch pipes leading from said pipe and discharging into the interior of said plow above said partition, pipes leading from the lower portion of said interior and discharging into the smoke-stack above said damper, and a pipe leading from the interior of the plow and discharging upwardly in front of the locomotive.

4. In combination with a steam locomotive having a damper in its smoke-stack, a snow plow adapted to be attached to said locomotive comprising a forwardly pointed base, an upwardly pointed rear wall, a central downwardly and forwardly extending ridge uniting the points of said base and rear wall, means for securing the plow to the locomotive, a forwardly and downwardly extending partition from said rear wall, a pipe leading from said smoke stack below said damper, branch pipes leading from said pipe and discharging into the interior of said plow above said partition, pipes leading from the lower portion of said interior and discharging into the smoke-stack above said damper, and an oil burner for heating the interior of said plow.

5. In combination with a steam locomotive having a damper in its smoke-stack, a snow plow adapted to be attached to said locomotive comprising a forwardly pointed base, an upwardly pointed rear wall, a central downwardly and forwardly extending ridge uniting the points of said base and rear wall, means for securing the plow to the locomotive, a forwardly and downwardly extending partition from said rear wall, a pipe leading from said smoke stack below said damper, branch pipes leading from said pipe and discharging into the interior of said plow above said partition, pipes leading from the lower portion of said interior and discharging into the smoke-stack above said damper, and a longitudinal partition centrally dividing the the interior of the locomotive into chambers and having holes therethrough through which the chambers communicate with each other.

[Claim 6 not printed in the Gazette.]

1,155,100. PORTABLE ELECTRIC FLASH-LIGHT. CHARLES J. SAGEBRECHT, Brooklyn, N. Y., assignor to Interstate Electric Novelty Co., New York, N. Y., a Corporation of New York. Filed Jan. 22, 1914. Serial No. 813,615. (Cl. 240—8.5.)



1. In an electric flash light of the class described, a non-conducting shell or main casing formed of a spirally wound sheet of material, a conductor embedded within said shell between layers thereof, a lamp and reflector on one end of the shell, a battery within the shell having one terminal in connection with the lamp, and manually operative means for connecting said conductor in the lamp and battery circuit to complete the same, said shell or casing being self sustaining, hard, dense and strong.

2. In an electric flash light of the class described, a non-conducting shell or main casing formed of a spirally wound sheet of material, a conductor embedded within said shell between layers thereof, a lamp and reflector on one end of the shell, a battery within the shell having one terminal in connection with the lamp, means electrically connecting one end of said conductor with the other battery terminal, and manually operative means for connecting the said conductor in the lamp and battery circuit to complete the same, said shell or casing being self sustaining, hard, dense and strong.

3. In an electric flash light of the class described, a non-conducting shell or main casing formed of a spirally wound sheet of material, a conductor embedded within said shell between layers thereof, a lamp and reflector on one end of the shell, a battery within the shell having one terminal in connection with the lamp, means electrically connecting one end of said conductor with the other battery terminal, and manually operative means for connecting the said conductor in the lamp and battery circuit to complete the same and comprising a slide on said shell

in electrical connection with said conductor and a second conductor to be engaged by said slide and leading to the lamp, said shell or casing being self sustaining, hard, dense and strong.

4. In an electric flash light of the class described, a non-conducting shell or main casing formed of a spirally wound sheet of material, conductors embedded within said shell between layers thereof and extending inwardly toward each other and separated from each other at adjoining portions, a lamp and reflector on one end of said shell, a battery within the shell in electrical connection with the lamp and the outer ends of said conductors, and manually operative means for connecting and closing the circuit through said conductors, said shell or casing being self sustaining, hard, dense and strong.

5. In an electric flash light of the class described, a non-conducting shell or main casing formed of a spirally wound sheet of material, conductors embedded within said shell between layers thereof and extending inwardly toward each other and separated from each other at adjoining portions, a lamp and reflector on one end of said shell, a battery within the shell in electrical connection with the lamp and the outer ends of said conductors, and manually operative means for connecting and closing the circuit through said conductors and comprising a slide on the shell in electrical connection with one of said conductors and a contact plate in electrical connection with the other conductor and to be engaged by said slide, said shell or casing being self sustaining, hard, dense and strong.

[Claim 6 not printed in the Gazette.]

1,155,101. MIXTURES OF BORATES CONTAINING ACTIVE OXYGEN. FRIEDRICH LUDWIG SCHMIDT, Charlottenburg, Germany, assignor to The Roessler & Hasslacher Chemical Company, a Corporation of New York. Filed Jan. 25, 1910. Serial No. 540,044. (Cl. 23—13.)

1. The herein described new mixtures of borates comprising a perborate and a soluble inorganic magnesium compound in a less than equivalent proportion, which give a superior bleaching effect.

2. The herein described new mixtures of borates, comprising a perborate and a soluble inorganic compound of an alkaline earth metal in a less than equivalent proportion which give a superior bleaching effect.

1,155,102. PROCESS OF BLEACHING. FRIEDRICH LUDWIG SCHMIDT, Charlottenburg, Germany, assignor to The Roessler & Hasslacher Chemical Company, a Corporation of New York. Original application filed Jan. 25, 1910, Serial No. 540,044. Divided and this application filed Jan. 9, 1911. Serial No. 601,695. (Cl. 8—2.)

1. The process herein described of washing and bleaching fibers by means of a perborate, which consists in applying the same to the fibers in the presence of a soluble inorganic compound of magnesium in a less than equivalent proportion.

2. The process herein described of washing and bleaching fibers by means of a perborate which consists in applying the same to the fibers in the presence of a soluble inorganic compound of an alkali earth metal in a less than equivalent proportion.

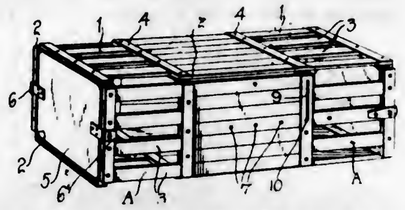
1,155,103. MIXTURE OF BORATES CONTAINING ACTIVE OXYGEN. FRIEDRICH LUDWIG SCHMIDT, Charlottenburg, Germany, assignor to The Roessler & Hasslacher Chemical Company, a Corporation of New York. Original application filed Jan. 25, 1910, Serial No. 540,044. Divided and this application filed May 7, 1914. Serial No. 836,889. (Cl. 8—2.)

A bleaching mixture, comprising a perborate and a soluble inorganic compound of zinc in less than an equivalent molecular proportion, and having a superior bleaching effect.

1,155,104. PROCESS OF BLEACHING. FRIEDRICH LUDWIG SCHMIDT, Charlottenburg, Germany, assignor to The Roessler & Hasslacher Chemical Company, a Corporation of New York. Original application filed Jan. 9, 1911, Serial No. 601,695. Divided and this application filed May 7, 1914. Serial No. 836,890. (Cl. 8—2.)

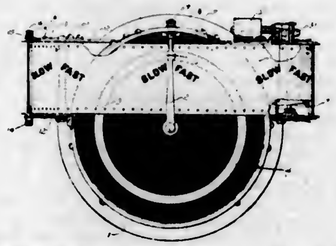
The process herein described of washing and bleaching fibers by means of a perborate, which consists in applying the same to the fibers in the presence of a soluble inorganic compound of zinc in less than a molecular proportion.

1,155,105. SHIPPING-CRATE. WARREN J. SCHREINER, Middletown, Pa. Filed Feb. 16, 1915. Serial No. 8,535. (Cl. 217—47.)



A shipping crate comprising substantially telescoping sections capable of longitudinal movement, one relative to the other, each of said sections comprising hingedly connected panels adapted to be folded laterally into compact form, end members hinged at one side to one of the panels and adapted to be folded inwardly, one of said sections being provided with a series of longitudinally disposed recesses, and a spring member carried by the second section and provided with a laterally projected end adapted to be received within the recesses of the first named section to retain said sections in relative adjusted positions.

1,155,106. SYNCHRONIZING RECORDER. EDMUND O. SCHWEITZER, Chicago, Ill. Filed Aug. 12, 1911. Serial No. 643,709. (Cl. 234—1.5.)



1. In combination, an indicating synchroscope having a movable pointer, a paper strip, means for making a record of the movement of said pointer on said strip, means for advancing said strip, time controlled means intermittently governing said advancing means and an electric switch governing in one position the operation of said recording means and governing in another position said time controlled means.

2. In combination, an indicating instrument having a moxing pointer, a recording strip, means for making a continuous record of the movement of said pointer on said paper strip, means for advancing said paper strip, an electromagnet governing said advancing means, contacts governing said electromagnet, a controlling circuit, means in said controlling circuit to close said contacts upon de-energization of said circuit, an electric switch for closing said governing circuit and for governing the operation of said recording means.

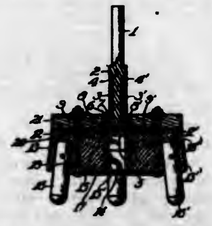
3. In combination, an indicating synchroscope having a movable pointer, a record strip adjacent said pointer, electrical means for making a continuous record of the movement of said pointer on said strip, spring controlled means for advancing said paper strip, an electromagnet for releasing said spring controlled advancing means, a normally open controlling circuit, a switch for opening said circuit, the closing of said circuit energizing the electrical recording means and opening of said switch energizing said electrical release means.

4. In combination, an indicating instrument having a movable pointer, a dial, a paper strip for recording the movements of said pointer over said dial, means for making a record on said paper strip, means for advancing said record strip, an electromagnet for governing said advancing means, a relay having contacts closed only upon deenergization of said relay, said relay controlling the circuit of said electromagnet, an electric switch controlling the circuit of said means for making a record and of said relay.

5. In combination, an indicating instrument having a movable pointer, a dial, a paper strip for recording the movements of said pointer over said dial, electrical means for making a record on said paper strip, spring controlled means for advancing said record strip, an electromagnet having a detent restraining said spring controlled advancing means, a circuit for said electromagnet, a relay having contacts in said electromagnetic circuit, an armature for said relay, said contacts being operated upon movement of said armature in one direction only, a circuit for said relay and a switch controlling the circuit of said electrical record making means and of said relay.

[Claims 6 to 23 not printed in the Gazette.]

1,155,107. WASHING-MACHINE AGITATOR. HARRISON L. STALEY, Martinsville, Ind. Filed Jan. 29, 1913. Serial No. 744,882. (Cl. 68—15.)



1. In a washing machine agitator, the combination of a circular disk, a hub inserted in the disk and extending from the normal lower side thereof, arms fixed on the hub and extending against the lower side of said disk, wings seated on the lower side of the arms respectively, the outer portion of the arms being in contact with the lower side of said disk, and a plurality of bolts extending through said disk and also through the wings respectively, the bolts rigidly securing the wings and the disk to the arms.

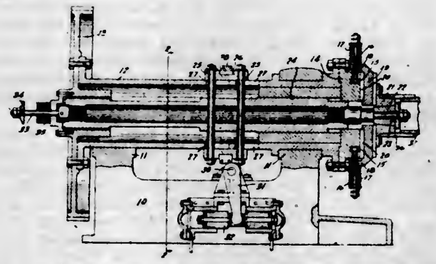
2. In a washing machine agitator, the combination of a circular disk, a hub inserted in the disk and extending from the normal lower side thereof, arms fixed on the hub and extending against the lower side of the disk, each arm having an opening therein, wings seated on the lower side of the arms respectively, the upper side of each wing being recessed, the recess receiving the adjacent arm, the outer upper portions of the arms being in contact with said disk, and a plurality of bolts extending through said disk and also through said wings respectively and through the openings of said arms respectively, said bolts rigidly securing said wings and said disk to said arms and said wings directly to said disk.

3. In a washing machine agitator, the combination of a circular disk, a hub inserted in the normal lower side of the disk, four arms fixed on the hub and having each a slot in its end, the upper sides of the arms extending against the lower side of said disk, two pieces of wood that are recessed and crossed at their middle portions and forming four wings, the normal upper sides of the wings being recessed, each recess receiving an arm, the outer upper portions of the wings extending against the lower side of said disk, the middle portion of each piece forming said wings having each a hole therein, two bolts extending through said disk and the said slots in two of said arms and also through two of said wings and rigidly securing the disk and the wings to the arms, a shaft extending movably through said hub and said holes, a tie-plate seated on the lower side of the middle portion of the lower one of said pieces and onto the wings formed thereby, said tie-plate extending across said holes and being movable by said wings into contact with the lower end of said shaft, and two bolts extending through said disk and the said slots in the adjacent two of said arms and also through said tie-plate and the adjacent wings and rigidly securing the said several parts together.

4. In a washing machine agitator, the combination with a hub having an aperture therein, a lug in the aperture fixed on the wall of the hub, and arms on the hub, of a shaft extending movably in the aperture, there being a groove in one side of the shaft receiving the lug, a pin inserted transversely in said shaft and extending into the groove to be engaged by said lugs, wings secured to said arms, and a tie-plate secured to said wings and extending opposite the end of said shaft to be moved by the arms into contact with the end of said shaft.

5. In a washing machine agitator, an element comprising an externally cylindrical hub, there being a squared aperture extending through the hub, four flat arms on the normal lower end of the hub, the end of each arm having a recess therein, two lugs on the inner side of the hub extending into the aperture relatively near to but not immediately at the lower end of the hub, and a plurality of flanges on the lower sides of the arms respectively, the flanges being on the opposite sides of the arms from the hub.

1,155,108. APPARATUS FOR APPLYING COUPLINGS. JOHN B. THOMAS, Lorain, Ohio, assignor to National Tube Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Mar. 29, 1915. Serial No. 17,842. (Cl. 29—88.2.)



1. In a device of the class described, the combination of a rotatable member, a segmental plug carried on said rotatable member, a wedge for spreading the segments of said plug, said wedge being rotatable with and longitudinally movable relative to said rotatable member and means for preventing a relative rotation of the wedge and rotatable member, substantially as described.

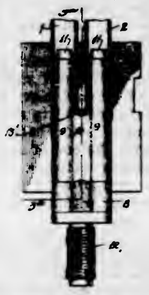
2. In a device of the class described, the combination of a rotatable cylinder, a segmental plug carried at one end of said cylinder, a longitudinally reciprocable plunger for positively expanding the segments of the plug, and means for rotating said cylinder and said plunger in unison, substantially as described.

3. In a device of the class described, the combination of a cylinder, mechanical means for rotating said cylinder, a plurality of segments carried at one end of the cylinder, said segments being adapted to engage the interior of a pipe coupling, positive means for expanding said segments, said means including a longitudinally movable plunger,

and means for rotating said plunger in unison with said cylinder, substantially as described.

4. In a device of the class described, the combination of an outer hollow shaft, a plurality of segments mounted on the end of said shaft, spring means for forcing said segments inwardly, positive means for forcing the segments outwardly against the force of said springs, said positive means including a longitudinally reciprocable inner shaft, and means for rotating said outer and inner shafts in unison, substantially as described.

1,155,109. DIE FOR MAKING PIPE-BENDS. CHARLES H. TRUE, Hammond, Ind., and NEAL TRIMBLE MCKEE, Dobbs Ferry, N. Y., assignors to Locomotive Superheater Company, New York, N. Y., a Corporation of Delaware. Original application filed Apr. 30, 1914, Serial No. 835,360. Divided and this application filed Jan. 26, 1915. Serial No. 4,475. (Cl. 29—157.)



1. A die for making pipe bends comprising a female forming die having parallel bores for holding two pipe lengths said bores being joined by a space opening from one end of the die, and a breeches die having two legs for entering said bores, said legs being united by a web shaped to correspond with the space referred to but spaced from the walls of said space.

2. A die for making pipe bends comprising a female forming die having parallel bores for holding two pipe length said bores being joined by a space opening from one end of the die and tapering to a closure before the other end is reached, and a breeches die having two legs for entering said bores, said legs being united by a web shaped to correspond with the space referred to but separated from the walls of said space by an amount substantially equal to the thickness of the pipe walls.

3. A die for making pipe bends comprising a female forming die having parallel bores for holding two pipe lengths said bores being joined by a space opening from one end of the die and ending before the other end is reached, and a breeches die having two legs for entering said bores, said legs being united by a web shaped to correspond with the space referred to but spaced from the walls of said space.

4. A die for making pipe bends comprising a female forming die having parallel bores for holding two pipe lengths said bores being joined by a space opening from one end of the die and ending before the other end is reached, and a male die having a cutting member adapted to be pressed into the female die against the end of neighboring walls of the two pipes so as to slit and spread said walls against the opposite walls of the space joining the two bores.

1,155,110. METHOD OF MAKING PIPE-BENDS. CHARLES H. TRUE, Hammond, Ind., and NEAL TRIMBLE MCKEE, Yonkers, N. Y., assignors to Locomotive Superheater Company, New York, N. Y., a Corporation of Delaware. Filed Mar. 26, 1915. Serial No. 17,147. (Cl. 29—157.)

1. The improvement in the art of making pipe bends from an incomplete bend as described which comprises giving the open end a circular contour, then swaging and shaping the end, closing the remaining cleft by welding, and then pressing the end into final shape.



2. The improvement in the art of making pipe bends from an incomplete bend as described which comprises applying pressure at the inside of the open end so as to give said end a circular contour, then contracting and shaping said end by outside pressure, closing the remaining cleft by welding, and then shaping the end by pressures applied at right angles to the plane of the bend.

3. The improvement in the art of making pipe bends from an incomplete bend as described which comprises reshaping the open end by the insertion of a tapered shaping tool, then swaging down said end and finally closing and shaping said end.

1,155,111. SELF-LUBRICATING BOLT. DANIEL H. TWAITS, Chicago, Ill. Filed Dec. 22, 1913. Serial No. 808,164. (Cl. 64—27.)



1. In a spring bolt, the combination of a tubular member forming a shank of the bolt, a cap fitting over one end of the tubular member, projections carried by the tubular member and engaging the cap for rigidly securing the cap thereto, and means for feeding lubricant to the outer surface of the shank of the bolt.

2. In a spring bolt, the combination of a tubular member forming the shank of the bolt, a cap tightly fitting over one end of the bolt and having a closed end, an opening in the closed end thereof, a projection carried by the tubular member and engaging said openings for securely holding the cap in place, and inlet and outlet passages for said bolt.

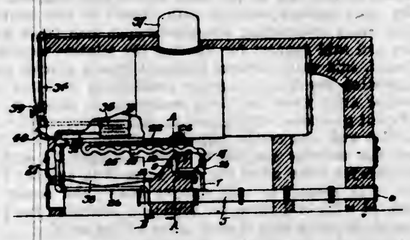
3. In a spring bolt, the combination of a tubular member forming the shank of the bolt, a cap fitted tightly over one end of the bolt and having a closed end, an opening in said closed end, a projection carried by the tubular member extending into said opening and being upset at the outer end for rigidly holding the cap in place, and inlet and outlet passages for said bolt.

4. In a spring bolt, the combination of a tubular member forming the shank of the bolt, a cap tightly fitted over one end of the bolt and having an end wall closing the end of tubular member and having openings through said end wall, said opening being chamfered at the outer side of the cap, said tubular member having integral projections at the end thereof engaging said openings and being upset at their outer ends into the chamfered portion of the openings whereby the cap is securely held onto the end of the tubular member, said bolt having inlet and outlet passages for lubricant.

5. In a spring bolt, the combination of a tubular member forming the shank of the bolt, a cap fitted over one end of the tubular member, projections carried by the tubular member and engaging the cap to securely hold the same in place, a lug carried by the cap for engaging the shackle of the spring to prevent the bolt turning when in place, and outlet means leading to the outer surface of the shank.

[Claims 6 to 13 not printed in the Gazette.]

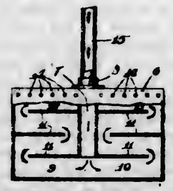
1,155,112. PREHEATING DEVICE. GERRIT VAN DAAM, Buffalo, N. Y. Filed Mar. 27, 1914. Serial No. 827,657. (Cl. 110—60.)



1. The combination with a furnace, of an air conducting main having an air intake, opening to the atmosphere at a point outside the furnace wall and below the level of the fuel bed, and a conductor leading from said main to the front part of the furnace and delivering to an upwardly extending pipe which in turn delivers to an undulating pipe extension which in turn delivers to a return horizontal extension delivering to an injector, said injector comprising a bell-shaped discharge nozzle and a needle valve controlled steam jet delivering thereto.

2. The combination with the combustion chamber, of means for delivering hot air and superheated steam mixed together, above the fuel bed, comprising an inclined, flaring-mouth, bell-shaped delivery nozzle, a conductor leading thereto from a preheated air supply and a coöperating needle-valve-controlled nozzle located within the first mentioned nozzle and forming an integral part thereof, said needle-valve-controlled nozzle being connected with a preheated steam supply and delivering at substantially the same inclination as said first mentioned nozzle.

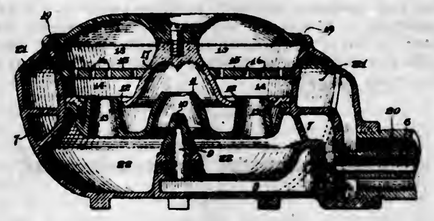
1,155,113. PREHEATING DEVICE. GERRIT VAN DAAM, Buffalo, N. Y. Filed Mar. 27, 1914. Serial No. 827,659. (Cl. 110—75.)



1. In combination with a combustion chamber of a furnace, an air heating element, an air conductor projecting into the combustion chamber and having a depending extension delivering to and suspending the air heating element above the level of the fuel bed, said air heating element comprising a chambered body having at its top, air discharging means to the combustion chamber and connection with the air conductor, said element provided with a channel in line with said depending conductor extension and leading directly therefrom to the bottom of the element, and tortuous channels communicating with said first mentioned channel and leading therefrom to the air discharge.

2. In combination with a combustion chamber of a furnace, an air heating element, an air conductor leading from a point outside the furnace with an intake below the level of the fuel bed, said conductor leading into the furnace at a point above the fuel bed supported directly at a plurality of points by the walls of the furnace and having a depending extension delivering to and suspending the air heating element, said air heating element consisting of an integral cored casting having connection at its top with the air conductor and provided with a channel in line with said depending conductor extension and leading directly therefrom to the bottom of said element, and tortuous channels leading from said channel to distributing chambers at the top of said element, said chambers provided with air vents discharging into the combustion chamber of the furnace.

1,155,114. GAS-BURNER. GERRIT VAN DAAM, Buffalo, N. Y. Filed May 27, 1915. Serial No. 30,717. (Cl. 158—108.)



1. A burner element comprising a chambered body having a plurality of concentric chambers and annular channels, a gas or hydrocarbon supply and an air supply, one leading to one set of chambers and channels and the other leading to another set of chambers and channels separated from the first set, said channels arranged so that the gas and air must both circulate separately around the chambered body near its periphery, to cause the heating of the same, and then be brought together, mixed and superheated within said burner element, and burned.

2. A burner element for combustible mixtures comprising a chambered body having air intake and gas or hydrocarbon intake, means for circulating the air and gas separately about the chambered body so that the same shall be heated by contact with the hot walls of said body, means whereby the heated air and gas are mixed together within said chambered body and further heated, and a combustion chamber within said burner element wherein the mixture is then burned.

3. A gas burner element comprising a chambered body, an air supply and a gas or hydro-carbon supply connected therewith, the chambered body having separate annular channels connected with said supplies, discharge and mixing nozzles for bringing the air and gas together within said burner element, a hot baffle for superheating the mixture and a discharge for the burning mixture.

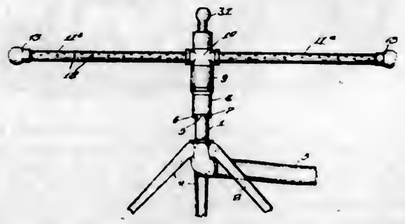
4. A gas burner element comprising a chambered body, an air supply and a gas supply connected therewith, the chambered body having separate annular channels connected with said supplies, said channels located near the combustion zone, discharge and mixing nozzles for bringing the air and gas together, a hot baffle for superheating the same and a discharge for the burning mixture.

5. A gas burner comprising a chambered body, an air supply and a gas supply connected therewith, the chambered body having separate annular channels connected with said supplies, discharge and mixing nozzles for bringing the air and gas together, a perforated baffle plate through which the mixture passes to be burned, and an aperture through which the flame issues.

1,155,115. OSCILLATING LAWN-SPRINKLER. CHARLES WATSON, Chicago, Ill. Filed Sept. 29, 1914. Serial No. 864,106. (Cl. 137—87.)

1. A lawn sprinkler comprising a hollow supporting member, a sprayer member pivoted thereon and presenting hollow arms extending in opposite directions therefrom, and a valve member interposed between said supporting and sprayer members and rotatable with respect to both thereof: said valve member having ports respectively connecting the bore of the supporting member with the bore of one or the other of said arms, according as the valve member is in one or the other of two positions.

2. A lawn sprinkler including a hollow vertical supporting member, a pair of hollow sprayer arms pivotally mounted thereon and extending in opposite directions therefrom, and a hollow valve member interposed between said supporting member and said arms and rotatable with respect to both thereof, said valve member having ports connecting the bore of the supporting member with the bore of one or the other of said arms according as the valve member is in one or the other of two positions: a source of water supply connected to said supporting member, each of said arms equipped on one side with water outlets, the back pressure of the water issuing from said outlets causing the arm equipped therewith to move about its pivotal mounting in a direction opposite to that in which the water is being discharged, and means connecting said arms and said valve for causing said motion of either arm to actuate the valve.



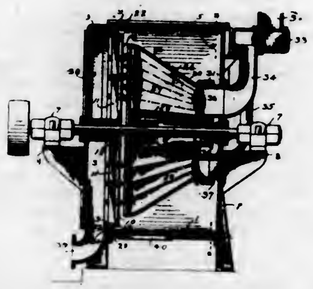
3. A lawn sprinkler including a hollow vertical supporting member, a pair of hollow sprayer arms pivotally mounted thereon and extending in opposite directions therefrom, a hollow valve member interposed between said supporting member and said arms and rotatable with respect to both thereof, said valve member having ports connecting the bore of the supporting member with the bore of one or the other of the said arms according as the valve is in one or the other of two positions: a source of water supply connected to said supporting member, each of said arms equipped on one side with water outlets, the back pressure of the water issuing from said outlets causing the arm equipped therewith to move about its pivotal mounting in a direction opposite to that in which the water is being discharged, stop means associated with said arms and said supporting member for limiting the movement of the former about its pivotal mounting upon the latter, and means connecting said arms and said valve for causing the said motion of either arm to actuate the valve when the arm is approaching one limit of its movement.

4. A lawn sprinkler comprising a hollow vertical support, a hollow member pivoted thereon and equipped with a pair of sprayer arms extending in substantially opposite directions from said support, a supply of water connected to said support, and a valve member interposed between said support and said hollow member and movable with respect to both thereof, said valve member and said hollow member each equipped with stop formations coöperating respectively with stop formations upon said support to limit the relative movement of the valve member and the hollow member respectively with respect to said support, the said valve member and each of said arms equipped with ports alining with each other when the said arm and valve member are in relative predetermined positions, the impact of the water flowing from the valve member into the said arm against the lateral walls of the port in said valve member normally maintaining the said ports in alinement and thereby causing said valve to rotate about said support in unison with said hollow member.

5. A yawn sprinkler comprising a hollow support, a hollow sprayer member housing the upper end of said support and equipped with sprayer arms extending in substantially opposite directions from said support, the said sprayer member being pivotally mounted upon said support and there being coöperating formations upon said sprayer member and said support for limiting the relative movement of the former about its said pivotal mounting: a valve member housed by said sprayer member and connected at one end to the bore of the said support, the said valve member movable with respect to said support, there being coöperating formations upon said valve members and said support for limiting the relative movement thereof, said valve member equipped with a pair of ports connecting the interior thereof respectively with the said sprayer arms when the valve member is in either of two different positions with respect to said support: said valve member and said hollow member equipped with relatively tapering surfaces adapted to form a closure for each of the sprayer arms when the said valve is in another position with respect to said sprayer arms: and means associated with said valve for vertically adjusting the position of the valve with respect to the hollow member.

[Claim 6 not printed in the Gazette.]

1,155,116. PULP-SCREENING MACHINE. PEDER P. WESTBYE, Peterborough, Ontario, Canada. Filed Aug. 9, 1911. Serial No. 643,232. (Cl. 92—30.)



1. In a pulp screening machine, a casing, a screen member in said casing, a supporting frame for the screen member, a plurality of bosses on the supporting frame upon which the screen member rests, whereby the screen member will be spaced away from the supporting frame, a distributer adapted to distribute the pulp over the screen surface, and a pulp supply leading to the distributer.

2. In a pulp screening machine, a casing, a screen member within the casing, a supporting frame for the screen member, resilient abutments for the screen member adapted to yieldingly support the screen against the impact of the pulp discharged thereon, a distributer for the pulp and a pulp supply conduit leading to the distributer.

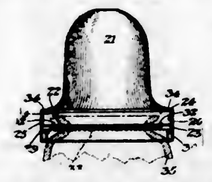
3. In a pulp screening machine, a casing, a screen member within the casing, a supporting frame for the screen member, a plurality of attachment bolts securing the screen member to the supporting frame, resilient collars about said bolts on opposite sides of the screen, a distributer for the pulp, and a pulp supply conduit leading to the distributer.

4. In a pulp screening machine, a casing, a screen member within the casing, a supporting frame for the screen member, a plurality of bolts attaching the screen to the supporting frame, conical heads upon the attachment bolts whereby portions of pulp discharged against the bolt heads will be deflected onto the screen, a distributer for the pulp, and a pulp supply conduit leading to the distributer.

5. In a pulp screening machine, a casing, a screen member within the casing, a supporting frame for the screen member, a grooved flange within the casing, projections carried by the screen supporting frame extending within the groove of the flange whereby the screen and frame will be detachably engaged therewith.

[Claims 6 to 19 not printed in the Gazette.]

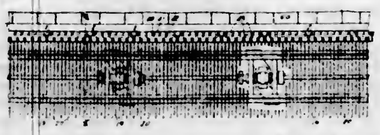
1,155,117. SHADE-HOLDER. EDWIN L. WHITE, New York, N. Y., assignor to J. H. White Manufacturing Company, Brooklyn, N. Y., a Corporation of New York. Filed Jan. 25, 1915. Serial No. 4,184. (Cl. 240—115.)



1. A device of the character described, consisting of two concentric rings, the inner ring having an annular inturned flange at its top and bottom edges and an elongated slot in one side with a number of adjacent short ribs or corrugations, the lower flange of said ring being provided with spaced holes, the outer ring having its bottom edge inturned and provided with spaced slots, a plurality of curved arms each having their respective ends bent at right angles in opposite directions, one of which bent ends, in each arm, is inserted into one of the holes in the lower flange of the inner ring while the other ends are inserted into the said slots in the inturned bottom portion of the outer ring, a rib or projection on the inner surface of the outer ring which normally is within the said slot in the side of the inner ring, the outer ring being rotatable whereby when rotated said rib is forced into connection with said ribs or corrugations on the side of the inner ring and acts to hold the rings and arms in the desired position.

2. A shade holder consisting of two concentric rings, the inner ring being provided with an inturned flange on both edges, a slot in one of said flanges and a projecting body portion integral with the same flange, spaced holes in the other flange, a slot in one side of said ring and adjoining corrugations, the outer ring having one edge bent over the flange containing the slot on the inner ring, a lug upon said bent over portion of the outer ring projecting into said slot in the flange of the inner ring, a rib or projection upon the inner surface of the outer ring projecting into said slot in the side of the inner ring and adapted to be moved into engagement with said adjoining corrugations, the other edge of said outer ring being bent inwardly and upwardly and then at right angles toward the inner surface of said ring, spaced slots in said right angled portion, and a plurality of curved arms, each having their ends bent at right angles in opposite directions with one of said right angled bends inserted into one of said spaced holes in the flange of the inner ring, and the other right angled bend inserted into one of said spaced slots in the bent over portion of the outer ring.

1,155,118. BAR-HANDLING APPARATUS. HOMER D. WILLIAMS and WILLIAM AHLEN, Duquesne, Pa. Filed Mar. 29, 1915. Serial No. 17,825. (Cl. 80—48.)



1. Apparatus for handling metal bars comprising a series of rollers forming a run-out table, a support alongside said run-out table to which the bars are transferred from the run-out table, and means for moving the bars sidewise from the run-out table to said support, said means being arranged to engage and move the rear ends of the bars in advance of the front ends thereof.

2. Apparatus for handling metal bars comprising a series of rollers forming a run-out table, a support alongside said run-out table to which the bars are transferred from the run-out table, means for moving the bars sidewise from the run-out table to said support, said means being arranged to engage and move the rear ends of the bars in advance of the front ends thereof, a hot bed alongside said support, and means for lifting the bars from the support to said hot bed.

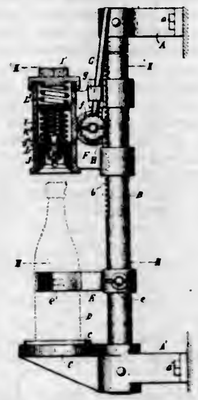
3. Apparatus for handling metal bars comprising a series of rollers forming a run-out table, a support on one side thereof to which the bars are transferred from the run-out table, and means for moving the bars sidewise from the run-out table to the said support, said means comprising fingers engaging with the bars, horizontal supports for the fingers, eccentric arms for said supports, an eccentric shaft having eccentrics on which said eccentric arms are mounted, and means for rotating said eccentric shaft.

4. Apparatus for handling metal bars comprising a series of rollers forming a run-out table, a support on one side thereof to which the bars are transferred from the run-out table, and means for moving the bars sidewise from the run-out table to said support, said means having fingers at intervals in the length thereof adapted to engage the bars in the sidewise movement thereof and arranged to engage and move the rear ends of the bars in advance of the front ends thereof, and means for actuating said bar moving means.

5. Apparatus for handling metal bars comprising a series of rollers forming a run-out table, a support on one side thereof to which the bars are transferred from the run-out table, means for moving the bars sidewise from the run-out table to said support, said means comprising fingers engaging with the bars, horizontal supports on which the fingers are secured, eccentric arms for said supports, an eccentric shaft having eccentrics on which said eccentric arms are mounted and means for rotating said shaft, and a hot bed at one side of the run-out table to receive the bars removed therefrom, said hot bed having means for lifting bars from said support.

[Claim 6 to 14 not printed in the Gazette.]

1,155,119. MACHINE FOR APPLYING BOTTLE-SEALS. CHARLES WINTER, Woodbury, N. J., assignor to Star Seal Company, a Corporation of New York. Filed Oct. 20, 1908. Serial No. 458,633. (Cl. 113—4.)



1. A bottle sealing machine for a bottle having a neck with an interior groove and for a seal having an upturned flange adapted to be formed partly within said groove to make an air tight joint of said seal with the lower wall of said groove, comprising a tool having a working face having a fixed configuration for co-acting with the end of said flange, a face for co-acting with the inner face of said flange, and a flaring face for forcing said flange

slightly outward, a receptacle for holding said tool, and means for reciprocating the said receptacle for bringing the end of the said flange and tool together with sufficient pressure to collapse the flange to form the point within the bottle and to turn the flange over the top of the bottle.

2. A bottle sealing machine for a bottle having a neck with an interior groove and for a seal having an upturned flange adapted to be formed partly within said groove to make an air tight joint of said seal with the lower wall of said groove, comprising a hollow receptacle, a sleeve mounted to slide within the receptacle having an interior lower face converging upwardly for co-acting with the bottle neck to centralize the bottle, a spring within the receptacle backing the sleeve, a tool slidably mounted within the sleeve having a working face at its lower end for co-acting with the end of said flange, resilient means within the receptacle backing the tool, a plunger mounted to slide within the tool and having a lower side face for engaging the inner face of said flange and a bottom face to seat upon the seal, a spring within the tool backing the plunger, and means for reciprocating the receptacle operable when a bottle is in sealing position and a seal is seated therein for compressing the springs and resilient means to hold the bottle by the sleeve and to cause the plunger and tool to press the seal to form the joint within the bottle.

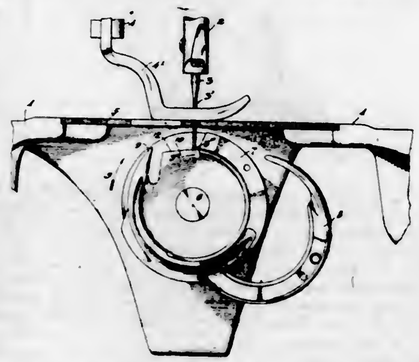
3. A bottle sealing machine for a bottle having a neck with an interior groove and for a seal having an upturned flange adapted to be formed partly within said groove to make an air tight joint of said seal with the lower wall of said groove, comprising a hollow receptacle, a cap for the upper end of the receptacle, an interior rim formed on the lower end of the receptacle having an upwardly converging interior face for centralizing the bottle, a sleeve slidably mounted within the receptacle to seat upon the interior rim and having a lower interior upwardly converging face for further centralizing the bottle and for holding it in position, a tool having a head part mounted to slide within the receptacle and a body part mounted to slide within the sleeve and having a lower working face flaring upwardly from its inner end for co-acting with the edge of the seal flange to force it outwardly and downwardly, a spring between the said head and sleeve, a spring between the said head and the said cap to the receptacle, a plunger mounted to slide within the said tool having a protruding cylindrical side face for engaging the inner face of said seal flange and a lower face to seat upon the seal, a spring within said tool backing said plunger, a shoulder formed within the tool, a shoulder formed on the plunger to co-act with said first shoulder to restrict the movement of said plunger upwardly within said tool, means for restricting the relative movement of the plunger downward from said tool, spring-pressed means for holding said seal in engagement upon the said plunger, and means for reciprocating the said receptacle operable when a bottle is in sealing position and a seal is seated therein for compressing said springs to hold the bottle by said centralizing sleeve and to press the plunger and tool upon the seal to form the joint within the bottle.

4. A machine for applying flanged seals to interior grooved bottles, comprising a tool, for conforming the seal flange to the groove, having a working face adapted to engage the edge of the flange to confine its circumference, an end below said face having a face for supporting the flange from the inner side thereof, and means for pressing the flange and said first face together to form the joint within the groove.

5. A machine for applying flanged seals to interior grooved bottles, comprising a tool, for conforming a seal flange to the groove, having a working face adapted to engage the edge of the flange to confine its circumference, an end below said face having a face for supporting the flange from the inner side thereof, means for holding the seal on said lower end, and means for pressing the flange and said first face together to form the joint within the groove.

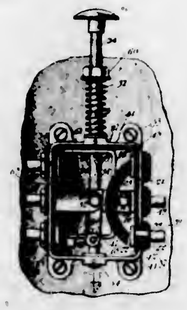
[Claims 6 to 8 not printed in the Gazette.]

1,155,120. SEWING-MACHINE. EDWARD B. ALLEN, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed July 19, 1912. Serial No. 710,446. (Cl. 112—38.)



In a stitch-forming mechanism for sewing machines, the combination with an eye-pointed needle, a loop-taker provided with a loop-seising point, and means for actuating said needle, and loop-taker, of a needle-guard carried by said loop-taker and provided with a free edge located with respect to said loop-seising point to maintain a substantially uniform relationship with the needle-blade to a point directly above its beveled piercing portion during the time that said guard is passing said needle and the eye of the latter is within the arc described by said loop-seising point.

1,155,121. SWITCH. VINCENT G. APPLE, Dayton, Ohio. Filed Oct. 26, 1914. Serial No. 868,582. (Cl. 175—287.)



1. A switch comprising in actuating member, a movable switch blade, a lug projecting therefrom, contacts for said blade, a resilient connection between the actuating member and blade and a latch carried by the actuating member and on its movement in one direction engaging one side of said lug to lock the switch blade from movement until the said member nears the end of its stroke, and on the movement of the said member in the opposite direction engaging the opposite side of said lug to prevent movement of the blade until the member nears the end of its stroke in the return direction.

2. A switch comprising an axially movable plunger, a pivotally mounted switch blade, an insulating lug projecting therefrom, contacts adapted to be engaged by the switch blade, a pair of alining coil springs secured at their outer ends to said plunger, a lever extending from said switch blade to one side of the axis thereof and in engagement with the adjacent ends of said springs, and a latch carried by the plunger for engagement with said lug to lock the blade from movement until the plunger nears the end of its stroke.

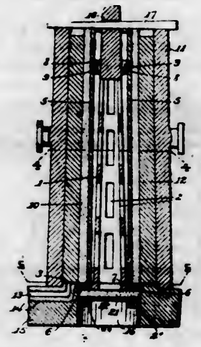
3. A switch comprising a casing, an axially movable plunger extending into said casing, a switch blade pivotally mounted within the casing, contacts supported in the walls of the casing and adapted to be engaged by the switch blade, binding posts for said contacts extending outside of the walls of the casing, a pair of alining coil springs positioned within the casing and secured at their outer ends to a portion of said plunger, a lever extending from the switch blade to one side of its axis and in engagement with the adjacent ends of said spring, and a latch carried by the plunger for engagement with a portion of said switch blade to lock the blade from movement until the plunger nears the end of its stroke.

4. A switch comprising an axially movable plunger, a pivotally mounted switch blade, contacts adapted to be engaged by the switch blade, parallel arms extending from said plunger, a pair of alining coil springs secured at their ends to said arm, a lever extending from said switch blade to one side of its axis and positioned between the adjacent ends of said spring, substantially as and for the purposes set forth.

5. A switch comprising a U-shaped switch actuating member, a pair of alining coil springs within the open end of the U-shaped member and secured at their outer ends to the said member, a pivotally mounted switch blade, contacts adapted to be engaged by the switch blade, a lever extending from said switch blade to one side of its axis and positioned between the adjacent ends of said springs, and a latch carried by the U-shaped member for engagement with a portion of the switch blade to lock the same from movement until the U-shaped member nears the end of its stroke.

[Claims 6 to 9 not printed in the Gazette.]

1,155,122. CORE-BARREL FOR INGOT-MOLDS. JOSEPH P. BAGLEY, Warwood, W. Va., assignor to Wheeling Steel Casting Company, Wheeling, W. Va., a Corporation of West Virginia. Filed May 8, 1914. Serial No. 837,180. (Cl. 22—173.)



1. A core barrel comprising a central member, and a plurality of staves surrounding and in interlocking relation with said member, all said staves having beveled edges and being freely movable in an inward direction when said central member has been ejected.

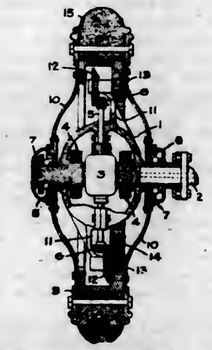
2. A core barrel comprising a central member, and two pairs of oppositely disposed staves embracing and interlocking with said member, one pair of said staves being seated against said member and the other pair thereof being seated against the one pair, the interengaging portions of said staves being beveled.

3. A core barrel comprising a central member, and a plurality of staves embracing said member, said staves being interlocked with and permitting the ejection of said member in one direction only, said staves having interengaging beveled surfaces and being automatically collapsible under pressure exerted by the shrinkage of an encircling casting.

4. A core barrel comprising a central member, and a plurality of staves separately interlocked with and disposed in embracing relation to said member, said staves having interengaging beveled surfaces which, when said member is ejected, facilitate collapsing movement thereof under external pressure exerted by shrinkage of an encircling casting.

5. A core barrel comprising a central member, and a plurality of staves disposed in inclosure-forming relation to said member and separately attached to said member whereby the latter is locked except against movement in one direction only, said staves having interengaging beveled surfaces which serve to facilitate the collapse thereof when said member is ejected.

1,155,123. DRIVING MECHANISM. FREDERICK C. BARTON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 11, 1912. Serial No. 690,104. (Cl. 74—7.)



1. The combination with a circular rack having a single series of teeth, of a continuous shaft, said shaft being shorter than the internal diameter of said rack, a motor for driving said shaft near its center, and similar gearing at each end of said shaft and in operative relation therewith for simultaneously driving said series of teeth.

2. A rotatable rim, a circular rack secured to the rim, said rack having a single series of teeth, a motor having a continuous shaft extending parallel to the plane of said rim, said shaft being shorter than the internal diameter of said rack, and similar gearing at both ends of said shaft for simultaneously transmitting motion from said motor to opposite points of said series of teeth.

3. A rotatable rim having a rack on its inner surface, said rack having a single series of teeth, a motor, a continuous shaft extending parallel to the plane of said rim adapted to be driven by said motor and being shorter than the internal diameter of said rack, and similar gearing operatively connecting each end of the shaft with said series of teeth.

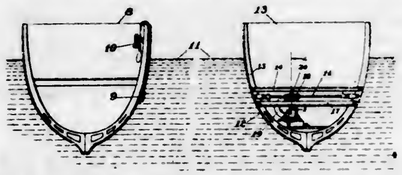
4. In a wheel drive for tractors, a wheel, a circular rack rigidly secured to said wheel, said rack having a single series of teeth, a motor having a continuous shaft extending parallel to the plane of said wheel, said shaft being shorter than the internal diameter of said rack, and similar gearing for driving said wheel by said motor at two diametrically opposite points of said series of teeth.

5. A rotatable rim, a circular rack secured to the rim, said rack having a single series of teeth, a continuous shaft extending parallel to the plane of said rim and being shorter than the internal diameter of said rack, a motor for driving said shaft near its center, similar beveled gearing in operative relation with each end

of said shaft, and pinions meshing with said rack at approximately opposite points and each operatively connected to one of said beveled gearings.

[Claims 6 to 10 not printed in the Gazette.]

1,155,124. SUBMARINE SIGNALING APPARATUS. CHRISTIAN BERGER, New York, N. Y., assignor to Submarine Wireless Company, a Corporation of New York. Filed Feb. 18, 1913. Serial No. 749,255. (Cl. 177—7.)



1. A submarine signal sending apparatus including in combination an immersed plate or shell adapted to be vibrated from the interior to transfer the vibrations to the surrounding water, an elongated vibratable sonorous member connected to said shell at the interior side thereof, a plurality of cross braces connected to said shell and spaced apart with said member between them, whereby the shell is braced and is confined against interfering with the vibrations, and means for longitudinally vibrating said member.

2. A submarine signal sending apparatus including in combination with an immersed plate or shell, an elongated longitudinally vibratable member connected to said shell, and a rubbing device therefor constructed with a pervious surface which is moistened and cushioned.

3. A submarine signal sending apparatus including in combination with an immersed plate or shell, an elongated longitudinally vibratable member connected to said shell, and a rubbing device therefor constructed with an annular body of pervious elastic fabric and means for moistening the same.

4. A submarine signal sending apparatus including in combination with an immersed plate or shell, an elongated longitdinally vibratable member connected to said shell, and an exciting wheel therefor constructed with a body, an annular piece of rubbing material thereon, and a detachable side plate for securing the whole together.

5. A submarine signal sending apparatus including in combination with an immersed plate or shell, an elongated longitudinally vibratable member connected to said shell, and a rotary exciting wheel therefor constructed with a chambered body and directly tangentially contacting said member, an annular piece of rubbing material thereon, and a detachable side plate for securing the whole together there being liquid passages from the chamber in said body to said rubbing material for keeping the latter moist.

[Claims 6 to 13 not printed in the Gazette.]

1,155,125. LADDER. ALBERT BLANKENHAGEN, Akron, Ohio, assignor of one-half to Frank W. Blankenhagen, Akron, Ohio. Filed Nov. 3, 1914. Serial No. 870,134. (Cl. 228—24.)

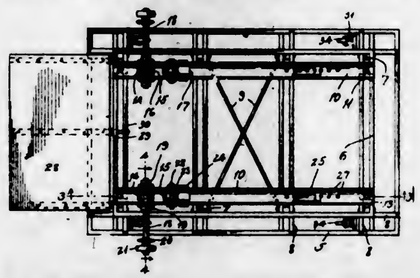
1. A ladder of the class designated comprising fixed and movable sections, the latter when in its operative position adapted to be supported in a vertical position and in parallelism with a wall by the fixed section, the latter extending in an inclined direction and at an angle to the movable section, means for loosely coupling the sections together, brackets carried by said movable section arranged to rest against said wall for holding the movable section in spaced relation therewith.

2. A ladder of the class designated comprising fixed and movable sections, the latter when in its operative position adapted to be supported in a vertical position and in parallelism with a wall by the fixed section, the latter extending in an inclined direction and at an angle to the movable section, means for loosely coupling the sections together, brackets carried by said movable section arranged to rest against said wall for holding the movable section in spaced relation therewith, and means for securing the brackets to the movable member, said means permitting the shifting of said brackets.



3. A ladder of the class designated comprising a fixed and movable section, means for loosely coupling said sections together, said movable section adapted when in its operative position to extend in an upright manner and in parallelism with a supporting structure, the fixed section extending downwardly from said movable section and at an inclination to comprise a support and brace for wedging said movable section toward said supporting structure, a removable bracket capable of supporting a platform detachably secured to the movable section and adapted to engage said supporting structure for holding the movable section of the ladder in spaced relation to said structure, any weight on said platform operating to force the movable section inwardly toward the wall by reason of the inclined position of said fixed section.

1,155,126. VEHICLE DEMONSTRATING AND TESTING DEVICE. BENNETT BOND, Los Angeles, Cal. Filed July 5, 1913. Serial No. 777,438. (Cl. 21—90.)

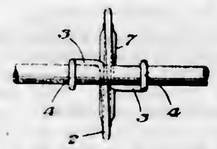


1. A demonstrating device for motor driven vehicles having guide troughs thereon for receiving and holding the wheels of a vehicle, a roller in each guide trough adapted to engage the driven wheels of a vehicle, the said troughs directing the said wheels to the said rollers, shafting driven by said rollers and means carried by said shafting for driving speed and power indicating devices.

2. A demonstrating device for motor driven vehicles comprising a stand having wheel grinding supports thereon, means for adjustably holding said wheel guiding supports with respect to each other, locking pieces for limiting the movement of the wheels in said wheel guiding supports and rollers for engaging the power actuated wheels of the vehicle whereby the capabilities of the vehicle may be demonstrated and tested, said rollers also limiting the movement of the vehicle on the stand.

3. A demonstrating and testing stand for automobiles comprising a frame, adjustable wheel receiving troughs mounted thereon, stop blocks, adjustably mounted in said troughs, wheel supporting rollers adjustably mounted in said troughs and shafting driven by some of said rollers whereby the action of the automobile may be demonstrated.

1,155,127. CABLE-SUPPORT. ORSON W. BRENIZER, Philadelphia, Pa., assignor of one-half to David L. Short, West Collingswood, N. J. Filed Sept. 22, 1914. Serial No. 862,902. (Cl. 248—83.)



1. The combination with a supporting wire, of a cable support formed of a single piece of wire and comprising a cable-receiving loop extending transversely beneath the supporting wire and having end portions crossing each other beneath the supporting wire, one of said end portions terminating in a hook which extends over the supporting wire from one side thereof, the other of said end portions terminating in an arm which extends laterally from said loop and in the direction of the supporting wire and has its free end terminating in a hook which extends over the supporting wire from the side thereof opposite to the first named side, the last named hook being free to be moved upwardly from the supporting wire.

2. The combination with a supporting wire, of a cable support formed of a single piece of wire and comprising a cable-receiving loop extending transversely beneath the supporting wire and having end portions crossing each other beneath the supporting wire, one of said end portions terminating in an arm which extends laterally from said loop and in the direction of the supporting wire and has its free end terminating in a hook which extends over the supporting wire from one side thereof, and the other of said end portions terminating in an arm which extends laterally from said loop and in the direction of the supporting wire away from the first named arm and has its free end terminating in a hook which extends over the supporting wire from the side thereof opposite to the first named side, said hooks being free to be moved upwardly from the supporting wire.

3. The combination with a supporting wire, of a cable support formed of a single piece of wire and comprising a cable-receiving loop extending transversely beneath the supporting wire and having a hook on one of its end portions extending over the supporting wire and having its other end portion extending beneath the supporting wire and engaged therewith, the last named end portion terminating in an arm which extends laterally from said loop and in the direction of the supporting wire and has its free end terminating in a hook which extends over the supporting wire, the last named hook being free to be moved upwardly from the supporting wire.

1,155,128. PROCESS FOR MAKING CUTS. LOUIS W. BURGESS, Wheaton, Ill. Filed Nov. 19, 1914. Serial No. 872,886. (Cl. 95—5.)

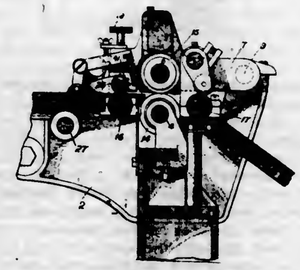
1. The process of making a cut comprising the making of a photograph through a screen of coarse mesh, the retouching of said coarse mesh photograph, and the photographic reduction of the retouched coarse mesh photograph to the size required for the cut.

2. The process of making a cut comprising the making of an enlarged photograph through a screen of coarse mesh, the retouching of said coarse mesh photograph, and the photographic reduction of the retouched coarse mesh photograph to the size required for the cut.

3. The process of making a cut comprising the making of a photograph through a screen of coarse mesh a number of times larger than the final cut desired, the retouching of said coarse mesh photograph, and the photographic reduction of the retouched coarse mesh photograph to the size required for the cut.

4. The process of making a cut comprising the making of a photograph through a screen of coarse mesh a number of times larger than the final cut desired, the retouching of said coarse mesh photograph, and the multiple photographic reduction of the retouched coarse mesh photograph to the size required for the cut.

1,155,129. PERFORATING-MACHINE. CHARLES A. BURTON, Chicago, Ill. Filed Dec. 8, 1913. Serial No. 805,229. (Cl. 164—61.)



1. In a machine of the character described, devices for acting upon a sheet passing through said machine, cooperating parallel feed rollers for delivering a sheet to said devices, means for driving one of said rollers, means for automatically moving the other rollers into and out of engagement with the coöperating roller while maintaining the axes of the rollers parallel with each other, and gearing between said rollers for causing the rollers to travel at a common peripheral speed in all relative positions of the rollers.

2. In a machine of the character described, a main frame, rotary devices for acting upon a sheet passing through the machine, a swinging frame mounted on the main frame and carrying one of said devices, a jaw on said swinging frame, a stud on the main frame beneath said jaw, a screw threaded part hinged to the stud and adapted to be swung into and out of engagement with said jaw, and a nut on said screw threaded part adapted to engage with the upper side of the jaw.

1,155,130. WEATHER AND FLAME RESISTANT SHINGLE, &c., AND METHOD OF MAKING SAME. SUMNER R. CHURCH, Brooklyn, N. Y., assignor to Barrett Manufacturing Company, New York, N. Y., a Corporation of West Virginia. Filed June 16, 1915. Serial No. 34,485. (Cl. 99—12.)

1. The method of preserving fibrous materials which consists in applying to the same a mixture comprising an incombustible waxy body and a combustible waxy body the latter serving as a non-volatile solvent of the former.

2. The method of preserving fibrous materials which consists in applying to the same a composition comprising an incombustible waxy body, a combustible waxy body, the latter serving as a non-volatile solvent of the former, and a volatile solvent for both.

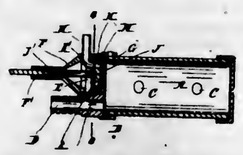
3. The method of preserving fibrous materials which consists in applying to the same a composition comprising an incombustible waxy body, a combustible waxy body, the latter serving as a non-volatile solvent of the former, said mixture containing a volatile solvent for both of said products, and a pigment.

4. The method of preserving fibrous materials which consists in applying to the same a composition containing chlorinated naphthalene and wax tailings.

5. The method of preserving fibrous materials which consists in applying to the same a composition comprising hexachlor-naphthalene and wax tailings, the latter serving as a non-volatile solvent of the former.

[Claims 6 to 14 not printed in the Gazette.]

1,155,131. MILKING MACHINERY. WILLIAM R. COCKBURN, Hamilton, New Zealand. Filed Mar. 4, 1915. Serial No. 12,103. (Cl. 31—101.)



1. A teat cup claw for milking machines consisting of a single tubular chamber having means at one end for connection with the milk-vacuum main and having teat cup branches leading from its sides, such chamber being made of such a cross sectional size and the teat cup branches so disposed as to leave a free air space above the milk therein, substantially as herein specified.

2. A teat cup claw for milking machines consisting of a single tubular chamber having means at one end for connection with the milk-vacuum main and having teat cup branches leading from its sides, such chamber being made of such a cross sectional size and the teat cup branches so disposed as to leave a free air space above the milk therein, in combination with pulsating means mounted on the chamber and adapted in their operation to connect a pipe branch alternately with the chamber and with the air substantially as specified.

3. In milking machinery, a teat cup claw consisting of a single chamber having means at one end for connection with the milk-vacuum main and having teat cup branches leading from its sides at levels below the top thereof, a cover on the chamber having a circular chamber formed thereon, a port aperture in the cover base, opening into the upper portion of the chamber, an air admission port in the wall of the circular chamber, a fixed disk mounted adjacent to the cover base within such circular chamber, a port aperture in such fixed disk arranged in a line coincident with the port aperture in the cover and communicating with a pipe branch, a rotating disk mounted between the cover and the fixed disk formed with a port extending right through it adapted to connect the port in the fixed disk with that in the cover base and with a second port arranged diametrically opposite the other and shaped to connect the port in the fixed disk with the air admission port, and means whereby such rotating disk may be rotated, substantially as specified.

1,155,132. SAFETY-RAZOR-BLADE HOLDER. ALFRED FRANK COLLINS, Toronto, Ontario, and CLAUDE CROSBY CRAIG, Winnipeg, Manitoba, Canada. Filed Jan. 4, 1915. Serial No. 431. (Cl. 30—25.)

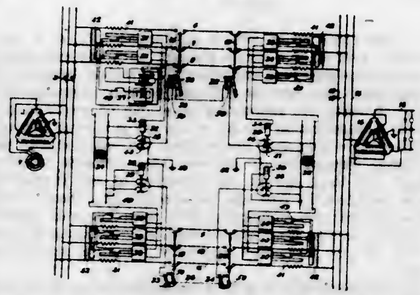
1. A safety razor blade holder comprising a handle, means for securing the blade to one end of the handle member so that the edges project laterally therefrom, a shield supporting member movably carried by the handle member and shield members carried at the ends of the supporting member and reversely set one to the other so as to alternately cover the edges of the blade when the supporting member is moved into the required position.

2. A razor blade holder comprising a handle member formed by two portions connected together at one end, means for securing the blade of a razor between the opposite ends of such portions, an arm swung between the



portions intermediately of its length, and reversely set shield members, one shield member being carried at each end of the arm and designed to alternately cover the opposite cutting edges of the razor blade, as and for the purpose specified.

1,155,133. PROTECTIVE MEANS FOR ELECTRICAL SYSTEMS. FRANK CONRAD, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 31, 1910. Serial No. 589,897. (Cl. 175—294.)



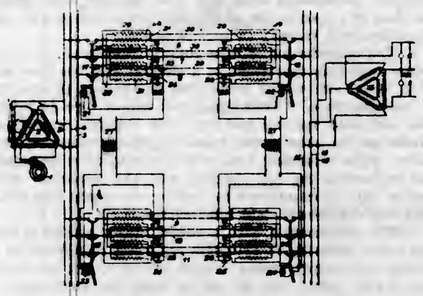
1. A system of distribution comprising parallel transmission circuits, circuit-breakers therein at each end thereof, tripping coils for the circuit-breakers, conductors connecting the tripping coils of the circuit-breakers that are associated with the same circuits, the said conductors being grounded at their ends, sources of current in the circuits of said conductors at each end thereof, reversing switches also in the circuits of said conductors at each end thereof, and normally occupying positions to cause opposition of the sources of current, and relays associated with each transmission circuit at each end thereof and governing the reversing switches to cause the said sources to supplement each other upon the occurrence of abnormal conditions in the transmission circuits.

2. A system of distribution comprising parallel transmission circuits, circuit-breakers therein at each end thereof, tripping coils for the circuit-breakers, conductors connecting the tripping coils of the circuit-breakers that are associated with the same circuits, sources of current in the circuits of said conductors at each end thereof, reversing switches also in the circuits of said conductors at each end thereof and normally occupying positions to cause opposition of the sources of current, and relays associated with each transmission circuit at each end thereof and governing the reversing switches to cause the said sources to supplement each other upon the occurrence of abnormal conditions in the transmission circuits.

3. A system of distribution comprising an alternating current transmission circuit, circuit-breakers therein at each end thereof, tripping magnets for the circuit-breakers having energising coils and short-circuited coils, and a conductor connecting the energising coils of the tripping magnets.

4. The combination with an electrical circuit, and a circuit-breaker therein, of an auxiliary conductor extending parallel to said circuit, and a tripping magnet for the circuit-breaker having an energising coil in circuit with said conductor and a short-circuited coil.

1,155,134. MEANS FOR PROTECTING ELECTRICAL SYSTEMS. FRANK CONRAD, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 31, 1910. Serial No. 589,898. (Cl. 175—294.)



1. A system of distribution comprising a transmission circuit, circuit-breakers therein at each end thereof, series transformers at the ends of the circuit having their primary windings respectively in series with the conductors of the transmission circuit, and their secondary windings respectively connected in series relation, the said transformers being provided with auxiliary secondary windings that supply current for governing the operation of the circuit-breakers.

2. A system of distribution comprising a transmission circuit, circuit-breakers therein at each end thereof, series transformers also at each end thereof and having their primary windings respectively in series with the conductors of the transmission circuit, and their secondary windings respectively connected in series relation, the said transformers being provided with auxiliary secondary windings that are connected in delta relation, and relays for governing the circuit-breakers respectively connected in shunt to the said auxiliary secondary windings.

3. A system of distribution comprising a transmission circuit, circuit-breakers therein at each end thereof, a set of series transformers also at each end of the transmission circuit having their primary windings respectively connected in series with the conductors of the said circuit, secondary windings for the transformers that are arranged in star relation in each set, conductors connecting the two sets of secondary windings, auxiliary secondary windings for the transformers that are connected in delta relation in each set, and relays for governing the circuit-breakers respectively connected in shunt to the said auxiliary secondary windings.

1,155,135. FLEXIBLE JOINT FOR DOLLS, &c. GEORGE ROBERT DICE, Ashland, Ohio. Filed June 21, 1915. Serial No. 35,295. (Cl. 46—40.)

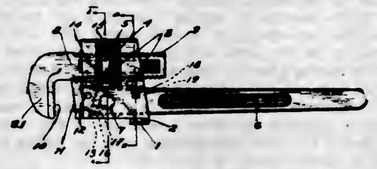


1. A doll or other figure having two members one of which has a socket therein, and the other member of which is made of elastic material and has an integral projection entered into the socket when compressed and expanded therein to hold the members together.

2. A doll or other figure having two members one of which has a circular undercut socket, and the other of which is made of elastic material and has an integral circular projection entered into the socket when compressed and expanded therein to hold the members together.

3. A flexible joint for connecting two members of a figure, comprising a circular socket in one member, and circular elastic projection on the other member and integral therewith, sprung into said socket when compressed and expanded therein, said members having plane abutting surfaces around said socket and projections.

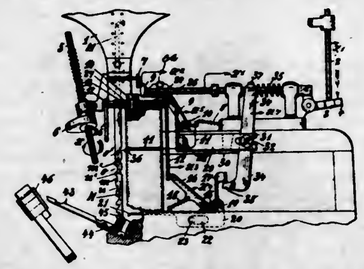
1,155,136. WRENCH. CHARLES ALBIN DIBB, Chicago, Ill. Filed Feb. 9, 1914, Serial No. 817,549. Renewed Mar. 5, 1915. Serial No. 12,409. (Cl. 81—127.)



1. A device of the class described, comprising a body member, a lever pivotally mounted on said member, jaws mounted on said member separately from said lever and being relatively movable in substantial alinement therewith, means connecting said lever with one of said jaws whereby said jaw is shifted longitudinally of said lever by a swinging movement thereof, and a cam carried by said lever and adapted to shift the other said jaw when said lever is swung and thereby force said jaws together.

2. A device of the class described, comprising a body member, a lever pivotally mounted on said member, jaws mounted on said member separately from said lever and being relatively movable in substantial alinement therewith, means connecting said lever with one of said jaws whereby said jaw is shifted longitudinally of said lever by a swinging movement thereof, the same comprising a transverse rib on said lever, a sleeve nut operatively associated with said rib and adjustably connected to said jaw by a screw-thread connection, and a cam carried by said lever and adapted to shift the other jaw when said lever is swung and thereby force said jaws together.

1,155,137. MATRIX-SETTING AND LINE-CASTING MACHINE. JULIUS DORNETH, Berlin, Germany, assignor to Typograph Gesellschaft M. B. H., Berlin, Germany, a Corporation of Germany. Filed June 22, 1914. Serial No. 846,519. (Cl. 199—8.)



1. In a matrix setting and line casting machine, the combination with the assembling and distributing means, of matrix bars each having three matrices formed thereon, means for setting a bar with the second matrix of the three matrices in casting position, and means for setting a bar with the third one of the matrices in casting position, comprising the means for setting the bar with the second one of the matrices in casting position and means for shifting said bar set with the second one of the matrices in casting position from said position to the position with the third one of the matrices in casting position.

2. In a matrx setting and line casting machine, the combination with the assembling and distributing means

of matrix bars each having three matrices formed thereon, means for setting the matrix bars being assembled with one of the matrices in casting position, a rail adapted to be shifted into the path of the matrix bars and when shifted to set the same with the second ones of the matrices in casting position, and means to lift said rail after being shifted with the third ones of the matrices of the matrix bars supported thereby in casting position.

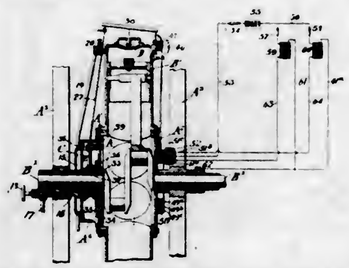
3. In a matrix setting and line casting machine, the combination with the assembling and distributing means, of matrix bars each having three matrices formed thereon, means for setting the matrix bars being assembled with one of the matrices in casting position, a rail adapted to be shifted into the path of the matrix bars and when shifted to set the same with the second ones of the matrices in casting position, means to lift said rail after being shifted with the third ones of the matrices of the matrix bars supported thereby in casting position, a member which is operated following assemblage of the matrices, and means to couple said member with the lifting means so as to impart lifting movement thereto.

4. In a matrix setting and line casting machine, the combination with the assembling and distributing means, of matrix bars each having three matrices formed thereon, a shaft carrying a member for clamping the assembled matrix bars and having a reduced face providing a support for the matrix bars being assembled with one of the matrices in casting position, means for setting the same with the second ones of the matrices in casting position, and means for shifting the same from the positions with the second ones of the matrices in casting position into position with the third ones of the matrices in casting position.

5. In a matrix setting and line casting machine, the combination with the assembling and distributing means, and a coupling rod for throwing the machine into gear, of matrix bars each having three matrices formed thereon, means for setting the matrix bars being assembled with one of the matrices in casting position, means for setting the same with the second ones of the matrices in casting position, and means controlled from said coupling rod for shifting the same from the positions with the second ones of the matrices in casting position into position with the third ones of the matrices in casting position.

[Claims 6 to 8 not printed in the Gazette.]

1,155,138. INTERNAL-COMBUSTION MOTOR. FAY O. FARWELL, Dubuque, Iowa. Filed Feb. 28, 1911. Serial No. 611,842. (Cl. 123—44.)



1. In an internal combustion motor, cylinders radiating from and rotatable about a central axis, liquid fuel inlet valves on the respective cylinders, a circular liquid fuel chamber concentric with the rotary axis of the cylinders and movable with the latter, and pipes connecting said chamber with the respective fuel valves.

2. In an internal combustion motor, cylinders rotatable about a central axis, a central liquid fuel chamber movable with the cylinders, fuel inlet valves on the respective cylinders and connected with said fuel chamber for supply of liquid fuel therefrom, and means for operating said valves.

3. The combination with a rotary motor casing and cylinders radiating therefrom, of a liquid fuel chamber of annular form applied to one face of said casing concentric with the axis of rotation of the latter, liquid fuel inlet valves on the outer ends of the cylinders and having individual connections with said fuel chamber into which the fuel is projected by centrifugal force, and means for operating said valves.

4. The combination with a rotary crank case and cylinders radiating therefrom, of a circular fuel chamber applied to one side of the crank case and having an opening in its outer face, a fixed liquid fuel supply pipe to inject fuel into said opening and into said chamber, fuel inlet valves on the outer ends of the respective cylinders, and radial pipes extending alongside the respective cylinders and connecting the fuel chamber with the respective inlet valves, said pipes adapted to conduct the liquid fuel from said fuel chamber to said inlet valves.

5. The combination with a rotary crank case of a motor, and a plurality of cylinders radiating therefrom, of a rotary fuel supply casing carried by the crank case and into which liquid fuel is fed in regulable quantities, a fixed pipe to feed said fuel to the said rotary casing, normally closed fuel inlet valves on the cylinders, pipes connecting said valves with said fuel casing and adapted to conduct the liquid fuel from said fuel casing to the valves, and means to open said valves periodically.

[Claims 6 to 15 not printed in the Gazette.]

1,155,139. TOOL FOR CURING, SPICING, AND SEASONING MEATS. WILLIAM S. FELKER, Mancos, Colo. Filed July 23, 1914. Serial No. 852,758. (Cl. 99—2.)



1. A meat seasoning tool including in combination a movable tapered jaw, another tapered jaw co-acting with the said movable jaw, and discharging means positioned between the said jaws and movable therein.

2. A meat seasoning tool including in combination a movable tapered jaw, another tapered jaw co-acting with the said movable jaw and means including a reciprocating plunger positioned between the said jaws for discharging the contents thereof.

3. A meat seasoning tool including in combination a body portion having a tapering jaw extending therefrom, a movable jaw adapted to co-act with the first mentioned jaw and means movable upon the said body portion for separating the jaws.

4. A meat seasoning tool including in combination a body portion having a tapering jaw extending therefrom, a movable jaw pivotally mounted upon the said body portion and adapted to co-act with the first mentioned jaw, and means including a movable sleeve arranged to engage one end of the said movable jaw for opening and closing the same.

5. A meat seasoning tool comprising a body portion having a tapering jaw extending therefrom, a similarly arranged movable jaw adapted to co-act with the first mentioned jaw, graduations provided on one of said jaws, a reciprocating plunger positioned between the said jaws, and a retaining sleeve slidably mounted upon the said body portion for opening and closing the said jaws.

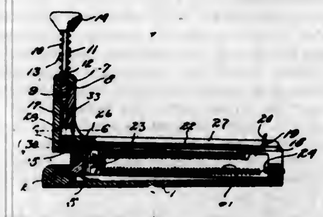
1,155,140. MONOLITHIC INSCRIPTION-STONE. WILLIAM H. FILER, Grove City, Pa. Filed Sept. 24, 1913. Serial No. 791,497. (Cl. 40—136.)

An article of the character described composed of a plurality of concrete masses forming a solid mass and comprising a central member, an outer member partially inclosing the central member and forming the front of the article, and a different colored member extending from the central member at intervals through said front, said central members constituting the main body of the



article and affording a base for the colored member, substantially as set forth.

1,155,141. STAPLE FORMING AND SETTING IMPLEMENT. ROBERT E. FORD, Baltimore, Md. Filed Jan. 11, 1915. Serial No. 1,650. (Cl. 1—48.)



1. In a staple forming and setting implement, the combination with a forming plate of means constructed and arranged to coöperate with said plate to cut a strip of material to form the legs of a staple and to simultaneously cut the strip to form the bight portion of a staple of which the legs have been previously formed.

2. In a staple forming and setting implement, a forming plate and single means coöperating therewith for partially forming a staple from a strip of material and simultaneously completing the formation of a staple which has been previously partially formed and setting the same.

3. In a staple forming and setting implement, a forming plate, and means coöperating with the forming plate to shear and bend a portion of a strip of material to form the legs of a staple and to simultaneously complete the formation of a staple of which the legs have been previously formed, the said means being operable to set the completed staple.

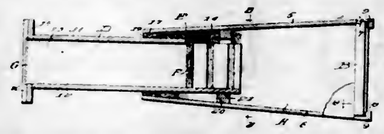
4. In a staple forming and setting implement, the combination with a forming plate, of a staple former and setter constructed and arranged to coöperate with the forming plate to shear a portion from a strip of material and bend the same to form the legs of a staple and to simultaneously sever from the strip the bight portion of a staple which has had its legs previously formed.

5. In a staple forming and setting implement, the combination with a forming plate having an extension of lesser width than itself, of a staple former and setter consisting of spaced legs and a web connecting the same, the said legs coöperating with the forming plate to sever the prongs of a staple from a strip of material and to simultaneously bend the prongs over the extension of the forming plate and the said web being simultaneously operable to sever the bight portion of a staple and to drive the same.

[Claims 6 and 7 not printed in the Gazette.]

1,155,142. ENLARGING-CAMERA. ARTHUR L. GATES, Cawker City, Kans., assignor of one-half to Joseph F. Mergen, Cawker City, Kans. Filed Apr. 23, 1915. Serial No. 23,375. (Cl. 88—24.)

1. An enlarging camera comprising a casing tapering toward its front end, a guideway at the rear end of the casing for the reception of a plate or screen holder, a light excluding bearing arranged in the forward end of the casing, a tube slidably extending through the bearing and projecting within the casing, said tube having one of its walls shortened and being provided on its walls adjacent the shortened wall with a plurality of spaced guideways, a lens holder adapted to be positioned within the guideways, said guideways being provided adjacent the inner end of said tube, an outwardly extending flange provided at the outer end of the tube, a pair of strips carried by the flange in opposed and spaced relation to each other, one of the strips being fixed relatively to the flange, means whereby the other strip may be adjusted laterally relatively to the fixed strip, said strips being provided with means whereby a negative may be clamped between them, and a partition arranged within the casing and provided with an opening for the slidable reception of the inner end of said tube.



2. In a device of the class described, the combination of a casing open at both ends, a light excluding bearing arranged in one end of the casing, a tube slidably extending through said bearing and projecting within the casing, a guideway provided in the opposite end of the casing, a screen holder and a plate holder adapted to be interchangeably engaged within the guideway, a lens holder, means associated with the tube whereby the lens holder may be adjustably positioned longitudinally of the tube, a pair of strips disposed at the outer end of the tube, and being adjustable one toward and away from the other, whereby a negative may be clamped between them, and a partition arranged within the casing and provided with an opening through which said tube is adapted to be slidably extended.

3. In a device of the class described, the combination of a casing open at both ends, a tube slidably extending through one end of the casing and projecting within the latter, a plate holder and a focusing screen holder, means arranged at the opposite end of the casing whereby the plate holder and focusing screen holder may be interchangeably disposed in said opposite casing end, a lens holder, means associated with the tube whereby said lens holder may be adjustably disposed longitudinally of the tube, means whereby a negative may be positioned at the outer end of the tube, and means whereby the tube may be maintained in adjusted position relatively to the casing at will.

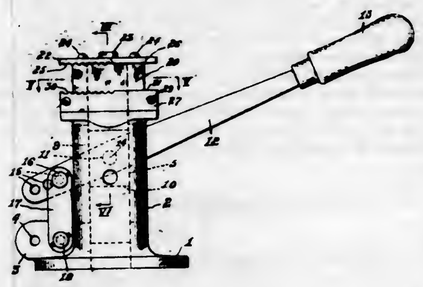
4. In a device of the class described, the combination of a casing, a tube telescopically engaging within the casing, a plate holder and a focusing screen holder adapted to be interchangeably disposed within the casing, a lens holder, means whereby the same may be adjusted longitudinally of the tube, and means whereby a negative may be secured to the tube relatively to the lens holder.

5. In a device of the class described, the combination with a casing and a tube adjustable one relatively to the other, and having means whereby a negative and a lens may be carried in adjusted positions relatively to each other, of a focusing screen and a plate holder adapted to be interchangeably disposed within the casing, said screen and holder being provided with analogous zones of various areas.

1,155,143. MACHINE FOR SEALING AND CRIMPING TUBES. ERNEST W. GAUBE, Cleveland, Ohio; Ida A. Gaube executrix of said Ernest W. Gaube, deceased. Filed Nov. 19, 1913. Serial No. 801,795. (Cl. 113—54.)

1. A tube sealing and crimping machine comprising in combination, two members movable relative to each other, the opposed surfaces of said members being corrugated, an abutting plate transversely adjacent said surfaces, and means for effecting such relative movement.

2. A tube sealing and crimping machine comprising in combination, a standard provided with an opening and having a corrugated edge laterally adjacent said opening, a plunger mounted for movement in such opening, a member carried by and projecting therefrom said plunger, said member having a corrugated surface opposed to said edge, and means for actuating said plunger.



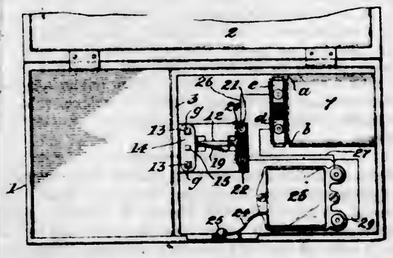
3. A tube sealing and crimping machine comprising in combination, a standard having an upper surface corrugated, a member mounted for movement toward and away from such surface, said member having a corrugated surface opposed to said first mentioned surface, the corrugations of said surface respectively being staggered in a direction at an angle to the direction of movement, a guided connection between said standard and member, and means for actuating said member.

4. A tube sealing and crimping machine comprising in combination, a standard, a member thereon formed on its upper surface with corrugations, a plunger movably mounted in said standard, an abutting plate carried by said plunger and adjacent said member, the direction of movement of said plunger corresponding with the direction of projection of said corrugations, a coöperating member carried by said plunger and projecting beyond said plate, said coöperating member being formed on its under surface with corrugations opposed to said first mentioned corrugations, and means for actuating said plunger.

5. A tube sealing and crimping machine comprising in combination, a pair of jaws movable relative to each other, one of said jaws having an obliquely beveled surface, said bevel merging with the inner surface of such jaw, and means for effecting said relative movement.

[Claims 6 to 8 not printed in the Gazette.]

1,155,144. BURGLAR-ALARM. HERMAN T. GAY, Baltimore, Md., assignor, by mesne assignments, to Protection Company, Incorporated, a Corporation of Maryland. Filed Jan. 29, 1914, Serial No. 815,117. Renewed May 8, 1915. Serial No. 26,899. (Cl. 177—316.)



1. In a burglar alarm of the character described, a box adapted for closure, an electric sounding mechanism which is situated in the box, a spring backed vertically-moving staff adapted to project loosely through the bottom of the box, and two contact posts in an electric circuit the closing of which operates the sounding mechanism, combined with a spring-drawn sliding bar one end of which carries a circuit closer, and the other end adapted to engage and be held by the said staff when the same is forced inward by the seating of the box, and to be released therefrom upon the projection of the said staff below the box.

2. In a burglar alarm of the character described, a box adapted for closure, an electric sounding mechanism which is situated in the box, a spring-backed vertically-moving staff adapted to project loosely through the bottom of the box, and two contact posts in an electric circuit the closing of which operates the sounding mechanism, combined with a spring-drawn sliding bar one end of which carries a circuit closer, and the other end adapted to engage and be held by the said staff when the same is forced inward by the seating of the box, and to be released therefrom upon the projection of the said staff below the box, and means whereby the said sliding bar can be held in an inoperative condition.

3. In a burglar alarm of the character described, a box adapted for closure, an electric sounding mechanism which is situated in the box and embraces two contact posts, a pivoted sliding hooked bar carrying a circuit-closing pivoted crosshead, a spring supported and vertically moving staff adapted to project below the bottom of the box, the same having a tooth adapted to engage the hooked bar when the staff is forced inward by the seating of the box, and the electric circuit opened, and to be disengaged from the said hooked bar and the circuit closed, upon the lifting of the box from its seat.

4. In a burglar alarm of the character described, a box adapted for closure, an electric sounding mechanism which is contained in the box and embraces two contact posts, a pivoted spring-actuated sliding hooked bar carrying a circuit-closing pivoted crosshead, a spring-supported and vertically moving staff adapted to project below the bottom of the box, the same having a tooth to engage the hooked bar when the staff is forced inward by the seating of the box and the electric circuit opened, and to be disengaged from the said hooked bar and the circuit is closed by the lifting of the box from its seat.

5. In a burglar alarm of the character described, a box adapted for closure, an electric sounding mechanism which is situated in the box and embraces two contact posts, a pivoted sliding hooked bar carrying a circuit-closing pivoted crosshead, a spring-supported vertically moving staff adapted to project below the bottom of the box, the same having a tooth to engage the hooked bar when the staff is forced inward by the seating of the box and the electric circuit thereby opened, and to be disengaged from the said hooked bar and the circuit closed upon the lifting of the box from its seat, combined with a switch situated within the box whereby the operation of the apparatus can be suspended.

[Claim 6 not printed in the Gazette.]

1,155,145. PORTABLE SECTIONAL OVEN. HERMANN GEHNRICH, Brooklyn, N. Y. Filed Mar. 16, 1915. Serial No. 14,875. (Cl. 34—19.)

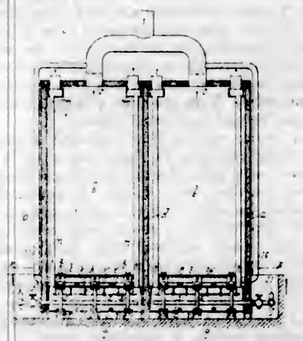
1. The combination with an oven, of a floor located in the oven, supports for mounting the floor, said supports including means for admitting air into the oven.

2. The combination with an oven, of a floor forming the lower portion of the oven, supports for mounting the floor, said supports including tubular means for admitting air into the oven.

3. The combination with an oven, of a floor forming the lower portion of the oven, a plurality of supports for mounting the floor, said supports including a tube forming part of each support for admitting air into the oven.

4. The combination with an oven, of a perforated floor forming the lower portion of the oven, a plurality of supports for mounting the floor, said supports including a tube forming part of each support for admitting air into the oven.

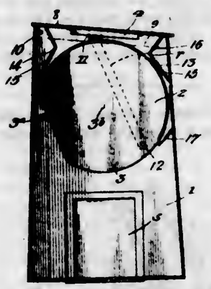
5. The combination with an oven and a combustion compartment, of a perforated floor arranged above the compartment, a plurality of supports for mounting the floor.



said supports including a tube forming part of each support for admitting air into the oven.

[Claims 6 to 13 not printed in the Gazette.]

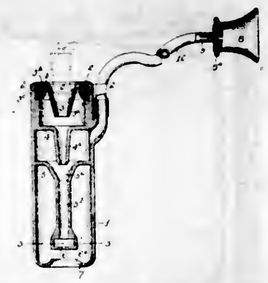
1,155,146. MAIL-BOX. HENRY D. GRAVES, Grant Park, Ill. Filed Feb. 10, 1913. Serial No. 747,541. (Cl. 232—49.)



A mail box comprising a dominant mail receptacle, a partially revoluble auxiliary mail receptacle mounted in the upper end of the dominant receptacle, said auxiliary receptacle having an elongated opening and an adjoining flat surface and adapted to be revolved partially to bring the opening toward the upper end of the main receptacle, said flat surface acting as a chute for the mail matter when the auxiliary receptacle is rotated to a position with the opening facing downwardly, a cover hinged to the open end of the dominant receptacle and provided with downwardly extending lugs, links pivoted to said lugs, and in turn having eccentrically pivoted connections with the auxiliary receptacle, whereby when the cover is raised the auxiliary receptacle is rotated to bring the opening to a position facing upwardly, projections comprising inclined surfaces on the interior of the dominant receptacle to prevent insertion of an instrument, and a flange projecting from the inner wall of the dominant receptacle adjacent the lower portion of the auxiliary receptacle to further prevent the insertion of an instrument.

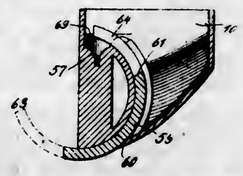
1,155,147. PUMPING MEANS FOR MASSAGE DEVICES. GEORGE ELMER GRAY, Des Moines, Iowa. Filed Feb. 21, 1913. Serial No. 749,936. (Cl. 230—13.)

A suction generator comprising a hollow cylindrical shell having at its upper end means for attachment to a faucet and having its lower end curved inwardly and upwardly, a horizontal partition provided with a depending nozzle, a second partition below said first named partition and having a depending tube or leg axially alined with said nozzle, a suction passage connected with the



space between said partitions, and a spreader disk below the lower end of said tube or leg, substantially as described.

1,155,148. BUTTON-FEEDING MECHANISM. CLARENCE C. HAMMOND, Wichita, Kans. Original application filed Apr. 21, 1914, Serial No. 833,383. Divided and this application filed Feb. 23, 1915. Serial No. 10,080. (Cl. 218—12.)



1. In a button-setting machine, a button magazine having an inclined button raceway and an outlet opening to which the said raceway extends, said raceway being located above the bottom of the magazine, and a button elevator working in the magazine between the bottom thereof and the raceway, said elevator having an end guard flange which extends transversely across the top of the raceway when the elevator is discharging thereinto.

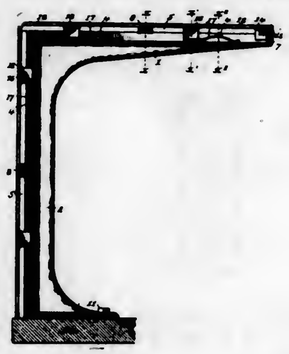
2. In a button-setting machine, a button magazine having an inclined button raceway and an outlet opening to which the raceway extends, said raceway being located above the bottom of the magazine, and a button elevator mounted in the magazine to oscillate transversely of the raceway between the latter and the bottom of the magazine, said elevator having an end guard flange which extends across the top of the raceway when the elevator is discharging thereinto.

3. In a buttonsetting machine, a button magazine having an inclined button raceway and an outlet opening to which the raceway extends, said raceway being located above the bottom of the magazine, and a button elevator working in the magazine between the bottom thereof and the raceway, said elevator having a button-supporting shoulder which is inclined to extend parallel to the button raceway at the end of its upward stroke, and a guard flange at the lower end of the button-supporting shoulder.

1,155,149. COUNTER-BRACKET. SHERMAN A. HATHORNE, Waukegan, Ill., assignor to Chicago Hardware Foundry Company, North Chicago, Ill., a Corporation of Illinois. Filed Mar. 20, 1915. Serial No. 15,687. (Cl. 211—25.)

1. The combination of a bracket having a transversely disposed web associated in fixed relation to a supporting face of the bracket, a guard rail, and a resilient finger attached to said guard rail and adapted for resilient

holding engagement beneath the aforesaid bearing web, substantially as set forth.



2. The combination of a bracket formed with an open recess in its supporting face and with a transverse bearing web in said open recess, a guard rail, and a resilient finger attached to said rail and adapted for resilient holding engagement beneath the aforesaid bearing web, substantially as set forth.

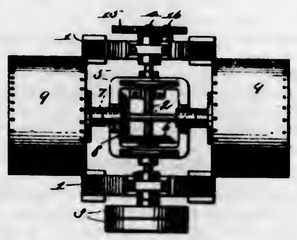
3. The combination of a bracket having a transversely disposed web associated in fixed relation to a supporting face of the bracket, a guard rail having a lug on its underside, and a resilient finger attached at one end to said lug and adapted for resilient holding engagement beneath the aforesaid bearing web, substantially as set forth.

4. The combination of a bracket formed with an open recess in its supporting face and with a transverse bearing web in said open recess, a guard rail having a lug on its underside, and a resilient finger attached at one end to said lug and adapted for resilient holding engagement beneath the aforesaid bearing web, substantially as set forth.

5. The combination of a bracket having a transversely disposed web associated in fixed relation to a supporting face of the bracket, a guard rail, means for connecting the guard rail to the bracket, said bracket having a vertical web at the rear end of its upper member to form an abutment for the guard rail, and a fastening means intermediate of said vertical web and the guard rail, substantially at set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,155,150. TUMBLING-BARREL. JOHN HENDERSON, Waterbury, Conn. Filed Mar. 25, 1914. Serial No. 827,184. (Cl. 51—14.)



1. A device of the kind described comprising two shafts arranged at right angles to each other, one of said shafts being adapted to oscillate in a vertical plane, intermeshing miter gears having skewed teeth carried respectively by said shafts, tumbling barrels carried by the oscillating shaft, means for rotating the other shaft and means for oscillating the shaft having the tumbling barrels.

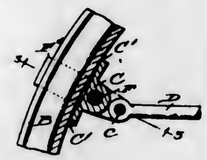
2. A device of the kind described comprising suitable supports, a shaft journaled in said supports, a frame mounted to rock upon said supports, a shaft journaled in said frame, tumbling barrels carried by the second mentioned shaft, intermeshing gears carried respectively by said shafts, means for driving the first mentioned shaft, and means driven from the first mentioned shaft for oscillating the second mentioned shaft.

3. In a device of the kind described a shaft, an oscillating shaft arranged at right angles to the shaft, a barrel upon each end of said oscillating shaft common means for rotating both shafts, a depending bracket adapted when swung to rock the oscillating shaft, a block slidable in said bracket, a crank shaft connected to said block, a gear wheel mounted upon said crank shaft, a gear wheel mounted upon the first mentioned shaft and an intermediate gear meshing with the two above mentioned gears, as and for the purpose set forth.

4. The combination with a combined rotating and oscillating shaft having a tumbling barrel at each end thereof, of a frame in which said shaft is journaled, a rotary shaft on which the frame is mounted, gearings arranged within the frame for rotating the tumbling barrel shaft, and gearing arranged without the frame, for oscillating said shaft.

5. The combination with a combined rotating and oscillating shaft having a tumbling barrel at each end thereof, of a frame in which said shaft is journaled, a rotary shaft on which the frame is mounted, gearing arranged within the frame for rotating the tumbling barrel shaft, and gearing arranged without the frame for oscillating said shaft, said oscillating gearing being arranged to equalize the speed of the rotay gearing.

1,155,151. RIM-TOOL. MOSES MILTON HERMAN, Danville, Va. Filed Mar. 11, 1915. Serial No. 13,764. (Cl. 29—84.)

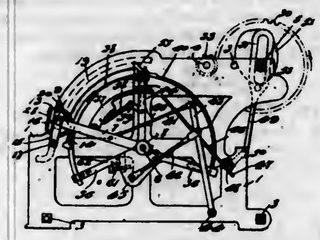


1. A rim tool of the character described comprising a pair of clamping members, each of which consists of a body plate having transverse engaging edges projecting beyond its outer face to positively engage the inner periphery of a rim in non-slipping relation, clamping pieces carried by each of said clamping members and for detachable engagement with the side edges of the rim, and adjustable connections between the said clamping members.

2. A rim tool of the character described comprising a pair of clamping members, each of which is provided with means for detachably engaging the side edges of a rim, and each of which is provided with outwardly projecting transversely extending engaging edges for engagement with the inner periphery of a rim to prevent accidental displacement circumferentially of the rim, and adjustable connections between the said clamping members.

3. A rim tool of the character described comprising a pair of clamping members, each of which consists of a body plate, the outer face of which is concaved to provide transverse engaging edges at the upper and lower ends of the plate, projecting beyond its said outer face to positively engage the inner periphery of a rim in non-slipping relation, clamping pieces carried by each of said clamping members for detachably engaging the side edges of the rim, and adjustable connections between said clamping members.

1,155,152. BAG-TURNER. IKE HIRSCHFELD, Fort Worth, Tex. Filed May 7, 1915. Serial No. 26,512. (Cl. 139—47.)



1. A bag turning machine comprising a frame, a rocker-shaft journaled in said frame, a bag receiving and holding yoke and a bag holding and turning yoke mounted on said shaft, means carried by the former yoke for receiving and stretching the bag to be turned, means for rocking said yokes in opposite directions for turning the bag and a gripping device for bearing against the bottom of the turned bag for pressing the kinks out of the corners and removing the bag from said turning yoke.

2. A bag turning machine comprising a frame, a rocker-shaft journaled in said frame, a bag receiving and holding yoke and a bag holding and turning yoke mounted on said shaft, means for driving said yokes in opposite directions, means carried by the former yoke for receiving and stretching bags, and bag turning members carried by the latter consisting of a pair of yielding arms for entering the unturned bag and a pair of yielding arms extending on the outside of the bag and the pairs of arms coöperating with each other.

3. A bag turning machine comprising a frame, a rocker-shaft journaled in said frame, a bag receiving and holding yoke and a bag holding yoke mounted and turning on said shaft, means for rocking said yokes in opposite directions, a pivoted frame mounted in the former yoke, means mounted in said pivoted yoke for holding and stretching bags, means mounted on the bag holding and turning yoke coöperating with said pivoted yoke for turning bags, a gripping device for detaching the bag from said holding and turning yoke and means for throwing the bags out of the machine.

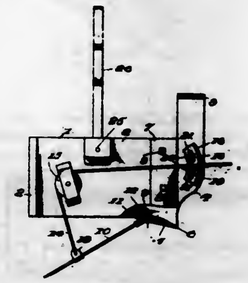
4. A bag turning machine comprising a frame, a rocker-shaft journaled in said frame, a bag receiving and holding yoke and a bag holding and turning yoke mounted on said shaft, means for rocking said yokes in opposite directions, each one of said yokes having gripping devices for holding bags and each yoke coöperating with the other for turning bags, and a gripping device for pressing against the bottom of the turned bag for removing kinks therefrom and for removing the bag from said bag holding and turning yoke.

5. A bag turning machine comprising a frame, a rocker-shaft journaled in said frame, a bag receiving and holding yoke and a bag holding and turning yoke mounted on said shaft, means for rocking said yokes in opposite directions, each yoke having gripping devices for holding bags and each yoke coöperating with the other for turning bags, and means for pressing against the bottom of the bag after it is turned for straightening the corners thereof and for detaching bags from said holding and turning yoke.

[Claims 6 to 11 not printed in the Gazette.]

1,155,153. EXCAVATING-SHOVEL. ROGER HOLMES, New Orleans, La. Filed Nov. 30, 1914. Serial No. 874,864. (Cl. 37—54.)

1. In an excavating shovel, the combination of a body portion open at its front end, an arch-shape brace secured to the sides of the body portion adjacent the open end, a shear at the bottom of the body portion adjacent the front end, said shear having side extensions which engage the outside of the body portion, means for securing the extensions to the body portion to rigidly fasten the shear, a bottom hinged to the rear of the shear, the hinge being forward of the center of gravity when the shovel is loaded, guide pulleys mounted on the body portion, angular adjustable slotted guides on the forward part of the sides of the body portion, and drag cables secured to the sides of the bottom and extending over the guide pulleys and through the slots in the adjustable guides.



2. In an excavating shovel, the combination of a body portion open at its front end, an arch-shape brace secured to the forward ends of the side walls of the shovel adjacent the front open end, a shear at the bottom of the body portion adjacent the open end thereof, means for securing the said shear to the bottom of the body portion, said bottom being hinged to the rear of the shear forward of the center of gravity when the shovel is loaded, guide pulleys on the sides of the body portion, angular shape guides at the forward end of the body portion, means including bolts and slots through which the bolts pass to fasten the guides to the body portion, the lower edges of the horizontal portions of the body portion being beveled and formed with openings above said bevel portions, the drag cables extending through said openings.

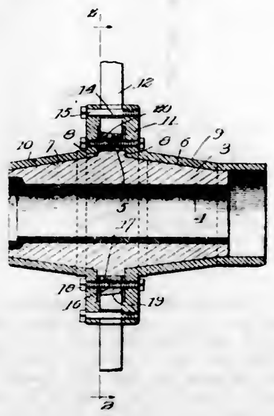
3. An excavating shovel comprising a body portion open at its forward end, a shear secured to the bottom adjacent the open end thereof, a bottom hinged to the rear of the shear, the hinge being located forward of the center of gravity when the shovel is loaded, drag cables secured to the sides of the bottom, pulleys on the body portion over which the drag cables pass, guides on each side at the forward end of the body portion, each guide comprising an angle iron formed with radial slots, the horizontal portion of the angle iron being beveled at the lower edges and formed with openings above said bevel portions, and bolts for securing the guides to the body portion.

4. An excavating shovel comprising a body portion open at its front end, a fixed shear at the forward end of the body portion and adjacent the open end thereof, a movable bottom in the bottom portion, means for operating the bottom, angle-shape gages on the forward sides of the body portion in advance of the front end of the fixed shear, each gage comprising a base and an outwardly extended flange, the lower edge of the outwardly extended flange being beveled to determine the depth of the cut of the shear, the base having slots, and bolts passing through said slots and the sides of the body portion to adjustably mount the gages.

1,155,154. WAGON-WHEEL. WILLIAM FRANKLIN JARRETT, Carl Junction, Mo. Filed Sept. 10, 1914. Serial No. 861,030. (Cl. 21—31.)

1. A wheel hub comprising a body portion having a polygonal portion intermediate its ends, a pair of sleeves engaging the ends of said body and being provided with outstanding annular flanges adjacent the polygonal portions, means connecting the flanges and adapted to anchor

the sleeves in position, a plurality of contacting wedge members slidably mounted between the flanges and adjacent entirely around the surfaces of the polygonal portions between those flanges circumferentially of the hub, a plurality of spokes with beveled extremities contacting each with one of the wedge members and extending between the flanges, and oppositely extending bolts projecting through the flanges and engaging the wedge members for the rigid adjustment of said wedge members and the forced extension of said spokes.



2. A wheel comprising a hub body with oppositely tapering ends and a polygonal central portion, a pair of oppositely tapered sleeves engaging the tapering portions of said hub body and provided with annular flanges at their adjacent extremities, a plurality of spokes extending from said hub body polygonal portion, said spokes provided with beveled lower extremities and with slotted apertures spaced a distance therefrom, a plurality of anchor bolts extending between said flanges and projecting through said slotted apertures, a plurality of wedge shaped blocks slidably mounted between said flanges and provided with outer beveled surfaces contacting with the beveled extremities of said spokes, and oppositely extending adjusting bolts projecting through said flanges and threadedly engaging said blocks for the forced adjustment thereof.

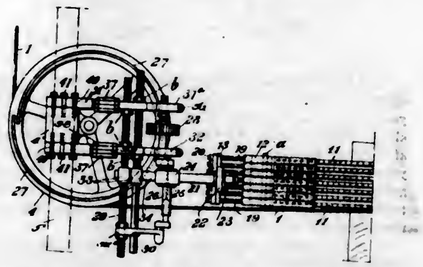
1,155,155. CORN-SHELLING MACHINE. JACOB F. KIENZLE, Sioux Falls, S. D. Filed Mar. 20, 1915. Serial No. 15,945. (Cl. 130—6.)



1. A corn sheller, a cage, and a sheller rotatable in the cage, said sheller having radial blades which are spirally disposed from one end of the sheller to points approximately midway of the length of the sheller and from said points extend parallel with the longitudinal axis of the sheller, and angularly adjustable plates carried by said parallel parts of the blades and extending from said midway points to the opposite end of the sheller.

2. In a device of the class described, a cage, a shaft rotatably mounted in the cage, a hub fixed to the shaft and having integral blades extending longitudinally thereof, said blades having cutaway parts formed therein, providing shoulders at one of their ends, plates mounted in the cutaway parts and having their inner ends abutting the shoulders, said blades being adjustable in the cutaway parts at different angular relations to the hub, and means for holding the blades in adjusted positions.

1,155,156. AUTOMATIC STONE-SAWING MECHANISM. ALBERT LESPAGNOL, Bois-Colombes, France. Filed June 21, 1912. Serial No. 705,127. (Cl. 125—18.)



1. In combination, a saw, pulleys around which the saw passes, bearings for said pulleys, frames extending from the bearings, a plurality of corrugated blades operating over the saw, and means operated by the pulleys for reciprocating the blades.

2. In combination, a saw, a plurality of corrugated blades operating over the saw to hold the latter to the work, and mechanism operated by the saw including crank shafts for reciprocating the blades.

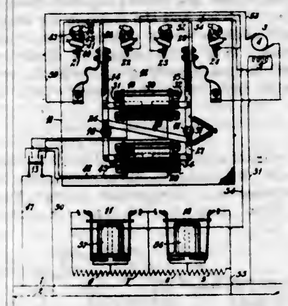
3. In combination, a saw, a sliding frame and a pulley, said pulley having spiral ribs, a plurality of reciprocating blades above and engaging the saw to hold the latter to its work, heads which support the blades, bars having slots and extending from the heads and reciprocating in the frame, crank shafts mounted in the frames, blocks on the cranks, said blocks sliding in the slots in the bars to impart reciprocating movement to the blades, and gears on the crank shafts, said gears meshing with the spiral ribs.

4. In combination, a saw, sliding frames and pulleys mounted in the sliding frames, each pulley having spiral ribs, reciprocating rods mounted in the frames, each rod having a slot, heads supporting the rods, forked blade supports mounted in the heads, means for maintaining the forked blade supports in alinement, a plurality of blades mounted in the blade supports, means for adjustably mounting the blades in the supports, means for adjusting the tension of the blades, sliding blocks mounted in the slots in the rods, and mechanism operated by the spiral ribs for operating the blocks to reciprocate the blades.

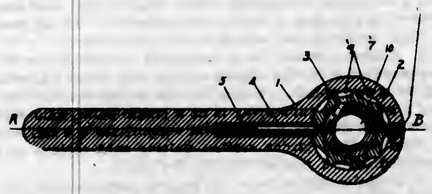
5. In combination, a saw, a reciprocating element which bears on and follows the saw to hold the same to its work, and mechanism operated by and movable with the pulley for reciprocating the element.

1,155,157. REVERSING-SWITCH. HARRY A. LEWIS, Norristown, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 22, 1911. Serial No. 628,735. (Cl. 175—281.)

A reversing switch comprising two sets of stationary contact members, a pair of pivotally mounted arms having contact members, means for insuring synchronous operation of said arms, centering means for the movable arms, an electro-magnet for moving the arms toward each other to effect engagement of their contact members with one set of stationary contact members, and an electro-magnet for moving said arms away from each other to effect engagement of their contact members with the second set of stationary contact members.



1,155,158. WRENCH. CHARLES B. MOULTHROP and LUCIAN C. JACKSON, Buffalo, N. Y. Filed Jan. 23, 1906. Serial No. 297,462. (Cl. 81—60.)



1. In a wrench, in combination with a handle having an annular head, jaws capable of rotation in said head, means for securing said jaws in said head, a cylindrical shaped, spring actuated ratchet pin carried in said head at an angle with the center line of said jaws and semi-cylindrically shaped ratchet holes having inclined leads in one of said jaws, the radii of said ratchet pin and said semi-cylindrical ratchet holes being substantially equal.

2. In a wrench, in combination with a handle having an annular head, a jaw having an external annular seat to fit into said head, ratchet holes in the face of said seat, a ratchet pin and spring mounted in said head to engage said holes and a second jaw externally threaded to engage in said first mentioned jaw, said threads being cut in the direction to tighten when said second jaw is in use.

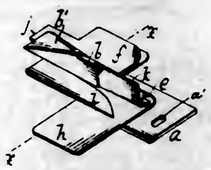
3. In a wrench, the combination of a nut-turning member having semi-cylindrically shaped ratchet holes with inclined leads and a ratchet mechanism external to, and adapted to revolve said nut-turning member.

4. In a wrench, in combination with a handle and a head, a rotating part, one side of said part used to tighten a nut and the opposite side of said part used to loosen said nut and a ratchet mechanism consisting of a spring and a ratchet pin, said pin having a uniform diameter with its axis at an angle with the axis of said rotating part and being operative when bearing on any side.

5. In a wrench, the combination of a handle and a head formed of a single piece of material having a hole formed through the head for the reception of two jaws inserted from opposite sides and locked together and held in place by means of threads, one of said jaws suitable for tightening a nut and the other of said jaws suitable for loosening said nut and a cylindrical ratchet pin having a uniform diameter, said pin being operated by means of a spring in contact with one end.

[Claims 6 to 24 not printed in the Gazette.]

1,155,159. HEMMING ATTACHMENT FOR SEWING-MACHINES. LAMBERT G. NEFF, New York, N. Y., and JOSEPH J. TAYLOR, Richmond, Vt. Filed Aug. 26, 1914. Serial No. 858,625. (Cl. 112—10.)



1. A hemming attachment for sewing machines, comprising a guide having an inclosed winding passage for guiding a tucked fabric means for vertically positioning the tuck before it enters the passage, means for hemming the lower edge of the fabric, and means for placing a strip of fabric on to the hem.

2. A hemming attachment for sewing machines, comprising a guide having an inclosed winding passage for guiding a tucked fabric in a vertical and horizontal path, a vertical plate extending forwardly from the vertical portion of the guide to vertically position the tuck before it enters the passage, means for hemming the lower edge of the fabric, and means for placing a strip of fabric on to the hem.

3. A hemming attachment for sewing machines, comprising a vertically disposed member provided with a horizontal portion for guiding the tucked portion of a fabric in a vertical and horisontal path, a looped member located adjacent to the tuck member for hemming the flap portion of the fabric, and side wings arranged above the loop for placing a strip of fabric on to the hem.

4. A hemming attachment for sewing machines, comprising a vertically disposed member provided with a horizontal portion for guiding the tucked portion of a fabric in a vertical and horisontal path, a looped member located adjacent to the tuck member for hemming the flap portion of the fabric, said loop member having an upwardly projecting plate forming the forward portion of the tuck member, and side wings arranged above the loop for placing a strip of fabric on to the hem.

5. A hemming attachment for sewing machines, comprising a vertically disposed member provided with a horizontal portion for guiding the tucked portion of a fabric in a vertical and horisontal path, a looped member located adjacent to the tuck member for hemming the flap portion of the fabric, said loop member having an upwardly projecting plate forming the forward portion of the tuck member, side wings arranged above the loop for placing a strip of fabric on to the hem, and means coacting with the lower portion of the plate for guiding the fabric into the tuck guide.

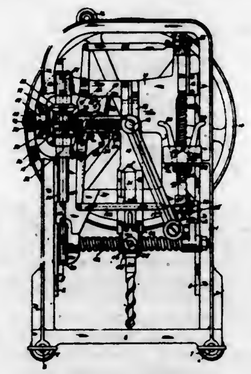
1,155,160. MORTISING-MACHINE. GEORGE E. NORRIS, Columbus, Ohio, assignor to The Perfection Mortise Machine Company, Columbus, Ohio, a Corporation of Ohio. Filed Aug. 28, 1913. Serial No. 787,232. (Cl. 144—70.)

1. A mortising machine comprising a framework, a bit, means for rotating said bit, means for oscillating said bit during the rotation, and means for varying the length of such oscillation, said last means being such that the number of oscillations is increased correspondingly with each reduction in length of oscillation and vice-versa.

2. A mortising machine comprising a framework, a bit, means for rotating said bit, means for oscillating said bit during its rotation, means for varying the length of the oscillations, and means for maintaining a uniform rate of oscillatory movement of said bit for all lengths of oscillatory movement.

3. A mortising machine comprising a framework, a carriage slidable on said framework, a bit, a bit supporting structure pivotally mounted on said carriage, a rotatable cross feed screw for said bit supporting structure, means

for imparting rotation to said bit, said bit supporting structure having a part slidable toward and from the pivot thereof and having threaded connection with said cross feed screw.



4. A mortising machine comprising a framework, a carriage slidable on said framework, a bit, a bit supporting structure, means for moving said structure back and forth, in-feed mechanism for the bit, and connecting means between said structure and said mechanism adapted to actuate said mechanism to give a continuous in-feed as long as said structure moves in its backward and forward path.

5. A mortising machine comprising a framework, a carriage slidable on said framework, a bit, a bit supporting structure, means for moving said structure back and forth, a pivotally mounted rocker arm, in-feed mechanism, connecting means between said arm and said mechanism, and connecting means between said arm and said structure, said two named connecting means being arranged to operate said mechanism continuously inward by the movement of said structure.

[Claims 6 to 11 not printed in the Gazette.]

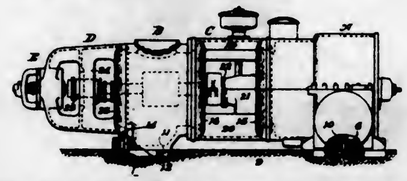
1,155,161. HINGE. WALTER C. RAMSEY, Peculiar, Mo. Filed June 17, 1915. Serial No. 34,617. (Cl. 20—53.)



1. The combination of a sash frame, a sash molding, a sash mounted in the said frame and adapted to be seated laterally against the molding, a cross strip at the lower portion of said frame and spaced laterally from said molding and between which and the molding the sash is adapted to engage when in closed position, and a hinged connection for the upper end of the sash consisting of a three-leaf hinge, one leaf of which is secured to said sash, another leaf of which is secured to and depends below the upper portion of said sash frame, and the third leaf of which connects the two first-mentioned leaves and is adapted to assume a substantially horizontal position when the sash is closed, whereby to force the sash laterally into close engagement with said sash molding.

2. The combination of a sash frame, a sash molding, a sash mounted in the said frame and adapted to be seated laterally against the molding, a cross strip at the lower portion of said frame and spaced laterally from said molding and between which and the molding the sash is adapted to engage when in closed position, and a hinged connection between said sash frame and upper end of the sash and including a spreading leaf whereby to force the sash laterally into close engagement with said sash molding.

1,155,162. FRAME FOR TURBO-DRIVEN MACHINES. RICHARD H. RICE, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Aug. 16, 1913. Serial No. 785,118. (Cl. 121—58.)



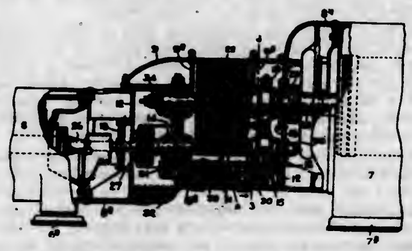
1. A girder frame for a horizontal turbine-driven set composed of a turbine casing having sole plates supporting it at two points, a casing for the driven element having a sole plate supporting it at a single point, said sole plates thus forming a three-point support for the set, and a rigid vertical girder section uniting said casings.

2. A girder frame for a horizontal turbine-driven set composed of a turbine casing having sole plates supporting it at two points, a casing for the driven element having a sole plate supporting it at a single point, said sole plates thus forming a three-point support for the set, and a rigid vertical girder section uniting said casings and provided with a journal box for the shaft.

3. A girder frame for a horizontal turbine-driven set, composed of a casing for the turbine having sole plates containing transverse slots for fastening devices and supporting it at two points, a casing for the driven element having a sole plate containing a longitudinal slot for a fastening device and supporting it at a single point, said sole plates thus forming a three-point support for the set, and a rigid open girder section connecting said casings.

4. A girder frame for a horizontal turbine driven set comprising a casing for the turbine, a casing for the driven element, a girder section uniting said casings, sole plates forming a three-point support for said casings, and having slots therein, and fastening devices connected to the casing and passing through said slots.

1,155,163. GEARED TURBINE-DRIVEN SET. RICHARD H. RICE, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 25, 1915. Serial No. 30,368. (Cl. 74—56.)



1. In combination, an elastic fluid turbine, an apparatus driven thereby, shafts for the turbine and apparatus, a bridging member which is suspended between and supported by the casings of said turbine and apparatus, and gearing between the shafts which is wholly supported by said member.

2. In combination, an elastic fluid turbine, an apparatus driven thereby, shafts for the turbine and apparatus, a member which forms a bridge uniting the turbine and driven apparatus, said member being suspended between and supported by said turbine and apparatus, gearing between the shafts, the axes of said gears being located in the same vertical plane, shafts for said gears, and bearings for the gear shafts, said gear shafts and bearings being supported wholly by the bridge.

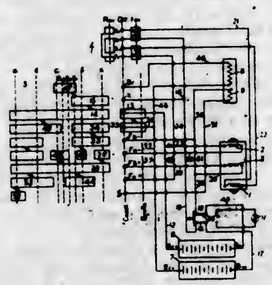
3. In combination, a turbine, an apparatus driven thereby, main shafts for the turbine and apparatus which are located in the same vertical plane, a suspended bridge member which unites the turbine and apparatus, short shafts which are united with the main shafts and are located one over the other, gearing between the short shafts, and bearings for the short shafts which are supported wholly by the bridge member.

4. In combination, a turbine, an apparatus driven thereby, shafts for the turbine and apparatus, a suspended bridge member which unites the turbine and apparatus, said member being hollow and provided with cross-ribs for stiffening it, gears for transmitting motion from one shaft to the other, which are located one above the other within the member, shafts for said gears, and bearings for the last named shafts which are supported by the cross-ribs.

5. In combination, a turbine, an apparatus driven thereby, shafts for the turbine and apparatus, a suspended bridge member which unites the turbine and apparatus, said member being hollow and provided with transverse walls near its ends through which the shafts extend and also with internal supports, gearing for transmitting motion from one shaft to the other, shafts for said gearing, and bearings for the gearing shafts which are carried by said internal supports.

[Claims 6 to 13 not printed in the Gazette.]

1,155,164. SYSTEM AND METHOD OF CONTROL FOR ELECTRIC MOTORS. LYNN G. RILEY, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 3, 1913. Serial No. 793,097. (Cl. 172—291.)



1. The method of transition from a series-parallel relation of a plurality of energy sources and a plurality of dynamo-electric machine windings to a series relation thereof that consists in disconnecting one of said windings, inserting a translating device across said sources of energy, connecting one winding across a portion of the line, opening certain connections of said sources to dispose them in series with said translating device, opening the portion of the line that short-circuits one of said windings and excluding said device.

2. The method of transition from a series-parallel relation of a plurality of energy sources and a plurality of field magnet windings to a series relation thereof that consists in disconnecting one of said windings, inserting a translating device across the common terminals of said sources, connecting said previously disconnected winding across a relatively short portion of the line, opening connections with said device at opposite ends of the respective sources, opening the portion of the line that short-circuits said previously disconnected winding and excluding said device.

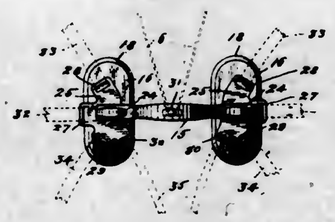
3. The method of controlling an electric motor which is supplied with energy from a plurality of sources initially in parallel and a plurality of the field magnet windings of which are connected in parallel that consists in disconnecting one of said windings, inserting a translating device across the common terminals of said sources, connecting one of said windings in parallel with a portion of the line intermediate another of said windings and the armature winding, opening certain connections of said sources to dispose them in series with said device, opening the portion of the line that short-circuits one of said field magnet windings and excluding said device.

4. The method of controlling an electric motor which is supplied with energy from a plurality of sources initially in parallel and a plurality of the field windings of which are connected in parallel that consists in disconnecting one of said windings, inserting a translating device across the common terminals of said sources, connecting said previously disconnected winding in parallel with a relatively short portion of the line intermediate another of said windings and the armature winding, opening connections with said translating device at opposite ends of the respective sources, opening the portion of the line that short-circuits said previously disconnected winding and excluding said device.

5. The method of controlling an electric motor which is supplied with energy from a plurality of sources that consists in the following steps: first, connecting said sources in parallel sections and the field magnet windings and the armature in series therewith; second, connecting the field magnet windings in parallel sections; third, disconnecting one of said windings and inserting a translating device across the common terminals of said source; fourth, connecting one of said windings in parallel with a portion of the line intermediate another of said windings and the armature winding and opening certain connections of said sources to dispose them in series with said device; fifth, opening the portion of the line that short-circuits one of said field magnet windings; sixth, excluding said translating device; and seventh, connecting the field magnet windings in parallel sections.

[Claims 6 to 8 not printed in the Gazette.]

1,155,165. HARNESS. MARTIN O. ROLSTAD, Sisseton, S. D. Filed Nov. 2, 1914. Serial No. 869,823. (Cl. 54—1.)

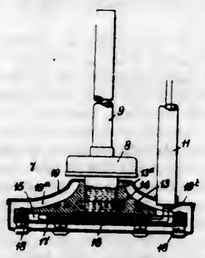


1. The combination with a harness, having a collar, hames and a breeching, of a bridge bracket, having at its ends strap plates and back pads, strap connections between said hames and strap plates tending to shift the load on said collar to said back pads, a belly band connect-

ing said strap plates, and strap connections between the breeching of said harness and said strap plates.

2. The combination with a harness, having a collar, hames, a breeching and a crupper, of a bridge bracket, having at its ends strap plates and back pads, strap connections between said hames and strap plates tending to shift the load on said collar to said back pads, a belly band connecting said strap plates, strap connections between the crupper of said harness and said strap plates, and strap connections between the breeching of said harness and said strap plates.

1,155,166. PERCOLATOR. EDWARD E. ROSE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 5, 1910. Serial No. 595,619. (Cl. 219—41.)



1. The combination with a liquid-containing vessel, a heater unit immersed therein, and a fountain tube, of means for dividing the liquid to produce a relatively thin film adjacent to the heating surface of said heater unit, and a heat-insulating barrier enveloping the remainder of the heater unit.

2. An electric heater adapted for immersion in a body of liquid and comprising a heating element, means for imparting a portion of the heat generated therein to the main body of liquid, means for inclosing a portion of said liquid within said heater, and means for localizing the remaining heat and imparting it to the said inclosed portion of said liquid.

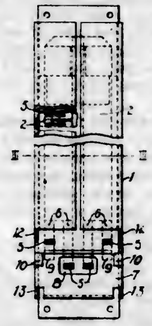
3. In a percolator, the combination with a vessel, a body of liquid contained therein, and a fountain tube, of a heating device associated with said fountain tube and adapted for immersion in said body of liquid, said device comprising a source of heat, means for localizing a portion of said heat to raise the temperature of a portion of said body of liquid to a high degree, whereby said portion of liquid is forced through said tube, and means for imparting the remaining heat to the main body of liquid surrounding said heating device.

4. In a percolator, the combination with a vessel, a body of liquid contained therein, and a fountain tube, of a removable heating device associated with said fountain tube and adapted for immersion in the said body of liquid, said device comprising a source of heat, means for inclosing a portion of said liquid within said heating device, means for rapidly imparting the major part of said heat to said inclosed portion of said liquid, and means for imparting the remaining heat to the main body of liquid.

5. The combination with a vessel, a body of liquid contained therein, a fountain tube and a heating device immersed in said liquid and comprising a source of heat, and means for slowly imparting a portion of said heat to the main body of liquid surrounding said heating device, of means for localizing the remaining heat and rapidly imparting it to a small segregated portion of said liquid, whereby part of said liquid is projected through said fountain tube.

[Claims 6 to 17 not printed in the Gazette.]

1,155,167. ELECTRIC HEATING APPARATUS. EDWARD E. ROSE, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 19, 1914. Serial No. 819,680. (Cl. 219—63.)



1. In an electric heater, the combination with an insulated resistance element, of a casing for inclosing the resistance element and leaving one end thereof exposed, a supporting means for the exposed end of the resistance element that constitutes an integral part of the casing, and terminals attached to the said exposed portion of the resistance element and disposed substantially perpendicular to the said resistance element and to the said casing.

2. In an electric heater, the combination with an insulated resistance element, of a casing for inclosing the resistance element and leaving one end thereof exposed, and a supporting means for the exposed end of the resistance element, the said supporting means being an integral extension of the casing and having integral clamping ears, and means for securing the exposed end of the resistance element to the support, the said means being held in place by the clamping ears.

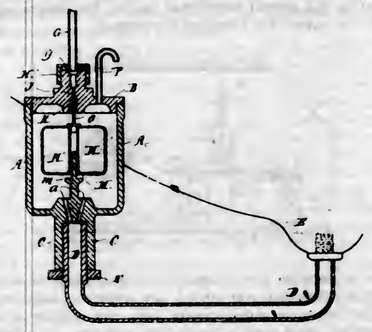
3. In an electric heater, the combination of an insulated resistance element, of a casing for inclosing the resistance element and leaving one end thereof exposed, and a supporting means for the exposed end of the resistance element, the said supporting means being an integral extension of the casing and having clamping ears integral therewith, and a single plate for securing the free ends of the resistance element to the support, the said plate being held in place by the clamping ears.

4. In an electric heater, the combination with a plurality of flat resistance elements insulated from each other and inclosed in a single sheath of insulating material, a metal casing having a portion partly inclosing the resistance elements and another portion supporting the exposed ends thereof, terminals secured to the exposed ends of the resistance elements, and a single plate for securing said exposed ends to the casing, the said plate having an opening through which terminals project.

5. In an electric heater, a resistance element, terminals secured to one end of the resistance element, and a support for the said terminal end comprising a base plate, a plurality of ears integral with the base plate, and a single holding plate coöperating with the base plate, the said holding plate being clamped in position by some of the said ears, and a cover secured to the support by the remaining ears.

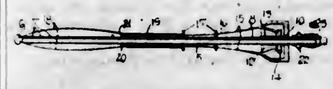
1,155,168. AUTOMATIC OIL-FEED FOR MOTOR-CARS. GORDON ANDREW, CHARLES HENRY SLOACOMBE, and HENRY HILL KINGHAM, Timaru, New Zealand. Filed Dec. 11, 1914. Serial No. 876,744. (Cl. 184—103.)

An automatic oil feed for motor cars having engine oil sumps, consisting of an oil chamber, a pipe connection leading from the bottom of such chamber into the bottom of the engine oil sump, means for adjusting the height of the oil chamber in relation to such sump, an oil supply pipe leading into the top of the oil chamber and having a needle valve seating at its inlet into such chamber, a float mounted in such chamber, a needle valve attached to the



float and adapted to fit into the needle valve seating when the float is raised, and an air vent in the top of the oil chamber, substantially as specified.

1,155,169. SURGICAL INSTRUMENT. JOHN STARKWEATHER, Pomona, Kans. Filed Nov. 28, 1914. Serial No. 874,452. (Cl. 128—45.)

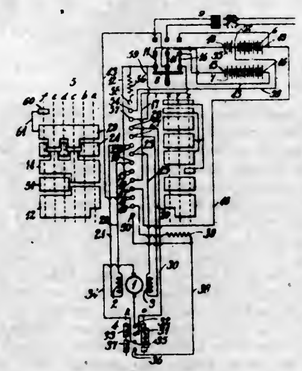


1. An instrument of the class described including a nozzle provided with jet orifices, a plurality of longitudinally extending expansible members, an element longitudinally movable upon the nozzle to which said members are fixed at one of their ends, the other end portions of said members being longitudinally curved and fixed at their extremities to the end of the nozzle, a tube inclosing the intermediate portions of said members and engaged with the inner ends of said bowed portions, means for positively preventing longitudinal shifting movement of said tube in one direction with respect to said expansible members, and means adjustable upon the nozzle to move said expansible members longitudinally through the tube and expand or contract the bowed portions thereof.

2. An instrument of the class described including a nozzle provided with jet orifices, a plurality of longitudinally extending expansible members, an element longitudinally movable upon the nozzle to which said members are fixed at one of their ends, the other end portions of said members being outwardly bowed and fixed at their extremities to the end of the nozzle, a tube inclosing the intermediate portions of said members and having notches in one of its ends to receive the inner ends of the bowed portions of the members whereby said tube is held against rotation independently of the nozzle, spaced guide collars fixed upon the nozzle through which said members are loosely disposed, one of said collars constituting a stop against which the inner end of the tube is adapted to engage to prevent longitudinal shifting movement of said tube in one direction, and means longitudinally adjustable upon the nozzle and engaged with said movable element to move the expansible wires through said tube and the guides and expand or contract the bowed portions thereof.

3. An instrument of the class described including a nozzle provided with jet orifices, a plurality of longitudinally extending expansible members, an element longitudinally movable upon the nozzle to which said members are fixed at one of their ends, the other end portions of said members being outwardly bowed and fixed at their extremities to the end of the nozzle, a tube inclosing the intermediate portions of said members, a guide collar rigidly fixed upon the tube and having openings therein to loosely receive the respective expansible members, said collar also constituting a stop for said sleeve to limit its movement in one direction, and means longitudinally adjustable upon the nozzle and engaged with said movable element to move the expansible members through said tube and the guides to expand or contract the bowed portions thereof.

1,155,170. SYSTEM AND METHOD OF CONTROL FOR ELECTRIC MOTORS. NORMAN W. STORER, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 5, 1912. Serial No. 724,067. (Cl. 172—291.)



1. The method of operating an electric motor regeneratively which consists in connecting the motor field magnet windings and a portion of the battery in parallel with each other and in series with the motor armature and the remainder of the battery.

2. The method of controlling an electric motor which consists, for motor operation, in connecting the armature and field magnet windings thereof in series with each other and with a battery, and an intermediate point of the battery to the connection between the armature and field magnet windings, and, for regenerative operation, in connecting the motor field magnet windings and a portion of the battery in parallel with each other and in series with the motor armature and the remainder of the battery.

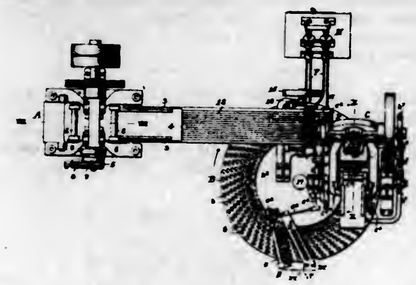
3. The method of controlling an electric motor that is supplied with energy from a storage battery which consists in connecting the armature and field magnet windings in series relation across the storage battery and interconnecting a point between the armature and field magnet windings and an intermediate point in the battery for relatively high-speed operation.

4. The method of controlling an electric motor that is supplied with energy from a storage battery which consists in connecting storage battery cells in multiple groups and the armature and field magnet windings of the motor in series relation across the terminals of said groups for low-speed operation and connecting the storage battery cells in series relation and establishing a cross connection from between the armature and field magnet windings to an intermediate point in the storage battery for high-speed operation.

5. The method of controlling an electric motor that is supplied with energy from a storage battery which consists in connecting storage battery sections in multiple relation, the field magnet winding sections in series relation and in series with the motor armature for low-speed operation, connecting the storage battery sections in series relation for an intermediate operating speed and establishing a cross connection from between the armature and field magnet windings to an intermediate point in the storage battery for high-speed operation.

[Claims 6 to 20 not printed in the Gazette.]

1,155,171. BOTTLE-CAP-ASSEMBLING MACHINE. JULIUS STURTEVANT and JOSEPH T. WEINZIERL, New Kensington, Pa. Filed Aug. 18, 1913. Serial No. 785,428. (Cl. 113—80.)



1. In an assembling machine, the combination with a movable table having square ended semi-circular pockets; of guides adapted to deliver caps edgewise into the square ends of said pockets, and means for tipping the caps flat-wise within the pockets, substantially as set forth.

2. In an assembling machine, the combination with a movable table having square ended semi-circular pockets; of means adapted to deliver caps to the table pockets edgewise, means for tipping the caps flat-wise within the pockets, and means adapted to deliver disks to the caps within the table pockets, substantially as set forth.

3. In an assembling machine, the combination with a movable table having pockets; of means adapted to deliver caps to the table pockets edgewise, means to effect tipping of the caps within the pockets open side up, means adapted to deliver disks to the caps within the table pockets, and means for delivering additional packing disks to the caps, substantially as set forth.

4. In an assembling machine, the combination with a movable table having pockets; of means adapted to deliver caps to the table pockets edgewise, means to effect tipping of the caps within the pockets open side up, means adapted to deliver disks to the caps within the table pockets, means for delivering packing disks to the caps, and means for inserting the packing disks within the caps, substantially as set forth.

5. In an assembling machine, the combination with a movable table having pockets; of means adapted to deliver caps to the table pockets edgewise, means to effect tipping of the caps within the pockets open side up, means adapted to deliver disks to the caps within the table pockets, means for delivering packing disks to the caps, means for inserting the packing disks within the caps, and means for automatically receiving the caps from the table, substantially as set forth.

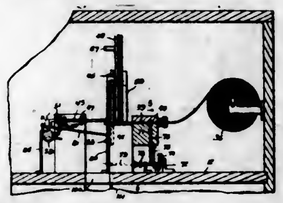
[Claims 6 to 27 not printed in the Gazette.]

1,155,172. VENDING-MACHINE. HARRY J. SWEANY, Quapaw, Okla. Filed Aug. 27, 1913, Serial No. 786,917. Renewed Mar. 20, 1915. Serial No. 15,904. (Cl. 211—8.)

1. In a vending machine, an electric circuit, a motor connected in said circuit, feed mechanism driven by the motor for advancing the articles to be vended, a cutter, means including a motor for operating the cutter, and means for automatically switching the current from the first mentioned to the second mentioned motor.

2. In a vending machine, an electric circuit, a motor in said circuit, feed mechanism driven by the motor, a cutter, cutter operating means including a motor, means for switching the current from the first to the second mentioned motor after each operation of the feed mechanism and means for automatically breaking the circuit through the second mentioned motor after each operation of the cutter.

3. In a vending machine, a circuit, a motor in said circuit, feed mechanism driven by the motor, a cutter, mechanism for driving the cutter including a motor, each operation of the feed mechanism switching current from the first to the second mentioned motor, and means operated by the cutter for breaking the circuit.

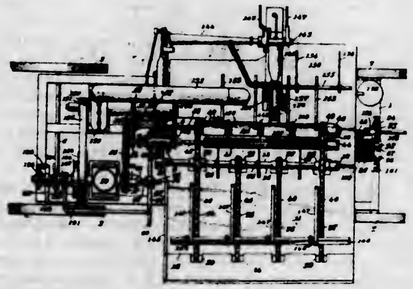


4. In a machine for vending articles formed in strips, feed mechanism for advancing the articles, said mechanism including a reciprocatory pull rod, spring means for drawing said rod toward the articles, a rotating element, and means carried by the rotating element for drawing the pull rod longitudinally after the same has engaged an article.

5. In a vending machine for articles formed in strips, feed mechanism including a reciprocatory pull rod adapted to engage an article and advance the same, spring means for drawing the pull rod toward the articles, a stop member for holding the rod against the action of the spring means, a rotatable element and means carried by the rotatable element for tripping the stop member and for drawing the pull rod in a direction away from the articles.

[Claims 6 to 11 not printed in the Gazette.]

1,155,173. CORN-HUSKING MACHINE. WILLIAM H. TSCHANTZ, Orrville, Ohio. Filed Dec. 29, 1914. Serial No. 879,441. (Cl. 130—5.)



1. A machine of the character described, comprising a frame, horizontal snap rolls mounted upon said frame, a conveyer adapted to carry stalks to said snap rolls, spring fingers located above said conveyer and arranged to prevent the stalks from being carried too swiftly to the snap rolls, husking rolls mounted beneath said snap rolls, a table located upon said frame and arranged to receive the stalks after they pass through the snap rolls, a trough located beneath the husking rolls and adapted to receive the husks from the husking rolls, a blower pipe communicating with said trough, the extremity of said pipe being located above said table, and a blower located intermediate the ends of said blower pipe and adapted to deposit the loose husks from the husking rolls upon said table.

2. In a machine of the character described, snap rolls, a bin located diagonally to said snap rolls and arranged to receive stalks, and a conveyer arranged to carry the stalks from said bin diagonally to said snap rolls.

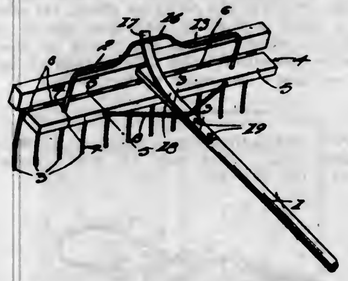
3. In a machine of the character described, snap rolls, a bin located diagonally to said snap rolls and arranged to receive stalks, a conveyer arranged to carry the stalks from said bin diagonally to said snap rolls, and fingers arranged above said conveyer for the purpose of retarding the movement of the stalks.

4. A machine of the character described, comprising a frame, an inclined table mounted upon the frame, a bin located at the lower extremity of the table and adapted to receive stalks, said bin being located diagonally to the upper edge of said table, snap rolls journaled in the frame and parallel to the upper edge of the table, means for carrying the stalks diagonally from the bin to the snap rolls, means for preventing the stalks from being carried too swiftly to the snap rolls and husking rolls located beneath the snap rolls and in alinement therewith.

5. A machine of the character described, comprising a frame, an inclined table mounted upon the frame, a bin located at the lower extremity of the table and adapted to receive stalks, said bin being located diagonally to the upper edge of said table, snap rolls journaled in the frame and parallel to the upper edge of the table, means for carrying the stalks diagonally from the bin to the snap rolls, means for preventing the stalks from being carried too swiftly to the snap rolls, and husking rolls located beneath the snap rolls and in alinement therewith.

[Claims 6 to 8 not printed in the Gazette.]

1,155,174. SELF-CLEANING RAKE. JOSEPH H. UBBELAKER, Chicago, Ill. Filed Feb. 6, 1915. Serial No. 6,519. (Cl. 55—146.)



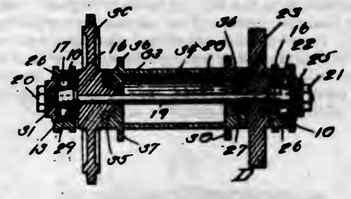
1. A rake cleaner including the combination with a rake, of a stripping bar, a bail carried by the stripping bar and pivoted to the handle of the rake, a second bail secured to the stripping bar and extending upwardly therefrom and bridging the handle of the rake, a spring carried by the rake handle and engaging the under side of the second bail to hold the stripping bar against the rake head, and means extending forwardly from the stripping bar and between the rake teeth to force the trash from the ends thereof when the stripping bar is moved downwardly.

2. In combination, a rake including a handle, a head, and teeth secured to the head, a stripping bar, teeth secured to the stripping bar and extending forwardly therefrom and between the teeth of the rake, a bail secured to the stripping bar and pivoted to the handle at a point in the rear of the rake head, a spring secured to the handle, the forward end of the spring being upturned, a second bail secured to the stripping bar and overlying the spring, the second bail being arranged to engage the spring and hold the stripping bar in its raised position, and means to secure the bails to the stripping bar.

1,155,175. WHEEL-MOUNTING. DURBIN VAN LAW, Bishop, Cal. Filed Aug. 12, 1914. Serial No. 856,437. (Cl. 308—17.)

1. In a wheel mounting, the combination of a support, a pair of spaced bearings mounted on the support, an element rotatably mounted in each bearing, and a hub between said elements detachably interlocking therewith.

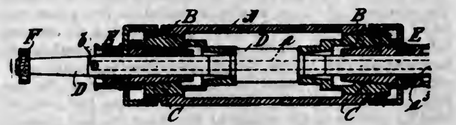
2. In a wheel mounting, the combination of a support, a pair of spaced bearings mounted on the support, an element rotatably mounted in each bearing, and a hub between said elements detachably interlocking therewith and adapted to be disengaged from the elements by bodily movement in a plane at right angles to its axis of rotation.



3. In a wheel mounting, the combination of a support, a pair of spaced bearings mounted on the support, an element rotatably mounted in each bearing, a hub having its end portions slidably interlocked with respective end portions of the elements and adapted to be disengaged from the elements by bodily movement in a plane at right angles to its axis of rotation, and means for locking the hub against bodily movement relatively to the elements.

4. In a wheel mounting, the combination of a support, a pair of spaced bearings mounted on the support, an element rotatably mounted in each bearing, projections on the adjacent ends of said elements and a hub having its end portions provided with transverse recesses respectively, said recesses opening through one side of the hub and adapted to receive the projections on the elements respectively to detachably interlock the hub and elements together.

1,155,176. HIGH-SPEED-SPINDLE DEVICE. FREDERICK D. VAN NORMAN, Springfield, Mass., assignor, by mesne assignments, to Van Norman Machine Tool Company, Springfield, Mass., a Corporation of Massachusetts. Filed Apr. 9, 1912. Serial No. 689,527. (Cl. 64—28.)

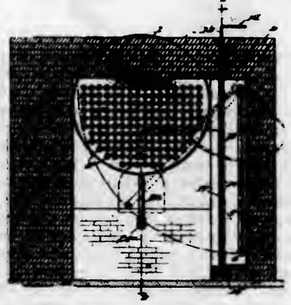


In a high-velocity spindle device, in combination, a bearing, a spindle rotatable in said bearing, and having a bore longitudinally therein and extending through an open end of the spindle and in direct communication with the atmosphere, a passage leading from the bore angularly to the length of the latter and also in communication with the atmosphere and means for rotating the spindle.

1,155,177. FLUE-BLOWER. GEORGE H. VAN SCHAICK, Hudson Falls, and PATRICK BURNS and JOHN REARDON, Fort Edward, N. Y. Filed Nov. 24, 1914. Serial No. 873,768. (Cl. 122—391.)

1. The combination with the boiler and the casing for the same, of means for blowing out the flues of the boiler, said means being at the rear of the boiler and within the casing of the boiler, and mounted for movement into and out of operative position, said casing having a compartment for the said means within the casing and at one side of the boiler, said compartment having a door opening between the same and the interior of the casing and at the side adjacent to the boiler, a door for closing the opening, said door having a facing of fire proof material on its outer face, and the casing having an opening between the compartment and the interior thereof corresponding in size to the facing, said blowing means comprising a pipe, the casing having a tubular support for the pipe extending into the compartment at one end and extending utside of the casing at the other end and parallel

with the axis of the boiler, said pipe being within the support and extending beyond the same at each end, the outer end being adapted for connection with the blowing means, a pipe within the compartment having one end connected to the first-named pipe and having the other end closed, said pipe being provided with a series of nipples on the side adjacent to the boiler, the nipples being adapted to register with the flues, a handle detachably connected with the pipe outside of the casing for oscillating the said pipe to swing the last-named pipe into and out of the compartment, pintles upon which the door is mounted to swing into and out of the compartment, one of the pintles being extended beyond the casing and having an angular portion for swinging the same.



2. The combination with the boiler and the casing for the same, of means for blowing out the flues of the boiler, said means being at the rear of the boiler and within the casing of the boiler, and mounted for movement into and out of operative position, said casing having a compartment for the said means within the casing and at one side of the boiler, said compartment having a door opening between the same and the interior of the casing and at the side adjacent to the boiler, a door for closing the opening, said door having a facing of fire proof material on its outer face, and the casing having an opening between the compartment and the interior thereof corresponding in size to the facing, said blowing means comprising a pipe, the casing having a tubular support for the pipe extending into the compartment at one end and extending outside of the casing at the other end and parallel with the axis of the boiler, said pipe being within the support and extending beyond the same at each end, the outer end being adapted for connection with the blowing means, a pipe within the compartment having one end connected to the first-named pipe and having the other end closed, said pipe being provided with a series of nipples on the sides adjacent to the boiler, the nipples being adapted to register with the flues, a handle detachably connected with the pipe outside of the casing for oscillating the said pipe to swing the last-named pipe into and out of the compartment, and means for opening and closing the door.

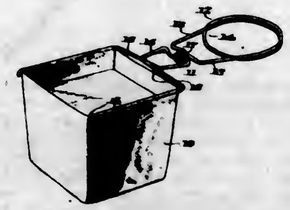
3. The combination with the boiler and the casing for the same, of means for blowing out the flues of the boiler, said means being at the rear of the boiler and within the casing of the boiler, and mounted for movement into and out of operative position, said casing having a compartment for the said means within the casing and at one side of the boiler, said compartment having a door opening between the same and the interior of the casing and at the side adjacent to the boiler, a door for closing the opening, said door having a facing of fire proof material at its outer face, and the casing having an opening between the compartment and the interior thereof corresponding in size to the facing, said blowing means comprising a pipe, the casing having a tubular support for the pipe extending into the compartment at one end and extending outside of the casing at the other end and parallel with the axis of the boiler, said pipe being within the support and extending beyond the same at each end, the outer end being adapted for connection with the blowing means, a pipe within the compartment having one end connected to the first-named pipe and having the other end closed, said pipe being provided with a series of nipples on the side adjacent to the boiler, the nipples being adapted to register with the flues, means for oscillating the pipe, and means for opening the door.

4. The combination with the boiler and the casing for the same, said casing having a compartment at one side of the rear of the boiler and having an opening leading from the compartment into the interior of the casing, a door having a facing of non-heat conducting material normally closing the opening and mounted to swing into and out of the compartment, a casing within the compartment, the door closing the casing when in closed position, a tubular support journaled in the casing and extending into the compartment at one end and out of the casing at the other end, a pipe mounted to oscillate on the support and adapted for connection with blowing means, a pipe in the compartment connected with the first-named pipe and having laterally extending nipples for registering with the flues of the boiler, and means for oscillating the pipe.

5. A blowing out means for boiler flues, adapted to be arranged adjacent to the boiler and comprising a pipe adapted to be connected at one end to the blowing means and having at the other end a lateral extension, said lateral extension having laterally extending nipples adapted to register with the flues, a casing for receiving the pipe, said casing having a lateral tubular extension at its upper end in which the first-named pipe is journaled, the extension of the pipe being received within the casing, and a door hinged to the casing for closing the same and having a facing of non-heat conducting material on its outer face, means for opening and closing the door, and means connected with the pipe for oscillating the same.

[Claims 6 and 7 not printed in the Gazette.]

1,155,178. DRINKING-CUP. WILLIAM R. WATKINS, Woodlawn, Ala. Filed Nov. 13, 1914. Serial No. 871,927. (Cl. 150—48.)

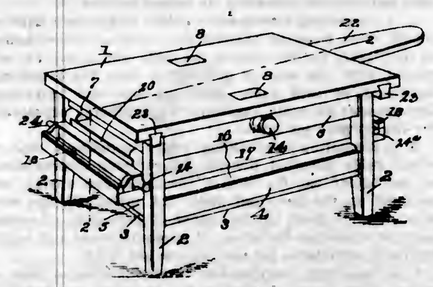


1. A cup comprising a frame formed of a single piece of spring-like wire providing a handle and supports, of a cup body formed of a pliable material, said cup body being carried on the supports, with said frame normally closed to collapse said cup body, and means formed with the frame for holding said cup body in an open position and against the spring like action of the said frame.

2. A cup comprising a frame formed of a single piece of spring-like wire providing a handle and supports, of a cup body formed of a pliable material, said cup body being carried on said supports, with said frame normally closed to collapse said cup body, a hook formed with the frame, and a loop formed with the frame and adapted to be engaged by the hook to hold the frame in an open position and secure the cup body in an open position.

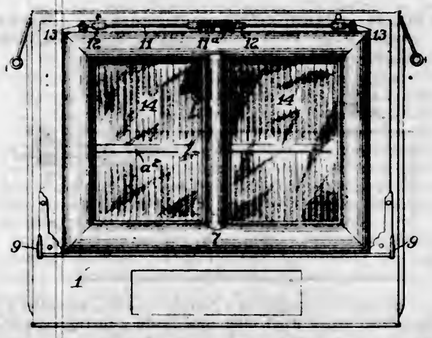
3. A cup comprising a frame, a spring formed by a part of said frame and normally holding said frame in a closed position, a cup body supported on said frame and adapted to be held open when said frame is open and closed by the spring of the frame, and means formed with the frame for securing said frame in open position and holding said cup body open.

1,155,179. MANGLE-TABLE. GOTTLOB L. WILD, Linden, N. J. Filed Nov. 4, 1914. Serial No. 870,254. (Cl. 68—28.)



A combined table and mangle comprising a table top, said table top mounted on legs and provided with openings in the top portion thereof, guides having rollers mounted therein and fitted in said openings, a pressure box mounted on movable rollers and adapted to be reciprocated between said roller guides, said pressure box having compartments for weights covered by sliding doors, and said pressure box adapted to be placed underneath the table top and supported upon the end members of the table when not in use as a mangle.

1,155,180. OVEN. WILLIAM H. WILDER, deceased, Gardner, Mass., by Solon Wilder, administrator, Gardner, Mass., and FRED E. WHITE, Gardner, Mass. Original application filed Feb. 7, 1912, Serial No. 676,100. Divided and this application filed Aug. 8, 1914. Serial No. 855,887. (Cl. 126—194.)

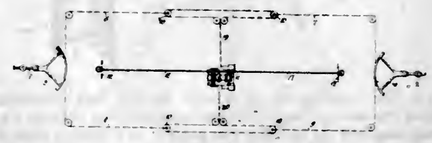


1. An oven having a door opening slotted near its lower corners, a removable door having arms supported in said slots with the ends of the arms extending within the oven and a stop member projecting inwardly from the inner wall of the oven engaging the end of the arm in the lowered position of the door, the end of the stop member being removed from the oven wall a distance greater than the width of the arm whereby disengagement of the arm is permitted from the stop member by the lifting of the door, substantially as described.

2. An oven having a door opening with slots near the lower corners thereof, a door having arms projecting from its corners through said openings into the oven and a stop member secured to the inner wall of the oven and having a lower inclined end projecting into the oven a distance from the inner wall greater than the width of the arm, the arm having a shoulder to engage the stop member and capable of disengagement therefrom when the door is lifted, substantially as described.

3. An oven having a door opening with slots near the lower corners thereof, and a door having arms projecting from its corners into said openings, said arms having notches to rest in the lower ends of the slots and parts projecting beyond said notches and lugs or abutments of spring material inclining downwardly and rearwardly from the oven walls to contact with said arms when the door is open, said arms having projections to engage behind said lugs when the door is open.

1,155,181. STEERING-GEAR. WILLIAM S. WILKINSON, Fox Chase, Pa., assignor to American Engineering Company, a Corporation of Pennsylvania. Filed Apr. 26, 1911. Serial No. 623,440. (Cl. 114—161.)



1. A new article of manufacture consisting of a drum having two conical portions arranged base to base and provided with cylindrical portions forming continuations of the small diameter parts of said conical portions; there being a groove or grooves formed in the said portions of the drum; one of said cylindrical portions being of greater length than the other; and having a part detachable at will from the remainder.

2. The combination with the two rudders of a double ended boat, of cables attached to said rudders; and a power actuated machine including a single winding drum to which said cables are connected, for operating the rudders; said machine including means for moving either of said rudders with greater force adjacent its hard over positions than adjacent its mid position; with means whereby but one of the rudders is operated at a time.

3. The combination with the rudders of a double ended boat of cables connected to said rudders; and a machine including a single winding drum for actuating said rudders through said cables, said machine including means for moving either of the rudders with relatively small power and at a high speed adjacent its mid position and with a relatively greater power at a slower speed adjacent its hard over position; with means whereby but one of the rudders is operated at a time.

4. The combination with the rudders of a double ended boat of a single machine including a single winding drum for actuating either of said rudders at will; and means for connecting said rudders with said machine, the latter including a device for automatically applying a greater operating force to either of the rudders adjacent its hard over position than is applied to operate said rudder adjacent its mid position; with means whereby but one of the rudders is operated at a time.

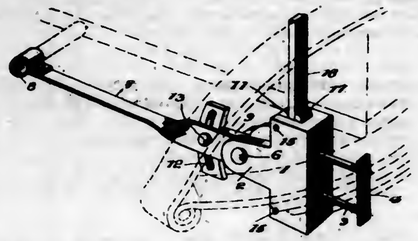
5. The combination with the rudders of a double ended boat of a single machine including a single winding drum for actuating either of said rudders; and means for connecting said rudder with said machine, the latter including a device for automatically applying a greater operating force to either of the rudders adjacent its hard over positions than is applied to operate said rudder adjacent its mid position; with a hand operated device capable of directly actuating the rudders under predetermined conditions; and means whereby but one rudder is operated at a time.

[Claims 6 to 17 not printed in the Gazette.]

1,155,182. SHOCK-ABSORBER. ERNEST L. WILLIAMS and EMMETT JONES, Hopland, Cal. Filed Mar. 10, 1915. Serial No. 13,415. (Cl. 21—105.)

1. In a shock absorber, the combination of a body, a spring secured in the body and extending laterally therefrom, the body and the free end of the spring being secured to relatively movable parts of a vehicle, a brake bar secured to the vehicle body and depending therefrom through the shock absorber body, brake shoes held within

the body and embracing the said brake bar, and means controlled by the said spring for applying pressure laterally to said brake shoes.

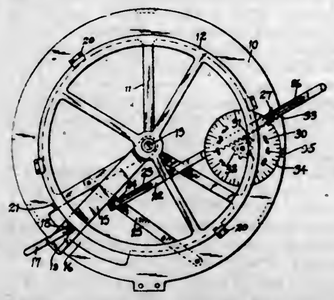


2. The combination of a body having lugs extending from its sides, a spring having one end fitted between the said lugs and its opposite end secured to a vehicle body, a brake bar secured to the vehicle body and depending therefrom through the first-mentioned body, and a brake lever mounted between the lugs on said first-mentioned body and connected with the said spring whereby to apply pressure to the said brake bar.

3. The combination of a body adapted to be secured to a vehicle spring and provided with lateral lugs, a spring pivoted between said lugs and adapted to be secured to a vehicle body, a brake bar secured to the vehicle body and depending therefrom past the first-mentioned body, a brake lever pivotally mounted between the said lugs and having an extended end arranged to apply pressure to the said brake bar and provided inwardly beyond the said lugs with an arcuate slot, and a bolt carried by the said spring and engaging the said slot.

4. The combination of a channeled body adapted to be secured to a vehicle spring and having laterally extending lugs, a pair of brake shoes fitted in the channel of the said body and provided on their outer faces at their opposite ends with lateral shoulders, the shoulders on one of said shoes engaging the upper and lower ends of the body, pins inserted through the body and engaging the shoulders on the other shoe, a brake bar secured to the vehicle body and depending therefrom between said shoes, a spring secured within the lugs and extending therefrom, and a brake lever pivoted between the said lugs and adjustably connected with the said spring and adapted to engage the adjacent brake shoe and thereby apply pressure to the brake bar.

1,155,183. COMPUTING MERCHANDISE-CUTTER. FORREST M. WILSON, Anderson, Ind., assignor to The Computing Cheese Cutter Company, Anderson, Ind., a Corporation. Filed May 6, 1912. Serial No. 695,509. (Cl. 31—68.)



1. A computing merchandise cutter including a base, a rotary table mounted thereon for carrying merchandise, an oscillatory bar for moving the table, an adjustable stop member for limiting the movement of said bar arranged so that the adjusting movement thereof exceeds the extent of change of position with reference to the said bar and a graduated disk rotatably and operatively connected with said bar for indicating its proper position.

2. A computing merchandise cutter including a base, a rotary table mounted thereon for carrying merchandise, an oscillatory bar for moving the table, and a stop bar arranged with one end in position to stop the actuating movement of said table actuating bar and extending therefrom at an acute angle and longitudinally adjustable for the purpose set forth.

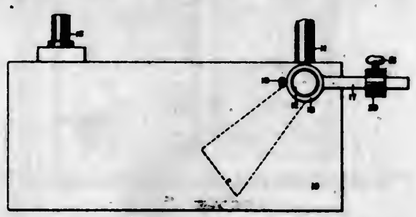
3. A computing merchandise cutter including a base, a rotary table mounted thereon for carrying merchandise, an oscillatory bar for moving the table, and a stop bar mounted on the base and under the table with one end in position to limit the movement of said table actuating bar and extending therefrom at an acute angle and longitudinally adjustable for the purpose set forth.

4. A computing merchandise cutter including a base, a rotary table mounted thereon for carrying merchandise, an oscillatory bar for moving the table, a stop bar provided with longitudinal slots and mounted on the base with one end in position to limit the movement of the table actuating bar, and means mounted on the base and extending through said slots for guiding said stop bar for longitudinal adjustment and securing it in adjusted position.

5. A computing merchandise cutter including a base, a rotary table mounted thereon for carrying merchandise, an oscillatory bar for moving the table, a stop bar arranged with one end in position to stop the actuating movement of said table actuating bar and extending therefrom at an acute angle and longitudinally adjustable for the purpose set forth, and a scale means actuated by said bar for indicating the adjustment thereof.

[Claims 6 to 10 not printed in the Gazette.]

1,155,184. CARBURETER. THEODORE O. WINGER, Amery, Wis. Filed Feb. 9, 1915. Serial No. 7,054. (Cl. 48—169.)



A carbureter comprising a reservoir having an outlet for carbureted air, a fixed inlet pipe leading to the reservoir and having a perforated member extending transversely across the reservoir near the top for the outlet of air, a hollow deflector rockably hung upon and surrounding the said transverse member of the air inlet pipe, and having an outlet near its lower end, and a variable counterbalance arm on the said deflector outside the reservoir serving to counter-balance the deflector at various inclinations.

1,155,185. SPACER FOR BALL-BEARINGS. FRANZ WINKLER, Schweinfurt, Germany. Filed Apr. 9, 1915. Serial No. 20,290. (Cl. 64—59.)

1. A spacer-ring for ball-bearings with two rows of balls, composed of two rings having lugs projecting from the edges of either ring over the other ring so as to clamp the said rings together, also forming spacing means for the balls.

2. A spacer-ring for ball-bearings with two series of balls, comprising two rings and lugs projecting from the edges of either ring and bent down upon the side of the other ring, the said lugs being so formed as to be the spacing means for the balls.

3. A spacer-ring for ball-bearings with two series of balls, comprising two congruent rings placed side by side, lugs projecting from the edges of either ring beyond the other ring, and wings of the lugs folded together and bearing upon outer side of the other ring.



4. A spacer-ring for ball-bearings with two series of balls, comprising two sinuous rings placed side by side, lugs projecting from the edge of either ring over the other ring, and wings of the lugs folded together along the elevation of the other side of the spacer-ring, the sides of the lugs being hollowed out so as to conform themselves to the periphery of the balls to be received in the interstices between every two lugs.

5. The combination with a ball-bearing having two rows of balls, of a spacer-ring, comprising two rings placed side by side and situated between the two rows of balls, and lugs projecting from the edge of either ring over the outer side of the other ring, so as to clamp the rings tightly together, and extending between two consecutive balls for spacing same.

1,155,186. PREPARATION OF PHOTOMECHANICAL PRINTING-SURFACES. JOHN GASKIN WOOD, Edinburgh, Scotland. Filed July 1, 1914. Serial No. 848,475. (Cl. 101—204.)

1. The process for the preparation of photo-mechanical printing surfaces, which consists in coating a grained surface with a sensitising material and then with a transfer material, and thereafter exposing the surface to the actinising effect of light corresponding to the picture to be produced and developing.

2. The process for the preparation of photo-mechanical printing surfaces, which consists in treating a sand-blasted or grained surface of a plate or stone, first with a sensitizing material and then with a transfer medium applied to both the hollows or recesses of the grain and the tops or raised parts thereof, but applying said coating more thickly to said tops or raised parts than to the hollows, then actinising the sensitized plate thus prepared, by a light transmitted through a negative, and then developing the plate thus exposed, substantially as described.

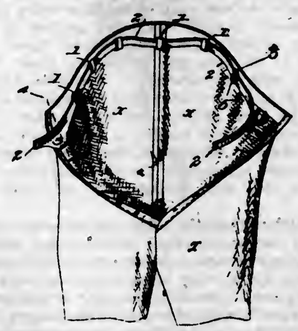
3. The process for the preparation of photo-mechanical printing surfaces, which consists in treating a sand-blasted or grained plate or stone, first with a coating of sensitising solution and then with a coating of transfer ink applied to the surface of the plate through the medium of pressure exerted upon the hollows or recesses of the grain, as well as upon the tops or raised parts thereof, and in a manner to develop a thicker coating upon the raised parts than upon the hollows, then printing by transmitted light, through an ordinary continuous tone photographic negative, onto the hollows or recesses of the plate or stone, and thereafter developing the surface thus prepared and actinised, substantially as described.

4. The process for the preparation of photo-mechanical printing surfaces, which consists in coating a grained surface with a sensitising material and then with an acid resisting material, and thereafter exposing the surface to the actinising effect of light corresponding to the picture to be produced and after developing, lasting etching the surface in usual manner.

5. The process for the preparation of photo-mechanical printing surfaces, which consists in treating a sand-blasted or grained surface of a plate or stone, first with a sensitising material and then with an acid-resisting medium applied to both the hollows or recesses of the grain and the tops or raised parts thereof, but applying said coating more thickly to said tops or raised parts than to the hollows, then actinising the sensitised plate thus prepared, by a light transmitted through a negative, and then developing the plate thus exposed, and finally etching it in usual manner.

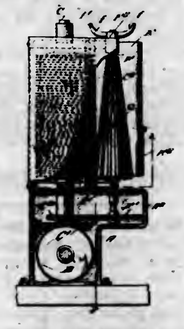
[Claim 6 not printed in the Gazette.]

1,155,187. BELT ATTACHMENT FOR TROUSERS. WILLIAM DOUGLAS WOODRUFF, Belton, Tex. Filed Mar. 8, 1915. Serial No. 13,017. (Cl. 2—143.)



Trousers provided with belt loops inside the waist-band, the loop in the middle of the back being located lower than the others, and a belt confined entirely within the trousers and secured to the trousers at the front only and at a point lower than the adjacent loops.

1,155,188. COTTON-GIN. ANTON ALBERT ZALONDEK, Capitol Hill, Okla. Filed June 4, 1914. Serial No. 842,901. (Cl. 13—9.)



1. In a cotton gin, the combination of a lower gear casing, a drive shaft journaled horizontally through the lower portion of the casing, a substantially rectangular box secured in upright position upon the gear casing and open at its front side, a saw shaft journaled vertically through the boxing and through the upper portion of the gear casing, gears connecting the said saw shaft to the said drive shaft, a vertical series of ginning saws mounted in spaced relation upon the saw shaft within the box, a shaft journaled vertically through the upper portion of the gear casing and extending parallel with and spaced from the saw shaft at the open side of the box, gears connecting said shaft with the saw shaft, a conical fluted roller mounted on the latter shaft with its smaller end uppermost and its lower enlarged end spaced above the top of the gear casing, a shell open at its upper and lower ends and disposed around the said fluted roller and its shaft and open adjacent to the saws, the lower open end of the said shell being spaced above the top of the gear casing, an adjustable discharge door mounted in guides on the lower portion of the said shell, and a feeding head secured upon the upper end of the roller shaft and having

outwardly projecting spirally curved arms, all for the purpose described.

2. In a cotton gin, the combination of a lower gear casing, a drive shaft journaled horizontally through the lower portion of the casing, a substantially rectangular box secured in upright position upon the gear casing and open at its front side, a saw shaft journaled vertically through the boxing and through the upper portion of the gear casing, gears connecting the said saw shaft to the said drive shaft, a vertical series of ginning saws mounted in spaced relation upon the saw shaft within the box, a shaft journaled vertically through the upper portion of the gear casing and extending parallel with and spaced from the saw shaft at the open side of the box, gears connecting said shaft with the saw shaft, a conical fluted roller mounted on the latter shaft with its smaller end uppermost and its lower enlarged end spaced above the top of the gear casing, and a shell open at its upper and lower ends and disposed around the said fluted roller, and its shaft and open adjacent to the saws, the lower open end of the said shell being spaced above the top of the gear casing.

3. In machinery of the character described, the combination of a vertical saw shaft, saws mounted horizontally thereon in spaced relation, a beam mounted to extend vertically along the series of saws, a plurality of ribs secured to the beam and having their free ends extending between the saws, a shaft mounted parallel with the saw shaft and spaced therefrom, a conical fluted roller mounted upon the last mentioned shaft, means for driving the saw shaft, and geared connections between the saw shaft and the roller shaft, all for the purpose described.

4. In machinery of the character described, the combination of a vertical series of ginning saws, a conical roller arranged and operating at one side of the series of saws with its smaller end uppermost, means for rotating the saws and roller in relatively opposite directions and at different speeds, a shell open at its base and in which the roller is mounted, and a box in which the saws are mounted, opening at one side into the roller shell, all for the purpose described.

5. In machinery of the character described, the combination of a vertical series of ginning saws, a conical feed roller mounted and operating at one side of the series of saws with its smaller end uppermost, means for rotating the roller and saws and housings communicating with one another and in which the said saws and said roller are disposed.

[Claims 6 to 8 not printed in the Gazette.]

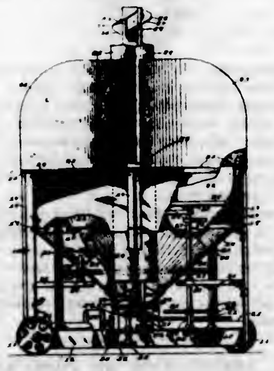
1,155,189. MEANS FOR USE IN FEEDING SHEEP AND CATTLE. FRANK ADAMS, Blenheim, New Zealand. Filed Aug. 13, 1914. Serial No. 856,572. (Cl. 119—51.)



In means for use in feeding sheep and cattle, a storage shed provided with filling doors in its sides and ends and near the top thereof, a number of slot openings in the sides of the shed, near the bottom thereof, a manger beneath each of such openings, stirring apertures in the sides of the sheds situated above the manger slots and hinged covers upon the insides of such openings, substantially as specified.

1,155,190. MACHINE FOR ELEVATING AND MIXING CONCRETE. AUGUST W. ALTHOFF, Oklahoma, Okla. Filed Apr. 9, 1914. Serial No. 830,591. (Cl. 83—73.)

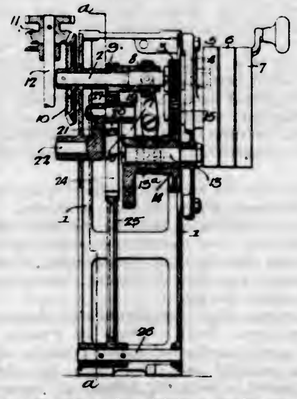
1. In a machine of the class described, a vertically disposed elevating mechanism comprising two circular conduits opening into each other, revolving spiral conveyers arranged in said conduits, the lips of one conveyer projecting at a right angle to its core, or shaft, while the lip of the adjacent conveyer is inclined to its core and projects beneath and works in contact with the first-named lip, said conveyer serving to raise the material in a dry state, a return conveyer adapted to receive the discharge of said conduits, means contained in said return conveyer for agitating the contents thereof, and a sprinkler system contained within said return conveyer adjacent the top thereof, substantially as described.



2. In a machine of the class described, mechanism comprising a vertically disposed elevating means consisting of parallel conduits opening into each other and containing spirally flanged coacting conveyers, means for rotating said conveyers in the same direction, which serve to mix and raise material in a dry state and a return conveyer projecting downward and adapted to receive the discharge of the two conduits at the top, and means for agitating and spraying contents of the return conveyer, as described.

3. A device of the character described consisting of a conduit having combined elevating and mixing means therein and a second conduit connected with and leading downwardly from the upper end of said elevating and mixing means and having agitating and sprinkling means therein.

1,155,191. MECHANICAL MOVEMENT. ELMER U. AMES, Philadelphia, Pa., assignor to H. Brinton Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 2, 1915. Serial No. 18,801. (Cl. 74—50.)



1. The combination of a driving crank; an arm oscillated thereby and pivotally held from other than oscillatory movement; mechanism driven from said arm; and means for causing the speed of said arm to be the same in corresponding parts of its strokes in opposite directions.

2. The combination of two eccentrically mounted cranks; a pin fixed to one crank and slidably engaging the other; an oscillatory member also engaged by said pin; means for driving one of the cranks; and driven mechanism connected to the oscillatory member.

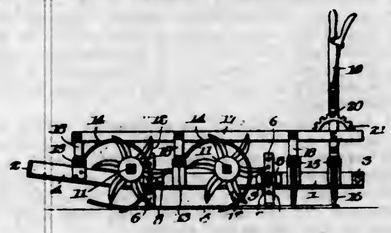
3. The combination of a driving crank having a radial slot; a second crank mounted eccentrically to the first crank; a pin carried by the second crank and slidable in the slot of the first crank; a pivotally mounted arm having a radial slot for the reception of the pin; and driven mechanism connected to said arm.

4. The combination of two eccentrically mounted cranks; a pivotally mounted arm having a radial slot and operative between the cranks; a pin fixed to one of the cranks extending through the slot of the arm and slidably engaging the other crank; means for turning one of the cranks; and mechanism driven from the arm.

5. The combination of a crank having a radial slot; a second crank mounted eccentrically of the first crank; an oscillatory arm; a pin fixed to one of the cranks; two blocks mounted on the pin and slidable in the slots of the other crank and of the arm respectively; means for turning the slotted crank; and mechanism driven by the oscillatory arm.

[Claims 6 to 8 not printed in the Gazette.]

1,155,192. COMBINED HARROW AND CULTIVATOR. ERIK ANDERSON, San Francisco, Cal. Filed June 5, 1914. Serial No. 843,256. (Cl. 55—11.)



In a device of the class described, a main frame, spaced transverse bars having their ends mounted in bearings at the sides of the main frame, connections between said bars to cause them to turn simultaneously, means to turn said bars, axle shafts arranged alternately with respect to said bars, mounted in bearings and having rotary cutters, and substantially reversely C-shaped spring harrow teeth, each extending over and to the rear of one of the axle shafts and having a forwardly extending arm attached to one of the transverse bars, each of said harrow teeth being arranged near one side of one of the cutters, the said cutters being arranged in staggered relation.

1,155,193. CORK-EXTRACTOR. ERNEST BALTHAZAR, Pawnee, La. Filed July 11, 1914. Serial No. 850,370. (Cl. 65—47.)

1. In a cork extractor, the combination with a frame adapted to be applied to the top of a bottle, an extracting member mounted to turn and to slide on the frame and adapted to be inserted between the cork and the bottle and then turned to engage the cork and extract the same upon an upward pull of the extractor, and means on the frame for holding the same in position on the bottle and for limiting the extraction of the cork relatively to the bottle.

2. In a cork extractor, the combination with a frame adapted to be applied to the top of a bottle, an extracting member mounted to turn and to slide on the frame and adapted to be inserted between the cork and the bottle and then turned to engage the cork and extract the same upon an upward pull of the extractor, and a cross piece on the frame and adapted to be engaged by the cork when the same is pulled upwardly in the bottle to limit the extraction of the cork relatively to the bottle.



3. In a cork extractor, the combination with a frame adapted to be applied to the top of a bottle, an extracting member mounted to turn and to slide on the frame and adapted to be inserted between the cork and the bottle and then turned to engage the cork and extract the same upon an upward pull of the extractor, a cross piece on the frame and adapted to be engaged by the cork when the same is pulled upwardly in the bottle to limit the extraction of the cork relatively to the bottle, and a depending member on the frame and constituting means for arranging the frame upon the bottle and adapted to be grasped with the bottle neck, to hold the frame on the bottle.

1,155,194. PROCESS FOR STERILIZING AND PRESERVING COTTON-SEED. EDWARD ROBERTSON BARROW, Memphis, Tenn., assignor to Barrow Cottonseed Preserver Company, Memphis, Tenn., a Corporation of Tennessee. Filed Oct. 7, 1914. Serial No. 865,578. (Cl. 99—1.)

1. The herein described process of treating cotton seed to sterilise and preserve the same, which consists in treating the same with small quantities of sodium chlorid, starch and magnesium carbonate, substantially as described.

2. The herein described process of treating cotton seed to sterilise and preserve the same, which consists in treating same with about 5% by weight of sodium chlorid which would contain about 2% by weight of starch and 2% by weight of magnesium carbonate, substantially as described.

3. The process of treating cotton seed to sterilise and preserve the same, which consists in mixing finely divided chlorid of sodium, starch and magnesium carbonate with the cotton seed having the hulls on, substantially as described.

4. The process of treating cotton seed to sterilise and preserve the same, which consists in mixing about 5% by weight of finely divided chlorid of sodium, containing about 2% by weight of starch, and 2% by weight of magnesium carbonate with the cotton seed having the hulls on, substantially as described.

1,155,195. AUXILIARY LOCKING DEVICE. THOMAS BARTHOLOMEW and HERBERT J. PERCY, Columbus, Ohio; said Bartholomew assignor to Franklin O. Schoedinger, Columbus, Ohio. Filed Nov. 25, 1914. Serial No. 873,925. (Cl. 70—80.)



1. A lid lock of the character described comprising a pair of turn buttons, handles carried by said buttons so

formed to extend toward each other, and means comprising a pad lock for locking the free ends of said handles together independent of the lid they are arranged to lock.

2. A lid lock of the character described comprising a pair of turn buttons, handles carried by said buttons so formed to extend toward each other, and means carried only by the free ends of said handles for locking them together.

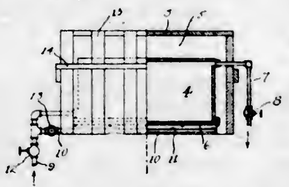
3. A lid lock of the character described comprising a pair of turn buttons, handles carried by said buttons so formed to extend toward each other, and a sleeve arranged to snugly fit over the free ends of both of said handles to lock them together.

4. A lid lock of the character described comprising a pair of turn buttons, handles carried by said buttons so formed to extend toward each other, a sleeve arranged to snugly fit over the free ends of both said handles to lock them together, and spring means for holding said sleeve in its locking position.

5. A lid lock of the character described comprising a pair of turn buttons, handles carried by said buttons so formed to extend toward each other, a sleeve arranged to snugly fit over the free ends of both of said handles to hold them together, and a pad lock arranged to be locked in position to prevent unlocking movement of said sleeve.

[Claims 6 to 9 not printed in the Gazette.]

1,155,196. SHOE-TOE HEATER. ALFRED BARTON, Marlboro, Mass. Filed July 10, 1915. Serial No. 39,208. (Cl. 12—1.)



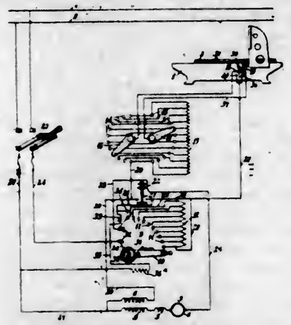
1. A heater for the purpose mentioned, comprising a housing having an open bottom, rear and top walls and upper front openings for shoe toes with a support adjacent thereto, a steam chest within the housing, a steam supply pipe leading to the chest, a valve therein, a discharge pipe leading from the chest, an apertured steam spray pipe leading from the supply pipe and located beneath the chest, and a valve for controlling the supply of steam to the spray pipe.

2. A heater for the purpose mentioned, comprising a housing having an open bottom, inclined rear and top walls and upper front openings for shoe toes with a support adjacent thereto, a steam chest within the housing, a steam supply pipe leading to the chest, a valve therein, a discharge pipe leading from the chest, a steam spray pipe beneath the chest provided with steam apertures, and a valve controlling the supply of steam to said spray pipe from the main steam pipe.

3. A heater for the purpose mentioned, comprising a housing having an open bottom, inclined rear and top walls and upper front openings for shoe toes with a support adjacent thereto, a steam chest within the housing, a steam supply pipe leading to the chest, a valve therein, a discharge pipe leading from the chest, a valve therein, a steam spray pipe beneath the chest provided with apertures, and a valve controlling the supply of steam to said spray pipe from the main steam pipe.

1,155,197. SYSTEM OF ELECTRIC-MOTOR CONTROL. HOWARD L. BEACH, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 12, 1912. Serial No. 690,445. (Cl. 172—240.)

1. In a control system, the combination with a driven mechanism, a driving motor, and two manually adjustable means for predetermining two selective rates of motor speed, of means dependent upon the driven mechanism for alternately and periodically connecting said manually adjustable means in circuit for the selected motor speed.



2. In a control system, the combination with a driven mechanism, a driving motor, and manually adjustable means for predetermining two different rates of speed thereof, of means dependent upon the driven mechanism for alternately and periodically connecting said manually adjustable means in circuit for the different motor speeds.

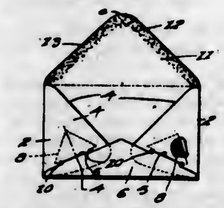
3. In a control system, the combination with a reciprocatory mechanism, a continuously rotating driving motor having a shunt field magnet winding, a resistor having one terminal permanently connected to a terminal of said winding and two independent manually operable devices for varying the active length of said resistor, of means dependent upon the reciprocatory mechanism for connecting said manually operable devices respectively in circuit in accordance with the forward and the reverse movements of said mechanism.

4. In a control system, the combination with a driven mechanism, a driving motor having an armature and a field magnet winding, a resistor having spaced contact members, two independent contact arms adapted to engage said members, and means dependent upon the driven mechanism for periodically connecting said arms alternately to said field magnet winding.

5. In a control system, the combination with a driven mechanism, a driving motor having an armature and a field magnet winding, a resistor, two independent devices for including desired portions of said resistor in the circuit of the field magnet winding, and means dependent upon the driven mechanism for alternately and periodically connecting said devices to the field magnet winding.

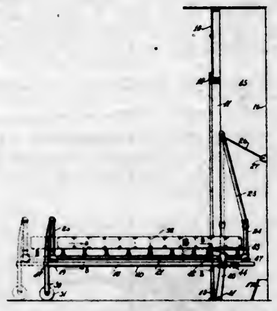
[Claims 6 to 10 not printed in the Gazette.]

1,155,198. ENVELOP. IRENE A. BEAN, Lonepine, Ark. Filed May 8, 1915. Serial No. 26,806. (Cl. 229—80.)



A safety envelop comprising a body portion, side flaps provided with long inclined upper edges, and having inclined slits formed in their lower edges, a bottom flap provided with a pair of oppositely arrow-shaped tongues, said tongues having a reduced neck and cut away portion at the sides of said neck, and a sealing flap provided with an adhesive substance the inner face adapted to engage the side flaps and a portion of the bottom flap when assembled, said tongues being inserted in the inclined slits of the side flaps when in use.

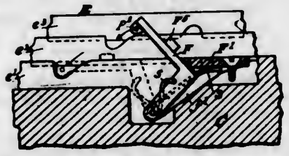
1,155,199. FOLDING BED. CONRAD BENDER, Indianapolis, Ind. Filed Aug. 3, 1914. Serial No. 854,722. (Cl. 5—54.)



1. The combination with a folding bed, of rocking bars for supporting the inner end of the bed, said rocking bars being turned outward at their upper ends, rollers on the forward upper ends of said rocking bars, guides on said bed for serving as a track for said rollers, means for pivotally mounting the lower ends of said rocking bars, and means for limiting the rocking movement of said bars.

2. The combination with a wall of a room having an opening therein, of a folding bed in said opening, rocking bars pivotally mounted at their lower ends to the side walls of said opening and turned forward at their upper ends, rollers on the forward upper ends of said bars, tracks on the bed in which said rollers operate, and means secured to the wall for limiting the rocking movement of said bars.

1,155,200. WINDOW. JOHN S. BERRY, Plainfield, N. J. Original application filed Dec. 6, 1913, Serial No. 805,066. Divided and this application filed Dec. 21, 1914. Serial No. 878,390. (Cl. 20—12.)



1. A collapsible parting strip adapted to seat and be compressed in the normal groove therefor in the window casing, and adapted to be engaged and compressed by the downward, vertical movement of the sash.

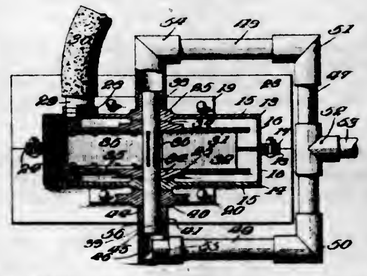
2. The combination in a window, of a vertically moving sash, a collapsible parting strip, and means operated by a sash in its downward movement to collapse the strip in its containing groove.

3. A parting strip for windows embodying in combination a plurality of telescoping elements held in parallel relations by a plurality of corresponding arms each pivoted severally to the said elements, and with an actuating device adapted to be engaged by the sash in its descent to collapse said elements one within the other.

4. An actuating device for a collapsible parting strip consisting of a holding plate adapted to be secured to the guideway in the path of the sash, and a movable plate pivotally secured thereto and to the parting strip and normally projected outward into the path of the sash and adapted to actuate and collapse the parting strip.

5. An actuating device for a collapsible parting strip consisting of a holding plate adapted to be secured to the guideway in the path of the sash, and a movable plate pivotally secured thereto and to the parting strip and normally projected outward into the path of the sash and adapted to actuate and collapse the parting strip, and a spring normally holding the movable plate outward and by its connections also holding the parting strip outward as a guide to the sash.

1,155,201. VACUUM-CREATOR. CHARLES H. BEST, Morland, Kans. Filed Nov. 15, 1913. Serial No. 801,218. (Cl. 230—11.)



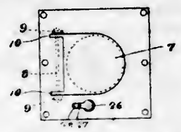
1. A device of the character described comprising a cylindrical casing, a hollow axle journaled in and projecting beyond the sides of the casing, said axle being provided at its center with longitudinally extending slots, a fan carried by the axle and consisting of a pair of side plates fixed to the axle at the ends of the slots and having their edges near the peripheral wall of the casing, and a plurality of singly disposed outwardly diverging substantially radial blades fixed to and disposed between the side plates and extending from the axle to the edges of the said side plates to define intermediate compartments, each of which is wider at its outer extremity than at its inner extremity and communicates at its inner extremity with one of the slots in the axle and a substantially U-shaped inlet pipe providing a handle for the device and having its terminals rotatably mounted adjacent and concentric with the ends of the axle and arranged to form fluid-tight communication therewith.

2. A device of the character described including a cylindrical casing having bosses formed upon its side walls at the center thereof, one of said bosses being formed with an outwardly projecting sleeve, a bracket supported from the opposite side of the casing and provided at its upper end with a bearing sleeve spaced from and concentric with the boss on the adjacent side of the casing, a hollow axle journaled in the bosses on the casing and having one end journaled in the sleeve projecting from the first-mentioned boss and its other end journaled in the sleeve at the upper end of said bracket, the said axle being provided with a plurality of longitudinal slots between the sides of the casing, a driving wheel fixed upon the axle between the bracket supported sleeve and the adjacent side of the casing, a fan fixed to the axle within the casing and comprising side plates, and substantially radial singly disposed blades secured to and between the said side plates and extending from the axle to the outer edges of said side plates, the spaces between adjacent blades each communicating with one of the slots in the axle, an outlet pipe leading from the casing eccentric to the axle, and an inlet pipe having spaced terminals rotatably fitted over the ends of the sleeves in which the axle is journaled.

1,155,202. CUSPIDOR. WILLIAM G. BEYS, Youngstown, Ohio. Filed Nov. 27, 1914. Serial No. 874,294. (Cl. 4—39.)

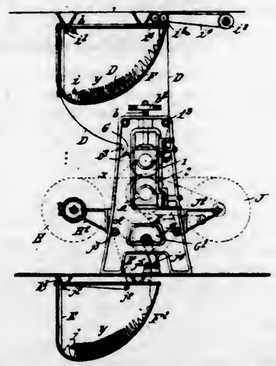
The combination with a support having an opening therein, of a cuspidor comprising a cylindrical body secured to the support to depend therefrom in alinement with the opening therein, a lid swingingly mounted on the support for closing the opening therein, a cover swingingly connected to the body for closing the end thereof remote from the opening, a rocking lever pivoted to the

body without the same, links adjustably connected with the lever at the opposite ends thereof and loosely connected with the respective lid and cover, a weight adjustably mounted upon one end of the lever, a segment



formed on the lever at its pivot point, an actuating rod eccentrically pivoted to the segment and extending through the support, and a delivery hopper connected with the body and having a contracted open discharge end.

1,155,203. PAPER-FINISHING MACHINE. PAUL W. BIDWELL, Holyoke, Mass. Filed Apr. 2, 1915. Serial No. 18,848. (Cl. 92—68.)



1. In a machine for surface finishing paper, in combination, adjacent, peripherally coacting cylinders under pressure, an endless apron running around one of the cylinders and having long courses, and between which cylinders and apron the paper to be finished is passed, and means comparatively close to said cylinders for causing a disposition of the apron in reversed folds, whereby the machine in its entirety and comprising such long apron requires but comparatively small space of occupancy.

2. In a machine for surface finishing paper, in combination, adjacent, peripherally coacting cylinders under pressure, a pair of endless aprons having long courses and running around the respective cylinders and between which cylinders and their appurtenant aprons the paper to be finished is passed, and means comparatively close to said cylinders for causing dispositions of the aprons in reversed folds.

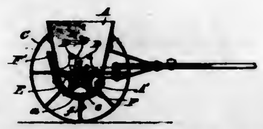
3. In a machine for surface finishing paper, in combination, adjacent, peripherally coacting cylinders under pressure, an endless apron running around one of the cylinders and having long courses, and between which cylinders and apron the paper to be finished is passed, means comparatively close to said cylinders for causing a disposition of the apron in a multiplicity of reversed folds or loops, means, between the apron folding means and the cylinder to which it is appurtenant, for imparting a transversely expanding tension to the apron.

4. In a machine for surface finishing paper, in combination, adjacent, peripherally coacting cylinders under pressure, an endless apron running around one of the cylinders and having long courses, and between which cylinders and apron the paper to be finished is passed, an upwardly open receptacle adjacent the cylinders within which the apron will assume a disposition in reversed loose folds or plaits, and guiding means for the apron.

5. In a machine for surface finishing paper, in combination, adjacent, peripherally coacting cylinders under pressure, endless aprons having long courses and having running engagements around the cylinders and between which apron engaged cylinders the paper to be finished is passed, upwardly open receptacles suitably adjacent the cylinders within which the aprons will assume dispositions in reversed loose folds or plaits, and means for guiding the courses of the endless aprons, from the cylinders to the receptacles, which comprise positively driven feed rolls.

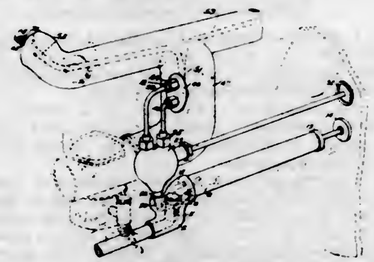
[Claims 6 to 13 not printed in the Gazette.]

1,155,204. FERTILIZER-DISTRIBUTER. WILLIAM W. BIRNSTOCK, York, Pa., assignor to Hench & Dromgold Company, York, Pa. Filed July 10, 1915. Serial No. 39,089. (Cl. 111—34.)



In a fertiliser distributer, a hopper extending crosswise of a machine and having a bottom curved transversely of its length; an agitator, extending lengthwise of the hopper and mounted therein to revolve upon an axis coincident with the axis from which the curve of the hopper bottom is struck, and having evenly spaced longitudinal peripheral members which sweep over the curved hopper bottom in a path in close proximity thereto and concentric therewith; rhomboidal feed openings in the curved hopper bottom with their longer axes oblique to the axis of revolution of the agitator, parallel with and evenly spaced from one another, and of such length that by the time one of the longitudinal peripheral agitator members, in its sweeping movement over the curved hopper bottom, has passed beyond the feed openings therein, the following member will have reached said feed openings; and a sliding gate curved to match said curved hopper bottom and formed with corresponding obliquely set rhomboidal openings registering with, and operating to vary the width without changing the length of, said feed openings.

1,155,205. GAS-ENGINE PRIMER. RICHARD B. BRAUER, Richmond, Va. Filed Aug. 28, 1914. Serial No. 859,113. (Cl. 123—180.)



1. A primer for multi-cylinder explosive engines comprising a source of fluid fuel supply, a switch valve whose stem is connected therewith, devices located at different points within the engine intake for producing spray, connections between the arms of the valve and said devices respectively, and means for setting the valve plug manually.

2. A primer for multi-cylinder explosive engines comprising a source of gasolene supply, a switch valve whose stem is connected therewith, diffusers located at different points within the engine intake for producing spray, connections between the arms of the valve and the respective diffusers, and means for setting the valve plug manually to connect its stem with one arm or with both arms.

3. A primer for gasolene engines comprising a source of gasolene supply, a switch valve whose stem is connected therewith, a diffuser adjacent the intake valve of the engine, another diffuser in the intake pipe remote from the first-named diffuser, connections between the arms of the valve and the respective diffusers, and means for setting the valve manually.

4. A primer for multi-cylinder gasolene engines comprising a source of gasolene supply, a switch valve whose stem is connected therewith, a diffuser within the intake manifold and connected with one arm of the valve, a set of diffusers under the intake valves of the engine, a pipe connected with the other arm of the valve and leading to the diffusers in said set, and means for setting the valve plug.

5. A primer for explosive engines comprising a source of gasolene supply, a switch valve, a diffuser within the intake manifold and connected with one arm of the valve, a set of diffusers adjacent the intake valves of the engine and connected with the other arm of said switch valve, means for setting the switch valve manually, and means for passing a charge of gasolene under pressure from the supply to the stem of the switch valve.

[Claims 6 to 19 not printed in the Gazette.]

1,155,206. BOX. HENRY ERNEST BROCK and EDWARD ZENOPHIL MYER, Hancock, Mich. Filed July 16, 1914. Serial No. 851,371. (Cl. 217—12.)

A box comprising, a plurality of end boards transversely grooved adjacent opposite edges to receive therein top and bottom boards, said end boards being rabbeted adjacent the vertical edges to receive side boards; a plurality of top and bottom boards fitting in said grooves; a plurality of side boards fitting within said rabbets, said side boards and end boards forming a standing edge encircling said top and bottom boards; a plurality of square-angled metal strips enfolding the vertical corners of said end boards to cover the joints thereof with said side boards, said strips having bifurcated terminals folded over said standing edges of said end and side boards, and lapped each on the other and on said top and bottom boards; and means for rigidly uniting the bifurcated terminals of said strips.

1,155,207. LIFE-PRESERVER. WILLIAM GOULD BROKAW, High Point, N. C. Filed Feb. 9, 1915. Serial No. 7,005. (Cl. 9—20.)



1. The combination with a garment having a collar, of a life preserver made of substantially the same configuration as the collar, and detachably inclosed between the layers thereof.

2. The combination with a collar comprising two layers of material, of a life preserver of substantially the same configuration as the collar and inclosed between the layers thereof.

3. The combination with a collar composed of two layers of material and having an opening at one edge, of a life preserver of substantially the same configuration as said collar and arranged between the layers thereof, and fasteners for closing the open edge of the collar.

4. The combination of a collar composed of two layers of material and having forwardly directed portions, of a life preserver of substantially the same configuration as the collar and removably inclosed between the layers thereof.

5. The combination with a collar made of two layers of material stitched together at its sides and open at its back edge, of a life preserver of substantially the same configuration as said collar inclosed between the layers thereof, and fasteners located upon the adjacent rear edges of said layers, whereby the life preserver is retained within the collar, but may be removed therefrom.

[Claims 6 to 9 not printed in the Gazette.]

1,155,208. ELECTRICALLY-LIGHTED PENCIL. WILLIS Q. BROWNE, Boston, Mass. Filed Oct. 19, 1914. Serial No. 867,498. (Cl. 240—8.4.)



A device of the class described comprising the combination with the threaded end of a flash light casing and a bulb projecting from the same, a holder screw threaded upon the threaded end of said casing, said holder having its free end curved inwardly and secured by a pencil receiving ring, said holder provided with a plurality of screws for adjustably supporting a pencil therein and means carried by said casing completing a circuit through said bulb.

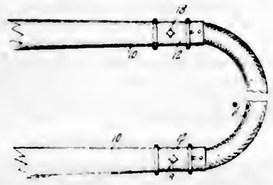
1,155,209. HEEL-GRIP. MICHAEL H. BURKE, Denver, Colo. Filed July 10, 1914. Serial No. 850,230. (Cl. 36—1.)



As an article of manufacture, a heel-grip comprising a narrow neck and two wings which are enlarged to extend

above the upper edge and below the lower edge respectively of the neck, the outer surface having adhesive material to hold the grip in the shoe and the other surface roughened to cause it to take a grip upon the foot.

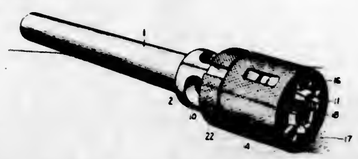
1,155,210. SHAFT ATTACHMENT. FREDERICK E. BURNHAM, Scranton, Pa., assignor of one-third to James E. Burr, Scranton, Pa. Filed May 14, 1912. Serial No. 697,222. (Cl. 21—36.)



1. In a shaft attachment, a shaft structure having externally threaded ferrules on the respective ends thereof, a flexible member, non-rotatable complementally threaded nipples carried by the opposite ends thereof, said nipples being engageable with the threaded ferrules on the shaft structure, as and for the purpose set forth.

2. A shaft attachment, including, in combination with a plurality of shafts having externally threaded ferrules thereon, a flexible member having internally threaded tubular members on the opposite extremities thereof for engagement with said threaded ferrules, said tubular members having lugs thereon to facilitate their removal.

1,155,211. DIE-HOLDER. JAMES M. CARPENTER, Pawtucket, R. I. Filed Dec. 4, 1914. Serial No. 875,425. (Cl. 10—111.)



1. In a device of the character described, the combination with a pronged die, of a holder therefor, said holder being provided with a body and with a sleeve, said sleeve being arranged with dogs engaging the prongs of said die for preventing a circular distortion of the prongs of the die.

2. In a device of the character described, the combination with a pronged die, of a holder therefor including a body, and a sleeve, said sleeve being provided with means engaging the outer ends of the prongs of said die for preventing any torque of the prongs.

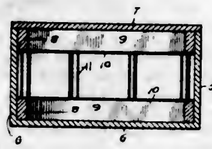
3. In a device of the character described, the combination with a pronged die, of a holder provided with a body for receiving said die and a sleeve and engaging the prongs of the die, said sleeve being formed with means for moving radially inwardly said prongs, and means for preventing any torsional movement of said prongs.

4. In a device of the character described, the combination with a die having prongs, of a holder for said die, said holder being provided with a body and a sleeve removably connected with said body, said sleeve having means arranged to engage one face of each of said prongs for preventing any torsional movement thereof.

5. In a device of the character described, the combination with a pronged die, of a holder therefor provided with a socket for receiving part of said die, said holder having a pair of threaded sections, said threaded sections being arranged with threads of opposite pitch, a lock nut arranged on one of said threaded sections, and a sleeve arranged to engage the other of said threaded sections, said sleeve also being adapted to engage said die, the parts engaging said die being adapted to prevent any torsional movement of the prongs of said die.

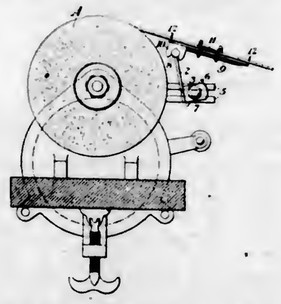
[Claims 6 to 11 not printed in the Gazette.]

1,155,212. SHIPPING-RECEPTACLE. ROBERT E. CHAPMAN, Canon City, Colo., assignor of one-half to Samuel Waugh, Canon City, Colo. Filed Feb. 6, 1914. Serial No. 816,966. (Cl. 217—35.)



A shipping receptacle for eggs or like articles comprising a box, top and bottom spacing members each including a rectangular frame adapted to fit in the box and a sheet of canvas or like material stretched across and secured to the frame and substantially coincident with the plane of its inner face, a filler member disposed between the said spacing members and having compartments to receive the articles and a cover for the box.

1,155,213. WORK-HOLDING ATTACHMENT FOR GRINDING-MACHINES. BENNETT F. CLARK, Niagara Falls, N. Y., assignor to The Carborundum Company, Niagara Falls, N. Y., a Corporation of Pennsylvania. Filed July 14, 1914. Serial No. 850,902. (Cl. 51—7.)

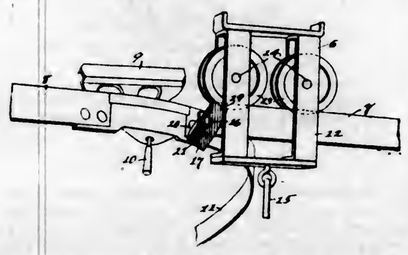


1. A work holder attachment for grinders, comprising a supporting bracket, a guide member connected thereto and extending in a direction substantially parallel to the axis of the grinding wheel, a work holding member having a plurality of downwardly extending lugs, said lugs having ears which engage the guide member, there being a space between said ears to permit the carrier to be removed from the bracket; substantially as described.

2. A work holder attachment for grinders, comprising a bracket, means for adjustably securing the bracket to the frame of the grinder, said bracket having an arm extending at right angles to the axis of the grinding wheel and over the periphery of the wheel, a guide member carried by the arm and extending in a direction substantially parallel with the axis of the grinding wheel, a work holding member having downwardly extending lugs, ears extending downwardly from said lugs engaging the guide member, said ears forming stops for the work holder, there being a space between the ears to permit the removal of the work holder when moved out of its normal position; substantially as described.

3. A tool-holding device for grinders, comprising a guide member arranged to extend adjacent to the periphery of a grinding wheel in a direction substantially parallel to the axis of said wheel, a work-supporting plate slidably and rotatably engaged with the guide member, and a spring clip carried by said plate and adapted to hold the work thereon, said plate having stops for one side of the work, substantially as described.

1,155,214. TROLLEY-STOP. ELMER EUGENE CONRAD, West Salem, Wis., assignor of one-half to Harry A. Tulloch, Genoa, Wis. Filed Apr. 6, 1915. Serial No. 19,603. (Cl. 104—180.)



1. The combination with an overhead track section having a notch in the upper side of the end thereof, a switch link adapted to rest in said notch and to be moved therefrom, and a trolley moving on said track section; of a stop pivoted to the side of said track section beneath said notch and normally overlapping said notch, and gravity means for insuring this stop relationship, said stop being engaged by said link in the operation of closing the switch and moved away from said notch by revolving said stop on its pivot against the action of said gravity means.

2. The combination with an overhead track section having a notch in the upper side of the end thereof, a switch link adapted to rest in said notch and to be moved therefrom, and a trolley moving on said track section; of a stop having a thickened, weighted, lower end forming shoulders, pivoted to the side of said track section beneath said notch and normally overlapping said notch, said stop being moved away from said notch by said link in the closing of said switch by being revolved on its pivot, said shoulders serving as means for limiting the degree of stop movement by striking against said track section.

1,155,215. EGG-BEATER. EDWARD H. COOLEY, Takoma Park, Md. Filed May 15, 1915. Serial No. 28,369. (Cl. 107—53.)



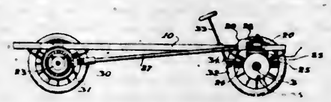
1. An egg beater or stirrer consisting of a handle portion and a whipping end formed of a length of wire, the said whipping end consisting of spirally arranged convolutions wound so as to be under an expanding tension, substantially as described.

2. An egg beater or stirrer consisting of a handle portion and a whipping end formed of a length of wire, the said whipping end consisting of spirally arranged convolutions wound so as to be under an expanding tension, and a length of wire extended for engagement with each of said convolutions to support the latter, substantially as described.

3. A beater or stirrer including a whipping end consisting of convolutions formed from a length of wire coiled under tension, substantially as described.

4. An egg beater consisting of a handle portion and a whipping end formed of a length of wire, the said whipping end consisting of spirally arranged convolutions, and means integral with said length of wire and extending to the center of said whipping end to reinforce said convolutions, substantially as described.

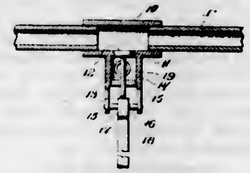
1,155,216. FRONT AND REAR DRIVE FOR AUTO-VEHICLES. RALEIGH C. CRISWELL, Chicago, Ill., assignor of one-half to Guy C. Fleming, Chicago, Ill. Filed Jan. 13, 1915. Serial No. 2,064. (Cl. 21—90.)



1. A front and rear axle drive for vehicles comprising an axle consisting of axle sections mounted in tubular bearings, differential gearing on said axle members, a fifth wheel member secured to the front axle, a vertically disposed stub shaft mounted on said axle, a double gear wheel mounted on said stub shaft, and meshing with said differential gearing, a yoke supported on said double gear wheel, the ends of said yoke being extended underneath the vehicle springs, and the lower fifth wheel member being provided with gear teeth to be operated by a pinion on the steering post.

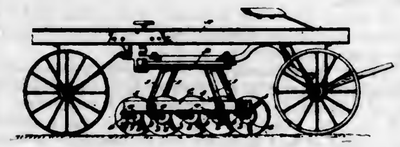
2. A front and rear axle drive for vehicles comprising axles consisting of axle sections, tubular bearings for said axle sections, differential gearing for said sections, a fifth wheel member mounted on the front axle, a vertical stub shaft mounted on the front axle, a double gear wheel mounted on said shaft to mesh with the differential gearing, and supported on ball bearings, a yoke pivoted to said shaft, front vehicle springs supported on said yoke, and a steering post and gear for operating the lower fifth wheel member to permit the wheel to have independent movement in rounding corners.

1,155,217. CONTROLLING-VALVE. ARTHUR O. CURRY, San Bernardino, Cal. Filed Jan. 17, 1914. Serial No. 812,768. (Cl. 137—4.)



A controlling valve of the class described comprising a T-shaped casing adapted to have the head thereof in open communication with a source of fluid supply and having the stem thereof formed to provide a chamber formed with an outlet port adapted to communicate with the interior of the head, the head of said casing being formed with a valve seat contiguous to the inner end of said chamber, a valve engaging said seat, a stem depending from said valve and extending through the lower wall of the chamber formed by said casing stem, pivot ears depending from said casing at diametrically opposite sides of the valve stem, a pin carried by said ears, a cam on said pin engaging the lower end of said valve stem and rotatable to elevate the stem to move the valve disk out of engagement with the seat, and a trip arm depending from said cam to operate the latter.

1,155,218. ROADWAY-SCARIFIER. WILLIAM V. DARLING, Riverside, Cal. Filed Sept. 20, 1912. Serial No. 721,435. (Cl. 55—73.)



1. In a road scarifier, the combination with a frame having a plurality of parallel axles journaled thereon, of a plurality of disks mounted upon each axle forming a set of disks for each axle, each set of disks off-set from the other sets so that a disk on each set lies adjacent to one of the disks of the set on the axle in advance thereof, and the distance between the cutting edges of a forward disk and the disk of a set which lies adjacent to the disk of the set on the axle in advance thereof is the same as the distance between the cutting edges of the disks of each set.

2. In a road scarifier, the combination with a frame having a plurality of axles journaled thereon, of a plurality of disks mounted on each axle and nested together so that the cutting edges of the disks will be prevented from embedding themselves in the road surface, each set of disks off-set from the other sets, and the cutting edges of each set of disks, and the adjacently lying disks of one set with respect to the other, being the same distance apart.

3. In a road scarifier, the combination with a frame consisting of two parallel members extending diagonally to the line of draft, of a plurality of parallel axles journaled in said members transversely to the line of draft, a plurality of concave disks contiguously arranged mounted on each axle adapted to travel in the line of draft said disks adapted to remove the uneven surface of the roadway without affecting the foundation thereof and for loosening all the earth confined between the adjacent disks.

4. In a road scarifier, the combination with a wheel truck, of a frame suspended therefrom, having axles journaled thereon, a plurality of disks mounted upon each axle, said disks adapted to travel normally in the line of draft, the disks of each axle traversing an area independent of the area traversed by the other disks, and means for actuating the frame carrying the disks, for moving the disks to a position at an angle to the line of draft.

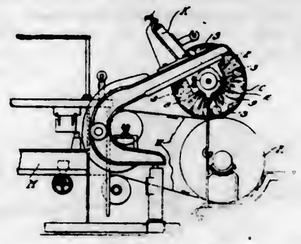
5. In a road scarifier, the combination with a frame consisting of two parallel members extending diagonally to the line of draft, of a plurality of parallel axles journaled in said members transversely to the line of draft, a plurality of concave disks contiguously arranged mounted on each axle adapted to travel in the line of draft, said disks adapted to remove the uneven surface of the roadway without affecting the foundation thereof and for loosening all the earth confined between the adjacent disks, and means for adjusting the disks on each axle longitudinally thereof.

1,155,219. PAPER-MACHINE. LEWIS J. DEANE and MACK P. WINGATE, Millinocket, Me. Filed Apr. 26, 1915. Serial No. 23,983. (Cl. 92—47.)

1. A machine for removing moisture from paper pulp including a moisture absorbing couch roll comprising an apertured cylindrical shell, a moisture absorbing jacket surrounding the same, and a flush pipe discharging into said shell.

2. A machine for removing moisture from paper pulp including a moisture absorbing couch roll comprising an apertured cylindrical shell, openwork end walls therefor, a moisture absorbing jacket surrounding said shell, and a flush pipe discharging into the shell through one of the end walls thereof.

3. A machine for removing moisture from paper pulp including a moisture absorbing couch roll comprising an apertured cylindrical shell, open-work end walls therefor, a moisture absorbing jacket surrounding said shell and continuing inwardly around the outer edge portions of said end walls, and a flush pipe discharging into the shell through one of said end walls thereof.



4. A machine for removing moisture from paper pulp including a moisture absorbing couch roll comprising an apertured cylindrical shell, a moisture absorbing jacket surrounding the same, and a fluid inlet into said shell for the admission of a flushing fluid.

5. The method of rejuvenating absorbent couch rolls having deposits between their apertured shells and the absorbent jackets thereof, consisting in introducing a fluid into the space occupied by the deposits.

[Claims 6 and 7 not printed in the Gazette.]

1,155,220. CLUTCH DEVICE. VICTOR DE MARAIS, Chico, Cal. Filed July 17, 1914. Serial No. 851,542. (Cl. 192—20.)

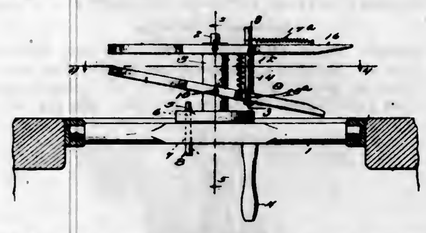


In combination with a starting crank having an annular arrangement of teeth adjacent one end, a rotary member having radially disposed recesses and openings intersecting with the recesses about at a right angle, dogs pivotally mounted in the recesses and adapted to engage the teeth of the starting crank, each of said dogs normally lying substantially in a line with the axis of its pivot and the axis of the toothed portion of the crank, each tooth formed in the crank having one wall arranged parallel to one face of the dog and the remaining wall extending at right angles thereto, plungers mounted in the openings, expansible helical springs arranged in said openings and pressing the plungers forwardly, and adjusting screws threaded into the openings for adjusting the tension of said spring.

1,155,221. MAIL-BAG CATCHER. ALBERT W. DICKERSON, Galion, Ohio. Filed June 30, 1914. Serial No. 848,121. (Cl. 258—22.)

1. A device of the type described, including a suspending pivoted member having a fixed shaft at right angles thereto, a second shaft sleeved upon the aforesaid shaft and having fixed thereto a finger, a resiliently actuated fork positioned to have movement upon the sleeved shaft, and a resiliently actuated trip pivoted to said fork and having a shoulder at its free end, said free end of the trip being movable through said finger and having its said shoulder engaging the finger.

2. A device of the type described, including a suspending pivoted member having a fixed shaft at right angles thereto, a second shaft turning upon the aforesaid shaft and having fixed thereto at one end a finger, a resiliently actuated fork positioned to have movement upon said second shaft opposite said finger, and a resiliently actuated trip pivoted in said fork and having a shoulder at its free end, said trip being received by an aperture in said finger, and its said shoulder engaging the finger, at the edge of said aperture.



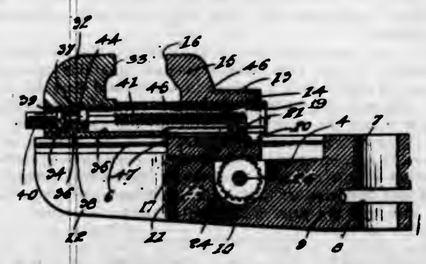
3. A device of the type described, including a suspending pivoted member having a fixed shaft at right angles thereto, a second shaft sleeved upon the aforesaid shaft and having fixed thereto a finger, a resiliently actuated fork positioned to have movement upon said second shaft, opposite said finger, means effecting hinged or pivoted connection between said fork and said finger, and a resiliently actuated trip fulcrumed in said fork and received in an aperture in said finger, said trip having a shoulder at its free end arranged for engagement with said finger, at the edge of the aperture in the finger.

4. A device of the type described, including a suspending pivoted bar having a fixed shaft at right angles thereto, a tubular shaft carried by and arranged to turn upon the aforesaid shaft and having fixed to one end a finger, a resiliently controlled fork fulcrumed upon said tubular shaft and itself having fulcrumed therein a resiliently controlled trip having a shoulder near its free end, said finger having an aperture receiving said free end of the trip, the shoulder of said trip arranged to engage said finger at the edge of said aperture.

5. A device of the type described, including a suspending pivoted member having a fixed shaft at right angles thereto, a fixed finger, means providing for carrying said finger upon said shaft, means for fixing the position of said finger-carrying means, with respect to said pivoted member, a resiliently actuated fork positioned to have movement toward said finger at one end, and a resiliently actuated trip pivoted to said fork and having a shoulder near its free end, said free end of the trip being movable through said finger and having its shoulder engaging said finger.

[Claim 6 not printed in the Gazette.]

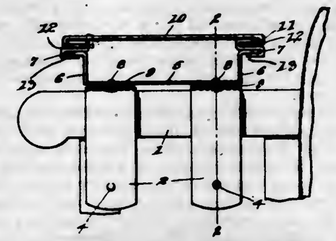
1,155,222. BLACKSMITH'S POST-DRILL. MERLIN A. DOROTHY, Pillsbury, N. D. Filed Dec. 11, 1914. Serial No. 876,712. (Cl. 77—63.)



1. An attachment for post drills including a base member, said base member having a groove in its upper surface, means to secure the base member to the support of a post drill, a relatively stationary jaw slidable within the groove, means to hold the jaw in adjusted positions on the base member, a movable jaw slidable in the groove, the relatively stationary jaw being provided with a rectangular aperture, a hollow rectangular extension on the movable jaw slidable in the aperture in the relatively stationary jaw, a threaded block secured to the relatively stationary jaw, and means extending through the movable jaw to engage the block and adjust the movable jaw with relation to the relatively stationary jaw.

2. An attachment for post drills including a base member, said base member being provided with a vertical aperture, said aperture being arranged to receive the support of the drill, the base member being provided with a groove in its upper edge, tongues extending into the groove for a short distance, a relatively stationary jaw slidable in the groove, the base member having a chamber intermediate its ends, the chamber communicating with the groove, a gear wheel within the chamber to engage the under side of the relatively stationary jaw to hold the same in various adjusted positions on the base member, a movable jaw slidable in the groove, and means engaging the relatively stationary jaw to hold the movable jaw in adjusted position with relation to the relatively stationary jaw.

1,155,223. HEAD-REST. SAMUEL E. DOUGLASS, Mount Gilead, N. C. Filed Dec. 13, 1913. Serial No. 806,517. (Cl. 155—10.)



1. In a head rest including a pair of U-shaped spring clips, a support formed of a strip of metal having a base, said base having its ends turned upwardly and outwardly, said base pivotally connected to said U-shaped clips, an S-shaped clip adapted to removably engage the outwardly extending ends of said support, a head resting element attached to said S-shaped clip for supporting a head thereon.

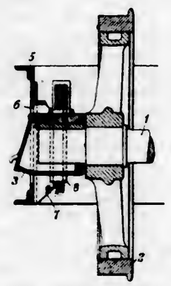
2. In a head support, a pair of U-shaped spring clips, a support formed of a flat strip of metal, said support having a base, the outer ends turned upwardly and outwardly, said base being pivotally connected to said U-shaped clips, an S-shaped clip adapted to engage the outwardly extending end of said base, a head supporting element having its ends secured in the upper end of said S-shaped clip, the inner faces of said U-shaped spring clips being lined with felt preventing said clips from marring the arm of a seat or chair when placed thereupon.

1,155,224. VEHICLE. GEORGE M. EATON, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 6, 1910, Serial No. 580,768. Renewed Dec. 7, 1914. Serial No. 875,963. (Cl. 105—17.)

1. A vehicle truck comprising an axle, journal boxes upon the ends thereof, and a frame having girder side members between which the axle is located, the said girders being provided with apertures adjacent to the ends of the axle through which the journal boxes project and may be removed longitudinally of the axle.

2. A vehicle truck comprising an axle, journal boxes upon the ends thereof, and a frame having girder side members between which the axle is located, the said girders being provided with apertures having integral top, bottom and side walls and located adjacent to the ends

of the axle to permit removal of the journal boxes therethrough.



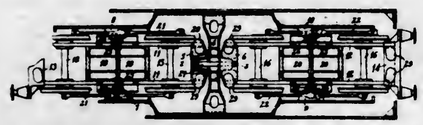
3. A vehicle truck comprising an axle, journal boxes upon the ends thereof, a frame having side members between which the axle is located, journal box guide brackets carried by the side members of the frame, and shoes for the said guide brackets the removal of which permits removal of the journal boxes longitudinally of the axle.

4. A vehicle truck comprising an axle, journal boxes for said axle having side projections, a frame having side members between which the axle is located and provided with apertures having integral top, bottom and side walls between which the journal boxes may be removed, journal box guide brackets carried by each of said side members and spaced apart a distance greater than the width of the journal box, and locking shoes removably fastened to said brackets and located between the side projections of said journal boxes.

5. A vehicle truck comprising an axle, a journal box having side projections, a frame provided with an aperture having integral top, bottom and side walls and so located as to permit removal of the journal box, guide members that are spaced apart a distance greater than the width of the journal box, and locking shoes interposed between the side projections of the journal box and removably fastened to the guide members.

[Claims 6 to 16 not printed in the Gazette.]

1,155,225. ELECTRIC LOCOMOTIVE. GEORGE M. EATON, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 21, 1911. Serial No. 609,946. (Cl. 105—259.)



1. A vehicle comprising a cab or body having a downwardly projecting cross tie or bolster intermediate its ends and trucks located at the respective sides of the cross tie for driving the cab or body therethrough.

2. An electric vehicle comprising a cab or body having a downwardly projecting cross tie or bolster intermediate its end, motor trucks, located at the respective sides of the cross tie or bolster for driving the cab or body therethroug, and a link connection between the trucks.

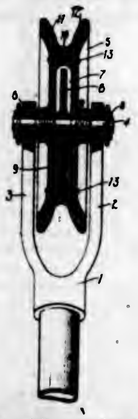
3. An electric vehicle comprising a cab or body having a downwardly projecting cross tie or bolster intermediate its ends, and motor trucks located at the respective sides of the cross tie or bolster for driving the cab or body therethrough, and a draw-bar interposed between the trucks and connected to one of them by a lost-motion connection.

4. In an articulated truck locomotive, the combination with a cab or body having a centrally located cross tie or bolster projecting downwardly between the adjacent truck bumpers, and means for laterally restraining each truck in substantially its central plane.

5. A vehicle comprising a body frame and a truck adapted for relative longitudinal movement and having a centrally located driving motor projecting upwardly through the body frame, a driving connection between the truck frame and the body frame and means for laterally restraining the truck in substantially its central lateral plane.

[Claims 6 to 31 not printed in the Gazette.]

1,155,226. TROLLEY-WHEEL. EARL E. EBY, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 7, 1914. Serial No. 810,768. (Cl. 191—63.)



1. The combination with a trolley harp, a shaft fixedly mounted therein, and a trolley wheel rotatably mounted upon said shaft and having a central chamber therein, of a conducting disk disposed in said chamber and fixed to said shaft, and a body of conducting fluid contained in the chamber of said rotatable wheel.

2. The combination with a trolley harp and a shaft fixedly mounted therein, of a trolley wheel rotatably mounted upon said shaft and having a central chamber therein, and a body of conducting fluid contained in the chamber of said rotatable wheel.

3. The combination with a trolley harp, a shaft fixedly mounted upon said harp, and a rotatable trolley wheel having a chamber therein adjacent to said shaft, of a body of conducting fluid disposed in the chamber of said rotatable wheel.

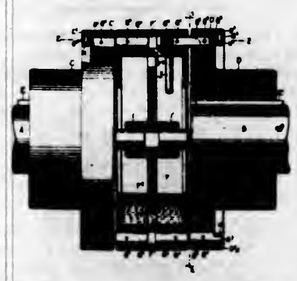
4. The combination with a trolley harp, a shaft rigidly associated therewith, and a trolley wheel rotatably mounted on said shaft and having a central chamber therein, of a conducting member rigidly secured to said shaft and disposed in said chamber, and a body of conducting fluid disposed in said chamber of said rotatable wheel in intimate engagement with the wheel and said conducting member.

5. The combination with a fixed shaft, a member rigidly secured thereto and another member rotatably mounted thereon and having a pocket in which said first member is disposed, of a body of conducting fluid disposed within said pocket for carrying current around the surfaces of frictional engagement and adapted to be thrown outwardly by centrifugal force to make electrical connection between said members throughout the entire periphery of said first member and of the inner wall of said pocket.

[Claim 6 not printed in the Gazette.]

1,155,227. FLEXIBLE COUPLING. WILLIAM J. FRANCKE, Highland Park, N. J. Filed May 20, 1915. Serial No. 29,299. (Cl. 64—13.)

1. In a flexible coupling, the combination of coupling members adapted to be secured to the adjacent ends of two shafts, an intermediate member arranged intermediate the said coupling members, and flexible connecting members connecting the said coupling members with the said intermediate member independently one of the other, each flexible connecting member consisting of a bunch of superimposed flat springs extending approximately parallel to the axes of the coupling members.



2. In a flexible coupling, the combination of coupling members adapted to be secured to the adjacent ends of two shafts, an intermediate member arranged intermediate the said coupling members, and flexible connecting members fixed to the coupling members and having a longitudinal sliding connection with the said intermediate member.

3. In a flexible coupling, the combination of coupling members adapted to be secured to the adjacent ends of two shafts, an intermediate member arranged intermediate the said coupling members, flexible connecting members each having a plurality of superimposed flat springs, and keepers attached to the ends of the springs, the outermost keeper of a flexible connecting member being attached to the corresponding coupling member and the inner keeper of each flexible connecting member slidably engaging the said intermediate member.

4. In a flexible coupling, the combination of coupling members adapted to be secured to the adjacent ends of two shafts, an intermediate member arranged intermediate the said coupling members and having a central contact with the adjacent ends of the said shafts, and flexible connecting members connecting the said coupling members with the said intermediate member.

5. In a flexible coupling, the combination of coupling members adapted to be secured to the adjacent ends of two shafts, an intermediate member arranged intermediate the said coupling members and provided with an oil well and with a series of longitudinal bearings in communication with the said oil well, and flexible connecting members attached at their outer ends to the said coupling members and having their inner ends slidable in the said bearings.

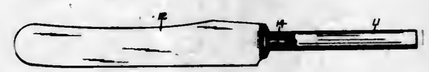
[Claims 6 and 7 not printed in the Gazette.]

1,155,228. NECKTIE-HOLDER. STANLEY L. GEDNEY, Maplewood, N. J. Filed Nov. 2, 1910. Serial No. 590,378. (Cl. 24—261.)



A necktie holder formed from a single strand of material, comprising inner and outer clasp members, yieldingly connected together, the outer clasp member being greater in length than the inner clasp member, the inner clasp member being greater in width at its free end than the outer clasp member, and having its sides spaced outwardly for a greater part of their length, from the opposite sides of the outer clasp member, so that the outer clasp member and the inner clasp member clamp the material at four spaced points, thereby holding the material of a tie and shirt yieldingly between the two members at four different points, the free ends of both of the clasp members being curved upwardly, the upwardly curved end of the inner member terminating short of the upwardly curved end of the outer member, thereby forming a passage to permit of the ready insertion of the shirt and tie between the clasp members, the said upwardly curved portion of the outer member being designed for engagement with the material of the tie and shirt beyond the end of the inner clasp member, thereby facilitating the forcing of the material inwardly between the clasping members.

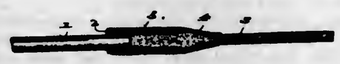
1,155,229. PROCESS OF MAKING CUTLERY. WILLIAM F. GORTON, Muncie, Ind. Filed Aug. 17, 1914. Serial No. 857,159. (Cl. 76—105.)



1. The process of making cutlery, which process consists in taking two pieces of metal, and uniting them by means of compression dies and in the same operation forming the handle and bolster.

2. The process of making cutlery, which process consists in taking two pieces of metal, forming one of said pieces of metal into a blade, and thereafter uniting said two pieces of metal by means of compression dies and in the same operation forming the handle and bolster of the cutlery.

1,155,230. SHOT-SHOOTING DEVICE FOR USE IN BLASTING. LEE GRAHAM, Sandford, Ind., assignor of one-third to Wyatt A. House, Sandford, Ind. Filed Nov. 17, 1914. Serial No. 872,639. (Cl. 102—8.)



The combination with a blasting fuse, of a tubular sleeve fitted in one end of the same, a cord-like member having an unraveled end forming a plurality of strands providing a pocket receiving the said tubular sleeve, explosive substance filling the said sleeve and pocket, and a combustible cord coiled about the strands without the sleeve and coextensive with the length of the said strands.

1,155,231. HORSESHOE-CALK. JAMES R. GREENLEE, Portland, Oreg. Filed Aug. 3, 1915. Serial No. 43,403. (Cl. 168—29.)



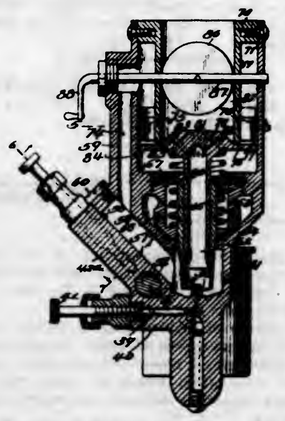
1. A shoe calk having a recess therein and a core for said recess comprising aluminum and corundum.

2. A shoe calk comprising a soft metallic body portion having a recess therein, a filling for the recess of much harder metal than the body portion and the filling comprising a soft metal and a hard mineral consisting of rhombohedral grains.

3. A shoe calk comprising a soft metallic body portion having a recess therein, a filling for said recess, said filling comprising a mixture of two metallic substances, one substance of the filling being of a harder and lighter metal than that of the body portion of the calk and the

other substance of the filling comprising small grains of harder metal than that of the first mentioned metallic substance of the filling substantially as and for the purpose set forth.

1,155,232. CARBURETER. FRANKLIN W. HAGAR, Nashville, Tenn. Filed Nov. 12, 1914. Serial No. 871,774. (Cl. 48—155.)



1. In a carbureter, the combination of a fuel supply source, a casing having a nozzle in communication with the said supply source and upper inner and outer chambers, a mixing chamber having a duct communicating therewith and with the said outer chamber and through which air moves downwardly to the said mixing chamber, and means for automatically setting up communication between the inner and outer chambers.

2. In a carbureter, the combination of a fuel supply source, a casing having a nozzle in communication with said supply source and upper inner and outer chambers, the inner chamber being provided with a throttle valve, a mixing chamber having a duct communicating therewith and with the said outer chamber and through which air moves downwardly to said mixing chamber, and an automatically movable spray head coöperating with the said inner and outer chambers and controlling the communication of the outer chamber with the inner chamber

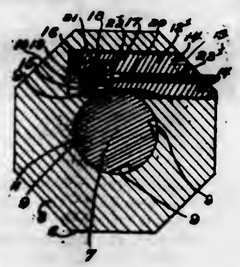
3. In a carbureter, the combination of a fuel supply source, a casing having a nozzle in communication with said supply source and upper air supply means, a mixing chamber having a duct communicating therewith and with the said upper air supply means and through which air moves downwardly to said mixing chamber, and an automatically movable spray head coöperating with said air supply means and having a hollow stem depending therefrom and centrally disposed over the said nozzle.

4. In a carbureter, the combination of a fuel supply means, a casing having a nozzle in communication with said fuel supply means and also having an upper air supply, a duct setting up communication between said air supply means and the nozzle for feeding air to the latter, and an automatically operating spray head movable in relation to said air supply and disposed over the nozzle, the periphery of the spray head being flanged to form a piston which is movable close to the wall of the air supply means.

5. In a carbureter, the combination of a fuel supply source, a casing having a nozzle in communication with said fuel supply source and also provided with upper inner and outer chambers forming air and pressure controlling means, a mixing chamber to which the said nozzle is exposed, a duct leading downwardly from the air controlling chamber to the said mixing chamber, a spray head having a plurality of ports at the center thereof communicating with the inner chamber and also provided with a peripheral flanged construction to form a piston accessory which is movable in the outer chamber, the said spray head controlling communication between the inner and outer chambers and having a depending hollow stem over the said nozzle, and means for automatically moving the spray head and stem.

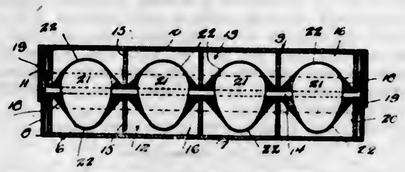
[Claims 6 to 8 not printed in the Gazette.]

1,155,233. NUT-LOCK. ROBERT O. HAMMOND, Amityville, N. Y., assignor to Charles F. Delano, Amityville, N. Y. Filed Aug. 9, 1912. Serial No. 714,256. (Cl. 151—10.)



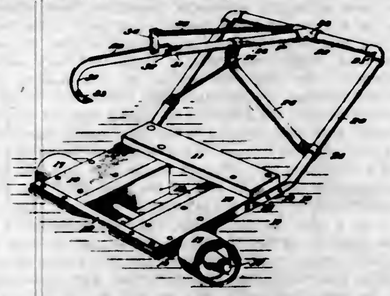
The combination with a bolt having grooves therein, of a nut having a threaded opening for receiving the bolt and a threaded recess in communication with the opening therein, a spring pressed plunger movable in said recess into and out of engagement with the grooves in said bolt, a plug movable in the recess into and out of engagement with the plunger for limiting the movement of the same into and out of operative relation with the grooves in the bolt and retaining the said plunger in inoperative position, and a stem projecting from the plunger through the plug and beyond the side of the nut, whereby upon depression of said stem, the plunger will be forced to inoperative position.

1,155,234. SHIPPING CRATE OR CASE FOR EGGS OR THE LIKE. ROBERT O. HAMMOND, New York, N. Y., assignor to George W. Renkel and John D. Montmeat, Paterson, N. J. Filed Oct. 22, 1914. Serial No. 867,992. (Cl. 217—28.)



In a shipping case for eggs, a lower and an upper section, each section comprising a base and lateral edge flanges adapted to telescope one within the other, longitudinal and transverse partitions removably disposed within said sections and spaced from the flanges thereof, the flanges of the lower sections fitting between the flanges of the upper section and adjacent sides of the partitions, said partitions being spaced apart when the upper section is fitted upon the lower section, and flexible sheets secured to the outer sides of the outer sides of the outer partitions between said partitions and flanges of the sections and extending loosely between said partitions whereby when eggs or the like are disposed between said partitions the flexible sheets will be forced in opposite directions forming pockets having communications therebetween by virtue of the spaced partitions and the partitions will be held in yielding engagement with the bases of said sections.

1,155,235. HAND-TRUCK. BENJAMIN V. HARVEY and BASIL K. WATKINS, Danville, Va. Filed Mar. 6, 1915. Serial No. 12,580. (Cl. 21—65.)



1. A device of the character described including a platform, supporting wheels therefor, a handle carried by the platform, an arm mounted upon the handle and projecting over the platform in spaced relation thereto, and a work engaging member pivotally mounted upon said arm and adapted to coact with the platform, the work engaging member being adapted to engage the arm for limiting the said member in its pivotal movement toward the platform.

2. A device of the character described including a platform, supporting wheels therefor, a handle having spaced arms terminally connected to the platform, an arm connected to the outer extremity of the handle and extending over the platform in spaced relation thereto, brace bars extending between the arms of the handle and said last mentioned arm, and a work engaging member pivotally connected to the outer extremity of said last mentioned arm and adapted to coact with the platform.

3. A device of the character described including a platform, supporting wheels therefor, a substantially U-shaped handle having its arms connected to the platform, an arm connected to the bight portion of the handle and extending over the platform in spaced relation thereto, brace bars extending between the arms of the handle and said last mentioned arm, a work engaging member pivotally mounted upon said last mentioned arm and adapted to coact with the platform, and a flexible element connected to said member for actuating the member.

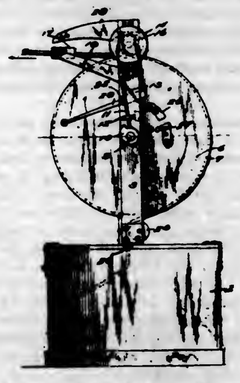
4. A device of the character described including a platform, supporting wheels therefor, a handle carried by the platform, a shiftably mounted work engaging hook operatively supported by the handle and limited in its movement in one direction with the shank of the hook disposed in substantially parallel relation to the platform, said hook being adapted to coact with the platform, an actuating lever carried by the hook, and a flexible element extending between said lever and the handle.

5. A device of the character described including a platform, supporting wheels therefor, a handle carried by the platform, an arm supported by the handle and extending over the platform in spaced relation thereto, a work engaging hook pivotally mounted upon the outer extremity of the arm and adapted to coact with the platform, the hook being adapted to engage the arm for limiting the hook in its movement toward the platform, an actuating lever carried by said hook, and a flexible element connected to the free extremity of said lever, whereby the hook may be moved upon its pivot through the medium of said element.

[Claim 6 not printed in the Gazette.]

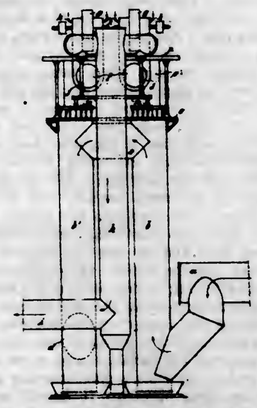
1,155,236. ROPE-MEASURE. WILLIAM L. HOBBS, Downs, Ala. Filed May 8, 1915. Serial No. 26,862. (Cl. 33—134.)

1. In a rope measure, the combination with a receptacle, a pair of uprights rising from the receptacle, rollers journaled between them near their upper and lower ends, a drum also journaled between them and disposed between said rollers, a cam on the drum shaft, and guides for the rope; of a counting device having a ratchet on its shaft, guides on one upright, a rod mounted therein and having one end engaged by said cam and the other end engaging said ratchet, a stop on one end of the drum, and a lever pivoted to one upright and having an inturned foot standing normally in the path of said stop.



2. In a rope measuring machine, the combination with a pair of uprights, a flanged drum journaled between them and of predetermined length around its circumference, a cam on the drum shaft, counting mechanism, and means for advancing the latter one number of each rotation of the cam; of a block secured inside one upright, a lever pivoted between its ends inside the same upright with a projecting handle at one end and its inner end resting normally on said block and having an inturned foot, a tension spring for holding the lever set, a spring finger secured at its forward end to the drum in the direction of rotation of the latter and having its rearward end outstanding from said drum and lying in the path of the normal position of said foot, and a fixed stop secured to the drum in rear of said rearward end of the finger, for the purpose set forth.

1,155,237. APPARATUS FOR COOLING AND PURIFYING FURNACE-GASES. ERNST HOFMANN, Duisburg, Meiderich, Germany. Filed Nov. 7, 1913. Serial No. 799,776. (Cl. 75—30.)



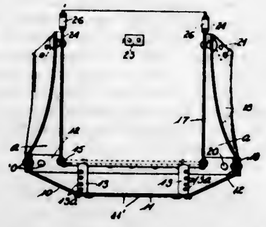
1. Apparatus for cooling and purifying furnace gases having a plurality of intercommunicating cooling cylinders, connected in series, a spraying device for said cylinders and a finishing purifier connected with the cooling cylinder last in the series; a conduit for admitting cooling medium under pressure into said purifier and pipe

connection between said purifier and said spraying device; said medium first passing through said purifier and thereupon as fine spray through said cooling cylinders.

2. Apparatus for cooling and purifying furnace gases having a plurality of intercommunicating cooling cylinders, connected in series, a spraying device for said cylinders and a plurality of finishing purifiers connected with the cooling cylinder last in the series; a conduit for admitting cooling medium under pressure into said purifiers and pipe connection between said purifiers and said spraying device; said medium first passing through said purifiers and thereupon as fine spray through said cooling cylinders.

3. An apparatus for cooling and purifying furnace gases, having a first, a second and a third upright cooling cylinder, rotating finishing purifiers adjacent the top of said cylinders; a conduit for admitting the gases from the furnace at the lower end of the first cylinder, conduits between the upper ends of the first and second cooling cylinders, and between the lower ends of said second and third cooling cylinders, conduits between the upper end of said third cylinder and said purifiers; a water tank above said purifiers and pipe connections from said tank to the purifiers; a sprinkling device at the top of each cooling cylinder; pipe connection from said purifiers to the sprinklers of the first and second cooling cylinders and other pipe connection from said water tank to the sprinkler of said third cooling cylinder.

1,155,238. FEED-BAG FOR HORSES. JOHN H. HUCKE, Jr., New York, N. Y. Continuation of application Serial No. 768,255, filed May 17, 1913. This application filed Nov. 5, 1914. Serial No. 870,456. (Cl. 119—65.)



1. The herein described feed bag for horses comprising, in combination, a rigid base frame, the main portion of which is in the form of a frustum of a rectangular pyramid and including a rim at its upper edge, the frame also including a circular ring of a smaller size than said rim and lying within the rim, there being provided vertical spaces between the ring and the rim, the side spaces being wider than those in the front and rear, a nose piece having upper and lower ends, the lower end being secured permanently to said ring, a magazine bag secured to the rim of said frame and extending thence upwardly in spaced relation to the nose piece, said magazine bag providing spaces on the sides for the bulk of the feed and serving to deliver the same into the bottom of the frame beneath the nose piece and ring, and means to support both the nose piece and the bag in operative position.

2. In a feed bag for horses, the combination of a metallic base pan having a flat bottom, a vertical rim and inclined members connecting the bottom and rim directing the feed toward the center of the bottom, a rigid ring above the bottom and of a diameter slightly less than the shorter diameter of the flange, a nose piece secured at its open lower end to the ring, a magazine bag secured to the flange and extending upwardly in spaced relation to the nose piece but closely embracing the nose piece at its upper end, and means including hollow ventilating standards serving to rigidly secure the ring and nose piece in spaced relation to the bottom.

3. In a feed bag for horses, the combination of a rigid base member including a bottom section, a rim and inclined members connecting the bottom and the rim, a series of rigid standards of tubular construction communicating with as many holes in the bottom of the base member and extending upwardly therefrom, said standards having a series of holes formed in opposite sides thereof, a ring supported upon the upper ends of said standards, fastening means comprising a staple for each standard embracing the ring and having its legs passing downwardly through the standard, the lower ends of the legs passing beyond the bottom and rigidly secured thereto, a tubular nose piece secured to the ring, means connected to the nose piece to support the device upon the horse's head, and a magazine bag attached to the base rim and loosely surrounding the lower end of the nose piece but closely fitting the nose piece at its upper end.

4. In a feed bag for horses, the combination of a rigid base member having a bottom, a rim and inclined walls leading toward the bottom from the rim, a ring above the bottom and within the rim, a tubular nose piece secured to the ring, a magazine bag secured to the rim and extending upwardly on the outside of the nose piece, means permanently securing the nose piece and magazine bag together at the front and rear, separable fastening means securing the sides of the nose piece and bag together making a substantially tight closure between the nose piece and the top of the bag, and means rigidly securing the ring and nose piece in spaced relation to the base bottom, said means including a series of tubular standards, each standard having a pair of notches at its top in which the ring is seated and also having a series of lateral holes arranged in the same plane as said notches, and a staple for each standard, the staple embracing the ring between the notches and extending downwardly within the standard and projecting beyond the lower end thereof, the portions of the staple passing through the standard lying along the unperforated parts thereof.

1,155,239. PACKAGE-TIE. OSCAR A. IASIOI, Brookline, Mass. Filed July 14, 1914. Serial No. 850,942. (Cl. 24—18.)



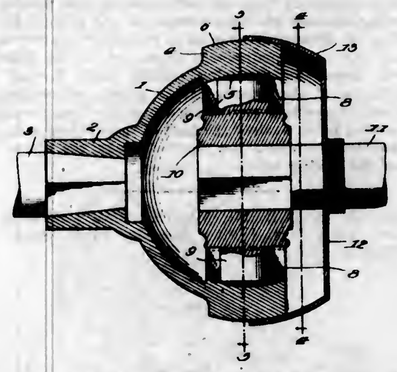
1. In a package tie, the combination with a flexible tying element, of a single length of wire coiled at each of its ends to form a base portion and each of its ends bent transversely from said base portion for forming necks, the terminal end of said length of wire being coiled for forming disks which are positioned above said base portion whereby a flexible tying element when wound about said neck will be held against accidental unwinding.

2. In combination with a flexible tying element, a package tie formed of a single length of wire, said wire coiled intermediate of its ends to form a base portion and bent transversely from said base portion to form upstanding necks, the terminal ends of said neck being coiled to form disks which are positioned directly above the base portion whereby a flexible tying element when wound about said neck and placed between the coils, it will be held against accidental unwinding.

3. A package tie comprising a bar, circular gripping bases located at and disposed on opposite sides and ends of said bar, said gripping bases being coiled and their innermost ends bent upwardly to form necks, the ends of said necks being coiled to form disks, said disks positioned directly over said bases, forming a resilient and flexible binding clamp for a cord wound about said neck.

4. A package tie comprising a bar, gripping bases located at and disposed on opposite sides and ends of said bar, said bases being coiled and their innermost ends bent upwardly forming necks, the terminals of said necks coiled for forming disks, said disks being spaced above said bases for frictionally holding a cord therebetween.

1,155,240. UNIVERSAL JOINT. MAX L. JEFFREY, Muncie, Ind. Filed Mar. 22, 1915. Serial No. 16,104. (Cl. 74—19.)



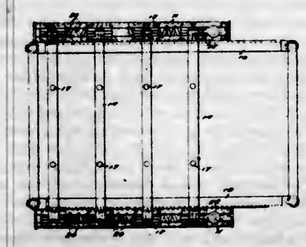
1. A universal joint comprising a rotatable ring, a pair of bearings disposed adjacent one of the curved sides of said ring at diametrically opposite points and movable transversely of said ring, abutments releasably secured to the ring at circumferentially spaced points and bearing against the circumferentially spaced sides of the bearings, and a rotatable member having diametrically alined studs projecting into the bearings.

2. A universal joint comprising a rotatable ring, a pair of bearings movable transversely thereof and disposed adjacent one of the curved sides of said ring at diametrically opposite points, a pair of arcuate abutments secured to the aforesaid curved side of the ring between the bearings and having their ends disposed in contact with the circumferentially spaced sides of said bearings, and a rotatable member having alined studs projecting into the bearings.

3. A universal joint comprising a rotatable ring, a pair of bearings movable transversely thereof and disposed adjacent one of the curved sides of said ring at diametrically opposite points, a pair of arcuate abutments releasably secured to the aforesaid curved side of the ring between the bearings and having their ends disposed in contact with the circumferentially spaced sides of said bearings, and a rotatable member having alined studs projecting into the bearings.

4. A universal joint comprising a rotatable ring, a pair of bearings disposed within said ring at diametrically spaced points and movable transversely thereof, arcuate abutments secured to the inner side of the ring and contacting at their ends with the circumferentially spaced sides of the bearings, and a head disposed within the ring and having studs projecting into the bearings.

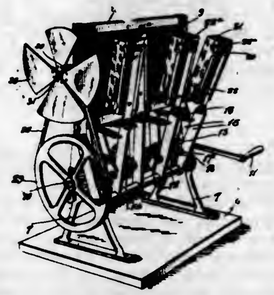
1,155,241. BED ATTACHMENT. NIELS P. JENSEN, Janesville, Wis. Filed Oct. 1, 1914. Serial No. 864,482. (Cl. 5—41.)



1. In a bed clothing support, guides adapted to be attached to the side rails of a bed; tubular members slidable along the guides; arches carried by the tubular members and spanning the interval between the guides, said arches being adapted to have bed clothing secured thereto; springs connecting the tubular members and serving to draw the members toward each other, a device for securing one end of each spring, near the end of the adjacent guide, to a stationary member; and means to hold the tubular members in spaced relation under tension of the springs.

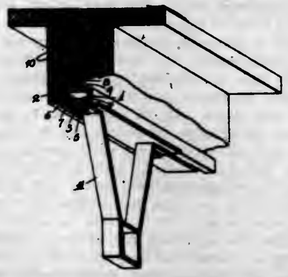
2. In a bed clothing support, spaced guides; a plurality of tubular members slidably mounted and movable along the guides; arches carried by the tubular members and spanning the interval between the guides, said arches being adapted to have bed-clothing secured thereto; springs connecting the several tubular members and tending to draw the tubular members together, a device for securing one end of each spring, near the end of the adjacent guide, to a stationary member, and a manually operable detent tending to hold the tubular members in spaced relation against the tension of the springs.

1,155,242. ERASER-CLEANER. JOHN W. JOHNSON, Chicago, Ill. Filed Jan. 11, 1915. Serial No. 1,652. (Cl. 15—25.)



In a device of the character described, comprising a pair of standards, a base plate secured to said standards, a foraminous beater member secured between the upper extremities of said standards, a cam shaft rotatably mounted below said beater member, shafts arranged laterally of and below said cam shaft, a plurality of arms pivotally secured to said shafts, eraser holders secured to the upper extremities of said arms, bearing rollers carried by the arms, said arms being arranged in pairs, springs connecting the arms of each pair, and normally tending to retain the latter in engagement with said foraminous beater member, a hand crank carried by said cam shaft, and a plurality of cams secured to said cam shaft between the standards, said cams being formed with circumferential channels to act as guides and permit the arms to come in contact with the beater member.

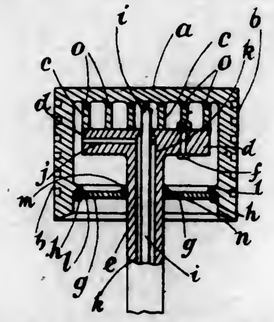
1,155,243. MEANS FOR SUSPENDING OBJECTS FROM REINFORCED CONCRETE STRUCTURES. ANDERS JORDAHL, Berlin-Wilmersdorf, Germany. Filed July 2, 1914. Serial No. 848,631. (Cl. 72—105.)



A slotted hollow means for suspending objects from reinforced concrete and other structures and for the

reception of securing bolts for plumber-blocks comprising in combination, horizontal flanges forming the walls of said slot, reinforcing lugs on said flanges extending into the hollow profile space and bolt heads provided with grooves into which said lugs engage with a limited play, substantially as described.

1,155,244. PISTON FOR INTERNAL-COMBUSTION ENGINES. OLAV ESKIL JONGMANS, Glasgow, Scotland, assignor to The Atlas Mercantile Company, Limited, London, England. Filed Aug. 13, 1914. Serial No. 856,611. (Cl. 123—176.)



1. A liquid cooled piston for internal combustion engines, having a working face, means located between the center of the piston and the outer edge of the same for rigidly supporting the working face in axial direction from the front face of the piston rod, a cylindrical body portion supported only from the working face, and a back part movably fitted between the said body portion and the piston rod at a distance from its front face, and means for conducting cooling liquid centrally against the back portion of the working face.

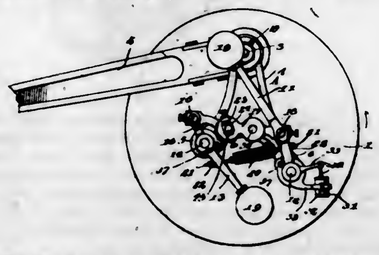
2. A liquid cooled piston for internal combustion engines, having a working face, supporting ribs located between the center of the piston and the outer edge of the same for rigidly supporting the working face in axial direction from the front face of the piston rod, and a cylindrical body portion supported only from the working face and means for conducting cooling liquid centrally against the back portion of the working face.

3. A liquid cooled piston for internal combustion engines, having a working face, a series of ribs on the back of the working face, and located between the center of the piston and the outer edge thereof, a flange on the end of the piston rod for rigidly supporting the working face through such ribs and a cylindrical body portion supported only from the working face and means for conducting cooling liquid centrally against the back portion of the working face.

4. A liquid cooled piston for internal combustion engines having a cylindrical body portion, a working face from which the body portion is supported, a series of perforated supporting ribs at the back of the working face and located between the center of the piston and the outer edge thereof, a piston rod with a flange on the end of the piston rod for engaging the said ribs in such manner that the working face is supported from the piston rod, a detachable disk extending between the rear end of the body portion of the piston and the piston rod in such manner as to permit of relative movement due to inequalities of expansion in the different parts, and a central pipe through the piston rod for directing cooling liquid against the back of said working face, said piston rod, and flange being provided with passages for conducting cooling liquid from the space between the working face and the disk.

5. A liquid cooled piston for internal combustion engines having a cylindrical body portion, a working face from which the body portion is supported, a series of annular supporting ribs on the back of the working face and located between the center of the piston and the outer edge thereof, a flange on the end of the piston rod for engaging the said ribs in such manner that the working face is supported from the piston rod, a rear portion extending between the body portion of the piston and the piston rod in such manner as to permit of relative movement due to inequalities of expansion in the different parts, means for supplying cooling liquid through the piston rod to the interior of the piston, perforations in the said supporting ribs to permit of the free circulation of cooling liquid against the back of the working face, and means for conveying the liquid through the piston rod from the cooling space.

1,155,245. AUTOMATIC VALVE-GEAR. CHARLES A. JOY, Park, Wash. Filed Dec. 12, 1914. Serial No. 876,874. (Cl. 121—97.)



1. In governor mechanism for engines, the combination with the crank wheel and the wrist pin thereof, of a hanger supported wholly on said wrist pin, bearing a fixed relation to said crank wheel and having arms extending to opposite sides of the axis of said wheel, weighted governor levers fulcrumed on said hanger arms one of said levers embodying a long arm and a short arm, a valve throwing link connecting one of said levers with the short arm of the other lever, and a speed controlling spring connecting both levers.

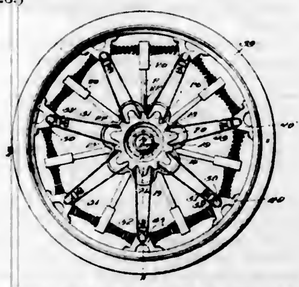
2. In governor mechanism for engines, the combination with the crank wheel and the wrist pin thereof, of a hanger supported wholly on said wrist pin, bearing a fixed relation to said crank wheel and having arms of unequal length extending to opposite sides of the axis of said wheel, weighted governor levers fulcrumed on said hanger arms one of said levers embodying a long arm and a short arm, a valve throwing link connecting one of said levers with the short arm of the other lever, and a speed controlling spring connecting both levers.

3. In governor mechanism for engines, the combination with the crank wheel and the wrist pin thereof, of a hanger supported wholly on said wrist pin, bearing a fixed relation to said crank wheel and having arms extending to opposite sides of the axis of said wheel, weighted governor levers fulcrumed on said hanger arms one of said levers embodying a long arm and a short arm, a valve throwing link connecting one of said levers with the short arm of the other lever, means on said link for adjusting the lead of the valves, and a speed controlling spring connecting both levers.

4. In governor mechanism for engines, the combination with the crank wheel and the wrist pin thereof, of a hanger supported wholly on said wrist pin, bearing a fixed relation to said crank wheel and having arms extending to opposite sides of the axis of said wheel, weighted governor levers fulcrumed on said hanger arms one of said levers embodying a long arm and a short arm, a valve throwing link connecting one of said levers with the short arm of the other lever, a speed controlling spring connecting both levers, and means for adjusting the tension of said spring to regulate the speed of the engine.

5. In governor mechanism for engines, the combination with the crank wheel and the wrist pin thereof, of a hanger supported wholly on said wrist pin, bearing a fixed relation to said crank wheel and having arms extending to opposite sides of the axis of said wheel, weighted governor levers fulcrumed on said hanger arms one of said levers embodying a long arm and a short arm, a valve throwing link connecting one of said levers with the short arm of the other lever, a speed controlling spring connecting both levers, and a stop device to hold said governor levers in position to hold the valve open when the engine is at rest.

1,155,246. RESILIENT WHEEL. ARTTURI JUTILA, Orr, Minn. Filed June 25, 1913. Serial No. 775,761. (Cl. 152—28.)



1. A resilient wheel including a hub, spokes supported by the hub, a rim, springs interposed between said spokes and rim, a member embracing the hub and spaced therefrom, and a substantially non-yielding connection drawn tightly between said member and the rim, said connection being flexible before being tightened.

2. A resilient wheel including a hub, a rim, said hub having a flange provided with a series of spaced openings, a ring embracing the hub and provided with extensions disposed within the openings of the flange of the hub, a connection between the rim and said ring at different points throughout their circumferences, spokes supported by the hub, and springs interposed between said spokes and said rim.

3. A resilient wheel including a hub, a rim, a flange carried by said hub, said flange being provided with a plurality of apertures, a ring embracing the hub, projections carried by the ring and extending within the openings of the flange, hooks carried by the ring and disposed between said projections, a flexible member looped to embrace the hooks, and adjustably connected to the rim, spokes supported by the hub, and springs interposed between said spokes and the rim.

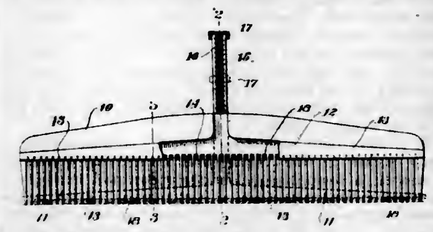
4. A resilient wheel including a hub, a rim, spokes pivotally supported by the hub, brackets mounted on said rim in spaced relation, said brackets being formed with converging side portions forming guideways, coil-springs provided terminally with plates disposed to be slid into the guideways of the brackets, and holding means arranged on the outer terminals of said spokes and embracing said springs.

5. A resilient wheel including a hub, a rim, spokes pivotally supported by the hub, members arranged on the outer terminals of said spokes, each of said members being formed with a threaded barrel which receives the terminal of the spoke, each member being provided with a plurality of slots which open through one of its ends, a plate forming a closure for the open end of said slots, brackets mounted on the rim, and springs terminally connected to said brackets, said springs being slidable into the slots formed in the members which receive the outer terminals of the spokes.

[Claims 6 to 8 not printed in the Gazette.]

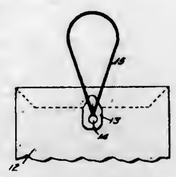
1,155,247. COMB. LUTHER MARTIN KELLETT, Williford, Ark. Filed Sept. 3, 1913. Serial No. 787,949. (Cl. 132—17.)

In combination with a comb body having a series of teeth, of a plurality of opposed side bars extending longitudinally of the comb body and operable over the sides thereof and the sides of the teeth, cleaning members carried by the side bars and lying in the spaces between the teeth of the comb body, uprights arched in cross section and projecting from medial portions of the side bars, with the vertical edges of the uprights spaced apart a distance slightly greater than the width of the comb body, said uprights forming a casing, a spring arranged in the casing and having one end thereof abutting against the comb body, said spring being held in vertical position



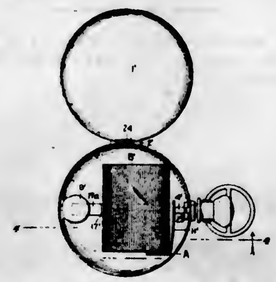
by the said uprights, and a knob connecting the upper ends of the uprights and encircling the same to hold the uprights together, said spring having an end secured in said knob whereby said spring will normally hold the side bars in an uppermost position relatively to the comb body, with the cleaning members normally lying adjacent the inner extremities of the teeth of the comb body.

1,155,248. BAG. CHARLES P. KLEEBAUER, New York, N. Y. Filed Apr. 3, 1915. Serial No. 18,910. (Cl. 229—68.)



A bag comprising a reinforced closure flap; a body on which said flap is mounted, said body having threading holes formed therein adjacent said flap when closed in service relation; a flexible carrying loop adapted for extension through said holes; a reinforcing member surrounding said holes; and means embodying a binding gap formed in said reinforcing member for engaging said loop to resist the withdrawal thereof from said hole after being placed in service relation for carrying the bag.

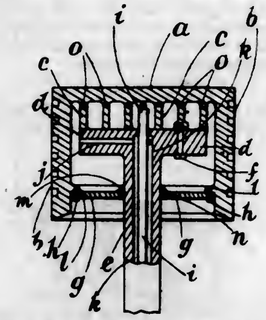
1,155,249. FLASH-LIGHT. HARRY M. KORETZKY, New York, N. Y. Filed Jan. 29, 1915. Serial No. 5,039. (Cl. 240—8.5.)



1. A flash light comprising a circular metallic casing, a rectangular battery disposed in the casing, a lamp disposed in the space between one side of the battery and the adjacent edge of the casing, one terminal of the lamp

reception of securing bolts for plumber-blocks comprising in combination, horizontal flanges forming the walls of said slot, reinforcing lugs on said flanges extending into the hollow profile space and bolt heads provided with grooves into which said lugs engage with a limited play, substantially as described.

1,155,244. PISTON FOR INTERNAL-COMBUSTION ENGINES. OLAV ESKIL JONGENSEN, Glasgow, Scotland, assignor to The Atlas Mercantile Company, Limited, London, England. Filed Aug. 13, 1914. Serial No. 856,611. (Cl. 123—176.)



1. A liquid cooled piston for internal combustion engines, having a working face, means located between the center of the piston and the outer edge of the same for rigidly supporting the working face in axial direction from the front face of the piston rod, a cylindrical body portion supported only from the working face, and a back part movably fitted between the said body portion and the piston rod at a distance from its front face, and means for conducting cooling liquid centrally against the back portion of the working face.

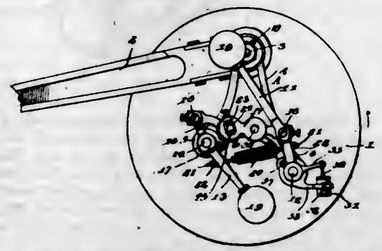
2. A liquid cooled piston for internal combustion engines, having a working face, supporting ribs located between the center of the piston and the outer edge of the same for rigidly supporting the working face in axial direction from the front face of the piston rod, and a cylindrical body portion supported only from the working face and means for conducting cooling liquid centrally against the back portion of the working face.

3. A liquid cooled piston for internal combustion engines, having a working face, a series of ribs on the back of the working face, and located between the center of the piston and the outer edge thereof, a flange on the end of the piston rod for rigidly supporting the working face through such ribs and a cylindrical body portion supported only from the working face and means for conducting cooling liquid centrally against the back portion of the working face.

4. A liquid cooled piston for internal combustion engines having a cylindrical body portion, a working face from which the body portion is supported, a series of perforated supporting ribs at the back of the working face and located between the center of the piston and the outer edge thereof, a piston rod with a flange on the end of the piston rod for engaging the said ribs in such manner that the working face is supported from the piston rod, a detachable disk extending between the rear end of the body portion of the piston and the piston rod in such manner as to permit of relative movement due to inequalities of expansion in the different parts, and a central pipe through the piston rod for directing cooling liquid against the back of said working face, said piston rod, and flange being provided with passages for conducting cooling liquid from the space between the working face and the disk.

5. A liquid cooled piston for internal combustion engines having a cylindrical body portion, a working face from which the body portion is supported, a series of annular supporting ribs on the back of the working face and located between the center of the piston and the outer edge thereof, a flange on the end of the piston rod for engaging the said ribs in such manner that the working face is supported from the piston rod, a rear portion extending between the body portion of the piston and the piston rod in such manner as to permit of relative movement due to inequalities of expansion in the different parts, means for supplying cooling liquid through the piston rod to the interior of the piston, perforations in the said supporting ribs to permit of the free circulation of cooling liquid against the back of the working face, and means for conveying the liquid through the piston rod from the cooling space.

1,155,245. AUTOMATIC VALVE-GEAR. CHARLES A. JOY, Park, Wash. Filed Dec. 12, 1914. Serial No. 876,874. (Cl. 121—97.)



1. In governor mechanism for engines, the combination with the crank wheel and the wrist pin thereof, of a hanger supported wholly on said wrist pin, bearing a fixed relation to said crank wheel and having arms extending to opposite sides of the axis of said wheel, weighted governor levers fulcrumed on said hanger arms one of said levers embodying a long arm and a short arm, a valve throwing link connecting one of said levers with the short arm of the other lever, and a speed controlling spring connecting both levers.

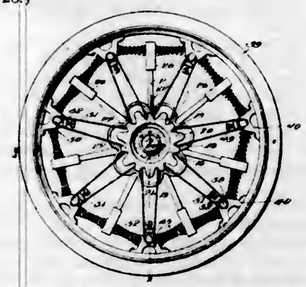
2. In governor mechanism for engines, the combination with the crank wheel and the wrist pin thereof, of a hanger supported wholly on said wrist pin, bearing a fixed relation to said crank wheel and having arms of unequal length extending to opposite sides of the axis of said wheel, weighted governor levers fulcrumed on said hanger arms one of said levers embodying a long arm and a short arm, a valve throwing link connecting one of said levers with the short arm of the other lever, and a speed controlling spring connecting both levers.

3. In governor mechanism for engines, the combination with the crank wheel and the wrist pin thereof, of a hanger supported wholly on said wrist pin, bearing a fixed relation to said crank wheel and having arms extending to opposite sides of the axis of said wheel, weighted governor levers fulcrumed on said hanger arms one of said levers embodying a long arm and a short arm, a valve throwing link connecting one of said levers with the short arm of the other lever, means on said link for adjusting the lead of the valves, and a speed controlling spring connecting both levers.

4. In governor mechanism for engines, the combination with the crank wheel and the wrist pin thereof, of a hanger supported wholly on said wrist pin, bearing a fixed relation to said crank wheel and having arms extending to opposite sides of the axis of said wheel, weighted governor levers fulcrumed on said hanger arms one of said levers embodying a long arm and a short arm, a valve throwing link connecting one of said levers with the short arm of the other lever, a speed controlling spring connecting both levers, and means for adjusting the tension of said spring to regulate the speed of the engine.

5. In governor mechanism for engines, the combination with the crank wheel and the wrist pin thereof, of a hanger supported wholly on said wrist pin, bearing a fixed relation to said crank wheel and having arms extending to opposite sides of the axis of said wheel, weighted governor levers fulcrumed on said hanger arms one of said levers embodying a long arm and a short arm, a valve throwing link connecting one of said levers with the short arm of the other lever, a speed controlling spring connecting both levers, and a stop device to hold said governor levers in position to hold the valve open when the engine is at rest.

1,155,246. RESILIENT WHEEL. ARTTURI JUTILA, Orr, Minn. Filed June 25, 1913. Serial No. 775,761. (Cl. 152—28.)



1. A resilient wheel including a hub, spokes supported by the hub, a rim, springs interposed between said spokes and rim, a member embracing the hub and spaced therefrom, and a substantially non-yielding connection drawn tightly between said member and the rim, said connection being flexible before being tightened.

2. A resilient wheel including a hub, a rim, said hub having a flange provided with a series of spaced openings, a ring embracing the hub and provided with extensions disposed within the openings of the flange of the hub, a connection between the rim and said ring at different points throughout their circumferences, spokes supported by the hub, and springs interposed between said spokes and said rim.

3. A resilient wheel including a hub, a rim, a flange carried by said hub, said flange being provided with a plurality of apertures, a ring embracing the hub, projections carried by the ring and extending within the openings of the flange, hooks carried by the ring and disposed between said projections, a flexible member looped to embrace the hooks, and adjustably connected to the rim, spokes supported by the hub, and springs interposed between said spokes and the rim.

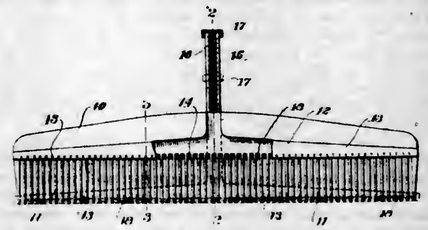
4. A resilient wheel including a hub, a rim, spokes pivotally supported by the hub, brackets mounted on said rim in spaced relation, said brackets being formed with converging side portions forming guideways, coil-springs provided terminally with plates disposed to be slid into the guideways of the brackets, and holding means arranged on the outer terminals of said spokes and embracing said springs.

5. A resilient wheel including a hub, a rim, spokes pivotally supported by the hub, members arranged on the outer terminals of said spokes, each of said members being formed with a threaded barrel which receives the terminal of the spoke, each member being provided with a plurality of slots which open through one of its ends, a plate forming a closure for the open end of said slots, brackets mounted on the rim, and springs terminally connected to said brackets, said springs being slidable into the slots formed in the members which receive the outer terminals of the spokes.

[Claims 6 to 8 not printed in the Gazette.]

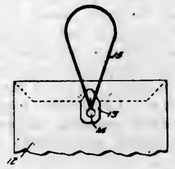
1,155,247. COMB. LUTHER MARTIN KELLETT, Williford, Ark. Filed Sept. 3, 1913. Serial No. 787,949. (Cl. 132—17.)

In combination with a comb body having a series of teeth, of a plurality of opposed side bars extending longitudinally of the comb body and operable over the sides thereof and the sides of the teeth, cleaning members carried by the side bars and lying in the spaces between the teeth of the comb body, uprights arched in cross section and projecting from medial portions of the side bars, with the vertical edges of the uprights spaced apart a distance slightly greater than the width of the comb body, said uprights forming a casing, a spring arranged in the casing and having one end thereof abutting against the comb body, said spring being held in vertical position



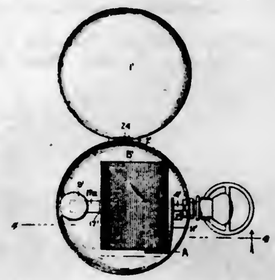
by the said uprights, and a knob connecting the upper ends of the uprights and encircling the same to hold the uprights together, said spring having an end secured in said knob whereby said spring will normally hold the side bars in an uppermost position relatively to the comb body, with the cleaning members normally lying adjacent the inner extremities of the teeth of the comb body.

1,155,248. BAG. CHARLES P. KLEEBAUER, New York, N. Y. Filed Apr. 3, 1915. Serial No. 18,910. (Cl. 229—63.)



A bag comprising a reinforced closure flap; a body on which said flap is mounted, said body having threading holes formed therein adjacent said flap when closed in service relation; a flexible carrying loop adapted for extension through said holes; a reinforcing member surrounding said holes; and means embodying a binding gap formed in said reinforcing member for engaging said loop to resist the withdrawal thereof from said hole after being placed in service relation for carrying the bag.

1,155,249. FLASH-LIGHT. HARRY M. KORETZKY, New York, N. Y. Filed Jan. 29, 1915. Serial No. 5,039. (Cl. 240—8.5.)



1. A flash light comprising a circular metallic casing, a rectangular battery disposed in the casing, a lamp disposed in the space between one side of the battery and the adjacent edge of the casing, one terminal of the lamp

being grounded on the casing, a connection between the lamp and the battery, a yielding contact on the battery, a movable contact mounted on the casing and grounded thereon and adapted to engage the spring contact of the battery to close the circuit, and means for operating the movable contact.

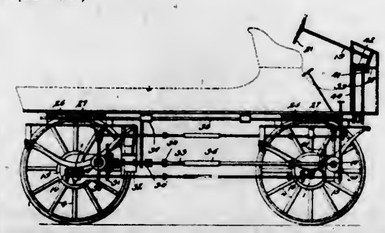
2. A flash light comprising a metallic casing, a stem barrel fastened to the casing, a stem movable in the barrel and forming a switch contact, a knob on the outer end of the stem, a rectangular battery in the casing and having a contact adapted to be engaged by the stem, a lamp disposed in the casing between one side of the battery and the edge of the casing and having a terminal grounded on the latter, a contact engaging the other terminal of the lamp, and a ring attached to the barrel and forming a grip member.

3. A flash light comprising a metal circular casing, a lamp socket in the casing and electrically connected therewith, a lamp disposed in the socket and having one terminal grounded thereon, a rectangular battery in the casing and having one terminal connected with the other terminal of the lamp, the lamp being disposed in the space between one side of the battery and the edge of the casing, a switch including a movable contact element grounded on the casing and arranged to engage the other terminal of the battery, and means for operating the movable element of the switch, said battery comprising a plurality of cell units connected in series, and each unit including a metallic casing element, a covering of insulation for the cell units, said covering having an opening exposing one of the casing elements at a point intermediate its ends for forming a terminal.

4. A flash light comprising a casing, a cover hingedly mounted thereon, a spring acting on the cover for throwing the same open, a catch on the casing and engaging the cover for holding the same closed, a battery disposed in the casing, there being a space between one side of the battery and the adjacent peripheral portion of the casing, a lamp positioned in the said space having one terminal grounded on the casing and the other terminal grounded on the battery, and a circuit closing means operated by the catch when releasing the cover for electrically connecting the casing and battery to complete the circuit of the lamp.

5. A flash light having an external appearance like a closed watch, a casing, a stem barrel, a stem in the barrel, a spring acting on the stem, a ring attached to the barrel to form a means for holding the watch, a knob on the stem, and means on the ring for engaging the knob to hold the stem pressed inwardly against the tension of the spring, a battery in the casing and having a terminal with which the stem engages when pressed in, a lamp in the casing and having its terminals connected with the battery and casing respectively, whereby current flows through the lamp when the stem is pressed inwardly, a cover for the casing, means tending to throw the cover open, and a catch on the stem for releasing the cover when the stem is pressed inwardly.

1,155,250. MOTOR-VEHICLE. WALLACE A. LEE, Oakland, Cal. Filed Mar. 21, 1914. Serial No. 826,388. (Cl. 21—90.)



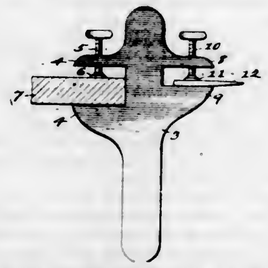
1. In a vehicle of the character specified, the combination of front and rear axles mounted to turn about vertical axes, a motor, a longitudinal shaft having gear connections with each of the axles, a second longitudinal shaft having connection with the motor, a steering post, and connecting means between the steering post and each longitudinal shaft and including a clutch.

2. In a vehicle of the character specified, the combination of front and rear axles mounted to turn about vertical axes, a motor, a longitudinal shaft having gear connections with each of the axles, a second longitudinal shaft having connection with the motor, a steering post, a shaft, connecting means between the shaft and steering post, and connecting means between the shaft and each longitudinal shaft.

3. In a motor vehicle the combination of the motor, steering mechanism, a steering post, a shaft, connecting means between the steering post and shaft, connecting means between the shaft and the motor and steering mechanism to admit of operation of either by means of the steering post, and a clutch on the shaft for throwing the steering post into or out of operative connection with the engine starting mechanism or the steering mechanism.

4. In a motor vehicle, the combination of the motor, steering mechanism, a steering post, a shaft disposed directly below and in adjacent relation to the steering post, connecting means between the steering post and shaft, connecting means between the shaft and the motor and steering mechanism to admit of operation of either by means of the steering post, and a clutch arranged in the length of the shaft and at points between the points of connection of the shaft with the motor and steering mechanism, for throwing the steering post into or out of operative connection with the engine starting mechanism.

1,155,251. SKIRT-MARKER. CORA BELLE LEMON, Grants Pass, Oreg. Filed Oct. 28, 1914. Serial No. 868,982. (Cl. 33—9.)

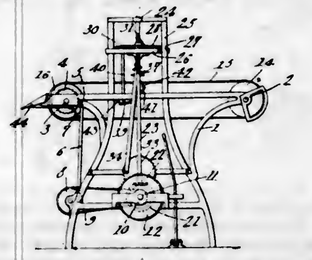


A skirt marker, comprising a handled plate having two oppositely disposed, integral, lateral, projections thereon, and having complemental, oppositely disposed, integral, lateral, projections thereon over the first named projections and spaced therefrom a thumb-screw in one of said upper projections to clamp said plate to a table, and a thumb-screw through the other upper projection to clamp a skirt marking medium in position for use, said thumb-screws coöperating with the respective lower projections to accomplish the desired results.

1,155,252. CORING-MACHINE. JOHN W. LINVILLE and CARL C. TILLMAN, Toledo, Ohio, assignors to Linville, Tillman & Co., Toledo, Ohio. Filed Feb. 10, 1915. Serial No. 7,392. (Cl. 146—6.)

1. A coring machine including means for feeding an article with a step-by-step movement, means for coring the article during a pause in its movement, and means for automatically cutting out a portion of the bottom of the article while being cored.

2. In a machine of the class described, the combination with an endless series of holders, and means for shifting said holders with a step-by-step movement, of a revoluble coring blade, means for lowering and raising said blade during the pauses in the movement of the holders thereby to core an article supported by one of the holders, and means for automatically cutting out a portion of the bottom of the object while being cored.



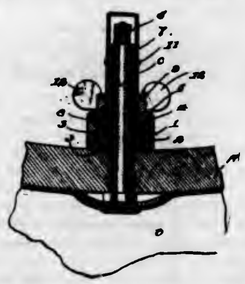
3. A coring machine including a series of holders, means for moving the same intermittently, a revoluble coring blade, means for lowering and raising said coring blade during the pauses in the movement of the holders, a blade mounted for oscillation below each coring blade and below the path of the holder, and means operated by the movement of the coring blade in one direction for actuating the other blade to engage and cut the obstacle supported by a holder.

4. The combination with a series of holders mounted to move intermittently, of a coring blade, means for reciprocating said blade during the pauses in the movement of the holders thereby to force the blade into and out of an object supported by one of the holders, means for constantly rotating said blade during the reciprocation thereof, and yielding means mounted for reciprocation with the blade for engaging and bearing against the object being cored.

5. The combination with a series of holders mounted to move intermittently, of a coring blade, means for reciprocating said blade during the pauses in the movement of the holders thereby to force the blade into and out of an object supported by one of the holders, means for constantly rotating said blade during the reciprocation thereof, a second blade mounted below the path of the holders and under the coring blade, and means operated by the descent of the coring blade for actuating said second blade to cut the bottom portion of the object being cored.

[Claims 6 to 10 not printed in the Gazette.]

1,155,253. VALVE-CAP. CECIL E. LLOYD, Pensacola, Fla. Filed Jan. 15, 1915. Serial No. 2,464. (Cl 152—12.)

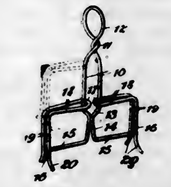


1. The combination with a tire valve, of a jam nut threaded onto the body of said valve and having one end thereof formed with a seat, a washer engaging the end wall of said seat, a cap surrounding the body of said valve and adapted to slide onto and off of the same, a flange formed on one end of said cap and disposed within said seat in engagement with the washer therein, and means for effecting a connection between the flanged end of said cap and seat.

2. The combination with a tire valve, of a jam nut threaded onto the body of said valve and having one end thereof formed with a seat, a cap surrounding the body of said valve and adapted to slide onto and off of the same and having the inner end thereof formed with a flang disposed within said seat, and a collar surrounding said cap and threaded into said seat and engaging the flanged end of said cap to hold the latter to said nut.

3. The combination with a tire valve, of a jam nut threaded onto the body of said valve and having one end thereof formed with a seat, a cap surrounding the body of said valve and adapted to slide onto and off of the same and having the inner end thereof formed with a flange disposed within said seat, and a collar surrounding said cap and threaded into said seat and engaging the flanged end of said cap to hold the latter to said nut, said cap being formed with an annular bead acting to prevent accidental removal of said collar.

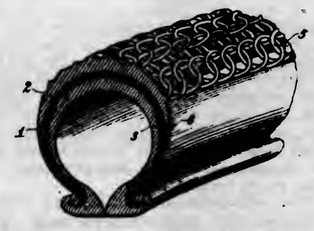
1,155,254. CLOTHES-PIN. FRITZ LUBBSEN, Price, Utah. Original application filed Jan. 14, 1914, Serial No. 812,028. Divided and this application filed Aug. 8, 1914. Serial No. 855,810. (Cl. 24—139.)



1. The herein described clothespin, comprising a body presenting shanks spaced apart at the upper portions thereof and bent toward each other at the lower portions, and clamps slidable on the shanks and presenting depending resilient clamp members, the said shanks having lateral arms disposed between the resilient members of the clamps.

2. A clothespin, comprising a body and clamps thereon, the body having a loop at its upper end to receive a clothes line, spaced shank members below the loop, said shank members having shoulders above the lower terminals thereof, and lateral arms at the lower ends of the shanks, the said arms terminating respectively in forwardly and rearwardly disposed ends and the clamps being slidable on the respective shank members, each clamp comprising a length of wire bent upon itself around the shank member and then bent in a downward direction to provide pendant clamp members, the lower ends of the clamp members diverging and being disposed at opposite sides of the lateral arms on the shanks, near the terminals of said shanks.

1,155,255. TIRE. JOHN EVERETT MCCOUGHTRY, Gary, Ind. Filed Nov. 8, 1913. Serial No. 799,971. (Cl. 152—18.)



A core for pneumatic tires embodying a non-puncturable sheet of metallic armor, and sheets fastened together at their opposite edges and composed of closely woven textile fabric impregnated with a semiliquid lubricating prep-

aration of zinc-oxid mixed with tar, said sheets being located at opposite sides of said armor sheet and inclosing the latter.

1,155,256. PROCESS OF TREATING BY-PRODUCT LIQUORS FROM WOOD-SULFITE PLANTS. CHARLES MARCHAND, Portland, Oreg. Filed Mar. 24, 1915. Serial No. 16,814. (Cl. 252.)

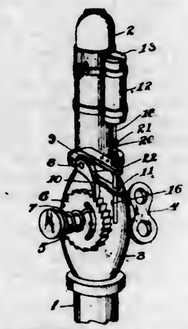
1. The process of treating by-product liquors from sulfite wood pulp plants consisting in adding sulfuric acid, recovering part of the sulfur dioxid thus set free by evaporation, converting the remaining sulfur dioxid into sulfuric acid, and neutralizing the traces of sulfuric acid by the addition of an alkali.

2. The process of treating by-product liquors from wood sulfite plants consisting in adding sulfuric acid, recovering part of the sulfur dioxid, converting the remaining traces of sulfur dioxid into sulfuric acid, neutralizing the sulfuric acid, allowing to settle and decanting, fermenting the decanted liquor, and distilling off the alcohol.

3. The process of treating by-product liquors from wood-sulfite plants consisting in adding sulfuric acid, evaporating off part of the sulfur dioxid, adding a peroxid material to convert the remaining traces of sulfur dioxid into sulfuric acid, neutralizing the sulfuric acid by the addition of an alkali, allowing to settle and decanting, fermenting the decanted liquor, and distilling off the alcohol.

4. The process of treating by-product liquors from wood-sulfite plants consisting in adding sulfuric acid to convert the sulfite into sulfur dioxid, evaporating off the sulfur dioxid under vacuum, traces of sulfur dioxid and sulfuric acid remaining, treating the remaining traces of sulfur dioxid with an oxidizing agent to convert such sulfur dioxid to sulfuric acid, neutralizing the sulfuric acid by the addition of lime, allowing to settle and decanting, fermenting the decanted liquor, and distilling off the alcohol.

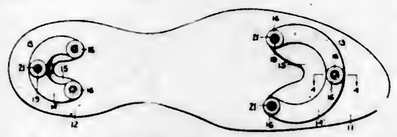
1,155,257. AUTOMATIC GAS CUT-OFF. ALBERT W. MARCILLE, Thorold, Ontario, Canada. Filed Oct. 9, 1914. Serial No. 865,931. (Cl. 67—117.)



A gas extinguisher including a controlling valve, a dog for locking the valve in open position, an expansible liquid holding chamber arranged in proximity to the gas burner, a piston in said chamber, a rod projecting from the piston, a projection extending from the dog and terminally formed with an eye to permit the passage of the rod therethrough, said rod below the eye being formed with a tooth, the eye being elongated to permit lateral play of the rod to disengage the tooth and projection in the initial setting of the device.

1,155,258. TOE OR HEEL PLATE FOR SHOES. GEORGE CLINTON MERKIM, New York, N. Y. Filed Feb. 6, 1915. Serial No. 6,477. (Cl. 36—59.)

1. The combination with a shoe sole, of a plate therefor comprising a body of homogeneous cushioning material, said body including a flat portion having a reinforcing rib and a plurality of calks extending downwardly from said rib and integral therewith, each calk having a vertical hole therethrough, and a series of rigid fastening devices extending from the sole downwardly through said calk hole for securing the plate rigidly to the shoe sole.



2. The herein described toe or heel plate for shoes, the same comprising a flat portion having a marginal reinforcing rim and a plurality of cylindrical calks extending downwardly therefrom and integral therewith, each calk having a central vertical countersunk hole therethrough, substantially as set forth.

1,155,259. TARE-BEAM FOR SCALES. EMIL MENN and JOHN L. JACKSON, Hamilton, Ohio, assignors, by mesne assignments, to The Computing Scale Company, Dayton, Ohio, a Corporation. Filed Dec. 11, 1913. Serial No. 805,919. (Cl. 73—30.)



1. A beam for weighing scales having thereon a series of graduation marks, and upper and lower series of indicating numerals associated with said series of graduation marks, a poise on said beam for each series of indicating numerals, said poises being arranged so that their adjacent edges will constitute their reading lines, each poise having a recess in the reading edge, the recess in one poise registering with the upper series of indicating marks only and the recess in the other poise registering with the lower series of indicating marks only.

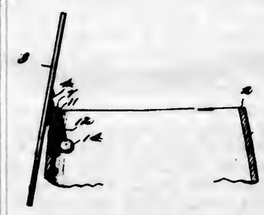
2. A beam for weighing scales having thereon a series of graduation marks and a plurality of series of indicating numerals associated with said series of graduation marks, a poise on said beam for each series of said indicating numerals, said poise being arranged so that their adjacent edges will constitute their reading lines, and a projection from the reading line of one of said poises for concealing the indicating numeral in the other series of indicating numerals which is located at the reading line of such poise.

1,155,260. SANITARY SEAT-COVER. HENRY F. W. MEYER, Washington, D. C. Filed Sept. 13, 1913. Serial No. 789,632. (Cl. 4—18.)



As a new article of manufacture, a cover for toilet seats comprising a thin sheet of paper of oval contour having an oblong central opening, the material being accordion folded around two sides and one end on predetermined score lines, the opposite end of the material being folded on predetermined score lines and forming a housing receiving said sides and first end in folded position, the device being adapted to assume a flat condition upon removal of the said sides and end from within the housing.

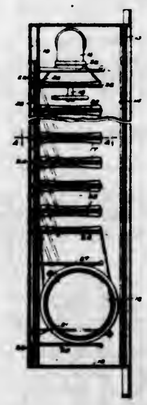
1,155,261. BARREL-LID. CLARENCE D. MITCHELL, Reed, Ky. Filed Sept. 9, 1914. Serial No. 860,866. (Cl. 217—81.)



1. A barrel cover having upon its underside a gravity catch swiveled within a plate connected to the underside of the lid, said catch having a bent portion, an inclined shank, a weight connected to said shank and adapted to swing the catch to engage the chime of a barrel when the lid is thrown back from any point around its periphery.

2. A barrel lid catch comprising a securing plate having a recess therein, a catch having a head mounted in the recess in said plate, said catch having a bend, an inclined member and a weight at the free end thereof.

1,155,262. HOSE-RACK. OTTO D. MOCK, Louisville, Ky. Filed May 21, 1915. Serial No. 29,533. (Cl. 137—31.)



1. In a fire hose rack, the combination of a stationary member having a vertical series of slots, a slidable bar adjacent said slots, a series of fingers projecting through said slots and pivoted to said bar, means to hold the bar in a certain position causing the fingers to project in a horizontal position therefrom, and means acting upon the bar to move the same with relation to the fixed member allowing the hose to drop from the fingers after said holding means are withdrawn.

2. In a device of the nature set forth, the combination of a fixed member having a series of slots therein, a movable bar adjacent said slots, a series of fingers pivoted to said bar and projecting outwardly through said slots, a spring acting upon the bar tending to move it in one direction, and means acting in the other direction upon the bar against the force of said spring and normally locking the same in fixed position, causing the pivoted fingers to project in a horizontal position for normally supporting the hose thereon.

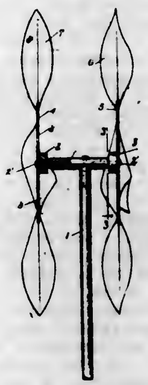
3. In a hose rack, the combination of a fixed member having a rigid finger projecting outwardly therefrom, a movable bar slidable along the fixed member and having adjacent one end a rigid member projecting parallel to and adjacent the first mentioned rigid member, means acting upon the bar tending to move it to cause its connected rigid member to move toward the first rigid member, a locking device arranged between said rigid members normally resisting such movement, and a series of hose supporting devices connected to one of the main members aforesaid and coöperating with the other of them to cause the devices to be maintained normally in horizontal position.

4. In a hose rack, the combination of a vertical stationary member, a movable bar adjacent the stationary member, a series of fingers pivoted to one of said first mentioned members and coöperating with the other to determine their holding position, a fixed finger secured to the stationary member, a foot piece secured to the slidable bar and arranged substantially parallel to the fixed finger, and means coöperating with the bar and its foot piece with respect to the fixed finger to determine the holding position of the pivoted fingers.

5. In a fire hose rack, the combination with a standpipe, a flexible hose secured thereto and a rigid nozzle connected to the other end of the hose, of a supporting device for the hose and nozzle comprising a rigid stationary member having fixed fingers projecting horizontally therefrom, the upper finger lying above the hose, a series of movable fingers coöperating with the vertical rigid member, means acting through the nozzle aforesaid and the other of said fixed fingers to lock the movable fingers in normal horizontal position to support the hose and uppermost movable finger gripping the hose between it and said upper stationary finger.

[Claim 6 not printed in the Gazette.]

1,155,263. WIND-WHEEL TOY. KWANZABURO NAITO, Atlantic City, N. J. Filed May 13, 1911. Serial No. 627,006. (Cl. 46—14.)

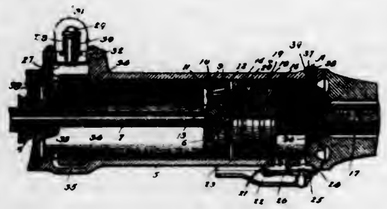


In a wind wheel toy, the combination of a pair of rotatable disks arranged one behind the other, means for setting said disks into rotation relatively to each other, one of said disks having colored elongated designs on its front face, with the long axes of said designs parallel with one another, and the other disk having a number of radially-extending openings therethrough, whereby when the said disks are in relative motion, different visual effects will be presented to the eye of an observer viewing the designs on one disk through the openings in the other.

1,155,264. PRESSURE DEVELOPING AND DRIVEN TOOL. ALEXANDER PALMROS, Syracuse, N. Y., assignor to The Pneumelectric Machine Company, Syracuse, N. Y., a Corporation of New York. Filed June 17, 1910. Serial No. 567,441. (Cl. 125—20.)

1. The combination with a single cylinder closed at its rear end, of a fluid pressure driven piston and a fluid

pressure creating piston therein, a port formed through the fluid pressure creating piston and a spring actuated valve therein controlling said port for canducting the fluid from the space between said pistons to the space at the rear of the fluid pressure creating piston during the complete forward stroke of the fluid pressure creating piston and means for delivering the fluid from said last-named space to the space between the pistons when the fluid pressure creating piston reaches a predetermined point in its travel.



2. The combination with a single cylinder closed at both ends, of a pressure actuated piston therein, a pressure creating piston therein, both pistons being in alinement, means in said pressure creating piston for permitting escape of air from the space between said pistons to the space in the rear of the pressure creating piston during the complete forward stroke of said pressure creating piston, a flap valve in said pressure creating piston controlling said means, and means for delivering the air from the last named space to the space between said pistons when the pressure creating piston reaches a predetermined point in its travel.

3. The combination with a single cylinder closed at both ends, of a pressure driven piston and a pressure creating piston therein, both pistons in alinement and of the same diameter, a port formed through the pressure creating piston and a spring actuated valve therein controlling said port for conducting the air from the space between said pistons to the space at the rear of the pressure creating piston during the complete forward stroke of the pressure creating piston, and means for delivering the air from said last named space to the space between the pistons, when the pressure creating piston reaches a predetermined point in its travel.

4. The combination with a single cylinder closed at both ends, of a pressure driven piston and a pressure creating piston therein, a port formed through the pressure creating piston and a spring actuated valve therein controlling said port for conducting the air from the space between said pistons, to the space at the rear of the pressure creating piston during the complete forward stroke of the pressure creating piston, means for delivering the air from said last named space to the space between the pistons, when the pressure creating piston reaches a predetermined point in its travel, and an inwardly opening valve adapted to supply air to the space in the rear of the pressure creating piston when said pressure falls below atmospheric.

5. The combination with a single cylinder closed at both ends, of a pressure driven piston and a pressure creating piston therein, a port formed through the pressure creating piston and a spring actuated valve controlling said port for conducting the air from the space between said pistons to the space at the rear of the pressure creating piston during the complete forward stroke of the pressure creating piston, means for delivering air from said last named space to a space between the pistons, when the pressure creating piston reaches a predetermined point in its travel, an inwardly opening valve adapted to supply atmospheric air to said air delivering means when said pressure falls below atmospheric during the forward stroke of said pressure creating piston, said inwardly opening valve being situated at one end of the cylinder so as to communicate directly with the surrounding atmosphere.

1,155,265. VEHICLE-SPRING. WARREN J. PARSONS, Huntington, W. Va. Filed Jan. 12, 1915. Serial No. 1,831. (Cl. 21—50.)



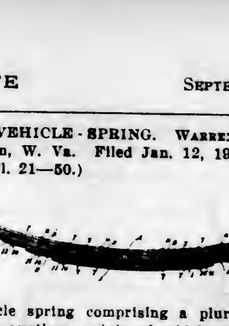
1. A vehicle spring comprising a plurality of leaves overlying one another, certain of said leaves being formed with longitudinally extending slots, and anti-friction bodies within said slots bearing against the faces of adjacent leaves and acting to hold the leaves of the spring spaced apart and eliminate friction therebetween.

2. A vehicle spring comprising a plurality of leaves overlying one another, anti-friction bodies interposed between the confronting faces of said leaves and arranged in rows, the bodies in each row extending longitudinally of the spring and alternating with the bodies in an adjoining row.

3. A vehicle spring comprising a plurality of leaves overlying one another, anti-friction bodies interposed between the confronting faces of said leaves and arranged in rows, the bodies in each row extending logitudinally of the spring and alternating with the bodies in an adjoining row, the lower surfaces of the leaves of the spring coacting with said bodies being formed with cups to receive the bodies.

4. A vehicle spring comprising a plurality of leaves overlying one another, certain of said leaves being formed with longitudinally extending slots, balls within said slots bearing against the faces of adjacent leaves and acting to hold the leaves of the spring spaced apart and eliminate friction therebetween, the balls in the slots in each leaf alternating with those in the slots of adjoining leaves so that the leaves will be held in spaced relation and the strain on the spring distributed evenly thereover.

1,155,266. FUEL-INJECTING DEVICE. CLEMENS PASEL, Heidhausen, near Werden, Germany. Filed Oct. 24, 1912. Serial No. 727,610. (Cl. 123—131.)



1. In a fuel injecting device for internal combustion engines having an atomizer, means for adjusting the resistance of the fuel passing through the atomizer in accordance with different loads of the engine.

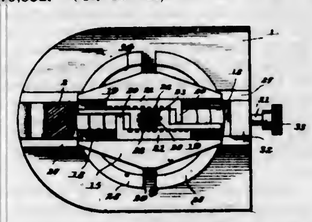
2. In a fuel injecting device for internal combustion engines having a valve cage with a nozzle chamber, a valve spindle seated therein, and air and fuel passages opening into said nozzle chamber, an atomizer forward of said passage openings, means for adjusting the resistance of the fuel passing through the atomizer in accordance with different loads of the engine, said means consisting of two or more branch fuel passages, opening into the nozzle chamber one above the other at different distances from the seat of the needle valve, a device allowing the fuel to enter into the nozzle chamber through one or

the other of these branch fuel-passages, thereby lengthening or shortening the way of the fuel through the atomizer.

3. In a fuel injecting device for internal combustion engines having a valve cage with a nozzle chamber, a valve spindle seated therein, and air and fuel passages opening into said nozzle chamber, an atomizer forward of said passage openings comprising a plurality of plates arranged around said spindle and spaces between said plates, a plurality of holes in said plates at different radial distances from the axis of the atomizer, a main fuel passage, a branch fuel passage opening into said chamber and a second branch fuel passage opening into one of said spaces between the plates, a recess connecting said main and said branch fuel passages and a plunger in said recess adapted to open one or the other of said branch fuel passages.

4. In a fuel injecting device for internal combustion engines having a valve cage with a nozzle chamber, a valve spindle seated therein and air and fuel passages opening into said nozzle chamber, an atomizer forward of said passage openings comprising a plurality of plates arranged around said spindle and spaces between said plates, a plurality of holes in said plates at different radial distances from the axis of the atomizer, a main fuel passage, a branch fuel passage opening into said chamber and a second branch fuel passage opening into one of said spaces between the plates, a recess connecting said main and said branch fuel passages and a plunger in said recess adapted to open one or the other of said branch passages; whereby the fuel will be given a long way with a great load of the engine and a short way with a small load of the engine.

1,155,267. CAN-CUTTING MACHINE. OLLIE U. PRESCOTT, Waterville, Wash. Filed Dec. 29, 1914. Serial No. 879,552. (Cl. 30—3.)



In a can cutting machine the combination of a supporting element having a threaded opening, a screw shaft engaging said threaded opening and means to turn the screw shaft, a cutter head attached to one end of the screw shaft for movement therewith, knives having rack arms arranged for movement in said cutter head toward and from each other, and an adjusting pinion mounted for rotation on an unthreaded portion of the screw shaft and engaging said rack arms.

1,155,268. KEY. CARL W. PETTIGROVE, Tremont, Me. Filed June 18, 1915. Serial No. 34,920. (Cl. 81—122.)



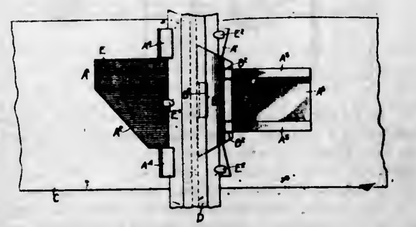
In a clock key, a stem, a slotted housing mounted for rotation upon the stem, a recessed flange formed on said housing, means for preventing the rotation of the housing upon the stem including a pivoted pawl, a spring disposed beneath said flange and having one end thereof slidably engaged with the pawl, and an arm upon said spring extending in the housing whereby the free end of the spring may be slid upon the pawl to cause the above mentioned means to prevent the rotation of the housing upon the stem in one direction.

1,155,269. GLIDE-CASTER. ANDREW T. PETERSEN, Colorado Springs, Colo., assignor of one-half to Thomas J. Fair, Colorado Springs, Colo. Filed June 3, 1914. Serial No. 842,718. (Cl. 155—33.)



The combination with a caster shank, of a holder comprising a tubiform member for receiving the shank and having a contracted inner end to form a bearing shoulder for the shank at one point thereof, an out-turned annular flange formed at the outer end of the said member and forming a bearing for the shank at another point thereof, a resilient bonnet integral with the member and forming a plurality of spaced outwardly divergent resilient limbs for frictionally securing the holder in an article of furniture, and means at the free end of the limbs to engage with the flange on the member and also with the article of furniture for reinforcing the flange and also for limiting the inward movement of the holder in the said furniture.

1,155,270. COMBINED RAIL-BRACE AND TIE-PLATE. JOHN O. PHELPS, New York, N. Y. Filed Nov. 3, 1914. Serial No. 870,037. (Cl. 238—2.)



1. A rail fastener, comprising a tie plate for a rail to rest on and provided with retaining lugs for engagement with one side of the base of the rail, the said tie plate having a rising abutment for the outer side of the base of the rail to abut against, the inner edge of the abutment extending upwardly and outwardly opposite the rail web and approximately to the same height thereof, and a rail brace having a face shaped to fit the outer side of the rail, the back of the base being beveled upwardly and outwardly and the said brace being wedged in between the outer side of the rail and the said inner edge of the abutment, the said brace and abutment being interlocked to hold the brace against movement in the direction of the length of the rail.

2. A rail fastener, comprising a tie plate for a rail to rest on and provided with retaining lugs for engagement with one side of the base of the rail, the said tie plate having spaced upright abutment flanges, and a rail brace having its face shaped to conform to the side of the rail, the back of the said rail brace having grooves fitting the

said abutment flanges to hold the brace against movement in the direction of the length of the rail and to prevent the rail from spreading.

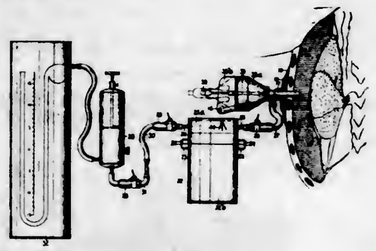
3. A rail fastener, comprising a tie plate for a rail to rest on and provided with retaining lugs for engagement with one side of the base of the rail, the said tie plate having spaced upright abutment flanges, the inner edges of which slant upward and outward, and a rail brace having its face shaped to conform to the side of the rail, the back of the said rail brace resting against the sloping inner edges of the said flanges.

4. A rail fastener, comprising a tie plate for a rail to rest on and provided with retaining lugs for engagement with one side of the base of the rail, the said tie plate having spaced upright abutment flanges, the inner edges of which slant upward and outward, and a rail brace having its face shaped to fit the side of the rail and having its back provided with grooves engaging the said inner edges of the abutment flanges.

5. A rail fastener, comprising a tie plate for a rail to rest on and provided with retaining lugs for engagement with one side of the base of the rail, the said tie plate having spaced upright abutment flanges, the inner edges of which slant upward and outward and the lower ends of the said inner edges being adapted to engage the other side of the rail brace, and a rail brace having its face fitting the outer side of the rail, the back of the said rail brace being provided with grooves fitting the slanting inner edges of the said abutment flanges.

[Claims 6 to 9 not printed in the Gazette.]

1,155,271. THERAPEUTIC APPARATUS. HEAMAN B. PHILIPS, New York, N. Y., assignor to Ralph S. Philips, New York, N. Y. Filed Jan. 22, 1915. Serial No. 3,713. (Cl. 128—28.)



1. In an apparatus of the character set forth, the combination of a cannula, a drainage receptacle connected to one side thereof, means to hold the cannula in draining connection with the patient, and means to produce negative atmospheric pressure in said receptacle and cannula.

2. The herein described therapeutic apparatus comprising, in combination, a cannula having a straight longitudinal bore and a lateral nipple extending therefrom, a receptacle connected to said nipple, means to hold the cannula in draining position, and means to close the outer end of said bore.

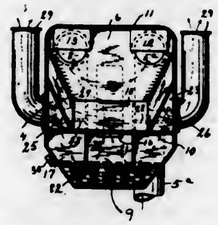
3. In a device of the kind set forth, the combination of a cup having a tubular neck, a cannula extending through said neck and cup, said cannula having a straight longitudinal bore, a trocar adapted to extend into and through said bore, means to grip the cannula at any desired depth in said cup neck, an airtight drainage receptacle in communication with the cannula bore, means to produce a negative atmospheric pressure in said receptacle and cannula, and means to withdraw the trocar and close the outer end of the cannula without disturbing the aforesaid negative pressure in the receptacle.

4. In therapeutic apparatus of the character set forth, the combination of a cannula having a nipple connected therewith, means to hold the cannula in definite position at any desired depth, an airtight receptacle connected in said nipple, and an indicator serving to show whether or not the passageway through the cannula to the receptacle is open.

5. In therapeutic apparatus of the character set forth, the combination of a cannula, means to hold the cannula in drainage position, a drainage receptacle, a tubular connection between the receptacle and the cannula, and an indicator carried by the receptacle to show whether or not the passageway through the cannula to the receptacle is open.

[Claims 6 to 11 not printed in the Gazette.]

1,155,272. DUST-COLLECTOR FOR PNEUMATIC STREET-SWEEPING MACHINES. JOHN R. POLLOCK, Long Beach, Cal. Filed Aug. 26, 1914. Serial No. 858,619. (Cl. 83—47.)



1. In a pneumatic street sweeping machine means to purify the air of dirt and dust comprising a body having a dirt chamber in the upper portion thereof, said chamber having an inlet port and an outlet port at the front end thereof and a bottom sloping downwardly and rearwardly and a door forming the rear end thereof; air channels at the sides of said dirt chamber; a water chamber below the dirt chamber having a door forming the rear end thereof and ports in the top wall at the front end thereof opening into the air channels; longitudinal deflectors depending from the top wall of said water chamber and projecting into the water when said machine is charged for use; air delivery pipes connected to the air channels near the rear ends of said channels; in combination with means to draw air out of the front end of the dirt chamber and deliver it into the front end of the water chamber between the deflectors.

2. In a pneumatic street sweeping machine, a dirt chamber having a port in the front end thereof; a water chamber below the dirt chamber, said chamber having a door forming the rear end thereof; a connection between said chambers; air channels at the sides of the dirt chamber having ports opening into the front end of the water chamber; discharge pipes connected to said air channels near the rear ends thereof; and deflectors depending from the top wall of the water chamber and projecting downwardly into the water when the machine is ready for use; in combination with means to cause the travel of air through said chambers.

1,155,273. APPARATUS FOR PLAYING HOPPING GAMES. FRITZ QUADE, Buckow, Germany. Filed Aug. 5, 1914. Serial No. 855,288. (Cl. 46—65.)

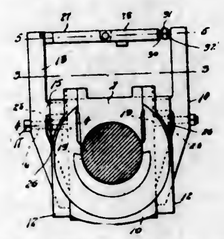


1. In apparatus for playing hopping or jumping games, a plurality of mats, each distinctively marked and relatively placed for the players to hop from one mat on to another.

2. Apparatus for playing a jumping game comprising a plurality of thin plates having beveled edges, distinctive marks on said plates and means for preventing said plates from slipping on the ground.

3. Apparatus for playing a jumping game comprising a plurality of thin plates having beveled edges, distinctive marks on said plates, and pegs on the underside of each plate adapted to hold it stationary on the ground.

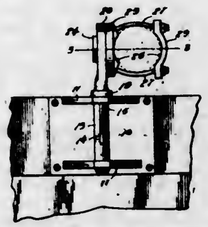
1,155,274. TOOL FOR REMOVING DRIVING-BOX CELLARS. WILLIAM QUEITSCH, Tacoma, Wash. Filed Sept. 22, 1914. Serial No. 863,052. (Cl. 29—84.)



1. A device for removing the cellar of a driving box, comprising side members, spreading clamps carried by said side members and adapted for engagement with the flanges of a box, and a folding adjustable spreading device carried by one of the side members and pivotally engaging the other side member for forcing said members apart.

2. A device for removing the cellar of a driving box, comprising side members, adjustable bolts carried by said side members, expanding clamps carried by said bolts, and a spreading element pivoted to one of said side members said spreading element including a plurality of hinged sections, and means disposed in one of said sections for engagement with the other side member, for forcing the side members apart so as to release the cellar from the box.

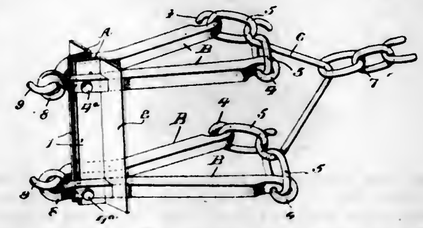
1,155,275. OAR-LOCK. CHARLES L. RATHBONE, Bozrah, Conn. Filed Mar. 20, 1914. Serial No. 826,085. (Cl. 9—26.)



An oar lock comprising a bracket adapted for connection to the side of the boat, a spindle rotatably mounted in said bracket, an oar holding device rotatably mounted on the upper end of said spindle and having its axis of rotation disposed at right angles to the axis of rotation of the spindle, said device including an inner head bearing directly against the upper end of the spindle, spaced arms carried by the head, a securing plate having the terminals thereof detachably engaged on the free ends of said arms, and nuts threaded on the free ends of said arms for preventing disengagement of the securing plate.

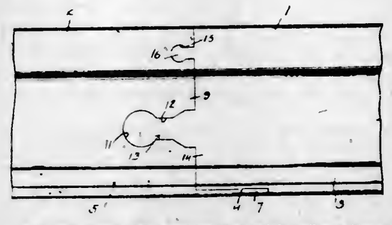
1,155,276. WIRE-FENCE CLAMP. WILLIAM G. ROBINSON, Fairfield, Iowa. Filed Apr. 14, 1915. Serial No. 21,376. (Cl. 254—83.)

A clamp comprising similar jaws, each consisting of an angle bar, the jaws being arranged with two of their wings parallel and the remaining two wings extending outwardly in opposite directions and formed near their opposite ends with openings, a pair of arms for each jaw passing through the openings of the outer wings and touching the outer faces of the parallel wings and attached thereto, said arms projecting beyond the jaws in opposite directions to unequal distances to provide long and short



ends, the short ends of the arms attached to one jaw terminating in eyes and the short ends of the other arms terminating in hooks to engage the eyes, and the long ends of the arms being oppositely inclined, links attached to the extremities of the long ends of the arms and arranged to converge and a connection to the converging ends of the links and adapted when under tension to press the jaws together.

1,155,277. RAIL-JOINT. JOE RONCEVICK, Park City, Utah. Filed Jan. 2, 1915. Serial No. 143. (Cl. 239—8.)



1. In a rail joint the combination with coöperating rails, one of the rails being provided with key hole openings formed in the web and ball respectively of such rail, and keys carried by and projecting beyond the ends of the other rail and arranged to engage the said key hole openings.

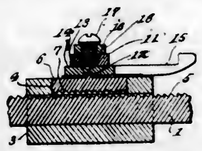
2. The combination with coöperating rails provided at their bottom flanges with overlapping interlocking projections, one of the rails being provided in its web and ball respectively with the key hole openings and keys projecting from the web and ball of the other rail and arranged in planes at right angles to each other and engaging the said key hole openings.

3. The combination with rails of a joint including bases, webs and balls, of projections carried by the bases of the rails and arranged to overlap, the balls and webs of the rails arranged to engage each other when the projections are overlapped, one of said rails having key hole openings therein, keys carried by the other of said rails and arranged to engage into said key hole openings, said key hole openings being disposed in the web and ball respectively of rail, said opening in the web opening transversely relative thereto, said opening in the ball opening on one side of said ball.

1,155,278. WRENCH. FRANK E. RUSH, Sullivan, Ind. Filed June 23, 1915. Serial No. 35,845. (Cl. 81—150.)

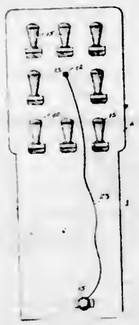
In a wrench, the combination with a shank having a fixed jaw, of a movable jaw slidably mounted upon the shank, said movable jaw having a substantially rectangular opening communicating with the shank, a rectangular block filling and arranged for lateral movement through

the opening, said block having an inner friction face, a spring secured to the block and extending laterally thereof, the extension of the spring being received in depressions in the movable jaw, a lug arranged centrally of the block upon its outer face, a bar straddling the block and its spring and secured to the movable jaw, said bar having a central reduced portion, a lever having its head arranged within the said reduced portion of the bar, the head of



said lever having a kerf normally receiving the lug of the friction block, an adjustable means contacting with the head of said lever for normally retaining its kerf in alinement to receive the said lug, said lever adapted to force the block against the compression of the spring to bring its friction surface into contact with the shank of the wrench when the lever is swung to bring the lug out of its kerf and its head in contact with said lug.

1,155,279. RUBBER-STAMP BOARD. JOHN E. RYMER, Charleston, S. C., assignor to Frank F. Herndon, Charleston, S. C. Filed Jan. 28, 1915. Serial No. 4,954. (Cl. 101—188.)

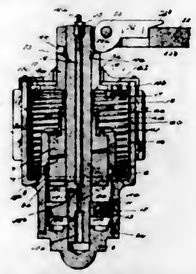


1. A rubber stamp board having a plurality of apertures therein, a plurality of cords connected with each other and extending through said apertures, stamps connected with the ends of said cords outside said board, and a spring controlled movable member connected with said cords.

2. A stamp board comprising a casing having apertures in its front wall, a bar slidably mounted in said casing, coiled springs connecting said bar with said casing, eyes carried by said bar, cords slidably engaged with said eyes and with each other, said cords extending through the apertures in the board of said casing, and stamps connected with the extended ends of said cords.

1,155,280. DOOR-CHECK. JOHN C. SCHMIDT, Chicago, Ill. Filed Dec. 20, 1913. Serial No. 807,805. (Cl. 16—88.)

1. In a door check and closer, a casing having a spring compartment and a liquid compartment, a cap for said spring compartment having a central opening therein, a spring disk having a flange therein adapted to extend through and having its bearing in the opening in said cap, a spring within said spring compartment secured respectively to said compartment and said disk, a rotatable and reciprocable stem journaled centrally of said spring cap and extending to and through said fluid chamber, a cap adapted to close said fluid chamber having a central aperture therein into which the lower end of said stem extends and which is adapted to form a bearing for the movement thereof, a spring actuated collar surrounding said stem for separating said liquid chamber from said spring chamber, a cam faced disk arranged in said liquid chamber and around said stem and through which said stem is adapted to reciprocate, a second cam faced disk fixedly arranged on said stem within the liquid compartment and adapted to coact with said first mentioned cam, a piston arranged on said stem within said liquid compartment having a passageway therethrough and a valve in said passageway adapted to close same against the passage of liquid upwardly therethrough, said plunger stem having a passageway therein opening respectively above and below said piston, a needle valve extending longitudinally of said stem and adapted to control the size of said passageway.



2. In a door check and closer, a casing having a spring compartment and a liquid compartment, a cap for said spring compartment having a central opening therein, a spring disk having a flange therein adapted to extend through and having its bearing in the opening in said cap, a spring within said spring compartment secured respectively to said compartment and said disk, a rotatable and reciprocable stem journaled centrally of said spring cap and extending to and through said fluid chamber, a cap adapted to close said fluid chamber having a central aperture therein into which the lower end of said stem extends and which is adapted to form a bearing for the movement thereof, a cam faced disk arranged in said liquid chamber and around said stem and through which said stem is adapted to reciprocate, a second cam faced disk fixedly arranged on said stem within the liquid compartment and adapted to coact with said first mentioned cam, a piston arranged on said stem within said liquid compartment, said plunger stem having a passageway therein opening respectively above and below said piston, a needle valve extending longitudinally of said stem and adapted to control the size of said passageway.

3. In a door check and closer, a casing having a spring compartment and a liquid compartment, a cap for said spring compartment having a central opening therein, a spring disk having a flange therein adapted to extend through and having its bearing in the opening in said cap, a spring within said spring compartment secured respectively to said compartment and said disk, a rotatable and reciprocable stem journaled centrally of said spring cap and extending to and through said fluid chamber, a cap adapted to close said fluid chamber having a central aperture therein into which the lower end of said stem extends and which is adapted to form a bearing for the movement thereof, a cam faced disk arranged in said liquid chamber and around said stem and through which said stem is adapted to reciprocate, a second cam faced disk fixedly arranged on said stem within the liquid compartment and adapted to coact with said first mentioned cam, a piston arranged on said stem within said liquid compartment, said plunger stem having a passageway therein opening respectively above and below said piston, a needle valve extending longitudinally of said stem and adapted to control the size of said passageway, and means for normally holding the above mentioned spring under partial compression.

1,155,281. PLATFORM FOR SHIRT-BOXES, &c. EDWIN J. SCHOETTLE, Philadelphia, Pa. Filed Feb. 18, 1915. Serial No. 9,083. (Cl. 206—7.)

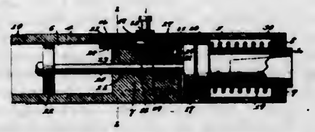


1. The combination in a box for holding shirts and like articles, of a platform having a flange to raise it above the bottom of the box and having an opening at one end to receive a neck band of a shirt, the said platform being less in length than the box so that the cuff of a shirt, or like article, packed in the box, will extend over the platform.

2. The combination in a box, of a platform less in length than the box and having an opening at one end, said platform having a flange to raise it above the bottom of the box and having a hump at the center so that the center of the platform will be at a greater height than the ends.

3. The combination in a box, of a platform mounted therein, said platform being less in length than the box and having an opening at one end to receive the collar band of a shirt, the body portion of the platform having a flange and being slotted; and a blank forming a hump of the platform and having tongues entering the slots so that when the section is mounted on the platform it is bowed in order to raise it above the level of the platform.

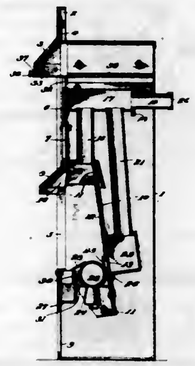
1,155,282. PNEUMATIC HAMMER. MACONIUS SHANER, Bethlehem, Pa. Filed Aug. 27, 1914. Serial No. 858,828. (Cl. 121—20.)



A device of the class described, comprising a barrel provided with a cylinder in each end and with a centrally arranged inlet port, a partition arranged centrally of said barrel and provided with an outlet port adjacent each end thereof, a piston in each cylinder, a rod connecting said pistons, a supplemental piston in one of said cylinders adapted to be outwardly actuated by the corresponding one of said joined pistons, a spring for moving said supplemental piston inwardly, a tool carrier connected with said supplemental piston, and a valve controlling said ports and slidable in said partition by the impact of said joined pistons thereon, alternately, said valve comprising a cylindrical bar having three transverse grooves in one side thereof, the outer ones of which are adapted for alternate communication with the corresponding piston chambers and exhaust ports, and forming guiding flanges therebetween, and said bar having longitudinally arranged grooves from each end thereof to a predetermined point at each side of the center of said bar to form a partition between the two series of end grooves, and adapted to place the inlet port in communication with the two piston chambers, alternately.

1,155,283. GAS-HEATER. GEORGE E. SHARPE, Steubenville, Ohio. Filed Feb. 25, 1915. Serial No. 10,620. (Cl. 126—88.)

1. In a heater, the combination of a deflector plate having an opening therethrough near its lower end, a heat chamber at the upper end of said plate in advance of the same, a drum above and spaced from said heat chamber and in direct communication therewith, a box on the back of said plate covering the opening therein, flues back of the deflector plate connecting said box with the drum, and a burner in advance of the deflector plate adjacent the opening therein.



2. In a heater, the combination of a deflector plate having an opening therethrough near its lower end, a drum above the deflector plate in communication with the space on front of said plate, a box on the back of the plate covering the opening therethrough and in communication with the drum, a guard carried by said deflector plate and offset therefrom to project over the opening therethrough, and a burner below and in advance of said guard.

3. In a heater, the combination of a housing, a hood projecting from the front end of said housing, a grille across the front of said housing below said hood, heating members supported within the housing in rear of said grille and below said hood and spaced from the housing, and a damper slidably supported by said housing below the top of the same and at the lower edge of the said hood.

4. The combination of a housing, a hood secured to and projecting from the upper end of said housing, heating members supported within the housing below the said hood, guides upon the side walls of the housing, a slide mounted on said guides and projecting under and forward of the said hood, and keepers on the side walls of the housing adjacent and above said guides.

5. The combination of a housing, a hood on the front of the housing at the upper end of the same, heating members within the housing below and spaced from the hood, and a movable shield interposed between the hood and the heating members and arranged to be extended in front of the hood.

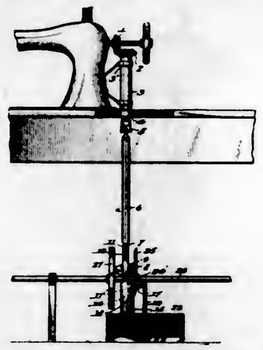
1,155,284. MECHANISM FOR TRANSMITTING POWER. SAMUEL T. SIMMONS, Columbus, Ohio. Filed June 12, 1915. Serial No. 33,737. (Cl. 74—26.)

1. In a mechanism for transmitting power, the combination of a drive disk, a shaft, a wheel adjustably mounted thereon, a base, supporting means for said shaft pivotally connected to the base, a lever fulcrumed on the base independent of the supporting means, and actuating means for forcing the lever against the supporting means for engaging said wheel with said drive disk.

2. In a mechanism for transmitting power, the combination of a drive disk, a shaft, a wheel adjustably mounted thereon, a base, supporting means for said shaft pivotally connected to the base, a lever fulcrumed on the base independent of the supporting means, a link connecting the lever with a treadle rod, and a treadle for actuating said lever against the supporting means for engaging said wheel with said disk.

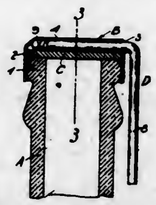
3. In a mechanism for transmitting power, the combination of a drive disk, a shaft, a wheel adjustably mounted thereon, a base, supporting means for said shaft pivotally connected to the base, a lever fulcrumed on the base, actuating means for forcing the lever against the sup-

porting means for engaging said wheel with said disk, and means for disengaging the wheel from the disk upon the release of the actuating means.



4. In a mechanism for transmitting power, the combination of a drive disk, a shaft, a wheel adjustably mounted thereon, a base, supporting means for said shaft pivotally connected to the base, a lever fulcrumed on the base, and actuating means for forcing the lever against the supporting means for engaging said wheel with said drive disk, a spring connected to the base and to the supporting means for oscillating the support to its normal position upon the release of the actuating means and a brake in the path of the supporting means against which it is normally held by the spring.

1,155,285. BOTTLE-CAP AND OPENER. FREDERICK G. SMITH, New Bedford, Mass. Filed Oct. 6, 1914. Serial No. 865,279. (Cl. 215—53.)



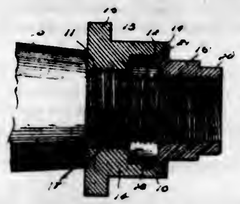
1. The combination of a bottle cap having an opening at one side and formed with a channel in its top extending from said opening, said channel having at its inner end an offset and a single-piece cap opener having an inner and an outer arm, the inner arm extending into the opening and lying in the channel and provided with a pry finger at its inner end lying in the offset of the channel, the outer arm serving as a handle for operating the opener.

2. The combination of a container, a sealing cap therefor, said cap having an opening at one side and a channel extending inwardly from the opening and terminating in a bend, a rotary element extending into the cap through the said opening and lying in the channel and having a pry finger in the offset of the latter, and means on the outer end of the element for turning the same for prying open the cap.

3. A bottle sealing cap opener comprising a wire bent into two members at right-angles to each other and one member having its extremity bent into a finger disposed in a plane at substantially right-angles to a plane in which the said members lie.

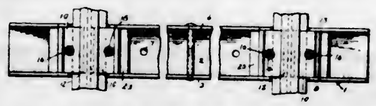
1,155,286. NUT-LOCK. ALBERT SPATZ, Elsah, Ill. Filed Nov. 8, 1912. Serial No. 730,265. (Cl. 151—16.)

A device of the class described, a spindle having a threaded extension, a nut threadedly mounted on the spindle and having an angular portion hollowed out to form a bore greater in diameter than said extension, a second nut threaded upon said extension at a point in advance of the first nut and having its lower extremity formed with an annular flange, said flange adapted to fit snugly in the bore of the first mentioned nut and to be



adjusted longitudinally therein, and a ring secured to the outer face of the first mentioned nut and adapted to engage the flange formed on the lower extremity of the second mentioned nut upon adjustment of the latter to a distance equaling the length of the bore of the first mentioned nut and preventing any accidental loss to said second mentioned nut.

1,155,287. RAILROAD-TIE. EDGAR H. SPIERS, Lagrange, Ga. Filed Feb. 27, 1915. Serial No. 11,018. (Cl. 238—5.)



A railroad tie of the character described comprising a base, flanges formed on the base, said flanges being notched near each end in their upper edges, partition walls extending between the flanges to form chambers, cushioning elements within the chambers, rail clamps pivoted between the upper edges of the flanges, clamping screws extending through the base and through the cushioning members, a wear plate supported on the cushioning members, the clamping screws extending through the wear plate, flange and web engaging flanges on the rail clamps and nuts cooperating with the clamping screws to hold the rail clamps in engagement with the railroad rail.

1,155,288. HORSESHOE-SPREADER. ADONIJAH STARK, Joplin, Mo. Filed July 3, 1915. Serial No. 38,010. (Cl. 168—47.)

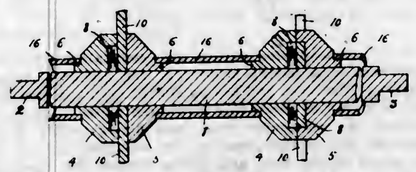


1. A horseshoe spreader comprising, a pair of handle members, shoe engaging portions formed on the handle members, teeth formed on the handle members and below the shoe engaging members, and adapted to interengage with each other, and means for pivotally connecting the handles to each other.

2. A horseshoe spreader comprising a pair of handle members, shoe engaging portions formed on the handle members, means for pivotally connecting the handles to each other, and removable caps associated with the said shoe engaging portion.

3. A horseshoe spreader comprising a pair of handle members, shoe-engaging portions formed on the handle members, means for pivotally connecting the handles to each other, caps removably associated with the shoe-engaging portions, and means extending through the caps and the shoe-engaging portions for holding the caps in position.

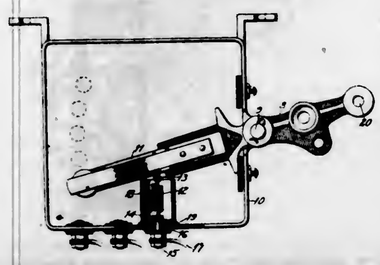
1,155,289. SOIL-CULTIVATING TOOL. MATT STROM and ERIC HOGLUND, Duluth, Minn. Filed Apr. 17, 1915. Serial No. 22,069. (Cl. 97—78.)



1. A soil cultivating tool comprising a rotatable shaft of rectangular cross-section, a plurality of hubs mounted upon the said shaft, said hubs composed of two similarly constructed abutting halves, the inner faces of the abutting halves having central depressed portions, and radial grooves connecting the depressed portions and the outer periphery of each half of the hub, cultivator blades having their inner ends of a size and shape to fit within the central depressed portion and their shank of a size to fit within the radial groove, and means engaging each half of the hubs for holding the cultivator blades between them.

2. A soil cultivating tool comprising a rotatable shaft of rectangular cross section, a plurality of hubs mounted upon the said shaft, said hubs composed of two similarly constructed abutting halves, the abutting faces of the said halves having central depressed portions and two oppositely arranged radial grooves of a depth equal to the depth of the central depressed portion and connecting the said portion and the outer periphery of the said halves, cultivator blades having their inner ends provided with a semi-circular hub portion adapted to fit within one-half of the depressed portion of the hub, and a shank of a size to fit within one of the radial grooves, the inner edge of the hub end of each blade having an opening of a size to fit around one half of the rectangular shaft, and means engaging each half of each hub to hold the hub ends of the blades within the central depressed portions of the hub, the parts arranged as and for the purpose described.

1,155,290. STARTING-BOX. MAX TAIGMAN, New York, N. Y. Filed July 6, 1914. Serial No. 849,178. (Cl. 200—14.)



1. A starting box, comprising a rocking switch lever; an electric current supply; a metal coiled spring electrically connecting said supply and said lever, said spring operating to normally retract said lever to its off position; and means for supporting said spring to prevent the same from falling in the event of its parting.

2. A starting box, comprising a rocking switch lever; an electric current supply; a metal coiled spring electrically connecting said supply and said lever, said spring operating to normally retract said lever to its off position; and a tubular inclosure for said spring to confine the same in the event of its parting.

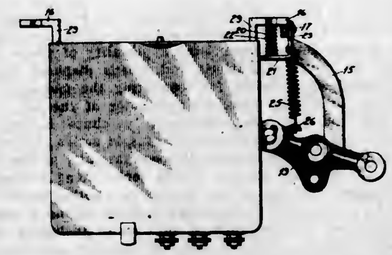
3. A starting box, comprising a rocking switch lever; an electric current supply; a metal coiled spring electrically connecting said supply and said lever, said spring operating to normally retract said lever to its off position; a metal cup permanently surrounding said spring to confine the same when broken; and means for insulating said cup from the surrounding members of said box.

4. A starting box, comprising a rocking switch lever; an electric current supply; a metal coiled spring electrically connecting said supply and said lever, said spring operating to normally retract said lever to its off position; means for supporting said spring to prevent the same from falling in the event of its parting; and means for locking said lever in fixed position consequent upon the breaking of said spring.

5. A starting box, comprising a rocking switch lever; an electric current supply; a metal coiled spring electrically connecting said supply and said lever, said spring operating to normally retract said lever to its off position; means for supporting said spring to prevent the same from falling in the event of its parting; and means for locking said lever in its raised position in said box consequent upon the breaking of said spring, to prevent the approximation of the broken fragments of said spring.

[Claims 6 to 9 not printed in the Gazette.]

1,155,291. STARTING-BOX. MAX TAIGMAN, New York, N. Y. Filed July 13, 1914. Serial No. 850,676. (Cl. 200—20.)



1. A starting box embodying a pivoted switch lever, said lever being movable to off position; a latch arm pivotally mounted adjacent said lever for engaging the same when at said off position when unrestrained; and power means operatively connecting said latch arm and said lever, for normally supporting said lever and arm and for restraining said arm from engaging said lever.

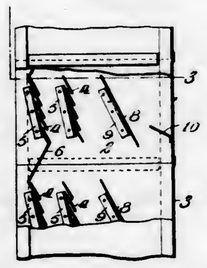
2. In combination, a starting box; a pivoted switch lever, a portion of said lever being within said box, and a portion of said lever extending outside of said box; a latch arm pivotally mounted on said box for engaging said lever when unrestrained; said arm having a hook at one end thereof and a bracket arm at the other end thereof; and a spring operatively connecting said lever and said bracket arm to rock said latch arm to position where said hook is removed from the path of said lever.

3. In combination, a starting box; a pivoted switch lever, a portion of said lever being within said box, and a portion of said lever extending outside of said box; a latch arm pivotally mounted on said box for engaging said lever when unrestrained; said arm having a hook at one end thereof and a bracket arm at the other end thereof; a spring operatively connecting said lever and said bracket arm to rock said latch arm to a position where said hook is removed from the path of said le-

ver; and means operatively connected with said latch arm for rocking the same to dispose the hook in the path of said lever.

4. In combination, a starting box; a pivoted switch lever, a portion of said lever being within said box, and a portion of said lever extending outside of said box; a latch arm pivotally mounted on said box for engaging said lever when unrestrained; said arm having a hook at one end thereof and a bracket arm at the other end thereof; a connecting spring operatively connecting said lever and said bracket arm to rock said latch arm to a position where said hook is removed from the path of said lever; and an auxiliary spring operatively engaging said latch arm to rock the same, for disposing the hook at the end thereof in the path of said lever when said connecting spring fails to support said lever.

1,155,292. ORE-SEPARATOR. EDWARD TORREY, Thetford Mines, Quebec, Canada. Filed Aug. 9, 1912. Serial No. 714,269. (Cl. 83—54.)



1. An ore separator comprising a chute having two or more rebound devices disposed laterally across the chute, each of such devices comprising a plurality of plates arranged in louver formation; and means disposed laterally beyond such devices for separating the material rebounding therefrom from the remainder of the ore.

2. An ore separator comprising a chute having a series of separating devices, each of said series including two or more rebound devices disposed laterally across the chute, the rebound devices of one series being arranged in staggered relation to the devices of another series.

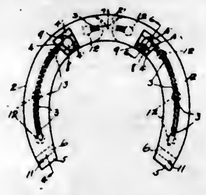
3. An ore separator comprising a chute having a series of separating devices, each of said series including two or more rebound devices disposed laterally across the chute and each comprising a plurality of plates arranged in louver formation, the rebounding devices of one series being arranged in staggered relation to the devices of another series.

4. An ore separator comprising a chute having two or more inclined rebound devices disposed laterally across the chute, each of such devices comprising a plurality of plates arranged in louver formation, and said devices being so spaced that each after the first receives part of the material rebounding from the laterally preceding device, and a take-off plate adjacent to the inclined rebound devices, such take-off plate being inclined at a greater angle to the vertical than the rebound devices.

5. An ore separator comprising a chute having a series of separating devices, each of said series including two or more rebound devices disposed laterally across the chute and each comprising a plurality of plates arranged in louver formation, and said devices being so spaced that each after the first receives part of the material rebounding from the laterally preceding device, the rebound devices of one series being arranged in staggered relation to the devices of another series; and a take-off plate adjacent to each laterally disposed series, for separating the material rebounding therefrom from the remainder of the ore.

[Claims 6 to 12 not printed in the Gazette.]

1,155,293. NON-SLIPPING DEVICE. WILLIAM H. WILSON, Jamesville, N. Y. Filed July 21, 1915. Serial No. 41,202. (Cl. 168—11.)

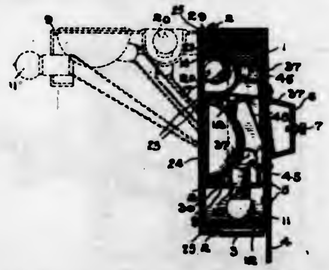


1. In a non-slipping device, the combination with the permanent shoe having grooves in the heel-ends facing the toe of the shoe, and having slotted openings near the toe, of a pair of detachable perforated plates adapted to underlie the permanent shoe, said plates having studs engaging said slotted openings for clamping one end of the plates to the shoe, and having tongues for engaging said grooves for clamping the other end to the shoe, and a plurality of removable calks inserted through the said plates and bearing against the underside of the permanent shoe.

2. In a non-slipping device, the combination with the permanent horse-shoe having slots arranged at the opposite sides of the toe-calk, and having its heel-portions folded upon themselves to form grooves, of a pair of detachable arc-shaped plates, each of said plates having a stud for engaging one of said slots, and each plate having a series of tapering holes, the heel-end of each plate comprising a tongue adapted to engage the corresponding groove in the heel of the shoe, and a plurality of spikes inserted in the tapering holes of said plates for preventing slipping.

3. In a non-slipping device, the combination with the permanent shoe having grooves in the heel-ends facing the toe of the shoe, and having slotted openings near the toe, of a pair of detachable arc-shaped plates adapted to underlie the permanent shoe, said plates having studs engaging said slotted openings for clamping one end of the plates to the shoe, and having tongues for engaging said grooves, a plurality of removable spikes inserted through the said plates and bearing against the underside of the permanent shoe, and pins piercing the heel-ends of said shoe for preventing the accidental release of the said plates.

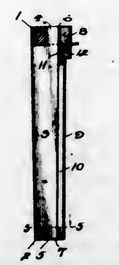
1,155,294. SIGNALING DEVICE. LEO ABELES, Philadelphia, Pa., assignor of one-half to Daniel J. Shern, Philadelphia, Pa. Filed July 6, 1914. Serial No. 849,112. (Cl. 40—132.)



1. A signaling device of the character described, comprising a casing, a body fitting within the casing with its outer face adjacent the front of the casing and provided with openings, pockets extending rearwardly from the openings, a hinge connecting the body and casing, lamps in the pockets, a door closing the casing and having signaling characters in front of the pockets, each of said pockets in the body having a bead, projecting outwardly from the body and bearing against the door, substantially as described.

2. A signaling device of the character described, comprising a casing, a body fitted in the casing and terminating short of the bottom thereof and having a plurality of openings in its face, pockets extending rearwardly from the openings, lamp sockets located in all of the pockets and in the lower side of the body, lamps in the sockets, a door closing the casing and hinged thereto, said door having signaling characters in front of the pockets and having a section of colored glass in front of the lamp in the socket in the lower side of the body, the bottom of the casing having a transparent section, substantially as described.

1,155,295. PIANO-BACK. WILLIAM G. BETZ, Chicago, Ill. Filed Apr. 25, 1914. Serial No. 834,346. (Cl. 84—28.)



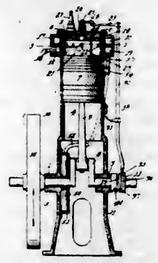
A piano-back comprising head and base pieces, posts secured at their ends to said head and base pieces, a pin-block secured to the front sides of said posts, and a reinforcing ply secured to the rear side of the pin-block and bearing against the posts.

1,155,296. TRANSFER-PAD HOLDER. WILLIAM F. BEUTHER, Louisville, Ky., assignor of one-third to Edward Cohn and one-third to Richard G. Tafel, Louisville, Ky. Filed Nov. 28, 1914. Serial No. 874,391. (Cl. 24—3.)



A holder for transfer pads formed of a single piece of wire bent back upon itself constituting a double portion, a hook formed of such double portion, one end of the wire extending laterally of the double portion forming an arm adapted to lie along a portion of the back of a transfer pad, the end of such arm being bent at an angle thereto and in substantially the same plane therewith, and having its end bent into a loop forming a finger-engaging enlargement, the other end of the wire also extending laterally of the double portion and in an opposite direction to the first-mentioned end forming a second arm adapted to lie along the remaining portion of the back of said pad, the end of the second arm being bent at an angle thereto and in substantially the same plane, and having an eye formed in its end.

1,155,297. EXPLOSION-ENGINE. JOHN W. BRADLEY, Fruitvale, Cal. Filed Mar. 4, 1914. Serial No. 822,291. (Cl. 123—81.)



1. In an explosion engine, an engine frame having an explosion chamber therein, a plurality of flanges carried by said engine frame and forming with a ring an exhaust chamber and an inlet chamber around the explosion chamber, a crank shaft, a piston connected with the crank shaft, an annular valve within the explosion chamber and having ports capable of being placed in juxtaposition with ports extending through the holes of the explosion chamber into the inlet chamber and the exhaust chamber respectively, levers to oscillate said valve, and a cam on the crank shaft to cause said valve to be oscillated to be placed successively in position to permit the inlet of the explosive gas on a compression thereof and the exhaust thereof from the explosion chamber.

2. In an explosion engine, an engine frame having a combustion chamber therein and provided with a plurality of flanges adjacent the end of said chamber and forming with a ring an inlet chamber and an exhaust chamber, a crank shaft, a piston connected with said crank shaft, a fan, means to deliver air to the exhaust chamber, and a suitable valve for carrying out the cycles of the explosion engine.

3. In an explosion engine, an engine frame having an explosion chamber therein, a plurality of flanges carried by the engine frame and forming with a ring an exhaust chamber and an inlet chamber around the explosion chamber, a crank shaft, a piston connected with the crank shaft, an annular valve within the explosion chamber and having ports capable of being placed in register with ports extending through the walls of the explosion chamber into the exhaust chamber and inlet chamber respectively, and means to oscillate said valve to successively place the openings therethrough in register with the inlet ports and exhaust ports.

1,155,298. MICA-SPLITTING MACHINE. EDWARD COOPER, Newton, Mass. Filed Sept. 3, 1913. Serial No. 788,031. (Cl. 125—5.)



1. An apparatus for splitting mica which consists of a holder composed of layers of flexible material adapted to receive the mica to be acted upon between them, combined with bending devices having coöperating members which engage said holder at the opposite faces thereof, and means for producing a relative movement of the bending

devices and the holder in the direction of the plane of the holder whereby the mica plates are flexed by the bending devices while confined between the layers of the holder.

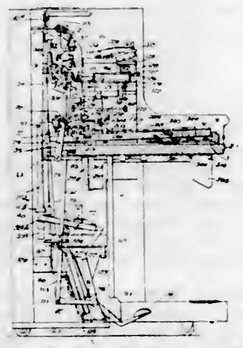
2. In a machine for splitting mica, the combination with a flexible holder having two adjacent layers adapted to receive the unsplit mica between them; of bending devices at opposite sides of said holder, embracing said holder between them; and means for producing a relative movement of said bending devices and holder.

3. An apparatus for splitting mica which consists of a holder comprising adjacent layers of flexible material, combined with reciprocating bending devices acting on opposite sides of said holder; and means for actuating said bending devices in the reciprocating movements thereof.

4. An apparatus for splitting mica which consists of a holder comprising adjacent layers of flexible material, combined with bending devices acting on opposite sides of said holder; means for reciprocating said bending devices and means for causing said holder to travel with relation to said reciprocating devices.

5. An apparatus for splitting mica comprising a holder of flexible material having adjacent layers, means for holding the opposite edges of said holder parallel to each other and equidistant from each other, bending devices operating simultaneously on opposite surfaces of said holder where it lies between them; and means for producing a relative movement of said flexing devices and holder.

1,155,299. MUSICAL INSTRUMENT. JOHN W. DARLEY, Jr., Baltimore, Md. Filed Apr. 3, 1907. Serial No. 366,213. (Cl. 84—25.)



1. In a musical instrument, the combination of selecting means, strings, a source of energy for vibrating said strings, and means for applying power from said source to said strings, the amount of power depending upon the speed of the selecting means and being uniform at will during any part of the time said means is held in the operative position, substantially as described.

2. In a musical instrument the combination of selecting means, strings, a source of energy for vibrating said strings, and means for varying the force derived from said source and applied to said strings, the force applied depending upon the speed of the selecting means and continuing uniform at will during any part of the operation of the selecting means, substantially as described.

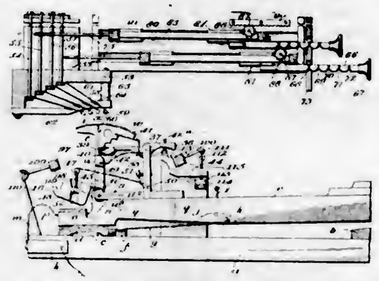
3. In a musical instrument, the combination of selecting means, strings, and means for applying power to said strings, the amount of power depending upon the speed of the selecting means and being uniform at will during any part of the time said means is held in the operative position, substantially as described.

4. In a musical instrument the combination of selecting means, strings, a source of power and mechanism operated thereby for continuously vibrating said strings, and means for varying the amplitude of vibration depending upon the speed of the selecting means, substantially as described.

5. In a musical instrument the combination of selecting means, strings, means for continuously vibrating said strings with an amplitude of vibration depending upon the speed of the selecting means, and for increasing said amplitude at the will of the operator, substantially as described.

[Claims 6 to 54 not printed in the Gazette.]

1,155,300. EXPRESSION DEVICE FOR ELECTRIC ORGANS. JOHN W. DARLEY, Jr., Baltimore, Md. Filed July 3, 1908. Serial No. 441,840. (Cl. 84—81.)



1. In an instrument for producing vibrations, the combination of a source of electricity, a plurality of vibrating bodies, means for controlling the vibration thereof connected to one terminal of said source, a plurality of electrical contacts normally disconnected from said controlling means, means for selectively connecting said controlling means to said contacts, a key and means connected to the other terminal of said source of electricity operated by said key for closing the circuit through a variable number of said contacts, the number depending only upon the speed impressed upon said key.

2. In an instrument for producing vibrations, the combination of a source of electricity, a plurality of vibrating bodies, means for controlling the vibrations thereof connected to one terminal of said source, a plurality of electrical contacts normally disconnected from said controlling means, means for selectively connecting said controlling means to said contacts, a key, and means connected to the other terminal of said source operated by said key for closing the circuit through any one of said contacts, the one depending only upon the speed impressed upon said key.

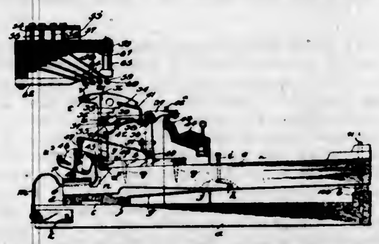
3. In an instrument for producing vibrations, the combination of a source of electricity, a plurality of vibrating bodies, means for controlling the vibrations thereof connected to one terminal of said source, a plurality of electrical contacts normally disconnected from said controlling means, means for selectively connecting said controlling means to said contacts, a key, means connected to the other terminal of said source operated by said key for closing the circuit through a variable number of said contacts, or through one of said contacts, the one or the number depending only upon the speed impressed upon said key, and means for changing at will from the first method of closing the circuit through the contacts to the second method and vice-versa.

4. In an instrument for producing vibrations, the combination of a source of electricity, a plurality of vibrating bodies, means for controlling said vibrating bodies connected to one terminal of said source, fixed contacts, means for selectively connecting said controlling means to said fixed contacts, a key, a contact strip connected to the other terminal of said source moved by said key, and inertia controlled means connected to said contact strip for causing said contact strip to make contact with a greater or less number of said fixed contacts, the number depending only upon the speed impressed upon said key.

5. In an instrument for producing vibrations, the combination of a source of electricity, a plurality of vibrating bodies, means for controlling said vibrating bodies connected to one terminal of said source, fixed contacts, means for selectively connecting said controlling means to said fixed contacts, a key, a contact strip connected to the other terminal of said source moved by said key, and inertia controlled means connected to said contact strip for causing said contact strip to make contact with any one of said fixed contacts, the one depending only upon the speed impressed upon said key, a greater or less number of said fixed contacts, the number depending only upon the speed impressed upon said key, and means for shifting said contact strip at will to vary said number.

[Claims 6 to 38 not printed in the Gazette.]

1,155,301. KEY-CONTROLLED CONTACT-MAKER FOR USE WITH MUSICAL INSTRUMENTS. JOHN W. DARLEY, Jr., Baltimore, Md. Filed Oct. 15, 1912, Serial No. 725,963. Renewed July 3, 1915. Serial No. 37,952. (Cl. 84—81.)



1. The combination of a plurality of vibration emitters, means for operating said vibration emitters, keys, fixed electrical contacts, one for controlling the operation of each emitter, a moving contact maker mounted on each of said keys, and means for causing said contact maker to engage one of said fixed contacts, the one of the fixed contacts depending upon the speed impressed upon the key upon which said moving contact maker is mounted.

2. The combination of a key, a source of electricity, an electric circuit having a plurality of branches, a means for controlling the flow of electricity in said branches moved by said key a distance varying with the speed of said key, and a detent for supporting said means near the limit of its movement until the key has almost returned to the initial position, said detent being so arranged that said means can be moved by short strokes of said key whereby the said branches may be closed and opened in succession.

3. In a mechanism for controlling an electric circuit having a plurality of branches, the combination of a key, a member moved by said key a distance depending upon the speed of said key, a contact carried by said member and adapted to close one of said branches, and means for supporting said contact in position to close said circuit, yet permitting of the opening of said circuit when said key is allowed to rise slightly.

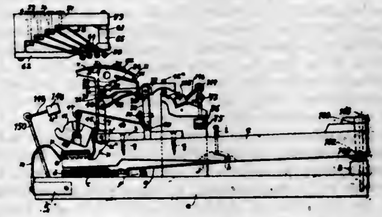
4. In a key controlled contact maker, the combination of a key, fixed electrical contacts, a contact maker mounted on said key, and means for causing said contact maker to make contact with one of the fixed contacts, the one of the fixed contacts depending on the speed of the key.

5. In a key controlled contact maker, the combination of a key, a fixed electrical contact, a contact maker moved by said key, means for moving said contact maker into a position to make contact with the fixed contact, at a predetermined speed of movement of said key, and means for supporting the contact maker in the contact-making position, so that while supported it moves with said key.

[Claims 6 to 17 not printed in the Gazette.]

1,155,302. CIRCUIT-CLOSER. JOHN W. DARLEY, Jr., Baltimore, Md. Original application filed July 3, 1908, Serial No. 441,840. Divided and this application filed Dec. 5, 1914. Serial No. 875,727. (Cl. 200—27.)

1. In a circuit closer, the combination of a key, contacts, a contact maker moved by said key, pedally controlled means for moving said contact maker to make contact with any number of said contacts when said contact maker is moved by said key, the number depending upon the extent of movement of said key and said pedally controlled means.



2. In a circuit closer, the combination of a key, contacts, a contact maker moved by said key, and inertia controlled means for moving said contact maker to make contact with any number of said contacts when said key is depressed, the movement of said contact maker and the number depending upon the speed impressed upon the key.

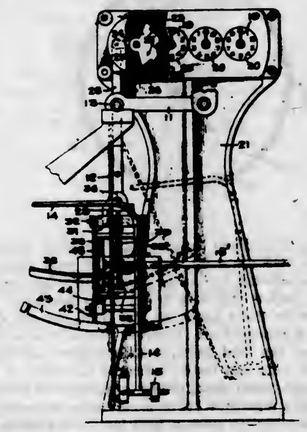
3. In a circuit closer, the combination of a key, contacts, a contact maker moved by said key, means for moving said contact maker to make contact with any number of said contacts when said key is depressed, and means for varying said number while said key is depressed.

4. In a circuit closer, the combination of a key, contacts, a contact maker moved by said key, means for moving said contact maker to make contact with any one of said contacts when said key is depressed, and means for shifting said contact maker to make contact with another contact while said key is depressed.

5. In a circuit closer, the combination of a key, contacts, a contact maker moved by said key, means for moving said contact maker to make contact with any number or with any one of said contacts, and means for changing from the first mode of making contact to the second.

[Claims 6 to 21 not printed in the Gazette.]

1,155,303. INTEGRATING MECHANISM FOR FLOW-METERS. AUSTIN R. DODGE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 29, 1911. Serial No. 641,241. (Cl. 235—91.)



1. An integrating mechanism for an instrument having a member movable in proportion to one of the factors of the quantity to be integrated comprising an element connected with said member and having angular movement about a given center, a registering mechanism, means for actuating it at periodic intervals, means whereby said

actuation varies in correspondence with the angular positions assumed by said element, and means for automatically locking said element against movement at periodic intervals which bear a definite relation to the periodic intervals before mentioned.

2. An integrating mechanism for an instrument having a member movable in proportion to one of the factors of the quantity to be integrated comprising a swinging arm connected with said member, a registering mechanism, a lever for actuating it, means for oscillating the lever, a curved stop on the arm with which said lever contacts at each oscillation, and means for locking the arm when the lever makes contact with the stop.

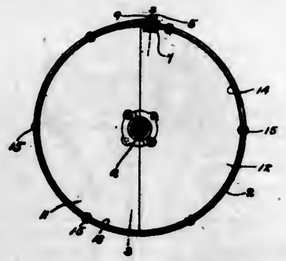
3. An integrating mechanism for an instrument having a member movable in proportion to one of the factors of the quantity to be integrated comprising a swinging arm connected with said member, a registering mechanism, a lever for actuating it, means for oscillating the lever, a curved stop on the arm with which the lever comes in contact at each oscillation, a notched quadrant on the arm, and a locking lever engaging with the quadrant when the register-actuating lever engages the stop.

4. An integrating mechanism for an instrument having a member movable in proportion to one of the factors of the quantity to be integrated comprising a swinging arm connected with said member, a curved stop and a notched quadrant secured to the arm, registering mechanism, a lever for actuating it which is adapted to be arrested by the stop, a locking lever coöperating with the quadrant, a shaft, means for rotating the shaft, and cams on the shaft for controlling the movement of the levers.

5. An integrating mechanism for a fluid flow meter comprising a member having angular movement about a center, a registering mechanism, means for periodically actuating said mechanism, means controlled by said member for varying the extent of said actuation, and automatic means operated in synchronism with the first named means for periodically locking the member against movement.

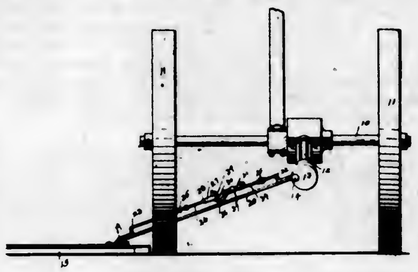
[Claim 6 not printed in the Gazette.]

1,155,304. DEMOUNTABLE ROLLER-SECTION FOR LAND-ROLLERS AND THE LIKE. RAY E. DUNHAM, Berea, Ohio. Filed Nov. 24, 1913. Serial No. 802,675. (Cl. 55—6.)



A demountable drum comprising a cylinder formed of a sheet of flexible material, one edge of said sheet being arranged to overlap the other edge, said edges being provided with registering bolt holes, bolts arranged in said bolt holes with their heads on the inside of the drum, a channel iron arranged on the inner face of the drum over the heads of the said bolts, nuts arranged on the outer ends of said bolts and heads arranged at each end of said cylinder, each head comprising a pair of semi-circular members, said members being secured to the cylinder so that each member occupies a position intermediate of one of the meeting edges of the cylinder and a point diametrically opposite to the meeting edge, each member having a semi-circular opening at the center of the straight edge thereof, said openings being adapted to register with each other when said members are placed together to form a head.

1,155,305. ATTACHMENT FOR MOWING-MACHINES. WILLIAM ELDRY, Menlo, Iowa. Filed Sept. 14, 1914. Serial No. 861,731. (Cl. 74—17.)



1. In a device of the class described, two movable members spaced from each other, a pitman received between parts of the respective movable members and bearing against said parts, hook members engaging said parts, and yielding means for connecting said hook members and drawing them together for holding said pitman in its installed position, said means including a hook member connected with one of said first hook members, a second hook member pivotally connected with the other of said first hook members, said pivoted hook member having a handle and being adapted to be swung to position for engaging said third hook member, thus locking the first two hook members together.

2. In a device of the class described, a reciprocating member, a rotating member, a pin fixed off center to said rotating member, a pitman received between said pin and reciprocating member and bearing against said parts, hook members receiving said pin and a portion of said reciprocating member respectively, and means for connecting said hook members and yieldingly drawing them toward each other, said means including a resilient device and means for stretching said resilient device and locking said hook members together.

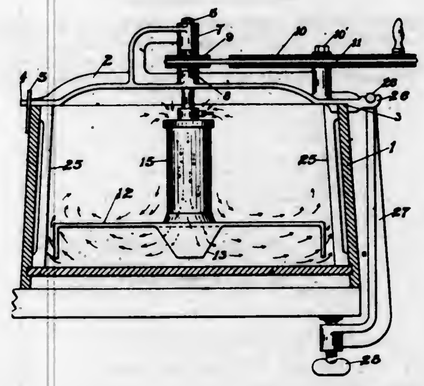
3. In a device of the class described, two movable members spaced from each other, a pitman received between parts of the respective movable members and bearing against said parts, hook members engaging said parts, and yielding means for connecting said hook members and drawing them together for holding said pitman in its installed position, said means including co-acting engaging devices capable in one position of engaging each other and adapted to be moved into position for stretching said yielding means and to be locked in said position.

1,155,306. BUTTER-SEPARATOR. ALPHEUS FAY, Louisville, Ky. Filed Feb. 11, 1915. Serial No. 7,657. (Cl. 31—42.)

1. In a butter separator in combination with a vessel to hold the milk elements, an impeller formed of a single flat substantially rectangular sheet with its corners turned down, whereby the impeller is octagonal with four closed sides alternating with four open sides and defining a space between the lower side of the disk and the bottom of the vessel, with the lower edges of said sides close to the bottom of the vessel, and means for rotating said disk on an axis substantially at right angles to its plane while submerged in the milk elements in the vessel.

2. In a butter separator in combination with a vessel adapted to hold milk elements, an impeller, a supporting and driving shaft for the impeller, a means for mounting said impeller on said shaft consisting of a transverse pin, the shaft having an opening through which the pin extends below the impeller and said impeller having an opening, and a projection on said pin extending up through said opening, the pin having a recess where it passes through the shaft, and the ends of the recess engaging with the sides of the shaft adjacent to the opening therein, whereby

the impeller holds the pin down so that its recess prevents the pin from leaving the shaft, and whereby said pin by engaging in the opening in the impeller holds the impeller and shaft concentric.



3. In a butter separator in combination with a vessel to hold the milk elements, an impeller comprising a single disk with a central aperture and a tubular shaft extending down and connecting with this aperture, a solid shaft extending down through the tubular shaft and through the aperture, and means on the lower end of the solid shaft extending across the aperture and securing the said impeller to said shaft.

4. In a butter separator in combination with a vessel to hold milk elements, an impeller formed from a single substantially rectangular sheet with its corners turned down whereby it is octagonal with alternating closed and open sides around its periphery, means for admitting air from above to below said disk, a supporting and driving shaft for the impeller and means for securing said disk to said shaft.

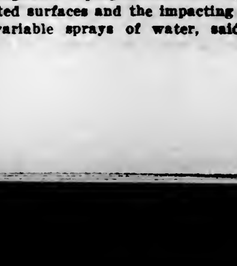
5. In a butter separator in combination with a vessel to hold milk elements, an impeller comprising a single disk having a substantially central aperture up around which extends a flange, a tubular shaft with its lower end fitting down over said flange, a supporting and driving shaft extending down through the tubular shaft, clamping means on the supporting shaft above the upper end of the tubular shaft and having means engaging with the arm of the tubular shaft, said arm having means to engage with the engaging means on the hub whereby the tubular shaft turns with the supporting shaft, the lower part of said supporting shaft having an opening through it, a pin extending transversely through this opening across the aperture in the flat disk, an upward projection on said pin near one end, said disk having an opening in it through which said projection extends, said pin having a recess where it extends through the shaft, the ends of which recess engaging with the sides of the shaft and preventing the pin from becoming displaced endwise from the shaft when held down by said impeller and the tubular shaft and said collar and its engaging means engaging with the upper end of the tubular shaft, whereby all of said parts are readily separable for the purposes set forth.

[Claim 6 not printed in the Gazette.]

1,155,307. SWITCH-OPERATING DEVICE. DAVID D. GORDON, Chicago, Ill., assignor to Yost Electric Manufacturing Company, Toledo, Ohio. Filed Feb. 12, 1914. Serial No. 818,238. (Cl. 173—354.)

1. A device of the character described having a movable element for controlling a switch, a rigid bent tension member pivotally attached at one extremity to and adapted to move said element, a guide forming a support for the opposite extremity of said member, and means for exerting a pull on the opposite extremity of said member.

2. A device of the character described having a movable element for controlling a switch, a rigid bent tension member pivotally attached at one extremity to and adapted to move said element, a guide forming a support for the opposite extremity of said member with which said member has sliding engagement to define the movement of said opposite extremity, and means for exerting a pull on said opposite extremity of said tension member, said member by reason of its bent condition, pivotal mounting, and engagement with the said guide alining itself in the plane of the direction of the exerted pull.



3. A device of the character described having a movable element for controlling a switch, a rigid curved tension member pivotally attached at one extremity to and adapted to move said element, a guide forming a support for the opposite extremity of said member with which said member has sliding engagement to define the movement of said opposite extremity, and means for exerting a pull on said opposite extremity of said tension member, said member by reason of its curved condition, pivotal mounting, and engagement with the said guide alining itself in the plane of the direction of the exerted pull.

4. In a device of the character described the combination with a movable element for controlling a switch, a rigid curved tension member pivotally associated at one extremity with said movable element, a guide forming a support for the opposite extremity of said tension member, and means for exerting a pull at the opposite extremity of said tension member, said tension member by reason of its curvature and pivotal mounting alining itself in the plane of the direction of the exerted pull.

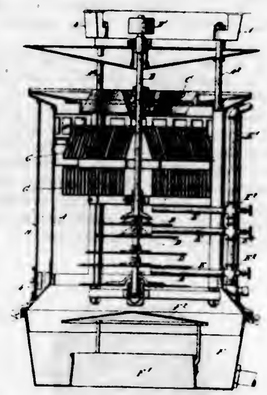
5. A device of the character described having a pivoted arm for controlling a switch, a rigid curved tension member swingingly attached at one extremity to and adapted to move said arm, a guide forming a support for the opposite extremity of said member with which said member has sliding engagement, and means for exerting a pull on said opposite extremity of said tension member, said member by reason of its curvature and swinging attachment alining itself in the plane of the direction of the exerted pull.

[Claim 6 not printed in the Gazette.]

1,155,308. PROCESS OF CONDITIONING AIR. DANIEL P. GOSLINE, Boston, Mass. Filed Mar. 11, 1909. Serial No. 482,703. (Cl. 98—41.)

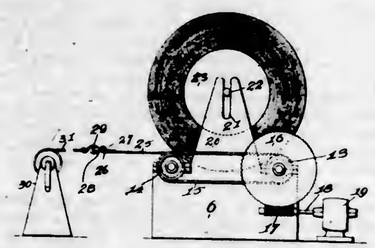
The process of conditioning air which consists in submitting the air, while moving at a relatively low velocity, to the cutting and wiping action of a series of rapidly moving wetted surfaces and the impacting action of independently variable sprays of water, said surfaces and

sprays both treating the air, in passage, at right angles to its line of travel; whereby a predetermined quantity of



atomized liquid will be mingled with and absorbed by the air.

1,155,309. APPARATUS FOR CONTROLLING THE PLACEMENT OF A COVERING OVER BASE-BALL DIAMONDS. OTTO A. HECKEL, St. Louis, Mo., assignor of one-half to Emil Ameling, St. Louis, Mo. Filed June 20, 1914. Serial No. 846,253. (Cl. 242—55.)



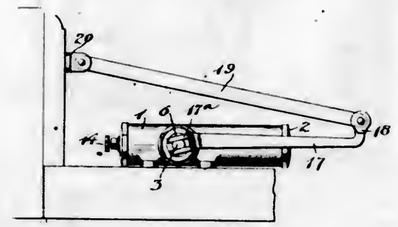
1. A device of the class described comprising a tubular roller, a covering mounted thereon; a pair of supporting rollers and a means for rotating the same simultaneously in order to roll and unroll the covering and a means for pulling the unrolled portion across the surface to be covered, substantially as specified.

2. A device of the class described comprising a frame; a roller adjustably mounted in said frame; a covering supported on said roller; a pair of rollers located in said frame and supporting the roller and the covering; a gear mechanism controlling the movement of the supporting roller and unrolling the cover; and a means for assisting the placing of the unwound portion of the covering over the surface to be covered, substantially as specified.

3. A device of the class described comprising a frame; a slotted projection formed on each end of said frame; a tubular roller guided in the slotted projections; a covering mounted on said tubular roller; and supporting rollers mounted in bearings within said frame for supporting the weight of the covering and for controlling the rolling and unrolling movement of the same; and a gear mechanism for rotating the supporting rollers, and means for drawing the unrolled portion of the cover over the surface to be covered, substantially as specified.

4. A device of the class described comprising a roll of covering arranged the required length of the surface to be covered; rollers supporting the roll of covering and for placing the same in motion for rolling and unrolling the same; and a gear mechanism for placing the rollers in simultaneous rotation in combination with a windlass mechanism for assisting the movement and placing of the unwound portion of the covering over the surface, substantially as specified.

1,155,310. DOOR-CONTROLLER. WILLIAM K. HENRY, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed May 29, 1915. Serial No. 31,091. (Cl. 16—88.)



1. In a door controlling device, a cylinder, a checking piston mounted wholly in one end thereof, a spring arranged wholly in the opposite end of said cylinder pressing said piston in one direction, a slotted member interposed between said spring and piston, two racks on the opposite sides of the slot in said slotted member, a spindle passing diametrically into said cylinder and into said slotted member, an interrupted pinion on said spindle for engaging said racks alternately, with means for connecting said cylinder to a door, and with means for rotating said spindle, said means being arranged to be connected to a door casing, said means including a lever arm reversibly connected to the spindle, said reversible connection comprising a hinge joint, the pivot of said joint being oblique to the line of the arm.

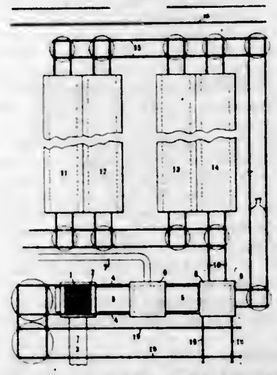
2. In a door controlling device, a cylinder, a checking piston therein, a spring in said cylinder for pressing said piston in one direction, a slotted member interposed between said spring and piston, two racks on the opposite sides of the slot in said slotted member, a spindle passing diametrically into said cylinder and into said slotted member, an interrupted pinion on said spindle for engaging said racks alternately, with means for connecting said cylinder to a door and with means for rotating said spindle, said means being arranged to be connected to a door casing, said means including a lever arm reversibly connected to the spindle, said lever arm being arranged at such an angle to the spindle that when the lever arm is in line with the center line of the cylinder, the interrupted pinion will be in mesh with one of the racks.

3. In a door check, a cylinder, a piston therein located at one end, a spring for pressing the piston in one direction, said spring being at the other end of said cylinder, a rack member interposed between the piston and the spring and loosely connected at one end to the piston, a guide pin rigidly supported at its rear end by the end of the cylinder and arranged to support the other end of said rack member as it moves to and fro.

4. In a door controller, a cylinder, a checking piston therein, a spring therein, a removable cap at one end of the cylinder, a rack member interposed between the piston and the spring and loosely connected at one end to said piston, and a guide pin rigidly carried by the cap for supporting one end of said rack member.

5. In a door controller, a cylinder, a checking piston mounted wholly in one end thereof, a spring arranged wholly in the opposite end thereof, an intermediate slotted member between said spring and piston and loosely connected at one end to the latter, two racks on the opposite sides of the slot in said slotted member, a spindle passing diametrically into said cylinder and slot, an interrupted pinion on the spindle for alternately engaging said racks, means for supporting said cylinder on a door, means for connecting the spindle to a door casing, said means including a lever hinged at one end to the end of the spindle, the axis of said hinge being transverse to the axis of the spindle whereby said controller may be adapted to either right or left hand use at will.

1,155,311. BRIQUETING ORE CONCENTRATES. CHARLES E. HEUSMANN, Scarsdale, N. Y., assignor to Moose Mountain, Limited, Sellwood, Ontario, Canada, a Corporation of Ontario. Filed Apr. 22, 1911. Serial No. 622,708. (Cl. 25—1.)



1. The process of forming briquets from wet ore concentrates which comprises charging the ore concentrates into a bottomless mold box having a plurality of compartments while said mold box is over a support forming a temporary bottom to the mold, transferring the charged bottomless mold to a discharging station, positioning a kiln car beneath the mold box at the discharging station to form a bottom to the mold, ejecting the briquets from the mold compartments directly onto the kiln car and moving said kiln car without disturbing the briquets deposited thereon into a kiln for firing the briquets.

2. The improvement in the art of forming briquets from wet ore concentrates which comprises charging the wet concentrates having at least 20% of water into a multiple compartment mold, removing the excess water from the concentrates so as to form individual briquets in the mold, separating the mold from the briquets and leaving the briquets in spaced apart relation, then transporting and heating the briquets while in said spaced apart relation.

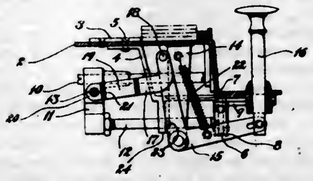
3. The improvement in the art of forming briquets from wet ore concentrates, which comprise filling the wet ore concentrates into a bottomless mold having a large number of compartments while said mold is over a stationary floor which temporarily forms a bottom to the mold, compressing the concentrates in the compartments of the mold while the mold is over a stationary floor forming a temporary bottom to the mold to remove surplus liquid and compact the concentrates into briquets, bringing the mold with its contents over a kiln car and so relating the mold and the car that the car will constitute a bottom to the mold, discharging the briquets from the mold directly onto the kiln car and moving the kiln car without disturbing the briquets deposited thereon into a kiln for firing the briquets.

4. Apparatus for forming briquets comprising a mold box having a plurality of compartments and arranged for travel from a filling station to a press, means for filling the mold box, a multiple headed press, stripping plungers, a kiln car adapted for placement beneath the stripping plungers, means forming a bottom to the mold box in its passage from the filling means to the press and up to the point of entry beneath the stripping plungers whereby displacement of the contents of the mold box will be prevented up to the time the mold box passes beneath the stripping plungers and means operating the stripping plungers to strip the unsupported briquets in the mold compartments onto the kiln car.

5. Apparatus for forming briquets from wet ore concentrates comprising the combination of a feed box, a press having a multiple headed press member, an ejecting member having corresponding plungers, a kiln car and track beneath said ejecting member, a multiple compartment mold box, a platform running beneath the feed box and the press member and forming a floor for the mold box, a track for the mold box running beneath the ejecting member and a hoist for lifting the mold box from the briquets.

[Claims 6 to 10 not printed in the Gazette.]

1,155,312. VENDING-MACHINE. HENRY D. HINCKLEY, Hartford, Conn., assignor to The R. & H. Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Dec. 13, 1913. Serial No. 806,423. (Cl. 194—80.)



1. The combination of a plurality of article-ejectors, plungers adapted through the intervention of coins, to operate the respective article-ejectors, a manually-operable lever, a shaft connecting the plungers, and a link pivoted to the levers, having branches freely receiving said shaft.

2. The combination of a plurality of article-ejectors, plungers adapted through the intervention of coins, to operate the respective article-ejectors, a manually-operable lever, a link pivoted to said lever, having outwardly-diverging branches, and a shaft connecting the plungers, said branches being perforated to freely receive said shaft.

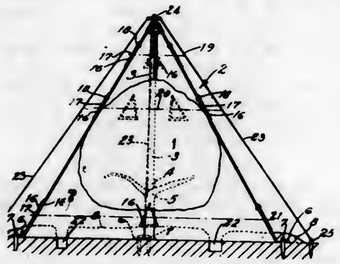
3. The combination of a plurality of article-ejectors, plungers adapted through the intervention of coins, to operate the respective article-ejectors, an angle lever pivoted at its elbow, having an upright arm and a forwardly extending arm, a manually operable device to act against the forwardly-extending arm of the angle lever, and a link pivoted to the upright arm of the angle lever and extending rearwardly therefrom, said link having rearwardly diverging branches connected with the respective plungers.

4. A vending machine comprising supporting means for the articles to be vended, a slidable member provided with means for ejecting said articles, a plunger, said slidable member being provided with a carrier to hold a coin in the path of advancing movement of the plunger, a second slidable member to which said plunger is connected, a push rod, an angle lever pivoted at its angle and against one branch of which said push rod acts, an operative connection between the other branch of the angle lever and said second slidable member, a spring for returning the angle lever to initial position after it has been operated by said push rod, and means actuated with said plunger for drawing back said first mentioned slidable member.

5. A vending machine comprising supporting means for the articles to be vended, a slidable member for ejecting said articles, said slidable member having a pendent portion, a plunger extending through said pendent portion, said slidable member having a coin carrier to support a coin in the path of advancing movement of the plunger, a second slidable member to which said plunger is connected, an angle lever pivoted at its elbow and operatively connected with said second slidable member, said angle lever on its advancing movement being adapted through said connection to advance said second slidable member, means for returning said angle lever to its initial position, and means on said plunger for engaging said pendent portion on the backward movement of the plunger for returning said first mentioned slidable member.

[Claims 6 to 8 not printed in the Gazette.]

1,155,313. PROTECTOR FOR TREES OR OTHER VEGETATION. NEWTON HOGAN, Los Angeles, Cal. Filed Mar. 17, 1913. Serial No. 755,016. (Cl. 47—33.)

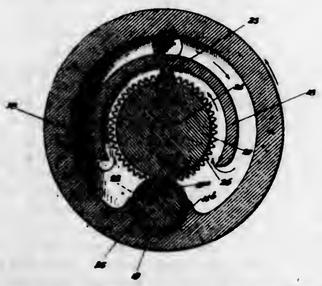


1. A tree protector comprising a flat reinforced sheet having three sides, one a semi-circular side and two straight sides, one of the straight sides passing through a line that is parallel to and spaced apart from the other side whereby to form an overlapping portion, said straight sides being adapted to engage with one another when the sheet is wrapped around a tree, the sheet when in protecting position forming a conical housing over the tree with the overlapping portion of said one side extending over the other side and permitting a place of securement from the top to the bottom of the protector, and hooks formed in the sheet near the adjacent straight sides, and fastening means passed around said hooks to fasten the adjacent sides to one another.

2. A device of the character described comprising a flat sheet of substantially semi-circular conformation reinforced with wire netting to give the sheet a partially rigid structure, said sheet having two radial sides out of alinement with one another, said radial sides being adapted to engage one another when the sheet is wrapped around a tree, and means provided around the circular periphery of said sheet, said means being adapted to be fastened to the ground to secure the lower edge of the sheet in place when the sheet is wrapped around a tree.

3. A device of the character described comprising a flat sheet of substantially semi-circular conformation reinforced with wire netting, said sheet having two radial sides out of alinement with one another, a notched reinforcement positioned between the two adjacent ends of said radial sides, and a pole adapted to be positioned centrally of the tree to be protected, said sheet being adapted to be wrapped around said tree with its notched reinforcement secured to the upper end of said pole and its radial sides fastened to one another.

1,155,314. POWER-TRANSMITTING APPARATUS. WARREN H. HUNGERFORD, Chicago, Ill., assignor to Frank M. Peters, Chicago, Ill. Filed June 24, 1912. Serial No. 705,590. (Cl. 192—18.)



1. An apparatus of the character described, comprising a liquid-containing casing, a plurality of connected compartments therein forming an endless passage, means for controlling the flow of fluid through said endless passage, a rotary piston disposed within said casing, blades on said rotary piston forming spaces between the same which are a multiple of the width of said blades, an abutment, in rolling engagement with said piston, arranged intermediate the communicating ends of said compartments and serving to direct the flow of fluid from one of said compartments directly into the other of said compartments, substantially as specified.

2. An apparatus of the character described, comprising a liquid-containing casing, a plurality of concentric, connected compartments therein forming an endless passage, means for controlling the flow of fluid through said endless passage, a rotary piston located within the inner of said compartments, blades on said rotary piston forming spaces between the same which are a multiple of the width of said blades, and a rotating abutment in rolling engagement with said piston, located intermediate the communicating ends of said compartments, substantially as specified.

3. An apparatus of the character described, comprising a liquid-containing casing, a plurality of concentric, connected compartments therein forming an endless passage, valve means for controlling the flow of fluid through said endless passage, a rotary piston located within the inner of said compartments, blades extending from said piston and forming spaces between the same which are a multiple of the width of said blades, and a rotating, cylindrical abutment provided with means for receiving the blades on said rotary piston arranged intermediate the adjoining, communicating ends of said compartments, substantially as specified.

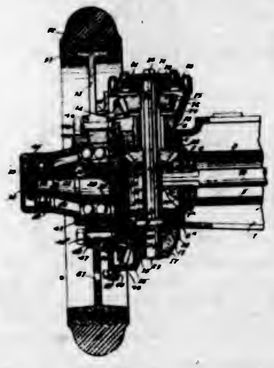
4. An apparatus of the character described comprising a liquid-containing casing, a plurality of connected compartments therein forming an endless passage, a valve for controlling the flow of fluid through said endless passage, a rotary piston disposed within the inner of said compartments, a pair of blades on said rotary piston, and a rotating abutment provided with means for receiving said blades, and arranged intermediate the adjoining communicating ends of said compartments, and out of the direct path of flow of said fluid and serving to direct the flow of fluid from one of said compartments directly into the other of said compartments, substantially as specified.

5. An apparatus of the character described comprising a liquid-containing casing, a plurality of concentric, connected compartments therein forming an endless passage, a valve for controlling the flow of fluid through said endless passage, a shaft supported within the inner of said compartments, a cylindrical member mounted upon said shaft, a pair of projecting blades on said cylindrical member, and a rotating abutment provided with a longitudinal groove adapted to receive the blades on said cylindrical member; said rotating abutment being located intermediate the adjoining, communicating ends of said compartments, and arranged out of the direct path of flow of said fluid and serving to direct the flow of said fluid from one of said compartments into the other of said compartments, substantialy as specified.

[Claims 6 to 11 not printed in the Gazette.]

1,155,315. WHEEL FOR SELF-PROPELLED VEHICLES. JOHN MCGEORGE, Cleveland, Ohio, assignor to The Cleveland Engineering Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 27, 1913. Serial No. 751,117. (Cl. 21—90.)

1. In a self-propelled vehicle, the combination, with an axle having at each end a pair of vertically spaced, substantially horizontal extensions, and a supporting member having a wheel receiving spindle, of means including a hollow sleeve for pivoting said supporting member to said projection, such pivot axis being substantially vertical and said wheel receiving spindle being substantially horizontal, a wheel journaled upon said spindle and lying at one side of said pivot axis, an annular gear secured to the inner face of said wheel and extending outside of said projections, a rotatable shaft journaled in said axis, a gear carried by said shaft between said projections, a transverse shaft coinciding substantially with the pivot axis and projecting through said hollow sleeve, a pair of spaced pinions carried by said last shaft, one of said pinions being located outside of said projections and meshing with said annular gear, and the other of said pinions being located between said projections and meshing with said shaft gear, and a housing covering said annular gear and the pinion meshing therewith.



2. In a self propelled vehicle, the combination, with an axle having a recess defined between upper and lower supporting portions, the end of said axle being rounded about a vertical center, of a ring having laterally extending projections embracing the supporting portions of said axle above and below the same, hollow interfitting means carried by said supporting portions and projections permitting a pivotal movement of said ring relatively to said axle about a substantially vertical axis, a wheel supporting member carried by said ring, a wheel journaled to said supporting member, an annular gear secured to the face of said wheel outside of said supporting portions, a rotatable shaft substantially coinciding with the pivot axis of said ring and projecting through said hollow means, a drive shaft journaled in said axis and having a gear inside said recess, and pinions carried by said first shaft and meshing with both said gears.

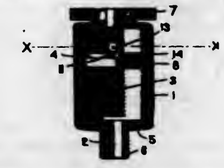
3. In a self propelled vehicle, the combination, with an axle having a recess defined between upper and lower supporting portions, the end of said axle being rounded about a vertical center, of a ring having laterally extending projections embracing the supporting portions of said axle above and below the same, one of said projections being hollow and forming a housing, hollow interfitting means carried by said supporting portions and projections permitting a pivotal movement of said ring relatively to said axle about a substantially vertical axis and establishing communication between said recess and said housing, a wheel supporting member carried by said ring, a wheel journaled to said supporting member, an annular gear secured to the face of said wheel outside of said supporting portion, said gear passing through said housing, a rotatable shaft substantially coinciding with the pivot axis of said ring and projecting through said hollow means, a drive shaft journaled in said axle and having a gear inside said recess, a pinion carried by said first shaft within said housing and meshing with said annular gear, and a second pinion carried by said first shaft within said recess and meshing with said shaft gear.

4. In a self propelled vehicle, the combination, with an axle having a recess defined between upper and lower supporting portions, of a ring pivoted to said supporting portions upon a substantially vertical axis, the pivoting means being hollow and arranged to permit a movement of said ring relatively to said axle about a substantially vertical axis, a wheel supporting member carried by said ring, a wheel journaled to said supporting member, an annular gear carried by said wheel, a rotatable shaft substantially coinciding with the pivot axis of said ring, a drive shaft journaled in said axis and having a gear inside said recess, pinions carried by said transverse shaft and meshing with both said gears, a journal bearing carried by said ring and engaging said transverse shaft at a point adjacent to said annular gear, and a second journal bearing carried by said axle and engaging said transverse shaft adjacent to said shaft gear.

5. In a self-propelled vehicle, the combination, with an axle and a driving shaft rotatably journaled in said axle, of a combined bearing and steering ring pivotally secured to the end of the axle upon an axis generally transverse thereto, said ring having a wheel receiving spindle whose axis is substantially transverse to said pivotal axis, a wheel journaled upon said spindle and located entirely to one side of said pivot axis, an annular gear secured to the face of said wheel and surrounding said spindle, a gear carried by the end of said shaft, a second shaft projecting freely through said pivot axis, pinions carried by said second shaft and meshing with both of said gears, a journal bearing carried by said ring and supporting said shaft at a point adjacent to said annular gear, and a second journal bearing carried by said axle and supporting said shaft adjacent to said shaft gear.

[Claims 6 to 16 not printed in the Gazette.]

1,155,316. GREASE-CUP. EARLE R. MACAUSLAND, Boston, Mass. Filed Mar. 16, 1915. Serial No. 14,748. (Cl. 184—38.)



In a grease cup, the combination with a lubricant-containing chamber having a discharge port, of a screw-threaded stem swiveled to said chamber, a follower screw-threaded to said stem, the latter having a filling port which leads from the exposed end thereof to the interior of the chamber and through which said chamber can be filled, which port is opened and closed by the follower as it is moved on the stem.

1,155,317. METHOD OF APPLYING PROTECTIVE COATINGS TO METALLIC ARTICLES. CLARENCE MARK, Evanston, and CLAYTON MARK, Jr., Lake Forest, Ill., assignors to Clayton Mark, Lake Forest, Ill. Filed May 28, 1914. Serial No. 841,484. (Cl. 91—70.2.)

1. The herein described process of applying protective coatings to metallic articles, which consists in introducing the article to be coated into a molten bath consisting of lead, with small percentages of tin and zinc, the zinc being present substantially up to the point of saturation of the bath, the molten metal being covered by a flux of sal-ammoniac containing iron and zinc salts.

2. The herein described process of applying a protective coating to iron and steel articles, which consists in introducing metallic articles into a bath, the temperature of which is between 650° and 760° F. and being protected by a flux of sal-ammoniac containing iron and zinc salts, the said bath containing mainly lead, but having alloyed with it enough zinc to render the coating obtained from said bath electro-positive to iron but not in excess of 3% of zinc.

3. The herein described process of applying protective coatings to metallic articles, which consists in introducing the metallic articles to be coated into a bath of lead containing zinc heated to between 650° to 760° F., and adding more zinc periodically so as to maintain the proportion of zinc in the alloy at a point below 3% but above an amount

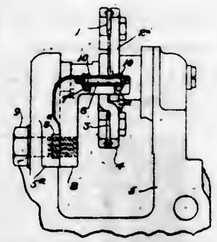
necessary to render the coating formed from the bath electro-positive to iron.

4. The herein described process of applying protective coatings to metallic articles, which consists in introducing metallic articles into a lead bath containing tin and zinc, covered with a flux of sal-ammoniac, said flux containing zinc and iron salts, the bath forming upon the surface of the articles a zinc-iron alloy, and forming upon the zinc-iron alloy, an alloy of lead, tin and zinc.

5 The herein described process of applying a protective coating to metallic articles, which consists in introducing metallic articles into a bath containing lead and zinc substantially up to the saturation point, and periodically adding zinc in such proportions as will maintain the zinc content at a uniform percentage in the bath at temperatures less than the melting point of zinc.

[Claims 6 and 7 not printed in the Gazette.]

1,155,318. WORK-SUPPORT FOR SEWING-MACHINES. FRANK W. MERRICK, Boston, Mass., assignor to Union Lock Stitch Company, Boston, Mass., a Corporation of Maine. Filed Nov. 25, 1912. Serial No. 733,298. (Cl. 112—20.)



1. The combination with a support, of a work-rest pivotally mounted thereon, with its pivotal axis parallel with the direction of feed and passing through the stitching point, the said work-rest adapted to conform to the inclination of work in contact therewith by tilting about the said axis.

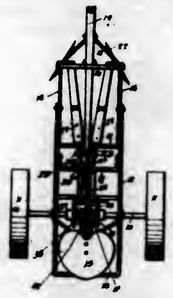
2. The combination with a support, of a work-rest pivotally mounted thereon with its pivotal axis parallel with the direction of feed and substantially in the work-contacting surface of the work-rest, the said work-rest adapted to conform to the inclination of work in contact therewith by tilting about the said axis.

3. The combination with a support, of a work-rest pivotally mounted thereon with its pivotal axis located substantially in the work-contacting surface thereof, extending parallel with the direction of feed and passing through the stitching point.

1,155,319. BEET-HARVESTER. CHRISTIAN C. MOLLER and JENS J. BOLLERUP, Audubon, Iowa. Filed May 4, 1914. Serial No. 836,383. (Cl. 55—106.)

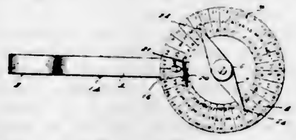
1. In a device of the class described, a second frame, a first frame tiltably mounted with relation thereto, furrow opening devices carried by said second frame and adapted to open parallel furrows on opposite sides of a row of beets or the like, rollers mounted rearwardly of the furrow opening devices substantially horizontally, said rollers being gradually increased in their size from their forward to their rearward ends, the forward ends of said rollers traveling in said furrows while their rearward ends are inclined toward each other, gripping devices on said rollers, traction wheels on the first frame, and means for imparting movement from the traction wheels to the rollers in any of the relative positions of the frames.

2. In a device of the class described, a second frame, a first frame tiltably mounted with relation thereto, traction wheels supporting said first frame, opposite downwardly extending arms on the second frame, rotary furrow opening means on the lower ends of said arms, opposite downwardly extending arms on the rear portion of said second frame arranged in alinement longitudinally of the machine with the respective first described downwardly extending arms, rollers arranged longitudinally of the machine and rotatably mounted in said downwardly extending arms and adapted to travel in the furrows



opened by said furrow opening devices, and to engage beets and the like of different sizes in the space between the furrows for pulling them out of the ground, and means for imparting rotation to the rollers from said wheels in any of the relative positions of the arms.

1,155,320. TOY PISTOL. FRANK H. OLTHOFF, Kent, Ill. Filed Mar. 1, 1915. Serial No. 11,299. (Cl. 46—56.)



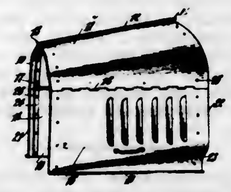
1. In a toy pistol, a stock, a handle formed upon one end of said stock, a dial carried by the end of said stock remote from said handle, an indicating hand rotatably mounted upon said dial, a spiral spring carried by said stock and having one end extending upwardly through said dial for engagement with said indicating hand, means engaging said indicating hand for arresting movement thereof and holding said spring under tension, and means for releasing said restraining means.

2. In a toy pistol, a stock, a handle formed upon one end of said stock, a dial carried by the end of said stock remote from said handle, an indicating hand rotatably mounted upon said dial, a spiral spring carried by said stock and having one end extending upwardly through said dial for engagement with said indicating hand, a trigger rod pivotally carried by said stock and having one end extending upwardly through said dial for engagement with said indicating hand for holding said spring under tension and arresting movement of said indicating hand.

1,155,321. AUTOMOBILE-HOOD. HARRY FUTTERMAN, New York, N. Y., assignor to Superior Lamp Mfg. Co., a Corporation of New York. Filed Mar. 4, 1915. Serial No. 12,102. (Cl. 74—56.)

1. In a device of the character described, the combination, with an automobile having a radiator frame provided with parallel side pieces, having hood-fastening means thereon, of a hood-supporting member detachably secured to the dashboard of the atuomobile of a height and width substantially greater than the radiator, hinged members supported between the radiator and the said support and inclined outwardly from the radiator to the said support, and provided at the lower edges thereof with recessed portions adapted to be engaged by the fastening means of the said parallel side pieces of the radiator frame.

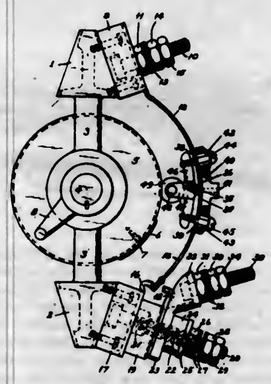
2. In a device of the character described, the combination, with an automobile having a radiator frame provided with parallel side pieces having hood-fastening means thereon, of a hood-supporting member detachably secured to the dashboard of the automobile of a height and width substantially greater than the radiator, hinged members supported between the radiator and the said support, and inclined outwardly from the radiator to the said support, and having the lower portions thereof recessed to form the lower edges parallel with the parallel side pieces of the frame, the said lower edges adapted to be engaged by the fastening means of the said parallel side pieces.



3. In a device of the character described, the combination, with an automobile having a radiator frame provided with parallel side pieces, having hood-fastening means thereon, of a hood-supporting member detachably secured to the dashboard of the automobile, of a height and width substantially greater than the radiator, the lower ends of the said support being inclined inwardly to the parallel side pieces of the frame, hinged members supported between the radiator and the said support and inclined outwardly from the radiator to the said support, and having the lower portions thereof recessed to form the lower edges parallel with the said parallel side pieces of the frame, the said lower edges adapted to be engaged by the fastening means of the said parallel side pieces.

4. A device of the character described comprising a supporting member detachably secured to the dash-board of an automobile, of a height and width substantially greater than the radiator of the automobile, hinged members supported between the radiator and the said support, and inclined from the radiator to the said support, and having their lower ends adapted to be secured to the frame of the automobile, and reinforcing means on the said hinged members abutting the radiator and the said support.

1,155,322. ELECTRIC-CIRCUIT-TIMING DEVICE. RICHARD C. LEAKE, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed Apr. 17, 1915. Serial No. 21,988. (Cl. 123—166.)



1. An electric circuit timing device comprising a contact finger, a rocking part held thereto, means adjusting the rocking part relatively to the finger, and a cam adapted to simultaneously move said mutually adjusted rocking part and finger for controlling one or more electric circuits through the finger at different times predetermined by relative adjustment of the rocking part and finger.

2. An electric circuit timing device comprising a contact finger, a rocking part held thereto, means adjusting the rocking part relatively to the finger, a drum, and a cam on the drum adapted to simultaneously move said mutually adjusted rocking part and finger for controlling one or more electric circuits through the finger at different times predetermined by relative adjustment of the rocking part and finger.

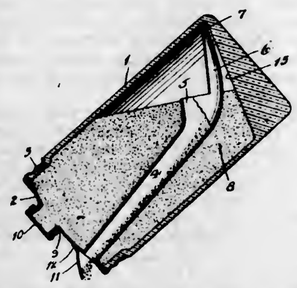
3. An electric circuit timing device comprising a contact finger, a rocking part fulcrumed thereat, means adjusting the rocking part relatively to the finger, and a cam adapted to simultaneously move said mutually adjusted rocking part and finger for controlling one or more electric circuits through the finger at different times predetermined by relative adjustment of the rocking part and finger.

4. An electric circuit timing device comprising a contact finger, a rocking part fulcrumed thereat, two screws adjusting and locking the bracket relatively to the finger, and a cam adapted to simultaneously move said mutually adjusted rocking part and finger for controlling one or more electric circuits through the finger at different times predetermined by relative adjustment of the rocking part and finger.

5. An electric circuit timing device comprising a contact finger, a rocking part held thereto, an insulating roller journaled to said rocking part, means adjusting said rocking part and roller relatively to the finger, and a cam adapted by action on the roller to move said mutually adjusted rocking part and finger for controlling one or more electric circuits through the finger at different times predetermined by relative adjustment of the rocking part and finger.

[Claims 6 to 14 not printed in the Gazette.]

1,155,323. SUGAR CONTAINER AND DISPENSER. WILLIAM VERNON MCBROOM, Kankakee, Ill., assignor of one-half to Victor McBroom, Kankakee, Ill. Filed Nov. 5, 1914. Serial No. 870,491. (Cl. 221—98.)



1. A device of the character described comprising a container, a removable closure therefor, a discharge spout within said container and secured to said closure and discharging therethrough, a shallow oval shaped bowl member secured on the lower end of said spout and extending in proximity to the junction of the wall and bottom of said container, the bottom of said container being inclined downwardly toward the point of said spoon.

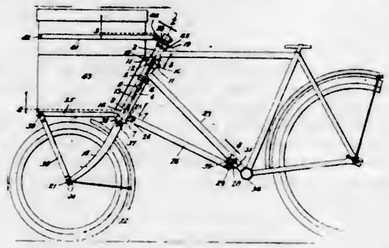
2. A device of the character described comprising a cylindrical container, the outside face of the bottom of said container being flat, and the inside face of said bottom inclined to the outside face, a detachable screw top secured on said container, said top having an opening therein closed by a screw cap, a discharge spout disposed in an inclined direction within said container and

connected with and discharging through said top, and a spoon formed on the bottom end of said discharge spout, the point of said spoon being in close proximity with the lowest inside point of said container.

3. A device of the character described comprising a cylindrical container, a removable closure on said container, a discharge spout within said container and secured to said closure and discharging therethrough, said spout being of much greater dimensions at its lower end than at its upper end, the lower end of said spout flaring outwardly to form a receiving portion, and a spoon secured to said flaring portion of said spout, the flared portion also serving as a shield to prevent an excess of the material entering said tube.

4. A device of the character described comprising a cylindrical container, a removable closure on said container, a discharge spout within said container and secured to said closure and discharging therethrough, said spout having its bottom portion flared outwardly to form a receiving portion, and an ovoid bowl portion secured at an angle to said spout.

1,155,324. BICYCLE ATTACHMENT. AUGUST D. MEISELBACH, Chicago, Ill., assignor to Handy Bicycle Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 13, 1914. Serial No. 871,949. (Cl. 208—45.)



1. An attachment for bicycles for the purpose specified, comprising, in combination, a steering-head extension arranged to extend downwardly from and in alinement with the standard head, means for rigidly attaching the same to said head, rearwardly extended bracing means for connecting the lower end of said head extension to the main frame, a steering shaft arranged to extend through said standard and extension steering heads and a steering fork and wheel, the latter having a diameter adapted to support the forward end of the main frame at substantially normal height.

2. An attachment for bicycles for the purpose specified, comprising in combination, a steering-head extension arranged to extend downwardly from and in alinement with the standard head, means for rigidly attaching the same to said head, rearwardly extended bracing means for connecting the lower end of said head extension to the main frame, a steering shaft arranged to extend through said standard and extension steering-heads, a steering fork connected with said shaft, a steering wheel of reduced diameter to permit the standard head to remain at substantially normal height, a parcel carrier and means for supporting the same with its center of gravity at the lowest practical level above said wheel, said carrier being secured to and adapted to turn with the steering shaft.

3. An attachment for bicycles, consisting of the combination with a standard steering-head, of a steering-head extension, means for securing the same to the lower end of said steering-head, adjustable bracing means for connecting the lower end of said head extension to the main frame, a steering shaft arranged to extend through said standard and extension steering heads, a steering fork connected with said shaft, a steering-wheel having its diameter reduced in proportion to the relative extension of said steering-head, a parcel carrier and means connected with the steering shaft and fork for sustaining said carrier, immediately above said steering wheel.

4. An attachment for bicycles, consisting of the combination with a standard steering head, of a steering-head extension, means for securing the same to the lower end of said steering-head, bracing means for connecting the lower end of said steering-head, bracing means for connecting the lower end of said head extension to the main frame, a steering shaft arranged to extend through standard and extension steering-heads, a steering fork connected with said shaft, a steering wheel the diameter of which is reduced in proportion to the relative extension of said steering-head, a parcel carrier and means in detachable connection with the steering-shaft and fork for sustaining said carrier with its center of gravity at the lowest practical level above said steering wheel.

5. An attachment for bicycles for the purpose specified, comprising in combination a steering head extension arranged to connect with the lower end of a standard steering-head, means upon said extension for the reception of retaining rods clamping means upon said head and means for connecting said clamping means with said retaining rods.

1,155,325. MANUFACTURE OF RUBBER BANDS. THOMAS W. MILLER, Ashland, Ohio, assignor to The Faultless Rubber Company, Ashland, Ohio, a Corporation of Ohio. Filed Feb. 28, 1914. Serial No. 821,704. (Cl. 18—56.)

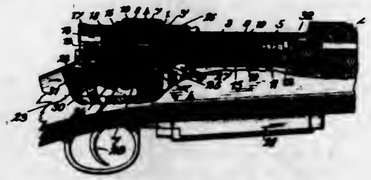
1. The process of making elastic rubber bands, which consists in assembling the rubber in suitable form in a tube mold, simultaneously applying pressure and heat to the mold to unite and vulcanize the rubber into a tube, and finally cutting said tube into rubber band widths.

2. The process of making elastic bands, which consists in assembling suitable pieces of rubber in a tube mold, applying pressure and heat to the mold to unite the edges of said pieces into a tube and to vulcanize the same, and finally cutting said tube into rubber band widths.

3. The process of making elastic rubber bands which consists in assembling the rubber in a tube mold, applying pressure and heat to the mold to unite and vulcanize the rubber into a tube having a thickened portion along its united edge, and finally cutting said tube into rubber band widths.

4. The process of making elastic rubber bands, which consists in assembling suitable pieces of rubber in a tube mold, applying pressure and heat to the mold to unite the edges of said pieces into a tube having said united edges thickened and to vulcanize the same, and finally cutting said tube into rubber band widths.

1,155,326. SAFETY MECHANISM FOR STRAIGHT-PULL BREECH-ACTIONS OF MILITARY RIFLES. HANS STAMM, St. Gallen, Switzerland, assignor to the Firm of Adolph Saurer, Arbon, Switzerland. Filed May 27, 1915. Serial No. 30,773. (Cl. 42—16.)



1. In a straight pull breech action for military rifles, a breech frame, a rotary breech bolt therein, a striking apparatus in the breech bolt comprising a striker having a safety arm, a striker spring, and a striker nut screwed on the striker and having a lug, said striker capable of rotating relatively to said nut, and a guide sleeve for the striker movably fixed in the back part of the breech bolt and receiving said nut and safety arm, said sleeve being provided with means to hold the striker by the tension of the striker spring at safety and at release.

2. In a straight pull breech action for military rifles, a breech frame, a rotary breech bolt therein, a striking apparatus located in the breech bolt and comprising a striker having a safety arm, a striker spring, and a striker nut screwed on the striker and having a lug, said striker capable of rotating relatively to said nut, a guide sleeve for the striker movably fixed in the back part of the breech bolt and having an enlarged rear part to receive said nut and the safety arm, said sleeve having two lateral diametrically opposite notches into which the safety arm can be inserted by a rotary movement and be held therein by the tension of the striking spring for the purpose of placing the striker at safety and at release.

3. In a straight pull breech action for military rifles, a breech frame, a rotary breech bolt therein, a striking apparatus in the breech bolt comprising a striker having a safety arm, a striker spring, and a striker nut screwed on the striker and having a lug, the striker capable of rotating relatively to said nut, a guide sleeve for the striker movably fixed in the back part of the breech bolt and having an enlarged rear part with a cylindrical bore to receive said nut and the head of the striker, said sleeve having two lateral diametrically opposite notches of different depth into which the safety arm can be inserted by a rotary movement and be held therein by the tension of the striking spring for the purpose of placing the striker at safety and at release, and means to catch and cock the striker by the axial movement resulting therefrom.

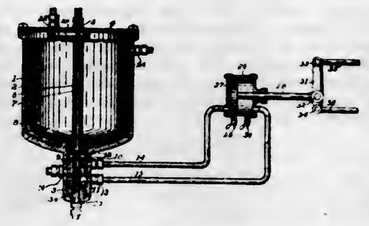
4. In a straight pull breech action for military rifles, a breech frame, a rotary breech bolt therein, a striking apparatus in the breech bolt comprising a striker having a safety arm, a striker spring, a striker nut screwed on the striker and having a lug, said striker capable of rotating relatively to said nut, a guide sleeve for the striker movably fixed in the back part of the breech-bolt and having an enlarged rear part to receive the striker nut and the head of the striker, said sleeve having two lateral diametrically opposite notches into which the safety arm can be inserted by a rotary movement and be held therein by the tension of the striking spring for the purpose of placing the striker at safety and at release, and a sear lug adapted to catch the striker by the striker lug and to cock the striker by the axial movement resulting therefrom to bring the striker in the released and safety position.

5. In a straight pull breech action for military rifles, a breech frame, a rotary breech bolt therein, a striking apparatus in the breech bolt comprising a striker having a safety arm, a striker spring, a striker nut screwed on the striker and having a lug, said striker capable of rotating relatively to the nut, a guide sleeve for the striker movably fixed in the back part of the breech bolt and having an enlarged rear part to receive the striker nut and the head of the striker, said sleeve having two lateral diametrically opposite notches into which the safety arm can be inserted by a rotary movement and be held therein by the tension of the striking spring for the purpose of placing the striker at safety and at release, means to cock the striker in the securing movement, and means on the safety arm to prevent the cocked striker from rotating while in the safety position and immediately before firing.

[Claims 6 to 8 not printed in the Gazette.]

1,155,327. DEVICE FOR REGULATING THE WATER-LEVEL IN BOILERS. JOHN LEE, Stuart, Iowa, assignor of one-half to Peter J. Basten, Oelwein, Iowa. Filed Oct. 27, 1913. Serial No. 797,532. (Cl. 137—101.)

1. A device for regulating the water-level in boilers, comprising a cylinder containing a piston whose rod extends externally thereof, an arm to which said piston is pivotally connected intermediate its ends, connecting-rods from the ends of said arm to the steam and water admission valves of an injector, a closed vessel having a diminished basal portion, the latter provided with spaced exit-ports and an exhaust-port out of line therewith, a valve movable in said diminished end past said ports and having a central longitudinal hollow closed at the lower end, and also having orifices adapted to effect occasional communication between the said hollow and said exit-ports alternately, communications between said exit-ports respectively, and opposite ends of said cylinder, a float in said vessel connected to said valve, said vessel having a valve-controlled communication with a boiler, and a conduit in communication between the steam-dome of the boiler and the hollow of said valve, said float when moved down by water entering from the boiler being adapted to move the valve to shift the steam from one of said exit-ports to the other, and when caused to rise by steam entering the vessel from the boiler, to reëstablish communication between the hollow of the valve and the other exit-port.



2. A device for regulating the water-level in boilers, comprising a cylinder containing a piston whose rod extends externally thereof, an arm to which said piston is pivotally connected intermediate its ends, connecting-rods from the ends of said arm to the steam and water admission-valves of an injector, a closed vessel having a diminished basal portion, the latter provided with spaced exit-ports and an exhaust-port, said vessel having a water overflow port, a valve movable in said diminished end past said exit and exhaust ports and having a central longitudinal hollow closed at the lower end, and also having orifices adapted to effect occasional communication between the said hollow and said exit-ports alternately, communications between said exit-ports respectively and opposite ends of said cylinder, a steam-pipe leading centrally through said vessel and extending into the hollow of said valve, and in communication with the steam-dome of a boiler, and having orifices adapted for occasional communication with the valve-orifices respectively when said valve is moved past them, said vessel being in communication with the water-containing interspace of said boiler, a cup-shaped float fixedly connected with said valve and seated about said steam-pipe, a fixed hollow tube in communication with the overflow-port of said vessel and with the interior of said cup-shaped float, the lower end of said tube detachably fitting the inner part of said float fittingly when the float is in its uppermost position, said tube being seated about and spaced from said steam-pipe, and said float, when moved down by water entering the vessel from the boiler, lowering said valve to cause communication through the valve to one side of said cylinder, and when lifted, to shift communication from the steam-pipe to the opposite end of said cylinder.

1,155,328. HAND BRAKE MECHANISM. HERBERT MAUSK, Lakewood, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 14, 1915. Serial No. 39,743. (Cl. 188—59.)



1. In hand brake mechanism, a brake shaft, a sleeve on said shaft, and means for attaching a chain to the sleeve,

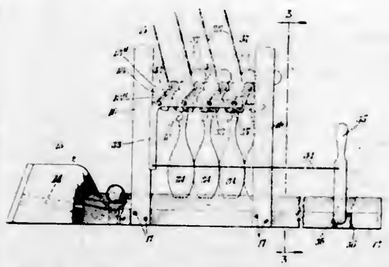
said means consisting of a link having a portion extending into the interior of the sleeve and held thereagainst by the brake shaft.

2. In brake mechanism, a brake shaft, and a sleeve apertured for reception of the end link of a brake chain, a portion of said link being bent at an angle to the part of the link to which the chain is attached, said angled portion being held in the interior of the sleeve and in operative position by the brake shaft.

3. In hand brake mechanism, a brake shaft, and a sleeve rotatably connected with said shaft, said sleeve having an aperture for reception of an end link of the brake chain, said link having an angled portion adapted for insertion into said sleeve before the insertion of the brake shaft therein, and being adapted to be held in operative position within said sleeve by said brake shaft.

4. In brake mechanism, a brake shaft, and a sleeve apertured for reception of a brake chain securing member, said securing member being of U-shape and its ends having a bearing against the interior of the sleeve and being held thereagainst by the brake shaft.

1,155,329. BOWLING-ALLEY. KARL G. DIETERICH, New York, N. Y. Filed Nov. 2, 1914. Serial No. 869,785. (Cl. 46—66.)



1. In a bowling alley, the combination with a series of pins, means for yieldingly suspending said pins, of a series of indicating members loosely engaging said pins and partly surrounding the same adjacent to their suspended ends so as to be operated thereby, resetting means for said indicating members, and means for actuating said resetting means to restore said indicating members after the same have been tripped by the pins, substantially as specified.

2. In a bowling alley, the combination with a support and a series of pins, of means for yieldingly suspending said pins, pivotally supported indicating members for said pins, means on said indicating members adapted to engage with said pins in order to trip said indicating members when said pins are oscillated, and means for resetting said indicating members after the same have been tripped by said pins, substantially as specified.

3. In a bowling alley, the combination with a support and a series of pins, of means for yieldingly suspending said pins, a series of indicating members corresponding in number with said pins and pivotally supported above the same, means arranged upon said indicating members below their points of support adapted to engage with said pins whereby to trip said indicating members when said pins are oscillated, and means for quickly restoring said pins to their positions of rest after said pins have tripped said indicating members, substantially as specified.

4. In a bowling alley, the combination with a support and a series of pins, of means for yieldingly suspending said pins, a series of indicating members corresponding in number with said pins and pivotally supported above the same, means arranged upon said indicating members below their points of support adapted to engage with said pins whereby to trip said indicating members when said pins are oscillated, and weights disposed upon the upper ends of said pins for quickly restoring the same to their positions of rest after said pins have tripped said indicating members, substantially as specified.

5. In a bowling alley, the combination with a support and a series of pins, of means for yieldingly suspending said pins, a series of indicating members corresponding in number with said pins and pivotally supported above the same, means arranged upon said indicating members below their points of support adapted to engage with said pins whereby to trip said indicating members when said pins are oscillated, and weights slidably disposed upon the suspending means for said pins and resting upon the upper ends thereof for quickly restoring the same to their positions of rest after said pins have tripped said indicating members, substantially as specified.

[Claims 6 to 11 not printed in the Gazette.]

1,155,330. PROCESS FOR PRODUCING HEAT-INSULATING BOARDS FROM FIBROUS MATERIAL. JAMES E. LAPPEN, Winona, Minn., assignor to Union Fibre Company, Winona, Minn., a Corporation of Minnesota. Filed Apr. 26, 1915. Serial No. 23,881. (Cl. 154—28.)

1. The process of felting fibrous materials, which consists in applying jets of water under pressure to a layer of stock, while the stock is moved beneath the jets, and then draining the water from the stock.

2. The process of manufacturing self-sustaining boards from fibrous material, which consists in first spreading the stock while wet upon a traveling conveyer provided with drainage facilities, second, in applying to said fibrous material upon said conveyer a plurality of vertical jets of water under pressure and allowing said water to escape, whereby said material is felted into a homogeneous sheet, third, in compressing said sheet and finally in drying the same.

3. The process of manufacturing self-sustaining boards from fibrous material, which consists in first spreading the stock upon a platform provided with drainage facilities, second, in applying to said fibrous material a plurality of jets of water under pressure and allowing said water to escape, while the platform or jets are moved in a substantially horizontal plane, third, in compressing said stock and finally in drying the same.

REISSUES.

13,988. MOLD FOR MAKING RUBBER ARTICLES. WILLIAM EGGERS, New York, N. Y. Filed June 25, 1914. Serial No. 847,564. Original No. 1,049,688, dated Jan. 7, 1913, Serial No. 586,968. (Cl. 18—47.)

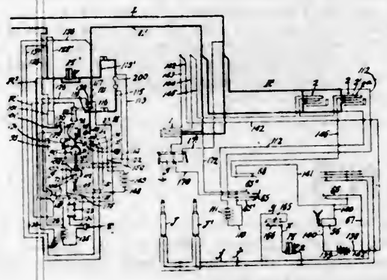
1. A mold for making and vulcanizing rubber articles made of soft metal having the interior thereof solid and swaged to a highly polished surface.

2. A mold for making and vulcanizing rubber articles, comprising a cast solid soft metal member of shell form, having its interior swaged to a highly polished surface, and having its shell-like walls of substantially equal thickness.

13,989. SELECTIVE SYSTEM OF TELEPHONY. RUBEN C. M. HASTINGS, Columbus, Ohio, assignor to The International Telephone Co., Columbus, Ohio. Filed May 8, 1915. Serial No. 26,914. Original No. 1,061,285, dated May 13, 1913, Serial No. 646,697. (Cl. 179—32.)

1. In a system of selective telephony, the combination of an exchange and a plurality of subscribers' instruments connected in a talking circuit, a selecting instrument at the exchange, and a shunt operating device in each subscriber's instrument influenced only by the selecting instrument to shunt the uncalled subscribers' instruments from the talking circuit and at the same time open all the transmitter circuits to the batteries in the instruments so shunted.

2. In a system of selective telephony, the combination of an exchange and a plurality of sets of subscribers' instruments connected for the transmission of intelligence, said exchange having manually operated means for selecting a subscriber's set and shunting the uncalled sets, and automatically operated means for signaling the called set, said selecting means being the sole instrumentality for selecting and signaling a called set, and for shunting the uncalled sets.



3. In a system of selective telephony, the combination of an exchange and a plurality of sets of subscribers' instruments connected for the transmission of intelligence, said exchange having means for selecting the desired set, signaling the same, and shunting all uncalled sets from the system, said selecting means being the sole instrumentality for selecting and signaling a called set, for shunting the uncalled sets, and for connecting all sets to the line for communication with the exchange.

4. In a system of selective telephony, the combination of an exchange and a plurality of sets of subscribers' instruments, each set having a transmitter, receiver, a call-up device and a receiver locking and shunting device, said exchange and sets being connected for the electrical transmission of speech, and mechanism mounted at the exchange and manually operated to connect any two of the subscribers' sets for communication, to operate the shunting devices in the remaining sets to isolate them from the line, and for automatically operating the call-up device of the set called, and auxiliary means mounted in said mechanism for repeating the signal.

5. In a system of selective telephony, the combination of an exchange and a plurality of subscribers' sets of instruments, including a transmitter, a receiver, a call-up alarm, a shunting device and a visual indicator, said exchange and subscribers' sets of instruments being electrical communication, and mechanism mounted at the exchange and manually operated to connect any two of the subscribers' sets of instruments for communication, to operate the shunting devices and visual indicators in the remaining sets of instruments, and for automatically operating the call-up alarm of the set selected.

6. In a system of selective telephony, the combination of an exchange and a plurality of subscribers' sets of instruments, including each a shunting device, a visual indicator, a transmitter, a receiver and a call-up device, said exchange and subscribers' sets of instruments being in electrical communication, and a selecting device at the exchange for selecting any one set for connection with a calling set, said device automatically operating the call-up device in the selected set, giving a visual indication in all sets, and shunting all sets except the called and calling set.

7. In a telephone system, the combination with an exchange station having a selecting apparatus, of a series of subscribers' sets of instruments connected with the exchange station for the transmission of intelligence, each having a local battery circuit, a shunting device controlled from the exchange through the selecting apparatus, and a visual signal operable by said shunting device to indicate the condition of the local battery circuit relatively to the transmitting circuit.

8. In a selective system of telephony, the combination of an exchange and a plurality of sets of subscribers' instruments connected electrically for the transmission of intelligence, a manually operated selecting device in the exchange and connected in the line, a receiver hook lock in each subscriber's set, means controlled by the selecting device to cause said lock to be engaged or freed, and a shunting connection with the line at each subscriber's set controlled by said lock, whereby when two sets are connected for communication all of the other receiver hooks are locked and the sets are shunted from the line.

9. In a selective system of telephony, the combination of an exchange and a plurality of sets of subscribers' instruments connected electrically for the transmission of intelligence, a manually operated selecting device in the exchange and connected in the line, a receiver hook lock in each subscriber's set, means controlled by the selecting device to cause said lock to be engaged or freed, a shunting connection with the line at each subscriber's set controlled by said lock, whereby when two sets are connected for communication all of the other receiver hooks are locked and the sets are shunted from the line, and a signal device controlled by each lock controlling means to indicate the line condition of its respective subscriber's set.

10. In a selective system of telephony, the combination of an exchange, and a plurality of sets of subscribers' instruments connected electrically for the transmission of intelligence, a manually operated selecting device in the exchange and connected in the line, a receiver hook lock in each subscriber's set, means controlled by the selecting device to cause said lock to be engaged or freed, and a shunting connection with the line at each subscriber's set controlled by said lock, whereby when two sets are connected for communication all of the other sets are shunted from the line.

11. In a selective system of telephony, the combination of an exchange, and a plurality of sets of subscribers' instruments connected electrically for the transmission of intelligence, a manually operated selecting device in the exchange and connected in the line, a receiver hook lock in each subscriber's set, means controlled by the selecting device to cause said lock to be engaged or freed, a shunting connection with the line at each subscriber's set controlled by said lock, whereby when two sets are connected for communication all of the other sets are shunted from the line, and a signal device controlled by each lock controlling means to indicate the line condition of its respective subscriber's set.

12. A selective system of telephony, having an exchange, and a plurality of subscribers' sets of instruments connected electrically for the transmission of intelligence, a selecting device at the exchange, a lock out device in each subscriber's set influenced by the selecting device, a shunt connection with the line at each subscriber's set actuated by the lock out device, and a signal device in each subscriber's set, the placing into communication of two subscribers' sets, actuating all signal devices to indicate their condition relatively to the line while the shunt connections in all other sets than the calling and called sets are closed and the instruments shunted from the line.

13. In a system of selective telephony, the combination of an exchange and a plurality of subscribers' instruments connected in a talking circuit, a selecting instrument at the exchange, and a shunt operating and receiver hook locking device in each subscriber's instrument influenced only by the selecting instrument to shunt the uncalled subscribers' instruments from the talking circuit.

14. In a system of selective telephony, the combination of an exchange and a plurality of sets of subscribers' instruments connected for the transmission of intelligence and including a line shunt, a receiver hook lock and a device for controlling the shunt and receiver hook lock, said exchange having manually operated means for selecting a subscriber's set and shunting the uncalled sets, said selecting means being the sole instrumentality for selecting a called set, and for simultaneously operating the line shunts and receiver hook locks of the uncalled sets.

15. In a system of selective telephony, the combination of an exchange station and a plurality of substations connected for the electrical transmission of intelligence, each substation having a transmitter, a receiver, a call-up de-

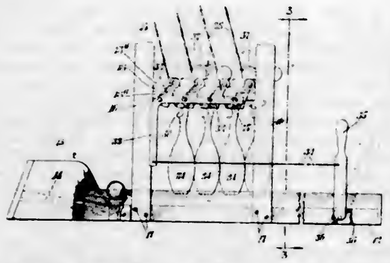
said means consisting of a link having a portion extending into the interior of the sleeve and held thereagainst by the brake shaft.

2. In brake mechanism, a brake shaft, and a sleeve apertured for reception of the end link of a brake chain, a portion of said link being bent at an angle to the part of the link to which the chain is attached, said angled portion being held in the interior of the sleeve and in operative position by the brake shaft.

3. In hand brake mechanism, a brake shaft, and a sleeve rotatably connected with said shaft, said sleeve having an aperture for reception of an end link of the brake chain, said link having an angled portion adapted for insertion into said sleeve before the insertion of the brake shaft therein, and being adapted to be held in operative position within said sleeve by said brake shaft.

4. In brake mechanism, a brake shaft, and a sleeve apertured for reception of a brake chain securing member, said securing member being of U-shape and its ends having a bearing against the interior of the sleeve and being held thereagainst by the brake shaft.

1,155,329. BOWLING-ALLEY. KARL G. DIETERICH, New York, N. Y. Filed Nov. 2, 1914. Serial No. 869,785. (Cl. 46—66.)



1. In a bowling alley, the combination with a series of pins, means for yieldingly suspending said pins, of a series of indicating members loosely engaging said pins and partly surrounding the same adjacent to their suspended ends so as to be operated thereby, resetting means for said indicating members, and means for actuating said resetting means to restore said indicating members after the same have been tripped by the pins, substantially as specified.

2. In a bowling alley, the combination with a support and a series of pins, of means for yieldingly suspending said pins, pivotally supported indicating members for said pins, means on said indicating members adapted to engage with said pins in order to trip said indicating members when said pins are oscillated, and means for resetting said indicating members after the same have been tripped by said pins, substantially as specified.

3. In a bowling alley, the combination with a support and a series of pins, of means for yieldingly suspending said pins, a series of indicating members corresponding in number with said pins and pivotally supported above the same, means arranged upon said indicating members below their points of support adapted to engage with said pins whereby to trip said indicating members when said pins are oscillated, and means for quickly restoring said pins to their positions of rest after said pins have tripped said indicating members, substantially as specified.

4. In a bowling alley, the combination with a support and a series of pins, of means for yieldingly suspending said pins, a series of indicating members corresponding in number with said pins and pivotally supported above the same, means arranged upon said indicating members below their points of support adapted to engage with said pins whereby to trip said indicating members when said pins are oscillated, and weights disposed upon the upper ends of said pins for quickly restoring the same to their positions of rest after said pins have tripped said indicating members, substantially as specified.

5. In a bowling alley, the combination with a support and a series of pins, of means for yieldingly suspending said pins, a series of indicating members corresponding in number with said pins and pivotally supported above the same, means arranged upon said indicating members below their points of support adapted to engage with said pins whereby to trip said indicating members when said pins are oscillated, and weights slidably disposed upon the suspending means for said pins and resting upon the upper ends thereof for quickly restoring the same to their positions of rest after said pins have tripped said indicating members, substantially as specified.

[Claims 6 to 11 not printed in the Gazette.]

1,155,330. PROCESS FOR PRODUCING HEAT-INSULATING BOARDS FROM FIBROUS MATERIAL. JAMES E. LAFFEN, Winona, Minn., assignor to Union Fibre Company, Winona, Minn., a Corporation of Minnesota. Filed Apr. 26, 1915. Serial No. 23,881. (Cl. 154—28.)

1. The process of felting fibrous materials, which consists in applying jets of water under pressure to a layer of stock, while the stock is moved beneath the jets, and then draining the water from the stock.

2. The process of manufacturing self-sustaining boards from fibrous material, which consists in first spreading the stock while wet upon a traveling conveyer provided with drainage facilities, second, in applying to said fibrous material upon said conveyer a plurality of vertical jets of water under pressure and allowing said water to escape, whereby said material is felted into a homogeneous sheet, third, in compressing said sheet and finally in drying the same.

3. The process of manufacturing self-sustaining boards from fibrous material, which consists in first spreading the stock upon a platform provided with drainage facilities, second, in applying to said fibrous material a plurality of jets of water under pressure and allowing said water to escape, while the platform or jets are moved in a substantially horizontal plane, third, in compressing said stock and finally in drying the same.

REISSUES.

13,988. MOLD FOR MAKING RUBBER ARTICLES. WILLIAM EGGERS, New York, N. Y. Filed June 25, 1914. Serial No. 847,564. Original No. 1,049,688, dated Jan. 7, 1913, Serial No. 586,968. (Cl. 18—47.)

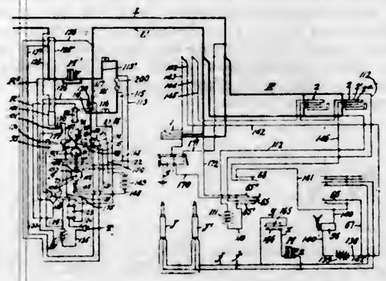
1. A mold for making and vulcanizing rubber articles made of soft metal having the interior thereof solid and swaged to a highly polished surface.

2. A mold for making and vulcanizing rubber articles, comprising a cast solid soft metal member of shell form, having its interior swaged to a highly polished surface, and having its shell-like walls of substantially equal thickness.

13,989. SELECTIVE SYSTEM OF TELEPHONY. RUBEN C. M. HASTINGS, Columbus, Ohio, assignor to The International Telephone Co., Columbus, Ohio. Filed May 8, 1915. Serial No. 26,914. Original No. 1,061,285, dated May 13, 1913, Serial No. 646,697. (Cl. 179—32.)

1. In a system of selective telephony, the combination of an exchange and a plurality of subscribers' instruments connected in a talking circuit, a selecting instrument at the exchange, and a shunt operating device in each subscriber's instrument influenced only by the selecting instrument to shunt the uncalled subscribers' instruments from the talking circuit and at the same time open all the transmitter circuits to the batteries in the instruments so shunted.

2. In a system of selective telephony, the combination of an exchange and a plurality of sets of subscribers' instruments connected for the transmission of intelligence, said exchange having manually operated means for selecting a subscriber's set and shunting the uncalled sets, and automatically operated means for signaling the called set, said selecting means being the sole instrumentality for selecting and signaling a called set, and for shunting the uncalled sets.



3. In a system of selective telephony, the combination of an exchange and a plurality of sets of subscribers' instruments connected for the transmission of intelligence, said exchange having means for selecting the desired set, signaling the same, and shunting all uncalled sets from the system, said selecting means being the sole instrumentality for selecting and signaling a called set, for shunting the uncalled sets, and for connecting all sets to the line for communication with the exchange.

4. In a system of selective telephony, the combination of an exchange and a plurality of sets of subscribers' instruments, each set having a transmitter, receiver, a call-up device and a receiver locking and shunting device, said exchange and sets being connected for the electrical transmission of speech, and mechanism mounted at the exchange and manually operated to connect any two of the subscribers' sets for communication, to operate the shunting devices in the remaining sets to isolate them from the line, and for automatically operating the call-up device of the set called, and auxiliary means mounted in said mechanism for repeating the signal.

5. In a system of selective telephony, the combination of an exchange and a plurality of subscribers' sets of instruments, including a transmitter, a receiver, a call-up alarm, a shunting device and a visual indicator, said exchange and subscribers' sets of instruments being electrical communication, and mechanism mounted at the exchange and manually operated to connect any two of the subscribers' sets of instruments for communication, to operate the shunting devices and visual indicators in the remaining sets of instruments, and for automatically operating the call-up alarm of the set selected.

6. In a system of selective telephony, the combination of an exchange and a plurality of subscribers' sets of instruments, including each a shunting device, a visual indicator, a transmitter, a receiver and a call-up device, said exchange and subscribers' sets of instruments being in electrical communication, and a selecting device at the exchange for selecting any one set for connection with a calling set, said device automatically operating the call-up device in the selected set, giving a visual indication in all sets, and shunting all sets except the called and calling set.

7. In a telephone system, the combination with an exchange station having a selecting apparatus, of a series of subscribers' sets of instruments connected with the exchange station for the transmission of intelligence, each having a local battery circuit, a shunting device controlled from the exchange through the selecting apparatus, and a visual signal operable by said shunting device to indicate the condition of the local battery circuit relatively to the transmitting circuit.

8. In a selective system of telephony, the combination of an exchange and a plurality of sets of subscribers' instruments connected electrically for the transmission of intelligence, a manually operated selecting device in the exchange and connected in the line, a receiver hook lock in each subscriber's set, means controlled by the selecting device to cause said lock to be engaged or freed, and a shunting connection with the line at each subscriber's set controlled by said lock, whereby when two sets are connected for communication all of the other receiver hooks are locked and the sets are shunted from the line.

9. In a selective system of telephony, the combination of an exchange and a plurality of sets of subscribers' instruments connected electrically for the transmission of intelligence, a manually operated selecting device in the exchange and connected in the line, a receiver hook lock in each subscriber's set, means controlled by the selecting device to cause said lock to be engaged or freed, a shunting connection with the line at each subscriber's set controlled by said lock, whereby when two sets are connected for communication all of the other receiver hooks are locked and the sets are shunted from the line, and a signal device controlled by each lock controlling means to indicate the line condition of its respective subscriber's set.

10. In a selective system of telephony, the combination of an exchange, and a plurality of sets of subscribers' instruments connected electrically for the transmission of intelligence, a manually operated selecting device in the exchange and connected in the line, a receiver hook lock in each subscriber's set, means controlled by the selecting device to cause said lock to be engaged or freed, and a shunting connection with the line at each subscriber's set controlled by said lock, whereby when two sets are connected for communication all of the other sets are shunted from the line.

11. In a selective system of telephony, the combination of an exchange, and a plurality of sets of subscribers' instruments connected electrically for the transmission of intelligence, a manually operated selecting device in the exchange and connected in the line, a receiver hook lock in each subscriber's set, means controlled by the selecting device to cause said lock to be engaged or freed, a shunting connection with the line at each subscriber's set controlled by said lock, whereby when two sets are connected for communication all of the other sets are shunted from the line, and a signal device controlled by each lock controlling means to indicate the line condition of its respective subscriber's set.

12. A selective system of telephony, having an exchange, and a plurality of subscribers' sets of instruments connected electrically for the transmission of intelligence, a selecting device at the exchange, a lock out device in each subscriber's set influenced by the selecting device, a shunt connection with the line at each subscriber's set actuated by the lock out device, and a signal device in each subscriber's set, the placing into communication of two subscribers' sets, actuating all signal devices to indicate their condition relatively to the line while the shunt connections in all other sets than the calling and called sets are closed and the instruments shunted from the line.

13. In a system of selective telephony, the combination of an exchange and a plurality of subscribers' instruments connected in a talking circuit, a selecting instrument at the exchange, and a shunt operating and receiver hook locking device in each subscriber's instrument influenced only by the selecting instrument to shunt the uncalled subscribers' instruments from the talking circuit.

14. In a system of selective telephony, the combination of an exchange and a plurality of sets of subscribers' instruments connected for the transmission of intelligence and including a line shunt, a receiver hook lock and a device for controlling the shunt and receiver hook lock, said exchange having manually operated means for selecting a subscriber's set and shunting the uncalled sets, said selecting means being the sole instrumentality for selecting a called set, and for simultaneously operating the line shunts and receiver hook locks of the uncalled sets.

15. In a system of selective telephony, the combination of an exchange station and a plurality of substations connected for the electrical transmission of intelligence, each substation having a transmitter, a receiver, a call-up de-

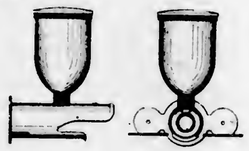
vice and a receiver hook-locking and shunting device, and manually operated means mounted at the exchange station for connecting any two of the substations for communication and for operating the shunting devices in the remaining substations to isolate them from the line, and for automatically operating the call-up device in the called substation.

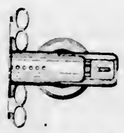
16. In a system of selective telephony, the combination of an exchange station and a plurality of substations connected for the electrical transmission of intelligence, each substation having a transmitter, a receiver, a shunting device, a receiver hook lock, and a visual indicator, and manually operated mechanism mounted at the exchange station and being the sole instrument to connect any two of the substations for communication, and to operate the shunting devices and receiver hook locks in the remaining substations, and the visual indicators in all substations.

17. In a selective system of telephony, the combination of an exchange station and a plurality of substations connected electrically for the transmission of intelligence, a manually operated selecting device in the exchange and connected to the line, a receiver hook lock at each substation, and a shunting connection with the line at each substation and means at each substation controlled by the selecting device, whereby any two substations may have their shunting connections opened while the remaining substations have their shunting connections closed and the receiver hooks locked.

DESIGNS.

47,871. DISPENSING DEVICE. LOUIS BERGMAN and JULIUS L. MENDEL, New York, N. Y., assignors to Dentor Company, New York, N. Y., a Corporation of New York. Filed Nov. 12, 1914. Serial No. 871,810. Term of patent 3½ years.





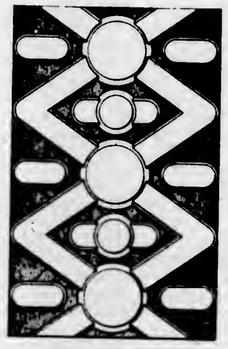
The ornamental design for a dispensing device, as described and shown.

47,872. PNEUMATIC-TIRE TREAD. PERCY B. BOSWORTH, Springfield, Ohio, assignor to The Victor Rubber Company, Springfield, Ohio, a Corporation of Ohio. Filed July 16, 1915. Serial No. 40,336. Term of patent 14 years.



The ornamental design for a pneumatic tire tread, as shown.

47,873. VEHICLE-TIRE. WILLIAM F. BOWERS, San Francisco, Cal. Filed Aug. 10, 1915. Serial No. 44,831. Term of patent 14 years.



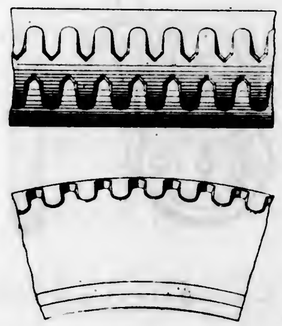
The ornamental design for vehicle tire, as shown.

47,874. CONTAINER FOR HOT-WATER BOTTLES AND FOUNTAIN-SYRINGES. LUCIAN L. BRITTON, Denver, Colo. Filed Apr. 26, 1915. Serial No. 24,161. Term of patent 14 years.



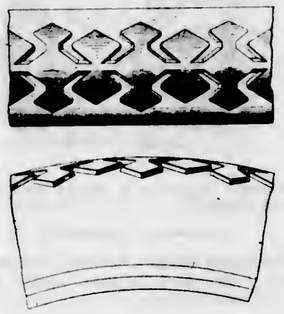
The ornamental design for a container for hot water bottle and fountain syringe, as shown.

47,875. VEHICLE-TIRE. JAMES CHRISTY, Cleveland, Ohio, assignor to The Portage Rubber Company, Barberton, Ohio, a Corporation. Filed July 12, 1915. Serial No. 39,494. Term of patent 14 years.



The ornamental design for a vehicle tire, as shown.

47,876. VEHICLE-TIRE. JAMES CHRISTY, Cleveland, Ohio, assignor to The Portage Rubber Company, Barberton, Ohio, a Corporation. Filed July 1, 1915. Serial No. 37,595. Term of patent 14 years.



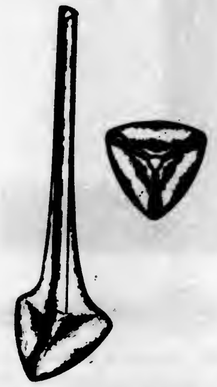
The ornamental design for a vehicle tire, as shown.

47,877. DEFLATING IMPLEMENT. CHARLES E. DELAPLAIN, Jacksonville, Ill. Filed Feb. 12, 1915. Serial No. 7,901. Term of patent 14 years.



The ornamental design for a deflating implement, as shown.

47,878. VASE. GEORGE DOUGHERTY, Tiffin, Ohio, assignor to United States Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 28, 1915. Serial No. 24,608. Term of patent 7 years.



The ornamental design for a vase, substantially as shown.

47,879. FRAME FOR ENGINE-DRIVEN FANS. LLOYD D. FREELAND, Chicago, Ill., assignor to William J. H. Strong, Chicago, Ill. Filed Apr. 15, 1915. Serial No. 21,616. Term of patent 14 years.



The ornamental design for a frame for an engine-driven fan, as shown.

47,880. TOWEL-SUPPORT. HARLOW F. GRANDY, Converse, Ind. Filed May 4, 1915. Serial No. 25,854. Term of patent 14 years.



The ornamental design for a towel support, as shown.

47,881. MOLDING. ALBERT JANSON, New York, N. Y. Filed July 19, 1915. Serial No. 40,781. Term of patent 7 years.



The ornamental design for a molding as shown.

47,882. DUST-CAP FOR VALVES OR THE LIKE. HENRY P. KRAFT Ridgewood, N. J. Filed Aug. 10, 1914. Serial No. 856,146. Term of patent 14 years.



The ornamental design for a dust cap for valves or the like as shown.

47,883. DUST-CAP FOR VALVES OR THE LIKE. HENRY P. KRAFT, Ridgewood, N. J. Filed Aug. 10, 1914. Serial No. 856,147. Term of patent 14 years.



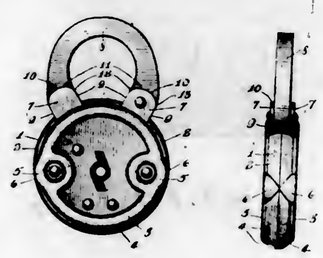
The ornamental design for a dust cap for valves or the like, as shown.

47,884. DUST-CAP FOR VALVES OR THE LIKE. HENRY P. KRAFT, Ridgewood, N. J. Filed Aug. 10, 1914. Serial No. 856,148. Term of patent 14 years.



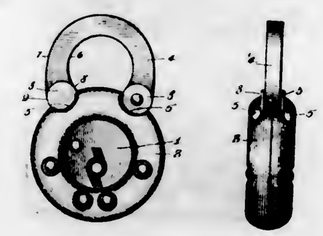
The ornamental design for a dust cap for valves or the like, as shown.

47,885. PADLOCK. JAMES F. LEMON, Syracuse, N. Y., assignor to The O. M. Edwards Company, Inc., Syracuse, N. Y., a Corporation of New York. Filed Apr. 29, 1915. Serial No. 24,819. Term of patent 3½ years.



The ornamental design for a padlock, substantially as shown and described.

47,886. PADLOCK. JAMES F. LEMON, Syracuse, N. Y., assignor to The O. M. Edwards Company, Inc., Syracuse, N. Y., a Corporation of New York. Filed Apr. 29, 1915. Serial No. 24,820. Term of patent 3½ years.



The ornamental design for a padlock, substantially as shown and described.

47,887. GRAVE-MARKER. WILLIAM J. LOGAN, Cleveland, Ohio. Filed June 16, 1915. Serial No. 34,527. Term of patent 3½ years.



The ornamental design for a grave marker, as shown.

47,888. GRAVE-MARKER. WILLIAM J. LOGAN, Cleveland, Ohio. Filed June 16, 1915. Serial No. 34,528. Term of patent 3½ years.



The ornamental design for a grave marker, as shown.

47,889. TEXTILE FABRIC. HIRAM R. MALLINSON, New York, N. Y. Filed July 23, 1915. Serial No. 41,609. Term of patent 3½ years.



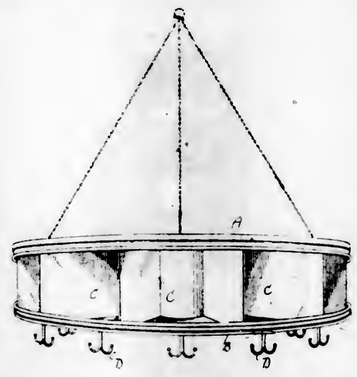
The ornamental design for a textile fabric as shown.

47,890. VEHICLE WHEEL-TIRE. ELGIN COURT MAY, Edmonton, Alberta, Canada. Filed Aug. 16, 1915. Serial No. 45,829. Term of patent 3½ years.



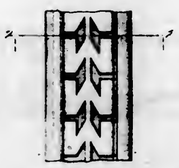
The ornamental design for a vehicle wheel tire substantially as shown.

47,891. HANGING TOILET-RACK. HOWARD C. MCDONALD, Buffalo, N. Y. Filed July 16, 1914. Serial No. 851,407. Term of patent 7 years.



The ornamental design for a hanging toilet rack, as shown and described.

47,892. TREAD FOR TIRES. JULES HAUVETTE-MICHELIN, New Brunswick, N. J., assignor to Michelin Tire Co., Milltown, N. J., a Corporation of New Jersey. Filed July 10, 1915. Serial No. 39,202. Term of patent 14 years.



The ornamental design for a tread for tires as shown.

47,893. AWL. WILLIAM CAREY PORTER, McCall Creek, Miss. Filed June 12, 1915. Serial No. 33,805. Term of patent 14 years.



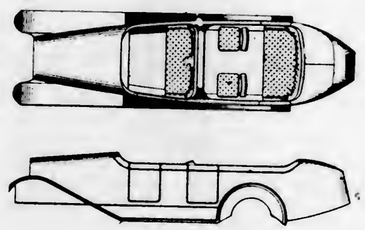
The ornamental design for an awl, as shown.

47,894. PENNANT. JOHN SAMUEL POTTER and ALEXANDER TOUGH, Niagara Falls, Ontario, Canada. Filed May 19, 1915. Serial No. 29,250. Term of patent 7 years.



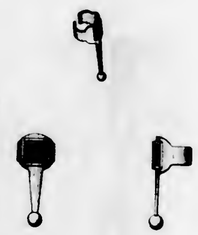
The ornamental design for a pennant, as shown.

47,895. AUTOMOBILE-BODY. FRANÇOIS RICHARD, Cleveland, Ohio. Filed Mar. 27, 1915. Serial No. 17,569. Term of patent 7 years.



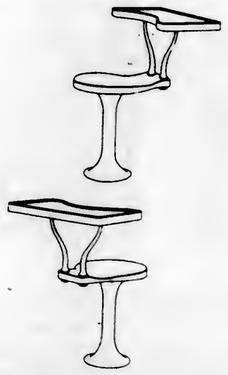
The ornamental design for an automobile body as shown.

47,896. PEN OR PENCIL CLIP. SAMUEL M. RIKER, Chester, N. J. Filed Apr. 1, 1915. Serial No. 18,617. Term of patent 7 years.



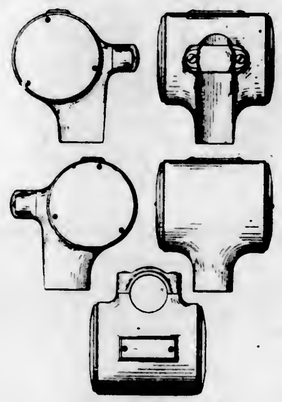
The ornamental design for a pen or pencil clip as shown.

47,897. DAIRY-LUNCH CHAIR. HORATIO B. RUGGLES, West Somerville, Mass., assignor to The H. B. Ruggles Co., Boston, Mass., a Corporation of Massachusetts. Filed May 6, 1915. Serial No. 26,430. Term of patent 7 years.



The ornamental design for a dairy lunch chair, as shown.

47,898. STEERING-COLUMN SWITCH UNIT. RICHARD C. SCAIFE, Cleveland, Ohio, assignor to White Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 10, 1914. Serial No. 850,266. Term of patent 7 years.



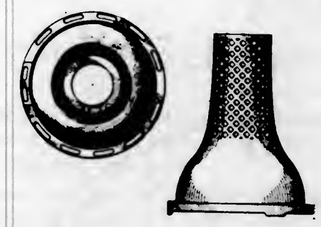
The ornamental design for a steering column switch unit substantially as shown.

47,899. ELECTRIC-LIGHTING FIXTURE. SAMUEL H. SHIMINSKY, New York, N. Y. Filed Nov. 23, 1914. Serial No. 873,647. Term of patent 7 years.



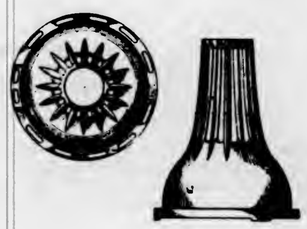
The ornamental design for an electric lighting fixture, substantially as shown in the accompanying drawing.

47,900. BASE FOR MOTOR-DRIVEN FANS. WILLIAM J. H. STRONG, Beloit, Wis. Filed May 29, 1915. Serial No. 31,296. Term of patent 14 years.



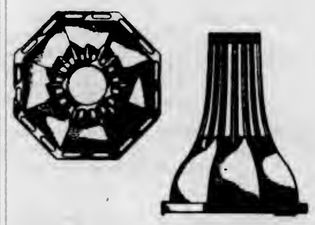
The ornamental design for a base for a motor-driven fan, as shown.

47,901. BASE AND STANDARD OF MOTOR-DRIVEN FANS. WILLIAM J. H. STRONG, Beloit, Wis. Filed June 1, 1915. Serial No. 31,585. Term of patent 14 years.



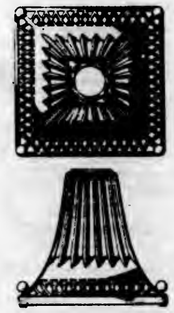
The ornamental design for the base and standard of a motor-driven fan, as shown.

47,902. BASE AND STANDARD OF MOTOR-DRIVEN FANS. WILLIAM J. H. STRONG, Beloit, Wis. Filed June 1, 1915. Serial No. 31,586. Term of patent 14 years.



The ornamental design for the base and standard of a motor-driven fan, as shown.

47,903. BASE FOR MOTOR-DRIVEN FANS. WILLIAM J. H. STRONG, Beloit, Wis. Filed July 2, 1915. Serial No. 37,772. Term of patent 14 years.



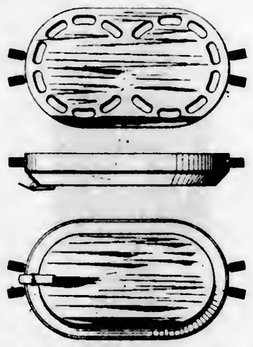
The ornamental design for a base for a motor-driven fan, as shown.

47,904. WEAPON. ANDREW SZENASY, Woodbridge, and MATHIAS ZSERAI, Perth Amboy, N. J. Filed Mar. 19, 1915. Serial No. 15,620. Term of patent 7 years.



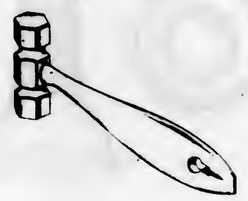
The ornamental design for a weapon, as shown.

47,905. TELEPHONIC TRANSMITTING APPLIANCE. KELLEY MONROE TURNER, Jamaica, N. Y., assignor to General Acoustic Company, a Corporation of New York. Filed Mar. 20, 1912. Serial No. 685,067. Term of patent 14 years.



The ornamental design for a telephonic transmitting appliance as shown and described.

47,906. WINDOW-TRIMMER'S HAMMER. JAMES M. WALTERS, Los Angeles, Cal. Filed May 15, 1915. Serial No. 28,469. Term of patent 14 years.



The ornamental design for window-trimmer's hammer, as shown.

TRADE-MARKS

PUBLISHED SEPTEMBER 28, 1915.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 67,150. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CONSOLIDATED GROCERY COMPANY, Tampa, Jacksonville, and Pensacola, Fla. Filed Nov. 27, 1912.

CHEROKEE ROSE

Particular description of goods.—Canned Vegetables, Fruit, Fruit Jam, Canned Fish, and Coffee.
Claims use since May 1, 1912.

Ser. No. 68,650. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FABRIKKEN FERRIN VED E. ANDERSEN, J. A. LØVENGREEN, TH. LØVENGREEN, Copenhagen, Denmark. Filed Feb. 21, 1913.

Ferrin.

The trade-mark consists of the representation of an Assyrian lion with the word "Ferrin" written underneath, the initial letter "F" being so large that it reaches above the head of the lion.
Particular description of goods.—Treatment of Anemia.
Claims use since about January, 1911.

Ser. No. 80,841. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) F. C. HUYCK & SONS, Albany, N. Y. Filed Aug. 27, 1914.

"KENWOOD TAN-FELT"

No claim being made to the word "Tan-Felt" apart from the mark shown in the drawing.
Particular description of goods.—Paper-Making Felts.
Claims use since about Aug. 1, 1914.

Ser. No. 81,565. (CLASS 39. CLOTHING.) COHN, GOLDWATER & CO., Los Angeles, Cal. Filed Sept. 30, 1914.

Cover-Kids

Particular description of goods.—Children's Overalls.
Claims use since about Sept. 12, 1914.

Ser. No. 82,507. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) FREDERIC A. AMES, Owensboro, Ky. Filed Nov. 10, 1914.

THE KENTUCKY THOROUGHBRED

Particular description of goods.—Automobiles and Buggies.
Claims use since Oct. 1, 1914.

Ser. No. 82,978. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DISY HOGG, Monahans, Tex. Filed Nov. 30, 1914.



The words "Trade Mark," "Disy Hogg Owner," "Monahans, Texas" are disclaimed as any part of the trade-mark.
Particular description of goods.—A medical Compound for Treatment of Sick Headache, Intermittent Nervous Headache, and Periodical Headache.
Claims use since Jan. 1, 1914.

Ser. No. 83,030. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VINCENT TAORMINA, New Orleans, La. Filed Dec. 2, 1914.



Particular description of goods.—Olive-Oil in Tins.
Claims use since the year of 1895.

Ser. No. 84,438. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) WYATT COAL COMPANY, Kanawha county and Charleston, W. Va., and Cincinnati, Ohio. Filed Feb. 10, 1915.

MAIN ISLAND

Particular description of goods.—Block, Mine-Run, Egg, Nut, and Slack Coal.
Claims use since Aug. 1, 1914.

Ser. No. 84,728. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN COFFEE COMPANY OF NEW ORLEANS, LTD., New Orleans, La. Filed Feb. 24, 1915.

TULANE



Particular description of goods.—Coffee.
Claims use since April, 1903.

Ser. No. 84,848. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KOL-ISK KURE KOMPANY, Gettysburg, S. D. Filed Mar. 1, 1915.



No claim being made for the words "Kolera Kompound" apart from the mark shown in the drawing.
Particular description of goods.—A Preparation for Warding Off and for the Treatment of Hog-Cholera.
Claims use since Sept. 7, 1914.

Ser. No. 85,165. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) GARTHWAITE BROTHERS, Dewsbury, England. Filed Mar. 15, 1915.

Gartol

Particular description of goods.—A Preparation for Use in Scouring and Cleaning Clothing and Textile Fabrics.
Claims use since Dec. 9, 1914.

Ser. No. 85,295. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHAMPION ANIMAL FOOD COMPANY, St. Paul, Minn. Filed Mar. 22, 1915.

CHAMPION

Particular description of goods.—Dog-Biscuit.
Claims use since Apr. 1, 1903.

Ser. No. 85,335. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DONATO LATTARULO, New York, N. Y. Filed Mar. 23, 1915.





No claim being made to the words, letter, and abbreviations "J. Petruzzellis & Co. Importers New York Purissimo Olio Di Bitonto-Bari" except in connection with the mark as shown in the drawing.
Particular description of goods.—Olive-Oil.
Claims use since July 1, 1911.

Ser. No. 86,272. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KAHN-BECK CO., Los Angeles, Cal. Filed Apr. 29, 1915.



The trade-mark consists of the word "Reel" in combination with the picture of a moving-picture performer. The picture shown in the drawing is a fanciful one.
Particular description of goods.—Candy.
Claims use since Apr. 1, 1915.

Ser. No. 86,579. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NEW ORLEANS COFFEE CO., LTD., New Orleans, La. Filed May 12, 1915.

"THE OLD SECRET BLEND"

Comprising the words "The Old Secret Blend," the exclusive use of the word "Blend" not being claimed except in connection with the drawing as shown.
Particular description of goods.—Coffee.
Claims use since Apr. 28, 1915.

Ser. No. 86,783. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HENRY A. LAUHOFF, Detroit, Mich. Filed May 20, 1915.

TUSTO

Particular description of goods.—Cereal Breakfast Food.
Claims use since October, 1914.

Ser. No. 86,849. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WILLIAM WALL CHACE, New York, N. Y. Filed May 24, 1915. Under ten-year proviso.

LOCK STITCH

Particular description of goods.—Laces.
Claims use for thirty years last past.

Ser. No. 87,328. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) BLACK HORN SALES CO., Scranton, Pa. Filed June 16, 1915.

Washwell

Applicant disclaims the right to the exclusive use of the word "Washwell" except in connection with the diamond-shaped figure.
Particular description of goods.—Chamois-Leather.
Claims use since December, 1910.

Ser. No. 87,384. (CLASS 12. CONSTRUCTION MATERIALS.) M. N. CARTIER AND SONS COMPANY, Providence, R. I. Filed June 18, 1915.

LEXONITE

Particular description of goods.—Roofing Compounds.
Claims use since Sept. 1, 1914.

Ser. No. 87,462. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) FITZPATRICK BROS., Chicago, Ill. Filed June 21, 1915.

ENAMILO

Particular description of goods.—A Detergent Cleaning Preparation in Powder Form for Household Use and Having Deodorizing and Disinfectant Properties.
Claims use since June 14, 1915.

Ser. No. 87,553. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) CHALMERS MOTOR COMPANY, Detroit, Mich. Filed June 24, 1915.

Chalmers Six

No claim being made to the word "Six" apart from the mark shown.
Particular description of goods.—Automobiles.
Claims use since June 21, 1915.

Ser. No. 87,554. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) CHALMERS MOTOR COMPANY, Detroit, Mich. Filed June 24, 1915.

Chalmers Double Six

No claim being made to the words "Double Six" apart from the mark shown.
Particular description of goods.—Automobiles.
Claims use since June 21, 1915.

Ser. No. 87,576. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SCHULZE BAKING COMPANY, Chicago, Ill. Filed June 24, 1915.

Luxury

Particular description of goods.—Cake in Bulk or Mass Form and Which Calls for Cutting Into Relatively Small Pieces or Slices for Consumption.
Claims use since June 7, 1915.

Ser. No. 87,577. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BERT E. SELLERS, St. Louis, Mo. Filed June 24, 1915.

MAY-PA

Particular description of goods.—A Flavoring Extract for Food Purposes.
Claims use since about May 26, 1915.

Ser. No. 87,728. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BLOOMINGDALE BROS., New York, N. Y. Filed July 3, 1915.

SEPTOL

Comprising the word "Septol."
Particular description of goods.—Pharmaceuticals—viz., Mouth-Washes.
Claims use since about April, 1905.

Ser. No. 87,802. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) CHAS. H. CLARK, Westfield, Mass. Filed July 7, 1915.

"Wirebone"

Particular description of goods.—Whips.
Claims use since June 22, 1915.

Ser. No. 87,810. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) MECCA MANUFACTURING & SPECIALTY CO., New York, N. Y. Filed July 7, 1915.

MECCA
400

Particular description of goods.—Mechanically-Operated Automobile-Horns.
Claims use since April, 1912.

Ser. No. 87,830. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) W. F. MCLAUGHLIN & COMPANY, Chicago, Ill. Filed July 8, 1915.



Particular description of goods.—Blended Coffee.
Claims use since June 15, 1915.

Ser. No. 87,838. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AMERICAN COMPOUNDING CO., Jasper, Ala. Filed July 9, 1915.

BAUGHN'S PELLAGRA TREATMENT

No exclusive right to the words "Baughn's," "Pellagra," and "Treatment" being claimed.
Particular description of goods.—A Medicinal Preparation for the Treatment of Pellagra.
Claims use since Apr. 26, 1913.

Ser. No. 87,880. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ONYX OIL & CHEMICAL CO., Jersey City, N. J. Filed July 10, 1915.

SANITOSE

Particular description of goods.—A Product of the Nature of a Size for Producing a Finish for Giving Body and Hand and for Use as a Filler for Silk, Wool, Cotton, and other Fabrics.
Claims use since January, 1910.

Ser. No. 87,897. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE MONARCH MANUFACTURING COMPANY, Bascom, Ohio. Filed July 12, 1915.

MONARCH

Particular description of goods.—Washboards.
Claims use since July, 1903.

Ser. No. 88,005. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) CLINCHFIELD COAL CORPORATION, Dante, Va. Filed July 19, 1915.

COAL CLINCHFIELD SERVICE

No claim being made to the words "Coal" and "Service" apart from the mark shown in the drawing.
Particular description of goods.—Coal.
Claims use since June 2, 1906.

Ser. No. 88,008. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) CARBO HYDROGEN CO. OF AMERICA, Pittsburgh, Pa. Filed July 19, 1915.

ANIPCO

Particular description of goods.—Welding and Cutting Torches or Blowpipes.
Claims use since Jan. 1, 1915.

Ser. No. 88,031. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ESTELLA D. SMITH, Broussard, La. Filed July 19, 1915.



The bow being indicated in green and the circle in red.
Particular description of goods.—Pickles.
Claims use since the 26th day of June, 1915.

Ser. No. 88,099. (CLASS 38. PRINTS AND PUBLICATIONS.) AMERICAN LITHOGRAPHIC CO., New York, N. Y. Filed July 22, 1915.

Colorgraphic

Consisting exclusively of the fanciful word "Colorgraphic."
Particular description of goods.—Lithographed, Printed, and Mechanically-Reproduced Pictures and Representations.
Claims use since July 15, 1915.

Ser. No. 88,132. (CLASS 38. PRINTS AND PUBLICATIONS.) AMERICAN LITHOGRAPHIC CO., New York, N. Y. Filed July 23, 1915.

Colography

Consisting exclusively of the fanciful word "Colography."

Particular description of goods.—Lithographed, Printed, and Mechanically-Reproduced Pictures and Representations.

Claims use since July 15, 1915.

Ser. No. 88,240. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) KATHERINE SILVERMAN, Chicago, Ill. Filed July 27, 1915.

Maiden

America

Particular description of goods.—Dolls.
Claims use since July 26, 1915.

Ser. No. 88,243. (CLASS 12. CONSTRUCTION MATERIALS.) THE KELLEY ISLAND LIME & TRANSPORT COMPANY, Cleveland, Ohio. Filed July 27, 1915.



Said trade-mark consists of a picture of a tiger's head, surrounded by the words "Tiger Brand White Rock Finish." Disclaims the use of the words "Brand" and "White Rock Finish" apart from the mark shown on the drawing.

Particular description of goods.—Hydrated Lime.
Claims use since October, 1905.

Ser. No. 88,269. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE BUCKLEY-NEWHALL COMPANY, New York and Brooklyn, N. Y. Filed July 29, 1915.

BLUE RIBBON

Particular description of goods.—Clothes-Wringers and Washing-Machines.
Claims use since Aug. 10, 1910.

Ser. No. 88,301. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) FRANK J. GOLDSOLL, New York, N. Y. Filed July 30, 1915.

PALMERA

Particular description of goods.—Imitation, Artificial, Scientific, or Synthetic Pearls, Rubies, Emeralds, Sapphires, and other Gems.
Claims use since Apr. 24, 1914.

Ser. No. 88,324. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. P. BRAUN COMPANY, Chicago, Ill. Filed July 31, 1915.

Victor

Particular description of goods.—Oleomargarin.
Claims use since Dec. 1, 1904.

Ser. No. 88,345. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THORNTON & CHESTER MILLING Co., Buffalo, N. Y. Filed July 31, 1915.

Ask Your Mother

Particular description of goods.—Wheat-Flour.
Claims use since July 27, 1915.

Ser. No. 88,380. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ANSTED & BURK CO., Springfield, Ohio. Filed Aug. 3, 1915.

SEMINOLE

Particular description of goods.—Cornmeal.
Claims use since Apr. 27, 1915.

Ser. No. 88,392. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MEMPHIS BREAD CO., Memphis, Tenn. Filed Aug. 3, 1915.

JITNEY

Particular description of goods.—Bread-Rolls.
Claims use since June 11, 1915.

Ser. No. 88,394. (CLASS 37. PAPER AND STATIONERY.) NEENAH PAPER COMPANY, Neenah, Wis. Filed Aug. 3, 1915.

AMERICA FIRST

Particular description of goods.—Bonds and Writing-Paper.
Claims use since May 21, 1915.

Ser. No. 88,417. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MANSFIELD MILLING CO., Mansfield, Ohio. Filed Aug. 4, 1915.



Particular description of goods.—Wheat-Flour.
Claims use since June 1, 1915.

Ser. No. 88,418. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MANSFIELD MILLING CO., Mansfield, Ohio. Filed Aug. 4, 1915.



No claim being made to the words "The Mansfield Milling Co.," "Brooks Special Hard Wheat Bread Flour," and "Mansfield, Ohio," apart from the mark shown in the drawing.

Particular description of goods.—Wheat-Flour.
Claims use since June 1, 1915.

Ser. No. 88,425. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) UNION BEVERAGE COMPANY, Knoxville, Tenn. Filed Aug. 4, 1915.

JITNEY-COLA

Particular description of goods.—A Carbonated Non-Alcoholic Beverage and Syrup for Making the Same.
Claims use since May 25, 1914.

Ser. No. 88,453. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BRUNSWIG DRUG COMPANY, Los Angeles, Cal. Filed Aug. 6, 1915.

Velma

Particular description of goods.—Hair-Tonic and Dandruff Remedy, Almond-Crême, Witch-Hazel Lotion, Talcum Powder, Crême de Toilette, Bath-Salts, Shampoo, Liquid Face-Powder, Face-Powder, Bandoline, Toilet Water, Almond Meal, Rouge, Nail-Polish, Smelling-Salts, Freckle-Cream, Peroxized Cream, Massage-Cream, Cuticle-Acid, Tooth-Paste, Tooth-Powder, and Tooth-Wash.
Claims use since about Mar. 1, 1915.

Ser. No. 88,487. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMMON & PERSON, Jersey City, N. J. Filed Aug. 9, 1915.

GRASDALE

Particular description of goods.—Butter.
Claims use since July 30, 1915.

Ser. No. 88,489. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ANGER-BROHEL CO., INC., New York, N. Y. Filed Aug. 9, 1915.

ANGERONI

Particular description of goods.—Alimentary Pastes.
Claims use since July 15, 1915.

Ser. No. 88,501. (CLASS 48. MALT EXTRACTS AND LIQUORS.) IROQUOIS BREWING COMPANY, Buffalo, N. Y. Filed Aug. 9, 1915.

NEW-TRAL

Particular description of goods.—A Soft Drink of a Malt Nature.
Claims use since about the 16th day of June, 1915.

Ser. No. 88,508. (CLASS 38. PRINTS AND PUBLICATIONS.) THE OHIO SATURDAY NIGHT PUBLISHING COMPANY, Columbus, Ohio. Filed Aug. 9, 1915.

Columbus Saturday Monitor

Particular description of goods.—A Weekly Newspaper.
Claims use since Aug. 7, 1915.

Ser. No. 88,516. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) H. M. HOBBIE GROCERY COMPANY, Montgomery, Ala. Filed Aug. 9, 1915.

MOLALFA

Particular description of goods.—A Mixed Feed Containing Molasses and Alfalfa.
Claims use since Jan. 1, 1913.

Ser. No. 88,545. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MCDONALD MILLING COMPANY, McDonald, Pa. Filed Aug. 11, 1915.

"YUMYUM"

Particular description of goods.—Self-Rising Pancake-Flour, Self-Rising Buckwheat-Flour, and Self-Rising Biscuit-Flour.
Claims use since Nov. 2, 1914.

Ser. No. 88,547. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MAUSER MILL COMPANY, Laurys Station, Pa. Filed Aug. 11, 1915.

CHESTO

Particular description of goods.—Rye-Flour.
Claims use since Mar. 28, 1914.

Ser. No. 88,548. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NORTHRUP, KING & Co., Minneapolis, Minn. Filed Aug. 11, 1915.

Peep o'Day

Particular description of goods.—Chick-Meal.
Claims use since Apr. 20, 1915.

Ser. No. 88,559. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BEGGS MANUFACTURING COMPANY, Chicago, Ill. Filed Aug. 12, 1915.

KAN-D-LAX

Particular description of goods.—A Medicinal Preparation with Laxative or Cathartic Properties.
Claims use since the 23d day of July, 1915.

Ser. No. 88,574. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) NUYENS & Co., INC., New York, N. Y. Filed Aug. 12, 1915.

MINT-U-LEP

Particular description of goods.—A Non-Alcoholic Beverage. The Said Non-Alcoholic Beverage is in the Nature of a Syrup to be Used with Carbonated or Still Waters or other Liquids for the Purpose of Making a Subacid, Mucilaginous, Sweetened Drink.
Claims use since July 13, 1915.

Ser. No. 88,606. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANGLO-AMERICAN PHARMACEUTICAL COMPANY LIMITED, Croydon, England, and New York, N. Y. Filed Aug. 14, 1915.

LACTABS

Particular description of goods.—Lactic Ferments in Tablet Form.
Claims use since the year 1909.

Ser. No. 88,648. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GULF REFINING COMPANY, Port Arthur, Tex., and Pittsburgh, Pa. Filed Aug. 16, 1915.

Albolax

Particular description of goods.—A Pure White Mineral Oil to be Used as an Intestinal Lubricant in the Treatment of Constipation.
Claims use since July 28, 1915.

Ser. No. 88,649. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ARTHUR O. KLAUSER, Kansas City, Mo., and Toledo, Ohio. Filed Aug. 16, 1915.

HALO

Particular description of goods.—Stimulants for Subnormal Blood and Tissue Conditions.
Claims use since November, 1914.

Ser. No. 88,658. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANNA WEIMAR, Chicago, Ill. Filed Aug. 16, 1915.

Delilah

Particular description of goods.—Depilatories.
Claims use since Aug. 1, 1914.

Ser. No. 88,665. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MILLER MFG. CO., Clear Lake, Iowa. Filed Aug. 17, 1915.

Miller's TON-POO

Particular description of goods.—A Combined Shampoo and Hair-Tonic.
Claims use since Mar. 15, 1915.

Ser. No. 88,669. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WHALEY MILL & ELEVATOR CO., Gainesville, Tex. Filed Aug. 17, 1915.

WHITE LAYER

Particular description of goods.—Wheat-Flour.
Claims use since July 25, 1915.

Ser. No. 88,677. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOUIS KLEINERMAN, Trenton, N. J. Filed Aug. 18, 1915.

L. K.

Particular description of goods.—Cheese.
Claims use since May 10, 1915.

Ser. No. 88,678. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARVEL PILE REMEDY CO., Cleveland, Ohio. Filed Aug. 18, 1915.

MARVEL

Particular description of goods.—Pile Remedy.
Claims use since June 15, 1915.

Ser. No. 88,681. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE BLAKE MILLING COMPANY, Edwardsville, Ill. Filed Aug. 19, 1915.

Mi-Lady

Particular description of goods.—Wheat-Flour.
Claims use since July, 1914.

Ser. No. 88,683. (CLASS 37. PAPER AND STATIONERY.) CHARLES BECK COMPANY, Philadelphia, Pa. Filed Aug. 19, 1915.

BECK

Particular description of goods.—Cardboard—viz., Bristols and Blanks, Box-Board, Wood-Board, Blotter—Envelops, Lace-Paper, Paper Border for Decorating, Stay-Paper for Staying Corners of Paper Boxes, Adding-Machine Paper-Rolls, Paper for Writing, Printing, Publishing, and Wrapping Purposes, Whether in Free Leaf or in Tablets—Namely, Bond, Ledger, Cover, Book, Coated Lithograph, Gummed, Embossed, Printed, Decorated Surface Papers, Linen, Jute, Parchment, Tissue, Gelatin.
Claims use since March, 1915.

Ser. No. 88,690. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Aug. 19, 1915.



Particular description of goods.—Biscuit.
Claims use since at least July 13, 1915.

Ser. No. 88,726. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. BUBB & SONS, Williamsport, Pa. Filed Aug. 21, 1915.

HALEEKA

Particular description of goods.—Bird-Seed, Coffee, Catsup, Vanilla, Mince-Meat, Olives, Corn-Starch, Milk, Salmon, Baked Beans, Macaroni, Syrup, Molasses, Pickles, Sardines, Tapioca, Flour, Prepared Mustard, Worcester-Style Sauce, Onion Salad, Celery-Seed, Pepper, Dried Beef, Mustard, Spices, Vegetables, Peanut-Butter, Pancake-Flour, Buckwheat-Flour, Rice, Raisins, Celery-Salt, Nutmegs, Pickling-Spices.
Claims use since Jan. 1, 1900.

Ser. No. 88,756. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES G. GRIMES, New York, N. Y. Filed Aug. 23, 1915.

FOE



Particular description of goods.—Liniment for Internal nd External Use.
Claims use since the 1st day of May, 1915.

Ser. No. 88,764. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NATHAN MORGENSTERN, Baltimore, Md. Filed Aug. 23, 1915.



No claim being made to the word "Salve" as forming a part of the trade-mark.
Particular description of goods.—A Salve Remedy for the Treatment of Sores, Cuts, Boils, Felons, Chapped Hands, Sunburn, and Burns.
Claims use since July 1, 1915.

Ser. No. 88,772. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE VOCALSTYLE MUSIC COMPANY, Cincinnati, Ohio. Filed Aug. 23, 1915.



Particular description of goods.—Perforated Music-Records.
Claims use since Oct. 19, 1914.

Ser. No. 88,779. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FARBWERKE VORM. MEISTER LUCIUS & BRÜNING, Höchst-on-the-Main, Germany. Filed Aug. 24, 1915.

NIRVANOL

Particular description of goods.—Hypnotic and Sedative Preparations.
Claims use since July 16, 1915.

Ser. No. 88,785. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HOLLAND SPECIALTY COMPANY, Indianapolis, Ind. Filed Aug. 24, 1915.

TAXI

Particular description of goods.—Tooth-Cleansers.
Claims use since August, 1912.

Ser. No. 88,787. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE LEE-WARREN MILLING COMPANY, Salina, Kans. Filed Aug. 24, 1915.

FOREST KING

Particular description of goods.—Wheat-Flour.
Claims use since April, 1900.

Ser. No. 88,792. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) B. H. REICHMANN and ROY C. CROWE, Washington, D. C. Filed Aug. 24, 1915.

B. H. R

Particular description of goods.—A Pile Remedy.
Claims use since Aug. 23, 1915.

Ser. No. 88,819. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) HENRY W. FISHEL & SONS, INC., New York, N. Y. Filed Aug. 26, 1915.



Particular description of goods.—Ear-Rings, Ornaments for Combs, Braid-Pins and Barrettes, Bandeaux, Hat-Pins, Bar-Pins, Cuff-Pins, Veil-Pins, Bow-Pins, Ornaments and Clasps for Velvet Collars and Ribbon, Sautoires, Bracelets, Shoe-Buckles, Finger-Rings, Lavallières, Pendants, Brooches, Lorgnettes, Lorgnons, Monocles, Scarf-Pins, Cuff-Links, and Clasps. The Aforesaid Articles are Made from Precious and Plated Metals and from Alloys of Metal Used to Imitate Precious Metal.
Claims use since about Jan. 1, 1915.

Ser. No. 88,829. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUISE M. WITTENBERGER, Union Hill, N. J. Filed Aug. 26, 1915.



Particular description of goods.—A Mosquito-Repelling Lotion.
Claims use since July 1, 1915.

Ser. No. 88,848. (CLASS 48. MALT EXTRACTS AND LIQUORS.) AUTO CITY BREWING COMPANY, Detroit, Mich. Filed Aug. 28, 1915.

Auto City

Particular description of goods.—Beer.
Claims use since Aug. 3, 1915.

Ser. No. 88,901. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed Aug. 30, 1915.

BUSTED ROMANCES

Particular description of goods.—A Newspaper-Section.
Claims use since Mar. 1, 1915.

Ser. No. 88,904. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed Aug. 30, 1915.

THEIR ONLY CHILD!

Particular description of goods.—A Newspaper-Section.
Claims use since 1912.

Ser. No. 88,905. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed Aug. 30, 1915.

HAPPY HOOLIGAN

Particular description of goods.—A Newspaper-Section.
Claims use since prior to the year 1902.

Ser. No. 88,906. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed Aug. 30, 1915.

JIMMY

Particular description of goods.—A Newspaper-Section.
Claims use since prior to the year 1905.

Ser. No. 89,121. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE WELCH GRAPE JUICE CO., Westfield, N. Y. Filed Sept. 9, 1915.

National

Particular description of goods.—Grape-Juice.
Claims use since Sept. 3, 1915.

Ser. No. 88,690. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Aug. 19, 1915.



Particular description of goods.—Biscuit.
Claims use since at least July 13, 1915.

Ser. No. 88,726. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEO. BUBB & SONS, Williamsport, Pa. Filed Aug. 21, 1915.

HALEEKA

Particular description of goods.—Bird-Seed, Coffee, Catsup, Vanilla, Mince-Meat, Olives, Corn-Starch, Milk, Salmon, Baked Beans, Macaroni, Syrup, Molasses, Pickles, Sardines, Tapioca, Flour, Prepared Mustard, Worcester-Style Sauce, Onion Salad, Celery-Seed, Pepper, Dried Beef, Mustard, Spices, Vegetables, Peanut-Butter, Pancake-Flour, Buckwheat-Flour, Rice, Raisins, Celery-Salt, Nutmegs, Pickling-Spices.
Claims use since Jan. 1, 1900.

Ser. No. 88,756. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES G. GRIMES, New York, N. Y. Filed Aug. 23, 1915.

FOE



Particular description of goods.—Liniment for Internal nd External Use.
Claims use since the 1st day of May, 1915.

Ser. No. 88,764. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NATHEN MORGENSTERN, Baltimore, Md. Filed Aug. 23, 1915.



No claim being made to the word "Salve" as forming a part of the trade-mark.
Particular description of goods.—A Salve Remedy for the Treatment of Sores, Cuts, Boils, Felons, Chapped Hands, Sunburn, and Burns.
Claims use since July 1, 1915.

Ser. No. 88,772. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE VOCALSTYLE MUSIC COMPANY, Cincinnati, Ohio. Filed Aug. 23, 1915.



Particular description of goods.—Perforated Music-Records.
Claims use since Oct. 19, 1914.

Ser. No. 88,779. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FARBWERKE VORM. MEISTER LUCIUS & BRÜNING, Höchst-on-the-Main, Germany. Filed Aug. 24, 1915.

NIRVANOL

Particular description of goods.—Hypnotic and Sedative Preparations.
Claims use since July 16, 1915.

Ser. No. 88,785. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HOLLAND SPECIALTY COMPANY, Indianapolis, Ind. Filed Aug. 24, 1915.

TAXI

Particular description of goods.—Tooth-Cleansers.
Claims use since August, 1912.

Ser. No. 88,787. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE LEE-WARREN MILLING COMPANY, Salina, Kans. Filed Aug. 24, 1915.

FOREST KING

Particular description of goods.—Wheat-Flour.
Claims use since April, 1900.

Ser. No. 88,792. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) B. H. REICHMANN and ROY C. CROWE, Washington, D. C. Filed Aug. 24, 1915.

B. H. R

Particular description of goods.—A Pile Remedy.
Claims use since Aug. 23, 1915.

Ser. No. 88,819. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) HENRY W. FISHEL & SONS, INC., New York, N. Y. Filed Aug. 26, 1915.



Particular description of goods.—Ear-Rings, Ornaments for Combs, Braid-Pins and Barrettes, Bandeaux, Hat-Pins, Bar-Pins, Cuff-Pins, Veil-Pins, Bow-Pins, Ornaments and Clasps for Velvet Collars and Ribbon, Sautoires, Bracelets, Shoe-Buckles, Finger-Rings, Lavallières, Pendants, Brooches, Lorgnettes, Lorgnons, Monocles, Scarf-Pins, Cuff-Links, and Clasps. The Aforesaid Articles are Made from Precious and Plated Metals and from Alloys of Metal Used to Imitate Precious Metal.
Claims use since about Jan. 1, 1915.

Ser. No. 88,829. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUISE M. WITTENBERGER, Union Hill, N. J. Filed Aug. 26, 1915.



Particular description of goods.—A Mosquito-Repelling Lotion.
Claims use since July 1, 1915.

Ser. No. 88,848. (CLASS 48. MALT EXTRACTS AND LIQUORS.) AUTO CITY BREWING COMPANY, Detroit, Mich. Filed Aug. 28, 1915.



Particular description of goods.—Beer.
Claims use since Aug. 3, 1915.

Ser. No. 88,901. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed Aug. 30, 1915.

BUSTED ROMANCES

Particular description of goods.—A Newspaper-Section.
Claims use since Mar. 1, 1915.

Ser. No. 88,904. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed Aug. 30, 1915.

THEIR ONLY CHILD!

Particular description of goods.—A Newspaper-Section.
Claims use since 1912.

Ser. No. 88,905. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed Aug. 30, 1915.

HAPPY HOOLIGAN

Particular description of goods.—A Newspaper-Section.
Claims use since prior to the year 1902.

Ser. No. 88,906. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed Aug. 30, 1915.

JIMMY

Particular description of goods.—A Newspaper-Section.
Claims use since prior to the year 1905.

Ser. No. 89,121. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE WELCH GRAPE JUICE CO., Westfield, N. Y. Filed Sept. 9, 1915.

National

Particular description of goods.—Grape-Juice.
Claims use since Sept. 3, 1915.

TRADE-MARK REGISTRATIONS GRANTED

SEPTEMBER 28, 1915.

106,064. PAPER TOWELS AND PAPER NAPKINS. CENTRAL PAPER COMPANY, Muskegon, Mich.
Filed March 5, 1915. Serial No. 84,953. PUBLISHED MAY 18, 1915.

106,065. SHINGLES. THE NATIONAL BUILDING SUPPLY Co., Baltimore, Md.
Filed January 30, 1915. Serial No. 84,223. PUBLISHED MARCH 30, 1915.

106,066. FLAVORING EXTRACTS FOR FOODS. THE NEWTON TEA & SPICE CO., Cincinnati, Ohio.
Filed November 10, 1911. Serial No. 59,643. PUBLISHED APRIL 6, 1915.

106,067. HOSIERY. JOSEPH P. VOORHEES, New York, N. Y.
Filed March 5, 1915. Serial No. 84,944. PUBLISHED MAY 4, 1915.

106,068. HOSIERY. JOSEPH P. VOORHEES, New York, N. Y.
Filed March 5, 1915. Serial No. 84,945. PUBLISHED APRIL 6, 1915.

106,069. HOSIERY. JOSEPH P. VOORHEES, New York, N. Y.
Filed March 5, 1915. Serial No. 84,946. PUBLISHED APRIL 6, 1915.

106,070. HOSIERY. JOSEPH P. VOORHEES, New York, N. Y.
Filed March 5, 1915. Serial No. 84,947. PUBLISHED APRIL 6, 1915.

TRADE-MARK REGISTRATIONS RENEWED.

13,009. POCKET AND TABLE CUTLERY. NEW YORK KNIFE COMPANY, Walden, N. Y.
Registered February 9, 1886. Renewed February 9, 1916.

LABELS

REGISTERED SEPTEMBER 28, 1915.

18,776.—*Title:* "COLUMBINE BRAND." (For Cantaloups.) CRUTCHFIELD & WOOLFOLK, Pittsburgh, Pa. Filed August 18, 1915.

18,777.—*Title:* "CALCYLATES." (For Pulvoid Tablets.) THE DRUG PRODUCTS CO., INC., New York, N. Y. Filed July 9, 1915.

18,778.—*Title:* "HI-GLOSS WOOD POLISH." (For Wood-Polish.) HI-GLOSS MFG. CO., Scranton, Pa. Filed March 29, 1915.

18,779.—*Title:* "KNOW YOUR FLOUR." (For Flour.) INDIANA MILLERS ASSOCIATION, Indianapolis, Ind. Filed July 29, 1915.

18,780.—*Title:* "JAPANA FURNITURE POLISH." (For Furniture-Polish.) MARK H. STOKES, Cleveland, Ohio. Filed December 15, 1914.

18,781.—*Title:* "EGADAY." (For Poultry Feed.) SOUTH TEXAS GRAIN COMPANY, Houston, Tex. Filed Aug. 5, 1915.

18,782.—*Title:* "WHITE RIBBON BEER THE FOOD DRINK." (For Beer.) WHITE RIBBON BEER COMPANY, San Diego, Cal. Filed June 11, 1915.

PRINTS

REGISTERED SEPTEMBER 28, 1915.

4,067.—*Title:* "B. V. D. BOYS' CLOSED CROTCH UNION SUIT." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed August 27, 1915.

4,068.—*Title:* "CHERRY SMASH SUNDAE." (For Sundaes.) JOHN E. FOWLER, Richmond, Va. Filed July 29, 1915.

4,069.—*Title:* "THE SAFE-CABINET." (For Safe-Cabinets and Steel Furniture.) THE SAFE-CABINET CO., Marietta, Ohio. Filed March 25, 1914.

4,070.—*Title:* "THE SAFE-CABINET." (For Safe-Cabinets and Steel Furniture.) THE SAFE-CABINET CO., Marietta, Ohio. Filed March 25, 1914.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

U. S. Circuit Court of Appeals—Second Circuit.

MIEHLE PRINTING PRESS & MFG. CO. *v.* WHITLOCK PRINTING PRESS & MFG. CO.

Decided April 12, 1915.

223 FED. REP., 647.

1. PATENTS—VALIDITY AND INFRINGEMENT—MECHANICAL MOVEMENT.
The Hodgman patent, No. 664,151, for a mechanical movement designed for use on a Miehle printing-press, covers a patentable improvement and discloses invention; also *Held* infringed.

2. SAME—"PATENTABLE NOVELTY"—IMPROVEMENT OF EXISTING STRUCTURE.
"Patentable novelty" is sometimes found in discovering what is the difficulty with an existing structure and what change in its elements will correct the difficulty, even though the means for introducing that element into the combination are old and their adaptation to the new purpose involves no patentable novelty.

APPEAL from the District Court of the United States for the Southern District of New York.

STATEMENT OF THE CASE.

This cause comes here on appeal from a decree of the District Court, Southern District of New York, dismissing the bill. The suit was brought for infringement of United States Patent No. 664,151, granted December 18, 1900 (application filed January 21, 1898), to Willis K. Hodgman for a mechanical movement.

Mr. C. C. Linthicum and *Mr. Frederick L. Emery* for the appellant.

Mr. G. D. Seymour, Mr. O. E. Edwards, Jr., Mr. Louis W. Southgate, and *Mr. Chas. T. Hawley* for the appellee.

Before LACOMBE, WARD, and ROGERS, Circuit Judges.

LACOMBE, *Cir. J.*:

(1) Although the patented device is entitled broadly as a "mechanical movement," the specification states that it is particularly adapted for use in a certain type of printing-press; it can be sustained only as an improvement on the mechanism of that type of printing-press, as the actual movement of the part of the mechanism with which it is concerned is effected by means well known in the mechanic art.

The gist of the invention, as the patentee states, consists essentially in the use of a plane-faced actuating-block and means for maintaining it in proper position relative to the devices with which it intermittently coöperates.

The type of printing-press referred to is the Miehle press, United States Patent No. 322,309, July 14, 1885. The invention of this press was a great advance in the art. It involved the motion back and forth of the bed of the press—a very heavy part—at high speed. The movement of the bed was accomplished by a toothed wheel, which always moved clockwise and engaged alternately with racks in the bed, above and below the wheel. The heavy bed acquired momentum which had to be gradually reduced, stopped, and the direction of movement reversed. This was accomplished by a stud on the toothed wheel, called a reversing member, which engaged alternately with guideways at each end of the machine. These guideways were vertical; when the stud was in one of them it bore against one side of the guideway, gradually checking the movement of the bed to which the guideway was attached and finally initiating a movement of the same in a reverse direction, just as the teeth of the gear-wheel engaged with the rack to continue the reverse motion. As no question arises as to operation of the Miehle press itself, further details of its structure seem unnecessary. The claim of the patent in suit, on which complainant relies reads as follows:

3. In a reversing mechanism, a reciprocating member, relatively movable shoes carried thereby to form a guideway, a reversing member movable in a circular path and having *parallel plane bearing-faces*, to enter said guideway intermittently and coöperate with the shoes, *means to position the bearing-faces* of said reversing member to enter the guideway and means to effect relative movement of the shoes to permit the entrance to and departure of the reversing member from the guideway.

Some of the elements of this claim are Miehle's; such of them as indicate Hodgman's improvement we have italicized. Every one agrees that Miehle made a highly-meritorious invention; it revolutionized the art and has stood the test of time. Like every such invention involving a complicated structure it was, of course, susceptible of improvement; whether any particular improvement would itself constitute patentable invention is an open question, to be decided upon consideration of such improvement.

Miehle secured reversal of motion of heavy parts, without jar or disturbance, by means of a stud on

the gear-wheel, the wheel which alternately meshed with upper and lower rack. That stud (during a half-revolution of the wheel) passed through a guideway; it then (during two revolutions) passed unguided through the air and entered another guideway through which it passed (during a half-revolution).

Miehle's stud was round and had a cylindrical sleeve on it to reduce friction. This had defects; or perhaps, as it may better be expressed, it was not as efficient as it might be. Because stud and sleeve were cylindrical, the sleeve made line contact only with the guide with which it engaged. This increased wear and tear; not only would the roller itself wear, but it tended to wear the guides. This necessitated the very best workmanship and materials. Moreover, any jarring of the press would cause the roller to jump across from one guide to the other, which was undesirable.

Hodgman, while retaining the Miehle stud with its two guideways and a flight through the air between one guideway and the other, has substituted for the cylindrical sleeve a square side block, presenting long parallel sides to travel in contact with the walls of the guideways. Thus guides and block will wear longer—the block can be made of softer material and more cheaply than a roller. We do not understand that any one contends that the Miehle press is not at all improved by the use of a square-sided block; certainly defendant, which uses such a block, cannot so contend. Inasmuch as the block is constantly leaving one guideway and entering another, it must always—especially when in the air and not controlled by guides—be maintained in position, top side up, without any rotative motion whatsoever about its own axis.

No one disputes the proposition that it was common knowledge that a square-sided engagement with a guide would have the advantages above pointed out.

The defendant contends that it was "obvious" that the frictional roller of Miehle did not provide satisfactory wearing-surfaces; that it was "obvious" that this was a defect which should be eliminated; that it was "obvious" that it would be eliminated if a square-sided block were substituted for the roller, the stud and guideways remaining substantially the same as before.

If this be so then Judge Mayer was correct, and it is not necessary to add anything to his discussion of the mechanics of the case, because the only thing left for Hodgman to do with these "obvious" suggestions before him would be to secure right-side-up position for his squared block and two well-known mechanical devices (the "planetary gear" and the "parallel links") were available to secure it; given the appreciation of the defect and the realization that the square-sided block would remedy it, the details of the structure would seem to be within the range of the ordinary skilled mechanic, who would use either the planetary gear, as Hodgman did, or the parallel links, as defendant does.

We must admit that, looking at the situation as laymen, unskilled in mechanics, and enlightened by the situation as it is *after* the event, we would be inclined to agree with defendant in its statement of what was obvious before Hodgman appeared. But in our opinion the record does not indicate that this is all there is to Hodgman's improvement. Past experience has shown us that what may seem obvious after disclosure was not obvious before, even to persons skilled in the art. (*Brunswick Balke Co.* v. *Thum*, 111 Fed., 904; 50 C. C. A., 61; *Schenck* v. *Singer Mfg. Co.*, 77 Fed., 841; 23 C. C. A. 494.)

If the defect of line engagement in the Miehle press were so obvious, it must have been perceived soon after his presses began to be used. It must be assumed that defects of that sort, when they can be rectified without much expense, are corrected by improvements whenever the method of improving them is obvious. One would suppose that, soon after the Miehle press got into use, its defect of line engagement would be apparent, and that the skilled persons who had devised it and were operating it would be prompt to improve it.

But this is not what happened; Miehle's patent was issued in 1885, but Hodgman's substitute of the square-sided block on the Miehle stud, moving sometimes in guideways, sometimes free, does not appear until his application is filed in 1898. Why was it that the art waited fourteen years before it modified the Miehle engaging stud by covering it with a square block, instead of a roller? Two modifications appeared during that period. Wood in 1892, Huson in 1896; but, although both used a square block, in neither did the block leave and enter successive guideways; in both the block, or what is its equivalent, is always in a guideway. Their devices depart farther from Miehle than does Hodgman. They may be better or worse than Hodgman's change. Hodgman's change is the simpler, and if it were as obvious, as defendant contends, why did the more complicated changes of Wood and Huson first appear? The record indicates, as it did in the cases of the sewing-machine treadle and the bowling-alley ball-return way, that there is something about the improvement of Hodgman which marks it as an expedient—simple, no doubt—but not naturally suggesting itself to the man skilled in the art.

(2) Patentable novelty is sometimes found in discovering what is the difficulty with an existing structure and what change in its elements will correct the difficulty, even though the *means* for introducing that element into the combination are old and their adaptation to the new purpose involves no patentable novelty. So in this case, if Hodgman was the first one to perceive that the roller-sleeve would handicap the Miehle structure and that a block-sleeve on the crank-pin entering and leaving guideways would relieve the handicap, if it took him years to find this out, and if in the meantime skilled persons who wanted to make Miehle's structure a success suggested neither the difficulty nor the remedy, we are inclined to think that for his particular improvement Hodgman was entitled to a patent.

It is contended that this argument is without weight, because the Miehle Company, which has owned the Hodgman patent for some time, does not incorporate his improvement in the machines which it makes and sells. The Hodgman patent became the property first of the Huber Company, and afterward of its successor, the Huber-Hodgman Company. During the period of their ownership between four hundred and five hundred printing-presses involving Hodgman's invention were made and sold, a gross business of about $1,500,000, covering a period of ten years. Then the Miehle Company bought out the Huber-Hodgman Company's business, taking this patent and others with the rest of the assets. What business reasons have influenced the Miehle Company since then to make and market its presses without incorporating the Hodgman squared block we do not know. Possibly some other changes in the old structure are found to be more economical or more efficient; that art may have progressed far beyond Miehle and Hodgman; as to that the record is silent. But it is significant that defendant does not use the round sleeve of Miehle, nor the continuous guiding of Wood or Huson, but the identical square-sided block of Hodgman, moving partly in guideways, partly not so moving, and held always in proper position for ingress into a guideway. Miehle's patent has expired; the cylindrical sleeve on the round stud is free for defendant to use; if Hodgman's device is not an improvement of Miehle's there is no apparent reason why defendant should use it; Miehle's will answer every purpose. Nevertheless defendant does use Hodgman's device, and has been willing to go to the expense of a lawsuit to maintain its right to do so, when it would have cost it nothing to use the old device of Miehle's expired patent.

In our opinion, Hodgman's change was an improvement, and, for the reasons above indicated, it was a patentable improvement. Infringement is plain; the claim does not confine the patentee to any particular "means" for maintaining the square-sided block in position.

The decree is reversed, with costs of this appeal, and cause remanded, with instructions to decree in conformity with this opinion.

ADJUDICATED PATENTS.

(U. S. D. C.) The Walker patent, No. 614,279, for a pivoted or tilting bin, *Held* not anticipated, valid, and infringed. *Walker Bin Co.* v. *Leibe*, 224 Fed. Rep., 516.

(U. S. D. C.) The Weldon patent, No. 645,698, for apparatus for mercerizing, *Held* valid and infringed. *Klauder-Weldon Dyeing Mach. Co.* v. *Giles*, 224 Fed. Rep., 515.

(U. S. D. C.) The Weldon patent, No. 659,906, for a rotary dyeing-machine, *Held* valid and infringed. *Klauder-Weldon Dyeing Mach. Co.* v. *Giles*, 224 Fed. Rep., 515.

(U. S. C. C. A.) The Baldwin patent, No. 659,910, for an improvement in weighing-machines, *Held* void for lack of invention. *Autosales Gum & Chocolate Co.* v. *Caille Bros. Co.*, 224 Fed. Rep., 473.

(U. S. C. C. A.) The Ellis patent, No. 714,880, claims 6, 7, and 8, for a composition for removing paint and varnish, *Held* not anticipated, valid, and infringed. *Chadeloid Chemical Co.* v. *Wilson Remover Co.*, 224 Fed. Rep., 481.

(U. S. D. C.) The Thompson patent, No. 758,340, for a recording-safe for holding coins, claim 4, *Held* valid. *Automatic Recording Safe Co.* v. *Bankers' Registering Safe Co.*, 224 Fed. Rep., 506.

(U. S. D. C.) The Elliott patent, No. 765,616, for an improvement in shoe-button-fastening machines, *Held* void for lack of novelty. *Elliott Mach. Co.* v. *Rothschild & Co.*, 224 Fed. Rep., 502.

(U. S. C. C. A.) The McCaskey patent, No. 783,126, for a credit-accounting appliance, claim 23 *Held* void for anticipation. *McCaskey Register Co.* v. *Mantz*, 224 Fed. Rep., 495.

(U. S. D. C.) The Fisher patent, No. 793,779, for a recording coin-safe, *Held* valid. *Automatic Recording Safe Co.* v. *Bankers' Registering Safe Co.*, 224 Fed. Rep., 506.

(U. S. C. C. A.) The Stickney patent, No. 811,183, for a type-writing machine, *Held* not anticipated, valid, and infringed. *Fox Typewriter Co.* v. *Underwood Typewriter Co.*, 224 Fed. Rep., 489.

(U. S. C. C. A.) The Marsh patent, No. 811,859, for an electric resistance element, *Held* not anticipated, valid, and infringed. *General Electric Co.* v. *Hoskins Mfg. Co.*, 224 Fed. Rep., 464.

(U. S. C. C. A.) The Hoffman patent, No. 928,199, for a garment-pressing machine, *Held* not anticipated, valid, and infringed. *United States Hoffman Co.* v. *Becker & Wade Co.*, 224 Fed. Rep., 484.

(U. S. C. C. A.) The Bane and Crane patent, No. 937,573, for an improvement in computing-scales, *Held* void for lack of invention. *Computing Scale Co.* v. *Toledo Computing Scale Co*, 224 Fed. Rep., 500.

(U. S. C. C. A.) The MacClemmy patent, No. 948,233, for a body-brace, *Held* valid. *MacClemmy* v. *Gilbert Corset Co.*, 224 Fed. Rep., 497.

(U. S. C. C. A.) The MacClemmy patent, No. 948,234, for a body-brace, *Held* valid. *MacClemmy* v. *Gilbert Corset Co.*, 224 Fed. Rep., 497.

(U. S. C. C. A.) Claims 1 and 3 of Henderson patent, No. 959,008, for an improved scaffold-supporting means, *Held* valid. *New York Scaffolding Co.* v. *Whitney*, 224 Fed. Rep., 452.

(U. S. D. C.) The Fisher patent, No. 990,534, relating to a recording-safe for holding coins, claim 7, *Held* valid. *Automatic Recording Safe Co.* v. *Bankers' Registering Safe Co.*, 224 Fed. Rep., 506.

(U. S. D. C.) The Fisher patent, No. 990,535, relating to a recording-safe for holding coins, *Held* valid. *Automatic Recording Safe Co.* v. *Bankers' Registering Safe Co.*, 224 Fed. Rep., 506.

(U. S. D. C.) The Fisher patent, No. 1,073,847, relating to a recording-safe for holding coins, *Held* valid. *Automatic Recording Safe Co.* v. *Bankers' Registering Safe Co.*, 224 Fed. Rep., 506.

Changes in Classification.

(ORDER No. 2,219.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 8, 1915.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 70, Locks and Latches, (Division XX,) establish the following subclass:

121. Tightening fasteners.

The patents contained in this subclass have been taken from class 39, Fences, Gates, subclass 101, Gates, Wire gates, Frameless, hereinafter abolished.

In class 119, Animal Husbandry, (Division XXXVIII,) establish the following subclass and definition:

Confining and housing devices—

15.5. Course.

15.5. CONFINING AND HOUSING DEVICES, COURSE. Devices specially adapted for the management of animals upon roadways, racetracks, etc. Includes combinations of course construction with animal controlling elements.

The patents contained in this subclass have been taken from class 39, Fences, Gates, subclass 103, Gates, Race-starters, hereinafter abolished.

Establish, in Division I, the following class:

CLASS 268.—CLOSURE OPERATORS. (I.)

Subclasses.

5. **Cab-door.**
6. **Car-door.**
7. **Car-platform door.**
2. **Counter-guard.**
3. **Hatch.**
1. **Miscellaneous.**
8. **Sliding door.**
9. **Swinging door.**
4. **Window.**

The patents contained in these subclasses, except subclass 1, Miscellaneous, have been taken from similarly entitled subclasses in class 39, Fences, Gates, hereinafter abolished.

Establish, in same division, the following class:

CLASS 269.—RAILWAY GATES. (I.)

Subclasses.

3. **Electric.**
5. **Mast, automatic.**
1. **Miscellaneous.**
2. **Platform-guard.**
4. **Pneumatic.**
9. **Rocking.**
8. **Sliding.**
7. **Swinging.**
6. **Vertically-moving.**

The patents contained in these subclasses have been taken from similarly entitled subclasses under subclass 11, Gates, Railway, in class 39, Fences, Gates, hereinafter abolished, with the exception of subclass 1, Miscellaneous, the patents in which have been taken from subclass 11, Gates, Railway, in class 39, Fences, Gates.

In class 39, Fences, Gates, (Division I,) change the title to read—

CLASS 39.—GATES,

abolish the existing subclasses, and establish in lieu thereof the following subclasses and definitions:

CLASS 39.—GATES. (I.)

Subclasses.

84. **Automatic return.**
75. **Compound.**
4. **Flood.**
5. **Flush—**
6. With operator.
86. **Folding on horisontal pivots.**
85. **Folding on vertical pivots.**
96. **Front-end supports.**
88. **Horisontally pivoted—**
90. **Falling panel,**
89. **Picket shaft,**
91. **Pivot transverse—**
92. **Bar.**

CLASS 39.—GATES. (I.)—Continued.

Subclasses.

9. **Mechanically operated—**
17. Automatic return—
24. Horisontally pivoted,
25. Horisontal translational movement,
18. Load restrained,
19. Track-guard—
20. Double-acting,
21. Lateral barrier,
22. Vertically pivoted—
23. With weight,
10. Compound,
50. Folding on horisontal pivots,
49. Folding on vertical pivots,
Gate and latch—
27. Gate folding on horisontal pivots,
26. Gate folding on vertical pivots,
45.] Gate having translational movement—
46. Curvilinear,
47. Interconnected,
48. Operator connected at ends,
42. Gate horisontally pivoted—
43. Pivot transverse—
44. With weight,
28. Gate vertically pivoted—
31. Gravitational,
32. Hinge-stile operated—
35. Crank arm,
33. Geared,
34. Sheaved,
29. Interconnected,
37. Intermediately connected operator—
41. Flexible,
38. Lever—
40. On hinge post,
39. Toggle,
30. Pivot intermediate,
36. Rear extension,
60. Horisontally pivoted—
61. Interconnected—
62. Bar,
11. **Multiple movement—**
On vertical pivot—
15. And on horisontal pivot,
13. And series of horisontal pivots,
16. With horisontal translation,
Mechanically operated—
Multiple movement—
On vertical pivot—
12. With horisontal translation and vertical adjustment,
14. With vertical adjustment,
63. Translational movement—
64. Curvilinear,
65. Horisontal—
69. Bar and wheel moved,
67. Gravitational—
68. Sectional track,
66. Interconnected,
71. Lever operator—
72. Loosely connected,
73. Toggle,
70. Operator connected at ends,
51. Vertically pivoted—
55. Gravitational—
56. Movable pivot—
57. Lever on hinge post,
52. Interconnected,
58. Intermediately connected operator—
59. Toggle,
54. Jump,
53. Pivot intermediate.
1. **Miscellaneous.**
7. **Motor-driven—**
8. **Fluid-pressure motor.**
76. **Multiple movement—**
On two axes—
77. With horisontal translation,
78. With vertical adjustment,
On vertical axis—
82. And on horisontal pivot,
80. And series of horisontal pivots,
83. With horisontal translation,
79. With horisontal translation and vertical adment,
81. With vertical adjustment.
2. **Successive barrier—**
3. Turnstiles.
74. **Tension.**
93. **Translational—**
94. Curvilinear.
95. Horisontal.
87. **Vertically pivoted.**

THOMAS EWING,
Commissioner.

Changes in Classification.

(ORDER No. 2,220.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 8, 1915.

The following change in the classification of inventions is hereby directed, to take effect immediately:

In class 60, Miscellaneous Heat-Engine Plants, (Division XVIII,) abolish the following subclass with its definition:

Rotary engine—

5. Injector.

The patent formerly contained in this subclass has been placed in class 253, Motors—Fluid, subclass 41, Gas-operated, Rotary, Peripheral supply, Injected fluid.

THOMAS EWING,
Commissioner.

INDEX

TO THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

SEPTEMBER, 1915.

[The decisions of the United States Circuit Court of Appeals are indicated by the letter (d), and of the Supreme Court of the United States by two stars (**).]

TABLE OF CASES.

	Page.
d Adrian Wire Fence Co. v. United Fence Co.	321
d Crown Cork & Seal Co. of Baltimore City v. Sterling Cork & Seal Co.	875
**Healy v. Sea Gull Specialty Co.	604
Klemm and Schreiber. *Ex parte*	603
d Miehle Printing Press & Mfg. Co. v. Whitlock Printing Press & Mfg. Co.	1155

SUBJECT-MATTER INDEX.

Page.

d Claims, particular involved in subsequent litigation not necessarily affected by previous rejection and amendment, Crown Cork & Seal Co. of Baltimore City v. Sterling Cork & Seal Co. 875

d Reading into by courts of elements not named to limit, so as to make valid one otherwise invalid, Crown Cork & Seal Co. of Baltimore City v. Sterling Cork & Seal Co. 875

d Rejection and amendment of not necessarily limitation, Crown Cork & Seal Co. of Baltimore City v. Sterling Cork & Seal Co. 875

d Combination, elements and result old, change in means no more than mechanical skill, not invention, Adrian Wire Fence Co. v. United Fence Co. 321

Design, patent not to be refused because it has movable parts, *ex parte* Klemm and Schreiber 603

Page.

d Particular patent, Hodgman, No. 664,151, valid and infringed, Miehle Printing Press & Mfg. Co. v. Whitlock Printing Press & Mfg. Co. 1155

d Williams, No. 533,403, void in view of the state of the art, Adrian Wire Fence Co. v. United Fence Co. 321

d Patentable novelty, discovering the difficulty with existing structure and the change necessary to correct it may involve, Miehle Printing Press & Mfg. Co. v. Whitlock Printing Press & Mfg. Co. 1155

**Suit for infringement, case for infringement under patent laws within jurisdiction of district court, though a contract be relied on as the mode of finding damages by infringement, Healy v. Sea Gull Specialty Co. 604

d Validity of patent, device adopted from one art and adapted to another, valid patent not to be obtained for another adoption from same art for same purpose, Crown Cork & Seal Co. of Baltimore City v. Sterling Cork & Seal Co. 875

DIGEST

OF THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

SEPTEMBER, 1915.

[The decisions of the United States Circuit Court of Appeals are indicated by the letter (d), and of the Supreme Court of the United States by two stars (**).]

ADAPTATION.

See Adoption from Another Art.

ADOPTION FROM ANOTHER ART.

PATENTS—ADAPTATION.
Having gone into another art and adopted a device therefrom and adapted it to this art, the patentee could not thereafter get a valid patent covering broadly another adoption from the same art for similar purpose. There remained open for the later patent only the adaptation, not the adoption.
[d Crown Cork & Seal Co. of Baltimore City v. Sterling Cork & Seal Co., 875.

AMBIGUITY.

See Construction of Claims, 1.

AMENDMENT.

See Construction of Claims, 2.

COMBINATION.

See Invention; Patentability.

CONSTRUCTION OF CLAIMS.

1. LIMITATION.
Only when necessary to make the claims of a patent operative, or in case of ambiguity apparent on the face of the claims, or induced by their study in connection with the specification and prior art, is a court permitted to read in an element not named therein in order to narrow a claim so as to make valid one otherwise invalid.
[d Crown Cork & Seal Co. of Baltimore City v. Sterling Cork & Seal Co., 875.

2. SAME—EFFECT OF PROCEEDINGS IN PATENT OFFICE.
The effect of the rejection of a claim by the Patent Office and an amendment is not necessarily a limitation; but, even if so, it may not affect the claim in the particular involved in a subsequent litigation, and the exact thing done must be examined from all sides, and especially in connection with the point later in controversy, before its effect can be interpreted. (See note to *Novelty Glass Mfg. Co.* v. *Brookfield*, 95 C. C. A., 530.) [d Id.

CONTRACT.

See Suits for Infringement.

DAMAGES.

See Suits for Infringement.

DESIGNS.

MOVABLE PARTS.
Where a chair has relatively fixed seat, arms, and legs and an adjustable back, book-rest, etc., *Held* that a design patent should not be refused simply because it has moving parts.
[*Ex parte* Klemm and Schreiber, 603.

EARLIER AND LATER PATENTS.

See Adoption from Another Art.

ELEMENTS.

See Construction of Claims, 1; Invention; Patentability.

FORMER DECISIONS CITED.

See Construction of Claims, 2.

INFRINGEMENT.

See Particular Patents, 1; Suits for Infringement.

INVENTION.

See Particular Patents; Patentability.

COMBINATIONS.
Where the elements of a combination and the result attained by it were old and the change in the means of attaining such result showed nothing more than mechanical skill, there was no "invention."
[d Adrian Wire Fence Co. v. United Fence Co., 321.

JURISDICTION OF FEDERAL COURTS.

See Suits for Infringement.

LIMITATION OF CLAIMS.

See Construction of Claims.

MECHANICAL SKILL.

See Invention.

NEW USE.

See Patentability.

NOVELTY.

See Patentability.

PARTICULAR PATENTS.

1. HODGMAN—No. 664,151—MECHANICAL MOVEMENT.
The Hodgman patent, No. 664,151, for a mechanical movement designed for use on a Miehle printing-press, covers a patentable improvement and discloses invention; also *Held* infringed.
[d Miehle Printing Press & Mfg. Co. v. Whitlock Printing Press & Mfg. Co., 1155.

2. WILLIAMS—No. 533,403—TIFFANY—No. 755,187—TIES FOR WIRE CONSTRUCTION AND DIES FOR MAKING THEM.
Claim 1 of the Williams patent, No. 553,403, for an improvement in ties for wire structures, such as wire fences, and the Tiffany patent, No. 755,187, for an improvement in dies for forming such ties, *Held* void for lack of patentable invention in view of prior patents.
[4 Adrian Wire Fence Co. v. United Fence Co., 321.

PATENTABILITY.

See Designs; Particular Patents.

IMPROVEMENT OF EXISTING STRUCTURE.
"Patentable novelty" is sometimes found in discovering what is the difficulty with an existing structure and what change in its elements will correct the difficulty, even though the means for introducing that element into the combination are old and their adaptation to the new purpose involves no patentable novelty.
[4 Miehle Printing Press & Mfg. Co. v. Whitlock Printing Press & Mfg. Co., 1155.

PROCEEDINGS IN THE PATENT OFFICE.

See Construction of Claims, 2.

REJECTION OF CLAIMS.

See Construction of Claims, 2.

SPECIFICATIONS.

See Construction of Claims, 1.

STATE OF THE ART.

See Construction of Claims, 1; Particular Patents, 2.

SUBSEQUENT LITIGATION.

See Construction of Claims, 2.

SUITS FOR INFRINGEMENT.

JURISDICTION—CONTRACT—FIXING DAMAGES.
Where it appears from the plaintiff's statement that his case is for infringement and arose under the patent laws, the district court has jurisdiction, notwithstanding the fact that he may also rely upon a contract as furnishing the mode in which the damages crounded on infringement should be ascertained.
[**Healy v. Sea Gull Specialty Co., 604.

TERMINOLOGY.

See Patentability.

VALID PATENTS.

See Adoption from Another Art; Construction of Claims, 1; Particular Patents, 1.

VOID PATENTS.

See Particular Patents, 2.

O

BAKER PUBLIC
DEC 31 1915
LIBRARY

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF SEPTEMBER, 1915.

[Abbreviations: "Gaz."—Official Gazette.]

A. Kimball Company. (See Anthony, Marcus O., assignor.)
A. Welskittel & Son Company. (See Hearl, John, assignor.)
A. B. Dick Company. (See Dick, Albert B., assignor.)
A-B Stove Company. (See Reedy, Alfred J., assignor.)
Abbott, John J., *et al.* (See Knowles, George H., assignor.)
Abbott, Peter, Franklin, N. H. Center-finder for center-squares. No. 1,153,149; Sept. 7; Gaz. vol. 218; p. 276.
Abeles, Leo, assignor of one-half to D. J. Shern, Philadelphia, Pa. Signaling device. No. 1,155,294; Sept. 28; Gaz. vol. 218; p. 1118.
Abtmeyer, Theodore, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Armature. No. 1,153,474; Sept. 14; Gaz. vol. 218; p. 431.
Accounting Devices Company. (See Jones, William G., assignor.)
Acme Electric Heater Company. (See Schneider, George J., assignor.)
Acme Manufacturing Company. (See Bacon and Nicolet, assignors.)
Acton, Robert, La Salle, Ill. Step-ladder. No. 1,152,687; Sept. 7; Gaz. vol. 218; p. 113.
Adams, A. H., *et al.* (See Byron, Hagar B., assignor.)
Adams, Alva J., *et al.* (See Knowles, George H., assignor.)
Adams, Frank, Blenheim, New Zealand. Means for use in feeding sheep and cattle. No. 1,155,189; Sept. 28; Gaz. vol. 218; p. 1068.
Adams, Frank C., assignor of one-fourth to H. R. Estel and one-fourth to S. Wilson, Yellow Springs, Ohio. Shock-absorber. No. 1,153,531; Sept. 14; Gaz. vol. 218; p. 453.
Adams, Frederick U., Hastings-upon-Hudson, N. Y. Vehicle-tire. No. 1,152,470; Sept. 7; Gaz. vol. 218; p. 31.
Adams, John M., Chicago, Ill. Metal bedstead. No. 1,153,590; Sept. 14; Gaz. vol. 218; p. 475.
Addressograph Company. (See Hughes, Davydd C., assignor.)
Addressograph Company. (See Rogers, Russell N., assignor.)
Addressograph Company. (See Wright, Walter, assignor.)
Adler, Morton L., New York, N. Y. Register for pool or billiard tables. No. 1,154,226; Sept. 21; Gaz. vol. 218; p. 727.
Adler, Stephen O. (See Trysna, Josef, assignor.)
Adriance, Benjamin. (See Culleson, Amos, assignor.)
Adt, Lee F., Albany, N. Y. Eyeglass-mounting. No. 1,154,743; Sept. 28; Gaz. vol. 218; p. 933.
Advance Mfg. Co. (See Barnes, Edward M., assignor.)
Agasote Millboard Co., The. (See Sutherland, Daniel M., Jr., assignor.)
Agricultural Research Corporation. (See Peacock, Samuel, assignor.)
Ahlen, William. (See Williams and Ahlen.)
Ahrens, William H., Canandaigua, N. Y. Sleet-cutter for trolley-wires. No. 1,154,828; Sept. 28; Gaz. vol. 218; p. 963.
Ahrle, Hermann. (See Revira and Ahrle.)
Aicher, Gustav A., and S. Lazar, assignors to National Paper Products Co., San Francisco, Cal. Drawing and cutting machine for paper towels. No. 1,153,183; Sept. 14; Gaz. vol. 218; p. 327.
Aikman, Burton S., Chicago, Ill., assignor to National Brake & Electric Company, Milwaukee, Wis. Pneumatic governor. No. 1,153,879; Sept. 21; Gaz. vol. 218; p. 609.
Ainslie, Albert E., Brashear, Mo. Resiliently-attached but removable cap for oil-cans. No. 1,154,829; Sept. 28; Gaz. vol. 218; p. 963.
Aktiebolaget Adderator. (See Wiberg, Helge A., assignor.)
Aktiebolaget Svenska Kullagerfabriken. (See Wiesselgren, Carl E., assignor.)
Aktiengesellschaft Brown, Boveri & Cie. (See Jonas, Julius, assignor.)
Albertson, Anton, Minot, N. D. Flange-oiler. No. 1,154,156; Sept. 21; Gaz. vol. 218; p. 704.
Albrecht, Christian A., Berlin, Germany, assignor to Mergenthaler Linotype Company. Galley mechanism for repeating and non-repeating line-casting machines. No. 1,153,880; Sept. 21; Gaz. vol. 218; p. 609.
Albrecht, Martin, Frankfort-on-the-Main, Germany. Miner's safety-lamp. No. 1,153,003; Sept. 7; Gaz. vol. 218; p. 229.
Alcemo Manufacturing Company. (See Harris, Earl A., assignor.)
Aldridge, Thomas J., Rochester, N. Y. Garment-stretching device. No. 1,153,150; Sept. 7; Gaz. vol. 218; p. 276.
Alenius, Carl G., Meadowlands, Minn. Steam cut-off. No. 1,152,589; Sept. 7; Gaz. vol. 218; p. 78.
Alexander, Chris Z., Redwood City, Cal. Barber's accessory. No. 1,152,870; Sept. 7; Gaz. vol. 218; p. 160.
Allen, Ambrose, Kansas City, Mo. Incubator. No. 1,153,184; Sept. 14; Gaz. vol. 218; p. 327.
Allen, Charles A., assignor to The Whitin Machine Works, Whitinsville, Mass. Skewer-support for creels. No. 1,152,388; Sept. 7; Gaz. vol. 218; p. 3.
Allen, Charles A., assignor, to The Whitin Machine Works, Whitinsville, Mass. Card-fleece-width controller. No. 1,152,389; Sept. 7; Gaz. vol. 218; p. 3.
Allen, Charles A., Jr. (See Bain, Forée, assignor.)
Allen, Charles M., San Francisco, Cal. Compound internal-combustion engine. No. 1,153,881; Sept. 21; Gaz. vol. 218; p. 610.
Allen, Edward B., Bridgeport, Conn., assignor to The Singer Manufacturing Company. Thread-cutting mechanism. No. 1,153,412; Sept. 14; Gaz. vol. 218; p. 410.
Allen, Edward B., Bridgeport, Conn., assignor to The Singer Manufacturing Company. Sewing-machine. No. 1,155,120; Sept. 28; Gaz. vol. 218; p. 1064.
Allen, Harry T., East Orange, N. J. Ice-cream cone. No. 1,153,744; Sept. 14; Gaz. vol. 218; p. 527.
Allen-Higgins Wall Paper Company. (See Dupuis, Moses, assignor.)
Allen, John C. (See Wheeler, Ira R., assignor.)
Allen, Louis R., Sparks, Nebr. Wagon-brake. No. 1,153,745; Sept. 14; Gaz. vol. 218; p. 527.
Allen, Myron H., New Brunswick, N. J. Egg-carrier. No. 1,153,185; Sept. 14; Gaz. vol. 218; p. 327.
Allino Switch Box Manufacturing Company. (See Maison and Robinson, assignors.)
Allis-Chalmers Manufacturing Company. (See Cheney, Herbert W., assignor.)
Allis-Chalmers Manufacturing Company. (See De Wein, George F., assignor.)
Allis-Chalmers Manufacturing Company. (See Kollberg, Gustaf L., assignor.)
Allis-Chalmers Manufacturing Company. (See Williamson, Robert B., assignor.)
Allport, Katherine E., Chicago, Ill. Fastener for articles of wearing-apparel. No. 1,153,366; Sept. 14; Gaz. vol. 218; p. 393.
Alquist, Karl, Schenectady, N. Y. Means for grinding or polishing gears. No. 1,154,830; Sept. 28; Gaz. vol. 218; p. 963.
Alquist, Karl, Schenectady, N. Y. Marine turbine. No. 1,155,029; Sept. 28; Gaz. vol. 218; p. 1030.
Alquist, Karl, Schenectady, N. Y. Marine turbine. No. 1,155,030; Sept. 28; Gaz. vol. 218; p. 1030.
Alquist, Karl, Schenectady, N. Y., assignor to General Electric Company. Marine turbine. No. 1,153,475; Sept. 14; Gaz. vol. 218; p. 431.
Alsop, Bertha S., New York, N. Y. Hose-supporter. No. 1,154,556; Sept. 21; Gaz. vol. 218; p. 841.
Althoff, August W., Oklahoma, Okla. Machine for elevating and mixing concrete. No. 1,155,190; Sept. 28; Gaz. vol. 218; p. 1088.
Althouse, Charles S., Reading, Pa. Treating thread. No. 1,153,004; Sept. 7; Gaz. vol. 218; p. 229.
Amalgamated Machinery Corporation. (See Yeomans, Lucien I., assignor.)
Ameling, Emil. (See Heckel, Otto A., assignor.)
American Can Company. (See Dixon, James W., assignor.)
American Can Company. (See Eberhart, Felix, assignor.)
American Can Company. (See Graham, Charles W., assignor.)

American Can Company. (See Harbeck, Jervis R., assignor.)
American Can Company. (See Jones, Harry W., assignor.)
American Can Company. (See Marcuse, Isaac J., assignor.)
American Can Company. (See Pilarowski, Stephen, assignor.)
American Can Company. (See Rudolphi, Frank, assignor.)
American Can Company. (See Sharp, Lee C., assignor.)
American Can Company. (See Swangren and Widell, assignors.)
American Can Company. (See Taylor, William E., assignor.)
American Car Roof Co. (See Christy, Henry A., assignor.)
American Cutlery Company. (See Chapleau, Phileas T., assignor.)
American Cyanamid Company. (See Landis, Walter S., assignor.)
American District Steam Company. (See Hall, Robert, assignor.)
American Ditching Machine Company. (See Linga, Torbjorn, assignor.)
American Electrical Heater Company. (See Kuhn and Shallor, assignors.)
American Engineering Company. (See Wilkinson, William S., assignor.)
American Fork & Hoe Company, The. (See Lowell, Erwin D., assignor.)
American Graphophone Company. (See Lyle, Mervin E., assignor.)
American Graphophone Company. (See Macdonald, Thomas H., assignor.)
American Graphophone Company. (See Woods, Clinton E., assignor.)
American Hardware Corporation, The. (See Henry, William K., assignor.)
American Hardware Corporation, The. (See Teich, Ernest L., assignor.)
American Hoist & Derrick Co. (See Crosby, Oliver, assignor.)
American Holding Company. (See Buttress, George, assignor.)
American Nitro-Products Company. (See Brownlee and Uhlinger, assignors.)
American Optical Company. (See Bugbee, Lucian W., assignor.)
American Paper Products Company. (See Rexford, Ley P., assignor.)
American Rotary Motor Company. (See Mears, William N., assignor.)
American Sales Book Company. (See Pringle, William A., assignor.)
American Seating Company. (See Wills, Wayne, assignor.)
American Steam Gauge and Valve Manufacturing Company. (See Hopkins, Frank H., assignor.)
American Steel & Wire Company of New Jersey. (See Merkt, Gustav A., assignor.)
American Stove Company. (See Possons, Minard A., assignor.)
American Stove Company. (See Stockstrom, Louis, assignor.)
American Tobacco Company, The. (See Wright, Benjamin S., assignor.)
American Voting Machine Company. (See Butler, James A., assignor.)
American Warp-Drawing Machine Company. (See Blair, Charles E., assignor.)
American Warp-Drawing Machine Company. (See Hathaway and Lea, assignors.)
American Warp-Drawing Machine Company. (See Lea, Charles, assignor.)
American Well Works, The. (See Bodinson, Lars W., assignor.)
American Well Works, The. (See Chapman, Matthew T. and M. C., assignors.)
Ames, Butler, Lowell, Mass. Spark-coil. No. 1,153,005; Sept. 7; Gaz. vol. 218; p. 229.
Ames, Butler, Lowell, Mass. Armature for magnetos. No. 1,153,006; Sept. 7; Gaz. vol. 218; p. 229.
Ames, Elmer U., assignor to H. Brinton Company, Philadelphia, Pa. Mechanical movement. No. 1,155,191; Sept. 28; Gaz. vol. 218; p. 1088.
Amon, Josef. (See Hadaway and Amon.)
Amsel, Henry, and B. Reichard, New York, N. Y. Extension-table. No. 1,153,666; Sept. 14; Gaz. vol. 218; p. 499.
Anchor Cap & Closure Corporation. (See Townsend, Harry E., assignor.)
Anderson, Andrew, Portland, Oreg. Power-transmission mechanism. No. 1,153,882; Sept. 21; Gaz. vol. 218; p. 610.
Anderson, Axel, St. Paul, assignor to Russell Grader Manufacturing Company, Minneapolis, Minn. Draft-rigging. No. 1,153,007; Sept. 7; Gaz. vol. 218; p. 230.
Anderson, Charles B., Bluffton, Ind. Pumping-jack. No. 1,153,746; Sept. 14; Gaz. vol. 218; p. 527.
Anderson, Charles H., and T. Elliott, Cincinnati, Ohio. Window for vestibules of street-cars. No. 1,153,008; Sept. 7; Gaz. vol. 218; p. 230.
Anderson, Charles R. (See Brooks and Anderson.)
Anderson, Charles S., Minneapolis, Minn. Cylinder-boring machine. No. 1,152,590; Sept. 7; Gaz. vol. 218; p. 78.
Anderson, Erik, San Francisco, Cal. Combined harrow and cultivator. No. 1,155,192; Sept. 28; Gaz. vol. 218; p. 1089.
Anderson, George W., *et al.* (See Hackett, Harry C., assignor.)
Anderson, Harold B. (See Winton and Anderson.)
Anderson, Harry J., Chicago, Ill. Pneumatic musical instrument. No. 1,154,957; Sept. 28; Gaz. vol. 218; p. 1005.
Andrade, Cipriano, Jr. (See Knorr and Andrade.)
Andrew, Gordon, C. H. Sloacombe, and H. H. Kingham, Timaru, New Zealand. Automatic oil-feed for motor-cars. No. 1,155,168; Sept. 28; Gaz. vol. 218; p. 1080.
Andrews, Oliver B., Chattanooga, Tenn. Knockdown crate. No. 1,154,831; Sept. 28; Gaz. vol. 218; p. 964.
Andrews, William H. (See Carroll and Andrews.)
Angelo Micell Unsinkable Vessel Company. (See Micell, Angelo, assignor.)
Angster, Clarence E., Wausa, Nebr. Post-puller. No. 1,153,747; Sept. 14; Gaz. vol. 218; p. 528.
Anklam, William F., assignor to C. M. Hall Lamp Company, Detroit, Mich. Lamp-socket. No. 1,153,591; Sept. 14; Gaz. vol. 218; p. 475.
Ansco Company. (See Bornmann, Carl, assignor.)
Ansted, Edward W. (See Russell, Edwin L., assignor.)
Anthony, Marcus O., Englewood, N. J., assignor to A. Kimball Company, New York, N. Y. Pin-ticket cartridge and container. No. 1,152,471; Sept. 7; Gaz. vol. 218; p. 32.
Anthony, Noel L., Cranston, R. I. Truck or carrier for cylindrical objects. No. 1,153,476; Sept. 14; Gaz. vol. 218; p. 432.
Apgar, John T., New York, N. Y. Forming artificial-leg sockets. No. 1,153,532; Sept. 14; Gaz. vol. 218; p. 454.
Apple Electric Company, The. (See Apple, Vincent G., assignor.)
Apple, Vincent G., Dayton, Ohio. Switch. No. 1,155,121; Sept. 28; Gaz. vol. 218; p. 1064.
Apple, Vincent G., assignor to The Apple Electric Company, Dayton, Ohio. Power generating and transmitting system. No. 1,153,667; Sept. 14; Gaz. vol. 218; p. 499.
Appleby, Edmund G. (See Bentley, George H., assignor.)
Arbetter Felling Machine Company. (See Arbetter, Wolf, assignor.)
Arbetter, Wolf, Chelsea, assignor to Arbetter Felling Machine Company, Boston, Mass. Blindstitch-felling machine. No. 1,152,871; Sept. 7; Gaz. vol. 218; p. 181.
Arcade Manufacturing Company. (See Tscherning, Henry, assignor.)
Arledter, Herman, Frodsham, England. Treating pulp for making paper and like materials. No. 1,153,883; Sept. 21; Gaz. vol. 218; p. 611.
Armstrong Cork and Insulation Company. (See Grunsweig, Max, assignor.)
Armstrong, Frank H., Vulcan, Mich. Tripping device for shovel-dipper doors. No. 1,154,157; Sept. 21; Gaz. vol. 218; p. 704.
Armstrong, Henry A., Brooklyn, assignor to International Typesetting Machine Company, New York, N. Y. Escapement mechanism for line-composing machines. No. 1,152,688; Sept. 7; Gaz. vol. 218; p. 113.
Armstrong, John J., Honolulu, Hawaii. Continuous-discharge centrifugal machine. No. 1,153,367; Sept. 14; Gaz. vol. 218; p. 393.
Armstrong, John J., assignor of one-half to A. G. Hawes, Honolulu, Hawaii. Sugar product and producing the same. No. 1,154,557; Sept. 21; Gaz. vol. 218; p. 841.
Arndt, Franklin E., assignor to The Gallon Iron Works and Manufacturing Company, Gallon, Ohio. Hoisting and dumping bucket. No. 1,152,472; Sept. 7; Gaz. vol. 218; p. 31.
Arndt, Franklin E., assignor to The Gallon Iron Works and Manufacturing Company, Gallon, Ohio. Hoisting and dumping mechanism. No. 1,154,474; Sept. 21; Gaz. vol. 218; p. 813.
Arnold, Isaac H., Animas, N. Mex. Washing-machine. No. 1,154,832; Sept. 28; Gaz. vol. 218; p. 964.
Aronson, Saul, New York, assignor to E. E. Wilkinson, Brooklyn, N. Y. Clock winding and setting mechanism. No. 1,153,533; Sept. 14; Gaz. vol. 218; p. 454.
Arrighi, Pietro, San Jose, Cal. Sack-sewing machine. No. 1,153,009; Sept. 7; Gaz. vol. 218; p. 230.
Asendorf, Cord, Jr., Savannah, Ga. Cigar-cutter. No. 1,154,158; Sept. 21; Gaz. vol. 218; p. 704.
Ashland Manufacturing Company, The. (See Willour, Le Roy, assignor.)
Ashton, Edwin P., Detroit, Mich. Yieldable thrust-bearing for worm-shafts. No. 1,152,689; Sept. 7; Gaz. vol. 218; p. 114.
Ashworth, Asa, Salamanca, N. Y. Bit for valve-grinders. No. 1,154,159; Sept. 21; Gaz. vol. 218; p. 704.
Astley, John W. (See Mordey, Astley, and Saunderson.)
Atkinson, Mentzer & Company. (See Crowdus, Walter A., assignor.)
Atlantic Refining Company, The. (See Van Dyke and Irish, assignors.)
Atlas Mercantile Company, The. (See Jorgensen, Olav E., assignor.)
Atwood, William S., Montreal, Quebec, Canada. Brake-step. No. 1,154,160; Sept. 21; Gaz. vol. 218; p. 705.
Aufiero, Michael A., Brooklyn, N. Y. Automobile-horn. No. 1,153,534; Sept. 14; Gaz. vol. 218; p. 454.
Aug. Goertz & Co. (See Vom Eigen, Benno, assignor.)

Aull, Jerome J., assignor to The Lunkenheimer Company, Cincinnati, Ohio. Priming-cup. No. 1,154,683; Sept. 28; Gaz. vol. 218; p. 914.
Austin, Frederick C. (See Bunnell, Morton G., assignor.)
Austin, Frederick C. (See Rosendahl, Nils M., assignor.)
Automatic Machine Manufacturing Company. (See Melchert, Charles A., assignor.)
Automatic Train Stop Company. (See Woltmann, Ernst, assignor.)
Autosales Gum and Chocolate Company. (See Bridges, Charles E., assignor.)
Autosales Gum and Chocolate Company. (See Corbet, Denys W., assignor.)
Autosales Gum and Chocolate Company. (See Patterson, James W., assignor.)
Avera, Margaret C., Los Angeles, Cal. Hook and eye. No. 1,154,558; Sept. 21; Gaz. vol. 218; p. 841.
Aylsworth, Jonas W., East Orange, N. J., assignor, by mesne assignments, to Pyrene Manufacturing Company. Fire-extinguishing liquid. No. 1,154,161; Sept. 21; Gaz. vol. 218; p. 705.
B. F. Sturtevant Company. (See Williams, Eugene B., assignor.)
B. V. D. Company, The. (See Heyn, Edmund C., assignor.)
Babb, Walter A. (See Osborne, Evan E., assignor.)
Babich, George G., New York, N. Y. Burial-vault. No. 1,153,535; Sept. 14; Gaz. vol. 218; p. 455.
Bach, John A., St. Paul, Minn. Stringed musical instrument. No. 1,152,925; Sept. 7; Gaz. vol. 218; p. 200.
Bache, Leigh S., assignor to The Graphite Lubricating Company, Boundbrook, N. J. Oilless spindle. No. 1,153,592; Sept. 14; Gaz. vol. 218; p. 475.
Bacon, Raymond F., and B. H. Nicolet, Pittsburgh, Pa., assignors to Acme Manufacturing Company, Chicago, Ill. Manufacture of catalysts. No. 1,152,591; Sept. 7; Gaz. vol. 218; p. 79.
Baddiley, James. (See Levinstein and Baddiley.)
Bade, Heinrich, Jr., Wunstorf, Germany. Scaffold. No. 1,153,884; Sept. 21; Gaz. vol. 218; p. 611.
Badeau, Louis C., New York, N. Y. Steering apparatus for airships. No. 1,155,031; Sept. 28; Gaz. vol. 218; p. 1030.
Badger Steel House Company. (See Downey, Richard F., assignor.)
Badham, Bertram G., Waihino, New Zealand. Ring-bearing-lubricating device. No. 1,152,872; Sept. 7; Gaz. vol. 218; p. 189.
Badische Anilin- & Soda-Fabrik. See Bosch, Mittasch, Wolf, and Stern, assignors.)
Baer, Herman A., Shickshinny, Pa. Fob-guard. No. 1,155,032; Sept. 28; Gaz. vol. 218; p. 1031.
Baexner, Carlo, assignor to E. De Haën, Chemische Fabrik List, G. m. b. H., Seelze, near Hanover, Germany. Opaque enamel or glaze composition. No. 1,153,748; Sept. 14; Gaz. vol. 218; p. 528.
Bagley, Joseph P., Warwood, assignor to Wheeling Steel Casting Company, Wheeling, W. Va. Core-barrel for ingot-molds. No. 1,155,122; Sept. 28; Gaz. vol. 218; p. 1065.
Bahr, Amel F. and O. B., Marion, Ind. Shell-lining for paper-pulp-grinding mills. No. 1,152,690; Sept. 7; Gaz. vol. 218; p. 114.
Bahr, Otto B. (See Bahr, Amel F. and O. B.)
Bailey, Ervin G., Newton, Mass. Pressure-relation gage. No. 1,153,413; Sept. 14; Gaz. vol. 218; p. 410.
Bailey, Ervin G., Newton Highlands, Mass. Pressure-relation gage. No. 1,153,414; Sept. 14; Gaz. vol. 218; p. 411.
Baillod, Charles M. J. (See Blais, Cambou, and Baillod.)
Bain, Forée. (See Brunell, Frank J., assignor.)
Bain, Forée, assignor to C. A. Allen, Jr., La Grange, Ill. Clamp. No. 1,154,904; Sept. 28; Gaz. vol. 218; p. 987.
Baker, Charles E., and E. M. De Long, Hartford, assignors, by mesne assignments, to The New Britain Machine Company, New Britain, Conn. Explosive-engine. No. 1,154,475; Sept. 21; Gaz. vol. 218; p. 813.
Baker, Charles H., Pittsburgh, Pa. Spraying device. No. 1,154,833; Sept. 28; Gaz. vol. 218; p. 964.
Baker, David, Los Angeles, Cal. Signal apparatus. No. 1,154,162; Sept. 21; Gaz. vol. 218; p. 705.
Baker, James A., Mutual, Okla. Header attachment for engines. No. 1,154,595; Sept. 28; Gaz. vol. 218; p. 883.
Baldridge, Charles W., Chicago, Ill. Contour-recorder. No. 1,154,596; Sept. 28; Gaz. vol. 218; p. 883.
Baldwin Company, The. (See Gally, Robert A., assignor.)
Baldwin Locomotive Works, The. (See Wille, Henry V., assignor.)
Baldwin, Nathaniel, Mill Creek, Utah. Telephone-receiver. No. 1,153,593; Sept. 14; Gaz. vol. 218; p. 475.
Bale, Damon, Louisville, Ky., assignor to Standard Sanitary Manufacturing Company, Pittsburgh, Pa. Collapsible spacing-frame. No. 1,154,688; Sept. 28; Gaz. vol. 218; p. 916.
Ball Engine Company. (See Weston, Clarence B., assignor.)
Ball, Henry P., Pittsfield, Mass., assignor to General Electric Company. Attaching-plug. No. 1,154,834; Sept. 28; Gaz. vol. 218; p. 965.
Ball, Henry P., New York, assignor to S. Sternau & Company, Brooklyn, N. Y. Lamp attachment for culinary articles. No. 1,155,033; Sept. 28; Gaz. vol. 218; p. 1031.
Ball, John P., Chicago, Ill. System of separating sewage. No. 1,154,597; Sept. 28; Gaz. vol. 218; p. 883.
Ballard, George L. (See Wildman and Ballard.)
Ballauf, Daniel, deceased, Washington, D. C.; A. W. C. Wurdeman, administrator. Navigational sounding apparatus. No. 1,153,885; Sept. 21; Gaz. vol. 218; p. 612.
Ballou, Leon H., Lockport, N. Y. Dispensing-receptacle for paste, &c. No. 1,154,163; Sept. 21; Gaz. vol. 218; p. 706.
Balthazar, Ernest, Pawnee, La. Cork-extractor. No. 1,155,193; Sept. 28; Gaz. vol. 218; p. 1089.
Balz, Robert J., assignor of one-half to G. C. Meyer, Syracuse, N. Y. Internal-combustion engine. No. 1,154,958; Sept. 28; Gaz. vol. 218; p. 1006.
Banks & Company, F. S. (See Slee, Richard, assignor.)
Banks, Lynn T., Kahoka, Mo. Gate and door fastener. No. 1,153,010; Sept. 7; Gaz. vol. 218; p. 231.
Banner, Otto, Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J. Regulating means for centrifugal compressors. No. 1,154,959; Sept. 28; Gaz. vol. 218; p. 1006.
Bannon, Martin J. (See Gray, William B., assignor.)
Baptiste, George. (See Stubblefield, William P., assignor.)
Barash, S. S. (See Reeves, James W., assignor.)
Barber, William, Brooklyn, N. Y. Motor-vehicle. No. 1,153,536; Sept. 14; Gaz. vol. 218; p. 455.
Barber, William, Brooklyn, N. Y. Motor-vehicle. No. 1,153,537; Sept. 14; Gaz. vol. 218; p. 455.
Barber, William, Brooklyn, N. Y. Traction-machine. No. 1,153,538; Sept. 14; Gaz. vol. 218; p. 456.
Barbour, James G., Canton, Ohio. Brick-cut-off table. No. 1,152,873; Sept. 7; Gaz. vol. 218; p. 181.
Barker, Lewis W., Fredericton, New Brunswick, Canada. Skate-clamp. No. 1,153,993; Sept. 21; Gaz. vol. 218; p. 647.
Barkwill, William H., assignor to Die Sinking and Machine Co., Akron, Ohio. Frictional gearing. No. 1,154,598; Sept. 28; Gaz. vol. 218; p. 883.
Barnes, Edward M., assignor to Advance Mfg. Co., Hastings, Mich. Vacuum-creator. No. 1,152,473; Sept. 7; Gaz. vol. 218; p. 33.
Barnes, John S., and N. E. Sherwood, Detroit, Mich.; said Barnes assignor to said Sherwood. Strand-guide for rope-making machines. No. 1,154,905; Sept. 28; Gaz. vol. 218; p. 987.
Barnes, Wilfred, Jr., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Shaft-bearing. No. 1,154,227; Sept. 21; Gaz. vol. 218; p. 727.
Barnett, James. (See Montgomery, Gustavus A., assignor.)
Barnett, William S., Decatur, Ill. Combustion device. No. 1,152,691; Sept. 7; Gaz. vol. 218; p. 114.
Barr, John H., New York, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,153,668; Sept. 14; Gaz. vol. 218; p. 499.
Barrett, Halsey M., *et al.*, receivers. (See Hogan, John L., Jr., assignor.)
Barrett Manufacturing Company. (See Church, Sumner R., assignor.)
Barron, Anastasia G., New York, assignor to C. G. Barron and W. V. Barry, Brooklyn, N. Y. Duster. No. 1,153,011; Sept. 7; Gaz. vol. 218; p. 231.
Barron, Chester G., *et al.* (See Barron, Anastasia G., assignor.)
Barron, William L., New York, N. Y., assignor to The Singer Manufacturing Company. Button-feeding mechanism. No. 1,152,692; Sept. 7; Gaz. vol. 218; p. 115.
Barrow Cottonseed Preserver Company. (See Barrow, Edward R., assignor.)
Barrow, Edward R., assignor to Barrow Cottonseed Preserver Company, Memphis, Tenn. Sterilizing and preserving cotton-seed. No. 1,155,194; Sept. 28; Gaz. vol. 218; p. 1089.
Barry, William V., *et al.* (See Barron, Anastasia G., assignor.)
Bartels, Carl. (See Mosler and Bartels.)
Bartha, John, Clinton, Mass. Level. No. 1,153,012; Sept. 7; Gaz. vol. 218; p. 232.
Bartholomew, Thomas, and H. J. Percy; said Bartholomew assignor to F. O. Schoedinger, Columbus, Ohio. Auxiliary locking device. No. 1,155,195; Sept. 28; Gaz. vol. 218; p. 1089.
Bartlebaugh, Benjamin C., Wheeling, W. Va. Gas-burner. No. 1,153,013; Sept. 7; Gaz. vol. 218; p. 232.
Barton, Alfred, Marlboro, Mass. Shoe-toe heater. No. 1,155,196; Sept. 28; Gaz. vol. 218; p. 1090.
Barton, Frederick C., Schenectady, N. Y., assignor to General Electric Company. Driving mechanism. No. 1,155,123; Sept. 28; Gaz. vol. 218; p. 1065.
Barton, Lionel V., and W. P. Thompson, Liverpool, England. Apparatus for making white lead. No. 1,152,693; Sept. 7; Gaz. vol. 218; p. 115.
Baruch, Samuel, New York, N. Y. Nut-protector. No. 1,154,960; Sept. 28; Gaz. vol. 218; p. 1007.
Basch, David, Schenectady, N. Y., assignor to General Electric Company. Protective device. No. 1,154,559; Sept. 21; Gaz. vol. 218; p. 774.
Basler, George, assignor to Basler Machinery Company, Lynn, Mass. Sole flexing and tempering machine. No. 1,154,961; Sept. 28; Gaz. vol. 218; p. 1007.
Basler Machinery Company. (See Basler, George, assignor.)
Basten, Peter J. (See Lee, John, assignor.)

Bate, James, Detroit, Mich. Die-casting machine. No. 1,153,749; Sept. 14; Gaz. vol. 218; p. 528.

Bater, Harold M., *et al.* (See Bostwick, Seymour A., assignor.)

Bates, Clifford V., Chicago, Ill. Shock-absorber. No. 1,154,599; Sept. 28; Gaz. vol. 218; p. 884.

Bates, John, Turlock, Cal. Ditch-guard. No. 1,153,186; Sept. 14; Gaz. vol. 218; p. 328.

Bates, John T., Pittsburgh, Pa. Furnace-bottling apparatus. No. 1,154,281; Sept. 21; Gaz. vol. 218; p. 747.

Battisti, Enrico, Rome, Italy. Fastening device. No. 1,152,778; Sept. 7; Gaz. vol. 218; p. 146.

Bauch, Kurt. (See Uhlig and Bauch.)

Bauchet, Henry, Bethel, France. Clutch mechanism for motor haulage-vehicles. No. 1,153,014; Sept. 7; Gaz. vol. 218; p. 232.

Bauer, Conrad, Pittsburgh, Pa. Screen. No. 1,153,015; Sept. 7; Gaz. vol. 218; p. 232.

Bauerfeld, Walther, assignor to Firm of C. Zeiss, Jena, Germany. Cinematographic apparatus. No. 1,154,835; Sept. 28; Gaz. vol. 218; p. 905.

Bauman, Paul H., Battle Creek, Mich. Boot-scraper. No. 1,154,228; Sept. 21; Gaz. vol. 218; p. 728.

Bausch & Lomb Optical Company. (See Saegmuller, George N., assignor.)

Baxter, Cad C. (See Christopher, Walter B., assignor.)

Bayles, Lewis C., Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J. Flow-controlling valve for conduits. No. 1,154,962; Sept. 28; Gaz. vol. 218; p. 1007.

Bayley, William, Springfield, Ohio. Music-sheet. No. 1,152,926; Sept. 7; Gaz. vol. 218; p. 201.

Bayley, William, Springfield, Ohio. Swinging window-sash. No. 1,152,927; Sept. 7; Gaz. vol. 218; p. 201.

Baylis, Everest A., Madera, Mexico, assignor to J. A. McMahon, El Paso, Tex. Protective covering for concentrator-tables and applying the same. (Reissue.) No. 13,981; Sept. 21; Gaz. vol. 218; p. 855.

Beach, Howard L., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. System of electric-motor control. No. 1,155,197; Sept. 28; Gaz. vol. 218; p. 1090.

Beadle, George W., East Orange, N. J., assignor to Westinghouse Lamp Company. Welding-machine. No. 1,153,283; Sept. 14; Gaz. vol. 218; p. 362.

Beadle, George W., New York, N. Y., assignor of ten one-hundredths to D. Smith, Lake Forest, and ten one-hundredths to E. P. Russell, Chicago, Ill. Detachable bottle-cap. No. 1,153,477; Sept. 14; Gaz. vol. 218; p. 432.

Beadle, George W., Bayonne, N. J., assignor to Single Service Package Corporation of America, New York, N. Y. Rendering paper bottles liquid-tight. No. 1,154,282; Sept. 21; Gaz. vol. 218; p. 747.

Beall, William L., assignor to Gale Manufacturing Company, Albion, Mich. Cultivator. No. 1,154,084; Sept. 21; Gaz. vol. 218; p. 680.

Bean, Irene A., Lonepine, Ark. Envelop. No. 1,155,198; Sept. 28; Gaz. vol. 218; p. 1090.

Beaty, Arthur, San Fernando, Cal. Projectile-thrower. No. 1,153,415; Sept. 14; Gaz. vol. 218; p. 412.

Beaumont, Robert H., Philadelphia, Pa. Roll-crusher. No. 1,153,016; Sept. 7; Gaz. vol. 218; p. 233.

Beazley, Thomas C., Richmond, Va. Heel-plate for rubber heels. No. 1,153,368; Sept. 14; Gaz. vol. 218; p. 394.

Bechtold, William S., Newark, N. J. Comb. No. 1,153,669; Sept. 14; Gaz. vol. 218; p. 500.

Becker, August C., assignor of one-half to O. A. Knapp, Elkins, W. Va. Boot or shoe. No. 1,154,360; Sept. 21; Gaz. vol. 218; p. 775.

Becker, Richard M., New York, assignor to J. T. Underwood, Brooklyn, N. Y. Type-writing machine. No. 1,152,928; Sept. 7; Gaz. vol. 218; p. 201.

Becket, Frederick M., assignor to Electro Metallurgical Company, Niagara Falls, N. Y. Treating tungsten ores. No. 1,153,594; Sept. 14; Gaz. vol. 218; p. 476.

Beckman, Jacob H., Seattle, Wash. Ice-machine. No. 1,154,838; Sept. 28; Gaz. vol. 218; p. 905.

Beckwith, Walter C., Fostoria, Ohio. Manufacturing torpedoes. No. 1,154,164; Sept. 21; Gaz. vol. 218; p. 706.

Beckwith, Walter C., Fostoria, Ohio. Railway-fusee. No. 1,154,165; Sept. 21; Gaz. vol. 218; p. 706.

Bedford, Fred, Stratton, Nebr. Brake-actuating device for automatic train-stop mechanism. No. 1,152,695; Sept. 7; Gaz. vol. 218; p. 116.

Beechlyn, John T., Lynn, Mass., assignor to General Electric Company. Lamp and support for same. No. 1,153,284; Sept. 14; Gaz. vol. 218; p. 362.

Behm, Henry, and **J. Vene,** assignors of one-fifth to said Behm, one-fifth to said Vene, one-fifth to W. Marks, one-fifth to G. J. Streimel, Sr., and one-fifth to C. C. Mair, Elizabeth, N. J. Tire. No. 1,152,779; Sept. 7; Gaz. vol. 218; p. 146.

Beidler, George C., Oklahoma, Okla. Photographing and developing apparatus. No. 1,153,017; Sept. 7; Gaz. vol. 218; p. 233.

Beier, Paul T., Rodelheim, Frankfort-on-the-Main, Germany, assignor to United Shoe Machinery Company, Paterson, N. J. Stitch-down-shoe-lasting machine. No. 1,152,694; Sept. 7; Gaz. vol. 218; p. 116.

Belden, David, assignor to Jewell Manufacturing Company, Auburn, N. Y. Thermostat. No. 1,154,361; Sept. 21; Gaz. vol. 218; p. 775.

Belden, David, assignor to Jewell Manufacturing Company, Auburn, N. Y. Damper-controlling apparatus. No. 1,154,600; Sept. 28; Gaz. vol. 218; p. 884.

Bellens, Charles, Brussels-Izelles, Belgium. Pump for variable-speed hydraulic transmission-gears. No. 1,154,478; Sept. 14; Gaz. vol. 218; p. 433.

Bemis Car Truck Company. (See Boyer, Warren L., assignor.)

Bemis, Gilbert C., assignor of one-half to E. F. Fletcher, Worcester, Mass. Brush-bridle. No. 1,152,474; Sept. 7; Gaz. vol. 218; p. 33.

Bemiss, Sylvester E., and **P. Johnson, Clarkston, Wash.** Current-motor. No. 1,153,416; Sept. 14; Gaz. vol. 218; p. 412.

Bender, Conrad, Indianapolis, Ind. Folding bed. No. 1,155,199; Sept. 28; Gaz. vol. 218; p. 1091.

Benét, Laurence V., and **H. A. Mercié, Paris, France.** Muzzle-support for guns. No. 1,153,018; Sept. 7; Gaz. vol. 218; p. 234.

Benjamin Electric Manufacturing Company. (See Benjamin, Reuben B., assignor.)

Benjamin Electric Manufacturing Company. (See Dean, William W., assignor.)

Benjamin, Harry S., Rochester, N. Y. Filling device. No. 1,154,476; Sept. 21; Gaz. vol. 218; p. 813.

Benjamin, John M., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-slotting machine. No. 1,153,886; Sept. 21; Gaz. vol. 218; p. 612.

Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Separable attachment-plug. No. 1,154,963; Sept. 28; Gaz. vol. 218; p. 1007.

Benker, John. (See Stengel, William F., assignor.)

Bennett, Clarence E. (See Foster, Turner, Bennett, and Linn.)

Bennett, Walter E., Houston, Tex. Fuel-economizer. No. 1,153,994; Sept. 21; Gaz. vol. 218; p. 648.

Benson, W. J., *et al.* (See Henneuse, Clarence A., assignor.)

Benster, Olin W., Toledo, Ohio. Loom for weaving wire fabric. No. 1,152,592; Sept. 7; Gaz. vol. 218; p. 79.

Bentley, Frank, Watertown, assignor to Simplex Wire & Cable Company, Cambridge, Mass. Braider mechanism. No. 1,154,964; Sept. 28; Gaz. vol. 218; p. 1008.

Bentley, George H., Westminster, assignor of one-half to E. G. Appleby, London, England. Gas-generator. No. 1,153,417; Sept. 14; Gaz. vol. 218; p. 412.

Berebaum, Lee E., Chicago, Ill. Garment-supporter. No. 1,152,929; Sept. 7; Gaz. vol. 218; p. 202.

Berebaum, Lee E., Chicago, Ill. Fabric-clasp. No. 1,154,362; Sept. 21; Gaz. vol. 218; p. 776.

Beresford, Fred G., assignor to Maywood Packing Co., Corning, Cal. Preparing olives and product thereof. No. 1,154,363; Sept. 21; Gaz. vol. 218; p. 776.

Bergen, Harry S., assignor to Toledo Scale Company, Toledo, Ohio. Scale. No. 1,154,965; Sept. 28; Gaz. vol. 218; p. 1008.

Berger, Christian, New York, N. Y., assignor to Submarine Wireless Company. Submarine signaling apparatus. No. 1,155,124; Sept. 28; Gaz. vol. 218; p. 1066.

Berger, Otto R., Cleveland, Ohio. Snap-flask. No. 1,154,559; Sept. 21; Gaz. vol. 218; p. 841.

Berglund, Albin E., Motley, Minn. Cutter attachment. No. 1,154,837; Sept. 28; Gaz. vol. 218; p. 905.

Berkeley Electric Cooker Company. (See Kercher, Arthur J., assignor.)

Berkley, Laurence J., Santa Monica, Cal. Bottle-crate. No. 1,154,906; Sept. 28; Gaz. vol. 218; p. 988.

Bernard, James L., Beaver, Pa. Chuck. No. 1,154,283; Sept. 21; Gaz. vol. 218; p. 748.

Bernier, Frederick, Fitchburg, Mass. Picker-stick attachment for looms. No. 1,153,595; Sept. 14; Gaz. vol. 218; p. 476.

Berry, Earle A., Kansas City, Mo. Ladder for stave structures. No. 1,153,750; Sept. 14; Gaz. vol. 218; p. 528.

Berry, Edward F., New Orleans, La. Flexible joint. No. 1,153,187; Sept. 14; Gaz. vol. 218; p. 328.

Berry, John S., Plainfield, N. J. Window. No. 1,155,200; Sept. 28; Gaz. vol. 218; p. 1091.

Berry, Robert C., Indianapolis, Ind. Band-saw. No. 1,152,696; Sept. 7; Gaz. vol. 218; p. 116.

Berry, Thomas, and **W. Breymaier, Bucyrus, Ohio.** Cement burial-vault. No. 1,154,085; Sept. 21; Gaz. vol. 218; p. 680.

Bertram, William E., Brooklyn, assignor to International Typesetting Machine Company, New York, N. Y. Line-casting machine. No. 1,153,020; Sept. 7; Gaz. vol. 218; p. 234.

Besserdich, William A., assignor of one-half to B. A. Mosling, Clintonville, Wis. Steering mechanism. No. 1,152,874; Sept. 7; Gaz. vol. 218; p. 182.

Best, Charles H., Morland, Kans. Vacuum-creator. No. 1,155,201; Sept. 28; Gaz. vol. 218; p. 1091.

Best & Company. (See Gallagher, Edward D., assignor.)

Best, Harry L., Sr., Davis, W. Va. Sighting-shade. No. 1,154,838; Sept. 28; Gaz. vol. 218; p. 986.

Best, Otto, San Francisco, Cal. Extraction, purification, and electrolytic precipitation of metallic zinc from smelter-fumes, zinc ores, and the like. No. 1,154,601; Sept. 28; Gaz. vol. 218; p. 885.

Best, Otto, San Francisco, Cal. Hydrometallurgy of zinc. No. 1,154,602; Sept. 28; Gaz. vol. 218; p. 885.

Beth, Wilhelm F. L., Lübeck, Germany. Apparatus for cleaning filters. No. 1,153,751; Sept. 14; Gaz. vol. 218; p. 528.

Betterman, Reinhold, Johnstown, Pa. Tapping apparatus. No. 1,154,603; Sept. 28; Gaz. vol. 218; p. 885.

Betz, William G., Chicago, Ill. Piano-back. No. 1,155,295; Sept. 28; Gaz. vol. 218; p. 1119.

Beugler, Edwin F., assignor to E. & B. Holmes Machinery Co., Buffalo, N. Y. Sandpapering-machine. No. 1,153,479; Sept. 14; Gaz. vol. 218; p. 433.

Beugler, Edwin F., assignor to E. & B. Holmes Machinery Company, Buffalo, N. Y. Hoop expanding and flaring machine. No. 1,153,480; Sept. 14; Gaz. vol. 218; p. 434.

Beugler, Edwin F., assignor to E. & B. Holmes Machinery Company, Buffalo, N. Y. Machine for making barrels. No. 1,154,684; Sept. 28; Gaz. vol. 218; p. 915.

Beuther, William F., assignor of one-third to E. Cohn and one-third to R. G. Tafel, Louisville, Ky. Transfer-pad holder. No. 1,155,296; Sept. 28; Gaz. vol. 218; p. 1119.

Beye, William G., Youngstown, Ohio. Cuspidor. No. 1,155,202; Sept. 28; Gaz. vol. 218; p. 1091.

Biais, Auguste P., and **J. J. Cambon, Bordeaux,** and **C. M. J. Baillod, Colombes, France.** Aeroplane. No. 1,153,752; Sept. 14; Gaz. vol. 218; p. 529.

Bibolini, Aldo, Agordo, and **P. Riboni, Naples, Italy.** Electrostatic separator for sorting out the constituent parts of commodities according to their permeability. No. 1,154,907; Sept. 28; Gaz. vol. 218; p. 988.

Biddle, John M. (See Marrow and Biddle.)

Bidwell, Paul W., Holyoke, Mass. Paper-finishing machine. No. 1,155,203; Sept. 28; Gaz. vol. 218; p. 1092.

Bigelow, Clarence E. (See Ray, Albert D., assignor.)

Bigford, John W., Toronto, Ontario, Canada. Garden-tool. No. 1,154,839; Sept. 28; Gaz. vol. 218; p. 966.

Bigsby Rotary Manufacturing Company, The. (See Sherbondy, William E., assignor.)

Bilan, John A., Oklahoma, Okla. Railway-tie. No. 1,153,670; Sept. 14; Gaz. vol. 218; p. 500.

Bilger, Harry E. (See Clifford, Claymaker, and Bilger.)

Bilhorn, Peter P., Chicago, Ill. Folding organ. No. 1,152,475; Sept. 7; Gaz. vol. 218; p. 33.

Binder, Leo J., Spokane, Wash. Grate. No. 1,154,477; Sept. 21; Gaz. vol. 218; p. 814.

Bird, Charles S., Walpole township, Norfolk county, Mass. Shingle. No. 1,153,418; Sept. 14; Gaz. vol. 218; p. 412.

Birmeley, William C., Paton, Iowa. Self-lighter for cigars. No. 1,153,419; Sept. 14; Gaz. vol. 218; p. 413.

Birnstock, William W., assignor to Hench & Dromgold Company, York, Pa. Fertilizer-distributer. No. 1,155,204; Sept. 28; Gaz. vol. 218; p. 1092.

Bishop, Warren A., Lowell, Mass. Screen. No. 1,152,390; Sept. 7; Gaz. vol. 218; p. 3.

Bittel, Henry, San Francisco, Cal. Convertible chair and bed. No. 1,154,685; Sept. 28; Gaz. vol. 218; p. 915.

Bixby, Allan S., Indianapolis, Ind., assignor to The National Malleable Castings Company, Cleveland, Ohio. Chain-link. No. 1,152,476; Sept. 7; Gaz. vol. 218; p. 34.

Bixby, Allan S., Indianapolis, Ind., assignor to The National Malleable Castings Company, Cleveland, Ohio. Chain-link. No. 1,152,477; Sept. 7; Gaz. vol. 218; p. 34.

Bjur, Oscar H., Kennewick, Wash. Weed-cutting machine. No. 1,154,364; Sept. 21; Gaz. vol. 218; p. 776.

Black, Daniel G., Detroit, Mich. Flange-oiler. No. 1,152,593; Sept. 7; Gaz. vol. 218; p. 79.

Black, Hugh M., Brighton, England. Advertising-sign. No. 1,152,780; Sept. 7; Gaz. vol. 218; p. 146.

Black, John C., Point Richmond, Cal., assignor to Standard Oil Company. Refining petroleum. No. 1,152,478; Sept. 7; Gaz. vol. 218; p. 35.

Blair, Charles E., Somerville, Mass., assignor to American Warp-Drawing Machine Company. Warp-drawing-in machine. No. 1,153,855; Sept. 14; Gaz. vol. 218; p. 567.

Blair, Charles E., Boston, Mass., assignor to American Warp-Drawing Machine Company. Warp-drawing-in machine. No. 1,153,856; Sept. 14; Gaz. vol. 218; p. 567.

Blair, Charles E., Dorchester, Mass., assignor to American Warp-Drawing Machine Company. Detached heddle or the like. No. 1,153,857; Sept. 14; Gaz. vol. 218; p. 568.

Blair, Charles E., Dorchester, Mass., assignor to American Warp-Drawing Machine Company. Detached heddle or the like. No. 1,153,858; Sept. 14; Gaz. vol. 218; p. 568.

Blair, Theodore H. (See McGiffert and Blair.)

Blair, Thomas H., Northboro, Mass. Adjustable bearing for power-transmission mechanism. No. 1,153,285; Sept. 14; Gaz. vol. 218; p. 362.

Blair, Thomas H., assignor to Whiting Manufacturing Company, Northboro, Mass. Kinetograph. No. 1,153,887; Sept. 21; Gaz. vol. 218; p. 612.

Blankenhagen, Albert, assignor of one-half to F. W. Blankenhagen, Akron, Ohio. Ladder. No. 1,155,125; Sept. 28; Gaz. vol. 218; p. 1066.

Blankenhagen, Frank W. (See Blankenhagen, Albert, assignor.)

Bliss, Donald M., assignor to Thomas A. Edison, Incorporated, West Orange, N. J. Alternating-current-rectifying system. No. 1,152,594; Sept. 7; Gaz. vol. 218; p. 79.

Bloch, Bruno, Berlin, Germany, assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,154,166; Sept. 21; Gaz. vol. 218; p. 707.

Block, Charles W., Neenah, Wis. Hitching device. No. 1,153,188; Sept. 14; Gaz. vol. 218; p. 328.

Blohm & Voss, Kommandit-Gesellschaft auf Aktien. (See Jessen, Theodor, assignor.)

Blood, Howard E., Kalamazoo, Mich. Variable-speed gearing. No. 1,154,365; Sept. 21; Gaz. vol. 218; p. 777.

Bloomer, Charles T., Newark, N. Y. Paper pail or box. No. 1,154,086; Sept. 21; Gaz. vol. 218; p. 680.

Blue, Chilton W., assignor to Janney & Company, Montgomery, Ala. Brake-shoe. No. 1,153,753; Sept. 14; Gaz. vol. 218; p. 529.

Blume, Robert A., assignor to Valveless Engine Corporation, Seattle, Wash. Internal-combustion engine. No. 1,154,366; Sept. 21; Gaz. vol. 218; p. 778.

Blything, John F., Chicago, Ill. Lock-valve. No. 1,153,189; Sept. 14; Gaz. vol. 218; p. 329.

Boal, Robert T., Kearney, N. J. Safety belt and clutch shifting mechanism. No. 1,152,781; Sept. 7; Gaz. vol. 218; p. 146.

Boch, Philipp, assignor of one-half to P. Reich, New York, N. Y. Car-brake. No. 1,153,151; Sept. 7; Gaz. vol. 218; p. 276.

Bock, William A., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Side bearing. No. 1,153,671; Sept. 14; Gaz. vol. 218; p. 500.

Bodde, Theodore, Brant Rock, Mass. Submarine signaling. No. 1,152,697; Sept. 7; Gaz. vol. 218; p. 117.

Bodendieck, Henry W., Springfield, Ill. Street-car fender. No. 1,154,686; Sept. 28; Gaz. vol. 218; p. 915.

Bodenslek, Gottfried O., *et al.* (See Bodenslek, Jennie M., assignor.)

Bodenslek, Jennie M., assignor of one-third to G. O. Bodenslek, New York, and one-third to F. Broaker, Brooklyn, N. Y. Invalid's corset. No. 1,152,595; Sept. 7; Gaz. vol. 218; p. 80.

Bodinson, Lars W., assignor to The American Well Works, Aurora, Ill. Deep-well pump. No. 1,152,479; Sept. 7; Gaz. vol. 218; p. 35.

Bogle, John F., Bushnell, Nebr. Pipe-lifter. No. 1,154,687; Sept. 28; Gaz. vol. 218; p. 916.

Bohannon, Nathaniel, Chase City, Va. Door-brace. No. 1,154,087; Sept. 21; Gaz. vol. 218; p. 681.

Boissier, Edgar. (See Henry, George W., assignor.)

Boissier, Hermann R., Great Neck, N. Y. Electroplating device. No. 1,154,604; Sept. 28; Gaz. vol. 218; p. 886.

Boland, Francis P., Providence, R. I. Drying jewelry. No. 1,154,167; Sept. 21; Gaz. vol. 218; p. 707.

Boler, John D. (See Story, Hudson F., assignor.)

Bollerup, Jens J. (See Moller and Bollerup.)

Bolling, Baltzar E., assignor to J. K. Stewart Manufacturing Company, Chicago, Ill. Parcel-post-rate indicator. No. 1,153,530; Sept. 14; Gaz. vol. 218; p. 456.

Bolson, Aberham L., Mason, Nev. Adjusting device for rock-drills. No. 1,155,034; Sept. 28; Gaz. vol. 218; p. 1031.

Boman, Claes W., Brooklyn, assignor to Eagle Pencil Company, New York, N. Y. Pen and pencil clip. No. 1,153,754; Sept. 14; Gaz. vol. 218; p. 529.

Bonawitz, George. (See Bowen, David J., assignor.)

Boud, Bennett, Los Angeles, Cal. Vehicle demonstrating and testing device. No. 1,155,126; Sept. 28; Gaz. vol. 218; p. 1066.

Bonner, Stephen T., Spokane, Wash. Fish-hook. No. 1,152,698; Sept. 7; Gaz. vol. 218; p. 117.

Booth, Zachariah E., New Bedford, Mass. Spinning and winding machine. No. 1,153,190; Sept. 14; Gaz. vol. 218; p. 329.

Borchers, Wilhelm, and **E. Thilges, Aachen, Germany.** Separating iron and nickel from copper in certain ores and masses. No. 1,152,699; Sept. 7; Gaz. vol. 218; p. 117.

Border, William N., Dunlap, Mo. Shock-absorber. No. 1,154,284; Sept. 21; Gaz. vol. 218; p. 748.

Bordner, Charles S., Circleville, Kans. Chicken-brooder. No. 1,152,700; Sept. 7; Gaz. vol. 218; p. 118.

Bornmann, Carl, assignor to Ansco Company, Binghamton, N. Y. Finder for cameras. No. 1,152,782; Sept. 7; Gaz. vol. 218; p. 147.

Bornmann, Carl, Binghamton, N. Y., assignor to Ansco Company. Film-pack camera. No. 1,154,285; Sept. 21; Gaz. vol. 218; p. 748.

Borresen, Helge A., Marquette, Mich. Device for ascertaining the vertical angle and direction of diamond-drill holes. No. 1,152,701; Sept. 7; Gaz. vol. 218; p. 118.

Borresen, Helge A., Marquette, Mich., assignor to M. W. Zabel, trustee, Chicago, Ill. Chuck. No. 1,153,905; Sept. 21; Gaz. vol. 218; p. 648.

Borsari-Fischer, Heinrich, Zollikon, near Zurich, Switzerland. Material for lining concrete tanks. No. 1,152,783; Sept. 7; Gaz. vol. 218; p. 147.

Bosch, Carl, A. Mittasch, H. Wolf, and **G. Stern,** assignors to Badische Anilin- & Soda-Fabrik, Ludwigshafen-on-the-Rhine, Germany. Production of ammonia. No. 1,152,930; Sept. 7; Gaz. vol. 218; p. 202.

Bosch, Firm of Robert. (See Honold, Gottlob, assignor.)

Boss-Conselmann, Johannes, Oustinettingen, Germany. Adding apparatus. No. 1,154,367; Sept. 21; Gaz. vol. 218; p. 778.

Bosserman, Joseph S., Sedalia, Mo. Fish-hook. No. 1,154,168; Sept. 21; Gaz. vol. 218; p. 708.

Bost, Francis W., China Grove, N. C. Circuit-closer for fire-alarms. No. 1,153,755; Sept. 14; Gaz. vol. 218; p. 530.

Bostwick, Seymour A., assignor of one-third to C. A. Glentworth and one-third to H. M. Bater, Boston, Mass. Valve-grinding device. No. 1,154,605; Sept. 28; Gaz. vol. 218; p. 886.

Bostwick, Tuffel L., Burlington, Vt. Construction-block. No. 1,155,035; Sept. 28; Gaz. vol. 218; p. 1032.

Bosworth, George P., Central Falls, R. I. Automatic circular-knitting machine for producing split-foot hosiery. No. 1,154,169; Sept. 21; Gaz. vol. 218; p. 708.

Bott, Robert W., Minneapolis, Minn. End-play device for rotary engines. No. 1,153,888; Sept. 21; Gaz. vol. 218; p. 613.

Böttcher, Paul, Gross Flottbeck, near Hamburg, Germany. Curved teeth for gears. No. 1,154,840; Sept. 28; Gaz. vol. 218; p. 966.

Bottome, Turner D., Indianapolis, Ind. Carbureting. No. 1,153,889; Sept. 21; Gaz. vol. 218; p. 613.

Bouché, William F., Buffalo, assignor to Gould Coupler Company, New York, N. Y. Connection-box. No. 1,153,019; Sept. 7; Gaz. vol. 218; p. 234.

Boucher, Peter, assignor to Inland Knitting Works, Green Bay, Wis. Suction-roll covering. No. 1,152,596; Sept. 7; Gaz. vol. 218; p. 80.

Bouk, Henry A., assignor to Bouk Patents Company, Seattle, Wash. Theater-chair. No. 1,152,480; Sept. 7; Gaz. vol. 218; p. 36.

Bouk Patents Company. (See Bouk, Henry A., assignor.)

Bowen, David J., assignor of one-half to G. Bonawitz, Brooklyn, N. Y. Feed-bag. No. 1,154,229; Sept. 21; Gaz. vol. 218; p. 728.

Bower, Benjamin H., and O. L. Osborn, St. Louis, Mo. Ball-bearing caster and the like. No. 1,153,838; Sept. 14; Gaz. vol. 218; p. 560.

Bowers, George, San Francisco, Cal. Pulley. No. 1,152,597; Sept. 7; Gaz. vol. 218; p. 80.

Bowland, Frank Y., assignor to F. R. Meadors, Pasadena, Cal. Front-wheel-centering device. No. 1,154,908; Sept. 28; Gaz. vol. 218; p. 988.

Bowman, Howard H., Owen Sound, Ontario, Canada. Skate. No. 1,153,890; Sept. 21; Gaz. vol. 218; p. 614.

Bowman, Newton K., North Lawrence, Ohio. Berailer. No. 1,152,784; Sept. 7; Gaz. vol. 218; p. 147.

Boyce, Irving J. (See Clark, William W., assignor.)

Boyce, John E., New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Controlling device for hydraulic elevators. No. 1,152,481; Sept. 7; Gaz. vol. 218; p. 36.

Boyd, William C. (See Martin, James S., assignor.)

Boyd, William T., Scranton, Tex. Peanut-harvester. No. 1,154,368; Sept. 21; Gaz. vol. 218; p. 779.

Boyer, Warren L., Kingston, N. Y., assignor to Bemis Car Truck Company, Springfield, Mass. Brake-head. No. 1,152,391; Sept. 7; Gaz. vol. 218; p. 4.

Bozard, Harrison B., La Crosse, Wis. Fuel-burning apparatus. No. 1,154,606; Sept. 28; Gaz. vol. 218; p. 887.

Bradbury, Frederick G., trustee. (See Sorg, William A., assignor.)

Braddy, Rufa D., Anaconda, Mont. Fender. No. 1,154,478; Sept. 21; Gaz. vol. 218; p. 814.

Bradley, Charles M., Harvey, Ill. Internal-combustion engine. No. 1,153,191; Sept. 14; Gaz. vol. 218; p. 329.

Bradley, John W., Fruitvale, Cal. Explosion-engine. No. 1,155,297; Sept. 28; Gaz. vol. 218; p. 1119.

Bradley, Wakeman, Detroit, Mich. Armor. No. 1,154,689; Sept. 28; Gaz. vol. 218; p. 916.

Bradstreet, Arthur H., Haverhill, Mass. Heel-building form. No. 1,154,744; Sept. 28; Gaz. vol. 218; p. 934.

Braithwaite, Cora B., Minneapolis, Minn. Spool-carrier. No. 1,153,021; Sept. 7; Gaz. vol. 218; p. 235.

Brasseur, Charles L. A., New York, N. Y. Screen for color photography. No. 1,154,607; Sept. 28; Gaz. vol. 218; p. 887.

Braner, Richard B., Richmond, Va. Gas-engine primer. No. 1,155,205; Sept. 28; Gaz. vol. 218; p. 1092.

Braune, Friedrich, Clifton, Tex. Cultivator. No. 1,154,841; Sept. 28; Gaz. vol. 218; p. 966.

Breath, William L., New York, N. Y. Carbureter. No. 1,153,891; Sept. 21; Gaz. vol. 218; p. 614.

Bredt, Otto P. C., New York, N. Y. Production of concentrated radium residue and the separation of radium compounds therefrom. No. 1,154,230; Sept. 21; Gaz. vol. 218; p. 728.

Bredt, Otto P. C., assignor of three-fifths to Radium Therapy Corporation, New York, N. Y. Concentrating radium ores and residues. No. 1,154,231; Sept. 21; Gaz. vol. 218; p. 728.

Breitung, Edward N., Marquette, Mich., and A. Pick, assignors to Subterranean Heater Corporation, New York, N. Y. Treating subterranean wells. No. 1,152,392; Sept. 7; Gaz. vol. 218; p. 4.

Breil, Julius J., New York, N. Y. Snap-button. No. 1,152,785; Sept. 7; Gaz. vol. 218; p. 148.

Bremer & Bruckman. (See Sharp, Lee C., assignor.)

Bremer, Joseph H., Tampa, Fla. Pen-point remover. No. 1,153,756; Sept. 14; Gaz. vol. 218; p. 530.

Brending, Frederick J., Brainerd, Minn. Attachment for cooking utensils. No. 1,153,757; Sept. 14; Gaz. vol. 218; p. 530.

Breneman, Joseph T., Lancaster, Pa. Gravity traveling toy. No. 1,154,088; Sept. 21; Gaz. vol. 218; p. 681.

Brenizer, Orson W., Philadelphia, Pa., assignor of one-half to D. L. Short, West Collingswood, N. J. Cable-support. No. 1,155,127; Sept. 28; Gaz. vol. 218; p. 1067.

Brennan, Charles M., Bridgeport, Conn. Trolley-wheel. No. 1,154,170; Sept. 21; Gaz. vol. 218; p. 709.

Brennan, John J. (See Brennan, Michael H. and J. J.)

Brennan, Michael H., Devils Lake, N. D., and J. J. Brennan, Girardsville, Pa. Heating apparatus. No. 1,154,608; Sept. 28; Gaz. vol. 218; p. 887.

Brewitt, Walter. (See Goldschmidt and Brewitt.)

Breymaier, William. (See Berry and Breymaier.)

Bridges, Charles E., Chicago, Ill., assignor to Autosales Gum and Chocolate Company. Vending device. No. 1,152,931; Sept. 7; Gaz. vol. 218; p. 202.

Briney, George B., Greenfield, Ind. Rotary valve for gas-engines. No. 1,154,479; Sept. 21; Gaz. vol. 218; p. 814.

Bring, Einar J., Franklin, Pa. Dumping-vehicle. No. 1,153,369; Sept. 14; Gaz. vol. 218; p. 394.

Brinkley, Robert L., Winston-Salem, N. C. Fire-alarm. No. 1,154,480; Sept. 21; Gaz. vol. 218; p. 815.

Britt, Alfred A., Detroit, Mich. Valve. No. 1,154,577; Sept. 21; Gaz. vol. 218; p. 849.

Broaker, Frank, *et al.* (See Bodenstek, Jennie M., assignor.)

Brock, Henry E., and E. Z. Myre, Hancock, Mich. Box. No. 1,155,206; Sept. 28; Gaz. vol. 218; p. 1093.

Brockbank, Clarence J., Niagara Falls, Ontario, Canada, assignor to The Carborundum Company, Niagara Falls, N. Y. Filtering apparatus. No. 1,152,875; Sept. 7; Gaz. vol. 218; p. 182.

Brockman, Oscar, Louisville, Ky. Snap-hook. No. 1,153,022; Sept. 7; Gaz. vol. 218; p. 235.

Brockman, Oscar, Louisville, Ky. Bridle. No. 1,153,023; Sept. 7; Gaz. vol. 218; p. 235.

Brocksmith, Adolph E., St. Louis, Mo. Rear-axle truss. No. 1,153,996; Sept. 21; Gaz. vol. 218; p. 648.

Brockway, Don M. (See Richards, Frank J., assignor.)

Brody, Alexander, New York, N. Y. Push and pinch contact-plug for flash-lights. No. 1,153,420; Sept. 14; Gaz. vol. 218; p. 413.

Brokaw, William G., High Point, N. C. Life-preserver. No. 1,155,207; Sept. 28; Gaz. vol. 218; p. 1093.

Bromet, John, F. Thorman, and H. C. Wood, Tadcaster, England. Apparatus for drying sewage-sludge and the like. No. 1,153,192; Sept. 14; Gaz. vol. 218; p. 330.

Bronnert, Emile, Niedermorschweiler, Germany. Non-inflammable celluloid-like mass and production thereof. No. 1,153,596; Sept. 14; Gaz. vol. 218; p. 476.

Brooks, Charles T. (See Sargent and Brooks.)

Brooks, Saulsbury, Jr., and C. R. Anderson, Los Angeles, Cal. Electrotherapeutic apparatus. No. 1,155,036; Sept. 28; Gaz. vol. 218; p. 1032.

Broughton, Walter C., Kansas City, Mo. Concrete building. No. 1,155,037; Sept. 28; Gaz. vol. 218; p. 1032.

Broughton, Walter C., Kansas City, Mo. Concrete building. No. 1,155,038; Sept. 28; Gaz. vol. 218; p. 1032.

Brown, Albert C., Chicago, Ill. Self-closing cock or faucet. No. 1,153,370; Sept. 14; Gaz. vol. 218; p. 395.

Brown, Charles O., Minot, N. D. Ironing-board. No. 1,153,758; Sept. 14; Gaz. vol. 218; p. 530.

Brown, Cheney C. (See Milliken, Frank W., assignor.)

Brown, Clark J., Petersburg, Va. Note-book and holder for same. No. 1,152,702; Sept. 7; Gaz. vol. 218; p. 119.

Brown Hoisting Machinery Company, The. (See Colby and Taylor, assignors.)

Brown, Howard, Mittineague, Mass. Paper-marking device. No. 1,152,393; Sept. 7; Gaz. vol. 218; p. 4.

Brown, James F., Bokhoma, Okla. Attachment for scrapers. No. 1,155,039; Sept. 28; Gaz. vol. 218; p. 1032.

Brown, Louis E., assignor to Farrington Manufacturing Company, Roxbury, Mass. Affixing covering material to frames. No. 1,152,786; Sept. 7; Gaz. vol. 218; p. 148.

Brown, Milo, assignor of one-half to W. B. Kirby, Wellington, Tex. Pipe-clamp. No. 1,153,024; Sept. 7; Gaz. vol. 218; p. 236.

Brown, Otis E., Brockton, Mass., assignor to The Singer Manufacturing Company. Stitch-forming device. No. 1,152,482; Sept. 7; Gaz. vol. 218; p. 37.

Brown, Perry, Coraopolis, Pa. Journal-box. No. 1,155,040; Sept. 28; Gaz. vol. 218; p. 1033.

Brown, Raymond E., and E. C. Gaines, assignors to Heyl & Patterson Inc., Pittsburgh, Pa. Rail-clamp for traveling-bridges. No. 1,153,672; Sept. 14; Gaz. vol. 218; p. 501.

Brown, Stanley, Garden City, N. Y. Finder for cameras. No. 1,154,966; Sept. 28; Gaz. vol. 218; p. 1009.

Brown, William C., Syracuse, N. Y., assignor to Humphrey Gas Pump Company. Utilizing heat energy. No. 1,152,394; Sept. 7; Gaz. vol. 218; p. 4.

Brown, William L., and A. J. Meuwly, Little Rock, Ark. Engine-rod connection. No. 1,152,876; Sept. 7; Gaz. vol. 218; p. 182.

Browne Apparatus Company *et al.* (See Browne, Ralph C., assignor.)

Browne, Ralph C., Salem, assignor of one-half to J. C. Sherman, Brookline, and one-half to Browne Apparatus Company, Boston, Mass. Method of and apparatus for elevating fluids by elastic-fluid pressure. No. 1,154,745; Sept. 28; Gaz. vol. 218; p. 934.

Browne, Willis Q., Boston, Mass. Electrically-lighted pencil. No. 1,155,208; Sept. 28; Gaz. vol. 218; p. 1093.

Browning, Tillie J., Philadelphia, Pa. Cleaning appliance. No. 1,154,369; Sept. 21; Gaz. vol. 218; p. 779.

Brownlee, Roy H., and R. H. Uhlinger, assignors, by mesne assignments, to American Nitro-Products Company, Pittsburgh, Pa. Making nitrogen and carbon dioxid. No. 1,154,171; Sept. 21; Gaz. vol. 218; p. 709.

Brownlee, Roy H., and R. H. Uhlinger, assignors to American Nitro-Products Company, Pittsburgh, Pa. Making nitrogen and carbon dioxid. No. 1,154,172; Sept. 21; Gaz. vol. 218; p. 709.

Brucker, Francis, Lansing, Mich. Roofing. No. 1,153,152; Sept. 7; Gaz. vol. 218; p. 277.

Brueck, Theodor. (See Klein and Brueck.)

Brumberg, Eli. (See Simpson, Clarence L., assignor.)

Brunell, Frank J., Chicago, assignor of one-half to F. Balu, La Grange, Ill. Machine for making paper pails. No. 1,153,193; Sept. 14; Gaz. vol. 218; p. 330.

Bruniquel, Michel, Paris, France. Increasing the energy of a fluid-motor in motor-driven torpedoes. No. 1,154,609; Sept. 28; Gaz. vol. 218; p. 888.

Brunker, Joseph, and C. A. Mattmiller, Helena, Mont. Fluid-pressure-controlling valve. No. 1,153,759; Sept. 14; Gaz. vol. 218; p. 531.

Brunswick-Balke-Collender Company, The. (See Hobbs, Frank C., assignor.)

Bryan, William D. (See Dunlap and Bryan.)

Bryant, Asa T., Lawrence, Mass. Drying-machine. No. 1,154,560; Sept. 21; Gaz. vol. 218; p. 842.

Bryant, Elmer J., assignor to The Taft Peirce Manufacturing Company, Woonsocket, R. I. Boring-tool holder. No. 1,153,673; Sept. 14; Gaz. vol. 218; p. 501.

Bryant, Richard S., assignor to The Standard Welding Company, Cleveland, Ohio. Vehicle-wheel with demountable rim. No. 1,153,481; Sept. 14; Gaz. vol. 218; p. 434.

Bryant, Richard S., assignor to The Standard Welding Company, Cleveland, Ohio. Vehicle-wheel with demountable rim. No. 1,153,482; Sept. 14; Gaz. vol. 218; p. 435.

Bryant, Robert F., Los Angeles, Cal. Balancing attachment for motor-cycles. No. 1,154,089; Sept. 21; Gaz. vol. 218; p. 681.

Bryant, Solomon L., Mount Airy, N. C. Plant-setting machine. No. 1,154,173; Sept. 21; Gaz. vol. 218; p. 710.

Bryce, Henry, Cohoes, N. Y. Wing-collar. No. 1,152,483; Sept. 7; Gaz. vol. 218; p. 37.

Brylinski, Miroslaw, Brussels, Belgium. Hydrocarbon-vapor lamp. No. 1,154,090; Sept. 21; Gaz. vol. 218; p. 682.

Buckeye Steel Castings Company, The. (See Johnson, George T., assignor.)

Buckeye Steel Castings Company, The. (See Whitridge and Johnson, assignors.)

Buckles, Enoch, *et al.* (See Martin, Commodore V., assignor.)

Buffalo Foundry & Machine Company. (See Sleeper, Oliver S., assignor.)

Bugbee, Lucian W., assignor to American Optical Company, Southbridge, Mass. Forming ophthalmic lenses. No. 1,153,859; Sept. 14; Gaz. vol. 218; p. 568.

Bunnell, Morton G., assignor to F. C. Austin, Chicago, Ill. Two-way bucket excavator. No. 1,153,997; Sept. 21; Gaz. vol. 218; p. 649.

Burdett, John B., Chicago, Ill., assignor to Davis-Bournonville Company, New York, N. Y., and Chicago, Ill. Electrolytic apparatus. No. 1,154,091; Sept. 21; Gaz. vol. 218; p. 682.

Burdett, John B., Chicago, Ill., assignor to Davis-Bournonville Company, New York, N. Y., and Chicago, Ill. Electrode for electrolytic cells. No. 1,154,092; Sept. 21; Gaz. vol. 218; p. 683.

Burgess, Louis W., Wheaton, Ill. Making cuts. No. 1,155,128; Sept. 28; Gaz. vol. 218; p. 1067.

Burke, James E., assignor of one-half to Cooper Manufacturing Co., Bennington, Vt. Union garment. No. 1,152,484; Sept. 7; Gaz. vol. 218; p. 37.

Burke, Michael H., Denver, Colo. Heel-grip. No. 1,155,209; Sept. 28; Gaz. vol. 218; p. 1093.

Burke, Thomas, New York, N. Y. Combined sleigh and wagon. No. 1,154,370; Sept. 21; Gaz. vol. 218; p. 779.

Burke, Timothy J., Middletown, N. Y. Hat and cap holder. No. 1,154,371; Sept. 21; Gaz. vol. 218; p. 779.

Burlingame, George L., Chicago, Ill. Gas-shut-off valve. No. 1,154,561; Sept. 21; Gaz. vol. 218; p. 842.

Burnham Basket Company. (See Burnham, Charles, assignor.)

Burnham, Charles, Los Angeles, Cal. Metal-strip-bending mechanism. No. 1,154,970; Sept. 28; Gaz. vol. 218; p. 1010.

Burnham, Charles, Los Angeles, Cal., assignor to Burnham Basket Company. Box-making machine. No. 1,154,610; Sept. 28; Gaz. vol. 218; p. 888.

Burnham, Charles, Los Angeles, Cal., assignor to Burnham Basket Company. Feeding mechanism for box-making machines. No. 1,154,968; Sept. 28; Gaz. vol. 218; p. 1009.

Burnham, Charles, Los Angeles, Cal., assignor to Burnham Basket Company. Box-making machine. No. 1,154,969; Sept. 28; Gaz. vol. 218; p. 1009.

Burnham, Frederick E., assignor of one-third to J. E. Burr, Scranton, Pa. Shaft attachment. No. 1,155,210; Sept. 28; Gaz. vol. 218; p. 1094.

Burns, Patrick. (See Van Schaick, Burns, and Reardon.)

Burpee, Frank W., South Bellingham, Wash. Continuous can-cooking retort. No. 1,154,611; Sept. 28; Gaz. vol. 218; p. 888.

Burr, James E. (See Burnham, Frederick E., assignor.)

Burritt, Augustus P., Ozone Park, N. Y. Battery-cell. No. 1,154,372; Sept. 21; Gaz. vol. 218; p. 780.

Burroughs Adding Machine Company. (See Gardner, Clyde E. W., assignor.)

Burroughs Adding Machine Company. (See Kilpatrick, William J., assignor.)

Burt Machine Company. (See Wild, Frederick W., Jr., assignor.)

Burton, Charles A., Chicago, Ill. Perforating-machine. No. 1,155,129; Sept. 28; Gaz. vol. 218; p. 1067.

Burton, Frank W., San Diego, Cal. Illuminated sign. No. 1,152,703; Sept. 7; Gaz. vol. 218; p. 119.

Burwell, George O., Salt Lake City, Utah, and C. M. Kurtz, Bellevue, Pa. Trolley. No. 1,154,234; Sept. 21; Gaz. vol. 218; p. 729.

Buschmann, Theodor E., assignor to Wanderer Werke, vorm. Winklhofer & Jaenicke, A. G., Chemnitz, Germany. Accent mechanism for type-writers. No. 1,154,286; Sept. 21; Gaz. vol. 218; p. 748.

Butcher, Ura, Athens, Ohio. Single-wheel emergency-truck. No. 1,154,287; Sept. 21; Gaz. vol. 218; p. 749.

Butler, Frank, Oxnard, Cal. Spirit-level. No. 1,153,760; Sept. 14; Gaz. vol. 218; p. 531.

Butler, George F., Jacksonport, Wis. Plow. No. 1,153,025; Sept. 7; Gaz. vol. 218; p. 236.

Butler, James A., Winthrop, assignor to American Voting Machine Company, Boston, Mass. Indicator mechanism for restrictive voting. No. 1,155,041; Sept. 28; Gaz. vol. 218; p. 1033.

Butler, Joseph C., Pomona, Cal. Motor-car signal. No. 1,152,704; Sept. 7; Gaz. vol. 218; p. 119.

Butler, Paul, Lowell, Mass., assignor to United States Cartridge Company. Constructing packages. No. 1,152,598; Sept. 7; Gaz. vol. 218; p. 80.

Butler, Paul, Lowell, Mass., assignor to United States Cartridge Company. Cartridge. No. 1,153,860; Sept. 14; Gaz. vol. 218; p. 569.

Butler, William F., Indianapolis, Ind., assignor to Sanitary Can Company, New York, N. Y. Can-head-flange curling and coating machine. No. 1,152,395; Sept. 7; Gaz. vol. 218; p. 5.

Butte, Emile, Warren Point, N. J. Composition of matter for weighting silk yarns and fabrics. No. 1,154,174; Sept. 21; Gaz. vol. 218; p. 710.

Buttler, William, Indianapolis, Ind. Combination kitchen-cabinet and stove. No. 1,153,597; Sept. 14; Gaz. vol. 218; p. 477.

Buttress, George, assignor to American Holding Company, Los Angeles, Cal. Street-indicator for cars. No. 1,153,421; Sept. 14; Gaz. vol. 218; p. 413.

Buttschau, William J. (See Hopkins, Arthur C., assignor.)

Butusov, William P., assignor of one-half to J. M. Lopez, Biloxi, Miss. Garment. No. 1,154,842; Sept. 28; Gaz. vol. 218; p. 966.

Buzard, Jacob M., Pittsburgh, E. P. Cole, Coraopolis, and F. H. Haslage, Pittsburgh, Pa. Protecting device for air-brake-pipe couplings. No. 1,154,481; Sept. 21; Gaz. vol. 218; p. 815.

Byram Foundry Company. (See Farris, Harry W., assignor.)

Byrd, John M., Hazlehurst, Ga. Spike. No. 1,154,482; Sept. 21; Gaz. vol. 218; p. 815.

Byron, Hagar B., assignor, by mesne assignments, of one-third to A. H. Adams, A. E. Pickard, and J. L. Jackson, Chicago, Ill. Apparatus for producing a round or relief effect by photography. No. 1,154,232; Sept. 21; Gaz. vol. 218; p. 729.

Byron, Hagar B., assignor, by mesne assignments, of one-third to A. H. Adams, A. E. Pickard, and J. L. Jackson, Chicago, Ill. Kinetographic apparatus. No. 1,154,233; Sept. 21; Gaz. vol. 218; p. 729.

C. G. Conn, Inc. (See Hardy, Paul C., assignor.)

C. G. Sargent's Sons Corporation. (See Sargent and Brooks, assignors.)

C. M. Hall Lamp Company. (See Anklam, William F., assignor.)

Cahill, Harry C., Akron, Ohio. Repeater for telegraph-lines. No. 1,152,877; Sept. 7; Gaz. vol. 218; p. 183.

Cahill, Henry D., assignor to Frank W. Whitcher Company, Boston, Mass. Tool for stripping insulation-covering from electric wires. No. 1,153,286; Sept. 14; Gaz. vol. 218; p. 343.

Cailis Brothers Company, The. (See Vanderslel and Goodall, assignors.)

Caldwell, William F., assignor to J. A. Riggs, Hot Springs, Ark. Automatic fire-alarm. No. 1,152,932; Sept. 7; Gaz. vol. 218; p. 203.

Calef, Harry G., Haverhill, Mass. Shank for shoes. No. 1,154,690; Sept. 28; Gaz. vol. 218; p. 916.

Calhoon, Tilmon J., Monroe, La. Wrench. No. 1,154,612; Sept. 28; Gaz. vol. 218; p. 889.

Calhoun, Andrew S., East Liverpool, Ohio. Drill-jar. No. 1,154,483; Sept. 21; Gaz. vol. 218; p. 816.

Callahan, John, Lynn, Mass. Presser-foot. No. 1,154,373; Sept. 21; Gaz. vol. 218; p. 780.

Calleson, Amos, assignor to B. Adriance, Brooklyn, N. Y. Bottle-sealing machine. No. 1,153,174; Sept. 7; Gaz. vol. 218; p. 285.
Cambou, Jean J. (See Blais, Cambou, and Baillod.)
Campbell, Donald J., Muskegon, Mich. Piston-ring pliers. No. 1,153,674; Sept. 14; Gaz. vol. 218; p. 502.
Campbell, Robert A., Minneapolis, Minn. Tire-pressure gage. No. 1,153,026; Sept. 7; Gaz. vol. 218; p. 236.
Canby, Amos G., Detroit, Mich. Pouring-spout for cans. No. 1,153,998; Sept. 21; Gaz. vol. 218; p. 649.
Candee, Zenas P., assignor to The Waterbury Farrel Foundry and Machine Company, Waterbury, Conn. Punch-shifting device. No. 1,153,287; Sept. 14; Gaz. vol. 218; p. 363.
Cannedy, Edgar P., Clovis, N. Mex. Harrow. No. 1,153,027; Sept. 7; Gaz. vol. 218; p. 236.
Canon, Edward L., Quitman, Ga. Peanut-picker. No. 1,153,598; Sept. 14; Gaz. vol. 218; p. 477.
Canton, Georges H. M., P. G. Unné, and E. J. J. Salmson, Billancourt, France. Valve-sprtug. No. 1,154,971; Sept. 28; Gaz. vol. 218; p. 1010.
Carbis, Samuel H., Freeport, Pa. Strainer. No. 1,154,175; Sept. 21; Gaz. vol. 218; p. 710.
Carbone, Tito L., Charlottenburg, Germany, assignor to General Electric Company. Inclosed flaming-arc lamp. No. 1,154,093; Sept. 21; Gaz. vol. 218; p. 683.
Carborundum Company, The. (See Brockbank, Clarence J., assignor.)
Carborundum Company, The. (See Clark, Bennett F., assignor.)
Carey, John. (See Hornbostel and Carey.)
Carleton, Herbert O., New York, and E. W. Nelson, New Rochelle, N. Y. Apparatus for printing positive motion-picture films. No. 1,152,590; Sept. 7; Gaz. vol. 218; p. 81.
Carleton, Herbert O., New York, and E. W. Nelson, New Rochelle, N. Y. Cam-movement. No. 1,152,600; Sept. 7; Gaz. vol. 218; p. 81.
Carlson, Amanda C., Cannon Falls, Minn. Adjustable cake-holding band. No. 1,154,972; Sept. 28; Gaz. vol. 218; p. 1010.
Carlson, Karl O., assignor to National Piano Manufacturing Company, Grand Rapids, Mich. Automatic musical instrument with magazine. No. 1,152,287; Sept. 7; Gaz. vol. 218; p. 148.
Carmont, William H., Kingston, England. Resilient tire for road-vehicles. No. 1,154,484; Sept. 21; Gaz. vol. 218; p. 816.
Caron, Omer, and G. Surprenant, Maisonneuve, Quebec, Canada. Pipe-bender. No. 1,155,042; Sept. 28; Gaz. vol. 218; p. 1033.
Carpenter, Allie M., *et al.* (See Carpenter, Mason P., assignor.)
Carpenter, Harold N., Woodford, Vt. Fountain-pen filler. No. 1,152,601; Sept. 7; Gaz. vol. 218; p. 81.
Carpenter, Harold N., Bennington, Vt. Fountain-pen filler. No. 1,152,602; Sept. 7; Gaz. vol. 218; p. 82.
Carpenter, James M., Pawtucket, R. I. Die-holder. No. 1,155,211; Sept. 28; Gaz. vol. 218; p. 1094.
Carpenter, John C., Houston Heights, Tex. Carbureter. No. 1,153,999; Sept. 21; Gaz. vol. 218; p. 649.
Carpenter, Mason P., assignor to A. M. Carpenter, Hickory Ridge, P. M. Carpenter, Blytheville, Ark., F. O. Hadley, P. H. Cullen, St. Louis, Mo., and H. J. Parks, East St. Louis, Ill. Nut-lock. No. 1,154,691; Sept. 28; Gaz. vol. 218; p. 917.
Carpenter, Nathan H., Coshocton, Ohio. Machine for making paper. No. 1,153,892; Sept. 21; Gaz. vol. 218; p. 614.
Carpenter, Price M., *et al.* (See Carpenter, Mason P., assignor.)
Carpenter, Tennauski Z., assignor to Federal Screw Corporation, Providence, R. I. Screw-slotting machine. No. 1,153,540; Sept. 14; Gaz. vol. 218; p. 456.
Carpenter, William B. (See MacVane, James, assignor.)
Carr, Arthur C., *et al.* (See Lovejoy, Harvey P., assignor.)
Carr, John H., Alhambra, and A. C. Routhe, Los Angeles, Cal. Continuous concrete-pipe machine. No. 1,153,599; Sept. 14; Gaz. vol. 218; p. 477.
Carrill, Albert H., assignor to Hart-King System Company, Baltimore, Md. Recording and computing cards and holder therefor. No. 1,153,761; Sept. 14; Gaz. vol. 218; p. 531.
Carroll, John E., and W. H. Andrews, Boston, Mass., assignors, by mesne assignments, to Wizard Tire Inflator & Fire Extinguisher Co. Discharge control for fluid-receptacles. No. 1,152,485; Sept. 7; Gaz. vol. 218; p. 37.
Carson, William B. (See Gregory, Thomas F., assignor.)
Carter, Augustus A., Fayette, Iowa. Adjustable shelving. No. 1,153,371; Sept. 14; Gaz. vol. 218; p. 395.
Carter-Crume Company, The. (See Turck, Frederick M., assignor.)
Cary Manufacturing Company. (See Miller, George C. D., assignor.)
Cash, Clifford E., Detroit, Mich. Hatch-cover. No. 1,152,486; Sept. 7; Gaz. vol. 218; p. 38.
Cassard, Harry L., Philadelphia, Pa. Climbing-ball toy. No. 1,154,064; Sept. 21; Gaz. vol. 218; p. 683.
Castlebone Company. (See Schloss, Joseph W. and M. W., assignors.)
Caswell, Herbert M., and F. Sherer, Oatman, Ariz. Can-opener. No. 1,153,600; Sept. 14; Gaz. vol. 218; p. 477.
Caughey, Edward G., Sewickley, Pa., assignor of one-half to E. H. Schane, Youngstown, Ohio. Sheet-metal wall. No. 1,153,601; Sept. 14; Gaz. vol. 218; p. 478.
Central Railway Signal Company. (See Dutcher, Frank, assignor.)
Cerruti, Antonio, San Francisco, Cal. Syruping-machine. No. 1,154,374; Sept. 21; Gaz. vol. 218; p. 780.
Chalk, Alvin T., Baltimore, Md. Plant and flower stand. No. 1,153,028; Sept. 7; Gaz. vol. 218; p. 237.
Challenge Machinery Company, The. (See McCabe, George E., assignor.)
Chambers Brothers Company. (See King, Howard K., assignor.)
Champ, John K., Paris, Ky. Open book-link. No. 1,153,762; Sept. 14; Gaz. vol. 218; p. 532.
Champ, Joseph H., Cleveland, Ohio. Bottle-filling device. No. 1,154,746; Sept. 28; Gaz. vol. 218; p. 935.
Champion, John H. W., Hermon, Cal. Telephone attachment. No. 1,153,029; Sept. 7; Gaz. vol. 218; p. 237.
Chapin, Charles E. (See Hetherington and Chapin.)
Chapin, Maurice S., Springfield, Mass. Vehicle-frame. No. 1,153,602; Sept. 14; Gaz. vol. 218; p. 478.
Chapleau, Phileas T., assignor to American Cutlery Company, Chicago, Ill. Guard for punch-presses. No. 1,153,603; Sept. 14; Gaz. vol. 218; p. 478.
Chapman, Mark C. (See Chapman, Matthew T. and M. C.)
Chapman, Matthew T. and M. C., assignors to The American Well Works, Aurora, Ill. Pumping machinery. No. 1,152,603; Sept. 7; Gaz. vol. 218; p. 82.
Chapman, Ralph W., Oldtown, Me. Electrical therapeutic apparatus. No. 1,153,839; Sept. 14; Gaz. vol. 218; p. 560.
Chapman, Robert E., assignor of one-half to S. Waugh, Canon City, Colo. Shipping-receptacle. No. 1,155,212; Sept. 28; Gaz. vol. 218; p. 1094.
Chapman, Walter S., *et al.* (See Nichols, Robert M., assignor.)
Chapsal, François J., Paris, and A. L. E. Saillet, La Garenne-Colombes, France. Piston with two cupped leathers. No. 1,153,604; Sept. 14; Gaz. vol. 218; p. 479.
Chard, Nicholas D. (See Schellenbach, Lodge, and Chard.)
Charles E. Benefiel Company. (See Hiatt, William F., assignor.)
Charles W. Shonk Company. (See Dun Lany, William P., assignor.)
Charles W. Shonk Company. (See Eaton, Allan L., assignor.)
Chase, William D. (See Ward and Chase.)
Chenette, Frank A., Worcester, Mass. Bottle-cover. No. 1,154,972; Sept. 28; Gaz. vol. 218; p. 1011.
Cheney, Herbert W., Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Potential-regulator. No. 1,153,422; Sept. 14; Gaz. vol. 218; p. 414.
Chenoweth, John H., Chicago, Ill. Sewing-machine support. No. 1,152,487; Sept. 7; Gaz. vol. 218; p. 38.
Chic Mfg. Co. (See Salmenstein, Solomon C., assignor.)
Chicago Hardware Foundry Company. (See Hathorne, Sherman A., assignor.)
Chicago Lubricator Company, The. (See Edwards, Frank W., assignor.)
Chicago Pneumatic Tool Company. (See Sherwood, Mather W., assignor.)
Christenson, Peter A., Benson, Minn. Tire-armor. No. 1,153,194; Sept. 14; Gaz. vol. 218; p. 331.
Christianson, Andrew, Butler, Pa. Shock-absorber. No. 1,153,483; Sept. 14; Gaz. vol. 218; p. 435.
Christoph, Edward A. (See Elvyn and Christoph.)
Christopher, Walter B., assignor of one-half to C. C. Baxter, Birmingham, Ala. Collapsible rim. No. 1,154,288; Sept. 21; Gaz. vol. 218; p. 749
Christy, Henry A., Kenilworth, assignor to American Car Roof Co., Chicago, Ill. Rail-joint. No. 1,153,153; Sept. 7; Gaz. vol. 218; p. 277.
Church, Philetus M., assignor to National Service Selling Company, Saginaw, Mich. Knife-sharpener. No. 1,154,375; Sept. 21; Gaz. vol. 218; p. 781.
Church, Sumner R., Brooklyn, assignor to Barrett Manufacturing Company, New York, N. Y. Weather and flame resistant shingle, &c., and making same. No. 1,155,130; Sept. 28; Gaz. vol. 218; p. 1097.
Churchill, George A. H., Rumson, N. J. Binding-post. No. 1,152,705; Sept. 7; Gaz. vol. 218; p. 120.
Churchward, Alexander, Boston, Mass. Electric-lighting and battery-charging system for vehicles. No. 1,152,878; Sept. 7; Gaz. vol. 218; p. 183.
Churchward, Alexander, Boston, Mass. Power-transmission means for operating dynamos. No. 1,153,372; Sept. 14; Gaz. vol. 218; p. 395.
Cilley, Cassius S., Salem, Mass. Chair-lock. No. 1,155,043; Sept. 28; Gaz. vol. 218; p. 1034.
Claiborne, Alexander, Palms, assignor to Western Pipe & Steel Company of California, Los Angeles, Cal. Pipe-repairing device. No. 1,154,376; Sept. 21; Gaz. vol. 218; p. 781.
Claren, Ferdinand L., assignor to Drägerwerk, Heinr. und Bernh. Dräger, Lübeck, Germany. Diver's dress consisting of a shirt or jacket and separate trousers. No. 1,153,030; Sept. 7; Gaz. vol. 218; p. 237.

Clark, Ben F., Wichita, Kans. Nest. No. 1,152,706; Sept. 7; Gaz. vol. 218; p. 120.
Clark, Bennett F., assignor to The Carborundum Company, Niagara Falls, N. Y. Work-holding attachment for grinding-machines. No. 1,155,213; Sept. 28; Gaz. vol. 218; p. 1094.
Clark, Charles B., East Orange, N. J. Electric-lamp socket. No. 1,153,195; Sept. 14; Gaz. vol. 218; p. 331.
Clark, Emerson L., Lakewood, assignor to National Carbon Company, Cleveland, Ohio. Compression-rheostat. No. 1,154,377; Sept. 21; Gaz. vol. 218; p. 781.
Clark, Franklin J., Montclair, N. J. Garbage-can cover. No. 1,153,288; Sept. 14; Gaz. vol. 218; p. 364.
Clark, George E. (See Clark, Irrgang, and Clark.)
Clark, George J. J., *et al.* (See Snell, Harry, assignor.)
Clark, George P., W. F. Irrgang, and G. E. Clark, assignors to George P. Clark Company, Windsor Locks, Conn. Truck. No. 1,152,788; Sept. 7; Gaz. vol. 218; p. 149.
Clark, John M., Whitestone, N. Y. Steam-engine. No. 1,152,488; Sept. 7; Gaz. vol. 218; p. 38.
Clark, William F., Coraopolis, Pa. Furnace-charging apparatus. No. 1,153,605; Sept. 14; Gaz. vol. 218; p. 479.
Clark, William J. (See Heron and Clark.)
Clark, William W., assignor of one-half to I. J. Boyce, Portland, Oreg. Trolley-pole. No. 1,152,707; Sept. 7; Gaz. vol. 218; p. 120.
Clarke, Charles W. E. (See Santry, Joseph V., assignor.)
Clawson, Leonard E., San Francisco, Cal. Cylinder-grinder. No. 1,154,378; Sept. 21; Gaz. vol. 218; p. 781.
Clay, Robert, Cheadle, England. Tracing-cloth. No. 1,154,485; Sept. 21; Gaz. vol. 218; p. 816.
Clayton & Lambert Manufacturing Company. (See Lambert, Charles R., assignor.)
Clayton, Thomas J., Port Arthur, Tex. Lubricating device. No. 1,154,095; Sept. 21; Gaz. vol. 218; p. 683.
Cleal, Joseph P., Toronto, Ontario, Canada, assignor to Michigan Cash Register Company, Detroit, Mich. Cash-register. No. 1,154,096; Sept. 21; Gaz. vol. 218; p. 684.
Clemens, Charles, East Long Meadow, assignor to National Equipment Company, Springfield, Mass. Feeding device for chocolate-molding machines. No. 1,152,789; Sept. 7; Gaz. vol. 218; p. 149.
Clements, Charles H. (See Richeson, Joseph S., assignor.)
Clements Company, The. (See Kennedy, Joseph, assignor.)
Clements, Elliert A., assignor to Grand Rapids Textile Machinery Company, Grand Rapids, Mich. Pressing-machine. No. 1,153,289; Sept. 14; Gaz. vol. 218; p. 364.
Cleveland Engineering Company, The. (See McGeorge, John, assignor.)
Clewe, William F. (See Von Hacht, Taylor, and Clewe.)
Clouette, Nelson, Penacook, N. H., assignor to W. Firth, Chestnut Hill, Mass. Driving device for pneumatic dust-removers. No. 1,154,379; Sept. 21; Gaz. vol. 218; p. 782.
Cobb, Lyman H., assignor to M. E. Johnson, trustee, Fitchburg, Mass. Valve-controlling mechanism for internal-combustion engines. No. 1,155,044; Sept. 28; Gaz. vol. 218; p. 1034.
Cobb, Manuel E., assignor of one-half to R. T. Lewis, Marion, Ohio. Lock for grave-vaults. No. 1,154,235; Sept. 21; Gaz. vol. 218; p. 730.
Cockburn, John W., Dundas, Ontario, Canada. Power-transmission device. No. 1,153,031; Sept. 7; Gaz. vol. 218; p. 237.
Cockburn, William R., Hamilton, New Zealand. Milking machinery. No. 1,155,131; Sept. 28; Gaz. vol. 218; p. 1068.
Coffey, Joseph H. and J. H., Jr., assignors of one-half to Gutta Percha and Rubber Limited, Toronto, Ontario, Canada. Tire-mold core. No. 1,154,843; Sept. 28; Gaz. vol. 218; p. 967.
Coffin, Howard E., Detroit, Mich. Explosion-engine. No. 1,153,675; Sept. 14; Gaz. vol. 218; p. 502.
Coffin, Howard E., Detroit, Mich. Explosion-engine. No. 1,153,676; Sept. 14; Gaz. vol. 218; p. 502.
Cohen, Max M. (See Vollrath and Cohen.)
Cohn, Edward, *et al.* (See Beuther, William F., assignor.)
Colby, Mark R., Portland, Oreg., and E. W. Taylor, assignors to The Brown Hoisting Machinery Company, Cleveland, Ohio. Means for hoisting and conveying lumber-packages. No. 1,152,879; Sept. 7; Gaz. vol. 218; p. 183.
Cole, Everson P. (See Buzard, Cole, and Haslage.)
Cole, Orlando J., Coxs Creek, Ky. Internal-combustion engine. No. 1,154,844; Sept. 28; Gaz. vol. 218; p. 967.
Cole, William H., Waltham, Mass. Fault-detector. No. 1,152,880; Sept. 7; Gaz. vol. 218; p. 184.
Cole, William H., Waltham, Mass. System of electrical distribution. No. 1,152,881; Sept. 7; Gaz. vol. 218; p. 184.
Coleman, Clyde J., New York, N. Y., assignor, by mesne assignments, to Virginia Refrigerator Corporation. Refrigerating apparatus. No. 1,152,708; Sept. 7; Gaz. vol. 218; p. 121.
Coles, Walter H., Troy, Ohio. Irrigation apparatus. No. 1,154,380; Sept. 21; Gaz. vol. 218; p. 782.
Coll, John J., Reno, Nev. Valve. No. 1,152,604; Sept. 7; Gaz. vol. 218; p. 82.
Coll, John J., Reno, Nev. Playing-card. No. 1,152,605; Sept. 7; Gaz. vol. 218; p. 83.
Collett, Emil, assignor to Norsk Hydro-Elektrisk Kvaelstofaktieselskab, Christiania, Norway. Concentrating dilute nitric acid. No. 1,154,289; Sept. 21; Gaz. vol. 218; p. 749.
Collier, Charles E., *et al.* (See Fuller, Edward, Jr., assignor.)
Collings, William A., Kansas City, Mo. Deformed reinforcing-bar. No. 1,152,606; Sept. 7; Gaz. vol. 218; p. 83.
Collins, Alfred F., Toronto, Ontario, and C. C. Craig, Winnipeg, Manitoba, Canada. Safety-razor-blade holder. No. 1,155,132; Sept. 28; Gaz. vol. 218; p. 1068.
Collins, Roy V., New York, N. Y., assignor, by mesne assignments, to Collins Switch & Signal Company. Switch and signal system. No. 1,152,790; Sept. 7; Gaz. vol. 218; p. 149.
Collins, Roy V., New York, N. Y., assignor, by mesne assignments, to Royal Engineering Corporation. Switch-throwing mechanism. No. 1,152,791; Sept. 7; Gaz. vol. 218; p. 150.
Collins Switch & Signal Company. (See Collins, Roy V., assignor.)
Collinson, Grover W., *et al.* (See Tredway, William E., assignor.)
Combs, George W., Leavenworth, Kans. Means for supporting and controlling gyratory structures. No. 1,152,396; Sept. 7; Gaz. vol. 218; p. 5.
Commercial Camera Company. (See Greene, John S., assignor.)
Commonwealth Steel Company. (See Westlake, Charles T., assignor.)
Compagnie Des Forges Et Acieries De La Marine Et D'Homecourt. (See Rimailho, Emile, assignor.)
Company of Levinstein Limited. (See Levinstein and Baddiley, assignors.)
Computing Cheese Cutter Company, The. (See Wilson, Forrest M., assignor.)
Computing Scale Company, The. (See Menz and Jackson, assignors.)
Conerway, Edcor, Atwood, Tenn. Rail-joint. No. 1,153,606; Sept. 14; Gaz. vol. 218; p. 479.
Conger, Charles A., Oakland, Cal. Salt and pepper shaker. No. 1,154,000; Sept. 21; Gaz. vol. 218; p. 650.
Conine, Fred B., Clifton, Tex. Sleeve-protector. No. 1,153,893; Sept. 21; Gaz. vol. 218; p. 614.
Conklin, Edward D., assignor to The Whitehead & Hoag Company, Newark, N. J. Pin-receiving device. No. 1,153,175; Sept. 7; Gaz. vol. 218; p. 285.
Conklin, Lewis P., Red Bank, N. J. Antirattling sash-lock and window-stop. No. 1,153,763; Sept. 14; Gaz. vol. 218; p. 532.
Conley Electric Furnace Company, The. (See Hampton, William H., assignor.)
Conn, Robert, and O. H. Shults, Vernon, British Columbia, Canada. Making artificial stone. No. 1,153,032; Sept. 7; Gaz. vol. 218; p. 238.
Connelly, James A., Hamilton, Ohio. Brake-shoe. No. 1,153,154; Sept. 7; Gaz. vol. 218; p. 278.
Conrad, Elmer E., West Salem, assignor of one-half to H. A. Tulloch, Genoa, Wis. Trolley-stop. No. 1,155,214; Sept. 28; Gaz. vol. 218; p. 1095.
Conrad, Frank, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. Protective means for electrical systems. No. 1,155,133; Sept. 28; Gaz. vol. 218; p. 1068.
Conrad, Frank, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. Means for protecting electrical systems. No. 1,155,134; Sept. 28; Gaz. vol. 218; p. 1069.
Consolidated Car-Heating Company *et al.* (See Williams, Harry S., assignor.)
Continental Investment Company. (See Hartenstein, Herman L., assignor.)
Cook, Charles H. (See Dungan, James G., assignor.)
Cook, Henry J., Los Angeles, Cal., and H. E. Marsden, Ottumwa, Iowa. Device for rotating pneumatic drills. No. 1,152,882; Sept. 7; Gaz. vol. 218; p. 185.
Cook, Willard J., Des Moines, Iowa. Manure-spreader. No. 1,154,236; Sept. 21; Gaz. vol. 218; p. 730.
Cooley, Edward H., Takoma Park, Md. Egg-beater. No. 1,155,215; Sept. 28; Gaz. vol. 218; p. 1095.
Coolidge, William D., Schenectady, N. Y., assignor to General Electric Company. X-ray target. No. 1,153,290; Sept. 14; Gaz. vol. 218; p. 364.
Coons, Lillian M., *et al.* (See Parr, Webster A., assignor.)
Cooper, Edward, Newton, Mass. Mica-splitting machine. No. 1,155,298; Sept. 28; Gaz. vol. 218; p. 1119.
Cooper, Frank W., Cora, W. Va. Cable-hook. No. 1,152,397; Sept. 7; Gaz. vol. 218; p. 6.
Cooper Hewitt Electric Company. (See Pole, Joseph C., assignor.)
Cooper Hewitt Electric Co. (See Thomas, Percy H., assignor.)
Cooper, James A. and J. C., Dallas, Tex. Lemon-squeezer. No. 1,152,933; Sept. 7; Gaz. vol. 218; p. 203.
Cooper, Joel C. (See Cooper, James A. and J. C.)
Cooper, John S. (See Hinkle and Cooper.)
Cooper Manufacturing Co. (See Burke, James E., assignor.)

Cooper, William, Hampton Springs, Fla. Suspension device. No. 1,154,845; Sept. 28; Gaz. vol. 218; p. 967.

Cope, Henry P., assignor to Michigan Stamping Company, Detroit, Mich. Vehicle-chock. No. 1,153,607; Sept. 14; Gaz. vol. 218; p. 480.

Copenhagen, Herman C., Auburn, Wash. Dirt-wagon. No. 1,153,179; Sept. 7; Gaz. vol. 218; p. 286.

Coppage, Benjamin D., Wilmington, Del. Shake-head connection. No. 1,154,613; Sept. 28; Gaz. vol. 218; p. 889.

Corbet, Denya W., assignor, by mesne assignments, to Autosales Gum and Chocolate Company, New York, N. Y. Automatic coin-operated lock. No. 1,154,381; Sept. 21; Gaz. vol. 218; p. 782.

Corey, Charles W., Malden, Mass. Liquid-server. No. 1,152,607; Sept. 7; Gaz. vol. 218; p. 83.

Corey, Fred B., Edgewood, Pa. Inspector's gage. No. 1,152,792; Sept. 7; Gaz. vol. 218; p. 151.

Corey, Fred B., Edgewood, Pa. Indicator for automobile-radiators. No. 1,154,097; Sept. 21; Gaz. vol. 218; p. 684.

Corey, William W., assignor to Pratt & Whitney Company, Hartford, Conn. Lubricator. No. 1,152,398; Sept. 7; Gaz. vol. 218; p. 6.

Coss, Wilbur, and W. Stockhill, Glassport, Pa. Door-hanger. No. 1,154,001; Sept. 21; Gaz. vol. 218; p. 650.

Costello, Bartley P. (See Duffy and Costello.)

Costello, Joseph, Atlantic City, N. J. Hat-guard. No. 1,153,291; Sept. 14; Gaz. vol. 218; p. 364.

Costello, Richard A., Chicago Heights, Ill. Blackboard-eraser. No. 1,153,894; Sept. 21; Gaz. vol. 218; p. 615.

Coulson, Willis, Mace, Idaho. Chuck for drills. No. 1,153,033; Sept. 7; Gaz. vol. 218; p. 238.

Coulston, Earl V., Cleveland, Ohio. Stove. No. 1,152,793; Sept. 7; Gaz. vol. 218; p. 151.

Counter, John, Elizabeth, N. J. Watch and clock holding case. No. 1,154,382; Sept. 21; Gaz. vol. 218; p. 783.

Courson, Oliver H., Memphis, Tenn. Guard for wood-working machinery. No. 1,154,098; Sept. 21; Gaz. vol. 218; p. 684.

Cousland, Hugh, Singer, Clydebank, Scotland. Sewing-machine. No. 1,153,176; Sept. 7; Gaz. vol. 218; p. 235.

Coverdell, Grover F., Council Bluffs, Iowa, assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,152,934; Sept. 7; Gaz. vol. 218; p. 204.

Cowan, Edward H., East Cleveland, Ohio. Concrete-mixer. No. 1,154,383; Sept. 21; Gaz. vol. 218; p. 783.

Cowell, John W., assignor of one-third to R. Karwiese, Chicago, Ill. Oil-can. No. 1,152,709; Sept. 7; Gaz. vol. 218; p. 121.

Cowen, Joshua L., New York, N. Y. Toy track. No. 1,152,489; Sept. 7; Gaz. vol. 218; p. 39.

Cowen, Joshua L., New York, N. Y. Toy-rail joint. No. 1,152,490; Sept. 7; Gaz. vol. 218; p. 39.

Cowley, James T., Scituate, assignor to The Lamson Company, (formerly Lamson Consolidated Store Service Company,) Boston, Mass. Table for mail and the like. No. 1,154,562; Sept. 21; Gaz. vol. 218; p. 842.

Cox, Albert F., Chicago, Ill. Hair-drying comb. No. 1,153,196; Sept. 14; Gaz. vol. 218; p. 331.

Cox Multi-Mailer Company. (See Cox, Sandford C., assignor.)

Cox Multi-Mailer Company. (See Huneke, John, assignor.)

Cox, Sandford C., Edison Park, Ill., assignor to Cox Multi-Mailer Company, Augusta, Me. Folding and wrapping machine. No. 1,152,794; Sept. 7; Gaz. vol. 218; p. 151.

Cox, Thomas, Oakland, assignor to J. F. Lucey, Los Angeles, Cal. Hanger for polished-rod adjusters for wells. No. 1,154,486; Sept. 21; Gaz. vol. 218; p. 816.

Coyle, James R., Huntsville, Ala., assignor of one-fourth to J. J. Friedel, North Chattanooga, Tenn. Rotary-valve internal-combustion engine. No. 1,154,487; Sept. 21; Gaz. vol. 218; p. 817.

Craig, Alvin M., New Haven, Conn., assignor to Metal Molds Compressed Castings Company, Wilmington, Del. Casting and uniting metals. No. 1,153,197; Sept. 14; Gaz. vol. 218; p. 331.

Craig, Claude C. (See Collins and Craig.)

Cram, Benjamin H., Baltimore, Md. Apparatus for producing oxygen. No. 1,155,045; Sept. 28; Gaz. vol. 218; p. 1035.

Crane, Calvin D., Dayton, Ohio. Water-still. No. 1,154,590; Sept. 21; Gaz. vol. 218; p. 853.

Crane Company. (See Houser, Arthur M., assignor.)

Crane, James P., Chicago, Ill. Producing compounds of rubber and steel-wool. No. 1,152,935; Sept. 7; Gaz. vol. 218; p. 204.

Cranmer, George O., and G. V. Tudhope, Oakland, Cal. Non-interfering succession-movement fire-alarm signaling-machine. No. 1,152,710; Sept. 7; Gaz. vol. 218; p. 121.

Cremer, Henry, Chicago, Ill. Bottle-closure. No. 1,154,290; Sept. 21; Gaz. vol. 218; p. 750.

Cremer, Henry, Chicago, Ill. Bottle-closure. No. 1,154,291; Sept. 21; Gaz. vol. 218; p. 750.

Crescent Machine Company, The. (See Harrold, Elmer, assignor.)

Crescent Talking Machine Company. (See Hoschke, William H., assignor.)

Cribbs, Thomas J., Clearwater, Fla. Bicycle transmission. No. 1,154,292; Sept. 21; Gaz. vol. 218; p. 750.

Criswell, Raleigh C., assignor of one-half to G. C. Fleming, Chicago, Ill. Front and rear drive for autovehicles. No. 1,155,216; Sept. 28; Gaz. vol. 218; p. 1095.

Crockett, William P., *et al.* (See Levison, Maurice, assignor.)

Crofts, Maurice Sydney, New South Wales, Australia. Ladder. No. 1,154,614; Sept. 28; Gaz. vol. 218; p. 890.

Cronenberger, Walter M., Toledo, Ohio. Separator and filter. No. 1,152,399; Sept. 7; Gaz. vol. 218; p. 6.

Cronin, Patrick J., *et al.* (See Lynch, Daniel E., assignor.)

Crosby, Oliver, assignor to American Hoist & Derrick Co., St. Paul, Minn. Boom-operating mechanism. No. 1,153,034; Sept. 7; Gaz. vol. 218; p. 238.

Croslen, William T., assignor of one-half to J. P. Woolsey, Oklahoma, Okla. Apparatus for raising water. No. 1,153,198; Sept. 14; Gaz. vol. 218; p. 332.

Cross, Edward, Rotherham, England. Electrically-propelled road-vehicle. No. 1,154,293; Sept. 21; Gaz. vol. 218; p. 750.

Crowdus, Walter A., assignor of one-half to Atkinson, Mentzer & Company, Chicago, Ill. Storage battery. No. 1,155,046; Sept. 28; Gaz. vol. 218; p. 1035.

Crowdus, Walter A., assignor of one-half to Atkinson, Mentzer & Company, Chicago, Ill. Storage battery. No. 1,155,047; Sept. 28; Gaz. vol. 218; p. 1035.

Crucet, Joseph M., New York, N. Y. Relief ornament and making the same. No. 1,154,384; Sept. 21; Gaz. vol. 218; p. 783.

Crump Company, The. (See Crump and Hilsinger, assignors.)

Crump, Samuel, Montclair, and A. W. Hilsinger, Orange, N. J., assignors to The Crump Company, New York, N. Y., Printing-press. No. 1,154,002; Sept. 21; Gaz. vol. 218; p. 651.

Cruser, Frederick V., Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill. Match-testing apparatus. No. 1,152,796; Sept. 7; Gaz. vol. 218; p. 152.

Cruser, Frederick V., Barberton, Ohio, assignor to The Diamond Match Company, Chicago, Ill. Match-testing apparatus. No. 1,152,797; Sept. 7; Gaz. vol. 218; p. 153.

Cruson, George E., Yountville, Cal. Derrick-fork. No. 1,153,764; Sept. 14; Gaz. vol. 218; p. 532.

Csanyi, Henry, assignor to Maxivolt Primary Battery Co., New York, N. Y. Safety-lamp. No. 1,154,615; Sept. 28; Gaz. vol. 218; p. 890.

Cucuiic, Joseph, Fiume, Austria-Hungary. Circuit-breaker. No. 1,153,765; Sept. 14; Gaz. vol. 218; p. 533.

Cull, Louis D., assignor to D. Round & Son, Cleveland, Ohio. Pulley-block. No. 1,152,608; Sept. 7; Gaz. vol. 218; p. 83.

Cullen, P. H., *et al.* (See Carpenter, Mason P., assignor.)

Cunneen, James M., Jersey City, N. J. Oiling device. No. 1,153,604; Sept. 14; Gaz. vol. 218; p. 480.

Cunningham, James A., Independence, Kans. Hose-coupling. No. 1,153,895; Sept. 21; Gaz. vol. 218; p. 615.

Curry, Arthur O., San Bernardino, Cal. Controlling-valve. No. 1,155,217; Sept. 28; Gaz. vol. 218; p. 1095.

Curry, William H., Lake City, Iowa. Ground-connector. No. 1,154,099; Sept. 21; Gaz. vol. 218; p. 685.

Curtis & Company Manufacturing Company. (See Steedman, George F., assignor.)

Cushman, Ara, Jr. (See Wilkinson, Noah, assignor.)

Custer, Burr, Marion, Ind. Welding-torch. No. 1,154,974; Sept. 28; Gaz. vol. 218; p. 1011.

Cuthbertson, William, Pittsfield, Mass. Device for automatically stopping the turn-table of a phonograph. No. 1,154,975; Sept. 28; Gaz. vol. 218; p. 1012.

Cutler-Hammer Mfg. Co., The. (See Henderson, Clark T., assignor.)

Cutler-Hammer Mfg. Co., The. (See Klein, Charles J., assignor.)

Cutler-Hammer Mfg. Co., The. (See Radley, Guy R., assignor.)

Cutler-Hammer Mfg. Co., The. (See Simon, Arthur, assignor.)

Cutler, Henry H., Milwaukee, Wis. Controller for electric motors. No. 1,154,976; Sept. 28; Gaz. vol. 218; p. 1012.

Cutler, Isabella M., Sawtelle, Cal. Display device. No. 1,152,795; Sept. 7; Gaz. vol. 218; p. 152.

Cycle Mfg. & Supply Company. (See Musselman, Alvin J., assignor.)

D'Homergue, John B. (See De Long and D'Homergue.)

Dain, Joseph, assignor to Deere & Company, Moline, Ill. Draft device. No. 1,152,936; Sept. 7; Gaz. vol. 218; p. 205.

Dain, Joseph, Moline, Ill., assignor to Dain Manufacturing Company of Iowa, Ottumwa, Iowa. Hay-press. No. 1,153,199; Sept. 14; Gaz. vol. 218; p. 332.

Dain Manufacturing Company of Iowa. (See Dain, Joseph, assignor.)

Dale, Frank M., assignor to Motoring Clock Manufacturing Company, Sullivan, Ind. Automobile timepiece attachment. No. 1,153,609; Sept. 14; Gaz. vol. 218; p. 480.

Dalén, Gustaf, assignor to Svenska Aktiebolaget Gas-accumulator, Stockholm, Sweden. Apparatus for mixing gases. No. 1,153,766; Sept. 14; Gaz. vol. 218; p. 533.

Dalén, Gustaf, assignor to Svenska Aktiebolaget Gas-accumulator, Stockholm, Sweden. Railway signaling system. No. 1,153,840; Sept. 14; Gaz. vol. 218; p. 561.

Damon, Clare B., *et al.*, executors. (See Damon, Russell H.)

Damon, Murray C., *et al.*, executors. (See Damon, Russell H.)

Damon, Russell H., deceased; C. B. and M. C. Damon, executors, assignors to The Hairlight Company, Leominster, Mass. Barrette or hair-retainer. No. 1,152,883; Sept. 7; Gaz. vol. 218; p. 185.

Damon, Russell H., deceased; C. B. and M. C. Damon, executors, assignors to The Hairlight Company, Leominster, Mass. Hair-roll. No. 1,152,884; Sept. 7; Gaz. vol. 218; p. 185.

Daniel Green Felt Shoe Company. (See Franz, Paul H., assignor.)

Daniell, Pearl, Lawton, Okla. Brooder. No. 1,154,488; Sept. 21; Gaz. vol. 218; p. 817.

Daniels, George E. (See Marshall and Daniels.)

Daniels, John J., Albia, Iowa. Fire-escape. No. 1,153,200; Sept. 14; Gaz. vol. 218; p. 332.

Daniels, Theodor, Brooklyn, N. Y. Bookbinder. No. 1,154,489; Sept. 21; Gaz. vol. 218; p. 817.

Daniels, Thomas M., Chicago, Ill. Safety controlling apparatus for aeroplanes. No. 1,153,035; Sept. 7; Gaz. vol. 218; p. 239.

Daniels, Thomas M., Chicago, Ill. Means for joining railway-rails. No. 1,153,036; Sept. 7; Gaz. vol. 218; p. 239.

Danley, William L., *et al.* (See Killman, Thomas A., assignor.)

Dansby, Thomas M., Pine Bluff, Ark. Slicing-machine. No. 1,153,484; Sept. 14; Gaz. vol. 218; p. 436.

Dansby, Thomas M., Pine Bluff, Ark. Slicing-machine. No. 1,153,485; Sept. 14; Gaz. vol. 218; p. 436.

Danzenbaker, Francis, Norfolk, Va. Beehive. No. 1,154,176; Sept. 21; Gaz. vol. 218; p. 710.

Darby, Levi I., Newark, N. J. Lifting-jack. No. 1,155,049; Sept. 28; Gaz. vol. 218; p. 1036.

Darby, Levi I., Newark, and C. N. Walsh, East Orange, N. J., assignors to Darby Machine Company. Calculating-machine. No. 1,155,048; Sept. 28; Gaz. vol. 218; p. 1036.

Darby Machine Company. (See Darby and Walsh, assignors.)

Darley, John W., Jr., Baltimore, Md. Musical instrument. No. 1,155,299; Sept. 28; Gaz. vol. 218; p. 1120.

Darley, John W., Jr., Baltimore, Md. Expression device for electric organs. No. 1,155,300; Sept. 28; Gaz. vol. 218; p. 1120.

Darley, John W., Jr., Baltimore, Md.. Key-controlled contact-maker for use with musical instruments. No. 1,155,301; Sept. 28; Gaz. vol. 218; p. 1121.

Darley, John W., Jr., Baltimore, Md. Circuit-closer. No. 1,155,302; Sept. 28; Gaz. vol. 218; p. 1121.

Darling, Richard S., assignor to Paramount Glass Percolator Mfg. Co., New York, N. Y. Straining device. No. 1,153,768; Sept. 14; Gaz. vol. 218; p. 534.

Darling, William V., Riverside, Cal. Roadway-scarifier. No. 1,155,218; Sept. 28; Gaz. vol. 218; p. 1096.

Davidson, William J., Hartford, Conn. Collar-band. No. 1,154,909; Sept. 28; Gaz. vol. 218; p. 989.

Davis, Benjamin W., Phillips, Wis. Pneumatic spring. No. 1,152,609; Sept. 7; Gaz. vol. 218; p. 84.

Davis, Bert L., Wichita, Kans. Vehicle. No. 1,154,616; Sept. 28; Gaz. vol. 218; p. 890.

Davis-Bournonville Company. (See Burdett, John B., assignor.)

Davis, Edward W., Minneapolis, Minn. Magnetic ore-washer. No. 1,153,037; Sept. 7; Gaz. vol. 218; p. 239.

Davis & Furber Machine Co. (See Thiel, Charles P. B., assignor.)

Davis, Henry O., Plymouth, Mass. Last-tube. No. 1,153,201; Sept. 14; Gaz. vol. 218; p. 333.

Davis, Louis P. (See Sullivan and Davis.)

Davis, Robert H. (See Luellen, Lawrence W., assignor.)

Davis, Robert H., New York, N. Y. Golf-club. No. 1,154,490; Sept. 21; Gaz. vol. 218; p. 818.

Davis, Thomas W., Elizabeth, N. J. Pressure-controlling valve. No. 1,154,885; Sept. 21; Gaz. vol. 218; p. 783.

Davis, Vernard O., *et al.* (See Wheeler, Richard, assignor.)

Davis, Winfield H., Rutherford, N. J. Adjustable track-gage. No. 1,153,769; Sept. 14; Gaz. vol. 218; p. 534.

Dawley, Clarence A., Plainfield, N. J., assignor to Ingersoll-Rand Company, New York, N. Y. Pulsatory tool. No. 1,154,977; Sept. 28; Gaz. vol. 218; p. 1012.

Dawsey, John E., Conway, S. C. Timepiece. No. 1,153,038; Sept. 7; Gaz. vol. 218; p. 240.

Daymon, Eugene A., Lima, Ohio. Automatic cylinder-cock. No. 1,153,770; Sept. 14; Gaz. vol. 218; p. 535.

Dayton Engineering Laboratories Co., The. (See Kettering, Charles F., assignor.)

De Bats, Jean H. L., Zellenople, Pa. Welding. No. 1,152,610; Sept. 7; Gaz. vol. 218; p. 84.

De Lamater, Jules V., Vancouver, British Columbia, Canada. Hot-blast stump-burner. No. 1,153,610; Sept. 14; Gaz. vol. 218; p. 481.

De Laski and Thropp Circular Woven Tire Company, The. (See Thropp, Peter D., assignor.)

De Laval Steam Turbine Company. (See Hanzlik, Henry J., assignor.)

De Long, Everett M. (See Baker and De Long.)

De Long, Julius, New York, N. Y., and J. B. D'Homergue, Pittsburgh, Pa. Insulating material for building and analogous purposes. No. 1,152,798; Sept. 7; Gaz. vol. 218; p. 153.

De Marais, Victor, Chico, Cal. Clutch device. No. 1,155,220; Sept. 28; Gaz. vol. 218; p. 1096.

De Mendoza ver Mehr, J. M. (See Owens, John S., assignor.)

De Vore, Charles D., assignor to J. C. Vogel, Philadelphia, Pa. License-tag support. No. 1,154,847; Sept. 28; Gaz. vol. 218; p. 968.

De Wein, George F., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Crusher-mantle. No. 1,154,100; Sept. 21; Gaz. vol. 218; p. 685.

Dean, Arthur M. (See Ryan, Andrew, assignor.)

Dean, Francis M., Anacortes, Wash. Matrix-retainer. No. 1,152,711; Sept. 7; Gaz. vol. 218; p. 122.

Dean, William W., assignor, by mesne assignments, to Benjamin Electric Manufacturing Company, Chicago, Ill. Electric horn. No. 1,153,039; Sept. 7; Gaz. vol. 218; p. 240.

Deane, Lewis J., and M. P. Wingate, Millinocket, Me. Paper-machine. No. 1,155,219; Sept. 28; Gaz. vol. 218; p. 1096.

Debacher, Robert R., *et al.* (See Von Bültzingslöwen, Bruno, assignor.)

Debauge, Henry, Paris, France. Process and apparatus for purifying caoutchouc. No. 1,153,040; Sept. 7; Gaz. vol. 218; p. 240.

Dech, Peter, assignor of one-half to H. G. Rollpiller, West Orange, N. J. Horseshoe attachment. No. 1,154,978; Sept. 28; Gaz. vol. 218; p. 1013.

Deeds, Edward A., Dayton, Ohio. Automobile construction. No. 1,152,712; Sept. 7; Gaz. vol. 218; p. 122.

Deemer, Frank C., Brookville, Pa. Fluid-elevator. No. 1,153,373; Sept. 14; Gaz. vol. 218; p. 395.

Deere & Company. (See Dain, Joseph, assignor.)

Defiance Machine Company. (See Ocumpaugh, Edmund 2nd, assignor.)

Defoy, Iréné, St. Roch de Quebec, Quebec, Canada. Automatic governor-valve. No. 1,152,491; Sept. 7; Gaz. vol. 218; p. 39.

Dehm, Hans. (See Seybold and Dehm.)

Dehullu, Frank R., Detroit, Mich. Folding table. No. 1,154,692; Sept. 28; Gaz. vol. 218; p. 917.

Deisbeck, Louis L., Peru, Ill. Catch-basin. No. 1,152,611; Sept. 7; Gaz. vol. 218; p. 84.

Deitemeier, William F., San Francisco, Cal. Disappearing playing attachment for pianos. No. 1,154,846; Sept. 28; Gaz. vol. 218; p. 967.

Delano, Charles F. (See Hammond, Robert O., assignor.)

Delany, Patrick B., South Orange, N. J. Means for supervision of machine and tool work. No. 1,154,386; Sept. 21; Gaz. vol. 218; p. 784.

Deming, William L., Salem, Ohio. Garment-supporter. No. 1,152,492; Sept. 7; Gaz. vol. 218; p. 40.

Demuth, Leopold, New York, N. Y. Smoking-pipe. No. 1,153,771; Sept. 14; Gaz. vol. 218; p. 535.

Denley, William H., Birmingham, assignor of one-half to B. Makin, Sheffield, England. File or like cutting-tool. No. 1,154,578; Sept. 21; Gaz. vol. 218; p. 849.

Denne, Mark T., Rushden, England. Heel-seat-trimming machine for use in the manufacture of boots and shoes. No. 1,152,799; Sept. 7; Gaz. vol. 218; p. 153.

Dennedy, James H., Detroit, Mich. Means for controlling the operation of air and gas compressors. No. 1,152,400; Sept. 7; Gaz. vol. 218; p. 7.

Dennis, Clayton G., Hastings, Nebr. Wrench for flange unions. No. 1,152,885; Sept. 7; Gaz. vol. 218; p. 186.

Dennison, Wilburn N., Merchantville, N. J., assignor to Victor Talking Machine Company. Talking-machine. No. 1,152,401; Sept. 7; Gaz. vol. 218; p. 7.

Deol, Louis D., New York, N. Y. Orthopedic cushion. No. 1,154,491; Sept. 21; Gaz. vol. 218; p. 818.

Deppé, William P., Bayshore, N. Y. Heater for internal-combustion engines. No. 1,154,617; Sept. 28; Gaz. vol. 218; p. 891.

Deragon, Ernest J., Worcester, Mass. Clothes-hanger. No. 1,153,677; Sept. 14; Gaz. vol. 218; p. 503.

Detroit Demountable Rim Co. (See Harbidge, Chester C., assignor.)

Detwiler, Forest V., Grand Rapids, Mich. Valve for gas-burners. No. 1,154,177; Sept. 21; Gaz. vol. 218; p. 711.

Deutsche Waffen- und Munitionsfabriken. (See Eitner, Berthold, assignor.)

Deutsche Waffen- und Munitionsfabriken. (See Heinemann, August A. K., assignor.)

Deutsche Waffen- und Munitionsfabriken. (See Kajdacsy, Karl J. von, assignor.)

Devine, Robert E., Hamilton, Ontario, Canada. Machine for embossing seamless knife-handles. No. 1,154,618; Sept. 28; Gaz. vol. 218; p. 891.

Dew, Hugh S., De Walt, and W. H. Minton, Missouri City, Tex. Pneumatic tire. No. 1,154,848; Sept. 28; Gaz. vol. 218; p. 968.

Dexter Company, The. (See George, William H., assignor.)

Dexter Folder Company. (See Hughes and Jones, assignors.)

Diamond Match Company, The. (See Cruser, Frederick V., assignor.)

Dice, George R., Ashland, Ohio. Flexible joint for dolls, &c. No. 1,155,135; Sept. 28; Gaz. vol. 218; p. 1069.

Dick, Albert B., Lake Forest, assignor to A. B. Dick Company, Chicago, Ill. Stylus. No. 1,152,800; Sept. 7; Gaz. vol. 218; p. 154.

Dickerson, Albert W., Galion, Ohio. Mail-bag catcher. No. 1,155,221; Sept. 28; Gaz. vol. 218; p. 1096.

Die Sinking and Machine Co. (See Barkwill, William H., assignor.)

Dieckmann, Carl F., assignor to Eugene Dietzgen Company, Factory, Chicago, Ill. Slide-rule. No. 1,154,619; Sept. 28; Gaz. vol. 218; p. 892.

Dies, Charles A., Chicago, Ill. Wrench. No. 1,155,136; Sept. 28; Gaz. vol. 218; p. 1069.

Dieter, William, New York, assignor to E. W. Bliss Company, Brooklyn, N. Y. Depth-recorder for torpedoes. No. 1,152,493; Sept. 7; Gaz. vol. 218; p. 40.

Dieter, William, New York, assignor to E. W. Bliss Company, Brooklyn, N. Y. Gyroscopic steering mechanism. No. 1,153,678; Sept. 14; Gaz. vol. 218; p. 503.

Dieterich, Karl G., New York, N. Y. Bowling-alley. No. 1,155,329; Sept. 28; Gaz. vol. 218; p. 1132.

Dillard, George L., and W. Johns, Mogollon, N. Mex. Tire-protector. No. 1,153,042; Sept. 7; Gaz. vol. 218; p. 241.

Dinkelspiel, Lawrence, New York, N. Y. Reinforced scalloped edging for embroidery. No. 1,152,713; Sept. 7; Gaz. vol. 218; p. 123.

Dinklage, August J., East Orange, N. J. Device for preventing creeping of rails. No. 1,153,541; Sept. 14; Gaz. vol. 218; p. 457.

Ditson, Jesse, assignor to The J. Geo. Leyner Engineering Works Company, Littleton, Colo. Oil-burner. No. 1,154,101; Sept. 21; Gaz. vol. 218; p. 685.

Dittrich, Joseph C., New York, N. Y. Line-up register-gage. No. 1,153,896; Sept. 21; Gaz. vol. 218; p. 615.

Dixon, James W., Chicago, Ill., assignor to American Can Company, New York, N. Y. Can-head-feeding machine. No. 1,154,237; Sept. 21; Gaz. vol. 218; p. 731.

Dock, William H., Wilmington, N. C. Hoe. No. 1,153,202; Sept. 14; Gaz. vol. 218; p. 333.

Dodge, Austin R., Schenectady, N. Y., assignor to General Electric Company. Automatic feed-water regulator. No. 1,154,591; Sept. 21; Gaz. vol. 218; p. 853.

Dodge, Austin R., Schenectady, N. Y., assignor to General Electric Company. Feed-water regulator. No. 1,154,592; Sept. 21; Gaz. vol. 218; p. 854.

Dodge, Austin R., Schenectady, N. Y., assignor to General Electric Company. Integrating mechanism for flow-meters. No. 1,155,303; Sept. 28; Gaz. vol. 218; p. 1121.

Dodge, Willard A., Hornell, N. Y. Hose-coupling. No. 1,152,714; Sept. 7; Gaz. vol. 218; p. 123.

Doherty, Henry L., New York, N. Y. Generating steam. No. 1,154,010; Sept. 28; Gaz. vol. 218; p. 989.

Dolan, James A., Hartford, Conn. Horseshoe. No. 1,154,178; Sept. 21; Gaz. vol. 218; p. 711.

Dolan, James A., assignor to The Side-Weight Horse Shoe Company, Hartford, Conn. Horseshoe. No. 1,152,715; Sept. 7; Gaz. vol. 218; p. 123.

Dolan, James H., Lee, Mass. Tread for draft-animals. No. 1,153,374; Sept. 14; Gaz. vol. 218; p. 396.

Doldt, John E., Portland, Me., assignor to National Metal Seal Corporation, Boston, Mass. Closure for containing vessels. No. 1,153,897; Sept. 21; Gaz. vol. 218; p. 613.

Dolen, Charles M., Mooresville, Ind. Concrete-molding machine. No. 1,154,387; Sept. 21; Gaz. vol. 218; p. 784.

Dom, Alexander and C., assignors to The Samuel C. Tatum Company, Cincinnati, Ohio. Paper-perforator. No. 1,154,294; Sept. 21; Gaz. vol. 218; p. 751.

Dom, Chesley. (See Dom, Alexander and C.)

Dom, Chesley, assignor to The Globe-Wernicke Company, Cincinnati, Ohio. Punch. No. 1,152,886; Sept. 7; Gaz. vol. 218; p. 186.

Donahue, Joseph F. (See MacIndoe, John F., assignor.)

Donley, William F. (See Doolittle, Tracy W., assignor.)

Donnell, Edwin C., Brockton, Mass. Innersole. No. 1,152,887; Sept. 7; Gaz. vol. 218; p. 187.

Donovan, Frank H., Wellston, Mo. Combination Morris chair and bed. No. 1,153,423; Sept. 14; Gaz. vol. 218; p. 414.

Doolittle, Rollin E., and P. S. Johst, New York, N. Y.; said Johst assignor to said Doolittle. Picture-building. No. 1,153,424; Sept. 14; Gaz. vol. 218; p. 414.

Doolittle, Tracy W., Endicott, assignor to W. F. Donley, Binghamton, N. Y. Guard for woodworking-machines. No. 1,154,911; Sept. 28; Gaz. vol. 218; p. 990.

Dorgeloh, George H., Schenectady, N. Y., assignor to General Electric Company. Liquid rheostat. No. 1,152,801; Sept. 7; Gaz. vol. 218; p. 154.

Dorneth, Julius, assignor to Typograph Gesellschaft m. b. H., Berlin, Germany. Matrix-setting and line-casting machine. No. 1,155,137; Sept. 28; Gaz. vol. 218; p. 1069.

Dorothy, Merlin A., Pillsbury, N. D. Blacksmith's post-drill. No. 1,155,222; Sept. 28; Gaz. vol. 218; p. 1097.

Dorsey, Howard F., Lockport, La. Casting device for fish-nets. No. 1,154,563; Sept. 21; Gaz. vol. 218; p. 843.

Dossor, Frederick M., Doncaster, England. Apparatus for cleaning and separating seeds and grain. No. 1,154,102; Sept. 21; Gaz. vol. 218; p. 686.

Dotten, Earl W., Aitkin, Minn. Power-spud for dredges. No. 1,154,492; Sept. 21; Gaz. vol. 218; p. 818.

Doucet, Theodore, Indianapolis, Ind., assignor of one-half to O. M. Feet, Minneapolis, Minn. Collapsible folding wardrobe. No. 1,154,693; Sept. 28; Gaz. vol. 218; p. 917.

Dougan, Kennedy, Minneapolis, Minn. Type-writer. No. 1,152,494; Sept. 7; Gaz. vol. 218; p. 40.

Dougan, Kennedy, Minneapolis, Minn. Type-writer. No. 1,152,495; Sept. 7; Gaz. vol. 218; p. 40.

Dougan, Kennedy, Minneapolis, Minn. Automatic steering mechanism. No. 1,154,103; Sept. 21; Gaz. vol. 218; p. 686.

Doughty, George E., Caldwell, N. J. Manifolding sales-book. No. 1,153,611; Sept. 14; Gaz. vol. 218; p. 481.

Douglass, Samuel E., Mount Gilead, N. C. Head-rest. No. 1,155,223; Sept. 28; Gaz. vol. 218; p. 1097.

Downey, Richard F., assignor to Badger Steel House Company, Milwaukee, Wis. Knockdown metallic house. No. 1,153,292; Sept. 14; Gaz. vol. 218; p. 364.

Downing, Harry W., Christchurch, New Zealand. Riding-saddle. No. 1,154,003; Sept. 21; Gaz. vol. 218; p. 651.

Dr. C. Otto & Comp. Ges. mit Beschr. Haftung. (See Ellingen, Karl, assignor.)

Drägerwerk, Heinr. und Bernh. Dräger. (See Claren, Ferdinand L., assignor.)

Drahonovsky, John B., assignor of one-half to P. Leach, Milwaukee, Wis. Resilient wheel. No. 1,154,012; Sept. 28; Gaz. vol. 218; p. 990.

Drake, Howard A., Richmond, Va. Ticket. No. 1,153,043; Sept. 7; Gaz. vol. 218; p. 241.

Draper Company. (See Rhoades, Alonzo E., assignor.)

Draper, David, Rome, N. Y. Planter. No. 1,152,402; Sept. 7; Gaz. vol. 218; p. 7.

Drefahl, Louis C., assignor to The Grasselli Chemical Company, Cleveland, Ohio. Treating ores. No. 1,153,203; Sept. 14; Gaz. vol. 218; p. 333.

Drucklieb, Paul A., assignor to New York Cigarette Machine Company, New York, N. Y. Machine for finishing cigarette-seams. No. 1,152,716; Sept. 7; Gaz. vol. 218; p. 124.

Drucklieb, Paul A., assignor to New York Cigarette Machine Company, New York, N. Y. Machine for finishing cigarette-seams. No. 1,152,717; Sept. 7; Gaz. vol. 218; p. 124.

Druitt, Percy W. (See Earle and Druitt.)

Drygas, Albert B., St. Cloud, Minn. Grain-header. No. 1,154,493; Sept. 21; Gaz. vol. 218; p. 818.

Drysdale, Alexander T., Burlington, N. J. Machine for stamping sand molds. No. 1,154,238; Sept. 21; Gaz. vol. 218; p. 732.

Duckett, James V., Hillside, Colo. Nut-lock. No. 1,153,898; Sept. 21; Gaz. vol. 218; p. 616.

Dudley, Job, and H. E. Plastow, assignors of one-third to F. J. Highland, Hamilton, Ontario, Canada. Screw adjusting and locking device. No. 1,153,861; Sept. 14; Gaz. vol. 218; p. 569.

Duffy, Mathew D., and B. P. Costello, Cincinnati, Ohio. Machine for grinding pigments. No. 1,154,004; Sept. 21; Gaz. vol. 218; p. 651.

Dula, Robert B., Tarrytown, N. Y. Machine for pressing and finishing plug-tobacco. No. 1,154,913; Sept. 28; Gaz. vol. 218; p. 991.

Dula, Robert B., Tarrytown, N. Y. Apparatus for pressing and finishing plug-tobacco. No. 1,154,914; Sept. 28; Gaz. vol. 218; p. 991.

Dun Lany, William P., Maywood, assignor to Charles W. Shonk Company, Chicago, Ill. Coin-registering mechanism. No. 1,154,239; Sept. 21; Gaz. vol. 218; p. 732.

Dungan, James G., Omaha, Nebr., assignor of one-half to himself, and one-half to C. H. Cook, Oak Park, Ill. Stove. No. 1,154,747; Sept. 28; Gaz. vol. 218; p. 935.

Dunham, James E., Portland, Oreg. Exterminator. No. 1,153,044; Sept. 7; Gaz. vol. 218; p. 241.

Dunham, Ray E., Berea, Ohio. Demountable roller-section for land-rollers and the like. No. 1,155,304; Sept. 28; Gaz. vol. 218; p. 1122.

Dunham, William G., Mount Vernon, N. Y., assignor to The Noesting Pin Ticket Company, Inc. Pin-ticket. No. 1,152,612; Sept. 7; Gaz. vol. 218; p. 85.

Dunlap, Joseph B., and W. D. Bryan, Tulsa, Okla. Simplex rod-slip. No. 1,153,772; Sept. 14; Gaz. vol. 218; p. 536.

Dunlop Rubber Company, The. (See Wright, Walter, assignor.)

Dunn, Sola B., Chicago, Ill. Speculum. No. 1,154,748; Sept. 28; Gaz. vol. 218; p. 935.

Dunn, Walter C. (See Saunders, James, assignor.)

Dünnebier, Max, and A. Winkler, Neuwied-on-the-Rhine, Germany. Apparatus for feeding blanks. No. 1,153,296; Sept. 14; Gaz. vol. 218; p. 366.

Dünnebier, Max, and A. Winkler, Neuwied-on-the-Rhine, Germany, assignors to A. J. Wantzen, London, England. Envelop-making machine. No. 1,153,293; Sept. 14; Gaz. vol. 218; p. 365.

Dünnebier, Max, and A. Winkler, Neuwied-on-the-Rhine, Germany, assignors to A. J. Wantzen, London, England. Delivery and counting mechanism. No. 1,153,294; Sept. 14; Gaz. vol. 218; p. 365.

Dünnebier, Max, and A. Winkler, Neuwied-on-the-Rhine, Germany, assignors to A. J. Wantzen, London, England. Sheet-feeding mechanism. No. 1,153,295; Sept. 14; Gaz. vol. 218; p. 366.

Dunnuck, Alonso G., Stockton, Kans. Draft-equalizer. No. 1,154,104; Sept. 21; Gaz. vol. 218; p. 686.

Dunwoody, Henry H. C., Washington, D. C. Contour-cap for projectiles. No. 1,153,425; Sept. 14; Gaz. vol. 218; p. 415.

Dupuis, Moses, assignor to Allen-Higgins Wall Paper Company, Worcester, Mass. Machine for printing fabrics. No. 1,153,045; Sept. 7; Gaz. vol. 218; p. 241.

Dupuis, Moses, assignor to Allen-Higgins Wall Paper Company, Worcester, Mass. Machine for printing fabrics. No. 1,153,046; Sept. 7; Gaz. vol. 218; p. 242.

Dupuis, Noël, Aberdeen, Wash. Marine governor. No. 1,154,106; Sept. 21; Gaz. vol. 218; p. 687.

Durepo, Joseph H., Presque Isle, Me. Concrete-mixer. No. 1,154,295; Sept. 21; Gaz. vol. 218; p. 751.

Dutcher, Frank, Versailles, assignor to Central Railway Signal Company, Pittsburgh, Pa. Railway signal-torpedo. No. 1,153,047; Sept. 7; Gaz. vol. 218; p. 242.

Dutcher, Frank, Versailles, assignor to Central Railway Signal Company, Pittsburgh, Pa. Fiber-case railway-torpedo. No. 1,153,048; Sept. 7; Gaz. vol. 218; p. 243.

Dutchess Tool Company. (See Van Houten, Frank H., Jr., assignor.)

Dyson, Alfred H., New York, N. Y., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Automatic telephone system. No. 1,153,542; Sept. 14; Gaz. vol. 218; p. 457.

E. De Haën, Chemische Fabrik List, G. m. b. H. (See Baegner, Carlo, assignor.)

E. A. Whitehouse Mfg. Co. (See Ehrlich, Frederick W., assignor.)

E. & B. Holmes Machinery Co. (See Beugler, Edwin F., assignor.)

E. C. Tecktonius Manufacturing Co. (See Vogt, Anton, assignor.)

E. L. Webb & Co. (See Swem, Lawrence W., assignor.)

E. & T. Fairbanks & Company. (See Jenkins, John L., assignor.)

E. W. Bliss Company. (See Dieter, William, assignor.)

E. W. Bliss Company. (See Kruse, Peter, assignor.)

Eagle Pencil Company. (See Boman, Claes W., assignor.)

Eagle Pencil Company. (See Kraus, Samuel, assignor.)

Eames, George M., and J. S. Finch, Bridgeport, Conn., assignors to The Singer Manufacturing Company. Sewing-machine. No. 1,155,050; Sept. 28; Gaz. vol. 218; p. 1037.

Eames, George M., Bridgeport, Conn., assignor to The Singer Manufacturing Company. Sewing-machine. No. 1,155,051; Sept. 28; Gaz. vol. 218; p. 1038.

Eames, George M., and J. S. Finch, Bridgeport, Conn., assignors to The Singer Manufacturing Company. Overseaming sewing-machine. No. 1,155,052; Sept. 28; Gaz. vol. 218; p. 1038.

Earle, Edward, assignor of one-fourth to J. D. Locke, Philadelphia, Pa. Dowsing device. No. 1,153,841; Sept. 14; Gaz. vol. 218; p. 561.

Earle, Hardman A., London, and P. W. Druitt, county of Surrey, England. Apparatus for composing and casting type. No. 1,153,049; Sept. 7; Gaz. vol. 218; p. 243.

Easter, Lee E., Leon, Iowa. Wireless corn-planter. No. 1,153,426; Sept. 14; Gaz. vol. 218; p. 415.

Eastman, J. D. (See Peters, Frank E., assignor.)

Eastman Kodak Company. (See Plante, Levi N., assignor.)

Eaton, Allan L., Austin, assignor to Charles W. Shonk Company, Chicago, Ill. Sectional display-cabinet. No. 1,154,240; Sept. 21; Gaz. vol. 218; p. 732.

Eaton, George M., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Vehicle. No. 1,155,224; Sept. 28; Gaz. vol. 218; p. 1097.

Eaton, George M., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electric locomotive. No. 1,155,225; Sept. 28; Gaz. vol. 218; p. 1098.

Eberhart, Felix, Newark, N. J., assignor to American Can Company, New York, N. Y. Sheet-stack-handling mechanism. No. 1,152,408; Sept. 7; Gaz. vol. 218; p. 8.

Eby, Earl E., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Trolley-wheel. No. 1,155,226; Sept. 28; Gaz. vol. 218; p. 1098.

Eckardt, August H., St. Paul, Minn. Bunching attachment for mowing-machines. No. 1,153,842; Sept. 14; Gaz. vol. 218; p. 562.

Eckardt, Otto M., Dover, N. J. Snow-removing device. No. 1,154,388; Sept. 21; Gaz. vol. 218; p. 795.

Eddins, Quint G., Richmond, Va. Sash-holder. No. 1,153,773; Sept. 14; Gaz. vol. 218; p. 536.

Eddy, Charles H., Attleboro, Mass. Ice-cream freezer. No. 1,152,496; Sept. 7; Gaz. vol. 218; p. 41.

Eddy, James F., Lansdowne, Pa. Daily-date sign. No. 1,153,543; Sept. 14; Gaz. vol. 218; p. 458.

Eddy, James F., Lansdowne, Pa. Daily-date sign. No. 1,153,544; Sept. 14; Gaz. vol. 218; p. 458.

Eddy, James F., Lansdowne, Pa. Daily-date sign. No. 1,153,545; Sept. 14; Gaz. vol. 218; p. 458.

Edelhausen, Charles M., Long Island City, N. Y. Helmet. No. 1,154,494; Sept. 21; Gaz. vol. 218; p. 819.

Edison, Thomas A. (See Bliss, Donald M., assignor.)

Edison, Thomas A., Llewellyn Park, Orange, N. J. Burning Portland-cement clinker. No. 1,152,613; Sept. 7; Gaz. vol. 218; p. 85.

Edison, Thomas A., Llewellyn Park, assignor to New Jersey Patent Company, West Orange, N. J. Phonographic recording apparatus. No. 1,152,614; Sept. 7; Gaz. vol. 218; p. 86.

Edison, Thomas A., Llewellyn Park, assignor to New Jersey Patent Company, West Orange, N. J. Alternating-current-rectifying system. No. 1,152,615; Sept. 7; Gaz. vol. 218; p. 86.

Edison, Thomas A., Llewellyn Park, assignor to New Jersey Patent Company, West Orange, N. J. Contact for electrical apparatus. No. 1,152,616; Sept. 7; Gaz. vol. 218; p. 87.

Edward J. Rice Mfg. Co., The. (See Rice, Oscar W., assignor.)

Edward Katzinger Company. (See Katzinger, Edward, assignor.)

Edwards, Albert J., *et al.* (See Martin, Commodore V., assignor.)

Edwards, Edward W., Cincinnati, Ohio. Stovepipe. No. 1,153,204; Sept. 14; Gaz. vol. 218; p. 334.

Edwards, Frank W., assignor to The Chicago Lubricator Company, Chicago, Ill. Sight-feed lubricator. No. 1,153,540; Sept. 14; Gaz. vol. 218; p. 459.

Edwards Manufacturing Company, The. (See Wells, John T., assignor.)

Edwards, William C., Jr., Kansas City, Mo. Wall-construction apparatus. No. 1,153,205; Sept. 14; Gaz. vol. 218; p. 334.

Egan, Raymond W., Cincinnati, Ohio. Gaging and reversing means for drilling and tapping machines. No. 1,154,296; Sept. 21; Gaz. vol. 218; p. 751.

Eggers, William, New York, N. Y. Mold for making rubber articles. (Reissue.) No. 13,988; Sept. 28; Gaz. vol. 218; p. 1132.

Ehrenthal, Bruno M. E. L. P. von, Cöthen, assignor of forty-five one-hundredths to M. von Halle, Hamburg, Germany. Producing cellulose and other products. No. 1,153,834; Sept. 14; Gaz. vol. 218; p. 559.

Ehrlich, Frederick W., Newark, N. J., assignor to E. A. Whitehouse Mfg. Co. Tire or shoe holder for automobiles. No. 1,155,053; Sept. 28; Gaz. vol. 218; p. 1038.

Eigenbrot, Harry L., Pittsburgh, Pa., assignor to International Typesetting Machine Company, New York, N. Y. Distributer mechanism for typographical machines. No. 1,152,718; Sept. 7; Gaz. vol. 218; p. 124.

Eisenberg, Samuel, Newark, N. J. Toy novelty. No. 1,153,206; Sept. 14; Gaz. vol. 218; p. 334.

Eisenberg, Samuel, Newark, N. J. Horn. No. 1,153,207; Sept. 14; Gaz. vol. 218; p. 335.

Eisenhauer, John P., Port Huron, Mich. Filing-envelop for phonograph disk records and other filing purposes. No. 1,154,297; Sept. 21; Gaz. vol. 218; p. 751.

Elser, Louis W., Norwood, Ohio. Window. No. 1,153,208; Sept. 14; Gaz. vol. 218; p. 335.

Eitner, Berthold, Reinickendorf, near Berlin, assignor to Deutsche Waffen- und Munitionsfabriken, Berlin, Germany. Measuring apparatus. No. 1,154,620; Sept. 28; Gaz. vol. 218; p. 892.

Elcouin, Eli V., Detroit, Mich. Playing-cards. No. 1,153,899; Sept. 21; Gaz. vol. 218; p. 616.

Eldridge, Frederick P., Northampton, Mass. Cabinet. No. 1,152,404; Sept. 7; Gaz. vol. 218; p. 8.

Electric Boat Company. (See Spear, Lawrence Y., assignor.)

Electro Chemical Products Association. (See Schulte, Louis, assignor.)

Electro Metallurgical Company. (See Becket, Frederick M., assignor.)

Elery, William, Menlo, Iowa. Attachment for mowing-machines. No. 1,155,305; Sept. 28; Gaz. vol. 218; p. 1122.

Elia, Giovanni E., Paris, France, assignor to Vickers Limited, Westminster, England. Safety-anchor for submarine mines. No. 1,153,774; Sept. 14; Gaz. vol. 218; p. 537.

Ellett, Frederick S., Elmira, N. Y. Coaster-brake for motor-cycles. No. 1,154,015; Sept. 28; Gaz. vol. 218; p. 991.

Ellingen, Karl, assignor to Dr. C. Otto & Comp. Ges. mit Beschr. Haftung, Bochum, Germany. Coke-oven. No. 1,154,298; Sept. 21; Gaz. vol. 218; p. 752.

Elliot, William, Jr., Lawrence, Mass. Machine for marking bobbins. No. 1,153,670; Sept. 14; Gaz. vol. 218; p. 503.

Elliott, Alonzo E., Raymond, Wash. Conveyer-bucket. No. 1,153,375; Sept. 14; Gaz. vol. 218; p. 396.

Elliott, Thomas. (See Anderson and Elliott.)

Ellis, Alvarado L. R., Lynn, Mass., assignor to General Electric Company. Electrical measuring instrument. No. 1,154,979; Sept. 28; Gaz. vol. 218; p. 1013.
Ellis, Carleton, Montclair, N. J. Adding hydrogen to fatty acids, fatty esters, and other unsaturated compounds. No. 1,154,495; Sept. 21; Gaz. vol. 218; p. 819.
Elmore, Oliver, Louisville, Ky. Horseshoe. No. 1,152,497; Sept. 7; Gaz. vol. 218; p. 41.
Elrod, Abraham, Seymour, Ind. Saw-grinding machine. No. 1,153,297; Sept. 14; Gaz. vol. 218; p. 366.
Elton, Charles A., Moodys, Okla. Punching-machine. No. 1,154,621; Sept. 28; Gaz. vol. 218; p. 892.
Elvyn, Jacob W., and E. A. Christoph, Chicago, Ill. Coin-receptacle. No. 1,152,937; Sept. 7; Gaz. vol. 218; p. 205.
Emerson-Brantingham Company. (See Seramor, Arthur P., assignor.)
Emkins, John H., Omaha, Nebr. Egg tester or container. No. 1,153,298; Sept. 14; Gaz. vol. 218; p. 367.
Emmers, Edward, Royersford, Pa. Lady's undervest. No. 1,152,405; Sept. 7; Gaz. vol. 218; p. 8.
Emmet, William L. R., Schenectady, N. Y., assignor to General Electric Company. Slot-closing device for dynamo-electric machines. No. 1,154,496; Sept. 21; Gaz. vol. 218; p. 820.
England, Clifford R., assignor of one-half to R. E. Stone, McKeesport, Pa. Means for controlling electric current. No. 1,154,849; Sept. 28; Gaz. vol. 218; p. 968.
Enterprise Plumbing Supply Co. (See Talt, Richard, Jr., assignor.)
Ephraim, Ferdinand, San Francisco, Cal. Air-blast-heating apparatus. No. 1,154,106; Sept. 21; Gaz. vol. 218; p. 687.
Epstein, Irving, New York, N. Y. Fastener-setting machine. No. 1,152,719; Sept. 7; Gaz. vol. 218; p. 125.
Erickson, Edward. (See Johnson and Erickson.)
Erickson, Edward, Beverly, Mass. Fastening device. No. 1,153,209; Sept. 14; Gaz. vol. 218; p. 336.
Erickson, Edward, Lynn, assignor to Victor Shoe Machinery Co., Boston, Mass. Loop-spreader for sewing-machines. No. 1,154,564; Sept. 21; Gaz. vol. 218; p. 843.
Erickson, Edward, Lynn, assignor to Victor Shoe Machinery Co., Boston, Mass. Combined needle-carrier and loop-holder for sewing-machines. No. 1,154,565; Sept. 21; Gaz. vol. 218; p. 843.
Erie, James P., Oakland, Cal. Aeroplane. No. 1,153,612; Sept. 14; Gaz. vol. 218; p. 482.
Escher, Wyss & Co. (See Ruegger, Eduard, assignor.)
Estel, Harry R., *et al.* (See Adams, Frank C., assignor.)
Estes, William F., Ozark, Mo. Wrench. No. 1,153,050; Sept. 7; Gaz. vol. 218; p. 244.
Eugene Dietzgen Company. (See Dieckmann, Carl F., assignor.)
Evans, Israel, Lenoir City, Tenn. Cable-clamp. No. 1,154,916; Sept. 28; Gaz. vol. 218; p. 992.
Evans, James F., Martinsburg, W. Va. Wheel. No. 1,154,497; Sept. 21; Gaz. vol. 218; p. 820.
Eveland, John L., Hornell, assignor of one-half to W. Gates, South Dansville, N. Y. Window shade and curtain support. No. 1,152,617; Sept. 7; Gaz. vol. 218; p. 87.
Evins, Dossa D., Waco, Tex. Making electrotype embossing-dies. No. 1,154,179; Sept. 21; Gaz. vol. 218; p. 711.
Exbrayat, Alphonse, Paris, France. Manufacture of agglomerates. No. 1,154,980; Sept. 28; Gaz. vol. 218; p. 1013.
Exline, William G., Cleveland, Ohio. Pocket check-binder. No. 1,154,566; Sept. 21; Gaz. vol. 218; p. 844.
Faber, Ernst, Berlin, assignor to Rheinische Metallwaaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany. Shell-fuse. No. 1,154,579; Sept. 21; Gaz. vol. 218; p. 849.
Fair and Carnival Trading Co. (See Haskell, Samuel, assignor.)
Fair, Thomas J. (See Petersen, Andrew T., assignor.)
Fairbank, Frederick B., Detroit, Mich. Building-block. No. 1,153,900; Sept. 21; Gaz. vol. 218; p. 616.
Fairhurst, William S., New York, N. Y. Valve. No. 1,153,051; Sept. 7; Gaz. vol. 218; p. 244.
Fangel, Elna F., executrix. (See Fangel, John P.)
Fangel, John P., deceased, Boston; E. F. Fangel, executrix, assignor to A. Johnson, East Boston, Mass. Sectional partition. No. 1,154,622; Sept. 28; Gaz. vol. 218; p. 893.
Farbwerke vorm. Meister Lucius & Brüning. (See Wulff, Otto, assignor.)
Farquharson, William, Greenock, Scotland. Drill-chuck. No. 1,154,299; Sept. 21; Gaz. vol. 218; p. 752.
Farrington Manufacturing Company. (See Brown, Louis E., assignor.)
Farris, Harry W., assignor to Byram Foundry Company, Indianapolis, Ind. Cistern neck-ring and cover. No. 1,152,618; Sept. 7; Gaz. vol. 218; p. 87.
Farwell, Fay O., Dubuque, Iowa. Internal-combustion motor. No. 1,155,138; Sept. 28; Gaz. vol. 218; p. 1070.
Fassett, James H. (See Warren, John E., assignor.)
Faultless Rubber Company. (See Miller, Thomas W., assignor.)
Fawkes, Leslie H., *et al.* (See Fawkes, Wilbert C., assignor.)
Fawkes, Wilbert C., assignor of two-thirds to L. H. Fawkes and one-third to E. E. Hermann, Portland, Oreg. Wall-socket and bolt. No. 1,154,580; Sept. 21; Gaz. vol. 218; p. 849.
Fay, Alpheus, Louisville, Ky. Butter-separator. No. 1,155,306; Sept. 28; Gaz. vol. 218; p. 1122.
Fay, Winthrop L., Dexter, Me. Diameter-stop for lathes. No. 1,154,107; Sept. 21; Gaz. vol. 218; p. 687.
Federal Screw Corporation. (See Carpenter, Tennauski Z., assignor.)
Fee, Walter L., Moline, Ill. Disk-clutch transmission. No 1,154,749; Sept. 28; Gaz. vol. 218; p. 936.
Feldman, John. (See Schlesinger, Max, assignor.)
Felker, William S., Mancos, Colo. Tool for curing, spicing, and seasoning meats. No. 1,155,139; Sept. 28; Gaz. vol. 218; p. 1070.
Fella, Orley E., Spokane, Wash. Vertically-adjustable hinge. No. 1,154,850; Sept. 28; Gaz. vol. 218; p. 969.
Felt & Tarrant Manufacturing Company. (See Turck, Joseph A., assignor.)
Fennell, William, Southam, near Rugby, England. Tube-mill. No. 1,154,981; Sept. 28; Gaz. vol. 218; p. 1013.
Fennell, William, Southam, near Rugby, England. Tube-mill. No. 1,154,982; Sept. 28; Gaz. vol. 218; p. 1014.
Ferber, William M., assignor to J. R. Bunting Bedding Company, Philadelphia, Pa. Couch-hammock. No. 1,153,680; Sept. 14; Gaz. vol. 218; p. 504.
Ferguson, George J., St. Louis, Mo. Valve. No. 1,152,888; Sept. 7; Gaz. vol. 218; p. 187.
Ferguson, William H., San Francisco, Cal., assignor to The P. & M. Co., Chicago, Ill. Anticreeper. No. 1,152,802; Sept. 7; Gaz. vol. 218; p. 154.
Ferres, Jeffrey T., assignor to The Sefton Manufacturing Company, Anderson, Ind. Brooder. No. 1,152,619; Sept. 7; Gaz. vol. 218; p. 87.
Ferris, William I., Westfield, N. J., assignor to L. E. Waterman Company, New York, N. Y. Gold pen. No. 1,154,498; Sept. 21; Gaz. vol. 218; p. 820.
Ferro, Casimiro, Ansonia, Conn. Register-gages and grippers for job-presses. No. 1,154,694; Sept. 28; Gaz. vol. 218; p. 918.
Ferry, John M., Baltimore, Md. Compound for water-tight joints. No. 1,153,427; Sept. 14; Gaz. vol. 218; p. 415.
Fessenden, Reginald A., Brant Rock, Mass. Amplifying electrical impulses. No. 1,154,750; Sept. 28; Gaz. vol. 218; p. 936.
Fesamann, Louis, and G. Hämmerle, Augsburg, Germany. Bobbin frame or creel for warping-machines. No. 1,153,862; Sept. 14; Gaz. vol. 218; p. 569.
Fifield, Albert F., Elizabeth, N. J., assignor to The Singer Manufacturing Company. Sewing-machine. No. 1,152,498; Sept. 7; Gaz. vol. 218; p. 41.
Filer, William H., Grove City, Pa. Monolithic inscription-stone. No. 1,155,140; Sept. 28; Gaz. vol. 218; p. 1070.
Finch, John S. (See Eames and Finch.)
Finklestein, Max, Springfield, Mass. Roller-skate. No. 1,154,300; Sept. 21; Gaz. vol. 218; p. 753.
Finlay, Robert P., West Hartlepool, Durham, England. Valve-gear for direct-acting fluid-pressure engines. No. 1,153,613; Sept. 14; Gaz. vol. 218; p. 482.
Finney, James J., assignor of three-fourths to R. L. Roberts, Chicago, Ill. Thermostatic water-valve. No. 1,153,547; Sept. 14; Gaz. vol. 218; p. 459.
Finnilis, August, Los Angeles, Cal. Bake-oven. No. 1,152,803; Sept. 7; Gaz. vol. 218; p. 155.
Firth and Sons, Thos. (See Strange, Harry B., assignor.)
Firth, William. (See Clouette, Nelson, assignor.)
Firth, William. (See Smith, Joseph J., assignor.)
Fischer, John A., Memphis, Tenn. Lock. No. 1,154,499; Sept. 21; Gaz. vol. 218; p. 820.
Fisher, Frank R., Springfield, Ill. Cap-remover and cover. No. 1,154,751; Sept. 28; Gaz. vol. 218; p. 936.
Fisher, George W., assignor of one-half to H. N. Talkin, Baltimore, Md. Shutter-lock. No. 1,152,720; Sept. 7; Gaz. vol. 218; p. 125.
Fitz, Ervin M. (See Lanphier and Fitz.)
Fitzgerald, Joseph P., *et al.* (See Hackett, Harry C., assignor.)
Flaherty, John J., New York, N. Y. Measuring device. No. 1,154,108; Sept. 21; Gaz. vol. 218; p. 688.
Flannery Bolt Company. (See Stafford, Benjamin E. D., assignor.)
Flannigan, Thomas A., Philadelphia, Pa. Combined shoe and legging. No. 1,154,109; Sept. 21; Gaz. vol. 218; p. 688.
Fleming, Guy C. (See Criswell, Raleigh C., assignor.)
Fleming, James R., Scranton, Pa. Axle-box. (Reissue.) No. 13,976; Sept. 7; Gaz. vol. 218; p. 288.
Fletcher, Edward F. (See Bemis, Gilbert C., assignor.)
Flintkote Manufacturing Company. (See Overbury, Frederick C., assignor.)
Flogerzi, John B., assignor of one-half to J. T. Smith, St. Paul, Minn. Moving-picture screen and producing the same. No. 1,152,820; Sept. 7; Gaz. vol. 218; p. 88.
Flynn, Thomas L. (See Smith and Flynn.)
Fogalsang, Thomas E., San Francisco, Cal. Protective device for steering-wheels. No. 1,154,889; Sept. 21; Gaz. vol. 218; p. 785.
Fogarty, John C., Green Bay, Wis. Machine for slitting, perforating, and rewinding paper. No. 1,154,301; Sept. 21; Gaz. vol. 218; p. 753.
Foley, Edward P., Thorold, Ontario, Canada. Bleaching ground wood-pulp. No. 1,154,851; Sept. 28; Gaz. vol. 218; p. 969.
Force, William A., New York, N. Y. Indicating device for numbering-machines. No. 1,153,901; Sept. 21; Gaz. vol. 218; p. 616.

Ford, George W., Gourock, Scotland. Apparatus for operating two mechanisms in synchronism. No. 1,153,210; Sept. 14; Gaz. vol. 218; p. 336.
Ford, Henry, Detroit, Mich. Traction-engine. No. 1,153,052; Sept. 7; Gaz. vol. 218; p. 244.
Ford, Henry R., Buffalo, N. Y. Machine-efficiency recorder. No. 1,154,983; Sept. 28; Gaz. vol. 218; p. 1014.
Ford, Robert E., Baltimore Md. Staple forming and setting implement. No. 1,155,141; Sept. 28; Gaz. vol. 218; p. 1071.
Forest King Machine Company. (See Gooch, Orrel A., assignor.)
Forrester, Robert E., Burleson, Tex. Cultivator-cuff. No. 1,154,180; Sept. 21; Gaz. vol. 218; p. 712.
Forschler, Philip, assignor to Philip Forschler Wagon and Manufacturing Company, New Orleans, La. Motor-vehicle. No. 1,154,500; Sept. 21; Gaz. vol. 218; p. 821.
Forsheim, Joseph, Great Neck, and J. Konigsberg, New York, N. Y. Lock. No. 1,153,614; Sept. 14; Gaz. vol. 218; p. 482.
Forsheim, Joseph, Great Neck, and J. Konigsberg, New York, N. Y. Pin-retainer. No. 1,153,615; Sept. 14; Gaz. vol. 218; p. 482.
Forster, John, Los Angeles, Cal. Pencil attachment. No. 1,153,211; Sept. 14; Gaz. vol. 218; p. 336.
Forster, Sebastian, Brooklyn, N. Y. Fishing-line attachment. No. 1,153,053; Sept. 7; Gaz. vol. 218; p. 244.
Fortescue, Charles L., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. System of current distribution. No. 1,154,852; Sept. 28; Gaz. vol. 218; p. 969.
Forth, Charles, Ottawa, Ontario, Canada. Pipe-joint. No. 1,154,984; Sept. 28; Gaz. vol. 218; p. 1014.
Forth, Charles, Boston, Mass. Pipe-joint. No. 1,154,985; Sept. 28; Gaz. vol. 218; p. 1015.
Forth, Charles, Ottawa, Ontario, Canada, assignor to The National Cash Register Company, Dayton, Ohio. Railway-ticket-issuing machine. No. 1,153,299; Sept. 14; Gaz. vol. 218; p. 367.
Fortin, Benjamin P., Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Erasing-shield for type-writing machines. No. 1,152,938; Sept. 7; Gaz. vol. 218; p. 206.
Foster, Alva C. (See MacGregor and Foster.)
Foster, Alvah J., Syracuse, N. Y. Routing-machine. No. 1,154,732; Sept. 28; Gaz. vol. 218; p. 937.
Foster, C. H. (See Scovill, James P., assignor.)
Foster, Charles H., Washington, D. C. Oiling and cleaning device for guns. No. 1,154,390; Sept. 21; Gaz. vol. 218; p. 785.
Foster, George H. P., Chicago, Ill. Resilient or cushion heel. No. 1,154,917; Sept. 28; Gaz. vol. 218; p. 992.
Foster, Homer, W. C. Turner, C. E. Bennett, and W. B. Linn, Casey, Ill. Automatic gasolene-vending apparatus. No. 1,153,376; Sept. 14; Gaz. vol. 218; p. 396.
Foster, Hugh M., New York, N. Y. Food-inspecting device. No. 1,154,501; Sept. 21; Gaz. vol. 218; p. 821.
Foster, William L., Dayton, Ohio. Friction-hinge. No. 1,153,903; Sept. 21; Gaz. vol. 218; p. 617.
Four Wheel Drive Auto Company. (See Zachow, Otto, assignor.)
Fourt, Frank, Fairfield, Iowa. Tool-bag for automobiles. No. 1,153,377; Sept. 14; Gaz. vol. 218; p. 397.
Fouts, Roy W., Dawson, Nebr. Cotter-key. No. 1,154,753; Sept. 28; Gaz. vol. 218; p. 937.
Fowler, William, assignor of one-half to C. H. Krippendorf, Cincinnati, Ohio. Outer sole for shoes. No. 1,154,623; Sept. 28; Gaz. vol. 218; p. 893.
Fox, Mac L., Columbiaville, Mich. Furnace. No. 1,154,502; Sept. 21; Gaz. vol. 218; p. 822.
Fradette, Donald F., assignor to L. E. Fradette, Buffalo, N. Y. Shoe-polishing device. No. 1,154,181; Sept. 21; Gaz. vol. 218; p. 712.
Fradette, Louise E. (See Fradette, Donald F., assignor.)
Frame, S., *et al.* (See Henneuse, Clarence A., assignor.)
Franciscan Fathers of Arizona, The. (See Schmitz, Pamphilus, assignor.)
Francke, William J., Highland Park, N. J. Flexible coupling. No. 1,155,227; Sept. 28; Gaz. vol. 218; p. 1098.
Franey-Shore Company, The. (See Shore, William E., assignor.)
Frank, Carl, assignor of one-half to L. A. Welch, Jr., Schenectady, N. Y. Safety-faucet. No. 1,153,863; Sept. 14; Gaz. vol. 218; p. 569.
Frank, John P., Danville, Ky. Skid. No. 1,154,986; Sept. 28; Gaz. vol. 218; p. 1015.
Frank W. Whitcher Company. (See Cahill, Henry D., assignor.)
Frankenberg, Alfred, assignor to J. L. Clark Manufacturing Company, Rockford, Ill. Sifter-top closure. No. 1,153,378; Sept. 14; Gaz. vol. 218; p. 397.
Frankenberg, Alfred, assignor to J. L. Clark Manufacturing Company, Rockford, Ill. Sifter-top closure. No. 1,153,379; Sept. 14; Gaz. vol. 218; p. 398.
Franquist, Gustave E., New Brunswick, N. J. Piston. No. 1,153,902; Sept. 21; Gaz. vol. 218; p. 617.
Franz, Paul H., Dolgeville, N. Y., assignor to Daniel Green Felt Shoe Company, Boston, Mass. Friction-surface and forming same. No. 1,155,054; Sept. 28; Gaz. vol. 218; p. 1039.
Frary, Chauncy M., Warsaw, Ind. Window-trough. No. 1,154,182; Sept. 21; Gaz. vol. 218; p. 712.
Frary, Francis C., Minneapolis, Minn. Producing sulfids of phosphorus. No. 1,153,054; Sept. 7; Gaz. vol. 218; p. 245.
Frasch, Herman, New York, N. Y., assignor, by mesne assignments, to The Union Sulphur Company, Jersey City, N. J. Mining sulfur. No. 1,152,499; Sept. 7; Gaz. vol. 218; p. 42.
Fraser, Donnelly P., New York, N. Y. Radiator thermometer-cap. No. 1,154,503; Sept. 21; Gaz. vol. 218; p. 822.
Frazine, William H., Modesto, Cal. Shock-absorber. No. 1,153,300; Sept. 14; Gaz. vol. 218; p. 368.
Frederick, Clarence H., assignor to The Simmons Manufacturing Company, Kenosha, Wis. Bed fabric. No. 1,152,500; Sept. 7; Gaz. vol. 218; p. 42.
Frederick, Clarence H., assignor to The Simmons Manufacturing Company, Kenosha, Wis. Bed fabric. No. 1,152,621; Sept. 7; Gaz. vol. 218; p. 88.
Freebey, Mordecai P., Los Angeles, Cal. Seal for bottles and the like containers. No. 1,154,853; Sept. 28; Gaz. vol. 218; p. 970.
Freeburn, Thomas I., Winchester, Mass. Tally device. No. 1,154,854; Sept. 28; Gaz. vol. 218; p. 970.
Freeland, George W., Moline, Ill., assignor to Williams, White & Company. Recording mechanism. No. 1,152,804; Sept. 7; Gaz. vol. 218; p. 155.
Freeman, James D., assignor of one-third to J. F. Muffley, Kalamazoo, Mich. Button-remover. No. 1,153,904; Sept. 21; Gaz. vol. 218; p. 617.
French, Alfred W., Piqua, Ohio. Cooker for oil-bearing material and the like. No. 1,153,212; Sept. 14; Gaz. vol. 218; p. 336.
French, Morgan C., Yampa, Colo. Brush-plow. No. 1,153,213; Sept. 14; Gaz. vol. 218; p. 336.
Fretz, William R., *et al.* (See Tredway, William E., assignor.)
Fried. Krupp Aktiengesellschaft, Germaniawerft. (See Regenbogen, Conrad, assignor.)
Friedel, John J. (See Coyle, James R., assignor.)
Friedlander, Joseph, New York, N. Y. Eyeglasses. No. 1,154,241; Sept. 21; Gaz. vol. 218; p. 733.
Friese-Greene Patents. (See Friese-Greene, William, assignor.)
Friese-Greene, William, Hove, Brighton, assignor to Friese-Greene Patents, Limited, London, England. Reproduction of animated pictures. No. 1,155,056; Sept. 28; Gaz. vol. 218; p. 1039.
Friesleben, Harold M., San Francisco, Cal. Flush-tank control. No. 1,154,695; Sept. 28; Gaz. vol. 218; p. 918.
Fritsch, John W. J., assignor to M. E. Fritsch, Cincinnati, Ohio. Miniature aeroplane. No. 1,153,155; Sept. 7; Gaz. vol. 218; p. 278.
Fritsch, Marie E. (See Fritsch, John W. J., assignor.)
Fritsche, William M., Mangum, Okla. Detachable heel. No. 1,152,721; Sept. 7; Gaz. vol. 218; p. 125.
Froehlich, Albert A., Toledo, Ohio. Linotype attachment. No. 1,154,302; Sept. 21; Gaz. vol. 218; p. 753.
Froehlich, Wilhelm, Wannsee, near Berlin, Germany. Internal-combustion motor. No. 1,154,303; Sept. 21; Gaz. vol. 218; p. 754.
Fuller, Edward, Jr., assignor of one-third to C. E. Collier, Altheimer, and one-third to D. D. Leary, Wabbaseka, Ark. Stoker for locomotive-boilers and the like. No. 1,153,156; Sept. 7; Gaz. vol. 218; p. 278.
Fuller, Frans A., assignor to The J. E. Mergott Company, Newark, N. J. Bag-fastener. No. 1,153,301; Sept. 14; Gaz. vol. 218; p. 368.
Fuller, Frans A., assignor to The J. E. Mergott Company, Newark, N. J. Bag-frame. No. 1,153,302; Sept. 14; Gaz. vol. 218; p. 368.
Fuller, Franz A., assignor to The J. E. Mergott Company, Newark, N. J. Match-box. No. 1,153,875; Sept. 14; Gaz. vol. 218; p. 574.
Fuller, Herbert M., assignor to himself and J. C. Fuller, Philadelphia, Pa. Magazine crayon and lead holder. No. 1,153,055; Sept. 7; Gaz. vol. 218; p. 245.
Fuller, Jessie C. (See Fuller, Herbert M., assignor.)
Fulton Company, The. (See Fulton, Weston M., assignor.)
Fulton, Weston M., assignor to The Fulton Company, Knoxville, Tenn. Damper-regulator. No. 1,153,214; Sept. 14; Gaz. vol. 218; p. 337.
Fulton, Weston M., assignor to The Fulton Company, Knoxville, Tenn. Balanced valve. No. 1,153,681; Sept. 14; Gaz. vol. 218; p. 504.
Furber, Frederick M., Revere, Mass., assignor to A. B. Mosler, New York, N. Y. Priming device. No. 1,152,722; Sept. 7; Gaz. vol. 218; p. 125.
Fussell, James E., Roff, Okla. Fence-post. No. 1,153,380; Sept. 14; Gaz. vol. 218; p. 398.
Futterman, Harry, New York, N. Y., assignor to Superior Lamp Mfg. Co. Automobile-hood. No. 1,155,321; Sept. 28; Gaz. vol. 218; p. 1128.
Fynn, Valère A., assignor to Wagner Electric Manufacturing Company, St. Louis, Mo. Alternating-current motor. No. 1,152,622; Sept. 7; Gaz. vol. 218; p. 89.
G. & W. Electric Specialty Co. (See Williams, Paul F., assignor.)
Gail, John F., Kenosha, Wis. Polishing-machine. No. 1,154,696; Sept. 28; Gaz. vol. 218; p. 918.
Gail, John F., assignor to The Simmons Manufacturing Company, Kenosha, Wis. Machine for making wire structures. No. 1,152,889; Sept. 7; Gaz. vol. 218; p. 187.

Galler, Ferdinand, New York, N. Y. Book-sewing machine. No. 1,153,775; Sept. 14; Gaz. vol. 218; p. 537.
Gaines, Edward C. (See Brown and Gaines.)
Gala Manufacturing Company. (See Beall, William L., assignor.)
Gale, Ernest L., Sr., Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Brake-magnet-demagnetizing device. No. 1,152,501; Sept. 7; Gaz. vol. 218; p. 43.
Gallon Iron Works and Manufacturing Company, The. (See Arndt, Franklin E., assignor.)
Gallagher, Edward D., assignor to Best & Company, New York, N. Y. Shoe. No. 1,152,939; Sept. 7; Gaz. vol. 218; p. 206.
Gallup, Benjamin, Norwich, Conn. Folding shingle-bracket. No. 1,154,855; Sept. 28; Gaz. vol. 218; p. 970.
Gally, Robert A., assignor to The Baldwin Company, Cincinnati, Ohio. Music-player valve. No. 1,153,056; Sept. 7; Gaz. vol. 218; p. 245.
Gandy, Wiley N., Athens, La. Clamping device for plow stocks and handles. No. 1,154,754; Sept. 28; Gaz. vol. 218; p. 937.
Gannon, Patrick J., Farmington, Minn. Weed-destroying machine. No. 1,152,940; Sept. 7; Gaz. vol. 218; p. 206.
Gano, Avery W., Carrollton, Ill. Vehicle wheel-tire. No. 1,154,504; Sept. 21; Gaz. vol. 218; p. 822.
Gardner, Adelbert L., Chicago, Ill., assignor of one-half to C. H. Gardner. Meat-slicing machine. No. 1,152,623; Sept. 7; Gaz. vol. 218; p. 89.
Gardner, Clyde E. W., assignor to Burroughs Adding Machine Company, Detroit, Mich. Carriage for recording-machines. No. 1,154,304; Sept. 21; Gaz. vol. 218; p. 754.
Gardner, Curtis H. (See Gardner, Adelbert L., assignor.)
Gardner, Otto, Hoboken, N. J., assignor to Gem Construction Co. Motor-vehicle. No. 1,154,755; Sept. 28; Gaz. vol. 218; p. 938.
Garritson, Henry R., Logansport, Ind. Basket. No. 1,153,057; Sept. 7; Gaz. vol. 218; p. 246.
Garvin, Samuel, Terre Haute, Ind. Springless lock. No. 1,152,723; Sept. 7; Gaz. vol. 218; p. 126.
Gast, Adolph W., Chicago, Ill. Letter-box. No. 1,153,548; Sept. 14; Gaz. vol. 218; p. 459.
Gates, Arthur L., assignor of one-half to J. F. Mergen, Cawker City, Kans. Enlarging-camera. No. 1,155,142; Sept. 28; Gaz. vol. 218; p. 1071.
Gates, Wilber. (See Eveland, John L., assignor.)
Gaube, Ernest W., deceased, Cleveland, Ohio; I. A. Gaube, executrix. Machine for sealing and crimping tubes. No. 1,155,143; Sept. 28; Gaz. vol. 218; p. 1071.
Gaube, Ida A., executrix. (See Gaube, Ernest W.)
Gause, Frederick T., assignor to Standard Oil Company of New York, New York, N. Y. Candlestick. No. 1,152,724; Sept. 7; Gaz. vol. 218; p. 126.
Gautschi, Henry, Evanston, Ill. Threading-machine. No. 1,152,502; Sept. 7; Gaz. vol. 218; p. 43.
Gay, Herman T., Baltimore, Md., assignor, by mesne assignments, to Protection Company, Incorporated, Burglar-alarm. No. 1,155,144; Sept. 28; Gaz. vol. 218; p. 1072.
Gaydosh, Michael, Clymer, Pa. Shoemaker's awl. No. 1,152,890; Sept. 7; Gaz. vol. 218; p. 188.
Gebhart, George W., Sunbury, Pa. Snow-plow. No. 1,153,776; Sept. 14; Gaz. vol. 218; p. 537.
Gebroeders Werkhoven. (See Hoftinga, Ulbe S., assignor.)
Geckler, Robert C. (See Sadler and Geckler.)
Gedney, Stanley L., Maplewood, N. J. Necktie-holder. No. 1,155,228; Sept. 28; Gaz. vol. 218; p. 1090.
Gee, Robert D., Blackfoot, Idaho. Tooth-powder dispenser. No. 1,154,391; Sept. 21; Gaz. vol. 218; p. 785.
Gee, Thomas J., Buenos Aires, Argentina. Wind-stacker. No. 1,152,805; Sept. 7; Gaz. vol. 218; p. 156.
Gehnrich, Hermann, Brooklyn, N. Y. Portable sectional oven. No. 1,155,145; Sept. 28; Gaz. vol. 218; p. 1072.
Gehrlein, Anton A., Erie, Pa. Cylinder-vat for paper-making machines. No. 1,154,183; Sept. 21; Gaz. vol. 218; p. 712.
Gem Construction Co. (See Gardner, Otto, assignor.)
General Composing Company, Gesellschaft mit beschränkte Haftung, The. (See Jung, Karl, assignor.)
General Electric Company. (See Alquist, Karl, assignor.)
General Electric Company. (See Ball, Henry P., assignor.)
General Electric Company. (See Barton, Frederick C., assignor.)
General Electric Company. (See Basch, David, assignor.)
General Electric Company. (See Beechlyn, John T., assignor.)
General Electric Company. (See Carbone, Tito L., assignor.)
General Electric Company. (See Coolidge, William D., assignor.)
General Electric Company. (See Dodge, Austin R., assignor.)
General Electric Company. (See Dorgeloh, George H., assignor.)
General Electric Company. (See Ellis, Alvarado L. R., assignor.)
General Electric Company. (See Emmet, William L. R., assignor.)
General Electric Company. (See Gray, George F., assignor.)
General Electric Company. (See Hartwig, Max, assignor.)
General Electric Company. (See Henrichsen, Christian, assignor.)
General Electric Company. (See Jacoby, Richard, assignor.)
General Electric Company. (See Kieser, Walter, assignor.)
General Electric Company. (See Krämer, Bernhard, assignor.)
General Electric Company. (See Lasche, Oskar, assignor.)
General Electric Company. (See Lemp, Hermann, assignor.)
General Electric Company. (See Moss, Sanford A., assignor.)
General Electric Company. (See Murphy, Edwin J., assignor.)
General Electric Company. (See Neeley, George S., assignor.)
General Electric Company. (See Persson, Otto F., assignor.)
General Electric Company. (See Porter, Willard E., assignor.)
General Electric Company. (See Rice, Richard H., assignor.)
General Electric Company. (See Samuelson, Frederick, assignor.)
General Electric Company. (See Steinbecker, Karl, assignor.)
General Electric Company. (See Stock, Henry W., assignor.)
General Electric Company. (See Weintraub, Ezechiel, assignor.)
General Electric Company. (See Wilkinson, James, assignor.)
General Fireproofing Company, The. (See Schaffert, Adolf H., assignor.)
General Fireproofing Company, The. (See White, Herbert E., assignor.)
General Railway Signal Company. (See Howe, Winthrop K., assignor.)
General Railway Signal Company. (See Leake, Richard C., assignor.)
Gentle, Waldo P., Hepler, Kans. Wagon-gear. No. 1,154,505; Sept. 21; Gaz. vol. 218; p. 823.
George H. Caboone Company. (See Wacha, John C., assignor.)
George P. Clark Company. (See Clark, Irrgang, and Clark, assignors.)
George P. Pilling and Son Co. (See Pilling and White, assignors.)
George, William H., Dexter, assignor to The Dexter Company, Fairfield, Iowa. Hand-operated driving mechanism. No. 1,153,157; Sept. 7; Gaz. vol. 218; p. 279.
George, William H., assignor to The Dexter Company, Fairfield, Iowa. Operating mechanism for washing-machines. No. 1,154,005; Sept. 21; Gaz. vol. 218; p. 652.
George, William H., assignor to The Dexter Company, Fairfield, Iowa. Gearing. No. 1,154,006; Sept. 21; Gaz. vol. 218; p. 652.
George, William H., assignor to The Dexter Company, Fairfield, Iowa. Operating mechanism for washing-machines. No. 1,154,007; Sept. 21; Gaz. vol. 218; p. 652.
George, William H., assignor to The Dexter Company, Fairfield, Iowa. Operating mechanism for washing-machines. No. 1,154,008; Sept. 21; Gaz. vol. 218; p. 653.
Georgeson, Albin M., Hamberg, N. D. Signaling device. No. 1,154,756; Sept. 28; Gaz. vol. 218; p. 938.
Gerald, August P., Jersey City, N. J. Gasket-seat cleaner. No. 1,154,757; Sept. 28; Gaz. vol. 218; p. 939.
Gessner, David, Worcester, Mass. Apparatus for the treatment of cloth. No. 1,154,758; Sept. 28; Gaz. vol. 218; p. 939.
Geza, Fulop, Dayton, Ohio. Folding box. No. 1,154,697; Sept. 28; Gaz. vol. 218; p. 918.
Ghosh, Sarath K., Seattle, Wash. Automatic train or car stopping apparatus. No. 1,153,616; Sept. 14; Gaz. vol. 218; p. 483.
Gibbs, Eugene U., York, Pa. Thrust-bearing. No. 1,153,777; Sept. 14; Gaz. vol. 218; p. 538.
Gibbs, Robert R., Liverpool, England. Tap or cock. No. 1,153,778; Sept. 14; Gaz. vol. 218; p. 538.
Gibney, Joseph W. (See North and Gibney.)
Gierding, Charles E., assignor to The Ohio Brass Company, Mansfield, Ohio. Trolley-pole base. No. 1,154,759; Sept. 28; Gaz. vol. 218; p. 939.
Gifford, Albert J., Worcester, Mass. Paper-clip. No. 1,152,406; Sept. 7; Gaz. vol. 218; p. 9.
Gifford-Wood Company. (See Wood, Ellis G., assignor.)
Giles, Julian A., Derby, Conn. Wrench. No. 1,153,303; Sept. 14; Gaz. vol. 218; p. 368.
Gilfillan, James O., Napoleon, N. D. Vehicle-spring. No. 1,153,058; Sept. 7; Gaz. vol. 218; p. 246.
Gill, George W., Three Rivers, Mich. Oiler for the slides of wind musical instruments. No. 1,152,407; Sept. 7; Gaz. vol. 218; p. 9.
Gilliam Manufacturing Company, The. (See White, Harry B., assignor.)
Gilliam, William L., Potosi, Wis. Self-sorting hog-house door. No. 1,154,760; Sept. 28; Gaz. vol. 218; p. 940.
Gilling, Preston E., East Orange, N. J. Signaling device. No. 1,153,215; Sept. 14; Gaz. vol. 218; p. 337.

Gilman, George H., Claremont, N. H., assignor, by mesne assignments, to Sullivan Machinery Company, Boston, Mass. Pneumatic tool. No. 1,152,624; Sept. 7; Gaz. vol. 218; p. 90.
Ginter, John M., Wooster, Ohio. Vulcanizer. No. 1,153,059; Sept. 7; Gaz. vol. 218; p. 246.
Giri, Christian. (See Schultis, Charles F., assignor.)
Glatt, Morris, Chicago, Ill. Suspender-clasp. No. 1,152,408; Sept. 7; Gaz. vol. 218; p. 9.
Gledhill, George A., Milwaukie, Oreg. Overall-suspender attachment. No. 1,153,060; Sept. 7; Gaz. vol. 218; p. 247.
Glentworth, Clarence A., et al. (See Boatwick, Seymour A., assignor.)
Globe-Wernicke Company, The. (See Dom, Chesley, assignor.)
Gloggner, Gerhardt, St. Joseph, Mo. Hog-ring. No. 1,153,001; Sept. 7; Gaz. vol. 218; p. 247.
Goddard, Arthur S., assignor to Waterbury Mfg. Co., Waterbury, Conn. Letter-box. No. 1,152,941; Sept. 7; Gaz. vol. 218; p. 207.
Goddard, Robert H., Worcester, Mass. Apparatus for producing gases. No. 1,154,000; Sept. 21; Gaz. vol. 218; p. 653.
Goeriz, Oscar C., Oakland, Cal. Rotary pump. No. 1,154,710; Sept. 21; Gaz. vol. 218; p. 688.
Goetz, John, West Allis, assignor to The Kempsmith Manufacturing Co., Milwaukee, Wis. Arm for milling-machines. No. 1,153,618; Sept. 14; Gaz. vol. 218; p. 483.
Goetz, Joseph F., Dayton, Ohio. Crack-filling machine. No. 1,154,305; Sept. 21; Gaz. vol. 218; p. 755.
Goetz, Julius F., Hartford, Wis. Lightning-rod. No. 1,153,617; Sept. 14; Gaz. vol. 218; p. 483.
Goff, Nara D., Clinton, Iowa. Attaching-link. No. 1,154,387; Sept. 28; Gaz. vol. 218; p. 1016.
Goff, Samuel J., Dallas, Iowa. Washing-machine. No. 1,154,242; Sept. 21; Gaz. vol. 218; p. 733.
Goldfarb, William, New York, N. Y. Sanitary sugar-container. No. 1,154,506; Sept. 21; Gaz. vol. 218; p. 823.
Goldknopf, Abraham, New York, N. Y. Adjustable lamp for beds. No. 1,154,243; Sept. 21; Gaz. vol. 218; p. 733.
Goldschmidt, Hans, and W. Brewitt, Essen-on-the-Ruhr, Germany, assignors to Goldschmidt Thermit Company, New York, N. Y. Forming parallel faces on the ends of rails and other objects to be butt-welded. No. 1,154,918; Sept. 28; Gaz. vol. 218; p. 993.
Goldschmidt Thermit Company. (See Goldschmidt and Brewitt, assignors.)
Goldschmidt Thermit Company. (See Lange, Felix, assignor.)
Goldsmith, Byron B., New York, N. Y. Composition of matter. No. 1,152,625; Sept. 7; Gaz. vol. 218; p. 90.
Gooch, Orrel A., East Machias, assignor to Forest King Machine Company, Machias, Me. Tree-felling device. No. 1,154,624; Sept. 28; Gaz. vol. 218; p. 893.
Goodall, John T. (See Vanderziel and Goodall.)
Goode, Ovella M., South Bend, Tex. Fender. No. 1,153,779; Sept. 14; Gaz. vol. 218; p. 539.
Goodwin, Ernest G., Roanoke, Va., assignor to Locomotive Superheater Company, New York, N. Y. Locomotive-superheater. No. 1,153,216; Sept. 14; Gaz. vol. 218; p. 338.
Goodwin, John M., Spokane, Wash. Dumping-car. No. 1,154,761; Sept. 28; Gaz. vol. 218; p. 940.
Gordon, David D., Chicago, Ill., assignor to Yost Electric Manufacturing Company, Toledo, Ohio. Switch-operating device. No. 1,155,307; Sept. 28; Gaz. vol. 218; p. 1123.
Gordon, George A., Toronto, Ontario, Canada. Metal shingle. No. 1,153,619; Sept. 14; Gaz. vol. 218; p. 484.
Gorton, George, Racine, Wis. Cutting-off saw. No. 1,153,682; Sept. 14; Gaz. vol. 218; p. 504.
Gorton, William E., assignor of one-half to W. F. Hoffman, St. Joseph, Mo. Filter. No. 1,154,507; Sept. 21; Gaz. vol. 218; p. 824.
Gorton, William F., Muncie, Ind. Making cutlery. No. 1,155,229; Sept. 28; Gaz. vol. 218; p. 1099.
Gosline, Daniel P., Boston, Mass. Conditioning air. No. 1,155,308; Sept. 28; Gaz. vol. 218; p. 1123.
Gottschalk & Co. (See Gottschalk, Hugo, assignor.)
Gottschalk, Felix, Stirling, N. J. Fire-alarm system. No. 1,152,942; Sept. 7; Gaz. vol. 218; p. 207.
Gottschalk, Hugo, assignor to Gottschalk & Co., Inc., Reedsville, Pa. Pan cleaning and greasing machine. No. 1,153,683; Sept. 14; Gaz. vol. 218; p. 505.
Goularte, Manoel F. (See Rasmussen and Goularte.)
Gould Coupler Company. (See Bouché, William F., assignor.)
Gourlay, Ezra B. H. A., Edmonton, Alberta, Canada. Cabinet. No. 1,153,062; Sept. 7; Gaz. vol. 218; p. 247.
Grace, John F., New York, N. Y., assignor to Henry R. Worthington. Condenser. No. 1,153,217; Sept. 14; Gaz. vol. 218; p. 339.
Graf, Edwin, Rüti, Switzerland. Card-clothing. No. 1,154,856; Sept. 28; Gaz. vol. 218; p. 971.
Graham, Charles W., assignor to American Can Company, New York, N. Y. Soldering-machine. No. 1,152,409; Sept. 7; Gaz. vol. 218; p. 10.
Graham, Charles W., assignor to American Can Company, New York, N. Y. Solder-fusing machine. No. 1,152,410; Sept. 7; Gaz. vol. 218; p. 10.
Graham, Charles W., assignor to American Can Company, New York, N. Y. Machine for fusing can-seams. No. 1,152,411; Sept. 7; Gaz. vol. 218; p. 10.
Graham, Charles W., Rome, N. Y., assignor to American Can Company. Automatic stop-motion for can-body-forming machines. No. 1,154,244; Sept. 21; Gaz. vol. 218; p. 733.
Graham, Charles W., Huntington, assignor to American Can Company, New York, N. Y. Can-end and gasket assembling machine. No. 1,154,245; Sept. 21; Gaz. vol. 218; p. 734.
Graham, Lee, assignor of one-third to W. A. House, Sandford, Ind. Shot-shooting device for use in blasting. No. 1,155,230; Sept. 28; Gaz. vol. 218; p. 1099.
Grand Rapids Textile Machinery Company. (See Clements, Elbert A., assignor.)
Granger, Frank B., assignor to Hall-Borchert Dress Form Co., New York, N. Y. Adjustable dress-form. No. 1,153,218; Sept. 14; Gaz. vol. 218; p. 339.
Granger, Frank B., assignor to Hall-Borchert Dress Form Co., New York, N. Y. Sectional dress-form. No. 1,153,219; Sept. 14; Gaz. vol. 218; p. 339.
Grant, Alexander C. (See Marsh, Franklin, assignor.)
Graphite Lubricating Company, The. (See Bache, Leigh S., assignor.)
Graphite Lubricating Company, The. (See Smalley, George O., assignor.)
Grask, Thaddeus, Wichita, Kans. Extensible molding-flask. No. 1,153,063; Sept. 7; Gaz. vol. 218; p. 247.
Grasselli Chemical Company, The. (See Drefahl, Louis C., assignor.)
Graumüller, Hermann, Berlin, Germany. Brake for use on hoisting devices. No. 1,154,508; Sept. 21; Gaz. vol. 218; p. 824.
Graves, Henry D., Grant Park, Ill. Mail-box. No. 1,155,146; Sept. 28; Gaz. vol. 218; p. 1073.
Gray, Chester E., Eureka, Cal. Manufacturing churned products from milk and cream. No. 1,155,055; Sept. 28; Gaz. vol. 218; p. 1039.
Gray, George E., Des Moines, Iowa. Pumping means for massage devices. No. 1,155,147; Sept. 28; Gaz. vol. 218; p. 1073.
Gray, George F., Schenectady, N. Y., assignor to General Electric Company. Vacuum-indicator. No. 1,154,306; Sept. 21; Gaz. vol. 218; p. 755.
Gray, William B., assignor to M. J. Bannon, Louisville, Ky. Sewer construction. No. 1,153,158; Sept. 7; Gaz. vol. 218; p. 279.
Gray, William B., assignor to M. J. Bannon, Louisville, Ky. Reinforcement for pipe insulation. No. 1,153,159; Sept. 7; Gaz. vol. 218; p. 279.
Grayek, Martin, et al. (See Plontkowski, John, assignor.)
Greeson, Frederick A. (See Watt and Greeson.)
Greeley, James T., Nashua, N. H. Clinical-thermometer casing. No. 1,152,503; Sept. 7; Gaz. vol. 218; p. 44.
Green, Clifford H., assignor to National Piano Manufacturing Company, Grand Rapids, Mich. Multiple-coin chute. No. 1,152,806; Sept. 7; Gaz. vol. 218; p. 156.
Green, Clifford H., assignor to National Piano Manufacturing Company, Grand Rapids, Mich. Coin-detector. No. 1,154,919; Sept. 28; Gaz. vol. 218; p. 993.
Green, William W., Niles, Mich. Plow. No. 1,154,307; Sept. 21; Gaz. vol. 218; p. 755.
Greene, John S., Rochester, N. Y., assignor to Commercial Camera Company, Providence, R. I. Web-guide for photographic cameras. No. 1,153,843; Sept. 14; Gaz. vol. 218; p. 562.
Greenfield, Hirsh, Chicago, Ill. Hanger for screen and storm sashes. No. 1,154,920; Sept. 28; Gaz. vol. 218; p. 993.
Greenig, Albert F., Lancaster, Pa. Arch-support. No. 1,153,064; Sept. 7; Gaz. vol. 218; p. 248.
Greenleaf, Rupert L., Brockton, Mass. Heel and rand trimmer. No. 1,153,780; Sept. 14; Gaz. vol. 218; p. 539.
Greenlee, James A., Chicago, Ill., and H. Wegwart, Burlington, Wis. Basket or receptacle. No. 1,155,306; Sept. 21; Gaz. vol. 218; p. 618.
Greenlee, James R., Portland, Oreg. Horseshoe-calk. No. 1,155,231; Sept. 28; Gaz. vol. 218; p. 1099.
Greeson, Clarett B., assignor to F. L. Hunt, Fairfield, Iowa. Machine for cutting and folding cloth tubing. No. 1,154,581; Sept. 21; Gaz. vol. 218; p. 850.
Gregg, Adolphus E. J., Los Angeles, Cal. Artificial denture. No. 1,153,486; Sept. 14; Gaz. vol. 218; p. 436.
Gregory, Thomas F., Henning, Tenn., assignor to W. B. Carson, St. Louis, Mo. Whiffletree. No. 1,154,246; Sept. 21; Gaz. vol. 218; p. 735.
Greiner, Fritz, Reinickendorf-Ost, assignor to O. Schlick, Berlin, Germany. Carbureter. No. 1,153,487; Sept. 14; Gaz. vol. 218; p. 436.
Grey, Charles M., East Orange, N. J. Casting-machine. No. 1,153,220; Sept. 14; Gaz. vol. 218; p. 340.
Griffin, Herbert E., Mount Horeb, Wis. Fire-lighter. No. 1,153,065; Sept. 7; Gaz. vol. 218; p. 248.
Griffin, Lorne A., Elkhart, Ind. Suction-machine for conduits conveying loose, abrasive, and disintegrated materials. No. 1,153,684; Sept. 14; Gaz. vol. 218; p. 505.
Griffith, Charles E., Philadelphia, Pa. Car-vestibule door and trap. No. 1,152,626; Sept. 7; Gaz. vol. 218; p. 91.
Griffiths, Thomas L., Birmingham, England. Lamp for vehicles. No. 1,152,807; Sept. 7; Gaz. vol. 218; p. 157.
Grimm, Walter H. (See Nelson, Nils G., assignor.)

Grinnell Electric Car Co. (See Pattison, Albert W., assignor.)
Grip Nut Company. (See Sharp, William E., assignor.)
Groene, William F. (See Le Blond and Groene.)
Groening, Charles W., New York, N. Y. Railway-station indicator. No. 1,152,725; Sept. 7; Gaz. vol. 218; p. 126.
Gross, Johannes J., Hamburg, Germany. Producing tanning compositions from waste sulfite-cellulose liquor. No. 1,154,702; Sept. 28; Gaz. vol. 218; p. 940.
Grossmann, Gustav. (See Raselhorn and Grossmann.)
Grunbauch, Charles, assignor of one-half to N. J. Seaver, Detroit, Mich. Tool-holder. No. 1,154,010; Sept. 21; Gaz. vol. 218; p. 654.
Grundfast, Max. (See Pierce, William L., assignor.)
Grunzweig, Max, Ludwigshafen-on-the-Rhine, Germany, assignor to The Armstrong Cork and Insulation Company, Pittsburgh, Pa. Treatment of cork. No. 1,155,057; Sept. 28; Gaz. vol. 218; p. 1040.
Gudmundsen, Abraham, Payson, Utah. Beet-cleaner. No. 1,153,381; Sept. 14; Gaz. vol. 218; p. 398.
Guerzoni, Joseph, and R. Pechkranz, Geneva, Switzerland. Projection apparatus. No. 1,153,685; Sept. 14; Gaz. vol. 218; p. 506.
Guillette, Fred A., Taunton, Mass. Self-threading loom-shuttle. No. 1,154,011; Sept. 21; Gaz. vol. 218; p. 654.
Gunderson, Gunder H., Fairchild, Wis. Drag for multiple harrows. No. 1,154,763; Sept. 28; Gaz. vol. 218; p. 940.
Gunn, George C. (See Smith, Richard S., Jr., assignor.)
Gurney Ball Bearing Company. (See Gurney, Frederick W., assignor.)
Gurney, Frederick W., Jamestown, N. Y., assignor to Gurney Ball Bearing Company. Assembling ball-bearings. No. 1,153,066; Sept. 7; Gaz. vol. 218; p. 248.
Gustafson, Edwin, assignor to The Fairtridge Metal Equipment Company, Chicago, Ill. Metal door. No. 1,153,549; Sept. 14; Gaz. vol. 218; p. 460.
Gutenkunst, William, Milwaukee, Wis. Stanchion-supporting frame. No. 1,154,625; Sept. 28; Gaz. vol. 218; p. 894.
Guttu Percha and Rubber Limited. (See Coffey, Joseph H. and J. H., Jr., assignors.)
Guzmán M, Ramón, Tegucigalpa, Honduras. Cryptographic apparatus. No. 1,152,808; Sept. 7; Gaz. vol. 218; p. 151.
Gwozdz, Bronislaw, Schöneiche, near Berlin, Germany. Thermo-telephone or the like. No. 1,152,627; Sept. 7; Gaz. vol. 218; p. 91.
H. Brinton Company. (See Ames, Elmer U., assignor.)
H. W. Johns-Manville Company. (See Webb, Jervis B., assignor.)
Hackett, Harry C., assignor of two-thirds to G. W. Anderson and J. P. Fitzgerald, Kansas City, Mo. Shipping-case for eggs. No. 1,153,620; Sept. 14; Gaz. vol. 218; p. 484.
Hackney, Leslie S., St. Paul, Minn. Street-sweeper. No. 1,152,726; Sept. 7; Gaz. vol. 218; p. 127.
Hackney, Leslie S., St. Paul, Minn. Ventilating device. No. 1,153,067; Sept. 7; Gaz. vol. 218; p. 249.
Hadaway, William S., Jr., New Rochelle, N. Y. Electric heater. No. 1,154,111; Sept. 21; Gaz. vol. 218; p. 689.
Hadaway, William S., Jr., New Rochelle, N. Y. Humidifier. No. 1,154,113; Sept. 21; Gaz. vol. 218; p. 690.
Hadaway, William S., Jr., New Rochelle, N. Y. Stove. No. 1,154,114; Sept. 21; Gaz. vol. 218; p. 690.
Hadaway, William S., Jr., New Rochelle, N. Y. Electric heater. No. 1,154,115; Sept. 21; Gaz. vol. 218; p. 690.
Hadaway, William S., Jr., New Rochelle, N. Y. Terminal for electric apparatus. No. 1,154,626; Sept. 28; Gaz. vol. 218; p. 894.
Hadaway, William S., Jr., New Rochelle, and J. Amon, New York, N. Y. Socket for electric heater units. No. 1,154,112; Sept. 21; Gaz. vol. 218; p. 689.
Hadley, Frank O., *et al.* (See Carpenter, Mason P., assignor.)
Hagan, Elijah J., Brush, Colo. Sanitary poultry-roost. No. 1,154,392; Sept. 21; Gaz. vol. 218; p. 786.
Hagar, Franklin W., Nashville, Tenn. Carburetor. No. 1,155,232; Sept. 28; Gaz. vol. 218; p. 1100.
Hagarty, Thomas F., New York, N. Y. Plating-machine. No. 1,154,857; Sept. 28; Gaz. vol. 218; p. 971.
Haggin, Louis T., *et al.*, executor. (See Kendall, Edward D., assignor.)
Haggin, Margaret V., *et al.*, executor. (See Kendall, Edward D., assignor.)
Hague, Charles E. (See Leich and Hague.)
Haigh, William, Baltimore, Md. Package. No. 1,153,221; Sept. 14; Gaz. vol. 218; p. 340.
Hairlight Company, The. (See Damon, Russell H., assignor.)
Halbert, Fred E., San Diego, Cal. Hat sweat-band. No. 1,153,907; Sept. 21; Gaz. vol. 218; p. 619.
Halblelb, Edward A., assignor to North East Electric Company, Rochester, N. Y. Power-transmission mechanism. No. 1,152,504; Sept. 7; Gaz. vol. 218; p. 44.
Hale, Albert H., Cairo, Ill. Brake. No. 1,153,382; Sept. 14; Gaz. vol. 218; p. 399.
Hale, Willis L., North Attleboro, Mass. Demountable-rim fastener. No. 1,153,068; Sept. 7; Gaz. vol. 218; p. 249.
Halkyard Manufacturing Company. (See Wakefield, Edward E., assignor.)
Hall-Borchert Dress Form Co. (See Granger, Frank B., assignor.)
Hall, Charles T., Buffalo, N. Y. Card-shuffler. No. 1,154,988; Sept. 28; Gaz. vol. 218; p. 1016.
Hall, Elmer E., assignor of one-half to W. R. Schmidt and one-half to L. W. Hall, Chicago, Ill. Can. No. 1,154,627; Sept. 28; Gaz. vol. 218; p. 894.
Hall, L. W., *et al.* (See Hall, Elmer E., assignor.)
Hall, Mathew. (See Van Horn, Sheridan A., assignor.)
Hall, Robert, Lockport, assignor to American District Steam Company, North Tonawanda, N. Y. Liquid-measuring device. No. 1,152,891; Sept. 7; Gaz. vol. 218; p. 188.
Hall, William L., Newark, Ohio. Wire-clamping device. No. 1,152,943; Sept. 7; Gaz. vol. 218; p. 207.
Hallaire, Charles, Amsterdam, N. Y. Curtain-shade bracket. No. 1,153,069; Sept. 7; Gaz. vol. 218; p. 249.
Halle, Max von. (See Ebrenthal, Bruno M. E. L. P. von, assignor.)
Hallowell, Albert, assignor to W. S. Lamson, deceased, Lowell, Mass.; M. A. Lamson, executrix. Hydrant. No. 1,154,582; Sept. 21; Gaz. vol. 218; p. 850.
Hallowell, Howard T., Philadelphia, Pa. Hollow or socket screw. No. 1,153,488; Sept. 14; Gaz. vol. 218; p. 437.
Hamachek, Frank, Kewaunee, Wis. Pea-separator. No. 1,153,304; Sept. 14; Gaz. vol. 218; p. 369.
Hamilton, David, Greensburg, Pa. Water-heater. No. 1,153,781; Sept. 14; Gaz. vol. 218; p. 539.
Hamilton, George, Providence, R. I. Engraving-machine. No. 1,153,550; Sept. 14; Gaz. vol. 218; p. 460.
Hamilton, James B., London, England. Reed-organ combined with pianoforte. No. 1,154,509; Sept. 21; Gaz. vol. 218; p. 824.
Hammar, Charles C. R., New Duluth, Minn. Extractor. No. 1,153,070; Sept. 7; Gaz. vol. 218; p. 250.
Hämmerle, Gebhard. (See Fessman and Hämmerle.)
Hammond, Clarence C., Wichita, Kans. Button-feeding mechanism. No. 1,155,148; Sept. 28; Gaz. vol. 218; p. 1073.
Hammond, John H., Jr., Gloucester, Mass. Wireless selective system and apparatus. No. 1,154,628; Sept. 28; Gaz. vol. 218; p. 895.
Hammond, Lee, *et al.* (See Levison, Maurice, assignor.)
Hammond, Luthan W., Venice, N. Y. Two-collar harness. No. 1,153,908; Sept. 21; Gaz. vol. 218; p. 619.
Hammond, Robert O., assignor to C. F. Delano, Amityville, N. Y. Nut-lock. No. 1,155,233; Sept. 28; Gaz. vol. 218; p. 1100.
Hammond, Robert O., New York, N. Y., assignor to G. W. Renkel and J. D. Montmeat, Paterson, N. J. Shipping crate or case for eggs or the like. No. 1,155,234; Sept. 28; Gaz. vol. 218; p. 1100.
Hammond, William H., Clifford, Mass. Parcel-post mailing-case. No. 1,154,764; Sept. 28; Gaz. vol. 218; p. 941.
Hampton, William H., New York, N. Y., assignor to The Conley Electric Furnace Company, Incorporated, Wilmington, Del. Electrical furnace. No. 1,152,505; Sept. 7; Gaz. vol. 218; p. 45.
Hanaoka, Yoshisuki, Hilo, Hawaii. Automatic light or heat regulator. No. 1,152,412; Sept. 7; Gaz. vol. 218; p. 11.
Hanchett, George T., New York, N. Y. Gear-shifting device. No. 1,152,809; Sept. 7; Gaz. vol. 218; p. 157.
Hancock, John B., Buda, Tex. Polish for woodwork and preparing the same. No. 1,153,686; Sept. 14; Gaz. vol. 218; p. 506.
Handy Bicycle Company. (See Meiselbach, August D., assignor.)
Hanes, Wellington R., Chicago, Ill. Garment. No. 1,153,009; Sept. 21; Gaz. vol. 218; p. 619.
Hanly, George A., Elgin, Ill. Pneumatic valve apparatus. No. 1,152,810; Sept. 7; Gaz. vol. 218; p. 158.
Hanly, George A., Elgin, Ill. Pneumatic valve mechanism. No. 1,152,811; Sept. 7; Gaz. vol. 218; p. 158.
Hanna, Raymond G., New York, N. Y. Twin-saddle attachment for motor-cycles. No. 1,154,308; Sept. 21; Gaz. vol. 218; p. 756.
Hannah, Elmer E., Estacada, Oreg. Safety clutch device. No. 1,153,782; Sept. 14; Gaz. vol. 218; p. 540.
Hansen, Charles C., Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J. Percussive drill. No. 1,154,921; Sept. 28; Gaz. vol. 218; p. 993.
Hansen, Charles C., Easton, Pa., assignor to Ingersoll-Rand Company, Jersey City, N. J. Coal-mining machine. No. 1,154,922; Sept. 28; Gaz. vol. 218; p. 994.
Hansen, Hans A., and J. M. Schmueser, Smuggler, Colo. Lining for pebble or ball mills. No. 1,153,844; Sept. 14; Gaz. vol. 218; p. 563.
Hanslik, Henry J., assignor to De Laval Steam Turbine Company, Trenton, N. J. Shroud and bucket. No. 1,152,812; Sept. 7; Gaz. vol. 218; p. 159.
Harbeck, Jervis R., Chicago, Ill., assignor to American Can Company, New York, N. Y. Vessel-closure. No. 1,152,413; Sept. 7; Gaz. vol. 218; p. 11.
Harbridge, Chester C., assignor to Detroit Demountable Rim Co., Detroit, Mich. Demountable rim. No. 1,154,629; Sept. 28; Gaz. vol. 218; p. 895.
Harden, Emmett S., Casey, Iowa. Foot-lever-holding mechanism. No. 1,154,012; Sept. 21; Gaz. vol. 218; p. 654.
Hardy, Emery E., Bayside, N. Y. Roller-skate. No. 1,152,813; Sept. 7; Gaz. vol. 218; p. 159.
Hardy, Paul C., assignor to C. G. Conn, Inc., Elkhart, Ind. Making key-seats on wind musical instruments. No. 1,153,489; Sept. 14; Gaz. vol. 218; p. 437.

Harper, T. W. (See Huffman, Orla L., assignor.)
Harral, Elbert B., New Orleans, La. Railway package-transferring device. No. 1,153,071; Sept. 7; Gaz. vol. 218; p. 250.
Harrell, William B., Baldwin, Fla. Skate. No. 1,154,510; Sept. 21; Gaz. vol. 218; p. 824.
Harrington, Cornelius J., assignor to Harrington Manufacturing Company, Boston, Mass. Self-opening die. No. 1,154,568; Sept. 21; Gaz. vol. 218; p. 844.
Harrington Manufacturing Company. (See Harrington, Cornelius J., assignor.)
Harris, Arnold W., *et al.* (See McCallum, Jean, assignor.)
Harris, Earl A., Scranton, Pa., assignor to Alcemo Manufacturing Company, Newark, N. J. Device for applying chains to wheels. No. 1,153,490; Sept. 14; Gaz. vol. 218; p. 437.
Harris, Henry H., Traverse City, Mich. Harvesting-machine. No. 1,153,783; Sept. 14; Gaz. vol. 218; p. 540.
Harris, William L. (See Houts and Harris.)
Harrison, Thomas J., Julesburg, Colo. Seed-potato cutter. No. 1,154,765; Sept. 28; Gaz. vol. 218; p. 941.
Harrold, Elmer, assignor to The Crescent Machine Company, Leetonia, Ohio. Rotary cutter-head. No. 1,153,910; Sept. 21; Gaz. vol. 218; p. 619.
Harstad, Ole, assignor to J. O'Connor, Montevideo, Minn. Silo. No. 1,154,511; Sept. 21; Gaz. vol. 218; p. 825.
Hart-King System Company. (See Carrill, Albert H., assignor.)
Hart, Lewis B., Plaquemine, La. Generative-organ appliance. No. 1,153,072; Sept. 7; Gaz. vol. 218; p. 250.
Hartenstein, Herman L., Constantine, Mich., assignor, by mesne assignments, to Continental Investment Company, Duluth, Minn. Manufacturing carbid. No. 1,152,506; Sept. 7; Gaz. vol. 218; p. 45.
Harter, Charles. (See O'Brien and Harter.)
Harter, James G., Berwick, Pa. Wrench. No. 1,152,727; Sept. 7; Gaz. vol. 218; p. 127.
Hartford, Edward V., Deal, N. J. Suspension device for vehicles. No. 1,154,569; Sept. 21; Gaz. vol. 218; p. 845.
Hartley, William B., Watts, Cal. Helicopter. No. 1,153,073; Sept. 7; Gaz. vol. 218; p. 251.
Hartman, Ferdinand Q., Danville, Pa. Grease-cup. No. 1,153,074; Sept. 7; Gaz. vol. 218; p. 251.
Hartwig, Max, Berlin, Germany, assignor to General Electric Company. Shaft-coupling. No. 1,154,766; Sept. 28; Gaz. vol. 218; p. 941.
Harvey, Benjamin V., and B. K. Watkins, Danville, Va. Hand-truck. No. 1,155,235; Sept. 28; Gaz. vol. 218; p. 1101.
Harvey, Charles, Kansas City, Mo. Faucet for urns. No. 1,153,428; Sept. 14; Gaz. vol. 218; p. 415.
Harvey, Earl. (See Lunnon and Harvey.)
Harvey, Joseph C., Chicago, Ill., assignor to J. T. Underwood, Brooklyn, N. Y. Type-writing machine. No. 1,152,944; Sept. 7; Gaz. vol. 218; p. 208.
Harvey, Joseph C., Chicago, Ill., assignor to J. T. Underwood, Brooklyn, N. Y. Type-writing machine. No. 1,152,945; Sept. 7; Gaz. vol. 218; p. 208.
Hasburg, John W., Chicago, Ill. Range-finder for air-craft. No. 1,152,946; Sept. 7; Gaz. vol. 218; p. 208.
Haskell, Henry L., Ludington, Mich. Dust-guard for car journal-boxes. No. 1,153,551; Sept. 14; Gaz. vol. 218; p. 461.
Haskell, Samuel, assignor to Fair and Carnival Trading Co., Inc., New York, N. Y. Doll-mold. No. 1,154,247; Sept. 21; Gaz. vol. 218; p. 735.
Haslage, Frank H. (See Buzard, Cole, and Haslage.)
Hasseries, James P., Columbus, Ohio. Grass-catcher. No. 1,153,383; Sept. 14; Gaz. vol. 218; p. 399.
Hastings, Ruben C. M., assignor to The International Telephone Co., Columbus, Ohio. Selective system of telephony. (Reissue.) No. 13,989; Sept. 28; Gaz. vol. 218; p. 1132.
Hathaway, Claude P., assignor of one-half to J. G. Robinson, Coffeyville, Kans. Sash-lock. No. 1,152,723; Sept. 7; Gaz. vol. 218; p. 127.
Hathaway, Edgar F., Dorchester, and C. Lea, Boston, Mass., assignors to American Warp-Drawing Machine Company. Machine for handling tuft-yarns for carpet-looms. No. 1,153,864; Sept. 14; Gaz. vol. 218; p. 570.
Hathaway, Edgar F., Dorchester, and C. Lea, Boston, Mass., assignors to American Warp-Drawing Machine Company. Mechanism for handling tuft-yarns for carpet-looms. No. 1,153,865; Sept. 14; Gaz. vol. 218; p. 570.
Hathaway, Edgar F., Dorchester, and C. Lea, Boston, Mass., assignors to American Warp-Drawing Machine Company. Mechanism for handling tuft-yarns for carpet-looms. No. 1,153,866; Sept. 14; Gaz. vol. 218; p. 570.
Hathaway, Edgar F., Dorchester, and C. Lea, Boston, Mass., assignors to American Warp-Drawing Machine Company. Mechanism for handling tuft-yarns for carpet-looms. No. 1,153,867; Sept. 14; Gaz. vol. 218; p. 571.
Hathaway, Hosea, Boston, Mass. Weighing and adding scale. No. 1,153,222; Sept. 14; Gaz. vol. 218; p. 341.
Hathaway, Thomas F., assignor to Illinois Watch Case Company, Elgin, Ill. Attachment for wrist-watches. No. 1,153,075; Sept. 7; Gaz. vol. 218; p. 251.
Hathorne, Sherman A., Waukegan, assignor to Chicago Hardware Foundry Company, North Chicago, Ill. Counter-bracket. No. 1,155,149; Sept. 28; Gaz. vol. 218; p. 1073.
Hatton, Joseph E., Brooklyn, N. Y. Railway-tie. No. 1,154,013; Sept. 21; Gaz. vol. 218; p. 655.
Hawes, Alexander G. (See Armstrong, John J., assignor.)
Hawkins, Jamison O., Louisville, Ky. Figure toy. No. 1,154,014; Sept. 21; Gaz. vol. 218; p. 655.
Hawley, Charles G., assignor to K. Nut Co., Chicago, Ill. Nut-lock. No. 1,154,698; Sept. 28; Gaz. vol. 218; p. 919.
Hawthorne Manufacturing Company, The. (See Madden, Edward J., assignor.)
Hay, Charles E., Ilford, and H. W. Sullivan, London, England. Electrical resistance. No. 1,155,058; Sept. 28; Gaz. vol. 218; p. 1040.
Hay, John T., Union City, Ohio. Bearing-adjuster. No. 1,154,512; Sept. 21; Gaz. vol. 218; p. 825.
Haynes, Frank, Limon, Colo. Billiard-cue tip. No. 1,153,491; Sept. 14; Gaz. vol. 218; p. 438.
Hayot, Louis A., Beauvais, Oise, France. Automatic stabilising apparatus for aeroplanes. No. 1,154,396; Sept. 21; Gaz. vol. 218; p. 787.
Hays, Charles W. (See Hays, Joseph W. and C. W.)
Hays, Joseph W. and C. W., Chicago, Ill. Gas-analyzing apparatus. No. 1,153,911; Sept. 21; Gaz. vol. 218; p. 620.
Hays, Joseph W. and C. W., Chicago, Ill. Gas absorbing and indicating apparatus for gas-analyzers. No. 1,153,912; Sept. 21; Gaz. vol. 218; p. 620.
Head, Daniel J., *et al.* (See Snell, Harry, assignor.)
Headland, Nestor, Chicago, Ill. Machine for pasting, trimming, and cutting wall-paper. No. 1,154,015; Sept. 21; Gaz. vol. 218; p. 655.
Heany, John A., New York, N. Y. Electric welding apparatus. No. 1,153,384; Sept. 14; Gaz. vol. 218; p. 399.
Hearl, John, assignor to A. Weiskittel & Son Company, Baltimore, Md. Flushing apparatus for water-closets. No. 1,153,784; Sept. 14; Gaz. vol. 218; p. 540.
Heath, Forrest A., Jersey City, N. J., assignor, by mesne assignments, to G. Whysall, Marion, Ohio. Mixing device. No. 1,153,913; Sept. 21; Gaz. vol. 218; p. 620.
Heath, Forrest A., assignor, by mesne assignments, to New Jersey Carbureter Company, Jersey City, N. J. Mixing device. No. 1,153,914; Sept. 21; Gaz. vol. 218; p. 621.
Heath, Forrest A., Jersey City, N. J., assignor, by mesne assignments, to G. Whysall, Marion, Ohio. Mixing device. No. 1,153,915; Sept. 21; Gaz. vol. 218; p. 621.
Heath, Walter S., San Mateo, Cal. Tire-case. No. 1,153,305; Sept. 14; Gaz. vol. 218; p. 369.
Heathcote, Lewin J., Baltimore, Md. Draftsman's tool. No. 1,155,059; Sept. 28; Gaz. vol. 218; p. 1040.
Heckel, Otto A., assignor of one-half to E. Ameling, St. Louis, Mo. Apparatus for controlling the placement of a covering over base-ball diamonds. No. 1,155,309; Sept. 28; Gaz. vol. 218; p. 1124.
Heckman, Joseph C., Avalon borough, Pa. Process and substance for purifying gas. No. 1,154,858; Sept. 28; Gaz. vol. 218; p. 971.
Heckman, Joseph C., Avalon borough, Pa. Gas-purifying material. No. 1,154,859; Sept. 28; Gaz. vol. 218; p. 971.
Heffner, John L., Peoria, Ill. Mattress. (Reissue.) No. 13,982; Sept. 21; Gaz. vol. 218; p. 855.
Heggie, David, Lorain, Ohio, assignor to National Tube Company, Pittsburgh, Pa. Sawing-machine. No. 1,155,060; Sept. 28; Gaz. vol. 218; p. 1041.
Heggland, Evend T., Mina, Nev. Ditching-machine. No. 1,153,916; Sept. 21; Gaz. vol. 218; p. 621.
Hegstedt, Peter E., Jamestown, N. Y. Metal door. No. 1,153,306; Sept. 14; Gaz. vol. 218; p. 369.
Hehle, Boniface, Kansas City, Mo. Brewing. No. 1,154,989; Sept. 28; Gaz. vol. 218; p. 1017.
Helder, Henry J., assignor to Helder Mfg. Co., Carroll, Iowa. Transmission mechanism. No. 1,154,767; Sept. 28; Gaz. vol. 218; p. 941.
Helder Mfg. Co. (See Helder, Henry J., assignor.)
Helnemann, August A. K., assignor to Deutsche Waffen- und Munitionsfabriken, Berlin, Germany. Machine-gun. No. 1,155,061; Sept. 28; Gaz. vol. 218; p. 1041.
Heinze, John O., Jr., Lowell, Mass. Dynamo-electric generator. No. 1,153,076; Sept. 7; Gaz. vol. 218; p. 251.
Heisler, Charles L., Schenectady, N. Y. Motor-vehicle spring-mounting. No. 1,155,062; Sept. 28; Gaz. vol. 218; p. 1042.
Hele-Shaw, Henry S., London, England. Variable-stroke motor or pump. No. 1,152,720; Sept. 7; Gaz. vol. 218; p. 128.
Helin, Vernie R., Minneapolis, Minn. Combined micrometer and scale. No. 1,153,785; Sept. 14; Gaz. vol. 218; p. 541.
Heller, Joseph F., Woodhaven, N. Y. Socket-joint. No. 1,154,309; Sept. 21; Gaz. vol. 218; p. 756.
Hellinga, Bertha, Amsterdam, Netherlands. Bathing-cap. No. 1,153,687; Sept. 14; Gaz. vol. 218; p. 506.
Helson, George A., Peterborough, Ontario, Canada. Wet dust-collector. No. 1,152,414; Sept. 7; Gaz. vol. 218; p. 11.
Hemenway, Ora E. (See Hemenway, William A. and O. E.)
Hemenway, William A. and O. E., Cottage Grove, Oreg. Fly-catcher. No. 1,154,310; Sept. 21; Gaz. vol. 218; p. 757.
Hench & Dromgold Company. (See Birnstock, William W., assignor.)
Henderson, Clark T., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Dynamic-braking controller. No. 1,154,016; Sept. 21; Gaz. vol. 218; p. 656.

Henderson, George E., near Manton, Cal. Electric level-indicator. No. 1,152,730; Sept. 7; Gaz. vol. 218; p. 128.
Henderson, John, Waterbury, Conn. Tumbling-barrel. No. 1,155,150; Sept. 28; Gaz. vol. 218; p. 1074.
Hendrickson, Thomas M., assignor of one-half to T. J. Ragsdale, Lees Summit, Mo. Lifting-jack. No. 1,153,223; Sept. 14; Gaz. vol. 218; p. 341.
Hendry, George W., San Francisco, Cal. Adjustable life-jacket. No. 1,154,860; Sept. 28; Gaz. vol. 218; p. 972.
Henkels, Albert, Langerfeld, near Barmen, Germany. Braiding-carrier. No. 1,154,017; Sept. 21; Gaz. vol. 218; p. 656.
Henneuse, Clarence A., San Jose, assignor, by mesne assignments, of one-third to S. Frame, Benicia, and one-third to W. J. Benson, San Jose, Cal. Traction apparatus. No. 1,153,845; Sept. 14; Gaz. vol. 218; p. 563.
Henrichsen, Christian, Pittsfield, Mass., assignor to General Electric Company. Arc-lamp. No. 1,152,731; Sept. 7; Gaz. vol. 218; p. 129.
Henry, George W., Glendale, assignor of one-half to E. Boissier, Great Neck, N. Y. Safety clasp or catch. No. 1,152,892; Sept. 7; Gaz. vol. 218; p. 189.
Henry R. Worthington. (See Grace, John F., assignor.)
Henry, Walter P., Des Moines, Iowa. Cabinet for drying films, plates, and prints. No. 1,153,688; Sept. 14; Gaz. vol. 218; p. 507.
Henry, William K., assignor to The American Hardware Corporation, New Britain, Conn. Door-controller. No. 1,155,310; Sept. 28; Gaz. vol. 218; p. 1124.
Herman, Moses M., Danville, Va. Rim-tool. No. 1,155,151; Sept. 28; Gaz. vol. 218; p. 1074.
Hermann Aukam & Co. (See Jensen, Karl F., assignor.)
Hermann, Ellis E., *et al.* (See Fawkes, Wilbert C., assignor.)
Herndon, Frank F. (See Rymer, John E., assignor.)
Herold, John, Lewiston, Nebr. Stock-trough. No. 1,154,768; Sept. 28; Gaz. vol. 218; p. 942.
Heron, James C., and W. J. Clark, Pittsburgh, Pa. Fiber keg or barrel. No. 1,154,699; Sept. 28; Gaz. vol. 218; p. 919.
Herr, Henry C., assignor, by mesne assignments, to South Side Trust Company, Pittsburgh, Pa., trustee. Barrel-heading machine. No. 1,153,160; Sept. 7; Gaz. vol. 218; p. 280.
Herrmann, Charles E., Scarsdale, N. Y., assignor to Moose Mountain, Limited, Sellwood, Ontario, Canada. Briqueting ore concentrates. No. 1,155,311; Sept. 28; Gaz. vol. 218; p. 1125.
Hertzberg, Harry, Denver, Colo. Planetary gearing. No. 1,154,769; Sept. 28; Gaz. vol. 218; p. 942.
Herzog, Felix B., deceased, New York, N. Y.; H. Herzog, executrix. Electric signaling apparatus. No. 1,154,184; Sept. 21; Gaz. vol. 218; p. 712.
Herzog, Henrietta, executrix. (See Herzog, Felix B.)
Hesketh, Joseph, and A. Olson, Portsmouth, Va. Shutter-holding device. No. 1,152,947; Sept. 7; Gaz. vol. 218; p. 209.
Hesse, Herman, Easton, Pa. Letter-opener. No. 1,152,628; Sept. 7; Gaz. vol. 218; p. 91.
Hetherington, John, Newark, N. J., and C. E. Chapin, New York, N. Y.; said Hetherington assignor to said Chapin. Pigtail-brush. No. 1,155,063; Sept. 28; Gaz. vol. 218; p. 1042.
Hetrick, Frank S., Fortville, Ind. Clothes-line. No. 1,152,948; Sept. 7; Gaz. vol. 218; p. 209.
Heuser, Franz, Mülheim-Ruhr-Styrum, Germany, assignor, by mesne assignments, to Locomotive Superheater Company, New York, N. Y. Making return-bends. No. 1,153,224; Sept. 14; Gaz. vol. 218; p. 341.
Heyl & Patterson, Inc. (See Brown and Gaines, assignors.)
Heylandt, Paul, assignor to Maschinen- und Apparate-Fabrik A. R. Ahrendt & Co., Berlin, Germany. Blasting-cartridge. No. 1,154,770; Sept. 28; Gaz. vol. 218; p. 943.
Heyn, Edmund C., Catonsville, Md., assignor to The B. V. D. Company, New York, N. Y. Garment. (Reissue.) No. 13,983; Sept. 21; Gaz. vol. 218; p. 856.
Hiatt, William F., assignor, by mesne assignments, to Charles E. Benefiel Company, Indianapolis, Ind. Lifting-jack. No. 1,152,507; Sept. 7; Gaz. vol. 218; p. 45.
Hicks, A. C., *et al.* (See Hoagland, Ellery M., assignor.)
Hicks, Laura M., Bloomington, Ind. Washmitt. (Reissue.) No. 13,977; Sept. 14; Gaz. vol. 218; p. 575.
Hidden, Charles P., Winchester, assignor to The Lamson Company, Boston, Mass. Pneumatic-despatch-tube apparatus. No. 1,154,570; Sept. 21; Gaz. vol. 218; p. 845.
Higginbotham, Frank C., *et al.* (See Mallett, Charles J., assignor.)
Higgins, Fred B., Boothbay Harbor, Me. Shipping-package for lobsters. No. 1,152,629; Sept. 7; Gaz. vol. 218; p. 92.
Higgins, William H. C., Jr., assignor to M. Rumely Company, Laporte, Ind. Carbureter. No. 1,154,630; Sept. 28; Gaz. vol. 218; p. 895.
Higgs, Wallace J., Lehi, Utah. Puncture-proof wheel. No. 1,152,508; Sept. 7; Gaz. vol. 218; p. 46.
Highfield, Frank W., Caversham, England. Reduction of metallic oxids and the like. No. 1,153,786; Sept. 14; Gaz. vol. 218; p. 541.
Highland, Frederick J. (See Dudley and Plastow, assignors.)
Hill, Charles W., Lakewood, assignor to National Carbon Company, Cleveland, Ohio. Electrode for arc-lights. No. 1,154,393; Sept. 21; Gaz. vol. 218; p. 786.
Hill, Clement V., Trenton, N. J. Heater for brooders. No. 1,152,732; Sept. 7; Gaz. vol. 218; p. 129.
Hill, Clement V., Trenton, N. J. Heat-regulator for brooders. No. 1,152,814; Sept. 7; Gaz. vol. 218; p. 160.
Hill, Harry M., Kirkwood, Mo. Lamp for stereopticons. No. 1,153,161; Sept. 7; Gaz. vol. 218; p. 280.
Hill, Irving. (See Morscher, Lawrence N., assignor.)
Hilsinger, Adin W. (See Crump and Hilsinger.)
Himebaugh, Adelbert C. (See Himebaugh, Ray C., assignor.)
Himebaugh, Ray C., assignor to A. C. Himebaugh, Burr Oak, Mich. Hand-planter. No. 1,153,225; Sept. 14; Gaz. vol. 218; p. 342.
Hinckley, Henry D., assignor to The R. & H. Manufacturing Company, Hartford, Conn. Vending-machine. No. 1,155,312; Sept. 28; Gaz. vol. 218; p. 1125.
Hinder & Dauch Paper Company, The. (See Morton, Lawrence D.)
Hinkle, James M., and J. S. Cooper, Somerset, Ky. Rail-joint. No. 1,154,771; Sept. 28; Gaz. vol. 218; p. 943.
Hinterlach, Ernst, Munich, Germany. Brewing beer. No. 1,152,415; Sept. 7; Gaz. vol. 218; p. 12.
Hippel, Alfred J., New York, N. Y. Carbureter. No. 1,153,077; Sept. 7; Gaz. vol. 218; p. 252.
Hirner, Emil A., Allentown, Pa. Manufacture of hosiery. No. 1,154,116; Sept. 21; Gaz. vol. 218; p. 691.
Hirschberger, Josef, Jersey City, N. J. Apparatus for the treatment of textile fibers with liquids. No. 1,154,681; Sept. 28; Gaz. vol. 218; p. 896.
Hirschfeld, Ike, Fort Worth, Tex. Bag-turner. No. 1,155,152; Sept. 28; Gaz. vol. 218; p. 1075.
Hirt, Jules H., El Paso, Tex. Caustic-soda process. No. 1,152,949; Sept. 7; Gaz. vol. 218; p. 209.
Hleb, Peter, Elizabeth, N. J., assignor to The Singer Manufacturing Company. Sewing-machine. No. 1,153,429; Sept. 14; Gaz. vol. 218; p. 416.
Hoagland, Amos N., Oxford, N. J. Spark-plug. No. 1,154,117; Sept. 21; Gaz. vol. 218; p. 691.
Hoagland, Ellery M., San Francisco, Cal., assignor of one-fourth to I. J. Kohler, Seattle, Wash., and one-fourth to A. C. Hicks, San Francisco, Cal. Window-lock. No. 1,154,861; Sept. 28; Gaz. vol. 218; p. 972.
Hoagland, Ellery M., San Francisco, Cal., assignor of one-fourth to I. J. Kohler, Seattle, Wash., and one-fourth to A. C. Hicks, San Francisco, Cal. Safety-bolt for doors. No. 1,154,862; Sept. 28; Gaz. vol. 218; p. 972.
Hobbie, William L., Downs, Ala. Rope-measure. No. 1,155,236; Sept. 28; Gaz. vol. 218; p. 1101.
Hobbs, Frank C., Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill. Pin-setter for bowling-alleys. No. 1,153,689; Sept. 14; Gaz. vol. 218; p. 507.
Hobbs, Frank C., Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill. Bowling-alley pin-setter. No. 1,153,917; Sept. 21; Gaz. vol. 218; p. 622.
Hoberg, Frank H., Green Bay, Wis. Paper-cabinet. No. 1,154,632; Sept. 28; Gaz. vol. 218; p. 896.
Hoberg, Frank H., Green Bay, Wis. Paper-feeding cabinet. No. 1,154,633; Sept. 28; Gaz. vol. 218; p. 897.
Hoberg, Frank H., Green Bay, Wis. Feeding-cabinet. No. 1,154,634; Sept. 28; Gaz. vol. 218; p. 897.
Hobson, Francis J., Phoenix, Ariz. Tractor attachment for motor-vehicles. No. 1,154,635; Sept. 28; Gaz. vol. 218; p. 897.
Höchstädter, Martin, assignor to Siemens-Schuckertwerke G. m. b. H., Berlin, Germany. Safety connection for electric mains. No. 1,154,394; Sept. 21; Gaz. vol. 218; p. 786.
Hockabout, Walter R., Palo Alto, Cal. Drill. No. 1,154,636; Sept. 28; Gaz. vol. 218; p. 898.
Hockensmith Wheel & Mine Car Company. (See Hockensmith, Wilbur D., assignor.)
Hockensmith, Wilbur D., assignor to Hockensmith Wheel & Mine Car Company, Penns Station, Pa. Mine-car wheel. No. 1,154,090; Sept. 28; Gaz. vol. 218; p. 1017.
Hoeglund, Herman, assignor of one-half to S. B. Widlund, Hawley, Minn. Combined step-ladder and ironing-board. No. 1,153,430; Sept. 14; Gaz. vol. 218; p. 416.
Hoffelt, Frank J. and M., Springfield, Mo. Shade-bracket. No. 1,153,885; Sept. 14; Gaz. vol. 218; p. 400.
Hoffelt, Michel. (See Hoffelt, Frank J. and M.)
Hoffman, Peter L., assignor to Richards-Wilcox Manufacturing Company, Aurora, Ill. Bracket for trolley-tracks. No. 1,152,630; Sept. 7; Gaz. vol. 218; p. 92.
Hoffman, Rudolph, Chicago Heights, assignor to Sears, Roebuck and Company, Chicago, Ill. Blue-flame oil-burner. No. 1,154,637; Sept. 28; Gaz. vol. 218; p. 898.
Hoffman, William F. (See Gorton, William E.)
Hoffmann-La Roche Chemical Works, The. (See Hug, Ernst, assignor.)
Hofmann, Ernst, Duisburg, Meiderich, Germany. Apparatus for cooling and purifying furnace-gases. No. 1,155,237; Sept. 28; Gaz. vol. 218; p. 1101.
Hofmann, Walter H., Richmond Hill, N. Y. Molding apparatus. No. 1,152,631; Sept. 7; Gaz. vol. 218; p. 92.
Hogan, Enos W., Banning, Ontario, Canada. Grain-car door. No. 1,153,787; Sept. 14; Gaz. vol. 218; p. 541.

Hogan, John L., Jr., New York, N. Y., assignor, by mesne assignments, to S. M. Kintner, Pittsburgh, Pa., and H. M. Barrett, Bloomfield, N. J., receivers. Oscillating-current meter. No. 1,152,632; Sept. 7; Gaz. vol. 218; p. 93.
Hogan, Newton, Los Angeles, Cal. Protector for trees or other vegetation. No. 1,155,313; Sept. 28; Gaz. vol. 218; p. 1126.
Hoglund, Eric. (See Strom and Hoglund.)
Hoiles, Frank A., Alliance, Ohio. Ornamenting bricks. No. 1,154,118; Sept. 21; Gaz. vol. 218; p. 691.
Holtinga, Ulbe S., assignor to Gebroeders Werkhoven, Witmarsum, Netherlands. Calendar-clock. No. 1,153,492; Sept. 14; Gaz. vol. 218; p. 438.
Hoke, Frederick, assignor to Holcomb & Hoke Mfg. Co., Indianapolis, Ind. Hot-plate-heating means for corn-popping machines and the like. No. 1,152,950; Sept. 7; Gaz. vol. 218; p. 209.
Holcomb & Hoke Mfg. Co. (See Hoke, Frederick, assignor.)
Holden, Holden, East Newark, N. J. Ladder-bracket. No. 1,154,923; Sept. 28; Gaz. vol. 218; p. 994.
Holden, Robert A., *et al.* (See Moore, Chauncey H., assignor.)
Holderbaum, Charles W., and H. Kraft, Warren, Ark. Safety device for switch-stands. No. 1,154,513; Sept. 21; Gaz. vol. 218; p. 825.
Hollcky, John G., Willoughby, Ohio. Dirigible automobile-headlight. No. 1,154,863; Sept. 28; Gaz. vol. 218; p. 972.
Holland, John A., assignor to The John Holland Gold Pen Company, Cincinnati, Ohio. Fountain-pen. No. 1,152,509; Sept. 7; Gaz. vol. 218; p. 46.
Hollis, Albert L., *et al.* (See Lovejoy, Harvey P., assignor.)
Hollis, Otis A., Pittsburgh, Pa. Collapsible drinking-cup. No. 1,154,185; Sept. 21; Gaz. vol. 218; p. 713.
Hollstein, Paul G., Carlstadt, N. J., assignor to J. M. Lehmann Company, New York, N. Y. Grinding-mill. No. 1,153,918; Sept. 21; Gaz. vol. 218; p. 622.
Hollstein, Paul G., Carlstadt, N. J., assignor to J. M. Lehmann Company, New York, N. Y. Melting-kettle. No. 1,154,772; Sept. 28; Gaz. vol. 218; p. 943.
Holmes, Erwin W., Jeffersonville, Vt. Evaporator. No. 1,153,788; Sept. 14; Gaz. vol. 218; p. 542.
Holmes, Roger, New Orleans, La. Excavating-shovel. No. 1,155,153; Sept. 28; Gaz. vol. 218; p. 1075.
Holophane Glass Company. (See Mygatt, Otis A., assignor.)
Holt, Benjamin, Stockton, Cal. Clutch device. No. 1,154,895; Sept. 21; Gaz. vol. 218; p. 786.
Holt, James, Wallasey, England. Siphon flushing-cistern. No. 1,154,186; Sept. 21; Gaz. vol. 218; p. 713.
Holtgrave, Ernst, Brooklyn, N. Y. Scissors or shears. No. 1,152,633; Sept. 7; Gaz. vol. 218; p. 93.
Holtzapple, George L., *et al.* (See Moore, Chauncey H., assignor.)
Holub, Charles J., Newport, Ky., assignor to The Williamson Heater Company, Cincinnati, Ohio. Sheet-metal cutter. No. 1,154,924; Sept. 28; Gaz. vol. 218; p. 994.
Holyoke Machine Company. (See Lombard, Nathaniel, assignor.)
Homans, Thomas S., Hempstead, assignor to International Typesetting Machine Company, New York, N. Y. Linotype-machine. No. 1,153,078; Sept. 7; Gaz. vol. 218; p. 252.
Homans, Thomas S., Hempstead, assignor to International Typesetting Machine Company, New York, N. Y. Line-composing machine. No. 1,153,079; Sept. 7; Gaz. vol. 218; p. 253.
Homans, Thomas S., Hempstead, assignor to International Typesetting Machine Company, New York, N. Y. Typographical machine. No. 1,153,080; Sept. 7; Gaz. vol. 218; p. 253.
Honeywell Heating Specialty Company, The. (See Jewell, Charles E., assignor.)
Honold, Gottlob, assignor to the Firm of R. Bosch, Stuttgart, Germany. Mechanical interrupter for electrical ignition systems. No. 1,154,311; Sept. 21; Gaz. vol. 218; p. 757.
Hood Rubber Company. (See Perrault, Joseph E., assignor.)
Hook, Susanna, Battle Creek, Mich. Washboard attachment. No. 1,153,081; Sept. 7; Gaz. vol. 218; p. 254.
Hopkins, Arthur C., assignor of one-half to W. J. Buttschau, Sioux Falls, S. D. Vehicle-wheel. No. 1,153,919; Sept. 21; Gaz. vol. 218; p. 622.
Hopkins, Clara, administratrix. (See Hopkins, Hiram F.)
Hopkins, Frank H., Somerville, assignor to American Steam Gauge and Valve Manufacturing Company, Boston, Mass. Dead-weight gage-tester. No. 1,154,018; Sept. 21; Gaz. vol. 218; p. 656.
Hopkins, Hiram F., deceased; C. Hopkins, administratrix, North Girard, Pa. Universal joint. No. 1,153,789; Sept. 14; Gaz. vol. 218; p. 542.
Hopkins, Leslie, Kansas City, Mo. Apparatus for producing and controlling the vacuum in steam-heating systems. No. 1,152,634; Sept. 7; Gaz. vol. 218; p. 93.
Hopkins, William W., assignor to Moon-Hopkins Billing Machine Company, St. Louis, Mo. Calculating-machine. No. 1,153,886; Sept. 14; Gaz. vol. 218; p. 400.
Horn, Josef, Kötzschenbroda, near Dresden, assignor to Maschinenfabrik, Rockstroh & Schneidernachf, Aktiengesellschaft, Heidenau, near Dresden, Saxony, Germany. Automatic sheet feeding and delivery mechanism for platen-presses. No. 1,154,312; Sept. 21; Gaz. vol. 218; p. 757.
Hornbostel, Edward A., and J. Carey, Des Moines, Iowa. Oil and water burner. No. 1,154,019; Sept. 21; Gaz. vol. 218; p. 657.
Horovitz, Alexander S., Passaic, N. J. Disinfecting composition. No. 1,154,925; Sept. 28; Gaz. vol. 218; p. 995.
Horton, Charles M., Elizabeth, N. J., assignor to The Singer Manufacturing Company. Multiple-tucking guide for sewing-machines. No. 1,152,635; Sept. 7; Gaz. vol. 218; p. 94.
Hoschke, William H., New York, N. Y., assignor to Crescent Talking Machine Company, Inc. Tone-arm connection for talking-machines. No. 1,155,064; Sept. 28; Gaz. vol. 218; p. 1043.
Hospital Appliance Company, The. (See Sleicher, Ralph H., assignor.)
Hostetler, John J., and W. O. Rice, Clarkton, Mo.; said Hostetler assignor to said Rice. Mold for tongue-and-groove concrete blocks. No. 1,153,846; Sept. 14; Gaz. vol. 218; p. 563.
Hotchkiss, John, Sebring, Ohio. Filter. No. 1,153,920; Sept. 21; Gaz. vol. 218; p. 623.
Hothersall, John M., New York, N. Y., assignor to J. Q. A. and C. Whittemore, Boston, Mass. Box. No. 1,154,020; Sept. 21; Gaz. vol. 218; p. 657.
Houghton, Horatio G., Green Bay, Wis. Railway-tie. No. 1,153,387; Sept. 14; Gaz. vol. 218; p. 401.
House, Wyatt A. (See Graham, Lee, assignor.)
Houseman, Harry A., assignor to Standard Machine Company, Philadelphia, Pa. Thread-carrier-operating mechanism for circular-knitting machines. No. 1,152,951; Sept. 7; Gaz. vol. 218; p. 210.
Houser, Arthur M., assignor to Crane Company, Chicago, Ill. Safety-valve. No. 1,152,733; Sept. 7; Gaz. vol. 218; p. 130.
Houston, Hugh E., Wichita Falls, Tex. Sprinkler. No. 1,152,636; Sept. 7; Gaz. vol. 218; p. 94.
Houtz, John J., and W. L. Harris, Merwin, Mo. Silo-roof. No. 1,153,082; Sept. 7; Gaz. vol. 218; p. 254.
Howard, William H., Garfield, Utah. Converter for treating matte. No. 1,153,921; Sept. 21; Gaz. vol. 218; p. 623.
Howe, Winthrop K., Rochester, assignor to General Railway Signal Company, Gates, N. Y. Gasket. No. 1,153,162; Sept. 7; Gaz. vol. 218; p. 280.
Howell, Edward F., Fort Smith, Ark. Fruit-picker. No. 1,153,083; Sept. 7; Gaz. vol. 218; p. 254.
Howkins, John S., Fulham, London, England. Grooving-plane and analogous woodworking-tool for grooving, rabbeting, beading, and the like. No. 1,153,790; Sept. 14; Gaz. vol. 218; p. 543.
Hoyer, Anton, Neukölln-Berlin, Germany, assignor to Mergenthaler Linotype Company. Typographical composing-machine. No. 1,153,493; Sept. 14; Gaz. vol. 218; p. 438.
Hoyer, Anton, Neukölln-Berlin, Germany, assignor to Mergenthaler Linotype Company. Typographical composing-machine. No. 1,153,494; Sept. 14; Gaz. vol. 218; p. 439.
Hoyt, Orla T., Good Hope, Ill. Draft-equalizer. No. 1,153,388; Sept. 14; Gaz. vol. 218; p. 401.
Hubbard, Charles W., Jr., New York, N. Y. Cigarette-box. No. 1,152,815; Sept. 7; Gaz. vol. 218; p. 160.
Hubbard, Norman, Elizabeth, N. J. Automatic stop and check valve. No. 1,153,226; Sept. 14; Gaz. vol. 218; p. 342.
Hubers, Albert W., New York, N. Y. Controlling mechanism for elevator-cars. No. 1,155,065; Sept. 28; Gaz. vol. 218; p. 1043.
Huberts, William, La Fayette, Ind. Ditching-machine. No. 1,152,893; Sept. 7; Gaz. vol. 218; p. 189.
Hübner, Gustav, Plauen, Germany. Tambour-frame-moving mechanism for embroidering-machines. No. 1,154,397; Sept. 21; Gaz. vol. 218; p. 787.
Hucke, John H., Jr., New York, N. Y. Feed-bag for horses. No. 1,155,238; Sept. 28; Gaz. vol. 218; p. 1102.
Hudgel, Jessie E., Sloan, Iowa. Paper-holder. No. 1,153,389; Sept. 14; Gaz. vol. 218; p. 401.
Hudnall, Ephraim J. (See Nale and Hudnall.)
Huenefeld Company, The. (See Huenefeld, Walter E., assignor.)
Huenefeld, Walter E., assignor to The Huenefeld Company, Cincinnati, Ohio. Hydrocarbon-burner. No. 1,153,084; Sept. 7; Gaz. vol. 218; p. 254.
Huff, Russell, assignor to Packard Motor Car Company, Detroit, Mich. Radiator-support for motor-vehicles. No. 1,153,227; Sept. 14; Gaz. vol. 218; p. 343.
Huff, Russell, assignor to Packard Motor Car Company, Detroit, Mich. Wind-shield for motor-vehicles. No. 1,154,313; Sept. 21; Gaz. vol. 218; p. 758.
Huffman, Orla L., Albany, Ind., assignor to T. W. Harper, Moore, Mont. Gate. No. 1,153,847; Sept. 14; Gaz. vol. 218; p. 564.
Hug, Ernst, Grenzach, Germany, assignor to The Hoffmann-La Roche Chemical Works, New York, N. Y. Polyhydrocolchicin. No. 1,154,314; Sept. 21; Gaz. vol. 218; p. 758.

Hughes, Arthur J., and R. E. Jones, assignors to Dexter Folder Company, Pearl River, N. Y. Sheet-straightening and slow-down device. No. 1,154,864; Sept. 28; Gaz. vol. 218; p. 973.
Hughes, Davydd C., assignor, by mesne assignments, to Addressograph Company, Chicago, Ill. Dating-machine. No. 1,152,637; Sept. 7; Gaz. vol. 218; p. 95.
Hughes, Davydd C., assignor, by mesne assignments, to Addressograph Company, Chicago, Ill. Type-setting machine. No. 1,153,390; Sept. 14; Gaz. vol. 218; p. 401.
Hughes, Davydd C., assignor, by mesne assignments, to Addressograph Company, Chicago, Ill. Tool for forming and deforming type-stops in type-holders. No. 1,153,391; Sept. 14; Gaz. vol. 218; p. 402.
Hughes, Frederick. (See Taylor and Hughes.)
Hughes, James Y., Quanah, Tex. Cotton-separator. No. 1,153,180; Sept. 7; Gaz. vol. 218; p. 287.
Huhn, John H., Fairmont, W. Va. Machine for leveling coal in beehive coke-ovens. No. 1,155,066; Sept. 28; Gaz. vol. 218; p. 1043.
Hulbert, Clinton H., Manila, Philippine Islands. Instrument for reproducing and magnifying sound-waves. No. 1,153,431; Sept. 14; Gaz. vol. 218; p. 416.
Hull, Matthew R., assignor to Rex Buggy Company, Connersville, Ind. Latch for vehicle-doors. No. 1,154,398; Sept. 21; Gaz. vol. 218; p. 788.
Hull, Matthew R., assignor to Rex Buggy Company, Connersville, Ind. Ventilator for closed-vehicle bodies. No. 1,154,399; Sept. 21; Gaz. vol. 218; p. 788.
Hulme, John W., Jersey City, N. J., assignor to Consolidated Car Heating Company, Albany, N. Y. Automatic safety-lock for doors. (Reissue.) No. 13,978; Sept. 14; Gaz. vol. 218; p. 575.
Hummel, Frank J., Pittsburgh, Pa. Toy railway. No. 1,153,922; Sept. 21; Gaz. vol. 218; p. 623.
Humphrey Gas Pump Company. (See Brown, William C., assignor.)
Huneke, John, Chicago, Ill., assignor to Cox Multi-Mailer Company, Augusta, Me. Mail-bag holder. No. 1,152,816; Sept. 7; Gaz. vol. 218; p. 160.
Hungerford, Warren H., assignor to F. M. Peters, Chicago, Ill. Power-transmitting apparatus. No. 1,155,314; Sept. 28; Gaz. vol. 218; p. 1126.
Hunkin-Conkey Construction Company, The. (See Hunkin, William J., assignor.)
Hunkin, William J., assignor to The Hunkin-Conkey Construction Company, Cleveland, Ohio. Clamp. No. 1,153,552; Sept. 14; Gaz. vol. 218; p. 461.
Hunt, Charles E., Thomasville, Ala. Starter for explosive-engines. No. 1,153,085; Sept. 7; Gaz. vol. 218; p. 255.
Hunt, Fred L. (See Greeson, Clarett B., assignor.)
Hunt, William H., New York, N. Y. Dumping-wagon. No. 1,152,510; Sept. 7; Gaz. vol. 218; p. 46.
Hunter, Charlie J., and E. C. Tweedy, Concord, Va. Portable soda-fountain. No. 1,153,307; Sept. 14; Gaz. vol. 218; p. 370.
Hunter, Percy E., Pittsburgh, Pa. Annealing-box. No. 1,154,400; Sept. 21; Gaz. vol. 218; p. 788.
Huntington, Scott A., Syracuse, N. Y. Junction-box. No. 1,154,773; Sept. 28; Gaz. vol. 218; p. 944.
Hunzinger, George, assignor to G. Hunzinger & Son, New York, N. Y. Chair. No. 1,154,021; Sept. 21; Gaz. vol. 218; p. 658.
Hunzinger & Son, George. (See Hunzinger, George, assignor.)
Hupe, Friedrich, U. S. Navy. Rotary steam-engine. No. 1,153,086; Sept. 7; Gaz. vol. 218; p. 255.
Hupp Motor Car Company. (See Watts, Frank E., assignor.)
Hurd, Judson B., Washington, D. C. Key-controlled vending-machine. No. 1,152,638; Sept. 7; Gaz. vol. 218; p. 95.
Hurst, Willis T., assignor to Pittsburgh Coal Washer Company, Pittsburgh, Pa. Conveying-link construction. No. 1,154,401; Sept. 21; Gaz. vol. 218; p. 789.
Hutaff, George H., Wilmington, N. C. Tumbler washing and rinsing machine. No. 1,153,228; Sept. 14; Gaz. vol. 218; p. 343.
Hutchings, William, Eveleth, Minn. Cable-grip. No. 1,153,621; Sept. 14; Gaz. vol. 218; p. 484.
Hutchinson, William S., Oyster Bay, N. Y. Drum-brake. No. 1,152,511; Sept. 7; Gaz. vol. 218; p. 47.
Hyatt, Frank S., Brooklyn, N. Y. Top for cans and other receptacles. No. 1,152,817; Sept. 7; Gaz. vol. 218; p. 161.
Hydrocarbon Burner & Manufacturing Company. (See Meltzer, Edward, assignor.)
Hylton, Charles D. (See Robinson and Hylton.)
Iasigi, Oscar A., Brookline, Mass. Package-tie. No. 1,155,289; Sept. 28; Gaz. vol. 218; p. 1102.
Ihde, Otto, Topeka, Kans. Fire-escape. No. 1,153,622; Sept. 14; Gaz. vol. 218; p. 484.
Iler, George A., Kirkwood, and T. M. Nalon, Atlanta, Ga. Internal-combustion engine. No. 1,153,432; Sept. 14; Gaz. vol. 218; p. 417.
Illinois Watch Case Company. (See Hathaway, Thomas F., assignor.)
Iman, Orla H., assignor to Voightmann & Company, Chicago, Ill. Pulley frame and mounting. No. 1,153,923; Sept. 21; Gaz. vol. 218; p. 624.
Imperial Typewriter Company. (See Pilbiad and Tomlinson, assignors.)
Import Sales Company. (See Rosenfeld, Francis M., assignor.)
Ingersoll, Adelbert J., Niles Center, Ill. Sleigh attachment for perambulators. No. 1,153,924; Sept. 21; Gaz. vol. 218; p. 624.
Ingersoll Milling Machine Company. (See Johnson, John R., assignor.)
Ingersoll-Rand Company. (See Banner, Otto, assignor.)
Ingersoll-Rand Company. (See Bayles, Lewis C., assignor.)
Ingersoll-Rand Company. (See Dawley, Clarence A., assignor.)
Ingersoll-Rand Company. (See Hansen, Charles C., assignor.)
Inland Knitting Works. (See Boucher, Peter, assignor.)
International Canning Machinery Co. (See Vaudreuil, Edward J., assignor.)
International Harvester Company of New Jersey. (See Sharp, James A., assignor.)
International Oxygen Company. (See Levin, Isaac H., assignor.)
International Telephone Co., The. (See Hastings, Ruben C. M., assignor.) (Reissue.)
International Typesetting Machine Company. (See Armstrong, Henry A., assignor.)
International Typesetting Machine Company. (See Bertram, William E., assignor.)
International Typesetting Machine Company. (See Elgenbrot, Harry L., assignor.)
International Typesetting Machine Company. (See Homans, Thomas S., assignor.)
Interstate Electric Novelty Co. (See Sagebrecht, Charles J., assignor.)
Irish, William M. (See Van Dyke and Irish.)
Irrgang, William F. (See Clark, Irrgang, and Clark.)
Irving, Adam H., Spokane, Wash., and D. R. Tanner, La Grande, Oreg. Drying-kiln-truck take-up. No. 1,154,315; Sept. 21; Gaz. vol. 218; p. 758.
Isaacs, Josiah, Birmingham, England. Toy. No. 1,152,639; Sept. 7; Gaz. vol. 218; p. 96.
Ishida, Maritarow, Seattle, Wash. Apparatus for washing tumblers. No. 1,153,308; Sept. 14; Gaz. vol. 218; p. 370.
Ives, Frederick E., Woodcliffe-on-the-Hudson, N. J. Photographic camera. No. 1,153,229; Sept. 14; Gaz. vol. 218; p. 343.
Izer, Elmer E., assignor to Pomona Manufacturing Company, Pomona, Cal. Pump. No. 1,154,316; Sept. 21; Gaz. vol. 218; p. 759.
J. E. Mergott Company, The. (See Fuller, Frans A., assignor.)
J. Geo. Leyner Engineering Works Company, The. (See Ditson, Jesse, assignor.)
J. H. White Manufacturing Company. (See White, Edwin L., assignor.)
J. I. Case Threshing Machine Company. (See MacGregor and Foster, assignors.)
J. K. Stewart Manufacturing Company. (See Bolling, Baltzar E., assignor.)
J. L. Clark Manufacturing Company. (See Frankenberg, Alfred, assignor.)
J. L. Clark Manufacturing Company. (See Truesbury, Fred C., assignor.)
J. M. Lehmann Company. (See Hollstein, Paul G., assignor.)
J. R. Bunting Bedding Company. (See Ferber, William M., assignor.)
Jackson, George B. (See Jackson, Wilton D., assignor.)
Jackson, George B., Philadelphia, Pa. Fusee. No. 1,153,087; Sept. 7; Gaz. vol. 218; p. 256.
Jackson, Gilbert, New York, N. Y. Bottle-valve. No. 1,154,638; Sept. 28; Gaz. vol. 218; p. 898.
Jackson, J. L., et al. (See Byron, Hagar B., assignor.)
Jackson, John L. (See Mens and Jackson.)
Jackson, Lucian C. (See Mouithrop and Jackson.)
Jackson, Robert G., Tacoma, Wash. Food compound. No. 1,153,925; Sept. 21; Gaz. vol. 218; p. 624.
Jackson, Wilton D., assignor to G. B. Jackson, Philadelphia, Pa. Fusee. No. 1,153,088; Sept. 7; Gaz. vol. 218; p. 256.
Jacob, Max, Berlin, Germany, assignor to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,153,309; Sept. 14; Gaz. vol. 218; p. 371.
Jacobs, Charles B., Port Chester, assignor to Murray and Jacobs Manufacturing Company, New York, N. Y. Sand mold and treating the same. No. 1,153,230; Sept. 14; Gaz. vol. 218; p. 343.
Jacobs, Charles B., Port Chester, assignor to Murray and Jacobs Manufacturing Company, New York, N. Y. Method of and mold for making castings. No. 1,153,231; Sept. 14; Gaz. vol. 218; p. 344.
Jacobs, Henry W., and H. H. Lanning, Topeka, Kans. Acetylene-generating apparatus. No. 1,152,512; Sept. 7; Gaz. vol. 218; p. 47.
Jacobson, John, Stanley, N. D. Snap-hook. No. 1,152,894; Sept. 7; Gaz. vol. 218; p. 190.
Jacoby, Richard, Berlin, Germany, assignor to General Electric Company. Incandescent lamp. No. 1,154,514; Sept. 21; Gaz. vol. 218; p. 826.
Jaderstrom, Louis W., Des Moines, Iowa. Check-protector. No. 1,154,248; Sept. 21; Gaz. vol. 218; p. 735.
Jaeger, Gustav A., Morrison, Ill. Pocket for pool-tables. No. 1,154,865; Sept. 28; Gaz. vol. 218; p. 973.
Janney & Company. (See Blue, Chilton W., assignor.)

Jarrett, William F., Carl Junction, Mo. Wagon-wheel. No. 1,155,154; Sept. 28; Gaz. vol. 218; p. 1075.
Jarvis, Herbert C., Toronto, Ontario, Canada. Wall-paper roll. No. 1,154,022; Sept. 21; Gaz. vol. 218; p. 658.
Jay, Webb, Chicago, Ill. Fuel-feeding device for internal-combustion engines. No. 1,153,089; Sept. 7; Gaz. vol. 218; p. 257.
Jeavons, William R., and A. R. Whittaker, Cleveland, Ohio. Calking-machine. No. 1,152,513; Sept. 7; Gaz. vol. 218; p. 48.
Jefferies, Ebenezer A. W., assignor to Morgan Construction Company, Worcester, Mass. Gas-producer. No. 1,152,514; Sept. 7; Gaz. vol. 218; p. 49.
Jefferies, Ebenezer A. W., assignor to Morgan Construction Company, Worcester, Mass. Gas-producer. No. 1,153,623; Sept. 14; Gaz. vol. 218; p. 485.
Jeffrey, Max L., Muncie, Ind. Universal joint. No. 1,155,240; Sept. 28; Gaz. vol. 218; p. 1103.
Jenkins, Charles F., Washington, D. C. Motion-picture apparatus. No. 1,152,515; Sept. 7; Gaz. vol. 218; p. 49.
Jenkins, Charles F., Washington, D. C. View-changing device. No. 1,153,110; Sept. 7; Gaz. vol. 218; p. 263.
Jenkins, Charles F., Washington, D. C. Picture-projecting apparatus. No. 1,153,163; Sept. 7; Gaz. vol. 218; p. 281.
Jenkins, Charles F., Washington, D. C. Motion-picture apparatus. No. 1,153,164; Sept. 7; Gaz. vol. 218; p. 281.
Jenkins, John L., assignor to E. & T. Fairbanks & Company, St. Johnsbury, Vt. Automatic scale. No. 1,154,402; Sept. 21; Gaz. vol. 218; p. 789.
Jensen, Karl F., South River, N. J., assignor to Hermann Aukam & Co., New York, N. Y. Machine for use in applying clamps to strips of fabric. No. 1,154,249; Sept. 21; Gaz. vol. 218; p. 735.
Jensen, Niels P., Janesville, Wis. Bed attachment. No. 1,155,241; Sept. 28; Gaz. vol. 218; p. 1103.
Jerram, Arthur E., Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Chain-stitch shoe-sewing machine. No. 1,154,774; Sept. 28; Gaz. vol. 218; p. 944.
Jessen, Theodor, Altona-Bahrenfeld, assignor to Blohm & Voss, Kommandit-Gesellschaft auf Aktien, Hamburg, Germany. Electric change-over switch. No. 1,152,516; Sept. 7; Gaz. vol. 218; p. 49.
Jewell, Charles E., Auburn, N. Y., assignor to The Honeywell Heating Specialty Company, Wabash, Ind. Time-controlled thermostat. No. 1,154,926; Sept. 28; Gaz. vol. 218; p. 995.
Jewell Manufacturing Company. (See Belden, David, assignor.)
John Holland Gold Pen Company, The. (See Holland, John A., assignor.)
Johns, William. (See Dillard and Johns.)
Johnson, Adison J., and R. L. Skinner, Bethany, Mo. Wrist-watch holder. No. 1,153,111; Sept. 7; Gaz. vol. 218; p. 264.
Johnson, Adolf F., El Campo, Tex. Auto power-transmitting jack. No. 1,153,791; Sept. 14; Gaz. vol. 218; p. 543.
Johnson, Albert. (See Fangel, John P., assignor.)
Johnson, Alfred C., Winters, Cal. Traction-engine. No. 1,153,112; Sept. 7; Gaz. vol. 218; p. 264.
Johnson, Conrad A., Jamestown, N. Y. Sheet-metal frame. (Reissue.) No. 13,987; Sept. 21; Gaz. vol. 218; p. 857.
Johnson, Earl. (See Thomas, Isaiah F., assignor.)
Johnson, Ernest W., Little Falls, Minn. Runner for baby-carriages. No. 1,154,991; Sept. 28; Gaz. vol. 218; p. 1017.
Johnson, Garrett P., Rochester, N. Y. Return-torpedo. No. 1,152,640; Sept. 7; Gaz. vol. 218; p. 96.
Johnson, George A., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Side bearing for railway-cars. No. 1,153,792; Sept. 14; Gaz. vol. 218; p. 544.
Johnson, George T. (See Whitridge and Johnson.)
Johnson, George T., assignor to The Buckeye Steel Castings Company, Columbus, Ohio. Cast-metal yoke for railway draft mechanism. No. 1,153,793; Sept. 14; Gaz. vol. 218; p. 544.
Johnson, Henry H., Summit, N. J. Container for goods in transit. No. 1,154,775; Sept. 28; Gaz. vol. 218; p. 945.
Johnson, Jeremiah P., Detroit, Mich. Waterproof self-lubricating bearing for propeller-shafts, &c. No. 1,153,624; Sept. 14; Gaz. vol. 218; p. 485.
Johnson, John C., St. Louis, Mo. Means for use in sealing fiber boxes, cartons, and the like. No. 1,154,639; Sept. 28; Gaz. vol. 218; p. 899.
Johnson, John E., Jamestown, N. Y., assignor to Rickert-Shafer Company, Erie, Pa. Tapping-machine. No. 1,153,310; Sept. 14; Gaz. vol. 218; p. 371.
Johnson, John E., Jamestown, N. Y., assignor to Rickert-Shafer Company, Erie, Pa. Drive for machine-tools. No. 1,153,311; Sept. 14; Gaz. vol. 218; p. 371.
Johnson, John R., Rockford, Ill., assignor to Ingersoll-Milling Machine Company. Milling-machine. No. 1,153,165; Sept. 7; Gaz. vol. 218; p. 281.
Johnson, John W., Chicago, Ill. Eraser-cleaner. No. 1,155,242; Sept. 28; Gaz. vol. 218; p. 1103.
Johnson, Lawrence E., Winthrop, and E. Erickson, Lynn, assignors to Victor Shoe Machinery Co., Boston, Mass. Looper mechanism for sewing-machines. No. 1,154,571; Sept. 21; Gaz. vol. 218; p. 846.
Johnson, Lawrence E., Winthrop, and E. Erickson, Lynn; said Erickson assignor to Victor Shoe Machinery Company, Boston, Mass. Shoe-heel-reducing device. No. 1,154,572; Sept. 21; Gaz. vol. 218; p. 846.
Johnson, Leland F., and A. D. Wyckoff, assignors to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind. Waste-soaking tank. No. 1,153,690; Sept. 14; Gaz. vol. 218; p. 507.
Johnson, Mary E., trustee. (See Cobb, Lyman H., assignor.)
Johnson, Oscar, Starks, Wis. Window-holder. No. 1,154,317; Sept. 21; Gaz. vol. 218; p. 759.
Johnson, Philip. (See Bemiss and Johnson.)
Johnson Spring Garter Co. (See Winters, Edward B., assignor.)
Johnston, Joseph H., Portland, Oreg. Date-finder and calendar. No. 1,153,926; Sept. 21; Gaz. vol. 218; p. 625.
Johnstone, Francis W., Fort Smith, Ark. Tank-indicator. No. 1,153,553; Sept. 14; Gaz. vol. 218; p. 461.
Johst, Paul S. (See Doolittle and Johst.)
Jonas, Julius, assignor to Aktiengesellschaft Brown, Boveri & Cie., Baden, Switzerland. Mercury-vapor rectifier and the like. No. 1,153,794; Sept. 14; Gaz. vol. 218; p. 544.
Jones, Eliza J., Enterprise, Ala. Convertible chair and step. No. 1,154,403; Sept. 21; Gaz. vol. 218; p. 789.
Jones, Emmett. (See Williams and Jones.)
Jones, Harry W., Chicago, Ill., assignor to American Can Company, New York, N. Y. Pouring-spout container vessel. No. 1,152,416; Sept. 7; Gaz. vol. 218; p. 12.
Jones, John A., Rome, N. Y. Egg-crate. No. 1,153,495; Sept. 14; Gaz. vol. 218; p. 439.
Jones, Joseph F., Jr., Bakersfield, Cal. Pump. No. 1,152,734; Sept. 7; Gaz. vol. 218; p. 130.
Jones, Richard E. (See Hughes and Jones.)
Jones, Roy D., Cuyahoga Falls, Ohio. Reversible countershaft gearing. No. 1,152,735; Sept. 7; Gaz. vol. 218; p. 131.
Jones, Sidney E. (See Moldenhauer and Jones.)
Jones, William G., Oak Park, assignor to Accounting Devices Company, Evanston, Ill. Binder. No. 1,155,067; Sept. 28; Gaz. vol. 218; p. 1044.
Jones, William G., Oak Park, assignor to Accounting Devices Company, Evanston, Ill. Binder. No. 1,155,068; Sept. 28; Gaz. vol. 218; p. 1044.
Jordahl, Anders, Berlin-Wilmersdorf, Germany. Means for suspending objects from reinforced concrete structures. No. 1,155,248; Sept. 28; Gaz. vol. 218; p. 1103.
Jorgensen, Olav E., Glasgow, Scotland, assignor to The Atlas Mercantile Company, Limited, London, England. Piston for internal-combustion engines. No. 1,155,244; Sept. 28; Gaz. vol. 218; p. 1104.
Joseph, William E., Hemlock, Ohio. Mattress. No. 1,154,770; Sept. 28; Gaz. vol. 218; p. 945.
Jouffret, Henri V. J., Paris, France. Piston for engines. No. 1,153,795; Sept. 14; Gaz. vol. 218; p. 544.
Jourdin, Willis W., et al. (See McCallum, Jean, assignor.)
Joy, Charles A., Park, Wash. Automatic valve-gear. No. 1,155,245; Sept. 28; Gaz. vol. 218; p. 1104.
Joyce, Victor E., London, England. Apparatus for electrically igniting miners' safety-lamps. No. 1,154,092; Sept. 28; Gaz. vol. 218; p. 1017.
Judson, Charles F., Eagle, Idaho. Lawn-mower sharpener. No. 1,152,736; Sept. 7; Gaz. vol. 218; p. 131.
Julius Kayser & Co. (See Keeton, James, assignor.)
Jung, Karl, assignor to The General Composing Company, Gesellschaft mit beschränkter Haftung, Berlin, Germany. Automatic machine for profile-turning. No. 1,152,641; Sept. 7; Gaz. vol. 218; p. 96.
Jupp, George E., New York, N. Y. Leak-stopper. No. 1,153,796; Sept. 14; Gaz. vol. 218; p. 545.
Jutila, Artturi, Orr, Minn. Resilient wheel. No. 1,155,246; Sept. 28; Gaz. vol. 218; p. 1105.
K. Nut Co. (See Hawley, Charles G., assignor.)
Kabo Corset Co. (See Mortara, Hugo, assignor.)
Kachel, Charles, Utica, N. Y. Clutch. No. 1,153,691; Sept. 14; Gaz. vol. 218; p. 507.
Kaelber, Friedrich. (See Krementz and Kaelber.)
Kaisling, William, assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Operator's calling device. No. 1,154,250; Sept. 21; Gaz. vol. 218; p. 736.
Kajdacsy, Karl von, Kiel, assignor, by mesne assignments, to Deutsche Waffen- und Munitionsfabriken, Berlin, Germany. Double-acting ball thrust-bearing. No. 1,152,995; Sept. 7; Gaz. vol. 218; p. 226.
Kajiwara, Takuma, St. Louis, Mo. Camera. No. 1,153,392; Sept. 14; Gaz. vol. 218; p. 402.
Kalbach, Samuel E., assignor to Reading Crane and Hoist Works, Reading, Pa. Portable rope hoist. No. 1,153,496; Sept. 14; Gaz. vol. 218; p. 440.
Kalbach, Samuel E., assignor to Reading Crane and Hoist Works, Reading, Pa. Combination portable rope hoist. No. 1,153,497; Sept. 14; Gaz. vol. 218; p. 440.
Kallis, Henry, Wessington Springs, S. D. Crank and lever mechanism for windmills. No. 1,154,404; Sept. 21; Gaz. vol. 218; p. 790.
Kampler, Daniel M., assignor of forty-seven and one-half one-hundredths to J. Rosenwasser, New York, N. Y. Resilient tire. No. 1,154,119; Sept. 21; Gaz. vol. 218; p. 691.
Kaplan, Abraham, Brooklyn, N. Y. Ship's ballasting apparatus. No. 1,154,515; Sept. 21; Gaz. vol. 218; p. 826.

Karasinski, John. (See Zakrzewski and Karasinski.)
Karcher, Otto, Canton, Ohio. Pump. No. 1,153,312; Sept. 14; Gaz. vol. 218; p. 372.
Kardell, Henry W., St. Louis, Mo. Tractor. No. 1,153,692; Sept. 14; Gaz. vol. 218; p. 508.
Karish, Isaac, Chicago, Ill. Extension-table. No. 1,154,023; Sept. 21; Gaz. vol. 218; p. 658.
Karlberg, Arvid E. (See Sargent and Karlberg.)
Karpowicz, Marcyan, Bridgeport, Conn. Railway-tie. No. 1,152,417; Sept. 7; Gaz. vol. 218; p. 12.
Karwiese, Rudolph. (See Cowell, John W., assignor.)
Kassander, Leopold, assignor to The Nathan Manufacturing Company, New York, N. Y. Sight-feed lubricator for locomotives. No. 1,153,113; Sept. 7; Gaz. vol. 218; p. 264.
Kassander, Leopold, and H. L. Leverett, assignors to The Nathan Manufacturing Company, New York, N. Y. Injector. No. 1,153,114; Sept. 7; Gaz. vol. 218; p. 265.
Katcher, Mayer, New York, N. Y. Cap. No. 1,153,927; Sept. 21; Gaz. vol. 218; p. 625.
Kate, John H., assignor of one-half to E. J. Raymond, Des Moines, Iowa. Incubator-tray. No. 1,154,927; Sept. 28; Gaz. vol. 218; p. 995.
Kathe, Georg. (See Rommeney and Kathe.)
Katzinger, Edward, assignor to Edward Katzinger Company, Chicago, Ill. Machine for folding the corners of pans and the like. No. 1,153,313; Sept. 14; Gaz. vol. 218; p. 372.
Kaufman, Jesse, New York, N. Y. Collar. No. 1,153,693; Sept. 14; Gaz. vol. 218; p. 508.
Kayser, Edwin C., Beau Sejour, Island of Jersey, assignor to The Procter and Gamble Company, Cincinnati, Ohio. Manufacturing soap powder. No. 1,153,625; Sept. 14; Gaz. vol. 218; p. 485.
Keall, Frank B., Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-holding jack. No. 1,153,928; Sept. 21; Gaz. vol. 218; p. 625.
Kearns, Helen, and W. D. Martin, assignors to W. J. Kearns Mirror Company, Chicago, Ill. Mirror and shelf supporting frame. No. 1,153,929; Sept. 21; Gaz. vol. 218; p. 626.
Kearns Mirror Company, W. J. (See Kearns and Martin, assignors.)
Keast, Alfred J., assignor of one-half to Nash, Engelhardt, Silva Mfg. Co., San Jose, Cal. Cooker. No. 1,153,177; Sept. 7; Gaz. vol. 218; p. 286.
Keck, William M., Coolinga, Cal. Winding-drum. No. 1,152,895; Sept. 7; Gaz. vol. 218; p. 190.
Keeler, Frank, Boston, Mass. Automatic signaling or releasing device for windows and the like. No. 1,153,314; Sept. 14; Gaz. vol. 218; p. 373.
Keene, Archibald T., Chicago, Ill., assignor to Keene Hydraulic Transmission Company. Fluid-power transmission. No. 1,153,930; Sept. 21; Gaz. vol. 218; p. 626.
Keene Hydraulic Transmission Company. (See Keene, Archibald T., assignor.)
Keeran, Charles R., Bloomington, Ill. Lead-pencil. No. 1,153,115; Sept. 7; Gaz. vol. 218; p. 265.
Keeton, James, Sidney, assignor to Julius Kayser & Co., New York, N. Y. Knitting-machine. No. 1,154,251; Sept. 21; Gaz. vol. 218; p. 736.
Kegreisz, Jules E., New York, N. Y. Expansion-anchor. No. 1,153,797; Sept. 14; Gaz. vol. 218; p. 545.
Kelm, Harry J. S., Catasauqua, Pa. Tire-filler. No. 1,154,318; Sept. 21; Gaz. vol. 218; p. 759.
Keller, James H., Covington, Okla. Pruning-knife. No. 1,153,626; Sept. 14; Gaz. vol. 218; p. 486.
Keller, Karl, Arbon, Switzerland. Cutting-machine for embroidery. No. 1,153,498; Sept. 14; Gaz. vol. 218; p. 440.
Kellett, Luther M., Williford, Ark. Comb. No. 1,155,247; Sept. 28; Gaz. vol. 218; p. 1105.
Kelley, Elmer J., Algona, Iowa. Tank-filling device. No. 1,153,116; Sept. 7; Gaz. vol. 218; p. 265.
Kellogg, Carl A., Battle Creek, Mich. Printing-machine. No. 1,153,315; Sept. 14; Gaz. vol. 218; p. 373.
Kellogg Switchboard and Supply Company. (See Dyson, Alfred H., assignor.)
Kellogg Switchboard and Supply Company. (See Kaisling, William, assignor.)
Kellogg Switchboard & Supply Company. (See Leich and Hague, assignors.)
Kellogg Switchboard and Supply Company. (See Mueller, George E., assignor.)
Kells, Charles E., New Orleans, La. Apparatus for surgically cleansing surfaces. No. 1,152,818; Sept. 7; Gaz. vol. 218; p. 161.
Kelsey, Willard A., and J. G. Stoneback, Topeka, Kans. Mattress-sewing machine. No. 1,152,418; Sept. 7; Gaz. vol. 218; p. 13.
Kelso, Wilber M., Oak Park, Ill. Soap receptacle or shaker. No. 1,152,819; Sept. 7; Gaz. vol. 218; p. 161.
Kelso, William, assignor to The McConway & Torley Company, Pittsburgh, Pa. Coupling-centering device. No. 1,155,069; Sept. 28; Gaz. vol. 218; p. 1045.
Kemble, William F., and C. R. Underhill, Yonkers, N. Y. Door-lock. No. 1,154,573; Sept. 21; Gaz. vol. 218; p. 847.
Kemp, Noah P., Norfolk, Va. Car-door fastening. No. 1,152,419; Sept. 7; Gaz. vol. 218; p. 13.
Kempien, August J., St. Paul, Minn. Telephone apparatus. No. 1,154,700; Sept. 28; Gaz. vol. 218; p. 919.
Kempsmith Manufacturing Co., The. (See Goetz, John, assignor.)
Kendall, Edward D., Elizabeth, assignor of one-third to L. T. Haggin, Closter, N. J., M. V. Haggin, A. McCulloh, New York, N. Y., and H. E. Moller, Montclair, N. J., executors of J. B. Haggin, deceased, and one-third to estate of W. A. Megrath, Brooklyn, N. Y. Refining hydrocarbons. No. 1,154,516; Sept. 21; Gaz. vol. 218; p. 826.
Kendall, Edward D., Elizabeth, assignor of one-third to L. T. Haggin, Closter, N. J., M. V. Haggin and A. McCulloh, New York, N. Y., and H. E. Moller, Montclair, N. J., executors of J. B. Haggin, deceased, and one-third to estate of W. A. Megrath, Brooklyn, N. Y. Apparatus for refining hydrocarbons. No. 1,154,517; Sept. 21; Gaz. vol. 218; p. 827.
Kendall, William G., Newark, N. J. Top for receptacles. No. 1,154,518; Sept. 21; Gaz. vol. 218; p. 827.
Kendrick, Glenn, Kansas City, Mo. Drum-pedal. No. 1,154,120; Sept. 21; Gaz. vol. 218; p. 692.
Kendrick, Glenn, Kansas City, Mo. Drum-pedal. No. 1,154,121; Sept. 21; Gaz. vol. 218; p. 692.
Kenely, William J., Elizabeth, N. J. Means of escape from submarines. No. 1,152,420; Sept. 7; Gaz. vol. 218; p. 13.
Kennedy, Absalom M., West Orange, N. J. Range-finder. No. 1,154,252; Sept. 21; Gaz. vol. 218; p. 737.
Kennedy, David S., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,153,499; Sept. 14; Gaz. vol. 218; p. 441.
Kennedy, Dennis M., Durban, Natal, South Africa. Draft-harness for oxen and cattle. No. 1,152,737; Sept. 7; Gaz. vol. 218; p. 132.
Kennedy, Howard L., Fort Wayne, Ind. Traveler's grip or bag. No. 1,153,393; Sept. 14; Gaz. vol. 218; p. 403.
Kennedy, Joseph, New York, N. Y., assignor to The Clements Company. Cable-hanger. No. 1,154,319; Sept. 21; Gaz. vol. 218; p. 760.
Kennedy, William D., assignor of one-half to G. L. Wallace, Oakland, Cal. Clamp. No. 1,154,405; Sept. 21; Gaz. vol. 218; p. 790.
Kennicott, Cass L., Chicago Heights, assignor to The Kennicott Company, Chicago, Ill. Means for feeding powdered material. No. 1,152,820; Sept. 7; Gaz. vol. 218; p. 162.
Kennicott Company, The. (See Kennicott, Cass L., assignor.)
Kent, Arthur A., Philadelphia, Pa. Electric contact device. No. 1,152,642; Sept. 7; Gaz. vol. 218; p. 97.
Kent, Arthur A., Philadelphia, Pa. Signaling-horn. No. 1,152,643; Sept. 7; Gaz. vol. 218; p. 97.
Kenyon, Otis A., Hastings-upon-Hudson, assignor to J. Kjekstad and W. Schenstrom, New York, N. Y. Electric welding apparatus. No. 1,154,320; Sept. 21; Gaz. vol. 218; p. 760.
Keough, Zachariah, Los Angeles, Cal. Automobile direction signal or indicator. No. 1,154,024; Sept. 21; Gaz. vol. 218; p. 658.
Kepka, Josef A., Chicago, Ill. Liquid-measuring device. No. 1,152,952; Sept. 7; Gaz. vol. 218; p. 211.
Kercher, Arthur J., assignor to Berkeley Electric Cooker Company, Berkeley, Cal. Cooker. No. 1,154,093; Sept. 28; Gaz. vol. 218; p. 1018.
Kerr, Thomas C., Stevenston, Scotland. Means for the prevention of accidents on railways. No. 1,152,953; Sept. 7; Gaz. vol. 218; p. 211.
Kerwin, Edwin J., *et al.* (See Terry, Louis, assignor.)
Kessler, Louis, Chicago, Ill. Filling-tube for gasolene-receptacles. No. 1,155,070; Sept. 28; Gaz. vol. 218; p. 1045.
Kettering, Charles F., Dayton, Ohio, assignor to The Dayton Engineering Laboratories Co. Electric meter. No. 1,154,025; Sept. 21; Gaz. vol. 218; p. 659.
Keuffel & Esser Company, The. (See Keuffel, Willie L. E., assignor.)
Keuffel, Willie L. E., assignor to The Keuffel & Esser Company, Hoboken, N. J. Studia-transit. No. 1,154,253; Sept. 21; Gaz. vol. 218; p. 737.
Kevil, Manson R. (See Larkins and Kevil.)
Keyoke Railway Equipment Company. (See Murray, George C., assignor.)
Kienzle, Jacob F., Sioux Falls, S. D. Corn-shelling machine. No. 1,155,155; Sept. 28; Gaz. vol. 218; p. 1076.
Kiesel, William F., Jr., Altoona, Pa. Car-truck. No. 1,153,117; Sept. 7; Gaz. vol. 218; p. 266.
Kieser, Walter, Charlottenburg, Germany, assignor to General Electric Company. Tapped turbine. No. 1,153,316; Sept. 14; Gaz. vol. 218; p. 374.
Kiesor, Walter, Charlottenburg, Germany, assignor to General Electric Company. Attaching means for nozzles. No. 1,154,777; Sept. 28; Gaz. vol. 218; p. 945.
Killman, Thomas A., assignor of twenty-six and one-fourth one-hundredths to W. L. Danley, Nashville, ten one-hundredths to E. H. Roy, Tullahoma, and eighteen and three-fourths one-hundredths to T. Taylor, Nashville, Tenn. Steam-boiler. No. 1,152,421; Sept. 7; Gaz. vol. 218; p. 14.
Killpartrick, John W., Lowell, Mass. Release mechanism for shuttles. No. 1,153,500; Sept. 14; Gaz. vol. 218; p. 441.
Kilpatrick, William J., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding and listing machine. No. 1,152,517; Sept. 7; Gaz. vol. 218; p. 50.
Kimberly-Clark Company. (See Wheeler, Frank G., assignor.)

Kimes, Grant C., Ogden, Utah. Cleaning-brush. No. 1,153,118; Sept. 7; Gaz. vol. 218; p. 266.
Kimmel, Howard S., Tiffin, Ohio. Automatic electrical wire-coupling for cars. No. 1,154,027; Sept. 21; Gaz. vol. 218; p. 660.
Kimmel, Howard S., Tiffin, Ohio. Train-pipe coupling. No. 1,154,028; Sept. 21; Gaz. vol. 218; p. 660.
Kimmel, Howard S., Tiffin, Ohio. Fluid-pressure coupling-head. No. 1,154,029; Sept. 21; Gaz. vol. 218; p. 660.
Kindt, Henry R., Floral Park, N. Y. Stipple-brush. No. 1,154,928; Sept. 28; Gaz. vol. 218; p. 996.
King, Charles B., and C. B. Weston, assignors to The Marion Steam Shovel Company, Marion, Ohio. Exhaust-nozzle. No. 1,154,026; Sept. 21; Gaz. vol. 218; p. 659.
King, Howard K., Philadelphia, Pa., assignor to Chambers Brothers Company. Sheet-feeding machine. No. 1,154,406; Sept. 21; Gaz. vol. 218; p. 790.
King, Howard K., Philadelphia, Pa., assignor to Chambers Brothers Company. Sheet-feeding machine. No. 1,154,407; Sept. 21; Gaz. vol. 218; p. 791.
King, Joseph M., Jacksonville, Fla. Fluid-tractor. No. 1,153,798; Sept. 14; Gaz. vol. 218; p. 545.
King, Raymond D., Lamoille, Ill. Corn-kiln. No. 1,152,644; Sept. 7; Gaz. vol. 218; p. 97.
King, Virgil E., Palmyra, Ill. Shuttle riding-plow. No. 1,152,896; Sept. 7; Gaz. vol. 218; p. 190.
Kingham, Henry H. (See Andrew, Sloacombe, and Kingham.)
Kinnear, Alexander, Toledo, Ohio. Mold-plunger. No. 1,152,518; Sept. 7; Gaz. vol. 218; p. 50.
Kinnel, Henry, Seattle, Wash. Motor-vehicle. No. 1,154,321; Sept. 21; Gaz. vol. 218; p. 760.
Kintner, Samuel M., *et al.*, receivers. (See Hogan, John L., Jr., assignor.)
Kinzig, Louis D., Dayton, Ohio, assignor to Northern Water Softener Co. Water-softening apparatus. No. 1,154,031; Sept. 21; Gaz. vol. 218; p. 627.
Kirby, Arthur, Unionville, Mo. Resilient wheel. No. 1,153,119; Sept. 7; Gaz. vol. 218; p. 266.
Kirby, William B. (See Brown, Milo, assignor.)
Kirk, Thomas E., assignor of one-half to J. G. Lehr, Columbus, Ohio. Window-cleaning device. No. 1,152,519; Sept. 7; Gaz. vol. 218; p. 50.
Kirk, Walter I., assignor to Lyon & Healy, Chicago, Ill. Washer. No. 1,153,232; Sept. 14; Gaz. vol. 218; p. 344.
Kirk, Walter I., assignor to Lyon & Healy, Chicago, Ill. Harp-neck. No. 1,153,317; Sept. 14; Gaz. vol. 218; p. 374.
Kirkpatrick, Orson F., North English, Iowa. Air-brake coupling. No. 1,153,318; Sept. 14; Gaz. vol. 218; p. 374.
Kirshner, Nathaniel M., Buffalo, N. Y. Scarf-pin retainer. No. 1,154,408; Sept. 21; Gaz. vol. 218; p. 791.
Kitching, David C., Valley Mills, Tex. Lamp-adjusting pedal mechanism. No. 1,154,187; Sept. 21; Gaz. vol. 218; p. 713.
Kittrell, John, Durant, Okla. Nutcracker. No. 1,153,433; Sept. 14; Gaz. vol. 218; p. 417.
Kjekstad, Johannes, *et al.* (See Kenyon, Otis A., assignor.)
Kleckner, Charles P., New York, N. Y. Bag. No. 1,155,248; Sept. 28; Gaz. vol. 218; p. 1105.
Kleeger, John, Marshland, assignor of one-half to C. H. Stockwell, Jr., Clatskanie, Oreg. Mailing-tube. No. 1,153,627; Sept. 14; Gaz. vol. 218; p. 486.
Klein, Charles B., Los Angeles, Cal. Tractor. No. 1,154,322; Sept. 21; Gaz. vol. 218; p. 761.
Klein, Charles J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Outlet-box. No. 1,153,394; Sept. 14; Gaz. vol. 218; p. 403.
Klein, Charles J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric switch. No. 1,154,030; Sept. 21; Gaz. vol. 218; p. 661.
Klein, Charles J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Binding-post for electrical conductors. No. 1,154,583; Sept. 21; Gaz. vol. 218; p. 851.
Klein, Rudolph, and T. Brueck, Rochester, N. Y. Iris-diaphragm. No. 1,153,319; Sept. 14; Gaz. vol. 218; p. 374.
Klenck, John H., Warren, Pa. Camera-support. No. 1,153,320; Sept. 14; Gaz. vol. 218; p. 375.
Kliewer, Cornelius W., Midland, Cal. Ironing-board. No. 1,154,031; Sept. 21; Gaz. vol. 218; p. 661.
Knapp, Fred S., Omaha, Nebr. Partition-holder for boxes. No. 1,154,778; Sept. 28; Gaz. vol. 218; p. 946.
Knapp, O. A. (See Becker, August C., assignor.)
Knickrehm, William H., Somonauk, Ill. Composite railway-tie. No. 1,154,779; Sept. 28; Gaz. vol. 218; p. 946.
Knight, Charles Y., Chicago, Ill. Connecting means for internal-combustion motors. No. 1,155,071; Sept. 28; Gaz. vol. 218; p. 1046.
Knight, William D., Santa Monica, Cal. Hot-water-circulating system. No. 1,153,233; Sept. 14; Gaz. vol. 218; p. 344.
Knipe, Oliver C., Palo Alto, Cal. Antifriction hand-support. No. 1,154,188; Sept. 21; Gaz. vol. 218; p. 714.
Knoblock, James W., West Orange, N. J. Smoker's article. No. 1,152,738; Sept. 7; Gaz. vol. 218; p. 132.
Knoedler, Elmer L., assignor to Welsbach Light Company, Gloucester City, N. J. Packing-box for mantles, &c. No. 1,153,932; Sept. 21; Gaz. vol. 218; p. 627.
Knopp, Fred B., Union City, Okla. Mail-bag catcher and deliverer. No. 1,154,323; Sept. 21; Gaz. vol. 218; p. 761.
Knorr, Jacob F., Patchogue, and C. Andrade, Jr., New York, N. Y. Stuffing-box. No. 1,153,933; Sept. 21; Gaz. vol. 218; p. 627.
Knowles, George H., assignor of one-half to J. J. Abbott and one-half to A. J. Adams, Wyoming, Ill. Railway-track crossing. No. 1,153,166; Sept. 7; Gaz. vol. 218; p. 282.
Knox, Lewis, Queen Junction, Pa. Automatic pipe-wrench. No. 1,153,694; Sept. 14; Gaz. vol. 218; p. 508.
Knox, William J., Dubois, Pa. Tank-car. No. 1,154,324; Sept. 21; Gaz. vol. 218; p. 762.
Knudsen, August L., Boston, Mass. Lubricator. No. 1,152,520; Sept. 7; Gaz. vol. 218; p. 51.
Kober & Co., Wilh. (See Van Devoorde, Eugen, assignor.)
Kochendoerfer, Ernst, Frankfort-on-the-Main, Germany, assignor to Roessler & Hassiacher Chemical Company, New York, N. Y. Soap containing active oxygen and making it. No. 1,153,167; Sept. 7; Gaz. vol. 218; p. 282.
Kohler, I. J., *et al.* (See Hoagland, Ellery M., assignor.)
Kohn, Alfred. (See Thorandt and Kohn.)
Kohn, Louis, Chicago, Ill. Watchmaker's tool for adjusting balance-wheels. No. 1,153,695; Sept. 14; Gaz. vol. 218; p. 509.
Kollberg, Gustaf L., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Cross-head. No. 1,154,780; Sept. 28; Gaz. vol. 218; p. 946.
Könemann, Wilhelm, Minden, Germany. Writing-table. No. 1,153,501; Sept. 14; Gaz. vol. 218; p. 442.
Konigsberg, Joseph. (See Forsheim and Konigsberg.)
Kopischke, Lydia J., Vernon Center, Minn. Broom-bridle. No. 1,154,781; Sept. 28; Gaz. vol. 218; p. 947.
Kops, Daniel, New York, N. Y. Apparel-corset. No. 1,152,954; Sept. 7; Gaz. vol. 218; p. 211.
Kops, Waldemar, New York, N. Y. Garment-clasp. No. 1,155,072; Sept. 28; Gaz. vol. 218; p. 1046.
Koretzky, Harry M., New York, N. Y. Flash-light. No. 1,155,249; Sept. 28; Gaz. vol. 218; p. 1105.
Kottila, Edward H., Frederick, S. D. Gate-operating means. No. 1,154,782; Sept. 28; Gaz. vol. 218; p. 947.
Kovesy, Joseph A., New York, N. Y. Purse. No. 1,154,122; Sept. 21; Gaz. vol. 218; p. 692.
Kowaleski, Edward, *et al.* (See Le Compte, Joseph H., assignor.)
Kraft, Harry. (See Holderbaum and Kraft.)
Krämer, Bernhard, Charlottenburg, Germany, assignor to General Electric Company. Combined pump and emergency governor. No. 1,153,628; Sept. 14; Gaz. vol. 218; p. 486.
Krämer, Bernhard, Charlottenburg, Germany, assignor to General Electric Company. Controlling mechanism for internal-combustion engines. No. 1,153,629; Sept. 14; Gaz. vol. 218; p. 487.
Kraus, Samuel, assignor to Eagle Pencil Company, New York, N. Y. Eraser-tip for lead-pencils. No. 1,153,799; Sept. 14; Gaz. vol. 218; p. 546.
Krause, Martin, Berlin, Germany. Heat-recorder. No. 1,152,645; Sept. 7; Gaz. vol. 218; p. 98.
Krauth, Albert, assignor to Krauth & Benninghofen, Hamilton, Ohio. Autographic register. No. 1,154,032; Sept. 21; Gaz. vol. 218; p. 661.
Krauth & Beaninghofen. (See Krauth, Albert, assignor.)
Krementz & Co. (See Krementz and Kaelber, assignors.)
Krementz, Richard, and F. Kaelber, assignors to Krementz & Co., Newark, N. J. Tie-clasp. No. 1,152,739; Sept. 7; Gaz. vol. 218; p. 132.
Kriegsheim, Heinrich, assignor to The Permutit Company, New York, N. Y. Manufacture of oxygen. No. 1,153,502; Sept. 14; Gaz. vol. 218; p. 442.
Krippendorf, Charles H. (See Fowler, William, assignor.)
Krogh, Ferdinand W., San Francisco, Cal. Balanced centrifugal pump. No. 1,153,321; Sept. 14; Gaz. vol. 218; p. 375.
Kruck, Walter A., New York, N. Y. Pneumatic piano-player action. No. 1,153,554; Sept. 14; Gaz. vol. 218; p. 462.
Krueger, Ernest, Milwaukee, Wis. Sand-bar for molders' flasks. No. 1,155,073; Sept. 28; Gaz. vol. 218; p. 1046.
Krüger, Ernst A., Seehausen, Altmark, Germany. Producing tungsten filaments. No. 1,154,701; Sept. 28; Gaz. vol. 218; p. 920.
Kruse, Peter, New York, assignor to E. W. Bliss Company, Brooklyn, N. Y. Feeding means for sheets. No. 1,153,454; Sept. 14; Gaz. vol. 218; p. 418.
Krusick, John, Winamac, Ind. Silo-mold. No. 1,154,783; Sept. 28; Gaz. vol. 218; p. 947.
Krypton Company. (See Quimby, Clarence E., assignor.)
Kuhmarker, David, New York, N. Y. Wrapping-paper pad. No. 1,153,503; Sept. 14; Gaz. vol. 218; p. 442.
Kuhn, Frank, Detroit, Mich. Electrically-heated oven. No. 1,154,416; Sept. 21; Gaz. vol. 218; p. 793.
Kuhn, Frank, Detroit, Mich. Electrical heater. No. 1,154,417; Sept. 21; Gaz. vol. 218; p. 794.
Kuhn, Frank, and F. E. Shailor, assignors to American Electrical Heater Company, Detroit, Mich. Electrical heating unit. No. 1,154,409; Sept. 21; Gaz. vol. 218; p. 791.

Kuhn, Frank, and F. E. Shallor, assignors to American Electrical Heater Company, Detroit, Mich. Connector for electrically-heated instruments. No. 1,154,413; Sept. 21; Gaz. vol. 218; p. 792.

Kuhn, Frank, and F. E. Shallor, assignors to American Electrical Heater Company, Detroit, Mich. Electrically-heated cooking utensil. No. 1,154,418; Sept. 21; Gaz. vol. 218; p. 794.

Kuhn, Frank, and F. E. Shallor, Detroit, Mich.; said Shallor assignor to said Kuhn. Electric heater. No. 1,154,410; Sept. 21; Gaz. vol. 218; p. 792.

Kuhn, Frank, and F. E. Shallor, Detroit, Mich.; said Shallor assignor to said Kuhn. Electric heater. No. 1,154,411; Sept. 21; Gaz. vol. 218; p. 792.

Kuhn, Frank, and F. E. Shallor, Detroit, Mich.; said Shallor assignor to said Kuhn. Electrical heater. No. 1,154,412; Sept. 21; Gaz. vol. 218; p. 792.

Kuhn, Frank, and F. E. Shallor, Detroit, Mich.; said Shallor assignor to said Kuhn. Electrically-heated soldering-iron. No. 1,154,414; Sept. 21; Gaz. vol. 218; p. 793.

Kuhn, Frank, and F. E. Shallor, Detroit, Mich.; said Shallor assignor to said Kuhn. Handle and terminal connection for electrically-heated instruments. No. 1,154,415; Sept. 21; Gaz. vol. 218; p. 793.

Kulhawy, Ferdinand, Philadelphia, Pa. Revolving-hook mechanism. No. 1,152,740; Sept. 7; Gaz. vol. 218; p. 132.

Kulper, William, Waterloo, Iowa. Goods holding and computing apparatus. No. 1,153,504; Sept. 14; Gaz. vol. 218; p. 443.

Kunz-Garniss Company. (See Moffat, Albert S., assignor.)

Kurtz, Charles M. (See Burwell and Kurtz.)

Kurtz, Samuel B., Brooklyn, N. Y. Motor-vehicle. No. 1,152,821; Sept. 7; Gaz. vol. 218; p. 162.

L. E. Waterman Company. (See Ferris, William I., assignor.)

La Casse, Henry, Los Angeles, Cal. Pencil-sharpener. No. 1,154,325; Sept. 21; Gaz. vol. 218; p. 762.

La Rue, Theodore B., Spokane, Wash. Safety appliance for railway-cars. No. 1,152,823; Sept. 7; Gaz. vol. 218; p. 163.

La Vallee, Emmanuel, Pawtucket, R. I., assignor to Lorraine Manufacturing Company. Shuttle. No. 1,154,420; Sept. 21; Gaz. vol. 218; p. 795.

Lachance, Joseph, Los Angeles, Cal. Wave-motor. No. 1,154,033; Sept. 21; Gaz. vol. 218; p. 661.

Lachman, Maurice, New York, N. Y. Metallic structure and making the same. No. 1,154,784; Sept. 28; Gaz. vol. 218; p. 963.

Lachman, Maurice, New York, assignor to Universal Electric Welding Company, Long Island City, N. Y. Constructing window-sashes. No. 1,152,741; Sept. 7; Gaz. vol. 218; p. 133.

Lachman, Maurice, assignor to Universal Electric Welding Company, New York, N. Y. Sheet-metal panel-work. No. 1,154,254; Sept. 21; Gaz. vol. 218; p. 737.

Lackey, Greeley E., Burlington, Iowa. Mattress. No. 1,153,120; Sept. 7; Gaz. vol. 218; p. 267.

Lagutt, Jan. Basel, Switzerland. Antipyretic, o-sulfamidobenzoyl-p-phenetidin, and producing the same. No. 1,153,121; Sept. 7; Gaz. vol. 218; p. 267.

Lake, Christopher J., Bridgeport, Conn. Engine. No. 1,154,034; Sept. 21; Gaz. vol. 218; p. 662.

Lambert, Charles R., assignor to Clayton & Lambert Manufacturing Company, Detroit, Mich. Torch-holder. No. 1,153,630; Sept. 14; Gaz. vol. 218; p. 487.

Lamson Company, The. (See Cowley, James T., assignor.)

Lamson Company, The. (See Hidden, Charles P., assignor.)

Lamson, Mary A., executrix. (See Hallowell, Albert.)

Lamson, William S. (See Hallowell, Albert, assignor.)

Landefeld, John C., Detroit, Mich. Fuel-economizer. No. 1,152,955; Sept. 7; Gaz. vol. 218; p. 212.

Landis, Edward S., Reading, Pa. Water or gas box. No. 1,153,631; Sept. 14; Gaz. vol. 218; p. 487.

Landis, Frank F., Waynesboro, Pa. Mold. No. 1,154,255; Sept. 21; Gaz. vol. 218; p. 738.

Landis, Walter S., Niagara Falls, N. Y., assignor to American Cyanamid Company, Nashville, Tenn. Producing ammonia. No. 1,154,640; Sept. 28; Gaz. vol. 218; p. 899.

Lang, John A., Carthage, N. C. Differential gearing. No. 1,154,641; Sept. 28; Gaz. vol. 218; p. 899.

Lange, Felix, Essen-on-the-Ruhr, Germany, assignor to Goldschmidt Thermit Company, New York, N. Y. Uniting railway-rails. No. 1,153,435; Sept. 14; Gaz. vol. 218; p. 418.

Lange, Pieter A. de, Alkmaar, Netherlands. Machine for cutting beans and other legumes. No. 1,153,041; Sept. 7; Gaz. vol. 218; p. 241.

Langley, Sam G., Orange, assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J. Alternating-current rectifier. No. 1,152,646; Sept. 7; Gaz. vol. 218; p. 98.

Langseth, Gust, assignor to Washburn-Crosby Company, Minneapolis, Minn. Bottle-case. No. 1,154,702; Sept. 28; Gaz. vol. 218; p. 920.

Lanhoffer, Edmond, Poissy, France. Molding sheets of fibrous materials. No. 1,154,256; Sept. 21; Gaz. vol. 218; p. 738.

Lanning, Charles D., Dorchester, Mass. Repeater. No. 1,154,574; Sept. 21; Gaz. vol. 218; p. 847.

Lanning, Howard H. (See Jacobs and Lanning.)

Lanphier, Robert C., Springfield, Ill., and E. M. Fitz, Columbus, Ohio. Battery-controlling device for axle-driven generators. No. 1,152,822; Sept. 7; Gaz. vol. 218; p. 163.

Lansdowne, David S., Mulvane, Kans. Jack-screw. No. 1,154,519; Sept. 21; Gaz. vol. 218; p. 828.

Lansing, James A., assignor to Scranton Stove Works, Scranton, Pa. Range. No. 1,153,322; Sept. 14; Gaz. vol. 218; p. 375.

Lanz, Firm of Heinrich. (See Seck, Karl H. W. L., assignor.)

Lappen, James E., assignor to Union Fibre Company, Winona, Minn. Producing heat-insulating boards from fibrous material. No. 1,155,330; Sept. 28; Gaz. vol. 218; p. 1132.

Larkins, Herman H., and M. R. Kevil, Princeton, Ky. Agricultural machine. No. 1,153,800; Sept. 14; Gaz. vol. 218; p. 546.

Larson, Edward A., assignor to Steward-Warner Speedometer Corporation, Chicago, Ill. Liquid-feeding device. No. 1,153,696; Sept. 14; Gaz. vol. 218; p. 509.

Larson, John M., assignor to National Regulator Company, Chicago, Ill. Humidity-controlling apparatus. No. 1,153,234; Sept. 14; Gaz. vol. 218; p. 344.

Lasche, Oskar, Charlottenburg, Germany, assignor to General Electric Company. Fuel-supply system for engines. No. 1,154,904; Sept. 28; Gaz. vol. 218; p. 1018.

Lashar, Walter B., Bridgeport, and T. C. Luce, Stratford, Conn. Antifriction-bearing. No. 1,153,868; Sept. 14; Gaz. vol. 218; p. 572.

Lautenschlager, William F., Cincinnati, Ohio. Cement-applying machine. No. 1,154,419; Sept. 21; Gaz. vol. 218; p. 794.

Lawrence, Harry W., Denver, Colo. Combined removable-key single-piece shell and automatically-interlocking shell and switch-mechanism socket. No. 1,154,257; Sept. 21; Gaz. vol. 218; p. 738.

Lawrence, Henry J., Long Beach, Cal. Wave-motor. No. 1,154,326; Sept. 21; Gaz. vol. 218; p. 762.

Lawton, Charles L., Hancock, Mich. Percussion-drill. No. 1,154,642; Sept. 28; Gaz. vol. 218; p. 900.

Lazar, Solomon. (See Aicher and Lazar.)

Le Blond, Richard K., and W. F. Groene, assignors to The R. K. Le Blond Machine Tool Company, Cincinnati, Ohio. Milling-machine. No. 1,152,647; Sept. 7; Gaz. vol. 218; p. 99.

Le Compte, Joseph H., Maywood, assignor of one-third to P. T. Pauls and one-third to E. Kowaleski, Chicago, Ill. Railway-coupling. No. 1,154,327; Sept. 21; Gaz. vol. 218; p. 763.

Le Febvre, Henry D., Alpena, Mich. Lacing and lace-fastener. No. 1,152,422; Sept. 7; Gaz. vol. 218; p. 14.

Lea, Charles. (See Hathaway and Lea.)

Lea, Charles, Boston, Mass., assignor to American Warp-Drawing Machine Company. Textile-machine. No. 1,153,869; Sept. 14; Gaz. vol. 218; p. 572.

Lea, Charles, Boston, Mass., assignor to American Warp-Drawing Machine Company. Yarn-holder. No. 1,153,870; Sept. 14; Gaz. vol. 218; p. 572.

Leake, Richard C., Rochester, assignor to General Railway Signal Company, Gates, N. Y. Electric-circuit-timing device. No. 1,155,322; Sept. 28; Gaz. vol. 218; p. 1129.

Lear, Milton, and J. Sloop, Findlay, Ohio. Combined hook and saddle-seat. No. 1,153,122; Sept. 7; Gaz. vol. 218; p. 267.

Leary, D. D., *et al.* (See Fuller, Edward, Jr., assignor.)

Leary, James I., Chicago, Ill. Scoop. No. 1,152,824; Sept. 7; Gaz. vol. 218; p. 164.

Lederer, Friedrich, Milwaukee, Wis. Automobile-bumper. No. 1,153,632; Sept. 14; Gaz. vol. 218; p. 487.

Lee, Albert O., Minneapolis, Minn. Controlling mechanism for traction-driven headers. No. 1,154,703; Sept. 28; Gaz. vol. 218; p. 920.

Lee, Emma L., Chicago, Ill. Fly-exterminator. No. 1,153,123; Sept. 7; Gaz. vol. 218; p. 267.

Lee, Guavara J., Gorman, Md. Resilient wheel. No. 1,152,648; Sept. 7; Gaz. vol. 218; p. 99.

Lee, John, Stuart, assignor of one-half to P. J. Basten, Oelwein, Iowa. Device for regulating the water-level in boilers. No. 1,155,327; Sept. 28; Gaz. vol. 218; p. 1131.

Lee, Tennant, and A. B. Monks, Dedham, Mass., assignors, by mesne assignments, to Z. G. Simmons, Kenosha, Wis., A. W. Preston, Swampscott, and B. W. Palmer, Boston, Mass., trustees. Treating sugar-cane. No. 1,153,934; Sept. 21; Gaz. vol. 218; p. 628.

Lee, Wallace A., Oakland, Cal. Motor-vehicle. No. 1,155,250; Sept. 28; Gaz. vol. 218; p. 1106.

Lehman, Frank H., Lebanon, Pa. Game apparatus. No. 1,153,395; Sept. 14; Gaz. vol. 218; p. 403.

Lehr, John G. (See Kirk, Thomas E., assignor.)

Leibe, Henry E., Newark, N. J. Folding eyeglasses. No. 1,152,521; Sept. 7; Gaz. vol. 218; p. 51.

Leich, Oscar M., and C. E. Hague, Rochester, N. Y., assignors, by mesne assignments, to Kellogg Switchboard & Supply Company. Signaling system. No. 1,154,929; Sept. 28; Gaz. vol. 218; p. 996.

Leidigh, John J., Milwaukee, Wis., assignor to The National Cash Register Company, Dayton, Ohio. Validating stamping system. No. 1,152,522; Sept. 7; Gaz. vol. 218; p. 52.

Leitner, Emil, Hoboken, N. J., assignor to Powers Photo-Engraving Company, New York, N. Y. Making printing-plates. No. 1,154,643; Sept. 28; Gaz. vol. 218; p. 900.

Leland, John A., Montague, assignor to Millers Falls Company, Millers Falls, Mass. Jack-screw. No. 1,153,697; Sept. 14; Gaz. vol. 218; p. 510.

Lemon, Cora B., Grants Pass, Oreg. Skirt-marker. No. 1,155,251; Sept. 28; Gaz. vol. 218; p. 1106.

Lemp, Hermann, Erie, Pa., assignor to General Electric Company. Controlling mechanism for internal-combustion engines. No. 1,154,785; Sept. 28; Gaz. vol. 218; p. 948.

Lent, Charles W., Carbondale, Ill. Krout-press. No. 1,153,323; Sept. 14; Gaz. vol. 218; p. 376.

Lepsch, Joseph H., Ridgway, Pa. Tire-vulcanizer apparatus. No. 1,153,324; Sept. 14; Gaz. vol. 218; p. 376.

Lesch, Peter. (See Drahonovsky, John B., assignor.)

Lespagnol, Albert, Bois-Colombes, France. Automatic stone-sawing mechanism. No. 1,155,156; Sept. 28; Gaz. vol. 218; p. 1076.

Leverett, Harry L. (See Kassander and Leverett.)

Levin, Isaac, Brooklyn, N. Y. Sectional garment-form. No. 1,153,633; Sept. 14; Gaz. vol. 218; p. 488.

Levin, Isaac, Brooklyn, N. Y. Collapsible garment-form stand. No. 1,153,634; Sept. 14; Gaz. vol. 218; p. 488.

Levin, Isaac H., Newark, N. J., assignor to International Oxygen Company. Electrolytic apparatus. No. 1,153,108; Sept. 7; Gaz. vol. 218; p. 282.

Levinstein, Herbert, and J. Baddiley, assignors to Company of Levinstein Limited, Manchester, England. Azo dyestuffs. No. 1,153,555; Sept. 14; Gaz. vol. 218; p. 462.

Levis, James H., Ipswich, Mass. Cattle-stanchion. No. 1,152,523; Sept. 7; Gaz. vol. 218; p. 52.

Levison, Maurice, assignor to W. P. Crockett, Chicago, and L. Hammond, Evanston, Ill. Means for divided control of an electric signal device. No. 1,153,505; Sept. 14; Gaz. vol. 218; p. 443.

Lewis, Abram J., New York, N. Y. Pocket for coats, shirts, and the like. No. 1,154,258; Sept. 21; Gaz. vol. 218; p. 739.

Lewis, Edward D., Elmira, N. Y. Portable crematory. No. 1,153,871; Sept. 14; Gaz. vol. 218; p. 573.

Lewis, Harry A., Norristown, Pa., assignor to Westinghouse Electric and Manufacturing Company. Reversing-switch. No. 1,155,157; Sept. 28; Gaz. vol. 218; p. 1076.

Lewis, Ralph T. (See Cobb, Manuel E., assignor.)

Leyson, Sackville G., Syracuse, N. Y. Clothes-line prop. No. 1,154,704; Sept. 28; Gaz. vol. 218; p. 920.

Lidell, Alexander N. (See Sletten and Lidell.)

Light, Claus H., Des Moines, Iowa. Hose-coupling. No. 1,154,259; Sept. 21; Gaz. vol. 218; p. 739.

Lilly, William J., Butte, Mont. Hoisting-engine control. No. 1,153,124; Sept. 7; Gaz. vol. 218; p. 267.

Linaker, Frederick W., assignor to The Vulcan Soot Cleaner Co. of Pittsburg, Pa., Dubois, Pa. Tube-cleaner. No. 1,152,423; Sept. 7; Gaz. vol. 218; p. 15.

Lindau, Charles I., Pearce, Ariz. Liquid-fuel boiler-furnace. No. 1,152,897; Sept. 7; Gaz. vol. 218; p. 190.

Lindeberg, William, Miles City, Mont. Clothes-boiler. No. 1,154,786; Sept. 28; Gaz. vol. 218; p. 948.

Lindgren, Alexus C., Moline, Ill., assignor to Moline Plow Company. Plowing-machine. No. 1,154,905; Sept. 28; Gaz. vol. 218; p. 1018.

Lindstrom, Charles A., Pittsburgh, Pa. Friction locking device. No. 1,153,556; Sept. 14; Gaz. vol. 218; p. 462.

Lindstrom, Charles A., Pittsburgh, Pa. Clutch device for preventing reverse rotation. No. 1,153,557; Sept. 14; Gaz. vol. 218; p. 463.

Linga, Torbjörn, Thor, Iowa, assignor to American Ditching Machine Company, West Minneapolis, Minn. Ditching-machine apparatus. No. 1,152,524; Sept. 7; Gaz. vol. 218; p. 53.

Linga, Torbjörn, Thor, Iowa, assignor to American Ditching Machine Company, West Minneapolis, Minn. Caterpillar-wheel for ditching-machines. No. 1,152,525; Sept. 7; Gaz. vol. 218; p. 54.

Linn, Walter B. (See Foster, Turner, Bennett, and Linn.)

Linville, John W., and C. C. Tillman, assignors to Linville, Tillman & Co., Toledo, Ohio. Coring-machine. No. 1,155,252; Sept. 28; Gaz. vol. 218; p. 1106.

Linville, Tillman & Co. (See Linville and Tillman, assignors.)

Lippincott, Walter M., Lynbrook, N. Y. Internal-combustion engine. No. 1,152,424; Sept. 7; Gaz. vol. 218; p. 15.

Lippitt, Anna L., Grand Rapids, Mich. Union garment. No. 1,153,935; Sept. 21; Gaz. vol. 218; p. 628.

Lipps, Emory J., Fountain Hill borough, Pa. Machine for reeling skeins. No. 1,154,705; Sept. 28; Gaz. vol. 218; p. 921.

Litchfield, Isaac W., Boston, Mass. Dental floss-holder. No. 1,152,825; Sept. 7; Gaz. vol. 218; p. 164.

Litscher, Ben, Davenport, Iowa. Combined paper-weight and bill-file. No. 1,154,260; Sept. 21; Gaz. vol. 218; p. 739.

Littlefield, Frank A., assignor to Nashua Machine Company, Nashua, N. H. Steam-trap. No. 1,153,125; Sept. 7; Gaz. vol. 218; p. 268.

Livingston, Charles G. (See Plesser and Livingston.)

Livingston, Charles G., *et al.* (See Redd, Charlie, assignor.)

Livingston, Fred N., Seattle, Wash. Automobile-starter. No. 1,154,520; Sept. 21; Gaz. vol. 218; p. 828.

Lloyd, Annie B., Keithsburg, Ill. Dish-pan. No. 1,154,521; Sept. 21; Gaz. vol. 218; p. 828.

Lloyd, Cecil E., Pensacola, Fla. Valve-cap. No. 1,155,253; Sept. 28; Gaz. vol. 218; p. 1107.

Lobato, Luiz C., Lowell, Mass. Loom. No. 1,154,644; Sept. 28; Gaz. vol. 218; p. 901.

Locke, Albert R., Chicago, Ill. Perforating separated obstructions in hollow walls. No. 1,154,035; Sept. 21; Gaz. vol. 218; p. 662.

Locke, John D. (See Earle, Edward, assignor.)

Locomotive Superheater Company. (See Goodwin, Ernest G., assignor.)

Locomotive Superheater Company. (See Heuser, Franz, assignor.)

Locomotive Superheater Company. (See True and McKee, assignors.)

Loder, Frank, La Fayette, Ind. Resilient pneumatic tire. No. 1,153,306; Sept. 14; Gaz. vol. 218; p. 404.

Lodge & Shipley Machine Tool Company, The. (See Schellenbach, Lodge, and Chard, assignors.)

Lodge, William. (See Schellenbach, Lodge, and Chard.)

Lombard, Nathaniel, assignor to Holyoke Machine Company, Worcester, Mass. Friction-clutch. No. 1,153,635; Sept. 14; Gaz. vol. 218; p. 489.

London Grave Vault Company, The. (See Sherwood, Charles L., assignor.)

Long, Harry, Kokomo, Ind. Mold for glass spark-plugs and cores. No. 1,153,126; Sept. 7; Gaz. vol. 218; p. 268.

Long Manufacturing Company. (See Lyon, Guy A., assignor.)

Long, Russell L., Morgantown, W. Va. Tooth-brush. No. 1,153,801; Sept. 14; Gaz. vol. 218; p. 546.

Longden, Thomas J., Chelsea, Mass. Brake mechanism for loom let-offs. No. 1,153,636; Sept. 14; Gaz. vol. 218; p. 489.

Longenecker, Rutherford B., Dayton, Ohio. Resilient hub. No. 1,152,956; Sept. 7; Gaz. vol. 218; p. 212.

Lopez, Julius M. (See Butusov, William P., assignor.)

Loring, Benjamin C., assignor to J. A. Moross and R. C. Loring, trustees, Detroit, Mich. Wind-shield cleaner. No. 1,153,848; Sept. 14; Gaz. vol. 218; p. 504.

Loring, Rosanna C., *et al.*, trustees. (See Loring, Benjamin C., assignor.)

Lorraine Manufacturing Company. (See La Vallee, Emmanuel, assignor.)

Lotz, Henry, Lawrence, Mass. Means for locating submarine boats. No. 1,154,522; Sept. 21; Gaz. vol. 218; p. 820.

Louderback, Raymond L., Middletown, Ohio. Horseshoe-calk. No. 1,152,526; Sept. 7; Gaz. vol. 218; p. 54.

Love, Daniel J., Carlisle, Iowa. Stanchion. No. 1,154,706; Sept. 28; Gaz. vol. 218; p. 921.

Lovejoy, Harvey P., Los Gatos, assignor of one-half to A. L. Hollis and one-half to A. C. Carr, San Francisco, Cal. Folding kite. No. 1,153,637; Sept. 14; Gaz. vol. 218; p. 489.

Lovell, Albert K., New Haven, Conn. Window-operating apparatus. No. 1,152,425; Sept. 7; Gaz. vol. 218; p. 16.

Lovering, John W., Sandown, N. H. Cotter-pin-extracting tool. No. 1,153,849; Sept. 14; Gaz. vol. 218; p. 565.

Lowell, Erwin D., Cleveland Heights Village, assignor to The American Fork & Hoe Company, Cleveland, Ohio. Paper casing for hoes. No. 1,152,957; Sept. 7; Gaz. vol. 218; p. 212.

Lowery, Daniel D., Harrisburg, Pa. Game apparatus. No. 1,153,802; Sept. 14; Gaz. vol. 218; p. 546.

Lubell, Julius L., New York, N. Y. Child's garment. No. 1,154,523; Sept. 21; Gaz. vol. 218; p. 829.

Lucas, Owen D., Westminster, London, England. Gas-producer. No. 1,153,506; Sept. 14; Gaz. vol. 218; p. 444.

Luce, Thomas C. (See Lashar and Luce.)

Lucey, John F. (See Cox, Thomas, assignor.)

Ludlow Typograph Company, The. (See Reade, William A., assignor.)

Luehrs, Daniel M., assignor to McCreery Engineering Company, Toledo, Ohio. Spraying device and means for controlling same. No. 1,154,707; Sept. 28; Gaz. vol. 218; p. 922.

Luellen, Lawrence W., Mountain Lakes, N. J., assignor to R. H. Davis, New York, N. Y. Golf tee. No. 1,152,649; Sept. 7; Gaz. vol. 218; p. 100.

Luersen, Fritz, Price, Utah. Clothes-pin. No. 1,155,254; Sept. 28; Gaz. vol. 218; p. 1107.

Lummer, George B., Quincy, Ill. Rail-joint. No. 1,153,397; Sept. 14; Gaz. vol. 218; p. 404.

Lundgren, Edwin. (See Ostergren, Oscar P., assignor.)

Lundgren, John, Detroit, Mich. Die for planing metal articles. No. 1,152,826; Sept. 7; Gaz. vol. 218; p. 164.

Lunkenheimer Company, The. (See Aull, Jerome J., assignor.)

Lunmon, Otto W., and E. Harvey, Denver, Colo. Potential-transformer. No. 1,154,866; Sept. 28; Gaz. vol. 218; p. 974.

Luxmore, William, Chicago, Ill. Flour-sifter. No. 1,152,650; Sept. 7; Gaz. vol. 218; p. 100.

Lydon, Coleman C., Minneapolis, Minn. Table-pad. No. 1,154,036; Sept. 21; Gaz. vol. 218; p. 663.

Lyle, Mervin E., assignor to American Graphophone Company, Bridgeport, Conn. Pressing sound-records. No. 1,152,651; Sept. 7; Gaz. vol. 218; p. 100.

Lyman, Henry J., Newfield, N. J. Automatic regulator and safety appliance for the control of motor-vehicles. No. 1,154,328; Sept. 21; Gaz. vol. 218; p. 763.

Lynch, Daniel E., assignor of one-fourth to C. D. Robbins, one-fourth to P. J. Cronin, and one-fourth to J. J. Lynch, Chicago, Ill. Means for cooling printing-rollers. No. 1,153,308; Sept. 14; Gaz. vol. 218; p. 405.

Lynch, James J., *et al.* (See Lynch, Daniel E., assignor.)

Lynch, Philip, and H. Wochner, Rock Island, Ill. Magnet-charger. No. 1,153,127; Sept. 7; Gaz. vol. 218; p. 269.

Lyon, Guy A., assignor to Long Manufacturing Company, Detroit, Mich. Hinge construction. No. 1,152,958; Sept. 7; Gaz. vol. 218; p. 213.

Lyon & Healy. (See Kirk, Walter L., assignor.)

Lyon, Howard, assignor to Welsbach Light Company, Gloucester City, N. J. Burner-tip. No. 1,154,421; Sept. 21; Gaz. vol. 218; p. 795.

Lyons, Frank A., Charlotte, N. C. Trousers-stretcher. No. 1,153,128; Sept. 7; Gaz. vol. 218; p. 269.

M. Rumely Company. (See Higgins, William H. C., Jr., assignor.)

MacAusland, Earle R., Boston, Mass. Grease-cup. No. 1,155,316; Sept. 28; Gaz. vol. 218; p. 1127.

MacDonald, Karl, Swampscott, Mass. Spray-nozzle. No. 1,153,805; Sept. 14; Gaz. vol. 218; p. 548.

MacGregor, Wallace F., and A. C. Foster, assignors to J. I. Case Threshing Machine Company, Racine, Wis. Straw-bruiser. No. 1,154,292; Sept. 21; Gaz. vol. 218; p. 740.

MacIndoe, John F., assignor, by mesne assignements, to said MacIndoe and J. F. Donahue, Philadelphia, Pa. Bottle-closure. No. 1,153,236; Sept. 14; Gaz. vol. 218; p. 345.

MacNutt, Barry, South Bethlehem, Pa. Revaporizer for internal-combustion engines. No. 1,152,744; Sept. 7; Gaz. vol. 218; p. 133.

MacPherson, Kenneth W., Palmyra, N. Y. Ink-eradicator. No. 1,153,807; Sept. 14; Gaz. vol. 218; p. 548.

MacVane, James, assignor of one-half to W. B. Carpenter, Providence, R. I. Ice-creeper. No. 1,154,646; Sept. 28; Gaz. vol. 218; p. 901.

MacVicar, Frank, Syracuse, N. Y. Axle-mount. No. 1,154,143; Sept. 21; Gaz. vol. 218; p. 699.

Macdonald, Thomas H., assignor to American Graphophone Company, Bridgeport, Conn. Ejector or throw-off for sound-records. No. 1,152,529; Sept. 7; Gaz. vol. 218; p. 55.

Macey, Frank, Govans, Md. Horseshoe-calk. No. 1,154,330; Sept. 21; Gaz. vol. 218; p. 764.

Machlet, Adolph W., Elizabeth, N. J. Case-hardening. No. 1,152,959; Sept. 7; Gaz. vol. 218; p. 213.

Mack, Ernest U., Florence, S. C. Air-brake device. No. 1,153,806; Sept. 14; Gaz. vol. 218; p. 548.

Mackin, John F., Philadelphia, Pa., assignor, by mesne assignments, to L. Maxwell, Cincinnati, Ohio. Rerolling mechanism for musical instruments. No. 1,154,189; Sept. 21; Gaz. vol. 218; p. 714.

Macklind, William R., assignor to G. A. Martin, trustee, Cleveland, Ohio. Mechanism for feeding pulps. No. 1,154,190; Sept. 21; Gaz. vol. 218; p. 714.

Madden, Edward J., assignor to The Hawthorne Manufacturing Company, Inc., Bridgeport, Conn. Clamping device. No. 1,152,530; Sept. 7; Gaz. vol. 218; p. 56.

Madsen, Martin, *et al.* (See Potts, Thomas E., assignor.)

Madsen, Peter, *et al.* (See Potts, Thomas E., assignor.)

Magruder, Charles H., Shelbina, Mo. Grading-machine. No. 1,153,508; Sept. 14; Gaz. vol. 218; p. 445.

Mahoney, Jeremiah L., New Haven, Conn. Machine for forming rolls on rubber nipples. No. 1,154,191; Sept. 21; Gaz. vol. 218; p. 715.

Mailhe, Alphonse. (See Sabatier and Mailhe.)

Mains, Thane H., Dallas, Tex. Transmitting telegraph-relay. No. 1,153,937; Sept. 21; Gaz. vol. 218; p. 629.

Mair, Charles C., *et al.* (See Behm and Vene, assignors.)

Malson, Cyril C., and R. H. Robinson, St. Louis, Mo., assignors to Allino Switch Box Manufacturing Company. Switch-box. No. 1,154,576; Sept. 21; Gaz. vol. 218; p. 848.

Makin, Benjamin. (See Denley, William H., assignor.)

Mallett, Charles J., Kempner, assignor of one-fourth to F. C. Higginbotham, Holland, and one-fourth to R. H. Whigham, Kempner, Tex. Rake. No. 1,154,790; Sept. 28; Gaz. vol. 218; p. 950.

Malm, Arthur T., assignor to Norton Company, Worcester, Mass. Hollow article of refractory material. No. 1,152,428; Sept. 7; Gaz. vol. 218; p. 16.

Malone, Ernest E., Ottawa, Ontario, Canada. Shock-absorber. No. 1,154,996; Sept. 28; Gaz. vol. 218; p. 1019.

Maloney, Michael H., Plymouth, Mass. Spinning mechanism. No. 1,153,237; Sept. 14; Gaz. vol. 218; p. 346.

Maly, Hermann, Guben, Germany. Improving the roving produced on a carding-engine. No. 1,154,870; Sept. 28; Gaz. vol. 218; p. 975.

Mangold, William, Baltimore, Md. Container. No. 1,154,710; Sept. 28; Gaz. vol. 218; p. 923.

Manning, Henry E., New Haven, Conn. Fish-line-reel holder. No. 1,154,123; Sept. 21; Gaz. vol. 218; p. 692.

Mapel, Lewis A., St. Louis, Mo. Air-operated figure. No. 1,155,074; Sept. 28; Gaz. vol. 218; p. 1047.

Marbach, Fritz. (See Vuilliume and Marbach.)

Marchand, Charles, Portland, Oreg. Treating by-product liquors from wood-sulfite plants. No. 1,155,256; Sept. 28; Gaz. vol. 218; p. 1108.

Marcille, Albert W., Thorold, Ontario, Canada. Automatic gas cut-off. No. 1,155,257; Sept. 28; Gaz. vol. 218; p. 1108.

Marcuse, Isaac J., Richmond, Va., assignor to American Can Company, New York, N. Y. Pocket-box. No. 1,152,429; Sept. 7; Gaz. vol. 218; p. 17.

Marcy, Frank E., Salt Lake City, Utah. Screen-grate for ball-mills. No. 1,153,238; Sept. 14; Gaz. vol. 218; p. 346.

Marcy, Frank E., Salt Lake City, Utah. Ball-mill. No. 1,153,239; Sept. 14; Gaz. vol. 218; p. 347.

Marion Steam Shovel Company, The. (See King and Weston, assignors.)

Mark, Clarence, Evanston, and C. Mark, Jr., assignors to C. Mark, Lake Forest, Ill. Applying protective coatings to metallic articles. No. 1,155,317; Sept. 28; Gaz. vol. 218; p. 1127.

Mark, Clayton, Jr. (See Mark, Clarence and C., Jr.)

Markham, Jackson M., Williamsville, Mo. Calendar. No. 1,154,997; Sept. 28; Gaz. vol. 218; p. 1019.

Marks, William, *et al.* (See Behm and Vene, assignors.)

Marland, George L., Dookie, Victoria, Australia. Wrench. No. 1,154,129; Sept. 21; Gaz. vol. 218; p. 715.

Marquardt, Samuel J., Monroeville, Ind. Harvester. No. 1,154,037; Sept. 21; Gaz. vol. 218; p. 663.

Marr, George M., New York, N. Y. Mechanical releasing means for electric brakes. No. 1,154,791; Sept. 28; Gaz. vol. 218; p. 950.

Marrow, William C., Narragansett Pier, R. I., and J. M. Biddle, Washington, D. C. Time-controlled switch for electric lights. No. 1,154,193; Sept. 21; Gaz. vol. 218; p. 715.

Marschalek, Frank, West New York, N. J. Embroidery-machine. No. 1,154,871; Sept. 28; Gaz. vol. 218; p. 975.

Marschalek, Frank, West New York, N. J. Embroidery-machine. No. 1,154,872; Sept. 28; Gaz. vol. 218; p. 976.

Marsden, Herbert E. (See Cook and Marsden.)

Marsh, Franklin, National Home, assignor of one-half to A. C. Grant, Milwaukee, Wis. Muffler attachment for blow-off cocks. No. 1,153,327; Sept. 14; Gaz. vol. 218; p. 377.

Marsh, Wilbur W. (See Morgan, Thomas W., assignor.)

Marshall, Herbert E., New York, N. Y. Hedge-cutter. No. 1,152,531; Sept. 7; Gaz. vol. 218; p. 56.

Marshall, Howard P., and G. E. Daniels, Dayton, Ohio. Dish-washing machine. No. 1,152,532; Sept. 7; Gaz. vol. 218; p. 57.

Martell, Zeno, Bedford, Ohio. Tenon-cutting machine. No. 1,153,938; Sept. 21; Gaz. vol. 218; p. 629.

Martin, Commodore V., assignor of one-fourth to E. Buckles and three-eighths to A. J. Edwards, Indianapolis, Ind. Vending-machine. No. 1,152,533; Sept. 7; Gaz. vol. 218; p. 57.

Martin, Eugene J., assignor of one-fifth to R. W. Thompson, Washington, D. C. Car-window cleaner. No. 1,153,095; Sept. 7; Gaz. vol. 218; p. 269.

Martin, George A., trustee. (See Macklind, William R., assignor.)

Martin, Haakon A., assignor to The National Cash Register Company, Dayton, Ohio. Differential mechanism for accounting-machines. No. 1,153,328; Sept. 14; Gaz. vol. 218; p. 378.

Martin, James S., Dormont borough, assignor of one-half to W. C. Boyd, McKees Rocks, Pa. Dump-car. No. 1,153,939; Sept. 21; Gaz. vol. 218; p. 629.

Martin, Sidney C., Dulwich Village, England. Advertisement device. No. 1,154,124; Sept. 21; Gaz. vol. 218; p. 692.

Martin, William D. (See Kearns and Martin.)

Maschinen- und Apparate-Fabrik A. R. Abrendt & Co. (See Heylandt, Paul, assignor.)

Maschinenfabrik Rockstroh & Schneidernachf. Aktiengesellschaft. (See Horn, Josef, assignor.)

Mason, Irving W., Aberdeen, Wash. Spirit-level. No. 1,154,873; Sept. 28; Gaz. vol. 218; p. 976.

Mason, John T., Kewanee, Ill. Automatic nest-box. No. 1,153,808; Sept. 14; Gaz. vol. 218; p. 549.

Mason, Lewis T. (See Strouvelle and Mason.)

Mason Regulator Company, The, trustee. (See Melcher, George S., assignor.)

Matheny, James W., Mobile, Ala. Convertible step-ladder and ironing-board. No. 1,153,558; Sept. 14; Gaz. vol. 218; p. 463.

Mathews, Frank J., Brill, Wis. Motor-sleigh. No. 1,154,423; Sept. 21; Gaz. vol. 218; p. 795.

Mathews, William N., Wellsburg, W. Va. Glass-furnace. No. 1,152,828; Sept. 7; Gaz. vol. 218; p. 165.

Matsler, David W., Kingston, Okla. Ventilator-fan. No. 1,153,872; Sept. 14; Gaz. vol. 218; p. 573.

Matt, Albert E., Stillwell, Ind. Bottle-stopper. No. 1,153,240; Sept. 14; Gaz. vol. 218; p. 347.

Mattmiller, Charley A. (See Brunker and Mattmiller.)

Matserath, Otto, Aachen, Germany. Apparatus for analyzing gases. No. 1,154,792; Sept. 28; Gaz. vol. 218; p. 950.

Maul, Henry C., assignor to The Michigan Stove Company, Detroit, Mich. Combination coal and gas range. No. 1,154,038; Sept. 21; Gaz. vol. 218; p. 663.

Maurer, Howard T., Philadelphia, Pa. Phonograph-record cabinet. No. 1,154,263; Sept. 21; Gaz. vol. 218; p. 740.

Mausk, Herbert, Lakewood, assignor to The National Malleable Castings Company, Cleveland, Ohio. Hand brake mechanism. No. 1,155,328; Sept. 28; Gaz. vol. 218; p. 1131.

Maxivolt Primary Battery Co. (See Csanyi, Henry, assignor.)

Maxwell, Lawrence. (See Mackin, John F., assignor.)

Maywood Packing Co. (See Beresford, Fred G., assignor.)

McArthur, Warren, Jr., Chicago, Ill. Wick-burner. No. 1,152,742; Sept. 7; Gaz. vol. 218; p. 133.

McBoyle, Joseph, Oakland, Cal. Hose-nozzle. No. 1,152,652; Sept. 7; Gaz. vol. 218; p. 100.

McBroom, Victor. (See McBroom, William V., assignor.)

McBroom, William V., assignor of one-half to V. McBroom, Kankakee, Ill. Sugar container and dispenser. No. 1,155,323; Sept. 28; Gaz. vol. 218; p. 1120.

McCabe, George E., assignor to The Challenge Machinery Company, Incorporated, Grand Haven, Mich. Printing-block system. No. 1,152,827; Sept. 7; Gaz. vol. 218; p. 165.

McCaleb Adding Machine Company. (See McCaleb, Walter F., assignor.)

McCaleb, Walter F., assignor to McCaleb Adding Machine Company, San Antonio, Tex. Adding-machine. No. 1,153,132; Sept. 21; Gaz. vol. 218; p. 269.

McCallum, Jean, Hurley, N. Mex., assignor of two-ninths to W. W. Jourdin and two-ninths to A. W. Harris. Centrifugal separator. No. 1,154,575; Sept. 21; Gaz. vol. 218; p. 847.

McCarroll, Frank, Dallas, Tex. Plane for aeroplanes. No. 1,152,426; Sept. 7; Gaz. vol. 218; p. 16.

McCarroll, Frank, Dallas, Tex. Aeroplane. No. 1,152,743; Sept. 7; Gaz. vol. 218; p. 133.

McCarthy, Charles J., Waterbury, Conn. Strainer. No. 1,153,090; Sept. 7; Gaz. vol. 218; p. 257.

McCarthy, Robert H., Madelia, Minn. Internal-combustion engine. No. 1,154,329; Sept. 21; Gaz. vol. 218; p. 763.

McCaskey Register Company, The. (See Moseley, Emerson B., assignor.)

McCaskey Register Company, The. (See Silvius, Ellis T., assignor.)

McClave, William S. (See Mercier, Joseph T., assignor.)

McClintock, William, New York, N. Y. Hose-rack. No. 1,153,091; Sept. 7; Gaz. vol. 218; p. 257.

McConway & Torley Company, The. (See Kelso, William, assignor.)

McConway & Torley Company, The. (See Milliken, Isaac H., assignor.)

McConway & Torley Company, The. (See Regan, William J., assignor.)

McCormick, Langdon, New York, N. Y. Apparatus for producing illusionary effects. No. 1,154,787; Sept. 28; Gaz. vol. 218; p. 948.

McCormick, Patrick C., Mackinac Island, Mich. Fastening device. No. 1,154,708; Sept. 28; Gaz. vol. 218; p. 922.

McCoughtry, John E., Gary, Ind. Tire. No. 1,155,255; Sept. 28; Gaz. vol. 218; p. 1107.

McCray, Harold E., assignor to Western Motor Appliance Company, Charles City, Iowa. Carbureter. No. 1,153,430; Sept. 14; Gaz. vol. 218; p. 418.

McCreery Engineering Company. (See Luehrs, Daniel M., assignor.)

McCulloh, Allan, *et al.*, executors. (See Kendall, Edward D., assignor.)

McCurdy, Lester S., Thorold, Ontario, Canada. Flow-regulator for paper-making machines. No. 1,154,788; Sept. 28; Gaz. vol. 218; p. 949.

McDade, John J., San Francisco, Cal. Envelop-sealing and stamp-affixing machine. No. 1,153,326; Sept. 14; Gaz. vol. 218; p. 377.

McDade, John J., San Francisco, Cal. Envelop-sealing and stamp-affixing machine. No. 1,153,325; Sept. 14; Gaz. vol. 218; p. 377.

McDaniel, Albert R., Bayfield, Colo., assignor of one-half to C. W. McDaniel, Johnstown, Nebr. Car-door. No. 1,153,803; Sept. 14; Gaz. vol. 218; p. 547.

McDaniel, Charles W. (See McDaniel, Albert R., assignor.)

McDermott, Frank W., Rawlings, Wyo. Glazier's tool. No. 1,153,092; Sept. 7; Gaz. vol. 218; p. 258.

McDonald, James A., assignor to J. D. Zook, Fort Worth, Tex. Combined door-bell and mail-receiver. No. 1,154,422; Sept. 21; Gaz. vol. 218; p. 795.

McDonough, James T., New York, N. Y. Clothes-line apparatus. No. 1,154,524; Sept. 21; Gaz. vol. 218; p. 829.

McEvoy, Joseph H., Houston, Tex. Well-strainer. No. 1,154,709; Sept. 28; Gaz. vol. 218; p. 922.

McFadden, John L., Ness City, Kans. Wire-stretcher. No. 1,153,093; Sept. 7; Gaz. vol. 218; p. 258.

McFarlane, Charles S., Auckland, New Zealand. Rotary pump for gas-producing apparatus. No. 1,153,235; Sept. 14; Gaz. vol. 218; p. 345.

McFeil, Judson, Chicago, Ill. Fire-alarm system. No. 1,152,527; Sept. 7; Gaz. vol. 218; p. 54.

McGarry, James P., South Boston, Mass. Antiskidding-chain for vehicle-wheels. No. 1,153,936; Sept. 21; Gaz. vol. 218; p. 628.

McGeorge, John, assignor to The Cleveland Engineering Company, Cleveland, Ohio. Wheel for self-propelled vehicles. No. 1,155,315; Sept. 28; Gaz. vol. 218; p. 1128.

McGiffert, John R., and T. H. Blair, Duluth, Minn. Interlocking sheaves and means for operating the same. No. 1,152,528; Sept. 7; Gaz. vol. 218; p. 55.

McGillivray, James, Sacramento, Cal. Concrete revetment. No. 1,154,867; Sept. 28; Gaz. vol. 218; p. 974.

McGinty, James, Chicago, Ill. Identification-tag holder. No. 1,153,094; Sept. 7; Gaz. vol. 218; p. 258.

McGonigle, Thomas G., Lambton Mills, Ontario, Canada. Rotary engine. No. 1,154,645; Sept. 28; Gaz. vol. 218; p. 901.

McGuckin, Henry J. (See Walsh, John P., assignor.)

McHenry, Clyde D., Martins Ferry, Ohio. Emulsifier. No. 1,154,868; Sept. 28; Gaz. vol. 218; p. 974.

McHenry, Clyde D., Martins Ferry, Ohio. Gas-generating apparatus. No. 1,154,869; Sept. 28; Gaz. vol. 218; p. 975.

McIntosh, Frances E. (See Smyth, Ezra, assignor.)

McIntosh, James, New York, N. Y. Combined electrolier and telephone-cover. No. 1,153,507; Sept. 14; Gaz. vol. 218; p. 444.

McKee, Harry M. (See Priddy, Miells H., assignor.)

McKee, Neal T. (See True and McKee.)

McKee, William E., Warren, Ariz. Steam-generator. No. 1,152,898; Sept. 7; Gaz. vol. 218; p. 191.

McKinlay, Edward S., Steamboat Springs, Colo. Screen for ores and coal and other material. No. 1,153,804; Sept. 14; Gaz. vol. 218; p. 547.

McKnight, Thomas R., assignor to Western Wheeled Scraper Company, Aurora, Ill. Dump-car. No. 1,154,261; Sept. 21; Gaz. vol. 218; p. 740.

McLaughlin, Hugh E., New York, N. Y. Artificial-stone facing slab or tile. No. 1,152,427; Sept. 7; Gaz. vol. 218; p. 16.

McMahon, J. A. (See Baylis, Everest A., assignor.)

McMullen, John, Butte, Mont. Antiskidding and traction appliance for vehicle-wheels. No. 1,154,525; Sept. 21; Gaz. vol. 218; p. 829.

McNish, Andrew, New Suffolk, N. Y. Trimmer. No. 1,154,789; Sept. 28; Gaz. vol. 218; p. 949.

McVey, Ambrose, Wilmington, Del. Switch-shifter. No. 1,154,526; Sept. 21; Gaz. vol. 218; p. 830.

Mead, Cyrus E., assignor to Mead Engine Company, Dayton, Ohio. Explosive-engine. No. 1,154,647; Sept. 28; Gaz. vol. 218; p. 902.

Mead Engine Company. (See Mead, Cyrus E., assignor.)

Meade, James, Stoughton, Mass. Coating apparatus. No. 1,154,874; Sept. 28; Gaz. vol. 218; p. 976.

Meade, James, Stoughton, Mass. Coating fabrics. No. 1,154,875; Sept. 28; Gaz. vol. 218; p. 977.

Meadors, F. R. (See Bowland, Frank Y., assignor.)

Meakin, George C., New York, N. Y. Toe or heel plate for shoes. No. 1,155,258; Sept. 28; Gaz. vol. 218; p. 1108.

Mears, Charles W., and B. B. West, Cleveland, Ohio; said West assignor to said Mears. Machine for stitching books. No. 1,152,534; Sept. 7; Gaz. vol. 218; p. 58.

Mears, William N., Brookline, assignor to American Rotary Motor Company, Boston, Mass. Rotary engine. No. 1,152,535; Sept. 7; Gaz. vol. 218; p. 58.

Mechanical Appliance Company, The. (See Reinhard, Louis, assignor.)

Medley, Robert, Manchester, England. Foldable-hood fittings of vehicles. No. 1,154,527; Sept. 21; Gaz. vol. 218; p. 830.

Megrath, Estate of William A. (See Kendall, Edward D., assignor.)

Megular, Charles W., Sonora, Ky. Combination resilient clip and article-holder. No. 1,154,528; Sept. 21; Gaz. vol. 218; p. 830.

Meier, Edward C., Phoenixville, Pa. Header. No. 1,154,194; Sept. 21; Gaz. vol. 218; p. 715.

Meier, Ernst, Neubeckum, Germany. Valve for automatically stopping the supply of liquid to pipes upon breaking of the latter. No. 1,153,850; Sept. 14; Gaz. vol. 218; p. 565.

Meiselbach, August D., assignor to Handy Bicycle Company, Chicago, Ill. Bicycle attachment. No. 1,155,324; Sept. 28; Gaz. vol. 218; p. 1130.

Melcher, George S., Sharon, Mass., assignor to The Mason Regulator Company, trustee. Feed-pressure regulator. No. 1,155,076; Sept. 28; Gaz. vol. 218; p. 1047.

Melchert, Charles A., assignor to Automatic Machine Manufacturing Company, Kansas City, Mo. Vending-machine. No. 1,152,430; Sept. 7; Gaz. vol. 218; p. 17.

Melenbacker, Arthur H., Kansas City, Mo. Alcohol-torch. No. 1,152,745; Sept. 7; Gaz. vol. 218; p. 134.

Melheim, Herman L., Hanska, Minn. Wrench. No. 1,153,390; Sept. 14; Gaz. vol. 218 p. 405.

Mellin, Carl J., Schenectady, N. Y. Fluid-pressure turbine. No. 1,154,648; Sept. 28; Gaz. vol. 218; p. 902.

Mello, Manoel E., *et al.* (See Simao, Antonio P., assignor.)

Melocco, Hugo, Budapest, Austria-Hungary. Watch. No. 1,153,559; Sept. 14; Gaz. vol. 218; p. 463.

Meltzer, Edward, New York, N. Y., assignor, by mesne assignments, to Hydrocarbon Burner & Manufacturing Company. Hydrocarbon-burner. No. 1,152,746; Sept. 7; Gaz. vol. 218; p. 134.

Meluzzi, Luis, Buenos Aires, Argentina. Game-table. No. 1,154,529; Sept. 21; Gaz. vol. 218; p. 831.

Mens, Emil, and J. L. Jackson, Hamilton, assignors, by mesne assignments, to The Computing Scale Company, Dayton, Ohio. Tare-beam for scales. No. 1,155,259; Sept. 28; Gaz. vol. 218; p. 1108.

Menzies, James, New Orleans, La. Conveyer for levee construction. No. 1,153,851; Sept. 14; Gaz. vol. 218; p. 565.

Mercié, Henri A. (See Benét and Mercié.)

Mercier, Joseph T., assignor of one-half to W. S. McClave, Chicago, Ill. Heating appliance. No. 1,153,096; Sept. 7; Gaz. vol. 218; p. 269.

Mergen, Joseph F. (See Gates, Arthur L., assignor.)
Mergenthaler Linotype Company. (See Albrecht, Christian A., assignor.)
Mergenthaler Linotype Company. (See Bloch, Bruno, assignor.)
Mergenthaler Linotype Company. (See Hoyer, Anton, assignor.)
Mergenthaler Linotype Company. (See Kennedy, David S., assignor.)
Mergenthaler Linotype Company. (See Muehleisen, Carl, assignor.)
Mergenthaler Linotype Company. (See Rogers, John R., assignor.)
Mergenthaler Linotype Company. (See Taft, Henry D., assignor.)
Merk, S. D., *et al.* (See Wheeler, Richard, assignor.)
Merkt, Gustav A., Worcester, Mass., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J. Rail-bond. No. 1,154,264; Sept. 21; Gaz. vol. 218; p. 741.
Merriam, Harry C., and L. M. York, Edmonton, Alberta, Canada. Carbureter. No. 1,154,530; Sept. 21; Gaz. vol. 218; p. 831.
Merrick, Frank W., assignor to Union Lock Stitch Company, Boston, Mass. Work-support for sewing-machines. No. 1,155,318; Sept. 28; Gaz. vol. 218; p. 1128.
Messinger, George E., Birmingham, Ala. Coin-vending machine. No. 1,154,711; Sept. 28; Gaz. vol. 218; p. 923.
Messinger, William, Philadelphia, Pa. Hydraulic jack. No. 1,152,829; Sept. 7; Gaz. vol. 218; p. 165.
Metal Molds Compressed Castings Company. (See Craig, Alvin M., assignor.)
Metals Coating Company of America. (See Morf, Erika, assignor.)
Metcalf, Walter E., Hudson Falls, N. Y. Paper-making machine. No. 1,152,747; Sept. 7; Gaz. vol. 218; p. 135.
Meuwly, Alex J. (See Brown and Meuwly.)
Meyer, Arthur, Berlin, Germany. Trick writing implement. No. 1,153,809; Sept. 14; Gaz. vol. 218; p. 549.
Meyer, Charles L., Omaha, Nebr. Mold for concrete columns. No. 1,154,998; Sept. 28; Gaz. vol. 218; p. 1019.
Meyer, Gertrude C. (See Balz, Robert J., assignor.)
Meyer, Henry F. W., Washington, D. C. Sanitary seat-cover. No. 1,155,260; Sept. 28; Gaz. vol. 218; p. 1108.
Meyer, Israel, Seattle, Wash. Lawn-mower grinder. No. 1,154,712; Sept. 28; Gaz. vol. 218; p. 923.
Meyer, William C., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Inseam-trimming machine. No. 1,154,713; Sept. 28; Gaz. vol. 218; p. 923.
Meyers, Harry R. and W. R., New York, N. Y. Ball-playing, exercising, and practising apparatus. No. 1,152,748; Sept. 7; Gaz. vol. 218; p. 135.
Meyers, William R. (See Meyers, Harry R. and W. R.)
Micell, Angelo, assignor to Angelo Micell Unsinkable Vessel Company, Boston, Mass. Floating device for vessels. No. 1,154,195; Sept. 21; Gaz. vol. 218; p. 716.
Michigan Cash Register Company. (See Cleal, Joseph P., assignor.)
Michigan Safety Furnace Pipe Company. (See Stearns, Isaac, assignor.)
Michigan Stamping Company. (See Cope, Henry P., assignor.)
Michigan Stove Company, The. (See Maul, Henry C., assignor.)
Midgley, Thomas, Worthington, Ohio, assignor to Morgan & Wright, Detroit, Mich. Elastic vehicle-tire. No. 1,152,830; Sept. 7; Gaz. vol. 218; p. 166.
Might, Lincoln, Battleford, Saskatchewan, Canada. Automatic windmill. No. 1,154,930; Sept. 28; Gaz. vol. 218; p. 997.
Milentz, Arnold L., St. Louis, Mo. Glass-cutting machine. No. 1,162,653; Sept. 7; Gaz. vol. 218; p. 101.
Miller, Anthony E., Detroit, Mich. Propeller. No. 1,154,649; Sept. 28; Gaz. vol. 218; p. 902.
Miller, Calvin, Bluffton, Ohio. Gate. No. 1,153,560; Sept. 14; Gaz. vol. 218; p. 464.
Miller, Carmi A., assignor of one-half to J. F. Miller, Spring Valley, Ill. Muffler. No. 1,153,097; Sept. 7; Gaz. vol. 218; p. 260.
Miller, Christ, Westbrook, Minn. Safety-envelop. No. 1,153,940; Sept. 21; Gaz. vol. 218; p. 630.
Miller, Dicey, Bennington, Vt. Combination sad-iron heater and cooking utensil. No. 1,154,714; Sept. 28; Gaz. vol. 218; p. 924.
Miller, Frank A., Montgomery, Ala. Rotary explosive-engine. No. 1,153,169; Sept. 7; Gaz. vol. 218; p. 282.
Miller, George C. D., assignor to Cary Manufacturing Company, New York, N. Y. Fastener for crates, boxes, &c. No. 1,153,941; Sept. 21; Gaz. vol. 218; p. 630.
Miller, George J., assignor to Wise Brothers, Baltimore, Md. Combined waist-line supporting and adjusting means for garments. No. 1,154,584; Sept. 21; Gaz. vol. 218; p. 851.
Miller, Harry B., Boston Corners, N. Y. Filter. No. 1,153,437; Sept. 14; Gaz. vol. 218; p. 419.
Miller, Horace E., Newark, assignor to The Sillcocks-Miller Company, South Orange, N. J. Bottle. No. 1,154,931; Sept. 28; Gaz. vol. 218; p. 997.
Miller, John F. (See Miller, Carmi A., assignor.)
Miller, Orin J., Hurdsfield, N. D. Grain-door. No. 1,153,509; Sept. 14; Gaz. vol. 218; p. 445.
Miller, Robert R., Toledo, Ohio. Appliance for measuring and computing heights and distances. No. 1,153,098; Sept. 7; Gaz. vol. 218; p. 260.
Miller, Thomas, Craig, Miss. Bolt and nut therefor. No. 1,154,265; Sept. 21; Gaz. vol. 218; p. 741.
Miller, Thomas W., assignor to The Faultless Rubber Company, Ashland, Ohio. Manufacture of rubber bands. No. 1,155,325; Sept. 28; Gaz. vol. 218; p. 1130.
Miller, Willoughby S., Reading, Pa. Automobile-wheel. No. 1,154,876; Sept. 28; Gaz. vol. 218; p. 977.
Millers Falls Company. (See Leland, John A., assignor.)
Milliken, Frank W., assignor of one-half to C. C. Brown, Auburn, Me. Automatic sprinkler alarm and indicator system. No. 1,153,400; Sept. 14; Gaz. vol. 218; p. 405.
Milliken, Isaac H., Aspinwall, assignor to The McConway & Torley Company, Pittsburgh, Pa. Coupling-operating mechanism. No. 1,154,039; Sept. 21; Gaz. vol. 218; p. 664.
Milliken, Isaac H., Aspinwall, assignor to The McConway & Torley Company, Pittsburgh, Pa. Coupling-controlling mechanism. No. 1,154,040; Sept. 21; Gaz. vol. 218; p. 664.
Mills, Bertie E., assignor to Mills Novelty Co., Chicago, Ill. Coin-operated weighing-scale. No. 1,155,077; Sept. 28; Gaz. vol. 218; p. 1048.
Mills, David B., Montclair, N. J., assignor to Pasha Spark Plug Company. Spark-plug. No. 1,153,942; Sept. 21; Gaz. vol. 218; p. 631.
Mills, Herbert S., Chicago, Ill. Coin-operated weighing-scale. No. 1,155,078; Sept. 28; Gaz. vol. 218; p. 1048.
Mills Novelty Co. (See Mills, Bertie E., assignor.)
Mills, Radcliffe B. (See Sack, Herman R., assignor.)
Milne, Russell A., assignor of one-half to A. C. Picard, Detroit, Mich. Adjustable nozzle for atomizing oil. No. 1,153,401; Sept. 14; Gaz. vol. 218; p. 406.
Milward, Victor T., Dayton, Wyo. Measuring device. No. 1,153,810; Sept. 14; Gaz. vol. 218; p. 549.
Miner, William H. (See Bock, William A., assignor.)
Miner, William H. (See Johnson, George A., assignor.)
Miner, William H. (See O'Connor, John F., assignor.)
Miner, William H., Chazy, N. Y. Draft-rigging for railway-cars. No. 1,155,079; Sept. 28; Gaz. vol. 218; p. 1049.
Minton, Willis H. (See Dew and Minton.)
Mitchell, Clarence D., Reed, Ky. Barrel-lid. No. 1,155,261; Sept. 28; Gaz. vol. 218; p. 1109.
Mitchell, Harry J., Wilmerding, Pa. Toy. No. 1,154,331; Sept. 21; Gaz. vol. 218; p. 764.
Mitchell, Marcus J., Youngstown, Ohio. Penholder. No. 1,154,332; Sept. 21; Gaz. vol. 218; p. 764.
Mittasch, Alwin. (See Bosch, Mittasch, Wolf, and Stern.)
Mock, Otto D., Louisville, Ky. Hose-rack. No. 1,155,262; Sept. 28; Gaz. vol. 218; p. 1109.
Moeng, Edward D. (See Williams, Edward C., assignor.)
Moffat, Albert S., Belmont, Mass., assignor to Kuns-Garniss Company. Telephone-receiver. No. 1,152,536; Sept. 7; Gaz. vol. 218; p. 58.
Moine, Selest E., Tulia, Tex. Vignetter for cameras. No. 1,155,080; Sept. 28; Gaz. vol. 218; p. 1049.
Moldenhauer, Frederick W., Oconomowoc, and S. E. Jones, Hustisford, assignors to Wisconsin Stable Equipment Company, Oconomowoc, Wis. Stall equipment. No. 1,154,715; Sept. 21; Gaz. vol. 218; p. 924.
Moline Plow Company. (See Lindgren, Alexus C., assignor.)
Moller, Christian C., and J. J. Bollerup, Audubon, Iowa. Beet-harvester. No. 1,155,319; Sept. 28; Gaz. vol. 218; p. 1128.
Moller, H. Esk, *et al.*, executors. (See Kendall, Edward D., assignor.)
Moloney, Simon J., Chicago, Ill. Screw. No. 1,152,960; Sept. 7; Gaz. vol. 218; p. 214.
Monarch Telephone Manufacturing Company. (See Steinke, August W., assignor.)
Monks, Allan B. (See Lee and Monks.)
Montague, Hubert H., Traverse City, Mich. Lawn-mower. No. 1,153,943; Sept. 21; Gaz. vol. 218; p. 631.
Monteagle, Robert C., West Newton, Mass. Pipe-strainer. No. 1,152,831; Sept. 7; Gaz. vol. 218; p. 166.
Montgomery, Gustavus A., assignor of one-fourth to J. Barnett, Oilfields, Cal. Drive-shoe. No. 1,153,811; Sept. 14; Gaz. vol. 218; p. 550.
Montgomery, Gustavus A., assignor of one-third to R. H. Stichel, Oilfields, Cal. Rope-socket. No. 1,153,812; Sept. 14; Gaz. vol. 218; p. 550.
Montmeat, John D., *et al.* (See Hammond, Robert O., assignor.)
Moon-Hopkins Billing Machine Company. (See Hopkins, William W., assignor.)
Moon-Hopkins Billing Machine Company. (See Thieme, Otto, assignor.)
Moore, Chauncey H., assignor of one-fourth to G. L. Holtzapple, one-fourth to F. M. Weaver, and one-fourth to R. A. Holden, Bellwood, Pa. Smoke-consuming furnace. No. 1,154,877; Sept. 28; Gaz. vol. 218; p. 977.
Moore, Henry J., Niagara Falls, Ontario, Canada. Window-conservatory. No. 1,152,899; Sept. 7; Gaz. vol. 218; p. 191.
Moore, Jesse C., Mountain View, Okla. Clutch device. No. 1,154,196; Sept. 21; Gaz. vol. 218; p. 715.
Moore, Oliver P., Spokane, Wash. Oil-burning smelting-furnace. No. 1,153,561; Sept. 14; Gaz. vol. 218; p. 464.
Moore, Thomas J. and W. V., Sandusky, Mich. Bridge. No. 1,153,099; Sept. 7; Gaz. vol. 218; p. 261.

Moore, William C., Detroit, Mich. Connecting-rod bearing. No. 1,154,650; Sept. 28; Gaz. vol. 218; p. 903.
Moore, William V. (See Moore, Thomas J. and W. V.)
Moose Mountain. (See Herrmann, Charles E., assignor.)
Moran, James J., assignor of one-half to W. J. Schultz, Maricopa, Cal. Vehicle-spring. No. 1,154,999; Sept. 28; Gaz. vol. 218; p. 1019.
Morand, Charles H., Los Angeles, Cal. Fire-escape. No. 1,152,961; Sept. 7; Gaz. vol. 218; p. 214.
Mordey, William M., Westminster, London, J. W. Astley and D. B. Saunderson, Prescot, England. Conductor-support. No. 1,153,813; Sept. 14; Gaz. vol. 218; p. 550.
More, George, Richmond Hill, N. Y. Portage device for ash-cans and the like. No. 1,155,081; Sept. 28; Gaz. vol. 218; p. 1050.
Morf, Erika, Zurich, Switzerland, assignor, by mesne assignments, to Metals Coating Company of America, Boston, Mass. Coating with aluminium. No. 1,154,651; Sept. 28; Gaz. vol. 218; p. 903.
Morgan, Clyde E., Holdenville, Okla. Mine-car brake. No. 1,154,041; Sept. 21; Gaz. vol. 218; p. 664.
Morgan Construction Company. (See Jefferies, Ebeneser A. W., assignor.)
Morgan, Richard T. (See Tomlin, James, assignor.)
Morgan, Thomas W., assignor to W. W. Marsh, Waterloo, Iowa. Magneto-generator. No. 1,153,944; Sept. 21; Gaz. vol. 218; p. 631.
Morgan & Wright. (See Midgley, Thomas, assignor.)
Morin, Edward J., Wynot, Nebr. Non-refillable bottle. No. 1,154,531; Sept. 21; Gaz. vol. 218; p. 831.
Morison, Donald B., Hartlepool, England. Steam-condenser. No. 1,153,814; Sept. 14; Gaz. vol. 218; p. 551.
Moross, Joseph A., *et al.*, trustees. (See Loring, Benjamin C., assignor.)
Morris, Anthony S., Haverford, Pa. Press. No. 1,153,638; Sept. 14; Gaz. vol. 218; p. 490.
Morscher, Lawrence N., Lawrence, Kans., assignor to himself and I. Hill. Automatic liquid-weighing apparatus. No. 1,154,042; Sept. 21; Gaz. vol. 218; p. 665.
Morse, Arthur R., Chicago, Ill. Continuous cooker or evaporator. No. 1,153,170; Sept. 7; Gaz. vol. 218; p. 283.
Mortara, Hugo, assignor to Kabo Corset Co., Chicago, Ill. Buckle. No. 1,153,100; Sept. 7; Gaz. vol. 218; p. 261.
Mortensen, Martin. (See Ohlsen, Ulrich, assignor.)
Morton, Lawrence D., assignor to The Hinde & Dauch Paper Company, Sandusky, Ohio. Handle for paper boxes. No. 1,154,043; Sept. 21; Gaz. vol. 218; p. 665.
Moseley, Emerson B., assignor, by mesne assignments, to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,153,562; Sept. 14; Gaz. vol. 218; p. 464.
Moseley, Emerson B., assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio. Filing appliance. No. 1,154,593; Sept. 21; Gaz. vol. 218; p. 854.
Mosler, Arthur R. (See Furber, Frederick M., assignor.)
Mosler, Moses, Cincinnati, and C. Bartels, Hamilton, Ohio, assignors to The Mosler Safe Company, New York, N. Y. Safe construction. No. 1,153,329; Sept. 14; Gaz. vol. 218; p. 378.
Mosler, Moses, Cincinnati, and C. Bartels, Hamilton, Ohio, assignors to The Mosler Safe Company, New York, N. Y. Grinding-machine. No. 1,153,510; Sept. 14; Gaz. vol. 218; p. 446.
Mosler Safe Company, The. (See Mosler and Bartels, assignors.)
Mosling, Bernhard A. (See Besserdich, William A., assignor.)
Moss, Arthur H., Misterton, Gainsborough, England. Grinding or crushing machinery. No. 1,154,532; Sept. 21; Gaz. vol. 218; p. 832.
Mom, Sanford A., Lynn, Mass., assignor to General Electric Company. Governing mechanism for turbines. No. 1,154,533; Sept. 21; Gaz. vol. 218; p. 832.
Mostoller, Mervin, Stoyestown, Pa. Poison-bottle. No. 1,155,082; Sept. 28; Gaz. vol. 218; p. 1050.
Motoring Clock Manufacturing Company. (See Dale, Frank M., assignor.)
Mouawad, John J., Newark, N. J. Exhibitor. No. 1,155,083; Sept. 28; Gaz. vol. 218; p. 1050.
Moulthrop, Charles B., and L. C. Jackson, Buffalo, N. Y. Wrench. No. 1,155,158; Sept. 28; Gaz. vol. 218; p. 1077.
Moulton, James N., Haverhill, assignor to Walpole Shoe Supply Company, Boston, Mass. Machine for preparing insoles. No. 1,154,716; Sept. 28; Gaz. vol. 218; p. 924.
Muchnic, Harry E., Atchison, Kans. Railway grade-crossing. No. 1,154,534; Sept. 21; Gaz. vol. 218; p. 832.
Muckenhirn, Charles H., Detroit, Mich. Water-closet. No. 1,152,962; Sept. 7; Gaz. vol. 218; p. 214.
Muehleisen, Carl, Berlin, Germany, assignor to Mergenthaler Linotype Company. Typographical composing-machine. No. 1,153,511; Sept. 14; Gaz. vol. 218; p. 446.
Mueller, George E., La Grange, assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Non-interfering switch device. No. 1,152,963; Sept. 7; Gaz. vol. 218; p. 214.
Mueller, Oscar W., Cincinnati, Ohio. Turning or boring appliance. No. 1,153,241; Sept. 14; Gaz. vol. 218; p. 347.
Muench, Carl G., St. Paul, Minn. Thermo non-conductor. No. 1,153,512; Sept. 14; Gaz. vol. 218; p. 446.
Muffley, John F. (See Freeman, James D., assignor.)
Mühlbach, Ferdinand, New York, N. Y. Horseshoe-attachment-securing means. No. 1,153,101; Sept. 7; Gaz. vol. 218; p. 261.
Muirhead, William J. A., Seattle, Wash. Furnace. No. 1,154,717; Sept. 28; Gaz. vol. 218; p. 925.
Mullaney, Thomas F., New York, N. Y. Self-locking pin. No. 1,152,749; Sept. 7; Gaz. vol. 218; p. 135.
Mullen, Simon S., Watertown, Wis. Eye-shield. No. 1,152,431; Sept. 7; Gaz. vol. 218; p. 17.
Müller, Richard, Eilenburg, Germany. Manufacture of organic acid anhydrids or of mixtures of such anhydrids with their acids. No. 1,153,402; Sept. 14; Gaz. vol. 218; p. 406.
Munker, Conrad, Washington, D. C. Aeroplane. No. 1,152,432; Sept. 7; Gaz. vol. 218; p. 17.
Munschy, George J., New York, N. Y. Bottle attachment. No. 1,154,535; Sept. 21; Gaz. vol. 218; p. 833.
Muojo, Arturo, Brooklyn, N. Y. Ventilating safety-window. No. 1,152,900; Sept. 7; Gaz. vol. 218; p. 191.
Murphy, Edwin J., Schenectady, N. Y., assignor to General Electric Company. Circuit-controller. No. 1,154,266; Sept. 21; Gaz. vol. 218; p. 741.
Murphy, Thomas J., Rochester, N. Y. Time-switch. No. 1,152,433; Sept. 7; Gaz. vol. 218; p. 18.
Murray, George C., Chicago, Ill., assignor to Keyoke Railway Equipment Company. Draw-bar yoke. No. 1,153,242; Sept. 14; Gaz. vol. 218; p. 348.
Murray, George M., West Duluth, Minn. Chimney-hood. No. 1,154,044; Sept. 21; Gaz. vol. 218; p. 666.
Murray and Jacobs Manufacturing Company. (See Jacobs, Charles B., assignor.)
Murset, Jacob, Brooklyn, N. Y. Watchcase construction. No. 1,152,537; Sept. 7; Gaz. vol. 218; p. 59.
Musselman, Alvin J., assignor to Cycle Mfg. & Supply Company, Chicago, Ill. Luggage-carrier. No. 1,154,197; Sept. 21; Gaz. vol. 218; p. 716.
Mustin, Henry C., U. S. Navy. Attachment for telescopes. No. 1,153,945; Sept. 21; Gaz. vol. 218; p. 631.
Muth, Augustus W., Sparks, Ga. Mail delivering and catching device. No. 1,153,102; Sept. 7; Gaz. vol. 218; p. 261.
Muxxy, William H., assignor to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,153,330; Sept. 14; Gaz. vol. 218; p. 379.
Myratt, Otis A., Paris, France, assignor to Holophane Glass Company, New York, N. Y. Glass manufacturing. No. 1,155,000; Sept. 28; Gaz. vol. 218; p. 1020.
Myre, Edward Z. (See Brock and Myre.)
Naito, Kwangaburo, Atlantic City, N. J. Wind-wheel toy. No. 1,155,263; Sept. 28; Gaz. vol. 218; p. 1109.
Nale, Franklin P., and E. J. Hudnall, Birmingham, Ala. Back for fireplaces. No. 1,154,045; Sept. 21; Gaz. vol. 218; p. 666.
Nalon, Thomas M. (See Iler and Nalon.)
Nash, Engelhardt, Silva Mfg. Co. (See Keast, Alfred J., assignor.)
Nashua Machine Company. (See Littlefield, Frank A., assignor.)
Nastef, Benjamin J., Rochester, N. Y. Folding camera. No. 1,154,046; Sept. 21; Gaz. vol. 218; p. 666.
Nathan Manufacturing Company, The. (See Kassander, Leopold, assignor.)
Nathan Manufacturing Company, The. (See Kassander and Leverett, assignors.)
National-Acme Manufacturing Company, The. (See Smith, Oscar A., assignor.)
National Brake & Electric Company. (See Aikman, Burton S., assignor.)
National Carbon Company. (See Clark, Emerson L., assignor.)
National Carbon Company. (See Hill, Charles W., assignor.)
National Cash Register Company, The. (See Forth, Charles, assignor.)
National Cash Register Company, The. (See Jacob, Max, assignor.)
National Cash Register Company, The. (See Leidigh, John J., assignor.)
National Cash Register Company, The. (See Martin, Haakon A., assignor.)
National Cash Register Company, The. (See Muxxy, William H., assignor.)
National Cash Register Company, The. (See Von Pein, Edward J., assignor.)
National Cash Register Company, The. (See Vuillaume and Marbach, assignors.)
National Cash Register Company. (See Werner, John A., assignor.)
National Equipment Company. (See Clemens, Charles, assignor.)
National Malleable Castings Company. (See Bixby, Allan S., assignor.)
National Malleable Castings Company, The. (See Mauck, Herbert, assignor.)
National Malleable Castings Company, The. (See Tower, Clinton A., assignor.)
National Metal Seal Corporation. (See Doldt, John E., assignor.)
National Paper Products Co. (See Aicher and Lazar, assignors.)

National Piano Manufacturing Company. (See Carlson, Karl O., assignor.)
National Piano Manufacturing Company. (See Green, Clifford H., assignor.)
National Piano Manufacturing Company. (See Sherman, Edgar B., assignor.)
National Regulator Company. (See Larson, John M., assignor.)
National Service Selling Company. (See Church, Philetus M., assignor.)
National Supply Company, The. (See Stewart, Andrew M., assignor.)
National Tape Company. (See Sharp, Robert S., assignor.)
National Tube Company. (See Heggie, David, assignor.)
National Tube Company. (See Thomas, John B., assignor.)
Natterer, Joseph, Newark, N. J. Metallic mat. No. 1,153,698; Sept. 14; Gaz. vol. 218; p. 510.
Naugle, Ingle R., Amesville, Ohio. Music-leaf turner. No. 1,152,538; Sept. 7; Gaz. vol. 218; p. 59.
Naumburg, Robert E., New York, N. Y. Mechanical movement. No. 1,154,198; Sept. 21; Gaz. vol. 218; p. 717.
Naylor, Isaac B., New York, N. Y. Irrigation-pipe. No. 1,152,001; Sept. 7; Gaz. vol. 218; p. 102.
Naylor, Isaac B., New York, N. Y. Irrigation. No. 1,153,332; Sept. 14; Gaz. vol. 218; p. 380.
Neal, Harry W., Indianapolis, Ind. Register-shield. No. 1,152,539; Sept. 7; Gaz. vol. 218; p. 59.
Neale, William M., Greenville, S. C. Cotton-seed press. No. 1,153,103; Sept. 7; Gaz. vol. 218; p. 262.
Neeley, George S., St. Louis, Mo., assignor, by mesne assignments, to General Electric Company. Apparatus for regulating the field density of electric generators. No. 1,155,001; Sept. 28; Gaz. vol. 218; p. 1020.
Neeper, Alexander M. (See Stiefel, Henry C., assignor.)
Neff, James R., Indianapolis, Ind. Bottle-cap perforator and remover. No. 1,154,718; Sept. 28; Gaz. vol. 218; p. 925.
Neff, Lambert G., New York, N. Y., and J. J. Taylor, Richmond, Vt. Hemming attachment for sewing-machines. No. 1,155,159; Sept. 28; Gaz. vol. 218; p. 1077.
Neistadt, Henry, Ames, Iowa, assignor to The Stanley Rule & Level Company, New Britain, Conn. Clapboard-marker. No. 1,153,171; Sept. 7; Gaz. vol. 218; p. 284.
Nelles, Anton, Neuenahr, Germany. Injector-burner for furnaces. No. 1,153,639; Sept. 14; Gaz. vol. 218; p. 490.
Nelson, Charles, New York, assignor to S. Sternau & Company, Brooklyn, N. Y. Alcohol-lamp. No. 1,154,125; Sept. 21; Gaz. vol. 218; p. 693.
Nelson, Charles A., assignor to Savage Arms Company, Utica, N. Y. Firearm. No. 1,152,750; Sept. 7; Gaz. vol. 218; p. 136.
Nelson, Erik W. (See Carleton and Nelson.)
Nelson, John W., and J. C. Scoggins, Viola, Kans. Sanitary closet. No. 1,153,815; Sept. 14; Gaz. vol. 218; p. 551.
Nelson, Nils G., Oak Park, assignor to W. H. Grimm, Chicago, Ill. Window-sash lock. No. 1,155,084; Sept. 28; Gaz. vol. 218; p. 1051.
Nernst Lamp Company. (See Roffy, Joseph T., assignor.)
Nestel, Oslas, New Haven, Conn. Stove. No. 1,153,243; Sept. 14; Gaz. vol. 218; p. 348.
Neville, George, Vancouver, British Columbia, Canada. Railway-crossing alarm. No. 1,154,047; Sept. 21; Gaz. vol. 218; p. 667.
New Britain Machine Company, The. (See Baker and De Long, assignors.)
New Jersey Carbureter Company. (See Heath, Forrest A., assignor.)
New Jersey Patent Company. (See Edison, Thomas A., assignor.)
New Jersey Patent Company. (See Langley, Sam G., assignor.)
New York Cigarette Machine Company. (See Drucklieb, Paul A., assignor.)
New York Sewage Disposal Company, The. (See Robinson and Wagner, assignors.)
Newcomer, Martin, New York, N. Y., assignor to Volotone Company, Elizabeth, N. J. Player-piano. No. 1,152,540; Sept. 7; Gaz. vol. 218; p. 59.
Newell, Warren P., Horton, Kans. Broom. No. 1,153,104; Sept. 7; Gaz. vol. 218; p. 262.
Newhall, Henry B. (See Pleister, Henry W., assignor.)
Newhold, Harry, Holywell, St. Albans, England. Apparatus for the production of toric or toroidal surfaces of spectacle and eyeglass lenses. No. 1,154,199; Sept. 21; Gaz. vol. 218; p. 717.
Newton, William G., assignor to The Peck Bros. & Co., New Haven, Conn. Bath or basin waste. No. 1,155,085; Sept. 28; Gaz. vol. 218; p. 1052.
Nichol, John C., Perth, Ontario, Canada. Jar-closure or the like. No. 1,153,563; Sept. 14; Gaz. vol. 218; p. 465.
Nichol, John C., Perth, Ontario, Canada. Combined window-sash holder and lock. No. 1,153,564; Sept. 14; Gaz. vol. 218; p. 465.
Nichols, George S., Freeport, Me. Wheelbarrow. No. 1,154,536; Sept. 21; Gaz. vol. 218; p. 833.
Nichols, Robert M., assignor of one-fourth to T. Williams, San Francisco, and one-fourth to W. S. Chapman, Oakland, Cal. Pump. No. 1,153,816; Sept. 14; Gaz. vol. 218; p. 552.
Nicolet, Benjamin H. (See Bacon and Nicolet.)
Nielsen, Wilhelm, Bielefeld, Germany. Manufacture of dental models. No. 1,152,964; Sept. 7; Gaz. vol. 218; p. 215.
Nikolai, Peter, Mellen, Wis. Car-stake pocket. No. 1,154,719; Sept. 28; Gaz. vol. 218; p. 925.
Nivling, Walter A., Boston, Mass. Apparatus for sizing yarns. No. 1,153,244; Sept. 14; Gaz. vol. 218; p. 348.
Nivling, Walter A., Boston, Mass. Sizing yarns. No. 1,153,245; Sept. 14; Gaz. vol. 218; p. 349.
Nixon, Lewis, New York, N. Y. Incendiary projectile. No. 1,153,513; Sept. 14; Gaz. vol. 218; p. 447.
Noble, Donald, Bridgeport, Conn., assignor to The Singer Manufacturing Company. Needle-guard for sewing-machines. No. 1,155,086; Sept. 28; Gaz. vol. 218; p. 1052.
Noesting Pin Ticket Company, The. (See Dunham, William G., assignor.)
Noggle, Sherman W., Kansas City, Mo. Dough mixing and kneading machine. No. 1,153,246; Sept. 14; Gaz. vol. 218; p. 349.
Nolte, Christian F., New York, N. Y. Ash-sifter. No. 1,154,932; Sept. 28; Gaz. vol. 218; p. 997.
Norquist, Emanuel E., assignor of one-half to Oxygen Gas Company, Kansas City, Mo. Electrolytic cell. No. 1,153,438; Sept. 14; Gaz. vol. 218; p. 419.
Norris, Almon E., Cambridge, Mass. Grip for cable-cars. No. 1,154,652; Sept. 28; Gaz. vol. 218; p. 903.
Norris, George E., assignor to The Perfection Mortise Machine Company, Columbus, Ohio. Mortising-machine. No. 1,155,100; Sept. 28; Gaz. vol. 218; p. 1077.
Norris, William J., Reynoldsville, Pa. Safety-envelop. No. 1,154,878; Sept. 28; Gaz. vol. 218; p. 978.
Norsk Hydro-Elektrisk Kvaelstofaktieselskab. (See Collett, Emil, assignor.)
North East Electric Company. (See Halbleib, Edward A., assignor.)
North, Herbert B., and J. W. Gibney, assignors to The Sentinel Mfg. Co., New Haven, Conn. Antislamming-latch for oven-doors. No. 1,153,514; Sept. 14; Gaz. vol. 218; p. 447.
Northern Water Softener Co. (See Kinzig, Louis D., assignor.)
Norton, Charles H., assignor to Norton Grinding Company, Worcester, Mass. Gearing. No. 1,152,434; Sept. 7; Gaz. vol. 218; p. 18.
Norton Company. (See Maim, Arthur T., assignor.)
Norton, Eugene E., Bridgeport, Conn. Machine for inserting stays in corsets. No. 1,154,200; Sept. 21; Gaz. vol. 218; p. 718.
Norton Grinding Company. (See Norton, Charles H., assignor.)
Nosworthy, William H., and S. J. Prescott, London, England. Hydroaeroplane. No. 1,152,654; Sept. 7; Gaz. vol. 218; p. 101.
Null, David W., Ned, Pa. Wrench. No. 1,152,832; Sept. 7; Gaz. vol. 218; p. 166.
O'Brien, Dennis J., San Francisco, Cal., assignor, by mesne assignments, to Straight Filament Lamp Company. Mercury-pump. No. 1,154,585; Sept. 21; Gaz. vol. 218; p. 851.
O'Brien, John E., and C. Harter, St. Louis, Mo. Car-roof. No. 1,154,425; Sept. 21; Gaz. vol. 218; p. 796.
O'Brien, John J., Chicago, Ill. Sash-cord fastener. No. 1,153,439; Sept. 14; Gaz. vol. 218; p. 419.
O'Connor, John. (See Harstad, Ole, assignor.)
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Manufacturing draft-yokes. No. 1,153,331; Sept. 14; Gaz. vol. 218; p. 379.
O'Connor, John F., assignor to W. H. Miner, Chicago, Ill. Side bearing for railway-cars. No. 1,153,699; Sept. 14; Gaz. vol. 218; p. 511.
O'Connor, John F., Chicago, Ill., assignor to W. H. Miner, Chazy, N. Y. Railway-car construction. No. 1,154,202; Sept. 21; Gaz. vol. 218; p. 718.
O'Connor, William H., Horseheads, N. Y. Steam-heated last. No. 1,155,087; Sept. 28; Gaz. vol. 218; p. 1052.
O'Connor, William V., Grand Forks, N. D. Pencil-holder. No. 1,153,105; Sept. 7; Gaz. vol. 218; p. 262.
O'Donnell, John B., assignor of one-half to J. S. Strong, Kansas City, Mo. Shock-absorbing device. No. 1,154,267; Sept. 21; Gaz. vol. 218; p. 741.
O'Hara, Walter, Seattle, Wash. Portable house. No. 1,152,655; Sept. 7; Gaz. vol. 218; p. 101.
O'Neill, George, Moncton, New Brunswick, Canada. Fuel-saving device. No. 1,153,333; Sept. 14; Gaz. vol. 218; p. 380.
Oakes, Ernest A., Seymour, Conn. Die-stock. No. 1,154,424; Sept. 21; Gaz. vol. 218; p. 796.
Oare, Alonzo W., Herrick, Ill. Faucet. No. 1,154,048; Sept. 21; Gaz. vol. 218; p. 667.
Oberg, Henry, Bridgeport, Conn. Computing device. No. 1,153,565; Sept. 14; Gaz. vol. 218; p. 465.
Oberg, Walter, St. Edward, Nebr. Newspaper-holder. No. 1,154,537; Sept. 21; Gaz. vol. 218; p. 833.
Obergfell, Herbert F., Chicago, Ill. Bearing. No. 1,154,049; Sept. 21; Gaz. vol. 218; p. 668.
Oberle, Jacob F., Richmond, N. Y. Smoke-house. No. 1,152,965; Sept. 7; Gaz. vol. 218; p. 215.
Ochs, Arthur H., Louisville, Ky. Spark-plug connector. No. 1,154,201; Sept. 21; Gaz. vol. 218; p. 718.
Ocumpaugh, Edmund, 2nd, assignor to Defiance Machine Company, Rochester, N. Y. Printing-machine. No. 1,154,050; Sept. 21; Gaz. vol. 218; p. 668.

Odmark, August E., Muskegon, Mich. Vermin exterminator for poultry-perches. No. 1,155,088; Sept. 28; Gaz. vol. 218; p. 1053.
Ofitter, Charles A., St. Louis, Mo. Machine-shop work-support. No. 1,154,333; Sept. 21; Gaz. vol. 218; p. 765.
Offutt, William N., Sr., Medford, Oreg. Hinge. No. 1,154,538; Sept. 21; Gaz. vol. 218; p. 834.
Ogden, Allen A., Wolbach, Nebr. Neck-yoke attachment. No. 1,155,059; Sept. 28; Gaz. vol. 218; p. 1053.
Ohio Brass Company, The. (See Gierding, Charles E., assignor.)
Ohio Match Company, The. (See Parker, Lucian E., assignor.)
Ohlsen, Ulrich, assignor of one-half to M. Mortensen, Denver, Colo. Flooring-tool. No. 1,153,106; Sept. 7; Gaz. vol. 218; p. 262.
Ohnstrand, Enoch, assignor to U. S. Steel Furniture Company, Syracuse, N. Y. Furniture. No. 1,153,946; Sept. 21; Gaz. vol. 218; p. 682.
Ohnstrand, Enoch, assignor to U. S. Steel Furniture Company, Syracuse, N. Y. Furniture. No. 1,153,947; Sept. 21; Gaz. vol. 218; p. 682.
Older, Clifford, Springfield, C. M. Slaymaker, Ottawa, and H. E. Bilger, Springfield, Ill. Culvert-core. No. 1,154,720; Sept. 28; Gaz. vol. 218; p. 926.
Oldfield, William H., Rochester, N. Y. Trap. No. 1,153,247; Sept. 14; Gaz. vol. 218; p. 349.
Oliver, Abraham T., Tamaqua, Pa. Draft-regulator for heating-furnaces. No. 1,152,751; Sept. 7; Gaz. vol. 218; p. 136.
Oliver, Doctor F., San Francisco, Cal. Combined cushioning and rebound-checking device for vehicles. No. 1,152,752; Sept. 7; Gaz. vol. 218; p. 136.
Oliver, Immanuel A., Eden Vale, Cal. Motor-cycle saddle. No. 1,153,817; Sept. 14; Gaz. vol. 218; p. 553.
Olson, Alfred. (See Hesketh and Olson.)
Olson, Alfred F., Vermilion, S. D. Lantern-carrier. No. 1,154,879; Sept. 28; Gaz. vol. 218; p. 979.
Olson, Edwin N., Bellingham, Wash. Potato-stripper. No. 1,154,539; Sept. 21; Gaz. vol. 218; p. 834.
Olthoff, Frank H., Kent, Ill. Toy pistol. No. 1,155,320; Sept. 28; Gaz. vol. 218; p. 1128.
Orewiler, Benjamin F., Chicago, Ill. Garment-supporter. No. 1,152,753; Sept. 7; Gaz. vol. 218; p. 136.
Orewiler, Benjamin F., Chicago, Ill. Stud-base for garment-supporters. No. 1,153,107; Sept. 7; Gaz. vol. 218; p. 263.
Orme, Harry A., Washington, D. C. Aeroplane. No. 1,153,248; Sept. 14; Gaz. vol. 218; p. 350.
Orner, Ellis F., Gowen City, Pa. Brake. No. 1,154,420; Sept. 21; Gaz. vol. 218; p. 796.
Osborn, Oliver L. (See Bower and Osborn.)
Osborne, Evan E., Los Angeles, assignor of one-half to W. A. Babb, Santa Monica, Cal. Combination sucker-rod socket. No. 1,153,818; Sept. 14; Gaz. vol. 218; p. 553.
Oster, Walter E., and S. Tempinski, Chicago, Ill. Pipe-coupling. No. 1,154,540; Sept. 21; Gaz. vol. 218; p. 834.
Ostergren, Oscar P., Brooklyn, assignor of one-half to E. Lundgren, New York, N. Y. Condensing apparatus. No. 1,155,090; Sept. 28; Gaz. vol. 218; p. 1053.
Oswald, James N., Pittsburgh, Pa. Stocking-supporter. No. 1,153,334; Sept. 14; Gaz. vol. 218; p. 380.
Otis Elevator Company. (See Boyce, John E., assignor.)
Otis Elevator Company. (See Gale, Ernest L., Sr., assignor.)
Otto, Marius P., Paris, France. Dirigible torpedo. No. 1,154,427; Sept. 21; Gaz. vol. 218; p. 797.
Overbury, Frederick C., Montclair, assignor to Flintkote Manufacturing Company, Rutherford, N. J. Making roofing elements. No. 1,154,334; Sept. 21; Gaz. vol. 218; p. 765.
Overholt, Frank M., and F. M. Steiner, Minneapolis, Minn. Laundry-extractor. No. 1,153,701; Sept. 14; Gaz. vol. 218; p. 512.
Owen, Oscar L., assignor to The Whitin Machine Works, Whitinsville, Mass. Stop-motion. No. 1,152,541; Sept. 7; Gaz. vol. 218; p. 60.
Owens, John S., assignor to J. M. De Mendoza ver Mehr, London, England. Concrete-mixer. No. 1,154,051; Sept. 21; Gaz. vol. 218; p. 668.
Owsley, Edgar H., San Jose, Cal. Trolley-actuated switch. No. 1,153,515; Sept. 14; Gaz. vol. 218; p. 447.
Oxygen Gas Company. (See Norquist, Emanuel E., assignor.)
P. A. Geier Company, The. (See Trautman, Walter G., assignor.)
P. & M. Co., The. (See Ferguson, William H., assignor.)
P. & M. Co., The. (See Preston, Frederick A., assignor.)
Pacetty, Thomas A., Columbus, Ga. Splitting attachment for ice-saws. No. 1,154,541; Sept. 21; Gaz. vol. 218; p. 835.
Packard Motor Car Company. (See Huff, Russell, assignor.)
Padden, David H., Chicago, Ill. Resilient wheel. No. 1,152,966; Sept. 7; Gaz. vol. 218; p. 216.
Page, Caleb D., assignor to Page Portable Buildings Company, Greeley, Colo. Building construction. No. 1,154,203; Sept. 21; Gaz. vol. 218; p. 718.
Page, Caleb D., assignor to Page Portable Buildings Company, Greeley, Colo. Knockdown building. No. 1,154,204; Sept. 21; Gaz. vol. 218; p. 719.
Page Portable Buildings Company. (See Page, Caleb D., assignor.)
Page, Robert R., Brooklyn, N. Y. Etching apparatus. No. 1,152,435; Sept. 7; Gaz. vol. 218; p. 10.
Pallady, George H., Allerton, Iowa. Loading attachment to binders. No. 1,154,542; Sept. 21; Gaz. vol. 218; p. 835.
Palmer, Bradley W., *et al.*, trustees. (See Lee and Monks, assignors.)
Palmer, Charles O., Cleveland, Ohio. Rotating device for rock-drills. No. 1,153,700; Sept. 14; Gaz. vol. 218; p. 511.
Palmer, Charles O., Cleveland, Ohio. Compressed-air system for operating pneumatic tools. No. 1,154,793; Sept. 28; Gaz. vol. 218; p. 950.
Palmer, Charles O., Cleveland, Ohio. Compressed-air apparatus for operating pneumatic tools. No. 1,154,794; Sept. 28; Gaz. vol. 218; p. 951.
Palmer, Charles O., Cleveland, Ohio. Compressed-air apparatus for operating pneumatic tools. No. 1,154,795; Sept. 28; Gaz. vol. 218; p. 951.
Palmer, Charles O., Cleveland, Ohio. Compressed-air apparatus for operating pneumatic tools. No. 1,154,796; Sept. 28; Gaz. vol. 218; p. 952.
Palmer, Charles O., Cleveland, Ohio. Pneumatic tool. No. 1,154,797; Sept. 28; Gaz. vol. 218; p. 953.
Palmer, Charles O., Cleveland, Ohio. Governor for air-compressors. No. 1,154,798; Sept. 28; Gaz. vol. 218; p. 953.
Palmer, Emily M., *et al.*, executors. (See Palmer, Edward H.)
Palmer, Edward H., deceased; E. M. and H. V. Palmer, Reading, and W. H. Roberts, Malden, Mass., executors, assignors to E. M. and H. V. Palmer, individually. Calculating apparatus. No. 1,152,542; Sept. 7; Gaz. vol. 218; p. 60.
Palmer, Harold V., *et al.*, executors. (See Palmer, Edward H.)
Palmer, Theodore D., assignor to T. D. Palmer Company, Syracuse, N. Y. Steam garment-pressing machine. No. 1,154,799; Sept. 28; Gaz. vol. 218; p. 953.
Palmros, Alexander, assignor to The Pneumelectric Machine Company, Syracuse, N. Y. Pressure developing and driven tool. No. 1,155,264; Sept. 28; Gaz. vol. 218; p. 1109.
Paltridge Metal Equipment Company, The. (See Gustafson, Edwin, assignor.)
Panitz, Isidor, Baltimore, Md. Man's union suit. No. 1,155,091; Sept. 28; Gaz. vol. 218; p. 1054.
Pannecoucke, Hector V., and H. Schaefer, Detroit, Mich. Wheel. No. 1,153,948; Sept. 21; Gaz. vol. 218; p. 633.
Pantazi, Dimitrios, New York, N. Y. Cigarette packing and sealing machine. No. 1,155,002; Sept. 28; Gaz. vol. 218; p. 1020.
Parmount Glass Percolator Mfg. Co. (See Darling, Richard S., assignor.)
Parke, Peter, assignor to The Pullman Company, Chicago, Ill. Grain-tight box-car. No. 1,153,249; Sept. 14; Gaz. vol. 218; p. 350.
Parker, George A., Hartford, assignor of one-half to F. G. Whitmore, West Hartford, Conn. Park-bench. No. 1,154,268; Sept. 21; Gaz. vol. 218; p. 742.
Parker, Joseph T., Washington, D. C. Submarine vessel. No. 1,154,126; Sept. 21; Gaz. vol. 218; p. 693.
Parker, Lucian E., assignor to The Ohio Match Company, Wadsworth, Ohio. Book-match. No. 1,154,586; Sept. 21; Gaz. vol. 218; p. 852.
Parker, Melten. (See Rogers and Parker.)
Parkinson, John A., Sioux City, Iowa. Actuating means for motor-starters. No. 1,155,003; Sept. 28; Gaz. vol. 218; p. 1021.
Parks, H. J., *et al.* (See Carpenter, Mason P., assignor.)
Parmenter, George A., Cambridge, Mass. Fender for motor-cars. No. 1,153,566; Sept. 14; Gaz. vol. 218; p. 466.
Parr, Gertrude E., *et al.* (See Parr, Webster A., assignor.)
Parr, Webster A., assignor, by mesne assignments, of one-half to G. E. Parr and one-half to L. M. Coons, Indianapolis, Ind. Horse-collar. No. 1,153,852; Sept. 14; Gaz. vol. 218; p. 565.
Parrott, Van Cleave A., Sumter, S. C. Food product and making the same. No. 1,154,721; Sept. 28; Gaz. vol. 218; p. 926.
Parsons, Warren J., Huntington, W. Va. Vehicle-spring. No. 1,155,265; Sept. 28; Gaz. vol. 218; p. 1110.
Partida, Rafael I., Torreon, Mexico. Automatic railway-switch device. No. 1,153,819; Sept. 14; Gaz. vol. 218; p. 553.
Pasel, Clemens, Essen-Ruhr West, Germany. Guard-rail attachment. No. 1,154,335; Sept. 21; Gaz. vol. 218; p. 766.
Pasel, Clemens, Heidhausen, near Werden, Germany. Fuel-injecting device. No. 1,155,266; Sept. 28; Gaz. vol. 218; p. 1110.
Pasha Spark Plug Company. (See Mills, David B., assignor.)
Passerieux, Marguerite, St. Louis, Mo. Baby-walker. No. 1,154,543; Sept. 21; Gaz. vol. 218; p. 835.
Passmore, Levis, Philadelphia, Pa. Centerless engine. No. 1,153,702; Sept. 14; Gaz. vol. 218; p. 512.
Pate, William T. S., assignor of one-half to H. P. Splitgerber, Bloomington, Ind. Scraper for vehicle-wheels. No. 1,153,108; Sept. 7; Gaz. vol. 218; p. 263.

Patent Button Company. (See White, Franklin R., assignor.)
Patent Products Corporation, The. (See Rosencrants, Isidor B., assignor.)
Patten, Elmer E., St. Louis, Mo., assignor to L. Rasieur, Jr., trustee. Adding-machine. No. 1,153,820; Sept. 14; Gaz. vol. 218; p. 554.
Patten, John, Baltimore, Md. Power-generating system. No. 1,154,880; Sept. 28; Gaz. vol. 218; p. 979.
Patterson, James W., White Plains, assignor to Autosales Gum and Chocolate Company, New York, N. Y. Coin-operating vending-machine. No. 1,153,440; Sept. 14; Gaz. vol. 218; p. 420.
Pattison, Albert W., assignor to Grinnell Electric Car Co., Detroit, Mich. Steering and controlling system for automobiles. No. 1,154,653; Sept. 28; Gaz. vol. 218; p. 904.
Paul, Charles O., Kent, Wash. Tractor. No. 1,153,109; Sept. 7; Gaz. vol. 218; p. 263.
Pauls, Peter T., *et al.* (See Le Compte, Joseph H., assignor.)
Paxton, Heyward A., De Land, Fla. Metallic fence-post and wire-fence-fastening means. No. 1,153,403; Sept. 14; Gaz. vol. 218; p. 406.
Payne, Ira P., Dubois, Pa. Railway-spike. No. 1,152,656; Sept. 7; Gaz. vol. 218; p. 102.
Peacock, Edward L., Wallsend-on-the-Tyne, England. Submarine or submersible boat. No. 1,152,754; Sept. 7; Gaz. vol. 218; p. 137.
Peacock, Samuel, Chicago, Ill., assignor, by mesne assignments, to Agricultural Research Corporation, New York, N. Y. Forming double nitrids. No. 1,154,800; Sept. 28; Gaz. vol. 218; p. 953.
Peacock, Samuel, Philadelphia, Pa., assignor, by mesne assignments, to Agricultural Research Corporation, New York, N. Y. Volatile aluminum compounds and producing same. No. 1,154,801; Sept. 28; Gaz. vol. 218; p. 954.
Peacock, Samuel, Philadelphia, Pa., assignor, by mesne assignments, to Agricultural Research Corporation, New York, N. Y. Smelting zinc. No. 1,154,802; Sept. 28; Gaz. vol. 218; p. 954.
Peacott, Ollie U., Waterville, Wash. Can-cutting machine. No. 1,155,267; Sept. 28; Gaz. vol. 218; p. 1111.
Pease, Roger S., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa. Glass-drawing. No. 1,152,833; Sept. 7; Gaz. vol. 218; p. 167.
Pechkranz, Rodolphe. (See Guersoni and Pechkranz.)
Peck Bros. & Co., The. (See Newton, William G., assignor.)
Pedersen, Carl, Fort Wayne, Ind. Wrench. No. 1,154,544; Sept. 21; Gaz. vol. 218; p. 835.
Peel, Charles F., New York, N. Y. Portable track trip device. No. 1,153,568; Sept. 14; Gaz. vol. 218; p. 466.
Peet, O. M. (See Doucet, Theodore, assignor.)
Peiseler, Kuno, Preussen, Germany, assignor to Thomson Electric Welding Company, Lynn, Mass. Electrically-welded tubing and making the same. No. 1,154,933; Sept. 28; Gaz. vol. 218; p. 998.
Penedo, Daniel A., Bisbee, Ariz. Digging-machine. No. 1,154,545; Sept. 21; Gaz. vol. 218; p. 836.
Penna, Samuel T., Avon-by-the-Sea, N. J. Bottle-filling apparatus. No. 1,154,269; Sept. 21; Gaz. vol. 218; p. 742.
Penrod, Charles E., Concord township, Miami county, Ohio. Sack-holder for grain-chutes. No. 1,154,722; Sept. 28; Gaz. vol. 218; p. 926.
Percy, Herbert J. (See Bartholomew and Percy.)
Perez, Miguel, Chicago, Ill. Automobile-tire. No. 1,152,902; Sept. 7; Gaz. vol. 218; p. 192.
Perfection Mortise Machine Company, The. (See Norris, George E., assignor.)
Perfection Spring Company, The. (See Utz, John G., assignor.)
Perls, Nicholas U., Landisville, Pa. Combined steam, gas, and hot-water heater. No. 1,153,130; Sept. 7; Gaz. vol. 218; p. 270.
Permutit Company, The. (See Kriegsheim, Heinrich, assignor.)
Perrault, Joseph E., Belmont, assignor to Hood Rubber Company, Watertown, Mass. Demountable felly-band for vehicle-wheels. No. 1,152,543; Sept. 7; Gaz. vol. 218; p. 61.
Perrault, Zoel, Reeds Ferry, N. H. Shade-hanger. No. 1,153,940; Sept. 21; Gaz. vol. 218; p. 633.
Perron, Louis P., Ballston, Va. Combination guide and line-clasp for floats. No. 1,152,755; Sept. 7; Gaz. vol. 218; p. 137.
Perry, Frederick H., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for generating patterns. No. 1,152,967; Sept. 7; Gaz. vol. 218; p. 216.
Persson, Otto F., Erie, Pa., assignor to General Electric Company. Combined scavenging-pump and compressor. No. 1,154,336; Sept. 21; Gaz. vol. 218; p. 766.
Pesenti, Guido, assignor to M. Pesenti, Paris, France. Hollow nail. No. 1,154,881; Sept. 28; Gaz. vol. 218; p. 979.
Pesenti, Mario. (See Pesenti, Guido, assignor.)
Peter Smith Heater Company *et al.* (See Williams, Harry S., assignor.)
Peters, Frank E., assignor of one-half to J. D. Eastman, Indianapolis, Ind. Cement building-block. No. 1,154,546; Sept. 21; Gaz. vol. 218; p. 836.
Peters, Frank M. (See Hungerford, Warren H., assignor.)
Petersen, Andrew T., assignor of one-half to T. J. Fair, Colorado Springs, Colo. Glide-caster. No. 1,155,269; Sept. 28; Gaz. vol. 218; p. 1111.
Petersen, Christen, Davenport, Iowa. Rotary engine. No. 1,155,092; Sept. 28; Gaz. vol. 218; p. 1054.
Petersen, Ludvig T., assignor to The Republic Rubber Company, Youngstown, Ohio. Elastic tire for vehicle-wheels. No. 1,152,756; Sept. 7; Gaz. vol. 218; p. 138.
Petersen, Waldemar, Darmstadt, Germany. High-voltage protection. No. 1,153,821; Sept. 14; Gaz. vol. 218; p. 554.
Peterson, Per A., New York, N. Y. Welt-groover. No. 1,152,757; Sept. 7; Gaz. vol. 218; p. 138.
Peterson, Peter, San Francisco, Cal. Clam-shell-dredger-bucket buffer. No. 1,153,950; Sept. 21; Gaz. vol. 218; p. 633.
Petit, Charles G., Bellevue, France. Production of safety-grounds for documents. No. 1,153,131; Sept. 7; Gaz. vol. 218; p. 270.
Pettengill, George I. (See Ryder, Joshua H., assignor.)
Pettersen, Kristian. (See Sælid and Pettersen.)
Pettibone, Franklin A., Conewango Valley, N. Y. Tire-tightener. No. 1,153,822; Sept. 14; Gaz. vol. 218; p. 554.
Pettigrove, Carl W., Tremont, Me. Key. No. 1,155,268; Sept. 28; Gaz. vol. 218; p. 1111.
Pettit, George B., Brooklyn, N. Y. Bed-joint. No. 1,154,803; Sept. 28; Gaz. vol. 218; p. 954.
Pettit, Samuel H., *et al.* (See Woods, James C., assignor.)
Pettit, Samuel H. (See Wright and Woods, assignors.)
Pettitt, Paul C., Schofield Barracks, Honolulu county, Hawaii. Cement and concrete nozzle. No. 1,153,132; Sept. 7; Gaz. vol. 218; p. 270.
Pfeifer, Charles P., Humphrey, Nebr. Fly-paper holder. No. 1,152,544; Sept. 7; Gaz. vol. 218; p. 61.
Pfeiffer, Otto G., assignor to Utahna Development Company, Salt Lake City, Utah. Clutch. No. 1,153,853; Sept. 14; Gaz. vol. 218; p. 566.
Pfeiffer, Otto G., St. Louis, Mo., assignor to Utahna Development Company, Salt Lake City, Utah. Clutch. No. 1,153,854; Sept. 14; Gaz. vol. 218; p. 566.
Pfiederer, William, *et al.* (See Stuber, Walter C., assignor.)
Phelps, John O., New York, N. Y. Combined rail-brace and tie-plate. No. 1,155,270; Sept. 28; Gaz. vol. 218; p. 1111.
Phelps, Sebring I., Buchanan, Mich. Electric heater. No. 1,153,703; Sept. 14; Gaz. vol. 218; p. 518.
Philadelphia Pile Fabric Mills. (See Steiner, Richard J., assignor.)
Philadelphia Steel & Wire Co. (See Wedmore, Daniel A., assignor.)
Philip Forschler Wagon and Manufacturing Company. (See Forschler, Philip, assignor.)
Philips, Herman B., assignor to R. S. Philips, New York, N. Y. Therapeutic apparatus. No. 1,155,271; Sept. 28; Gaz. vol. 218; p. 1112.
Philips, Ralph S. (See Philips, Herman B., assignor.)
Phillips, Smith F., El Paso, Tex. Switch-stand. No. 1,154,428; Sept. 21; Gaz. vol. 218; p. 797.
Phillips, Darius T., Chicago, Ill. Toy. No. 1,153,250; Sept. 14; Gaz. vol. 218; p. 350.
Phillips, Nathan C., assignor to Russia Cement Company, Gloucester, Mass. Plug for glue and paste tubes. No. 1,152,545; Sept. 7; Gaz. vol. 218; p. 61.
Phillips, Nathan C., assignor to Russia Cement Company, Gloucester, Mass. Ink-bottle. No. 1,152,546; Sept. 7; Gaz. vol. 218; p. 62.
Picard, Albert C. (See Milne, Russell A., assignor.)
Pick, Alfred. (See Breitung and Pick.)
Pickard, Ada E., *et al.* (See Byron, Hagar B., assignor.)
Pickens, Robert F., St. Louis, Mo. Subscriber's auto-switching system for intercommunicating telephones. No. 1,152,968; Sept. 7; Gaz. vol. 218; p. 216.
Pierce-Arrow Motor Car Company, The. (See Sheppy, Charles L., assignor.)
Pierce, Frank M., Chicago, Ill. Wrapping. No. 1,153,704; Sept. 14; Gaz. vol. 218; p. 513.
Pierce, Howard C., Worcester, Mass. Poultry-picking frame. No. 1,155,004; Sept. 28; Gaz. vol. 218; p. 1021.
Pierce, William L., assignor of one-fifth to M. Grundfast, New York, N. Y. Picot-cutting attachment for sewing-machines. No. 1,154,337; Sept. 21; Gaz. vol. 218; p. 766.
Pierce, William S., Franklin, Pa. Washing apparatus. No. 1,153,823; Sept. 14; Gaz. vol. 218; p. 555.
Pierce, William S., Franklin, Pa. Pipe-coupling. No. 1,153,824; Sept. 14; Gaz. vol. 218; p. 555.
Pieser, Isaac, *et al.* (See Redd, Charlie, assignor.)
Pieser, Isaac, and C. G. Livingston, Chicago, Ill. Cereal food product. No. 1,155,093; Sept. 28; Gaz. vol. 218; p. 1055.
Piessens, Henry, Philadelphia, Pa. Arch or instep supporter. No. 1,153,441; Sept. 14; Gaz. vol. 218; p. 420.
Pietrusza, Frank, Arnold City, Pa. Rail-joint. No. 1,154,882; Sept. 28; Gaz. vol. 218; p. 979.
Pilarowski, Stephen, Detroit, Mich., assignor to American Can Company, New York, N. Y. Pouring-spout can. No. 1,154,205; Sept. 21; Gaz. vol. 218; p. 719.
Pilblad, Eric J., and A. Tomlinson, assignors to Imperial Typewriter Company, Limited, Leicester, England. Feed-roller of type-writers. No. 1,153,567; Sept. 14; Gaz. vol. 218; p. 466.

Pilkington, Alfred C., *et al.*, executors. (See Pilkington, William W.)
Pilkington Brothers. (See Pilkington, William W., assignor.)
Pilkington, Richard A., *et al.*, executors. (See Pilkington, William W.)
Pilkington, Sarah L., *et al.*, executors. (See Pilkington, William W.)
Pilkington, William W., deceased, Prescot; S. L., R. A., and A. C. Pilkington, executors, assignors to Pilkington Brothers, Limited, St. Helens, England. Glass-furnace. No. 1,154,052; Sept. 21; Gaz. vol. 218; p. 668.
Pilling, Charles J., Philadelphia, Pa. Apparatus for measuring and indicating blood-pressure. No. 1,153,251; Sept. 14; Gaz. vol. 218; p. 351.
Pilling, Charles J., Lansdowne, Pa., and G. S. White, Los Angeles, Cal., assignors to George P. Pilling and Son Co., Philadelphia, Pa. Sphygmomanometer. No. 1,154,934; Sept. 28; Gaz. vol. 218; p. 998.
Pilling, Henry, Chorlton-cum-Hardy, England. Reciprocating-piston engine. No. 1,153,133; Sept. 7; Gaz. vol. 218; p. 270.
Pingree, Carroll L., *et al.* (See Simao, Antonio P., assignor.)
Piontkowski, John, Cleveland, Ohio, assignor of three-eighths to S. Wasielewski, one-eighth to J. Yablonowski, and one-eighth to M. Grayek. Tire structure. No. 1,152,657; Sept. 7; Gaz. vol. 218; p. 102.
Pittroff, Andreas, Dresden, Germany. Heel-stiffener for boots and shoes. No. 1,154,429; Sept. 21; Gaz. vol. 218; p. 797.
Pittsburgh Coal Washer Company. (See Hurst, Willis T., assignor.)
Pittsburgh Plate Glass Company. (See Pease, Roger S., assignor.)
Pittsburgh Valve, Foundry and Construction Company, The. (See Stuart, George J., assignor.)
Plante, Levi N., Auburn, Mass., assignor to Eastman Kodak Company, Rochester, N. Y. Scoring device. No. 1,153,951; Sept. 21; Gaz. vol. 218; p. 633.
Plastow, Harry E. (See Dudley and Plastow.)
Platt, Clarence D., Bridgeport, Conn. Electric switch. No. 1,152,758; Sept. 7; Gaz. vol. 218; p. 138.
Platz, Wilhelm, Weinheim, Germany. Steam-generator. No. 1,153,442; Sept. 14; Gaz. vol. 218; p. 421.
Pleister, Henry W., Westfield, N. J., assignor to H. B. Newhall. Drive and screw expansion-bolt. No. 1,153,335; Sept. 14; Gaz. vol. 218; p. 380.
Pletscher, Carl, assignor to Werner & Pfleiderer Company, Saginaw, Mich. Rotary roller-pan. No. 1,154,935; Sept. 28; Gaz. vol. 218; p. 999.
Pneumelectric Machine Company, The. (See Palmros, Alexander, assignor.)
Podlesák, Emil, Tiffin, Ohio. Mixture-producing device and speed-governor. No. 1,155,094; Sept. 28; Gaz. vol. 218; p. 1055.
Pogue, George D., St. Louis, Mo. Variable-feed pump. No. 1,154,723; Sept. 28; Gaz. vol. 218; p. 926.
Pohle, Frederick, Jr., Honesdale, Pa. Calk-sharpening machine. No. 1,153,826; Sept. 14; Gaz. vol. 218; p. 555.
Pole, Joseph C., New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Reflector for vapor-lamps. No. 1,153,443; Sept. 14; Gaz. vol. 218; p. 421.
Pollak, Isidor, Vienna, Austria-Hungary. Diastase preparations and making same. No. 1,153,640; Sept. 14; Gaz. vol. 218; p. 490.
Pollak, Isidor, Vienna, Austria-Hungary. Malt extract and making same. No. 1,153,641; Sept. 14; Gaz. vol. 218; p. 490.
Pollock, John R., Long Beach, Cal. Dust-collector for pneumatic street-sweeping machines. No. 1,155,272; Sept. 28; Gaz. vol. 218; p. 1112.
Pomona Manufacturing Company. (See Izer, Elmer E., assignor.)
Porcelain Enameling Association of America. (See Vollrath and Cohen, assignors.)
Porter, Jesse R., Buffalo, N. Y. Cultivator. No. 1,153,952; Sept. 21; Gaz. vol. 218; p. 634.
Porter, Robert, Youngstown, Ohio. Machine for the manufacture of twisted bars. No. 1,152,759; Sept. 7; Gaz. vol. 218; p. 138.
Porter Screen Company. (See Southworth, Henry E., assignor.)
Porter, Willard E., Lynn, Mass., assignor to General Electric Company. Electrical measuring instrument. No. 1,155,095; Sept. 28; Gaz. vol. 218; p. 1055.
Portman, John H., Pascagoula, Miss. Wrist-pin. No. 1,154,883; Sept. 28; Gaz. vol. 218; p. 980.
Possons, Minard A., Cleveland, Ohio, assignor to American Stove Company, St. Louis, Mo. Gas-range door. No. 1,154,430; Sept. 21; Gaz. vol. 218; p. 798.
Potts, Thomas E., assignor of one-third to P. Madsen and one-third to M. Madsen, Los Angeles, Cal. Distillate-burner. No. 1,153,516; Sept. 14; Gaz. vol. 218; p. 448.
Potts, Thomas E., assignor of one-third to P. Madsen and one-third to M. Madsen, Los Angeles, Cal. Panel stove-top. No. 1,153,517; Sept. 14; Gaz. vol. 218; p. 448.
Powell, Richard G., Lewistown, Pa. Rail joint and fastener. No. 1,154,724; Sept. 28; Gaz. vol. 218; p. 927.
Power, Howard W., Davenport, Iowa. Folding washbench. No. 1,153,336; Sept. 14; Gaz. vol. 218; p. 381.
Powers, George G., assignor to Union Wire Mattress Company, Chicago, Ill. Bed-spring. No. 1,154,936; Sept. 28; Gaz. vol. 218; p. 999.
Powers Photo-Engraving Company. (See Leitner, Emil, assignor.)
Powers Regulator Company, The. (See Snediker, Morton O., assignor.)
Pozzi, Romeo, Oakland, Cal. Flushing apparatus. No. 1,155,005; Sept. 28; Gaz. vol. 218; p. 1021.
Prankard, Charles J., Jr., Troy, N. Y. Collar-folding machine. No. 1,153,337; Sept. 14; Gaz. vol. 218; p. 381.
Pratt & Whitney Company. (See Corey, William W., assignor.)
Pre-Heated Air Company. (See Tacy, Samuel H., assignor.)
Prescott, Samuel J. (See Nosworthy and Prescott.)
Preston, Albert F., East Boston, Mass. Binding-machine. No. 1,152,903; Sept. 7; Gaz. vol. 218; p. 192.
Preston, Andrew W., *et al.*, trustees. (See Lee and Monks, assignors.)
Preston, Frederick A., Highland Park, assignor to The P. & M. Co., Chicago, Ill. Anticreeper. No. 1,152,760; Sept. 7; Gaz. vol. 218; p. 139.
Price, Aubrey L., Waverly, New South Wales, Australia. Collar. No. 1,153,134; Sept. 7; Gaz. vol. 218; p. 271.
Price, Gomer W., Oakland, assignor to H. L. Smith, San Rafael, Cal. Changeable-speed-transmission mechanism. No. 1,153,569; Sept. 14; Gaz. vol. 218; p. 467.
Price, Gomer W., Oakland, assignor to H. L. Smith, San Rafael, Cal. Oscillating self-laying track for traction-engines. No. 1,153,570; Sept. 14; Gaz. vol. 218; p. 467.
Price, Raymond B., Mishawaka, Ind. Manufacturing articles from plastic materials. No. 1,152,834; Sept. 7; Gaz. vol. 218; p. 167.
Price, Raymond B., Mishawaka, Ind. Treating plastic materials. No. 1,152,835; Sept. 7; Gaz. vol. 218; p. 167.
Price, Raymond B., Mishawaka, Ind. Treating combined plastic and fabric articles. No. 1,152,836; Sept. 7; Gaz. vol. 218; p. 168.
Price, Raymond B., New York, N. Y. Treating plastic materials. No. 1,152,837; Sept. 7; Gaz. vol. 218; p. 168.
Price, Raymond B., New York, N. Y. Making vulcanised-rubber products. No. 1,152,838; Sept. 7; Gaz. vol. 218; p. 168.
Priddy, Miells H., assignor of two-fifths to H. M. McKee, Fresno, Cal. Operating mechanism for car-doors. No. 1,154,053; Sept. 21; Gaz. vol. 218; p. 669.
Primrose, John, New York, N. Y. Locomotive-superheater. No. 1,152,839; Sept. 7; Gaz. vol. 218; p. 168.
Pringle, William A., Niagara Falls, N. Y., assignor, by mesne assignments, to American Sales Book Company, Limited. Web-transforming mechanism. No. 1,152,436; Sept. 7; Gaz. vol. 218; p. 19.
Priskey, George, Detroit, Mich. Lubricant-atomiser. No. 1,153,642; Sept. 14; Gaz. vol. 218; p. 491.
Pritzl, Lorenz L., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,153,252; Sept. 14; Gaz. vol. 218; p. 351.
Procter and Gamble Company, The. (See Kayser, Edwin C., assignor.)
Protection Company. (See Gay, Herman T., assignor.)
Provost, Milford E., Holyoke, Mass. Micrometer-gage. No. 1,152,761; Sept. 7; Gaz. vol. 218; p. 139.
Pullman Company, The. (See Parke, Peter, assignor.)
Puppe, Johann, Breslau, Germany. Rolling-mill. No. 1,154,884; Sept. 28; Gaz. vol. 218; p. 980.
Purdy, Joseph S. L., Le Roy, N. Y. Apparatus for expelling oil or water from natural-gas wells. No. 1,153,253; Sept. 14; Gaz. vol. 218; p. 351.
Puscariu, Valeriu. (See Tacit and Puscariu.)
Pyrene Manufacturing Company. (See Aylsworth, Jonas W., assignor.)
Quade, Fritz, Buckow, Germany. Apparatus for playing hopping games. No. 1,155,273; Sept. 28; Gaz. vol. 218; p. 1112.
Queitsch, William, Tacoma, Wash. Tool for removing driving-box cellars. No. 1,155,274; Sept. 28; Gaz. vol. 218; p. 1113.
Quimby, Clarence E., Geneva, assignor, by mesne assignments, to Kryptok Company, New York, N. Y. Ware-manufacturing. No. 1,152,969; Sept. 7; Gaz. vol. 218; p. 217.
Quirk, Edward P., Syracuse, N. Y. Support for bleed-rods. No. 1,152,547; Sept. 7; Gaz. vol. 218; p. 62.
R. & H. Manufacturing Company, The. (See Hinckley, Henry D., assignor.)
R. K. Le Blond Machine Tool Company, The. (See Le Blond and Groene, assignors.)
Rachals, Walter, Youngstown, Ohio. Automatic coupling device. No. 1,155,006; Sept. 28; Gaz. vol. 218; p. 1022.
Racsynski, Peter P., Chicago, Ill. Box-covering machine. No. 1,152,970; Sept. 7; Gaz. vol. 218; p. 217.
Radford, George S., Bridgeport, Conn. Tool-holder. No. 1,154,804; Sept. 28; Gaz. vol. 218; p. 954.
Radiguer, Charles, assignor to The Societe Anonyme Des Etablissements Delaunay-Belleville, St.-Denis, Seine, France. Device to prevent the admission of water into the interior of the hollow shaft of a torpedo's propeller. No. 1,154,206; Sept. 21; Gaz. vol. 218; p. 720.
Radio Telephone Company, The. (See Seibt, Georg, assignor.)
Radium Therapy Corporation. (See Bredt, Otto P. C., assignor.)

Radley, Guy R., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Regulator. No. 1,154,725; Sept. 28; Gaz. vol. 218; p. 927.
Rae, Frank B., Cleveland, Ohio. Transmission mechanism. No. 1,153,338; Sept. 14; Gaz. vol. 218; p. 382.
Ragsdale, Thomas J. (See Hendrickson, Thomas M., assignor.)
Rahm, Robert C., Wyomissing borough, assignor to Textile Machine Works, Wyomissing, Pa. Braiding-machine. No. 1,153,826; Sept. 14; Gaz. vol. 218; p. 556.
Ramage, George W., Cleveland, Ohio. Geographical time-globe. No. 1,152,904; Sept. 7; Gaz. vol. 218; p. 193.
Ramlow, Frederick C., Chicago, Ill. Pressing-board. No. 1,154,726; Sept. 28; Gaz. vol. 218; p. 927.
Ramsdell, Fred L., Hayward, Wis. Runner attachment for automobiles. No. 1,154,431; Sept. 21; Gaz. vol. 218; p. 798.
Ramsey, Walter C., Peculiar, Mo. Hinge. No. 1,155,161; Sept. 28; Gaz. vol. 218; p. 1078.
Randolph, Smith M., Chicago, Ill. Concrete-mold or the like. No. 1,153,254; Sept. 14; Gaz. vol. 218; p. 352.
Rankin, Edmund, Lincoln, Ill. Boiler-cleaner. No. 1,153,953; Sept. 21; Gaz. vol. 218; p. 634.
Rasehorn, Paul, Halensee, near Berlin, and G. Grossmann, Charlottenburg, assignors to Siemens & Halske, A.-G., Berlin, Germany. Apparatus for neutralizing electric charges in fibrous materials. No. 1,154,127; Sept. 21; Gaz. vol. 218; p. 693.
Rasmussen, Peter, and M. F. Goularte, Selma, Cal. Window-operating mechanism. No. 1,153,404; Sept. 14; Gaz. vol. 218; p. 407.
Rassieur, Leo, Jr., trustee. (See Patten, Elmer E., assignor.)
Rathbone, Charles L., Bozrah, Conn. Oar-lock. No. 1,155,275; Sept. 28; Gaz. vol. 218; p. 1113.
Rauch, Aron, New York, N. Y. Weaving-frame for hair goods. No. 1,154,338; Sept. 21; Gaz. vol. 218; p. 767.
Rawlings, Arthur D., and E. J. Clapham, London, England. Automatic sash-raising mechanism. No. 1,154,432; Sept. 21; Gaz. vol. 218; p. 798.
Rawlings, Ernest J. (See Rawlings, Arthur D. and E. J.)
Ray, Albert D., Cleveland, Ohio, assignor of one-fourth to C. E. Bigelow, Grand Rapids, Mich. Bottle-closure. No. 1,153,518; Sept. 14; Gaz. vol. 218; p. 448.
Ray, Blanche, Citronelle, Ala. Egg substitute and making it. No. 1,154,805; Sept. 28; Gaz. vol. 218; p. 954.
Ray, William H., assignor, by mesne assignments, to Barnac Machine Co., St. Joseph, Mich. Sheet-metal-fastener-driving machine. No. 1,152,840; Sept. 7; Gaz. vol. 218; p. 169.
Raymond, Ed. J. (See Kate, John H., assignor.)
Raymond, Francois D., Fall River, Mass. Loom. No. 1,152,905; Sept. 7; Gaz. vol. 218; p. 193.
Read, James A., Arlington, N. J. Auto-tire. No. 1,152,906; Sept. 7; Gaz. vol. 218; p. 194.
Reade, William A., assignor to The Ludlow Typograph Company, Cleveland, Ohio. Composing mechanism for typographs. No. 1,154,054; Sept. 21; Gaz. vol. 218; p. 609.
Reading Crane and Hoist Works. (See Kalbach, Samuel E., assignor.)
Beam, Willis F., Seanor, Pa. Trolley. No. 1,152,762; Sept. 7; Gaz. vol. 218; p. 139.
Reames, Ralph E., Dent, Minn. Shaving-brush. No. 1,155,006; Sept. 28; Gaz. vol. 218; p. 1056.
Reardon, John. (See Van Schaick, Burns, and Reardon.)
Record, George J., Conneaut, Ohio. Removable braced shipping-can case. No. 1,154,885; Sept. 28; Gaz. vol. 218; p. 980.
Redd, Charlie, assignor to I. Pieser and C. G. Livingston, Chicago, Ill. Carton-machine. No. 1,153,571; Sept. 14; Gaz. vol. 218; p. 468.
Redman, John R. (See Scholfield and Redman.)
Redmon, Dillard, Baltimore, Md. Producing material for ornamental woodwork. No. 1,154,800; Sept. 28; Gaz. vol. 218; p. 955.
Redmon, Marion F., Cedar Rapids, Iowa. Dish-washing machine. No. 1,153,255; Sept. 14; Gaz. vol. 218; p. 352.
Reece Button Hole Machine Company, The. (See Zaleski, Frank, assignor.)
Reece, John, Manchester, Mass. Variable-speed transmitter. No. 1,153,256; Sept. 14; Gaz. vol. 218; p. 352.
Reece, William M., Ottumwa, Iowa. Acetylene-gas generator. No. 1,154,433; Sept. 21; Gaz. vol. 218; p. 799.
Reed, Walter C., Dalton, assignor to The Telelectric Company, Pittsfield, Mass. Electrically-operated pianoplayer. No. 1,152,841; Sept. 7; Gaz. vol. 218; p. 169.
Reed, Walter C., Dalton, assignor to The Telelectric Company, Pittsfield, Mass. Variable-resistance device. No. 1,152,842; Sept. 7; Gaz. vol. 218; p. 170.
Reed, Walter C., Dalton, assignor to The Telelectric Company, Pittsfield, Mass. Circuit-controller. No. 1,152,843; Sept. 7; Gaz. vol. 218; p. 171.
Reedy, Alfred J., assignor to A-B Stove Company, Battle Creek, Mich. Automatically-adjustable mixer for gas-burner valves. No. 1,153,043; Sept. 14; Gaz. vol. 218; p. 491.
Rees, Edmund S. G., Stafford, England. Rotary condenser and self-condensing turbine. No. 1,154,434; Sept. 21; Gaz. vol. 218; p. 799.
Reeves, George C., Chicago, Ill. Force-cup. No. 1,154,055; Sept. 21; Gaz. vol. 218; p. 670.
Reeves, James W., assignor to S. S. Barash, Seattle, Wash. Ink-distributing roller for printing-presses. No. 1,154,727; Sept. 28; Gaz. vol. 218; p. 928.
Regan, H. W., *et al.* (See Wheeler, Richard, assignor.)
Regan, William J., assignor to The McConway & Torley Company, Pittsburgh, Pa. Draft appliance for railway-vehicles. No. 1,155,097; Sept. 28; Gaz. vol. 218; p. 1056.
Regenbogen, Conrad, Kiel, assignor to Fried. Krupp Aktiengesellschaft, Germaniawerft, Kiel-Gaarden, Germany. Internal-combustion engine. No. 1,152,658; Sept. 7; Gaz. vol. 218; p. 102.
Reich, Paul. (See Boch, Philipp, assignor.)
Reichard, Benjamin. (See Amsel and Reichard.)
Reid, George C., Labonte, Wyo. Ratchet-wrench. No. 1,154,056; Sept. 21; Gaz. vol. 218; p. 670.
Reid, Thomas, Northfield, Birmingham, England. Two-stroke-cycle combustion-engine. No. 1,152,659; Sept. 7; Gaz. vol. 218; p. 103.
Reinhard, Louis, assignor to The Mechanical Appliance Company, Milwaukee, Wis. Switch. No. 1,153,257; Sept. 14; Gaz. vol. 218; p. 353.
Reis, Theodor, Cincinnati, Ohio. Riveting device. No. 1,152,971; Sept. 7; Gaz. vol. 218; p. 218.
Reiss, August, Medford Station, N. Y. Ice-creeper. No. 1,153,954; Sept. 21; Gaz. vol. 218; p. 634.
Remington Typewriter Company. (See Barr, John H., assignor.)
Remington Typewriter Company. (See Seib, George A., assignor.)
Remington Typewriter Company. (See Sheldon, William G., assignor.)
Remington Typewriter Company. (See Smith, Charles E., assignor.)
Remington Typewriter Company. (See Yaw, Clio B., assignor.)
Renaud, Felix D., Chicago, Ill. Flashing for parapet-walls. No. 1,154,435; Sept. 21; Gaz. vol. 218; p. 800.
Renkel, George W., *et al.* (See Hammond, Robert O., assignor.)
Rennie, John A., Lyndhurst, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,152,972; Sept. 7; Gaz. vol. 218; p. 218.
Republic Rubber Company, The. (See Petersen, Ludvig T., assignor.)
Reuscher, Charles J. (See Walter, David C., assignor.)
Rex Buggy Company. (See Hull, Matthew R., assignor.)
Rexford, Ley P., assignor to American Paper Products Company, St. Louis, Mo. Paper box. No. 1,152,844; Sept. 7; Gaz. vol. 218; p. 171.
Reynolds, Morley P., assignor to W. S. Tyler Company, Cleveland, Ohio. Refrigerator-car. No. 1,153,705; Sept. 14; Gaz. vol. 218; p. 513.
Reynolds, Morley P., assignor to The W. S. Tyler Company, Cleveland, Ohio. Refrigerator-car. No. 1,154,436; Sept. 21; Gaz. vol. 218; p. 800.
Reynolds, Samuel W., West Toledo, Ohio. Setting-machine. No. 1,153,827; Sept. 14; Gaz. vol. 218; p. 556.
Rheinische Metallwaaren- und Maschinenfabrik. (See Faber, Ernst, assignor.)
Rhoades, Alonzo E., assignor to Draper Company, Hopedale, Mass. Spooler. No. 1,152,845; Sept. 7; Gaz. vol. 218; p. 171.
Rhodus, Thomas, Chicago, Ill. Rheostat. No. 1,154,728; Sept. 28; Gaz. vol. 218; p. 928.
Riboni, Pietro. (See Bibolini and Riboni.)
Rice, Arlo E., Marcus, Iowa. Pipe-wrench. No. 1,154,654; Sept. 28; Gaz. vol. 218; p. 904.
Rice, Irwin E. (See Wilson and Rice.)
Rice, Oscar W., assignor to The Edward J. Rice Mfg. Co., Rochester, N. Y. Water-closet connection. No. 1,152,973; Sept. 7; Gaz. vol. 218; p. 218.
Rice, Oscar W., assignor to The Edward J. Rice Mfg. Co., Rochester, N. Y. Water-closet bend. No. 1,152,974; Sept. 7; Gaz. vol. 218; p. 219.
Rice, Richard H., Lynn, Mass., assignor to General Electric Company. Regulating device for mixed-pressure turbo-compressors. No. 1,154,594; Sept. 21; Gaz. vol. 218; p. 855.
Rice, Richard H., Lynn, Mass., assignor to General Electric Company. Frame for turbo-driven machines. No. 1,155,162; Sept. 28; Gaz. vol. 218; p. 1078.
Rice, Richard H., Lynn, Mass., assignor to General Electric Company. Geared turbine-driven set. No. 1,155,163; Sept. 28; Gaz. vol. 218; p. 1078.
Rice, Thomas B., Jr., Philadelphia, Pa. Attachment for machines for driving fasteners. No. 1,153,955; Sept. 21; Gaz. vol. 218; p. 635.
Rice, William O. (See Hostetter and Rice.)
Rich, William, Liverpool, England. Apparatus for indicating fires in compartments at a distance. No. 1,154,128; Sept. 21; Gaz. vol. 218; p. 694.
Richards, Frank J., assignor of forty-nine one-hundredths to D. M. Brockway, Los Angeles, Cal. Rotary engine. No. 1,154,886; Sept. 28; Gaz. vol. 218; p. 981.
Richards-Wilcox Manufacturing Company. (See Hoffman, Peter L., assignor.)
Richardson, Paley K., Mangum, Okla. Cotton packing or baling device. No. 1,154,655; Sept. 28; Gaz. vol. 218; p. 904.
Richeson, Joseph S., assignor of one-half to C. H. Clements, Oronoco, Va. Mail-catcher. No. 1,154,807; Sept. 28; Gaz. vol. 218; p. 955.

Richey, John T., Rogersville, Ala. Cotton-chopper. No. 1,152,975; Sept. 7; Gaz. vol. 218; p. 219.
Richmond, John C., Helper, Utah. Self-leveling table. No. 1,153,828; Sept. 14; Gaz. vol. 218; p. 556.
Richmond Radiator Company. (See Van Ness, Frank W., assignor.)
Ricker, Jerome B., St. Maries, Idaho. Shaper for swaged saw-teeth. No. 1,153,444; Sept. 14; Gaz. vol. 218; p. 421.
Rickert-Shafer Company. (See Johnson, John E., assignor.)
Rickles, Jasper N., Altoona, Ala. Picture-hanger. No. 1,154,887; Sept. 28; Gaz. vol. 218; p. 981.
Rietzel, Adolph F., Charlestown, R. I., assignor to Universal Electric Welding Company, New York, N. Y. Joining metal by welded rivets. No. 1,154,808; Sept. 28; Gaz. vol. 218; p. 955.
Rigby, Clark F., Butler, Pa. Oil-saver. No. 1,152,648; Sept. 7; Gaz. vol. 218; p. 62.
Rigby, Clark F., Butler, Pa. Oil-saver. No. 1,152,649; Sept. 7; Gaz. vol. 218; p. 62.
Riggs, J. A. (See Caldwell, William F., assignor.)
Riley, Lynn G., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. System and method of control for electric motors. No. 1,155,164; Sept. 28; Gaz. vol. 218; p. 1079.
Rilling, John E., Milwaukee, Wis. Mattress. No. 1,153,644; Sept. 14; Gaz. vol. 218; p. 491.
Rimailho, Emile, assignor to Compagnie Des Forges Et Acieries De La Marine Et D'Homecourt, Paris, France. Artillery-projectile. No. 1,154,437; Sept. 21; Gaz. vol. 218; p. 800.
Rioux, Arthur, Jamestown, N. D. Meat-saw. No. 1,152,976; Sept. 7; Gaz. vol. 218; p. 219.
Risberg, Fred A., Chicago, Ill. Bookbinding-machine. No. 1,152,907; Sept. 7; Gaz. vol. 218; p. 194.
Ritchie, William H. S., West Point, Ky. Corn-harvester. No. 1,152,660; Sept. 7; Gaz. vol. 218; p. 103.
Riviere, Fernand E., assignor of forty-eight one-hundredths to L. Salmon, New Orleans, La. Emergency-shoe. No. 1,154,800; Sept. 28; Gaz. vol. 218; p. 955.
Robbins, Cornelius D., *et al.* (See Lynch, Daniel E., assignor.)
Robbins, Merrill, Adams, N. Y. Non-refillable bottle. No. 1,153,519; Sept. 14; Gaz. vol. 218; p. 448.
Roberson, John J., Springville, Utah. Automatic sheep-dipper. No. 1,152,910; Sept. 7; Gaz. vol. 218; p. 195.
Roberts, Fredrick A., Dickey, N. D. Line-shaft journal-box. No. 1,152,550; Sept. 7; Gaz. vol. 218; p. 63.
Roberts, Henry P., Boston, Mass. Milk-bottle protector. No. 1,154,656; Sept. 28; Gaz. vol. 218; p. 905.
Roberts, John H., Chicago, Ill. Thermostatic control of furnaces. No. 1,154,207; Sept. 21; Gaz. vol. 218; p. 720.
Roberts, Roscoe L. (See Finney, James J., assignor.)
Roberts, Walter H., *et al.*, executors. (See Palmer, Edward H.)
Robertson, Richard E., Kelburn, New Zealand. Pipe-coupling. No. 1,154,937; Sept. 28; Gaz. vol. 218; p. 999.
Robinette, James M., Williamson, W. Va. Game-cue. No. 1,152,908; Sept. 7; Gaz. vol. 218; p. 194.
Robinson, Charles G., and J. E. Schlieper, Pittsburgh, Pa. Method and apparatus for producing cast-steel car-wheels. No. 1,153,258; Sept. 14; Gaz. vol. 218; p. 353.
Robinson, George L., and E. L. Wagner, New York, N. Y., assignors to The New York Sewage Disposal Company. Sewage-disposal apparatus. No. 1,154,129; Sept. 21; Gaz. vol. 218; p. 694.
Robinson, John G. (See Hathaway, Claude P., assignor.)
Robinson, Roland H. (See Maison and Robinson.)
Robinson, William A., Old Fort, N. C. Ice-cream-cone filler. No. 1,153,172; Sept. 7; Gaz. vol. 218; p. 284.
Robinson, William G., Fairfield, Iowa. Wire-fence clamp. No. 1,155,276; Sept. 28; Gaz. vol. 218; p. 1113.
Robinson, William T., and C. D. Hylton, Ethel, W. Va. Trolley-hanger. No. 1,152,909; Sept. 7; Gaz. vol. 218; p. 194.
Robson, Charles, Philadelphia, Pa. Baker's-oven light. No. 1,154,339; Sept. 21; Gaz. vol. 218; p. 767.
Rodeck, Walter, New Durham, N. J. Clip. No. 1,153,135; Sept. 7; Gaz. vol. 218; p. 271.
Rodriguez, Ramon, *et al.* (See Simao, Antonio P., assignor.)
Roessler & Hasslacher Chemical Company. (See Kochendoerfer, Ernst, assignor.)
Roessler & Hasslacher Chemical Company, The. (See Schmidt, Friedrich L., assignor.)
Roessler & Hasslacher Chemical Co., The. (See Weber, Friedrich W., assignor.)
Roffy, Joseph T., Chicago, Ill., assignor to Nernst Lamp Company. Lamp. No. 1,153,445; Sept. 14; Gaz. vol. 218; p. 421.
Roffy, Joseph T., Pittsburgh, Pa., assignor to Nernst Lamp Company. Lamp and reflector. No. 1,153,446; Sept. 14; Gaz. vol. 218; p. 422.
Rogers, Joesire S., Laurelhill, Fla. Padlock. No. 1,153,405; Sept. 14; Gaz. vol. 218; p. 407.
Rogers, John R., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,154,057; Sept. 21; Gaz. vol. 218; p. 670.
Rogers, Lee R., Chicago, Ill. Rectifier. No. 1,154,058; Sept. 21; Gaz. vol. 218; p. 670.
Rogers, Russell N., assignor, by mesne assignments, to Addressograph Company, Chicago, Ill. Paper-feeder. No. 1,153,330; Sept. 14; Gaz. vol. 218; p. 382.
Rogers, William A., and M. Parker, Washington, D. C., assignors to W. G. Cornell Company, New York, N. Y. Supervisory system for sprinkler-valves. No. 1,153,573; Sept. 14; Gaz. vol. 218; p. 469.
Rohde, William, Lincoln, Nebr. Telephonic apparatus. No. 1,153,572; Sept. 14; Gaz. vol. 218; p. 468.
Rolfe, Orrin M., Lowell, Mass. Heel-cushion for boots and shoes. No. 1,154,340; Sept. 21; Gaz. vol. 218; p. 767.
Rollpiller, Henry G. (See Dech, Peter, assignor.)
Rolstad, Martin O., Sisseton, S. D. Harness. No. 1,155,165; Sept. 28; Gaz. vol. 218; p. 1079.
Romanczak, Joezef, Pittock, Pa. Hill-climbing device. No. 1,154,657; Sept. 28; Gaz. vol. 218; p. 905.
Romberger, Floyd T., Elizabethville, Pa. Internal-combustion engine. No. 1,152,763; Sept. 7; Gaz. vol. 218; p. 140.
Rommeney, Albert, and G. Kathe, Heidenau, Dresden, Germany. Apparatus for cutting and stacking sheets of paper or the like. No. 1,152,551; Sept. 7; Gaz. vol. 218; p. 63.
Roncevick, Joe, Park City, Utah. Rail-joint. No. 1,155,277; Sept. 28; Gaz. vol. 218; p. 1113.
Rosa, Evaristo L., *et al.* (See Simao, Antonio P., assignor.)
Rose, Edward E., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Percolator. No. 1,155,166; Sept. 28; Gaz. vol. 218; p. 1080.
Rose, Edward E., Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electric heating apparatus. No. 1,155,167; Sept. 28; Gaz. vol. 218; p. 1080.
Rose, Fred G., Rocky Ford, Colo. Recorder. No. 1,154,438; Sept. 21; Gaz. vol. 218; p. 801.
Rose, Harry E., Greenfield, Okla. Wrench. No. 1,152,764; Sept. 7; Gaz. vol. 218; p. 140.
Rosell, Claude A. O., assignor to Turco-Halvah Company, (Inc.,) New York, N. Y. Food product. No. 1,154,059; Sept. 21; Gaz. vol. 218; p. 671.
Rosenberg, Carl G. K., Stockholm, Sweden. Holding device for manuscripts, copies, and the like. No. 1,153,378; Sept. 14; Gaz. vol. 218; p. 575.
Rosenberger, Andrew F., Chicago, Ill. Listing device. No. 1,153,520; Sept. 14; Gaz. vol. 218; p. 449.
Rosenbluth, Edwin M., Philadelphia, Pa. Electrically-operated water-heater for automobile-radiators. No. 1,155,098; Sept. 28; Gaz. vol. 218; p. 1056.
Rosencrantz, Isidor B., New York, N. Y., assignor to The Patent Products Corporation. Bottle-cap. No. 1,153,706; Sept. 14; Gaz. vol. 218; p. 514.
Rosendahl, Nils M., assignor to F. C. Austin, Chicago, Ill. Window-ventilator dust-collecting mechanism. No. 1,154,060; Sept. 21; Gaz. vol. 218; p. 671.
Rosenfeld, Francis M., New York, N. Y., assignor to Import Sales Company. Circuit-closing device. No. 1,154,130; Sept. 21; Gaz. vol. 218; p. 695.
Rosenfeld, Morris W., Rochester, N. Y. Suitcase. No. 1,153,136; Sept. 7; Gaz. vol. 218; p. 271.
Rosenthal, August, West Allis, Wis. Distributer-elbow. No. 1,154,658; Sept. 28; Gaz. vol. 218; p. 905.
Rosenthal, Raphael. (See Schreiber, Norbert, assignor.)
Rosenwasser, Josef. (See Kampler, Daniel M., assignor.)
Ross, Charles H. A. F. L., Balnagown Castle, county of Ross, Scotland. Machine for feeding and swaging bullets. No. 1,154,810; Sept. 28; Gaz. vol. 218; p. 956.
Ross, William H., Holyoke, Mass. Foldable and collapsible bucket. No. 1,152,846; Sept. 7; Gaz. vol. 218; p. 172.
Rossi, Ugo, Milan, Italy. Apparatus for concentrating liquids. No. 1,152,977; Sept. 7; Gaz. vol. 218; p. 219.
Rothenberger, Daniel M., assignor of one-third to F. F. Seidel, Reading, Pa. Mausoleum. No. 1,153,956; Sept. 21; Gaz. vol. 218; p. 635.
Roughsedge, William H., Ottawa, Ontario, Canada. Mold for use in the construction of concrete buildings. No. 1,153,447; Sept. 14; Gaz. vol. 218; p. 422.
Round & Son, David. (See Cull, Louis D., assignor.)
Routhe, Albert C. (See Carr and Routhe.)
Rovira, Joaquin, Mainz, and H. Ahrle, Frankfort-on-the-Main, Germany; said Ahrle assignor to said Rovira. Mouthpiece for cigarettes. No. 1,153,574; Sept. 14; Gaz. vol. 218; p. 469.
Rowe, Frank W., Oakland, Cal. Window-shade device. No. 1,153,521; Sept. 14; Gaz. vol. 218; p. 449.
Rowley, Fred A., Sparta, Mich. Electric-tool handle. No. 1,153,575; Sept. 14; Gaz. vol. 218; p. 469.
Roy, Edward H., *et al.* (See Killman, Thomas A., assignor.)
Royal Engineering Corporation. (See Collins, Roy V., assignor.)
Royal Typewriter Company. (See Utz, Anthony, assignor.)
Royle, Vernon, Paterson, N. J. Tubing-machine. No. 1,152,978; Sept. 7; Gaz. vol. 218; p. 220.
Royle, Vernon, Paterson, N. J. Circular loom. No. 1,153,576; Sept. 14; Gaz. vol. 218; p. 469.
Royse, Charles E., assignor of one-half to C. A. Winters, Eugene, Ind. Throwing-machine. No. 1,152,979; Sept. 7; Gaz. vol. 218; p. 220.
Rubens, Morris, *et al.* (See Von Bültzingslöwen, Bruno, assignor.)

Rudolphi, Frank, Montclair, N. J., assignor to American Can Company, New York, N. Y. Portable can-flange straightener. No. 1,152,437; Sept. 7; Gaz. vol. 218; p. 19.

Rueckert, Ernest F., Providence, R. I. Take-up for flexible electric conductors. No. 1,153,829; Sept. 14; Gaz. vol. 218; p. 557.

Ruegger, Eduard, Zurich, Switzerland, assignor to Escher, Wyss & Co. Automatic lubricator. No. 1,152,847; Sept. 7; Gaz. vol. 218; p. 172.

Ruhe, Carleton, Olean, N. Y. Machine for treating leather. No. 1,154,341; Sept. 21; Gaz. vol. 218; p. 768.

Ruhe, Carleton, Olean, N. Y. Machine for brushing sole-leather. (Reissue.) No. 13,984; Sept. 21; Gaz. vol. 218; p. 856.

Rummel, James W., Windber, Pa. Tool-handle. No. 1,153,340; Sept. 14; Gaz. vol. 218; p. 382.

Rumsey, Charles B., Tuscaloosa, Ala. Shaper attachment. No. 1,154,729; Sept. 28; Gaz. vol. 218; p. 928.

Rundle, Fred A., assignor to Whiting Foundry Equipment Company, Harvey, Ill. Combination automatic and lowering brake for hoisting-machines. No. 1,153,957; Sept. 21; Gaz. vol. 218; p. 635.

Rundle, George W., Spokane, Wash. Propulsion mechanism. No. 1,154,208; Sept. 21; Gaz. vol. 218; p. 720.

Rundle, William, Johannesburg, Transvaal, South Africa. Railway-vehicle coupling. No. 1,153,577; Sept. 14; Gaz. vol. 218; p. 470.

Runne, Henry, Brockport, N. Y. Veneer-jointing machine. No. 1,154,730; Sept. 28; Gaz. vol. 218; p. 929.

Ruppert, Austin J., Forreston, Ill. Clothes-pounder. No. 1,152,438; Sept. 7; Gaz. vol. 218; p. 20.

Rush, Frank E., Sullivan, Ind. Wrench. No. 1,155,278; Sept. 28; Gaz. vol. 218; p. 1113.

Rushton, John L., Muscatine, Iowa. Saw-guard. No. 1,154,209; Sept. 21; Gaz. vol. 218; p. 720.

Russell, Edward P., *et al.* (See Beadle, George W., assignor.)

Russell, Edwin L., Cleveland, Ohio. Valve. No. 1,153,708; Sept. 14; Gaz. vol. 218; p. 515.

Russell, Edwin L., Cleveland, Ohio. Valve adjuster and driver. No. 1,153,709; Sept. 14; Gaz. vol. 218; p. 515.

Russell, Edwin L., Cleveland, Ohio. Valve adjuster and driver. No. 1,153,710; Sept. 14; Gaz. vol. 218; p. 516.

Russell, Edwin L., Detroit, Mich. Valve adjuster and driver. No. 1,153,711; Sept. 14; Gaz. vol. 218; p. 516.

Russell, Edwin L., Cleveland, Ohio, assignor to E. W. Ansted, Connellsville, Ind. Valve actuating and adjusting mechanism. No. 1,153,707; Sept. 14; Gaz. vol. 218; p. 514.

Russell, George H., Florence, Ala. Fireplace heating appliance. No. 1,152,912; Sept. 7; Gaz. vol. 218; p. 195.

Russell Grader Manufacturing Company. (See Anderson, Axel, assignor.)

Russell, William H., St. Clair, Pa. Charge-heating attachment for explosive-engines. No. 1,153,448; Sept. 14; Gaz. vol. 218; p. 422.

Russia Cement Company. (See Phillips, Nathan C., assignor.)

Ruud, Edwin, assignor to Ruud Manufacturing Company, Pittsburgh, Pa. Refrigerating apparatus. No. 1,153,712; Sept. 14; Gaz. vol. 218; p. 516.

Ruud Manufacturing Company. (See Ruud, Edwin, assignor.)

Ryan, Andrew, Knob, assignor of one-half to A. M. Dean, Redding, Cal. Snow-plow. No. 1,155,099; Sept. 28; Gaz. vol. 218; p. 1057.

Ryan, Michael E., Fall River, Mass. Combined shaving and clipping machine. No. 1,152,911; Sept. 7; Gaz. vol. 218; p. 195.

Ryan, William A., Chicago, Ill. Moving-picture apparatus. No. 1,153,841; Sept. 14; Gaz. vol. 218; p. 383.

Ryason, Samuel M., Kirkwood, Ill. Trap. No. 1,152,980; Sept. 7; Gaz. vol. 218; p. 220.

Ryder, Joshua H., Brockton, assignor of one-half to G. I. Pettengill, Boston, Mass. Attachment for sinks, washtubs, and the like. No. 1,152,552; Sept. 7; Gaz. vol. 218; p. 64.

Rymer, John E., assignor to F. F. Herndon, Charleston, S. C. Rubber-stamp board. No. 1,155,279; Sept. 28; Gaz. vol. 218; p. 1114.

S. F. Bowser & Company. (See Johnson and Wyckoff, assignors.)

Sabatier, Paul, and A. Mailhe, Toulouse, assignors to Société des Raffineries Catalytiques des Pétroles et hydrocarbures, Paris, France. Converting petroleums and other heavy liquid hydrocarbons into volatile hydrocarbons distilling below 150° C. No. 1,152,765; Sept. 7; Gaz. vol. 218; p. 140.

Saccaggio, Pedro C., Talleres, Ferro Carril Sud, Argentina, assignor to J. Stone & Company Limited, Deptford, England. Car-door hinge and fastener. No. 1,154,061; Sept. 21; Gaz. vol. 218; p. 672.

Sack, Herman E., assignor to R. B. Mills, Philadelphia, Pa. Mechanism for transferring hairs. No. 1,153,522; Sept. 14; Gaz. vol. 218; p. 449.

Sadler, Luther, and R. C. Geckler, Oakland, Cal. Railway-crossing. No. 1,153,342; Sept. 14; Gaz. vol. 218; p. 383.

Saefke, William M., assignor of one-half to H. Saevke, Milwaukee, Wis. Valve. No. 1,153,343; Sept. 14; Gaz. vol. 218; p. 384.

Saegmuller, George N., assignor to Bausch & Lomb Optical Company, Rochester, N. Y. Binocular periscope. No. 1,153,259; Sept. 14; Gaz. vol. 218; p. 354.

Saild, Oskar, and K. Pettersen, Sarpsborg, Norway. Electrically-heated kitchen-range. No. 1,154,270; Sept. 21; Gaz. vol. 218; p. 743.

Saevke, Henry. (See Saefke, William M., assignor.)

Safety Car Heating & Lighting Company. (See Thomson, William I., assignor.)

Sagebrecht, Charles J., Brooklyn, assignor to Interstate Electric Novelty Co., New York, N. Y. Portable electric flash-light. No. 1,155,100; Sept. 28; Gaz. vol. 218; p. 1057.

Sagle, Roy E., Roseville, Ohio. Electrical regulating device. No. 1,152,913; Sept. 7; Gaz. vol. 218; p. 196.

Saillot, Alfred L. E. (See Chapsal and Saillot.)

Sala, Francisco, Calbarien, and J. Vazquez, Yaguajay, Cuba. Mechanical system for elevating liquids. No. 1,154,938; Sept. 28; Gaz. vol. 218; p. 1000.

Salka, Samuel G., Chicago, Ill. Muffler. No. 1,153,260; Sept. 14; Gaz. vol. 218; p. 354.

Salmon, Leon. (See Riviere, Fernand E., assignor.)

Salmson, Emile J. J. (See Canton, Unné, and Salmson.)

Salzenstein, Solomon C., assignor to Chic. Mfg. Co., Peoria, Ill. Garment. No. 1,153,523; Sept. 14; Gaz. vol. 218; p. 450.

Samaia, Dino, Milan, Italy. Apparatus for actuating conduit-covers and collector-plows for electric railways. No. 1,152,914; Sept. 7; Gaz. vol. 218; p. 196.

Samel, Michael, Lorain, Ohio. Agricultural machine. No. 1,154,888; Sept. 28; Gaz. vol. 218; p. 982.

Samel, Michael, Cherry Valley, Pa. Motor-plow. No. 1,154,889; Sept. 28; Gaz. vol. 218; p. 982.

Sammet, Carl F., assignor to E. Sammet, Annandale, N. J. Music-leaf turner. No. 1,154,842; Sept. 21; Gaz. vol. 218; p. 768.

Sammet, Emil. (See Sammet, Carl F., assignor.)

Samstag, Louis A., New York, N. Y. Hand-bag, &c., and framing the same. No. 1,153,958; Sept. 21; Gaz. vol. 218; p. 636.

Samuel C. Tatum Company, The. (See Dom, Alexander and C., assignors.)

Samuelson, Frederick, Bugby, England, assignor to General Electric Company. Speed-governing mechanism. No. 1,154,062; Sept. 21; Gaz. vol. 218; p. 672.

Sanders, Stephen P., Cupertino, Cal. Carbureter. No. 1,152,915; Sept. 7; Gaz. vol. 218; p. 197.

Sandfield, Michael, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Coil-forming apparatus. No. 1,153,344; Sept. 14; Gaz. vol. 218; p. 384.

Sands, George H., Electra, Tex. Internal-combustion steam-generator. No. 1,154,131; Sept. 21; Gaz. vol. 218; p. 695.

Sanitary Can Company. (See Butler, William F., assignor.)

Santry, Joseph V., Boston, assignor to C. W. E. Clarke, Brookline, Mass. Heating and power-producing system. No. 1,154,210; Sept. 21; Gaz. vol. 218; p. 721.

Saranac Machine Co. (See Ray, William H., assignor.)

Sargent & Company. (See Shaw, John H., assignor.)

Sargent & Company. (See Voight, Henry G., assignor.)

Sargent, Frederick G., and C. T. Brooks, Westford, assignors to C. G. Sargent's Sons Corporation, Graniteville, Mass. Apron-gulding device. No. 1,152,439; Sept. 7; Gaz. vol. 218; p. 20.

Sargent, James T., Merchantville, N. J. Washboard. No. 1,152,766; Sept. 7; Gaz. vol. 218; p. 141.

Sargent, Marshall B., and A. E. Karlberg, assignors to The Stenotype Company, Indianapolis, Ind. Type-writing machine. No. 1,153,959; Sept. 21; Gaz. vol. 218; p. 636.

Sauer, Charles W., Jr., Elizabeth, N. J. Antislipping device for shoes. No. 1,154,890; Sept. 28; Gaz. vol. 218; p. 982.

Sauerman, William E., Ogden, Iowa. Railway signal device. No. 1,153,449; Sept. 14; Gaz. vol. 218; p. 423.

Saunders, Emily M., Boston, Mass. Mangle-roll. No. 1,154,731; Sept. 28; Gaz. vol. 218; p. 929.

Saunders, James, Dayton, assignor to W. C. Dunn, Wyoming, Ohio. Truing-machine. No. 1,154,843; Sept. 21; Gaz. vol. 218; p. 769.

Saunderson, Douglas B. (See Mordey, Astley, and Saunderson.)

Saurer, Firm of Adolph. (See Stamm, Hans, assignor.)

Saurer, Hippolyt, Arbon, Switzerland, Automatic embroidering-machine. No. 1,155,007; Sept. 28; Gaz. vol. 218; p. 1022.

Sauter, Raimund. (See Senger and Sauter.)

Savage Arms Company. (See Nelson, Charles A., assignor.)

Savage, Will R., Omaha, Nebr. Valve. No. 1,154,811; Sept. 28; Gaz. vol. 218; p. 956.

Savarese, Antonio, Philadelphia, Pa. Combination ironing-pad. No. 1,152,553; Sept. 7; Gaz. vol. 218; p. 64.

Sawyer, Harry. (See Whichello and Sawyer.)

Sayers, Cyril, Jersey City, N. J. Loose-leaf binder. No. 1,153,713; Sept. 14; Gaz. vol. 218; p. 517.

Schacht, William F., Huntington, Ind. Force-cup. No. 1,152,981; Sept. 7; Gaz. vol. 218; p. 221.

Schaefer, Hugo. (See Pannecoucke and Schaefer.)

Schaff, Schuyler R., Louisville, Ky. Guy-anchor. No. 1,153,450; Sept. 14; Gaz. vol. 218; p. 423.

Schaffert, Adolf H., assignor to The General Fireproofing Company, Youngstown, Ohio. Drawer-follower. No. 1,154,211; Sept. 21; Gaz. vol. 218; p. 721.

Schane, Edward H. (See Caughey, Edward G., assignor.)

Schelbner, Walter E., Wilbur, Wash. Variable-speed-transmission device. No. 1,153,261; Sept. 14; Gaz. vol. 218; p. 354.

Schellenbach, William, Hartwell, W. Lodge, and N. D. Chard, assignors to The Lodge & Shipley Machine Tool Company, Cincinnati, Ohio. Narrow tool-support. No. 1,154,939; Sept. 28; Gaz. vol. 218; p. 1000.

Schenstrom, Wilhelm, *et al.* (See Kenyon, Otis A., assignor.)

Scherer, Henry, Billings, Mont. Ball-and-socket attachment for chains. No. 1,153,451; Sept. 14; Gaz. vol. 218; p. 424.

Scheuber, William F., Marshall, Tex. Expansion-reamer. No. 1,152,440; Sept. 7; Gaz. vol. 218; p. 20.

Scheuer, Belle. (See Schwarzschild and Scheuer.)

Schicker, George L. (See Specht, Christ A., assignor.)

Schiessler, Josef, Baden, near Vienna, Austria-Hungary. Transmitting apparatus for submarine signaling. No. 1,152,661; Sept. 7; Gaz. vol. 218; p. 104.

Schiller, Carl, New York, N. Y. Protective apparatus for repairers of bakers' ovens. No. 1,152,554; Sept. 7; Gaz. vol. 218; p. 64.

Schlachter, Carl A., Manson, Iowa. Wardrobe. No. 1,154,659; Sept. 28; Gaz. vol. 218; p. 906.

Schlangen, Nicholas. (See Schlangen, Simon and N.)

Schlangen, Simon and N., Chicago, Ill. Beer-racking apparatus. No. 1,155,008; Sept. 28; Gaz. vol. 218; p. 1022.

Schlangen, Simon and N., Chicago, Ill. Beer-racking apparatus. No. 1,155,009; Sept. 28; Gaz. vol. 218; p. 1023.

Schlesinger, Max, New York, assignor of one-half to J. Feldman, Brooklyn, N. Y. Lock for trunks and similar articles. No. 1,152,016; Sept. 7; Gaz. vol. 218; p. 197.

Schlick, Otto. (See Greiner, Fritz, assignor.)

Schlieper, John E. (See Robinson and Schlieper.)

Schliggemann, Heinrich, Gleiwitz, Germany. Plant for cooling, removing scale from, chalking, and drying wire delivered by finishing-rolls. No. 1,152,848; Sept. 7; Gaz. vol. 218; p. 172.

Schloss, Joseph W. and M. W., New York, N. Y., assignors to Castlebone Company. Dispensing-container. No. 1,154,212; Sept. 21; Gaz. vol. 218; p. 722.

Schloss, Meyer W. (See Schloss, Joseph and M. W.)

Schlothan, James, San Francisco, Cal., and W. F. Schlothan, Ketchikan, Alaska. Cutting means for canning apparatus. No. 1,152,441; Sept. 7; Gaz. vol. 218; p. 21.

Schlothan, William F. (See Schlothan, James and W. F.)

Schmidt, Ernst M. C., Tarrytown, N. Y. Egg and cream beater. No. 1,154,040; Sept. 28; Gaz. vol. 218; p. 1000.

Schmidt, Ferdinand L., New York, N. Y., assignor to United States Envelope Company, Springfield, Mass. Envelop-machine. No. 1,152,555; Sept. 7; Gaz. vol. 218; p. 65.

Schmidt, Friedrich L., Charlottenburg, Germany, assignor to The Roessler & Hasslacher Chemical Company. Mixture of borates containing active oxygen. No. 1,155,101; Sept. 28; Gaz. vol. 218; p. 1058.

Schmidt, Friedrich L., Charlottenburg, Germany, assignor to The Roessler & Hasslacher Chemical Company. Bleaching. No. 1,155,102; Sept. 28; Gaz. vol. 218; p. 1058.

Schmidt, Friedrich L., Charlottenburg, Germany, assignor to The Roessler & Hasslacher Chemical Company. Mixture of borates containing active oxygen. No. 1,155,103; Sept. 28; Gaz. vol. 218; p. 1058.

Schmidt, Friedrich L., Charlottenburg, Germany, assignor to The Roessler & Hasslacher Chemical Company. Bleaching. No. 1,155,104; Sept. 28; Gaz. vol. 218; p. 1058.

Schmidt, John C., Chicago, Ill. Door-check. No. 1,155,280; Sept. 28; Gaz. vol. 218; p. 1114.

Schmidt, William B., *et al.* (See Hall, Elmer E., assignor.)

Schmitt, Philipp. Port Orchard, Wash. Fender for cultivators. No. 1,154,063; Sept. 21; Gaz. vol. 218; p. 672.

Schmitz, Pamphilus, assignor to The Franciscan Fathers of Arizona, Phoenix, Ariz. Building structure. No. 1,153,714; Sept. 14; Gaz. vol. 218; p. 517.

Schmueser, Joseph M. (See Hansen and Schmueser.)

Schneider, Eberhard, New York, N. Y. Consecutive-view apparatus. No. 1,153,578; Sept. 14; Gaz. vol. 218; p. 470.

Schneider, Eugène, Le Creuzot, France. Percussion-fuse. No. 1,152,917; Sept. 7; Gaz. vol. 218; p. 197.

Schneider, Eugène, Paris, France. Submarine mine. No. 1,153,830; Sept. 14; Gaz. vol. 218; p. 557.

Schneider, George J., assignor to Acme Electric Heater Company, Detroit, Mich. Stand for sad-irons. No. 1,152,767; Sept. 7; Gaz. vol. 218; p. 141.

Schneider, Peter, Aurora, Ind. Curtain-stretcher. No. 1,154,732; Sept. 28; Gaz. vol. 218; p. 929.

Schniewind, Elma M., executrix. (See Schniewind, Frederic W. C.)

Schniewind, Frederic W. C., deceased, Englewood, N. J.; E. M. Schniewind, executrix. Separation of coal. No. 1,152,442; Sept. 7; Gaz. vol. 218; p. 21.

Schniewind, Frederic W. C., deceased, Englewood, N. J.; E. M. Schniewind, executrix. Purification of coal. No. 1,153,182; Sept. 7; Gaz. vol. 218; p. 288.

Schoedinger, Franklin O. (See Bartholomew and Percy, assignors.)

Schoettle, Edwin J., Philadelphia, Pa. Platform for shirt-boxes, &c. No. 1,155,281; Sept. 28; Gaz. vol. 218; p. 1115.

Scholfield, Arthur J., Ridge Bank, Todmorden, and J. R. Redman, Sandbed, Hebden Bridge, England. Lock for vehicle-doors. No. 1,154,439; Sept. 21; Gaz. vol. 218; p. 801.

Scholl, William M., Chicago, Ill. Arch-support. No. 1,152,556; Sept. 7; Gaz. vol. 218; p. 65.

Scholl, William M., Chicago, Ill. Stature-increaser. No. 1,152,557; Sept. 7; Gaz. vol. 218; p. 66.

Schrader, Carl, Halensee, near Berlin, assignor to Siemens & Halske, A. G., Berlin, Germany. High-tension transformer. No. 1,154,132; Sept. 21; Gaz. vol. 218; p. 695.

Schreiber, Norbert, assignor of one-half to R. Rosenthal, Lincoln, Ill. Boiler-skimmer. No. 1,152,918; Sept. 7; Gaz. vol. 218; p. 197.

Schreiner, Warren J., Middletown, Pa. Shipping-crate. No. 1,155,105; Sept. 28; Gaz. vol. 218; p. 1058.

Schroeder, Henry F., Cleveland, Ohio. Stop and waste cock. No. 1,153,645; Sept. 14; Gaz. vol. 218; p. 491.

Schroeder, Simon E., Minier, Ill. Gearing. No. 1,153,715; Sept. 14; Gaz. vol. 218; p. 517.

Schubert, Franz, Hamburg, Germany. Machine for treating materials with a liquid. No. 1,154,440; Sept. 21; Gaz. vol. 218; p. 801.

Schueler, George R., Kingston-upon-Hull, England. Press. No. 1,152,919; Sept. 7; Gaz. vol. 218; p. 198.

Schulte, Louis, assignor to Electro Chemical Products Association, Chicago, Ill. Plating-machine. No. 1,154,660; Sept. 28; Gaz. vol. 218; p. 906.

Schultis, Charles F., assignor to C. Girl, Cleveland, Ohio. Threading device. No. 1,153,345; Sept. 14; Gaz. vol. 218; p. 384.

Schultz, Lyda M., Dorchester, Wis. Doughnut-drainer. No. 1,154,812; Sept. 28; Gaz. vol. 218; p. 957.

Schultz, William J. (See Moran, James J., assignor.)

Schulz, Carl J., New York, N. Y. Asphalt-cutter attachment for steam-rollers. No. 1,153,137; Sept. 7; Gaz. vol. 218; p. 272.

Schwarzschild, Monroe M., and B. Scheuer, New York, N. Y. Type-writing doll toy. No. 1,153,524; Sept. 14; Gaz. vol. 218; p. 450.

Schweitzer, Earnst J., and R. G. Wagner, Los Angeles, Cal. Lighting-fixture. No. 1,153,960; Sept. 21; Gaz. vol. 218; p. 636.

Schweitzer, Edmund O., Chicago, Ill. Transformer regulation. No. 1,154,441; Sept. 21; Gaz. vol. 218; p. 802.

Schweitzer, Edmund O., Chicago, Ill. Synchronizing recorder. No. 1,155,106; Sept. 28; Gaz. vol. 218; p. 1058.

Scoggins, Jesse C. (See Nelson and Scoggins.)

Scott, John M., Racine, Wis. Steering-gear for motor-vehicles. No. 1,153,961; Sept. 21; Gaz. vol. 218; p. 637.

Scott, Robert W., assignor to Scott & Williams, Incorporated, Boston, Mass. Attachment for circular hosiery-machines. No. 1,152,849; Sept. 7; Gaz. vol. 218; p. 172.

Scott, Robert W., Boston, Mass., assignor to Scott & Williams, Incorporated, Camden, N. J. Circular-knitting machine. No. 1,152,850; Sept. 7; Gaz. vol. 218; p. 173.

Scott & Williams. (See Scott, Robert W., assignor.)

Scovill, James P., Wyoming, Ohio, assignor of one-half to C. H. Foster, Troy, N. Y. Tobacco-stemming machine. No. 1,153,962; Sept. 21; Gaz. vol. 218; p. 637.

Scranton Stove Works. (See Lansing, James A., assignor.)

Sears, Roebuck and Company. (See Hoffman, Rudolph, assignor.)

Seator Machine Mfg. Company. (See Seator, Robert J., assignor.)

Seator, Robert J., assignor to Seator Machine Mfg. Company, Battle Creek, Mich. Paper feed and cut-off means. No. 1,153,346; Sept. 14; Gaz. vol. 218; p. 385.

Seaver, Nelson J. (See Grunbauch, Charles, assignor.)

Sebring, Daniel, Spokane, Wash. Saw-gage. No. 1,153,262; Sept. 14; Gaz. vol. 218; p. 355.

Seck, Karl H. W. L., assignor to Firm of H. Lanz, Mannheim, Germany. Driving mechanism for rotary power hoes or cultivators. No. 1,152,558; Sept. 7; Gaz. vol. 218; p. 66.

Sedlacsek, Joseph, Binghamton, N. Y. Door-lock. No. 1,154,271; Sept. 21; Gaz. vol. 218; p. 743.

Sefton Manufacturing Company, The. (See Ferres, Jeffrey T., assignor.)

Segec, Gerard T., Revere, Mass. Nut-lock. No. 1,153,347; Sept. 14; Gaz. vol. 218; p. 386.

Segee, Gerard T., Revere, Mass. Void-tire. No. 1,153,348; Sept. 14; Gaz. vol. 218; p. 386.

Seib, George A., assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,153,716; Sept. 14; Gaz. vol. 218; p. 518.

Seibt, Georg, assignor to The Radio Telephone Company, New York, N. Y. Means for generating and radiating electromagnetic waves. No. 1,153,717; Sept. 14; Gaz. vol. 218; p. 518.

Seidel, Francis F. (See Rothenberger, Daniel M., assignor.)

Seidl, Rudolf, Minneapolis, Minn. Cleaning grain. No. 1,152,920; Sept. 7; Gaz. vol. 218; p. 198.

Selke, Willy, Berlin, Germany. Apparatus for plastically reproducing objects. No. 1,155,010; Sept. 28; Gaz. vol. 218; p. 1024.

Selke, Willy, Berlin, Germany. Plastically reproducing objects. No. 1,155,011; Sept. 28; Gaz. vol. 218; p. 1024.

Sellers, Charles H., Eugene, Oreg. Nut-lock. No. 1,154,813; Sept. 28; Gaz. vol. 218; p. 957.

Seltzer, William H., Philadelphia, Pa. Automatic coupling device for ferries. No. 1,154,133; Sept. 21; Gaz. vol. 218; p. 696.

Semmler, Carl, Wiesbaden, Germany. Apparatus for utilizing the heat of coke-cakes. No. 1,153,453; Sept. 14; Gaz. vol. 218; p. 424.

Senftleben, Harry, Clamart, France. Submarine mine. No. 1,152,559; Sept. 7; Gaz. vol. 218; p. 66.

Senger, Emil, and R. Sauter, London, England. Marine mine. No. 1,154,272; Sept. 21; Gaz. vol. 218; p. 743.

Sengstock, August E., Detroit, Mich. Film-reel holder. No. 1,153,963; Sept. 21; Gaz. vol. 218; p. 637.

Sentinel Mfg. Co., The. (See North and Gibney, assignors.)

Seramor, Arthur P., assignor to Emerson-Brantingham Company, Rockford, Ill. Carriage-top. No. 1,152,062; Sept. 7; Gaz. vol. 218; p. 104.

Serrell, John A., North Plainfield, N. J. System of steam-heating. No. 1,152,560; Sept. 7; Gaz. vol. 218; p. 67.

Settle, Francis M., Wynne Wood, Okla. Road-leveler. No. 1,153,452; Sept. 14; Gaz. vol. 218; p. 424.

Severin, Ludwig, Hagen, Germany. Device for securing bells, globes, chimneys, or the like to lamps. No. 1,154,064; Sept. 21; Gaz. vol. 218; p. 673.

Sevison, Frank, Muncy, Pa. Tire-tool. No. 1,154,442; Sept. 21; Gaz. vol. 218; p. 802.

Seybold, Christian, and H. Dehm, Düren, Germany. Rotary knotter with deeply-immersed screening-drum for paper-making. No. 1,153,579; Sept. 14; Gaz. vol. 218; p. 470.

Shadid, Mike, Peoria, Ill. Match-ignition composition. No. 1,153,525; Sept. 14; Gaz. vol. 218; p. 451.

Shafer, Julius E., Chicago, Ill. Roller-bearing. No. 1,152,663; Sept. 7; Gaz. vol. 218; p. 105.

Shallor, Frank E. (See Kuhn and Shallor.)

Shaner, Maconius, Bethlehem, Pa. Pneumatic hammer. No. 1,155,282; Sept. 28; Gaz. vol. 218; p. 1115.

Shappirio, Maurice. (See Shepard and Shappirio.)

Sharp, James A., Springfield, Ohio, assignor to International Harvester Company of New Jersey. Harvester-reel. No. 1,152,768; Sept. 7; Gaz. vol. 218; p. 141.

Sharp, Lee C., Plattsmouth, Nebr., assignor to Bremer & Bruckman, Brunswick, Germany. Can-body forming and soldering machine. No. 1,153,454; Sept. 14; Gaz. vol. 218; p. 425.

Sharp, Lee C., Plattsmouth, Nebr., assignor to American Can Company, New York, N. Y. Combined flanging and beading machine. No. 1,154,661; Sept. 28; Gaz. vol. 218; p. 906.

Sharp, Robert S., assignor to National Tape Company, Inc., New York, N. Y. Holder for tape-wound cones and the like. No. 1,154,443; Sept. 21; Gaz. vol. 218; p. 802.

Sharp, William E., assignor to Grip Nut Company, Chicago, Ill. Forming bolt-nuts. No. 1,154,134; Sept. 21; Gaz. vol. 218; p. 696.

Sharpe and Dohme. (See Winchester, Benjamin T., assignor.)

Sharpe, George E., Steubenville, Ohio. Gas-heater. No. 1,155,283; Sept. 28; Gaz. vol. 218; p. 1115.

Sharpnack, Matthew C., Prescott, Ariz. Friction-clutch. No. 1,154,891; Sept. 28; Gaz. vol. 218; p. 982.

Shaver, Elizabeth, administratrix. (See Shaver, Theodore.)

Shaver, Theodore, deceased, Ireton, Iowa; E. Shaver, administratrix. Tank-heater. No. 1,154,065; Sept. 21; Gaz. vol. 218; p. 673.

Shaw, James, Lodi, Cal. Internal-combustion engine. No. 1,152,501; Sept. 7; Gaz. vol. 218; p. 67.

Shaw, John H., assignor to Sargent & Company, New Haven, Conn. Indicator-lock. No. 1,152,443; Sept. 7; Gaz. vol. 218; p. 21.

Shaw, Nathaniel H., Boston, Mass. Wood-saw frame. No. 1,153,646; Sept. 14; Gaz. vol. 218; p. 492.

Sheldon, William G., London, England, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,152,921; Sept. 7; Gaz. vol. 218; p. 198.

Shellberg, Carl A., Elgin, Ill. Ball-bearing. No. 1,154,444; Sept. 21; Gaz. vol. 218; p. 803.

Shelley, Robert N., Newark, N. J. Towel-paper holder. No. 1,152,851; Sept. 7; Gaz. vol. 218; p. 173.

Shepard, Samuel D., Friendship Heights, Md., and M. Shappirio, Washington, D. C. Gun-sight. No. 1,153,964; Sept. 21; Gaz. vol. 218; p. 638.

Sheppy, Charles L., assignor to The Pierce-Arrow Motor Car Company, Buffalo, N. Y. Electrical connector. No. 1,153,580; Sept. 14; Gaz. vol. 218; p. 470.

Sheppy, Charles L., assignor to The Pierce-Arrow Motor Car Company, Buffalo, N. Y. Electrical connector. No. 1,153,581; Sept. 14; Gaz. vol. 218; p. 471.

Sherbondy, William E., assignor, by mesne assignments, to The Bigsby Rotary Manufacturing Company, Cleveland, Ohio. Forming a shell for a spark-plug. No. 1,152,982; Sept. 7; Gaz. vol. 218; p. 221.

Sherbondy, William E., assignor, by mesne assignments, The Bigsby Rotary Manufacturing Company, Cleveland, Ohio. Forming a sheet-metal shell for a spark-plug. No. 1,152,983; Sept. 7; Gaz. vol. 218; p. 221.

Sherbondy, William E., assignor, by mesne assignments, to The Bigsby Rotary Manufacturing Company, Cleveland, Ohio. Tool for forming polygonal sides upon a hollow metal shell. No. 1,152,984; Sept. 7; Gaz. vol. 218; p. 222.

Sherer, Fidellus. (See Caswell and Sherer.)

Sherman, Edgar B., assignor to National Piano Manufacturing Company, Grand Rapids, Mich. Automatic player-piano. No. 1,152,852; Sept. 7; Gaz. vol. 218; p. 174.

Sherman, John C., *et al.* (See Browne, Ralph C., assignor.)

Sherman, John C., Brookline, Mass. Producing sound-records. No. 1,152,562; Sept. 7; Gaz. vol. 218; p. 68.

Shern, Daniel J. (See Abeles, Leo, assignor.)

Sherrer, Philip, Cleveland, Ohio. Package-coating apparatus. No. 1,152,922; Sept. 7; Gaz. vol. 218; p. 199.

Sherwood, Charles L., assignor to The London Grave Vault Company, London, Ohio. Rest-rail for grave-vaults. No. 1,152,853; Sept. 7; Gaz. vol. 218; p. 174.

Sherwood, Mather W., Franklin, Pa., assignor to Chicago Pneumatic Tool Company, Chicago, Ill. Shackle for drills, &c. No. 1,154,041; Sept. 28; Gaz. vol. 218; p. 1000.

Sherwood, Nathan E. (See Barnes and Sherwood.)

Shirk, Peter E., Blue Ball, Pa. Combined motor-vehicle and mower. No. 1,154,662; Sept. 28; Gaz. vol. 218; p. 907.

Shirley, Roswell R., Rockford, Ill. Hay-feeder. No. 1,153,263; Sept. 14; Gaz. vol. 218; p. 355.

Shope, James E., Connellsville, Pa. Rail chair and fastener. No. 1,154,445; Sept. 21; Gaz. vol. 218; p. 803.

Shore Instrument & Manufacturing Company, The. (See Shore, William F., assignor.)

Shore, William, Toronto, Ontario, Canada, assignor to The Franey-Shore Company, Wilmington, Del. Rotary compressor. No. 1,153,874; Sept. 14; Gaz. vol. 218; p. 574.

Shore, William E., Toronto, Ontario, Canada, assignor to The Franey-Shore Company, Wilmington, Del. Rotary pump. No. 1,153,873; Sept. 14; Gaz. vol. 218; p. 573.

Shore, William F., New York, N. Y., assignor to The Shore Instrument & Manufacturing Company. Scleroscope. No. 1,154,663; Sept. 28; Gaz. vol. 218; p. 907.

Short, David L. (See Brenizer, Orson W., assignor.)

Shultz, Otto H. (See Conn and Shultz.)

Shumway, Harry E., Waterford, assignor to Van Zandt, Jacobs & Co., Troy, N. Y. Collar. No. 1,153,455; Sept. 14; Gaz. vol. 218; p. 425.

Side-Weight Horse Shoe Company, The. (See Dolan, James A., assignor.)

Siemens & Halske, A.-G. (See Rasehorn and Grossmann, assignors.)

Siemens & Halske, A. G. (See Schrader, Carl, assignor.)

Siemens-Schuckertwerke G. m. b. H. (See Höchstädter, Martin, assignor.)

Silk, Thomas, Martins Ferry, Ohio. Priming appliance for orchard-heaters. No. 1,153,178; Sept. 7; Gaz. vol. 218; p. 286.

Silicocks-Miller Company, The. (See Miller, Horace E., assignor.)

Silva, Filicissimo C., *et al.* (See Simao, Antonio P., assignor.)

Silverthorn, Minnie E., Cayuga, N. D. Handle. No. 1,153,718; Sept. 14; Gaz. vol. 218; p. 519.

Silvius, Ellis T., Indianapolis, Ind., assignor, by mesne assignments, to The McCaskey Register Company, (Incorporated in 1914,) Alliance, Ohio. Filing appliance. No. 1,154,135; Sept. 21; Gaz. vol. 218; p. 696.

Simao, Antonio P., assignor of one-seventh to R. Rodriguez, one-seventh to F. C. Silva, one-seventh to E. L. Rosa, one-seventh to C. L. Pingree, and two-sevenths to M. E. Mello, Lowell, Mass. Puzzle. No. 1,154,186; Sept. 21; Gaz. vol. 218; p. 697.

Simmons Manufacturing Company, The. (See Frederick, Clarence H., assignor.)

Simmons Manufacturing Company, The. (See Gall, John F., assignor.)

Simmons, Parker T., Attleboro Falls, Mass. Base-ball-game apparatus. No. 1,153,719; Sept. 14; Gaz. vol. 218; p. 519.

Simmons, Samuel T., Columbus, Ohio. Mechanism for transmitting power. No. 1,155,284; Sept. 28; Gaz. vol. 218; p. 1115.

Simmons, Walter B. (See Staley and Simmons.)

Simmons, Zalmon G., *et al.*, trustees. (See Lee and Monks, assignors.)

Simon, Arthur, assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Circuit-controller. No. 1,154,783; Sept. 28; Gaz. vol. 218; p. 930.

Simplex Electric Heating Company. (See Williams, Roger, assignor.)

Simplex Wire & Cable Company. (See Bentley, Frank, assignor.)

Simpson, Clarence L., Tacoma, assignor of one-half to E. Brumberg, Hoquiam, Wash. Cape. No. 1,152,854; Sept. 7; Gaz. vol. 218; p. 175.

Singer Manufacturing Company, The. (See Allen, Edward B., assignor.)

Singer Manufacturing Company, The. (See Barron, William L., assignor.)

Singer Manufacturing Company, The. (See Brown, Otis E., assignor.)

Singer Manufacturing Company, The. (See Eames, George M., assignor.)

Singer Manufacturing Company, The. (See Eames and Finch, assignors.)

Singer Manufacturing Company, The. (See Fifield, Albert F., assignor.)

Singer Manufacturing Company, The. (See Hieb, Peter, assignor.)

Singer Manufacturing Company, The. (See Horton, Charles M., assignor.)

Singer Manufacturing Company, The. (See Noble, Donald, assignor.)

Singer Manufacturing Company, The. (See Stafford, Charles, assignor.)

Singer Manufacturing Company, The. (See Ströbeck, Franz T., assignor.)

Singewald, Max, Leipzig, Germany. Apparatus for embossing the rims of disks. No. 1,153,965; Sept. 21; Gaz. vol. 218; p. 638.

Single Service Package Corporation of America. (See Beadle, George W., assignor.)

Sinnes, Anton, Chicago, Ill. Handle or lever. No. 1,153,966; Sept. 21; Gaz. vol. 218; p. 638.

Sisson, Henry W., Lake George, N. Y. Fire-hose coupling. No. 1,153,406; Sept. 14; Gaz. vol. 218; p. 408.

Skidmore, William D., Pelham, N. Y. Dumping-car. No. 1,154,446; Sept. 21; Gaz. vol. 218; p. 803.

Skinner, Robert L. (See Johnson and Skinner.)

Slattery, William. (See Whitman, Roland E., assignor.)

Slaymaker, Charles M. (See Clifford, Slaymaker, and Bilger.)

Slee, Richard, Swiftwater, Pa., assignor of one-half to F. S. Banks & Company, New York, N. Y. Antitoxin-syringe. No. 1,155,012; Sept. 28; Gaz. vol. 218; p. 1024.

Sleeper, Oliver S., assignor to Buffalo Foundry & Machine Company, Buffalo, N. Y. Impregnating apparatus. No. 1,154,447; Sept. 21; Gaz. vol. 218; p. 804.

Sleicher, Ralph H., assignor to The Hospital Appliance Company, Troy, N. Y. Ball-caster. No. 1,154,448; Sept. 21; Gaz. vol. 218; p. 805.

Slentz, Albertus O., deceased, Canton, Ohio; W. E. Slentz, administrator. Clutch. No. 1,153,831; Sept. 14; Gaz. vol. 218; p. 558.

Slentz, Warren E., administrator. (See Slentz, Albertus O.)

Sletten, Henry, and A. N. Lidell, Minneapolis, Minn. Device for sinking foundation-tubes. No. 1,154,137; Sept. 21; Gaz. vol. 218; p. 697.

Slick, Edwin E., Westmont borough, Pa. Making reinforcing-bars. No. 1,154,664; Sept. 28; Gaz. vol. 218; p. 908.

Slick, Edwin E., Westmont borough, Pa. Drop-ball. No. 1,154,734; Sept. 28; Gaz. vol. 218; p. 930.

Sloacombe, Charles H. (See Andrew, Sloacombe, and Kingham.)

Sloan, Augustus K., Jr., Brooklyn, N. Y. Detector. No. 1,152,444; Sept. 7; Gaz. vol. 218; p. 22.

Slocum, Benjamin A., Rochester, N. Y. Photographic-shutter operator. No. 1,154,892; Sept. 28; Gaz. vol. 218; p. 983.

Sloop, John. (See Lear and Sloop.)

Small, Chesley T., St. Louis, Mo. Can-filling machine. No. 1,154,665; Sept. 28; Gaz. vol. 218; p. 908.

Smalley, George O., assignor to The Graphite Lubricating Company, Boundbrook, N. J. Self-lubricating bearing. No. 1,153,647; Sept. 14; Gaz. vol. 218; p. 492.

Smith, August, and C. S. Wickes, Camden, N. J. Making sound-records. No. 1,152,445; Sept. 7; Gaz. vol. 218; p. 22.

Smith, Bassett E., Ramsey, Ill. Safety attachment for valves for faucets. No. 1,153,264; Sept. 14; Gaz. vol. 218; p. 356.

Smith, Charles B., Crafton, Pa. Shoe-lace fastener. No. 1,154,066; Sept. 21; Gaz. vol. 218; p. 673.

Smith, Charles E., assignor to Underwood Typewriter Company, New York, N. Y. Type-writer centering-scale. No. 1,152,923; Sept. 7; Gaz. vol. 218; p. 199.

Smith, Charles E., New York, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,154,213; Sept. 21; Gaz. vol. 218; p. 722.

Smith, Charles E., New York, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,154,344; Sept. 21; Gaz. vol. 218; p. 769.

Smith, Cyrus H., Tonica, Ill. Signalling apparatus. No. 1,153,265; Sept. 14; Gaz. vol. 218; p. 356.

Smith, Delaven, *et al.* (See Beadle, George W., assignor.)

Smith, Elizabeth J., Larchmont, N. Y. Machine for attaching hooks and eyes. No. 1,152,855; Sept. 7; Gaz. vol. 218; p. 175.

Smith, Elmer H. (See Smith, John W. and E. H.)

Smith, Frederick G., New Bedford, Mass. Bottle-cap and opener. No. 1,155,285; Sept. 28; Gaz. vol. 218; p. 1116.

Smith, Gary B., Chicago, Ill. Machine for making bed fabric. No. 1,153,266; Sept. 14; Gaz. vol. 218; p. 356.

Smith, George A., South Hill, Va. Successive and selective assorter. No. 1,154,814; Sept. 28; Gaz. vol. 218; p. 957.

Smith, George T., Dallas, Tex. Flour purifier and drier. No. 1,154,067; Sept. 21; Gaz. vol. 218; p. 674.

Smith, George T., Fort Worth, Tex. Purifying flour during the manufacture thereof. No. 1,154,547; Sept. 21; Gaz. vol. 218; p. 837.

Smith, Henry C., Detroit, Mich. Power-hammer. No. 1,154,666; Sept. 28; Gaz. vol. 218; p. 908.

Smith, Henry C., Detroit, Mich. Power-hammer. No. 1,154,667; Sept. 28; Gaz. vol. 218; p. 909.

Smith, Henry L. (See Price, Gomer W., assignor.)

Smith, Herbert H., Bay Shore, N. Y. Binder for hollow-tile building-blocks. (Reissue.) No. 13,980; Sept. 14; Gaz. vol. 218; p. 578.

Smith, Howard R., Washington, Pa. Attachment for telephones. No. 1,153,349; Sept. 14; Gaz. vol. 218; p. 386.

Smith, Jesse A. B., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,152,563; Sept. 7; Gaz. vol. 218; p. 68.

Smith, Jesse A. B., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,152,850; Sept. 7; Gaz. vol. 218; p. 170.

Smith, John A., Rochester, N. Y. Sash. No. 1,153,350; Sept. 14; Gaz. vol. 218; p. 386.

Smith, John T. (See Flogerzi, John B., assignor.)

Smith, John W. and E. H., Minneapolis, Minn. Acetylene-blowpipe. No. 1,152,985; Sept. 7; Gaz. vol. 218; p. 222.

Smith, Joseph J., Cambridge, assignor to W. Firth, Chestnut Hill, Mass. Stop-motion for looms. No. 1,154,449; Sept. 21; Gaz. vol. 218; p. 805.

Smith, Josiah H., assignor to W. H. Tigerman, Philadelphia, Pa. Truck. No. 1,152,564; Sept. 7; Gaz. vol. 218; p. 69.

Smith, Oscar A., Cleveland, Ohio. Priming-cup. No. 1,153,457; Sept. 14; Gaz. vol. 218; p. 426.

Smith, Oscar A., assignor to The National-Acme Manufacturing Company, Cleveland, Ohio. Stud-threading machine. No. 1,153,456; Sept. 14; Gaz. vol. 218; p. 425.

Smith, Richard S., Jr., Woodbury, assignor of one-half to G. C. Gunn, Burlington, N. J. Electrical indicator. No. 1,152,986; Sept. 7; Gaz. vol. 218; p. 223.

Smith, Simon A., Burlington, Vt. Photographic-printing apparatus. No. 1,154,735; Sept. 28; Gaz. vol. 218; p. 930.

Smith, Stuart F., San Francisco, Cal. Computing and recording machine. No. 1,152,664; Sept. 7; Gaz. vol. 218; p. 105.

Smith, Theeharmon M., Wax, Ky. Automatic wagon-brake. No. 1,153,067; Sept. 21; Gaz. vol. 218; p. 639.

Smith, Walter A., and T. L. Flynn, Springfield, Mass. Sugar-dispenser. No. 1,155,013; Sept. 28; Gaz. vol. 218; p. 1025.

Smith, William B., Parkesburg, Pa. Injector for locomotive-tenders. No. 1,153,138; Sept. 7; Gaz. vol. 218; p. 272.

Smolensky, Michael, Cleveland, Ohio. Work-holder for machine-tools. No. 1,154,450; Sept. 21; Gaz. vol. 218; p. 805.

Smulski, Edward, Newton Highlands, Mass. Reinforced concrete construction. No. 1,154,548; Sept. 21; Gaz. vol. 218; p. 837.

Smyth, Ezra, assignor of one-half to F. E. McIntosh, Portland, Oreg. Reraller. No. 1,154,273; Sept. 21; Gaz. vol. 218; p. 744.

Snavely, Clarence S., Edgewood borough, assignor to The Union Switch & Signal Company, Swissvale, Pa. Signal. No. 1,154,068; Sept. 21; Gaz. vol. 218; p. 674.

Sneddon, William, Del Rio, Tex. Car-door. No. 1,152,665; Sept. 7; Gaz. vol. 218; p. 106.

Snedeker, James W., Adrian, Mich. Machine for securing webbing to frames. No. 1,152,565; Sept. 7; Gaz. vol. 218; p. 69.

Snediker, Morton O., assignor to The Powers Regulator Company, Chicago, Ill. Water-motor. No. 1,152,566; Sept. 7; Gaz. vol. 218; p. 69.

Snell, Harry, Hanover, assignor of one-third to G. J. J. Clark and one-third to D. J. Head, West Hanover, Mass. Shoe-filler. No. 1,153,139; Sept. 7; Gaz. vol. 218; p. 272.

Snow Dental Company, The. (See Snow, George B., assignor.)

Snow, George B., Long Beach, Cal., assignor to The Snow Dental Company, Buffalo, N. Y. Dental face-bow. No. 1,154,942; Sept. 28; Gaz. vol. 218; p. 1001.

Societe Anonyme Des Etablissements Delaunay-Belleville. (See Radiguer, Charles, assignor.)

Société des Raffineries Catalytiques des Petroles et hydrocarbures. (See Sabatier and Malihe, assignors.)

Soderberg, Carl A., West Lynn, Mass. Vise. No. 1,154,815; Sept. 28; Gaz. vol. 218; p. 957.

Somerville, William E., Coal City, Ill. Flying-machine. No. 1,154,214; Sept. 21; Gaz. vol. 218; p. 723.

Soret, Célestin, Havre, France. Audiphone. No. 1,154,069; Sept. 21; Gaz. vol. 218; p. 674.

Sorg, William A., Minneapolis, Minn., assignor, by mesne assignments, to F. G. Bradbury, trustee. Combustion-engine. No. 1,153,526; Sept. 14; Gaz. vol. 218; p. 451.

Soss, Charles J., assignor of one-third to H. Soss and one-third to S. Soss, New York, N. Y. Hinge. No. 1,153,720; Sept. 14; Gaz. vol. 218; p. 519.

Soss, Henry, *et al.* (See Soss, Charles J., assignor.)

Soss, Samuel, *et al.* (See Soss, Charles J., assignor.)

Soule, Arthur C., San Francisco, assignor of one-half to W. B. Thurman, Madera, Cal. Window. No. 1,155,014; Sept. 28; Gaz. vol. 218; p. 1025.

South Side Trust Company, trustee. (See Herr, Henry C., assignor.)

Southworth, Henry E., assignor to Porter Screen Company, Burlington, Vt. Window-screen. No. 1,153,140; Sept. 7; Gaz. vol. 218; p. 273.

Spalding, James F., Kansas City, Mo. Folding extensible stool. No. 1,152,987; Sept. 7; Gaz. vol. 218; p. 223.

Spalding, James F., Kansas City, Mo. Catheter-user's standard apparatus. No. 1,154,668; Sept. 28; Gaz. vol. 218; p. 910.

Spatz, Albert, Elsah, Ill. Nut-lock. No. 1,155,286; Sept. 28; Gaz. vol. 218; p. 1116.

Spear, Lawrence Y., Groton, Conn., assignor to Electric Boat Company, New York, N. Y. Propelling apparatus for vessels. No. 1,152,567; Sept. 7; Gaz. vol. 218; p. 70.

Spear, Lawrence Y., Groton, Conn., assignor to Electric Boat Company, New York, N. Y. Submarine boat. No. 1,153,267; Sept. 14; Gaz. vol. 218; p. 357.

Spear, Lawrence Y., Quincy, Mass., assignor to Electric Boat Company, New York, N. Y. Hull construction of submarine boats. No. 1,154,215; Sept. 21; Gaz. vol. 218; p. 723.

Specht, Christ A., assignor of one-half to G. L. Schicker, Punxsutawney, Pa. Bushing for mine-car wheels. No. 1,154,345; Sept. 21; Gaz. vol. 218; p. 769.

Specialty Development Co., The. (See Wake, Frederick N., assignor.)

Speck, William F., Frenchmans Bayou, Ark. Cotton-harvester. No. 1,153,968; Sept. 21; Gaz. vol. 218; p. 639.

Spencer, James M., Hastings, Fla. Door-holder. No. 1,152,446; Sept. 7; Gaz. vol. 218; p. 22.

Speyer, Hugo W., Union township, Union county, N. J. Game apparatus. No. 1,154,346; Sept. 21; Gaz. vol. 218; p. 770.

Spiers, Edgar H., Lagrange, Ga. Railway-tie. No. 1,155,287; Sept. 28; Gaz. vol. 218; p. 1116.

Splitsgerber, Henry F. (See Pate, William T. S., assignor.)

Sprague, Goldwin S., Newton, Mass. Snow-shoe. No. 1,154,347; Sept. 21; Gaz. vol. 218; p. 770.

Sprecher, Peter W., Milwaukee, Wis. Electric-lighting fixture. No. 1,154,070; Sept. 21; Gaz. vol. 218; p. 674.

Sproull, William J., Saginaw, Mich. Air-gun. No. 1,152,447; Sept. 7; Gaz. vol. 218; p. 23.

St. John, Howard M., Passaic, N. J. Safety appliance for steam-engines. No. 1,154,549; Sept. 21; Gaz. vol. 218; p. 838.

Stafford, Benjamin E. D., assignor to Flannery Bolt Company, Pittsburgh, Pa. Cap for flexible stay-bolts. No. 1,153,458; Sept. 14; Gaz. vol. 218; p. 426.

Stafford, Charles, Elizabeth, N. J., assignor to The Singer Manufacturing Company. Adjustable hemmer. No. 1,153,459; Sept. 14; Gaz. vol. 218; p. 426.

Staley, Harrison L., Martinsville, Ind. Motion-augmenting pendulum-gearing. No. 1,153,268; Sept. 14; Gaz. vol. 218; p. 357.

Staley, Harrison L., Martinsville, Ind. Washing-machine agitator. No. 1,155,107; Sept. 28; Gaz. vol. 218; p. 1059.

Staley, Harrison L., Martinsville, Ind., and W. B. Simmons, assignors to Wilts Veneer Company, Richmond, Va. Composite veneer and making same. No. 1,154,138; Sept. 21; Gaz. vol. 218; p. 697.

Stamm, Hans, St. Gallen, assignor to Firm of A. Saurer, Arbon, Switzerland. Safety mechanism for straight-pull breech-actions of military rifles. No. 1,155,326; Sept. 28; Gaz. vol. 218; p. 1130.

Standard Machine Company. (See Houseman, Harry A., assignor.)

Standard Oil Company. (See Black, John C., assignor.)

Standard Oil Company of New York. (See Gause, Frederick T., assignor.)

Standard Sanitary Manufacturing Company. (See Bale, Damon, assignor.)

Standard Stoker Company. (See Williams, David T., assignor.)

Standard Welding Company, The. (See Bryant, Richard S., assignor.)

Standley, Meredith G., Cincinnati, Ohio. Hand-stamp. No. 1,153,351; Sept. 14; Gaz. vol. 218; p. 387.

Stanfield, Joab and S. O., Orange, Cal. Lantern-holder. No. 1,154,071; Sept. 21; Gaz. vol. 218; p. 675.

Stanfield, Stephen O. (See Stanfield, Joab and S. O.)

Stankey, Oscar, East St. Louis, Ill. Combination stationery device. No. 1,154,736; Sept. 28; Gaz. vol. 218; p. 931.

Stanley Rule & Level Company, The. (See Neistadt, Henry, assignor.)

Staples, Augustine E., Chester, Vt. Compound weeding and scraping implement. No. 1,153,721; Sept. 14; Gaz. vol. 218; p. 520.

Star Seal Company. (See Winter, Charles, assignor.)

Stark, Adonijah, Joplin, Mo. Horseshoe-spreader. No. 1,155,288; Sept. 28; Gaz. vol. 218; p. 1116.

Starkweather, John, Pomona, Kans. Surgical instrument. No. 1,155,169; Sept. 28; Gaz. vol. 218; p. 1081.

Staude, Edwin G., Minneapolis, Minn. Counter for blanks. No. 1,154,451; Sept. 21; Gaz. vol. 218; p. 805.

Stauffer, Harry F., Dubois, Pa. Draft-regulator for locomotives. No. 1,154,669; Sept. 28; Gaz. vol. 218; p. 910.

Stearns, Isaac, assignor to Michigan Safety Furnace Pipe Company, Detroit, Mich. Locking device for sectional conduits. No. 1,152,568; Sept. 7; Gaz. vol. 218; p. 70.

Stearns, William F., Exeter, N. H. Vulcanizing apparatus. No. 1,154,737; Sept. 28; Gaz. vol. 218; p. 931.

Stedman, William A., Wonder, Nev. Apparatus for thickening slimes. No. 1,153,722; Sept. 14; Gaz. vol. 218; p. 520.

Stedman, William A., Wonder, Nev. Head-motion. No. 1,153,723; Sept. 14; Gaz. vol. 218; p. 520.

Steedman, George F., St. Louis, assignor to Curtis & Company Manufacturing Company, Wellston, Mo. Air-drier. No. 1,153,181; Sept. 7; Gaz. vol. 218; p. 287.

Steele, Mary E., *et al.* (See Terry, Louis, assignor.)

Steensland, James O., Blanchardville, Wis. Temperature-regulator. No. 1,153,407; Sept. 14; Gaz. vol. 218; p. 408.

Stehlin, Charles F., New Rochelle, N. Y. Screw-press. No. 1,152,857; Sept. 7; Gaz. vol. 218; p. 176.

Steinbecker, Karl, Charlottenburg, Germany, assignor to General Electric Company. Method of and means for feeding fluid combustible to internal-combustion engines. No. 1,154,816; Sept. 28; Gaz. vol. 218; p. 958.

Steiner, Adolf, assignor to Titania Schreibmaschinen Ges. M. B. H., Berlin, Germany. Keyboard-machine. No. 1,153,582; Sept. 14; Gaz. vol. 218; p. 471.

Steiner, Frank M. (See Overholt and Steiner.)

Steiner, Richard J., assignor to Philadelphia Pile Fabric Mills, Philadelphia, Pa. Napping-machine. No. 1,153,173; Sept. 7; Gaz. vol. 218; p. 284.

Steinke, August W., assignor to Monarch Telephone Manufacturing Company, Fort Dodge, Iowa. Telephony. No. 1,153,352; Sept. 14; Gaz. vol. 218; p. 387.

Stengel, William F., assignor of one-half to J. Benker, Akron, Ohio. Vehicle wheel-rim. No. 1,154,216; Sept. 21; Gaz. vol. 218; p. 723.

Stenotype Company, The. (See Sargent and Karlberg, assignors.)

Sterilization Company. (See Swinburne, George W., assignor.)

Stern, Georg. (See Bosch, Mittasch, Wolf, and Stern.)

Sternau & Company, S. (See Ball, Henry P., assignor.)

Sternau & Company, S. (See Nelson, Charles, assignor.)

Sterner, Clement A., assignor to H. L. Sterner, trustee, Allentown, Pa. Windmill control for electrical equipment. No. 1,152,686; Sept. 7; Gaz. vol. 218; p. 106.

Sterner, Helen L., trustee. (See Sterner, Clement A., assignor.)

Stevens, Charles E., Lenexa, Kans. Insulated rail-joint. No. 1,154,738; Sept. 28; Gaz. vol. 218; p. 931.

Stevens, Thomas S., Topeka, Kans., assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway signaling. No. 1,152,448; Sept. 7; Gaz. vol. 218; p. 23.

Stewart, Andrew M., assignor to The National Supply Company, Toledo, Ohio. Making tubing-rings. No. 1,152,868; Sept. 7; Gaz. vol. 218; p. 176.

Stewart, Elmer U., Sharon, Pa. Explosion-engine. No. 1,152,859; Sept. 7; Gaz. vol. 218; p. 177.

Stewart, John K., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill. Drive-gearing for shaft-speed indicators. No. 1,152,569; Sept. 7; Gaz. vol. 218; p. 70.

Stewart-Warner Speedometer Corporation. (See Larson, Edward A., assignor.)

Stewart-Warner Speedometer Corporation. (See Stewart, John K., assignor.)

Stichel, Rudolph H. (See Montgomery, Gustavus A., assignor.)

Stiefel, Henry C., assignor of one-half to A. M. Neeper, Pittsburgh, Pa. Batch for semi-opaque, semi-translucent glass. No. 1,153,353; Sept. 14; Gaz. vol. 218; p. 388.

Stiegelmeyer, Theodor, Hanover-Wülfel, Germany. Device for dressing castings and the like. No. 1,152,570; Sept. 7; Gaz. vol. 218; p. 71.

Stille, Curt, Zehlendorf-West, near Berlin, Germany. Telegraph or telephone relay. No. 1,154,139; Sept. 21; Gaz. vol. 218; p. 698.

Stock, Henry W., Erie, Pa., assignor to General Electric Company. Radiator for motor-cars. No. 1,154,072; Sept. 21; Gaz. vol. 218; p. 675.

Stocker, Robert, Brooklyn, N. Y. Pipe-lining. No. 1,153,724; Sept. 14; Gaz. vol. 218; p. 521.

Stockhill, William. (See Coss and Stockhill.)

Stocking, Charles H., Audubon, Iowa. Hog-feeder. No. 1,154,073; Sept. 21; Gaz. vol. 218; p. 675.

Stockstrom, Louis, assignor to American Stove Company, St. Louis, Mo. Oil-burner. No. 1,154,452; Sept. 21; Gaz. vol. 218; p. 806.

Stockwell, C. H., Jr. (See Kleger, John, assignor.)

Stoetzer, William A., Wheeling, W. Va. Material for binding plaster to concrete surfaces. No. 1,152,860; Sept. 7; Gaz. vol. 218; p. 177.

Stokes, John S., Moorestown, N. J., assignor to Stokes & Smith Company, Summerdale, Pa. Sealed wrapped package and opener therefor. No. 1,154,217; Sept. 21; Gaz. vol. 218; p. 724.

Stokes & Smith Company. (See Stokes, John S., assignor.)

Stoll, Mathew H., La Crosse, Wis. Container-latch. No. 1,154,739; Sept. 28; Gaz. vol. 218; p. 932.

Stone, Bertram, West New Brighton, N. Y. Non-refillable bottle. No. 1,153,725; Sept. 14; Gaz. vol. 218; p. 521.

Stone & Company Limited, J. (See Saccaggio, Pedro C., assignor.)

Stone, John E., Sweet Water, Tex. Motor-vehicle brake. No. 1,153,726; Sept. 14; Gaz. vol. 218; p. 521.

Stone, Robert E. (See England, Clifford R., assignor.)

Stoneback, John G. (See Kelsey and Stoneback.)

Stonebridge, Charles H., New York, N. Y. Folding lantern. No. 1,152,571; Sept. 7; Gaz. vol. 218; p. 71.

Stoolfire, Charles, Myrtle Creek, Oreg. Stack-climber. No. 1,153,583; Sept. 14; Gaz. vol. 218; p. 471.

Storer, Norman W., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. System and method of control for electric motors. No. 1,155,170; Sept. 28; Gaz. vol. 218; p. 1081.

Storey, John E., Leicester, England. Means for supporting articles of regular or irregular form. No. 1,153,727; Sept. 14; Gaz. vol. 218; p. 521.

Story, Hudson F., assignor of one-half to J. D. Boley, Highland, Cal. Pump-head. No. 1,154,348; Sept. 21; Gaz. vol. 218; p. 770.

Stosick, Joseph J., South Milwaukee, Wis. Demountable rim. No. 1,154,218; Sept. 21; Gaz. vol. 218; p. 724.

Strache, Hugo, Vienna, Austria-Hungary. Producing combustible gases. No. 1,154,455; Sept. 21; Gaz. vol. 218; p. 806.

Straight Filament Lamp Company. (See O'Brien, Dennis J., assignor.)

Straight, Halver R., Adel, Iowa. Ventilated building structure. No. 1,154,219; Sept. 21; Gaz. vol. 218; p. 724.

Strange, Harry B., Blackheath, assignor to Thos. Firth and Sons, Limited, Sheffield, England. Armor-piercing projectile. No. 1,153,460; Sept. 14; Gaz. vol. 218; p. 427.

Stratton, Asariah D., Omaha, Nebr. Combination plasterer's implement. No. 1,154,453; Sept. 21; Gaz. vol. 218; p. 806.

Straus, Walter C., Chicago, Ill. Fireless cooker. No. 1,152,861; Sept. 7; Gaz. vol. 218; p. 177.

Street, Clement F., New York, N. Y. Brick arch for boiler-furnaces. No. 1,153,648; Sept. 14; Gaz. vol. 218; p. 492.

Streisel, George J., Sr., *et al.* (See Behm and Vene, assignors.)

Strickland, George N., Savannah, Ga. Lock. No. 1,154,454; Sept. 21; Gaz. vol. 218; p. 806.

Strickland, George R., Chicago, Ill., assignor of one-half to W. W. Wagg, Moose Jaw, Saskatchewan, Canada. Conveyer for harvesting-machines. No. 1,152,572; Sept. 7; Gaz. vol. 218; p. 72.

Strob, Lawrence J., St. Louis, Mo. Horseshoe attachment. No. 1,152,988; Sept. 7; Gaz. vol. 218; p. 223.

Ströbeck, Frans T., Beachmont, Mass., assignor to The Singer Manufacturing Company. Sewing-machine. No. 1,152,667; Sept. 7; Gaz. vol. 218; p. 106.

Strom, Matt, and E. Hoglund, Duluth, Minn. Soil-cultivating tool. No. 1,155,289; Sept. 28; Gaz. vol. 218; p. 1117.

Stromberg-Carlson Telephone Manufacturing Company. (See Taggart, John A., assignor.)

Strong, Eugene M., Boise, Idaho. Fastener. No. 1,154,074; Sept. 21; Gaz. vol. 218; p. 676.

Strong, James S. (See O'Donnell, John B., assignor.)

Strootman, John, Buffalo, N. Y. Cutter for concaving-machines. No. 1,153,461; Sept. 14; Gaz. vol. 218; p. 427.

Strouvelle, Arthur R., and L. T. Mason, Clovis, N. Mex. Transmission-gearing for automobiles. No. 1,154,140; Sept. 21; Gaz. vol. 218; p. 698.

Stuart, George J., Bellevue, assignor to The Pittsburgh Valve, Foundry and Construction Company, Pittsburgh, Pa. Limited controller for motors. No. 1,154,274; Sept. 21; Gaz. vol. 218; p. 744.

Stubblefield, William P., assignor of one-third to G. Baptiste, St. Louis, Mo. Step-mold. No. 1,153,462; Sept. 14; Gaz. vol. 218; p. 427.

Stuber, John, *et al.* (See Stuber, Walter C., assignor.)

Stuber, Walter C., assignor of one-third to J. Stuber and one-third to W. Pfoderer, Tremont, Ill. Fence-post. No. 1,154,740; Sept. 28; Gaz. vol. 218; p. 932.

Stull, William A., Fort Defiance, W. Va. Railway-track switch. No. 1,152,573; Sept. 7; Gaz. vol. 218; p. 72.

Stump, Levi E., Chanute, Kans. Hay-rack attachment for wagon-bolsters. No. 1,155,015; Sept. 28; Gaz. vol. 218; p. 1025.

Sturdevant, Roma C., Weldon, Iowa. Wire-stretcher. No. 1,154,456; Sept. 21; Gaz. vol. 218; p. 807.

Sturm, William, Sr., Chicago, Ill. Brick-handling tongs. No. 1,153,260; Sept. 14; Gaz. vol. 218; p. 357.

Sturtevant, Julius, and J. T. Weinsierl, New Kensington, Pa. Bottle-cap-assembling machine. No. 1,155,171; Sept. 28; Gaz. vol. 218; p. 1082.

Sturtz, Ernest H., Philadelphia, Pa. Gas-lighter. No. 1,153,969; Sept. 21; Gaz. vol. 218; p. 639.

Submarine Wireless Company. (See Berger, Christian, assignor.)

Subterranean Heater Corporation. (See Breitung and Pick, assignors.)

Sudish, Rachel, New York, N. Y. Soft fold-over collar. No. 1,154,943; Sept. 28; Gaz. vol. 218; p. 1001.

Sullender, Walter C., St. Louis, Mo. Camera-shutter. No. 1,153,141; Sept. 7; Gaz. vol. 218; p. 273.

Sullivan, Charles C., and L. P. Davis, New Orleans, La. Stump remover and destroyer. No. 1,153,270; Sept. 14; Gaz. vol. 218; p. 358.

Sullivan, Charles F., deceased, Des Moines, Iowa; V. A. Sullivan, administratrix. Projectile. No. 1,152,668; Sept. 7; Gaz. vol. 218; p. 107.

Sullivan, Herbert W. (See Hay and Sullivan.)

Sullivan Machinery Company. (See Gilman, George H., assignor.)

Sullivan, Virginia A., administratrix. (See Sullivan, Charles F.)

Superior Lamp Mfg. Co. (See Futterman, Harry, assignor.)

Surprenant, George. (See Caron and Surprenant.)

Sutherland, Daniel M., Jr., Trenton, assignor to The Agasote Millboard Co., Ewing township, N. J. Imitation wood. No. 1,153,970; Sept. 21; Gaz. vol. 218; p. 640.

Sutherland, George W., Newport, Wash. Device for stretching wire around wooden pipes. No. 1,154,275; Sept. 21; Gaz. vol. 218; p. 744.

Svenska Aktiebolaget Gasaccumulator. (See Dalén, Gustaf, assignor.)

Swangren, Edwin V., and M. E. Widell, Maywood, Ill., assignors to American Can Company, New York, N. Y. Air can-testing machine. No. 1,152,449; Sept. 7; Gaz. vol. 218; p. 23.

Sweany, Harry J., Quapaw, Okla. Vending-machine. No. 1,155,172; Sept. 28; Gaz. vol. 218; p. 1082.

Swem, Lawrence W., assignor to E. L. Webb & Co., West Liberty, Iowa. Ring-expanding press. No. 1,154,893; Sept. 28; Gaz. vol. 218; p. 983.

Swickard, Frank, Franklin Grove, Ill. Device for securing curtains. No. 1,154,670; Sept. 28; Gaz. vol. 218; p. 910.

Swiergocki, John, Chicago, Ill. Soldering-iron. No. 1,153,971; Sept. 21; Gaz. vol. 218; p. 640.

Swift, Willard E., Worcester, assignor to United States Envelope Company, Springfield, Mass. Merchandise-envelop. No. 1,155,016; Sept. 28; Gaz. vol. 218; p. 1026.

Swinburne, George W., East Orange, N. J., assignor to Sterilization Company. Apparatus for purifying sewage or the like. No. 1,153,972; Sept. 21; Gaz. vol. 218; p. 640.

Swint, Louis A., Pickens, W. Va. Wrench. No. 1,153,271; Sept. 14; Gaz. vol. 218; p. 358.

Swoboda, Richard, Akron, Ohio. Sausage-linking machine. No. 1,153,584; Sept. 14; Gaz. vol. 218; p. 472.

Ssass, Alexander, Hinsdale, Ill. Chair-operated churn. No. 1,153,272; Sept. 14; Gaz. vol. 218; p. 358.

T. D. Palmer Company. (See Palmer, Theodore D., assignor.)

Tacit, Virgiliu, and V. Puscariu, Bucharest, Roumania, Well-tube-closing apparatus. No. 1,153,973; Sept. 21; Gaz. vol. 218; p. 641.

Tacy, Samuel H., Elkins Park, assignor to Pre-Heated Air Company, Philadelphia, Pa. Preheater. No. 1,153,273; Sept. 14; Gaz. vol. 218; p. 358.

Tafel, Richard G., *et al.* (See Beuther, William F., assignor.)

Taft, Henry D., Rockville Center, N. Y., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,153,463; Sept. 14; Gaz. vol. 218; p. 428.

Taft Peirce Manufacturing Company, The. (See Bryant, Elmer J., assignor.)

Taggart, John A., assignor to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Telephone system. No. 1,154,075; Sept. 21; Gaz. vol. 218; p. 676.

Taigman, Max, New York, N. Y. Starting-box. No. 1,155,290; Sept. 28; Gaz. vol. 218; p. 1117.

Taigman, Max, New York, N. Y. Starting-box. No. 1,155,291; Sept. 28; Gaz. vol. 218; p. 1117.

Tait, Richard, Jr., assignor to Enterprise Plumbing Supply Co., Chicago, Ill. Refrigerator drain-pan or the like. No. 1,154,141; Sept. 21; Gaz. vol. 218; p. 698.

Talkin, Hyman N. (See Fisher, George W., assignor.)

Tanaka, Atarashi, Los Angeles, Cal. Dish-washer. No. 1,154,849; Sept. 21; Gaz. vol. 218; p. 771.

Tanner, Daniel R. (See Irving and Tanner.)

Tanner, Daniel R., La Grande, Oreg. Truck-transferring mechanism. No. 1,153,274; Sept. 14; Gaz. vol. 218; p. 359.

Tanner, John M., Kingsville, Mo. Nut-lock. No. 1,153,649; Sept. 14; Gaz. vol. 218; p. 493.

Taylor, Adelaide, Stevens Point, Wis. Hat-box. No. 1,154,457; Sept. 21; Gaz. vol. 218; p. 807.

Taylor, Albertis C. (See Windield and Taylor.)

Taylor, Charles R. (See Von Hacht, Taylor, and Clewe.)

Taylor, Dean L., Santa Maria, Cal. Gas-turbine. No. 1,152,862; Sept. 7; Gaz. vol. 218; p. 178.

Taylor, Edward W., Salt Lake City, Utah. Nut-lock. (Reissue.) No. 13,986; Sept. 21; Gaz. vol. 218; p. 857.

Taylor, Ernest W. (See Colby and Taylor.)

Taylor, Harry A., New York, N. Y. Glove. No. 1,153,728; Sept. 14; Gaz. vol. 218; p. 522.

Taylor, Joseph J. (See Neff and Taylor.)

Taylor, Leslie B., and F. Hughes, Birmingham, England; said Hughes assignor to said Taylor. Breech-loading small-arm. No. 1,154,458; Sept. 21; Gaz. vol. 218; p. 808.

Taylor, Philip J., Cairo, Ill. Motion-picture device. No. 1,152,989; Sept. 7; Gaz. vol. 218; p. 224.

Taylor, Thomas, *et al.* (See Killman, Thomas A., assignor.)

Taylor, Walter, Nashville, Tenn. Automatic trip mechanism for end-matching machines. No. 1,152,990; Sept 7; Gaz. vol. 218; p. 224.

Taylor, William E., Eastport, Me., assignor to American Can Company, New York, N. Y. Can-cover tucking and fusing machine. No. 1,152,450; Sept. 7; Gaz. vol. 218; p. 24.

Taylor, William J. G., Clarksburg, W. Va. Holder for bits and similar tools. No. 1,152,669; Sept. 7; Gaz. vol. 218; p. 107.

Teeple, William S., Wellsburg, W. Va. Glass-forming machine. No. 1,154,894; Sept. 28; Gaz. vol. 218; p. 983.

Teeple, William S., Wellsburg, W. Va. Glass-working machine. No. 1,154,895; Sept. 28; Gaz. vol. 218; p. 984.

Teich, Ernest L., assignor to The American Hardware Corporation, New Britain, Conn. Lock. No. 1,154,142; Sept. 21; Gaz. vol. 218; p. 698.

Telelectric Company, The. (See Reed, Walter C., assignor.)

Tempinski, Stanislaw. (See Oster and Tempinski.)

Tenbusch, William, Pana, Ill. Acetylene-lantern. No. 1,152,991; Sept. 7; Gaz. vol. 218; p. 225.

Tench, Samuel V., Lansford, Pa. Discharging means for jigs. No. 1,153,527; Sept. 14; Gaz. vol. 218; p. 451.

Terry, Louis, assignor of one-fourth to E. J. Kerwin, one-fourth to E. Thompson, and one-fourth to M. E. Steele, Pine Bluff, Ark. Insecticide and preparing same. No. 1,153,974; Sept. 21; Gaz. vol. 218; p. 641.

Terstegge, John D., Effingham, Ill. Construction of gates. No. 1,153,877; Sept. 14; Gaz. vol. 218; p. 575.

Textile Machine Works. (See Rahn, Robert C., assignor.)

Thayer, Harry M., Woodhull, Ill. Metallic feed-box. No. 1,153,729; Sept. 14; Gaz. vol. 218; p. 522.

Theryc, Charles, Marseille, France. Railway-train. No. 1,152,451; Sept. 7; Gaz. vol. 218; p. 24.

Thiel, Charles F. R., assignor to Davis & Furber Machine Co., North Andover, Mass. Safety device for time-clearers on nappers. No. 1,154,350; Sept. 21; Gaz. vol. 218; p. 771.

Thieme, Otto, assignor to Moon Hopkins Billing Machine Company, St. Louis, Mo. Carriage-shifting mechanism for calculating-machines. No. 1,153,354; Sept. 14; Gaz. vol. 218; p. 389.

Thilges, Eduard. (See Borchers and Thilges.)

Thomas, Charles L., Canisteo, N. Y. Automobile shock-absorber. No. 1,153,876; Sept. 14; Gaz. vol. 218; p. 574.

Thomas, Isaiah F., assignor of one-half to E. Johnson, Norristown, Pa. Sugar-box. No. 1,152,892; Sept. 7; Gaz. vol. 218; p. 225.

Thomas, John A., Lansing, Mich. Fire-fighting apparatus. No. 1,152,452; Sept. 7; Gaz. vol. 218; p. 25.

Thomas, John B., Lorain, Ohio, assignor to National Tube Company, Pittsburgh, Pa. Apparatus for applying couplings. No. 1,155,108; Sept. 28; Gaz. vol. 218; p. 1059.

Thomas, Orlando V., Penang, Straits Settlements. Electrically-insulating compound. No. 1,153,975; Sept. 21; Gaz. vol. 218; p. 641.

Thomas, Percy H., Upper Montclair, assignor to Cooper Hewitt Electric Co., Hoboken, N. J. Mercury-vapor apparatus. No. 1,153,976; Sept. 21; Gaz. vol. 218; p. 641.

Thompson Electric Clock Company. (See Thompson, William H., assignor.)

Thompson, Elizabeth, *et al.* (See Terry, Louis, assignor.)

Thompson, John A., Des Moines, Iowa. Light-dimmer. No. 1,153,464; Sept. 14; Gaz. vol. 218; p. 428.

Thompson, John H., Greenville, Ohio. Brush-holding device. No. 1,153,730; Sept. 14; Gaz. vol. 218; p. 522.

Thompson, Newton B., Kansas City, Kans. Board-bundling machine. No. 1,152,670; Sept. 7; Gaz. vol. 218; p. 108.

Thompson, Robert W. (See Martin, Eugene J., assignor.)

Thompson, William H., assignor to Thompson Electric Clock Company, Memphis, Tenn. Clock. No. 1,154,076; Sept. 21; Gaz. vol. 218; p. 677.

Thompson, William P. (See Barton and Thompson.)

Thomson, Datlif F., Bettsville, Ohio. Float-operated circuit-closer. No. 1,153,142; Sept. 7; Gaz. vol. 218; p. 273.

Thomson Electric Welding Company. (See Peiseler, Kuno, assignor.)

Thomson, Samuel G., Reading, Pa. Locomotive. No. 1,152,863; Sept. 7; Gaz. vol. 218; p. 178.

Thomson, William I., Newark, N. J., assignor to Safety Car Heating & Lighting Company. Generator mounting and drive for railway-cars. No. 1,154,671; Sept. 28; Gaz. vol. 218; p. 911.

Thorandt, Paul H., Lichterfelde, near Berlin, and A. Kohn, Charlottenburg, Germany. Collar-support. No. 1,154,550; Sept. 21; Gaz. vol. 218; p. 838.

Thorman, Frank. (See Bromet, Thorman, and Wood.)

Thornton, Douglas, Yonkers, N. Y. Music-leaf turner. No. 1,153,731; Sept. 14; Gaz. vol. 218; p. 522.

Thorson, Samuel T., Boston, Mass. Check-protector. No. 1,153,832; Sept. 14; Gaz. vol. 218; p. 558.

Thropp, Peter D., assignor to The De Laski and Thropp Circular Woven Tire Company, Trenton, N. J. Vulcanizer. No. 1,152,903; Sept. 7; Gaz. vol. 218; p. 225.

Thune, Sverre, Madserud, Vestre Aker, near Christiania, Norway. Rotary piston-pump. No. 1,152,453; Sept 7; Gaz. vol. 218; p. 25.

Thurman, William B. (See Soule, Arthur C., assignor.)

Tigerman, William H. (See Smith, Josiah H., assignor.)

Tikijian, Richard, Waterbury, Conn. Whistle. No. 1,154,672; Sept. 28; Gaz. vol. 218; p. 911.

Tilden, James A., Boston, Mass. Meter system. No. 1,154,896; Sept. 28; Gaz. vol. 218; p. 984.

Tillman, Carl C. (See Linville and Tillman.)

Tillman, Ferdinand J., St. Louis, Mo. Type-writer calculating attachment. No. 1,154,551; Sept. 21; Gaz. vol. 218; p. 838.

Tilly, Charles A., New York, N. Y. Coupling. No. 1,154,944; Sept. 28; Gaz. vol. 218; p. 1001.

Tin Decorating Company of Baltimore. (See Tuttle, Washington I., assignor.)

Tindall, Leroy P., Jesup, Ga. Footwear-clasp. No. 1,153,732; Sept. 14; Gaz. vol. 218; p. 523.

Tingle, William C., Washington, Mo. Moistening-machine. No. 1,154,552; Sept. 21; Gaz. vol. 218; p. 839.

Titania Schreibmaschinen Ges. M. B. H. (See Steiner, Adolf, assignor.)

Toepfer, Charles, Milwaukee, Wis. Automatic line-winding attachment for reels. No. 1,154,220; Sept. 21; Gaz. vol. 218; p. 725.

Toledo Pipe Threading Machine Company, The. (See Vosper, William W., assignor.)

Toledo Scale Company. (See Bergen, Harry S., assignor.)

Tomlin, James, assignor of one-half to R. T. Morgan, Moro, Oreg. Weed-remover. No. 1,152,574; Sept. 7; Gaz. vol. 218; p. 72.

Tomlinson, Arthur. (See Pilblad and Tomlinson.)

Tooley, John A., Shreveport, La. Bird-trap. No. 1,155,017; Sept. 28; Gaz. vol. 218; p. 1026.

Torrey, Edward, Thetford Mines, Quebec, Canada. Ore-separator. No. 1,155,202; Sept. 28; Gaz. vol. 218; p. 1118.

Tournadre, Jules, San Francisco, Cal. Container and dispenser. No. 1,154,351; Sept. 21; Gaz. vol. 218; p. 772.

Tower, Clinton A., assignor to The National Malleable Castings Company, Cleveland, Ohio. Friction draft-rigging. No. 1,154,967; Sept. 28; Gaz. vol. 218; p. 1009.

Tower, Edwin B. H., Jr., Milwaukee, Wis., assignor, by mesne assignments, to The United States Light and Heating Company. Automatic electric regulator. No. 1,154,945; Sept. 28; Gaz. vol. 218; p. 1001.

Town, Hazel E., Libby, Mont. Skirt-marker. No. 1,153,733; Sept. 14; Gaz. vol. 218; p. 523.

Towne, George S., Oakland, Cal. Piston-packing. No. 1,155,018; Sept. 28; Gaz. vol. 218; p. 1026.

Townsend, Fitzhugh. (See Young and Townsend.)

Townsend, Harry E., assignor to Anchor Cap & Closure Corporation, Brooklyn, N. Y. Sealing closures. No. 1,154,352; Sept. 21; Gaz. vol. 218; p. 772.

Trautman, Walter G., assignor to The P. A. Geier Company, Cleveland, Ohio. Vacuum cleaning apparatus. No. 1,153,734; Sept. 14; Gaz. vol. 218; p. 523.

Traver, Frank A., Milwaukee, Wis. Corn-popper. No. 1,153,465; Sept. 14; Gaz. vol. 218; p. 428.

Tredway, William E., Blackwell, Okla., assignor to W. R. Fretz and G. W. Collinson, Arkansas City, Kans. Rail-gage. No. 1,153,365; Sept. 14; Gaz. vol. 218; p. 389.

Trent, Lamartine C., Los Angeles, Cal. Apparatus for treating solid-bearing solutions. No. 1,152,709; Sept. 7; Gaz. vol. 218; p. 142.

Triggs, James M., Huntington, Ind. Register. No. 1,152,864; Sept. 7; Gaz. vol. 218; p. 178.

Trisler, John, Homer, Ill. Tank-heater. No. 1,152,671; Sept. 7; Gaz. vol. 218; p. 108.

Trott, Thekla, Berlin, Germany. Sewing-machine. No. 1,154,946; Sept. 28; Gaz. vol. 218; p. 1002.

Troville, Frederick H., South Hero, Vt. Cradle-bit. No. 1,152,770; Sept. 7; Gaz. vol. 218; p. 142.

Trowbridge, Emory E., Kansas City, Kans. Manufacturing bricks. No. 1,154,741; Sept. 28; Gaz. vol. 218; p. 933.

True, Charles H., Hammond, Ind., and N. T. McKee, Dobbs Ferry, assignors to Locomotive Superheater Company, New York, N. Y. Die for making pipe-bends. No. 1,155,109; Sept. 28; Gaz. vol. 218; p. 1060.

True, Charles H., Hammond, Ind., and N. T. McKee, Yonkers, assignors to Locomotive Superheater Company, New York, N. Y. Making pipe-bends. No. 1,155,110; Sept. 28; Gaz. vol. 218; p. 1060.

True, Thomas B., Eaton Rapids, Mich. Sleigh. No. 1,153,735; Sept. 14; Gaz. vol. 218; p. 524.

Truesbury, Fred C., assignor to J. L. Clark Manufacturing Company, Rockford, Ill. Sifter-top closure. No. 1,153,356; Sept. 14; Gaz. vol. 218; p. 389.

Truscott, Harry A., Washington, D. C. Parcel-post envelop. No. 1,154,276; Sept. 21; Gaz. vol. 218; p. 745.

Trysna, Josef, Haindorf, Austria-Hungary, assignor to S. O. Adler, Altoona, Pa. Valve for steam-engines. No. 1,153,736; Sept. 14; Gaz. vol. 218; p. 524.

Tschantz, William H., Orrville, Ohio. Corn-husking machine. No. 1,155,173; Sept. 28; Gaz. vol. 218; p. 1082.

Tschering, Henry, assignor to Arcade Manufacturing Company, Freeport, Ill. Molding-machine. No. 1,155,019; Sept. 28; Gaz. vol. 218; p. 1026.

Tucker, Benjamin W., South Orange, N. J. Barrel-machine. No. 1,152,575; Sept. 7; Gaz. vol. 218; p. 73.

Tudhope, George V. (See Cranmer and Tudhope.)

Tuerk, Albert, Chicago, Ill. Culinary timing apparatus. No. 1,153,466; Sept. 14; Gaz. vol. 218; p. 429.

Tuite, Thomas P., New York, N. Y. Hose-supporter. No. 1,152,672; Sept. 7; Gaz. vol. 218; p. 108.

Tulloch, Harry A. (See Conrad, Elmer E., assignor.)

Turck, Frederick M., New York, N. Y., assignor to The Carter-Crume Company, Limited, Toronto, Canada. Delivery mechanism for web-printing presses. No. 1,153,833; Sept. 14; Gaz. vol. 218; p. 559.

Turck, Joseph A., assignor to Felt & Tarrant Manufacturing Company, Chicago, Ill. Calculating-machine. No. 1,154,897; Sept. 28; Gaz. vol. 218; p. 985.

Turco-Haivah Company. (See Rosell, Claude A. O., assignor.)

Turner, Jessee W., Kirksville, Mo. Multiple-chamber pneumatic tire. No. 1,154,817; Sept. 28; Gaz. vol. 218; p. 958.

Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Wilmerding, Pa. Fluid-pressure brake device. No. 1,153,275; Sept. 14; Gaz. vol. 218; p. 359.

Turner, William C. (See Foster, Turner, Bennett, and Linn.)

Tuttle, Washington I., assignor to Tin Decorating Company of Baltimore, Baltimore, Md. Supplemental cover for boxes. No. 1,153,276; Sept. 14; Gaz. vol. 218; p. 359.

Twaits, Daniel H., Chicago, Ill. Self-lubricating spring-bolt. No. 1,154,947; Sept. 28; Gaz. vol. 218; p. 1002.

Twaits, Daniel H., Chicago, Ill. Self-lubricating bolt. No. 1,155,111; Sept. 28; Gaz. vol. 218; p. 1060.

Tweedie, Charles, Jefferson City, Mo. Boot-top. No. 1,153,977; Sept. 21; Gaz. vol. 218; p. 642.

Tweedy, Eddie C. (See Hunter and Tweedy.)

Tynan, Henry J., Paterson, N. J. Shaft-shield. No. 1,153,407; Sept. 14; Gaz. vol. 218; p. 429.

Typograph Gesellschaft m. b. H. (See Dorneth, Julius, assignor.)

U. S. Steel Furniture Company. (See Ohnstrand, Enoch, assignor.)

Ubelsker, Joseph H., Chicago, Ill. Self-cleaning rake. No. 1,155,174; Sept. 28; Gaz. vol. 218; p. 1083.

Uhlig, Ernst, and K. Bauch, Gera-Untermhaus, Germany. Chuck. No. 1,154,898; Sept. 28; Gaz. vol. 218; p. 985.

Uhlinger, Roy H. (See Brownlee and Uhlinger.)

Underhill, Charles R. (See Kemble and Underhill.)

Underwood, John T. (See Becker, Richard M., assignor.)

Underwood, John T. (See Harvey, Joseph C., assignor.)

Underwood Typewriter Company. (See Coverdell, Grover F., assignor.)

Underwood Typewriter Company. (See Fortin, Benjamin P., assignor.)

Underwood Typewriter Company. (See Pritzl, Lorenz L., assignor.)

Underwood Typewriter Company. (See Rennle, John A., assignor.)

Underwood Typewriter Company. (See Smith, Charles E., assignor.)

Underwood Typewriter Company. (See Smith, Jesse A. R., assignor.)

Underwood Typewriter Company. (See Wayrich, Alexander, assignor.)

Ungles, Lloyd A., Des Moines, Iowa. Oil-burner. No. 1,154,221; Sept. 21; Gaz. vol. 218; p. 725.

Union Fibre Company. (See Lappen, James E., assignor.)

Union Lock Stitch Company. (See Merrick, Frank W., assignor.)

Union Sulphur Company, The. (See Frasch, Herman, assignor.)

Union Switch & Signal Company, The. (See Snavely, Clarence S., assignor.)

Union Switch & Signal Company, The. (See Stevens, Thomas S., assignor.)

Union Switch & Signal Company, The. (See Waldron, James M., assignor.)

Union Wire Mattress Company. (See Powers, George G., assignor.)

United Gas Improvement Company, The. (See Zeek, Charles F., assignor.)

United Shoe Machinery Company. (See Beier, Paul T., assignor.)

United Shoe Machinery Company. (See Benjamin, John M., assignor.)

United Shoe Machinery Company. (See Jerram, Arthur E., assignor.)

United Shoe Machinery Company. (See Keall, Frank B., assignor.)

United Shoe Machinery Company. (See Meyer, William C., assignor.)

United Shoe Machinery Company. (See Perry, Frederick H., assignor.)

United Shoe Machinery Company. (See Warren, Frank H., assignor.)

United Shoe Machinery Company. (See Warren, George E., assignor.)

United States Cartridge Company. (See Butler, Paul, assignor.)

United States Envelope Company. (See Schmidt, Ferdinand L., assignor.)

United States Envelope Company. (See Swift, Willard E., assignor.)

United States Light and Heating Company, The. (See Tower, Edwin B. H., Jr., assignor.)

Universal Electric Welding Company. (See Lachman, Maurice, assignor.)

Universal Electric Welding Company. (See Rietzel, Adolph F., assignor.)

Unné, Pierre G. (See Canton, Unné, and Salmson.)

Upton, James R., Peoria, Ill. Lock. No. 1,154,078; Sept. 21; Gaz. vol. 218; p. 677.

Utahna Development Company. (See Pfeiffer, Otto G., assignor.)

Uts, Anthony, Hartford, Conn., assignor to Royal Typewriter Company, Inc., New York, N. Y. Back-spacing device for type-writing machines. No. 1,154,277; Sept. 21; Gaz. vol. 218; p. 745.

Utz, John G., assignor to The Perfection Spring Company, Cleveland, Ohio. Vehicle-spring. No. 1,153,357; Sept. 14; Gaz. vol. 218; p. 390.

Vaill, Edward W., Jr., Oradell, N. J. Furniture. No. 1,153,358; Sept. 14; Gaz. vol. 218; p. 390.

Valveless Engine Corporation. (See Blume, Robert A., assignor.)

Van Daam, Gerrit, Buffalo, N. Y. Preheating device. No. 1,155,112; Sept. 28; Gaz. vol. 218; p. 1061.

Van Daam, Gerrit, Buffalo, N. Y. Preheating device. No. 1,155,113; Sept. 28; Gaz. vol. 218; p. 1061.

Van Daam, Gerrit, Buffalo, N. Y. Gas-burner. No. 1,155,114; Sept. 28; Gaz. vol. 218; p. 1061.

Van der Hoorn, Lodovicus J. J., and S. Wouda, Utrecht, Netherlands. Bargain-indicator. No. 1,153,737; Sept. 14; Gaz. vol. 218; p. 524.

Van Deventer, Harry R., Sumter, S. C. Igniter mechanism for internal-combustion engines. No. 1,153,767; Sept. 14; Gaz. vol. 218; p. 534.

Van Devoorde, Eugen, Bremen, assignor to W. Kober & Co., Subl-in-Türing, Germany. Rotatable circular brush. No. 1,153,738; Sept. 14; Gaz. vol. 218; p. 525.

Van Dorn, Robert W., Saratoga Springs, N. Y. Electric-light hanger and adjuster for mast-arms. No. 1,154,818; Sept. 28; Gaz. vol. 218; p. 959.

Van Dusen, George E., Cleveland, Ohio. Smoker's convenience. No. 1,152,454; Sept. 7; Gaz. vol. 218; p. 25.

Van Dyke, John W., and W. M. Irish, assignors to The Atlantic Refining Company, Philadelphia, Pa. Setting for petroleum-stills or analogous vessels. No. 1,152,576; Sept. 7; Gaz. vol. 218; p. 73.

Van Horn, Sheridan A., assignor of forty-nine one-hundredths to M. Hall, Syracuse, N. Y. Woman's hat-fastener. No. 1,154,222; Sept. 21; Gaz. vol. 218; p. 725.

Van Houten, Frank H., Jr., assignor to Dutchess Tool Company, Fishkill-on-the-Hudson, N. Y. Dough-rounding-up machine. No. 1,153,359; Sept. 14; Gaz. vol. 218; p. 391.

Van Law, Durbin, Bishop, Cal. Wheel-mounting. No. 1,155,175; Sept. 28; Gaz. vol. 218; p. 1083.

Van Ness, Clair L., Akron, Ohio. Drafting implement. No. 1,154,673; Sept. 28; Gaz. vol. 218; p. 911.

Van Ness, Clair L., Akron, Ohio. Insulating-head. No. 1,154,674; Sept. 28; Gaz. vol. 218; p. 912.

Van Ness, Frank W., Milwaukee, Wis., assignor, by mesne assignments, to Richmond Radiator Company, New York, N. Y. Electrical controller. No. 1,153,978; Sept. 21; Gaz. vol. 218; p. 642.

Van Norman, Frederick D., assignor, by mesne assignments, to Van Norman Machine Tool Company, Springfield, Mass. High-speed-spindle device. No. 1,155,176; Sept. 28; Gaz. vol. 218; p. 1083.

Van Norman Machine Tool Company. (See Van Norman, Frederick D., assignor.)

Van Orden, Leander, Alameda, Cal. Saliva-ejector. No. 1,155,020; Sept. 28; Gaz. vol. 218; p. 1027.

Van Schaick, George H., Hudson Falls, P. Burns, and J. Reardon, Fort Edward, N. Y. Flue-blower. No. 1,155,177; Sept. 28; Gaz. vol. 218; p. 1083.

Van Zandt, Jacobs & Co. (See Shumway, Harry E., assignor.)

Vanderziel, William, and J. T. Goodall, assignors to The Caille Brothers Company, Detroit, Mich. Coin-controlled weighing mechanism. No. 1,153,650; Sept. 14; Gaz. vol. 218; p. 493.

Vaudreuil, Edward J., Eau Claire, assignor to International Canning Machinery Co., Owen, Wis. Machine for treating vegetable products for canning. No. 1,154,675; Sept. 28; Gaz. vol. 218; p. 912.

Vaughan, James H., Oakland, Cal. Stippling-pen. No. 1,153,468; Sept. 14; Gaz. vol. 218; p. 429.

Vaughn, Lewis C., Forkston, Pa. Steering mechanism for motor-vehicles. No. 1,152,455; Sept. 7; Gaz. vol. 218; p. 26.

Vazquez, Jesus. (See Sala and Vazquez.)

Vene, Joseph. (See Behm and Vene.)

Verberckmoes, Louis F., Anaconda, Mont. Watchcase-crown. No. 1,152,673; Sept. 7; Gaz. vol. 218; p. 109.

Viall, William G., Bridgeport, Conn. Time-reckoning device. No. 1,153,460; Sept. 14; Gaz. vol. 218; p. 430.

Vicars, Edward L. (See Vicars, Thomas, J., and E. L.)

Vicars, John. (See Vicars, Thomas, J., and E. L.)

Vicars, Thomas, J., and E. L., Earlestown, England. Biscuit-icing machine. No. 1,153,585; Sept. 14; Gaz. vol. 218; p. 472.

Vickers Limited. (See Ellu, Giovanni E., assignor.)

Vickery, John R., Chicago, Ill. Vehicle-wheel. No. 1,154,948; Sept. 28; Gaz. vol. 218; p. 1002.

Victor Shoe Machinery Co. (See Erickson, Edward, assignor.)

Victor Shoe Machinery Co. (See Johnson and Erickson, assignors.)

Victor Talking Machine Company. (See Dennison, Wilburn N., assignor.)

Vinger, Henry E., Barron, Wis. Heater for a range and coil. No. 1,153,408; Sept. 14; Gaz. vol. 218; p. 408.

Virden, Orville, St. Louis, Mo. Underfeed firing device. No. 1,153,979; Sept. 21; Gaz. vol. 218; p. 642.

Virginia Refrigerator Corporation. (See Coleman, Clyde J., assignor.)

Vitek, Vaclav J., Cincinnati, Ohio. Mowing-machine for sugar-cane. No. 1,152,994; Sept. 7; Gaz. vol. 218; p. 226.

Viviani, Benigno, Monessen, Pa. Mining-machine. No. 1,154,459; Sept. 21; Gaz. vol. 218; p. 808.
Voelker, George, St. Paul, Minn. Type-writing machine. No. 1,153,651; Sept. 14; Gaz. vol. 218; p. 494.
Vogel, John C. (See De Vore, Charles D., assignor.)
Vogelsang, John B., Webster Groves, Mo. Combining and emulsifying two or more liquids. No. 1,152,456; Sept. 7; Gaz. vol. 218; p. 26.
Vogt, Anton, assignor to E. C. Tecktonius Manufacturing Co., Racine, Wis. Kiln. No. 1,153,980; Sept. 21; Gaz. vol. 218; p. 643.
Voight, Henry G., New Britain, assignor to Sargent & Company, New Haven, Conn. Lock. No. 1,152,457; Sept. 7; Gaz. vol. 218; p. 26.
Voightmann & Company. (See Iman, Orla H., assignor.)
Vollrath, Walter J., Sheboygan, Wis., and M. M. Cohen, Chicago, Ill., assignors to Porcelain Enameling Association of America, Sheboygan, Wis. Receptacle-cover. No. 1,153,586; Sept. 14; Gaz. vol. 218; p. 473.
Volotone Company. (See Newcomer, Martin, assignor.)
Vom Eigen, Benno, Newark, N J., assignor to Aug. Goertz & Co. Bag-frame. No. 1,153,652; Sept. 14; Gaz. vol. 218; p. 494.
Vom Eigen, Benno, Newark, N. J., assignor to August Goertz & Co. Bag-frame fastener. No. 1,153,654; Sept. 14; Gaz. vol. 218; p. 494.
Von Blitzingslöwen, Bruno, assignor of one-half to M. Rubens and one-half to R. R. Debacher, New York. N. Y. Cutter. No. 1,152,577; Sept. 7; Gaz. vol. 218; p. 74.
Von Hacht, William, C. R. Taylor, and W. F. Clewe, Sonoma, Cal. Rotary valve. No. 1,154,899; Sept. 28; Gaz. vol. 218; p. 986.
Von Hohenstein, Charles H., San Antonio, Tex. Hydrocarbon-burner. No. 1,152,674; Sept. 7; Gaz. vol. 218; p. 109.
Von Oefele, Felix, New York, N. Y. Compound of vanadium and selenium. No. 1,154,949; Sept. 28; Gaz. vol. 218; p. 1003.
Von Pein, Edward J., assignor to The National Cash Register Company, Dayton, Ohio. Multiple cash-register. No. 1,153,360; Sept. 14; Gaz. vol. 218; p. 391.
Voorhees, Martin M., Oak Park, Ill. Undertow-warner indicator-register. No. 1,153,653; Sept. 14; Gaz. vol. 218; p. 494.
Vosper, William W., assignor to The Toledo Pipe Threading Machine Company, Toledo, Ohio. Thread-cutting tool. No. 1,153,981; Sept. 21; Gaz. vol. 218; p. 643.
Vreeland, Frederick K., Montclair, N. J., assignor to Wireless Telegraph Exploitation Company, New York, N. Y. Electrical oscillator. No. 1,152,675; Sept. 7; Gaz. vol. 218; p. 109.
Vuillaume, Jules, and F. Marbach, Paris, France, assignors to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,153,361; Sept. 14; Gaz. vol. 218; p. 392.
Vulcan Soot Cleaner Co. of Pittsburg, Pa. (See Linaker, Frederick W., assignor.)
W. G. Cornell Company. (See Rogers and Parker, assignors.)
W. S. Tyler Company, The. (See Reynolds, Morley P., assignor.)
Wacha, John C., Providence, R. I., assignor to George H. Cahoone Company. Chain. No. 1,153,362; Sept. 14; Gaz. vol. 218; p. 392.
Wagg, W. W. (See Strickland, George R., assignor.)
Waggoner, William H., Jeanerette, La. Apparatus for bleaching cane-juice. No. 1,152,458; Sept. 7; Gaz. vol. 218; p. 26.
Wagner, Allen P., Fredericksburg, Pa. Trestle for carpenters' use. No. 1,153,470; Sept. 14; Gaz. vol. 218; p. 430.
Wagner, Edward L. (See Robinson and Wagner.)
Wagner Electric Manufacturing Company. (See Fynn, Valére A., assignor.)
Wagner, Karl W., Berlin-Lankwitz, Germany. Telephone-cable. No. 1,153,655; Sept. 14; Gaz. vol. 218; p. 495.
Wagner, Mathias, Atlanta, Ga. Saw-sharpening machine. No. 1,153,982; Sept. 21; Gaz. vol. 218; p. 644.
Wagner, Robert G. (See Schweitzer and Wagner.)
Wagoner, Alma M., special administratrix. (See Wagoner, James B.)
Wagoner, James B., deceased, Los Angeles; A. M. Wagoner, special administratrix, San Francisco, Cal. Thermo-electric device for therapeutics. No. 1,154,144; Sept. 21; Gaz. vol. 218; p. 699.
Wake, Frederick N., assignor to The Specialty Development Co., New York, N. Y. Electric switch for elevators. No. 1,153,656; Sept. 14; Gaz. vol. 218; p. 495.
Wake, Frederick N., assignor to The Specialty Development Co., New York, N. Y. Fuse-carrying connecting device for electrical conductors. No. 1,153,657; Sept. 14; Gaz. vol. 218; p. 495.
Wakefield, Charles C., London, England. Lubricator. No. 1,154,353; Sept. 21; Gaz. vol. 218; p. 772.
Wakefield, Edward E., assignor to Halkyard Manufacturing Company, Providence, R. I. Lacing-stud-setting machine. No. 1,154,553; Sept. 21; Gaz. vol. 218; p. 839.
Wakefield, Edwin F., Chagrin Falls, Ohio. Electric connector. No. 1,154,354; Sept. 21; Gaz. vol. 218; p. 772.
Wakefield, Frank T., Fairhaven, Pa. Combined mail-box and milk-bottle holder. No. 1,154,900; Sept. 28; Gaz. vol. 218; p. 986.
Wakefield, George F., San Jose, Cal. Car time-finder. No. 1,153,471; Sept. 14; Gaz. vol. 218; p. 430.
Waldron, James M., Englewood, N. J., assignor to The Union Switch & Signal Company, Swissvale, Pa. Railway-traffic-controlling apparatus. No. 1,154,742; Sept. 28; Gaz. vol. 218; p. 933.
Wales, Charles, assignor to The White Adding Machine Company, New Haven, Conn. Keyboard for computing-machines. No. 1,154,355; Sept. 21; Gaz. vol. 218; p. 773.
Walker, Arthur W., Malden, Mass. Latch-mounting. No. 1,154,676; Sept. 28; Gaz. vol. 218; p. 912.
Walker, Clarence G., Bramwell, W. Va. Flying-machine. No. 1,153,143; Sept. 7; Gaz. vol. 218; p. 274.
Walker, John B., Birmingham, Ala. Closure for joints of sectional collapsible cores. No. 1,154,079; Sept. 21; Gaz. vol. 218; p. 678.
Walker, William E., Seattle, Wash. Door-lock. No. 1,152,865; Sept. 7; Gaz. vol. 218; p. 179.
Wall, Clarence A. (See Winn and Wall.)
Wallace, George L. (See Kennedy, William D., assignor.)
Wallace, Roger W., and E. Wassmer, London, England. Production of nitrogen. No. 1,154,145; Sept. 21; Gaz. vol. 218; p. 700.
Walpole Shoe Supply Company. (See Moulton, James N., assignor.)
Walsh, Charles N. (See Darby and Walsh.)
Walsh, Edward B., Los Angeles, Cal. Signal device for submarine vessels. No. 1,153,277; Sept. 14; Gaz. vol. 218; p. 360.
Walsh, John P., assignor of one-half to H. J. McGuckin, New York, N. Y. Headlight for automobiles and the like. No. 1,152,676; Sept. 7; Gaz. vol. 218; p. 110.
Walston, Thomas B., Williamsport, Ohio. Derrick apparatus. No. 1,154,460; Sept. 21; Gaz. vol. 218; p. 808.
Walter, David C., assignor of one-half to C. J. Reuscher, Toledo, Ohio. Pipe-threading machine. No. 1,153,835; Sept. 14; Gaz. vol. 218; p. 550.
Walz, Edgar A., Jr., New York, N. Y. Guide-signal for automobiles. No. 1,154,461; Sept. 21; Gaz. vol. 218; p. 808.
Walz, Edgar A., Jr., New York, N. Y. Wiring system. No. 1,154,462; Sept. 21; Gaz. vol. 218; p. 809.
Wamelink, Eugene C., Cleveland, Ohio. Piano-player. No. 1,154,146; Sept. 21; Gaz. vol. 218; p. 700.
Wanderer Werke, vorm. Winklhofer & Jaenicke, A. G. (See Buschmann, Theodor E., assignor.)
Wantzen, Anton J. (See Dünnebier and Winkler, assignors.)
Wappler Electric Manufacturing Company. (See Wappler, Reinhold H., assignor.)
Wappler, Reinhold H., assignor to Wappler Electric Manufacturing Company, Inc., New York, N. Y. X-ray tube. No. 1,152,578; Sept. 7; Gaz. vol. 218; p. 74.
Ward, Charles W., Lakewood, Ohio. Sempahore-operating mechanism. No. 1,153,739; Sept. 14; Gaz. vol. 218; p. 525.
Ward, Lynford A., and W. D. Chase, Brooklyn, N. Y. Identification device for automobiles. No. 1,153,278; Sept. 14; Gaz. vol. 218; p. 360.
Warner, William F., Davenport, Iowa. Internal-combustion engine. No. 1,153,364; Sept. 14; Gaz. vol. 218; p. 393.
Warnock, Wallace S., Evanston, Ill. Printing-press. No. 1,153,587; Sept. 14; Gaz. vol. 218; p. 473.
Warren, Emmet T., Dyersville, Iowa. Fence-post. No. 1,153,983; Sept. 21; Gaz. vol. 218; p. 644.
Warren, Frank H., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Inseam shoe-sewing machine. No. 1,154,554; Sept. 21; Gaz. vol. 218; p. 839.
Warren, George E., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Steam-generator. No. 1,152,579; Sept. 7; Gaz. vol. 218; p. 74.
Warren, George T., Sr., Charleston, S. C. Ladder. No. 1,154,147; Sept. 21; Gaz. vol. 218; p. 700.
Warren, James C., Emporia, Va. Ice-chute. No. 1,153,658; Sept. 14; Gaz. vol. 218; p. 496.
Warren, John E., Greenfield, assignor of one-half to J. H. Fassett, Nashua, N. H. Painter's hook. No. 1,152,677; Sept. 7; Gaz. vol. 218; p. 110.
Washburn-Crosby Company. (See Langseth, Gust, assignor.)
Wasielewski, Stephen, *et al.* (See Piontkowski, John, assignor.)
Wassmer, Eugene. (See Wallace and Wassmer.)
Waterbury Farrel Foundry and Machine Company, The. (See Candee, Zenas P., assignor.)
Waterbury Mfg. Co. (See Goddard, Arthur S., assignor.)
Waters, Edmund J., Asbury Park, N. J. Billiard-cue attachment. No. 1,152,866; Sept. 7; Gaz. vol. 218; p. 179.
Watkins, Alfred, Hereford, England. Thermometer for bakers. No. 1,153,740; Sept. 14; Gaz. vol. 218; p. 525.
Watkins, Basil K. (See Harvey and Watkins.)
Watkins, William R., Woodlawn, Ala. Drinking-cup. No. 1,155,178; Sept. 28; Gaz. vol. 218; p. 1084.
Watson, Charles, Chicago, Ill. Oscillating lawn-sprinkler. No. 1,155,115; Sept. 28; Gaz. vol. 218; p. 1061.
Watson, Hugh, and C. M. Whritenour, Paterson, N. J. Beaming attachment for warping and beaming machines. No. 1,153,528; Sept. 14; Gaz. vol. 218; p. 452.

Watt, Delton C., and F. A. Grearson, Barre, Vt. Vehicle top-operating mechanism. No. 1,154,463; Sept. 21; Gaz. vol. 218; p. 809.
Watts, Frank E., assignor to Hupp Motor Car Company, Detroit, Mich. Propeller-shaft. No. 1,153,984; Sept. 21; Gaz. vol. 218; p. 645.
Watts, John, Kansas City, Mo. Aeroplane. No. 1,153,659; Sept. 14; Gaz. vol. 218; p. 496.
Waugh, Samuel. (See Chapman, Robert E., assignor.)
Waydlich, Aloys, New York, N. Y. Clothes-drier. No. 1,154,080; Sept. 21; Gaz. vol. 218; p. 678.
Wayrich, Alexander, assignor to Underwood Typewriter Company, New York, N. Y. Theatrical appliance. No. 1,154,950; Sept. 28; Gaz. vol. 218; p. 1003.
Weaver, Frank M., *et al.* (See Moore, Chauncey H., assignor.)
Webb, Jervis B., Mount Vernon, N. Y., assignor to H. W. Johns-Manville Company. Furring-strip. No. 1,153,836; Sept. 14; Gaz. vol. 218; p. 560.
Weber, Friedrich W., Perth Amboy, N. J., assignor to The Roessler & Hasslacher Chemical Co., New York, N. Y. Stable compounds containing hydrogen peroxid and making the same. No. 1,153,985; Sept. 21; Gaz. vol. 218; p. 645.
Weber, John A., Toledo, Ohio. Rosser mechanism. No. 1,153,363; Sept. 14; Gaz. vol. 218; p. 392.
Weber, Judson, Marcus Hook, Pa. Screen-door protector. No. 1,153,472; Sept. 14; Gaz. vol. 218; p. 431.
Wedge, Utley, Ardmore, Pa. Electrical heater for liquids. No. 1,154,356; Sept. 21; Gaz. vol. 218; p. 773.
Wedig, John H., Granite City, Ill. Hypodermic syringe. No. 1,154,677; Sept. 28; Gaz. vol. 218; p. 913.
Wedmore, Daniel A., assignor to Philadelphia Steel & Wire Co., Philadelphia, Pa. Supporting and spacing means for reinforcing-bars. No. 1,153,270; Sept. 14; Gaz. vol. 218; p. 360.
Wegwart, Herman. (See Greenlee and Wegwart.)
Weidlich, Louis, Stratford, Conn. Electric switch. No. 1,152,580; Sept. 7; Gaz. vol. 218; p. 75.
Weidlich, Louis, Stratford, Conn. Adjustable reflector for incandescent lamps. No. 1,152,581; Sept. 7; Gaz. vol. 218; p. 75.
Weinberg, Frederick, Detroit, Mich. Fuel-supply apparatus for internal-combustion engines. No. 1,153,660; Sept. 14; Gaz. vol. 218; p. 496.
Weintraub, Ezechiel, Lynn, Mass., assignor to General Electric Company. Leading-in conductor. No. 1,154,081; Sept. 21; Gaz. vol. 218; p. 678.
Weinzierl, Joseph T. (See Sturtevant and Weinzierl.)
Weirich, Clarence A., Canton, Ohio. Sheet-metal-forming machine. No. 1,154,951; Sept. 28; Gaz. vol. 218; p. 1003.
Weiss, Albert T., assignor to Yawman & Erbe Manufacturing Company, Rochester, N. Y. Label-holder for labeling-machines. No. 1,153,144; Sept. 7; Gaz. vol. 218; p. 274.
Welch, Fidelia D. (See Welch, William, assignor.)
Welch, Louis A., Jr. (See Frank, Carl, assignor.)
Welch, William, assignor of one-fourth to F. D. Welch, Haskell, Tex. Stalk-header and ensilage-cutter. No. 1,154,464; Sept. 21; Gaz. vol. 218; p. 810.
Weld, George A., Winchester, Mass. Noiseless steam and water mixer. No. 1,152,459; Sept. 7; Gaz. vol. 218; p. 27.
Wells, Henry N., Riverhead, N. Y. Hacksaw-holder. No. 1,154,465; Sept. 21; Gaz. vol. 218; p. 810.
Wells, John T., Newport, Ky., assignor to The Edwards Manufacturing Company, Cincinnati, Ohio. Film-fire-prevention shutter for motion-picture machines. No. 1,154,952; Sept. 28; Gaz. vol. 218; p. 1004.
Wels, Franz, Vienna, Austria-Hungary. Flying-machine. No. 1,154,466; Sept. 21; Gaz. vol. 218; p. 810.
Welsbach Light Company. (See Knoedler, Elmer L., assignor.)
Welsbach Light Company. (See Lyon, Howard, assignor.)
Wendle, Edgar J., Johnstown, Pa. Automobile transmission power. No. 1,152,771; Sept. 7; Gaz. vol. 218; p. 143.
Werner, John A., assignor to The National Cash Register Company, Dayton, Ohio. Departmental cash-register. No. 1,152,582; Sept. 7; Gaz. vol. 218; p. 75.
Werner & Pfleiderer Company. (See Pletscher, Carl, assignor.)
Werry, William, London, England. Steam and other fluid-pressure engine. No. 1,153,588; Sept. 14; Gaz. vol. 218; p. 474.
Wessberg, Sigfrid N., Brooklyn, N. Y. Launching apparatus for boats. No. 1,152,678; Sept. 7; Gaz. vol. 218; p. 110.
West, Brennan B. (See Mears and West.)
West, Cyrus R., Dawson, Yukon Territory, Canada. Excavating apparatus. No. 1,154,357; Sept. 21; Gaz. vol. 218; p. 774.
West, William J., Clay City, Wash. Door-check. No. 1,154,148; Sept. 21; Gaz. vol. 218; p. 700.
Westbye, Peder P., Peterborough, Ontario, Canada. Pulp-screening machine. No. 1,155,116; Sept. 28; Gaz. vol. 218; p. 1062.
Westcott, William W. (See White, Frederick H., assignor.)
Western Motor Appliance Company. (See McCray, Harold E., assignor.)
Western Pipe & Steel Company of California. (See Claiborne, Alexander, assignor.)
Western Wheeled Scraper Company. (See McKnight, Thomas R., assignor.)
Westinghouse Air Brake Company, The. (See Turner, Walter V., assignor.)
Westinghouse Electric and Manufacturing Company. (See Abtmeyer, Theodore, assignor.)
Westinghouse Electric and Manufacturing Company. (See Barnes, Wilfred, Jr., assignor.)
Westinghouse Electric and Manufacturing Company. (See Beach, Howard L., assignor.)
Westinghouse Electric and Manufacturing Company. (See Conrad, Frank, assignor.)
Westinghouse Electric and Manufacturing Company. (See Eaton, George M., assignor.)
Westinghouse Electric and Manufacturing Company. (See Eby, Earl E., assignor.)
Westinghouse Electric and Manufacturing Company. (See Fortescue, Charles L., assignor.)
Westinghouse Electric and Manufacturing Company. (See Lewis, Harry A., assignor.)
Westinghouse Electric and Manufacturing Company. (See Riley, Lynn G., assignor.)
Westinghouse Electric and Manufacturing Company. (See Rose, Edward E., assignor.)
Westinghouse Electric and Manufacturing Company. (See Sandfield, Michael, assignor.)
Westinghouse Electric and Manufacturing Company. (See Storer, Norman W., assignor.)
Westinghouse Lamp Company. (See Beadle, George W., assignor.)
Westlake, Charles T., assignor to Commonwealth Steel Company, St. Louis, Mo. Chafing-plate. No. 1,154,223; Sept. 21; Gaz. vol. 218; p. 726.
Weston, Clarence B. (See King and Weston.)
Weston, Clarence B., Marion, Ohio, assignor to Ball Engine Company, Erie, Pa. Engine and friction-clutch control. No. 1,154,149; Sept. 21; Gaz. vol. 218; p. 701.
Wetcarbonizing Limited. (See Whitaker, James S., assignor.)
Wheeler, Frank G., Appleton, assignor of one-half to Kimberly-Clark Company, Neenah, Wis. Cathode for electrolytic cells. No. 1,152,772; Sept. 7; Gaz. vol. 218; p. 144.
Wheeler, Ira R., Baltimore, Md., assignor of one-half to J. C. Allen, Northampton, Mass. Massaging device. No. 1,153,409; Sept. 14; Gaz. vol. 218; p. 409.
Wheeler, Richard, San Francisco, assignor, by mesne assignments, of seventy-six one-hundredths to H. W. Regan, V. O. Davis, and S. D. Merk, Burlingame, Cal. Adjustable fruit-cell. No. 1,153,365; Sept. 14; Gaz. vol. 218; p. 393.
Wheeling Steel Casting Company. (See Bagley, Joseph P., assignor.)
Whichello, Norman, and H. Sawyer, Muskegon, Mich. Transit device. No. 1,154,678; Sept. 28; Gaz. vol. 218; p. 913.
Whigham, Russell H., *et al.* (See Mallett, Charles J, assignor.)
Whitaker, James S., Dumfries, Scotland, assignor to Wetcarbonizing Limited, London, England. Apparatus for removing roots and the like from peat. No. 1,153,661; Sept. 14; Gaz. vol. 218; p. 497.
Whitcomb, Clarance E., Richford, Vt. Sap-spout. No. 1,154,679; Sept. 28; Gaz. vol. 218; p. 913.
White Adding Machine Company, The. (See Wales, Charles, assignor.)
White, Albert E., Eau Claire, Wis. Saw-tooth-centering indicator. No. 1,152,996; Sept. 7; Gaz. vol. 218; p. 226.
White, Edward Y., San Antonio, Tex. Motor-cycle frame. No. 1,152,773; Sept. 7; Gaz. vol. 218; p. 144.
White, Edwin L., New York, assignor to J. H. White Mfg. Co., Brooklyn, N. Y. Device for suspending shades or bowls in lighting-fixtures. No. 1,154,358; Sept. 21; Gaz. vol. 218; p. 774.
White, Edwin L., New York, assignor to J. H. White Manufacturing Company, Brooklyn, N. Y. Shade-holder. No. 1,155,117; Sept. 28; Gaz. vol. 218; p. 1063.
White, Frank C., assignor to The Wilcox & White Company, Meriden, Conn. Automatic stop for power-driven player mechanisms. No. 1,154,082; Sept. 21; Gaz. vol. 218; p. 678.
White, Franklin R., assignor to Patent Button Company, Waterbury, Conn. Fastener-escapement for button-attaching machines. No. 1,154,680; Sept. 28; Gaz. vol. 218; p. 913.
White, Fred E. (See Wilder and White.)
White, Frederick H., assignor of one-half to W. W. Westcott, New York, N. Y. Combined stereopticon and panoramic projecting-machine. No. 1,154,819; Sept. 28; Gaz. vol. 218; p. 959.
White, George, Jersey City, N. J. Light-regulating device for film-printing machines. No. 1,154,820; Sept. 28; Gaz. vol. 218; p. 960.
White, George S. (See Pilling and White.)
White, Harry B., assignor to The Gilliam Manufacturing Company, Canton, Ohio. Bow rest and clamp device. No. 1,152,924; Sept. 7; Gaz. vol. 218; p. 200.
White, Herbert E., assignor to The General Fireproofing Company, Youngstown, Ohio. Making expanded-metal structures. No. 1,153,145; Sept. 7; Gaz. vol. 218; p. 274.
White, Loring Q., Brockton, Mass. Last for boots and shoes. No. 1,152,679; Sept. 7; Gaz. vol. 218; p. 111.

White, Roger S., Washington, D. C. Electric-meter brush. No. 1,155,021; Sept. 28; Gaz. vol. 218; p. 1027.
Whitehead & Hoag Company, The. (See Conklin, Edward D., assignor.)
Whitesel, Fred. (See Whitesel, Newton and F.)
Whitesel, Newton and F., Watertown, Nebr. Wire-stretcher. No. 1,152,583; Sept. 7; Gaz. vol. 218; p. 76.
Whitin Machine Works, The. (See Allen, Charles A., assignor.)
Whitin Machine Works, The. (See Owen, Oscar L., assignor.)
Whiting Foundry Equipment Company. (See Rundle, Fred A., assignor.)
Whiting Manufacturing Company. (See Blair, Thomas H., assignor.)
Whiting, Saville, St. Kilda, Victoria, Australia. Spring-frame for motor-cycles and like machines. No. 1,154,821; Sept. 28; Gaz. vol. 218; p. 960.
Whitman, Roland E., assignor of one-half to W. Slattery, Sturgis, Mich. Convertible sled. No. 1,152,774; Sept. 7; Gaz. vol. 218; p. 144.
Whitmore, Franklin G. (See Parker, George A., assignor.)
Whitney, Raynard L., Elmira, N. Y. Bearing. No. 1,153,986; Sept. 21; Gaz. vol. 218; p. 645.
Whitridge, John C., and G. T. Johnson, assignors to The Buckeye Steel Castings Company, Columbus, Ohio. Six-wheel truck. No. 1,153,741; Sept. 14; Gaz. vol. 218; p. 526.
Whittaker, Arnold R. (See Jeavons and Whittaker.)
Whittemore, Charles, *et al.* (See Hothersall, John M., assignor.)
Whittemore, John Q. A., *et al.* (See Hothersall, John M., assignor.)
Whritenour, Charles M. (See Watson and Whritenour.)
Whysall, George. (See Heath, Forrest A., assignor.)
Wiberg, Helge A., assignor to Aktiebolaget Adderator, Stockholm, Sweden. Calculating-machine. No. 1,154,150; Sept. 21; Gaz. vol. 218; p. 701.
Wickersham, Charles E., assignor of one-half to B. E. Willis, Mount Vernon, Ill. Drop-door mechanism. No. 1,153,146; Sept. 7; Gaz. vol. 218; p. 275.
Wickes, Clarence S. (See Smith and Wickes.)
Widegren, Emil H. and K. A., Alby, Sweden. Method of and means for reducing line capacity. No. 1,154,278; Sept. 21; Gaz. vol. 218; p. 746.
Widegren, Emil H. and K. A., Alby, Sweden. Transmitter for electric writing-telegraphs. No. 1,154,279; Sept. 21; Gaz. vol. 218; p. 746.
Widegren, Klas A. (See Widegren, Emil H. and K. A.)
Widell, Magnus E. (See Swangren and Widell.)
Widger, Frank V., Chicago, Ill. Gearing. No. 1,154,555; Sept. 21; Gaz. vol. 218; p. 840.
Widlund, Sven B. (See Hoeglund, Herman, assignor.)
Wiebke, Louis, New York, N. Y. Rope-guide for dumb-waiter ropes. No. 1,152,775; Sept. 7; Gaz. vol. 218; p. 144.
Wiedeke, Gustav. (See Wiedeke, Otto, assignor.)
Wiedeke, Otto, assignor of one-half to G. Wiedeke, Dayton, Ohio. Tube-expander. No. 1,153,662; Sept. 14; Gaz. vol. 218; p. 497.
Wiedeke, Otto, assignor of one-half to G. Wiedeke, Dayton, Ohio. Boiler-tube expander. No. 1,153,663; Sept. 14; Gaz. vol. 218; p. 497.
Wiegand, Edwin L., Youngstown, Ohio. Electrical heating device. No. 1,154,953; Sept. 28; Gaz. vol. 218; p. 1004.
Wieselgreen, Carl E., assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden. Electrically-insulated bearing. No. 1,152,680; Sept. 7; Gaz. vol. 218; p. 111.
Wieselgreen, Carl E., assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden. Insulated roller-bearing. No. 1,152,681; Sept. 7; Gaz. vol. 218; p. 111.
Wilcox & White Company, The. (See White, Frank C., assignor.)
Wild, Frederick W., Jr., Baltimore, Md., assignor to Burt Machine Company. Machine for casing or boxing cans. No. 1,152,997; Sept. 7; Gaz. vol. 218; p. 227.
Wild, Gottlob L., Linden, N. J. Mangle-table. No. 1,155,179; Sept. 28; Gaz. vol. 218; p. 1085.
Wilder, Solon, administrator. (See Wilder and White.)
Wilder, William H., deceased, and F. E. White; S. Wilder, administrator, Gardner, Mass. Oven. No. 1,155,180; Sept. 28; Gaz. vol. 218; p. 1085.
Wildman, Frank B., and G. L. Ballard, Norristown, Pa., assignors to Wildman Mfg. Co. Thread-guide. No. 1,153,742; Sept. 14; Gaz. vol. 218; p. 526.
Wildman Mfg. Co. (See Wildman and Ballard, assignors.)
Wilkerson, Charles J., Leonard, Tex. Water tank and filter. No. 1,152,998; Sept. 7; Gaz. vol. 218; p. 227.
Wilkinson, Elmer E. (See Aronson, Saul, assignor.)
Wilkinson, James, Boston, Mass., assignor to General Electric Company. Means for regulating the supply of liquid to vapor-generators. No. 1,154,467; Sept. 21; Gaz. vol. 218; p. 811.
Wilkinson, Noah, Lewiston, assignor of one-half to A. Cushman, Jr., Auburn, Me. Ship steering-gear. No. 1,155,022; Sept. 28; Gaz. vol. 218; p. 1027.
Wilkinson, William S., Fox Chase, Pa., assignor to American Engineering Company. Steering-gear. No. 1,155,181; Sept. 28; Gaz. vol. 218; p. 1085.
Willard, Orson H., Cottage Grove, Oreg. Door securer, holder, or fastener. No. 1,154,822; Sept. 28; Gaz. vol. 218; p. 960.
Wille, Henry V., assignor to The Baldwin Locomotive Works, Philadelphia, Pa. Stay-bolt. No. 1,154,468; Sept. 21; Gaz. vol. 218; p. 811.
Wille, Henry V., assignor to The Baldwin Locomotive Works, Philadelphia, Pa. Stay-bolt. No. 1,154,469; Sept. 21; Gaz. vol. 218; p. 811.
Willemin, John R., Akron, Ohio. Fire-pot for hot-air heating-furnaces. No. 1,154,901; Sept. 28; Gaz. vol. 218; p. 986.
Willet, Nicholas M., Detroit, Mich. Clamp for forming sheet-metal shapes. No. 1,154,224; Sept. 21; Gaz. vol. 218; p. 726.
William Tod Company, The. (See Woodard, Louis A., assignor.)
Williams, Claude H., Catawissa, Pa. Whip-holder. No. 1,154,151; Sept. 21; Gaz. vol. 218; p. 702.
Williams, David T., Paterson, N. J., assignor to Standard Stoker Company, Inc., Wilmington, Del. Automatic stoking mechanism. No. 1,152,682; Sept. 7; Gaz. vol. 218; p. 111.
Williams, Edward C., assignor to E. D. Moeng, Chicago, Ill. Apparatus for cleaning electrotype-casts and type-forms. No. 1,152,460; Sept. 7; Gaz. vol. 218; p. 27.
Williams, Ernest L., and E. Jones, Hopland, Cal. Shock-absorber. No. 1,155,182; Sept. 28; Gaz. vol. 218; p. 1085.
Williams, Eugene B., assignor to B. F. Sturtevant Company, Boston, Mass. Centrifugal fan-wheel. No. 1,154,152; Sept. 21; Gaz. vol. 218; p. 702.
Williams, Harry S., Detroit, Mich., assignor of one-half to Peter Smith Heater Company, Detroit, Mich., and one-half to Consolidated Car-Heating Company, Albany, N. Y. Heating system. No. 1,154,587; Sept. 21; Gaz. vol. 218; p. 852.
Williams, Henry L. (See Windell, Frank D., assignor.)
Williams, Homer D., and W. Ahlen, Duquesne, Pa. Bar-handling apparatus. No. 1,155,118; Sept. 28; Gaz. vol. 218; p. 1063.
Williams, Paul F., assignor to G. & W. Electric Specialty Co., Chicago, Ill. Pot-head connector. No. 1,154,823; Sept. 28; Gaz. vol. 218; p. 961.
Williams, Roger, Bogota, N. J., assignor to Simplex Electric Heating Company, Cambridge, Mass. Electric range. No. 1,154,954; Sept. 28; Gaz. vol. 218; p. 1005.
Williams, Thomas, *et al.* (See Nichols, Robert M., assignor.)
Williams, White & Company. (See Freeland, George W., assignor.)
Williamson, Adrian, Monticello, Ark. Automatic gate. No. 1,152,999; Sept. 7; Gaz. vol. 218; p. 227.
Williamson Heater Company, The. (See Holub, Charles J., assignor.)
Williamson, Robert B., Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Dynamo-electric machine. No. 1,152,683; Sept. 7; Gaz. vol. 218; p. 112.
Willis, B. E. (See Wickersham, Charles E., assignor.)
Willoughby, Alfred B., Philadelphia, Pa. Marine-furnace equipment. No. 1,154,153; Sept. 21; Gaz. vol. 218; p. 702.
Willour, Le Roy, assignor to The Ashland Manufacturing Company, Ashland, Ohio. Jack. No. 1,153,589; Sept. 14; Gaz. vol. 218; p. 474.
Wills, Wayne, Chicago, Ill., assignor, by mesne assignments, to American Seating Company. Structural tubing. No. 1,154,955; Sept. 28; Gaz. vol. 218; p. 1005.
Wilson, Aaron W., and I. E. Rice, Casper, Wyo. Car-door No. 1,154,681; Sept. 28; Gaz. vol. 218; p. 914.
Wilson, Forrest M., assignor to The Computing Cheese Cutter Company, Anderson, Ind. Computing merchandise-cutter. No. 1,155,183; Sept. 28; Gaz. vol. 218; p. 1086.
Wilson, Gordon, Chicago, Ill. Reference-record. No. 1,154,225; Sept. 21; Gaz. vol. 218; p. 727.
Wilson, Mabel. (See Wilson, Richard T., assignor.)
Wilson, Richard T., assignor to M. Wilson, Hastings, Mich. Artificial bait. No. 1,153,473; Sept. 14; Gaz. vol. 218; p. 431.
Wilson, Roland F., Denver, Colo. Headlight. No. 1,154,824; Sept. 28; Gaz. vol. 218; p. 961.
Wilson, Solomon, *et al.* (See Adams, Frank C., assignor.)
Wilson, William H., Jamesville, N. Y. Non-slipping device. No. 1,155,293; Sept. 28; Gaz. vol. 218; p. 1118.
Wilts Veneer Company. (See Staley and Simmons, assignors.)
Winchester, Benjamin T., Windsor Hills, assignor, by mesne assignments, to Sharpe and Dohme, Baltimore, Md. Capsule-assembling machine. No. 1,155,023; Sept. 28; Gaz. vol. 218; p. 1027.
Windell, Frank D., Philadelphia, assignor of one-half to H. L. Williams, Pittsburgh, Pa. Apparatus for automatically controlling relative humidity. No. 1,153,987; Sept. 21; Gaz. vol. 218; p. 645.
Winfield Electric Welding Machine Company, The. (See Winfield and Taylor, assignors.)
Winfield, William C., and A. C. Taylor, assignors to The Winfield Electric Welding Machine Company, Warren, Ohio. Electric welding-machine. No. 1,154,470; Sept. 21; Gaz. vol. 218; p. 812.
Wing, Augustus M., Portland, Oreg. Type-writer carriage-return. No. 1,152,684; Sept. 7; Gaz. vol. 218; p. 112.
Wingate, Mack P. (See Deane and Wingate.)

Winger, Theodore O., Amery, Wis. Carbureter. No. 1,155,184; Sept. 28; Gaz. vol. 218; p. 1086.
Winger, William W., Wolcott, Ind. Gearing. (Reissue.) No. 13,979; Sept. 14; Gaz. vol. 218; p. 576.
Winkle, Guy, Cincinnati, Ohio. Chicken-watering fountain. No. 1,154,825; Sept. 28; Gaz. vol. 218; p. 961.
Winkler, Alfred. (See Dünnebier and Winkler.)
Winkler, Franz, Schweinfurt, Germany. Spacer for ball-bearings. No. 1,155,185; Sept. 28; Gaz. vol. 218; p. 1086.
Winkley, Erastus E., Lynn, Mass. Machine for operating on shoe-soles. No. 1,152,584; Sept. 7; Gaz. vol. 218; p. 76.
Winn, Charles S., and C. A. Wall, Rockford, Ill. Roof-scaffold bracket. No. 1,152,685; Sept. 7; Gaz. vol. 218; p. 113.
Winter, Charles, Woodbury, N. J., assignor to Star Seal Company. Machine for applying bottle-seals. No. 1,155,119; Sept. 28; Gaz. vol. 218; p. 1063.
Winters, Charles A. (See Royse, Charles E., assignor.)
Winters, Edward B., assignor to Johnson Spring Garter Co., Coffeyville, Kans. Garter. No. 1,153,147; Sept. 7; Gaz. vol. 218; p. 275.
Winton, Alexander, and H. B. Anderson, assignors to The Winton Motor Carriage Company, Cleveland, Ohio. Pedal. No. 1,153,743; Sept. 14; Gaz. vol. 218; p. 526.
Winton Motor Carriage Company, The. (See Winton and Anderson, assignors.)
Wireless Telegraph Exploitation Company. (See Vreeland, Frederick K., assignor.)
Wisconsin Stable Equipment Company. (See Moldenhauer and Jones, assignors.)
Wise Brothers. (See Miller, George J., assignor.)
Wisener, George E., Steubenville, Ohio. Apparatus for recovering metal scrap. No. 1,152,867; Sept. 7; Gaz. vol. 218; p. 179.
Witts, Francis J., Manor Park, England. Guard for eyeglasses. No. 1,153,000; Sept. 7; Gaz. vol. 218; p. 228.
Wizard Tire Inflator & Fire Extinguisher Co. (See Carroll and Andrews, assignors.)
Wizsolyi, George, Cleveland, Ohio. Combined shade-roller and curtain-hanger. No. 1,154,902; Sept. 28; Gaz. vol. 218; p. 987.
Wochner, Henry. (See Lynch and Wochner.)
Wohlberg, Johan A., Chicago, Ill. Reversing-valve. No. 1,153,280; Sept. 14; Gaz. vol. 218; p. 361.
Wolcott, William H., Nelsson, Wash. Motor-boat. No. 1,154,471; Sept. 21; Gaz. vol. 218; p. 812.
Wolf, Carl, Schweinsburg-on-the-Pleisse, Germany. Water-supply system. No. 1,155,024; Sept. 28; Gaz. vol. 218; p. 1028.
Wolf, Hans. (See Bosch, Mittasch, Wolf, and Stern.)
Wolf, Meyer, New York, N. Y. Cigarette-container. No. 1,154,589; Sept. 21; Gaz. vol. 218; p. 852.
Wolfe, Bert W. (See Wolfe, Clinton L. and B. W.)
Wolfe, Clinton L., Brooklyn, N. Y. Rubber-tread flexible armor for pneumatic tires. No. 1,155,025; Sept. 28; Gaz. vol. 218; p. 1028.
Wolfe, Clinton L. and B. W., Brooklyn, N. Y. Lock. No. 1,152,776; Sept. 7; Gaz. vol. 218; p. 145.
Wolfe, Jacob M., Lathrop, Cal. Rodent-trap. No. 1,153,988; Sept. 21; Gaz. vol. 218; p. 646.
Woltmann, Ernst, New York, N. Y., assignor to Automatic Train Stop Company. Electric train-control system. No. 1,154,956; Sept. 28; Gaz. vol. 218; p. 1005.
Wood Apparatus Company. (See Wood, Frank J., assignor.)
Wood, Ellis G., assignor to Gifford-Wood Company, Hudson, N. Y. Winter and summer ice-run. No. 1,153,991; Sept. 21; Gaz. vol. 218; p. 647.
Wood, Frank J., assignor to Wood Apparatus Company, New York, N. Y. Recovering salt from brine. No. 1,152,777; Sept. 7; Gaz. vol. 218; p. 145.
Wood, Frederick W., Kansas City, Mo. Web-changing device. No. 1,154,682; Sept. 28; Gaz. vol. 218; p. 914.
Wood, Henry C. (See Bromet, Thorman, and Wood.)
Wood, John G., Edinburgh, Scotland. Preparation of photomechanical printing-surfaces. No. 1,155,186; Sept. 28; Gaz. vol. 218; p. 1087.
Wood, John R., Herkimer, N. Y. Calk attachment for horseshoes. No. 1,153,664; Sept. 14; Gaz. vol. 218; p. 498.
Woodard, Louis A., assignor to The William Tod Company, Youngstown, Ohio. Barometric condenser. No. 1,153,001; Sept. 7; Gaz. vol. 218; p. 228.
Woodruff, William D., Belton, Tex. Belt attachment for trousers. No. 1,155,187; Sept. 28; Gaz. vol. 218; p. 1087.
Woods, Clinton E., assignor to American Graphophone Company, Bridgeport, Conn. Correction device for talking-machines. No. 1,153,665; Sept. 14; Gaz. vol. 218; p. 498.
Woods, James C. (See Wright and Woods.)
Woods, James C., Lockport, assignor of one-third to W. H. Wright, Jr., North Tonawanda, and one-third to S. H. Pettit, Lockport, N. Y. Rail. No. 1,153,989; Sept. 21; Gaz. vol. 218; p. 646.
Woolner, Adolph, Jr., Peoria, Ill. Distillation. No. 1,153,992; Sept. 21; Gaz. vol. 218; p. 647.
Woolsey, James P. (See Croslen, William T., assignor.)
Wouda, Sjoerd. (See Van der Hoorn and Wouda.)
Wright, Alfred M., Bloomington, Ill. Joint for hose connections. No. 1,153,002; Sept. 7; Gaz. vol. 218; p. 228.
Wright, Arthur B., Hinsdale, Ill. Radiation-regulator. No. 1,152,585; Sept. 7; Gaz. vol. 218; p. 76.
Wright, Benjamin S., Mount Vernon, assignor to The American Tobacco Company, New York, N. Y. Display-card holder. No. 1,152,461; Sept. 7; Gaz. vol. 218; p. 27.
Wright, John, Wilmington, Del. Punching-machine. No. 1,153,410; Sept. 14; Gaz. vol. 218; p. 409.
Wright, Parvin, Seattle, Wash. Electric furnace. No. 1,152,586; Sept. 7; Gaz. vol. 218; p. 77.
Wright, Walter, San Francisco, Cal., assignor to Addressograph Company, Chicago, Ill. Printing apparatus. No. 1,152,587; Sept. 7; Gaz. vol. 218; p. 77.
Wright, Walter, San Francisco, Cal., assignor to Addressograph Company, Chicago, Ill. Individual-letter-printing apparatus. No. 1,152,588; Sept. 7; Gaz. vol. 218; p. 78.
Wright, Walter, Stoke Park, Coventry, assignor to The Dunlop Rubber Company, Limited, Aston Cross, near Birmingham, England. Spanner or wrench. No. 1,154,154; Sept. 21; Gaz. vol. 218; p. 703.
Wright, William H., deceased; W. H. Wright, Jr., executor, North Tonawanda, and J. C. Woods, assignors of one-third to S. H. Pettit, Lockport, N. Y. Rail. No. 1,153,990; Sept. 21; Gaz. vol. 218; p. 646.
Wright, William H., Jr., *et al.* (See Woods, James C., assignor.)
Wright, William H., Jr., executor. (See Wright and Woods.)
Wright, Wilson D. C., Philadelphia, Pa. Signaling device for vehicles. No. 1,155,026; Sept. 28; Gaz. vol. 218; p. 1028.
Wright, Wilson D. C., Philadelphia, Pa. Adjustable vise. No. 1,155,027; Sept. 28; Gaz. vol. 218; p. 1029.
Wuckowski, Richard, Vienna, Austria-Hungary. Construction of ferroconcrete trusses, girders, and the like. No. 1,153,411; Sept. 14; Gaz. vol. 218; p. 410.
Wulff, Otto, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Red wool-dyestuffs and making same. No. 1,154,826; Sept. 28; Gaz. vol. 218; p. 962.
Wurdeman, Aloph W. C., administrator. (See Ballauf, Daniel.)
Wurm, Max, Brooklyn, N. Y. Extension-table. No. 1,154,827; Sept. 28; Gaz. vol. 218; p. 962.
Wyatt, Clayton F., Fullerton, Cal. Music-leaf turner. No. 1,152,462; Sept. 7; Gaz. vol. 218; p. 28.
Wyckoff, Andrew D. (See Johnson and Wyckoff.)
Wylie, Anna, Rockville Center, N. Y. Undergarment. No. 1,154,280; Sept. 21; Gaz. vol. 218; p. 746.
Yablonowski, John, *et al.* (See Piontkowski, John, assignor.)
Yakushiji, Kanelchi, Paradise, Mont. Potato-peeler. No. 1,154,472; Sept. 21; Gaz. vol. 218; p. 812.
Yaw, Clio B., Arlington, N. J., assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,152,463; Sept. 7; Gaz. vol. 218; p. 28.
Yawman & Erbe Manufacturing Company. (See Weiss, Albert T., assignor.)
Yeln, Marie W., Kendallville, Ind. Clothes-rack. No. 1,154,083; Sept. 21; Gaz. vol. 218; p. 679.
Yellowley, William, Kingston, Ontario, Canada. Machine for painting and drying projectiles. No. 1,153,529; Sept. 14; Gaz. vol. 218; p. 452.
Yeomans, Lucien I., assignor to Amalgamated Machinery Corporation, Chicago, Ill. Lathe or the like. No. 1,154,155; Sept. 21; Gaz. vol. 218; p. 703.
York, Lorne M. (See Merriam and York.)
Yost Electric Manufacturing Company. (See Gordon, David D., assignor.)
Young, Frank H. (See Young, William W., assignor.)
Young, Samuel M., and F. Townsend, New York, N. Y., assignors to said Young. Electric signaling system. No. 1,154,588; Sept. 21; Gaz. vol. 218; p. 852.
Young, William M., Victoria, British Columbia, Canada. Ship. No. 1,155,028; Sept. 28; Gaz. vol. 218; p. 1029.
Young, William W., Agawam, Mass., assignor to F. H. Young, St. Louis, Mo. Acoustic diaphragm. No. 1,153,837; Sept. 14; Gaz. vol. 218; p. 500.
Zabel, Max W., trustee. (See Borresen, Helge A., assignor.)
Zachow, Otto, assignor to Four Wheel Drive Auto Company, Clintonville, Wis. Driving and steering axle. No. 1,153,281; Sept. 14; Gaz. vol. 218; p. 361.
Zahm, Edward, assignor to Zahm Manufacturing Company, Buffalo, N. Y. Filter. No. 1,153,282; Sept. 14; Gaz. vol. 218; p. 361.
Zahm Manufacturing Company. (See Zahm, Edward, assignor.)
Zahorik, Frank, Racine, Wis. Dial test-indicator. No. 1,152,686; Sept. 7; Gaz. vol. 218; p. 113.
Zakrzewski, Julian, and J. Karasinski, Detroit, Mich. Electric snap-switch. No. 1,154,473; Sept. 21; Gaz. vol. 218; p. 813.
Zaleski, Frank, Somerville, assignor to The Reece Button Hole Machine Company, Boston, Mass. Thread cutter and clamp for buttonhole-sewing machines. No. 1,152,464; Sept. 7; Gaz. vol. 218; p. 28.
Zaleski, Frank, Somerville, assignor to The Reece Button Hole Machine Company, Boston, Mass. Buttonhole-sewing machine. No. 1,152,465; Sept. 7; Gaz. vol. 218; p. 29.

Zaleski, Frank, Somerville, assignor to The Reece Button Hole Machine Company, Boston, Mass. Buttonhole-sewing machine. No. 1,152,466; Sept. 7; Gaz. vol. 218; p. 29.

Zaleski, Frank, Somerville, assignor to The Reece Button Hole Machine Company, Boston, Mass. Thread-cutting mechanism for sewing-machines. No. 1,153,148; Sept. 7; Gaz. vol. 218; p. 275.

Zalondek, Anton A., Capitol Hill, Okla. Cotton-gin. No 1,155,188; Sept. 28; Gaz. vol. 218; p. 1087.

Zanone, Richard J., assignor to J. Zinsmeister, New Albany, Ind. Automatic scale. No. 1,152,868; Sept. 7; Gaz. vol. 218; p. 179.

Zarnowiecki, Bogumil, Gr. Lichterfelde, near Berlin, Germany. Manufacture of marbled paper. No. 1,152,467; Sept. 7; Gaz. vol. 218; p. 30.

Zeek, Charles F., Pensacola, Fla., assignor to The United Gas Improvement Company, Philadelphia, Pa. Manufacture of water-gas. No. 1,152,869; Sept. 7; Gaz. vol. 218; p. 180.

Zeiss, Firm of Carl. (See Bauersfeld, Walther, assignor.)

Ziegler, Alfred A., Boston, Mass. Bonding device for rails. No. 1,154,903; Sept. 28; Gaz. vol. 218; p. 987.

Zin, Charles F., St. Paul, Minn. Indicator. No. 1,153,530; Sept. 14; Gaz. vol. 218; p. 452.

Zinsmeister, Jacob. (See Zanone, Richard J., assignor.)

Zook, J. D. (See McDonald, James A., assignor.)

Zwoyer, Ellsworth B. A. and R. A., Perth Amboy, N. J., assignors to The Zwoyer Fuel Company. Machine for making briquets. No. 1,152,468; Sept. 7; Gaz. vol. 218; p. 30.

Zwoyer, Ellsworth B. A. and R. A., Perth Amboy, N. J., assignors to The Zwoyer Fuel Company. Mechanism for preparing pulverulent materials for molding or briqueting. No. 1,152,469; Sept. 7; Gaz. vol. 218; p. 31.

Zwoyer Fuel Company, The. See Zwoyer, Ellsworth B. A. and R. A., assignors.)

Zwoyer, Rolland A. (See Zwoyer, Ellsworth B. A. and R. A.)

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

Albrecht, Nicholas, Philadelphia, assignor to Fred Pearson & Company, Incorporated, Manayunk, Pa. Cut pile fabric. Nos. 47,841–3; Sept. 21; Gaz. vol. 218; p. 858.

American Optical Company. (See Carson, Oswald B., assignor.)

American Pin Company. (See Nash, John J., assignor.)

Ballou, Byrd W., Buffville, Kans. Brick. No. 47,844; Sept. 21; Gaz. vol. 218; p. 858.

Bentley, Charles M., and E. W. Hargiss, Hermitage, Mo. Trace-carrier. No. 47,779; Sept. 7; Gaz. vol. 218; p. 289.

Bergman, Louis, and J. L. Mendel, assignors to Dentor Company, New York, N. Y. Dispensing device. No. 47,871; Sept. 28; Gaz. vol. 218; p. 1134.

Birkin, Richard L., Nottingham, England. Levers lace. Nos. 47,807–10; Sept. 14; Gaz. vol. 218; pp. 578–9.

Bosworth, Percy B., assignor to The Victor Rubber Company, Springfield, Ohio. Pneumatic-tire tread. No. 47,872; Sept. 28; Gaz. vol. 218; p. 1134.

Bowers, William F., San Francisco, Cal. Vehicle-tire. No. 47,873; Sept. 28; Gaz. vol. 218; p. 1134.

Britton, Lucian L., Denver, Colo. Container for hot-water bottles and fountain-syringes. No. 47,874; Sept. 28; Gaz. vol. 218; p. 1134.

Carson, Oswald B., assignor to American Optical Company, Southbridge, Mass. Display-stand. No. 47,780; Sept. 7; Gaz. vol. 218; p. 289.

Carson, Oswald B., assignor to American Optical Company, Southbridge, Mass. Display device. No. 47,781; Sept. 7; Gaz. vol. 218; p. 289.

Christy, James, Cleveland, assignor to The Portage Rubber Company, Barberton, Ohio. Vehicle-tire. Nos. 47,875–6; Sept. 28; Gaz. vol. 218; p. 1135.

Collingbourne, Albert B., Chicago, Ill. Tatting-shuttle. No. 47,811; Sept. 14; Gaz. vol. 218; p. 579.

Consolidated Car Heating Company. (See Hulme, John W., assignor.)

Corcoran, James D., assignor to The Corcoran-Seidel Company, Cleveland, Ohio. Grease-cup and oiler. No. 47,845; Sept. 21; Gaz. vol. 218; p. 858.

Corcoran-Seidel Company, The. (See Corcoran, James D., assignor.)

Crowell, Gilbert L., Jr., Arlington, N. J., assignor to Dominick & Haff, New York, N. Y. Spoon, fork, or similar article. No. 47,782; Sept. 7; Gaz. vol. 218; p. 289.

Cutten, Elisha B., Dayton, Ohio. Permanent magnet. No. 47,812; Sept. 14; Gaz. vol. 218; p. 579.

Delaplain, Charles E., Jacksonville, Ill. Deflating implement. No. 47,877; Sept. 28; Gaz. vol. 218; p. 1135.

Dentor Company. (See Bergman and Mendel, assignors.)

Dominick & Haff. (See Crowell, Gilbert L., Jr., assignor.)

Dougherty, George D., Tiffin, Ohio, assignor to United States Glass Company, Pittsburgh, Pa. Vase. No. 47,878; Sept. 28; Gaz. vol. 218; p. 1135.

Edwards, Thomas J., Canton, Ohio. Cabinet-desk. No. 47,813; Sept. 14; Gaz. vol. 218; p. 579.

Erickson, John E., Minneapolis, Minn. Combined table-lamp, signal, and tray. No. 47,814; Sept. 14; Gaz. vol. 218; p. 579.

Eustis, John P., Newton, Mass. Dish. No. 47,846; Sept. 21; Gaz. vol. 218; p. 859.

Faber, John F., Brooklyn, N. Y. Ring. No. 47,815; Sept. 14; Gaz. vol. 218; p. 580.

Fields, Albert F., Alhambra, Cal. Game-chart. No. 47,869; Sept. 21; Gaz. vol. 218; p. 863.

Fred Pearson & Company. (See Albrecht, Nicholas, assignor.)

Freeland, Lloyd D., assignor to W. J. H. Strong, Chicago, Ill. Frame for motor-driven fans. No. 47,783; Sept. 7; Gaz. vol. 218; p. 289.

Freeland, Lloyd D., assignor to W. J. H. Strong, Chicago, Ill. Frame for engine-driven fans. No. 47,879; Sept. 28; Gaz. vol. 218; p. 1135.

General Acoustic Company. (See Turner, Kelley M., assignor.)

Geo. Borgfeldt & Co. (See Kindt, George C., assignor.)

Goodyear Rubber Company. (See Payne, Fred E., assignor.)

Gomtola, Borbála S., South Bend, Ind. Stocking. No. 47,847; Sept. 21; Gaz. vol. 218; p. 859.

Graefe, Rudolf L., Chicago, Ill. Advertising-easel. No. 47,784; Sept. 7; Gaz. vol. 218; p. 289.

Grandy, Harlow F., Converse, Ind. Towel-support. No. 47,880; Sept. 28; Gaz. vol. 218; p. 1135.

Grasberger, Boniface A., Richmond, Va. Holder for sanitary paper ice-cream plates. Nos. 47,785–6; Sept. 7; Gaz. vol. 218; p. 290.

Green, Jonathan S., Pittsburgh, Pa. Lamp. No. 47,816; Sept. 14; Gaz. vol. 218; p. 580.

Green, Walter R., Chicago, Ill. Mud-guard and bracket therefor for a motor-cycle or similar device. No. 47,817; Sept. 14; Gaz. vol. 218; p. 580.

Gruelle, John B., New York, N. Y. Toy duck. Nos. 47,787–8; Sept. 7; Gaz. vol. 218; p. 290.

Gruelle, John B., New York, N. Y. Doll. No. 47,789; Sept. 7; Gaz. vol. 218; p. 290.

H. B. Ruggles Co., The. (See Ruggles, Horatio B., assignor.)

Hamilton, Asbury H., Brooklyn, N. Y. Combination-dresser. No. 47,818; Sept. 14; Gaz. vol. 218; p. 580.

Hansel, Fred C., Kansas City, Mo. Lamp-box. No. 47,848; Sept. 21; Gaz. vol. 218; p. 859.

Hanzel, John, Columbus, Ohio. Belt. No. 47,819; Sept. 14; Gaz. vol. 218; p. 580.

Hargiss, Edwin W. (See Bentley and Hargiss.)

Hart, Ralph E., Fort Wayne, Ind. Self-heating sad-iron. No. 47,820; Sept. 14; Gaz. vol. 218; p. 580.

Hauvette-Michelin, Jules, New Brunswick, assignor to Michelin Tire Co., Milltown, N. J. Tread for tires. No. 47,892; Sept. 28; Gaz. vol. 218; p. 1137.

Hill, Robert R., and C. C. Robinson, Houston, Tex. Safety-first sign. No. 47,849; Sept. 21; Gaz. vol. 218; p. 859.

Hughes, Joshua, West Somerville, Mass. College ice-dish. No. 47,790; Sept. 7; Gaz. vol. 218; p. 290.

Huskey, Harry, assignor to Smith, Kline & French Company, Philadelphia, Pa. Table. No. 47,821; Sept. 14; Gaz. vol. 218; p. 581.

Hutter, Josef, New York, N. Y. Bottle-opener. No. 47,850; Sept. 21; Gaz. vol. 218; p. 859.

J. H. White Mfg. Co. (See White, Edwin L., assignor.)

J. H. Williams & Co. (See Martin, Clifford A., assignor.)

Janson, Albert, New York, N. Y. Molding. No. 47,881; Sept. 28; Gaz. vol. 218; p. 1136.

Jensen, Hans H., Milwaukee, Wis. Antirattling device. No. 47,851; Sept. 21; Gaz. vol. 218; p. 859.

Jones, Edward B., Springfield, Ill. Railway-coach body. No. 47,791; Sept. 7; Gaz. vol. 218; p. 290.

Kelsey, Harry S., Brookline, Mass. Settle for lunch-rooms. No. 47,792; Sept. 7; Gaz. vol. 218; p. 291.

Kempf, Frank P., Jasper, Ind. Barber's sign. No. 47,822; Sept. 14; Gaz. vol. 218; p. 581.

Kindt, George C., Jersey City, N. J., assignor to Geo. Borgfeldt & Co., New York, N. Y. Spun metal vessel. No. 47,793; Sept. 7; Gaz. vol. 218; p. 291.

Koretzky, Harry M., New York, N. Y. Pocket flash-light. No. 47,870; Sept. 21; Gaz. vol. 218; p. 863.

Kraft, Henry P., Ridgewood, N. J. Dust-cap for valves or the like. Nos. 47,882–4; Sept. 28; Gaz. vol. 218; p. 1136.

Kulow, John H. Buffalo, N. Y. Penholder. No. 47,794; Sept. 7; Gaz. vol. 218; p. 291.

Kulow, John H., Buffalo, N. Y. Penholder. No. 47,852; Sept. 21; Gaz. vol. 218; p. 860.

Lacey, Milton A., Bath, Ill. Watch-charm. No. 47,823; Sept. 14; Gaz. vol. 218; p. 581.

Lemon, James F., assignor to The O. M. Edwards Company, Inc., Syracuse, N. Y. Padlock. Nos. 47,885–6; Sept. 28; Gaz. vol. 218; p. 1136.

Lewis, William J., Flint, Mich. Hat-fastener. No. 47,853; Sept. 21; Gaz. vol. 218; p. 860.

Livingston, D. McRa, New York, N. Y. Automobile-hood. No. 47,854; Sept. 21; Gaz. vol. 218; p. 860.

Logan, William J., Cleveland, Ohio. Grave-marker. Nos. 47,887–8; Sept. 28; Gaz. vol. 218; pp. 1136–7.

Ludwig, John O., Cincinnati, assignor to The Schuster Company, Cleveland, Ohio. Flask. No. 47,795; Sept. 7; Gaz. vol. 218; p. 291.

Mallinson, Hiram R., New York, N. Y. Textile fabric. No. 47,889; Sept. 28; Gaz. vol. 218; p. 1137.

Mapel, Lewis A., St. Louis, Mo. Toy. No. 47,796; Sept. 7; Gaz. vol. 218; p. 291.

Margolin, Hyman, New York, N. Y. Hand-bag or similar article. No. 47,824; Sept. 14; Gaz. vol. 218; p. 581.

Martin, Clifford A., New York, assignor to J. H. Williams & Co., Brooklyn, N. Y. Face spanner-wrench. No. 47,855; Sept. 21; Gaz. vol. 218; p. 860.

May, Elgin C., Edmonton, Alberta, Canada. Vehicle wheel-tire. No. 47,890; Sept. 28; Gaz. vol. 218; p. 1137.

McDonald, Howard C., Buffalo, N. Y. Hanging toilet-rack. No. 47,891; Sept. 28; Gaz. vol. 218; p. 1137.

Mendel, Julius L. (See Bergman and Mendel.)

Michelin Tire Co. (See Hauvette-Michelin, Jules, assignor.)

Moore, Judson, Bainbridge, Ga. Shoe-display rack. No. 47,797; Sept. 7; Gaz. vol. 218; p. 291.

Nash, John J., assignor to American Pin Company, Waterbury, Conn. Bedstead-trimming. Nos. 47,856–8; Sept. 21; Gaz. vol. 218; pp. 860–1.

New York Mackintosh Clothing Company. (See Place, Charles H., assignor.)
Newcome, Robert B., Amarillo, Tex. Bowl for fountain-syringes. No. 47,859; Sept. 21; Gaz. vol. 218; p. 861.
O. M. Edwards Company, The. (See Lemon, James F., assignor.)
Ozanne, Emilie J., New York, N. Y., assignor to Regina Lace Company. Lace fabric. Nos. 47,825–6; Sept. 14; Gaz. vol. 218; pp. 581–2.
Palmer, James A., Cranston, assignor to Parks Bros. & Rogers, Providence, R. I. Button-head. No. 47,860; Sept. 21; Gaz. vol. 218; p. 861.
Parks Bros. & Rogers. (See Palmer, James A., assignor.)
Payne, Fred E., assignor to Goodyear Rubber Company, Middletown, Conn. Rubber boot. No. 47,861; Sept. 21; Gaz. vol. 218; p. 862.
Pick, Hugo, Chicago, Ill. Tumbler. Nos. 47,798–800; Sept. 7; Gaz. vol. 218; pp. 291–2.
Place, Charles H. Mamaroneck, assignor to New York Mackintosh Clothing Company, New York, N. Y. Waterbag. No. 47,827; Sept. 14; Gaz. vol. 218; p. 582.
Portage Rubber Company, The. (See Christy, James, assignor.)
Porter, William C., McCall Creek, Miss. Awl. No. 47,893; Sept. 28; Gaz. vol. 218; p. 1137.
Portland Sales Company. (See Seamon, Percy R., assignor.)
Potter, John S., and A. Tough, Niagara Falls, Ontario, Canada. Pennant. No. 47,894; Sept. 28; Gaz. vol. 218; p. 1138.
Powell, William B., assignor to The Sherwin-Williams Company, Cleveland, Ohio. Card. No. 47,828; Sept. 14; Gaz. vol. 218; p. 582.
Query, Harry G., Shelbyville, Ind. Calendar-frame. No. 47,862; Sept. 21; Gaz. vol. 218; p. 862.
Ramsing, William, Schenectady, N. Y. Table or mantel ornament. No. 47,801; Sept. 7; Gaz. vol. 218; p. 292.
Rappaport, Paul, New York, N. Y. Display-case. No. 47,829; Sept. 14; Gaz. vol. 218; p. 582.
Raymann, Hugo W., Portland, Oreg. Tire. No. 47,830; Sept. 14; Gaz. vol. 218; p. 582.
Reaves, John S., and James G. Wells, Anniston, Ala. Grocery-bin. No. 47,806; Sept. 7; Gaz. vol. 218; p. 293.
Regina Lace Company. (See Ozanne, Emile J., assignor.)
Richard, François, Cleveland, Ohio. Automobile-body. No. 47,895; Sept. 28; Gaz. vol. 218; p. 1138.
Riker, Samuel M., Chester, N. J. Pen or pencil clip. No. 47,896; Sept. 28; Gaz. vol. 218; p. 1138.
Robinson, Charles C. (See Hill and Robinson.)
Rockwell, Albert F., Bristol, Conn. Automobile. No. 47,802; Sept. 7; Gaz. vol. 218; p. 292.
Rosenblatt, Byron S., Chicago, Ill. Nutcracker. No. 47,831; Sept. 14; Gaz. vol. 218; p. 582.
Rubay, Leon, assignor to The White Company, Cleveland, Ohio. Automobile-body. Nos. 47,803–4; Sept. 7; Gaz. vol. 218; p. 292.
Ruggles, Horatio B., West Somerville, assignor to The H. B. Ruggles Co., Boston, Mass. Dairy-lunch chair. No. 47,897; Sept. 28; Gaz. vol. 218; p. 1138.
Scaife, Richard C., assignor to White Company, Cleveland, Ohio. Steering-column switch unit. No. 47,898; Sept. 28; Gaz. vol. 218; p. 1138.
Scheuer, William, New York, N. Y. Collar. No. 47,805; Sept. 7; Gaz. vol. 218; p. 293.
Schuster Company, The. (See Ludwig, John O., assignor.)
Seamon, Percy R., assignor to Portland Sales Company, Boston, Mass. Mirror-stand. No. 47,863; Sept. 21; Gaz. vol. 218; p. 862.
Shaw, Walden W., assignor to Walden W. Shaw Livery Co., Chicago, Ill. Tag. Nos. 47,864–5; Sept. 21; Gaz. vol. 218; p. 862.
Sherwin-Williams Company, The. (See Powell, William B., assignor.)
Shiminsky, Samuel H., New York, N. Y. Electric-lighting fixture. No. 47,899; Sept. 28; Gaz. vol. 218; p. 1138.
Slayter, Henry S., Belmont, Mass. Ornamented paper. Nos. 47,832–4; Sept. 14; Gaz. vol. 218; p. 583.
Smith, Kline & French Company. (See Husky, Harry, assignor.)
Stanton, Stephen, Middletown, Conn. Cambined salt and pepper shaker. No. 47,866; Sept. 21; Gaz. vol. 218; p. 862.
Strong, William J. H. (See Freeland, Lloyd D., assignor.)
Strong, William J. H., Beloit, Wis. Base for motor-driven fans. No. 47,900; Sept. 28; Gaz. vol. 218; p. 1139.
Strong, William J. H., Beloit, Wis. Base and standard of motor-driven fans. Nos. 47,901–2; Sept. 28; Gaz. vol. 218; p. 1139.
Strong, William J. H., Beloit, Wis. Base for motor-driven fans. No. 47,903; Sept. 28; Gaz. vol. 218; p. 1139.
Szabo, Paul, South Bend, Ind. Picture-frame. No. 47,835; Sept. 14; Gaz. vol. 218; p. 583.
Szenasy, Andrew, Woodbridge, and M. Zserai, Perth Amboy, N. J. Weapon. No. 47,904; Sept. 28; Gaz. vol. 218; p. 1139.
Teters, Alvin R., Boise, Idaho. Souvenir emblematic gate. No. 47,867; Sept. 21; Gaz. vol. 218; p. 863.
Thoeming, William H., assignor to Vanguard Manufacturing Company, Detroit, Mich. Tubing for windshield frames. No. 47,868; Sept. 21; Gaz. vol. 218; p. 863.
Tough, Alexander. (See Potter and Tough.)
Turner, Kelley M., Jamaica, N. Y., assignor to General Acoustic Company. Telephonic transmitting appliance. No. 47,905; Sept. 28; Gaz. vol. 218; p. 1140.
Vanguard Manufacturing Company. (See Thoeming, William H., assignor.)
Victor Rubber Company, The. (See Bosworth, Percy B., assignor.)
Walden W. Shaw Livery Co. (See Shaw, Walden W., assignor.)
Wallace, Henry L., Wallingford, Conn. Spoon, fork, or similar article. Nos. 47,836–7; Sept. 14; Gaz. vol. 218; p. 583.
Walters, James M., Los Angeles, Cal. Window-trimmer's hammer. No. 47,906; Sept. 28; Gaz. vol. 218; p. 1140.
Wells, James G. (See Reaves and Wells.)
White Company, The. (See Rubay, Leon, assignor.)
White Company. (See Scaife, Richard C., assignor.)
White, Edwin L., New York, assignor to J. H. White Mfg. Co., Brooklyn, N. Y. Metallic band or border. No. 47,838; Sept. 14; Gaz. vol. 218; p. 583.
Wolfe, Moses, New York, N. Y. Emblem or similar article of jewelry. Nos. 47,839–40; Sept. 14; Gaz. vol. 218; p. 584.
Zserai, Mathias. (See Szenasy and Zserai.)

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. G. Jacobus' Sons, Incorporated, Verona, N. J. Mops, brooms, and floor-brushes. No. 106,048; Sept. 21; Gaz. vol. 218; p. 873.
Alexander, John M., Marshalltown, Iowa. Preparations for treatment of dandruff and diseases of the bladder and kidneys. No. 106,025; Sept. 14; Gaz. vol. 218; p. 600.
American Brewing Co., New Orleans, La. Lager-beer. No. 105,969; Sept. 7; Gaz. vol. 218; p. 317.
Bennett, Ella M., Boston, Mass. Liquid for restoring gray hair to its former color. No. 106,026; Sept. 14; Gaz. vol. 218; p. 600.
Bergman Knitting Mills, Germantown, Pa. Cardigan jackets and sweater-coats. No. 106,027; Sept. 14; Gaz. vol. 218; p. 600.
Bullups, Cecil, Norfolk, Va. Plows, moldboards, landsides, plow-points, &c. No. 105,970; Sept. 7; Gaz. vol. 218; p. 317.
Bird Archer Company, The, New York, N. Y. Substances for the prevention of incrustation in boilers. No. 106,028; Sept 14; Gaz. vol. 218; p. 600.
Branson, William, Bloomington, Ill. Liquid and powder for the destruction of insects. No. 105,993; Sept. 14; Gaz. vol. 218; p. 599.
Buck, Seralpha A., Monroe, Wash. Egg-crates. No. 106,043; Sept. 21; Gaz. vol. 218; p. 873.
Butler, Henry H., Washington, D. C. Oleomargarin. No. 105,971; Sept. 7; Gaz. vol. 218; p. 317.
Canton Culvert and Silo Company, The, Canton, Ohio. Rust-resisting anticorrosive metal. No. 105,972; Sept. 7; Gaz. vol. 218; p. 317.
Central Paper Company, Muskegon, Mich. Paper towels and napkins. No. 106,064; Sept. 28; Gaz. vol. 218; p. 1153.
Chapple Publishing Company, Boston, Mass. Monthly magazines. No. 105,995; Sept. 14; Gaz. vol. 218; p. 599.
Chop Suey Cannery, San Francisco, Cal. Canned chop suey. No. 105,973; Sept. 7; Gaz. vol. 218; p. 317.
Colville, William, Santa Barbara, Cal. Silver and nickel polish. No. 105,974; Sept. 7; Gaz. vol. 218; p. 317.
Comar & Cie., Paris, France. Antiseptic compound. No. 105,975; Sept. 7; Gaz. vol. 218; p. 317.
Continental Rubber Works, Erie, Pa. Games, toys, and sporting goods. No. 105,996; Sept. 14; Gaz. vol. 218; p. 599.
Continental Rubber Works, Erie, Pa. Rubber heels and gloves. No. 105,997; Sept. 14; Gaz. vol. 218; p. 599.
Cronin, William L., Springfield, Mass. Cleaners for boiler-flues or soot-cleaners. No. 105,976; Sept. 7; Gaz. vol. 218; p. 317.
Culp, Jesse J., Warrensburg, Mo. Hog-worm remedy. No. 106,029; Sept. 14; Gaz. vol. 218; p. 600.
Cyclecar & Motorette. (See Kennedy, Robert S., assignor.)
D. Eugster Importing Company, Inc., The, New York, N. Y. Embroidery, threading, &c., machines, parts of same, &c. No. 106,045; Sept. 21; Gaz. vol. 218; p. 873.
De Pree Chemical Company, The, Holland, Mich. Bronchial remedy, diuretic elixir, eczema-lotion, &c. No. 106,042; Sept. 21; Gaz. vol. 218; p. 873.
Delaney & Co., J. M., New York, N. Y. Sole-leather. No. 106,030; Sept. 14; Gaz. vol. 218; p. 600.
Drachmann Piano Co., Chicago, Ill. Pianos and player-pianos. No. 106,031; Sept. 14; Gaz. vol. 218; p. 600.
Dunbar, Arthur, South Melbourne, Victoria, Australia. Refractory preparation or composition of a plastic or liquid consistency. No. 105,977; Sept. 7; Gaz. vol. 218; p. 317.
E. Carré Company, Mobile, Ala. Soft drink. No. 106,041; Sept. 14; Gaz. vol. 218; p. 600.
Eagle Pencil Company, New York, N. Y. Trays and easels for lead-pencils and penholders. No. 105,978; Sept. 7; Gaz. vol. 218; p. 317.
Egg Baking Powder Company, New York, N. Y. Baking-powder. No. 105,979; Sept. 7; Gaz. vol. 218; p. 317.
Ellwood, Belle P., Gouverneur, N. Y. Preparation for treatment of scours in all live stock and poultry. No. 106,044; Sept. 21; Gaz. vol. 218; p. 873.
Evansville Paint & Varnish Co., Evansville, Ind. Prepared roofing. No. 106,046; Sept. 21; Gaz. vol. 218; p. 873.
Excelsior Feature Film Co. Inc., New York, N. Y. Motion-picture films. No. 106,047; Sept. 21; Gaz. vol. 218; p. 873.
Fahey, James, Ludington, Mich. Compound for cleaning carpets, rugs, delicate fabrics, &c. No. 106,032; Sept. 14; Gaz. vol. 218; p. 600.
Falk Tobacco Co., New York, N. Y. Smoking-tobacco and cigarettes. No. 105,980; Sept. 7; Gaz. vol. 218; p. 317.
Ford Knock Down Winter Top Co., Chicago, Ill. Automobile tops or covers. No. 105,998; Sept. 14; Gaz. vol. 218; p. 599.
Gabilla, Henriette, Paris, France. Soap. No. 105,999; Sept. 14; Gaz. vol. 218; p. 599.
Goodrich Drug Co., Omaha, Nebr. Toilet soaps. No. 106,000; Sept. 14; Gaz. vol. 218; p. 599.
Gus V. Brecht Butchers' Supply Company, The, St. Louis, Mo. Certain named cutlery and machinery. No. 105,994; Sept. 14; Gaz. vol. 218; p. 599.
Haas Brothers, New York, N. Y. Silk dress goods. Nos. 106,033–4; Sept. 14; Gaz. vol. 218; p. 600.
Harter, Gustav A., Chicago, Ill. Electric-light fixtures. No. 106,001; Sept. 14; Gaz. vol. 218; p. 599.
J. & J. G. Wallach, New York, N. Y. Boxes, envelops, wrappers, or containers made of cardboard, &c., for laundry. No. 105,991; Sept. 7; Gaz. vol. 218; p. 317.
Johnson, J. Bailey, Pittsburgh, Pa. Greaseless massage face-cream. No. 106,003; Sept. 14; Gaz. vol. 218; p. 599.
Kennedy, Robert S., New York, N. Y., assignor to Cyclecar & Motorette. Trade journal published periodically. No. 106,049; Sept. 21; Gaz. vol. 218; p. 873.
Kleeno-Glass-Kloth Mfg. Co., St. Louis, Mo. Cloth for polishing glasses. No. 105,981; Sept. 7; Gaz. vol. 218; p. 317.
Kohlerman, John N., Baltimore, Md. Restoring color of human hair. No. 106,062; Sept. 21; Gaz. vol. 218; p. 873.
Laux, Mathias J., St. Louis, Mo. Chocolate-flavored popcorn. No. 106,050; Sept. 21; Gaz. vol. 218; p. 873.
Lawrenceburg Roller Mills Co., Lawrenceburg, Ind., and Boston, Mass. Wheat-flour. No. 106,002; Sept. 14; Gaz. vol. 218; p. 599.
Limol Chemical Co., The, Alexandria, Va. Antiseptic powder. No. 105,982; Sept. 7; Gaz. vol. 218; p. 317.
Lindlar, Matilda W., Chicago, Ill. Abrasive polishing-cloths. No. 105,983; Sept. 7; Gaz. vol. 218; p. 317.
Lippincott & Co., Philadelphia and Altoona, Pa. Tea, coffee, spices, cocoa, &c. No. 105,984; Sept. 7; Gaz. vol. 218; p. 317.
Luyties Pharmacy Company, St. Louis, Mo. Uterine wafer for cervical inflammations, vaginitis, vulvitis, &c. No. 106,051; Sept. 21; Gaz. vol. 218; p. 873.
Lyle, Madeleine S. C. V., San Francisco, Cal. Flesh-reducer. No. 106,052; Sept. 21; Gaz. vol. 218; p. 873.
Manowitz, Hyman, New York, N. Y. Preparation for ailments arising from indigestion and constipation. No. 105,985; Sept. 7; Gaz. vol. 218; p. 317.
Marsh Commission Company, Pine Bluff, Ark. Cornmeal, grits, corn chops, mixed feed, &c. No. 106,053; Sept. 21; Gaz. vol. 218; p. 873.
McRae, Jennie M., Bisbee, Ariz. Hair-tonic. No. 106,004; Sept. 14; Gaz. vol. 218; p. 599.
Merchants Candy Company, Salt Lake City, Utah. Candy. No. 105,986; Sept. 7; Gaz. vol. 218; p. 317.
Milton Bradley Co., Springfield, Mass. Games. No. 105,992; Sept. 14; Gaz. vol. 218; p. 599.
National Building Supply Co., The, Baltimore, Md. Shingles. No. 106,065; Sept. 28; Gaz. vol. 218; p. 1153.
National Carbon Company, Cleveland, Ohio. Dry cells. No. 106,006; Sept. 14; Gaz. vol. 218; p. 599.
National Carbon Company, Cleveland, Ohio. Dry batteries. No. 106,007; Sept. 14; Gaz. vol. 218; p. 599.
Neuss, Heaslein & Co., New York, N. Y. Woven cotton plaids. No. 106,008; Sept. 14; Gaz. vol. 218; p. 599.
New York Clay Products Company, Van Deventers, N. J., and New York, N. Y. Hollow-tile building-blocks. No. 106,061; Sept. 21; Gaz. vol. 218; p. 873.
Newton Tea & Spice Co., The, Cincinnati, Ohio. Flavoring extracts for foods. No. 106,066; Sept. 28; Gaz. vol. 218; p. 1153.
Norris, John, Canon City, Colo. Rheumatism-liniment. No. 106,054; Sept. 21; Gaz. vol. 218; p. 873.
Northwestern Bedding and Manufacturing Co., St. Paul, Minn. Mattresses and bedsteads. No. 106,009; Sept. 14; Gaz. vol. 218; p. 599.
Nuyts, Paul E. E., Roubaix, France. Combined tooth-brushes and dental instruments. No. 106,010; Sept. 14; Gaz. vol. 218; p. 599.
O'Grady, John H., Chicago, Ill. Medicinal compound for treating certain named diseases. No. 105,987; Sept. 7; Gaz. vol. 218; p. 317.
Park & Tilford, New York, N. Y. Candies and chocolate. No. 105,988; Sept. 7; Gaz. vol. 218; p. 317.
Parker Brothers, Portland, Me., and Salem, Mass. Games. Nos. 106,013–14; Sept. 14; Gaz. vol. 218; p. 599.
Parkin, Charles H., Cleveland, Ohio. Bricks, tiles, blocks, slabs, floors, walls, and ceilings. No. 105,989; Sept. 7; Gaz. vol. 218; p. 317.

Periolat, Charles B., Chicago, Ill. Abrasive compound to be used on razor-strops. No. 106,035; Sept. 14; Gaz. vol. 218; p. 600.

Periolat, Charles B., Chicago, Ill. Machinists' clamps. No. 106,036; Sept. 14; Gaz. vol. 218; p. 600.

Phinny Bros. Company, Oil City, Pa. Petroleum, gasoleine, lubricating-oil, &c. No. 106,015; Sept. 14; Gaz. vol. 218; p. 599.

Plains Oil Company, Phoenix, Ariz. Preparation for use in internal-combustion engines for augmenting the energy of motor-spirits. No. 106,016; Sept. 14; Gaz. vol. 218; p. 599.

Pommery, fils & Cie., Lse., Rheims, France. Champagne and sparkling wines. Nos. 106,011–12; Sept. 14; Gaz. vol. 218; p. 599.

Quincy, Charles F., Center Harbor, N. H. Plant and vegetable food. No. 106,037; Sept. 14; Gaz. vol. 218; p. 600.

Rogue River Fruit & Produce Association, Medford, Oreg. Fresh apples, pears, peaches, plums, &c. No. 106,055; Sept. 21; Gaz. vol. 218; p. 873.

Rohrer Candy Company, Bellevue, Ky. Confections. No. 106,017; Sept. 14; Gaz. vol. 218; p. 599.

Roland Co., The, Seattle, Wash. Food-flavor. No. 106,018; Sept. 14; Gaz. vol. 218; p. 599.

Rubel, Carrie H., Philadelphia, Pa. Medicine for diseases of the kidneys, bladder, and urinary organs. No. 106,019; Sept. 14; Gaz. vol. 218; p. 599.

Schwarz, Samuel, Newark, N. J. Preparation for the treatment of corns, bunions, and warts. No. 106,056; Sept. 21; Gaz. vol. 218; p. 873.

Silverberg and Lince, Des Moines, Iowa. Certain named textile and knitted clothing for men. No. 106,020; Sept. 14; Gaz. vol. 218; p. 600.

Slade, John, New York, N. Y. Boats. No. 106,038; Sept. 14; Gaz. vol. 218; p. 600.

So-Jer Manufacturing Company, Baldwinsville, N. Y. Ammonia and bluing. No. 105,990; Sept. 7; Gaz. vol. 218; p. 317.

Society Specialty Co. Inc., New York, N. Y. Toilet creams. No. 106,039; Sept. 14; Gaz. vol. 218; p. 600.

Springfield Creamery Co., Springfield, Mo. Butter. No. 106,063; Sept. 21; Gaz. vol. 218; p. 873.

Stevenson Packing Company, Sedalia, Mo. Pork sausage. No. 106,040; Sept. 14; Gaz. vol. 218; p. 600.

Thomas, Robert G., New York, N. Y. Coffee. No. 106,057; Sept. 21; Gaz. vol. 218; p. 873.

Tradesmen's Publishing Co., St. Louis, Mo. Magazine issued weekly. No. 106,058; Sept. 21; Gaz. vol. 218; p. 873.

U S Gun Oil Co., Houston, Tex. Lubricating-oil. No. 106,059; Sept. 21; Gaz. vol. 218; p. 873.

Valley Shoe Co., Elizabethville, Pa. Infants' and children's leather shoes. No. 106,021; Sept. 14; Gaz. vol. 218; p. 600.

Volgt Brewery Co., Detroit, Mich. Lager-beer. No. 106,022; Sept. 14; Gaz. vol. 218; p. 600.

Voorhees, Joseph P., New York, N. Y. Hosiery. Nos. 106,067–70; Sept. 28; Gaz. vol. 218; p. 1153.

Waldes & Co., Prague-Wrschowitz, Austria-Hungary. Snap-buttons. No. 106,023; Sept. 14; Gaz. vol. 218; p. 600.

Woodard, Clarke & Co., Portland, Oreg. Optical lenses for spectacles and eyeglasses. No. 106,060; Sept. 21; Gaz. vol. 218; p. 873.

Woodley, Edward L., Shamrock, Tex. Brazilian and Paraguay teas. No. 106,024; Sept. 14; Gaz. vol. 218; p. 600.

ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

Abbott, O. B., Battle Creek, Mich. "El-Burto." (For Cigar-Boxes.) No. 18,723; Sept. 7; Gaz. vol. 218; p. 319.

Alexander Brothers, Philadelphia, Pa. "Alexander Sole Leather." (For Sole-Leather.) No. 18,761; Sept. 21; Gaz. vol. 218; p. 874.

Blanke-Wennecker Candy Company, St. Louis, Mo. "Jumbo Roasted Peanuts." (For Peanuts.) No. 18,724; Sept. 7; Gaz. vol. 218; p. 319.

Brechet & Richter Company, Minneapolis, Minn. "Fruit Nectar." (For a Flavoring Compound.) No. 18,762; Sept. 21; Gaz. vol. 218; p. 874.

Campbell, Edwin C., Portland, Oreg. "Campbell's Electric Spark." (For a Cleaning Preparation.) No. 18,755; Sept. 14; Gaz. vol. 218; p. 601.

Coast Fishing Company, Los Angeles, Cal. "Mermaid Supreme." (For Canned Tuna.) No. 18,763; Sept. 21; Gaz. vol. 218; p. 874.

Coburn, R. W., Baltimore, Md. "Mme. Coburn's Maryland Mint Cordial." (For Cordial.) No. 18,764; Sept. 21; Gaz. vol. 218; p. 874.

Coburn, R. W., Baltimore, Md. "Mme. Coburn's Southern Mint Julep." (For Mint Julep.) No. 18,765; Sept. 21; Gaz. vol. 218; p. 874.

Cole, Charles S., Glenview, Ill. "Sweethearts." (For Candy.) No. 18,725; Sept. 7; Gaz. vol. 218; p. 319.

Crutchfield & Woolfolk, Pittsburgh, Pa. "Columbine Brand." (For Cantaloups.) No. 18,776; Sept. 28; Gaz. vol. 218; p. 1154.

Daugherty, Jennie R., Wichita, Kans. "No-Kaffeen." (For a Substitute for Coffee.) No. 18,727; Sept. 7; Gaz. vol. 218; p. 319.

Davis, Lyman H., Louisville, Ky. "Lyman H. Davis Rheumatic Liniment." (For Rheumatic Liniment.) No. 18,728; Sept. 7; Gaz. vol. 218; p. 319.

Doran, W. H., Brandenburg, Ky. "Doran's Gape Remedy." (For a Gape Remedy.) No. 18,729; Sept. 7; Gaz. vol. 218; p. 319.

Drug Products Co., Inc., The, New York, N. Y. "Calylates." (For Pulvoid Tablets.) No. 18,777; Sept. 28; Gaz. vol. 218; p. 1154.

Dwinell-Wright Company, Boston, Mass. "Double Cross." (For Coffee.) No. 18,766; Sept. 21; Gaz. vol. 218; p. 874.

E. L. Daggett Company, Boston, Mass. "Liggett Brand Cherriade." (For Cherriade Flavor.) No. 18,726; Sept. 7; Gaz. vol. 218; p. 319.

Franklin Baker Company, The, Philadelphia, Pa. "Baker Gelatine." (For Gelatin.) No. 18,730; Sept. 7; Gaz. vol. 218; p. 319.

Fulcher, L. O., Mayfield, Ky. "Cherry Kola." (For a Beverage.) No. 18,756; Sept. 14; Gaz. vol. 218; p. 601.

G. Washington Coffee Refining Co., New York, N. Y. "G Washington's." (For Prepared Tea.) No. 18,753; Sept. 7; Gaz. vol. 218; p. 319.

Golland, Morris, New York, N. Y. "Ford Suit." (For Men's Suits.) No. 18,731; Sept. 7; Gaz. vol. 218; p. 319.

Gray, Elmer E., Protection, Kans. "Protection Barbed Wire Liniment." (For Liniment.) No. 18,732; Sept. 7; Gaz. vol. 218; p. 319.

Hi-Gloss Mfg. Co., Scranton, Pa. "Hi-Gloss Wood Polish." (For Wood-Polish.) No. 18,778; Sept. 28; Gaz. vol. 218; p. 1154.

Hoffman & Hauck, New York, N. Y. "Warranted Strictly Pure H & H Vermont Maple Syrup H & H Pure Food Products for Health & Happiness. Hoffman & Hauck, Woodhaven, N. Y." (For Maple-Syrup.) No. 18,757; Sept. 14; Gaz. vol. 218; p. 601.

Hours Saved Co., Toledo, Ohio. "Hours Saved." (For a Washing Preparation.) No. 18,733; Sept. 7; Gaz. vol. 218; p. 319.

Importers Coffee Co., Ltd., New Orleans, La. "Jackson Square." (For Coffee and Chicory Compound.) No. 18,768; Sept. 21; Gaz. vol. 218; p. 874.

Indiana Millers Association, Indianapolis, Ind. "Know Your Flour." (For Flour.) No. 18,779; Sept. 28; Gaz. vol. 218; p. 1154.

Jacobs Candy Company, Ltd., New Orleans, La. "Made Last Night." (For Candy.) No. 18,734; Sept. 7; Gaz. vol. 218; p. 319.

Jones, H. C., Atlanta, Ga. "Revil." (For Liver-Tablets.) No. 18,739; Sept. 7; Gaz. vol. 218; p. 319.

Kalak Water Company of New York, Inc., Brooklyn, N. Y. "Kalak Water." (For Artificially-Prepared Medicinal Water.) No. 18,735; Sept. 7; Gaz. vol. 218; p. 319.

Kalak Water Company of New York, Inc., Brooklyn, N. Y. "Kalak." (For Artificially-Prepared Medicinal Water.) No. 18,736; Sept. 7; Gaz. vol. 218; p. 319.

Knickerbocker Chocolate Company, (Inc.,) New York, N. Y. "Sportsman's Chocolate Bracer, Sandwich Form." (For Eating-Chocolate.) No. 18,737; Sept. 7; Gaz. vol. 218; p. 319.

Kvasnicka, August, Chicago, Ill. "White Rock Rheumatic Remedy." (For Medicine.) No. 18,738; Sept. 7; Gaz. vol. 218; p. 319.

L. Frank & Son Company, Milwaukee, Wis. "Frank's Quality Meat-Treats." (For Meat Preparations.) No. 18,767; Sept. 21; Gaz. vol. 218; p. 874.

Lato Pharmacal Company, Elizabeth, N. J., and New York, N. Y. "Escharol." (For a Medical Preparation.) No. 18,769; Sept. 21; Gaz. vol. 218; p. 874.

Lato Pharmacal Company, Elizabeth, N. J., and New York, N. Y. "Phytoform." (For a Tonic.) No. 18,770; Sept. 21; Gaz. vol. 218; p. 874.

Lincoln, W. A., Dayton, Ohio. "Lincoln Ointment." (For Ointment.) No. 18,758; Sept. 14; Gaz. vol. 218; p. 601.

Lundgren, Robert, New York, N. Y. "Nu-Lax." (For Medicine.) No. 18,740; Sept. 7; Gaz. vol. 218; p. 319.

Major, Samuel T., St. Louis, Mo. "The Major Blends. 'Our Matchless.'" (For Roasted Coffee.) No. 18,741; Sept. 7; Gaz. vol. 218; p. 319.

Marshel, Blaine M., New Albany, Ind. "Marshels Intense Black Ink." (For Ink.) No. 18,742; Sept. 7; Gaz. vol. 218; p. 319.

Murphy, James, Wichita, Kans. "Sasnak." (For Tobacco Cigars.) No. 18,743; Sept. 7; Gaz. vol. 218; p. 319.

National Chemical Company, The, New Haven, Conn. "Nacco." (For Cleaning Compounds, Disinfectants, and Vermin-Exterminators.) No. 18,744; Sept. 7; Gaz. vol. 218; p. 319.

Peabody, A. W., Thomaston, Me. "Musterking." (For a Medicinal Preparation.) No. 18,745; Sept. 7; Gaz. vol. 218; p. 319.

Praitano, Anthony J., New York, N. Y. "Scalp Balm." (For a Hair-Tonic.) No. 18,746; Sept. 7; Gaz. vol. 218; p. 319.

Ralston Purina Company, St. Louis, Mo. "Purina Bran Bread." (For Bran-Bread.) No. 18,771; Sept. 21; Gaz. vol. 218; p. 874.

Ric Rac Company, The, Canonsburg, Pa. "Ric Rac, The Candied Food." (For Candy.) No. 18,747; Sept. 7; Gaz. vol. 218; p. 319.

Rosedor Cigarette Co., New York, N. Y. "Salome." (For Cigarettes.) No. 18,748; Sept. 7; Gaz. vol. 218; p. 319.

Seabury & Johnson, East Orange, N. J., and New York, N. Y. "Gold Cross Brand." (For Absorbent Cotton.) No. 18,749; Sept. 7; Gaz. vol. 218; p. 319.

Smith Webbing Company, Pawtucket, R. I. "Clover." (For Garter-Elastic.) No. 18,772; Sept. 21; Gaz. vol. 218; p. 874.

Smith Webbing Company, Pawtucket, R. I. "Henley." (For Garter-Elastic.) No. 18,773; Sept. 21; Gaz. vol. 218; p. 874.

Smith Webbing Company, Pawtucket, R. I. "Windsor." (For Garter-Elastic.) No. 18,774; Sept. 21; Gaz. vol. 218; p. 874.

Smolowitz, Meyer, New York, N. Y. "Family Cambric." (For Cambric.) No. 18,750; Sept. 7; Gaz. vol. 218; p. 319.

South Texas Grain Company, Houston, Tex. "Egaday." (For Poultry Feed.) No. 18,781; Sept. 28; Gaz. vol. 218; p. 1154.

Stokes, Mark H., Cleveland, Ohio. "Japana Furniture Polish." (For Furniture-Polish.) No. 18,780; Sept. 28; Gaz. vol. 218; p. 1154.

Taylor & Co., F. W., Kansas City, Mo. "We Want Your Hay Business." (For Baled Hay.) No. 18,751; Sept. 7; Gaz. vol. 218; p. 319.

Toedtmann, Fredrick C., Cleveland, Ohio. "Toedtmann's Honeypepper." (For a Cough Remedy.) No. 18,759; Sept. 14; Gaz. vol. 218; p. 601.

Tompkins, Oscar R., Asbury Park, N. J. "Base Ball." (For a Game-Board.) No. 18,752; Sept. 7; Gaz. vol. 218; p. 319.

Valley Fruit & Produce Ass'n., Walla Walla, Wash. "Walla Walla Valley Brand." (For Fresh Apples.) No. 18,775; Sept. 21; Gaz. vol. 218; p. 874.

White Ribbon Beer Company, San Diego, Cal. "White Ribbon Beer The Food Drink." (For Beer.) No. 18,782; Sept. 28; Gaz. vol. 218; p. 1154.

Willson, Ellis O., Elgin, Oreg. "Dr Willson's Umatilla Indian Medicine." (For Medicine.) No. 18,760; Sept. 14; Gaz. vol. 218; p. 601.

Winget Manufacturing Co., Inc., Minneapolis, Minn. "Priscilla." (For Headwear.) No. 18,754; Sept. 7; Gaz. vol. 218; p. 319.

PRINTS.

A. G. Hyde & Sons, New York, N. Y. "Heatherbloom." (For Petticoats.) No. 4,064; Sept. 21; Gaz. vol. 218; p. 874.

Aunt Jemima Mills Company, St. Joseph, Mo. "Made In A Minute The Milk's Mixed In It." (For Pancake-Flour.) No. 4,049; Sept. 7; Gaz. vol. 218; p. 320.

B. V. D. Company, The, New York, N. Y. "B. V. D. Boys' Closed Crotch Union Suit." (For Athletic Underwear.) No. 4,067; Sept. 28; Gaz. vol. 218; p. 1154.

Cream of Wheat Co., Minneapolis, Minn. "Jack Sprat." (For Wheat Breakfast Food.) No. 4,050; Sept. 7; Gaz. vol. 218; p. 320.

Cream of Wheat Co., Minneapolis, Minn. "A Dainty Breakfast." (For Wheat Breakfast Food.) No. 4,058; Sept. 21; Gaz. vol. 218; p. 874.

F. S. Love Manufacturing Company, Johnstown, Pa. "Delicious Candy Kid. A Popcorn and Peanut Confection. 5¢ per box." (For Popcorn and Peanut Confection.) No. 4,054; Sept. 7; Gaz. vol. 218; p. 320.

Fowler, John E., Richmond, Va. "Cherry Smash Sundae." (For Sundaes.) No. 4,068; Sept. 28; Gaz. vol. 218; p. 1154.

Fussell Ice Cream Company, New York, N. Y. "Home Treat." (For Ice-Cream Products.) No. 4,051; Sept. 7; Gaz. vol. 218; p. 320.

Globe Paint Company, The, Cleveland, Ohio. "Zanzibar Paint." (For Paint.) No. 4,062; Sept. 21; Gaz. vol. 218; p. 874.

Harris, Morris D., New York, N. Y. "M. D. Harris & Co. Known All Over Land, Shirt Makers." (For Shirts.) No. 4,063; Sept. 21; Gaz. vol. 218; p. 874.

Humphrey, David, Cleveland, Ohio. "Hum-Ala." (For Beverages.) No. 4,052; Sept. 7; Gaz. vol. 218; p. 320.

King Philip Mills, Fall River, Mass. "King Philip Mills Line of Nainsooks." (For Nainsooks.) No. 4,065; Sept. 21; Gaz. vol. 218; p. 874.

Omega Corn Cure Medicine Co., Milwaukee, Wis. "Knocks the Devil Out of Your Corns." (For Corn Cures.) No. 4,066; Sept. 21; Gaz. vol. 218; p. 874.

Safe-Cabinet Co., The, Marietta, Ohio. "The Safe-Cabinet." (For Safe-Cabinets and Steel Furniture.) Nos. 4,069–70; Sept. 28; Gaz. vol. 218; p. 1154.

Sanitary Milk Bottle Lock Co., Inc., Portland, Oreg. "Sanitary Milk Bottle Lock." (For Milk-Bottle Locks.) No. 4,056; Sept. 14; Gaz. vol. 218; p. 601.

Schulze Baking Company, Chicago, Ill. "Always Buy Schulzes Butter-Nut Bread." (For Bread.) No. 4,053; Sept. 7; Gaz. vol. 218; p. 320.

Thos. Cusack Company, Chicago, Ill. "Always good—all ways." (For Sausage.) No. 4,059; Sept. 21; Gaz. vol. 218; p. 874.

Thos. Cusack Company, Chicago, Ill. "Ask Dad, he knows." (For Cigarettes.) No. 4,060; Sept. 21; Gaz. vol. 218; p. 874.

Thos. Cusack Company, Chicago, Ill. "Why are they sold in every Club and Hotel?" (For Cigarettes.) No. 4,061; Sept. 21; Gaz. vol. 218; p. 874.

Winget Manufacturing Co. Inc., The, Minneapolis, Minn. "Priscilla." (For Headwear.) No. 4,055; Sept. 7; Gaz. vol. 218; p. 320.

Wire Goods Company, The, Akron, Ohio. "The Cotter with the Point Facilitates Insertion." (For Cotters.) No. 4,057; Sept. 14; Gaz. vol. 218; p. 601.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF SEPTEMBER, 1915.

[Abbreviations: "Gaz."—Official Gazette.]

Accounting-machines, Differential mechanism for. H. A. Martin. No. 1,153,328; Sept. 14; Gaz. vol. 218; p. 378.

Acetylene-generating apparatus. H. W. Jacobs and H. H. Lanning. No. 1,152,512; Sept. 7; Gaz. vol. 218; p. 47.

Acid anhydrids or of mixtures of such anhydrids with their acids, Manufacture of organic. R. Müller. No. 1,153,402; Sept. 14; Gaz. vol. 218; p. 406.

Acid, Concentrating dilute nitric. E. Collett. No. 1,154,289; Sept. 21; Gaz. vol. 218; p. 749.

Acoustic diaphragm. W. W. Young. No. 1,153,837; Sept. 14; Gaz. vol. 218; p. 560.

Adding and listing machine. W. J. Kilpatrick. No. 1,152,517; Sept. 7; Gaz. vol. 218; p. 50.

Adding apparatus. J. Boss-Conzelmann. No. 1,154,367; Sept. 21; Gaz. vol. 218; p. 778.

Adding-machine. W. F. McCaleb. No. 1,153,129; Sept. 7; Gaz. vol. 218; p. 269.

Adding-machine. E. E. Patten. No. 1,153,820; Sept. 14; Gaz. vol. 218; p. 554.

Advertisement device. S. C. Martin. No. 1,154,124; Sept. 21; Gaz. vol. 218; p. 692.

Aeroplane. A. P. Bluis, J. J. Cambou, and C. M. J. Bailliod. No. 1,153,752; Sept. 14; Gaz. vol. 218; p. 529.

Aeroplane. J. P. Eric. No. 1,153,612; Sept. 14; Gaz. vol. 218; p. 482.

Aeroplane. F. McCarroll. No. 1,152,743; Sept. 7; Gaz. vol. 218; p. 133.

Aeroplane. C. Munker. No. 1,152,432; Sept. 7; Gaz. vol. 218; p. 17.

Aeroplane. H. A. Orme. No. 1,153,248; Sept. 14; Gaz. vol. 218; p. 350.

Aeroplane. J. Watts. No. 1,153,659; Sept. 14; Gaz. vol. 218; p. 496.

Aeroplane, Miniature. J. W. J. Fritsch. No. 1,153,155; Sept. 7; Gaz. vol. 218; p. 278.

Aeroplane-plane. F. McCarroll. No. 1,152,426; Sept. 7; Gaz. vol. 218; p. 16.

Aeroplane safety controlling apparatus. T. M. Daniels. No. 1,153,035; Sept. 7; Gaz. vol. 218; p. 239.

Aeroplane-stabilizing apparatus, Automatic. L. A. Hayot. No. 1,154,396; Sept. 21; Gaz. vol. 218; p. 787.

Agglomerates, Manufacture of. A. Exbrayat. No. 1,154,980; Sept. 28; Gaz. vol. 218; p. 1013.

Agricultural machine. H. H. Larkins and M. R. Kevil. No. 1,153,800; Sept. 14; Gaz. vol. 218; p. 546.

Agricultural machine. M. Samel. No. 1,154,888; Sept. 28; Gaz. vol. 218; p. 982.

Air and gas compressors, Means for controlling the operation of. J. H. Dennedy. No. 1,152,400; Sept. 7; Gaz. vol. 218; p. 7.

Air-brake coupling. O. F. Kirkpatrick. No. 1,153,318; Sept. 14; Gaz. vol. 218; p. 374.

Air-brake device. E. U. Mack. No. 1,153,806; Sept. 14; Gaz. vol. 218; p. 548.

Air-compressor governor. C. O. Palmer. No. 1,154,798; Sept. 28; Gaz. vol. 218; p. 953.

Air, Conditioning. D. P. Gosline. No. 1,155,308; Sept. 28; Gaz. vol. 218; p. 1123.

Air-craft, Range-finder for. J. W. Hasburg. No. 1,152,946; Sept. 7; Gaz. vol. 218; p. 208.

Air-drier. G. F. Steedman. No. 1,153,181; Sept. 7; Gaz. vol. 218; p. 287.

Airship-steering apparatus. L. C. Badeau. No. 1,155,031; Sept. 28; Gaz. vol. 218; p. 1030.

Alarm: *See*—
- Burglar-alarm.
- Fire-alarm.
- Railway-crossing alarm.
- Sprinkler-alarm.

Aluminum compounds and producing same, Volatile. S. Peacock. No. 1,154,801; Sept. 28; Gaz. vol. 218; p. 954.

Ammonia, Producing. W. S. Landis. No. 1,154,640; Sept. 28; Gaz. vol. 218; p. 899.

Ammonia, Production of. C. Bosch, A. Mittasch, H. Wolf, and G. Stern. No. 1,152,030; Sept. 7; Gaz. vol. 218; p. 202.

Anchor, Expansion-. J. E. Kegreiss. No. 1,153,797; Sept. 14; Gaz. vol. 218; p. 545.

Anchor, Guy-. S. R. Schaff. No. 1,153,450; Sept. 14; Gaz. vol. 218; p. 423.

Animal tread, Draft-. J. H. Dolan. No. 1,153,374; Sept. 14; Gaz. vol. 218; p. 396.

Annealing-box. P. E. Hunter. No. 1,154,400; Sept. 21; Gaz. vol. 218; p. 788.

Anticreeper. W. H. Ferguson. No. 1,152,802; Sept. 7; Gaz. vol. 218; p. 154.

Anticreeper. F. A. Preston. No. 1,152,760; Sept. 7; Gaz. vol. 218; p. 139.

Antipyretic, o-sulfamidobenzoyl-p-phenetidin, and producing the same. J. Lagutt. No. 1,153,121; Sept. 7; Gaz. vol. 218; p. 267.

Antiskidding and traction appliance for vehicle-wheels. J. McMullen. No. 1,154,525; Sept. 21; Gaz. vol. 218; p. 829.

Antiskidding-chain for vehicle-wheels. J. P. McGarry. No. 1,153,936; Sept. 21; Gaz. vol. 218; p. 628.

Apron-guiding device. F. G. Sargent and C. T. Brooks. No. 1,152,439; Sept. 7; Gaz. vol. 218; p. 20.

Arch or instep supporter. H. Plessens. No. 1,153,441; Sept. 14; Gaz. vol. 218; p. 420.

Arch-support. A. F. Greenig. No. 1,153,064; Sept. 7; Gaz. vol. 218; p. 248.

Arch-support. W. M. Scholl. No. 1,152,556; Sept. 7; Gaz. vol. 218; p. 65.

Armature. T. Abtmeyer. No. 1,153,474; Sept. 14; Gaz. vol. 218; p. 431.

Armature for magnetos. B. Ames. No. 1,153,006; Sept. 7; Gaz. vol. 218; p. 229.

Armor. W. Bradley. No. 1,154,689; Sept. 28; Gaz. vol. 218; p. 916.

Assorter, Successive and selective. G. A. Smith. No. 1,154,814; Sept. 28; Gaz. vol. 218; p. 957.

Atomizer, Lubricant-. G. Priskey. No. 1,153,642; Sept. 14; Gaz. vol. 218; p. 491.

Audiphone. C. Soret. No. 1,154,060; Sept. 21; Gaz. vol. 218; p. 674.

Autographic register. A. Krauth. No. 1,154,032; Sept. 21; Gaz. vol. 218; p. 661.

Automatic gate. A. Williamson. No. 1,152,990; Sept. 7; Gaz. vol. 218; p. 227.

Automatic lubricator. E. Ruegger. No. 1,152,847; Sept. 7; Gaz. vol. 218; p. 172.

Automobile-bumper. F. Lederer. No. 1,153,632; Sept. 14; Gaz. vol. 218; p. 487.

Automobile construction. E. A. Deeds. No. 1,152,712; Sept. 7; Gaz. vol. 218; p. 122.

Automobile direction signal or indicator. Z. Keough. No. 1,154,024; Sept. 21; Gaz. vol. 218; p. 658.

Automobile guide-signal. E. A. Walz, Jr. No. 1,154,461; Sept. 21; Gaz. vol. 218; p. 808.

Automobile-hood. H. Futterman. No. 1,155,321; Sept. 28; Gaz. vol. 218; p. 1128.

Automobile identification device. L. A. Ward and W. D. Chase. No. 1,153,278; Sept. 14; Gaz. vol. 218; p. 360.

Automobile runner attachment. F. L. Ramsdell. No. 1,154,431; Sept. 21; Gaz. vol. 218; p. 798.

Automobile-starter. F. N. Livingston. No. 1,154,520; Sept. 21; Gaz. vol. 218; p. 828.

Automobile steering and controlling system. A. W. Pattison. No. 1,154,653; Sept. 28; Gaz. vol. 218; p. 904.

Automobile tool-bag. F. Fourt. No. 1,153,377; Sept. 14; Gaz. vol. 218; p. 397.

Automobile transmission power. E. J. Wendle. No. 1,152,771; Sept. 7; Gaz. vol. 218; p. 143.

Automobile-wheel. W. S. Miller. No. 1,154,876; Sept. 28; Gaz. vol. 218; p. 977.

Automobiles, Transmission-gearing for. A. R. Strouvelle and L. T. Mason. No. 1,154,140; Sept. 21; Gaz. vol. 218; p. 698.

Auto power-transmission jack. A. F. Johnson. No. 1,153,791; Sept. 14; Gaz. vol. 218; p. 543.

Autovehicles, Front and rear drive for. R. C. Criswell. No. 1,155,216; Sept. 28; Gaz. vol. 218; p. 1095.

Awl, Shoemaker's. M. Gaydosh. No. 1,152,890; Sept. 7; Gaz. vol. 218; p. 188.

Axle-box. J. R. Fleming. (Reissue.) No. 13,976; Sept. 7; Gaz. vol. 218; p. 288.

Axle, Driving and steering. O. Zachow. No. 1,153,281; Sept. 14; Gaz. vol. 218; p. 361.

Axle-mount. F. MacVicar. No. 1,154,143; Sept. 21; Gaz. vol. 218; p. 699.

Axle truss, Rear-. A. R. Brocksmith. No. 1,153,906; Sept. 21; Gaz. vol. 218; p. 648.

Baby-walker. M. Passerieux. No. 1,154,543; Sept. 21; Gaz. vol. 218; p. 835.
Bag: *See*—
Automobile tool-bag. Hand-bag.
Feed-bag.
Bag. C. P. Kleebauer. No. 1,155,248; Sept. 28; Gaz. vol. 218; p. 1105.
Bag-fastener. F. A. Fuller. No. 1,153,301; Sept. 14; Gaz. vol. 218; p. 368.
Bag-frame. F. A. Fuller. No. 1,153,302; Sept. 14; Gaz. vol. 218; p. 368.
Bag-frame. B. Vom Elgen. No. 1,153,652; Sept. 14; Gaz. vol. 218; p. 494.
Bag-frame fastener. B. Vom Elgen. No. 1,153,654; Sept. 14; Gaz. vol. 218; p. 494.
Bag-turner. I. Hirschfeld. No. 1,155,152; Sept. 28; Gaz. vol. 218; p. 1075.
Bait, Artificial. R. T. Wilson. No. 1,153,473; Sept. 14; Gaz. vol. 218; p. 431.
Ball: *See*—
Drop-ball.
Ball-mill. F. E. Marcy. No. 1,153,239; Sept. 14; Gaz. vol. 218; p. 347.
Ball-mills, Screen-grate for. F. E. Marcy. No. 1,153,238; Sept. 14; Gaz. vol. 218; p. 346.
Ball-playing, exercising, and practising apparatus. H. R. and W. R. Meyers. No. 1,152,748; Sept. 7; Gaz. vol. 218; p. 135.
Bar: *See*—
Reinforcing-bar.
Bar-handling apparatus. H. D. Williams and W. Ahlen. No. 1,155,118; Sept. 28; Gaz. vol. 218; p. 1063.
Bars, Machine for the manufacture of twisted. R. Porter. No. 1,152,759; Sept. 7; Gaz. vol. 218; p. 138.
Barber's accessory. C. Z. Alexander. No. 1,152,870; Sept. 7; Gaz. vol. 218; p. 180.
Bargain-indicator. L. J. J. Van der Hooen and S. Wouda. No. 1,153,737; Sept. 14; Gaz. vol. 218; p. 524.
Barrel-heading machine. H. C. Herr. No. 1,153,160; Sept. 7; Gaz. vol. 218; p. 280.
Barrel-lid. C. D. Mitchell. No. 1,155,261; Sept. 28; Gaz. vol. 218; p. 1109.
Barrel-machine. B. W. Tucker. No. 1,152,575; Sept. 7; Gaz. vol. 218; p. 73.
Barrel-making machine. E. F. Beugler. No. 1,154,684; Sept. 28; Gaz. vol. 218; p. 915.
Barrette or hair-retainer. R. H. Damon. No. 1,152,883; Sept. 7; Gaz. vol. 218; p. 185.
Base-ball diamonds, Apparatus for controlling the placement of a covering over. O. A. Heckel. No. 1,155,309; Sept. 28; Gaz. vol. 218; p. 1124.
Basin, Catch-. L. L. Delabeck. No. 1,152,611; Sept. 7; Gaz. vol. 218; p. 84.
Basket. H. R. Garritson. No. 1,153,057; Sept. 7; Gaz. vol. 218; p. 246.
Basket or receptacle. J. A. Greenlee and H. Wegwart. No. 1,153,906; Sept. 21; Gaz. vol. 218; p. 618.
Bath or basin waste. W. G. Newton. No. 1,155,085; Sept. 28; Gaz. vol. 218; p. 1052.
Battery: *See*—
Storage battery.
Battery-cell. A. P. Burritt. No. 1,154,372; Sept. 21; Gaz. vol. 218; p. 780.
Beans and other legumes, Machine for cutting. P. A. de Lange. No. 1,153,041; Sept. 7; Gaz. vol. 218; p. 241.
Bearing. H. F. Obergfell. No. 1,154,049; Sept. 21; Gaz. vol. 218; p. 608.
Bearing. R. L. Whitney. No. 1,153,986; Sept. 21; Gaz. vol. 218; p. 645.
Bearing-adjuster. J. T. Hay. No. 1,154,512; Sept. 21; Gaz. vol. 218; p. 825.
Bearing, Antifriction-. W. B. Lashar and T. C. Luce. No. 1,153,868; Sept. 14; Gaz. vol. 218; p. 572.
Bearing, Ball-. C. A. Shellberg. No. 1,154,444; Sept. 21; Gaz. vol. 218; p. 803.
Bearing, Connecting-rod. W. C. Moore. No. 1,154,650; Sept. 28; Gaz. vol. 218; p. 903.
Bearing, Double-acting ball thrust-. K. J. von Kajdacsy. No. 1,152,995; Sept. 7; Gaz. vol. 218; p. 226.
Bearing, Electrically-insulated. C. E. Wieselgreen. No. 1,152,680; Sept. 7; Gaz. vol. 218; p. 111.
Bearing for power-transmission mechanism, Adjustable. T. H. Blair. No. 1,153,285; Sept. 14; Gaz. vol. 218; p. 362.
Bearing for propeller-shafts, &c., Waterproof self-lubricating. J. P. Jonnson. No. 1,153,624; Sept. 14; Gaz. vol. 218; p. 485.
Bearing for worm-shafts, Yieldable thrust-. E. P. Ashton. No. 1,152,689; Sept. 7; Gaz. vol. 218; p. 114.
Bearing, Insulated roller-. C. E. Wieselgreen. No. 1,152,681; Sept. 7; Gaz. vol. 218; p. 111.
Bearing-lubricating device, Ring. B. G. Badham. No. 1,152,872; Sept. 7; Gaz. vol. 218; p. 181.
Bearing, Roller-. J. E. Shafer. No. 1,152,663; Sept. 7; Gaz. vol. 218; p. 105.
Bearing, Self-lubricating. G. O. Smalley. No. 1,153,647; Sept. 14; Gaz. vol. 218; p. 492.
Bearing, Shaft-. W. Barnes, Jr. No. 1,154,227; Sept. 21; Gaz. vol. 218; p. 727.
Bearing, Side. W. A. Bock. No. 1,153,671; Sept. 14; Gaz. vol. 218; p. 500.
Bearing solutions, Apparatus for treating solid-. L. C. Trent. No. 1,152,769; Sept. 7; Gaz. vol. 218; p. 142.
Bearing spacer, Ball-. F. Winkler. No. 1,155,185; Sept. 28; Gaz. vol. 218; p. 1086.
Bearing, Thrust-. E. U. Gibbs. No. 1,153,777; Sept. 14; Gaz. vol. 218; p. 538.
Bearings, Assembling ball-. F. W. Gurney. No. 1,153,066; Sept. 7; Gaz. vol. 218; p. 248.
Bed attachment, N. P. Jensen. No. 1,155,241; Sept. 28; Gaz. vol. 218; p. 1103.
Bed fabric. C. H. Frederick. No. 1,152,500; Sept. 7; Gaz. vol. 218; p. 42.
Bed fabric. C. H. Frederick. No. 1,152,621; Sept. 7; Gaz. vol. 218; p. 88.
Bed fabric, Machine for making. G. B. Smith. No. 1,153,266; Sept. 14; Gaz. vol. 218; p. 356.
Bed, Folding. C. Bender. No. 1,155,109; Sept. 28; Gaz. vol. 218; p. 1091.
Bed-joint. G. B. Pettit. No. 1,154,803; Sept. 28; Gaz. vol. 218; p. 954.
Bed-spring. G. G. Powers. No. 1,154,936; Sept. 28; Gaz. vol. 218; p. 990.
Bedstead, Metal. J. M. Adams. No. 1,153,590; Sept. 14; Gaz. vol. 218; p. 475.
Beehive. F. Danzenbaker. No. 1,154,176; Sept. 21; Gaz. vol. 218; p. 710.
Beer, Brewing. E. Hinterlach. No. 1,152,415; Sept. 7; Gaz. vol. 218; p. 12.
Beer-racking apparatus. S. and N. Schlangen. No. 1,155,008; Sept. 28; Gaz. vol. 218; p. 1022.
Beer-racking apparatus. S. and N. Schlangen. No. 1,155,009; Sept. 28; Gaz. vol. 218; p. 1023.
Beet-cleaner. A. Gummundsen. No. 1,153,381; Sept. 14; Gaz. vol. 218; p. 398.
Bell and mail-receiver, Combined door-. J. A. McDonald. No. 1,154,422; Sept. 21; Gaz. vol. 218; p. 795.
Belt and clutch shifting mechanism, Safety. R. T. Boal. No. 1,152,781; Sept. 7; Gaz. vol. 218; p. 140.
Bench: *See*—
Park-bench. Washbench.
Bends, Making return-. F. Heuser. No. 1,153,224; Sept. 14; Gaz. vol. 218; p. 341.
Bicycle attachment. A. D. Melselbach. No. 1,155,324; Sept. 28; Gaz. vol. 218; p. 1130.
Bicycle transmission. T. J. Cribbs. No. 1,154,292; Sept. 21; Gaz. vol. 218; p. 750.
Billiard-cue attachment. E. J. Waters. No. 1,152,866; Sept. 7; Gaz. vol. 218; p. 179.
Billiard-cue tip. F. Haynes. No. 1,153,491; Sept. 14; Gaz. vol. 218; p. 438.
Binder. W. G. Jones. No. 1,155,067; Sept. 28; Gaz. vol. 218; p. 1044.
Binder. W. G. Jones. No. 1,155,068; Sept. 28; Gaz. vol. 218; p. 1044.
Binder-loading attachment. G. H. Pallady. No. 1,154,542; Sept. 21; Gaz. vol. 218; p. 835.
Binder, Loose-leaf. C. Sayers. No. 1,153,713; Sept. 14; Gaz. vol. 218; p. 517.
Binder, Pocket check-. W. G. Exline. No. 1,154,566; Sept. 21; Gaz. vol. 218; p. 844.
Binding-machine. A. F. Preston. No. 1,152,903; Sept. 7; Gaz. vol. 218; p. 192.
Binding-post. G. A. H. Churchill. No. 1,152,705; Sept. 7; Gaz. vol. 218; p. 120.
Bird-trap. J. A. Tooley. No. 1,155,017; Sept. 28; Gaz. vol. 218; p. 1026.
Biscuit-icing machine. T., J., and E. L. Vicars. No. 1,153,585; Sept. 14; Gaz. vol. 218; p. 472.
Bit: *See*—
Bridle-bit. Valve-grinder bit.
Bits and similar tools, Holder for. W. J. G. Taylor. No. 1,152,609; Sept. 7; Gaz. vol. 218; p. 107.
Blank-feeding apparatus. M. Dinnebier and A. Winkler. No. 1,153,296; Sept. 14; Gaz. vol. 218; p. 366.
Blasting, Shot-shooting device for use in. L. Graham. No. 1,155,230; Sept. 28; Gaz. vol. 218; p. 1099.
Bleaching. F. L. Schmidt. No. 1,155,102; Sept. 28; Gaz. vol. 218; p. 1058.
Bleaching. F. L. Schmidt. No. 1,155,104; Sept. 28; Gaz. vol. 218; p. 1058.
Bleaching cane-juice, Apparatus for. W. H. Waggoner. No. 1,152,458; Sept. 7; Gaz. vol. 218; p. 26.
Bleaching ground wood-pulp. E. P. Foley. No. 1,154,851; Sept. 28; Gaz. vol. 218; p. 969.
Bleed-rod support. E. P. Quirk. No. 1,152,547; Sept. 7; Gaz. vol. 218; p. 62.
Block: *See*—
Building-block. Pulley-block.
Construction-block.
Blower, Flue-. G. H. Van Schaick, P. Burns, and J. Reardon. No. 1,155,177; Sept. 28; Gaz. vol. 218; p. 1083.
Blowpipe, Acetylene-. J. W. and E. H. Smith. No. 1,152,985; Sept. 7; Gaz. vol. 218; p. 222.
Board: *See*—
Ironing-board. Stamp-board.
Pressing-board. Washboard.
Board-bundling machine. N. B. Thompson. No. 1,152,670; Sept. 7; Gaz. vol. 218; p. 108.
Boat-launching apparatus. S. N. Wessberg. No. 1,152,678; Sept. 7; Gaz. vol. 218; p. 110.
Boat, Motor-. W. H. Wolcott. No. 1,154,471; Sept. 21; Gaz. vol. 218; p. 812.
Boat, Submarine. L. Y. Spear. No. 1,153,267; Sept. 14; Gaz. vol. 218; p. 357.

Boat, Submarine or submersible. E. L. Peacock. No. 1,152,754; Sept. 7; Gaz. vol. 218; p. 137.
Boats, Hull construction of submarine. L. Y. Spear. No. 1,154,215; Sept. 21; Gaz. vol. 218; p. 723.
Boats, Means for locating submarine. H. Lotz. No. 1,154,522; Sept. 21; Gaz. vol. 218; p. 829.
Bobbin-marking machine. W. Elliot, Jr. No. 1,153,679; Sept. 14; Gaz. vol. 218; p. 503.
Boiler: *See*—
Clothes-boiler. Steam-boiler.
Boiler-cleaner. E. Rankin. No. 1,153,953; Sept. 21; Gaz. vol. 218; p. 634.
Boiler-furnace, Liquid-fuel. C. I. Lindau. No. 1,152,897; Sept. 7; Gaz. vol. 218; p. 190.
Boiler-tube expander. O. Wiedeke. No. 1,153,663; Sept. 14; Gaz. vol. 218; p. 497.
Boilers, Device for regulating the water-level in. J. Lee. No. 1,154,327; Sept. 28; Gaz. vol. 218; p. 1131.
Bolt: *See*—
Door safety-bolt. Spring-bolt.
Expansion-bolt. Stay-bolt.
Self-lubricating bolt.
Bolt and nut therefor. T. Miller. No. 1,154,265; Sept. 21; Gaz. vol. 218; p. 741.
Book and holder for same, Note-. C. J. Brown. No. 1,152,702; Sept. 7; Gaz. vol. 218; p. 119.
Book, Manifolding sales-. G. E. Doughty. No. 1,153,611; Sept. 14; Gaz. vol. 218; p. 481.
Bookbinder. T. Daniels. No. 1,154,480; Sept. 21; Gaz. vol. 218; p. 817.
Bookbinding-machine. F. A. Risberg. No. 1,152,907; Sept. 7; Gaz. vol. 218; p. 194.
Boom-operating mechanism. O. Crosby. No. 1,153,034; Sept. 7; Gaz. vol. 218; p. 238.
Boot or shoe. A. C. Becker. No. 1,154,360; Sept. 21; Gaz. vol. 218; p. 775.
Boot-top. C. Tweedle. No. 1,153,977; Sept. 21; Gaz. vol. 218; p. 642.
Borates containing active oxygen, Mixture of. F. L. Schmidt. No. 1,155,101; Sept. 28; Gaz. vol. 218; p. 1058.
Borates containing active oxygen, Mixture of. F. L. Schmidt. No. 1,155,103; Sept. 28; Gaz. vol. 218; p. 1058.
Boring-tool holder. E. J. Bryant. No. 1,153,673; Sept. 14; Gaz. vol. 218; p. 501.
Bottle. H. E. Miller. No. 1,154,931; Sept. 28; Gaz. vol. 218; p. 997.
Bottle attachment. G. J. Munschy. No. 1,154,535; Sept. 21; Gaz. vol. 218; p. 833.
Bottle-cap. I. B. Rosencrantz. No. 1,153,706; Sept. 14; Gaz. vol. 218; p. 514.
Bottle-cap and opener. F. G. Smith. No. 1,155,285; Sept. 28; Gaz. vol. 218; p. 1116.
Bottle-cap-assembling machine. J. Sturtevant and J. T. Weinzierl. No. 1,155,171; Sept. 28; Gaz. vol. 218; p. 1082.
Bottle-cap, Detachable. G. W. Beadle. No. 1,153,477; Sept. 14; Gaz. vol. 218; p. 432.
Bottle-cap perforator and remover. J. B. Neff. No. 1,154,718; Sept. 28; Gaz. vol. 218; p. 925.
Bottle-case. G. Langseth. No. 1,154,702; Sept. 28; Gaz. vol. 218; p. 920.
Bottle-closure. H. Cremer. No. 1,154,290; Sept. 21; Gaz. vol. 218; p. 750.
Bottle-closure. H. Cremer. No. 1,154,291; Sept. 21; Gaz. vol. 218; p. 750.
Bottle-closure. J. F. MacIndoe. No. 1,153,236; Sept. 14; Gaz. vol. 218; p. 345.
Bottle-closure. A. D. Ray. No. 1,153,518; Sept. 14; Gaz. vol. 218; p. 448.
Bottle-cover. F. A. Chenette. No. 1,154,973; Sept. 28; Gaz. vol. 218; p. 1011.
Bottle-filling apparatus. S. T. Penna. No. 1,154,269; Sept. 21; Gaz. vol. 218; p. 742.
Bottle-filling device. J. H. Champ. No. 1,154,746; Sept. 28; Gaz. vol. 218; p. 935.
Bottle, Ink-. N. C. Phillips. No. 1,152,540; Sept. 7; Gaz. vol. 218; p. 62.
Bottle, Non-refillable. E. J. Morin. No. 1,154,531; Sept. 21; Gaz. vol. 218; p. 831.
Bottle, Non-refillable. M. Robbins. No. 1,153,519; Sept. 14; Gaz. vol. 218; p. 448.
Bottle, Non-refillable. B. Stone. No. 1,153,725; Sept. 14; Gaz. vol. 218; p. 521.
Bottle, Poison-. M. Mostoller. No. 1,155,082; Sept. 28; Gaz. vol. 218; p. 1050.
Bottle protector, Milk-. H. P. Roberts. No. 1,154,656; Sept. 28; Gaz. vol. 218; p. 905.
Bottle-stopper. A. E. Matt. No. 1,153,240; Sept. 14; Gaz. vol. 218; p. 347.
Bow rest and clamp device. H. B. White. No. 1,152,924; Sept. 7; Gaz. vol. 218; p. 200.
Bowling-alley. K. G. Dieterich. No. 1,154,329; Sept. 28; Gaz. vol. 218; p. 1132.
Bowling-alley pin-setter. F. C. Hobbs. No. 1,153,917; Sept. 21; Gaz. vol. 218; p. 622.
Bowling-alleys, Pin-setter for. F. C. Hobbs. No. 1,153,680; Sept. 14; Gaz. vol. 218; p. 507.
Box: *See*—
Annealing-box. Match-box.
Axle-box. Nest-box.
Cigarette-box. Outlet-box.
Connection-box. Packing-box.
Feed-box. Paper box.
Folding box. Pocket-box.
Hat-box. Starting-box.
Journal-box. Stuffing-box.
Junction-box. Sugar-box.
Letter-box. Switch-box.
Mail-box. Water or gas box.
Box. H. E. Brock and E. Z. Myre. No. 1,155,206; Sept. 28; Gaz. vol. 218; p. 1093.
Box. J. M. Hothersall. No. 1,154,020; Sept. 21; Gaz. vol. 218; p. 657.
Box-cover, Supplemental. W. I. Tuttle. No. 1,153,276; Sept. 14; Gaz. vol. 218; p. 359.
Box-covering machine. P. P. Raczynski. No. 1,152,970; Sept. 7; Gaz. vol. 218; p. 217.
Box-making machine. C. Burnham. No. 1,154,610; Sept. 28; Gaz. vol. 218; p. 888.
Box-making machine. C. Burnham. No. 1,154,969; Sept. 28; Gaz. vol. 218; p. 1009.
Box-making-machine feeding mechanism. C. Burnham. No. 1,154,968; Sept. 28; Gaz. vol. 218; p. 1009.
Boxes, Partition-holder for. F. S. Knapp. No. 1,154,778; Sept. 28; Gaz. vol. 218; p. 946.
Brace: *See*—
Door-brace. Rail-brace.
Bracket: *See*—
Counter-bracket. Shade-bracket.
Ladder-bracket. Shingle-bracket.
Roof-scaffold bracket. Trolley-track bracket.
Braider mechanism. F. Bentley. No. 1,154,964; Sept. 28; Gaz. vol. 218; p. 1008.
Braiding-carrier. A. Henkels. No. 1,154,017; Sept. 21; Gaz. vol. 218; p. 656.
Braiding-machine. R. C. Rahm. No. 1,153,826; Sept. 14; Gaz. vol. 218; p. 556.
Brake: *See*—
Car-brake. Vehicle-brake.
Coaster-brake. Wagon-brake.
Drum-brake.
Brake. A. H. Hale. No. 1,153,382; Sept. 14; Gaz. vol. 218; p. 399.
Brake. E. F. Orner. No. 1,154,426; Sept. 21; Gaz. vol. 218; p. 706.
Brake device, Fluid-pressure. W. V. Turner. No. 1,153,275; Sept. 14; Gaz. vol. 218; p. 359.
Brake for use on hoisting devices. H. Graumüller. No. 1,154,508; Sept. 21; Gaz. vol. 218; p. 824.
Brake-head. W. L. Boyer. No. 1,152,391; Sept. 7; Gaz. vol. 218; p. 4.
Brake-shoe. C. W. Blue. No. 1,153,753; Sept. 14; Gaz. vol. 218; p. 529.
Brake-shoe. J. A. Connelly. No. 1,153,154; Sept. 7; Gaz. vol. 218; p. 278.
Brake-step. W. S. Atwood. No. 1,154,160; Sept. 21; Gaz. vol. 218; p. 705.
Brakes, Mechanical releasing means for electric. G. M. Marr. No. 1,154,791; Sept. 28; Gaz. vol. 218; p. 950.
Braking controller, Dynamic-. C. T. Henderson. No. 1,154,016; Sept. 21; Gaz. vol. 218; p. 656.
Brewing. B. Hehle. No. 1,154,989; Sept. 28; Gaz. vol. 218; p. 1017.
Brick-cut-off table. J. G. Barbour. No. 1,152,873; Sept. 7; Gaz. vol. 218; p. 181.
Bricks, Manufacturing. E. E. Trowbridge. No. 1,154,741; Sept. 28; Gaz. vol. 218; p. 933.
Bricks, Ornamenting. F. A. Hoiles. No. 1,154,118; Sept. 21; Gaz. vol. 218; p. 691.
Bridge. T. J. and W. V. Moore. No. 1,153,099; Sept. 7; Gaz. vol. 218; p. 261.
Bridges, Rail-clamp for traveling-. R. E. Brown and E. C. Gaines. No. 1,153,672; Sept. 14; Gaz. vol. 218; p. 501.
Bridle. O. Brockman. No. 1,153,023; Sept. 7; Gaz. vol. 218; p. 235.
Briquet-making machine. E. B. A. and R. A. Zwoyer. No. 1,152,468; Sept. 7; Gaz. vol. 218; p. 30.
Brooder. P. Daniell. No. 1,154,488; Sept. 21; Gaz. vol. 218; p. 817.
Brooder. J. T. Ferres. No. 1,152,619; Sept. 7; Gaz. vol. 218; p. 87.
Brooder, Chicken-. C. S. Bordner. No. 1,152,700; Sept. 7; Gaz. vol. 218; p. 118.
Brooder-heater. C. V. Hill. No. 1,152,732; Sept. 7; Gaz. vol. 218; p. 129.
Brooders, Heat-regulator for. C. V. Hill. No. 1,152,814; Sept. 7; Gaz. vol. 218; p. 160.
Broom. W. P. Newell. No. 1,153,104; Sept. 7; Gaz. vol. 218; p. 262.
Brush-bridle. G. C. Bemis. No. 1,152,474; Sept. 7; Gaz. vol. 218; p. 33.
Broom-bridle. L. J. Kopischke. No. 1,154,781; Sept. 28; Gaz. vol. 218; p. 947.
Brush, Cleaning-. G. C. Kimes. No. 1,153,118; Sept. 7; Gaz. vol. 218; p. 266.
Brush, Electric-meter. R. S. White. No. 1,155,021; Sept. 28; Gaz. vol. 218; p. 1027.
Brush-holding device. J. H. Thompson. No. 1,153,730; Sept. 14; Gaz. vol. 218; p. 522.

Brush, Pigtail-. J. Hetherington and C. E. Chapin. No. 1,155,063; Sept. 28; Gaz. vol. 218; p. 1043.
Brush, Rotatable circular. E. Van Devoorde. No. 1,153,738; Sept. 14; Gaz. vol. 218; p. 525.
Brush, Shaving-. R. E. Reames. No. 1,155,096; Sept. 28; Gaz. vol. 218; p. 1056.
Brush, Stipple-. H. R. Kindt. No. 1,154,928; Sept. 28; Gaz. vol. 218; p. 906.
Brush, Tooth-. R. L. Long. No. 1,153,801; Sept. 14; Gaz. vol. 218; p. 546.
Bucket buffer, Clam-shell-dredger-. P. Peterson. No. 1,153,950; Sept. 21; Gaz. vol. 218; p. 633.
Bucket, Conveyer-. A. E. Elliott. No. 1,153,875; Sept. 14; Gaz. vol. 218; p. 396.
Bucket, Foldable and collapsible. W. H. Ross. No. 1,152,846; Sept. 7; Gaz. vol. 218; p. 172.
Bucket, Hoisting and dumping. F. E. Arndt. No. 1,153,472; Sept. 7; Gaz. vol. 218; p. 32.
Buckle. H. Mortara. No. 1,153,100; Sept. 7; Gaz. vol. 218; p. 261.
Building-block. F. B. Fairbank. No. 1,153,900; Sept. 21; Gaz. vol. 218; p. 616.
Building-block, Cement. F. E. Peters. No. 1,154,546; Sept. 21; Gaz. vol. 218; p. 836.
Building-blocks, Binder for hollow-tile. H. H. Smith. (Reissue.) No. 13,980; Sept. 14; Gaz. vol. 218; p. 678.
Building construction. C. D. Page. No. 1,154,203; Sept. 21; Gaz. vol. 218; p. 718.
Building, Knockdown. C. D. Page. No. 1,154,204; Sept. 21; Gaz. vol. 218; p. 719.
Building structure. P. Schmitz. No. 1,153,714; Sept. 14; Gaz. vol. 218; p. 517.
Building structure, Ventilated. H. R. Straight. No. 1,154,219; Sept. 21; Gaz. vol. 218; p. 724.
Bullet feeding and swaging machine. C. H. A. F. L. Ross. No. 1,154,810; Sept. 28; Gaz. vol. 218; p. 956.
Burglar-alarm. H. T. Gay. No. 1,155,144; Sept. 28; Gaz. vol. 218; p. 1072.
Burner: *See*—
Distillate-burner. Oil-burner.
Gas-burner. Oil and water burner.
Hydrocarbon-burner. Wick-burner.
Burner-tip. H. Lyon. No. 1,154,421; Sept. 21; Gaz. vol. 218; p. 795.
Butter-separator. A. Fay. No. 1,155,306; Sept. 28; Gaz. vol. 218; p. 1122.
Button-attaching machines, Fastener-escapement for. F. R. White. No. 1,154,680; Sept. 28; Gaz. vol. 218; p. 913.
Button-feeding mechanism. W. L. Barron. No. 1,152,692; Sept. 7; Gaz. vol. 218; p. 115.
Button-feeding mechanism. C. C. Hammond. No. 1,155,148; Sept. 28; Gaz. vol. 218; p. 1078.
Button-remover. J. D. Freeman. No. 1,153,904; Sept. 21; Gaz. vol. 218; p. 617.
Button, Snap-. J. J. Brell. No. 1,152,785; Sept. 7; Gaz. vol. 218; p. 148.
Cabinet. F. P. Eldridge. No. 1,152,404; Sept. 7; Gaz. vol. 218; p. 8.
Cabinet. E. B. H. A. Gourlay. No. 1,153,062; Sept. 7; Gaz. vol. 218; p. 247.
Cabinet and stove, Combination kitchen-. W. Buttler. No. 1,153,597; Sept. 14; Gaz. vol. 218; p. 477.
Cabinet, Feeding-. F. H. Hoberg. No. 1,154,634; Sept. 28; Gaz. vol. 218; p. 897.
Cabinet for drying films, plates, and prints. W. P. Henry. No. 1,153,688; Sept. 14; Gaz. vol. 218; p. 507.
Cabinet, Paper-. F. H. Hoberg. No. 1,154,632; Sept. 28; Gaz. vol. 218; p. 896.
Cabinet, Paper-feeding. F. H. Hoberg. No. 1,154,633; Sept. 28; Gaz. vol. 218; p. 897.
Cable-clamp. I. Evans. No. 1,154,916; Sept. 28; Gaz. vol. 218; p. 992.
Cable-grip. W. Hutchings. No. 1,153,621; Sept. 14; Gaz. vol. 218; p. 484.
Cable-hanger. J. Kennedy. No. 1,154,319; Sept. 21; Gaz. vol. 218; p. 760.
Cable-hook. F. W. Cooper. No. 1,152,397; Sept. 7; Gaz. vol. 218; p. 6.
Cable-support. O. W. Brentzer. No. 1,155,127; Sept. 28; Gaz. vol. 218; p. 1066.
Cake-holding band, Adjustable. A. C. Carlson. No. 1,154,072; Sept. 28; Gaz. vol. 218; p. 1010.
Calculating apparatus. E. H. Palmer. No. 1,152,542; Sept. 7; Gaz. vol. 218; p. 60.
Calculating-machine. L. I. Darby and C. N. Walsh. No. 1,155,048; Sept. 28; Gaz. vol. 218; p. 1036.
Calculating-machine. W. W. Hopkins. No. 1,153,886; Sept. 14; Gaz. vol. 218; p. 400.
Calculating-machine. J. A. Turck. No. 1,154,897; Sept. 28; Gaz. vol. 218; p. 985.
Calculating-machine. H. A. Wiberg. No. 1,154,150; Sept. 21; Gaz. vol. 218; p. 701.
Calculating-machines, Carriage-shifting mechanism for. O. Thieme. No. 1,153,354; Sept. 14; Gaz. vol. 218; p. 389.
Calendar. J. M. Markham. No. 1,154,997; Sept. 28; Gaz. vol. 218; p. 1019.
Calking-machine. W. R. Jeavons and A. R. Whittaker. No. 1,152,513; Sept. 7; Gaz. vol. 218; p. 48.
Calling device, Operator's. W. Kaisling. No. 1,154,250; Sept. 21; Gaz. vol. 218; p. 736.
Cam-movement. H. O. Carleton and E. W. Nelson. No. 1,152,600; Sept. 7; Gaz. vol. 218; p. 81.
Camera. T. Kajiwara. No. 1,153,892; Sept. 14; Gaz. vol. 218; p. 402
Camera, Enlarging-. A. L. Gates. No. 1,155,142; Sept. 28; Gaz. vol. 218; p. 1071.
Camera, Film-pack. C. Borsmann. No. 1,154,285; Sept. 21; Gaz. vol. 218; p. 748.
Camera-finder. C. Bornmann. No. 1,152,782; Sept. 7; Gaz. vol. 218; p. 147.
Camera-finder. S. Brown. No. 1,154,966; Sept. 28; Gaz. vol. 218; p. 1009.
Camera, Folding. B. J. Nasief. No. 1,154,046; Sept. 21; Gaz. vol. 218; p. 666.
Camera, Photographic. F. E. Ives. No. 1,153,229; Sept. 14; Gaz. vol. 218; p. 343.
Camera-shutter. W. C. Sullender. No. 1,153,141; Sept. 7; Gaz. vol. 218; p. 273.
Camera-support. J. H. Klenck. No. 1,153,320; Sept. 14; Gaz. vol. 218; p. 375.
Cameras, Vignetter for. S. E. Moine. No. 1,155,080; Sept. 28; Gaz. vol. 218; p. 1049.
Cameras, Web-guide for photographic. J. S. Greene. No. 1,153,843; Sept. 14; Gaz. vol. 218; p. 562.
Can: *See*—
Oil-can. Pouring-spout can.
Can. E. E. Hall. No. 1,154,627; Sept. 28; Gaz. vol. 218; p. 894.
Can-body forming and soldering machine. L. C. Sharp. No. 1,153,454; Sept. 14; Gaz. vol. 218; p. 425.
Can-body-forming machines, Automatic stop-motion for. C. W. Graham. No. 1,154,244; Sept. 21; Gaz. vol. 218; p. 733.
Can-case, Removable braced shipping. G. J. Record. No. 1,154,885; Sept. 28; Gaz. vol. 218; p. 980.
Can casing or boxing machine. F. W. Weld, Jr. No. 1,152,997; Sept. 7; Gaz. vol. 218; p. 227.
Can cover, Garbage-. F. J. Clark. No. 1,153,288; Sept. 14; Gaz. vol. 218; p. 364.
Can-cover tucking and fusing machine. W. E. Taylor. No. 1,152,450; Sept. 7; Gaz. vol. 218; p. 24.
Can-end and gasket assembling machine. C. W. Graham. No. 1,154,245; Sept. 21; Gaz. vol. 218; p. 734.
Can-cutting machine. O. U. Pescott. No. 1,155,267; Sept. 28; Gaz. vol. 218; p. 1111.
Can-filling machine. C. T. Small. No. 1,154,665; Sept. 28; Gaz. vol. 218; p. 908.
Can-flange straightener. F. Rudolphi. No. 1,152,437; Sept. 7; Gaz. vol. 218; p. 19.
Can-head-feeding machine. J. W. Dixon. No. 1,154,237; Sept. 21; Gaz. vol. 218; p. 731.
Can-head-flange curling and coating machine. W. F. Butler. No. 1,152,395; Sept. 7; Gaz. vol. 218; p. 5.
Can-opener. H. M. Caswell and F. Sherer. No. 1,153,600; Sept. 14; Gaz. vol. 218; p. 477.
Can-seam-fusing machine. C. W. Graham. No. 1,152,411; Sept. 7; Gaz. vol. 218; p. 10.
Can-spout, Pouring. A. G. Canby. No. 1,153,998; Sept. 21; Gaz. vol. 218; p. 649.
Can-testing machine, Air. E. V. Swangren and M. E. Widell. No. 1,152,449; Sept. 7; Gaz. vol. 218; p. 23.
Cans and other receptacles, Top for. F. S. Hyatt. No. 1,152,817; Sept. 7; Gaz. vol. 218; p. 161.
Cans and the like, Portage device for ash-. G. More. No. 1,155,081; Sept. 28; Gaz. vol. 218; p. 1050.
Cans, Resiliently-attached but removable cap for oil-. A. E. Ainslie. No. 1,154,829; Sept. 28; Gaz. vol. 218; p. 963.
Canning apparatus, Cutting means for. J. and W. F. Schlothan. No. 1,152,441; Sept. 7; Gaz. vol. 218; p. 21.
Canning, Machine for treating vegetable products for. E. J. Vaudreuil. No. 1,154,675; Sept. 28; Gaz. vol. 218; p. 912.
Candlestick. F. T. Gause. No. 1,152,724; Sept. 7; Gaz. vol. 218; p. 126.
Cane, Treating sugar-. T. Lee and A. B. Monks. No. 1,153,934; Sept. 21; Gaz. vol. 218; p. 628.
Caoutchouc, Process and apparatus for purifying. H. Debauge. No. 1,153,040; Sept. 7; Gaz. vol. 218; p. 240.
Cap. M. Katcher. No. 1,153,927; Sept. 21; Gaz. vol. 218; p. 625.
Cap, Bathing-. B. Hellinga. No. 1,153,687; Sept. 14; Gaz. vol. 218; p. 506.
Cap-remover and cover. F. R. Fisher. No. 1,154,751; Sept. 28; Gaz. vol. 218; p. 936.
Cape. C. L. Simpson. No. 1,152,854; Sept. 7; Gaz. vol. 218; p. 175.
Capsule-assembling machine. B. T. Winchester. No. 1,155,023; Sept. 28; Gaz. vol. 218; p. 1027.
Car-brake. P. Boch. No. 1,153,151; Sept. 7; Gaz. vol. 218; p. 276.
Car brake, Mine-. C. E. Morgan. No. 1,154,041; Sept. 21; Gaz. vol. 218; p. 664.
Car construction, Railway-. J. F. O'Connor. No. 1,154,202; Sept. 21; Gaz. vol. 218; p. 718.
Car-door. A. R. McDaniel. No. 1,153,808; Sept. 14; Gaz. vol. 218; p. 547.
Car-door. W. Sneddon. No. 1,152,065; Sept. 7; Gaz. vol. 218; p. 106.
Car-door. A. W. Wilson and I. E. Rice. No. 1,154,681; Sept. 28; Gaz. vol. 218; p. 914.
Car-door fastening. N. P. Kemp. No. 1,152,419; Sept. 7; Gaz. vol. 218; p. 13.

Car door, Grain-. E. W. Hogan. No. 1,153,787; Sept. 14; Gaz. vol. 218; p. 541.
Car-door-operating mechanism. M. H. Priddy. No. 1,154,053; Sept. 21; Gaz. vol. 218; p. 660.
Car draft-rigging, Railway-. W. H. Miner. No. 1,155,079; Sept. 28; Gaz. vol. 218; p. 1049.
Car, Dump-. J. S. Martin. No. 1,153,989; Sept. 21; Gaz. vol. 218; p. 629.
Car, Dump-. T. R. McKnight. No. 1,154,261; Sept. 21; Gaz. vol. 218; p. 740.
Car, Dumping-. J. M. Goodwin. No. 1,154,761; Sept. 28; Gaz. vol. 218; p. 940.
Car, Dumping-. W. D. Skidmore. No. 1,154,446; Sept. 21; Gaz. vol. 218; p. 803.
Car fender, Motor-. G. A. Parmenter. No. 1,153,566; Sept. 14; Gaz. vol. 218; p. 466.
Car fender, Street-. H. W. Bodendieck. No. 1,154,686; Sept. 28; Gaz. vol. 218; p. 915.
Car, Grain-tight box-. P. Parke. No. 1,153,249; Sept. 14; Gaz. vol. 218; p. 350.
Car journal-boxes, Dust-guard for. H. L. Haskell. No. 1,153,551; Sept. 14; Gaz. vol. 218; p. 401.
Car-roof. J. E. O'Brien and C. Harter. No. 1,154,425; Sept. 21; Gaz. vol. 218; p. 796.
Car safety appliance, Railway-. T. B. La Rue. No. 1,152,823; Sept. 7; Gaz. vol. 218; p. 163.
Car side bearing, Railway-. G. A. Johnson. No. 1,153,792; Sept. 14; Gaz. vol. 218; p. 544.
Car side bearing, Railway-. J. F. O'Connor. No. 1,153,699; Sept. 14; Gaz. vol. 218; p. 511.
Car signal, Motor-. J. C. Butler. No. 1,152,704; Sept. 7; Gaz. vol. 218; p. 119.
Car-stake pocket. P. Nikolai. No. 1,154,719; Sept. 28; Gaz. vol. 218; p. 925.
Car street-indicator. G. Buttress. No. 1,153,421; Sept. 14; Gaz. vol. 218; p. 413.
Car; Tank-. W. J. Knox. No. 1,154,324; Sept. 21; Gaz. vol. 218; p. 762.
Car time-finder. G. F. Wakefield. No. 1,153,471; Sept. 14; Gaz. vol. 218; p. 430.
Car-vestibule door and trap. C. E. Griffith. No. 1,152,626; Sept. 7; Gaz. vol. 218; p. 91.
Car-wheel bushing, Mine-. C. A. Specht. No. 1,154,345; Sept. 21; Gaz. vol. 218; p. 709.
Car wheel, Mine-. W. D. Hockensmith. No. 1,154,990; Sept. 28; Gaz. vol. 218; p. 1017.
Car-wheels, Method and apparatus for producing cast-steel. C. G. Robinson and J. E. Schlieper. No. 1,153,258; Sept. 14; Gaz. vol. 218; p. 353.
Car-window cleaner. E. J. Martin. No. 1,153,095; Sept. 7; Gaz. vol. 218; p. 259.
Cars, Automatic electrical-wire coupling for. H. S. Kimmel. No. 1,154,027; Sept. 21; Gaz. vol. 218; p. 660.
Cars, Generator mounting and drive for railway-. W. I. Thomson. No. 1,154,671; Sept. 28; Gaz. vol. 218; p. 911.
Cars, Grip for cable-. A. E. Norris. No. 1,154,652; Sept. 28; Gaz. vol. 218; p. 903.
Cars, Window for vestibules of street-. C. H. Anderson and T. Elliott. No. 1,153,008; Sept. 7; Gaz. vol. 218; p. 230.
Carbid, Manufacturing. H. L. Hartenstein. No. 1,152,506; Sept. 7; Gaz. vol. 218; p. 45.
Carbureter. W. L. Breath. No. 1,153,891; Sept. 21; Gaz. vol. 218; p. 614.
Carbureter. J. C. Carpenter. No. 1,153,999; Sept. 21; Gaz. vol. 218; p. 649.
Carbureter. F. Greiner. No. 1,153,487; Sept. 14; Gaz. vol. 218; p. 436.
Carbureter. F. W. Hagar. No. 1,155,232; Sept. 28; Gaz. vol. 218; p. 1100.
Carbureter. W. H. C. Higgins, Jr. No. 1,154,630; Sept. 23; Gaz. vol. 218; p. 895.
Carbureter. A. J. Hippel. No. 1,153,077; Sept. 7; Gaz. vol. 218; p. 252.
Carbureter. H. E. McCray. No. 1,153,436; Sept. 14; Gaz. vol. 218; p. 418.
Carbureter. H. C. Merriam and L. M. York. No. 1,154,530; Sept. 21; Gaz. vol. 218; p. 831.
Carbureter. S. P. Sanders. No. 1,152,915; Sept. 7; Gaz. vol. 218; p. 197.
Carbureter. T. O. Winger. No. 1,155,184; Sept. 28; Gaz. vol. 218; p. 1086.
Carbureting. T. D. Bottome. No. 1,153,889; Sept. 21; Gaz. vol. 218; p. 613.
Cards and holder therefor, Recording and computing. A. H. Carrill. No. 1,153,761; Sept. 14; Gaz. vol. 218; p. 531.
Card-clothing. E. Graf. No. 1,154,856; Sept. 28; Gaz. vol. 218; p. 971.
Card-fleece-width controller. C. A. Allen. No. 1,152,389; Sept. 7; Gaz. vol. 218; p. 3.
Card-shuffler. C. T. Hall. No. 1,154,988; Sept. 28; Gaz. vol. 218; p. 1016.
Card, Playing-. J. J. Coll. No. 1,152,605; Sept. 7; Gaz. vol. 218; p. 83.
Cards, Playing-. E. V. Elcouin. No. 1,153,899; Sept. 21; Gaz. vol. 218; p. 616.
Carriage runner, Baby-. E. W. Johnson. No. 1,154,991; Sept. 28; Gaz. vol. 218; p. 1017.
Carriage-top. A. P. Seramor. No. 1,152,662; Sept. 7; Gaz. vol. 218; p. 104.
Carrier: *See*—
Braiding-carrier. Luggage-carrier.
Egg-carrier. Spool-carrier.
Lantern-carrier.
Carton-machine. C. Redd. No. 1,153,571; Sept 14; Gaz. vol. 218; p. 468.
Cartridge. P. Butler. No. 1,153,860; Sept. 14; Gaz. vol. 218; p. 569.
Cartridge, Blasting-. P. Heylandt. No. 1,154,770; Sept. 28; Gaz. vol. 218; p. 943.
Case: *See*—
Bottle-case. Tire-case.
Can-case. Watch and clock holding case.
Egg-shipping case.
Mailing-case.
Case-hardening. A. W. Machlet. No. 1,152,959; Sept. 7; Gaz. vol. 218; p. 213.
Cash-register. J. P. Cleal. No. 1,154,096; Sept. 21; Gaz. vol. 218; p. 684.
Cash-register. M. Jacob. No. 1,153,309; Sept. 14; Gaz. vol. 218; p. 371.
Cash-register. W. H. Muzzy. No. 1,153,330; Sept. 14; Gaz. vol. 218; p. 379.
Cash-register. J. Vuillaume and F. Marbach. No. 1,153,361; Sept. 14; Gaz. vol. 218; p. 392.
Cash-register, Departmental. J. A. Werner. No. 1,152,582; Sept. 7; Gaz. vol. 218; p. 75.
Cash-register, Multiple. E. J. Von Pein. No. 1,153,360; Sept. 14; Gaz. vol. 218; p. 391.
Caster and the like, Ball-bearing. B. H. Bower and O. L. Osborn. No. 1,153,838; Sept. 14; Gaz. vol. 218; p. 560.
Caster, Ball-. R. H. Sleicher. No. 1,154,448; Sept. 21; Gaz. vol. 218; p. 805.
Caster, Glide-. A. T. Petersen. No. 1,155,269; Sept. 28; Gaz. vol. 218; p. 1111.
Casting and uniting metals. A. M. Craig. No. 1,153,197; Sept. 14; Gaz. vol. 218; p. 331.
Casting-machine. C. M. Grey. No. 1,153,220; Sept. 14; Gaz. vol. 218; p. 340.
Castings and the like, Device for dressing. T. Stiegelmeyer. No. 1,152,570; Sept. 7; Gaz. vol. 218; p. 71.
Castings, Method of and mold for making. C. B. Jacobs. No. 1,153,231; Sept. 14; Gaz. vol. 218; p. 344.
Catalysts, Manufacture of. R. F. Bacon and B. H. Nicolet. No. 1,152,591; Sept. 7; Gaz. vol. 218; p. 79.
Catheter-user's standard apparatus. J. F. Spalding. No. 1,154,668; Sept. 28; Gaz. vol. 218; p. 910.
Cathode for electrolytic cells. F. G. Wheeler. No. 1,152,772; Sept. 7; Gaz. vol. 218; p. 144.
Celluloid-like mass and production thereof, Non-inflammable. E. Bronnert. No. 1,153,596; Sept. 14; Gaz. vol. 218; p. 470.
Cellulose and other products, Producing. B. M. E. L. P. von Ehrenthal. No. 1,153,834; Sept. 14; Gaz. vol. 218; p. 559.
Cement-applying machine. W. F. Lautenschlager. No. 1,154,419; Sept. 21; Gaz. vol. 218; p. 794.
Cement clinker, Burning Portland-. T. A. Edison. No. 1,152,613; Sept. 7; Gaz. vol. 218; p. 85.
Centerless engine. L. Passmore. No. 1,153,702; Sept. 14; Gaz. vol. 218; p. 512.
Centrifugal machine, Continuous-discharge. J. J. Armstrong. No. 1,153,307; Sept. 14; Gaz. vol. 218; p. 393.
Centrifugal separator. J. McCallum. No. 1,154,575; Sept. 21; Gaz. vol. 218; p. 847.
Chain. J. C. Wacha. No. 1,153,362; Sept. 14; Gaz. vol. 218; p. 392.
Chain-link. A. S. Bixby. No. 1,152,476; Sept. 7; Gaz. vol. 218; p. 34.
Chain-link. A. S. Bixby. No. 1,152,477; Sept. 7; Gaz. vol. 218; p. 34.
Chains, Ball-and-socket attachment for. H. Scherer. No. 1,153,451; Sept. 14; Gaz. vol. 218; p. 424.
Chair: *See*—
Convertible chair. Rail-chair.
Morris chair. Theater-chair.
Chair. G. Hunzinger. No. 1,154,021; Sept. 21; Gaz. vol. 218; p. 658.
Chair and step, Convertible. E. J. Jones. No. 1,154,403; Sept. 21; Gaz. vol. 218; p. 789.
Chair-lock. C. S. Cilley. No. 1,155,043; Sept. 28; Gaz. vol. 218; p. 1034.
Check-protector. L. W. Jaderstrom. No. 1,154,248; Sept. 21; Gaz. vol. 218; p. 735.
Check-protector. S. T. Thorson. No. 1,153,832; Sept. 14; Gaz. vol. 218; p. 558.
Chimney-hood. G. M. Murray. No. 1,154,044; Sept. 21; Gaz. vol. 218; p. 666.
Chock, Vehicle-. H. P. Cope. No. 1,153,607; Sept. 14; Gaz. vol. 218; p. 480.
Chocolate-molding machines, Feeding device for. C. Clemens. No. 1,152,739; Sept. 7; Gaz. vol. 218; p. 149.
Chopper: *See*—
Cotton-chopper.
Chuck. J. L. Bernard. No. 1,154,283; Sept. 21; Gaz. vol. 218; p. 748.
Chuck. H. A. Borresen. No. 1,153,995; Sept. 21; Gaz. vol. 218; p. 648.
Chuck. E. Uhlig and K. Bauch. No. 1,154,898; Sept. 28; Gaz. vol. 218; p. 985.
Chuck, Drill-. W. Coulson. No. 1,153,033; Sept. 7; Gaz. vol. 218; p. 238.
Chuck, Drill-. W. Farquharson. No. 1,154,299; Sept. 21; Gaz. vol. 218; p. 752.

Churn, Chair-operated. A. Szasz. No. 1,153,272; Sept. 14; Gaz. vol. 218; p. 358.
Chute, Ice-. J. C. Warren. No. 1,153,658; Sept. 14; Gaz. vol. 218; p. 496.
Chute, Multiple-coin. C. H. Green. No. 1,152,806; Sept. 7; Gaz. vol. 218; p. 156.
Chutes, Sack-holder for grain-. C. E. Penrod. No. 1,154,722; Sept. 28; Gaz. vol. 218; p. 926.
Cigar-cutter. C. Asendorf, Jr. No. 1,154,158; Sept. 21; Gaz. vol. 218; p. 704.
Cigar self-lighter. W. C. Birmeley. No. 1,153,419; Sept. 14; Gaz. vol. 218; p. 413.
Cigarette-box. C. W. Hubbard, Jr. No. 1,152,815; Sept. 7; Gaz. vol. 218; p. 160.
Cigarette-container. M. Wolf. No. 1,154,589; Sept. 21; Gaz. vol. 218; p. 852.
Cigarette-mouthpiece. J. Rovira and H. Ahrle. No. 1,153,574; Sept. 14; Gaz. vol. 218; p. 469.
Cigarette packing and sealing machine. D. Pantazi. No. 1,155,002; Sept. 28; Gaz. vol. 218; p. 1020.
Cigarette-seam-finishing machine. P. A. Drucklieb. No. 1,152,716; Sept. 7; Gaz. vol. 218; p. 124.
Cigarette-seam-finishing machine. P. A. Drucklieb. No. 1,152,717; Sept. 7; Gaz. vol. 218; p. 124.
Cinematographic apparatus. W. Bauersfeld. No. 1,154,835; Sept. 28; Gaz. vol. 218; p. 965.
Circuit-breaker. J. Cuculic. No. 1,153,765; Sept. 14; Gaz. vol. 218; p. 533.
Circuit-closer. J. W. Darley, Jr. No. 1,155,302; Sept. 28; Gaz. vol. 218; p. 1121.
Circuit-closer, Float-operated. D. F. Thomson. No. 1,153,142; Sept. 7; Gaz. vol. 218; p. 273.
Circuit-closing device. F. M. Rosenfeld. No. 1,154,130; Sept. 21; Gaz. vol. 218; p. 695.
Circuit-controller. E. J. Murphy. No. 1,154,266; Sept. 21; Gaz. vol. 218; p. 741.
Circuit-controller. W. C. Reed. No. 1,152,843; Sept. 7; Gaz. vol. 218; p. 171.
Circuit-controller. A. Simon. No. 1,154,733; Sept. 28; Gaz. vol. 218; p. 930.
Cistern neck-ring and cover. H. W. Farris. No. 1,152,618; Sept. 7; Gaz. vol. 218; p. 87.
Cistern, Sip-on-flushing. J. Holt. No. 1,154,186; Sept. 21; Gaz. vol. 218; p. 713.
Clamp: *See*—
Cable-clamp. Pipe-clamp.
Fence-clamp. Skate-clamp.
Clamp. F. Bain. No. 1,154,904; Sept. 28; Gaz. vol. 218; p. 987.
Clamp. W. J. Hunkin. No. 1,153,552; Sept. 14; Gaz. vol. 218; p. 461.
Clamp. W. D. Kennedy. No. 1,154,405; Sept. 21; Gaz. vol. 218; p. 790.
Clamps to strips of fabric, Machine for use in applying. K. F. Jensen. No. 1,154,249; Sept. 21; Gaz. vol. 218; p. 735.
Clamping device. E. J. Madden. No. 1,152,530; Sept. 7; Gaz. vol. 218; p. 56.
Clapboard-marker. H. Neistadt. No. 1,153,171; Sept. 7; Gaz. vol. 218; p. 284.
Clasp: *See*—
Fabric-clasp. Safety-clasp.
Footwear-clasp. Suspender-clasp.
Garment-clasp. Tie-clasp.
Cleaner: *See*—
Beet-cleaner. Gasket-seat cleaner.
Boiler-cleaner. Tube-cleaner.
Car-window cleaner. Wind-shield cleaner.
Eraser-cleaner.
Cleaning appliance. T. J. Browning. No. 1,154,309; Sept. 21; Gaz. vol. 218; p. 779.
Climber, Stack-. C. Stoolfire. No. 1,153,583; Sept. 14; Gaz. vol. 218; p. 471.
Climbing device, Hill-. J. Romanczak. No. 1,154,657; Sept. 28; Gaz. vol. 218; p. 905.
Clip: *See*—
Paper-clip. Pen and pencil clip.
Clip. W. Rodeck. No. 1,153,135; Sept. 7; Gaz. vol. 218; p. 271.
Clock. W. H. Thompson. No. 1,154,076; Sept. 21; Gaz. vol. 218; p. 677.
Clock, Calendar-. U. S. Hottinga. No. 1,153,492; Sept. 14; Gaz. vol. 218; p. 438.
Clock winding and setting mechanism. S. Aronson. No. 1,153,533; Sept. 14; Gaz. vol. 218; p. 454.
Closet: *See*—
Sanitary closet. Water-closet.
Cloth, Apparatus for the treatment of. D. Gessner. No. 1,154,758; Sept. 28; Gaz. vol. 218; p. 939.
Clothes-boiler. W. Lindeberg. No. 1,154,786; Sept. 28; Gaz. vol. 218; p. 948.
Clothes-drier. A. Wayditch. No. 1,154,080; Sept. 21; Gaz. vol. 218; p. 678.
Clothes-hanger. E. J. Deragon. No. 1,153,677; Sept. 14; Gaz. vol. 218; p. 503.
Clothes-line. F. S. Hetrick. No. 1,152,948; Sept. 7; Gaz. vol. 218; p. 209.
Clothes-line apparatus. J. T. McDonough. No. 1,154,524; Sept. 21; Gaz. vol. 218; p. 829.
Clothes-line prop. S. G. Leyson. No. 1,154,704; Sept. 28; Gaz. vol. 218; p. 920.
Clothes-pin. F. Luersen. No. 1,155,254; Sept. 28; Gaz. vol. 218; p. 1107.
Clothes-pounder. A. J. Ruppert. No. 1,152,438; Sept. 7; Gaz. vol. 218; p. 20.
Clothes-rack. M. W. Yela. No. 1,154,083; Sept. 21; Gaz. vol. 218; p. 679.
Clutch. C. Kachel. No. 1,153,601; Sept. 14; Gaz. vol. 218; p. 507.
Clutch. O. G. Pfeiffer. No. 1,153,853; Sept. 14; Gaz. vol. 218; p. 566.
Clutch. O. G. Pfeiffer. No. 1,153,854; Sept. 14. Gaz. vol. 218; p. 566.
Clutch. A. O. Sientz. No. 1,153,831; Sept. 14; Gaz. vol. 218; p. 558.
Clutch device. V. De Marais. No. 1,155,220; Sept. 28; Gaz. vol. 218; p. 1096.
Clutch device. B. Holt. No. 1,154,395; Sept. 21; Gaz. vol. 218; p. 780.
Clutch device. J. C. Moore. No. 1,154,190; Sept. 21; Gaz. vol. 218; p. 716.
Clutch device for preventing reverse rotation. C. A. Lindstrom. No. 1,153,557; Sept. 14; Gaz. vol. 218; p. 463.
Clutch device, Safety. E. E. Hannah. No. 1,153,782; Sept. 14; Gaz. vol. 218; p. 540.
Clutch, Friction-. N. Lombard. No. 1,153,035; Sept. 14; Gaz. vol. 218; p. 489.
Clutch, Friction-. M. C. Sharpnack. No. 1,154,891; Sept. 28; Gaz. vol. 218; p. 982.
Clutch mechanism for motor haulage-vehicles. H. Bauchet. No. 1,153,014; Sept. 7; Gaz. vol. 218; p. 232.
Clutch transmission, Disk-. W. L. Fee. No. 1,154,749; Sept. 28; Gaz. vol. 218; p. 936.
Coal, Purification of. F. W. C. Schniewind. No. 1,153,182; Sept. 7; Gaz. vol. 218; p. 288.
Coal, Separation of. F. W. C. Schniewind. No. 1,152,442; Sept. 7; Gaz. vol. 218; p. 21.
Coaster-brake for motor-cycles. F. S. Ellett. No. 1,154,915; Sept. 28; Gaz. vol. 218; p. 991.
Coating apparatus. J. Meade. No. 1,154,874; Sept. 28; Gaz. vol. 218; p. 976.
Coating fabrics. J. Meade. No. 1,154,875; Sept. 28; Gaz. vol. 218; p. 977.
Coating with aluminium. E. Morf. No. 1,154,651; Sept. 28; Gaz. vol. 218; p. 903.
Coatings to metallic articles, Applying protective. C. and C. Mark, Jr. No. 1,155,317; Sept. 28; Gaz. vol. 218; p. 1127.
Cock, Automatic cylinder-. E. A. Daymon. No. 1,153,770; Sept. 14; Gaz. vol. 218; p. 535.
Cock or faucet, Self-closing. A. C. Brown. No. 1,153,370; Sept. 14; Gaz. vol. 218; p. 395.
Cock, Stop and waste. H. F. Schroeder. No. 1,153,645; Sept. 14; Gaz. vol. 218; p. 491.
Cocks, Muffler attachment for blow-off. F. Marsh. No. 1,153,327; Sept. 14; Gaz. vol. 218; p. 377.
Coil-forming apparatus. M. Sandfield. No. 1,153,344; Sept. 14; Gaz. vol. 218; p. 384.
Coin-detector. C. H. Green. No. 1,154,919; Sept. 28; Gaz. vol. 218; p. 993.
Coin-operated lock, Automatic. D. W. Corbet. No. 1,154,381; Sept. 21; Gaz. vol. 218; p. 782.
Coin-receptacle. J. W. Elvyn and E. A. Christoph. No. 1,154,239; Sept. 21; Gaz. vol. 218; p. 732.
Coin-registering mechanism. W. P. Dun Lany. No. 1,154,239; Sept. 21; Gaz. vol. 218; p. 732.
Coke-cakes, Apparatus for utilising the heat of. C. Semmler. No. 1,153,453; Sept. 14; Gaz. vol. 218; p. 424.
Coke-oven. K. Ellingen. No. 1,154,298; Sept. 21; Gaz. vol. 218; p. 752.
Coke-ovens, Machine for leveling coal in beehive. J. H. Huhn. No. 1,155,066; Sept. 28; Gaz. vol. 218; p. 1043.
Collar. J. Kaufman. No. 1,153,603; Sept. 14; Gaz. vol. 218; p. 508.
Collar. A. L. Price. No. 1,153,134; Sept. 7; Gaz. vol. 218; p. 271.
Collar. H. E. Shumway. No. 1,153,455; Sept. 14; Gaz. vol. 218; p. 425.
Collar-band. W. J. Davidson. No. 1,154,909; Sept. 28; Gaz. vol. 218; p. 989.
Collar-folding machine. C. J. Prankard, Jr. No. 1,153,337; Sept. 14; Gaz. vol. 218; p. 381.
Collar, Horse-. W. A. Parr. No. 1,153,852; Sept. 14; Gaz. vol. 218; p. 565.
Collar, Soft fold-over. R. Sudiah. No. 1,154,943; Sept. 28; Gaz. vol. 218; p. 1001.
Collar-support. P. H. Thorandt and A. Kohn. No. 1,154,550; Sept. 21; Gaz. vol. 218; p. 838.
Collar, Wing-. H. Bryce. No. 1,152,483; Sept. 7; Gaz. vol. 218; p. 37.
Comb: *See*—
Hair-drying comb.
Comb. W. S. Bechtold. No. 1,153,669; Sept. 14; Gaz. vol. 218; p. 500.
Comb. L. M. Kellett. No. 1,155,247; Sept. 28; Gaz. vol. 218; p. 1105.
Combustion device. W. S. Barnett. No. 1,152,691; Sept. 7; Gaz. vol. 218; p. 114.
Combustion-engine. W. A. Sorg. No. 1,153,526; Sept. 14; Gaz. vol. 218; p. 451.
Combustion-engine, Two-stroke-cycle. T. Reid. No. 1,152,659; Sept. 7; Gaz. vol. 218; p. 103.
Composing machine, Line-. T. S. Homans. No. 1,153,079; Sept. 7; Gaz. vol. 218; p. 253.

Composing machines, Escapement mechanism for line-. H. A. Armstrong. No. 1,152,688; Sept. 7; Gaz. vol. 218; p. 113.
Composition of matter. B. B. Goldsmith. No. 1,152,625; Sept. 7; Gaz. vol. 218; p. 90.
Compressor, Rotary. W. Shore. No. 1,153,874; Sept. 14; Gaz. vol. 218; p. 574.
Compressors, Regulating device for mixed-pressure turbo-. R. H. Rice. No. 1,154,594; Sept. 21; Gaz. vol. 218; p. 855.
Compressors, Regulating means for centrifugal. O. Banner. No. 1,154,959; Sept. 28; Gaz. vol. 218; p. 1006.
Computing and recording machine. S. F. Smith. No. 1,152,664; Sept. 7; Gaz. vol. 218; p. 105.
Computing device. H. Oberg. No. 1,153,565; Sept. 14; Gaz. vol. 218; p. 465.
Computing-machine, Keyboard. C. Wales. No. 1,154,355; Sept. 21; Gaz. vol. 218; p. 773.
Computing merchandise-cutter. F. M. Wilson. No. 1,155,183; Sept. 28; Gaz. vol. 218; p. 1086.
Concaving-machine cutter. J. Strootman. No. 1,153,461; Sept. 14; Gaz. vol. 218; p. 427.
Concentrator-tables and applying the same, Protective covering for. E. A. Baylis. (Reissue.) No. 13,981; Sept. 21; Gaz. vol. 218; p. 855.
Concrete-block mold, Tongue-and-groove-. J. J. Hostetter and W. O. Rice. No. 1,153,846; Sept. 14; Gaz. vol. 218; p. 563.
Concrete building. W. C. Broughton. No. 1,155,037; Sept. 28; Gaz. vol. 218; p. 1032.
Concrete building. W. C. Broughton. No. 1,155,038; Sept. 28; Gaz. vol. 218; p. 1032.
Concrete buildings. Mold for use in the construction of. W. H. Roughsedge. No. 1,153,447; Sept. 14; Gaz. vol. 218; p. 422.
Concrete-column mold. C. L. Meyer. No. 1,154,998; Sept. 28; Gaz. vol. 218; p. 1019.
Concrete construction, Reinforced. E. Smulski. No. 1,154,548; Sept. 21; Gaz. vol. 218; p. 837.
Concrete elevating and mixing machine. A. W. Althoff. No. 1,155,190; Sept. 28; Gaz. vol. 218; p. 1088.
Concrete-mixer. E. H. Cowan. No. 1,154,383; Sept. 21; Gaz. vol. 218; p. 783.
Concrete-mixer. J. H. Durepo. No. 1,154,295; Sept. 21; Gaz. vol. 218; p. 751.
Concrete-mixer. J. S. Owens. No. 1,154,051; Sept. 21; Gaz. vol. 218; p. 668.
Concrete-mold or the like. S. M. Randolph. No. 1,153,254; Sept. 14; Gaz. vol. 218; p. 352.
Concrete-molding machine. C. M. Dolen. No. 1,154,387; Sept. 21; Gaz. vol. 218; p. 784.
Concrete-pipe machine, Continuous. J. H. Carr and A. C. Routhe. No. 1,153,599; Sept. 14; Gaz. vol. 218; p. 477.
Concrete revetment. J. McGillivray. No. 1,154,867; Sept. 28; Gaz. vol. 218; p. 974.
Concrete structures, Means for suspending objects from reinforced. A. Jordahl. No. 1,155,243; Sept. 28; Gaz. vol. 218; p. 1103.
Concrete-tank-lining material. H. Boesari-Fischer. No. 1,152,783; Sept. 7; Gaz. vol. 218; p. 147.
Condenser. J. F. Grace. No. 1,153,217; Sept. 14; Gaz. vol. 218; p. 339.
Condenser and self-condensing turbine, Rotary. E. S. G. Rees. No. 1,154,434; Sept. 21; Gaz. vol. 218; p. 799.
Condenser, Barometric. L. A. Woodard. No. 1,153,001; Sept. 7; Gaz. vol. 218; p. 228.
Condenser, Steam-. D. B. Morison. No. 1,153,814; Sept. 14; Gaz. vol. 218; p. 551.
Condensing apparatus. O. P. Ostergren. No. 1,155,090; Sept. 28; Gaz. vol. 218; p. 1053.
Conductor, Leading-in. E. Weintraub. No. 1,154,081; Sept. 21; Gaz. vol. 218; p. 678.
Conductor-support. W. M. Mordey, J. W. Astley, and D. B. Saunderson. No. 1,153,813; Sept. 14; Gaz. vol. 218; p. 550.
Conduits conveying loose, abrasive, and disintegrated materials, Suction-machine for. L. A. Griffin. No. 1,153,684; Sept. 14; Gaz. vol. 218; p. 505.
Conduits, Locking device for sectional. I. Stearns. No. 1,152,568; Sept. 7; Gaz. vol. 218; p. 70.
Connection-box. W. F. Bouché. No. 1,153,019; Sept. 7; Gaz. vol. 218; p. 234.
Conservatory, Window-. H. J. Moore. No. 1,152,899; Sept. 7; Gaz. vol. 218; p. 191.
Construction-block. T. L. Bostwick. No. 1,155,035; Sept. 28; Gaz. vol. 218; p. 1032.
Container. W. Mangold. No. 1,154,710; Sept. 28; Gaz. vol. 218; p. 923.
Container and dispenser. J. Tournadre. No. 1,154,351; Sept. 21; Gaz. vol. 218; p. 772.
Container for goods in transit. H. H. Johnson. No. 1,154,775; Sept. 28; Gaz. vol. 218; p. 945.
Container vessel, Pouring-spout. H. W. Jones. No. 1,152,416; Sept. 7; Gaz. vol. 218; p. 12.
Contour-recorder. C. W. Baldridge. No. 1,154,596; Sept. 28; Gaz. vol. 218; p. 883.
Convertible chair and bed. H. Bittel. No. 1,154,685; Sept. 28; Gaz. vol. 218; p. 915.
Conveyer for levee construction. J. Menzies. No. 1,153,851; Sept. 14; Gaz. vol. 218; p. 565.
Cooker. A. J. Keast. No. 1,153,177; Sept. 7; Gaz. vol. 218; p. 286.
Cooker. A. J. Kercher. No. 1,154,993; Sept. 28; Gaz. vol. 218; p. 1018.
Cooker, Fireless. W. C. Strauss. No. 1,152,861; Sept. 7; Gaz. vol. 218; p. 177.
Cooker for oil-bearing material and the like. A. W. French. No. 1,153,212; Sept. 14; Gaz. vol. 218; p. 336.
Cooker or evaporator, Continuous. A. R. Morse. No. 1,153,170; Sept. 7; Gaz. vol. 218; p. 283.
Cooking retort, Continuous can-. F. W. Burpee. No. 1,154,611; Sept. 28; Gaz. vol. 218; p. 888.
Cooking-utensil attachment. F. J. Brending. No. 1,153,757; Sept. 14; Gaz. vol. 218; p. 530.
Cooking utensil, Electrically-heated. F. Kuhn and F. E. Shallor. No. 1,154,418; Sept. 21; Gaz. vol. 218; p. 794.
Coring-machine. J. W. Linville and C. C. Tillman. No. 1,155,252; Sept. 28; Gaz. vol. 218; p. 1106.
Cork-extractor. E. Balthazar. No. 1,155,193; Sept. 28; Gaz. vol. 218; p. 1089.
Cork, Treatment of. M. Grunzweig. No. 1,155,057; Sept. 28; Gaz. vol. 218; p. 1040.
Corn-husking machine. W. H. Tschantz. No. 1,155,173; Sept. 28; Gaz. vol. 218; p. 1082.
Corn-kiln. R. D. King. No. 1,152,644; Sept. 7; Gaz. vol. 218; p. 97.
Corn-popper. F. A. Traver. No. 1,153,465; Sept. 14; Gaz. vol. 218; p. 428.
Corn-popping machines and the like, Hot-plate-heating means for. F. Hoke. No. 1,152,950; Sept. 7; Gaz. vol. 218; p. 209.
Corn-shelling machine. J. F. Klenzle. No. 1,155,155; Sept. 28; Gaz. vol. 218; p. 1076.
Corset, Apparel-. D. Kops. No. 1,152,954; Sept. 7; Gaz. vol. 218; p. 211.
Corset, Invalid's. J. M. Bodensiek. No. 1,152,595; Sept. 7; Gaz. vol. 218; p. 80.
Cotter-key. R. W. Fouts. No. 1,154,753; Sept. 28; Gaz. vol. 218; p. 937.
Cotter-pin-extracting tool. J. W. Lovering. No. 1,153,849; Sept. 14; Gaz. vol. 218; p. 565.
Cotton-chopper. J. T. Richey. No. 1,152,975; Sept. 7; Gaz. vol. 218; p. 219.
Cotton-gin. A. A. Zalondek. No. 1,155,188; Sept. 28; Gaz. vol. 218; p. 1087.
Cotton packing or baling device. P. K. Richardson. No. 1,154,655; Sept. 28; Gaz. vol. 218; p. 904.
Cotton-separator. J. Y. Hughes. No. 1,153,180; Sept. 7; Gaz. vol. 218; p. 287.
Counter-bracket. S. A. Hathorne. No. 1,155,149; Sept. 28; Gaz. vol. 218; p. 1073.
Counter for blanks. E. G. Staude. No. 1,154,451; Sept 21; Gaz. vol. 218; p. 805.
Coupling: *See*—
Air-brake coupling. Pipe-coupling.
Fire-hose coupling. Railway-coupling.
Flexible coupling. Railway-vehicle coupling.
Hose-coupling. Shaft-coupling.
Coupling. C. A. Tilly. No. 1,154,944; Sept. 28; Gaz. vol. 218; p. 1001.
Coupling-applying apparatus. J. B. Thomas. No. 1,155,108; Sept. 28; Gaz. vol. 218; p. 1059.
Coupling-centering device. W. Kelso. No. 1,155,069; Sept. 28; Gaz. vol. 218; p. 1045.
Coupling-controlling mechanism. I. H. Milliken. No. 1,154,040; Sept. 21; Gaz. vol. 218; p. 664.
Coupling device, Automatic. W. Rachals. No. 1,155,006; Sept. 28; Gaz. vol. 218; p. 1022.
Coupling-head, Fluid-pressure. H. S. Kimmel. No. 1,154,029; Sept. 21; Gaz. vol. 218; p. 660.
Coupling-operating mechanism. I. H. Milliken. No. 1,154,039; Sept. 21; Gaz. vol. 218; p. 664.
Crack-filling machine. J. F. Goetz. No. 1,154,305; Sept. 21; Gaz. vol. 218; p. 755.
Cradle-bit. F. H. Troville. No. 1,152,770; Sept. 7; Gaz. vol. 218; p. 142.
Crate, Bottle-. L. J. Berkley. No. 1,154,906; Sept. 28; Gaz. vol. 218; p. 988.
Crate, Egg-. J. A. Jones. No. 1,153,495; Sept. 14; Gaz. vol. 218; p. 439.
Crate, Knockdown. O. B. Andrews. No. 1,154,831; Sept. 28; Gaz. vol. 218; p. 964.
Crate or case for eggs or the like, Shipping. R. O. Hammond. No. 1,155,234; Sept. 28; Gaz. vol. 218; p. 1100.
Crate, Shipping-. W. J. Schreiner. No. 1,155,105; Sept. 28; Gaz. vol. 218; p. 1058.
Crates, boxes, &c., Fastener for. G. C. D. Miller. No. 1,153,941; Sept. 21; Gaz. vol. 218; p. 830.
Crayon and lead holder, Magazine. H. M. Fuller. No. 1,153,055; Sept. 7; Gaz. vol. 218; p. 245.
Creels, Skewer-support for. C. A. Allen. No. 1,152,388; Sept. 7; Gaz. vol. 218; p. 3.
Crematory, Portable. E. D. Lewis. No. 1,153,871; Sept. 14; Gaz. vol. 218; p. 572.
Cross-head. G. L. Kollberg. No. 1,154,780; Sept. 28; Gaz. vol. 218; p. 946.
Crusher: *See*—
Roll-crusher.
Crusher-mantle. G. F. De Wein. No. 1,154,100; Sept. 21; Gaz. vol. 218; p. 685.
Cryptographic apparatus. R. Guzmán M. No. 1,152,808; Sept. 7; Gaz. vol. 218; p. 157.
Cue, Game-. J. M. Robinette. No. 1,152,908; Sept. 7; Gaz. vol. 218; p. 194.
Culinary timing apparatus. A. Tuerk. No. 1,153,466; Sept. 14; Gaz. vol. 218; p. 429.
Cultivating tool, Soil-. M. Strom and E. Hoglund. No. 1,155,289; Sept. 28; Gaz. vol. 218; p. 1117.

Cultivator. W. L. Beall. No. 1,154,084; Sept. 21; Gaz. vol. 218; p. 680.
Cultivator. F. Braune. No. 1,154,841; Sept. 28; Gaz. vol. 218; p. 966.
Cultivator. J. R. Porter. No. 1,153,952; Sept. 21; Gaz. vol. 218; p. 634.
Cultivator-cuff. R. E. Forrester. No. 1,154,180; Sept. 21; Gaz. vol. 218; p. 712.
Cultivator-fender. P. Schmitt. No. 1,154,063; Sept. 21; Gaz. vol. 218; p. 672.
Culvert-core. C. Older, C. M. Slaymaker, and H. E. Bilger. No. 1,154,720; Sept. 28; Gaz. vol. 218; p. 926.
Cup: *See*—
Drinking-cup. Grease-cup.
Force-cup. Priming-cup.
Current-distribution system. C. L. Fortescue. No. 1,154,852; Sept. 28; Gaz. vol. 218; p. 969.
Current meter, Oscillating-. J. L. Hogan, Jr. No. 1,152,632; Sept. 7; Gaz. vol. 218; p. 93.
Current-motor. S. E. Bemiss and P. Johnson. No. 1,153,416; Sept. 14; Gaz. vol. 218; p. 412.
Current motor, Alternating-. V. A. Fynn. No. 1,152,622; Sept. 7; Gaz. vol. 218; p. 89.
Current rectifier, Alternating-. S. G. Langley. No. 1,152,646; Sept. 7; Gaz. vol. 218; p. 98.
Current-rectifying system, Alternating-. D. M. Bliss. No. 1,152,594; Sept. 7; Gaz. vol. 218; p. 79.
Current-rectifying system, Alternating-. T. A. Edison. No. 1,152,615; Sept. 7; Gaz. vol. 218; p. 86.
Curtain-securing device. F. Swickard. No. 1,154,670; Sept. 28; Gaz. vol. 218; p. 910.
Curtain-stretcher. P. Schneider. No. 1,154,732; Sept. 28; Gaz. vol. 218; p. 929.
Cushion: *See*—
Orthopedic cushion.
Cuspidor. W. G. Beye. No. 1,155,202; Sept. 28; Gaz. vol. 218; p. 1091.
Cutlery, Making. W. F. Gorton. No. 1,155,229; Sept. 28; Gaz. vol. 218; p. 1099.
Cuts, Making. L. W. Burgess. No. 1,155,128; Sept. 28; Gaz. vol. 218; p. 1067.
Cutter: *See*—
Cigar-cutter. Hedge-cutter.
Computing merchandise-cutter. Potato-cutter.
Sheet-metal cutter.
Cutter. B. Von Bültzingslöwen. No. 1,152,577; Sept. 7; Gaz. vol. 218; p. 74.
Cutter attachment. A. E. Berglund. No. 1,154,837; Sept. 28; Gaz. vol. 218; p. 965.
Cutter-head, Rotary. E. Harrold. No. 1,153,910; Sept. 21; Gaz. vol. 218; p. 619.
Cycle frame, Motor-. E. Y. White. No. 1,152,773; Sept. 7; Gaz. vol. 218; p. 144.
Cycle saddle, Motor-. L. A. Oliver. No. 1,153,817; Sept. 14; Gaz. vol. 218; p. 553.
Cycles and like machines, Spring-frame for motor-. S. Whiting. No. 1,154,821; Sept. 28; Gaz. vol. 218; p. 960.
Cycles, Balancing attachment for motor-. R. F. Bryant. No. 1,154,089; Sept. 21; Gaz. vol. 218; p. 681.
Cycles, Twin saddle attachment for motor-. R. G. Hanna. No. 1,154,308; Sept. 21; Gaz. vol. 218; p. 756.
Cylinder-boring machine. C. S. Anderson. No. 1,152,500; Sept. 7; Gaz. vol. 218; p. 78.
Damper-controlling apparatus. D. Belden. No. 1,154,600; Sept. 28; Gaz. vol. 218; p. 884.
Damper-regulator. W. M. Fulton. No. 1,153,214; Sept. 14; Gaz. vol. 218; p. 337.
Date-finder and calendar. J. H. Johnston. No. 1,153,926; Sept. 21; Gaz. vol. 218; p. 625.
Dating-machine. D. C. Hughes. No. 1,152,637; Sept. 7; Gaz. vol. 218; p. 95.
Delivery and counting mechanism. M. Dünnebier and A. Winkler. No. 1,153,294; Sept. 14; Gaz. vol. 218; p. 365.
Dental face-bow. G. B. Snow. No. 1,154,942; Sept. 28; Gaz. vol. 218; p. 1001.
Dental floss-holder. I. W. Litchfield. No. 1,152,825; Sept. 7; Gaz. vol. 218; p. 164.
Dental models, Manufacture of. W. Nielsen. No. 1,152,964; Sept. 7; Gaz. vol. 218; p. 215.
Denture, Artificial. A. E. J. Gregg. No. 1,153,486; Sept. 14; Gaz. vol. 218; p. 436.
Derrick apparatus. T. B. Walston. No. 1,154,460; Sept. 21; Gaz. vol. 218; p. 808.
Derrick-fork. G. E. Cruson. No. 1,153,764; Sept. 14; Gaz. vol. 218; p. 532.
Detector. A. K. Sloan, Jr. No. 1,152,444; Sept. 7; Gaz. vol. 218; p. 22.
Dial test-indicator. F. Zahorik. No. 1,152,686; Sept. 7; Gaz. vol. 218; p. 113.
Diastase preparations and making same. I. Pollak. No. 1,153,640; Sept. 14; Gaz. vol. 218; p. 490.
Die: *See*—
Self-opening die.
Die-casting machine. J. Bate. No. 1,153,749; Sept. 14; Gaz. vol. 218; p. 528.
Die-holder. J. M. Carpenter. No. 1,155,211; Sept. 28; Gaz. vol. 218; p. 1094.
Die-stock. E. A. Oakes. No. 1,154,424; Sept. 21; Gaz. vol. 218; p. 796.
Digging-machine. D. A. Penedo. No. 1,154,545; Sept. 21; Gaz. vol. 218; p. 836.
Dish-pan. A. B. Lloyd. No. 1,154,521; Sept. 21; Gaz. vol. 218; p. 828.
Dish-washer. A. Tanaka. No. 1,154,349; Sept. 21; Gaz. vol. 218; p. 771.
Dish-washing machine. H. P. Marshall and G. E. Daniels. No. 1,152,532; Sept. 7; Gaz. vol. 218; p. 57.
Dish-washing machine. M. F. Redmon. No. 1,153,255; Sept. 14; Gaz. vol. 218; p. 352.
Disinfecting composition. A. S. Horovitz. No. 1,154,925; Sept. 28; Gaz. vol. 218; p. 995.
Disks, Apparatus for embossing the rims of. M. Singewald. No. 1,153,965; Sept. 21; Gaz. vol. 218; p. 638.
Dispensing-container. J. W. and M. W. Schloss. No. 1,154,212; Sept. 21; Gaz. vol. 218; p. 722.
Dispensing-receptacle for paste, &c. L. H. Ballou. No. 1,154,163; Sept. 21; Gaz. vol. 218; p. 706.
Display-cabinet, Sectional. A. L. Eaton. No. 1,154,240; Sept. 21; Gaz. vol. 218; p. 732.
Display-card holder. B. S. Wright. No. 1,152,461; Sept. 7; Gaz. vol. 218; p. 27.
Display device. I. M. Cutler. No. 1,152,795; Sept. 7; Gaz. vol. 218; p. 152.
Distillate-burner. T. E. Potts. No. 1,153,516; Sept. 14; Gaz. vol. 218; p. 448.
Distillation. A. Woolner, Jr. No. 1,153,992; Sept. 21; Gaz. vol. 218; p. 647.
Distributer-elbow. A. Rosenthal. No. 1,154,658; Sept. 28; Gaz. vol. 218; p. 905.
Ditch-guard. J. Bates. No. 1,153,186; Sept. 14; Gaz. vol. 218; p. 328.
Ditching-machine. E. T. Heggland. No. 1,153,916; Sept. 21; Gaz. vol. 218; p. 621.
Ditching-machine. W. Huberts. No. 1,152,893; Sept. 7; Gaz. vol. 218; p. 189.
Ditching-machine apparatus. T. Linga. No. 1,152,524; Sept. 7; Gaz. vol. 218; p. 53.
Ditching-machines, Caterpillar-wheel for. T. Linga. No. 1,152,525; Sept. 7; Gaz. vol. 218; p. 54.
Diver's dress consisting of a shirt or jacket and separate trousers. F. L. Claren. No. 1,153,030; Sept. 7; Gaz. vol. 218; p. 237.
Documents, Production of safety-grounds for. C. G. Petit. No. 1,153,131; Sept. 7; Gaz. vol. 218; p. 270.
Doll-mold. S. Haskell. No. 1,154,247; Sept. 21; Gaz. vol. 218; p. 735.
Door-brace. N. Bohannon. No. 1,154,087; Sept. 21; Gaz. vol. 218; p. 681.
Door-check. J. C. Schmidt. No. 1,155,280; Sept. 28; Gaz. vol. 218; p. 1114.
Door-check. W. J. West. No. 1,154,148; Sept. 21; Gaz. vol. 218; p. 700.
Door-controller. W. K. Henry. No. 1,155,310; Sept. 28; Gaz. vol. 218; p. 1124.
Door, Grain-. O. J. Miller. No. 1,153,509; Sept. 14; Gaz. vol. 218; p. 445.
Door-hanger. W. Coss and W. Stockhill. No. 1,154,001; Sept. 21; Gaz. vol. 218; p. 650.
Door-holder. J. M. Spencer. No. 1,152,446; Sept. 7; Gaz. vol. 218; p. 22.
Door-lock. W. F. Kemble and C. R. Underhill. No. 1,154,573; Sept. 21; Gaz. vol. 218; p. 847.
Door-lock. J. Sedlacsek. No. 1,154,271; Sept. 21; Gaz. vol. 218; p. 743.
Door-lock. W. E. Walker. No. 1,152,865; Sept. 7; Gaz. vol. 218; p. 179.
Door mechanism, Drop-. C. E. Wickersham. No. 1,153,146; Sept. 7; Gaz. vol. 218; p. 275.
Door, Metal. E. Gustafson. No. 1,153,549; Sept. 14; Gaz. vol. 218; p. 460.
Door, Metal. P. E. Hegstedt. No. 1,153,306; Sept. 14; Gaz. vol. 218; p. 369.
Door safety-bolt. E. M. Hoagland. No. 1,154,862; Sept. 28; Gaz. vol. 218; p. 972.
Door securer, holder, or fastener. O. H. Willard. No. 1,154,822; Sept. 28; Gaz. vol. 218; p. 960.
Door, Self-sorting hog-house. W. L. Gilliian. No. 1,154,760; Sept. 28; Gaz. vol. 218; p. 940.
Dough mixing and kneading machine. S. W. Noggle. No. 1,153,246; Sept. 14; Gaz. vol. 218; p. 349.
Dough-rounding-up machine. F. H. Van Houten, Jr. No. 1,153,359; Sept. 14; Gaz. vol. 218; p. 391.
Doughnut-drainer. L. M. Schultz. No. 1,154,812; Sept. 28; Gaz. vol. 218; p. 957.
Dowelling device. E. Earle. No. 1,153,841; Sept. 14; Gaz. vol. 218; p. 561.
Draft device. J. Dain. No. 1,152,936; Sept. 7; Gaz. vol. 218; p. 203.
Draft-equalizer. A. G. Dunnuck. No. 1,154,104; Sept. 21; Gaz. vol. 218; p. 686.
Draft-equalizer. O. T. Hoyt. No. 1,153,388; Sept. 14; Gaz. vol. 218; p. 401.
Draft-rigging. A. Anderson. No. 1,153,007; Sept. 7; Gaz. vol. 218; p. 230.
Draft-rigging, Friction. C. A. Tower. No. 1,154,967; Sept. 28; Gaz. vol. 218; p. 1009.
Draffting implement. C. L. Van Ness. No. 1,154,673; Sept. 28; Gaz. vol. 218; p. 911.
Draftsman's tool. L. J. Heathcote. No. 1,155,059; Sept. 28; Gaz. vol. 218; p. 1040.
Drawer-follower. A. H. Schaffert. No. 1,154,211; Sept. 21; Gaz. vol. 218; p. 721.
Dredges, Power-spud for. E. W. Dotten. No. 1,154,492; Sept. 21; Gaz. vol. 218; p. 818.
Drier: *See*—
Air-drier. Clothes-drier.

Drill: *See*—
Percussion-drill. Post-drill.
Percussive drill.
Drill. W. R. Hockabout. No. 1,154,636; Sept. 28; Gaz. vol. 218; p. 898.
Drill holes, Device for ascertaining the vertical angle and direction of diamond-. H. A. Borresen. No. 1,152,701; Sept. 7; Gaz. vol. 218; p. 118.
Drill-jar. A. S. Calhoun. No. 1,154,483; Sept. 21; Gaz. vol. 218; p. 816.
Drills, Device for rotating pneumatic. H. J. Cook and H. E. Marsden. No. 1,152,882; Sept. 7; Gaz. vol. 218; p. 185.
Drilling and tapping machines, Gaging and reversing means for. R. W. Egan. No. 1,154,296; Sept. 21; Gaz. vol. 218; p. 751.
Drinking-cup. W. R. Watkins. No. 1,155,178; Sept. 28; Gaz. vol. 218; p. 1084.
Drinking-cup, Collapsible. O. A. Hollis. No. 1,154,185; Sept. 21; Gaz. vol. 218; p. 713.
Drive-shoe. G. A. Montgomery. No. 1,153,811; Sept. 14; Gaz. vol. 218; p. 550.
Driving-box cellars, Tool for removing. W. Queitsch No. 1,155,274; Sept. 28; Gaz. vol. 218; p. 1113.
Driving mechanism. P. C. Barton. No. 1,155,128; Sept. 28; Gaz. vol. 218; p. 1065.
Driving mechanism. W. H. George. No. 1,153,157; Sept. 7; Gaz. vol. 218; p. 279.
Drop-ball. E. E. Slick. No. 1,154,734; Sept. 28; Gaz. vol. 218; p. 930.
Drum-brake. W. S. Hutchinson. No. 1,152,511; Sept. 7; Gaz. vol. 218; p. 47.
Drum-pedal. G. Kendrick. No. 1,154,120; Sept. 21; Gaz. vol. 218; p. 692.
Drum-pedal. G. Kendrick. No. 1,154,121; Sept. 21; Gaz. vol. 218; p. 692.
Drying-machine. A. T. Bryant. No. 1,154,560; Sept. 21; Gaz. vol. 218; p. 842.
Dumb-waiter ropes, Rope-guide for. L. Wiebke. No. 1,152,775; Sept. 7; Gaz. vol. 218; p. 144.
Dust collecting mechanism, Window-ventilator. N. M. Rosendahl. No. 1,154,060; Sept. 21; Gaz. vol. 218; p. 671.
Dust-collector, Wet. G. A. Nelson. No. 1,152,414; Sept. 7; Gaz. vol. 218; p. 11.
Dust-removers, Driving device for pneumatic. N. Clouette. No. 1,154,879; Sept. 21; Gaz. vol. 218; p. 782.
Duster. A. G. Barron. No. 1,153,011; Sept. 7; Gaz. vol. 218; p. 231.
Dyestuffs and making same, Red wool-. O. Wulff. No. 1,154,826; Sept. 28; Gaz. vol. 218; p. 962.
Dyestuffs, Azo. H. Levinstein and J. Baddiley. No. 1,153,555; Sept. 14; Gaz. vol. 218; p. 462.
Dynamos, Power-transmission means for operating. A. Churchward. No. 1,153,872; Sept. 14; Gaz. vol. 218; p. 395.
Egg and cream beater. E. M. C. Schmidt. No. 1,154,940; Sept. 28; Gaz. vol. 218; p. 1000.
Egg-beater. E. H. Cooley. No. 1,155,215; Sept. 28; Gaz. vol. 218; p. 1095.
Egg-carrier. M. H. Allen. No. 1,153,185; Sept. 14; Gaz. vol. 218; p. 327.
Egg-shipping case. H. C. Hackett. No. 1,153,620; Sept. 14; Gaz. vol. 218; p. 484.
Egg substitute and making it. B. Ray. No. 1,154,805; Sept. 28; Gaz. vol. 218; p. 954.
Egg tester or container. J. H. Emkins. No. 1,153,298; Sept. 14; Gaz. vol. 218; p. 367.
Electric-apparatus terminal. W. S. Hadaway, Jr. No. 1,154,626; Sept. 28; Gaz. vol. 218; p. 894.
Electric change-over switch. T. Jessen. No. 1,152,516; Sept. 7; Gaz. vol. 218; p. 49.
Electric charges in Sprons materials, Apparatus for neutralizing. P. Baseborn and G. Grossmann. No. 1,154,127; Sept. 21; Gaz. vol. 218; p. 693.
Electric-circuit-timing device. R. C. Leake. No. 1,155,322; Sept. 28; Gaz. vol. 218; p. 1129.
Electric conductors, Take-up for flexible. E. F. Bueckert. No. 1,153,829; Sept. 14; Gaz. vol. 218; p. 557.
Electric connector. E. F. Wakefield. No. 1,154,854; Sept. 21; Gaz. vol. 218; p. 772.
Electric contact device. A. A. Kent. No. 1,152,642; Sept. 7; Gaz. vol. 218; p. 97.
Electric-current-controlling means. C. R. England. No. 1,154,849; Sept. 28; Gaz. vol. 218; p. 968.
Electric device for therapeutics, Thermo-. J. B. Wagoner. No. 1,154,144; Sept. 21; Gaz. vol. 218; p. 699.
Electric furnace. P. Wright. No. 1,152,586; Sept. 7; Gaz. vol. 218; p. 77.
Electric generator, Dynamo-. J. O. Heinze, Jr. No. 1,153,076; Sept. 7; Gaz. vol. 218; p. 251.
Electric generators, Apparatus for regulating the field density of. G. S. Neeley. No. 1,155,001; Sept. 28; Gaz. vol. 218; p. 1020.
Electric heater. W. S. Hadaway, Jr. No. 1,154,111; Sept. 21; Gaz. vol. 218; p. 689.
Electric heater. W. S. Hadaway, Jr. No. 1,154,115; Sept. 21; Gaz. vol. 218; p. 690.
Electric heater. F. Kuhn and F. E. Shailor. No. 1,154,410; Sept. 21; Gaz. vol. 218; p. 792.
Electric heater. F. Kuhn and F. E. Shailor. No. 1,154,411; Sept. 21; Gaz. vol. 218; p. 792.
Electric heater. S. I. Phelps. No. 1,153,703; Sept. 14; Gaz. vol. 218; p. 513.
Electric heater units, Socket for. W. S. Hadaway, Jr., and J. Amon. No. 1,154,112; Sept. 21; Gaz. vol. 218; p. 689.
Electric-light hanger and adjuster for mast-arms. R. W. Van Dorn. No. 1,154,818; Sept. 28; Gaz. vol. 218; p. 959.
Electric-light switch, Time-controlled. W. C. Marrow and J. M. Biddle. No. 1,154,193; Sept. 21; Gaz. vol. 218; p. 715.
Electric-lighting and battery-charging system for vehicles. A. Churchward. No. 1,152,878; Sept. 7; Gaz. vol. 218; p. 183.
Electric-lighting fixture. P. W. Sprecher. No. 1,154,070; Sept. 21; Gaz. vol. 218; p. 674.
Electric machine, Dynamo-. E. B. Williamson. No. 1,152,683; Sept. 7; Gaz. vol. 218; p. 112.
Electric machines, Slot-closing device for dynamo-. W. L. R. Emmet. No. 1,154,496; Sept. 21; Gaz. vol. 218; p. 820.
Electric mains, Safety connection for. M. Höchstädter. No. 1,154,394; Sept. 21; Gaz. vol. 218; p. 786.
Electric meter. C. F. Kettering. No. 1,154,025; Sept. 21; Gaz. vol. 218; p. 659.
Electric regulator, Automatic. E. B. H. Tower, Jr. No. 1,154,945; Sept. 28; Gaz. vol. 218; p. 1001.
Electric snap-switch. J. Zakrzewski and J. Karasinski. No. 1,154,473; Sept. 21; Gaz. vol. 218; p. 813.
Electric switch. C. J. Klein. No. 1,154,030; Sept. 21; Gaz. vol. 218; p. 661.
Electric switch. C. D. Platt. No. 1,152,758; Sept. 7; Gaz. vol. 218; p. 133.
Electric switch. L. Weidlich. No. 1,152,580; Sept. 7; Gaz. vol. 218; p. 75.
Electric wires, Tool for stripping insulation-covering from. H. D. Cahill. No. 1,153,286; Sept. 14; Gaz. vol. 218; p. 363.
Electrical-apparatus contact. T. A. Edison. No. 1,152,616; Sept. 7; Gaz. vol. 218; p. 87.
Electrical conductors, Binding-post for. C. J. Klein. No. 1,154,583; Sept. 21; Gaz. vol. 218; p. 851.
Electrical conductors, Fuse-carrying connecting device for. F. N. Wake. No. 1,153,657; Sept. 14; Gaz. vol. 218; p. 495.
Electrical connector. C. L. Sheppy. No. 1,153,580; Sept. 14; Gaz. vol. 218; p. 470.
Electrical connector. C. L. Sheppy. No. 1,153,581; Sept. 14; Gaz. vol. 218; p. 471.
Electrical controller. F. W. Van Ness. No. 1,153,978; Sept. 21; Gaz. vol. 218; p. 642.
Electrical distribution system. W. H. Cole. No. 1,152,881; Sept. 7; Gaz. vol. 218; p. 184.
Electrical furnace. W. H. Hampton. No. 1,152,505; Sept. 7; Gaz. vol. 218; p. 45.
Electrical heater. F. Kuhn. No. 1,154,417; Sept. 21; Gaz. vol. 218; p. 794.
Electrical heater. F. Kuhn and F. E. Shailor. No. 1,154,412; Sept. 21; Gaz. vol. 218; p. 792.
Electrical heater for liquids. U. Wedge. No. 1,154,856; Sept. 21; Gaz. vol. 218; p. 773.
Electrical heating unit. F. Kuhn and F. E. Shailor. No. 1,154,409; Sept. 21; Gaz. vol. 218; p. 791.
Electrical ignition systems, Mechanical interrupter for. G. Honold. No. 1,154,311; Sept. 21; Gaz. vol. 218; p. 757.
Electrical impulses, Amplifying. R. A. Fessenden. No. 1,154,750; Sept. 28; Gaz. vol. 218; p. 936.
Electrical indicator. R. S. Smith, Jr. No. 1,152,986; Sept. 7; Gaz. vol. 218; p. 223.
Electrical oscillator. F. K. Vreeland. No. 1,152,675; Sept. 7; Gaz. vol. 218; p. 109.
Electrical regulating device. R. E. Sagle. No. 1,152,913; Sept. 7; Gaz. vol. 218; p. 196.
Electrical resistance. C. E. Hay and H. W. Sullivan. No. 1,155,058; Sept. 28; Gaz. vol. 218; p. 1040.
Electrical-system-protecting means. F. Conrad. No. 1,155,134; Sept. 28; Gaz. vol. 218; p. 1060.
Electrical-system protective means. F. Conrad. No. 1,155,133; Sept. 28; Gaz. vol. 218; p. 1068.
Electrically-heated instruments, Connector for. F. Kuhn and F. E. Shailor. No. 1,154,413; Sept. 21; Gaz. vol. 218; p. 792.
Electrically-heated instruments, Handle and terminal connection for. F. Kuhn and F. E. Shailor. No. 1,154,415; Sept. 21; Gaz. vol. 218; p. 793.
Electrode for arc-lights. C. W. Hill. No. 1,154,393; Sept. 21; Gaz. vol. 218; p. 786.
Electrode for electrolytic cells. J. B. Burdett. No. 1,154,092; Sept. 21; Gaz. vol. 218; p. 683.
Electrolier and telephone-cover, Combined. J. McIntosh. No. 1,153,507; Sept. 14; Gaz. vol. 218; p. 444.
Electrolytic apparatus. J. B. Burdett. No. 1,154,091; Sept. 21; Gaz. vol. 218; p. 682.
Electrolytic apparatus. I. H. Levin. No. 1,153,168; Sept. 7; Gaz. vol. 218; p. 282.
Electrolytic cell. E. E. Norquist. No. 1,153,438; Sept. 14; Gaz. vol. 218; p. 419.
Electromagnetic waves, Means for generating and radiating. G. Seibt. No. 1,153,717; Sept. 14; Gaz. vol. 218; p. 518.
Electroplating device. H. E. Boissier. No. 1,154,604; Sept. 28; Gaz. vol. 218; p. 886.
Electrostatic separator for sorting out the constituent parts of commodities according to their permeability. A. Biboliní and P. Riboni. No. 1,154,907; Sept. 28; Gaz. vol. 218; p. 988.

Electrotherapeutic apparatus. S. Brooks, Jr., and C. R. Anderson. No. 1,155,036; Sept. 28; Gaz. vol. 218; p. 1032.
Electrotype-casts and type-forms, Apparatus for cleaning. E. C. Williams. No. 1,152,460; Sept. 7; Gaz. vol. 218; p. 27.
Electrotype embossing-dies, Making. D. D. Evins. No. 1,154,179; Sept. 21; Gaz. vol. 218; p. 711.
Elevator: *See*—
Fluid-elevator.
Elevator-car-controlling mechanism. A. W. Hubers. No. 1,155,065; Sept. 28; Gaz. vol. 218; p. 1043.
Elevator-controlling device, Hydraulic-. J. E. Boyce. No. 1,152,481; Sept. 7; Gaz. vol. 218; p. 36.
Elevators, Electric switch for. F. N. Wake. No. 1,153,656; Sept. 14; Gaz. vol. 218; p. 495.
Embroidering-machine, Automatic. H. Saurer. No. 1,155,007; Sept. 28; Gaz. vol. 218; p. 1022.
Embroidering-machines, Tambour-frame-moving mechanism for. G. Hübner. No. 1,154,397; Sept. 21; Gaz. vol. 218; p. 787.
Embroidery-cutting machine. K. Keller. No. 1,153,498; Sept. 14; Gaz. vol. 218; p. 440.
Embroidery-machine. F. Marschalek. No. 1,154,871; Sept. 28; Gaz. vol. 218; p. 975.
Embroidery-machine. F. Marschalek. No. 1,154,872; Sept. 28; Gaz. vol. 218; p. 976.
Embroidery, Reinforced scalloped edging for. L. Dinkelspiel. No. 1,152,713; Sept. 7; Gaz. vol. 218; p. 128.
Emulsifier. C. D. McHenry. No. 1,154,868; Sept. 28; Gaz. vol. 218; p. 974.
Enamel or glaze composition, Opaque. C. Baesner. No. 1,153,748; Sept. 14; Gaz. vol. 218; p. 528.
End-matching machines, Automatic trip mechanism for. W. Taylor. No. 1,152,990; Sept. 7; Gaz. vol. 218; p. 224.
Engine: *See*—
Centerless engine.
Combustion-engine.
Explosion-engine.
Explosive-engine.
Internal-combustion engine.
Reciprocating-piston engine.
Rotary engine.
Rotary explosive-engine.
Rotary steam-engine.
Steam-engine.
Steam and other fluid-pressure engine.
Traction-engine.
Engine. C. J. Lake. No. 1,154,034; Sept. 21; Gaz. vol. 218; p. 662.
Engine and friction-clutch control. C. B. Weston. No. 1,154,149; Sept. 21; Gaz. vol. 218; p. 701.
Engine control, Hoisting-. W. J. Lilly. No. 1,153,124; Sept. 7; Gaz. vol. 218; p. 267.
Engine-controlling mechanism, Internal-combustion-. B. Krämer. No. 1,153,629; Sept. 14; Gaz. vol. 218; p. 487.
Engine-controlling mechanism, Internal-combustion-. H. Lemp. No. 1,154,785; Sept. 28; Gaz. vol. 218; p. 948.
Engine header attachment. J. A. Baker. No. 1,154,595; Sept. 28; Gaz. vol. 218; p. 883.
Engine heater, Internal-combustion-. W. P. Deppé. No. 1,154,617; Sept. 28; Gaz. vol. 218; p. 881.
Engine igniter mechanism, Internal-combustion-. H. R. Van Deventer. No. 1,153,767; Sept. 14; Gaz. vol. 218; p. 534.
Engine, Improving the roving produced on a carding-. H. Maly. No. 1,154,870; Sept. 28; Gaz. vol. 218; p. 975.
Engine primer, Gas-. E. B. Brauer. No. 1,155,205; Sept. 28; Gaz. vol. 218; p. 1092.
Engine revaporizer, Internal-combustion-. B. MacNutt. No. 1,152,744; Sept. 7; Gaz. vol. 218; p. 133.
Engine-rod connection. W. L. Brown and A. J. Meuwly. No. 1,152,876; Sept. 7; Gaz. vol. 218; p. 182.
Engine safety appliance, Steam-. H. M. St. John. No. 1,154,549; Sept. 21; Gaz. vol. 218; p. 838.
Engine starter, Explosive-. C. E. Hunt. No. 1,153,085; Sept. 7; Gaz. vol. 218; p. 255.
Engines, Charge-heating attachment for explosive-. W. H. Russell. No. 1,153,448; Sept. 14; Gaz. vol. 218; p. 422.
Engines, End-play device for rotary. R. W. Bott. No. 1,153,888; Sept. 21; Gaz. vol. 218; p. 613.
Engines, Fuel-feeding device for internal-combustion. W. Jay. No. 1,153,089; Sept. 7; Gaz. vol. 218; p. 257.
Engines, Fuel-supply apparatus for internal-combustion. F. Weinberg. No. 1,153,660; Sept. 14; Gaz. vol. 218; p. 496.
Engines, Fuel-supply system for. O. Lasche. No. 1,154,994; Sept. 28; Gaz. vol. 218; p. 1018.
Engines, Method of and means for feeding fluid combustible to internal-combustion. K. Steinbecker. No. 1,154,816; Sept. 28; Gaz. vol. 218; p. 958.
Engraving-machine. G. Hamilton. No. 1,153,550; Sept. 14; Gaz. vol. 218; p. 460.
Envelop. I. A. Bean. No. 1,155,198; Sept. 28; Gaz. vol. 218; p. 1090.
Envelop for phonograph disk records and other filing purposes, Filing-. J. P. Eisenhauer. No. 1,154,297; Sept. 21; Gaz. vol. 218; p. 751.
Envelop-machine. F. L. Schmidt. No. 1,152,555; Sept. 7; Gaz. vol. 218; p. 65.
Envelop-making machine. M. Dünnebier and A. Winkler. No. 1,153,293; Sept. 14; Gaz. vol. 218; p. 365.
Envelop, Merchandise-. W. E. Swift. No. 1,155,016; Sept. 28; Gaz. vol. 218; p. 1026.
Envelop, Parcel-post. H. A. Truscott. No. 1,154,276; Sept. 21; Gaz. vol. 218; p. 745.
Envelop, Safety-. C. Miller. No. 1,153,940; Sept. 21; Gaz. vol. 218; p. 630.
Envelop, Safety-. W. J. Norris. No. 1,154,878; Sept. 28; Gaz. vol. 218; p. 978.
Eraser, Blackboard-. R. A. Costello. No. 1,153,894; Sept. 21; Gaz. vol. 218; p. 615.
Eraser-cleaner. J. W. Johnson. No. 1,155,242; Sept. 28; Gaz. vol. 218; p. 1103.
Etching apparatus. R. R. Page. No. 1,152,435; Sept. 7; Gaz. vol. 218; p. 19.
Evaporator. E. W. Holmes. No. 1,153,788; Sept. 14; Gaz. vol. 218; p. 542.
Excavating apparatus. C. R. West. No. 1,154,357; Sept. 21; Gaz. vol. 218; p. 774.
Excavating-shovel. R. Holmes. No. 1,155,153; Sept. 28; Gaz. vol. 218; p. 1075.
Excavator, Two-way bucket. M. G. Bunnell. No. 1,153,997; Sept. 21; Gaz. vol. 218; p. 649.
Exhibitor. J. J. Mouawad. No. 1,155,063; Sept. 28; Gaz. vol. 218; p. 1050.
Expansion-bolt, Drive and screw. H. W. Pleister. No. 1,153,335; Sept. 14; Gaz. vol. 218; p. 380.
Explosion-engine. J. W. Bradley. No. 1,155,297; Sept. 28; Gaz. vol. 218; p. 1119.
Explosion-engine. H. E. Coffin. No. 1,153,675; Sept. 14; Gaz. vol. 218; p. 502.
Explosion-engine. H. E. Coffin. No. 1,153,676; Sept. 14; Gaz. vol. 218; p. 502.
Explosion-engine. E. U. Stewart. No. 1,152,859; Sept. 7; Gaz. vol. 218; p. 177.
Explosive-engine. C. E. Baker and E. M. De Long. No. 1,154,475; Sept. 21; Gaz. vol. 218; p. 813.
Explosive-engine. C. E. Mead. No. 1,154,647; Sept. 28; Gaz. vol. 218; p. 902.
Extension-table. H. Amsel and B. Reichard. No. 1,153,666; Sept. 14; Gaz. vol. 218; p. 499.
Extension-table. I. Karish. No. 1,154,023; Sept. 21; Gaz. vol. 218; p. 658.
Extension-table. M. Wurm. No. 1,154,827; Sept. 28; Gaz. vol. 218; p. 962.
Exterminator. J. E. Dunham. No. 1,153,044; Sept. 7; Gaz. vol. 218; p. 241.
Extractor: *See*—
Cork-extractor.
Laundry-extractor.
Extractor. C. G. R. Hammar. No. 1,153,070; Sept. 7; Gaz. vol. 218; p. 250.
Eye-shield. S. S. Mullen. No. 1,152,431; Sept. 7; Gaz. vol. 218; p. 17.
Eyeglass-guard. F. J. Witts. No. 1,153,000; Sept. 7; Gaz. vol. 218; p. 228.
Eyeglass-mounting. L. F. Adt. No. 1,154,743; Sept. 28; Gaz. vol. 218; p. 933.
Eyeglasses. J. Friedlander. No. 1,154,241; Sept. 21; Gaz. vol. 218; p. 733.
Eyeglasses, Folding. H. E. Leibe. No. 1,152,521; Sept. 7; Gaz. vol. 218; p. 51.
Fabric: *See*—
Bed fabric.
Coating fabric.
Fabric-clasp. L. E. Berebaum. No. 1,154,362; Sept. 21; Gaz. vol. 218; p. 776.
Fan, Ventilator-. D. W. Matsler. No. 1,153,872; Sept. 14; Gaz. vol. 218; p. 573.
Fan-wheel, Centrifugal. E. B. Williams. No. 1,154,152; Sept. 21; Gaz. vol. 218; p. 702.
Fastener. E. M. Strong. No. 1,154,074; Sept. 21; Gaz. vol. 218; p. 676.
Fastener-driving machine, Sheet-metal-. W. H. Ray. No. 1,152,840; Sept. 7; Gaz. vol. 218; p. 169.
Fastener for articles of wearing-apparel. K. E. Allport. No. 1,153,366; Sept. 14; Gaz. vol. 218; p. 393.
Fastener-setting machine. I. Epstein. No. 1,152,719; Sept. 7; Gaz. vol. 218; p. 125.
Fasteners, Attachment for machines for driving. T. B. Rice, Jr. No. 1,153,955; Sept. 21; Gaz. vol. 218; p. 635.
Fastening device. E. Battisti. No. 1,152,778; Sept. 7; Gaz. vol. 218; p. 146.
Fastening device. E. Erickson. No. 1,153,209; Sept. 14; Gaz. vol. 218; p. 336.
Fastening device. F. C. McCormick. No. 1,154,708; Sept. 28; Gaz. vol. 218; p. 922.
Faucet. A. W. Oare. No. 1,154,048; Sept. 21; Gaz. vol. 218; p. 667.
Faucet for urns. C. Harvey. No. 1,153,428; Sept. 14; Gaz. vol. 218; p. 415.
Faucet, Safety-. C. Frank. No. 1,153,863; Sept. 14; Gaz. vol. 218; p. 569.
Faucets, Safety attachment for valves for. B. E. Smith. No. 1,153,264; Sept. 14; Gaz. vol. 218; p. 356.
Fault-detector. W. H. Cole. No. 1,152,880; Sept. 7; Gaz. vol. 218; p. 184.
Feed-bag. D. J. Bowen. No. 1,154,229; Sept. 21; Gaz. vol. 218; p. 728.
Feed-bag for horses. J. H. Hucke, Jr. No. 1,155,238; Sept. 28; Gaz. vol. 218; p. 1102.
Feed-box, Metallic. H. M. Thayer. No. 1,153,729; Sept. 14; Gaz. vol. 218; p. 522.
Feed-pressure regulator. G. S. Melcher. No. 1,155,076; Sept. 28; Gaz. vol. 218; p. 1047.
Feed-water regulator. A. R. Dodge. No. 1,154,592; Sept. 21; Gaz. vol. 218; p. 854.
Feed-water regulator, Automatic. A. R. Dodge. No. 1,154,591; Sept. 21; Gaz. vol. 218; p. 853.
Feeder, Hog-. C. H. Stocking. No. 1,154,073; Sept. 21; Gaz. vol. 218; p. 675.

Feeding sheep and cattle, Means for use in. F. Adams. No. 1,155,189; Sept. 28; Gaz. vol. 218; p. 1088.
Felling machine, Blindstitch-. W. Arbetter. No. 1,152,871; Sept. 7; Gaz. vol. 218; p. 181.
Felly-band for vehicle-wheels, Demountable. J. E. Perrault. No. 1,152,548; Sept. 7; Gaz. vol. 218; p. 61.
Fence clamp, Wire-. W. G. Robinson. No. 1,155,276; Sept. 28; Gaz. vol. 218; p. 1113.
Fence-post. J. E. Fussell. No. 1,153,880; Sept. 14; Gaz. vol. 218; p. 596.
Fence-post. W. C. Stuber. No. 1,154,740; Sept. 28; Gaz. vol. 218; p. 932.
Fence-post. E. T. Warren. No. 1,153,983; Sept. 21; Gaz. vol. 218; p. 644.
Fence-post and wire-fence-fastening means, Metallic. H. A. Paxton. No. 1,153,403; Sept. 14; Gaz. vol. 218; p. 406.
Fender: *See*—
Car-fender.
Cultivator-fender.
Fender. R. D. Braddy. No. 1,154,478; Sept. 21; Gaz. vol. 218; p. 814.
Fender. O. M. Goode. No. 1,153,779; Sept. 14; Gaz. vol. 218; p. 539.
Ferries, Automatic coupling device for. W. H. Seltzer. No. 1,154,183; Sept. 21; Gaz. vol. 218; p. 696.
Fertiliser-distributer. W. W. Birnstock. No. 1,155,204; Sept. 28; Gaz. vol. 218; p. 1092.
Figure, Air-operated. L. A. Mapel. No. 1,155,074; Sept. 28; Gaz. vol. 218; p. 1047.
File or like cutting-tool. W. H. Denley. No. 1,154,578; Sept. 21; Gaz. vol. 218; p. 849.
Filing appliance. E. B. Moseley. No. 1,153,562; Sept. 14; Gaz. vol. 218; p. 464.
Filing appliance. E. B. Moseley. No. 1,154,598; Sept. 21; Gaz. vol. 218; p. 854.
Filing appliance. E. T. Silvius. No. 1,154,135; Sept. 21; Gaz. vol. 218; p. 696.
Filling device. H. S. Benjamin. No. 1,154,476; Sept. 21; Gaz. vol. 218; p. 813.
Film-reel holder. A. E. Sengstock. No. 1,153,963; Sept. 21; Gaz. vol. 218; p. 637.
Filter. W. E. Gorton. No. 1,154,507; Sept. 21; Gaz. vol. 218; p. 824.
Filter. J. Hotchkiss. No. 1,153,920; Sept. 21; Gaz. vol. 218; p. 623.
Filter. H. B. Miller. No. 1,153,437; Sept. 14; Gaz. vol. 218; p. 419.
Filter. E. Zahm. No. 1,153,282; Sept. 14; Gaz. vol. 218; p. 361.
Filter-cleaning apparatus. W. F. L. Beth. No. 1,153,751; Sept. 14; Gaz. vol. 218; p. 528.
Filtering apparatus. C. J. Brockbank. No. 1,152,875; Sept. 7; Gaz. vol. 218; p. 182.
Fire-alarm. R. L. Brinkley. No. 1,154,480; Sept. 21; Gaz. vol. 218; p. 815.
Fire-alarm, Automatic. W. F. Caldwell. No. 1,152,932; Sept. 7; Gaz. vol. 218; p. 203.
Fire-alarm signaling-machine, Non-interfering succession-movement. G. O. Cranmer and G. V. Tudhope. No. 1,152,710; Sept. 7; Gaz. vol. 218; p. 121.
Fire-alarm system. F. Gottschalk. No. 1,152,942; Sept. 7; Gaz. vol. 218; p. 207.
Fire-alarm system. J. McFell. No. 1,152,527; Sept. 7; Gaz. vol. 218; p. 54.
Fire-alarms, Circuit-closer for. F. W. Bost. No. 1,153,755; Sept. 14; Gaz. vol. 218; p. 530.
Fire-escape. J. J. Daniels. No. 1,153,200; Sept. 14; Gaz. vol. 218; p. 332.
Fire-escape. O. Inde. No. 1,153,622; Sept. 14; Gaz. vol. 218; p. 484.
Fire-escape. C. H. Morand. No. 1,152,961; Sept. 7; Gaz. vol. 218; p. 214.
Fire-extinguishing liquid. J. W. Aylsworth. No. 1,154,161; Sept. 21; Gaz. vol. 218; p. 705.
Fire-fighting apparatus. J. A. Thomas. No. 1,152,452; Sept. 7; Gaz. vol. 218; p. 25.
Fire-hose coupling. H. W. Sisson. No. 1,153,406; Sept. 14; Gaz. vol. 218; p. 408.
Fire-lighter. H. E. Griffin. No. 1,153,065; Sept. 7; Gaz. vol. 218; p. 248.
Fires in compartments at a distance, Apparatus for indicating. W. Rich. No. 1,154,128; Sept. 21; Gaz. vol. 218; p. 694.
Firearm. C. A. Nelson. No. 1,152,750; Sept. 7; Gaz. vol. 218; p. 136.
Fireplace-back. F. P. Nale and E. J. Hudnall. No. 1,154,045; Sept. 21; Gaz. vol. 218; p. 666.
Fireplace heating appliance. G. H. Russell. No. 1,152,912; Sept. 7; Gaz. vol. 218; p. 195.
Firing device, Underfeed. O. Virden. No. 1,153,979; Sept. 21; Gaz. vol. 218; p. 642.
Fish-hook. S. T. Bonner. No. 1,152,698; Sept. 7; Gaz. vol. 218; p. 117.
Fish-hook. J. S. Bosserman. No. 1,154,168; Sept. 21; Gaz. vol. 218; p. 708.
Fish-line-reel holder. H. E. Manning. No. 1,154,123; Sept. 21; Gaz. vol. 218; p. 692.
Fish-net-casting device. H. F. Dorsey. No. 1,154,563; Sept. 21; Gaz. vol. 218; p. 843.
Fishing-line attachment. S. Forster. No. 1,153,053; Sept. 7; Gaz. vol. 218; p. 244.
Flange-union wrench. C. G. Dennis. No. 1,152,885; Sept. 7; Gaz. vol. 218; p. 186.
Flanging and heading machine, Combined. L. C. Sharp. No. 1,154,661; Sept. 28; Gaz. vol. 218; p. 906.
Flash-light. H. M. Koretzky. No. 1,155,249; Sept. 28; Gaz. vol. 218; p. 1105.
Flash-light, Portable electric. C. J. Sagebrecht. No. 1,155,100; Sept. 28; Gaz. vol. 218; p. 1057.
Flash-lights, Push and pinch contact-plug for. A. Brody. No. 1,153,420; Sept. 14; Gaz. vol. 218; p. 413.
Flask: *See*—
Molding-flask.
Snap-flask.
Flexible coupling. W. J. Francke. No. 1,155,227; Sept. 28; Gaz. vol. 218; p. 1098.
Flexible joint. E. F. Berry. No. 1,153,187; Sept. 14; Gaz. vol. 218; p. 328.
Flexible joint for dolls, &c. G. R. Dice. No. 1,155,135; Sept. 28; Gaz. vol. 218; p. 1069.
Floats, Combination guide and line-clasp for. L. F. Perron. No. 1,152,755; Sept. 7; Gaz. vol. 218; p. 137.
Flooring-tool. U. Ohlsen. No. 1,153,106; Sept. 7; Gaz. vol. 218; p. 262.
Flour during the manufacture thereof, Purifying. G. T. Smith. No. 1,154,547; Sept. 21; Gaz. vol. 218; p. 837.
Flour purifier and drier. G. T. Smith. No. 1,154,067; Sept. 21; Gaz. vol. 218; p. 674.
Flow-meters, Integrating mechanism for. A. R. Dodge. No. 1,155,303; Sept. 28; Gaz. vol. 218; p. 1121.
Fluid-elevator. F. C. Deemer. No. 1,153,373; Sept. 14; Gaz. vol. 218; p. 395.
Fluid-receptacles, Discharge control for. J. E. Carroll and W. H. Andrews. No. 1,152,485; Sept. 7; Gaz. vol. 218; p. 37.
Fluids by elastic fluid-pressure, Method of and apparatus for elevating. R. C. Browne. No. 1,154,745; Sept. 28; Gaz. vol. 218; p. 934.
Flush-tank control. H. M. Friesleben. No. 1,154,695; Sept. 28; Gaz. vol. 218; p. 918.
Flushing apparatus. R. Possi. No. 1,155,005; Sept. 28; Gaz. vol. 218; p. 1021.
Flushing apparatus for water-closets. J. Hearl. No. 1,153,784; Sept. 14; Gaz. vol. 218; p. 540.
Fly-catcher. W. A. and O. E. Hemenway. No. 1,154,310; Sept. 21; Gaz. vol. 218; p. 757.
Fly-exterminator. E. L. Lee. No. 1,153,128; Sept. 7; Gaz. vol. 218; p. 267.
Fly-paper holder. C. P. Pfeifer. No. 1,152,544; Sept. 7; Gaz. vol. 218; p. 61.
Flying-machine. W. E. Somerville. No. 1,154,214; Sept. 21; Gaz. vol. 218; p. 723.
Flying-machine. C. G. Walker. No. 1,153,143; Sept. 7; Gaz. vol. 218; p. 274.
Flying-machine. F. Wels. No. 1,154,466; Sept. 21; Gaz. vol. 218; p. 810.
Fob-guard. H. A. Baer. No. 1,155,032; Sept. 28; Gaz. vol. 218; p. 1031.
Folding and wrapping machine. S. C. Cox. No. 1,152,794; Sept. 7; Gaz. vol. 218; p. 151.
Folding box. F. Geza. No. 1,154,697; Sept. 28; Gaz. vol. 218; p. 918.
Folding table. F. R. Dehullu. No. 1,154,692; Sept. 28; Gaz. vol. 218; p. 917.
Food compound. R. G. Jackson. No. 1,153,925; Sept. 21; Gaz. vol. 218; p. 624.
Food-inspecting device. H. M. Foster. No. 1,154,501; Sept. 21; Gaz. vol. 218; p. 821.
Food product. C. A. O. Rosell. No. 1,154,059; Sept. 21; Gaz. vol. 218; p. 671.
Food product and making the same. V. A. Parrott. No. 1,154,721; Sept. 28; Gaz. vol. 218; p. 926.
Food product, Cereal. I. Pieser and C. G. Livingston. No. 1,155,093; Sept. 28; Gaz. vol. 218; p. 1055.
Footwear-clasp. L. P. Tindall. No. 1,153,752; Sept. 14; Gaz. vol. 218; p. 528.
Force-cup. G. C. Reeves. No. 1,154,055; Sept. 21; Gaz. vol. 218; p. 670.
Force-cup. W. F. Schacht. No. 1,152,981; Sept. 7; Gaz. vol. 218; p. 221.
Fork: *See*—
Derrick-fork.
Form, Adjustable dress-. F. B. Granger. No. 1,153,218; Sept. 14; Gaz. vol. 218; p. 339.
Form, Sectional dress-. F. B. Granger. No. 1,153,219; Sept. 14; Gaz. vol. 218; p. 339.
Form, Sectional garment-. I. Levin. No. 1,153,633; Sept. 14; Gaz. vol. 218; p. 488.
Form stand, Collapsible garment-. I. Levin. No. 1,153,634; Sept. 14; Gaz. vol. 218; p. 488.
Fountain: *See*—
Soda-fountain.
Watering-fountain.
Frame: *See*—
Bag-frame.
Cycle-frame.
Poultry-picking frame.
Pulley-frame.
Saw-frame.
Sheet-metal frame.
Spacing-frame.
Stanchion-supporting frame.
Turbo-driven-machine frame.
Vehicle-frame.
Frames, Affixing covering materials to. L. E. Brown. No. 1,152,786; Sept. 7; Gaz. vol. 218; p. 148.
Friction-surface and forming same. P. H. Frans. No. 1,155,054; Sept. 28; Gaz. vol. 218; p. 1059.
Front-wheel-centering device. F. Y. Bowland. No. 1,154,908; Sept. 28; Gaz. vol. 218; p. 988.
Fruit-cell, Adjustable. R. Wheeler. No. 1,153,365; Sept. 14; Gaz. vol. 218; p. 393.

Fruit-picker. E. F. Howell. No. 1,153,083; Sept. 7; Gaz. vol. 218; p. 254.
Fuel-burning apparatus. H. B. Bozard. No. 1,154,606; Sept. 28; Gaz. vol. 218; p. 887.
Fuel-economiser. W. E. Bennett. No. 1,153,994; Sept. 21; Gaz. vol. 218; p. 648.
Fuel-economiser. J. C. Landefeld. No. 1,152,955; Sept. 7; Gaz. vol. 218; p. 212.
Fuel-injecting device. C. Pasel. No. 1,155,266; Sept. 28; Gaz. vol. 218; p. 1110.
Fuel-saving device. G. O'Neill. No. 1,153,333; Sept. 14; Gaz. vol. 218; p. 380.
Furnace: *See*—
Boiler-furnace. Glass-furnace.
Electric furnace. Smelting-furnace.
Electrical furnace. Smoke-consuming furnace.
Furnace. M. L. Fox. No. 1,154,502; Sept. 21; Gaz. vol. 218; p. 822.
Furnace. W. J. A. Muirhead. No. 1,154,717; Sept. 28; Gaz. vol. 218; p. 926.
Furnace-bottling apparatus. J. T. Bates. No. 1,154,281; Sept. 21; Gaz. vol. 218; p. 747.
Furnace-charging apparatus. W. F. Clark. No. 1,153,605; Sept. 14; Gaz. vol. 218; p. 479.
Furnace draft-regulator, Heating-. A. T. Oliver. No. 1,152,751; Sept. 7; Gaz. vol. 218; p. 136.
Furnace equipment, Marine-. A. B. Willoughby. No. 1,154,153; Sept. 21; Gaz. vol. 218; p. 702.
Furnaces, Brick arch for boiler-. C. F. Street. No. 1,153,648; Sept. 14; Gaz. vol. 218; p. 492.
Furnaces, Fire-pot for hot-air heating-. J. R. Willemin. No. 1,154,901; Sept. 28; Gaz. vol. 218; p. 986.
Furnaces, Injector-burner for. A. Nelles. No. 1,153,639; Sept. 14; Gaz. vol. 218; p. 490.
Furnaces, Thermostatic control of. J. H. Roberts. No. 1,154,207; Sept. 21; Gaz. vol. 218; p. 720.
Furniture. E. Ohnstrand. No. 1,153,946; Sept. 21; Gaz. vol. 218; p. 632.
Furniture. E. Ohnstrand. No. 1,153,947; Sept. 21; Gaz. vol. 218; p. 632.
Furniture. E. W. Vaill, Jr. No. 1,153,358; Sept. 14; Gaz. vol. 218; p. 390.
Furring-strip. J. B. Webb. No. 1,153,836; Sept. 14; Gaz. vol. 218; p. 560.
Fuse, Percussion-. E. Schneider. No. 1,152,917; Sept. 7; Gaz. vol. 218; p. 197.
Fuse, Shell-. E. Faber. No. 1,154,579; Sept. 21; Gaz. vol. 218; p. 849.
Fusee. G. B. Jackson. No. 1,153,087; Sept. 7; Gaz. vol. 218; p. 256.
Fusee. W. D. Jackson. No. 1,153,088; Sept. 7; Gaz. vol. 218; p. 256.
Fusee, Railway-. W. C. Beckwith. No. 1,154,165; Sept. 21; Gaz. vol. 218; p. 706.
Gage: *See*—
Inspector's gage. Rain-gage.
Line-up register-gage. Saw-gage.
Micrometer-gage. Tire-pressure gage.
Pressure-relation gage. Track-gage.
Gage-tester, Dead-weight. F. H. Hopkins. No. 1,154,018; Sept. 21; Gaz. vol. 218; p. 656.
Game apparatus. F. H. Lehman. No. 1,153,395; Sept. 14; Gaz. vol. 218; p. 403.
Game apparatus. D. D. Lowery. No. 1,153,802; Sept. 14; Gaz. vol. 218; p. 546.
Game apparatus. H. W. Speyer. No. 1,154,346; Sept. 21; Gaz. vol. 218; p. 770.
Game apparatus, Base-ball-. P. T. Simmons. No. 1,153,719; Sept. 14; Gaz. vol. 218; p. 519.
Game-table. L. Meluzzi. No. 1,154,529; Sept. 21; Gaz. vol. 218; p. 831.
Games, Apparatus for playing hopping. F. Quade. No. 1,155,273; Sept. 28; Gaz. vol. 218; p. 1112.
Garden-tool. J. W. Bigford. No. 1,154,839; Sept. 28; Gaz. vol. 218; p. 966.
Garment. W. P. Butusov. No. 1,154,842; Sept. 28; Gaz. vol. 218; p. 966.
Garment. W. R. Hanes. No. 1,153,909; Sept. 21; Gaz. vol. 218; p. 619.
Garment. E. C. Heyn. (Reissue.) No. 13,983; Sept. 21; Gaz. vol. 218; p. 856.
Garment. S. C. Salsenstein. No. 1,153,523; Sept. 14; Gaz. vol. 218; p. 430.
Garment, Child's. J. L. Lubell. No. 1,154,523; Sept. 21; Gaz. vol. 218; p. 829.
Garment-clasp. W. Kops. No. 1,155,072; Sept. 28; Gaz. vol. 218; p. 1046.
Garment-stretching device. T. J. Aldridge. No. 1,153,150; Sept. 7; Gaz. vol. 218; p. 276.
Garment-supporter. L. E. Berebaum. No. 1,152,929; Sept. 7; Gaz. vol. 218; p. 202.
Garment-supporter. W. L. Deming. No. 1,152,492; Sept. 7; Gaz. vol. 218; p. 40.
Garment-supporter. B. F. Orewiler. No. 1,152,753; Sept. 7; Gaz. vol. 218; p. 136.
Garment-supporters, Stud-base for. B. F. Orewiler. No. 1,153,107; Sept. 7; Gaz. vol. 218; p. 263.
Garment, Union. A. L. Lippitt. No. 1,153,935; Sept. 21; Gaz. vol. 218; p. 628.
Garter. E. B. Winters. No. 1,153,147; Sept. 7; Gaz. vol. 218; p. 275.
Gas absorbing and indicating apparatus for gas-analysers. J. W. and C. W. Hays. No. 1,153,912; Sept. 21; Gaz. vol. 218; p. 620.
Gas-analysing apparatus. J. W. and C. W. Hays. No. 1,153,911; Sept. 21; Gaz. vol. 218; p. 620.
Gas-analysing apparatus. O. Matsorath. No. 1,154,792; Sept. 28; Gaz. vol. 218; p. 950.
Gas-burner. B. C. Bartlebaugh. No. 1,153,013; Sept. 7; Gaz. vol. 218; p. 232.
Gas-burner. G. Van Daam. No. 1,155,114; Sept. 28; Gaz. vol. 218; p. 1061.
Gas-burner valves. Automatically-adjustable mixer for. A. J. Reedy. No. 1,153,643; Sept. 14; Gaz. vol. 218; p. 491.
Gas cut-off, Automatic. A. W. Marcille. No. 1,155,257; Sept. 28; Gaz. vol. 218; p. 1108.
Gas-generating apparatus. C. D. McHenry. No. 1,154,869; Sept. 28; Gaz. vol. 218; p. 975.
Gas-generator. G. H. Bentley. No. 1,153,417; Sept. 14; Gaz. vol. 218; p. 412.
Gas generator, Acetylene-. W. M. Reece. No. 1,154,433; Sept. 21; Gaz. vol. 218; p. 799.
Gas-heater. G. E. Sharpe. No. 1,155,283; Sept. 28; Gaz. vol. 218; p. 1115.
Gas-lighter. E. H. Sturtz. No. 1,153,969; Sept. 21; Gaz. vol. 218; p. 639.
Gas, Manufacture of water-. C. F. Zeek. No. 1,152,869; Sept. 7; Gaz. vol. 218; p. 180.
Gas-mixing apparatus. G. Dalén. No. 1,153,766; Sept. 14; Gaz. vol. 218; p. 533.
Gas, Process and substance for purifying. J. C. Heckman. No. 1,154,858; Sept. 28; Gaz. vol. 218; p. 971.
Gas-producer. E. A. W. Jefferies. No. 1,152,514; Sept. 7; Gaz. vol. 218; p. 49.
Gas-producer. E. A. W. Jefferies. No. 1,153,623; Sept. 14; Gaz. vol. 218; p. 485.
Gas-producer. O. D. Lucas. No. 1,153,506; Sept. 14; Gaz. vol. 218; p. 444.
Gas-producing apparatus. R. H. Goddard. No. 1,154,009; Sept. 21; Gaz. vol. 218; p. 653.
Gas-purifying material. J. C. Heckman. No. 1,154,859; Sept. 28; Gaz. vol. 218; p. 971.
Gases, Apparatus for cooling and purifying furnace-. E. Hofmann. No. 1,155,237; Sept. 28; Gaz. vol. 218; p. 1101.
Gases, Producing combustible. H. Strache. No. 1,154,455; Sept. 21; Gaz. vol. 218; p. 806.
Gasolene-receptacles, Filling-tube for. L. Kessler. No. 1,155,070; Sept. 28; Gaz. vol. 218; p. 1045.
Gasket. W. K. Howe. No. 1,153,162; Sept. 7; Gaz. vol. 218; p. 280.
Gasket-seat cleaner. A. P. Gerald. No. 1,154,757; Sept. 28; Gaz. vol. 218; p. 939.
Gate: *See*—
Automatic gate.
Gate. O. L. Huffman. No. 1,153,847; Sept. 14; Gaz. vol. 218; p. 504.
Gate. C. Miller. No. 1,153,560; Sept. 14; Gaz. vol. 218; p. 464.
Gate and door fastener. L. T. Banks. No. 1,153,010; Sept. 7; Gaz. vol. 218; p. 231.
Gate-opening means. E. H. Kotila. No. 1,154,782; Sept. 28; Gaz. vol. 218; p. 947.
Gates, Construction of. J. D. Terstegge. No. 1,153,877; Sept. 14; Gaz. vol. 218; p. 575.
Gear-shifting device. G. T. Hanchett. No. 1,152,809; Sept. 7; Gaz. vol. 218; p. 157.
Gear-teeth, Curved. P. Böttcher. No. 1,154,840; Sept. 28; Gaz. vol. 218; p. 966.
Gearing. W. H. George. No. 1,154,006; Sept. 21; Gaz. vol. 218; p. 652.
Gearing. C. H. Norton. No. 1,152,434; Sept. 7; Gaz. vol. 218; p. 18.
Gearing. S. E. Schroeder. No. 1,153,715; Sept. 14; Gaz. vol. 218; p. 517.
Gearing. F. V. Widger. No. 1,154,555; Sept. 21; Gaz. vol. 218; p. 840.
Gearing. W. W. Winger. (Reissue.) No. 13,979; Sept. 14; Gaz. vol. 218; p. 576.
Gearing, Differential. J. A. Lang. No. 1,154,641; Sept. 28; Gaz. vol. 218; p. 899.
Gearing for shaft-speed indicators, Drive-. J. K. Stewart. No. 1,152,569; Sept. 7; Gaz. vol. 218; p. 70.
Gearing, Frictional. W. H. Barkwill. No. 1,154,598; Sept. 28; Gaz. vol. 218; p. 883.
Gearing, Motion-augmenting pendulum-. H. L. Staley. No. 1,153,268; Sept. 14; Gaz. vol. 218; p. 357.
Gearing, Planetary. H. Hertsberg. No. 1,154,769; Sept. 28; Gaz. vol. 218; p. 942.
Gearing, Reversible counter-shaft. R. D. Jones. No. 1,152,735; Sept. 7; Gaz. vol. 218; p. 131.
Gearing, Variable-speed. H. E. Blood. No. 1,154,865; Sept. 21; Gaz. vol. 218; p. 777.
Generative-organ appliance. L. B. Hart. No. 1,153,072; Sept. 7; Gaz. vol. 218; p. 250.
Generator: *See*—
Electric generator. Magnetic generator.
Gas-generator. Steam-generator.
Generators, Battery-controlling device for axle-driven. R. C. Lanphier and E. M. Fitz. No. 1,152,822; Sept. 7; Gaz. vol. 218; p. 162.
Glass, Batch for semi-opaque, semi-translucent. H. C. Stiefel. No. 1,153,353; Sept. 14; Gaz. vol. 218; p. 388.
Glass-cutting machine. A. L. Milents. No. 1,152,653; Sept. 7; Gaz. vol. 218; p. 101.
Glass-drawing. R. S. Pease. No. 1,152,833; Sept. 7; Gaz. vol. 218; p. 167.

Glass-forming machine. W. S. Teeple. No. 1,154,894; Sept. 28; Gaz. vol. 218; p. 983.
Glass-furnace. W. N. Mathews. No. 1,152,838; Sept. 7; Gaz. vol. 218; p. 165.
Glass-furnace. W. W. Pilkington. No. 1,154,052; Sept. 21; Gaz. vol. 218; p. 668.
Glass, Manufacturing. O. A. Mygatt. No. 1,155,000; Sept. 28; Gaz. vol. 218; p. 1020.
Glass-working machine. W. S. Teeple. No. 1,154,895; Sept. 28; Gaz. vol. 218; p. 984.
Glazier's tool. F. W. McDermott. No. 1,153,092; Sept. 7; Gaz. vol. 218; p. 258.
Globe, Geographical time-. G. W. Ramage. No. 1,152,904; Sept. 7; Gaz. vol. 218; p. 193.
Glove. H. A. Taylor. No. 1,153,728; Sept. 14; Gaz. vol. 218; p. 522.
Glue and paste tubes, Plug for. N. C. Phillips. No. 1,152,545; Sept. 7; Gaz. vol. 218; p. 61.
Golf-club. R. H. Davis. No. 1,154,490; Sept. 21; Gaz. vol. 218; p. 818.
Golf-tee. L. W. Luellen. No. 1,152,649; Sept. 7; Gaz. vol. 218; p. 100.
Goods holding and computing apparatus. W. Kulper. No. 1,153,504; Sept. 14; Gaz. vol. 218; p. 443.
Governor, Marine. N. Dupuis. No. 1,154,105; Sept. 21; Gaz. vol. 218; p. 687.
Governor, Pneumatic. B. S. Aikman. No. 1,153,879; Sept. 21; Gaz. vol. 218; p. 609.
Grading-machine. C. H. Magruder. No. 1,153,508; Sept. 14; Gaz. vol. 218; p. 445.
Grain, Cleaning. R. Seidl. No. 1,152,920; Sept. 7; Gaz. vol. 218; p. 198.
Grain-header. A. B. Drygas. No. 1,154,493; Sept. 21; Gaz. vol. 218; p. 818.
Grain-catcher. J. P. Hasseries. No. 1,153,383; Sept. 14; Gaz. vol. 218; p. 399.
Grate. L. J. Binder. No. 1,154,477; Sept. 21; Gaz. vol. 218; p. 814.
Grease-cup. F. Q. Hartman. No. 1,153,074; Sept. 7; Gaz. vol. 218; p. 251.
Grease-cup. E. R. MacAusland. No. 1,155,316; Sept. 28; Gaz. vol. 218; p. 1127.
Grinder, Cylinder-. L. E. Clawson. No. 1,154,378; Sept. 21; Gaz. vol. 218; p. 781.
Grinder, Lawn-mower. I. Meyer. No. 1,154,712; Sept. 28; Gaz. vol. 218; p. 922.
Grinding-machine. M. Mosler and C. Bartels. No. 1,153,510; Sept. 14; Gaz. vol. 218; p. 446.
Grinding machine, Saw-. A. Elrod. No. 1,153,297; Sept. 14; Gaz. vol. 218; p. 366.
Grinding-machines, Work-holding attachment for. B. F. Clark. No. 1,155,213; Sept. 28; Gaz. vol. 218; p. 1094.
Grinding-mill. P. G. Hollstein. No. 1,153,918; Sept. 21; Gaz. vol. 218; p. 622.
Grinding or crushing machinery. A. H. Moss. No. 1,154,532; Sept. 21; Gaz. vol. 218; p. 832.
Grinding or polishing gears, Means for. K. Alquist. No. 1,154,880; Sept. 28; Gaz. vol. 218; p. 963.
Grip or bag, Traveler's. H. L. Kennedy. No. 1,153,393; Sept. 14; Gaz. vol. 218; p. 403.
Ground-connector. W. H. Curry. No. 1,154,099; Sept. 21; Gaz. vol. 218; p. 685.
Gun, Air-. W. J. Sproull. No. 1,152,447; Sept. 7; Gaz. vol. 218; p. 23.
Gun, Machine-. A. A. K. Heinemann. No. 1,155,061; Sept. 28; Gaz. vol. 218; p. 1041.
Gun-sight. S. D. Shepard and M. Shappirio. No. 1,153,964; Sept. 21; Gaz. vol. 218; p. 638.
Guns, Muzzle-support for. L. V. Benét and H. A. Mercié. No. 1,153,018; Sept. 7; Gaz. vol. 218; p. 234.
Gyratory structures, Means for supporting and controlling. G. W. Combs. No. 1,152,396; Sept. 7; Gaz. vol. 218; p. 5.
Hacksaw-holder. H. N. Wells. No. 1,154,465; Sept. 21; Gaz. vol. 218; p. 810.
Hair-drying comb. A. F. Cox. No. 1,153,196; Sept. 14; Gaz. vol. 218; p. 331.
Hair goods, Weaving-frame for. A. Rauch. No. 1,154,338; Sept. 21; Gaz. vol. 218; p. 767.
Hair-roll. R. H. Damon. No. 1,152,884; Sept. 7; Gaz. vol. 218; p. 185.
Hairs, Mechanism for transferring. H. B. Sack. No. 1,153,522; Sept. 14; Gaz. vol. 218; p. 449.
Hammer, Pneumatic. M. Shaner. No. 1,155,282; Sept. 28; Gaz. vol. 218; p. 1115.
Hammer, Power-. H. C. Smith. No. 1,154,666; Sept. 28; Gaz. vol. 218; p. 908.
Hammer, Power-. H. C. Smith. No. 1,154,667; Sept. 28; Gaz. vol. 218; p. 909.
Hammock, Couch-. W. M. Ferber. No. 1,153,680; Sept. 14; Gaz. vol. 218; p. 504.
Hand-bag, &c., and framing the same. L. A. Samstag. No. 1,153,958; Sept. 21; Gaz. vol. 218; p. 636.
Hand brake mechanism. H. Mausk. No. 1,155,328; Sept. 28; Gaz. vol. 218; p. 1131.
Hand-support, Antifriction. O. C. Knipe. No. 1,154,188; Sept. 21; Gaz. vol. 218; p. 714.
Handle: *See*—
Paper-box handle. Tool-handle.
Handle. M. E. Silverthorn. No. 1,153,718; Sept. 14; Gaz. vol. 218; p. 519.
Handle or lever. A. Sinnes. No. 1,153,966; Sept. 21; Gaz. vol. 218; p. 638.
Hanger: *See*—
Cable-hanger. Screen and storm-sash hanger.
Clothes-hanger. Shade-hanger.
Door-hanger. Trolley-hanger.
Electric-light hanger.
Picture-hanger.
Harness. M. O. Rolstad. No. 1,155,165; Sept. 28; Gaz. vol. 218; p. 1079.
Harness for oxen and cattle, Draft-. D. M. Kennedy. No. 1,152,787; Sept. 7; Gaz. vol. 218; p. 182.
Harness, Two-collar. L. W. Hammond. No. 1,153,908; Sept. 21; Gaz. vol. 218; p. 619.
Harp-neck. W. I. Kirk. No. 1,153,317; Sept. 14; Gaz. vol. 218; p. 374.
Harrow. E. P. Cannedy. No. 1,155,027; Sept. 7; Gaz. vol. 218; p. 286.
Harrow and cultivator, Combined. E. Anderson. No. 1,155,192; Sept. 28; Gaz. vol. 218; p. 1089.
Harrows, Drag for multiple. G. H. Gunderson. No. 1,154,763; Sept. 28; Gaz. vol. 218; p. 940.
Harvester. S. J. Marquardt. No. 1,154,037; Sept. 21; Gaz. vol. 218; p. 663.
Harvester, Beet-. C. C. Moller and J. J. Bollerup. No. 1,155,319; Sept. 28; Gaz. vol. 218; p. 1128.
Harvester, Corn-. W. H. S. Ritchie. No. 1,152,660; Sept. 7; Gaz. vol. 218; p. 103.
Harvester, Cotton-. W. F. Speck. No. 1,153,968; Sept. 21; Gaz. vol. 218; p. 639.
Harvester, Peanut-. W. T. Boyd. No. 1,154,368; Sept. 21; Gaz. vol. 218; p. 779.
Harvester-reel. J. A. Sharp. No. 1,152,768; Sept. 7; Gaz. vol. 218; p. 141.
Harvesting-machine. H. H. Harris. No. 1,153,788; Sept. 14; Gaz. vol. 218; p. 540.
Harvesting-machine conveyer. G. R. Strickland. No. 1,152,572; Sept. 7; Gaz. vol. 218; p. 72.
Hat and cap holder. T. J. Burke. No. 1,154,371; Sept. 21; Gaz. vol. 218; p. 779.
Hat-box. A. Taylor. No. 1,154,457; Sept. 21; Gaz. vol. 218; p. 807.
Hat-fastener, Woman's. S. A. Van Horn. No. 1,154,222; Sept. 21; Gaz. vol. 218; p. 725.
Hat-guard. J. Costello. No. 1,153,291; Sept. 14; Gaz. vol. 218; p. 364.
Hat sweat-band. F. E. Halbert. No. 1,153,907; Sept. 21; Gaz. vol. 218; p. 619.
Hatch-cover. C. E. Cash. No. 1,152,486; Sept. 7; Gaz. vol. 218; p. 38.
Hay-feeder. R. R. Shirley. No. 1,153,268; Sept. 14; Gaz. vol. 218; p. 355.
Hay-press. J. Dain. No. 1,153,199; Sept. 14; Gaz. vol. 218; p. 332.
Head-motion. W. A. Stedman. No. 1,153,723; Sept. 14; Gaz. vol. 218; p. 520.
Head-rest. S. E. Douglass. No. 1,155,223; Sept. 28; Gaz. vol. 218; p. 1097.
Header. E. C. Meier. No. 1,154,194; Sept. 21; Gaz. vol. 218; p. 715.
Headers, Controlling mechanism for traction-driven. A. O. Lee. No. 1,154,703; Sept. 28; Gaz. vol. 218; p. 920.
Headlight. R. F. Wilson. No. 1,154,824; Sept. 28; Gaz. vol. 218; p. 961.
Headlight, Dirigible automobile-. J. G. Holicky. No. 1,154,863; Sept. 28; Gaz. vol. 218; p. 972.
Headlight for automobiles and the like. J. P. Walsh. No. 1,152,676; Sept. 7; Gaz. vol. 218; p. 110.
Heat energy, Utilising. W. C. Brown. No. 1,152,894; Sept. 7; Gaz. vol. 218; p. 4.
Heat-insulating boards from fibrous material, Producing. J. E. Lappen. No. 1,155,330; Sept. 28; Gaz. vol. 218; p. 1132.
Heat-recorder. M. Krause. No. 1,152,645; Sept. 7; Gaz. vol. 218; p. 98.
Heater: *See*—
Brooder-heater. Shoe-toe heater.
Electric heater. Steam, gas, and hot-water heater.
Electrical heater. Tank-heater.
Engine-heater. Water-heater.
Gas-heater.
Iron-heater.
Heating and power-producing system. J. V. Santry. No. 1,154,210; Sept. 21; Gaz. vol. 218; p. 721.
Heating apparatus. M. H. and J. J. Brennan. No. 1,154,608; Sept. 28; Gaz. vol. 218; p. 887.
Heating apparatus, Air-blast-. F. Ephraim. No. 1,154,106; Sept. 21; Gaz. vol. 218; p. 687.
Heating apparatus, Electric. E. E. Rose. No. 1,155,167; Sept. 28; Gaz. vol. 218; p. 1080.
Heating appliance. J. T. Mercier. No. 1,153,096; Sept. 7; Gaz. vol. 218; p. 259.
Heating device, Electrical. E. L. Wiegand. No. 1,154,953; Sept. 28; Gaz. vol. 218; p. 1004.
Heating system. H. S. Williams. No. 1,154,587; Sept. 21; Gaz. vol. 218; p. 852.
Heating system, Steam-. J. A. Serrell. No. 1,152,560; Sept. 7; Gaz. vol. 218; p. 67.
Heating systems, Apparatus for producing and controlling the vacuum in steam-. L. Hopkins. No. 1,152,634; Sept. 7; Gaz. vol. 218; p. 93.
Heddle or the like, Detached. C. E. Blair. No. 1,153,857; Sept. 14; Gaz. vol. 218; p. 568.
Heddle or the like, Detached. C. E. Blair. No. 1,153,858; Sept. 14; Gaz. vol. 218; p. 568.

Hedge-cutter. H. E. Marshall. No. 1,152,531; Sept. 7; Gaz. vol. 218; p. 56.
Heel and rand trimmer. R. L. Greenleaf. No. 1,153,780; Sept. 14; Gaz. vol. 218; p. 539.
Heel-building form. A. H. Bradstreet. No. 1,154,744; Sept. 28; Gaz. vol. 218; p. 934.
Heel-cushion for boots and shoes. O. M. Rolfe. No. 1,154,340; Sept. 21; Gaz. vol. 218; p. 767.
Heel, Detachable. W. M. Fritsche. No. 1,152,721; Sept. 7; Gaz. vol. 218; p. 125.
Heel-grip. M. H. Burke. No. 1,155,209; Sept. 28; Gaz. vol. 218; p. 1092.
Heel-plate for rubber heels. T. C. Beasley. No. 1,153,868; Sept. 14; Gaz. vol. 218; p. 394.
Heel-reducing device, Shoe-. L. E. Johnson and E. Erickson. No. 1,154,572; Sept. 21; Gaz. vol. 218; p. 846.
Heel, Resilient or cushion. G. H. P. Foster. No. 1,154,917; Sept. 28; Gaz. vol. 218; p. 992.
Heel-seat-trimming machine for use in the manufacture of boots and shoes. M. T. Denne. No. 1,152,799; Sept. 7; Gaz. vol. 218; p. 153.
Heel-stiffener for boots and shoes. A. Pittroff. No. 1,154,429; Sept. 21; Gaz. vol. 218; p. 797.
Helicopter. W. B. Hartley. No. 1,153,073; Sept. 7; Gaz. vol. 218; p. 251.
Helmet. C. M. Edelhausen. No. 1,154,494; Sept. 21; Gaz. vol. 218; p. 819.
Hemmer, Adjustable. C. Stafford. No. 1,153,459; Sept. 14; Gaz. vol. 218; p. 426.
Hinge. W. N. Offutt, Sr. No. 1,154,538; Sept. 21; Gaz. vol. 218; p. 834.
Hinge. W. C. Ramsey. No. 1,155,161; Sept. 28; Gaz. vol. 218; p. 1078.
Hinge. C. J. Soss. No. 1,153,720; Sept. 14; Gaz. vol. 218; p. 519.
Hinge and fastener, Car-door. P. C. Saccaggio. No. 1,154,061; Sept. 21; Gaz. vol. 218; p. 672.
Hinge construction. G. A. Lyon. No. 1,152,958; Sept. 7; Gaz. vol. 218; p. 213.
Hinge, Friction-. W. L. Foster. No. 1,153,903; Sept. 21; Gaz. vol. 218; p. 617.
Hinge, Vertically-adjustable. O. E. Fells. No. 1,154,850; Sept. 28; Gaz. vol. 218; p. 969.
Hitching device. C. W. Block. No. 1,153,188; Sept. 14; Gaz. vol. 218; p. 328.
Hoe. W. H. Dock. No. 1,153,202; Sept. 14; Gaz. vol. 218; p. 333.
Hoes or cultivators, Driving mechanism for rotary power. K. H. W. L. Seck. No. 1,152,558; Sept. 7; Gaz. vol. 218; p. 66.
Hog-ring. G. Gloggner. No. 1,153,061; Sept. 7; Gaz. vol. 218; p. 247.
Hoist, Combination portable rope. S. E. Kalbach. No. 1,153,497; Sept. 14; Gaz. vol. 218; p. 440.
Hoist, Portable rope. S. E. Kalbach. No. 1,153,496; Sept. 14; Gaz. vol. 218; p. 440.
Hoisting and dumping mechanism. F. E. Arndt. No. 1,154,474; Sept. 21; Gaz. vol. 218; p. 813.
Hoisting-machines, Combination automatic and lowering brake for. F. A. Rundle. No. 1,153,957; Sept. 21; Gaz. vol. 218; p. 635.
Hollow article of refractory material. A. T. Malm. No. 1,152,428; Sept. 7; Gaz. vol. 218; p. 16.
Hollow nail. G. Pesenti. No. 1,154,881; Sept. 28; Gaz. vol. 218; p. 979.
Hook: *See*—
Cable-hook. Printer's hook.
Fish-hook. Snap-hook.
Hook and eye. M. C. Avera. No. 1,154,558; Sept. 21; Gaz. vol. 218; p. 841.
Hook and saddle-seat, Combined. M. Lear and J. Sloop. No. 1,153,122; Sept. 7; Gaz. vol. 218; p. 267.
Hook mechanism, Revolving-. F. Kulhawy. No. 1,152,740; Sept. 7; Gaz. vol. 218; p. 132.
Hooks and eyes, Machine for attaching. E. J. Smith. No. 1,152,855; Sept. 7; Gaz. vol. 218; p. 175.
Hoop expanding and flaring machine. E. F. Beugler. No. 1,153,480; Sept. 14; Gaz. vol. 218; p. 434.
Horn. S. Eisenberg. No. 1,153,207; Sept. 14; Gaz. vol. 218; p. 335.
Horn, Automobile-. M. A. Auflero. No. 1,153,534; Sept. 14; Gaz. vol. 218; p. 454.
Horn, Electric. W. W. Dean. No. 1,153,039; Sept. 7; Gaz. vol. 218; p. 240.
Horn, Signaling-. A. A. Kent. No. 1,152,643; Sept. 7; Gaz. vol. 218; p. 97.
Horseshoe. J. A. Dolan. No. 1,152,715; Sept. 7; Gaz. vol. 218; p. 123.
Horseshoe. J. A. Dolan. No. 1,154,178; Sept. 21; Gaz. vol. 218; p. 711.
Horseshoe. O. Elmore. No. 1,152,497; Sept. 7; Gaz. vol. 218; p. 41.
Horseshoe attachment. P. Dech. No. 1,154,978; Sept. 28; Gaz. vol. 218; p. 1013.
Horseshoe attachment. L. J. Strob. No. 1,152,988; Sept. 7; Gaz. vol. 218; p. 223.
Horseshoe-attachment-securing means. F. Mühlbach. No. 1,153,101; Sept. 7; Gaz. vol. 218; p. 261.
Horseshoe-calk. J. R. Greenlee. No. 1,155,231; Sept. 28; Gaz. vol. 218; p. 1099.
Horseshoe-calk. R. L. Louderback. No. 1,152,526; Sept. 7; Gaz. vol. 218; p. 54.
Horseshoe-calk. F. Macey. No. 1,154,330; Sept. 21; Gaz. vol. 218; p. 764.
Horseshoe calk attachment. J. R. Wood. No. 1,153,664; Sept. 14; Gaz. vol. 218; p. 496.
Horseshoe-spreader. A. Stark. No. 1,155,288; Sept. 28; Gaz. vol. 218; p. 1116.
Hose-connection joint. A. M. Wright. No. 1,153,002; Sept. 7; Gaz. vol. 218; p. 228.
Hose-coupling. J. A. Cunningham. No. 1,153,895; Sept. 21; Gaz. vol. 218; p. 615.
Hose-coupling. W. A. Dodge. No. 1,152,714; Sept. 7; Gaz. vol. 218; p. 123.
Hose-coupling. C. H. Light. No. 1,154,259; Sept. 21; Gaz. vol. 218; p. 739.
Hose-nozzle. J. McBoyle. No. 1,152,652; Sept. 7; Gaz. vol. 218; p. 100.
Hose-rack. W. McClintock. No. 1,153,091; Sept. 7; Gaz. vol. 218; p. 257.
Hose-rack. O. D. Mock. No. 1,155,262; Sept. 28; Gaz. vol. 218; p. 1109.
Hose-supporter. B. S. Alsop. No. 1,154,556; Sept. 21; Gaz. vol. 218; p. 841.
Hose-supporter. T. P. Tuite. No. 1,152,672; Sept. 7; Gaz. vol. 218; p. 108.
Hosiery-machine attachment, Circular-. R. W. Scott. No. 1,152,849; Sept. 7; Gaz. vol. 218; p. 172.
Hosiery, Manufacture of. E. A. Hirner. No. 1,154,116; Sept. 21; Gaz. vol. 218; p. 691.
House: *See*—
Knockdown metallic house. Smoke-house.
Portable house.
Hub, Resilient. R. B. Longenecker. No. 1,152,956; Sept. 7; Gaz. vol. 218; p. 212.
Humidifier. W. S. Hadaway, Jr. No. 1,154,118; Sept. 21; Gaz. vol. 218; p. 690.
Humidity, Apparatus for automatically controlling relative. F. D. Windell. No. 1,153,987; Sept. 21; Gaz. vol. 218; p. 645.
Humidity-controlling apparatus. J. M. Larson. No. 1,153,234; Sept. 14; Gaz. vol. 218; p. 344.
Hydrant. A. Hallowell. No. 1,154,582; Sept. 21; Gaz. vol. 218; p. 850.
Hydraulic jack. W. Messinger. No. 1,152,829; Sept. 7; Gaz. vol. 218; p. 165.
Hydroaeroplane. W. H. Nosworthy and S. J. Prescott. No. 1,152,654; Sept. 7; Gaz. vol. 218; p. 101.
Hydro-carbon-burner. W. E. Huenefeld. No. 1,153,084; Sept. 7; Gaz. vol. 218; p. 254.
Hydrocarbon-burner. E. Meltser. No. 1,152,746; Sept. 7; Gaz. vol. 218; p. 134.
Hydrocarbon-burner. C. H. Von Hohenstein. No. 1,152,674; Sept. 7; Gaz. vol. 218; p. 109.
Hydrocarbon-refining apparatus. E. D. Kendall. No. 1,154,517; Sept. 21; Gaz. vol. 218; p. 827.
Hydrocarbons, Refining. E. D. Kendall. No. 1,154,516; Sept. 21; Gaz. vol. 218; p. 826.
Hydrogen peroxid and making the same, Stable compound containing. F. W. Weber. No. 1,153,985; Sept. 21; Gaz. vol. 218; p. 645.
Hydrogen to fatty acids, fatty esters, and other unsaturated compounds, Adding. C. Ellis. No. 1,154,495; Sept. 21; Gaz. vol. 218; p. 819.
Ice-cream cone. H. T. Allen. No. 1,153,744; Sept. 14; Gaz. vol. 218; p. 527.
Ice-cream-cone filler. W. A. Robinson. No. 1,153,172; Sept. 7; Gaz. vol. 218; p. 284.
Ice-cream freezer. C. H. Eddy. No. 1,152,496; Sept. 7; Gaz. vol. 218; p. 41.
Ice-creeper. J. MacVane. No. 1,154,646; Sept. 28; Gaz. vol. 218; p. 901.
Ice-creeper. A. Reiss. No. 1,153,954; Sept. 21; Gaz. vol. 218; p. 634.
Ice-machine. J. H. Beckman. No. 1,154,836; Sept. 28; Gaz. vol. 218; p. 965.
Ice-run, Winter and summer. E. G. Wood. No. 1,153,991; Sept. 21; Gaz. vol. 218; p. 647.
Ice-saw splitting attachment. T. A. Pacetty. No. 1,154,541; Sept. 21; Gaz. vol. 218; p. 835.
Illusionary effects, Apparatus for producing. L. McCormick. No. 1,154,787; Sept. 28; Gaz. vol. 218; p. 948.
Impregnating apparatus. O. S. Sleeper. No. 1,154,447; Sept. 21; Gaz. vol. 218; p. 804.
Incubator. A. Allen. No. 1,153,184; Sept. 14; Gaz. vol. 218; p. 327.
Incubator-tray. J. H. Kate. No. 1,154,927; Sept. 28; Gaz. vol. 218; p. 995.
Indicator: *See*—
Bargain-indicator. Parcel-post-rate indicator.
Car street-indicator. Radiator-indicator.
Dial test-indicator. Railway-station indicator.
Electrical indicator. Tank-indicator.
Level-indicator. Vacuum-indicator.
Indicator. C. F. Zinn. No. 1,153,580; Sept. 14; Gaz. vol. 218; p. 452.
Indicator-lock. J. H. Shaw. No. 1,152,443; Sept. 7; Gaz. vol. 218; p. 21.
Ingot-molds, Core-barrel for. J. P. Bagley. No. 1,155,122; Sept. 28; Gaz. vol. 218; p. 1065.
Injector. L. Kassander and H. L. Leverett. No. 1,153,114; Sept. 7; Gaz. vol. 218; p. 265.
Ink-eradicator. K. W. MacPherson. No. 1,153,807; Sept. 14; Gaz. vol. 218; p. 548.
Innersole. E. C. Donnell. No. 1,152,887; Sept. 7; Gaz. vol. 218; p. 187.

Inseam-trimming machine. W. C. Meyer. No. 1,154,718; Sept. 28; Gaz. vol. 218; p. 923.
Insecticide and preparing same. L. Terry. No. 1,153,974; Sept. 21; Gaz. vol. 218; p. 641.
Insole-preparing machine. J. N. Moulton. No. 1,154,716; Sept. 28; Gaz. vol. 218; p. 924.
Inspector's gage. F. B. Corey. No. 1,152,792; Sept. 7; Gaz. vol. 218; p. 151.
Insulating compound, Electrically-. O. V. Thomas. No. 1,153,975; Sept. 21; Gaz. vol. 218; p. 641.
Insulating-head. C. L. Van Ness. No. 1,154,674; Sept. 28; Gaz. vol. 218; p. 912.
Insulating material for building and analogous purposes. J. De Long and J. B. D'Homergue. No. 1,152,798; Sept. 7; Gaz. vol. 218; p. 153.
Internal-combustion engine. R. J. Bals. No. 1,154,958; Sept. 28; Gaz. vol. 218; p. 1006.
Internal-combustion engine. R. A. Blume. No. 1,154,866; Sept. 21; Gaz. vol. 218; p. 778.
Internal-combustion engine. C. M. Bradley. No. 1,153,191; Sept. 14; Gaz. vol. 218; p. 329.
Internal-combustion engine. O. J. Cole. No. 1,154,844; Sept. 28; Gaz. vol. 218; p. 967.
Internal-combustion engine. G. A. Iler and T. M. Nalon. No. 1,153,432; Sept. 14; Gaz. vol. 218; p. 417.
Internal-combustion engine. W. M. Lippincott. No. 1,152,424; Sept. 7; Gaz. vol. 218; p. 15.
Internal-combustion engine. R. H. McCarthy. No. 1,154,329; Sept. 21; Gaz. vol. 218; p. 763.
Internal-combustion engine. C. Regenbogen. No. 1,152,658; Sept. 7; Gaz. vol. 218; p. 102.
Internal-combustion engine. F. T. Romberger. No. 1,152,763; Sept. 7; Gaz. vol. 218; p. 140.
Internal-combustion engine. J. Shaw. No. 1,152,561; Sept. 7; Gaz. vol. 218; p. 67.
Internal-combustion engine. W. F. Warner. No. 1,153,364; Sept. 14; Gaz. vol. 218; p. 393.
Internal-combustion engine, Compound. C. M. Allen. No. 1,153,881; Sept. 21; Gaz. vol. 218; p. 610.
Internal-combustion engine, Rotary-valve. J. R. Coyle. No. 1,154,487; Sept. 21; Gaz. vol. 218; p. 817.
Internal-combustion motor. F. O. Farwell. No. 1,155,188; Sept. 28; Gaz. vol. 218; p. 1070.
Internal-combustion motor. W. Froehlich. No. 1,154,803; Sept. 21; Gaz. vol. 218; p. 754.
Iris-diaphragm. R. Klein and T. Brueck. No. 1,153,819; Sept. 14; Gaz. vol. 218; p. 374.
Iron: *See*—
Soldering-iron.
Iron and nickel from copper in certain ores and masses, Separating. W. Borchers and E. Thilges. No. 1,152,699; Sept. 7; Gaz. vol. 218; p. 117.
Iron heater and cooking utensil, Combination sad-. D. Miller. No. 1,154,714; Sept. 28; Gaz. vol. 218; p. 924.
Iron stand, Sad-. G. J. Schneider. No. 1,152,767; Sept. 7; Gaz. vol. 218; p. 141.
Ironing-board. C. O. Brown. No. 1,153,758; Sept. 14; Gaz. vol. 218; p. 530.
Ironing-board. C. W. Kilewer. No. 1,154,031; Sept. 21; Gaz. vol. 218; p. 661.
Ironing-pad, Combination. A. Savarese. No. 1,152,553; Sept. 7; Gaz. vol. 218; p. 64.
Irrigation. I. B. Naylor. No. 1,153,332; Sept. 14; Gaz. vol. 218; p. 380.
Irrigation apparatus. W. H. Coles. No. 1,154,880; Sept. 21; Gaz. vol. 218; p. 782.
Irrigation-pipe. I. B. Naylor. No. 1,152,901; Sept. 7; Gaz. vol. 218; p. 192.
Jack: *See*—
Auto power-transmitting jack. Lifting-jack.
Hydraulic jack. Pumping-jack.
Shoe-holding jack.
Jack. L. Willour. No. 1,153,589; Sept. 14; Gaz. vol. 218; p. 474.
Jar: *See*—
Drill-jar.
Jar-closure or the like. J. C. Nichol. No. 1,153,563; Sept. 14; Gaz. vol. 218; p. 465.
Jewelry, Drying. F. P. Boland. No. 1,154,167; Sept. 21; Gaz. vol. 218; p. 707.
Jigs, Discharging means for. S. V. Tench. No. 1,153,527; Sept. 14; Gaz. vol. 218; p. 451.
Joint: *See*—
Bed-joint. Rail-joint.
Flexible joint. Socket-joint.
Hose-connection joint. Toy-rail joint.
Pipe-joint. Universal joint.
Joints of sectional collapsible cores, Closure for. J. B. Walker. No. 1,154,079; Sept. 21; Gaz. vol. 218; p. 678.
Journal-box. P. Brown. No. 1,155,040; Sept. 28; Gaz. vol. 218; p. 1033.
Journal-box, Line-shaft. F. A. Roberts. No. 1,152,550; Sept. 7; Gaz. vol. 218; p. 63.
Junction-box. S. A. Huntington. No. 1,154,773; Sept. 28; Gaz. vol. 218; p. 944.
Keg or barrel, Fiber. J. C. Heron and W. J. Clark. No. 1,154,699; Sept. 28; Gaz. vol. 218; p. 919.
Kettle, Melting-. P. G. Hollstein. No. 1,154,772; Sept. 28; Gaz. vol. 218; p. 943.
Key: *See*—
Cotter-key.
Key. C. W. Pettigrove. No. 1,155,268; Sept. 28; Gaz. vol. 218; p. 1111.
Keyboard-machine. A. Steiner. No. 1,153,582; Sept. 14; Gaz. vol. 218; p. 471.
Kiln: *See*—
Corn-kiln.
Kiln. A. Vogt. No. 1,153,980; Sept. 21; Gaz. vol. 218; p. 643.
Kinetograph. T. H. Blair. No. 1,153,887; Sept. 21; Gaz. vol. 218; p. 612.
Kinetographic apparatus. H. B. Byron. No. 1,154,233; Sept. 21; Gaz. vol. 218; p. 729.
Kite, Folding. H. P. Lovejoy. No. 1,153,637; Sept. 14; Gaz. vol. 218; p. 489.
Knife: *See*—
Pruning-knife.
Knife-handles, Machine for embossing seamless. R. H. Devine. No. 1,154,618; Sept. 28; Gaz. vol. 218; p. 881.
Knitting-machine. J. Keeton. No. 1,154,251; Sept. 21; Gaz. vol. 218; p. 736.
Knitting machine, Circular-. R. W. Scott. No. 1,152,850; Sept. 7; Gaz. vol. 218; p. 173.
Knitting machine for producing split-foot hosiery, Automatic circular-. G. P. Bosworth. No. 1,154,160; Sept. 21; Gaz. vol. 218; p. 708.
Knitting machines, Thread-carrier-operating mechanism for circular-. H. A. Houseman. No. 1,152,951; Sept. 7; Gaz. vol. 218; p. 210.
Knockdown metallic house. R. F. Downey. No. 1,153,292; Sept. 14; Gaz. vol. 218; p. 364.
Krout-press. C. W. Lent. No. 1,153,323; Sept. 14; Gaz. vol. 218; p. 376.
Labeling-machine label-holder. A. T. Weiss. No. 1,153,144; Sept. 7; Gaz. vol. 218; p. 274.
Lace fastener, Shoe-. C. E. Smith. No. 1,154,066; Sept. 21; Gaz. vol. 218; p. 673.
Lacing and lace-fastener. H. D. Le Febvre. No. 1,152,422; Sept. 7; Gaz. vol. 218; p. 14.
Ladder. A. Blankenhagen. No. 1,155,125; Sept. 28; Gaz. vol. 218; p. 1066.
Ladder. M. Crofts. No. 1,154,614; Sept. 28; Gaz. vol. 218; p. 890.
Ladder. G. T. Warren, Sr. No. 1,154,147; Sept. 21; Gaz. vol. 218; p. 700.
Ladder and ironing-board, Combined step-. H. Hoeglund. No. 1,153,430; Sept. 14; Gaz. vol. 218; p. 416.
Ladder and ironing-board, Convertible step-. J. W. Matheny. No. 1,153,558; Sept. 14; Gaz. vol. 218; p. 463.
Ladder-bracket. H. Holden. No. 1,154,923; Sept. 28; Gaz. vol. 218; p. 994.
Ladder for stave structures. E. A. Berry. No. 1,153,750; Sept. 14; Gaz. vol. 218; p. 528.
Ladder, Step-. R. Acton. No. 1,152,687; Sept. 7; Gaz. vol. 218; p. 113.
Lamp. J. T. Roffy. No. 1,153,445; Sept. 14; Gaz. vol. 218; p. 421.
Lamp-adjusting pedal mechanism. D. C. Kitching. No. 1,154,187; Sept. 21; Gaz. vol. 218; p. 713.
Lamp, Alcohol-. C. Nelson. No. 1,154,125; Sept. 21; Gaz. vol. 218; p. 693.
Lamp and reflector. J. T. Roffy. No. 1,153,446; Sept. 14; Gaz. vol. 218; p. 422.
Lamp and support for same. J. T. Beechlyn. No. 1,153,284; Sept. 14; Gaz. vol. 218; p. 362.
Lamp, Arc-. C. Henrichsen. No. 1,152,731; Sept. 7; Gaz. vol. 218; p. 129.
Lamp attachment for culinary articles. H. P. Ball. No. 1,155,033; Sept. 28; Gaz. vol. 218; p. 1031.
Lamp for beds, Adjustable. A. Goldknopf. No. 1,154,243; Sept. 21; Gaz. vol. 218; p. 733.
Lamp for stereopticons. H. M. Hill. No. 1,153,161; Sept. 7; Gaz. vol. 218; p. 280.
Lamp, Hydrocarbon-vapor. M. Brylinski. No. 1,154,090; Sept. 21; Gaz. vol. 218; p. 682.
Lamp, Incandescent. R. Jacoby. No. 1,154,514; Sept. 21; Gaz. vol. 218; p. 826.
Lamp, Inclosed flaming-arc. T. L. Carbone. No. 1,154,093; Sept. 21; Gaz. vol. 218; p. 683.
Lamp, Miner's safety-. M. Albrecht. No. 1,153,003; Sept. 7; Gaz. vol. 218; p. 229.
Lamp reflector, Vapor-. J. C. Pole. No. 1,153,443; Sept. 14; Gaz. vol. 218; p. 421.
Lamp, Safety-. H. Cuanyl. No. 1,154,615; Sept. 28; Gaz. vol. 218; p. 890.
Lamp-socket. W. F. Anklam. No. 1,153,591; Sept. 14; Gaz. vol. 218; p. 475.
Lamp socket, Electric-. C. B. Clark. No. 1,153,195; Sept. 14; Gaz. vol. 218; p. 331.
Lamp, Vehicle-. T. L. Griffiths. No. 1,152,807; Sept. 7; Gaz. vol. 218; p. 157.
Lamps, Adjustable reflector for incandescent. L. Weidlich. No. 1,152,581; Sept. 7; Gaz. vol. 218; p. 75.
Lamps, Apparatus for electrically igniting miners' safety-. V. E. Joyce. No. 1,154,992; Sept. 28; Gaz. vol. 218; p. 1017.
Lamps, Device for securing bells, globes, chimneys, or the like to. L. Severin. No. 1,154,064; Sept. 21; Gaz. vol. 218; p. 673.
Land-rollers and the like, Demountable roller-section for R. E. Dunham. No. 1,155,804; Sept. 28; Gaz. vol. 218; p. 1122.
Lantern, Acetylene-. W. Tenbusch. No. 1,152,991; Sept. 7; Gaz. vol. 218; p. 225.
Lantern-carrier. A. F. Olson. No. 1,154,879; Sept. 28; Gaz. vol. 218; p. 979.

Lantern, Folding. C. H. Stonebridge. No. 1,152,571; Sept. 7; Gaz. vol. 218; p. 71.
Lantern-holder. J. and S. O. Stanfield. No. 1,154,071; Sept. 21; Gaz. vol. 218; p. 675.
Last for boots and shoes. L. Q. White. No. 1,152,679; Sept. 7; Gaz. vol. 218; p. 111.
Last, Steam-heated. W. H. O'Connor. No. 1,155,087; Sept. 28; Gaz. vol. 218; p. 1052.
Last-tube. H. O. Davis. No. 1,153,201; Sept. 14; Gaz. vol. 218; p. 333.
Lasting machine, Stitch-down-shoe-. P. T. Beier. No. 1,152,694; Sept. 7; Gaz. vol. 218; p. 116.
Latch, Container-. M. H. Stoll. No. 1,154,789; Sept. 28; Gaz. vol. 218; p. 932.
Latch for oven-doors, Antislamming-. H. B. North and J. W. Gibney. No. 1,153,514; Sept. 14; Gaz. vol. 218; p. 447.
Latch for vehicle-doors. M. R. Hull. No. 1,154,898; Sept. 21; Gaz. vol. 218; p. 788.
Latch-mounting. A. W. Walker. No. 1,154,676; Sept. 28; Gaz. vol. 218; p. 912.
Lathe or the like. L. I. Yeomans. No. 1,154,155; Sept. 21; Gaz. vol. 218; p. 703.
Lathes, Dizmeter-stop for. W. L. Fay. No. 1,154,107; Sept. 21; Gaz. vol. 218; p. 687.
Laundry-extractor. F. M. Overholt and F. M. Steiner. No. 1,153,701; Sept. 14; Gaz. vol. 218; p. 512.
Lawn-sprinkler, Oscillating. C. Watson. No. 1,155,115; Sept. 28; Gaz. vol. 218; p. 1061.
Lead-making apparatus, White-. L. V. Barton and W. P. Thompson. No. 1,152,693; Sept. 7; Gaz. vol. 218; p. 115.
Leak-stopper. G. E. Jupp. No. 1,153,796; Sept. 14; Gaz. vol. 218; p. 545.
Leather-brushing machine, Sole-. C. Ruhe. (Reissue.) No. 13,984; Sept. 21; Gaz. vol. 218; p. 856.
Leather-treating machine. C. Ruhe. No. 1,154,841; Sept. 21; Gaz. vol. 218; p. 768.
Leg sockets, Forming artificial-. J. T. Apgar. No. 1,153,532; Sept. 14; Gaz. vol. 218; p. 454.
Lemon-squeezer. J. A. and J. C. Cooper. No. 1,152,933; Sept. 7; Gaz. vol. 218; p. 203.
Lenses, Apparatus for the production of toric or toroidal surfaces of spectacle and eyeglass. H. Newbold. No. 1,154,199; Sept. 21; Gaz. vol. 218; p. 717.
Lenses, Forming ophthalmic. L. W. Bugbee. No. 1,153,859; Sept. 14; Gaz. vol. 218; p. 568.
Letter-box. A. W. Gast. No. 1,153,548; Sept. 14; Gaz. vol. 218; p. 459.
Letter-box. A. S. Goddard. No. 1,152,941; Sept. 7; Gaz. vol. 218; p. 207.
Letter-opener. H. Hesse. No. 1,152,628; Sept. 7; Gaz. vol. 218; p. 91.
Level. J. Bartha. No. 1,153,012; Sept. 7; Gaz. vol. 218; p. 282.
Level-indicator, Electric. G. E. Henderson. No. 1,152,730; Sept. 7; Gaz. vol. 218; p. 128.
Level, Spirit-. F. Butler. No. 1,153,760; Sept. 14; Gaz. vol. 218; p. 531.
Level, Spirit-. I. W. Mason. No. 1,154,873; Sept. 28; Gaz. vol. 218; p. 976.
Lever-holding mechanism, Foot-. E. S. Harden. No. 1,154,012; Sept. 21; Gaz. vol. 218; p. 654.
Life-jacket, Adjustable. G. W. Hendry. No. 1,154,860; Sept. 28; Gaz. vol. 218; p. 972.
Life-preserver. W. G. Brokaw. No. 1,155,207; Sept. 28; Gaz. vol. 218; p. 1093.
Lifter: *See*—
Pipe-lifter.
Lifting-jack. L. I. Darby. No. 1,155,049; Sept. 28; Gaz. vol. 218; p. 1036.
Lifting-jack. T. M. Hendrickson. No. 1,153,223; Sept. 14; Gaz. vol. 218; p. 341.
Lifting-jack. W. F. Hiatt. No. 1,152,507; Sept. 7; Gaz. vol. 218; p. 45.
Light: *See*—
Flash-light.
Light-dimmer. J. A. Thompson. No. 1,153,464; Sept. 14; Gaz. vol. 218; p. 428.
Light or heat regulator, Automatic. Y. Hanaoka. No. 1,152,412; Sept. 7; Gaz. vol. 218; p. 11.
Lighting-fixture. E. J. Schweitzer and R. G. Wagner. No. 1,153,960; Sept. 21; Gaz. vol. 218; p. 636.
Lighting-fixtures, Device for suspending shades or bowls in. E. L. White. No. 1,154,358; Sept. 21; Gaz. vol. 218; p. 774.
Lightning-rod. J. F. Goetz. No. 1,153,617; Sept. 14; Gaz. vol. 218; p. 483.
Line capacity, Method of and means for reducing. E. H. and K. A. Widegren. No. 1,154,278; Sept. 21; Gaz. vol. 218; p. 746.
Line-casting machine. W. E. Bertram. No. 1,153,020; Sept. 7; Gaz. vol. 218; p. 234.
Line-casting machines, Galley mechanism for repeating and non-repeating. C. A. Albrecht. No. 1,153,880; Sept. 21; Gaz. vol. 218; p. 609.
Line-up register-gage. J. C. Dittrich. No. 1,153,896; Sept. 21; Gaz. vol. 218; p. 615.
Link, Attaching-. N. D. Goff. No. 1,154,987; Sept. 28; Gaz. vol. 218; p. 1016.
Link construction, Conveying-. W. T. Hurst. No. 1,154,401; Sept. 21; Gaz. vol. 218; p. 789.
Link, Open-hook. J. K. Champ. No. 1,153,762; Sept. 14; Gaz. vol. 218; p. 532.
Linotype attachment. A. A. Froehlich. No. 1,154,302; Sept. 21; Gaz. vol. 218; p. 753.
Linotype-machine. T. S. Homans. No. 1,153,078; Sept. 7; Gaz. vol. 218; p. 252.
Liquid-concentrating apparatus. U. Rossi. No. 1,152,977; Sept. 7; Gaz. vol. 218; p. 219.
Liquid-elevating system, Mechanical. F. Sala and J. Vazques. No. 1,154,988; Sept. 28; Gaz. vol. 218; p. 1000.
Liquid-feeding device. E. A. Larson. No. 1,153,696; Sept. 14; Gaz. vol. 218; p. 509.
Liquid-server. C. W. Corey. No. 1,152,607; Sept. 7; Gaz. vol. 218; p. 83.
Liquids, Combining and emulsifying two or more. J. B. Vogelsang. No. 1,152,456; Sept. 7; Gaz. vol. 218; p. 26.
Liquors from wood-sulfite plants, Treating by-product. C. Marchand. No. 1,155,256; Sept. 28; Gaz. vol. 218; p. 1108.
Listing device. A. F. Rosenberger. No. 1,153,520; Sept. 14; Gaz. vol. 218; p. 449.
Lock: *See*—
Chair-lock. Sash-lock.
Coin-operated lock. Shutter-lock.
Door-lock. Springless lock.
Indicator-lock. Vault-lock.
Nut-lock. Vehicle door-lock.
Padlock. Window-lock.
Lock. J. A. Fischer. No. 1,154,499; Sept. 21; Gaz. vol. 218; p. 820.
Lock. J. Forsheim and J. Konigsberg. No. 1,153,614; Sept. 14; Gaz. vol. 218; p. 482.
Lock. G. N. Strieklan. No. 1,154,454; Sept. 21; Gaz. vol. 218; p. 806.
Lock. E. L. Teich. No. 1,154,142; Sept. 21; Gaz. vol. 218; p. 698.
Lock. J. R. Upton. No. 1,154,078; Sept. 21; Gaz. vol. 218; p. 677.
Lock. H. G. Voight. No. 1,152,457; Sept. 7; Gaz. vol. 218; p. 26.
Lock. C. L. and B. W. Wolfe. No. 1,152,776; Sept. 7; Gaz. vol. 218; p. 145.
Lock for trunks and similar articles. M. Schlesinger. No. 1,152,916; Sept 7; Gaz. vol. 218; p. 197.
Locking device, Auxiliary. T. Bartholomew and H. J. Percy. No. 1,155,195; Sept. 28; Gaz. vol. 218; p. 1089.
Locking device, Friction. C. A. Lindstrom. No. 1,153,556; Sept. 14; Gaz. vol. 218; p. 462.
Locomotive. S. G. Thomson. No. 1,152,863; Sept. 7; Gaz. vol. 218; p. 178.
Locomotive draft-regulator. H. F. Stauffer. No. 1,154,669; Sept. 28; Gaz. vol. 218; p. 910.
Locomotive, Electric. G. M. Eaton. No. 1,155,225; Sept. 28; Gaz. vol. 218; p. 1098.
Locomotive-tenders, Injector for. W. B. Smith. No. 1,153,138; Sept. 7; Gaz. vol. 218; p. 272.
Loom. L. C. Lobato. No. 1,154,644; Sept. 28; Gaz. vol. 218; p. 901.
Loom. F. D. Raymond. No. 1,152,905; Sept. 7; Gaz. vol. 218; p. 193.
Loom, Circular. V. Royle. No. 1,153,576; Sept. 14; Gaz. vol. 218; p. 469.
Loom for weaving wire fabric. O. W. Benster. No. 1,152,592; Sept. 7; Gaz. vol. 218; p. 79.
Loom let-offs, Brake mechanism for. T. J. Longden. No. 1,153,636; Sept. 14; Gaz. vol. 218; p. 489.
Loom picker-stick attachment. F. Bernier. No. 1,153,595; Sept. 14; Gaz. vol. 218; p. 476.
Loom-shuttle, Self-threading. F. A. Guillette. No. 1,154,011; Sept. 21; Gaz. vol. 218; p. 654.
Loom stop-motion. J. J. Smith. No. 1,154,449; Sept. 21; Gaz. vol. 218; p. 805.
Looms, Machine for handling tuft-yarns for carpet-. E. F. Hathaway and C. Lea. No. 1,153,864; Sept. 14; Gaz. vol. 218; p. 570.
Looms, Mechanism for handling tuft-yarns for carpet-. E. F. Hathaway and C. Lea. No. 1,153,865; Sept. 14; Gaz. vol. 218; p. 570.
Looms, Mechanism for handling tuft-yarns for carpet-. E. F. Hathaway and C. Lea. No. 1,153,866; Sept. 14; Gaz. vol. 218; p. 570.
Looms, Mechanism for handling tuft-yarns for carpet-. E. F. Hathaway and C. Lea. No. 1,153,867; Sept. 14; Gaz. vol. 218; p. 571.
Lubricating device. T. J. Clayton. No. 1,154,095; Sept. 21; Gaz. vol. 218; p. 683.
Lubricator: *See*—
Automatic lubricator. Sight-feed lubricator.
Lubricator. W. W. Corey. No. 1,152,398; Sept. 7; Gaz. vol. 218; p. 6.
Lubricator. A. L. Knudaen. No. 1,152,520; Sept. 7; Gaz. vol. 218; p. 51.
Lubricator. C. C. Wakefield. No. 1,154,853; Sept. 21; Gaz. vol. 218; p. 772.
Luggage-carrier. A. J. Musselman. No. 1,154,197; Sept. 21; Gaz. vol. 218; p. 716.
Lumber-packages, Means for hoisting and conveying. M. R. Colby and E. W. Taylor. No. 1,152,879; Sept. 7; Gaz. vol. 218; p. 183.
Machine and tool work, Means for supervision of. P. B. Delany. No. 1,154,386; Sept. 21; Gaz. vol. 218; p. 784.
Machine-efficiency recorder. H. R. Ford. No. 1,154,963; Sept. 28; Gaz. vol. 218; p. 1014.

Machine-tool drive. J. E. Johnson. No. 1,153,311; Sept. 14; Gaz. vol. 218; p. 371.
Magnet-charger. P. Lynch and H. Woehner. No. 1,153,127; Sept. 7; Gaz. vol. 218; p. 269.
Magnet-demagnetizing device, Brake-. E. L. Gale, Sr. No. 1,152,501; Sept. 7; Gaz. vol. 218; p. 43.
Magnetic generator. T. W. Morgan. No. 1,153,944; Sept. 21; Gaz. vol. 218; p. 631.
Mail-bag catcher. A. W. Dickerson. No. 1,155,221; Sept. 28; Gaz. vol. 218; p. 1096.
Mail-bag catcher and deliverer. F. B. Knopp. No. 1,154,523; Sept. 21; Gaz. vol. 218; p. 761.
Mail-bag holder. J. Huneke. No. 1,152,816; Sept. 7; Gaz. vol. 218; p. 160.
Mail-box. H. D. Graves. No. 1,155,146; Sept. 28; Gaz. vol. 218; p. 1073.
Mail-box and milk-bottle holder, Combined. F. T. Wakefield. No. 1,154,900; Sept. 28; Gaz. vol. 218; p. 936.
Mail-catcher. J. S. Richason. No. 1,154,807; Sept. 28; Gaz. vol. 218; p. 955.
Mail delivering and catching device. A. W. Muth. No. 1,153,102; Sept. 7; Gaz. vol. 218; p. 261.
Mailing-case, Parcel-post. W. H. Hammond. No. 1,154,764; Sept. 28; Gaz. vol. 218; p. 941.
Mailing-tube. J. Kleger. No. 1,153,627; Sept. 14; Gaz. vol. 218; p. 486.
Malt extract and making same. I. Pollak. No. 1,153,641; Sept. 14; Gaz. vol. 218; p. 490.
Mangle-roll. E. M. Saunders. No. 1,154,731; Sept. 28; Gaz. vol. 218; p. 929.
Mangle-table. G. L. Wild. No. 1,155,179; Sept. 28; Gaz. vol. 218; p. 1085.
Manure-spreader. W. J. Cook. No. 1,154,286; Sept. 21; Gaz. vol. 218; p. 730.
Manuscripts, copies, and the like, Holding device for. C. G. K. Rosenberg. No. 1,153,878; Sept. 14; Gaz. vol. 218; p. 575.
Massage devices, Pumping means for. G. E. Gray. No. 1,155,147; Sept. 28; Gaz. vol. 218; p. 1073.
Massaging device. I. R. Wheeler. No. 1,153,409; Sept. 14; Gaz. vol. 218; p. 409.
Mat: *See*—
Metallic mat.
Match, Book-. L. E. Parker. No. 1,154,586; Sept. 21; Gaz. vol. 218; p. 852.
Match-box. F. A. Fuller. No. 1,153,875; Sept. 14; Gaz. vol. 218; p. 574.
Match-ignition composition. M. Shadid. No. 1,153,525; Sept. 14; Gaz. vol. 218; p. 451.
Match-testing apparatus. F. V. Cruser. No. 1,152,796; Sept. 7; Gaz. vol. 218; p. 152.
Match-testing apparatus. F. V. Cruser. No. 1,152,797; Sept. 7; Gaz. vol. 218; p. 153.
Matrix-retainer. F. M. Dean. No. 1,152,711; Sept. 7; Gaz. vol. 218; p. 122.
Matrix-setting and line-casting machine. J. Dorneth. No. 1,155,137; Sept. 28; Gaz. vol. 218; p. 1069.
Matte, Converter for treating. W. H. Howard. No. 1,153,921; Sept. 21; Gaz. vol. 218; p. 623.
Mattress. J. L. Heffner. (Reissue.) No. 13,982; Sept. 21; Gaz. vol. 218; p. 855.
Mattress. W. E. Joseph. No. 1,154,776; Sept. 28; Gaz. vol. 218; p. 945.
Mattress. G. E. Lackey. No. 1,153,120; Sept. 7; Gaz. vol. 218; p. 267.
Mattress. J. E. Rilling. No. 1,153,644; Sept. 14; Gaz. vol. 218; p. 491.
Mausoleum. D. M. Rothenberger. No. 1,153,956; Sept. 21; Gaz. vol. 218; p. 635.
Measure, Rope-. W. L. Hobbis. No. 1,155,236; Sept. 28; Gaz. vol. 218; p. 1101.
Measuring and computing heights and distances, Appliance for. R. R. Miller. No. 1,153,098; Sept. 7; Gaz. vol. 218; p. 260.
Measuring and indicating blood-pressure, Apparatus for. C. J. Pilling. No. 1,153,251; Sept. 14; Gaz. vol. 218; p. 351.
Measuring apparatus. B. Eitner. No. 1,154,620; Sept. 28; Gaz. vol. 218; p. 892.
Measuring device. J. J. Flaherty. No. 1,154,108; Sept. 21; Gaz. vol. 218; p. 688.
Measuring device. V. T. Milward. No. 1,153,810; Sept. 14; Gaz. vol. 218; p. 549.
Measuring device, Liquid-. R. Hall. No. 1,152,891; Sept. 7; Gaz. vol. 218; p. 188.
Measuring device, Liquid-. J. A. Kepka. No. 1,152,952; Sept. 7; Gaz. vol. 218; p. 211.
Measuring instrument, Electrical. A. L. R. Ellis. No. 1,154,979; Sept. 28; Gaz. vol. 218; p. 1013.
Measuring instrument, Electrical. W. E. Porter. No. 1,155,095; Sept. 28; Gaz. vol. 218; p. 1055.
Meat curing, spicing, and seasoning tool. W. S. Felker. No. 1,155,139; Sept. 28; Gaz. vol. 218; p. 1070.
Mechanical movement. E. U. Ames. No. 1,155,191; Sept. 28; Gaz. vol. 218; p. 1088.
Mechanical movement. R. B. Naumburg. No. 1,154,198; Sept. 21; Gaz. vol. 218; p. 717.
Mercury-vapor apparatus. P. H. Thomas. No. 1,153,976; Sept. 21; Gaz. vol. 218; p. 641.
Mercury-vapor rectifier and the like. J. Jonas. No. 1,153,794; Sept. 14; Gaz. vol. 218; p. 544.
Metal by welded rivets, Joining. A. F. Rietzel. No. 1,154,808; Sept. 28; Gaz. vol. 218; p. 955.
Metal scrap, Apparatus for recovering. G. E. Wiesner. No. 1,152,867; Sept. 7; Gaz. vol. 218; p. 179.
Metal-strip-bending mechanism. C. Burnham. No. 1,154,970; Sept. 28; Gaz. vol. 218; p. 1010.
Metal structures, Making expanded-. H. E. White. No. 1,153,145; Sept. 7; Gaz. vol. 218; p. 274.
Metallic mat. J. Natterer. No. 1,153,608; Sept. 14; Gaz. vol. 218; p. 510.
Metallic structure and making the same. M. Lachman. No. 1,154,784; Sept. 28; Gaz. vol. 218; p. 947.
Meter: *See*—
Current-meter. Electric meter.
Meter system. J. A. Tilden. No. 1,154,896; Sept. 28; Gaz. vol. 218; p. 984.
Mica-splitting machine. E. Cooper. No. 1,155,298; Sept. 28; Gaz. vol. 218; p. 1119.
Micrometer and scale, Combined. V. R. Helin. No. 1,153,785; Sept. 14; Gaz. vol. 218; p. 541.
Micrometer-gage. M. E. Provost. No. 1,152,761; Sept. 7; Gaz. vol. 218; p. 139.
Milk and cream, Manufacturing churned products from. C. E. Gray. No. 1,155,055; Sept. 28; Gaz. vol. 218; p. 1039.
Milking machinery. W. R. Cockburn. No. 1,155,131; Sept. 28; Gaz. vol. 218; p. 1068.
Mill: *See*—
Ball-mill. Tube-mill.
Grinding-mill. Windmill.
Rolling-mill.
Mills, Lining for pebble or ball. H. A. Hansen and J. M. Schmueser. No. 1,153,844; Sept. 14; Gaz. vol. 218; p. 563.
Milling-machine. J. R. Johnson. No. 1,153,165; Sept. 7; Gaz. vol. 218; p. 281.
Milling-machine. R. K. Le Blond and W. F. Groene. No. 1,152,647; Sept. 7; Gaz. vol. 218; p. 99.
Milling-machine arm. J. Goetz. No. 1,153,618; Sept. 14; Gaz. vol. 218; p. 483.
Mine, Marine. E. Senger and R. Sauter. No. 1,154,272; Sept. 21; Gaz. vol. 218; p. 745.
Mine, Submarine. E. Schneider. No. 1,153,330; Sept. 14; Gaz. vol. 218; p. 557.
Mine, Submarine. H. Senftleben. No. 1,152,559; Sept. 7; Gaz. vol. 218; p. 66.
Mines, Safety-anchor for submarine. G. E. Ellis. No. 1,153,774; Sept. 14; Gaz. vol. 218; p. 537.
Mining-machine. B. Viviani. No. 1,154,459; Sept. 21; Gaz. vol. 218; p. 808.
Mining machine, Coal-. C. C. Hansen. No. 1,154,922; Sept. 28; Gaz. vol. 218; p. 994.
Mining sulfur. H. Frasch. No. 1,152,499; Sept. 7; Gaz. vol. 218; p. 42.
Mirror and shelf supporting frame. H. Kearns and W. D. Martin. No. 1,153,929; Sept. 21; Gaz. vol. 218; p. 626.
Mixer: *See*—
Concrete-mixer. Steam and water mixer.
Mixing device. F. A. Heath. No. 1,153,913; Sept. 21; Gaz. vol. 218; p. 620.
Mixing device. F. A. Heath. No. 1,153,914; Sept. 21; Gaz. vol. 218; p. 621.
Mixing device. F. A. Heath. No. 1,153,915; Sept. 21; Gaz. vol. 218; p. 621.
Mixture-producing device and speed-governor. E. Podlesak. No. 1,155,094; Sept. 28; Gaz. vol. 218; p. 1055.
Moistening-machine. W. C. Tingle. No. 1,154,552; Sept. 21; Gaz. vol. 218; p. 839.
Mold: *See*—
Concrete-mold. Sand mold.
Concrete-block mold. Silo-mold.
Concrete-column mold. Step-mold.
Doll-mold.
Mold. F. F. Landis. No. 1,154,255; Sept. 21; Gaz. vol. 218; p. 738.
Molders' flasks, Sand-bar for. E. Krueger. No. 1,155,073; Sept. 28; Gaz. vol. 218; p. 1046.
Molding apparatus. W. H. Hofmann. No. 1,152,631; Sept. 7; Gaz. vol. 218; p. 92.
Molding-flask, Extensible. T. Grask. No. 1,153,063; Sept. 7; Gaz. vol. 218; p. 247.
Molding-machine. H. Tscherning. No. 1,155,019; Sept. 28; Gaz. vol. 218; p. 1026.
Molding or briqueting, Mechanism for preparing pulverulent materials for. E. B. A. and R. A. Zwoyer. No. 1,152,469; Sept. 7; Gaz. vol. 218; p. 31.
Molding sheets of fibrous materials. E. Lanhoffer. No. 1,154,256; Sept. 21; Gaz. vol. 218; p. 738.
Monolithic inscription-stone. W. H. Filer. No. 1,155,140; Sept. 28; Gaz. vol. 218; p. 1070.
Morris chair and bed, Combination. F. H. Donovan. No. 1,153,423; Sept. 14; Gaz. vol. 218; p. 414.
Mortising-machine. G. E. Norris. No. 1,155,160; Sept. 28; Gaz. vol. 218; p. 1077.
Motor: *See*—
Current-motor. Water-motor
Internal-combustion motor. Wave-motor.
Variable-stroke motor.
Motor-control system, Electric-. H. L. Beach. No. 1,155,197; Sept. 28; Gaz. vol. 218; p. 1090.
Motor controller, Electric-. H. H. Cutler. No. 1,154,976; Sept. 28; Gaz. vol. 218; p. 1012.
Motor limit-controller. G. J. Stuart. No. 1,154,274; Sept. 21; Gaz. vol. 218; p. 744.
Motor-starter-actuating means. J. A. Parkinson. No. 1,155,003; Sept. 28; Gaz. vol. 218; p. 1021.

Motors, Connecting means for internal-combustion. C. Y. Knight. No. 1,155,071; Sept. 28; Gaz. vol. 218; p. 1046.
Motors, System and method of control for electric. L. G. Riley. No. 1,155,164; Sept. 28; Gaz. vol. 218; p. 1079.
Motors, System and method of control for electric. N. W. Storer. No. 1,155,170; Sept. 28; Gaz. vol. 218; p. 1081.
Mower, Lawn-. H. H. Montague. No. 1,153,943; Sept. 21; Gaz. vol. 218; p. 631.
Mowing-machine attachment. W. Emery. No. 1,155,305; Sept. 28; Gaz. vol. 218; p. 1122.
Mowing-machine bunching attachment. A. H. Eckardt. No. 1,153,842; Sept. 14; Gaz. vol. 218; p. 562.
Mowing-machine for sugar-cane. V. J. Vitek. No. 1,152,994; Sept. 7; Gaz. vol. 218; p. 226.
Muffler. C. A. Miller. No. 1,153,097; Sept. 7; Gaz. vol. 218; p. 260.
Muffler. S. G. Salka. No. 1,153,260; Sept. 14; Gaz. vol. 218; p. 354.
Music-leaf turner. I. R. Naugle. No. 1,152,538; Sept. 7; Gaz. vol. 218; p. 59.
Music-leaf turner. C. F. Sammet. No. 1,154,842; Sept. 21; Gaz. vol. 218; p. 768.
Music-leaf turner. D. Thornton. No. 1,153,731; Sept. 14; Gaz. vol. 218; p. 522.
Music-leaf turner. C. F. Wyatt. No. 1,152,462; Sept. 7; Gaz. vol. 218; p. 28.
Music-player valve. R. A. Gally. No. 1,153,056; Sept. 7; Gaz. vol. 218; p. 245.
Music-sheet. W. Bayley. No. 1,152,926; Sept. 7; Gaz. vol. 218; p. 201.
Musical instrument. J. W. Darley, Jr. No. 1,155,299; Sept. 28; Gaz. vol. 218; p. 1120.
Musical instrument, Pneumatic. H. J. Anderson. No. 1,154,957; Sept. 28; Gaz. vol. 218; p. 1005.
Musical instrument, Stringed. J. A. Bach. No. 1,152,925; Sept. 7; Gaz. vol. 218; p. 200.
Musical instrument with magazine, Automatic. K. O. Carlson. No. 1,152,787; Sept. 7; Gaz. vol. 218; p. 148.
Musical instruments, Key-controlled contact-maker for use with. J. W. Darley, Jr. No. 1,155,301; Sept. 28; Gaz. vol. 218; p. 1121.
Musical instruments, Making key-seats on wind. P. C. Hardy. No. 1,153,489; Sept. 14; Gaz. vol. 218; p. 437.
Musical instruments, Rerolling mechanism for. J. F. Mackin. No. 1,154,189; Sept. 21; Gaz. vol. 218; p. 714.
Nail: *See*—
Hollow nail.
Nappers, Safety device for time-clearers on. C. P. R. Thiel. No. 1,154,350; Sept. 21; Gaz. vol. 218; p. 771.
Napping-machine. R. J. Steiner. No. 1,153,173; Sept. 7; Gaz. vol. 218; p. 284.
Necktie-holder. S. L. Gedney. No. 1,155,228; Sept. 28; Gaz. vol. 218; p. 1099.
Nest. B. F. Clark. No. 1,152,706; Sept. 7; Gaz. vol. 218; p. 120.
Nest-box, Automatic. J. T. Mason. No. 1,153,608; Sept. 14; Gaz. vol. 218; p. 549.
Newspaper-holder. W. Oberg. No. 1,154,537; Sept. 21; Gaz. vol. 218; p. 833.
Nitrids, Forming double. S. Peacock. No. 1,154,800; Sept. 28; Gaz. vol. 218; p. 953.
Nitrogen and carbon dioxid, Making. R. H. Brownlee and R. H. Uhlinger. No. 1,154,171; Sept. 21; Gaz. vol. 218; p. 709.
Nitrogen and carbon dioxid, Making. R. H. Brownlee and R. H. Uhlinger. No. 1,154,172; Sept. 21; Gaz. vol. 218; p. 709.
Nitrogen, Production of. R. W. Wallace and E. Wassmer. No. 1,154,145; Sept. 21; Gaz. vol. 218; p. 700.
Non-slipping device. W. H. Wilson. No. 1,155,293; Sept. 28; Gaz. vol. 218; p. 1118.
Nozzle-attaching means. W. Kieser. No. 1,154,777; Sept. 28; Gaz. vol. 218; p. 945.
Nozzle, Cement and concrete. P. C. Pettitt. No. 1,153,132; Sept. 7; Gaz. vol. 218; p. 270.
Nozzle, Exhaust-. C. B. King and C. B. Weston. No. 1,154,026; Sept. 21; Gaz. vol. 218; p. 659.
Nozzle for atomizing oil, Adjustable. R. A. Milne. No. 1,153,401; Sept. 14; Gaz. vol. 218; p. 406.
Nozzle, Spray-. K. MacDonald. No. 1,153,805; Sept. 14; Gaz. vol. 218; p. 548.
Numbering-machines, Indicating device for. W. A. Force. No. 1,153,901; Sept. 21; Gaz. vol. 218; p. 616.
Nut-lock. M. P. Carpenter. No. 1,154,691; Sept. 28; Gaz. vol. 218; p. 917.
Nut-lock. J. V. Duckett. No. 1,153,898; Sept. 21; Gaz. vol. 218; p. 616.
Nut-lock. R. O. Hammond. No. 1,155,233; Sept. 28; Gaz. vol. 218; p. 1100.
Nut-lock. C. G. Hawley. No. 1,154,698; Sept. 28; Gaz. vol. 218; p. 919.
Nut-lock. G. T. Segee. No. 1,153,347; Sept. 14; Gaz. vol. 218; p. 386.
Nut-lock. C. H. Sellers. No. 1,154,813; Sept. 28; Gaz. vol. 218; p. 957.
Nut-lock. A. Spatz. No. 1,155,286; Sept. 28; Gaz. vol. 218; p. 1116.
Nut-lock. J. M. Tanner. No. 1,153,649; Sept. 14; Gaz. vol. 218; p. 493.
Nut-lock. E. W. Taylor. (Reissue.) No. 13,986; Sept. 21; Gaz. vol. 218; p. 857.
Nutcracker. J. Kittrell. No. 1,153,433; Sept. 14; Gaz. vol. 218; p. 417.
Nut-protector. S. Baruch. No. 1,154,960; Sept. 28; Gaz. vol. 218; p. 1007.
Nuts, Forming bolt-. W. E. Sharp. No. 1,154,134; Sept. 21; Gaz. vol. 218; p. 696.
Oar-lock. C. L. Rathbone. No. 1,155,275; Sept. 28; Gaz. vol. 218; p. 1113.
Oil and water burner. E. A. Hornbostel and J. Carey. No. 1,154,019; Sept. 21; Gaz. vol. 218; p. 657.
Oil-burner. J. Ditson. No. 1,154,101; Sept. 21; Gaz. vol. 218; p. 685.
Oil-burner. L. Stockstrom. No. 1,154,452; Sept. 21; Gaz. vol. 218; p. 806.
Oil-burner. L. A. Ungles. No. 1,154,221; Sept. 21; Gaz. vol. 218; p. 725.
Oil-burner, Blue-flame. R. Hoffman. No. 1,154,687; Sept. 28; Gaz. vol. 218; p. 898.
Oil-can. J. W. Cowell. No. 1,152,709; Sept. 7; Gaz. vol. 218; p. 121.
Oil-feed for motor-cars, Automatic. G. Andrew, C. H. Sloacombe, and H. H. Kingham. No. 1,155,168; Sept. 28; Gaz. vol. 218; p. 1080.
Oil-saver. C. F. Rigby. No. 1,152,548; Sept. 7; Gaz. vol. 218; p. 62.
Oil-saver. C. F. Rigby. No. 1,152,549; Sept. 7; Gaz. vol. 218; p. 62.
Oiler, Flange-. A. Albertson. No. 1,154,156; Sept. 21; Gaz. vol. 218; p. 704.
Oiler, Flange-. D. G. Black. No. 1,152,593; Sept. 7; Gaz. vol. 218; p. 79.
Oiler for the slides of wind musical instruments. G. W. Gill. No. 1,152,407; Sept. 7; Gaz. vol. 218; p. 9.
Oiling and cleaning device for guns. C. H. Foster. No. 1,154,390; Sept. 21; Gaz. vol. 218; p. 785.
Oiling device. J. M. Cunneen. No. 1,153,608; Sept. 14; Gaz. vol. 218; p. 480.
Oilless spindle. L. S. Bache. No. 1,153,592; Sept. 14; Gaz. vol. 218; p. 475.
Olives and product thereof, Preparing. F. G. Beresford. No. 1,154,363; Sept. 21; Gaz. vol. 218; p. 776.
Orchard-heaters, Priming appliance for. T. Silk. No. 1,153,178; Sept. 7; Gaz. vol. 218; p. 286.
Ore concentrates, Briqueting. C. E. Herrmann. No. 1,155,311; Sept. 28; Gaz. vol. 218; p. 1125.
Ore-separator. E. Torrey. No. 1,155,292; Sept. 28; Gaz. vol. 218; p. 1118.
Ore-washer, Magnetic. E. W. Davis. No. 1,153,037; Sept. 7; Gaz. vol. 218; p. 239.
Ores, Treating. L. C. Dreiahl. No. 1,153,203; Sept. 14; Gaz. vol. 218; p. 333.
Ores, Treating tungsten. F. M. Becket. No. 1,153,594; Sept. 14; Gaz. vol. 218; p. 476.
Organ combined with pianoforte, Reed-. J. B. Hamilton. No. 1,154,509; Sept. 21; Gaz. vol. 218; p. 824.
Organ, Folding. P. P. Bilhorn. No. 1,152,475; Sept. 7; Gaz. vol. 218; p. 33.
Organs, Expression device for electric. J. W. Darley, Jr. No. 1,155,300; Sept. 28; Gaz. vol. 218; p. 1120.
Ornament and making the same, Relief. J. M. Crucet. No. 1,154,384; Sept. 21; Gaz. vol. 218; p. 783.
Orthopedic cushion. L. D. Deol. No. 1,154,491; Sept. 21; Gaz. vol. 218; p. 818.
Outlet-box. C. J. Klein. No. 1,153,894; Sept. 14; Gaz. vol. 218; p. 403.
Oven. W. H. Wilder and F. E. White. No. 1,155,180; Sept. 28; Gaz. vol. 218; p. 1085.
Oven, Bake-. A. Finnila. No. 1,152,803; Sept. 7; Gaz. vol. 218; p. 155.
Oven, Electrically-heated. F. Kuhn. No. 1,154,416; Sept. 21; Gaz. vol. 218; p. 793.
Oven light, Baker's-. C. Robson. No. 1,154,339; Sept. 21; Gaz. vol. 218; p. 767.
Oven, Portable sectional. H. Gehnrich. No. 1,155,145; Sept. 28; Gaz. vol. 218; p. 1072.
Ovens, Protective apparatus for repairers of bakers'. C. Schiller. No. 1,152,554; Sept. 7; Gaz. vol. 218; p. 64.
Oxids and the like, The reduction of metallic. F. W. Highfield. No. 1,153,786; Sept. 14; Gaz. vol. 218; p. 541.
Oxygen, Manufacture of. H. Kriegsheim. No. 1,153,502; Sept. 14; Gaz. vol. 218; p. 442.
Oxygen-producing apparatus. B. H. Cram. No. 1,155,045; Sept. 28; Gaz. vol. 218; p. 1035.
Package. W. Haigh. No. 1,153,221; Sept. 14; Gaz. vol. 218; p. 340.
Package and opener therefor, Sealed wrapped. J. S. Stokes. No. 1,154,217; Sept. 21; Gaz. vol. 218; p. 724.
Package-coating apparatus. P. Sherrer. No. 1,152,922; Sept. 7; Gaz. vol. 218; p. 199.
Package-tie. O. A. Iasigi. No. 1,155,289; Sept. 28; Gaz. vol. 218; p. 1102.
Packages, Constructing. P. Butler. No. 1,152,598; Sept. 7; Gaz. vol. 218; p. 80.
Packing-box for mantles, &c. E. L. Knoedler. No. 1,153,932; Sept. 21; Gaz. vol. 218; p. 627.
Packing, Piston-. G. S. Towne. No. 1,155,018; Sept. 28; Gaz. vol. 218; p. 1026.
Pad: *See*—
Ironing-pad. Table-pad.
Paper pad.
Pad holder, Transfer-. W. F. Beuther. No. 1,155,296; Sept. 28; Gaz. vol. 218; p. 1119.

Padlock. J. S. Rogers. No. 1,153,405; Sept. 14; Gaz. vol. 218; p. 407.
Painter's hook. J. E. Warren. No. 1,152,677; Sept. 7; Gaz. vol. 218; p. 110.
Painting and drying projectiles, Machine for. W. Yellowley. No. 1,153,529; Sept. 14; Gaz. vol. 218; p. 452.
Pan: *See*—
Dish-pan. Roller-pan.
Refrigerator drain-pan.
Pan cleaning and greasing machine. H. Gottschalk. No. 1,153,683; Sept. 14; Gaz. vol. 218; p. 505.
Pans and the like, Machine for folding the corners of. E. Katzinger. No. 1,153,813; Sept. 14; Gaz. vol. 218; p. 372.
Panel-work, Sheet-metal. M. Lachman. No. 1,154,254; Sept. 21; Gaz. vol. 218; p. 737.
Paper bottles liquid-tight, Rendering. G. W. Beadle. No. 1,154,282; Sept. 21; Gaz. vol. 218; p. 747.
Paper box. L. P. Rexford. No. 1,152,844; Sept. 7; Gaz. vol. 218; p. 171.
Paper-box handle. L. D. Morton. No. 1,154,043; Sept. 21; Gaz. vol. 218; p. 665.
Paper casing for hose. E. D. Lowell. No. 1,152,957; Sept. 7; Gaz. vol. 218; p. 212.
Paper-clip. A. J. Gifford. No. 1,152,406; Sept. 7; Gaz. vol. 218; p. 9.
Paper feed and cut-off means. E. J. Seator. No. 1,153,346; Sept. 14; Gaz. vol. 218; p. 385.
Paper-feeder. R. N. Rogers. No. 1,153,339; Sept. 14; Gaz. vol. 218; p. 382.
Paper-finishing machine. P. W. Bidwell. No. 1,155,203; Sept. 28; Gaz. vol. 218; p. 1092.
Paper-holder. J. E. Hudgel. No. 1,153,389; Sept. 14; Gaz. vol. 218; p. 401.
Paper holder, Towel-. R. N. Shelley. No. 1,152,851; Sept. 7; Gaz. vol. 218; p. 173.
Paper-machine. L. J. Deane and M. P. Wingate. No. 1,155,219; Sept. 28; Gaz. vol. 218; p. 1096.
Paper-making machine. N. H. Carpenter. No. 1,153,892; Sept. 21; Gaz. vol. 218; p. 614.
Paper-making machine. W. E. Metcalf. No. 1,152,747; Sept. 7; Gaz. vol. 218; p. 135.
Paper-making machines, Cylinder-vat for. A. A. Gehrlein. No. 1,154,183; Sept. 21; Gaz. vol. 218; p. 712.
Paper-making machines, Flow-regulator for. L. S. McCurdy. No. 1,154,788; Sept. 28; Gaz. vol. 218; p. 949.
Paper-making machines, Rotary knotter with deeply-immersed screening-drum for. C. Seybold and H. Dehm. No. 1,153,579; Sept. 14; Gaz. vol. 218; p. 470.
Paper, Manufacture of marbled. B. Zarnowiecki. No. 1,152,467; Sept. 7; Gaz. vol. 218; p. 30.
Paper-marking device. H. Brown. No. 1,152,893; Sept. 7; Gaz. vol. 218; p. 4.
Paper or the like, Apparatus for cutting and stacking sheets of. A. Rommeney and G. Kathe. No. 1,152,551; Sept. 7; Gaz. vol. 218; p. 63.
Paper pad, Wrapping-. D. Kuhmarker. No. 1,153,503; Sept. 14; Gaz. vol. 218; p. 442.
Paper-pail-making machine. F. J. Brunell. No. 1,153,193; Sept. 14; Gaz. vol. 218; p. 330.
Paper pail or box. C. T. Bloomer. No. 1,154,086; Sept. 21; Gaz. vol. 218; p. 680.
Paper pasting, trimming, and cutting machine, Wall-. N. Headland. No. 1,154,015; Sept. 21; Gaz. vol. 218; p. 655.
Paper-pulp-grinding mills, Shell-lining for. A. F. and O. B. Bahr. No. 1,152,690; Sept. 7; Gaz. vol. 218; p. 114.
Paper roll, Wall-. H. C. Jarvis. No. 1,154,022; Sept. 21; Gaz. vol. 218; p. 658.
Paper slitting, perforating, and rewinding machine. J. C. Fogarty. No. 1,154,301; Sept. 21; Gaz. vol. 218; p. 753.
Paper-towel drawing and cutting machine. G. A. Aicher and S. Lazar. No. 1,153,183; Sept. 14; Gaz. vol. 218; p. 327.
Paper-weight and bill-file, Combined. B. Litscher. No. 1,154,260; Sept. 21; Gaz. vol. 218; p. 739.
Parcel-post-rate indicator. B. E. Bolling. No. 1,153,539; Sept. 14; Gaz. vol. 218; p. 456.
Park-bench. G. A. Parker. No. 1,154,268; Sept. 21; Gaz. vol. 218; p. 742.
Partition, Sectional. J. P. Fangel. No. 1,154,622; Sept. 28; Gaz. vol. 218; p. 892.
Pattern-generating machine. F. H. Perry. No. 1,152,967; Sept. 7; Gaz. vol. 218; p. 216.
Pea-separator. F. Hamachek. No. 1,153,304; Sept. 14; Gaz. vol. 218; p. 369.
Peanut-picker. E. L. Canon. No. 1,153,598; Sept. 14; Gaz. vol. 218; p. 477.
Peat, Apparatus for removing roots and the like from. J. S. Whitaker. No. 1,153,661; Sept. 14; Gaz. vol. 218; p. 497.
Pedal. A. Winton and H. B. Anderson. No. 1,153,743; Sept. 14; Gaz. vol. 218; p. 526.
Peeler, Potato-. K. Yakushiji. No. 1,154,472; Sept. 21; Gaz. vol. 218; p. 812.
Pen and pencil clip. C. W. Boman. No. 1,153,754; Sept. 14; Gaz. vol. 218; p. 529.
Pen filler, Fountain-. H. N. Carpenter. No. 1,152,601; Sept. 7; Gaz. vol. 218; p. 81.
Pen filler, Fountain-. H. N. Carpenter. No. 1,152,602; Sept. 7; Gaz. vol. 218; p. 82.
Pen, Fountain-. J. A. Holland. No. 1,152,509; Sept. 7; Gaz. vol. 218; p. 46.
Pen, Gold. W. I. Ferris. No. 1,154,498; Sept. 21; Gaz. vol. 218; p. 820.
Pen-point remover. J. H. Bremer. No. 1,153,756; Sept. 14; Gaz. vol. 218; p. 530.
Pen, Stippling-. J. H. Vaughan. No. 1,153,468; Sept. 14; Gaz. vol. 218; p. 429.
Penholder. M. J. Mitchell. No. 1,154,332; Sept. 21; Gaz. vol. 218; p. 764.
Pencil attachment. J. Forster. No. 1,153,211; Sept. 14; Gaz. vol. 218; p. 336.
Pencil, Electrically-lighted. W. G. Browne. No. 1,155,206; Sept. 28; Gaz. vol. 218; p. 1093.
Pencil-holder. W. V. O'Connor. No. 1,153,105; Sept. 7; Gaz. vol. 218; p. 262.
Pencil, Lead-. C. R. Keeran. No. 1,153,115; Sept. 7; Gaz. vol. 218; p. 265.
Pencil-sharpener. H. Le Casse. No. 1,154,325; Sept. 21; Gaz. vol. 218; p. 762.
Pencils, Eraser-tip for lead-. S. Kraus. No. 1,153,799; Sept. 14; Gaz. vol. 218; p. 546.
Perambulators, Sleigh attachment for. A. J. Ingersoll. No. 1,153,924; Sept. 21; Gaz. vol. 218; p. 624.
Percolator. E. E. Rose. No. 1,155,166; Sept. 28; Gaz. vol. 218; p. 1080.
Percussion-drill. C. L. Lawton. No. 1,154,642; Sept. 28; Gaz. vol. 218; p. 900.
Percussive drill. C. C. Hansen. No. 1,154,921; Sept. 28; Gaz. vol. 218; p. 993.
Perforating-machine. C. A. Burton. No. 1,155,129; Sept. 28; Gaz. vol. 218; p. 1067.
Perforator, Paper-. A. and C. Dom. No. 1,154,294; Sept. 21; Gaz. vol. 218; p. 751.
Periscope, Binocular. G. N. Saegmuller. No. 1,153,259; Sept. 14; Gaz. vol. 218; p. 354.
Petroleum, Refining. J. C. Black. No. 1,152,478; Sept. 7; Gaz. vol. 218; p. 35.
Petroleums and other heavy liquid hydrocarbons into volatile hydrocarbons distilling below 150° C., Converting. P. Sabatier and A. Mailhe. No. 1,152,765; Sept. 7; Gaz. vol. 218; p. 140.
Phonograph, Device for automatically stopping the turntable of a. W. Cuthbertson. No. 1,154,975; Sept. 28; Gaz. vol. 218; p. 1012.
Phonograph-record cabinet. H. T. Maurer. No. 1,154,263; Sept. 21; Gaz. vol. 218; p. 740.
Phonographic recording apparatus. T. A. Edison. No. 1,152,614; Sept. 7; Gaz. vol. 218; p. 86.
Photographic-printing apparatus. S. A. Smith. No. 1,154,735; Sept. 28; Gaz. vol. 218; p. 930.
Photographic-shutter operator. B. A. Slocum. No. 1,154,892; Sept. 28; Gaz. vol. 218; p. 983.
Photographing and developing apparatus. G. C. Beidler. No. 1,153,017; Sept. 7; Gaz. vol. 218; p. 233.
Photography, Apparatus for producing a round or relief effect by. H. B. Byron. No. 1,154,232; Sept. 21; Gaz. vol. 218; p. 729.
Photography, Screen for color. C. L. A. Brasseur. No. 1,154,607; Sept. 28; Gaz. vol. 218; p. 887.
Piano, Automatic player-. E. B. Sherman. No. 1,152,852; Sept. 7; Gaz. vol. 218; p. 174.
Piano-back. W. G. Bets. No. 1,155,295; Sept. 28; Gaz. vol. 218; p. 1119.
Piano, Player-. M. Neucomer. No. 1,152,540; Sept. 7; Gaz. vol. 218; p. 59.
Piano-player. E. C. Wamelink. No. 1,154,146; Sept. 21; Gaz. vol. 218; p. 700.
Piano-player action. Pneumatic. W. A. Kruck. No. 1,153,554; Sept. 14; Gaz. vol. 218; p. 462.
Piano-player, Electrically-operated. W. C. Reed. No. 1,152,841; Sept. 7; Gaz. vol. 218; p. 169.
Piano-playing attachment, Disappearing. W. F. Deitemeier. No. 1,154,846; Sept. 28; Gaz. vol. 218; p. 967.
Picker: *See*—
Fruit-picker. Peanut-picker.
Picture apparatus, Motion-. C. F. Jenkins. No. 1,152,515; Sept. 7; Gaz. vol. 218; p. 49.
Picture apparatus, Motion-. C. F. Jenkins. No. 1,153,164; Sept. 7; Gaz. vol. 218; p. 281.
Picture apparatus, Moving-. W. A. Ryan. No. 1,153,341; Sept. 14; Gaz. vol. 218; p. 383.
Picture-building. E. E. Doolittle and P. S. Johst. No. 1,153,424; Sept. 14; Gaz. vol. 218; p. 414.
Picture device, Motion-. P. J. Taylor. No. 1,152,989; Sept. 7; Gaz. vol. 218; p. 224.
Picture films, Apparatus for printing positive motion-. H. O. Carleton and E. W. Nelson. No. 1,152,599; Sept. 7; Gaz. vol. 218; p. 81.
Picture-hanger. J. N. Rickles. No. 1,154,887; Sept. 28; Gaz. vol. 218; p. 981.
Picture machines, Film-fire-prevention shutter for motion-. J. T. Wells. No. 1,154,952; Sept. 28; Gaz. vol. 218; p. 1004.
Picture-projecting apparatus. C. F. Jenkins. No. 1,153,163; Sept. 7; Gaz. vol. 218; p. 281.
Picture screen and producing the same, Moving-. J. B. Flogersi. No. 1,152,620; Sept. 7; Gaz. vol. 218; p. 88.
Pictures, Reproduction of animated. W. Friese-Greene. No. 1,155,056; Sept. 28; Gaz. vol. 218; p. 1039.
Pigment-grinding machine. M. D. Duffy and B. P. Costello. No. 1,154,004; Sept. 21; Gaz. vol. 218; p. 651.
Pin: *See*—
Clothes-pin. Wrist-pin.
Self-locking pin.

Pin-receiving device. E. D. Conklin. No. 1,153,175; Sept. 7; Gaz. vol. 218; p. 285.
Pin-retainer. J. Forsheim and J. Konigsberg. No. 1,153,615; Sept. 14; Gaz. vol. 218; p. 482.
Pipe: *See*—
Irrigation-pipe. Smoking-pipe.
Pipe-bend-making die. C. H. True and N. T. McKee. No. 1,155,109; Sept. 28; Gaz. vol. 218; p. 1060.
Pipe-bends, Making. C. H. True and N. T. McKee. No. 1,155,110; Sept. 28; Gaz. vol. 218; p. 1060.
Pipe-bender. O. Caron and G. Surprenant. No. 1,155,042; Sept. 28; Gaz. vol. 218; p. 1033.
Pipe-clamp. M. Brown. No. 1,153,024; Sept. 7; Gaz. vol. 218; p. 236.
Pipe-coupling. W. E. Oyster and S. Tempinski. No. 1,154,540; Sept. 21; Gaz. vol. 218; p. 834.
Pipe-coupling. W. S. Pierce. No. 1,153,824; Sept. 14; Gaz. vol. 218; p. 555.
Pipe-coupling. R. E. Robertson. No. 1,154,987; Sept. 28; Gaz. vol. 218; p. 999.
Pipe coupling, Train-. H. S. Kimmel. No. 1,154,028; Sept. 21; Gaz. vol. 218; p. 660.
Pipe couplings, Protecting device for air-brake-. J. M. Buzard, E. P. Cole, and F. H. Haslage. No. 1,154,481; Sept. 21; Gaz. vol. 218; p. 815.
Pipe installation, Reinforcement for. W. B. Gray. No. 1,153,150; Sept. 7; Gaz. vol. 218; p. 279.
Pipe-joint. C. Forth. No. 1,154,984; Sept. 28; Gaz. vol. 218; p. 1014.
Pipe-joint. C. Forth. No. 1,154,985; Sept. 28; Gaz. vol. 218; p. 1015.
Pipe-lifter. J. F. Bogle. No. 1,154,687; Sept. 28; Gaz. vol. 218; p. 916.
Pipe-lining. R. Stocker. No. 1,153,724; Sept. 14; Gaz. vol. 218; p. 521.
Pipe-repairing device. A. Claiborne. No. 1,154,376; Sept. 21; Gaz. vol. 218; p. 781.
Pipe-threading machine. D. C. Walter. No. 1,153,885; Sept. 14; Gaz. vol. 218; p. 559.
Pipe-wrench. A. E. Rice. No. 1,154,654; Sept. 28; Gaz. vol. 218; p. 904.
Pipe-wrench, Automatic. L. Knox. No. 1,153,694; Sept. 14; Gaz. vol. 218; p. 508.
Piston. G. E. Franquist. No. 1,153,902; Sept. 21; Gaz. vol. 218; p. 617.
Piston, Engine-. H. V. J. Jouffret. No. 1,153,795; Sept. 14; Gaz. vol. 218; p. 544.
Piston, Internal-combustion-engine. O. E. Jorgensen. No. 1,155,244; Sept. 28; Gaz. vol. 218; p. 1104.
Piston with two cupped leathers. F. J. Chapsal and A. L. E. Saillot. No. 1,153,604; Sept. 14; Gaz. vol. 218; p. 479.
Plaiting-machine. T. F. Hagarty. No. 1,154,857; Sept. 28; Gaz. vol. 218; p. 971.
Plane and analogous woodworking-tool for grooving, rabbeting, beading, and the like, Grooving-. J. S. Howkins. No. 1,153,700; Sept. 14; Gaz. vol. 218; p. 543.
Planing metal articles, Die for. J. Lundgren. No. 1,152,826; Sept. 7; Gaz. vol. 218; p. 164.
Plant and flower stand. A. T. Chalk. No. 1,153,028; Sept. 7; Gaz. vol. 218; p. 237.
Plant-setting machine. S. L. Bryant. No. 1,154,173; Sept. 21; Gaz. vol. 218; p. 710.
Planter. D. Draper. No. 1,152,402; Sept. 7; Gaz. vol. 218; p. 7.
Planter, Hand-. R. C. Himebaugh. No. 1,153,225; Sept. 14; Gaz. vol. 218; p. 342.
Planter, Wireless corn-. L. E. Easter. No. 1,153,426; Sept. 14; Gaz. vol. 218; p. 415.
Plaster to concrete surfaces, Material for binding. W. A. Stoetzer. No. 1,152,860; Sept. 7; Gaz. vol. 218; p. 177.
Plasterer's implement, Combination. A. D. Stratton. No. 1,154,453; Sept. 21; Gaz. vol. 218; p. 806.
Plastic and fabric articles, Treating combined. R. B. Price. No. 1,152,836; Sept. 7; Gaz. vol. 218; p. 168.
Plastic materials, Manufacturing articles from. R. B. Price. No. 1,152,834; Sept. 7; Gaz. vol. 218; p. 167.
Plastic materials, Treating. R. B. Price. No. 1,152,835; Sept. 7; Gaz. vol. 218; p. 167.
Plastic materials, Treating. R. B. Price. No. 1,152,837; Sept. 7; Gaz. vol. 218; p. 168.
Plate, Chafing-. C. T. Westlake. No. 1,154,223; Sept. 21; Gaz. vol. 218; p. 726.
Platen-presses, Automatic sheet feeding and delivering mechanism for. J. Horn. No. 1,154,312; Sept. 21; Gaz. vol. 218; p. 757.
Plaiting-machine. L. Schulte. No. 1,154,630; Sept. 28; Gaz. vol. 218; p. 906.
Player mechanisms, Automatic stop for power-driven. F. C. White. No. 1,154,082; Sept. 21; Gaz. vol. 218; p. 678.
Pliers, Piston-ring. D. J. Campbell. No. 1,153,674; Sept. 14; Gaz. vol. 218; p. 502.
Plow. G. F. Butler. No. 1,153,025; Sept. 7; Gaz. vol. 218; p. 236.
Plow. W. W. Green. No. 1,154,307; Sept. 21; Gaz. vol. 218; p. 755.
Plow, Brush-. M. C. French. No. 1,153,213; Sept. 14; Gaz. vol. 218; p. 336.
Plow, Motor-. M. Samel. No. 1,154,889; Sept. 28; Gaz. vol. 218; p. 982.
Plow, Shuttle riding-. V. E. King. No. 1,152,896; Sept. 7; Gaz. vol. 218; p. 190.
Plow stocks and handles, Clamping device for. W. N. Gandy. No. 1,154,754; Sept. 28; Gaz. vol. 218; p. 937.
Plowing-machine. A. C. Lindgren. No. 1,154,995; Sept. 28; Gaz. vol. 218; p. 1018.
Plug, Attaching-. H. P. Ball. No. 1,154,834; Sept. 28; Gaz. vol. 218; p. 965.
Plug. Separable attachment-. R. B. Benjamin. No. 1,154,963; Sept. 28; Gaz. vol. 218; p. 1007.
Plunger, Mold-. A. Kinnear. No. 1,152,518; Sept. 7; Gaz. vol. 218; p. 50.
Pneumatic-despatch-tube apparatus. C. P. Hidden. No. 1,154,570; Sept. 21; Gaz. vol. 218; p. 845.
Pneumatic spring. B. W. Davis. No. 1,152,609; Sept. 7; Gaz. vol. 218; p. 84.
Pocket-box. I. J. Marcuse. No. 1,152,429; Sept. 7; Gaz. vol. 218; p. 17.
Pocket for coats, shirts, and the like. A. J. Lewis. No. 1,154,258; Sept. 21; Gaz. vol. 218; p. 739.
Polish for woodwork and preparing the same. J. B. Hancock. No. 1,153,686; Sept. 14; Gaz. vol. 218; p. 506.
Polishing-machine. J. F. Gail. No. 1,154,696; Sept. 28; Gaz. vol. 218; p. 918.
Polyhydrocolchicin. E. Hug. No. 1,154,314; Sept. 21; Gaz. vol. 218; p. 758.
Pool or billiard table register. M. L. Adler. No. 1,154,226; Sept. 21; Gaz. vol. 218; p. 727.
Pool-table pocket. G. A. Jaeger. No. 1,154,865; Sept. 28; Gaz. vol. 218; p. 973.
Portable house. W. O'Hara. No. 1,152,655; Sept. 7; Gaz. vol. 218; p. 101.
Post: *See*—
Binding-post.
Post-drill, Blacksmith's. M. A. Dorothy. No. 1,155,222; Sept. 28; Gaz. vol. 218; p. 1097.
Post-puller. C. E. Angster. No. 1,153,747; Sept. 14; Gaz. vol. 218; p. 528.
Pot-head connector. P. F. Williams. No. 1,154,823; Sept. 28; Gaz. vol. 218; p. 961.
Potato cutter, Seed-. T. J. Harrison. No. 1,154,765; Sept. 28; Gaz. vol. 218; p. 941.
Potato-stripper. E. N. Olson. No. 1,154,539; Sept. 21; Gaz. vol. 218; p. 834.
Potential-regulator. H. W. Cheney. No. 1,153,422; Sept. 14; Gaz. vol. 218; p. 414.
Poultry-picking frame. H. C. Pierce. No. 1,155,004; Sept. 28; Gaz. vol. 218; p. 1021.
Pouring-spout can. S. Pilarowski. No. 1,154,205; Sept. 21; Gaz. vol. 218; p. 719.
Powder dispenser, Tooth-. R. D. Gee. No. 1,154,391; Sept. 21; Gaz. vol. 218; p. 785.
Powdered material, Means for feeding. C. L. Kennicott. No. 1,152,820; Sept. 7; Gaz. vol. 218; p. 162.
Power generating and transmitting system. V. G. Apple. No. 1,153,667; Sept. 14; Gaz. vol. 218; p. 499.
Power-generating system. J. Patten. No. 1,154,880; Sept. 28; Gaz. vol. 218; p. 979.
Power-transmission device. J. W. Cockburn. No. 1,153,031; Sept. 7; Gaz. vol. 218; p. 237.
Power transmission, Fluid-. A. T. Keene. No. 1,153,930; Sept. 21; Gaz. vol. 218; p. 626.
Power-transmission mechanism. A. Anderson. No. 1,153,882; Sept. 21; Gaz. vol. 218; p. 610.
Power-transmission mechanism. E. A. Halbleib. No. 1,152,504; Sept. 7; Gaz. vol. 218; p. 44.
Power-transmitting apparatus. W. H. Hungerford. No. 1,155,314; Sept. 28; Gaz. vol. 218; p. 1126.
Power-transmitting mechanism. S. T. Simmons. No. 1,155,284; Sept. 28; Gaz. vol. 218; p. 1115.
Preheater. S. H. Tacy. No. 1,153,273; Sept. 14; Gaz. vol. 218; p. 358.
Preheating device. G. Van Daam. No. 1,155,112; Sept. 28; Gaz. vol. 218; p. 1061.
Preheating device. G. Van Daam. No. 1,155,113; Sept. 28; Gaz. vol. 218; p. 1061.
Press: *See*—
Hay-press. Ring-expanding press.
Krout-press. Screw-press.
Printing-press. Seed-press.
Press. A. S. Morris. No. 1,153,638; Sept. 14; Gaz. vol. 218; p. 490.
Press. G. R. Schueler. No. 1,152,919; Sept. 7; Gaz. vol. 218; p. 198.
Presser-foot. J. Callahan. No. 1,154,373; Sept. 21; Gaz. vol. 218; p. 780.
Pressing-board. F. C. Ramlow. No. 1,154,726; Sept. 28; Gaz. vol. 218; p. 927.
Pressing-machine. E. A. Clements. No. 1,153,289; Sept. 14; Gaz. vol. 218; p. 364.
Pressing machine, Steam garment-. T. D. Palmer. No. 1,154,709; Sept. 28; Gaz. vol. 218; p. 953.
Pressure developing and driven tool. A. Palmros. No. 1,155,264; Sept. 28; Gaz. vol. 218; p. 1109.
Pressure-relation gage. E. G. Bailey. No. 1,153,413; Sept. 14; Gaz. vol. 218; p. 410.
Pressure-relation gage. E. G. Bailey. No. 1,153,414; Sept. 14; Gaz. vol. 218; p. 411.
Priming-cup. J. J. Aull. No. 1,154,683; Sept. 28; Gaz. vol. 218; p. 914.
Priming-cup. O. A. Smith. No. 1,153,457; Sept. 14; Gaz. vol. 218; p. 426.
Priming device. F. M. Furber. No. 1,152,722; Sept. 7; Gaz. vol. 218; p. 125.
Printing apparatus. W. Wright. No. 1,152,587; Sept. 7; Gaz. vol. 218; p. 77.

Printing apparatus, Individual-letter-. W. Wright. No. 1,152,588; Sept. 7; Gaz. vol. 218; p. 78.
Printing-block system. G. E. McCabe. No. 1,152,827; Sept. 7; Gaz. vol. 218; p. 165.
Printing-machine. C. A. Kellogg. No. 1,153,315; Sept. 14; Gaz. vol. 218; p. 373.
Printing-machine. E. Ocumpaugh, 2nd. No. 1,154,050; Sept. 21; Gaz. vol. 218; p. 668.
Printing machine, Fabric-. M. Dupuis. No. 1,153,045; Sept. 7; Gaz. vol. 218; p. 241.
Printing machine, Fabric-. M. Dupuis. No. 1,153,046; Sept. 7; Gaz. vol. 218; p. 242.
Printing machines, Light-regulating device for film-. G. White. No. 1,154,820; Sept. 28; Gaz. vol. 218; p. 960.
Printing-plates, Making. E. Leitner. No. 1,154,643; Sept. 28; Gaz. vol. 218; p. 900.
Printing-press. S. Crump and A. W. Hilsinger. No. 1,154,002; Sept. 21; Gaz. vol. 218; p. 651.
Printing-press. W. S. Warnock. No. 1,153,587; Sept. 14; Gaz. vol. 218; p. 473.
Printing-press delivery mechanism, Web-. F. M. Turck. No. 1,153,833; Sept. 14; Gaz. vol. 218; p. 550.
Printing-press ink-distributing roller. J. W. Reeves. No. 1,154,727; Sept. 28; Gaz. vol. 218; p. 928.
Printing-rollers, Means for cooling. D. E. Lynch. No. 1,153,398; Sept. 14; Gaz. vol. 218; p. 405.
Printing-surfaces, Preparation of photomechanical. J. G. Wood. No. 1,155,186; Sept. 28; Gaz. vol. 218; p. 1087.
Profile-turning, Automatic machine for. K. Jung. No. 1,152,641; Sept. 7; Gaz. vol. 218; p. 96.
Projectile. C. F. Sullivan. No. 1,152,668; Sept. 7; Gaz. vol. 218; p. 107.
Projectile, Armor-piercing. H. B. Strange. No. 1,153,460; Sept. 14; Gaz. vol. 218; p. 427.
Projectile, Artillery-. E. Rimailho. No. 1,154,437; Sept. 21; Gaz. vol. 218; p. 800.
Projectile, Incendiary. L. Nixon. No. 1,153,513; Sept. 14; Gaz. vol. 218; p. 447.
Projectile-thrower. A. Beaty. No. 1,153,415; Sept. 14; Gaz. vol. 218; p. 412.
Projectiles, Contour-cap for. H. H. C. Dunwoody. No. 1,153,425; Sept. 14; Gaz. vol. 218; p. 415.
Projection apparatus. J. Guerson and R. Pechkrans. No. 1,153,985; Sept. 14; Gaz. vol. 218; p. 506.
Propeller. A. E. Miller. No. 1,154,649; Sept. 28; Gaz. vol. 218; p. 902.
Propeller-shaft. F. E. Watts. No. 1,153,984; Sept. 21; Gaz. vol. 218; p. 645.
Propelling apparatus for vessels. L. Y. Spear. No. 1,152,567; Sept. 7; Gaz. vol. 218; p. 70.
Propulsion mechanism. G. W. Rundle. No. 1,154,208; Sept. 21; Gaz. vol. 218; p. 720.
Protective device. D. Basch. No. 1,154,359; Sept. 21; Gaz. vol. 218; p. 774.
Pruning-knife. J. H. Keller. No. 1,153,626; Sept. 14; Gaz. vol. 218; p. 486.
Puller: *See*—
Post-puller.
Pulley. G. Bowers. No. 1,152,597; Sept. 7; Gaz. vol. 218; p. 50.
Pulley-block. L. D. Cull. No. 1,152,608; Sept. 7; Gaz. vol. 218; p. 83.
Pulley frame and mounting. O. H. Iman. No. 1,153,923; Sept. 21; Gaz. vol. 218; p. 624.
Pulp-feeding mechanism. W. R. Macklind. No. 1,154,190; Sept. 21; Gaz. vol. 218; p. 714.
Pulp for making paper and like material, Treating. H. Ariedter. No. 1,153,883; Sept. 21; Gaz. vol. 218; p. 611.
Pulp-screening machine. P. P. Westbye. No. 1,155,116; Sept. 28; Gaz. vol. 218; p. 1062.
Pump. E. E. Izer. No. 1,154,316; Sept. 21; Gaz. vol. 218; p. 759.
Pump. J. F. Jones, Jr. No. 1,152,734; Sept. 7; Gaz. vol. 218; p. 130.
Pump. O. Karcher. No. 1,153,812; Sept. 14; Gaz. vol. 218; p. 372.
Pump. R. M. Nichols. No. 1,153,816; Sept. 14; Gaz. vol. 218; p. 552.
Pump and compressor, Combined scavenging-. O. F. Persson. No. 1,154,336; Sept. 21; Gaz. vol. 218; p. 766.
Pump and emergency governor, Combined. B. Krimer. No. 1,153,628; Sept. 14; Gaz. vol. 218; p. 486.
Pump, Balanced centrifugal. F. W. Krough. No. 1,153,321; Sept. 14; Gaz. vol. 218; p. 375.
Pump, Deep-well. L. W. Bodinson. No. 1,152,479; Sept. 7; Gaz. vol. 218; p. 35.
Pump for gas-producing apparatus. C. S. McFarlane. No. 1,153,235; Sept. 14; Gaz. vol. 218; p. 345.
Pump for variable-speed hydraulic transmission-gears. C. Bellena. No. 1,153,478; Sept. 14; Gaz. vol. 218; p. 433.
Pump-head. H. F. Story. No. 1,154,348; Sept. 21; Gaz. vol. 218; p. 770.
Pump, Mercury-. D. J. O'Brien. No. 1,154,585; Sept. 21; Gaz. vol. 218; p. 851.
Pump, Rotary. O. C. Goeriz. No. 1,154,110; Sept. 21; Gaz. vol. 218; p. 688.
Pump, Rotary. W. E. Shore. No. 1,153,878; Sept. 14; Gaz. vol. 218; p. 573.
Pump, Rotary piston-. S. Thune. No. 1,152,453; Sept. 7; Gaz. vol. 218; p. 25.
Pump, Variable-feed. G. D. Pogue. No. 1,154,723; Sept. 28; Gaz. vol. 218; p. 926.
Pumping-jack. C. B. Anderson. No. 1,153,746; Sept. 14; Gaz. vol. 218; p. 527.
Pumping machinery. M. T. and M. C. Chapman. No. 1,152,603; Sept. 7; Gaz. vol. 218; p. 82.
Punch. C. Dom. No. 1,152,886; Sept. 7; Gaz. vol. 218; p. 186.
Punch-press guard. P. T. Chapleau. No. 1,153,603; Sept. 14; Gaz. vol. 218; p. 478.
Punch-shifting device. Z. P. Candee. No. 1,153,287; Sept. 14; Gaz. vol. 218; p. 363.
Punching-machine. C. A. Elton. No. 1,154,621; Sept. 28; Gaz. vol. 218; p. 892.
Punching-machine. J. Wright. No. 1,153,410; Sept. 14; Gaz. vol. 218; p. 409.
Puncture-proof wheel. W. J. Higgs. No. 1,152,508; Sept. 7; Gaz. vol. 218; p. 46.
Purse. J. A. Kovesy. No. 1,154,122; Sept. 21; Gaz. vol. 218; p. 692.
Puzzle. A. P. Simao. No. 1,154,136; Sept. 21; Gaz. vol. 218; p. 697.
Rack: *See*—
Clothes-rack. Hose-rack.
Radiation-regulator. A. B. Wright. No. 1,152,585; Sept. 7; Gaz. vol. 218; p. 76.
Radiator for motor-cars. H. W. Stock. No. 1,154,072; Sept. 21; Gaz. vol. 218; p. 675.
Radiator-indicator, Automobile. F. B. Corey. No. 1,154,097; Sept. 21; Gaz. vol. 218; p. 684.
Radium ores and residues, Concentrating. O. P. C. Bredt. No. 1,154,231; Sept. 21; Gaz. vol. 218; p. 728.
Radium residues and the separation of radium compounds therefrom, Production of. O. P. C. Bredt. No. 1,154,230; Sept. 21; Gaz. vol. 218; p. 728.
Rail. J. C. Woods. No. 1,153,989; Sept. 21; Gaz. vol. 218; p. 646.
Rail. W. H. Wright. No. 1,153,990; Sept. 21; Gaz. vol. 218; p. 646.
Rail attachment, Guard-. C. Pasel. No. 1,154,335; Sept. 21; Gaz. vol. 218; p. 766.
Rail-bond. G. A. Merkt. No. 1,154,264; Sept. 21; Gaz. vol. 218; p. 741.
Rail-bonding device. A. A. Ziegler. No. 1,154,903; Sept. 28; Gaz. vol. 218; p. 987.
Rail-brace and tie-plate, Combined. J. O. Phelps. No. 1,155,270; Sept. 28; Gaz. vol. 218; p. 1111.
Rail chair and fastener. J. E. Shope. No. 1,154,445; Sept. 21; Gaz. vol. 218; p. 803.
Rail-joint. H. A. Christy. No. 1,153,153; Sept. 7; Gaz. vol. 218; p. 277.
Rail-joint. E. Conerway. No. 1,153,606; Sept. 14; Gaz. vol. 218; p. 479.
Rail-joint. J. M. Hinkle and J. S. Cooper. No. 1,154,771; Sept. 28; Gaz. vol. 218; p. 943.
Rail-joint. G. B. Lummer. No. 1,153,397; Sept. 14; Gaz. vol. 218; p. 404.
Rail-joint. F. Pietrussa. No. 1,154,882; Sept. 28; Gaz. vol. 218; p. 979.
Rail-joint. J. Roncevick. No. 1,155,277; Sept. 28; Gaz. vol. 218; p. 1113.
Rail joint and fastener. R. G. Powell. No. 1,154,724; Sept. 28; Gaz. vol. 218; p. 927.
Rail-joint, Insulated. C. E. Stevens. No. 1,154,738; Sept. 28; Gaz. vol. 218; p. 931.
Rails and other objects to be butt-welded, Forming parallel faces on the ends of. H. Goldschmidt and W. Brewitt. No. 1,154,918; Sept. 28; Gaz. vol. 218; p. 993.
Rails, Device for preventing creeping of. A. J. Dinklage. No. 1,153,541; Sept. 14; Gaz. vol. 218; p. 457.
Railway-coupling. J. H. Le Compte. No. 1,154,327; Sept. 21; Gaz. vol. 218; p. 763.
Railway-crossing. L. Sadler and R. C. Geckler. No. 1,153,342; Sept. 14; Gaz. vol. 218; p. 383.
Railway-crossing alarm. G. Neville. No. 1,154,047; Sept. 21; Gaz. vol. 218; p. 667.
Railway grade-crossing. H. E. Muchnic. No. 1,154,534; Sept. 21; Gaz. vol. 218; p. 832.
Railway package-transferring device. E. B. Harral. No. 1,153,071; Sept. 7; Gaz. vol. 218; p. 250.
Railway-rails, Means for joining. T. M. Daniels. No. 1,153,036; Sept. 7; Gaz. vol. 218; p. 289.
Railway-rails, Uniting. F. Lange. No. 1,153,435; Sept. 14; Gaz. vol. 218; p. 418.
Railway signal device. W. E. Sauerman. No. 1,153,449; Sept. 14; Gaz. vol. 218; p. 423.
Railway signaling. T. S. Stevens. No. 1,152,448; Sept. 7; Gaz. vol. 218; p. 23.
Railway signaling system. G. Dalén. No. 1,153,840; Sept. 14; Gaz. vol. 218; p. 561.
Railway-spike. I. P. Payne. No. 1,152,656; Sept. 7; Gaz. vol. 218; p. 102.
Railway-station indicator. C. W. Groening. No. 1,152,725; Sept. 7; Gaz. vol. 218; p. 126.
Railway-switch device, Automatic. R. I. Partida. No. 1,153,819; Sept. 14; Gaz. vol. 218; p. 553.
Railway-tie. J. A. Bilan. No. 1,153,670; Sept. 14; Gaz. vol. 218; p. 500.
Railway-tie. J. E. Hatton. No. 1,154,018; Sept. 21; Gaz. vol. 218; p. 655.
Railway-tie. H. G. Houghton. No. 1,153,387; Sept. 14; Gaz. vol. 218; p. 401.
Railway-tie. M. Karpowicz. No. 1,152,417; Sept. 7; Gaz. vol. 218; p. 12.
Railway-tie. E. H. Spiers. No. 1,155,287; Sept. 28; Gaz. vol. 218; p. 1116.

Railway-tie, Composite. W. H. Knickrehm. No. 1,154,779; Sept. 28; Gaz. vol. 218; p. 946.
Railway-track crossing. G. H. Knowles. No. 1,153,166; Sept. 7; Gaz. vol. 218; p. 282.
Railway-track switch. W. A. Stull. No. 1,152,573; Sept. 7; Gaz. vol. 218; p. 72.
Railway-traffic-controlling apparatus. J. M. Waldron. No. 1,154,742; Sept. 28; Gaz. vol. 218; p. 933.
Railway-train. C. Theryc. No. 1,152,451; Sept. 7; Gaz. vol. 218; p. 24.
Railway-vehicle coupling. W. Rundle. No. 1,153,577; Sept. 14; Gaz. vol. 218; p. 470.
Railway-vehicles, Draft appliance for. W. J. Regan. No. 1,155,097; Sept. 28; Gaz. vol. 218; p. 1056.
Railways, Apparatus for actuating conduit-covers and collector-plows for electric. D. Samala. No. 1,152,914; Sept. 7; Gaz. vol. 218; p. 196.
Railways, Means for the prevention of accidents on. T. C. Kerr. No. 1,152,953; Sept. 7; Gaz. vol. 218; p. 211.
Rain-gage. W. E. Tredway. No. 1,153,355; Sept. 14; Gaz. vol. 218; p. 389.
Rake: *See*—
Self-cleaning rake.
Rake. C. J. Mallett. No. 1,154,790; Sept. 28; Gaz. vol. 218; p. 950.
Range. J. A. Lansing. No. 1,153,322; Sept. 14; Gaz. vol. 218; p. 375.
Range and coil heater. H. E. Vinger. No. 1,153,408; Sept. 14; Gaz. vol. 218; p. 408.
Range, Combination coal and gas. H. C. Maul. No. 1,154,038; Sept. 21; Gaz. vol. 218; p. 663.
Range door, Gas-. M. A. Possons. No. 1,154,430; Sept. 21; Gaz. vol. 218; p. 798.
Range, Electric. R. Williams. No. 1,154,954; Sept. 28; Gaz. vol. 218; p. 1005.
Range, Electrically-heated kitchen-. O. Smlid and K. Pettersen. No. 1,154,270; Sept. 21; Gaz. vol. 218; p. 743.
Range-finder. A. M. Kennedy. No. 1,154,252; Sept. 21; Gaz. vol. 218; p. 737.
Ratchet-wrench. G. C. Reid. No. 1,154,056; Sept. 21; Gaz. vol. 218; p. 670.
Razor-blade holder, Safety-. A. F. Collins and C. C. Craig. No. 1,155,132; Sept. 28; Gaz. vol. 218; p. 1068.
Reamer, Expansion-. W. F. Schenber. No. 1,152,440; Sept. 7; Gaz. vol. 218; p. 20.
Receptacle-cover. W. J. Vollrath and M. M. Cohen. No. 1,153,586; Sept. 14; Gaz. vol. 218; p. 473.
Receptacle-top. W. G. Kendall. No. 1,154,518; Sept. 21; Gaz. vol. 218; p. 827.
Reciprocating-piston engine. H. Pilling. No. 1,153,133; Sept. 7; Gaz. vol. 218; p. 270.
Recorder: *See*—
Contour-recorder. Synchronizing recorder.
Heat-recorder. Torpedo-depth recorder.
Machine-efficiency recorder.
Recorder. F. G. Rose. No. 1,154,438; Sept. 21; Gaz. vol. 218; p. 801.
Recording-machine carriage. C. E. W. Gardner. No. 1,154,304; Sept. 21; Gaz. vol. 218; p. 754.
Recording mechanism. G. W. Freeland. No. 1,152,804; Sept. 7; Gaz. vol. 218; p. 155.
Rectifier. L. R. Rogers. No. 1,154,058; Sept. 21; Gaz. vol. 218; p. 670.
Reel: *See*—
Harvester-reel.
Reels, Automatic line-winding attachment for. C. Toepfer. No. 1,154,220; Sept. 21; Gaz. vol. 218; p. 725.
Reeling machine, Skein-. E. J. Lippa. No. 1,154,705; Sept. 28; Gaz. vol. 218; p. 921.
Reference-record. G. Wilson. No. 1,154,225; Sept. 21; Gaz. vol. 218; p. 727.
Refrigerating apparatus. C. J. Coleman. No. 1,152,708; Sept. 7; Gaz. vol. 218; p. 121.
Refrigerating apparatus. E. Ruud. No. 1,153,712; Sept. 14; Gaz. vol. 218; p. 516.
Refrigerator-car. M. P. Reynolds. No. 1,154,436; Sept. 21; Gaz. vol. 218; p. 800.
Refrigerator-car. M. P. Reynolds. No. 1,153,705; Sept. 14; Gaz. vol. 218; p. 518.
Refrigerator drain-pan or the like. R. Tate, Jr. No. 1,154,141; Sept. 21; Gaz. vol. 218; p. 698.
Register: *See*—
Autographic register. Undertow-warner indicator-register.
Cash-register.
Pool or billiard table register.
Register. J. M. Triggs. No. 1,152,864; Sept. 7; Gaz. vol. 218; p. 178.
Register-gages and grippers for job-presses. C. Ferro. No. 1,154,694; Sept. 28; Gaz. vol. 218; p. 918.
Register-shield. H. W. Neal. No. 1,152,589; Sept. 7; Gaz. vol. 218; p. 59.
Regulator: *See*—
Damper-regulator. Locomotive draft-regulator.
Electric regulator.
Feed-pressure regulator. Potential-regulator.
Feed-water regulator. Radiation-regulator.
Light or heat regulator. Temperature-regulator.
Regulator. G. R. Radley. No. 1,154,725; Sept. 28; Gaz. vol. 218; p. 927.
Reinforcing-bar, Deformed. W. A. Collings. No. 1,152,606; Sept. 7; Gaz. vol. 218; p. 88.
Reinforcing-bars, Making. E. E. Slick. No. 1,154,664; Sept. 28; Gaz. vol. 218; p. 908.
Reinforcing-bars, Supporting and spacing means for. D. A. Wedmore. No. 1,153,279; Sept. 14; Gaz. vol. 218; p. 360.
Repeater. C. D. Lanning. No. 1,154,574; Sept. 21; Gaz. vol. 218; p. 847.
Reproducing objects, Apparatus for plastically. W. Selke. No. 1,155,010; Sept. 28; Gaz. vol. 218; p. 1024.
Reproducing objects, Plastically. W. Selke. No. 1,155,011; Sept. 28; Gaz. vol. 218; p. 1024.
Reraller. N. K. Bowman. No. 1,152,784; Sept. 7; Gaz. vol. 218; p. 147.
Rerailer. E. Smyth. No. 1,154,273; Sept. 21; Gaz. vol. 218; p. 744.
Resilient clip and article-holder, Combination. C. W. Meguiar. No. 1,154,528; Sept. 21; Gaz. vol. 218; p. 830.
Resilient wheel. J. B. Drahonovsky. No. 1,154,912; Sept. 28; Gaz. vol. 218; p. 990.
Resilient wheel. A. Jutila. No. 1,155,246; Sept. 28; Gaz. vol. 218; p. 1105.
Resilient wheel. A. Kirby. No. 1,153,119; Sept. 7; Gaz. vol. 218; p. 266.
Resilient wheel. G. J. Lee. No. 1,152,648; Sept. 7; Gaz. vol. 218; p. 99.
Resilient wheel. D. H. Padden. No. 1,152,966; Sept. 7; Gaz. vol. 218; p. 216.
Resistance device, Variable-. W. C. Reed. No. 1,152,842; Sept. 7; Gaz. vol. 218; p. 170.
Reversing-switch. H. A. Lewis. No. 1,155,157; Sept. 28; Gaz. vol. 218; p. 1076.
Rheostat. T. Rhodus. No. 1,154,728; Sept. 28; Gaz. vol. 218; p. 928.
Rheostat, Compression-. E. L. Clark. No. 1,154,877; Sept. 21; Gaz. vol. 218; p. 781.
Rheostat, Liquid. G. H. Dorgeloh. No. 1,152,801; Sept. 7; Gaz. vol. 218; p. 154.
Rifles, Safety mechanism for straight-pull breech-actions of military. H. Stamm. No. 1,155,826; Sept. 28; Gaz. vol. 218; p. 1130.
Rim, Collapsible. W. B. Christopher. No. 1,154,288; Sept. 21; Gaz. vol. 218; p. 749.
Rim, Demountable. C. C. Harbridge. No. 1,154,629; Sept. 28; Gaz. vol. 218; p. 895.
Rim, Demountable. J. J. Stosick. No. 1,154,218; Sept. 21; Gaz. vol. 218; p. 724.
Rim fastener, Demountable-. W. L. Hale. No. 1,153,068; Sept. 7; Gaz. vol. 218; p. 249.
Rim-tool. M. M. Herman. No. 1,155,151; Sept. 28; Gaz. vol. 218; p. 1074.
Ring: *See*—
Cistern neck-ring. Hog-ring.
Ring-expanding press. L. W. Swem. No. 1,154,893; Sept. 28; Gaz. vol. 218; p. 983.
Riveting device. T. Reis. No. 1,152,971; Sept. 7; Gaz. vol. 218; p. 218.
Road-leveler. F. M. Settle. No. 1,153,452; Sept. 14; Gaz. vol. 218; p. 424.
Roadway-scarifier. W. V. Darling. No. 1,155,218; Sept. 28; Gaz. vol. 218; p. 1096.
Rock-drill-adjusting device. A. L. Bolson. No. 1,155,034; Sept. 28; Gaz. vol. 218; p. 1031.
Rock-drill-rotating device. C. O. Palmer. No. 1,153,700; Sept. 14; Gaz. vol. 218; p. 511.
Rod: *See*—
Lightning-rod.
Rodent-trap. J. M. Wolfe. No. 1,153,088; Sept. 21; Gaz. vol. 218; p. 646.
Roll covering, Suction-. P. Boucher. No. 1,152,596; Sept. 7; Gaz. vol. 218; p. 50.
Roll-crusher. R. H. Beaumont. No. 1,153,016; Sept. 7; Gaz. vol. 218; p. 233.
Roller: *See*—
Shade-roller. Type-writer feed-roller.
Roller-pan, Rotary. C. Pletscher. No. 1,154,935; Sept. 28; Gaz. vol. 218; p. 999.
Rolling-mill. J. Puppe. No. 1,154,884; Sept. 28; Gaz. vol. 218; p. 980.
Roof-scaffold bracket. C. S. Winn and C. A. Wall. No. 1,152,685; Sept. 7; Gaz. vol. 218; p. 113.
Rooding. F. Brucker. No. 1,153,152; Sept. 7; Gaz. vol. 218; p. 277.
Roofing elements, Making. F. C. Overbury. No. 1,154,334; Sept. 21; Gaz. vol. 218; p. 765.
Roost, Sanitary poultry-. E. J. Hagan. No. 1,154,392; Sept. 21; Gaz. vol. 218; p. 786.
Rope-making machines, Strand-guide for. J. S. Barnes and N. R. Sherwood. No. 1,154,905; Sept. 28; Gaz. vol. 218; p. 967.
Rope-socket. G. A. Montgomery. No. 1,153,812; Sept. 14; Gaz. vol. 218; p. 550.
Rosser mechanism. J. A. Weber. No. 1,153,863; Sept. 14; Gaz. vol. 218; p. 392.
Rotary engine. T. G. McGonigle. No. 1,154,645; Sept. 28; Gaz. vol. 218; p. 901.
Rotary engine. W. N. Mears. No. 1,152,535; Sept. 7; Gaz. vol. 218; p. 58.
Rotary engine. C. Petersen. No. 1,155,092; Sept. 28; Gaz. vol. 218; p. 1054.
Rotary engine. F. J. Richards. No. 1,154,886; Sept. 28; Gaz. vol. 218; p. 981.
Rotary explosive-engine. F. A. Miller. No. 1,153,169; Sept. 7; Gaz. vol. 218; p. 282.

Rotary steam-engine. F. Hupe. No. 1,153,086; Sept. 7; Gaz. vol. 218; p. 255.
Routing-machine. A. J. Foster. No. 1,154,752; Sept. 28; Gaz. vol. 218; p. 937.
Rubber and steel-wool, Producing compounds of. J. P. Crane. No. 1,152,935; Sept. 7; Gaz. vol. 218; p. 204.
Rubber articles, Mold for making. W. Eggers. (Reissue.) No. 13,988; Sept. 28; Gaz. vol. 218; p. 1132.
Rubber bands, Manufacture of. T. W. Miller. No. 1,155,325; Sept. 28; Gaz. vol. 218; p. 1130.
Rubber nipples, Machine for forming rolls on. J. L. Mahoney. No. 1,154,191; Sept. 21; Gaz. vol. 218; p. 715.
Rubber products, Making vulcanised-. R. B. Price. No. 1,152,838; Sept. 7; Gaz. vol. 218; p. 168.
Rule, Slide-. C. F. Dieckmann. No. 1,154,619; Sept. 28; Gaz. vol. 218; p. 892.
Saddle, Riding-. H. W. Downing. No. 1,154,003; Sept. 21; Gaz. vol. 218; p. 651.
Safe construction. M. Mosler and C. Bartels. No. 1,153,329; Sept. 14; Gaz. vol. 218; p. 378.
Safety clasp or catch. G. W. Henry. No. 1,152,892; Sept. 7; Gaz. vol. 218; p. 189.
Safety-lock for doors, Automatic. J. W. Hulme. (Reissue.) No. 13,978; Sept. 14; Gaz. vol. 218; p. 578.
Saliva-ejector. L. Van Orden. No. 1,155,020; Sept. 28; Gaz. vol. 218; p. 1027.
Salt and pepper shaker. C. A. Conger. No. 1,154,000; Sept. 21; Gaz. vol. 218; p. 650.
Salt from brine, Recovering. F. J. Wood. No. 1,152,777; Sept. 7; Gaz. vol. 218; p. 145.
Sand mold and treating the same. C. B. Jacobs. No. 1,153,230; Sept. 14; Gaz. vol. 218; p. 343.
Sandpapering-machine. E. F. Beugler. No. 1,153,479; Sept. 14; Gaz. vol. 218; p. 433.
Sanitary closet. J. W. Nelson and J. C. Scoggins. No. 1,153,515; Sept. 14; Gaz. vol. 218; p. 551.
Sash. J. A. Smith. No. 1,153,350; Sept. 14; Gaz. vol. 218; p. 386.
Sash-cord fastener. J. J. O'Brien. No. 1,153,439; Sept. 14; Gaz. vol. 218; p. 419.
Sash-holder. Q. G. Eddins. No. 1,153,773; Sept. 14; Gaz. vol. 218; p. 536.
Sash holder and lock, Combined window-. J. C. Nichol. No. 1,153,564; Sept. 14; Gaz. vol. 218; p. 465.
Sash-lock. J. P. Hathaway. No. 1,152,728; Sept. 7; Gaz. vol. 218; p. 127.
Sash-lock and window-stop, Antirattling. L. P. Conklin. No. 1,153,763; Sept. 14; Gaz. vol. 218; p. 532.
Sash lock, Window-. N. G. Nelson. No. 1,155,084; Sept. 28; Gaz. vol. 218; p. 1051.
Sash-raising mechanism, Automatic. A. D. and E. J. Rawlings. No. 1,154,432; Sept. 21; Gaz. vol. 218; p. 798.
Sash, Swinging window-. W. Bayley. No. 1,152,927; Sept. 7; Gaz. vol. 218; p. 201.
Sashes, Constructing window-. M. Lachman. No. 1,152,741; Sept. 7; Gaz. vol. 218; p. 133.
Sausage-linking machine. R. Swoboda. No. 1,153,584; Sept. 14; Gaz. vol. 218; p. 472.
Saw, Band-. R. C. Berry. No. 1,152,696; Sept. 7; Gaz. vol. 218; p. 116.
Saw, Cutting-off. G. Gorton. No. 1,153,682; Sept. 14; Gaz. vol. 218; p. 504.
Saw frame, Wood-. N. H. Shaw. No. 1,153,646; Sept. 14; Gaz. vol. 218; p. 492.
Saw-gage. D. Sebring. No. 1,153,262; Sept. 14; Gaz. vol. 218; p. 355.
Saw-guard. J. L. Rushton. No. 1,154,209; Sept. 21; Gaz. vol. 218; p. 720.
Saw, Meat-. A. Rioux. No. 1,152,976; Sept. 7; Gaz. vol. 218; p. 219.
Saw-teeth, Shaper for swaged. J. B. Ricker. No. 1,153,444; Sept. 14; Gaz. vol. 218; p. 421.
Saw-tooth-centering indicator. A. E. White. No. 1,152,996; Sept. 7; Gaz. vol. 218; p. 226.
Sawing-machine. D. Heggie. No. 1,155,060; Sept. 28; Gaz. vol. 218; p. 1041.
Scaffold. H. Bade, Jr. No. 1,153,884; Sept. 21; Gaz. vol. 218; p. 611.
Scale. H. S. Bergen. No. 1,154,965; Sept. 28; Gaz. vol. 218; p. 1005.
Scale, Adding and weighing. H. Hathaway. No. 1,153,222; Sept. 14; Gaz. vol. 218; p. 341.
Scale, Automatic. J. L. Jenkins. No. 1,154,402; Sept. 21; Gaz. vol. 218; p. 789.
Scale, Automatic. R. J. Zanone. No. 1,152,868; Sept. 7; Gaz. vol. 218; p. 179.
Scale, Coin-operated weighing-. B. E. Mills. No. 1,155,077; Sept. 28; Gaz. vol. 218; p. 1048.
Scale, Coin-operated weighing-. H. S. Mills. No. 1,155,078; Sept. 28; Gaz. vol. 218; p. 1048.
Scales, Tare-beam for. E. Mens and J. L. Jackson. No. 1,155,259; Sept. 28; Gaz. vol. 218; p. 1108.
Scarf-pin retainer. N. M. Kirshner. No. 1,154,408; Sept. 21; Gaz. vol. 218; p. 791.
Scissors or shears. E. Holtgrave. No. 1,152,633; Sept. 7; Gaz. vol. 218; p. 93.
Sclaroscope. W. F. Shore. No. 1,154,663; Sept. 28; Gaz. vol. 218; p. 907.
Scoop. J. I. Leary. No. 1,152,824; Sept. 7; Gaz. vol. 218; p. 164.
Scoring device. L. N. Plante. No. 1,153,951; Sept. 21; Gaz. vol. 218; p. 633.
Scraper attachment. J. F. Brown. No. 1,155,039; Sept. 28; Gaz. vol. 218; p. 1032.
Scraper, Boot-. P. H. Bauman. No. 1,154,228; Sept. 21; Gaz. vol. 218; p. 728.
Screen: *See*—
Picture-screen. Window-screen.
Screen. C. Bauer. No. 1,153,015; Sept. 7; Gaz. vol. 218; p. 232.
Screen. W. A. Bishop. No. 1,152,890; Sept. 7; Gaz. vol. 218; p. 3.
Screen and storm-sash hanger. H. Greenfield. No. 1,154,920; Sept. 28; Gaz. vol. 218; p. 993.
Screen-door protector. J. Weber. No. 1,153,472; Sept. 14; Gaz. vol. 218; p. 431.
Screen for ores and coal and other material. E. S. McKinley. No. 1,153,804; Sept. 14; Gaz. vol. 218; p. 547.
Screw. S. J. Moloney. No. 1,152,960; Sept. 7; Gaz. vol. 218; p. 214.
Screw adjusting and locking device. J. Dudley and H. E. Plastow. No. 1,153,861; Sept. 14; Gaz. vol. 218; p. 569.
Screw, Hollow or socket. H. T. Hallowell. No. 1,153,488; Sept. 14; Gaz. vol. 218; p. 487.
Screw, Jack-. D. S. Lansdowne. No. 1,154,519; Sept. 21; Gaz. vol. 218; p. 828.
Screw, Jack-. J. A. Leland. No. 1,153,697; Sept. 14; Gaz. vol. 218; p. 510.
Screw-press. C. F. Stehlin. No. 1,152,857; Sept. 7; Gaz. vol. 218; p. 176.
Screw-slotting machine. T. Z. Carpenter. No. 1,153,540; Sept. 14; Gaz. vol. 218; p. 456.
Seal for bottles and the like containers. M. P. Freebey. No. 1,154,853; Sept. 28; Gaz. vol. 218; p. 970.
Seals, Machine for applying bottle-. C. Winter. No. 1,155,119; Sept. 28; Gaz. vol. 218; p. 1063.
Sealing and crimping tubes, Machine for. E. W. Gaube. No. 1,155,148; Sept. 28; Gaz. vol. 218; p. 1071.
Sealing and stamp-affixing machine, Envelop-. J. J. McDade. No. 1,153,325; Sept. 14; Gaz. vol. 218; p. 377.
Sealing and stamp-affixing machine, Envelop-. J. J. McDade. No. 1,153,326; Sept. 14; Gaz. vol. 218; p. 377.
Sealing-closures. H. E. Townsend. No. 1,154,352; Sept. 21; Gaz. vol. 218; p. 772.
Sealing fiber boxes, cartons, and the like, Means for use in. J. C. Johnson. No. 1,154,639; Sept. 28; Gaz. vol. 218; p. 899.
Sealing machine, Bottle-. A. Calleson. No. 1,153,174; Sept. 7; Gaz. vol. 218; p. 285.
Seat-cover, Sanitary. H. E. W. Meyer. No. 1,155,260; Sept. 28; Gaz. vol. 218; p. 1108.
Seed press, Cotton-. W. M. Neale. No. 1,153,103; Sept. 7; Gaz. vol. 218; p. 262.
Seed, Sterilising and preserving cotton-. E. R. Barrow. No. 1,155,194; Sept. 28; Gaz. vol. 218; p. 1089.
Seeds and grain, Apparatus for cleaning and separating. F. M. Dossor. No. 1,154,102; Sept. 21; Gaz. vol. 218; p. 686.
Selective system and apparatus, Wireless. J. H. Hammond, Jr. No. 1,154,628; Sept. 28; Gaz. vol. 218; p. 895.
Self-cleaning rake. J. H. Ubelaker. No. 1,155,174; Sept. 28; Gaz. vol. 218; p. 1083.
Self-leveling table. J. C. Richmond. No. 1,153,828; Sept. 14; Gaz. vol. 218; p. 556.
Self-locking pin. T. F. Mullaney. No. 1,152,749; Sept. 7; Gaz. vol. 218; p. 135.
Self-lubricating bolt. D. H. Twaits. No. 1,155,111; Sept. 28; Gaz. vol. 218; p. 1060.
Self-opening die. C. J. Harrington. No. 1,154,568; Sept. 21; Gaz. vol. 218; p. 844.
Semaphore-operating mechanism. C. W. Ward. No. 1,153,789; Sept. 14; Gaz. vol. 218; p. 525.
Separator: *See*—
Butter-separator. Electrostatic separator.
Centrifugal separator. Ore-separator.
Cotton-separator. Pea-separator.
Separator and filter. W. M. Cronenberger. No. 1,152,899; Sept. 7; Gaz. vol. 218; p. 6.
Setting-machine. S. W. Reynolds. No. 1,153,827; Sept. 14; Gaz. vol. 218; p. 556.
Sewage-disposal apparatus. G. L. Robinson and E. L. Wagner. No. 1,154,129; Sept. 21; Gaz. vol. 218; p. 694.
Sewage or the like, Apparatus for purifying. G. W. Swinburne. No. 1,153,972; Sept. 21; Gaz. vol. 218; p. 640.
Sewage-separating system. J. P. Ball. No. 1,154,507; Sept. 28; Gaz. vol. 218; p. 883.
Sewage-sludge and the like, Apparatus for drying. J. Bromet, F. Thorman, and H. C. Wood. No. 1,153,192; Sept. 14; Gaz. vol. 218; p. 330.
Sewer construction. W. H. Gray. No. 1,153,158; Sept. 7; Gaz. vol. 218; p. 279.
Sewing-machine. E. R. Allen. No. 1,155,120; Sept. 28; Gaz. vol. 218; p. 1064.
Sewing-machine. H. Cousland. No. 1,153,176; Sept. 7; Gaz. vol. 218; p. 285.
Sewing-machine. G. M. Eames. No. 1,155,051; Sept. 28; Gaz. vol. 218; p. 1038.
Sewing-machine. G. M. Eames and J. S. Finch. No. 1,155,050; Sept. 28; Gaz. vol. 218; p. 1037.
Sewing-machine. A. F. Fifield. No. 1,152,498; Sept. 7; Gaz. vol. 218; p. 41.

Sewing-machine. P. Hleb. No. 1,153,429; Sept. 14; Gaz. vol. 218; p. 416.
Sewing-machine. F. T. Ströbeck. No. 1,152,667; Sept. 7; Gaz. vol. 218; p. 106.
Sewing-machine. T. Trott. No. 1,154,946; Sept. 28; Gaz. vol. 218; p. 1002.
Sewing machine, Book-. F. Galler. No. 1,153,775; Sept. 14; Gaz. vol. 218; p. 537.
Sewing machine, Buttonhole-. F. Zaleski. No. 1,152,465; Sept. 7; Gaz. vol. 218; p. 29.
Sewing machine, Buttonhole-. F. Zaleski. No. 1,152,466; Sept. 7; Gaz. vol. 218; p. 29.
Sewing machine, Chain-stitch shoe-. A. E. Jerram. No. 1,154,774; Sept. 28; Gaz. vol. 218; p. 944.
Sewing-machine hemming attachment. L. G. Neff and J. J. Taylor. No. 1,155,159; Sept. 28; Gaz. vol. 218; p. 1077.
Sewing machine, Inseam shoe-. F. H. Warren. No. 1,154,554; Sept. 21; Gaz. vol. 218; p. 839.
Sewing-machine loop-spreader. E. Erickson. No. 1,154,564; Sept. 21; Gaz. vol. 218; p. 843.
Sewing-machine looper mechanism. L. E. Johnson and E. Erickson. No. 1,154,571; Sept. 21; Gaz. vol. 218; p. 846.
Sewing machine, Mattress-. W. A. Kelsey and J. G. Stoneback. No. 1,152,418; Sept. 7; Gaz. vol. 218; p. 13.
Sewing-machine multiple tucking-guide. C. M. Horton. No. 1,152,635; Sept. 7; Gaz. vol. 218; p. 94.
Sewing-machine needle-carrier and loop-holder, Combined. E. Erickson. No. 1,154,565; Sept. 21; Gaz. vol. 218; p. 843.
Sewing-machine needle-guard. D. Noble. No. 1,155,086; Sept. 28; Gaz. vol. 218; p. 1052.
Sewing-machine, Overseaming. G. M. Eames and J. S. Finch. No. 1,155,052; Sept. 28; Gaz. vol. 218; p. 1038.
Sewing machine, Sack-. P. Arrighi. No. 1,153,009; Sept. 7; Gaz. vol. 218; p. 230.
Sewing-machine support. J. H. Chenoweth. No. 1,152,487; Sept. 7; Gaz. vol. 218; p. 38.
Sewing-machine thread cutter and clamp, Buttonhole-. F. Zaleski. No. 1,152,464; Sept. 7; Gaz. vol. 218; p. 28.
Sewing-machine thread-cutting mechanism. F. Zaleski. No. 1,153,148; Sept. 7; Gaz. vol. 218; p. 275.
Sewing-machine work-support. F. W. Merrick. No. 1,155,318; Sept. 28; Gaz. vol. 218; p. 1128.
Sewing-machines, Picot-cutting attachment for. W. L. Pierce. No. 1,154,337; Sept. 21; Gaz. vol. 218; p. 766.
Shackle for drills, &c. M. W. Sherwood. No. 1,154,941; Sept. 28; Gaz. vol. 218; p. 1000.
Shade and curtain support, Window. J. L. Eveland. No. 1,152,617; Sept. 7; Gaz. vol. 218; p. 87.
Shade-bracket. F. J. and M. Hoffelt. No. 1,153,385; Sept. 14; Gaz. vol. 218; p. 400.
Shade bracket, Curtain-. C. Hallaire. No. 1,153,069; Sept. 7; Gaz. vol. 218; p. 249.
Shade device, Window-. F. W. Rowe. No. 1,153,521; Sept. 14; Gaz. vol. 218; p. 449.
Shade-hanger. Z Perrault. No. 1,153,949; Sept. 21; Gaz. vol. 218; p. 633.
Shade-holder. E. L. White. No. 1,155,117; Sept. 28; Gaz. vol. 218; p. 1063.
Shade-roller and curtain-hanger, Combined. G. Wimsolyt. No. 1,154,902; Sept. 28; Gaz. vol. 218; p. 987.
Shade, Sighting-. H. L. Best, Sr. No. 1,154,838; Sept. 28; Gaz. vol. 218; p. 966.
Shaft attachment. F. E. Burnham. No. 1,155,210; Sept. 28; Gaz. vol. 218; p. 1094.
Shaft-coupling. M. Hartwig. No. 1,154,766; Sept. 28; Gaz. vol. 218; p. 941.
Shaft-shield. H. J. Tynan. No. 1,153,467; Sept. 14; Gaz. vol. 218; p. 429.
Shake-head connection. B. D. Coppage. No. 1,154,613; Sept. 28; Gaz. vol. 218; p. 889.
Shaper attachment. C. B. Rumsey. No. 1,154,729; Sept. 28; Gaz. vol. 218; p. 928.
Sharpener, Knife-. P. M. Church. No. 1,154,375; Sept. 21; Gaz. vol. 218; p. 781.
Sharpener, Lawn-mower. C. F. Judson. No. 1,152,786; Sept. 7; Gaz. vol. 218; p. 131.
Sharpening machine, Calk-. F. Pohle, Jr. No. 1,153,825; Sept. 14; Gaz. vol. 218; p. 555.
Sharpening machine, Saw-. M. Wagner. No. 1,153,982; Sept. 21; Gaz. vol. 218; p. 644.
Shaving and clipping machine, Combined. M. E. Ryan. No. 1,152,911; Sept. 7; Gaz. vol. 218; p. 195.
Sheaves and means for operating the same, Interlocking. J. E. McGiffert and T. H. Blair. No. 1,152,528; Sept. 7; Gaz. vol. 218; p. 55.
Sheep-dipper, Automatic. J. J. Roberson. No. 1,152,910; Sept. 7; Gaz. vol. 218; p. 195.
Sheet-feeding machine. H. K. King. No. 1,154,406; Sept. 21; Gaz. vol. 218; p. 790.
Sheet-feeding machine. H. K. King. No. 1,154,407; Sept. 21; Gaz. vol. 218; p. 791.
Sheet-feeding means. P. Kruse. No. 1,153,434; Sept. 14; Gaz. vol. 218; p. 418.
Sheet-feeding mechanism. M. Dünnebier and A. Winkler. No. 1,153,295; Sept. 14; Gaz. vol. 218; p. 366.
Sheet-metal cutter. C. J. Holub. No. 1,154,924; Sept. 28; Gaz. vol. 218; p. 994.
Sheet-metal-forming machine. C. A. Weirich. No. 1,154,951; Sept. 28; Gaz. vol. 218; p. 1003.
Sheet-metal frame. C. A. Johnson. (Reissue.) No. 13,987; Sept. 21; Gaz. vol. 218; p. 857.
Sheet-metal shapes, Clamp for forming. N. M. Willet. No. 1,154,224; Sept. 21; Gaz. vol. 218; p. 726.
Sheet-stack-handling mechanism. F. Eberhart. No. 1,152,403; Sept. 7; Gaz. vol. 218; p. 8.
Sheet-straightening and slow-down device. A. J. Hughes and R. E. Jones. No. 1,154,864; Sept. 28; Gaz. vol. 218; p. 973.
Shell and automatically-interlocking shell and switch-mechanism socket, Combined removable-key single-piece. H. W. Lawrence. No. 1,154,257; Sept. 21; Gaz. vol. 218; p. 738.
Shell, Tool for forming polygonal sides upon a hollow metal. W. E. Sherbondy. No. 1,152,984; Sept. 7; Gaz. vol. 218; p. 222.
Shelving, Adjustable. A. A. Carter. No. 1,153,371; Sept. 14; Gaz. vol. 218; p. 395.
Shingle. C. S. Bird. No. 1,153,418; Sept. 14; Gaz. vol. 218; p. 412.
Shingle, &c., and making same, Weather and flame resistant. S. R. Church. No. 1,155,180; Sept. 28; Gaz. vol. 218; p. 1067.
Shingle-bracket, Folding. B. Gallup. No. 1,154,855; Sept. 28; Gaz. vol. 218; p. 970.
Shingle, Metal. G. A. Gordon. No. 1,153,619; Sept. 14; Gaz. vol. 218; p. 484.
Ship's ballasting apparatus. A. Kaplan. No. 1,154,515; Sept. 21; Gaz. vol. 218; p. 826.
Ship. W. M. Young. No. 1,155,028; Sept. 28; Gaz. vol. 218; p. 1029.
Shipping-package for lobsters. F. B. Higgins. No. 1,152,629; Sept. 7; Gaz. vol. 218; p. 92.
Shipping-receptacle. R. E. Chapman. No. 1,155,212; Sept. 28; Gaz. vol. 218; p. 1094.
Shirt-bosoms, &c., Platform for. E. J. Schoettle. No. 1,155,281; Sept. 28; Gaz. vol. 218; p. 1115.
Shock-absorber. F. C. Adams. No. 1,153,531; Sept. 14; Gaz. vol. 218; p. 453.
Shock-absorber. C. V. Bates. No. 1,154,599; Sept. 28; Gaz. vol. 218; p. 884.
Shock-absorber. W. N. Border. No. 1,154,284; Sept. 21; Gaz. vol. 218; p. 749.
Shock-absorber. A. Christianson. No. 1,153,483; Sept. 14; Gaz. vol. 218; p. 435.
Shock-absorber. W. H. Frasine. No. 1,153,300; Sept. 14; Gaz. vol. 218; p. 368.
Shock-absorber. E. E. Malone. No. 1,154,996; Sept. 28; Gaz. vol. 218; p. 1019.
Shock-absorber. E. L. Williams and E. Jones. No. 1,155,182; Sept. 28; Gaz. vol. 218; p. 1085.
Shock-absorber, Automobile. C. L. Thomas. No. 1,153,876; Sept. 14; Gaz. vol. 218; p. 574.
Shock-absorbing device. J. B. O'Donnell. No. 1,154,267; Sept. 21; Gaz. vol. 218; p. 741.
Shoe. E. D. Gallagher. No. 1,152,939; Sept. 7; Gaz. vol. 218; p. 206.
Shoe and legging, Combined. T. A. Flannigan. No. 1,154,109; Sept. 21; Gaz. vol. 218; p. 688.
Shoe, Emergency-. F. E. Riviere. No. 1,154,809; Sept. 28; Gaz. vol. 218; p. 955.
Shoe-filler. H. Snell. No. 1,153,139; Sept. 7; Gaz. vol. 218; p. 272.
Shoe-holding jack. F. B. Keall. No. 1,153,928; Sept. 21; Gaz. vol. 218; p. 625.
Shoe-polishing device. D. F. Fradette. No. 1,154,181; Sept. 21; Gaz. vol. 218; p. 712.
Shoe-shank. H. G. Calef. No. 1,154,690; Sept. 28; Gaz. vol. 218; p. 916.
Shoe, Snow-. G. S. Sprague. No. 1,154,347; Sept. 21; Gaz. vol. 218; p. 770.
Shoe-toe heater. A. Barton. No. 1,155,196; Sept. 28; Gaz. vol. 218; p. 1090.
Shoes, Antislipping device for. C. W. Sauer, Jr. No. 1,154,890; Sept. 28; Gaz. vol. 218; p. 982.
Shoes, Toe or heel plate for. G. C. Meakim. No. 1,155,258; Sept. 28; Gaz. vol. 218; p. 1108.
Shovel: *See*—
Excavating-shovel.
Shovel-dipper doors, Tripping device for. F. H. Armstrong. No. 1,154,157; Sept. 21; Gaz. vol. 218; p. 704.
Shroud and bucket. H. J. Hanslik. No. 1,152,812; Sept. 7; Gaz. vol. 218; p. 159.
Shutter-holding device. J. Heaketh and A. Olson. No. 1,152,947; Sept. 7; Gaz. vol. 218; p. 209.
Shutter-lock. G. W. Fisher. No. 1,152,720; Sept. 7; Gaz. vol. 218; p. 125.
Shuttle. E. La Vallee. No. 1,154,420; Sept. 21; Gaz. vol. 218; p. 795.
Shuttle-release mechanism. J. W. Killpartrick. No. 1,153,500; Sept. 14; Gaz. vol. 218; p. 441.
Sifter, Ash-. C. F. Nolte. No. 1,154,932; Sept. 28; Gaz. vol. 218; p. 997.
Sifter, Flour-. W. Luxmore. No. 1,152,650; Sept. 7; Gaz. vol. 218; p. 100.
Sifter-top closure. A. Frankenberg. No. 1,153,378; Sept. 14; Gaz. vol. 218; p. 397.
Sifter-top closure. A. Frankenberg. No. 1,153,379; Sept. 14; Gaz. vol. 218; p. 398.
Sifter-top closure. F. C. Truesbury. No. 1,153,356; Sept. 14; Gaz. vol. 218; p. 389.
Sight-feed lubricator. F. W. Edwards. No. 1,153,546; Sept. 14; Gaz. vol. 218; p. 459.

Sight-feed lubricator for locomotives. L. Kassander. No. 1,153,113; Sept. 7; Gaz. vol. 218; p. 264.
Sign, Advertising-. H. M. Black. No. 1,152,780; Sept. 7; Gaz. vol. 218; p. 146.
Sign, Daily-date. J. F. Eddy. No. 1,153,543; Sept. 14; Gaz. vol. 218; p. 458.
Sign, Daily-date. J. F. Eddy. No. 1,153,544; Sept. 14; Gaz. vol. 218; p. 458.
Sign, Daily-date. J. F. Eddy. No. 1,153,545; Sept. 14; Gaz. vol. 218; p. 458.
Sign, Illuminated. F. W. Burton. No. 1,152,703; Sept. 7; Gaz. vol. 218; p. 119.
Signal: *See*—
Automobile direction-signal. Car-signal.
Automobile guide-signal.
Signal. C. S. Snavely. No. 1,154,068; Sept. 21; Gaz. vol. 218; p. 674.
Signal apparatus. D. Baker. No. 1,154,162; Sept. 21; Gaz. vol. 218; p. 705.
Signal device for submarine vessels. E. B. Walsh. No. 1,153,277; Sept. 14; Gaz. vol. 218; p. 360.
Signal device, Means for divided control of an electric. M. Levison. No. 1,153,505; Sept. 14; Gaz. vol. 218; p. 443.
Signaling apparatus. C. H. Smith. No. 1,153,265; Sept. 14; Gaz. vol. 218; p. 356.
Signaling apparatus, Electric. F. B. Hersog. No. 1,154,184; Sept. 21; Gaz. vol. 218; p. 712.
Signaling apparatus, Submarine. C. Berger. No. 1,155,124; Sept. 28; Gaz. vol. 218; p. 1066.
Signaling device. L. Abeles. No. 1,155,294; Sept. 28; Gaz. vol. 218; p. 1118.
Signaling device. A. M. Georgeson. No. 1,154,756; Sept. 28; Gaz. vol. 218; p. 938.
Signaling device. P. E. Gilling. No. 1,153,215; Sept. 14; Gaz. vol. 218; p. 337.
Signaling device, Vehicle. W. D. C. Wright. No. 1,155,026; Sept. 28; Gaz. vol. 218; p. 1028.
Signaling or releasing device for windows and the like, Automatic. F. Keeler. No. 1,153,314; Sept. 14; Gaz. vol. 218; p. 373.
Signaling, Submarine. T. Bodde. No. 1,152,697; Sept. 7; Gaz. vol. 218; p. 117.
Signaling system. O. M. Leich and C. E. Hague. No. 1,154,929; Sept. 28; Gaz. vol. 218; p. 996.
Signaling system, Electric. S. M. Young and F. Townsend. No. 1,154,588; Sept. 21; Gaz. vol. 218; p. 852.
Signaling, Transmitting apparatus for submarine. J. Schiessler. No. 1,152,661; Sept. 7; Gaz. vol. 218; p. 104.
Silo. O. Harstad. No. 1,154,511; Sept. 21; Gaz. vol. 218; p. 825.
Silo-mold. J. Kruzick. No. 1,154,783; Sept. 28; Gaz. vol. 218; p. 947.
Silo-roof. J. J. Houts and W. L. Harris. No. 1,153,082; Sept. 7; Gaz. vol. 218; p. 254.
Simplex rod-slip. J. B. Dunlap and W. D. Bryan. No. 1,153,772; Sept. 14; Gaz. vol. 218; p. 536.
Sinks, washtubs, and the like, Attachment for. J. H. Ryder. No. 1,152,552; Sept. 7; Gaz. vol. 218; p. 64.
Skate. H. H. Bowman. No. 1,153,890; Sept. 21; Gaz. vol. 218; p. 614.
Skate. W. B. Harrell. No. 1,154,510; Sept. 21; Gaz. vol. 218; p. 824.
Skate-clamp. L. W. Barker. No. 1,153,993; Sept. 21; Gaz. vol. 218; p. 647.
Skate, Roller-. M. Finkelstein. No. 1,154,300; Sept. 21; Gaz. vol. 218; p. 758.
Skate, Roller-. E. E. Hardy. No. 1,152,813; Sept. 7; Gaz. vol. 218; p. 159.
Skid. J. P. Frank. No. 1,154,986; Sept. 28; Gaz. vol. 218; p. 1015.
Skimmer, Boiler-. N. Schreiber. No. 1,152,918; Sept. 7; Gaz. vol. 218; p. 197.
Skirt-marker. C. B. Lemon. No. 1,155,251; Sept. 28; Gaz. vol. 218; p. 1106.
Skirt-marker. H. E. Town. No. 1,153,738; Sept. 14; Gaz. vol. 218; p. 523.
Sled, Convertible. R. E. Whitman. No. 1,152,774; Sept. 7; Gaz. vol. 218; p. 144.
Sleeve-protector. F. B. Conine. No. 1,153,893; Sept. 21; Gaz. vol. 218; p. 614.
Sleigh. T. B. True. No. 1,153,735; Sept. 14; Gaz. vol. 218; p. 524.
Sleigh and wagon, Combined. T. Burke. No. 1,154,370; Sept. 21; Gaz. vol. 218; p. 779.
Sleigh, Motor-. F. J. Mathews. No. 1,154,423; Sept. 21; Gaz. vol. 218; p. 795.
Slicing-machine. T. M. Dansby. No. 1,153,484; Sept. 14; Gaz. vol. 218; p. 436.
Slicing-machine. T. M. Dansby. No. 1,153,485; Sept. 14; Gaz. vol. 218; p. 436.
Slicing machine, Meat-. A. L. Gardner. No. 1,152,623; Sept. 7; Gaz. vol. 218; p. 89.
Slime-thickening apparatus. W. A. Stedman. No. 1,153,722; Sept. 14; Gaz. vol. 218; p. 520.
Small-arm, Breech-loading. L. B. Taylor and F. Hughes. No. 1,154,458; Sept. 21; Gaz. vol. 218; p. 806.
Smelting-furnace, Oil-burning. O. P. Moore. No. 1,153,561; Sept. 14; Gaz. vol. 218; p. 464.
Smelting zinc. S. Peacock. No. 1,154,802; Sept. 28; Gaz. vol. 218; p. 954.
Smoke-consuming furnace. C. H. Moore. No. 1,154,877; Sept. 28; Gaz. vol. 218; p. 977.
Smoke-house. J. F. Oberle. No. 1,152,965; Sept. 7; Gaz. vol. 218; p. 215.
Smoker's article. J. W. Knoblock. No. 1,152,738; Sept. 7; Gaz. vol. 218; p. 132.
Smoker's convenience. G. B. Van Dusen. No. 1,152,454; Sept. 7; Gaz. vol. 218; p. 25.
Smoking-pipe. L. Demuth. No. 1,153,771; Sept. 14; Gaz. vol. 218; p. 535.
Snap-flask. O. B. Berger. No. 1,154,559; Sept. 21; Gaz. vol. 218; p. 841.
Snap-hook. O. Brockman. No. 1,153,022; Sept. 7; Gaz. vol. 218; p. 235.
Snap-hook. J. Jacobson. No. 1,152,894; Sept. 7; Gaz. vol. 218; p. 190.
Snow-plow. G. W. Gebhart. No. 1,153,776; Sept. 14; Gaz. vol. 218; p. 537.
Snow-plow. A. Ryan. No. 1,155,099; Sept. 28; Gaz. vol. 218; p. 1057.
Snow-removing device. O. M. Eckardt. No. 1,154,888; Sept. 21; Gaz. vol. 218; p. 785.
Soap containing active oxygen and making it. E. Kochendoerfer. No. 1,153,167; Sept. 7; Gaz. vol. 218; p. 282.
Soap powder, Manufacturing. E. C. Kayser. No. 1,153,625; Sept. 14; Gaz. vol. 218; p. 485.
Soap receptacle or shaker. W. M. Kelso. No. 1,152,819; Sept. 7; Gaz. vol. 218; p. 161.
Socket-joint. J. F. Heller. No. 1,154,309; Sept. 21; Gaz. vol. 218; p. 756.
Soda-fountain, Portable. C. J. Hunter and E. C. Tweedy. No. 1,153,307; Sept. 14; Gaz. vol. 218; p. 370.
Soda process, Caustic-. J. H. Hirt. No. 1,152,949; Sept. 7; Gaz. vol. 218; p. 209.
Solder-fusing machine. C. W. Graham. No. 1,152,410; Sept. 7; Gaz. vol. 218; p. 10.
Soldering-iron. J. Swiergocki. No. 1,153,971; Sept. 21; Gaz. vol. 218; p. 640.
Soldering-iron, Electrically-heated. F. Kuhn and F. H. Shailor. No. 1,154,414; Sept. 21; Gaz. vol. 218; p. 793.
Soldering-machine. C. W. Graham. No. 1,152,409; Sept. 7; Gaz. vol. 218; p. 10.
Sole flexing and tempering machine. G. Basler. No. 1,154,961; Sept. 28; Gaz. vol. 218; p. 1007.
Sole for shoes, Outer. W. Fowler. No. 1,154,623; Sept. 28; Gaz. vol. 218; p. 892.
Sole-slotting machine. J. M. Benjamin. No. 1,153,886; Sept. 21; Gaz. vol. 218; p. 612.
Soles, Machine for operating on shoe-. E. E. Winkley. No. 1,152,584; Sept. 7; Gaz. vol. 218; p. 76.
Sound-records, Ejector or throw-off for. T. H. Macdonald. No. 1,152,529; Sept. 7; Gaz. vol. 218; p. 55.
Sound-records, Making. A. Smith and C. S. Wickes. No. 1,152,445; Sept. 7; Gaz. vol. 218; p. 22.
Sound-records, Pressing. M. E. Lyle. No. 1,152,651; Sept. 7; Gaz. vol. 218; p. 100.
Sound-records, Producing. J. C. Sherman. No. 1,152,562; Sept. 7; Gaz. vol. 218; p. 68.
Sound-waves, Instrument for reproducing and magnifying. C. H. Hulbert. No. 1,153,431; Sept. 14; Gaz. vol. 218; p. 410.
Sounding apparatus, Navigational. D. Ballauf. No. 1,153,885; Sept. 21; Gaz. vol. 218; p. 612.
Spacing-frame, Collapsible. D. Bale. No. 1,154,688; Sept. 28; Gaz. vol. 218; p. 916.
Spanner or wrench. W. Wright. No. 1,154,154; Sept. 21; Gaz. vol. 218; p. 703.
Spark-coil. B. Ames. No. 1,153,005; Sept. 7; Gaz. vol. 218; p. 229.
Spark-plug. A. N. Hoagland. No. 1,154,117; Sept. 21; Gaz. vol. 218; p. 691.
Spark-plug. D. B. Mills. No. 1,153,942; Sept. 21; Gaz. vol. 218; p. 631.
Spark-plug connector. A. H. Ochs. No. 1,154,201; Sept. 21; Gaz. vol. 218; p. 718.
Spark-plug, Forming a sheet-metal shell for a. W. E. Sherbondy. No. 1,152,983; Sept. 7; Gaz. vol. 218; p. 221.
Spark-plug, Forming a shell for a. W. E. Sherbondy. No. 1,152,982; Sept. 7; Gaz. vol. 218; p. 221.
Spark-plugs and cores, Mold for glass. H. Long. No. 1,153,126; Sept. 7; Gaz. vol. 218; p. 268.
Speculum. S. B. Dunn. No. 1,154,748; Sept. 28; Gaz. vol. 218; p. 935.
Speed-governing mechanism. F. Samuelson. No. 1,154,062; Sept. 21; Gaz. vol. 218; p. 672.
Speed-transmission device, Variable-. W. E. Scheibner. No. 1,153,261; Sept. 14; Gaz. vol. 218; p. 354.
Speed-transmission mechanism, Changeable-. G. W. Price. No. 1,153,569; Sept. 14; Gaz. vol. 218; p. 467.
Speed transmitter, Variable-. J. Reece. No. 1,153,256; Sept. 14; Gaz. vol. 218; p. 352.
Sphygmomanometer. C. J. Pilling and G. S. White. No. 1,154,934; Sept. 28; Gaz. vol. 218; p. 998.
Spike. J. M. Byrd. No. 1,154,482; Sept. 21; Gaz. vol. 218; p. 815.
Spindle: *See*—
Oilless spindle.
Spindle device, High-speed-. F. D. Van Norman. No. 1,155,176; Sept. 28; Gaz. vol. 218; p. 1083.
Spinning and winding machine. Z. E. Booth. No. 1,153,190; Sept. 14; Gaz. vol. 218; p. 329.
Spinning mechanism. M. H. Maloney. No. 1,153,237; Sept. 14; Gaz. vol. 218; p. 346.
Spool-carrier. C. B. Braithwaite. No. 1,153,021; Sept. 7; Gaz. vol. 218; p. 235.

Spooler. A. E. Rhoades. No. 1,152,845; Sept. 7; Gaz. vol. 218; p. 171.
Spout, Sap-. C. E. Whitcomb. No. 1,154,679; Sept. 28; Gaz. vol. 218; p. 913.
Spraying device. C. H. Baker. No. 1,154,833; Sept. 28; Gaz. vol. 218; p. 964.
Spraying device and means for controlling same. D. M. Luehrs. No. 1,154,707; Sept. 28; Gaz. vol. 218; p. 922.
Spring: *See*—
Bed-spring. Valve-spring.
Pneumatic spring. Vehicle-spring.
Spring-bolt, Self-lubricating. D. H. Twaits. No. 1,154,947; Sept. 28; Gaz. vol. 218; p. 1002.
Springless lock. S. Garvin. No. 1,152,723; Sept. 7; Gaz. vol. 218; p. 126.
Sprinkler: *See*—
Lawn-sprinkler.
Sprinkler. H. E. Houston. No. 1,152,636; Sept. 7; Gaz. vol. 218; p. 94.
Sprinkler alarm and indicator system, Automatic. F. W. Milliken. No. 1,153,400; Sept. 14; Gaz. vol. 218; p. 405.
Squares, Center-finder for center-. P. Abbott. No. 1,153,149; Sept. 7; Gaz. vol. 218; p. 276.
Stacker, Wind-. T. J. Gee. No. 1,152,805; Sept. 7; Gaz. vol. 218; p. 156.
Stadia-transit. W. L. E. Keuffel. No. 1,154,253; Sept. 21; Gaz. vol. 218; p. 737.
Stalk-header and ensilage-cutter. W. Welch. No. 1,154,464; Sept. 21; Gaz. vol. 218; p. 810.
Stall equipment. F. W. Moldenhauer and S. E. Jones. No. 1,154,715; Sept. 28; Gaz. vol. 218; p. 924.
Stamp board, Rubber-. J. E. Rymer. No. 1,155,279; Sept. 28; Gaz. vol. 218; p. 1114.
Stamp, Hand-. M. G. Standley. No. 1,153,351; Sept. 14; Gaz. vol. 218; p. 387.
Stamping sand molds, Machine for. A. T. Drysdale. No. 1,154,238; Sept. 21; Gaz. vol. 218; p. 782.
Stamping system, Validating. J. J. Leidigh. No. 1,152,522; Sept. 7; Gaz. vol. 218; p. 52.
Stanchion. D. J. Love. No. 1,154,706; Sept. 28; Gaz. vol. 218; p. 921.
Stanchion, Cattle-. J. H. Levis. No. 1,152,523; Sept. 7; Gaz. vol. 218; p. 52.
Stanchion-supporting frame. W. Gutenkunst. No. 1,154,625; Sept. 28; Gaz. vol. 218; p. 894.
Stand: *See*—
Iron-stand. Switch-stand.
Plant and flower stand.
Staple forming and setting implement. R. E. Ford. No. 1,155,141; Sept. 28; Gaz. vol. 218; p. 1071.
Starting-box. M. Taigman. No. 1,155,290; Sept. 28; Gaz. vol. 218; p. 1117.
Starting-box. M. Taigman. No. 1,155,291; Sept. 28; Gaz. vol. 218; p. 1117.
Stationery device, Combination. O. Stankey. No. 1,154,736; Sept. 28; Gaz. vol. 218; p. 931.
Stature-increaser. W. M. Scholl. No. 1,152,557; Sept. 7; Gaz. vol. 218; p. 66.
Stay-bolt. H. V. Wille. No. 1,154,468; Sept. 21; Gaz. vol. 218; p. 811.
Stay-bolt. H. V. Wille. No. 1,154,469; Sept. 21; Gaz. vol. 218; p. 811.
Stay-bolts, Cap for flexible. B. E. D. Stafford. No. 1,153,458; Sept. 14; Gaz. vol. 218; p. 426.
Stays in corsets, Machine for inserting. E. E. Norton. No. 1,154,200; Sept. 21; Gaz. vol. 218; p. 718.
Steam and other fluid-pressure engine. W. Werry. No. 1,153,588; Sept. 14; Gaz. vol. 218; p. 474.
Steam and water mixer, Noiseless. G. A. Weld. No. 1,152,459; Sept. 7; Gaz. vol. 218; p. 27.
Steam-boiler. T. A. Killman. No. 1,152,421; Sept. 7; Gaz. vol. 218; p. 14.
Steam cut-off. C. G. Alenius. No. 1,152,589; Sept. 7; Gaz. vol. 218; p. 78.
Steam-engine. J. M. Clark. No. 1,152,488; Sept. 7; Gaz. vol. 218; p. 38.
Steam, gas, and hot-water heater, Combined. N. U. Peris. No. 1,153,130; Sept. 7; Gaz. vol. 218; p. 270.
Steam, Generating. H. L. Doherty. No. 1,154,910; Sept. 28; Gaz. vol. 218; p. 989.
Steam-generator. W. E. McKee. No. 1,152,898; Sept. 7; Gaz. vol. 218; p. 191.
Steam-generator. W. Platz. No. 1,153,442; Sept. 14; Gaz. vol. 218; p. 421.
Steam-generator. G. E. Warren. No. 1,152,579; Sept. 7; Gaz. vol. 218; p. 74.
Steam-generator, Internal-combustion. G. H. Sands. No. 1,154,131; Sept. 21; Gaz. vol. 218; p. 695.
Steam-rollers, Asphalt-cutter attachment for. C. J. Schulz. No. 1,153,137; Sept. 7; Gaz. vol. 218; p. 272.
Steam-trap. F. A. Littlefield. No. 1,153,125; Sept. 7; Gaz. vol. 218; p. 268.
Steering-gear. W. S. Wilkinson. No. 1,155,181; Sept. 28; Gaz. vol. 218; p. 1085.
Steering-gear, Ship. N. Wilkinson. No. 1,155,022; Sept. 28; Gaz. vol. 218; p. 1027.
Steering mechanism. W. A. Besserdich. No. 1,152,874; Sept. 7; Gaz. vol. 218; p. 182.
Steering mechanism, Automatic. K. Dougan. No. 1,154,103; Sept. 21; Gaz. vol. 218; p. 686.
Steering mechanism, Gyroscopic. W. Dieter. No. 1,153,678; Sept. 14; Gaz. vol. 218; p. 503.
Step-mold. W. P. Stubblefield. No. 1,153,462; Sept. 14; Gaz. vol. 218; p. 427.
Stereopticon and panoramic projecting-machine, Combined. F. H. White. No. 1,154,819; Sept. 28; Gaz. vol. 218; p. 959.
Still, Water-. C. D. Crane. No. 1,154,590; Sept. 21; Gaz. vol. 218; p. 853.
Stills or analogous vessels, Setting for petroleum-. J. W. Van Dyke and W. M. Irish. No. 1,152,576; Sept. 7; Gaz. vol. 218; p. 73.
Stitch-forming device. O. E. Brown. No. 1,152,482; Sept. 7; Gaz. vol. 218; p. 37.
Stitching machine, Book-. C. W. Mears and B. B. West. No. 1,152,534; Sept. 7; Gaz. vol. 218; p. 58.
Stock-trough. J. Herold. No. 1,154,768; Sept. 28; Gaz. vol. 218; p. 942.
Stocking-supporter. J. N. Oswald. No. 1,153,384; Sept. 14; Gaz. vol. 218; p. 380.
Stoker for locomotive-boilers and the like. E. Fuller, Jr. No. 1,153,156; Sept. 7; Gaz. vol. 218; p. 278.
Stoking mechanism, Automatic. D. T. Williams. No. 1,152,682; Sept. 7; Gaz. vol. 218; p. 111.
Stone facing slab or tile, Artificial-. H. E. McLaughlin. No. 1,152,427; Sept. 7; Gaz. vol. 218; p. 16.
Stone, Making artificial. R. Conn and O. H. Shultz. No. 1,153,032; Sept. 7; Gaz. vol. 218; p. 238.
Stone-sawing mechanism, Automatic. A. Lespagnol. No. 1,155,156; Sept. 28; Gaz. vol. 218; p. 1076.
Stool, Folding extensible. J. F. Spalding. No. 1,152,987; Sept. 7; Gaz. vol. 218; p. 223.
Stop-motion. O. L. Owen. No. 1,152,541; Sept. 7; Gaz. vol. 218; p. 60.
Stopper: *See*—
Bottle-stopper. Leak-stopper.
Storage battery. W. A. Crowdus. No. 1,155,046; Sept. 28; Gaz. vol. 218; p. 1035.
Storage battery. W. A. Crowdus. No. 1,155,047; Sept. 28; Gaz. vol. 218; p. 1035.
Stove. E. V. Coulston. No. 1,152,793; Sept. 7; Gaz. vol. 218; p. 151.
Stove. J. G. Dungan. No. 1,154,747; Sept. 28; Gaz. vol. 218; p. 935.
Stove. W. S. Hadaway, Jr. No. 1,154,114; Sept. 21; Gaz. vol. 218; p. 690.
Stove. O. Nestel. No. 1,153,243; Sept. 14; Gaz. vol. 218; p. 348.
Stovepipe. E. W Edwards. No. 1,153,204; Sept. 14; Gaz. vol. 218; p. 334.
Stove-top, Panel. T. E. Potts. No. 1,153,517; Sept. 14; Gaz. vol. 218; p. 448.
Strainer. S. H. Carbis. No. 1,154,175; Sept. 21; Gaz. vol. 218; p. 710.
Strainer. C. J. McCarthy. No. 1,153,090; Sept. 7; Gaz. vol. 218; p. 257.
Strainer, Pipe-. R. C. Monteagle. No. 1,152,831; Sept. 7; Gaz. vol. 218; p. 166.
Strainer, Well-. J. H. McEvoy. No. 1,154,709; Sept. 28; Gaz. vol. 218; p. 922.
Straining device. R. S. Darling. No. 1,153,768; Sept. 14; Gaz. vol. 218; p. 534.
Straw-bruiser. W. F. MacGregor and A. C. Foster. No. 1,154,262; Sept. 21; Gaz. vol. 218; p. 740.
Street-sweeper. L. S. Hackney. No. 1,152,726; Sept. 7; Gaz. vol. 218; p. 127.
Street-sweeping machines, Dust-collector for pneumatic. J. R. Pollock. No. 1,155,272; Sept. 28; Gaz. vol. 218; p. 1112.
Stud-setting machine, Lacing-. E. E. Wakefield. No. 1,154,553; Sept. 21; Gaz. vol. 218; p. 839.
Stud-threading machine. O. A. Smith. No. 1,153,456; Sept. 14; Gaz. vol. 218; p. 425.
Stuffing-box. J. F. Knorr and C. Andrade, Jr. No. 1,153,933; Sept. 21; Gaz. vol. 218; p. 627.
Stump-burner, Hot-blast. J. V. De Lamater. No. 1,153,610; Sept. 14; Gaz. vol. 218; p. 481.
Stump remover and destroyer. C. C. Sullivan and L. P. Davis. No. 1,153,270; Sept. 14; Gaz. vol. 218; p. 358.
Stylus. A. B. Dick. No. 1,152,800; Sept. 7; Gaz. vol. 218; p. 154.
Submarines, Means of escape from. W. J. Kenely. No. 1,152,420; Sept. 7; Gaz. vol. 218; p. 13.
Sucker-rod socket, Combination. E. E. Osborne. No. 1,153,818; Sept. 14; Gaz. vol. 218; p. 553.
Sugar-box. I. F. Thomas. No. 1,152,992; Sept. 7; Gaz. vol. 218; p. 225.
Sugar container and dispenser. W. V. McBroom. No. 1,155,323; Sept. 28; Gaz. vol. 218; p. 1129.
Sugar-container, Sanitary. W. Goldfarb. No. 1,154,506; Sept. 21; Gaz. vol. 218; p. 823.
Sugar-dispenser. W. A. Smith and T. L. Flynn. No. 1,155,013; Sept. 28; Gaz. vol. 218; p. 1025.
Sugar product and producing the same. J. J. Armstrong. No. 1,154,557; Sept. 21; Gaz. vol. 218; p. 841.
Suitcase. M. W. Rosenfeld. No. 1,153,136; Sept. 7; Gaz. vol. 218; p. 271.
Sulfids of phosphorus, Producing. F. C. Frary. No. 1,153,054; Sept. 7; Gaz. vol. 218; p. 245.
Superheater, Locomotive-. E. G. Goodwin. No. 1,153,216; Sept. 14; Gaz vol 218; p 338
Superheater, Locomotive-. J. Primrose. No. 1,152,839; Sept. 7; Gaz. vol. 218; p. 168.
Supporting articles of regular or irregular form, Means for. J. E. Storey. No. 1,153,727; Sept. 14; Gaz. vol. 218; p. 521.
Surgical instrument. J. Starkweather. No. 1,155,169; Sept. 28; Gaz. vol. 218; p. 1081.

Surgically cleansing surfaces, Apparatus for. C. E. Kells. No. 1,152,818; Sept. 7; Gaz. vol. 218; p. 161.
Suspender attachment, Overall-. G. A. Gledhill. No. 1,153,060; Sept. 7; Gaz. vol. 218; p. 247.
Suspender-clasp. M. Glatt. No. 1,152,403; Sept. 7; Gaz. vol. 218; p. 9.
Suspension device. W. Cooper. No. 1,154,845; Sept. 28; Gaz. vol. 218; p. 967.
Switch: *See*—
Electric switch. Railway-track switch.
Electric change-over switch. Reversing-switch.
Electric-light switch. Time-switch.
Electric snap-switch. Trolley-actuated switch.
Switch. V. G. Apple. No. 1,155,121; Sept. 28; Gaz. vol. 218; p. 1064.
Switch. L. Reinhard. No. 1,153,257; Sept. 14; Gaz. vol. 218; p. 353.
Switch and signal system. R. V. Collins. No. 1,152,790; Sept. 7; Gaz. vol. 218; p. 149.
Switch-box. C. C. Maison and R. H. Robinson. No. 1,154,576; Sept. 21; Gaz. vol. 218; p. 848.
Switch device, Non-interfering. G. E. Mueller. No. 1,152,963; Sept. 7; Gaz. vol. 218; p. 214.
Switch-operating device. D. D. Gordon. No. 1,155,307; Sept. 28; Gaz. vol. 218; p. 1123.
Switch-shifter. A. McVey. No. 1,154,526; Sept. 21; Gaz. vol. 218; p. 830.
Switch-stand. S. F. Philips. No. 1,154,428; Sept. 21; Gaz. vol. 218; p. 797.
Switch-stand safety device. C. W. Holderbaum and H. Kraft. No. 1,154,513; Sept. 21; Gaz. vol. 218; p. 825.
Switch-throwing mechanism. R. V. Collins. No. 1,152,791; Sept. 7; Gaz. vol. 218; p. 150.
Synchronism, Apparatus for operating two mechanisms in. G. W. Ford. No. 1,153,210; Sept. 14; Gaz. vol. 218; p. 336.
Synchronizing recorder. E. O. Schweitzer. No. 1,155,106; Sept. 28; Gaz. vol. 218; p. 1058.
Syringe, Antitoxin-. R. Slee. No. 1,155,012; Sept. 28; Gaz. vol. 218; p. 1024.
Syringe, Hypodermic. J. H. Wedig. No. 1,154,677; Sept. 28; Gaz. vol. 218; p. 913.
Syruping-machine. A. Cerruti. No. 1,154,374; Sept. 21; Gaz. vol. 218; p. 780.
Table: *See*—
Brick-cut-off table. Mangle-table.
Extension-table. Self-leveling table.
Folding table. Writing-table.
Game-table.
Table for mail and the like. J. T. Cowley. No. 1,154,562; Sept. 21; Gaz. vol. 218; p. 842.
Table-pad. C. C. Lydon. No. 1,154,036; Sept. 21; Gaz. vol. 218; p. 663.
Tag holder, Identification-. J. McGinty. No. 1,153,094; Sept. 7; Gaz. vol. 218; p. 258.
Tag support, License-. C. D. De Vore. No. 1,154,847; Sept. 28; Gaz. vol. 218; p. 968.
Talking-machine. W. N. Dennison. No. 1,152,401; Sept. 7; Gaz. vol. 218; p. 7.
Talking-machine tone-arm connection. W. H. Hoschke. No. 1,155,064; Sept. 28; Gaz. vol. 218; p. 1043.
Talking-machines, Correction device for. C. E. Woods. No. 1,153,665; Sept. 14; Gaz. vol. 218; p. 498.
Tally device. T. I. Freeburn. No. 1,154,854; Sept. 28; Gaz. vol. 218; p. 970.
Tank: *See*—
Waste-soaking tank. Water-tank.
Tank-filling device. E. J. Kelley. No. 1,153,116; Sept. 7; Gaz. vol. 218; p. 265.
Tank-heater. T. Shaver. No. 1,154,065; Sept. 21; Gaz. vol. 218; p. 673.
Tank-heater. J. Trisler. No. 1,152,671; Sept. 7; Gaz. vol. 218; p. 108.
Tank-indicator. F. W. Johnstone. No. 1,153,553; Sept. 14; Gaz. vol. 218; p. 461.
Tanning compositions from waste sulfite-cellulose liquor, Producing. J. J. Gross. No. 1,154,762; Sept. 28; Gaz. vol. 218; p. 940.
Tap or cock. R. R. Gibbs. No. 1,153,778; Sept. 14; Gaz. vol. 218; p. 538.
Tapping apparatus. R. Bettermann. No. 1,154,603; Sept. 28; Gaz. vol. 218; p. 885.
Tapping-machine. J. E. Johnson. No. 1,153,310; Sept. 14; Gaz. vol. 218; p. 371.
Tape-wound cones and the like, Holder for. R. S. Sharp. No. 1,154,443; Sept. 21; Gaz. vol. 218; p. 802.
Telegraph-line repeater. H. C. Cahill. No. 1,152,877; Sept. 7; Gaz. vol. 218; p. 183.
Telegraph or telephone relay. C. Stille. No. 1,154,139; Sept. 21; Gaz. vol. 218; p. 698.
Telegraph-relay, Transmitting. T. H. Mains. No. 1,153,937; Sept. 21; Gaz. vol. 218; p. 629.
Telegraphs, Transmitter for electric writing-. E. H. and K. A. Widegren. No. 1,154,279; Sept. 21; Gaz. vol. 218; p. 746.
Telephone apparatus. A. J. Kempien. No. 1,154,700; Sept. 28; Gaz. vol. 218; p. 919.
Telephone attachment. J. H. W. Champion. No. 1,153,029; Sept. 7; Gaz. vol. 218; p. 237.
Telephone attachment. H. R. Smith. No. 1,153,349; Sept. 14; Gaz. vol. 218; p. 386.
Telephone-cable. K. W. Wagner. No. 1,153,655; Sept. 14; Gaz. vol. 218; p. 495.
Telephone or the like, Thermo-. B. Gwosdz. No. 1,152,627; Sept. 7; Gaz. vol. 218; p. 91.
Telephone-receiver. N. Baldwin. No. 1,153,593; Sept. 14; Gaz. vol. 218; p. 475.
Telephone-receiver. A. S. Moffat. No. 1,152,536; Sept. 7; Gaz. vol. 218; p. 58.
Telephone system. J. A. Taggart. No. 1,154,075; Sept. 21; Gaz. vol. 218; p. 676.
Telephone system, Automatic. A. H. Dyson. No. 1,153,542; Sept. 14; Gaz. vol. 218; p. 457.
Telephones, Subscriber's autoswitching system for intercommunicating. R. F. Pickens. No. 1,152,968; Sept. 7; Gaz. vol. 218; p. 216.
Telephonic apparatus. W. Rohde. No. 1,153,572; Sept. 14; Gaz. vol. 218; p. 468.
Telephony. A. W. Steinke. No. 1,153,352; Sept. 14; Gaz. vol. 218; p. 387.
Telephony selective system. R. C. M. Hastings. (Reissue.) No. 13,989; Sept. 28; Gaz. vol. 218; p. 1132.
Telescope attachment. H. C. Mustin. No. 1,153,945; Sept. 21; Gaz. vol. 218; p. 631.
Temperature-regulator. J. D. Steensland. No. 1,153,407; Sept. 14; Gaz. vol. 218; p. 408.
Tenon-cutting machine. Z. Martell. No. 1,153,938; Sept. 21; Gaz. vol. 218; p. 629.
Textile fibers with liquids, Apparatus for the treatment of. J. Hirschberger. No. 1,154,631; Sept. 28; Gaz. vol. 218; p. 896.
Textile-machine. C. Lea. No. 1,153,869; Sept. 14; Gaz. vol. 218; p. 572.
Theater-chair. H. A. Bouk. No. 1,152,480; Sept. 7; Gaz. vol. 218; p. 86.
Theatrical appliance. A. Wayrich. No. 1,154,950; Sept. 28; Gaz. vol. 218; p. 1003.
Therapeutic apparatus. H. B. Philips. No. 1,155,271; Sept. 28; Gaz. vol. 218; p. 1112.
Therapeutic apparatus, Electrical. R. W. Chapman. No. 1,153,839; Sept. 14; Gaz. vol. 218; p. 560.
Thermo non-conductor. C. G. Muench. No. 1,153,512; Sept. 14; Gaz. vol. 218; p. 446.
Thermometer cap, Radiator-. D. P. Fraser. No. 1,154,503; Sept. 21; Gaz. vol. 218; p. 822.
Thermometer casing, Clinical-. J. T. Greeley. No. 1,152,503; Sept. 7; Gaz. vol. 218; p. 44.
Thermometer for bakers. A. Watkins. No. 1,153,740; Sept. 14; Gaz. vol. 218; p. 525.
Thermostat. D. Belden. No. 1,154,361; Sept. 21; Gaz. vol. 218; p. 775.
Thermostat, Time-controlled. C. E. Jewell. No. 1,154,926; Sept. 28; Gaz. vol. 218; p. 995.
Thread-cutting mechanism. E. B. Allen. No. 1,153,412; Sept. 14; Gaz. vol. 218; p. 410.
Thread-cutting tool. W. W. Vosper. No. 1,153,981; Sept. 21; Gaz. vol. 218; p. 643.
Thread-guide. F. B. Wildman and G. L. Ballard. No. 1,153,742; Sept. 14; Gaz. vol. 218; p. 526.
Thread, Treating. C. S. Althouse. No. 1,153,004; Sept. 7; Gaz. vol. 218; p. 229.
Threading device. C. F. Schultis. No. 1,153,345; Sept. 14; Gaz. vol. 218; p. 384.
Threading-machine. H. Gautschi. No. 1,152,502; Sept. 7; Gaz. vol. 218; p. 43.
Throwing-machine. C. E. Royse. No. 1,152,979; Sept. 7; Gaz. vol. 218; p. 220.
Ticket. H. A. Drake. No. 1,153,043; Sept. 7; Gaz. vol. 218; p. 241.
Ticket cartridge and container, Pin-. M. O. Anthony. No. 1,152,471; Sept. 7; Gaz. vol. 218; p. 32.
Ticket-issuing machine, Railway-. C. Forth. No. 1,153,299; Sept. 14; Gaz. vol. 218; p. 367.
Ticket, Pin-. W. G. Dunham. No. 1,152,612; Sept. 7; Gaz. vol. 218; p. 85.
Tie: *See*—
Package-tie. Railway-tie.
Tie-clasp. R. Krementz and F. Kaelber. No. 1,152,739; Sept. 7; Gaz. vol. 218; p. 132.
Time-reckoning device. W. G. Viall. No. 1,153,469; Sept. 14; Gaz. vol. 218; p. 430.
Time-switch. T. J. Murphy. No. 1,152,433; Sept. 7; Gaz. vol. 218; p. 18.
Timepiece. E. E. Dawsey. No. 1,153,038; Sept. 7; Gaz. vol. 218; p. 240.
Timepiece attachment, Automobile. F. M. Dale. No. 1,153,600; Sept. 14; Gaz. vol. 218; p. 480.
Tire. H. Behm and J. Vene. No. 1,152,779; Sept. 7; Gaz. vol. 218; p. 146.
Tire. J. E. McCoughtry. No. 1,155,255; Sept. 28; Gaz. vol. 218; p. 1107.
Tire-armor. P. A. Christenson. No. 1,153,194; Sept. 14; Gaz. vol. 218; p. 331.
Tire, Auto-. J. A. Read. No. 1,152,906; Sept. 7; Gaz. vol. 218; p. 194.
Tire, Automobile-. M. Perez. No. 1,152,902; Sept. 7; Gaz. vol. 218; p. 192.
Tire-case. W. S. Heath. No. 1,153,305; Sept. 14; Gaz. vol. 218; p. 369.
Tire, Elastic vehicle-. T. Midgley. No. 1,152,880; Sept. 7; Gaz. vol. 218; p. 166.
Tire-filler. H. J. S. Keim. No. 1,154,318; Sept. 21; Gaz. vol. 218; p. 759.
Tire for road-vehicles, Resilient. W. H. Carmont. No. 1,154,484; Sept. 21; Gaz. vol. 218; p. 816.
Tire for vehicle-wheels, Elastic. L. T. Petersen. No. 1,152,756; Sept. 7; Gaz. vol. 218; p. 138.

Tire-mold core. J. H. and J. H. Coffey, Jr. No. 1,154,848; Sept. 28; Gaz. vol. 218; p. 967.
Tire, Multiple-chamber pneumatic. J. W. Turner. No. 1,154,817; Sept. 28; Gaz. vol. 218; p. 958.
Tire or shoe holder for automobiles. F. W. Ehrlich. No. 1,155,053; Sept. 28; Gaz. vol. 218; p. 1039.
Tire, Pneumatic. H. S. Dew and W. H. Minton. No. 1,154,845; Sept. 28; Gaz. vol. 218; p. 968.
Tire-pressure gage. R. A. Campbell. No. 1,153,026; Sept. 7; Gaz. vol. 218; p. 236.
Tire-protector. G. L. Dillard and W. Johns. No. 1,153,042; Sept. 7; Gaz. vol. 218; p. 241.
Tire, Resilient. D. M. Kampler. No. 1,154,119; Sept. 21; Gaz. vol. 218; p. 691.
Tire, Resilient pneumatic. F. Loder. No. 1,153,396; Sept. 14; Gaz. vol. 218; p. 404.
Tire structure. J. Plontkowski. No. 1,152,657; Sept. 7; Gaz. vol. 218; p. 102.
Tire-tightener. F. A. Pettibone. No. 1,153,822; Sept. 14; Gaz. vol. 218; p. 554.
Tire-tool. F. Sevison. No. 1,154,442; Sept. 21; Gaz. vol. 218; p. 802.
Tire, Vehicle-. F. U. Adams. No. 1,152,470; Sept. 7; Gaz. vol. 218; p. 31.
Tire, Vehicle wheel-. A. W. Gano. No. 1,154,504; Sept. 21; Gaz. vol. 218; p. 822.
Tire, Vold-. G. T. Begee. No. 1,153,348; Sept. 14; Gaz. vol. 218; p. 386.
Tire-vulcanizer apparatus. J. H. Lepsch. No. 1,153,324; Sept. 14; Gaz. vol. 218; p. 376.
Tires, Rubber-tread flexible armor for pneumatic. C. L. Wolfe. No. 1,155,025; Sept. 28; Gaz. vol. 218; p. 1028.
Tobacco pressing and finishing apparatus, Plug-. R. B. Dula. No. 1,154,914; Sept. 28; Gaz. vol. 218; p. 991.
Tobacco pressing and finishing machine, Plug-. R. B. Dula. No. 1,154,913; Sept. 28; Gaz. vol. 218; p. 991.
Tobacco-stemming machine. J. P. Scovill. No. 1,153,962; Sept. 21; Gaz. vol. 218; p. 637.
Tongs, Brick-handling. W. Sturm, Sr. No. 1,153,269; Sept. 14; Gaz. vol. 218; p. 357.
Tool-handle. J. W. Rummel. No. 1,153,340; Sept. 14; Gaz. vol. 218; p. 382.
Tool handle, Electric-. F. A. Rowley. No. 1,153,575; Sept. 14; Gaz. vol. 218; p. 469.
Tool-holder. C. Grunbauch. No. 1,154,010; Sept. 21; Gaz. vol. 218; p. 654.
Tool-holder. G. S. Radford. No. 1,154,804; Sept. 28; Gaz. vol. 218; p. 954.
Tool, Pneumatic. G. H. Gilman. No. 1,152,624; Sept. 7; Gaz. vol. 218; p. 90.
Tool, Pneumatic. C. O. Palmer. No. 1,154,797; Sept. 28; Gaz. vol. 218; p. 953.
Tool, Pulsatory. C. A. Dawley. No. 1,154,977; Sept. 28; Gaz. vol. 218; p. 1012.
Tool-support, Narrow. W. Schellenbach, W. Lodge, and N. D. Chard. No. 1,154,939; Sept. 28; Gaz. vol. 218; p. 1000.
Tools, Compressed-air apparatus for operating pneumatic. C. O. Palmer. No. 1,154,794; Sept. 28; Gaz. vol. 218; p. 951.
Tools, Compressed-air apparatus for operating pneumatic. C. O. Palmer. No. 1,154,795; Sept. 28; Gaz. vol. 218; p. 951.
Tools, Compressed-air apparatus for operating pneumatic. C. O. Palmer. No. 1,154,796; Sept. 28; Gaz. vol. 218; p. 952.
Tools, Compressed-air system for operating pneumatic. C. O. Palmer. No. 1,154,793; Sept. 28; Gaz. vol. 218; p. 950.
Torch, Alcohol-. A. H. Melenbacker. No. 1,152,745; Sept. 7; Gaz. vol. 218; p. 134.
Torch-holder. C. R. Lambert. No. 1,153,630; Sept. 14; Gaz. vol. 218; p. 487.
Torch, Welding-. B. Custer. No. 1,154,974; Sept. 28; Gaz. vol. 218; p. 1011.
Torpedo-depth recorder. W. Dieter. No. 1,152,493; Sept. 7; Gaz. vol. 218; p. 40.
Torpedo, Dirigible. M. P. Otto. No. 1,154,427; Sept. 21; Gaz. vol. 218; p. 797.
Torpedo, Fiber-case railway-. F. Dutcher. No. 1,153,048; Sept. 7; Gaz. vol. 218; p. 243.
Torpedo, Railway signal-. F. Dutcher. No. 1,153,047; Sept. 7; Gaz. vol. 218; p. 242.
Torpedo, Return-. G. P. Johnson. No. 1,152,640; Sept. 7; Gaz. vol. 218; p. 96.
Torpedoes, Increasing the energy of a fluid-motor in motor-driven. M. Bruniquel. No. 1,154,609; Sept. 28; Gaz. vol. 218; p. 886.
Torpedoes, Manufacturing. W. C. Beckwith. No. 1,154,164; Sept. 21; Gaz. vol. 218; p. 706.
Torpedo's propeller, Device to prevent the admission of water into the interior of the hollow shaft of a. C. Radiguer. No. 1,154,206; Sept. 21; Gaz. vol. 218; p. 720.
Toy. J. Isaacs. No. 1,152,639; Sept. 7; Gaz. vol. 218; p. 96.
Toy. H. J. Mitchell. No. 1,154,331; Sept. 21; Gaz. vol. 218; p. 764.
Toy. D. T. Phillips. No. 1,153,250; Sept. 14; Gaz. vol. 218; p. 350.
Toy, Climbing-ball. H. L. Cassard. No. 1,154,094; Sept. 21; Gaz. vol. 218; p. 683.
Toy, Figure. J. O. Hawkins. No. 1,154,014; Sept. 21; Gaz. vol. 218; p. 655.
Toy, Gravity traveling. J. T. Breseman. No. 1,154,068; Sept. 21; Gaz. vol. 218; p. 681.
Toy novelty. S. Eisenberg. No. 1,153,206; Sept. 14; Gaz. vol. 218; p. 334.
Toy pistol. F. H. Oithoff. No. 1,155,220; Sept. 28; Gaz. vol. 218; p. 1128.
Toy-rail joint. J. L. Cowen. No. 1,152,490; Sept. 7; Gaz. vol. 218; p. 39.
Toy railway. F. J. Hummel. No. 1,153,922; Sept. 21; Gaz. vol. 218; p. 623.
Toy track. J. L. Cowen. No. 1,152,489; Sept. 7; Gaz. vol. 218; p. 39.
Toy, Type-writing doll. M. M. Schwarzschild and B. Scheuer. No. 1,153,524; Sept. 14; Gaz. vol. 218; p. 450.
Toy, Wind-wheel. K. Naito. No. 1,155,263; Sept. 28; Gaz. vol. 218; p. 1109.
Tracing-cloth. B. Clay. No. 1,154,485; Sept. 21; Gaz. vol. 218; p. 816.
Track for traction-engines, Oscillating self-laying. G. W. Price. No. 1,153,570; Sept. 14; Gaz. vol. 218; p. 467.
Track-gage, Adjustable. W. H. Davis. No. 1,153,709; Sept. 14; Gaz. vol. 218; p. 534.
Track rip device, Portable. C. F. Peel. No. 1,153,568; Sept. 14; Gaz. vol. 218; p. 466.
Traction apparatus. C. A. Henneuse. No. 1,153,845; Sept. 14; Gaz. vol. 218; p. 563.
Traction-engine. H. Ford. No. 1,153,052; Sept. 7; Gaz. vol. 218; p. 244.
Traction-engine. A. C. Johnson. No. 1,153,112; Sept. 7; Gaz. vol. 218; p. 264.
Traction-machine. W. Barber. No. 1,153,538; Sept. 14; Gaz. vol. 218; p. 456.
Tractor. H. W. Kardell. No. 1,153,692; Sept. 14; Gaz. vol. 218; p. 508.
Tractor. C. B. Klein. No. 1,154,322; Sept. 21; Gaz. vol. 218; p. 761.
Tractor. C. O. Paul. No. 1,153,109; Sept. 7; Gaz. vol. 218; p. 263.
Tractor attachment for motor-vehicles. F. J. Hobson. No. 1,154,635; Sept. 28; Gaz. vol. 218; p. 897.
Tractor, Fluid-. J. M. King. No. 1,153,798; Sept. 14; Gaz. vol. 218; p. 545.
Train-control system, Electric. E. Woltmann. No. 1,154,956; Sept. 28; Gaz. vol. 218; p. 1005.
Train or car stopping apparatus, Automatic. S. K. Ghosh. No. 1,153,616; Sept. 14; Gaz. vol. 218; p. 483.
Train-stop mechanism, Brake-actuating device for automatic. F. Bedford. No. 1,152,695; Sept. 7; Gaz. vol. 218; p. 116.
Transformer, High-tension. C. Schrader. No. 1,154,132; Sept. 21; Gaz. vol. 218; p. 695.
Transformer, Potential-. O. W. Lunnon and E. Harvey. No. 1,154,866; Sept. 28; Gaz. vol. 218; p. 974.
Transformer regulation. E. O. Schweitser. No. 1,154,441; Sept. 21; Gaz. vol. 218; p. 802.
Transit device. N. Whichello and H. Sawyer. No. 1,154,678; Sept. 28; Gaz. vol. 218; p. 913.
Transmission mechanism. H. J. Helder. No. 1,154,767; Sept. 28; Gaz. vol. 218; p. 941.
Transmission mechanism. F. B. Rae. No. 1,153,338; Sept. 14; Gaz. vol. 218; p. 382.
Trap: *See*—
Bird-trap. Steam-trap.
Rodent-trap.
Trap. W. H. Oldfield. No. 1,153,247; Sept. 14; Gaz. vol. 218; p. 349.
Trap. S. M. Ryason. No. 1,152,980; Sept. 7; Gaz. vol. 218; p. 220.
Treating materials with a liquid, Machine for. F. Schubert. No. 1,154,440; Sept. 21; Gaz. vol. 218; p. 801.
Tree-felling device. O. A. Gooch. No. 1,154,624; Sept. 28; Gaz. vol. 218; p. 982.
Trees or other vegetation, Protector for. N. Hogan. No. 1,155,313; Sept. 28; Gaz. vol. 218; p. 1126.
Trestle for carpenters' use. A. P. Wagner. No. 1,153,470; Sept. 14; Gaz. vol. 218; p. 430.
Trimmer: *See*—
Heel and rand trimmer.
Trimmer. A. McNish. No. 1,154,789; Sept. 28; Gaz. vol. 218; p. 949.
Trolley. G. O. Burwell and C. M. Kurtz. No. 1,154,234; Sept. 21 Gaz. vol. 218; p. 729.
Trolley. W. F. Ream. No. 1,152,762; Sept. 7; Gaz. vol. 218; p. 139.
Trolley-actuated switch. E. H. Owsley. No. 1,153,515; Sept 14; Gaz. vol. 218; p. 447.
Trolley-hanger. W. T. Robinson and C. D. Hylton. No. 1,152,909; Sept. 7; Gaz. vol. 218; p. 194.
Trolley-pole. W. W. Clark. No. 1,152,707; Sept. 7; Gaz. vol. 218; p. 120.
Trolley-pole base. C. E. Gierding. No. 1,154,759; Sept. 28; Gaz. vol. 218; p. 939.
Trolley-stop. E. E. Conrad. No. 1,155,214; Sept. 28; Gaz. vol. 218; p. 1066.
Trolley-track bracket. P. L. Hoffman. No. 1,152,630; Sept. 7; Gaz. vol. 218; p. 92.
Trolley-wheel. C. M. Brennan. No. 1,154,170; Sept. 21; Gaz. vol. 218; p. 709.
Trolley-wheel. E. R. Eby. No. 1,155,226; Sept. 28; Gaz. vol. 218; p. 1069.
Trolley-wires, Sleet-cutter for. W. H. Ahrens. No. 1,154,828; Sept. 28; Gaz. vol. 218; p. 963.
Trough: *See*—
Stock-trough. Window-trough.

Trousers belt attachment. W. D. Woodruff. No. 1,155,187; Sept. 28; Gaz. vol. 218; p. 1067.
Trousers-stretcher. F. A. Lyons. No. 1,153,128; Sept. 7; Gaz. vol. 218; p. 269.
Truck. G. P. Clark, W. F. Irrgang, and G. E. Clark. No. 1,152,788; Sept. 7; Gaz. vol. 218; p. 149.
Truck. J. H. Smith. No. 1,152,564; Sept. 7; Gaz. vol. 218; p. 69.
Truck, Car-. W. F. Kiesel, Jr. No. 1,153,117; Sept. 7; Gaz. vol. 218; p. 266.
Truck, Hand-. B. V. Harvey and B. K. Watkins. No. 1,155,235; Sept. 28; Gaz. vol. 218; p. 1101.
Truck or carrier for cylindrical objects. N. L. Anthony. No. 1,153,476; Sept. 14; Gaz. vol. 218; p. 432.
Truck, Single-wheel emergency. U. Butcher. No. 1,154,287; Sept. 21; Gaz. vol. 218; p. 749.
Truck, Six-wheel. J. C. Whitridge and G. T. Johnson. No. 1,153,741; Sept. 14; Gaz. vol. 218; p. 526.
Truck take-up, Drying-kiln-. A. H. Irving and D. R. Tanner. No. 1,154,315; Sept. 21; Gaz. vol. 218; p. 758.
Truck-transferring mechanism. D. R. Tanner. No. 1,153,274; Sept. 14; Gaz. vol. 218; p. 359.
Truing-machine. J. Saunders. No. 1,154,843; Sept. 21; Gaz. vol. 218; p. 769.
Trusses, girders, and the like, Construction of ferroconcrete. R. Wuczkowski. No. 1,153,411; Sept. 14; Gaz. vol. 218; p. 410.
Tube: *See*—
Last-tube. X-ray tube.
Mailing-tube.
Tube-cleaner. F. W. Linaker. No. 1,152,423; Sept. 7; Gaz. vol. 218; p. 15.
Tube-expander. O. Wiedeke. No. 1,153,662; Sept. 14; Gaz. vol. 218; p. 497.
Tube-mill. W. Fennell. No. 1,154,981; Sept. 28; Gaz. vol. 218; p. 1013.
Tube-mill. W. Fennell. No. 1,154,982; Sept. 28; Gaz. vol. 218; p. 1014.
Tubes, Device for sinking foundation-. H. Sletten and A. N. Lidell. No. 1,154,187; Sept. 21; Gaz. vol. 218; p. 697.
Tubing and making the same, Electrically-welded. K. Pelseler. No. 1,154,933; Sept. 28; Gaz. vol. 218; p. 998.
Tubing-machine. V. Royle. No. 1,152,978; Sept. 7; Gaz. vol. 218; p. 220.
Tubing, Machine for cutting and folding cloth. C. B. Greeson. No. 1,154,581; Sept. 21; Gaz. vol. 218; p. 850.
Tubing-rings, Making. A. M. Stewart. No. 1,152,858; Sept. 7; Gaz. vol. 218; p. 176.
Tubing, Structural. W. Wills. No. 1,154,955; Sept. 28; Gaz. vol. 218; p. 1006.
Tumbler washing and rinsing machine. G. H. Hutaff. No. 1,153,228; Sept. 14; Gaz. vol. 218; p. 343.
Tumbler-washing apparatus. M. Ishida. No. 1,153,308; Sept. 14; Gaz. vol. 218; p. 370.
Tumbling-barrel. J. Henderson. No. 1,155,150; Sept. 28; Gaz. vol. 218; p. 1074.
Tungsten filaments, Producing. E. A. Krüger. No. 1,154,701; Sept. 28; Gaz. vol. 218; p. 920.
Turbine-driven set, Geared. R. H. Rice. No. 1,155,163; Sept. 28; Gaz. vol. 218; p. 1075.
Turbine, Fluid-pressure. C. J. Mellin. No. 1,154,648; Sept. 28; Gaz. vol. 218; p. 902.
Turbine, Gas-. D. L. Taylor. No. 1,152,862; Sept. 7; Gaz. vol. 218; p. 178.
Turbine-governing mechanism. S. A. Moss. No. 1,154,533; Sept. 21; Gaz. vol. 218; p. 852.
Turbine, Marine. K. Alquist. No. 1,153,475; Sept. 14; Gaz. vol. 218; p. 431.
Turbine, Marine. K. Alquist. No. 1,155,029; Sept. 28; Gaz. vol. 218; p. 1030.
Turbine, Marine. K. Alquist. No. 1,155,030; Sept. 28; Gaz. vol. 218; p. 1030.
Turbine, Tapped. W. Kieser. No. 1,153,316; Sept. 14; Gaz. vol. 218; p. 374.
Turbo-driven-machine frame. R. H. Rice. No. 1,155,162; Sept. 28; Gaz. vol. 218; p. 1075.
Turning or boring appliance. O. W. Mueller. No. 1,153,241; Sept. 14; Gaz. vol. 218; p. 347.
Type composing and casting apparatus. H. A. Earle and F. W. Druitt. No. 1,153,049; Sept. 7; Gaz. vol. 218; p. 243.
Type-setting machine. D. C. Hughes. No. 1,153,390; Sept. 14; Gaz. vol. 218; p. 401.
Type-stops in type-holders, Tool for forming and deforming. D. C. Hughes. No. 1,153,391; Sept. 14; Gaz. vol. 218; p. 402.
Type-writer. K. Dougan. No. 1,152,494; Sept. 7; Gaz. vol. 218; p. 40.
Type-writer. K. Dougan. No. 1,152,495; Sept. 7; Gaz. vol. 218; p. 40.
Type-writer accent mechanism. T. H. Buschmann. No. 1,154,286; Sept. 21; Gaz. vol. 218; p. 748.
Type-writer calculating attachment. F. J. Tillman. No. 1,154,551; Sept. 21; Gaz. vol. 218; p. 838.
Type-writer carriage-return. A. M. Wing. No. 1,152,684; Sept. 7; Gaz. vol. 218; p. 112.
Type-writer centering-scale. C. E. Smith. No. 1,152,923; Sept. 7; Gaz. vol. 218; p. 199.
Type-writer feed-roller. M. J. Pilblad and A. Tomlinson. No. 1,153,567; Sept. 14; Gaz. vol. 218; p. 466.
Type-writing machine. J. H. Barr. No. 1,153,668; Sept. 14; Gaz. vol. 218; p. 499.
Type-writing machine. R. M. Becker. No. 1,152,928; Sept. 7; Gaz. vol. 218; p. 201.
Type-writing machine. G. F. Coverdell. No. 1,152,934; Sept. 7; Gaz. vol. 218; p. 204.
Type-writing machine. J. C. Harvey. No. 1,152,944; Sept. 7; Gaz. vol. 218; p. 208.
Type-writing machine. J. C. Harvey. No. 1,152,945; Sept. 7; Gaz. vol. 218; p. 208.
Type-writing machine. L. L. Pritsel. No. 1,153,252; Sept. 14; Gaz. vol. 218; p. 351.
Type-writing machine. J. A. Smale. No. 1,152,972; Sept. 7; Gaz. vol. 218; p. 213.
Type-writing machine. M. B. Sargent and A. E. Kariberg. No. 1,153,950; Sept. 21; Gaz. vol. 218; p. 626.
Type-writing machine. G. A. Seib. No. 1,153,716; Sept. 14; Gaz. vol. 218; p. 518.
Type-writing machine. W. G. Sheldon. No. 1,152,921; Sept. 7; Gaz. vol. 218; p. 198.
Type-writing machine. C. E. Smith. No. 1,154,213; Sept. 21; Gaz. vol. 218; p. 722.
Type-writing machine. C. E. Smith. No. 1,154,244; Sept. 21; Gaz. vol. 218; p. 769.
Type-writing machine. J. A. R. Smith. No. 1,152,563; Sept. 7; Gaz. vol. 218; p. 63.
Type-writing machine. J. A. Smith. No. 1,152,856; Sept. 7; Gaz. vol. 218; p. 176.
Type-writing machine. G. Voelker. No. 1,153,651; Sept. 14; Gaz. vol. 218; p. 494.
Type-writing machine. C. B. Yaw. No. 1,153,463; Sept. 7; Gaz. vol. 218; p. 28.
Type-writing-machine back-spacing device. A. Utz. No. 1,154,277; Sept. 21; Gaz. vol. 218; p. 745.
Type-writing machines, Erasing-shield for. E. P. Fortin. No. 1,152,938; Sept. 7; Gaz. vol. 218; p. 206.
Typograph composing mechanism. W. A. Reade. No. 1,154,054; Sept. 21; Gaz. vol. 218; p. 669.
Typographical composing-machine. A. Hoyer. No. 1,153,493; Sept. 14; Gaz. vol. 218; p. 438.
Typographical composing-machine. A. Hoyer. No. 1,153,494; Sept. 14; Gaz. vol. 218; p. 439.
Typographical composing-machine. C. Muehleisen. No. 1,153,511; Sept. 14; Gaz. vol. 218; p. 446.
Typographical machine. B. Bloch. No. 1,154,168; Sept. 21; Gaz. vol. 218; p. 707.
Typographical machine. T. S. Homans. No. 1,153,980; Sept. 7; Gaz. vol. 218; p. 263.
Typographical machine. D. S. Kennedy. No. 1,153,499; Sept. 14; Gaz. vol. 218; p. 441.
Typographical machine. J. R. Rogers. No. 1,154,957; Sept. 21; Gaz. vol. 218; p. 670.
Typographical machine. H. D. Taft. No. 1,153,463; Sept. 14; Gaz. vol. 218; p. 428.
Typographical machines, Distributer mechanism for. H. L. Eigenbrot. No. 1,152,718; Sept. 7; Gaz. vol. 218; p. 124.
Undergarment. A. Wylie. No. 1,154,280; Sept. 21; Gaz. vol. 218; p. 746.
Undertow-warner indicator-register. M. M. Voorhees. No. 1,153,053; Sept. 14; Gaz. vol. 218; p. 494.
Undervest, Lady's. R. Emmers. No. 1,152,466; Sept. 7; Gaz. vol. 218; p. 3.
Union garment. J. E. Burke. No. 1,152,484; Sept. 7; Gaz. vol. 218; p. 37.
Union suit, Man's. I. Panitz. No. 1,156,691; Sept. 28; Gaz. vol. 218; p. 1054.
Universal joint. H. F. Hopkins. No. 1,153,730; Sept. 14; Gaz. vol. 218; p. 542.
Universal joint. M. L. Jeffrey. No. 1,155,240; Sept. 28; Gaz. vol. 218; p. 1103.
Vacuum cleaning apparatus. W. G. Trantman. No. 1,153,734; Sept. 14; Gaz. vol. 218; p. 528.
Vacuum-creator. E. M. Barnes. No. 1,152,473; Sept. 7; Gaz. vol. 218; p. 33.
Vacuum-creator. C. H. Best. No. 1,155,291; Sept. 28; Gaz. vol. 218; p. 1061.
Vacuum-indicator. G. F. Gray. No. 1,154,296; Sept. 21; Gaz. vol. 218; p. 755.
Valve. A. A. Britt. No. 1,154,577; Sept. 21; Gaz. vol. 218; p. 840.
Valve. J. J. Coll. No. 1,152,604; Sept. 7; Gaz. vol. 218; p. 82.
Valve. W. S. Fairhurst. No. 1,153,051; Sept. 7; Gaz. vol. 218; p. 244.
Valve. G. J. Ferguson. No. 1,152,938; Sept. 7; Gaz. vol. 218; p. 187.
Valve. R. L. Russell. No. 1,153,708; Sept. 14; Gaz. vol. 218; p. 515.
Valve. W. M. Saefke. No. 1,153,343; Sept. 14; Gaz. vol. 218; p. 384.
Valve. W. R. Savage. No. 1,154,811; Sept. 28; Gaz. vol. 218; p. 956.
Valve actuating and adjusting mechanism. E. L. Russell. No. 1,153,707; Sept. 14; Gaz. vol. 218; p. 514.
Valve adjuster and driver. E. L. Russell. No. 1,153,709; Sept. 14; Gaz. vol. 218; p. 515.
Valve adjuster and driver. E. L. Russell. No. 1,153,710; Sept. 14; Gaz. vol. 218; p. 516.
Valve adjuster and driver. E. L. Russell. No. 1,153,711; Sept. 14; Gaz. vol. 218; p. 516.
Valve apparatus, Pneumatic. G. A. Hamly. No. 1,153,170; Sept. 7; Gaz. vol. 218; p. 158.
Valve, Automatic governor-. L. Defoy. No. 1,152,491; Sept. 7; Gaz. vol. 218; p. 39.

Valve, Automatic stop and check. N. Hubbard. No. 1,153,226; Sept. 14; Gas. vol. 218; p. 842.
Valve, Balanced. W. M. Fulton. No. 1,153,681; Sept. 14; Gas. vol. 218; p. 504.
Valve, Bottle-. G. Jackson. No. 1,154,638; Sept. 28; Gas. vol. 218; p. 898.
Valve-cap. C. E. Lloyd. No. 1,155,253; Sept. 28; Gas. vol. 218; p. 1107.
Valve, Controlling-. A. O. Curry. No. 1,155,217; Sept. 28; Gas. vol. 218; p. 1095.
Valve-controlling mechanism for internal-combustion engines. L. H. Cobb. No. 1,155,044; Sept. 28; Gas. vol. 218; p. 1034.
Valve, Fluid-pressure-controlling. J. Brunker and C. A. Mattmiller. No. 1,153,759; Sept. 14; 7Gas. vol. 218; p. 531.
Valve for automatically stopping the supply of liquid to pipes upon breaking of the latter. E. Meier. No. 1,153,850; Sept. 14; Gas. vol. 218; p. 565.
Valve for conduits, Flow-controlling. L. C. Bayles. No. 1,154,962; Sept. 28; Gas. vol. 218; p. 1007.
Valve for gas-burners. F. V. Detwiler. No. 1,154,177; Sept. 21; Gas. vol. 218; p. 711.
Valve for gas-engines, Rotary. G. B. Briney. No. 1,154,479; Sept. 21; Gas. vol. 218; p. 814.
Valve for steam-engines. J. Tryana. No. 1,153,736; Sept. 14; Gas. vol. 218; p. 524.
Valve, Gas-shut-off. G. L. Burlingame. No. 1,154,561; Sept. 21; Gas. vol. 218; p. 842.
Valve-gear, Automatic. C. A. Joy. No. 1,155,245; Sept. 28; Gas. vol. 218; p. 1104.
Valve-gear for direct-acting fluid-pressure engines. R. P. Finlay. No. 1,153,613; Sept. 14; Gas. vol. 218; p. 482.
Valve-grinder bit. A. Ashworth. No. 1,154,159; Sept. 21; Gas. vol. 218; p. 704.
Valve-grinding device. S. A. Bostwick. No. 1,154,605; Sept. 28; Gas. vol. 218; p. 886.
Valve, Lock-. J. F. Blything. No. 1,153,189; Sept. 14; Gas. vol. 218; p. 329.
Valve mechanism, Pneumatic. G. A. Hanly. No. 1,152,811; Sept. 7; Gas. vol. 218; p. 158.
Valve, Pressure-controlling. T. W. Davis. No. 1,154,385; Sept. 21; Gas. vol. 218; p. 783.
Valve, Reversing-. J. A. Wohlberg. No. 1,153,280; Sept. 14; Gas. vol. 218; p. 361.
Valve, Rotary. W. Von Hacht, C. R. Taylor, and W. F. Clewe. No. 1,154,899; Sept. 28; Gas. vol. 218; p. 986.
Valve, Safety-. A. M. Houser. No. 1,152,733; Sept. 7; Gas. vol. 218; p. 130.
Valve-spring. G. H. M. Canton, P. G. Unne, and E. J. J. Salmson. No. 1,154,971; Sept. 28; Gas. vol. 218; p. 1010.
Valve, Thermostatic water-. J. J. Finney. No. 1,153,547; Sept. 14; Gas. vol. 218; p. 459.
Valves, Supervisory system for sprinkler-. W. A. Rogers and M. Parker. No. 1,153,573; Sept. 14; Gas. vol. 218; p. 469.
Vanadium and selenium, Compound of. F. Von Oefele. No. 1,154,949; Sept. 28; Gas. vol. 218; p. 1003.
Vapor-generators, Means for regulating the supply of liquid to. J. Wilkinson. No. 1,154,467; Sept. 21; Gas. vol. 218; p. 811.
Variable-stroke motor or pump. H. S. Hele-Shaw. No. 1,152,729; Sept. 7; Gas. vol. 218; p. 128.
Vault, Burial-. G. G. Babich. No. 1,153,535; Sept. 14; Gas. vol. 218; p. 455.
Vault, Cement burial-. T. Berry and W. Breymaier. No. 1,154,085; Sept. 21; Gas. vol. 218; p. 680.
Vault lock, Grave-. M. E. Cobb. No. 1,154,285; Sept. 21; Gas. vol. 218; p. 730.
Vaults, Rest-rail for grave-. C. L. Sherwood. No. 1,153,853; Sept. 7; Gas. vol. 218; p. 174.
Vehicle. B. L. Davis. No. 1,154,616; Sept. 28; Gas. vol. 218; p. 890.
Vehicle. G. M. Eaton. No. 1,155,224; Sept. 28; Gas. vol. 218; p. 1097.
Vehicle and mower, Combined motor-. P. E. Shirk. No. 1,154,662; Sept. 28; Gas. vol. 218; p. 907.
Vehicle body-ventilator, Closed-. M. R. Hull. No. 1,154,399; Sept. 21; Gas. vol. 218; p. 788.
Vehicle brake, Motor-. J. E. Stone. No. 1,153,726; Sept. 14; Gas. vol. 218; p. 521.
Vehicle demonstrating and testing device. B. Bond. No. 1,155,126; Sept. 28; Gas. vol. 218; p. 1066.
Vehicle door-lock. A. J. Schofield and J. E. Redman. No. 1,154,439; Sept. 21; Gas. vol. 218; p. 801.
Vehicle, Dumping-. E. J. Bring. No. 1,153,369; Sept. 14; Gas. vol. 218; p. 394.
Vehicle, Electrically-propelled. E. Cross. No. 1,154,293; Sept. 21; Gas. vol. 218; p. 750.
Vehicle-frame. M. S. Chapin. No. 1,153,602; Sept. 14; Gas. vol. 218; p. 478.
Vehicle, Motor-. W. Barber. No. 1,153,536; Sept. 14; Gas. vol. 218; p. 455.
Vehicle, Motor-. W. Barber. No. 1,153,537; Sept. 14; Gas. vol. 218; p. 455.
Vehicle, Motor-. P. Forschler. No. 1,154,500; Sept. 21; Gas. vol. 218; p. 821.
Vehicle, Motor-. O. Gardner. No. 1,154,755; Sept. 28; Gas. vol. 218; p. 938.
Vehicle, Motor-. H. Klinnel. No. 1,154,321; Sept. 21; Gas. vol. 218; p. 790.
Vehicle, Motor-. S. B. Kurtz. No. 1,152,821; Sept. 7; Gas. vol. 218; p. 162.
Vehicle, Motor-. W. A. Lee. No. 1,155,259; Sept. 28; Gas. vol. 218; p. 1106.
Vehicle-spring. J. O. Gilfillan. No. 1,153,058; Sept. 7; Gas. vol. 218; p. 246.
Vehicle-spring. J. J. Moran. No. 1,154,999; Sept. 28; Gas. vol. 218; p. 1019.
Vehicle-spring. W. J. Parsons. No. 1,155,265; Sept. 28; Gas. vol. 218; p. 1110.
Vehicle-spring. J. G. Uts. No. 1,153,357; Sept. 14; Gas. vol. 218; p. 390.
Vehicle spring-mounting, Motor-. C. L. Heisler. No. 1,155,062; Sept. 28; Gas. vol. 218; p. 1042.
Vehicle steering-gear, Motor-. J. M. Scott. No. 1,153,961; Sept. 21; Gas. vol. 218; p. 637.
Vehicle steering mechanism, Motor-. L. C. Vaughn. No. 1,152,455; Sept. 7; Gas. vol. 218; p. 26.
Vehicle suspension device. E. V. Hartford. No. 1,154,569; Sept. 21; Gas. vol. 218; p. 845.
Vehicle top-operating mechanism. D. C. Watt and F. A. Grearson. No. 1,154,463; Sept. 21; Gas. vol. 218; p. 809.
Vehicle-wheel. A. C. Hopkins. No. 1,153,919; Sept. 21; Gas. vol. 218; p. 622.
Vehicle-wheel. J. R. Vickery. No. 1,154,948; Sept. 28; Gas. vol. 218; p. 1002.
Vehicle wheel, Self-propelled-. J. McGeorge. No. 1,155,315; Sept. 28; Gas. vol. 218; p. 1126.
Vehicle-wheel with demountable rim. R. S. Bryant. No. 1,153,481; Sept. 14; Gas. vol. 218; p. 434.
Vehicle-wheel with demountable rim. R. S. Bryant. No. 1,153,482; Sept. 14; Gas. vol. 218; p. 435.
Vehicle wind-shield, Motor-. R. Huff. No. 1,154,318; Sept. 21; Gas. vol. 218; p. 758.
Vehicles, Automatic regulator and safety appliance for the control of motor-. H. J. Lyman. No. 1,154,328; Sept. 21; Gas. vol. 218; p. 763.
Vehicles, Combined cushioning and rebound-checking device for. D. F. Oliver. No. 1,152,752; Sept. 7; Gas. vol. 218; p. 136.
Vehicles, Foldable-hood fittings of. R. Medley. No. 1,154,527; Sept. 21; Gaz. vol. 218; p. 830.
Vehicles, Radiator-support for motor-. R. Huff. No. 1,153,227; Sept. 14; Gas. vol. 218; p. 343.
Vending apparatus, Automatic gasolene-. H. Foster, W. C. Turner, C. E. Bennett, and W. B. Linn. No. 1,153,376; Sept. 14; Gas. vol. 218; p. 396.
Vending device. C. E. Bridges. No. 1,152,931; Sept. 7; Gas. vol. 218; p. 202.
Vending-machine. H. D. Hinckley. No. 1,155,312; Sept. 28; Gas. vol. 218; p. 1125.
Vending-machine. C. V. Martin. No. 1,152,533; Sept. 7; Gas. vol. 218; p. 57.
Vending-machine. C. A. Melchert. No. 1,152,480; Sept. 7; Gas. vol. 218; p. 17.
Vending-machine. H. J. Sweany. No. 1,155,172; Sept. 28; Gas. vol. 218; p. 1082.
Vending-machine, Coin. G. E. Messinger. No. 1,154,711; Sept. 28; Gas. vol. 218; p. 923.
Vending-machine, Coin-operated. J. W. Patterson. No. 1,153,440; Sept. 14; Gas. vol. 218; p. 420.
Vending-machine, Key-controlled. J. B. Hurd. No. 1,152,638; Sept. 7; Gas. vol. 218; p. 95.
Veneer and making same, Composite. H. L. Staley and W. B. Simmons. No. 1,154,138; Sept. 21; Gas. vol. 218; p. 697.
Veneer-jointing machine. H. Runne. No. 1,154,730; Sept. 28; Gas. vol. 218; p. 929.
Ventilating device. L. S. Hackney. No. 1,153,067; Sept. 7; Gas. vol. 218; p. 249.
Ventilator: *See*—
Vehicle body-ventilator.
Vermin-exterminator for poultry-perches. A. E. Odmark. No. 1,155,088; Sept. 28; Gas. vol. 218; p. 1053.
Vessel-closure. J. R. Harbeck. No. 1,152,418; Sept. 7; Gas. vol. 218; p. 11.
Vessel closure, Containing-. J. E. Doldt. No. 1,153,897; Sept. 21; Gas. vol. 218; p. 615.
Vessel, Submarine. J. T. Parker. No. 1,154,126; Sept. 21; Gas. vol. 218; p. 693.
Vessels, Floating device for. A. Micell. No. 1,154,195; Sept. 21; Gaz. vol. 218; p. 715.
View apparatus, Consecutive-. E. Schneider. No. 1,153,578; Sept. 14; Gaz. vol. 218; p. 470.
View-changing device. C. F. Jenkins. No. 1,153,110; Sept. 7; Gas. vol. 218; p. 268.
Vise. C. A. Soderberg. No. 1,154,815; Sept. 28; Gas. vol. 218; p. 957.
Vise, Adjustable. W. D. C. Wright. No. 1,155,027; Sept. 28; Gaz. vol. 218; p. 1029.
Voltage protection, High-. W. Petersen. No. 1,153,821; Sept. 14; Gas. vol. 218; p. 554.
Voting, Indicator mechanism for restrictive. J. A. Butler. No. 1,155,041; Sept. 28; Gas. vol. 218; p. 1033.
Vulcanizer. J. M. Ginter. No. 1,153,059; Sept. 7; Gas. vol. 218; p. 246.
Vulcanizer. P. D. Thropp. No. 1,152,998; Sept. 7; Gas. vol. 218; p. 225.
Vulcanizing apparatus. W. F. Stearns. No. 1,154,737; Sept. 28; Gaz. vol. 218; p. 931.
Wagon-holsters, Hay-rack attachment for. L. E. Stump. No. 1,155,015; Sept. 28; Gas. vol. 218; p. 1025.
Wagon-brake. L. R. Allen. No. 1,153,745; Sept. 14; Gas. vol. 218; p. 527.

Wagon-brake, Automatic. T. M. Smith. No. 1,153,967; Sept. 21; Gas. vol. 218; p. 639.
Wagon, Dirt-. H. C. Copenhagen. No. 1,153,179; Sept. 7; Gas. vol. 218; p. 286.
Wagon, Dumping-. W. H. Hunt. No. 1,152,510; Sept. 7; Gas. vol. 218; p. 46.
Wagon-gear. W. P. Gentle. No. 1,154,505; Sept. 21; Gas. vol. 218; p. 823.
Wagon-wheel. W. F. Jarrett. No. 1,155,154; Sept. 28; Gaz. vol. 218; p. 1075.
Waist-line supporting and adjusting means for garments, Combined. G. J. Miller. No. 1,154,584; Sept. 21; Gas. vol. 218; p. 851.
Wall-construction apparatus. W. C. Edwards, Jr. No. 1,153,205; Sept. 14; Gas. vol. 218; p. 334.
Wall, Sheet-metal. E. G. Caughey. No. 1,153,601; Sept. 14; Gas. vol. 218; p. 478.
Wall-socket and bolt. W. C. Fawkes. No. 1,154,580; Sept. 21; Gas. vol. 218; p. 849.
Walls, Flashing for parapet-. F. D. Renaud. No. 1,154,435; Sept. 21; Gas. vol. 218; p. 800.
Walls, Perforating separated obstructions in hollow. A. R. Locke. No. 1,154,035; Sept. 21; Gaz. vol. 218; p. 662.
Wardrobe. C. A. Schlachter. No. 1,154,659; Sept. 28; Gas. vol. 218; p. 906.
Wardrobe, Collapsible folding. T. Doucet. No. 1,154,693; Sept. 28; Gas. vol. 218; p. 917.
Ware-manufacturing. C. E. Quimby. No. 1,152,969; Sept. 7; Gas. vol. 218; p. 217.
Warp-drawing-in machine. C. E. Blair. No. 1,153,855; Sept. 14; Gaz. vol. 218; p. 567.
Warp-drawing-in machine. C. E. Blair. No. 1,153,856; Sept. 14; Gas. vol. 218; p. 567.
Warping and beaming machines, Beaming attachment for. H. Watson and C. M. Whritenour. No. 1,153,528; Sept. 14; Gaz. vol. 218; p. 452.
Warping-machines, Bobbin frame or creel for. L. Fessmann and G. Hämmerle. No. 1,153,862; Sept. 14; Gas. vol. 218; p. 569.
Washbench, Folding. H. W. Power. No. 1,153,336; Sept. 14; Gaz. vol. 218; p. 381.
Washboard. J. T. Sargent. No. 1,152,766; Sept. 7; Gas. vol. 218; p. 141.
Washboard attachment. S. Hook. No. 1,153,081; Sept. 7; Gas. vol. 218; p. 254.
Washer: *See*—
Dish-washer. Ore-washer.
Washer. W. I. Kirk. No. 1,153,232; Sept. 14; Gas. vol. 218; p. 344.
Washing apparatus. W. S. Pierce. No. 1,153,823; Sept. 14; Gas. vol. 218; p. 555.
Washing-machine. I. H. Arnold. No. 1,154,832; Sept. 28; Gaz. vol. 218; p. 964.
Washing-machine. S. J. Goff. No. 1,154,242; Sept. 21; Gas. vol. 218; p. 733.
Washing-machine agitator. H. L. Staley. No. 1,155,107; Sept. 28; Gas. vol. 218; p. 1059.
Washing-machine-operating mechanism. W. H. George. No. 1,154,005; Sept. 21; Gaz. vol. 218; p. 652.
Washing-machine-operating mechanism. W. H. George. No. 1,154,007; Sept. 21; Gaz. vol. 218; p. 652.
Washing-machine-operating mechanism. W. H. George. No. 1,154,008; Sept. 21; Gaz. vol. 218; p. 653.
Washmitt. L. M. Hicks. (Reissue.) No. 13,977; Sept. 14; Gaz. vol. 218; p. 575.
Waste-soaking tank. L. L. Johnson and A. D. Wyckoff. No. 1,153,690; Sept. 14; Gas. vol. 218; p. 507.
Watch. H. Melocco. No. 1,153,559; Sept. 14; Gas. vol. 218; p. 463.
Watch and clock holding case. J. Counter. No. 1,154,382; Sept. 21; Gaz. vol. 218; p. 783.
Watch attachment, Wrist-. T. F. Hathaway. No. 1,153,075; Sept. 7; Gas. vol. 218; p. 251.
Watch holder, Wrist-. A. J. Johnson and R. L. Skinner. No. 1,153,111; Sept. 7; Gas. vol. 218; p. 264.
Watchcase construction. J. Murset. No. 1,152,537; Sept. 7; Gas. vol. 218; p. 59.
Watchcase-crown. L. F. Verberckmoes. No. 1,152,673; Sept. 7; Gas. vol. 218; p. 109.
Watchmaker's tool for adjusting balance-wheels. L. Kohn. No. 1,153,695; Sept. 14; Gas. vol. 218; p. 509.
Water-circulating system, Hot-. W. D. Knight. No. 1,153,233; Sept. 14; Gas. vol. 218; p. 344.
Water-closet. C. H. Muckenhirn. No. 1,152,962; Sept. 7; Gas. vol. 218; p. 214.
Water-closet bend. O. W. Rice. No. 1,152,974; Sept. 7; Gas. vol. 218; p. 219.
Water-closet connection. O. W. Rice. No. 1,152,973; Sept. 7; Gas. vol. 218; p. 218.
Water-heater. D. Hamilton. No. 1,153,781; Sept. 14; Gas. vol. 218; p. 539.
Water-heater for automobile-radiators, Electrically-operated. E. M. Rosenbluth. No. 1,155,098; Sept. 28; Gas. vol. 218; p. 1056.
Water-motor. M. O. Snediker. No. 1,152,566; Sept. 7; Gas. vol. 218; p. 69.
Water or gas box. E. S. Landis. No. 1,153,631; Sept. 14; Gas. vol. 218; p. 487.
Water-raising apparatus. W. T. Croslen. No. 1,153,198; Sept. 14; Gas. vol. 218; p. 332.
Water-softening apparatus. L. D. Kinzig. No. 1,153,931; Sept. 21; Gas. vol. 218; p. 627.
Water-supply system. C. Wolf. No. 1,155,024; Sept. 28; Gas. vol. 218; p. 1028.
Water tank and filter. C. J. Wilkerson. No. 1,152,998; Sept. 7; Gas. vol. 218; p. 227.
Water-tight joints, Compound for. J. M. Ferry. No. 1,153,427; Sept. 14; Gas. vol. 218; p. 415.
Watering fountain, Chicken-. G. Winkle. No. 1,154,825; Sept. 28; Gas. vol. 218; p. 961.
Wave-motor. J. Lachance. No. 1,154,033; Sept. 21; Gas. vol. 218; p. 661.
Wave-motor. H. J. Lawrence. No. 1,154,826; Sept. 21; Gas. vol. 218; p. 762.
Web-changing device. F. W. Wood. No. 1,154,682; Sept. 28; Gas. vol. 218; p. 914.
Web-transforming mechanism. W. A. Pringle. No. 1,152,436; Sept. 7; Gas. vol. 218; p. 19.
Webbing to frames, Machine for securing. J. W. Snedeker. No. 1,152,565; Sept. 7; Gas. vol. 218; p. 69.
Weed-cutting machine. O. H. Bjur. No. 1,154,364; Sept. 21; Gas. vol. 218; p. 776.
Weed-destroying machine. P. J. Gannon. No. 1,152,940; Sept. 7; Gas. vol. 218; p. 206.
Weed-remover. J. Tomlin. No. 1,152,574; Sept. 7; Gas. vol. 218; p. 72.
Weeding and scraping implement, Compound. A. E. Staples. No. 1,153,721; Sept. 14; Gas. vol. 218; p. 520.
Weighing apparatus, Automatic liquid-. L. N. Moescher. No. 1,154,042; Sept. 21; Gas. vol. 218; p. 665.
Weighing mechanism, Coin-controlled. W. Vanderslel and J. T. Goodall. No. 1,153,650; Sept. 14; Gas. vol. 218; p. 493.
Welding. J. H. L. De Batz. No. 1,152,610; Sept. 7; Gas. vol. 218; p. 84.
Welding apparatus, Electric. J. A. Heany. No. 1,153,384; Sept. 14; Gas. vol. 218; p. 399.
Welding apparatus, Electric. O. A. Kenyon. No. 1,154,320; Sept. 21; Gas. vol. 218; p. 760.
Welding-machine. G. W. Beadle. No. 1,153,283; Sept. 14; Gas. vol. 218; p. 362.
Welding-machine, Electric. W. C. Winfield and A. C. Taylor. No. 1,154,476; Sept. 21; Gas. vol. 218; p. 812.
Well-tube-closing apparatus. V. Tacit and V. Puscariu. No. 1,153,973; Sept. 21; Gas. vol. 218; p. 641.
Wells, Apparatus for expelling oil or water from natural-gas. J. S. L. Purdy. No. 1,153,253; Sept. 14; Gas. vol. 218; p. 351.
Wells, Hanger for polished-rod adjusters for. T. Cox. No. 1,154,486; Sept. 21; Gas. vol. 218; p. 816.
Wells, Treating subterranean. E. N. Breitung and A. Pick. No. 1,152,392; Sept. 7; Gas. vol. 218; p. 4.
Welt-groover. P. A. Peterson. No. 1,152,757; Sept. 7; Gaz. vol. 218; p. 138.
Wheel: *See*—
Automobile-wheel. Spring-wheel.
Car-wheel. Trolley-wheel.
Fan-wheel. Vehicle-wheel.
Puncture-proof wheel. Wagon-wheel.
Resilient wheel.
Wheel. J. F. Evans. No. 1,154,497; Sept. 21; Gas. vol. 218; p. 820.
Wheel. H. V. Pannecoucke and H. Schaefer. No. 1,153,948; Sept. 21; Gaz. vol. 218; p. 633.
Wheel-mounting. D. Van Law. No. 1,155,175; Sept. 28; Gaz. vol. 218; p. 1083.
Wheel-rim, Vehicle. W. F. Stengel. No. 1,154,216; Sept. 21; Gas. vol. 218; p. 723.
Wheel scraper, Vehicle-. W. T. S. Pate. No. 1,153,108; Sept. 7; Gaz. vol. 218; p. 263.
Wheels, Device for applying chains to. E. A. Harris. No. 1,153,490; Sept. 14; Gas. vol. 218; p. 437.
Wheels, Protective device for steering-. T. E. Fogalsang. No. 1,154,389; Sept. 21; Gas. vol. 218; p. 785.
Wheelbarrow. G. S. Nichols. No. 1,154,536; Sept. 21; Gaz. vol. 218; p. 833.
Whirletree. T. F. Gregory. No. 1,154,246; Sept. 21; Gas. vol. 218; p. 785.
Whip-holder. C. H. Williams. No. 1,154,151; Sept. 21; Gaz. vol. 218; p. 702.
Whistle. R. Tikijian. No. 1,154,672; Sept. 28; Gas. vol. 218; p. 911.
Wick-burner. W. McArthur, Jr. No. 1,152,742; Sept. 7; Gas. vol. 218; p. 133.
Wind-shield cleaner. B. C. Loring. No. 1,153,848; Sept. 14; Gas. vol. 218; p. 564.
Winding-drum. W. M. Keck. No. 1,152,895; Sept. 7; Gas. vol. 218; p. 190.
Windmill, Automatic. L. Might. No. 1,154,980; Sept. 28; Gas. vol. 218; p. 997.
Windmill control for electrical equipment. C. A. Sterner. No. 1,152,666; Sept. 7; Gas. vol. 218; p. 106.
Windmill crank and lever mechanism. H. Kallis. No. 1,154,404; Sept. 21; Gas. vol. 218; p. 790.
Window. J. S. Berry. No. 1,155,200; Sept. 28; Gas. vol. 218; p. 1091.
Window. L. W. Eiser. No. 1,153,208; Sept. 14; Gas. vol. 218; p. 335.
Window. A. C. Soule. No. 1,155,014; Sept. 28; Gas. vol. 218; p. 1025.
Window-cleaning device. T. E. Kirk. No. 1,152,519; Sept. 7; Gas. vol. 218; p. 50.
Window-holder. O. Johnson. No. 1,154,317; Sept. 21; Gas. vol. 218; p. 759.
Window-lock. E. M. Hoagland. No. 1,154,861; Sept. 28; Gaz. vol. 218; p. 972.
Window-operating apparatus. A. K. Lovell. No. 1,152,425; Sept. 7; Gas. vol. 218; p. 16.

Window-operating mechanism. P. Rasmussen and M. F. Goularte. No. 1,153,404; Sept. 14; Gaz. vol. 218; p. 407.
Window-screen. H. E. Southworth. No. 1,153,140; Sept. 7; Gaz. vol. 218; p. 273.
Window-trough. C. M. Frary. No. 1,154,182; Sept. 21; Gaz. vol. 218; p. 712.
Window, Ventilating safety-. A. Muojo. No. 1,152,900; Sept. 7; Gaz. vol. 218; p. 191.
Wire around wooden pipes, Device for stretching. G. W. Sutherland. No. 1,154,275; Sept. 21; Gaz. vol. 218; p. 744.
Wire-clamping device. W. L. Hall. No. 1,152,943; Sept. 7; Gaz. vol. 218; p. 207.
Wire delivered by finishing-rolls, Plant for cooling, removing scale from, chalking, and drying. H. Schliggeman. No. 1,152,848; Sept. 7; Gaz. vol. 218; p. 172.
Wire-stretcher. J. L. McFadden. No. 1,153,093; Sept. 7; Gaz. vol. 218; p. 258.
Wire-stretcher. R. C. Sturdevant. No. 1,154,456; Sept. 21; Gaz. vol. 218; p. 807.
Wire-stretcher. N. and F. Whitesel. No. 1,152,583; Sept. 7; Gaz. vol. 218; p. 76.
Wire structures, Machine for making. J. F. Gail. No. 1,152,889; Sept. 7; Gaz. vol. 218; p. 187.
Wiring system. E. A. Wals, Jr. No. 1,154,462; Sept. 21; Gaz. vol. 218; p. 809.
Wood, Imitation. D. M. Sutherland, Jr. No. 1,153,970; Sept. 21; Gaz. vol. 218; p. 640.
Woodwork, Producing material for ornamental. D. Redmon. No. 1,154,806; Sept. 28; Gaz. vol. 218; p. 955.
Woodworking-machine guard. T. W. Doolittle. No. 1,154,911; Sept. 28; Gaz. vol. 218; p. 990.
Woodworking-machinery guard. O. H. Courson. No. 1,154,098; Sept. 21; Gaz. vol. 218; p. 684.
Work-holder for machine-tools. M. Smolensky. No. 1,154,450; Sept. 21; Gaz. vol. 218; p. 805.
Work-support, Machine-shop. C. A. Oehler. No. 1,154,333; Sept. 21; Gaz. vol. 218; p. 765.
Wrapping. F. M. Pierce. No. 1,153,764; Sept. 14; Gaz. vol. 218; p. 513.
Wrench: See—
Flange-union wrench. Ratchet-wrench.
Pipe-wrench.
Wrench. T. J. Calhoon. No. 1,154,612; Sept. 28; Gaz. vol. 218; p. 889.
Wrench. C. A. Dies. No. 1,155,136; Sept. 28; Gaz. vol. 218; p. 1069.
Wrench. W. F. Estes. No. 1,153,060; Sept. 7; Gaz. vol. 218; p. 244.
Wrench. J. A. Giles. No. 1,153,803; Sept. 14; Gaz. vol. 218; p. 368.
Wrench. J. G. Harter. No. 1,152,727; Sept. 7; Gaz. vol. 218; p. 127.
Wrench. G. I. Mariand. No. 1,154,192; Sept. 21; Gaz. vol. 218; p. 715.
Wrench. H. L. Melheim. No. 1,153,399; Sept. 14; Gaz. vol. 218; p. 405.
Wrench. C. B. Moulthrop and L. C. Jackson. No. 1,155,158; Sept. 28; Gaz. vol. 218; p. 1077.
Wrench. D. W. Null. No. 1,152,832; Sept. 7; Gaz. vol. 218; p. 166.
Wrench. C. Pedersen. No. 1,154,544; Sept. 21; Gaz. vol. 218; p. 835.
Wrench. H. E. Rose. No. 1,152,764; Sept. 7; Gaz. vol. 218; p. 140.
Wrench. F. E. Rush. No. 1,155,278; Sept. 28; Gaz. vol. 218; p. 1113.
Wrench. L. A. Swint. No. 1,153,271; Sept. 14; Gaz. vol. 218; p. 358.
Wrist-pin. J. H. Portman. No. 1,154,883; Sept. 28; Gaz. vol. 218; p. 980.
Writing implement, Trick. A. Meger. No. 1,153,809; Sept. 14; Gaz. vol. 218; p. 549.
Writing-table. W. Konemann. No. 1,153,501; Sept. 14; Gaz. vol. 218; p. 442.
X-ray target. W. D. Coolidge. No. 1,153,290; Sept. 14; Gaz. vol. 218; p. 364.
X-ray tube. R. H. Wappler. No. 1,152,578; Sept. 7; Gaz. vol. 218; p. 74.
Yarn-holder. C. Lee. No. 1,153,870; Sept. 14; Gaz. vol. 218; p. 572.
Yarn-sizing apparatus. W. A. Nivling. No. 1,153,244; Sept. 14; Gaz. vol. 218; p. 348.
Yarns and fabrics, Composition of matter for weighting silk. E. Butte. No. 1,154,174; Sept. 21; Gaz. vol. 218; p. 710.
Yarns, Sizing. W. A. Nivling. No. 1,153,245; Sept. 14; Gaz. vol. 218; p. 349.
Yoke attachment, Neck-. A. A. Ogden. No. 1,155,089; Sept. 28; Gaz. vol. 218; p. 1053.
Yoke, Draw-bar. G. C. Murray. No. 1,153,242; Sept. 14; Gaz. vol. 218; p. 348.
Yoke for railway draft mechanism, Cast-metal. G. T. Johnson. No. 1,153,793; Sept. 14; Gaz. vol. 218; p. 544.
Yokes, Manufacturing draft-. J. F. O'Connor. No. 1,153,331; Sept. 14; Gaz. vol. 218; p. 379.
Zinc from smelter-fumes, zinc ores, &c., Extraction, purification, and electrolytic precipitation of metallic. O. Best. No. 1,154,601; Sept. 28; Gaz. vol. 218; p. 885.
Zinc, Hydrometallurgy of. O. Best. No. 1,154,602; Sept. 28; Gaz. vol. 218; p. 885.

ALPHABETICAL LIST OF DESIGNS.

Advertising-easel. R. L. Graefe. No. 47,784; Sept. 7; Gaz. vol. 218; p. 289.
Antirattling device. H. H. Jensen. No. 47,851; Sept. 21; Gaz. vol. 218; p. 859.
Automobile. A. F. Rockwell. No. 47,802; Sept. 7; Gaz. vol. 218; p. 292.
Automobile-body. F. Richard. No. 47,895; Sept. 28; Gaz. vol. 218; p. 1138.
Automobile-body. L. Rubay. Nos. 47,803–4; Sept. 7; Gaz. vol. 218; p. 292.
Automobile-hood. D. M. Livingston. No. 47,854; Sept. 21; Gaz. vol. 218; p. 860.
Awl. W. C. Porter. No. 47,893; Sept. 28; Gaz. vol. 218; p. 1137.
Bedstead-trimming. J. J. Nash. Nos. 47,856–8; Sept. 21; Gaz. vol. 218; pp. 861–2.
Belt. J. Hansel. No. 47,819; Sept. 14; Gaz. vol. 218; p. 580.
Boot, Rubber. F. E. Payne. No. 47,861; Sept. 21; Gaz. vol. 218; p. 862.
Bottle-opener. J. Hutter. No. 47,850; Sept. 21; Gaz. vol. 218; p. 859.
Bottles and fountain-syringes, Container for. L. L. Britton. No. 47,874; Sept. 28; Gaz. vol. 218; p. 1134.
Brick. B. W. Ballou. No. 47,844; Sept. 21; Gaz. vol. 218; p. 858.
Button-head. J. A. Palmer. No. 47,860; Sept. 21; Gaz. vol. 218; p. 861.
Calendar-frame. H. G. Query. No. 47,862; Sept. 21; Gaz. vol. 218; p. 862.
Card. W. B. Powell. No. 47,828; Sept. 14; Gaz. vol. 218; p. 582.
Chart, Game-. A. F. Fields. No. 47,869; Sept. 21; Gaz. vol. 218; p. 863.
Collar. W. Scheuer. No. 47,805; Sept. 7; Gaz. vol. 218; p. 293.
Defiating implement. C. E. Delaplain. No. 47,877; Sept. 28; Gaz. vol. 218; p. 1135.
Desk, Cabinet-. T. J. Edwards. No. 47,813; Sept. 14; Gaz. vol. 218; p. 579.
Dish. J. P. Eustis. No. 47,846; Sept. 21; Gaz. vol. 218; p. 859.
Dish, College ice-. J. Hughes. No. 47,790; Sept. 7; Gaz. vol. 218; p. 290.
Dispensing device. L. Bergman and J. L. Mendel. No. 47,871; Sept. 28; Gaz. vol. 218; p. 1134.
Display-case. P. Rappaport. No. 47,829; Sept. 14; Gaz. vol. 218; p. 582.
Display device. O. B. Carson. No. 47,781; Sept. 7; Gaz. vol. 218; p. 289.
Display rack, Shoe-. J. Moore. No. 47,797; Sept. 7; Gaz. vol. 218; p. 291.
Display-stand. O. B. Carson. No. 47,780; Sept. 7; Gaz. vol. 218; p. 289.
Doll. J. B. Gruelle. No. 47,789; Sept. 7; Gaz. vol. 218; p. 290.
Dresser, Combination-. A. H. Hamilton. No. 47,818; Sept. 14; Gaz. vol. 218; p. 580.
Electric-lighting fixture. S. H. Shiminsky. No. 47,899; Sept. 28; Gaz. vol. 218; p. 1138.
Emblem or similar article of jewelry. M. Wolfe. Nos. 47,839–40; Sept. 14; Gaz. vol. 218; p. 584.
Fabric, Cut pile. N. Albrecht. Nos. 47,841–3; Sept. 21; Gaz. vol. 218; p. 858.
Fabric, Textile. H. E. Mallinson. No. 47,889; Sept. 28; Gaz. vol. 218; p. 1137.
Face spanner-wrench. C. A. Martin. No. 47,855; Sept. 21; Gaz. vol. 218; p. 860.
Fan frame, Motor-driven-. L. D. Freeland. No. 47,783; Sept. 7; Gaz. vol. 218; p. 289.
Fans, Base and standard of motor-driven. W. J. H. Strong. Nos. 47,901–2; Sept. 28; Gaz. vol. 218; p. 1139.
Fans, Base for motor-driven. W. J. H. Strong. No. 47,900; Sept. 28; Gaz. vol. 218; p. 1139.
Fans, Base for motor-driven. W. J. H. Strong. No. 47,903; Sept. 28; Gaz. vol. 218; p. 1139.
Fans, Frame for engine-driven. L. D. Freeland. No. 47,879; Sept. 28; Gaz. vol. 218; p. 1135.
Flash-light, Pocket. H. M. Koretsky. No. 47,870; Sept. 21; Gaz. vol. 218; p. 863.
Flask. J. O. Ludwig. No. 47,795; Sept. 7; Gaz. vol. 218; p. 291.
Grave-marker. W. J. Logan. Nos. 47,887–8; Sept. 28; Gaz. vol. 218; pp. 1136–7.
Grease-cup and oiler. J. D. Corcoran. No. 47,845; Sept. 21; Gaz. vol. 218; p. 858.
Grocery-bin. J. S. Reaves and J. G. Wells. No. 47,806; Sept. 7; Gaz. vol. 218; p. 293.
Hammer, Window-trimmer's. J. M. Walters. No. 47,906; Sept. 28; Gaz. vol. 218; p. 1140.
Hand-bag or similar article. H. Margolin. No. 47,824; Sept. 14; Gaz. vol. 218; p. 581.
Hat-fastener. W. J. Lewis. No. 47,853; Sept. 21; Gaz. vol. 218; p. 860.
Lace fabric. E. J. Ozanne. Nos. 47,825–6; Sept. 14; Gaz. vol. 218; pp. 581–2.
Lace, Levers. R. L. Birkin. Nos. 47,807–10; Sept. 14; Gaz. vol. 218; pp. 578–9.
Lamp. J. S. Green. No. 47,816; Sept. 14; Gaz. vol. 218; p. 580.
Lamp-box. F. C. Hansel. No. 47,848; Sept. 21; Gaz. vol. 218; p. 859.
Lamp, signal, and tray, Combined table-. J. E. Erickson. No. 47,814; Sept. 14; Gaz. vol. 218; p. 579.
Lunch chair, Dairy-. H. B. Ruggles. No. 47,897; Sept. 28; Gaz. vol. 218; p. 1138.
Magnet, Permanent. E. B. Cutten. No. 47,812; Sept. 14; Gaz. vol. 218; p. 579.
Metallic band or border. E. L. White. No. 47,838; Sept. 14; Gaz. vol. 218; p. 583.
Mirror-stand. P. E. Seamon. No. 47,863; Sept. 21; Gaz. vol. 218; p. 862.
Molding. A. Janson. No. 47,881; Sept. 28; Gaz. vol. 218; p. 1136.
Mud-guard and bracket therefor for a motor-cycle or similar device. W. R. Green. No. 47,817; Sept. 14; Gaz. vol. 218; p. 580.
Nutcracker. B. S. Rosenblatt. No. 47,831; Sept. 14; Gaz. vol. 218; p. 582.
Ornament, Table or mantel. W. Ramsing. No. 47,801; Sept. 7; Gaz. vol. 218; p. 292.
Padlock. J. F. Lemon. Nos. 47,885–6; Sept. 28; Gaz. vol. 218; p. 1136.
Paper ice-cream plates, Holder for sanitary. B. A. Grasberger. Nos. 47,785–6; Sept. 7; Gaz. vol. 218; p. 290.
Paper, Ornamented. H. S. Slayter. Nos. 47,852–4; Sept. 14; Gaz. vol. 218; p. 583.
Pen or pencil clip. S. M. Riker. No. 47,896; Sept. 28; Gaz. vol. 218; p. 1138.
Penholder. J. H. Kulow. No. 47,794; Sept. 7; Gaz. vol. 218; p. 291.
Penholder. J. H. Kulow. No. 47,852; Sept. 21; Gaz. vol. 218; p. 860.
Pennant. J. S. Potter and A. Tough. No. 47,894; Sept. 28; Gaz. vol. 218; p. 1138.
Picture-frame. P. Szabo. No. 47,835; Sept. 14; Gaz. vol. 218; p. 583.
Railway-coach body. E. B. Jones. No. 47,791; Sept. 7; Gaz. vol. 218; p. 290.
Ring. J. F. Faber. No. 47,815; Sept. 14; Gaz. vol. 218; p. 580.
Sad-iron, Self-heating. R. E. Hart. No. 47,820; Sept. 14; Gaz. vol. 218; p. 580.
Salt and pepper shaker, Combined. S. Stanton. No. 47,868; Sept. 21; Gaz. vol. 218; p. 862.
Settle for lunch-rooms. H. S. Kelsey. No. 47,792; Sept. 7; Gaz. vol. 218; p. 291.
Sign, Barber's. F. P. Kempf. No. 47,822; Sept. 14; Gaz. vol. 218; p. 581.
Sign, Safety-first. R. R. Hill and C. C. Robinson. No. 47,849; Sept. 21; Gaz. vol. 218; p. 859.
Souvenir emblematic gate. A. R. Teters. No. 47,867; Sept. 21; Gaz. vol. 218; p. 863.
Spoon, fork, or similar article. G. L. Crowell, Jr. No. 47,782; Sept. 7; Gaz. vol. 218; p. 289.
Spoon, fork, or similar article. H. L. Wallace. Nos. 47,836–7; Sept. 14; Gaz. vol. 218; p. 583.
Steering-column switch unit. R. C. Scaife. No. 47,898; Sept. 28; Gaz. vol. 218; p. 1138.
Stocking. B. S. Gosstola. No. 47,847; Sept. 21; Gaz. vol. 218; p. 859.
Syringe bowl, Fountain-. R. B. Newcome. No. 47,859; Sept. 21; Gaz. vol. 218; p. 861.
Table. H. Huskey. No. 47,821; Sept. 14; Gaz. vol. 218; p. 581.
Tag. W. W. Shaw. Nos. 47,864–5; Sept. 21; Gaz. vol. 218; p. 862.
Tatting-shuttle. A. B. Collingbourne. No. 47,811; Sept. 14; Gaz. vol. 218; p. 579.
Telephonic transmitting appliance. K. M. Turner. No. 47,905; Sept. 28; Gaz. vol. 218; p. 1140.
Tire. H. W. Raymann. No. 47,830; Sept. 14; Gaz. vol. 218; p. 582.
Tire-tread. J. Hauvette-Michelin. No. 47,892; Sept. 28; Gaz. vol. 218; p. 1137.
Tire tread, Pneumatic-. P. B. Bosworth. No. 47,872; Sept. 28; Gaz. vol. 218; p. 1134.
Tire, Vehicle-. W. F. Bowers. No. 47,873; Sept. 28; Gaz. vol. 218; p. 1134.
Tire, Vehicle-. J. Christy. Nos. 47,875–6; Sept. 28; Gaz. vol. 218; p. 1135.

Tire, Vehicle wheel-. E. C. May. No. 47,890; Sept. 28; Gaz. vol. 218; p. 1137.
Toilet-rack, Hanging. H. C. McDonald. No. 47,891; Sept. 28; Gaz. vol. 218; p. 1137.
Towel-support. H. F. Grandy. No. 47,880; Sept. 28; Gaz. vol. 218; p. 1135.
Toy. L. A. Mapel. No. 47,796; Sept. 7; Gaz. vol. 218; p. 291.
Toy duck. J. B. Gruelle. Nos. 47,787–8; Sept. 7; Gaz. vol. 218; p. 290.
Trace-carrier. C. M. Bentley and E. W. Hargess. No. 47,779; Sept. 7; Gaz. vol. 218; p. 288.
Tumbler. H. Pick. Nos. 47,798–800; Sept. 7; Gaz. vol. 218; pp. 291–2.
Valves or the like, Dust-cap for. H. P. Kraft. Nos. 47,882–4; Sept. 28; Gaz. vol. 218; p. 1136.
Vase. G. D. Dougherty. No. 47,878; Sept. 28; Gaz. vol. 218; p. 1135.
Vessel, Spun metal. G. C. Kindt. No. 47,793; Sept. 7; Gaz. vol. 218; p. 291.
Watch-charm. M. A. Lacey. No. 47,823; Sept. 14; Gaz. vol. 218; p. 581.
Water-bag. C. H. Place. No. 47,827; Sept. 14; Gaz. vol. 218; p. 582.
Weapon. A. Szenasy and M. Zeerai. No. 47,904; Sept. 28; Gaz. vol. 218; p. 1139.
Wind-shield frames, Tubing for. W. H. Thoeming. No. 47,868; Sept. 21; Gaz. vol. 218; p. 863.

ALPHABETICAL LIST OF TRADE-MARKS.

Ammonia and bluing. So-Jer Manufacturing Company. No. 105,990; Sept. 7; Gaz. vol. 218; p. 317.
Antiseptic compound for general use. Comar & Cie. No. 105,975; Sept. 7; Gaz. vol. 218; p. 317.
Automobile tops or covers. Ford Knock Down Winter Top Co. No. 105,998; Sept. 14; Gaz. vol. 218; p. 599.
Baking-powder. Egg Baking Powder Company. No. 105,979; Sept. 7; Gaz. vol. 218; p. 317.
Batteries, Dry. National Carbon Company. No. 106,007; Sept. 14; Gaz. vol. 218; p. 599.
Beer, Lager-. American Brewing Co. No. 105,969; Sept. 7; Gaz. vol. 218; p. 317.
Beer, Lager-. Voigt Brewery Co. No. 106,022; Sept. 14; Gaz. vol. 218; p. 600.
Boats. J. Slade. No. 106,038; Sept. 14; Gaz. vol. 218; p. 600.
Boiler-flue or soot cleaners. W. L. Cronin. No. 105,976; Sept. 7; Gaz. vol. 218; p. 317.
Boilers, Substances for prevention of incrustation in. The Bird Archer Company. No. 106,028; Sept. 14; Gaz. vol. 218; p. 600.
Boxes, envelops, wrappers, or containers for laundry. J. & J. G. Wallach. No. 105,991; Sept. 7; Gaz. vol. 218; p. 317.
Bricks, tiles, blocks, floors, &c. C. H. Parkin. No. 105,989; Sept. 7; Gaz. vol. 218; p. 317.
Brushes and dental instruments, Combined tooth-. P. E. E. Nuyts. No. 106,010; Sept. 14; Gaz. vol. 218; p. 599.
Building-blocks, Hollow-tile. New York Clay Products Company. No. 106,061; Sept. 21; Gaz. vol. 218; p. 873.
Butter. Springfield Creamery Co. No. 106,063; Sept. 21; Gaz. vol. 218; p. 873.
Buttons, Snap-. Waldes & Co. No. 106,023; Sept. 14; Gaz. vol. 218; p. 600.
Candies and chocolates. Park & Tilford. No. 105,988; Sept. 7; Gaz. vol. 218; p. 317.
Candy. Merchants Candy Company. No. 105,986; Sept. 7; Gaz. vol. 218; p. 317.
Canned chop suey. Chop Suey Cannery. No. 105,978; Sept. 7; Gaz. vol. 218; p. 317.
Champagne and sparkling wines. L. Pommery, fils & Cie. Nos. 106,011–12; Sept. 14; Gaz. vol. 218; p. 599.
Clamps, Machinists'. C. B. Periolat. No. 106,036; Sept. 14; Gaz. vol. 218; p. 600.
Cleaning carpets, rugs, delicate fabrics, &c., Compound for. J. Fahey. No. 106,032; Sept. 14; Gaz. vol. 218; p. 600.
Clothing for men, Certain named textile and knitted. Silverberg and Lince. No. 106,020; Sept. 14; Gaz. vol. 218; p. 600.
Coffee. R. G. Thomas. No. 106,057; Sept. 21; Gaz. vol. 218; p. 873.
Confections. Rohrer Candy Company. No. 106,017; Sept. 14; Gaz. vol. 218; p. 599.
Cornmeal, grits, corn chops, mixed feed, &c. Marsh Commission Company. No. 106,053; Sept. 21; Gaz. vol. 218; p. 873.
Cotton plaids, Woven. Neuss, Hesslein & Co. No. 106,008; Sept. 14; Gaz. vol. 218; p. 599.
Cream, Greaseless massage face-. J. B. Johnson. No. 106,003; Sept. 14; Gaz. vol. 218; p. 599.
Creams, Toilet. Society Specialty Co. No. 106,039; Sept. 14; Gaz. vol. 218; p. 600.
Cutlery and machinery, Certain named. The Gus V. Brecht Butchers' Supply Company. No. 105,994; Sept. 14; Gaz. vol. 218; p. 599.
Cutlery and machines and parts thereof, Certain named. The D. Eugster Importing Company. No. 106,045; Sept. 21; Gaz. vol. 218; p. 873.
Drink, Soft. E. Carré Company. No. 106,041; Sept. 14; Gaz. vol. 218; p. 600.
Dry cells. National Carbon Company. No. 106,006; Sept. 14; Gaz. vol. 218; p. 599.
Egg-crates. S. A. Buck. No. 106,043; Sept. 21; Gaz. vol. 218; p. 873.
Electric-light fixtures. G. A. Harter. No. 106,001; Sept. 14; Gaz. vol. 218; p. 599.
Flavor, Food-. The Roland Co. No. 106,018; Sept. 14; Gaz. vol. 218; p. 599.
Flavoring extracts. The Newton Tea & Spice Co. No. 106,066; Sept. 28; Gaz. vol. 218; p. 1153.
Flesh-reducer. M. S. C. V. Lyle. No. 106,052; Sept. 21; Gaz. vol. 218; p. 873.
Flour, Wheat-. Lawrenceburg Roller Mills Co. No. 106,002; Sept. 14; Gaz. vol. 218; p. 599.
Fruits and berries, Certain named fresh. Rogue River Fruit & Produce Association. No. 106,055; Sept. 21; Gaz. vol. 218; p. 873.
Games. Milton Bradley Co. No. 105,992; Sept. 14; Gaz. vol. 218; p. 599.
Games. Parker Brothers. Nos. 106,013–14; Sept. 14; Gaz. vol. 218; p. 599.
Games, toys, and sporting goods, Certain named. Continental Rubber Works. No. 105,996; Sept. 14; Gaz. vol. 218; p. 599.
Hair-color-restoring liquid. E. M. Bennett. No. 106,026; Sept. 14; Gaz. vol. 218; p. 600.
Hair, Restoring color of human. J. N. Kohlerman. No. 106,062; Sept. 21; Gaz. vol. 218; p. 873.
Hair-tonic. J. M. McRae. No. 106,004; Sept. 14; Gaz. vol. 218; p. 599.
Hosiery. J. P. Voorhees. Nos. 106,067–70; Sept. 28; Gaz. vol. 218; p. 1153.
Insects, Liquid and powder for the destruction of. W. Branson. No. 105,993; Sept. 14; Gaz. vol. 218; p. 599.
Jackets and sweater-coats, Cardigan. Bergman Knitting Mills. No. 106,027; Sept. 14; Gaz. vol. 218; p. 600.
Journal published periodically, Trade. R. S. Kennedy. No. 106,049; Sept. 21; Gaz. vol. 218; p. 873.
Leather, Sole-. J. M. Delaney & Co. No. 106,030; Sept. 14; Gaz. vol. 218; p. 600.
Lenses for spectacles and eyeglasses, Optical. Woodard, Clarke & Co. No. 106,060; Sept. 21; Gaz. vol. 218; p. 873.
Liniment, Rheumatism-. J. Norris. No. 106,054; Sept. 21; Gaz. vol. 218; p. 873.
Magazine, Weekly. Tradesmen's Publishing Co. No. 106,058; Sept. 21; Gaz. vol. 218; p. 873.
Magazines, Monthly. Chapple Publishing Company. No. 105,995; Sept. 14; Gaz. vol. 218; p. 599.
Mattresses and bedsteads. Northwestern Bedding and Manufacturing Co. No. 106,009; Sept. 14; Gaz. vol. 218; p. 599.
Meal, Cotton-seed. C. L. Montgomery & Company. No. 106,005; Sept. 14; Gaz. vol. 218; p. 599.
Medicinal compound for treating certain named diseases. J. H. O'Grady. No. 105,987; Sept. 7; Gaz. vol. 218; p. 317.
Medicine for diseases of the kidneys, bladder, and urinary organs. C. H. Rubel. No. 106,019; Sept. 14; Gaz. vol. 218; p. 599.
Medicines and toilet preparations, Certain named. The De Pree Chemical Company. No. 106,042; Sept. 21; Gaz. vol. 218; p. 873.
Metal, Rust-resisting anticorrosive. The Canton Culvert and Silo Company. No. 105,972; Sept. 7; Gaz. vol. 218; p. 317.
Mops, brooms, and floor-brushes. A. G. Jacobus' Sons. No. 106,048; Sept. 21; Gaz. vol. 218; p. 873.
Oleomargarin. H. H. Butler. No. 105,971; Sept. 7; Gaz. vol. 218; p. 317.
Oil, Lubricating-. U S Gun Oil Co. No. 106,059; Sept. 21; Gaz. vol. 218; p. 873.
Paper towels and napkins. Central Paper Company. No. 106,064; Sept. 28; Gaz. vol. 218; p. 1153.
Pencil and penholder trays and easels, Lead-. Eagle Pencil Company. No. 105,978; Sept. 7; Gaz. vol. 218; p. 317.
Petroleum, gasolene, lubricating-oil, and grease. Phinny Bros. Company. No. 106,015; Sept. 14; Gaz. vol. 218; p. 599.
Pianos and player-pianos. Drachmann Piano Co. No. 106,031; Sept. 14; Gaz. vol. 218; p. 600.
Picture films, Motion-. Excelsior Feature Film Co. No. 106,047; Sept. 21; Gaz. vol. 218; p. 873.
Plant and vegetable food. C. F. Quincy. No. 106,067; Sept. 14; Gaz. vol. 218; p. 600.
Plows, moldboards, landsides, plow-points, &c. C. Billups. No. 105,970; Sept. 7; Gaz. vol. 218; p. 317.
Polishing-cloths, Abrasive. M. W. Lindar. No. 105,983; Sept. 7; Gaz. vol. 218; p. 317.
Polishing-cloths for glasses. Kleeno-Glass-Kloth Mfg. Co. No. 105,981; Sept. 7; Gaz. vol. 218; p. 317.
Popcorn, Chocolate-flavored. M. J. Laux. No. 106,050; Sept. 21; Gaz. vol. 218; p. 873.
Powder, Antiseptic. The Limol Chemical Co. No. 105,982; Sept. 7; Gaz. vol. 218; p. 317.
Preparation for ailments arising from indigestion and constipation. H. Manowitz. No. 105,985; Sept. 7; Gaz. vol. 218; p. 317.
Preparation for treatment of corns, bunions, and warts. S. Schwarz. No. 106,065; Sept. 21; Gaz. vol. 218; p. 873.
Preparation for treatment of scours in live stock and poultry. B. P. Ellwood. No. 106,044; Sept. 21; Gaz. vol. 218; p. 873.
Preparation for use in internal-combustion engines for augmenting the energy of motor-spirits. Plains Oil Company. No. 106,016; Sept. 14; Gaz. vol. 218; p. 599.
Preparation or composition of a plastic or liquid consistency, Refractory. A. Dunbar. No. 105,977; Sept. 7; Gaz. vol. 218; p. 317.

Preparations for treatment of dandruff and diseases of the bladder and kidneys. J. M. Alexander. No. 106,025; Sept. 14; Gaz. vol. 218; p. 600.

Razor-strop abrasive compound. C. B. Periolat. No. 106,035; Sept. 14; Gaz. vol. 218; p. 600.

Remedy, Hog-worm. J. J. Culp. No. 106,029; Sept. 14; Gaz. vol. 218; p. 600.

Roofing, Prepared. Evansville Paint & Varnish Co. No. 106,046; Sept. 21; Gaz. vol. 218; p. 873.

Rubber heels and gloves. Continental Rubber Works. No. 105,997; Sept. 14; Gaz. vol. 218; p. 599.

Sausage Pork. Stevenson Packing Company. No. 106,040; Sept. 14; Gaz. vol. 218; p. 600.

Shingles. The National Building Supply Co. No. 106,055; Sept. 28; Gaz. vol. 218; p. 1153.

Shoes, Infants' and children's leather. Valley Shoe Co. No. 106,021; Sept. 14; Gaz. vol. 218; p. 600.

Silk dress goods. Haas Brothers. Nos. 106,033–4; Sept. 14; Gaz. vol. 218; p. 600.

Silver and nickel polish. W. Colville. No. 105,974; Sept. 7; Gaz. vol. 218; p. 317.

Soap. H. Gabilla. No. 105,999; Sept. 14; Gaz. vol. 218; p. 599.

Soaps, Toilet. Goodrich Drug Co. No. 106,000; Sept. 14; Gaz. vol. 218; p. 599.

Tea, Brazilian and Paraguay. E. L. Woodley. No. 106,024; Sept. 14; Gaz. vol. 218; p. 600.

Tea, coffee, canned vegetables and fruits, rice, &c. Lippincott & Co. No. 105,984; Sept. 7; Gaz. vol. 218; p. 317.

Tobacco and cigarettes, Smoking. Falk Tobacco Co. No. 105,980; Sept. 7; Gaz. vol. 218; p. 317.

Wafer for cervical inflammations, &c., Uterine. Luyties Pharmacy Company. No. 106,051; Sept. 21; Gaz. vol. 218; p. 873.

ALPHABETICAL LIST OF LABELS.

"Alexander Sole Leather." (For Sole-Leather.) Alexander Brothers. No. 18,761; Sept. 21; Gaz. vol. 218; p. 874.

"Baker Gelatine." (For Gelatin.) The Franklin Baker Company. No. 18,730; Sept. 7; Gaz. vol. 218; p. 319.

"Base Ball." (For a Game-Board.) O. R. Tompkins. No. 18,752; Sept. 7; Gaz. vol. 218; p. 319.

"Calcylates." (For Pulvoid Tablets.) The Drug Products Co. No. 18,777; Sept. 28; Gaz. vol. 218; p. 1154.

"Campbell's Electric Spark." (For a Cleaning Preparation.) E. C. Campbell. No. 18,755; Sept. 14; Gaz. vol. 218; p. 601.

"Cherry Kola." (For a Beverage.) L. O. Fulcher. No. 18,756; Sept. 14; Gaz. vol. 218; p. 601.

"Clover." (For Garter-Elastic.) Smith Webbing Company. No. 18,772; Sept. 21; Gaz. vol. 218; p. 874.

"Columbine Brand." (For Cantaloupes.) Crutchfield & Woolfolk. No. 18,776; Sept. 28; Gaz. vol. 218; p. 1154.

"Doran's Gape Remedy." (For a Gape Remedy.) W. H. Doran. No. 18,729; Sept. 7; Gaz. vol. 218; p. 319.

"Double Cross." (For Coffee.) Dwinell-Wright Company. No. 18,766; Sept. 21; Gaz. vol. 218; p. 874.

"Dr. Willson's Umatilla Indian Medicine." (For Medicine.) H. O. Willson. No. 18,760; Sept. 14; Gaz. vol. 218; p. 601.

"Egaday." (For Poultry Feed.) South Texas Grain Company. No. 18,781; Sept. 28; Gaz. vol. 218; p. 1154.

"Em-Burto." (For Cigar-Boxes.) O. B. Abbott. No. 18,723; Sept. 7; Gaz. vol. 218; p. 319.

"Escharol." (For a Medical Preparation.) Lato Pharmacal Company. No. 18,769; Sept. 21; Gaz. vol. 218; p. 874.

"Family Cambric." (For Cambric.) M. Smolowitz. No. 18,750; Sept. 7; Gaz. vol. 218; p. 319.

"Ford Suit." (For Men's Suits.) M. Golland. No. 18,781; Sept. 7; Gaz. vol. 218; p. 319.

"Frank's Quality Meat-Treats." (For Meat Preparations.) L. Frank & Son Company. No. 18,767; Sept. 21; Gaz. vol. 218; p. 874.

"Fruit Nectar." (For a Flavoring Compound.) Brechet & Richter Company. No. 18,762; Sept. 21; Gaz. vol. 218; p. 874.

"G Washington's." (For Prepared Tea.) G. Washington Coffee Refining Co. No. 18,758; Sept. 7; Gaz. vol. 218; p. 319.

"Gold Cross Brand." (For Absorbent Cotton.) Seabury & Johnson. No. 18,749; Sept. 7; Gaz. vol. 218; p. 319.

"Henley." (For Garter-Elastic.) Smith Webbing Company. No. 18,773; Sept. 21; Gaz. vol. 218; p. 874.

"Hi-Gloss Wood Polish." (For Wood-Polish.) Hi-Gloss Mfg. Co. No. 18,778; Sept. 28; Gaz. vol. 218; p. 1154.

"Hours Saved." (For a Washing Preparation.) Hours Saved Co. No. 18,733; Sept. 7; Gaz. vol. 218; p. 319.

"Jackson Square." (For Coffee and Chicory Compound.) Importers Coffee Co. No. 18,768; Sept. 21; Gaz. vol. 218; p. 874.

"Japana Furniture Polish." (For Furniture-Polish.) M. H. Stokes. No. 18,780; Sept. 28; Gaz. vol. 218; p. 1154.

"Jumbo Roasted Peanuts." (For Peanuts.) Blanke-Wenneker Candy Company. No. 18,724; Sept. 7; Gaz. vol. 218; p. 319.

"Kalak." (For Artificially-Prepared Medicinal Water.) Kalak Water Company of New York. No. 18,736; Sept. 7; Gaz. vol. 218; p. 319.

"Kalak Water." (For Artificially-Prepared Medicinal Water.) Kalak Water Company of New York. No. 18,735; Sept. 7; Gaz. vol. 218; p. 319.

"Know Your Flour." (For Flour.) Indiana Millers Association. No. 18,779; Sept. 28; Gaz. vol. 218; p. 1154.

"Liggett Brand Cherriade." (For Cherriade Flavor.) F. L. Daggatt Company. No. 18,726; Sept. 7; Gaz. vol. 218; p. 319.

"Lincoln Ointment." (For Ointment.) W. A. Lincoln. No. 18,758; Sept. 14; Gaz. vol. 218; p. 601.

"Lyman H. Davis Rheumatic Liniment." (For Rheumatic Liniment.) L. H. Davis. No. 18,728; Sept. 7; Gaz. vol. 218; p. 319.

"Made Last Night." (For Candy.) Jacobs Candy Company. No. 18,734; Sept. 7; Gaz. vol. 218; p. 319.

"Marshels Intense Black Ink." (For Ink.) B. M. Marshel. No. 18,842; Sept. 7; Gaz. vol. 218; p. 319.

"Mermaid Supreme." (For Canned Tuna.) Coast Fishing Company. No. 18,763; Sept. 21; Gaz. vol. 218; p. 874.

"Mme. Coburn's Genuine Southern Mint Julep." (For Mint Julep.) E. W. Coburn. No. 18,765; Sept. 21; Gaz. vol. 218; p. 874.

"Mme. Coburn's Maryland Mint Cordial." (For Cordial.) E. W. Coburn. No. 18,764; Sept. 21; Gaz. vol. 218; p. 874.

"Musterking." (For a Medicinal Preparation.) A. W. Peabody. No. 18,745; Sept. 7; Gaz. vol. 218; p. 319.

"Nacco." (For Cleaning Compounds, Disinfectants, and Vermin-Exterminators.) The National Chemical Company. No. 18,744; Sept. 7; Gaz. vol. 218; p. 319.

"No-Kaffeen." (For a Substitute for Coffee.) J. B. Daugherty. No. 18,727; Sept. 7; Gaz. vol. 218; p. 319.

"Nu-Lax." (For Medicine.) R. L. Lundgren. No. 18,740; Sept. 7; Gaz. vol. 218; p. 319.

"Phytoform." (For a Tonic.) Lato Pharmacal Company. No. 18,770; Sept. 21; Gaz. vol. 218; p. 874.

"Priscilla." (For Headwear.) The Winget Manufacturing Co. No. 18,754; Sept. 7; Gaz. vol. 218; p. 319.

"Protection Barbed Wire Liniment." (For Liniment.) H. H. Gray. No. 18,732; Sept. 7; Gaz. vol. 218; p. 319.

"Purina Bran Bread." (For Bran-Bread.) Ralston Purina Company. No. 18,771; Sept. 21; Gaz. vol. 218; p. 874.

"Revil." (For Liver-Tablets.) G. C. Jones. No. 18,739; Sept. 7; Gaz. vol. 218; p. 319.

"Ric Rac, The Candied Food." (For Candy.) The Ric Rac Company. No. 18,747; Sept. 7; Gaz. vol. 218; p. 319.

"Salome." (For Cigarettes.) Rosador Cigarette Co. No. 18,748; Sept. 7; Gaz. vol. 218; p. 319.

"Samak." (For Tobacco Cigars.) J. Murphy. No. 18,742; Sept. 7; Gaz. vol. 218; p. 319.

"Scalp Balm." (For a Hair-Tonic.) A. J. Praitano. No. 18,746; Sept. 7; Gaz. vol. 218; p. 319.

"Sportsman's 'Chocolate Bracer,' Sandwich Form." (For Eating-Chocolate.) Knickerbocker Chocolate Company. No. 18,737; Sept. 7; Gaz. vol. 218; p. 319.

"Sweethearts." (For Candy.) C. S. Cole. No. 18,725; Sept. 7; Gaz. vol. 218; p. 319.

"The Major Blends, 'Our Matchless.'" (For Roasted Coffee.) S. T. Major. No. 18,741; Sept. 7; Gaz. vol. 218; p. 319.

"Toedtmann's Honeypepper." (For a Cough Remedy.) F. C. Toedtmann. No. 18,759; Sept. 14; Gaz. vol. 218; p. 601.

"Walla Walla Valley Brand." (For Fresh Apples.) Valley Fruit & Produce Ass'n. No. 18,775; Sept. 21; Gaz. vol. 218; p. 874.

"Warranted Strictly Pure H & H Vermont Maple Syrup H & H Pure Food Products for Health & Happiness. Hoffman & Hauck, Woodhaven, N. Y." (For Maple-Syrup.) Hoffman & Hauck. No. 18,757; Sept. 14; Gaz. vol. 218; p. 601.

"We Want Your Hay Business." (For Baled Hay.) F. W. Taylor & Co. No. 18,751; Sept. 7; Gaz. vol. 218; p. 319.

"White Ribbon Beer The Food Drink." (For Beer.) White Ribbon Beer Company. No. 18,782; Sept. 28; Gaz. vol. 218; p. 1154.

"White Rock Rheumatic Remedy." (For Medicine.) A. Kvasnicka. No. 18,738; Sept. 7; Gaz. vol. 218; p. 319.

"Windsor." (For Garter-Elastic.) Smith Webbing Company. No. 18,774; Sept. 21; Gaz. vol. 218; p. 874.

PRINTS.

"A Dainty Breakfast." (For Wheat Breakfast Food.) Cream of Wheat Co. No. 4,058; Sept. 21; Gaz. vol. 218; p. 874.

"Always Buy Schulse's Butter-Nut Bread." (For Bread.) Schulse Baking Company. No. 4,053; Sept. 7; Gaz. vol. 218; p. 820.

"Always good—all ways." (For Sausage.) Thos. Cusack Company. No. 4,059; Sept. 21; Gaz. vol. 218; p. 874.

"Ask Dad, he knows." (For Cigarettes.) Thos. Cusack Company. No. 4,060; Sept. 21; Gaz. vol. 218; p. 874.

"B. V. D. Boys' Closed Crotch Union Suit." (For Athletic Underwear.) The B. V. D. Company. No. 4,067; Sept. 28; Gaz. vol. 218; p. 1154.

"Cherry Smash Sundae." (For Sundaes.) J. E. Fowler. No. 4,068; Sept. 28; Gaz. vol. 218; p. 1154.

"Delicious Candy Kid. A Popcorn and Peanut Confection. 5¢ per box." (For Popcorn and Peanut Confection.) F. S. Love Manufacturing Company. No. 4,054; Sept. 7; Gaz. vol. 218; p. 820.

"Heatherbloom." (For Petticoats.) A. G. Hyde & Sons. No. 4,064; Sept. 21; Gaz. vol. 218; p. 874.

"Home Treat." (For Ice-Cream Products.) Fussell Ice Cream Company. No. 4,051; Sept. 7; Gaz. vol. 218; p. 820.

"Hum-Ala." (For Beverages.) D. Humphrey. No. 4,052; Sept. 7; Gaz. vol. 218; p. 820.

"Jack Sprat." (For Wheat Breakfast Food.) Cream of Wheat Co. No. 4,050; Sept. 7; Gaz. vol. 218; p. 820.

"King Philip Mills Line of Nainsooks." (For Nainsooks.) King Philip Mills. No. 4,065; Sept. 21; Gaz. vol. 218; p. 874.

"Knocks the Devil Out of Your Corns." (For Corn Cures.) Omega Corn Cure Medicine Co. No. 4,066; Sept. 21; Gaz. vol. 218; p. 874.

"M. D. Harris & Co. Known All Over Land, Shirt Makers." (For Shirts.) M. D. Harris. No. 4,063; Sept. 21; Gaz. vol. 218; p. 874.

"Made In A Minute The Milk's Mixed In It." (For Pancake-Flour.) Aunt Jemima Mills Company. No. 4,049; Sept. 7; Gaz. vol. 218; p. 820.

"Priscilla." (For Headwear.) The Winget Manufacturing Co. No. 4,055; Sept. 7; Gaz. vol. 218; p. 820.

"Sanitary Milk Bottle Lock." (For Milk-Bottle Locks.) Sanitary Milk Bottle Lock Co. No. 4,056; Sept. 14; Gaz. vol. 218; p. 601.

"'The Cotter with the Point' Facilitates Insertion." (For Cotters.) The Wire Goods Company. No. 4,057; Sept. 14; Gaz. vol. 218; p. 601.

"The Safe-Cabinet." (For Safe-Cabinets and Steel Furniture.) The Safe-Cabinet Co. Nos. 4,069–70; Sept. 28; Gaz. vol. 218; p. 1154.

"Why are they sold in every Club and Hotel?" (For Cigarettes.) Thos. Cusack Company. No. 4,061; Sept. 21; Gaz. vol. 218; p. 874.

"Zanzibar Paint." (For Paint.) The Globe Paint Company. No. 4,062; Sept. 21; Gaz. vol. 218; p. 874.

OFFICIAL GAZETTE

3/11/16

OF THE

BANGOR PUBLIC
JAN 15 1916
LIBRARY

UNITED STATES PATENT OFFICE.

VOLUME CCXIX.

OCTOBER,

1915.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1915.

ERRATA.

1,155,456, page 46, in heading, residence of the patentee, for "Pioche, Nebr." read *Pioche, Nev.*

1,155,537, page 75, in heading, residence of patentee, for "Findlay, N. Y." read *Findlay, Ohio.*

1,155,780, page 158, first claim, line 14, for the word "reservoid" read *reservoir;* same page and claim, line 16, for the word "lubricating" read *lubricant.*

1,156,006, page 236, in the figure shown, the lower ball within the smaller circle should be indicated by the reference-letter P and the upper ball within the circle by P′. the ball P should be shown in dotted lines adjacent the lower left-hand pocket A^2 and the ball P′ in dotted lines adjacent the upper right-hand pocket A^2.

1,156,135, page 308, in heading, name of patentee, for "John P. Doran" read *John P. Doreau.*

1,156,285, page 356, third claim, line 6, before the word "being" insert the word *shelf.*

1,156,291, page 359, in heading, title of invention, for "Disintegrator Attachments for Elevator-Buckets" read *Disintegrator Attachments for Excavator-Buckets.*

1,156,630, page 480, second claim, line 3, before the word "resistances" insert the words *and having.*

1,156,768, page 528, in heading, assignment, name of assignee, for "Oscar H. Lucker" read *Oscar H. Iucker.*

1,157,533, page 828, in heading, assignment, for the compound word "one-third" read *one-half.*

1,157,906, page 1021, second claim, line 16, for the word "portion" read *member.*

1,158,086, page 1084, first claim, line 5, after the word "ring" insert the words *in electrical connection with the collector ring;* same claim, lines 6 and 7, strike out the words "in electrical connection with the collector ring."

Adverse Decisions in Interference, page 933, No. 940,037, name of patentee, for "Harold Lockwood" read *Marquis Hartwell Lockwood.*

CONTENTS.

	Page.
PATENTS AND DESIGNS GRANTED, October 5, 12, 19, 26	3, 277, 593, 935
TRADE-MARKS PUBLISHED AND REGISTERED, October 5, 12, 19, 26	259, 575, 895, 1213
LABELS AND PRINTS REGISTERED, October 5, 12, 19, 26	268, 585, 928, 1236
DECISIONS OF THE COMMISSIONER OF PATENTS, October 5, 12, 19, 26	260, 587, 929, 1237
INDEX TO THE DECISIONS OF THE COMMISSIONER OF PATENTS	1241
ALPHABETICAL LIST OF PATENTEES AND INVENTIONS	1

ANNOUNCEMENTS.

		Page.
ADVERSE DECISIONS IN INTERFERENCE—		
	Bourne, 1,045,251	273
	Greve, 1,128,972	590
	Larsen, 1,135,299	274
	Lockwood, 940,037	933
	Rosenbaum, 1,128,520	591
AMENDMENTS—		
	Rule 73	933
AMENDMENTS TO AMENDMENTS—		
	Rule 74	591
APPLICATIONS—		
	Access to pending	275
	Condition of pending	2, 276, 592, 934
CLASSIFICATION OF INVENTIONS—		
	Changes in—*Order 2223*	590
DISCLAIMERS—		
	Bryant, Courtney S., (reissue)	274
	Katzenberger, Oscar	519
DRAWINGS—		
	Instructions relative to preparing and mailing	1
FOREIGN PATENTS AND TRADE-MARKS—		
	Notice relative to fees and taxes—Austria	273
	Germany	932
	Norway	273
	Sweden	273
	Requirements for applications—Russia	273
INTERFERENCE NOTICES—		
	Detroit Electric Soap Company	590, 932, 1240
	Grant, James Lunham	274, 590, 932
	Patterson & Cross	590, 932, 1240
OFFICIAL GAZETTE—		
	Subscription price of	275
PATENTS—		
	Date of—Rule 207	933
	List of adjudicated	272, 931, 1240

Patents Nos. 1,155,331 to 1,156,043.

THE OFFICIAL GAZETTE OF THE United States Patent Office.

Vol. 219—No. 1. TUESDAY, OCTOBER 5, 1915. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
Issue of October 5, 1915	1
Drawings	1
Applications Under Examination	2
Patents Granted	3
Reissues	250
Designs	252
Trade-Marks—Registration Applied for	259
Trade-Mark Registrations Granted	267
Labels and Prints	268
Decisions of the U. S. Courts—	
Standard Typewriter Co. v. Standard Folding Typewriter Sales Co. *et al*	269
Adjudicated Patents	272
In re Foreign Patents, Trade-Marks, Etc.—Taxes, Fees, Etc.	273
Requirements for Applications in Russia	273
Adverse Decisions in Interference	273
Disclaimer	274
Interference Notice	274

ISSUE OF OCTOBER 5, 1915.

Patents	712	No. 1,155,331 to No. 1,156,043	inclusive.
Designs	35	No. 47,907 to No. 47,941	inclusive.
Trade-Marks	13	No. 105,071 to No. 105,083	inclusive.
Labels	13	No. 18,783 to No. 18,795	inclusive.
Prints	9	No. 4,071 to No. 4,079	inclusive.
Reissues	1	No. 13,990.	
Total	784		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	8	.....	North Carolina	7	.....
Arizona	2	.....	North Dakota	3	.....
Arkansas	1	.....	Ohio	36	1
California	21	.....	Oklahoma	2	.....
Colorado	7	.....	Oregon	3	.....
Connecticut	19	.....	Pennsylvania	56	.....
Delaware	.....	.....	Rhode Island	5	.....
Florida	1	.....	South Carolina	1	.....
Georgia	3	1	South Dakota	3	.....
Idaho	1	.....	Tennessee	3	.....
Illinois	80	2	Texas	9	.....
Indiana	21	2	Utah	.....	.....
Iowa	29	.....	Vermont	2	.....
Kansas	10	.....	Virginia	4	2
Kentucky	8	.....	Washington	18	1
Louisiana	5	.....	West Virginia	2	.....
Maine	2	.....	Wisconsin	18	1
Maryland	4	10	Wyoming	3	.....
Massachusetts	38	2			
Michigan	30	1	Alaska, District of	.....	.....
Minnesota	11	1	Canal Zone	.....	.....
Mississippi	.....	.....	District of Columbia	7	1
Missouri	28	1	Hawaii Territory	.....	.....
Montana	3	.....	Philippine Islands	.....	.....
Nebraska	7	.....	Porto Rico	.....	.....
Nevada	.....	.....	U. S. Army	.....	.....
New Hampshire	2	.....	U. S. Navy	.....	.....
New Jersey	33	3			
New Mexico	3	.....	Total to residents of the United States	667	33
New York	117	4			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	1	.....	Netherlands	.....	.....
Belgium	.....	.....	New South Wales	3	.....
British India	.....	.....	New Zealand	.....	.....
British West Indies	.....	.....	Norway	.....	.....
Canada	15	.....	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	1	.....
Cuba	.....	.....	Scotland	.....	.....
Denmark	1	.....	South Australia	.....	.....
England	21	1	Spain	.....	.....
Finland	.....	.....	Sweden	3	.....
France	12	.....	Switzerland	.....	.....
Germany	18	.....	Transvaal, South Africa	.....	.....
Guatemala	.....	.....	Victoria	1	.....
India	.....	.....	Western Australia	.....	.....
Ireland	1	.....			
Italy	2	1	Total to residents of foreign countries	79	2
Luxemburg	.....	.....			
Mexico	.....	.....			

Drawings.

PRECAUTIONS TO BE OBSERVED IN FORWARDING DRAWINGS TO THE UNITED STATES PATENT OFFICE.

Where drawings are to be filed in connection with an application for Letters Patent in the United States Patent Office, each sheet, before it can be accepted by the Office as a part of the application, must be signed in the name of the inventor at the lower right-hand corner, either by him or by an attorney whose written authorization from the applicant is filed in connection with the application. The signatures should never be written on a line parallel with the longer edges of the sheet, one of the shorter edges being always regarded, for the purpose of locating the signatures, as the lower edge of the sheet. The signatures must all be within the margin-lines of the sheet and below the lines of the drawing. The title of the invention should be written with pencil on the back of each sheet of drawings.

When there are filed on the same day two or more applications by the same inventor, each of the documents and drawings belonging to the same application should have placed thereon the same letter or number, which should be different from the letter or number placed upon those of any other of the applications.

It is desirable that all parts of the complete application, including the drawings, be deposited in the Office at the same time. Should, however, the other parts of the application be filed before the drawings are sent, the latter when forwarded should be accompanied by a letter stating the number of sheets inclosed, and that the drawings are to be filed with the other parts of the application, giving the date at which such other parts were filed in the Office, the name of the inventor, and title of the invention. If the application has received a serial number, that should also be given, and it should be indorsed with pencil on the back of each sheet of drawings. The letter should also state, if such be the case, that the new drawings are to be substituted for those previously filed.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business October 2, 1915.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	July 12	July 9	534
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Aug. 12	July 26	857
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	Sept. 7	Sept. 13	86
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	Apr. 16	Aug. 30	614
167	5. Bookbinding; Harvesters; Jewelry; Music.	July 1	Aug. 3	363
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar. 3	Aug. 27	497
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	July 26	Aug. 1	490
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Apr. 20	Aug. 24	1196
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Mar. 8	Sept. 14	575
235	10. Carriages and Wagons	June 14	Aug. 2	793
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Aug. 19	Sept. 25	126
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	July 6	July 8	706
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	July 25	Aug. 2	563
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	May 1	Sept. 2	246
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	May 27	Aug. 16	557
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Apr. 19	July 9	513
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	July 7	Sept. 2	181
237	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	May 7	Aug. 16	285
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	Aug. 12	July 19	238
179	20. Artificial Limbs; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Sept. 4	Sept. 2	264

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	June 17	July 27	362
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	July 21	Aug. 5	207
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	May 19	June 4	495
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	June 12	July 29	477
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Aug. 30	Aug. 30	152
106	26. Electricity, Generation; Motive Power.	Mar. 29	June 2	636
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Aug. 4	Aug. 6	349
65	28. Internal-Combustion Engines	July 10	Aug. 10	406
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	July 15	Aug. 3	347
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Aug. 6	Aug. 25	258
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	July 2	Sept. 2	298
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	Mar. 24	Aug. 20	725
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	July 7	July 26	381
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	July 12	Aug. 2	311
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	May 15	Aug. 26	766
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	June 9	Aug. 31	734
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Mar. 29	June 8	867
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	June 7	July 23	550
321	39. Water Distribution	June 22	July 12	386
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Apr. 3	Aug. 5	947
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	May 28	Aug. 7	422
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	June 2	June 1	821
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Aug. 9	July 6	275

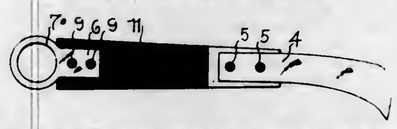
Oldest new case, Mar. 3; oldest amended, June 1.
Total number of applications awaiting action..... 20,956

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	July 28	Sept. 2	981
	Designs	May 20	Sept. 15	468
	Labels and Prints	Sept. 13	Sept. 4	50

PATENTS

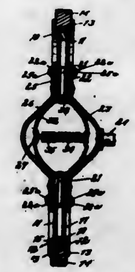
GRANTED OCTOBER 5, 1915.

1,155,331. KNIFE. PERCY ABEL, Alton, Ill. Filed Nov. 11, 1914. Serial No. 871,536. (Cl. 30—9.)



A device of the class described including a handle consisting of two sections, a knife blade having a shank arranged between the sections at one end thereof, a removable bolt extending through the handle and shank and having its ends counter-sunk within the sections, a ring provided with a shank arranged between the sections of the handle at the opposite end thereof, rivets extending through the handle and the shank and ring to rigidly secure the ring in position, and means for filling the space between the inner ends of the knife shank and the shank of the ring, whereby to insulate the ring from the knife, as and for the purpose set forth.

1,155,332. RESILIENT WHEEL. OLIVER E. ADAMSON, Grimes, Iowa. Filed Feb. 23, 1915. Serial No. 10,132. (Cl. 152—28.)

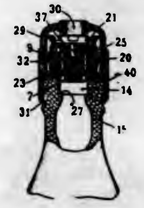


1. In a device of the class described, a rim, a plurality of pairs of opposite webs secured thereto, rollers mounted between said webs, central plates secured on opposite sides of the inner portions of said webs, the central portions of said plates being spaced from each other to form a receptacle, means for locking said central plates together, and means for securing said central plates to said webs for permitting sliding movement of the plates with relation to the webs and for preventing rotation of the plates with relation to the webs, a pneumatic device received within said receptacle engaging said rollers, and an axle secured to one of said plates, extending away from said device.

2. In a device of the class described, a rim, opposite webs secured thereto, rollers mounted between said webs, central plates secured on opposite sides of the inner portions of said webs, the central portions of said plates being spaced from each other to form a receptacle, means for locking said central plates together, and means for securing said central plates to said webs for permitting sliding movement of the plates with relation to the webs and for preventing rotation of the plates with relation to the webs, a pneumatic device received within said receptacle having a groove in its surface receiving said rollers and an axle secured to one plate and extending away from said device.

3. In a device of the class described, a rim, opposite webs secured thereto, rollers mounted between said webs, central plates secured on opposite sides of the inner portions of said webs, the central portions of said plates being spaced from each other to form a receptacle, an axle secured to one of said central portions and extending away from the receptacle, means for locking said central plates together, means for securing said central plates to said webs for permitting sliding movement of the plates with relation to the webs and for preventing rotation of the plates with relation to the webs, a pneumatic device received within said receptacle, and an adjustable spring device mounted in said pneumatic device for yieldingly limiting its expansion in one direction.

1,155,333. BOTTLE. BERTHA S. ALSOP, New York, N. Y. Filed Mar. 25, 1914. Serial No. 827,028. (Cl. 215—69.)



1. The combination, a bottle provided with a liquid passage and a valve seat, a buoyant valve body engaged in the said passage, means limiting the inward movement of the valve body within the liquid passage and a flexible seal carried by the valve body, extending beyond the valve body and resting upon the valve seat and adapted upon application of pressure to the valve to be carried by the valve body down into engagement with the walls of the passage at a point below the valve seat.

2. In a bottle, a valve seat surrounding a liquid passage, a buoyant valve for said passage comprising a body located in said passage and a flexible seal carried by said body extending over the outer edges of said body and over said valve seat, and a stop for limiting the inward displacement of said body and flexible seal into the liquid passage.

3. In combination, a bottle provided with an outlet passage, seats surrounding said passage and facing in opposite directions, and a floatable valve normally engaging the outer one of said seats and displaceable by the application of force thereto into operative relation with respect to the inner seat.

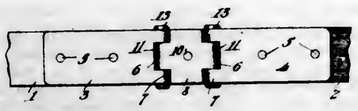
4. In combination, a bottle provided with a liquid passage, a valve seat surrounding said passage, a buoyant valve body engaged in the said passage, a stop limiting the inward movement of the valve body within the passage and a flexible seal carried by the valve body, extending beyond the outer edges of the valve body to thereby normally rest upon the surrounding valve seat and adapted upon application of pressure to the valve to be carried by the valve body down into the passage and into engagement with the walls of the passage at a point below the valve seat.

5. In a bottle, a valve seat surrounding a liquid passage, a buoyant valve for said passage comprising a body located in said passage and a flexible seal extending over

the outer edges of said body and said seat, a stop for limiting the inward movement of said body and a shoulder for coacting with said seal to lock said valve when the valve has been forced inward.

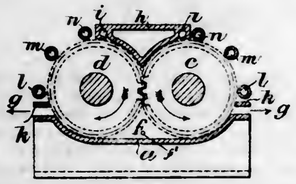
[Claims 6 to 8 not printed in the Gazette.]

1,155,334. LINE-SPLICE. JAMES S. BRANDON, Albin, Wyo. Filed July 24, 1913. Serial No. 780,947. (Cl. 24—33.)



A line splice, comprising a pair of embracing members having spaced eyes at their free ends, said members being formed of strips of metal bent to form substantially U-shaped members adapted to be secured to a line, a coupling member having oppositely disposed reduced ends forming eyes adapted to fit between the spaced eyes of the embracing members, said coupling member being formed of a single piece of metal bent to form an oblong loop having overlapping ends, a filler arranged in said loop, a centrally arranged rivet extending through the overlapping ends of said loop for securing said filler therein, and pintle pins extending through the eyes of the embracing members and coupling members having their ends swaged to form heads.

1,155,335. INTERNAL-COMBUSTION ENGINE. AUGUSTUS LEA BRICKNELL, ALGERNON JOSEPH GEORGE BRICKNELL, and JOHN LEA BRICKNELL, Carshalton, England. Filed Dec. 30, 1912. Serial No. 739,349. (Cl. 123—12.)



1. A rotary internal combustion engine, comprising in combination, a casing, intermeshed toothed rotor wheels mounted in said casing, a combustion chamber constituted by the space formed between the rotor wheels and a portion of said casing, means for supplying combustible mixture to said combustion chamber between the intermeshing teeth of said rotor wheels, means for igniting the combustible mixture, and exhaust outlets from said casing for the products of combustion, substantially as set forth.

2. A rotary internal combustion engine comprising in combination, a casing, intermeshed toothed rotor wheels mounted in said casing, a combustion chamber constituted by the space formed between the rotor wheels and a portion of said casing, means for supplying air to said combustion chamber between the intermeshing teeth of said rotor wheels, means for supplying fuel to said combustion chamber, means for igniting the combustible mixture of fuel and air, and exhaust outlets from said casing for the products of combustion, substantially as set forth.

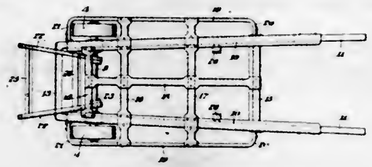
3. A rotary internal combustion engine comprising in combination, a casing, intermeshed toothed rotor wheels mounted in said casing, a combustion chamber constituted by the space formed between the rotor wheels and a portion of said casing, means for supplying combustible mixture to said combustion chamber between the intermeshing teeth of said rotor wheels, means for igniting the first supply of combustion mixture fed to the combustion chamber, continuous combustion of subsequent supplies of combustible mixture being maintained by the burning gases in the combustion chamber, and exhaust outlets from said casing for the products of combustion, substantially as set forth.

4. A rotary internal combustion engine comprising in combination, a casing, intermeshed toothed rotor wheels mounted in said casing, a combustion chamber constituted by the space formed between the rotor wheels and a portion of said casing, means for supplying air to said combustion chamber between the intermeshing teeth of said rotor wheels, means for supplying fuel to said combustion chamber, means for igniting the first supply of combustible mixture of fuel and air fed to the combustion chamber, continuous combustion of subsequent supplies of fuel and air being maintained by the burning gases in the combustion chamber, and exhaust outlets from said casing for the products of combustion, substantially as set forth.

5. A rotary internal combustion engine comprising in combination, a casing, intermeshed toothed rotor wheels mounted in said casing, a combustion chamber constituted by the space formed between the rotor wheels and a portion of said casing, means for supplying combustible mixture to the spaces between the teeth of the rotor wheels as said teeth move toward the combustion chamber, means for igniting the combustible mixture in said combustion chamber, and exhaust outlets from said casing for the products of combustion, substantially as set forth.

[Claims 6 to 19 not printed in the Gazette.]

1,155,336. WAREHOUSE-TRUCK. TRACY V. BUCKWALTER, Altoona, Pa. Filed July 30, 1914. Serial No. 854,063. (Cl. 21—65.)



1. A truck having wheels, in combination with a frame having longitudinal exterior and interior sills between which each wheel is housed, said exterior sills having their ends fixed to said interior sills, and handles on said frame.

2. A truck having wheels, in combination with a frame having longitudinal members between said wheels, said members having handles thereon, auxiliary longitudinal members exterior to said wheels, and transverse members whereby said longitudinal members are connected.

3. A truck having wheels, in combination with a frame having main longitudinal members between said wheels, and auxiliary longitudinal members having inturned ends fixed to said longitudinal members first named, said wheels being housed between said main and auxiliary members and beneath the tops thereof.

4. A truck having an axle, wheels thereon, a sleeve on said axle, a frame connected with said sleeve, and an auxiliary frame adapted to engage said sleeve.

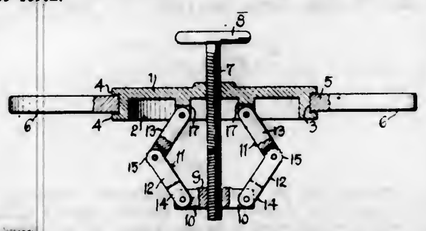
5. A truck having an axle, wheels thereon, journal boxes in which said axle revolves, a sleeve on said axle connecting said journal boxes, and handles and legs on said frames, a frame supported by said journal boxes.

[Claims 6 to 9 not printed in the Gazette.]

1,155,337. PIPE-HOLDING DEVICE. FRANCIS B. BURNS, North River, N. Y. Filed June 12, 1915. Serial No. 33,818. (Cl. 81—53.)

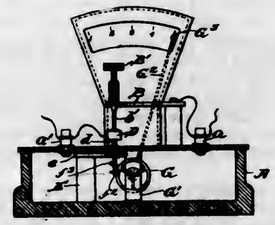
1. A device of the character described, comprising a disk, a strap rotatably connected thereto, and provided with means whereby it may be easily grasped and held, an actuating screw working through said disk, a nut working in said screw, and articulated jaw members connected respectively to the disk and to the nut, as and for the purpose set forth.

2. A tool of the character described, comprising a disk formed in one face with a recess and with lugs projecting from said recessed face, a strap rotatably connected to the disk and encircling the same and provided with handles, a screw working through said disk, a nut mounted on said screw, and formed with radiating arms, and articulated jaws connected at one end to the lugs and at their other ends to the arms of the nut, as and for the purpose set forth.



3. A tool of the character described comprising a disk formed in one face with a recess and in its edge with a peripheral groove and flanges defining said groove, a sectional strap encircling said disk in the groove, and rotatably mounted on the disk, the strap being provided with outstanding handles, a screw working through said disk and provided at one end with a handle, a nut mounted on the other end of said disk and provided with radiating arms, the disk being formed in its recessed face with outstanding lugs, and jaws consisting of sections pivotally connected together at their adjoining ends and one section of each jaw being formed with serrations at its pivoted end, the other end of said section being forked to receive one of the arms of the nut and being pivotally connected thereto, and the other sections being pivotally connected to said lugs.

1,155,338. DETECTOMETER. ARTHUR G. CARLSON, North Easton, Mass. Filed June 11, 1913. Serial No. 772,955. (Cl. 250—31.)



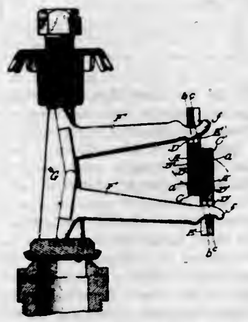
1. A detectometer comprising an adjusting member; a mineral cup movably mounted and adapted to be electrically engaged by, and moved by, the adjusting member; a spring moved by said cup; a wheel rotated by said spring; a pointer swung by said wheel; and a gage in adjacency to said pointer.

2. A detectometer comprising an adjusting member; a mineral cup member movably mounted and adapted to be electrically engaged by, and moved by, the adjusting member; a spring member having one end fixed and one end free and being engaged relatively near its fixed end by said cup member; a balance wheel rotated by the free end of said spring; a gage; a pointer rigidly connected to said wheel and having its free end moving in adjacency to said gage, the distance from the free end of the pointer to the axis of said wheel being very great relatively to the distance from the axis of the wheel to the point of engagement of the wheel and spring.

3. A wireless system detectometer comprising a plurality of elements which when disposed in an exactly determined contact relationship with respect to each other, normally establish operative conditions in said system most favorable to the operation thereof, one of said elements comprising a rectifying mineral and another of said elements being a member adapted to exert a compressive effort upon said mineral, movable means for establishing said relationship, and means subject to the action of said movable means, for indicating how much movement of the latter is required to restore said relationship when the same has been disestablished, said indicating means including mechanism for amplifying a displacement of one of said elements resulting from the compressive effort exerted upon said rectifying mineral, said displaced element having a connection with said amplifying mechanism, which connection is normally under a compressive stress corresponding to said compressive effort.

4. A wireless system, detectometer comprising a plurality of elements which when disposed in an exactly determined contact relationship with respect to each other, normally establish operative conditions in said system most favorable to the operation thereof, one of said elements comprising a rectifying mineral and another of said elements being a member adapted to exert a compressive effort upon said mineral, movable means for establishing said relationship, and means, subject to the action of said movable means, for indicating how much movement of the latter is required to restore said relationship when the same has been disestablished, said indicating means including mechanism for amplifying a displacement of one of said elements resulting from the compressive effort exerted upon said rectifying mineral, said displaced element having a connection with said amplifying mechanism, which connection is normally under a stress corresponding to said compressive effort.

1,155,339. ELEMENT FOR AUTOMATIC FIRE-EXTINGUISHERS. EMANUEL M. COOK, Indianapolis, Ind. Filed Dec. 28, 1914. Serial No. 879,354. (Cl. 236—16.)



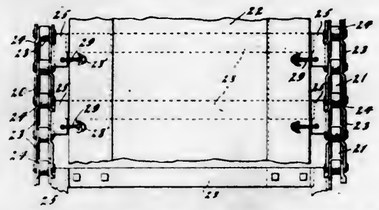
1. An element for automatic fire extinguishers having in combination two identical plates arranged face to face, and having shoulders disposed at right angles to the plane of the adjacent surfaces of said plates and at equal distances from their mid-length, thereby forming a recess, a rocking strut occupying said recess and having line-bearing-surfaces contacting with said shoulders respectively, said plates having bearing surfaces adapted to contact with the parts to be held in normal positions, said bearing surfaces being located upon opposite sides of a plane passing through the lines of contact between the rocking strut and the shoulders.

2. An element for automatic fire extinguishers having, in combination, two identical plates arranged face to face and offset at right angles on opposite sides of their mid-length, thereby providing oppositely presented shoulders disposed at right angles to the plane of the meeting surfaces of the plates and forming between said plates a recess or pocket, a rocking strut occupying said recess or pocket said strut being of elliptical cross section in a plane which is perpendicular to said shoulders and also to the meeting surfaces of the plates whereby said strut has line-bearing-surfaces contacting with the shoulders, respectively, in a plane parallel with the plates, said plates

having also bearing surfaces adapted to contact with the parts to be held, the bearing surfaces last aforesaid being located in proximity to a plane passing through the points of contact between the rocking strut and the shoulders on the plates.

3. An element for automatic fire apparatus having, in combination, two identical overlapping plates, offset at right angles on opposite sides of their mid-length, thereby providing at opposite ends of the element, end portions having surfaces which contact with each other in parallel planes and providing also oppositely presented shoulders having bearing surfaces lying in parallel planes at right angles to the planes first aforesaid and leaving between said shoulders and overlapping portions of the plates, a recess or pocket, a rocking strut occupying said recess or pocket and having line-bearing-surfaces contacting with said shoulders in a common plane between and parallel with the planes of contact of the aforesaid contacting end portions of the plates, said contacting end portions being soldered together whereby when the parts are assembled and the solder joint remains intact, the line of strain will be approximately in the common plane of the lines of contact between the rocking strut and the shoulders.

1,155,340. ENDLESS CARRIER FOR CONVEYERS. BEMISS N. DAVIS, New Orleans, La. Filed Nov. 10, 1914. Serial No. 871,235. (Cl. 193—26.)



1. A carrier of the class described, comprising a pair of endless spaced parallel driving members, an endless flexible apron secured along its edges to said members, the intermediate portion of said apron being unsupported throughout its entire length and sagging transversely when subjected to the weight of the objects carried thereby to form a longitudinal trough in which said objects rest, and means secured to and connecting said members for supporting them in spaced relation to each other, said means being disposed out of engagement with said apron throughout the entire length of the same.

2. A carrier of the class described, comprising a pair of spaced endless members, a flexible apron secured along its side edges to said members, the intermediate portion of said apron being unsupported for its entire length and sagging transversely when subjected to the weight of the objects carried thereby to form a longitudinal trough, and means for maintaining said members in spaced relation to each other comprising cross-bars secured at their ends to said members and offset from the plane thereof to permit the apron to sag without coming in contact therewith.

3. A carrier of the class described, comprising a pair of spaced endless driving members, a flexible apron secured along its side edges to said members, and cross-bars secured to said members for maintaining them in spaced relation, said cross-bars being offset from the plane of said members and disposed out of contact with said apron.

4. A carrier of the class described, comprising a pair of spaced parallel endless driving members, a flexible apron secured to said members along its side edges, means for supporting said members in spaced relation to each other, disposed out of engagement with said apron, and pads secured to one face of the apron adjacent its side edges and projecting over said members.

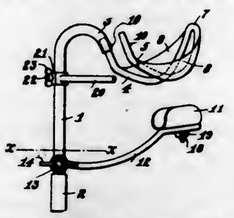
5. A carrier of the class described, comprising a pair of spaced parallel endless chains, a flexible apron secured to said chains along its side edges, means for supporting said chains in spaced relation to each other disposed out of engagement with said apron, and pads secured to the face of the apron adjacent its side edges and projecting over said members for protecting the objects adapted to be carried in said apron from contact with said chains.

1,155,341. SANITARY DEVICE FOR MASSAGE IMPLEMENTS. MICHAEL DE LESKO, Pittsburgh, Pa. Filed Jan. 26, 1915. Serial No. 4,523. (Cl. 128—16.)



A sanitary cap for a massage implement comprising a cone-shaped body formed of thin flexible material having its base provided with a flange capable of over-lapping the edge of a mossage cup whereby said cap is detachably secured to the cup, the bend of said flange constituting the working face of a cap when the cup is used, and a pair of projections carried by said flange and providing means in connection with the flange for detachably securing the cap to the cup.

1,155,342. MOUTHPIECE FOR SALIVA-EJECTING APPARATUS. WILLIAM P. DE WITT, Somerville, Mass. Filed Oct. 8, 1912. Serial No. 724,672. (Cl. 32—33.)



1. A mouth-piece for saliva ejecting apparatus comprising a suction tube having two members, one adapted to drain the lingual, and the other the buccal portion of the mouth and connected at their rear ends, and each provided with a saliva intake opening, one end of the suction tube being free, and a single eduction tube extending from the other end of the suction tube, substantially as described.

2. A mouth piece for saliva ejecting apparatus comprising a suction tube having two members, one adapted to drain the lingual and the other the buccal portion of the mouth and connected at their rear ends, each of said members being provided with a saliva intake opening, and an eduction tube adapted to be connected to the front end of either of the members to adapt the mouth piece for use in either the right or the left side of the mouth, substantially as described.

3. A mouth piece for saliva ejecting apparatus comprising a suction tube having two members, one adapted to drain the lingual and the other the buccal portion of the mouth and each provided with a saliva intake opening, connections between the rear ends of said members, and an eduction tube connected with the front end of one member only and offset in a direction away from the other member, substantially as described.

4. A mouth piece for saliva ejecting apparatus comprising a suction tube adapted to enter the mouth of the user and provided with a saliva intake opening, an eduction tube connected with said suction tube, and means carried by the eduction tube and adapted to be clamped beneath the jaw to hold the mouth piece in position, said means including an angularly adjustable contact piece to adapt the apparatus for use upon either side of the mouth, substantially as described.

5. A mouth piece for saliva ejecting apparatus comprising a suction tube adapted to enter the mouth of a user and provided with a saliva intake opening, an eduction tube connected with the suction tube, a clamp carried by the mouth piece and adapted to engage beneath the jaw to hold the mouth piece in position, and a pivotal connection between the mouth piece and clamp, the engaging faces of said connection being oppositely inclined, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,155,343. DISINFECTANT-CONTAINER. ALBERT H. EKMAN and PATRICK J. GALLAGHER, Spokane, Wash. Filed Dec. 8, 1914. Serial No. 876,036. (Cl. 132—11.)



1. In a disinfecting device, a container having a threaded open portion, a closure device for said open portion comprising an open ended threaded ferrule adapted to be turned onto said portion and having a gasket engaging flange, a ring gasket interposed between said flange and said portion, a disinfectant holder carried by said ferrule and disposed interiorly of said container, a closure hinged to said ferrule for closing the open end of said container, and a disk gasket interposed between said closure and the flange of said ferrule, substantially as described.

2. In a disinfecting device, a container having a threaded open portion, a support for said container disposing the same with its open portion downwardly, a closure device for said open portion comprising an open ended threaded ferrule adapted to be turned onto said portion and having a gasket engaging flange, a ring gasket interposed between said flange and said portion, a disinfectant holder carried by said ferrule and disposed interiorly of said container, a closure hinged to said ferrule for closing the open end of said container, and a disk gasket interposed between said closure and the flange of said ferrule, substantially as described.

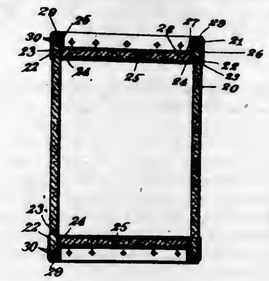
3. In a disinfecting device, a tubular container having a closed and an open end, a support for holding said container in an inverted position with its open end downwardly, a ferrule secured to the open end of said container and provided with a disinfectant holder disposed interiorly of said container, and a closure hinged to said ferrule for closing the container and supporting the article to be disinfected therein, substantially as described.

4. In a disinfecting device, a tubular container having a closed and an open end, a support for holding said container in an inverted position with its open end downwardly, a ferrule secured to the open end of said container and provided with a disinfectant holder disposed interiorly of said container, and a closure for attachment to said ferrule for closing the open end of said container and supporting the article to be disinfected therein, substantially as described.

5. In a disinfecting device, a tubular container having a closed and an open end, a ferrule secured to the open end of said container and provided with a disinfectant holder disposed interiorly of said container, and a closure for attachment to said ferrule to close the open end of said container for direct engagement with the article to be disinfected to prevent discharge of the article from said container, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,155,344. BARREL. JULIAN O. ELLINGER, New York, N. Y. Filed Aug. 29, 1913. Serial No. 787,259. (Cl. 217—76.)



1. In a barrel or keg, a cylinder, a reinforcing ring secured to an edge of the cylinder, said ring having inner and outer walls forming a space therebetween for the reception of the edge of the cylinder, the inner wall being provided with an inwardly projecting flange and a series of openings, a head seated on said flange, and a ring fitting inside of the first mentioned ring, said ring having outturned fingers or projections which extend through said openings and into the body of the cylinder.

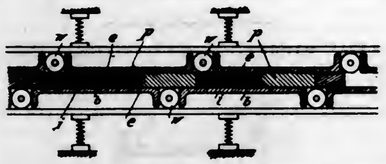
2. In a barrel or keg, a cylinder, a reinforcing ring secured to an edge of the cylinder, said ring having inner and outer walls forming a space therebetween for the reception of the edge of the cylinder, the inner wall being provided with an inwardly projecting flange and a series of openings, a head seated on said flange, and a ring fitting inside of the first mentioned ring, said ring having outturned fingers or projections which extend through said openings and into the body of the cylinder, said fingers being flared at their outer ends.

3. In a barrel or keg, a cylinder, a ring secured to an end of the cylinder, said ring being formed with an inner wall fitting on the inside of the cylinder, said inner wall being provided with oppositely extending flanges and a series of openings, a head seated on one of said flanges, and a securing ring inside of the first mentioned ring, said ring being provided with an inwardly projecting flange resting on the head and also provided with an outturned end extending over the end of the first mentioned ring and on the outside of the cylinder, said inner ring being provided with a series of fingers or projections extending through the openings in the first mentioned ring.

1,155,345. MEANS FOR SMOOTHING AND IRONING THE INSULATING-WRAPPING OF ELECTRIC CONDUCTORS. ADOLF FINCKBEIN, Charlottenburg, Germany, assignor to Siemens-Schuckertwerke G. M. B. H., a Corporation of Germany. Filed Jan. 6, 1913. Serial No. 740,458. (Cl. 178—244.)

1. An apparatus for smoothing and ironing the insulating wrapping on electrical conductors of the kind specified, comprising abutment plates adapted to abut longitudinally against a conductor to hold the same in position and so as to expose said wrapping on two opposite sides, and means for ironing said two opposite sides of said wrapping, whereby the same will be compressed and drawn tight, substantially as described.

2. An apparatus for smoothing and ironing the insulating wrapping on electrical conductors of the kind specified, comprising rigid abutment plates adapted to abut longitudinally against a conductor so as to expose two opposite sides of said wrapping, and pressure means for ironing said wrapping on a side thus exposed, whereby the same will be compressed and drawn tight, substantially as described.



3. An apparatus for smoothing and ironing the insulating wrapping on electrical conductors of the kind specified, comprising rigid abutment plates adapted to abut longitudinally against a conductor so as to expose two opposite sides of said wrapping, pressure members abutting against both of said exposed sides of said wrapping, means for producing relative movement between said pressure members and said wrapping, said movement being transverse to the conductors and the movement of said pressure members on oposite sides of said wrapping being in opposite directions, whereby an ironing effect will be exerted upon said wrapping and the same compressed and drawn tight, substantially as described.

4. An apparatus for smoothing and ironing the insulating wrapping on electrical conductors of the kind specified, comprising rigid abutment plates adapted to abut longitudinally against a conductor so as to expose two opposite sides of said wrapping, pressure members, abutting against both of said exposed sides of said wrapping, and means for producing movement of said pressure members on one of said exposed sides oppositely to those on the other side, whereby an ironing effect will be exerted upon said wrapping and the same compressed and drawn tight, substantially as described.

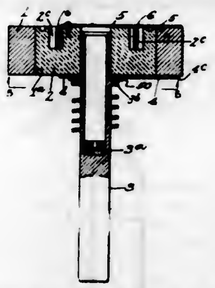
5. An apparatus for smoothing and ironing the insulating wrapping on electrical conductors of the kind specified, comprising rigid abutment plates adapted to abut against the entire length of a conductor on two opposite sides of its wrapping, pressure plates and pressure rollers abutting against the two remaining sides of said wrapping, said pressure plates and rollers being adapted to move in opposite directions on said two sides of the wrapping, and means for producing relative movement between said pressure plates and rollers and said sides of said wrapping against which they respectively abut, said movement being transverse to the conductors, the movement of said pressure plates and rollers being in opposite directions on opposite sides of said wrapping, whereby an ironing effect will be exerted upon said wrapping for compressing and drawing same tight.

1,155,346. TACHOMETER-MAGNET AND MOUNT FOR THE SAME. THEODORE J. FISCHER, Chicago, Ill., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill., a Corporation of Illinois. Filed Oct. 1, 1914. Serial No. 864,528. (Cl. 264—13.)

1. A tachometer magnet in the form of a split-ring in combination with an integral mount for the same of non-magnetic metal occupying the central aperture and the gap of the said ring, the mount being flush with the lateral surfaces of the magnet at both sides.

2. In a tachometer a magnet in the form of a split ring, in combination with an integral mount for the same of non-magnetic metal which occupies the central aperture of the magnet; a calibrating shunt plate held tightly to the mount at one side having a segment which laps both poles to the magnet, and means for holding the shunt with its said segment tightly in lateral frictional contact with the magnet.

3. A tachometer magnet in the form of a split ring in combination with an integral mount for the same of non-magnetic metal occupying the central aperture of the ring, the mount being flush with the lateral surfaces of the magnet at both sides, and a calibrating shunt plate held tightly to the mount at one side, having a segment which laps both poles of the magnet, and means for holding the segment tightly in lateral frictional contact with the mount and magnet.

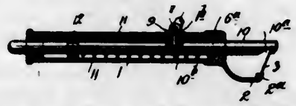


4. A tachometer magnet in the form of a split ring in combination with an integral mount for the same of non-magnetic metal occupying the central aperture of the magnet, said magnet having on one side a temperature compensating shunt, pivoted to the mount on that side, and lapping laterally on one pole of the magnet, and a thermostatic device connected to the mount and to the shunt for swinging the latter about its pivot to cause it to approach and depart from, and to lap more or less on the other pole of the magnet.

5. A tachometer magnet in the form of a split ring in combination with an integral mount for the same of non-magnetic metal occupying the central aperture of the magnet, the mount being flush with the lateral surfaces of the magnet at both sides; a temperature compensating shunt pivoted to the mount at one side of the magnet and lapping laterally on one pole thereof, and adapted to be moved about its pivot to lap upon the other pole, the mount having an annular pocket in the side at which the shunt is pivoted; a thermostatic element lodged into the annular pocket and secured at one end of the mount and connected at the other end with the shunt for moving the latter about its pivot by changes of temperature of said thermostatic element.

[Claim 6 not printed in the Gazette.]

1,155,347. SAFETY-RAZOR. HENRY J. GAISMAN, New York, N. Y., assignor to Auto Strop Company, New York, N. Y., a Corporation of New York. Filed Apr. 7, 1909. Serial No. 488,507. (Cl. 30—12.)



1. In a safety razor, a blade provided with one or more cutting edges, a blade holder comprising a guard for the cutting edge, means for receiving the opposite edges of the blade comprising jaws movable toward and away from each other, a handle upon the blade holder, means extending longitudinally therethrough for controlling the movement of the jaws, and means extending outwardly from the side of the handle between its ends at an angle to the axis of the latter, for manually operating the longitudinally extending means, whereby holding the device in one hand the longitudinally extending means may be operated to grip or release the blade.

2. In a razor, a guard, means adjacent the guard for engaging the blade, a handle, a rod engaging the blade and slidably carried in the handle, and means coöperative with the rod and projecting from the side of the handle between its ends in position to be operated to grip or release the blade while the handle is held in one hand.

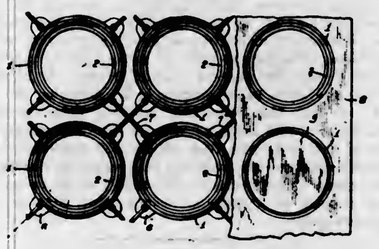
3. In a razor, a guard, means adjacent the guard for engaging the blade, a handle, a rod engaging the blade and slidably carried in the handle, means coöperative with the rod and projecting from the side of the handle between its ends in position to be operated to grip or release the blade while the handle is held in one hand, and a spring acting on said rod to hold it in engagement with the blade.

4. In a razor, a handle, a guard, means adjacent the guard to engage a blade, a rod mounted to slide longitudinally through the handle and provided with means to engage the blade, to hold it adjacent the guard, and a lever pivotally carried by the handle between its ends and engaging said rod.

5. In a razor, a handle, a guard, means adjacent the guard to engage a blade, a rod mounted to slide longitudinally through the handle and provided with means to engage a blade, to hold it adjacent the guard, a lever pivotally carried by the handle between the ends of the latter and engaging said rod, and a spring acting with the rod to hold it in engagement with the blade.

[Claims 6 and 7 not printed in the Gazette.]

1,155,348. VAULT-LIGHT. WILLIAM J. GARRISON, Sheffield, Pa. Filed July 16, 1915. Serial No. 40,241. (Cl. 94—7.)

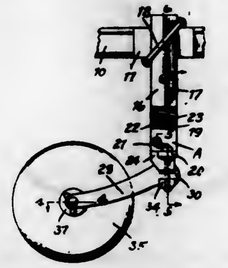


1. A vault-light comprising, a frame having an inward upwardly presenting shoulder and an interior recess above said shoulder, ears projecting from the exterior of the frame and adapted to receive links to connect the frame with similar frames, a glass adapted to rest upon said shoulder and have its upper surface flush with the rim of the frame and having a dimension less than that of the interior of the frame and having an exterior groove, and sealing material disposed within the frame around the glass and in the groove in the glass and in the recess in the frame, combined substantially as set forth.

2. A vault-light comprising, a group of frames provided with perforated exterior ears, a glass secured within each frame by sealing material, links engaging said ears and uniting the frames, and a slab of plastic material embedding said ears and links and surrounding the frames, combined substantially as set forth.

1,155,349. DISK-JOINTER FOR PLOWS. PHILIP H. GEISLER, Oxford, Ohio. Filed May 8, 1914. Serial No. 837,300. (Cl. 97—43.)

A jointer for plows comprising a bar adapted for attachment at one end to a plow beam, an L-shaped member secured to the other end of the plow beam, a depending portion carried by the L-shaped member and provided with a groove in its lower end having its wall corrugated, a forked member having its arm connecting end seated in said groove and provided with corrugations interlocking with the first named corrugation, said arm connecting end being provided with an oppositely flared passage, a bolt engaged through said passage and through the depending portion for binding the forked member to the depending portion, and a disk rotatably mounted between the arms of the forked members.



1,155,350. ATTACHMENT OF ELECTRICAL FIXTURES TO OUTLET-BOXES. HENRY R. GILSON, Baden, and JAMES M. G. FULLMAN, Sewickley, Pa., assignors to National Metal Molding Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 31, 1914. Serial No. 859,436. (Cl. 247—5.)



1. In an electrical installation, the combination of an outlet box provided adjacent to its open face with inwardly extending lugs having holes therein, a spanner having tongues at its opposite ends engaging the holes of said lugs, and means for adjustably attaching an electrical fixture to said spanner.

2. In an electrical installation, the combination of an outlet box, inwardly extending supports adjacent to the open face of said box, a spanner engaging said supports at its opposite ends, an electrical fixture, and a single clamping member engaging said fixture and said spanner at its central point.

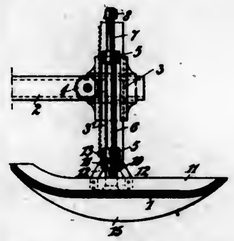
3. In an electrical installation, the combination of an outlet box, inwardly extending supports adjacent to the open face of said box, a spanner engaging said supports at its opposite ends, an electrical fixture comprising in part a base plate having a transversely extending rib with a passageway at the side thereof, and means for attaching said plate through the rib thereof to said spanner.

4. In an electrical installation, the combination of an outlet box provided adjacent to its open face with oppositely disposed inwardly-extending lugs having holes therein, a spanner having tongues at its opposite ends engaging the holes of said lugs and having a central screw threaded hole, an electrical fixture comprising in part a base plate having a transversely extending rib with a centrally disposed key-hole slot, and a screw extending through said slot and engaging the screw threaded hole of said spanner.

1,155,351. STEERING DEVICE FOR AGRICULTURAL MACHINES. CARL GLEICHE, Berlin, Germany, assignor to Stock Motorpflug Gesellschaft Mit Beschränkter Haftung, Berlin, Germany, a Corporation of Germany. Filed Mar. 26, 1915. Serial No. 17,249. (Cl. 97—14.)

1. Steering device for agricultural machine, comprising in combination a steering shoe, a rib at the bottom side of said steering shoe and adapted to penetrate the ground and to produce the lateral pressure for steering, a vertical rod in connection with the frame of said machine, said steering shoe being firmly fixed to the bottom end of said rod,

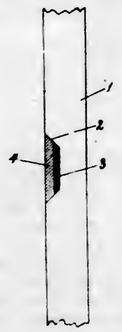
means for vertically moving said rod, and means for rotating said rod, substantially as described.



2. Steering device for agricultural machine comprising in combination a steering shoe consisting of a rail member bent up at both ends and provided beneath with a blade of varying width, a vertical rod carried in a foot-bearing arranged on said rail member, a steering arm attached to said rod, a rack with annular bearings for said vertical rod, a guide member carried by the frame of the machine in which said rack can be adjustably arranged.

3. Steering device for agricultural machine comprising in combination a steering shoe consisting of a rail member bent up at both ends, a blade attached thereto the depth thereof decreasing from center to ends, a vertical rod attached to said shoe, a rack carrying bearings for said vertical rod, a guide member arranged on the frame of the machine carrying said rack, and a gear wheel operable by the driver for adjusting the height of said rack, and a steering arm attached to said vertical rod substantially as described.

1,155,352. LITHOGRAPHIC PLATE FOR OFFSET AND DIRECT PRINTING. JACOB GRASS, Fulham, London, England. Filed July 24, 1914. Serial No. 852,867. (Cl. 101—173.)



1. A method of producing a printing surface on a metal lithographic plate, consisting of coating said plate with a sensitized film, exposing said film to light through a positive transparency, washing said plate after removal of said transparency, drying said plate, etching said plate, softening said film after said etching and removing the same, drying said plate, applying varnish insoluble in water or grease to the etched recesses of said plate, and filling said recesses with lithographic ink to a plane coincident with the face of the plate, said varnish serving as a mat to hold a maximum quantity of ink, thereby imparting a deeper color to the print obtained from the plate.

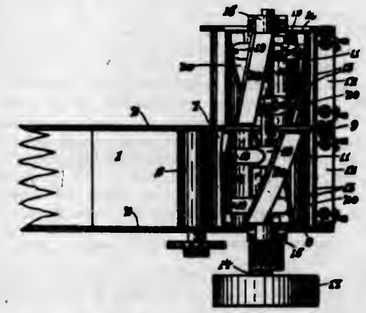
2. A method of producing a printing surface on a metal lithographic plate, consisting in coating said plate with a sensitised colloid film, exposing said film to light through a positive transparency, washing said plate after removal of said transparency, drying said plate, etching said plate, softening said film after said etching, drying said plate, applying celluloid varnish to the etched recesses of said plate and filling said varnished recesses with lithographic ink and removing the film.

3. A method of producing a printing surface on a metal lithographic plate, consisting in coating said plate with a sensitized film, exposing said film to light through a transparency, washing said plate after removal of the transparency, drying said plate, etching said plate, softening said film after said etching, drying said plate, applying celluloid varnish to the etched recesses of said plate, filling said varnished recesses with said lithographic ink, removing said film by washing around the recesses and gumming said plate to prevent oxidation.

4. The process of producing an intaglio printing surface on a metal lithographic plate, consisting in coating the same with a sensitive colloid film in the form of a glue, placing a positive transparency on the sensitized film rendered suitably opaque, hardening the portions of the sensitised coating of the plate which are located beneath the transparent portions of the transparency, dissolving away the unhardened portions of the coating of the plate by washing with water, dipping the plate in a dye bath to render the picture or the like thereon visible, drying the plate, immersing the same in an etching bath, softening the hardened glue like film and removing the same, then drying the plate and filling the intaglio portions of the plate with lithographic ink.

5. The process of producing an intaglio printing surface on a metal lithographic plate, consisting in coating the same with a sensitive colloid film in the form of a glue, placing a positive transparency on the sensitized film rendered suitably opaque, hardening the portions of the sensitized coating of the plate which are located beneath the transparent portions of the transparency, dissolving away the unhardened portions of the coating of the plate by washing with water, dipping the plate in a dye bath to render the picture or the like thereon visible, drying the plate, immersing the same in an etching bath, softening the hardened glue like film, removing said film, then drying the plate and working celluloid varnish into the intaglio portions of the plate and then filling said intaglio portions with lithographic ink over the said varnish, whereby the latter being a mat varnish, will cause the ink to enter the pores thereof to produce a deeper color than is otherwise obtainable.

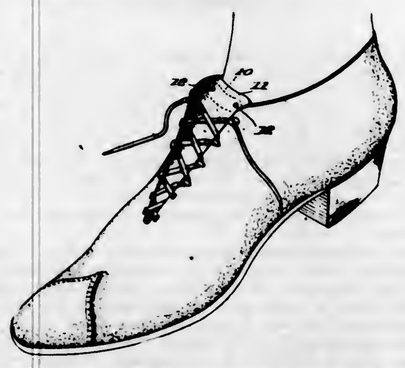
1,155,353. FEED-CUTTER. JAMES CLYDE HALDEMAN, Salem, Ohio, assignor to The Silver Manufacturing Company, Salem, Ohio, a Corporation of Ohio. Filed Feb. 25, 1915. Serial No. 10,487. (Cl. 146—29.)



1. In a feed cutter, the combination of a fixed cylinder formed of substantially the same diameter from end to end, a feed hopper provided with a throat and arranged to feed breastwise to said cylinder, said throat located at the intake end of the cylinder and of a width less than the length of the cylinder, a shaft located concentric with the cylinder, a cutter head mounted on said shaft, said cutter head formed of a length to correspond substantially with the length of the cutting cylinder, and arranged to feed the material longitudinally through the cylinder, a series of cutter knives connected to the cutting cylinder, and said cutting cylinder having a free open discharge end of a size corresponding substantially with the diameter of the cutting cylinder.

2. In a feed cutter, the combination of a fixed cylinder formed of substantially the same diameter from end to end, a feed hopper provided with a throat and arranged to feed breastwise to said cylinder, said throat located at the intake end of the cylinder, a shaft located concentric with the cylinder, a cutter head mounted on said shaft, said cutter head comprising a plurality of series of knives located in staggered relation and arranged to feed the material longitudinally through the cylinder, said cutter head formed of a length to correspond substantially with the length of the cutting cylinder, a series of cutter knives adjustably connected to the cutter cylinder and said cutting cylinder having a free open discharge end of a size corresponding substantially with the diameter of the cutting cylinder.

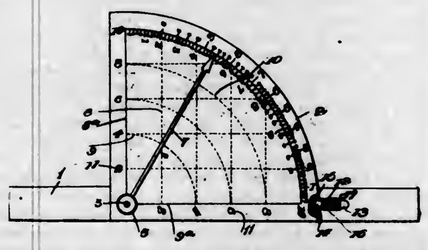
1,155,354. TONGUE FOR SHOES. DANIEL Y. HALLOCK, York, Pa. Filed Dec. 28, 1914. Serial No. 878,774. (Cl. 36—54.)



1. As a new article of manufacture, a tongue for a shoe having a rigid supporting member curved to conform to the ankle of the wearer and extending transversely of the tongue at the upper end.

2. As a new article of manufacture, a tongue for a shoe having a rigid supporting member curved to conform to the foot of the wearer of the shoe and attached to the tongue transversely thereof.

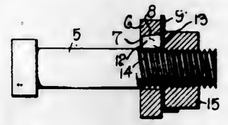
1,155,355. DRILLING AND BLASTING GAGE. ARCHIBALD HARRIGAN, Grand Rapids, Mich. Filed Sept. 23, 1913. Serial No. 791,394. (Cl. 33—93.)



1. In a gage of the class described, a stock, a quadrant having its apex disposed against the stock, an indicator hand disposed against one face of the quadrant, a pivot fitted through the hand, the quadrant and the stock and supporting the quadrant for pivotal movement upon the stock and the hand for angular movement across the face of the quadrant, the quadrant being provided upon its face with a scale concentric with the pivot and being movable about the pivot across the stock to bring either radial edge into parallelism with the stock, and means on the stock for holding the quadrant at adjustment upon the stock.

2. In a gage of the class described, a stock, a quadrant disposed against the stock and pivoted at its apex thereto, whereby it may be moved to lie with either radial edge parallel with the stock, the arcuate edge of the quadrant being provided at its ends with keeper sockets, a latch pin upon the stock adapted to engage either socket whereby to hold the quadrant at adjustment, and an indicator hand pivotally mounted for angular adjustment across the face of the quadrant, the quadrant being provided upon said face with a scale defining the path of movement of the free end of the indicator hand.

1,155,356. NUT-LOCK. GEORGE L. HIERONYMUS, Winchester, Ill. Filed July 26, 1915. Serial No. 42,005. (Cl. 151—2.)



1. The combination with the bolt and nut, of a collar adapted to be engaged upon the bolt against the face of the object, a sheet metal washer plate permanently fixed upon one face of the collar and having a relatively movable section, said collar being provided with a recess communicating with the bore thereof, said recess having an inclined wall, and a key lug fixed to the movable section of the washer plate and extending into said recess, said movable section of the plate being forced into engagement against the face of the collar when the nut is threaded up upon the bolt and said key lug forced inwardly by engagement with the inclined wall of the recess into biting engagement with the bolt threads.

2. The combination with a bolt and nut, of a collar adapted to be engaged upon the bolt against the face of the object and having a recess communicating with the bore thereof, the base wall of the recess being obliquely inclined, a split washer plate permanently fixed at one of its ends to the face of the collar, the other end portion of the split washer being normally spaced from the face of the collar, and a key lug fixed to the latter end of the washer plate and movable in the recess of the collar, said washer plate being of greater diameter than the collar and the movable portion of said plate being forced into engagement against the face of the collar when the nut is threaded up upon the bolt whereby the key lug, engaging the inclined wall of the recess in the collar, is forced into biting engagement with the bolt threads, the outer edge of the plate being adapted to be bent over against the face of the nut to prevent turning movement of the same upon the bolt.

1,155,357. METHOD OF FORMING SHEET-METAL SPOOLS. EBER J. HUBBARD, Berwyn, Ill. Filed Oct. 2, 1913. Serial No. 792,952. (Cl. 29—148.)

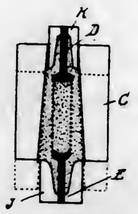
1. The method of forming a sheet metal spool which consists in forming from sheet metal two cup-shaped halves each comprising a cylindrical body part and flaring end, then removing the bottoms of the cup-shaped halves, then turning over the resulting edge of each cup-shaped member radially outwardly to form a flange, and then abutting these flanges and fusing them down and together to weld the bottom ends of the cup-shaped members securely together to thereby form a one-piece sheet metal spool body.

2. The method of forming a sheet metal spool body which consists in drawing out of sheet metal disks two



cup-shaped halves, and then welding the halves together at the peripheries of their bottoms to thus form a single piece sheet metal spool body.

1,155,358. PROCESS OF MANUFACTURING ARTICLES OUT OF HIGHLY-REFRACTORY MATERIAL. PRESCOTT M. HULBERT, Detroit, Mich. Filed Sept. 24, 1906. Serial No. 336,048. (Cl. 204—64.)



1. The method of forming articles of highly refractory materials which consists in compacting the comminuted material in a mold corresponding to the final form of the article, said mold being formed of a more highly refractory material and one which will not combine with the contained material at the temperature to which it is subjected, in then heating the mold to produce integration by surface adhesion of the particles of the contained material.

2. The method of forming articles of highly refractory materials which consists in compacting the comminuted material in a carbon mold corresponding to the final form of the article and heating said mold to produce integration by surface adhesion of the particles of the contained material.

3. The method of forming articles of highly refractory materials which consists in compacting the comminuted material in a fashioned mold of graphitic carbon corresponding to the final form of the article and in heating the mold to produce integration by surface adhesion of the particles of the contained body.

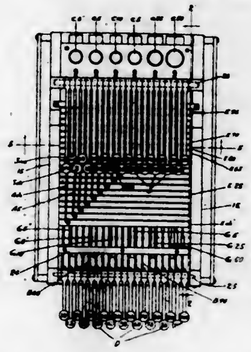
4. The method of protecting high fusing oxidizable electrical heating resistances which consists in embedding said resistance in a body of comminuted non-oxidizable refractory material with enlarged terminals leading out from said body and in heating the body to integrate said refractory material and hermetically seal and protect from oxidation the resistance therein.

5. The method of protecting carbon heating resistances which consists in embedding and completely protecting the same in a body of comminuted non-oxidizable refractory material and in heating to produce integration of said refractory material.

[Claims 6 and 7 not printed in the Gazette.]

1,155,359. CHANGE-MAKING MACHINE. JOHN B. LEWIS, Kit Carson, Colo., assignor to The Lewis Change Meter Company, Denver, Colo. Filed Sept. 18, 1913. Serial No. 789,685. Renewed Mar. 1, 1915. Serial No. 11,326. (Cl. 133—2.)

1. In a change making machine, a coin tube, a coin slide beneath the tube, a reciprocable bar having a hooked end adapted when raised to engage with the slide, a deposit key, connections between the deposit key and the bar whereby the manual movement of the key raises the hooked end of the bar, a sales key, and connections between the sales key and the bar whereby the manual movement of the sales key moves the bar and slide.



2. In a change making machine, a coin tube, a coin slide disposed beneath the tube, a sliding bar positioned when raised to engage with the coin slide, a plurality of rock shafts under the bar, cams carried by some of said rock shafts for raising the bar into slide-engaging position, a plurality of deposit keys, connections between the deposit keys and the rock shafts whereby the depression of the deposit keys rotates the shafts, a plurality of sales keys, and connections between some of said sales keys and the bar whereby the depression of the sales keys moves the bar.

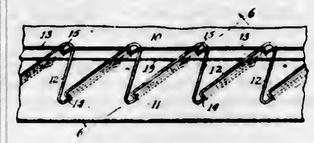
3. In a change making machine, a plurality of coin tubes, coin slides beneath said tubes, a plurality of bars mounted to slide beneath the coin tubes and having hooks adapted when raised to engage with the coin slides, a plurality of rock shafts journaled beneath the bars, cams carried by said rock shafts for raising the hooks of some of said bars selectively, a plurality of deposit keys connected with the rock shafts whereby the depression of the deposit keys rotates the shafts, and a plurality of sales keys connected with the bars whereby the depression of the sales keys moves the bars.

4. In a change making machine, a plurality of coin receptacles, mechanism for withdrawing a single coin from each of said receptacles, bars slidably mounted and adapted to engage with the coin withdrawing mechanism when raised, a plurality of rock shafts journaled beneath the bars, means carried by said rock shafts for raising some of said bars selectively, a plurality of deposit keys, connections between the deposit keys and the shafts whereby the depression of the keys rotates the shafts, a plurality of rock shafts journaled above the bars, fingers depending from said upper rock shafts, pins through the bars engaged by said fingers, a plurality of sales keys, and means connecting the sales keys and upper rock shafts whereby a depression of the sales keys rotates said upper rock shafts.

5. In a change making machine, a plurality of coin receptacles, mechanism for withdrawing a single coin from each of said receptacles, bars slidably mounted and adapted to engage with the coin withdrawing mechanism when raised, a plurality of rock shafts journaled beneath the bars, means carried by said rock shafts for raising some of said bars selectively, a plurality of deposit keys, connections between the deposit keys and the shafts whereby the depression of the keys rotates the shafts, a plurality of rock shafts journaled above the bars, means carried by said upper rock shafts for sliding the bars, a plurality of sales keys, and means connecting the sales keys and upper rock shafts whereby a depression of the sales keys rotates said upper rock shafts.

[Claims 6 and 7 not printed in the Gazette.]

1,155,360. HEM OR SEAM FOR SEWED ARTICLES. JOHN G. LEWIS, St. Louis, Mo. Filed June 18, 1909. Serial No. 502,878. (Cl. 112—84.)



1. A hem or seam for sewed articles, comprising a plurality of layers of textile or similar material and a row of stitches connecting said layers, said stitches entering and emerging on the same side of the work, consisting of a series of keyed penetrant loop structures, and a series of overcast loops or bights, overcast on the surface of the work from the points of entrance of two successive stitches, the emergent portion of one only of said two successive stitches passing through and engaging the overcast loop formed between it and the preceding stitch, and said overcast loops formed in the same thread as the penetrant loops.

2 A hem or seam for sewed articles, comprising a plurality of layers of textile or similar material and thread uniting said layers of material comprising two series of loops formed in a single thread, alternate loops, constituting one said series being keyed to form stitches penetrating and emerging from the same surface of the work, and the intervening loops constituting the other series being overcast on the surface of the work each from terminal points at the points of penetration of two successive stitches and each said overcast loops embracing the emergent thread at the point of emergence of the last made one of said stitches and free from the penetrant loops of all other stitches of the series.

3. A hem or seam for sewed articles comprising a plurality of layers of textile or similar material and a row of stitches each entering and emerging from the same surface of the work, said row of stitches consisting of a needle thread and a second thread, the needle thread of each stitch penetrating the material once only and keying with the second thread, and said needle thread also forming for each stitch an overcast loop embracing the emergent thread at the point of emergence of a succeeding stitch.

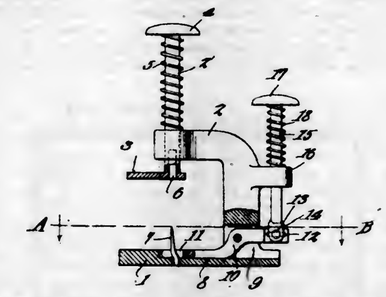
4. A hem or seam for sewed articles comprising a plurality of layers of textile or similar material and a row of stitches uniting said layers of material entering and emerging from the same surface of the work, said row of stitches consisting of a needle thread and a second thread, said needle thread forming two alternating series of loops, one series consisting of penetrant loops and the other series consisting of overcast loops, each of the overcast loops having its terminal points at the points of entrance of successive stitches and its bend or crest embracing the emergent thread at the point of emergence of the last made of said stitches, and said second thread engaging and keying all of the penetrant loops and overlying and retaining all of the overcast loops.

5. A hem or seam for sewed articles comprising a main layer of textile or similar material and one or more superimposed layers secured to said main layer by a row of stitches entering and emerging from different points on the same side of the goods composed of a needle thread and a second thread, the emergent portion of each stitch engaging with a loop of the needle thread brought forward from the preceding stitch, said needle thread having, in each stitch, a single penetrant loop engaging all of the layers of material and being keyed by the second thread.

[Claims 6 to 10 not printed in the Gazette.]

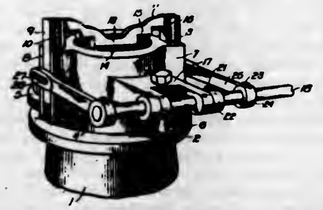
1,155,361. PUNCH. DANIEL E. LYNCH, Wichita, Kans. Filed Apr. 28, 1915. Serial No. 24,489. (Cl. 164—110.)

The combination with a base having a recess, and an arm upstanding from the base, of a yieldingly supported plunger slidably mounted in the arm and having a recessed foot, a perforating prong extending upwardly through the recess in the base, a lever fulcrumed in the arm and having a forked arm normally seated in the recess with its upper



face flush with the top of the base, and a yieldingly supported plunger connected to the arm and lever for shifting the forked end of the lever upwardly relative to the prong.

1,155,362. STEAM-EXHAUST NOZZLE. FREDERICK MERTSHEIMER, Kansas City, Mo. Filed Mar. 19, 1915. Serial No. 15,662. (Cl. 110—152.)



1. The combination with an exhaust nozzle, of a bridge crossing said nozzle and comprising blades arranged in vertically stepped relation, and means for raising or lowering the bridge.

2 The combination with an exhaust nozzle, of movable bridge supports at opposite sides of the nozzle, a bridge carried by said supports and comprising blades arranged in stepped relation across the nozzle, and means for raising or lowering the bridge.

3. The combination with an exhaust nozzle, of a bridge comprising a plurality of stepped blades, means for movably supporting the blades, whereby the latter may move into or from the nozzle, and mechanism for actuating the supporting means.

4. The combination with an exhaust nozzle, of posts slidably mounted at opposite sides of the nozzle, a bridge carried by said posts and comprising blades of different length and arranged in stepped relation across the nozzle, and means for actuating said posts to raise or lower the bridge relative to the nozzle.

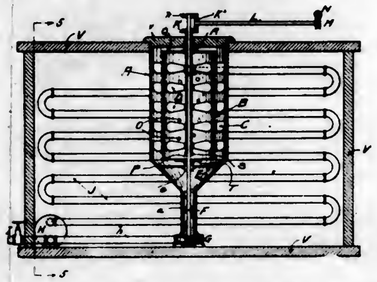
5. The combination with a nozzle, of posts slidably mounted at opposite sides of the nozzle and adapted for longitudinal movement relative thereto, a bridge extending across the nozzle and mounted on said posts, said bridge comprising a suspended blade having its ends set in from the posts to form a seat for the bridge on the edge of the nozzle, a second blade suspended from and set in from the ends of the first blade, and means for actuating the posts to vary the projection of the blades into and from the nozzle.

[Claims 6 to 12 not printed in the Gazette.]

1,155,363. REFRIGERATING APPARATUS. BENJAMIN AUGUSTUS MICHEL, New Orleans, La. Filed July 18, 1914. Serial No. 850,665. (Cl. 62—101.)

1. A refrigeration apparatus comprising a chamber, a refrigerant container, a rotatable perforated casing in the

container, said casing having dasher blades on the outside, a shaft carrying the casing, a dasher in the casing, said dasher having a hollow shaft through which the first-mentioned shaft extends, means for rotating the shafts in opposite directions, a pump, and a refrigerant circulating coil connected to the outlet of the pump and discharging into the refrigerant container, the inlet of the pump being connected to said refrigerant container.



2. A refrigeration apparatus comprising a chamber, a pump, a refrigerant container having a screen and connected on one side of the screen to the inlet of the pump, a rotatable perforated casing in the container on the other side of the screen, said casing having dasher blades on the outside, a rotary dasher in the casing, means for rotating the casing and the dasher in opposite directions, and a refrigerant circulating coil connected at one end to the pump outlet and at the other end to the refrigerant container.

3. A refrigeration apparatus comprising a chamber, a pump, a refrigerant container connected to the inlet of the pump, a rotatable perforated casing in the container, said casing having dasher blades on the outside, a rotary dasher in the casing, means for rotating the casing and the dasher in opposite directions, and a refrigerant circulating coil connected at one end to the pump outlet and at the other end to the refrigerant container.

4. A refrigeration apparauts comprising a chamber, a refrigerant circulating coil in the chamber, a pump discharging into one end of the coil, a refrigerant container into which the other end of the coil discharges, said container being connected to the inlet of the pump, a drive shaft for the pump passing through the container, and refrigerant agitating means carried by that portion of the drive shaft which passes through the container.

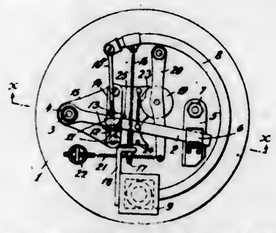
5. A refrigeration apparatus comprising a chamber, a refrigerant circulating coil in the chamber, a pump discharging into one end of the coil, a refrigerant container into which the other end of the coil discharges, said container being connected to the inlet of the pump, and a second container mounted in the first-mentioned container and in communication therewith.

[Claims 6 to 8 not printed in the Gazette.]

1,155,364. ELECTRIC SWITCH. JOHN F. MONNOT, Paris, France. Filed July 14, 1911. Serial No. 638,471. (Cl. 175—287.)

1. An electric switch comprising in combination a movable switch member, a contact device with which said member is adapted to make and break contact, a movable actuating member for said switch member, provided with grooves, and with means adapted to move said switch member in one direction or the other when said actuating member is moved, a spring-actuated jockey arranged to engage one or another of said grooves and by wedge action to enforce rapid movement of said actuating member, and a yielding primary operating device adapted to yield to such movement of the actuating member, and means connecting same to said switch-actuating member to move the latter.

2. An electric switch comprising in combination a movable switch member, a contact device with which said member is adapted to make and break contact, a movable actuating member for said switch member, provided with grooves, and with means adapted to positively engage said switch member to move same in one direction or the other when said actuating member is moved, a spring-actuated jockey arranged to engage one or another of said grooves and by wedge action to enforce rapid movement of said actuating member, and a yielding primary operating device arranged to be actuated by elastic fluid pressure, and means connecting same to said switch-actuating member to move the latter.



3. An electric switch comprising in combination a pivoted switch member, a contact device with which said member is adapted to make and break contact, a movable actuating member for said switch member, primary operating means connected to said switch-actuating member to move the latter, spring means acting upon said actuating member to enforce rapid movement thereof, said actuating member provided with means adapted to positively engage said switch member to move same, and a spring connecting said actuating member to said switch member, and adapted to withdraw said switch member quickly from said contact device.

4. An electric switch comprising in combination a movable switch member, a contact device with which said member is adapted to make and break contact, a movable actuating member for said switch member, primary operating means, means connecting the latter to said switch-actuating member comprising a link and adjustable abutments thereon adapted to engage opposite sides of a portion of said actuating member, said actuating member provided with means for actuating said switch member.

5. An electric switch comprising in combination a movable switch member, a contact device with which said member is adapted to make and break contact, a movable actuating member for said switch member, primary operating means, means connecting the latter to said switch-actuating member comprising a link and adjustable abutments thereon adapted to engage opposite sides of a portion of said actuating member, said actuating member provided with means for actuating said switch member, and means acting upon said actuating member and adapted to enforce rapid movement thereof.

[Claims 6 to 9 not printed in the Gazette.]

1,155,365. CARLINE. CHARLES F. MURRAY, Evanston, Ill., assignor to The Fowler Car Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 18, 1912. Serial No. 731,975. (Cl. 108—5.)



1. A carline composed of a metal beam having a single vertical web and two laterally projecting flanges, said flanges being longer than the web at the ends of the beam, both said flanges being bent downward into parallelism to provide means for attachment to a car side plate, substantially as described.

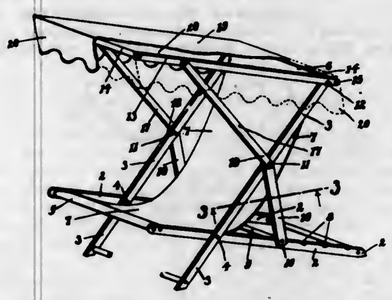
2. A carline composed of a metal beam having a single vertical web and two oppositely extending lateral flanges, said flanges being longer than the web at the ends of the beam, both said flanges being bent downward into parallelism to provide means for attachment to a car side plate, substantially as described.

3. A metallic carline comprising a web having flanges projecting laterally therefrom, the longitudinal dimension of each flange exceeding that of the web, the portions of the flanges which extend beyond the end of the web being bent transversely across the carline and lying at substantially right angles to the planes of the main portions of the respective flanges, and also extending beyond one and the same side of the carline.

4. A metallic carline comprising a web, a top flange projecting at one side of the web and a bottom flange projecting at the opposite side of the web, the longitudinal dimension of each flange exceeding that of the web, the portions of the flanges which extend beyond the end of the web being bent transversely across the carline and lying at substantially right angles to the planes of the main portions of the respective flanges, and also extending beyond one and the same side of the carline.

5. A metallic carline comprising a web, a top flange projecting at one side of the web and a bottom flange projecting at the opposite side of the web, the longitudinal dimension of each flange exceeding that of the web, the portion of the flanges which extend beyond the end of the web being bent tranversely across the carline and lying at substantially right angles to the planes of the main portions of the respective flanges, and also extending beyond one and the same side of the carline, said bent-over flange portions being disposed substantially coincident with the adjacent end of the web.

1,155,366. CHAIR-AWNING. ALEXANDER MYERS, Revere, Mass., assignor to International Comfort Chair Co., Boston, Mass., a Partnership consisting of Alexander Myers, Louis H. Burack, Samuel Hurwitz, and Albert Hurwitz, Boston, Mass. Filed Oct. 29, 1914. Serial No. 869,308. (Cl. 135—5.)



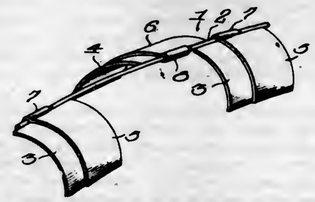
1. A chair awning of the character described, consisting of an oscillating covered frame member, adapted to be swung to the front or to the rear of the chair, and having an engaging end provided with disengaging means for disengagingly engaging said end with the back of the chair when the frame member is set in the sun-shade position; and oscillating supporting-arms having the upper ends of the same pivotally secured toward the opposite end of said frame member and the lower ends pivotally secured to the arms of the chair for swingingly engaging said frame member with said chair.

2. A chair awning of the character described, consisting of a rigid covered frame member having one end of the same provided with recesses for engaging with the chair to which the same is attached; swinging supporting arms having the upper ends pivotally secured to the frame member, near the end opposite the end provided with said recesses, and the lower ends adapted to pivotally engage with said chair for swingingly engaging said awning with said chair, substantially as shown.

3. A chair awning of the character described, consisting of a rigid frame member having a projecting end, an engaging end, and intermediate engaging means for holding said frame member in set position with the top of the chair; swinging supporting-arms having the upper ends pivotally secured to the sides of said frame member and positioned near to the projecting end of the same, and the lower ends adapted to be pivotally secured to said chair for swingingly engaging said awning with said chair; and a cover member adapted to inclose and cover said frame member substantially as shown.

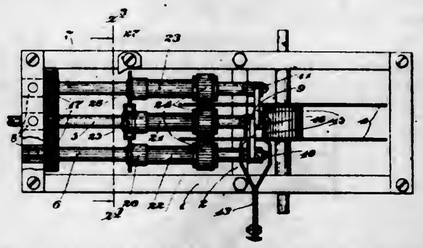
4. A chair awning of the character described, consisting of a rigid frame member provided with a projecting end and an engaging end adapted to be detachably secured to the top of a chair; swinging supporting-arms having the upper ends of the same pivotally secured to the sides and near to said projecting end of the same, and the lower ends of said supporting-arms adapted to be pivotally secured to the chair for permitting said frame member, when the engaging end of the same is disengaged from the upper end of the chair to swing forward or backward on same or to fold and close with said chair; and a covering member adapted to fit over said frame and inclose the same, substantially as shown.

1,155,367. LINER FOR PNEUMATIC TIRES. FINESS E. NEAL, Anderson, Ind. Filed Dec. 14, 1914. Serial No. 877,228. (Cl. 152—18.)



A tire shield comprising a single ring and two annular series of units disposed one series on each side of said ring, each unit comprising inner and outer rectangular plates of substantially equal area, one half of the width of the inner plate being overlapped by one half of the width of the outer plate, and a knuckle uniting and formed integrally with the inner ends of the overlapped halves of the plates, the knuckles of the several units being disposed end to end around the ring, and the projecting halves of all the inner plates being overlapped by the projecting halves of the outer plates of adjacent units.

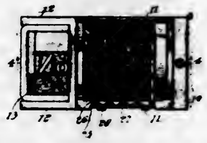
1,155,368. REVERSIBLE VARIABLE-SPEED DRIVE. REUBEN B. OMAN, Willmar, Minn. Filed Jan. 11, 1913. Serial No. 741,481. (Cl. 74—26.)



In a transmission mechanism, the combination with a shaft having two laterally spaced disks, of three shafts geared together and provided with friction wheels slidable thereon but rotatable therewith, the said disks being interposed between said wheels, connections applied to said shafts for imparting angular movement thereto to cause the intermediate friction wheel and one or the other of the outer friction wheels to clamp one or the other of said disks between them, according to the direction of ro-

tation desired, a grooved collar on said intermediate friction wheel, single collars on the other two of said wheels working in said grooved collar, said collars connecting said friction wheels for a simultaneous sliding movement on their respective shafts, and a shipper lever having a stud working in said grooved collar.

1,155,369. TYPOGRAPHICAL NUMBERING-MACHINE. JOSEPH H. PRICE, Lombard, Ill., assignor of one-half to Chicago Paper Company, Chicago, Ill., a Corporation of Illinois. Filed June 7, 1915. Serial No. 32,479. (Cl. 101—184.)



1. A typographical numbering machine comprising in combination a plurality of numbering wheels, a sectional shaft for supporting said wheels, one section of which supports the unit wheel to the exclusion of the other wheel and wheels.

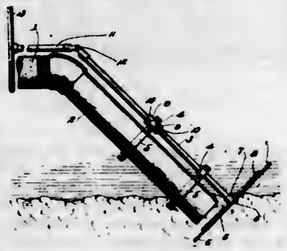
2. A typographical numbering machine comprising in combination a series of numbering wheels, a transversely divided shaft therefor, means for removably locking the sections thereof together, a unit wheel supported upon one of said sections to the exclusion of the other numbering wheels.

3. A typographical numbering machine comprising in combination a series of numbering wheels, a sectional shaft transversely divided into two sections, a pin on one section, a socket in the other section for receiving said pin, means for preventing the rotary movement of either section, and means for maintaining said shaft against longitudinal movement.

4. A typographical numbering machine comprising in combination a series of numbering wheels, provided with drop ciphers, a shaft for supporting said wheels, provided with a groove adapted to receive and maintain said ciphers in their dropped position, said shaft being constructed in sections removably jointed together, one of which sections is provided with means for visually indicating when the groove therein is in register with the drop ciphers.

5. A typographical numbering machine comprising in combination a sectional shaft, provided with a longitudinal groove, a series of numbering wheels mounted upon said shaft, provided with drop ciphers, adapted to be moved to register with said ciphers on turning the shaft, means whereby both sections of said shaft may be simultaneously revolved, means for indicating the register of the drop groove with the ciphers therefor, and means for locking said shaft in a fixed position.

1,155,370. PUMP. JAMES H. RANDLES, Poplar Bluff, Mo. Filed June 11, 1914. Serial No. 844,387. (Cl. 37—9.)



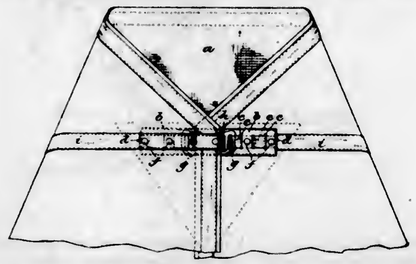
1. A pump comprising an intake pipe, clamps detachably supported by said pipe, bearings in said clamps above said pipe, a shaft revolubly journaled in said bearings, a series of arms supported by the end of said shaft adjacent to the end of said pipe, adjustable means coöperating with said bearings and said shaft whereby said arms may be supported at any desired distance from the end of said pipe, and manual means for revolving said shaft.

2. A pump comprising an intake pipe, clamps detachably supported by said pipe, bearings in said clamps above said pipe, a series of radial arms attached to said shaft adjacent to the open end of said pipe, a series of rings of different diameters concentric with said shaft and supported by said arms, adjustable devices coöperating with said bearings and said shaft whereby said arms and said rings may be retained at any desired distance from the open end of said pipe, and manual means for revolving said shaft.

3. A pump comprising an intake pipe, clamps detachably supported by said pipe, bearings in said clamps above said pipe, a series of arms attached to said shaft adjacent to the open end of said pipe, a series of rings of different diameters attached to said arms, adjustable devices cooperating with said bearings to hold said shaft in position to hold said arms and said rings at any desired distance from the end of said pipe, an additional shaft, a universal pivot joint connecting said additional shaft with said first-named shaft, and manual means for revolving said additional shaft and thereby said first-named shaft.

4. A pump comprising an intake pipe, bearings wholly supported by said intake pipe, a shaft journaled in said bearings, arms attached to said shaft adjacent to the open end of said pipe, rings of different diameters attached to said arms, devices coöperating with said bearings to hold said shaft in position to retain said arms and rings at any desired distance from the open end of said pipe, an additional shaft pivoted to said first-named shaft, and means for revolving said additional shaft.

1,155,371. ADJUSTABLE BREAST-FASTENING FOR BLANKETS. GUSTAVE C. RASCH, Burlington, Wis. Filed Dec. 9, 1912. Serial No. 735,594. (Cl. 24—206.)



1. Adjustable breast fastenings for blankets consisting of strips of flexible material each formed with a number of transverse slits, flexible bands drawn alternately in and out through said slits and forming a series of loops, the strips being secured with the bands at intervals between the loops, one to the inner side and the other to the outer side of a blank adjacent and transversely to its front edges, and hooks attached to the blanket at the ends of said strips adjacent to the front edges of the blanket and each adapted to be engaged with any of the series of loops of the opposite band.

2. Adjustable breast fastenings for blankets consisting of two flexible strips each formed at intervals with a number of transverse slits, flexible bands woven alternately in and out through said slits and each forming a series of loops, the strips being attached with the bands between the loops, one to the inner side and the other to the outer side of a blanket adjacent and transversely to its front edges below the neck, and hooks secured to the blanket adjacent to its front edges by looped ends of the bands and each adapted to be engaged with any loop of the opposite band.

3. Adjustable breast fastenings for blankets consisting of bands attached at intervals one to the inner side and the other to the outer side of a blanket and forming two series of loops adjacent and transversely to its front edges, and hooks secured to the blanket adjacent to the inner ends of the series of loops and having their downwardly projecting points bent backward and laterally, the point of the underlying hook being bent laterally outward while the point of the overlying hook is bent laterally inward.

1,155,372. IGNITION DEVICE FOR INTERNAL-COMBUSTION ENGINES. LEWIS T. RHOADES, Mont Clare, Pa., assignor to New York Coil Company, Incorporated, New York, N. Y. Filed Mar. 6, 1915. Serial No. 12,530. (Cl. 123—117.)



1. The combination with a movable circuit breaker arm, of a cam positioned transversely of the arm and tapering from one end toward the other, a rotary member having cams thereon adapted to engage the cam of the circuit breaker arm, and means for moving one of said members relative to the other, substantially as described.

2. The combination with a movable circuit breaker arm, of a cam positioned transversely of the arm and tapering from one end toward the other, a rotary member having cams thereon adapted to engage the cam of the circuit breaker arm, and means for moving the rotary member transversely of the circuit breaker arm, substantially as described.

3. The combination with a movable circuit breaker arm, of a cam positioned transversely of the arm and tapering from one end toward the other, a rotary member having cams thereon adapted to engage the cam of the circuit breaker arm, and a centrifugal governor constructed to move the rotary member at right angles to the circuit breaker arm, substantially as described.

4. The combination with a circuit breaker arm having a tapering cam thereon, said cam extending transversely of the circuit breaker arm and tapering from one end toward the other, of a rotary cam engaging the cam on the arm, a time shaft on which said rotary cam is mounted, and a governor on the time shaft constructed to move the rotary cam longitudinally, substantially as described.

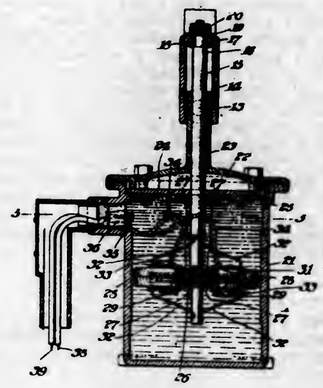
5. The combination with a circuit breaker arm having a tapering cam thereon, said cam extending transversely of the circuit breaker arm and tapering from one end toward the other, of a time shaft, a sleeve on the time shaft, a rotary cam secured to the sleeve and engaging the cam on the circuit breaker arm, and a governor mounted on the time shaft and constructed to move the sleeve longitudinally, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,155,373. TRACK INSTRUMENT. JOHN STUART ROMIG, Altoona, Pa. Filed Oct. 31, 1914. Serial No. 869,541. (Cl. 246—35.)

1. The combination with a track, of an instrument comprising a liquid receptacle, means adapted to be reciprocated in and to be operated by liquid in said receptacle, circuit making and breaking mechanism operated by said means, and mechanism connecting said track and means whereby the latter is reciprocated.

2. The combination with a track, of an instrument comprising a liquid receptacle, means comprising circuit making and breaking mechanism movable in and operated by liquid in said receptacle, a signal, mechanism whereby said circuit making and breaking means operates said signal, and mechanism connecting said track and said means first named for operating the latter.



3. The combination with a track, of a receptacle containing a liquid, mechanism comprising circuit making and breaking means adapted to reciprocate in said receptacle, a rod for reciprocating said mechanism, and means connecting said rod and track whereby the latter is adapted to reciprocate the former.

4. The combination with a track comprising rails, a bar connected with one of said rails and adapted to be moved thereby, a piston rod connected with said bar and adapted to be reciprocated thereby, circuit making and breaking mechanism connected in movable relation with said rod, and a vessel containing a liquid in which said making and breaking mechanism is adapted to be reciprocated.

5. The combination with a track comprising a pair of rails, a cross bar fixed to said rails, a rod connected with and reciprocated by said cross bar, a fulcrumed member carried by said rod, circuit making and breaking mechanism comprising a contact carried by said member, and a vessel containing a liquid in which said member is reciprocated by said rod, whereby said member is oscillated.

[Claims 6 to 11 not printed in the Gazette.]

1,155,374. [WITHDRAWN.]

1,155,375. GRAIN-BAG. JAMES F. SHANNON, Farmville, Va. Filed Aug. 6, 1912. Serial No. 713,622. (Cl. 150—1.)

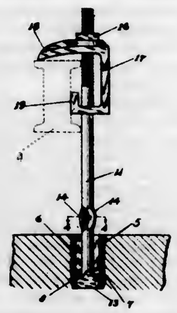


1. The combination with a sack to inclose and protect a commodity against attack by rodents comprising a

flexible metallic mesh container body being positively closed by a portion of itself at one end to prevent attack by rodents at said end, said metallic body having an insert opening at the second end, of means to positively close the bag at said opening to prevent the entrance of rodents thereat comprising bars, one bar being fastened on each of opposite sides of the body to the body at the insert opening, one of said bars being provided with a flange to overlap the other bar for the purpose specified, and means positively fastening said bars against relative movement.

2. The combination with a sack to inclose and protect a commodity against the attack of rodents, comprising a flexible, metallic mesh container body being substantially closed by a portion of itself at one end to prevent an attack by rodents at said end, said metallic body having an inserted opening at the second end, said opening providing a pair of straight horizontal edges, of means to positively close the bag at said opening to prevent the entrance of rodents thereat comprising independent alined bars, one of said bars fastened to said bag adjacent to each of said edges, said bars extending above said edges, said bars being of similar length, the upper longitudinal edge of one of said bars being perforated to overlap the corresponding edge of the other of said bars, and common means for securing said bars together.

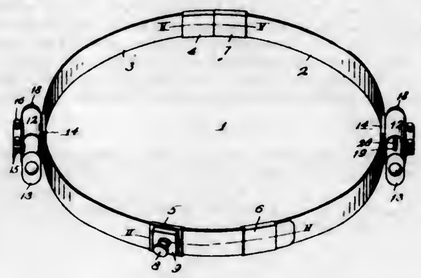
1,155,376. FURNITURE-ANCHOR. HARVEY C. SHEARER, Columbus, Ohio, assignor to Fayette A. McKenzie, Columbus, Ohio. Filed Feb. 21, 1914. Serial No. 820,342. (Cl. 155—34.)



1. A furniture anchor comprising a socket member having an elongated slot passing through its body, a bracket member adapted to engage the furniture, a bolt and nut for engaging said bracket member and said socket member, said bolt being provided wtih a head similar in shape to the slot in said body member, said socket member being arranged to engage the head of the bolt when the bolt is given a partial turn and fins on said bolt disposed at such an angle with respect to its head to limit its passage through said socket member.

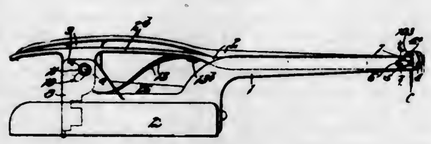
2. A furniture anchor comprising a socket member having an elongated slot passing through its body, the bottom of said member having a substantially circular countersunk portion communicating with said elongated slot, inwardly projecting shoulders in said countersunk portion, a bolt and nut, a flattened head on said bolt adapted to fit said slot and engage the shoulders in said countersunk portion when the bolt is given a partial turn, fins on said bolt disposed at such an angle with respect to its head to limit its passage through the socket member, and a bracket member for engaging the furniture and held on said bolt by said nut.

1,155,377. COLLAPSIBLE DUPLEX-FLASH-LIGHT BELT. JAMES F. SPALDING, Kansas City, Mo. Filed Apr. 17, 1915. Serial No. 22,073. (Cl. 240—59.)



In a belt, a pair of semi-circular metallic members each having a source of light connected thereto, end loops fixed on one of the semi-circular members, another fixed loop arranged on said specified member to the rear of and adjacent one of the end loops thereof, a thumb screw borne by one of said end loops and having a head on its inner end, the other semi-circular member having its ends passed through the respective aforementioned loops, and a loop fixed on an end of the second named member and receiving the adjacent end portion of the first named member and adapted to abut the loop at said adjacent end of the first named member, said head of the screw being adapted to engage the second named member.

1,155,378. NEEDLE-HOLDER. EDWIN H. STEEDMAN, St. Louis, Mo. Filed Feb. 6, 1915. Serial No. 6,558. (Cl. 128—44.)



1. A needle holder provided with coöperating needle-clamping members, one of which can be moved relatively to the other, jaws on said members for gripping a needle, one of said jaws having a portion that hangs over the other jaw when the jaws are closed, and means for moving the needle from under the overhanging portion of said jaw when the jaws open.

2. A needle holder provided with a needle-clamping means composed of two members, one of which is adapted to be moved longitudinally of the other to clamp and release the needle, coöperating jaws on said members for clamping the needle, one of said jaws having an overhanging portion that laps over the other jaw when the jaws are closed and thus prevents the needle from moving laterally out of said jaws, and means for moving the needle away from the overhanging portion of said jaw when the jaws open.

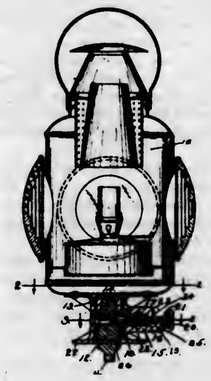
3. A needle holder provided with a needle-clamping means composed of two members, one of which is adapted to be moved longitudinally of the other to clamp and release the needle, coöperating jaws on said members for clamping the needle, one of said jaws having an overhanging portion that laps over the other jaw when the jaws are closed and thus prevents the needle from moving laterally out of said jaws, and means for moving the needle away from the overhanging portion of said jaw when the jaws open, said means also serving to hold said members together and guide one member on the other.

4. A needle holder having a needle-operating member composed of a stationary part and a movable part provided with coöperating needle-gripping portions, and a device on one of said parts that projects into an inclined slot on the other part which is of such dimensions that the action of the side walls thereof on said pin will cause said movable part to move longitudinally of the stationary part when one end of said movable part is raised or lowered.

5. A needle holder having a needle-operating member composed of a stationary part and a longitudinally movable part provided with coöperating needle-gripping portions, said movable part having a resilient handle, and automatic means for causing said handle to be held locked under tension when said coöperating needle-gripping portions are in engagement with the needle.

[Claims 6 to 20 not printed in the Gazette.]

1,155,379. LOCKING DEVICE FOR LANTERNS. IAA G. STUTSMAN, Tomah, Wis. Filed June 17, 1915. Serial No. 34,675. (Cl. 240—52.)



1. The combination of a lantern formed with a socket, a support over which said socket fits provided with a transverse recess, and a spring-pressed locking element in said socket adapted to enter said recess, said support being formed with a cam surface arranged to force back the locking element when the lantern is placed on the support.

2. The combination of a lantern formed with an internally tapered socket, a correspondingly tapered support over which said socket fits, said support being provided with a transverse recess and said socket being formed with a boss having a projection on one end thereof, said boss having a bore and a counter-bore of larger diameter than said bore, the counter-bore extending through the inner face of said socket, a reciprocable and revoluble locking device comprising a bolt in the counter-bore having a stem extending through said bore, a spring seated in the counter-bore and surrounding the stem and bearing against the bolt, and a stop pin on the stem which is adapted to engage the projection on the end of the boss when the locking device is slightly revolved in its retracted position, the locking end of said bolt and one surface of said tapered support being so mutually conformed that when the socket is fitted over the support a movement of the socket downwardly upon said support will cause the bolt to be automatically forced backward until the socket is fully seated on said support, whereupon the bolt will be automatically forced into the recess in the support.

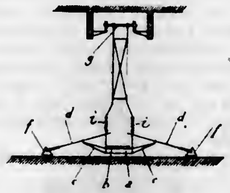
1,155,380. MANICURING INSTRUMENT. ARTHUR H. SWANK, Fremont, Ohio. Filed June 23, 1913. Serial No. 775,306. (Cl. 30—23.)



1. A manicuring instrument comprising a body having a recess extending inward from its outer edge, and a projection located at one side of the recess and extending partly across the same, said projection having its outer edge extending inward a substantial distance with respect to the adjacent portion of the periphery of the instrument, the body also having a portion at the inner end of the recess which extends in the same direction as the projection, and then transversely thereof a material distance beyond the extremity thereof, whereby the extremity of the projection will be located entirely within the outline of the instrument.

2. A manicuring instrument comprising an elongated strip having a recess extending inward from one lateral edge thereof, and a longitudinal projection located at one side of the recess and extending partly across the same, said projection having its outer edge extending inward a material distance with respect to the adjacent portion of the periphery of the strip, the strip also having a portion at the inner end of the recess which extends in the same direction as the projection, and then transversely thereof a material distance beyond the extremity of the projection, whereby the extremity of the projection will be located entirely within the outline of the instrument.

1,155,381. ROWING-CRAFT INTENDED FOR AN AMUSEMENT DEVICE. GÉZA SZIKLAI, Budapest, Austria-Hungary. Filed Sept. 8, 1913. Serial No. 788,675. (Cl. 104—111.)

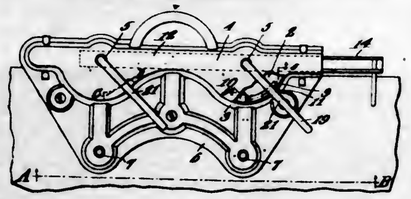


In combination, an upper track, wheels mounted on said track, a boat structure suspended in a freely rotatable manner from said wheels, springs on which said boat structure is mounted, a lower track, two rows of abutments on said lower track, rowlocks, and oars fitting in said rowlocks and adapted frictionally to engage said abutments to propel the boat and by means of such suspension to produce a natural gliding and rocking motion, substantially as herein described.

1,155,382. BILL-FILE. JAMES M. TEAMER, Evansville, Ind., assignor of one-third to Frederick W. Schepman and one-third to Clinton T. Kohl, Evansville, Ind. Filed Sept. 28, 1914. Serial No. 863,916. (Cl. 129—10.)

1. In a bill file, the combination with a tubular keeper and an arch member mounted to slide into and out of engagement with the keeper and to rotate, of a slidable actuating member, and means operated thereby during the movement thereof in one direction for successively sliding and rotating the arch member.

2. In a bill file, the combination with a keeper and an arch member mounted to slide and rotate, one end of said member being adapted to project into the keeper, of an actuating member and means operated by said member during its movement in one direction, for successively sliding the arch member out of engagement with its keeper and rotating said arch member away from the keeper.



3. A bill file including a keeper, an arch member mounted to slide and rotate, one end of said member being adapted to project into the keeper, a slidable actuating member, and an arm movable with the arch member and movably engaged by the actuating member, said actuating member and arm coöperating to successively withdraw the arch member from its keeper and to swing said arch member away from the keeper during the movement of the actuating member in one direction.

4. A bill file including a keeper, an arch member mounted to slide and rotate, one end of said member being adapted to project into the keeper, a slidable actuating member, and an arm movable with the arch member and movably engaged by the actuating member, said actuating member and arm coöperating to successively withdraw the arch member from its keeper and to swing said arch member away from the keeper during the movement of the actuating member in one direction, said arm and actuating member coöperating to hold the arch member against withdrawal from its keeper prior to such movement of the actuating member.

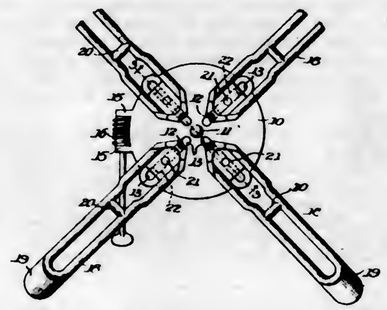
5. A bill file including a tubular keeper having a beveled free end, an arch member mounted to slide and rotate, an arm movable with the arch member, an actuating member engaging the arm, said actuating member and arm coöperating, during the movement of the arm in one direction, to successively shift the arch member to position at one terminal thereof above the keeper and to lower said end into the keeper, the wall of the beveled end of the keeper constituting a stop for limiting the swinging movement of said arch member.

[Claims 6 to 9 not printed in the Gazette.]

1,155,383 ADJUSTABLE SUPPORT. ALEXANDER TISCHER, Chicago, Ill. Filed June 25, 1913. Serial No. 775,629. (Cl. 248—30.)

1. The combination of a guide plate radially slotted, and adjusting plate pivoted at its center to the center of the guide plate and having radially curved slots crossing the slots of the guide plate, a plurality of clamping jaws upon the outer face of the guide plate, elongated guide members formed upon the jaws, fitting the slots of the guide plate and slidable therein, binding members passing through the slots of both plates and into the jaws, and means for oscillating the adjusting plate with respect to the guide plate.

2. The combination of a guide plate radially slotted, an adjusting plate pivoted at its center to the center of the guide plate and having radially curved slots crossing the slots of the guide plate, a plurality of clamping jaws upon the outer face of the guide plate, elongated guide members formed upon the jaws, fitting the slots of the guide plate and slidable therein, binding members passing through the slots of both plates and into the jaws, and means for oscillating the adjusting plate with respect to the guide plate, comprising a worm wheel mounted upon one of the plates, and teeth formed upon the other plate and in mesh with the worm wheel.



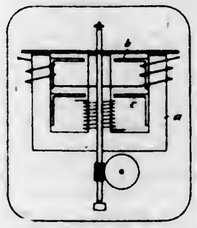
3. The combination of a guide plate radially slotted, an adjusting plate centrally pivoted to the center of the guide plate and having radially curved slots crossing the slots of the guide plate, a plurality of clamping jaws upon the outer face of the guide plate, elongated guide members formed upon the jaws, fitting the slots of the guide plate and slidable therein, cap screws passing through the slots of both plates and into the jaws, bearing lugs formed upon the guide plate, a handled worm wheel tangentially mounted for rotation in the lugs, and teeth upon the periphery of the adjusting plate meshing with the worm wheel.

4. The combination of a horizontal plate, radially adjustable upright clamping jaws upon the plate, horizontal legs formed upon the bottoms of the jaws and extending radially therefrom, and downwardly disposed feet upon the outer ends of the legs.

5. The combination of a horizontal plate, radially adjustable upright clamping jaws upon the plate, horizontal legs formed upon the bottoms of the jaws and extending radially therefrom, and downwardly disposed feet upon the outer ends of the legs, said jaws being toothed on their adjacent sides.

[Claims 6 to 8 not printed in the Gazette.]

1,155,384. ELECTRICAL METER. HEINRICH TOLLE, Berlin, Germany, assignor to Siemens-Schuckertwerke G. M. B. H., Berlin, Germany, a Corporation of Germany. Filed Mar. 5, 1915. Serial No. 12,405. (Cl. 171—264.)



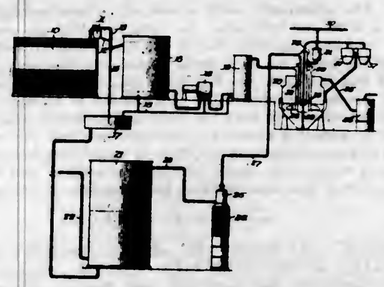
1. An alternating current meter of the Ferraris type comprising a series field and a voltage field, and a magnetic shunt for said series field, said shunt being designed to compensate the drop of speed at higher loads.

2. An alternating current meter of the Ferraris type comprising a series field, a voltage field, and a magnetizable member for said series field, said member being arranged to form a shunt essentially for said series field and designed to become magnetically saturated at higher current loads for compensating the drop of speed occurring thereby.

3. An alternating current meter of the Ferraris type comprising a triple-shanked iron, series windings mounted on the two outer shanks of said iron, a voltage coil mounted on the middle shank and a magnetizable member interposed between said outer shanks, said magnetizable member being arranged to form a shunt essentially for said series field and designed to become magnetically saturated at higher current loads for compensating the drop of speed occurring thereby.

4. An alternating current meter of the Ferraris type comprising a triple-shanked iron core, series coils mounted upon the outer shanks of said core, a voltage coil mounted upon the middle shank, magnetizable members provided at the ends of said outer shanks and mounted to be under the influence of said series coils, said members being designed to form a saturated magnetic shunt for the series field at a higher current load, and further magnetizable members mounted to form a shunt only for said voltage coil.

1,155,385. METHOD OF PRODUCING AMMONIUM SULFATE. FREDERICK TSCHUDY, Fairfield, Ala. Filed Sept. 21, 1914. Serial No. 862,833. (Cl. 23—21.)



1. The method of purifying gases of carbonisation which consists in separating from the gas the first condensate consisting of tars, tar oils and moisture, decanting off the weak ammonia liquor, cooling the gas to a temperature of 75° to 85° F., distilling the resulting condensate and the weak ammonia liquor, compressing the gas to a point at which the temperature of the gas is approximately 100° F., then passing the gas through one compartment of a saturator and passing the vapors of distillation of the ammonia liquor through a separate compartment of the same saturator, transferring heat from the vapors to the gas to bring the gas to approximately a temperature of 105° F. in the saturator, then passing the gas to the distributing mains and the waste gases from the vapors to the atmosphere, substantially as described.

2. The method of purifying gases of carbonization which consists in separating from the gas the first condensate consisting of tars, tar oils and moisture, decanting off the weak ammonia liquor, cooling the gas to a temperature of 75° to 85° F., distilling the resulting condensate and the weak ammonia liquor, compressing the gas to a point at which the temperature of the gas is approximately 100° F., then passing the gas through one compartment of a saturator and passing the vapors of distillation of the ammonia liquor through a separate compartment of the same saturator, supplying said saturator with sulfuric acid by spraying said acid into the departing vapors, the heat of the reaction and of the vapors from the still increasing the temperature of the gases to approximately 105° F., substantially as described.

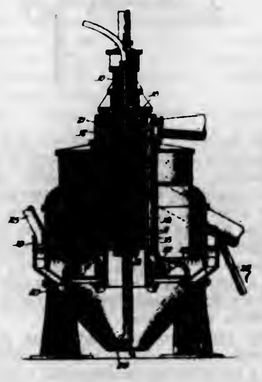
3. The method of recovering ammonium sulfate from gases of carbonisation, which comprises cooling of the gases to free them from tarry matters and water vapors and condensing the water vapors containing a certain percentage of the free and fixed ammonia liberated from the coal by distillation, distilling the condensate and cooling the resultant vapors to a temperature consistent with the pressure of the seal required for the vapor bath in the saturator, this temperature to be of sufficient degree to keep a portion of the vapor bath at its proper temperature, and to heat the bath for the gas inside the same saturator to a temperature not less than 105° F., substantially as described.

4. The method of recovering ammonium sulfate from gases of carbonisation, which comprises cooling of the gases to free them from tarry matters, and water vapors, and condensing the water vapors containing a certain percentage of the free and fixed ammonia liberated from the coal by distillation, distilling the condensate and cooling the resultant vapors to a predetermined temperature, passing these vapors through a high temperature zone of the saturator and spraying sulfuric acid counter-current to the waste vapors emerging from the acid bath, substantially as described.

5. The method of recovering ammonium sulfate from gases of carbonization which comprises cooling of the gases to free them from tarry matters and water vapors and condensing the water vapors containing a certain percentage of the free and fixed ammonia, liberated from the coal by distillation, distilling the condensate and introducing the gases of carbonization and the vapors of distillation independently into the saturator under differential pressure and at differential temperature, utilizing the higher heats of the vapors to keep a balance of temperature in the gas entering the saturator simultaneously with the vapors and diffusing the high temperature of the vapor bath to maintain a proper low temperature in the bath for the gas, substantially as described.

[Claim 6 not printed in the Gazette.]

1,155,386. SATURATING APPARATUS. FREDERICK TSCHUDY, Fairfield, Ala. Filed Sept. 21, 1914. Serial No. 862,835. (Cl. 23—21.)



1. In a saturator, the combination of an inclosing shell, a concentric division wall, a vapor cracker pipe within said wall and a gas cracker pipe outside of said wall, and means for spraying acid into the upper portion of the space inclosed by said division wall, substantially as described.

2. In a saturator, the combination of an inclosing shell having a liquid seal on its periphery, means for separately supplying vapor and gas to different portions of the same

acid bath, means for removing the formed salts, and means for returning to the liquid seal the liquor drained from the ejected salts, substantially as described.

3. In a saturator, the combination of a shell, three concentric tubes, open at the lower ends, arranged centrally in said shell and extending through the top of said shell and terminating above the bottom of the shell, the lower end of the inner tube terminating farthest away from and the lower end of the intermediate tube terminating nearest the bottom of the shell, the lower end of said inner tube provided with serrations, the lower end of the outer tube provided with a series of reversed wedge-like extensions having downwardly directed side walls, the edges thereof provided with serrations, the upper ends of the inner and outer tubes provided with pipe connections for outside sources of supply, the outer end of the intermediate tube provided with a pipe connection for withdrawal means, an outlet pipe connected to said shell and a seal about said shell, substantially as described.

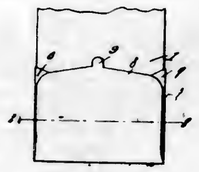
1,155,387. TAR-EXTRACTOR. FREDERICK TSCHUDY, Fairfield, Ala. Filed Oct. 2, 1914. Serial No. 864,632. (Cl. 48—138.)



1. In a tar extractor, the combination of a shell, walls forming a plurality of chambers, including a two-part distributing chamber, a separating chamber, and checker work in said separating chamber, said two-part distributing chamber provided, in the lower portion, with a gas port, a vertical arcuate baffle plate disposed near said gas port, said upper portion provided with a diaphragm having flanged apertures therethrough, said flanges extending upwardly, and a tube secured to said diaphragm and extending downwardly through said lower portion of said chamber, substantially as described.

2. In a tar extractor, the combination of a shell, a sealing pot upon which said shell is supported, said shell divided into a plurality of compartments, including a two-part distributing chamber, a separating chamber provided with checkerwork, said seal provided with a central depression, a drain leading therefrom, the lower portion of the distributing chamber provided with a gas inlet port, an arcuate baffle plate vertically disposed in front of said gas port, the upper portion of the distributing chamber having a diaphragm therein, said diaphragm provided with flanged apertures, the flanges extending upwardly and a downwardly-extending tube attached to said diaphragm and adapted to enter said central depression in said seal pot, substantially as described.

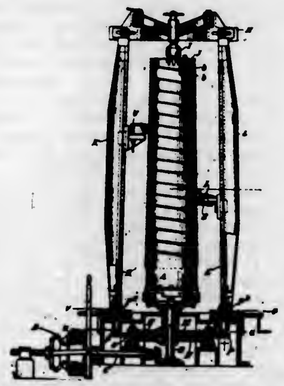
1,155,388. ENVELOP. PAUL HOLLADAY WAGGENER, Columbia, Ky. Filed Aug. 12, 1914. Serial No. 856,439. (Cl. 229—68.)



1. An envelop blank having a rectangular central portion, four flaps, one extending from each edge of the central portion the two opposite flaps being short with substantially parallel outer edges, one of the longer flaps carrying adhesive upon its free edges, and an adhesive carrying tab projecting from one edge of the remaining long flap, whereby when the two short flaps and the adhesive carrying longer flap are folded against the central portion and an article of greater length than the central portion is slipped between the two short flaps and such folded long flap, the remaining long flap incloses the opposite face of the article and the short flap and the parts are held so folded by the tab adhesively engaging the article.

2. The combination with a card, of an envelop comprising a body and free flaps, the body shielding one end of the card and the other end of the card being exposed beyond the body, the flaps being folded with respect to the body and the card, one flap being provided with a severable tongue connected to the card thereby to maintain the flaps folded and to hold the envelop detachably upon the card to permit a removal of the envelop from the card; and means for securing the flaps in closed positions with respect to the body, after the tongue is severed, and after the envelop has been refolded independently of the card.

1,155,389. MACHINE FOR MANUFACTURING SPIRALLY-REINFORCED PILE-SHELLS. WILLIAM J. WAINWRIGHT, Brainerd, Ill., and HERMAN RAYMOND SMITH, New York, N. Y., assignors to Raymond Concrete Pile Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 4, 1913. Serial No. 799,091. (Cl. 29—33.)



1. In a machine of the kind described, the combination with a mandrel of a device for winding a wire spirally thereon and a device for grooving a superposed shell of metal over the wire to form a reinforced shell.

2. In a machine of the kind described, the combination with a revolving mandrel, of means for winding the wire spirally thereon, and means for grooving a superposed shell of metal over the wire to form a reinforced shell.

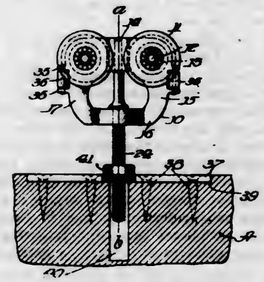
3. In a machine of the kind described, the combination with a mandrel and means for revolving the same, of supports parallel with the surface of the mandrel, a device for winding a wire spirally around the mandrel mounted on one of the supports, and a grooving attachment for forcing a superposed metal shell around the wire mounted on the other support, and means for causing the wire winding and grooving attachments to move longitudinally with respect to the mandrel.

4. In a machine of the kind described, the combination with a mandrel and means for revolving the same, of supports parallel with the surface of the mandrel, a device for winding a wire spirally around the mandrel, a threaded rod in one support carrying the winding device, a grooving attachment for forcing the superposed sheet metal shell around the wire, a threaded rod in the other support carrying the said attachment and means for imparting rotation to the threaded rods.

5. In a machine of the kind described, the combination with a revoluble mandrel, of a wire winding device movable longitudinally with respect thereto, whereby a wire may be wound spirally about said mandrel, and a grooving wheel movable longitudinally with respect to the mandrel, whereby a superposed metal shell may be forced around the wire and a reinforced shell produced.

[Claims 6 to 11 not printed in the Gazette.]

1,155,390. DOOR-HANGER. DONALD E. WILLARD, Danville, Ill. Filed July 6, 1915. Serial No. 38,098. (Cl. 16—91.)



1. A hanger for sliding folding doors comprising a hanger frame, track wheels, and a suspension bolt, the latter having driving connection with the hanger frame at its upper portion and a bearing support upon the hanger frame below the track wheels, substantially as described.

2. A door hanger comprising in combination a hanger frame, two pairs of track wheels mounted thereon in tandem, a track member having two separated parallel trackways, a suspension member rotatably mounted in the hanger frame and having a horizontally-disposed swivel bearing therein, and a driving connection therewith, the swivel bearing and the driving connection being separated from each other and the suspension member being adapted for connection to the door, substantially as described.

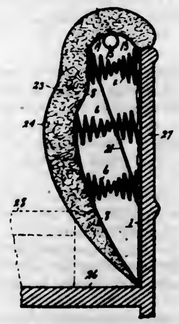
3. A door hanger comprising in combination a hanger frame having upper and lower frame elements, two pairs of track wheels journaled in said frame, a suspension member rotatably mounted within the frame and having a bearing in the upper of the frame members, the lower frame member having a horizontally-disposed antifriction bearing and the suspension member resting thereon, means for connecting the door to the suspension member, and means for locking the suspension member with relation to the door, substantially as described.

4. A door hanger having a hanger frame, two pairs of wheels mounted therein in tandem relation, a track having separated track ways for the wheels, a suspension element rotatably mounted in the hanger frame and depending between said trackways and having separate driving and swiveling connections with the frame, and steadying rollers mounted on the frame and adapted to engage the track ways.

5. An adjustable door hanger comprising a rigid frame, two pairs of wheels in tandem carried by said frame, an attaching plate adapted to be secured to a door and provided with an aperture therethrough, a suspension bolt rotatably mounted in the frame and provided with separated driving and swiveling connections therewith and having a threaded connection with the attaching plate, and a lock nut applied to the suspension bolt whereby to prevent rotative movement of same with respect to said plate when adjusted.

[Claims 6 to 8 not printed in the Gazette.]

1,155,391. SPRING-FRAME CONSTRUCTION. LEONARD A. YOUNG, Detroit, Mich. Filed Nov. 1, 1909. Serial No. 525,635. (Cl. 155—25.)



1. A spring frame construction, comprising two separate, vertically arranged frames having spaced upper border wires in substantially parallel relation, and a plurality of resilient arches projecting above said border wires and adapted to yieldingly support the upholstery in an arc above the top borders of the frames, said arches extending between said border wires to which their terminals are flexibly connected.

2. A spring frame construction, comprising spaced border members in substantially parallel relation, a plurality of resilient arches extending between said border members to yieldingly support the upholstery in a projected arc, and a laterally extending member crossing between and connecting the tops of said arches.

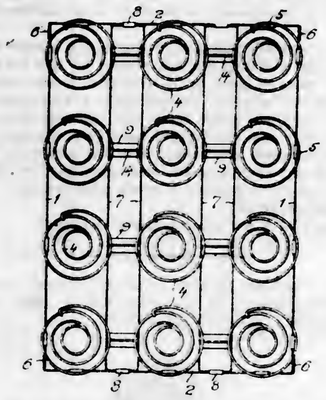
3. A spring frame construction having body springs, separate frames yieldingly held in spaced relation thereby, and a plurality of arch springs connected to the frame structure to lie outside of the plane of the frame sides and to act independently of the other springs for yieldingly supporting applied upholstery in an arch beyond the frame sides.

4. A spring frame construction, comprising a fixed primary frame, a movable secondary frame, a plurality of projected arches extending between the tops of said frames to support the upholstery in an arc above the borders thereof, and diagonally disposed brace rods connecting said frames to support the movable secondary frame independently of said arches.

5. A spring frame construction, comprising a fixed primary frame vertically disposed, a movable secondary frame in front of the primary frame, a plurality of projected resilient arches extending between and connecting the tops of said frames, and means for resiliently suspending the secondary frame in advance of the primary frame independently of said arches.

[Claims 6 to 9 not printed in the Gazette.]

1,155,392. SPRING STRUCTURE. LEONARD A. YOUNG, Detroit, Mich. Filed Nov. 4, 1913. Serial No. 799,101. (Cl. 5—29.)



1. A spring structure comprising a base frame having longitudinal and transverse members each provided with longitudinal recesses, upright body springs the base coils of which engage in the recesses, and means for locking the base turns therein, the springs and locking means spacing and holding the frame members in operative relation.

2. A spring structure comprising a base frame having longitudinally recessed side, end and intermediate members, upright body springs the base turns of which engage in the recesses of the frame members and are interlocked therein, the springs operating as spacing and holding members for retaining the frame members in operative relation.

3. A spring structure comprising a base frame having side, end and intermediate members with recesses therein, upright body springs the base turns of which are locked in the recesses of the frame member and act as spacing and holding means for retaining the frame members in operative relation.

4. A spring structure comprising a frame formed of side, end and intermediate strips on edge provided with spring seating recesses and upright body springs the base turns of which are seated in the recesses and locked with the strips, the base turns and strips coöperating to lock the frame together.

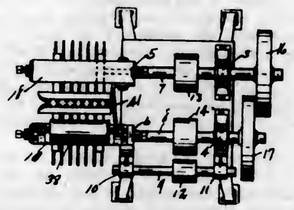
5. In a spring structure, a base consisting of side, end and intermediate strips on edge provided with longitudinal recesses, upright body springs, the base turns of which are seated in the recesses, clips securing the inserted turns of the side and end members, and clips securing adjacent portions of pairs of turns in the intermediate members and holding the latter in spaced relation.

[Claims 6 and 7 not printed in the Gazette.]

1,155,393. APPARATUS FOR CLEANING SAUSAGE-SKINS. HERMAN C. ZIPRICK, Spokane, Wash. Filed Feb. 17, 1915. Serial No. 8,897. (Cl. 17—12.)

1. A machine for cleaning sausage casings and the like comprising in combination, coacting pressure combs between which the casing is adapted to be manually or otherwise advanced to express and loosen extraneous matter thereon, and operating removers projecting into the comb spaces for engaging and removing such expressed matter, substantially as described.

2. A machine for cleaning sausage casings and the like comprising in combination, coacting pressure members between which the casing is adapted to be manually or otherwise advanced to express and loosen extraneous matter thereon, said pressure members having openings for projection thereinto of such expressed matter, and means projecting into such openings for removing such expressed matter therefrom, substantially as described.



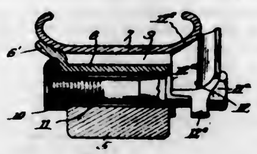
3. A machine for cleaning sausage casings and the like comprising in combination, coacting pressure members between which the casing is adapted to be manually or otherwise advanced to express and loosen extraneous matter therefrom, means for adjusting such members toward and from each other in accordance with the pressure to be exerted upon the casing, said members having openings for discharge of such express matter thereinto, and rotary means projecting into said openings for engaging and throwing off such expressed matter, substantially as described.

4. A machine for cleaning sausage casings and the like comprising in combination, a pair of comb pressure members shaped to converge from their ends toward their central portions and the teeth of which extend in the path of the casing drawn therebetween to a point slightly beyond the point of greatest convergence, means for adjusting said combs toward and from each other to vary the pressure to be exerted on the casing, and rotating removers projecting into the comb spaces at the point of greatest convergence but not into the space between said combs, substantially as described.

5. A machine for cleaning sausage casings and the like comprising in combination, a pair of pressure comb members shaped to converge from their ends toward their central portions and the teeth of which extend in the path of the casing to be drawn therebetween to a point slightly beyond the point of greatest convergence, means for adjusting said combs toward or from each other to vary the pressure to be exerted on the interposed casing, and rotating disks one projecting into each comb space and provided with peripheral teeth for removing the matter expressed into such comb spaces, substantially as described.

[Claim 6 not printed in the Gazette.]

1,155,394. PNEUMATIC-TIRE MOUNTING. ERLE K. BAKER, Chicago, Ill., assignor to Universal Rim Company, Chicago, Ill., a Corporation of Illinois. Original application filed July 3, 1911, Serial No. 636,693. Divided and this application filed July 19, 1911. Serial No. 639,393. (Cl. 152—21.)



The herein described improvement comprising a demountable-rim wedge-lug composed of a shank portion having a bolt hole and a unitary wedge portion substantially parallel with the projected axis of said hole and eccentrically offset with respect thereto, for the purpose specified.

1,155,395. VEHICLE-WHEEL. ERLE K. BAKER, Chicago, Ill., assignor to Universal Rim Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1912. Serial No. 692,477. (Cl. 152—21.)



1. A tire rim having two outwardly extending tire flanges of different shapes spaced at a greater distance apart than the width of the base of a tire to be mounted thereon, in combination with a loose ring mounted upon the rim between the flanges formed to coöperate alternately with each of said rim flanges to fill the space between a tire base and the rim and to retain a tire thereon.

2. A tire rim having a clencher tire flange at one side and a straight tire flange at the opposite side spaced apart on the rim a greater distance than the width of the base of a tire to be mounted thereon, in combination with a loose ring mounted on the rim between its flanges and formed to present a clencher flange opposite to the similar flange of the rim, and a straight flange opposite to the straight flange of the rim and adapted to be positioned adjacent to either of the rim flanges to coöperate with the opposite flange to retain a tire upon the rim.

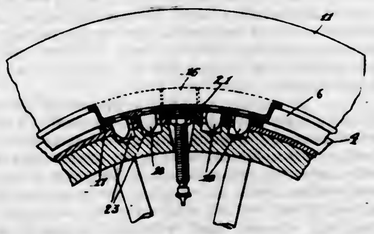
3. A contractible tire rim having an integral hooked tire flange on one side and an integral straight tire flange at the other side thereof, a movable flange ring mounted on the rim between the flanges and adapted to coöperate with either of the rim flanges to provide a tire base receiving space.

4. An integrally flanged tire rim split at one point to permit the placement thereon of a tire which has a non-stretchable base, an inwardly turned hooked flange at one side and an outwardly extending straight tire flange at the other side, in combination with a circumferential ring flange mounted on the rim between the flanges and formed to present an inwardly turned hooked flange to the similar rim flange and an outwardly turned straight tire flange to the similar straight rim flange.

5. A pneumatic tire carrier adapted to interchangeably carry tires having bases of two different forms and comprising a tire rim cut apart at one point in its circumference and having a tire retaining flange of one type at one side and a tire retaining flange of a second type at the other side, a loose flange ring mounted on the rim between the flanges and movable from side to side of the rim and adapted to coöperate with either of the rim flanges to hold a tire.

[Claims 6 to 8 not printed in the Gazette.]

1,155,396. MOUNTING FOR TIRES. ERLE K. BAKER, Chicago, Ill., assignor to Universal Rim Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 20, 1912. Serial No. 685,102. (Cl. 152—2.)



1. A tire carrying rim in the form of a split ring the ends thereof being separated to form a gap, said rim having a substantially cylindrical middle portion bordered by outwardly inclined bearing portions which terminate in integral outwardly extending tire engaging and retaining flanges, a relatively short rim section of substantially identical cross sectional shape with the rim arranged between the ends of the rim and substantially filling the gap, a bridge plate conformed to and with the inner periphery of the rim spanning the gap and means for connecting the bridge member to the ends of the rim and means immovably fixing the bridge member to the removable section, substantially as described.

2. A flanged tire carrying rim in the form of a ring cut apart at one point and thereby provided with a gap, a rim section substantially filling the gap, a bridge plate arranged against the inner periphery of the rim spanning the gap, inwardly projecting dowel pins on the ends of the rim, said bridge plate being provided with elongated openings receiving said dowels and thereby connecting the ends of the rim together and means immovably securing the removable rim section to the bridge plate, substantially as described.

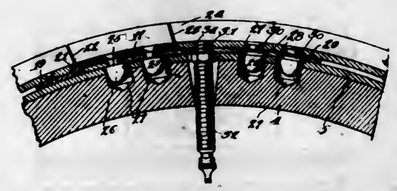
3. A flanged tire carrying rim in the form of a ring severed at one point and thereby provided with a gap, a removable rim section, having a valve stem hole, arranged between the ends of the rim and substantially filling the gap and a bridge plate conformed to and with the inner periphery of the rim immovably fixed to the removable rim section and having a valve stem hole registering with the valve stem hole in said removable section and loosely connecting the ends of the rim together, substantially as described.

4. A flanged tire carrying rim divided circumferentially into a major and a minor portion, the major portion having inwardly extending tapered projections adjacent its ends, a bridge plate arranged against the inner periphery of the rim rigidly connected to the minor portion and provided with openings to receive said projections, substantially as described.

5. A flanged tire carrying rim divided circumferentially into a major and a minor portion, the major portion having inwardly extending tapered projections adjacent its ends, a bridge plate arranged against the inner periphery of the rim rigidly connected to the minor portion and provided with openings to receive said dowels, said minor portion and bridge plate having registering openings forming a valve stem hole, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,155,397. VEHICLE-WHEEL. ERLE K. BAKER, Chicago, Ill., assignor to Universal Rim Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 30, 1912. Serial No. 694,246. (Cl. 152—21.)



1. A tire rim having an integral tire-retaining flange at each edge and having a main part and a removable section, the removable section being hinged at one end to the adjacent end of the main part, a circumferential projection extending from the opposite end of the removable section adapted to contact with the inner surface of the main part, a radially projecting dowel on the main part and said projection having an opening to receive the dowel to separably connect the removable section with the main part.

2. A pneumatic tire rim having integrally formed tire-retaining flanges at each edge and divided circumferentially into a main part and a removable section, the removable section being hinged at one end to the adjacent

end of the main part, a bridge plate carrying the removable section and extending beneath the opposite end of the main part, a dowel pin on the opposite end of the main part, and said bridge plate having an opening adapted to receive said dowel pin, the rim and the bridge plate being provided with openings adapted to receive the valve stem, said dowel being formed to receive and retain the end of an operating lever adapted to be projected through the valve-stem hole of the bridge plate for the purpose of contracting the rim.

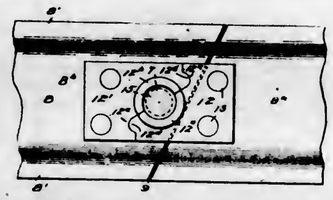
3. A tire rim adapted to hold a pneumatic tire and comprising a main section having a gap and a relatively short section adapted to fill the gap, a bridge plate upon which said short section is permanently mounted, said bridge plate being hinged at one end to one end of the main part of the rim and adapted to project beneath the opposite end and to be separably connected therewith whereby the rim is held against contraction and expansion.

4. A pneumatic tire carrier adapted to receive and retain either one of two types of tires and comprising a main circumferential section having a gap and a relatively short circumferential section adapted to fill the gap, said short section being hinged at one end to the adjacent end of the main section and adapted to be removably connected at its opposite end to the opposite end of the main section, said rim as a whole having an integrally formed tire flange of one type at one side and an integral tire flange of a second type at the other side and a loose flange ring mounted on the rim between the integral flanges and movable from side to side and adapted to coöperate with either of the rim flanges to hold a tire.

5. A pneumatic tire rim adapted to carry either a Dunlop or a clencher tire and comprising a main circumferential section presenting a gap and a short section adapted to fill the gap, said short section being hinged at one end to the adjacent end of the main section and formed at its opposite end to be removably connected with the opposite end of the main section, said rim as a whole having an integral inwardly turned clencher flange at one side and an integral inwardly turned straight or radial flange at the opposite side, and a loose flange ring carried by the rim between the flanges adapted to be moved from one side to the other and to present on each side a tire-receiving flange similar to the oppositely disposed integral flange.

[Claims 6 and 7 not printed in the Gazette.]

1,155,398. DEMOUNTABLE RIM FOR AUTOMOBILE-WHEELS. ERLE K. BAKER, Chicago, Ill., assignor to Universal Rim Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 10, 1914. Serial No. 823,805. (Cl. 152—21.)



1. A diagonally transplit rim, in combination with complementary rim-end interlocking plates upon the inner periphery of the rim secured to respective ends and holding said ends slightly apart.

2. A diagonally transplit rim, in combination with complementary rim-end interlocking plates upon the inner periphery of the rim, secured to respective ends thereof, holding them apart and together forming a driver.

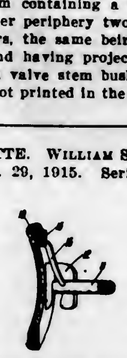
3. A diagonally transplit rim, in combination with complementary rim-end interlocking plates secured to respective ends of the rim and one overlapping the opposed end, said plates normally holding the rim ends apart and together forming a driver.

4. A transplit rim, in combination with complementary end interlocking members fixed upon the inner periphery of the rim, one of said members bridging the split in the rim and the other, with the rim end to which it is secured, containing a valve stem hole.

5. A transplit rim containing a valve stem hole and having upon its inner periphery two complementary end-interlocking members, the same being fixed to respective ends of the rim, and having projections which together form a driver and a valve stem bushing.

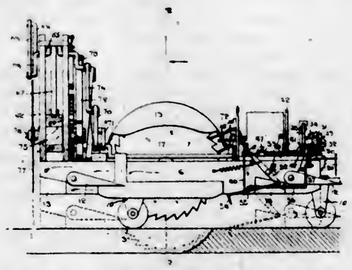
[Claims 6 to 15 not printed in the Gazette.]

1,155,399. BARRETTE. WILLIAM S. BECHTOLD, Newark, N. J. Filed Mar. 29, 1915. Serial No. 17,683. (Cl. 132—22.)



A barrette, comprising a back or body portion provided with a longitudinal opening, and a tongue pivotally attached thereto at one end, and adapted to be locked at the other end, a short comb portion extending rearwardly and downwardly from said back or body portion substantially to the middle thereof into the space between said tongue and body portion, and mid-way of the ends of the latter and substantially parallel thereto, whereby upon downward movement of the barrette said comb will bite deeper into the hair to lock the barrette against displacement, said comb also coöperating with the tongue to securely lock the barrette.

1,155,400. ICE-CUTTING MACHINE. HERMAN BLANK, Jr., Madison, Nebr. Filed Oct. 23, 1913. Serial No. 796,902. (Cl. 125—14.)



1. In an ice-cutting machine, a supporting structure, longitudinally positioned ice cutting saws rotatably mounted in said structure, operating means for driving said saws, a winding shaft positioned transversely of the forward end of said supporting structure, cables attached at one end to said winding shaft, ice engaging means carried at the other end of said cables, and means for intermittently connecting said winding shaft with said operating means whereby the former may be rotated to wind the cable thereupon.

2. In an ice cutting machine, a supporting structure, longitudinally positioned ice cutting saws rotatably mounted in said structure, operating means for driving said saws, a winding shaft positioned transversely of the forward end of said supporting structure, cables attached at one end to said winding shaft, ice engaging means carried at the other end of said cables, means for intermittently connecting said winding shaft with said operating means whereby the former may be rotated to wind the cable thereupon, and means for automatically disconnecting the driving connections between said operating means and said winding shaft when the machine has traveled a predetermined distance.

3. In an ice cutting machine, a supporting platform, longitudinally acting cutting saws rotatably mounted on said platform, operating means for driving said saws, a winding shaft carried forwardly of said platform, cables attached at one end to said shaft, ice gripping means carried by the other end of said cables, driving connections interposed between said operating means and said winding shaft, manually shiftable means for engaging or disengaging said driving connections with said operating means and further manually operable means for operatively connecting said driving connections with said winding shaft whereby the latter is rotated and said cable wound thereon.

4. In an ice cutting machine, a supporting platform, longitudinally acting cutting saws rotatably mounted on said platform, operating means for driving said saws, a winding shaft carried forwardly of said platform, cables attached at one end to said shaft, ice gripping means carried by the other end of said cables, driving connections interposed between said operating means and said winding shaft, manually shiftable means for engaging or disengaging said driving connections with said operating means, further connecting means interposed between said driving connections and said winding shaft whereby the same may be intermittently connected, and manually operable means whereby said further connecting means may be operated to engage said driving connections with said winding shaft for winding said cables upon the latter.

5. In an ice cutting machine, a supporting platform, longitudinally acting cutting saws rotatably mounted on said platform, operating means for driving said saws, a winding shaft carried forwardly of said platform, cables attached at one end to said shaft, ice gripping means carried by the end of said cables, driving connections interposed between said operating means and said winding shaft, manually shiftable means for engaging or disengaging said driving connections with said operating means, further connecting means interposed between said driving connections and said winding shaft whereby the same may be intermittently connected, manually operable means whereby said further connecting means may be operated to engage said driving connections with said winding shaft for winding said cables upon the latter, and resilient means normally holding said further connecting means out of that position which operatively engages said driving connection with said winding shaft.

[Claims 6 to 9 not printed in the Gazette.]

1,155,401. CENTRIFUGAL PUMP. LARS W. BODINSON, Aurora, Ill., assignor to The American Well Works, Aurora, Ill., a Corporation of Illinois. Filed Apr. 29, 1911. Serial No. 624,018. (Cl. 103—43.)

1. In a centrifugal pump, the combination of a sectional water conducting pipe, a coupling connecting the sections of said pipe together, a pump-shaft extending down through said pipe, rotary water elevating devices carried by said pump-shaft, a sectional casing inclosing said shaft, and bearings for said shaft connecting the sections of the casing together, said bearings being centered by said coupling and having a sliding engagement therewith.

2. In a centrifugal pump, the combination of a sectional water conducting pipe, a coupling connecting the sections of said pipe together, a sleeve carried by said coupling, a pump-shaft extending down through said pipe, rotary water elevating devices carried by said pump-shaft, a sectional casing inclosing said shaft, and bearings for said shaft fitted in said sleeve.

3. In a centrifugal pump, the combination of a sectional water conducting pipe, a coupling connecting the sections of said pipe together, a sleeve carried by said coupling, a pump-shaft extending down through said pipe, rotary water elevating devices carried by said pump-shaft, a sectional casing inclosing said shaft, and bearings for said shaft slidably fitted in said sleeve.

4. In a centrifugal pump, the combination of a sectional water conducting pipe, a coupling connecting the sections of said pipe together, a sleeve carried by said coupling, a pump-shaft extending down through said pipe, rotary water elevating devices carried by said pump-shaft, a sectional casing inclosing said shaft, and a bearing block connecting the sections of the casing together, said bearing block forming a bearing for said shaft and being slidably fitted in said sleeve.



5. In a centrifugal pump, the combination of a sectional water conducting pipe, couplings connecting the sections of said pipe together, a pump-shaft extending down through said pipe, rotary water elevating devices carried by said pump-shaft, a sectional casing inclosing said shaft, the sections of said casing being centered by said couplings, a bearing for said shaft adjacent to the lower end of said casing, one or more passages below said bearing and extending from the shaft to the interior of the well, packing around said shaft between said bearing and said passages, and a gland and a spring for compressing said packing.

[Claims 6 to 23 not printed in the Gazette.]

1,155,402. APPARATUS FOR DRYING GRANULAR MATERIAL. ERNST BOHNMANN, Erfurt, Germany, assignor to the Firm of J. A. Topf & Soehne, Erfurt, Germany. Filed Mar. 31, 1914. Serial No. 828,549. (Cl. 34—37.)

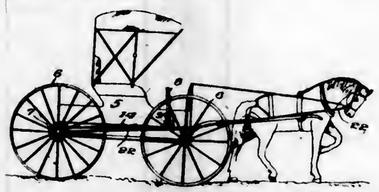


1. In an apparatus for drying granular material, comprising in combination an inclosed shaft through which material is passed in a continuous column, sets of baffle plates arranged in said column to cause the material to pass through the column in sub-divisions having independent movements, division plates arranged vertically in said shaft in common alinement so as to maintain the independence of said sub-divisions in their passage from one set of baffle plates to another, and means for introducing a drying medium at various stages.

2. An apparatus for drying granular material, comprising in combination an inclosed shaft through which material is passed in a continuous column, sets of baffle plates arranged in said column to cause the material to pass through the column in sub-divisions having independent movements, division plates arranged vertically in said shaft in common alinement so as to maintain the inde-

pendence of said sub-divisions in their passage from one set of baffle plates to another, means for regulating the flow of material through the shaft and means for introducing a drying medium at various stages.

1,155,403. DEVICE FOR CHECKING HORSES. ALFRED G. BUTLER, Valley Ford, Wash. Filed Apr. 3, 1915. Serial No. 19,029. (Cl. 21—136.)

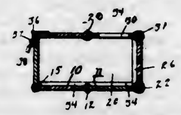


1. In a device of the character described in combination, a member adapted to fit over the hub of one of the wheels of a horse drawn vehicle and rotate therewith, a winding drum loosely mounted on said member, a casing therefor, a flexible connection adapted to be wound on said drum having its free end connected with the bridle of the horse, a pawl and ratchet mechanism for connecting said drum with said first mentioned member, and means for moving said drum axially by shifting said casing transversely to complete the connection through said pawl and ratchet mechanism.

2. In a device of the character described in combination, a cylindrical member adapted to fit over the hub of one of the wheels of a horse drawn vehicle and be clamped thereto to rotate therewith, a winding drum fitting over said member and provided with a flange, a flexible member adapted to be wound on said drum and having its free end connected with the bridle of the horse, a tubular sleeve loosely fitting over said winding drum, cams carried by said sleeve adapted to coact with the flange on said drum for moving the same axially as said sleeve is moved laterally, and a pawl and ratchet mechanism between said drum and the plate adapted to lock said parts together.

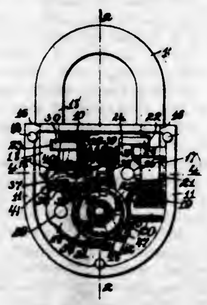
3. In a device of the character described in combination, a cylindrical member adapted to fit over the hub of one of the wheels of a horse drawn vehicle and be clamped thereto to rotate therewith, a winding drum fitting over said member and provided with a flange, a flexible member adapted to be wound on said drum and having its free end connected with the bridle of the horse, a tubular sleeve loosely fitting over said winding drum, cams carried by said sleeve adapted to coact with the flange on said drum for moving the same axially as said sleeve is moved laterally, a pawl and ratchet mechanism between said drum and the plate adapted to lock said parts together, and means operable from a point adjacent the drivers' seat adjustably connected with said sleeve for moving the same laterally.

1,155,404. FOLDING CRATE. RAY MALVIN CROUSE, Great Bend, Kans. Filed Oct. 13, 1914. Serial No. 866,487. (Cl. 217—14.)



A folding crate comprising a bottom formed in two similar sections hinged together, cleats on the ends of said sections, a side wall hinged upon one edge of one of said sections, end walls hinged upon said side wall and engaging said cleats, a second side wall hinged upon the free edge of the other bottom section, pairs of cleats on the ends of said second named side wall engaging the ends of said end walls, a cover formed of two similar sections hinged together, one edge of one of said cover sections being hingedly connected with the free edge of said second named side wall, pairs of cleats upon the ends of said cover sections engaging the top edges of said end walls, and means on said cover coöperating with means on said first named side wall for securing the device in its expanded position, all of said walls and sections being foldable upon one another when in their collapsed position.

1,155,405. LOCK. PASQUALE D'ANGELO, Newark, N. J. Filed Mar. 2, 1915. Serial No. 11,452. (Cl. 70—108.)



1. In a lock, a casing, a shackle adapted to slide in the casing, locking levers adapted to engage and lock each of the two shackle arms, and a catch for holding one of the levers out of locking position.

2. In a lock, a casing, a shackle adapted to slide in the casing, locking levers adapted to engage each of the two arms of the shackle and lock the same, a catch for holding one of the locking levers out of locking position, and key operated means for actuating said locking levers and catch.

3. In a lock, a casing, a shackle adapted to slide in the casing, locking levers adapted to engage and lock each of the arms of the shackle, a catch for holding one of the locking levers out of locking position, and rotatable key operated means normally free to be rotated freely but movable into a position to actuate said levers and catch.

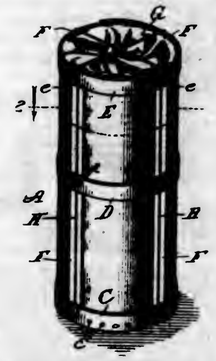
4. In a lock, a casing, a shackle adapted to slide in the casing, a lever pivoted in the casing and adapted at one end to engage and lock one arm of the shackle, a second lever pivoted in the casing and adapted at one end to engage and lock the other arm of the shackle, a catch for holding one of the locking levers out of locking position, and key operated means adapted to engage the two levers at the ends thereof opposite the locking ends and also adapted to engage and move said catch to free the locking lever engaged thereby.

5. In a lock, a casing, a shackle adapted to slide therein, a pivoted lever adapted at one end to engage and lock one arm of said shackle, a second pivoted lever adapted at one end to engage and lock the second arm of the shackle, each of said levers being provided with extensions at the ends opposite the locking ends, a key operated disk, a pintle in said casing on which said disk is mounted to rotate and slide bodily, and a spring for holding said disk outwardly on said pintle, said pintle being normally freely rotatable but upon being pushed against said spring and rotated being adapted to engage either or both of the lever extensions.

[Claims 6 to 8 not printed in the Gazette.]

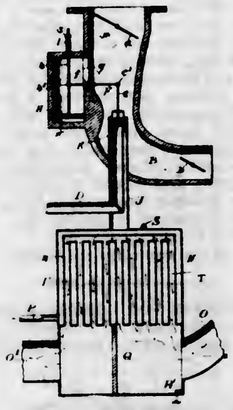
1,155,406. BANANA-CRATE. JOSEPH DIAFERIA, Chicago, Ill., assignor to Frank Cuneo, Chicago, Ill. Filed July 26, 1912. Serial No. 711,698. (Cl. 217—49.)

1. A cylindrical open topped banana crate comprising a bottom, a top hoop, vertical side strips secured to said bottom and said top hoop, bracing wires secured to said bottom and extending upwardly over and in contact with the outer faces of said vertical side strips, said wires being fastened to the upper portion of the crate and having extended ends adapted to be connected across the open top thereof, substantially as described.



2. A cylindrical open topped banana crate comprising a bottom, a top hoop, vertical side strips secured to said bottom and said top hoop, and bracing wires extending across and beneath said bottom and upwardly over and in contact with the outer faces of said vertical side strips, said wires being fastened to said top hoop and having extended end portions adapted to be connected across the open top of the crate, substantially as described.

1,155,407. CARBURETER. JOHN L. DOUGAN, Plankinton, S. D. Filed Feb. 23, 1915. Serial No. 9,915. (Cl. 48—150.1.)



1. A carbureter provided with a mixing chamber for air and fuel, an air supply pipe leading to said mixing chamber, a fuel supply pipe concentrically disposed within said air supply pipe, a valve for controlling the admission of fuel to said chamber, a second chamber communicating at one end with the mixing chamber and having an air tight closure at the other end, a piston operating in said second chamber, and means connecting said piston with said valve for opening and closing the same.

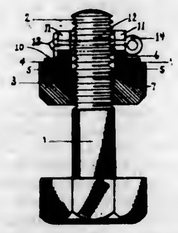
2. A carbureter provided with a mixing chamber for air and fuel, an air supply pipe leading to said mixing chamber, a valve controlling the passage of air through said pipe, a fuel supply pipe disposed within said air supply pipe, a valve for controlling the admission of fuel to said chamber, a second chamber located at one side of said fuel control valve and communicating at one end with the mixing chamber and having its opposite end closed to the atmosphere, a piston operating in said chamber, a lever pivoted intermediate its ends to the wall of said mixing chamber and having its opposite ends connected with said valve and said piston respectively for operating the same in unison.

3. In a carbureter having a mixing chamber for air and fuel, a fuel supply pipe, a valve controlling the supply of fuel from said pipe, a second pipe, a valve seat carried thereby, an annular valve between said pipes, and means for simultaneously operating both of said valves.

4. In a carbureter having a mixing chamber, a fuel supply pipe, a valve for controlling the supply of fuel from said pipe, a second pipe concentrically positioned around said first mentioned pipe, a valve seat carried thereby, a guide casing carried by said inner pipe, a valve in said casing, and means for operating said valves in unison.

5. In a carbureter in combination, a fuel supply pipe, a valve controlling the fuel supply from said pipe, a steam generator, a second pipe surrounding said first mentioned pipe and communicating with said generator, an annular valve located between said pipes, and connecting means between said valves for causing the same to move in unison.

1,155,408. NUT-LOCK. WILLIAM EDSON, New York, N. Y. Filed Oct. 20, 1914. Serial No. 867,606. (Cl. 151—27.)



1. In a nut lock, the combination with a bolt having a transverse opening in the screw thread portion thereof, a main body portion or nut screwed on said bolt, a hollow cylindrical locking element rotatably mounted in said member and having diametrical disposed openings adapted to be revolved to register with the transverse opening in the screw thread portion of said bolt to allow the insertion of a locking element through said openings; said nut and locking element having interlocking means to retain them together.

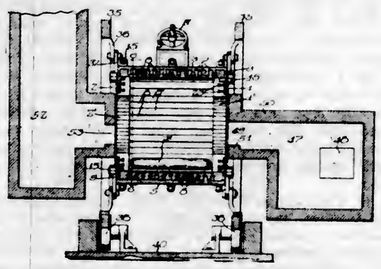
2. A nut lock comprising a nut or body portion provided with a threaded bore and a circumferentially flanged rim encompassing said bore communicating and coaxial therewith, a hollow locking element having a flanged part at one end of greater diameter than the body portion, and diametrical locking element receiving apertures carried in the opposite end thereof, said locking element rotatably mounted at its flanged end on the nut or main body portion within the circumferentially flanged rim, and adapted to be turned whereby the diametrical apertures may be brought into registration with the transverse aperture of a bolt, and means adapted to prevent the separation of one member relatively to the other.

3. A nut lock, consisting of a bolt having a transverse opening, a nut on said bolt, a rotatable locking member mounted in and having flanged, interlocking engagement with said nut, and means having engagement with the opening of said bolt and locking member for locking the nut upon the bolt.

1,155,409. PROCESS OF PRODUCING BLOOMS FROM SCRAP METAL. WALTER C. ELY, Terre Haute, Ind. Filed Dec. 21, 1911. Serial No. 667,179. (Cl. 75—50.)

1. The process of producing blooms directly from scrap metal which consists in heating a loose quantity of scrap

metal to a state of plasticity, intermittently rolling the plastic mass always in the same direction and subjecting the same to alternate hammering actions, while confining the ends of the plastic mass to form a homogeneous structure of substantially uniform diameter from end to end.



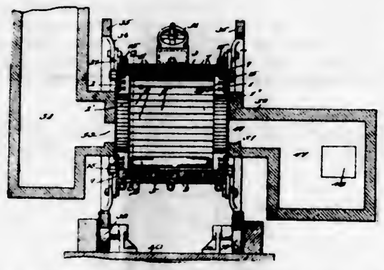
2. The process of making blooms which consists in heating a quantity of loose scrap metal while tumbling the same to remove surface impurities, and continuing such heating until the metal reaches a state of plasticity while subjecting the mass to intermittent rolling always in the same direction and intermediate or alternate hammering to remove substantially all of the remaining impurities from the metal, and confining the ends of the mass while being rolled and hammered to produce an elongated bloom of substantially uniform diameter from end to end and of homogeneous fibrous structure longitudinally.

3. The process of making blooms which consists in heating particles of scrap iron to a welding temperature, of tumbling the same to remove surface impurities, and intermittently rolling the welded mass while maintaining its axis horizontal and subjecting the welded mass to a hammering action at the end of each rolling action to remove substantially all of the remaining impurities and producing a homogeneous structure, the rolling action being always in the same direction, and the ends of the welded mass being confined to produce a bloom of substantially uniform diameter from end to end.

4. The process of directly converting metal scrap into blooms which consists in heating a suitable quantity of loose scrap metal to a state of viscosity in an inclosed chamber, and continuously rotating in the same direction an endless series of inclined planes under said scrap metal to cause surface impurities thereof to be removed during the first stages of heating and causing the scrap to be welded into a mass which is subjected to intermittent rolling over said inclined planes and intermediate or hammering action when striking against the next succeeding plane, whereby substantially all of the remaining impurities are removed and an integral homogeneous mass of purified material having a longitudinal fibrous structure is produced, the ends of such mass being confined by vertical flat surfaces to cause the purified bloom to be of substantially uniform diameter from end to end.

5. The process of directly converting metal scraps into blooms which consists in heating a substantial quantity of loose scrap to a state of viscosity while the same is being tumbled to remove surface impurities, and continuing such heating while an endless series of inclined planes is continuously moved in the same direction under the metal to cause the same to weld together and then be subjected to intermittent rolling always in the same direction and with the axis of the rolling mass always substantially horizontal, and also subjecting the mass of metal after each rolling to a hammering action to gradually remove substantially all of the remaining impurities, and also confining the ends of the mass of metal while being intermittently rolled and alternately hammered, to produce a bloom of substantially uniform diameter from end to end.

1,155,410. METAL-WORKING FURNACE. WALTER C. ELY, Terre Haute, Ind. Filed Dec. 21, 1911. Serial No. 667,180. (Cl. 75—127.)



1. In a bloom producing furnace, the combination with a chambered structure comprising a plurality of flat walls with their longitudinal edges extending parallel to the longitudinal axis of said structure and having end walls substantially perpendicular to said longitudinal walls, and means for rotating said chambered structure to cause the flat longitudinal walls to successively pick up the metal and let it drop by gravity onto the next lower wall to form the mass of metal into an elongated bloom of a length substantially equal to the said longitudinal flat walls.

2. A metal working furnace comprising a chambered structure having a charging and discharging opening therein, a door pivoted to said structure, means for rotating said chambered structure and power mechanism mounted on said structure for swinging said door on its pivot to open or closed position.

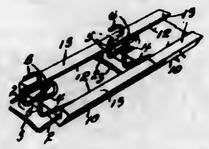
3. A metal working chambered structure having heat openings in the ends thereof and a charging and discharging opening in the body portion thereof, a door for said charging and discharging opening, means for rotating said chambered structure, and door operating mechanism mounted on said chamber and movable therewith.

4. A metal working furnace comprising a chamber having a charging and discharging opening in the body thereof, means for rotating said chamber, a door for said opening, pivoted supporting means for said door having its pivotal point spaced apart from said opening, and means for operating said door to open and close the same.

5. A metal-working furnace comprising a chamber, means for supplying heat to said chamber, a door for an opening in said chamber, means for rotating said chamber, and power mechanism carried by said furnace and moving therewith, to operate said door.

[Claims 6 to 45 not printed in the Gazette.]

1,155,411. FASTENER FOR CONCRETE SEWER CONSTRUCTIONS. WILLIAM C. FLANNERY, Washington, D. C. Filed Sept. 3, 1913. Serial No. 788,017. (Cl. 72—53.)



1. A fastener comprising duplicate parallel members, each consisting of an engaging arm having opposite engaging ends, an extension from one of the engaging ends of the arm projecting toward the other engaging end of the arm, said extension having a portion bent perpendicularly to the plate of the arm and extension, a fastening element carried by said angularly bent portion of the extension, and a connection between said duplicate parallel members.

2. A fastener comprising duplicate parallel members, each consisting of an engaging arm having opposite engaging ends, an extension from one of the engaging ends of the arm projecting inwardly toward the other engaging end of the arm, said extension having its inner end portion bent in a plane perpendicularly to the plane of the arm and extension, a hook carried by the right angularly bent portion of the extension and disposed in a plane parallel with the arm and extension, and a connection between the said duplicate parallel members.

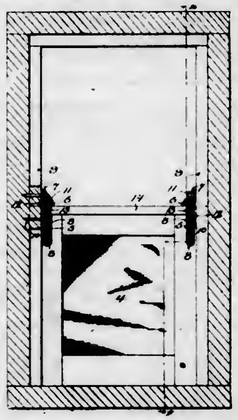
3. A fastener formed of spring wire and comprising substantially parallel engaging arms, portions extending inwardly from one end of said arms and having their end portions bent at right angles thereto, and hooks upon said right angularly bent portions disposed in spaced relation to the arms.

4. A fastener formed of spring wire and comprising a U-shaped body portion, arms extending inwardly on converging lines from the free ends of the arms of said body portion, extensions arranged at right angles to the free ends of said converging arms, and engaging members carried by said extensions and arranged in spaced relation to the body portion.

5. A fastener formed of spring wire and comprising a U-shaped body portion, arms integral with the free ends of the arms of the body portion and extending inwardly therefrom toward the cross piece of the body portion in converging relation, extensions projecting from the free ends of the converging arms at right angles to the plane of the body portion, and engaging hooks formed upon the free ends of said extensions.

[Claims 6 to 10 not printed in the Gazette.]

1,155,412. SCREEN-HANGER. EDWARD J. FELLMAN, Milwaukee, Wis. Filed Feb. 19, 1915. Serial No. 9,302. (Cl. 16—48.)



1. A hanger comprising a plate-member attachable to a stile of a half-screen and having an upper wing at a right-angle to the remainder thereof designed to parallel a blind-stop of a window-frame, a bracket-member attachable to the blind-stop and provided with an outer transverse rib that takes the place of a cut away portion of the shut-off stop of the screen, and a pivot that extends from said bracket-member above the rib thereof for engagement with a vertical notch provided in the wing of said plate-member.

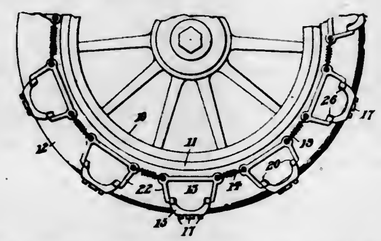
2. A hanger comprising a plate-member attachable to a stile of a half-screen and having an upper wing at a right-angle to the remainder thereof designed to parallel a blind-stop of a window-frame, a bracket-member attachable to the blind-stop and provided with an outer transverse rib that takes the place of a cut away portion of the shut-off stop of the screen, and an attaching device for said bracket-member above the rib thereof constituting a pivot for engagement with a vertical notch provided in the wing of said plate-member.

3. A hanger comprising a plate-member attachable to a stile of a half-screen and having an upper shoulder by which to lap the shut-off stop of the screen, the plate-member being also provided with an upper wing at a right-angle to the remainder thereof designed to parallel a blind-stop of a window-frame, a bracket-member attachable to the blind-stop and provided with an outer transverse rib that takes the place of a cut away portion of the shut-off stop of said screen, and a pivot that extends from said bracket-member above the rib thereof for engagement with a vertical notch provided in the wing of said plate-member.

4. A hanger comprising a plate-member attachable to a stile of a half-screen and having an upper wing at a right-angle to the remainder thereof designed to parallel a blind-stop of a window-frame, a bracket-member attachable to the blind-stop and provided with an outer transverse rib that takes the place of a cut away portion of the shut-off stop of the screen, an attaching device for the plate-member normally opposing the underside of the rib, and a pivot that extends from said bracket-member above the rib thereof for engagement with a vertical notch provided in the wing of said plate-member.

5. A hanger comprising a plate-member attachable to a stile of a half-screen and having a vertically notched wing at a right-angle to the remainder thereof designed to parallel a blind-stop of the window-frame immediately adjacent to the upper sash of the window, a bracket-member attachable to the blind-stop and provided with an outer transverse rib that takes the place of a cut away portion of the shut-off stop of the screen, and a pivot that extends from the bracket-member above the rib thereof in engagement with the wing-notch of the plate-member for which said sash serves as a stop to prevent clearance of said pivot by said plate-member.

1,155,413. NON-SKIDDING DEVICE. MELVIN C. GANNETT, Brooklyn, N. Y. Filed June 23, 1914. Serial No. 846,787. (Cl. 152—14.)



1. A non-skid element comprising a tread plate having calks upon the traction surface thereof, spaced integral bracket members upon the opposite ends of said plate and having overturned ends forming hinged bearings, stirrups having inwardly projecting pintles journaled in said bearings, lugs upon the inner ends of said pintles, perforated lugs at the base corners of said stirrups and having their walls severed on the inner sides thereof.

2. A non-skid device comprising rectangular tread plates, calks projecting from the tread portion of said plates, spaced bracket arms upon the ends of said plates having hinge bearing rolled-over ends, stirrups having inwardly extending pintles at their free ends journaled in said bearings, retaining lugs upon the adjacent ends of said pintles, perforated lugs at the base corners of said stirrups, one side of each of said lugs being severed to its perforation, and resilient connectors having integral reinforced terminal hooks adapted for engaging said perforations of adjacent ones of said arch base portions.

3. A non-skid element comprising a tread plate having calks upon the traction surface thereof, spaced integral

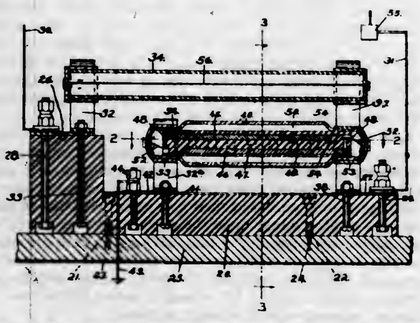
bracket members upon the opposite ends of said plate forming hinge bearings, stirrups hinged to said bearings, lugs at the base corners of said stirrups, and resilient connectors having reinforced terminal hooks adapted to engage the lugs at the base corners of the stirrups.

1,155,414. DISK GRINDER. FREDERICK N. GARDNER and FRANCESIC E. GARDNER, Beloit, Wis., assignors of one-third to Louis Waldo Thompson, Beloit, Wis.; Alice M. Gardner executrix of said Frederick N. Gardner, deceased. Filed Sept. 21, 1911. Serial No. 650,649. (Cl. 51—1.)



In a disk grinder, the combination of a rotary spindle, a grinding wheel mounted thereon consisting of two flat plate-like sections divided on a plane extending perpendicularly to the axis of said spindle and wheel, one of said sections being a circular metallic rear plate which is rigidly fixed on the extreme end of said spindle, the other section being a thin circular disk positioned face to face and co-extensive with said rear plate, said disk having a layer of abrasive material cemented to and covering its unobstructed forward face, said face being plane and unrecessed and the disk and abrasive thereon presenting a continuous or unbroken flat abrading surface at all points within its circumference, and a plurality of devices for clamping said disk to the face of said rear plate, said devices lying behind the plane of said layer of abrasive material.

1,155,415. LIGHTNING-ARRESTER. JOHN T. GREENE, Toledo, Ohio, assignor to The National Electric Specialty Company, Toledo, Ohio, a Corporation of Ohio. Filed Aug. 5, 1913. Serial No. 783,009. (Cl. 175—30.)



1. In a vacuum lightning arrester, the combination with an evacuated transparent container, of electrodes arranged therein, and a spacer of refractory, non-conducting material between said electrodes formed with grooves which provide discharge gaps between the electrodes visible through said container.

2. In a vacuum lightning arrester, the combination with an evacuated container, of electrodes arranged in parallel relation in said container, a spacer between said electrodes, and leading-in wires sealed through opposite ends of said container and connected with said electrodes respectively, said spacer provided at opposite ends with projections which intervene, in each case, between the end of one of the electrodes and the connection between the leading-in wire and the other electrode.

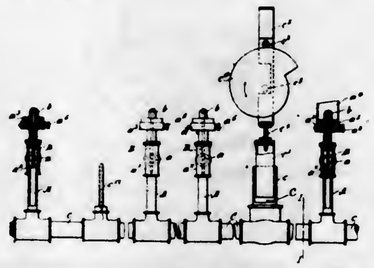
3. In a vacuum lightning arrester, the combination with an evacuated tubular glass container, of electrodes arranged longitudinally within said container, a spacer between said electrodes, and a tubular member surrounding said spacer and electrodes so as to hold them together, which is fitted into the ends of said container.

4. In a vacuum lightning arrester, the combination with an evacuated tubular glass container, of a pair of parallel electrodes therein, a porcelain spacer between said electrodes formed with grooves on opposite edges, screws for securing the electrodes to opposite ends of said spacer, the spacer being formed at opposite ends with projections intervening, in each case, between the screw securing one electrode to the spacer and the end of the other electrode, leading-in wires sealed through opposite ends of the container and connected with said screws respectively, and a tubular element surrounding said electrodes and spacers.

5. In a vacuum lightning arrester, the combination with an evacuated tubular glass container, of electrodes arranged longitudinally within said container, a spacer between said electrodes to which the electrodes are secured; the structure comprising said electrodes and spacer being supported at opposite ends in said container with the intermediate portion out of contact with the wall of said container, said spacer formed with grooves which provide gaps between said electrodes and protecting means intervening between said grooving and the wall of the container.

[Claims 6 to 9 not printed in the Gazette.]

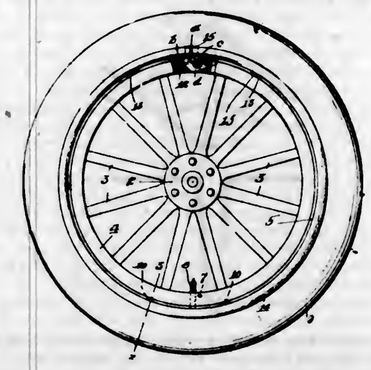
1,155,416. DEVICE FOR CONTROLLING THE SUPPLY OF GAS TO BURNERS. CLARK WAY HARRISON, New York, N. Y. Filed Feb. 9, 1911. Serial No. 607,568. (Cl. 67—111.)



1. A flashlight advertising device having in combination a series of gas burners each provided with a separate liquid-seal-valve to control their gas supply, the liquid-seal-valves being contained in separate chambers which communicate with a chamber that is common to all of them, and continuously operated mechanical means for varying the pressure on a fluid in said common chamber, thereby effecting automatically the periodic opening and closing of the said liquid-seal-valves.

2. A flashlight advertising device having in combination a series of gas burners each provided with a separate liquid-seal-valve to control their gas supply, the liquid-seal-valves being contained in separate chambers which communicate with a chamber that is common to all of them, and continuously operated mechanical means for varying the pressure on a fluid in said common chamber, effecting automatically the periodic successive lighting and extinguishing of said burners, and means for relatively timing the successive lighting of said burners.

1,155,417. PNEUMATIC-TIRE MOUNTING. CHARLES GILBERT HAWLEY and ERLE K. BAKER, Chicago, Ill., assignors to Universal Rim Company, Chicago, Ill., a Corporation of Illinois. Continuation of application Serial No. 502,069, filed June 14, 1909. This application filed Dec. 14, 1910. Serial No. 537,263. (Cl. 152—21.)



1. The improvement herein described, comprising a wheel in combination with a flanged tire-holding-rim fitting said wheel and split or open at one point for expansion and contraction thereon, of a link pivoted to one end of the rim, a lug on the other end of the rim, said lug and the end of said link being formed to interlock to hold the rim either open or closed, the free end of the link being formed to interlock with the wheel when the rim is in locked condition and prevent relative lateral displacement of the rim on the wheel.

2. The improvement described, comprising a wheel in combination with a flanged tire-holding rim fitting said wheel and split or open at one point for expansion and contraction thereon, of a rim contracting and expanding mechanism comprising a link pivoted on one end of the rim, a lug or part on the other end of the rim, said lug and the end of said link being formed to interlock in two positions to hold the rim either open or closed, said wheel being provided with a notch to receive said mechanism, and a groove in one wall of said notch adapted to receive the free end of said link when in closed position and prevent lateral movement of said link.

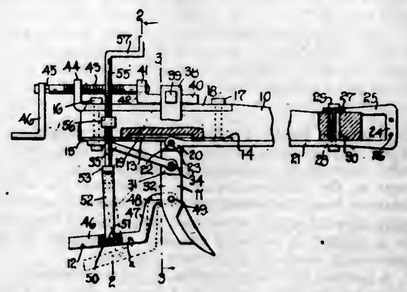
3. A demountable flanged tire-holding-rim in the form of a split ring and a complementary wheel having a felly and a metal felly band fixed thereon, in combination with rim expanding and contracting mechanism attached to the ends of the ring, said felly and band being notched to receive said mechanism, said mechanism comprising a link pivoted on one end of the said ring, a lug on the other end of the ring, said lug and the end of the link being formed to interlock in two positions to hold the rim either open or closed, said felly and fixed band being provided with registering slots in one end of said notch and said link having a longitudinal projection adapted to enter said slots when the link is moved to its closed position.

4. A demountable flanged tire-holding-rim in the form of a split ring and a complementary wheel having a felly and a metal felly band thereon, in combination with rim expanding and contracting mechanism attached to the ends of the rim, said felly and band being notched to receive said mechanism, said mechanism comprising a link pivoted on one end of said ring, a lug on the other end of the ring, said lug and the free end of the link being formed to interlock in two positions to hold the rim either open or closed, said felly and felly band being provided with registering slots in one end of said notch, and a projecting part on the free end of said link being formed to enter the slot in the felly and project into the slot in the felly band when the link is moved to its closed position.

5. A demountable rim in the form of a split ring, in combination with a two part bridge, bridging the gap or split in the rim, said bridge being transversely and circumferentially conformed to the inner surface of the rim and the two parts being movable toward each other within the rim.

[Claims 6 to 25 not printed in the Gazette.]

1,155,418. PLOW. CHARLES O. HEMBREE, Asher, Okla. Filed June 26, 1915. Serial No. 36,477. (Cl. 97—26.)



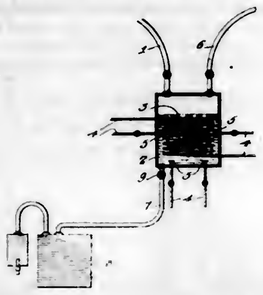
1. A plow including a beam, a standard including a pair of parallel spaced plates having their upper terminals disposed on opposite sides of the beam, a supporting bar having one end fixed to the under face of the beam at the inner end thereof and its other end inclined downwardly and disposed between the plates at their approximate centers, a bolt extending through the plates and the lower end of the supporting bar for pivotally mounting the standard, a draft rod carried by the beam and having one end connected to the standard, a slide plate movable over the upper face of the beam and pivotally connected to the upper terminals of the standard plates, one end of said plate being angularly disposed and provided with an opening, a bracket plate secured to the beam and arranged beneath the slide plate, and a screw rod movable in the bracket plate and having its inner end connected with the angularly disposed end of the slide plate for adjusting said slide plate longitudinally upon the beam, whereby the angular relation of the standard to the beam may be varied.

2. A plow including a beam, a standard supported by the beam for pivotal movement, a ground engaging member including a relatively long body bar, an L-shaped connecting arm formed at one end thereof, the horizontal portion of said arm being pivotally connected to the standard adjacent the lower terminal thereof, a bar having pivotal connection with the body of the ground engaging member, an angular lug at the upper end of said bar, having an opening therethrough, a supporting bracket carried by the beam and arranged in alinement with the angular lug, a vertically disposed screw rod movably mounted within said bracket and having its lower end attached to the angular lug of the bar, and a handle formed at the upper end of the screw rod for operating the same to adjust the ground engaging member with respect to the standard.

1,155,419. MANUFACTURE OF PURE CARBON. HENRI HENNEBUTTE, Paris, France, assignor to Société Anonyme des Combustibles Industriels, Paris, France. Filed Feb. 21, 1914. Serial No. 820,305. (Cl. 204—65.)

1. A process for the production of carbon consisting in treating hydrocarbons while in a heated state with an oxidising current of gaseous matter to a degree short of carbonising the hydrocarbons, subsequently treating the hydrocarbons with a solvent in order to separate de-

hydrogenated insoluble substances contained in the oxidised mass, and subsequently carbonizing the insoluble mass to produce the ultimate product.



2. A process for the production of carbon consisting in treating hydrocarbons while in a heated state with a divided current of oxidizing gaseous matter, adding a solvent to the oxidized material, separating the soluble substances from the remainder of the oxidised materials, heating the said soluble remainder, treating said remainder with a current of oxidizing gas, and carbonising the dehydrogenated insoluble substances obtained.

3. A process for the production of carbon consisting in treating hydrocarbons while in a heated state with oxidising gaseous matter, adding a solvent thereto, to separate the insoluble substances obtained by this oxidation, separating the soluble part of the oxidized mass obtained from the insoluble substances and mixing the same with raw hydrocarbons, treating the latter mixture with a current of oxidizing gaseous matter until the mixture has been transformed into a mass containing a substantial proportion of strongly dehydrogenated insoluble substances, and carbonising the dehydrogenated insoluble substances.

1,155,420. FOUNTAIN GLUE-SPREADER. ARVID JOHNSON, North Bend, Oreg. Filed Aug. 4, 1914. Serial No. 855,004. (Cl. 91—39.)

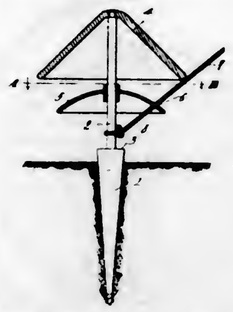


1. A glue spreader comprising a primary tube equipped at one end with a trough-shaped extension, the side walls of which are slit transversely to form guards and to form jaws located above the guards; and a brush in the extension and engaged by the jaws; the tube being provided with a laterally extended nozzle which discharges between the guards.

2. A glue spreader comprising a tube equipped at one end with a trough shaped extension, the side walls of which constitute guards and are provided with jaws located above the guards; and a brush in the extension and engaged by the jaws; the tube being provided with a laterally extended nozzle which discharges between the guards.

3. A glue spreader comprising a primary tube equipped at one end with a trough-shaped extension, the side walls of which are slit transversely to form guards and to form jaws located above the guards; a brush in the extension and engaged with the jaws; and a clamping device connecting the jaws; the tube being provided with a laterally extended nozzle which discharges between the guards.

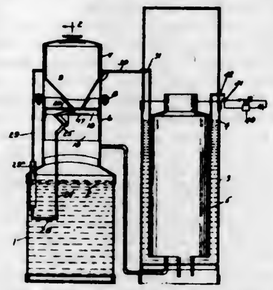
1,155,421. TETHER-STAKE. MARY F. JONES, Washington, D. C. Filed Apr. 20, 1915. Serial No. 22,610. (Cl. 119—117.)



1. A tether stake including a stem adapted to be loosely engaged adjacent its lower end by the looped end of a tether, a rounded guard at the upper end of the stem, said guard being circular and the periphery thereof constituting a guide for the tether, and a tether guide slidably and revolubly mounted on the stem and below the guard, said guide having an opening through which the tether is adapted to extend.

2. A tether stake including a ground engaging portion, a stem extending therefrom, there being a shoulder at the base of the stem, a rounded guard at the upper end of the stem, the periphery of the guard constituting a guide edge for a tether, the lower portion of the stem being adapted to be engaged by the looped end of a tether, a tether guide slidably and revolubly mounted on the stem and having a tether receiving opening adjacent its periphery, said guide constituting a weight for pounding the looped end of the tether when the tether becomes slack.

1,155,422. ACETYLENE-GAS GENERATOR. JOSEPH KARL, West Pullman, Ill. Filed Nov. 20, 1914. Serial No. 873,136. (Cl. 48—46.)



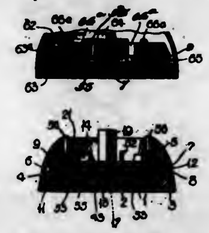
1. In an apparatus of the character described, a generating reservoir, a gas-receiving bell, a hopper for containing calcium carbid, an elongated trough lying beneath the hopper and adapted to receive carbid therefrom, a slide movable lengthwise in said trough to discharge carbid therefrom and having a part serving as a valve to close the outlet end of the hopper, said trough being of such length as to hold sufficient carbid to form a considerable

number of individual charges, and operating connections for said slide including a device in the path of movement of a part on the bell for intermittently reciprocating said slide through approximately equal short distances as long as the hopper contains a supply of carbid and through progressively increasing distances after the hopper has been emptied until the trough-like member has been emptied.

2. In an apparatus of the character described, a casing open at the top, inwardly projecting shoulders on the casing in a plane below the top, a flanged trough extending across said casing and having its flanges resting on said shoulders, the member forming the bottom of the trough being cut away at each end, a hopper supported in the casing above said trough, a combined pusher and valve for the hopper arranged within said trough.

3. In an apparatus of the character described, a generating reservoir, a gas receiving bell, a hopper for containing calcium carbid, an elongated trough lying beneath the hopper and adapted to receive carbid therefrom, a slide movable lengthwise in said trough to discharge carbid therefrom and having a part serving as a valve to close the outlet end of the hopper, said trough being of sufficient length to hold a considerable number of individual charges of carbid, and operating connections for said slide including a device in the path of movement of a part on the bell, said operating connections having no positive connection with the bell and tending constantly to hold said slide in one end of the trough, the parts being so constructed and arranged that upon each descent of the bell to a predetermined point it causes said slide to move from the normal starting point a distance sufficient to feed a single charge into the reservoir until the hopper is empty, while, after the hopper becomes empty successive descents of the bell to points below said predetermined point cause the slide to move from said normal starting point in constantly increasing strokes until the trough is empty.

1,155,423. ELECTRIC FLAT-IRON. WILLIAM J. KEEP, Detroit, Mich., assignor to The Michigan Stove Company, Detroit, Mich., a Corporation of Michigan. Filed Jan. 29, 1915. Serial No. 4,977. (Cl. 219—25.)



1. An electric flat iron comprising housings, a heating unit clamped between said housings, a spider in one of said housings providing an air gap, handle supports carried by said spider, a housing connected to one of said handle supports, a conductor cord extending into said housing in circuit with said heating unit and a switch carried by the other support and in circuit with said heating unit and said conductor cord for controlling the operation of said iron.

2. An electric heating device, comprising a flat insulation plate, a winding thereon, insulated lead in wires having bared ends superimposed upon the ends of said winding, a flat plate of insulation superimposed upon said winding, a flat metallic plate superimposed upon said insulating plate, housings above and below the assembled plates adapted to clamp said plates together except at a spot over the contact points at the ends of said winding and the bared ends of said lead in wires, and a pressure screw adjustable in the upper housing and operable from without the device to force together the bared ends of said wires and the ends of said winding between the core of the winding and the superimposed plate of insulation.

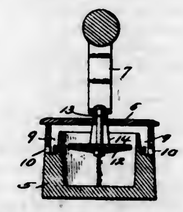
3. An electrical flat iron comprising housings, a laminated heating unit compressed between said housings, insulated terminals passing through holes in the upper housing, one bared end of one of said terminals lying upon the end windings of said unit between laminations thereof, and means, other than the connecting means which unite said housings, for clamping together the bared ends of the insulated terminals, and the end windings of said unit.

4. In an electric flat iron, a heating unit, a flat plate of insulation on each side thereof, an insulated terminal having bared ends placed between the plates of insulation and bared resistance of the heating unit, means operable from outside the iron for clamping the bared surfaces together beneath the upper plate of insulation, and a metal plate under the clamping means and over the upper sheet of insulation to prevent injury to the insulation plate.

5. In an electric flat iron having a heating unit made by winding resistance wires on a flat insulating core, insulated lead in wires with bared ends superimposed on the last coils of the winding, a sheet of resistance superimposed on both of these and having a hole properly formed in the upper sheet through which the lead in wires pass and fit closely to prevent displacement of the contacts.

[Claims 6 to 15 not printed in the Gazette.]

1,155,424. SAD-IRON. ROY W. KELLEY, Davenport, Iowa, assignor to Western Pattern & Manufacturing Company, Moline, Ill., a Corporation of Illinois. Filed Aug. 14, 1914. Serial No. 856,799. (Cl. 158—23.1.)

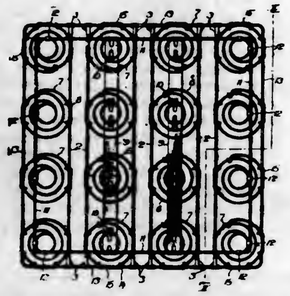


A hollow sad iron having its sides formed with open-topped longitudinal chambers, the outer walls of said chambers having outlet openings extending therethrough at substantially the level of the bottoms of said chambers, and the upper edges of the inner walls of said chambers being below the upper edges of said outer walls, a cover fitted to the top edges of the outer walls and forming passages leading from the interior of the iron over the upper edges of the inner walls and to the tops of said longitudinal chambers, a forwardly and downwardly inclined plate arranged within the interior of the iron and having a space between its periphery and the inner walls of said chambers below the upper edges of the latter, and means for directing a combustible medium forwardly into the interior of the iron and beneath said plate.

1,155,425. SPRING CONSTRUCTION. FRED B. KING, Albion, Mich., assignor to National Spring and Wire Company, Albion, Mich., a Corporation of Michigan. Filed Oct. 17, 1913. Serial No. 795,709. (Cl. 5—29.)

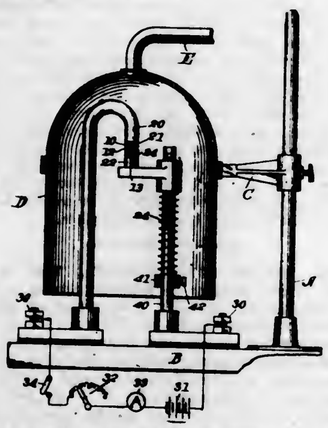
1. A spring seat construction comprising a base frame having longitudinal spaced members, clips each encircling the end portion of a longitudinal member and the adjacent portion of a side member of the frame and holding the parts in abutting relation, upright coiled springs secured on the base frame, resilient spring strips connecting the intermediate coils of the interior body springs and front and back marginal springs, an intermediate frame secured and supported by the end portions of the spring strips and by the middle turns of the side marginal springs, and an upper rim frame having off-set portions on which the upper turns of the body springs rest and to which they are secured to clips lying below the plane of the upper face of the rim frame.

2. In a spring seat construction having a base, upright coiled springs thereon and an upper rim frame connecting the upper turns of the marginal body springs, spring metal strips having struck out tongues that engage the intermediate turns of the interior body springs and corresponding turns of some of the marginal springs, with a frame supported by the end portions of the strips and secured to the intermediate turns of the marginal springs that are not connected to the strips, one end portion of each strip extending to the base of the structure to which it is secured.



3. In a spring seat construction, having a base and upright body springs mounted thereon, an upper rim frame consisting of a rim having depending off-sets adapted to receive the upper turns of adjacent body springs, and clips having S bends at the ends thereof whose eyelets encircle the off-set portions of the rim and contiguous parts of the body spring coils respectively, the clips and coils forming with the rim frame a substantially flush support for applied upholstery.

1,155,426. METHOD OF MAKING CONTACT BODIES OF TUNGSTEN. ALFRED J. LIEBMANN and WILLIAM A. MEGRATH, New York, N. Y., assignors to Independent Lamp and Wire Company, Inc., New York, N. Y., a Corporation of New Jersey. Filed Nov. 20, 1914. Serial No. 873,087. (Cl. 219—10.)



1. The method of making electric contacts of tungsten which consists in securing a tungsten plate to a supporting base by electrically welding with a resistance increasing material between the tungsten plate and the supporting base.

2. The method of making electric contacts of tungsten which consists in securing a tungsten plate to a supporting base by electrical resistance welding with metal powder between the tungsten plate and the supporting base.

3. The method of making electric contacts of tungsten by electrically heating the tungsten contact plate and the supporting back, having powdered tungsten metal between the same.

4. The method of making electric contacts of tungsten by simultaneously treating tungsten and the supporting metal with an exothermically reacting compound and electically welding the two metals together.

5. The method of making electric contacts of tungsten by simultaneously treating the tungsten and the other metal with potassium nitrite and welding the two metals together.

[Claims 6 to 11 not printed in the Gazette.]

1,155,427. CONTACT BODIES OF TUNGSTEN. ALFRED J. LIEBMANN and WILLIAM A. MEGRATH, New York, N. Y., assignors to Independent Lamp and Wire Company, Inc., New York, N. Y., a Corporation of New Jersey. Original application filed Nov. 20, 1914, Serial No. 873,087. Divided and this application filed May 22, 1915. Serial No. 29,777. (Cl. 173—13.)



1. An electric make and break contact consisting only of a face plate of tungsten and a supporting base of another metal of comparatively high melting point secured directly to each other by an electrical resistance weld.

2. An electric make-and-break contact consisting only of a face plate of tungsten and a support of iron or steel welded thereto.

1,155,428. FEATHER-FASTENER. WILLIAM T. J. LYNCH, Brooklyn, N. Y., assignor of one-half to Val J. Schultheis, Brooklyn, N. Y. Filed Sept. 24, 1914. Serial No. 863,333. (Cl. 2—108.)

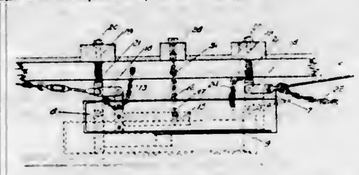


1. A device of the class described comprising a pair of substantially parallel plates pivoted together to move toward and away from each other, a pair of gripping flanges extending inwardly toward each other from the edges of the two plates disposed to one side of the pivotel axis, an additional pair of gripping flanges projecting inwardly toward each other from the bodies of the plates and disposed between the pivotal axis and the aforesaid flanges, and a spring for rocking the two plates and their flanges toward each other.

2. A device of the class described comprising a pair of substantially parallel plates pivoted together and adapted to move toward and away from each other, a pair of coacting gripping members projecting inwardly from the adjacent faces of said plates at points remote from the pivotal axis, an additional pair of such gripping members projecting inwardly from said adjacent faces of the plates and disposed between the pivotal axis and the aforesaid members, and a spring for forcing the plates and the gripping members toward each other.

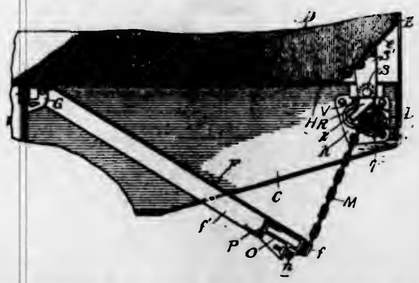
3. A device of the class described comprising a pair of elongated plates lying substantially parallel to each other and having laterally parallel pivot ears, a transversely extending pivot pin passing through said ears, whereby the two plates are pivoted to each other, a pair of crescent-shaped flanges projecting laterally toward each other from the edges of the plates to one side of the pivot pin, an additional pair of flanges projecting toward each other from the two plates and disposed between the pivot pin and the aforesaid flanges, and a spring for forcing the two plates and their flanges toward each other.

1,155,429. BALLAST PLOW OR SPREADER. CHARLES C. MALLARD, Globe, Ariz.; Charles L. Rawlings administrator of said Mallard, deceased. Filed Mar. 25, 1914. Serial No. 827,212. (Cl. 37—22.)



A ballast spreader comprising a support, a plow provided with diverging blades, yieldable means carried by said support, links engaging said yieldable means and also engaging said plow for permitting the forward and rearward swing of said plow upon said support whereby said plow may be raised and lowered, a locking chain engaging said plow, means carried by said support for engaging said locking chain and holding said plow in a lifted position, and means for bracing said plow.

1,155,430. DOOR-ACTUATING MECHANISM FOR GENERAL-SERVICE CARS. WILLIAM E. MOREY, Chicago, Ill., assignor to National Dump Car Company, Chicago, Ill., a Corporation of Maine. Filed May 5, 1913. Serial No. 765,602. (Cl. 105—14.)



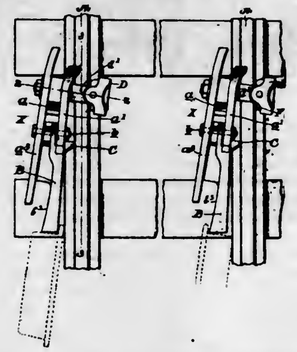
1. In combination with a car having a drop door, a rotatable shaft, a chain or the like operatively connecting said shaft and said door whereby rotation of the former will operate to close the latter, a latch member pivoted adjacent said shaft, the latter being operable during closing of said door to move said member beneath said door, and means to positively effect said last-named operation of said shaft, said means comprising a rack, said shaft being provided with a pinion member arranged to mesh and coact with said rack.

2. In a freight car, the combination with an underframe comprising longitudinal and transverse members, of a floor comprising drop doors, a rotary and bodily movable shaft supported by the underframe, chains operatively connecting said shaft and doors to close the doors upon the rotation of the shaft, toothed collars fixed upon said shaft, stationary racks with which said collars engage to effect a bodily movement of said shaft longitudinally of the doors, and members actuated by the bodily movement of said shaft to support the doors in closed position.

3. In a freight car, the combination with an underframe comprising longitudinal and transverse members, of a floor comprising drop doors therein, a rotary and bodily movable shaft extending transversely of the path of movement of the doors, chains operatively connecting said shaft and doors to close the doors when the shaft is rotated, toothed collars fixed to said shaft, stationary racks with which said collars engage to effect a bodily movement of the shaft longitudinally of the doors, and pivoted latches depending into the path of movement of said shaft and actuated thereby to support the doors in closed position.

4. In a freight car, the combination with an underframe comprising longitudinal and transverse members, of a floor comprising drop doors therein, a rotary and bodily movable shaft extending through elongated openings in the ends of the transverse members of the underframe, chains operatively connecting said shaft with the doors to lift the doors upon the rotation of the shaft in one direction and to permit them to drop upon the rotation of the shaft in the opposite direction, toothed collars fixed to said shaft, racks secured to the transverse members of the underframe above the slots therein through which such shaft extends, and pivoted latches depending into the path of said shaft, whereby the rotation of said shaft will wind said chains thereon and lift said shaft in position for the collars thereon to engage said racks and thereby bodily move said shaft toward the doors and swing said latches into position to support the doors.

1,155,431. CAR-REPLACER. JEREMIAH A. MOYNIHAN, Minneapolis, Minn., assignor of one-half to Thomas E. Sands, Minneapolis, Minn. Filed Aug. 19, 1915. Serial No. 46,297. (Cl. 104—162.)



1. A reversible tread car replacer, comprising a body portion having upper and lower inner flanges and upper and lower outer flanges with grooves between them, said inner flanges having portions adapted to overlap the top of a rail and rest thereon and said outer flanges being arranged to project forwardly from the body portion of the replacer to a greater extent than the inner flanges, and an approach block pivotally connected with the replacer and forming a continuation of the inner flanges thereof and which projects forwardly from the replacer to a greater extent than the outer flanges thereof.

2. A car replacer, comprising a body portion having inner flanges to receive the tread of a car wheel, outer flanges for guiding the wheel and which project forwardly from the replacer to a greater extent than the inner flanges, and an approach block forming a continuation of the inner flanges having a curved bearing portion engaging a correspondingly curved portion of the replacer, and a bolt for pivotally connecting the approach block with the replacer.

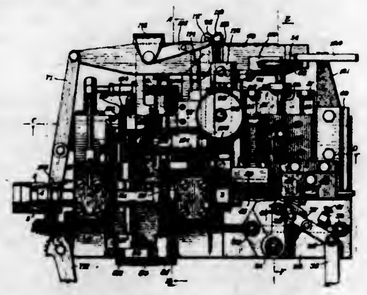
3. A car replacer, comprising a body portion formed with inner flanges to receive the tread of a car wheel and formed at their rear ends with portions adapted to overlap the top of a rail and rest thereon and with outer guide flanges therefor, a gage lug on the front side portion of the replacer adapted to engage a rail, and a clamping device connecting the rear portion of the replacer with the rail and drawing said guide lug and the rear portion of the replacer firmly against the rail

4. A car replacer, comprising a body portion formed with inner flanges to receive the tread of a car wheel and having their rear ends bent inwardly to engage the tread portion and bottom flange of the rail, outer flanges formed on the replacer for guiding the wheel and which are bent inwardly at their rear ends to direct the wheel onto the track, and an adjustable clamp applied to the rear portion of the replacer and adapted to engage a rail.

5. A car replacer, comprising a body portion formed with inner flanges adapted to receive the tread of a car wheel, outer flanges for guiding the wheel and an approach block pivotally connected with the replacer and having an inclined edge adapted to engage the flange of a wheel.

[Claims 6 to 8 not printed in the Gazette.]

1,155,432. TAP-MAKING MACHINE. FRIEDERICH MÜLLER, Hartford, Conn., assignor to Pratt & Whitney Company, Hartford, Conn., a Corporation of New Jersey. Filed Dec. 7, 1912. Serial No. 735,388. (Cl. 10—154.)



1. A machine for threading taps comprising a revolving cutter, blank supporting and rotating means; means for causing the cutter to take a roughing cut from the blank during one revolution thereof; and automatic means for advancing the cutter at the end of the revolution of the blank to take a finishing cut during another revolution thereof.

2. In a machine for threading taps, means for rotating a blank, means for making a roughing cut during one rotation of the blank, and automatic means brought into action at a determinate time in the rotation of the blank for taking a finishing cut during another rotation.

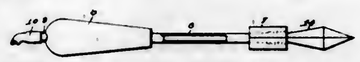
3. A machine for threading taps and the like, said machine including in combination, a blank support, means for simultaneously cutting a plurality of thread grooves on the blanks, mechanism for rotating each blank through a predetermined number of revolutions, mechanism for effecting a relative movement between the blank support and the cutter in the direction of the axis of the blank, said movement being of such rate as to produce the desired pitch of the thread, and mechanism for effecting a predetermined relative advancing movement between the blank support and the cutter, said advancing movement occurring substantially between consecutive revolutions of the blank.

4. A machine for threading taps and the like, said machine including in combination, a blank support, means for simultaneously cutting a plurality of thread grooves on the blanks, mechanism for establishing a predetermined initial relation between the blank support and the cutter, mechanism for rotating each blank through a predetermined number of revolutions, mechanism for effecting a relative movement between the blank support and the cutter in the direction of the axis of the blank, said movement being of such rate as to produce the desired pitch of the thread, and mechanism for effecting a predetermined relative advancing movement between the blank support and the cutter, said advancing movement occurring substantially between consecutive revolutions of the blank.

5. A machine for threading taps and the like, said machine including in combination, a blank support, means for simultaneously cutting a plurality of thread grooves on the blanks, mechanism for rotating each blank through a predetermined number of revolutions, mechanism for effecting a relative movement between the blank support and the cutter in the direction of the axis of the blank, said movement being of such rate as to produce the desired pitch of the thread, mechanism for effecting a predetermined number of vibrating movement between the blank support and the cutter during each revolution of the blank, and mechanism for effecting a predetermined relative advancing movement between the blank support and the cutter, said advancing movement occurring substantially between consecutive revolutions of the blank.

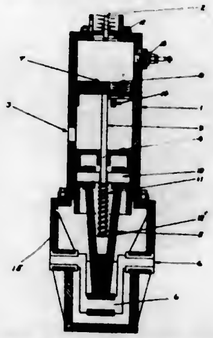
[Claims 6 to 48 not printed in the Gazette.]

1,155,433. SOLDERING-IRON. PETER MUNEY, St. Louis, Mo. Filed Apr. 20, 1914. Serial No. 833,291. (Cl. 158—26.)



A soldering iron comprising a tube, a handle located near one end of said tube, a rectangular burner located on the other end of the tube, a tapered rectangular recess formed in the end of the burner and forming a socket therein, a soldering tip having a tapered rectangular shank seated in the recess and a plurality of openings formed in the sides of the recess of the burner, substantially as specified.

1,155,434. INTERNAL-COMBUSTION ENGINE. ROBERT H. OLANDT, Long Island City, N. Y. Filed June 15, 1914. Serial No. 845,042. (Cl. 123—66.)



1. In an internal combustion engine, in combination, a cylinder, a working piston having a wrist pin and a forked crank connector, a scavenging follower in said cylinder, an exhaust port adapted to be opened after each working stroke of said piston, and means within said cylinder for moving said follower forward after said working stroke of said piston, comprising a guide-rod connected to said follower and passing through the wrist pin of said working piston and lying between the forked portions of said crank connector and a coil spring surrounding said rod.

2. In an internal combustion engine, in combination, a cylinder, a piston working in said cylinder, a crank, a crank connector pivotally connected between said piston and said crank, a scavenging follower in said cylinder between which and said piston the charge is exploded, an exhaust port near the outer end of said cylinder and adapted to be opened during the outward movement of said working piston, and means arranged within said cylinder upon the piston side of the follower for causing said follower to follow said piston in its outward movement as soon as said exhaust port is opened.

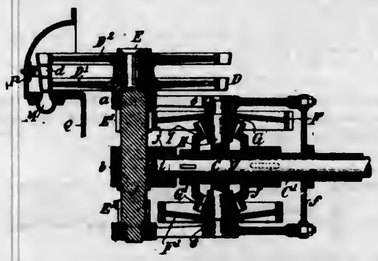
3. In an internal combustion engine, in combination, a cylinder, a piston working in said cylinder, a crank, a crank connector, a scavenging follower in said cylinder, an exhaust port adapted to be opened after each working stroke of said piston, means connecting said piston with said follower comprising a rod fixed to said follower and slidably connected to said piston and a coil spring carried on said rod and acting between said rod and said piston to cause said follower to expel gases from said cylinder after each working stroke of said piston.

4. In an internal combustion engine, in combination, a cylinder, a piston working in said cylinder, a crank, a crank connector pivotally connected between said piston and said crank, a scavenging follower in said cylinder, an exhaust port near the outer end of said cylinder and adapted to be opened during the outward movement of said working piston, and resiliently acting means connecting said piston with said follower arranged within said cylinder for causing said follower to follow said piston in its outward movement as soon as said exhaust port is opened.

5. In an internal combustion engine, in combination, a cylinder, a piston working in said cylinder, a crank, a crank connector, a scavenging follower in said cylinder, an exhaust port adapted to be opened after each working stroke of said piston, means connecting said piston with said follower comprising a coiled spring with a supporting rod therefor for causing said follower to follow the piston after each working stroke of said piston to expel the gases from said cylinder through said exhaust port.

[Claims 6 to 12 not printed in the Gazette.]

1,155,435. DRIVING MECHANISM FOR TORPEDOES. FRANK C. B. PAGE, Brooklyn, N. Y., assignor to E. W. Bliss Company, Brooklyn, N. Y., a Corporation of West Virginia. Filed Jan. 28, 1913. Serial No. 744,703. (Cl. 115—37.)



1. In an automobile torpedo, a turbine turning on an axis transverse to the torpedo, inner and outer propeller shafts, opposite bevel gears on said shafts respectively, opposite pinions meshing with both bevel gears, and reducing gears for driving said pinions in contrary directions at equal speeds from said turbine.

2. In an automobile torpedo, a turbine turning in a horizontal plane on a vertical axis, inner and outer propeller shafts, opposite bevel gears on said shafts respectively, opposite pinions meshing with both bevel gears, and reducing gears for driving said pinions in contrary directions at equal speeds from said turbine.

3. In an automobile torpedo, a turbine turning on an axis transverse to the torpedo, a shaft driven thereby having two pinions, inner and outer propeller shafts, opposite bevel gears on said shafts respectively, opposite bevel pinions meshing with both said gears, and reducing gearing between said respective bevel pinions and the pinions on said turbine shaft.

4. In an automobile torpedo, a turbine turning on an axis transverse to the torpedo, a shaft driven thereby having two pinions, inner and outer propeller shafts, opposite bevel gears on said shafts respectively, opposite bevel pinions meshing with both said gears, and gear wheels driving said bevel pinions respectively, one of said gears meshing with one of the pinions on said turbine shaft, and the other of said gears driven from the other pinion on said shaft through an idler gear.

1,155,436. SIDE BEARING. CALVIN B. PATCH, Glenellyn, Ill., assignor to William H. Miner, Chazy, N. Y. Filed July 25, 1914. Serial No. 853,003. (Cl. 64—64.)



1. In a side bearing for railway cars, a rockably mounted cradle, a journal rotatably mounted in said cradle, and a roller carried on each end of said journal, the cradle being rockable about a pivot at right angles to the axis of said journal.

2. In a side bearing for railway cars, the combination with a base plate, of a cradle, said plate and cradle having interengaging means permitting the latter to have a rocking movement, and a journal rotatably mounted in said cradle having rollers on the ends thereof, said cradle being pivoted about an axis extending at right angles to the axis of said journal.

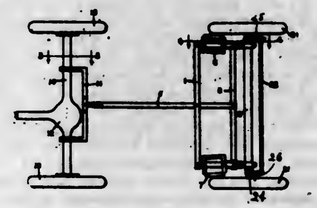
3. In a side bearing for railway cars, the combination with a base plate, of a cradle, said plate and cradle having interengaging means permitting the latter to have a rocking movement, said means comprising arcuate flanges on one of said members and arcuate grooves on the other member, and a roller carried by said cradle.

4. In a side bearing for railway cars, the combination with a base plate, of a cradle detachably and rockably mounted on said plate, axially alined rollers carried by said cradle on opposite sides thereof, said rollers preventing disengagement of said cradle from the base plate, said cradle being rockable about an axis at right angles to the axis of said rollers.

5. In a side bearing for railway cars, the combination with a base plate having spaced, upstanding lugs provided with actuate grooves on the inner sides thereof, of a cradle having laterally extended arcuate flanges at the bottom thereof mounted in said grooves, and rollers carried by said cradle.

[Claim 6 not printed in the Gazette.]

1,155,437. TRAILING APPARATUS. VICTOR E. PETRASSON, Omaha, Nebr. Filed July 13, 1914. Serial No. 850,581. (Cl. 21—137.)



1. A trailing apparatus of the specified class, comprising a pole for attachment to the tractor, a geometrically deformable frame attached to the front axle of the trailer, and operated by the pole to engage the wheels of that axle alternatively.

2. A trailing apparatus of the specified class, comprising a pole for attachment to the tractor, a pivotally jointed frame operated thereby and attachable to the front axle of the trailer, and a pair of guides mounted upon the frame for engagement with the wheels of that axle.

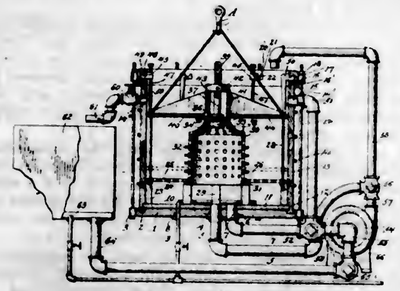
3. A trailing apparatus of the specified class, comprising a pole attachable to the tractor, and a geometrically deformable frame actuated thereby, which is adapted to be attached to the front axle of the trailer and to exert lateral pressure on the wheels of that axle.

4. A trailing apparatus of the specified class, comprising a pole for attachment to the tractor, and a geometrically deformable frame operated thereby, which is mounted upon the front axle of the trailer and is adapted to engage one of the bearing-wheels of that axle.

5. A trailing apparatus of the specified class, comprising a pole, a mechanically deformable frame actuated by the pole, a pair of guides adjustably mounted on the opposite ends of the frame, and pivotal connections for attaching the frame to the front axle of the trailer.

[Claims 6 to 11 not printed in the Gazette.]

1,155,438. DYEING-MACHINE. JOHN T. PSARSKI, Cleveland, Ohio, assignor to The Psarski Dyeing Machine Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 28, 1910. Serial No. 546,414. (Cl. 8—19.)



1. In a dyeing machine, a receptacle forming a chamber for receiving the material to be dyed and having a wall against which the material is to be compacted, top and bottom members for said receptacle, said wall being provided with a group of discharge openings adjacent one of said top and bottom members only, and means for supplying the dye liquor to the mass at a point on the opposite side thereof from the discharge.

2. In a dyeing machine, a receptacle forming a chamber having a vertical wall provided with an imperforate part and a group of perforations extending around the entire tank, said wall being adapted to have the material compacted against the same, top and bottom members, one of which is arranged adjacent the imperforate part of the wall and the other is adjacent the perforated part, such member adjacent the perforated part being provided with discharge openings adjacent the discharge openings in the wall, and means for supplying the dye liquor to the mass at a point opposite to the discharge whereby the mass is forced against the imperforate part of the wall and against the member having the discharge openings.

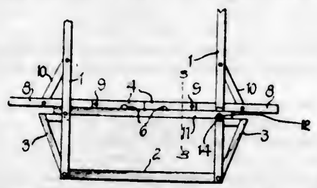
3. In a dyeing machine, a tank adapted to receive the material to be dyed and having on its side an imperforate portion and a group of discharge openings, top and bottom members, one arranged adjacent the imperforate portion and the other arranged adjacent to the discharge openings, said last named member having discharge openings adjacent the discharge openings in the side of the tank, and means for delivering the dye liquor to the mass at a point opposite to the discharge openings whereby the mass is forced outwardly against the side of the tank and against the member having the discharge openings.

4. In a dyeing machine, a tank having a bottom and an annular group of discharge openings in the side thereof and below the same an annular imperforate portion, a cover for said tank adapted to be arranged in a manner such that its periphery is adjacent to the discharge openings, said cover having discharge openings near its periphery, and means for delivering the dye liquor to the mass at a point opposite to the discharge.

5. In a dyeing machine, a tank having a bottom and an annular row of discharge openings near the upper edge thereof and an annular imperforate portion between such row of openings and the bottom of the tank, a cover for said tank adapted to normally assume a position with its periphery substantially midway between the upper and lower row of perforations, said cover being provided with discharge openings adjacent its periphery, and a distributing means adapted to deliver the dye liquor from the center and from the bottom of said tank whereby the mass is driven toward the side of the tank and against the under side of the cover.

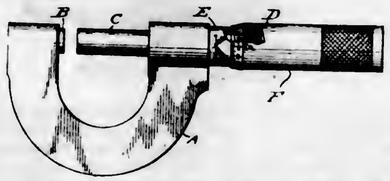
[Claims 6 to 10 not printed in the Gazette.]

1,155,439. SWING. ASA I. RABB, Kansas City, Kans. Filed May 25, 1914. Serial No. 840,883. (Cl. 155—35.)



A device of the class described comprising hangers, a platform connected with the lower extremities of the hangers, supports operatively engaged with said hangers, cross bars connecting the hangers above the supports and in close proximity to the supports, said supports being disposed outwardly relative to the hangers and longitudinally of the platform, seats adapted to rest upon the supports and including end rails provided in their under edges with notches to interlock with the cross bars, backs pivotally engaged with the seats, rigid links operatively engaged with the hangers and the backs, said links serving to limit the inward movement of the seats and backs, and supplemental members adapted to engage the cross bars and to be positioned below the seats and backs when the same are swung inwardly.

1,155,440. MICROMETER-CALIPER. HARRY A. REBELSKI, Brooklyn, N. Y. Filed Sept. 21, 1914. Serial No. 862,784. (Cl. 33—166.)

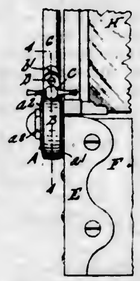


1. In a micrometer caliper including a barrel, sleeve, and spindle diverging reading lines on the said barrel the said lines starting from a common point of zero, metric graduations on one of the said lines and English graduations on the other of the said lines, divisional lines on the edge of the said sleeve, certain of said lines being located to be read in conjunction with the metric graduations and the other of the said lines being located to be read in conjunction with the English graduations, the said spindle having screw threaded engagement with the barrel, the threads being of such pitch as to produce the readings, simultaneously, upon the movement of the spindle with relation to the barrel.

2. A micrometer caliper having diverging lines on the barrel thereof starting from a common point of zero, metric graduations on one of said lines and English graduations on the other of said lines, and divisional marks on the sleeve, certain of said marks being adapted to cooperate with the metric graduations and other of said marks being adapted to coöperate with the English graduations to produce a reading in either of the metric or English systems, the spindle of the said micrometer having a thread, of fifty and four-tenths to the inch, thereon.

3. A micrometer caliper including a barrel, spindle and sleeve, diverging reading lines on the said barrel having graduations in the metric and English systems thereon, the edge of the sleeve having divisional marks thereon, certain of said marks being constructed to coöperate with the English reading line and other of said marks being constructed to coöperate with the remaining reading line, the said reading lines diverging from a common point of zero on the surface of the barrel, and threads on the said spindle of such pitch as to compensate for the divergence of the lines from a line parallel to the said axis.

1,155,441. HINGE-JOINT FOR WIND-SHIELDS. HENRY W. ROBBINS, Medina, N. Y. Filed Apr. 1, 1912. Serial No. 687,716. (Cl. 21—148.)



1. A hinge joint for wind shields comprising two parts having oppositely disposed faces forming a groove, means for adjusting said parts toward and from each other, a ring located and adapted to turn in said groove, and means for contracting said ring for holding said ring and parts from relative movement, substantially as set forth.

2. A hinge joint for wind shields comprising a part having a circumferential friction face, a second part having a circumferential friction face oppositely disposed with regard to the face of said first part, said faces forming a groove, means for adjusting said parts toward and from each other, a ring located and adapted to turn in said groove and having friction faces engaging the faces of said parts, and means for moving the faces of said ring into engagement with the faces of said parts for holding said ring and parts from relative movement.

3. In a hinge joint for wind shields comprising a part having a circumferential beveled face, a second part having a circumferential beveled face, means for adjusting said second part toward and from said first part, a tapered ring located and adapted to turn in the groove formed by said beveled faces, and means for contracting said ring whereby it is wedged into said groove for holding said ring and parts against relative movement, substantially as set forth.

4. A hinge joint for wind shields comprising a part having a circumferential beveled face, a stud secured to said part, a second part having a circumferential beveled face, means for adjusting said second part toward and from said first mentioned part on said stud, a tapered ring located and adapted to turn in the groove formed by said beveled faces, and means for contracting said ring whereby it is wedged into said groove for holding said ring and parts from relative movement, substantially as set forth.

5. A hinge joint for wind shields comprising a member provided with a circumferential beveled face, a stud secured to said first named member, a second member slidably movable upon said stud toward and from said first named member, means for holding said second named member in adjustable positions, a tapered ring located and adapted to turn in a groove formed by said beveled faces, and means for contracting said ring whereby it is wedged into said groove for holding said ring and members from relative movement, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,155,442. PROCESS FOR THE MANUFACTURE OF A PLASTIC AND ELASTIC MATERIAL FOR TARRING ROADS OR FOR OTHER PURPOSES. JEAN ROSEN, Paris, France. Filed Aug. 8, 1913. Serial No. 783,814. (Cl. 134—1.)

1. A process for the manufacture of plastic material consisting in treating coal tar to remove phenols and phenol oils and naphthalene and naphthalene oils from the coal tar, then mixing anthracene and anthracene oils with the residue, and then oxidizing the mixture to provide a viscous and flexible compound.

2. A process for the manufacture of plastic material consisting in withdrawing from coal tar the phenols and phenol oils which are detrimental because of their caustic effect and separating naphthalene and naphthalene oils because of the crystalline structure which they impart to the composition which contains them, adding anthracene and anthracene oils to the residue thus prepared while the same is in a heated state, and subsequently applying a current of air to the mixture to render it viscous.

3. A process for the manufacture of plastic material consisting in withdrawing from coal tar the phenols and phenol oils which are detrimental because of their caustic effect and separating naphthalene and naphthalene oils because they impart a crystalline structure thereto, then adding anthracene and anthracene oils to the residue while the same is heated to a temperature between 90° C. and 200° C., and subsequently passing a current of air through the same so as to thicken the mixture and render it viscous.

1,155,443. PROCESS OF MANUFACTURE OF IMPREGNATED MATERIAL. JEAN ROSEN, Paris, France, assignor to Société Anonyme des Combustibles Industriels, Paris, France. Filed July 22, 1914. Serial No. 852,516. (Cl. 91—70.)

1. A process for the manufacture of an unalterable, elastic and insulating impregnating product and impregnating supporting material consisting in treating coal tar by heating to remove its caustic and easily volatilizable crystalline substances, adding neutral oil to the tar, oxidizing the mixture by air, coating the supporting material with the product, and subsequently cooling the final product with air.

2. A process for the manufacture of an unalterable elastic and insulating impregnating product and impregnating supporting material consisting in treating coal tar by heating to remove its caustic and easily volatilizable crystalline substances, by heating and adding to the residue heavy neutral oil, thereupon submitting the mixture of tar residue and oil obtained to the oxidizing action of air, impregnating the supporting material by steeping said material in the oxidized insulating and plastic product obtained while heating the latter, and subsequently cooling the product by a current of air so as to cause the impregnating product to oxidize and solidify owing to the comparatively high temperature of solidification of this impregnating product.

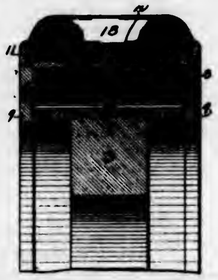
1,155,444. SPRING-WHEEL. JOSEPH SANDERS, Washington, D. C. Filed Mar. 6, 1912. Serial No. 681,883. (Cl. 152—38.)

1. A spring wheel construction including fixed and movable members, a constantly active normal spring support for the movable member, and a supplemental circumferential set of reserve spring units normally out of action and so disposed that all of the said units act in synchronism to simultaneously receive the load.

2. A spring wheel construction including fixed and movable members, a constantly active normal spring support for the movable member, and a plurality of supplemental circumferential sets of reserve spring units, all of which sets are normally out of action, and the units of each set being so disposed as to act in synchronism to simultaneously receive the load.

3. A spring wheel construction including fixed and movable members, a constantly active normal spring support

for the movable member, and a plurality of supplemental circumferential sets of reserve spring units, all of which sets are normally out of action, and the units of each set being so disposed as to act in synchronism to simultaneously receive the load, the said several sets of reserve spring units being graduated in strength and progressively coming into play according to the load.

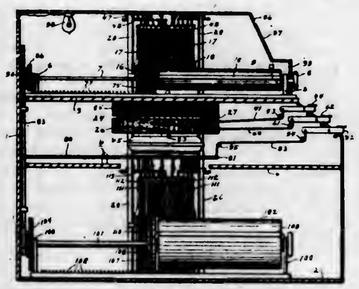


4. A spring wheel construction including fixed and movable members, one of which has bearings, a constantly active normal spring support for the movable member, and a supplemental circumferential set of reserve springs carried by one member and normally out of contact with said bearings, and all of said springs in said set acting in synchronism so as to come into contact at the same time with their bearings on a predetermined load.

5. A spring wheel having fixed and movable members, a series of wire-bundle units normally supporting one of said members from the other, and other reserve spring supports similarly arranged but normally free from supporting function, said reserve spring supports being graduated in strength.

[Claims 6 to 13 not printed in the Gazette.]

1,155,445. TYPE-WRITER. EVLAN SARGENT, Moline, Ill. Filed Aug. 5, 1914. Serial No. 855,156. (Cl. 197—5.)



1. A device of the class named, comprising a casing; a cylinder mounted therein so as to rotate transversely thereof; means for causing longitudinal movement of said cylinder; a plurality of type-bars pivotally mounted adjacent to said cylinder; vertically movable bars adapted to actuate said type-bars; a constantly operating mechanism mounted in said casing adjacent to said bars; and means for imparting the movement of said operating mechanism to said last-named bars, to suitably actuate the same.

2. In a device of the class described, the combination of a casing; a plurality of type-bars mounted therein so as to operate at a common point; vertically movable bars in rear of said type-bars and capable of actuating the same; a plurality of inking devices held normally in position adjacent to said type-bars; and means for suitably actuating said inking devices upon the upward movement of the vertically operative bars in rear thereof.

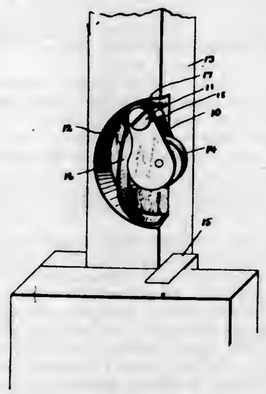
3. A device of the class named, comprising an inclosed casing; a cylinder mounted therein so as to rotate transversely thereof; means for giving to said cylinder a progressive longitudinal movement; a plurality of type-bars pivotally supported adjacent to said cylinder so as to operate at a common point; vertically movable bars in rear of said type-bars and capable of actuating the same; a central operating mechanism adapted to be constantly operated; means for imparting the movement of said operating mechanism to said last-named bars to suitably raise and lower the same; means for providing the type on each type-bar with a supply of ink upon the upward movement of the vertically movable bar in rear thereof.

4. In a device of the class named, a plurality of type-bars, pivotally mounted so as to operate at a common point; vertically movable bars adjacent to said type-bars; means for imparting the movement of said last-named bars to said type-bars to suitably actuate the same; a central rotatable cylinder capable of being constantly rotated and provided with a plurality of upwardly operating spirals and a plurality of downwardly operating spirals; dogs on said bars adapted for alternate engagement with said spirals; and means for compelling the engagement of said dogs with said spirals, to cause a movement of said bars upwardly or downwardly.

5. In a device of the class named, a plurality of type-bars pivotally mounted so as to operate at a common point; vertically movable bars adjacent to said type-bars; means for imparting the movement of said bars to said type-bars to suitably actuate the same; a central rotatable cylinder capable of being constantly operated, and provided with a plurality of upwardly operating spirals and a plurality of downwardly operating spirals; dogs on said bars adapted to alternately engage said spirals; means for enforcing the engagement of said dogs with said spirals; means for holding said dogs normally out of engagement with said spirals; and manually operated means for releasing said dogs to permit an engagement with said upwardly operating spirals.

[Claims 6 to 17 not printed in the Gazette.]

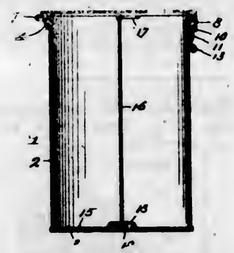
1,155,446. ANTIRATTLER FOR WINDOWS. JOHN SAUL, Jersey City, N. J. Filed Jan. 6, 1915. Serial No. 730. (Cl. 16—54.)



1. A device of the kind described comprising a swinging arm having a notch in the front side near the pivoted end, a pivot for the arm, a roller pivoted on the arm, and a spring having one end fitted in the aforesaid notch, said spring extending over the top of the arm and corresponding in shape to said top part of the arm with the free end of the spring curving outward and downward behind the arm and extending beyond the end of the arm under its pivot, said spring at its lower end being adapted to ride on a wall of a recess formed in the window sash.

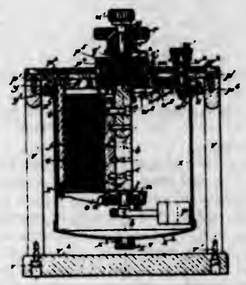
2. The combination with a window sash having a recess with a curved back wall in one side thereof extending to the edge of the sash, of a swinging arm pivoted in the recess, a roller on the arm, and a spring secured to the arm on the front side near the pivot, the spring extending from this point over the top of the arm and substantially fitting said top portion, with the free portion of the spring curving backward and downward beyond the end of the swinging arm, the said spring bearing against the wall of the recess under said pivot.

1,155,447. SHIPPING-CAN. BENJAMIN P. SAUNDERS, Iatan, Mo. Filed Feb. 9, 1914, Serial No. 817,508. Renewed Aug. 20, 1915. Serial No. 46,528. (Cl. 220—92.)



In a receptacle of the class described, a container having a closed bottom, a plate removably mounted in the container, said plate having an upwardly extending pocket formed centrally thereof, and having its open end confronting the bottom of the container, a rod having a threaded end, said pocket having a threaded aperture therein for engagement by the threaded end of the rod, a lock nut confined in the pocket and above the bottom of the container, said nut being removably engaged with the threaded end of the rod, said rod being adapted to penetrate centrally material in bulk previous to the placing of the material and plate in the container, said rod and plate being removable from the container with the material, and a ring connected to the upper end of the rod and being pivotally connected thereto, whereby said ring can lie in a horizontal position on the top of the material and below the plate of the upper edge of the container.

1,155,448. ELECTRIC PLATE-CONDENSER. GEORG SEIBT, Schöneberg, near Berlin, Germany, assignor to General Transmission Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 17, 1911. Serial No. 655,210. (Cl. 250—41.)



1. In an electric condenser of the type having parallel plates, a condenser member comprising parallel plates, and a carrier for said plates, said carrier and plates being integral with one another and machined from a single metallic body.

2. In an electric condenser of the type having stationary parallel plates and movable parallel plates adapted to enter between the stationary plates, a movable condenser member comprising a carrying core, parallel plates forming an integral homogeneous body with said core, and a spindle secured to said core.

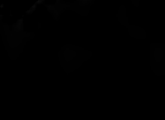
3. In an electric condenser of the type having stationary parallel plates and movable parallel plates adapted to enter between the stationary plates, a movable condenser member comprising carrier and parallel plates forming an integral homogeneous body with said carrier, and a stationary condenser member having a metal body which comprises as integral parts, a plate carrier and distance pieces, and separate plates set between the distance pieces of said body.

4. In an electric condenser of the type having parallel plates, a condenser member or electrode comprising a series of parallel plates and a carrier for said plates, the material constituting said plates and carrier being formed as a single body.

5. An electric condenser comprising stationary parallel plates and movable parallel plates adapted to enter between the stationary plates, the edges of the movable plates being arranged in step-like fashion to secure a more gradual change of capacity.

[Claims 6 to 10 not printed in the Gazette.]

1,155,449. CHERRY-PITTING MACHINE. JAMES H. SMITH, Rochester, N. Y., assignor to J. Hungerford Smith Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 20, 1913. Serial No. 796,106. (Cl. 146—5.)



1. A cherry pitting machine comprising a cherry holder, a pit presser, and a backing for the cherries consisting in a pair of parallel yielding strips rectangular in cross section spaced apart and adapted to roll apart to split the fruit while the pit is forced between them.

2. A cherry pitting machine comprising a cherry holder, a pit presser and means coöperating with said holder and presser adapted to present a yielding backing to the cherry, said means comprising two portions capable of rolling laterally and separating in a manner to split the cherry in a diametrical plane, as the pit presser is actuated to eject the pit.

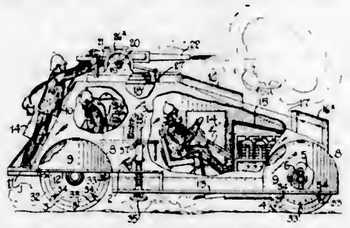
3. Apparatus of the kind described, comprising a cherry holder having a pocket with a reduced open bottom, a pit presser mounted in coöperative relation with said pocket, and thick yielding strips normally closing the pocket bottom as it is in position beneath said presser and adapted to roll laterally in opposite directions and open under pressure of said presser as the cherry is pressed thereagainst to split the cherry and permit the pit to pass therethrough.

4. Apparatus of the kind described, comprising a movable carrier having lines of cherry receiving pockets to be successively brought to operative position, said pockets having open bottoms, a gang of pit pressers mounted to operate simultaneously on the cherries in a line of said pockets, and yielding strips extending lengthwise beneath the carrier and forming a common backing for the cherries in said pockets as they are operated on.

1,155,450. ARMORED MOTOR-CAR. JOHN STANKUS, Portage, Pa. Filed May 8, 1915. Serial No. 26,831. (Cl. 89—40.)

1. In an armored motor car, an armored body inclosing the steering and operating mechanism of the car, the top of the body at the rear end of the body having a fixed upwardly projecting annular member, a rotatable annular

member supported upon the fixed annular member and having upwardly extending lateral cheeks and a gun including a wheeled carriage, the axle of the wheels being adapted to be engaged with said cheeks, the rear end of the armored body being provided with a platform extending around three sides of the body and below the gun whereby the operator of the gun may direct the latter from the platform and be protected by the armored body.



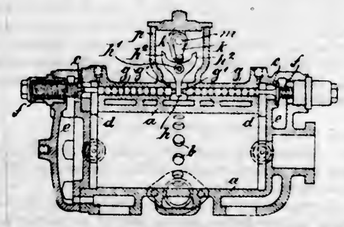
2. In an armored motor car, an armored body, a fixed annular member supported upon the top of the body, an annular member having rotative engagement with the fixed annular member and disposed therein and having vertically extending recesses, and a gun supported by the inner rotatable member having axles normally disposed within the recesses of the rotatable member and having wheels upon which the gun is supported.

3. In an armored motor car, an armored body inclosing the driving and steering mechanism of the car, the rear end of the body having a platform disposed around three sides of the body, a fixed annular member mounted upon the top of the body adjacent the rear end thereof, a rotatable annular member disposed upon the fixed annular member and rotatable thereon, a gun including a carriage detachably mounted upon the rotatable member and having wheels normally supporting the carriage, the platform providing a place for the operator of the gun to stand, the armored body acting to shield the operator.

4. In an armored motor car having supporting wheels, a platform disposed on three sides of the car, a housing extending over the wheels, plates supported upon said housing and extending down on the exterior faces of the wheels, and platforms carried by said plates and alined with the platforms on the sides of the body.

5. In an armored motor car, flanged supporting wheels, road engaging tires detachably mounted upon the wheels and when in place extending out to the peripheries of the flanges thereof, shoes mounted upon the car for vertical movement and adapted to engage the railway rails and receive current therefrom, springs normally urging said shoes downward into engagement with a rail, means for supporting said shoes in a raised position against the action of said spring to thereby carry the shoes in spaced relation to the rail and electrically actuated signaling devices disposed within the car and electrically connected to said shoes.

1,155,451. DISTRIBUTING-VALVE FOR STEAM-ENGINES. JOHANN STUMPF, Berlin, Germany. Filed Mar. 30, 1912. Serial No. 687,423. (Cl. 121—97.)

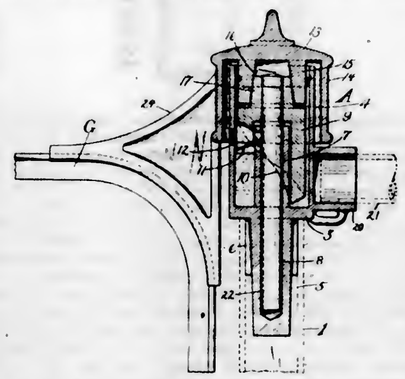


1. A power cylinder having an inlet port at each end, valves for said ports, valve actuating spindles having ends approaching each other, spindle-actuating means comprising two members co-acting through a cam face on one, one member actuated by a uniformly moved part of the engine, the other member transmitting to the spindles alternately intermittent quick movements.

2. A power cylinder having an inlet port at each end, valves for said ports, valve actuating spindles having ends approaching each other, spindle-actuating means comprising two pivotally movable members co-acting through a cam face on one, one member actuated by a uniformly moved part of the engine, the other member transmitting to the spindles alternately intermittent quick movements.

3. A power cylinder having an inlet port at each end, valves for said ports, valve actuating spindles having ends approaching each other, spindle-actuating means comprising two members co-acting through a cam face on one, one member actuated by a uniformly moved part of the engine, the other member transmitting to the spindles alternately intermittent quick movements, and an oil containing chamber inclosing said two members and the spindle ends.

1,155,452. HINGE MECHANISM. AUGUST SUNDH, Hastings-upon-Hudson, N. Y. Filed Oct. 8, 1912. Serial No. 724,508. (Cl. 16—163.)



1. The combination of a support, a stationary hinge member carried thereby and formed with an oil chamber, an anti-friction bearing device in said chamber, a movable hinge member rotatable about the vertical axis and having an inclined surface coöperating with said anti-friction bearing device, whereby said member is raised and lowered as it is rotated, and a gate supported by and rotatable with said movable member.

2. The combination of a gate adapted to be swung in either direction from a closed position, a hinge member supporting the gate, an oil reservoir containing said hinge member, the latter being rotatable horizontally, and a roller on which said member is supported, the bearing surface of said member being formed to cause said member to move vertically when the gate is swung in either direction from a closed position, whereby the weight of the gate operates to make the gate self-closing when opened in either direction.

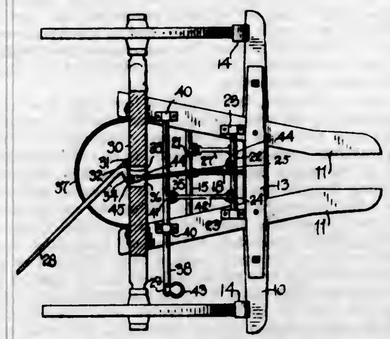
3. The combination of a gate post, hinge mechanism located on top of the post and comprising a pintle extending vertically downward within the post, a gate supported by said mechanism and having its axis of movement within the said pintle, said mechanism comprising a bearing located laterally beyond said pintle to support the weight of the gate, and a member to swing with the gate and having an inclined bearing surface also located laterally beyond the pintle to ride on said first named bearing and thereby cause the gate to ride up and down as it swings, said pintle forming a means to receive the lateral strain or pull of the gate while free from the downward pull or weight of the gate.

4. The combination of a gate post, a stationary hinge member mounted on top of the post, a movable hinge member coöperating with the stationary member and having its axis of movement in line with the post, one of said members comprising a vertical pintle, the other member having a vertical socket to receive the pintle, an anti-friction roller mounted on said last named member laterally beyond said socket and pintle and rolling on an inclined surface of the member comprising said pintle, and a closure supported by the said movable member and forming a cover for the hinge, said pintle forming a means to receive the lateral strain or pull of the gate while free from the downward pull or weight of the gate.

5. The combination of a stationary hinge member forming a receptacle adapted to contain lubricating oil, a coöperating movable hinge member, and a cover for the said hinge member and receptacle, said cover carried with the movable hinge member and formed with a downwardly extending flange within which the receptacle projects.

[Claims 6 to 18 not printed in the Gazette.]

1,155,453. WAGON-BRAKE. FIRDIA WATSON, Cass, Ark. Filed Apr. 21, 1915. Serial No. 22,930. (Cl. 21—8.)

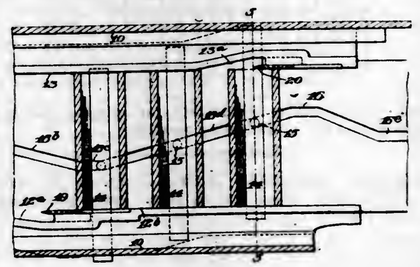


1. A wagon brake including a brake beam, an operating shaft connected to the beam, a controlling shaft connected to the operating shaft, a lever mounted for movement in a horizontal plane, a lever mounted for movement in a vertical plane, and rods connecting the levers and the controlling shaft, whereby either one of said levers may be swung to rotate said controlling shaft for moving the brake beam into active position.

2. A vehicle brake including a swinging brake beam, an operating shaft having a pair of angularly opposed cranks, a rod connecting one of said cranks to the brake beam, a controlling shaft having three cranks, a pair of the cranks being similarly disposed and the third crank being diametrically opposed to the pair of cranks, a rod connecting the third crank to the second crank of the operating shaft, a lever mounted for movement in a horizontal plane, a lever mounted for movement in a vertical plane, and rods independently connecting said pair of cranks with said levers, whereby either one of said levers may be swung to rotate the controlling shaft with a consequent movement of the brake beam.

3. A vehicle brake including a swingingly mounted brake beam, an operating shaft extending in parallel relation thereto and provided with a pair of angularly opposed cranks, a rod connecting the first of said cranks to the brake beam, a controlling shaft provided with a plurality of cranks, a rod connecting one of said cranks with the second crank of the operating shaft, rods connected to the other cranks of the controlling shaft, a lever mounted for swinging movement in a horizontal plane, and a lever mounted for swinging movement in a vertical plane, said levers being connected to said last mentioned rod, whereby either one of said levers may be swung to actuate the brake beam.

1,155,454. BEAN-SNIPPER. FRED WEGNER, Fairport, N. Y., assignor to Geo. W. Cobb, New York, N. Y. Filed Jan. 10, 1914. Serial No. 811,292. (Cl. 146—7.)



1. A bean snipping apparatus comprising a conveyer bearing bean holders, cutters at each side of said conveyer at separated points along the line of its travel, and means operable by the conveyer movement for shifting beans in said holders independently thereof endwise first into operative relation to one of said cutters and then to the other for snipping the ends thereof.

2. A bean snipping apparatus comprising a conveyer bearing bean holders, each of said holders having a bean engaging portion therein movable transversely of the line of conveyer movement, cutters mounted at each side of said conveyer at separated points along the line of its travel and means for moving said movable holder portions for presenting first one end of the beans to one of said cutters and thereafter the remaining end to the other cutter.

3. Apparatus of the kind described, comprising a conveyer bearing bean holders extending transversely of the line of the conveyer movement, said holders having transversely movable lower portions adapted to engage the beans, means for moving said conveyer portions first toward one side of the conveyer from a median line and then toward the other, and cutting means mounted in position to snip first one end of the beans and then the other as they are moved lengthwise in said holders.

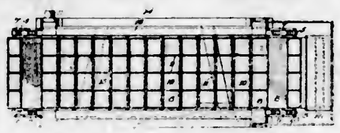
4. Apparatus of the kind described, comprising an endless conveyer having a horizontally extending stretch, transversely extending bean holders carried by said conveyer, said holders having lower portions movable transversely of the directions of the conveyer movement, said portions having provision for movement toward one side of the conveyer at one part of its travel and toward the other side at another part, and cutters mounted in position to snip the bean ends successively as they are moved in said holders.

5. Apparatus of the kind described, comprising an endless conveyer having a horizontally extending stretch, bean holders carried by said conveyer extending transversely of its line of movement and of open troughlike form, said holders having transversely movable bottoms, a fixed element having an irregular groove engaging a portion of said movable bottoms to move them transversely first toward one side and then toward the other of the conveyer as it progresses, and shear cutters mounted for coöperation with the two ends of the bean holders in position to snip the respective ends of the beans, as they are moved endwise in said holders by engagement with said movable bottom portions of the holders.

1,155,455. BEAN-SNIPPER. FRED WEGNER, Fairport, N. Y., assignor to Geo. W. Cobb, New York, N. Y. Filed Jan. 10, 1914. Serial No. 811,293. (Cl. 146—7.)

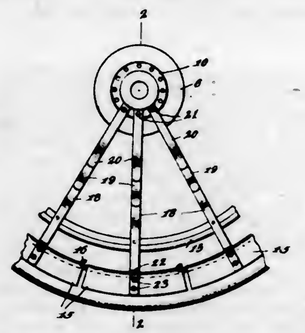
A device of the kind described comprising an endless conveyer having upper and lower horizontally extending stretches, bean holders projecting transversely from said conveyer divided into a plurality of pockets of limited size

to hold beans upstanding therein, said pockets having aligning and cutting means coöperative therewith on the upper



and lower stretchea respectively for snipping the bean ends while held in upstanding position.

1,155,456. RESILIENT WHEEL. CLYDE M. WERT, Pioche, Nebr. Filed Oct. 18, 1913. Serial No. 795,988. (Cl. 152—30.)

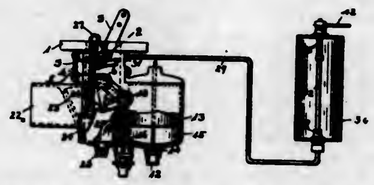


1. A spring wheel including a hub, rim and tread, spokes connecting the hub and rim, springs arranged in pairs on said hub and secured thereto, certain of which extend beyond the rim and in proximity to the margin thereof into engagement with the tread, the latter being arranged in spaced relation to the rim, and stops mounted on the inner faces of said certain springs for abutment with the rim, whereby undue lateral thrust of the springs is prevented when preasure is exerted on said tread.

2. A spring wheel including a hub, a flange formed on the inner end of said hub, a flange formed in proximity to the outer end of said hub, a plurality of uniformly spaced sockets arranged on the outer periphery of said hub approximately midway the ends, thereof, said hub being provided with an annular recess in proximity to each of said flanges, a plurality of spokes radiating from said hub, one end of each of which is engaged in one of said sockets, a rim arranged on the outer ends of said spokes, a second rim comprising a plurality of hingedly connected plates arranged in spaced relation to said first mentioned rim, a tread carried by said plates, a plurality of springs one end of each of which is engaged in one of said recesses, and means for securing said springs to said hub, some of said springs having engagement with said plates, for the purpose specified.

3. A spring wheel including a hub, a multiplicity of spokes radiating from said hub, a rim connecting said spokes at the outer ends thereof, a rim arranged in spaced relation to said first mentioned rim, said second mentioned rim comprising a plurality of hingedly connected plates each of which has the longitudinal edges thereof turned into parallelism, a tread portion arranged between the parallel edges of said plates, a plurality of springs one end of each of which is in engagement with said hub, spacing washers arranged between each of said springs for holding the same in spaced apart relation, a series of said spokes being arranged in pairs on the sides of said spokes, said springs varying in size, one of the springs of each series being engaged with one of said plates, and stops arranged on each of said plate engaging springs for limiting the movement of said tread.

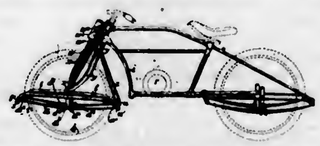
1,155,457. CARBURETER. EDWARD WETTERHAHN, Granada Park, Cal. Filed Sept. 23, 1914. Serial No. 863,118. (Cl. 48—150.3.)



1. In a carbureter, a spray tube having spray holes, a float chamber communicating with the spray tube, a spray adjusting tube upon the spray tube having holes normally to fit above the spray holes of the spray tube, a lever for manually adjusting the spray through the spray holes by the spray adjusting tube, a fuel oil controlling valve having one end cut down for a fuel oil passage inside of the spray tube, a fuel oil operating lever attached to the fuel oil controlling valve, a throttle above the spray tube, a lever attached to the throttle connected by a rod with the operating lever of the fuel oil controlling valve, adapted for mechanically operating the fuel oil controlling valve with the throttle, and an air valve having a lever connected to another lever on the gas throttle shaft by a spring adapted to decrease the tension of the spring when opening the throttle.

2. In a carbureter, for burning a low grade fuel oil, a spray tube having spray holes, a float chamber communicating with the spray tube, a spray adjusting tube upon the spray tube having holes normally to fit above the spray holes of the spray tube, a lever for manually adjusting the spray through the spray holes by the spray adjusting tube, a fuel oil controlling valve having one end cut down for a fuel oil passage inside of the spray tube, a fuel oil operating lever attached to the fuel oil controlling valve, a throttle above the spray tube, a lever attached to the throttle connected by a rod with the operating lever of the fuel oil controlling valve, adapted for mechanically operating the fuel oil controlling valve with the throttle, another lever attached to the throttle on the other side, a spring attached to this lever, an air valve having a lever connected to the spring adapted to decrease the tension of the spring when opening the throttle, and a priming tube having a valve with a hollow stem shutting off the priming oil allowing the priming oil in the priming tube to be sucked into the engine while the low grade fuel oil in the carbureter is getting warmed.

1,155,458. SPRING FRONT FORK FOR MOTOR-CYCLES AND LIKE MACHINES. SAVILLE WHITING, St. Kilda, Victoria, Australia. Original application filed July 29, 1914, Serial No. 853,884. Divided and this application filed Mar. 30. 1915. Serial No. 18,180. (Cl. 208—97.)

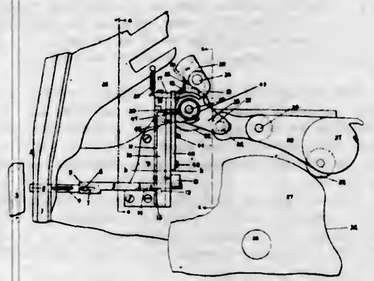


1. A spring fork for the front wheel of a motor cycle or like machine, comprising in combination, a front wheel fork, a main steering column, a pair of laminated springs, bearing members clamped on the springs to receive the wheel axle, a guide fork with its open ends secured to the said bearing members, a shank at the other end of the guide fork, a cylinder carried by the steering column, a piston on the shank adapted to slide in the cylinder, and compression means in the latter.

2. A spring fork for the front wheel of a motor cycle or like machine, comprising in combination, a front wheel fork, a main steering column, a pair of cambered girders carried by the said front fork, a pair of laminated springs secured by their respective opposite ends to the respective ends of the cambered girders, bearing members clamped on the springs to receive the wheel axle, a guide fork with its open ends secured to the said bearing members, a shank at the other end of the guide fork, a cylinder carried by the steering column, a piston on the shank adapted to slide in the cylinder, and compression means in the latter.

3. A spring fork for the front wheel of a motor cycle or like machine, comprising in combination, a front wheel fork, a main steering column, a pair of cambered girders, carried by the said front fork, a pair of standards secured to the respective ends of the fork and to the top of the steering column, diagonal stay rods secured to the upper portion of the wheel fork, and to the ends of the cambered girders, bearing members clamped on the springs to receive the wheel axle, a guide fork with its open ends secured to the said bearing members, a shank at the other end of the guide fork, a trunnion mounted cylinder carried by the steering column, a piston on the shank adapted to slide in the cylinder, and compression means in the latter.

1,155,459. FEED-REGULATOR. JOSEPH WOODWARD, Dayton, Ohio. Filed Mar. 24, 1914. Serial No. 826,962. (Cl. 74—54.)



1. In a feed regulator, a rotating member, a ratchet wheel secured to said member, a pawl adapted to engage said ratchet wheel, actuating mechanism to which said pawl is pivotally connected, said actuating mechanism adapted to intermittently rotate the ratchet wheel through said pawl, vertically movable means to lift and hold said pawl out of engagement with the ratchet wheel without disturbing the movement of said actuating mechanism, a platen, and a laterally movable device adapted to be engaged by said platen, to force downwardly the vertically movable means and thereby permit the pawl to descend and engage the ratchet wheel, substantially as described.

2. In a feed regulator, a rotating member, a ratchet wheel secured to said member, a pawl adapted to engage said ratchet wheel, actuating mechanism to which said pawl is pivotally connected, said actuating mechanism adapted to intermittently rotate the ratchet wheel by means of said pawl, a vertically movable member, resilient means for elevating said member, means carried by said member to lift the pawl out of engagement with the ratchet wheel when the vertically movable member is elevated, without disturbing the movement of said actuating mechanism, a platen, and a laterally movable device adapted to be engaged by said platen, to force the vertically movable member downwardly, against the tension of said resilient means, and thereby permit the pawl to descend and engage the ratchet wheel, substantially as described.

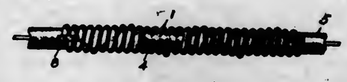
3. In a feed regulator, a shaft, a ratchet wheel secured to said shaft, a pawl, cam operated mechanism to which said pawl is pivotally secured, said pawl having two projecting portions, one projecting portion adapted to engage the ratchet wheel and rotate the latter when the pawl is moved by the cam operated mechanism, a vertically movable member, a shoe carried by the top portion of said member, the other projecting portion of said pawl resting on said shoe, resilient means for elevating said shoe and vertically movable member, to lift the pawl out of engagement with the ratchet wheel without disturbing the movement of the cam-operated mechanism, a curved device secured to the lower end of said vertically movable member, and a laterally movable plunger, said plunger being movable over the curved device to force the latter downwardly, whereby the vertically movable member and shoe may be drawn downwardly thereby, to permit the first named projecting portion of said pawl to descend into engagement with the ratchet wheel, substantially as described.

4. In a feed regulator, a shaft, a ratchet wheel secured to said shaft, a pawl, a cam-operated arm to which said pawl is pivotally secured, a vertical slide, a shoe carried by the top portion of said slide, said pawl having two nose portions, one nose portion thereof adapted to engage the ratchet wheel and rotate the latter when the pawl is moved forwardly by said arm, the other nose portion of said pawl resting upon said shoe, a spring for elevating said shoe to hold the first named nose portion of the pawl above the ratchet wheel, a roller carried by the lower end of said slide, and a laterally movable plunger, said plunger having a beveled portion movable over said roller, to force the latter downwardly, whereby the slide and shoe will be drawn downwardly against the tension of said spring, to permit the first named nose portion of said pawl to descend into engagement with the ratchet wheel, substantially as described.

5. In a feed regulator, a shaft, a ratchet wheel secured to said shaft, a pawl, a cam-operated arm to which said pawl is pivotally secured, a vertical slide, a shoe carried by the top portion of said slide, said pawl having two nose portions which straddle said cam-operated arm, one nose portion adapted to engage the ratchet wheel and rotate the latter when the pawl is moved forwardly by said arm, the other nose portion of said pawl being movable upon said shoe, a spring for elevating said shoe and slide, said shoe adapted, when elevated, to carry upwardly its respective nose portion of the pawl, whereupon the other nose portion of said pawl will be lifted above the ratchet wheel, a roller carried by the lower end of said slide, a laterally movable plunger, a beveled piece secured to said plunger, said plunger adapted to carry the beveled piece over said roller to force the latter downwardly, whereupon said slide and shoe will be drawn downwardly by said roller against the tension of said spring, and resilient means for forcing the first named nose portion of said pawl into engagement with the ratchet wheel when the shoe descends, substantially as described.

[Claim 6 not printed in the Gazette.]

1,155,460. ARMOR FOR FLEXIBLE ARTICLES. CHARLES BARBOUR, Pittsburgh, Pa., assignor to Standard Underground Cable Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Continuation of application Serial No. 748,752, filed Feb. 15, 1913. This application filed Nov. 13, 1914. Serial No. 871,881. (Cl. 173—267.)



1. An envelop for a flexible article consisting of an inner helix of resilient wire coiled at one pitch, and an outer helix of resilient wire coiled at a materially less pitch than the inner helix, said helices being united at their ends.

2. An envelop for a flexible article consisting of two helices of resilient wire coiled in opposite directions and united at their ends.

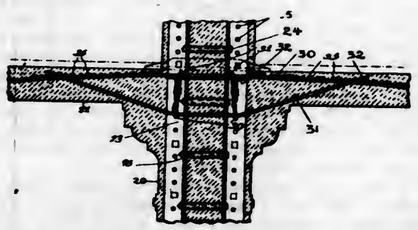
3. The combination with a flexible article, of a protecting armor comprising a resilient wire coiled around

said article, and a locking wire extending spirally around said article at a pitch materially greater than that of said armor, the locking wire being within said armor.

4. The combination with a flexible article, of a protecting armor comprising a resilient wire coiled around said article, and a locking wire coiled at a pitch materially greater than that of said armor and in an opposite direction thereto, said locking wire being incased within and held against movement by said armor.

5. The combination with a flexible article, of a protecting armor comprising a plurality of resilient wires coiled around said article, and a corresponding number of locking wires extending spirally around said article and at a pitch materially greater than that of the armor, each of said locking wires being secured to the free end of one of said armor coils.

1,155,461. REINFORCED-CONCRETE BUILDING CONSTRUCTION. FRANCIS M. BARTON, Chicago, Ill. Filed June 24, 1907. Serial No. 380,438. (Cl. 72—15.)



1. In a reinforced concrete building construction, the combination of a column and a floor made of suitably molded concrete, said column embracing a core comprising a plurality of rigidly connected bars provided with vertically separated apertures, reinforcing rods supported on said column, certain of which extend continuously through the apertures of the bars and radially from said column into the concrete floor structure, and flim rods supported on the main reinforcing rods in criss-cross relation to each other and the main reinforcing rods.

2. In a reinforced concrete building construction, the combination of a column and a floor formed of a body of concrete suitably molded to form, the column embracing a core comprising a plurality of rigidly connected angle bars having their apices directed toward a common center, the flanges of said bars being provided with a plurality of vertically separated openings, and reinforcing rods supported on said column, certain of which extend continuously through the openings of said bars and radially from the column into the floor structure, and certain of said bars extending through said floor structure and constituting tension bars for the floor structure.

3. In a reinforced concrete building construction, the combination of a column and a floor made of suitably molded concrete, said column embracing a core comprising a plurality of rigidly connected bars provided with vertically separated openings, and reinforcing rods extending through said openings and into the floor, said rods being arranged in vertical pairs and crossing each other radially outside of the column, one of the rods of each pair being inclined upwardly from the column core bars and constituting a strut rod, and the other rod of each pair being inclined downwardly from the core bars toward the bottom of the floor structure and crossing the upwardly inclined rod to constitute a tension or cradle rod.

4. In a reinforced concrete building construction, the combination of a column and a floor made of suitably molded concrete, said column embracing a core comprising a plurality of rigidly connected bars provided with vertically separated openings, reinforcing rods extending through said openings and into the floor, said rods being arranged in vertical pairs and crossing each other radially outside of the column, one of the rods of each pair being inclined upwardly from the column core bars and constituting a strut rod, and the other rod of each pair being inclined downwardly from the core bars toward the bottom of the floor structure and crossing the upwardly inclined rod to constitute a tension or cradle rod, and means for locking said rods of each pair together at the points of their crossing.

5. In a reinforced concrete building construction, a concrete floor a column comprising a molded mass of concrete and a core comprising a plurality of rigidly connected bars embedded in said concrete mass, and a column head comprising a plurality of rods extending through the column and into the floor and supported directly on the core bars and arranged in upper and lower sets, the rods of said upper and lower sets being arranged to cross each other a distance radially from the column to constitute a trussed column head.

[Claims 6 and 7 not printed in the Gazette.]

1,155,462. COMPOSITE TITANIC-OXID PIGMENT AND METHOD OF PRODUCING SAME. LOUIS E. BARTON, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed July 14, 1914. Serial No. 850,876. (Cl. 134—58.)

1. The method of treating a titanic sulfate solution which comprises adding thereto a compound capable of forming by reaction with said solution an insoluble sulfate and digesting the mass so as to produce a composite precipitate comprising such insoluble sulfate and titanic acid.

2. The method of treating a titanic sulfate solution which comprises adding thereto a soluble salt capable of forming by reaction with said solution an insoluble sulfate and digesting the mass so as to produce a composite precipitate comprising such insoluble sulfate and titanic acid.

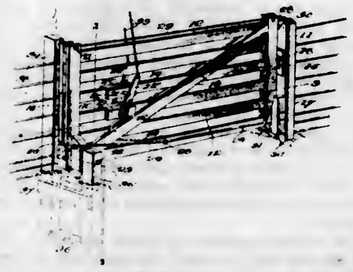
3. The method of treating a titanic sulfate solution which comprises adding thereto a chlorid of an alkali earth metal and digesting the mass so as to produce a composite precipitate comprising an insoluble sulfate and titanic acid.

4. The method of treating a titanic sulfate solution which comprises adding thereto chlorid of calcium and digesting the mass so as to produce a composite precipitate comprising an insoluble sulfate and titanic acid.

5. The method of making pigments containing titanic oxid which comprises digesting a titanic compound in sulfuric acid until titanic sulfate is formed, adding a compound capable of forming an insoluble sulfate, treating the mixture to promote precipitation of titanic acid, separating the resulting precipitates, and calcining them.

[Claims 6 to 27 not printed in the Gazette.]

1,155,463. FARM-GATE. GEORGE M. BATES, Lebanon, Mo. Filed Feb. 20, 1915. Serial No. 9,617. (Cl. 39—13.)



1. In a device of the class described, a gate including end members and connecting rails, laterally directed bearing members carried by said gate at one end and at opposite sides thereof, vertical posts spaced apart, a tie rod extending through said vertical posts and through said bearing members, and a rod bent intermediate its ends to form side portions and extended at its bend through one of the rails near its free end and the sides of the rod diverged and connected to the bearing members, and a clip device engaging the sides of the rod and holding the outer portions thereof in close engagement with the adjacent rail.

2. In a device of the class described, a gate including end members and connecting rails, laterally directed bearing members carried by said gate at one end and at opposite sides thereof, vertical posts spaced apart, a tie rod extending through said vertical posts and through said bearing members, a rod bent intermediate its ends to form side portions and extended at its bend through one of the rails near its free end and the sides of the rod diverged and connected to the bearing members, and a clip device having eyes engaging the rod and bearing over the adjacent rail and holding the outer portions of the rod in close engagement with the adjacent rail.

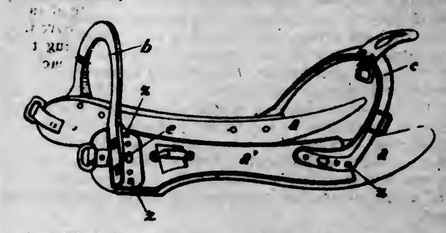
1,155,464. HYDROCARBON-LANTERN. LEONIDAS BAXTER, Dayton, Ohio, assignor to The Thomas Manufacturing Company, Dayton, Ohio, a Corporation of Ohio. Filed Apr. 2, 1915. Serial No. 18,672. (Cl. 240—38.)

1. In a hydrocarbon lantern, a fluid reservoir, a tubular standard mounted thereon, a lantern frame, a base for said frame, a tubular member extending upwardly from said standard and through said base, a coupling removably secured to the upper end of said tubular member, hydrocarbon burner means secured to said coupling and communicating therethrough with the tubular member, and a shoulder on the lower end of the latter, between which and the coupling the base is clamped, substantially as described.

2. In a hydrocarbon lantern, a fluid reservoir, a tubular standard mounted thereon, a lantern frame, a base for said frame, a threaded tubular member extending upwardly from said standard and through said base, a sleeve supported by the upper threaded end of said tubular member, a vaporizing tube extending upwardly from said sleeve, hydrocarbon burner means supported upon said tube, and a shoulder on the lower end of the tubular member, between which and the sleeve the base is clamped, substantially as described.

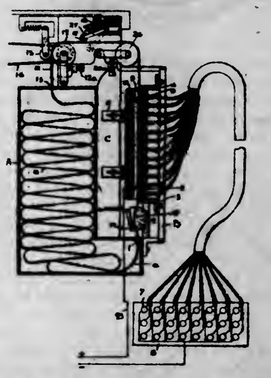
3. In a hydrocarbon lantern, a fluid reservoir, a tubular standard mounted thereon, a lantern frame, a base for said frame, a sleeve, a vaporizing tube extending upwardly from said sleeve, a mixing tube supported upon the vaporizing tube, a burner tube extending downwardly on each side of said mixing tube, arms extending outwardly from the lower portions of said burner tubes, a tubular member extending from said sleeve, through said base into the tubular standard, supporting members attached to said arms through the lower ends of which said tubular member also passes, said tubular member being threaded, and a shoulder on the latter below said base, to compress the lower ends of said supporting members between the base and said coupling, whereby said members may form a firm bracing support for the mixing and burner tubes, substantially as described.

1,155,465. SADDLE. FREDERICK C. BEAL, Toronto, Ontario, Canada. Filed Mar. 16, 1915. Serial No. 14,578. (Cl. 54—44.)



A saddle tree comprising a pair of arches and a pair of spacing members connecting them together and holding them in their spaced relation, in combination with a pair of side-boards, two hinged plates for each side-board, each hinged plate having a set of hinge members, hinge lugs having shanks extending through the feet of the arches, and hinge pins connecting the hinge lugs to the hinge members.

1,155,466. ELECTRIC-DISPLAY SWITCHING MECHANISM. EVERETT H. BICKLEY, Detroit, Mich., assignor to Motograph Company of America, Detroit, Mich., a Corporation of Michigan. Filed Dec. 23, 1912. Serial No. 738,162. (Cl. 177—350.)



1. A control for electric displays, having in combination, a field of electric display lamps, a field of terminals connected therewith, contact means opposite said terminals, a box and an endless ribbon running through said box and stored therein, in convolutions and passing between the field of terminals and contact means to make and break the electrical circuits to the display lamps, substantially as described.

2. A control for electric displays, having in combination, a field of electric lamps, a field of terminals connected therewith, a contact plate opposite said terminals, a ribbon propelled between said field of terminals and the contact plate, the said ribbon being slotted and a metal character provided with a stud by which the character may be removably fastened to the ribbon and which wipes the contact plate, substantially as described.

1,155,467. DRIVING-GEAR. MAURICE E. BLOOD, Kalamazoo, Mich. Filed Oct. 15, 1913. Serial No. 795,218. (Cl. 192—1.)

1. The combination with a driving shaft of a wheel comprising a chambered hub rotatably mounted on said

shaft and having an internal peripheral groove therein, a driving member having a peripheral groove therein secured to said shaft, driving lugs disposed in said grooves in said hub and driving member, a ring member provided with internal and external driving lugs, the external driving lug being disposed in said groove in said hub to coact with said driving lug thereof, a resilient split ring member having an external lug at each end and an internal driving lug disposed in said groove in said driving member to coact with the said driving lug thereof, a shoe disposed within said ring member to coact with the internal driving lug thereof, said shoe having slots adapted to receive the external lugs on said resilient member, the slot for the lug at the end of the member having the internal driving lug thereon being of such length as to provide a lost motion connection between the parts, said ring members being free for independent rotative movement except as limited by said lugs and shoe, a retaining plate seated in said hub, and a hub cap adapted to clamp said retaining plate in its seat.



2. The combination with a driving shaft of a wheel comprising a chambered hub rotatably mounted on said shaft and having an internal peripheral groove therein, a driving member having a peripheral groove therein, secured to said shaft, driving lugs disposed in said grooves in said hub and driving member, a ring member provided with internal and external driving lugs, the external driving lug being disposed in said groove in said hub to coact with said driving lug thereof, a resilient split ring member having an external lug at each end and an internal driving lug disposed in said groove in said driving member to coact with the said driving lug thereof, a shoe disposed within said ring member to coact with the internal driving lug thereof, said shoe having slots adapted to receive the external lugs on said resilient member, the slot for the lug at the end of the chamber having the internal driving lug thereon being of such length as to provide a lost motion connection between the parts, said ring members being free for independent rotative movement except as limited by said lugs and shoe.

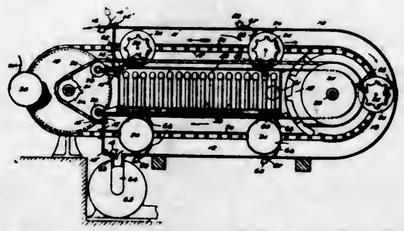
3. The combination with a driving shaft of a wheel comprising a chambered hub rotatably mounted on said shaft, a driving member secured to said shaft, driving lugs on said hub and driving member, a ring member provided with opposed internal and external driving lugs, the external driving lug coacting with said driving lug on said hub, a resilient split ring member having an external lug at each end and an internal driving lug coacting with the said driving lug of said driving member, a shoe disposed with said ring member to coact with the internal driving lug thereof, said shoe having slots adapted to receive the external lugs on said resilient member, the slot for the lug at the end of the resilient member having the internal driving lug thereon being of such length as to provide a lost motion connection between the parts, said ring members being free for independent rotative movement except as limited by said lugs and shoe, and a retaining plate seated in said hub.

4. The combination with a driving shaft of a wheel comprising a chambered hub rotatably mounted on said shaft, a driving member secured to said shaft, driving lugs on said hub and driving member, a ring member provided with opposed internal and external driving lugs, the external driving lug coacting with said driving lug on said hub, a resilient split ring member having an external lug at each end and an internal driving lug coacting with the said driving lug of said driving member, a shoe disposed within said ring member to coact with the internal driving lug thereof, said shoe having slots adapted to receive the external lugs on said resilient member, the slot for the lug at the end of the resilient member having the internal driving lug thereon being of such length as to provide a lost motion connection between the parts, said ring members being free for independent rotative movement except as limited by said lugs and shoe.

5. The combination with a driving shaft of a wheel comprising a chambered hub, rotatably mounted on said shaft and having an internal peripheral groove therein, a driving member having a peripheral groove therein secured to said shaft, driving lugs disposed in said grooves in said hub and driving member, an outer annular member provided with internal and external driving lugs, the external driving lugs being disposed in said groove in said hub rim to co-act with said driving lug thereof, an inner annular member having an internal driving lug disposed in said groove in said driving member to coact with said driving lug thereof, and having a driving part coacting with said internal driving lug of said outer annular member, and a retaining plate seated in said hub.

[Claims 6 to 12 not printed in the Gazette.]

1,155,468. CLOTHES-DRYING MACHINE. CHARLES W. COLLINS, Seattle, Wash. Filed Dec. 22, 1914. Serial No. 878,463. (Cl. 34—12.)



1. In a machine of the class described, a heating tank provided with a runway, a plurality of rotatable drums, means to propel said drums through said runway, means for automatically interrupting the travel of said drums when they have traveled a definite distance, and manually-controlled means whereby said propelling means are caused to become operative to again propel the drums.

2. In a machine of the class described, the combination with a tank having a runway, means to supply heated air to said runway, and means to effect the flow of said air through the runway, of a rotary drum, a conveyer for carrying said drum into and from said runway, means for rotating the drum, and means to affect the conveyer to impart intermittent progressive movements to the drum.

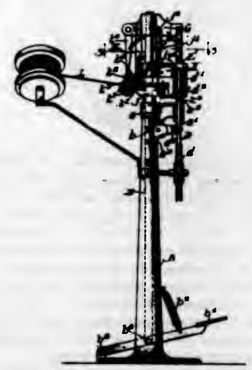
3. In a machine of the class described, a tank provided with two runways one above the other and connected at the rear end of the tank, a heating chamber communicating with one of said runways, means for drawing air from the other runway, a plurality of drums, means to propel the drums through said runways, and means for rotating the drums within the tank.

4. In a machine of the class described, a tank, a plurality of drums, conveyer means including endless chains for carrying the drums in a plurality of intermittent movements into and out of the tank, means to rotate the drums only when they are traveling and at rest within the tank, and means to supply a current of heated air to flow through the tank.

5. In a machine of the class described, a heating tank, a rotary drum, means to convey the drum in a series of intermittent progressive movements into and out of said tank, and means to rotate the drum both when it is traveling and at rest in the tank.

[Claims 6 to 10 not printed in the Gazette.]

1,155,469. LAUNDRY-TAG MACHINE. EDWARD CRAIG, St. Joseph, Mich., assignor to Saranac Machine Co., St. Joseph, Mich., a Corporation of Michigan. Filed Nov. 22, 1909. Serial No. 529,472. (Cl. 93—88.)



1. In a machine of the class disclosed, mechanism for feeding a strip of sheet material, means for driving two parallel staples through the opposite ends of a predetermined length of said material, and means for cutting off the double stapled length of material, by making a cut parallel with said staples, close to the last staple, together with means for supporting the article to which the said material is applied, and means for feeding the staple wire transversely of the said strip.

2. A laundry tag machine comprising means for feeding a strip of cloth, means for stapling the same to an article, by the insertion of parallel staples, means for cutting off the stapled portion of said material, thereby leaving the tag fastened to the article by two staples, by making a cut parallel with said staples, close to the last staple, and means for feeding the staple wire transversely of the said strip.

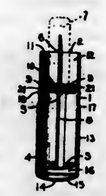
3. A laundry tag machine comprising means for feeding a strip or ribbon of cloth, means for stapling the said strip at a plurality of points therein, by parallel and properly spaced staples, and means for supporting an article in position for receiving the multiple stapled portions of said strip or ribbon of cloth, together with means for raising the article to be tagged into position to receive the tag, said last mentioned means comprising a pair of clench blocks mounted to slide up and down in unison, and means for lifting the strip to sever the attached tag.

4. In a machine of the class disclosed, a plurality of staplers arranged in a row, means for feeding sheet material in the direction of said row, and in position to receive the staples from said staplers, means for feeding wire to the said staplers, the wires extending parallel and at right angles to the direction of feed of the sheet material, whereby the staples are parallel, means for supporting an article in position to receive the staples, and means for cutting off the stapled portion of the said material, close to the last staple, said staples having staple formers disposed in planes extending transversely of the direction of feed of said material.

5. In a machine of the class disclosed, a vertically movable support for the article to be operated upon, adapted to slide up and down on a straight line, a lever for operating said support, said lever and support having a shifting connection, a vertically disposed rod, and a cam on said rod for operating said lever.

[Claims 6 to 10 not printed in the Gazette.]

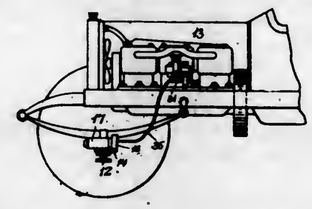
1,155,470. SOAP-BUBBLER. MARTIN R. CROSSMAN, Boston, Mass. Filed Apr. 6, 1915. Serial No. 19,581. (Cl. 46—81.)



1. In a soap bubbler, the combination with a casing having a closed end provided with an aperture and an open end, of a soap-retaining element within said casing and a cap element adapted to telescope over either end of the casing, said cap element having an aperture in its closed end which when inserted over the closed end of the casing constitutes therewith a whistle.

2. In a soap bubbler, the combination with a tubular casing open at one end and provided with an aperture at the other end, of a soap mass inserted into the open end of the casing but projecting beyond said end, said soap mass and casing having such a relative shape as to provide two separate air passages whereby a double bubble will be blown.

1,155,471. SHOCK-OPERATED SPEED-CONTROLLING APPARATUS FOR SELF-PROPELLED VEHICLES. ISAAC H. DAVIS, Newtonville, Mass., assignor, by direct and mesne assignments, of one-half to Henry H. Westinghouse, New York, N. Y., and one-half to Mary C. Davis, Boston, Mass. Filed May 15, 1914. Serial No. 838,767. (Cl. 21—90.)



1. An apparatus of the character stated, comprising, in combination, a road vehicle, a motor therefor, an inertia weight movable independently of the body of the vehicle and normally held yieldingly in an inoperative position on the vehicle, said weight being movable from inoperative position by its own inertia in response to shocks due to the too rapid progress over inequalities and roughness of the road, and means operated by a movement of said weight from its normal position to shut off the power to said motor.

2. An apparatus of the character stated, comprising, in combination, a road vehicle, a motor therefor, an inertia weight movable independently of the body of the vehicle and normally held yieldingly in an inoperative position on the vehicle, said weight being movable from inoperative position by its own inertia in response to shocks due to the too rapid progress over inequalities and roughness of the road and speed controlling means operated by a movement of said weight from its normal position to shut off the power to said motor, and by the return of the weight to its normal position to permit the motor to be again operated.

3. An apparatus of the character stated, comprising, in combination, a road vehicle, a motor therefor, an inertia weight movable independently of the body of the vehicle and normally held yieldingly in an inoperative position

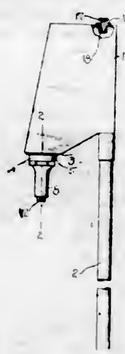
on the vehicle, said weight being movable from inoperative position by its own inertia in response to shocks due to the too rapid progress over inequalities and roughness of the road, and motor controlling means operated by a movement of said weight from its normal position to shut off the power to said motor, and by the return of the weight to its normal position to permit the motor to be again operated, and means for retarding the return movement of the weight.

4. An apparatus of the character stated, comprising, in combination, a road vehicle, an inertia weight normally held yieldingly in an inoperative position on the vehicle, and movable therefrom by its own inertia in response to inequalities in or roughness of the road, speed-controlling means operated by a movement of the vehicle to reduce the speed, a recording device and connections between said weight and recording device for operating the latter and recording movements of the weight.

5. An apparatus of the character stated, comprising in combination, a road vehicle, a casing having means for attachment to the vehicle, an inertia weight movable in said casing, means for yieldingly holding the weight in a normal position from which it is movable by inertia in response to inequalities in or roughness of the road, and speed-controlling instrumentalities carried by the casing and operated by a movement of the weight from its normal position to cooperate with other instrumentalities in reducing the speed of the vehicle.

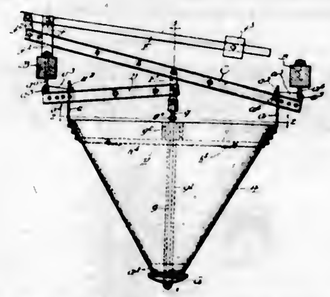
[Claims 6 to 20 not printed in the Gazette.]

1,155,472. HANGER-BOX OILER. CHARLES A. DE TEMPLE, St. Louis, Mo. Filed Apr. 11, 1914. Serial No. 831,257. (Cl. 221—54.)



A device of the character described comprising, in combination, a receptacle provided with a discharge opening, a staff secured to said receptacle, a tubular guide member detachably engaged with the receptacle and projecting a predetermined distance therein, the exterior portion of the guide member being disposed in substantial parallelism with the adjacent extremity of the staff, the inner end portion of the bore of the guide member being enlarged to afford a valve seat, the portion of the guide member within the receptacle having inlet ports produced therein, the inner extremity of the guide member being provided with an inwardly disposed flange, a valve within the enlarged portion of the bore of the guide member coacting with the valve seat therein, an expansible member interposed between the valve and the flange of the guide member for maintaining said valve normally seated, and an extension carried by the valve projecting through the outer portion of the bore of the valve member, said extension being of such a length as to extend exteriorly of the guide member when the valve is seated, said extension being provided with open end grooves disposed longitudinally thereof and serving as a guide means for the discharge from within the receptacle.

1,155,473. SEPARATOR. RAYMOND W. DULL, Chicago, Ill. Filed Apr. 20, 1914. Serial No. 833,047. (Cl. 83—82.)



1. A sand separator comprising a receptacle having a discharge opening, supporting mechanism for said receptacle, arranged above the same, whereby said receptacle is movable up and down bodily, counterbalancing means for normally holding the receptacle in raised position, adjusted to permit the receptacle to move downward under a load, and a valve for said opening, connected above with said mechanism to open when the receptacle moves downward, said mechanism including a lever having a fixed axis, a link connecting said lever with said means, and a hanger secured to said receptacle, engaging said lever at a point between said axis and link.

2. A sand separator comprising a receptacle having a discharge opening, supporting mechanism for said receptacle, arranged above the same, whereby said receptacle is movable up and down, counterbalancing means for normally holding the receptacle in raised position, adjusted to permit the receptacle to move downward under a load, and a valve for said opening, connected with said mechanism to open downwardly when the receptacle moves downward, said mechanism comprising a pair of levers having fixed axes, connected together where said mechanism is connected with said valve, and connections from one lever to said counterbalancing means.

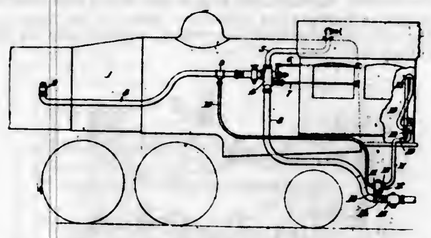
3. A sand separator comprising a receptacle having a discharge opening, supporting mechanism whereby said receptacle is movable up and down, counterbalancing means for normally holding the receptacle in raised position, adjusted to permit the receptacle to move downward under a load, and a valve for said opening, connected with said mechanism to open when the receptacle moves downward, said mechanism comprising a pair of levers having fixed axes, hinges resting on said levers, a link connecting said levers together, a rod connecting said link and valve together, and a connection from the end of one lever to said means.

4. A sand separator comprising a receptacle having a discharge opening, supporting mechanism whereby said receptacle is movable up and down, counterbalancing means for normally holding the receptacle in raised position, adjusted to permit the receptacle to move downward under a load, and a valve for said opening, connected with said mechanism to open when the receptacle moves downward, said mechanism and means being connected together by a vertically disposed rod, said receptacle containing guides for said rod, and said mechanism including a system of levers whereby said rod moves faster than the receptacle.

5. A sand separator comprising a receptacle having a discharge opening, supporting mechanism whereby said receptacle is movable up and down, counterbalancing means for normally holding the receptacle in raised position, adjusted to permit the receptacle to move downward under a load, and a valve for said opening, connected with said mechanism to open when the receptacle moves downward, said valve having a rod which extends upward through said receptacle, said mechanism having means to move said rod downward faster than the receptacle to open said valve.

[Claims 6 to 9 not printed in the Gazette.]

1,155,474. LOCOMOTIVE-CAB SQUIRT. FRANK W. EDWARDS, Chicago, Ill., assignor to The Chicago Lubricator Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 21, 1914. Serial No. 862,844. (Cl. 137—14.)



1. A locomotive cab squirt, having a temperature and pressure reducing device interposed between a source of supply of water at high temperature and high pressure and a source of supply of cooler water and in communication with both sources, an outlet for said reducing device, and means to control the outflow from said reducing device through said outlet of the mingled waters at reduced temperature and pressure.

2. A locomotive cab squirt, having a temperature and pressure reducing device interposed between a source of supply of water at high temperature and high pressure and a source of supply of cooler water, and means to control the discharge of the commingled two bodies of water from said reducing device.

3. A locomotive cab squirt, having a reducer interposed between a source of supply of water at high temperature and high pressure and a source of supply of cooler water and communicating with both sources, an outlet extending from said reducer to the place of delivery of the commingled waters, a valve arranged in said outlet at such place for controlling the delivery, and a check-valve interposed between the reducer and the cooler water inlet to the reducer.

4. A locomotive cab squirt, having a reducer interposed between a source of supply of water at high temperature and high pressure and a source of supply of cooler water and communicating with both sources, an outlet from said reducer, and a controlling-valve located in said outlet to allow the mixing of these waters and thereby cause a reduction of the temperature and pressure of the water delivered by the reducer.

5. The combination of an injector, a water supply therefor, a water delivery pipe leading from the injector, means to supply steam to the injector, a reducer, separate means to connect said reducer with the water delivery pipe and the water supply, and means to render the reducer operative to deliver water through it at reduced temperature and pressure.

[Claims 6 to 9 not printed in the Gazette.]

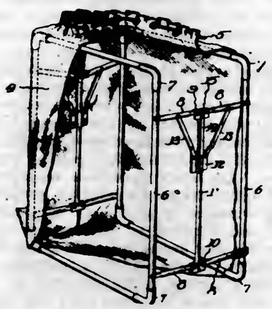
1,155,475. COLLAPSIBLE-FRAME PARCEL-SACK. THOMAS F. FAY, Chicago, Ill., assignor to Thomas J. Fay, Elkhart, Ind. Filed July 5, 1913. Serial No. 777,500. (Cl. 150—49.)

1. The combination with a bag, of a collapsible and removable metal frame within the bag to distend it, and an automatic locking device to lock the frame in distended position when the bag is distended by the frame.

2. The combination with a bag, of a removable collapsible frame disposed within the bag, and automatic locking devices for releasably clamping the frame after it is distended.

3. The combination with bag open at one end, of a removable collapsible metal frame disposed therein, comprising rigid rectangular frame members, and means to space the frames apart within the bag, and a snap lock in connection with said means for holding the rectangular frame members releasably in relative spaced relation.

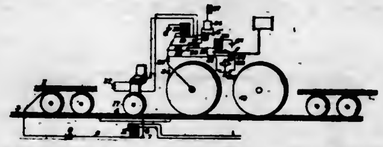
4. The combination with a bag, of a metal frame disposed therein, comprising rectangular frame members, arms connected at one end to one of the frame members, and members to which the other extremities of corresponding pairs of arms are pivotally connected, and means in connection with the arms for locking them in position with respect to the rectangular frames, when the bag and frames are distended.



5. The combination with a bag, of a metal frame disposed therein, comprising rectangular frame members, arms connected at one end to one of the frame members, and members to which the other extremities of corresponding pairs of arms are pivotally connected, and a locking device comprising a pair of arms connected to the arms of any corresponding pair intermediate of the ends of the latter, a second member to which the free extremities of the second pair of arms are connected, and a resilient member connected to the second said member having an extending tip adapted to engage the first said member for locking the arms in distended position.

[Claims 6 to 12 not printed in the Gazette.]

1,155,476. SAFETY APPARATUS FOR RAILWAYS. THOMAS M. FREEBLE, Rochester, Pa. Filed Sept. 28, 1912. Serial No. 721,793. (Cl. 246—58.)



1. Safety apparatus for railways, comprising a railway track divided into block sections, one of the track rails in each section having a plurality of relatively short contact sections arranged end to end and insulated from each other and from the adjacent rails, means in each block section controlled by track conditions in another block section, each of said short contact sections being connected to the track rails of the same block by connections controlled by said means, some of said contact sections being connected with one of the track rails of the same block and some of them with the other track rail of the same block; substantially as described.

2. Safety apparatus for railways, comprising a railway track divided into block sections, one of the track rails in each section having a plurality of relatively short contact sections arranged end to end and insulated from each other and from the adjacent rails, each of said short contact sections being connected through a source of current with one of the track rails of the same block, adjacent of said contact sections being connected to opposite track rails of the same block; substantially as described.

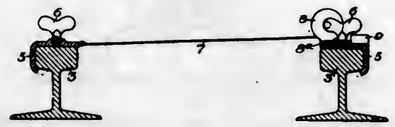
3. The combination with a railway track having its rails divided into block sections, and a rail in each block section being provided with a relatively short insulated contact member, a source of current connected to said contact member, means governed by track conditions in another block for controlling said connection, and safety

appliances carried by the vehicle, said appliances comprising a circuit containing a stick relay, a source of current, and a traveling contact adapted to engage the track rails and also said short contact section, said relay having an armature which is permanently connected to the energising winding of the relay and said armature having a front contact which is permanently connected to the last named source of current, and also a back contact with which is permanently connected to said contact device; substantially as described.

4. A railway track having track rails divided into block sections and there being a relatively short insulated contact member in each block section, a source of current connected to said contact member, means governed by conditions in another block for controlling said connection, a relay on the vehicle, a normally closed circuit controlled by said relay and safety apparatus controlled by said circuit, said relay having its winding grounded at one terminal, an armature of said relay to which the other terminal of said winding is permanently connected, a front contact for said armature permanently connected to a source of current on the vehicle, a back contact for said armature, and a contact device mounted on the vehicle for contact with one of the track rails and with the said short insulated contact sections, said contact device being connected with said source of current and also with said back contact, substantially as described.

5. In safety apparatus for railways, track rails divided into block sections, one of said rails in each block having therein a plurality of relatively short sectiones placed end to end insulated from each other and from the adjacent rail sections, a relay having a circuit leading to and controlled by track conditions of a different block, said relay having a plurality of armatures and armature contacts, each of said armatures and its contact forming part of a circuit from one of the short sections to one of the track rails, adjacent armatures being connected to opposite track rails, substantially as described.

1,155,477. MANUAL ACTUATOR FOR RAILWAY-SIGNALS. THOMAS M. FREEBLE, Rochester, Pa., assignor of one-half to Raymond M. Kaufmann, Pittsburgh, Pa. Filed Oct. 8, 1912. Serial No. 724,595. (Cl. 246—21.)



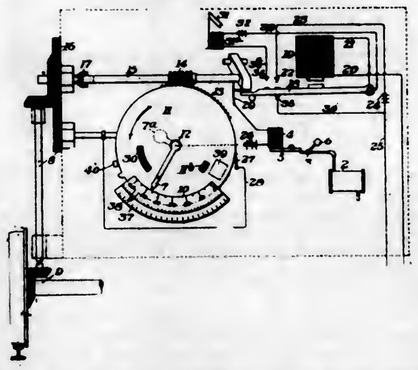
1. A manual actuator for track signals, comprising a conductor adapted to bridge two opposite track rails and having contact members at its ends for engagement with the rails, one of said members having a low resistance current indicator; substantially as described.

2. A manual actuator for track signals, comprising a conductor adapted to bridge two opposite track rails and having contact members at its ends for engagement with the rails, one of said members having a low resistance current indicator, said indicator being in series with the bridging conductor; substantially as described.

3. A manual actuator for track signals comprising a conductor adapted to bridge two opposite track rails and having contact members at its ends for engagement with said rails, the two contact members having insulation between them, and a current indicator mounted on one of the contact members and connected in series between the two contact members; substantially as described.

1,155,478. SAFETY APPARATUS FOR RAILWAY-TRAINS. THOMAS M. FREEBLE, Rochester, Pa. Filed Feb. 20, 1913. Serial No. 749,667. (Cl. 246—58.)

1. In train control apparatus, an indicating device, comprising a normally inactive movable member, normally inoperative driving connections for actuating said member from a moving part of the vehicle, and a track controlled trip operating under predetermined track conditions to operatively connect said member with the said driving connections, together with means with which said member co-acts to indicate the permissive speed of the train under such predetermined conditions, substantially as described.



2. In train control apparatus, an indicating device, comprising a normally inactive movable member, normally inoperative driving connections for actuating said member from a moving part of the vehicle, and a track controlled trip operating under predetermined track conditions to operatively connect said member with the said driving connections, means with which said member co-acts to indicate the permissive speed of the train under such predetermined conditions, and means along the track for causing said trip to operate at definite predetermined points under said conditions, substantially as described.

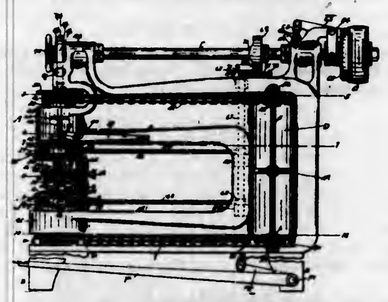
3. In train control apparatus, an indicating device, comprising a normally inactive movable member, normally inoperative driving connections for actuating said member from a moving part of the vehicle, and a track controlled trip operating under predetermined track conditions to operatively connect said member with the said driving connections, means with which said member co-acts to indicate the permissive speed of the train under such predetermined conditions, and means for limiting the movement of said member in the direction of reduced permissive speed, substantially as described.

4. In train control apparatus, an indicating device, comprising a normally inactive movable member, normally inoperative driving connections for actuating said member from a moving part of the vehicle, and a track controlled trip operating under predetermined track conditions to operatively connect said member with the said driving connections, means with which said member co-acts to indicate the permissive speed of the train under such predetermined conditions, means along the track for causing said trip to operate at definite predetermined points under said conditions, and a speed scale with which said member co-acts when operative to indicate the permissive speed of the train under the predetermined conditions, and another scale which coöperates with said member to show actual distance traveled by the vehicle beyond one of said predetermined points, substantially as described.

5. In train control apparatus, an indicating device, comprising a normally inactive movable member, normally inoperative driving connections for actuating said member from a moving part of the vehicle, and a track controlled trip operating under predetermined track conditions to operatively connect said member with the said driving connections, means with which said member co-acts to indicate the permissive speed of the train under such predetermined conditions, means for limiting the movement of said member in the direction of reduced permissive speed, and means co-acting with said movable member to automatically reduce the speed of the train if the indicated permissive speed is exceeded, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,155,479. MACHINE FOR CUTTING SHEET METAL. CHARLES B. GRAY, Knoxville, Tenn. Filed May 1, 1913. Serial No. 764,836. (Cl. 164—49.)



1. In a machine of the nature described, the combination of a reciprocatory cutter, rotatable feed mechanism supports having an axis perpendicular to the feed plane and adapted for turning in unison on said axis, feed members located on said supports for supporting and feeding a sheet between them, and means for actuating one of said feed members, substantially as described.

2. In a machine of the nature described, the combination of a reciprocatory cutter, rotatable feed mechanism supports having axis perpendicular to the feed plane and adapted for turning in unison on said axis, two feed members for supporting and feeding a sheet, one of said feed members being on one and the other on the other of said supports and one of said feed members standing in opposition to the other, and means for actuating one of said feed members, substantially as described.

3. In a machine of the nature described, the combination of a reciprocatory cutter, rotatable feed mechanism supports having an axis perpendicular to the feed plane and adapted for turning in unison on said axis, feed members located on said supports for supporting and feeding a sheet between them, means for actuating one of said feed members, and means controllable by the operator for turning said supports in unison, substantially as described.

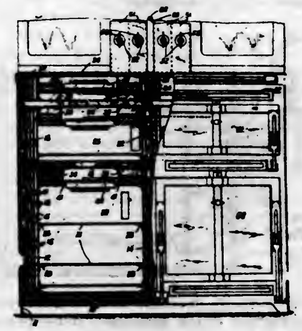
4. In a machine of the nature described, the combination of a reciprocatory cutter, rotatable feed mechanism supports having an axis perpendicular to the feed plane and adapted for turning in unison on said axis, two feed members for supporting and feeding a sheet, one of said feed members being on one and the other on the other of said supports and one of said feed members standing in opposition to the other, means for actuating one of said feed members, and means controllable by the operator for turning said supports in unison, substantially as described.

5. In a machine of the nature described, the combination of an upper reciprocatory cutter, a lower cutter, rotatable feed mechanism supports, having an axis perpendicular to the feed plane and adapted for turning in unison on said axis, feed members located on said supports for supporting and feeding a sheet between them, and means for actuating one of said feed members, substantially as described.

[Claims 6 to 86 not printed in the Gazette.]

1,155,480. RANGE. WILLIAM S. HADAWAY, Jr., New Rochelle, N. Y. Filed Mar. 9, 1914. Serial No. 823,372. (Cl. 219—35.)

1. A range comprising a plurality of complete independent composite heat-insulating slabs arranged to produce a baking oven or inclosure and a stove top recess each having a channel space, interchangeable heater units removably supported in said channel spaces and comprising a slab of heat absorbing material and a radiant heater associated therewith, said heater units being adapted to be mounted with the slab of heat absorbing material either above or below the radiant heater.



2. A range comprising a baking oven, a broiling compartment and a stove top grate, a pair of spaced insulating blocks below the top grate and correspondingly spaced pairs of insulating blocks at the top of the baking oven and the broiling compartment, guide members secured to the adjacent surfaces of said insulating blocks, and interchangeable heater units mounted in the spaces between the blocks and supported by said guide members.

3. A range comprising a baking oven, a broiling compartment and a stove top grate, a pair of spaced insulating blocks below the top grate and correspondingly spaced pairs of insulating blocks at the top of the baking oven and the broiling compartment, guide members secured to the adjacent surfaces of said insulating blocks, and interchangeable heater units mounted in the spaces between the blocks and supported by said guide members, each of the heater units comprising a slab of heat absorbing material and a radiant heater conductor supported by the slab and spaced from a surface thereof.

4. A range comprising a baking oven, a broiling compartment and a stove top grate, a pair of spaced insulating blocks below the top grate and correspondingly spaced pairs of insulating blocks at the top of the baking oven and the broiling compartment, guide members secured to the adjacent surfaces of said insulating blocks, and interchangeable heater units mounted in the spaces between the blocks and supported by said guide members, each of the heater units comprising a slab of heat absorbing material and a radiant heater conductor supported by the slab and spaced from a surface thereof, heater units being adapted to be inserted in the baking oven and the broiling compartment with the radiant heater conductor suspended below its bottom surface and a heating unit for the top grate being supported with radiant heater above the slab and below the grating.

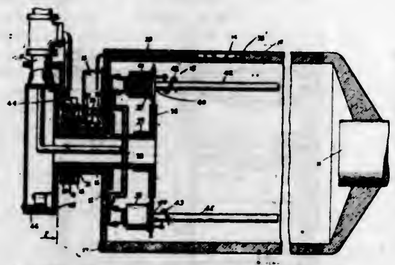
5. A range comprising an oven and a stove top grate, a pair of spaced insulating blocks below the top grate and a correspondingly spaced pair of insulating blocks at the top of the oven, guide members secured to the adjacent surfaces of said insulating blocks, and interchangeable heater units mounted in the spaces between the blocks and supported by said guide members.

[Claim 6 not printed in the Gazette.]

1,155,481. REGULATOR FOR LAUNDRY-ROLLS. WILLIAM S. HADAWAY, Jr., New Rochelle, N. Y. Filed May 14, 1914. Serial No. 838,441. (Cl. 219—20.)

1. In combination with a rotatable body, a stationary heater for imparting heat thereto, a regulator, means associated with the rotatable body for actuating the regulator, and means responsive to the action of the regulator for governing the heat imparted to the rotatable body by the heater.

2. In combination, a rotatable body, a stationary electric heater for imparting heat thereto, a thermometer secured to the body, and means responsive to the temperature of the body and the action of the thermometer for automatically governing the amount of heat imparted to the rotatable body by the heater.



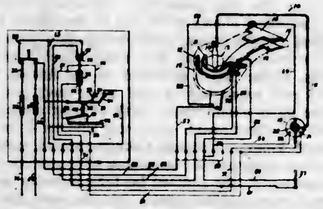
3 In combination, a rotatable, heated body, a thermometer embedded in the body near its periphery, a regulator secured to and rotatable with the body and responsive to the action of the thermometer, and means dependent upon the regulator for governing the amount of heat supplied to the body.

4. In combination, a rotatable, heated body, a thermometer embedded in the body near its periphery, a regulator secured to and rotatable with the body and responsive to the action of the thermometer, and stationary means dependent upon the regulator for governing the amount of heat supplied to th ebody.

5. In combination, a rotatable body, a relatively stationary heater therefor, means for controlling the energy supplied to the heater, a regulator secured thereto and responsive to the temperature of the rotating body for governing the action of said control means.

[Claims 6 to 10 not printed in the Gazette.]

1,155,482. HEAT-REGULATING SYSTEM. WILLIAM S. HADAWAY, Jr., New Rochelle, N. Y. Filed Apr. 17, 1914. Serial No. 832,410. (Cl. 219—20.)



1. A heat regulating system comprising an immersion heater, an outlet heater, and means for connecting a section of the immersion heater in series with the outlet heater to relatively reduce the heat generated in the outlet heater.

2. A heat regulating system for type-setting machine crucibles comprising an immersion heater, an outlet heater, and means dependent upon the temperature in the crucible for connecting a section of the immersion heater in series with the outlet heater and disconnecting the remainder of the immersion heater from the circuit.

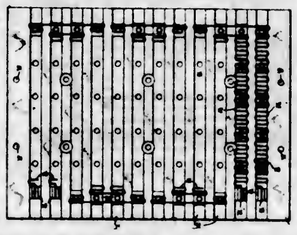
3. A heat regulating system for type-setting machine crucibles comprising an outlet heater, a heater for the body of the crucible having a section connected in series with the outlet heater and means dependent upon the temperature in the crucible for disconnecting the remainder of the body heater from the circuit.

4. A heat regulating system for type-setting machine crucibles comprising an immersion heater, an outlet heater, a solenoid switch for connecting and disconnecting the immersion heater to and from the circuit, dependent upon the temperature in the crucible, and means for either connecting the outlet heater to the supply circuit or connecting it thereto with a portion of the immersion heater.

5. A heat regulating system for type-setting machine crucibles comprising an immersion heater, an outlet heater, automatic means for energizing and deenergizing the immersion heater, and means for varying the heat generated in the outlet heater.

[Claims 6 to 27 not printed in the Gazette.]

1,155,483. ELECTRIC HEATER. WILLIAM S. HADAWAY, Jr., New Rochelle, N. Y. Filed May 20, 1014. Serial No. 839,672. (Cl. 219—37.)

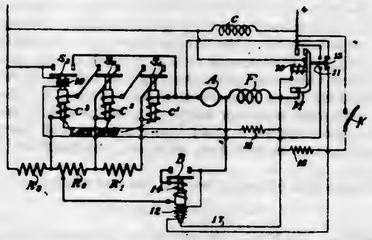


1. A heater comprising a slab of heat absorbing material, a heating conductor supported by said slab and arranged substantially parallel to one of its surfaces, and means for spacing the heating conductor from the adjacent surface of the slab, whereby the heat transfer from the heating conductor to the slab is effected largely by radiation.

2. An electric heater comprising a solid body of heat absorbing material having a surface provided with a plurality of substantially parallel grooves, spaced supports secured to the body in said grooves and extending outwardly from the surface, and a heating conductor arranged close to but spaced from the surface of the body and mounted on said supports.

3. A heater comprising a slab of electric insulating and heat absorbing material having a plurality of substantially parallel grooves, angle supports mounted in said grooves and secured to the slab, and a zigzag resistance ribbon secured to said supports and mounted on edge relative to the surface of the slab, said ribbon being adjacent to but spaced slightly from the surface of the slab whereby the heat transfer from the resistance conductor to the slab is effected largely by radiation.

1,155,484. MOTOR-CONTROL SYSTEM. JAY H. HALL, Cleveland, Ohio, assignor to The Electric Controller and Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 7, 1914. Serial No. 823,082. (Cl. 172—288.)



1. In a motor control system, a motor, a resistance, a switch for cutting out the resistance, a winding therefor energized by current through the motor, a main switch for connecting the motor, the resistance, and the said winding to a source of supply for starting the motor, a braking switch for connecting the motor, the resistance, and the said winding in a closed circuit to stop the motor, an operating winding therefor energized by the counter electromotive force of the motor, and a holding winding for the braking switch energized by current in the closed circuit.

2. In a motor control system, a motor, a motor circuit, sections of resistance for the circuit, switches for cutting out the resistances, windings therefor arranged to be connected in the motor circuit, a main switch for connecting the motor, the resistance, and the operating winding of the first resistance to a source of supply for starting the motor, a braking switch for including the motor, the said operating winding, and at least a portion of the resistances in a closed circuit for stopping the motor, and an operating winding for the braking switch energized by the counter electromotive force of the motor.

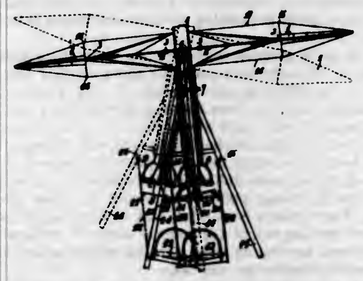
3. In a motor control system, a motor, a source of supply, a resistance, a main switch for connecting the motor and the resistance to the source, an operating winding therefor, a braking switch for connecting the motor and the resistance in a closed circuit, an operating winding therefor energized by the counter electromotive force of the motor, means for opening the circuit of the braking switch when the main switch is closed, and means for shunting the operating winding of the main switch when the braking switch is closed.

4. In a motor control system, a motor, a source of supply, a resistance, a series of switches for cutting out the resistance, a main switch for connecting the motor and the resistance to the source, an operating winding therefor, a braking switch for connecting the motor and the resistance in a closed circuit, an operating winding therefor, means for opening the circuit of the braking switch when the main switch is closed, and means for shunting the operating winding of the main switch when one of the resistance switches is closed.

5. In a motor control system, a motor, a source of supply, a main circuit for connecting the motor to the source for accelerating the motor, a braking circuit for connecting the motor in a closed loop for retarding the motor, a resistance for controlling both circuits, a switch for controlling the resistance, an operating winding therefor common to both circuits, and an electro-responsive device dependent upon the speed of the motor for closing the braking circuit.

[Claim 6 not printed in the Gazette.]

1,155,485. AERIAL MACHINE. JACOB CHRISTIAN HANSEN-ELLEHAMMER and NIELS WALTERSEN AAGEN, Copenhagen, Denmark. Filed Sept. 28, 1912. Serial No. 722,791. (Cl. 244—15.)

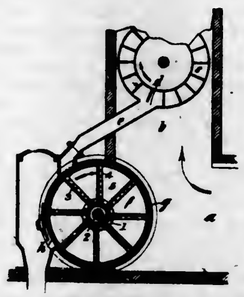


1. In an aerial machine the combination with a rotating parachute and a hollow shaft therefor, of a plurality of adjustable aeroplanes located on the circumference of said parachute, movable spindles supporting said aeroplanes, a pendulum structure comprising the seat of the operator adapted to automatically vary the inclination of said aeroplanes and connecting means between said pendulum structure and said spindles for transmitting the swinging movements of said pendulum structure to said spindles.

2. In an aerial machine the combination with a rotating parachute and a hollow shaft therefor, of a plurality of adjustable aeroplanes located on the circumference of said parachute, movable spindles supporting said aeroplane, a frame, a pendulum structure comprising the seat of the operator, adapted to automatically vary the inclination of said aeroplanes, rods for loosely suspending said pendulum structure from said frame, a cross bar pivotally and slidably mounted on said rods and connecting means between said cross bar and said aeroplanes for transmitting the movements of said pendulum structure through said cross bar to the said aeroplanes.

3. In an aerial machine the combination with a rotating parachute and a hollow shaft therefor, of a plurality of adjustable aeroplanes located on the circumference of said parachute, movable spindles supporting said aeroplanes, a frame, a pendulum structure comprising the seat of the operator adapted to automatically vary the inclination of said aeroplanes, rods for loosely suspending said pendulum structure from said frame, a cross bar pivotally and slidably mounted on said rods, a movable disk (8) suspended from the lower end of said hollow shaft by means of a Cardan joint, connecting means between said disk and said movable spindles, and a rod projecting from said disk and passing through an opening in said cross bar for transmitting the swinging movement of said pendulum structure to the disk and through said disk and connecting means to said aeroplanes.

1,155,486. APPARATUS FOR COKING COAL BRIQUETS. PAUL HEIN, Essen-Rüttenscheid, Germany, assignor to Diamant-Brikett-Werke G. M. B. H., Berlin, Germany. Filed June 19, 1914. Serial No. 846,070. (Cl. 44—1.)



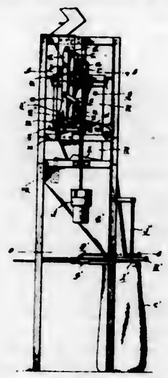
In an apparatus for coking coal-briquets containing an agglutinant capable of carbonization, the combination with a furnace, of a series of superposed rotatable coking drums, a rotatable after-coking drum, a chute leading from the lowermost of said drums to said after-coking drum, said after-coking drum being partially built and extending into said furnace, and a stationary casing inclosing said after-coking drum and having a discharge opening.

1,155,487. WEIGHING AND BAGGING MACHINE. JOSEPH E. HENDERSON, Monroe, N. C. Filed Nov. 27, 1914. Serial No. 874,183. (Cl. 73—177.)

1. In a weighing machine, a supply spout and a gate therefor, a weigh beam and a weighing hopper suspended therefrom, the hopper being provided with a normally closed discharge gate, means for locking this latter gate closed, and means for simultaneously unlocking the discharge gate and closing the supply gate when the hopper descends, said means embodying a notched gravitating bar and pawls for locking said bar up or down, and means for actuating these pawls.

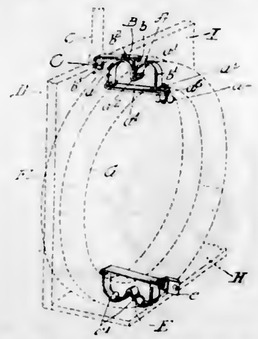
2. In a weighing machine, a supply spout and a gate therefor, a weigh beam and a weighing hopper suspended therefrom, the hopper being provided with a normally

closed discharge gate, means for locking this latter gate closed, and means for simultaneously unlocking the discharge gate and closing the supply gate when the hopper descends, said means embodying a notched gravitating



bar and pawls for locking said bar up or down, and means for actuating these pawls, means being provided whereby the descent of the weighted end of the weigh beam positively lifts the gravitating bar.

1,155,488. TIRE-HOLDER. CHRISTIAN F. HESS, Chicago, Ill., assignor to Alexander Nelson, Chicago, Ill. Filed June 22, 1914. Serial No. 846,483. (Cl. 224—29.)

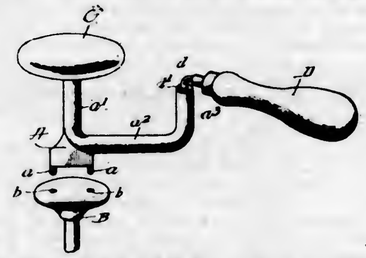


1. In an automobile, and in combination with a wind shield brace bolt therefor, a tire holder comprising means for engaging and holding the top portion of the tire, a bracket forming a hanger for said means, said bracket being provided with means for engaging said bolt to support the holder in position at the side of the automobile.

2. In an automobile, and in combination with a wind shield brace bolt therefor, a tire holder comprising means for engaging and holding the top portion of the tire, a bracket forming a hanger for said means, secured to the top of said holder, said bracket being provided with means for engaging said bolt to support the holder in position at the side of the automobile, said bolt extending through the brace and the side of the automobile, and said bracket having a downturned end portion provided with an opening for said bolt, said end portion being inserted between the body and brace.

3. In an automobile, and in combination with a wind shield brace bolt therefor, a tire holder comprising means for engaging and holding the top portion of the tire, a bracket forming a hanger for said means, said bracket being provided with means for engaging said bolt to support the holder in position at the side of the automobile, said bracket consisting of a strap bent down at each end thereof, one end being secured between portions of the holder and the other end engaging said bolt.

1,155,489. VALVE-GRINDER. CHRISTIAN F. HESS, Chicago, Ill., assignor to Alexander Nelson, Chicago, Ill. Filed June 22, 1914. Serial No. 846,484. (Cl. 51—4.)



1. A valve grinder comprising a tool for engaging the valve, a stem for said tool, a hand grip swiveled on the end of said stem, an arm extending laterally from between the tool and said hand grip, said arm having its distal end bent toward the plane of said grip, said tool being rigid with the elbow formed by said stem and arm, and a handle for operating said tool, movably connected at one end thereof to the distal end of said arm, having its outer end free, thereby adapted to swing around and assume different angles relative to said arm.

2. A valve grinder comprising a tool for engaging the valve, a stem for said tool, a hand grip swiveled on the end of said stem, an arm extending laterally from between the tool and said hand grip, and a handle for operating said tool, movably connected at one end thereof to said arm, having its outer end free, thereby adapted to swing around and assume different angles relative to said arm, the connection between said handle and arm permitting said handle to swing about an axis parallel with the said stem, and also about another axis extending at right angles to said stem, the one axis extending at an angle to the other.

3. A valve grinder comprising a tool for engaging the valve, a stem for said tool, a hand grip swiveled on the end of said stem, an arm extending laterally from between the tool and said hand grip, and a handle for operating said tool, movably connected at one end thereof to said arm, having its outer end free, thereby adapted to swing around and assume different angles relative to said arm, said connection between the arm and handle being a ball and socket joint permitting swinging motion of said handle in all directions.

4. A valve grinder comprising a tool for engaging the valve, a stem for said tool extending directly thereto, a hand grip swiveled on the end of said stem, an arm extending laterally from between the tool and said hand grip, integral with said stem, and a handle for operating said tool, movably connected at one end thereof to said arm, having its outer end free, thereby adapted to swing around and assume different angles relative to said arm, said handle being mounted to swing in either direction until it encounters said stem, and to have a limited freedom of motion out of the general plane of such swinging movement, as well as some rocking motion about an axis extending lengthwise thereof.

5. A valve grinder comprising a tool for engaging the valve, a stem for said tool, a hand grip swiveled on the end of said stem, an arm extending laterally from between the tool and said hand grip, and a handle for operating said tool, movably connected at one end thereof to said arm, having its outer end free, thereby adapted to swing around and assume different angles relative to said arm, the connected end of said handle being provided with a bent portion having a ball, and said arm having a bent portion provided with a socket for said ball.

[Claims 6 to 10 not printed in the Gazette.]

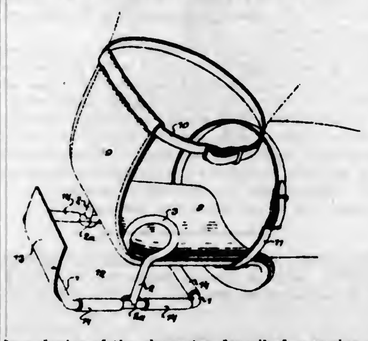
1,155,490. RESERVOIR. GEORGE F. HODKINSON, Philadelphia, Pa. Filed July 20, 1910. Serial No. 572,805. (Cl. 137—21.)



1. A solid wall for a reservoir basin formed of concrete and provided with a seepage pocket, which divides said wall vertically into two sections, said pocket serving to prevent seepage from one side of said wall to the other, and a drain connection for said pocket.

2. A solid wall for a reservoir basin, formed of concrete, and provided with a seepage pocket which divides said wall vertically into two sections, said pocket serving to prevent seepage from one side of said wall to the other, struts extending across said pocket at spaced intervals vertically, and connecting the concrete sections for strengthening the same, and a drain connection for said pocket.

1,155,491. KNEE-PAD. WALTER R. HOLSEY, Corsicana, Tex., assignor of one-half to P. F. Halbert, E. R. Glover, W. R. Kenner, J. T. Montfort, and L. L. Holsey, Corsicana, Tex., and S. W. Johnson, Dallas, Tex. Filed May 3, 1915. Serial No. 25,381. (Cl. 2—130.)

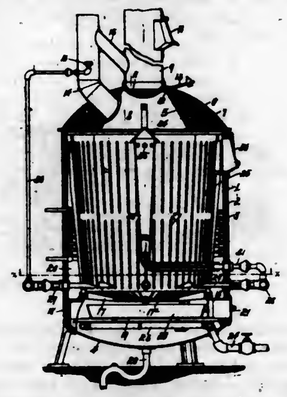


1. In a device of the character described, a spring member comprising a rectangular base formed of spring wire, uprights formed integrally therewith and extending upward from the sides, side spring arms formed integrally with and extending rearwardly from said uprights, said side arms joined by a downwardly and laterally projecting arm, a bag having a pouch inclosing the rear and side arms and a flap extending upwardly and forwardly therefrom in combination with means removable from the bag and adapted to fasten the pouch and the flap to the wearer.

2. In a device of the character described, a spring member formed of a single spring wire and comprising a rectangular base, uprights formed integrally with and projecting upward from the sides of the base, side spring arms formed integrally with and extending rearwardly from said uprights, and a laterally projecting arm formed integrally with the side arms and projecting downwardly and laterally therefrom.

3. In a device of the character described, a spring member formed of a single spring wire and comprising a rectangular base, uprights formed integrally with and projecting upward from the sides of the base, side spring arms formed integrally with and extending rearwardly from said uprights, and a laterally projecting arm formed integrally with the side arms and projecting downwardly and laterally therefrom, combined with a base plate having an upwardly and forwardly projecting front edge said base plate united to the base and extending beneath and in front of the same.

1,155,492. GARBAGE-INCINERATOR. RINHOLD W. KRENZ, Toledo, Ohio. Filed Mar. 31, 1915. Serial No. 18,375. (Cl. 110—18.)



1. In an apparatus of the class described, a fire chamber, a tube extending up within said chamber and gradually enlarging from the bottom to the top thereof, said tube having communication at its upper end with the upper portion of said chamber, and heating means interiorly of the tube.

2. In an apparatus of the class described, a fire chamber having a grated bottom, a tube extending from one side of said chamber to the center thereof adjacent to the grate and thence extending upward through the central portion of the chamber to the upper part thereof and having its upper end opening into said chamber, and heating means disposed within said tube.

3. In an apparatus of the class described, an outer casing, a fire box disposed within said casing and having a bottom grate and a side grating rising from the bottom grate in spaced relation to said casing, a tube extending from a point between said casing and side grating through said grating to near the center of the fire box and thence extending upward through the central portion of the fire box and having its upper end in lateral communication with the upper end of the fire box chamber, and a burner disposed in said tube for heating the wall thereof and for directing a spreading flame outward from the top of said tube over the top of matter disposed in the fire box.

4. In an apparatus of the class described, a fire box, a tube extending from without said fire box transversely thereof to near its center and adjacent to its lower end, thence extending upward through the central portion of the fire box chamber and having lateral communication at its upper end with the upper portion of the fire box chamber, and a burner disposed in the lower portion of said tube.

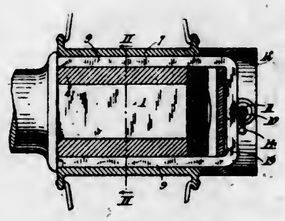
5. In an apparatus of the class described, a fire box, a tube extending from without the fire box transversely thereof to near the center thereof and thence extending upward through the central portion of the fire box chamber and having communication with the upper end of said chamber, said tube having the upwardly extending portion thereof gradually tapering outward from its lower end to near the upper end thereof, and a burner disposed in said tube.

[Claims 6 and 7 not printed in the Gazette.]

1,155,493. WHEEL-HUB. SORABJI RATANJI LALKAKA, London, England. Filed May 23, 1914. Serial No. 840,451. (Cl. 21—31.)

1. A detachable wheel hub comprising in combination two concentric hub-members one of which is provided with key-ways each having a side formed with recesses and another side straight and unrecessed, teeth narrower than said key-ways on the other hub-member adapted to enter

the key-ways, projections on one side of each of said teeth adapted to engage the said recesses in the key-ways, locking keys adapted to be inserted between the straight sides of the teeth and of the key-ways to hold the projections in engagement with the recesses, and means for holding the locking-keys in place.



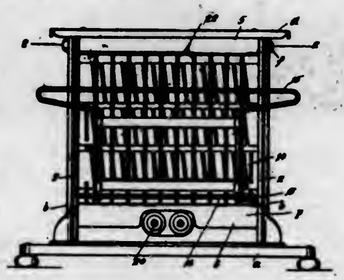
2. A detachable wheel hub comprising in combination a boss adapted to be fixed to the end of the rear axle of a motor vehicle and provided with key-ways each having a side formed with recesses and another side straight and unrecessed, a hub-shell adapted to be placed over the boss, teeth in said shell narrower than the key-ways and engaging therewith, projections on said teeth adapted to enter the said recesses in the key-ways, locking keys adapted to be inserted between the straight sides of the teeth and of the key-ways to hold the projections in engagement with the recesses, and means for holding the locking-keys in place.

3. A detachable wheel hub comprising in combination two concentric hub-members one of which is provided with key-ways each having a side formed with recesses and another side straight and unrecessed, teeth narrower than said key-ways on the other hub-member adapted to enter the key-ways, projections on one side of each of said teeth adapted to engage the said recesses in the key-ways, locking keys adapted to be inserted between the straight sides of the teeth and of the key-ways to hold the projections in engagement with the recesses, a cross-bar connecting the keys together, a pin adapted to lie across said cross-bar, a spring adapted to hold the pin in the operative position, and means for moving the pin out of the path of the cross-bar.

4. A detachable wheel hub comprising in combination a boss adapted to be fixed to the end of the rear axle of a motor vehicle and provided with key-ways each having a side formed with recesses and another side straight and unrecessed, a hub-shell adapted to be placed over the boss, teeth in said shell narrower than the key-ways and engaging therewith, projections on said teeth adapted to enter the said recesses in the key-ways, locking keys adapted to be inserted between the straight sides of the teeth and of the key-ways to hold the projections in engagement with the recesses, a cross-bar connecting the keys together, a pin adapted to lie across said cross-bar, a spring adapted to hold the pin in the operative position, and means for moving the pin out of the path of the cross-bar.

5. A detachable wheel hub comprising in combination a boss adapted to be fixed to the end of the rear axle of a motor vehicle and provided with key-ways each having a side formed with recesses and another side straight and unrecessed, a hub-shell adapted to be placed over the boss, teeth in said shell narrower than the key-ways and engaging therewith, projections on said teeth adapted to enter the said recesses in the key-ways, locking keys adapted to be inserted between the straight sides of the teeth and of the key-ways to hold the projections in engagement with the recesses, a hub-cap adapted to be screwed on the outer end of the hub-shell and having holes to allow the keys to pass, two opposed bosses in the outer part of said cap having coaxial holes, a pin sliding in said holes and having a lifting pin whereby it may be operated by hand, and a spring adapted to keep the pin in its operative position in the space between the two bosses.

1,155,494. TOASTER. JOSEPH F. LAMB, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation of Connecticut. Filed Mar. 25, 1915. Serial No. 16,971. (Cl. 219—19.)



1. In a toaster, a base, side uprights mounted thereon, a holder slidably mounted between said side uprights, an electrical resistance unit supported by said holder and removable means to unite the tops of the side uprights and secure the holder in place.

2. In a toaster, a base, side uprights secured thereto, a removable top and an electrical unit holder slidably mounted between said side uprights, and means for preventing the lateral displacement of said holder in said side uprights.

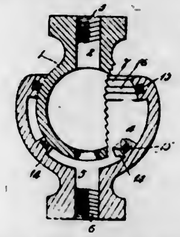
3. In a toaster, a base, channeled side uprights mounted thereon, and a holder slidably mounted in the channels of said side uprights and a top connecting the other ends of said side members.

4. In a toaster, a base, channeled side uprights mounted thereon, a holder slidably mounted in the channels of said side uprights, and a tie rod connecting the upper ends of said side uprights to clamp said holder therebetween.

5. In a toaster, a base, channeled side uprights mounted thereon, a holder slidably mounted in the channels of said side uprights, and a tie rod passing through the upper end of said side uprights and engaging the upper portion of said holder as and for the purpose specified.

[Claims 6 to 11 not printed in the Gazette.]

1,155,495. METHOD OF MAKING LUBRICATED JOINTS. JOHN S. LEAKE, Louisville, Ky. Filed Dec. 29, 1913. Serial No. 800,155. (Cl. 22—202.)



1. The method of forming a lubricated joint consisting in positioning a shaped refractory lubricant on the inner member as a core, and casting the outer member integrally about said inner member and lubricant, of metal which will chill on contact with said inner member forming a hard bearing surface.

2. The method of forming a lubricated ball-joint, consisting in positioning a shaped, refractory, lubricant on the ball member as a core, and casting the socket member integrally about said ball and lubricant.

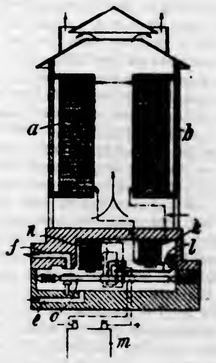
3. The method of forming a lubricated joint consisting in positioning a lubricant on one member as a core and casting the other member about the first named member and lubricant, using a metal which on contact with the first named member will chill forming a hard bearing face.

4. A method of forming a lubricated joint, consisting in positioning a shaped refractory lubricant about one member of the joint and casting the main enveloping member about the first named member and the lubricant using a metal which on contact with the first named member will chill forming a hard bearing surface.

5. A method of forming a lubricated joint consisting in positioning a refractory lubricant about one member of the joint, as a core and casting the other member integrally thereabout in such manner that said second member comes into contact with the first named member only on a portion adjacent said lubricant, said second named member being formed of a metal which will chill on contact with first member forming a hard bearing surface.

[Claims 6 to 8 not printed in the Gazette.]

1,155,496. AUTOMATIC CONTROL DEVICE FOR ILLUMINATING APPARATUS. CARL GUSTAF LINDBLOM, Stockholm, Sweden, assignor to Aktiebolaget Lux, Stockholm, Sweden. Filed June 6, 1914. Serial No. 843,579. (Cl. 67—110.)



1. A device for lighting and extinguishing illuminating apparatus comprising an electric thermo-pile, one group of like-poled contact points of which is exposed to the action of day-light, a transparent heat insulating casing surrounding said thermo-pile, a conductor for a light producing medium, and means actuated by the current from said pile for controlling the passage of the light producing medium through said conductor.

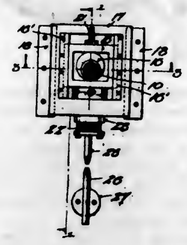
2. A device for lighting and extinguishing illuminating apparatus comprising an electric thermo-pile, one group of like-poled contact points of which is exposed to the action of day-light while the other group is exposed to a current of air, a transparent heat insulating casing surrounding said thermo-pile so as to protect the first-named group of contact points against air currents, a conductor for a light producing medium, and means actuated by the electric current from the thermo-pile for controlling the passage of the light producing medium through said conductor.

3. A device for lighting and extinguishing illuminating apparatus comprising an electric thermo-pile, one group of like-poled contact points of which is exposed to the action of day-light, a heat storing body arranged adjacent to the other group of like-poled contact points, a transparent heat insulating casing surrounding said thermo-pile, a conductor for a light producing medium, and means actuated by the electric current from said pile for controlling the passage of the light producing medium through said conductor.

4. A device for lighting and extinguishing illuminating apparatus comprising an electric thermo-pile, one group of like-poled contact points of which is exposed to the action of day-light, a transparent heat insulating casing surrounding said thermo-pile, a conductor for a light producing medium, and a relay actuated by the current from said thermo-pile, said relay controlling the passage of the light producing medium through said conductor.

5. A device for lighting and extinguishing illuminating apparatus comprising an electric thermo-pile, one group of like-poled contact points of which is exposed to the action of day-light, a transparent heat insulating casing surrounding said thermo-pile, a conductor for a light producing medium, an electro-magnet actuated by the current from said thermo-pile, and a polarized armature operated by said electro-magnet and acting to control the passage of the light producing medium through said conductor.

1,155,497. ELECTRIC WELDING-MACHINE. WALTER C. LINDEMANN and KEY D. CAMP, Milwaukee, Wis., assignors to A. J. Lindemann & Hoverson Co., Milwaukee, Wis. Filed Feb. 18, 1913. Serial No. 749,191. (Cl. 219—4.)



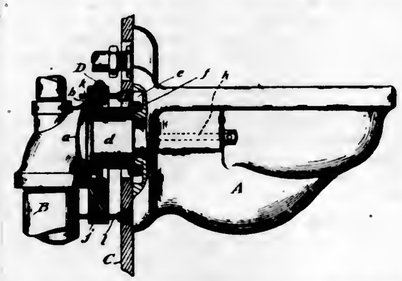
1. In an electric-welding machine, the combination of a driven shaft, a cam therewith, a sliding frame for which stationary guides are provided, another sliding frame guided in the one aforesaid and engaged by the cam, spring-resistance arranged between the two frames to oppose independent movement of the inner one for a time in one direction, a welding-circuit electrode movable with the crosshead formed by said frames, an opposing electrode in the same circuit, and means with the shaft for effecting an automatic make and break of said circuit during the interval of time the material to be welded is gripped between said electrodes and during which interval of time said inner frame may have independent yield to said cam against said spring-resistance.

2. In an electric-welding machine, the combination of a driven shaft, a cam therewith, a sliding frame for which stationary guides are provided, another sliding frame guided in the one aforesaid and engaged by the cam, spring-resistance arranged between the two frames to oppose independent movement of the inner one for a time in one direction, means controlling adjustment of the inner frame opposite said spring resistance, a welding-circuit electrode movable with the crosshead formed by said frames, an opposing electrode in the same circuit, and means with the shaft for effecting an automatic make and break of said circuit during the interval of time the material to be welded is gripped between said electrodes and during which interval of time said inner frame may have independent yield to said cam against said spring-resistance.

3. In an electric-welding machine, the combination of a driven shaft, a cam therewith, a sliding frame for which stationary guides are provided, another sliding frame guided in the one aforesaid and engaged by the same, spring-resistance arranged between the two frames to oppose independent movement of the inner one for a time in one direction, a turret-screw depending from the outer frame against the inner one opposite said spring resistance, a welding-circuit electrode movable with the crosshead formed by said frames, an opposing electrode in the same circuit, and means with the shaft for effecting an automatic make and break of said circuit during the interval of time the material to be welded is gripped between

said electrodes and during which interval of time said inner frame may have independent yield to said cam against said spring-resistance.

1,155,498. WATER-CLOSET. WILLIAM H. LLOYD, Chicago, Ill., assignor to Pyramid Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed May 1, 1911. Serial No. 624,354. (Cl. 137—94.)



1. In a water closet, the combination of a soil-pipe provided with a lateral connection, a bowl having a discharge-opening in the rear face thereof, said bowl taking up flush against a side wall or partition, with retaining means located on the lateral connection of the soil-pipe, mechanism whereby the bowl is secured to said means, and pressure devices whereby the pressure of the bowl is transmitted to said means.

2. The combination of a bowl having a vertical rear face provided with a discharge opening and taking against a side wall or partition, and a soil-pipe located on the opposite side of the wall or partition, with means for securing the bowl in place against the wall or partition, and adjustable means adapted to engage the rear face of the bowl adjacent the lower end thereof for relieving the wall of the lateral pressure of the bowl.

3. In a water closet, the combination of a soil-pipe provided with a lateral connection, a bowl provided with a discharge opening in the rear face thereof, means whereby the bowl is secured to said lateral connection, and adjustable abutting members whereby the pressure of the bowl is transmitted to the soil-pipe.

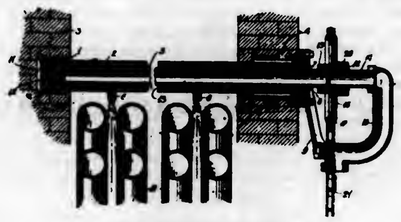
4. In a water closet, the combination of a bowl having a discharge-opening in the rear face thereof, said bowl being provided with a vertical rear face taking up flush against a side wall or partition, a soil-pipe, and retaining means secured to the soil-pipe, with means extending through the bowl and engaging with said first mentioned means for securing the bowl in place, and adjustable means arranged in engagement with the rear face of the bowl at a point beneath the discharge-opening thereof for receiving the lateral pressure of the bowl.

5. A water closet of the class described, comprising a bowl fitting against a side wall or partition, a soil-pipe provided with a lateral connection, means arranged to fit about said connection whereby the bowl is removably held against a side wall, and mechanism engaging with said means and adapted to abut against the bowl to transmit the pressure of the bowl to the soil-pipe.

[Claims 6 to 29 not printed in the Gazette.]

1,155,499. BLOWER UNIT FOR BOILERS. JOHN MAGEE, Detroit, Mich., assignor to Diamond Power Specialty Company, Detroit, Mich., a Corporation of Michigan. Filed June 12, 1914. Serial No. 844,645. (Cl. 122—392.)

1. A blower unit for boilers comprising a steam pipe a series of lateral jet nozzles extending therefrom, a casing secured in spaced relation concentrically around the pipe and provided with apertures engaged by the nozzles, inner and outer bearing members for supporting the corresponding end portions of the casing, a bracket secured to the outer bearing member, a steam supply fitting mounted on the bracket in axial alinement with the steam pipe, and a packing joint between the supply fitting and the pipe and adapted to turn the pipe.



2. A blower unit for boilers comprising inner and outer bearing members, a bracket in the outer bearing member, a casing rotatable in the inner bearing member and bracket, a pipe concentrically disposed within the casing, jet nozzles extending laterally from the pipe and engaging apertures in the casing to hold the casing in proper relation to the pipe, lining or refractory material filling the space between the pipe and casing, a supply fitting mounted in the bracket, and a packing joint secured to the pipe that is rotatably mounted on the fitting and is adapted to rotate the pipe and casing in the bearings.

3. A blower unit for boilers comprising an inner bearing collar, an outer bearing collar, a bracket mounted in the outer collar, a pipe extending through the bracket and outer bearing, nipples extending laterally from the pipe, a casing that incloses the pipe and is secured by the nipples, refractory lining between the casing and pipe, a member closing the outer end of the casing and encircling the pipe, a supply fitting secured to the bracket, a sleeve projected from the fitting in alinement with the pipe, a packing joint connecting the pipe, a sleeve that is journaled on the latter, and manually operable means connected to the pipe for turning the latter.

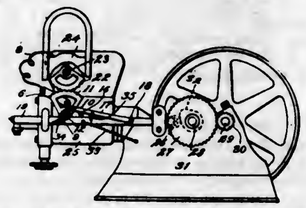
4. A blower unit for boilers comprising a pipe provided with Venturi jet nozzles and jacketed with a casing having a refractory lining, bearing members for mounting the jacketed pipe in operative relation to the baffle and tube surfaces of a boiler, a supply fitting carried by one of the bearing members, and manually operable means for turning the pipe that forms a connecting joint between the fitting and the pipe.

5. A blower unit for boilers comprising a pipe, Venturi jet nozzles extending latreally from the pipe, a casing concentric with the pipe, a refractory lining coöperating with the nozzles to hold the casing in proper relation to the pipe, bearing members for mounting the jacketed pipe in operative relation to the baffle and tube surfaces of a boiler, a supply fitting carried by one of the bearing members, manually operable means for turning the pipe that forms a connecting joint between the fitting and the pipe, the nozzles supporting the casing on the pipe, and a packing joint between the fitting and the pipe.

[Claim 6 not printed in the Gazette.]

1,155,500. COÖRDINATING ACTUATING MEANS FOR MAGNETOS AND IGNITERS OF INTERNAL-COMBUSTION ENGINES. THEODORE C. MENGES, Waterloo, Iowa, assignor to Associated Manufacturers Company, Waterloo, Iowa. Filed Oct. 27, 1913. Serial No. 797,617. (Cl. 123—153.)

1. In an internal-combustion engine, a fixed and a movable electrode, said electrodes being in electrical circuit with a magneto-electric machine, a trip-finger journaled on said movable electrode, an abutment secured on said movable electrode, said abutment being interposed in the path of movement of said trip-finger, a yieldable torsion-spring coiled about said movable electrode, connected to the outer end and also connected to said trip-finger to yieldingly draw it into contact with said abutment, operative connections between said trip-finger and the driving-shaft of said magneto-electric machine, a yieldable resilient means connected to said abutment and adapted to rock said movable electrode away from said fixed electrode, means for increasing the tension of the latter resilient means while said trip-finger and movable electrode are being rocked toward said fixed electrode, and means for actuating said magneto-electric machine suddenly and rapidly while the contact is being broken between said electrodes, comprising means for pushing over said trip-finger to rock said movable electrode in to contact with the fixed electrode and then suddenly release them to permit said resilient means to react to break contact between the electrodes while in so returning the operative connections with said magneto-electric machine rapidly actuate the latter to create a high-tension current in said circuit.

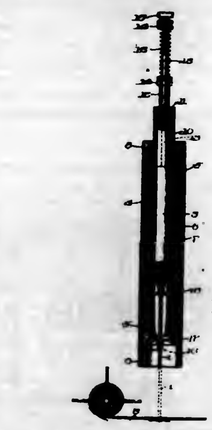


2. In an internal-combustion engine, a fixed and a movable electrode, said electrodes being in electrical circuit with a magneto-electric machine, a fixedly-connected trip-finger and a rack-segment journaled on said movable electrode outside the engine, a rack-segment on the driving-shaft of the magneto-electric machine in mesh with the first-mentioned rack-segment, a torsion-spring coiled about the outer part of said movable electrode, connected at one end thereto and at the other end to said fixedly-connected rack-segment and trip-finger, and adapted to draw said trip-finger away from said fixed electrode, an adjustable body secured on said movable electrode and having oppositely-directed parts, of which one part is interposed in the path of movement of said trip-finger away from the fixed electrode, a reciprocatory-bar, a tension-spring connected between the other part of said body and said bar and adapted to draw upon said body to yieldingly rock the movable electrode away from said fixed electrode and to be placed under an increased tension as said reciprocatory bar is moving in one direction to increase the tension upon said movable electrode, and a rock-arm pivoted on said reciprocatory bar having its free end adapted to move therewith and rock suitably to first engage and rock over said trip-finger to rock the movable electrode into contact with the fixed electrode, then suddenly release said finger to permit the said springs to react to break the contact, said springs being adapted to rapidly return the movable parts to first position.

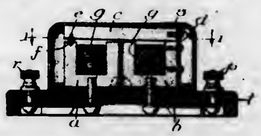
1,155,501. RECORDING INSTRUMENT. CHARLES R. MOORE, La Fayette, Ind. Filed May 24, 1913. Serial No. 769,754. (Cl. 234—1.5.)

1. A recording instrument including a recording element supplied with mechanically operating means for placing it in a normally idle position; an electro-magnet acting in opposition to said means and serving partially directly to effect recording movement of said recording element which is supplied with sufficient weight to enable it to complete its recording movement by inertia, said recording element remaining within the range of influence of the magnet substantially throughout the recording movement, the magnet opposing such inertia and exerting withdrawing action upon the recording element; and a record receiver operated upon by the recording element and located without the reach of the recording element as it is moved by the magnet and within reach of the recording element when its movement is completed by inertia.

2. A recording instrument including a recording element; an electro-magnet serving partially directly to effect recording movement of said recording element which is supplied with sufficient weight to enable it to complete its recording movement by inertia, said recording element remaining within the range of influence of the magnet substantially throughout the recording movement, the magnet opposing such inertia and exerting withdrawing action upon the recording element; and a record receiver operated upon by the recording element and located without the reach of the recording element as it is moved by the magnet and within reach of the recording element when its movement is completed by inertia.



1,155,502. ELECTROMAGNET. CHARLES R. MOORE, La Fayette, Ind. Filed May 24, 1913. Serial No. 769,755. (Cl. 175—21.)

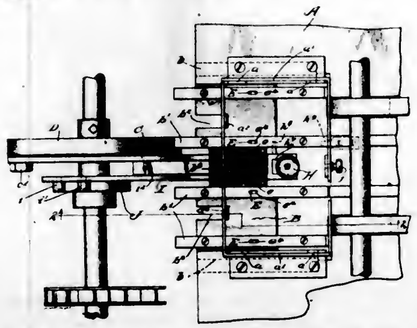


A regulable electric circuit including a source of current and a circuit supplied thereby; in combination with an electro-magnet having two electrically separated magnetic circuit portions included in different magnetic circuits and each having two poles connected thereby, said electro-magnet having a singfile armature presented to the four poles thereof and mounted upon one magnetic circuit portion and free to be moved toward and have contact with the other magnetic circuit portion, the coil of said magnet being supplied with current from said source while the circuit supplied by said source includes one of said magnetic circuit portions, the armature, and the other magnetic circuit portion, at which latter portion the circuit is made and broken by the movement of the armature.

1,155,503. FEED MECHANISM FOR MAILING OR OTHER MACHINES. FRANK V. MOORE, Chicago, Ill., assignor to Woman's World Magazine Company Incorporated, Chicago, Ill., a Corporation of Virginia. Filed Apr. 13, 1914. Serial No. 831,451. (Cl. 101—41.)

1. A feed mechanism comprising instrumentalities for holding in stationary position a stack of flat articles, devices for engaging the bottom of the stack, mechanism for causing said devices to have a back and forth movement for feeding the articles in succession from the bottom of the stack, and a stationary gage extending below the front edge of the lowermost article, said devices including suction means for pulling said front edge below said gage to permit the edgewise removal of the article from the bottom of the stack.

2. A feed mechanism comprising instrumentalities for holding in stationary position a stack of flat articles, devices for engaging the bottom of the stack, mechanism for causing said devices to have a back and forth movement for feeding the articles in succession from the bottom of the stack, and a stationary gage extending downward below the front edge of the lowermost article, said devices including suction means for pulling said front edge below said gage to permit the edgewise removal of the article from the bottom of the stack, and said instrumentalities including a plurality of parallel strips forming a support for the stack, said strips being movable endwise with said devices.



3. A feed mechanism comprising instrumentalities for holding a stack of flat articles, devices for engaging the bottom of the stack, mechanism for causing said devices to have a back and forth movement for feeding the articles in succession from the bottom of the stack, and a gage extending below the front edge of the lowermost article, said devices including suction means for pulling said front edge below said gage to permit the edgewise removal of the article from the bottom of the stack, and sharp points for engaging the lower surface of said article to feed the same forward.

4. A feed mechanism comprising instrumentalities for holding a stack of flat articles, devices for engaging the bottom of the stack, mechanism for causing said devices to have a back and forth movement for feeding the articles in succession from the bottom of the stack, and a gage extending below the front edge of the lowermost article, said devices including suction means for pulling said front edge below said gage to permit the edgewise removal of the article from the bottom of the stack, said instrumentalities including a plurality of parallel strips for supporting the stack, movable endwise with said devices, and a sharp point for each strip, said points engaging the lower surface of said article to feed the same forward, and means permitting depression of said points during the return movement thereof below the next article.

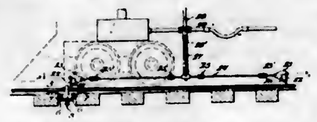
5. A feed mechanism comprising instrumentalities for holding in stationary position a stack of flat articles, devices for engaging the bottom of the stack, mechanism for causing said devices to have a back and forth movement for feeding the articles in succession from the bottom of the stack, and a stationary gage extending downward below the front edge of the lowermost article, said devices including suction means for pulling said front edge below said gage to permit the edgewise removal of the article from the bottom of the stack, a valve for admitting air to release the article from said means, and a stationary element for automatically opening said valve.

[Claims 6 to 12 not printed in the Gazette.]

1,155,504. RAILWAY-BRAKE-SETTING MECHANISM. FRANK MELVEY, Waupun, Wis. Filed Oct. 3, 1914. Serial No. 864,733. (Cl. 246—59.)

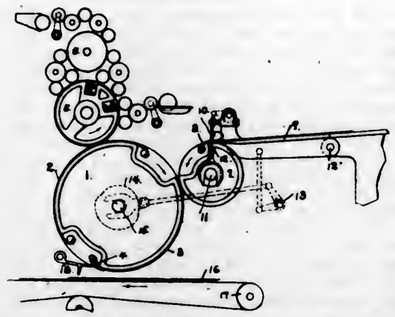
1. A railway-track, rolling stock running on the track and provided with automatic brake-setting mechanism comprising an angle-rod slidable in guides, an arm rigid with the rod and connected to a brake-control device, and tripper-opposing opposite buffers carried by the rod, the tripper being arranged between track-rails for adjustment in and out of the way of one or the other of said buffers.

2. A railway-track, rolling stock running on the track and provided with automatic brake-setting mechanism com-



prising an angle-rod slidable in guides, an arm rigid with the rod and connected to a brake-control device, and tripper-opposing buffers carried by the rod at its ends, the tripper being arranged between track-rails for adjustment in connection with a semaphore in and out of the way of one or the other of the buffers.

1,155,505. PRINTING-MACHINE. IRVING F. NILES, Plainfield, N. J., assignor to R. Hoe and Co., New York, N. Y., a Corporation of New York. Filed Jan. 3, 1913. Serial No. 739,993. (Cl. 101—100.)



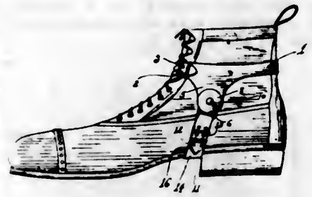
1. In a printing machine, the combination with a cylinder having a printing surface, and a non-impression sheet receiving surface, of an impression cylinder making two revolutions to one of the cylinder having the printing surface, said cylinder coöperating with the printing surface on one revolution and delivering the sheet to the non-impression sheet receiving surface on the next revolution, and a flat delivery mechanism coöperating with said sheet receiving surface.

2. In a transfer printing machine, the combination with a cylinder having a planographic printing surface and a non-impression sheet receiving surface, of a design carrying cylinder for delivering the design to the printing surface, a flat delivery coöperating with the sheet receiving surface to which the sheets are delivered printed side up from the sheet-receiving surface, and coöperating impression means.

3. In a transfer printing machine, the combination with a cylinder having a planographic printing surface and a non-impression sheet receiving surface, of a design carrying cylinder for delivering the design to the printing surface, a flat delivery coöperating with the sheet receiving surface, and an impression cylinder making two revolutions to one revolution of the cylinder having the printing surface, said cylinder coöperating with the printing surface to print the sheet on one revolution and delivering the sheet to the sheet receiving surface on the next revolution.

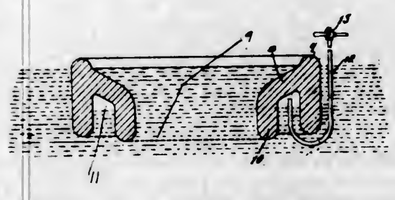
4. In a transfer printing machine, the combination with a cylinder having a planographic printing surface and a non-impression sheet receiving surface, of a design carrying cylinder for delivering the design to the printing surface, said cylinder being arranged to make two revolutions to each of the cylinder having the design carrying surface, an impression cylinder making two revolutions to one of the cylinder having the printing surface, and a flat delivery mechanism coöperating with the sheet receiving surface.

1,155,506. SHOE-SUPPORTER. MIHISUKA OSAKI, San Quentin, Cal. Filed Jan. 13, 1915. Serial No. 1,942. (Cl. 36—72.)



A protector for shoes comprising a supporting member arranged to be disposed around the ankle of a shoe, a relatively stiff member arranged to be disposed transversely across the shank of the shoe adjacent the breast of the heel, such member having upturned ends and inwardly projecting flanges, the latter being constructed and arranged to overlie the upper edge of the sole, and means for connecting the said supporting member with the said upturned ends.

1,155,507. DRAWING-RING. ROGER S. PEASE, Pittsburgh, Pa., assignor to The Pittsburgh Plate Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 24, 1911. Serial No. 662,226. (Cl. 49—61.)



1. In combination in drawing apparatus, a ring lying partially submerged in a body of glass and comprising a conical bench having its inner and outer surfaces converging downwardly and provided at its lower end with a downwardly projecting collar having its lower edge free and projecting into the body of glass.

2. In combination in a drawing apparatus, a ring lying partially submerged in a body of glass and comprising a conical annular bench open at the bottom and having its inner and outer surfaces converging downwardly whereby the body of glass in the ring is partially segregated from the glass beneath the ring but is in free communication therewith.

3. A drawing ring comprising a body portion provided with an annular recess formed in the normally submerged portion of the ring, and means for admitting fluid under pressure into the recess.

4. A drawing ring comprising a body portion provided with a recess in the lower face which is normally submerged in the glass, and means for admitting fluid under pressure into the recess.

5. A drawing ring comprising a body portion provided with a recess in the lower face which is normally submerged in the glass, and means for exhausting the gas given off by the glass and collecting in the recess.

[Claims 6 and 7 not printed in the Gazette.]

1,155,508. PHOTOGRAPHIC-ROLL HOLDER. JULES RICHARD and RENÉ PIERRE MARIE LAVIE, Paris, France. Filed Jan. 11, 1913. Serial No. 741,515. (Cl. 95—34.)



1. In a photographic apparatus, the combination of a fixed glass plate, a movable table, a supply spool, a winding spool adapted to take up a film passing between said glass plate and table from said supply spool, an operating handle for controlling the shifting of the table against said glass plate, and means actuated by the operation of said handle for locking the winding spool when the film is clamped between said table and glass plate.

2. In a photographic apparatus, the combination of a fixed glass, a movable table, a supply spool, a winding spool adapted to take up a film passing between said glass and table from said supply spool, an operating handle for controlling the shifting of the table against said glass, and a bolt actuated by the operation of said handle for locking the winding spool when the film is clamped between said table and glass.

3. In a photographic apparatus, the combination of a fixed glass, a movable table, a supply spool, a winding spool adapted to take up a film passing between said glass and table from said supply spool, an operating handle for controlling the shifting of the table against said glass, a bolt actuated by the operation of said handle, a ratchet for said winding spool and a pawl engaging with said ratchet and adapted to be locked by said bolt when the film is clamped between said table and glass.

4. In a photographic apparatus, the combination of a fixed glass, a movable table, a supply spool, a winding spool adapted to take up a film passing between said glass and table from said supply spool, an operating handle for controlling the shifting of the table against said glass, a bolt actuated by the operation of said handle, a ratchet for said winding spool, a pawl engaging with said ratchet and adapted to be locked by said bolt when the film is clamped between said table and glass, and means to indicate whether the film is in a free or clamped position.

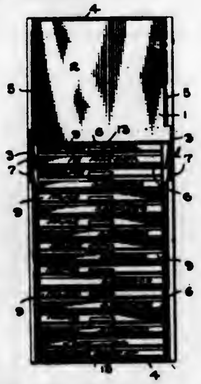
5. In a photographic apparatus, the combination of a fixed glass, a movable table, a supply spool, a winding spool adapted to take up a film passing between said glass and table from said supply spool, a cam shaft provided with an operating handle and adapted by its engagement with the table to shift said table against the glass so as to clamp the film therebetween, a ratchet for the winding spool, a pawl in engagement with said ratchet, a bolt member controlled by said cam shaft and adapted to lock said pawl so as to prevent further rotation of said ratchet when the film is thus clamped, an index actuated by said bolt and adapted to indicate whether the film is in a free or clamped position, substantially as herein described.

1,155,509. RUBBER-STAMP CABINET. HOWARD W. ROBERTS, Philadelphia, Pa. Filed Feb. 25, 1915. Serial No. 10,551. (Cl. 101—188.)

1. A rubber stamp cabinet having parallel sides and fixed flanges at the outer edges of said parallel sides projecting inwardly beyond the inner face of the sides, in combination with a plurality of spacers supported under the flanges and bearing against each other, substantially as described.

2. A rubber stamp cabinet having parallel sides and fixed flanges at the outer edges of said parallel sides projecting inwardly beyond the inner face of the sides, in combination with a plurality of spacers supported under the flanges and bearing against each other, said spacers located parallel to each other and at an angle to the rear wall of the cabinet, substantially as described.

3. A cabinet of the character described having parallel sides and fixed flanges at the edges thereof projecting inwardly beyond the inner face of the sides, in combination with a plurality of removable spacers, each spacer having its ends bent at an angle and supported on the spacer below, substantially as described.

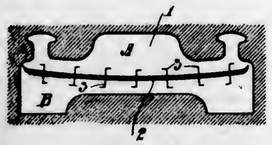


4. A cabinet of the character described having parallel sides and fixed flanges at the edges thereof projecting inwardly beyond the inner face of the sides, in combination with a plurality of removable spacers, each spacer having its ends bent at an angle and supported on the spacer below, the edges of said end portion located at an angle, whereby the spacers are located parallel to each other but at an angle to the rear wall of the cabinet, substantially as described.

5. A rubber stamp cabinet, comprising a back, sides, and ends, and fixed flanges at the front edges of the sides, projecting inwardly beyond the inner faces of the sides, a series of removable spacers in the cabinet, the ends of said spacers bent at an acute angle to the intermediate portions thereof and positioned under the said flanges, the ends of each spacer bearing against the adjacent spacer, substantially as described.

[Claim 6 not printed in the Gazette.]

1,155,510. MOLD FOR COMPOSITE STEEL CASTINGS. ALEXANDER ROJEKOFF, Biejitza, Russia. Original application filed Sept. 18, 1912, Serial No. 720,953. Divided and this application filed July 24, 1914. Serial No. 852,819. (Cl. 22—121.)

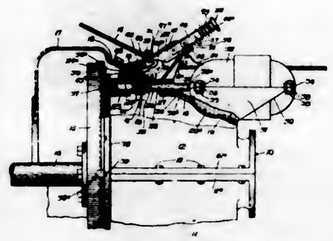


In a mold for producing composite metal castings made up of layers of different chemical compositions, the combination with the mold of any number of metal partitions adapted to fuse with the hot molten metal and of less width than the opposed walls of the mold bordering the edges of the partition and provided with projections to facilitate and strengthen the bonding of adjacent layers.

1,155,511. STARTING DEVICE FOR MOTOR-VEHICLES. EMERSON C. RUSSELL, Chicago, Ill. Filed May 28, 1914. Serial No. 841,434. (Cl. 74—7.)

1. The combination with an engine flywheel and a gear casing provided with an aperture in its side wall, of a base-plate secured to the casing over said aperture, and provided with bearings, a shaft supported in said bearings and operatively connected at one end with said engine flywheel, and a rotative member in driving connection with said shaft at its opposite end.

2. The combination with an engine flywheel and a gear casing provided with an aperture in its side wall, of a base-plate secured to the casing over said aperture, a shaft mounted on said base-plate and extending through the same, a pinion on one end of said shaft having driving connection with said flywheel, and a rotative member operatively connected with the opposite end of said shaft exterior of the casing.



3. The combination with an engine flywheel and a gear casing provided with an aperture in its side wall, of a base-plate secured to the casing over said aperture, an endwise movable shaft mounted on said base-plate and extending through the same, said shaft having driving connection at one end with said flywheel, a motor having driving connection with the opposite end of said shaft, and means for giving endwise movement to said shaft.

4. The combination with an engine fly-wheel and a gear casing provided with an aperture in its side wall, of a base-plate secured to the casing over said aperture, an endwise movable shaft mounted on said base-plate and extending through the same, said shaft having driving connection at one end with said flywheel, a motor having driving connection with the opposite end of said shaft, and an endwise movable plunger operatively connected with said shaft and adapted to be operated to transmit endwise movement thereto.

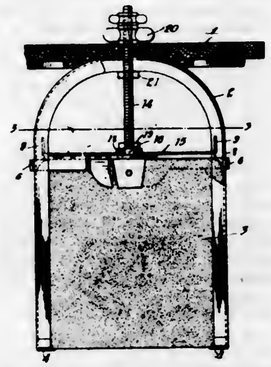
5. The combination with an engine flywheel provided with a gear-ring and a gear-casing provided with an aperture in its side wall, of a starting device, comprising a base-plate secured to the casing over said aperture, an endwise movable shaft mounted on said base-plate and extending through the same, a pinion on the end of said shaft inside of the base-plate, a motor mounted on the outer face of the base-plate, and having driving connection with the outer end of said starter shaft, and means for giving endwise shifting motion to said starter shaft.

[Claims 6 to 21 not printed in the Gazette.]

1,155,512. PRIMARY BATTERY. AUGUSTE L. SALTZMAN, East Orange, N. J.; assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Feb. 20, 1911. Serial No. 609,618. (Cl. 204—38.)

1. In a voltaic battery, the combination of a battery plate and a supporting frame therefor, said frame comprising a hanger having depending portions channel-shaped in cross section, and a bridging member channel-shaped in cross section with its walls depending and provided with an upturned lug located between and in engagement with the walls of one of the depending portions of the hanger, subatantially as described.

2. In a voltaic battery, the combination of a battery plate and a supporting frame therefor, the said frame comprising a hanger having depending portions channel shaped in cross-section, and a bridging member channel shaped in cross-section with its walls depending and provided with upturned lugs which are frictionally engaged with the walls of the depending portions of the hanger, substantially as described.



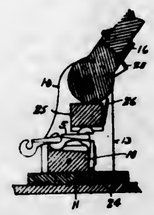
3. In a voltaic battery, the combination of a battery plate, and a supporting frame therefor, comprising a supporting member having two depending arms channel shaped in cross-section, and provided with openings and a bridging member having end projections extending through the said openings and pressed against the outer portions of the depending arms, and having upturned projections wedged between the walls of the said arms, substantially as described.

4. In a voltaic battery, the combination of a negative electrode plate and a supporting frame therefor, the said frame having depending arms and a bridging member having its ends secured to the depending arms and having lugs wedged between the walls of the depending arms, and a positive electrode plate carried by and insulated from the said bridging member, substantially as described.

5. In a voltaic battery, the combination of a negative electrode plate and a supporting frame therefor, the said frame having depending arms and a bridging member having its ends secured to the depending arms and having lugs wedged between the walls of the depending arms, and a plurality of positive electrode plates carried by and insulated from the said bridging member, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,155,513. DEVICE FOR UPSETTING THE LINKS OF CHAINS. FREDERICK W. SCHANDONEY, Sprague, Wash. Filed Aug. 21, 1911, Serial No. 645,053. Renewed Mar. 27, 1915. Serial No. 17,540. (Cl. 59—29.)



1. In a device of the class described, a framework, an anvil mounted therein, a block mounted above the anvil and arranged to bear upon a link carried by the anvil, a cam mounted within the framework above the block and bearing upon the latter, and means for operating the cam, said block being provided with parallel link-engaging devices spaced from the sides of the block.

2. In a device of the class described, a framework, an anvil mounted therein, said anvil being provided with grooves extending across one face thereof, a projecting device on an adjoining face and located between the ends of the grooves, a block mounted upon the anvil and provided with corresponding grooves, a cam bearing upon the block, and means for operating the cam.

3. In a device of the class described, a framework, an anvil mounted therein, means provided on one face of the anvil for holding a link in a given position, means provided upon another face of said anvil for holding a link at an angle to the link first mentioned, a block mounted above the anvil and provided with means for preventing the lateral movement of a link resting on the anvil, a cam bearing on the block and means for operating the cam.

4. In a device of the class described, a framework, an anvil mounted therein, a block mounted above the anvil, means for operating the block, means for gaging the movement of the block with reference to the anvil, said means last mentioned being located in the path of the block operating means.

5. In a device of the class described, a framework, an anvil mounted therein, a block mounted above the anvil and arranged to engage a link carried thereby, means including a cam for operating the block, means for operating the cam, and a gage located in the path of movement of the block operating means for indicating the distance moved by the block with reference to the anvil.

[Claims 6 to 11 not printed in the Gazette.]

1,155,514. SPARK-PLUG. ALBERT SCHMIDT, Flint, Mich., assignor to Champion Ignition Company, Flint, Mich., a Corporation of Michigan. Filed Mar. 16, 1912. Serial No. 684,115. (Cl. 123—169.)



1. In a spark plug, the combination with the case, of spaced lugs on said case, an electrode formed of a tapering sheet metal stamping having a shank engaging said spaced lugs and secured thereto by the riveting over of the latter.

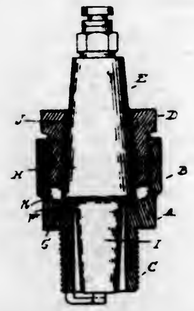
2. In a spark plug, the combination with the case, of an electrode formed of a tapering sheet of metal stamping having a shouldered shank portion, and spaced lugs on said case for receiving said shank and engaging said shoulder, said lugs being riveted over the shank to secure the same.

1,155,515. SPARK-PLUG. ALBERT SCHMIDT, Flint, Mich., assignor to Champion Ignition Company, Flint, Mich., a Corporation of Michigan. Filed July 24, 1913. Serial No. 780,865. (Cl. 123—169.)

1. A spark plug, comprising an outer casing having a threaded nipple, an internally threaded outer portion and a shoulder bearing therebetween, an insulator having a portion within the nipple portion and an enlargement forming a shoulder opposed to the shoulder on the casing and a portion tapering outward from said shoulder, a bushing having a threaded engagement with the internally threaded portion of said casing and a tapered bore, and an inner sleeve or bushing of substantially the length of said last mentioned bushing interposed between said last mentioned busning and the tapering portion of said insulator forming an extended surface in contact with each and a heat conducting medium therebetween.

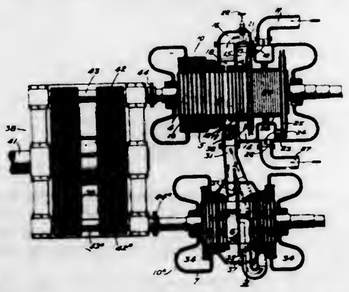
2. A spark plug, comprising a casing, an insulator therein having an enlargement forming a shoulder opposed to

a complementary shoulder on the casing and tapering outward from said shoulder, a tapering bushing surrounding said tapering portion of the insulator and having a threaded engagement with the casing, and a second tapering



bushing extending substantially the length of said first-mentioned tapering bushing, interposed between said insulator and first-mentioned tapering bushing to form a seat and heat-conducting medium.

1,155,516. MARINE TURBINE. HENRY F. SCHMIDT, Pittsburgh, Pa., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Sept. 12, 1913. Serial No. 789,463. (Cl. 121—58.)



1. A power generating system comprising a turbine having a high pressure turbine element, a divided low pressure turbine element communicating therewith, the separate sections of which are arranged to operate in parallel, one of the sections of the divided low pressure turbine element being isolated by being located in a separate casing and being adapted to receive fluid from the high pressure element while the turbine is operating at full power and at high speed, and means for shutting off the fluid to the isolated section when the turbine is operating at low speed and at reduced power.

2. A turbine comprising an impulse stage and a full peripheral admission low pressure section, in combination with an isolated low pressure section located in a separate casing and adapted to operate in parallel with said first mentioned low pressure section, and means for delivering a portion of the motive fluid discharged from the impulse stage of the turbine to the isolated section when the combined apparatus is developing full power.

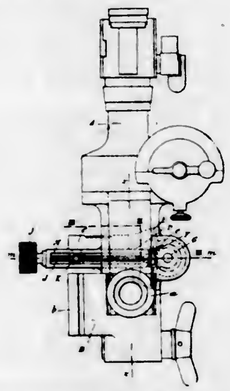
3. In an apparatus of the character described, a turbine having a working passage for expanding motive fluid from initial to exhaust pressure, and a low pressure turbine for receiving motive fluid from said first mentioned turbine and for expanding the motive fluid so received to exhaust pressure, in combination with a transmission gearing comprising a driven gear, a driving gear intermeshing with said driven gear and coupled to said first mentioned turbine, and a second driving gear intermeshing with said gear and coupled to said low pressure turbine.

4. In an apparatus of the character described, a turbine in which motive fluid is expanded from initial to exhaust pressure, a second turbine having oppositely extending working passages, each adapted to expand motive fluid from an intermediate to exhaust pressure, and means for delivering motive fluid from an intermediate portion of the working passage of the first turbine to the inlet of the second turbine.

5. In an apparatus of the character described, a turbine comprising a high pressure section and a low pressure section in which motive fluid is expanded from initial to exhaust pressure, a second turbine having a divided working section adapted to operate in parallel with the low pressure section of the first turbine, and means for delivering motive fluid from an intermediate point of the working passage of the first to the inlet of the second turbine.

[Claims 6 to 50 not printed in the Gazette.]

1,155,517. SIGHTING APPARATUS OF ORDNANCE. EUGÈNE SCHNEIDER, Le Creuzot, France. Filed Jan. 20, 1915. Serial No. 3,315. (Cl. 33—48.)



1. In an apparatus for sighting guns, the combination of a transverse level, a sight, supporting means for the level and the sight adapted to secure them to the gun, the said level being adjustable on the supporting means in accordance with the transverse inclination of the gun about an axis extending in a direction generally longitudinal of the gun, and the said sight being adjustable on the supporting means about an upright axis fixed against transverse angular movement with respect to the gun, and means for adjusting the sight in definite predetermined relationship to the adjustment of the said level, thereby correcting the error otherwise arising from the said transverse inclination.

2. In an apparatus for sighting guns, the combination of a transverse level adjustable in accordance with the transverse inclination of the gun about an axis extending in a direction generally longitudinal of the gun, a sight adjustable about an upright axis fixed against transverse angular movement with respect to the gun, and connections between the said level and the said sight for automatically adjusting the sight in definite predetermined relationship to the adjustment of the said level, thereby correcting the error otherwise arising from the said transverse inclination.

3. In an apparatus for sighting guns, the combination of a support adapted to be secured to the gun in a position which is fixed for any given range, a transverse level on the support adjustable to different vertical angles with respect to the normally vertical median plane of the gun in accordance with the transverse inclination of the gun, a sight on the support extending in a direction generally longitudinal of the gun but at a normally small horizontal angle to the axis thereof to compensate for the drift of the projectile, the said sight being adjustable with respect to the support to increase or decrease the said normally small angle, and means for varying the said angle of the sight in definite predetermined relationship to the adjustments of the level, thereby correcting the error otherwise arising from the transverse inclination of the gun.

4. In an apparatus for sighting guns, the combination of a support adapted to be secured to the gun in a position which is fixed for any given range, a transverse level on the support adjustable to different vertical angles with respect to the normally vertical median plane of the gun in accordance with the transverse inclination of the gun, a sight on the support extending in a direction generally longitudinal of the gun but at a normally small horizontal angle to the axis thereof to compensate for the drift of the projectile, the said sight being adjustable to increase or decrease the said normally small angle, and connections between the said level and the said sight for automatically adjusting the angle of the sight in definite predetermined relationship to the adjustments of the level, thereby correcting the error otherwise arising from the transverse inclination of the gun.

5. In an apparatus for sighting guns, the combination of a transverse level adjustable in accordance with the transverse inclination of the gun about an axis extending in a direction generally longitudinal of the gun, a sight adjustable about an upright axis fixed gainst transverse angular movement with respect to the gun, connections between the said level and the said sight for automatically adjusting the sight in definite predetermined relationship to adjustments of the said level, thereby correcting the error otherwise arising from the transverse inclination, and means for adjusting the said connections in accordance with the range.

[Claims 6 to 17 not printed in the Gazette.]

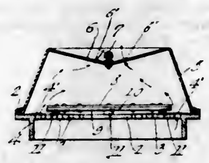
1,155,518. WINDMILL. DANIEL R. SCHOLES, Chicago, Ill., assignor to Aermotor Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 9, 1914. Serial No. 830,580. (Cl. 170—77.)



A wind mill including a wind wheel; a mill head; a supporting tower; and an upright tubular column fixed at the upper end of said tower and having a lower portion upon which the mill head may turn and an upper portion of smaller diameter that constitutes a shaft about which the mill head may turn, said column portions being integrally formed from a single tube.

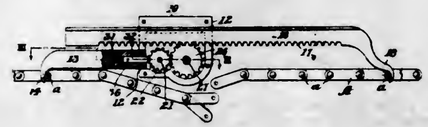
1,155,519. COOKING ATTACHMENT FOR STOVES. GEORGE F. SHAPLAND, Salina, Kans. Filed Feb. 8, 1915. Serial No. 6,829. (Cl. 126—215.)

A cooking attachment for stoves, including a base plate having an upstanding marginal rib and a depending circular supporting flange, there being radially disposed ribs upon the upper face of the plate, each rib gradually increasing in height from its ends toward an intermediate point, a hood removably seated on the base plate and bearing outwardly at its lower edge against the marginal rib, said hood having a depressed top, a handle connected to the depressed top and having its uppermost portion located below the uppermost portion of the hood, said hood having outlet openings in said depressed top, and



heat spreading means detachably mounted on the base plate and under the hood and including upper and lower plates, an interposed thickness of insulating material secured to the plates, and legs depending from the lower plate and detachably bearing upon the base plate and between certain of the radial ribs, there being radial series of openings within the base plate and between the radial ribs, the said openings increasing in width toward the periphery of the base plate.

1,155,520. CHAIN-STRETCHER. JOSEPH SHOOS, Roseton, N. Y. Filed Mar. 17, 1915. Serial No. 15,019. (Cl. 254—66.)



1. In a device of the class described, a housing, a rack bar slidably mounted in said housing, a hook carried by one end of the rack bar, an arm mounted in said housing, a hook carried by the free end of said arm, a gear wheel in mesh with said rack, a pinion in mesh with said gear wheel, a spring pressed pin adapted to engage said pinion to arrest movement thereof, and an operating handle for said gear wheel.

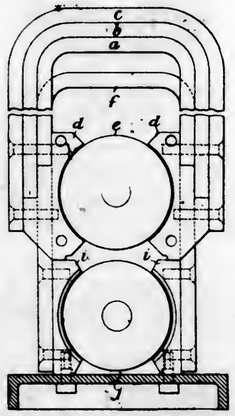
2. Means for stretching a chain comprising a pair of hook members, a spring-pressed pin carried by one of said members, a rack bar carried by the other of said members, a supporting housing, meshing gearing within said housing adapted to be engaged by said spring pressed pin, and means for operating said gearing.

3. A device of the class described, comprising a housing, a hooked arm fixed to said housing, a second hooked arm slidably mounted within said housing and provided with rack teeth on its lower edge, a gear in mesh with said rack teeth, a pinion in mesh with said gear, a spring pressed pin adapted to engage said pinion to arrest movement thereof, a cam member carried by said spring pressed pin and adapted to be moved to position to engage said housing to hold the pin retracted from engagement with the pinion.

4. A device of the class described comprising a housing, an arm mounted in one end of said housing, a hook carried by the free end of said arm, there being a recess in said arm opening into said housing, a spring pressed pin mounted in said recess, meshing gearing within said housing, a rack bar within said housing meshing with said gearing, a hook carried by the free end of said rack bar, and a cam member associated with said spring pressed pin adapted to hold the same retracted from said meshing gear.

5. A device of the class described comprising a supporting housing, a pair of hook members associated with said housing, means for moving one of said hook members, a locking member for the moving means, a cam member carried by the locking member adapted to be moved to engaging position with the housing to hold the locking member in inoperative position.

1,155,521. MAGNETO-ELECTRIC MACHINE. FREDERICK RICHARD SIMMS, Kilburn, England, assignor to The Simms Magneto Company, Bloomfield, N. J., a Corporation of New York. Filed Feb. 21, 1912. Serial No. 679,044. (Cl. 171—209.)



1. In a magneto electric machine for generating separate currents for ignition and lighting circuits, the combination with a plurality of permanent horse shoe magnets having their arms extending in the same direction, the arms of certain of said magnets being extended beyond the arms of the others, a pair of pole shoes secured to said extended arms, an armature located between said pole shoes, a pair of pole shoes secured to the shorter magnet arms, and a separate armature located between said pole shoes.

2. In a magneto electric machine for generating separate currents for ignition and lighting circuits respectively, the combination with a plurality of permanent horse shoe magnets located side by side, and having their arms extending in the same direction, one of said magnets being provided with arms extending beyond those of the other magnet or magnets, a pair of pole shoes secured to said extended arms, an armature located between said pole shoes, a pair of pole shoes secured to the shorter magnet arms and a separate armature located between said pole shoes.

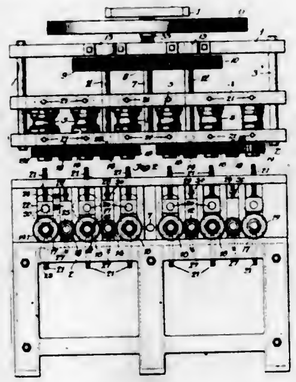
3. In a magneto electric machine for generating separate currents for ignition and lighting circuits respectively, the combination with a plurality of permanent magnets, arranged side by side, each comprising a plurality of superimposed horse shoe shaped strips, having their arms extending in the same direction, the arms of certain of said strips being extended beyond the others, a pair of pole shoes connected to said extended arms, a pair of pole shoes connected to the arms not so extended, and separate and differentially constructed armatures located between said pairs of pole shoes respectively.

4. In a magneto electric machine for generating separate currents for ignition and lighting circuits respectively, the combination with a plurality of permanent magnets, arranged side by side, each comprising a plurality of superimposed horse shoe shaped strips, having their arms extending in the same direction, the arms of certain of said strips being extended beyond the others, a pair of pole shoes connected to said extended arms, a pair of pole shoes connected to the arms not so extended, and an independent armature located between each of said pairs of pole shoes.

5. In a magneto electric machine for generating separate currents for ignition and lighting circuits respectively, the combination with a central permanent magnet comprising a plurality of superimposed horse shoe shaped strips, the arms of one of said strips being extended beyond those of the others, and permanent magnets located on opposite sides of said central magnet, each composed of a plurality of horse shoes shaped strips having arms substantially of the length of the short arms of said central magnet, all of said arms extending in the same direction, a pair of pole shoes secured to said extended arms, an armature located between said pole shoes, a pair of pole shoes secured to the arms of the end magnets and the short arms of said central magnet, and a separate armature located between said pole shoes.

[Claims 6 and 7 not printed in the Gazette.]

1,155,522. METAL-ROLLING MACHINE. NELS P. SJOBRING, Chicago, Ill. Filed July 28, 1913. Serial No. 781,608. (Cl. 153—54.)



1. In a machine of the class described the combination of a continuous positive gear train, a series of rolls each frictionally driven connected therewith, and a series of idler rolls to coact with said frictionally driven rolls to reform metal strips passed therebetween.

2. In a machine of the class described the combination of a continuous positive gear train, a series of frictionally driven rolls any one of which is capable of differential movement with respect to the others without interfering with the drive of the others, and a series of idler rolls adapted to coact with said frictionally driven rolls to reform metal passed therebetween.

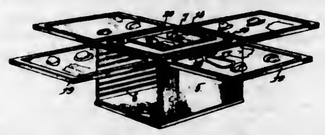
3. In a machine of the class described the combination of a plurality of pairs of roller dies, means for frictionally driving one of each pair of said dies, the remaining die of each pair of dies adapted to be driven by the material operated upon, and adjustable means above and below said pairs of roller dies for adjusting the same.

4. In a device of the class described the combination of a supporting frame, an adjustable sliding frame thereon, uprights in said frames, a plurality of movable members in each of said uprights adapted to be vertically adjusted so as to independently move toward or away from each other, a plurality of pairs of upper and lower roller dies journaled in said members, and frictional means for independently driving each of said lowermost dies.

5. The combination of a main frame, a slidable auxiliary frame mounted thereon, a series of graduated pairs of roller dies adjustably supported between said frames, a plurality of gears frictionally connected to, and adjustable with certain of said roller dies, and a plurality of adjustable pinions meshing with said gears to form a continuous gear train.

[Claims 6 and 7 not printed in the Gazette.]

1,155,523. DEVICE FOR IDENTIFYING CRIMINALS AND OTHER PERSONS THROUGH COMBINATION-PICTURE. CHRISTOPHER J. SMITH, St. Louis, Mo. Filed Feb. 14, 1914. Serial No. 818,677. (Cl. 35—12.)



1. A device of the class described comprising a case, a photograph supporting plate adjustably mounted on the top of said case and a plurality of transparent plates on which is imprinted various articles of wearing apparel hingedly mounted on four sides of said case and arranged to be folded over the photographic supporting plate, substantially as specified.

2. A device of the class described comprising a rectangular case, a photograph supporting plate mounted on the top of the case and arranged to be shifted to various positions on said top; a plurality of transparent plates hinged to the sides of the case and arranged to be folded over the photograph, each of said transparent plates provided with a picture of a certain article of wearing apparel which is to be placed over the photograph for dressing the picture; and slides located in the frame for supporting various plates containing different articles of wearing apparel, substantially as specified.

1,155,524. PAPER FRUIT-CONTAINER. ONA E. SMITH, San Jose, Cal. Filed May 3, 1915. Serial No. 25,533. (Cl. 229—5.)

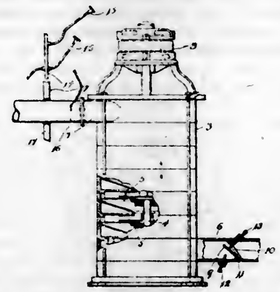


The combination with a paraffined plaited paper fruit container having an outwardly curving upper edge of an elastic band positioned around said container a distance below said upper edge.

1,155,525. REGULATOR TO CONTROL THE FLOW OF FLUID. IRA H. SPENCER, West Hartford, Conn., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn., a Corporation of Connecticut. Filed Aug. 10, 1911. Serial No. 643,467. (Cl. 230—24.)

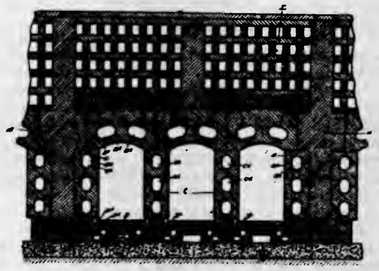
1. In a device of the kind described, a casing, a pipe leading into the casing, a check valve in said pipe, a seat for the valve, means to regulate the closing of the valve, and means operating independently of the aforesaid means to regulate the extent of opening of the valve.

2. In a device of the kind described, a casing, a pipe leading into the casing, a check valve in said pipe, a seat for the valve, independently operable means for regulating the extent of movement of the valve to its seat and the extent of movement of said valve from its seat.



3. In a device of the kind described, a casing, a pipe leading into the casing, a gravity actuated check valve in the pipe, a screw bolt extending through the pipe and valve seat to control movement of the valve toward the seat, and a second screw bolt extending through the pipe in opposition to the first to control the opening of the valve.

1,155,526. COKE-OVEN. LELAND L. SUMMERS, Chicago, Ill. Filed May 22, 1914. Serial No. 840,171. (Cl. 202—7.)



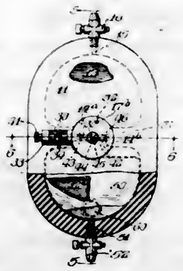
1. A coke oven comprising in combination a substantially horizontal closed retort divided into a plurality of sections by intermediate walls of relatively light construction extending longitudinally through the retort, means for feeding portions of carboniferous material simultaneously to each of the several sections of the retort, means for conveying the material forwardly in each of the several sections of the retort simultaneously, and means for compressing simultaneously and equally the material in each of the several sections in the retort during the coking period.

2. A coke oven comprising in combination a substantially horizontal closed retort having comparatively heavy side walls, intermediate walls of relatively light construction extending longitudinally through the retort and dividing the retort into a plurality of sections, the side and intermediate walls being provided with heating ducts, means for feeding portions of the material simultaneously to each of the sections of the retort, means for conveying the material forwardly in each of the several sections of the retort simultaneously, and means for compressing simultaneously and equally the material in each of the several sections of the retort during the coking period.

1,155,527. MEDICAL APPLIANCE. MARTIN M. SWEET, Chicago, Ill. Filed Apr. 2, 1915. Serial No. 18,718. (Cl. 128—47.)

1. An article of the class described, including a base and a pair of chambers therein separated by a bridge, a trans-

fer valve located in said bridge, there being an outlet arising from said valve to the exterior of said base, there being openings from said chambers to said valve, and co-incidable openings in said valve, whereby upon oscillation of said valve the same will alternately open communication between said chambers and said outlet.

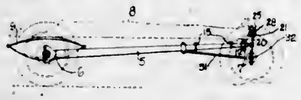


2. A device of the class described including a non-collapsible structure, an upstanding nozzle upon the upper surface of said structure, there being a chamber within said structure, a protuberance integral with said structure projecting into said chamber, and having a horizontal passage way therein contiguous to the inner face of the upper wall of said chamber, said nozzle having a through aperture connecting with said passage way, and a valve adapted for the admission of pressure means into said chamber.

3. A device of the class described including a non-collapsible structure, an upstanding nozzle upon the upper surface of said structure, there being a chamber within said structure, a protuberance integral with said structure projecting into said chamber directly underneath said nozzle, and having a horizontal passage way therein contiguous to the inner face of the upper wall of said chamber, said nozzle having a through aperture connecting with said passage way, and a valve adapted for the admission of pressure means into said chamber.

4. An article of the class described including a base and a pair of chambers therein separated by a bridge, said bridge having a vertical aperture therein extending exteriorly of said structure and a transfer valve in said bridge effecting connection of said aperture with said chambers alternately upon oscillation of said valve.

1,155,528. VEHICLE BODY-MOUNTING. WALTER R. TENNILLE, Dothan, Ala. Filed Aug. 20, 1914. Serial No. 857,736. (Cl. 21—101.)



1. The combination with a vehicle frame and supporting axle therefor, of levers fulcrumed intermediate of their ends upon said frame and having short inwardly and upwardly extending arms and relatively long outwardly extending arms, relatively movable sections between the latter ends of the arms and the axle, and relatively movable spring held members to which the shorter arms of the respective levers are connected.

2. The combination with a vehicle frame and supporting axle therefor, of levers fulcrumed intermediate of their ends upon the frame and having short inwardly and upwardly extending arms and relatively long outwardly extending arms, link connections between the latter arms of the levers and the axle, and spring held telescopically engaged members, the ends of the shorter arms of the respective levers being pivotally connected to said members.

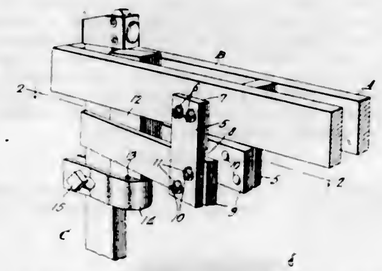
3. The combination with a vehicle frame including longitudinal side bars, a front supporting axle for said frame, of levers fulcrumed intermediate of their ends upon the forward ends of said frame bars, shock absorbing means including telescoping cylinder sections, the inner ends of said levers being pivotally connected to the respective cylinder sections, and relatively movable means connecting the outer ends of said levers to the ends of the vehicle axle.

4. The combination with a vehicle frame including longitudinal side bars and a front axle to support said frame, of levers fulcrumed intermediate of their ends upon the respective frame bars, telescopically engaged cylinder sections, the inner ends of said levers being pivotally connected to the respective cylinder sections, a spring arranged within said sections and normally tending to force the same apart, and links connecting the outer ends of the respective levers to the ends of the vehicle axle.

5. The combination with a vehicle frame including longitudinal side bars and a front axle to support said frame, of levers fulcrumed intermediate of their ends upon the respective frame bars, spring held telescopically engaged cylinder sections, the inner ends of said levers extending upwardly from their fulcrums and pivotally connected to the respective cylinder sections, the outer ends of said levers extending downwardly from their fulcrums, and links connecting the outer ends of the respective levers to the ends of the vehicle axle.

[Claim 6 not printed in the Gazette.]

1,155,529. PICKER-STICK CHECK. JOSEPH F. VAILLANCOURT, Fall River, Mass. Filed Apr. 17, 1915. Serial No. 22,053. (Cl. 139—22.)



1. A picker stick check comprising a pair of hangers, each including a block having beveled and convex inner surfaces, means for securing the beveled surfaced portions of the blocks upon the lay of a loom, for disposing the blocks in convergent relation to each other, a pair of outwardly tapered resilient checking arms having their thicker ends overlying the convexed surfaces of the blocks, and duplicate means passed through the arms and blocks and diagonally disposed with relation to each other on opposite sides of the centers of the convexed surfaces to permit the rocking of the arms thereon for the adjustment thereof.

2. A picker stick check comprising a pair of resilient checking arms disposed in convergent relation to each other, hangers for the arms and having rounded contacting surfaces for the arms to permit rocking of the latter thereon for changing the relative position of said arms, a wearing block on the picker stick and of greater width than the latter to engage the arms when passing between the same, a reduced extension on said block, and a clip bolted on the picker stick and embracing the extension.

1,155,530. PROCESS FOR FINISHING BREAD AND THE LIKE. ARNOLD S. WAHL, Chicago, Ill. Filed Mar. 22, 1915. Serial No. 16,210. (Cl. 99—10.)

1. The herein described process of finishing bread and the like, which consists in surrounding the same while cooling, after baking, with a predetermined atmosphere containing substances which it is desired to add.

2. The herein described process of finishing bread and the like, which consists in surrounding the same while cooling, after baking, with a predetermined atmosphere containing proper constituents for absorption, whereby the bread or the like absorbs into its pores the desired ingredients.

3. The herein described process of finishing bread and the like, which consists in surrounding the same while cooling, after baking, with an atmosphere free from oxygen.

4. The herein described process of finishing bread and the like, which consists in surrounding the same while cooling, after baking, with an atmosphere of carbon dioxid.

5. The herein described process of finishing bread and the like, which consists in surrounding the same while cooling, after baking, with an atmosphere of carbon dioxid produced by fermentation.

[Claims 6 and 7 not printed in the Gazette.]

1,155,531. STOCK FOOD. THOMAS BAILEY WALKER, Austin, Tex. Filed Feb. 5, 1913. Serial No. 746,411. (Cl. 99—11.)

1. That process of making stock food which consists in leaching wood particles, adding thereto a small per cent. of ground malt, and subjecting the same to heat, then treating the mass with acid liquors under pressure to produce hydrolized wood cellulose, then neutralizing with an alkali, finally drawing off and evaporating the liquid to the consistency of a syrup, and returning this to the mass.

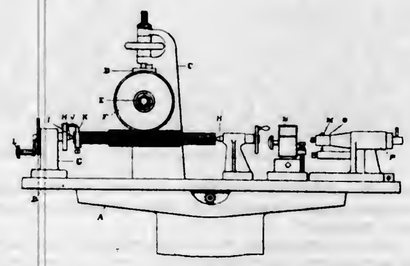
2. That process of making stock food which consists in leaching wood particles, adding thereto a small per cent. of ground malt, and subjecting the same to heat, then treating the mass with acid liquors under pressure to produce hydrolized wood cellulose, then neutralizing with an alkali, then drawing off and evaporating the liquid to the consistency of a syrup, and returning this to the mass, and finally adding a proportion of cotton seed meal.

3. A stock food comprising malt treated and hydrolized cellulose.

4. A stock food comprising malt treated and hydrolized cellulose, and cotton seed meal.

5. A stock food comprising malt treated and hydrolized cellulose, cotton seed meal, and molasses.

1,155,532. TRIMMING MECHANISM FOR GRINDER-WHEELS OF SHAFT-GRINDING MACHINES. FREDERICK ALEXANDER WARD, Detroit, Mich., assignor to Gear Grinding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 13, 1912. Serial No. 714,811. (Cl. 125—6.)



1. The combination with a rotary grinder wheel of a reciprocatory work-holder and trimming mechanism for said wheel, comprising a concave forming trimmer centered parallel to the longitudinal axis of said work-holder and provided with means for adjusting the radius of the arc, and an edge trimmer provided with divergent arms and trimming points movable on said arms.

2. In a machine of the character described, trimming mechanism for the grinder wheel, comprising a rotatable shaft having its axis of rotation parallel to the longitudinal axis of the work, a trimming point and a holder for the trimming point laterally, adjustably secured to said rotatable shaft, and a second trimmer provided with divergent guide arms and trimming points movable along said guide arms for the purpose described.

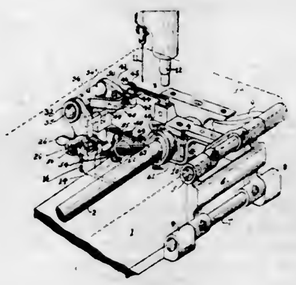
3. The combination with a rotary grinder wheel and a relatively reciprocatory work-holder of a trimming mechanism for the grinder wheel, comprising a rotatable member having its axis parallel to the longitudinal axis of the work, a radial adjustable trimming-point holder secured to said rotatable member and an exchangeable trimmer having divergent guide arms and trimming points movable thereon, said guide arms being adjustable in relation to the axis of the rotative trimmer for the purpose described.

4. The combination with a rotary grinder wheel and a relatively reciprocatory work-holder, of a trimmer, comprising a rotatable member having its axis parallel with the longitudinal axis of the work, a radially adjustable trimming point secured to said rotatable member, a member having a shank adjustable toward and from the axis of said rotatable member, and a pair of divergent guide arms and trimming points movable upon said guide arms for the purpose described.

5. A trimming mechanism for grinder wheels of shaft grinding-machines, comprising means for trimming a concave segment in the periphery of the grinder wheel, exactly corresponding to a segment of the finished work, the center of said trimming arc being in alinement with the axis of the shaft being ground.

[Claim 6 to 14 not printed in the Gazette.]

1,155,533. TRIMMING MECHANISM FOR SEWING-MACHINES. JOHN P. WEIS, Brooklyn, N. Y., assignor, by mesne assignments, to Metropolitan Sewing Machine Company, a Corporation of New York. Filed June 5, 1903. Serial No. 160,208. (Cl. 112—6.)



1. In combination with the bed-plate of a sewing machine, a bracket, one portion of which engages the bottom and the other portion of which engages the edge of said bed-plate, means by which the bracket may be detachably secured to said bed-plate; a second bracket, and complemental means between the two brackets for coupling one detachably to the other; a trimming mechanism comprising a stationary and a vibratory blade carried by said second bracket; and means for actuating said vibratory blade.

2. In combination with the bed-plate of a sewing machine, a bracket one portion of which engages the bottom and the other portion of which engages the edge of said bed-plate; means by which the bracket may be detachably secured to said bed-plate; a second bracket, and complemental means between the two brackets for coupling one

detachably to the other; a trimming mechanism comprising a stationary and a vibratory blade carried by said second bracket; and means for actuating said vibratory blade including a detachable connection therefrom to the driving-member of the actuating means.

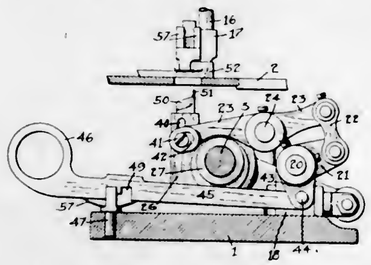
3. A trimming mechanism comprising a bracket one portion of which has means adapting it to be secured to a supporting-frame, and another portion of which has supporting means; a second bracket having means coöperating with the supporting means of the first named bracket for coupling the two brackets detachably together; trimming mechanism carried by the second bracket; and means for adjusting the two brackets relatively to each other.

4. In combination with the cloth-plate of a sewing machine, a trimming mechanism having a fixed blade and a movable blade, means for securing the trimming mechanism to the machine with the cutting edge of the movable blade below the surface of the cloth-plate, means for projecting the movable blade through the cloth-plate into operative position and maintaining it thus during its operation, and means whereby the movable blade may be actuated.

5. In combination with a sewing machine, a trimming mechanism having a fixed blade and a movable blade, means for detachably securing the movable blade and its actuating mechanism to the machine below the cloth-plate thereof so that the latter will shield the same, means for projecting the movable blade through the cloth-plate into operative position and for maintaining it thus during its operation, and means for actuating the movable blade.

[Claims 6 to 24 not printed in the Gazette.]

1,155,534. TRIMMING-MACHINE. JOHN P. WEIS, Nyack, N. Y., assignor, by mesne assignments, to Metropolitan Sewing Machine Company, a Corporation of New York. Original application filed Apr. 23, 1903, Serial No. 153,908. Divided and this application filed Sept. 1, 1911. Serial No. 647,192. (Cl. 112—6.)



1. A trimming mechanism for sewing machines comprising a trimmer-holder located below the work-plate of the machine and carrying a trimmer-blade; a means for supporting and also for actuating the holder also located below the work-plate; and means connected to the supporting and actuating means for moving the holder independently of the latter means.

2. A trimming mechanism for sewing machines comprising a trimmer-holder carrying a trimmer-blade; a means for supporting and also for actuating the holder; and means for actuating the holder independently of its supporting and actuating means, including a rock-shaft, manual means for actuating the shaft, and a link connected to the shaft and holder.

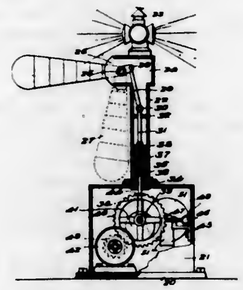
3. A trimming mechanism for sewing machines comprising a trimmer-holder carrying a trimmer-blade; a means for supporting and also for actuating the holder; a lever carried by the said means; a connection between the lever and holder whereby the latter may be shifted independently of its support; and means for actuating the lever.

4. A trimming mechanism for sewing machines comprising a trimmer-holder, a constantly vibrating member in which said holder may slide, a lever pivotally supported on said member, an operative connection between said holder and lever, and means whereby the lever may be actuated to control the position of the holder regardless of the action of said member.

5. A trimming machine comprising a trimmer-holder, a constantly vibrating member for actuating said holder, a lever pivoted for movement relatively to said member, a connection between said lever and said holder, means whereby the lever may be manipulated to control the action of the holder without disturbing the action of the vibrating member, all said parts being arranged and operating below the work-plate of the machine, a trimmer secured in said holder, whereby the trimmer may be depressed below the work-plate out of operative position, and a member operating as a ledger blade for coöperating with said trimmer.

[Claims 6 to 9 not printed in the Gazette.]

1,155,535. TRAIN-CONTROLLED ELECTRIC RECORDING CROSSING-SIGNAL. HARRY WILKINS, Evansville, Ind., assignor of one-fourth to William H. Redman, one-fourth to William M. Smith, and one-half to James P. Wilson, Vanderburg county, Ind. Filed Nov. 29, 1912. Serial No. 734,223. (Cl. 234—27.5.)



1. In a train controlled recording crossing signal for railways, the combination with a wheel, of a hammer adapted to be periodically operated by said wheel, a marking device adapted to be operated by the hammer, a clock-operated record adapted to receive the markings of the marking device, and track instruments located on opposite sides of the crossing and for actuation by the train, said track instruments controlling the rotation of the wheel.

2. In a train controlled recording crossing signal for railways, the combination with an electric motor, a wheel driven thereby, a hammer, means operated by the wheel adapted to periodically operate the hammer, a marking device adapted to be operated by the hammer, a clock-operated record adapted to receive the markings of the marking device, track instruments on opposite sides of the crossing which are adapted for actuation by a train, and electrical circuit connections for the electric motor which are controlled by said track instruments.

1,155,536. ROTARY ENGINE. JOSEPH H. WILLIAMS, Wallace, Idaho. Filed Nov. 9, 1914. Serial No. 871,105. (Cl. 123—43.)

1. In a rotary engine, a rotor including working cylinders and pistons therefor, feeding cylinders in said rotor one for each working cylinder, a piston in each feeding cylinder, a valve controlling communication between each feeding cylinder and its working cylinder and limiting movement of said feeding piston in a non-feeding direction, a spring for actuating said piston in a non-working direction to close said valve, and fixed cam means for actuating said feeding piston in a feeding direction to open said valve, substantially as described.



2. In a rotary engine, a rotor provided with a working cylinder, a working piston in said cylinder adapted for working movement under motive fluid pressure to impart rotary thrust to said rotor, a spring for retracting said piston, and means limiting retraction of said piston under the action of said spring, substantially as described.

3. In a rotary engine, a rotor provided with a working cylinder, a working piston in said cylinder adapted for working movement under motive fluid pressure to impart rotary thrust to said rotor, a spring for retracting said piston, means for limiting retraction of said piston under the action of said spring, and mechanism for adjusting said means to vary the retractive movement of the piston, substantially as described.

4. In a rotary engine, a rotor provided with a working cylinder, a working piston in said cylinder adapted for movement therein under motive fluid pressure to impart rotating thrust to said rotor, a spring for retracting said piston, means for limiting retraction of said piston under the action of said spring, and cam mechanism for actuating said means to move said piston against the action of said spring to a starting position, substantially as described.

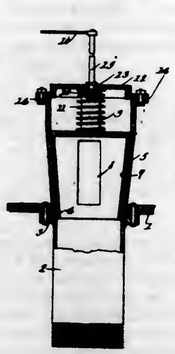
5. In a rotary engine, a rotor provided with a working cylinder, a piston in said cylinder adapted for working movement under motive fluid pressure to impart rotating thrust to said rotor, a spring for retracting said piston, a retractor arm pivoted on said rotor and engaging said piston, and cam means acting through said retractor arm for limiting retraction of said piston and moving said piston to a starting position, substantially as described.

[Claim 6 not printed in the Gazette.]

1,155,537. OUTLET-VALVE FOR OIL-TANKS. JOHN E. WOOLEY, Findlay, N. Y. Filed Jan. 4, 1915. Serial No. 513. (Cl. 137—21.)

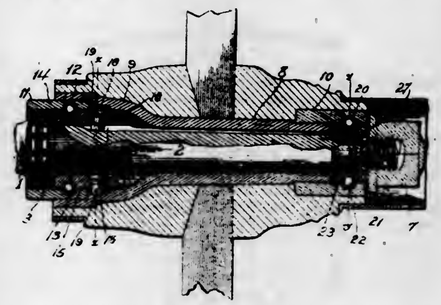
1. The combination with a liquid tank, and an outlet pipe therefor having an interiorly threaded portion of slightly greater diameter than the inlet of the pipe, of a valve for controlling the pipe, including a casing having a frusto-conical lower end, said end being exteriorly threaded for engagement with the threads of the outlet pipe, a frusto-conical valve having a socket formed therein from the lower reduced end thereof and provided with diametrically disposed ports, said casing in the frusto-conical portion thereof being provided with diametrically disposed ports for registration with the ports of the valve, a stem carried by the frusto-conical valve and extending in an opposite direction to the socket thereof, a spring surrounding said stem, a bridging member connected across the valve casing and exerting a pressure upon the spring to hold the valve seated within the casing, and means for operating the valve extending through the bridging member and engaging the stem.

2. The combination with a liquid tank, and an outlet pipe therefor having an interiorly threaded portion of slightly greater diameter than the inlet of the pipe, of a valve for controlling the pipe, including a casing having a frusto-conical lower end, said end being exteriorly threaded for engagement with the threads of the outlet pipe, a frusto-conical valve having a socket formed therein from the lower reduced end thereof and provided with diametrically disposed ports, said casing in the frusto-conical portion thereof being provided with diametrically disposed ports for registration with the ports of the valve, a stem carried by the frusto-conical valve and extending



in an opposite direction to the socket thereof, a spring surrounding said stem, a bridging member connected across the valve casing and exerting a pressure upon the spring to hold the valve seated within the casing, the said stem being provided with an angular socket in the upper end thereof and said bridging member being provided with a circular opening concentric to the socket, and an operating stem having an end seatable within the angular socket of the valve stem and extending through the circular opening of the bridge, whereby the valve may be oscillated.

1,155,538. WHEEL-MOUNTING. ALFRED H. WORREST, Lancaster, Pa. Filed Mar. 15, 1913. Serial No. 754,616. (Cl. 74—8.)

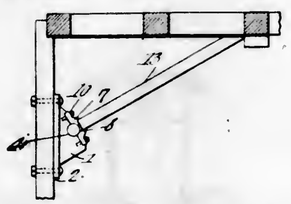


1. The combination in a device of the character described, of a spindle having a single groove, a removable radial bearing device encircling the inner end portion of the spindle, a plurality of keys passing freely through a wall of the removable bearing device, and a single spring engaging said keys and pressing them into engagement with the spindle, one of said keys adapted to enter the groove in the spindle.

2. The combination in a device of the character described, of a spindle having a recess, a removable ring encircling said spindle and having an annular groove in its peripheral wall and having a plurality of key holes arranged transversely through the wall of the ring and

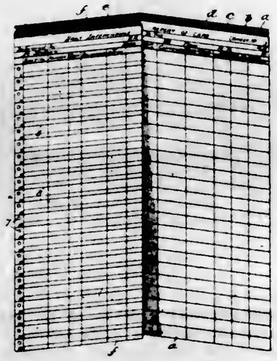
communicating with said annular groove, keys passing freely through said key holes, and a spring disposed in said annular groove of the ring and engaging each of said keys to press any one of them into the recess in the spindle.

1,155,539. CALF AND BULL WHEEL BEARING. REUBEN C. BAKER, Coalinga, Cal. Filed May 15, 1913. Serial No. 767,886. (Cl. 64—10.)



In well drilling machinery, the combination with an upstanding supporting structure and a laterally extending structure fixed relative thereto, of a bearing block secured to one side of the upstanding structure and provided with an inclined active face formed with a recess for the reception of a revoluble element, a cap secured upon the recessed face of the bearing block and having a recess registering with the recess in said face of the block, thus to form a circular opening for the reception of a revoluble element, said cap having a recess in its outer or inclined upper face, and an upwardly and laterally inclined compression member bearing at one end within said last named recess within the cap and at its other end against the horizontally extending fixed structure, said member constituting means for reinforcing the cap against upward and outward pressure and constituting means for binding the bearing block against the upstanding supporting member.

1,155,540. INTERCHANGE-CAR-REPORT BLANK. NOTEN D. BALLANTINE, Chicago, Ill. Filed Aug. 7, 1911. Serial No. 642,796. (Cl. 11—19.)

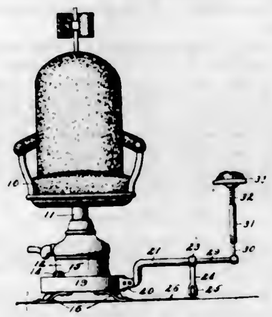


1. A report blank folded upon a series of vertical lines to form a plurality of superposed double sheets of equal size in contact with each other throughout their entire area and two single sheets of equal size folded together also in contact with each other and superposed upon a portion of the face of the upper wide sheet, the sheets of the blank being printed and ruled alternately upon opposite faces thereof to form appropriately designated, registering spaces upon the upper faces of all of said sheets to receive data constituting a full car record upon each of said wide sheets and a portion of such record upon each of said narrow sheets, substantially as described.

2. A car report blank divided by weakened vertical lines into four double sheets of equal size and two single sheets of equal size, the wide sheets being provided with like vertical and transverse intersecting rulings forming columns and spaces appropriately designated to receive data constituting a full car record, said rulings and designations being located alternately on the opposite faces of said sheets, the single sheets bearing identical rulings and designations appearing on one side of the double sheets and being located alternately on their opposite faces, so that when the blank is folded in such a manner that the double sheets are superposed in contact with each other throughout their entire area and in registration and the single sheets are superposed also in contact with each other and in registration and located immediately above one side of the double sheets, like rulings and designations on all the sheets will be in registration, substantially as described.

3. A report blank, comprising a blank of paper divided by vertical lines into a plurality of equal width full sheets, one of the intermediate full sheets being equally divided vertically to provide two one-half sheets, the alternate full sheets on both sides of the blank being appropriately printed and ruled to provide one printed side to each full sheet, and said one-half sheets being also appropriately printed and ruled on opposite sides of the blank to provide one printed side to each one-half sheet, whereby the blank can be folded on the dividing lines to superpose the full sheets in contact with each other throughout their entire area, with the one-half sheets superposed in contact with each other upon the outer full sheet.

1,155,541. ADJUSTABLE OPERATOR'S SEAT FOR DENTAL CHAIRS. JAMES B. BARDIN, Chadbourn, N. C. Filed May 23, 1914. Serial No. 840,536. (Cl. 155—22.)



1. A seat attachment for dental chairs and the like, comprising an arm for attachment to the base of the chair and projecting radially therefrom, means on said arm in fixed-apart relation to the base for supporting the outer end of the arm, and a seat support mounted on the arm independently of said supporting means and adapted for radial adjustment toward and from the base of the chair and said supporting means.

2. A seat attachment for dental chairs and the like, comprising a supporting ring arranged about the base of the chair, a collar upon said supporting ring adapted for rotation about the same, an arm radiating from said collar, a depending leg fixed on the end of said arm and movable with the same, a seat, and an adjustable connection between said seat and said arm whereby the seat may be moved radially to and from the chair and legs independently thereof.

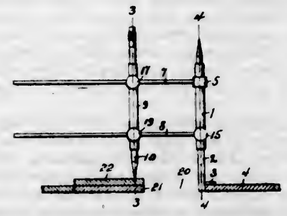
3. A seat attachment for dental chairs and the like comprising a sleeve for securement about the base of the chair, a collar rotatably supported on said sleeve, a plurality of arms projecting outwardly from said collar, legs secured on the outer ends of said arms extending downwardly to the floor and movable with said arms, a seat support slidably connected to said arms independently of said legs whereby the seat may be moved radially to and from the chair and said legs.

4. An operating attachment for dental chairs and the like, comprising an arm for attachment to the base of the chair and extending outwardly therefrom, a leg depending from said arm to support the same, a roller on said leg and track for said roller arranged concentrically about the chair base, a seat support slidably connected to said arm and adapted for radial movement to and from the base independently of said leg and said track, and a seat on said support.

5. In combination with a chair having a pedestal, a split sleeve surrounding said pedestal and having a groove in its outer periphery, a split collar surrounding said sleeve and having a rib on its inner periphery for engagement in the groove in the sleeve and adapted for rotation thereon about the axis of said pedestal, a plurality of arms projecting from said collar, legs supporting the outer ends of said arms, and a seat support slidably connected to said arms and projecting beyond said legs, said seat support being adapted to be adjusted radially of said pedestal independently of said legs.

[Claim 6 not printed in the Gazette.]

1,155,542. COMBINED GAGE AND COMPASS. EDWARD B. BENNETT and JOHN ARMSTRONG, Kansas City, Kans. Filed Jan. 16, 1915. Serial No. 2,590. (Cl. 33—41.)



1. In a combined gage and compass, a tubular holder provided with a lateral arm and having a lateral hole extending to the longitudinal opening in the holder, a gage member slidably and rotatably mounted in said holder and provided with a lateral projection adapted to serve as a support, a screw fitted in said lateral hole and adapted to bear against said gage member, and a pencil holder longitudinally adjustable on said arm toward and from said gage member.

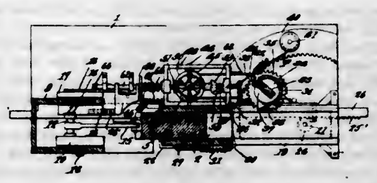
2. In a combined gage and compass, a tubular holder provided with a lateral arm and having a lateral hole extending to the longitudinal opening in the holder, a gage member slidably and rotatably mounted in said holder and adapted to be reversed end for end therein and provided with one pointed end, the other end of said gage member having adjacent thereto a lateral projection adapted to serve as a support, a screw fitted in said lateral hole and adapted to bear against said gage member, and a pencil holder longitudinally adjustable on said arm toward and from said gage member.

3. In a combined gage and compass, a tubular holder provided with a lateral arm, a gage member mounted in said holder and provided adjacent to one end with a lateral projection adapted to serve as a support, a tubular pencil holder provided with a transverse hole which intersects the longitudinal opening of said pencil holder and in which said arm is longitudinally slidable and laterally movable to a position in which the arm will be adapted to clamp a pencil mounted in the longitudinal opening of the pencil holder, and clamping means adapted to releasably lock the pencil holder to said arm and to clamp said arm against said pencil.

4. In a combined gage and compass, a tubular holder provided with a lateral arm, a gage member mounted in said holder and provided adjacent to one end with a lateral projection adapted to serve as a support, a tubular pencil holder having a transverse hole intersecting the longitudinal opening of the pencil holder and in which said arm is longitudinally slidable and laterally movable to a position in which the arm will be adapted to clamp a pencil mounted in the longitudinal opening of the pencil holder, the pencil holder having a screw-threaded hole which intersects said transverse hole, and a clamping screw fitted in said screw-threaded hole and adapted to force said arm tightly against a pencil mounted in said pencil holder and to releasably lock the pencil holder to said arm.

5. In a combined gage and compass, a tubular holder provided with a lateral arm and having a lateral hole extending to the longitudinal opening of the holder, a gage member rotatably and slidably mounted in said holder and provided with a lateral projection adapted to serve as a support, a screw fitted in said lateral hole and adapted to bear against said gage member, a tubular pencil holder having a transverse hole intersecting the longitudinal opening of the pencil holder, said arm being longitudinally slidable in and laterally movable to a position in said transverse hole in which the arm will be adapted to clamp a pencil mounted in the longitudinal opening of the pencil holder, and clamping means adapted to releasably lock the pencil holder to said arm and to force said arm against said pencil.

1,155,543. BALING-PRESS. JOHN H. BEST, Guthrie, Okla. Filed Apr. 9, 1915. Serial No. 20,231. (Cl. 100—20.)



1. A baling press including normally aliining fixed and movable press boxes, compressing means, means for revolving the movable press box to wrap a tie therearound, and means for automatically fastening together the ends of the tie upon the completion of such rotation.

2. A baling press including normally aliining fixed and movable press boxes, compressing means, manually controlled means for revolving the movable press box relative to the fixed box, means movable with said press box for conveying a portion of a tie therewith to wrap the tie about the contents of the press box, and means for automatically twisting the ends of the tie upon the completion of the rotation of the movable press box.

3. The combination with normally registering fixed and movable press boxes, and pressing means, of manually controlled means for automatically revolving the movable press box, a tie holder, means operated by the movement of the press box for withdrawing a tie from the holder and wrapping it about the contents of the box, and means for automatically twisting and severing the tie upon the completion of such rotation of the press box.

4. The combination with normally aliining fixed and movable press boxes, compressing means, and means for locking the press boxes in alinement, of manually controlled means for successively unlocking the movable press box and revolving it, a tie holder, means operated by the revolution of the movable press box for unwinding the tie from its holder and wrapping it about the contents of

the press box, and means for automatically engaging and twisting the tie upon the completion of such rotation.

5. The combination with a revoluble press box and means for compressing material therein, of a continuously operating drive element, manually controlled means for coupling the same to the press box thereby to impart a complete rotation to the press box, a tie holder, means for connecting the tie to the press box thereby to wrap the tie about the contents of the box during the revolution of the box, and means for automatically engaging and twisting together the ends of the tie upon the completion of the rotation of the box.

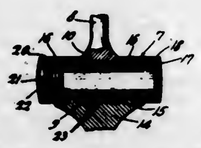
[Claims 6 and 7 not printed in the Gazette.]

1,155,544. GOWN. CHARLES A. BONOFF, New York, N. Y. Filed Feb. 21, 1914. Serial No. 820,120. (Cl. 2—54.)



An apron gown for workers comprising a body and skirt formed of front and rear members permanently secured together, said body having arm openings extending for a substantial distance below the position of the arm pits, to afford freedom of movement of the wearer when the sleeves are attached, the said body also having separable overlapping shoulder portions provided with rows of devices for adjustably connecting the said separable shoulder portions together to vary the amount of overlap and thus vary the size of the arm openings, detachable tubular sleeves formed separately and independently of the body of the garment, and means for attachably and adjustably securing said sleeves to the body of the garment over and around the arm openings to fit arm openings of different sizes, said means including devices adapted to coöperate with any of said rows of devices to secure the sleeves in different positions on the shoulder portions to thereby vary the length of the sleeves, both the body, skirt and sleeves being adapted to be laid flat for ironing.

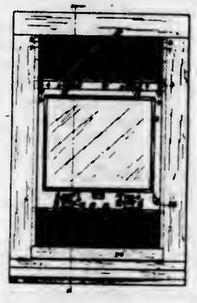
1,155,545. ARTIFICIAL LIMB. JAMES T. BRACHT, Memphis, Tenn. Filed Feb. 20, 1915. Serial No. 9,756. (Cl. 3—3.)



1. An ankle joint for artificial limbs, including two coöperating members, one of which is provided with a single hollow cylindrical end, while the other of which is provided with two hollow cylindrical ends for axial alinement with the other hollow end, and a tubular fastening and bearing member fitting in all the hollow ends and upon which the ends rotate.

2. An ankle joint for artificial limbs, including a foot engaging and a lower limb engaging member, a hollow cylindrical knob carried by one member, two hollow cylindrical knobs carried by the other member, said knobs being spaced apart to permit the insertion therebetween and axially alined therewith of the first knob, a tubular member sealed at one end and having an annular rim at the sealed end said tubular member fitting in the hollows of the knobs and forming a bearing for the knobs, and a locking member insertible in the open end of the tubular member for locking the parts assembled.

1,155,546. DISAPPEARING WINDOW-SCREEN. JOSEPH A. BRIDGES, San Francisco, Cal. Filed Jan. 6, 1915. Serial No. 808. (Cl. 156—39.)



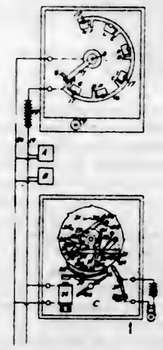
1. In combination with inner and outer sashes of a window, pulleys at the upper ends of the window frame and a cord around each pulley connected at its ends to said sashes, upper and lower flexible screens connected at one end with the upper and lower rails respectively of the upper and lower sashes, and upper and lower rollers around which the upper and lower screens are respectively wound.

2. In combination with inner and outer sashes of a window, pulleys at the upper ends of the window frame and a cord around each pulley connected at its ends to said sashes, upper and lower flexible screens detachably connected at one end with the upper and lower rails respectively of the upper and lower sashes, and upper and lower spring-actuated rollers around which the upper and lower screens are respectively wound.

1,155,547. ELECTRIC SIGNALING SYSTEM. ANDERS H. BULL, Brooklyn, N. Y. Filed June 25, 1910. Serial No. 568,781. (Cl. 177—342.)

1. The combination with a line circuit, and a source of electric current, of a transmitter having means for producing a number of current impulses and, after any of said impulses, a further impulse, said impulses being of any polarity, a plurality of receivers, each receiver including signal operating means, a movable member operable by said impulses, selective means adapted to be positioned to engage said movable member for controlling said signal operating means, means also operable by impulses for controlling the position of said selective means relative to said movable member, the effect of said movable member upon said signal operating means depending on the position of said selective means at the time of operation of said movable member, and a signal controlled by said signal operating means.

2. A selective signaling system including a line circuit, a source of electric current, a transmitter having means for producing a number of current impulses and, after any of said impulses, a further impulse, said impulses being of any polarity, a plurality of receivers, each receiver including signal controlling means, selective means controlling the operation of said signal controlling means, impulse operated means associated with said selective means and controlling the position thereof, an impulse controlled member adapted to coöperate with said selective means during certain prearranged positions, thereby causing said signal controlling means to be operated, and signaling means responding to a given number of operations of said signal controlling means.



3. A selective signaling system including a line circuit, a source of electric current, a transmitter having means for producing a number of current impulses and, after any of said impulses, a further impulse, a plurality of receivers, each receiver including a driven member, means operable by impulses for controlling the movement of said member, a second member having a plurality of connections with said driven member, a second means also operable by impulses for releasing said connections, said connections changing their position relative to said second means during the movement of said driven member, being releasable in distinct positions only, means for actuating said second member when all of said connections have been released, and signaling means controlled by said second member.

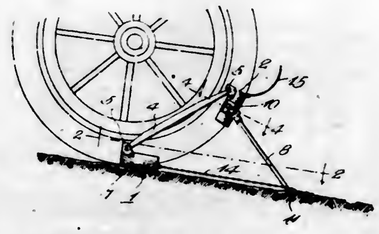
4. A selective signaling system including a line circuit, a source of electric current, a transmitter having means for producing a number of current impulses and, after any of said impulses, a further impulse, a plurality of receivers, each receiver including a driven member, means for arresting said member in different positions, said arresting means being releasable by impulses, retarding means permitting said member, when free to move, to change its position at a given rate, signal controlling means moving with said member, means operable by impulses for controlling said signal controlling means, the effect of said impulse operated means upon said signal controlling means being dependent upon their relative position so as to permit said signal controlling means to respond to current impulses produced while said driven member is in certain given positions.

5. The combination with a line circuit and a source of electric current, of a transmitter having means for producing a number of regular current impulses and, after any of said impulses, a special impulse, a plurality of receivers, each receiver including a driven member, means releasable by impulses for arresting said member in different positions, retarding means permitting said member to change its position during a time period exceeding the duration of a special impulse, signal controlling means, selective means controlling said signal controlling means and moving with said driven member, a second means operable by impulses for controlling said selective means, said selective means being thus arranged relative to said second means as to be operable only while said driven member is moving from certain arrested positions to others, and a signal operable through said signal controlling means.

[Claims 6 and 7 not printed in the Gazette.]

1,155,548. [WITHDRAWN.]

1,155,549. VEHICLE-CHOCK. ALBERT CASPER, Vallejo, Cal. Filed Dec. 7, 1914. Serial No. 875,817. (Cl. 21—8.)



1. A chock for vehicle wheels comprising a plurality of wheels engaging shoes, means connecting said shoes to locate them at different positions on the periphery of a wheel, surface engaging means carried by one of said shoes, and combined surface engaging and supporting means connected with the other shoe.

2. A chock for vehicle wheels comprising a plurality of wheel engaging shoes, means movably connecting said shoes to locate them at different positions on the periphery of a wheel, surface engaging means carried by one of said shoes, and combined surface engaging and supporting means connected with the other, and means for detachably connecting said supporting means with said first mentioned shoe.

3. A chock for vehicle wheels comprising a plurality of wheel engaging shoes, means movably connecting said shoes to locate them at different positions on the periphery of a wheel, surface engaging means carried by one of said shoes, and combined surface engaging and supporting means connected with the other, and means for detachably and adjustably connecting said supporting means with said first mentioned shoe.

4. A chock for vehicle wheels comprising a plurality of wheel engaging shoes, means movably connecting said shoes to locate them at different positions on the periphery of a wheel, surface engaging means carried by one of said shoes, braces pivotally connected at one end with the other shoe and having spikes at their free ends.

5. A chock for vehicle wheels comprising a plurality of wheel engaging shoes, means movably connecting said shoes, surface engaging means carried by one of said shoes, braces pivotally connected at one end with the other shoe and having spikes at their free ends, and means for adjustably connecting said braces.

[Claims 6 to 10 not printed in the Gazette.]

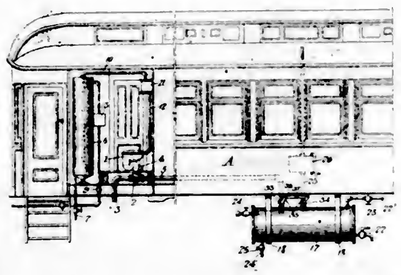
1,155,550. SEWAGE SYSTEM FOR RAILWAY-CARS AND THE LIKE. ANNA C. CLARKE, Scranton, Pa. Filed Dec. 24, 1912. Serial No. 738,409. (Cl. 4—32.)

1. A sewage system for cars and the like comprising a bowl, a receiving tank into which said bowl discharges, an open discharge, means to direct the sewage into said tank or through said open discharge, means independent of said first-named means to cut off communication between said bowl and said tank, an outlet in said tank, and means to admit a flushing medium to said tank to force the contents through said outlet.

2. A sewage system for cars and the like comprising a bowl, a receiving casing into which said bowl discharges, an open discharge, means to direct the sewage into said tank or through said open discharge, means independent of said first-named means to cut off communication between said bowl and casing, an outlet in said casing, means to admit a flushing medium to said casing to force the contents through said outlet, and means to heat said casing.

3. A sewage system for cars and the like comprising a bowl, a receiving tank into which said bowl discharges, an open discharge, means to direct the sewage into said tank

or through said open discharge, a vent pipe communicating with said tank, a discharge outlet in said tank, means to admit a flushing medium to said tank, and means independent of said first-named means to cut off communication between the tank and the bowl, and means to cut off communication between the tank and vent pipe.



1,155,551. MATERNITY-GOWN. TRUESDELL COOPER and JANE H. BRIGANCE, Denver, Colo. Filed Dec. 23, 1913. Serial No. 808,411. Renewed May 28, 1915. Serial No. 31,036. (Cl. 2—42.)

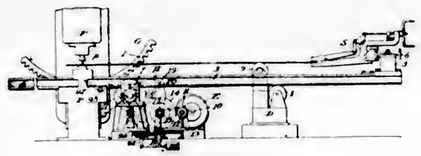


1. A maternity gown comprising a waist made in two parts detachably connected at the back and formed integrally with sleeves and front overlapping adjustable portions which extend over the shoulders, a skirt secured to the back portions of the waist and having its front edges separated, a full front piece attached to the skirt filling the space between the front edges thereof, extending above the waist line and forming the front of the bust, and means for tightening and loosening the skirt and front near the waist line.

2. A maternity gown comprising a waist made in two parts detachably connected at the back and provided with sleeves and front overlapping adjustable portions extending over the shoulders, a skirt secured to the back portions of the waist, a full front piece attached to the front vertical edges of the skirt extending above the waist line and forming the front of the bust, and a belt section attached to the skirt at the back, extending across the full front piece and adjustably connected with the skirt at the front.

1,155,552. PUNCHING-MACHINE. PAUL A. CUENOT and LEWIS G. FISCHER, Steelton, Pa., assignors to Pennsylvania Steel Company, Philadelphia, Pa., a Corporation of New Jersey. Filed July 2, 1913. Serial No. 776,992. (Cl. 164—114.)

1. In a spacing machine, a traversable table, mechanism for traversing the table, a pin drum stopped when the table is stopped, and pneumatic mechanism controlled by the pins in said drum to disconnect the traversing mechanism to stop the drum and table.



2. In a spacing machine, a traversable table, mechanism for traversing the table, a templet drum having templet pins arranged in a spiral line thereon, pneumatic control devices actuated successively by said pins, mechanism to cause said devices to move longitudinally into register with said spiral line, and a starting and stopping mechanism for said table and drum controlled by said devices.

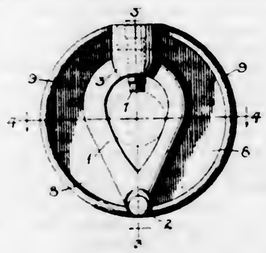
3. In a spacing machine, a traversable table, mechanism for traversing the table, a pin drum stopped when the table is stopped, pneumatic mechanism controlled by pins on said drum to disconnect the traversing mechanism to stop the drum and table and means operated by the table to traverse the pneumatic mechanism.

4. The combination with a punching machine, of a traversable spacing table, mechanism for traversing the table, means on the machine for controlling the starting of said mechanism, a stopping mechanism and means driven by the traversing mechanism to control the operation of the stopping mechanism.

5. In a spacing machine, a traversable table, mechanism for traversing the table, a pin drum, movable pins in spiral spaced relation in the drum, mechanism for suddenly stopping the drum and table, controlling mechanism controlling the stopping mechanism and brought into operation by the pins in said drum.

[Claims 6 to 21 not printed in the Gazette.]

1,155,553. LATHE-DOG. WILLIAM R. DAVIS, Toledo, Ohio. Filed Apr. 20, 1914. Serial No. 833,240. (Cl. 82—41.)



The combination with a lathe dog comprising a work clamping yoke, a finger projecting laterally from one side thereof and lying substantially parallel to the axis of the yoke, and a clamping screw passing through one side of said yoke and having a head projecting outwardly therefrom; of a circular guard flange surrounding said yoke and terminating on opposite sides of the head of said screw and on opposite sides of said finger, whereby to protect both the screw and the finger, the outer edge of the flange being formed on an arc described around the axis of the yoke.

1,155,554. RUG-FASTENING DEVICE. HENRY A. ECKAS, Seattle, Wash. Filed Jan. 11, 1915. Serial No. 1,519. (Cl. 16—3.)

In a carpet fastening device, the combination of a resilient cupped leather clip adapted to be fastened to the underside of a carpet, and a dished head nail, the said dished head being thrustable between a carpet and the said clip, whereby a resilient fastening means is secured, which,



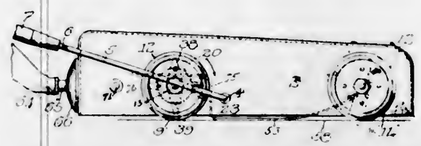
when stepped upon, firmly grips the said clip against the floor.

1,155,555. PROCESS FOR PICKLING CANTALOUPS. AUGUST O. EDWARDS, Lindsay, Cal. Filed Dec. 24, 1914. Serial No. 878,975. (Cl. 99—1.)

1. The process of pickling cantaloups by subjecting small unripened melons to the action of a solution of substantially four parts of water and one part of salt for approximately forty-eight hours, transferring the melons to a solution of substantially one part salt to one part water and permitting them to remain therein for approximately twenty-four hours, transferring the melons to clear water in which they are to be kept approximately twenty-four hours, removing them to a glass container and pouring vinegar over them, exposing them to the sunlight for approximately twenty-four hours.

2. The process of pickling cantaloups which consists in subjecting small unripened melons to the action of brine for approximately forty-eight hours, removing the melons therefrom and immersing them in a much stronger brine for approximately twenty-four hours, removing the melons therefrom and immersing them in clear water for approximately twenty-four hours, removing them therefrom and immersing them in vinegar, and then applying means to restore their natural color.

1,155,556. CARPET-CLEANER. OLOF ENGLUND, Chicago, Ill. Filed Dec. 26, 1914. Serial No. 879,028. (Cl. 15—8.)



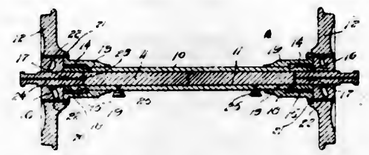
1. The combination with a hood, of a series of beater arms arranged substantially parallel to the surface of a carpet and the like, traction wheels upon which said hood is mounted, means actuated by said wheels for actuating said beaters whether said hood is moved forward or backward on said wheels, and means for collecting dust released within said hood.

2. The combination with a hood, of a series of springs fixedly mounted at one end and normally free at the other, means for adjusting said springs to vary their positions, means for lifting the free ends of said springs and releasing them to beat against a carpet on which said hood is movable, and means for collecting dust released from a carpet by said beaters.

3. The combination with a hood, of a series of springs to serve as beaters, a revolubly adjustable support to which one end of each of said springs is secured, cams for lifting and releasing said springs to cause them to beat against a carpet, and means for actuating said cams on both forward and backward movement of said hood to move in the same direction, a fan for collecting the dust released by said beaters, and a receptacle into which dust released by the beaters is forced by said fan.

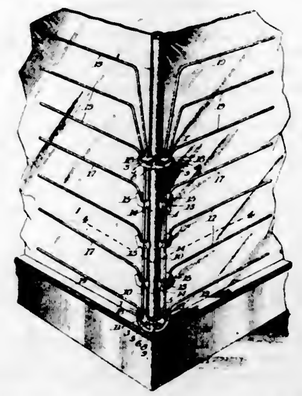
1,155,557. CAR WHEEL AND AXLE. OSCAR A. EYERMAN and MARTIN W. HIMMLER, Cumberland, Md. Filed Nov. 11, 1914. Serial No. 871,557. (Cl. 105—68.)

A combined car axle and wheel comprising a tubular axle section, a solid axle section rotatable in the tubular axle section, a wheel fixed on the solid axle section, a collar rotatable on and surrounding the tubular axle section, connections between the collar and the wheel, and a gib



interposed between the collar and tubular axle section and having interlocking engagement with the collar and tubular axle section whereby said collar and tubular axle section are secured against relative longitudinal movement.

1,155,558. DISPLAY-RACK. LENPHA A. FOLSOM, Boonville, Ind. Filed Jan. 23, 1915. Serial No. 3,921. (Cl. 211—14.)



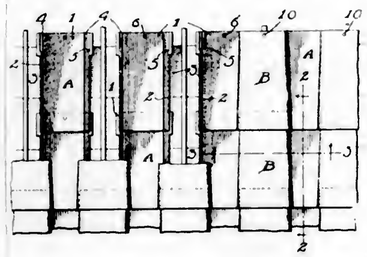
1. A display rack comprising a standard, a rod support adjustably mounted thereon and having a projecting arm formed with a socket inclined to the axis of the standard, a rod having one end of substantially the same diameter of the socket freely rotatable therein and a free supporting portion bent at such an angle to said end that said supporting portion has a horizontal stable equilibrium in one predetermined vertical plane.

2. In a display rack, the combination with a vertical frame member of a show case, of a base-plate and a top plate each formed of two parts having recessed portions partially embracing the frame member, means to connect said parts together, upwardly converging standards mounted in sockets formed in said plates, rod holders adjustably mounted on the standards and having upwardly inclined sockets, and horizontal supporting rods having bent end portions rotatably mounted in the sockets of the holders.

1,155,559. TILE. BENJAMIN FRANKLIN, San Diego, Cal. Filed June 3, 1915. Serial No. 31,902. (Cl. 108—10.)

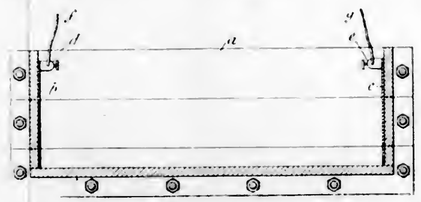
A roof structure, comprising a set of flat underlying tiles having side edge flanges beveled inwardly to longitudinally extending semi-circular grooves formed in the upper surface of said tiles, the upper end of said tiles being enlarged and the flanges of said ends spaced outward from the grooves to form a socket, said tiles being arranged in separate rows and their lower ends being inserted in the sockets formed in the upper ends of the adjacent lower tiles, the grooves in said tiles aligning throughout the row, and an upper or superimposed set of tiles arranged in row formations, said rows bridging the space formed by the first set of tiles, the members of the second

set overlapping one another and having depending flat edges cut away at their upper end to fit the interlocking sections of said underlying tiles, and the said flat edges



being disposed adjacent the semi-circular grooves in the upper surface of the underlying tiles and flush with said upper surface.

1,155,560. TREATMENT OF SEED-GRAIN. HENRY ERNEST FAY, Dorchester, England, assignor to Charles Edward De Wolf, London, England. Filed Mar. 27, 1915. Serial No. 17,511. (Cl. 175—311.)



1. A process of treating grain consisting in placing the grain in a solution of manure, passing an electric current through the solution and then spraying the treated grain with mineral oil.

2. A process of treating grain consisting in placing the grain in a solution of nitric acid, passing an electric current through the solution and then spraying the treated grain with mineral oil.

3. A process of treating grain consisting in placing the grain in a solution of manure, heating the solution to 80° F. and passing an electric current through the solution.

4. A process of treating grain consisting in placing the grain in a solution of nitric acid, heating the solution to 80° F. and passing an electric current through the solution.

5. A process of treating grain consisting in placing the grain in a solution of manure, heating the solution to 80° F. passing an electric current through the solution and then spraying the treated grain with mineral oil.

[Claim 6 not printed in the Gazette.]

1,155,561. SCREEN FOR THE RECEPTION OF IMAGES. JOHN P. GILBERT, Rochester, N. Y. Filed May 14, 1914. Serial No. 838,522. (Cl. 88—24.)

1. A drop for theaters having a screen for projection apparatus mounted thereon to turn about a horizontal axis.

2. A drop for theaters having a screen for a projection apparatus mounted to turn about a horizontal axis and movable so that its plane may lie in the plane of the drop.

3. A drop for theaters having an opening therein and a screen for projection apparatus hinged at its lower edge at the lower edge of said opening to move to and from the plane of the drop.

4. A drop for theaters having an opening therein which gradually increases in width toward the top of the opening, and a screen for projection apparatus hinged at its lower edge at the lower edge of said opening to move to and from the plane of the drop.



5. A drop for theaters having an opening therein which gradually increases in width toward the top of the opening and a black area surrounding said opening, a screen for projection apparatus hinged at its lower edge at the lower edge of the opening, and flexible material connecting the side edges of the screen with the side edges of the opening, said material having its exposed face black.

[Claims 6 to 8 not printed in the Gazette.]

1,155,562. ARTICLE-HOLDER. RAYMOND B. GILCHRIST, Newark, N. J., assignor to The Gilchrist Company, Newark, N. J., a Corporation of New Jersey. Filed Apr. 10, 1914. Serial No. 830,850. (Cl. 211—8.)



1. In dispensing apparatus for articles, the combination of an article holding device comprising an elastic diaphragm having an opening therein through which the articles can be removed and a metallic binding ring affixed to and extending completely around the margin of the diaphragm and a support by which the ring is removably sustained, the entire holding device being removable as a unit from the support.

2. In dispensing apparatus for articles, the combination of an article-holding device comprising an elastic diaphragm having an opening therein through which the articles can be removed, a metallic marginal binding-ring inseparably connected to the diaphragm and extending completely around it, and a support by which the ring is removably sustained, the entire holding device being removable as a unit from the support.

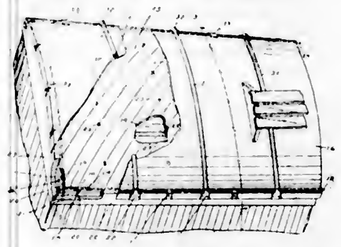
3. In dispensing apparatus for articles, the combination of a holding device comprising an elastic diaphragm having an opening therein through which articles may be removed and marginal metallic binding for the diaphragm consisting of two rings extending completely around the diaphragm and fixedly secured together with the margin of the diaphragm therebetween, and a support on which the binding is removably held, the entire holding device being removable as a unit from the support.

4. Dispensing apparatus comprising the combination of a case, a diaphragm in the case and having an opening through which articles may be removed, a metallic binding for the diaphragm consisting of two rings fixedly secured together with the margin of the diaphragm therebetween so as to retain the diaphragm when it is removed from the case, and means for removably holding the binding in the case.

5. Dispensing apparatus comprising the combination of an elastic diaphragm having a hole therein, and for removably holding the articles, and a metallic binding for the margin of the diaphragm consisting of two rings on opposite sides of the margin of the diaphragm, the rings having an interfitting groove and rib respectively, and means fixedly securing the rings together with the diaphragm therebetween.

[Claims 6 to 10 not printed in the Gazette.]

1,155,563. CAR-ROOF. GEORGE HENRY GILMAN and HENRY MILLS ROBERTSON, St. Paul, Minn. Filed Jan. 12, 1914. Serial No. 811,616. (Cl. 108—5.)



1. The combination with the side and end walls of a railway box car, of a roof structure for the car comprising a framework supported by said walls and having an arched configuration, and roof boards extending diagonally across said framework, bent so as to conform thereto, so engaged one with another along their meeting edges as to prevent longitudinal movement, and anchored to said framework and to said end and side walls.

2. In a roof structure for railway cars, the combination with supporting members, of roof boards arranged diagonally of the car and bent so as to give the roof an arched configuration, and retaining wires which engage the extremities of said roof boards and hold them down in proper position.

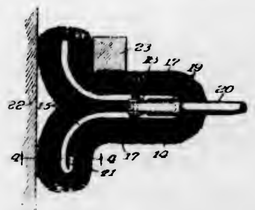
3. In a roof structure for railway cars, the combination with supporting members, of roof boards arranged diagonally of the car and bent so as to give the roof an arched configuration, and a retaining element which engages the extremities of a plurality of adjacent roof boards so as to distribute the stresses in one roof board among a plurality of said boards.

4. In a roof structure for railway cars, the combination with supporting members, of roof boards arranged diagonally of the car, bent so as to give the roof an arched configuration and formed with kerfs in their end edges, and a retaining element which extends through a plurality of said kerfs, so as to distribute the stresses at the edge of one of the roof boards among a plurality of said boards.

5. In a roof structure for railway cars, the combination with supporting members, of roof boards arranged diagonally of the car, bent so as to give the roof an arched configuration and formed with kerfs in their end edges, and retaining wires extending through said kerfs.

[Claims 6 to 25 not printed in the Gazette.]

1,155,564. DUST-MOP. CHARLES B. GILMORE, Chicago, Ill. Filed July 27, 1914. Serial No. 853,282. (Cl. 15—13.)



1. A mop of the character described comprising a substantially U-shaped body portion having the extremities of its legs turned outwardly in opposite directions to provide laterally extending arms, mop strands carried by said body portion, and a handle pivoted to said body portion.

2. In a mop of the character described, the combination with a frame comprising a relatively long and narrow body portion having its ends separated to form a pair of rigid arms extending laterally in opposite directions from one end of said body portion substantially at right angles to the latter, of a body of fabric secured to and depending from said frame, and a handle secured to the body portion of said frame.

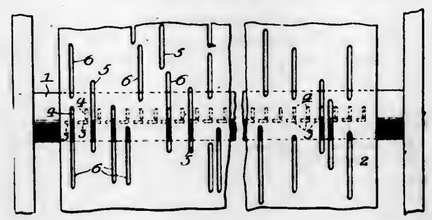
3. In a mop of the character described, the combination with a metal frame strip having its free ends bent laterally to provide oppositely disposed arms, of a body of mop strands overlapping the upper edge and sides of said frame strip, and stitching securing said strands to said frame strip.

4. In a mop of the character described, the combination with a metal frame strip having a row of apertures extending lengthwise thereof, of a body of mop strands overlapping the upper edge and sides of said frame strip, a binding fabric covering the overlapping portions of said mop strands, and stitching securing said binding and mop strands to said frame strip through said apertures.

5. In a mop of the character described, the combination with a frame having a body portion formed by a pair of parallel limbs and a laterally extending arm, of a body of fabric secured to and depending from said frame, a pair of lugs secured to the respective limbs of said body portion, and a handle frictionally pivoted to and between said lugs.

[Claim 6 not printed in the Gazette.]

1,155,565. TRACKER-BOARD AND MUSIC-SHEET. JAMES CLARKE HAGEY, Chicago, Ill., assignor to The Cable Company, Chicago, Ill., a Corporation of Illinois. Filed July 11, 1911. Serial No. 637,971. (Cl. 84—162.)



1. A music sheet having a plurality of perforations for an individual note, each perforation being of less width than the full tracker-board port space or zone for the note, and each occupying a different transverse position in said tracker port space or zone, in combination with a tracker board having a plurality of ports for said individual note, one in the rear of another, said ports being partly in alinement in the direction of the music sheet movement, and partly out of such alinement, and one perforation being arranged to travel over the alined portions of said ports, and the other perforation being arranged to travel over the unalined portion of one of said ports, whereby one perforation will open both ports and the other perforation will open one port only.

2. A music sheet having a plurality of perforations for an individual note, each perforation being of less width than the full tracker-board port space or zone for the note, and located on opposite sides of said tracker port space or zone, in combination with a tracker board having a plurality of ports for said individual note, one in the rear of another, said ports being partly in alinement in the direction of the music sheet movement, and partly out of such alinement, and one perforation being arranged to travel over the alined portions of said ports, and the other perforation being arranged to travel over the unalined portion of one of said ports, whereby one perforation will open both ports and the other perforation will open one port only.

3. A music sheet having a plurality of perforations for an individual note, said perforations being of the same width and each perforation being of less width than the full tracker-board port space or zone for the note, and each occupying a different transverse position in said tracker port space or zone, in combination with a tracker

board having a plurality of ports for said individual note, one in the rear of another, said ports being partly in alinement in the direction of the music sheet movement, and partly out of such alinement, and one perforation being arranged to travel over the alined portions of said ports, and the other perforation being arranged to travel over the unalined portion of one of said ports, whereby one perforation will open both ports and the other perforation will open one port only.

4. A music sheet having a plurality of perforations for an individual note, each of said perforations being of substantially half the width of the tracker port space or zone for the note, and said perforations being located on opposite sides of said tracker port space or zone, in combination with a tracker board having a plurality of ports for said note, one in the rear of the other, said ports being partly in alinement in the direction of the music sheet movement, and partly out of such alinement, and one perforation being arranged to travel over the alined portions of said ports, and the other perforation being arranged to travel over the unalined portion of one of said ports, whereby one perforation will open both ports and the other perforation will open one port only.

5. A tracker having front and rear ports which are partly in alinement with one another in the direction that the music sheet travels, and partly out of alinement with one another, in combination with a music sheet having narrow perforations, some of which are so located as to open the alined portions of said ports and others of which are so located as to open only unalined portions of the same.

[Claims 6 to 13 not printed in the Gazette.]

1,155,566. SHIPPING-TAG. THOMAS I. HART, St. Louis, Mo. Filed June 27, 1914. Serial No. 847,737. (Cl. 40—21.)



1. An attaching device for shipping tags, comprising a strip of metal having an opening intermediate the ends and a similar opening adjacent one end thereof, said end being doubled back toward the body portion of the strip so as to form a loop for engagement with the article being tagged, and an integral tongue at the other end of said strip adapted to engage the eye of a tag and the openings in said strip in succession so as to connect said doubled back end portion to said tongue and also secure said strip to said tag.

2. The combination of a shipping tag provided with an eye, and an attaching device consisting of a flat strip of metal provided at one end with a reduced portion that engages the eye of said tag, the body portion of said strip being provided with an opening adjacent said reduced portion and a similar opening adjacent its opposite end, said opposite end being bent back toward the body portion so that said end lies adjacent the point where the reduced portion joins the body portion, said reduced portion engaging said first mentioned opening, extending across the end of said strip that is bent back upon the body portion and engaging the opening in said end, the end of said reduced portion lying between the bent back end portion and the body portion of said strip.

3. A new article of manufacture consisting of a shipping tag provided at one end with an eye, a thin, flexible metallic strip having a main body portion terminating at one end in a reduced portion, and an opening adjacent the point where said reduced portion joins the main body portion of said strip, said reduced portion engaging the eye of said tag and said opening, said strip also having an opening adjacent its opposite end that is adapted to receive the projecting end of said reduced portion when the tag is attached to an article.

4. As a new article of manufacture, a shipping tag provided with an eye and a removable attaching device consisting of a thin strip of metal having a reduced portion which engages said eye, said strip having an opening therein to receive said reduced portion so as to secure said strip to said tag, the free ends of the strip being provided with means whereby they may be connected to form a closed loop.

1,155,567. DEVICE FOR SEALING OR CLOSING LETTERS AND LIKE PACKAGES. PETER HEALY, county Sligo, Ireland. Filed Aug. 24, 1914. Serial No. 858,298. (Cl. 229—78.)



1. A device for sealing or closing letters and the like, comprising two interlocking members, one of said interlocking members being constituted by a base portion and a separate disk member held loosely in engagement therewith, and the other interlocking member having prongs adapted to pass through said disk member and be turned or deflected thereunder so as to hold the interlocking members together.

2. A device for sealing or closing letters and the like comprising two interlocking members, one of said interlocking members being constituted by a base portion and a separate disk member held loosely in engagement therewith, said base portion having a guide rim provided thereon, and the other interlocking member having prongs adapted to fit within said guide rim and pass through said disk member and be turned or deflected thereunder so as to hold the interlocking members together.

3. A device for sealing or closing letters and the like, comprising two interlocking members, one of said interlocking members being constituted by a base portion and a separate disk member held loosely in engagement therewith, said base portion having a guide rim provided thereon, and the other interlocking member having prongs adapted to fit within said guide rim and pass through slots in said disk member and be turned or deflected thereunder so as to hold the interlocking members together.

4. A device for sealing or closing letters and the like, comprising two interlocking members, one of said interlocking members being constituted by a base portion and a separate disk member held loosely in engagement therewith, said disk member being provided with a guide tongue, and the other interlocking member having a slot in which said guide tongue is adapted to engage and prongs adapted to pass through said disk member and be turned or deflected thereunder so as to hold the interlocking members together.

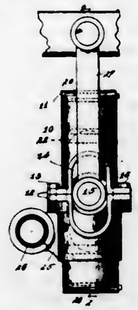
5. A device for sealing or closing letters and the like comprising two interlocking members, one of said interlocking members being constituted by a base portion having a guide rim provided thereon and a separate disk member held loosely in engagement with the base portion, said disk member being provided with a guide tongue, and the other interlocking member having a slot in which said guide tongue is adapted to engage and prongs adapted to fit within said guide rim and pass through said disk member and be turned or deflected thereunder so as to hold the interlocking members together.

[Claims 6 to 9 not printed in the Gazette.]

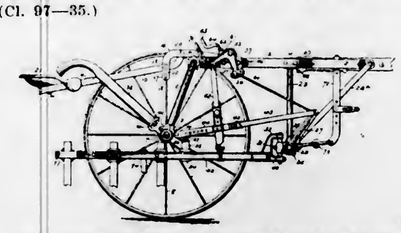
1,155,568. SHOCK-ABSORBING DEVICE. REINHOLD HERMAN, Pittsburgh, Pa. Filed May 10, 1913. Serial No. 766,835. (Cl. 21—105.)

1. In shock absorbing devices, a casing adapted to be secured to one part of a vehicle, a piston mounted therein and movable relative to the casing, said piston having chambers in its ends, said chambers each having an opening communicating with the respective end of the casing, and means connected to the piston and adapted for connection to a second part of a vehicle movable relative to the part connected to the casing.

2. In shock absorbing devices, a casing having closed ends and oppositely disposed side openings, said casing being adapted for connection to one part of a vehicle, a piston movable in said casing and provided with chambers at its opposite ends, said chambers having openings communicating with the respective ends of the casing and surrounded by flanges extending toward said ends, packings carried by said flanges, and means connected with said piston through the openings in the casing and adapted for connection to a second part of the vehicle movable relative to the first.



1,155,569. CULTIVATOR. EDWARD M. HEYLMAN, South Bend, Ind., assignor to Oliver Chilled Plow Works, South Bend, Ind. Filed Nov. 24, 1914. Serial No. 873,807. (Cl. 97—35.)



1. In a cultivator, the combination with a main frame, wheels, an arch axle connecting said frame with the wheels, and a seat connected with the main frame and disposed rearwrdly of the mounting of the arch axle, of a cultivator gang frame connected with the main frame, a bell-crank mounted on the main frame, a rock-arm near the forward end of the gang frame, a connection between said rock arm and the arch axle, a connection between the rock-arm and one arm of the bell crank and a connection between the other arm of the bell-crank and the gang frame.

2. In a cultivator, the combination with a main frame, an arch axle, wheels, a seat rearwardly of the arch axle, a forward depending member, and a gang frame connected with the forward depending member, of a bell-crank on the main frame, a rock arm mounted on the forward depending member, an adjustable connection between said rock arm and the arch axle, a connection between the rock arm and one arm of the bell-crank, and a connection between the other arm of the bell-crank and the cultivator gang.

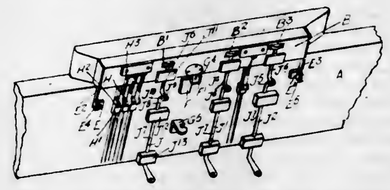
3. In a cultivator, the combination with a main frame, an arch axle, wheels, a forward depending member, a gang frame connecting with said forward depending member, and a seat rearwardly of the arch axle, of a rock arm mounted on said forward depending member, a bell crank on the main frame, a longitudinally adjustable connection between one arm of the bell-crank and the gang frame, a rod connected at one end to the rock arm and adjustably connected at its other end with the other arm of the bell-crank, and a connection between said rock arm and the arch axle.

4. In a cultivator, the combination with a main frame, an arch axle, wheels, a seat rearwardly of the arch axle, a forward depending member, and a gang frame connected with said forward depending member, of a lever pivoted to the frame, connection between said lever and the gang frame, means for adjusting said lever to adjust the gang frame vertically, and means connected with said lever and arch axle for moving the wheels rearwardly when a gang frame is raised.

5. In a cultivator, the combination with a main frame, an arch axle, wheels, a seat in rear of the arch axle, a forward depending member, and a gang frame connected with said forward depending member, of a bracket secured to the main frame, a bell-crank mounted on said bracket, a connection between one arm of the bell-crank and the gang frame, connections between the other arm of the bell crank and the arch axle, and an adjusting screw passing through an arm of the bell-crank and engaging the bracket to adjust the gang frame vertically.

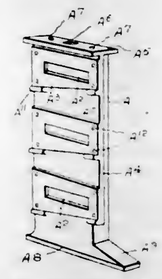
[Claims 6 to 11 not printed in the Gazette.]

1,155,570. OPERATING DEVICE FOR PLAYER-PIANOS. OTTO HIGEL, Toronto, Ontario, Canada. Filed Oct. 1, 1912. Serial No. 723,301. (Cl. 84—160.)



A player piano including an operating lever pivoted support, a stem extending from said support and provided at one end with a spring-pressed arm, said arm having a notch, a key bed having a recess, a plate member secured beneath the key bed at a side edge of the recess in said key bed and a notched bracket secured beneath the key bed, the notch in said spring-pressed notched arm being arranged to receive said plate, when said support is in one position and the notch in said bracket when said support is in its other position.

1,155,571. PNEUMATIC ACTION FOR PLAYER-PIANOS. OTTO HIGEL, Toronto, Ontario, Canada. Filed Nov. 23, 1914. Serial No. 873,519. (Cl. 84—167.)



1. In a player piano pneumatic action, the combination with the bars forming the vacuum valve chests, and a hollow end post having side openings in the inner wall thereof designed to register with the openings in the ends of the bars, of bearing faces surrounding said openings and laterally projecting valve chest bar supporting lugs extending from said faces, as and for the purpose specified.

2. In a player piano pneumatic action, the combination with the bars forming the vacuum valve chests, of a vertical metallic end post having side openings registering

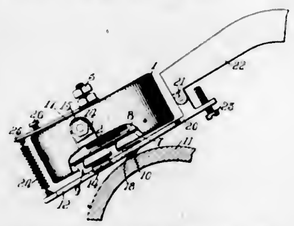
with the open ends of the bars, flat bearing faces surrounding said openings against which the ends of the bars bear, said faces projecting beyond said post to form vertical flanges extending laterally from the end post and means for securing said bars to said flanges, as and for the purpose specified.

3. In a player piano pneumatic action, the combination with the bars forming the vacuum valve chests, of an end post having a channel extending vertically therethrough and having side openings extending through the inner side of the post to the vertical channel, an extension extending forwardly from the lower end of the post and having a downwardly inclined upper face, a block secured to the base having a correspondingly inclined lower face bearing against the inclined face of the front extension of the end post, and means for securing said front extension of the post into the base, as and for the purpose specified.

4. In a player piano pneumatic action, the combination with the bars forming the vacuum valve chests, of a vertical metallic end post having side openings registering with the open ends of the bars, flat bearing faces surrounding such opening against which the ends of the bars bear, lugs extending laterally from the lower edge of each bearing face and on which the aforesaid bars are supported, and vertical flanges extending laterally from the end post and screws extending through such flanges into the ends of the aforesaid bars, as and for the purpose specified.

5. In a player piano, the combination with the key board and the valve chest bars, of an end post having a vertical duct with which the valve chest bars communicate, a horizontal flange surrounding the lower end of the post and having a downwardly inclined front extension, a foot piece having an orifice therein registering with the lower end of the vertical duct, an upwardly inclined hook portion extending over the inclined extension of the post, a set screw extending therethrough against such extension, and a screw extending through the rear end of the surrounding post flange into the foot piece, as and for the purpose specified.

1,155,572. PHONOGRAPH. NEWMAN H. HOLLAND, West Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Mar. 21, 1914. Serial No. 826,138. (Cl. 181—10.)



1. In a device of the class described, the combination of means for tracking a sound record, and a sound box provided with a vibratory member and a stylus connected to said vibratory member, said sound box being pivotally supported by said tracking means for up and down movement about an axis located to one side of the center of gravity of said sound box, substantially as described.

2. In a device of the class described, the combination of means for tracking a sound record, a sound box provided with a vibratory member and a stylus connected to said vibratory member, said sound box being pivotally supported by said tracking means for up and down movement about an axis located to one side of the center of gravity of said sound box, and means tending to resist downward movement of said sound box with respect to said tracking means, substantially as described.

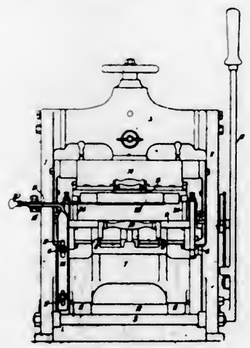
3. In a device of the class described, the combination of means for tracking a sound record, a sound box provided with a vibratory member and a stylus connected to said vibratory member, said sound box being pivoted to said tracking means for up and down movement about an axis located to one side of the center of gravity of said sound box, and adjustable means tending to resist downward movement of said sound box with respect to said tracking means, substantially as described.

4. In a device of the class described, the combination of record tracking means pivoted for movement about a given axis, and a sound box provided with a vibratory member and a stylus connected to said vibratory member, said sound box being pivoted to said tracking means for movement about an axis located to one side of the center of gravity of said sound box and substantially parallel to said first named axis, substantially as described.

5. In a device of the class described, the combination of record tracking means pivoted for movement about a given axis, a sound box provided with a vibratory member and a stylus connected to said vibratory member, said sound box being pivoted to said tracking means for movement about an axis located to one side of the center of gravity of said sound box and substantially parallel to said first named axis, and means for limiting the pivotal movement of said tracking means, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,155,573. PRESS FOR BLOCKING IN GOLD AND OTHER METALLIC LEAF. THOMAS HOOLEY, Stockport, England. Filed Apr. 10, 1912. Serial No. 689,736. (Cl. 41—7.)



1. In a blocking press, the combination of a die, means for depositing grease upon it, means operative to bring the pile of gold leaf into and out of apposition to the die, means operative to bring the topmost leaf of the pile into contact with the greased face of the said die, means for supporting the article to be blocked, and means operative to bring the said article and the leaf-covered surface of the die into contact with each other, the die being maintained stationary from the time the gold leaf is applied to it until that leaf is impressed upon the article to be blocked.

2. In a blocking press, the combination of a stationary die, means movable past the die for depositing grease upon it, means movable to carry a pile of gold leaf from a normal position in which it is not, to a position in which it is, beneath the stationary die, and vice versa, means operative to bring the top sheet of the pile of gold leaf and the greased surface into contact with each other, means for supporting the article to be blocked, and means operative to bring the said article and the leaf-covered surface of the die into contact with each other without moving the die.

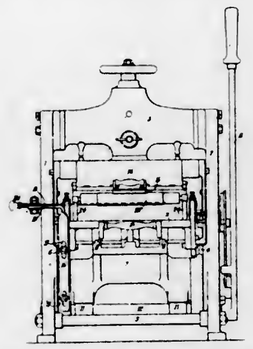
3. In a blocking press, the combination of a die, means movable past the die for depositing grease upon it, means carrying a pile of gold leaf, means operative to bring the pile beneath the die and the topmost sheet of the pile into contact with the die, means for supporting the article to be blocked, and means operative to bring the said article into contact with the leaf-covered surface of the die which latter remains stationary throughout the whole of such operations.

4. In a blocking press, the combination of a die, means for depositing grease upon the die, means carrying a pile of gold leaf beneath and away from the die, a rising and falling table carrying the article to be blocked, the means carrying the pile of gold leaf rising and falling with the table, and means bringing the surface or article to be blocked into forcible contact with the die.

5. In a blocking press, the combination of a die, means for depositing grease upon the surface of the die, a table carrying the article to be blocked, means for raising this table toward and lowering it from the die, a bracket rising and falling with the table, and a plate pivoted to the bracket and adapted to swing beneath and away from the die and to carry a pile of gold leaf for presentation to the underside of the said die.

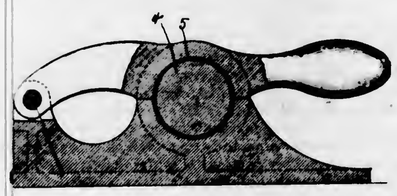
[Claim 6 not printed in the Gazette.]

1,155,574. PROCESS OF BLOCKING IN GOLD AND OTHER METALLIC LEAF. THOMAS HOOLEY, Stockport England. Original application filed Apr. 10, 1912, Serial No. 689,736. Divided and this application filed July 1, 1912. Serial No. 706,875. (Cl. 41—7.)



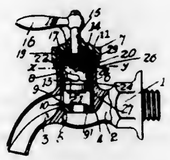
The process of blocking in gold leaf consisting in greasing the face of a die, pressing a sheet of gold leaf on to the die, pressing the surface of the article to be blocked against the face of the die, and maintaining the die stationary from the time gold leaf is applied to it until that leaf is impressed on the article to be blocked.

1,155,575. RESILIENT BODY. WILLIAM HOSKINS, La Grange, Ill. Filed May 19, 1913. Serial No. 768,578. (Cl. 46—4.)



A new article of manufacture comprising a core formed of a resilient rubber-substitute, and a relatively thin imperforate covering of soft rubber surrounding and bonded to said core.

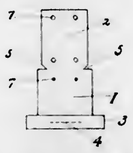
1,155,576. VALVE. GILBERT WILLIAM ISLEY, Toronto, Ontario, Canada. Filed Nov. 9, 1914. Serial No. 871,091. (Cl. 137—4.)



1. A valve comprising an outer cylindrical member having vertical opposing slots therein and an internal thread at its upper end, an inner cylindrical member having an external thread at its upper end engaging with the internal thread of the aforesaid member and having circumferential spiral slots extending respectively from opposite sides of such member in opposite directions, a solid cylindrical member slidably held within the aforesaid inner cylindrical member, a valve head carried thereby, and projecting portions extending from the solid cylindrical member at diametrically opposite sides thereof into the spiral slots of the inner cylindrical member and vertical slots of the outer cylindrical member, and an operating valve stem extending upwardly from the inner cylindrical member, as and for the purpose specified.

2. In a valve, the combination with the valve casing having a suitable valve seat and the usual outlet and inlet orifices, of a cylindrical member fitting within the valve body and having longitudinal diametrically opposing slots therein and having an internal threaded upper end, a closing cap suitably secured on to the valve body and against the upper end of the outer cylindrical member, an inner cylindrical member having an externally threaded upper end engaging the internal thread of the outer cylindrical member and having spiral slots extending circumferentially in opposite directions from opposite sides of the inner cylindrical member, a solid cylindrical portion fitting within the inner cylindrical member, a valve head carried thereby, a cross pin extending through the solid cylindrical member and projecting at its ends into the spiral slots of the inner cylindrical member and vertical slots of the outer cylindrical member, and an operating stem extending from the inner cylindrical member through the closing cap of the valve, as and for the purpose specified.

1,155,577. BLOW-OUT PATCH. LON H. ISRAEL, Fairfield, Iowa. Filed Jan. 21, 1914. Serial No. 813,504. (Cl. 152—24.)



1. A patch for pneumatic tires comprising a band of fabric of sufficient length to reach around the inner tube a plurality of times, each lap of which being so spaced and securely fastened as to be a patch in itself.

2. A patch for pneumatic tires comprising a band of fabric of sufficient length to reach around the inner tube a plurality of times, each lap of which being so spaced and securely fastened as to be a patch in itself, said band being provided with slits in its longitudinal edges to provide for expansion at the ends of the patch when in applied position.

3. A patch of the character described comprising two flaps connected one to the other, each of said flaps being adapted to encircle the inner tube of a tire and provided with means whereby the same may be independently se-

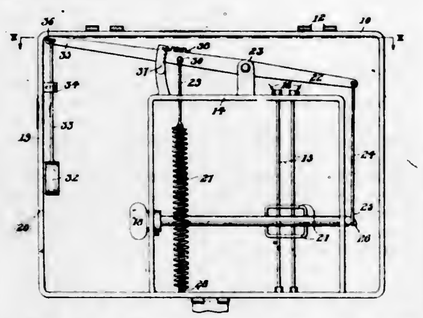
cured in position around the inner tube, one of said flaps being of a length in excess of the other flap.

4. A patch of the character described comprising two flaps connected one to the other, each of said flaps being adapted to encircle the inner tube of a tire and provided with means whereby the same may be independently secured in position around the inner tube, one of said flaps being of a length in excess of the other flap and of a less transverse width.

5. A patch of the character described comprising two flaps connected one to the other, each of said flaps being adapted to encircle the inner tube of a tire and provided with means whereby the same may be independently secured in position around the inner tube, the side marginal portions of the flaps at their junction being provided with slits.

[Claim 6 not printed in the Gazette.]

1,155,578. FALSE-ALARM-PREVENTING DEVICE. JOHN JANIK, Plymouth, Pa. Filed June 9, 1915. Serial No. 33,124. (Cl. 177—379.)



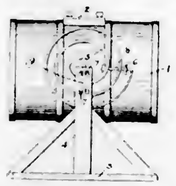
1. A false alarm preventing device comprising in combination with an alarm box having a hand-entrance opening in the wall thereof, a rotatable operating switch bar with the said box having a hooked end, a pivoted lever, a trip link connection between the said lever and the said hooked end of the switch bar, a wrist-engaging cuff pivoted to the said lever above the said opening, a cross-bar carried by the said lever, operating tensioning means for the said cuff connected between the opposite ends of the said cross-bar, and the bottom of the said box, and a return-preventing pawl and ratchet device for the said lever.

2. A device of the class described comprising an alarm box having a hand-entrance opening in the forward side thereof, a U-shaped frame within the said box, a switch operating bar journaled in the said frame and having a hooked rear end, a turn knob upon the inner end of the said bar, inwardly of the said opening, a lever pivoted substantially centrally of the top of the said frame, a detachable link connection between the rear end of the said lever and the said hooked end of the bar, and a wrist-engaging cuff operatively connected to the forward end of the said lever and adjacent the said box opening.

3. A device of the class described comprising an alarm box having a hand-entrance opening in the forward side thereof, a U-shaped frame within the said box, a switch operating bar journaled in the said frame and having a hooked rear end, a turn knob upon the inner end of the said bar, inwardly of the said opening, a lever pivoted substantially centrally of the top of the said frame, a detachable link connection between the rear end of the said lever and the said hooked end of the bar, a cross-bar carried by the said lever forwardly of the pivotal point thereof, compression springs connected between the opposite outer ends of the said cross-bar and the bottom of the box, a toothed rack spanning the said lever forwardly of the said cross-bar, a spring-pressed engaging pawl for the said rack mounted upon the said lever, a guide secured to the side of the box directly above the said opening therein, a wrist engaging cuff positioned above the said opening, an arm carried by the said cuff and slidably mounted in the said guide and having a ring and slot connection with the forward end of the said lever.

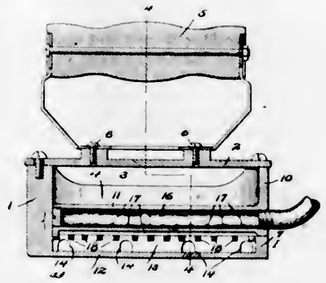
4. A device of the class described comprising an alarm box having a hinged side door and a hand-entrance in its forward side, a frame within the said box, parallel circuit terminal rods secured to the said frame, a switch bar journaled in the said frame in a plane perpendicular to the plane of the said rods, oppositely arranged U-shaped plate wires carried by the said bar and having a path of movement in the same plane as the said rods, hand-turning means for the said switch bar, and an automatically operated wrist-engaging cuff arranged directly above the said opening and having a path of movement transversely thereof.

1,155,579. TUMBLING-BARREL. ABRAHAM C. JOHNSON, Omaha, Nebr. Filed Jan. 19, 1914. Serial No. 813,022. (Cl. 31—18.)



In combination with a support having a pair of spaced uprights, a barrel disposed in the space between said uprights, convolute springs having horizontal ends connected to the barrel and having vertical ends, and means to adjustably connect the vertical ends of the springs to the uprights, said springs being disposed on opposite sides of the barrel and having their horizontal ends pointing in opposite directions and secured to the barrel sides at points on opposite sides of the center of the length of the barrel.

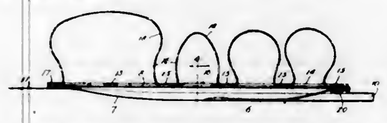
1,155,580. GAS-HEATED IRON. ROBERT JOYCE, Philadelphia, Pa. Filed Jan. 8, 1915. Serial No. 1,137. (Cl. 158—23.1.)



1. In a device of the character described, a hollow body having exhaust vents in the walls thereof, a longitudinal channel in the base thereof, means for supplying air to said channel, a plurality of transverse bars across the upper portion of the channel spaced apart to form a plurality of outlets communicating with said channel, and a longitudinal burner carried in said hollow body above the longitudinal channel, substantially as described.

2. In a device of the character described, a hollow body having exhaust vents in the walls thereof, a longitudinal channel in the base, lateral bores leading from said channel to ports in the walls of the body to supply air to the channel, a plurality of transverse bars across the upper portion of the channel spaced apart to form a plurality of outlets communicating with said channel, and a longitudinal burner carried in said hollow body above said longitudinal channel having orifices registering with said outlets, substantially as described.

1,155,581. ARTICLE-HOLDER. JOSEPH M. KAISER, Chicago, Ill. Filed May 15, 1915. Serial No. 28,340. (Cl. 150—34.)



1. An article-holder provided with loops on one face, a strap threaded through said loops and having a free end adapted to be deflected over an edge of the holder and turned back to oppose the opposite face of the holder, and means frictionally engaging the free end of the strap which is turned back and extends beyond said edge.

2. An article-holder provided with loops on one face, a strap secured at one end and having its free end threaded through said loops and adapted to have its free end deflected over an edge of the holder and be turned back to oppose the opposite face of the holder, and means frictionally engaging the portion of the free end of the strap which is turned back and extends beyond said edge.

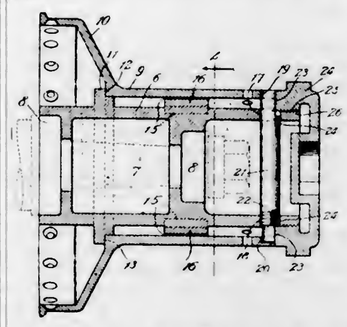
3. An article-holder provided with loops on one face of a section thereof and containing a slot, and a strap threaded through said loops and having a free end adapted to be deflected over an edge of the holder and be turned back to oppose the opposite face of the holder and be inserted into said slot.

4. An article-holder provided with loops on one face of a section thereof and with a loop on the rear face of said section, and a strap threaded through said first-named loops with its free end adapted to be deflected over an edge of said section and be turned back and inserted into said loop.

5. An article-holder provided with loops on one face of a section thereof and with a loop on the rear face of said section, one of said first-named loops and said last-named loop being located closely adjacent to an edge presented by said section, and a strap threaded through said first-named loops with its free end deflected over said edge and turned back and lying within said last-named loop.

[Claims 6 and 7 not printed in the Gazette.]

1,155,582. VEHICLE-WHEEL. MICHAEL P. KELLY, Chicago, Ill. Filed Aug. 2, 1915. Serial No. 43,212. (Cl. 21—31.)



1. In a vehicle wheel, the combination of an inner hub member and an outer hub member adapted to telescope with each other, means for holding said members against relative rotation when the latter are telescoped, said hub members having registering openings, a removable and replaceable pin extending through said openings for preventing said members from separating in a longitudinal direction, said pin having a portion of reduced diameter, and a member screwing upon an end of one of said hub members and engaging said pin at said portion.

2. In a vehicle wheel, the combination of an inner hub member and an outer hub member adapted to telescope with each other, means for holding said members against relative rotation when the latter are telescoped, said hub members having registering openings, a removable and replaceable pin extending through said openings for preventing said members from separating in a longitudinal direction, said pin having a shouldered portion, and a member screwing upon an end of one of said hub members and engaging said pin beyond said shoulder.

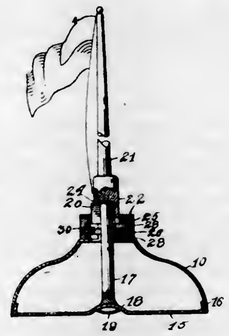
3. In a vehicle wheel, the combination of an inner hub member and an outer hub member adapted to telescope with each other, means for holding said members against relative rotation when the latter are telescoped, said hub members having registering openings, a removable and replaceable pin extending through said openings and screwing into one of the latter for preventing said members from separating in a longitudinal direction.

4. In a vehicle wheel, the combination of an inner hub member and an outer hub member adapted to telescope with each other, means for holding said members against relative rotation when the latter are telescoped, said hub members having registering openings, a removable and replaceable pin extending through said openings and screwing into one of the latter for preventing said members from separating in a longitudinal direction, said pin having a flat surface, and a member screwed upon one of said hub members and engaging said flat surface.

5. In a vehicle wheel, the combination of an inner hub member and an outer hub member adapted to telescope with each other, means for holding said members against relative rotation when the latter are telescoped, said hub members having registering openings, a removable and replaceable pin extending through said openings for preventing said members from separating in a longitudinal direction, said pin having a shouldered surface between its ends, and a spring member on one of said hub members adapted to be moved into and out of engagement with said shoulder to interlock therewith and prevent said pin from becoming displaced.

[Claim 6 not printed in the Gazette.]

1,155,583. TOY BANK. ERICK N. KINDLAND, Jamestown, N. Y. Filed Mar. 27, 1915. Serial No. 17,365. (Cl. 46—36.)



1. A toy bank comprising a receptacle having a slot in the wall for the reception of coins, a removable bottom in said receptacle, a post attached to said bottom and extending up through said receptacle, and a lock on said receptacle to engage said post.

2. A toy bank comprising a receptacle having a coin slot in the wall thereof, a removable bottom in said receptacle, a post attached to said bottom and extending up through said receptacle and having flanges on its upper

end, and a combination lock on said receptacle to engage said flanges.

3. A toy bank comprising a receptacle having a coin slot in the wall thereof, a removable bottom in said receptacle, a post attached to said bottom and extending above said receptacle, combination locking mechanism engaging said post, and a decorative superstructure attached to said receptacle over the upper end of said post to mislead as to the use of said receptacle.

4. A toy bank comprising a receptacle having a coin slot in the wall thereof, a removable bottom in said receptacle, a post attached to said bottom and extending above said receptacle, combination locking mechanism engaging said post, and a flag staff attached to said receptacle above said locking mechanism.

5. A toy bank comprising a receptacle having a coin slot in the wall thereof, a spring on the inner side of said wall covering said slot to prevent the withdrawal of the coin, a removable bottom in said receptacle, a post attached to the central portion of said bottom and extending through an opening in the top of said receptacle, spaced flanges on the upper end of said post, and combination disks revoluibly mounted on said post and receptacle to lockingly engage said flanges.

[Claim 6 not printed in the Gazette.]

1,155,584. MEDICINE-DROPPER. FREDERICK C. LA GRANGE, Cedar Rapids, Iowa. Filed Apr. 16, 1915. Serial No. 21,860. (Cl. 128—25.)

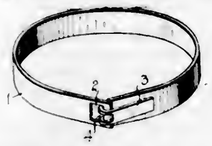


1. In a medicine dropper, a suction tube, a discharge tube, and a laterally extended reservoir connected with the tubes, the tubes projecting beyond opposed portions of the reservoir, the inner end of the suction tube lying within the reservoir; and a suction device assembled with the other end of the suction tube.

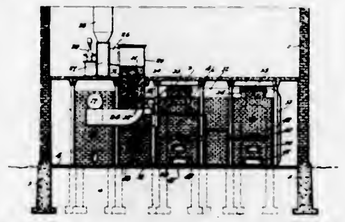
2. In a medicine dropper, a suction tube, a discharge tube, and a laterally extended reservoir connected with the tubes, the tubes projecting beyond opposed portions of the reservoir, the inner end of the suction tube lying within the reservoir, and being extended toward the discharge tube to a point beyond the center of the reservoir, thereby to retain a maximum charge when the dropper is laid on a support; and a suction device assembled with the outer end of the suction tube.

1,155,585. SEAL. MARTIN B. LARSON, Molson, Wash. Filed Apr. 16, 1915. Serial No. 21,718. (Cl. 70—98.)

A seal of the character described comprising an elongated metallic strip having an opening produced therein in close proximity to an end thereof and having its opposite end portion provided with a longitudinally disposed extension, said extension being insertible through the opening of the strip, the longitudinal margins of the extension being free and unobstructed throughout their lengths, the inner extremity of the extension having its intermediate portion cut-out, said extension at substantially its junction with the strip having its inner face weakened on a transverse line extending entirely across the extension and intersecting the cut-out portion thereof, said extension being adapted to be flexed at the inner extremity thereof, said flexure being facilitated by the cut-out portion of the extension.

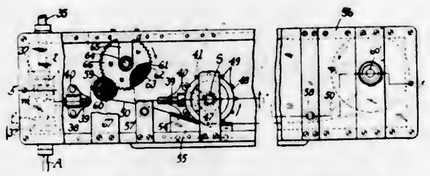


1,155,586. INCINERATOR. ALEXANDER LEIGHTON and HENRY NORLANDE RUTTAN, Winnipeg, Manitoba, Canada. Filed Oct. 6, 1914. Serial No. 865,256. (Cl. 110—12.)



In an incinerator the combination comprising a central flue, a plurality of opposing furnaces located on either side of the flue and provided with grates, drying arches elevated above the grates and outlet openings located above the drying arches and opening to the flue, a chimney communicating with the flue, a preheater interposed between the chimney and the flue, means for effecting an induced draft of the products of combustion through the preheater to the chimney, air pipes communicating with the preheater and leading to the furnaces, opening to the same beneath the grates, a cross flue communicating with the atmosphere passing across the central flue, a connection between the cross flue and the preheater and a forced draft fan interposed in the latter connection and designed to effect a forced hot air draft through the preheater and air pipes to the furnaces, as and for the purpose specified.

1,155,587. STREET-INDICATOR. ARCHIBALD S. B. LITTLE, Springfield, Ill., and ROBERT M. FEUSTEL, Madison, Wis. Filed Dec. 31, 1914. Serial No. 879,866. (Cl. 40—93.)



1. In an indicator of the character described, a traveling web provided with a series of alining perforations and elongated slots, a rotating member provided with peripheral radially disposed pins or teeth for engaging the perforations for advancing the web, and operating through the slots without exerting an advance on the web, as set forth.

2. In an indicator of the character described, a traveling web, a guide therefor comprising a member provided with a deep narrow passage for the traverse of a marginal section of the web, an actuating disk or wheel, peripheral radially disposed pins, the walls of the guide and passage

thereof aforesaid being provided with elongated registering slots for the traverse of the pins and peripheral portion of the disk or wheel, the web being provided with a series of openings or perforations opposite the slots for the reception of the pins.

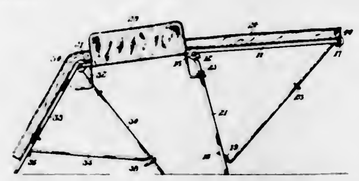
3. In an indicator of the character described, a traveling web, means spaced a suitable distance apart for maintaining a given section of the web taut or under tension, a guiding member interposed between said means provided with a narrow passage for receiving a marginal section of the web, an actuating disk, peripheral radially disposed pins on the disk, the walls of the passage aforesaid being provided with elongated slots for accommodating the pins aforesaid, the web being provided with perforations opposite the slots for receiving the pins of the actuating disk.

4. In an indicator of the character described, a clutch-shaft, a sliding clutch-member on the shaft, a screw-shaft, a detachable crank-handle for operating the screw-shaft, a sliding clutch member on the clutch-shaft, a clutch-shifter on the screw-shaft, an indicator for indicating the direction of rotation of the screw-shaft to shift the clutch member in a given direction, a second indicator serving as a check on the first indicator, and a member on the clutch-shifter coöperating with said second indicator, for the purpose set forth.

5. In an indicator of the character described, a traveling web, means spaced a suitable distance apart for maintaining a given section of the web taut or under tension, a guiding member interposed between said means provided with a narrow passage for receiving a marginal section of the web, a rotary actuating member, radially disposed pins on said member, the walls of the passage aforesaid being provided with slots for accommodating the pins aforesaid, the web being provided with perforations opposite the slots for receiving the pins of the actuating member.

[Claim 6 not printed in the Gazette.]

1,155,588. INVALID-CHAIR. JOSEPH LUHA, Flemington, N. J., assignor of one-half to Joseph Hrehocsik, Flemington, N. J. Filed Feb. 3, 1915. Serial No. 5,909. (Cl. 155—6.)



1. A device of the class described comprising a metallic frame having a rectangular bottom, a U-shaped rear leg and a U-shaped back hinged to the rear portion of the said bottom, a foot engaging strut pivoted to the outer side of the said back and foldable with respect to the said back, side frames carried by the bottom and having leg engaging projecting hooks and a forwardly positioned triangular supporting frame work hinged to the said bottom.

2. A device of the class described comprising a metallic frame having a rectangular bottom, a U-shaped rear leg and a U-shaped back hinged to the rear portion of the said bottom, a foot engaging strut pivoted to the outer side of the said back and foldable with respect to the said back, side frames carried by the bottom and having a leg engaging projecting hooks, a U-shaped front leg hinged to the said bottom, a U-shaped foot frame of substantially the same dimensions hinged to the said bottom and a strut carried by said foot frame and adapted for hooking engagement with the said front leg.

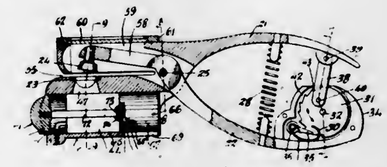
3. As an article of manufacture, a knockdown frame for convertible furniture comprising a rectangular bottom, a rear leg and back hinged to the said bottom, a leg engaging strut frame foldable against the said back and hinged thereto, a triangular front supporting frame pivoted to the said bottom and side frames pivoted to the said bottom and having projecting hooks adapted for engaging the said rear leg and front frame when the device is positioned as a chair.

1,155,589. STAFF-HOLDER. SAMUEL MCDONALD, Louisville, Ky. Filed Feb. 10, 1913, Serial No. 747,454. Renewed Aug. 16, 1915. Serial No. 45,847. (Cl. 248—38.)



A staff holder comprising a socket consisting of a plurality of yielding arms, a collar forming the lower end of said socket from which the lower diverging ends of the arms of said socket project, a pin secured within the collar forming the lower end of said socket and having a pointed end adapted to project into the socket and above the diverging lower portions of the arms forming said socket, and a collar adjustable upon and along the length of the arms of said socket whereby when a staff is inserted within the socket and forced upon the pointed end of the pin located therein and against the diverging portions of the arms of said socket, said staff will be rigidly held at a space and properly entered before the clamp is adjusted.

1,155,590. PUNCH. MILTON A. MCLANE, Middletown, Ohio. Filed May 7, 1913. Serial No. 766,071. (Cl. 164—119.)



1. In a punch of the character described, the combination of coöperating punch-members, coöperating punching dies carried respectively by said members, a ratchet-wheel on one of said members, a pawl on said last-named member coöperating with said ratchet-wheel, and a link articulated with the other of said members and having crank-connection with said ratchet-wheel, and constructed and arranged for locking said members against retractive movement during the normal approaching movement between said coöperating punching dies.

2. In a punch of the character described, the combination of coöperating members respctively having the cooperating punching dies thereon, said dies comprising an apertured die, one of said coöperating members having a cavity therein communicating with said apertured die for receiving the punchings from said coöperating punching dies, and a registering closure closing said cavity.

3. In a punch of the character described, the combination of a pair of coöperating punch-members, coöperating punching dies mounted on said respective members, said cooperating punching dies comprising an apertured die and a die received therein, a punching-receptacle having connec-

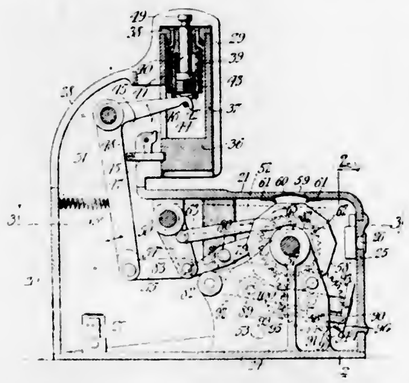
tion with said apertured die, a registering closure closing said receptacle, and a lock for said closure.

4. In a punch of the character described, the combination of a pair of coöperating punch-levers, coöperating punching dies comprising an apertured die and a cooperating die received therein mounted on said respective members, said member having said apertured die thereon provided with a punching cavity, a counting register for said cavity, and a locking closure for said cavity having connection with said counting register.

5. In a punch of the character described, the combination of coöperating punch-members, punching dies comprising an apertured die and a coöperating die received therein, said punching dies mounted on said respective members, said member having said apertured die thereon provided with a punching-receiving cavity, a counting register on said last-named member at one end of said cavity, and a closure for the other end of said cavity, there being a releaseable stem-connection in said cavity between said closure and said counting register.

[Claims 6 to 9 not printed in the Gazette.]

1,155,591. LETTER-STAMPING MACHINE. EDWARD J. MADDEN, Bridgeport, Conn. Filed Feb. 28, 1913. Serial No. 751,271. (Cl. 101—80.)



1. In combination, a support for articles to be stamped, a plunger movable toward and from said support, and presenting a stamping face and a casing for said plunger, including two substantially semi-cylindrical casing sections, and means operable from beneath said support for securing said casing sections together.

2. In combination, a support for articles to be stamped, a stamping member movable toward and from the same, a guiding member for said stamping member and a two-part casing for said stamping member and serving to lock said guiding member in position upon the assembling of the two parts of the casing.

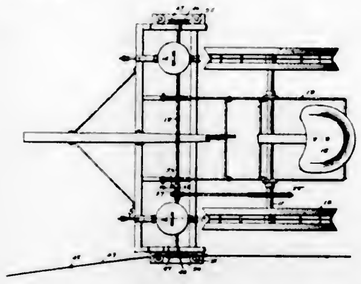
3. In combination, a support, a plunger movable toward and from the same, a stationary pin within said plunger and having an enlarged head at its upper end and a two-part casing for said plunger, the parts of said casing being provided with recesses in their meeting faces to receive said head.

4. In combination, a hollow cylindrical stamping member, a hollow cylindrical casing inclosing the same, a spring within said casing, an arm extending into said casing and into said stamping member and operatively connected to said spring to give the latter elastic displacement, and means for normally preventing movement of said stamping member until said spring has been given a predetermined displacemet.

5. In combination, a casing serving as a support for an article to be stamped, a stamping member movable toward and from said support, mechanism for operating said stamping member and including an oscillating arm, a locking bolt positioned adjacent to said arm and means for moving said bolt into the path of said arm after a predetermined number of stamping operations.

[Claims 6 to 27 not printed in the Gazette.]

1,155,592. CORN-PLANTER. MADS H. MADSEN, Kimballton, Iowa. Filed July 14, 1913. Serial No. 779,065. (Cl. 111—5.)



1. In a corn planter, the combination of a frame having a planter box, a dropper, a shaft, means for operating said dropper from the shaft, a grooved wheel on said shaft provided with notches adapted to be engaged by an ordinary wire having knots or the like, guide devices for holding said wire adjacent to the lower portion of said wheel, a cam wheel on said shaft, an arm, a roller thereon adapted to engage said cam wheel, yielding means for holding said roller against said cam, said cam and said grooved wheel being so constructed that when one of the knots on the wire engages one of the notches in the grooved wheel, the shaft is rotated for moving a projecting portion of the cam past said roller, whereupon said yielding means acts upon said arm and roller for moving said cam, and thereby tending to impart a slight further rotation to the shaft.

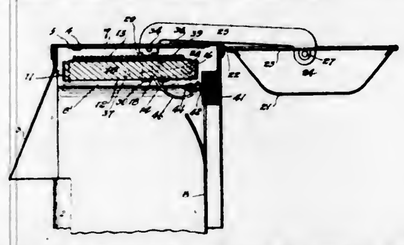
2. In a corn planter, the combination of a shaft adapted to operate dropper mechanism with means thereon adapted to be engaged by knots or the like on a wire, additional means operatively connected with said shaft and designed, when a knot on the wire has imparted a certain degree of rotation to the shaft, to yieldingly tend to impart slight further rotation to the shaft.

3. In a device of the class described, a frame, a grain box thereon, a shaft extending through said box, a dropper fixed thereon, a wire engaging wheel fixed to each end of said shaft, capable of an intermittent rotary movement in one direction, as the frame is advanced, a cam wheel on said shaft having a plurality of notches and projections, a pivoted arm, a roller on said arm in engagement with said cam wheel, and yielding means for pressing said roller against said cam wheel and a seed controlling device on said arm.

4. In a device of the class described, a frame, a grain box thereon, a horizontal shaft extending through said box, a disk fixed to said shaft, a dropper detachably connected to said disk, a cam wheel on said disk having a plurality of notches, yielding means for engaging the notches on said cam, and a seed controlling device operatively connected with said yielding means, and wire engaging means for rotating the shaft intermittently and in one direction.

5. In a device of the class described, the combination of a corn planter frame having a planter box, a dropper, a shaft, means for operating said dropper from said shaft, a grooved wheel on said shaft, provided with notches, a wire having knots, guide devices for holding said wire against said wheel, a cam device on said shaft having alternate points and depressions, an arm, a roller thereon, and yielding means for holding said roller against said cam.

1,155,593. ELECTRICAL HEATER. ARNOLD WILLIAM MANSBRIDGE, Winnipeg, Manitoba, Canada. Filed Mar. 3, 1915. Serial No. 11,773. (Cl. 219—34.)



1. In an electrical heater, a movable normally vertically disposed heating element and means for shifting the element into a horizontal position.

2. In an electrical heater, a movable heating element disposed within the heater normally to radiate heat through the front of the heater and means for shifting the heating element to bring it to a location adjacent the top of the heater.

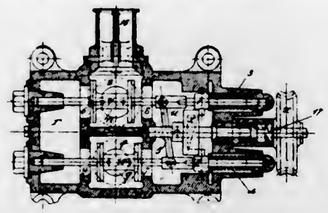
3. An electrical heater having a movable heating element adaptable, when adjusted, for radiating purposes through the front of the heater or for stove purposes at the top of the heater.

4. An electrical heater constructed normally to serve the purpose of an electric radiator and convertible into an electric stove.

5. The combination with a casing having an open front and top, of a movable heating element contained within the casing and normally designed to radiate heat through the open front of the casing, means normally closing the top of the casing and means for shifting the heating element to a position beneath the open top of the casing.

[Claims 6 to 11 not printed in the Gazette.]

1,155,594. COMPRESSED-AIR HYDRAULIC PUMP. ATTILIO MARIOTTI, Florence, Italy. Filed Mar. 30, 1914. Serial No. 828,203. (Cl. 103—8.)

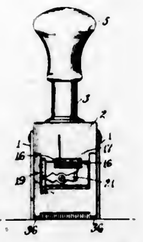


1. In an apparatus of the class described, the combination of a pair of water reservoirs, a discharge for said reservoirs, a reversing valve chamber, having terminal compartments and a pair of intermediate compartments, each intermediate compartment having alining ports communicating with the terminal compartments, air pipes connecting the terminal compartments of the said valve chamber with the respective water reservoirs, a compressor, including the cylinder and a movable compressing element operating in the cylinder, a suction pipe connecting the cylinder with one intermediate compartment of the reversing valve chamber, a check valve provided in the suction pipe, a pipe for compressed air connecting the cylinder with the other intermediate compartment of the said valve chamber, a check valve provided in the last named pipe, a valve stem extending through each of the intermediate compartments of the reversing valve chamber and the alining ports thereof, a double headed valve plug mounted upon each stem within the corresponding intermediate compartment, the heads of each plug being adapted alternately to seat against the opposite ends of the receiving compartment to close the corresponding ports during movement of the stem, and means associated with the compressing element of the compressor for imparting movement in opposite directions to both valve stems of the reversing valve chamber at regular intervals during the operation of the compressor.

2. In an apparatus of the class described, the combination of a pair of water reservoirs, a discharge for said reservoirs, a reversing valve chamber, having terminal compartments and a pair of intermediate compartments, each intermediate compartment having alining ports communicating with the terminal compartments, air pipes connecting the terminal compartments of the said valve chamber with the respective water reservoirs, a compressor including a cylinder and a movable compressing element operating in the cylinder, a suction pipe connecting the cylinder with one intermediate compartment of the reversing valve chamber, a check valve provided in the suction pipe, a pipe for compressed air connecting the cylinder with the other intermediate compartment of the said valve chamber, a check valve provided in the last named pipe, a valve stem extending through each of the intermediate compartments of the reversing valve chamber and the alining ports thereof, a double headed valve plug mounted upon each stem within the corresponding intermediate compartment, the heads of each plug being adapted alternately to seat against the opposite ends of the receiving compartments to close the corresponding ports during movement of the stem, a rocking beam pivotally mounted within one terminal compartment of the reversing valve chamber and having its ends pivotally connected with the valve stems, resilient means for normally maintaining the valve stems co-extensive with the plugs disposed in neutral position between seats, radial pins provided fixedly upon the valve stems, an operating shaft journaled in the valve chamber, a cam disk mounted fixedly upon the said shaft within the chamber and having an annular flange provided with semi-arcuate, axially inclined cam faces for engagement with the said pins, and means connecting the said operating shaft with the compressing element of the compressor for rotating the shaft synchronously with the operation of the said element.

3. In an apparatus of the class described, the combination of a pair of water reservoirs, a discharge for said reservoirs, a reversing valve chamber, having terminal compartments, and a pair of intermediate compartments, each intermediate compartment having alining ports communicating with the terminal compartments, air pipes connecting the terminal compartments of the said valve chamber with the respective water reservoirs, a compressor including a cylinder and a movable compressing element operating in the cylinder, a suction pipe connecting the cylinder with one intermediate compartment of the reversing valve chamber, a check valve provided in the suction pipe, a pipe for compressed air connecting the cylinder with the other intermediate compartment of the said valve chamber, a check valve provided in the last named pipe, a valve stem extending through each of the intermediate compartments of the reversing valve chamber and the alining ports thereof, a double headed valve plug mounted upon each stem within the corresponding intermediate compartment, the heads of each plug being adapted alternately to seat against the opposite ends of the receiving compartments to close the corresponding ports during movement of the stem, a rocking beam pivotally mounted within one terminal compartment of the reversing valve chamber and having its ends pivotally connected with the valve stems, resilient means for normally maintaining the valve stems co-extensive with the plugs disposed in neutral position between seats, radial pins provided fixedly upon the valve stems, an operating shaft journaled in the valve chamber, a cam disk mounted fixedly upon the said shaft within the chamber and having an annular flange provided with semi-arcuate, axially inclined cam faces for engagement with the said pins, a gear wheel mounted loose upon the operating shaft, pawl and ratchet mechanism connecting the gear wheel with the shaft for rotation together in one direction, and means connecting the gear wheel with the compressing element of the compressor for movement therewith.

1,155,595. PRINTING-STAMP. ALBERT MARKS, Brooklyn, N. Y. Filed Feb. 8, 1915. Serial No. 6,716. (Cl. 101—185.)



1. In a printing stamp the combination of a shaft supporting member, a shaft therein provided with a spring retaining cavity, numeral printing wheels thereon, said numeral printing wheels having printing faces on their exterior and corresponding notches on their interior, and a leaf spring supported in said cavity within the body of said shaft and provided with a plurality of projecting portions corresponding to the said numeral wheels, each projecting portion engaging the notches in one of said numeral wheels, said spring having a bead integral therewith, which fits said cavity so as to hold the spring in position.

2. In a stamp, the combination of a shaft carrying member, a shaft therein, numeral printing wheels mounted thereon, a frame within which said member moves, an automatic carrying pawl pivoted directly to said frame and adapted to act upon a plurality of said numeral printing wheels one at a time, and a spring tending to move said carrying pawl into engagement with the ratchet teeth upon said wheels.

3. In a stamp, the combination of a shaft carrying member, a shaft therein, numeral printing wheels mounted thereon, a frame within which said member moves, an automatic carrying pawl pivoted directly to said frame, and adapted to act upon a plurality of numeral printing wheels one at a time, and a spring tending to move said carrying pawl into engagement with the ratchet teeth upon said wheels, and a supplemental pawl adapted to be locked to said main pawl in a plurality of positions, and means carried by said carrying pawl for locking it thereto, and a duplication controlling wheel mounted on said shaft and controlling the action of said pawls when said supplemental pawl is adjusted in duplicating position.

4. In a stamp, the combination of a shaft carrying member, a shaft therein, numeral printing wheels mounted thereon, a frame within which said member moves, an automatic carrying pawl pivoted to said frame and acting to move the numeral wheels on the upward movement of the shaft-carrying member, and a spring tending to move said carrying pawl into engagement with the ratchet teeth upon said wheels, and a supplemental pawl adapted to be locked to said main pawl in a plurality of positions, and means carried by said carrying pawl for locking it thereto, and a duplication controlling wheel mounted on said shaft and controlling the action of said pawls when said supplemental pawl is adjusted in duplicating position, said shaft supporting means being provided with an abutment retracting said supplemental pawl when said shaft supporting means is approaching printing position.

5. In a stamp, the combination of supporting means, printing surfaces supported thereby, a wing pivoted to said supporting means, a cradle carried by said wing and a spring engaging said cradle tending to move it away from said printing surfaces.

[Claims 6 to 9 not printed in the Gazette.]

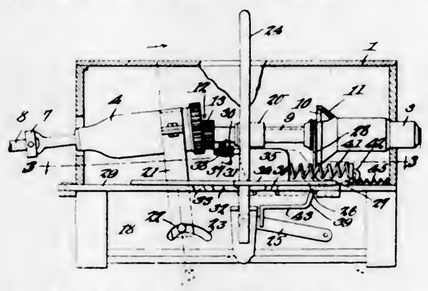
1,155,596. METAL ROOF FOR CARS. FREDERICK W. MARTIN, New York, N. Y., assignor to John L. Mohun, Brooklyn, N. Y. Filed Dec. 19, 1912. Serial No. 737,767. (Cl. 108—5.)

1. In a car roof, the combination with the supporting members, of transverse metal roof sheets with overlapping side edges, one sheet having a turned up edge and a vertical rib spaced apart to form a lateral drain trough, and the edge of the adjacent sheet being turned up and over and down to drain into said trough, there being a free clearance space between the vertical portions of said overlapping edges and a metal cap portion covering said trough.



2. In a car roof, the combination with a U shaped metal carline, of transverse metal roof sheets with overlapping side edges, supported on said carlines, one roof sheet having a vertical rib and a turned up edge forming a drain trough over the channel in said carline, and the adjacent sheet being turned up and over and down to drain into said trough, and a metal cap covering said trough, there being a free clearance space between said over-lapping edges.

1,155,597. VARIABLE-SPEED-TRANSMISSION GEARING. HENRY MASCHEK, Beaumont, Tex., assignor of one-half to Bert Borders, Beaumont, Tex. Filed May 22, 1915. Serial No. 29,867. (Cl. 74—58.)



1. In a transmission gearing, an internal gear having a recess provided with a rounded end and having a plurality of toothed portions of various diameters, a shaft entering said recess and having a rounded end bearing against the end of said recess, a gear slidable upon said shaft into and out of the internal gear and having a toothed portion to engage the toothed portions of the internal gear, means for sliding the second mentioned gear upon the shaft, and means for swinging the internal gear and shaft relative to one another whereby the toothed portions of the two gears are brought into and out of engagement.

2. In a transmission gearing, an internal gear having a recess provided with a rounded end and a plurality of toothed portions of various diameters, a shaft projecting into said recess and having a rounded end bearing against the rounded end of said recess, a gear slidable upon the shaft and engageable with said toothed portions, means for shifting the second mentioned gear along the shaft, means for swinging the shaft and internal gear relative to one another to bring the gears into and out of engagement, a pinion adapted to be projected between said gears when said gears are separated properly, and means for moving the pinion into and out of engagement with said gears

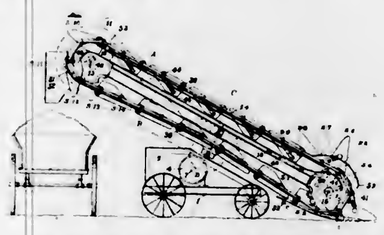
3. In a transmission gear, a pair of coöperable clutch members, a gear shifting lever, a bar having notches for normally receiving said lever, and a lever operatively connected to one clutch member and coöperating with the aforesaid lever, whereby when the first mentioned lever is moved out of the notches, it will swing the second mentioned lever to disengage the clutch members.

4. In a transmission gearing, an internal gear having a plurality of toothed portions of various diameters, a shaft, a tubular shaft journaled upon said shaft and having a gear engageable with said toothed portions of the internal gear, a clutch member feathered upon the tubular shaft, a coöperating clutch member carried by the first mentioned shaft, operating means operatively connected to said tubular shaft and internal gear for shifting the tubular shaft longitudinally and for swinging the internal gear and first mentioned shaft relative to one another whereby the two gears are properly brought into and out of engagement, and means operated by said operating means when the operating means is actuated for shifting said gears from one position to another, for releasing the first mentioned clutch member from the other clutch member.

5. In a transmission gearing, an internal gear having a plurality of toothed portions of various diameters, a shaft, a tubular shaft slidable thereon and having a gear engageable wtih said toothed portions, a slide having an operative connection with said tubular shaft, whereby the tubular shaft is moved with the slide, a pedestal carrying the internal gear, the pedestal and slide having interengageable means whereby the internal gear is swung relative to the first mentioned shaft when the slide is moved, and means for moving the slide.

[Claims 6 and 7 not printed in the Gazette.]

1,155,598. LOADING-MACHINE. WILBUR S. MAYERS, Fairmont, W. Va. Filed Oct. 27, 1913. Serial No. 797,524. (Cl. 37—24.)



1. A loading machine comprising a tiltably mounted frame, two endless chains running upon suitable sprocket wheels, scoops having both sliding and swinging attachments to both chains, top guides for rollers on the scoops, said guides and their supports forming the sides of the conveyer trough, a plate forming the bottom of the conveyer trough, bottom guides for the rollers of the scoops, top and bottom guides for said chains, and a shoe for sustaining the unbalanced weight and for guiding the scoops under the pile of material at the receiving end of the machine.

2. A loading machine comprising a frame tiltably mounted upon a truck, two endless carrier chains running upon suitable sprocket wheels, scoops having both sliding and swinging attachments to the chain on either side, a trough for said scoops while they have the function of scraper-conveyer flights, top and bottom guides for said chains, independent top and bottom guides for rollers attached to said scoops, and a shoe adjustably mounted upon a horizontal fulcrum for the purposes set forth.

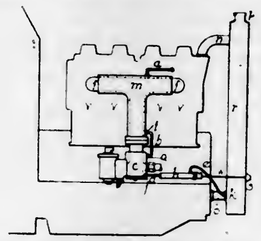
3. A loading machine comprising scoops each having both sliding and swinging attachments to endless carrier-chains, means for imparting an approximately horizontal travel to the scoops into the pile of material to be loaded, and means for lifting the scoops from their horizontal position in the pile and inverting them with their contents into a conveyer trough and conveying the material to and discharging it into suitable receptacles in the manner described.

4. A loading machine comprising a frame tiltably mounted upon a truck, two endless carrier chains mounted upon sprocket wheels having horizontal axes, scoops having elongated holes and studs on their sides, rollers on the outer ends of said studs, lifting-links slidably and revolubly attached to the bases of the studs and revolubly attached to projecting pins in the carrier chains, carrier rods forming the pins of and connecting the two carrier chains at opposite joints and passing through the said elongated holes, top and bottom guides for the carrier chains, top and bottom guides for the scoop rollers, a shoe with guides for the scoops and adjustable in a vertical direction around a fulcrum upon which the unbalanced weight of the machine rests, a conveyer trough, and means for furnishing power and transmitting it to the carrier chains, substantially as described and for the purposes set forth.

5. In a loading machine of the character described the combination of a frame tiltably mounted upon a turntable and carried by a power propelled truck, a pair of endless chains with means for driving and guiding them, a series of scoops with sliding and swinging attachments to said chains, guides for maintaining and changing the positions of the scoops, a shoe adapted to support the lower end of the frame and to guide the scoops, means for adjusting the position of said shoe, a conveyer trough having its terminals curved to conform to the path of the scoops and means for tilting the frame to an approximately horizontal position for the purpose described.

[Claim 6 not printed in the Gazette.]

1,155,599. ELECTRIC HEATER FOR USE IN CONNECTION WITH WATER-COOLED GASOLENE-AUTOMOBILES. GEORGE P. METCALF, St. Paul, Minn. Filed Dec. 15, 1913. Serial No. 806,846. (Cl. 123—170.)



1. The combination with the cylinder and radiator of an explosion engine of pipes between the same to circulate cooling liquid, a heater having a liquid circulating chamber connected with said pipes and a carbureter having a liquid circulating chamber connected with said pipes and situated adjacent to said heater whereby the hottest portion of the circulating liquid passes through said chamber of said carbureter.

2. The combination with the cylinder and radiator of an explosion engine of a duct between the same to circulate a cooling liquid, a carbureter having a liquid circulating chamber and a manifold having a liquid circulating chamber, said liquid circulating chambers of said carbureter and manifold being connected in series with said radiator and cylinder by said duct, and a heater having a liquid circulating chamber connected with said duct and situated adjacent said carbureter, whereby the hottest portion of the circulating liquid is conveyed through said chamber of said carbureter first, for the purpose specified.

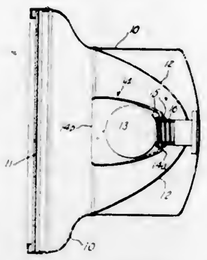
3. The combination with the cylinder and radiator of an explosion engine of piping between the same to circulate cooling liquid and a heater and carbureter having liquid circulating chambers connected with said piping, the chamber of said carbureter being placed adjacent the chamber of said heater and below the liquid circulating chamber of said cylinder so that the hottest portion of the circulating liquid passes through the circulating chamber of said carbureter, immediately after egressing from the heater and before passing into the circulating chamber of the cylinder.

4. The combination with an explosive engine comprising a jacketed carbureter, cylinder and a radiator having pipes connecting them in circuit, of a liquid heating

chamber interposed in said circuit to deliver primarily into the jacket of said carbureter.

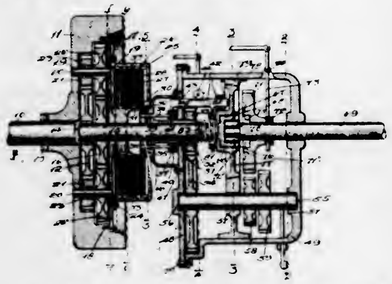
5. The combination with an explosive engine comprising a jacketed carbureter, cylinder and a radiator having pipes connecting them in circuit, of a chamber containing liquid and interposed in said circuit to deliver primarily into the jacket of said carbureter, and an electric heater disposed within said chamber.

1,155,600. NON-GLARE HEADLIGHT. WILLIAM W. METZGER, JULIAN A. ALTENDORF, and CALVIN M. VANBILL, Los Angeles, Cal. Filed Apr. 13, 1915. Serial No. 21,043. (Cl. 240—48.6.)



A non-glare headlight, embodying in combination a lamp, a reflector behind and around the lamp, said reflector adapted normally to throw the light from said lamp in a concentrated stream ahead, and a translucent member around and behind the lamp and of such extent as to intercept the light from the lamp which would otherwise be transmitted directly to the reflector, the front of said member being open to allow direct radiation from the lamp ahead independently of the reflector, whereby the reflector is illuminated only by diffused light from the translucent member and that portion of the light which is transmitted forwardly from the lamp is allowed to be freely transmitted independently of the reflector.

1,155,601. TRANSMISSION-GEARING. CHARLES A. MILES, Baxter Springs, Kans. Filed Aug. 25, 1914. Serial No. 858,420. (Cl. 74—34.)



1. In transmission gearing, a driving shaft, a fly-wheel rotatable upon the driving shaft, a second shaft arranged near the driving shaft, a sun-pinion rigidly connected with the driving shaft, a sun-pinion rigidly connected with the second shaft, planetary pinions carried by the fly-wheel and engaging the sun-pinions, clutch mechanism arranged between the fly-wheel and the second shaft and adapted to unlock and lock them, a third shaft connected with the clutch mechanism to be rotated thereby, and means to control the rotation of the second shaft.

2. In transmission gearing, a driving shaft, a second shaft arranged near the same, planetary gearing connecting the shafts, clutch mechanism arranged between the second shaft and the planetary gearing, and means to approximately simultaneously stop the rotation of the second shaft and render the clutch mechanism inactive.

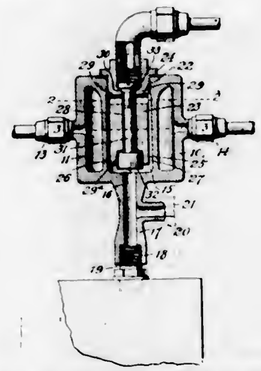
3. In transmission gearing, a driving shaft, a second shaft arranged near the same, planetary gearing connecting the shafts, clutch mechanism arranged between the second shaft and the planetary gearing, a tubular shaft surrounding the second shaft and receiving rotation from the fly-wheel, and means to stop the rotation of the second shaft and render the clutch mechanism inactive.

4. In transmission gearing, a driving shaft, a jack-shaft arranged near the driving shaft, a driven shaft arranged near the jack-shaft, planetary gearing connecting the driving shaft and the jack-shaft, clutch mechanism arranged between the planetary gearing and the jack-shaft including a casing, a tubular shaft connected with the casing and rotatable upon the jack-shaft, a plurality of gears driven by the tubular shaft, a relatively stationary brake member, a brake-wheel splined upon the jack-shaft to engage and disengage the stationary brake-member, means to operate the clutch mechanism and shift the brake-wheel, and a gear carried by the driven shaft and adapted to be alternately rotated by said plurality of gears or the jack shaft.

5. In transmission gearing, a driving shaft, a jack-shaft arranged near the driving shaft, a driven shaft arranged near the jack-shaft, planetary gearing connecting the driving shaft and the jack-shaft, friction disk clutch mechanism arranged between the planetary gearing and jack-shaft and adapted to lock and unlock the same, a tubular shaft connected with the clutch mechanism and rotatable upon the jack-shaft, a plurality of gears driven by the tubular shaft, a gear splined upon the driven shaft and adapted to be shifted into and out of engagement with certain of the plurality of gears, means to render the clutch mechanism active, and brake means to hold the jack-shaft against rotation when the clutch mechanism is inactive.

[Claims 6 to 12 not printed in the Gazette.]

1,155,602. VALVE. DON DAVID MILES, Jr., San Francisco, Cal. Filed June 1, 1914. Serial No. 842,308. (Cl. 137—32.)



1. In a valve for the purpose described, the combination with an inclosing casing having a fluid inlet end, and means for connecting said end to an engine cylinder, said inclosing casing having a cooled valve chamber, of a valve casing removably supported in said valve chamber, said inclosing casing having an outlet, and a valve in said valve casing for said outlet arranged at a point removed from said inlet end.

2. In a valve for the purpose described, the combination of a casing having a chamber with an inlet opening adjacent one end of the casing, a valve casing removably supported within said chamber and spaced from the wall thereof, said chamber having an outlet opening through the casing upon the end thereof opposite the inlet opening, the valve casing having inlet openings leading from said chamber through the wall of the valve casing adjacent said outlet whereby the chamber and the outlet of the valve casing may be brought into communication, and means actuated by gas introduced into the inlet end of the chamber for controlling the passage of gas from the chamber through the outlet of the valve casing.

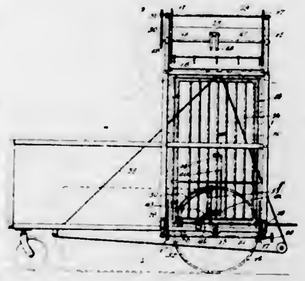
3. In a valve for the purpose described, the combination of a casing having a chamber open at both ends, a valve casing supported within the chamber and closing one end of the same, there being passages passing transversely through the valve casing whereby the chamber may be brought into communication with an outlet formed in the valve casing, and means controlling the outlet through the valve casing and operated by gas pressure introduced through the inlet of the chamber and at a point adjacent said inlet.

4. In a valve for the purpose described, the combination of a casing having a chamber open at both ends to form an inlet and an outlet, a valve casing supported within the chamber and closing outlet end of the same, there being passages passing transversely through the valve casing adjacent the outlet whereby the chamber may be brought into communication with an outlet formed in the valve casing, and means movable longitudinally of the valve casing for controlling the outlet through the valve casing and operated by gas pressure introduced through the inlet of the chamber and at a point adjacent said inlet.

5. In a valve for the purpose described, the combination of a casing having a chamber open at both ends, a valve casing supported within the chamber and closing one end of the same there being passages passing transversely through the valve casing whereby the chamber may be brought into communication with an outlet formed in the valve casing, and means carrying a valve at one end for closing the outlet of the valve casing and a disk of relatively larger diameter at the other with which gas introduced at the open end of the chamber acts upon to open the outlet through the valve casing.

[Claims 6 to 12 not printed in the Gazette.]

1,155,603. SHOCK-FORMER ATTACHMENT FOR BINDERS. JACK E. MILLER, Cleburne, Tex. Filed Jan. 27, 1914. Serial No. 814,723. (Cl. 56—121.)



1. A machine of the character described comprising a frame, a receptacle pivotally carried by said frame, pivotally mounted side walls for said receptacle, cam strips carried by said frame, levers slidably connected with said side walls and having fingers slidably connected with said cam strips for causing the side walls and fingers to be automatically moved to a position to release the contents of said receptacle when the same is moved to a discharging position, and means for moving said receptacle to a discharging position.

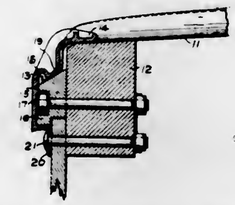
2. A machine of the character described comprising a frame, a receptacle pivotally carried by said frame, pivotally mounted side walls for said receptacle, cam strips carried by said frame, levers slidably connected with said cam strips and having their free end portions provided with longitudinally-extending slots, pins carried by said walls and mounted in the slots of said levers, means for feeding the material into said receptacle, means for moving said receptacle to a discharging position, the cam strips moving said levers to swing said side walls to a position to release the contents of said receptacle when the receptacle is moved to a discharging position, doors carried by said receptacle, and means for opening said doors when said receptacle is moved to a discharging position.

3. A machine of the character described comprising a frame, a receptacle pivotally carried by said frame, end doors pivotally carried by said receptacle, a cam strip carried by said frame, levers slidably connected with said doors and slidably connected with said cam strips for causing said doors to be swung open when said receptacle is swung downwardly to a position for discharging the contents thereof, means for feeding material into said receptacle, and means for moving said receptacle to a discharging position.

4. A machine of the character described comprising a frame, a receptacle movably carried by said frame, end doors movably carried by said receptacle, cam elements carried by said frame, actuating means for said doors slidably connected with said cam elements for causing said doors to move to an open position when said receptacle is moved to a discharging position, and means for moving said receptacle to a discharging position.

5. A machine of the character described comprising a frame, a receptacle movably carried by said frame, movably mounted side walls forming part of said receptacle, cam elements carried by said frame, actuating means for said side walls slidably connected with said side walls and slidably connected with said cam elements, for causing said side walls to be moved to a releasing position when said receptacle is moved to a discharging position, and means for moving said receptacle to a discharging position.

1,155,604. CAR-ROOF. JOHN L. MOHUN, Brooklyn, N. Y. Filed Dec. 19, 1912. Serial No. 737,668. (Cl. 108—5.)



1. In a car roof, the combination of metal roofing sheets with overlapping edges located transversely of the car, one of said edges being shaped to form a drain trough and the other edge extending over and constituting a cover for said trough, a running board saddle, and fastening bolts therefor extending through and bolted to said cover portion over said trough.

2. A car roof, the combination with a frame member, and a fascia having an inclined surface below the top of said frame member, of a metal roofing sheet supported on said frame and having its end turned down over the inclined surface of the fascia, and a metal clip fastened to the fascia and having projections for holding the metal sheet down upon the frame member and upon the fascia.

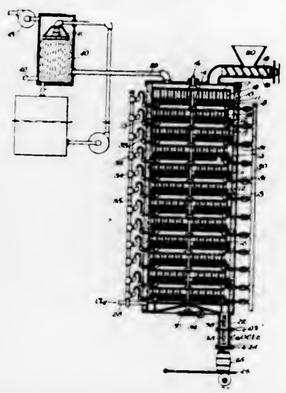
3. In a car roof, the combination with a frame member and a fascia, of a metal roofing sheet supported on said member, a metal clip mounted on said fascia and extending over said roofing sheet, said clip also having a socket on its inner face projecting into a recess in said fascia, and a bolt having a head located in said socket and extending through the fascia and the frame member.

4. In a car roof, the combination with a frame member and a fascia, of a roofing sheet having its end turned down over the frame and extending over the fascia, and a metal clip fastened to the fascia and extending over the roofing

sheet for holding the same in position, the end of said sheet upon the fascia being turned up to form a deflecting flange beneath the clip.

5. In a car roof, the combination with a frame member and a fascia, of a roofing sheet having its end turned down over the frame and extending over the fascia, a metal clip mounted on said fascia and extending over the roofing sheet, and a bolt connected to the inside of the clip for fastening the same to the fascia and frame member, the end of the roofing sheet upon the fascia being turned up to form a deflecting flange beneath the clip.

1,155,605. PROCESS OF MAKING CALCIUM HYPOCHLORITE. HUGH K. MOORE, Berlin, N. H. Filed Oct. 31, 1914. Serial No. 869,688. (Cl. 23—13.)



1. The herein described method of making dry calcium hypochlorite which consists in chlorinating powdery calcium hydroxid, and refrigerating the product to approximately the freezing point of water.

2. The herein described method of making dry calcium hypochlorite which consists in chlorinating powdery calcium hydroxid and abstracting from the product the heat liberated by the reaction, together with sufficient heat to leave the contained water in frozen condition.

3. The herein described method of making dry calcium hypochlorite which consists in chlorinating powdery calcium hydroxid, refrigerating the product at or below the freezing point of water, and withdrawing the product in dry condition.

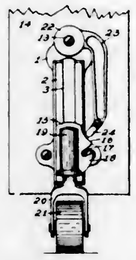
4. The herein described process which consists in subjecting a powdery material to reaction with a gas and liberating a liquid-forming substance, and simultaneously refrigerating the product below the freezing temperature of such substance leaving the product in a dry or powdery condition.

5. The herein described process which consists in mechanically feeding calcium hydroxid while in contact with chlorin to form hypochlorite and refrigerating the same to a freezing temperature to prevent the balling of the product.

[Claims 6 to 12 not printed in the Gazette.]

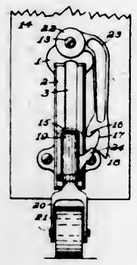
1,155,606. CASTER-MOUNTING. ALBERT H. NELLER, Fairfield, Iowa, assignor of one-third to Irving L. Eales and one-third to Frank S. Boies, Fairfield, Iowa. Filed Jan. 25, 1915. Serial No. 4,265. (Cl. 16—165.)

1. A caster-mounting, comprising a slide-way mounted on a supported body, a slide seated movably in said slideway, a caster pivotally mounted on said slide, said slide being adapted to carry the caster either above or below the lower limit of the supported body, and having integral detents, and a pawl hung pivotally from said slideway and adapted to swing into engagement with said detents by gravity when the slide is moved past it relatively slowly.



2. A caster-mounting, comprising a vertically grooved slideway mounted on a supported body, a slide mounted slidably in said slideway and having a bearing for a caster spindle, a caster whose spindle is mounted rotatably in said bearing, said slideway permitting movement of the slide downwardly sufficient to locate the caster below the lower limit of the supported body, and means operable by gravity adapted to engage and hold the said slide in its lower limit of movement when the slide is dropped past said means at a relatively low rate of speed.

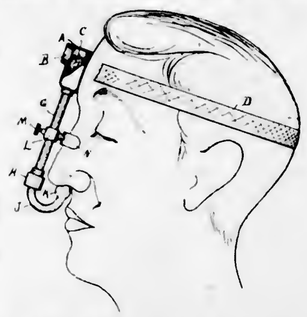
1,155,607. CASTER-MOUNTING. ALBERT H. NELLER, Fairfield, Iowa, assignor of one-third to Irving L. Eales and one-third to Frank S. Boies, Fairfield, Iowa. Filed Mar. 1, 1915. Serial No. 11,195. (Cl. 16—165.)



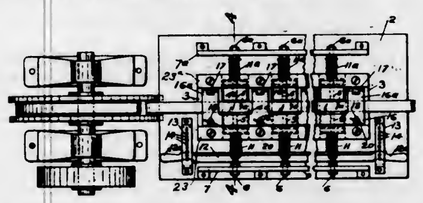
A caster mounting, comprising a vertically grooved slideway mounted on a supported body, a slide mounted slidably in said slideway and having a bearing for a caster-spindle, a caster whose spindle is mounted rotatably in said bearing, said slideway permitting movement of the slide to locate the caster below the lower limit of the supported body, said slide having a lateral detent and a pawl suspended on the supported body above said slide and having projections on opposite sides of a root cavity, said pawl being adapted when moved slowly past said slide to swing laterally to engage the detent on the slide in said root cavity to hold said body supported on the caster, and also adapted when moved rapidly past the slide to avoid, the detent thereon by having its projections bound off therefrom too far to the side to become engaged therewith when swung back, to thus permit the slide and caster to be pushed up and allow the supported body to rest on a supporting surface without being supported on the caster.

1,155,608. INHALER. CHARLES C. F. NIESCHANG, Fort Wayne, Ind. Filed Feb. 5, 1914. Serial No. 816,817. (Cl. 128—13.)

A device of the class described comprising a receptacle having a charge opening therein and also a pendent tube communicating therewith; a pair of adjustable nasal tubes arranged in connection with the lower end of said tube; and a saddle having adjustable connection with the pendent tube.

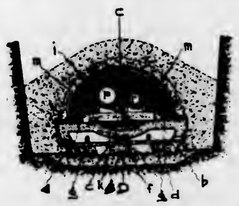


1,155,609. MACHINE FOR CLEANING METAL STRIPS. SEROP ODABASHIAN, Worcester, Mass. Filed Aug. 6, 1914. Serial No. 855,447. (Cl. 29—76.)



A bur stripping machine having in combination, a pair or series of pairs of file-faced blocks having holes substantially through their center, guide rods for said file-faced blocks and means to yieldingly hold said file-faced blocks in their inward position, means to manually adjust the compression of said file-faced blocks toward their inner position, a block or blocks having a leather or polishing strip secured at the bottom of a recess in each of said blocks to form the lower member of a clamping and polishing device, said blocks also forming guides for the file-faced blocks, a hinged clamp with means for adjusting and locking same, a leather surface on the under side of said clamp forming the upper member of the clamping and polishing device, substantially as shown and described and for the purpose set forth.

1,155,610. UNDERGROUND CONDUIT. JOHN W. ORROCK, Montreal, Quebec, Canada, assignor of one-half to Henry H. Vaughan, Montreal, Canada. Filed Jan. 5, 1914. Serial No. 810,519. (Cl. 137—75.)



1. In an underground conduit the combination with an insulated conductor, of an invert presenting a comparatively wide and substantially flat top and being chambered from side to side, said invert being located beneath and supporting said conductor; and a half pipe resting upon the invert and inclosing the conductor; and means for preventing horizontal displacement of the said invert.

2. An underground conduit consisting of a series of alined inverts spaced slightly apart and connected to each other by a cement joint extending half-way the depth thereof, each of the said inverts being chambered from side to side and presenting a substantially flat top; an insulated conductor mounted upon the said inverts and a series of half-pipes resting upon the tops of the inverts and inclosing said conductor, and means for preventing horizontal displacement of the inverts, said inverts presenting substantially flat and comparatively wide tops for the purpose of accommodating half-pipes of various sizes.

3. An underground conduit consisting of a series of inverts each of which is chambered from side to side and presents a substantially flat top, the joints between such inverts having their upper portions sealed and their lower portions open and the top of the said inverts having a central longitudinal concavity flanked by flat portions; a series of pipe-supports bridging the concavity, consisting of flanged bed-plates having rollers thereon; a series of half-pipe lengths resting upon the said flat portions; pipes supported upon the pipe supports; and means for preventing horizontal displacement of the said inverts.

4. An underground conduit consisting of a series of inverts each chambered from side to side and presenting a comparatively wide and substantially flat top spaced slightly apart, the adjacent ends of the said inverts being connected by a cement joint extending half-way down the same, and the top thereof having a central longitudinal concavity flanged by flat portions and the underside of the inverts having longitudinal recesses for the purpose of preventing horizontal displacement thereof, a series of pipe supports resting upon the said flat portions and bridging the concavities, a series of half-pipe lengths resting upon the said flat portions and pipes supported upon the pipe supports, the half-pipe lengths resting upon the inverts and inclosing the pipes, the diameter of each said half pipes being less than the width of the inverts.

1,155,611. FOUNTAIN-PEN. HARRY W. PIERCE, Waverley, Mass. Filed Dec. 17, 1913. Serial No. 807,332. (Cl. 120—46.)

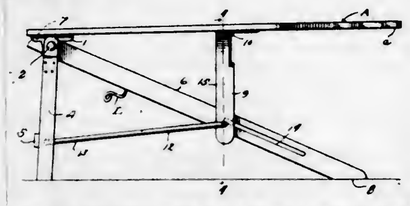


A fountain pen having a barrel, a reservoir therein, an inner extensible and retractable pen section having connections and a passage of communication with the reservoir, said inner pen section having a pen point and a feed passage, means for extending and retracting the inner pen section, and means for opening and closing the feed passage to the pen point automatically when the inner pen section is extended or retracted, and means for compressing a portion of the reservoir when the inner pen section is extended so that as the inner pen section is retracted the reservoir will expand to suck the unused ink back in the reservoir.

1,155,612. IRONING-BOARD. HARRY O. PITTS, Carthage, Ind. Filed Mar. 22, 1915. Serial No. 16,223. (Cl. 68—10.)

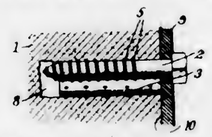
1. The combination with a body board, of a pivot shaft suspended from the underside of the board adjacent one end thereof, a pair of parallel legs carried by the pivot shaft, inclined brace legs carried by the parallel legs, a cross bar connecting the parallel legs and the brace legs, a diagonal supporting leg pivoted to the shaft at one end intermediate the parallel legs, said diagonal supporting leg having an elongated slot therein terminating in a notch, a pair of spaced arms hinged to the bottom of the body

board and between which arms the diagonal supporting leg extends, and a relatively long U-shaped yoke member having its bight portion passing through the free end portions of the arms and through the slot in the diagonal supporting leg, the terminals of the yoke being fastened to the parallel legs.



2. The combination with a board, of a pair of parallel legs pivotally connected with the bottom of the board adjacent one end thereof, a diagonal supporting leg pivotally connected with the bottom of the board at one end at a point between the parallel legs, said diagonal leg having a relatively long slot therein terminating at its upper end in a lateral notch, a pair of parallel spaced arms hinged to the bottom of the board and between which arms the diagonal brace extends, and a relatively long U-shaped yoke member having its bight portion extending through the free end portions of the arms and through the slot portion of the diagonal supporting leg, the terminals of said U-shaped member being connected with the parallel supporting legs, the bight of said yoke member resting in the notch at the end of the slot when the device is in its extended operative position.

1,155,613. BOLT-ANCHOR. HENRY W. PLEISTER, Westfield, N. J., assignor to Henry B. Newhall. Filed Jan. 20, 1915. Serial No. 3,328. (Cl. 85—2.4.)



1. A bolt anchor comprising in combination a shield and a rotative bolt engaging therewith, said bolt being exposed to engage its threads with the wall or support to co-act with the shield to expand the bolt anchor.

2. A bolt anchor comprising in combination a rigid shield and a rotative bolt engaging therewith, said bolt being exposed to engage its threads with the wall or support to co-act with the rigid shield to expand the bolt anchor.

3. A bolt anchor comprising in combination a shield provided with internal interrupted screw threads, and a bolt to engage said threads, both said shield and bolt being exposed on a part thereof to engage with the support to expand the bolt anchor.

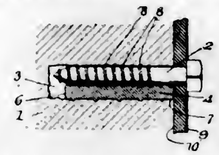
4. A bolt anchor comprising in combination a shield, a bolt having its threaded shank engaging said shield on one side and exposed so as to also engage directly with the walls of the opening in the support.

5. A bolt anchor comprising in combination a substantially rigid shield, a bolt having its threaded shank engaging said shield on one side and exposed so as to also engage directly with the walls of the opening in the support.

[Claims 6 to 14 not printed in the Gazette.]

1,155,614. BOLT-ANCHOR. HENRY W. PLEISTER, Westfield, N. J., assignor to Henry B. Newhall. Original application filed Jan. 20, 1915, Serial No. 3,328. Divided and this application filed Apr. 16, 1915. Serial No. 21,635. (Cl. 85—2.4.)

1. An article of manufacture comprising a shield member having an open side, said member being formed of ductile material to permit a bolt to cut its coöperating female threads in the open side of the shield and at the same time engage directly with the wall of the support.



2. An article of manufacture comprising a shield member having an inclined surface and an open side, said member being formed of ductile material to permit a bolt to cut its coöperating female threads in the open side of the shield and at the same time engage directly with the wall of the support.

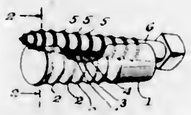
3. An article of manufacture comprising a shield member having an open side, said member being formed of ductile material to permit a bolt to cut its coöperating female threads in the open side of the shield, and at the same time engage directly with the wall of the support and means to normally hold the shield and bolt together.

4. An article of manufacture comprising a shield member having an inclined surface and an open side, said member being formed of ductile material to permit a bolt to cut its coöperating female threads in the open side of the shield, and at the same time engage directly with the wall of the support and means to normally hold the shield and bolt together.

5. A bolt anchor comprising in combination an expanding member and a one part ductile shield adapted to partly surround the expanding member.

[Claims 6 to 15 not printed in the Gazette.]

1,155,615. BOLT-ANCHOR. HENRY W. PLEISTER, Westfield, N. J., assignor to Henry B. Newhall. Original application filed Jan. 20, 1915, Serial No. 3,328. Divided and this application filed Apr. 16, 1915. Serial No. 21,636. (Cl. 85—2.4.)



1. A bolt anchor comprising in combination a cylindrical shield, provided with an inclined bore and an opening in its side and a bolt to engage in said bore and opening to coöperate with the cylindrical shield.

2. A bolt anchor comprising in combination a cylindrical shield provided with a bore starting at one end substantially concentric with the longitudinal axis of the cylindrical shield, and then extending at an angle to said longitudinal axis of the shield and emerging on the periphery of the shield, and a bolt to engage said bore and opening formed on the periphery of the shield.

3. An article of manufacture comprising a cylindrical shield having an inclined bore extending to its periphery.

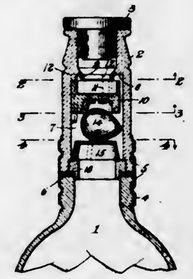
4. An article of manufacture comprising a cylindrical shield having a bore starting at one end substantially concentric with the longitudinal axis of the cylindrical shield and then extending at an angle to said longitudinal axis and emerging on the periphery of said shield.

5. A bolt anchor comprising in combination a substantially cylindrical shield with an inclined bore provided with interrupted screw threads and a bolt or screw to coöperate with the screw threads.

[Claims 6 to 8 not printed in the Gazette.]

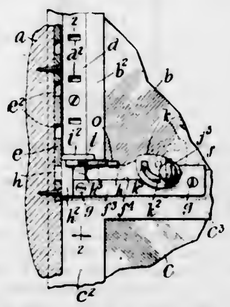
1,155,616. NON-REFILLABLE BOTTLE. CLAUDE C. PRALL, Trenton, N. J., assignor, by mesne assignments, to The Anglo-American Patent Bottle Company Limited, London, England. Filed Dec. 31, 1910. Serial No. 600,260. (Cl. 215—103.)

1. A bottle neck arranged to be connected to a bottle-body and comprising an integral outer member having a stopper receiving chamber at the upper end, an enlarged chamber extending to the lower end of the neck, a seat receiving rabbet in its lower edge, and an integral inwardly and downwardly flanged deflector intermediate the stopper chamber and the enlarged chamber and forming a constricted passage between said chamber, in combination with a valve seat arranged to fit in the seat receiving rabbet, a valve loosely mounted upon the valve seat, a non-integral baffle device fitting the enlarged chamber below the deflector and arranged to be cemented therein, said baffle having recesses on its upper and lower surfaces and liquid passages in its periphery, and a weight loose within the enlarged chamber between the bottom of the baffle and the top of the valve.



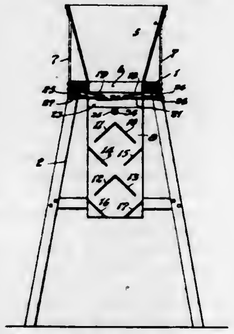
2. A bottle neck arranged to be connected to a bottle-body and comprising an integral outer member having a stopper receiving chamber at the upper end, an enlarged chamber extending to the lower end of the neck, a seat receiving rabbet in its lower edge, and an integral inwardly and downwardly flanged deflector intermediate the stopper chamber and the enlarged chamber and forming a constricted passage between said chamber, in combination with a valve seat arranged to fit in the seat receiving rabbet and provided with a downward extending portion arranged to enter the top of the bottle and form a dowel connection between the neck and bottle, a valve loosely mounted upon the valve seat, a non-integral baffle device fitting the enlarged chamber below the deflector and arranged to be cemented therein, said baffle having recesses on its upper and lower surfaces and liquid passages in its periphery, and a weight loose within the enlarged chamber between the bottom of the baffle and the top of the valve.

1,155,617. WINDOW-SASH LOCK. WILBUR M. REICHARD, New York, N. Y., assignor of one-half to Mary A. Reichard, New York, N. Y. Filed Dec. 28, 1914. Serial No. 879,241. (Cl. 16—52.)



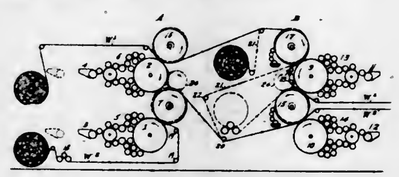
A window sash lock, comprising an attaching plate which is L-shaped in cross section and adapted to be secured to the top rail of the bottom sash at one side thereof, one part of said plate resting on said rail and the other abutting against the front face thereof when said attaching plate is in position, and two bolts one of which is placed on the top part of said plate and is movable forwardly and backwardly and adapted to engage the top sash and the other of which is placed on that part of said plate which abuts against the front face of the top rail and is movable laterally and adapted to engage the adjacent side of the window frame, the bolt which is movable forwardly and backwardly being provided with a head having a diagonal slot and the bolt which is movable laterally with a pin which operates in said slot, means for operating said laterally movable bolt in both directions by hand, consisting of a cam disk pivoted to the said plate and having a curved slot through which is passed a pin connected with said bolt, said cam disk being provided with a handle, and means for locking said bolt in operative position.

1,155,618. GRAIN-PICKLER. JOHN ELTON ROBINSON and WILLIAM JAMES CURRIE, Lauder, Manitoba, Canada. Filed Nov. 29, 1912. Serial No. 734,009. (Cl. 83—28.)



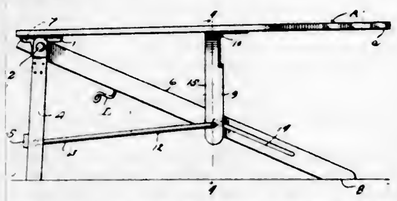
In a grain pickling apparatus, a hopper for receiving the grain, means for supporting said hopper, a rectangular chute carried by said hopper supporting means, means for discharging the contents of the hopper into said chute, a pair of centrally located deflecting plates carried by opposite walls of said chute, a pair of deflecting plates carried by the other walls of the chute located intermediate said first mentioned deflecting plates and extending at right angles thereto, and means located in the chute for delivering a saturating liquid to said grain prior to the time of its arrival at the upper most part of the deflecting plates in and for the purpose described.

1,155,619. WEB-PRINTING MACHINE. OSCAR ROESEN, New York, N. Y., assignor to R. Hoe and Co., New York, N. Y., a Corporation of New York. Filed Nov. 20, 1914. Serial No. 873,079. (Cl. 101—117.)



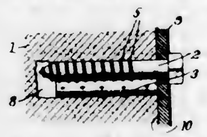
1. In a printing machine, the combination of a set of printing couples including form members and impression members arranged so that two form members may have quick successive printing relation with one impression member, a second set of printing couples including form members and impression members arranged so that two form members may have quick successive printing relation with one impression member, and means for changing the printing relation of the members of each set so that

board and between which arms the diagonal supporting leg extends, and a relatively long U-shaped yoke member having its bight portion passing through the free end portions of the arms and through the slot in the diagonal supporting leg, the terminals of the yoke being fastened to the parallel legs.



2. The combination with a board, of a pair of parallel legs pivotally connected with the bottom of the board adjacent one end thereof, a diagonal supporting leg pivotally connected with the bottom of the board at one end at a point between the parallel legs, said diagonal leg having a relatively long slot therein terminating at its upper end in a lateral notch, a pair of parallel spaced arms hinged to the bottom of the board and between which arms the diagonal brace extends, and a relatively long U-shaped yoke member having its bight portion extending through the free end portions of the arms and through the slot portion of the diagonal supporting leg, the terminals of said U-shaped member being connected with the parallel supporting legs, the bight of said yoke member resting in the notch at the end of the slot when the device is in its extended operative position.

1,155,613. BOLT-ANCHOR. HENRY W. PLEISTER, Westfield, N. J., assignor to Henry B. Newhall. Filed Jan. 20, 1915. Serial No. 3,328. (Cl. 85—2.4.)



1. A bolt anchor comprising in combination a shield and a rotative bolt engaging therewith, said bolt being exposed to engage its threads with the wall or support to co-act with the shield to expand the bolt anchor.

2. A bolt anchor comprising in combination a rigid shield and a rotative bolt engaging therewith, said bolt being exposed to engage its threads with the wall or support to co-act with the rigid shield to expand the bolt anchor.

3. A bolt anchor comprising in combination a shield provided with internal interrupted screw threads, and a bolt to engage said threads, both said shield and bolt being exposed on a part thereof to engage with the support to expand the bolt anchor.

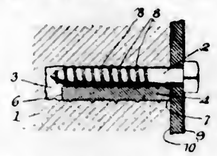
4. A bolt anchor comprising in combination a shield, a bolt having its threaded shank engaging said shield on one side and exposed so as to also engage directly with the walls of the opening in the support.

5. A bolt anchor comprising in combination a substantially rigid shield, a bolt having its threaded shank engaging said shield on one side and exposed so as to also engage directly with the walls of the opening in the support.

[Claims 6 to 14 not printed in the Gazette.]

1,155,614. BOLT-ANCHOR. HENRY W. PLEISTER, Westfield, N. J., assignor to Henry B. Newhall. Original application filed Jan. 20, 1915, Serial No. 3,328. Divided and this application filed Apr. 16, 1915. Serial No. 21,635. (Cl. 85—2.4.)

1. An article of manufacture comprising a shield member having an open side, said member being formed of ductile material to permit a bolt to cut its coöperating female threads in the open side of the shield and at the same time engage directly with the wall of the support.



2. An article of manufacture comprising a shield member having an inclined surface and an open side, said member being formed of ductile material to permit a bolt to cut its coöperating female threads in the open side of the shield and at the same time engage directly with the wall of the support.

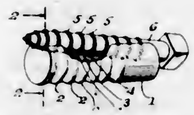
3. An article of manufacture comprising a shield member having an open side, said member being formed of ductile material to permit a bolt to cut its coöperating female threads in the open side of the shield, and at the same time engage directly with the wall of the support and means to normally hold the shield and bolt together.

4. An article of manufacture comprising a shield member having an inclined surface and an open side, said member being formed of ductile material to permit a bolt to cut its coöperating female threads in the open side of the shield, and at the same time engage directly with the wall of the support and means to normally hold the shield and bolt together.

5. A bolt anchor comprising in combination an expanding member and a one part ductile shield adapted to partly surround the expanding member.

[Claims 6 to 15 not printed in the Gazette.]

1,155,615. BOLT-ANCHOR. HENRY W. PLEISTER, Westfield, N. J., assignor to Henry B. Newhall. Original application filed Jan. 20, 1915, Serial No. 3,328. Divided and this application filed Apr. 16, 1915. Serial No. 21,636. (Cl. 85—2.4.)



1. A bolt anchor comprising in combination a cylindrical shield, provided with an inclined bore and an opening in its side and a bolt to engage in said bore and opening to coöperate with the cylindrical shield.

2. A bolt anchor comprising in combination a cylindrical shield provided with a bore starting at one end substantially concentric with the longitudinal axis of the cylindrical shield, and then extending at an angle to said longitudinal axis of the shield and emerging on the periphery of the shield, and a bolt to engage said bore and opening formed on the periphery of the shield.

3. An article of manufacture comprising a cylindrical shield having an inclined bore extending to its periphery.

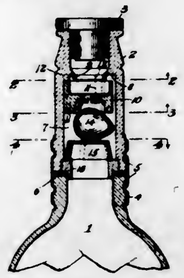
4. An article of manufacture comprising a cylindrical shield having a bore starting at one end substantially concentric with the longitudinal axis of the cylindrical shield and then extending at an angle to said longitudinal axis and emerging on the periphery of said shield.

5. A bolt anchor comprising in combination a substantially cylindrical shield with an inclined bore provided with interrupted screw threads and a bolt or screw to coöperate with the screw threads.

[Claims 6 to 8 not printed in the Gazette.]

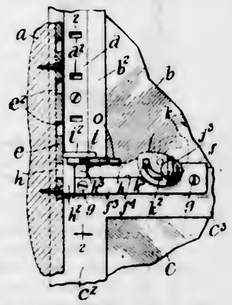
1,155,616. NON-REFILLABLE BOTTLE. CLAUDE C. PRALL, Trenton, N. J., assignor, by mesne assignments, to The Anglo-American Patent Bottle Company Limited, London, England. Filed Dec. 31, 1910. Serial No. 600,260. (Cl. 215—103.)

1. A bottle neck arranged to be connected to a bottle-body and comprising an integral outer member having a stopper receiving chamber at the upper end, an enlarged chamber extending to the lower end of the neck, a seat receiving rabbet in its lower edge, and an integral inwardly and downwardly flanged deflector intermediate the stopper chamber and the enlarged chamber and forming a constricted passage between said chamber, in combination with a valve seat arranged to fit in the seat receiving rabbet, a valve loosely mounted upon the valve seat, a non-integral baffle device fitting the enlarged chamber below the deflector and arranged to be cemented therein, said baffle having recesses on its upper and lower surfaces and liquid passages in its periphery, and a weight loose within the enlarged chamber between the bottom of the baffle and the top of the valve.



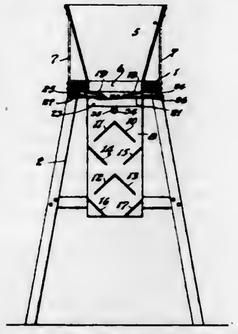
2. A bottle neck arranged to be connected to a bottle-body and comprising an integral outer member having a stopper receiving chamber at the upper end, an enlarged chamber extending to the lower end of the neck, a seat receiving rabbet in its lower edge, and an integral inwardly and downwardly flanged deflector intermediate the stopper chamber and the enlarged chamber and forming a constricted passage between said chamber, in combination with a valve seat arranged to fit in the seat receiving rabbet and provided with a downward extending portion arranged to enter the top of the bottle and form a dowel connection between the neck and bottle, a valve loosely mounted upon the valve seat, a non-integral baffle device fitting the enlarged chamber below the deflector and arranged to be cemented therein, said baffle having recesses on its upper and lower surfaces and liquid passages in its periphery, and a weight loose within the enlarged chamber between the bottom of the baffle and the top of the valve.

1,155,617. WINDOW-SASH LOCK. WILBUR M. REICHARD, New York, N. Y., assignor of one-half to Mary A. Reichard, New York, N. Y. Filed Dec. 28, 1914. Serial No. 879,241. (Cl. 16—52.)



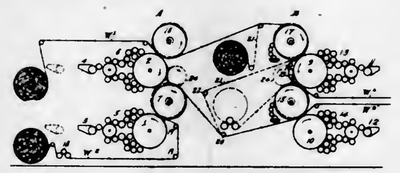
A window sash lock, comprising an attaching plate which is L-shaped in cross section and adapted to be secured to the top rail of the bottom sash at one side thereof, one part of said plate resting on said rail and the other abutting against the front face thereof when said attaching plate is in position, and two bolts one of which is placed on the top part of said plate and is movable forwardly and backwardly and adapted to engage the top sash and the other of which is placed on that part of said plate which abuts against the front face of the top rail and is movable laterally and adapted to engage the adjacent side of the window frame, the bolt which is movable forwardly and backwardly being provided with a head having a diagonal slot and the bolt which is movable laterally with a pin which operates in said slot, means for operating said laterally movable bolt in both directions by hand, consisting of a cam disk pivoted to the said plate and having a curved slot through which is passed a pin connected with said bolt, said cam disk being provided with a handle, and means for locking said bolt in operative position.

1,155,618. GRAIN-PICKLER. JOHN ELTON ROBINSON and WILLIAM JAMES CURRIE, Lauder, Manitoba, Canada. Filed Nov. 29, 1912. Serial No. 734,009. (Cl. 83—28.)



In a grain pickling apparatus, a hopper for receiving the grain, means for supporting said hopper, a rectangular chute carried by said hopper supporting means, means for discharging the contents of the hopper into said chute, a pair of centrally located deflecting plates carried by opposite walls of said chute, a pair of deflecting plates carried by the other walls of the chute located intermediate said first mentioned deflecting plates and extending at right angles thereto, and means located in the chute for delivering a saturating liquid to said grain prior to the time of its arrival at the upper most part of the deflecting plates in and for the purpose described.

1,155,619. WEB-PRINTING MACHINE. OSCAR ROESEN, New York, N. Y., assignor to R. Hoe and Co., New York, N. Y., a Corporation of New York. Filed Nov. 20, 1914. Serial No. 873,079. (Cl. 101—117.)



1. In a printing machine, the combination of a set of printing couples including form members and impression members arranged so that two form members may have quick successive printing relation with one impression member, a second set of printing couples including form members and impression members arranged so that two form members may have quick successive printing relation with one impression member, and means for changing the printing relation of the members of each set so that

in one position a web may be given multiple impressions on one side in one set and perfected with multiple impressions in the other set, and in another position two webs may each be printed with one impression in one set and perfected in the other.

2. In a printing machine, the combination of a set of rotary printing couples including form cylinders and impression cylinders arranged so that two form cylinders may have quick successive printing relation with one impression cylinder, a second set of printing couples including form cylinders and impression cylinders arranged so that two form cylinders may have quick successive printing relation with one impression cylinder, and means for changing the printing relation of the cylinders of each set so that in one position a web may be given multiple impressions on one side in one set and perfected with multiple impressions in the other set, and in another position two webs may each be printed with one impression in one set and perfected in the other.

3. In a printing machine, the combination of a set of rotary printing couples including two form cylinders, an impression cylinder, the two form cylinders being located on the same side of the axis of the impression cylinder so as to have quick successive printing relation therewith, a second impression cylinder coöperating with one of the form cylinders, both the impression cylinders being movable relatively to the form cylinders, a second set of rotary printing couples including two form cylinders, an impression cylinder, the two form cylinders of the second set being located on the same side of the axis of the impression cylinder so as to have quick successive printing relation therewith, and a second impression cylinder in the second set coöperating with one of the form cylinders, both impression cylinders of the second set being movable relatively to the form cylinders.

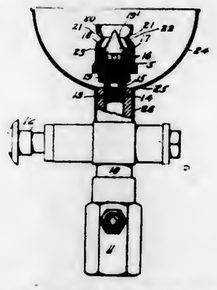
4. In a printing machine, the combination of a set of rotary printing couples including two form cylinders, an impression cylinder, the two form cylinders being located on the same side of the axis of the impression cylinder so as to have quick successive printing relation therewith, a second impression cylinder coöperating with one of the form cylinders, both the impression cylinders being movable relatively to the form cylinders, a second set of rotary printing couples including two form cylinders an impression cylinder, the two form cylinders of the second set being located on the same side of the axis of the impression cylinder so as to have quick successive printing relation therewith, a second impression cylinder in the second set coöperating with one of the form cylinders, both impression cylinders of the second set being movable relatively to the form cylinders, and guides for directing a web from one set to the other.

1,155,620. AIR-INJECTOR. WENZEL SCHEICK, Waterbury, Conn. Filed Feb. 3, 1915. Serial No. 5,857. (Cl. 137—59.)



An air injecting apparatus of the class described, the same comprising a stand including a base and upright, a bracket adjustably mounted thereon, a support adjustably mounted in the bracket and provided with outwardly disposed forks having holes in their end portions, a perforated pipe supported in the holes of the forks, a tube pivotally mounted on the pipe and covering the perforations, a valve connected to the pipe and a compressed air supply pipe connected with the valve to supply air to the perforated pipe and tube.

1,155,621. DRINKING-FOUNTAIN. WILLIAM H. SCHULTE, Trenton, N. J. Filed Sept. 30, 1911. Serial No. 652,167. (Cl. 137—110.)



A mouth drinking fountain having in combination with an inlet pipe a stationary vertically disposed distributer having a pointed cone shaped head connected with the pipe and arranged so that water from the pipe is delivered in an upward direction, a controlling ring threaded on the distributer inclosing the same and adjustable thereon so as to cause water to be delivered from the distributer in a stream when the ring is in one position and in a bubble when in a different position, and a guard formed on the upper part of the ring and surrounding the cone shaped pointed head of the distributer and acting therewith to prevent water from being squirted.

1,155,622. PRESSURE-TANK FOR VAPOR-LAMP SYSTEMS. EDWARD SEITZ, Peoria, Ill. Filed Dec. 9, 1911. Serial No. 664,940. (Cl. 158—50.1.)

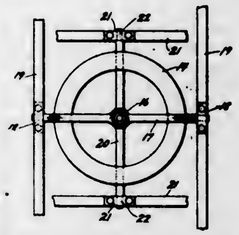


1. In a device for the purpose described, the combination of a tank including two receivers, a pipe extending through one of the receivers and communicating with and terminating within the other, means through which to introduce air under pressure into the first named receiver including a valve, a pipe connecting said means with the first named pipe, a pipe extending longitudinally through the first, and terminating in the second receiver including a valve in control of the same, and a third pipe extending through the first receiver terminating in the other and provided with a closure at its upper end.

2. In a device of the character described, the combination of a tank including an upper and a lower receiver, a pipe extending through the upper receiver and terminating at one end in the lower receiver, its upper end terminating outside the said upper receiver, a fitting mounted on said tank provided with a passage in communication with the pipe, said fitting having an extension, a second tubular fitting mounted on the top of the tank, means connecting it with said extension, a valve controlling the flow of fluid through said second fitting, the first described fitting having a second valved tubular extension, a valve in said extension, a second pipe lying within the first described pipe and extending into the lower of the receivers and terminating at its upper end in the first described fitting and communicating with its second or valved extension.

3. In a device for the purpose set forth, the combination of a tank, a partition therein separating the tank into an upper and a lower air tight receiver, a pipe opening at its end through the partition into the lower receiver and extending through and outside of the upper receiver, a fitting on the top of the latter including a passage receiving the end of said pipe, said fitting having two branches each provided with a passage, a second fitting on the top of the upper receiver provided with a passage communicating with said receiver, a conduit connecting the passage of said second fitting with one of the said branches of the first said fitting, a valve in said second fitting in control of its passage, means through which to introduce air under pressure to the passage of said second fitting and thence to the upper receiver, a second pipe extending longitudinally through the first pipe and having communication at one end with the other passage of the first described fitting, said pipe extending into the bottom of the lower receiver, a valve in control of the passage of said first named fitting with which the second pipe connects, and a filling pipe connected into the lower receiver.

1,155,623. FIFTH-WHEEL FOR VEHICLES. WILLIAM OSCAR SHADBOLT, New York, N. Y. Original application filed Sept. 18, 1913, Serial No. 790,497. Divided and this application filed May 27, 1914. Serial No. 841,281. (Cl. 21—114.)



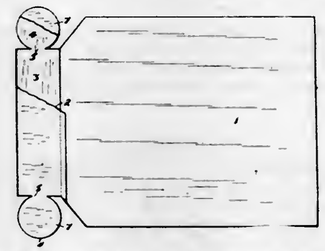
1. A fifth wheel adapted to connect the forward end of a vehicle to a tractor or the like, comprising an upper and a lower member of annular form and means adapted to pivotally connect the said two members together; the said upper member being provided with projections extending beyond the periphery of said upper member and adapted to be journaled in bearings secured to the under side of the forward portion of a vehicle, and said lower member being provided with projections extending beyond the periphery thereof and adapted to be journaled in devices secured to the said tractor, the axis of the lateral projections on one of said annular members being so located as to be in a line substantially at right angles to the axis of the lateral projections on the other of said annular members when the vehicle and the tractor are substantially in alinement.

2. A fifth wheel comprising an upper member having lateral projections journaled under the frame of a vehicle, a lower member having lateral projections journaled over devices located below the vehicle, a projecting member on said lower member, and a socket member on said upper member, said socket member being provided with an opening substantially larger than the upper portion of said projecting member.

3. A fifth wheel comprising an upper member having lateral projections journaled under the frame of a vehicle and a lower member having lateral projections journaled over devices located below the vehicle, one of said members being provided with a projecting member of conical form, and the other of said members being provided with a socket substantially larger than the apex of said conical projecting member.

4. A fifth wheel comprising an upper member having lateral projections journaled under the frame of a vehicle, and a lower member having lateral projections journaled over devices located below the vehicle, one of said members being provided with a projecting member of a form decreasing from its base outward, and the other of said members provided with a socket substantially larger than the smaller portion of said projecting member.

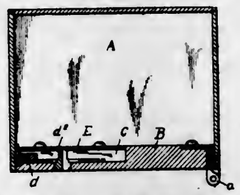
1,155,624. COIN-WRAPPER. CARL SILBERSTEIN, Berkeley, Cal. Filed Apr. 1, 1914, Serial No. 828,741. Renewed Sept. 1, 1915. Serial No. 48,577. (Cl. 133—10.)



1. A coin wrapper comprising a sheet of paper reduced in width at one end, a strip of thin sheet material of greater strength than the paper extending transversely across the paper at said end, said paper being folded over said strip, adhesive securing said strip and folded portion to the sheet of paper, said strip having at each end substantially circular extensions, and the paper and folded portion having similar extensions registering with the extensions of the strip, and adhesive securing said paper, strip and folded portions, as likewise the extensions, to one another.

2. A coin wrapper comprising a sheet of paper one terminal portion of which is formed on opposite sides with approximately circular portions, and a strip of thin sheet material of greater strength than the paper extending across said terminal portion of the paper and having approximately circular portions exactly overlying the circular portions of the paper, and adhesive securing said strip to the paper and the circular portions to one another.

1,155,625. DOOR AND LOCK FOR SAFE-DEPOSIT BOXES AND THE LIKE. THOMAS S. SPIVEY, Cincinnati, Ohio, assignor to American Bankers Dust Proof Time Lock Company, New York, N. Y., a Corporation of Delaware. Filed Apr. 6, 1914. Serial No. 829,769. (Cl. 109—12.)

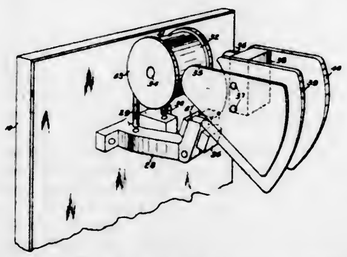


1. A metallic door for safe-deposit boxes and the like, of solid construction, and substantial and approximately uniform thickness, the same being provided with a recess in its internal face, a lock secured in position within said recess, and a cover-plate fixedly secured over said lock and lying in said recess, with its exposed face substantially

flush with the internal face of said door, said lock including a key-hole post the forward end of which lies substantially flush with the outer face of said door, its inner end operating in a bearing in said cover-plate, substantially as set forth.

2. A metallic door for safe-deposit boxes and the like, of substantial and approximately uniform thickness, the same being provided with a recess in its internal face, a lock secured in said recess, and a cover-plate in said recess extending over said lock and lying with its exposed face flush with the internal face of said door, said lock including a key-hole post the end whereof passes through said door and lies flush with the outer surface thereof, its rearward end, co-acting with a bearing in said cover-plate, said cover-plate being provided with ears engaging in depressions in the inner face of said door and having exposed surfaces flush with said inner face, and with securing means whereby said ears are secured in said depressions, substantially as set forth.

1,155,626. SWITCH. HALFDAN A. STEEN, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Nov. 2, 1910. Serial No. 590,295. (Cl. 175—282.)



1. A blow-out magnet including a core and poles, said poles being removably held in engagement with said core by the frictional engagement of said parts.

2. In combination, a switch having relatively movable contact members, and a blow-out magnet including a core and poles, said poles embracing said contacts and being removably held in yielding engagement with said core.

3. In combination, a switch having relatively movable contact members, a blow-out magnet including a core and poles, said poles embracing said contacts and said core and removably held in position thereon by the frictional engagement of said parts, and means to limit the relative movement of said core and poles.

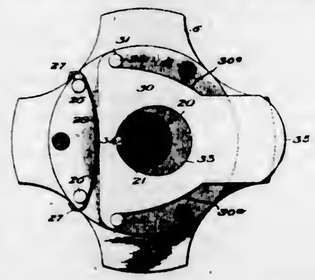
4. In combination, a switch having relatively movable contact members, and a blow-out magnet including a core and a pair of poles spaced apart and connected by non-magnetic material, said poles embracing said contacts and said poles and removably held in engagement with said core by the frictional engagement of the parts.

5. In a blow-out magnet, the combination of a winding, a metal member extending through said winding, and poles having arcing shields, said poles embracing said metal member and removably held thereto solely by the frictional engagement of the parts.

[Claims 6 to 13 not printed in the Gazette.]

1,155,627. REVOLVING CHAIR. CHARLES J. TRAVERS, Oak Park, Ill. Filed July 9, 1914. Serial No. 849,925. (Cl. 155—41.)

1. The combination, in a chair-iron, of a bored hub or base, a sleeve revolubly mounted therein, the latter being bored and threaded and provided at its upper end with an overlapping flange, an adjusting standard or screw mounted in the sleeve and having threads at its lower end engaging those of the sleeve and provided with a longitudinal groove, a pair of fulcrum-studs rising from the flange of the sleeve and arranged eccentrically with the opening therein, a substantially triangular-shaped plate mounted on the flange of the sleeve, said plate having an elongated opening to receive the adjusting-standard or screw and at one side formed with a lug for engaging the groove of the adjusting-screw or standard, a handle or tongue at one side of the plate and projecting beyond the flange, hooks at the remaining corners of the plate removably engaging the eccentrically located fulcrum-studs, studs back of the plate upon the flange, a bowed spring secured at its ends to said studs and between the same having its bowed portion bearing against the rear edge of the locking-plate, and a concaved cap or cover secured to the flange and provided with a slot at one side through and beyond which the tongue or handle projects.



2. The combination, in a chair-iron, of a bored hub or base, a sleeve revolubly mounted therein, the latter being bored and threaded and provided at its upper end with an overlapping flange, an adjusting-standard or screw mounted in the sleeve and having threads at its lower end engaging those of the sleeve and provided with a longitudinal groove, a pair of fulcrum-studs rising from the flange of the sleeve and arranged eccentrically with the opening therein, a substantially triangular-shaped plate mounted on the flange of the sleeve, said plate having an elongated opening to receive the adjusting-standard or screw and at one side formed with a lug for engaging the groove of the adjusting-screw or standard, a handle or tongue at one side of the plate and projecting beyond the flange, hooks at the remaining corners of the plate removably engaging the eccentrically located fulcrum-studs, means for yieldingly pressing said plate forward, whereby its lugs are normally retained in locking engagement with the groove of the adjusting-standard or screw, and a concaved cap or cover secured to the flange of the sleeve and having a slot through and beyond which the handle or tongue of the locking-plate projects.

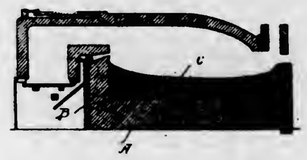
3. The combination, in a chair-iron, of a bored hub or base, a bored sleeve revolubly supported thereby and having opposite studs rising therefrom and arranged eccentrically with relation to the bore thereof, an adjusting-standard or screw longitudinally grooved and threaded in the sleeve, a locking-plate mounted for horizontal movement upon the sleeve and having a lug for engaging the adjusting standard or screw and opposite openings for loosely engaging the studs of the sleeve, and a spring for influencing the locking-plate whereby its lug is normally in engagement with the groove of the adjusting-standard or screw.

4. The combination, in a chair-iron, of a bored hub or base, a bored sleeve revolubly supported thereby and having a flange at one end provided with a pair of fulcrum-studs arranged opposite each other and eccentric with the bore of the sleeve, a longitudinally grooved adjusting-standard or screw threaded in the sleeve, a horizontally disposed vibratory locking-plate mounted for movement upon the flange of the sleeve and provided with a locking lug and at each side thereof with hooks for temporarily engaging the fulcrum-studs, and means for yieldingly influencing the locking-plate whereby its lug is normally in engagement with the groove of the adjusting-standard or screw and its hooks in engagement with the fulcrum studs.

5. The combination, in a chair-iron, of a bored hub or base, a bored sleeve revolubly supported thereby, an adjusting-standard or screw longitudinally grooved and threaded in the sleeve, a pair of fulcrum-studs arranged at opposite sides of the standard or screw and upon the sleeve, a vibratory locking-plate having opposite stud engaging openings and in advance thereof having curved guides, each concentric with the opposite stud, and with an elongated opening receiving the standard or screw, and at one side having a lug for engaging the standard or screw, and means for influencing the plate whereby its lug is normally in engagement with the groove of the standard or screw.

[Claim 6 not printed in the Gazette.]

1,155,628. METHOD FOR THE TREATMENT OF ZINC ORE OR ZINC-BEARING MATERIAL. SEWALL TRUAX, Canon City, Colo., assignor to Granadena Mining Company, a Corporation of Arizona. Filed Dec. 16, 1910. Serial No. 597,660. (Cl. 75—153.)



1. The herein described method of treating slag containing zinc comprising maintaining the slag in a fluid condition in contact with a body of finely divided reducing material, the particles of which are prevented from passing into the fluid.

2. The herein described method of treating slag containing zinc comprising melting the slag, depositing the fluid slag on a solid body of finely divided carbon reducing material and a binder that prevents the particles of reducing material from passing into the fluid, and maintaining the slag in fluid condition.

3. The herein described method of treating zinc bearing material comprising maintaining the material in a fluid condition with the lower portion thereof in contact with a carbon reducing material, that is prevented from passing up through the fluid, and permitting the gaseous carbon monoxid to bubble up through the fluid mass and extend to the upper portions thereof in being converted into carbon dioxid.

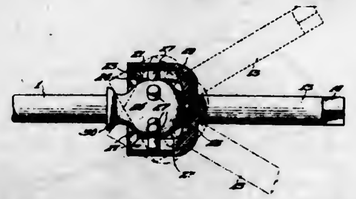
4. The herein described method of treating zinc bearing material comprising smelting the material to a fluid condition in contact with finely divided reducing material, the particles of which are prevented from passing into the fluid.

5. The herein described method of treating slag containing zinc comprising melting the slag, depositing the molten mass on a bed composed of finely divided coke and a clay binder that prevents the particles of coke from passing into the fluid, and maintaining the slag in fluid condition.

1,155,629. UNIVERSAL SHAFT-COUPLING. PETER TURON, Los Angeles, Cal. Filed Jan. 4, 1915. Serial No. 520. (Cl. 74—19.)

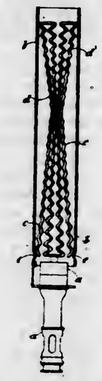
1. In combination, a stub shaft, a cup on said stub shaft, said cup having a series of longitudinal grooves formed in the inner face thereof parallel to the axis of the cup, the bottom of said grooves being parallel to the inner face of said cup, a main shaft, a ball on the end of said main shaft adapted to enter said cup and circumferentially engage the inner face of said cup the entire distance between said grooves, a series of pins on said ball adapted to enter the slots in said cup, said pins being adapted to engage the sides of the slots.

2. In combination, a fixed member, a main shaft mounted therein, a laterally movable member pivotally connected to said fixed member, a stub shaft mounted in said laterally movable member, a cup formed on one end of said stub shaft having a series of longitudinal grooves therein, the bottom of said grooves and the inner face of said cup being substantially parallel with the axis of said cup, a ball on one end of said main shaft, a series of pins arranged circumferentially on said ball in a plane at right



angles to the axis of said main shaft, and said movable member, said pins having straight sides adapted to engage the sides of said grooves during the lateral movement of said movable member, and said ball being in circumferential engagement with the inner face of said cup during such movement.

1,155,630. BURNER FOR GAS AND SIMILAR RADIATORS, STOVES, AND THE LIKE. ALEXANDER BEATON WALKER, Wallsend, England. Filed Aug. 30, 1912. Serial No. 717,834. (Cl. 126—251.)



1. The combination of a burner of the Bunsen type, a chimney of highly refractory material surrounding the burner, a heat radiating element of highly refractory material, such as silica, shaped as a hollow skeleton to follow the contour of and present a requisite conducting and radiating surface to the flame, and a regenerative element of similar material twisted spirally.

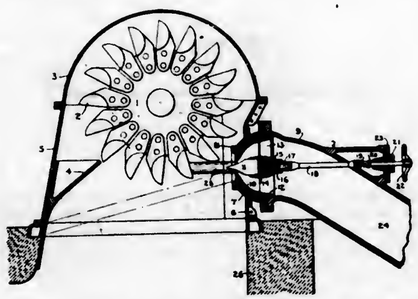
2. The combination of a burner of the Bunsen type, a chimney of highly refractory material surrounding the burner, a heat radiating element and a regenerative element of highly refractory material shaped as a double cone spiral.

3. In gas burners and radiators the combination of a vertical burner, a chimney of highly refractory material mounted over the burner, a heat radiating element of highly refractory material disposed within the chimney and extending longitudinally thereof for the greater part of the length of the chimney, said radiating element at its extremities extending to the wall of the chimney and contracting to a waist between its extremities.

4. In gas burners and radiators the combination of a vertical burner, a chimney of highly refractory material mounted over the burner, a radiating element of highly refractory material disposed within the chimney and ex-

tending longitudinally thereof for the greater part of the length of the chimney, said radiating element at its extremities extending to the wall of the chimney and contracting to a waist between its extremities.

1,155,631. HYDRAULIC NOZZLE. WILLIAM MONROE WHITE, Milwaukee, Wis. Filed Sept. 29, 1913. Serial No. 792,879. (Cl. 138—18.)



1. In a nozzle, a casing, jet-size-changing means shiftable angularly and adjustable to change the size of the jet, and a flexible shaft normally intersecting the axis of angular shift for adjusting said jet-size-changing means.

2. In a nozzle, a casing, jet-direction-changing means within said casing, adjustable jet-size-changing means carried by said jet-direction-changing means, and a flexible shaft within said casing for operating said jet-size-changing means.

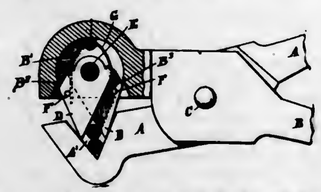
3. In a nozzle, a casing, jet-direction-changing means within said casing, means for operating said jet-direction-changing means, adjustable jet-size-changing means carried by said jet-direction-changing means, and a flexible shaft directly connected to and operating said jet-size-changing means.

4. In a nozzle, a casing, jet-direction-changing means within said casing, jet-size-changing means carried by said jet-direction-changing means, said jet-size-changing means being adjustably normally lock-geared to said jet-direction-changing means, and said parts being locked during movement of said jet-direction-changing means, and means extending from without said casing through and coacting directly with same and connected directly with and for adjustment of said jet-size-changing means.

5. In a nozzle, a casing, a hood movable within said casing, a needle within said hood, said needle being adjustably normally lock-geared to said hood and said parts being locked during movement of said hood, and means extending from without said casing through and coacting directly with same and connected directly with and for adjustment of said needle.

[Claims 6 and 7 not printed in the Gazette.]

1,155,632. PLIERS. FRANK WOODHEAD, Glen Riddle, Pa. Filed Mar. 26, 1915. Serial No. 17,103. (Cl. 81—47.)



1. In combination, a pair of plier levers pivoted together, one of said levers being formed with a trough shaped notch or recess in the inner side of its jaw end, a pair of gripping jaws pivoted together and carried by the jaw end of the other lever and adapted to enter said notch and engage the wall thereof when the jaw ends of said plier levers are moved toward one another, whereby said jaws are caused to approach one another.

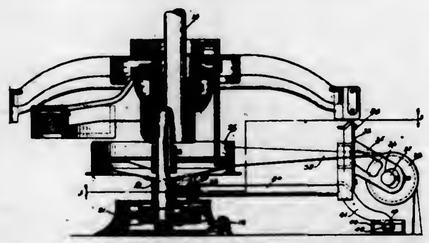
2. In combination, a pair of of plier levers pivoted together, one of said levers being formed with a trough shaped notch or recess in the inner side of its jaw end, and a pair of gripping jaws pivoted to one another and to the jaw end of the other plier lever and having tapered end portions adapted to enter said notch and engage the wall thereof when the jaw ends of said levers are brought together, whereby said jaws may be caused to close upon an object resting in said notch.

3. In combination, a pair of plier levers pivoted together, one of said levers being formed with a notch in the inner side of its jaw end, a pair of coöperating gripping jaws pivotally connected to one another and to the jaw end of the other plier lever and having end portions adapted to enter said notch and engage the wall thereof as the jaw ends of said levers are moved together, whereby said jaws are caused to approach one another, and resilient means tending to spread said jaws apart.

4. In combination, a pair of plier levers pivoted together, one of said levers being formed with a notch in the inner side of its jaw end, a pair of coöperating gripping jaws pivotally connected to one another and to the jaw end of the other lever and having end portions adapted to enter said notch and engage the wall thereof as the jaw ends of said levers are moved together, whereby said jaws are caused to approach one another, resilient means tending to spread said jaws apart, and means carried by said other lever limiting the spreading apart of said jaws.

5. In combination, a pair of plier levers pivoted together, one of said levers being formed with a notch in the inner side of its jaw end, the jaw end of the other lever being formed with a cavity in the inner side of its jaw end, a pair of coöperating gripping jaws entering said cavity and pivotally connected therein to said lever and to each other, and having end portions adapted to enter said notch and engage the wall thereof as the jaw ends of said levers are moved together, whereby said jaws are caused to approach one another, and resilient means mounted on said housing tending to spread said jaws apart, said cavity being so shaped that the wall thereof is adapted to limit the spreading apart of said jaws.

1,155,633. SIFTER-DRIVE. LESLIE I. ZIEGLER, Indianapolis, Ind., assignor to Nordyke & Marmon Company, Indianapolis, Ind., a Corporation of Indiana. Filed Apr. 23, 1914. Serial No. 834,015. (Cl. 83—38.)



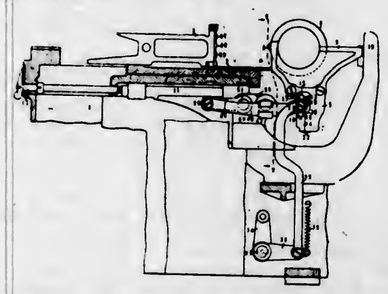
1. The combination of a gyratory body and means for supporting the same, of a rotatable shaft having a cranked portion journaled in said body and also having a supporting portion eccentric to said cranked portion and substantially in the axis of desired gyration, a laterally-yieldable, vertically-movable support for said shaft carrying a bearing receiving said eccentric portion, a driving pulley mounted upon said eccentric portion, a sleeve journaled on the aforesaid eccentric portion, a distance rod connected with said sleeve by a horizontal pivotal connection, a laterally-yieldable support for the outer end of said distance rod, and a pair of belt-supporting idlers carried by said distance rod to support a driving belt passing to the driving pulley.

2. The combination of a gyratory body and means for supporting the same, of a rotatable shaft having a cranked portion journaled in said body and also having a supporting portion eccentric to said cranked portion and substantially in the axis of desired gyration, a laterally-yieldable, vertically-movable support for said shaft carrying a bearing receiving said eccentric portion, a driving pulley mounted upon said eccentric portion, a sleeve journaled on the aforesaid eccentric portion, a distance rod connected with said sleeve, a laterally-yieldable support for the outer end of said distance rod, and a pair of belt-supporting idlers carried by said distance rod to support a driving belt passing to the driving pulley.

3. The combination of a gyratory body and means for supporting the same, of a rotatable shaft having a cranked portion journaled in said body and also having a supporting portion eccentric to said cranked portion and substantially in the axis of desired gyration, a laterally-yieldable, vertically-movable support for said shaft carrying a bearing receiving said eccentric portion, a driving pulley mounted upon said eccentric portion, a sleeve journaled on the aforesaid eccentric portion, a distance rod connected with said sleeve by a horizontal pivotal connection, a pair of laterally-separated feet carried by the outer end of said distance rod and each provided with a roller having a horizontal axis, a pair of supporting plates for said rollers, laterally-projecting horizontal pins carried by said feet, and guards carried by said plates and overlying said pins.

4. The combination of a gyratory body and means for supporting the same, of a rotatable shaft having a cranked portion journaled in said body and also having a supporting portion eccentric to said cranked portion and substantially in the axis of desired gyration, a laterally-yieldable, vertically-movable support for said shaft carrying a bearing receiving said eccentric portion, a driving pulley mounted upon said eccentric portion, a sleeve journaled on the aforesaid eccentric portion, a distance rod connected with said sleeve, a pair of laterally-separated feet carried by the outer end of said distance rod and each provided with a roller having a horizontal axis, a pair of supporting plates for said rollers, laterally-projecting horizontal pins carried by said feet, and guards carried by said plates and overlying said pins.

1,155,634. TYPE-WRITING MACHINE. NILS H. ANDERSON, Hartford, Conn., assignor, by mesne assignments, to The Noiseless Typewriter Company, Middletown, Conn., a Corporation of Connecticut. Filed Apr. 27, 1908. Serial No. 429,407. (Cl. 197—72.)



1. In a typewriting machine, in combination, a shiftable part, shifting mechanism therefor, a relatively fixed part, and pivotally mounted connecting means between said shiftable part and fixed part to compel a movement of the shifted part to three different printing positions lying in the same plane.

2. In a typewriting machine, in combination, a set of type-bars each being provided with a plurality of type, and a platen, one of which is shiftable to change the relative position of the type and platen for printing different case characters, means for supporting and shifting the shiftable part, and means pivotally connected with the shiftable part for compelling a movement thereof to shifted positions equally distant from the other part.

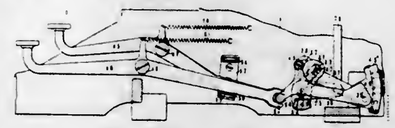
3. In a typewriting machine, the combination with the type bars, each of which carries a plurality of types, and a platen, of means for compelling the platen to move in a substantially vertical plane when shifted, comprising a shift rail, a rock shaft, intermediate connecting links, and swinging arms connected with the rail and with the frame of the machine.

4. In a typewriting machine, the combination with the type bars, each of which is provided with a plurality of types, and a platen shiftable in a direction transverse to its length, of a rock shaft journaled in a fixed portion of the machine, and means connected with said rock shaft and with said platen for compelling a movement of the latter to a shifted position in the same plane parallel to the plane occupied by the faces of the types when the latter are projected to the printing point.

5. In a typewriting machine, the combination with the type bars each of which carries a plurality of types, and a platen carriage shiftable with respect to said types, of swinging means connected with the platen carriage and adapted to guide the same in its shifting movements, and means for varying the radius of said swinging means whereby the platen carriage will be moved in a substantially straight line.

[Claims 6 to 28 not printed in the Gazette.]

1,155,635. PLATEN-SHIFTING MECHANISM FOR TYPE-WRITING MACHINES. NILS H. ANDERSON, Hartford, Conn., assignor, by mesne assignments, to The Noiseless Typewriter Company, Middletown, Conn., a Corporation of Connecticut. Filed Apr. 27, 1908. Serial No. 429,408. (Cl. 197—72.)



1. In a typewriting machine, the combination with a support for a set of types and a platen, one of which is shiftable to change the disposition of the type with respect to the platen, of a pair of rotatably mounted cam members adapted when actuated to move the shiftable part in opposite directions from a normal central position, and an independent actuator for each of said cam members movable relatively thereto, said actuators coöperating to hold said shiftable part in normal central position.

2. In a typewriting machine, the combination with a support for a set of types and a platen, one of which is shiftable to change the disposition of the type with respect to the platen, of a pair of rotatably mounted cam members adapted when actuated to move the shiftable part in opposite directions from a normal central position, and key operated means connected at one end to said cam-members for actuating each of said cam members and for holding them in a position of rest, whereby the shiftable part will be held in its normal central position.

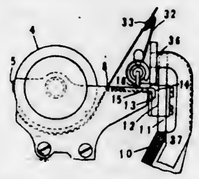
3. In a typewriting machine, the combination with a support for a set of types and a platen, one of which is shiftable to change the disposition of the type with respect to the platen, of a pair of oscillatory cam members having cam paths adapted when actuated to move the shiftable part in opposite directions from a normal central position, and a key operated actuator for each of said members having means for traversing the cam path thereof to thereby actuate the cam member, each of said key operated actuators having means which engages one of said oscillatory members and coöperates with the corresponding means upon the other thereof to hold the shiftable part in its normal central position.

4. In a typewriting machine, the combination with a support for a set of types and a platen, one of which is shiftable to change the disposition of the type with respect to the platen, of a pair of oscillatory members having cam paths connected with said shiftable part, and an actuating device for each of said members having means for traversing the cam paths thereof, whereby said members may be oscillated to shift the shiftable part, and means carried by said actuating devices for engaging said oscillatory members and for holding the same in such position as will hold the shiftable part in a normal central position.

5. In a typewriting machine, the combination with a support for a set of types and a platen, one of which is shiftable to change the disposition of the type with respect to the platen, of a pair of oscillatory members having cam paths connected with the platen, each of said members being adapted to move the shiftable part from a normal central position in a direction opposite to that in which it is moved by the other thereof, a key operated actuating device for each of said oscillatory members provided with a part which traverses the cam path thereof, thereby to actuate the same, each of said actuating devices being also provided with a part which limits the oscillatory movement of one of said cam members in one direction.

[Claim 6 to 57 not printed in the Gazette.]

1,155,636. TYPE-WRITING MACHINE. NILS H. ANDERSON, Hartford, Conn., assignor, by mesne assignments, to The Noiseless Typewriter Company, Middletown, Conn., a Corporation of Connecticut. Filed June 5, 1908. Serial No. 436,746. (Cl. 197—70.)



1. In a typewriting machine, the combination with the carriage, of a toothed rack fixed thereon, a bar seated upon the teeth of said rack, a block mounted to slide upon said bar, and a locking member movably mounted upon said block and having teeth adapted to engage those of the rack.

2. In a typewriting machine, the combination with the carriage, of a pair of contacting bars mounted upon the carriage and disposed in parallel relation thereon, said bars having intermediately-disposed teeth, a stop block mounted to slide upon one of said bars, and means mounted upon said stop block and engaging said teeth, whereby said stop block may be locked in position upon said bar.

3. In a typewriting machine, the combination with the carriage, of a toothed bar fixed upon the carriage, a circular bar supported upon the teeth of said first-mentioned bar, a stop block mounted to slide upon said circular bar and held against rotation with respect thereto, and a locking member, rotatively mounted upon said stop block and having teeth for engaging the teeth of said first-mentioned bar, whereby said block may be moved to and locked at any desired point in the length thereof.

4. In a typewriting machine, the combination with the carriage, of a toothed bar fixed thereon, said bar being provided with a plurality of teeth, a circular bar supported upon the teeth of said first-mentioned bar, a stop block mounted to slide upon said circular bar, said stop block being provided with a slot which engages the lateral surfaces of said teeth, whereby said block is maintained against rotation, a locking member rotatively mounted upon said stop block and having teeth adapted to be swung into engagement with the teeth of said first-mentioned bar, and spring means interposed between said stop block and said locking member whereby said teeth are normally urged into engagement.

5. In a typewriting machine, the combination with the carriage, of a rack bar supported upon said carriage, a circular bar located adjacent the teeth of said rack bar and supported thereon, a slotted stop block mounted to slide upon said circular bar, the slot thereof engaging the lateral surfaces of the teeth of the rack whereby said block is held against rotation with respect thereto, a slotted locking member rotatively mounted upon said stop block and having teeth for engaging the teeth of said rack, a spring interposed between said stop block and said locking member which normally urges the teeth of the latter into engagement with the teeth of said rack to lock said stop block in any desired position along said bar, and a finger piece located upon said locking member adapted to rotate the same to disengage the teeth thereof from those of the rack, whereby said stop block may be slid along said bar and locked at any desired point in the length thereof.

[Claims 6 to 17 not printed in the Gazette.]

1,155,637. CLIP. ROBERT P. BARBOUR, Waterbury, Conn., assignor to The Hoge Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Aug. 6, 1913. Serial No. 783,235. (Cl. 24—11.)



1. A clip of the character described, comprising a base having a resilient pressure arm integral therewith and extending longitudinally therefrom, said pressure arm having an opening therein at a point adjacent the base, a retracting lever extending through the opening in the pressure arm and having a fulcrum in said opening, the said retracting lever having a finger piece at one end disposed above the base, with the opposite end of the lever engaging beneath the pressure arm for lifting its outer end and a tongue carried by one of the said members and engaging the other member to thereby prevent withdrawal and disengagement of the lever from the opening in the pressure arm.

2. A clip of the character described, comprising a base having a resilient pressure arm integral therewith and extending longitudinally therefrom, said pressure arm having an opening therein at a point adjacent the base, a retracting lever passed part way through the opening in the pressure arm with the inner end of said lever disposed above the base and serving as a finger piece and the outer end of the lever engaging beneath the pressure arm for lifting its outer end, and a tongue coöperating with that part of the lever which has been passed through the opening in the pressure arm, to thereby secure the lever against withdrawal from the said opening.

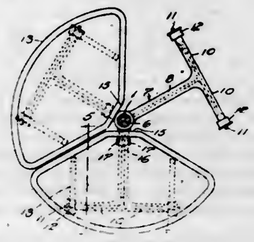
3. A clip of the character described, comprising in combination, a base, a resilient spring pressure arm carried by the base and extending longitudinally therefrom, said pressure arm having an opening therein at a point adjacent the base, and a retracting lever having a reduced portion adapted to pass through the opening in the pressure arm into engagement with the underside of said arm to lift the outer end thereof, shoulders at the base of said reduced portion engaging the arm to limit the movement of the lever through the opening, a finger piece in rear of said shoulders and overlying the base, and a tongue struck from the reduced portion of the lever and engaging the side of the pressure arm opposite that engaged by the shoulders to thereby secure the lever against withdrawal from the opening.

4. A clip of the character described, comprising in combination, a base, a longitudinally extending spring pressure arm carried by the base and provided with a fulcrum opening therein at a point adjacent the base, a retracting lever passed part way through said opening and extending beneath the pressure arm into engagement with said arm to lift the outer end thereof, a resilient tongue struck downward from the retracting lever and engaging the underside of the pressure arm at a point adjacent the edge of the fulcrum opening therein to thereby force the outer end of the lever up into engagement with the underside of the pressure arm, and a finger piece on the extended end of the retracting lever for operating the same.

5. A clip of the character described, comprising a base, a longitudinal extending spring pressure arm integral with the base and provided with a fulcrum opening therein at a point adjacent the base, a retracting lever made of resilient material and having a reduced portion passed through the fulcrum opening into engagement with the underside of the pressure arm to lift the outer end thereof, shoulders at the base of the reduced portion, engaging the upper side of the pressure arm adjacent the fulcrum opening therein, a finger piece on the extended end of the lever in rear of the shoulders and overlying the base, and a resilient tongue struck down from the reduced portion of the lever into engagement with the underside of the pressure arm beneath the fulcrum opening therein to thereby force the reduced portion of the lever upward into engagement with the pressure arm and to prevent withdrawal of the lever from the fulcrum opening.

[Claim 6 not printed in the Gazette.]

1,155,638. TABLE-SERVICE APPARATUS. AARON L. BOWEN, Seattle, Wash., assignor to Henry B. Hardt, Seattle, Wash. Filed July 6, 1914. Serial No. 849,095. (Cl. 65—55.)



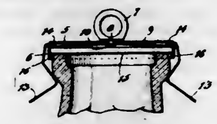
1. Table service apparatus, consisting in a vertically arranged circular standard, a frame rotatably mounted on said standard having a plurality of radially directed arms and oppositely directed branches upon each of said arms, anti-friction rollers rotatably supported upon each of said branches, a tray removably supported on each said arm, said tray having an axially alined clip adapted to engage with said arm, and a strip adapted to register with the respective said rollers, said strips being arranged to drop in behind said rollers when the tray is in inserted position upon the frame.

2. Table service apparatus consisting in a vertically arranged circular standard, a frame rotatably mounted on said standard having a plurality of radially directed arms and oppositely directed branches upon each of said arms, anti-friction rollers rotatably supported upon each of said branches, a tray of substantially segmental configuration removably supported on each said arm, said tray having an axially alined clip adapted to engage with said arm, and strips adapted to register with the respective said rollers, said strips being arranged to drop in behind said rollers when the tray is in inserted position upon the frame.

1,155,639. BOTTLE-CLOSURE. ABEL H. BRESLOVE and ALFRED WETZIG, Chicago, Ill., assignors to Sallie O. Powell, Chicago, Ill. Filed Apr. 17, 1914. Serial No. 832,472. (Cl. 215—25.)

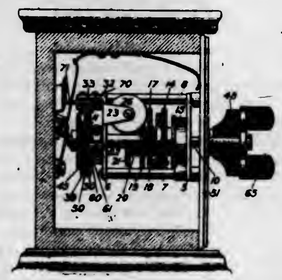
1. A bottle closure comprising a cap; bottle engaging arms extending laterally from said cap; heads on said arms; and a disk spring secured to the central part of said cap and having its edge portion resting against said heads, substantially as described.

2. A bottle closure comprising a cap having lateral perforations near its upper side; a bottle neck engaging arm extending through each perforation into said cap; a head on each of said arms on the inner side of said cap and adapted to prevent removal of said arm from said perforation; and a disk spring secured in said cap against the under side of said heads, substantially as described.



3. A bottle closure comprising a cap having lateral perforations near its upper side; a bottle neck engaging arm extending through each perforation into said cap; a head on each of said arms on the inner side of said cap and adapted to prevent removal of said arm from said perforation; a disk spring secured in said cap against the under side of said heads; and a disk spaced below said disk spring in said cap, substantially as described.

1,155,640. IMPULSE-TRANSMITTER FOR SELECTIVE SYSTEMS. GREGORY BROWN, Brooklyn, N. Y., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed July 11, 1910. Serial No. 571,397. (Cl. 179—90.)



1. In an impulse transmitter the combination with a rotatable toothed wheel, of contact springs engaged by the teeth of said wheel to make and break a circuit, a shaft upon which said toothed wheel is mounted, a segmental plate rotatably mounted upon the end of said shaft adjacent to said toothed wheel the periphery of said plate being flush with the outer ends of teeth on said wheel and a positioning spring secured to said plate and provided on one end with a portion adapted to engage the space between two adjacent teeth.

2. In an impulse transmitter the combination with a rotatable toothed wheel and spring contacts engaged thereby for making and breaking a circuit, of a shaft for said toothed wheel, a gear wheel rotatively mounted upon said shaft adjacent to said toothed wheel, a segmental plate secured to said gear wheel adjacent to said toothed wheel, the curved portion of said segmental plate being flush with the outer ends of teeth on said toothed wheel, a second gear meshing with the gear on the toothed wheel shaft, a shaft for said second gear and a knob for turning said shaft.

3. In an impulse transmitter the combination with a driving shaft and a driven shaft, of a motor spring surrounding said driving shaft, a gear on said driving shaft, a pinion secured to said driven shaft with which said gear meshes, a gear on said driven shaft adapted to rotate with said pinion, a pinion loosely mounted on said driving shaft with which said gear on the driven shaft meshes, a gear rotating with said pinion on said driving shaft, a pinion loosely mounted on said driven shaft with which the loose

gear on said driving shaft meshes, a gear mounted to rotate with said loose pinion on said driven shaft, a governor shaft mounted at right angles to said driven shaft and a worm on said governor shaft meshing with said loose gear on said driven shaft.

1,155,641. CLIP FOR PENS, PENCILS, &c. GORDON HENDRY CLARK, Waterbury, Conn., assignor to The Hoge Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Apr. 6, 1914. Serial No. 829,772. (Cl. 24—11.)



1. A clip of the character described comprising in combination, a base having a resilient pressure arm integral therewith, a retracting lever having a finger-piece extending over said base and a lifting arm extending entirely beneath the pressure arm, one of the said arms passing through an opening in the other arm adjacent said base, said lifting arm being fulcrumed on said pressure arm at said opening and means permanently securing the outer end of the lifting arm to the lower side of the outer end of the pressure arm at a distance from the fulcrum.

2. A clip of the character described comprising in combination, a base, a longitudinally extending resilient pressure arm carried by said base, said arm having a fulcrum opening therein at a point near the base, a retracting lever extended through the said opening and fulcrumed therein, said lever having a finger-piece overlying the base and having its opposite end extending forwardly beneath the pressure arm and means securing the forward end of the retracting lever to the pressure arm.

3. A clip of the character described comprising the combination of a base having a resilient pressure arm integral therewith and extending longitudinally therefrom, said arm having an opening adjacent said base and a retracting lever extending through and having a fulcrum in the opening of said arm adjacent said collar and having a finger-piece extending over said collar and its opposite end extending beneath said pressure arm from said opening and engaging beneath said pressure arm adjacent its outer end and means for positively securing said lever to said pressure arm and preventing the withdrawal of said lever from said opening and, in conjunction with the engagement with the walls of the opening, preventing the lateral movement of said lever.

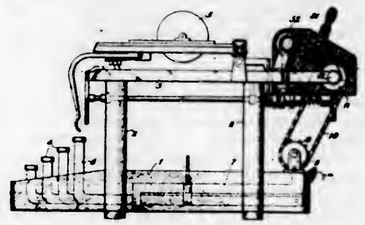
4. A pen or pencil clasp comprising two members connected at their lower ends, one member being bowed intermediate its ends and provided at its upper end with an encircling band, the other member passing through the bowed portion of the first mentioned member and fulcrumed therein, said members being spaced from each other between the joined lower ends and the fulcrumed point, as set forth.

5. A pen or pencil clasp comprising two members, one of said members being bowed intermediate its ends and having its upper end shaped into an encircling band, the other member passing through the bowed member adjacent the upper end thereof, and a ball or sphere connecting the lower ends of said members, as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,155,642. ADDING ATTACHMENT FOR TYPE-WRITING MACHINES. FREDERICK R. CORNWALL, St. Louis, Mo. Filed Aug. 5, 1912. Serial No. 713,322. (Cl. 235—59.)

1. In an adding attachment for type-writing machines, a sub-totalizer including totalizer wheels, means for accumulating amounts in said sub-totalizer, a grand totalizer, and a lever operable to place said sub-totalizer into coöperation with said grand totalizer and to reversely rotate the wheels thereof to restore same to zero position and introduce the amount accumulated therein into the grand totalizer.



2. In a device of the class described, a sub-totalizer, means for introducing amounts into said sub-totalizer, a grand totalizer, an operating handle, means operated from said handle for moving said subtotalizer into coöperation with said grand totalizer, means for locking said sub-totalizer in coöperation with said grand totalizer, means operated from said handle for transferring the amount accumulated in said sub-totalizer into said grand totalizer, and means for unlocking said sub-totalizer to permit its return to normal position.

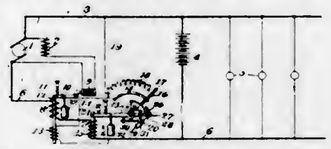
3. In a device of the class described, the combination of a sub-totalizer including totalizer wheels and means for rotating the same to introduce amounts thereinto, a grand totalizer, an operating handle, and means operable by said handle for freeing said totalizer wheels from their operating means and rotating them to introduce amounts accumulated therein into the grand totalizer.

4. In a device of the class described, in combination, a sub-totalizer including totalizer wheels and actuating wheels, means for introducing amounts into said sub-totalizer, a grand totalizer, an actuating handle for throwing said sub-totalizer and said grand totalizer into cooperation, and a rack operable by said handle adapted to rotate the actuating wheels of the sub-totalizer to introduce the amount accumulated in the sub-totalizer into the grand totalizer.

5. In a device of the class described, in combination, a sub-totalizer including totalizer wheels and actuating wheels for said totalizer wheels, means for operating said actuator wheels to introduce numbers into said sub-totalizer, a grand totalizer, means for placing said sub-totalizer and said grand totalizer in coöperation, an operating handle, and means operated thereby adapted to engage the actuator wheels and operate them to transfer an amount accumulated in said sub-totalizer into said grand totalizer.

[Claims 6 to 8 not printed in the Gazette.]

1,155,643. ELECTRIC REGULATION. JOHN L. CREVELING, New York, N. Y., assignor to Safety Car Heating and Lighting Company, a Corporation of New Jersey. Filed May 6, 1911. Serial No. 625,517. (Cl. 171—229.)



1. The combination of a generator, automatic regulating means therefor, and means for producing additional effects in the operation of said regulating means only upon intermittent effects in the performance of the generator.

2. The combination of a generator, automatic means for regulating the same, and means for additionally affecting the regulating means only in response to intermittent abnormal operation of the generator.

3. The combination of a generator, automatic means for controlling the same, electromagnetic means for operating said controlling means, and means for additionally affecting the controlling means only in response to fluctuations in the generator output.

4. The combination with a generator having a field circuit, of automatic means for controlling said field circuit, means for operating said controlling means in response to fluctuations in current output, and means for affecting said controlling means affected by alterations in generator current.

5. The combination with a generator and an automatic regulator therefor, of means for adjusting the operation of said regulator to increase the effect thereof depending only upon intermittent fluctuations in generator output.

[Claims 6 to 11 not printed in the Gazette.]

1,155,644. MINER'S SHOE. JOHN T. CROWLEY, Beacon Falls, Conn., assignor to The Beacon Falls Rubber Shoe Company, Beacon Falls, Conn., a Corporation of Connecticut. Filed Sept. 1, 1914. Serial No. 859,600. (Cl. 36—4.)



1. A rubber shoe having the front closed and free from obstruction and having an opening disposed rearwardly of such closed front, a rubber tongue located inwardly of such opening, and lacing eyelets disposed entirely on the outside of the upper adjacent the edges of the said opening, the parts being located in such relative positions that the lacings in said eyelets are kept out of contact with the tongue.

2. A rubber shoe having a bellows tongue located at the side and formed with four folds, two of such folds abutting one another and being disposed medially of the other folds, the upper being formed continuous outwardly of such tongue and slit along the medial line of said abutting folds.

3. A rubber shoe having a bellows tongue located at the side and formed with four folds, two of such folds abutting one another and being disposed medially of the other folds, the upper being formed continuous outwardly of such tongue and slit along the medial line of said abutting folds, and fastening means located upon the outside of the upper adjacent said slit.

4. A rubber shoe having a bellows tongue located at the side and formed with four folds, two of such folds abutting one another and being disposed medially of the other folds, the upper being formed continuous outwardly of such tongue and slit along the medial line of said abutting folds, and lacing loops secured upon the outside of the upper adjacent said slit, and lacing carried by said loops exterior to the upper and in position away from the tongue.

1,155,645. SPRING-CUSHION STRUCTURE. FRANK P. D'ARCY, Kalamazoo, Mich. Filed Feb. 25, 1915. Serial No. 10,546. (Cl. 155—25.)



1. In a spring cushion, the combination of a sheet metal frame member curved in cross section to provide a tacking strip channel disposed with the channel facing inwardly, the upper arm of said channel being folded backwardly upon itself and then curved upwardly and inwardly to provide an inwardly facing spring engaging channel disposed centrally above said tacking strip channel, springs having coils arranged in said spring engaging channel and secured therein by clamping portions thereof upon the coils, a rope disposed in said tacking strip channel, the distance between the edges of the channel being substantially less than the diameter of the channel whereby the tacking strip is retained therein, and a covering arranged with its edges wrapped under said frame member and secured thereto by tacks driven into said tacking strip, the length of the tacks exceeding the diameter of the channel whereby their ends are deflected by the wall of the channel and clenched into the tacking strip.

2. In a spring cushion, the combination of a sheet metal frame member curved in cross section to provide a tacking strip channel disposed with the channel facing inwardly, the upper arm of said channel being folded backwardly upon itself and then curved upwardly and inwardly to provide an inwardly facing spring engaging channel disposed centrally above said tacking strip channel, springs having coils arranged in said spring engaging channel, a rope disposed in said tacking strip channel, the diameter of the rope being greater than the distance between the edges of the channel, whereby the tacking strip is retained therein, and a covering arranged with its edges wrapped under said frame member and secured thereto by tacks driven into said tacking strip, the length of the tacks exceeding the diameter of the channel whereby their ends are deflected by the wall of the channel and clenched.

3. In a spring cushion, the combination of a sheet metal frame member curved in cross section to provide a tacking strip channel, one arm of said channel being folded backwardly upon itself and terminating in a spring engaging channel, springs having coils arranged in said spring engaging channel and secured thereby by clamping portions thereof upon the coils, a rope disposed in said tacking strip channel, the diameter of the rope being greater than the distance between the edges of the channel whereby the tacking strip is retained therein, and a covering secured to said frame member by tacks driven into said tacking strip, the length of the tacks exceeding the diameter of the channel whereby their ends are deflected by the wall of the channel and clenched into the rope.

4. In a spring cushion, the combination of a sheet metal frame member curved in cross section to provide a tacking strip channel, one arm of said channel being folded backwardly upon itself and terminating in a spring support channel, spring supports having their ends engaged in said spring support channel, a rope disposed in said tacking strip channel, the diameter of the rope being greater than the distance between the edges of the channel whereby the tacking strip is retained therein, and a covering secured to said frame member by tacks driven into said tacking strip, the length of the tacks exceeding the diameter of the channel whereby their ends are deflected by the wall of the channel and clenched into the rope.

5. In a spring cushion, the combination of a frame member provided with a tacking strip channel, springs mounted on said frame member, a tacking strip formed of rope secured in said tacking strip channel, and a covering secured to said frame member by tacks driven into said tacking strip, the length of the tacks exceeding the diameter of the channel whereby their ends are deflected by the wall of the channel and clenched in the tacking strip.

1,155,646. HOSE-CLAMP. FRANK P. D'ARCY, Kalamazoo, Mich. Filed Mar. 4, 1915. Serial No. 12,197. (Cl. 137—28.)

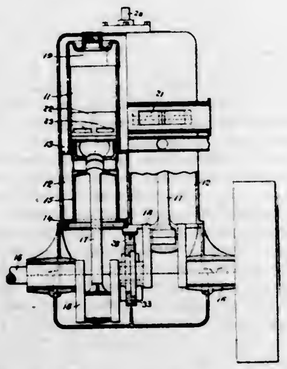
1. A hose clamp comprising an integral sheet metal body having a central portion and end portions of substantially the same width and diagonally opposed portions between the central and end portions of substantially one half the width of the central and end portions and adapted to lie edge to edge and with the central portion forming

a complete convolution, the end portions overlapping the central portion and terminating in out turned bolt ears, the central portion having a longitudinal bead providing an internal longitudinal rib and an external longitudinal groove, the end portions having lugs therein engaging said groove, and a bolt arranged through said ears.



2. A hose clamp comprising, a sheet metal body having integral out turned perforated ears at its ends, said ears having rearwardly turned flanges at their sides, the flanges being extended onto the body whereby the ears are braced, a nut disposed between the flanges of one ear, such flanges having lugs on their edges folded onto the outer side of the nut, there being a lug on the end of said ear folded upon the upper edge of the nut whereby the nut is secured to the ear, and a bolt disposed through the other ear to coact with said nut.

1,155,647. INTERNAL-COMBUSTION ENGINE. JAMES DEAN, New York, N. Y. Filed Jan. 21, 1915. Serial No. 3,464. (Cl. 123—40.)



1. In an internal combustion engine of the two cycle type, a working cylinder having a fuel inlet port and main and auxiliary exhaust ports in spaced relation to each other, a pump cylinder in communication with the working cylinder through the auxiliary exhaust port, said pump cylinder having a discharge port, a piston adapted to reciprocate within said cylinders and in its travel control the opening and closing of the exhaust ports at predetermined intervals, valve mechanism controlling the fuel inlet port of the working cylinder and the discharge port of the pump cylinder, and gearing between said mechanism and the main shaft of the engine.

2. In an internal combustion engine of the two cycle type, a working cylinder having a fuel inlet port and main and auxiliary exhaust ports in spaced relation to each other, a pump cylinder in communication with the working cylinder through the auxiliary port, said pump cylinder having a discharge port, a piston adapted to reciprocate within said cylinders and in its travel control the opening and closing of the exhaust ports at predetermined intervals, a rotary valve for the fuel inlet port of the working cylinder, a rotary valve for the discharge port of the pump cylinder, and gearing between said valves and the main shaft of the engine.

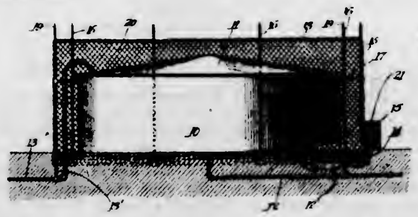
3. In an internal combustion engine of the two cycle type, a working cylinder having a fuel inlet port and main and auxiliary exhaust ports in spaced relation to each other, a pump cylinder in communication with the working cylinder through the auxiliary port, said pump cylinder having a discharge port, a piston adapted to reciprocate within said cylinders and in its travel control the opening and closing of the exhaust ports at predetermined intervals, a rotary valve for the fuel inlet port of the working cylinder, a rotary valve for the discharge port of the pump cylinder, a common shaft for said valves, and operative connection between said shaft and the main shaft of the engine.

4. In an internal combustion engine of the two cycle type, a working cylinder having a fuel inlet port and main and auxiliary exhaust ports in spaced relation to each other, a pump cylinder forming a continuation of the working cylinder and being in communication therewith through the auxiliary exhaust port, said pump cylinder having a discharge port, a piston adapted to reciprocate within said cylinders, and in its travel control the opening and closing of the exhaust ports at predetermined intervals, a vertically-disposed valve chamber adjacent said cylinders, an axial shaft in said chamber, two rotary valves on said shaft, one for the fuel inlet port of the working cylinder and the other for the discharge port of the pump cylinder, a member on said shaft rotatably mounted within the valve chamber and adapted to close the lower portion of the latter, and gearing between said shaft and the main shaft of the engine.

5. In an internal combustion engine of the two cycle type, a plurality of working cylinders having fuel inlet ports at or near the top, and main and auxiliary exhaust ports at or near the bottom, pump cylinders in communication with the respective working cylinders through the auxiliary ports, said pump cylinders having discharge ports, pistons adapted to reciprocate within said cylinders and in their travel control the opening and closing of the exhaust ports of the working cylinders at predetermined intervals, valve mechanism for the discharge ports of the pump cylinders, a common rotary valve for the fuel inlet ports of the working cylinders, and operative connection between said valve and the main shaft of the engine.

[Claims 6 and 7 not printed in the Gazette.]

1,155,648. MEANS FOR PROTECTING CONTENTS OF OIL-CONTAINING TANKS AGAINST IGNITION BY ELECTRICAL DISCHARGE. WEST DODD, Des Moines, Iowa. Filed Nov. 5, 1913. Serial No. 799,279. (Cl. 173—31.)



1. A cage for protecting the contents of storage receptacles from ignition by electrical disturbances comprising a circumferentially continuous electrically conductiong structure extending above and below the receptacle and spaced apart therefrom; electric conductors connecting said structure and receptacle at intervals, and an electrically conducting cover overlying said receptacle, electrically connected to said circumferential structure.

2. A cage for protecting the contents of storage receptacles from ignition by electrical disturbances comprising two electrically continuous parallel rings, one above and the other below said receptacle; a series of vertically disposed rods included between the rings at intervals and extending above the upper ring, walls, of electrically conducting material, extending between said rings, encompassing said receptacle and over the top thereof and electrical conductors connecting said receptacle with said protecting means.

1,155,649. RECTIFIER COMPOUND. NATHAN FALLEK, Denver, Colo., assignor to The Cook Railway Signal Company, Denver, Colo., a Corporation of Colorado. Filed Oct. 12, 1912. Serial No. 725,430. (Cl. 175—316.)

1. A compound for electrical rectifiers consisting of sodium phosphate, asbestos, sodium silicate, and water, in substantially the proportions specified.

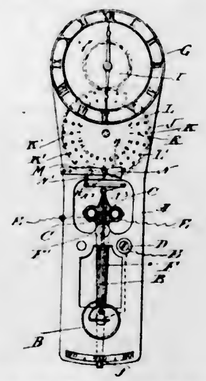
2. The herein described composition of matter for use as a rectifier compound consisting of dilute solution of sodium phosphate, a sufficient quantity of asbestos to absorb the sodium phosphate, and one part by weight of a solution of sodium silicate to 15 parts by weight of the sodium phosphate solution and asbestos.

3. The herein described composition of matter for use as a compound for electrical rectifiers consisting of sodium phosphate, water, asbestos, and sodium silicate solution, in the proportion of one pound of sodium phosphate to two gallons of water, enough asbestos to absorb the said solution, and one part by weight of the sodium silicate solution to 15 parts by weight of the sodium phosphate solution and asbestos.

4. A composition of matter for use as a compound for electrical rectifiers consisting of sodium phosphate, asbestos, sodium silicate, and water, in the proportion of one pound of sodium phosphate to two gallons of water, enough asbestos to absorb the said sodium phosphate solution, enough sodium silicate to raise distilled water to the specific gravity of 1.180, hydrometer test, one part by weight of this sodium silicate solution being used for 15 parts by weight of the sodium phosphate solution and asbestos.

5. A compound for electrical rectifiers consisting of a phosphate of one of the alkali metals, asbestos, sodium silicate, and water, in substantially the proportions specified.

1,155,650. THERMOSTATIC CONTROL. GEORGE R. FASSETT, Lakewood, Ohio. Filed Mar. 21, 1913. Serial No. 755,892. (Cl. 236—7.)

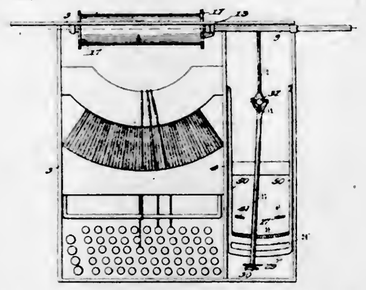


1. The combination with a thermostat blade free to move at one end and a pivoted lever provided with a contact point for an electric circuit on each side of said thermostat blade, a clock actuated gearing, one gear therein provided with concentric circles, each circle having openings for each of the 24 hours, pins insertible in the openings in said circles, and mechanism actuated by said pins in turn to move said pivoted lever to bring said contact points alternately into engagement with said thermostat blade, said blade serving also as one terminal of said electric circuit.

2. In a clock controlled device for closing an electric circuit at predetermined periods, a thermostat blade a pivoted lever provided with contact points in said electric circuit, one point in each side of said lever, a gear actuated by the hour spindle of said clock, a larger gear actuated thereby and spaced into 24 divisions, said larger gear provided with openings arranged in concentric circles, and having 24 openings in each circle, pins insertible in said circles in the positions of predetermined hours for day and night, and a pivoted member intermediate between said concentric circles and actuated in turn by the pins in said concentric circles, said pivoted member operatively connected with said pivoted lever and said pivoted member reversely operated by the pins in the respective circles to move said levers in opposite directions.

3. In a clock controlled mechanism for closing an electric circuit at predetermined intervals, in combination, a thermostat blade forming one terminal of said circuit, a pivoted blade provided with contact points arranged one on each side of said blade and forming each in turn the other terminal of said circuit, according as said blade contacts with them in turn, a gear operated by the clock spindle to turn once in 12 hours, a second gear operated by said first gear to turn once in 24 hours, said second gear provided with openings arranged in concentric circles therein, one representing the hours of day and the others representing the hours of night, a pin insertible in said openings in each circle, a pivoted member intermediate between said concentric circles of openings, said member adapted to be actuated in opposite directions by the pins in said circles, and links connecting said lever operatively with said pivoted member, whereby said lever will move to alternately engage said contact points with said thermostat blade at predetermined hours of day and night.

1,155,651. TYPE-WRITER. ANDREA FERRETTO, Milan, Italy. Filed Jan. 16, 1912. Serial No. 671,438. (Cl. 197—8.)



1. In a typewriter, the combination, with a platen and its carriage; of an actuator; connections between said platen and said actuator for rotating the platen when the actuator is oscillated in one direction; and connections between said carriage and said actuator for shifting the carriage endwise when a movement of a different character is imparted to the actuator.

2. In a typewriter, the combination, with a platen and its carriage; of a keyboard; printing mechanism controlled by the keys thereof; and a single actuating element independent of the keys connected with the platen and with the carriage, said element being movable manually in one direction to rotate said platen, and in another direction to shift said carriage endwise.

3. In a typewriter, the combination, with a platen and its carriage; of a key-board; printing mechanism controlled by the keys thereof; and a single pivotally-mounted actuating element independent of the keys connected with the platen and with the carriage, said element being arranged to swing bodily in one direction to rotate said platen, and to move in another direction to shift said carriage endwise.

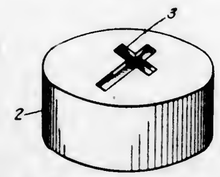
4. In a typewriter, the combination, with a platen and its carriage; of a key-board; printing mechanism con-

trolled by the keys thereof; and a single pivotally-mounted actuating element independent of the keys connected with the platen and with the carriage, said element being arranged to swing bodily in a horizontal plane to rotate said platen, and in a vertical plane to shift said carriage endwise.

5. In a typewriter, the combination, with a platen and its carriage; of a key-board; printing mechanism controlled by the keys thereof; and a single pivotally-mounted actuating element independent of the keys connected with the platen and with the carriage, said element being arranged to swing bodily in a horizontal plane to rotate said platen, and in a vertical plane to shift said carriage endwise and simultaneously rotate said platen.

[Claims 6 to 30 not printed in the Gazette.]

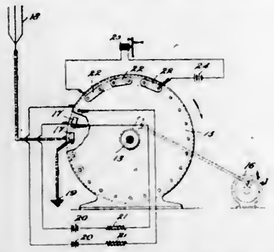
1,155,652. PROCESS OF FORMING METAL SPROUTS. WILLIAM J. GOEGLEIN, Goldfield, Colo., assignor of one-half to E. A. Colburn, Jr., Victor, Colo. Filed Mar. 25, 1914. Serial No. 827,159. (Cl. 75—187.)



1. The herein described process of producing metal sprouts of determinate contour consisting in heating granular metal in a mold of the desired form to a degree at which its constituent granules coalesce at their points of contact with each other.

2. The herein described process of producing metal sprouts of determinate contour consisting in forming metal in a divided condition, into a sprout by heating the same to a degree at which its constituent particles coalesce at their points of contact with each other, while the metal is being formed into a contour of predetermined design.

1,155,653. METHOD AND APPARATUS FOR UTILIZING HERTZIAN WAVES. EDWIN R. GILL, Yonkers, N. Y., assignor to Theron McCampbell. Filed Feb. 20, 1914. Serial No. 819,886. (Cl. 250—32.)



1. The art of utilizing Hertzian waves for controlling an electric translating device which consists in impressing a plurality of suitable detectors successively by the influence of said waves and completing, through all of said detectors together, a useful circuit in operative electric relation with said translating device.

2. The art of utilizing Hertzian waves for controlling an electric translating device which consists in impressing a plurality of suitable detectors successively by the influence of said waves, developing this impression in each, and finally completing, through all of said detectors together, a useful circuit in operative electric relation with said translating device.

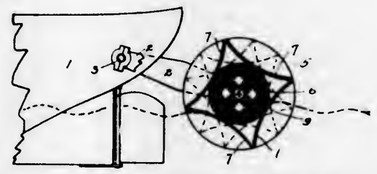
3. The art of utilizing a continuous train of Hertzian waves for controlling an electric translating device, which consists in impressing a plurality of suitable detectors successively by the influence of such train of waves during persistence thereof and completing, through all of said detectors together, a useful circuit in operative electric relation with said translating device.

4. The art of utilizing a continuous train of Hertzian waves for controlling an electric translating device which consists in impressing a plurality of suitable detectors successively by the influence of such train of waves during persistence thereof, developing this impression in each, and finally completing, through all of said detectors together, a useful circuit in operative electric relation with said translating device.

5. The art of utilizing Hertzian waves for controlling an electric translating device which consists in impressing a plurality of suitable detectors successively by the influence of said waves, and coupling said detectors in series to close a useful circuit in operative electric relation with said translating device.

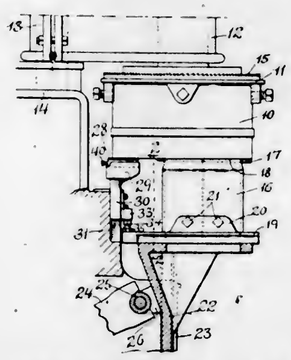
[Claims 6 to 18 not printed in the Gazette.]

1,155,654. SHIP-PROPELLER. BRUNO GREIF, Tacoma, Wash. Filed Aug. 10, 1914. Serial No. 855,993. (Cl. 115—54.)



In a ship propeller, the combination with a ship; thrust arms pivotally secured thereto; a nonrotating hollow shaft joining the ends of said arms; a plurality of circular disks mounted on said shaft and rotating thereon; cylindrical buoyant floats joining said disks and mounted concentric with said shaft, and being of less diameter than said disks; paddles extending outward from the floats and secured to the disks; and a suction pipe passing from the interior of said hollow shaft to the lowest point in said buoyant float to remove the water therefrom.

1,155,655. TRIMMER FOR DIEING-MACHINES. GEORGE B. GROVER, Lynn, Mass., assignor to W. J. Young Machinery Company, Lynn, Mass., a Corporation of Massachusetts. Filed May 7, 1914. Serial No. 836,957. (Cl. 164—34.)



1. In a dieing-out machine, the combination with a cutting block, of a cutting die, and a trimmer arranged to act simultaneously against the work-supporting surface of said block said trimmer being located to cut the parts of such surface which are not touched by the die.

2. The combination of a cutter and an opposed cutting block constituting coöperating cutting members relatively arranged for respectively severing material and supporting the material against the thrust of the cutter, one of said members being movable toward and from the other to effect the cutting operation, and one of said members being laterally movable with respect to the other to cause the indentations produced by the cutter in the surface of the block to be distributed over such surface, and a trimming cutter arranged and operated to indent a portion of the operative surface of the block adjacent to the portion or zone of such surface on which the cutter acts.

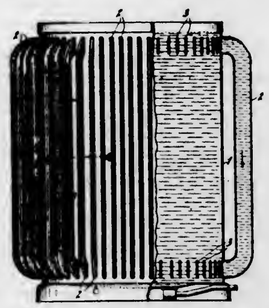
3. The combination in a dieing-out machine, of a cutting block, a sharp edged cutting die movable into contact with and away from a surface of the block, said block being movable step by step to present different portions of its surface to the edge of the die, whereby the indentations produced by the die are distributed over the surface of the block instead of being concentrated at one location, and means supplemental to the die for similarly indenting the surface of the block contiguous to the zone in which the indentation produced by the die are located.

4. In a dieing-out machine, the combination of a sharp edged cutting die and a cylindrical block arranged with one end opposed to the die, said die and block constituting coöperating opposed members for respectively cutting and supporting material, one of said members being displaceable laterally about the axis of the block, and means acting simultaneously with the die for indenting the surface of the block adjacent to that portion of such surface against which the die acts.

5. In a dieing-out machine, the combination of a relatively stationary cutting block, a die arranged to move toward and away from the end surface of the block and to be pressed against such surface, said block being laterally movable with respect to the die, an auxiliary sharp-edged cutter mounted for cutting movement in a path parallel to that of the die and arranged to engage a zone of the surface of the block beside the zone of such surface against which the die acts.

[Claims 6 to 21 not printed in the Gazette.]

1,155,656. AIR-COOLED TANK FOR ELECTRICAL APPARATUS. ISAAC HARTER, New York, N. Y., assignor to The Babcock & Wilcox Company, Bayonne, N. J., a Corporation of New Jersey. Filed Dec. 23, 1913. Serial No. 808,477. (Cl. 175—361.)



1. An air-cooled tank arranged to contain a fluid to dissipate heat from an electrical apparatus, said tank having connected to its walls a plurality of tubes exposed to the air and through which the fluid circulates, the cross-sections of said tubes having axes of different lengths and the longest axes lying in planes substantially normal to the tank.

2. An air-cooled tank to contain a fluid to dissipate heat from an electrical apparatus, said tank having inserted in its walls a plurality of tubes through which the fluid circulates, said tubes having at least a portion whose cross section is flattened where they are acted on by the air, and disposed in planes substantially normal to the surface of said tank.

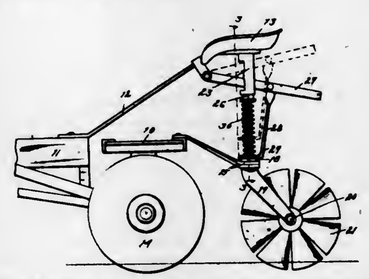
3. An air-cooled tank to contain a fluid to dissipate heat from an electrical apparatus, said tank having inserted in its walls a plurality of tubes through which the fluid circulates, said tubes having at least a portion whose cross section is flattened where they are acted on by the air, and disposed about the tank in a substantially vertical position.

4. An air-cooled tank arranged to contain a fluid to dissipate heat from an electrical apparatus, said tank having connected to its walls a plurality of substantially vertical tubes exposed to the air and through which the fluid circulates, the cross-sections of said tubes having axes of different lengths and the longest axes lying in planes substantially normal to the tank.

5. A tank designed to dissipate heat from electrical apparatus, said tank having a plurality of flattened tubes projecting outwardly from its wall.

[Claim 6 not printed in the Gazette.]

1,155,657. ATTACHMENT FOR DISKS. WILBER E. HELIN, State Center, Iowa. Filed June 7, 1915. Serial No. 32,790. (Cl. 55—82.)



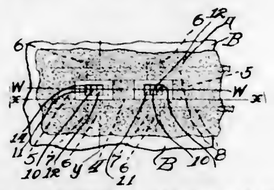
1. In a device of the class described, the combination of a disk cultivator having a frame, a spring supporting member mounted on said disk cultivator, an upright member mounted on said supporting member, a rotary cutting member slidably mounted on said upright member, a spring interposed between said cutting member and said supporting member, and means for moving said spring to position where it imparts no pressure to said rotary cutting member.

2. In a device of the class described, the combination of a disk cultivator having a frame, a spring supporting member mounted on the disk cultivator, a seat mounted on said supporting member, an upright member fixed with relation to said supporting member and extending from the rear end thereof, guide members secured to said frame and arranged to slidably receive said upright member, a rotary cutting member slidably mounted on said upright member, a spring interposed between said rotary cutting member and said supporting member, and means mounted on said supporting member for moving said spring to position where it imposes no pressure on said cutting member.

3. In a device of the class described, the combination of a disk cultivator having a frame, a spring supporting member mounted on the disk cultivator, a seat mounted on said supporting member, an upright member fixed with relation to said supporting member and extending from the rear end thereof, a sleeve on the lower portion of said upright member, a brace guide member mounted on said frame and having said sleeve extended through it, a yoke rotatably mounted on said sleeve, a rotary cutting member mounted on said yoke, an upright member having lateral extensions mounted on the upper portion of said upright member, a lever pivoted on said spring supporting member and extended between said upright members, an engaging portion on said second upright member adapted to

engage said lever and to hold it in its raised position, a downwardly extending member pivoted to said lever, an extension on the lower end of said downwardly extending member slidably mounted on said upright member, a coil spring mounted on said upright member between said last named extension and the lower extension of said second upright member, said first upright member being arranged to slide in said sleeve so that when said lever is in one position of its movement weight imposed on said spring supporting member will be imposed on said rotary cutting member, while when said spring is raised and held in its upper position said spring will be contracted and weight imposed on the spring supporting member will not be imposed on said rotary cutting member.

1,155,658. INSERT FOR HOLDING CAR-RAILS. ELISHA L. HOW, St. Paul, Minn. Filed Jan. 14, 1915. Serial No. 2,154. (Cl. 238—4.)



1. An insert for fastening railway rails to a cementitious support, comprising, in combination, a spike receiving element to be held by said support, a spike insertible into said receiving element, a block held within said element and with which said spike is adapted to be driven into engagement, said receiving element being formed with an inward projection below which said block is lodged while said spike is engaged.

2. An insert for fastening railway rails upon a cementitious support, comprising, in combination, a spike receiving element, having a downwardly extending chamber, blocks in said chamber and a spike adapted to be driven into engagement with said blocks, the wall of said chamber being formed with an opening in its upper end to receive said spike and blocks and with an inwardly projecting means near its upper end and below which said blocks are adapted to lodge to prevent them from being removed from said chamber while said spike is engaged.

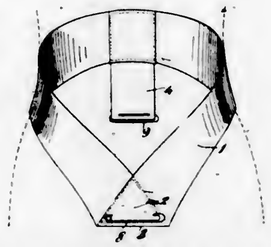
3. An insert for fastening railway rails upon a cementitious support, comprising, in combination, a pair of connected spike receiving elements adapted to be embedded in said support, each of said elements having a downwardly extending chamber, blocks of fibrous material adapted to stand in said chamber and a spike for holding a railway rail adapted to be driven between said blocks in said chamber, the wall of said chamber being formed with an opening in its upper end to receive said blocks and spike and with an inwardly projecting means at its upper end above said blocks adapted to prevent the removal of said blocks while said spike is lodged between them.

4. An insert for fastening railway rails upon a cementitious support, comprising, in combination, a pair of connected spike receiving elements, each of said elements being adapted to be embedded in said support and having a downwardly extending chamber, an opening entering the upper end of said chamber and an inwardly extending shoulder adjacent said opening, and a plurality of blocks adapted to be received singly through said opening and lodge below said shoulder in said chamber, whereby a spike entering said chamber through said opening is adapted to engage and force said blocks tightly against the wall of said chamber and lodged below said shoulder.

5. An insert for fastening a railway rail upon a cementitious support, comprising, in combination, a spike receiving element to be embedded in said support, a spike insertible into said element, a block held by said element, and with which said spike is driven into engagement, said receiving element being formed with an inward projection below which said block is lodged while said spike engages said block, and with a perforated boss on its outer wall projecting into said support and means passing through said perforation in said boss and into said support for holding said spike receiving element vertically in said support.

[Claims 6 to 8 not printed in the Gazette.]

1,155,659. CATAMENIAL BELT. EDWARD JOHNSON, Cincinnati, Ohio. Filed July 11, 1910. Serial No. 571,447. (Cl. 128—5.)



1. A catamenial belt comprising an integral strip of elastic webbing, forming a permanent encircling band, and provided with a diagonal uncut fold in the front forming a front depression to follow the lines of the body, with the front folds permanently secured together whereby buckles and metal points are dispensed with, said band being in a uniform shape except at the above fold.

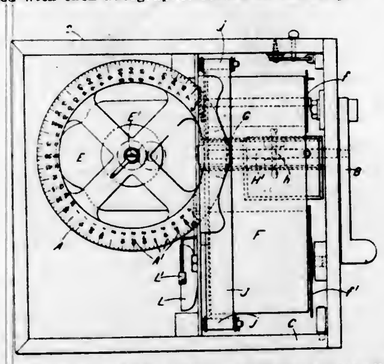
2. A catamenial belt comprising an integral strip of elastic webbing, forming a permanent encircling band, and provided with a diagonal uncut fold in the front forming a front depression to follow the lines of the body, with the front folds permanently secured together and having a depending strip of elastic webbing at the rear from the body of the belt of a length to correspond to the front depression, with means for attaching the napkin directly to the diagonal fold in front, said band being of a uniform shape except as at the above fold.

3. A catamenial belt comprising an integral strip of elastic webbing forming a permanent encircling band and provided with a diagonal uncut fold in the front, forming a front depression to follow the lines of the body, with the front folds permanently secured together, and having a depending strip of elastic webbing at the rear from the body of the belt of a length to correspond to the front depression, said depending strip being integral with the body portion, and said body portion being of uniform shape except at the front fold above described.

1,155,660. WORKMAN'S TIME-RECORDER AND SIMILAR APPARATUS. ALFRED JAMES JUNG, West Kensington, London, England. Filed Nov. 18, 1912. Serial No. 732,124. (Cl. 234—44.)

1. In a recording apparatus of the character described, the combination of clock actuated means provided with type representing divisions of time, a record strip movable relative to said type and adapted to receive impressions therefrom, a casing inclosing the record strip and provided with an aperture through which autographic records may be made on said strip, and means for producing an impression on the record strip from the type and feeding the strip relative to said aperture, the parts being so related that to provide a complete record two actuations of said impression and strip feeding means are required so that two time representations must be associated with each autographic record produced on the strip.

2. In a recording apparatus of the character described, the combination of clock actuated means provided with type representing divisions of time, a record strip movable relative to said type and adapted to receive impressions therefrom, a casing inclosing the record strip and provided with an aperture through which autographic records may be made on said strip, and a manually adjustable device adapted at each actuation to effect an impression on the record strip from the type and a feeding movement of the strip relative to the type, the extent of each of said feeding movements being less than the width of the aperture through which autographic records are made on the strip whereby two time representations must be associated with each autographic record on the strip.



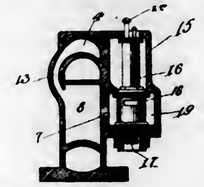
3. In a recording apparatus of the character described, the combination of clock actuated means provided with type representing divisions of time, a record strip movable relative to said type and adapted to receive impressions therefrom, a casing inclosing the record strip and provided with an aperture through which autographic records may be made on said strip, and means for feeding the strip relative to said aperture and effecting impressions on the strip from the type, each type impression being out of alinement on the strip with the associated autographic record thereon.

4. In a recording apparatus of the character described, the combination of clock actuated means provided with type representing divisions of time, a casing inclosing said means and provided with an aperture *d* in one wall thereof, a record strip within the casing movable relative to said type and across said aperture whereby autographic records may be made thereon, an operating lever, and means connected with said lever for producing an impression on the record strip from the type and feeding the strip, two operations of said lever being required to effect a complete record, the first causing an impression on the strip at one side of the opening *d* and feeding the strip to carry said impression beyond the opposite side of the opening and the second causing a similar impression on the strip and feeding the strip to carry the autographic record produced thereon between the impression beyond said opening *d*.

5. In a recording apparatus of the character described, the combination of clock actuated means provided with type representing divisions of time, a record strip movable relative to said type and adapted to receive impressions therefrom, a casing inclosing the strip and provided with an aperture through which autographic records may be made on the strip, one side of the casing being adjustable to permit the record strip to be inserted in or withdrawn from the casing, a lever mounted within the casing and provided with a hammer for producing impressions on the record strip from the type and with means for feeding the strip relative to the type and said aperture in the casing, said lever having a projection extending through an aperture in the adjustable side of the casing, and an operating lever mounted on said adjustable side of the casing, and detachably engaging the projection on the impression producing and strip feeding lever.

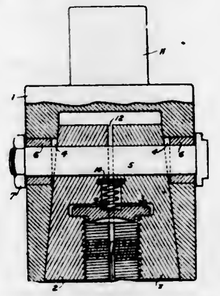
1,155,661. WATER-CLOSET. JOHN F. KELLY, Trenton, N. J., assignor to Thomas Maddock's Sons Company, Trenton, N. J., a Corporation of New Jersey. Filed Mar. 14, 1911. Serial No. 614,382. (Cl. 4—22.)

1. In a water closet, the combination of a bowl, an extension at the side thereof provided with a water-tight pocket having an outlet communicating with said bowl, a valve casing in said extension the outlet of which is located in said pocket at a distance from and discharging horizontally and directly against the vertical side walls of said pocket to break the force of the water, the outlet of said valve casing being remote from and pointing in a different direction than the outlet from the pocket to the bowl.



2. In a water closet, the combination with a bowl provided with a flushing rim, a water supply inlet, an extension at the side of said bowl provided with a water-tight pocket communicating with said supply inlet, a valve casing mounted in said pocket and having a direct connection with the source of supply and having a discharge passage located in said pocket and adapted to direct the water laterally against the walls thereof in close proximity to the discharge passage of the casing and means for conducting water from said inlet to said flushing rim, the direction of discharge from the valve casing discharge passage being different than that from the water supply inlet to the bowl.

1,155,662. CLAMPING DEVICE. WILLIAM J. KLEINSTEUBER, Milwaukee, Wis. Filed Aug. 10, 1914. Serial No. 856,316. (Cl. 81—128.)



1. In a clamping device for screw threaded elements, jaw members having threaded portions engageable with the element to be clamped, and means for automatically forcing said jaw members toward the element upon application of rotary force to said forcing means and of rotation opposing resistance to said jaw members.

2. In a clamping device for screw-threaded elements, jaw members having threaded portions, means for moving said threaded portions transversely of and into engagement with the element, and longitudinally movable means engaging an end of the element for permitting relative longitudinal movement of said element and of said jaws during transverse clamping movement of the latter.

3. In a clamping device for screw threaded elements, jaw members having threaded portions engageable with the element to be clamped, means normally tending to separate said jaw members, and means for automatically forcing said jaw members laterally against the element upon application of rotary force to said forcing means and of rotation opposing resistance to said jaw members.

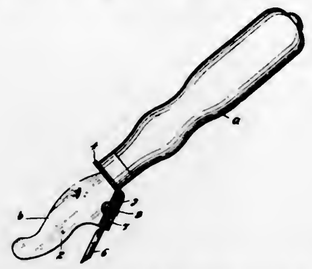
4. In a clamping device for corrugated elements, jaw members having corrugated portions engageable with the element to be clamped, means for forcing said jaw members against the element during clamping, and means en-

gaging an end of the element, said means permitting relative longitudinal movement of the element and of at least one of said jaw members during clamping.

5. In a clamping device for screw-threaded elements, jaw members having threaded portions, a clamping member rotatable relatively to said jaw members to move said threaded portions transversely of and into engagement with the element, and means for permitting relative longitudinal movement of said element and of said jaws during tranaverse clamping movement of the latter.

[Claims 6 to 10 not printed in the Gazette.]

1,155,663. ICE-SHAVER. JOSEPH F. LAMB, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation of Connecticut. Filed Feb. 24, 1915. Serial No. 10,167. (Cl. 83—62.)



1. In an article of the character described, a handle, a holder formed integrally of sheet metal and comprising a back secured to the handle, a seat arranged at an angle thereto, side guide arms bent up at right angles to the seat and projecting therebeyond at their front ends, and bearing against the back at their rear ends, a sheet metal blade secured to the front of said seat and provided with a continuous serrated cutting edge.

2. In a device of the character described, a handle, a sheet metal blade holder comprising a back secured to the handle, a seat bent at an angle to the back, and integral side guide arms bent up at an angle to the seat and with their rear edges abutting against the face of said back, and a blade removably secured to said seat.

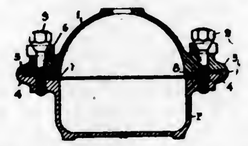
3. In a device of the character described, a handle, a sheet metal blade holder comprising a back secured to the handle, a seat bent at an angle to the back, and integral side guide arms bent at an angle to the seat and with their rear edges abutting against the face of said back, and a sheet metal blade provided with a serrated cutting edge, removably secured to said seat.

4. In a device of the character described, a handle, a sheet metal blade holder comprising a back secured to the handle, a seat bent at an angle to the back and longitudinally corrugated, side guide arms bent up at an angle to the seat and with their rear edges abutting against the face of said back, a corrugated sheet metal blade having its rear end fitted to the corrugations of said seat, and a corrugated retainer fitted to the corrugations of the rear end of said blade, and means for binding said blade between said retainer and said seat.

1,155,664. JOINT. FRANK LAMBERT, New York, N. Y. Filed Mar. 13, 1915. Serial No. 14,265. (Cl. 137—13.)

1. The combination with two joint members having integral projecting lugs provided with fulcra points near their outer ends, said joint members adapted to receive between them a gasket having a thickness such that, when such joint members are drawn together, said gasket will be compressed before such fulcra points contact, of means, located between the position for the inner edge of said gasket and said fulcra points, for drawing the joint members together and holding them together.

2. The combination with two joint members having projecting lugs provided with fulcra points near their outer ends, of means, located within such fulcra points, for holding the joint members together, and comprising expansible members and means causing expansion of such members in the event of separation of the joint members.



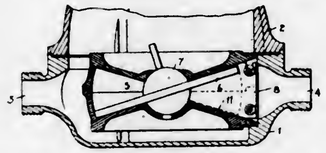
3. The combination with a plurality of joint members, of means for holding such joint members together comprising a fastening member and a coacting expansible member one of which two members has a tapering surface engaging a surface of the other of such coacting members whereby, upon increase in pressure above a predetermined degree said expansible member will expand.

4. The combination with a plurality of joint members, of means for holding such members together comprising fastening members having conical surfaces, and yield members engaging the conical surfaces of said fastening members and arranged to be expanded by pressure produced by such fastening members.

5. The combination with joint members having projecting lugs provided wtih fulcra points near their outer ends, of means, located well within such fulcra points, for holding such joint members together, and comprising fastening means consisting of coacting fastening members and a yield member, one of said coacting members comprising a conical surface engaging the other coacting member and arranged to cause expansion of such yield member upon the occurrence of pressure exceeding a predetermined amount.

[Claims 6 to 12 not printed in the Gazette.]

1,155,665. METER. FRANK LAMBERT, New York, N. Y. Filed Mar. 13, 1915. Serial No. 14,266. (Cl. 73—98.)



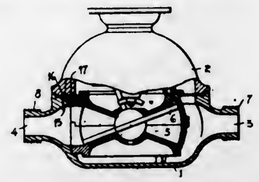
1. In a fluid meter, the combination with a measuring chamber and a nutating piston therein having a ball center, said chamber having inlet and outlet ports, of a diaphragm within said chamber separating said ports, and engaging the ball center of the piston, said diaphragm mounted to be adjusted radially, and means for holding said diaphragm in place in various positions to which it may be adjusted.

2. In a fluid meter, the combination with a measuring chamber and a nutating piston therein having a ball center, said chamber having inlet and outlet ports and having walls which flare radially outward, such walls of said chamber having in them grooves, of a diaphragm within said chamber separating said ports and engaging the ball center of the piston, and having its edges located within said grooves and fitting closely therein, said diaphragm mounted to be adjusted radially, and means for holding said diaphragm in place in various positions to which it may be adjusted.

3. In a fluid meter, the combination with a measuring chamber and a nutating piston therein having a ball center, said chamber having inlet and outlet ports and having walls which flare radially outward, such walls of said chamber having in them grooves, of a diaphragm within said chamber separating said ports, and engaging the ball center of the piston, and having its edges located within said grooves and fitting closely therein, said diaphragm mounted to be adjusted radially, and means for holding said diaphragm in place in various positions to which it may be adjusted.

4. In a fluid meter, the combination with a measuring chamber and a nutating piston therein having a ball center, said chamber having inlet and outlet ports, and having a wall separating said ports, of a diaphragm within said chamber, separating said ports, and engaging the ball center of the piston, said diaphragm mounted in grooves of radial walls of the chamber and secured to that wall of the chamber which separates the inlet and outlet ports, said diaphragm being adjustable radially.

1,155,666. METER. FRANK LAMBERT, New York, N. Y. Filed Mar. 13, 1915. Serial No. 14,267. (Cl. 73—98.)



1. In a meter, the combination with a casing and a measuring chamber therein, said casing and measuring chamber having joint-surfaces containing coacting ports, of means located in portions of said casing and measuring chamber adjacent such joint-surfaces arranged to draw together such surfaces of the casing and measuring chamber.

2. In a meter, the combination with a casing and a measuring chamber therein, said casing and measuring chamber having joint-surfaces containing coacting ports, one of said members having a screw head recess in proximity to its joint-surface, and the other said member having a screw recess registering with such screw head recess, of a screw located in said recess, and arranged to draw together such surfaces containing coacting ports of the casing and measuring chamber.

3. In a meter, the combination with a casing and a measuring chamber therein, said casing having internally projecting ribs, one of which contains a port, said measuring chamber having corresponding externally projecting ribs, one of which contains a port coacting with said port of the casing, the adjacent surfaces of the port-containing ribs of the casing and measuring chamber adapted to form a joint with each other, of means located in such port-containing ribs of the casing and measuring chamber arranged to draw together such surfaces of said ribs.

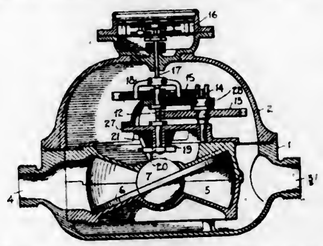
4. In a meter, the combination with a casing having substantially diametrically opposed inlet and outlet passages, and a measuring chamber within said casing having a surface adapted to form a joint with the surface of the casing adjacent one of said flow passages, of means located in proximity to such joint-surfaces arranged to draw together such portions of the casing and measuring chamber.

5. In a meter, the combination with a casing having substantially diametrically opposed inlet and outlet passages, and a measuring chamber within said casing having a surface adapted to form a joint with the surface of the casing adjacent one of said flow passages, of means located in proximity to such joint-surfaces arranged to draw together such portion of the casing and measuring chamber, said casing having also supporting shoulders upon which the measuring chamber rests.

[Claims 6 to 9 not printed in the Gazette.]

1,155,667. FLUID-METER. FRANK LAMBERT, New York, N. Y. Filed Mar. 13, 1915. Serial No. 14,268. (Cl. 73—98.)

1. A fluid meter comprising in combination a main driving member having critical positions, and means driven thereby comprising gearing of an intermittent drive character, the periods of intermission in drive of which synchronize with the critical positions of the driving member.



2. A fluid meter comprising in combination a nutating disk and means driven thereby comprising intermittent gearing, the intermissions in the drive of which synchronize with the critical periods of the nutating disk.

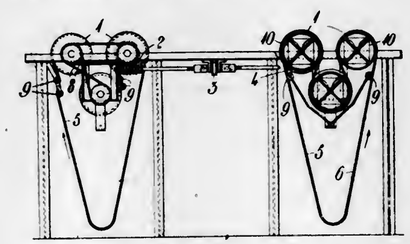
3. A fluid meter comprising in combination a nutating disk, registering means and reducing gearing for transmitting motion from such disk to such registering means comprising intermittent drive elements, the intermissions in the drive of which synchronize with the critical periods of said disk.

4. In a fluid meter, the combination of a nutating disk, registering means, and means for communicating motion from said disk to said registering means comprising a gear and a pinion so related that during certain periods of rotation of the pinion the gear is not driven, such periods of no drive synchronizing with the critical positions of the disk.

5. A fluid meter comprising in combination a measuring member, a registering device, and means for communicating motion from said measuring member to said registering device, comprising a gear train, the highest speed member of which is a two-tooth lantern pinion having two bearings one below and one above its lantern portion, said pinion having an open center.

[Claims 6 to 8 not printed in the Gazette.]

1,155,668. DEVICE FOR DRYING WASHED GOODS. HJALMAR LÖFQUIST, Stockholm, Sweden. Filed July 28, 1914. Serial No. 853,735. (Cl. 34—12.)



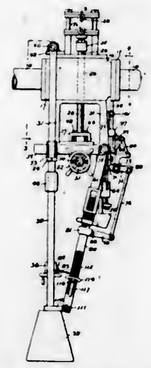
1. In a device for drying washed goods, in combination, a plurality of metal rollers, heating means positioned within said rollers, driving means for rotating said rollers, and endless travelling members operatively connected to said rollers adjacent the ends thereof, said members comprising means for attaching thereto the articles to be dried.

2. In a device for drying washed goods, in combination, a plurality of metal rollers, heating means positioned within said rollers, driving means for rotating said rollers, endless traveling members operatively connected to said rollers adjacent the ends thereof, and cross strips connected to said members to which strips the articles to be dried are adapted to be fastened.

3. In a device for drying washed goods, in combination, a plurality of metal rollers, heating means positioned within said rollers, driving means for rotating said rollers, and endless traveling members operatively connected to

said rollers adjacent the ends thereof, said members comprising means for attaching thereto the articles to be dried, said members being slack between certain of said rollers whereby the articles will be aired during the drying thereof.

1,155,669. MARINE-ENGINE-THROTTLING APPARATUS. OWEN J. MCGOWAN, New York, N. Y., assignor to Winifred Wilson, Brooklyn, N. Y. Filed Jan. 22, 1914. Serial No. 813,705. (Cl. 121—113.)



1. A throttling apparatus as characterized, comprising a valve adapted to lift vertically; a suspension frame operatively connected with said valve to lift the same; a plumbing member pivotally mounted above said frame; means connecting said frame and said plumbing member to vary the extent of operation of said frame; and means connecting said frame and said valve, embodying a supporting screw adapted to extend or contract the connection between said suspension frame and said valve, to vary the closing moment of said valve relative said frame.

2. A throttling apparatus as characterized, comprising a valve adapted to lift vertically; a suspension frame operatively connected with said valve to lift the same; a plumb member pivotally mounted above said frame; means connecting said frame and said plumb member to vary the extent of operation of said frame; means connecting said frame and said valve, embodying a supporting screw adapted to extend or contract the connection between said suspension frame and said valve, to vary the closing moment of said valve relative said frame; and a manually-operative screw member for at will manipulating said supporting screw.

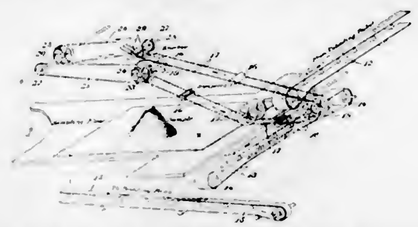
3. A throttling apparatus as characterized, comprising a vertically-operating valve; a rocking suspension frame therefor, operatively connected with to lift said valve; a plumb member pivotally mounted above said suspension frame; means operatively connecting said suspension frame and plumb member, said means embodying devices for varying the extent of the lift of said suspension frame relative said plumb member; and means for lifting said frame and said plumb member to vary the extent of action of said frame relative said plumb member.

4. A throttling apparatus as characterized, comprising a vertically-operating valve; a rocking suspension frame therefor, operatively connected with to lift said valve; a plumb member pivotally mounted above said suspension frame; means operatively connecting said suspension frame and plumb member, said means embodying devices for varying the extent of the lift of said suspension frame relative said plumb member; means for lifting said frame and said plumb member to vary the extent of action of said frame relative said plumb member; and manually operative means mounted on said frame for varying the operative connection between the same and said plumb member.

5. A throttling mechanism as characterized, comprising a plumb member; a controlling valve mounted on a steam-supply main; a transmission mechanism operatively connecting said plumb member and said valve, said transmission mechanism embodying means for varying the length of said transmission mechanism to alter the closing moment of said valve relative to said plumb member; a brace for said plumb member, pivotally connected therewith; and a casing for said valve, having pivotal mountings for said plumb member and said brace, said mountings being separated to form the base of a triangular arrangement of said plumb member and said brace.

[Claims 6 to 10 not printed in the Gazette.]

1,155,670. SAMPLING APPARATUS. ALEXANDER G. MCGREGOR, Globe, Ariz. Filed Aug. 10, 1914. Serial No. 856,081. (Cl. 73—21.)



1. In an apparatus for sampling concentrates or similar sticky materials, the combination with means for delivering a stream of material, of one or more sampling receptacles, an endless carrier for conveying said receptacle or receptacles, right side up, through said stream of material, periodically, said receptacle or receptacles being attached to said carrier so as to be reversed, for dumping, by the reverse travel of said conveyer, means for supporting and driving said carrier, and means for percussively jarring said receptacle or receptacles when in reversed or dumping position.

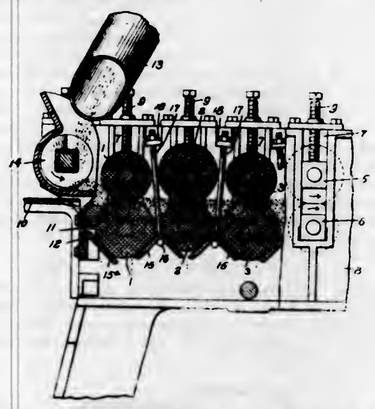
2. In an apparatus for sampling concentrates or similar sticky materials, the combination with means for delivering a stream of material, of one or more sampling receptacles, an endless carrier for conveying said receptacle or receptacles, right side up, through said stream of material, periodically, said receptacle or receptacles being attached to said carrier so as to be reversed, for dumping, by the reverse travel of said carrier, means for supporting and driving said carrier, and rotating knockers acting on the bottoms of the reversed receptacle or receptacles, for percussively jarring same when in dumping position.

3. In an apparatus for sampling concentrates or similar sticky materials, the combination with means for delivering a stream of material, of one or more sampling receptacles, an endless carrier for conveying said receptacle or receptacles, right side up, through said stream of material, periodically, said receptacle or receptacles being attached to said carrier so as to be reversed for dumping by the reverse travel of said carrier, means for supporting and driving said carrier, and flexible rotating knockers acting on the bottoms of the reversed receptacle or receptacles for percussively jarring same when in dumping position.

4. In an apparatus for sampling concentrates or similar sticky materials, the combination with an endless conveyer for delivering a stream of material, and means for supporting and driving said conveyer, of sample holding means, mechanism for carrying said sample-holding means through said stream of material, at intervals, and for dumping same, and flexible rotating knockers for jarring the sample-holding means when in dumping position.

1,155,671. MACHINE FOR CLEANING AND POLISHING TIN SHEETS. WILLIAM L. MCKEAN, Martins Ferry, Ohio. Filed Mar. 18, 1915. Serial No. 15,309. (Cl. 51—15.)

1. In a machine for cleaning and polishing tin sheets, the combination of a plurality of spaced pairs of rolls, and means arranged between adjacent lower rolls for supporting cleaning material in the line of movement of the sheets through the machine.

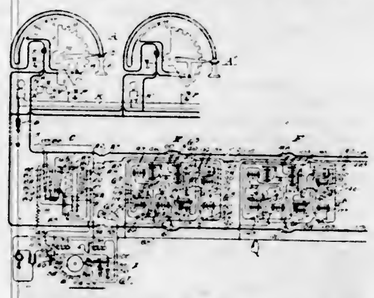


2. In a machine for cleaning and polishing tin sheets, the combination of a plurality of pairs of rolls having yielding surfaces, and means for applying deforming pressure to the surfaces of the lower rolls at points below the axes of the rolls.

3. In a machine for cleaning and polishing tin plates, bars arranged intermediate adjacent lower rolls, and means for adjusting the positions of the bars relative to the rolls.

4. In a machine for cleaning and polishing tin sheets, the combination of a plurality of pairs of rolls, angle bars arranged intermediate adjacent lower rolls, and means for raising and lowering said angle bars.

1,155,672. TELEPHONE-EXCHANGE SYSTEM. TALBOT G. MARTIN, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed May 6, 1910. Serial No. 559,815. (Cl. 179—18.)



1. In a telephone system, a telephone line, a plurality of telephones for said line each provided with means for intercommunicating over said line, automatic trunking apparatus in which the line terminates, means operative to supply current over the line from the central station to two of said telephones when the said line is used for intercommunicating purposes, and means for preventing the normal condition of said trunking apparatus being disturbed under such conditions.

2. In a telephone system, a subscriber's line, a plurality of telephones for said line each provided with means for intercommunicating over said line, an automatic trunking switch for said line, means operative to supply current over the line from the central station to two of said telephones when the said line is used for intercommunicating purposes, and means for preventing the normal condition of said trunking apparatus being disturbed under such conditions.

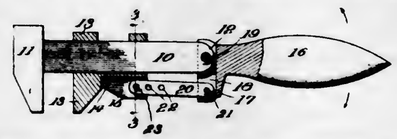
3. In a telephone system, a subscriber's line, trunk line, means for automatically selecting idle trunks ahead of the calls, switching apparatus for connecting the subscriber's line with a preselected trunk line, a plurality of telephones for said subscriber's line, means for supplying talking current over the subscriber's line to said telephones, and means preventing actuation of said switching apparatus when a person at one telephone uses said current for conversing with a person at another telephone on the same line.

4. In a telephone system, a subscriber's line, a plurality of telephones for said subscriber's line, an automatic switch for said line, means for supplying talking current through said switch to the line, a resistance for preventing actuation of said switch when a person at one telephone converses with a person at another telephone on the same line, and means at each telephone for short-circuiting said resistance to cause the actuation of said switch when connection with another line is desired.

5. In a telephone system, a telephone line, a plurality of telephones for said line, automatic switching apparatus in which the line terminates, means operative to supply current over the line from the central station to two of said telephones when the said line is used for intercommunicating purposes, means for preventing the normal condition of said trunking apparatus being disturbed under such conditions, and means whereby a person at one of said telephones may signal a person at another telephone on the same line.

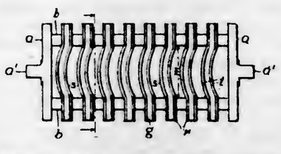
[Claims 6 to 26 not printed in the Gazette.]

1,155,673. WRENCH. BYRON E. MOORE, Slater, Mo. Filed Apr. 21, 1915. Serial No. 22,841. (Cl. 81—126.)



A device of the character described including a shank provided with a fixed jaw, a movable jaw shiftable upon the shank and adapted to coact with the fixed jaw, the movable jaw being formed with a socket, a handle provided with a laterally extending head recessed to provide upstanding flanges, the inner extremity of the shank being pivotally connected to said flanges at one extremity of the head, a link pivotally connected to the opposite extremity of the head and freely received in said socket, said link having a series of longitudinally spaced openings formed therein, and a pivot pin passing through the walls of the socket and pivotally connecting the link with the movable jaw, the pin being adapted to selectively engage in said series of openings for adjusting the link longitudinally within the socket.

1,155,674. GRATE-BAR. RODOLPH F. MORSE, Providence, R. I. Filed July 20, 1915. Serial No. 40,850. (Cl. 126—176.)



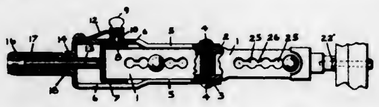
1. A grate-bar having the following elements or members arranged and cast in one piece and forming a unitary grate-bar, said grate-bar consisting of the two ends, each end having a trunnion or journal, one of the ends being also provided with a downward extension arranged to con-

nect with manually controlled means for tilting or rocking a plurality of the grate-bars, a pair of parallel longitudinally extending main tie bars connecting said ends, a plurality of parallel transverse cross-bar members spaced longitudinally on and uniting the said tie-bars, the upper face or edge of each transverse cross-bar being convex and provided with a longitudinally extending groove adapted to retain ashes, and having the portion of the cross-bar members intermediate the main tie-bars curved laterally or sidewise in a horizontal plane to produce between each pair of contiguous cross-bars a correspondingly curved vertical opening for the passage of air.

2. The combination with relatively stationary side members adapted to support a fire-grate, of a plurality of grate-bar units movably mounted on the said side members, each of the said grate-bar units cast in one piece and consisting of a plurality of parallel longitudinal side ties or bars disposed in a horizontal plane, oppositely arranged transverse end members connecting said side-ties, a plurality of spaced parallel transverse cross-bar members extending across and uniting the said side-ties, said transverse cross-bar members being curved laterally in a horizontal plane, correspondingly curved open passages formed between the adjacent sides of the respective transverse cross-bar members, the upper face of the said transverse cross-bars being convex and each provided with a longitudinal groove adapted to retain ashes, and manually controlled means connected with the grate-bar units for tilting the latter in unison.

3. A cast metal grate-bar unit for furnaces, comprising a pair of laterally separated longitudinal main ties, means connecting the ends of the ties together, and a plurality of cross bars spaced longitudinally on the main ties connecting the latter transversely to form an unobstructed passage for air between the adjacent sides of each pair of cross-bars and the inner sides of said longitudinal main ties, said cross-bar members being curved laterally in a horizontal plane and having their upper faces convex and provided with longitudinal grooves conforming to the lateral and vertical contours of the cross-bar members.

1,155,675. SOCKET-WRENCH. LOUIS MUELLER, Cincinnati, Ohio. Filed Oct. 3, 1913. Serial No. 783,138. (Cl. 81—177.)



1. A socket wrench comprising a barrel portion with a plurality of ends, sockets in the ends, a handle portion for said barrel, means for pivotally mounting the barrel in the handle and means for holding the barrel rigidly in the handle portion comprising a spring-pulled socket to fit over the barrel end and a latch for said socket for the purpose described.

2. A socket wrench comprising a holder portion with a plurality of open ends, socket pieces of graded sizes telescoped into the ends, a handle for said holder and means for independently advancing any socket piece in the holder ends, and means in the holder coöperating with the socket advancer means for locking said socket advancer means in a plurality of positions, whereby selected ones of the socket pieces may be advanced together, flush with or beyond the holder ends.

3. A socket wrench comprising a holder portion with a plurality of open ends, socket pieces of graded sizes telescoped into the ends, a handle for said holder and means for independently advancing any socket piece in the holder ends, and means in the holder coöperating with the socket advancer means for automatically locking said socket advancer means in a plurality of predetermined positions, whereby selected ones of the socket pieces may be advanced together, flush with or beyond the holder ends.

4. A socket wrench comprising a rectangular barrel, socket pieces of graded sizes telescoped into said barrel, pins on the socket pieces and extending through the barrel for advancing the socket pieces, and means in connection with the pins and the barrel for locking the pins in a plurality of predetermined positions, so that any one, ones, or all of the socket pieces may be locked inside of, flush with or beyond the barrel ends.

5. A socket wrench comprising a rectangular barrel with a plurality of open ends, socket pieces telescoped into the barrel, means for independently advancing and withdrawing the socket pieces from the ends of the barrel, a handle for the barrel and spring-pulled means for securing the barrel rigidly to the handle in a plurality of positions and means for locking said securing means when in holding position.

1,155,676. COLOR-CARTRIDGE. AUGUST E. NIENSTADT. New York, N. Y., assignor to Maurice Wolfer, New York, N. Y. Filed May 27, 1913, Serial No. 770,247. Renewed Mar. 1, 1915. Serial No. 11,325. (Cl. 134—28.)



1. A color cartridge in the form of a string composed of a multiplicity of loosely arranged threads saturated and coated with readily soluble coloring matter.

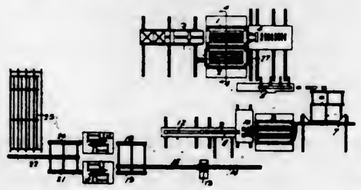
2. A color cartridge in the form of a flexible string composed of a multiplicity of loosely arranged flexible strands saturated with a readily soluble coating material.

3. A color cartridge in the form of a string composed of a multiplicity of loosely arranged threads saturated and coated with readily soluble coloring matter, and having inherent rigidity to retain its distended condition.

4. A color cartridge in the form of a string composed of a multiplicity of longitudinally arranged strands saturated with and rendered stiff by a readily soluble coloring material.

5. A color cartridge in the form of a string composed of a multiplicity of longitudinally arranged strands saturated with and rendered stiff by a readily soluble coloring material, and a holder to which said string is attached and beyond which it projects.

1,155,677. APPARATUS FOR THE MANUFACTURE OF TUBING. PETER PATTERSON, Pittsburgh, Pa.; Safe Deposit and Trust Company of Pittsburgh executor of said Patterson, deceased. Filed Sept. 15, 1911. Serial No. 649,460. (Cl. 78—83.)



1. In apparatus for forming tubing, the combination of two bending furnaces, a single welding furnace and multiple finishing rolls and means to feed stock from said welding furnace to said rolls successively.

2. In apparatus for the manufacture of pipe, the combination of two bending furnaces side by side, single laterally moving charging and skelp forming apparatus adapted to coöperate alternately with each furnace, a single welding furnace, charging and welding apparatus coöperating therewith and multiple cross roll finishing machines and feeding and delivery mechanism coöperating therewith to feed the stock thereto successively.

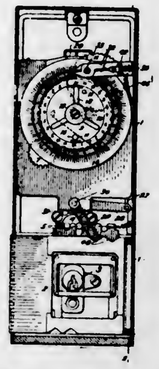
3. In apparatus for the manufacture of pipe, the combination of two bending furnaces side by side, single laterally moving charging and scarfing apparatus adapted to coöperate with each furnace alternately, a single welding furnace, charging and welding apparatus coöperating therewith and multiple cross roll finishing machines and feeding and delivery mechanism coöperating therewith to feed the stock thereto successively.

4. In apparatus for the manufacture of tubing, the combination of two bending furnaces side by side, single laterally moving charging and bending apparatus coöperating therewith, a single welding furnace, charging and welding apparatus coöperating therewith, multiple cross roll finishing apparatus, and feeding and delivery mechanism coöperating therewith and adapted to feed the stock thereto successively.

5. In apparatus for the manufacture of tubing, the combination of two bending furnaces side by side, single laterally moving, charging and scarfing mechanisms adapted to coöperate therewith alternately, bending mechanism, a single welding furnace and charging and welding mechanism coöperating therewith.

[Claims 6 to 9 not printed in the Gazette.]

1,155,678. TIME-RECORDING LOCK. EDWIN SANFORD PHELPS, Elizabeth, N. J. Filed July 20, 1914. Serial No. 852,079. (Cl. 234—1.)



1. A time recording lock comprising record-making mechanism including a record-receiving member and a recording stylus coöperating therewith, a lock-bolt, and means connecting the lock-bolt with the recording stylus and serving to deflect the stylus to effect a relatively broad record to indicate one position of the bolt and a relatively light or narrow record for the other position of the bolt.

2. A time recording lock comprising record making mechanism including a record-receiving member and a recording stylus coöperating therewith, the stylus having a spreadable marking nib, a lock-bolt, and means connecting the lock-bolt with the recording stylus and serving to spread the marking nib to form a relatively wide record for one position of the bolt and permit contraction of the nib to form a relatively light or narrow record for the other position of the bolt.

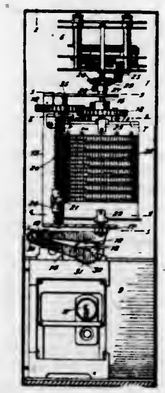
3. A time recording lock comprising record-making mechanism including a record-receiving member and a recording stylus coöperating therewith, the stylus comprising pivotally associated members having a spreadable marking nib, a lock-bolt, a lever associated with the bolt for actuation from the bolt, a spreading member associated with the pivoted members of the stylus, and a pitman connecting said spreader and lever to expand the marking nib to form a relatively wide record for one position of the bolt and permit contraction of the nib to form a relatively light or narrow record for the other position of the bolt.

4. A time recording lock comprising record-making mechanism including a record-receiving member and a recording stylus coöperating therewith, the stylus having a deflectable marking nib to form a relatively wide record in one position and a relatively narrower record in another position, a lock-bolt, and means for deflecting the marking nib of the stylus according to the locked or unlocked position of the bolt to effect the two characters of record.

5. In a time recording lock comprising a record-making mechanism including a record-receiving member and a stylus, a spring support for the stylus, the stylus being connected to said support to move thereon in the plane of the record-receiving member, and means for adjusting the spring support to vary the tension of the marking nib against the record-receiving member.

[Claim 6 not printed in the Gazette.]

1,155,679. TIME-RECORDING LOCK. EDWIN SANFORD PHELPS, Elizabeth, N. J. Filed July 23, 1914. Serial No. 852,657. (Cl. 234—1.)



1. A time recording lock comprising recording-mechanism including a rotatable drum and a recording stylus one of which is shiftable longitudinally of the axis of the drum, the stylus being in contact with the drum to inscribe a record during the period while the bolt is in both its locked and unlocked positions, and means coöperating with the bolt and shiftable member of the record-making mechanism to shift the latter member to change record from one plane made while the bolt is retracted to another plane made while the bolt is projected.

2. A time recording lock comprising record-making mechanism including a rotatable record-carrying drum and a stylus movable relatively to the drum, a lock-bolt, and means coöperating with the bolt to shift the drum longitudinally of its axis when the bolt is in one position.

3. A time recording lock comprising record-making mechanism including a rotatable record-carrying drum and a stylus movable relatively to the drum, a lock-bolt, means coöperating with the bolt to shift the drum longitudinally of its axis when the bolt is in one position, and spring influenced means associated with the stylus to hold it retracted when thrown away from the record-carrying drum.

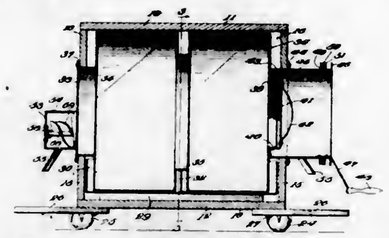
4. A time recording lock comprising record-making mechanism including a rotatable record-carrying drum and a recording stylus movable relatively to the drum, a lock-bolt, a spring-support for the drum, a lever coöperatively associated with the lock-bolt and adapted to be actuated by the bolt to throw it against said spring-support to shift the drum to change the plane of contact of the stylus therewith.

5. A time recording lock comprising record-making mechanism including a rotatable record-carrying drum and a worm shaft parallel with the axis of the drum and

one of which is shiftable longitudinally of the other, a recording stylus traversing the worm-shaft, a lock-bolt, and means intermediate of the bolt and the recording mechanism and actuated by the bolt to move the shiftable member of the recording mechanism to change the plane of the record.

[Claim 6 not printed in the Gazette.]

1,155,680. FREEZER. EMRY E. PHILLIPS, West Frankfort, Ill. Filed Mar. 21, 1914. Serial No. 826,353. (Cl. 257—97.)



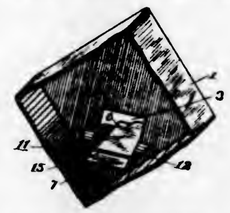
1. An ice-cream freezer comprising a casing, a tray mounted therein, a partition in the tray, a drum rotatably mounted in the casing and extending peripherally into the tray and provided with a peripheral bead receiving the partition, means for rotating the drum, a trough mounted in the casing with one edge in contact with the drum, a partition in the trough, covers for the ends of the trough, conveyers mounted in the trough between the ends of the same and the partition therein, one of said conveyers having one end of its shaft journaled upon the end of the trough, a coupling between the inner ends of the conveyer and supported by the partition, said coupling permitting swinging movement of the conveyer shafts relative to each other whereby they may be withdrawn from under the covers at the ends of the trough, a shaft mounted in one end of the trough, a gear on the outer end of said shaft, means acting on said gear to rotate the shaft, a collar mounted upon the end of the trough, and springs connecting said collar with said gear whereby to hold the said shaft in operative engagement with the adjacent end of the adjacent conveyer shaft.

2. An ice-cream freezer comprising a casing, a tray mounted therein, a drum provided at one end with an axially extending annular flange projecting through the end of the casing to form a journal for the drum and extended laterally at its outer end to bear against the outer face of the casing, a bearing ring secured to the opposite end of the drum and having a lateral extension, a spout secured to the lateral extension, a handle carried by said spout, and a closure for the drum housed within said bearing ring and detachably secured to a flange surrounding an opening in the end of the drum.

3. An ice cream freezer including a casing, a liquid holding tray mounted in the casing and divided into two compartments by a transverse partition, a freezing mixture holding drum rotatably mounted in the casing and provided intermediate its length with a circumferential depression receiving the partition whereby the resulting peripheral faces of the drum extend into the compartments of the tray, a trough bearing by one edge against the peripheral faces of the drum, oppositely acting conveyers mounted in the end portions of the trough, means for rotating the drum, and means actuated by the drum rotating means for simultaneously actuating the conveyers.

1,155,681. COVER AND SPOUT FOR PACKAGES. ERVIN W. PINKERTON, Rochester, N. Y. Filed Aug. 14, 1914. Serial No. 856,881. (Cl. 221—11.)

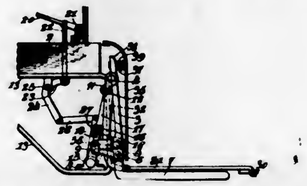
1. In a package, the combination of a top, an opening therein, lugs integral with the top on the opposite side of the said opening and bent at right angles to the top, a spout pivotally mounted between said lugs, said spout being folded from a blank and having a base and sides bent up from said base and stops bent at an angle to said sides, and having their ends adapted to abut edgewise against the top to thereby limit the swing of the spout.



2. In a package the combination of a top, an opening therein, lugs integral with the top on the opposite side of the said opening and bent at right angles to the top, a spout pivotally mounted between said lugs, said spout being folded from a blank and having a base and sides bent up from said base, and stops bent at an angle to said sides, and having their ends adapted to abut edgewise against the top to thereby limit the swing of the spout, perforations in said lugs and in said sides of the spout, a pin passing through said lugs and said sides pivotally connecting the spout to the top.

3. In a package, the combination of a top, an opening therein, a spout pivotally mounted in said opening, said spout being folded from a blank and having a base and sides bent up from said base and stops bent up from said sides, said stops engaging edgewise with the top to limit the swing of the spout.

1,155,682. STREET-CAR FENDER. ROBERT H. POGUE, New Westminster, British Columbia, Canada. Filed July 11, 1914. Serial No. 850,479. (Cl. 105—130.)



1. A street car fender, comprising the combination with a vertically and a horizontally disposed fender frame composed of side frames and cross rails, means for connecting the upper part of the fender to the car and for limiting its fall to the track, means for supporting the fender frame clear of the track, said means comprising a rocking shaft mounted in bearings secured to the car body below the upper cross rail of the fender, a lever projecting from and in line with the end of the rocking shaft, a link connecting the free end of each lever to the upper part of the fender frame, means for limiting the movement of this link connection forward beyond a straight line between the rocking shaft and the connection of the links to the fender and means for "breaking" the link connection backward and allowing the fender to fall to the track.

2. A street car fender, comprising the combination with a vertically and horizontally disposed frame composed of side frames and cross rails, means for connecting the upper part of the fender to the car and for limiting its fall to the track, means for supporting the fender frame clear of the track, said means comprising a rocking shaft mounted in bearing secured to the car body below the upper cross rail of the fender, a lever secured to each end of this rocking shaft, a link connecting the free end of each lever to the upper cross rail of the fender, means for limiting movement of this link connection forward beyond a straight line between the rocking shaft and the connection of the link to the fender, and means coöperative with a rail in advance of the front rail of the fender for "breaking" the link connection backward and allowing the fender to fall to the track.

3. A street car fender, comprising the combination with a vertically and horizontally disposed fender frame, means for connecting the fender to the front end of the car, said means comprising stanchions secured to the under frame of the car and projecting vertically downward from the front end thereof and carried backward and upward to the car body, links connecting the upper part of the fender frame to the upper part of each stanchion, a rocking shaft mounted in bearings on the stanchions and having at each end a lever integral with or secured to it, a link connecting the free end of each rocking shaft lever with the upper part of the fender frame, said link being produced beyond the pin connection to the lever and carried around the back of it to limit movement forward at the joint beyond a straight line between the rocking shaft and the fender frame where the rocking shaft levers are connected, an advance rail supported in front of the front rail of the fender, a rod on each end of this advance rail, a link supporting the after end of each side bar from the upper part of the fender frame, the back of each link being in engagement with the adjacent joint of the rocking shaft lever end, and means operative from within the car for moving the rocking shaft backward to "break" the supporting mechanism.

4. A street car fender, comprising the combination with a vertically and a horizontally disposed fender frame hinged together to enable the horizontally disposed frame to hold up against the vertically disposed frame and having a stop joint at the hinge that will sustain the horizontally disposed portion at right angles to the vertically disposed portion, means for suspending the vertically disposed portion from the under frame of the car in a manner that will limit its downward movement to the track level and permit it being lifted clear of the track, means for supporting the fender frame clear of the track, means coöperative with a rail in advance of the front rail of the fender for releasing the support and permitting the frame to fall, and means for raising and lowering the fender from within the car.

5. A street car fender, comprising the combination with a vertically and a horizontally disposed fender frame, stanchions secured to the car under frame and downwardly projecting from its front end, links connecting the upper part of the fender to the upper part of each stanchion, a rocking shaft supported in bearings across the lower part of the stanchions, levers secured to or integral with the rocking shaft at each end, links connecting the end of these levers with the upper part of the fender, the end of each of said links where connected to the levers being produced beyond the pin connection and carried around to engage the edge of the lever to which it is connected to limit movement of the link connection beyond the straight line between the rocking shaft and the link connection of it to the fender, a link suspended from the upper part of the fender adjacent to each rocking lever link, said links engaging the front of the pin connection, said bars being connected to the lower ends of these links and endwise movable on the horizontal portion of the fender and a cross rail connected to the ends of the side bar and supported by them in advance of the front rail of the fender.

[Claims 6 and 7 not printed in the Gazette.]

1,155,683. CAR-COUPLING. GEORGE H. PUTNAM, South Boston, Mass. Filed Apr. 22, 1913. Serial No. 762,809. (Cl. 213—35.)

1. A car-coupler comprising a recessed member and a lock-pin adapted to enter into, substantially, rigid locking engagement with each other; in combination with a latch, pivotally mounted at the top of said member, and housed entirely within the same, a free end on said latch adapted for projection through an opening in the side of said member, said latch being so designed as to automatically engage and lock said pin, and an opening through the side of said member adapted for the projection therethrough of said free end, said opening being designed to limit the pivotal action of said latch.

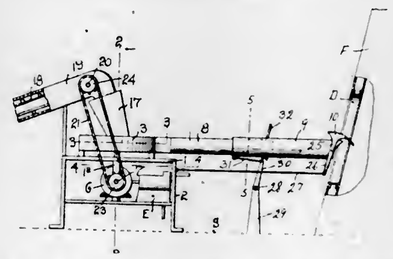


2. A car-coupler comprising a recessed member adapted to be rigidly mounted on the draw-bar of a car, and a lock-pin adapted to be rigidly connected to the draw-bar of an adjacent car to be shackled; in combination with a rounded boss formed integral with said member, a latch formed with a curved hook at one end, said hook being designed to form a pivotal connection with said boss, means whereby the middle portion of said latch may automatically engage and lock said pin, means whereby said pin may enter into rigid locking engagement with said member, and means, attached to the free end of said latch, for releasing its engagement with said pin.

3. A car-coupler comprising a recessed member and a lock-pin adapted to enter into engagement with each other; in combination with a rounded boss formed integral with said member, a latch formed with a curved hook at one end which is adapted to pivotally engage said boss, means whereby said latch may automatically lock said pin in such engagement, and means, attached to the free end of said latch, for releasing said lock.

4. A car-coupler comprising a recessed member and a lock-pin adapted to enter into, substantially, rigid engagement with each other; in combination with a rounded boss formed integral with said member, a latch, housed within said member, and adapted to automatically lock said pin in such rigid engagement, and a curved hook, on said latch, adapted to pivotally engage with said boss.

1,155,684. FEEDING APPARATUS. GEORGE PORTER RENROAT, Roodhouse, Ill., assignor of one-fourth to Charles T. Bates, Roodhouse, Ill. Filed July 17, 1915. Serial No. 40,451. (Cl. 110—115.)



1. A feeding apparatus comprising a casing having a feed opening and provided with a discharge spout, a delivery member telescopically engaged with the discharge spout and capable of longitudinal movement and axial rotation, a rotor mounted within the casing, means for driving the rotor, a deflector member pivotally engaged with the outer extremity of the delivery member and capable of rocking movement relative to the discharge end of the delivery member, a stationary support, and a rod operatively engaged with the deflector and the stationary support whereby said deflector is automatically caused to move relative to the discharge end of the delivery member upon endwise movement of the delivery member.

2. A feeding apparatus comprising a casing provided with a discharge spout, a delivery member telescopically engaged with the discharge spout and capable of longitudinal movement and axial rotation, a shaft supported below the delivery member and disposed transversely thereof, a rock arm carried by the shaft, a link operatively

connecting the rock arm and the delivery member, a lever pivotally engaged with the shaft and movable in a direction longitudinally thereof, coacting locking means carried by the lever and the shaft, and a rod operatively connecting the lever and the delivery member whereby axial rotation may be imparted to the delivery member.

3. A feeding apparatus comprising a casing having a discharge spout, a delivery member telescopically engaged with the discharge spout and capable of longitudinal movement, a stationary support, a deflector member pivotally engaged with the outer end of the delivery member and adapted to overlie the discharge end thereof, said deflector member being provided with an extension, and a rod operatively engaged with said extension and the stationary support whereby the deflector member is moved relative to the discharge end of the delivery member upon longitudinal movement of the delivery member.

1,155,685. BRAKE-SHOE. MORLEY PUNSHON REYNOLDS, Cleveland, Ohio, assignor to W. S. Tyler Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 7, 1914. Serial No. 855,620. (Cl. 188—82.)



1. A brake shoe including a body member, rods secured to the back thereof, and a supporting lug secured to the rods, said rods being formed to provide means for preventing longitudinal movement of the lug.

2. A brake shoe including a body member, rods carried by the back thereof, a supporting lug, and legs formed on the lug for engagement with the rods, said rods being formed to provide means for engaging the legs and holding the lug against longitudinal movement.

3. A brake-shoe comprising a body having rods on the back of the same, a supporting lug having legs provided with notches for engaging with said rods to connect the same thereto, and bent portions in said rods for locking said lug thereto.

4. A brake-shoe comprising a body having rods on the back of the same, a supporting lug having legs provided with notches for engaging with said rods to connect the same thereto, bearing portions on the ends of said standards for engaging with said rods, and means formed integrally with said rods for engaging said legs for preventing longitudinal movement of the lug.

5. A brake-shoe comprising a cast body having its back provided with rods cast into the same, a supporting lug secured to said rods, means formed integrally with the rods for preventing longitudinal movement of the lug.

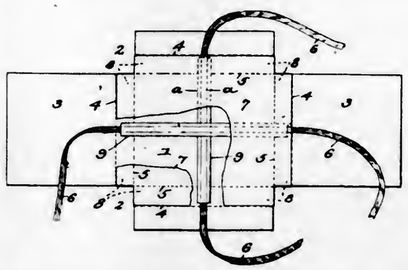
[Claims 6 to 11 not printed in the Gazette.]

1,155,686. PAPER BOX OR CARTON. ALFRED THORNTON RHODES, New York, N. Y. Filed July 8, 1915. Serial No. 38,703. (Cl. 229—46.)

1. In a folding box or carton, formed from a single blank having folding side and end flaps, of a fastening means slidably carried by said blank, a paper cover adhesively connected to the body of said blank, and an envelop surrounding said fastening means under said paper cover, said envelop serving to protect said faatening means from the adhesive substance of said paper covering.

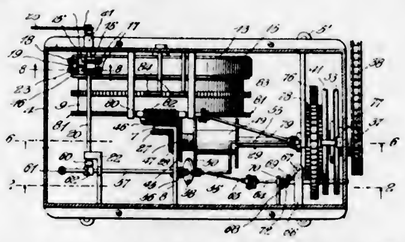
2. In a folding box or carton, formed from a single blank having side and end flaps scored and capable of being folded as specified, fastening tapes or cords slidably carried by said blank, a paper cover adhesively connected to the back or body portion of said blank, and envelops for said tapes arranged under and held in place by said paper covering providing channels for said tapes, whereby to permit the latter to be freely drawn therethrough, as specified.

3. In a folding box or carton, formed from a single blank having side and end flaps scored and capable of being folded as specified, fastening tapes or cords slidably carried by said blank, a paper cover adhesively applied to the back or body portion of said blank, and a covering of paraffin paper surrounding said tapes under said paper cover, providing channels for said tapes, whereby to permit the said tapes being freely drawn through said channels, said paraffin paper being held in position by said paper cover.



4. A folding parcel wrapper, comprising a body portion having a paper back or cover adhesively applied thereto, a tape carried by said wrapper, and an envelop surrounding said tape under said paper back or cover, said envelop being held in place and adhesively connected to said paper back or cover.

1,155,687. MECHANICAL STARTING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. JOSEPH SEVERA, Battle Creek, Nebr. Filed Jan. 14, 1915. Serial No. 2,206. (Cl. 123—187.)



1. In a mechanical starter of the character described, the combination with an engine shaft, of an energy storing device, a rotatably mounted element operable thereby, a pair of inner and outer friction disks disposed upon said element and adapted to be brought into frictional engagement, said outer disk being operatively connected with said engine shaft and having a detachable engagement with said rotary element, means controlled by the movement of said element to bring the inner friction disk into engagement with the outer one, means connecting one of said disks with said energy storing device, and additional means to permit disengagement of said disk, substantially as and for the purpose set forth.

2. In a mechanical starter of the character described, the combination with an engine shaft, of an energy storing device, a rotatably mounted element operable by said device, a pair of friction disks disposed upon said element, a member connected with one of said disks and operatively connected with said shaft, means providing a detachable connection between said member and rotary element, means to normally maintain said disks in spaced relation, means controlled by the movement of said rotary element to bring said disks into engagement, means operable by one of said disks and connected with said energy storing device to restore energy to the latter, and means to permit disengagement of said disks substantially as and for the purpose set forth.

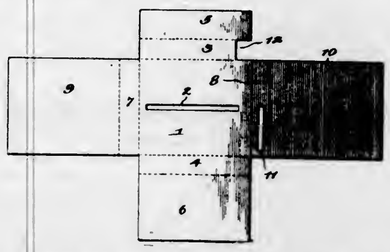
3. In a mechanical starter of the character described the combination with an engine shaft, of an energy storing device, a rotatably mounted element operated by said device, a pair of friction disks disposed upon said rotary element and adapted to be brought into frictional engagement, a sprocket gear connected with one of said disks and operatively connected with said engine shaft, means providing a detachable connection between said sprocket gear and said rotary element, means interposed between said disks to normally maintain the latter in spaced relation, means governed by the rotary movement of said element to bring said disks into engagement, mechanism connecting one of said disks with said energy storing device to restore energy to the latter, and means to permit disengagement of said disks substantially as and for the purpose set forth.

4. In a mechanical starter of the character described, the combination with an engine shaft, of an energy storing device, a rotatably mounted element operable thereby, inner and outer friction disks disposed upon said element, a sprocket gear connected with said outer disk and operatively connected with said engine shaft, dogs carried by said gear, a ratchet disposed upon said rotary element adapted to coöperate with said dogs whereby to provide a detachable connection between said element and gear, a spring interposed between said inner and outer disks to normally maintain the same in spaced relation, means governed by the rotary movement of said element to bring said inner disk into engagement with the outer one, mechanism connecting said storing device with said inner disk to restore energy to said device, and means to permit disengagement of said disks substantially as and for the purpose set forth.

5. In a mechanical starter of the character described, the combination with an engine shaft, of an energy storing device, a rotatably mounted element operable thereby, inner and outer friction disks disposed upon said element and adapted to be brought into frictional engagement, means to normally hold said disks in spaced relation, a gear connected with said outer disk and operatively connected with said engine shaft, dogs carried by said gear, a ratchet on said rotary element to coöperate with said dogs and provide a detachable connection between said element and gear, means to bring said inner disk into engagement with said outer disk, a spring actuated shaft controlling said means, said shaft being normally inoperative, means controlled by the rotary movement of said element to release said spring actuated shaft, mechanism connecting said inner disk with said energy storing device whereby to restore energy to the latter, and means to permit disengagement of said disks substantially as and for the purpose set forth.

[Claims 6 to 15 not printed in the Gazette.]

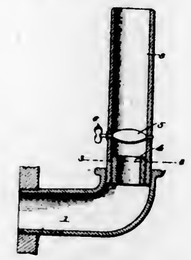
1,155,688. CIGARETTE BOX OR CONTAINER. JAMES A. SHEARMAN, Conimicut, and FRANCIS DE GORDY, Providence, R. I. Filed Jan. 15, 1915. Serial No. 2,361. (Cl. 229—17.)



1. In a cigarette box, a body formed of a blank having a front provided with a longitudinal slot, top and bottom portions having extensions, and ends having extensions, one of said ends having a longitudinal slot disposed at right angles to said first named slot, and said top having a cut-out part extending through one end thereof to form a cigarette outlet, said end extensions being engageable one on top of the other and said top and bottom extensions being foldable over said end extensions.

2. In a cigarette box, a body having a top, bottom and ends, each of which top, bottom and ends having extensions, the extensions of the ends being engaged one over the other and the extensions of the top and bottom being engaged over the end extensions, and said top having a cigarette discharge opening of a size and located so that a revenue stamp may be secured to the box to completely close the discharge opening and extend over and engage each of the top and bottom extensions so as to simultaneously seal the opening and secure all of the extensions in their said interengaging positions.

1,155,689. FURNACE-DOOR HANDLE. GABRIEL STEELE, Sioux City, Iowa. Filed Jan. 29, 1912. Serial No. 674,103. (Cl. 126—322.)



1. The combination with a furnace door, of a handle therefor comprising an angular tubular member, one end of which is attached to the door and the outer end of which is upwardly curved, an upwardly disposed tubular extension inserted in the upwardly curved end of the tubular member, and a reinforcing annular bushing disposed in the base of said extension and extending below the upwardly turned end of the first named member.

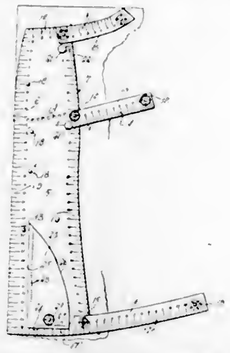
2. The combination with a furnace door, of a handle therefor comprising an angular tubular member, one end of which is screw threaded into the door, the other end of which extends upward and is interiorly screw threaded, an extension having its base engaging the screw threaded end of the first named member, and an annular bushing having screw threaded engagement with the interior face of the base of the extension, said bushing extending above and below the upwardly turned end of the first named member.

3. The combination with a furnace door, of a handle comprising a tubular angular member, one end of which is screw threaded into said furnace door, said member opening through the furnace door, the other end of the member being upwardly extending and interiorly screw threaded, a vertically disposed tubular extension having screw threaded engagement with the upwardly turned end of the first named member, a damper in said extension, and an annular bushing screw threaded into the base of the extension and extending above and below the angular end of the first named member.

1,155,690. SKIRT-MEASURING DEVICE. MARY C. TAYLOR, Perth Amboy, N. J., assignor of one-half to Samuel Taylor, Jersey City, N. J. Filed Oct. 16, 1913. Serial No. 795,536. (Cl. 33—14.)

1. A skirt drafting device comprising a body portion having the shape of a gore, with one longitudinal side edge straight throughout the major portion of its length, the opposite longitudinal side edge curved throughout the major portion of its length, the upper transverse edge slightly concaved, and the bottom transverse edge convexed, of a waist measuring arm pivotally connected to the body portion adjacent the top thereof, the top longi-

tudinal edge of said arm corresponding to the curvature of the top transverse edge of the body portion, an intermediate hip measuring arm pivoted to the body portion adjacent the curved longitudinal edge thereof and a lower measuring arm pivoted to the body portion adjacent the bottom thereof and having its lower longitudinal edge corresponding to the curvature of the bottom transverse edge of the body portion, said body portion and said upper, intermediate and lower arms all having measuring scales marked thereon.



2. A skirt drafting device comprising a body portion having the shape of a gore, with one longitudinal side edge straight throughout the major portion of its length, the opposite longitudinal side edge curved throughout the major portion of its length, the upper transverse edge slightly concaved, and the bottom transverse edge convexed, of a waist measuring arm pivotally connected to the body portion adjacent the top thereof, the top longitudinal edge of said arm corresponding to the curvature of the top transverse edge of the body portion, an intermediate hip measuring arm pivoted to the body portion adjacent the curved longitudinal edge thereof and a lower measuring arm pivoted to the body portion adjacent the bottom thereof and having its lower longitudinal edge corresponding to the curvature of the bottom transverse edge of the body portion, said body portion and said upper intermediate and lower arms all having measuring scales marked thereon, and a laterally slidable placket measuring arm connected with the body portion between the points of connection of the upper and intermediate arms, said placket measuring arm extending longitudinally of the body portion.

1,155,691. PIN-FASTENER. MARY E. TOWLER, Hubbard, Tex. Filed Oct. 1, 1914. Serial No. 864,448. (Cl. 24—150.)



1. A fastening of the class described formed adjacent one extremity to provide a loop having its sides disposed in a common plane and provided with a head supporting portion extending laterally from the plane of said sides at substantially right angles thereto, and a head adjustable upon the head supporting portion toward the sides of said loop.

2. A fastening of the class described having a portion of its length formed into a yieldably expansible head supporting portion, and a head carried by the head supporting portion and yieldably engaged thereby.

3. In a fastening device of the class described, a pin shank provided at its upper end with a head supporting portion, the said shank being bent upon itself a number of times to form the said portion and the said portion being initially expanded, and a head having an opening detachably receiving said portion in contracted condition.

4. A fastening of the class described including a pin shank rebent upon itself at one extremity a number of times to provide a plurality of overlapping portions normally expanded to form a head receiving portion, and a head having an opening detachably receiving said portion in contracted condition.

1,155,692. TUMBLING-FIGURE TOY. BLANCH VIETHEER, Marshfield, Oreg. Filed Mar. 3, 1915. Serial No. 11,926. (Cl. 46—40.)



1. In a tumbling toy, the combination of a tube or cylinder open at both ends, of cloth, fabric or similar heads or ends for the cylinder, and a ball or sphere arranged to roll within the cylinder into the cloth or fabric heads or ends thereof.

2. In a tumbling figure toy, the combination with a cylinder having both of its ends open, of a cloth, fabric or similar end for the head portion of the toy, and a cloth, fabric or similar end for the other end of the cylinder and arranged to constitute the lower portion of the body thereof, and a ball or sphere adapted to roll in said cylinder and into the cloth, or fabric ends thereof to thereby distend the said ends.

3. In a tumbling figure toy, the combination with a tube or cylinder which is open at its inner end and has a head portion at its outer end, of a cloth, fabric or similar covering, closure or pouch for the open inner end of the cylinder which constitutes the lower portion of the body of the figure, and a ball or sphere adapted to roll in said cylinder and into the said end or pouch and adapted to distend said end or pouch.

1,155,693. FOUNTAIN-PEN. ROBERT L. WARNOCK, Warnock, Ohio. Filed July 10, 1913. Serial No. 778,335. (Cl. 120—42.)



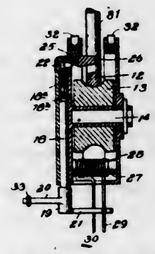
In a fountain pen, a barrel, a pen section mounted at one end of the barrel, a cap removably fitted onto the said end of the barrel and provided at its closed end with an opening, an auxiliary cap fitted into the first mentioned cap and having a threaded stud projecting through the said opening, the said auxiliary cap being arranged to inclose the said pen section when the main cap is fitted onto the barrel, and a nut threaded upon the stud and bearing against the closed end of the main cap.

1,155,694. AUTOMATIC STATION-INDICATOR FOR CARS. JAN WOLSKI, Chicago, Ill. Filed Nov. 30, 1914. Serial No. 874,686. (Cl. 40—47.)



In a device of the kind described, a shaft, oppositely-disposed ratchets on the shaft, independent levers loosely journaled on the shaft and freely movable in opposite directions, stops to limit movement of each lever in the opposite direction to that in which it is freely movable, pawls carried by the levers and engaging the ratchets, and means connecting the free ends of the levers and including a flexible portion.

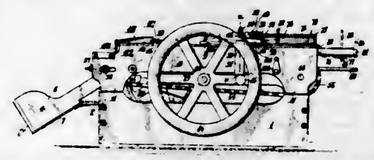
1,155,695. TROLLEY-GUARD. JOSEPH ZANOLLI, Pittsburgh, Pa. Filed June 2, 1914. Serial No. 842,421. (Cl. 191—80.)



1. A trolley guard comprising a pole provided with a pair of plates forming a forked frame for the trolley wheel, a trolley wheel journaled therein, a pivoted guard finger mounted therein above the trolley wheel and below the top of said forked frame, and adapted to move inward to admit the trolley wire and laterally in both directions to permit the passage of a stay wire, said finger being supported on a horizontal pivot at the top of a rotatable shaft mounted on the frame and provided at its bottom with a laterally extending finger, a spring to normally retain said finger and vertical shaft in position, and a spring on the said vertical shaft engaging the finger to hold it in normal horizontal position, substantially as described.

2. In a trolley guard, the combination with a forked frame having two leaves to support the trolley wheel, and provided at the top with contact rollers, a vertical shaft mounted on one side of said frame and held in normal position by springs in the frame, a guard finger pivoted to the top of said shaft for vertical motion and held normally in position by a spring in the shaft, whereby said finger is adapted to be depressed to admit the trolley wire, and to be turned sidewise with the said vertical shaft to permit the passage of the supports of the trolley wire, the said finger being entirely located within the trolley frame and below the top of the frame, and means to open the guard finger by rotating the vertical shaft, substantially as described.

1,155,696. DUPLICATING OR PRINTING MACHINE. CHARLES E. ADAMSON, Buffalo, N. Y., assignor to Knapp Husker Company, Baltimore, Md., a Corporation of Maryland. Filed Sept. 24, 1909. Serial No. 519,316. (Cl. 101—36.)



1. Two members coöperating to print upon a sheet of paper and a carrier movable back and forth over one of said members and supporting the other; combined with paper delivery-mechanism supported by said carrier and comprising two co-acting gripping members, one of said members having a curved gripping face and the other a flat gripping face.

2. Two members coöperating to print upon a sheet of paper and being relatively movable; combined with paper delivery-mechanism movable with one of said members and comprising two co-acting gripping-members, one being rotatable and having a curved gripping surface and the other being non-rotatable.

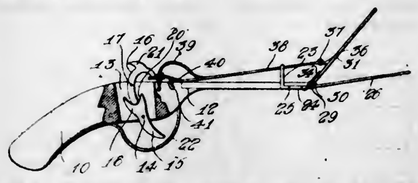
3. Two members coöperating to print upon a sheet of paper and a carrier movable back and forth over one of said members and supporting the other; combined with paper feeding-mechanism, supported by said carrier and comprising two co-acting gripping-members, one of said members being rotatable and the other being movable toward and from said rotatable member.

4. Two members coöperating to print upon a sheet of paper and being relatively movable; combined with paper feeding-mechanism movable with one of said members and comprising two co-acting gripping-members, one being rotatable and having a curved gripping-surface and the other being non-rotatable.

5. In a printing machine, the combination of a form-carrying member, a movable impression member, an inking device, a reciprocating paper feeding mechanism movable with said impression roller and placed into action after times of printing, said feeding mechanism being adapted to carry the sheets of paper onto said form carrying member preparatory to printing.

[Claims 6 to 29 not printed in the Gazette.]

1,155,697. FLY-KILLING APPARATUS. FRANK J. ANDERSON, Box Elder, Mont. Filed Apr. 17, 1915. Serial No. 22,160. (Cl. 43—1.)



1. In a device of the character described, an insect killing apparatus including a handle portion, a rim portion in rigid relation therewith, a reticular body carried by said rim portion, a second rim portion slightly smaller in length and width than said first mentioned rim portion in pivotal relation therewith, a reticular body carried by said second mentioned rim portion whereby when said reticular bodies are in a closed position they will engage each other, said second mentioned rim portion fitting within said first mentioned rim portion, and means for holding said second mentioned rim portion in a superposed position and means for releasing said second-mentioned rim portion, substantially as described.

2. In a device of the character described, a handle portion, arms carried by said handle portion, a rim mem-

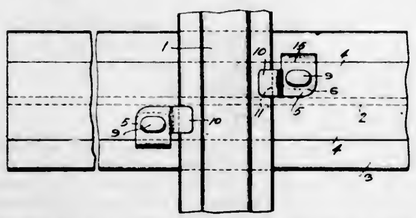
ber rigid upon said arms, a body supported by said rim portion, a second mentioned rim portion in pivoted relation to said first mentioned rim portion, a body supported by said second mentioned rim portion, said first mentioned rim portion being larger to accommodate said second mentioned rim portion, yieldable means for holding second mentioned body in engagement with said first mentioned body, means for drawing said second mentioned body out of engagement with said first mentioned body and holding the same in a superposed position, a bracket arranged on said arms for guiding said last mentioned means, and means carried by said handle for releasing said last mentioned means and second mentioned body, substantially as described.

3. In a device of the character described, a handle portion, a body carried in rigid relation to said handle portion, a second body pivotally connected to said first mentioned body, a rod to draw said pivoted body to an elevated position, a lug depending from said rod, said handle provided with a recess to receive said lug, means to trip said rod to move said lug out of engagement with said recess and a spring to operate said pivoted body, as and for the purpose set forth and described.

4. In a device of the character described, a handle portion, a body in rigid relation to said handle portion, a second body pivotally connected to said first mentioned body, a rod having connection with said pivoted body, a handle portion formed about the rear end of said rod, a lug depending from said rod, said first mentioned handle portion provided with a recess for receiving said lug, means to trip said rod to move said lug out of engagement with said recess, a pair of links connecting said rod and said tripping means, and a spring for operating said pivoted body, substantially as described.

5. In a device of the character described, a handle portion, a body in rigid relation to said handle portion, a second body pivotally connected to said first mentioned body, a rod connected to said pivoted body, a handle portion formed at the rear end of said rod to facilitate manipulation thereof, a lug depending from said rod, said handle provided with a recess for the reception of said lug, a spring to actuate said pivoted body, a trigger mounted on said first mentioned handle portion, a hammer pivotally connected to said first mentioned body portion and arranged above said trigger, an offset portion on said hammer engaging said second mentioned handle portion, whereby when said trigger is rocked said hammer will move said rod to disengage said lug from said recess, and a pair of links connecting said hammer and said second mentioned handle portion, as and for the purpose set forth and described.

1,155,698. RAIL-FASTENER. JOHN B. ATWOOD, Pittsburgh, Pa. Filed Dec. 17, 1912. Serial No. 737,354. (Cl. 238—4.)



1. A rail fastener, comprising the combination with a tie, a clip member having a rail engaging lug and a tie engaging lug, the body and tie engaging lug of said clip member and said tie being apertured respectively, a pin to engage said apertures, said apertures being so relatively arranged that when the wedge pin is driven home the rail lug will be caused to firmly engage the rail flange and the tie lug will be caused to firmly engage the tie.

2. A rail fastener comprising in combination with a tie, a clip member having a rail flange engaging lug and having a tie engaging lug at right angles thereto, the body and the tie engaging member of said clip member being apertured and the tie being likewise apertured, a fastening pin wedge shaped on all sides, said apertures being so arranged with reference to the lugs that when said pin is driven home the rail lug will be firmly clamped against the rail flange and the tie engaging lug will be firmly clamped against the edge of the tie.

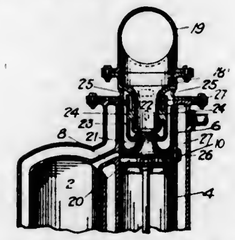
3. A rail fastener comprising in combination with a tie, a clip member having a rail flange engaging lug, and a tie engaging lug at right angles to each other, the body and tie engaging lug of said clip member being apertured and the tie being likewise apertured, a wedge shaped fastening pin, said apertures being so arranged that when the parts are assembled with the lugs respectively snugly engaging the rail flange and tie, the outer side edges and outer end edges of the apertures of the clip member will lie outside of the corresponding edges of the tie aperture so that when the pin is driven home the lugs of said clip member will be firmly clamped upon said rail flange and said tie respectively.

4. A rail fastener comprising the combination with a tie having a flange, a clip member having a rail engaging lug and a tie flange engaging lug, said clip member and said tie flange being apertured respectively, a wedge pin to engage said apertures, said apertures being so relatively arranged that when the wedge pin is driven home the rail lug will be caused to firmly engage the rail flange and the tie lug will be caused to firmly engage the tie, and means for securing said pin in fastening position.

5. A rail fastener comprising in combination with a tie, a clamping plate having tie engaging lugs at opposite sides in staggered relation, a rail flange lug at one end and an aperture at the opposite end, a clip member having a rail engaging lug, and a tie and clamping plate engaging lug, said clip member having substantially registering apertures in its body portion and its tie engaging lug, said tie having an aperture, a wedge shaped fastening pin, the apertures in said clip member, clamping plate and tie being so relatively arranged when the parts are assembled that the driving home of the fastening pin through said apertures will cause a slight twisting movement of the clamping plate on the tie to cause its lugs to securely engage the tie, the arrangement of the apertures being such as to cause the clamping plate lug and the rail clamping lug of the clip member to firmly engage the opposite sides of the rail flange and to cause the tie engaging lug to firmly clamp the clamping plates and tie together.

[Claims 6 to 12 not printed in the Gazette.]

1,155,699. INTERNAL-COMBUSTION ENGINE. HUGO J. BACHMAN, Denver, Colo. Filed Nov. 12, 1913. Serial No. 800,569. (Cl. 123—177.)



1. In an internal combustion engine, a working cylinder and a valve chamber connected by a port, a hollow valve movably mounted in the said chamber, and having an inwardly directed nozzle and an opening for establishing communication between the said nozzle and the said port, and an element providing a passage for gases ejected from the said nozzle through the interior of the valve, in spaced relation to the wall of the same, the said space connecting with the atmosphere and with the mouth of said passage adjacent said nozzle.

2. In an internal combustion engine, a working cylinder and a valve chamber connected by a port, a hollow valve movably mounted in the said chamber, and having an inwardly directed nozzle and an opening for establishing communication between the said nozzle and the said port, and an element providing a jacketed passage for gases ejected from the said nozzle, through the interior of the valve in spaced relation to the wall of the same, the said space connecting with the atmosphere and with the mouth of said passage adjacent said nozzle.

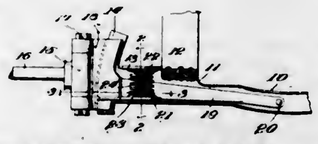
3. In an internal combustion engine, a working cylinder and a valve chamber connected by a port, a hollow valve movably mounted in the said chamber, and having an inwardly directed nozzle and an opening for establishing communication between the said nozzle and the said port, an element providing a passage for gases ejected from the said nozzle, through the interior of the valve in spaced relation to the wall of the same, and including a mantle forming an open-ended jacket around said passage, both the said space and the said jacket connecting with the atmosphere and with the mouth of said passage adjacent said nozzle.

4. In an internal combustion engine, a working cylinder and a valve-cylinder connected by a port, a hollow valve movably fitted in said valve cylinder and having an inwardly directed nozzle and an opening for establishing communication between the said nozzle and the said port, and an element including an open-ended hollow core extending within the valve in spaced relation to the interior surface of the same, and means for connecting said space with the atmosphere, the said core being adapted to receive at its inner end, the gases ejected through said nozzle and the said space being connected with the same end of the core for the admission of air thereinto.

5. In an internal combustion engine, a working cylinder and a valve-cylinder connected by a port, a hollow valve movably fitted in said valve cylinder and having an inwardly directed nozzle and an opening for establishing communication between the said nozzle and the said port, and an element including an open-ended jacketed hollow core extending within the valve in spaced relation to the interior surface of the same, and means for connecting said space with the atmosphere, the said core being adapted to receive at its inner end, the gases ejected through said nozzle and the said space being connected with the same end of the core for the admission of air thereinto.

[Claims 6 to 10 not printed in the Gazette.]

1,155,700. SHOCK-ABSORBER. AUBURN BAILEY, Oakland, Cal. Filed June 5, 1914. Serial No. 843,280. (Cl. 21—187.)



1. A shock absorber including a main axle section adapted for attachment to a vehicle body, a knuckle carrying section co-acting with the first section, the main axle section being T-shaped in section to engage in the intermediate portion of the knuckle carrying section which is U-shaped in section, and cushioning means between the sections.

2. A shock absorber including a main axle section terminating at its ends in vertically disposed heads, said section adjacent the heads having laterally disposed seats, a steering knuckle section having vertical movement with respect to the main axle section and terminating at its ends in bifurcated steering knuckles adapted to receive the heads, and means for yieldably coupling such sections together.

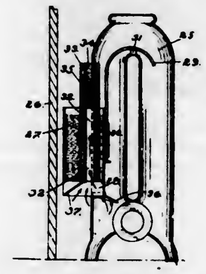
3. A shock absorber including a main axle section terminating at its ends in vertically disposed heads, a steering knuckle section having vertical movement with respect to the main axle section and terminating at its ends in bifurcated steering knuckles adapted to receive the heads, and means for yieldably coupling such sections together, said means including vertically alined seats formed upon the sections, springs interposed between the seats of one section and those of the other, and fastening devices passed through the alined seats and springs.

4. A shock absorber including a main axle member terminating at its ends in vertically disposed arcuate heads and provided adjacent such heads with laterally disposed seats, steering knuckles receiving yokes bifurcated to receive the heads, an axle member connecting the yokes, and movably connected to the main axle member, said yoke connecting axle member being formed with laterally disposed seats, and helical cushioning springs interposed between the seats of the main axle member and the other axle member.

5. A shock absorber including a main axle member terminating at its ends in vertically disposed arcuate heads and provided adjacent such heads with laterally disposed seats, steering knuckles receiving yokes bifurcated to receive the heads, an axle member connecting the yokes and movably connected to the main axle member, said yoke connecting axle member being formed with laterally disposed seats, helical cushioning springs interposed between the seats of the main axle member and the other axle member, and additional cushioning means adapted to operate upon expansion of such springs.

[Claims 6 and 7 not printed in the Gazette.]

1,155,701. HUMIDIFYING DEVICE. AMOS R. BLISS, Chicago, Ill. Filed Jan. 18, 1915. Serial No. 2,861. (Cl. 98—44.)



1. A humidifying device comprising a vessel to contain water formed with a substantially V-shaped projection on one side, means for supporting said vessel on a sectional radiator so that the V-shaped projection intervenes between two sections of the radiator, and a tubular evaporating element of absorbent material in said V-shaped projection open at its upper end and opening through the bottom part of the vessel, in contact with the water in said vessel and projecting above the upper edge of the vessel so as to stand between said radiator sections.

2. A humidifying device comprising a vessel to contain water formed with a substantially V-shaped projection on one side, means for supporting said vessel on a sectional radiator so that the V-shaped projection intervenes between two sections of the radiator, and a tubular evaporating element of absorbent material in said V-shaped projection in contact with the water in the vessel, and open at opposite ends so that it provides a duct for hot air from said radiator.

3. A humidifying device comprising a vessel to contain water formed with a substantially V-shaped projection on one side, means for supporting said vessel on a sectional radiator so that the V-shaped projection intervenes between two sections of the radiator, and a tubular ventilating element composed of blotting paper in said V-shaped projection open at its upper end and opening through the bottom part of the vessel, in contact with the water in said vessel, and projecting above the upper

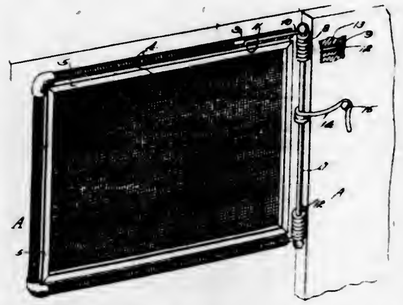
edge of the vessel so as to stand between said radiator sections.

4. A humidifying device comprising a means to contain water, means for supporting said vessel on the side of a sectional radiator, and a tubular evaporating element of absorbent material in substantially upright position in said containing means, in contact with the water therein, open at the bottom through the bottom of the containing means, and open at the top and projecting above the edge of the same and interposed between the said sections of said radiator.

5. A humidifying device comprising a vessel to contain water, means for supporting the same on a radiator, evaporating elements of absorbent material which extend downwardly into the water in the vessel and above the same, a deflecting plate on said vessel which extends over the upper ends of said elements, and a filling funnel for the vessel formed on said plate.

[Claim 6 not printed in the Gazette.]

1,155,702. SPRING-HINGE. GUSTAVE BOLAND, San Jose, Cal. Filed Oct. 23, 1914. Serial No. 868,290. (Cl. 16—25.)



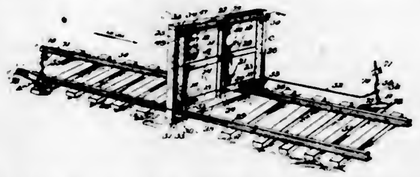
1. The combination with a permanent structure with an opening and a closure for the opening, and having holes formed in its edge, of a mounting connecting the closure and said structure for relative pivotal movement, said mounting including a pintle, coil springs with oppositely extending ends those on one side engaging the permanent structure and the other engaging the closure by insertion in said holes, and spring hooks connecting the pintle to the closure and to said structure, said structure having apertures for its respective ends of the springs.

2. A mounting for closures of openings in a permanent part, comprising a hinge with a pintle, springs on the pintle detachably interlocking with said closure and part, and spring hooks connected to the pintle, said hooks connecting the pintle to the closure and to said part to prevent relative shifting.

3. In combination, a door, a jamb, a pintle, a plurality of coil springs mounted on said pintle and connected at one end to the door and at the other end to the jamb, said springs serving as the sole hinge support for the door and acting also to automatically close the same, and means for holding said pintle against lateral movement.

1,155,703. MANUALLY-OPERATED MINE-DOOR. NEWTON K. BOWMAN, North Lawrence, Ohio. Filed June 23, 1914. Serial No. 846,828. (Cl. 39—43.)

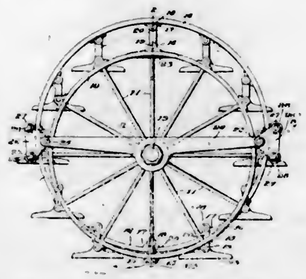
1. The combination with a mine door, including a pair of door sections arranged to open and close in opposite directions and disposed when in closed position to extend diagonally with respect to the track, means operably connecting the door sections whereby the movement of the one section is communicated to the other, and independent operating means connected to each of the sections, each means being operable for simultaneously opening or closing both door sections and including a fixed bracket secured to the door section, a door rod pivoted to the bracket at its one terminal and an operating lever pivoted to the door rod at its other terminal, said lever including a handle member whereby the door rod may be manually actuated, and a foot board adapted when depressed to operate the lever for moving the door sections into either open or closed positions.



2. A mine door of the character described including a pair of door sections, means operably connecting the door sections whereby the movement of one section will be communicated to the other section and operating means connected to one of the sections for moving both the sections into either open or closed position, said means including a draw rod pivotally connected to the rod sections and an operating lever pivotally connected to the draw rod, said operating lever including a socket, a body plate extending laterally thereof, terminally disposed depending ears formed on the body plate, a base plate, upstanding terminally disposed ears formed on the base plate, a hinged rod passing through the elongated base plate and of the body plate for pivotally connecting the said plates, a handle member removably seated in the socket, said handle member being manually operable and a foot board mounted on the body plate whereby the door sections may be moved into open or closed positions by foot pressure.

3. A mine door of the character described including a pair of door sections, means operably connecting the sections whereby the movement of the one will be communicated to the other, and an operating lever connected to one of the door sections, said lever including a socket, a body plate extending laterally therefrom, a handle removably received by the socket, said handle being manually operable, a base plate, depending ears formed on the body plate, upstanding ears formed on the base plate, a hinged rod passing through the body plate and base plate for hingedly connecting said plates, and a foot board rigidly mounted on the body plate, said foot board being depressible by foot pressure for either opening or closing the door sections.

1,155,704. TRACTION-WHEEL. WILLIAM W. COULTER, Garrison, N. D. Filed Apr. 28, 1915. Serial No. 24,549. (Cl. 21—152.)



1. An apparatus of the class described comprising a main wheel device mounted for rotation and having a plurality of bearings spaced apart, a supplemental wheel device having a plurality of bearings spaced apart, links mounted for rotation respectively relative to the bearings of said main wheel device and to the bearings of the supplemental wheel device, bearing members including flat portions maintained normally in horizontal position and connected rigidly relative to said links, and means for maintaining said supplemental wheel device in position eccentric to the main wheel device.

2. An apparatus of the class described comprising a main wheel device mounted for rotation and having a plurality of bearings spaced apart, a supplemental wheel device including annular members spaced apart and each having a plurality of bearings spaced apart, a plurality of shafts connecting the bearings of said annular members, links mounted for rotation respectively relative to the bearings of said main wheel device and rigidly connected to the shafts of the supplemental wheel device, bearing members including flat portions maintained normally in horizontal position and connected rigidly to said shafts, and means for maintaining said supplemental wheel device in position eccentric to the main wheel device.

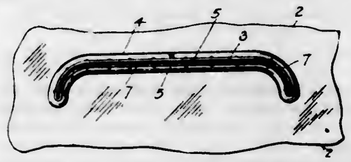
3. An apparatus of the class described comprising a main wheel device mounted for rotation, a supplemental wheel device, a plurality of links mounted for rotation respectively relative to said main wheel device and to the supplemental wheel device, bearing members including flat portions maintained normally in horizontal position and connected rigidly to said links, and means for maintaining said supplemental wheel device in position eccentric to the main wheel device.

4. An apparatus of the class described comprising a main wheel device mounted for rotation and having a plurality of bearings spaced apart, a supplemental wheel device having a plurality of bearings spaced apart, links mounted for rotation respectively relative to the bearings of said main wheel device and to the bearings of the supplemental wheel device, bearing members including flat portions maintained normally in horizontal position and connected rigidly relative to said links, frame members, and bearing rollers supported relative to said frame members and engaging said supplemental wheel device and maintaining the same eccentric relative to said main wheel device.

5. An apparatus of the class described comprising a main wheel device mounted for rotation and having a plurality of bearings spaced apart, a supplemental wheel device having a plurality of bearings spaced apart, links mounted for rotation respectively relative to the bearings of said main wheel device and to the bearings of the supplemental wheel device, bearing members connected rigidly relative to said links, frame members, holding members mounted to swing upon said frame members, and bearing rollers carried by sad swinging holding members and engaging said supplemental wheel device and maintaining the same eccentric relative to the man wheel device.

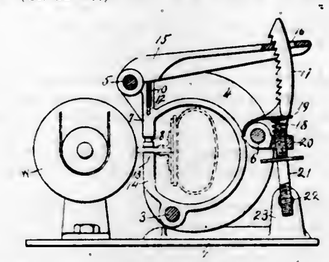
[Claims 6 and 7 not printed in the Gazette.]

1,155,705. RAIN AND SNOW SHIELD FOR VEHICLES. DON F. COWELL and CHARLES B. COWELL, Denver, Colo. Filed Jan. 8, 1915. Serial No. 1,119. (Cl. 20—40.5.)



A device of the type described, including a suction-exerting member in the form of an elongated cup of elastic material, with downwardly curved lateral portions and arcuate in cross-section, said cup-shaped suction-exerting member having longitudinal spaced ribs upon its forward rounded surface, and a shield or deflector slanting forwardly and downwardly and having an obtuse-angled inner terminal arranged for reception within the space between said longitudinal spaced ribs of the suction-exerting member.

1,155,706. WORK-HOLDER. EDMUND R. DARLING, Woonsocket, R. I. Filed Feb. 20, 1915. Serial No. 9,580. (Cl. 51—7.)



1. In a work holder, a base having upwardly extending lugs thereon, a horizontal rod secured to the lugs, a pair of C-shaped members pivoted on the rod, a pair of rods connecting the members, each member having an upper spring pressed slidable jaw, a cross bar connecting the jaws and slidable at its ends in slots provided in the member therefor, a cam lever mounted on one of the pair of rods to move the cross bar downwardly, means to swing the members about the first mentioned rod so as to present the work at different angles, and means borne by the other rod of the pair of rods to lock the lever in work holding position.

2. In a work holder, a pivoted holder proper, means to adjustably secure the holder at varying angles, an adjustable jaw borne by the holder, a swingable lever to actuate the jaw, and means to lock the lever in work holding position.

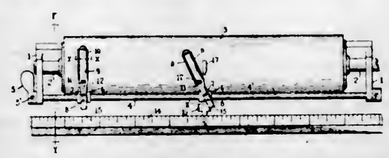
3. In a work holder, a holder proper, a series of spring pressed jaws borne thereby, and means to actuate the jaws in unison.

4. In a work holder, a holder proper, a series of spring pressed jaws borne thereby, a cam lever for actuating all of the jaws in unison, and means to lock the lever.

5. In a work holder, a movable jaw, a cam lever for moving the jaw to work engaging position, said lever having a projection and a pivoted spring pressed toothed member for engagement with the lever projection to hold the lever locked.

[Claims 6 and 7 not printed in the Gazette.]

1,155,707. TYPE-WRITING MACHINE. HORACE W. DAVIS, Sharon, Pa. Filed Apr. 24, 1908. Serial No. 429,333. (Cl. 197—139.)



1. In a typewriting machine having a carriage, a paper finger rotatable in the direction of the carriage feed and means for rotating the paper finger in such direction, substantially as shown and described.

2. In a typewriting machine having a rotatable platen, the combination of a paper finger and means for automatically rotating the paper finger in a plane parallel to the platen axle, substantially as shown and described.

3. In a typewriting machine having a carriage, a paper finger and means fixed to the machine frame for rotating the paper finger during the travel of the carriage, substantially as shown and described.

4. A typewriting machine having a carriage, a machine base, a paper finger, stationary means for moving said paper finger relative to the carriage and machine base during the travel of the carriage.

5. In a typewriting machine, the combination of a paper finger slidable and rotatable in the same plane, and means for rotating the paper finger, substantially as shown and described.

[Claims 6 to 34 not printed in the Gazette.]

1,155,708. TOXIC PRODUCT AND METHOD OF MAKING SAME. JUDSON A. DE CEW, Montreal, Quebec, Canada. Filed Feb. 25, 1914. Serial No. 820,956. (Cl. 252.)

1. A product consisting of a non-alkaline arsenical compound of the organic colloidal materials of waste sulfite liquor.

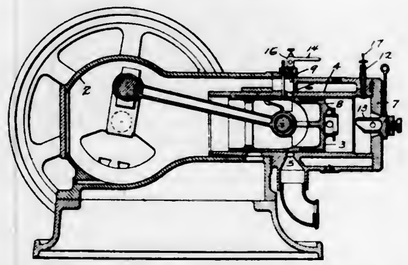
2. A product consisting of an arsenical compound of the organic materials of waste sulfite liquor, which is slightly acid in character.

3. A product consisting of an arsenical compound with the organic material of waste sulfite liquor combined with oil.

4. A process of preparing an arsenical compound, which consists in adding an alkaline arsenical compound to waste sulfite liquor, and then neutralizing the product.

5. A process of making an arsenical compound, which consists in adding an alkaline arsenical compound to the organic matter of waste sulfite liquor, and then rendering the compound slightly acid in character.

1,155,709. INTERNAL-COMBUSTION ENGINE. ALBERT H. DE GASTON and FREDERIC MCLEAN, Sacramento, Cal., assignors to Globe Iron Works, Sacramento, Cal., a Corporation of California. Filed July 7, 1913. Serial No. 777,614. (Cl. 123—140.)

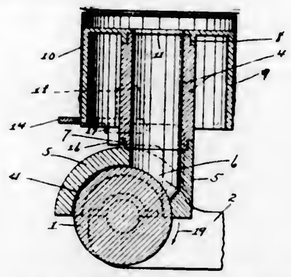


1. The combination with an internal combustion engine adapted to operate on oil fuel, of a double feed pump adapted to feed simultaneous charges of oil and water to the engine cylinder, a double piston in said pump, means connected to the engine adapted to abut against said piston and press it forward on the pumping stroke, means for adjusting the limit of movement of said piston to give a variable normal engine speed, and means for moving the piston on the suction stroke.

2. The combination with an internal combustion engine adapted to operate on oil fuel, of a double feed pump arranged to simultaneously feed charges of oil and water to different parts of the engine cylinder, a double piston in said pump, means connected to the engine and controlled in its movement by variations in the position of the engine governor arranged to be reciprocated by the operation of the engine and to abut against said double piston, and means for varying the length of said last named means whereby the normal speed of the engine may be varied.

1,155,710. INK-FOUNTAIN FOR PRINTING-PRESSES. WILLIAM P. DELANEY, Amsterdam, N. Y., assignor of one-half to William W. Dickson, Amsterdam, N. Y. Filed Oct. 6, 1913. Serial No. 793,502. (Cl. 101—74.)

1. In a device of the class described and in combination, an ink-feeding roll; a segmental saddle-plate substantially conforming to the upper side of said roll and provided with an aperture located substantially in rear of a vertical plane passing through the axis of the roll, said saddle-plate having inwardly extending end-flanges lapping and closely fitting the respective ends of the roll; and an ink-reservoir in communication with said aperture in said saddle-plate.



2. In a device of the class described and in combination, an ink-feeding roll; a segmental saddle-plate substantially conforming to the upper side of the roll and extending on the rear side of the roll substantially to a horizontal plane passing through the axis of the roll, said saddle-plate being provided with an aperture open to the rear side of the roll substantially in rear of the vertical plane passing through the axis of the roll and having inwardly extending end-flanges lapping and closely fitting the respective ends of the roll.

3. In a device of the class described and in combination, an ink-feeding roll; a vertically adjustable segmental saddle-plate substantially conforming to the upper side of the roll and extending on the rear side of the roll substantially to a horizontal plane passing through the axis of the roll, the rear edge of said plate being adapted to make substantially rubbing contact with the roll, said plate being provided with an aperture located substantially in rear of a vertical plane passing through the axis of the roll, and with a groove in its under-surface adjacent to the front side of the roll leading to said aperture, and means for adjustably raising and lowering said saddle-plate.

4. In a device of the class described, and in combination, an ink-feeding roll; a substantially semicylindrical vertically adjustable apertured saddle-plate conforming to the upper half of said roll; an ink-reservoir communicating with said aperture in the saddle-plate; and means for fixedly supporting the saddle-plate in different positions of vertical adjustment.

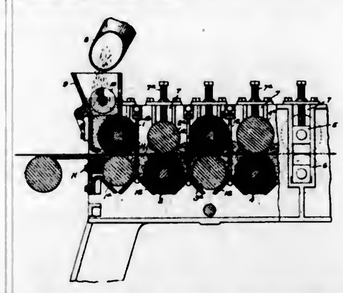
5. In a device of the class described, and in combination, an ink-feeding roll; an apertured saddle-plate adjacent to the upper side of said roll; an apertured plunger; an open can-body inverted upon said plunger; and a tube having its lower end detachably connected with said saddle-plate in communication with the aperture therein and having its upper end detachably connected with said plunger in communication with the aperture in said plunger.

[Claims 6 to 9 not printed in the Gazette.]

1,155,711. MACHINE FOR CLEANING AND POLISHING TIN SHEETS. SAMUEL E. DIESCHER, Pittsburgh, Pa. Filed Apr. 20, 1915. Serial No. 22,644. (Cl. 51—15.)

1. In a machine for cleaning and polishing coated metal sheets, the combination of a plurality of pairs of rolls, each pair consisting of a metal roll and a roll having a soft yielding surface, the peripheral speed of successive metal rolls being increased.

2. In a machine for cleaning and polishing coated metal sheets, the combination of a plurality of pairs of rolls, each pair consisting of a metal roll and a roll having a soft yielding surface, means for driving one roll of each pair at a higher speed than the other roll, the metal rolls of the several pairs having the same journal speed, and each metal roll having a larger diameter than that of the preceding metal roll.



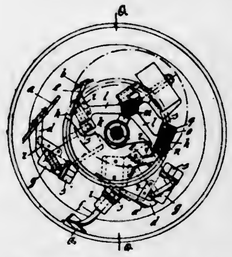
3. In a machine for cleaning and polishing coated metal sheets, the combination of a plurality of pairs of rolls, each pair consisting of a metal roll and a roll having a soft yielding surface, and one roll of each pair rotating at a higher speed than the other, the metal roll being provided with means for rendering its frictional engagement with the sheet greater than that of the soft roll.

4. In a machine for cleaning and polishing coated metal sheets, the combination of a plurality of pairs of rolls, each pair consisting of a metal roll and a roll having a soft yielding surface, and one roll of each pair rotating at a higher speed than the other, the metal roll having depressions in its surface.

5. In a machine for cleaning and polishing coated metal sheets, the combination of a plurality of pairs of rolls, each pair consisting of a metal roll and a roll having a soft yielding surface, the metal roll being provided with means for rendering its frictional engagement with the sheet greater than that of the soft roll.

[Claim 6 not printed in the Gazette.]

1,155,712. MIXING AND KNEADING MACHINE FOR EARTHY AND MINERAL MATERIALS. GUSTAV EIRICH, Hardheim, Germany. Filed Sept. 16, 1912. Serial No. 720,581. (Cl. 83—73.)



1. A mixing machine comprising a mixing receptacle, a mixing element movable therein, propelling mechanism for actuating said mixing element, a member rigidly connected with said mechanism, a member movable on said rigidly connected member, one of said members covering and protecting the other, said movable member being arranged to rock on its own axis, said axis being located in a plane approximately at right angles to the axis of rotation of said propelling mechanism, and extending also in a direction transverse to the plane of the mixing element and a connection between said movable member and the mixing element whereby said element is free to rise upwardly in substantially its own plane from the mixture under treatment.

2. A mixing machine comprising a mixing receptacle, a mixing element movable therein, propelling mechanism for actuating said mixing element, a member rigidly connected with said mechanism, a member movable on said rigidly connected member, one of said members covering and protecting the other, said movable member being arranged to rock on its own axis, said axis being located in a plane approximately at right angles to the axis of rotation of said propelling mechanism and extending also in a direction transverse to the plane of the mixing element and a connection between said movable member and the mixing element whereby said element is free to rise upwardly in substantially its own plane from the mixture under treatment.

3. A mixing machine comprising a mixing receptacle, a mixing element movable therein, propelling mechanism for actuating said mixing element, a member rigidly connected with said mechanism, a member movable on said rigidly connected member, one of said members being tubular and forming a protective casing for the other, a torsional spring in said casing connected therewith and with the other member, said spring being arranged to resist the rotation of the movable member in a direction away from the mixture under treatment while tending to rotate same in the opposite direction, the movable member being arranged to rock on its own axis, said axis being located in a plane approximately at right angles to the axis of rotation of the propelling mechanism and extending also in a direction transverse to the plane of the mixing element and a connection between said movable member and the mixing element whereby said element is free to rise upwardly in substantially its own plane from the mixture under treatment.

4. A mixing machine comprising a mixing receptacle, a mixing element movable therein, propelling mechanism for actuating said mixing element, a member rigidly connected with said mechanism, a member movable on said rigidly connected member, one of said members being tubular and forming a protective casing for the other, a torsional spring in said casing connected therewith and with the other member, said spring being arranged to resist the rotation of the movable member in a direction away from the mixture under treatment while tending to rotate same in the opposite direction, a stop for limiting the rotation of the movable member in the last named direction, the movable member being arranged to rock on its own axis, said axis being located in a plane approximately at right angles to the axis of rotation of the propelling mechanism and extending also in a direction transverse to the plane of the mixing element, and a connection between said movable member and the mixing element whereby said element is free to rise upwardly in substantially its own plane from the mixture under treatment.

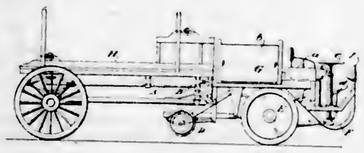
5. A mixing machine comprising a mixing receptacle, a mixing blade movable therein, propelling mechanism for actuating said blade, a casing carried by said mechanism, a shaft connected with the mixing blade and adapted to rock in said casing, a disk rotatably mounted on said casing, an impositive connection between said disk and said shaft and a torsional spring in said casing connected therewith and with said disk, said spring resisting the rocking of said shaft in one direction and tending to rock it in the opposite direction whereby the mixing blade is normally pressed toward the inner surface of said receptacle, said impositive connection between said disk and shaft permitting a rotation of the latter relatively to the spring.

[Claim 6 not printed in the Gazette.]

1,155,713. TRACTOR FOR WAGONS AND THE LIKE. WILLIAM E. ELDRIDGE, Boston, Mass. Filed June 17, 1914. Serial No. 845,676. (Cl. 21—90.)

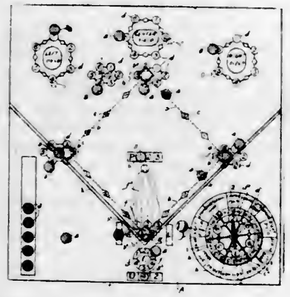
1. A motor vehicle comprising in combination a main body part, rear supporting wheels therefor, said body part being provided with longitudinal guide ways extending for some distance on either side, a tractor, front driving and steering wheels therefor, a pair of rigid rearwardly

extending coupling members on said tractor adapted to engage in said guideways, means for directing said members into said guideways in assembling the vehicle parts and means for securely fastening said coupling members in said guideways whereby a detachably connected motor vehicle is provided, substantially as described.



2. A motor vehicle comprising in combination a main body part, rear supporting wheels therefor, a driving tractor detachable therefrom, said tractor being supported upon combined diving and steering wheels, a pair of rearwardly extending coupling members on said tractor adapted to engage the said body part, said tractor being further provided with a depending front portion and a depending rear portion adapted to support said tractor and prevent tilting when detached from said body portion.

1,155,714. GAME-BOARD. WALTER J. ENNISSON, Brooklyn, N. Y. Filed May 17, 1907. Serial No. 374,257. (Cl. 46—63.)



1. In a base-ball gameboard, a ball-piece and men-pieces and single means for determining the moves of said pieces upon the board substantially in accordance with the movements of the ball and men upon a base-ball field.

2. A base-ball gameboard having a representation of a baseball field, a ball-piece and men-pieces, a dial, and single means for regulating the movements of the ball-piece and men-pieces upon the board in accordance with readings of said dial.

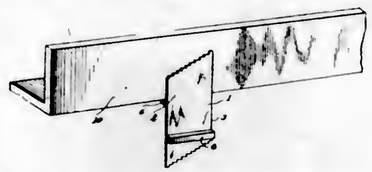
3. In a base-ball gameboard a diagram of a field, movable pieces representing players thereon, a ball-piece and means for simultaneously directing the movement of the said pieces about the board, substantially as described.

4. In a base-ball game-board, a diagram of the field, distinguishable movable pieces representing players of opposing teams thereon, a ball-piece and means for regulating the moves of said ball-piece upon the board including means for controlling simultaneously the moves of the men of said opposing teams in relation to each other and to said ball-piece.

5. A game apparatus comprising a board having a diagram representing a baseball field, pieces for locating thereon the ball, the runners and the out-fielders, in combination with single means for locating the ball on the board and for determining the position of players thereon as indicated, substantially as described.

[Claims 6 to 28 not printed in the Gazette.]

1,155,715. GAGE. ALBERT A. FAUST, Detroit, Mich. Filed Mar. 25, 1913. Serial No. 756,794. (Cl. 33—168.)



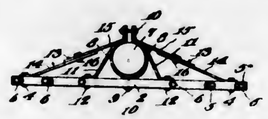
1. In a gage, a flat piece of material forming a body portion, steps formed upon opposite ends of said body portion, and cross bars mounted upon said body portion and extending at right angles to the sides thereof.

2. In a gage, a flat piece of material forming a body portion, steps formed upon opposite ends of said body portion, and cross bars mounted upon the upper and lower faces of said body portion and extending at right angles to the sides thereof.

3. In a gage, a flat piece of material forming a body portion, each end of said body portion provided with a series of cut-away portions, said cut-away portions forming steps, and cross bars mounted upon said body portion and extending at right angles to the longitudinal edges thereof and parallel with one edge of said steps.

4. In a gage, a flat piece of material forming a body portion, each end of said body portion being provided with a series of cut-away portions, said cut-away portions forming steps, and cross bars mounted upon the upper and lower faces of said body portion and extending at right angles to the longitudinal edges thereof and parellel to one edge of said steps.

1,155,716. WIRE-SUPPORT. ALBERT F. FEST, Audubon, Iowa. Filed Sept. 5, 1914. Serial No. 860,399. (Cl. 173—321.)



1. In a device of the character described, a cross arm, a securing element engaged therethrough, a clamp embodying a pair of sections having overlapped apertured ends adjustably engageable with said securing member, a clamping bolt connecting the other ends of the clamp sections, and adjustable braces connecting the clamping bolt and cross arm.

2. In a device of the character described, a cross arm embodying upper and lower members having their ends secured together, a securing element engaged through each of said members, a clamp for each of said members embodying a pair of sections having overlapped apertured ends adjustably engaging the respective securing element, a clamping bolt connecting the other ends of the sections of each clamp, and adjustable braces connecting each clamping bolt and the respective member of the cross arm.

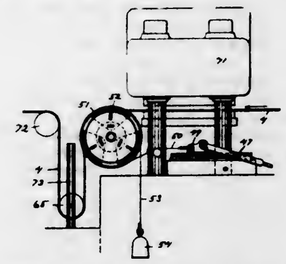
1,155,717. JOINT FOR METALLIC SHEETS. CALVIN C. FOUTS, Middletown, Ohio, assignor to The C. C. Fouts Company, Middletown, Ohio. Filed Dec. 24, 1914. Serial No. 878,974. (Cl. 189—36.)

In a joint for metallic sheets, a sheet having a flat flange turned out at right angles at its edge, a companion sheet having a flange turned out at right angles at its edge and provided with a longitudinal central gutter in said flange, the face of said guttered flange at each side of the gutter engaging said flat flange, sealing material disposed within said gutter, washers disposed against the outer surface of the guttered flange and having their faces concaved to permit them to freely straddle the back of the gutter and bear on the back of the guttered flange



at each side of the gutter, and clamping bolts passing through the flanges and packing and washers, combined substantially as set forth.

1,155,718. MACHINE FOR MANUFACTURING LINOLEUM-MOSAIC. GUSTAV FRENKEL, San Francisco, Cal., assignor to Armstrong Cork Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Original application filed Nov. 2, 1909, Serial No. 525,913. Divided and this application filed Dec. 17, 1914. Serial No. 877,814. (Cl. 154—22.)



1. A machine for making linoleum mosaic, including a mold or receptacle provided with figure-piece-receiving compartments of the design to be produced, means for supporting a fabric in position for receiving the figure-pieces, and mechanism for removing the figure-pieces from the mold or receptacle in layers and for depositing the layers successively upon the said fabric.

2. A machine for making linoleum mosaic, including a mold or receptacle having thin walls forming figure-piece-receiving compartments of the design to be produced, means for supporting a fabric in position to receive the figure-pieces, mechanism for simultaneously removing the figure-pieces in layers from the compartments of the mold or receptacle, and for depositing the layers successively upon the supporting fabric, said mold or receptacle and supporting fabric having relative movement.

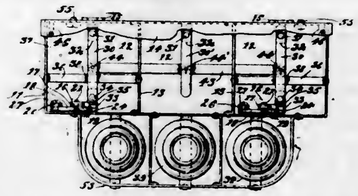
3. A machine for making linoleum mosaic, including a mold or receptacle provided with separate figure-piece-receiving compartments arranged in the form of the design to be produced, means for supporting the fabric in position to receive the figure-pieces, and plungers arranged to operate in the compartments of the mold or receptacle for expelling the figure-pieces simultaneously in layers.

4. A machine for making linoleum mosaic, including a mold or receptacle having separate figure-piece-receiving compartments arranged in the form of the design to be produced, means for supporting a fabric in position to receive the figure-pieces, mechanism for moving the mold or receptacle to and from the fabric, plungers for expelling the figure-pieces simultaneously from the compartments to form layers, and means for advancing the supporting fabric.

5. A machine for making linoleum mosaic, including a mold or receptacle having separate figure-piece-receiving compartments, means for supporting a fabric in position to receive the figure-pieces, plungers for expelling the figure-pieces from the said compartments, means for moving the mold toward and from the fabric, means for actuating the plungers when the mold is in position for depositing the figure-pieces on the supporting fabric, and means for advancing the supporting fabric.

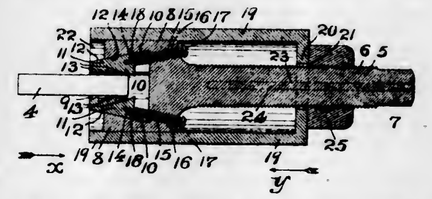
[Claims 6 to 12 not printed in the Gazette.]

1,155,719. SELF-LOCKING RECEPTACLE. CLARENCE N. FREY, Cincinnati, Ohio. Filed Jan. 8, 1912. Serial No. 670,082. (Cl. 232—41.)



In a self-locking receptacle, the combination of a casing having an outer bottom wall, a lid for said casing, straps extending next adjacent to but spaced from said outer bottom wall and located inside said casing, stirrups loosely pivoted at one of their ends in said casing and extending across said straps and arranged to be depressed into the plane of said straps, a lever in said casing pivoted to the wall of said casing adjacent to the bottom of the casing, one end of said lever having connection with one of said stirrups for being actuated thereby, a keeper on said lid, a second lever in said casing pivoted to the wall of said casing adjacent to the top of said casing, one end of said last-named lever formed as a bolt coacting with said keeper, and an upright link articulated with the other ends of both said levers, and constructed and arranged for normally retracting said bolt from said keeper.

1,155,720. KEY REMOVING OR PULLING TOOL. LOUIS GOLLY, Brooklyn, N. Y., assignor, by direct and mense assignments, to Mechanics' Specialties Co., Inc., Brooklyn, N. Y., a Corporation of New York. Filed Apr. 10, 1913. Serial No. 760,143. (Cl. 29—86.1.)



1. In a key-removing device, in combination with a socketed head and an element in the form of a container in which said socketed head is slidably disposed, a plurality of gripping jaws slidably connected with said head, means connected with said head and coöperating with said jaws for forcing them into a gripping relation with a portion of the key to be extracted and for retaining the said jaws in a positive gripped relation with the key, and means connected with said head for forcing said sleeve-like element into resisting engagement with the element in which the key is located and coöperating with said head for sliding the head and jaws interiorly within said sleeve-like element for the extraction of the key.

2. In a key-removing device, in combination with a socketed head and an element in the form of a container in which said socketed head is slidably disposed, a plurality of gripping jaws slidably connected with said head,

said head being provided with screw-receiving portions, screws in said screw-receiving portions coöperating with said jaws for forcing them into gripping relation with a portion of the key to be extracted and retaining the jaws in a positive gripped relation with the kay, and means connected with said head for forcing said sleeve-like element into resisting engagement with the element in which the key is located and coöperating with said head for sliding the head and jaws interiorly within said sleeve-like element for the extraction of the key.

3. In a key-removing device, in combination with a socketed head and an element in the form of a container in which said head is slidably disposed, said sleeve-like element being provided at one end with a flange and a guiding opening, a plurality of gripping jaws slidably connected with said head, means connected with said head and coöperating with a portion of the key to be extracted and for retaining the said jaws in a positive gripped relation with the key, a screw-threaded shank extending from said head longitudinally within said sleeve-like element and through and from the guiding opening thereof, and a nut upon the projecting portion of said screw-threaded shank adapted to be brought into engagement with the flange of said sleeve-like element, for forcing the latter into resisting engagement with the element in which the key is located and coöperating with said shank and head for sliding the head interiorly within said sleeve-like element for the extraction of the key.

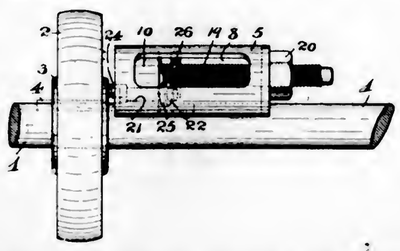
4. In a key-removing device, in combination with a socketed head and an element in the form of a container in which said head is slidably disposed, said sleeve-like element being provided at one end with a flange and a guiding opening, a plurality of gripping jaws slidably connected with said head, said head being provided with screw-receiving portions, screws in said screw-receiving portions coöperating with said jaws for forcing them into gripping relation with a portion of the key to be extracted and for retaining the jaws in a positive gripped relation with the key, a screw-threaded shank extending from said head longitudinally within said sleeve-like element and through and from the guiding opening thereof, and a nut upon the projecting portion of said screw-threaded shank adapted to be brought into engagement with the flange of said sleeve-like element, for forcing the latter into resisting engagement with the element in which the key is located and coöperating with said shank and head for sliding the head interiorly within said sleeve-like element for the extraction of the key.

5. A key-removing device comprising a screw-threaded rod-like member provided with a socketed enlargement formed with a plurality of tapering channels of quadrifoil conformation when said enlargement is viewed from the end, tapering gripping jaws slidably arranged in some of said channels, means connected with said enlargement for sliding said jaws forwardly in said channels and coöperating with said jaws for forcing and retaining the jaws in gripping relation with portions of the key which is to be extracted, a chambered sleeve-like member slidably mounted upon said rod-like member and its enlargement, and a nut upon the screw-threaded portion of the rod-like member adapted to be brought into engagement with said sleeve-like member for bringing the latter into resisting engagement with the element in which the key is located, said sleeve-like member coöperating with said jaws for the extraction of the key.

[Claims 6 and 7 not printed in the Gazette.]

1,155,721. KEY EXTRACTING OR REMOVING TOOL. LOUIS GOLLY, Brooklyn, N. Y., assignor of one-half to James H. Devereux, Sagaponack, N. Y., and one-half to Lanier McKee, New York, N. Y. Filed Nov. 14, 1913. Serial No. 800,997. (Cl. 29—86.1.)

1. A key-removing device comprising a main shell-like body formed with a lower open portion extending longitudinally of the entire length of said shell-like body for positively seating said body upon a shaft and against the element from which the key is to be extracted, a plurality of gripping jaws within said body, said jaws being adapted to be brought into gripped relation with a portion of the key.



2. A key-removing device comprising a main shell-like body formed with a lower open portion extending longitudinally of the entire length of said shell-like body for positively seating said body upon a shaft and against the element from which the key is to be extracted, a plurality of gripping jaws within said body, said jaws being adapted to be brought into gripped relation with a portion of the key, and means coöperating with said jaws for anchoring the same during the extraction of the key.

3. A key-removing device comprising a main shell-like body formed with a lower open portion extending longitudinally of the entire length of said shell-like body for positively seating said body upon a shaft and against the element from which the key is to be extracted, a plurality of gripping jaws within said body, a socketed element in which said gripping jaws are movably disposed, means for forcing said jaws into gripping relation with portion of the key, and means connected with said socketed element for bringing said shell-like body into resisting engagement with the element in which the key is located and coöpergating with said gripping jaws for the extraction of the key.

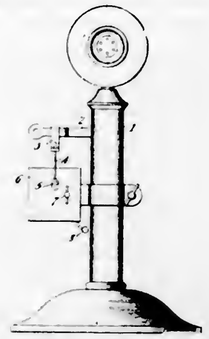
4. A key-removing device comprising a main shell-like body formed with a lower open portion for the arrangement of said body upon a shaft and against the element from which the key is to be extracted, a jaw-block movably arranged in said shell-like body, said jaw-block being provided with guide-channels, and stems slidably disposed in said channels, and a gripping jaw upon each stem, means connected with said stems for forcing said jaws into gripping relation with portions of the key, and means connected with said jaw-block for bringing said shell-like body into resisting engagemeht with the element in which the key is located and coöperating with said gripping jaws for the extraction of the key.

5. A key-removing device comprising a main shell-like body formed with a lower open portion for the arrangement of said body upon a shaft and against the element from which the key is to be extracted, a jaw-block movably arranged in said shell-like body, said jaw-block being provided with guide-channels, stems slidably disposed in said channels, and a gripping jaw upon each stem, each stem being also provided with a screw-threaded portion, an anchor nut upon the screw-threaded portions of said stems, and means connected with said jaw-block for bringing said shell-like body into resisting engagement with the element in which the key is located and coöperating with said gripping jaws for the extraction of the key.

[Claims 6 to 22 not printed in the Gazette.]

1,155,722. FIRE-ALARM SYSTEM. FELIX GOTTSCHALK, Stirling, N. J. Original application filed Sept 19, 1914. Serial No. 862,482. Divided and this application filed Nov. 17, 1914. Serial No. 872,540. (Cl. 179—5.)

1. In an alarm system of the character described, a telephone instrument having switching mechanism, means comprising a member adapted to melt in the presence of abnormal heat secured to said switching mechanism in its normal position, and means released by the melting of said member to produce a transmittable vibration to said telephone.



2. In an alarm system of the character described, the combination with a circuit leading from a premises to be protected, to a telephone exchange, of a telephone instrument having switching mechanism, a member adapted to melt in the presence of abnormal heat secured to said switching mechanism so as to release the same when melted, and means released by the melting of said member for producing a characteristic audible transmittable signal to said exchange, whereby the nature of the call is indicated.

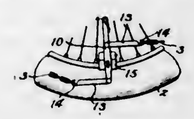
3. In an alarm system of the character described, a telephone instrument having switching mechanism, mechanical releasing means for said switching mechanism and a mechanical connection between said switching mechanism and releasing means, comprising a fusible link adapted to melt in the presence of abnormal heat.

4. In an alarm system of the character described, a telephone instrument having switching mechanism, spring operated signaling means carried by said telephone instrument, and a mechanical connection between said switching mechanism and said signaling means including a fusible link adapted to melt in the presence of adnormal heat.

5. In an alarm system of the character described, a telephone instrument having switching mechanism, a mechanical device arranged to produce sound signals in proximity to said telephone instrument and a fusible link connecting said switching mechanism and said signaling device, said link holding said switching mechanism and signaling device in their normal non-operative positions.

[Claims 6 and 7 not printed in the Gazette.]

1,155,723. TIRE-CHAIN. WILLIAM P. HAMMOND, Passaic, N. J. Filed May 21, 1914. Serial No. 839,938. (Cl. 152—14.)



1. A non-skid tire chain including a side chain having a gap between the ends thereof so that the said ends are spaced apart and cannot be directly connected to each other when the chain is applied to a tire, a felly engaging anchor member adapted to be applied to the wheel felly, and link elements permanently connected to and carried by the felly engaging anchor member for detachably engaging the free ends of the side chain to bridge the gap between the same so that the chain cannot be used without the felly engaging anchor member and will be held against rotation thereby.

2. A non-skid tire chain including a side chain having a gap between the ends thereof, an anchor clamp adapted to be applied to the wheel, and a finger actuated tightening lever mounted upon the anchoring clamp and having an operative connection with the ends of the side chain so as to bridge the gap between the same.

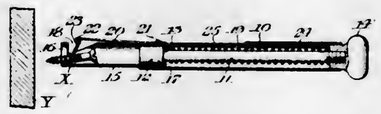
3. A non-skid tire chain including a side chain having a gap between the ends thereof, a wheel engaging anchor clamp adapted to be rigidly mounted upon the wheel, a finger operated tightening lever having a detachable and interlocking connection with the anchoring clamp, and an operative connection between the said finger operated tightening lever and the ends of the side chain so as to bridge the before mentioned gap between the same.

4. A non-skid tire chain including a side chain having a gap between the ends thereof, a wheel engaging anchor clamp formed with a pivot stud and adapted to be rigidly mounted upon the wheel, a finger operated tightening lever mounted upon the pivot stud at an intermediate point in its length and having a detachable and interlocking connection therewith, and an operative connection between the ends of the side chain and the tightening lever so as to tighten the said side chain and bridge the gap between the ends thereof.

5. A non-skid tire chain including a side chain having a gap between the ends thereof, a wheel engaging anchor clamp rigidly applied to the wheel and provided with a pivot stud terminating in a transverse head, a chain tightening lever provided with a pivot opening and a slot intersecting the pivot opening and corresponding to the transverse head of the pivot stud so that the lever can be applied to the pivot stud or removed therefrom when turned into such a position that the slot is in registry with the transverse head, and an operative connection between the chain tightening lever and the ends of the side chain so as to bridge the gap between the latter.

[Claims 6 and 7 not printed in the Gazette.]

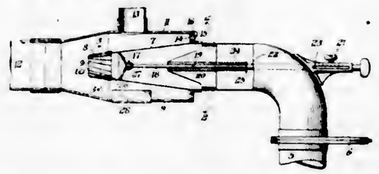
1,155,724. SCREW-SETTING INSTRUMENT. DAVID H. HARNLY, Austin, Ill. Filed Sept. 8, 1914. Serial No. 860,747. (Cl. 1—47.)



1. In a device of the kind described, in combination, a plunger having a shaft and an enlarged head adjacent each end of the shaft, a tube slidably inclosing the enlarged head at the forward end of the plunger and having an inturned annular flange engageable with the said head to limit forward movement of the tube thereon, a spring coiled about the shaft of the plunger and reacting between the enlarged head at the rear end of the plunger and the said annular flange of the tube, a spring finger acting within the bore of the tube to hold a screw or like article against the wall of the tube in front of the plunger, and a sleeve fixed to the said enlarged head at the rear end of the plunger and extending forwardly therefrom over the said coil spring and tube and slidingly engaging the said tube upon the outside of the same.

2. In a device of the kind described, in combination, a tubular head open at one end and having a lateral opening adjacent said end, a plunger sliding within the bore of the head from its other end, and a spring finger having one end secured against the head upon the outside of the same and having its other end entering the bore of the head obliquely through the said lateral opening to hold a screw or like article against the inside wall of the head in front of the plunger and to be lifted by a cam engagement of the plunger therewith upon the advance of the plunger, an intermediate part of the spring being folded upon itself to provide a projecting finger hold for use in lifting the spring.

1,155,725. AIR-FEED FOR PULVERIZED FUEL. SIMON HENRY HARRISON, Easton, Pa. Filed June 5, 1915. Serial No. 32,282. (Cl. 110—104.)



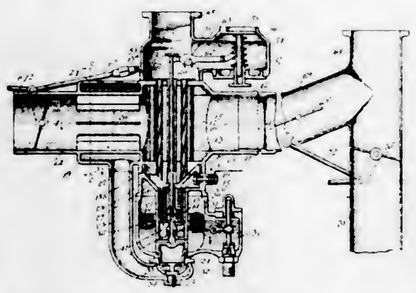
1. In a fluid feed for pulverized fuel, a casing having an inlet for pulverized fuel, a nozzle terminating in the casing in advance of the inlet, an air supply pipe connected with the nozzle, a valve transverse to the axis of the pipe, a stem for the valve, a guide for the stem and a spring pressing the stem away from the nozzle.

2. In a fluid feed for pulverized fuel, a casing, an inlet for the fuel entering the casing, an interiorly spiraled nozzle within the casing, a tapered air feed pipe connected therewith, a valve for the air extending transversely to the axis of the nozzle, a stem for the valve, a support for the stem guiding it in movement parallel to the axis of the pipe and means for securing the stem in adjusted position.

3. In a fluid feed for pulverized fuel, a casing having an inlet for pulverized fuel, a nozzle terminating in the casing in advance of the inlet, a tapered air supply pipe connected with the nozzle, a valve transverse to the axis of the pipe, a stem for the valve, a guide for the stem and a spring pressing the stem away from the nozzle and approximately equalizing the pressure of the air upon the rear of the valve.

4. In a fluid feed for pulverized fuel, a casing having an inlet for pulverized fuel and air openings in the rear thereof, a nozzle terminating in the casing in advance of the inlet and having a spiraled interior, an air pipe connected to the nozzle and a valve in the pipe giving an annular opening between it and the pipe.

1,155,726. CARBURETER. RAY W. HARROUN, Indianapolis, Ind., assignor, by mesne assignments, to Invincible Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 5, 1913. Serial No. 759,090. (Cl. 48—148.)



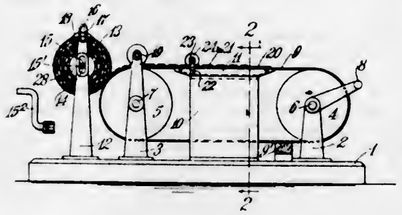
1. In a carbureter, the combination of a pipe, for conducting a fluid heating medium, having a transverse enlargement; a series of tubes, opening through said transverse enlargement; a structure providing an air passage, secured to said heating pipes with the air passage opening to the ends of the tubes; means for introducing fuel into said air pipe and the lower wall of the pipe at the transversely enlarged section formed to present toward the point of fuel mixture a convex conical surface.

2. In a carbureter, the combination of a pipe, for conducting a fluid heating medium, having a transverse enlargement; a tube opening through said transverse enlargement; a structure, providing an air passage secured to said heating pipe with the air passage opening to the end of the tube; a spray nozzle, within the tube, having radial apertures; and means for introducing fuel into the said spray nozzle and directing it radially against the walls of the said tube.

3. In a carbureter, the combination of a bowl, serving as the outer wall of a fuel reservoir; a cover for the said bowl, provided with a centrally arranged downwardly extending cylindrical vaporizing chamber, the bottom of the said bowl having an opening adapted to fit over the lower end of the said cylindrical chamber, a nut, in threaded engagement with the lower end of the said chamber to hold the bowl, lid and chamber in proper position, the said nut having a perforated dome and lug at its center; an air inlet pipe making contact with the outer face of the said nut and having an opening through which the threaded lug extends, and means for securing the said pipe upon the threaded lug.

4. In a carbureter, the combination of a bowl, the walls of which are adapted to form a fuel reservoir; a lid for the said bowl, having a central tubular member extending downward therefrom and formed integral therewith, the said bowl having an opening in its bottom adapted to pass over the lower end of the said tube; a nut, having threaded engagement with the lower end of the tube and adapted to hold the tube, lid and bowl in rigid relation to each other, the said nut having a threaded stud supported by an arch extending from its inner edge; an air supply pipe, one end of which is bent at right angles with its opening adapted to contact and form a joint with the outer surface of the said nut, the said pipe having an opening through which the threaded stud extends, and a nut positioned on the end of the stud to hold the pipe in contact with the nut.

1,155,727. MACHINE FOR CUTTING, PACKAGING, AND UNWINDING METALLIC LEAF. LEON M. HARWOOD, Springfield, Mass. Filed Jan. 26, 1915. Serial No. 4,552. (Cl. 164—65.)



1. In a device to cut roll metallic leaf, an endless conveyer upon which the metallic leaf and supporting strip are unwound, means to attract or hold the leaf and supporting strip to the conveyer, means to cut the leaf upon the conveyer.

2. In a device to cut metallic leaf, a cutting table, means to unwind spaced or single leaves of roll metallic leaf upon the table, means to attract or hold the leaf to the table, and means to cut the leaf on the table.

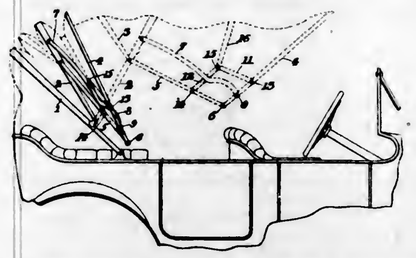
3. In a device to cut roll metallic leaf, a cutting table, means to unwind the leaf upon the table, means to attract or hold the leaf to the table, means to cut the leaf on the table.

4. In a device to cut metallic leaf, the combination of an endless conveyer, means to cause the leaf to travel therewith, a core rotatably supported upon which the metallic leaf and supporting strip may be wound, means to rotate the core with the movement of the conveyer, means to attract the leaf to the conveyer, means to cut the leaf on the conveyer.

5. In a device to cut metallic leaf as desired, the combination of a cutting table upon which the metallic leaf is placed, a rotatably supported core upon which the metallic leaf and supporting strip may be wound, means to rotate the core with the movement of the table, means to attract the leaf to the table, means to cut the leaf on the table.

[Claims 6 to 8 not printed in the Gazette.]

1,155,728. FOLDING TOP FOR VEHICLES. NEWTON HOLDEN, New York, N. Y., assignor to Holden One Man Top Company, Inc., a Corporation of New York. Filed Jan. 2, 1914. Serial No. 809,961. (Cl. 21—62.)



1. A folding top for vehicles comprising a main bow, a forward bow, an outrigger bow extending from the forward bow and having intermediate its ends a joint breakable in both directions, an auxiliary bow, means for mounting the same upon the front and rear sections of the outrigger bow, and a suspending link connecting the forward bow with the front section of the outrigger bow, said suspending link passing directly above and closely adjacent to the joint of the outrigger bow to prevent upward flexure thereof.

2. A folding top for vehicles comprising a main bow, a forward bow, an outrigger bow extending from the forward bow and having a joint intermediate the ends thereof, a pair of links mounted upon the portions of the outrigger bow at each side of the joint, said links being connected together with a break joint opening upward only and passing into substantial alinement when the top is set up, an auxiliary bow pivoted to said links at their break joint, and means connected to the forward bow and engaging both portions of the outrigger bow for preventing the flexure of the intermediate joint when the top is set up.

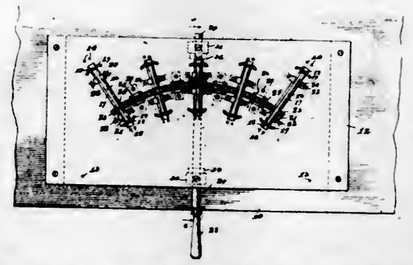
3. A folding top for vehicles comprising a main bow, a forward bow, an outrigger bow extending from the forward bow and having a joint intermediate the ends thereof, a pair of links mounted upon the portions of the outrigger bow at each side of the joint, said links being connected together with a break joint opening upward only, an auxiliary bow pivoted to said links at their break joint, and a link mounted upon the forward bow and engaging the portions of the outrigger bow at each side of the joint to prevent flexure thereof when the top is set up.

4. A folding top for vehicles comprising a main bow, a forward bow, an outrigger bow extending from the forward bow and having a joint intermediate the ends thereof, a pair of links mounted upon the portions of the outrigger bow at each side of the joint, said links being connected together with a break joint opening upward only, an auxiliary bow pivoted to said links at their break joint, and a link connecting the forward bow with the forward portion of the outrigger bow and having an abutment engaging the rear portion of the outrigger bow to prevent flexure of the joint when the top is set up.

5. A folding top for vehicles comprising a main bow, a forward bow, an outrigger bow extending from the forward bow formed with a joint intermediate the ends thereof, a pair of links pivoted to the portions of the outrigger bow at each side of the joint, said links being of a length equal to the distance of their pivotal connection with the outrigger bow to the intermediate joint, said links being connected together with a break joint opening upward only and adapted to come into alinement with the outrigger bow when the top is set up, an auxiliary bow pivoted to the links at their break joint, and a link connecting the forward bow with one of the portions of the outrigger bow and having an abutment engaging the other portion of the outrigger bow to prevent flexure of the intermediate joint when the top is set up.

[Claim 6 not printed in the Gazette.]

1,155,729. WIRE-WORKING MACHINE. FRANK R. HOLDRED, Three Oaks, Mich., assignor to The Warren Featherbone Co., Three Oaks, Mich., a Corporation of Michigan. Filed Sept. 10, 1914. Serial No. 861,034. (Cl. 140—71.)



1. In a wire-working machine, the combination of a twister member provided with a side opening at either end thereof extending substantially to the axis of said twister member for the admission, sidewise and toward the center thereof, of a pair of wires, means spaced apart along the axis of said twister member for causing the intermediate portions of said wires to rotate bodily with said twister member, and means for rotating said twister member.

2. In a wire-working machine, the combination of a twister member provided with a side opening at either end thereof extending substantially to the axis of said twister member for the admission in a radial direction of a pair of wires sidewise substantially to the center of said twister member, engaging means at either end of said twister member for preventing movement of the intermediate portions of said wires relative to said twister member, and means for rotating said twister member.

3. In a wire-working machine, the combination of a twister member provided with a side opening at either end thereof extending substantially to the axis of said twister member for the admission in a radial direction of a pair of wires sidewise substantially to the center of said twister member, engaging means at either end of said twister member for preventing movement of the intermediate portions of said wires relative to said twister member, means for rotating said twister member, and a journal bearing for said twister member intermediate the ends thereof.

4. In a wire-working machine, the combination of a twister tube having a slot extending from end to end in one side thereof to permit the insertion sidewise of a pair of wires to be twisted together at their ends, means for rotating said tube, and means associated with each end of said tube adapted to prevent relative movement of the intermediate portions of said wires with reference to said tube during said rotary movement.

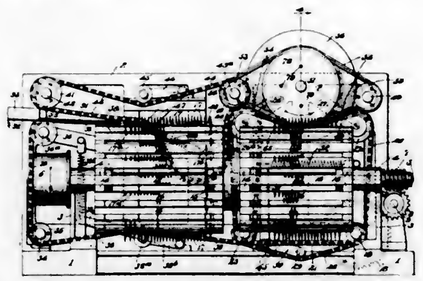
5. In a wire-working machine, the combination of a twister tube having a slot extending from end to end in one side thereof to permit the insertion sidewise of a pair of wires to be twisted together at their ends, means for rotating said tube, a separating member mounted in each end of said tube, and a journal mounting for said tube.

[Claims 6 and 7 not printed in the Gazette.]

1,155,730. MACHINE FOR DECORTICATING FIBROUS PLANTS. WALTER JOHN HOLLIER, St. Louis, Mo. Filed May 19, 1913. Serial No. 768,455. (Cl. 13—2.)

1. A machine for decorticating fibrous plants comprising a pair of rotatable decorticating members, feeding means for conveying material over the first of said members,

feeding mechanism traveling in a curved path for conveying the material over the second of said members comprising an endless chain and an endless belt traveling in contact therewith, and means normally exerting a yielding pressure on said belt for forcing it into firm contact with said chain.



2. A machine for decorticating fibrous plants comprising a pair of rotatable decorticating members, means for conveying the material over the first of said members, means for conveying the material over the second of said members comprising an endless chain and an endless belt traveling in contact therewith, and a compensating disk around which the said belt and chain are passed whereby to hold the belt in yielding contact with the chain.

3. A machine for decorticating fibrous plants comprising a pair of rotatable decorticating members arranged in endwise relation, feed mechanism for each of said conveyers, the feed mechanism of the first member being located in a plane in advance of the feed mechanism of the second member, and said feed mechanisms being so arranged that the first will deliver its material to the second, and movable means coöperating with the second feed mechanism for turning the portion of the plant engaged by the first feed mechanism into contact with the second decorticating member.

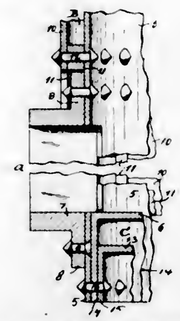
4. A machine for decorticating fibrous plants comprising a pair of rotatable decorticating cylinders arranged in endwise relation, feed mechanism for each of said cylinders, the first of which is adapted to deliver the material to the second, a member mounted adjacent to the second decorticating cylinder and adapted to be engaged by the plant as it passes into its feed mechanism, and means operated by the machine for moving said member inward to cause it to turn the butt end of the plant into contact with the second decorticating cylinder.

5. A machine for decorticating fibrous plants comprising a pair of rotatable decorticating cylinders arranged in endwise relation, feeding mechanism for each of said cylinders, the one being adapted to deliver material to the other, and means for turning the end of the plant engaged by the first feed mechanism into contact with the second decorticating cylinder, comprising a rotatable member located adjacent to said second decorticating cylinder, a disk carried thereby and located in the path of the plant, springs tending normally to force said disk away from its rotating member, and a fixed contact member engaging said disk near the outer edge thereof and operating to press the edge portion of said disk inward or toward its rotating member in the rotation thereof, whereby to turn the butt end of the plant downward into engagement with the said second decorticating cylinder.

[Claims 6 and 7 not printed in the Gazette.]

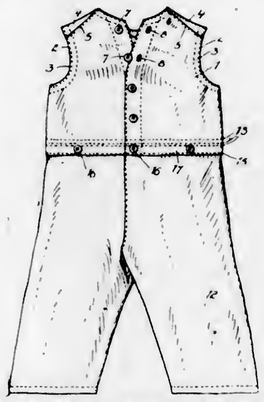
1,155,731. JACKETED TANK. WILLIAM C. HONHORST, Newport, Ky. Filed May 22, 1914. Serial No. 840,157. (Cl. 220—125.)

1. In a tank of the character described, the combination of a side wall provided with a door-opening, a door-frame fitted to this opening and provided with an attaching flange, rivets whereby said flange is secured to the side wall, the inner ends of these rivets which are below the door-opening being countersunk, a bottom positioned so as to aline with the lower edge of the opening in said side wall and provided with a downwardly projecting flange fitted against the inner-side of said wall and opposite the countersunk rivets so as to cover the inner heads of these rivets and exclude them from exposure to steam-pressure, an outer bottom spaced from the first bottom and provided with a similar flange which is fitted against the inner side of the flange of said first bottom and rivets passing through both these flanges and through the side wall below the door frame, for connecting these parts to each other.



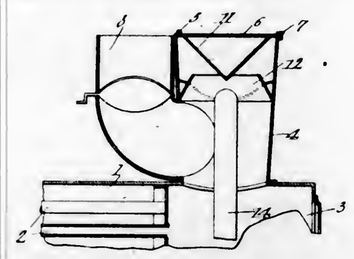
2. In a tank of the character described, the combination of a side wall provided with a door-opening, a door-frame fitted to this opening and provided with an attaching flange, rivets whereby said flange is secured to the side wall, an inner bottom and an outer bottom with a spacing ring between them and rivets whereby these bottoms are secured to each other and to the side-wall and in a manner that the inner bottom alines with the lower edge of the door-opening and that the inner heads of those of the rivets first mentioned which are below the door-opening are covered so as to be beyond the effects of steam-pressure.

1,155,732. UNDERGARMENT. LOUIS IOCCA, New York, N. Y. Filed Feb. 18, 1913. Serial No. 749,245. (Cl. 2—144.)



An integral waist and drawers for children's wear comprising a waist having an inwardly folded portion at the waist line, said folded portion being secured at its upper edge to the waist by a plurality of lines of stitches and the dependent portion of the inwardly folded portion being secured together by a line of stitches and unattached to the drawers, said folded portion forming a double belt integral with the garment, and a row of buttons connected centrally to said belt.

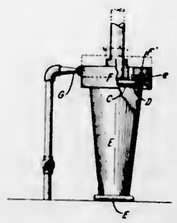
1,155,733. SPARK-ARRESTER. LEWIS T. JACK, Mount Sterling, Iowa, assignor to Oliver E. McNamar and Raymond McNamar, Mount Sterling, Iowa. Filed July 13, 1915. Serial No. 39,643. (Cl. 110—134.)



1. In a spark arrester, a combustion chamber; a stack communicating therewith; a lid closing the top of the stack; a depending conical deflector in the top of the stack; a spark ring projecting inwardly from the wall of the stack and located adjacent the deflector; and a spark chute opening through the ring; the stack being provided with a gas-escape located below the ring and constituting an outlet for the chamber.

2. In a spark arrester, a combustion chamber; a stack communicating therewith; a lid closing the top of the stack; a depending conical deflector in the top of the stack; a frusto-conical spark ring projecting inwardly from the wall of the stack, the wall of the ring being disposed at an angle to the active surface of the deflector; a spark chute opening through the ring and extended downwardly along the side of the stack; and a gas-escape for the stack, opening into the stack below the ring and constituting an outlet for the chamber.

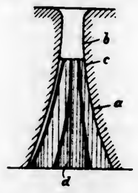
1,155,734. SPINNING AND SEALING PROCESS. MAXIMILLIAN P. JANISCH, Milwaukee, Wis., assignor to U. S. Fibre Bottle Mchy. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Jan. 11, 1915. Serial No. 1,566. (Cl. 93—55.)



1. The process of inserting bottoms in paper receptacles, which consists—1st, in softening the margin of the side wall with a heated sealing material, and 2nd, inserting the bottom and interfolding the margins of the bottom and side walls upon each other and pressing them together while said sealing material is hot.

2. The process of forming paper receptacles, which consists—1st, in providing bottom members having the form of an inverted cup and also providing side wall members having circular lower margins adapted to receive the cup shaped bottom members; 2nd, supporting said cup shaped bottom members; 3rd, immersing the lower margins of the side wall members in a heated sealing material, and applying the same while hot to the margins of the bottom members; and 4th, applying the interlapping margins of the side and bottom members to a heated folding die, while such margins are softened by the sealing material, and utilizing said die to press and fold said margins upon each other.

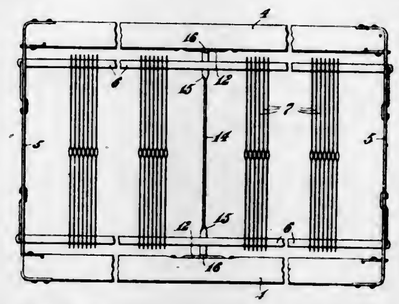
1,155,735. NOZZLE. EMIL JOSSE and WILHELM GENSECKE, Charlottenburg, Germany. Filed Dec. 19, 1913. Serial No. 807,769. (Cl. 121—57.)



1. The combination of a steam nozzle or the like, and means within said nozzle for imparting a rotation to the current passing therethrough, said means extending from a point located at a distance inwardly from the inlet end of said nozzle toward the outlet thereof and beginning substantially at the point at which the critical speed of the current is exceeded in said nozzle.

2. The combination of a steam nozzle or the like having an interior diameter increasing toward its outlet end, and ribs located within said nozzle and extending spirally about the axis thereof, said ribs extending lengthwise of said nozzle and beginning at a point intermediate of the ends thereof whereby a rotation is imparted to the current passing through said nozzle substantially at the point at which the critical speed of said current is exceeded therein.

1,155,736. HEDDLE-FRAME. JACOB KAUFMANN, Philadelphia, Pa., assignor to Steel Heddle Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 10, 1913. Serial No. 789,027. (Cl. 139—73.)



1. In a heddle frame, the combination of the top and bottom bars, the heddle supporting rods, additional auxiliary bars secured to and extending in the same general direction as said top and bottom bars, and a stay rod engaging said auxiliary bars and capable of sidewise adjustment thereon, said stay rod comprising a bar of rectangular cross section having its ends bent over to form hooks for engaging said auxiliary bars.

2. In a heddle frame, the combination of the top and bottom bars having recesses on their inner sides, auxiliary bars mounted in said recesses, and a stay rod engaging said auxiliary bars and capable of sidewise adjustment thereon, said stay rod comprising a bar of rectangular cross section having its ends bent over to form hooks for engaging said auxiliary bars.

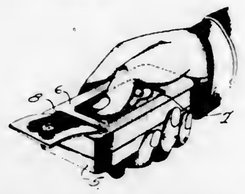
3. In a heddle frame, the combination of the top and bottom bars, the heddle supporting rods, additional auxiliary bars secured to and extending in the same general direction as said top and bottom bars, and a stay rod comprising a bar of rectangular cross section having hooked ends engaging said auxiliary bars.

4. In a heddle frame a stay rod extending between the top and bottom bars, said stay rod being of rectangular cross section having the greater axis of its central por-

tion extending transverse to the frame and having the greater axis of each of the end portions extending parallel to the frame.

5. In a heddle frame, the combination of the top and bottom bars having recesses on their inner sides, auxiliary bars mounted in said recesses, a stay rod having hooked ends engaging said auxiliary bars, said stay rod being of rectangular cross section having the greater axis of its central portion extending transverse to the frame and having the greater axis of each of the hooked end portions extending parallel to the frame.

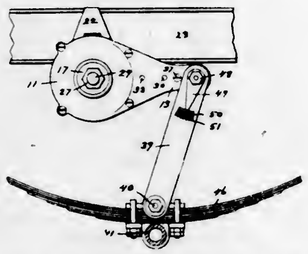
1,155,737. TICKET-CONTAINER. JOHN H. KINZIE, Charleston, S. C. Filed Sept. 28, 1914. Serial No. 863,911. (Cl. 206—39.)



1. A ticket case comprising a receptacle, a cover therefor, a tongue struck from said cover to project into said receptacle, whereby an opening in said cover is obtained for allowing the removal of tickets, substantially as described.

2. A ticket case comprising a receptacle, a cover therefor, said cover provided with an opening intermediate the ends thereof, a transverse tongue struck from said cover and projecting into said receptacle whereby a second opening is formed for allowing the removal of the tickets, substantially as described.

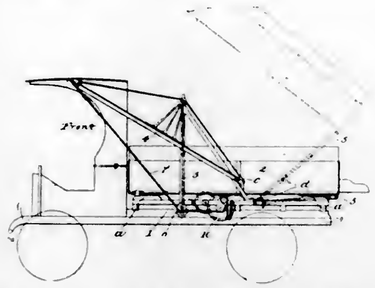
1,155,738. SHOCK-ABSORBER. ENOS H. KREIDER, Lancaster, Pa. Filed Oct. 22, 1913. Serial No. 796,693. (Cl. 21—105.)



1. In a shock absorber of the class described, the combination with a vehicle running gear having a body secured thereon by springs, of a bracket secured to said body, a shaft secured to said bracket, a casing formed with an arm and mounted on said shaft, a ratchet wheel rotatably mounted on said shaft within said case, a pair of friction plates rotatably mounted on said shaft on each side of said ratchet wheel, a second pair of friction plates embracing the first pair and rigidly secured upon said shaft and to said bracket, a spring tension on the end of said shaft for varying the frictional contact of said plates, a pawl mounted in the arm of the casing and adapted to engage said ratchet when the arm is moved in either direction, a link pivoted to the end of said arm and connected to the running gear of the vehicle, and means carried by the pivot of said arm and link to operate said pawl to engage the ratchet wheel either above or below the center line thereof.

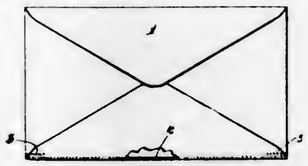
2. In a shock absorber of the class described, the combination with a combined casing and arm, having a pair of friction disks mounted within the casing, of a ratchet wheel mounted within said casing in coaction with said disks, spring actuated pawl points mounted within the arm, said pawl points adapted to engage the ratchet wheel when the arm is moved upward or downward for a predetermined distance.

1,155,739. DUMPING-WAGON. FREDERICK J. KUNKEL, Baltimore, Md. Filed Dec. 15, 1914. Serial No. 877,291. (Cl. 21—86.)



In a dumping wagon, a wheeled truck, a body adapted to seat on the truck and a single pair of standards erected on and at the longitudinal center line of the truck about centrally of its length and projecting above the body, combined with levers pivoted to the head of the standards with their upper ends extending beyond the front end of the body, chains which lead from the forward end of the levers to suitable winding mechanism adapted to effect the elevation of the body, extensible and contractible links which at one end are pivoted to the rear end of the body, and at the other end pivoted to the truck, and clamping devices for the links, substantially as specified.

1,155,740. ENVELOP. FRANÇOIS XAVIER JOSEPH LACROIX and JOSEPH EMILE ROY, Montreal, Quebec, Canada. Filed Oct. 8, 1914. Serial No. 865,709. (Cl. 229—86.)



Opening means for an envelop comprising a thread disposed and completely concealed within the crease of the lower edge of the envelop and extending into the opposite corners of said edge, and terminating short at the ends thereof, means for weakening the envelop at each of said opposite ends to provide readily detachable sections, said means comprising at each corner a straight row of perforations extending inwardly from the side of the envelop parallel with and adjacent to the lower edge of the envelop, and adhesive means for securing the thread within each detachable section only leaving the intermediate portion free.

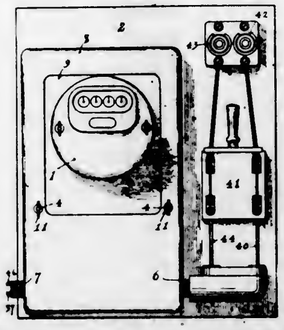
1,155,741. PROCESS OF TREATING SUGAR-CANE. TENNANT LEE, Dedham, Mass., assignor to United Fruit Company, Boston, Mass., a Corporation of New Jersey. Filed Sept. 16, 1913. Serial No. 790,125. (Cl. 92—1.)

1. The herein-described process of treating moist sugar-cane bagasse to prepare therefrom a fibrous concentrate suitable for paper-making, and a fuel, which consists in drying the moist bagasse to a condition suitable for the mechanical grading of the plant tissues, mechanically dissociating said tissues and separating the harder and softer tissues from the intermediate selected fiber suitable for paper-making.

2. In a process of utilizing moist bagasse from sugar-cane, the steps which consist in drying the bagasse to a condition suitable for the mechanical grading of the plant tissues, mechanically dissociating said tissues, separating the harder and softer tissues from the intermediate selected fiber, and digesting the selected fiber.

3. In a process of utilizing moist bagasse from sugar-cane, the steps which consist in drying the bagasse to a condition suitable for the mechanical grading of the plant tissues, mechanically dissociating said tissues, separating the harder and softer tissues from the intermediate selected fiber, washing the selected fiber, and digesting the washed fiber.

1,155,742. METER-PROTECTION DEVICE. EARLE ALBERT LE FEVER, Buffalo, N. Y. Filed July 25, 1913. Serial No. 781,100. (Cl. 171—34.)



1. In a meter protection device, in combination with a meter and a base, electrical connections mounted upon said base, a cover for inclosing said connections and said meter and apertured to fit over the face of said meter, screw-studs rigidly secured to said base independently of the meter casing and independently of the electrical connections within the area inclosed by said cover, nuts for securing said cover to said base and means for sealing said nuts.

2. In a meter protection device, in combination with a meter and a base, electrical connections mounted upon said base adjacent to said meter, a cover for inclosing said connections and said meter consisting of a box having an open back and apertured face to fit over the face of said meter and openings in said face to receive fastening and sealing means, rods secured to said base within the area inclosed by said cover and independent of the meter casing and passing through said openings in said cover, and securing and sealing devices on said rods.

3. In a meter protection device, in combination with a meter and a base, plates secured to said base and upstanding screw-studs secured to said plates, a carrying plate secured to said base plates, electrical connections mounted upon said carrying plate, a cover for inclosing said electrical connections and said meter and apertured to fit over the face of said meter and nuts on said screw-studs for securing said cover to said base.

4. In a meter protection device, in combination with a meter and a base, plates secured to said base, a carrying plate secured to said plates having upturned ends to receive the nipples of the incoming and out-going conduits, nipples secured thereto, electrical connections mounted upon said carrying plate, a cover for said meter and said connections apertured to fit over the face of said meter and apertured for said nipples, and means rigidly secured within the area inclosed by said cover to said base for securing said cover to said base.

5. A meter protection device comprising a base-board for supporting a meter and its electrical connections, a cover for inclosing the meter with the exception of the dial and for inclosing said electrical connections, said cover having holes for screw-studs, plates rigidly secured to said base-board within the area inclosed by said cover and independent of the meter casing, upstanding screw-studs secured to said plates and sealing nuts for securing said cover in place.

[Claims 6 to 15 not printed in the Gazette.]

1,155,743. CONDENSED MOLLUSCOUS FOOD PREPARATION AND PROCESS OF MAKING SAME. GEORGE P. LEBRITTER, Freehold, N. J. Filed Oct. 13, 1913. Serial No. 794,782. (Cl. 99—5.)

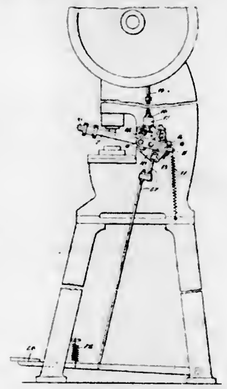
1. A food jelly comprising a large proportion of clam extract from which the solid matter has been removed, a small proportion of sodium chlorid as a preservative and a small proportion of arrow-root as a congulating agent, sterilized and condensed to a jelly.

2. A food jelly comprising thirty-two parts of a digested clam extract from which the solid matter has been removed, two parts of sodium chlorid as a preservative and one part of arrow-root as a coagulating agent, said parts being sterilized and condensed by boiling.

3. The herein described process of making a food preparation which consists in grinding clams in their own liquor, digesting the resultant material by subjecting it to heat below the boiling point, removing the solid matter therefrom, adding a preservative salt and a coagulating agent, and sterilizing and condensing the mixture thus obtained by boiling it until it has a jelly-like consistency.

1,155,744. [WITHDRAWN.]

1,155,745. SAFETY DEVICE FOR PRESSES. BENJAMIN LEVI, New York, N. Y. Filed Oct. 3, 1914. Serial No. 864,790. (Cl. 164—107.)



1. A safety device for presses, comprising a guard extending from an arm and adapted to move in front of the entrance to the press tool, a normally free and unconnected clutch trip rod, a trip rod controller movably connected to the guard arm normally held away from the trip rod and operating means connected to the controller, whereby the controller is brought into position to act on the trip rod when the guard is moved into safety position and is then caused to actuate the trip rod.

2. A safety device for presses, comprising a guard extending from an arm and adapted to move in front of the entrance to the press tool, a clutch trip rod, a trip rod controller movably connected to the guard arm unconnected with and normally held away from the trip rod, means for permitting movement of the controller relative to the guard arm only when the controller engages the trip rod and operating means connected to the controller.

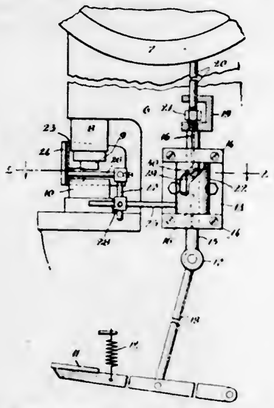
3. A safety device for presses, comprising a guard extending from a pivoted arm and adapted to move in front of the entrance to the press tool, a clutch trip rod, a trip rod controller slidably connected to the guard arm, means for permitting movement of the controller relative to the guard arm only when the controller engages the trip rod and operating means connected to the controller.

4. A safety device for presses, comprising a guard extending from an arm and adapted to move in front of the entrance to the press tool, a press trip rod normally free and unconnected, a trip rod controller movably connected to the guard arm, operating means connected to the controller and means for holding the controller away from the trip rod and immovable relative to the guard arm when the guard is moving into and out of safety position.

5. A safety device for presses, comprising a guard extending from an arm and adapted to move in front of the entrance to the press tool, a press trip rod, a trip rod controller movably connected to the guard arm and normally held away from the trip rod, means for locking the trip rod in inactive position and adapted to be disengaged therefrom by the controller and operating means connected to the controller.

[Claims 6 to 16 not printed in the Gazette.]

1,155,746. SAFETY DEVICE FOR PRESSES. BENJAMIN LEVI, New York, N. Y. Filed Mar. 16, 1915. Serial No. 14,840. (Cl. 164—107.)



1. In a press, a safety guard and clutch controlling device comprising a rotatable member carrying the guard, a co-acting sliding member adapted to actuate the trip rod of the clutch and a treadle connected to the sliding member.

2. In a press, a safety guard and clutch controlling device comprising a rotatable member, a sliding member, a working connection between the two members whereby a movement of the sliding member first actuates the rotatable member and then actuates the trip rod of the clutch, a guard carried by the rotatable member and a treadle connected to the sliding member.

3. In a press, a safety guard and clutch controlling device comprising a rotatable member arranged to rock on a vertical axis and carrying the guard, a co-acting vertically sliding member adapted to actuate the trip of the clutch and a treadle connected to the sliding member.

4. In a press, a safety guard and clutch controlling device comprising a rotatable member arranged to rock on a vertical axis, an arm extending from said member carrying on its end a guard plate, a vertically sliding member adapted to actuate the trip rod of the clutch, a working connection between the two members whereby a movement of the sliding member first actuates the rotatable member to set the guard in safety position and then actuates the trip rod of the clutch and press operating means attached to the sliding member.

5. In a press, a safety guard and clutch controlling device comprising a rotatable member arranged to rock on a vertical axis, an arm extending from said member carrying on its end a guard plate, a vertically sliding member, a yoke carried by said sliding member and having a loose connection with the trip rod of the clutch, a working connection between the two members whereby a sliding movement of the sliding member first causes the rotatable member to set the guard plate in safety position and then causes the yoke to move the trip rod and a treadle attached to the sliding member.

[Claims 6 to 15 not printed in the Gazette.]

1,155,747. APPLIANCE FOR CLEANING TOOTHED ARTICLES. WILLIAM EDWARD LIST, Addiscombe, England. Filed Nov. 21, 1914. Serial No. 873,289. (Cl. 132—17.)



1. An appliance for cleaning toothed articles, comprising a strip of woven fabric which is secured at its ends to holding devices, and the warp threads of which between the said holding devices have been removed to form a series of parallel strands, one end of the fabric being folded back through its holding device so as to lie against the main portion of the strip, and the warp threads being removed therefrom so as to provide a parallel series of strands constituting a brush, substantially as described.

2. An appliance for cleaning toothed articles, comprising a strip of woven horse-hair fabric which is secured at its ends to holding devices, and the warp threads of which between the said holding devices have been removed to form a series of parallel hairs, both ends of the fabric being folded back through the holding devices, so as to lie against the main portion of the strip, and the warp threads being removed therefrom so as to provide a parallel series of hairs constituting brushes, substantially as described.

3. An appliance for cleaning toothed articles, comprising a strip of woven fabric which is folded longitudinally on itself and has its warp threads partially removed so as to provide parallel strands, one end of the fabric being folded back upon itself so as to lie against the main portion of the strip, and the warp threads being removed from said end to provide a parallel series of strands constituting a brush.

4. An appliance for cleaning toothed articles comprising a strip formed of a series of parallel strands which is secured at its ends to holding devices, one of the ends of said strip being folded back through its holding device so as to lie against the main portion of the strip and form a brush, and flexible strips of polishing material carried by said holding devices and lying adjacent to said parallel strands.

5. An appliance for cleaning toothed articles comprising holding devices, a strip formed of a series of parallel strands carried by said holding device, a brush also carried by one of said holding devices and lying against said strip, and flexible strips of polishing material supported by said holding devices and lying adjacent to said strip.

1,155,748. CAR-HAULAGE PLANT. FREDERICK W. LOVELL, Cleveland, Ohio, assignor to The McMyler Interstate Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 12, 1913. Serial No. 753,671. (Cl. 104—113.)



1. In a car haulage plant, a main track for a car to be moved, and tracks for a haulage car including a section between the rails of the main track and a lower branch section beneath the upper section, said upper and lower sections being connected by inclined track portions by which the haulage car leaves the upper section at one point and passes onto the lower section, and leaves the lower section and passes up onto the upper section at a different point.

2. In a car haulage plant, a main track for a car to be moved, and tracks for a haulage car including an upper portion, and a branch portion beneath the same, and switches by which the haulage car may leave the upper portion of the track, and pass along the lower portion, and thence pass upwardly to the upper portion at a point beyond the point at which the haulage car left the upper portion.

3. In a car haulage plant, a main track for a car to be moved, a haulage track including a section in substantially the plane of the main track, and a lower section beneath the same, and switches by which the haulage car moving in one direction, leaves the upper track section, passes along the lower track section, and again passes up onto the upper track section at a point beyond the point at which the car left the upper track section.

4. In a car haulage plant, a main track for a car to be handled, including an upwardly inclined part, a car haulage track including an upper section and a branch section beneath the same, and haulage track switches by which a haulage car in moving rearwardly down the inclined portion of the main track traverses down onto the lower track section at a point in advance of the foot of the inclined portion of the main track, and passes upwardly onto the upper section at a point beyond said inclined portion of the main track.

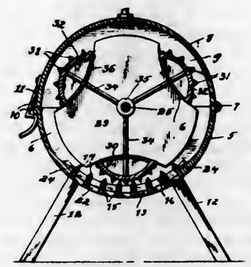
5. In a car haulage plant, a main track for cars to be handled, including a portion inclined upwardly, a narrow gage car haulage track including a section between the rails of the main track, and a lower branch section beneath the rails of the upper section, the said upper and lower sections being connected by inclined track portions by which the haulage car leaves the upper section and passes onto the lower section at one point, and leaves the lower section and passes up onto the upper section at a different point, the said points of leaving and entering onto the upper section being a greater distance apart than the length of the car to be handled.

[Claims 6 to 10 not printed in the Gazette.]

1,155,749. FOOD-GRINDER. NANNIE P. LUCAS, Washington, D. C. Filed May 6, 1914. Serial No. 836,645. (Cl. 146—9.)

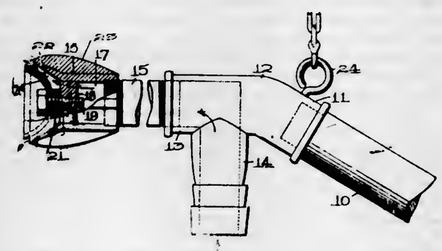
1. In a structure of the class described, the combination with a trough substantially semi-circular in cross section, of fixed cutting teeth carried thereby, a shaft journaled on the trough, circular plates fixed on the shafts inwardly of the ends of the trough and provided on their peripheries with cut-away portions presenting curved surfaces, longitudinal curved strips of greater curvature than the curvature of the trough, and having the end portions of their inner faces coincident with and secured to the faces of the said cutaway portions and cutting teeth disposed on the faces of the strips.

2. In a structure of the class described, the combination with a trough substantially semi-circular in cross section, of a rotary member journaled thereon and extending therein, arcuate tooth-carrying strips of greater curvature than the curvature of the trough secured to the rotary member and longitudinally bowed shield strips having their side edges secured to the side edges of the tooth carrying strips.



3. In a structure of the class described, a trough comprising a member substantially semi-circular in cross section, a tooth carrying rotary member journally carried by the trough, the base of the trough being provided with a longitudinal opening, arcuate ribs formed on the inner faces of the end walls adjacent said openings and provided with a plurality of spaced recesses opening upon the upper and inner faces of the ribs and with longitudinal arcuate openings, a plurality of tooth carrying bars, reduced ends on said bars seating in the sockets and provided with openings and flexible retaining members passed through the longitudinal openings of the ribs and the openings of the ends.

1,155,750. TUBE-BLOWER. EUGENE J. MCCARTY, Clinton, Mass., assignor to Thomas J. McNamara, Clinton, Mass. Filed Oct. 9, 1911. Serial No. 653,573. (Cl. 230—38.)

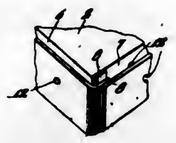


A nozzle for cleaning out boiler tubes having a cylindrical hub and a conical base ring at the end of the hub and provided with a concave baffle plate located within said base ring and spaced therefrom, a perforated bridge across the nozzle at the end of the conical base ring thereof, a bolt mounted on the bridge for holding said baffle plate in position, spacing devices between the bridge and baffle plate for regulating and adjusting the position of the baffle plate relative to the inner surface of the conical base ring, and external convex radial projections extending longitudinally the whole length of the hub and base ring and spaced apart.

1,155,751. ICE-CAN. WILLIAM T. MCCUE, Pittsburgh, Pa., assignor to Patrick Wall, Pittsburgh, Pa. Filed Aug. 12, 1913. Serial No. 784,382. (Cl. 220—137.)

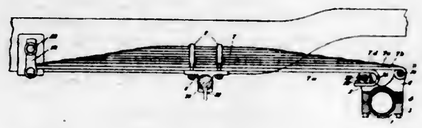
1. An ice can including a sheet metal bottom having edge flanges each forming a channel, the inner and outer walls of each channel having their ends lapping the inner and outer walls of the next adjoining channel whereby a continuous uninterrupted solder retaining channel is

formed around the bottom, and walls extending into and secured within the continuous channel.



2. An ice can including a sheet metal bottom having edge flanges each forming a channel, the inner and outer walls of each channel having their ends lapping the inner and outer walls of the next adjoining channel whereby a continuous lap is provided along said walls and under the channels and a continuous uninterrupted solder retaining channel is formed around the bottom, the lapped portions of the walls constituting means for preventing leakage of solder during the dipping of the can, and walls extending into and secured within the continuous channel.

1,155,752. VEHICLE-SPRING. MICHAEL M. MCINTYRE, Cleveland, Ohio, assignor to The Perfection Spring Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 1, 1914. Serial No. 828,694. (Cl. 21—101.)



1. The combination, with a vehicle body frame and axle, of a spring comprising a main plate and one or more plates additional thereto, the plate adjacent to the main plate extending thereheyond, means pivotally connecting the central portion of said spring to the frame, and means connecting the end of the main plate and the end of the next adjacent plate to longitudinally spaced portions of the axle.

2. The combination, with a vehicle body frame and axle, of a spring comprising a main plate and one or more plates additional thereto, the main plate being shorter at one end than the next adjacent plate, means pivotally connecting the central portion of the spring to the frame, a spring seat rotatably mounted on the axle, and means connecting the end of the main plate and the end of the plate adjacent thereto to the spring seat.

3. The combination, with a vehicle body frame and axle, of a spring sent rotatably mounted on the axle and having a pair of longitudinally spaced connecting portions, one of said portions extending beyond the other, a spring comprising a main plate and one or more plates adjacent thereto, means pivotally connecting the central portion of the spring to the frame, and means connecting the end of the main plate and the end of the plate next adjacent thereto to the connecting portions of the spring seat.

4. The combination, with a vehicle body frame and axle, of a spring sent rotatably mounted on the axle and having a pair of longitudinally spaced connecting portions, one of said portions being at a greater distance from the axle than the other, a spring comprising a plurality of plates, means connecting the central or body portion of the spring to the frame, and means connecting the ends of two of the plates to the connecting portions of the spring sent.

5. The combination, with a vehicle body frame and axle, of a spring comprising a main plate and one or more plates additional thereto, means pivotally connecting the central or body portion of the spring to the frame, and means connecting two or the plates to the axle, one of such connections being a yielding connection.

[Claims 6 to 10 not printed in the Gazette.]

1,155,753. MANUFACTURE OF SULFATE OF AMMONIA AND IN THE PURIFICATION OF COAL-GAS. JOHN MACKENZIE, Middlesborough, England. Filed Mar. 29, 1915. Serial No. 17,011. (Cl. 23—21.)

1. A process for the manufacture of sulfate of ammonia direct from the sulfur and ammonia compounds, which are contained in gases generated by the dry distillation of coal, consisting in subjecting the gases in a moist atmosphere to the action of a compound of nitrogen the base of which is nitric acid, substantially as described.

2. A process for the manufacture of sulfate of ammonia direct from the sulfur and ammonia compounds which are contained in gases generated by the dry distillation of coal, consisting in subjecting the gases in a moist atmosphere to the action of a compound of nitrogen the base of which is nitric acid, wherein the gas, freed from tar together with the nitrogen compound, is passed in a moist atmosphere at about 200° F. into a vessel in which all the sulfur compounds are oxidized and sulfate of ammonia is formed.

3. A process for the manufacture of sulfate of ammonia direct from the sulfur and ammonia compounds which are contained in gases generated by the dry distillation of coal, consisting in subjecting the gases in a moist atmosphere to the action of a compound of nitrogen the base of which is nitric acid, and any excess of the nitrogen compound remaining at the end of the process is absorbed in sulfuric acid and is then expelled therefrom by denitration and again used in the process.

1,155,754. WINDOW-REGULATOR. JOHN E. MARSDEN, Philadelphia, Pa. Filed Oct. 14, 1914. Serial No. 866,572. (Cl. 20—52.1.)



1. The combination with a window frame and a window member movable therein, of means for moving said member, a weather-strip supported on said frame, and means movable with said first named means for automatically moving said weather-strip against said member.

2. The combination with a window frame and a window member movable therein, of a weather-strip having limited movement on said frame, and means for actuating said member, said means automatically actuating said weather-strip against said member after predetermined movement of said member.

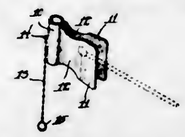
3. The combination with a window frame and a window member movable therein, of a resilient weather-strip, means on said frame with respect to which said weather-strip is movable for deflecting said weather-strip against said member, means for actuating said member, and means movable with said actuating means for automatically moving said weather-strip.

4. The combination with a window frame and a window member movable therein, of a weather-strip on said frame, means with respect to which said weather-strip is movable for deflecting said weather-strip toward said member, means for actuating said member, and means automatically actuating said weather strip after predetermined movement of said actuating means.

5. The combination with a window frame and a window member movable therein, of means for actuating said member, a flexible weather-strip, means guiding the same in movement parallel with the movement of said member, and means for bending said strip transversely to its said movement against said member after predetermined movement of said member.

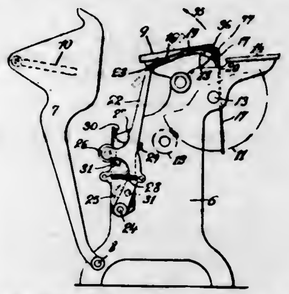
[Claims 6 to 10 not printed in the Gazette.]

1,155,755. MATCH LIGHTER AND EXTINGUISHER. ROBERT F. MATHESON, Ottawa, Ontario, Canada. Filed Aug. 24, 1914. Serial No. 858,263. (Cl. 206—30.)



A match igniting and extinguishing device formed from a strip of resilient sheet material bent intermediate its length to form a tubular extinguishing element having elongated scratching surfaces extending therefrom, the tubular extinguishing element forming a spring element for normally holding the scratching surfaces in spaced relation.

1,155,756. SAFETY-GUARD FOR PRINTING-PRESSES. LEWIS E. MORRISON, Newark, N. J., assignor to Humana Company, a Corporation of New Jersey. Filed Oct. 9, 1914. Serial No. 865,780. (Cl. 101—15.)



1. In a printing press or similar machine the combination with a movable platen and a form carrier, of a guard adapted to be moved across the position of the operator's hand, a link pivoted to said guard and said platen and a lever pivoted to said guard and to the frame of the press for operating the guard.

2. In a printing press or similar machine the combination with a movable platen and a form carrier, of a guard adapted to be moved across the position of the operator's hand, means pivoted to the guard and the platen for operating the guard in the direction of movement of said platen, means for moving the guard away from the platen and means operated by said form carrier for moving said guard into its extreme position away from the platen.

3. In a printing press or similar machine the combination with a movable platen and a form carrier, of a guard adapted to be moved across the position of the operator's hand, link connections between said guard and the platen, operating levers pivotally connected to the said guard and springs for moving said levers toward the said form carrier.

4. In a printing press or similar machine the combination with a movable platen and a form carrier, of a guard adapted to be moved across the position of the operator's hand, said guard comprising a cross bar and two side bars, pivoted connections between the latter and the said platen, operating levers pivoted to the free ends of said side bars, means for operating said operating levers toward the said form carrier and means for arresting the movement of said operating levers before they contact with said form carrier.

5. In a printing press or similar machine the combination with a movable platen and a form carrier, of a guard adapted to be moved across the position of the operator's hand, said guard comprising a cross bar and two side bars, links pivoted to the latter nearest the said cross bar and to the said platen, operating levers pivoted to the free ends of said side bars and pivotally secured to the frame of the press, springs for operating said operating levers in a direction away from said platen and cushioning means for arresting the movement of said operating levers in a predetermined position.

[Claims 6 and 7 not printed in the Gazette.]

1,155,757. MUFFLER. NATHANIEL RAPP, Toledo, Ohio. Filed Mar. 25, 1915. Serial No. 16,860. (Cl. 121—116.)



1. In a muffler, the combination of a cylindrical shell, a plurality of hollow spheres located within the shell and in spaced relation with respect to the shell and having large openings at the poles of the spheres and along the axis of the shell and smaller openings arranged longitudinally around the spheres the muffler having an inlet connected with the interior of the first sphere through which the gases enter into the muffler, the outer end of the end sphere being closed, the muffler having an exhaust opening located in the end of the shell opposite to the end having the inlet opening and located without the end sphere, the spheres successively intaking through the intake and the large openings and passing through the small openings into the shell and through the exhaust of the shell, the gases at all times moving through the shell in a direction from the intake of the shell to the exhaust of the shell.

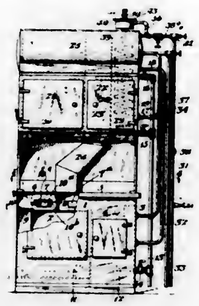
2. In a muffler, the combination of a shell, a plurality of spheres located coaxially with respect to each other and to the shell and having polarly located openings forming communications between the spheres, the muffler having an inlet opening communicating with the interior of the first sphere, the last of the spheres being closed, the spheres having oblong openings extending and arranged longitudinally which allow the escape of gases into the shell, an exhaust opening located in the shell and without the end sphere.

3. In a muffler, the combination of a cylindrical shell, a plurality of spherical shells located within the cylindrical shell and having polar openings forming thereby a continuous passageway through the spherical shells, the spherical shell at one end having an inlet opening, the other end one of the spherical shell being closed, the spherical shells having oblong openings extending longitudinally which allow gases to escape into the cylindrical shell, the muffler having an outlet located in the end of the cylindrical shell opposite to the end having the inlet to the first spherical shell and without the end spherical shell.

1,155,758. COMBINED COAL AND GAS RANGE. SOREN C. ROCKMAN, Philadelphia, Pa. Filed Sept. 17, 1914. Serial No. 862,137. (Cl. 236—5.)

1. A kitchen range comprising a fire box, a water back in operative relation to said fire box, a hood, a hot water tank for receiving water from said water back, said tank being supported upon said hood and being spaced

from the rear wall thereof, a gas heated hot water supplying apparatus situated in the space back of said tank, and means whereby water may be drawn either from the tank or the said hot water supplying apparatus or from both simultaneously, substantially as described.



2. A kitchen range comprising a fire box in its main body portion for burning fuel such as coal, a water back in operative relation to said fire box for heating water, a water holding tank for receiving hot water from said water back, a relatively small hot water holding receptacle, a heated coil for supplying hot water to said receptacle, and means whereby water may be drawn simultaneously from said tank and receptacle or independently from either one at different times.

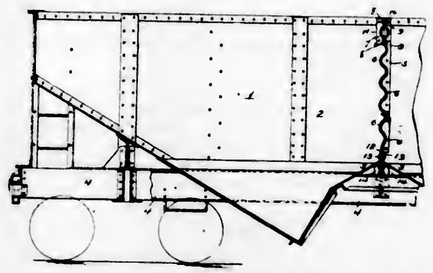
3. A kitchen range comprising a hood, a hot water tank supported upon said hood, the said tank being spaced from the back of said hood, a heating chamber interposed between the said tank and the said back, a coiled pipe situated in the said heating chamber, means for supplying cool water to said coiled pipe, a gas burner for heating the said coiled pipe and the water therein, a receptacle having connection with the upper end of said coiled pipe, a pipe for delivering hot water from the said tank and the said coiled pipe and receptacle and means whereby hot water may be delivered simultaneously or independently from the said tank and from the said coil and receptacle.

4. A kitchen range comprising a hood, a hot water tank supported thereon and provided with a pipe for delivering water therefrom, said tank being spaced from the back of said hood, a heating chamber interposed between said tank and the back of said hood, a coiled pipe in the said heating chamber, means for supplying cool water thereto, a gas burner for heating said coiled pipe and the water therein, a receptacle having connection with the upper end of said coiled pipe for receiving hot water therefrom, a connection between the said coiled pipe and the said receptacle whereby hot water may be supplied from said coiled pipe and the said receptacle to the delivery pipe leading from said tank, and independent means for closing the connections between the delivery pipe and the tank and the said coiled pipe and receptacle, substantially as described.

5. A kitchen range comprising a hood, a hot water tank supported upon said hood and having a delivery pipe for delivering water therefrom, the said tank being spaced from the back of said hood, a heating chamber interposed between the said tank and the back of said hood, a gas burner situated in the lower part of said chamber, a coiled pipe situated in the said heating chamber above the said burner, means for supplying cool water thereto, a receptacle having connection with the upper end of said coiled pipe for receiving hot water from the latter, connections between the said receptacle and the said coiled pipe and the said delivery pipe leading from the said tank, and means having engagement with the said coiled pipe and with the said receptacle and being actuated thereby for controlling the passage of gas to the said burner.

[Claims 6 to 13 not printed in the Gazette.]

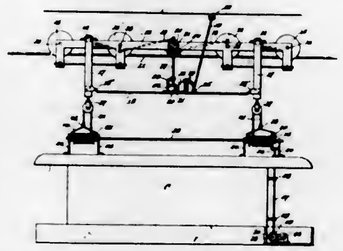
1,155,759. DUMPING-CAR. RALPH V. SAGE, Columbus, Ohio, and JOHN J. TATUM, Baltimore, Md.; said Sage assignor to The Ralston Steel Car Company, Columbus, Ohio. Filed Jan. 9, 1915. Serial No. 1,389. (Cl. 105—185.)



1. The combination with a hopper bottom car having a transverse hood, of a sheet metal dividing wall having horizontal corrugations, said dividing wall disposed between the sides of the car and having flanges secured to the latter, the lower portion of said corrugated wall being anchored to the apex of the hood and extending upwardly to the plane of the top of the car sides, and a transverse sheet metal strip secured to the upper edge of the sheet metal dividing wall and to the car sides, said transverse strip having a corrugation which is reverse to the upper corrugation of the dividing wall.

2. The combination with a hopper bottom car having a transverse hood, said hood having upwardly projecting flanges at its center, of a sheet metal dividing sheet having horizontal corrugations and provided at its vertical edges with flanges secured to the sides of the car, said dividing sheet having a plain tail portion extending downwardly between the flanges of the hood and terminating under the latter, means securing said tail portion to said flanges, and angle irons securing said tail portion of the dividing sheet to the sides of the car.

1,155,760. ELEVATED RAILWAY. GUSTAF SAUVOLA, Astoria, Oreg. Filed Mar. 25, 1913. Serial No. 756,756. (Cl. 104—146.)



1. In combination with an elevated railway, a supporting cable, a movable member thereupon, a car suspended from said movable member, an operating shaft mounted upon said car, means carried by said operating shaft, means for actuating said first-mentioned means and means connecting said first-mentioned means with said movable member for raising and lowering said car relative thereto.

2. In combination with an elevated railway, a supporting cable, a supporting track, a movable member thereupon, a car suspended from said movable member, an operating shaft mounted upon said car, means at the ends of said shaft, means carried by said car for actuating said first-mentioned means, and means connecting said first-mentioned means with said movable member for raising and lowering said car relative thereto.

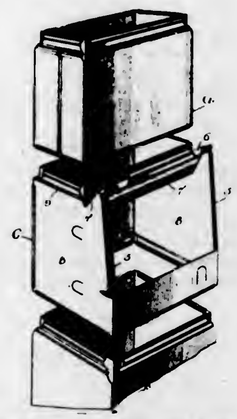
3. In combination with an elevated railway, a car supporting cable, a trolley wire, a car suspended from the said cable, drums carried by the said car, means carried by the said car for rotating the said drums, a supporting truck for the car movable upon said cable, and a flexible element connecting the said drum with the said truck for raising and lowering the said car relative to the cable, as and for the purpose set forth.

4. In combination with an elevated railway, a supporting cable, a truck movable thereupon, a car suspended from the said truck, an operating shaft mounted upon the said car, drums carried by the said shaft, means carried by the said car for actuating the said drums, means connecting the said drums with the said trucks for raising and lowering the said car relative thereto, as and for the purpose set forth.

5. In combination with an elevated railway, a supporting cable, a truck frame, wheels carried by said frame disposed for engagement with the said cable, a double crank shaft connected to certain of the said wheels for imparting motion thereto, means carried by the said truck for actuating the said shaft, and a car connected to the said truck adapted to be raised and lowered relative thereto, as and for the purpose set forth.

[Claims 6 to 15 not printed in the Gazette.]

1,155,761. STACK-HEAD OR BOOT FOR HOT-AIR STACKS. ALBERT G. SCHERER, Chicago, Ill., assignor to The Excelsior Steel Furnace Company, Chicago, Ill., a Corporation of Illinois. Filed July 16, 1915. Serial No. 40,167. (Cl. 137—75.)



1. A double-wall hot-air stack consisting of a plurality of sections having connected inner and outer walls, said sections adapted to fit together end to end by both the inner and outer walls, and a double wall section adapted to interlock respectively with an upper and a lower section and having its upper interlocking portion disposed in or below the plane of the top of the vertical front walls thereof.

2. A boot for hot air stacks comprising a four walled structure, a portion of one of said walls being cut away to provide a register opening and means on the top of said boot whereby the same is adapted to be interlocked with a superimposed stack section, said means being disposed in a plane at or below the horizontal plane of the upper edge of the cut away wall.

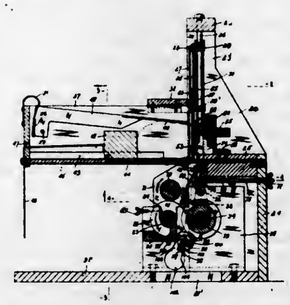
3. A register boot for hot-air stacks comprising a four-walled structure, a portion of one of the vertical walls thereof is cut away to provide a register opening, a top wall therefor consisting of a strip of metal bent upon itself and having a portion intermediate its ends substantially V-shape and extended down inside said boot.

4. A register boot for hot-air stacks comprising a four-walled structure, a portion of one of the vertical walls thereof being cut away to provide a register opening, a top wall therefor consisting of a strip of metal bent upon itself and folded edge whereof is bent at substantially right angles which constitutes the upper edge of the register opening, the top being extended from said flange rearwardly and then downwardly and the layers of said top being then separated and formed into means for securing the interlocking of said boot with an adjacent stack section.

5. A register foot for hot-air stacks comprising a four-walled structure, a portion of one of the vertical walls thereof being cut away to provide a register opening, a top wall therefor consisting of a strip of metal bent upon itself and the forward portion thereof being horizontally disposed adjacent the front wall of the boot and its rear portion vertically disposed with its upper edge terminating in a plane at or below the horizontal plane of the front portion of said top wall.

[Claim 6 not printed in the Gazette.]

1,155,762. VEGETABLE-CUTTER. JOSEPH SEGERC, New York, N. Y. Filed May 12, 1915. Serial No. 27,520. (Cl. 146—11.)



1. In a vegetable cutter, the combination with a hopper, of a slicing knife coöperating therewith, a cylindrical platen, a plurality of rotating disk knives mounted upon a common shaft coacting with said platen, said disk knives being spaced apart to cut the slices into strips, a feeding roller for advancing the slices received from said hopper onto said platen, and guiding means for bringing the slices within the reach of said roller.

2. In a vegetable cutter, the combination with a hopper, of a slicing knife coöperating therewith, a cylindrical platen, a plurality of rotating disk knives mounted upon a common shaft coacting with said platen, said disk knives being spaced apart to cut the slices into strips, means for feeding the slices received from said hopper onto said platen, a stripper associated with said disk knives, and a rotary cutter for subdividing the strips as they pass said stripper into blocks.

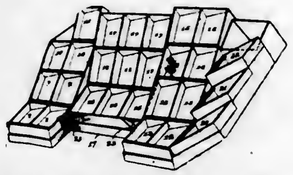
3. In a vegetable cutter, the combination with a hopper, of a slicing knife coöperating therewith, a cylindrical platen, a plurality of rotating disk knives mounted upon a common shaft coacting with said platen, said disk knives being spaced apart to cut the slices into strips, a feeding roller for advancing the slices received from said hopper onto said platen, guiding means for bringing the slices within the reach of said roller, a stripper associated with said disk knives, and a rotary cutter for subdividing the strips as they pass said stripper into blocks.

1,155,763. DISTRIBUTING DEVICE. JOHN C. SHIRLEY, Hubbard Woods, Ill. Filed Dec. 4, 1913. Serial No. 804,563. (Cl. 211—36.)

1. A distributing device having side and bottom walls and the bottom wall disposed at two angles whereby one corner of said bottom wall is lower than the other three corners.

2. A cabinet comprising a plurality of compartments arranged in adjacent sections, two of said sections com-

prising like arranged compartments super-imposed and having their bottom walls arranged in different planes, the center section having its compartments super-imposed and set back from the side sections and the bottom walls of each center section being arranged in different planes to each other and from the planes of the bottom walls in the adjacent sections, and a fourth section disposed adjacent one of the end sections and comprising a plurality of super-imposed compartments arranged transversely relative to the side sections.



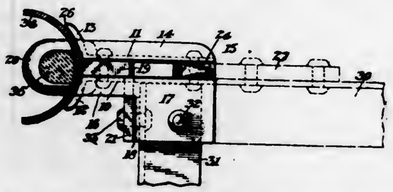
3. A cabinet comprising a plurality of compartments arranged in adjacent sections, two of said sections comprising like arranged compartments super-imposed and having their bottom walls arranged in different planes, the center section having its compartments super-imposed and set back from the side sections and the bottom walls of each center section being arranged in different planes to each other and from the planes of the bottom walls in the adjacent sections, and a fourth section disposed adjacent one of the end sections and comprising a plurality of super-imposed compartments arranged transversely relative to the side sections and a folding board within the recess formed by setting back the center section.

4. A cabinet comprising a plurality of compartments arranged in three adjacent sections, the middle section being set back from the side sections, and each section comprising a plurality of super-imposed compartments having their bottom walls arranged at different angles and the bottom wall of each section being disposed at two angles whereby one corner of said bottom wall is lower than the other three corners.

5. A cabinet comprising a plurality of compartments arranged in three adjacent sections, the middle section being set back from the side sections, and each section comprising a plurality of super-imposed compartments having their bottom walls arranged at different angles and the bottom wall of each section being disposed at two angles whereby one corner of said bottom wall is lower than the other three corners, and a stop adjacent to the top of the lower wall of each compartment.

[Claim 6 not printed in the Gazette.]

1,155,764. BEDPOST-BRACKET. ABRAHAM SONDACK, New York, N. Y. Filed Aug. 15, 1914. Serial No. 856,001. (Cl. 5—55.)



1. A bed post bracket comprising a pair of side members, flanges at corresponding edges of the said side members and adapted to conform to the surface of a bed post to which the bracket is to be connected, spacers for separating the said side members, providing a socket between the same for the reception of a hook provided with a recess into which one of the said spacers fits, and a loop member integral with the other spacer and adapted to enter a recess provided therefor in the bed post.

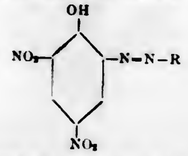
2. A bed post bracket comprising a pair of side members, flanges at corresponding edges of the said side members and adapted to conform to the surface of a bed post to which the bracket is to be connected, flanges at the upper edges of the said side members and which are adapted to have rails secured thereto, spacers for separating the said side members, providing a socket between the same for the reception of a hook provided with a recess into which one of the said spacers fits, and a loop member integral with the other spacer and adapted to enter a recess provided therefor in the bed post.

3. A bed post bracket comprising a pair of side members, flanges along corresponding edges of the said side members and adapted to conform to the outline of a bed post to which the bracket is to be connected, a flange at the upper edge of one of the said side members, a flange at the upper edge of the other side member having a parallel extension and a portion depending at right angles thereto and which are adapted to have a rail secured thereto, spacers for separating the said side members providing a socket between the same for the reception of a hook in which there is a recess for one of the said spacers, and a loop integral with the other spacer and adapted to extend into a recess provided therefor in the bed post.

4. A bed post bracket comprising a pair of side members, flanges along corresponding edges of the said side members and adapted to conform to the outline of a bed post to which the bracket is to be connected, a flange at the upper edge of one of the said side members, a flange at the upper edge of the other side member having a parallel extension and a portion depending at right angles thereto and which are adapted to have a rail secured thereto, spacers for separating the said side members providing a socket between the same for the reception of a hook in which there is a recess for one of the said spacers, a projection on the other spacer extending through an aperture provided therefor in the last aforesaid side member adapted to lie against the surface of the downwardly turned portion of the flange extension at the upper edge of the said side member, and a loop integral with the other spacer and adapted to extend into a recess provided therefor in the bed post.

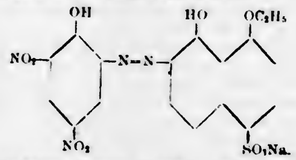
1,155,765. MORDANT AZO DYESTUFFS. OTTO STAEHLIN, Höchst-on-the-Main, Germany, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Oct. 1, 1913. Serial No. 792,790. (Cl. 8—1.)

1. As new articles of manufacture, the mordant dyestuffs having most probably the formula:—



wherein R represents the aryl radical of a monoalkyl ether of 4-sulfo-1.8-dioxynaphthaline, which in the form of their sodium salts, are greenish-black powders, soluble in water with a violet-blue color turning cherry red on addition of a mineral acid, and dissolve in concentrated sulfuric acid with a bluish-green color, dyeing wool on addition of potassium bichromate and an acid uniform Russian-green tints fast to milling, and being remarkable for their excellent fastness to light.

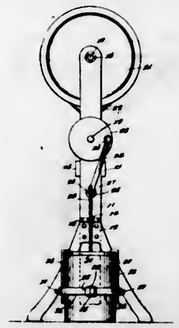
2. As a new article of manufacture, the mordant dyestuff having most probably the formula:



which is a greenish-black powder, soluble in water with a violet-blue color turning cherry-red on addition of a mineral acid, and dissolves in concentrated sulfuric acid with a bluish-green color, dyeing wool on addition of potassium bichromate and an acid uniform Russian-green tints fast to milling and remarkable for their excellent fastness to light.

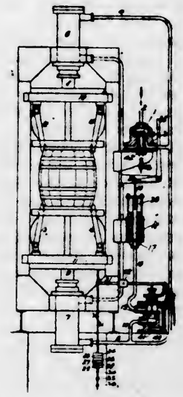
1,155,766. CHURN. JAMES A. STRINGER, Clare, La. Filed May 15, 1914. Serial No. 838,850. (Cl. 31—30.)

1. A churn comprising a frame, tub holding means carried by said frame, a driven shaft carried by said frame, a link pivotally and eccentrically connected with said driven shaft and provided with an eye adjacent its free end, a pin rotatably mounted in said eye and having its outer end portion slotted to receive a dasher, and means for rigidly securing a dasher in the slotted end portion of said pin.



2. In a churn, a frame, tub engaging means carried by said frame and including means for encircling the tub and means for engaging the cover of the tub to hold the cover in a closed position, rotatable operating means carried by said frame and including an eccentric disk, and a link pivotally connected with said eccentric disk and provided with pivotally mounted means for engaging a dasher.

1,155,767. CASK-HOOPING MACHINE. FRIEDRICH STROHL, Rumpenheim-on-the-Main, Germany, assignor to C. A. Neubecker, Offenbach-on-the-Main, Germany. Filed May 21, 1915. Serial No. 29,629. (Cl. 147—9.)



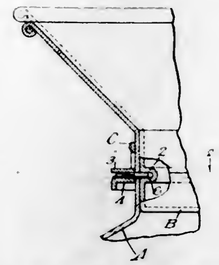
1. In a cask hooping machine, the combination of a pressure regulating device with an auxiliary valve which operates to close the regulating device at the desired pressure on the hoops.

2. In a cask hooping machine having pressure plates, a pressure regulating device having a piston, an auxiliary valve and weight plates for regulating the operation of the valve and piston according to the distance of the pressure plates from each other.

3. In a cask hooping machine having pressure plates, a pressure regulating device having a piston, an auxiliary valve and a series of weight plates suspended from the under pressure plate when the pressure plates are nearest each other and successively laid on a rod connected with the auxiliary valve while the pressure plates are returning to their initial position.

4. In a cask hooping machine, the combination of a pressure regulating device with an auxiliary valve which operates to close the regulating device at the desired pressure on the hoops, said operation on the regulating device being effected by the waste water from the auxiliary valve.

1,155,768. SEAL-LOCKING DEVICE. EMIL TYDEN, Evanston, Ill. Filed Feb. 26, 1915. Serial No. 10,813. (Cl. 70—23.)



1. A seal bolt having a hooked end adapting it to be engaged by an edgewise swinging movement about the corner of that which the hook engages, in combination with a mount for the same having an aperture into which the seal bolt is thrust for locking, and having a stop to limit the swinging movement of the seal bolt at locking position of the latter, and a second stop past which the seal bolt swings to reach said position, the seal bolt being weakened for folding to extend its outer portion adjacent to the last mentioned stop; whereby it is stopped from swinging back from locked position; the seal being adapted to break at said weakened line upon being straightened back past the second stop.

2. A flat seal bolt having a hook formation and adapted to be engaged by edgewise movement in two directions, in combination with a mount for the same which the hook is adapted to engage, and having an aperture through which the seal bolt is thrust for locking, said mount having an exterior abutment adjacent to the path of engaging movement of the seal bolt, the latter being weakened for folding at a line positioned for causing it when folded to extend one edge past said abutment, and adapted to break at the weakened line upon being straightened back past the abutment.

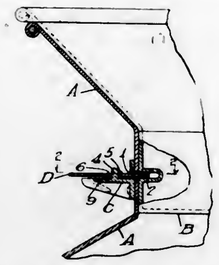
3. A flat seal bolt having a hook formation and adapted to be engaged in movement in two directions; a mount for the same having an aperture through which the seal bolt is thrust for locking and with which the hook is adapted to engage upon having received said two movements, said mount having an exterior abutment adjacent to the path of the seal bolt in the concluding portion of said engaging movement, the seal bolt being weakened for folding at a line positioned for causing it in such folding to extend past said abutment, and adapted to break at the weakened line upon being straightened by swinging back past the abutment.

4. A flat seal bolt having at one end a projection for its locking engagement; a mount for the same having an aperture through which said projection is thrust for said locking engagement; said mount being formed of sheet metal folded to form two parallel flanges projecting from the opposite sides of the aperture and forming a path for the seal bolt edgewise therethrough, one of said flanges

having a shoulder adjacent to the entering path of the outer edge of the seal bolt, the latter being weakened for folding at a transverse line positioned to cause its outer portion when so folded to extend past said shoulder.

5. A flat seal bolt having a projection extending from one edge, in combination with a mount for the same having an aperture for engagement of the projection, and a path for the edgewise entrance of the seal bolt leading from the projection to the aperture, and having a guard at both sides, one of the guards having at the end thereof removed from the aperture a shoulder past which the outer lateral edge of the seal bolt passes in said edgewise entrance; the seal bolt being weakened for folding at a line positioned to cause the folded portion of the seal bolt to extend inside said shoulder.

1,155,769. SEAL-LOCKING DEVICE. EMIL TYDEN, Evanston, Ill. Filed Feb. 26, 1915. Serial No. 10,814. (Cl. 70—23.)



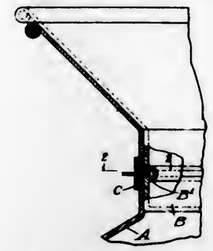
1. A flat seal bolt and a mount for the same having an aperture into which the seal bolt is thrust for locking, the mount having a seal slide-way leading to the said aperture, and a part which overhangs said slide-way, the seal-bolt being adapted to enter under such over-hanging part by withdrawal for a distance along its path of inthrust less than the depth of locking engagement effected by such inthrust, and being weakened for folding across the mount at such withdrawn position to prevent its subsequent inthrust, and adapted to break at said weakened line upon being straightened back into line with the path of inthrust.

2. A flat seal bolt and a mount for the same, having an aperture into which the seal bolt is thrust for locking and a slide-way for the inthrusting movement of the seal bolt, said slideway having a projection which extends through the path of the seal bolt and also overhangs said path, the seal bolt having an aperture which admits said projection at the extreme inthrust position of the seal bolt, the aperture being adapted to permit the retraction of the seal bolt for a portion of the distance of its inthrust to engage the margin of the aperture under the overhang of the projection, the seal bolt being weakened for folding at a line positioned for causing the folded portion to engage a portion of the mount against inthrust of the seal bolt, and adapted to break at said line of folding upon being folded back to normal position.

3. A flat seal bolt and a mount for the same, having an aperture into which the seal bolt is thrust for locking, the mount having an abutment which projects through the plane of the seal bolt and has an overhang to engage the latter, the seal bolt being cut away to admit the abutment through it and to form a shoulder for stopping withdrawal movement of the seal bolt, the inthrust of the latter for bringing its cut away part to the position for admitting the abutment being in excess of the amount required for locking, so as to permit a partial withdrawal without unlocking, the overhang being positioned for engaging the seal bolt upon such partial withdrawal, the seal bolt being weakened for folding at a line positioned so as to cause the folded portion of the seal bolt to engage a portion of the mount, the inthrust movement of the seal bolt, and adapted to break upon being straightened back to its original position.

4. A flat seal bolt and a mount for the same, having an aperture through which one end of the bolt is adapted to be thrust for engagement, the bolt being cut away between its ends to form three shoulders one facing away from the inthrust end and the other two facing laterally in opposite directions, the mount being formed for being engaged by all three shoulders by flat-wise movement of the bolt when at inthrust position, and the bolt being weakened for folding to engage the outer end of the mount at that position, and for breaking when straightened back far enough for flatwise movement to disengage its shoulder.

1,155,770. SEAL-LOCKING DEVICE. EMIL TYDEN, Evanston, Ill. Filed Feb. 26, 1915. Serial No. 10,815. (Cl. 70—23.)



1. A flat seal bolt having a hook extending off laterally therefrom, in combination with a mount having an aperture for engagement with the hook, and having a guard which extends for stopping the seal bolt laterally in the direction for withdrawing the hook from the aperture, through which guard the seal bolt is thrust to bring the hook opposite the aperture for inthrust of the hook therethrough, the seal being weakened for folding at a transverse line positioned beyond the guard at the engaged position of the hook for causing the folded part to extend adjacent to the guard and adapted to break upon being straightened back so as to be withdrawn through the guard.

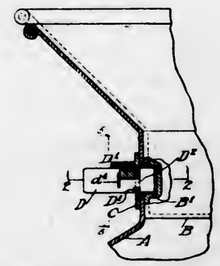
2. A flat seal bolt having a hook extending off from one lateral edge thereof, in combination with a mount for the same, having an aperture for engagement of the hook, and having a guard which extends for stopping the seal bolt laterally in the direction for withdrawing the hook from the aperture, through which guard the seal bolt is thrust to bring the hook opposite the aperture for engagement therewith, the seal being weakened for folding at a transverse line positioned just beyond the guard when the hook is engaged, and adapted to break upon being straightened back for withdrawal from the guard.

3. A flat seal bolt having a hook extending off from one lateral edge and transverse to the plane of the seal bolt, in combination with a mount for the latter, having an aperture for engagement of the hook and having a guard device under which the seal bolt may be thrust to bring the hook opposite the aperture for engagement therewith, the seal bolt being weakened for folding at a transverse line positioned just beyond the guard device when the hook is engaged, and adapted to break upon being straightened back for withdrawal from the guard.

4. A flat seal bolt having a hook extending off laterally therefrom, in combination with a mount having an aperture for engagement with the hook, and a guard which extends for stopping the seal bolt laterally in the direction for withdrawing the hook from the aperture, under which guard the seal bolt is thrust longitudinally in one direction to bring the hook opposite the aperture for entrance thereinto, the hook having its engaging terminal projecting for such engagement in the direction of said longitudinal thrust, whereby further thrust in that direction after the hook enters the aperture is necessary for engaging the hook, the seal bolt being weakened for folding at a transverse line immediately beyond the guard at the position occupied after the complete inthrust for engaging the hook, and adapted to break upon being straightened back to its normal position.

5. In a flat seal bolt having a hook extending off from one lateral edge, in combination with a mount having an aperture for entrance of the hook by lateral edgewise movement of the seal bolt, and a guard under which the seal bolt is thrust longitudinally to bring the hook opposite the entrance to said aperture, the hook having its engaging terminal projecting for engagement in the direction of said longitudinal thrust, whereby further thrust in the same direction after the hook enters the aperture is necessary for engaging the hook, the seal being weakened for folding at a transverse line which stands immediately beyond said guard after the hook has been engaged, and adapted to break upon being straightened back to its normal position.

1,155,771. SEAL-LOCKING DEVICE. EMIL TYDEN, Evanston, Ill. Filed Feb. 26, 1915. Serial No. 10,816. (Cl. 70—23.)

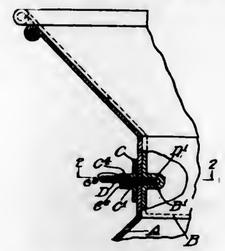


1. A flat seal bolt having an engaging head reduced in width back of the head to form a relatively narrow neck, in combination with a mount having an aperture through which the head can enter and in which the neck can turn to cause the head to extend crosswise of the aperture, a mount having a projection extending adjacent to the edge of the seal bolt at its said crosswise position, said seal bolt being adapted for folding at a transverse line position to cause the folded portion to abut edgewise on said projection, and adapted to break upon being straightened back into alinement with the engaged portion.

2 A flat seal bolt having an engaging head and reduced in width back of the head to form a relatively narrow neck, in combination with a mount having an aperture through which the head can enter and in which the neck can turn to cause the head to extend cross-wise of the aperture, the mount having at its forward or outer side a boss having a shoulder which extends adjacent to the face of the seal bolt at said crosswise position and which affords a corner over which the seal bolt may be folded or bent, the mount also having a projection extending adjacent to the edge of the seal bolt at its said crosswise position before folding, said seal bolt being weakened for folding at a transverse line substantially coincident with said shoulder at the engaged position of the seal bolt to cause the folded portion to abut edgewise on said projection, and being adapted to break upon being straightened back into alinement with the engaged portion.

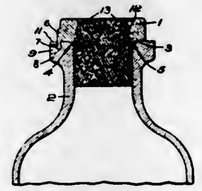
1,155,772. SEAL-LOCKING DEVICE. EMIL TYDEN, Evanston, Ill. Filed Feb. 26, 1915. Serial No. 10,817. (Cl. 70—23.)

1. In a seal bolt having an end portion adapted to be engaged for locking, and having at one edge a shoulder facing away from said end, the mount for the same having means for engaging the said shoulder, adapted for such engagement by edgewise movement of the seal bolt when the latter is in locking position, the mount having a guard along which the seal bolt is inserted which terminates in an edge oblique to the path of insertion of the seal bolt, the latter being weakened for folding at an obliquely transverse line positioned to coincide with an oblique edge of the mount guard when the bolt is at locking and engaged position and adapted to break upon being straightened back into alinement with the inserted end portion.



2. A flat seal bolt having a terminal portion adapted for locking engagement, having in one edge a notch forming a shoulder for engagement against withdrawal from locking position for the seal bolt having an aperture through which its terminal is inserted for locking engagement and having a projection with which the notch of the seal bolt is engageable by edgewise movement of the latter when it is in locking position, the mount having an exteriorly-projecting guard along which the seal bolt is inserted, said guard being terminated by an edge oblique to the path of insertion of the seal bolt, the latter being weakened for folding at an obliquely transverse line which is positioned to coincide with said oblique edge of the guard when the seal mount is in locking and engaged position, and adapted to break upon being straightened back to its original form.

1,155,773. BOTTLE-SEAL. WEET R. UCHTMANN, Boston, Mass., assignor of one-half to Ole M. Dahl, Boston, Mass. Filed Apr. 13, 1915. Serial No. 21,131. (Cl. 215—72.)



1. A bottle seal comprising a ring and a neck engaging fragile tongue thereon adapted to be fractured by withdrawal of the stopper.

2. A bottle seal comprising a ring and a neck engaging fragile tongue thereon of varying dimensions in cross section adapted to be fractured by withdrawal of the stopper.

3. A bottle seal comprising a ring, a flange thereon, and a neck-engaging fragile tongue on the ring.

4. A bottle seal comprising a ring, cork engaging teeth thereon, and a neck-engaging fragile tongue on the ring.

5. The combination of a ring having a neck-engaging fragile tongue adapted to be fractured by withdrawal of the stopper, and a bottle having a pocket for receiving said tongue end.

[Claims 6 to 8 not printed in the Gazette.]

1,155,774. CAP. WILLIAM H. VATCHER, Los Angeles, Cal., and CHARLES H. MELCHER, Douglas, Ariz.; said Melcher assignor to said Vatcher. Filed Sept. 21, 1914. Serial No. 862,849. (Cl. 2—106.)

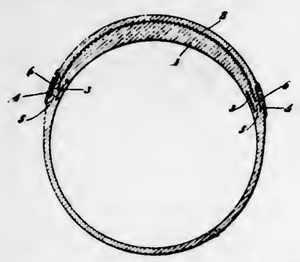
1. An adjustable cap comprising band sections having overlapping rear ends constituting straps, each band sec-

tion being secured to the lower edge of the body of the cap from front to rear, at which point they are spaced apart a predetermined distance whereby the strap ends constituting part of the bands are free, a rear apron section extending downwardly from the body of the cap to a point alined with the outer edges of the band sections and between the free ends of said bands, the said apron being transversely secured at its ends to the band sections at the base of the free ends of the aforesaid bands, and a fastening device secured to the central portion of the apron the exterior face thereof adapted to receive the backwardly folded free ends of the strap portions of said band.



2. An adjustable cap comprising band sections having rear free ends constituting straps, a rectangular apron depending from the cap body under the free ends of the straps, means for securing the ends of the aprons to the straps back of the free ends thereof, and a buckle secured to the central portion of the apron for engagement with the free ends of the straps whereby the latter may be adjustably folded therein to form an ornamental bow to vary the size of the cap.

1,155,775. INNER TUBE FOR PNEUMATIC TIRES. JOHN J. VOORHEES, Jersey City, N. J., assignor to Brown Perfection Tube Company, New York, N. Y., a Corporation of New York. Filed Apr. 8, 1915. Serial No. 19,854. (Cl. 152—13.)



1. An inner tube for pneumatic tires, comprising a thickened tread, a strip of fabric holding said tread in compression, and a fillet overlapping the edge of said strip and embedded in the rubber of the tube.

2. An inner tube for pneumatic tires, comprising a thickened tread, a strip of fabric holding said tread in compression, and a fillet on each side of said strip and overlying its edge and embedded in the rubber of the tube.

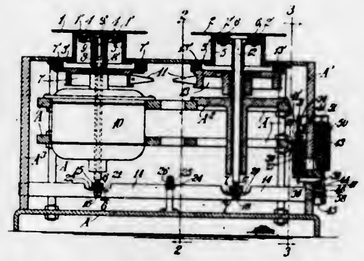
3. An inner tube for pneumatic tires, comprising a thickened tread, a strip of fabric holding said tread in compression, a fillet on each side of said strip overlying its edge and embedded in the rubber of the strip, and a layer of rubber between said fillets and substantially equal in thickness to the thickness of said first mentioned strip of fabric.

4. An inner tube for pneumatic tires, comprising a thickened tread, a strip of fabric holding said tread in compression, a fillet on each side of said strip overlying its edge and embedded in the rubber of the strip, and a layer of rubber between said fillets and substantially equal in thickness to the thickness of said first mentioned strip of fabric, said fillets being frictioned.

5. An inner tube for pneumatic tires, comprising a thickened tread, a strip of fabric holding said tread in compression, and a fillet on each side of said strip and overlying its edge and embedded in the rubber of the strip, said fillets being made of fabric which is elastic transversely.

[Claims 6 and 7 not printed in the Gazette.]

1,155,776. TELEGRAPHONE. HOWARD L. WASHBURN, Springfield, Mass., assignor to American Telegraphone Company, Springfield, Mass., a Corporation of the District of Columbia. Filed Oct. 3, 1914. Serial No. 864,778. (Cl. 181—1.)



1. In a telegraphone, the combination with a pair of record carrying reels, a shaft depending from each reel, a rock shaft, connecting devices between the depending shafts and the rock-shaft, and means for rocking the same for elevating either one or the other of said reels for rendering that reel free to revolve, as described.

2. In a telegraphone, the combination with the record-receiving reels, a driving mechanism means for rendering either one of said reels operative for winding purposes or inoperative for unwinding purposes, said means comprising a rock shaft having two cam surfaces formed thereon, clutches, a clutch lever for each reel, each lever having a pivotal connection at one end and its other end located on one of said cam surfaces, said surfaces being arranged so that either one of said levers resting on the cam surfaces may be operated without operating the other lever, whereby said levers may be alternately raised as said shaft is rocked in opposite directions, means engaging the free ends of each of the levers and having a connection with the reels for operating the clutches as described, means for operating the rock shaft, and means for retaining the rock shaft in a rocked position to unclutch one of the reels from the driving mechanism and allow it to rotate freely.

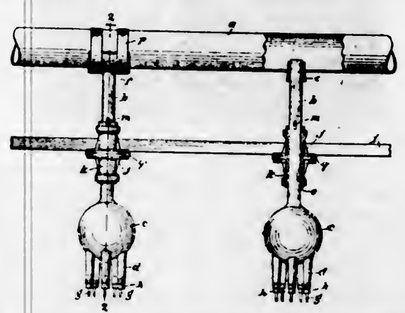
3. In a telegraphone construction, the combination, a rock-shaft formed with channels therein each having surfaces inclined to each other, a lever located in each of said channels, and engaging one of said surfaces, a reel operatively connected to each of said levers for winding and unwinding purposes, two electro-magnets for operating the rock shaft in opposite directions, a pinion on said shaft, a gear engaging the pinion, a toggle link construction connected to the gear, an armature for each of the two electro-magnets and connected to the toggle link construction, whereby when one of said magnets is energized, the shaft will be rocked in one direction and, when the other of said magnets is energized, the shaft will be rocked in the opposite direction, and means for locking the shaft in its rocked position.

4. In a telegraphone construction, the combination, a rock shaft formed with channels therein each having a horizontal and an inclined surface, a lever located in each of said channels, a reel operatively connected to each of said levers for winding and unwinding purposes, two electro-magnets for operating the rock shaft in opposite directions, a pinion on said shaft, a gear engaging the pinion, a toggle link construction connected to the gear, an armature for each of the two electro-magnets and connected to the toggle link construction, whereby when one of said magnets is energized, the shaft will be rocked in one direction and when the other of said magnets is energized, the shaft will be rocked in the opposite direction, and means for locking the shaft in its rocked position, said means comprising a pin, a link having spaced notches therein arranged to move thereunder, means operable by the movement of said rock shaft to move said link, a device for normally forcing said link against said pin, whereby, when said link is moved, one of said notches will engage said pin to lock said link and said rock shaft in their rocked position, an electro-magnet, and an armature therefor arranged when attracted to retract said device, whereby said link may drop away from said pin and said rock shaft may be returned to its normal position.

5. In a telegraphone, the combination, a rock-shaft, means for moving the same in opposite directions, said means comprising toggle-links connected to the shaft, electro-magnets connected to the links for alternately moving the links, a pair of reels, and operative connections between the reels and said shaft for moving the reels to either a winding or take-up position, as described.

[Claims 6 to 9 not printed in the Gazette.]

1,155,777. MECHANISM FOR PRODUCING ARTIFICIAL SILK. HARRY C. WHITNER, New York, N. Y. Filed Mar. 1, 1910. Serial No. 546,587. (Cl. 18—8.)



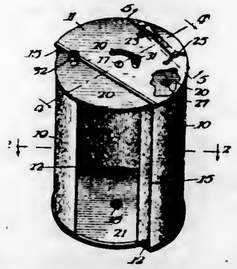
1. In a device for making artificial silk, the combination of a source of supply, a rotating part terminating in a multiplicity of apertures, a corresponding number of fine orificed tubes located adjacent to said apertures and joined thereto by a flexible connection.

2. In a device for making artificial silk, the combination of a vitreous bulb provided with an integral stem, and with a plurality of integral depending nipples, a tube detachably connected with each of said nipples, said tubes having minute discharge orifices, a source of supply, the upper end of said stem extending into said source of supply and being connected therewith by a flexible connection, a driving sleeve surrounding a part of and having a detachable driving connection with said stem and a bracket rotatably supporting said driving sleeve.

1,155,778. SAFETY DELIVERY-RECEPTACLE. EUGENE P. WOLF, Chicago, Ill. Filed Nov. 14, 1914. Serial No. 872,067. (Cl. 232—41.)

1. In a safety delivery receptacle of the character described, the combination of a substantially semicircular casing adapted to be set in a door with its open side on the outer side of the latter and formed with an inner side opening, a circular holder mounted in said casing on a vertical pivot and formed with a single receiving chamber and a single side opening adapted to register alternately with the openings of said casing, said holder being movable about its pivot in both directions, and means for automatically locking said holder with its opening in register with the inner side opening of said casing.

2. In a safety delivery receptacle of the character described, the combination of a substantially semicircular casing adapted to be set in a door with its open side on the outer side of the latter and formed with an inner side opening, a circular holder mounted in said casing on a vertical pivot and formed with a single receiving chamber and a single side opening adapted to register alternately with the openings of said casing, said holder being movable about its pivot in both directions, means for automatically locking said holder with its opening in register with the inner side opening of said casing, and means for limiting the turning movement of said holder in both directions.



3. In a safety delivery receptacle of the character described, the combination of a substantially semicircular casing having top and bottom walls adapted to be set in a door with its open side on the outer side of the door and formed with an inner side opening, a circular holder within said casing having top and bottom walls connected to the top and bottom walls of said casing by independent vertically alined pivots and formed with a single unobstructed receiving chamber and a single side opening adapted to register alternately with the openings of said casing, said holder being movable about its pivot in both directions, and means for automatically locking said holder with its opening in register with the inner side opening of said casing.

4. In a safety delivery receptacle of the character described, the combination of a substantially semicircular casing having top and bottom walls adapted to be set in a door with its open side on the outer side of the door and formed with an inner side opening, a circular holder within said casing having top and bottom walls connected to the top and bottom walls of said casing by independent vertically alined pivots and formed with a single unobstructed receiving chamber and a single side opening adapted to register alternately with the openings of said casing, said holder being movable about its pivot in both directions, means for turning said holder, means for automatically locking said holder with its opening in register with the inner side opening of said casing, and means for limiting the extent of turning movement of said holder in both directions.

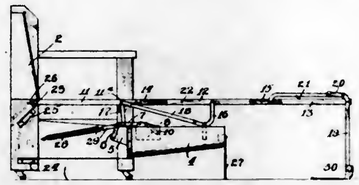
5. In a safety delivery receptacle of the character described, the combination of a casing adapted to be set in a door and having two side openings on the outer and inner sides of the door, respectively, and a top wall formed with a locking aperture, a holder centrally mounted on a vertical pivot within said casing and having a top wall formed with a locking aperture and a side opening adapted to register alternately with the openings of said casing, and a locking bar mounted on the top wall of said casing and projecting through the aperture of the latter onto the top wall of said holder, said locking bar automatically engaging the locking aperture of said holder when the latter is turned to bring its opening into register with the inner opening of said casing.

[Claims 6 and 7 not printed in the Gazette.]

1,155,779. FOLDING COUCH. FRITZ L. ANDREN, Chicago, Ill., assignor to S. Karpen & Bros., Chicago, Ill., a Corporation of West Virginia. Filed July 2, 1913. Serial No. 776,897. Renewed May 26, 1915. Serial No. 30,663. (Cl. 5—51.)

1. In a device of the class described a couch frame, a seat frame, bracket plates on each of said frames, a pair

of links pivotally connected together and connecting the lower end of one of said bracket plates with the upper end of the other of said bracket plates, another pair of links pivoted together connecting the upper end of one set of said bracket plates with the lower end of the other bracket plates, a pivot connecting said pairs of links together, a link pivoted on the couch frame, a spring connected to said link and to the couch frame, a sectional mattress frame adapted to be extending when said seat frame is rotated and inverted relative to said couch frame, and, when returned to folded position with said seat in normal position, supported on said links against the tension of said spring.



2. In a device of the class described a couch frame, a seat frame, a plurality of pairs of links connecting said frames at each side thereof, a common pivot connecting said pairs of links one to another, a foldable mattress frame connected to said couch and seat frames adapted to be extended when said seat frame is rotated and inverted relative said couch frame, and a plurality of separate tracking members for the rear portion of said mattress frame.

3. In a device of the class described a couch frame, a seat frame, pivotal connections therebetween permitting rotational movement of said seat frame relative said couch frame, a sectional mattress frame connected on said couch and seat frames, a plurality of bracket plates secured on said couch frame, an angled supporting member connected to one of said bracket plates and to one of said mattress frame sections, and a plurality of links connected between said couch frame and said seat frame to properly govern the movement of said seat frame in its rotational movement about said couch frame, one of said links connected to the mattress frame at the same point as said angled supporting member.

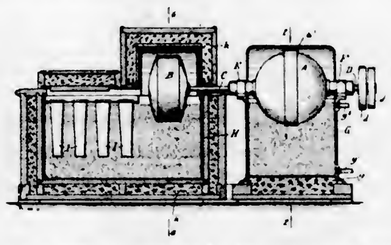
4. In a device of the class described a couch frame, a seat frame, a plurality of pairs of links on each side thereof connecting said frames together, a common pivot connecting each of said pairs of links together, a foldable sectional mattress frame connected to said seat frame and to said couch frame, actuating links and angled pivot members connected to said seat frame and to said mattress frame to properly position the same when extended and support the same upon said seat frame, and a positively actuated leg connected on the outer end of said mattress frame to support the same upon the floor.

5. In a device of the class described a couch frame, a seat frame, a foldable mattress frame associated therewith, a positively actuated leg connected on the end of said mattress frame, a pin in one of said mattress frame sections, a notched extended portion integral with said positively actuated legs adapted to engage said pin to lock the outer mattress frame sections together in folded position, a button on said seat frame, and a flexible strap connected to said positively actuated legs adapted to engage said button to retain said mechanism in folded relation upon said seat frame.

[Claims 6 to 9 not printed in the Gazette.]

1,155,780. REFRIGERATING APPARATUS. MARCEL AUDIFFREN, Golbey, near Epinal, and HENRI ALBERT SINGRÜN, Epinal, France, assignors to Audiffren Refrigerating Machine Company, a Corporation of New Jersey. Filed May 27, 1912. Serial No. 699,866. (Cl. 62—115.)

1. In inclosed refrigerating apparatus having a liquefying compartment and a vaporizing compartment and containing a refrigerant in liquid and vapor states and a lubricant, the combination of a refrigerant reservoir within said liquefying compartment having an outlet leading to said vaporizing compartment, a valve arranged in said outlet, a float designed to be positioned by the surface of juncture of liquid and vapor refrigerant in said reservoir and connected with said valve to operate the same to discharge through said outlet only the liquid content of said reservoir, and a separator adapted for the mechanical separation of the lubricant and liquid refrigerant and the discharge of the liquid refrigerant alone into said reservoid, with a second separator within the said vaporizing compartment adapted to receive mechanically mixed liquid refrigerant and lubricating appearing within the vaporizing compartment upon the vaporization of the refrigerant, and means for conveying the mixed liquid refrigerant and lubricant within the vaporizing compartment into said second separator; a conduit for conveying the separated lubricant from said second separator to said liquefying compartment, and a conduit for conveying the separated refrigerant from said second separator to the wall of said vaporizing compartment; substantially as and for the purpose set forth.



2. In inclosed refrigerating apparatus having a liquefying compartment and a vaporizing compartment adapted to contain a refrigerant in vapor and liquid states and a lubricant, the combination within the liquefying compartment of a refrigerant reservoir having an outlet leading to said vaporizing compartment, a valve arranged in said outlet, a float designed to be positioned by the surface of juncture of liquid and vapor refrigerant in said reservoir and connected with said valve to operate the same to discharge through said outlet only the liquid content of said reservoir and a separator adapted for the mechanical separation of the lubricant and liquid refrigerant and the discharge of the liquid refrigerant alone into said reservoir; substantially as and for the purpose set forth.

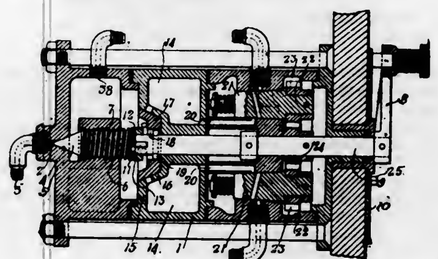
3. In inclosed refrigerating apparatus having a liquefying compartment and a vaporizing compartment containing a refrigerant in liquid and vapor states and a lubricant, the combination within the vaporizing compartment of a separator adapted to receive mechanically mixed liquid refrigerant and lubricant, and means for conveying the mixed liquid refrigerant and lubricant collected within said vaporizing compartment into said separator; a conduit for conveying the separated lubricant from said separator to said liquefying compartment, and a conduit for conveying the separated refrigerant from said separator to the wall of said vaporizing compartment; substantially as and for the purpose set forth.

4. In a rotary refrigerating apparatus of the character described having liquefying and vaporizing compartments, the liquid contents of which assume the form of annuli, a non-rotating member within the vaporizing compartment, comprising a collector projecting within the surface of the annulus of liquid, a separator arranged to receive liquid from said collector, a conduit leading from the upper part of said separator to said liquefying compartment for conveying separated lubricant from the separator to the liquefying compartment, a second conduit leading from the lower part of the separator and discharging toward the wall of the vaporizing compartment for conveying separated liquid refrigerant from the separator and discharging it upon the side wall of the vaporizing compartment, and a third conduit arranged to receive liquid from said collector and discharging it against the side wall of the vaporizing compartment; substantially and for the purpose set forth.

5. In inclosed refrigerating apparatus having a liquefying compartment and a vaporizing compartment containing a refrigerant in liquid and vapor states and a lubricant, a separator in the liquefying compartment for separating the lubricant from the liquid refrigerant, a reservoir for the separated liquid refrigerant also in said compartment, means for transferring the separated liquid refrigerant from the separator to the reservoir, a conduit for transferring the liquid refrigerant from said reservoir to the vaporizing compartment, and means for returning the vaporized refrigerant from the vaporizing compartment to the liquefying compartment, and for liquefying it therein; substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,155,781. STARTER FOR EXPLOSIVE-ENGINES. JOHN B. AUFULDISH, Dayton, Ohio. Filed May 20, 1912. Serial No. 698,390. (Cl. 123—187.5.)



1. A device of the character described comprising a casing having a chamber provided with an inlet port communicating with a source of gas supply, said port having a valve seat at its inner end, a screw-operated valve mounted for movement toward and away from said valve seat, a distributer communicating with said chamber, and means for operating said distributer and said valve in unison.

2. A device of the character described comprising a casing having a chamber provided with an inlet port communicating with a source of gas supply, said port having a valve seat at its inner end, a screw-operated valve mounted for movement toward and away from said valve seat, a distributer communicating with said chamber, and means for operating said distributer and said valve in unison said means being so arranged that the movement of both the distributer and the valve in one direction will be limited by the seating of said valve.

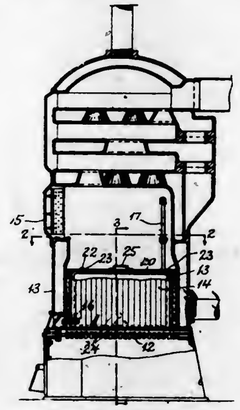
3. A device of the character described comprising a casing having a chamber provided with an inlet port communicating with a source of gas supply, a screw-actuated valve to control the flow of fluid through said inlet port, said chamber also having an outlet, means for controlling the escape of gas through said outlet, and a single actuating device for imparting movement to said valve and to said controlling means.

4. A device of the character described comprising a casing having a chamber provided with an inlet port communicating with a source of gas supply, a valve to control the flow of fluid through said inlet port, a screw-threaded actuating device for said valve arranged within said chamber, said chamber also having an outlet, means for controlling the escape of gas through said outlet, and means for causing said valve and said controlling means to move in unison.

5. A device of the character described comprising a casing having a chamber provided with an inlet port communicating with a source of gas supply, a valve to control the flow of fluid through said inlet port, a screw-threaded actuating device for said valve arranged within said chamber, said chamber also having an outlet, means to control said outlet, and means for causing said valve and said controlling means to be actuated in timed relation one to the other.

[Claims 6 to 14 not printed in the Gazette.]

1,155,782. HEATING APPARATUS. HENRY K. AUSTIN, Reading, Mass. Filed Nov. 27, 1914. Serial No. 874,169. (Cl. 122—370.)



1. A furnace having a grate below and a firing door above the fuel containing space, a hollow vertical partition constituting a water leg extending across said space from front to rear above the grate and below the door in a plane midway between the ends of the door, said partition subdividing the fuel space into two fuel boxes uniformly related to the grate and to the door, and each adapted to be charged independently through the latter, and flow and return conduit members connected respectively with the upper and lower portions of the partition, the said conduit members and partition constituting parts of a water circulating system.

2. A furnace having a grate below and a firing door above the fuel containing space, a hollow vertical partition constituting a water leg extending across said space from front to rear above the grate and below the door in a plane midway between the ends of the door, said partition subdividing the fuel space into two fuel boxes uniformly related to the grate and to the door, and each adapted to be charged independently through the latter, and flow and return conduit members detachably connected respectively with the upper and lower portions of the partition and with the furnace, the partition being formed as an independent part and detachably supported by said conduit members.

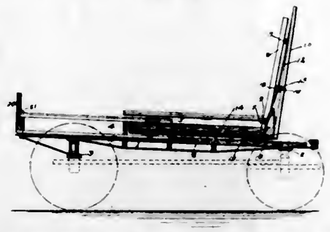
3. A furnace having a grate below and a firing door above the fuel containing space, a hollow vertical partition constituting a water leg extending across said space from front to rear above the grate and below the door in a plane midway between the ends of the door, said partition subdividing the fuel space into two fuel boxes uniformly related to the grate and to the door, and each adapted to be charged independently through the latter, flow and return conduit members connected respectively with the upper and lower portions of the partition, and a movable shield adapted to cover either of said fuel boxes and expose the other, the partition being provided with stops to prevent inward edgewise displacement of the shield.

1,155,783. HAY-RACK. JAMES G. BAILEY, Delavan, Ill. Filed Dec. 17, 1910. Serial No. 597,791. (Cl. 21—74.)

1. A hay rack including in combination, a fixed section and a section movable thereon, said second section being adapted to be moved from one end of the fixed section to

the other by gravity, and means for positively moving said movable section on said fixed section, said means including a toothed bar on one of said sections, a lever on the other of said sections having a ratchet member adapted to engage said toothed bar so as to move said section.

2. A hay rack including in combination, a fixed section and a section movable thereon, said second section being adapted to be moved from one end of the fixed section to the other by gravity, and means for positively moving said movable section on said fixed section, said means including a toothed bar on one of said sections, a lever on the other of said sections having a ratchet member adapted to engage said toothed bar so as to move said section, and means adapted to engage the sides of the toothed bar to operate as a brake or to be moved in front of either end of said bar to serve as a lock.



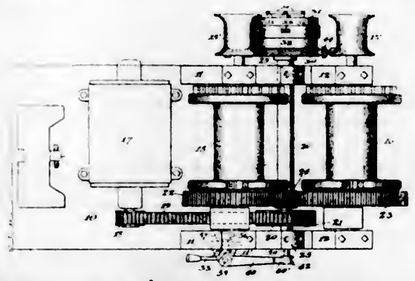
3. In a hay-rack, the combination with a fixed and a movable-section under normal conditions adapted to be moved from one end of the rack to the other by gravity, of a toothed-bar disposed longitudinally on the rack, a lever carried on the movable-section, an open pawl attached to the lever and adapted to have a ratchet engagement with the teeth on the bar, a locking-member pivotally attached to the movable-section and adapted to engage the teeth on the bar for locking the movable-section in adjusted position, and a second lever carried on the movable-section, said second lever operating through the open pawl on the first lever and arranged to engage the side of the bar or be moved in front of either end of said bar, for purposes described.

4. In a hay-rack, the combination with a fixed and movable section, said movable section under normal conditions adapted to be moved from one end of the rack to the other by gravity, of a toothed bar disposed longitudinally on the rack, a frame pivoted to said movable section and comprising uprights connected by cross-braces, arms extending from one of said cross-braces, a lever pivoted between said arms, an open pawl attached to said lever and adapted to have a ratchet engagement with the teeth on said bar, a locking member pivotally attached to said movable section and adapted to engage the teeth on the bar for locking the movable section in adjusted position, a second lever carried by said frame, a guide therefor on one of said cross-braces, said second lever extending through the open pawl and arranged to engage the side of said bar or to be moved in front of either end of said bar for the purposes described.

5. In a hay-rack, the combination with a fixed and movable section, said movable section under normal conditions adapted to be moved from one end of the rack to the other by gravity, a tooth-bar disposed longitudinally on the fixed section, a frame pivoted to the movable section and comprising uprights connected by cross-braces, a lever pivoted between said uprights and a pawl attached to said lever and adapted to have a ratchet engagement with the teeth of said bar, whereby said movable section may be positively moved from one end of the rack to the other.

1,155,784. HOISTING-MACHINE. WENDELL A. BARKER, Chicago, Ill., assignor to Thomas Elevator Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 8, 1913. Serial No. 794,089. (Cl. 254—185.)

1. In a hoisting machine, the combination with a motor, and a winding drum, of an outer tubular shaft journaled alongside and parallel with the axis of said drum and at one end geared to the latter, an inner tubular shaft extending through said outer tubular shaft and geared to said motor at its corresponding end, a planetary gear driving connection between said shafts at the other end of the latter, a clutch driving connection between said shafts operating through the parts of said planetary gear, an endwise movable clutch-actuating rod extending through said inner tubular shaft, and means for actuating said rod.



2. In a hoisting machine, the combination with a motor, and a winding drum, of a tubular shaft geared to said drum, a drive shaft extending through said tubular shaft and geared to said motor, a brake ring, a planetary gear driving connection between said shafts including an internal gear fast with said brake ring, a brake automatically engaging said brake ring when the latter is turned in one direction and automatically disengaging said brake ring when the latter is turned in the opposite direction, and a mechanical clutch directly connecting said power shaft with said internal gear.

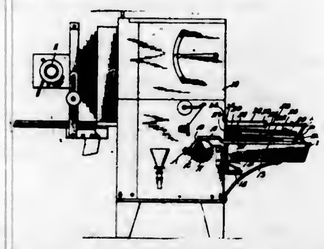
3. In a hoisting machine, the combination with a motor, and a winding drum, of a tubular shaft geared to said drum, a power shaft extending through said tubular shaft and geared to said motor, a brake ring, a clutch ring, a planetary gear driving connection between said shafts including an internal gear fast with said brake and clutch rings, a brake automatically engaging said brake ring when the latter is turned in one direction and automatically disengaging said brake ring when the latter is turned in the opposite direction, a clutch shoe operative to directly connect said power shaft with said clutch ring, and manually operable mechanical means for throwing said clutch shoe into and out of engagement with said clutch ring.

4. In a hoisting machine, the combination with a motor, and a pair of winding drums disposed side by side with their axes parallel, of an outer tubular shaft journaled between and parallel with said drums and at one end geared to both of said drums, an inner tubular shaft extending through said outer tubular shaft and geared to said motor at its corresponding end, a planetary gear driving connection between said shafts at the other end of the latter, an automatic brake for rendering said planetary gear driving connection operative to transmit a low speed movement, a clutch driving connection between said shafts operating through the parts of said planetary gear to transmit a high speed movement, and means extending through said inner tubular shaft for operating said clutch driving connection.

1,155,785. PHOTOGRAPHING APPARATUS. GEORGE C. BEIDLER, Rochester, N. Y. Filed Nov. 2, 1911. Serial No. 658,178. (Cl. 95—89.)

1. In a photographing apparatus, a receptacle adapted to receive film after its exposure to light, the said receptacle being adapted to contain a fluid, a frame for immersing film in the fluid, and mechanically operated means for controlling the movement of the frame.

2. In a photographing apparatus, a receptacle adapted to receive film after its exposure to light, the said receptacle being adapted to contain a fluid, means for immersing film in the fluid, and mechanically operated means for limiting the movement of the said means for immersing the film.



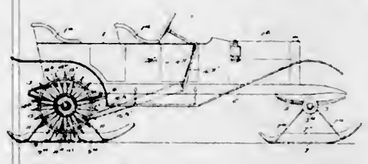
3. In a photographing apparatus, a receptacle adapted to receive film after it is exposed to light, the said receptacle being adapted to contain a fluid, a frame for immersing the film in the fluid, and a member connected to the frame, associated with means for causing an up and down movement of the frame.

4. In a photographing apparatus, a liquid container to which film is delivered, an immersing frame, means for supporting the frame, means for operating the supporting means to move the frame with relation to the container, and means for limiting the movement of the frame in one direction.

5. In a photographing apparatus, a liquid container to which film is delivered, an immersing frame, means for supporting the frame, means for operating the frame supporting means to raise the frame, said frame supporting means being released to permit the frame to descend by gravity, and means for controlling the descent of the frame.

[Claims 6 to 15 not printed in the Gazette.]

1,155,786. AUTOSLED. KÓLMÁN BELKÓ, Palouse, Wash. Filed Dec. 6, 1913. Serial No. 805,046. (Cl. 21—47.)



1. In a driving wheel for an auto sled, the combination of a hub having an annular member, a series of hollow spokes detachably connected to said annular member, a slide member slidably mounted in each spoke and normally projecting beyond the free end thereof, and a compression spring arranged within each of said spokes for maintaining the adjacent slide member in projected position, the said spring permitting the slide member to retract when engaging an abstruction.

2. In a driving wheel for an auto sled, the combination of a hub having an annular member, a series of hollow spokes detachably connected to said member and each having a contracted axial opening at its free end to form a shoulder, a slide member slidably mounted in the contracted opening of each spoke and normally projecting in axial line with and beyond the free end of the spoke, the said slide member having a head arranged to engage the shoulder to limit its outward movement, and a compression spring arranged within each of said spokes for maintaining the adjacent slide member in projected position, the said spring permitting the slide member to retract when engaging an obstruction.

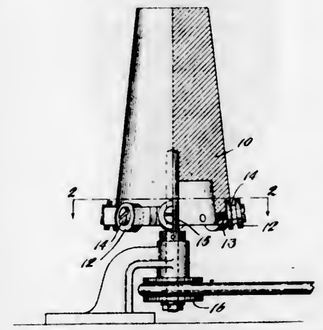
3. In a driving wheel for an auto sled, the combination of a hub having an annular member, a series of hollow spokes detachably connected to said member and each having a contracted axial opening at its free end to form a shoulder, a slide member slidably mounted in the contracted opening formed in each spoke and normally projecting in axial line with and beyond the free end of the spoke, the said slide member having a head arranged to engage the shoulder to limit its outward movement, and a compression spring arranged within each of said spokes and engaging the annular member and the head of the slide member at its opposite ends, whereby said slide member is yieldingly maintained in projected position.

4. In a driving wheel for an auto sled, the combination of a hub having an annular member, a series of hollow spokes connected to said member, a slide member slidably mounted in each spoke and normally projecting beyond the free end thereof, a compression spring mounted in each of said spokes and arranged to engage the adjacent slide member for maintaining it in projected position, and a rod centrally disposed in and extending longitudinally of each spoke for guiding the spring during compression.

5. In a driving wheel for an auto sled, the combination of a hub having an annular member, a series of hollow spokes connected to said member, a slide member slidably mounted in each spoke and normally projecting beyond the free end thereof, a compression spring mounted in each of said spokes and arranged to engage the adjacent slide member for maintaining it in projected position, and a rod centrally disposed in and extending longitudinally of each spoke for guiding the adjacent spring during compression, the free end of the rod serving as a stop to limit the retraction of the adjacent slide member.

[Claims 6 to 12 not printed in the Gazette.]

1,155,787. APPARATUS FOR MAKING PAPER CUPS WITH ROLLED EDGES. GEORGE J. BOHLMAN, Medford, Mass., assignor to American Water Supply Company of New England, Boston, Mass., a Corporation of Maine. Filed Nov. 2, 1914. Serial No. 869,764. (Cl. 93—55.)



1. An apparatus for rolling the edges of paper cup-bodies, consisting of a form arranged to receive upon it and guide the cup-body, enabling said body to be grasped and held against rotation, and a plurality of grooved rollers arranged radially on said form at the base thereof, the grooves of which are arranged to receive the end-portion of the cup-body, and to deflect the same, and means to rotate said form and thereby revolve said rollers about the axis of the form, said rollers being free to rotate about their own axes, substantially as described.

2. An apparatus for rolling the edges of paper cup-bodies, consisting of a form arranged to receive upon it the cup body and having an outwardly extended flange at its lower end with spaced apart recesses, and freely rotatable grooved rollers arranged in said recesses, the

grooves of which are arranged to receive the end-portion of the cup-body and to deflect the same, and means to rotate said form, substantially as described.

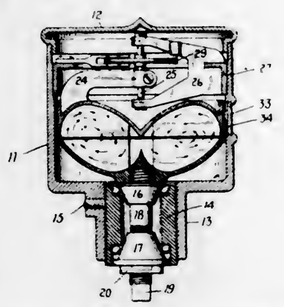
3. An apparatus for rolling the edges of paper cup-bodies, consisting of a form arranged to support and guide the cup-body, and a plurality of grooved rollers arranged radially on said form at the base thereof, the grooves of which are arranged to receive the end-portion of the cup-body and to deflect the same, some of said rollers being arranged at a lower elevation than the others, and means to rotate said form, and thereby revolve said rollers about the axis of the form, said rollers being freely rotatable about their own axis, substantially as described.

4. An apparatus for rolling the edges of paper cup-bodies, consisting of a form and a grooved-element associated with it, the groove of which is adapted to receive the end-portion of the cup-body, and means to rapidly revolve said grooved-element, to deflect the end-portion of said body while said body is held firmly in engagement with it and against rotation and is being pressed downward, one wall of said groove being arranged in continuation of the wall of the form, substantially as described.

5. An apparatus for rolling the edges of paper cup-bodies, consisting of a form and a grooved-element associated with it, the groove of which is adapted to receive the end-portion of the cup-body, and means to rapidly revolve said grooved-element to deflect the end-portion of said body while said body is held firmly in engagement with it and is being pressed downward, the inner wall of said groove being arranged in continuation of the wall of the form, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,155,788. INDICATING DEVICE. JOSEPH R. BLAINE, Taunton, Mass. Filed Jan. 22, 1914. Serial No. 813,624. (Cl. 264—13.)



1. In a measuring device, indicating means, a spring for controlling the movement of said indicating means, stops on said spring and a rigid arm positioned to arrest the movement of said stops when the tension of said spring is increased, thereby regulating the movement of said indicating means.

2. In a measuring device, indicating means, a spiral spring for controlling the movement of said indicating means, one end of said spring being free to move with said indicating means and the other end being fixed, stops adjustably mounted on said spring and a rigid arm positioned to arrest the forward movement of said stops, thereby increasing the tension on the spring by shortening its effective length.

3. The combination of a spiral spring fixed at its outer end and free to turn at its inner end, a series of adjustable stops mounted thereon and a rigid stationary arm for limiting the forward movement of said stops whereby parts of the spring may be in effect cut out of action, substantially as described.

4. In a measuring device, indicating means comprising a cylinder with scale markings thereon, a pivotal support about which said cylinder may turn, a spring for controlling the movement of said cylinder, stops on said spring and a rigid arm positioned to arrest the movement of said stops and thereby in effect cut out parts of said spring as the indicating means turns on its pivotal support.

5. In a measuring device, an indicating means in the form of a cylinder bearing a scale marking, a spiral spring fixed at its outer end and having its inner end connected with said cylinder, a pivotal mounting whereon said spring and cylinder may turn, stops on said spring and an arm positioned to arrest said stops in succession as said cylinder and spring turn on their pivotal mounting.

[Claims 6 and 7 not printed in the Gazette.]

1,155,789. LIGHTING-FIXTURE. FRANK M. BROOKS, New York, N. Y. Filed Nov. 30, 1914. Serial No. 874,656. (Cl. 240—78.)



1. In a lighting fixture, a plurality of supports, a globe engaging member fixed at the extremity of each support and a resilient member extending between the said supports and connected to each globe engaging member and adapted to lie within a globe in a position spaced apart from the same and also from the said globe engaging members.

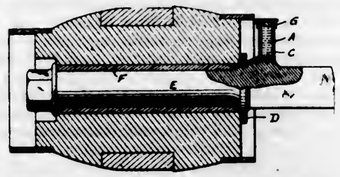
2. In a lighting fixture, a base, a plurality of members depending therefrom, a globe engaging member secured at the extremity of each of the said depending members, and a resilient member extending between and connecting each of the said depending members in a position spaced apart from the said globe engaging members.

3. In a lighting fixture, a base, a plurality of depending support arms connected thereto, lugs extending in diametrically opposite positions from the extremities of the said depending support arms, a globe engaging device connected to the corresponding lugs of each of the said depending support arms, and a resilient ring connected to the other and corresponding lugs on each of said depending support arms in a position spaced apart from the said globe engaging devices.

4. In a lighting fixture, a base, a plurality of depending support arms connected thereto, end members fixed at the extremities of each of the depending support arms, a lug extending outwardly from each of the said end members, a lug extending inwardly from each of the said end members, a globe engaging device for each of the said end members, means for securing the same thereto, and a resilient device extending between and connected to the said inwardly extending lugs in a position spaced from the said globe engaging members.

5. In a lighting fixture, a base, a plurality of depending support arms secured thereto, an end member fixed at the extremity of each of the said support arms, a lug extending outwardly from each end member, a lug extending inwardly from each end member, a globe engaging member secured to the outwardly extending lug to each of the said end members, and a resilient ring secured to each of the said inwardly extending lugs of the said end members so as to assume a position normally spaced from the rim of a globe when in contact with the said globe engaging members.

1,155,790. AXLE-LUBRICATOR. PETER BURRILL, Balmain, near Sydney, New South Wales, Australia. Filed May 28, 1913. Serial No. 770,345. (Cl. 64—27.)



1. In a device of the character described, in combination, a vehicle axle provided with an axle abutting ring, a lubricant reservoir on the axle and projecting at substantially right angles therefrom, a downwardly inclined conduit communicating with the bottom of said reservoir and with the surface of the axle spindle and extending through said ring, and a pin loosely extending through said reservoir and said conduit and having its lower end extending beyond the other end of said conduit, whereby the pin is vibrated by the rotation of the wheel of the vehicle for feeding the lubricant to the spindle.

2. In a device of the character described, in combination, a vehicle axle, a lubricant reservoir on the axle and projecting at substantially right angles therefrom, a downwardly inclined conduit communicating with the bottom of said reservoir and with the surface of the axle spindle, a pin having one arm loosely positioned in said conduit and the other arm of said pin loosely positioned in said reservoir, the lower end extending beyond the outer end of said conduit, whereby the pin is vibrated by the rotation of the wheel of the vehicle for feeding the lubricant to the spindle.

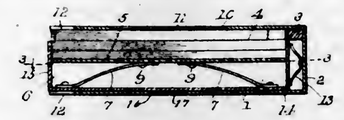
3. In a device of the character described, in combination a vehicle axle provided with an axle abutting ring, a lubricant reservoir on the axle and projecting at substantially right angles therefrom, a downwardly inclined conduit in said axle extending substantially parallel with the spindle of the axle and communicating with the bottom of the reservoir and with the surface of said spindle, and a pin having one arm loosely positioned within said conduit and the other arm loosely positioned in said reservoir, the lower end of said pin extending beyond the outer end of said conduit and parallel with the surface of the spindle, whereby the pin is vibrated by the rotation of the wheel of the vehicle for feeding the lubricant to the spindle.

4. In a lubricator of the class described, for a stationary spindle having an element rotatably retained thereon, comprising a lubricant reservoir on the spindle and having a projecting stem tapered toward its free end and provided with an inclined feed passage therethrough communicating with the reservoir and the surface of the axle between the latter and the rotating element and a pin fitted in said passage loosely and adapted to be vibrated by the rotation of the element for feeding the lubricant to the spindle.

5. In a lubricator of the class described, the combination with a vehicle axle; of a lubricant reservoir on the axle and projecting upwardly therefrom, a stem projecting from the reservoir and provided with a feed passage leading to the surface of the axle, said axle being provided to limit the displacement of a wheel inwardly thereon, a pin loosely mounted in the passage and gravitating toward the axle to contact with the latter and adapted to be vibrated by the rotation of the wheel for feeding the lubricant and a cap for said reservoir.

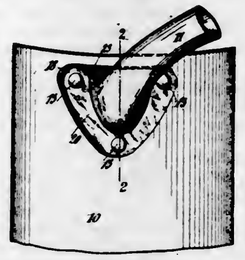
1,155,791. SPECIAL RECEPTACLE. JOHN L. CABELL, Savannah, Ga. Filed July 25, 1914. Serial No. 853,158. (Cl. 206—40.)

A receptacle of the character set forth, comprising a card box having an open upper side, a spring pressed follower mounted in the box and acting to expel the cards upwardly therefrom, a casing for the box, said casing having an open end and a recess in its top wall at said end, the casing being deeper than the box so as to permit a card being pressed against said top wall at a point above the box, a shoulder located at the rear end of the casing above the box and engaging the inner end of said card,



and the casing being longer than the holder so that an inward movement of the latter will dispose its front wall inwardly beyond the open end of the casing and the front end of said ticket, and a spring maintaining the holder in normal position.

1,155,792. HANDLE FOR CULINARY VESSELS. LOUIS D. CAHN, New York, N. Y. Filed Mar. 27, 1914. Serial No. 827,650. (Cl. 16—169.)



1. An improved handle for culinary vessels having a V-shaped flange, an insulating layer therebetween and the vessel, and a strengthening V-shaped member circumferentially of the flange of the handle, and rivets passing through and connecting said vessel, insulating layer, and flange, the outer heads of said rivets being exterior to said strengthening member with respect to said vessel, said rivets passing through the vertex and at the ends of the legs of said flange and said member.

2. An improved handle for culinary vessels of aluminum, having a flange curved out therefrom of V-shape, said handle and flange being made of steel, an insulating layer between the flange and vessel, and a V-shaped strengthening member along the legs of the V-shaped flange of the handle, and rivets passing through the V-shaped strengthening member, the V-shaped flange of the handle, the insulating layer and the wall of the vessel, the outer heads of said rivets being exterior to said strengthening member with respect to said vessel.

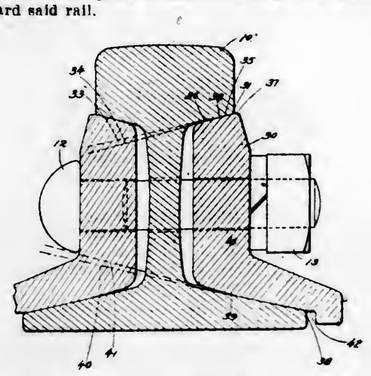
1,155,793. ANGLE-BAR. EDWARD C. CARTER, Evanston, Ill. Filed Feb. 26, 1915. Serial No. 10,861. (Cl. 239—9.)

1. In a device of the class described, a railway rail, an element adapted to be secured to said rail, and means for adjusting said element relatively to said rail, said rail and said element having wedging surfaces which contact over a portion of their areas and thence diverge in the general direction of movement of said element as it is adjusted relatively to said rail.

2. In a device of the class described, a railway rail, a supporting element adapted to wedge between the head and the base of said rail, and means to adjust said element relatively to said rail, said rail and said element having wedging surfaces which contact over portions of their areas and thence diverge toward the web of said rail.

3. In a device of the class described, a railway rail, a supporting element adapted to be secured to said rail, and means for adjusting said element relatively to said rail, said element having a wedging surface which contacts with said rail over a portion of its area and thence di-

verges from the plane of said contacting surface inwardly toward said rail.

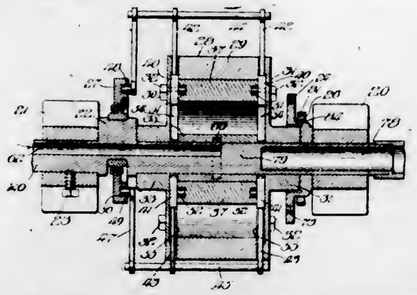


4. In a device of the class described, a railway rail, a supporting element adapted to be secured to said rail, and means for adjusting said element relatively to said rail, said element having a wedging surface which contacts with said rail over a portion of its area and thence diverges from the plane of said contacting surface toward said rail from one side of said contacting surface and away from said rail from the other side of said contacting surface.

5. In a device of the class described, a railway rail, an angle bar adapted to wedge between the head and base of said rail to support the same at a joint, and means for adjusting said angle bar relatively to said rail, said angle bar having upper and lower wedging surfaces adapted to engage the lower surface of the rail head and the upper surface of the rail base respectively, said wedging surfaces being arranged to contact with said rail over portions of their areas and to diverge from the planes of said contacting surfaces inwardly toward said rail.

[Claims 6 to 13 not printed in the Gazette.]

1,155,794. ROTARY GAS-ENGINE. CHARLES J. CLARK, Chicago, Ill., assignor of one-half to James B. Dibelka, Chicago, Ill. Filed Apr. 17, 1914. Serial No. 832,513. (Cl. 123—8.)



1. A rotary internal combustion engine comprising an outer rotatable cylinder, a support for said cylinder, an inner rotatable cylinder eccentrically positioned within said outer cylinder, a cam on said support concentric with said inner cylinder, mounting members for said inner cylinder having sliding engagement with the ends of both of said cylinders, and guiding members secured to said mounting members and having operative engagement with said cam.

2. A rotary internal combustion engine comprising an outer rotatable cylinder, a support for said cylinder, an inner rotatable cylinder eccentrically positioned within said outer cylinder, a cam on said support having a circular cam track concentric with said inner cylinder, a circular cam track on the ends of said inner cylinder of the same diameter as and concentric with the cam track on said support, mounting members for said inner cylinder bearing in its cam track and having radially sliding engagement with the ends of said outer cylinder, and guiding members secured to said mounting members and having operative engagement with the cam track on said support.

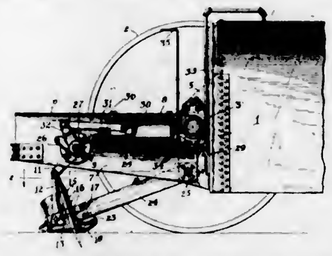
3. A rotary internal combustion engine comprising an outer rotatable cylinder, a concentric cylindrical hub, a support on which said hub is rotatably mounted, an inner eccentric cylinder surrounding said hub and bearing at diametrically opposite points against the inside of said outer cylinder and the outside of said hub, respectively, a vane between said hub and outer cylinder and extending through a slot in said inner cylinder, a cam on said support having a circular cam track concentric with said inner cylinder, a circular cam track on said inner cylinder of the same diameter as and concentric with the cam track on said support, mounting members for said inner cylinder bearing in its cam track and having radially sliding engagement with the ends of said outer cylinder, guiding members secured to said mounting members and having operative engagement with the cam track on said support, passages for supplying fuel charges to the rear of said vane and means for firing said charges.

4. A rotary internal combustion engine comprising an outer rotatable cylinder, a support for said cylinder, an inner rotatable cylinder eccentrically positioned within said outer cylinder, mounting members and rods extending radially outward from said inner cylinder through openings in said outer cylinder and means for guiding said members and rods during the rotation of the parts.

5. A rotary internal combustion engine comprising an outer rotatable cylinder, a support for said cylinder, an inner rotatable cylinder eccentrically positioned within said outer cylinder, and mounting means for said inner cylinder including rods which project radially outward relative to said support.

[Claim 6 not printed in the Gazette.]

1,155,795. SCARIFIER. HARRY C. CLAY, Columbus, Ind., signor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed Sept. 3, 1914. Serial No. 859,967. (Cl. 37—50.)



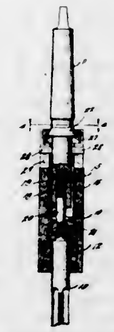
1. The combination with a road engine, of a scarifying attachment therefor comprising a toothed member suspended transversely beneath the rear of said engine, draw bars secured to said toothed member and pivotally connected to said engine, a spring for raising said toothed member and its suspending means, connections between said spring and said toothed member affording a decreasing leverage for the spring as the latter is stretched in lowering the toothed member onto the ground, and fluid pressure operated means for holding said toothed member on the ground in opposition to the action of said spring.

2. The combination with a road engine of a scarifying attachment therefor comprising a toothed member suspended transversely beneath the rear of said engine, draw bars secured to said toothed member and pivotally connected to said engine, a spring for raising said toothed member and its suspending means, connections between said spring and said toothed member affording a decreasing leverage for the spring that is substantially proportional to its increasing tension as it is stretched in lowering the toothed member onto the ground, said spring having an initial tension but slightly in excess of that required to hold said toothed member and its suspending means in raised position, and fluid pressure operated means for holding said toothed member on the ground in opposition to the action of said spring.

3. The combination with a road engine, of a scarifying attachment therefor comprising a toothed bar located transversely beneath the rear of said engine, draw bars secured to said toothed bar and pivotally connected to said engine, a rock-shaft journaled above and parallel with said toothed bar, rearwardly extending arms on said rock-shaft, links connecting said arms with said toothed bar, another arm on said rock-shaft, and a spring between the free end of said last named arm and a stationary part of the engine, said last named arm being so positioned on said rock-shaft as to extend substantially at right angles to the axis of said spring when said toothed bar is fully raised and at an acute angle to the axis of said spring when said toothed bar is engaged with the ground, and fluid pressure operated means acting to turn said rock-shaft, in opposition to the effort of said spring, in a direction to lower said toothed bar and yieldably hold the same in engagement with the ground.

4. The combination with a road engine of a scarifying attachment therefor comprising a toothed bar located transversely beneath the rear of said engine, draw bars secured to said toothed bar and pivotally connected to said engine, a rock-shaft journaled above and parallel with said toothed bar, rearwardly extending arms on said rock-shaft, links connecting said arms with said toothed bar, a crank-arm on said rock-shaft, a single-acting power cylinder having a plunger connected to said crank-arm and acting to lower said toothed bar onto, and hold it engaged with, the ground, a tension spring anchored at one end to said engine, and connections between the other end of said spring and said rock-shaft such that said spring opposes, with a substantially constant turning movement, the turning movement of said rock-shaft in a direction to lower said toothed bar onto the ground.

1,155,796. SELF-ALINING TAP-HOLDER. EDGAR W. CLEVELAND, Richmond, Ind., assignor to National Automatic Tool Company, Richmond, Ind., a Corporation of Indiana. Filed Apr. 14, 1915. Serial No. 21,219. (Cl. 29—109.)



1. A self-alining holder comprising the combination of two members, one for receiving a tap and the other for mounting in a driving spindle, said two members having two pairs of interengaging surfaces, such two pairs of interengaging surfaces being tapering and being axially displaced from each other sufficiently so that there is no overlapping between them axially, and one of said members being provided with a spring-pressed member which carries one of these tapering surfaces, and a driving connection between such two members permitting relative lateral displacement between the two members.

2. A self-alining holder, comprising a tap-carrying member, a member for mounting in a driving spindle, one of said members having an axial hole and the other projecting into said axial hole, a spring-pressed plunger on the inwardly projecting end of the member which projects into the hole, said spring-pressed plunger engaging the bottom of such hole and such bottom and the end of such spring-pressed plunger being correspondingly tapered, so that by the action of the spring they tend to center themselves relatively, a pair of interengaging surfaces on the two members at an axially removed point from the first pair of self-centering surfaces, said second pair of interengaging surfaces also being tapered so that the action of such spring tends to center them relatively, and a driving connection between the two members permitting shifting of the interengaging surfaces.

3. A self-alining holder, comprising two members, one for receiving a tap and the other for mounting in a driving spindle, a spring-pressed plunger carried by one of such members, two pairs of interengaging surfaces axially removed from each other a distance greater than their diameters, one surface of one pair being on the spring-pressed plunger, one surface of the other pair being on the member which carries the spring-pressed plunger, and the other two surfaces of the two pairs being on the other member, and said surfaces being tapered so that the action of the spring-pressed plunger tends to center each pair of surfaces, and a driving connection between the two members permitting relative lateral displacement between the two members.

4. A self-alining holder comprising two members, one for mounting in a driving spindle and the other for receiving a tap, one of said members being provided with a spring-pressed plunger, said two members being provided with a pair of interengaging surfaces and the spring-pressed plunger and the other member from that which is provided with the spring-pressed plunger being provided with a second pair of interengaging surfaces, the two pairs of interengaging surfaces being axially removed so that they do not overlap axially and being tapered so that the action of the spring-pressed plunger tends to center each pair of interengaging surfaces relatively, and a driving connection between the two members permitting relative lateral displacement between the two members.

5. A self-alining holder comprising the combination of a member for receiving a tap, a member for mounting in a driving spindle, a plunger on one of said members, a spring tending to force said spindle in one direction relatively to the member upon which it is mounted, said two members being provided with one pair of interengaging surfaces and said plunger and the other member from that which carries the plunger being provided with another pair of interengaging surfaces, the two pairs of interengaging surfaces being axially removed so that they do not overlap axially, the two surfaces of each pair of interengaging surfaces being relatively self-centering under the action of said spring, and a driving connection between the two members permitting relative lateral displacement between the two members.

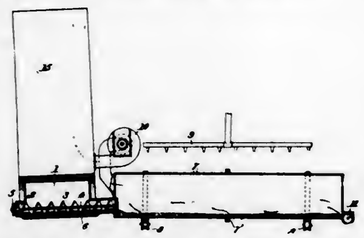
[Claims 6 and 7 not printed in the Gazette.]

1,155,797. PROCESS FOR HYDRATING COMMERCIAL CALCIUM CYANAMID. KENNETH F. COOPER, Buffalo, N. Y., assignor to American Cyanamid Company, Nashville, Tenn., a Corporation of Maine. Filed Dec. 1, 1914. Serial No. 875,040. (Cl. 23—13.)

1. The process of hydrating fertilizer material containing in varying proportions calcium cyanamid, calcium oxid, and calcium carbid, which consists in thoroughly stirring said material while adding water thereto in predetermined quantities sufficient to hydrate the oxid and decompose carbid present and while maintaining the temperature too low to permit any substantial liberation of ammonia, substantially as described.

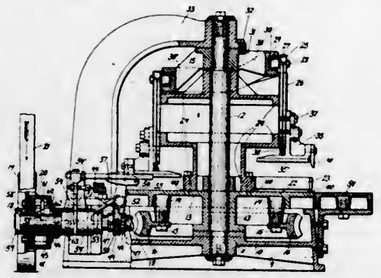
2. The process of hydrating fertilizer material containing in varying proportions calcium cyanamid, calcium oxid, and calcium carbid, which consists in thoroughly stirring said material while adding water thereto in predetermined

quantities sufficient to hydrate the oxid and decompose carbid present and while maintaining the temperature too low to permit and substantial liberation of ammonia; subjecting said stirred and water treated material to a further agitation while removing the liberated gases and vapors; and cooling said material substantially to the room temperature, substantially as described.



3. The process of hydrating and rendering less dustless fertilizer material containing in varying proportions calcium cyanamid, calcium oxid and calcium carbid, which consists in thoroughly stirring said material while adding water and oil thereto, said water being added in predetermined quantities sufficient to hydrate the oxid and decompose carbid present and while maintaining the temperature too low to permit any substantial liberation of ammonia; and said oil being added in quantities too small to interfere with said hydrating action, yet sufficient to serve as a binder between the particles, substantially as described.

1,155,798. COMPRESSOR. SIMON COOPER, New York, N. Y., assignor to Gorton-Pew Fisheries Company, Gloucester, Mass., a Corporation of Maine. Filed July 23, 1913. Serial No. 780,627. (Cl. 100—50.)



1. In apparatus of the class described, in combination, means carrying a plurality of compartments each adapted to support a masa of material, compressing means normally bodily removed from one of said compartments, and means adapted to cause the simultaneous travel of the first-mentioned means and said compressing means whereby said compressing means bodily enters one of said compartments.

2. In apparatus of the class described, in combination, means adapted to support a mass of material, compressing means normally removed from said material, means adapted to cause the simultaneous travel of said supporting means and said compressing means whereby said compressing means acts upon said material, and alining means adapted predeterminedly to act upon said material.

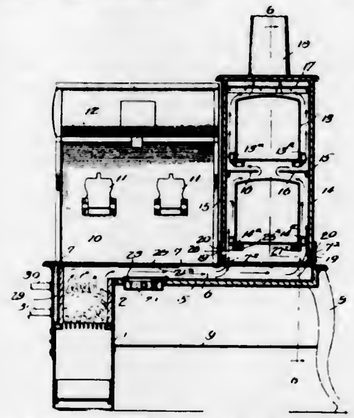
3. In apparatus of the class described, in combination, rotary means carrying a plurality of compartments each adapted to support a mass of material, compressing means normally bodily removed from one of said compartments and carried by said rotary means, and means adapted during the rotation of the first mentioned means to cause said compressing means bodily to enter the compartment last-mentioned.

4. In apparatus of the class described, in combination, rotary means carrying a plurality of compartments each adapted to support a mass of material, compressing means normally bodily removed from one of said compartments and carried by said rotary means, and means adapted during the rotation of the first mentioned means to cause said compressing means bodily to enter the compartment last-mentioned and thereafter to traverse said compartment with gradually increasing effect.

5. In apparatus of the class described, in combination, rotary means adapted to support a mass of material, said rotary means carrying a plurality of material-accommodating subdivisions into each successive one of which a mass of material may be fed during the rotation of said means, a plurality of compressing means each carried by said rotary means adjacent but normally entirely removed from one of said subdivisions, and means adapted during said rotation to cause each of said plurality of compressing means successively bodily to enter said subdivisions.

[Claims 6 to 29 not printed in the Gazette.]

1,155,799. COOKING-STOVE. JOEL ANDERSON COPPRIDGE, Richmond, Va. Filed July 3, 1913. Serial No. 777,253. (Cl. 126—36.)



1. In a combined solid fuel and gas stove, a combustion chamber, a casing, an exit flue connected with said casing, a horizontal passage for connecting the combustion chamber with the casing, the upper wall of said horizontal passage being made of conducting material and having stove openings and lids for the same, a lower wall being made of non-conducting material, and burners carried by the lower wall and arranged to register with the openings in the upper wall, said burners being below the top of the lower non-conducting wall, thereby providing an unrestricted passage for the products of combustion.

2. In a combined solid fuel and gas stove, a combustion chamber, a casing, an exit flue connected with said casing, a horizontal passage for connecting the combustion chamber with the casing, the upper wall of said horizontal pasage being made of conducting material and having stove openings and lids for the same, a lower wall being made of non-conducting material, burners carried by the lower wall and arranged to register with the openings in the upper wall, said burners being below the top of the lower non-conducting wall, thereby providing an unrestricted passage for the products of combustion, and means for protecting said burners when solid fuel is used with the stove.

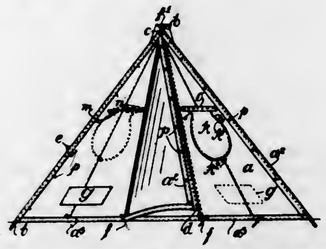
3. In a combined solid fuel and gas stove, a combustion chamber, a casing, an exit flue connected with said casing, a horizontal passage for connecting the combustion chamber with the casing, the upper wall of said horizontal passage being made of conducting material and having stove openings and lids for the same, a lower wall being made of non-conducting material, burners carried by the lower wall and arranged to register with the openings in the upper wall, said burners being below the top of the lower horizontal wall, thereby providing an unrestricted passage for the products of combustion, and means for protecting said burners when solid fuel is used with the stove, said last named means comprising plates pivoted to the inner side of the lower wall and adapted to swing over said burners.

4. In a combined solid fuel and gas stove, a combustion chamber, a casing, an exit flue connected with said casing, a horizontal passage for connecting the combustion chamber with the casing, the upper wall of said horizontal passage being made of conducting material and having stove openings and lids for the same, a lower wall being made of non-conducting material, burners carried by the lower wall and arranged to register with the openings in the upper wall, said burners being below the top of the lower non-conducting wall, thereby providing an unrestricted passage for the products of combustion, housings carried by the lower horizontal wall, a burner disposed in each housing, said burners being arranged to register with the stove openings, and a pivoted lid adapted to swing over and cover the burners and constituting a portion of said housings.

5. In a combined solid fuel and gas stove, a combustion chamber, a casing, ovens disposed within said casing and spaced from the interior walls thereof, the space between the walls and the ovens constituting a flue, a passage establishing communication between the combustion chamber and said flue, and gas burners disposed at the bottom of said passage above the level of the combustion chamber whereby the ovens in the flue may be heated by the combustion of solid fuel or gaseous fuel.

[Claims 6 and 7 not printed in the Gazette.]

1,155,800. TENT. ARCHER HENRY CORBET, Barnes, London, England. Filed Jan. 26, 1914. Serial No. 814,344. (Cl. 2—60.)



1. A tent comprising a framework and detachable sections constituting a covering, said covering being composed of a number of similar units, each comprising one pole and a section adapted to form a garment, said sections having openings for the wearer's head during the use of said garment, means for closing said openings during use of said tent, a hood attached to one of said sections in proximity to said opening, and means for retaining said hood in a flat extended position during use of said tent.

2. A tent comprising a sectional covering, the sections of which are of substantially triangular form, and adapted to be converted into garments, said sections having a slit arranged substantially parallel to the base line of the section, and a hood adjacent said slitted portion.

3. A tent comprising a sectional covering, the sections of which are of substantially triangular form, and adapted to be converted into garments, said sections having a slit arranged substantially parallel to the base line of the section, and a band reinforcing the slitted portion and adapted to serve as a collar for the garment.

4. A tent comprising a sectional covering, the sections of which are of substantially triangular form and adapted to be converted into garments, said sections having a slit arranged substantially parallel to the base line of the section, and a band reinforcing the slitted portion and adapted to serve as a collar for the garment, said section having, also, a flap and means whereby the wearer may draw the flap into the form of a hood.

5. A tent comprising a plurality of units, each including a cover section and a pole, said cover sections having engageable fastenings and being of substantially triangular form, and having a slit and a flap adjacent thereto, said slit adapted to admit a wearer's head, and said flap adapted to be formed into a hood to receive the head.

1,155,801. RUNNING-GEAR FOR MOTOR-VEHICLES. DAVID M. DEARING, Jackson, Mich. Filed Sept. 24, 1914. Serial No. 863,368. (Cl. 21—182.)



1. In a motor vehicle, an axle, a supporting frame, and a pivotal yielding connection between said frame and axle comprising upper and lower members pivotally connected midway their ends, springs disposed between the ends of said lower member and said axle and connected with both of them, and a semi-elliptical spring secured intermediately of its ends to said lower member and having its ends flexibly connected with the ends of said upper member.

2. In a motor vehicle, an axle, a supporting frame, and a pivotal yielding connection between said frame and axle comprising upper and lower members pivotally connected midway their ends, and a semi-elliptical spring fixed to one member and flexibly connected with the other.

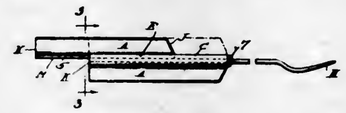
3. In a motor vehicle, an axle, a supporting frame, and a pivotal yielding connection between said frame and axle comprising upper and lower members pivotally connected midway their ends, and a semi-elliptical spring fixed to the lower member and flexibly connected with the upper member.

4. In a motor vehicle, an axle, a supporting frame, and a pivotal yielding connection between said frame and axle comprising upper and lower members pivotally connected midway their ends, and a semi-elliptical spring fixed midway its ends to said lower member and having its ends flexibly connected with the upper member.

5. In a motor vehicle, an axle, a supporting frame, and a pivotal yielding connection between said frame and axle comprising upper and lower members pivotally connected midway their ends, and a semi-elliptical spring fixed to the lower members and flexibly connected with the upper member, a shock absorber arranged between the pivot which connects said upper and lower members and said elliptical spring.

[Claim 6 not printed in the Gazette.]

1,155,802. COMBINATION CONDIMENT-HOLDER AND CUTLERY UTENSIL. GEORGE M. DENNIS, Van Houten, N. Mex. Filed May 21, 1914. Serial No. 839,990. (Cl. 65—45.)



1. A device of the class described including a table implement shank having flanges formed on its edges and extending above and below the shank and disposed toward each other, hollow condiment holders provided with grooves in which said flanges are adapted to engage whereby the holders may be slidably maintained on the shank, each holder at one end having its bottom provided

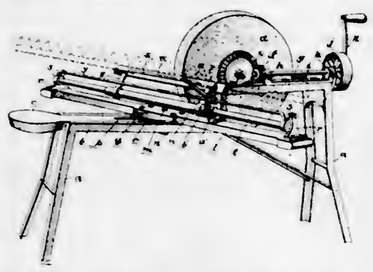
with sifter openings, and at the other end with a filler opening, said shank adapted to normally close said sifter and filler openings.

2. A device of the class described including a table implement shank, condiment holders, each of said holders providing a hollow body portion, the bottom of each holder being provided with an opening whereby the holder may be filled and with openings whereby a condiment may be sifted from the holder, and means for slidably maintaining said holders on opposite sides of the shank.

3. A device of the class described comprising a table implement shank, a hollow condiment holder, flanges carried by one of the parts, the other part being provided with grooves in which said flanges are adapted to engage to hold the parts in relative position.

4. A device of the class described comprising a table implement shank, hollow condiment holders adapted to be disposed one on each side thereof, coöperating means between said holders and shank whereby the former may be slidably maintained upon the latter, each of said holders being provided with openings through which condiment may be sifted, the holders being adapted to be moved into position upon the shank for closing the openings.

1,155,803. KNIFE-GRINDING MACHINE. OSWALD FACHMAN, Lindsey, Ohio. Filed July 2, 1915. Serial No. 37,785. (Cl. 51—8.)

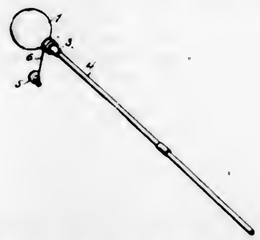


1. The combination with a bench and a grinding wheel journaled thereon, of a supporting board and means for pivotally adjusting it horizontally, a horizontal bar extending approximately the length of the board and means for swingingly suspending it at the ends thereof, thus permitting this bar to swing toward and from the wheel, a rod arranged approximately parallel with said bar and lying at a distance therefrom and being connected thereto at its ends, a handle attached to this rod, and a tool holder slidably and rotatably mounted upon said bar, for the purpose set forth.

2. The combination with a bench and a grinding wheel journaled thereon, of a supporting board and means for pivotally adjusting it horizontally, a horizontal bar extending approximately the length of the board and means for swingingly suspending it at the ends thereof, thus permitting this bar to swing toward and from the wheel, a rod arranged approximately parallel with said bar and lying at a distance therefrom and being connected thereto at its ends, a handle attached to this rod, a tool holder slidably and rotatably mounted upon said bar, and means for locking the swinging bar and the rod in adjusted position.

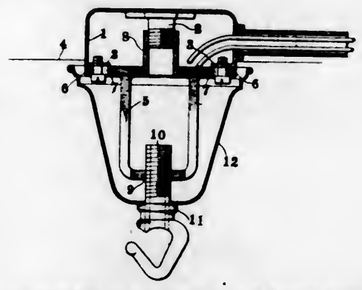
3. The combination with a bench and a grinding wheel journaled thereon, of a supporting board adjustably mounted on the bench in front of the grindstone, a pedestal or bearing block at each end of the board, a depending swinging arm on each pedestal, a horizontal bar connecting these arms, means for locking said bar in its adjusted position, said means consisting of a rod connecting said swinging arms, a lever attached to this rod, an upstanding bracket provided with a slot, and a clamp bolt adapted to clamp together said upstanding bracket and said lever, and a slidable and rockable knife clamp mounted on said bar.

1,155,804. IMPRÉGNATOR. FRANK B. GRAHAM, Kansas City, Mo. Filed Mar. 23, 1914. Serial No. 826,514. (Cl. 128—27.)



In an impregnator, a resilient semen container adapted for bodily insertion into and transportation in the vagina of an animal, and having a tubular internally screw threaded coupling through which the semen is received and discharged, an externally screw threaded nozzle adapted to be detachably fitted in said coupling, and adapted for insertion into the womb of an animal, a screw threaded plug adapted to be fitted in said coupling when the nozzle is detached therefrom, and flexible means for securing the plug to the container.

1,155,805. LIGHTING-FIXTURE. EDWIN F. GUTH, St. Louis, Mo., assignor to Luminous Unit Company, St. Louis, Mo., a Corporation of Missouri. Filed Mar. 13, 1915. Serial No. 14,113. (Cl. 240—85.)



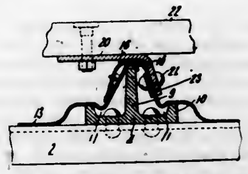
The combination of a junction box, a fixture supporting frame suitably attached thereto and provided with a threaded opening in its lower portion, a canopy inclosing the frame, a hollow stem forming a wire conduit extending through the canopy and having a threaded end extending into the opening in the frame, said stem being also provided with a fixed shoulder for supporting the canopy.

1,155,806. PROCESS FOR MAKING SYRUP FROM SUGAR-BEETS. HERBERT C. GORE, Takoma Park, Md., and CHARLES O. TOWNSEND, Washington, D. C. Filed May 19, 1915. Serial No. 29,209. (Dedicated to the public.) (Cl. 99—11.)

1. A process for making syrup from sugar beets, consisting in removing the beet crowns, washing the beets, and cutting them into finely divided parts, placing the treated material in water, and subjecting said mixture to heating at a temperature near the boiling point for a period sufficient to extract sugar from the fragmentary beet sections, then completely removing the beet particles and subjecting the liquid extract for a time to a slow boiling and then for a time to a rapid boiling, for removing the objectionable beet flavor from said extract, substantially as specified.

2. A process for making syrup from sugar beets, consisting in removing the beet crowns, washing the beets, and cutting them into small parts, placing the treated material in water and heating the mixture at a boiling temperature for a period sufficient to extract sugar from the beet product, then completely removing the cooked beet material, and then evaporating the liquid extract by boiling it slowly for a time and then rapidly, until the liquid extract is boiled down to the condition of syrup, substantially as specified.

1,155,807. CAR-ROOF. SOREN HANSSON and ISAK MOELLER, New Glasgow, Nova Scotia, Canada, assignors of one-third to Henderson B. Douglas, New Glasgow, Nova Scotia, Canada. Filed July 6, 1914. Serial No. 849,249. (Cl. 108—5.)



1. A car roof, comprising side plates, car-lines connecting the same and formed of inverted T sections each having a web and side flanges, and roof sheets secured to the side plates, the edges of adjacent roof sheets being bent upwardly over the webs of said carlines into inverted U shape, the bent edge portions of said roof sheets being shallower at the ends of the joints between roof sheets to form restricted openings for the discharge of water, each roof sheet at the end of a carline having a longitudinally extending portion overlapping the next adjacent roof sheet and secured thereto.

2. A car roof, comprising side plates car-lines connecting the same and formed of inverted T sections having an upright web and side flanges forming drainage gutters on opposite sides of said web, and roof sheets secured, at their ends to the side plates and having their edge portions overlapping each other and also overlapping the webs of said carlines but being free of connection thereto.

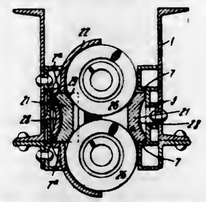
3. A car roof, comprising side plates, car-lines connecting the same and formed of inverted T sections having an upright web and side flanges forming drainage gutters on opposite sides of said web, and roof sheets secured at their ends to the side plates and having their edge portions overlapping each other and also overlapping the webs of said carlines but being free of connection thereto, said roof sheets also having portions adjacent their edges resting on the upper edges of the flanges of said carlines and supported thereby.

4. A car roof, comprising side plates, car-lines connecting the same and formed of inverted T sections having an upright web and side flanges forming drainage gutters on opposite sides of said web, roof sheets secured at their ends to the side plates and having their edge portions overlapping each other and also overlapping the webs of said carlines but being free of connection thereto, and longitudinal purlins located below said carlines and secured thereto, the roof sheets resting on said purlins between adjacent carlines.

5. A car roof, comprising side plates, car-lines connecting the same and formed of inverted T sections having an upright web and side flanges forming drainage gutters on opposite sides of said web, roof sheets secured at their ends to the side plates and having their edge portions overlapping each other and also overlapping the webs of said carlines but being free of connection thereto, said roof sheets also having portions adjacent their edges resting on the upper edges of the flanges of said carlines and supported thereby, and longitudinal purlins located below said carlines and secured thereto, the roof sheets resting on said purlins between adjacent carlines.

1,155,808. DRAFT-GEAR. SOREN HANSSON and ISAK MOELLER, New Glasgow, Nova Scotia, Canada, assignors of one-third to Henderson B. Douglas, New Glasgow, Nova Scotia, Canada. Filed Aug. 5, 1914. Serial No. 855,209. (Cl. 213—42.)

1. A draft gear, comprising side plates, front and rear follower plates, longitudinal keys passing through openings in said follower plates and provided with heads at their rear ends, a coupler head connected to the front ends of said longitudinal keys, and a pair of parallel springs between said follower plates, the inner portions of said longitudinal keys being arranged to engage said springs for supporting and separating the same.



2. A draft gear, comprising side plates having front and rear stop lugs, follower plates movable between said lugs, longitudinal keys passing through openings in said follower plates and provided with heads at their rear ends, a coupler head connected to the front ends of said longitudinal keys, and springs between said follower plates, said keys having portions extending inwardly and lying between said springs to support and separate the same.

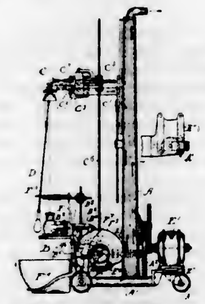
3. Draft mechanism for twin spring or friction type gears, comprising side plates provided with guideways, follower plates, longitudinal keys passing through said follower plates and movable in said guideways, and a coupler connected to said keys, each key having one face concave and the opposite face beveled at its opposite edges and being reversible to two positions in one of which said beveled edges are adapted to support and separate twin springs and in the other of which positions said concave faces are adapted to engage the barrel of friction mechanism.

4. A draft gear, comprising side plates, follower plates, longitudinal keys passing said follower plates, a coupler head, and a cross key extending through said coupler head and longitudinal keys, and a securing loop surrounding said cross key and having its end portions bent into an opening therein.

5. A draft gear, comprising side plates, follower plates, longitudinal keys passing through said follower plates, a coupler head, a cross key extending through said coupler head and longitudinal keys, said cross key being provided with a head lying on the outside of one of said longitudinal keys, and at its other end being provided with an opening, and a loop surrounding said cross key and having a portion bent into the opening therein.

[Claim 6 not printed in the Gazette.]

1,155,809. GLASS-BLOWING MACHINE. NOBLE W. HARTMAN, Toledo, Ohio, assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed July 12, 1909. Serial No. 507,056. (Cl. 49—19.)



1. In a glass blowing machine, a mold, a blow head and means for supporting a blow iron, and means for auto-

matically opening the mold and moving the blow iron to a position where the article blown is clear of the mold.

2. In a glass blowing machine, a mold, a blow head and means for supporting a blow iron, and means for automatically opening the mold and moving the blow iron to a position where the article blown is clear of the mold at a predetermined interval after the initiation of the blowing operation.

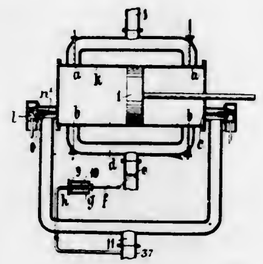
3. In a glass blowing machine, an operating shaft, a blow head, connections between the operating shaft and the blow head, and means in the path of the blow iron for automatically throwing in said connections when the blow iron is moved to operating position over the mold.

4. In a glass blowing machine, a mold, an operating shaft, a blow head, connections between the operating shaft and the blow head, a removable blow iron, means comprised by the blow head for receiving the said blow iron and for allowing it to be swung into position over said mold, and means automatically brought into operation upon the positioning of the said blow iron for throwing in the said connections.

5. In a glass blowing machine, an operating shaft, a driven shaft, a clutch therebetween, a blow head and sub-mechanism whereby the same is operated from said driven shaft, a mold, a removable blow iron adapted to be inserted in said blow head and swung over said mold and means in the path of said blow iron during said swinging movement thereof for operating said clutch and thereby starting the operation of said sub-mechanism.

[Claims 6 to 9 not printed in the Gazette.]

1,155,810. STEAM-ENGINE. CARL ADOLF HARTUNG, Berlin, Germany. Filed Mar. 28, 1911. Serial No. 617,356. (Cl. 121—45.)



1. A device for withdrawing steam for heating purposes from steam cylinders, comprising in combination, a withdrawal valve, means for maintaining the withdrawal valve normally closed during the working stroke of the piston while permitting it to open during the return stroke of the piston, and means governed by the steam condition in the heating pipes for controlling the usual exhaust of the cylinder.

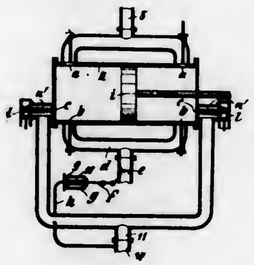
2. A device for withdrawing steam for heating purposes from steam cylinders, comprising in combination, a withdrawal valve, means for maintaining the withdrawal valve normally closed during the working stroke of the piston while permitting it to open during the return stroke of the piston, a valve in the usual exhaust pipe of the cylinder and means governed by the steam condition in the heating pipes, for controlling said valve in the exhaust pipe.

3. A device for withdrawing steam for heating purposes from steam cylinders, comprising in combination, a withdrawal valve, means for maintaining the withdrawal valve normally closed during the working stroke of the piston while permitting it to open during the return stroke of the piston, a throttle valve in the usual exhaust conduit of the cylinder, a controlling lever for said throttle valve, a cylinder in the steam heating system, a piston therefor, an operative connection therefrom to the valve lever and a spring opposing the steam pressure on the piston and of a strength equal to the normal pressure in the heating system.

4. A device for withdrawing steam for heating purposes from steam cylinders, comprising in combination a withdrawal passage opening to the cylinder at its exhaust end, a valve controlling said passage and subject to the pressure in the steam heating system, means for positively holding said valve closed during the working stroke of the piston and means subject to the steam pressure in the heating system for controlling the usual exhaust from the cylinder.

5. In a device for withdrawing steam from steam cylinders, the combination of a withdrawal valve in communication with the steam cylinder and means for maintaining said valve normally closed during the working stroke of the piston, together with means for exposing the rear face of the valve to the pressure of the withdrawn steam whereby the valve is maintained closed until the pressure in the cylinder, during the return stroke of the piston, exceeds that of the withdrawn steam.

1,155,811. MEANS FOR WITHDRAWING STEAM FROM STEAM-ENGINES. CARL ADOLF HARTUNG, Berlin, Germany. Original application filed Mar. 28, 1911, Serial No. 617,356. Divided and this application filed May 14, 1912. Serial No. 697,205. (Cl. 121—45.)

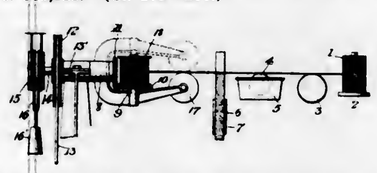


1. A device for withdrawing steam for heating purposes from steam cylinders, comprising in combination, a withdrawal valve in communication with the steam cylinder, a hollow spindle therefor, a relieving piston on the latter to which steam from the cylinder has access through the hollow spindle, a closure member for closing the bore in the spindle controlled by the movement of the spindle, and a device by which the withdrawal valve is held closed during the working stroke of the piston.

2. A device for withdrawing steam for heating purposes from steam cylinders, comprising in combination, a withdrawal valve in communication with the steam cylinder, a hollow spindle therefor, a relieving piston fast on the latter to which the steam from the cylinder has access through the hollow spindle, a closure member for the bore of the spindle controlled by the motion of the spindle, a positively actuated slide, a roller journaled on the slide, and a plunger operatively connected to the said slide having a cam face over which said roller runs on the displacement of the slide to close the withdrawal valve.

3. A device for withdrawing steam from steam cylinders, comprising in combination, a withdrawal valve in communication with the steam cylinder, a hollow spindle therefor, a relieving piston fast on said spindle and subjected to the pressure of the steam cylinder through said hollow spindle, a closure member for the bore of the spindle controlled by the motion of the spindle, a positively controlled slide for holding the valve to its seat under normal pressure conditions, a roller journaled on the slide, a plunger with cam bearing face for said roller adapted to be displaced by the latter during the travel of the slide and a spring interposed between the plunger and the valve spindle.

1,155,812. ELECTRIC INSULATION. JOHN ALLEN HEANY, New York, N. Y. Filed Sept. 23, 1914. Serial No. 863,123. (Cl. 173—264.)



1. The combination of an electric conductor and an insulating sheath therefor, comprising a filamentary body having a complete superficial coating of fibers, said fiber coated filamentary body being wrapped about the conductor.

2. The combination of an electric conductor and an insulating sheath therefor comprising successive convolutions of a filamentary body having a complete superficial coating of fibers, said fiber-coated body being applied to the surface of the conductor in a substantially uniform layer.

3. The combination of an electric conductor and an insulating sheath therefor, comprising a uniform layer of fiber-coated thread and a suitable binding material, the fibers constituting a complete superficial coating for the thread.

1,155,813. ELECTRIC INSULATION. JOHN ALLEN HEANY, New York, N. Y. Filed Sept. 23, 1914. Serial No. 863,124. (Cl. 173—28.)



1. An insulating medium for electric conductors comprising a tape or ribbon having a foundation cord or filament and an inclosing flat sheath of matted fibers.

2. An insulating medium for electric conductors comprising a foundation cord or filament associated with an inclosing flattened layer of matted fibers and a binding agent.

3. An insulating medium for electric conductors comprising a tape or ribbon having a foundation cord or filament and an inclosing flat sheath of matted asbestos fibers.

1,155,814. ELECTRIC SWITCH. EDWARD M. HEWLETT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Original application filed July 15, 1910, Serial No. 572,123. Divided and this application filed Sept. 1, 1911. Serial No. 647,143. (Cl. 175—283.)

1. An electric switch comprising an outer vessel adapted to contain insulating fluid, a stationary contact mounted in said vessel, an inner pressure retaining vessel mounted in but insulated from said outer vessel and having an opening in one wall thereof, and a movable contact mounted in said inner vessel to move through the opening in said vessel into engagement with said stationary contact, said inner vessel being positioned to inclose said movable contact as said movable contact reaches its final position as the switch opens.

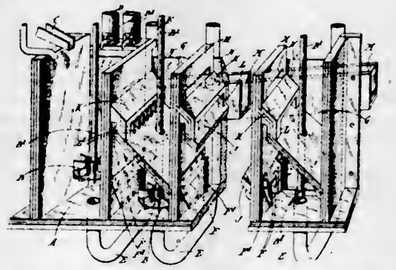
2. An electric switch comprising an outer vessel containing insulating fluid, a stationary contact mounted in one end of said vessel, an insulator projecting into the other end of said vessel, an inner pressure retaining vessel mounted on said insulator and having an opening in one wall thereof, and a movable contact slidably mounted in said insulator to pass through said inner pressure retaining device and through said opening to coöperate with said stationary contact whereby said movable contact passes through said opening and into said pressure retaining vessel during the latter portion of its movement as the switch opens.

3. An electric switch comprising an outer vessel containing insulating fluid, a stationary contact mounted in said outer vessel, a pressure retaining vessel mounted in but insulated from said outer vessel and having an opening in one wall thereof, and a movable contact mounted in said pressure retaining vessel to move through the



opening in said vessel to coöperate with said stationary contact, said pressure retaining vessel being mounted in said outer vessel near the end of the path of opening movement of said movable contact in position to cause said contact to pass through said opening and reach its final position in said pressure retaining vessel as the switch opens.

1,155,815. APPARATUS FOR ORE CONCENTRATION. ARTHUR HOWARD HIGGINS and WILLIAM WARWICK STENNING, London, England, assignors to Minerals Separation Limited, London, England. Filed Nov. 12, 1913. Serial No. 800,441. (Cl. 83—85.)



1. Apparatus for concentrating ores by gaseous flotation of certain mineral particles in liquid comprising, in combination, a vessel, means for introducing a gas therein at the lower part of the vessel, means for producing a zone of violent agitation and gasification in the lower part of the vessel, a baffle above the agitator for producing a quiescent zone in the upper part of the vessel, the baffle being inclined downwrdly from the inlet side to the outlet side of the vessel, an inlet for the pulp to the vessel below the baffle, means for removing the froth from the upper surface of the liquid, and an outlet for the residues above the baffle.

2. Apparatus for concentrating ores by gaseous flotation of certain mineral particles in liquid comprising, in combination, a vessel, means for introducing a gas therein at the lower part of the vessel, means for producing a zone of violent agitation and gasification in the lower part of the vessel, a baffle above the agitator for producing a quiescent zone in the upper part of the vessel, the baffle

being inclined downwardly from the inlet side to the outlet side of the vessel, a second baffle to direct the agitated and gasified pulp into the quiescent zone above the first mentioned baffle, an inlet for the pulp to the vessel below the baffle, means for removing the froth from the upper surface of the liquid, and an outlet for the residues above the baffle.

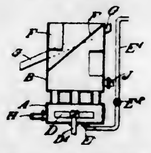
3. Apparatus for concentrating ores by gaseous flotation of certain mineral particles in liquid comprising, in combination, a series of contiguous vessels each having means for introducing a gas therein at the lower part of the vessel, means for producing a zone of violent agitation and gasification in the lower part of the vessel, a baffle above the agitator for producing a quiescent zone in the upper part of the vessel, the baffle being inclined downwardly from the inlet side to the outlet side of the vessel, an inlet for the pulp to the vessel below the baffle, means for removing the froth from the upper surface of the liquid, and an outlet for the residues above the baffle, the inlet to each vessel except the first of the series being also the residues outlet of the next contiguous vessel in advance.

4. Apparatus for concentrating ores by gaseous flotation of certain mineral particles in liquid comprising, in combination, a series of contiguous vessels each having means for introducing a gas therein at the lower part of the vessel, means for producing a zone of violent agitation and gasification in the lower part of the vessel, a baffle above the agitator for producing a quiescent zone in the upper part of the vessel, the baffle being inclined downwardly from the inlet side to the outlet side of the vessel, a second baffle to direct the agitated and gasified pulp into the quiescent zone above the first mentioned baffle, an inlet for the pulp to the vessel below the baffle, means for removing the froth from the upper surface of the liquid, and an outlet for the residues above the baffle, the inlet to each vessel except the first of the series being also the residues outlet of the next contiguous vessel in advance.

5. Apparatus for concentrating ores by gaseous flotation of certain mineral particles in liquid, comprising in combination an upright angular vessel, an air inlet pipe leading to the center of the bottom of the vessel, a centrifugal agitator near the bottom of the vessel, a baffle above the agitator and inclined downwardly from the inlet side to the outlet side of the vessel, an inlet for the pulp to the vessel below the baffle, a second baffle to direct the agitated and aerated pulp into a quiescent zone above the baffle where the froth forms, means to remove the froth and an outlet for the residues above the baffle at its lowest point.

[Claim 6 not printed in the Gazette.]

1,155,816. APPARATUS FOR ORE CONCENTRATION. ARTHUR HOWARD HIGGINS, London, England, assignor to Minerals Separation American Syndicate (1913) Limited, London, England. Filed Apr. 15, 1914. Serial No. 831,940. (Cl. 83—85.)



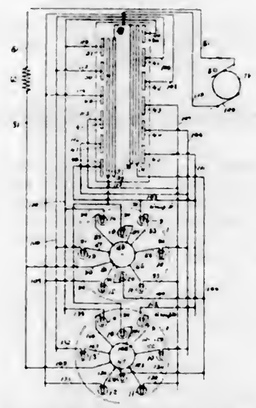
1. In an apparatus for concentrating ores by gaseous flotation, the combination of an agitation and separation vessel having a lower agitation zone and an upper separation zone, means for agitating and gasifying pulp in the agitation zone, and inclined and vertically elongated baffle plates in the separation zone whereby comparative quiescene is maintained at the upper surface of the pulp for the removal therefrom of mineral froth.

2. In an apparatus for concentrating ores by gaseous flotation, the combination of an agitation and separation vessel having a lower agitation zone and an upper separation zone, means for agitating and gasifying the pulp in the agitation zone, and a plurality of passages joining the agitation and separation zones and vertically elongated baffle plates in the separation zone whereby comparative quiescence is maintained at the upper surface of the pulp for the removal therefrom of mineral froth.

3. In an apparatus for concentrating ores by gaseous flotation, the combination of an agitation and separation vessel having a lower agitation zone and an upper separation zone, a rotatable agitator in the agitation zone and means for gasifying the pulp in said zone, and inclined and vertically elongated baffle plates in the separation zone whereby comparative quiescence is maintained at the upper surface of the pulp for the removal therefrom of mineral froth.

4. In an apparatus for concentrating ores by gaseous flotation, the combination of an agitation and separation vessel having a lower agitation zone and an upper separation zone, a rotatable agitator in the agitation zone and means for gasifying the pulp in said zone, and a plurality of passages joining the agitation and separation zones and vertically elongated baffle plates in the separation zone whereby comparative quiescence is maintained at the upper surface of the pulp for the removal therefrom of mineral froth.

1,155,817. CAR-INDICATOR. HENRY A. HUMPHREY, Kansas City, Mo., assignor to Safety Elevator Lock and Signal Company, Kansas City, Mo., a Corporation of Missouri. Filed July 19, 1909. Serial No. 508,469. (Cl. 177—336.)

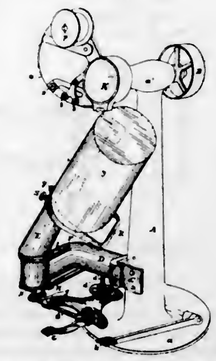


1. In a car indicator, the combination with a car movable to different floors of a building, of means for reciprocating the car, a carrier reciprocative synchronously with the car, two electric circuits, two lamps, one in each of said circuits for indicating direction of movement of the car, two other electric circuits each including a lamp for indicating the position of the car, a rock shaft carried by the carrier, circuit controlling means operated by said rock shaft and having means for controlling the circuits which include the direction indicating lamps and the position indicating lamp, and means for rocking said shaft when the direction of movement of the carrier is changed.

2. In car indicators, the combination with a car, of two electric circuits including a plurality of electric lamps for denoting different positions of the car, each lamp being in each two circuits, two sets of contacts, said contacts being located respectively in said circuits, and means for alternately closing the circuit through said two sets of contacts respectively when the direction of movement of the car is changed.

3. In car indicators, the combination with a car, of two electric circuits including a plurality of electric lamps for denoting different positions of the car, each lamp being in each two circuits, two sets of contacts, said contacts being located respectively in said circuits, and a contact device movable synchronously with the car, and means for alternately moving said device into two positions for respectively engaging said two sets of contacts when the direction of movement of said device is changed.

1,155,818. SWIVEL CLENCHER-ARM. ADELBERT S. JAQUITH, Boston, Mass., assignor to Granville C. Mitchell, Medfield, Mass. Filed June 30, 1914. Serial No. 848,498. (Cl. 1—15.)



1. In a wire stitching machine of the character described, the combination of a stitching head provided with a staple forming and driving mechanism of the usual construction to form and drive wire staples, an inclined clencher arm adapted to support the material to be stapled and arranged to swivel into and out of its operative position, a vertically adjustable support for said arm, a clencher sliding vertically in said arm, and means for operating said clencher in unison with the staple forming and driving mechanism in said stitching head.

2. In a wire stitching machine of the character described, a bracket fixed to the supporting column of said machine and having a vertical dovetail face formed thereon, a right-angled arm arranged to fit and slide vertically upon said bracket, a vertical screw to support and vertically adjust said right-angled supporting arm, an inclined supporting and clencher arm arranged to fit into and swivel upon said right-angled supporting arm, and means for locking said inclined clencher arm in its operative position.

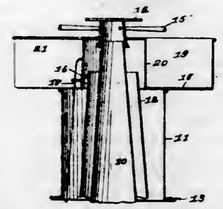
3. In a wire stitching machine of the character described, an inclined clencher arm, a support adjustably fixed to said machine, the arm being swiveled upon said support, a sliding member arranged to lock said inclined clencher arm in its operative position, a spring arranged to operate said sliding member, means for releasing said sliding member by a foot lever, a horizontal sliding plunger pivoted to said inclined clencher arm, and a spring arranged to move said plunger and swing said clencher arm away from its operative position.

4. In a wire stitching machine of the character described, the combination of an inclined clencher arm, a head plate fixed at a right angle to said clencher arm, said clencher arm and said head plate being adapted to support the component parts of a box, barrel or container to be operated upon, said clencher arm being arranged to swivel into and out of its operative position, and means for driving wire staples and for clenching said staples when driven through said material, substantially in the manner described.

5. In a wire stitching machine, in combination, staple forming and driving mechanism located at an elevated point and including, first, means for feeding the staple wire, secondly, means for cutting off the wire in staple lengths, thirdly, means for forming a staple with its ends projecting downward, and, fourthly, means for driving the staple downwardly, an inclined arm held under said mechanism against vertical movement during the operation of the machine, a head plate fixed at a right angle to said arm, the arm and head plate meeting to form a curved corner supporting apex and being formed to support respectively a circular container body and a flat container head associated therewith and to permit the rotation of said container body and head on said arm and head plate while supported thereby, staple clenching mechanism carried by said arm and including a vertically movable clencher acting in opposition to the staple driving means above the arm, and means within the arm for vertically reciprocating said clencher, the continuous circular corner formed by the intersection of the container body and head being movable by rotation in an endless path in which said corner supporting apex is located, so that the staples may be driven in an endless circular series without movement of the arm.

[Claim 6 not printed in the Gazette.]

1,155,819. WATER-TRAY FOR INCUBATORS. JOHN H. KATE, Des Moines, Iowa, assignor of one-half to Ed. J. Raymond, Des Moines, Iowa. Filed Apr. 13, 1914. Serial No. 831,546. (Cl. 126—358.)



1. In an incubator having a cylindrical support, a lamp chimney disposed in the cylindrical support and extending thereabove, a water tray mounted on the cylindrical support and provided with an enlarged central opening, and a guard surrounding the chimney and extending partially within the central opening of the water tray.

2. In an incubator having a cylindrical support, a lamp chimney disposed in the cylindrical support and extending thereabove, a water tray having a central opening removably receiving the lamp chimney, the latter extending above the tray, and a deflector removably supported on the extended portion of the chimney above the water tray for spreading the heat thereover.

3. In an incubator having a cylindrical support and a lamp chimney therein and also a thermostat lever adjacent said lamp chimney, a water tray mounted on said cylindrical support and formed with a central opening for the projecting portion of said lamp chimney, said tray also being formed with a lateral opening for said lever.

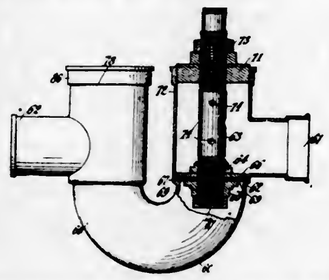
4. In an incubator having a cylindrical support and a lamp chimney therein and also having a thermostat lever adjacent said lamp chimney, a water tray adapted to be mounted on said cylindrical support, said tray comprising a bottom formed with a central opening to receive said lamp chimney, an outer side wall on said bottom, an inner side wall surrounding said central opening, said bottom also being formed with a lateral opening to receive said thermostat lever, said lateral opening leading to the central opening, and side walls for said lateral opening and connecting the inner and outer side walls.

1,155,820. PLUMBING DEVICE. EDWARD KENNEDY, New York, N. Y. Filed May 18, 1914. Serial No. 839,353. (Cl. 137—75.)

1. The combination, with a pipe having a seat in line with one of the vertical arms thereof, of a plug adapted to be inserted through said arm into place upon said seat, means for closing the upper end of the arm and a tubular stem extending through and between said plug and closing means and provided with a lateral opening between them for admitting water to said arm above the plug.

2. The combination with a trap, having a seat in line with one of the vertical arms thereof, of a plug comprising

a stopper adapted to engage said seat, means for closing the upper end of said vertical arm, a pipe extending between said stopper and closing means and provided between them with lateral openings and at its upper portion with a thread, and means engaging the thread of the pipe for enabling the same to be screwed downwardly for pressing the stopper upon its seat.



3. The combination with a trap, having a seat in line with one of the vertical arms thereof, of a plug comprising a stopper adapted to engage said seat, a pipe extending upwardly from said stopper and provided at its upper portion with a thread, a disk having openings, a washer between the same and the top of the trap, and adapted to close those openings opposite the top of the trap, and adjustable devices below said disk adapted to engage the flange of the trap, said disk being provided with a hub engaging said pipe for enabling the same to be screwed downwardly for pressing the stopper upon its seat.

4. The combination with a trap having a vertical arm at the street side thereof, and a seat opposite said arm, of a plug insertible through said vertical arm and comprising a stopper and a threaded pipe connected therewith, of a cross bar having a threaded annulus engaging a thread on said pipe, said cross bar being provided at each side of said annulus with a plurality of openings, and clamping members secured to said cross bar in said openings and having each a screw bolt laterally projecting at its inner end beneath the rim of the trap.

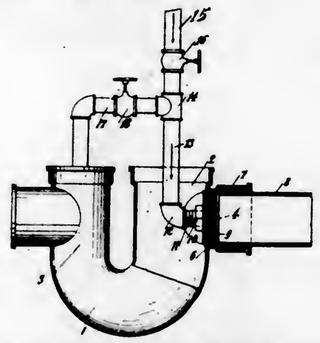
5. The combination with a trap, of a plug in the house side thereof, said plug comprising a pipe extending outside of the trap and said pipe being provided with lateral openings within the trap, a branch pipe from said pipe to the street side of the trap, a valve in said branch pipe, and a valve in the said first named pipe above the branch.

[Claims 6 to 8 not printed in the Gazette.]

1,155,821. TESTING DEVICE FOR WATER SYSTEMS. EDWARD KENNEDY, New York, N. Y. Filed Jan. 18, 1915. Serial No. 2,962. (Cl. 137—77.)

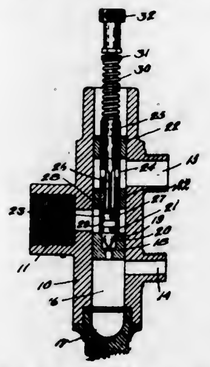
1. A device of the character described comprising a U-shaped trap, both legs of which are provided with nipples at their upper ends and with lateral nipples, the inlet leg being of larger diameter than the outlet leg, the lateral nipple of the inlet leg having a screw-threaded throat of larger diameter than the inlet pipe connected with said nipple, a testing apparatus comprising a reducing plug adapted to engage said throat, a T coupling, a pipe connecting said T coupling with said reducing plug, a valved pipe adapted to connect said T coupling with a water supply pipe and a valved pipe for connecting said T coupling with the outlet leg of said trap.

2. A device of the character described comprising a U-shaped trap, both legs of which are provided with nipples at their upper ends and with lateral nipples, the inlet leg being of larger diameter than the outlet leg, the lateral nipple of the inlet leg having a screw-threaded throat of larger diameter than the inlet pipe connected with said nipple, a testing apparatus comprising a reducing plug adapted to engage said throat, a T coupling, a pipe connecting said T coupling with said reducing plug a valved pipe adapted to connect said T coupling with a water supply pipe and a valved pipe for connecting said T coupling with the outlet leg of said trap, and a bushing interchangeable with said test reducing plug and adapted to make said threaded throat flush with the inlet pipe when the test device is not in use.



3. A device of the character described comprising a U-shaped sewer trap having lateral inlet and outlet openings on its respective legs, a reducing plug engaging said inlet opening, an elbow feed pipe whereof the horizontal member is connected with said plug within the inlet leg of said trap and the vertical member extends outward through the top of said leg, a valved discharge pipe connected at one end with said elbow pipe and delivering into the outlet leg of said trap, and a valved supply pipe connected with said elbow feed pipe above the connection therewith of said discharge pipe, said elbow feed pipe being adapted to supply test water to the pipe system being tested and in conjunction with said valved discharge pipe to deliver the test water from said system into the off leg of said trap.

1,155,822. DAMPER-REGULATOR MECHANISM FOR STEAM-PRESSURE APPARATUS. JAMES L. KIMBALL, Salem, Mass., assignor to Walter G. Ruggles Co., Boston, Mass., a Corporation of Massachusetts. Filed Mar. 26, 1915. Serial No. 17,297. (Cl. 137—26.)



1. Apparatus of the kind described, comprising a valve body having inlet and exhaust ports and an intermediate delivery port, and a valve stem slidably arranged in said body and having slidably mounted thereon a sleeve, said sleeve having at its end a valve adapted to be pressed against a seat for controlling the passage from said delivery port to one of the other ports, said sleeve having a passage therethrough from said delivery port to the third port with a valve seat formation, and said stem having a valve to fit said seat and close said passage, said valves being arranged to open the one by a movement of said stem in one direction, and the other by a movement of the stem in the other direction.

2. Apparatus of the kind described, comprising a valve body having a delivery port with inlet and exhaust ports leading thereto, and a valve stem slidably arranged in said body to control said ports, said stem having a sleeve slidably mounted thereon with a valve formation at its end adapted to be pressed against a seat controlling the passage from said inlet port to said delivery port, said sleeve having a passage therethrough from said delivery port to said exhaust port and said stem having a valve for controlling said passage adapted to be pressed against a seat in said sleeve and to open by a relative movement between the stem and sleeve in a direction opposite to the opening movement of the valve at the end of said sleeve.

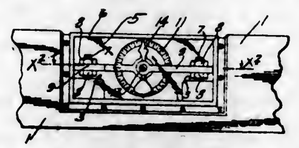
3. Apparatus of the kind described, comprising a valve body having a delivery port with inlet and exhaust ports leading thereto, and a valve stem slidably arranged in said body to control said ports, said stem having a sleeve slidably mounted thereon with a valve formation at its end adapted to be pressed against a seat controlling the passage from said inlet port to said delivery port, said sleeve having a passage therethrough from said delivery port to said exhaust port and said stem having a valve for controlling said passage adapted to be pressed against a seat in said sleeve and to open by a relative movement between the stem and sleeve in a direction opposite to the opening movement of the valve at the end of said sleeve, and a spring conecting between said sleeve and said stem for normally holding the valve on said stem against its seat in said sleeve.

1,155,823. CURTAIN-SUPPORT. JOSEPH V. KING, Jr., and GEORGE EDWARD RUFFLEY, Glenfield, Pa. Filed Nov. 19, 1914. Serial No. 873,020. (Cl. 156—24.)

1. A support of the character specified, comprising a pair of brackets adapted for connection with the opposite sides of a window casement, each bracket comprising a strip bent to form parallel end portions offset laterally, and connected by an integral web, each strip having a portion at the extremity of one of the end portions bent to lie alongside the outer face of the end portion in spaced relation, and each strip having an opening at the said extremity for receiving a curtain rod, the extremity serving as a stop to limit end movement of the pole, each strip having a head offset inwardly from the other end portion, one strip having openings in the last-named end portion and in the web and the other strip having notches in its upper edge and arranged similarly to the openings, said openings and notches being adapted to receive the trunnions of blind rollers.

2. A support of the character specified, comprising brackets adapted for connection with the opposite sides of a window casement, each bracket having two end portions offset laterally with respect to each other, and an integral web connecting the portions, the web being adapted for connection with the outer face of the window casement, each strip having means in the web portion and in one end portion for engagement by the trunnions of blind rollers, and having means at the other end portion for engagement by the end of a curtain pole, and having other means for limiting end movement of the curtain pole.

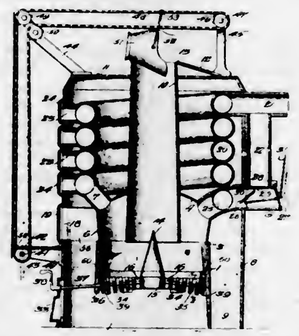
1,155,824. LEVEL. JOSEPH KNITLE, Minneapolis, Minn. Filed Jan. 6, 1915. Serial No. 714. (Cl. 33—219.)



1. In a level, the combination with a body member having a recess, of a bed-plate mounted in said recess and having an L-shaped slot extending through one edge thereof, a dial mounted in said slot on the bed-plate at the axis of the screw plug, and a gravity arighted indicator journaled at the axis of said dial for coöperation therewith.

2. In a level, the combination with a body member having a recess, of a bed-plate mounted in said recess and having an L-shaped slot extending through one edge thereof, an adjustable screw plug mounted in the prong of said bed-plate, a dial mounted in the long leg of said slot on the bed-plate at the axis of the screw plug, and a gravity arighted indicator, arranged for coöperation with said dial and having a shaft extending axially therethrough, said shaft having conical ends mounted in conical seats formed, one in the main body of said bed-plate and the other in said screw plug.

1,155,825. HOT-AIR FURNACE. DANIEL P. KURTZ, Elkhart, Ind. Filed Oct. 22, 1913. Serial No. 796,641. (Cl. 126—181.)

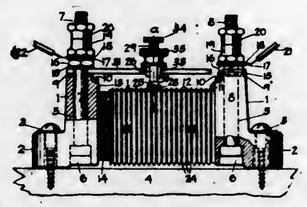


1. In a hot air furnace, a fire box provided in its top with a feed opening, a grate arranged transversely of the fire box and spaced below the feed opening, said grate comprising a series of radial shafts arranged in spaced relation and journaled in the fire box, each shaft having a series of arc-shaped transverse grate bars, one of the shafts being extended beyond the outer casing and having means for rotating the same, a toothed ring arranged within the fire box at the inner face thereof, the teeth being on the under edge of the ring, and a gear wheel on each shaft meshing with the ring.

2. In a hot air furnace, a fire box, and a grate arranged transversely of the fire box, a substantially conical deflector at the center of the grate, arms connected with the deflector and extending radially therefrom, the fire box having lugs upon which the outer ends of the arms rest, each lug having a fixed stop at one end to prevent movement of the arm in that direction, and a removable stop at the other end, shafts arranged radially of the fire box and journaled in the deflector at their inner ends, one of the shafts having means for engagment by a tool to rotate the same, a toothed ring arranged above the shafts and engaging the inner surface of the fire box, and a gear wheel on each shaft engaging the ring.

3. In a hot air furnace, a fire box, and a grate arranged transversely of the fire box, a substantially conical deflector at the center of the grate, arms connected with the deflector and extending radially therefrom, the fire box having lugs upon which the outer ends of the arms rest, each lug having a fixed stop at one end to prevent movement of the arm in that direction, and a removable stop at the other end, shafts arranged radially of the fire box and journaled in the deflector at their inner ends, one of the shafts having means for engagement by a tool to rotate the same, a toothed ring arranged above the shafts and engaging the inner surface of the fire box, a gear wheel on each shaft engaging the ring, and means for constraining the shaft to rotate in unison and in the same direction.

1,155,826. ADJUSTABLE RESISTANCE. EDWIN C. LARRY, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed June 26, 1915. Serial No. 36,516. (Cl. 219—62.)



1. An adjustable resistance comprising an insulating block, two binding posts thereon, two connected resistance coils on the block in circuit with the respective binding posts, one coil having open or spaced bare convolutions, a bar adjustable to either post and ranging along the coils, and a contact adjustable on the bar to conductively engage different convolutions of the open coil.

2. An adjustable resistance comprising an insulating block, two binding posts thereon, two connected resistance coils on the block, one coil of bare wire having open or spaced convolutions in circuit with one binding post, and the other close coil of covered wire being arranged at one end of the bare wire coil and in circuit with the other binding post, a bar held to one of the posts and ranging along the coils, and a contact adjustable on the bar to conductively engage different convolutions of the open coil.

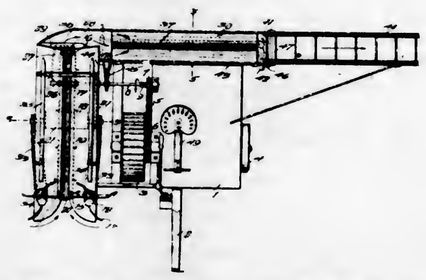
3. An adjustable resistance comprising an insulating block, two binding posts thereon, two connected resistance coils on the block, one coil having open or spaced bare convolutions in circuit with one binding post and the other coil having closely wound insulated convolutions in circuit with the other binding post, a bar conductively connected to one of the posts and ranging along the coils, and a contact adjustable on the bar to conductively engage different convolutions of the open coil.

4. An adjustable resistance comprising an insulating block, two binding posts thereon, two connected resistance coils on the block in circuit with the respective binding posts, one coil having open or spaced bare convolutions and the other coil having closely wound insulated convolutions in circuit with the other binding post, a bar conductively connected to one of the posts and ranging along the coils, and a contact adjustable on the bar and having opposite ends each engaging two convolutions of the open coil and therewith having four points of engagement at any desired adjustment of the contact along the bar.

5. An adjustable resistance comprising an insulating block grooved vertically at its opposite sides and obliquely at its lower edge, two binding posts on the block, two connected resistance coils on the block, one coil of bare wire having open or spaced convolutions in circuit with one binding post and entering said side and lower edge grooves of the block and ranging across its upper edge at right angles to the side walls of the block, and the other coil being arranged at one end of the open coil and in circuit with the other binding post, a bar held to one of the posts and ranging along the coils, and a contact adjustable on the bar to conductively engage different upper convolutions of the open coil.

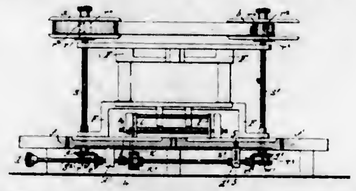
[Claims 6 to 15 not printed in the Gazette.]

1,155,827. CORN-HARVESTER. JOSEPH LIEBL, Clayton, S. D. Filed Dec. 3, 1914. Serial No. 875,327. (Cl. 56—113.)



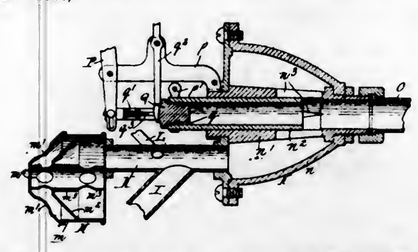
The improved corn harvester comprising parallel gathering boards inclined toward each other and separated by a narrow space, chain conveyers extending along the lower edges of the boards snapping rollers disposed below said conveyers and arranged parallel to the same, and means for driving the same whereby they are adapted to forcibly separate the ears from the stalks, and a toothed beater disposed below and extending transversely of the conveyer, as described.

1,155,828. TYPE-WRITING MACHINE. ARTHUR LOPEZ, New York, N. Y., assignor to The Hammond Typewriter Company, New York, N. Y., a Corporation of New York. Filed Apr. 1, 1912. Serial No. 687,671. (Cl. 197—160.)



In a typewriting machine, the combination with horizontally arranged ribbon spools having a central shell or bushing provided with a vertical slot therein, of vertical cylindrical spool-shafts extending within said bushings, the said shafts being provided with vertically disposed slots within said bushings, vertical slide-rods guided in said shafts and extending through the same within the said bushings, a horizontal shiftable reversing shaft supported in bearings on the base-plate of the machine, bevel gears on the reversing shaft, and bevel gears on the vertical shafts, adapted to be alternately engaged by the gears of the reversing shaft, worms on the said shaft adapted to be engaged by the lower ends of the slide-rods, elbow-levers fastened within the slots of the said bushings, one arm of the said lever adapted to be held flush with the surface of the said bushing in one position of movement when engaged by the ribbon wound around the same, the other arm of the said lever extending through the said slot of the shaft and engaging the slide-rod therein, and holding the same raised from the said worm-gear of the shiftable reversing shaft, the weight of the said arm being adapted to cause the same to drop down into engagement with the said worm-gear upon release of the said elbow-lever by the ribbon, the engagement of the said rods with the respective worm-gears adapted to cause an alternate shifting of the said shiftable reversing shaft, to cause a reversal of the action of the ribbon spools.

1,155,829. CARBURETER. LINUS J. MCADAM, Barker, N. Y. Filed Mar. 21, 1914. Serial No. 826,223. (Cl. 48—155.)



1. In a carbureter, the combination of a fuel atomizing device, a tube having an opening in its side into which the atomized fuel is admitted, an air inlet valve at the end of said tube, and means for admitting compressed air into said tube in proximity to the inlet for said atomized fuel.

2. In a carbureter, the combination of a fuel atomizing device, a tube into which the atomized fuel is admitted, an air valve for admitting air into said tube, said valve having a member which is moved in one direction by the suction within said pipe to open the valve and which is moved in the opposite direction by compression to close the valve, and means for admitting compressed air into said tube.

3. In a carbureter, the combination of a mixing chamber connected with the intake of an internal combustion engine, means for atomizing liquid fuel, a pipe into which said atomized fuel is discharged and which connects with said mixing chamber, and a pipe connecting a source of air under pressure with said mixing chamber in rear of the connection of said atomized fuel pipe therewith, and means under the control of the engine for admitting additional air to said mixing chamber in rear of the connection of said atomized fuel pipe therewith.

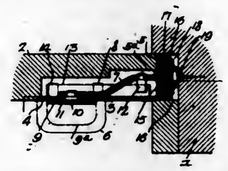
4. In a carbureter, the combination of a fuel atomizing device, a pipe for supplying air under pressure to said atomizing device to atomize the fuel, a passage which is connected with the intake of an internal combustion engine and into which said atomized fuel is discharged, suction-operated valves for separately admitting atmospheric air to said compressed air supply pipe and to said passage, and means for delivering a supplemental supply of compressed air to said passage adjacent to the portion thereof into which the atomized fuel is admitted.

5. In a carbureter, the combination of a fuel atomizing device, a tube into which the atomized fuel is admitted, an air valve for admitting air into said tube, said valve having a member which is moved in one direction by the suction within said pipe to open the valve and which is moved in the opposite direction by compression to close the valve, means for admitting compressed air into said tube, and a safety valve adapted to be opened by abnormal pressure.

[Claims 6 and 7 not printed in the Gazette.]

1,155,830. SASH-RETAINER. WALLACE B. MCALLISTER, Camden, N. J., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 4, 1915. Serial No. 12,092. (Cl. 16—19.)

1. The combination in means for retaining a sash in a fixed position, of a V-shaped rail mounted in a groove on the frame in which the sash slides, a retainer mounted on the sash consisting of a plate, a lever pivoted thereto having a head, and a loose plate having flanges extending back of the V-shaped rail, the head being in front of the rail so that when the parts are in the normal position the rail is clamped between the head and the flanges of the plate, and when the head is released the rail is free and the sash can be raised or lowered.

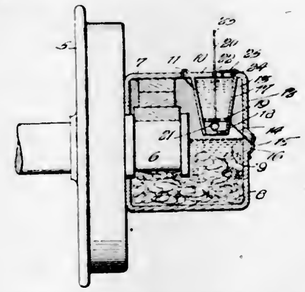


2. The combination of a frame having a groove therein, a V-shaped rail mounted in the groove, a sash arranged to travel in the groove, a retainer carried by the sash consisting of a plate, a lever pivoted to the plate having a head extending into the groove of the rail, a spring tending to raise the head so as to have an angular position in respect to the rail, and a loose plate having flanges extending back of the rail and clamped to the rail by the pressing of the head caused by the action of the spring.

3. The combination of a frame, of a groove therein, a V-shaped rail mounted in the groove, a sash arranged to travel in the groove, a retainer consisting of a plate having a right-angled extension located at the edge of the sash, said extension being slotted, a lever pivoted to the plate and extending through the said slot, and having a beveled head thereon projecting into the groove of the rail, a slotted plate mounted between the head and the end of the retainer plate and having beveled flanges extending back of the rail, a spring tending to hold the lever in its raised position so as to cause the head to clamp the rail against the flanges of the plate, and means for moving the lever against the pressure of the spring.

4. The combination of a frame, a sash arranged to slide therein, a vertical rail, a retainer on the sash, the retainer on the sash having a headed lever arranged to bear on one side of the rail, and a loose plate carried by the retainer and having flanges bearing upon the opposite side of the rail, with means for yieldingly holding the parts in the locked position.

1,155,831. JOURNAL-BOX. FRANK A. MCGUIRE, Iola, Kans. Filed Feb. 6, 1915. Serial No. 6,561. (Cl. 64—28.)



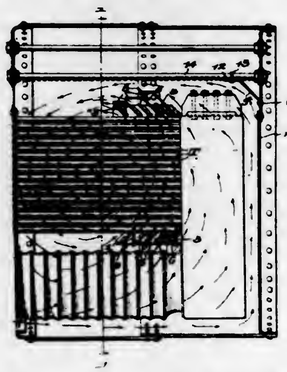
1. The combination with a journal box of a lid, a cup depending from the lid and being open at its lower end, said lid within the compass of the cup being provided with a filler opening, a stopper disposed in the lower open end of the cup and adapted to fuse at a predetermined temperature, a spider disposed within the cup and being provided with an opening, a rod slidably extending through the opening in the spider and bearing at its lower end against said stopper, said rod at its lower end being provided with an eye, said rod also extending through an opening in the lid and projecting above the same when the stopper is in place, the upper end of the rod being provided with an eye, said rod when the stopper is melted being adapted to drop whereby to provide a signal, substantially as described.

2. The combination with a journal box having a lid, of a cup depending from said lid and being open at its lower end and adapted to receive oil, a fusible stopper disposed in the lower end of the cup for closing the same whereby to retain the oil within the cup, a spider arranged in the cup, a rod slidably extending through the spider and through the lid of the box and resting against said stopper, substantially as described.

3. The combination with a journal box, of an oil reservoir disposed therein and having a fusible closure, and a signal supported by the closure and adapted to be actuated upon fusion of said closure.

4. The combination with a journal box having a lid, of a cup depending from the lid and provided with a fusible stopper adapted to maintain oil within the cup except at a predetermined temperature, and a rod visible from without the box and resting against the stopper, said stopper adapted to melt at a predetermined temperature whereby to allow the discharge of oil from the cup into the box, and to allow shifting movement of the rod.

1,155,832. BOILER-CIRCULATOR. ALEXANDER MCNAB, Bridgeport, Conn., assignor to The McNab Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Nov. 19, 1914. Serial No. 872,938. (Cl. 122—410.)



1. In a boiler circulator, a pair of spaced side plates, and blades rigidly connected at their ends to the side plates and formed at their upper portions into horizontally extending nozzles.

2. In a boiler circulator, a series of spaced blades adapted to be transversely arranged with respect to the boiler tubes, some of said blades having their upper portions formed into horizontally extending gradient nozzles.

3. In a boiler circulator, a series of spaced blades adapted to be transversely arranged with respect to the boiler tubes, some of said blades being formed into nozzle portions which latter extend in horizontal successively overlapping relation to form superposed water passages.

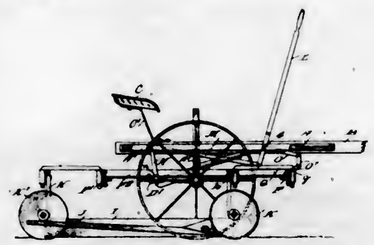
4. In a boiler circulator, a series of blades, and a forward horizontal extension on alternate blades, said extensions forming superposed nozzles.

5. In a boiler circulator, blades forming passages and horizontally extending nozzles overlying the passages and communicating therewith.

[Claim 6 not printed in the Gazette.]

1,155,833. CULTIVATOR. EDWIN MELTON, Clovis, N. Mex. Filed Feb. 19, 1915. Serial No. 9,296. (Cl. 97—35.)

1. In a cultivator of the character described, a main frame, a horizontal cultivator frame within the main frame and including transversely extending bars at its forward and rear ends, sleds carried by the cultivator frame at each side thereof, each of said sleds having swiveled connections with the said forward and rear cultivator frame bars whereby to permit of free lateral adjustment thereof, and each of said sleds including parallel longitudinal runners and cultivating implements carried by the said sleds, certain of which implements are set to guide the sleds in operation.



2. In a cultivator of the character described, a main wheeled frame, a horizontal cultivator frame within the main frame, sleds carried by the cultivator frame at each side thereof, each of which sleds has swiveled connections with the cultivator frame whereby to permit of free lateral movement thereof, and each of which sleds includes parallel runners, and cultivating implements carried by the said sleds.

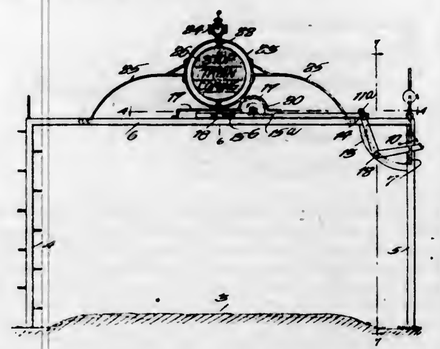
3. In a cultivator of the character described, a main wheeled frame, a horizontal cultivator frame within the main frame, sleds carried by the cultivator frame at the sides thereof, each of said sleds having swiveled connection with the cultivator frame permitting of free lateral movement thereof, and cultivating implements carried by the sleds, certain of which operate to guide the sleds and control their lateral movement.

4. In a cultivator of the character described, the combination of a main wheeled frame, a horizontally disposed cultivator frame in the main frame, and including transversely extending forward and rear bars, clips adjustably bolted upon the outer portion of the said transverse bars and being provided with a vertical bearing, sleds carried by the opposite sides of the cultivator frame and each having vertical bearings at its forward and rear ends, carrying rods having downturned forward and rear ends, the former of which are disposed in the bearings of the clips and the latter of which are disposed in the bearings of the sleds, whereby to permit the sleds to laterally adjust themselves with respect to the cultivator frame in use, said sleds being each provided with cutters, and with cultivator disks, certain of which act to guide the sleds in the furrows.

5. In a cultivator of the character described, a main wheeled frame, a horizontally disposed cultivator frame in the main frame, the said cultivator frame including transversely extending forward and rear bars, the ends of which project beyond the opposite sides of the main frame, clips adjustably connected to the said ends of the transverse cultivator frame bars and provided with vertical bearings, sleds disposed beneath the said end of the cultivator frame bars and provided at their forward and rear ends with U-shaped hangers each of which is provided at its upper end with a vertically disposed bearing, carrying rods having downturned forward and rear ends respectively disposed in the bearings of the clips and the said hanger bars, runners secured to the lower extremities of the hanger bars and arranged parallel with one another, cutters secured to the said runners, and cultivator disks carried by the lower extremities of the hanger bars at the forward ends, and upon opposite sides, of the sleds, the said disks being disposed to guide the sleds in the rows.

1,155,834. RAILWAY AND HIGHWAY SIGNALING DEVICE. AMOS H. MESSER, Mankato, Minn. Filed Mar. 24, 1915. Serial No. 16,642. (Cl. 246—32.)

1. The combination with a railway track and a highway crossing therefor, of a signal disposed adjacent to said highway crossing, the normal position of said signal being such as to indicate a free and unobstructed crossing, a semaphore disposed along the railway track, the normal position of the semaphore being such as to indicate danger, means for simultaneously bringing said highway crossing signal into the danger position and the semaphore into the clear position, said last-named means comprising an electric motor, a rack operated thereby, a pinion operated by said rack and having connection with said highway crossing signal for operating the latter, and a lever and link connection at the opposite end of the rack for operating the semaphore.



2. The combination with a railway track and a highway crossing therefor, of a signal disposed adjacent to said highway crossing, the normal position of said signal being such as to indicate a free and unobstructed crossing, a semaphore disposed along the railway track, the normal position of the semaphore being such as to indicate danger, means for simultaneously bringing said highway crossing into the danger position and the semaphore into the clear position, said last-named means comprising an electric motor, a pinion carried by the motor shaft, a rack arranged to mesh with said pinion, a second pinion arranged to mesh with said rack, a shaft for said second named pinion, a disk carried by said shaft, a bell crank lever at the opposite end of said rack having a pin and slot connection therewith, and a link connected to one end of said bell crank lever and having a pivotal connection with said semaphore at the other end.

1,155,835. ELECTRICAL SCROLL-SAW. GEORGE H. MURPHY, Balls Ferry, Cal. Filed Jan. 26, 1915. Serial No. 4,501. (Cl. 219—29.)



1. An electrical scroll saw, comprising a frame having a binding post for clamping the cutting member, a conductor carried by said frame having a binding post for clamping the opposite end of said cutting member, an insulating member arranged within said conductor to electrically insulate the frame and conductor, and a handle surrounding said conductor.

2. An electrical scroll saw, comprising a substantially U-shaped spring frame having a binding post at one end and provided with a projecting portion at the other end, a tubular conductor arranged over said projecting portion of said frame having a lug provided with a binding post, a cutting member having its ends secured respectively to the frame and projecting portion of said conductor, and lead wires connected respectively to the extension of said frame and conductor.

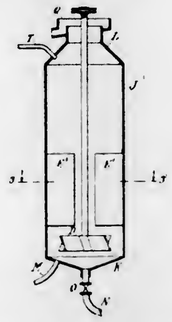
3. A scroll saw comprising a U-shaped spring frame having an extension at one end, a tubular conductor arranged upon said extension having a laterally projecting lug provided with a binding post, a binding post carried by the opposite end of said spring frame, a cutting member having its ends connected respectively to said frame and laterally projecting lug of said conductor by said binding posts, an insulating sleeve surrounding said extension within said tubular conductor, and a handle arranged over said conductor.

4. As a new article of manufacture, an electrical scroll saw, comprising a substantially U-shaped spring frame having an extension formed on one end thereof forming a conductor, a lead connected to said extension, an insulating sleeve surrounding said conductor, a tubular conductor arranged over said insulating sleeve having an extension, a cutting member having its ends connected respectively to the free end of said frame and said extension of said tubular conductor, and a lead connected to said tubular conductor.

5. An electrical scroll saw, comprising a substantially U-shaped spring frame having a binding post at the end of one of the legs thereof, and provided with an extension at the end of the opposite leg, an insulating sleeve surrounding said extension, a lead wire connected to said extension, a tubular conductor surrounding said insulating sleeve having an extension provided with a binding post, a cutting member connecting said extension with the free end of said frame and secured therein by a binding post, a handle surrounding said tubular conductor, and a lead wire connected to said tubular conductor.

[Claim 6 not printed in the Gazette.]

1,155,836. APPARATUS FOR THE CONCENTRATION OF ORES. THOMAS MACKELLAR OWEN, Broken Hill, New South Wales, Australia, assignor to Minerals Separation American Syndicate (1913) Limited, London, England. Filed May 2, 1914. Serial No. 835,811. (Cl. 83—85.)



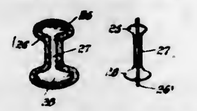
1. In an apparatus for concentrating ores by gaseous flotation of certain mineral particles in liquid, a single upright vessel open at the top comprising both an agitation and a separation vessel, an inlet conduit for ore pulp at the bottom of the vessel, an outlet conduit for tailings near the top of the vessel, a rotatable agitator in the lower part of the vessel, a conduit for air leading into the lower part of the vessel, vertically elongated baffles immediately above the agitator terminating at a substantial distance below the surface of the liquid in the vessel for producing a baffling zone above the atomizing zone

and a substantially quiescent topmost and separating zone above the baffling zone.

2. In an apparatus for concentrating ores by gaseous flotation of certain mineral particles in liquid, a single upright vessel open at the top comprising both an agitation and a separation vessel, an inlet conduit for ore pulp at the bottom of the vessel, an outlet conduit for tailings near the top of the vessel, a rotatable agitator in the lower part of the vessel, a conduit for air leading into the lower part of the vessel, vertically elongated baffles immediately above the agitator terminating at a substantial distance below the surface of the liquid in the vessel for producing a baffling zone above the atomizing zone and a substantially quiescent topmost and separating zone above the baffling zone, and a concentrates launder arranged at the top of the vessel for continuous removal of froth.

3. In an apparatus for concentrating ores by gaseous flotation of certain mineral particles in liquid, a single upright cylindrically shaped vessel comprising both an agitation and a separation vessel, an inlet conduit for ore pulp at the bottom of the vessel, an outlet conduit for tailings near the top of the vessel, a rotatable agitator in the lower part of the vessel, an air conduit for air leading into the lower part of the vessel, a valve in the air conduit for regulating the amount of air delivered to the agitation zone, four vertically elongated baffles above the agitator terminating at a substantial distance below the surface of the liquid in the vessel for producing a baffling zone above the atomizing zone and a substantially quiescent topmost and separating zone above the baffling zone, and a concentrates launder arranged at the top of the vessel for continuous removal of froth.

1,155,837. METHOD OF MAKING CUFF-BUTTONS. MEYER L. ROBBINS, New York, N. Y. Filed Feb. 19, 1915. Serial No. 9,265. (Cl. 79—3.)

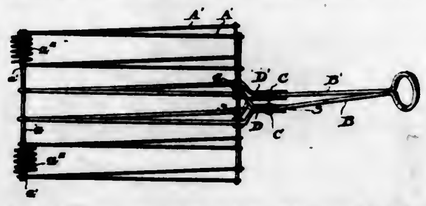


1. The herein described method of making one piece buttons having a solid stem, head or bean and a base without seam or joint, consisting in cutting a metal blank strip having a web and an accumulation of metal of greater thickness than the web, along each longitudinal edge of said web, into a series of individual blanks by cuts which extend transversely of the length of the blank strip through the web and top and bottom accumulations of metal, then shaping the accumulations of metal at each end of the individual button blank into substantially bulbous shapes and then flattening one of these bulbous shapes into a disk, substantially as set forth.

2. The herein described method of making one piece buttons having a solid stem, head or bean and a base without seam or joint, consisting in cutting a metal blank strip having a web and an accumulation of metal of greater thickness than the web, along each longitudinal edge of said web, into a series of individual blanks by cuts which extend transversely of the length of the blank strip through the web and top and bottom accumulations of metal, then shaping the accumulations of metal at each end of the individual button blank into substantially bulbous shapes, removing the metal surrounding the blank in the form of a fin and then pressing the bottom accumulation of metal into a disk, substantially as set forth.

3. The herein described method of making one piece buttons having a solid stem, head or bean and a base without seam or joint, consisting in cutting a metal blank strip having a web and an accumulation of metal of greater thickness than the web, along each longitudinal edge of said web, into a series of individual blanks by cuts which extend transversely of the length of the blank strip through the web and top and bottom accumulations of metal, then shaping the accumulations of metal at each end of the individual button blank into substantially bulbous shapes, removing the metal surrounding the blank in the form of a fin and then pressing the bottom accumulation of metal into a disk and finally removing the fin surrounding said disk, substantially as set forth.

1,155,838. TOASTER. DAVID ROSE, Lancaster, Pa. Filed Jan. 16, 1915. Serial No. 2,541. (Cl. 53—5.)



1. A toaster comprising grated members hinged together at one edge and handle members each pivoted to one of said grated members at the free edge thereof, said handle members forming a handle arranged at an angle to said grated members, and means for securing each handle member to one of said grated members at an angle from either side of the toaster.

2. A toaster comprising grated members hinged together at one edge and handle members pivoted thereto at the free edge thereof, said handle members forming a handle adapted to be arranged at different angles to said grated members extending from either side thereof, and means for securing said handle at the desired angle in a fixed position relatively to said grated members.

3. A toaster comprising grated members hinged together at one edge and each having a tang projecting from the opposite edge thereof, handle members each pivoted to one of said tangs and together forming a handle, and interlocking means on said handle members and tangs for securing said handle in a fixed position relatively to said grated members at an angle thereto.

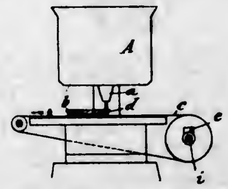
4. A toaster comprising grated members hinged together at one edge and each having a tang projecting from the opposite edge thereof, said tangs having notches therein, handle members each pivoted to one of said tangs and together forming a handle, the shanks of said handles also having notches therein, and means for interlocking engagement with opposed notches of the handle and shank for securing the handle in a fixed position relatively to the toaster at an angle thereto.

5. A toaster comprising grated members hinged together at one edge and each having a tang projecting from the opposite edge thereof, said tangs having notches in opposite sides thereof, handle members each pivoted to one of said tangs and arranged to support the grated members at an angle thereto, the shanks of said handle members also having notches on opposite sides thereof, and means on said handles for interlocking engagement with opposed notches in said tangs and shanks for securing the handle at an angle to the grated members on either side thereof.

[Claim 6 not printed in the Gazette.]

1,155,839. CHOCOLATE-MOLDING APPARATUS. ADOLF ALFRED SCHNEIDER, Dresden, Germany, assignor to I. M. Lehmann, Dresden, Germany, a Firm. Filed Oct. 26, 1911. Serial No. 656,797. (Cl. 107—27.)

1. In a chocolate-molding apparatus, a filling receptacle, a nozzle, said nozzle being always in free and full communication with said filling receptacle, whereby a continuous stream of material always enters from said filling receptacle into said nozzle, said nozzle being stationary, a conveyer-belt passing underneath the outlet of said nozzle, and adapted to carry molds for the paste delivered from the mouth of said nozzle, said nozzle and the mouth thereof being always open, whereby a continuous stream passes through said nozzle and out of the mouth thereof, means for moving said conveyer-belt in a given direction so as to carry said mold from one end thereof to the other under said nozzle, to receive the material flowing from the mouth of said nozzle, and means for suddenly reversing the motion of said conveyer-belt as the posterior end of said mold passes directly underneath the said mouth of the said nozzle, so that the said stream of material passing continuously from said filling receptacle and through said nozzle is broken off, the severed end of said stream falling into said mold.



2. In a chocolate-molding apparatus, a filling receptacle, a nozzle, said nozzle being always in free and full communication with said filling receptacle, whereby a continuous stream of material always enters from said filling receptacle into said nozzle, said nozzle being stationary, a conveyer-belt passing underneath the outlet of said nozzle, and adapted to carry molds for the paste delivered from the mouth of said nozzle, said nozzle and the mouth thereof being always open, whereby a continuous stream passes through said nozzle and out of the mouth thereof, means for moving said conveyer-belt in a given direction so as to carry said mold from one end thereof to the other under said nozzle, to receive the material flowing from the mouth of said nozzle, and means for suddenly reversing the motion of said conveyer-belt as the posterior end of said mold passes directly underneath the said mouth of the said nozzle, so that the said stream of material passing continuously from said filling receptacle and through said nozzle is broken off, the severed end of said stream falling into said mold, said mold being spaced from the mouth of said nozzle.

1,155,840. PROCESS OF FIXING NITROGEN. OTTOKAR SERPEK, Paris, France, assignor to Société Générale des Nitrurés, Paris, France. Filed Dec. 23, 1913. Serial No. 808,478. (Cl. 23—13.)

1. A process of fixing nitrogen, consisting in subjecting ferro-aluminium to the action of nitrogen in the presence of a mixture of carbon and aluminous material, heating to the temperature of fixation of nitrogen on the ferro-aluminium, and allowing the temperature to rise, by the exothermic reaction, to the temperature of fixation of nitrogen on the aluminium of the aluminous material mixed with carbon.

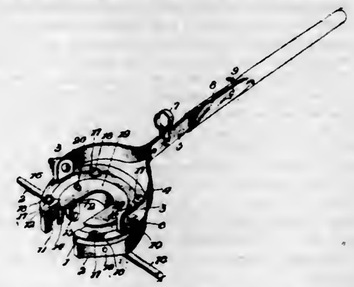
2. A process of fixing nitrogen, consisting in subjecting ferro-aluminium to the action of nitrogen in the presence of a mixture of carbon and aluminous material, heating to about 1200° C. and allowing the temperature to rise, by the exothermic reaction of the nitrogen on the ferro-aluminium, up to about 1800°–1900° C. a temperature at which the fixation of nitrogen on the aluminium of the aluminous material mixed with carbon is produced.

1,155,841. WRENCH. ANDREW J. SEYBERT, East Brady, Pa. Filed Aug. 26, 1915. Serial No. 47,436. (Cl. 81—90.)

1. A wrench of the kind described, comprising a head member having a hexagonal depending flange, one side of said flange being cut away to form an opening, pins extending through the other sides of said flange carrying rollers, and a jaw having a lateral flange mounted upon said rollers.

2. The combination with a head provided with upwardly projecting ears, of a lever provided with arms pivotally connected to said ears, rollers carried by said head, and a jaw revolubly mounted upon said rollers.

3. In a wrench of the kind described, the combination with a head, having a six-sided depending flange, one of said sides being cut away to form an opening, stud pins extending through the other side of said flange, rollers mounted on the inner ends of said stud pins, a jaw having a lateral flange mounted upon said rollers within said head, means for holding said jaw in position therein, and a forked lever having pivotal connection with said head.

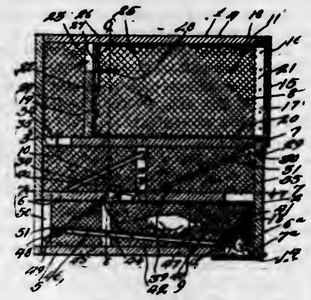


4. In a wrench of the kind described, the combination with a head, of a series of rollers carried by said head, a jaw provided with a lateral flange revolubly mounted upon said rollers within said head, a detachable handle carried by said jaw in a plane below said head, means for securing said jaw within said head, and a lever having a pivotal connection with said head.

5. In a wrench of the kind described, the combination with a ring shaped head having a depending flange, of stud pins extending transversely through said flange, rollers mounted upon the inner ends of said stud pins, a jaw provided with a lateral flange arranged within said head and mounted upon said rollers, means for securing said jaw within said head, oppositely disposed ears formed on said ring, a forked lever having its arms pivotally connected to said ears, and handles carried by said jaw below said head.

[Claims 6 to 9 not printed in the Gazette.]

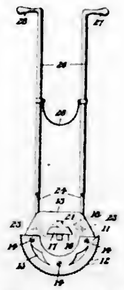
1,155,842. TRAP. JAY B. SHADLEY, Danville, Ill. Filed Apr. 8, 1915. Serial No. 19,957. (Cl. 43—26.)



1. A trap comprising a casing having three compartments superimposed, the inner end of the lower compartment having a bait chamber, a pair of trap members pivotally mounted in the lower compartment, one disposed in parallelism to and upon the other, one designed to be overbalanced by the weight of the animal to actuate and close the other trap member, means for automatically catching and holding the closed trap member, an opening between the lower compartment and the adjacent compartment, a pair of trap members in said adjacent compartments to prevent the backward passage of the animal, one of the trap members in the adjacent compartment when tilted upwardly operating said catching and holding means for releasing the first closure or trap member, the upper compartment being divided into two chambers, and means for preventing the backward passage of the animal from one chamber to the other.

2. An animal trap comprising a casing having three compartments super-imposed, the lower or first compartment having a bait chamber at one end, a trap member pivoted in the lower compartment having long and short portions, a second trap member pivoted in the lower or first compartment and lying against and in parallelism to the short portion of the first trap member holding the same set for the animal, the longer portion of the first trap member designed to be overbalanced by the weight of the animal causing the short portion to tilt the second trap member upwardly to close the first or lower compartment, a latch pivotally carried by the bottom of the second or adjacent compartment and protruding slightly below the bottom to automatically engage and hold the second trap member when closed, an opening between the first and second or adjacent compartment, and means in the second or adjacent compartment actuated by the animal to operate the latch to release the second trap member of the first or lower compartment, the uppermost compartment being divided into two chambers and having means to prevent the retrograde passage of the animal to one chamber or the other.

1,155,843. COMBINED CUTTER AND CHOPPER. STEVEN SIMON, Muskegon Heights, Mich. Filed Apr. 16, 1915. Serial No. 21,779. (Cl. 144—81.)



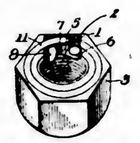
1. A cutter comprising spaced bars, of semi-circular cutting blades having sharpened edge teeth, mounting plates removably secured between the members of each pair of blades and having alined openings therethrough, casing blocks of a width equal to the thickness of two of the said blades and positioned between adjacent ones of the said plates and having perforations therethrough in alinement with the said plate openings, a locking block slidably positioned through the said perforations and openings, and operating handles pivoted to the said bars.

2. A cutter comprising spaced bars, of semi-circular cutting blades having sharpened edge teeth, mounting plates removably secured between the members of each pair of blades and having alined openings therethrough, casing blocks of a width equal to the thickness of two of the said blades and positioned between adjacent ones of the said plates and having perforations therethrough in alinement with the said plate openings, a locking block slidably positioned through the said perforations and openings, perforated lugs upon the opposite ends of the said bars, set screw connections between the said bars and block, locking cotter pins carried adjacent the opposite ends of the said block, bails pivoted to the said bar lugs, operating handles centrally attached to the said bails, and a limiting chain connected between the said handles.

1,155,844. NUT-LOCK. ALBERT E. SMITH, Dunkirk, N. Y. Filed Dec. 12, 1914. Serial No. 876,834. (Cl. 151—34.)

1. The combination of a threaded nut, a threaded bolt, and a nut lock therefor, including a roller housed in a recess in one of said parts and adapted to prevent the nut from turning relative to the bolt, said roller having a helical biting lip formed thereon.

2. The combination of a threaded nut, a threaded bolt and a nut lock therefor, including a roller housed in a recess formed in the inner face of the nut, said recess having an inclined inner wall on which said roller is adapted to rest, said roller having a plurality of parallel gripping lips extending in a helical path about the cylindrical surface of said roller.

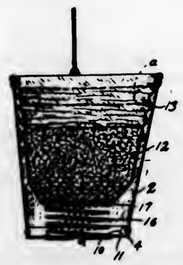


3. The combination of a threaded nut, a threaded bolt and a nut lock therefor, including a roller housed in a recess formed in the inner face of the nut, said recess having an inclined inner wall on which said roller is adapted to rest, said roller having a plurality of parallel gripping lips extending in a helical path about the cylindrical surface of said roller, said recess for the roller in said inclined inner face having an enlarged pocket adapted to receive said gripping roller when the same is forced over the shoulder formed by said inclined surface.

4. The combination of a threaded nut, a threaded bolt and a nut lock therefor, including a roller housed in a recess formed in the inner face of the nut, said recess having an inclined inner wall on which said roller is adapted to rest, said roller having a plurality of parallel gripping lips extending in a helical path about the cylindrical surface of said roller, and means for retaining said gripping roller in said recess, said means being so constructed as to permit the roller to freely move along the inclined surface of said recess.

5. The combination of a threaded nut, a threaded bolt and a nut lock therefor, including a roller housed in a recess formed in the inner face of the nut, said recess having an inclined inner wall on which said roller is adapted to rest, said roller having a plurality of parallel gripping lips extending in a helical path about the cylindrical surface of said roller, said nut having an annular groove formed in the inner face thereof, a retaining clip located in said groove and adapted to move endwise therein, said clip serving to hold said gripping roller in said recess.

1,155,845. FEED-BAG. WILLIAM H. STEFFENS, New York, N. Y. Filed Oct. 2, 1914. Serial No. 864,694. (Cl. 119—65.)



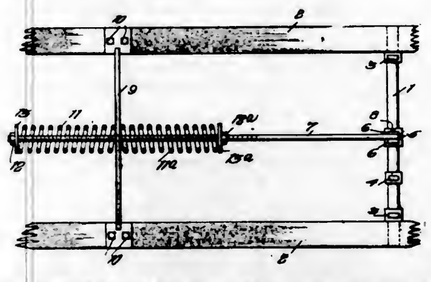
1. A feed bag comprising, in combination, an outer flexible bag, an inner receptacle having approximately rigid bottom and sides, the latter extending upward a substantial distance, a flexible extension connecting the top of said receptacle with the top of the outer bag, and a spring interposed between the receptacle and the bottom of the bag.

2. A feed bag comprising, in combination, an outer flexible bag, a ring for holding the same open at the top, an inner receptacle having approximately rigid bottom and sides, the latter extending upward a substantial distance, a flexible section secured to said receptacle, means detachably connecting said flexible extension to the top of the outer bag at a series of points around the same, and a spring interposed between the receptacle and the bottom of the bag.

3. A feed bag comprising, in combination, an outer flexible bag, a rigid bottom for said bag comprising a plate formed with large openings and having a circular depressed groove arched at one or more points by portions of the metal cut and forced upward, an inner substantially rigid receptacle, a flexible section connecting the top of said receptacle with the top of the bag, and a spring interposed between the receptacle and the bottom of the bag, the lower coil of the spring being seated in said groove and passed beneath the said arched portions.

4. A feed bag comprising, in combination, an outer flexible bag, an inner substantially rigid receptacle, a flexible extension connecting the top of said receptacle with the top of the outer bag, means for detachably fastening said flexible extension to the outer bag, a spring interposed between the receptacle and the bottom of the bag, and a flexible cover provided with means for buttoning the same over the top of the bag.

1,155,846. COUNTERBALANCING DEVICE. JOHN J. STRONG, Birmingham, Ala. Filed July 29, 1914. Serial No. 853,862. (Cl. 74—5.)



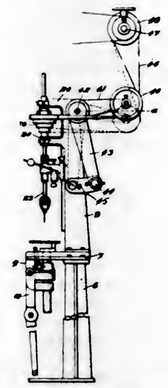
A counterbalancing device for use in connection with the reversing mechanism of a locomotive and comprising in combination with the frame of the locomotive having a cross brace plate and an oscillating shaft journaled transversely of the frame parallel with the plate and connected to the reversing mechaniam, said oscillating shaft having intermediate its ends a radial arm, and a counterbalance rod pivoted at one end to the radial arm, the cross brace plate having an opening through which the rod extends, a coil spring encircling the rod on each side of the brace plate, and a stop on the rod at the outer end of each spring and adjustable longitudinally of the rod to vary the tension of the adjacent spring.

1,155,847. GEARING. HARRY P. TOWNSEND, Waterbury, Conn. Filed Sept. 17, 1910. Serial No. 582,446. (Cl. 74—21.)

1. In combination with a horizontally arranged shaft, a supporting frame located below the level of said shaft, a spindle with its axis vertically disposed mounted in said frame, a cone pulley arranged on said spindle, a bent stub shaft mounted on said frame, idlers mounted on the bent shaft in fixed relative positions with the axis of one disposed at an angle relative to the axis of the other, a single-faced pulley upon said horizontal shaft, a driving belt passing over said pulleys and idlers, and means for changing the position of the idlers relative to the frame to direct the belt to a selected face of the cone pulley.

2. In combination with a horizontally-arranged shaft, a supporting frame located below the level of said shaft, a spindle with its axis vertically disposed mounted in said frame, a cone pulley secured to said spindle, a stub shaft having an offset end mounted on said frame, a pair of idlers adjustably mounted on said stub-shaft in fixed relative positions with the axis of one angularly-disposed relative to the axis of the other, a driving belt passing over said pulley, idlers and horizontally-arranged shaft, one of said idlers being mounted with its plane arranged parallel to a plane passing vertically through the axis of the spindle directly from the front to the back of the frame.

3. In a drill press, a supporting frame, a spindle mounted therein with its axis vertically arranged, a stepped cone pulley secured to the spindle, a power shaft, a single-faced power pulley on the power shaft, rigidly connected idlers adjustably mounted on the frame with the axis of one angularly-disposed relative to the axis of the other, the axis of the power pulley being parallel to the axis of one of the idlers, a driving belt passing directly over said cone pulley, idlers and power pulley, one of said idlers having its face located substantially at right angles to the direction of travel of the belt from the front of the frame to the rear thereof, and means for positioning the idlers with respect to the cone pulley.



4. In a drill press, a supporting frame, an overhead driving shaft, a vertical spindle mounted in said frame, a carrier pivotally mounted upon the frame with a handle extending to the front thereof, idler pulleys mounted on the carrier, a single-faced driving pulley mounted on said shaft with its axis arranged substantially in a plane at right angles to a plane passing directly from the front to the rear of the supporting frame and parallel to the axis of one of the idlers, said carrier being arranged to move the idlers in substantially a straight line parallel to the spindle, a stepped cone pulley mounted on the spindle, a driving belt passing over the cone pulley, idlers and single-faced driving pulley, the width of adjacent steps or faces of the cone pulley being proportioned to the difference in diameter of said steps to compensate for the change of positions of the idlers to maintain a tant stretch of the horizontal run of the belt.

1,155,848. RECTAL SYRINGE. CHARLES A. TYRRELL, New York, N. Y. Filed Sept. 17, 1914. Serial No. 862,178. (Cl. 128—25.)



A rectal syringe nozzle comprising a rigid tube whose inner end is adapted to engage a water-bag valve-casing and whose outer end is provided with an outward retaining lip, and a soft rubber tube comprising an elastic unperforated thin-walled shank fitting closely over said rigid tube

and an elongated yielding but comparatively stiff extension projecting beyond the outer end of said rigid tube, said extension having thickened walls and a thickened closing outer end and being provided with perforations below said thickened end.

1,155,849. MANUFACTURE OF STEEL. WILLIAM R. WALKER, New York, N. Y. Filed Aug. 24, 1909. Serial No. 514,582. (Cl. 204—64.)

1. In the manufacture of steel, the steps comprising treating molten iron containing a percentage of manganese in a Bessemer converter or open hearth furnace, stopping the treatment while the percentage of manganese is relatively high, transferring the heated metal to a basic-lined electric furnace and treating it therein.

2. In the manufacture of steel, the steps comprising treating molten iron containing a percentage of manganese in a Bessemer converter or open hearth furnace to remove at least a part of the silicon and carbon, then before the elimination of a considerable percentage of the manganese transferring the metal to a basic-lined electric furnace and treating it therein.

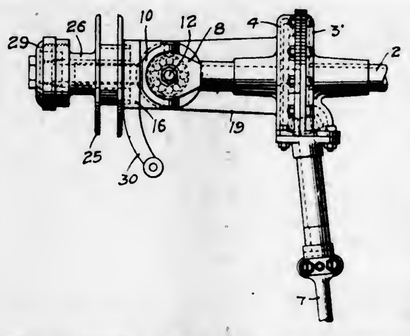
3. In the manufacture of steel, the steps comprising treating molten iron containing a percentage of manganese in an acid-lined Bessemer converter or an open hearth furnace for the removal of at least a part of the silicon and carbon and retention of a portion of the manganese, and after the elimination of the greater percentage of silicon and carbon and the removal of a less percentage of manganese, transferring the metal to a basic-lined electric furnace and treating it therein.

4. In the manufacture of steel, the steps comprising treating molten iron containing a percentage of manganese, in a Bessemer converter or open hearth furnace, until the manganese is reduced to not lower than .10 per cent., and then transferring the metal to a basic-lined electric furnace and treating it therein.

5. In the manufacture of the steel, the steps comprising treating molten iron containing a percentage of manganese in an acid-lined Bessemer converter or open hearth furnace for the removal of at least a part of the silicon and carbon and retention of a portion of the manganese, and after the elimination of the greater percentage of silicon and carbon and the removal of a less percentage of manganese transferring the metal to a mixer wherein the percentages of manganese are rendered more uniform, and thereafter transferring the metal to and treating it in a basic-lined electric furnace.

[Claims 6 to 8 not printed in the Gazette.]

1,155,850. TRACTION-WHEEL STEERING-DRIVE. JOSEPH L. WARE, St. Paul, Minn. Filed Oct. 30, 1911. Serial No. 657,565. (Cl. 21—90.)

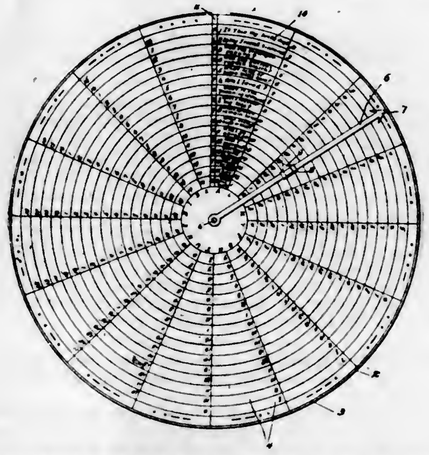


1. The combination, with an axle section having a forked outer end, the arms of said fork having inner flat bearing surfaces, of a collar fitting between the arms of said fork and having anti-friction bearings thereon, said collar having a limited lateral movement between said arms, and a wheel spindle having a forked inner end pivotally connected with said collar, the lateral movement of said collar permitting longitudinal movement of said spindle.

2. The combination, with an axle, of a bracket carried thereby and having a horizontal bearing surface, a spindle having a driving connection with said axle, a second bracket having a hub to receive said spindle and pivoted on said horizontal bracket and having an anti-friction bearing thereon, said pivot comprising a bushing having a ball bearing on said second bracket, and a bolt passing through said first named bracket and tapped into said bushing.

3. The combination, with an axle, of a housing mounted thereon and provided with a bearing projecting outwardly, concentric with said axle, and a bracket parallel substantially with said bearing and having a flat bearing surface, an axle section mounted in said bearing and having a forked outer end, a collar having a ball bearing within said fork, a wheel spindle having a fork to embrace said collar, a pivot connecting the arms of said wheel spindle fork with said collar, a second pivot passing through the arms of said axle section fork and through said collar and allowing rotation of said collar and a lateral horizontal movement in said fork, a bracket having an anti-friction bearing on said housing bracket, and a pivot concentric with the said second pivot of said axle section and provided with a hub in which said wheel spindle is journaled, said brackets supporting the load while the driving power is transmitted through said axle section and spindle.

1,155,851. GAME. JEANNE WELCH, Parsons, Kans. Filed May 5, 1915. Serial No. 26,094. (Cl. 46—41.)

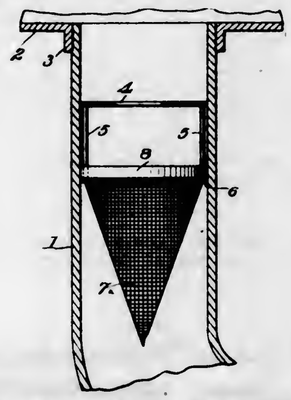


1. A game comprising a dial divided into radial sectors each sector being divided transversely into spaces extending from the center of the dial toward the periphery thereof, the spaces in the respective sectors being arranged in annular rows concentrically disposed, the spaces in each row being numbered consecutively and the lowest number in each row being disposed immediately adjacent to the next highest number in the adjacent inner row, the spaces in the outermost row having sets of symbols inscribed therein and the symbols in each set being arranged in a different order from those in every other set, an indicator finger pivoted at the center of the dial and movable over said dial and having a point on the outer end thereof adapted to register with the outermost spaces, a pointer slidably mounted upon said finger and adapted to register with any one of the spaces in any of said sectors, the spaces in one of said sectors having questions inscribed thereon respectively, and a deck of cards having the cards thereof provided with symbols respectively corresponding with the symbols in the particular spaces of said dial.

2. A game of the class described comprising a dial having questions inscribed thereon and provided with symbols through which the answers to the questions may be ascertained, and an indicator finger movable over said dial and having pointers thereon adapted to register with the questions and symbols respectively under different conditions.

3. A game of the class described comprising a dial having questions inscribed thereon and provided with symbols through which the answers to the questions may be ascertained, an indicator finger movable over said dial and having pointers thereon adapted to register with the questions and symbols respectively under different conditions, and a deck of cards, the cards of the deck having symbols thereon corresponding with the symbols on the dial and forming a guide to control the movement of the indicator finger.

1,155,852. STRAINER FOR DRAIN-PIPES. JULIUS S. WESTERGREN, Chicopee, Mass. Filed Mar. 22, 1915. Serial No. 16,247. (Cl. 210—16.)



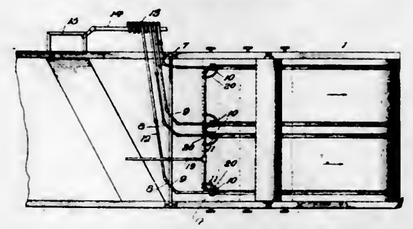
1. A device of the class described comprising a cone-shaped body formed and constructed of a foraminous material, a band around the large end of said body, a plurality of supporting legs having curved hooked ends secured under said band and through said foraminous body for supporting the same, a resilient band secured around the free ends of said legs adapted to engage the inner wall of the drain pipe for supporting said cone in position therein.

2. A device of the class described comprising a band formed of resilient material, a plurality of relatively spaced legs secured to said band and depending downwardly therefrom, the lower terminals of said legs curved outwardly, a cone-shaped strainer formed of foraminous material and having a band secured around its upper enlarged end adapted to be engaged, the hooked ends of the legs supporting the same, said resilient band of the supporting legs adapted to support said strainer in a drain pipe for engaging the inner wall of the same.

1,155,853. APPARATUS FOR PRODUCING THIN SECTIONS IN PAPER. PHILIP WESTON, Dalton, Mass. Filed Oct. 3, 1914. Serial No. 864,852. (Cl. 92—39.)

1. In combination with a paper making machine, means for removing a portion of the material from the web on the wet end of the machine, comprising suction nozzles or tubes arranged with their lower ends adjacent the web, suction pipes connected to the nozzles, ejectors connected to the suction pipes, and a common discharge pipe communicating with the ejectors and connected with a fan pump chest whereby material of the web may be drawn through the nozzles and suction pipes and delivered to the fan pump chest and thence to the screen.

2. In combination with a paper making machine, means for removing a portion of the material from the web on the wet end of the machine, comprising suction nozzles or tubes arranged with their lower ends adjacent the web, means for vertically and laterally adjusting the nozzles, suction pipes connected with the nozzles, ejectors connected to the suction pipes, and a common discharge pipe connecting with the ejectors and connected with a fan pump chest whereby material of the web may be drawn through the nozzles and suction pipes and delivered to the fan pump chest and thence to the screen.



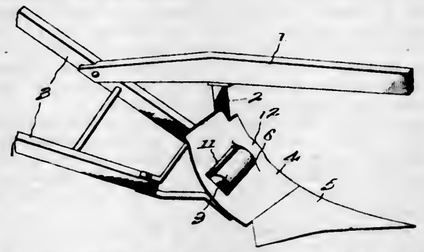
3. In combination with a paper making machine, means for removing a portion of the material from the web at the wet end of the machine, comprising suction nozzles or tubes arranged with their lower ends adjacent to the web, means for vertically adjusting the nozzles, suction pipes connected to the nozzles and adjusted transversely of the machine, ejectors connected to the suction pipes, and a common discharge pipe communicating with the ejectors and connected with the fan pump chest whereby material on the web may be drawn through the nozzles and suction pipes and delivered to the fan pump chest and thence to the screen.

4. In combination with a paper-making machine of ordinary construction including the usual suction boxes, a support extending across the frame, short pipes supported thereby, nozzles extending from said pipes downwardly to the wire over the first suction box, suction pipes extending transversely of the machine and attached at one end to the said short pipes, and at the other end in connection with a common discharge pipe leading to a fan pump chest.

5. In combination with a paper-making machine of ordinary construction including the usual suction boxes, a support extending across the frame, short pipes adjustably supported thereby, nozzles extending from said pipes downwardly to the work over the first suction box, suction pipes extending transversely of the machine and attached at one end to the said short pipes and at the other end in connection with a common discharge pipe leading to a fan pump chest.

[Claims 6 to 8 not printed in the Gazette.]

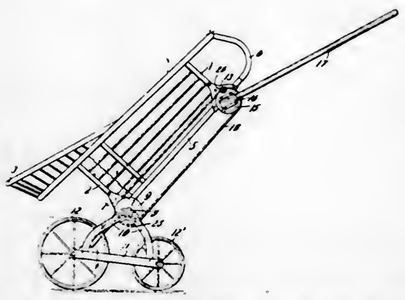
1,155,854. MOLDBOARD FOR PLOWS. WALTER A. WHITE, Covington, La. Filed July 15, 1914. Serial No. 851,133. (Cl. 97—23.)



The combination with a plow, of a mold board therefor constructed of sheet metal bent to shape and stamped with a central and diagonally disposed opening, said mold board being bulged outwardly at the upper end of said opening, a pair of perforated ears formed integral with said sheet metal mold board and stamped out in producing said opening, said ears being bent rearwardly, a roller provided with an axial opening, a pintle engaging through the open-

ing in said roller and journaled in said perforated ears, and a lip formed from the metal of said mold board and stamped in producing said opening, said lip being bent upwardly and having its free end terminating in close proximity to said roller for constituting a scraper, substantially as described.

1,155,855. BABY-CHAIR AND PERAMBULATOR. SAMUEL P. WITHROW, Cincinnati, Ohio. Filed Nov. 5, 1914. Serial No. 870,507. (Cl. 21—12.)



1. A baby chair adapted to stand on its base, a four wheel truck as a unit pivoted to the lower portion of the chair and adapted to be swung to an inoperative position above the base and to a series of operative positions below the base and of variable angularity relative thereto, a wheeling handle pivoted to the upper portion of the chair, and means operatively connecting said pivoted handle and truck.

2. A baby chair adapted to stand on its base, a four wheel truck as a unit pivoted to the lower portion of the chair and adapted to be swung to an inoperative position above the base and to a plurality of operative positions below the base, a wheeling handle pivoted to the upper portion of the chair, means operatively connecting said pivoted handle and truck, and means for locking the handle in various positions of adjustment.

3. A baby chair adapted to stand on its base, a sheave having a bearing on the lower portion of the chair, a wheel truck secured to said sheave, whereby it is movable into positions above or below the base, a sheave having a bearing at the upper portion of the chair, a wheeling handle secured to said upper sheave, and a transmitter connecting said sheaves whereby the wheel truck is rendered operative or inoperative by the wheeling handle manipulation.

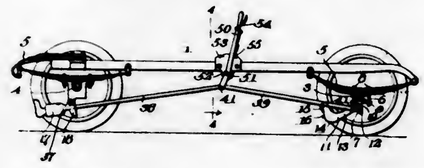
4. A baby chair adapted to stand on its base, a sheave having a bearing on the lower portion of the chair, a wheel truck secured to said sheave, whereby it is movable into positions above or below the base, a sheave having a bearing at the upper portion of the chair, a wheeling handle secured to said upper sheave, and a transmitter connecting said sheaves, whereby the wheel truck is rendered operative or inoperative by the wheeling handle manipulation, and means for locking the upper sheave in various positions of adjustment.

5. A baby chair adapted to stand on its base, a pivoted wheel truck, a pivoted wheeling handle, and connecting means whereby the handle manipulation renders the truck operative or inoperative and determines the angular position of the chair relative to the floor when in wheeling position.

[Claims 6 to 21 not printed in the Gazette.]

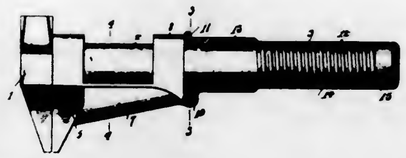
1,155,856. SUPPORTER. FREDERICK M. WILKINS, Dorchester, Mass., assignor of one-half to Charles R. Brainerd, Cambridge, Mass. Filed June 2, 1914. Serial No. 842,519. (Cl. 254—86.)

1. In combination with a vehicle, of bolster members resting upon the axles of the vehicle and secured to the running gear thereof, a jack including a flat head pivotally connected with each of the bolsters, means for sustaining the jacks longitudinally of the running gear, means for swinging the jacks to bring their heads into contact with the bolsters to arrange the same vertically with respect to the running gear to elevate the wheels of the vehicle.



2. In combination with the running gear of a vehicle, of bolster plates arranged upon the axles of the vehicles to the inner faces of the wheels thereof, detachable means for securing the bolsters to the said axles, each of the bolster plates having spaced ears, a jack having a flat head pivotally secured to each of the bolster plates between the ears thereof, each of said jacks including a body having an offset foot and a round heel, means for swinging the jacks to sustain the same longitudinally with respect to the running gear, means for swinging the jacks in an opposite direction to cause the rounded heels thereof to first contact with the roadbed and to have their feet rest upon their roadbed and their heads engage with the flat faces of the bolster plates.

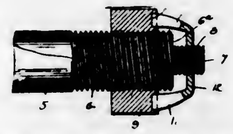
1,155,857. WRENCH. COWAN D. WILSON, Big Stone Gap, Va. Filed Mar. 17, 1914. Serial No. 825,323. (Cl. 81—174.)



1. The herein described construction of wrenches including a fixed jaw, a cross sectionally round shank formed with and extending from the shank, the said shank having its outer end threaded and the non-threaded portion of said shank being provided with a longitudinally arranged depression, a movable jaw for the shank including a pair of spaced collars connected by a web, and the said web between the said collars being formed with a longitudinally extending tongue which is received within the depression in the shank of the stationary jaw, and a hollow handle member threaded upon the end of the shank and co-acting with the movable jaw to slide the said movable jaw upon the said shank when the said handle is rotated.

2. A wrench constructed as herein described including a jaw having a cross sectionally rounded shank provided with a reduced threaded extension, a slidable jaw, said slidable jaw including spaced collars connected by a web, said collars having round openings to receive the rounded shank of the stationary jaw, the web being formed with a longitudinally extending tongue between the said collars which is received in the depression in the said shank, the outer collar being formed with a lip, a hollow operating handle having a bore of two dimensions, the smaller of which being threaded to engage with the threaded end of the shank, a compressible element between the end of the bore and the end of the threaded shank, and the open end of the said handle being formed with an annular bead which is adapted to co-engage with the lip of the mentioned outer collar of the movable jaw.

1,155,858. NUT-LOCK. JOSEPH H. WINES, Detroit, Mich. Filed Apr. 13, 1915. Serial No. 21,052. (Cl. 151—17.)

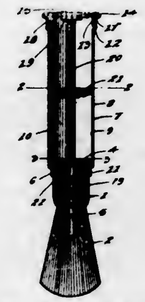


1. In a nut lock, a locking member substantially U-shape in formation and including an enlarged web portion having an internally screwthreaded opening therethrough.

2. In a nut lock, a locking member of substantially U-shape having an enlarged web or medial portion formed with an internally screwthreaded opening, the substantially parallel ends of said locking member being increased in width.

3. A nut lock comprising a bolt having a reduced end, screwthreads extending inwardly from the inner extremity of the reduced end, screwthreads extending inwardly from the reduced end and arranged oppositely to the screwthreads on the body of said bolt, a nut fitted upon said bolt, and a substantially U-shaped locking member having an internally screwthreaded aperture in the web thereof receiving the reduced end of said bolt and including a pair of spring arms engaged within the notches in said nut.

1,155,859. SHAVING-BRUSH. THOMAS R. WIRSING, Roanoke, Va. Filed Dec. 1, 1914. Serial No. 875,022. (Cl. 15—50.)



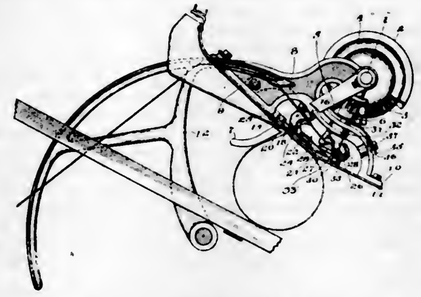
In a fountain brush, a bristle holder, bristles carried thereby, a hollow handle comprising a strip of sheet metal rolled into tubular form, said handle having one end detachably secured to the bristle holder, the meeting longitudinal edges of the strip being bent inwardly, one inturned edge being of greater width than the other and being bent over and around the other inturned edge, to form an air tight joint, said joint forming an internal rib extending longitudinally of the handle, a cap rotatable on the opposite end of the handle, a screw threaded stem secured to the inner side of said cap, and a follower threaded on the stem having a notch in one side to receive the rib to hold the follower against rotation in the handle.

1,155,860. CORD-KNOTTER FOR GRAIN-BINDERS. GUSTAV W. WITTE, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Nov. 14, 1912. Serial No. 731,277. (Cl. 56—83.)

1. In a knotter mechanism, a cord gate member having a laterally extending cord gate projecting therefrom at a point intermediate its ends and having a knife carried at one end thereof.

2. In a knotter mechanism, a cord gate member having a laterally extending cord gate disposed in the same plane therewith and intermediate its ends, and a knife carried at one end of said gate member.

3. In a knotter mechanism, a cord gate member having a cord gate extending laterally therefrom at a point between its ends and a knife disposed substantially at right angles to said gate member.

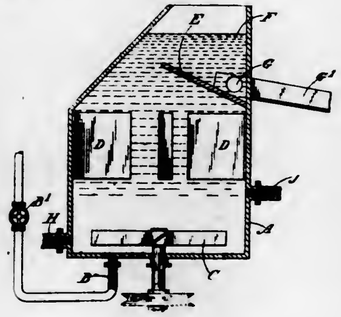


4. In a knotter mechanism, a cord gate member having a laterally extending cord gate between its ends, and a knife disposed substantially at right angles to said gate member and having an upper cutting edge.

5. In a knotter mechanism, a cord gate member having a laterally extending cord gate intermediate its ends, a knife carried at one end of said gate member and a cam surface carried on said member adjacent said knife.

[Claims 6 to 21 not printed in the Gazette.]

1,155,861. ORE CONCENTRATION. LOUIS ALBERT WOOD, London, England, assignor to Minerals Separation American Syndicate (1913) Limited, London, England. Filed June 2, 1914. Serial No. 842,449. (Cl. 83—85.)



1. A process of concentrating ores which consists in subjecting the powdered ore suspended in water free from frothing agents to the admission of gas, forcefully disseminating the gas through the pulp in such a way that the gaseous bubbles preferentially attach themselves to certain mineral particles and rise toward the surface and discharge their mineral load within the pulp, and catching and removing such discharged mineral below the surface of the liquid.

2. A process of concentrating ores, which consists in introducing gas to the lower zone of an ore pulp free from frothing agents, subjecting such ore pulp in its lower zone to agitation whereby the gas will be forcefully disseminated through the pulp, maintaining the upper zone of the pulp in a state of comparative quiescence, whereby gas bubbles attach themselves selectively to certain mineral particles and rise toward the surface and discharge their mineral load within the pulp, and catching and removing such discharged mineral below the surface of the liquid.

3. A process of concentrating ores which consists in subjecting a liquid mass of ore pulp free from frothing

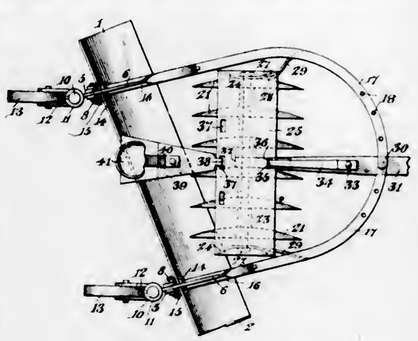
agents to continuous agitation in its lower zone, introducing fresh ore pulp continuously to said liquid mass, removing depleted ore pulp continuously from said liquid mass, introducing gas continuously to the lower zone of the pulp so that it will be forcefully disseminated through the pulp by the agitation of the pulp in the lower zone thereof, maintaining the upper zone of the pulp in a state of comparative quiescence, whereby gaseous bubbles attach themselves selectively to certain mineral particles and rise toward the surface and discharge their mineral load within the pulp, and catching and removing such discharged mineral below the surface of the liquid.

4. A process of concentrating sulfid ores which consists in subjecting the powdered ore suspended in water free from frothing agents to the admission of air, forcefully disseminating the air through the pulp in such a way that the air bubbles preferentially attach themselves to certain sulfid particles and rise toward the surface and discharge their mineral load in the pulp, and catching and removing such discharged mineral below the surface of the liquid.

5. A process of concentrating sulfid ores which consists in subjecting the liquid mass of ore pulp free from frothing agents to agitation in its lower zone, introducing air to the lower zone of the pulp so that it will be forcefully disseminated through the pulp by the agitation of the lower zone thereof, obstructing the turbulence of the pulp in its upper zone, whereby air bubbles attach themselves selectively to certain sulfid particles and rise toward the surface and discharge their load of sulfid particles within the pulp, and catching and removing said discharged sulfid particles below the surface of the liquid.

[Claim 6 not printed in the Gazette.]

1,155,862. ROAD-GRADER. PHILIP YEAGER, Oran, Iowa. Filed Mar. 22, 1915. Serial No. 16,117. (Cl. 37—7.)



1. A road grader having a scraping blade, a series of concave disks with the concave faces of the disks all presented toward that side of the machine corresponding to the forward end of the scraper blade, and said series of disks being of a lateral extent to include the greater portion of the length of the scraper blade and constituting the sole support for that portion of the machine in advance of the scraper blade, draft means for the grader in fixed perpendicular relation to the axis of the series of disks, and connections between the series of disks and the scraper adjustable with relation to the series of disks to vary the inclination of the scraper with respect to the line of draft.

2. A road grader having a scraping blade, a laterally extended series of concave disks with the concave faces all presented toward that side of the machine corresponding to the forward end of the scraper blade, and said disks constituting the sole support for the grader in advance of the blade, a draft pole connected to the mid portion of the series of disks and to the ends of the series in substantially perpendicular relation to the longitudinal axis of the series of disks, and connections between that portion of the grader comprising the pole and series of disks and that portion of the grader including the scraping blade for the adjustment of the angle of the scraping blade with relation to the line of draft with the longitudinal axis of the series of disks in constant perpendicular relation to the line of draft.

3. A road grader comprising a scraper blade, supporting wheels for the scraper blade in trailing relation thereto, a laterally extended series of concave disks with the concave faces all presented toward that side of the machine corresponding to the forward end of the scraper blade, a draft pole and connections between the latter and the series of disks for maintaining the latter in constant perpendicular relation to the pole and the line of draft, said series of disks constituting the sole support for that portion of the grader in advance of the scraper blade, and connections between the series of disks and the scraper blade with said connections adjustable to vary the diagonal relation of the blade to the line of travel of the grader.

4. A road grader provided with scraping means, a frame connected to the scraping means, a series of rotating members arranged transversely to the line of travel of the scraper and constituting means for counteracting side movement of the scraper, a frame connected to said series of rotating members, and draft means connected to the series of rotating members and to the frame thereof, the frame connected to the series of rotating members and the frame connected to the scraping means being correspondingly curved and provided with means for connecting them together and to the draft means whereby the angular relation of the scraper to the line of draft may be adjusted.

5. A road grader comprising a scraping member, a series of supporting disks and a carrying frame therefor arranged transversely of the line of travel of the scraper, draft means connected to the series of disks, connecting means between the scraper and draft means for varying the angular relation of the scraper to the line of draft, supporting rollers for the scraper means in trailing relation thereto, and a seat support connected to the frame of the series of disks and extending to and resting upon the scraper and movable with relation to the latter to accommodate the seat support to different angular positions of the scraping means.

[Claims 6 and 7 not printed in the Gazette.]

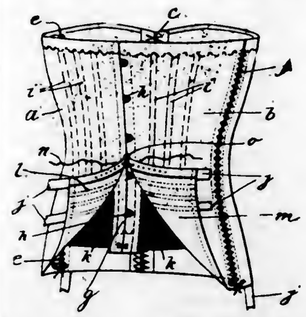
1,155,863. SHOW-CASE. EMIL E. YELINEK, Clutler, Iowa. Filed Jan. 13, 1915. Serial No. 2,022. (Cl. 211—25.)



The herein described case comprising a bottom, a top, side walls and a hinged door, bands on the outer side of the case, arranged vertically and having arms at their upper and lower ends which respectively bear on the upper side of the top and the lower side of the bottom, said arms being bolted to the top and bottom and said lower arms being provided with supporting feet, a shelf in the case and supporting rods for the shelf, extending across the case and through the openings in opposing walls and also through openings in certain bands, said rods being provided with heads and nuts bearing on the outer sides of said bands.

1,155,864. CORSET. ALFRED ABT, Bridgeport, Conn., assignor to The Warner Brothers Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Mar. 10, 1915. Serial No. 13,315. (Cl. 2—73.)

The combination with a corset body formed of two body halves, of busks respectively secured to said body halves from the top to a point adjacent the waist line and free from the body halves from the waist line downwardly to a point over the lower portion of the abdomen, substantially rectangular elastic strips each connected at one end to the inner face of a body half at a point remote from a busk and at its other end directly to the



lower free portion of said busk and each said insert lying entirely on the inner face of the corset body half, the corset body proper extending downwardly a substantial distance below the lower free portions of the busks and being adjustably connected together from the waist line downwardly over the said lower free portions of the busks.

1,155,865. ELASTIC WHEEL. EMILE AIMOND, Paris, France. Filed Aug. 8, 1912. Serial No. 714,026. (Cl. 152—28.)



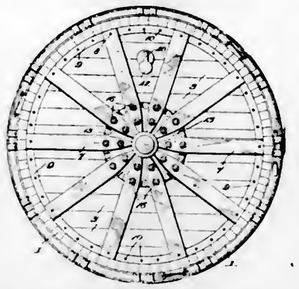
1. An elastic wheel comprising the combination of a hub, a rigid felly having internally angular parts, a free ring, springs radially arranged between the free ring and the hub, telescopic spokes interposed between the free ring and the angular surfaces of the felly, and springs located in the telescopic spokes and adapted for lengthening the latter.

2. An elastic wheel comprising the combination of a hub having guiding parts, a rigid felly having internally angular parts, a free ring, springs radially arranged between the free ring and the hub, telescopic spokes interposed between the free ring and the angular surfaces of the felly, and springs located in the said telescopic spokes and adapted for lengthening the latter, such spokes being radially guided in said guiding parts and those guiding parts being placed as near as possible to the felly to allow the necessary play of the hub with respect to the felly.

3. In an elastic wheel the combination of a hollow hub, a free ring within the hollow hub, a rigid felly having internally angular parts, telescopic spokes which are radially guided in the periphery of the hub, their outer ends bearing against the angular surfaces of the felly and their inner ends bearing against the periphery of the free ring, springs located in the said telescopic spokes and adapted for lengthening the latter, and springs interposed between the said free ring and the peripheral part of the hollow hub.

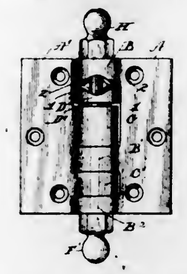
4. A yielding wheel comprising the combination of a rigid felly having angular inner parts, a hub, a free ring independent of the felly and of the hub, yielding spokes having springs compressed between the angular parts of the felly and the said ring and so adapted as to allow only a little radial play on the part of the ring with respect to the felly, and springs intercalated between the said ring and the hub, the radial play of the hub with respect to the ring, and consequently, the play of the springs intercalated between them, being greater than that of the ring with respect to the felly.

1,155,866. TANNING-DRUM. BONA ALLEN, Jr., Buford, Ga. Filed Oct. 6, 1913. Serial No. 793,705. (Cl. 149—11.)



A tanning drum of the character described comprising heads constructed each of a pair of panels built up of a plurality of closely assembled planks, a sheet of tarred cloth clamped between said panels, a plurality of staves assembled in cylindrical formation to constitute the drum body and provided with sockets adjacent their ends for receiving the drum head, hoops for clamping said staves about said heads, a casting fitted to each of said heads and comprising a base plate, webs formed on said base plate and dividing the same to provide a plurality of radially arranged tapering sockets, bars formed with tapered inner ends fitted in said sockets and having their outer ends engaging the staves, a pair of rings of different diameters fitted to the interior faces of each of said drums, circular series of bolts passing through said rings and bars for holding the parts together, segmental members arranged between the outer ends of said bars, and bolts passing through the outer ends of said bars and said segmental members for securing the same to the drum heads, substantially as described.

1,155,867. COMBINED SPRING HINGE AND CHECK. ANDREW ALLGIER, Grand Rapids, Mich., assignor to Ralph O. Rudolph, Bellevue, Ohio. Filed May 24, 1913. Serial No. 769,644. (Cl. 16—46.)



1. In a hinge, the combination with a pair of leaves and interlocking eye sockets, of a pintle pin passing

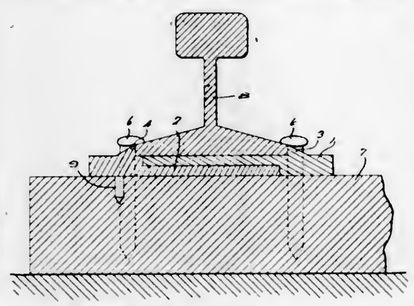
through said eye sockets, said pin provided with an enlarged head at one end, said head slidingly movable in one of said sockets, means for preventing the head from turning in said socket, a longitudinally adjustable head for the other end of said pin, a set of cam members upon the inner face of one of said eye sockets, a sleeve slidingly movable in the adjacent socket, and provided with a corresponding set of cam members, said sets of cam members having alternately spaced and curved surfaces of elevation and depression connected by inclined surfaces, and adapted and arranged to interlock with each other in one position of the hinge, and to exert their greatest pressure upon each other in other positions, means for adjusting the angular position of said sleeve in its socket, and for preventing it from turning, and a coiled closing spring encircling said pintle rod, and engaged by said sliding pintle head and said cam sleeve, said spring serving as a spacing sleeve for said eye sockets, through which it passes, and said pintle rod.

2. In a hinge provided with leaves and interlocking eye sockets a pintle rod, cam members upon one eye socket, a cam sleeve slidable in the adjacent socket, and angularly adjustable therein, and provided with corresponding cam members, said cam members having a locking position for the hinge and also points of greatest pressure, a closing spring encircling said pintle rod, and inclosed loosely between the same and some of said eye sockets, and also serving as a spacing sleeve between the eye sockets and pintle rod, and means upon said pintle rod for adjusting the pressure upon said cam sleeve.

3. In a hinge provided with leaves and interlocking eye sockets, a pintle rod, cam members upon one eye socket, a cam sleeve slidable in the adjacent socket, and angularly adjustable therein, and provided with corresponding cam members, said cam members having a locking position for the hinge and also points of greatest pressure, a spring encircling said pintle rod, and inclosed in some of said eye sockets, and exerting pressure upon said cam sleeve, the extremities of said spring operatively connected with opposite leaves of the hinge, and means upon said pintle rod for adjusting the pressure of said spring upon said cam sleeve.

4. In a hinge provided with leaves and interlocking eye sockets thereon, a pintle rod extending through said eye sockets, a head therefor engaging one socket, an adjustable nut upon the other end of said pintle rod, cam members upon one eye socket, a cam sleeve slidable and angularly adjustable in the adjacent socket, and provided with corresponding cam members, a spring encircling said pintle rod and inclosed in some of the eye sockets and adapted to exert pressure upon ssaid cam sleeve, the extremities of said spring inserted one in said pintle rod, and the other in said cam sleeve.

1,155,868. COMBINED RAIL-BRACE AND ANCHOR TIE-PLATE. THOMAS J. ARLEDGE, Winchester, Ky. Filed June 11, 1915. Serial No. 33,585. (Cl. 238—2.)

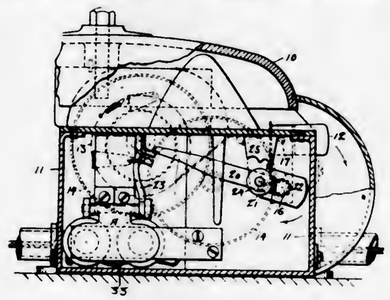


1. The herein described combined rail brace and anchor tie plate comprising a pair of members each having a flange on its upper side to bear against one side of a rail base, said members being arranged in overlapping relation, each having a rabbet to receive the other, and said members having openings and projections forming an interlocking connection between them.

2. The herein described combined rail brace and anchor tie plate comprising a pair of members each having a flange on its upper side to bear against one side of a rail base, said members being arranged in overlapping relation, each having a rabbet to receive the other, and said members having openings and projections forming an interlocking connection between them, said openings and projections having corresponding beveled ends exerting wedging action to draw said members toward each other and grip their flanges against opposite sides of the rail base under the stress of passing trains.

3. The herein described combined rail brace and anchor tie plate comprising a pair of members each having a flange on its upper side to bear against one side of a rail base, said members being arranged in overlapping relation, each having a rabbet to receive the other, and said members having openings and projections forming an interlocking connection between them, said members also having spike receiving openings extending therethrough and through their flanges, and one of said members being further provided with downwardly extending studs adapted to be drive into a tie.

1,155,869. GONG. CHARLES E. AVERY, Trenton, N. J., assignor to The Manhattan Electrical Supply Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 5, 1914. Serial No. 855,309. (Cl. 177—288.)



1. In a gong striker, a rotatable hammer shaft, a stop lever pivotally connected to an eccentric on said shaft and a detent engaging said stop lever to arrest and release said hammer shaft.

2. In a gong striker, a rotatable hammer shaft, an oscillating stop lever operatively connected to said shaft, a detent engaging said stop lever to arrest and release the hammer shaft and means for shifting said stop lever to clear said detent on the oscillation of said lever in one direction.

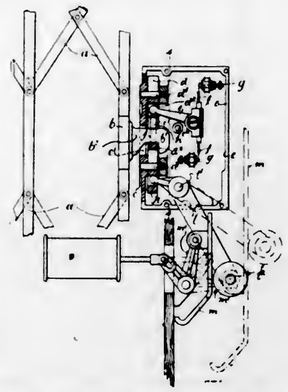
3. In a gong striker, a rotatable hammer shaft, a stop lever operatively connected to said shaft and oscillated thereby in a plane, a detent engaging said stop lever to arrest and release the hammer shaft and means for retracting the stop lever in said plane to clear said detent on the oscillation of said lever in one direction.

4. In a gong striker, a rotatable hammer shaft, a gong hammer operated thereby, an oscillating stop lever, and an operative connection between the said lever and hammer shaft for oscillating said lever, the movement of the latter being so timed that it is substantially halted near one end of its oscillating travel at the moment of gong impact by the hammer.

5. In a gong striker, a rotatable hammer shaft, a stop lever eccentrically pivoted thereto, a pivoted guide for said lever, and a detent engaged by said stop lever at the moment at which the axis of said guide and the pivoting axis of said lever approach alinement.

[Claims 6 and 7 not printed in the Gazette.]

1,155,870. LOCKING MECHANISM FOR ELEVATOR-GATES. FRANK BARLOW, London, England. Filed Oct. 23, 1913. Serial No. 796,810. (Cl. 187—31.)



1. A locking mechanism for elevator gates, comprising in combination with a cage a gate catch, means for engaging said gate catch, a movable member mounted upon said gate-catch, said movable member actuated by said engaing means, and a switch operated by the actuation of said movable member, said switch serving to start and stop said cage.

2. A locking mechanism for elevator gates, comprising in combination with a cage a gate-catch, means for engaging said gate-catch, a member movably mounted upon said gate-catch, said movable member actuated by said engaging means, and a switch serving to start and stop said cage, said switch being operated in one direction by said movable member and in the other direction by said engaging means.

3. A locking mechanism for elevator gates, comprising in combination with a cage a gate-catch, means for engaging said gate-catch, and a switch determining the movements of the cage, said switch being operated by said engaging means, the operation in one direction being conditional upon the engagement of said gate-catch.

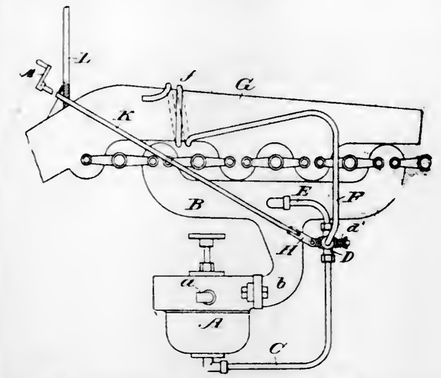
4. A locking mechanism for elevator gates, comprising in combination with a cage means for controlling said cage, a striker, said striker being mounted upon the cage and being movable under the action of said controlling means, a lever adapted to be actuated by said striker in one position of the latter, a gate-catch, means for engaging said gate-catch, said engaging means operated by said lever, and a switch serving to start and stop said cage, said switch operated by said engaging means, the operation in one direction being conditional upon the engagement of said gate-catch.

5. A locking mechanism for elevator gates, comprising in combination with a cage a gate-catch, a bolt adapted to engage said gate-catch, a pin loosely mounted in said gate catch, said pin being actuated by said bolt in engaging said gate-catch, and a switch serving to start and stop said cage, said switch being operated to start the cage by the actuation of said pin.

[Claims 6 to 14 not printed in the Gazette.]

1,155,871. PRIMER FOR GAS-ENGINES. EDWARD H BAUER, Washington, D. C. Filed Jan. 14, 1915. Serial No. 2,231. (Cl. 123—180.)

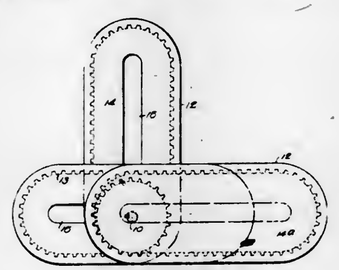
1. The combination with the manifold of an internal combustion engine, an exhaust pipe and a carbureter, of a three-way valve, a pipe leading from one port of the valve to the carbureter, another pipe leading from another port of the valve to the manifold, an open air intake pipe extending near to the exhaust pipe and connected to the third port of the valve, and means for operating said valve to selectively establish communication between either the air intake pipe or the pipe leading from the carbureter and the pipe leading to the manifold.



2. The combination with the manifold of an internal combustion engine, an exhaust pipe and a carbureter, of a three-way valve, a pipe leading from one port of the valve to the carbureter, another pipe leading from another port of the valve to the manifold, an open air intake pipe extending near to the exhaust pipe and connected to the third port of the valve, and means for operating said valve to selectively establish communication between either the air intake pipe or the pipe leading from the carbureter and the pipe leading to the manifold, and for closing the three pipes when desired.

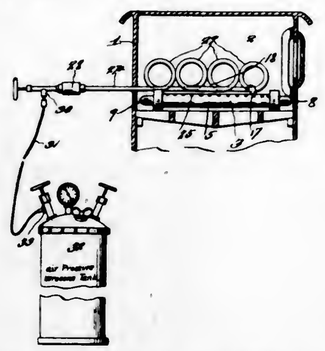
3. The combination with the manifold of an internal combustion engine, an exhaust pipe and a carbureter, of a three-way valve, a pipe leading from one port of the valve to the carbureter, another pipe leading from another port of the valve to the manifold, an open air intake pipe extending near to the exhaust pipe and connected to the third port of the valve, and means extending within reach from the driver's seat for operating said valve to selectively establish communication between either the air intake pipe or the pipe leading from the carbureter and the pipe leading to the manifold.

1,155,872. TRACTOR-WHEEL. JAMES BEARD, Two Rivers, Cal. Filed July 27, 1915. Serial No. 42,149. (Cl. 21—150.)



In a tractor wheel, a series of separate, self-laying, oblong, rigid track sections disposed side by side with their major axes in angular relation, said sections each having a continuous internal series of gear teeth, an axle, and a series of gear wheels on said axle, one for each track section, and in mesh with the teeth of the latter, the said track sections having side plates embracing and housing the respective gear wheels and providing oblong passages for the relative displacement of the track sections on the axle.

1,155,873. OIL-BURNER. JOSEPH BECKWITH, Broken Bow, Nebr. Filed June 15, 1915. Serial No. 34,201. (Cl. 158—65.)



1. An oil burner comprising outer parallel perforated burner tubes, transverse coupler tubes connecting the ends of said outer perforated tubes, an intermediate inlet perforated tube consisting of two sections, one section being connected to one coupler tube, and the other to the opposite coupler tube, said sections being alined and having their adjacent ends provided with reduced extensions spaced apart from each other, and a generator coil receiving fuel from any suitable supply and having its outlet end provided with openings alined with said reduced extensions.

2 An oil burner comprising outer parallel perforated burner tubes, transverse coupler tubes connecting the ends of said outer perforated tubes, an intermediate inlet perforated tube consisting of two sections, one section being connected to one coupler tube, and the other to the opposite coupler tube, said sections being alined and having their adjacent ends provided with reduced extensions spaced apart from each other, and a generator coil receiving fuel from any suitable supply and having its outlet end provided with openings alined with said reduced extensions, and refractory members arranged in said tubes.

3. An oil burner comprising outer parallel perforated burner tubes, U-shaped coupler tubes connecting the adjacent ends of said burner tubes, an intermediate sectional inlet perforated tube connecting said coupler tubes, and a generator comprising a tube turned into a plurality of coils arranged immediately above the sectional intermediate perforated tube and between the outer tubes to become heated from the burner tubes, said generator having its outlet end provided with openings, said outlet end being interposed between the adjacent ends of the sections of the intermediate tube with the openings alined with said sections.

1,155,874. FRICTION AND METAL PLUG FOR RUBBER HEELS AND OTHER TREAD-SURFACES. FRANK BERENSTEIN, Chelsea, Mass., assignor of one-half to William Bernstein, Boston, Mass. Filed June 18, 1915. Serial No. 34,784. (Cl. 36—59.)

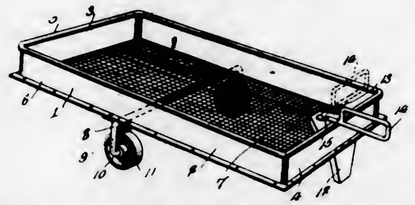


1. In a rubber heel having a perforation or recess, a hollow cylindrical plug of rubber coated fabric material located within and cemented to the side walls of said recess, a metal back plate extending across and having bracing engagement with the top of said plug, the interior diameter of said plug being comparatively large to receive the head of a fastening device, and said back plate having a central perforation of small size to receive the shank of said device, the marginal portion of said plate surrounding the central perforation thereof extending across the interior cavity of said plug and acting as a backing for the head of said device, and metallic means located exteriorly of and engaging said plug to hold it in place.

2. In a rubber heel having a recess, a hollow cylindrical plug of rubber coated fabric material located within and cemented to the side walls of said recess, a metal back plate extending across and having bracing engagement with the top of said plug, the interior diameter of said plug being comparatively large to receive the head of a fastening device and said back plate having a central perforation of small size to receive the shank of said device, the marginal portion of said plate around said central perforation extending across the interior cavity of said plug and acting as a backing for the head of said device, and metallic means located exteriorly of said plug and having perforations therein, the rubber of the heel proper and the rubber of the coated plug entering said perforations in the vulcanization of the heel and effecting a rubber lock for said plug.

3. In a rubber heel having upper and lower lifts and a perforation or recess, a hollow cylindrical plug of rubber coated material located within and cemented to the side walls of said recess, a metal back plate extending across and having bracing engagement with the top of said plug, said plate located at the joint of the lifts, the interior diameter of said plug being comparatively large to receive the head of a fastening device, and said back plate having a center perforation of small size to receive the shank of said device, the marginal portion of said plate surrounding the central perforation thereof extending across the cavity of the plug and acting as a backing for the head of said device, and a metallic band located exteriorly of said plug and provided with perforations, the rubber of the heel proper and the rubber of the coated plug entering said perforations in the vulcanization of the heel and effecting a rubber lock for said plug.

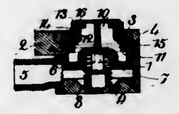
1,155,875. ASH-SIFTER. EDWIN J. BLASS, Portage, Wis. Filed Apr. 18, 1914. Serial No. 832,792. (Cl. 83—60.)



The herein described ash sifter for use in the ash pit of a furnace or stove and comprising a frame having a supporting leg at one end and also provided at said end with a pivotally attached handle adapted to be swung outwardly from and also swung inwardly over the sifter, a screen attached to the lower side of said frame, an arched axle at a point intermediate the ends of the frame and secured under the same, said axle being approximately near the center of the frame but farther from the leg than from the other end of the frame and supporting wheels on said axle.

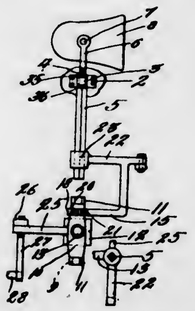
1,155,876. PIPE-COUPLING DEVICE FOR RAILWAY AND TRAM CARS. LOUIS BOIRAULT, Paris, France. Filed Oct. 31, 1912. Serial No. 728,958. (Cl. 188—13.)

1. A pipe coupling device comprising a box having an opening in its front face and a lateral pipe, the inner wall of such box having a shoulder surrounding the said opening and a seat turned away from such opening or toward the interior of the box, a spring actuated valve, adapted to be applied on to such seat and having guide wings and a ring joining such wings to one another, a rubber ring surrounding the wings of the valve and a metal ring surrounding the said rubber ring, such metal ring having on its inner end a flange adapted to impinge the said inner shoulder of the box and the rubber ring having on its inner end a flange which extends between the flange of the metal ring and the ring of the wings of the valve until it contacts with the inner wall of the box.



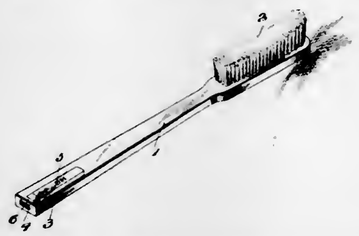
2. A pipe coupling device comprising a box having an opening in its front face and a lateral pipe, the inner wall of such box having a shoulder surrounding the said opening and a seat turned away from such opening or toward the interior of the box, a valve adapted to be applied on to the said seat and having guide wings and a ring joining such wings one to another, a rubber ring surrounding the wings of the valve, a metal ring surrounding the said rubber ring, such metal ring having at its inner end a flange adapted to impinge against the said inner shoulder of the box and the rubber ring having at its inner end a flange which extends between the flange of the metal ring and the ring of the wings of the valve until it contacts with the inner wall of the box, the wall of the box opposite to the said front opening being provided with a cylindrical cavity and with an opening at the bottom of such cavity, a movable piston in the said cavity and having a rod which passes through the opening at the bottom of such cavity, and a spring compressed between the valve and the said piston, such piston being designed to be actuated by an outer member forming a part of an automatic coupling for the purpose specified.

1,155,877. DIRIGIBLE LAMP FOR AUTOMOBILES. JAMES BOLLINGER, Whitefish, Mont. Filed Mar. 20, 1915. Serial No. 15,736. (Cl. 240—62.)



In combination with the knuckle joints between the front axle and the front wheels of an automobile, brackets secured to the body of the machine and having cylindrical bearings, lamps having shanks provided with cylindrical parts mounted in said bearings swivelly, said shanks being arranged vertically and above and axially with the knuckle joints, U-shaped brackets, the lower arm of each being clamped to and movable with one of the knuckle joints, the other arm having a socket opening rectangular in cross section and arranged axially with the knuckle joint, each shank below its cylindrical part being elongated and rectangular in cross section and having a sliding fit in the rectangular socket opening, so that as the knuckle joint rocks, the shank and lamp will correspondingly rock, and a bar connecting the forward portion of the U-shaped brackets.

1,155,878. TOOTH-BRUSH. ALBA C. BOOTH, Burlington, Vt. Filed Apr. 30, 1913. Serial No. 764,712. (Cl. 15—39.)



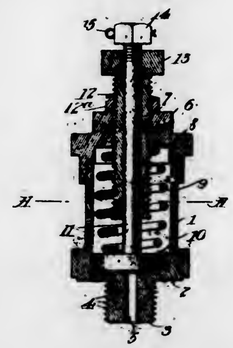
1. A brush comprising a brush-head and a transparent handle, the said handle having an elongated longitudinal aperture therewithin, a label within the said aperture and closely fitting the walls thereof, and completely filling the same, and a plastic plug snugly fitting within the aperture and adapted to hold the label-layer, and to close and seal the open end of the aperture.

2. A brush comprising a brush head and a transparent handle, the said handle having an elongated longitudinal aperture extending from the end thereof, a label marked on both sides within the said aperture, and snugly fitting the walls thereof, and completely filling the aperture, and a plastic plug fitting within the open end of the aperture, and adapted to hold the label therewithin, and to close and seal the end of the aperture.

3. A brush comprising a brush-head and a transparent handle, the said handle having a longitudinal wedge-shaped aperture therewithin extending from the end of the handle and a wedge-shaped label fitting within the aperture, and of a size to snugly fit and engage the walls of said longitudinal aperture for the purpose described.

4. A brush comprising a brush head and a transparent handle, the said handle having an elongated longitudinal aperture therewithin, and a label within said aperture, and of a size to closely fit the walls thereof, and completely filling the same substantially as shown and described.

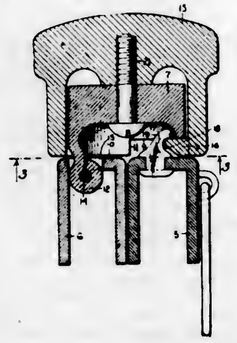
1,155,879. GREASE-CUP. CHARLES BROBST, Pasco, Wash. Filed Apr. 7, 1914. Serial No. 830,170. (Cl. 184—45.)



In a grease cup provided with a suitable discharge part a piston mounted for reciprocation within said cup, a cap for said cup provided with an interiorly threaded central opening, a hollow cylindrical member adapted to enter said opening and threaded to engage the threads thereof, a piston rod carried by the aforesaid piston and slidably mounted within said hollow cylindrical member, and a

coiled spring interposed between the aforesaid cap and said piston and surrounding said hollow cylindrical member, said spring being larger at the center than at the ends thereof, for the purposes set forth.

1,155,880. HAND-BAG LOCK. MORRIS BROOKS and HARRY B. FREEMAN, New York, N. Y. Filed Mar. 1, 1915. Serial No. 11,272. (Cl. 70—116.)



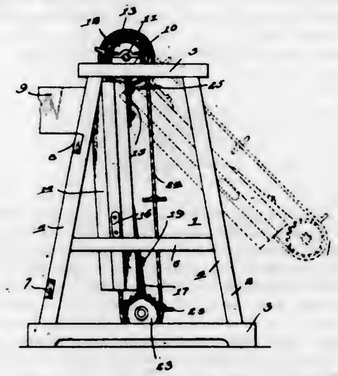
1. In a device of the class described, a pair of frame members adapted to move relatively, a head carried by one of said members, a resilient member associated with said head whereby the same can be rocked on said frame member, a cap mounted to turn on said head, and a stud associated with said second frame member and adapted to snap into the head, said stud and cap having coöperating means whereby the head is prevented from rocking and, therefore, the two frame members are locked together.

2. In a device of the class described, a pair of frame members adapted to move relatively, a head on one of said members mounted to rock transversely thereof, a portion of said head being adapted to overhang the second frame member when the same is against the first frame member, a resilient member carried by the first frame member and adapted to resist the movement of said head away from the second frame member, a stud carried by said second frame member and adapted to snap into the head, and a cap mounted to turn on the head and prevented from axial displacement thereon, said stud having an under-cut adapted to be engaged by a portion of said cap, whereby the rocking movement of said head is prevented and whereby the two frame members are positively locked together.

3. In a device of the class described, a pair of frame members mounted to move relatively, a head on one of said frame members mounted to rock thereon to and from the second frame member, a resilient member in said first frame member engaging said head and normally tending to move said head toward the second member, a stud carried by said second frame member adapted to snap into said head, and a cap rotatably mounted on said head and having a tongue portion engaging the bottom of the head whereby said cap is prevented from longitudinal displacement thereon, said stud having a cut-out adapted to be engaged by the tongue of the cap, whereby said head is prevented from rocking, substantially as and for the purpose set forth.

4. In a device of the class described, a pair of frame members adapted to move relatively, a cap mounted to rock and rotate on one of said frame members, means for resisting the rocking movement of said cap, and a stud associated with said second frame member and adapted to snap into the cap, said stud and cap having coöperating means whereby the cap is prevented from rocking, thereby locking the two frame members together.

1,155,881. WATER-POWER. FRANK BRUNORSS, Portland, Pa. Filed July 22, 1914. Serial No. 852,501. (Cl. 138—11.)



1. A water power of the class described comprising a chute inclosed on all sides and an endless traveling motor element having one of its leads arranged to move downwardly in and through the chute and blades carried by and forming a part of said motor element, said chute being mounted for adjustment, and a flume arranged to discharge in the upper side of the chute when the latter is adjusted to operative position.

2. In combination, a flume, a pivotally mounted chute arranged for adjustment toward and from the discharge end of the flume and an endless traveling flexible motor element having one lead arranged for movement downwardly in and through the chute.

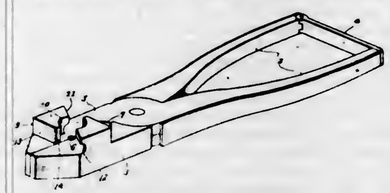
3. In a water power of the class described, a supporting structure, a shaft mounted in bearings thereon, a flume, a chute having its upper end pivotally connected to said shaft and arranged to be moved toward and from the discharge end of the flume to receive or avoid water discharged from the flume, revoluble elements mounted at the lower end of and supported by the chute, revoluble elements on said shaft, endless flexible elements connecting said revoluble elements and blades connecting the said endless flexible elements and arranged, together with said endless flexible elements for movement downwardly and through the chute.

4. In a water power of the class described a supporting structure, a shaft mounted in bearings thereon, a flume, a chute having its upper end pivotally connected to said shaft and arranged to be moved toward and from the discharge end of the flume to receive or avoid water discharged from the flume, revoluble elements mounted at the lower end of the chute, revoluble elements on said shaft, endless flexible elements connecting said revoluble elements and blades connecting the said endless flexible elements and arranged, together with said endless flexible elements for movement downwardly and through the chute, and supporting means for the chute, independent of said shaft, to relieve the latter of the weight of the chute.

1,155,882. PLIERS. WILLIAM D. BRYCE. Saltillo, Tex. Filed July 11, 1914. Serial No. 850,372. (Cl. 140—121.)

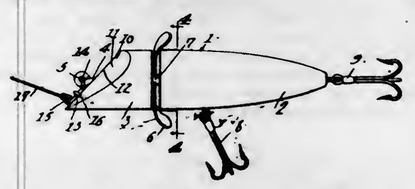
In a pliers for the purpose set forth, two pivoted members comprising each a handle and a jaw, means for locking the handles for retaining the inner faces of the jaws in contacting relation, each of the jaws having its inner face provided with a registering semi-circular opening and the said faces of the jaws being rounded to the depressions, lugs formed upon the jaws disposed opposite the openings, each of said lugs having one of its ends arranged flush with the inner face of the jaws, each of said lugs having its inner face provided with a rounded depression which is disposed angularly with relation to the center of the registering openings, the said lugs being

continued angularly from the depressions and the said angular walls being concaved from their connection with



the jaws, and the said concavities increasing in width from the walls of the depressed portions of the lugs.

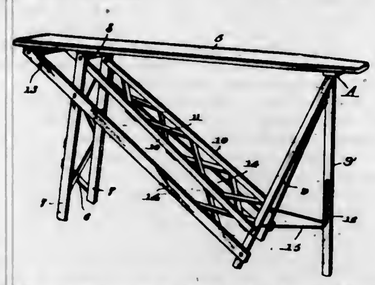
1,155,883. ARTIFICIAL BAIT. ARTHUR BURKMAN, Traverse City, Mich. Filed Mar. 11, 1915. Serial No. 13,636. (Cl. 43—30.)



1. A buoyant bait body, the forward end of which has a longitudinally inclined face comprising plane surfaces diverging rearwardly to the sides of the body and having a ridge therebetween, the surfaces being inclined longitudinally and laterally, and the ridge being inclined longitudinally, and a series of line attaching means carried by the body along said ridge.

2. An artificial bait comprising a body embodying a hook carrying section and a rotatable section, the rotatable section having a forward longitudinally inclined face comprising plane surfaces diverging rearwardly to the sides of the body and having a ridge therebetween, said surfaces being inclined longitudinally and laterally, and a ridge being inclined longitudinally, and a series of line attaching means carried by the rotatable section along said ridge.

1,155,884. FOLDING IRONING-BOARD. THOMAS M. BYRD, Raleigh, N. C. Filed Jan. 20, 1915. Serial No. 3,336. (Cl. 68—10.)

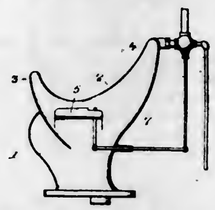


1. In a foldable ironing board, vertical end supports arranged adjacent the opposite ends thereof, brace bars pivotally connecting said supports, one of said supports comprising a plurality of legs arranged in triangular relation, one of said legs being pivoted and adapted to fold between the other of said legs, means for holding said leg in extended position, and a connection between said end supports and the board for simultaneously folding said parts on movement of one of said end supports to its folded position.

2. In a foldable ironing board, vertical end supports, one of said supports being pivotally connected with the board, the other of said supports being separable therefrom and comprising a plurality of pivotally connected legs arranged in triangular relation, a yoke connected with said legs for holding the latter in extended position, said yoke being movably associated with said legs to permit relative folding of the latter, and a connection between said end supports and the board for simultaneously folding said parts on movement of one of said end supports to its folded position.

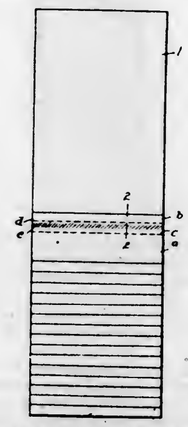
3. In a foldable ironing board, vertical end supports, one of said supports being pivotally connected with the board, the other of said supports being separable therefrom, and comprising a plurality of legs arranged in triangular relation, one of said legs being pivoted between the other legs and adapted to fold therebetween, said leg being slotted, a yoke terminally connected with the other of said legs and arranged within said slot, said yoke folding the legs extended and movable within the slot to permit said leg to swing to folded position, and a connection between said end supports and the board for simultaneously folding said parts on movement of one of said end supports to its folded position.

1,155,885. WATER-CLOSET BOWL. BOB CATCHINGS, Birmingham, Ala. Filed May 26, 1914. Serial No. 841,111. (Cl. 4—18.)



A water closet bowl having the upper edge thereof formed after the fashion of a saddle and having relatively high back and front pieces, and foot rests formed integral with the outer surface of said bowl, each of said rests being provided with a flat horizontal portion to receive the ball of the foot and a second flat portion arranged at a lower elevation for receiving the heel of the user in combination with the flushing mechanism having a portion thereof slidably mounted in the heel receiving portion of one of the rests.

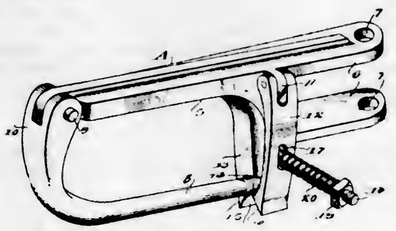
1,155,886. SELF-RESERVING TABLET. HOWARD FREDRIC CHISM, Olive Branch, Ill. Filed June 3, 1914. Serial No. 842,630. (Cl. 11—23.)



A tablet comprising a cover and a series of sheets connected to said cover, a stub connected to each sheet, said

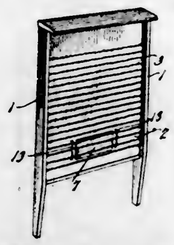
stub being permanently connected to the cover, a second stub portion disposed between the first mentioned stub and the original sheet and separated from the said first mentioned stub by a line of detaching perforations, each of said sheets comprising an original and a duplicate sheet, the duplicate sheet being normally attached to said second named stub portion, a line of adhesive material on said second named stub portion, and a line of detaching perforations separating each sheet and duplicate from the second named stub portion.

1,155,887. CLEVIS. MANSELL CHRISTOPHERSON, New Effington, S. D. Filed Nov. 6, 1914. Serial No. 870,667. (Cl. 21—75.)



A clevis comprising a substantially L-shaped frame formed with spaced parallel ears for receiving a coupling pin, a releasing hook pivoted to the free end of the longer limb of the said frame and being of substantially triangular shape in cross section at its free end to provide a wedge terminal, a locking jaw pivotally mounted on the frame and coöperating with the shorter limb thereof for the clamping of the wedge terminal therebetween, the said shorter limb and jaw being formed with inwardly beveled ends to coöperate with the wedge terminal for the spreading of the said jaw on the entrance of the wedge terminal between it and the shorter limb of the frame, the said shorter limb being provided with a notch forming a seat for the wedge terminal, a guide stem integrally formed with the shorter limb of the frame and loosely passed through the jaw, and an adjustable tension element carried by the stem and working against the jaw to hold the same in clamping relation to the shorter limb of the frame.

1,155,888. WASHBOARD. JOSEPH CIPOLLONI, Franklin, Ky. Filed Mar. 10, 1915. Serial No. 13,409. (Cl. 68—29.)



1. A washboard having an opening arranged in its rubbing surface, a soap receptacle mounted on said board and adapted to be disposed at the opening aforesaid, means for automatically feeding soap during rubbing action on the board, said means constituting manipulative means for moving the receptacle to or away from the opening aforesaid.

2. A washboard having an opening in its rubbing surface, a soap receptacle mounted upon the board and bodily movable to expose soap carried thereby at the opening or remove said soap therefrom, a spring actuated member in said receptacle for feeding soap during action, said member constituting holding means for retaining the receptacle and its contents at adjusted position.

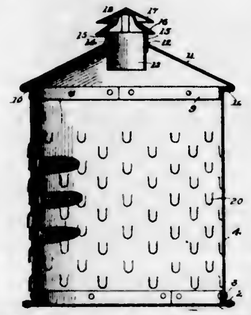
3. A washboard having an opening in its rubbing surface, a soap receptacle mounted upon the board and bodily movable to and from the opening aforesaid to expose soap carried thereby, and manipulative means for moving the receptacle and soap into operative and inoperative position with respect to the opening in the rubbing surface.

4. A washboard having an opening therein, a soap receptacle slidably mounted on the back of said board, a spring actuated follower arranged in the receptacle normally tending to displace the soap from the receptacle and holding it against the board to maintain the receptacle at different positions, a plunger connected to the follower for retracting the same to permit movement of the receptacle, said plunger constituting manipulative means for operating the receptacle.

5. A washboard having an opening in its rubbing surface, a soap receptacle mounted upon said board and movable into operative and inoperative positions with respect to the opening, soap feeding means carried by the receptacle, manipulative means for said feeding means, said manipulative means constituting manipulative means also for actuating the receptacle, and a locking member carried by said manipulative means for holding the feeding means in an inoperative position.

[Claim 6 not printed in the Gazette.]

1,155,889. CORN-DRIER. JOHN Q. CLARKE, Crawfordsville, Ind. Filed Nov. 30, 1914. Serial No. 874,767. (Cl. 34—26.)



1. In a corn drier structure, a circular base, a plurality of angle irons secured to the upper surface of the marginal edges of said base, a piece of metal secured to said angle iron and projecting vertically from said base, a plurality of angle irons secured to the upper edge of said vertically extending plate, and a substantially conical shaped roof secured to said last named angle iron.

2. In a corn drier structure, a supporting base, a cylindrical wall secured to said base and projecting vertically therefrom, a plurality of tongues cut from said vertical wall and struck out from the outer contour thereof, corn supporting peg-hooks for attachment to said vertical wall for supporting ears of corn inwardly of said tongues.

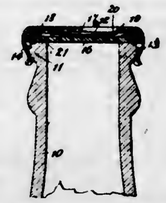
3. The combination with a corn drier embodying a supporting base, a cylindrical wall secured to said base and projecting vertically therefrom, said wall being provided with a plurality of openings formed and spaced circumferentially and vertically therein, of a plurality of peg-hooks having enlarged hook ends formed thereon, said hook ends adapted for insertion through said openings and engagement with the vertical wall adjacent said opening for suspending said peg-hooks horizontally within the interior of said drier.

4. In a corn drier structure, a supporting base, a cylindrical wall secured to said base and projecting vertically therefrom, said wall being provided with a door opening formed therein, a door hingedly connected to said wall and forming a closure for said door opening, a plurality of tongues cut from said wall and struck out from the outer contour thereof, corn supporting peg hooks for attachment to said vertical wall for supporting ears of corn inwardly of said tongues.

5. In a corn drier structure, a supporting base, a vertical wall constructed of a sheet of metal secured to said base, said wall having a plurality of tongues cut therefrom in circumferential and vertical rows, the tongues in each row being disposed staggeredly with respect to the tongue in the row next thereto, and a plurality of peg-hooks for insertion through the openings formed by the striking out of said tongues for supporting ears of corn horizontally within said corn drier adjacent to the openings formed by the striking out of said tongues.

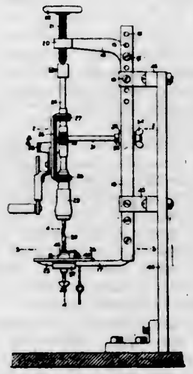
[Claim 6 not printed in the Gazette.]

1,155,890. RECEPTACLE-CLOSURE. EMIL A. CLAUS, New York, N. Y. Filed May 20, 1914. Serial No. 839,784. (Cl. 215—9.)



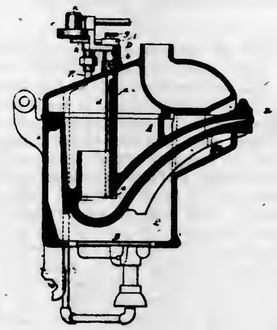
A receptacle closure consisting of a cap having a depending locking skirt adapted to engage a receptacle, a sealing disk within the cap, said cap having an inwardly directed bulge when not engaging a receptacle, the circumference of said bulge being less than the circumference of the mouth of the receptacle to be engaged by the cap, said cap having an upwardly directed circular rib surrounding the bulging portion and an inwardly directed rib surrounding the outwardly directed rib, said inwardly directed rib constituting a circular fulcrum for the cap when the same is fitted on to a receptacle whereby the skirt is maintained locked to the receptacle and the inwardly directed bulge is reversed into an outwardly directed bulge, whereby the sealing disk is depressed into the mouth of the receptacle by the circumference of the bulge, substantially as and for the purpose set forth.

1,155,891. DRILL-PRESS. PATRICK FRANCIS CONNOR, New York, N. Y., assignor of one-fourth to Orin W. Ward and one-eighth to Agnes Schull-Gramm, New York, N. Y., and one-eighth to Edgar C. Abbott, Boston, Mass. Filed Dec. 31, 1914. Serial No. 879,897. (Cl. 77—19.)



In a drill press of the character set forth, the combination of a bracket, head and foot members connected to the opposite ends of the bracket, work holding means connected to the foot, feed means acting through the head toward the foot, drill mechanism between the head and the foot and including a shank against which the feed means operates, said shank having a tapped hole perpendicular to its axis, a stem having at one end a socket embracing the tapped portion of the shank, a screw passing through the socket into said hole, whereby the drill mechanism may be operated on either side of the vertical plane of the stem, and a slide movable along the bracket and connected to the end of the stem opposite the shank.

1,155,892. LINE-CASTING MACHINE. FRANCIS B. CONVERSE, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Apr. 14, 1910. Serial No. 555,521. (Cl. 236—5.)



1. In combination, the seat *l*, the valve *o* sliding within said seat and adapted to reciprocate longitudinally therein, said valve being formed with circumferential grooves o^1, o^2, each adapted to be closed or opened according to the relation between the valve and seat, and said valve also having the longitudinal central passage connecting the grooves o^1 and o^2, and a thermostat for longitudinally moving the valve.

2. In combination, the seat *l*, the valve *o* sliding within said seat and adapted to reciprocate longitudinally therein, said valve being formed with circumferential grooves o^1 and o^2, each adapted to be closed or opened according to the relation between the valve and seat, and said valve also having the longitudinal central passage connecting the grooves o^1 and o^2, and a thermostat for longitudinally moving the valve, said central passage extending to the gas supply end of the valve for admitting a constant initial gas supply.

3. In a fuel governor, a valve device comprising a seat or throat *l* and a valve *o* adapted to slide longitudinally therein, said valve having inlet port or groove o^1 and outlet port or groove o^2 near its opposite ends respectively, with a passage connecting said inlet and outlet, and an inlet *q* at one end of said valve, said inlet *q* also connected to the inlet o^1 and outlet o^2, and means for reciprocating said valve.

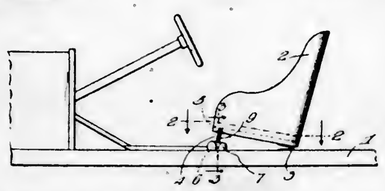
4. A thermostatically-actuated heat-controlling valve having a variable outlet port (as *w*), a variable inlet port (as *v*), and a constant inlet port (as *q*), said valve adapted initially to have said outlet and constant inlet open, and adapted when in full operation at predetermined high temperature to uniformly maintain such temperature by the variable degree of closure of said outlet while the variable inlet is wide open.

5. A thermostatically-actuated heat-controlling valve having a variable outlet port (as *w*), a variable inlet port (as *v*), and a constant inlet port (as *q*), said valve adapted initially to have said outlet and constant inlet open and variable inlet closed, and adapted after a rise in temperature to have the variable inlet become open for an increased heat supply, and adapted when in full operation at

predetermined high temperature to uniformly maintain such temperature by the variable degree of closure of said outlet while the variable inlet is wide open.

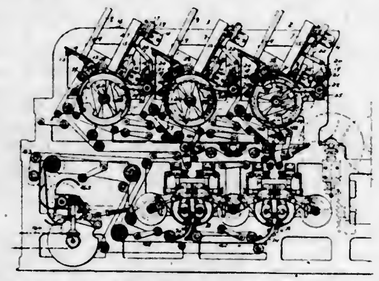
[Claim 6 not printed in the Gazette.]

1,155,893. SPRING-SEAT. ROY D. CRIPPEN, San Diego, Cal. Filed Oct. 1, 1914. Serial No. 864,509. (Cl. 155—25.)



In a spring seat for vehicles, a frame, a seat hinged at its rear edge thereon and inclined upwardly toward its forward edge, said seat having a pair of substantially vertical openings formed therethrough at its forward edge, a transverse bar mounted on said frame beneath the forward edge of said seat, said bar having formed therethrough a pair of openings alined with the openings through said seat edge, a cap member positioned in each of said openings at its inner end, said members being offset intermediate their ends to provide shoulders, expanding springs between each pair of cap members arranged therein against said shoulders, a contracting spring within the expanding spring, a bolt expanding through the end of each cap member and having its head engaging the adjacent end of the contracting spring, and a nut on the outer end of each bolt, whereby the tension of the springs may be varied.

1,155,894. PAPER-ASSOCIATING MACHINE. CLAUD D. CURRY, Memphis, Tenn. Filed Aug. 24, 1910. Serial No. 578,714. (Cl. 101—39.)



1. In a machine of the character described, the combination with a magazine for superimposed paper sections, of a revoluble cylinder below the same provided with an engaging flange for a paper section, a swinging arm, a needle box carried by said arm, means for operating the needle box to cause the needles thereof to engage a paper section, means for operating the swinging arm to move the needle box into the cylinder for deflecting the leading edges of the paper section in the path of the engaging flange of the cylinder, and a feed roller adjacent to and cooperating with said cylinder to bodily withdraw a paper section from the magazine.

2. In a machine of the character set forth, the combination of a paper support for superimposed paper sections, a frictional feeding member beneath said support, a carrier moving in a continuous path adjacent said support, a plurality of frictional feeding surfaces on said carrier spaced apart in the direction of travel thereof adapted to successively coöperate with said feeding member during each cycle of movement of the carrier, and means for partially deflecting a plurality of paper sections one by one from the support and presenting the same successively to the action of the feeding member and surfaces during each cycle of the carrier.

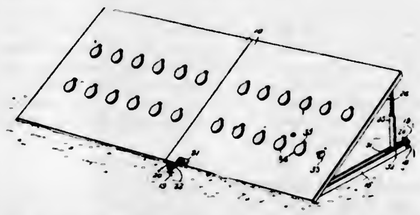
3. In a machine of the character described, the combination with a magazine for superimposed paper sections, and a feeding cylinder disposed below the magazine and provided with a flange for engaging paper sections, of a swinging arm projecting between the cylinder and magazine, withdrawing devices for a paper section carried by said arm, means for operating said withdrawing devices and means for swinging said arm, whereby a portion of a paper section will be deflected from the magazine and presented to the engaging flange of the feeding cylinder.

4. In a machine of the character described, the combination with a magazine for superimposed paper sections, and a feeding cylinder mounted below the same and provided with a flange for engaging paper sections, of a swinging arm projecting between said cylinder and magazine, a head pivoted to said arm, means for rocking said head, a needle carrier supported by said head, needles secured to said carrier, means for reciprocating said needle carrier on the head to cause the needle to engage a paper section, and means for swinging said arm to deflect a paper section and present the same to the feeding cylinder.

5. In a machine of the character described, the combination with a support for paper sections, of deflecting means comprising a pivoted head, means for moving said head bodily away from and toward said support, means for turning said head on its pivotal support, needles carried by said head, and means for reciprocating said needles.

[Claims 6 to 14 not printed in the Gazette.]

1,155,895. PORTABLE BREASTWORK. RAY W. DAVIS, Brownsville, Pa., assignor of one-half to Walter B. Chalfant, Brownsville, Pa. Filed Mar. 19, 1915. Serial No. 15,663. (Cl. 89—36.)



1. In portable breastworks, a plurality of plate sections, means for detachably interlocking the sections to each other, supports swingingly connected to each plate section, means for angularly adjusting the plate sections relative to the supports and also sustaining the same in such adjusted position, the said plate sections being provided with a plurality of openings, shutters swingingly connected to the sections for closing the said openings, loops fixed to the supports and the said sections, and anchoring means passed through the loops for securing the plates and supports to the ground.

2. In portable breastworks, a plurality of plate-like sections, means detachably connecting the sections together, supports swingingly connected to the respective sections, a stem swingingly connected to each section, a sleeve detachably connected to each support and having a slot provided at intervals with offset notches, the said stems being slidably telescoped within the sleeves, and pins fixed in the stems and working in the slots for engagement in any one of the notches to adjustably secure the plate sections in angular position.

3. In portable breastworks, a plurality of plate-like sections, means detachably connecting the sections together, supports swingingly connected to the respective sections, a stem swingingly connected to each section, a sleeve detachably connected to each support and having a slot provided at intervals with offset notches, the said stems being slidably telescoped within the sleeves, pins fixed in the stems and working in the slots for engagement in any one of the notches to adjustably secure the plate sections in angular position, and means for anchoring the plate sections and supports to the ground.

4. In portable breastworks, a plurality of plate-like sections, means detachably connecting the sections together, supports swingingly connected to the respective sections, a stem swingingly connected to each section, a sleeve detachably connected to each support and having a slot provided at intervals with offset notches, the said stems being slidably telescoped within the sleeves, pins fixed in the stems and working in the slots for engagement in any one of the notches to adjustably secure the plate sections in angular position, means for anchoring the plate sections and supports to the ground, the said plate sections being provided with a plurality of openings, and shutters carried by the setions for opening and closing said openings.

1,155,896. DRAFT-RIGGING FOR RAILWAY ROLLING-STOCK. WALTER R. DIEHL, Pittsburgh, Pa. Filed Jan. 26, 1915. Serial No. 4,521. (Cl. 213—64.)



1. In a friction draft gear, the combination of a coupler-draw-bar and yoke, a housing, guides whereby the housing is supported to move longitudinally of a car, rotatable friction disks in the housing, stationary friction disks with relation to and in engagement with which the movable disks travel, means for communicating the motion of the draw bar to the disks, means for guiding the disks longitudinally of the housing, means for causing the rotation of the movable disks during their travel.

2. In a friction draft gear, the combination of a coupler-draw-bar and yoke, a housing, longitudinal guides on which the housing is movable, guides for the yoke, helices interiorly of the housing, friction disks supported within the housing, means for holding the friction disks in contact, means on certain of the friction disks for engaging the helices, means for moving the disks longitudinally of the casing, whereby the means engaging the helices causes rotation of the disks, and means for communicating the motion of the draw bar to said disks.

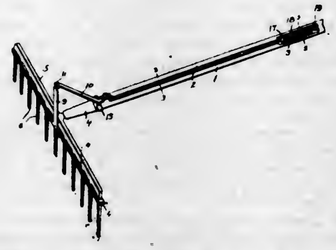
3. In a friction draft gear, the combination of a coupler-draw-bar and yoke, a housing, longitudinal guides on which the housing is movable, guides for the yoke, helices interiorly of the housing, friction disks supported within the housing, means for holding the friction disks in contact, means on certain of the friction disks for engaging the helices, means for moving the disks longitudinally of the casing, whereby the means engaging the helices causes rotation of the disks, means for increasing the tension on the disks as they move longitudinally of the housing, and means for communicating the motion of the draw-bar to said disks.

4. In a friction draft gear, the combination of a coupler-draw-bar and yoke, a housing, guides in which the housing is supported and with relation to which said housing is slidable, yoke guides, means for coupling the yoke to the draw bar whereby the movement of the draw bar is communicated to the yoke, helices interiorly of the housing, an annular shoulder near the end of said housing, a series of friction disks arranged in two series, one series of which is stationary and the other of which is rotatable, means on the rotatable disks engaging the helices, means for moving the disks longitudinally of the casing whereby the camming action of the helices communicates motion to the rotatable disks, and means for holding one series of friction disks in contact with the other series thereof.

5. In a friction draft gear, the combination of a coupler-draw-bar and yoke, a housing, guides in which the housing is supported and with relation to which said housing is slidable, yoke guides, means for coupling the yoke to the draw bar whereby the movement of the draw bar is communicated to the yoke, helices interiorly of the housing, an annular shoulder near the end of said housing, a series of friction disks arranged in two series, one series of which is stationary and the other of which is rotatable, means on the rotatable disks engaging the helices, means for moving the disks longitudinally of the casing whereby the camming action of the helices communicates motion to the rotatable disks, means for normally holding the friction disks in contact and means for increasing the pressure of the disks against one another according to the longitudinal movement of said disks.

[Claims 6 to 14 not printed in the Gazette.]

1,155,897. RAKE-CLEANER. SAMUEL E. DOUGLASS, Mount Gilead, N. C. Filed Dec. 23, 1913. Serial No. 808,425. (Cl. 55—146.)

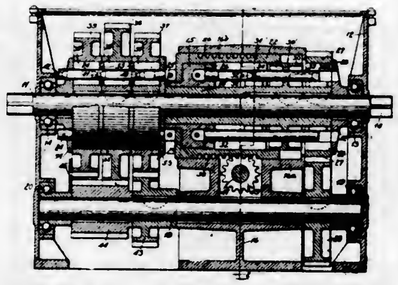


A rake cleaner of the character described comprising a handle, said handle being formed with a longitudinal groove and having a recess at the upper end of the groove, a rake head secured to the handle at the end opposite the recess end, a stripping bar slidable on the rake head, a standard extending upwardly from the stripping bar intermediate its ends, a U-shaped yoke surrounding the handle near the head, a lever pivoted between the ends of the arms of the yoke, the free ends of the lever being pivoted to the standard, an upstanding arm at the end of the lever opposite the pivoted end, an operating rod arranged to seat in the groove in the handle, a bifurcated end on the operating rod pivoted to the upstanding arm on the lever, a loop on the opposite end of the operating rod, and extending within the recess in the handle, a spring secured to the loop and resting in the recess, the opposite end of the spring being secured to the handle, the loop, operating bar and spring being disengaged from the walls of the groove and recess when the rake is inverted so that the loop will not engage the end walls of the recess and thereby permit the stripping bar to slide toward the ends of the rake teeth.

1,155,898. VARIABLE-SPEED GEARING. JOSEPH DOVE-SMITH, Niagara Falls, N. Y. Filed Aug. 14, 1914. Serial No. 856,770. (Cl. 74—59.)

1. In variable speed gearing, the combination of a driving shaft, a driven shaft in alinement with the driving shaft, a sleeve secured to the driving shaft and overlapping the adjacent end of the driven shaft, a cup surrounding said sleeve and adjustable longitudinally thereof, a pair of clutches secured to the sleeve, a gear wheel mounted loosely upon one of said clutches, the other clutch coöperating with said cup, variable speed gears surrounding the driven shaft, means for clutching either of the variable speed gears to the driven shaft, connections between the loosely mounted gear and the variable speed gears, and means movable longitudinally with the cup along the sleeve to cause one of said clutches to operate to drive the driven shaft with the driving shaft or in turn

to cause the other clutch through its surrounding gear, said connections, and other clutching means to set in operation the variable speed gears, substantially as set forth.



2. In variable speed mechanism, the combination of a driving shaft, a sleeve secured thereto for rotation therewith, a driven shaft journaled in one end of said sleeve, a collar surrounding the sleeve, a plurality of clutches secured to the sleeve, means connected to said collar to cause either of said clutches to be made operative, a plurality of clutches keyed to the driven shaft, a plurality of gears mounted loosely upon the last mentioned clutches, means to set the last mentioned clutches into operation in succession, means to cause movement of the collar and the last mentioned clutch setting devices, a jack shaft, and gear wheels associated with one of the first mentioned clutches, the jack shaft and the last mentioned plurality of clutches.

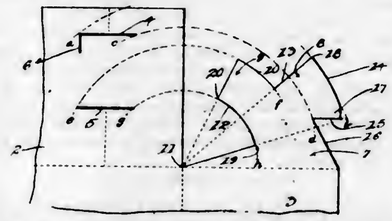
3. In variable speed gearing, the combination of driving and driven shafts, a plurality of clutches secured to the driving shaft, a plurality of clutches secured to the driven shaft, a gear wheel surrounding each of the last mentioned clutches, a gear wheel surrounding one of the first mentioned clutches, a jack shaft, a series of gears associated with the jack shaft and adapted to make driving connection between the driving shaft gear and the driven shaft gears at different speeds, direct clutch connections between the driving and driven shafts, and shiftable means serving to cause either the driving and driven shafts to be connected for movement as a unit through said direct clutch connections or any other desired speed to be had through the aforesaid gear members.

4. In variable speed gearing, the combination of a bracket including a cylindrical bearing, a cup journaled and movable longitudinally in said bearing, a sleeve extending through said cup and having a hub constituting a bearing for one end of the cup, a driving shaft connected to the sleeve, a driven shaft having one end journaled in the projecting end of said sleeve, a pair of clutch members secured to the sleeve on opposite sides of said hub, means to slide the cup longitudinally with respect to the bearing and hub, means operated from the cup and movable through said hub serving to make the clutches operative in alternation, one clutch serving to grip the cup to the sleeve, and a train of gears extending from the other clutch through a countershaft to the driven shaft serving to cause the driven shaft to be operated from the driving shaft but in a different manner when the other clutch is made operative.

5. In variable speed gearing, the combination of a bracket including a cylindrical bearing, a cup journaled and slidable in said bearing, a sleeve within the cup, a driving shaft connected to the sleeve, a driven shaft, means to slide the cup along said bearing, a series of independently rotatable gear wheels journaled on the driving and driven shafts, a jack shaft, gears on the jack shaft meshing with the aforesaid gears, and a series of devices associated with said first mentioned gears and cup serving through the slidable movement of the cup to cause either the driving and driven shafts to be operated in unison or the driven shaft to be operated from the driving shaft in a different manner through the jack shaft and its gears.

[Claims 6 to 8 not printed in the Gazette.]

1,155,899. FOLDING BOX. GENNARO DRAMIS, Brooklyn, N. Y. Filed Aug. 20, 1914. Serial No. 857,730. (Cl. 229—35.)



1. A folding box comprising a bottom side and end walls, said end walls provided with superposed slits, each upper slit having a downwardly extending slit formed therewith and communicating with the inner end thereof, the end walls and side walls provided with locking tongues, said locking tongues being formed by cutting away portions of the side walls forming an upper and lower tongue, the lower tongue being adapted to engage the lower slot thereby limiting the downward movement or inward movement of the side walls at the same time alining the upper tongue with the upper slot whereby by inserting the upper tongue into the upper slot, the box is pushed outward and the cut-away portion of the upper tongue limits the outward movement of the same and holds the box in position.

2. A folding box including side, bottom and end walls, said end walls having superposed transverse slits therein, upper slit having a downwardly extending slit communicating therewith at its inner end, said side walls having locking tongues formed thereon, locking tongues being so formed that they are positioned one above the other, the lower tongue projecting outwardly from the side thereof, the upper tongue extending vertically from the lower tongue having a rearwardly extending curved portion cut-away forming a V-shaped slot, the lower tongue adapted to engage the lower slit on the inward movement of the side limiting the inward movement thereof, the upper tongue engaging the rear downwardly extending slit by inserting the upper tongue through the upper slit and pulling the side outward, whereby the box will be held in an assembled position.

1,155,900. SELECTING-SCREEN FOR COLOR PHOTOGRAPHY. LOUIS DUFAY, Chantilly, France. Filed June 29, 1912. Serial No. 706,658. (Cl. 95—81.5.)



1. A selecting screen for color photography comprising a transparent support having a plurality of closely arranged recesses therein, a filling in said recesses composed of a transparent impermeable colored material, and areas intermediate said recesses and coterminous therewith, containing imbibed coloring matter.

2. A selecting screen for color photography comprising a transparent support having a plurality of narrow closely

arranged linear recesses therein, transparent grains arranged in spaced relation in said recesses, and colored in one selecting color, a filling composed of an impermeable transparent material colored in a second selecting color and arranged in said recesses between said grains, and areas intermediate said recesses and coterminous therewith, dyed with a third selecting color.

3. A selecting screen for color photography comprising a transparent support having a plurality of closely arranged recesses in both sides thereof, a filling in said recesses composed of a transparent impermeable colored material, and areas intermediate said recesses and coterminous therewith containing imbibed coloring matter.

4. A selecting screen for color photography comprising a transparent support having a plurality of closely arranged recesses in both sides thereof, a filling in the recesses on one side composed of a transparent impermeable colored material, a filling in the recesses on the other side composed of transparent colored grains embedded in a transparent impermeable colored material, and areas intermediate said recesses and coterminous therewith containing imbibed coloring matter.

5. A selecting screen for color photography comprising a transparent support having a plurality of closely arranged recesses in both sides thereof, a filling in said recesses comprising transparent colored grains embedded in transparent impermeable colored material and areas intermediate said recesses and coterminous therewith, containing imbibed coloring matter.

1,155,901. MUSHROOM-BULLET. JOHN B. DUNCAN, Wolf, Wyo. Filed Sept. 29, 1914. Serial No. 864,138. (Cl. 102—28.)



A sharp-nosed mushroom bullet comprising a body of soft metal, a jacket therefor having its forward end cut away, and a point member mounted within the forward end of the body and having a penetrating point whose lines merge with those of the jacket, the rear end of the point member being tapered to form a wedging portion, the wedging portion of the point member being separated from the penetrating point by an elongated portion of uniform thickness, the juncture of the rear wedge portion with the body of the pointed member being spaced from the cut away forward end of said jacket.

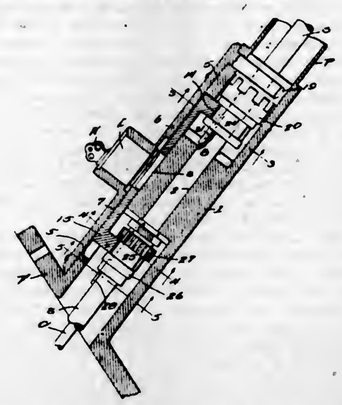
1,155,902. AUTOMOBILE-LOCK. CHARLES E. C. EDEY, Tacoma, Wash., assignor of one-half to Tom Burr Bonham, Tacoma, Wash. Filed July 7, 1915. Serial No. 38,476. (Cl. 70—90.)

1. The combination with the steering and control rods of an automobile; of means for locking one rod against rotation including a member moving in one path from locked to unlocked position, and means for locking the other rod against rotation including a second member moving from locked to unlocked position in another path intersecting the path of the first member.

2. The combination with the steering and control rods of an automobile; of means for locking one rod against rotation including a member sliding in one path from locked to unlocked position, and means for locking the other rod against rotation including a second member swinging from locked to unlocked position in another path intersecting the path of the first member, one member being held in locked position by the other when the latter also stands in locked position.

3. The combination with the steering and control rods of an automobile; of means for locking the steering rod against rotation including a sliding member, and means for locking the control rods including dogs swinging across the path of movement of said member and held in locked position by such member when it also stands in locked position.

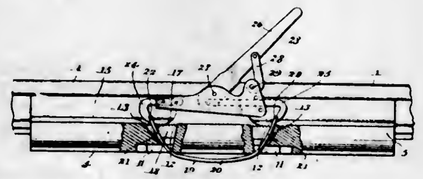
4. The combination with the steering and control rods of an automobile; of means for locking the steering rod against rotation including a sliding member, and means for locking the control rods including dogs swinging across the path of said member and fast on the control rods in position to hold the spark and throttle inoperative when said member stands between the dogs.



5. The combination with the steering and control rods of an automobile; of a gear splined on the steering rod, manually operable means for sliding it, dogs fast on the control rods and swinging into the path of said gear, and teeth on the dogs adapted to be engaged by those on the gear when the dogs are swung to position where the spark and throttle are inoperative and the gear is slid into position between said dogs.

[Claims 6 to 11 not printed in the Gazette.]

1,155,903. RAIL-JOINT. GEORGE EDICK, Albuquerque, N. Mex. Filed Jan. 25, 1915. Serial No. 4,371. (Cl. 239—6.)



1. A rail joint including a chair having one of its longitudinal edges provided with a vertical flange, the second edge provided with an angular rail-engaging flange, rails upon the chair, a spring including a longitudinal body portion having angular ends which are arranged in depressions upon the inner face of the vertical flange, said angular ends of the spring being inturned and provided with teeth, and the said vertical flange having its inner face inclined with respect to the longitudinal plane of the chair, rails upon the chair, a removable angle bar having a longitudinally extending tongue, the outer edge of which being beveled to engage with the inclined inner face of the vertical flange of the chair, the upper wall of the tongue being provided with transverse teeth and the said teeth adapted to be engaged by the toothed ends of the spring, and means for securing the rails to the angular plate of the chair.

2. In a rail joint, a chair upon which the rails rest, said chair having one of its longitudinal edges formed with an angular flange which is received within the fishing spaces of the rails, lugs upon the flange engaging in the bolt openings of the rails, the second longitudinal edge of the chair being formed with a vertical flange which is in-

clined from one end of the chair to the other end thereof, the chair having a longitudinal channel extending from the said vertical flange, the lower wall of the channel being provided with spaced substantially bayonet-shaped slots, a flat spring member having angular ends adapted to be arranged within the bayonet slots and to be received within the depressions provided upon the inner face of the vertical flange, a wedge-plate filling the channel and closing the outer and longitudinal portions of the bayonet slots, a removable angle bar formed with the wedge plate and having its lower horizontal portion provided with transverse teeth and its outer portions dove-tailed and integral with a longitudinal tongue to engage with the vertical flange and the longitudinal edges of the rail, and means for compressing the ends of the spring member to permit of the insertion of the rails and angle bar upon the chair, the end of said spring member being provided with lateral extensions provided with teeth which are adapted to engage between the teeth of the angle bar when the spring is permitted to expand.

3. The combination with rails having the undersurfaces of their heads channeled, of a joint chair for the rail ends including a base having a lateral flange received within the fishing spaces of the rails and which has its upper edge angular and engaged within the channels in the heads of the rail, said chair having its opposite longitudinal edge provided with a vertical flange, the inner wall of which being inclined from one end of the chair to the other end thereof, an angle bar having a beveled lower edge adapted to engage with the inclined inner face of the vertical flange, a spring member having angular arms arranged in depressions in the vertical flange of the chair, said ends of the springs being provided with lateral extensions having their lower portions formed with teeth which are adapted to engage between the teeth of the angle bar.

1,155,904. ARTIFICIAL TOOTH. EVERETT B. FEWELL, Madison, Ind. Filed Feb. 17, 1915. Serial No. 8,812. (Cl. 32—9.)



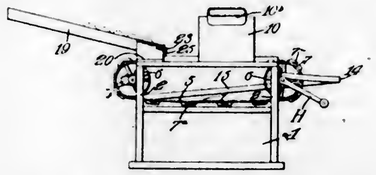
1. As an article of manufacture, a tooth front having a longitudinal passage. one portion of the rear face of the front being set forwardly to intersect the passage through a portion of its length and to open the passage, another portion of the rear face of the front being inclined to intersect the passage.

2. In a device of the class described, a front having a longitudinal passage, a portion of the rear face of the front being set forwardly to intersect the passage and to open the same adjacent the base of the tooth; backing means comprising a transverse extension engaged in the open portion of the passage; and a securing device entering the passage adjacent the working end of the front and engaged with the backing means.

3. In a device of the class described, a front having a longitudinal passage, a portion of the rear face of the front being set forwardly to intersect the passage, the front having a shoulder which extends across the passage intermediate its ends; and a backing means comprising an extension engaged in the open portion of the passage, one end of the extension terminating in a projection lodged behind the shoulder.

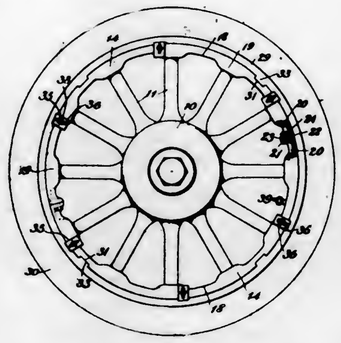
1,155,905. EGG-TESTING MACHINE. SQUIRE J. FISH, Jackson, Mich. Filed July 11, 1914. Serial No. 850,408. (Cl. 99—6.)

1. In an egg testing machine, a frame having a pair of bars provided with inclined roughened portions, there being a light opening between the bars, and an egg holder movable over said opening and having an aperture for receiving an egg whereby the egg depends partially below the holder, so that the egg is arranged to engage and roll upon the said bars when the holder passes over said opening.



2. In an egg testing machine, an egg carrying member having a series of egg holders, an egg delivery chute under the lower end of which the egg carrying member is movable, a curved detent having portions journaled to the sides of the chute adjacent the lower end thereof and having an arm, and means carried by the egg carrying member and coöperable with said arm for swinging the detent to egg releasing position when the holders pass from under the chute.

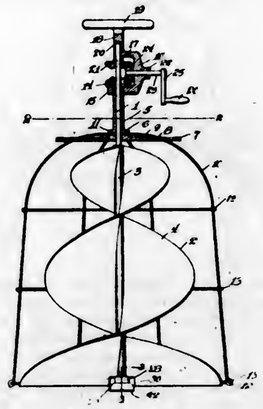
1,155,906. ARTILLERY-WHEEL. HENRY E. FLICK, Jackson, and LAURENCE W. LONG, Detroit, Mich. Filed June 1, 1914. Serial No. 842,068. (Cl. 21—178.)



1. In a vehicle wheel, a felly comprising a pair of metallic sections having inward extensions at their extremities, one of said extensions having an integral threaded stem projecting circumferentially therefrom and the other extension having an aperture receiving said stem therethrough, nuts on the stems, the extremity of one section having in its periphery a recess leading out through its end and the adjacent extremity of the other section having an extension flush with the outer face thereof and engaging said recess to hold the sections against lateral displacement, said felly sections being formed with mortises adapted to receive the extremities of the spokes, and a tire carrying rim mounted on the felly.

2. In a vehicle wheel, a felly comprising a pair of metallic sections having inward extensions at their extremities, one of said extensions having an integral stem projecting circumferentially therefrom and the other extension having an aperture receiving said stem therethrough, nuts engaged on the stem, the extremity of one section having a recess communicating with its free end and the adjacent extremity of the other section having an extension engaging said recess to hold the sections against lateral displacement, said felly sections having spaced peripheral grooves communicating with one edge thereof, a rim having lugs conforming to said grooves and engaging the same when the rim is in position, and means for holding the rim against displacement transversely.

1,155,907. MIXER. JOHN FRAME, Searsport, Me. Filed Nov. 14, 1913. Serial No. 801,044. (Cl. 107—36.)



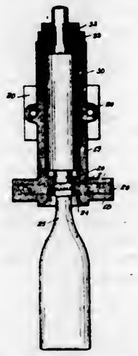
1. A mixer including a tapered spiral agitator rotating in one direction, a deflector disposed above the narrow end of the agitator and rotating in an opposite direction, and a cage agitator carried by the deflector and encompassing the spiral agitator for coöperating with the spiral agitator in mixing material which is thrown from and lifted by the agitator.

2. A mixer including a shaft and tapered spiral agitator carried thereby, a sleeve disposed about the shaft above the narrow end of the blade, a disk-like deflector formed integral with the sleeve and having a diameter larger than the diameter of the upper end of the spiral agitator, a wire cage carried by the deflector and encompassing the spiral agitator, means for simultaneously rotating the spiral agitator in one direction for lifting material upwardly and for throwing some of the material therefrom while it is being lifted and for rotating said cage agitator in an opposite direction for agitating the material thrown from the spiral agitator, and said deflector causing the material lifted upwardly by the spiral agitator to return to the lower end of the spiral agitator to be subsequently acted upon by this agitator for efficiently mixing the material.

3. A mixer including a shaft, a spiral agitator rigidly mounted on said shaft, a sleeve rotatably mounted upon said shaft, a deflector upon said sleeve, a conical cage agitator supported by said deflector and encompassing said spiral agitator, said cage agitator including a plurality of longitudinally disposed ribs, annular braces for supporting said ribs, and means for supporting said agitators in opposite directions.

4. A mixer comprising a shaft, a spiral agitator rigidly mounted upon said shaft, the blade of said spiral agitator tapering toward their upper ends, a sleeve rotatably mounted upon said shaft, a disk-like deflector formed upon said sleeve, an annular collar formed integral with said sleeve on the upper surface of said deflector, a substantially conical cage agitator including longitudinally disposed ribs and annular braces therefor, said ribs being secured in said collar and supported through openings in said deflector, said cage agitator encompassing said spiral agitator and conforming substantially to the configuration of said spiral agitator, and means for simultaneously operating said agitators in opposite directions for continuously causing the material adjacent the shaft to be lifted upwardly and forced downwardly adjacent the cage agitator.

1,155,908. BOTTLE-CAPPING MACHINE. JOHN J. GAYNOR, Indianapolis, Ind., assignor to Progress Machine Company, Indianapolis, Ind., a Corporation. Filed July 20, 1914. Serial No. 851,965. (Cl. 113—2.)

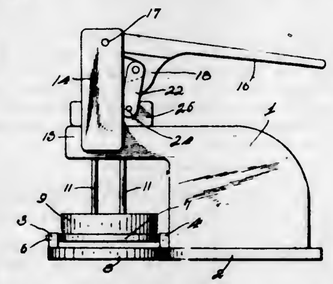


1. A bottle capping machine including a capping plate with a tapering throat in it, a plunger for discharging the bottle and cap with its lower end projecting through the capping plate into the throat thereof, adjustable means for positively limiting the upward movement of the plunger at the instant that the throat of the capping plate limits the upward movement of the cap and mouth of the bottle, and a vertically movable bottle support.

2. A bottle capping machine including a capping plate with a tapering throat in it to receive the cap and mouth of the bottle, a casing extending upward from said plate, a gravity actuated plunger in said casing, adjustable means secured to the upper end of the casing for positively limiting the upward movement of the plunger at the instant that the throat of the capping plate limits the upward movement of the cap and mouth of the bottle, and a vertically movable bottle support.

3. A bottle capping machine including a capping plate with a throat, a casing extending upward from said plate, a gravity actuated plunger in said casing with the reduced end entering said throat and said plate limiting the downward movement of said plunger, a nut which screws into the upper end of said casing for positively limiting the upward movement of said plunger, and a vertically movable bottle support.

1,155,909. VULCANIZER. FRANK L. GIBSON, Pender, Nebr. Filed Oct. 6, 1914. Serial No. 865,353. (Cl. 18—18.)



1. In a vulcanizer, a supporting structure having a base formed integrally therewith and extending forwardly therefrom, upstanding ears formed upon said base, said ears being provided with recesses formed in their upper ends, a plate having pins formed integrally therewith, said pins being seated in said recesses for pivotally supporting said plate upon said forwardly extending section of said

base, and a vulcanizing cup positioned upon said pivoted plate for movement into or out of engagement with said plate.

2. In a vulcanizer, a supporting structure having a base, said base extending forwardly of said supporting structure, upstanding ears formed integral with said base, said ears being provided with facial recesses formed in their upper sides, a plate, pins formed integral with the sides of said plate, said pins being mounted in said recesses for pivotally supporting said plate, a vulcanizing cup positioned above said pivoted plate, a plurality of rods connected to said vulcanizing cup and extending vertically therefrom, a head, said rods being rigidly connected to said head and means for raising or lowering said head for raising or lowering said vulcanizing cup into or out of engagement with said pivoted plate.

3. In a vulcanizer, a supporting structure, a base formed integral with said supporting structure and extending forwardly therefrom, upstanding ears formed upon said base, said ears being provided with facial recesses formed in their upper sides, a plate, pins formed integral with said plate, said pins being seated in said facial recesses for pivotally supporting said plate above said forwardly extending base, a vulcanizing cup having a plurality of pins formed integrally therewith and extending upwardly thereinto, a pair of vertical rods detachably connected to said cup, an arm formed upon said supporting structure and slidably supporting said vertically extending rods, a head rigidly connected to the upper end of said rod and positioned upon the upper side of said arm, upstanding plates connected to said arm, a lever pivotally carried by said plates and means associated with said lever for engagement with said head for moving it upwardly or downwardly for raising or lowering said vulcanizing cup into or out of engagement with said pivoted plate.

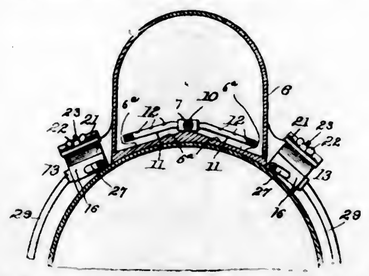
4. In a vulcanizer, a supporting structure, a base formed integral with said supporting structure and extending forwardly therefrom, upstanding ears formed upon said base, said ears being provided with facial recesses formed in their upper sides, a plate, pins formed integral with said plate, said pins being seated in said recesses for pivotally supporting said plate above said forwardly extending base, a transversely extending arm formed integrally with said supporting structure, said arm being provided with openings extending vertically therethrough, rods slidably seated in said openings, a vulcanizing cup detachably connected to the lower ends of said rods, a plurality of pins extending upwardly into said vulcanizing cup for increasing the heating area thereof, a head rigidly connected to the upper ends of said rod and positioned upon the upper side of said transversely extending arm, vertical plates connected to said arm, a lever pivotally connected to said vertical plates, a cam formed integrally with said lever and provided with a cam shaped opening extending therethrough, said cam shaped opening having a roller seated therein, said roller being rotatably mounted upon a pin, arms supporting said pin, said arms being pivotally connected to said head, for raising said head and said vulcanizing cup upon upward movement of said lever, the periphery of said cam engaging the upper surface of said head for forcing said head and said vulcanizing cup downwardly upon downward movement of said lever.

1,155,910. SANDING DEVICE FOR LOCOMOTIVES. MILES C. GLENN, Greensboro, N. C. Filed Nov. 9, 1914. Serial No. 871,110. (Cl. 105—263.)

1. In combination, a sand box, and an air pipe arranged diametrically in the lower portion of said sand box having open ends and a plurality of apertures in the upper portion, and sand traps arranged on opposite sides of said sand box adjacent the open ends of said pipe.

2. In combination, a sand box, an air pipe having a plurality of apertures in the upper portion thereof and having open ends arranged in spaced relation to the wall of said box, and traps arranged on opposite sides of said sand box adjacent the open ends of said pipe.

3. In combination, a sand box having diametrically opposed openings in the lower portion thereof, an air pipe arranged in the lower portion of said box having a plurality of apertures in the upper portion thereof and having open ends disposed in spaced relation to the openings in said box, and traps arranged on opposite sides of said box and connected with said openings.

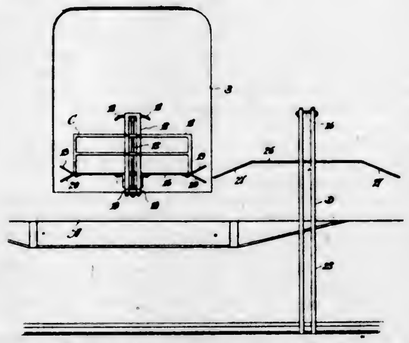


4. In combination, a sand box having a raised central portion providing oppositely inclined surfaces, an apertured air pipe arranged diametrically in said box, disposed parallel with said inclined surfaces and having open ends terminating in spaced relation to the wall of said box, and sand traps arranged on opposite sides of said sand box adjacent the open ends of said pipes.

5. In combination, a sand box having a raised central portion providing oppositely inclined surfaces, and an air pipe arranged diametrically in said box, disposed parallel with said inclined surfaces and adjacent thereto and having a plurality of apertures in the upper portion thereof.

[Claims 6 and 7 not printed in the Gazette.]

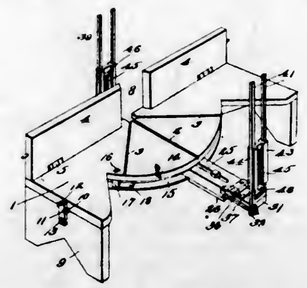
1,155,911. MAIL-BAG CATCHING AND DELIVERING APPARATUS. THOMAS JOSEPH GORMAN, Lampman, Saskatchewan, Canada. Filed May 26, 1914. Serial No. 841,128. (Cl. 258—11.)



1. A mail bag catching and delivering apparatus comprising a car supported element having spaced vertically disposed inverted U-shaped inner and outer uprights, spaced brackets arranged between the uprights, horizontally arranged rails on the brackets and having outwardly divergent tapered ends, hangers rising from the intermediate brackets, a stationery element having a horizontal arm provided with spaced depending hangers, and horizontally arranged rails movable between the first-named hangers slightly above the plane of the first-named rails and having inclined tapered ends.

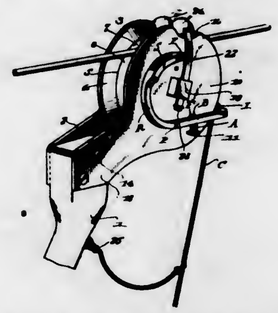
2. A mail bag catching and delivering apparatus comprising a car supported element having spaced vertically disposed inverted U-shaped inner and outer uprights, spaced brackets arranged between the uprights, horizontally arranged rails on the brackets and having outwardly divergent tapered ends, hangers rising from the intermediate brackets, a stationary element having a horizontal arm provided with spaced depending hangers, horizontally arranged rails movable between the first-named hangers slightly above the plane of the first-named rails and having inclined tapered ends, and guard rails at opposite sides of the series of first-named rails.

1,155,912. FOLDING MITER-BOX. JOHN F. GRABOWSKY, Brokaw, Wis. Filed May 28, 1915. Serial No. 30,971. (Cl. 145—86.)



A folding miter box of the class described comprising a bottom, a back comprising members hingedly connected to the bottom and foldable on the upper side thereof, supporting feet hingedly connected to the ends of the bottom and foldable under the same, an arm pivotally mounted under the bottom and comprising slidably connected members and sections pivotally mounted at the outer ends of said members, to fold longitudinally thereof, and saw guides on said sections.

1,155,913. TROLLEY-WHEEL. WILLIAM S. GRIFFITH, Homer City, Pa. Filed Dec. 12, 1913. Serial No. 806,296. (Cl. 191—81.)



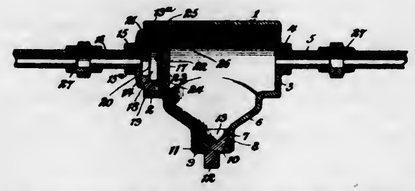
1. In a device for the purpose set forth, a trolley pole provided with a harp including spaced rounded heads having rounded pockets, a trolley wheel arranged within the pockets, securing elements for the trolley wheel, springs, said springs co-acting with the securing elements for sustaining the same against movement, said springs adapted to exert a tension toward the trolley wheel, and revoluble retaining elements connected with the springs and overlying the trolley wheel.

2. In a device for the purpose set forth, the combination with a trolley wheel having a harp, said harp including oppositely disposed rounded heads having their inner faces beveled inwardly from their periphery, the said inner faces being depressed to provide pockets, a trolley wheel arranged within the pockets, securing means for retaining the wheel revoluble within the pockets, spring members secured to the heads and co-acting with the wheel sustaining means for securing the said means against displacement, the said heads having peripheral depressions, said springs adapted to exert a tension toward the trolley wheel and having their ends disposed within the peripheral depressions of the heads, and a pivoted spherical member for each of the springs and adapted to overlie the trolley wheel.

3. In a device for the purpose set forth, a trolley pole provided with a harp, spring members secured to the opposite sides of the harp and rotatable members connected with the springs and arranged over the wire receiving groove of the trolley wheel of the harp, spring pressed members pivotally connected with the harp, stops for limiting the movement of the springs in one direction, said members each having a cam associated therewith and arranged adjacent the spring members secured to the harp, and a cable for swinging the spring pressed members to bring their cam faces between the sides of the harp and the spring members to force the spring members outwardly of the harp and the rotatable members to the opposite sides of the groove of the trolley wheel.

4. The combination with a trolley harp having a trolley wheel associated therewith, arms secured upon the opposite faces of the harp, revoluble members connected with the arms and disposed over the groove of the wheel, a bail having its arms pivotally secured to the sides of the harp, said bail having a rounded end, the said end being enlarged and having its extremities beveled and arranged to engage between the arms and the opposite faces of the harp, an operating cable connected with the bail, a spring for forcing the bail in one direction, and a stop for limiting the movement of the bail in the said direction.

1,155,914. GASOLENE-STRAINER. MARTIN L. GROVE, Tylersburg, Pa., assignor of one-half to William Alexander Wray and one-sixth to Albert Foy, Tylersburg, Pa. Filed Sept. 9, 1914. Serial No. 860,881. (Cl. 210—16.)

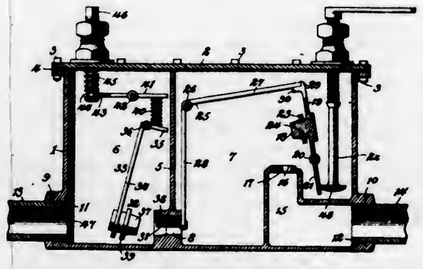


1. In combination with inlet and outlet pipes each having a pipe union therein, a horizontally disposed tubular casing provided at one end with an opening for the connection of the inlet pipe thereto and having its other end open and interiorly threaded, said casing being also provided between its ends with a depending downwardly tapered extension having its lower end open, a removable closure for said open end, an exteriorly threaded hollow cap nut screwed into and closing the open end of the casing and having an opening for the connection of the outlet pipe thereto, said cap nut being provided with a plurality of interior annular recesses of gradually increasing diameters forming seats, a straining means located wholly within and carried by the cap nut and mounted in said seats, a removable fastening ring also located within the cap nut for retaining the straining means in place, whereby any foreign matter passing through the inlet pipe is caught by the trap extension and prevented from passing through the straining means, the removability of the cap nut permitting the strainer to be cleaned without disconnecting the entire device from the pipe line.

2. A gasolene strainer including a horizontally disposed tubular casing provided at one end with an opening for the inlet pipe and having its other end open and interiorly threaded, said casing being also provided between its ends with a depending trap extension, an exteriorly

threaded hollow cylindrical cap nut screwed into and closing the open end of the casing and having an opening for the outlet pipe, said cap nut being provided with a plurality of interior annular recesses of gradually increasing diameters forming seats, a straining and filtering medium located wholly within and carried by the cap nut and consisting of a straining disk and a screen arranged on the seat of the outer annular recess, the inner annular recess being adapted to receive filtering material which is held in place by the disk and screen, and a fastening ring located within an interior groove of the cap for retaining the disk and screen in place thereby serving to hold the entire straining and filtering medium in position when the cap is either on or off the casing.

1,155,915. AUTOMATIC FLUID-PRESSURE CUT-OFF. MARTIN L. GROVE, Tylersburg, Pa., assignor of one-half to William Alexander Wray and one-sixth to Albert Foy, Tylersburg, Pa. Filed Sept. 9, 1914. Serial No. 860,882. (Cl. 50—14.)



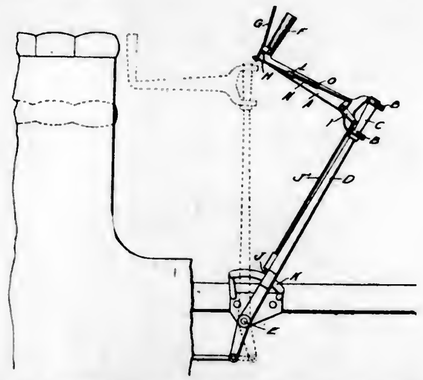
1. An automatic fluid pressure cut off including a casing having an inlet and an outlet and provided with a passage, an automatically closable valve or closure for cutting off the flow of fluid pressure through the outlet, a latch for normally holding the valve or closure in its open position, and a closure for the said passage yieldably maintained in an open position and operable through an abnormal increase in the flow and movable into engagement with the latch to release the said valve or closure.

2. An automatic fluid pressure cut off including a casing having inlet and outlet compartments and a connecting passage, an automatically closable valve for cutting off the flow of fluid pressure, a latch arranged to hold the valve or closure in an open position and having a finger or portion extending into the said passage, and a tripping device operable through the abnormal increase in the fluid pressure through the passage and arranged to engage the said finger or portion to trip the valve or closure.

3. An automatic fluid pressure cut off including a casing having inlet and outlet compartments and a connecting passage, an automatically closable valve for cutting off the flow of fluid pressure, a latch consisting of a bell crank lever having one arm arranged to engage and hold the valve or closure in the open position thereof, the other arm of the bell crank lever being provided with a finger extending into the passage, and a closure located in the inlet compartment and yieldably maintained in an open position and closable through an abnormal increase in the fluid pressure, the last mentioned closure being movable into and out of engagement with the finger and adapted to trip the said valve or closure.

4. An automatic fluid pressure cut off comprising a casing having inlet and outlet compartments, and a connecting passage, said casing being also provided with an outlet, an automatically closable valve or closure for cutting off the flow through the outlet, a latch device for holding the said valve or closure in its open position, and a tripping device including a closure adapted to close the intermediate passage, said latch device being arranged to be engaged and operated by the last mentioned closure to release the said valve or closure.

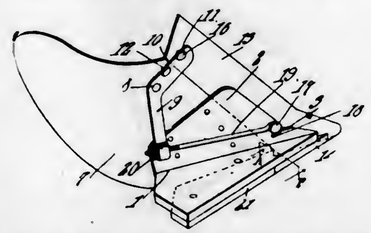
1,155,916. EXTENSION-ARM. BARTON FISK GROUT, Derby, Vt. Filed Oct. 3, 1914. Serial No. 864,754. (Cl. 74—39.)



1. An extension arm for the brake device of automobiles and the like, comprising an arm having an angular handle at one end and provided at its other end with clamping members for securing it to a brake lever, a hand lever pivoted intermediate of its ends to the handled end of the arm and extending along the side of the handle, a bell crank lever pivoted to the end of the arm having the clamping member, a link connecting one end of the hand lever with one member of the bell crank lever, and a spring for holding the hand lever away from the handle of the arm.

2. An extension arm for the brake lever of automobiles and the like, consisting of an arm having a handle at one end, means at its other end for detachably securing it to a brake lever, and a bearing intermediate of its ends, a hand lever pivoted to the arm adjacent its handle, a bell crank lever mounted on the end of the arm opposite that of the handle, a link passing through the bearing of the arm and pivoted to the hand lever and bell crank lever, the link being provided with a collar, and a spring on the link between the said collar and bearing.

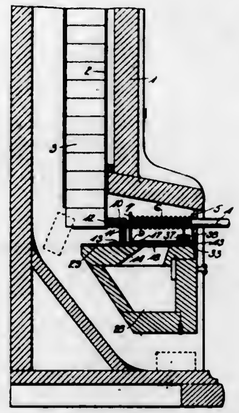
1,155,917. PLOW. ROBERT GRUBB, Powers Lake, N. D. Filed Jan. 13, 1915. Serial No. 2,014. (Cl. 97—18.)



1. In a plow, the combination with a frog having a recess extending into the front portion of the inwardly extending wing thereof, and a longitudinally extending key upon the point of the outer side of the frog, of a moldboard, a share, a point landside carried thereby and insertible into engagement with the key, a projection upon the share and movable into the recess in the frog, a lever fulcrumed upon the moldboard, means upon the share and adapted to be detachably engaged by the lever, and means adjustably engaging one arm of the lever for simultaneously drawing the projection on the share rearwardly into the recess in the frog and shifting the other arm of the lever laterally to press against the lever engaging means on the share, whereby a simultaneous backward and lateral pull is exerted upon the share relative to the moldboard and frog.

2. In a plow, the combination with a frog having a recess extending into the front edge portion of the inwardly extending wing thereof, of a moldboard, a share, a point landside carried by the share and adapted to engage the outer side of the frog, a projection upon the share, a lever fulcrumed upon the moldboard, means upon the share for engagement by one arm of the lever, and means engaging the projection and the other arm of the lever and adjustable relative to the lever for simultaneously drawing the projection rearwardly into the recess in the frog and swinging the other arm of the lever against the lever engaging means on the share to thrust said means laterally, thereby to bind the point landside against the frog.

1,155,918. VENDING-MACHINE. SALVATORE GUADAGNINO, New York, N. Y. Filed Oct. 26, 1914. Serial No. 868,711. (Cl. 194—71.)



1. In a device of the character described, a casing, a plunger arranged to reciprocate in said casing so as to displace articles arranged in the casing, a base plate formed with a slot, a sliding plate, a pivotally mounted plate associated with said sliding plate and movable therewith, a spring for normally pressing said pivotally mounted plate toward said sliding plate, said plates being formed with notches for receiving a coin therebetween, said coin holding said pivotally mounted member in a predetermined position, means adapted to engage said pivotally mounted member when not held in said predetermined position for preventing a sliding movement thereof, and means connected with said plunger for moving said plates when said plunger is moved.

2. In a vending machine, means for vending an article, a projection extending from said means, a sliding plate for controlling the movement of said projection and the vending means, said sliding plate having a coin receiving notch, a pivotally mounted plate arranged adjacent said sliding plate and pivotally connected therewith so as to be movable therewith, said pivotally mounted plate being provided with a coin receiving notch, means for guiding a coin into said notches whereby said pivotally mounted member is held in a predetermined position, a plurality of means arranged in the path of movement of the pivotally mounted plate when not in said predetermined position, and means for ejecting said coin after said sliding plate has been moved a predetermined distance.

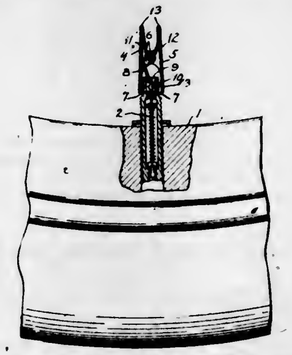
3. In a device of the character described, a reciprocating member, a sliding plate, means for connecting said reciprocating member and said sliding plate, a pivotally mounted plate connected with said sliding plate and movable therewith, said plates having oppositely arranged portions for receiving a coin of a predetermined size, means associated with said sliding plate for locking the same against movement, said means being disengaged by a coin of a predetermined size arranged between said pivotally mounted plate and said sliding plate, and means for preventing said pivotally mounted plate from sliding until a coin of a predetermined size has been inserted between said pivotally mounted plate and said sliding plate.

4. In a device of the character described, a sliding member for vending an article, a projection connected with said sliding member, a sliding plate formed with an aperture for receiving said projection whereby whenever said sliding member is moved said sliding plate will be moved, a locking device for locking said sliding plate against movement, said locking device including a pair of spring pressed pins, said pins being connected so as to operate simultaneously, means for guiding a coin to a position against one of said pins whereby said last mentioned pin will be raised and the other pin will also be raised therewith for unlocking said sliding plate, a pivotally mounted plate adapted to bear against said coin, and means for preventing said pivotally mounted plate from sliding with said sliding plate until a proper sized coin has been placed beneath said coin operated pin.

5. In a vending machine of the character described, a reciprocating plunger, a sliding plate, means for connecting said plunger and said sliding plate, a pivotally mounted plate connected with said plunger and movable therewith, means for guiding a coin to a position between said pivotally mounted plate and said sliding plates so as to hold the pivotally mounted plate in a predetermined position when the coin is of the proper size, a spring pressing against said pivotally mounted plate for urging the same in a predetermined direction, a stop arranged to engage said pivotally mounted plate when moved to one extreme, and a toothed member adapted to engage said pivotally mounted plate when moved to the opposite extreme position, whereby the pivotally mounted plate together with the sliding plate cannot move when a coin of an incorrect size is used.

[Claims 6 to 8 not printed in the Gazette.]

1,155,919. TIRE-DEFLATING TOOL. WILLIAM C. GUNNELL, Cadiz, Ohio. Filed Aug. 12, 1914. Serial No. 856,451. (Cl. 152—12.)

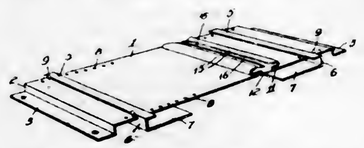


The herein described tire deflating tool comprising a clasp consisting of two members pivotally connected together and provided with jaws and a spring for forcing the jaws together, said jaws being formed by flanges turned inwardly and rounded to fit the threads of a nipple, and an integral tongue cut from the body of one of the members of the clasp, said tongue being bent inwardly and downwardly and having its terminal end disposed centrally between said jaws to engage the stem of a check valve.

1,155,920. STRIP-GUIDE. CLARA E. HALL, Cincinnati, Ohio. Filed Aug. 5, 1914. Serial No. 855,298. (Cl. 112—9.)

1. A guiding attachment for shirring machines, comprising an elevated base plate, a folder attached to the upper

side of said bed plate and detachable therefrom, flanged work guides adjustable toward and away from said folder and each other mounted on said plate and each provided with a work supporting apron which lies beneath the bed plate, said folder embodying U-shaped flanges in spaced relation to each other, and an upstanding centering rib between said flanges.



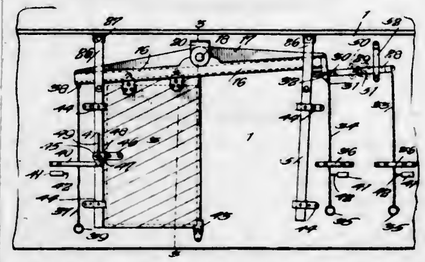
2. A guiding attachment for shirring machines, comprising an elevated base plate, flanged work guides adjustable on said plate transversely to the path of movement of the work, and a folder secured to the upper side of said bed plate and provided with a tongue parallel to the lower face thereof and adapted to engage the bed plate and detachably fasten the folder in place on the bed plate.

1,155,921. REVERSIBLE BRUSH-HOLDER. GUSTAF LEANDER HALVARDSON, Stockholm, Sweden. Filed July 29, 1911. Serial No. 641,202. (Cl. 171—318.)



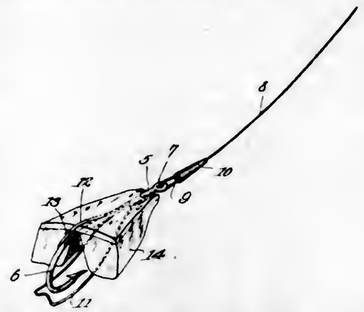
The combination in an electric motor having a commutator and brushes bearing thereon, of an oscillatory rocker carrying said brushes and comprising a disk fixed to the armature shaft, a ring surrounding said disk and frictionally engaging the periphery thereof and having the outer edge thereof formed with a notch, a fixed stop on the field element of the motor, pins on said ring spaced apart and designed to alternately engage said stop to limit the movement of the ring with the commutator, and a pivoted hook under the control of the field element and adapted to engage in the notch in said ring to lock the latter against movement.

1,155,922. CAR-DOOR-OPERATING MECHANISM. WILLIAM E. HARRIS, Scottsboro, Ala., assignor of one-half to C. L. Jarrett, Springfield, Mo. Filed Mar. 22, 1915. Serial No. 16,131. (Cl. 39—92.)



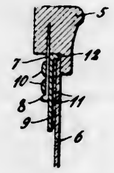
In a means for swinging and locking an oscillating door track for a sliding door, the combination with a track pivoted intermediate its length of a lever pivoted adjacent to one end thereof intermediate the ends of the lever and having a slidable and pivotal connection with the track adjacent one end of the lever, a chain connected with each end of the lever and depending therefrom, a chain connected with the opposite end of the track and depending therefrom, and means in connection with the last-named chain and with the outermost of the first-named chains for engagement by the chain to prevent the chains from upward movement.

1,155,923. BAIT-HOOK. JOHN G. HENZEL, Chicago, Ill. Filed Feb. 24, 1914. Serial No. 820,595. (Cl. 43—7.)



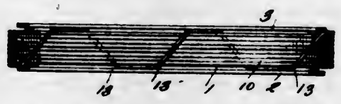
The combination with a fish hook having a shank, of a pin member having its base portion attached to the back of the shank and a sharpened point portion adapted to penetrate a bait, and a keeper slidable on the shank and engageable over the point of the pin.

1,155,924. GLASS OR MIRROR FASTENER. WILLIAM H. HOLDER, Scranton, Pa. Filed Dec. 16, 1914. Serial No. 877,540. (Cl. 20—56.4.)



A fastener for securing a glass in a frame, comprising a plate adapted to be seated against the back of the glass, and having a marginal bead adapted to fit between the edge of the glass and the opposite edge of the frame, and a slidable driven fastener carried by the plate and extending lengthwise thereof to project from the beaded end of the plate, said fastener being adapted to be driven into the aforesaid edge of the frame between which and the edge of the glass the marginal bead fits.

1,155,925. VEHICLE WHEEL-TREAD. LOUIS HENRY HOMRIGHAUSEN, Osawatomie, Kans. Filed July 30, 1913. Serial No. 782,057. (Cl. 152—8.)



1. A vehicle wheel tread including a metallic band, a strand of wire wound a number of times about the periphery of the band, the outer end of the wire being wrapped diagonally about the portion of the wire that has been wound about the band, said wire being arranged to permit of a slight yielding movement, and the diagonal winding of said wire constituting an anti-skidding means for the tread.

2. A vehicle wheel tread including a metallic band, flanges formed by bending the sides of the band upwardly,

a plurality of straps formed upon said band by slitting said band at spaced intervals and bending the portions between the slits upwardly, a plate disposed beneath one of the slits formed by the straps, a strand of wire inserted beneath one of the straps and through said plate, a knot formed upon one end of the wire and bearing against the plate for anchoring the wire on the plate, said wire being inserted beneath said straps and being supported by said flanges, said wire being further wound a number of times about the band and extending beyond the periphery of the flanges, the outer end of the wire being wound diagonally about the portion of the wire that has been wound on the band, said wire being arranged to permit a yielding movement upon the disposition of a heavy load, and the diagonal winding of the wire constituting an anti-skidding means for the tread.

1,155,926. WELL-CASING SPEAR. WILLIAM YATES JACK, New York, N. Y. Filed May 16, 1914. Serial No. 839,075. (Cl. 57—9.)



1. A well pipe spear comprising a head having in its surface a plurality of longitudinal dove-tailed grooves, dogs slidable in the grooves and fitting the latter, and a supporting element on which the dogs are movably mounted and which is freely slidable axially of the tool, each groove and dog therein having contacting surfaces of which one is convex and the other flat to provide longitudinal line contacts between the dogs and the head.

2. A well spear comprising a stem, a head on the stem, a dog slidably mounted on the head, a ring slidable on the stem and having a chambered under side into which the upper ends of the dogs extend, the surrounding wall of the chamber having apertures, and outwardly extending pins on the upper ends of the dogs engaging in the openings for connecting the dogs with the ring.

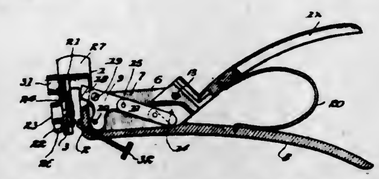
3. A well casing spear comprising a stem, a head thereon, casing gripping jaws on the head and slidable longitudinally thereof for movement laterally inwardly and outwardly, a ring slidable on the stem, said ring having its under side chambered to receive the upper ends of the dogs, means for loosely connecting the dogs with the wall of the chamber of the ring, whereby the dogs and ring move together longitudinally of the head and stem, spring-pressed locking means on the ring, and means on the stem with which the locking means engages when the ring is fully raised to support the dogs in retracted position.

4. A well casing spear comprising a stem, a head thereon, casing gripping jaws on the head and slidable longitudinally thereof for movement laterally inwardly and outwardly, a ring slidable on the stem and to which the dogs are connected, spring-pressed locking means on the ring, means on the stem with which the locking means engages when the ring is fully raised to suport the dogs in retracted position, and tool suspending means including a device for imparting a blow to the stem and head for moving the stem to a position where the locking means engages the said means on the stem.

5. A well casing spear comprising a stem, a head, pipe gripping dogs on the head and slidable longitudinally thereof to move the dogs inwardly and outwardly, a ring slidable on the stem and to which the dogs are movably connected, spring-pressed bolts on the ring, a shoulder on the stem with which the bolts engage when the dogs are fully retracted, a tool suspension and pull means including a collar free to slide downwardly on the stem, an abutment on the stem to which the collar imparts a blow, and a yielding device on the stem for preventing the said shoulder from reaching to the locking bolts of the ring except when the stem is moved downwardly by a blow imparted by the said collar.

[Claim 6 not printed in the Gazette.]

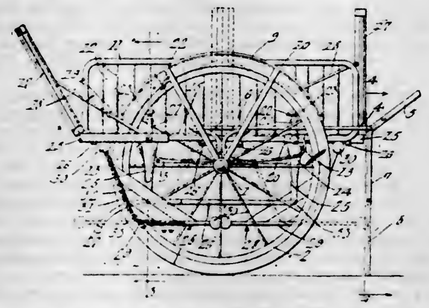
1,155,927. SAW-SET. WILLIAM J. JACOBS, Vanceboro, N. C., assignor of one-half to John Simpson, Vanceboro, N. C. Filed Feb. 17, 1915. Serial No. 8,850. (Cl. 76—64.)



1. In a saw set a head comprising spaced walls for arrangement on opposite sides of a saw, an anvil on the inner side of one of said walls, a swinging jaw mounted in the other wall at a point opposite the anvil and provided with a punch, means to operate said swinging jaw, feed rollers at the upper sides of said walls to engage the points of the saw teeth and vertically movable bearings in which said feed rollers are mounted, and comprising inverted U-shaped yokes having their arms slidably mounted in said walls.

2. In a saw set, a head comprising spaced walls for arrangement on opposite sides of a saw, an anvil on the inner side of one of said walls, a swinging jaw mounted in the other wall at a point opposite the anvil and provided with a punch, means to operate said swinging jaw, feed rollers at the upper sides of said walls to engage the points of the saw teeth and vertically movable bearings in which said feed rollers are mounted, and comprising inverted U-shaped yokes having their arms slidably mounted in said walls, and means to vertically and detachably secure said anvil.

1,155,928. CHILD'S CART. CARL J. JACOBSEN, De Pere, Wis. Filed Jan. 2, 1915. Serial No. 250. (Cl. 21—12.)



1. In a device of the character described, a frame, a pair of seats movably carried by the frame and arranged

to be disposed adjacent or spaced from each other, a back for each seat, and means for supporting the backs at the adjacent edges of the seats when the seats are arranged adjacent each other, and for supporting the backs at the remote edges of the seats when the seats are spaced apart.

2. In a device of the character described, a frame, a pair of seats movably carried thereby and adapted to be moved adjacent one another or spaced apart, a back for each seat, and links connecting the backs and frame whereby the backs may be reversed to coöperate properly with the seats at either position thereof.

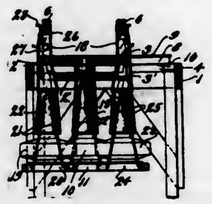
3. In a device of the character described, a frame, a pair of seats each pivotally connected to the frame adjacent one edge portion whereby the seats may be swung to project toward or away from each other, a back for each seat, and means for supporting each back at that edge portion of the respective seat remote from the pivotal point of the seat, at either position of the seat.

4. In a device of the character described, a frame, a pair of seats each pivotally engaged with the frame adjacent one edge portion whereby the seats may be swung to project toward or away from each other, a back for each seat and coöperable with that edge portion of the seat remote from the pivotal point thereof, and links connecting the backs and frame whereby the backs may be reversed when the seats are reversed.

5. In a device of the character described, a frame comprising side members and a pair of cross members connecting them, a seat pivotally engaged adjacent one edge with each cross member and adapted to be supported by the side members, the seats being arranged to be swung so as to project in either direction, a reversible back for each seat coöperable with that edge thereof remote from the respective cross members, and links connecting the backs and cross members to support the backs at either position thereof.

[Claims 6 to 13 not printed in the Gazette.]

1,155,929. SEALING APPARATUS FOR WRAPPERS. PETER JACOBSEN, Perth Amboy, N. J. Filed May 10, 1915. Serial No. 27,187. (Cl. 93—2.)



1. Sealing apparatus for wrappers comprising a support, guide means for the wrapped articles carried by said support, heating means disposed in said support and guide means, and comprising chambers, one wall of each of which constituting a heating plate, means for supplying heat to the chambers, and means for regulating the amount of heat retained by said chambers, said means comprising a valved opening disposed adjacent to the bottom of each chamber in the wall thereof opposite to its heating plate.

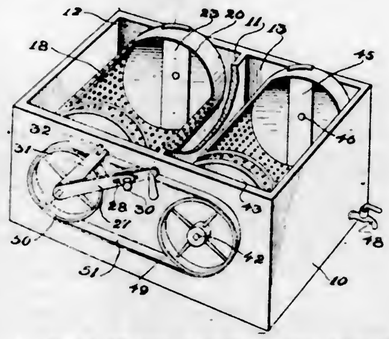
2. Sealing apparatus for wrappers comprising a support, guide means for the wrapped articles carried by said support, heating means disposed in said support and guide means, and comprising chambers, one wall of each of which constituting a heating plate, means for supplying heat to the chambers, means for regulating the amount of heat retained by said chambers, said means comprising a valved opening disposed adjacent to the bottom of each chamber in the wall thereof opposite to its heating plate, the walls of certain of said heating chambers having the valve opening, being formed with a deflecting portion for directing the heat supply to said chambers against its respective heating plate.

3. Sealing apparatus for wrappers comprising a support consisting of adjustable sections, guide means arranged on said sections, a lateral heating chamber, vertically disposed in each of the guide means and having its inner wall constituting a heating plate, valve means adjacent to the lower portion of each of said lateral chambers for controlling the amount of heat to be retained thereby, a horizontally disposed heating chamber arranged transversely of the support and having its upper wall constituting a heating plate, a valve opening arranged in the bottom of said horizontal chamber at a point most remote from the source of heat therefor, and means for supplying heat to each of said chambers, the operative area of the heating plate of the horizontal chamber being controlled by the adjustment of the sections aforesaid.

4. Sealing apparatus for wrappers comprising a support, consisting of longitudinally separable sections, a relatively stationary heating chamber arranged transversely on said sections and provided with a heating plate, the operative area of said plate being subject to control by adjustment of the separable sections, side members carried by said sections, heating chambers arranged in said side members and each provided with a heating plate, means in said side chambers for maintaining heat supplied thereto effective upon its heating plate, a source of heat for said chambers, and means for regulating the heat to be retained by said chambers.

5. Sealing apparatus for wrappers comprising a support, consisting of separable sections, a heating chamber arranged on said sections and provided with a heating plate, side members carried by said sections, heating chambers arranged in said side members and each provided with a heating plate, means in said side chambers for maintaining heat supplied thereto effective upon its heating plate, independent heat supplying elements communicating with each of said chambers adjustable to control the quantity of heat supplied thereto, and valve means for controlling the amount of heat to be retained by said chambers.

1,155,930. DISH-WASHING MACHINE. ENGELBRIGHT A. JOHANSON, Seattle, Wash. Filed Mar. 5, 1915. Serial No. 12,387. (Cl. 141—9.)



1. A washing machine including a liquid container, a cylinder rotatably mounted in said container, and a brush rotatably mounted in said cylinder.

2. A washing machine including a liquid container, a cylinder rotatably mounted in said container, means for rotating said cylinder, and a brush rotatably mounted in said cylinder.

3. A washing machine including a liquid container, a cylinder rotatably supported in said container, means for rotating said cylinder, a brush rotatably mounted in said cylinder, and means for securing said brush for rotation with said cylinder.

4. A washing machine comprising a liquid container, a cylinder rotatably mounted in said container, means for rotating said cylinder, a brush rotatably mounted in said cylinder, and means connecting said brush with said cylinder rotating means.

5. A dish washing machine comprising a liquid container, a cylinder rotatably mounted in said container, a brush rotatably mounted in said container and projecting into said cylinder, and means for rotating said brush independently of said cylinder.

[Claims 6 to 12 not printed in the Gazette.]

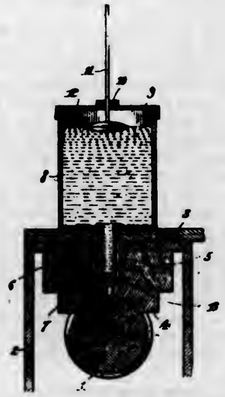
1,155,931. FRUIT AND VEGETABLE CUTTER. CLINTON KEEBAUGH, Canton, Wis. Filed Apr. 2, 1915. Serial No. 18,816. (Cl. 30—24.)



1. A cutter comprising a finger-engaging ring, an angular extension at one end of said ring, and a flat blade formed integral with said ring and having a curved cutting edge.

2. A cutter formed from a single piece of sheet metal including a finger-engaging ring, a reduced angularly directed extension on said ring constituting a finger tip rest, and a curved cutter blade projecting laterally of said ring.

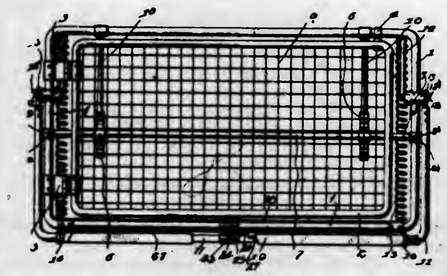
1,155,932. COOLING DEVICE FOR CAR-JOURNALS AND THE LIKE. ALPHONSO DE CLAUDE KESSLER, Dunkirk, N. Y. Filed Aug. 29, 1914. Serial No. 859,171. (Cl. 64—28.)



In apparatus of the class described, the combination with a tube leading from a cooling reservoir to a car journal, of a fusible plug in the journal end of said tube whereby communication between the reservoir and the journal will be established when the journal overheats, said plug comprising a metallic shell having the end portions thereof restricted and the central portion thereof screwthreaded to engage the particular end of the tube and fusible material within said shell and held therein by the restricted ends thereof.

1,155,933. AUTOMOBILE-FENDER. JOHN M. KISSEL, East St. Louis, Ill. Filed Nov. 21, 1914. Serial No. 873,361. (Cl. 105—127.)

1. A fender comprising in combination, a support, a stationary substantially upright marginal frame, a frame hinged to said stationary frame and provided with flexible fabric, an apron spreading frame having a jointed connection with said stationary frame, a flexible apron connecting the free end of said spreading frame with the stationary frame, spring mechanism for actuating said spreading frame to spread said apron, and a latch for holding said spreading frame in an inoperative position.



2. A fender comprising in combination, a support, a stationary substantially upright marginal frame, means for adjusting said frame up and down, a frame hinged to said stationary frame and provided with flexible fabric, an apron spreading frame having a jointed connection with said stationary frame, a flexible apron connecting the free end of said spreading frame with the stationary frame, spring mechanism for actuating said spreading frame to spread said apron, and a latch for holding said spreading frame in an inoperative position.

3. A fender comprising in combination, a support, a stationary substantially upright marginal frame, a frame hinged to said stationary frame and provided with flexible fabric, an apron spreading frame having a jointed connection with said stationary frame, a flexible apron connecting the free end of said spreading frame with the stationary frame, a spring roller on which said apron is wound, spring mechanism for actuating said spreading frame to spread said apron, and a latch for holding said spreading frame in an inoperative position.

4. A fender comprising in combination, a support, a stationary substantially upright marginal frame, a frame hinged to said stationary frame and provided with flexible fabric, an apron spreading frame having a jointed connection with said stationary frame, a flexible apron connecting the free end of said spreading frame with the stationary frame, spring mechanism for actuating said spreading frame to spread said apron, a latch for holding said spreading frame in an inoperative position, and means actuated by contact for tripping said latch.

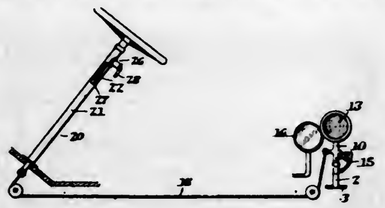
5. A fender comprising in combination, a support, a stationary substantially upright marginal frame, a frame hinged to said stationary frame and provided with flexible fabric, an apron spreading frame having a jointed connection with said stationary frame, a flexible apron connecting the free end of said spreading frame with the stationary frame, spring mechanism for actuating said spreading frame to spread said apron, a latch for holding said spreading frame in an inoperative position, a flexible strap extending in front of the fender and substantially parallel thereto, and means connected with said strap for tripping said apron spreading frame.

1,155,934. AUTOMOBILE-SIGNAL. THEODORE KLEMP, Muskegon, Mich. Filed Jan. 28, 1915. Serial No. 4,025. (Cl. 240—23.)

1. In combination, a pivotally mounted standard, a lens carried thereby, a laterally extending finger formed on said standard, a cable having one extremity connected to said finger, an upright tube, a rod slidably mounted in said tube and having connection with one extremity of said cable, means for holding said rod in elevated position, and a spring for returning said lens to normal position and to assist the gravitational action of said rod.

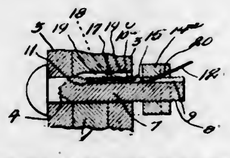
2. In combination, a pivotally mounted standard, a lens carried thereby, a laterally extending finger formed on said standard, a cable having one extremity connected

to said finger, an upright tube, a rod slidably mounted in said tube and having connection with one extremity of said cable, means for holding said rod in elevated position, and a spring for returning said lens to normal posi-



tion and to assist the gravitational action of said rod, said means comprising a spring pressed dog adapted to cooperate with the teeth formed adjacent one extremity of said rod.

1,155,935. NUT-LOCK. WILLIAM H. KLINK and JAMES C. GREEN, Towanda, Pa. Filed May 21, 1915. Serial No. 29,509. (Cl. 151—8.)



1. In combination, a bolt having an elongated groove in the shank thereof, a leaf spring having one end secured to one end of the grooves adjacent the head of the bolt, the leaf spring having a triangular shaped bend constituting a shoulder spaced apart from where it is attached to the groove, a recess in that which is being clamped, a nut threaded on the bolt and adapted to contact with the shoulder as it is screwed home thereby causing that portion of the leaf spring between the shoulder and where it is attached to buckle outwardly into the recess, and means on the nut to be engaged by the free end of the leaf spring to prevent the nut from turning.

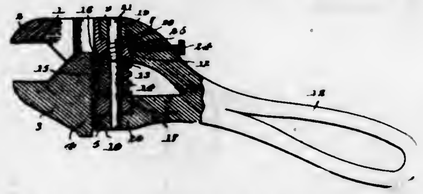
2. In combination, a bolt having an elongated groove in the shank thereof, a leaf spring device having one end secured to one end of the groove, said spring leaf device having an upwardly extending portion forming a shoulder, said spring device beyond the shoulder having its free end portion bent angularly, a nut threaded on the bolt and having a triangular shaped notch or recess adjacent the threaded bore and one face of the nut to receive the angularly bent free end portion, a recess in that which is being clamped, a portion of the leaf spring device between its attached end and the shoulder designed to engage the recess of that which is being clamped, when said nut is screwed home and in contact with the shoulder.

1,155,936. SWEAT-BAND FOR HATS. HARRY D. KREMER, Bozeman, Mont. Filed Dec. 15, 1914. Serial No. 877,386. (Cl. 2—32.)



A sweat band for hats consisting of a sectional band having a layer of hair winding transversely around the same from end to end, the strands of hair upon one face being loose and held to the band by an adhesive material upon the other face.

1,155,937. WRENCH. JULIUS LERFALD, Belfield, N. D. Filed Jan. 20, 1915. Serial No. 3,827. (Cl. 81—59.)

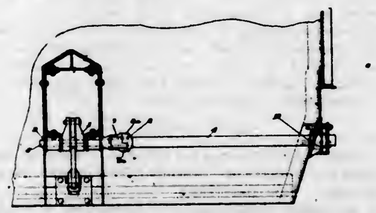


1. In a wrench, a stationary jaw having its body recessed to provide spaced knuckles, a movable jaw having a toothed shank arranged in a slot in the body of the stationary jaw and its teeth projecting in the recess between the knuckles, and an eccentrically pivoted bearing sleeve between the knuckles, a screw journaled on the sleeve and engaging with the teeth upon the shank of the movable jaw, and a pivoted handle for the wrench.

2. In a wrench, a stationary jaw having its body recessed to provide spaced knuckles having alining openings, a handle having a bifurcated end arranged upon the outer face of the knuckles, a pivoted pin passing through the openings in the handle through the openings in the knuckle and means for securing the pivot pin to one of the knuckles, a bearing sleeve eccentrically mounted upon the pivot pin and secured to one of the knuckles, and a screw journaled on the sleeve and engaging the teeth of the shank of the movable jaw.

3. In a wrench, a stationary jaw having its body recessed to provide spaced knuckles, a movable jaw having a toothed shank arranged in a slot in the body of the stationary jaw and the teeth of its shank extending in the recess between the knuckles, both of said knuckles being provided with registering openings, the opening in one of the knuckles being threaded, said knuckle having its outer face formed with spaced depressions, a handle having a bifurcated end arranged on the outer faces of the knuckles, a pivot pin passing through openings in the end of the handle and through the openings in the knuckles, said pin having a threaded portion engaging with the threads in one of the said knuckles, a thumb screw upon the handle adapted to engage with one of the depressions in said knuckle, an eccentrically mounted bearing sleeve upon the pin between the knuckles, means for removably securing the sleeve to one of the knuckles, and an operating screw journaled upon the bearing sleeve and engaging with the teeth of the shank of the movable jaw.

1,155,938. CAR-DOOR GEAR. CHARLES A. LINDSTRÖM, Pittsburgh, Pa. Filed Mar. 22, 1910. Serial No. 551,000. (Cl. 105—185.)



1. In a car discharge door operating mechanism, an operating shaft divided longitudinally, a head on one portion of said operating shaft, a crank on said portion and a rod connecting said crank to the car door, co-

operating clutch members secured to the adjacent end portions of the operating shaft, a portion of one clutch member being inserted in an enlarged portion of the other clutch member, and forming a rotary and end thrust bearing for the other clutch member; substantially as described.

2. In a car discharge door operating mechanism, an operating shaft divided longitudinally and having its end portions formed angular in cross section, a head on one porton of said operating shaft, a crank on said portion, and a rod connecting said crank to the car door, cooperating clutch members attached to the said adjacent angular end portions, clutch members secured on the said angular end portions, a portion of one clutch member being inserted in an enlarged portion of the other clutch member, and forming a rotary and end thrust bearing for the other clutch member; substantially as described.

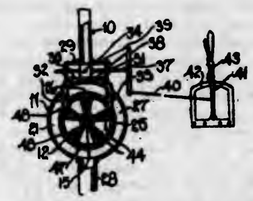
3. In a car discharge door operating mechanism, an operating shaft divided longitudinally and having its adjacent end portions formed angular in cross section, a head on one portion of said operating shaft, a crank on said portion and a rod connecting said crank to a car door, cooperating clutch members on said adjacent angular end portions, a portion of one clutch member being inserted in an enlarged portion of the other clutch member and forming a rotary end thrust bearing for the other clutch member, said clutch members having lugs projecting into the path of each other and arranged to remain out of contact with each other during the major portion of a revolution; substantially as described.

4. In a car discharge door operating mechanism, a two part door operating shaft, a head formed on one of said parts, a clutch member mounted on said part adapted to co-act with the clutch member mounted on the other of said parts.

5. In a car discharge door operating mechanism, a two part door operating shaft, co-acting clutch members mounted on the adjacent ends of said parts, and means on one of said parts adapted to seat within one of said clutch members to prevent accidental separation of said parts.

[Claims 6 and 7 not printed in the Gazette.]

1,155,939. STEAM-ENGINE. EDISON MCFEE, Hamilton, Mo. Filed May 10, 1915. Serial No. 27,162. (Cl. 253—51.)

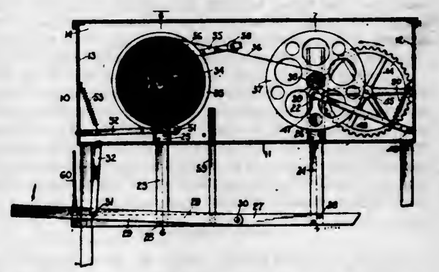


1. A rotary steam engine including a cylinder, a rotor casing disposed concentrically therein to provide an annular chamber between the rotor casing and the cylinder, an exhaust opening in the rotor casing, a rotor journaled in the rotor casing, said rotor including a plurality of radially extending vanes, and a piston ring incasing the rotor vanes, said ring being provided with a plurality of openings, there being one opening communicating with each of the segmental chambers defined between the vanes, a steam supply pipe leading through the cylinder across said annular chamber and into the rotor casing, and a throttle valve for controlling the admission of steam into the rotor casing.

2. A rotary steam engine including a cylinder, a rotor casing, a rotor journaled in the casing, said rotor including a plurality of spaced, radially extending vanes provided in their outer ends with longitudinally extending, substantially V-shaped grooves, and a piston ring incasing the vanes, said piston ring being provided with a scarf joint, whereby the ring may expand or contract in accordance with variations in temperature within the rotor casing, and a plurality of circumferentially spaced, substantially V-shaped ribs extending transversely across the inner face of the piston ring, said ribs being adapted to seat in the grooves of the vanes and being movable therein to allow for expansion or contraction of the piston ring.

3. A rotary steam engine including a cylinder, a rotor casing, and a rotor journaled in the casing, said rotor including a plurality of rotor vanes, provided in their outer ends with longitudinally extending grooves, and a piston ring incasing the vanes, said ring being expansible and having a plurality of circumferentially spaced, transversely extending ribs on its inner faces, said ribs being adapted to seat in the grooves of the vanes and being movable therein, to allow for expansion or contraction of the piston ring.

1,155,940. CASE FOR MOTION-PICTURE FILMS. WILLIAM PINKNEY MCNEEL, San Antonio, Tex. Filed Nov. 16, 1914. Serial No. 872,377. (Cl. 242—55.)



1. In a device of the character set forth, the combination of a fireproof casing having closure means at its top, a pair of reel supports movable within the casing, and means serving to project the reel supports upwardly from the casing and simultaneously open the closure means.

2. In a device of the character set forth, the combination of a casing, guides secured to the inner surface of the rear wall of the casing, slides movable up and down in said guides, reel supporting spindles carried by said slides, means to elevate or lower both of said slides simultaneously, said casing including closure means, and connections between the slide operating means and the closure means to cause the closure means to open simultaneously with the lifting of the slides and spindles.

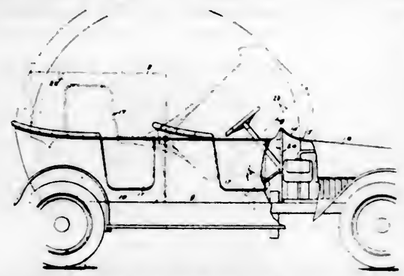
3. The combination of a casing including front and top doors, vertical guides secured to the inner surface of the rear wall of the casing, a pair of slides movable up and down in said guides, each of said slides carrying a reel supporting spindle, means connected to said slides to raise and lower them simultaneously, and connections between the casing doors and the slide operating means to cause the doors to open simultaneously with the lifting of the slides and the doors to close while the slides are lowered.

4. The combination of a casing including front and top swinging doors, a pair of reel supporting spindles movably mounted within the casing, means connecting said spindles for simultaneous movement into or out of the casing and including a horizontal bar, connections between said bar and one of the doors to cause said door to be moved directly from the bar, and connections between the two doors whereby the other door is moved from the one connected to the bar and whereby both doors swing open simultaneously with the lifting of the reel supports and swing closed when the reel supports are moved downwardly into the casing.

1,155,941. AUTOMOBILE-BODY. JOHN E. MANEEL and JOSEPH A. LYONS, Middletown, N. Y. Filed Mar. 31, 1915. Serial No. 18,285 (Cl. 21—90.)

1. An automobile body comprising a plurality of body sections pivotally connected at the upper edges thereof,

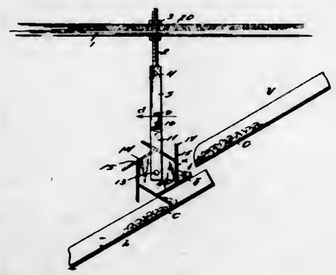
said sections being adapted for being optionally folded, either one upon the other.



2. An automobile body comprising a plurality of body sections pivotally connected at the upper edges thereof, said sections being adapted for being optionally folded, either one upon the other; and a plurality of connecting hinges, said hinges embodying straps, one having registering pins and the other corresponding sockets for said pins.

3. An automobile body comprising a plurality of body sections pivotally connected at the upper edges thereof, said sections being adapted for being optionally folded, either one upon the other; a plurality of connecting hinges, said hinges embodying straps, one having registering pins and the other corresponding sockets for said pins; and an automobile engine hood for resting upon the front edge of the foremost of said body sections.

1,155,942. COAL-CHUTE. FRED H. MASON and JAMES ALLEN, Scranton, Pa. Filed Oct. 1, 1914. Serial No. 864,485. (Cl. 193—29.)



1. The combination with an inclined chute for coal and the like; of an under-shot paddle-wheel whose blades are struck by the flowing coal, a yoke in whose arms the body of the wheel is journaled, and a pivotal overhead support for the yoke.

2. The combination with an inclined chute for coal and the like; of an under-shot paddle-wheel whose blades project tangentially from its body and are struck by the flowing coal, a journal for said wheel, and an overhead pivotal support for said journal.

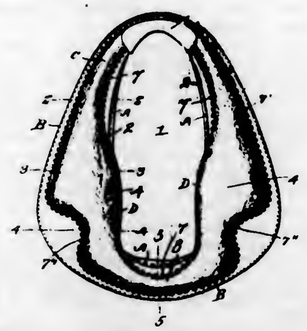
3. The combination with an inclined chute for coal and the like; of an under-shot paddle-wheel whose blades project tangentially from its body and extend into said chute and are struck by the flowing coal, a yoke in whose arms the body of the wheel is journaled, and an adjustable overhead support for the yoke.

4. The combination with an inclined chute for coal and the like; of an under-shot paddle-wheel whose blades project tangentially from its body and extend into said chute and are struck by the flowing coal, a yoke in whose arms the body of the wheel is journaled, an eye-bolt adjustably mounted in an overhead support, and a pivotal connection between its eye and the stem of said yoke.

5. The combination with an inclined chute for coal and the like; of an under-shot paddle-wheel whose blades project tangentially from its body and extend into said chute and are struck by the flowing coal, a yoke in whose arms the body of the wheel is journaled, an overhead support having a horizontal slot, an eye-bolt whose stem projects through and is adjustable horizontally in said slot, a nut on the shank of the eye-bolt rendering the latter vertically adjustable, and a pivotal connection between its eye and the stem of said yoke, for the purpose set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,155,943. HORSE-COLLAR. RHENIER S. MASON, Eddyville, Ky. Filed June 6, 1913. Serial No. 772,162. (Cl. 54—19.)

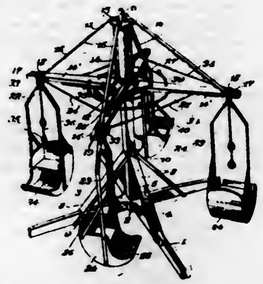


1. A horse collar including a fore-wale of firm leather, an after-wale having an outer facing of firm leather formed with the fore-wale and an inner face or liner of soft material, the said liner having its edges stitched to the inner edges of the fore-wale and the outer edges of the outer facing, the said liner being further secured to the outer facing by an inner and an outer seam, providing the central portion of the liner and the central portion of the outer facing with a pocket, and a filler of soft fiber for the pocket, said liner being approximately semi-cylindrical in cross section at the top sides of the collar and having widened belly portions opposite the shoulder draft or crooks of the collar, the said bellies having their inner opposite portions projecting beyond the inner edges of the fore-wale, and the lower portions of the bellies to the outer sides thereof being arranged at an inward curvature a distance away from the outer edges of the after-wale greater than at any other portion at which the liner is connected with the outer facing of the collar.

2. A horse collar including a fore-wale and an after-wale comprising an outer facing and an inner liner which is stitched to the outer facing, a fiber packing between the liner and facing arranged to form upper rolled portions and a belly portion arranged below each of the rolls and opposite the shoulder draft portion of the collar, the said belly portions inclining outwardly from the rolls and inwardly with respect to the fore-wale, the said belly portions having their lower edges rounded inwardly to provide depressions in the liner, the said liner having a reduced portion which is arranged at the throat of the collar below the fore-wale and above the outer edge of the collar.

3. A horse collar including a fore-wale and an after-wale, said after-wale comprising an outer facing and an inner liner, and said liner being stitched to the outer facing and to the fore-wale, a packing between the liner and facing arranged to form upper rolled portions and a belly portion arranged below each of the rolls and opposite the shoulder draft of the collar, the said belly portions inclining outwardly from the rolls and inwardly with respect to the fore-wale, and the said belly portions having their lower portions rounded inwardly to provide depressions in the facing and in the liner.

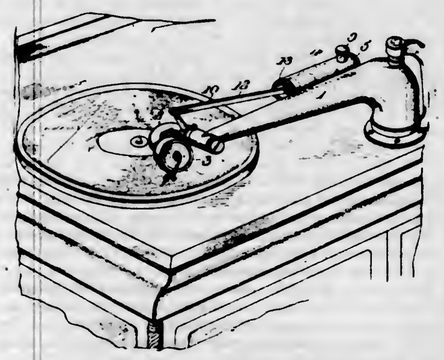
1,155,944. ROTARY SWING. JAMES G. MERRITT and FRED W. WATKINS, Newburgh, N. Y. Filed Jan. 25, 1915. Serial No. 4,324. (Cl. 46—27.)



1. A rotary swing comprising a vertical center post, a collar encircling said post and rotatable thereabout, arms secured to said collar and radiating therefrom, a plate on the upper end of said post and capable of rotation relatively to the post, connections between said plate and collar whereby the latter will be supported upon the post, connections between said plate and the outer ends of said arms, seats suspended from the outer extremities of said arms, and means for rotating said collar, arms and plate about said center post.

2. Intermittent gripping mechanism comprising a center post, means rotatable about said post, gripping bands encircling said post, levers connected to said bands respectively and radiating from the post, pull ropes each having one end secured to the outer end of one of said levers and the remaining end adapted to be pulled by a person on said rotatable means to actuate said levers inwardly to bind the bands against said center post, and subsequently move said means about said center post relatively to said levers, means for limiting the length of the stroke of said ropes whereby said levers will be relieved of the influence of the ropes, and coiled contractile springs each having one end secured to one of said levers and the remaining end secured to said rotatable means in advance of the lever, said springs acting to restore the levers to normal position when the levers are relieved of the influence of the ropes.

1,155,945. CUSHION FOR A SOUND-BOX. HENRY C. MILLER, Waterford, N. Y. Filed Nov. 9, 1910. Serial No. 591,500. (Cl. 181—3.)



1. The combination of a pivotally mounted amplifier of a talking machine, a sound box carried by the amplifier, a cylinder movable with the amplifier, a piston in the cylinder, a valve controlling an opening in the cylinder, and a connection between the sound box and the piston, whereby the movement of the sound box toward a record being reproduced is retarded irrespective of the position of said sound box to the said record.

2. The combination of a movable amplifier of a talking machine, a sound box carried by the movable amplifier, a cylinder movable with the amplifier, a piston in the cylinder, a connection between the sound box and the piston, and means controlled by the movement of the piston to retard the lowering movement of the sound box at any point on the surface of a record being reproduced.

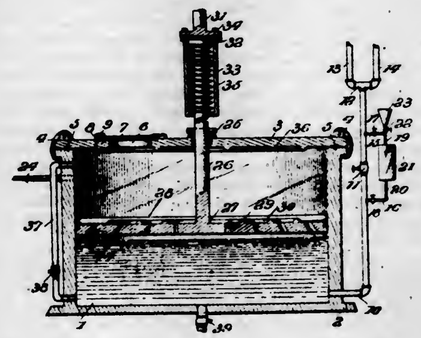
3. The combination of an amplifier of a talking machine, a sound box pivoted to the amplifier, a cylinder, a piston in the cylinder, a connection between the sound box and the piston, means controlled by the movment of the piston to retard the lowering movement of the sound box, and means to prevent minor movements of the sound box moving the piston.

4. In combination, a pivotally mounted sound box movable in two directions, a cylinder movable in one direction with the sound box, a piston in the cylinder, a piston rod pivotally connected to the piston, a valve controlling an opening formed in the cylinder, and a pivotal connection between the opposite end of the piston rod and the sound box, whereby the lowering movement of the sound box will be retarded at any point on the surface of the record being reproduced.

5. In combination, a sound conveyer, a movable sound box pivoted to the movable sound conveyer, a cylinder secured to the sound conveyer and movable therewith, said cylinder having a vent opening, a valve controlling the vent opening, a piston operating in the cylinder, an arm movable with the sound box, and a piston rod connected to the piston and the arm, whereby to retard the lowering movement of the sound box at any point on the surface of a record being reproduced.

[Claims 6 to 14 not printed in the Gazette.]

1,155,946. COMBINED VACUUM WASHING AND WRINGING MACHINE. SHREWSBURY B. MILLER, Fairmont, W. Va. Filed June 26, 1914. Serial No. 847,443. (Cl. 68—37.)



1. In a washing machine, the combination with an air-tight receptacle, of means for producing a partial vacuum within said receptacle, a movable clothes supporting member mounted within said receptacle having a reticulated clothes supporting surface upon its upper side, and means for operating said movable clothes supporting member.

2. In a washing machine, the combination with a receptacle, of a feed pipe leading to said receptacle, a cover for closing said receptacle provided with ribs, a perforated piston mounted within said receptacle having ribs upon its upper face, a piston rod carried by said head, means for producing a partial vacuum within said receptacle, a pitman rod, and a yielding connection between said piston rod and pitman.

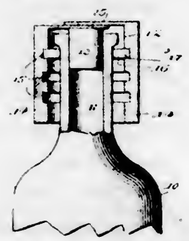
3. A washing machine, comprising a receptacle, a cover for closing said receptacle having depending ribs, a piston head mounted within said receptacle provided with perforations, ribs formed on the upper face of said piston head for supporting a mass of clothes in a plane above the piston head, means for reciprocating said piston head, means for creating a partial vacuum therein, and a by-pass having a communication with said receptacle above and below said piston head.

4. A washing machine, comprising an air-tight receptacle, a reciprocating clothes support mounted therein, means for producing a partial vacuum within said receptacle, and a by-pass connected to said receptacle above and below said clothes support.

5. As a new article of manufacture, a washing machine, comprising a receptacle having a by-pass communicating with said receptacle adjacent the top and bottom thereof, a cover for closing said receptacle, a suction pipe connected to said receptacle adjacent the upper end thereof for creating a partial vacuum therein, and a reciprocating clothes support mounted within said receptacle.

[Claims 6 and 7 not printed in the Gazette.]

1,155,947. LOCK FOR BOTTLES AND JARS. LLOYD M. MILLS, Appleton, Wis. Filed Oct. 21, 1914. Serial No. 867,805. (Cl. 215—33.)

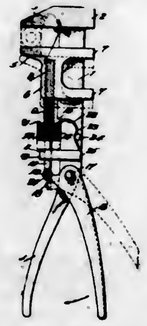


1. A lock for bottles comprising a plurality of hingedly connected plates adapted to encircle the neck of a bottle, said plates having formed on their inner faces a series of semi-circular recesses, with each recess in one plate adapted to aline with each recess in the other plate to form a continuous recess when the plates are in active position, a locking ring consisting of a plurality of hingedly connected sections, said locking ring being adapted to encircle the neck of a bottle and bear against an enlarged portion thereof, with said locking ring fitting into the semi-circular recesses of the plate, a locking element on one of said plates, and a casing on the other plate and provided with an opening through which said locking element is adapted to extend whereby to hold said plate against relative movement.

2. A lock for bottles comprising a plurality of plates adapted to encircle the neck of a bottle, said plates having recesses therein, a locking ring encircling the neck and received in the recesses of the plates, extensions on said plates and adapted to extend across the top of the bottle, a locking element on one of said plates, an apertured casing on the other plate and adapted to have the locking element extend therethrough, and an eccentrically mounted spring pressed locking means in said casing and adapted to coöperate with the said locking element to hold said plates against relative movement.

1,155,948. WRENCH. LEANDER WALTER MILLSAP, Jr., Woodland, Cal. Filed Aug. 5, 1913. Serial No. 783,017. (Cl. 81—85.)

1. A wrench comprising a shank having at one end a fixed jaw extending beyond one side edge thereof and having the other end offset laterally in the same direction as the fixed jaw to form a fixed grip or handle, a movable jaw slidable on the shank toward and from the fixed jaw and having an internally threaded opening extending longitudinally of the shank and on the opposite side of the movable jaw from the fixed jaw, said shank having a lug at the end adjacent to the grip or handle, a rod having a plain portion journaled in the lug and a threaded portion for engaging the opening of the movable jaw, said rod having a head between the threaded and the plain portion to turn the rod, a spring engaging the head and normally pressing the said head toward the lug, the shank having means for engagement by the head to limit the movement thereof toward the fixed jaw, and a movable handle pivoted to the shank on the opposite side of the lug from the fixed jaw, said movable handle having lugs extending on opposite faces of the shank toward the fixed jaw, and a roller journaled between the lugs and engaging the adjacent end of the plain portion of the rod.

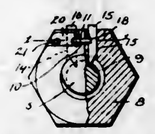


2. A wrench comprising a shank having at one end a fixed jaw extending beyond one side edge thereof and having the other end offset laterally in the same direction as the fixed jaw to form a fixed grip or handle, a movable jaw slidable on the shank toward and from the fixed jaw and having an internally threaded opening extending longitudinally of the shank and on the opposite side of the movable jaw from the fixed jaw, said shank having a lug at the end adjacent to the grip or handle, a rod having a plain portion journaled in the lug and a threaded portion for engaging the opening of the movable jaw, said rod having a head between the threaded and the plain portion to turn the rod, a spring engaging the head and normally pressing the said head toward the lug, the shank having means for engagement by the head to limit the movement thereof toward the fixed jaw, a handle pivoted to the shank for swinging movement toward and from the grip, said handle having means for engaging the end of the rod to move the movable jaw toward the fixed jaw when the movable handle is swung toward the fixed handle.

3. A wrench, comprising a shank having a laterally extending fixed jaw at one end thereof, a movable jaw mounted to slide on the shank toward and from the fixed jaw, a handle pivoted to the shank near the other end, and arranged cross-wise of the shank, a rod having one end threaded, the said end having a threaded engagement with the movable jaw and journaled on the shank approximately parallel with the axis thereof and movable longiudinally of the shank and engaged by the end of the handle adjacent to the rod to move the rod and the movable jaw toward the fixed jaw when the said handle is moved toward the shank, said rod having a head intermediate its ends for convenience in rotating the rod, a spring secured to the shank and engaging the head between the head and the movable jaw and acting normally to press the movable jaw away from the fixed jaw, and a roller journaled in the engaging end of the shank for contacting with the rod.

4. A wrench comprising a shank having at one end a fixed jaw and at the other end a grip or handle, a movable jaw slidable on the shank toward and from the fixed jaw, a rod having a threaded engagement with the movable jaw at one end and journaled on the shank at the other end, a handle on the opposite side of the shank from the rod and pivoted to the shank to swing toward and from the grip, said handle having means for engaging the rod to move the movable jaw toward the fixed jaw when the said handle is swung toward the grip, means for limiting the movement of the rod with respect to the shank, and a spring for pressing the movable jaw away from the fixed jaw.

1,155,949. LOCK-NUT. THOMAS T. MITCHELL, Joaquin, Tex., assignor of one-half to Marvin R. Crawford, Joaquin, Tex. Filed Feb. 15, 1915. Serial No. 8,359. (Cl. 151—24.)



1. A lock nut comprising a nut having an axial bore and a plurality of transverse openings intersecting said bore, a locking pin slidably mounted in each of the transverse openings having its inner end pointed; notches in said pins, and a plate slidably mounted in said nut adapted to engage said notches to lock said pins against removal.

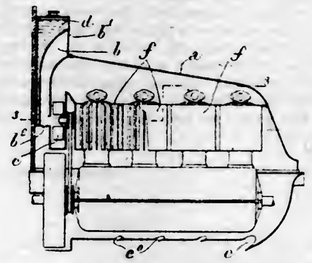
2. A nut lock including a nut having an axial bore and a plurality of openings intersecting said bore, a plurality of locking pins slidably mounted in said openings and having their inner ends pointed, said nut having a rectangular opening extending parallel with the axial bore thereof and extending between several of the openings, said locking pins having notches on the longitudinal edges adjacent the rectangular opening defining transverse shoulders, a locking plate slidably mounted in said rectangular opening adapted to engage the transverse shoulders of said pins to lock the latter against removal, and a spring plate pivotally secured to the outer face of said nut adapted to engage said plate to lock the latter against removal.

3. A lock nut comprising a nut having an axial bore and a plurality of transverse openings intersecting said bore, a locking pin slidably mounted in each of the transverse openings having its inner end pointed and adapted to engage in the shank of a bolt, notches formed in said pins, a plate slidably mounted in said nut for engaging and locking said pins against removal, and means for locking said plate against removal from said nut.

4. A lock nut comprising a nut having an axial bore and a plurality of transverse openings intersecting said bore, a locking pin slidably mounted in each of the transverse openings having its inner end pointed, notches formed on the longitudinal edges of said pins defining a plurality of outwardly facing shoulders, a plate slidably mounted in said nut adapted to engage behind said shoulders to lock said pins against removal, and means to lock said plate against removal from said nut.

1,155,950. COOLING SYSTEM FOR INTERNAL-COMBUSTION ENGINES. PHILIPPE MONTBARBON, Neuilly-sur-Seine, France, assignor to Societe Anonyme Montbarbon, Neuilly-sur-Seine, France. Filed May 11, 1912. Serial No. 696,763. (Cl. 123—170.)

1. A system of air-cooling multi-cylinder internal combustion engines for use on motor vehicles, comprising, in combination with the engine; a bonnet wherein said engine is arranged provided at its back with an air-funnel whose mouth opens forwardly and outwardly into the atmosphere above said bonnet and whose discharge end opens into the interior of the bonnet, and at its bottom with a rearwardly-directed air-exhauster, whereby air will be caused to circulate through the interior of said bonnet by the simultaneous action of pressure and suction when the vehicle is in motion, said funnel having its mouth provided with a grating and its lower portion provided with an outlet opening for such liquids and dust as may have passed through said grating.



2. A system of air-cooling multi-cylinder internal combustion engines for use on motor vehicles, comprising, in combination with the engine; a bonnet wherein said engine is arranged provided with an air-admission funnel having a forwardly-directed mouth, and with a rearwardly-directed exhauster, for forcing air to circulate through the bonnet under the simultaneous action of pressure and suction when the vehicle is in motion; an open-ended pipe inclosing each cylinder of the engine; and a horizontal partition on opposite sides of which said funnel and said exhauster are disposed located within the interior of said bonnet and extending to the sides and ends thereof, said partition being formed with openings in which the upper edges of said pipes are fitted, whereby the air will be forced to pass through the spaces between said pipes and the cylinders therein during its passage to said exhauster.

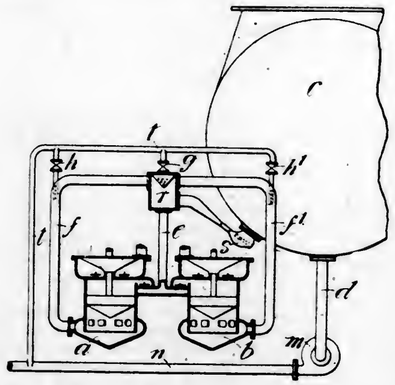
3. A system of air cooling multi-cylinder internal combustion engines for use on motor vehicles, comprising, in combination, with the engine; a hood adapted to shelter said engine, a horizontal partition located within the hood and extending to the sides and ends thereof dividing the same into upper and lower compartments, said partition being formed with a plurality of openings therein, a plurality of open-end-pipes disposed within the lower compartment and having their upper ends secured and fitted in the openings in said partition whereby said pipes are suspended in position, each pipe being adapted to surround a cylinder of the engine and arranged in spaced relation with respect thereto, an air receiving chamber located in the rear of the hood and below said partition, means for conducting air from said chamber to the upper compartment of said hood, an air funnel arranged to the rear of said hood and having a forwardly directed mouth and having its lower end opening into said air receiving chamber, the lower compartment of said hood being formed with an opening for exhausting the circulating air from said hood.

1,155,951. APPARATUS FOR WITHDRAWING AERATED VAPOR AND CONDENSATE FROM STEAM-CONDENSERS. DONALD BARNS MORISON, Hartlepool, England. Filed Sept. 2, 1914. Serial No. 859,920. (Cl. 257—24.)

1. Apparatus for withdrawing aerated vapor and condensate from steam condensers, comprising a steam jet device in communication with a condenser, a receiver, a passage leading from the steam jet to the receiver, means for withdrawing aerated vapor and water separately from said receiver, said means comprising reciprocating pumps, a passage leading from the lower portion of the receiver to one end of one of said reciprocating pumps, and a passage or passages leading from the receiver to one of the remaining ends of said reciprocating pumps, a pump connected to the condenser, and a passage for conveying water discharged from said pump to the passage or passages last mentioned and to said receiver, the whole as and for the purpose hereinbefore specified.

2. Apparatus for withdrawing aerated vapor and condensate from steam condensers, comprising a steam jet

device in communication with a condenser, a receiver, a passage leading from the steam jet to the receiver, means for withdrawing aerated vapor and water separately from said receiver, said means comprising a reciprocating pump, a passage leading from the lower portion of the receiver to an end of said reciprocating pump and another passage leading from the receiver to the other end of said reciprocating pump, a pump connected to the condenser, and a passage for conveying water discharged from said pump to the passage last mentioned and to said receiver, the whole as and for the purpose hereinbefore specified.



3. Apparatus for withdrawing aerated vapor and condensate from steam condensers, comprising a steam jet device in communication with a condenser, a receiver, a passage leading from the steam jet to the receiver, means for withdrawing aerated vapor and water separately from said receiver, said means comprising two reciprocating pumps, a passage leading from the lower portion of the receiver to an end of each of said reciprocating pumps, and passages leading from the receiver to the remaining ends of said reciprocating pumps, a pump connected to the condenser and a passage for conveying water discharged from said pump to the passages last mentioned and to said receiver, the whole as and for the purpose hereinbefore specified.

4. Apparatus for withdrawing aerated vapor and condensate from steam condensers, comprising a steam jet device in communication with a condenser, a receiver, a passage leading from the steam jet to the receiver, means for withdrawing aerated vapor and water separately from said receiver, said means comprising two vertical reciprocating pumps, a passage leading from the bottom of the receiver to the uppermost ends of each of said reciprocating pumps and passages leading from the upper part of the receiver to the remaining ends of said reciprocating pumps, a pump connected to the condenser, and a passage for conveying water discharged from said pump to the passages last mentioned and to said receiver, the whole as and for the purpose specified.

5. Apparatus for withdrawing aerated vapor and condensate from steam condensers, comprising a steam jet device in communication with a condenser, a receiver, a passage leading from the steam jet to the receiver, means for withdrawing aerated vapor and water separately from said receiver, said means comprising two vertical reciprocating pumps, a passage leading from the bottom of the receiver to the uppermost ends of each of said reciprocating pumps, and passages leading from the upper part of the receiver to the remaining ends of said reciprocating pumps, a rotary pump connected to the condenser, and a passage for conveying water discharged from said rotary pump to the passages last mentioned and to said receiver, the whole as and for the purpose hereinbefore specified.

[Claims 6 to 8 not printed in the Gazette.]

1,155,952. CARPET-BEATER. JOHN S. MORRISON, Great Bend, Kans. Filed Feb. 18, 1915. Serial No. 9,130. (Cl. 15—8.)



1. A carpet beater comprising a frame, uprights rising therefrom, resilient beaters mounted in said frame, a crank shaft mounted in said uprights having cranks in separate radial positions, connections between said beaters and cranks comprising sectional bars, the sections of which are connected one with one of said cranks and the other with a beater and mounted to slide relatively to each other, means for detachably locking said sections in succession, whereby the beaters are raised to a predetermined height on the turning of the crank shaft, and means for unlocking said locking means when the bars are raised to such height.

2. A carpet beater comprising a frame, uprights rising therefrom, resilient beaters mounted in said frame, a crank shaft mounted in said uprights having cranks in separate radial positions, connections between said beaters and cranks comprising sectional bars, the sections of which are connected one with one of said cranks and the other with a beater and mounted to slide relatively to each other, means for detachably locking said sections together in succession, whereby the beaters are raised to a predetermined height on the turning of the crank shaft, and means for unlocking one of the sections from the other at each quarter turn of the crank shaft, whereby to permit the beater to move forcibly downward under the tension of its spring.

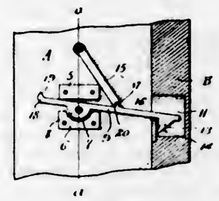
3. A carpet beater comprising a frame, uprights rising therefrom, a plurality of resilient beaters mounted in said frame, a crank shaft mounted in said uprights having cranks in separate radial positions, connections between said beaters and cranks comprising sectional connecting bars, the sections of which are connected one with one of said cranks and the other with a beater and mounted to move longitudinally relatively to each other, interlocking elements carried by said sections and positioned for engagement in succession, whereby the last named section is raised with the first named section while said elements are so engaged, and means for disengaging said elements when the first named section is raised to a predetermined height.

4. A carpet beater comprising a frame, uprights rising therefrom, resilient beaters mounted in said frame, a crank shaft mounted in said uprights having cranks in separate radial positions, connections between said beaters and cranks comprising sectional bars the sections of which are connected one with one of said cranks and the other with a beater and mounted to move longitudinally relatively to each other, each of said sections having a guide fixed thereto, the guide of one section slidably engaging the other section, means for detachably locking said sections together against longitudinal movement relatively to each other, and means for releasing said locking means when the bars are raised to a predetermined height.

5. A carpet beater comprising a frame, uprights rising therefrom, a plurality of resilient beaters mounted in said frame, a crank shaft mounted in said uprights having cranks in separate radial positions, connections between each of said beaters and cranks comprising sectional bars, the sections of which are connected one with one of said cranks and the other with a beater and mounted to slide relatively to each other, said sections having offsets therein interlocking with each other successively, and means for disengaging said offsets when the bars are raised to a predetermined height.

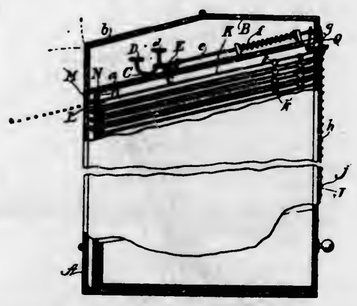
[Claims 6 to 9 not printed in the Gazette.]

1,155,953. SCREEN-DOOR FASTENER. WILLIAM BRYAN MORROW, Shippensburg, Pa. Filed Apr. 16, 1915. Serial No. 21,901. (Cl. 70—45.)



A door latch and lock therefor comprising in combination, a straight lever pivoted at a point between its ends to the jamb of the door for rocking movement, said lever being adapted to enter a recess in said door arranged at a right angle to said lever, a keeper plate secured to the door and extending across the lower end of the recess, said lever having a hooked end adapted to gravitate into engagement with said plate upon entering said recess, projections rising from the upper surface of the lever at spaced points, a pawl freely pivoted above said lever and having a notched end portion for interchangeable engagement with said projection whereby to maintain said lever in either operative or inoperative position, and means for limiting the rocking movement of said lever.

1,155,954. ACCOUNTS-DELIVERY CABINET. NELS OLSEN, Menominee, Mich. Filed Aug. 4, 1914. Serial No. 854,996. (Cl. 45—2.)



1. In a delivery cabinet, the combination with a casing, of a partition in the upper portion of the casing, a plurality of carriers below the partition arranged one over another in an inclined position, means for supporting the carriers movably and for guiding them forwardly and downwardly, each carrier having a latch tongue passing through the back of the casing, a series of horizontal latch levers pivotally mounted externally on the back of the casing one above another, the said levers being of different lengths and the shortest lever being located highest and the longest lever lowest, each lever having an end arranged to engage the latch tongue of a carrier, operating keys arranged upon the said partition, and connections extending between the said keys and levers and having members passing through the back of the casing above the upper carrier.

2. In a delivery cabinet, the combination with a casing, of a partition in the upper portion of the casing, a plurality of carriers below the partition arranged one over another, means for supporting the said carriers movably and for guiding them out and in with respect to the casing, each carrier having a latch tongue passing through the back of the casing, a series of horizontal latch levers pivotally mounted externally on the back of the casing one above another, the said levers being of different lengths and each having an end arranged to engage the latch tongue of a carrier, operating keys arranged upon the said partition, and connections between the said keys and levers including members passing through the back of the casing above the upper carrier.

3. In a delivery cabinet, the combination with a casing, of a plurality of carriers arranged one above another, means for supporting the carriers movably and for guiding them out and in with respect to the casing, each carrier having a latch tongue passing through the back of the casing, a series of horizontal latch levers pivotally mounted externally on the back of the casing one above another, the said levers being of different lengths and each having an end arranged to engage the latch tongue of a carrier, operating keys supported by the casing near the carriers, and means connecting the said keys and levers and constructed to transmit the movements of the keys to the said levers.

1,155,955. PIPE AND NUT WRENCH. GEORGE A. PARMENTER, Boston, Mass. Filed June 2, 1915. Serial No. 31,717. (Cl. 81—110.)



1. A pipe and nut wrench comprising a shank and handle, a casing connected to the shank adjustably and slidably, an outer jaw pivotally connected to the casing and a locking connection between the outer jaw and the shank, said connection being adjustable, and a gripping surface carried by the shank, substantially as described.

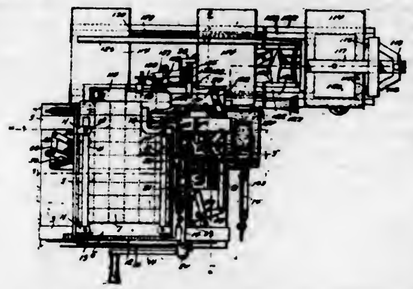
2. In a pipe wrench a shank, a casing carried thereby, said shank having a notched edge and a pin carried by the casing adapted to engage said notches, an outer jaw pivoted to the casing and having a shank depending within the same, said shank having notches, and a projection on the shank of the handle portion engaging said notches and coöperating with the notches and pin of the shank and casing, substantially as described.

1,155,956. MACHINE FOR APPLYING POSTAGE-STAMPS TO LETTERS. ARTHUR R. PAULSON, Clarkfield, Minn. Filed Aug. 23, 1912. Serial No. 716,685. (Cl. 216—17.)

1. In a machine of the character set forth and in combination with a stamp affixing mechanism, a carriage, a carrier mounted upon said carriage and adapted to receive a sheet of stamps, means for moving the carriage intermittently, means for preventing backward movement of the carriage during the return of the first mentioned means, means for releasing the carriage after a row of stamps have been used, and other means for moving the carrier laterally to bring the next row of stamps in position to be applied.

2. In a machine of the character specified, the combination of a track provided with teeth, a carriage mounted upon said track, feeding mechanism for advancing the carriage intermittently, a pawl movable with the carriage and adapted to engage the teeth of the track to prevent backward movement of the carriage during the return of

the feeding mechanism to normal position, a carrier mounted upon the carriage and adapted to receive a sheet of stamps, means for moving said carrier laterally to bring the next row of stamps in position to be applied, and means connected with the carriage to effect disengagement of the pawl to admit return of the carriage to normal position.



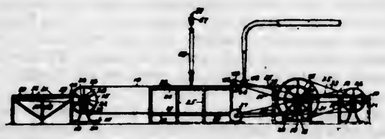
3. In a machine of the character specified, the combination of a carriage, a rack bar connected with said carriage, a pawl arranged to engage the teeth of the rack bar, a carrier mounted upon said carriage and adapted to receive a sheet of stamps, means for imparting intermittent movement of the pawl for advancing the carriage step by step, a rod engaging such pawl, a guide adapted to coöperate with said rod, means for imparting lateral movement to the carrier to bring the next row of stamps in position to be applied, and means for moving the guide to throw the pawl clear of the rack bar to admit of the carriage returning to normal position.

4. In a machine of the character specified, the combination of a carriage, a rack bar connected with said carriage, a pivoted arm, a pawl connected with the pivoted arm and adapted to engage the teeth of the rack bar, means for imparting an oscillatory movement to the pivoted arm, a rod having connection with the pawl, a guide engaging said rod, a carrier mounted upon said carriage, and adapted to receive a sheet of stamps, means for moving said carrier laterally to bring the next row of stamps in position to be applied, and means for moving said guide to release said pawl from the rack bar to admit of returning the carriage to normal position.

5. In a machine of the character described, the combination of a carriage, a rack bar having connection with said carriage, a pawl engaging the teeth of the rack bar, an arm having the pawl pivotally connected thereto, an operating shaft, a cam splined to the operating shaft and arranged to impart oscillatory movement to said arm, means for moving the cam on the operating shaft into and out of the plane of the oscillatory arm, a carrier mounted upon said carriage and adapted to receive a sheet of stamps, and means for moving said carrier laterally to bring the row of stamps in position to be applied.

[Claims 6 and 7 not printed in the Gazette.]

1,155,957. CARPET-CLEANING MACHINE. JOHN R. POWELL, New York, N. Y. Filed Aug. 11, 1913. Serial No. 784,143. (Cl. 15—8.)



1. In a cleaning machine of the class described, the combination of a carrier for the article to be cleaned, means for removing dust from the article supported by said carrier, a traveling device at one end of the carrier to receive the article being cleaned as it leaves the carrier, and means for driving said device in either direction whereby it is capable of removing the article from adjacent the end of said carrier when traveling in one direction and capable of moving the article toward the carrier when traveling in the opposite direction.

2. In a cleaning machine of the class described, the combination of a pair of spaced drums, a carrier for the article to be cleaned comprising an endless loop passing around the drums, means located in a position to remove dust from the article on said carrier, and traveling devices at the ends of said carrier to receive the article and remove it from adjacent either end of said carrier as it leaves the latter.

3. In a cleaning machine of the class described, the combination of a carrier capable of supporting the article while it is being cleaned, means for cleaning the article supported on said carrier, and a traveling device at one end of the carrier to receive the article as it leaves the carrier, and means for driving said carrier and said device in either direction, whereby the latter is capable of removing the article from adjacent the end of said carrier when the device travels in one direction and capable of moving the article toward the carrier when the device travels in the opposite direction, said driving means being readily reversible so that the article may be moved back and forth past said cleaning means a plurality of times successively.

4. In a cleaning machine of the class described, the combination of a series of pairs of spaced drums arranged side by side, a separate conveyer passing around each pair of drums, means for driving any number of said separate conveyers in accordance with the width of the article to be cleaned, and means for removing dust from the article or articles carried by said conveyers.

5. In a cleaning machine of the class described, the combination of a series of pairs of spaced drums, an endless conveyer for the article or articles to be cleaned passing around each pair of drums, means for driving any one set of drums and conveyers in either direction, and means extending across the conveyers for removing dust from the article or articles carried thereby.

[Claims 6 to 11 not printed in the Gazette.]

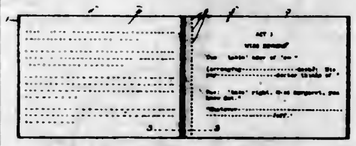
1,155,958. FIRE-FIGHTING APPARATUS. WARREN P. RICKARD, Plymouth, Mass. Filed Dec. 7, 1914. Serial No. 875,889. (Cl. 228—28.)



1. A fire fighting apparatus comprising a truck, a standard rising therefrom and composed of a plurality of telescopic sections, radial arms projecting from the upper ends of said sections in opposite directions, links secured to and projecting laterally from said arms, a plurality of slidably engaged ladder sections, one pair of links being secured to the top of each section, inclined truss rods leading from the lower ends of said ladder sections to the remote ends of the links, means to raise the uppermost standard sections, and a series of stops on the ladder sections to cause the latter to be successively raised.

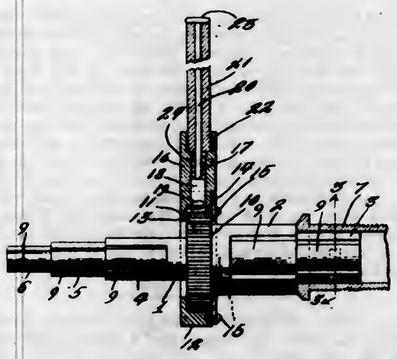
2. The combination with a truck and fire fighting means rising therefrom, of a plurality of inclined brace rods pivoted to said truck to swing downwardly, bearings on said rods, guides near the lower ends thereof, bolts slidable in said bearings, coiled springs connected to the upper ends of said bolts and to relatively fixed parts of the device, flexible elements depending from said bolts around said guides, said elements then continuing inwardly and being secured to a relatively fixed part of the machine below the pivot of the rods, and means for locking the bolts against sliding movement.

1,155,959. PLAY-BOOK. MARY C. ROBINSON, Asheville, N. C. Filed May 1, 1915. Serial No. 25,167. (Cl. 11—19.)



A book of the character described, including a cover and permanently attached leaves, said leaves containing a printed dialogue in which the names of the speakers appear and their lines, and readily detachable leaves within said cover, said readily detachable leaves being printed and containing successively the complete lines of each speaker in the dialogue interspersed with the cues of the speaker, said cues being a portion of the lines of the other speaker or speakers in the dialogue appearing on the permanent leaves, substantially as described.

1,155,960. RATCHET COMPOUND SPUD-WRENCH. ANDREW E. RUTH, Baltimore, Md. Filed May 14, 1915. Serial No. 28,057. (Cl. 81—71.)

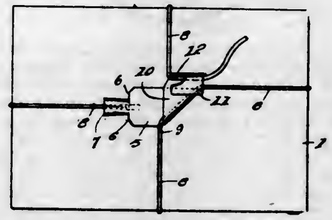


1. In combination, a wrench member having a multiple of spud or nipple engaging sections varying in sizes substantially from the central portion of the wrench member toward its opposite ends, each of said spud or nipple engaging sections having diametrically oppositely disposed grooves to receive diametrically oppositely disposed lugs on the interior of the spud or nipple, said grooves being of sufficiently greater width than the width of said lugs to permit of looseness of play with the lugs.

2. In combination, a wrench member having a multiple of spud or nipple engaging sections varying in sizes substantially from the central portion of the wrench member toward its opposite ends, each of said spud or nipple engaging sections having diametrically oppositely disposed grooves to receive diametrically oppositely disposed lugs on the interior of the spud or nipple, said grooves being of sufficient width to permit the lugs to have looseness of play therein, and means for imparting an intermittent motion to the wrench member.

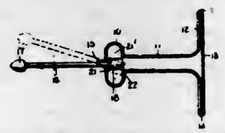
3. In combination, a wrench member having a multiple of spud engaging sections of varying diameters in cross section substantially from the central portion of the wrench member toward its opposite ends, each of said spud engaging sections having diametrically oppositely disposed grooves to receive diametrically oppositely disposed lugs on the interior of the spuds, the groove of one section being alined with the groove of each of the other sections, and varying in widths, each set of grooves being of greater width than the width of said lug to permit of a slight play of the wrench member so as to impart a jarring action on the spud to start the same, and means for imparting an intermittent motion to the wrench member.

1,155,961. PACKAGE-TIE. MILES A. SANDERS, Iuka, Ill. Filed Feb. 15, 1915. Serial No. 8,257. (Cl. 24—18.)



A package tie including a relatively flat body, a cord secured to one end of said body, the opposite end of said body being bent on an oblique line to define an intermediate member, a reduced end on said body bent over the intermediate member, and a tooth formed in the bight portion of the reduced end.

1,155,962. COLLAR-BUTTON. RANDALL N. SAUNDERS, Hudson, N. Y. Filed Jan. 27, 1915. Serial No. 4,632. (Cl. 24—97.)



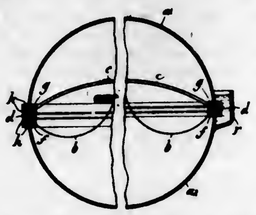
1. A button of the class described, comprising a button proper having a base, a tubular shank, and a hollow head, the head having a central opening of less diameter than the bore of the shank, and an extensible member having a shank of less diameter than the opening of the head and extending through the same and provided at its outer end with a head and at its inner end with a base fitting snugly in the tubular shank.

2. A button of the class described, comprising a button proper including a hollow head, a tubular shank reduced with respect thereto and an enlarged base, and an extensible portion including a tapering head having a reduced shank portion and a cylindrical base enlargement, said hollow head having an aperture axially therethrough through which the reduced shank of the extensible portion is movable to be extended or inclosed or collapsed with respect to the first named head and shank, said enlargement preventing displacement of the extensible portion through the aperture and snugly fitting the first named shank.

3. A button of the class described, comprising a button proper including a hollow head, a shank reduced with re-

spect thereto and an enlarged base, and an extensible portion including a head having a reduced shank portion and a base-forming enlargement, said hollow head having an aperture axially therethrough through which the reduced shank of the extensible porton is movable to be extended or inclosed or collapsed with respect to the first named head and shank, said shank being adapted for angular movement in the aperture with the enlargement braced against the head and shank on the inside.

1,155,963. ELECTRIC LAMP. OTTO SCHALLER, Südende, near Berlin, Germany. Filed Jan. 20, 1913. Serial No. 743,151. (Cl. 176—16.)

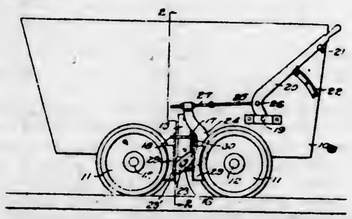


1. In an incandescent electric lamp a globe having an open ended part, on which a transversely disposed bearing surface is formed around the opening for the feed conductors, an annular conducting member seated with packing and insulating means on said bearing surface and serving for the feed connection on the one end of the filament, the globe being closed by a cover serving as a carrier for the feed connection of the other end of the filament and which cover fits over the annular conducting member and presses it together with the packing and insulating means onto the transversely disposed bearing surface, said parts being held together by atmospheric pressure.

2. In an incandescent electric-lamp a globe having open ended parts extending in opposite directions, each provided with a transversely disposed surface and surrounding an opening for a single feed conductor, a cover serving as a carrier for the feed connection of the end of the filament and adapted to be pressed tightly onto the said transversely disposed surface by atmospheric pressure.

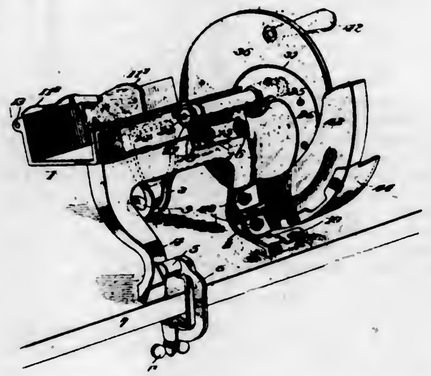
3. In an incandescent electric-lamp a globe having an open ended part, provided with a transversely disposed surface, a cover closed by atmospheric pressure over this seat and onto an interposed insulated ring the combination of a filament having one end attached to the insulated ring and the other to the cover, a ring surrounding the joint to contain a liquid.

1,155,964. MINE-CAR BRAKE. HENRY DOW SCOTT, Sheridan, Wyo. Filed June 29, 1915. Serial No. 36,996. (Cl. 188—24.)



In a device of the character set forth, the combination with a vehicle body, a pair of axles supporting the same, and a pair of wheels on each end of the pair of axles, of a rock shaft midway between and parallel to the axles and in the same plane thereof, a pair of holders secured to the vehicle body, one holder being between each pair of wheels and comprising a flat plate extending below the body and forming a bearing for one end of the rock shaft, each holder also including a horizontally extending bracket having forwardly and rearwardly projecting lugs, a pair of cams secured non-rotatably upon the ends of the rock shaft, a lever of the second class pivoted to one end of the body, a catch normally supporting the lever in idle position an arm secured at one end to the rock shaft and lying directly in the plane of the lever aforesaid, connections between the lever and the arm, a pair of brake blocks between each pair of wheels and suspended from said bracket lugs and in constant contact with said cams, and a pair of spacing collars on the ends of the rock shaft having their outer ends contacting with the cams, one of the collars being shorter than the other and bearing against said arm, said collar serving to hold the rock shaft from endwise movement maintaining the cams in the planes of the respective pairs of wheels.

1,155,965. SLICING-MACHINE. EDWARD F. SMITH, Rochester, N. Y., assignor to Josiah Anstice, Rochester, N. Y. Filed Apr. 22, 1912. Serial No. 692,425. (Cl. 17—24.)

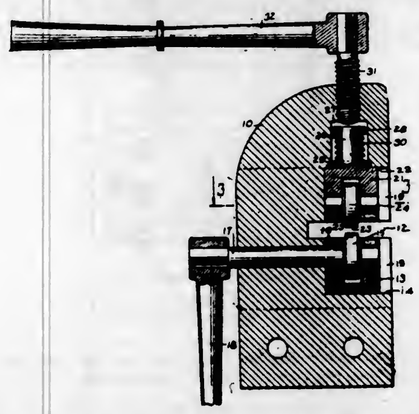


A meat slicer, comprising a meat support, a rotary shaft carried by said support, a knife mounted on said shaft and having an outwardly extending hub, a set screw passing through the hub and securing the knife on the shaft, a gage plate longitudinally adjustable on the shaft, a handle carried by the gage-plate, a hollow hub mounted upon the shaft and adapted to receive the knife hub and having a cut-away portion to expose the set-screw, a set screw carried by the hub and entering a longitudinal slot in the shaft to hold the same against rotation relatively to the shaft, but allowing it to freely slide thereon, a hand wheel screwed upon the outer end of the shaft and having a peripheral groove, and a member rigidly carried by the hub of the gage-plate and having a lateral lug entering the peripheral groove substantially as described.

1,155,966. SAW-RIM ADJUSTER. NORMAN HENRY STONE, Garyville, La. Filed May 4, 1915. Serial No. 25,723. (Cl. 76—27.)

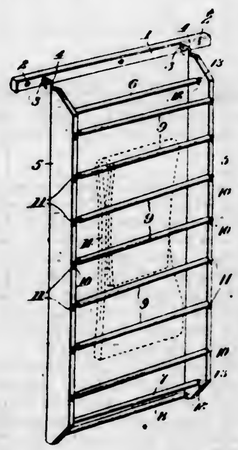
1. In a device of the character set forth, the combination of a bracket having a transverse slot formed therein and a pair of sockets on opposite sides of the slot, a pair of blocks in said sockets, a pair of L-shaped plates secured to the bracket and embracing each of said blocks preventing displacement thereof from the bracket, one of said blocks being rigidly held and the other being movable toward or from the stationary block, and saw shaping means carried by the blocks, substantially as set forth.

2. In a device of the character set forth, the combination of a rigid bracket having a transverse slot therein and a pair of sockets on opposite sides of the slot, a fixed jaw rigidly secured in one of said sockets, a movable jaw slidable in the other socket and having a shank secured thereto extending therefrom in a direction opposite from the fixed block, a collar carried by the end of the shank, a coil spring surrounding the shank and bearing at one end against the collar, face plates preventing lateral displacement of the blocks, a plate extending across the bracket



in stationary position and supporting the inner end of said spring, the supporting plate resting upon said face plates, and means acting through the end of the bracket and against the end of the shank to cause the movable jaw to advance forcibly toward the fixed jaw against the tension of the coil spring.

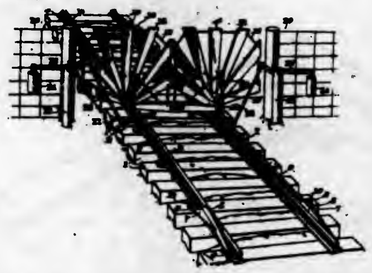
1,155,967. CLOTHES-RACK. ROBERT V. D. STOUTENBURGH, Hollis, N. Y. Filed June 24, 1914. Serial No. 846,959. (Cl. 211—17.)



1. A suitable wall support, flat side bars, connections between said support and the upper ends of said bars permitting the bars to turn about vertical axes and to swing forwardly, stay rods adapted to fit between the bars, connecting means between said rods and the bars adapted to interlock when the bars are in planes at right angles to the wall and to unlock when the side bars are turned from said positions, and one or more cross-rods detachably connected to the forward edges of said bars and adapted to hold the bars in planes at right angles to the supporting means.

2. A suitable wall support, side bars, connections between said support and the upper ends of said bars permitting the bars to turn about vertical axes and to swing forwardly, eyes arranged in pairs on said bars, one or more stay-rods having acute-angled hooks for engaging certain of the eyes, and one or more rods having right-angled hooks for engaging others of the eyes.

1,155,968. CATTLE-GUARD. LACY LOUIS TAPP, Elkton, Ky. Filed May 24, 1915. Serial No. 30,220. (Cl. 39—40.)



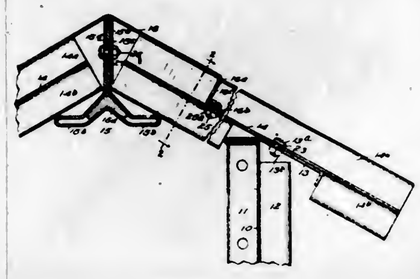
1. In a cattle guard for railway rails, substantially rectangular contact members arranged in pairs to the opposite sides of the rails, blocks connected with the rails and receiving pivots at the outer end of each of the contacts, each of said contacts having its outer face at its inner end formed with an enlargement provided with a longitudinally extending lug, a shaft journaled in bearings arranged between each pair of contact members, each of said shafts having angular ends providing bearings for the lugs of the contact members, a post central of each of the shafts, a member centrally pivoted to the post, a weight upon the outer end of the said member, a connection between the said member and each of the shafts, ears arranged at a right angle to the angular ends of the shafts and disposed centrally of each of the shafts, a swinging gate comprising a plurality of arms pivotally secured between the ears, one of said arms being connected with the pivot, and a flexible connection between the last mentioned arm and the remaining arms of the gate.

2. In a cattle guard for railway rails, substantially rectangular contact members arranged in pairs to the opposite sides of the rails, blocks connected with the rails and receiving pivots at the outer end of each of the contacts, each of said contacts having its outer face at its inner end formed with an enlargement provided with a longitudinally extending lug, a shaft journaled in bearings arranged between each pair of contact members, each of said shafts having angular ends providing bearings for the lugs of the contact members, a post central of each of the shafts, a member centrally pivoted to the post, a weight upon the outer end of the said member, a connection between the said member and each of the shafts, ears arranged at a right angle to the angular ends of the shafts and disposed centrally of each of the shafts, a swinging gate comprising a plurality of arms pivotally secured between the ears, one of said arms being connected with the pivot, and a flexible connection between the last mentioned arm and the remaining arms of the gate, arms arranged in a line with the ears to the opposite sides of the said ears, a flexible connection between the last mentioned arms and the end arms of the gate.

1,155,969. METALLIC BUILDING. WILLIAM W. TAYLOR, Montclair, N. J. Original application filed Mar. 14, 1913, Serial No. 754,216. Divided and application filed Nov. 12, 1913, Serial No. 800,493. Divided and this application filed May 19, 1915. Serial No. 29,105. (Cl. 108—3.)

1. In a metallic building, side walls, roofing plates supported on said walls, and a ridge at the upper ends of the

roofing plates, the said roofing plates terminating at the upper ends adjacent to the opposite sides of the ridge, and said ridge consisting of a core in the form of an angle bar of inverted V-shape, and a plate of sheet metal covering the core, said sheet metal covering extending across the underside of the core and outwardly at the sides of the latter in the form of wings, the sides of said plate extending from the wings inwardly over the upper side of the core and extending upwardly in close relation in the form of a vertical rib, the terminal of the plate at one side being returned over the terminal edge of the other side.



2. In a metallic building, side walls, roofing plates on said side walls, a ridge, said roofing plates terminating at their upper ends adjacent to the opposite sides of the ridge and inclined to each other, and a cover plate extending over the ridge and over the upper ends of the roofing plates, the said roofing plates having ribs at the upper side and at the underside thereof and the cover plate extending downwardly at the side edges between the said upper ribs of the roofing plates, and being secured to the said plates.

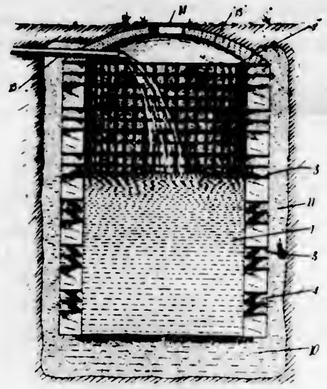
3. In a metallic building, side walls, roofing plates on said side walls, a ridge, said roofing plates terminating at their upper ends adjacent to the opposite sides of the ridge and inclined to each other, a cover plate extending over the ridge and over the upper ends of the roofing plates, the said roofing plates having ribs at the upper side and at the underside thereof and the cover plate extending downwardly at the side edges between the said upper ribs of the roofing plates, and being secured to the said plates, the said downwardly extending edges of the cover plate having ventilating openings, the spaces between the upper and lower ribs of the roof plates being in communication with each other, and the said spaces at the underside of the roof plates being open for the escape of air from beneath the roof.

4. In a metallic building, roofing plates, means supporting said roofing plates, and a ridge between the roofing plates, said ridge comprising a base having a core in the form of an inverted V-shaped bar and a sheet metal covering, said covering presenting wings at the sides of the said core and being formed into a vertical rib above the core, the rib presenting a plurality of thicknesses lying against each other.

1,155,970. CESSPOOL. LESTER E. TERRY, Southampton, N. Y. Filed Aug. 29, 1911. Serial No. 646,617. (Cl. 182—7.)

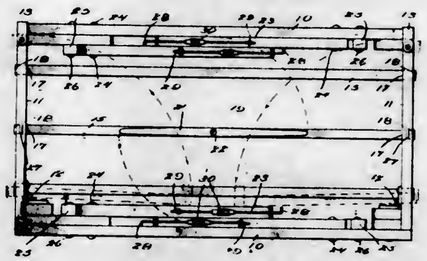
1. An earth inclosed sewage receptacle comprising a circular wall built up of cellular open-end tiles laid horizontally and radially upon each other in tiers, and a vertical body or jacket of mineral matter in granular form which incloses and surrounds the outer end of said tiles, the same being thus interposed between the tiles and the earth wall, said material also extending into and partly filling the tile passages, as described.

2. An earth inclosed sewage receptacle comprising a circular wall built up of cellular open-end tiles laid horizontally and radially one upon another, and a vertical surrounding body of mineral material in granular form,



which fills the triangular spaces between the tiles and projects into the tiles themselves, as described.

1,155,971. CAMP-TABLE. JOHN A. THORNTON and WALTER A. SETTLE, Walla Walla, Wash., assignors of one-third to Frances B. Allen, Walla Walla, Wash. Filed June 10, 1914. Serial No. 844,282. (Cl. 45—116.)

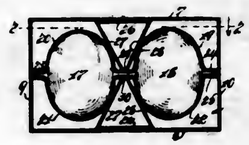


1. A camp table comprising a frame composed of side rails and end rails hinged to one of the side rails, said end rails being provided with notches cut in their top surfaces; braces extending longitudinally between the end rails, said braces having a right angled cutaway portion at each end and an angle member secured to each end to provide with said cutaway portion a U-shaped recess, the angle members engaging the notches in the end rails; and a fabric secured to the side rails and the longitudinal braces and adapted to roll about the rails and braces.

2. A camp table comprising a top embodying side rails and end rails hinged to one of said side rails and arranged to be folded parallel therewith and spaced therefrom, folding supporting members connected with the side rails and arranged to be placed at times parallel therewith and to lie between the folded end rails and the side rails; a separable fastener for the junction of the end rails with the side rail opposite the hinges; longitudinal braces extending between the end rails; and a fabric cover secured to the side rails and the longitudinal braces.

3. In a camp table, a frame comprising side rails, an end rail hinged to each end of one of the side rails and arranged to be folded parallel with the side rail and spaced therefrom, leg members pivoted to the side rails and arranged to be folded parallel therewith, certain of the leg members being adapted to lie between one side rail and the folded end rail, means for connecting the leg members with the end rails, braces connecting the end rails, means on the end of each brace for engaging opposite sides of the adjacent end rail, and stirrups on one end of each end rail for engaging the adjacent end of one of the side rails.

1,155,972. EGG-CARRIER. WILLIAM D. TICKNOR, Canton, Mass., assignor to Box Company of America, New York, N. Y., a Corporation of New York. Filed Aug. 4, 1915. Serial No. 43,508. (Cl. 229—29.)



1. An egg-carrier, comprising in combination, an exterior rectangular carton, an inner member within said carton, having parallel rows of egg-containing pockets, the lateral edges of said inner member bearing against the opposite sides of the carton, and a plurality of angular bracing members inserted between said parallel rows, bearing against the inner member, and also against the top and bottom of the carton.

2. An egg-carrier, comprising in combination, an exterior rectangular carton, an inner member within said carton, having parallel rows of egg-containing pockets, the lateral edges of said inner member bearing against the opposite sides of the carton, and a plurality of bracing members, triangular in cross-section, inserted between said parallel rows, bearing against the inner member, and also against the top and bottom of the carton.

3. An egg-carrier, comprising in combination, an exterior rectangular carton, an inner member within said carton, having parallel rows of egg-containing pockets, the lateral edges of said inner member bearing against the opposite sides of the carton, and a plurality of angular bracing members inserted between said parallel rows, bearing against the inner member intermediate said rows, and also against the top and bottom of the carton.

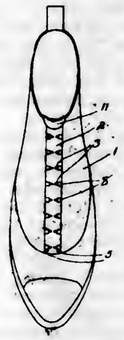
4. An egg-carrier, comprising in combination, an exterior rectangular carton, an inner member within said carton, having parallel rows of egg-containing pockets, the lateral edges of said inner member bearing against the opposite sides of the carton, and a plurality of bracing members, triangular in cross-section, inserted between said parallel rows, bearing against the inner member intermediate said rows, and also against the top and bottom of the carton.

5. An egg-carrier, comprising in combination, an exterior rectangular carton, an inner member within said carton, having parallel rows of egg-containing pockets, the lateral edges of said inner member bearing against the opposite sides of the carton, and a plurality of angular bracing members inserted between said parallel rows, bearing against the inner member intermediate said rows, against said pockets, and also against the top and bottom of the carton.

[Claim 6 not printed in the Gazette.]

1,155,973. SHOE-FASTENER. FRANCIS V. TREMBLAY, Rumford, Me. Filed June 17, 1914. Serial No. 845,661. (Cl. 24—207.)

A shoe fastener comprising an elastic tongue, having oppositely disposed ball members connected at spaced intervals thereto, slotted tubular members connected at spaced intervals to the meeting edges of the upper for engagement with said ball members, said tongue having an extending upper end forming a flap, and having fastening members on the flap and end of the tongue, so the flap may be turned down over the uppermost pairs of ball



members to hold the tongue from sliding movement and the ball and slotted tubular members from disconnection.

1,155,974. TREATMENT OF METALS. TYCHO VAN ALLER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 4, 1911. Serial No. 652,756. (Cl. 91—70.1.)

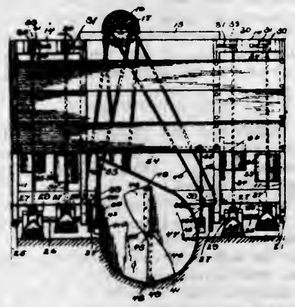
1. The process of rendering metals inoxidizable which consists in heating the same under non-oxidising conditions in contact with a powdered mixture containing aluminum and a chlorid.

2. The process of rendering metals inoxidizable which consists in heating the same under non-oxidizing conditions in contact with a powdered mixture containing aluminum and ammonium chlorid.

3. As a new article of manufacture, an oxidizable metal having its surface alloyed with another metal to form an alloy which is inoxidizable at high temperatures.

4. As a new article of manufacture, a metal having on its surface an alloy of aluminum with the metal which alloy is inoxidizable at high temperatures.

1,155,975. WALKING-DITCHER. CHARLES VAN ANTWERP, Miami, Fla., assignor to Lillie Van Antwerp, Miami, Fla. Filed Nov. 27, 1911, Serial No. 662,679. Renewed Mar. 8, 1915. Serial No. 12,912. (Cl. 37—17.)



1. In a ditcher, a frame, means to propel the frame, a hood carried at the front end of the frame comprising a substantially imperforate back and a circumferential forwadly extending cutter band, said band coinciding with a circle throughout the greater portion of its extent and having a tangential extension limiting an opening at the upper side, a cutter rotating within said hood comprising

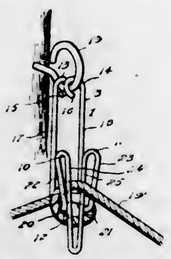
cutter blades spaced apart and having a web intermediate such cutter blades coinciding substantially with a radius of the circle of the hood, and means to rotate the cutter.

2. In a ditcher, a frame, means to propel the frame, a hood located upon the forward end of the frame and adapted to extend below the frame, said hood comprising a substantially imperforate back, and a cutting band extending forwardly from said back coinciding with a circle throughout the greater portion of its extent and having a tangential discharge opening, a shaft journaled to rotate centrally of the hood, a cutter mounted rigidly upon the shaft, said cutter comprising blades spaced apart longitudinally of the shaft, the outer blade coinciding approximately with the forward edge of the cutting band and the rearward blade adjacent the back of the hood, and a filler web disposed between the blades, said filler web coinciding substantially with a radius of the circle of the cutter band.

3. In a ditcher, a frame, a floating frame suspended beneath a portion of the first mentioned frame and adapted to be raised and lowered relative thereto, a cutter mounted upon the forward end of the floating frame, and a motor mounted upon the floating frame adapted to drive the cutter and propel the first mentioned frame.

4. In a ditcher, a vehicle, a frame mounted to float beneath the vehicle and suspended therefrom, a rotary cutter mounted upon the forward end of the floating frame, a motor mounted upon the floating frame, and means transmitting motion from the motor to drive the cutter and propel the vehicle.

1,155,976. ROPE-TYING DEVICE. CARL C. VAN DYKE, St. Paul, Minn. Filed June 16, 1913. Serial No. 773,905. (Cl. 24—131.)



A tying device comprising spaced shank members bent upwardly and horizontally back upon themselves to form jaws, and a connecting portion bent into substantially V-shape and lying in the plane with the jaws, said V-shaped portion being extended out beyond said jaws to form a guide member, the plane of said jaws and V-shaped portion being parallel to the plane of the shank members.

1,155,977. METHOD OF TREATING FLOUR AND PRODUCT THEREOF. THOMAS THORNYCROFT VERNON, Chester, England. Filed Feb. 11, 1915. Serial No. 7,656. (Cl. 99—10.)

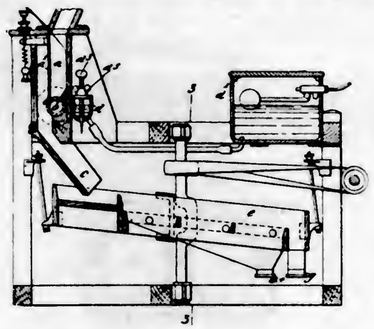
1. As a new article of manufacture, a coarse grained cereal flour or the like consisting of dry aggregates of fine grained particles of such flour.

2. A flour for making bread or cakes consisting of conditioned and dried aggregates of particles of flour.

3. The hereindescribed method of making a coarse grained cereal product, which comprises coating drops of water with fine grained particles of a cereal product, and drying the same to aggregate the fine grained particles into coarse grains.

4. The hereindescribed method of making a coarse grained cereal product composed of dried aggregates, which comprises bringing drops of water into contact with finely ground cereal or cereal product, and then drying the aggegates thus produced.

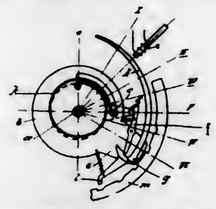
5. The hereindescribed method of making coarse grained cereal flour or the like, which comprises bringing drops



of water into contact with the flour or the like, and conditioning and drying the aggregates thus formed.

[Claim 6 not printed in the Gazette.]

1,155,978. DRUM-SWITCH WITH MAXIMUM CUT-OUT. MAX VOGELSANG, Frankfort-on-the-Main, Germany, assignor to the Firm of Voigt & Haeffner Actien Gesellschaft, Frankfort-on-the-Main, Germany. Filed Dec. 8, 1914. Serial No. 876,135. (Cl. 175—267.)

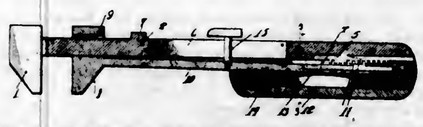


1. In a switch, the combination with the contact making and breaking member, the regulating member and means intermediate the contact making and breaking member and regulating member tending to retract the contact making and breaking member in contact breaking position, of means for rigidly connecting said contact making and breaking member and regulating member, electrically controlled means for throwing said connecting means out of opeation, and means operative when disconnecting the regulating member and contact making and breaking member to lock the regulating member in position.

2. In a switch, the combination with the contact making and breaking member, the regulating member and a spring intermediate the contact making and breaking member and regulating member tending to retract the contact making and breaking member into contact breaking position, of a pawl on the regulating member for rigidly connecting said contact making and breaking member and regulating member, a locking pawl on the regulating member normally holding said connecting pawl in connecting position, a maximum relay adapted to throw the locking pawl out of holding position, and means located in position for engagement by said locking pawl when acted upon by the relay and for locking the locking pawl in position.

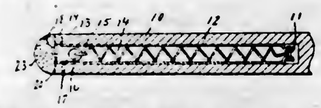
1,155,979. WRENCH. JOHN WILLIAM WALTERS, Nevada, Mo. Filed Jan. 14, 1914. Serial No. 812,115. (Cl. 81—130.)

In a wrench, a slotted shank having teeth upon one end thereof and a handle secured to said end, a movable jaw carried by said shank and provided with a stem having a toothed end slidable in said handle, means for normally maintaining the toothed end of the stem in engagement with the toothed end of the shank, and a headed pin disposed within said slot and secured to said stem whereby



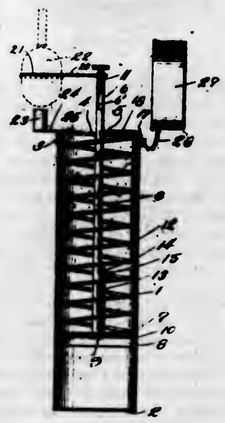
the end of the stem may be depressed and longitudinal movement communicated thereto by said pin.

1,155,980. BILLIARD-CUE. DANIEL F. WHITCOMB, Los Angeles, Cal. Filed Feb. 16, 1914. Serial No. 818,927. (Cl. 46—9.)



A billiard cue comprising a body having a socket in the tip end thereof; a tube mounted in said socket, said tube having a notch in the outer end; a connector having a shank adapted to fit in the notch in said tube, said shank having an eye therein; a washer secured to said connector; a tip secured to said washer; and a spring mounted in said tube and having one end secured to the tube and the other end removably connected to the connector.

1,155,981. AUTOMATIC MECHANISM FOR OPERATING CAMERA BULB OR CONTACT RELEASE. DON CARLOS WISELEY, Spokane, Wash. Filed Sept. 9, 1913. Serial No. 788,949. (Cl. 161—26.)



1. In a device of the character described a cylinder having closed ends, a piston slidably mounted in said cylinder, a plunger extending from said piston through an opening formed in one end of said cylinder, said opening having an offset leading therefrom, a resilient catch extending from said piston and passing through the cutout leading from the opening in the cylinder head when said plunger is drawn outwardly, means for moving said resilient catch to an inoperative position, and means for yieldably holding said piston in a normal position.

2. A device of the character described including a cylinder, a piston slidably mounted in said cylinder, a plunger extending from said piston through the head of said cylinder, resilient means extending from said piston for engaging the head of said cylinder to releasably hold said piston in a set position and means for returning said piston to its normal position when said resilient means is moved to an inoperative position.

3. A device of the character described including a cylinder having a head, a piston slidably mounted in said cylinder, resilient means carried by said piston for engaging the head of said cylinder to releasably hold said piston in a set position, and means for returning said piston to its normal position when said resilient means is moved out of engagement with the head of said cylinder.

1,155,982. ATTACHABLE OUTER SOLE FOR BOOTS AND SHOES. ROBERT MORSE WITHYCOMBE, Sydney, New South Wales, Australia. Filed May 8, 1915. Serial No. 26,830. (Cl. 36—72.)



1. A detachable outer sole for shoes comprising a sole piece of flexible material being formed with a slit in the edge thereof, a reinforcing member arranged in said slit and co-extensive therewith, and means for securing said sole piece to the sole of the shoe.

2. A detachable outer sole for shoes comprising, a sole piece of flexible material, a continuous reinforcing member embedded in the edge of said sole, loop portions formed in said reinforcing member and projecting beyond the edge of said sole, and means coöperating with said loop portions for securing said outer sole to the sole of the shoe.

3. A detachable outer sole for shoes comprising, a sole of flexible material having a marginal slit, a wire frame inserted in said slit in the sole and fastened therein, and means for attaching the outer sole to the shoe.

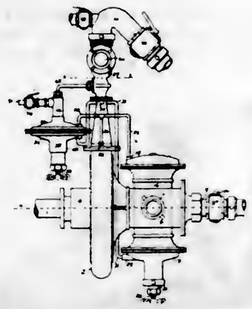
4. A detachable outer sole for shoes comprising a piece of flexible material adapted to be applied to the bottom of a shoe to provide the outer sole, said outer sole being formed with an inwardly extending peripheral slit, a resilient reinforcing wire introduced in said slit and co-extensive therewith, loop portions formed in said wire and extending beyond the peripheral edge of said outer sole and adapted to engage with said shoe, and means for securing the portions of the bifurcated edge of the sole together, thereby embedding and securing said wire therebetween.

1,155,983. APPARATUS FOR CHARGING LIQUIDS WITH GAS. JACOB F. WITTEMANN and RUDOLPH W. WITTEMANN, New York, N. Y., assignors to Amaranth Machinery and Supply Works, Inc., New York, N. Y., a Corporation of New York. Original application filed May 27, 1912, Serial No. 700,029. Divided and this application filed Aug. 6, 1914. Serial No. 855,410. (Cl. 209—1.)

1. The combination with a conduit for conducting liquid, of a chamber communicating with said conduit and having different areas in cross section in different parts of its length, a conduit for delivering gas, which is to be commingled with the liquid in said liquid conduit, a valve for controlling the uniform mixture of liquid and gas by controlling the flow of gas, a diaphragm mechanism for shifting said valve, and separate conduit connections from parts of different cross sections of said chamber to opposite sides of said valve operating mechanism, substantially as set forth.

2. The combination with a conduit for conducting liquid, of a chamber communicating with said conduit and having a different cross section at its inlet end from that at its

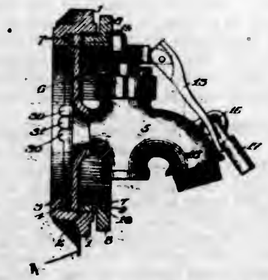
outlet end, a conduit for delivering gas, which is to be commingled with the liquid in said liquid conduit, a valve for controlling the uniform mixture of liquid and gas by controlling the flow of gas, a diaphragm mechanism for shifting said valve, and separate conduit connections from different parts of different cross sections of said chamber to opposite sides of said valve operating mechanism, substantially as set forth.



3. The combination with a pump, of a conduit for delivering a flow of liquid to the pump, a conduit having a varying area in cross section, another conduit for delivering gas to the pump, a valve for controlling the flow of gas to the pump, a diaphragm mechanism for shifting said valve, separate conduits extending from that part of the conduit of varying cross sections having the greater cross section and from that part having the lesser cross section to opposite sides of said diaphragm mechanism, substantially as set forth.

4. The combination with a conduit for conducting liquid, of a chamber communicating with said conduit having different areas on the cross section in different parts of its length, a conduit for delivering gas which is to be commingled with the liquid in said liquid conduit, a valve for controlling a uniform mixture of liquid and gas by controlling the flow of liquid, a valve for controlling the supply of gas delivered to said flow of liquid, a diaphragm mechanism for shifting said liquid controlling valve, another diaphragm mechanism for controlling the gas valve and separate conduit connections from parts of different cross sections of said chamber to the opposite sides of the mechanism for shifting the liquid controlling valve and to opposite sides of the mechanism for shifting the gas controlling valve, substantially as set forth.

1,155,984. FAUCET. CHARLES F. WRAY, Rochester, N. Y., assignor to National Brass Manufacturing Company, Rochester, N. Y. Filed Feb. 8, 1913. Serial No. 747,059. (Cl. 137—27.)



1. The combination with a receptacle of a faucet, a support on which the faucet is mounted, said support being removable from the receptacle and reversible thereon, means for securing the support in place, a valve, a handle connected to the valve, means for locking the handle against movement, and means coöperating with the valve for locking the support, against movement when the handle is locked.

2. The combination with a receptacle, of a faucet, a supporting plate on which the faucet is mounted, a seat secured in the receptacle and adapted to receive said plate, a nut for holding the plate in engagement with the seat, a valve, a handle connected to the valve, means for locking the handle against movement, and a locking member carried by the valve and coöperating with said nut to hold it against movement when the handle is locked.

3. The combination with a receptacle, of a faucet, a supporting plate on which the faucet is mounted, a seat secured in the receptacle and adapted to receive said plate, a nut engaging the seat for holding the plate in position, a rotary valve plug, the aforementioned nut having a series of openings or recesses on its outer face, and a locking member carried by the valve plug and adapted to engage the recesses in the nut when the valve is closed.

1,155,985. CENTRIFUGAL SWITCH. HENRY L. ZABRISKIE, Westfield, N. J., assignor to Diehl Manufacturing Company, Elizabeth, N. J., a Corporation of New Jersey. Filed July 10, 1913. Serial No. 778,343. (Cl. 175—310.)



1. A centrifugal switch, comprising a plate having fulcral arms and ears, contact fingers intermediately pivoted between said arms, springs interposed between said fingers and ears and engaging the fingers at points most remote from their contact ends, and contact plates arranged parallel with said plate and with which said springs normally hold said fingers in circuit-making contact.

2. A centrifugal switch, comprising a plate having arms and ears, contact fingers pivotally mounted between said arms, and a pair of springs attached to each finger and to said ears on opposite sides of each finger for normally holding said fingers in circuit-making position.

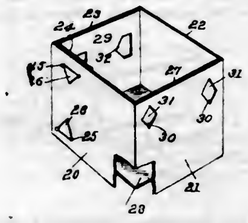
3. A centrifugal switch, comprising a plate having fulcral arms and ears, contact fingers pivotally mounted between said arms, and a pair of springs connected to each finger and to said ears on opposite sides of each finger, said ears being stationary and each finger movable in an arc of a circle about its axis, and the points of attachment of the springs to the ears affording centers for oscillatory movement of the springs, so that the tension of said springs remains substantially constant under the movement of the fingers.

4. A centrifugal switch, comprising a plate having fulcral arms and ears stamped up therefrom, contact fingers pivotally mounted between said arms, complementary contact plates arranged at right angles to the axis of the motor shaft and adapted to be engaged by said contact fingers, and a pair of springs attached to each finger and to said ears on opposite sides of each finger for holding said fingers in engagement with said contact plates.

5. A centrifugal switch, comprising a plate having fulcral arms and ears stamped up therefrom, counter-weighted contact fingers pivotally mounted between said arms, and a pair of springs connected to the counter-weighted end of each finger and to said ears on opposite sides of each finger and outside of the radius of revolution of the pivotal points of said fingers.

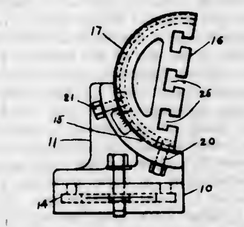
[Claim 6 not printed in the Gazette.]

1,155,986. PAPER BOX. JOHN C. ZEMLO, Beaver Dam, Wis. Filed Apr. 9, 1915. Serial No. 20,246. (Cl. 229—23.)



A knockdown paper box comprising a single strip of material forming a back wall, a front wall, and side walls and a flap, oppositely disposed tongues struck out from said flap adapted to engage in slots formed in said front wall, tongues formed on said side walls adjacent the lower edge thereof, and a similar strip of material forming a top and a bottom and having a right angular flap on said bottom, a reinforcing side wall connecting said top and bottom, and a flap formed on said top, tongues struck out from said right angular flap and said side wall adjacent said bottom, said tongues being adapted to interlock with the tongues formed on said side walls whereby said bottom is held in position, and said reinforcing wall is held in engagement with the side wall and reinforcing the same, and oppositely disposed tongues struck out from said flap formed on said top and adapted to engage in a pair of vertical slots formed in one of the side walls whereby said top is held in position.

1,155,987. UNIVERSAL ANGLE-PLATE. JOHN R. BECKETT, Boston, Mass. Filed Oct. 4, 1913. Serial No. 793,306. (Cl. 90—59.)

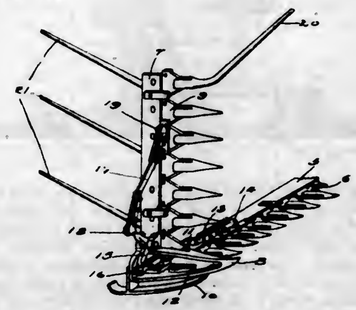


1. A universal work holder for metal working machines, comprising a block having a plane work receiving face with provision for clamping work thereto and a back of part cylindrical form, a backing member formed with an extended arcuate seat for said block, said parts being arranged to permit adjustment of said block about a horizontal axis, and being equipped with T-bolt clamping means for clamping said block to said member in any adjusted position, and means for rigidly holding said backing member with a capability of angular adjustment about a vertical axis, said means including T-bolt clamps operative in an annular slot, said vertical axis being substantially farther back than said horizontal axis, said block and backing member and the holding means therefor being so proportioned and disposed that the work receiving face may be adjusted through substantially a quadrant in any direction before any other part is projected into the plane thereof.

2. A universal work holder for metal working machines, comprising a block having a plane work receiving face and a back of part cylindrical form, a backing member formed with an extended arcuate seat for said block, said parts being arranged to permit adjustment of said block about a horizontal axis, T-bolt means for clamping said block to said backing member, and means including a T-bolt clamp for rigidly holding said backing member with a capability of angular adjustment about a vertical axis, said vertical axis being approximately in a line tangential to said arcuate seat, said block and backing member and the holding means therefor being so proportioned and disposed that the work receiving face may be adjusted through substantially a quadrant in any direction before any other part is projected into the plane thereof.

3. A universal work holder of the kind described, comprising a stand base having provision for supporting a backing member thereon with a capability of angular adjustment about a vertical axis, a backing member on said base formed with a cradle seat of substantially elongated quadrantal form, said backing member having T-bolt clamping means passed therethrough and engaged in an annular slot of said base, and a work holding block fitted to said seat for angular horizontal adjustment having T-bolt clamping means engaged with the periphery thereof for clamping it to said seat, said block being so mounted that its face may be adjusted through an angle of substantially ninety degrees in any direction before said base or said cradle seat is projected into the plane of said face.

1,155,988. MOWING-MACHINE. LOUIS BERTRAND, Seattle, Wash. Filed May 22, 1913. Serial No. 769,253. (Cl. 56—30.)



In a device of the kind described, the combination with a horizontal finger bar, of a vertical finger bar arranged at one end of the horizontal finger bar and having its lower end spaced above said horizontal bar and provided on its outer side with spaced ears, knife bars slidably mounted with respect to the respective finger bars, a bell crank lever having balls at its ends fulcrumed between said ears, ball supporting members connected to said knife bars, and offset links connecting the balls of the lever with the balls of the ball supporting members.

1,155,989. TIE-PLATE. BENJAMIN B. BETTS, St. Louis, Mo. Filed May 13, 1913. Serial No. 767,434. (Cl. 239—18.)



1. A tie plate having overlapping rail seats adapted to receive a running rail and a guard rail and provided with recesses along their overlapped margins to receive the inner base flanges of the rails, and with a rail-bearing shoulder against which the outer rail flange of the guard rail is adapted to bear, and a brace extending from said

overlapped margins to a point above and laterally removed from said overlapped margins to stand beneath the ball of the running rail supported by the plate.

2. The combination with a standard running rail and a standard guard rail, of a tie plate comprising a unitary structure and consisting of a pair of rail seats, the guard rail seat being in a plane above and its inner margin overlapping the inner margin of the running rail seat, a lip rising from the plate over said overlapped seat margins, a brace extending from said lip to the ball of the running rail, there being recesses to receive the inner, overlapped margins of both rails and rail bearing shoulders arising from said seats in opposition to said recesses, said shoulders and recesses holding both rails against lateral movement to prevent spike shearing and said brace shifting the load strains on the running rail to the center of the plate and the lateral strains of the guard rail to the ball of the running rail in order to prevent plate buckling and breaking.

1,155,990. TIE-PLATE. BENJAMIN B. BETTS, St. Louis, Mo. Filed Nov. 10, 1913, Serial No. 800,214. Renewed Aug. 2, 1915. Serial No. 43,343. (Cl. 239—18.)

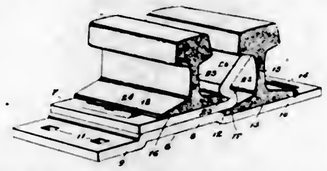


1. A tie plate having a pair of rail-bearing surfaces one of which is arranged in a plane above and overlapping the other, integral means forming a recess contiguous to each of said surfaces at their overlapped margins, shoulders arising from said surfaces in opposition to said recesses, one of said shoulders being spaced apart from its companion recess a distance equal to the width of a rail base, the other shoulder being spaced apart from its companion recess a distance greater than the width of a rail base, there being a channel in said first mentioned recess to provide for tilting the rail over said shoulder, and a removable plate arranged to be placed against the shoulder forming a companion to said second mentioned recess.

2. A combined running and guard rail tie-plate constructed as a unit and comprising a running-rail bearing surface, a guard-rail bearing surface arranged in a plane above and partially overlying the running rail bearing surface, whereby the base flanges of rails supported on said surfaces will be overlapped, a rib having a recess therein to receive the base flange of the guard rail, a brace extending from said rib and terminating above and laterally removed from the rib to engage beneath the ball of a running rail, a rail bearing shoulder on each surface, and a channel in one of said surfaces opposite the shoulder, and there being spike openings through each surface next adjacent said shoulders.

1,155,991. TIE-PLATE. BENJAMIN B. BETTS, St. Louis, Mo. Filed Oct. 12, 1914. Serial No. 866,395. (Cl. 239—18.)

1. A tie plate, comprising two sections of metal plate, a base section and a top section, the said base section being provided with an integral shoulder adjacent one end thereof struck from the said base section, and spike openings adjacent thereto, there being spike openings formed in the opposite end of said base section and said base section being provided with an elevated portion intermediate said spike openings pressed from the body of said base portion, the said elevated portion being provided with an upwardly projecting portion struck from said elevated portion, the remaining section of said tie plate comprising a single plate of material provided on its top surface with a recess at one end, an integral shoulder at the opposite end struck from said plate, and a spike opening adjacent thereto, and an integral brace formed from said plate and projecting at an angle from said plate.



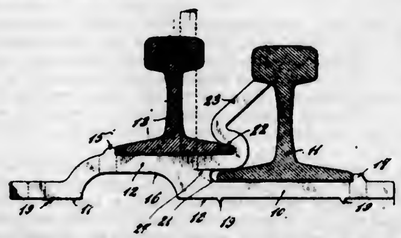
2. A guard rail mounting, comprising a base plate provided on one end with a spike opening and an up-set running rail bearing shoulder formed adjacent thereto and on the opposite end with a spike opening and further with an elevated portion intermediate said spike openings, and a separate plate adapted to be positioned on said elevated portion struck from the base plate, said second plate being provided with a rail bearing shoulder struck therefrom and a spike opening adjacent thereto and with a brace formed integral with said second plate and projecting at an angle therefrom.

3. In a tie plate, the combination with a metal plate comprising tie engaging portions in the same plane and a portion between and in a plane above the tie engaging portions of a second metal plate arranged to rest upon the elevated portion of the first mentioned plate and overlap one of the tie engaging portions thereof, said second plate having an integral brace arranged to extend to beneath the ball of a rail resting on one of the tie engaging portions of the first mentioned plate.

4. In a combined running and guard rail tie plate, a pair of metal plates, one arranged above the other and each arranged to support a rail in such manner as to cause the bases of the rails to overlap, integral rail bearing shoulders struck from each of said plates, means for connecting the plates and a brace formed integral with the uppermost plate and arranged to extend from the base of the guard rail to the ball of the running rail.

5. In a device of the class described, a metal plate having a spike opening at each end, a raised plane portion between said spike openings and a rail bearing shoulder struck from its body in opposition to said raised plane portion, and a second metal plate having a plane portion to rest on the raised portion of the first mentioned plate and extend therebeyond to form a recess, said second plate being shaped to form a recess over the mentioned recess and an inclined brace over the recess, a rail bearing shoulder struck from the second plate in opposition to the recess, there being a spike opening through said second plate in line with the shoulder and also through the first mentioned plate.

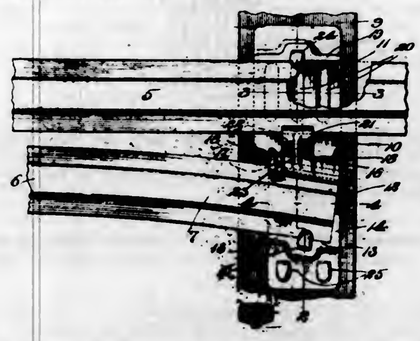
1,155,992. GUARD-RAIL MOUNTING. BENJAMIN B. BETTS, St. Louis, Mo. Filed Dec. 21, 1914. Serial No. 878,298. (Cl. 239—18.)



1. A guard rail mounting provided with a running rail seat, a flange therefor, a guard rail seat and a flange therefor, said seats occupying different elevations and overlapping each other, and a brace interposed between said seats adapted to lie beneath the ball of the running rail, all rolled or pressed from a single piece of material.

2. A guard rail mounting provided with a running rail seat, a shoulder therefor, a guard rail seat and a shoulder therefor, said respective seats occupying different elevations and overlapping each other, thus permitting the use of a standard unaltered running rail and a guard rail, there being spike openings formed adjacent the shoulder on the running rail seat and on the guard rail seat, and a brace interposed between said seats and projecting upwardly therefrom at an angle and adapted to seat beneath the ball of the running rail, said mounting all rolled or pressed from a single piece of material.

1,155,993. GUARD-RAIL MOUNTING. BENJAMIN B. BETTS, St. Louis, Mo. Filed Feb. 23, 1915. Serial No. 9,949. (Cl. 239—18.)



1. A guard rail mounting consisting of a unitary structure, comprising a running rail bearing surface, shoulders upstanding from said surface at each of its side margins, a guard rail bearing surface, located in a plane above, laterally spaced from and non-parallel with the running rail surface, upstanding shoulders at each side margin of the guard rail bearing surface, a stop on the guard rail bearing surface for engagement with a guard rail to prevent lonitudinal movement of the guard rail, certain of said shoulders overhanging the rail bearing surfaces for the securing of rail base flanges, and there being spike openings for securing rails to the mounting and the mounting to a sleeper.

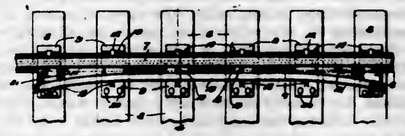
2. A guard rail mounting comprising a unitary structure having a running rail bearing surface, a shoulder paralleling each side margin of said surface, one of which overhangs said surface to form a recess to receive the base of a running rail, a guard rail bearing surface disposed at an angle to and in a plane above the running rail surface, shoulders paralleling the side margins of the guard rail bearing surface, one of which overhangs said surface, and a shoulder upstanding from said guard rail surface at an angle to the other shoulders to engage the end of the guard rail base to prevent longitudinal creeping of the guard rail.

3. A guard rail mounting comprising a running rail seat and a guard rail seat, the guard rail seat being disposed at an angle to the running rail seat and having contiguous to three of its margins upstanding shoulders to engage the sides and end of the base of a guard rail.

4. A guard rail mounting comprising a rail bearing surface, a shoulder at each side of said surface to bear against the sides of a rail base, and a shoulder arranged to bear against the end of a rail base.

1,155,994. GUARD-RAIL. BENJAMIN B. BETTS, St. Louis, Mo. Filed Mar. 12, 1915. Serial No. 13,941. (Cl. 239—17.)

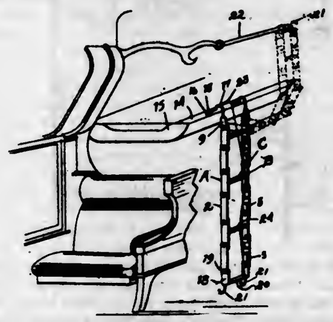
1. A guard rail structure comprising a plurality of spaced tie plates, a guard rail whose web integrally connects the tie plates, a brace on certain of the tie plates extending upwardly and laterally away from the guard rail over the tie plates, a shoulder on each plate, each plate having spike openings therethrough and each brace having a recess at its base in opposition to one of said shoulders and constituting a holding seat for one flange of the running rail.



2. A guard rail structure cast complete in one piece and comprising a plurality of tie plates, a guard rail whose web connects the tie plates, said plates extending on both sides from said web and having near their ends spike openings, a brace over each plate rising from the base of the web of the guard rail and inclining upwardly away from said web, ribs between said web and said braces, bracing webs between the guard rail web and the plates opposite said ribs, there being a recess at the base of each brace constituting a holding seat for one flange of the running rail and a shoulder on each plate in opposition to each recess adapted to bear against and hold the other flange of the running rail.

3. In combination with a guard rail, a plurality of mountings formed integrally with the guard rail and extended laterally therefrom to receive a running rail, an upwardly and laterally inclined brace over each plate and connected with said web, each brace having a recess at its bottom to receive the base of a running rail, a shoulder on each plate in opposition to each recess, there being spike openings through said plates whereby to secure the plates to sleepers and to secure the running rails by spiking and foot guards integrally connecting the end pairs of said plates with the web of the guard rail.

1,155,995. LADDER. CHARLES A. CREAPO, St. Paul, Minn. Filed Nov. 6, 1913. Serial No. 799,415. (Cl. 228—31.)



1. A ladder, comprising, in combination, a plurality of foldable sections having steps, the sides of said sections constituting the side rails of the ladder and being hinged together to fold lengthwise of the ladder, the connection between each pair of said sides consisting of a slot in one member and a pin on the other member passing through said slot, permitting said sections to turn or move outwardly longitudinally and a rigid hook carried by one of said members and the other of said members having a lug with which said hook engages to hold said member rigid when the latter are in outermost position and which disengages when said members are moved backwardly.

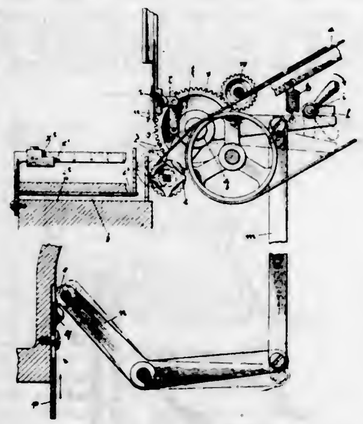
2. A ladder, comprising, in combination, a plurality of foldable sections arranged end to end and forming side rails and having steps between said side rails and con-

nected with pairs of said sections, interlocking connections between the sides of said sections of each rail adapted to uphold said sections rigidly in longitudinal position, means for detachably securing the uppermost of said sections to a support, and hooks on the lowermost of said sections adapted to support the lower end of the ladder in raised position on an object when the ladder is not in use.

3. A ladder, comprising, in combination, a plurality of foldable sections having steps, the sides of said sections constituting the side rails of the ladder, interlocking connections between the sides of said sections adapted to uphold said sections rigidly in longitudinal position when the ladder is in raised position, and to unlock when said sections are moved longitudinally apart, means for detachably securing the upper end of the ladder to an object and a flexible element secured to the lowermost section of the ladder and passing in a zig zag course over the successive steps toward the upper end of the ladder, whereby the sections of the ladder are adapted to be unlocked and folded together from the lower end toward the upper end by pulling upwardly upon the free end of said flexible element.

4. In combination with the floor of an upper sleeping car berth and the curtain rail of said berth, of a ladder composed of foldable sections having means for detachably engaging its upper end to the floor of said berth and means for detachably securing its lower end in raised position on said rail to act as a guard at the side of said berth.

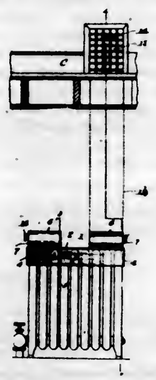
1,155,996. LINOTYPE-MACHINE. HEINRICH DEGENER, Berlin, Germany, assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Apr. 19, 1909. Serial No. 490,745. (Cl. 199—7.)



In a linotype machine in combination an adjustable transport wheel a chute for the spaces, a wall along which the spaces slide down to be added to the set line, said wall being adjustable and moved together with the adjustment of the transport wheel for the purpose described.

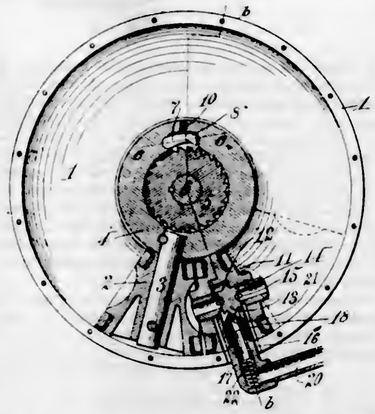
1,155,997. RADIATOR ATTACHMENT. JOHN DESJARDINS, Marinette, Wis. Filed Jan. 14, 1914. Serial No. 812,117. (Cl. 237—52.)

As a new article of manufacture, a radiator attachment including a single piece of sheet metal bent to form a hood of substantially rectangular configuration, including a top, sides and end walls, the top wall of said portion being formed at spaced intervals along the longitudinal medial line thereof, with a pair of parallel spaced horizontally disposed tubes each having an opening therein, one of said tubes being disposed flush with one of the end walls of said rectangular portion, while the other of the tubes being arranged flush with the opposite end walls and each protruding over and beyond one of the longitudinal side walls of said portion and above the plane of the



top wall thereof for the greater portion of their length, the opening of one tube being arranged at right angles to the opening of the other tube substantially as and for the purpose specified.

1,155,998. MOTOR. DAVID F. DOMIZI, Franklin, Pa. Filed Oct. 22, 1913. Serial No. 796,714. (Cl. 121—43.)



1. In a motor, the combination with a casing, of a valve-housing within said casing having an inlet chamber for the introduction of the live motive fluid to opposite sides thereof, and exhaust passages for the discharge of the motive fluid from opposite sides thereof, a double-seating valve controlling the passage of the live motive fluid from said chamber to opposite sides of said valve-housing, said valve having ports on both sides of the seating portion thereof which communicate with the exhaust passages in said valve-housing, and a plunger providing a passage in said valve-housing of the motive fluid to said chamber and adapted to lock said valve on one or the other of its seats.

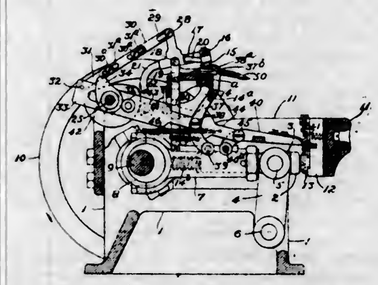
2. In a motor, the combination with a casing having a movable member or piston therein, of a valve-housing in said casing dividing the space on the interior of said casing, and having an inlet chamber and exhaust passages for the motive fluid, a double-seating valve in said chamber having exhaust passages and ports therein, said valve being actuated to reverse its position by engagement of said piston therewith, and a plunger adapted to hold said valve on either of its seats and through which the motive fluid is discharged to said inlet chamber.

3. In a motor, the combination with a piston, of a valve-housing having an inlet chamber and exhaust passages therein, a double-seating valve having tubular extensions communicating with opposite sides of said valve-housing and adapted to be actuated by said piston, said tubular extensions having ports alternately providing a communication between said tubular extensions and said exhaust passages, and a spring-controlled plunger holding said valve on its seats and providing a passage for the motive fluid to the inlet chamber in the valve-housing.

4. In a motor, the combination with a casing and a piston therein, of a valve-housing having an inlet chamber and separate central passages, a double-acting valve having tubular extensions with circumferential recesses and ports adapted to alternately register with the outlet passages, and a tubular spring-actuated plunger engaging said valve to hold it upon one or the other of its seats, said plunger being formed to release said valve and reengage it at predetermined times and to provide an inlet for the motive fluid to inlet chamber in said valve-housing.

5. The combination with a motor casing and an oscillating piston therein, of a valve-housing having an inlet opening and parallel side openings, a double-acting valve member mounted in the housing and having lateral movement relative to said openings, said valve-member having tubular extensions with orifices in the inner portions of said tubular extensions, and a tubular plunger within said inlet openings arranged at a right angle to said valve member, said plunger being adapted to lock the valve on either seat and through which the motive fluid is delivered to the tubular extensions of said valve.

1,155,999. EMBOSSING AND PRINTING MACHINE. THOMAS J. EDWARDS, Melrose, and WALTER P. OSGOOD, Malden, Mass.; said Osgood assignor to said Edwards. Filed Nov. 18, 1912. Serial No. 732,013. (Cl. 41—7.)



1. An embossing or printing machine having, in combination, a work-backing, a printing die or surface, a holder for a stack of prepared transfer material in slip form, a carrier to place a slip in position between the backing and the die or surface, so as to intervene between the work and said die or surface, and means for feeding the slip from said stack to said carrier.

2. An embossing or printing machine having, in combination, a work-backing, a printing die or surface, a holder for a stack of prepared transfer material in slip form, a separator for separating the leading slip of the stack, and means whereby a separated slip is presented in position between the backing and the die or surface so as to intervene between the work and said die or surface.

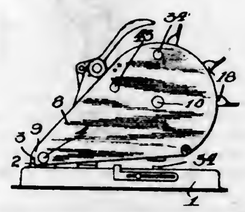
3. An embossing or printing machine having, in combination, a work-backing, a printing die or surface, a source of supply for prepared transfer material in slip form, a separator for the slips, a transferrer for a separated slip, and a carrier receiving such slip from the transferrer and presenting it in position between the backing and the die or surface, so as to intervene between the work and said die or surface.

4. An embossing or printing machine having, in combination, a work-backing, a printing die or surface, a source of supply for prepared transfer material in slip form, a pneumatic picker for separating the first slip, a transferrer taking the separated slip, and a carrier receiving the slip from the transferrer and presenting it in position between the backing and the die or surface, so as to intervene between the work and said die or surface.

5. An embossing or printing machine having, in combination, a printing die or surface, a work-backing, an operating plunger for one of such parts, a source of supply for transfer material, and means carried by said plunger operating to transfer such material from the supply into position between the work and the die or surface.

[Claims 6 and 7 not printed in the Gazette.]

1,156,000. CHECK-PROTECTOR. IVAN ENGSTROM, Chicago, Ill., assignor, by mesne assignments, to Carl M. Hedman and Herbert R. Hedman, Chicago, Ill. Filed Oct. 19, 1912. Serial No. 726,674. (Cl. 101—57.)



1. A base, a casing hinged thereon at one end, a spring normally supporting the casing, rotative marking elements in said casing, a lever for manual actuation on each marking element, a sight indicator attached to each marking element, a detent for holding said marking elements in adjusted position, a spring impelled limiting type adapted to engage and hold the marking elements not used from movement, an inking pad, and levers controlling the limiting type and inking pad to swing the latter away from the type, and permitting the casing to swing downwardly to printing position.

2. A machine of the class described embracing a pivotally supported casing adapted to be struck down, rotative marking mechanisms therein each appropriated to a single denomination and capable of independent operation, a detent for holding the same in adjusted position, a limiting type acting to lock the marking elements not used from movement, and a spring acting to elevate the casing when struck downwardly in making the impression.

3. In a device of the class described a printing check marking device comprising a base, a casing hingedly supported thereon and containing the marking mechanism and adapted to be struck downwardly in making the impression, means for adjusting the individual marking elements independently, a limiting type acting to lock all marking elements from movement when not used, and resilient means for retracting the same as the machine returns to normal.

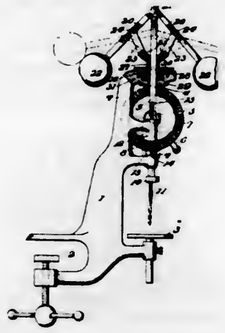
4. In a machine of the class described adjustable and rotating marking elements having numerals consecutively arranged and on a segment of its periphery, a type bar rigidly secured adjacent the marking element for the lowest denomination, a limiting type bar slidably engaged to be automatically projected against the marking element for the highest denomination at any given actuation, a casing containing said elements, a spring acting normally to hold said casing and mechanism elevated, and means operated by the normal upward swing of the casing to retract said limiting type bar after each actuation.

5. In a machine of the class described a base, a casing hingedly connected therewith at one end, a spring acting to hold the free end of the casing elevated, adjustable marking mechanism in said casing, a platen in the base positioned to receive the impression thereof, an inking pad adapted for actuation across the printing faces of

the marking mechanism, a lever for swinging the same away from the printing faces, and a transversely slidable limiting type bar operatively connected to be moved into printing position simultaneously with the withdrawal of the inking pad and prior to the downward swing of the casing to printing position, said spring acting to swing said casing and lever and operating parts to normal simultaneously.

[Claims 6 to 14 not printed in the Gazette.]

1,156,001. ROTARY DRILL. KARL K. FEINAIGLE, Cherokee, Iowa. Filed May 7, 1914. Serial No. 837,022. (Cl. 77—32.)



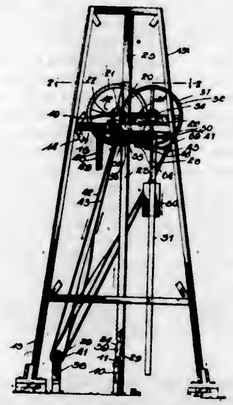
1. A rotary drill comprising a supporting frame, a vertical longitudinally-movable rotary drill shaft, means for rotating said shaft and permitting free vertical movement thereof, said frame having an open-top socket in its upper end, a rotary vertical hub concentric with said shaft and through which the same is freely movable vertically, said hub having its lower end arranged in said socket and formed with an enlargement, thrust bearings in said socket above and below said enlargement to receive the vertical thrust of said hub, a cap removably secured to the frame over said socket to removably confine the hub therein, opposite vertically-swingable levers weighted at the lower free ends and at their upper ends directly pivoted to the upper end of said shaft and rotated thereby, and vertically swingable fulcrum links to which said levers are fulcrumed, said links being pivoted to said hub and rotating the same.

2. A rotary drill comprising a supporting frame, a vertical longitudinally movable rotary drill shaft, means for rotating said shaft and permitting free vertical movement thereof, said frame having an open top socket in its upper end, a rotary vertical hub arranged in said socket concentric with said shaft and through which the same is freely movable vertically, ball bearings in said socket for said hub to receive the vertical thrust of said hub, a cap removably secured to the frame over said socket to removably confine the hub therein, and weighted centrifugal levers for supporting said shaft and for feeding and elevating the same, said levers being connected to said shaft and to said hub and rotated by said shaft and rotating said hub, substantially as described.

1,156,002. POWER-TRANSMITTING MECHANISM FOR PUMPS. MARCUS F. FULFORD, Fort Worth, Tex. Filed Dec. 1, 1913. Serial No. 804,089. (Cl. 64—4.)

1. The combination with a reciprocable pump plunger, of a reciprocating member connected to the plunger, driving means including a rotatable shaft, means for transmitting movement from the shaft to the reciprocating member, and means operable by movement of the reciprocating member for reversing the driving means to reverse the direction of movement of the shaft.

2. A pump actuating mechanism including a member, a shaft, a fixed pulley mounted on the shaft, idler pulleys mounted upon the shaft upon either side of the fixed pulley, means operable by rotation of the fixed pulley to the reciprocating member, a pair of oppositely moving belts trained over adjacent pulleys, and means for shifting said belts, said means including a second shaft, a crank arm on the shaft, a spring operatively connected to the arm to hold the same off dead center, a cam lug extending from the second shaft and engageable by the reciprocating member to swing the shaft past dead center, a reciprocally mounted rod having belt engaging arms, a pin extending from the reciprocally mounted rod, a sleeve upon the rotatable shaft, a slotted lever carried by the sleeve and engaging the pin, said sleeve being provided with a slot, and a pin carried by the second shaft and extending through the slot of the sleeve.



3. A pump actuating mechanism including a reciprocating member, a shaft, a fixed pulley mounted on the shaft, idler pulleys mounted upon the shaft upon either side of the fixed pulley, means operable by rotation of the fixed pulley to actuate the reciprocating member, a pair of oppositely moving belts trained over adjacent pulleys, and means for shifting said belts, said means including a reciprocating rod operatively engaging the belts, a crank arm operatively connected to the rod, a second crank arm adapted to be swung by movement of the reciprocating member, a connection between the crank arms, whereby the movement of the second crank arm beyond a certain point will cause corresponding movement of the first crank arm, and means for holding the second crank arm off dead center.

1,156,003. BAG-FASTENER. FRANZ A. FULLER, Newark, N. J., assignor to The J. E. Mergott Company, Newark, N. J., a Corporation of New Jersey. Filed Mar. 27, 1914. Serial No. 827,564. (Cl. 70—116.)



1. In a bag frame, the combination with a pair of hinged frame sections, a supporting base secured to one of said frame sections, said base provided with a stop along one edge thereof, and apertured end lugs, a spring-actuated catch secured to said supporting base and in normal retaining contact with one of said frame members, said catch comprising a chambered case provided with apertured end walls, said end walls being lower than the front wall of said chambered case and adapted to bear upon the supporting base, so as to limit the downward movement of the catch, a pintle connecting the base and case, and a spiral spring surrounding said pintle, one end of which is connected to the case and the other end connected to the base, so that the rear wall of the case strikes the stop on the base when the catch is raised, so as to limit the forward movement of the same.

2. In a bag frame, the combination of a pair of hinged frame sections, a supporting base secured in alinement upon one of said frame sections, said base provided with a stop arranged along one edge thereof, and apertured end lugs, a spring actuated catch pivotally secured to said supporting base and in normal retaining contact with one of said frame members, said catch comprising a chambered case provided with apertured end walls, a pintle connecting the base and case and a spiral spring surrounding said pintle, one end of which is connected to the case and the other end connected to the base, so that the rear wall of the catch strikes the stop on the base when the catch is raised, so as to limit the upward movement of the same.

3. In a bag frame, the combination with a pair of hinged frame sections, a supporting base secured to one of said frame sections, said base being provided with upwardly extending apertured lugs and further provided with an upwardly projecting stop extending between said lugs, a spring-actuated catch in pivotal engagement with said supporting base, one end of the spring being secured to the catch and the other end secured to the supporting base, so that the rear wall of the catch strikes the stop on the supporting base when the case is raised, so as to limit the upward movement of the same.

1,156,004. BAG-FASTENER. FRANZ A. FULLER, Newark, N. J., assignor to The J. E. Mergott Company, Newark, N. J., a Corporation of New Jersey. Filed Feb. 23, 1915. Serial No. 9,817. (Cl. 70—116.)



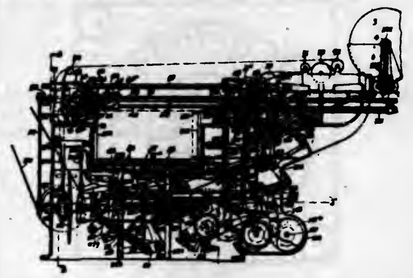
1. In combination with a bag frame, a latch stud mounted to turn in one member of said frame, and provided with a latch-head adapted to engage the other member of the said frame, said latch stud being further provided with means in engagement with the frame member in which it is mounted, for permitting upward movement of said latch stud, and a spring for controlling the movements of said latch stud.

2. In combination, two frame members movable relatively to each other, a spring-actuated locking device rotatively secured in one ofsaid frame members, comprising a latch stud provided with a latch-head adapted to engage with the other frame member to have locking engagement therewith, said latch stud being further provided with a cut-away portion, said cut-away portion being in engagement with the frame member in which it is mounted, for permitting upward movement of said latch stud, and a spring for controlling the rotary and upward movement of said latch stud.

3. In combination, two frame members movable relatively to each other, a spring-actuated locking device rotatively secured in one of said frame members, comprising a latch stud provided with a latch-head adapted to engage the other frame member to have locking engagement therewith, the first-named frame member being provided with means for permitting upward movement of said latch stud, and a spring provided with positioning means for controlling the movement of said latch stud.

1,156,005. MACHINE FOR APPLYING PAPER TO THE TOPS OF BOXES AND OTHER ARTICLES. FERDINAND G. HENRY, Philadelphia, Pa., assignor to Charles Beck, Charles J. Beck, Leon Beck, Annie S. Beck, Hortense P. Beck, and Andrew Simon, Philadelphia, Pa., Copartners trading as Charles Beck Company, Philadelphia, Pa. Filed Oct. 17, 1912. Serial No. 726,208. (Cl. 216—30.)

1. In a machine for the purpose described, the combination of a pair of paper grippers adapted to grip a web of adhesive paper, a pair of reciprocating grippers adapted to engage the paper held by the first pair of grippers and withdraw the paper therefrom, means to feed the articles to which the paper is to be applied under said paper when drawn out by said reciprocating grippers, and means to apply the adhesive paper to the surface of said articles.



2. In a machine for the purpose described, the combination of a pair of paper grippers adapted to grip a web of adhesive paper, a pair of reciprocating grippers adapted to engage the paper held by the first pair of grippers and withdraw the paper therefrom, means to feed the articles to which the paper is to be applied under said paper when drawn out by said reciprocating grippers, and reciprocating rotating brushes to press the drawn out web of adhesive paper upon the surface of the article fed under said web.

3. In a machine for the purpose described, the combination of a pair of paper grippers adapted to grip a web of adhesive paper, a pair of reciprocating grippers adapted to engage the paper held by the first pair of grippers and withdraw the paper therefrom, means to feed the articles to which the paper is to be applied under said paper when drawn out by said reciprocating grippers, reciprocating rotating brushes to press the drawn out web of adhesive paper upon the surface of the article fed under said web said brushes acting upon the paper in one direction on the forward reciprocation and in the other direction in the opposite reciprocation.

4. In a machine for the purpose described, the combination of a pair of paper grippers adapted to grip a web of adhesive paper, a pair of reciprocating grippers adapted to engage the paper held by the first pair of grippers and withdraw the paper therefrom, means to feed the article to which the paper is to be applied under said paper when drawn out by said reciprocating grippers, reciprocating rotating brushes to press the drawn out web of adhesive paper upon the surface of the article fed under said web, and means to bring said brushes in contact with said paper on both the forward and backward reciprocation thereof.

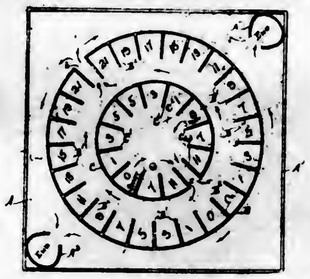
5. In a machine for the purpose described, the combination of means for drawing a web of adhesive paper over an article to which the paper is to be applied, a pair of oppositely rotating brushes, means to reciprocate said brushes over said paper, and means to bring said brushes in contact with said paper, one on the forward movement and the other on the backward movement.

[Claims 6 to 25 not printed in the Gazette.]

1,156,006. GAME APPARATUS. HARRISON B. HILL, East Providence, R. I. Filed Jan. 21, 1915. Serial No. 3,656. (Cl. 46—41.)

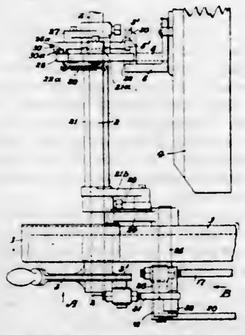
The herein described game apparatus comprising a base, an encompassing wall positioned at the outer edges of said base and extending above the plane thereof, two pockets secured to the inner side of said wall diagonally opposite each other and each open on the side toward the center of the base, an annular perpendicular wall secured upon said base equidistant from said encompassing wall, and provided with an exit opening toward the center of said base, and also with a plurality of radially extending chambers extending inward from the interior of said wall and open on their inward side, a second similar annular wall se-

cured upon said base and, disposed within said first annular wall concentrically therewith, equidistant from the inner sides of said chambers secured to said first annular wall, similarly provided with radial inwardly extending chambers open on their inward side, and also with an exit



opening in the contrary direction to the exit in said first mentioned annular wall, and two spherical bodies or balls initially disposed one in each of a predetermined two of said last mentioned radial chambers and rollable, upon said base, from said chambers one into each of said pockets.

1,156,007. PICK FINDER MECHANISM EMPLOYED IN LOOMS FOR WEAVING. EDWARD HOLLINGWORTH, Dobcross, England. Filed July 29, 1914. Serial No. 853,917. (Cl. 139—79.)



1. In a loom, in combination, controlling means for pick finding mechanism, an actuating device carried by the lay, and movable by weft detecting mechanism into operative and inoperative positions, connections operable by said device when in operative position to release said controlling means, and means to render said connections thereafter inoperative until after said actuating device is returned to inoperative position.

2. In a loom, in combination, controlling means for pick finding mechanism, an actuating device carried by the lay, and movable by weft detecting mechanism into operative and inoperative positions, connections operable by said device when in operative position to release said controlling means, and means to render said connections thereafter inoperative until after said actuating device is returned to inoperative position, said connections including a bunter positioned for engagement by said actuating device, and said latter means including a catch effective to lock said bunter out of the path of said actuating device.

3. In a loom in combination, controlling means for pick finding mechanism, an actuating device carried by the lay, and movable by weft detecting mechanism into operative and inoperative positions, connections operable by said device when in operative position to release said controlling means, and means to render said connections thereafter inoperative until after said actuating device is returned to inoperative position, said connections including a bunter positioned for engagement by said actuating device, and said latter means including a catch effective to lock said bunter out of the path of said actuating device, and a member operable by said actuating device, when the latter is in inoperative position, to disengage said catch.

4. In a loom, in combination, a frame, a lay, controlling means for pick finding mechanism, a dagger mounted on said lay, and movable into operative and inoperative positions, a bunter supported on the frame and also movable into operative and inoperative positions, connections whereby movement of said bunter by said dagger will cause operation of said controlling means, means to thereafter lock said bunter in inoperative position, and means operable to release said bunter after the return of the dagger to inoperative position.

5. In a loom, in combination, a frame, a lay, controlling means for pick finding mechanism, a dagger mounted on said lay, and movable into operative and inoperative positions, a bunter supported on the frame and also movable into operative and inoperative positions, connections whereby movement of said bunter by said dagger will cause operation of said controlling means, means to thereafter lock said bunter in inoperative position, and means to release said bunter, said releasing means comprising a movable member engaging said locking means and positioned for actuation by a portion of said dagger when the latter is in inoperative position.

1,156,008. SEPARABLE FASTENER. ERNEST N. HUMPHREY, New Britain, Conn., assignor to The Traut & Hine Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Mar. 27, 1915. Serial No. 17,315. (Cl. 241—19.)

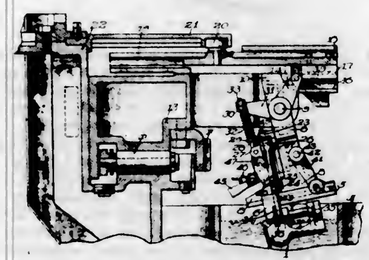


1. In combination, two separable parts, one comprising a plate having a key-hole slot therein, an abutment on said plate at each side of said slot, and adjacent to the middle portion thereof, the other member comprising a plate shaped to form a curved tubular bearing at its lower end, a stud rigidly connected to the upper end thereof, the diameter of the stud head being greater than the narrower portion of the key-hole slot and sufficiently great to engage the abutments at opposite sides thereof, and a spring located between said stud head and the upper part of the second member to which the stud is attached, said spring operating to draw the back of the stud head against the front face of the first member when said parts are attached.

2. In combination, two separable parts, one comprising a plate having a key-hole slot therein, an abutment on said plate at each side of said slot, and adjacent to the middle portion thereof, the other member comprising a plate shaped to form a curved tubular bearing at its lower end, a stud rigidly connected to the upper end thereof, the diameter of the stud head being greater than the narrower portion of the key-hole slot and sufficiently great to engage the abutments at opposite sides thereof, and a spring located between said stud head and the upper part of the second member to which the stud is attached, said spring operating to draw the back of the stud head against the front face of the first member when said parts are attached, said spring stud and second mentioned plate being rigidly united at a common point.

3. In combination, two separable parts, one comprising a plate having a key-hole slot therein, an abutment on said plate at each side of said slot and adjacent the middle portion thereof, the other member comprising a plate shaped to form a curved cord bearing at its lower end, a stud rigidly connected to the upper part thereof and projecting forwardly therefrom, the diameter of the stud head being greater than the narrower portion of the key-hole slot, and a spring located between the stud head and that part of the second member to which the stud is attached, said first mentioned plate being arranged to occupy the space between said spring and said stud head when the parts are assembled, said abutments offering resistance to the attachment and detachment of said separable parts.

1,156,009. GLASS-MOLDING MECHANISM. AUGUST KADOW, Toledo, Ohio, assignor to The Westlake Machine Company, Toledo, Ohio, a Corporation of Ohio. Original application filed July 6, 1910, Serial No. 570,621. Divided and this application filed Apr. 20, 1911. Serial No. 622,244. (Cl. 49—41.)



1. The combination with a mold carrier, of a bracket carried thereby, mold sections hinged to said bracket and extending longitudinally thereof, means for opening and closing said mold sections, and means for moving said bracket in the direction of its length with relation to said carrier and for locking it in any adjusted position, said mold sections being movable with said bracket with relation to said opening and closing means.

2. The combination with a mold carrier, of a bracket carried thereby and adjustable thereon lengthwise of said bracket, mold sections hinged to said bracket, mold operating means mounted on said carrier, means mounted on said carrier for adjusting said bracket longitudinally thereof with relation to said carrier and for locking the same in any adjusted position.

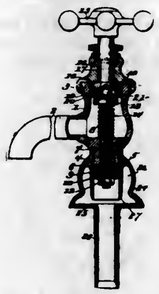
3. The combination with a mold carrier, of mold sections, actuating means therefor, and a bracket carrying said mold sections and slidably mounted on said mold carrier, of means for adjusting the position of said bracket on said carrier, said means comprising a lever pivoted to said carrier and engaging said bracket, and means for locking the bracket in any adjusted position, said mold sections and mold actuating means being provided with relatively slidable elements to permit of such adjustment of the bracket.

4. The combination with a mold carrier, of mold sections carried thereby, a cross-head slidably mounted on said mold carrier, links connecting said cross-head with said mold sections respectively, a rod pivoted to said cross-head and provided with a shoulder, a spring surrounding said rod and seated at one end against said shoulder, a lever mounted on said carrier, a lug on said lever slidably engaging said rod and providing a seat for the opposite end of said spring, and an abutment on said rod arranged to engage said lug, all so arranged that when rocked in the one direction the lever will compress the spring and actuate the mold sections, and when rocked in the opposite direction it will operatively engage said abutment and thereby reversely actuate said mold sections.

5. The combination with a traveling support of a mold carrier, mold sections carried thereby, a slide plate, mold actuating connections between the slide plate and mold sections, and means actuated by the travel of said support for reciprocating the slide plate and thereby raising the mold sections to a position to receive the material to be molded, thereafter closing the mold sections while in that position, then opening said sections and finally lowering them to their original position.

[Claims 6 to 8 not printed in the Gazette.]

1,156,010. SELF-CLOSING FAUCET. THOMAS H. KENNEY, Boston, Mass. Filed Nov. 20, 1913. Serial No. 802,060. (Cl. 137—4.)



A self-closing faucet, comprising a casing containing a chamber having an outlet pipe, and being externally screw-threaded at opposite ends; an external valve seat at the lower end of said casing, there being an inlet duct leading therefrom to said chamber; a valve coöperating with said seat; a feathered valve stem projecting through the said inlet duct from said valve into the chamber and being provided with an annular shoulder within the chamber; a spring located between said shoulder and the bottom of the chamber; lateral projections at the end of the stem above the said shoulder, said projections having rollers thereon; a closing member screw-threaded on the upper end of said casing, said closing member having a longitudinal bore and a stuffing box; a rotary valve actuator fitting and extending through said bore, and provided at its lower end with an enlargement adapted to fit within the upper end of said casing, said enlargement being provided at opposite sides respectively, with pairs of cam surfaces, the said pairs being separated by stops oppositely disposed and the members of each pair of cam surfaces being adapted to bear on one of the rollers aforesaid; an internally threaded inlet member screwed on the lower end of said casing and having an inlet pipe and enlarged chamber above said pipe; and a downwardly extended tube within the last named chamber, said tube surrounding the valve and being of larger diameter than the inlet passage.

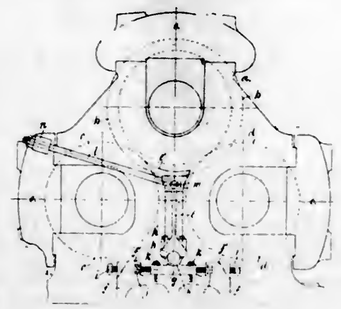
1,156,011. DRINKING-FOUNTAIN. THOMAS H. KENNEY, Boston, Mass., assignor to Dalton-Ingersoll Manufacturing Company, a Corporation of Massachusetts. Filed Nov. 20, 1913. Serial No. 802,061. (Cl. 50—14.)



In a drinking fountain, the combination with a chamber provided with an inlet pipe at one end and a direct

delivery orifice at the opposite end; of a closed bell within said chamber, the lower end of said bell being in direct communication with the inlet pipe and the walls of said bell being provided with lateral ports at different levels; a plunger extending into the bottom of said bell and being acted upon by the water entering from the inlet pipe, the said plunger having a permanently open port, leading to the interior of the bell and lateral ports adapted to be opened or closed in response to a movement of the plunger out of or into the bell, the outer wall of said plunger being so situated as to open and close one set of ports through the wall of the bell; and a spring located within the bell and adapted to act upon the plunger, substantially as described.

1,156,012. SUGAR-CANE AND LIKE MILL RETURNER-BAR. ARCHIBALD MCA. LANG, Liverpool, England. Filed Jan. 16, 1915. Serial No. 2,681. (Cl. 100—47.)



1. In sugar cane and like mill, the combination of an adjustable returner bar; longitudinally adjustable bearing parts; stools on which the said bearing parts are supported; trunnion supports on the returner bar beam, supported by the said bearing parts; bolts for adjusting the said bearing parts; and adjustable bolts connected with the upper part of the returner part beam; substantially as described.

2. In a sugar can and like mill, the combination of an adjustable returner bar; longitudinally adjustable bearing parts; stools on which the said bearing parts are supported; trunnion supports on the returner bar beam, supported by the said bearing parts; bolts for adjusting the said bearing parts; adjustable bolts connected with the upper part of the return bar beam; and wedge means for adjusting the returner bar vertically, disposed beneath the said former bearing parts; substantially as described.

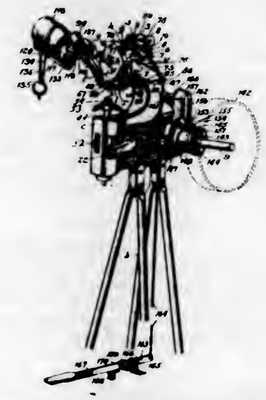
3. In a sugar cane or like mill, the combination of the frames or headstocks; supporting stools formed on the inner side of same; longitudinally adjustable bearing blocks supported on the said stools; fastening bolts; adjusting bolts; upwardly projecting gudgeons on the bearing blocks; returner bar beam resting at each end on the upper side of the said gudgeons; returner bar on the said beam; and adjusting bolts on the inside of the frames, secured at one end to the said returner bar beam, and the other provided with a nut for adjusting same; substantially as described.

4. In a sugar cane mill, the combination with the returner bar, of means which provides a rocking support for the return bar, means for adjusting said means vertically, means for adjusting said supporting means horizontally, and means for rocking the returner bar on its support.

5. In a sugar cane mill, the combination with the return bar of a bearing block adapted to provide a rocking support for the returner bar, a support for supporting the bearing block, means for adjusting the bearing block horizontally and vertically on its support, and means for rocking the returner bar on its support.

[Claims 6 and 7 not printed in the Gazette.]

1,156,013. RIVETING-MACHINE. ANDRU LARSEN, Chicago, Ill. Filed Oct. 17, 1913. Serial No. 795,634. (Cl. 218—2.)



1. A riveting machine, comprising means for holding a rivet in position to be operated upon, and a cutting tool having a transverse cutting edge movable with the tool into cutting engagement with the stem of the rivet, for splitting the same; said cuting tool being provided on opposite sides of said transverse cutting edge with inclined portions which meet in said cutting edge and diverge outwardly therefrom; the inclined portions serving to spread the split portions of the rivet stem laterally from each other, and said cutting tool being provided at the bases of said inclined portions with rivet-bending surfaces for bending the split portions of the rivet stem backward toward the head and into clenching engagement with material to be riveted.

2. A riveting machine, comprising means for holding a rivet in position to be operated upon, and a cutting tool provided with a transverse cutting edge movable with the tool into engagement with the stem of the rivet for splitting the same; said cutting tool being provided on opposite sides of said transverse cutting edge with inclined portions which meet in said cutting edge and diverge outwardly therefrom; the inclined portions serving to spread the split portions of the rivet stem laterally from each other, and said cutting tool being provided at the bases of said inclined portions with rivet-bending surfaces integral therewith and serving to bend the split portions of the rivet stem backward toward the head of the rivet.

3. In a riveting machine, the combination of means for holding a rivet in position to be operated upon, a plunger, a cutter supported by and movable with the plunger and provided with a cutting edge movable into and out of engagement with such rivet, and rivet-bracing mechanism supported upon the plunger and normally projecting beyond the cutting edge of the tool in the direction of a rivet to be operated upon.

4. In a riveting machine, the combination of means for holding a rivet in position to be operated upon, a plunger, a cutter supported by and movable with the plunger and provided with a cutting edge movable into and out of engagement with such rivet, rivet-bracing mechanism supported upon the plunger and normally projecting beyond the cutting edge of the tool, and means for yieldingly holding the rivet-bracing mechanism in operative engagement with a rivet during the operation of splitting and bending the rivet.

5. In a riveting machine, the combination of a rivet-supporting head, means for holding a rivet in engagement with said head in position to be operated upon, a plunger, and a cutting tool supported by the plunger and provided with a transverse cutting edge movable into and out of cutting engagement with a rivet to be split, said cutting tool having rivet-bending surface portions on opposite sides of the cutting edge adapted to engage and bend portions of the rivet located on opposite sides of such cutting edge during the engagement of the cutting edge with the rivet.

[Claims 6 to 30 not printed in the Gazette.]

1,156,014. TOILET-SEAT FOR CHILDREN. BEN LEHMAN, Dayton, Ohio. Filed Feb. 9, 1915. Serial No. 7,110. (Cl. 155—22.)



1. A toilet seat for children, comprising a bottom member having a hole formed therein, back, front and side guards above said member, and means connected to said side guards and bottom member for firmly securing said seat to that of a water closet, substantially as described.

2. A toilet seat for children, comprising a bottom member having a hole formed therein, an upright back member secured to said bottom member, arms secured to, and extending forwardly from the upper portion of said back member, a cross member secured to the forward ends of said arms, fastening devices pivotally depending from said arms, below said seat, and clamping means on said bottom member, adapted to engage said fastening devices and firmly secure them in an adjusted position, substantially as described.

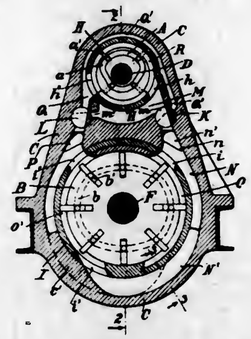
3. A toilet seat for children, comprising a flat bottom member having a hole formed in its central portion, a back member hingedly secured to said bottom member, arms pivotally secured to and extending forwardly from the top portion of said back member, a cross member secured to the front ends of said arms, a fastening device pivotally depending from each of said arms, and terminating in a hook-shaped portion adapted to grip the edge of a water-closet seat, and a clamp secured to each side of said bottom member, to engage and firmly lock said fastening devices in an adjusted portion, substantially as described.

4. A toilet seat for children, comprising a flat bottom member having an oval-shaped hole formed in its central portion, a back member hingedly secured to said bottom member, arms pivotally secured to and extending forwardly from the upper portion of said back member, a shelf secured to the outer ends of said arms, a pair of fastening wires, each of said wires being bent to parallelism at its middle portion to form two parallel prongs, said prongs being in turn bent upwardly, outwardly and thence upwardly, terminating in two looped end portions adapted to loosely receive one of said arms, and thus be pivotally supported thereby, and an adjustable device adapted to extend between and below the horizontal prongs of each wire, to tightly clamp the latter against the bottom member, substantially as described.

5. A toilet seat for children, comprising a flat bottom member having an oval-shaped hole formed in its central portion, a back member hingedly secured to said bottom member, arms pivotally secured to and extending forwardly from the upper portion of said back member, a shelf secured to the outer ends of said arms, a pair of fastening wires, each of said wires being bent to parallelism at its middle portion to form two parallel prongs, said prongs being in turn bent upwardly, outwardly and thence upwardly, terminating in two looped end portions adapted to loosely receive one of said arms and thus be pivotally supported thereby, and a T bolt extending from each side of said bottom member, between and below the horizontal prong portions of each wire to engage the latter and clamp it in an adjusted position, substantially as described.

1,156,015. FLUID CHANGE AND REVERSING GEAR. HUGO LENTZ, Berlin-Halensee, Germany. Filed Oct. 21, 1914. Serial No. 867,892. (Cl. 138—22.)

1. In an apparatus of the class described, the combination with a casing, a pressure pump, and a motor having at least two admission ports and adapted to be operated by the pressure fluid from said pressure pump, of a bushing fitted within said casing and inclosing the operating member of said motor, the passages connecting said pump and motor being provided with circumferential portions located at the contacting surfaces of said bushing and casing, the suction and pressure passages provided between the bushing and the casing being so arranged as to be located with parts of their lengths beside each other and communicating with their ends through ports made in the bushing with the ends of the section of the motor to which the fluid is to be supplied.



2. In an apparatus of the class described, the combination with a casing, a pressure pump, and a motor adapted to be operated by the pressure fluid from said pressure pump, of a bushing fitted within said casing and inclosing the operating member of said pump, the passages connecting said pump and motor being provided with circumferential portions located at the contacting surfaces of said bushing and casing, and one of said passages being bifurcated over a part of its length and so arranged with the bifurcated portion relatively to the other passages as to be located at opposite sides thereof.

3. In an apparatus of the class described, the combination with a casing, a pressure pump, and a motor adapted to be operated by the pressure fluid from said pressure pump, of a bushing fitted within said casing and inclosing the operating member of said motor, the passages connecting said pump and motor being provided with circumferential portions located at the contacting surfaces of said bushing and casing, one of said passages being bifurcated over a part of its length and so arranged with the bifurcated portion relatively to the other passages as to be located at opposite sides thereof.

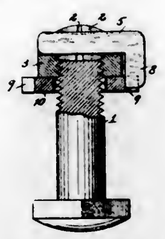
4. In an apparatus of the class described, the combination with a casing, a pressure pump, and a motor adapted to be operated by the pressure fluid from said pressure pump, of a bushing fitted within said casing and inclosing the operating member of said pump, the passages connecting said pump and motor being provided with circumferential portions located at the contacting surfaces of said bushing and casing, one of said passages being bifurcated over a part of its length and so arranged with the bifurcated portion relatively to the other passages as to be located at opposite sides thereof, and the parts of the passages which are located sidewise of one another being made with greater depths than the main parts of the passages, so that the cross-sections of the passages remain the same over the whole lengths thereof.

5. In an apparatus of the class described, the combination with a casing, a pressure pump, and a motor adapted to be operated by the pressure fluid from said pressure pump, of a bushing fitted within said casing and inclosing the operating member of said motor, the passages connecting said pump and motor being provided with circumferential portions located at the contacting surfaces of said bushing and casing, one of said passages being bifurcated over a part of its length and so arranged with the bifur-

cated portion relatively to the other passages as to be located at opposite sides thereof, and the parts of the passages which are located sidewise of one another being made with greater depths than the main parts of the passages, so that the cross sections of the passages remain the same over the whole lengths thereof.

[Claims 6 to 8 not printed in the Gazette.]

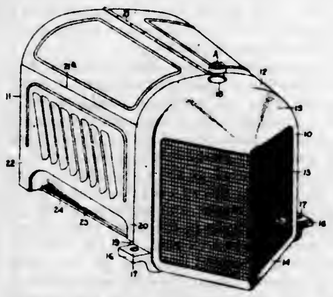
1,156,016. NUT-LOCK AND WASHER. SIEGFRIED LESCHZINER, Newark, N. J. Filed May 27, 1913. Serial No. 770,154. (Cl. 151—5.)



1. The combination with the bolt having diametrical slots, of a nut formed with a plurality of diametrically-opposite grooves extending from its central opening over one face and in its side, of a locking washer having recesses formed on its peripheral face, and a key fitting accurately the slot in the bolt, the registering face grooves and side grooves of the nut and the recesses in the locking washer.

2. The combination with the bolt having a plurality of diametrically tapered slots, of a nut formed with a plurality of registering tapered grooves extending from its central opening over one face and in its side, of a locking washer provided with a tapered face and having recesses formed in its peripheral face, a tapered key comprising a tapered cross-bar fitting accurately one of the slots in the bolt and the registering face grooves of the nut, and a tapered depending lug adapted to be received in one of the tapered recesses in the outer peripheral face of the locking washer.

1,156,017. COMBINATION-HOOD FOR AUTOMOBILES. D. MCRA LIVINGSTON, New York, N. Y. Filed Feb. 12, 1915. Serial No. 7,755. (Cl. 74—56.)



1. A mask adapted to conceal the motor and radiator casing of an automobile, comprising a motor hood section, and a separate radiator hood section the latter being adapted to form a removable cover for a radiator, each section being formed of self-sustaining material, and the motor hood section of the mask having support at its front edge on the removable radiator hood section of the mask, together with means for securing said mask in place on an automobile over the motor and radiator casing independently of the said motor and radiator casing.

2. A combination hood for use on automobiles, comprising a motor hood section, and a separate radiator hood section, said motor hood section flaring rearwardly from its front edge and presenting diverging bottom edges having members to engage the hood-retaining hooks of an automobile, the said sections joining each other at their adjacent edges and the front section presenting at its rear portion a rearward flare corresponding substantially with the flare of the motor hood section.

3. A combination hood for use on automobiles, comprising a motor hood section and a separate radiator hood section adapted to form a removable cover for a radiator, the said motor hood section flaring rearwardly and joining at its front edge the rear portion of the radiator hood section, the radiator hood section having its said rear portion flaring to substantially correspond with the flare of the motor hood section.

4. A combination hood for use on automobiles, comprising a rear section formed of movably connected members and constituting a motor cover, and a front section constituting a removable cover for a radiator, said front section having an arch formed at the rear portion thereof and provided at said arched portion with means affording support for the respective members of the said rear section.

5. A combination hood for use on automobiles, comprising a rear section constituting a motor cover and a front section adapted to constitute a removable cover for the radiator of an automobile, the said front section having means at the rear portion on which the rear section is movably supported, and both of said sections having individual means to afford support therefor on an automobile.

[Claims 6 to 17 not printed in the Gazette.]

1,156,018. BASIC LINING FOR KILNS. SPENCER B. NEWBERRY, Baybridge, Ohio, assignor to Sandusky Portland Cement Company, Cleveland, Ohio. Filed Apr. 13, 1914. Serial No. 831,615. (Cl. 106—9.)

1. A basic refractory lining for kilns, comprising Portland cement clinker, with the addition of ten to twenty per cent. of calcium chlorid.

2. The process of making basic refractory lining for kilns, which consists in mixing coarsely pulverized cement clinker with ten to twenty per cent. of calcium chlorid and water, forming blocks of the mixture, and drying the blocks.

3. The process of making basic refractory lining for kilns, which consists in mixing cement clinker with ten to twenty per cent. of lime and ten to twenty per cent. of calcium chlorid, forming the mixture into blocks, and drying the blocks.

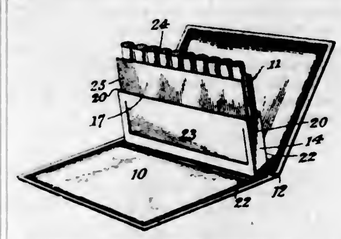
4. A basic lining for kilns, comprising Portland cement and ten to twenty per cent. of a fusible substance capable of forming when heated therewith a difficultly fusible compound.

5. A basic refractory lining for kilns, comprising cement and ten to twenty per cent. of the halid of an alkaline earth metal.

[Claims 6 to 9 not printed in the Gazette.]

1,156,019. CONTAINER. VICTOR NIVOIS, Brooklyn, N. Y. Filed Sept. 4, 1914. Serial No. 860,191. (Cl. 206—41.)

1. A container consisting of a pair of hingedly connected members adapted to close together so as to inclose a space therebetween, constructed to open out and lie extended upon a horizontal support, a bottomless holder of box form having side walls, and end walls of a width slightly less than the width of the space inclosed between said members, said holder having flaps at the lower end thereof attached to said members respectively at points removed from the hinge connection therebetween, the lower end of said holder being above the hinge connection between said members when the same are closed together, and arranged to support a plurality of cigarettes lying within said holder with the lower ends thereof projecting through the bottomless lower end of said holder, and lying adjacent to the hinge connection between said members.



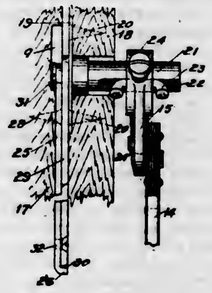
2. A container for cigarettes consisting of a pair of hingedly connected members, a holder of box form having side walls and end walls for retaining the cigarettes, a side wall of said holder having an integral tongue extending inwardly and having a cigarette engaging edge between the upper and lower edges of said holder to exert a slight pressure upon the cigarettes held within the holder.

3. A container for cigarettes consisting of a pair of hingedly connected members, a holder of box form having side walls and end walls for retaining the cigarettes, a side wall of said holder having an integral tongue struck therefrom extending inwardly to exert a slight pressure upon the cigarettes held within the holder, said side walls of said holder being of greater depth than said end walls to form integral extensions attached to the inner faces of said members.

4. A container consisting of a pair of hingedly connected members, a holder of box form having side walls and end walls for retaining the cigarettes, a side wall of said holder having an integral tongue struck therefrom and extending inwardly to exert a slight pressure upon the cigarettes held within the holder, and a protecting sheet between said tongue and the cigarettes, protecting the cigarettes and imparting the pressure thereto from said tongue.

5. A container consisting of a pair of hingedly connected members, a holder of box form having side walls and end walls for retaining the cigarettes, a side wall of said holder having an integral tongue struck therefrom and extending inwardly to exert a slight pressure upon the cigarettes held within the holder, and a protecting sheet passing under the lower inner ends of the cigarettes and lying on opposite sides thereof and extending between said tongue and the cigarettes, and imparting the pressure thereto from said tongue.

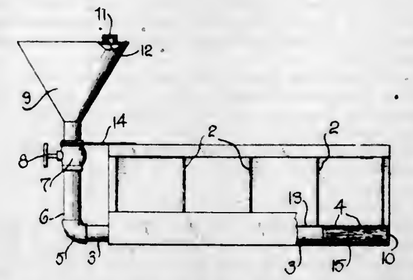
1,156,020. DEVICE FOR OPENING AND CLOSING TRANSOMS OR WINDOWS. JOHN PELZER, Orange, N. J. Filed Aug. 14, 1913. Serial No. 784,700. (Cl. 16—28.)



1. A transom operating device embracing rack and pinion mechanism for giving to the transom motion in opposite directions, and simultaneously automatically locking it twice in each revolution of the pinion in any position as it is advanced; in combination with means for adjusting the angular position of the transom.

2. A transom operating device embracing rack and pinion mechanism for giving to it motion in opposite directions, the transom being detachably journaled in the window of a door and provided with adjusting screws connected with one of the pivots and the operating mechanism for varying its angular position.

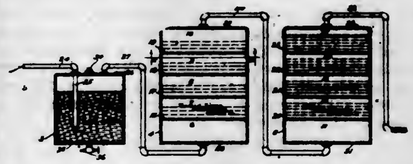
1,156,021. DISINFECTANT OR FUMIGATING ATTACHMENT FOR NESTS. COLEMAN L. RANDOLPH, Boonville, Mo. Filed Nov. 14, 1914. Serial No. 872,193. (Cl. 119—45.)



1. The combination with a nest box and a perforated partition extending horizontally across the nest box, of a perforated pipe disposed within said box and extending below said partition, said pipe at one end extending out of the nest box and having an upwardly extending portion terminating in a disinfectant container, a valve disposed in said upwardly extending portion of the pipe and controlling the passage of disinfectant from the container into said pipe, and a wick disposed within the pipe below the valve and extending beneath the perforations in the pipe.

2. The combination with a nest box and a reticulated partition extending horizontally across the nest box, of a perforated pipe disposed within and extending within the nest box below said partition, said pipe extending out of the nest box at one end and being upwardly turned and terminating in a disinfectant container disposed above the nest box, a valve located in the upwardly extending portion of the pipe and controlling the passage of disinfectant through the pipe, a wick disposed in the pipe below the valve and extending beneath the perforations in the pipe, said container being provided with a top having a relatively small filling opening, and a detachable cap closing said opening.

1,156,022. PROCESS OF PURIFYING GAS. MARIUS P. P. RIIS, Seattle, Wash. Filed Oct. 21, 1914. Serial No. 867,696. (Cl. 48—220.)



1. The process of purifying gas consisting in causing such gas first, to pass from the generator to a water tank, thence to bubble upwardly through said body of water and pass into a second purifying tank containing successive layers of different purifying materials, to wit: charcoal, sawdust and slaked lime, thence to pass into a third purifying tank containing successive layers of purify-

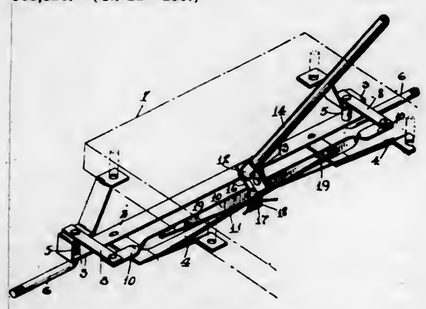
ing materials, first to wit: charcoal, sawdust, and slaked lime; secondly, horse manure; thirdly rusted iron chips, the top layers comprising a mixture of sawdust and slaked lime, and a covering of burlap, and finally passing through a mixture of sulfate of copper, sulfate of zinc, sulfate of iron and anhydrous cupric sulfate, and thence to a storage gas-holder.

2. The process of purifying gas consisting in causing such gas to percolate through a scrubber embodying purifying materials including charcoal, sawdust, slaked lime, horse manure, rusted iron chips, blue vitriol, sulfate of zinc, sulfate of iron and anhydrous cupric sulfate.

3. The process of purifying gas consisting in causing gas to first pass through a solution of water and lime, then passing through successive layers, each consisting of charcoal, sawdust, and slaked lime, then to pass through successive layers of horse manure, rusty iron chips, and finally through a layer formed of sawdust, slaked lime, a burlap covering, and sulfates of zinc, copper and iron.

4. The process of purifying gas consisting in causing gas to first pass through a body of water, subsequently to pass through distinct layers formed of charcoal, sawdust and slaked lime, then to pass through horse manure, rusty iron chips, and sulfates of zinc, iron and copper, and andhydrous cupric sulfate.

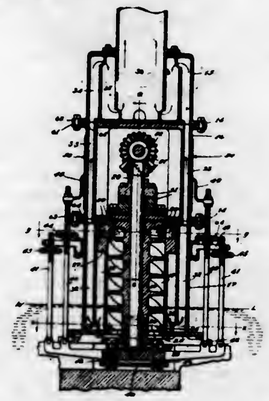
1,156,023. COMBINED FRONT GEAR AND STEERING CONNECTION FOR CHILDREN'S VEHICLES. WILLIAM J. SLEFFEL, Cleveland, Ohio, assignor to The Kirk-Latty Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 28, 1914. Serial No. 863,816. (Cl. 21—199.)



In a children's vehicle, the combination of a frame having two spaced horizontal members at each side, each such two members having vertically alined apertures therein, front wheel spindles having bent up ends pivotally received in such alined apertures, short links attached to such bent up ends of said spindles, a flat transverse link connecting said short link, said spindles and links being so connected that said spindles remain always either in alinement or parallelism and said links in parallelism, a steering column at an angle to the horizontal and at right angles to said transverse link, a flat bar attached to the lower end of said steering column and having its free end bent to lie normally substantially parallel to said transverse link, and relatively flexible connections extending from such free end of said bar to either end of said transverse link and said connections having a slight amount of lost motion at each point of attachment.

1,156,024. HYDRAULIC IRRIGATING-MACHINE. PAUL J. STALEC, Seattle, Wash. Filed Apr. 20, 1914. Serial No. 833,193. (Cl. 103—43.)

1. In a machine of the class described, the combination with a vertically disposed and suitably supported cylindrical casing which is provided with an inlet passageway for fluid in its lower portion and with an outlet passageway in its upper portion, and a fluid passage-way between its upper and lower portions of a shaft disposed concentrically within said casing and mounted to be rotatable in suitable bearings associated with said casing; an end thrust-bearing disposed exteriorly of the casing a helicoidal propeller screw mounted securely on said shaft within said casing and adapted to extend from said inlet passage-way to said outlet passage-way, and arms linked at one end to said thrust bearing and adjustably connected at their other ends to said casing to adjust said shaft with respect to its vertical position.



2. In a machine of the class described, the combination with a suitably supported and vertically disposed cylindrical casing which is provided with passageways for fluid in its lower and upper portions, of a shaft mounted to be rotatable in suitable bearings associated with said casing and disposed with its axis concentric with the inner surface of the cylindrical wall of said casing and extending below said casing, an end thrust bearing for said shaft; a helicoidal propeller screw securely mounted on said shaft within said casing and provided on its upper end with a head and on its lower end with a disk having openings through the head and disk for the passage of fluid and adapted to extend from the lower one of said passageways to the upper one thereof; means for communicating rotary motion to said shaft and arms linked at one end to said thrust bearing and adjustably connected at their other ends to said casing to adjust said shaft with respect to its vertical position.

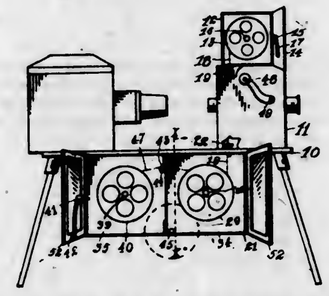
3. In a machine of the class described, the combination with a casing that is provided with inlet openings in its bottom, of a helicoidal propeller screw disposed within said casing, said screw being provided on its lower end with a flat disk having openings therein adapted when said screw is rotated to register with said inlet openings in said casing whereby liquid may enter through said openings and be conveyed upwardly by said screw; a head formed on the upper end of said casing said head being provided with spiral discharge passageways that connect with said screw through which water may be discharged; a bearing shaft connected with said screw, means for rotating said bearing shaft, a thrust bearing for the lower end of said shaft, and arms linked at one end to said thrust bearing and adjustably connected at their other ends to said casing to adjust said shaft with respect to its vertical position.

4. In a machine of the class described, the combination with a plurality of superposed casings which are provided with passageways leading through said casings from one to another; of a screw propeller disposed in the lowermost one of said casings; means for conducting fluid to said lowermost casing; a head provided on the top end of said screw propeller, said enlarged portion being provided with spiral passageways that extend between said screw and the upper passageway in the lowest one of said casings whereby fluid from said screw may be discharged into said upper passageway in said lowest casing with transversely adjustable packing devices associated with said shaft intermediate the ends thereof; means for rotating said shaft, a thrust bearing for the lower end of said shaft, and arms linked at one end to said thrust bearing and adjustably connected at their other ends to said casing to adjust said shaft with respect to its vertical position.

5. In a machine of the class described, the combination with a casing that is provided with inlet and outlet openings, of a conveyer screw adapted to fit within said casing; a shaft upon which said conveyer screw is mounted; a vertically adjustable step bearing for the lower end of said shaft; means adapted to rotate said shaft; and a packing box for the upper end of said shaft said packing box being provided with removable packing members which are adapted to be removed while said machine is in motion.

[Claims 6 to 12 not printed in the Gazette.]

1,156,025. FILM-REWINDING MECHANISM. WILLIS H. AKIN, Falconer, N. Y., assignor of one-fourth to Charles F. Moyer and one-fourth to Adolphus J. Bateman, Falconer, N. Y. Filed July 21, 1915. Serial No. 41,090. (Cl. 88—17.)



1. In combination with a moving picture machine, film rewinding mechanism comprising a double length rotatable spindle to removably receive one of the film reels of said moving picture machine thereon and to removably receive a second rewinding film reel thereon in front of said film reel of said moving picture machine, a pulley on the rear end of said double length spindle behind both of said film reels for rotating said spindle and film reels, a fixed spindle a spaced distance from said double length spindle to rotatably support a third film reel in line with the front film reel on said double length spindle, said third film reel on said fixed spindle containing the film to be rewound, and belt connection between said pulley on said double length spindle and said moving picture machine to simultaneously rotate said double length spindle and operate said moving picture machine and rewind said film to be rewound upon said front film reel.

2. In combination with a moving picture machine, a film rewinding cabinet, a double length rotatable spindle in said cabinet to removably receive one of the film reels of said moving picture machine thereon and to removably receive a second rewinding film reel thereon, means for turning said double length rotatable spindle by the operation of said moving picture machine, a fixed spindle a spaced distance from said double length spindle to support a third rewinding film reel thereon in line with said second rewinding film reel, and a third spindle hingingly attached in said rewinding cabinet to fold within said cabinet when the doors are closed and to receive said second rewinding film reel thereon when either of the films are in trouble.

3. In combination with a moving picture machine, a cabinet supported beneath said moving picture machine and opening toward the operating side of said moving picture machine, a double length spindle rotatably mounted in said cabinet to receive one of the film reels of said moving picture machine on the inner end thereof and a second film reel on the outer end thereof, a pulley on the rear end of said double length spindle, a belt connecting said pulley to the operating shaft of said moving picture machine to simultaneously turn said spindle and the reels thereon with said operating shaft of said moving picture machine, a fixed spindle in said cabinet a spaced distance from said double length spindle to rotatably support a third film reel thereon in line with said second film reel, a spring cap for said fixed spindle to bear against said third film reel and give tension thereto, and a roller midway between said second and third film reels to pass the film to be rewound thereover from said third reel to said second reel.

4. In combination with a moving picture machine, a rewinding cabinet comprising two compartments, doors for said compartments opening toward the operating side of the machine having glass therein, a double length spindle mounted in one of said compartments to receive one of the film reels of said moving picture machine on the inner end thereof and a second rewinding film reel on the outer end thereof, said double length spindle extending through the rear wall of said cabinet and rotatively mounted therein, a split pulley on the outer rear end of said spindle and a spring on said spindle to resiliently hold said split pulley, said split pulley belted to the operating shaft of said moving picture machine to be simultaneously turned with said operating shaft, a sleeve keyed between said inner and outer film reels on said double length spindle to hold said reels a spaced distance apart, a spring holding clip to hold said second film reel on the outer end of said double length spindle, a fixed spindle in the other compartment of said rewinding cabinet a spaced distance from said double length spindle to rotatably receive thereon a third film reel in line with said rewinding film reel on said double length spindle, a spring having a cap on one end and attached at the other end to the door of the compartment to engage over said fixed spindle when the door is closed and press against said third film reel and give tension thereto.

1,156,026. INSOLE. JOSEH A. AMES, Columbus, Ohio, assignor to Thomas W. McGovern, Columbus, Ohio. Filed Jan. 15, 1913. Serial No. 742,120. (Cl. 36—22.)



An insole comprising a body member and a folded tape secured to the margin of said insole by a line of stitches passing through the two thicknesses of said tape, the folded edge of said tape being bent laterally away from said body member at said line of stitches to form an upstanding marginal lip.

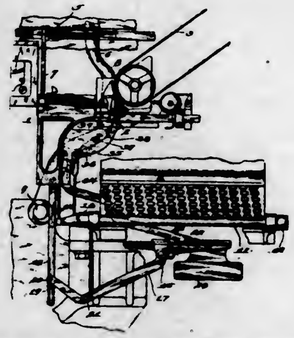
1,156,027. ELEVATOR-LIFT FOR MACHINES OF THE LINOTYPE CLASS. HENRY A. ARMSTRONG, Brooklyn, N. Y., assignor to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed Jan. 26, 1914. Serial No. 814,515. (Cl. 199—7.)

1. In machines of the class described, the combination with a vertically movable elevator, and a carriage for removing matrices therefrom, of a feeler for ascertaining if all the matrices of the line are within the elevator, and power means controlled by said feeler for lifting the elevator.

2. In machines of the class described, the combination with a vertically movable elevator, and a carriage for removing matrices therefrom, of a feeler for ascertaining if all the matrices of the line are within the elevator, and weight-actuated means controlled by said feeler for raising the elevator.

3. In machines of the class described, the combination with a vertically movable elevator, and a carriage for removing matrices therefrom, of a feeler for ascertaining if all the matrices of the line are within the elevator, and weight-actuated means set automatically by said carriage and controlled by said feeler for lifting the elevator.

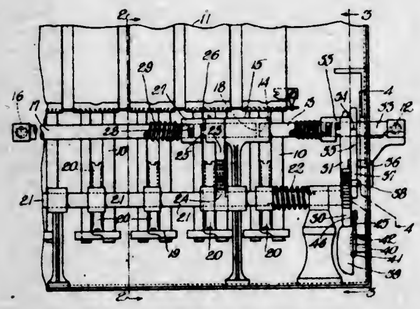
4. In machines of the class described, the combination with a vertically movable assembling elevator, a delivery carriage to receive matrices from the elevator when the latter is raised, a feeler for ascertaining if all the matrices of the line are within the elevator, and weight-actuated means controlled by said feeler and set automatically by said carriage to overbalance and lift the elevator when said carriage is in one position and rendered inactive when said carriage occupies another position.



5. In machines of the class described, the combination with a vertically movable assembling elevator, a delivery carriage to receive matrices from the elevator when the latter is raised, a feeler for ascertaining if all the matrices of the line are within the elevator, and lifting means for the elevator controlled by said feeler and embodying a shiftable weight set in position to lift the elevator when the carriage occupies one position and shiftable into an inactive position when the carriage occupies another position.

[Claims 6 to 10 not printed in the Gazette.]

1,156,028. CONTROLLING DEVICE FOR VOTING-MACHINES AND THE LIKE. JAMES A. BUTLER, Winthrop, Mass., assignor to American Voting Machine Company, Boston, Mass., a Corporation of Maine. Filed Dec. 26, 1912. Serial No. 738,771. (Cl. 235—51.)



1. Apparatus of the kind described, comprising entrance and exit guarding elements, connections therefrom to registering mechanisms, and means arranged to exert a locking action on said mechanisms, said entrance and exit guarding elements having operative connections for mutual control of said locking means, the connection of the exit guarding element being permanently geared with said locking means to control the same in both directions of movement for the purpose stated.

2. Apparatus of the kind described comprising an entrance lever, an exit lever, connections to registering mechanisms, a shaft having provision for locking said connections, and connecting devices from said entrance and exit levers to said shaft consisting in a geared connection of the exit lever with the shaft and a locking device controlled by the entrance lever for coöperation with said shaft throughout the range of turning movement thereof.

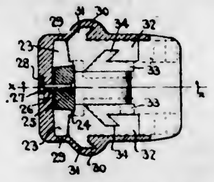
3. Apparatus of the kind described comprising an entrance lever, an exit lever, connections to registering mechanism, a shaft having provision for locking said connections, devices connecting said entrance and exit levers with said shaft consisting in a permanent connection with lost motion provision between the exit lever and the shaft, and a pawl and ratchet locking connection controlled by the entrance lever and arranged to be operative in all positions of turning movement of the shaft.

4. Apparatus of the kind described comprising an entrance lever, an exit lever, connections to registering mechanism, a shaft having provision to control said connections having spring means for urging it to an unlocking position, geared connections from the exit lever for turning said shaft to a locking position, and means controlled by the entrance lever for freeing said shaft to permit its return to unlocking position.

5. Apparatus of the kind described comprising an entrance guarding element, an exit guarding element, connections to registering mechanism, a shaft having provision for controlling said connections with spring means for urging it normally to an unlocking position, geared connections for controlling said shaft from said exit controlling element, a ratchet wheel on said shaft and a pawl mounted for control by the entrance guarding element for coöperation with said ratchet to lock and release the same for the purpose as stated.

[Claims 6 to 8 not printed in the Gazette.]

1,156,029. CAR-COUPLING. THOMAS E. COX, Birmingham, Ala., assignor, by direct and mesne assignments, of one-fourth to William C. Muckleroy, one-fifth to Charles M. Wall, one-sixth to Benjamin P. Williams, and two-fifteenths to William R. Stafford, Tampa, Fla. Filed Apr. 28, 1915. Serial No. 24,590. (Cl. 213—65.)



1. In a car coupler, a draw-head having at one side a jaw and at the opposite side being provided with a vertical chamber connecting at its center with a tail-wing recess in the draw-head, knuckle blocks detachably mounted in the upper and lower portions of said chamber and having each a perforated lug which projects from the draw-head, interlocking lugs and shoulders on the blocks and draw-head to resist both push and pull thrusts, and removable lock blocks to hold the knuckle blocks in interlocked position in the head.

2. In a car coupler, a draw-head having a vertical recess at one side and a knuckle, of detachable retaining means for the knuckle comprising lugs between which the knuckle is pivoted, a shank integral with each lug and adapted to fit into said vertical recess, a transverse undercut lug on the outside face of each shank, an outwardly and forwardly inclined lug on a side edge of each shank, shoulders in the draw-head to interlock with said lugs, and a plurality of lock blocks which are adapted to hold each other in position and to hold the shanks rigidly interlocked with the draw-head.

3. In a car coupler, a draw-head having at one side a chamber which opens to the front and extends substantially from top to bottom thereof and from front to a point near the rear end of the draw-head, perforated lugs to which the coupler knuckle is adapted to be pivoted, an elongated block formed integral with each lug and adapted to fit snugly into said chamber, a rear transverse lug on each block, a forwardly inclined side lug on each block, recesses in the side walls of the chamber to permit the side lugs to be passed in, shoulders in the draw-head with which lugs on the block interlock, a wedge block adapted to be fitted in behind each of said lug blocks and the rear wall of said chamber, and an intermediate lock block removably mounted between said wedge blocks to engage and hold them in position with the lug blocks interlocked with the recesses in the draw-head.

1,156,030. REINFORCEMENT FOR THE COMPOSITION COVERING OF STRUCTURAL MEMBERS. DAVID HOMER HAYDEN, New York, N. Y. Filed Dec. 4, 1912. Serial No. 734,936. (Cl. 72—109.)



1. A reinforcing element for the composition covering of structural beams and the like, comprising an individual wire cross stay adapted to be connected at one end to one edge of the beam and having an integral jaw at one end for engaging the flange at the opposite edge of the beam, said cross stay having reinforcing portions and one of the jaw portions thereof having an integral brace portion offset from said reinforcing portions and extending transversely of the cross stay, said brace portion being arranged to engage the beam and hold the reinforcing element against tipping with the reinforcing portions thereof in predetermined offset position relatively to the beam, substantially as described.

2. A reinforcing element for the composition covering of flanged structural beams and the like, comprising a cross stay formed of a single length of wire having one end portion bent to form attaching jaws adapted to embrace one end of the beam flange, the opposite end of the length of wire being bendable around the opposite edge of the beam flange to secure the stay in position, said wire stay having integral reinforcing portions and a portion of the length of the wire forming said stay being bent to form a brace offset from said reinforcing portions and arranged transversely of the main body of the stay, said brace being arranged to engage the beam to hold the cross stay against tipping and the reinforcing portions thereof offset from the face of the beam.

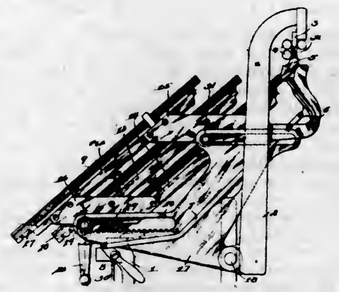
3. The combination with a structural beam, of a reinforcement for the composition covering thereof comprising a series of separate independent elements, each comprising a single wire cross-stay having integral end portions hooked over the opposite edges of the beam, each of said wire cross-stays having an integral reinforcing portion offset from the face of the beam, and a portion of the length of wire forming the cross stay being bent to form a brace extending transversely of the main portion of the stay and arranged to engage the beam to hold the individual element against tipping, substantially as described.

4. The combination with a structural beam, of a reinforcement for the composition covering thereof comprising a series of separate independent elements, each comprising a single wire cross-stay having one end bent around one edge of the beam and its opposite end bent to form an attaching jaw, the members of which embrace the opposite edge portion of the beam, each of said wire cross-stays having integral reinforcing portions offset from the face of the beam, and the portion of the length of wire forming each stay being bent to form an integral brace extending longitudinally of the beam and engaging the same to hold the individual element against tipping, substantially as described.

5. The combination with a structural flange beam of a reinforcement for the composition covering thereof comprising a series of separate independent elements, each comprising a cross-stay having one end bent around one edge of the beam flange and an integral, offset portion at its opposite end bent to form an attaching jaw which is spaced from the main portion of the stay and the members of which embrace the opposite edge portion of the beam flange and engage the opposite faces thereof to hold the adjacent end of the cross-stay in predetermined offset relation to the face of the beam, and one of said jaw members having an integral brace extending transversely of and on opposite sides of the plane of the cross-stay and arranged to engage the beam to hold the individual reinforcing element against tipping, substantially as described.

[Claim 6 not printed in the Gazette.]

1,156,031. TYPOGRAPHICAL MACHINE. THOMAS S. HOMANS, Hempstead, N. Y., assignor to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed Feb. 12, 1915. Serial No. 7,829. (Cl. 199—7.)



1. In a machine of the linotype class, in combination, a plurality of inclined matrix magazines, a set of underlying escapement actuating devices, and means for moving the magazines to bring any one of them into operative position, said means including a pivotal support for the lower ends of the magazines and guiding means for moving the pivotal support in one or more substantially cycloidal paths.

2. In a machine of the linotype class, in combination a plurality of inclined matrix magazines, a set of underlying escapement actuating devices, a pivot supporting the lower ends of the magazines, and means for moving said pivot in a substantially cycloidal path to bring the desired magazine into operative position.

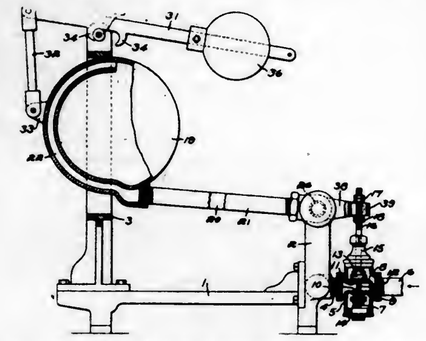
3. In a machine of the linotype class, in combination, a plurality of inclined matrix magazines, a set of underlying escapement actuating devices, a pivot supporting the lower ends of the magazines, and means for moving said pivot in a plurality of substantially cycloidal paths to bring any one of said magazines into operative position.

4. In a machine of the linotype class, in combination, a plurality of inclined matrix magazines, a set of underlying escapement actuating devices, a frame having a rack thereon, a pinion coöperative with said rack, and a pivot carried by said pinion and supporting the lower ends of the magazines, and operative to move the latter in a plurality of substantially cycloidal paths to bring any one of the magazines into operative position.

1,156,032. STEAM-TRAP AND VALVE THEREFOR. FRANK A. LITTLEFIELD, Nashua, N. H., assignor to Nashua Machine Company, Nashua, N. H., a Corporation of Maine. Filed Mar. 3, 1913. Serial No. 751,788. (Cl. 137—101.)

1. A steam trap comprising in combination, a movable bowl, counterweighting means therefor, admission means for the water of condensation and steam, a reciprocatory valve stem having valves controlling the flow of water of condensation and steam, and an operating connection be-

tween the bowl and said valve stem, whereby the latter is operated by movement of the bowl, and outlet means for the water of condensation.



2. A steam trap having in combination, a bowl support and provided with a steam inlet and an inlet and outlet for water of condensation, two pipes pivoted upon said support and in communication with said inlets and outlet, a bowl mounted upon and in communication with said pipes, and a duplex valve operated by pivotal movement of said bowl, and controlling the flow of steam and water of condensation, through said inlets and outlet.

3. A steam trap comprising in combination, a bowl support having a steam inlet and an inlet and outlet for water of condensation, two pipes pivoted upon said support, one constituting a water outlet and the other constituting a water and steam inlet, a bowl mounted upon and in communication with said pipes, and a duplex valve operated by tilting movement of said bowl and controlling the water and steam flow through said pipes.

4. A steam trap comprising in combination, a bowl support having a steam inlet and an inlet and outlet for water of condensation, two pipes pivoted upon said support, one constituting a water outlet and the other constituting a water and steam inlet, a bowl mounted upon and in communication with said pipes, and a reciprocatory valve stem operatively connected with and moved by tilting movement of said bowl, said valve stem having two valves controlling the flow of steam and water through said pipes.

5. A steam trap comprising in combination, a bowl support having a steam inlet and an inlet and an outlet for water of condensation, two pipes pivoted upon said support, one constituting a water and steam inlet and the other constituting a water outlet, a bowl mounted upon and in communication with said pipes, and a single valve means operatively connected with and actuated by tilting movement of said bowl to control the flow of water and steam through said pipes.

[Claims 6 to 11 not printed in the Gazette.]

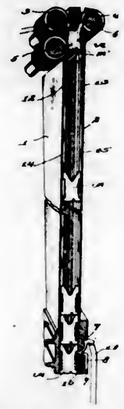
1,156,033. MAGAZINE FOR TYPOGRAPHICAL MACHINES. WILLIAM H. ORPEN, Jr., Brooklyn, N. Y., assignor to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed Feb. 4, 1914. Serial No. 816,563. (Cl. 199—7.)

1. In a machine of the linotype class, a channel or passageway through which matrices fall, said channel being straight but having its walls irregular in form to retard the movement of the matrices.

2. In a machine of the class described, a matrix passageway through which matrices are adapted to fall and having means for imparting oscillatory movement to the matrices to retard the speed of falling thereof.

3. In a machine of the class described, a sinuous passageway through which matrices are adapted to fall, the passageway being straight in its general direction.

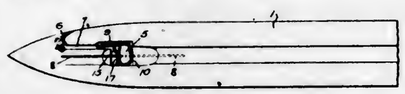
4. In a machine of the class described, a passageway through which matrices are adapted to fall, said passageway being straight in its general direction and having undulatory surfaces operative to oscillate and thereby retard the falling movement of the matrices.



5. A channel or chute through which matrices fall endwise, two opposite guiding surfaces of said chute being formed with alternate waves or corrugations to oscillate the matrices edgewise and thereby retard their speed and to guide the matrices in a substantially straight direction.

[Claims 6 and 7 not printed in the Gazette.]

1,156,034. HAND-THREADING SHUTTLE. RICHARD PACKER, Fall River, Mass., assignor to James K. Lanning, Fall River, Mass. Filed Jan. 2, 1913. Serial No. 739,832. (Cl. 139—46.)



1. A hand threading shuttle provided with a transverse threading socket, a threading member positioned therein and consisting of a plate portion having an eye 13 and a plurality of prongs extending from one face thereof in substantial transverse alinement with said eye, one of said prongs being bent into loop form and surrounding the thread, and another of said prongs being positioned so as frictionally to engage the thread passing through said loop.

2. A hand threading shuttle provided with a transverse threading socket, a threading member positioned therein and consisting of a plate portion having an eye leading to the under face thereof and a plurality of prongs extending from said under face thereof and in substantial transverse alinement, one of said prongs being bent into loop form and surrounding the thread, and another of said prongs extending in substantial parallelism to a portion of said looped prong.

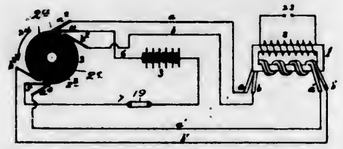
3. A hand threading shuttle provided with a transverse threading socket, a threading plate positioned therein and having spaced prongs, one of which is bent into looped form, and having an eye extending through the plate for the passage of the thread directly to said prongs, the latter being relatively positioned to compel friction of the thread against both prongs in either direction of throw of the shuttle.

4. A threading member for a hand threading or other shuttle consisting of a plate adapted to be inserted in a threading socket of the shuttle and having a plurality of spaced prongs extending from one face thereof, one of said prongs being reversely bent into loop form, a plurality of said prongs being oppositely concaved to provide a limited path for the thread.

5. A hand threading shuttle provided with a transverse threading socket, a threading plate positioned therein and having downwardly extending, spaced projections oppositely curved to provide a localized, predetermined thread path, one of the prongs being bent into loop form and having an extremity extending into close proximity to the under surface of the plate, thereby to prevent dethreading.

[Claims 6 to 8 not printed in the Gazette.]

1,156,035. ELECTRICAL TRANSFORMER SYSTEM. FREDERIC S. PERRIN, New York, N. Y., assignor to Splitdorf Electrical Co., Newark, N. J., a Corporation of New Jersey. Filed Sept. 25, 1913. Serial No. 791,710. (Cl. 123—148.)



1. A transformer having a primary winding comprising two parallel wires, and means for temporarily reversing the direction of the current in one of said wires while the current continues in the original direction in the other wire.

2. A transformer having a primary winding comprising two parallel wires, means for temporarily reversing the direction of the current in one of said wires, and a secondary winding adjacent said parallel wires while the current continues in the original direction in the other wire.

3. A transformer having primary and secondary windings adjacent to one another, the primary winding comprising a plurality of parallel wires, and means for temporarily changing the direction of the current through one of the parallel primary wires while the current continues in the original direction in the other wire to nullify the effect of the primary winding in the magnetic field.

4. The combination of a transformer having a primary winding comprising a plurality of parallel wires, with a generator, and means for directing the flow of current from said generator in parallel through said wires, and for temporarily reversing the direction of the current through one of said wires while the current continues to the original direction in the other wire.

5. The combination of a transformer having a primary winding comprising a plurality of parallel wires, with a generator, and means for directing the flow of current from said generator continuously in one direction through one of said wires and alternately in opposite directions through another of said wires while the current continues to the original direction in the other wire.

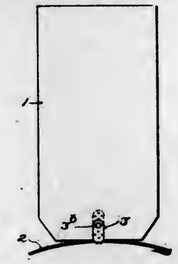
[Claims 6 to 11 not printed in the Gazette.]

1,156,036. TAG. FREDERIC K. PLYMPTON, Wellesley, Mass., assignor to Plympton Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed May 26, 1910. Serial No. 563,556. (Cl. 40—21.)

1. The combination with the tag or label proper, and the attaching string, of the U-shaped sheet-metal strip or piece clasping the string and a marginal portion of the tag or label proper within its bend or bight, having its respective limbs formed each with one or more burs intermediate the said bend or bight and the end of the limb which are set in the material of the said tag or label proper from the opposite faces of the latter and clenched, the burs of the said limbs being alternated in position so that those of one limb dodge those of the other.

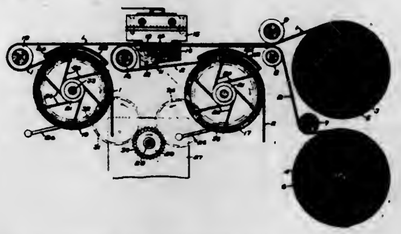
2. The combination with the tag or label proper, and the attaching string, of the U-shaped piece or strip clasping a marginal portion of the tag or label proper and an intermediate portion of the length of the string and clamping the string within its bend or bight, with its respective limbs permanently secured at intermediate points in their lengths to the opposite surfaces of the tag or label proper.

3. The combination with the tag or label proper, and the attaching string, of the U-shaped strip or piece clasping a marginal portion of the tag or label proper and inclosing and clamping the said string within its bend or bight, having its respective limbs formed each with one or more burs intermediate said bend or bight and the



end of the limb which are set in the material of the said tag or label proper from the opposite faces of the latter and clenched, the said strip or piece being thereby permanently attached to the tag or label proper with its limbs held in firm contact with the surfaces of the tag or label and prevented from spreading apart so as to loosen the grip upon the string.

1,156,037. FEEDING DEVICE. JOHN T. QUIGLEY, Boston, Mass., assignor to The Costmeter Company, Boston, Mass., a Corporation of California. Original application filed Nov. 8, 1913, Serial No. 799,988. Divided and this application filed Nov. 11, 1913. Serial No. 800,424. (Cl. 234—41.)



1. In a feeding and measuring device a sheet feeding member having a sheet feeding surface, fixed impaling members provided with impaling points projecting from said surface and inclined in the direction of movement of the sheet whereby the sheet will be punctured and brought into close contact in unchanging relation to the sheet feeding surface, and means for driving said member.

2. In a mechanism for feeding and measuring a continuous record sheet, a sheet feeding drum having a circumference accurately dimensioned with reference to the intended rate of feed and having fixed impaling members provided with impaling points inclined forwardly in the direction of rotation of the drum, and means for turning the drum.

3. In a mechanism for feeding and measuring a continuous record sheet, a feed drum, means for turning the same, impaling points projecting from the feeding surface of the drum adapted to impale the sheet, and a guard extending for a substantial distance over the feeding surface of the drum to press the sheet into close feeding relation with the surface thereof and the impaling points.

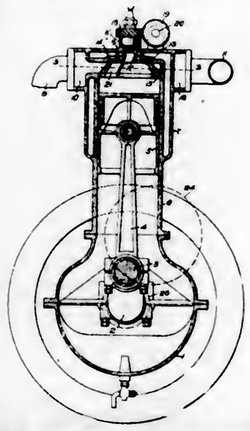
4. In a mechanism for feeding and measuring a continuous record sheet, a feed drum, means for turning the same, impaling points projecting from the surface thereof at a forward inclination with reference to the direction of drum rotation and adapted to impale the sheet, and a guard extending for a substantial distance over the feeding surface of the drum to press the sheet into close

feeding relation with the surface thereof and the impaling points.

5. In a mechanism for feeding and measuring a continuous record sheet, the combination with a sheet feeding drum, impaling points projecting from the surface thereof, and a segmental guard plate arranged to press the sheet closely against the drum and provided with one or more grooves to permit the passage of the impaling points.

[Claims 6 to 10 not printed in the Gazette.]

1,156,038. INTERNAL-COMBUSTION ENGINE. ANDREW L. RIKER, Bridgeport, Conn., assignor to The "Locomobile" Company of America, New York, N. Y., a Corporation of West Virginia. Filed Mar. 24, 1910. Serial No. 551,302. (Cl. 123—80.)

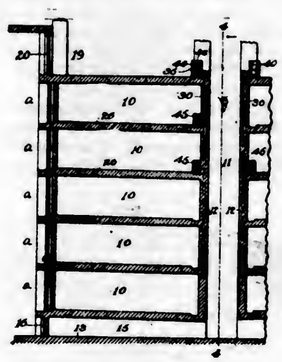


An internal combustion engine comprising in combination, a cylinder having admission and exhaust passages, a piston reciprocable in said cylinder, a combined admission and exhaust valve located in an end of the cylinder and having a single port, said valve having a frusto-conical surface spaced from the wall of said cylinder and other narrow surfaces presenting small areas bearing against the end and side walls respectively of the cylinder and means for operating said valve to place said port in communication with the admission passage during one stroke and with the exhaust passage during another stroke of the piston.

1,156,039. MAUSOLEUM. DANIEL M. ROTHENBERGER, Reading, Pa., assignor of one-third to Francis F. Seidel, Reading, Pa. Filed Oct. 22, 1914. Serial No. 867,953. (Cl. 72—7.)

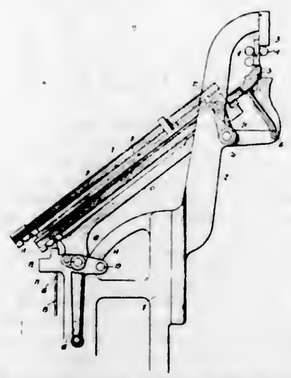
1. A mausoleum having a crypt provided with a ventilating conduit, a receptacle having inlet and outlet openings, a disinfectant means and a plastic self-hardening sealing means contained within said receptacle and supported upon the disinfectant means, said inlet opening communicating with said conduit and said outlet opening being arranged to allow of the escape of the utilized disinfectant with the neutralized gases upon a plane below the sealing means and without passing through said sealing means whereby, when the disinfectant is dissipated, the sealing means will fall and close the openings of the receptacle.

2. A mausoleum having a crypt provided with a ventilating conduit, a receptacle having inlet and outlet openings, a disinfectant means and a plastic self-hardening sealing means contained within said receptacle and supported upon the disinfectant means, said inlet opening communicating with said conduit, and said inlet and outlet openings being in horizontal alinement practically in continuation of each other, providing for the escape of the utilized disinfectant, with the neutralized gases, without passing through the sealing means, whereby, when the disinfectant is dissipated, the sealing means will fall and close the openings of the receptacle.



3. A mausoleum having a crypt provided with a ventilating conduit, a receptacle having inlet and outlet openings the former in communication with said conduit, a disinfecting element in said receptacle through which the gases escaping from said conduit must pass, and a plastic element supported upon the disinfecting element and adapted to fall when the disinfecting element is dissipated to effect final sealing of said inlet and outlet openings.

1,156,040. LINE-CASTING MACHINE. SAMUEL E. SPERRY, Woodhaven, and WILLIAM H. ORPEN, Jr., Brooklyn, N. Y., assignors to International Typesetting Machine Company, New York, N. Y., a Corporation of New York. Filed Feb. 12, 1915. Serial No. 7,816. (Cl. 199—7.)



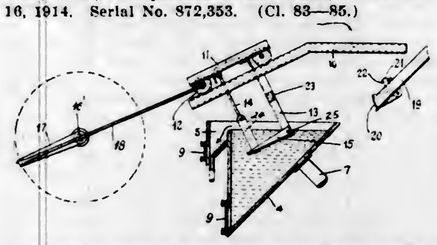
1. In a machine of the linotype class, in combination with a plurality of matrix magazines having controlling escapements, a movable frame supporting the magazines, escapement actuating means, cranks operatively connected to said frame for moving the lower ends of the magazines in a circular arc to bring the escapements of the different magazines into coöperative relation with said actuating means and means for moving the upper ends of the magazine in a circular arc of relatively smaller angle.

2. In a machine of the linotype class, in combination with a plurality of inclined matrix magazines, a movable carrying frame for said magazines, means for moving the lower end of the carrying frame in a circular arc, and means for moving the upper end of said frame through a circular arc of relatively smaller angle, the two means being connected solely by said carrying frame.

3. In a machine of the linotype class, in combination with a plurality of matrix magazines having controlling escapements, a movable frame supporting the magazines, escapement actuating means, cranks operatively connected to said frame for moving the lower ends of the magazines in a circular arc to carry the escapements of the different magazines to and from coöperative relation with said actuating means, and links connected to said frame and operative to guide the upper ends of the magazines in a circular arc of relatively less angle.

4. In a machine of the linotype class, the combination with a plurality of matrix magazines carrying controlling escapements, a movable frame supporting the magazines, actuating means for the escapements, means connected to said frame and operative to move the matrix delivery ends of the magazines in a circular arc to carry the escapements of the different magazines to and from cooperative relation with said actuating means, means actuated solely by said frame for guiding the upper matrix-receiving ends of the magazines in an arc-shaped path, and a stop on the frame for supporting the different magazines in operative position.

1,156,041. APPARATUS FOR CONCENTRATING MINERALS BY FLOTATION. GEORGE C. STONE, New York, N. Y., assignor to The New Jersey Zinc Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 16, 1914. Serial No. 872,353. (Cl. 83—85.)



1. Apparatus for the separation of floatable minerals from materials with which they are associated, comprising a receptacle for the flotation liquid, a carrier for the charge to be separated, and power-actuated devices for reciprocating the carrier over a prescribed path from a point exterior to the receptacle into the latter so as to immerse the charge in the liquid therein; substantially as described.

2. Apparatus for the separation of floatable minerals from materials with which they are associated, comprising a receptacle for the flotation liquid, a carrier for the charge to be separated, power-actuated devices for reciprocating the carrier over a prescribed path from a point exterior to the receptacle into the latter so as to immerse the charge in the liquid therein, and means for supplying a charge of the material to the carrier when the latter is outside the receptacle; substantially as described.

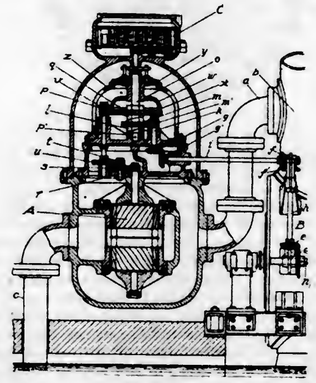
3. Apparatus for the separation of floatable minerals from materials with which they are associated, comprising a receptacle for the flotation liquid, a carrier for the charge to be separated, power-actuated devices for reciprocating the carrier over a prescribed path from a point exterior to the receptacle into the latter so as to immerse the charge in the liquid therein, and means for supplying a charge of the the material to the carrier when the latter is outside the receptacle, the carrier being so constructed as to discharge the material therein into the liquid in the receptacle at the termination of movement of the carrier into the liquid in the receptacle; substantially as described.

4. Apparatus for the separation of floatable minerals from materials with which they are associated, comprising a receptacle for the flotation liquid, a carrier for the charge to be separated, power-actuated devices for reciprocating the carrier over a prescribed path from a point exterior to the receptacle into the latter so as to immerse the charge in the liquid therein, a source of supply of the charge to be separated outside of the receptacle, and automatically operated devices for supplying a charge from the source of supply to the carrier when the latter is outside of the receptacle, substantially as described.

5. Apparatus for the separation of floatable minerals from materials with which they are associated, comprising a receptacle for the flotation liquid, a carrier for the charge to be separated, and means for moving the carrier wholly into and retracting it wholly from the flotation liquid in a substantially rectilinear path and in a direction inclined to the horizontal; substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,156,042. MECHANISM FOR MEASURING AND INTEGRATING THE AMOUNT OF FLOW OF WATER THROUGH TURBINE-GATES. HENRY E. WARREN, Ashland, Mass., assignor to The Lombard Governor Company, Ashland, Mass., a Corporation of New Jersey. Filed Jan. 28, 1914. Serial No. 815,089. (Cl. 73—167.)



1. In an apparatus for measuring the fluid passing through a turbine, an element in the apparatus which is given rotary motion by the passage of the fluid, proportional to its velocity of flow, and varying axial reciprocation by the change in position of the turbine gates.

2. In a meter for fluid passing through a turbine, an element therein which is given motion of revolution by the fluid, proportional to its velocity of flow, and varying axial reciprocatory motion dependent upon the position of the turbine gates, and means connected with said element to integrate thereby the resultant of said velocity of flow and the amount of gate opening.

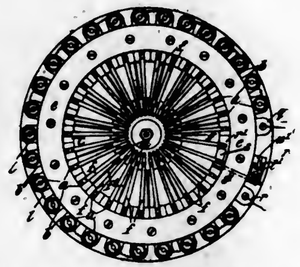
3. In an apparatus for measuring the amount of fluid passing through a turbine, an element in the apparatus which receives two motions, induced respectively by the velocity of the flow of the fluid and the opening of the turbine gate, and means by which the resultant produced by the said fluid velocity and the amount of the gate opening is integrated.

1,156,043. TELEGRAPH SYSTEM. WILLIAM HENRY SHEPHARD and ARCHIBALD EDWARD MCKECHNIE, Bayswater, London, England. Filed Mar. 4, 1915. Serial No. 12,232. (Cl. 178—88.)

1. In a telegraph system, receiving apparatus comprising a number of contact points capable of being arranged in accordance with a predetermined signal, a number of brushes movable relatively to the contact points, a member adapted to cause the brushes to be deflected to one side or other of the contact points, and electrically controlled devices including a delayed action contrivance for actuating said member, said devices being rendered operative when the predetermined signal is received.

2. In a telegraph system, receiving apparatus comprising a number of contact points capable of being arranged

in accordance with a predetermined signal, a number of brushes movable relatively to the contact points, a member adapted to cause the brushes to be deflected to one side or other of the contact points, and electrically controlled devices including a delayed action contrivance for actuating said member, said devices being rendered operative when the predetermined signal is received and said delayed action contrivance being so arranged relatively to the said electrically controlled devices as to insure that a brush moving toward and contiguous to the deflecting member will be brought into position at one side or other of the deflecting member before the latter is actuated.



3. In a telegraph system, receiving apparatus comprising a ring, a number of contact points carried by said ring, said contact points being capable of being arranged in accordance with a predetermined signal, a number of brushes movable relatively to the contact points, a member adapted to cause the brushes to be deflected to one side or other of the contact points, and electrically controlled devices including a delayed action contrivance for actuating said member, said devices being rendered operative when the predetermined signal is received.

4. In a telegraph system, receiving apparatus comprising a ring having a gap, a number of contact points carried by said ring, said contact points being capable of being arranged in accordance with a predetermined signal, a number of brushes movable relatively to the contact points, a member arranged within said gap adapted to cause the brushes to be deflected to one side or other of the contact points, and electrically controlled devices including a delayed action contrivance for actuating said member, said devices being rendered operative when the predetermined signal is received and said delayed action contrivance being so arranged relatively to the said electrically operated devices as to insure that a brush entering said gap will be brought into position at one side or other of the deflecting member before the latter is actuated.

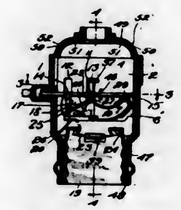
5. In a telegraph system, receiving apparatus comprising a number of contact points capable of being arranged in accordance with a predetermined signal, a number of brushes movable relatively to the contact points, and means comprising a delayed action contrivance for controlling the movement of the brushes whereby the relatively long spaces between the characters of the code are differentiated from the short spaces between the dots and dashes constituting the said characters.

[Claim 6 not printed in the Gazette.]

REISSUES.

13,990. MECHANICAL MOVEMENT AND ELECTRIC-LIGHT SOCKET. TONJES AUGUST CARL BOTH, Fairhaven, Mass., assignor, by meane assignments, to The Zee Socket and Mfg. Co., Boston, Mass., a Corporation of Massachusetts. Filed Sept. 1, 1914. Serial No. 859,718. Original No. 1,040,132, dated Oct. 1, 1912, Serial No. 668,632. (Cl. 173—346.)

1. In a mechanical movement the combination of a rotary driving member, a pivoted member operated by the driving member but having an axis transverse to the axis of the driving member, and a spring coöperating with the pivoted member to store energy in said spring.



2. In a mechanical movement the combination of a rotary driving member provided with two opposed cams and a rocking member on an axis transverse to the axis of the driving member and operated directly by said cams, and a spring coöperating with the rocking member to store energy in said spring.

3. An electric light socket comprising an insulating base; a fixed terminal on said base; and a switch mechanism for making and breaking the circuit through said fixed terminal including a rotary driving member, a spring, a rocking member operated by the driving member and storing energy in said spring, and a movable terminal operatively connected with the spring and moved thereby into and out of contact with the fixed terminal.

4. An electric light socket comprising an insulating base; a fixed terminal on said base and a switch mechanism for making and breaking the circuit through said fixed terminal including a rotary driving member, a spring, a rocking member reciprocated by the driving member and having its axis transverse of the axis of the driving member and storing energy in said spring, and a movable terminal operatively connected with the spring and moved thereby into contact with the fixed terminal.

5. An electric light socket comprising an insulating base; a fixed terminal on said base; and a switch mechanism including a rotary driving shaft and a pivoted member reciprocated by said driving shaft and including a spring member coöperating with said pivoted member to give a quick make and quick break of the circuit through said terminal.

6. In a mechanical movement the combination of a rotary driving member, a rocking member reciprocated by the driving member but having an axis transversely arranged with relation to the axis of the driving member, and a spring coöperating with the rocking member to store energy in said spring.

7. An electric light socket comprising an insulating base, terminals on said base, and a switch mechanism for making and breaking the circuit through said terminals including a rotary driving shaft and a pivoted member operated by said shaft, and including a spring coöperating with said pivoted member to move a movable terminal into engagement with said terminals on the base.

8. An electric light socket comprising an insulating base, terminals on said base and a switch mechanism for making and breaking the circuit through said terminals including a rotary shaft having an offset and a member pivoted on an axis transverse to the axis of said shaft, said member being operated by the offset portion of said shaft, and including a spring coöperating with said pivoted member to move a movable terminal into engagement with said terminals on the base.

9. In a mechanical movement the combination of a driving member, a separate resilient laterally movable driven member adapted to move laterally with relation to both the rocking and driving members, and an intermediate rocking member actuated by the driving member and adapted to actuate the resilient driven member and cause it to move laterally with relation to both the rocking and driving members.

10. In a mechanical movement, the combination of a driving member, a resilient driven member and a separate movable member provided with holding grooves or valleys at each of its ends to receive and coöperate with a portion of the resilient driven member.

11. In a mechanical movement the combination of a driving member, a resilient driven member and a separate movable member provided with holding grooves or valleys at each of its ends to receive and coöperate with a portion of the resilient driven member and with one or more accelerators or kickers.

12. In a mechanical movement, the combination of a driving member, a laterally resilient driven member, and pivoted means mounted independently of the driving member and coöperating with the driving and driven members and actuated by the driving member to cause the driven member to move laterally.

13. In a mechanical movement, the combination of a driving member, a laterally movable resilient driven member adapted to move laterally with relation to the driving member, and independent pivoted means coöperating with the driving and driven members and actuated by the driving member to cause the driven member to move laterally.

14. In a mechanical movement, the combination of a driving member, a laterally movable resilient driven member adapted to move laterally with relation to the driving member, and an independent intermediate member provided with surfaces to coöperate with the resilient driven member.

15. In a mechanical movement, the combination of a driving member, a laterally movable resilient driven member, a movable intermediate member provided with means to coöperate with and hold the resilient driven member during a portion of the movement of the intermediate member.

16. In a mechanical movement, the combination of a driving member, a resilient driven member having a surface coöperating with the intermediate member, a movable intermediate member, means carried by the movable intermediate member to hold the resilient driven member for a portion of the movement of the intermediate member, and additional means carried by the intermediate movable member to force the engaging surface of the driven member past the first means upon further movement of the intermediate member.

17. In a mechanical movement, the combination of a driving member, a resilient driven member and an intermediate movable member provided with valleys or grooves, ledges and with one or more kickers or accelerators to crowd the end of the resilient driven member over the ledge upon the movable intermediate member reaching a predetermined position.

18. In a mechanical movement, the combination of a rotary driving member, a reciprocating resilient driven member, and separate independent means located between the driving and driven members and coöperating with the rotary driving member and reciprocating resilient driven member, and actuated by the rotary driving member adapted to cause the driven member to move laterally.

19. In a mechanical movement, the combination of a rotary driving member, a reciprocating resilient driven member, and pivoted means mounted independently of the driving member cooperating with the driving and driven members and actuated by the driving member adapted to cause the driven member to move laterally.

20. In a mechanical movement, the combination of a rotary driving member, a reciprocating resilient driven member, an independently movable intermediate member mounted between the driving and driven members and provided with surfaces adapted to hold the reciprocating resilient driven member for a portion of the movement of the intermediate member.

21. In a mechanical movement, the combination of a driving member, a reciprocating resilient driven member, a movable intermediate member, means carried by the intermediate member to hold the reciprocating resilient driven member for a portion of the movement of the intermediate member, and additional means carried by the movable intermediate member to force the engaging surface of the resilient driven member past the first means upon further movement of the intermediate member.

22. In a mechanical movement, the combination of a rotary driving member, a reciprocating resilient driven member and an intermediate movable member provided with valleys or grooves to coöperate with the engaging surface carried by the reciprocating resilient driven member.

23. In a mechanical movement, the combination of a rotary driving member, a reciprocating resilient driven member, and a movable intermediate member provided with valleys or grooves and ledges and with one or more kickers or accelerators to crowd the end of the resilient driven member over the ledge upon the movable intermediate member reaching a certain predetermined position.

24. An article of manufacture for a mechanical movement comprising a driving member made from a single blank having offset arms which are bent or curved to form opposed cams.

25. An article of manufacture for a mechanical movement comprising an intermediate or integral hill and valley member formed from sheet metal and provided with kickers.

26. In a mechanical movement, the combination of a driving member, a driven member, an intermediate movable member and means carried by the intermediate member to hold the driven member when the intermediate member is in one position and to positively move the driven member when the intermediate member has reached a different position.

27. In a mechanical movement, the combination of a driving member, a resilient driven member, an intermediate rocking member, and means carried by the intermediate rocking member to hold the driven resilient member when the intermediate rocking member is at one angle and to positively move the resilient driven member when the intermediate rocking member has reached a different predetermined angle.

28. In electric light sockets, the combination of an insulating base, a driving member mounted in the base and provided with opposed actuating surfaces, a resilient reciprocating driven member, and independently mounted means between the driving member and the resilient driven member and actuated by the opposed actuating surfaces on the driving member to actuate the resilient driven member.

29. In electric light sockets, the combination of an insulating base, a driving member mounted in the base and provided with actuating surfaces, a resilient driven member, and pivoted means between the driving member and the resilient driven member and actuated by the opposed actuating surfaces on the driving member to actuate the resilient driven member.

30. In electric light sockets, the combination of an insulating base, a driving member mounted in the base and provided with actuating surfaces, a resilient driven member, and pivoted means mounted between the driving member and the resilient driven member and provided with grooves or valleys, said pivoted means being actuated by the actuating surfaces on the driving member.

31. In electric light sockets, the combination of an insulating base, a driving member mounted in the base and provided with opposed actuating surfaces, a resilient driven member, and pivoted means mounted between the driving member and resilient driven member and provided with grooves or valleys and with kickers or accelerators to coöperate with the resilient driven member.

32. In electric light sockets the combination of an insulating base, a rotary driving member provided with opposed actuating surfaces, a resilient reciprocating driven member having a contact arm and an actuating arm, an intermediate member mounted between the rotary driving member and the resilient reciprocating driven member and adapted to coöperate with the resilient driven member, and electrical contacts coöperating with the driven member.

33. In electric light sockets, the combination of an insulating base, a rotary driving member provided with opposed actuating surfaces, a resilient reciprocating driven member having a contact arm and an actuating arm, a pivoted intermediate member mounted between the rotory driving member and the resilient reciprocating driven mem-

ber and adapted to coöperate with the resilient driven member and the driving member, and electrical contacts adapted to coöperate with the driven member.

34. In electric light sockets, the combination of an insulating base, a rotary driving member provided with opposed actuated surfaces, a resilient reciprocating driven member having a contact arm and an actuating arm, an intermediate member provided with valleys to coöperate with the actuating arm of the resilient driven member, and electrical contacts to coöperate with the driven member.

35. In electric light sockets the combination of an insulating base, a rotary driving member provided with opposed actuating surfaces, a resilient reciprocating driven member having a contact arm and an actuating arm, an intermediate member provided with valleys and kickers or accelerators, to coöperate with the actuating arm of the resilient member, and electrical contacts to coöperate with the driven member.

36. In an electric light socket, the combination of an insulating base formed of a plurality of parts having meeting surfaces extending substantially longitudinally of the socket and provided with dovetail surfaces, a screw shell provided with dovetail surfaces to coöperate with those carried by the insulating sections, and means to secure the insulating sections and the screw shell together.

37. An electric light socket comprising an insulating base; a fixed terminal on said base; and a switch mechanism for making the circuit through said fixed terminal including a rotary driving member, a rocking member operated by the rotary member, a movable terminal, a spring operatively connected to said movable terminal, said rocking member storing energy in said spring, and the latter when released moving the moving terminal into contact with the fixed terminal.

38. An electric light socket comprising an insulating base; a fixed terminal on said base; and a switch mechanism for making the circuit through said fixed terminal including a rotary driving member, a rocking member operated by the rotary member, a movable member comprising a terminal portion and a spring portion operatively connected together, the rocking member storing energy in the spring portion and the latter moving the terminal portion into contact with the fixed terminal.

39. An electric light socket comprising an insulating base; a fixed terminal on said base; and switch mechanism for making the circuit through said fixed terminal including a rotary driving member, a movable terminal and a spring operatively connected together, the rotary member being operatively connected with the spring to store energy therein and the spring when released moving the movable terminal into contact with the fixed terminal.

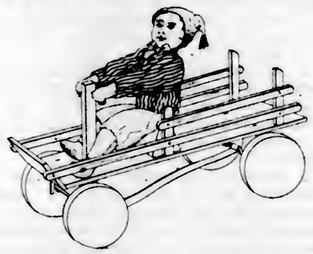
DESIGNS.

47,907. GLASS LIGHT-SHADE. KRAFT BOOTH, Philadelphia, Pa., assignor to Gillinder & Sons, Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 27, 1915. Serial No. 24,362. Term of patent 7 years.



The ornamental design for a glass light-shade substantially as shown.

47,908. TOY. HAROLD D. BOWIE, Mahwah, N. J., assignor to E. Q. Horsman Co., a Corporation of New York. Filed July 8, 1915. Serial No. 38,758. Term of patent 3½ years.



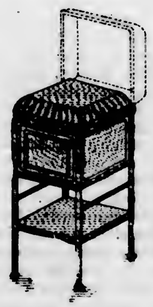
The ornamental design for a toy as shown.

47,909. TOILET-POWDER CONTAINER. GRANVILLE C. BRADFORD, Washington, D. C., assignor to Granville Manufacturing Co., Washington, D. C., a Corporation of Delaware. Filed July 13, 1915. Serial No. 39,686. Term of patent 7 years.



The ornamental design for a toilet powder container, as shown.

47,910. TALKING-MACHINE CABINET. PETER DUFFY, New York, N. Y. Filed July 10, 1915. Serial No. 39,195. Term of patent 3½ years.



The ornamental design for a talking machine cabinet, as shown.

47,911. TALKING-MACHINE CABINET. PETER DUFFY, New York, N. Y. Filed July 10, 1915. Serial No. 39,196. Term of patent 3½ years.



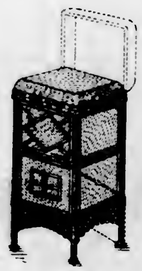
The ornamental design for a talking machine cabinet, as shown.

47,912. TALKING-MACHINE CABINET. PETER DUFFY, New York, N. Y. Filed July 10, 1915. Serial No. 39,197. Term of patent 3½ years.



The ornamental design for a talking machine cabinet, as shown.

47,913. TALKING-MACHINE CABINET. PETER DUFFY, New York, N. Y. Filed July 10, 1915. Serial No. 39,198. Term of patent 3½ years.



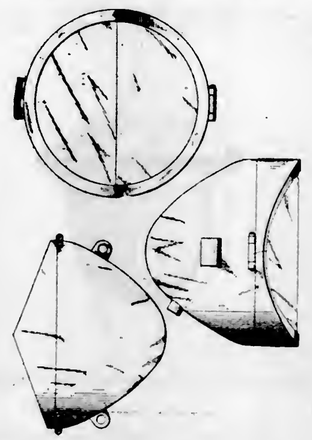
The ornamental design for a talking machine cabinet, as shown.

47,914. TALKING-MACHINE CABINET. PETER DUFFY, New York, N. Y. Filed July 10, 1915. Serial No. 39,199. Term of patent 3½ years.



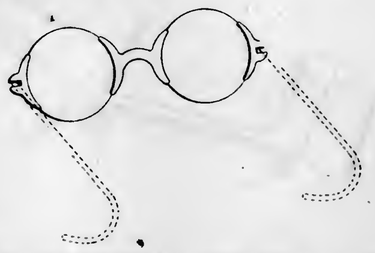
The ornamental design for a talking machine cabinet, as shown.

47,915. AUTOMOBILE-LAMP. DAVID HENRY ELKINS, Amesbury, Mass., assignor to Gray & Davis, Inc., Boston, Mass., a Corporation of Massachusetts. Filed May 3, 1915. Serial No. 25,616. Term of patent 7 years.



The ornamental design for an automobile lamp, substantially as shown.

47,916. PAIR OF GOGGLES. HARRY E. FENNO, Providence, R. I., assignor to George F. Berkander, Providence, R. I. Filed June 7, 1915. Serial No. 32,757. Term of patent 3½ years.



The ornamental design for a pair of goggles, as shown.

47,917. INSULATED CHAIN CONNECTOR. GILBERT W. GOODRIDGE, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed July 14, 1915. Serial No. 39,912. Term of patent 14 years.



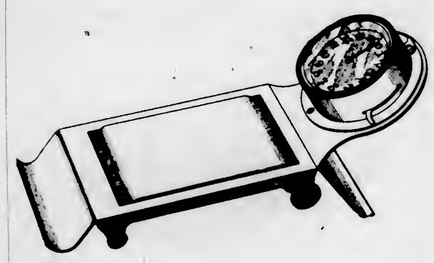
The ornamental design for an insulated chain connector, as shown.

47,918. LAMP-SHADE. EDWIN F. GUTH, St. Louis, Mo. Filed June 1, 1915. Serial No. 31,592. Term of patent 7 years.



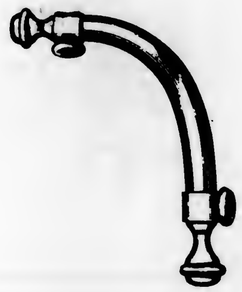
The ornamental design for a lamp shade as shown.

47,919. COMBINED STAND AND CLOCK-CASING. HENRY ENEU JOHNSON, Lansdowne, Pa. Filed Apr. 19, 1915. Serial No. 22,512. Term of patent 3½ years.



The ornamental design for a combined stand and clock casing, as shown.

47,920. ARM FOR CHANDELIERS AND BRACKETS. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed Apr. 16, 1915. Serial No. 21,925. Term of patent 7 years.



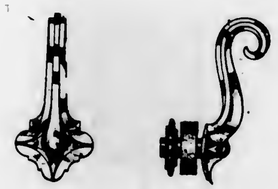
The ornamental design for an arm for chandeliers and brackets, as shown.

47,921. HANGER FOR LIGHT-REFLECTING BOWLS. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed Apr. 16, 1915. Serial No. 21,926. Term of patent 7 years.



The ornamental design for a hanger for light reflecting bowls, as shown.

47,922. HANGER FOR LIGHT-REFLECTING BOWLS. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed Apr. 19, 1915. Serial No. 22,515. Term of patent 7 years.



The ornamental design for a hanger for light reflecting bowls, as shown.

47,923. HANGER FOR LIGHT-REFLECTING BOWLS. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed Apr. 21, 1915. Serial No. 22,965. Term of patent 7 years.



The ornamental design for a hanger for light reflecting bowls, as shown.

47,924. ELECTRIC-CANDLE-BASE HICKEY. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed June 1, 1915. Serial No. 31,588. Term of patent 3½ years.



The ornamental design for an electric candle base hickey, as shown.

47,925. LAMP. DWIGHT D. KING, Warren, Pa. Filed Apr. 30, 1915. Serial No. 25,068. Term of patent 14 years.



The ornamental design for a lamp, as shown.

47,926. BADGE. SALLY C. KULL, Far Hills, N. J. Filed July 6, 1915. Serial No. 38,328. Term of patent 3½ years.



The ornamental design for a badge as shown.

47,927. BROOM OR MOP HOLDER. JOHN S. LEONHARDT, Detroit, Mich. Filed Mar. 20, 1915. Serial No. 15,967. Term of patent 7 years.



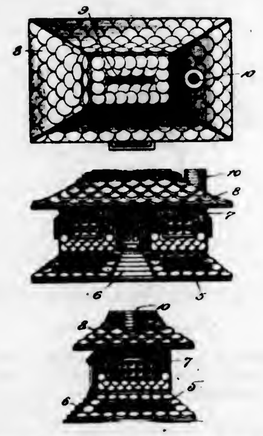
The ornamental design for a broom or mop holder, as shown.

47,928. CONCRETE BRIDGE. DANIEL B. LUTEN, Indianapolis, Ind. Filed May 7, 1915. Serial No. 26,661. Term of patent 14 years.



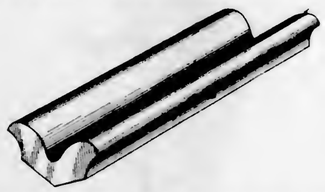
The ornamental design for a concrete bridge, as shown.

47,929. SAVINGS-BANK. BERNARD MANOVILL, St. Louis, Mo. Filed July 6, 1915. Serial No. 38,321. Term of patent 7 years.



The ornamental design for a savings bank, as shown and described.

47,930. FURNACE-TILE. EDWARD C. MEIER, Phoenixville, Pa. Filed Mar. 16, 1915. Serial No. 14,818. Term of patent 14 years.



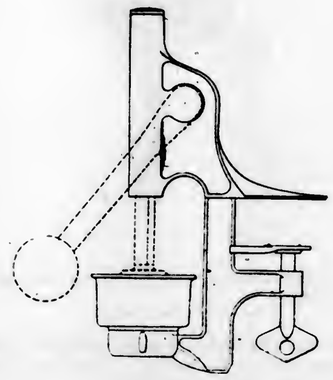
The ornamental design for a furnace tile, as shown.

47,931. HAND-HOLE PLATE. EDWARD C. MEIER, Phoenixville, Pa. Filed July 14, 1915. Serial No. 39,933. Term of patent 14 years.



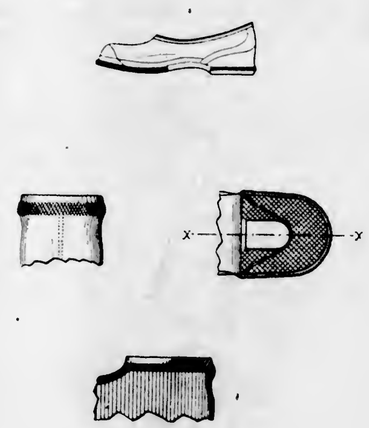
The ornamental design for a hand-hole plate as shown.

47,932. FRAME FOR LEMON-SQUEEZERS. CHARLES MORGAN, Freeport, Ill., assignor to Arcade Manufacturing Company, Freeport, Ill., a Corporation of Illinois. Filed May 21, 1914. Serial No. 840,134. Term of patent 7 years.



The ornamental design for a frame for a lemon squeezer, as shown.

47,933. RUBBER SHOE. FRED E. PAYNE, Middletown, Conn., assignor to Goodyear Rubber Company, Middletown, Conn., a Corporation. Filed Apr. 21, 1915. Serial No. 22,966. Term of patent 14 years.



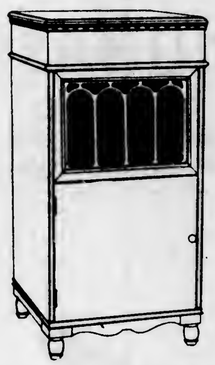
The ornamental design for a rubber shoe, as shown.

47,934. LIGHTING-FIXTURE. HARRY PICKHARDT, New York, N. Y., assignor to The Phoenix Glass Company, Pittsburgh, Pa., a Corporation of West Virginia. Filed May 10, 1915. Serial No. 27,278. Term of patent 7 years.



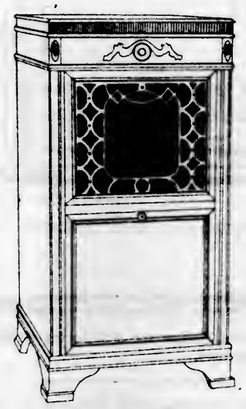
The ornamental design for a lighting fixture, as shown.

47,935. CASING FOR SOUND-PRODUCING INSTRUMENTS. STANLEY H. STIRRUP, Grand Rapids, Mich., assignor to Berkey and Gay Furniture Company, a Corporation of Michigan. Filed Apr. 22, 1915. Serial No. 23,243. Term of patent 3½ years.



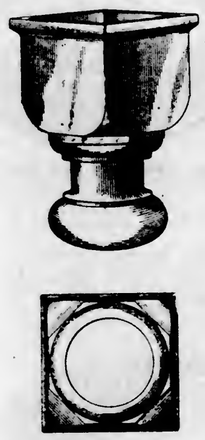
The ornamental design for a casing for sound producing instruments, as shown.

47,936. CASING FOR SOUND-PRODUCING INSTRUMENTS. STANLEY H. STIRRUP, Grand Rapids, Mich., assignor to Berkey and Gay Furniture Company, a Corporation of Michigan. Filed Apr. 23, 1915. Serial No. 23,541. Term of patent 3½ years.



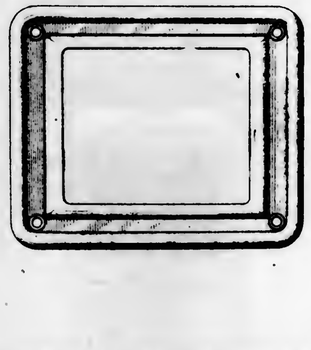
The ornamental design for a casing for sound producing instruments, as shown.

47,937. LEG FOR STORE FURNITURE. MAURICE TAUSSIG, Chicago, Ill. Filed June 30, 1915. Serial No. 37,386. Term of patent 3½ years.



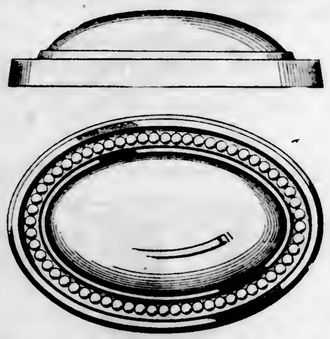
The ornamental design for a leg for store furniture, as shown.

47,938. SLIDE FOR STEREOPTICONS. ALEXANDER FERDINAND VICTOR, Davenport, Iowa, assignor to Victor Animatograph Company, Davenport, Iowa, a Corporation of Iowa. Filed Apr. 2, 1915. Serial No. 18,843. Term of patent 7 years.



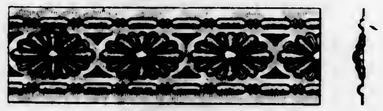
The ornamental design for a slide for stereopticons, as shown and described.

47,939. BACK PLATE FOR LIGHTING-FIXTURES. HERMAN F. VOSHARDT, Chicago, Ill., assignor to Friedley-Voshardt Co., Chicago, Ill., a Corporation of Illinois. Filed May 22, 1915. Serial No. 29,912. Term of patent 3½ years.



The ornamental design for a back plate for lighting fixtures, as shown.

47,940 METALLIC BAND OR BORDER. EDWIN L. WHITE, New York, N. Y., assignor to J. H. White Mfg. Co., Brooklyn, N. Y., a Corporation of New York. Filed Apr. 16, 1915. Serial No. 21,923. Term of patent 7 years.



The ornamental design for a metallic band or border as shown.

47,941. SPARK-PLUG. WILLIAM S. WITTER, Toledo, Iowa. Filed July 15, 1914. Serial No. 851,182. Term of patent 7 years.



The ornamental design for a spark plug, as shown.

TRADE-MARKS

PUBLISHED OCTOBER 5, 1915.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 57,138. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHEMISCHE FABRIK GÜSTROW, DR. HILLRINGHAUS & DR. HEILMANN, Güstrow and Heideweg, Germany. Filed June 17, 1911.

Yohimbin Spiegel.

Particular description of goods.—A Remedy for Nervous Diseases.
Claims use since Dec. 16, 1899.

Ser. No. 66,654. (CLASS 5. ADHESIVES.) WILLIAM A. DAVIS Co., Boston, Mass. Filed Nov. 1, 1912. Under ten-year proviso.

TREASURY

Particular description of goods.—Mucilage, Paste, and Glue.
Claims use since Aug. 1, 1872.

Ser. No. 73,518. (CLASS 37. PAPER AND STATIONERY.) PAPER SALES COMPANY, Chicago, Ill. Filed Oct. 20, 1913.



Applicant disclaims the right to the exclusive use of the words "The Sanitary Toilet Paper."
Particular description of goods.—Toilet-Paper.
Claims use since on or about Sept. 1, 1913.

Ser. No. 80,405. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) M'S STONE GINGER BEER COMPANY, New York, N. Y. Filed Aug. 8, 1914.



All the words and letters on the drawing are hereby disclaimed apart from the mark shown on the drawing, excepting that the words or letters "U-Want-Sum," which are disclaimed as a part of the mark herein registered, are already the subject of trade-mark registration No. 98,799, dated August 4, 1914, of which this company is the owner.
Particular description of goods.—Ginger-Beer.
Claims use since prior to June 12, 1914.

Ser. No. 80,958. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE STERLING GUM COMPANY, INC., New York, N. Y. Filed Sept. 3, 1914.



Particular description of goods.—Chewing-Gum.
Claims use since about Aug. 10, 1910.

Ser. No. 82,610. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) BRECHET & RICHTER COMPANY, Minneapolis, Minn. Filed Nov. 16, 1914.

B.&R.

Particular description of goods.—Non-Alcoholic Carbonated Beverages and Syrups Used in the Making of the Same—Namely, Nectar Compound, Fruit Syrups, Apple-Cider Maker, Non-Alcoholic Coffee Liqueur, Vegetable Flavors, Fruit Extracts, Cola Extract.
Claims use since about May, 1909.

Ser. No. 82,910. (CLASS 39. CLOTHING.) DAVID S. BERNSTEIN, Vanderburg, Ind. Filed Nov. 25, 1914.



Particular description of goods.—Overalls.
Claims use since Nov. 10, 1914.

Ser. No. 82,977. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) JOSEPH H. FRIEDMAN, New York, N. Y. Filed Nov. 30, 1914.



Applicant hereby disclaims all the printed matter on the drawing submitted on this application except the words "Ladder of Success" and the monogram "J H F."
Particular description of goods.—Seam-Bindings and Bias Folds.
Claims use since Aug. 1, 1913.

Ser. No. 83,417. (CLASS 48. MALT EXTRACTS AND LIQUORS.) IGAHIKO SUMIDA, Dairi-cho, near Moji, Kiku-gun, Japan. Filed Dec. 19, 1914.



The word "Beer" in Japanese appearing on the drawing is not claimed as a part of the trade-mark.
Particular description of goods.—Beer.
Claims use since July, 1914.

Ser. No. 83,418. (CLASS 48. MALT EXTRACTS AND LIQUORS.) IGAHIKO SUMIDA, Dairi-cho, near Moji, Kiku-gun, Japan. Filed Dec. 19, 1914.



Particular description of goods.—Beer.
Claims use since July, 1914.

Ser. No. 84,846. (CLASS 39. CLOTHING.) HAMILTON CARHARTT MANUFACTURER, Detroit, Mich. Filed Mar. 1, 1915.



Particular description of goods.—Overalls and Outer Garments.
Claims use since the early part of the year 1905.

Ser. No. 85,885. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ARTHUR WOLFSOHN CO. INC., New York, N. Y. Filed Apr. 10, 1915.

No. 1118 Elbopruf

No claim being made to the word "Elbopruf."
Particular description of goods.—Brussels Silk Net.
Claims use since Feb. 1, 1915.

Ser. No. 86,268. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) M. M. GRAVES CO., INC., Houston, Tex. Filed Apr. 29, 1915.

SAXET

Comprising the word "Saxet."
Particular description of goods.—Bagging.
Claims use since Feb. 22, 1915.

Ser. No. 86,665. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AUGUST GRAUSAM, New York, N. Y. Filed May 17, 1915.

ELECTROLYT

Comprising the word "Electrolyt."
Particular description of goods.—Beverage-Powders to be Used as a Treatment for Symptoms of Congestion, Nausea, Indigestion, Summer Complaint, Heartburn, and Gastritis.
Claims use since December, 1914.

Ser. No. 86,674. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) MINIMAX FACTORIES, Chicago, Ill. Filed May 17, 1915.

MINIMAX

Particular description of goods.—Illuminated Structural Show-Window Signs.
Claims use since Jan. 25, 1915.

Ser. No. 86,706. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WORUMBO MANUFACTURING COMPANY, Lisbon Falls, Me. Filed May 18, 1915.

YAMA

Particular description of goods.—Woolen Fabrics in the Piece.
Claims use since Oct. 1, 1914.

Ser. No. 86,764. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHAPIN & COMPANY, INCORPORATED, Hammond, Ind. Filed May 20, 1915.

BICORN

Particular description of goods.—Mixed Feeds for Horses, Cattle, and Farm Stock.
Claims use since May 4, 1915.

Ser. No. 86,924. (CLASS 12. CONSTRUCTION MATERIALS.) AMERICAN TAR PRODUCTS COMPANY, Chicago, Ill. Filed May 27, 1915.



Particular description of goods.—Roofing and Paving Materials Made of or Including Tar and Pitch.
Claims use since Apr. 20, 1915.

Ser. No. 87,066. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) J. W. BUCKLEY RUBBER CO., New York, N. Y. Filed June 3, 1915.

BUCKO

Comprising the word "Bucko."
Particular description of goods.—Rubber Hose; Fiber Hose; Rubber and Fiber Hose; Rubber Belting; Fiber Belting and Rubber and Fiber Belting; Rubber Packing; Rubber Valves; Rubber Rings; Rubber Gaskets and Rubber Tubing; Rubber and Fiber Packing, Valves, Rings, Gaskets, and Tubing, and Fiber Packing, Valves, Rings, Gaskets, and Tubing.
Claims use since December, 1914.

Ser. No. 87,106. (CLASS 39. CLOTHING.) RICHMOND HOSIERY MILLS, Rossville, Ga. Filed June 4, 1915.

POCAHONTAS

Particular description of goods.—Hosiery.
Claims use since 1908.

Ser. No. 87,107. (CLASS 39. CLOTHING.) RICHMOND HOSIERY MILLS, Rossville, Ga. Filed June 4, 1915.



Particular description of goods.—Hosiery.
Claims use since 1908.

Ser. No. 87,222. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MOUNT VERNON-WOODBERRY COTTON DUCK COMPANY, Baltimore, Md. Filed June 10, 1915.

SELKIRK

Consisting of the work "Selkirk."
Particular description of goods.—Cotton Duck or Canvas.
Claims use since early in 1902.

Ser. No. 87,254. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MECHANICAL RUBBER COMPANY, Jersey City, N. J.; New York, N. Y., and Cleveland, Ohio. Filed June 11, 1915.



Particular description of goods.—Machinery Packing Composed of Rubber or Rubber Compound.
Claims use since the year 1894.

Ser. No. 87,372. (CLASS 39. CLOTHING.) STERNBERGER-GERBER CO. INC., New York, N. Y. Filed June 17, 1915.

STERNBERGER-GERBER CO. INC.
GERBER HATS
EXCLUSIVE IDEAS

No claim being made to the exclusive use of the words "Hats" or "Exclusive Ideas" apart from the mark shown in the drawing.

Particular description of goods.—Ladies', Misses', and Children's Trimmed and Untrimmed Hats.

Claims use since May, 1915.

Ser. No. 87,409. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) MILES E. BELL, Minneapolis, Minn. Filed June 19, 1915.

V-S-V

Particular description of goods.—Vapor, Steam, and Vacuum Systems of Heating.

Claims use since April, 1911.

Ser. No. 87,447. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE J. WILSON, Rochester, N. Y. Filed June 19, 1915.



Particular description of goods.—Graham, Entire-Wheat, and Table Bran Flour.

Claims use since June 2, 1915.

Ser. No. 87,501. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN MELETIS, Pittsburgh, Pa. Filed June 22, 1915.



Applicant disclaims the use of the words "Compound Hair Tonic."

Particular description of goods.—Compound Hair-Tonic.

Claims use since Feb. 1, 1915.

Ser. No. 87,535. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) PENNSYLVANIA COAL COMPANY, Scranton, Pa. Filed June 23, 1915. Under ten-year proviso.

PITTSTON COAL

Comprising the words "Pittston Coal."

Particular description of goods.—Coal.

Claims use since about Jan. 15, 1852.

Ser. No. 87,690. (CLASS 17. TOBACCO PRODUCTS.) JOHN A. MCADOO, Charlotte, N. C. Filed July 1, 1915.

GENERAL
FORD

Comprises an adhesive seal of solid red color, bearing upon its face the words "General" and "Ford," conforming in arrangement to the outlines of said seal.

Particular description of goods.—Cigars.

Claims use since May 5, 1915.

Ser. No. 87,900. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) SCOVILL MANUFACTURING COMPANY, Waterbury, Conn. Filed July 12, 1915.



Particular description of goods.—Buttons for Trousers and other Garments.

Claims use since June 18, 1915.

Ser. No. 87,982. (CLASS 39. CLOTHING.) BONWIT, TELLER & Co., New York, N. Y. Filed July 17, 1915.

"Flapper"

Particular description of goods.—Female Apparel—Namely, Suits, Coats, Dresses, Shirt and Under Waists, Petticoats, Skirts, Wraps, Leather and Canvas Shoes, Blouses, Uniforms, Trimmed and Untrimmed Hats, Sweaters, Underwear Made of Wool, Linen, Cotton, or Silk, and Lingerie.

Claims use since about March, 1913.

Ser. No. 87,992. (CLASS 39. CLOTHING.) THEODORA WORMLEY ROGERS, Columbus, Ohio. Filed July 17, 1915.

Mold

Particular description of goods.—Knitted Drawers.

Claims use since about Apr. 15, 1914.

Ser. No. 88,006. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE COMMISSION FOR RELIEF IN BELGIUM, New York, N. Y. Filed July 19, 1915.



No claim is made to the words "Dentelle Belge" apart from the mark shown in the drawing.

Particular description of goods.—Belgian Lace.

Claims use since Apr. 1, 1915.

Ser. No. 88,016. (CLASS 38. PRINTS AND PUBLICATIONS.) HOME MAGAZINE CO., Chicago, Ill. Filed July 19, 1915.

THE HOME

Particular description of goods.—A Monthly Magazine.

Claims use since March, 1915.

Ser. No. 88,033. (CLASS 39. CLOTHING.) THE TINY TOGS COMPANY, St. Louis, Mo. Filed July 19, 1915.

Tiny Togs

No claim being made to the exclusive right to the word "Togs" apart from the mark shown in the drawing.

Particular description of goods.—Hosiery, Hats, Caps, Dresses, Gowns, Coats, Blouses.

Claims use since March, 1893.

Ser. No. 88,077. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOUIS S. HAFNER, New Hampton, Iowa. Filed July 21, 1915.



The applicant, Louis S. Hafner, hereby disclaims the words "Trade Mark," as shown on the labels and drawing sent in with the application and statement.

Particular description of goods.—Sausages.

Claims use since June 1, 1915.

Ser. No. 88,104. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BIG SIX CO., Wichita, Kans. Filed July 22, 1915.

BIG SIX

Particular description of goods.—An External Application for Relief of Burns, Chapped Hands, Bruises, Sunburns, Chilblains, Sore Eyes, Insect-Bites.

Claims use since Dec. 31, 1911.

Ser. No. 88,193. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KHAN-DHU MANUFACTURING CO., Elizabeth, N. J. Filed July 26, 1915.



Particular description of goods.—Toilet Powders, Creams, Lotions, and Rouge.
Claims use since Mar. 1, 1915.

Ser. No. 88,210. (CLASS 37. PAPER AND STATIONERY.) SAUQUOIT TOILET PAPER CO., New Hartford, N. Y. Filed July 26, 1915.



No claim being made to the words "Toilet Tissue."
Particular description of goods.—Toilet-Paper.
Claims use since Oct. 31, 1913.

Ser. No. 88,214. (CLASS 37. PAPER AND STATIONERY.) SAUQUOIT TOILET PAPER CO. INC., New Hartford, N. Y. Filed July 26, 1915.



Particular description of goods.—Toilet-Paper.
Claims use since Feb. 12, 1915.

Ser. No. 88,217. (CLASS 37. PAPER AND STATIONERY.) SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y. Filed July 26, 1915.



Particular description of goods.—Toilet-Paper.
Claims use since Jan. 25, 1915.

Ser. No. 88,275. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) INDIAN MEDICINE COMPANY, Las Cruces, N. Mex. Filed July 29, 1915.

SYPH-NO-MOR

Particular description of goods.—A Medicine for the Treatment of Syphilis.
Claims use since Feb. 14, 1914.

Ser. No. 88,363. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HARRY A. KRAMER, Oil City, Pa. Filed Aug. 2, 1915.

DENEMETINE

Particular description of goods.—Tooth-Paste, Tooth-Powder, and Mouth-Wash.
Claims use since the 17th day of March, 1915.

Ser. No. 88,455. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN L. BARTELS, Chicago, Ill. Filed Aug. 6, 1915.

PORINE

Particular description of goods.—Liquid Face-Wash.
Claims use since June 12, 1910.

Ser. No. 88,472. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BOTANICAL MANUFACTURING CO., Wilmington, Del., and Philadelphia, Pa. Filed Aug. 7, 1915.

RED WING

INSECT POWDER

No claim being made for the words "Insect Powder."
Particular description of goods.—An Insect-Powder for the Extermination of Insects.
Claims use since Oct. 1, 1910.

Ser. No. 88,483. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) RUDOLF SEYKOTA, New York, N. Y. Filed Aug. 7, 1915.

BARBEREX

Comprising the word "Barberex."
Particular description of goods.—A Depilatory.
Claims use since Aug. 1, 1915.

Ser. No. 88,524. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM L. SPOOR, Redlands, Cal. Filed Aug. 10, 1915.

FIGARETS

Particular description of goods.—A Laxative Confection.
Claims use since Mar. 1, 1915.

Ser. No. 88,599. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland. Filed Aug. 13, 1915.

SISTOMENSIN

Particular description of goods.—A Pharmaceutical Product Prepared from the Corpus Luteum and Particularly Applicable Against Menorrhagies Not Caused by Organical Changes of the Genitals, Loss of Blood Caused by Puberty, Exceptionally Long and Strong Loss of Blood During the Menstruation, Pains During the Menstruation Not Caused by Stenosis.
Claims use since Mar. 22, 1915.

Ser. No. 88,600. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland. Filed Aug. 13, 1915.

AGOMENSIN

Particular description of goods.—A Pharmaceutical Product Prepared from the Corpus Luteum and Particularly Applicable Against Amenorrhea and Hypoplasy by the Genitals, Sterility Caused by Hypoplasy, Also Disappearance of the Menstruation.
Claims use since Mar. 22, 1915.

Ser. No. 88,601. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland. Filed Aug. 13, 1915.

SORCYM

Particular description of goods.—A Pharmaceutical Product Prepared from Healthy Pathologically-Changed Organs and Particularly Applicable for Therapeutical Purposes, as Treatment for Diseased Organs, Such as Cancer and Tuberculosis.
Claims use since June 25, 1915.

Ser. No. 88,645. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) FERDINAND GUTMANN & Co., New York, N. Y. Filed Aug. 16, 1915.

AJAX

Particular description of goods.—Bottle-Seals.
Claims use since Aug. 3, 1915.

Ser. No. 88,691. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) NORTHWEST FRUIT PRODUCTS CO., Salem, Oreg. Filed Aug. 19, 1915.

Loju

Particular description of goods.—A Non-Alcoholic Beverage Containing the Essential Principles of the Loganberry.
Claims use since July 26, 1915.

Ser. No. 88,720. (CLASS 48. MALT EXTRACTS AND LIQUORS.) UNITED STATES BREWING CO. OF CHICAGO, Chicago, Ill. Filed Aug. 20, 1915.

Jus-Rite

Particular description of goods.—Malt Liquor Containing Less Than One-Half of One Per Cent. Alcohol.
Claims use since July 1, 1915.

Ser. No. 88,738. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ELEANOR MILLER HERRICK, San Francisco, Cal. Filed Aug. 21, 1915.

Sybil Sepstead's

The trade-mark consists of the name "Sybil Sepstead's" written in characteristic handwriting.
Particular description of goods.—Cold-Cream.
Claims use since Jan. 1, 1915.

Ser. No. 88,835. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ELITE GLASS CLMANER COMPANY, Detroit, Mich. Filed Aug. 27, 1915.

ELITE

Particular description of goods.—Glass-Cleaner.
Claims use since Aug. 7, 1915.

Ser. No. 88,844. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) ROGERS BROTHERS & KEVAN, Petersburg, Va. Filed Aug. 27, 1915.

PARAMOUNT

Particular description of goods.—Trunks, Bags, and Suitcases.
Claims use since May 1, 1915.

Ser. No. 88,933. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) MACK WILSON, Columbus, Ohio. Filed Aug. 31, 1915.

BUCKEYE

Particular description of goods.—A Wall-Paper Cleaner.
Claims use since Feb. 1, 1915.

Ser. No. 88,935. (CLASS 37. PAPER AND STATIONERY.) ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y. Filed Sept. 1, 1915.

Climax

Particular description of goods.—Toilet-Paper.
Claims use since Sept. 13, 1893.

Ser. No. 88,936. (CLASS 37. PAPER AND STATIONERY.) ALBANY PERFORATED WRAPPING PAPER COMPANY, Albany, N. Y. Filed Sept. 1, 1915.

EXPRESS

Particular description of goods.—Toilet-Paper.
Claims use since Apr. 9, 1890.

Ser. No. 89,149. (CLASS 48. MALT EXTRACTS AND LIQUORS.) FRED MILLER BREWING CO., Milwaukee, Wis. Filed Sept. 11, 1915.



Particular description of goods.—Beer.
Claims use since Sept. 8, 1915.

TRADE-MARK REGISTRATIONS GRANTED

OCTOBER 5, 1915.

106,071. TALCUM POWDER, FACE-POWDERS, AND SACHET-POWDER, TOILET WATERS, AND PERFUMES. A. P. BABCOCK CO., New York, N. Y.
Filed March 27, 1915. Serial No. 85,466. PUBLISHED JUNE 8, 1915.

106,072. ROLLED OATS. THE CORNO MILLS COMPANY, East St. Louis, Ill.
Filed January 28, 1915. Serial No. 84,161. PUBLISHED APRIL 27, 1915.

106,073. NON-ALCOHOLIC CARBONATED BEVERAGE AND THE SYRUP FOR MAKING SAME. HARVEY C. FERGUSON, Cornelia, Ga.
Filed March 24, 1915. Serial No. 85,365. PUBLISHED APRIL 20, 1915.

106,074. FIXTURES FOR ELECTRIC LIGHTS. LUMINOUS UNIT COMPANY, St. Louis, Mo.
Filed June 1, 1915. Serial No. 87,020. PUBLISHED AUGUST 8, 1915.

106,075. PLUG, TWIST, CUT PLUG, SMOKING-TOBACCO, AND LEAF-TOBACCO. MACLIN-ZIMMER-McGILL TOBACCO CO., INCORPORATED, Petersburg, Va.
Filed October 26, 1914. Serial No. 82,177. PUBLISHED MARCH 9, 1915.

106,076. PLOWSHARES. MATTHEW MARES, Racine, Wis.
Filed May 15, 1915. Serial No. 86,647. PUBLISHED AUGUST 3, 1915.

106,077. CANNED FISH AND VEGETABLES. JOSEPH HOWARD MERCIAN, New York, N. Y.
Filed October 18, 1913. Serial No. 73,486. PUBLISHED FEBRUARY 10, 1914.

106,078. CHEWING-GUM. THOMAS J. MULCAHY, Winthrop, Mass.
Filed April 2, 1915. Serial No. 85,644. PUBLISHED JUNE 8, 1915.

106,079. RUBBER TIRES AND TUBES. THE NATIONAL TIRE COMPANY, Trenton, N. J.
Filed April 16, 1914. Serial No. 77,513. PUBLISHED AUGUST 4, 1914.

106,080. PURE OLIVE-OILS. AGOSTINO NOVARO, Oneglia, Italy.
Filed January 28, 1913. Serial No. 68,167. PUBLISHED OCTOBER 13, 1914.

106,081. CANDY. POWELLS, New York, N. Y.
Filed June 16, 1913. Serial No. 71,138. PUBLISHED DECEMBER 2, 1913.

106,082. INCUBATORS. SPRATT'S PATENT (AMERICA) LIMITED, London, England, and Newark, N. J.
Filed April 1, 1914. Serial No. 77,135. PUBLISHED MARCH 23, 1915.

106,083. CERTAIN NAMED FOODS. FRANK B. SULLIVAN, Boston, Mass.
Filed January 2, 1914. Serial No. 74,947. PUBLISHED APRIL 27, 1915.

LABELS

REGISTERED OCTOBER 5, 1915.

18,783.—*Title:* "AUTO CITY." (For Beer.) AUTO CITY BREWING CO., Detroit, Mich. Filed August 28, 1915.

18,784.—*Title:* "TROPHY WON FEBRUARY 25TH 1915 AT THE AMERICAN ART LEAGUE." (For Gowns and Suits.) WINNIFRED BURNS, Duluth, Minn. Filed July 29, 1915.

18,785.—*Title:* "PERSONAL RECORD." (For Sound-Records for Talking-Machines.) COLUMBIA GRAPHOPHONE CO., Washington, D. C. Filed August 21, 1915.

18,786.—*Title:* "POTTERY." (For Earthenware Pottery.) JAMES J. DALE, Trenton, N. J. Filed August 3, 1915.

18,787.—*Title:* "GOOD SCOUT." (For a Confection.) DIRNBERGER POP CORN CO., Buffalo, N. Y. Filed August 23, 1915.

18,788.—*Title:* "HOME DRY CLEANER." (For a Cleaning Compound.) H. B. HUTCHENS and ERNEST MERLE GRAVES, Wabash, Ind. Filed August 31, 1915.

18,789.—*Title:* "KIR-MER." (For a Cleaner.) MARY E. KIRCHUEBEL, Camden, N. J. Filed July 7, 1915.

18,790.—*Title:* "KARINA." (For Cigars.) FRANKLIN MACVEAGH & COMPANY, Chicago, Ill. Filed September 3, 1915.

18,791.—*Title:* "CRYSTOLON." (For Grinding-Wheels.) NORTON COMPANY, Worcester, Mass. Filed August 25, 1915.

18,792.—*Title:* "ALUNDUM." (For Grinding-Wheels.) NORTON COMPANY, Worcester, Mass. Filed August 25, 1915.

18,793.—*Title:* "RANDALL BROS. LINIMENT." (For a Liniment.) RANDALL BROTHERS COMPANY, Tacoma, Wash., and Alhambra, Cal. Filed July 15, 1914.

18,794.—*Title:* "PARKWOOD BRAND." (For Canned Peaches.) THE TIEDTKE BROS. CO., Toledo, Ohio. Filed July 16, 1914.

18,795.—*Title:* "A HEALTHFUL DRINK." (For a Beverage.) LIME-KOLA CO., Culpeper, Va. Filed May 28, 1915.

PRINTS

REGISTERED OCTOBER 5, 1915.

4,071.—*Title:* "MARKER FOR PUBLIC ROADS." (For Markers for Public Roads.) JOHN H. BEESON, Crawfordsville, Ind. Filed June 25, 1915.

4,072.—*Title:* "THE MAGIC OF EFFICIENCY." (For an Electric Iron.) CONSOLIDATED GAS, ELECTRIC LIGHT & POWER COMPANY OF BALTIMORE, Baltimore, Md. Filed July 6, 1915.

4,073.—*Title:* "CLEANING—THE NEW WAY." (For an Electric Vacuum-Cleaner.) CONSOLIDATED GAS, ELECTRIC LIGHT & POWER COMPANY OF BALTIMORE, Baltimore, Md. Filed July 6, 1915.

4,074.—*Title:* "THE ORIOLE HEATER." (For a Gas Water-Heater.) CONSOLIDATED GAS, ELECTRIC LIGHT & POWER COMPANY OF BALTIMORE, Baltimore, Md. Filed July 6, 1915.

4,075.—*Title:* "COOKING IN COMFORT." (For a Gas-Range.) CONSOLIDATED GAS, ELECTRIC LIGHT & POWER COMPANY OF BALTIMORE, Baltimore, Md. Filed August 27, 1915.

4,076.—*Title:* "BURN YOUR REFUSE BEFORE IT BECOMES FILTH." (For a Garbage-Incinerator.) CONSOLIDATED GAS, ELECTRIC LIGHT & POWER COMPANY OF BALTIMORE, Baltimore, Md. Filed August 27, 1915.

4,077.—*Title:* "COOK IN COMFORT." (For a Gas-Range.) CONSOLIDATED GAS, ELECTRIC LIGHT & POWER COMPANY OF BALTIMORE, Baltimore, Md. Filed August 27, 1915.

4,078.—*Title:* "INDEPENDENT OF THE GARBAGE MAN." (For a Garbage-Incinerator.) CONSOLIDATED GAS, ELECTRIC LIGHT & POWER COMPANY OF BALTIMORE, Baltimore, Md. Filed August 27, 1915.

4,079.—*Title:* "BLUE MONDAY." (For an Electric Washing-Machine.) CONSOLIDATED GAS, ELECTRIC LIGHT & POWER COMPANY OF BALTIMORE, Baltimore, Md. Filed September 3, 1915.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

U. S. Circuit Court of Appeals—Second Circuit.

STANDARD TYPEWRITER CO. *v.* STANDARD FOLDING TYPEWRITER SALES CO. *et al.*

Decided April 29, 1915.

223 FED. REP., 779.

PATENTS—ANTICIPATION—TYPE-WRITER.

The Rose patent, No. 754,242, for a type-writer, claims 1 and 5, the distinguishing feature of which is the provision of means whereby the platen and its carriage may be folded into compact relation to the banks of keys, giving the machine a compact form for purposes of transportation, *Held* void for anticipation by the device of the Carmona patent, No. 661,849.

APPEAL from the District Court of the United States for the Southern District of New York.

STATEMENT OF THE CASE.

This cause comes here upon an appeal from a decree entered in the United States District Court for the Southern District of New York on December 2, 1913, which refused an injunction to the Standard Typewriter Company, plaintiff, restraining the Standard Folding Typewriter Sales Company *et al.*, defendants, on charges of infringement of claims 1 and 5 of Letters Patent of the United States No. 754,242 and claims 1, 2, 3, 4, 5, 6, and 7 of Letters Patent of the United States No. 948,553.

The Standard Typewriter Company is a corporation organized and existing under the laws of the State of New York. The Standard Folding Typewriter Sales Company is a corporation also organized and existing under the laws of the State of New York. James A. Whitcomb, Eugene E. St. Germain, and Arthur W. Buckwell are citizens of the United States, and of the State of New York, and each of the defendants resides in the southern district of New York and has a regular and established place of business in said district.

Patent No. 754,242 was granted to F. S. Rose on March 8, 1904, for a type-writing machine. And Patent No. 948,553 was granted to F. S. Rose, deceased, G. F. Rose administrator, on February 8, 1910. The first of these patents was, through mesne conveyances, assigned to the complainant, and by assignment complainant also claims the exclusive right to make, use, and vend the inventions and discoveries patented in and by Letters Patent No. 948,553. A suit was brought to restrain the alleged infringement of both patents. A motion for a preliminary injunction was made and was granted as to claims 1 and 5 of Patent No. 754,242 but was denied as to Patent No. 948,553.

An appeal was taken to this court from an order granting the injunction as to the first patent and the order granting the injunction was affirmed. (181 Fed., 500.) Subsequent to the granting of the preliminary injunction defendant discovered the Carmona patent, No. 661,849, which had been granted prior to the patents issued to Rose. Upon motion of defendants an order was made amending the answer to include the Carmona and other patents among those which defendants alleged fully and clearly described the inventions, or substantial and material parts thereof, claimed under the patents in suit.

The case came on for hearing under the amended answer, and, after taking of testimony, it was decided that claims 1 and 5 of Patent No. 754,242 were anticipated by the Carmona patent, and that claims 1 to 7 of Patent No. 948,553 were invalidated by the Sholes patent, No. 568,630, and so much of the bill of complaint as related to these claims was dismissed. The defendants conceded at the trial that claims 35 and 44 of Patent No. 948,553 were valid, and a perpetual injunction was ordered to prevent their infringement by the defendants, who were also ordered to account to plaintiff for profits and damages as to those particular claims.

The preliminary injunction previously granted was vacated.

Mr. William R. Davis, Mr. Charles S. Jones, and *Mr. Livingston Gifford* for the appellant.

Mr. Julian S. Wooster and *Mr. Clifton V. Edwards* for the appellees.

Before COXE, WARD, and ROGERS, Circuit Judges.

ROGERS, *Cir. J.*, (after stating the facts as above:)

This case involves the validity of the Rose patent, No. 754,242, for improvements in type-writers. The patentee realized that it would meet with public favor and answer a public need if a type-writing machine could be so constructed that it could be conveniently and readily transported or carried from place to place as part of one's ordinary hand-baggage. To meet the demand for such a machine, the patentee made a machine that was light in weight and capable of being folded into a compact package, but which could also be readily unfolded into operative condition. The folding and unfolding character of the machine was secured by means that in no way interfered with the proper operative functions of the parts. The folding capacity was obtained by minimizing the cubical dimensions of the machine without disorganizing or disassembling the parts. An unmechanical operator could turn the parts into their folded positions and secure less cubical dimensions for transportation purposes, and could also, by turning them into their unfolded operative position, have the parts at once ready for use.

Mr. Rose states in his specification that his invention relates to improvements in type-writers, in which he seeks—

to produce a new construction of the support or carriage for the type-platen or cylindrical roller which enables the same to be folded into compact relation to the keyboard, thus making provision for ready and convenient transportation of the instrument.

The folding of the platen-carriage reduced the height of the machine and made a very compact package, with all the delicate parts of the operative mechanism below the upper bars of the machine when the carriage was in its folded position. The machine was thus rendered transportable in a small

and convenient package. At the same time the delicate operating parts were protected by the upstanding and horizontal bars of the frame and carriage-support.

When this cause was before us in 1910, the question was whether the court below committed error in granting a preliminary injunction restraining the defendants from infringing the patent. We then held no error had been committed and sustained the injunction notwithstanding the patent in suit had never been adjudicated, as we thought the case came within well-recognized exceptions to the rule that an injunction will not issue upon an unadjudicated patent. In the opinion of the court written by Judge Noyes we said:

Now it is old in many arts to fold devices in order to obtain compact packages for storage or transportation. Thus patents for folding cameras, folding gocarts, folding organs, and folding wheelchairs are shown upon the record. If, however, these devices in other arts would negative invention in going into the typewriter art and applying the folding principle, it does not follow that the present patent is invalid. It may well be that the folding principle is so old that a patent merely for folding parts of typewriters upon other parts would possess no patentable novelty. But this patent is for the folding of a specific part, the platen carriage, into specific (overhanging) relation to another part, the keyboard, for a specific purpose, obtaining a compact and safe package. We think that it is not shown to be invalid by anything in arts other than that of the typewriter, and that we must look to that art if we are to find anticipation, or such a state thereof as negatives invention.

But before the case came on for final hearing the defendants discovered the Carmona patent, No. 661,849, and upon motion an order was made amending the answer to include it and certain other patents which need not now be mentioned.

Manuel S. Carmona was a citizen of the Republic of Mexico, where he resided. On February 2, 1900, he filed in the United States Patent Office an application for a patent for a new and improved typewriter and the patent was issued to him on November 13, 1900. This patent was regarded in the court below as an anticipation of the claims made in the Rose patents. And the question which is now presented to the court is whether the court below was justified in its conclusion that claims 1 and 5 of the Rose patent were anticipated by Carmona and were void. Frank S. Rose, at the time he applied for his patents, was a resident of Newark, in the State of New Jersey. In his specification upon which Patent No. 754,242 was issued, Rose declared:

The important features of the present invention is the provision of means whereby the platen and its carriage may be folded into compact relation to the banks of keys, thus making provisions for convenient transportation of the instrument. In carrying out this part of the invention I employ a foldable sectional construction of a frame adapted to support the carriage and the platen, and in the drawings this frame is shown as consisting of two main parts, one of which is carried by the adjustable stems 9, while the other part is pivoted to the nonfoldable part and serves as a track for the platen carriage. The nonfolding part of the carriage frame thus far described consists of arms, 22, 23, arranged in horizontal positions to extend from the front sides of the stems 9 and having their rear portions secured firmly to said stems. The folding part of the carriage frame consists of arms 24, 25 and a baseplate 26. Said arms 24, 25 of the folding member of the carriage frame normally lie alongside of the arms 22, 23, and the two pairs of arms are pivoted directly together, as at 27, in any suitable way. Said pivoted arms 24, 25 are arranged to rest upon the arms 22, 23 when the carriage and the platen are adjusted in their operative positions, as in Figs. 1 to 4, inclusive, thus sustaining the two parts of the frame in compact relation and skeletonizing the frame, so that the type-levers may work between the arms in a way to strike against the platen 10.

He defined claim 1 of the patent as follows:

1. In a typewriter, a foldable support for a platen carriage having one of its members movable to an abnormal position in overhanging relation to a keyboard.

And he defined claim 5 of the patent as follows:

5. In a typewriter, the combination of a two-part foldable support and a carriage provided with a platen and mounted on the adjustable member of said support; said carriage and the adjustable member being movable into overhanging relation to a keyboard.

These two claims are the only ones in the patent that are alleged to have been infringed by defendants.

The important feature of the patent has been stated. It is properly set forth by the patentee in the language quoted from his specification:

The provision of means whereby the platen and its carriage may be folded into compact relation to the banks of keys.

It is this feature which is specified in claims 1 and 5. And when the case was before this court this was the feature which we pointed out as the distinguishing feature of the patent. If this distinguishing feature is found in the prior Carmona patent it necessarily invalidates the patent.

The sole question of importance is whether the Carmona patent clearly discloses in a type-writer a folding support for a platen-carriage having one of its members movable to an abnormal position in overhanging relation to a keyboard, as specified in claim 1, or a two-part foldable support and a carriage and platen mounted on the adjustable member of the support and the carriage, the adjustable member being movable into overhanging relation to a keyboard, as specified in claim 5.

Carmona, in his specification upon which Patent No. 661,849 was issued, declared:

My invention relates to typewriters of that class in which a small number of keys (for instance, five) is employed, which by their use, either singly or in combination, govern the action of the type-locating mechanism and of a printing device. One object of my present invention is to provide means for locating the type which will be positive in action and which will not be liable to deteriorate by wear, and a further arrangement of the parts, so that the movement of the carriage will be relatively slight, and to provide an improved mechanism for effecting the impression.

He then proceeded:

The typewriter box or casing consists of an L-shaped section 20, which forms the rear wall and the bottom wall of the typewriter box when closed, and another L-shaped section 21 which, when the box is closed, forms the front and top walls thereof. Journaled in bearings 22 on the section 20 is a shaft 23, extending lengthwise of the typewriter box, and on said shaft is suspended so as to turn therewith the section 21. At the end of the shaft are arranged beveled pinions 24 which engage similar pinions 25, arranged upon transverse shafts 26, which are journaled in the section 20; said shafts having rigidly attached thereto end pieces 27. These end pieces are adapted to form feet for supporting the section 20, as shown in Figures 6 to 9. It will be understood that when the section 21 is folded upward the shaft 23, with the pinions 24, will be turned, and this will cause the shafts 26 to turn also, so that the ends 27 will be folded upward to close the box formed by the sections 20, 21. Similarly when the section 21 is folded down into the position shown in the drawings the ends 27 will automatically assume the positions shown.

The Carmona patent is a complicated one, and covers a very complicated structure. The typewriter construction consists of five keys, which serve to operate the type-carriage, moving it longitudinally. The type-carriage is mounted in front of the platen and is moved bodily longitudinally to bring any one of the type-bars opposite the printing-point, and throws a hammer below the center of the carriage, when in a normal position, to move the

type to printing-point. The platen is mounted on a support and is moved to an upper or lower or intermediate position, as the case may be, to receive the impression of one, two, or three type characters on each of the type-bars. It was supposed to be held by friction in its upper position, that being its normal position, and to be lowered into an intermediate and lower position by means of two keys at one side of the machine. The platen is rotated by an arm with a ratchet-ball connection with the platen and by a thumb-piece on the end. It is operated by means of the bell-crank and gear connection, with slide operated by the depression of the key. On each depression of the key the escapement mechanism operates to move the platen one letter-space, and at the end of the word the space-key is operated to cause the movement of the platen a double space, to make the space between the words. Each of the keys has a pin projecting therefrom and works to confine the pins in operated relation with the straight and inclined slots of the sections of the type-locating bar. On the depression of a key the pin takes the thrust and the entire energy of movement necessary to be imparted to the type basket or carriage, the rack, and the associating parts.

The type-writer manufactured under the Rose patent and sold under the name of Standard Folding Typewriter has the features of the modern type-writer and is easy and convenient to operate. The type-writer made under the Carmona patent had only a small number of keys (five), which by their use either singly or in combination governed the action of a type-locating mechanism and of a printing device. The key action of the Carmona machine is very different from the key action of the Rose machine and of the modern type-writers with which the public is to-day familiar. The mechanism for combining these five keys into the necessary number of letters is a complicated one, and the greater part of Carmona's disclosure consisted of a description of the operation of the keyboard and type-carriage. The Carmona machine appears to have been a difficult one to operate. There were seven characters which required all five keys to be pressed at once. This could be done by pressing down "with the entire arm or hand."

The key action of the two machines, however, does not now interest us. The Rose machine is, as we have seen, foldable, and so is the Carmona machine. And it is with the foldability of the two machines that we are concerned. The main object of the Rose device as of the Carmona device is the foldability of the machine. In the Carmona machine the carriage mechanism is entirely supported by one member of the box and the key mechanism by another; the two parts being hinged at one corner. In the machine of the Carmona patent the platen-support consists of two parts. In the machine of the Rose patent the platen-support also consists of two parts. In the Carmona machine the frame is divided into "sections 20, 21," which are hinged together at 23. One of these parts 20 carries the platen and the other part 21 carries the keyboard. In the Rose machine the frame is divided into two parts, consisting of the plate 26 and arms 24 carrying the platen, and the part 5 carrying the keyboard; these parts being hinged together at 27. Claims 1 and 5 of the Rose patent describe the arrangement as a foldable support for a platen-carriage, one of whose members (26 in the Rose patent and 20 in the Carmona patent) is movable to an abnormal position in overhanging relation to a keyboard. In our opinion the function of Carmona's part 20 is the function of Rose's parts 26 and arms 24, and the function of Carmona's part 21 is the function of Rose's part 5. The function of Carmona's part 21 and Rose's part 5 is to support the keyboard, and the function of Carmona's part 20 and Rose's part 26 is to support the platen-carriage. We think no valid distinction can be drawn between Rose and Carmona as regards the specific type-writer mechanism parts carried by the respective platen-supports. In both machines the foldable platen-carriage support carries the escapement-rack, the line-spacing knob, the bell and mechanism for ringing the same when the platen-carriage approaches the end of the line, and the tension-spring to draw the platen-carriage toward the end of the line. In the Carmona machine the foldable platen-carriage support has a key for operating dogs to accomplish word-spacing, and a key to lower platen to the lowest position, and a key to bring the platen to intermediate position. And in the Rose patent the same support has a key at the right of the platen to release the escapement, and a key at the left to release the grip of the paper.

There is nothing in the Rose patent to confine its claims to a "standard" machine, nor to a machine with a "universal" keyboard. There is no indication or suggestion that its claim is limited to a universal keyboard. And there is no attempt to define what constitutes a "standard" machine or a "universal" keyboard. We cannot discover that the patent has anything to do with the specific character of the keyboard. The question of the validity of the patent and the question of the infringement of the patent is obviously not to be determined by the number of the keys constituting the keyboard, or by the number of the parts of the type-writer mechanism added to the foldable part of the platen-support.

It is a matter of no consequence, for the purposes of this case, whether the type-bars are carried by one or the other part of the foldable suppport, or whether or not the particular mechanism for causing the keys to operate the type-bars is identical, or whether the keyboard contains five or twenty-five keys, or whether the platen-support is skeletonized so as to expose some of the parts even when the machine is folded, or unskeletonized so as to completely inclose the entire mechanism when folded, or whether Carmona's platen-support is a "box" and Rose's support is a "frame," or whether the operator folds the foldable part of the platen-support down toward the keys or the keys up toward the platen. The one vital and important fact which stands out above all else is that in both of

these type-writer machines the platen-support is foldable into overhanging relation with the keyboard. It is that fact which is decisive of this case, because it is that feature which is the subject of claims 1 and 5 of the Rose patent, and it is that feature which is clearly disclosed in the prior Carmona patent.

The complainant's expert was asked on cross-examination what was meant in the Rose patent by the words in claim 1 "overhanging relation to a keyboard." He answered:

> In the patent in suit, 754,242, this foldable character of the platen carriage support into overhanging relation with the keyboard has for its purpose primarily to bring the parts into such relation that the cubic dimensions of the instrument may be decreased in order to form a compact package convenient for shipment or transportation. A further object sought by the described characteristic is to provide a proper framework protection for the delicate parts of the typewriter instrument during such transportation. Viewing the phrase quoted by your question in the light of the purposes and functions sought by the patentee, it is my opinion that these words mean not necessarily the relative position noted by your question, but generally any position of the platen carriage support with relation to the keyboard of the typewriter substantially to secure the objects sought.

The purpose thus defined was as fully accomplished in the Carmona patent by the folding of the machine as it was in the Rose patent.

It has been urged upon us in the argument that the Carmona device has been found commercially impracticable, and the machine has not been manufactured. One of the experts testified that he regarded the device as practical. He said, "I don't consider it an impractical device at all." He was asked, however:

> Have you ever seen a machine, other than this model, built on the lines of the Carmona patent that we have been talking about?

To which he replied:

> I have seen another machine which has a key action similar to this Carmona patent, but I have never seen any other machine made to fold like this model in the Carmona patent.

And it was further brought out that the machine he had seen was not a Carmona machine. It simply had a key action which was of the same general character as that of the Carmona machine. It must be conceded that the Carmona patent is a mere paper patent, but a machine constructed under it is shown to have been capable of a limited, successful, practical operation. The patent is subject to the principle which we announced in *Van Epps* v. *United Box Board & Paper Co.*, (143 Fed., 869, 874; 75 C. C. A., 77, 1906,) when we said:

> Where such patents, or the machines constructed under them, embody the principle covered by a later patent, the mere fact that they are not capable of successful practical working because of objections as to the minor matters of detail in construction will not deprive them of their effect as defenses where they sufficiently disclose the invention claimed in the later patent. (*Pickering* v. *McCullough*, 104 U. S., 310, 319; 26 L. Ed., 749.)

The present suit is said to be another instance of an attempt to defeat a valuable invention by an abandoned "rusty relic." And our attention has been called to a decision which this court made in *United Shirt & Collar Co.* v. *Beattie*, (149 Fed., 736, 1907,) in which it was said through Judge Coxe that—

> If Pine did nothing more than take an old abandoned failure and by the introduction of new and ingenious features, no matter how simple they may be, convert the rusty relic into a living machine, which does the required work better, faster, cheaper than it was ever done before, he is entitled to the protection which his patent is intended to give.

The circumstances of this case are so unlike the circumstances of that case as to make what was said in that case inapplicable to the facts of this. In that case the Boxley patent, which was the "rusty relic" alluded to, failed to disclose all the elements involved in the Pine device, and this fact, as the court declared, removed it at once from the list of anticipating references. In the case at bar the "rusty relic" of the Carmona patent discloses, in the opinion of the court, the distinguishing feature of the Rose patent.

The thought of making a type-writer foldable can hardly be regarded as a substantial novelty, in view of the well-known practice of making numberless similar articles foldable, from pocket-knives to bicycles, including folding cameras, folding wheel-chairs, folding beds, folding baby-carriages, folding telegraph instruments, and many other articles. The purpose in all such cases has been to bring an extended article into a compact form, occupying little space for convenient transportation.

The problem of so placing the parts of a type-writer in a compact form that it could be easily packed in a small case and transported from place to place was not a particularly difficult one to solve. It required some ingenuity but nothing more. This ingenuity Rose exercised. But this ingenuity, as we have seen, had previously been exercised by Carmona. He had folded a similar machine in a similar way and for a similar purpose. The broad idea is clearly shown by Carmona. His claims read directly on Rose's device, and, being before Rose, his device anticipates. It may be conceded that the Rose type-writer is much the better type-writer. Carmona's machine may have been clumsy and inefficient and commercially unsuccessful; nevertheless, the broad idea of foldability was fully disclosed. The foldable support was there. It had one of its members movable to an abnormal position in overhanging relation to the keyboard.

In the machine of the Carmona patent the keyboard is a perfectly definite thing and stays in its position when the type-writer is folded. The essential essence of the Rose invention, compactness, foldability, the protection of the inner parts, are all present in both the Carmona and the Rose machines. Carmona and Rose reached the same general result—safe portability. And each reached it in the same way—by folding and unfolding the platen-carriage over the keyboard.

We do not find it necessary to enter upon any discussion of the second Rose patent.

Decree affirmed.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Paradice patent, No. 758,099, for a hose-joiner, *Held* not anticipated, valid, and infringed. *Stuber* v. *Central Brass & Stamping Co.*, 224 Fed. Rep., 712.

(U. S. C. C. A.) The McWilliams patent, No. 920,490, for a panel-board for electrical power distribution, *Held* not anticipated, valid, and infringed. *Beachey & Lawlor* v. *McWilliams*, 224 Fed. Rep., 717.

(U. S. C. C. A.) The Farrar and Clark patent, No. 952,876, for a door for silos, *Held* not anticipated, valid, and infringed. *Lawless* v. *Woods*, 224 Fed. Rep., 722.

In re Foreign Patents, Trade-Marks, Etc.—Taxes, Fees, Etc.

AUSTRIA.

III. Ordinance of the Ministry of Public Works, with the approval of the Ministries of Commerce and of Justice, as a supplement to the ordinance of September 24, 1914, establishing exceptional provisions in the matter of trade-marks. (*Reichsgesetz-Blatt* No. 257.)

(Of June 24, 1915.)

By virtue of the imperial ordinance of August 29, 1914, (*Reichsgesetz-Blatt* No. 227,) concerning the effects of the state of war on time limits, forfeitures and proceedings, it is hereby ordered:

SECTION 1. For the renewal of trade-marks which, under the term of section 16 of the law on trade-marks of January 6, 1890, (*Reichsgesetz-Blatt* No. 19,) should have been renewed since July 26, 1914, in order to keep the right to the trade-mark alive, an extension is hereby granted for a term of three months from and after the date to be fixed by a future ordinance.

SEC. 2. This ordinance shall go into force on the date of its publication (published June 27, 1915).

The ordinance of December 24, 1914, (*Reichsgesetz-Blatt* No. 355,) shall be abrogated from and after the same date.

HOCHENBURGER, M. P.
TRNKA, M. P.
SCHUSTER, M. P.

NORWAY.

III. Royal decree extending the supplemental term fixed for the payment of annual taxes on patents provided by article 6 of the law on patents of June 16, 1885, and article 14 of the law of July 2, 1910.

(Of June 18, 1915.)

By virtue of the law of June 18, 1915, concerning the temporary extension of the supplemental term fixed for the payment of annual taxes on patents provided by article 6 of the law on patents of June 16, 1885, and article 14 of the law of July 2, 1910, it is hereby ordered as follows:

The supplemental term of three months fixed by article 6, 3d paragraph, of the law on patents of June 16, 1885, and article 14, 2d paragraph, of the law of July 2, 1910, for the payment of annual taxes on patents is hereby extended to nine months in the case of patents the annual tax on which falls due between October 1, 1914, and June 30, 1915, inclusive, and until March 31, 1916, in the case of patents the annual tax on which will fall due between July 1 and December 30, 1915, inclusive.

SWEDEN.

Royal ordinance granting an extension for the payment of certain taxes relative to patents.

(Of May 25, 1915.)

We, Gustavus, by the grace of God King of Sweden, the Goths and Wends, hereby give notice that:

Having heard the delegates of the National Bank and of the Administration of the Public Debt, and by virtue of the law of September 18, 1914, concerning the extensions granted for the payment of debts (*moratorium*), we deem it expedient to ordain as follows:

The holders, settled outside of the Kingdom, of patents for which the tax accrued thereon, under section 11 of the ordinance of May 16, 1884, on patents, shall become due between June 1 and September 30, 1915, shall enjoy for the payment of such tax an extension of three months from the latest date on which such tax should be paid under the terms of the section cited above.

This ordinance shall go into force June 1, 1915,

To which all whom it may concern shall conform. In witness whereof we have signed these presents with our own hand and caused our royal seal to be affixed thereto.

Castle of Stockholm, May 25, 1915.

GUSTAVUS. [L. S.]
BERNDT HASSELROT,
Minister of Justice.

Requirements for Applications in Russia.

DEPARTMENT OF STATE,
Washington, September 20, 1915.

The Honorable the Secretary of the Interior.

SIR: There is inclosed herewith, for your information, a copy of a despatch No. 221 of August 26 last, in regard to the requirements of the Russian Government concerning the establishment of the American citizenship of persons applying for patents or registration of trade-marks in Russia.

I have the honor to be, sir, your obedient servant,

(Signed) FRANK L. POLK,
Acting Secretary of State.

EMBASSY OF THE UNITED STATES OF AMERICA,
Petrograd, August 26, 1915.

The Honorable the Secretary of State, Washington.

SIR: I have the honor to acknowledge the receipt of your instructions No. 194 of June 15, 1915, and No. 210 of July 19, 1915, inclosing information and suggestions in regard to the requirements of Americans endeavoring to register a patent in Russia.

In conformity with the instructions under No. 194, your suggestions were brought to the attention of the Foreign Office, but so far no answer has been received. Upon the receipt of your No. 210, the members of the committee charged with the examination of foreign applications for patents in war time, were personally approached. The representative of this committee stated that all that is necessary is for the Russian consul in the country of the applicant to satisfy himself of the *bona fide* citizenship of the latter. A translation of the letter of June 5th 1915, addressed to the Department * * * was shown to him and particular emphasis was laid upon the clause which states that the declaration must be duly authenticated by the Secretary of State and subsequently legalized by the Russian consul. In reply he stated that it was merely necessary for the consul to acknowledge the signature of the notary public, in support of which contention he adduced a copy of an application for a British patent which, he stated, had been granted and which runs as follows:—

"No. 58648. In the matter of the application for patent in Russia lodged 27th June/10 July 1913, No. 58648, in the name of Victor John Engbert of 3 Mills Lane Bromley by Bow, London, England, for improvements on floor coverings.

"I, the above named Victor John Engbert do hereby declare that I am a subject of the King of Great Britain and that I carry on business at No. 3 Mills Lane, Bromley by Bow, London, England.

(Signed:) VICTOR J. ENGBERT.

"Declared by the said Victor John Engbert at my office No. 9 Bishopsgate in the city of London, England, this 29th day of June 1913. Before me *Quod vide*

(Signed) E. COURTNEY WALKER,
Notary Public.

(Seal Not. Pub.) (Stamp of Not. Pub.)
(1/— stamp).

Certification of consul general Russia, as to the exact signature of notary public.

(Seal. Signature of consul)
(3 Rs. stamp)."

It was pointed out that the notary public had not certified to the citizenship of the applicant, but merely that he had sworn on a certain date to a certain purport. The representative of the committee again gave assurances that the above declaration was perfectly satisfactory.

Under these circumstances it would appear that unless the Russian consuls have instructions to be more exacting in regard to the certification of the notaries public, there should be no further difficulties encountered in regard to the registration of patents by Americans in Russia.

I have the honor to be, sir, your obedient servant,

Signed: GEORGE THOMAS MARYE.

Adverse Decisions in Interference.

PATENT NO. 1,045,251.

On August 13, 1915, a decision was rendered that Theodore F. Bourne was not the first inventor of the subject-

matter covered by claims 2, 3, 4, 5, 6, 9, 11, 12, 14, and 15 of his Patent No. 1,045,251, subject, "Carbureters," and no appeal having been taken within the time allowed such decision has become final.

PATENT No. 1,135,299.

On September 3, 1915, a decision was rendered that Bertinius Larsen was not the first inventor of the subject-matter covered by claim 8 of his Patent No. 1,135,299, subject "Lifting-jack," and no appeal having been taken within the time allowed such decision has become final.

Disclaimer.

13,515. (Reissue.)—*Courtney S. Bryant*, Greene, N. Y. HEATING SYSTEM FOR INCUBATORS. Patent dated January 21, 1913. Disclaimer filed September 28, 1915, by the assignee, *Willis A. Schleit*.

Enters this disclaimer—

"To that part of the claim in said specification, being claim 8 thereof, which is in the following words, to wit:

"An incubator comprising, in combination, a plurality of compartments arranged horizontally, a main circulating system for the heating fluid comprising an outgoing conductor and a return conductor having at all times free communication with the outgoing conductor, compartment circulating systems each communicating at its respective termini with the outgoing and return conductors, means for automatically controlling the temperature of the heating fluid in the main circulating system, and means for automatically and independently controlling the circulating of the heating fluid through each of the compartment circulating systems."

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 25, 1915.

James Lunham Grant, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of McLeod & Ormsbee, 9 Liberty street, Utica, N. Y., for registration of a trade-mark and trade-mark registered July 9, 1895, No. 26,799, to James Lunham Grant, No. 5 Rainford Square, Liverpool, England, and a notice of such declaration sent by registered mail to said Grant at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said James Lunham Grant, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

THE OFFICIAL GAZETTE OF THE United States Patent Office.

Vol. 219—No. 2. TUESDAY, OCTOBER 12, 1915. Price—$5 per year.

The OFFICIAL GAZETTE is issued under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscription, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. [For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF OCTOBER 12, 1915	275
THE OFFICIAL GAZETTE	275
ACCESS TO PENDING APPLICATIONS	275
APPLICATIONS UNDER EXAMINATION	276
PATENTS GRANTED	277
REISSUES	565
DESIGNS	568
TRADE-MARKS—REGISTRATION APPLIED FOR	575
TRADE-MARK REGISTRATIONS GRANTED	581
LABELS AND PRINTS	585
DECISIONS OF THE U. S. COURTS—	
The Vacuum Cleaner Company v. American Rotary Valve Company	587
ADVERSE DECISIONS IN INTERFERENCE	590
INTERFERENCE NOTICES	590
CHANGES IN CLASSIFICATION	590

ISSUE OF OCTOBER 12, 1915.

Patents	826—No.	1,155,044 to No. 1,155,869, inclusive.
Designs	38—No.	47,942 to No. 47,979, inclusive.
Trade-Marks	109—No.	105,994 to No. 106,102, inclusive.
Labels	7—No.	14,296 to No. 14,302, inclusive.
Prints	9—No.	4,020 to No. 4,028, inclusive.
Reissues	3—No.	13,901 to No. 13,903, inclusive.
Total	992	

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	6	....	North Carolina	2	....
Arizona	....	2	North Dakota	3	....
Arkansas	2	....	Ohio	66	8
California	41	1	Oklahoma	3	....
Colorado	15	1	Oregon	8	....
Connecticut	14	4	Pennsylvania	60	12
Delaware	....	....	Rhode Island	12	1
Florida	3	....	South Carolina	....	1
Georgia	2	....	South Dakota	4	....
Idaho	1	....	Tennessee	3	1
Illinois	91	9	Texas	12	4
Indiana	17	2	Utah	2	....
Iowa	17	1	Vermont	1	....
Kansas	10	2	Virginia	5	1
Kentucky	6	1	Washington	9	1
Louisiana	7	....	West Virginia	7	1
Maine	3	....	Wisconsin	14	3
Maryland	9	4	Wyoming	1	....
Massachusetts	54	4			
Michigan	22	4	Alaska, District of	....	....
Minnesota	10	1	Canal Zone	....	....
Mississippi	4	....	District of Columbia	13	....
Missouri	32	2	Hawaii Territory	....	....
Montana	3	2	Philippine Islands	....	....
Nebraska	4	....	Porto Rico	....	....
Nevada	1	....	U. S. Army	....	....
New Hampshire	2	....	U. S. Navy	....	....
New Jersey	46	8			
New Mexico	2	....	Total to residents of the United States	796	112
New York	140	34			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	....	....	Mexico	....	....
Austria-Hungary	2	....	Natal	....	....
Belgium	1	....	Netherlands	....	....
Brazil	1	1	New South Wales	1	....
British West Indies	....	....	Norfolk Island	1	....
Canada	13	....	Norway	3	....
China	....	....	Portugal	....	....
Chile	....	....	Queensland	....	....
Costa Rica	....	....	Roumania	....	....
Cuba	2	....	Russia	....	....
Denmark	....	....	San Salvador	1	....
England	9	5	South Australia	....	....
Finland	....	....	Straits Settlements	....	....
France	1	....	Sweden	2	1
Germany	20	3	Switzerland	....	....
Guatemala	....	....	Tasmania	....	....
India	....	....	Victoria	....	....
Ireland	....	....	Western Australia	1	....
Italy	....	....			
Japan	....	....	Total to residents of foreign countries	67	10
Luxemberg	....	....			

The Official Gazette.

The OFFICIAL GAZETTE is published every Tuesday, simultaneously with the weekly issue of patents. From January 1, 1872, (the commencement of its publication,) to June 30, 1883, it was published and bound in semi-annual volumes; from July 1, 1883, to December 31, 1902, in quarterly volumes; from January 1, 1903, to December 31, 1906, in bimonthly volumes; since January 1, 1907, in monthly volumes. Terms: Annual subscriptions, $5; monthly, 50 cents. Per postage upon foreign subscriptions, except those from Canada and Mexico, $5 or more, as required. Moneys received from foreign subscribers in excess of the subscription price of $5 will be deposited to the credit of the subscriber and applied to postage upon the subscription as incurred. Single copies, 10 cents; if mailed to foreign countries, excepting Canada and Mexico, 10 cents additional for postage. *Payment in advance required. No club rates. No discount to newsdealers. No sample copies.* All subscriptions must commence with the beginning of a volume. None taken for less than an entire volume. All orders should be addressed to "The Superintendent of Documents, Government Printing Office, Washington, D. C."

Access to Pending Applications.

Hereafter no person except the applicant, the assignee whose assignment is of record, or the attorney of record will be permitted to have access to the file of any application, except as provided for under the interference rules, unless written authority from the applicant, assignee, or attorney, identifying the application to be inspected, is filed in the case to become a part of the record thereof, or upon the written order of the Commissioner, which will also become a part of the record of the case.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business October 9, 1915.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	July 19	July 9	525
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Apr. 21	Aug. 1	870
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	Sept. 15	Sept. 17	96
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	May 3	Sept. 20	604
167	5. Bookbinding; Harvesters; Jewelry; Music.	July 1	Aug. 12	358
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar. 3	Sept. 10	496
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	July 26	Aug. 23	475
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	May 3	Sept. 1	1208
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Mar. 12	Sept. 17	559
235	10. Carriages and Wagons.....	July 1	Aug. 9	822
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Aug. 20	Sept. 25	126
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	July 7	July 19	677
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Aug. 2	Aug. 21	524
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	May 20	Sept. 3	267
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	June 2	Aug. 16	554
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Apr. 19	July 29	511
303	17. Matrix-Making; Paper Manufactures: Printing; Type-Bar Making.	July 17	Sept. 7	179
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Aug. 21	Aug. 30	284
326	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	Aug. 12	July 19	233
179	20. Artificial Limbs; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Sept. 10	Sept. 10	257

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	June 29	Aug. 9	354
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Aug. 23	Aug. 26	305
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	May 19	June 4	495
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	June 16	Aug. 10	471
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Sept. 8	Sept. 8	146
106	26. Electricity, Generation; Motive Power.	Apr. 6	June 18	643
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Aug. 4	Aug. 31	339
65	28. Internal-Combustion Engines....	July 15	Aug. 14	390
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	July 23	Aug. 6	346
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Aug. 12	Sept. 15	268
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	July 6	Sept. 2	295
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	Mar. 29	Sept. 2	719
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	July 20	Aug. 13	397
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	July 12	Aug. 3	307
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	May 18	Sept. 10	762
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	June 14	Sept. 9	742
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Apr 9	June 16	833
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	June 22	July 24	544
321	39. Water Distribution.....	July 7	July 31	399
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Apr. 9	Aug. 14	939
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	June 10	Aug. 17	461
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	June 2	June 10	820
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Aug. 9	July 6	251

Oldest new case, Mar. 3; oldest amended, June 4.
Total number of applications awaiting action..... 20,852

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks.....	Aug. 10	Sept. 9	810
	Designs.....	June 9	Sept. 18	500
	Labels and Prints.....	Sept. 13	Sept. 4	51

PATENTS

GRANTED OCTOBER 12, 1915.

1,156,044. ART OF PREPARING AMINO-ARSENOBENZENES. LORENZ ACH, Mannheim, and ALBERT ROTHMANN, Heidelberg, Germany, assignors to Farbwerke vorm. Meister Lucius & Bruening, Höchst-on-the-Main, Germany, a Firm. Filed Mar. 24, 1913. Serial No. 756,554. (Cl. 23—24.)

1. In the art of producing amino-arsenobensenes, the sub-process which consists in treating 3.5-dinitro-4-amino-bensene-1-arsinic acid with a reducing agent.

2. In the art of producing amino-arsenobensenes, the sub-process which consists in treating 3.5-dinitro-4-amino-bensene-1-arsinic acid, with a reducing agent and then treating with alkaline substance to separate the resultant basic compound.

3. In the art of producing amino-arsenobensenes, the sub-process which consists in treating 3.5-dinitro-4-amino-bensene-1-arsinic acid with an acid reducing agent.

4. In the art of producing amino-arsenobensenes, the sub-process which consists in treating 3.5-dinitro-4-amino-bensene-1-arsinic acid with an acid reducing agent and then treating the whole with an alkaline substance to separate the resultant basic compound.

5. The process which consists in treating 3.5-dinitro-4-aminobensene-1-arsinic acid, with a reducing agent, then treating with alkaline substance to separate the resultant basic compound, and then treating the latter with acid.

[Claims 6 to 8 not printed in the Gazette.]

1,156,045. ART OF PREPARING 2-CHLORO-4-AMINO-BENZENE-1-ARSINIC ACIDS. LORENZ ACH, Mannheim-Waldhof, ALBERT ROTHMANN, Heidelberg, and HERMANN DIETERICH, Mannheim, Germany, assignors to Farbwerke vorm. Meister Lucius & Bruening, Höchst-on-the-Main, Germany, a Firm. Filed Jan. 26, 1914. Serial No. 814,591. (Cl. 23—24.)

1. The process of preparing aromatic arsenic compounds which consists in treating chlorinated aromatic compounds containing in m-position to the chlorin atom the group

(where R_1 denotes alkyl and R_2 a univalent radical) with arsenic trichlorid and oxidising the resultant arsenic oxid.

2. The process of preparing aromatic arsenic compounds which consists in treating chlorinated benzenes containing in m-position to the chlorin atom the group



(where R_1 denotes alkyl and R_2 a univalent radical) with arsenic trichlorid and oxidising the resultant arsenic oxid.

3. The process of preparing aromatic arsenic compounds which consists in treating in chlorinated benzenes containing in m-position to the chlorin atom the group



(where R_1 denotes alkyl) with arsenic trichlorid and oxdising the resultant arsenic oxid.

4. The process of preparing aromatic arsenic compounds which consists in treating chlorinated benzenes containing in m-position to the chlorin atom the group



with arsenic trichlorid and oxidising the resultant


-2-Cl-bensene-1-arsenic oxid.

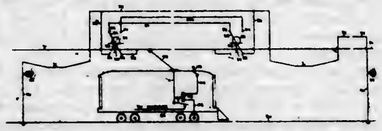
5. The process of preparing aromatic arsenic compounds which consists in treatng chlorinated aromatic compounds containing in m-position to the chlorin atom the group



(where R_1 denotes alkyl and R_2 a univalent radical) with arsenic trichlorid and oxidising the resultant arsenic oxid with potassium permanganate in alkaline solution.

[Claims 6 to 8 not printed in the Gazette.]

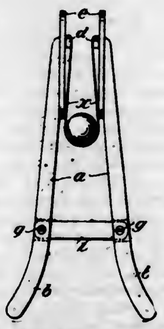
1,156,046. SAFETY SYSTEM FOR ELECTRIC RAILWAYS. PARIS L. BAILEY, Indianapolis, Ind. Filed May 9, 1911. Serial No. 626,029. (Cl. 246—36.)



1. In a block signal system, the combination of a signal block, a block signal wire having extensions beyond the signal block, a depressed section in each of said extensions, signal means in each of said extensions beyond said depressed sections, means connected to said block signal wire within the confines of said signal block to energize and deënergize said signal fire extensions upon the passing of a car, and contact means upon a car adapted to contact with said depressed sections, and means associated with said contact means to put the car motor out of action.

2. In a block signal system, the combination of a signal block, a block signal wire within the confines of said signal block, extensions on each end of said block signal wire each having one end grounded, a depressed section in each of said extensions adjacent the signal block, signal means in each of said extensions between said depressed section and said grounded end, means within the confines of a block to cut in or out said signals upon the passing of a car, and contact means upon the top of a car adapted to contact with said depressed section, and means associated with said contact means to put the car motor out of action.

1,156,047. BALL-GAME DEVICE. HELENE BEHREND, Berlin, Germany, assignor to H. Bierbaum, Berlin, Germany. Filed July 5, 1910. Serial No. 570,305. (Cl. 46—59.)



1. A ball game device consisting of two legs pivotally mounted on their lower ends, flat faces fixed to the upper

ends of said legs, and apiece of cloth fixed between said flat faces adapted to be stretched by a sudden moving apart of the legs in order to throw upward a ball resting upon said cloth and to catch and securely hold the same by moving said legs together as soon as a thrown ball drops and engages the stretched piece of cloth.

2. In a ball game device the combination of two legs pivotally mounted on their lower ends, flat faces fixed to the upper ends of said legs, a piece of cloth fixed between said flat faces and a cross bar pivoted between the lower ends of said legs adapted to prevent a touching of the hands holding the legs at the moving together of the same.

3. In a ball game device the combination of two legs pivotally mounted on their lower ends, flat faces fixed to the upper ends of said legs, a piece of cloth fixed between said flat faces, a cross-bar pivoted between the lower ends of said legs and the ends of said legs extending beyond their pivotal point to form handles.

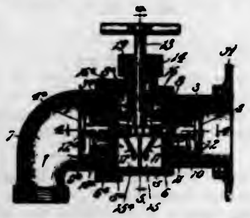
1,156,048. PROCESS OF BUCKING VEGETABLE MATERIAL. RENÉ BOHN, Mannheim, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Original application filed Jan. 27, 1909, Serial No. 474,485. Divided and this application filed Nov. 6, 1913. Serial No. 799,484. (Cl. 8—20.)

1. The process of bucking vegetable material dyed or printed with vat coloring matter, by heating the said material with a dilute alkali solution in the presence of an organic compound which is soluble and easily reducible in the presence of alkali.

2. The process of bucking vegetable material dyed or printed with vat coloring matter, by heating the said material with a dilute caustic soda solution in the presence of a salt of nitrobenzene-sulfonic acid.

3. The process of bucking vegetable material dyed or printed with vat coloring matter, by heating the said material with a dilute caustic soda solution in the presence of the sodium salt of nitrobenzene-monosulfonic acid.

1,156,049. VALVE. GUSTAVE P. BOPP, Kirkwood, Mo. Filed Jan. 2, 1915. Serial No. 241. (Cl. 137—30.)



1. A valve provided with a separable body portion composed of a plurality of sections that can be taken apart when it is desired to separate the members which the body portion of the valve joins together, oppositely-disposed valves in said sections, each of which acts as a closure for the member or object on which the section is mounted when said sections are separated, and a common operating mechanism for both valves arranged between same and comprising a manually-operated device that can be actuated from the exterior of the body portion of the valve.

2. A valve provided with separable portions, each of which is adapted to be connected to adjacent sections of a passageway, valves in said portions arranged in longitudinal alinement with each other that prevent the contents of said passageway from escaping when the sections of said passageway are taken apart or completely separated from each other, and an operating mechanism for both valves incased in said separable portions and comprising a single actuating device operable from the exterior of said portions for opening and closing both valves simultaneously.

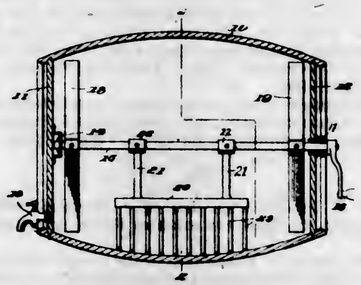
3. A valve having a separable body portion that comprises a plurality of parts that can be completely detached or separated from each other, each of said parts being provided with a valve and a valve seat, means that normally holds said parts together but which is so constructed that said parts can be separated from each other when said valves are seated, devices arranged inside of said body portion for opening and closing said valves, and a manually actuated operating member detachably connected to said devices and projecting outwardly through said body portion so that it can be operated to open and close both valves simultaneously.

4. A valve having a body portion that comprises two halves or sections that are detachably connected together and which are adapted to be taken apart when it is desired to separate the two members between which the valve is arranged, a valve carried by each of said sections that is adapted to act as a closure for a hollow member to which its coöperating section is connected when said sections are taken apart, and a valve-operating member on one of said sections detachably connected to the valves of both sections and adapted to be operated manually for opening and closing said valves when the two sections of the body portion are in normal position.

5. A valve provided with a body portion composed of two sections and a coupling member that normally joins said sections together but which permits said sections to be taken apart, oppositely-moving valves in said body portion, reciprocating devices joined to the stems of said valves by a slot and pin connection and arranged to move at right angles to the direction of movement of the valves, and means for actuating said reciprocating devices to open and close said valves without disturbing said body portion.

[Claims 6 to 10 not printed in the Gazette.]

1,156,050. AGITATOR FOR BARRELS. HENRY J. BRIERLEY, Brooklyn, N. Y. Filed May 26, 1914. Serial No. 841,126. (Cl. 91—57.)



1. In a device of the class described, a container downwardly sloping toward one portion, a brush including a plurality of bristles mounted for movement in engagement with said downwardly directed portion, and deflected by contact therewith, and paddle devices mounted for movement at the highest portion of the container and spaced from the bristles.

2. In a device of the class described, a container downwardly sloping toward the center, a brush including a plurality of bristles mounted for movement in engagement with said container at its lowest point, and deflected laterally by contact therewith, and paddle devices movable within said container at its highest point and spaced from the bristles.

3. In a device of the class described, a container, a shaft extending through said container, a brush head rotative with said shaft, bristles carried by said brush head and in constant engagement with the inner surface of said container, and paddle devices rotative with said shaft and spaced from the brush head.

4. In a device of the class described, a container, a brush rotative constantly within the interior of said container, and paddle devices rotative within said container and spaced from said brush.

5. In a device of the class described, a container, a shaft extending through said container, a brush head rotative with said shaft and of less length than the container, bristles carried by said brush head and in constant engagement with the inner surface of said container and deflected laterally by contact therewith, and paddles carried by said shaft and located in close proximity to the ends of the container and spaced from the brush head.

1,156,051. MANUFACTURE OF STEEL. JACOB ISRAEL BRONN, Rombach, Germany, assignor of one-half to the Firm of Rombacher Hüttenwerke, Rombach, Germany. Filed Dec. 2, 1912. Serial No. 734,614. (Cl. 75—45.)

1. The process of manufacturing steel which consists in introducing the required additions in solid form into a quantity of liquid iron, and mixing the solution so obtained with the refined molten iron constituting the main steel making charge.

2. The process of manufacturing steel which consists in melting a quantity of iron, adding to it manganese or a manganese alloy and carbon in desired proportions, in solid form and mixing the solution so obtained with the main charge of molten refined iron.

3. The process of manufacturing steel which consists in melting a quantity of refined iron, adding to it carbon in desired proportions and mixing the solution so obtained with the main charge of molten refined iron.

4. The process of making steel, which consists in refining and decarburizing a main charge of iron in a suitable furnace, forming a subsidiary charge by introducing in solid form and dissolving the additional constituents of the ultimate steel in proper proportions in a bath of molten refined iron, and mixing the main and subsidiary charges while in a molten state.

1,156,052. PUMP. JOHN T. S. BROWN, Jr., Prospect, Ky. Filed Feb. 1, 1915. Serial No. 5,462. (Cl. 103—70.)



1. A pump comprising a working barrel, a reciprocable plunger therein having a vertical passage, an inlet valve in the lower end of said barrel adapted to admit water below said plunger, ports in the side of said barrel adapted to admit water above said plunger, a domed cover on said plunger, a valve adapted to close said passage, a hollow piston rod extended upward from said cover and having a plurality of lateral openings near the upper end thereof, a guide ring disposed about said piston rod, lugs extended from said ring and secured to said barrel, an annular valve seat positioned below said ring and connected therewith, an annular valve disposed about said piston rod and adapted to close on said seat, valves depending from said valve seat and adapted to close said ports.

2. In combination, a working barrel connected with the lower end of a discharge tube, a reciprocable hollow piston in said barrel, a hollow piston rod extended from said piston upward into said discharge tube, said rod having lateral outlets into said tube, a valve in the lower end of said barrel, ports in the side of said barrel above said piston, a valve in said piston, a valve cage in the upper end of said barrel, said cage comprising a guide ring for said piston rod and an annular seat, an annular valve disposed about said rod within said cage and adapted to close on said seat, valves depending from said cage adapted to close said ports.

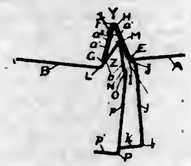
3. In a pump, a valve cage comprising a guide ring, lugs extended radially therefrom, legs depending from said lugs, an annular valve seat carried by said lugs, an annular flange depending from said seat resilient members secured to and depending from said flange and valves attached to the lower ends of said members.

4. In a pump, a valve cage comprising a guide ring, an annular valve seat connected therewith but spaced below, an annular valve adapted to close on said seat, and laterally operable valves suspended from said cage.

5. In a pump, a barrel, a piston reciprocably positioned therein, a rod extended upward from said piston, said barrel having inlet ports in the side thereof above said piston, a valve cage through which said rod passes, said cage comprising a guide ring, an annular valve seat spaced below, an annular valve adapted to close on said seat, laterally operable valves adapted to close said ports, resilient arms depending from said cage to the lower ends of which said valves are secured.

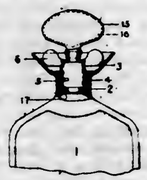
[Claims 6 and 7 not printed in the Gazette.]

1,156,053. COLLAPSIBLE SHEET-METAL WALL. STEWART BROWN, Chicago, Ill. Filed Oct. 12, 1914. Serial No. 866,323. (Cl. 189—34.)



A joint between sheets of metal comprising two sheets of metal meeting in adjacent edges, the adjacent edge of one sheet being doubled upon itself and bent to form a rib, the sides of which meet in an acute angle, the adjacent extremity of the sheet being bent at right angles to the plane of the sheet to form a web, and a flange formed on the free edge of the web substantially parallel to the plane of said sheet, the adjacent edge of the other sheet having a rib fitting within the first mentioned rib and having a web and flange fitting within the first mentioned web and flange.

1,156,054. HOT-WATER BOTTLE. WILLIAM MALCOLM BROWN, Cambridge, Mass. Filed Apr. 11, 1914. Serial No. 831,305. (Cl. 128—39.)



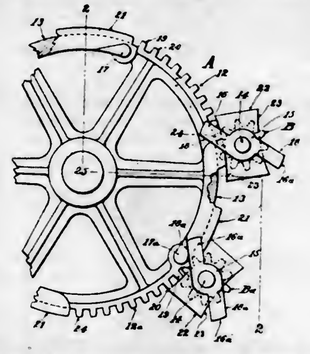
1. A thermal applicator comprising a local reservoir of limited capacity and a main reservoir of thermally dominating capacity, said reservoir constructed to form an applicator, said reservoirs being in communication and said

main reservoir including a discharging element operative to effect an interchange of content between said local and said main reservoirs.

2. A thermal applicator comprising a local reservoir of limited capacity and a main reservoir of thermally dominating capacity, each reservoir constructed to form an applicator, said reservoirs being in communication and said main reservoir including a compressible wall effective to merge the content of the local reservoir in the content of the main reservoir and recharge said local reservoir with a new charge of the thermal character of said main reservoir content.

3. A thermal applicator comprising a local reservoir of limited capacity having a communicating opening and a main reservoir of thermally dominating capacity having a filling opening, each reservoir constructed to form an applicator, and a coupling member having detachable engagement in said openings for placing said reservoirs in communication, said main reservoir being compressible to permit the content of the local reservoir to be merged in the content of the main reservoir and said local reservoir to be recharged with a new charge of the thermal character of said main reservoir content.

1,156,055. GEARING. HENRY E. BULLOCK, Chicago, Ill., assignor to H. E. & J. E. Bullock, Chicago, Ill. Filed Sept. 26, 1914. Serial No. 863,778. (Cl. 74—41.)



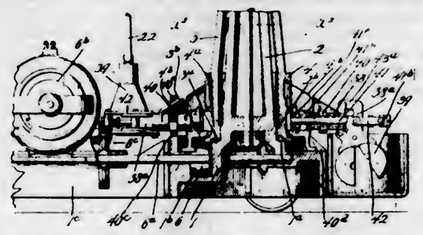
1. In gearing, the combination, of a driving shaft, a spur gear wheel mounted on said driving shaft, there being on the face of said gear wheel a series of gear teeth, and one or more blank spaces between these series of gear teeth, a further shaft, a gear pinion mounted on said shaft, a driven member on said latter shaft, said driven member comprising a substantially cylindrical body, said body being provided with an arm having a contacting face, said face being tangentially disposed with reference to said body, and an abutment element projecting from one of the flanks of said spur gear wheel, said abutment element having a contacting face constructed to coact with the contacting face of the said arm on the driven member.

2. In gearing, the combination, of a driving shaft, a spur gear wheel mounted on said driving shaft, there being on the face of said spur gear wheel a series of gear teeth, and a blank space between the terminal, and the entrance, teeth of said gear teeth, a further, driven shaft, a gear pinion mounted on said shaft constructed to mesh with the teeth section of the spur gear wheel, a driven member on said driven shaft comprising a substantially cylindrical body having an arm projecting therefrom, said arm having a contacting face tangent to said body, an abutment member on said spur gear wheel constructed to engage the contacting face of said arm, a curved track projecting from one flank of said spur gear wheel adjacent to the blank space between the gear teeth section, and a slide mounted on the driven shaft in alinement with the curved track aforesaid, constructed to engage said curved track to positively prevent said gear pinion from rotation while the blank space between said gear teeth section is passing said gear pinion.

3. In gearing, the combination, of a mutilated driving member, of a driven member constructed to be intermittently rotated by said driving member, auxiliary means to initiate the rotation of said driven member independently of the means employed to rotate said driven member, means constructed to arrest the rotative movement of said driven member at a predetermined point or position and resilient means in connection with said gearing constructed to yield when said rotative movement of the driven member is suddenly arrested.

4. In gearing, the combination, with a mutilated gear wheel, of a gear pinion constructed to be intermittently rotated by said gear wheel, auxiliary means constructed to initiate the rotative movement of said pinion independently of the means employed for rotating said pinion, means for positively arresting the rotative movement of said pinion at a predetermined position, and means connected with said gearing constructed to yield when the rotative movement of said pinion is suddenly arrested, and to absorb the momentum of said gear pinion.

1,156,056. MOLD MECHANISM FOR GLASS-BLOWING MACHINES. BENJAMIN DAY CHAMBERLIN, Corning, N. Y., assignor to Empire Machine Company, Portland, Me., a Corporation of Maine. Original application filed Mar. 23, 1910, Serial No. 551,198. Divided and this application filed Aug. 24, 1912. Serial No. 716,916. (Cl. 49—41.)



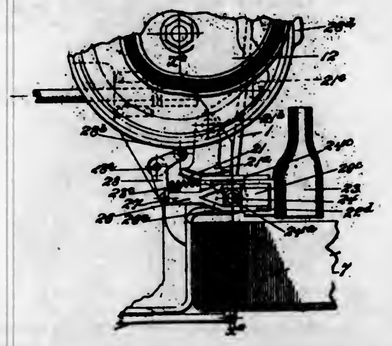
1. In a glass molding machine, the combination with a rotary tubular shaft having separable mold parts carried thereby, a shaft reciprocating within the tubular shaft and connected to the mold halves to close the same, means to rotate the tubular shaft to lift the mold, and means constantly controlling the position of the shaft within the tubular shaft and to reciprocate the same therein to close and open the mold.

2. In a glass molding machine, the combination with a cam track, of a rotary tubular shaft movable angularly thereover, mold parts carried by the shaft, a shaft reciprocating within the tubular shaft, and connected to the mold halves to close the same, and a member mounted on the reciprocating shaft and having a constant engagement with the cam, to control the movements of the former.

3. In a glass-blowing machine, the combination with a rotary tubular shaft, of separable mold parts carried to one side of the axis thereof, of a shaft reciprocating within the tubular shaft and connected to the mold parts to close the same, means to rotate the tubular shaft to lift the mold, and means constantly controlling the position of the shaft within the tubular shaft, and to reciprocate the same therein to close and open the mold parts.

1,156,057. MOLD FOR GLASS-BLOWING MACHINES. BENJAMIN DAY CHAMBERLIN, Corning, N. Y., assignor to Empire Machine Company, Portland, Me., a Corporation of Maine. Original application filed Jan. 13, 1911, Serial No. 602,532. Divided and this application filed Sept. 15, 1911. Serial No. 649,557. (Cl. 49—41.)

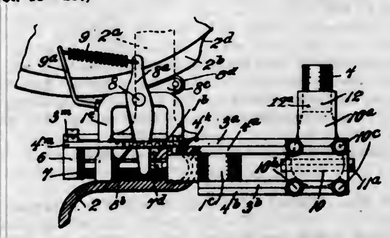
1. In a mold opening and closing and lowering mechanism the combination with a shaft, of mold parts pivoted thereon for opening and closing movement, means for imparting angular movement to the said shaft to raise and lower the molds, a second shaft concentric to the first named shaft and capable of axial movement in respect thereto, connections between the last named shaft and the mold parts to open and close the same and means comprising a lever pivoted independently of the first named shaft and parts carried thereon for imparting axial movement to the last named shaft.



2. In a mold opening and closing and lowering mechanism the combination with a tubular shaft, mold parts mounted thereon for opening and closing movements, a second shaft slidably mounted within the tubular shaft, connections between the last named shaft and the mold parts for opening and closing the same, means for imparting angular movement to the tubular shaft and means comprising a lever pivoted independently of the tubular shaft and parts carried thereon for imparting axial movement to the last named shaft.

3. In a mold-actuating mechanism, the combination with a tubular shaft, of mold parts mounted thereon for opening and closing movement, a second shaft slidably mounted within the tubular shaft, two collars upon the sliding shaft, one of which is rotatable thereon, connections between one of the said collars and the mold parts to open and close the same, a lever pivoted independently of the tubular shaft and connected with the other collar for reciprocating the sliding shaft and the other collar, a spring interposed between the collars, and means for rotating the tubular shaft.

1,156,058. MOLD FOR GLASS-BLOWING MACHINES. BENJAMIN DAY CHAMBERLIN, Corning, N. Y., assignor to Empire Machine Company, Portland, Me., a Corporation of Maine. Filed Apr. 20, 1911. Serial No. 622,391. (Cl. 49—19.)



1. In a mold for a glass blowing machine, the combination of a mold support mounted to turn about an axis for dipping the mold, mold parts pivoted upon the said support at right angles to the axis thereof, a bar sliding in the support at right angles to the axes of the support and of the mold and connected to the mold parts, a shaft mounted in the support parallel to the axis of the support, and a connection between the said shaft and bar for controlling the movement of the said bar.

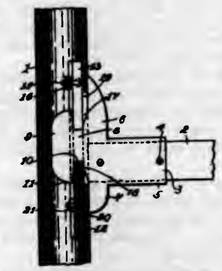
2. In a mold for a glass blowing machine, the combination of a mold support mounted to turn about a horisontal axis for dipping the mold, and having upon its end a knuckle upon one side of its axis and a yoke upon its opposite side, mold parts pivoted on the knuckle at right angles to the axis of the support, a bar slidingly mounted in the yoke, means for actuating the said bar and a connection between the bar and mold parts for controlling the opening and closing of the mold.

3. In a mold for a glass blowing machine, the combination of a mold support mounted to turn about a horisontal axis for dipping the mold and having upon its end a knuckle upon one side of its axis and a yoke upon its opposite side, mold parts pivoted on the knuckle at right angles to the axis of the support, a bar sliding in the yoke at right angles to the axis thereof and of the mold parts, a connection between the said bar and mold parts, a shaft mounted in the yoke parallel to the axis of the support, and a connection between the shaft and bar to actuate the sliding bar and means for oscillating the shaft.

4. In a mold for a glass blowing machine, the combination of a mold support mounted to turn about a horisontal axis for dipping the mold and having upon its end a knuckle upon one side of its axis and a yoke upon its opposite side, mold parts pivoted on the knuckle at right angles to the axis of the support, a bar slidingly mounted in the yoke, a cross-head mounted on the said bar and connected to the mold parts, a shaft mounted in the yoke parallel to the axis of said support and having on one end thereof an arm adapted to actuate the bar to control the opening and closing movements of the mold, and another arm upon the opposite end thereof by which it may be actuated.

5. In a mold for a glass blowing machine, the combination of a mold support mounted to turn about a horisontal axis for dipping the mold and having upon its end a knuckle upon one side of its axis and a yoke upon its opposite side, mold parts pivoted on the knuckle at right angles to the axis of the support, a bar slidingly mounted in the yoke, a cross-head mounted on the said bar and connected to the mold parts, a shaft mounted in the yoke parallel to the axis thereof and having on one end thereof an arm adapted to actuate the bar to control the opening and closing movements of the mold and another arm upon the opposite end thereof by which it may be actuated, a spring interposed between the first named arm and the bar and through which the mold is closed, and a spring connected to the last named arm for opening the mold.

1,156,059. CORNER-FASTENING FOR BEDSTEADS. GEORGE W. COMBE, Waterloo, Iowa. Filed Aug. 21, 1914. Serial No. 857,849. (Cl. 5—55.)



1. A hollow body having a longitudinal slot, a bar having a trifoliate extremity the middle leaf and a part of each of the other leaves of which enter and engage the walls of said slot and the inner part of the body.

2. A hollow body having a longitudinal slot and containing in its interior detachably-secured engaging-means, a bar having a trifoliate end, the middle leaf of which enters and engages the slot and said engaging-means, and

the other leaves of which engage the outer wall of said body.

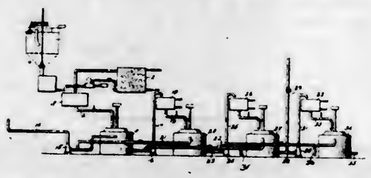
3. A hollow tube having a longitudinal slot, a bar having a trifoliate extremity, a bifurcated body secured to the inner wall of said tube to have its interspace over the said slot, the middle leaf of said bar being transversely grooved on its under side, and passed through said slot, with the grooved part of said leaf detachably engaged about the latter at its bifurcation.

4. A hollow tube having a longitudinal slot, a bar having a plate attached to one end to project therefrom, said plate having a longitudinally extending projection provided with like oppositely-projecting lugs to furnish like squared grooved seats between the lugs and the main body of the plate, a body having a squared groove, seated in and detachably secured to the inside of the tube with the groove alined with part of said slot, the said plate projection being detachably inserted in said slot and said alined groove with one of said lugs and the squared seat adjacent thereto engaged with the inner surface of said body.

5. A hollow tube having a longitudinal slot, a bar having a plate attached to one end to project therefrom, said plate having a longitudinally extending projection provided with like oppositely-projecting lugs to furnish like squared grooved seats between the lugs and the main body of the plate, a body having a squared opening, seated in and detachably secured to the inside of the tube with a squared end of the opening extending across the said slot and the opening thence alined with said slot, the said plate projection being detachably mounted in said slot and opening with its squared seat fitted upon the squared end of the said opening and one of said lugs engaged with the inner face of the said body, the said plate having upwardly and downwardly-extending projections adapted to engage the outer wall of said tube longitudinally when the first mentioned projection is mounted in said slot.

[Claim 6 not printed in the Gazette.]

1,156,060. PROCESS AND APPARATUS FOR DEFURATING. FRANK E. COOMBS, Natick, Mass. Filed Apr. 22, 1909. Serial No. 491,587. (Cl. 127—15.)



1. The process of defecating sugar liquids which comprises heating a sugar juice under pressure to defecate it and thereafter centrifugally separating the defecated liquid from suspended impurities, steam and gases at a temperature approaching 100° C.

2. The process of defecating sugar liquids which comprises liming a sugar juice uniformly, heating the limed juice under pressure to defecate it and thereafter centrifugally separating the defecated liquid from suspended impurities, steam and gases at a temperature approaching 100° C.

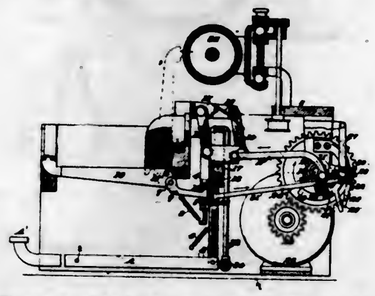
3. The process of defecating sugar liquids which comprises heating such juices to defecate the same, centrifugally separating the defecated liquid to separate solids as a magma, admixing the magma with a washing liquor and repeating the separation.

4. The process of defecating sugar liquids which comprises heating such juices to defecate the same, centrifugally separating the defecated liquid into clear liquid and solids, admixing the solids with a washing liquor, repeating the separation and mixing the clear liquor obtained with the liquid obtained in the first operation.

5. The process of defecating sugar liquids which comprises heating such juices to defecate the same, centrifugally separating the defecated liquid into clear liquid and a magma of solids, and mixing the magma with washing liquid from a succeeding operation and once more centrifugally separating, said separations being performed at a temperature approaching 100° C.

[Claims 6 to 8 not printed in the Gazette.]

1,156,061. ELECTRIC TYPE-WRITER. MANSFIELD C. CRAWLEY, Los Angeles, Cal., assignor to Addograph Company, Los Angeles, Cal., a Corporation of California. Original application filed Oct. 28, 1911, Serial No. 657,311. Divided and this application filed Dec. 17, 1912. Serial No. 737,225. (Cl. 197—17.)



1. The combination with a series of type bars and a bank of key levers, of a reciprocating bar for actuating the type bars, spring means for advancing the bar, a rotary motor, and means operable by said motor to retract the bar.

2. The combination with a series of type bars and a bank of key levers, of a reciprocating bar for actuating the type bars, spring means for advancing the bar, a rotary motor, means operable by said motor to retract the bar, and means for retaining the bar in its rearmost position in opposition to the spring advancing means.

3. The combination with a series of type bars and a bank of key levers, of a reciprocating bar for actuating the type bars, spring means for advancing the bar, a rotary motor, means operable by said motor to retract the bar, means for retaining the bar in its rearmost position in opposition to the spring advancing means, means operable by a key lever for connecting a type bar to the reciprocating bar, and means actuated by said connecting means to release the bar.

4. The combination with a series of type bars and a bank of key levers, of an arm pivoted on each of the type bars, said arm having an inclined portion and a hooked portion on its outer end, a reciprocating actuating bar, spring members for advancing the actuating bar, and means operated by a key lever for disposing the hooked portion of said arm in the path of travel of the actuating bar.

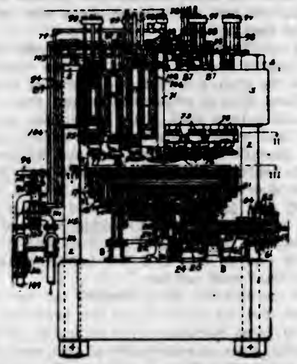
5. The combination with a series of type bars and a bank of key levers, of an arm pivoted on each of the type bars, said arm having an inclined portion and a hooked portion on its outer end, a reciprocating actuating bar, spring members for advancing the actuating bar, a rotary motor, means operable by said motor to retract the actuating bar, and means for normally holding the actuating bar in its retracted position in opposition to the spring members.

[Claims 6 to 28 not printed in the Gazette.]

1,156,062. METAL-BENDING MACHINE. EDWARD W. CARLLIN, Crafton, Pa., assignor to Des Moines Bridge & Iron Works, Des Moines, Iowa, a Corporation of Iowa. Filed Nov. 2, 1914. Serial No. 869,759. (Cl. 153—51.)

1. In a metal bending machine, a die containing a plurality of successively inclusive sections, having relative movement along their common axial center, and means for holding the sections in any one of a plurality of predetermined relative arrangements thereof along the said axial center.

2. In a metal bending machine, a die containing a plurality of successively inclusive sections, and means for holding the sections at any one of various relative adjustments along their common axial center.



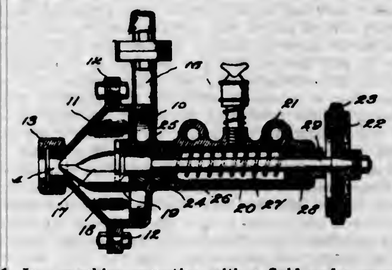
3. In a metal bending machine, a die comprising a plurality of successively inclusive sections, and means for adjusting the relative positions of the sections along their common axial center whereby the bending surfaces of the sections may have any one of several shapes.

4. In a metal bending machine, a die member comprising a plurality of successively inclusive sections, one of the intermediate sections being stationary, and means for holding the remaining sections at any one of various adjustments along their common axial center.

5. In a metal bending machine, a die comprising a plurality of successively inclusive sections, one of the intermediate sections being stationary, and means for adjusting the remaining sections along their common axial center.

[Claims 6 to 25 not printed in the Gazette.]

1,156,063. CENTRIFUGAL PUMP. PAUL DANIEL, Jamaica, N. Y. Filed Oct. 28, 1912. Serial No. 728,057. (Cl. 103—43.)

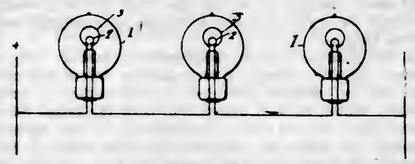


1. In a machine operating with a fluid under pressure, a chamber having a conical seat and a hollow extension beyond it, a revoluble member having a conical portion fitting said seat, a shaft on said member passing through said extension, a conical seat on the outer end of said extension, a sleeve on said shaft having a conical portion fitting said second seat, and a spring adapted to press both of said conical portions against their respective seats while permitting said shaft and revoluble member to turn, substantially as described.

2. In a machine operating with a fluid under pressure, a chamber having a conical seat and a hollow extension beyond it, a revoluble member having a conical portion fitting said seat, a shaft on said member passing through said extension, a conical seat on the outer end of said extension, a sleeve on said shaft having a conical portion fitting said second seat, and having an external transverse groove, a driving pulley on said shaft and a spring seated within said groove and abutting against said pulley, substantially as described.

3. In a centrifugal pump, a pump chamber having a seat and an extension beyond it, a revoluble member within said chamber having a portion fitting said seat, a shaft on said member passing through said extension, a suitably seated revoluble bushing on said shaft at the outer end of said extension having a transverse groove, a driving pulley on said shaft, and a spring on said pulley seated within said groove on said outer bushing, substantially as described.

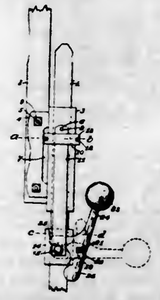
1,156,064. ELECTRIC ILLUMINATION. HARVEY DESCHERE, New York, N. Y. Filed Mar. 19, 1913. Serial No. 755,272. (Cl. 176—24.)



1. A group of incandescent electric lamps connected in series and having normal-service light-giving filaments, in combination with means to prevent the extinguishment of the group upon the rupture of one filament, said means comprising supplementary filaments connected respectively in parallel with the normal-service filaments and so proportioned that they do not assume light-giving incandescence until subjected to the increased potential due to the rupture of the associated normal-service filaments.

2. A group of incandescent electric lamps connected in series and having normal-service light-giving filaments, in combination with means to prevent the extinguishment of the group upon the rupture of one filament, said means comprising supplementary filaments connected respectively in parallel with the normal-service filaments and so proportioned that they do not assume light-giving incandescence until subjected to the increased potential due to the rupture of the associated normal-service filaments, said supplementary filaments being adapted to produce, when subjected to said increased potential, a light-giving effect differing from that of the normal service filaments and affording a visual indication of the rupture of the normal service filament.

1,156,065. WIND-WHEEL PUMP-ROD CONNECTION. GEORGE L. DIXON, Driscoll, N. D. Filed Jan. 18, 1915. Serial No. 2,906. (Cl. 74—17.)



1. In combination, a movable driving body, a driven body slidably mounted on said driving body, and cooperating devices movably connected to said bodies respectively and adapted to be reversely actuated to either engage them with or disengage them from each other and detachably lock them together while in engagement with each other.

2. In combination, a movable driving body, a driven body slidably mounted on said driving body, and coöperating devices, one resiliently connected to said driving body and the other movably mounted on said driven body, the latter device adapted to be operated to reversely actuate the former to either engage the driving body with or disengage it from said driven body.

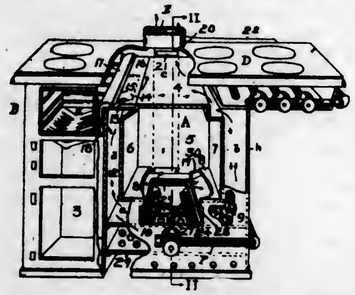
3. In combination, a reciprocatory driving body, a bracket mounted thereon, a reciprocatory driven body slidably connected thereto, a sleeve movably mounted thereon, said sleeve and driven body having transverse orifices adapted for occasional registration, and coacting devices mounted on said bracket and on said sleeve, the device mounted on the bracket having engaging-means movable through the orifice of the sleeve into and out of the orifice in the driven body, and the device mounted on said sleeve adapted to actuate the other device reversely to cause its engaging-means to engage or disengage said driven-body.

4. In combination, a reciprocatory driving rod, a socket bracketed thereon, a reciprocatory driven rod having one end slidably mounted in said socket, a body slidably seated on said driven rod, both the latter being transversely orificed in line longitudinally, a pin movable through the orifice in said body into the orifice in the driven rod detachably, and means movably mounted on said body to coact with said pin, to move it to engage with or to disengage from said driven body.

5. In combination, a reciprocatory driving rod, a socket bracketed thereon, a reciprocatory driven rod having one end slidably seated in said socket, a body slidably mounted on said driven rod, both the latter being transversely orificed in line longitudinally, a pin movable through the orifice in said body into the orifice in the driven rod detachably, a yieldable resilient connection between said pin and said socket, and a device movably mounted on said body and adapted to be operated reversely to engage either one or the other side of said resilient connection to move said pin into or out of engagement with the walls of the orifice in said driven rod.

[Claims 6 to 9 not printed in the Gazette.]

1,156,066. STOVE. JOHN W. DUPUY, Pittsburgh, Pa. Filed June 18, 1915. Serial No. 34,780. (Cl. 126—36.)



1. In a combination stove adapted for use with solid or gaseous fuel, an oven, a top flue extending over the top of the oven, a bottom flue extending beneath said oven, vertical flues at either side of said oven connecting said top and bottom flues, a chimney flue adapted to be connected to either said top or said bottom flue, a fire box on the opposite side of one of said vertical flues from said oven, a gas burner mounted beneath said bottom flue and adapted to discharge its products of combustion into said bottom flue beneath said oven, and means for shutting off either said fire box or said last named vertical flue from said top flue.

2. In a combination stove adapted for use with either solid or gaseous fuel, an oven, a top flue extending over the top of the oven, a bottom flue extending beneath said oven, vertical flues at either side of said oven connecting said top and bottom flues, a fire box on the opposite side of one of said vertical flues from said oven, a gas burner mounted beneath said bottom flue and adapted to discharge its products of combustion into said bottom flue beneath said oven when gaseous fuel is used, and means for sealing off said gas burner from said bottom flue when solid fuel is used.

3. In a combination stove adapted for use with either solid or gaseous fuel, an oven, a top flue extending over the top of the oven, a bottom flue extending beneath said oven, vertical flues at either side of said oven connecting said top and bottom flues, a fire box on the opposite side of one of said vertical flues from said oven, a gas burner mounted beneath said bottom flue and adapted to discharge its products of combustion into said bottom flue beneath said oven when gaseous fuel is used, means for sealing off said gas burner from said bottom flue when solid fuel is used, and means whereby when gaseous fuel is used said fire box is sealed off from said top flue and when solid fuel is used said last named vertical flue is sealed off from said top flue.

4. In a combination stove adapted for use with solid or gaseous fuel, an oven, a top flue extending over the top of the oven, a bottom flue extending beneath said oven, vertical flues at either side of said oven connecting said top and bottom flues, a chimney flue adapted to be connected to either said top or said bottom flue, a fire box on the opposite side of one of said vertical flues from said oven, a gas burner mounted beneath said bottom flue and adapted to discharge its products of combustion into the same beneath said oven, and a swinging damper pivoted at the top of the wall between said fire box and said last named vertical flue which when swung into its vertical position cuts off said fire box from said top flue but opens communication between said last named vertical flue and said top flue and which when swung toward said top flue into its horizontal position cuts off said last named vertical flue from said top flue but opens communication between said fire box and said top flue, as and for the purpose set forth.

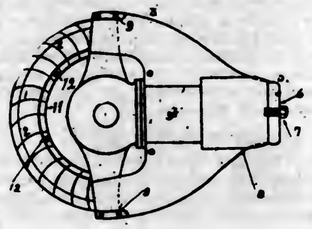
5. In a combination stove adapted for use with solid or gaseous fuel, an oven, a top flue extending over the top of the oven, a bottom flue extending beneath said oven and provided with an aperture in its bottom plate, vertical flues at either side of said oven connecting said top and bottom flues, a chimney flue adapted to be connected to either said top or said bottom flue, a fire box on the opposite side of one of said vertical flues from said oven, a gas burner mounted beneath the aperture in the bottom plate of said bottom flue and adapted to discharge its products of combustion through said aperture into said bottom flue, a removable cover for said aperture, and a swinging damper pivoted at the top of the wall between said fire box and said last named vertical flue which when swung into its vertical position cuts off said fire box from said top flue but opens communication between said last named vertical flue and said top flue and which when swung toward said top flue into its horizontal position cuts off said last named vertical flue from said top flue but opens communication between said fire box and said top flue, as and for the purpose set forth.

1,156,067. COOLING SYSTEM FOR MOTORS. CHARLES E. DURYEA, Saginaw, Mich. Filed June 11, 1912. Serial No. 702,941. (Cl. 123—170.)

1. In a device of the class described, a pair of cylinders, a fly wheel disposed between the same and provided with vanes extended laterally upon the sides of said wheel and constructed when revolving to throw a blast of air from the center of the wheel outward in all directions, and a case inclosing a portion of said wheel for receiving the air from the vanes and having connections for cooling both of said cylinders.

2. In a device of the class described, a fly wheel provided with two sets of removable vanes, one set upon each side thereof extended beyond the side of the wheel, the vanes of each set being connected together and removable as a whole.

3. In a device of the class described, a pair of cylinders, a casing surrounding one end of each cylinder, a fly wheel disposed between said cylinders and having in sets removable side vanes, conforming to the side of said fly wheel and a case inclosing a portion of said fly wheel and having communication with the casings of the cylinders, the said vanes extending circumferentially around the wheel beyond the side edges thereof.



4. In a device of the class described, a fly wheel with vanes, connected together and removably secured to said wheel, a cylinder, a casing therefor, and a removable casing, the support surrounding the fly wheel and to which said casing is attached and a branch from the fly wheel casing to the casing of the cylinder, said vanes being disposed circumferentially of the wheel upon both sides thereof.

5. In a device of the class described, a cylinder, a casing for one end thereof, a fly wheel by the side of the cylinder and independent thereof, a fly wheel case inclosing a portion of said fly wheel, means connecting the interior of the fly wheel case with the said casing, means permitting removal of the casing from the fly wheel without disturbing the cylinder, and draft-producing means carried by said fly wheel.

[Claims 6 to 10 not printed in the Gazette.]

1,156,068. CATALYZER AND PROCESS OF MAKING SAME. CARLETON ELLIS, Montclair, N. J. Filed Apr. 3, 1915. Serial No. 19,032. (Cl. 23—28.)

1. The process of preparing catalyser adapted for hydrogenating fatty oils and the like which comprises forming catalytic material comprising an active metal by reduction of a reducible hydrated compound of said metal in a compatible substantially fixed liquid vehicle in the presence of a reducing gas.

2. The process of making catalyser adapted for hydrogenating fatty oils and the like which comprises mixing a flocculent precipitate comprising nickel hydrate $Ni(OH)_2.H_2O$ with a compatible substantially fixed liquid vehicle, in heating and passing hydrogen through the mixture; whereby finely-divided catalytic material results.

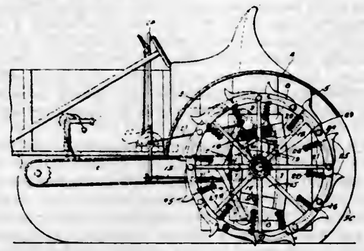
3. The process of making catalyser adapted for hydrogenating fatty oils and the like which comprises incorporating nicket and copper hydrate with a compatible substantially fixed oily medium, in heating and passing hydrogen through the mixture; whereby finely-divided catalytic material results.

4. The process of making catalyser adapted for use in hydrogenating fatty oils and the like which comprises incorporating a finely-divided reducible solid compound of nickel and a similar compound of copper with a compatible substantially fixed oily vehicle, in heating and exposing to the action of a reducing gas while removing moisture formed by reduction; whereby finely-divided catalytic material capable of hardening resistant oils results.

5. The process of making catalyser adapted for use in hydrogenating fatty oils and the like which comprises incorporating a finely-divided reducible solid compound of nickel and a similar compound of another catalysis-aiding element, in heating and exposing to the action of a reducing gas while removing moisture formed by reduction; whereby finely-divided catalytic material capable of hardening resistant oils results.

[Claims 6 to 15 not printed in the Gazette.]

1,156,069. AUTOMOBILE SLEIGH. BENJAMIN ERICKSON, Mapleton, Mich. Filed Oct. 14, 1912. Serial No. 725,672. (Cl. 21—47.)

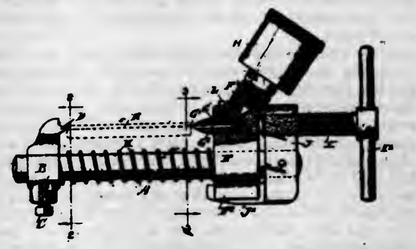


1. In an automobile sleigh comprising a housing, secured to one end of the machine, vertically disposed supports secured within said housing, curved guides carried by said supports, sliding blocks adjustably disposed within said curved guides, manually operable means carried by the machine for actuating said sliding blocks, drive wheels provided with bifurcated rims and with an axle journaled in the said sliding blocks and movable vertically therewith and spring-pressed friction shoes pivotally secured within said bifurcated rim.

2. In an automobile sleigh comprising a housing, secured to one end of the machine, vertically disposed supports secured within said housing, curved guides carried by said supports, sliding blocks adjustably disposed between said curved guides, manually operable means carried by the machine for actuating said sliding blocks, shock absorbers for said sliding blocks, drive wheels provided with bifurcated rims and with an axle journaled in the said sliding blocks and movable vertically therewith and spring-pressed friction shoes pivotally secured within said bifurcated rim.

3. In an automobile sleigh comprising a housing, secured to one end of the machine, vertically disposed supports secured within said housing, curved guides carried by said supports, sliding blocks adjustably disposed between said curved guides, terminal blocks connecting said curved guides, shock absorbers disposed between said terminal blocks and the said sliding blocks, manually operable means carried by the machine for actuating said sliding blocks, drive wheels provided with bifurcated rims and with an axle journaled in the said sliding blocks and movable vertically therewith and spring-pressed friction shoes pivotally secured within said bifurcated rim.

1,156,070. LUBRICATOR FOR LEAF-SPRINGS. PETER E. ERICKSON, Port Chester, N. Y. Filed Feb. 10, 1914. Serial No. 817,786. (Cl. 7—1.)



1. A leaf spring separator and lubricator, comprising a support, a prying member adjustably mounted on one

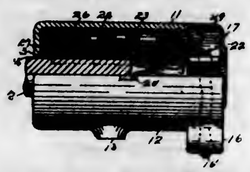
end of the support, a nut on the other end of the support, a second prying member mounted to slide but not to turn on the support, a spring on the support between the prying members, a lubricant container carried by the sliding prying member, and a screw mounted in the nut and engaging the sliding prying member.

2. A leaf spring separator and lubricator, comprising a rod, a prying member on one end of the rod and having a V-shaped lip, a nut on the other end of the rod and having a guide arm projecting therefrom, a second prying member mounted to slide on the rod and having a hollow V-shaped lip, said prying member having a passage with which the hollow lip communicates and provided with a guide way receiving the guide arm of the nut, a lubricant container carried by the slidable prying member, and a screw mounted in the nut and engaging the said slidable prying member.

3. A leaf spring separator and lubricator, comprising a rod, a prying member adjustably secured to one end of the rod and having a V-shaped lip, a nut secured to the other end of the rod and having a guide arm extending therefrom, a second prying member slidably mounted on the rod and having a hollow V-shaped lip detachably secured thereto, said prying member having a passage with which the hollow lip communicates and provided with a guideway receiving the guide arm of the nut, a spring on the rod between the prying members, a lubricant container carried by the slidable prying member, and a screw mounted in the said nut and engaging the slidable prying member.

4. A lubricating device for lubricating leaf springs, comprising a support, prying members for prying adjacent leaves of the spring open, one of the said prying members being secured to the said support and the other being movable thereon, the said movable prying member being hollow, a lubricant container attached to the said movable hollow prying member and in communication therewith to pass a lubricant between the said open leaves, manually-controlled actuating means for moving the said movable prying member toward the said fixed prying member, and a spring on the said support and pressing the said movable hollow prying member to return the latter on retracting the said actuating means.

1,156,071. SELF-LUBRICATING SHAFT-BEARING. IRA E. FARR, Sandusky, Ohio, assignor of one-half to Joseph V. Baron, Watertown, N. Y. Filed Nov. 22, 1913. Serial No. 802,583. (Cl. 64—24.)



1. In a lubricating device, the combination of a shaft, a bearing therefor having a longitudinally extending pocket therein, a sliding carrier for holding a lubricating pad mounted in said pocket and adapted to slide endwise of the shaft.

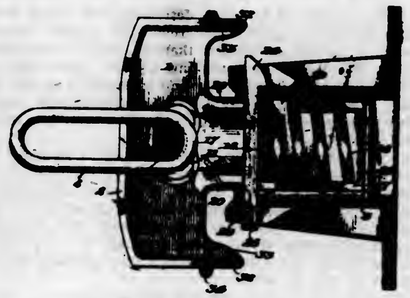
2. In a lubricating device, the combination of a shaft, a bearing therefor, a casing inclosing the bearing, said bearing provided with spaced parts for engagement with the casing to support the same therein, the bearing having a longitudinally extending recess and projecting sides arranged on each side of the recess, a carrier having a lubricating pad therein mounted in said recess, and a handle attached to the carrier for sliding the same endwise of the shaft and means carried by the casing to permit the insertion and removal of the same to and from the pocket.

3. In a lubricating device, the combination of a shaft, a bearing therefor, a casing inclosing the bearing and providing a support for the same, the bearing being provided with a longitudinally extending recess, a removable carrier for a lubricating pad arranged in the recess, and a door on the casing to permit the moving of the carrier to and from the recess endwise of the shaft.

4. In a lubricating device, the combination of a shaft, a bearing therefor, a casing inclosing the bearing and providing a support for the same, the said bearing being provided with a recess, a removable carrier for a lubricating pad engaging the recess, and a door on the casing to permit the insertion of the carrier and removal of the same to and from the recess without stopping the shaft.

5. In a lubricating device, the combination of a bearing having a longitudinally extending pocket therein a removable carrier for holding a lubricating pad mounted in said pocket, means associated with said pocket for preventing lateral movement of the carrier, and means for sliding the carrier endwise of the shaft.

1,156,072. CAR-COUPLING. OTIS TIFFANY GREGG, Hackensack, N. J., assignor to The Gregg Company, Limited, Hackensack, N. J., a Corporation of New York. Filed Mar. 17, 1913. Serial No. 754,935. (Cl. 213—50.)



1. In a car coupler, a draw-head formed with a shank to receive a bumper-spring, said shank having a centrally disposed end-opening for insertion of the spring, a bumper-spring positioned within the shank, a housing within which the shank is slidable, and abutments to confine the spring within the shank and permit the insertion and withdrawal of the shank from the housing without removal of the abutments.

2. In a car coupler, a draw-head formed with a shank to receive a bumper-spring, said shank having a centrally disposed end-opening for insertion of the spring, a bumper-spring positioned within the shank, a housing within which the shank is slidable, and a follower-block interposed between said spring and end-opening to confine the spring within the shank and permit the insertion and withdrawal of the shank in the housing without removal of the follower-block from the shank.

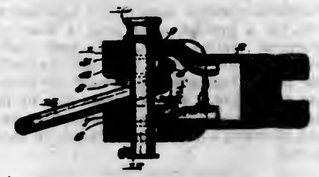
3. In a car coupler, a draw-head formed with a shank to receive a bumper-spring, said shank having a centrally disposed end-opening for insertion of the spring, shoulders on the shank at the side of said centrally disposed end-opening, a housing within which the shank is slidable, and a follower-block interposed between said shoulders and spring to confine the spring within the shank and permit the insertion and withdrawal of the shank without removal of the follower-block from the shank.

4. In a car coupler, a draw-head formed with a shank to receive a bumper-spring, said shank having a centrally disposed end-opening next to the head, the top and bottom members of the head being spaced apart and an opening formed at the rear of said members for the passage of a bumper-spring to the end-opening in the shank, a bumper-spring within the shank, and means confining the spring in the shank, substantially as described.

5. In a car-coupler, a draw-head formed with a shank to receive a bumper-spring, a bumper-spring within the shank, a housing inclosing said shank, a U-shaped locking key spanning the draw-head shank and straddling the housing and formed with laterally extended ends, said key adapted to move longitudinally of the housing, and pins attached to the housing and serving to limit the movement of the locking-key, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,156,073. CAR-COUPLING. OTIS TIFFANY GREGG, Hackensack, N. J., assignor to The Gregg Company, Limited, Hackensack, N. J., a Corporation of New York. Original application filed May 17, 1913, Serial No. 754,935. Divided and this application filed Oct. 13, 1913. Serial No. 794,886. (Cl. 213—50.)



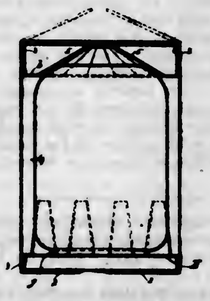
1. In a car coupler, a draw-head, and a coupling link, the top of the draw-head having formed on its under-face a recess or chamber extending cross-wise of the head of sufficient depth to receive the link and of a length, cross-wise of the head, not less than the greatest length of the link, substantially as described.

2. In a car coupler, a draw-head, and a coupling link, the top of the draw-head having formed on its underface a recess or chamber extending cross-wise of the head, and the bottom of the draw-head formed on its upper face with a recess or chamber extending cross-wise of the head, each of said chambers being of sufficient depth to receive the link and of a length, cross-wise of the head, not less than the greatest length of the link, substantially as described.

3. In a car coupler, a draw-head, and a coupling link, the top of the draw-head having formed on its under-face a recess or chamber adapted to receive said link, and having an opening formed in its front face extending the width of the head for the passage of an additional link, said opening in depth being less than the combined thickness of the two links, substantially as described.

4. In a car coupler, a draw-head, and a coupling-pin, the draw-head being formed with upper and lower openings for the coupling-pin, said openings being elongated in the direction of the width of the draw-head to permit the pin to move to either side of the center of the opening toward either side of the draw-head, substantially as described.

1,156,074. PACKING-CASE FOR FRAGILE ARTICLES. JOHN N. HAHN, Cleveland, Ohio. Filed Oct. 8, 1914. Serial No. 865,611. (Cl. 206—65.)



1. A shipping box for globes or shades comprising the combination of a case having its side walls spaced to clear the globe or shade and having end closures spaced to clear the globe or shade and two marginally flanged trays independent of the case and withdrawable therefrom and insertible therein and spaced to engage the globe or shade and hold it clear of the case and each having its entire flange fitting inside the case and contacting with a case closure and whereof one tray is provided with a circular row of inwardly extending fingers adapted to constitute a concave seat arranged between the tray and the adjacent case closure for the reception of one end of the globe or shade, and whereof the other tray is provided with a group of spaced tongues and with a solid center part adapted to overlie the other end of the globe or shade with the tongues in engagement with the curved wall of the shade or globe.

2. A shipping box for globes or shades comprising the combination of a knockdown corrugated strawboard case having its side walls spaced to clear the globe or shade and having end closures spaced to clear the globe or shade, and two marginally flanged detachable trays spaced to engage the globe or shade and hold it clear of the case and each having its entire flange fitting inside the case and contacting with a case closure and whereof one tray is provided with a circular row of inwardly extending fingers adapted to constitute a concave seat arranged between the tray and the adjacent case closure for the reception of one end of the globe or shade, and whereof the other tray is provided with a group of spaced tongues and is adapted to overlie the other end of the globe or shade with the tongues in engagement with the curved wall of the shade or globe.

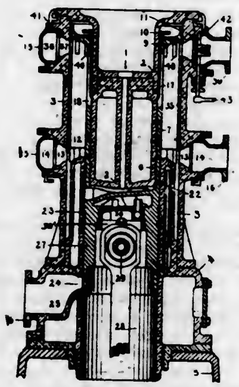
3. A shipping box for globes or shades comprising the combination of a case having its side walls spaced to clear the globe or shade and having two ends each consisting of four flaps adapted to be folded together to form end closures spaced to clear the globe or shade, and two marginally flanged trays spaced to engage the globe or shade and hold it clear of the case and each having its flange fitting inside the case and contacting with a case closure and whereof one tray is provided with a circular row of inwardly extending fingers adapted to constitute a concave seat arranged between the tray and the adjacent case closure for the reception of one end of the globe or shade, and whereof the other tray is provided with a group of spaced tongues and is adapted to overlie the other end of the globe or shade with the tongues in engagement with the curved wall of the shade or globe, substantially as described.

1,156,075. INTERNAL-COMBUSTION ENGINE. REUBEN M. HEAP, Pittsburgh, Pa. Filed May 10, 1912. Serial No. 696,408. (Cl. 123—65.)

1. In an internal combustion engine, a power cylinder having lateral exhaust ports, a hollow power piston reciprocable in the said cylinder and provided with a sleeve extension, the crown of the piston having circumferentially arranged alternate depressed and elevated portions, from the outer ends of which depressed portions exhaust ports lead to the exterior of the said piston, the last named ports arranged to register with the first named ports coincidently with the passing of the inner dead center, and means for supplying a cooling fluid within the hollow in the piston to cool the interior surface of the crown opposite the said depressed and elevated portions.

2. In an internal combustion engine, a power cylinder having lateral exhaust ports, a hollow power piston reciprocable in the said cylinder and provided with a sleeve extension, the crown of the piston having circumferentially arranged alternate depressed and elevated portions, from the outer ends of which depressed portions exhaust ports lead to the exterior of the said piston, the last named ports arranged to register with the first named ports coincidently with the passing of the inner dead center, means for supplying a cooling fluid within the hollow in the piston to cool the interior surface of the crown opposite the said depressed and elevated portions, and means for making the contiguous surfaces of the sleeve and cylinder gas tight.

3. In an internal combustion engine, a power piston, a pump piston, a sleeve connecting the said pistons, a cylinder, in contact with whose interior surface the said pistons and sleeve may reciprocate, a cylinder head extending into the outer end of the sleeve, and a pump chamber between the cylinder and the sleeve, and between the pump piston and a transverse wall opposite the cylinder head and nearer the outer end of the cylinder than the inner end of the cylinder head, the sleeve having in its substance longitudinal passages terminating at their inner ends in ports through the sleeve, the said ports being arranged to communicate with the interior of the sleeve between the cylinder head and the power piston when the latter is passing the inner dead center and the said passages at their outer ends communicating with the said pump chamber.

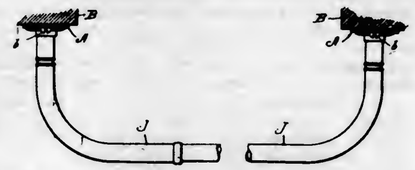


4. In an internal combustion engine, a power piston, a pump piston, a sleeve connecting the said pistons, a cylinder, in contact with whose interior surface the said pistons and sleeve reciprocate, a cylinder head extending into the outer end of the sleeve, a pump chamber between the cylinder and the sleeve, and between the pump piston and a transverse wall opposite the cylinder head and nearer the outer end of the cylinder than the inner end of the cylinder head, the sleeve having in its substance longitudinal passages terminating at their inner ends in ports through the sleeve, the said ports being arranged to communicate with the interior of the sleeve between the cylinder head and the power piston when the latter is passing the inner dead center and the said passages at their outer ends communicating with the said pump chamber, and a water jacket surrounding the power piston and overlapping the inner end of the cylinder head.

5. In an internal combustion engine, a cylinder having one end of greater internal diameter than the other, a power piston reciprocable in the smaller portion of the cylinder, a pump piston reciprocable in the larger portion thereof, a cylinder head extending through the larger portion of the cylinder and into the smaller portion, a piston sleeve fixed to the two pistons and slidable internally on the said cylinder head and externally on the inner surface of the smaller portion of the cylinder, longitudinal passages in the sleeve opening into the space between the sleeve and the larger portion of the cylinder and also terminating in ports arranged to communicate with the space between the power piston and the cylinder head when the piston is passing its inner dead center, the larger diameter terminating at its junction with the smaller diameter, and a water-jacket surrounding the portion of the cylinder having the smaller diameter, the water-jacket being opposite the combustion chamber from the cylinder head to the power piston.

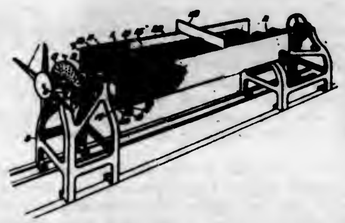
[Claims 6 to 11 not printed in the Gazette.]

1,156,076. BRACKET FOR CURTAIN-RODS. JAMES N. HENRY, Providence, R. I. Filed Mar. 22, 1915. Serial No. 16,043. (Cl. 156—22.)



The combination with a curtain rod provided with an internal rib, of a bracket comprising a base, provided with an elevated central portion, and with perforations in said central portion, a plate upon the elevated portion of the base having lugs passing through the perforations in the base and engaged with the rear face of the base, and compressible arms upon the plate adapted to engage the rod and provided with notches adapted to receive the rib of the rod.

1,156,077. APPARATUS FOR CONSTRUCTING PLASTIC COLUMNS. ALBERT G. HIGGINS, Kansas City, Mo., assignor to The Trusswall Manufacturing Company, Kansas City, Mo., a Corporation of Missouri. Filed Feb. 16, 1914. Serial No. 818,848. (Cl. 25—30.)



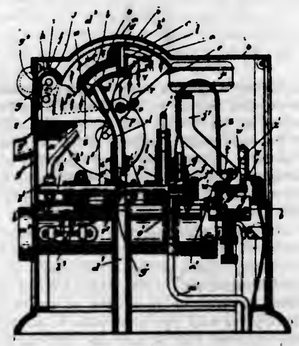
1. In an apparatus for constructing plastic columns, the combination of spaced supports, rotatable means carried by the supports for holding a column member, cross members carried by the supports, means on the cross members for holding guides in adjusted position and guides carried by said means and adapted for vertical adjustment.

2. In an apparatus for constructing plastic columns, the combination of spaced supports, rotatable means carried by the supports for holding a column member, cross members carried by the supports, upstanding brackets on the cross members, means on the brackets for holding guides in adjusted positions, and guides mounted in the brackets and adapted for vertical adjustment, for the purpose set forth.

3. In an apparatus for constructing plastic columns, the combination with spaced supports, of rotatable means carried by the supports for holding a column member, cross bars on the supports, brackets on the ends of the cross bars comprising upwardly opening yokes, guide boards mounted in the brackets at opposite sides of the column position, and set screws in one member of each of the brackets for clamping the guide boards in adjusted position, whereby guiding edges of the boards may be set to variable elevation relative to a column held on the supports.

1,156,078. AIR-VENDING MACHINE. ARTHUR PEART HOLDEN and ROBERT JAMES COPELAND, Toronto, Ontario, Canada. Filed June 6, 1912. Serial No. 702,122. (Cl. 194—84.)

1. In a machine of the class described, an electric motor, an air compressor operated thereby, coin operated means controlling the electric circuit through said motor, consisting of a movably mounted coin carriage, means for preventing the movement of said coin carriage without the insertion of a coin, a lever movable with said coin carriage, a switch, closed by the movement of said lever whereby the electric circuit through the motor is completed, a storage tank for the compressed air connected with the air compressor, and a flexible member connected with said storage tank to open the electric circuit and thereby stop the operation of the motor when the air within the storage tank attains a pre-determined pressure.



2. In a machine of the class described comprising an electric motor, an air compressor, a switch for opening and closing the circuit through said motor, a coin controlled lever, a hinged member at the inner end of said lever, a spring-held member engaged by the hinged member, said spring-held member moving the switch to close the circuit through the motor, a storage tank connected with the air compressor, a flexible member connected with said storage tank adapted to move the switch and open the circuit through the motor, and means for locking the coin controlled mechanism against operation without the insertion of a coin.

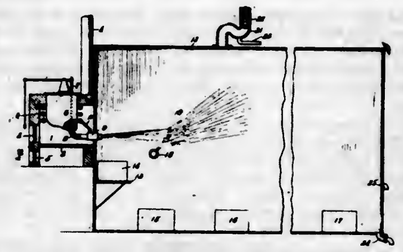
3. In a machine of the class described comprising an electric motor, an air compressor operated thereby, a switch, a coin controlled lever operating said switch to close the circuit through said motor, a coin carriage movable with said lever, means for preventing movement of the coin carriage until a coin has been inserted therein, an air storage tank connected with the air compressor and means connected with the storage tank resiliently acting upon the switch to open the same when the compressed air in said tank attains a pre-determined pressure.

4. In a machine of the class described comprising an electric motor, an air compressor operated thereby, a switch, a lever, a coin carriage rockably mounted in said machine movable with said lever, a pivoted dog for locking said coin carriage and lever against movement without the insertion of a coin, a spring-held member with which the lever engages, said spring-held member being adapted to close said switch when the coin carriage is rocked, an air storage tank, resilient means connected with said storage tank movable under the influence of the air pressure created by the air compressor to move the switch into an open position thereby stopping the operation of the air compressor.

5. In a machine of the class described, an electric motor, an air compressor, a switch, a rockable coin carriage, a lever to move said coin carriage and close said switch for the operation of the motor and air compressor, an arm movable with said lever, a pivoted locking dog actuated by said arm if said lever is moved before a coin has been introduced into the coin carriage, a coin chute, an offset on said coin chute, a shoulder on said dog to engage therewith when the dog is pressed by said arm, a keeper to engage said dog when the coin carriage is rocked to the limit of movement, an air storage tank connected with the air compressor, and automatic means connected therewith for stopping the operation of the air compressor.

[Claims 6 to 12 not printed in the Gazette.]

1,156,079. PROCESS OF AND APPARATUS FOR COMMINUTING LEAD. CLIFFORD D. HOLLEY, Detroit, Mich., assignor to Acme White Lead and Color Works, Detroit, Mich., a Corporation of Michigan. Filed Apr. 8, 1912. Serial No. 689,416. (Cl. 134—68.)



1. In the comminution of lead, the process which comprises atomizing a jet of molten lead with a jet of superheated steam, allowing a regulated expansion in a mixing chamber, delivering the steam and lead into a collecting chamber and collecting the atomized lead.

2. In the comminution of lead, the process which comprises atomizing a jet of molten lead with a jet of superheated steam, allowing a regulated expansion in a mixing chamber, delivering the steam and lead into a collecting chamber in the presence of a regulated amount of air and collecting the atomized lead.

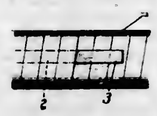
3. In the comminution of lead, the process which comprises atomizing a jet of molten lead with a jet of superheated steam, allowing a regulated expansion in a mixing chamber, delivering the steam and lead into a collecting chamber in the presence of a regulated amount of air containing active oxidants and collecting the atomized lead.

4. In the treatment of lead the process which comprises producing a jet of atomized lead in an atmosphere of steam by means of a current of superheated steam and delivering limited and regulated amounts of air to said jet subsequent to its formation.

5. In the comminution of lead, the process which comprises atomizing lead by superheated steam and oxidizing by a regulated amount of air containing active oxidants in an atmosphere of steam.

[Claims 6 to 23 not printed in the Gazette.]

1,156,080. WRAPPER FOR ARTICLES OF MERCHANDISE. ERNEST HOPKINSON, East Orange, N. J. Filed Nov. 23, 1914. Serial No. 873,489. (Cl. 150—54.)



1. In combination with a wrapper for an annular article of merchandise, consisting of a spirally wrapped strip of flexible material, a strip of material having a greater tearing resistance than said wrapper, located circumferentially of said article and attached to the successive convolutions of said wrapper to hold the latter together when the same are severed by pulling the end of said circumferential strip outwardly.

2. In combination with a wrapper for an annular article of merchandise, consisting of a spirally wrapped strip of flexible material, a strip of material having greater tearing resistance than said wrapper located circumferentially of said article within said wrapper and attached to the successive convolutions thereof.

3. In combination with a wrapper for tire casings consisting of a spirally wrapped strip of flexible material, a

strip of material having a greater tearing resistance than said wrapper and located within the same and attached thereto at one side of the central longitudinal line of the circumference of said casing.

1,156,081. SAFETY-TREAD AND METHOD OF PRODUCING THE SAME. GEORGE HOPP, New York, N. Y. Filed Apr. 22, 1914. Serial No. 833,808. (Cl. 154—2.)

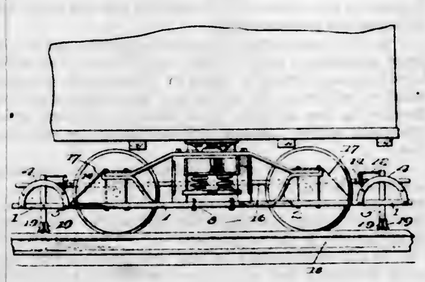
1. A safety tread consisting of a base and a layer composed of abrasive material and a phenolic condensation body.

2. A safety tread consisting of a metal base and a layer of abrasive material and phenolic condensation body.

3. A method of producing a safety tread consisting in mixing an abrasive material with phenolic condensation bodies, applying a layer thereof to a base, and treating the whole under suitable conditions of temperature and pressure.

4. A method of producing a safety tread consisting in mixing abrasive material with phenolic condensation products, applying a layer thereof to a metal base, and treating the whole under suitable conditions of temperature and pressure.

1,156,082. SAFETY APPLIANCE. MARTIN A. JONES, McGregor, Tex. Filed Oct. 28, 1914. Serial No. 869,112. (Cl. 188—2.)



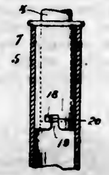
1. In an apparatus for the purpose set forth, the combination of a main supporting bar, a pair of arcuate plates secured upon the said bar, a lever pivoted to the said main supporting bar concentric with said plates and extending upwardly between the same, the said plates frictionally engaging the said lever and the upper end of the lever being extended inwardly above the said plates, a valve controlling the train pipe, and a link connecting the inner end of the said lever with the said valve.

2. In an apparatus for the purpose set forth, the combination of a main supporting bar, a lever pivoted upon the said bar, guide plates secured upon the said bar, and rising therefrom concentric with the pivot of said lever and frictionally engaging the lever, means on the lever and one of said plates for normally holding the lever in an upright position, a valve controlling the train pipe, and connections between the lever and said valve.

3. In an apparatus for the purpose set forth, the combination of a main supporting bar, a lever pivotally mounted upon the said bar, a valve controlling the train pipe, connections between said valve and the lever, and shoes detachably mounted upon the lower end of the lever.

4. In an apparatus for the purpose set forth, the combination of a main supporting bar, a lever pivoted thereon and provided with transverse notches in its lower end, a valve controlling the train pipe, connections between said valve and the lever, bolts inserted through the lever above the lower end thereof, and shoes carrying bolts adapted to seat in the notches in the lower ends of the lever and provided near their upper ends with notches adapted to frictionally engage the bolts in the lever.

1,156,083. DISPLAY-STAND. JULIUS J. KARNES, Maywood, Mo. Filed Oct. 16, 1913. Serial No. 795,491. (Cl. 211—24.)



1. In a display stand, an outer tubular member, a sleeve fitted therein and having in one wall a longitudinal slot, and provided at its lower end with a longitudinal slot having at its upper end a lateral recess, a member longitudinally slidable in said sleeve and provided with an outwardly extending projection adapted to enter said second named slot and said lateral recess, and a spring mounted in said first named slot and held compressed by said members and exerting frictional resistance against longitudinal movement of one member relative to the other.

2. In a display stand, a supporting base, and a standard mounted thereon and comprising an outer tubular vertical member secured to said base, a sleeve secured in said outer member and provided with a longitudinal slot in one side, an inner tubular member vertically slidable in said sleeve, a spring in said slot and held compressed between said inner member and said outer member, and a third inner member longitudinally slidable in the first named inner member, and a spring held compressed between said inner members, said springs serving as yielding resistances against longitudinal movement of the members against which they bear.

1,156,084. CARBURETER. HERBERT L. KIMMELL, Los Angeles, Cal., assignor, by mesne assignments, to W. F. Bianchi Tompkins, New York, N. Y. Filed Feb. 20, 1908. Serial No. 416,916. (Cl. 48—150.3.)



1. In a carbureter, the combination of a float chamber, a float therein, a valve controlled by the float for regulating the admission of gasolene to the float chamber, a cylindrical horizontal mixing chamber at one side of the float chamber, a gas chamber supported above the float chamber and in connection with the mixing chamber, a gasolene passage from the float chamber to the mixing chamber, means to control the admission of air to the mixing chamber, a sleeve threaded in the casing of the mixing chamber, a gasolene valve to control said passage screwed in said sleeve, an arm clamped to the sleeve to move the same, and a link adjustably attached to said arm, said link being also connected to said air controlling means and permitting limited relative movement of said means and said gasolene valve.

2. In a carbureter, the combination of a float chamber, a float therein, a valve controlled by the float for regulating the admission of gasolene to the float chamber, a cylindrical mixing chamber, supported on one side of the float chamber and having an air admission port, a gas chamber supported above the float chamber and in communication with the mixing chamber, a gasolene passage from the float chamber to the mixing chamber, an adjustable set valve in said passage for controlling the flow of gasolene therethrough, a second passage from the float chamber to the mixing chamber, a gasolene valve freely movable for varying the flow of gasolene therethrough, a valve for controlling the air admission port, said valve also controlling the flow of mixture to said reservoir, and means connecting the air valve stem to the last named gasolene valve for moving the two simultaneously, said means including a spring to permit relative movement of the valves.

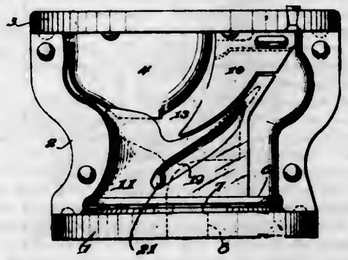
3. In a carbureter, the combination of a cylindrical mixing chamber, a float chamber at one side of and communicating with the mixing chamber, a gas chamber above and supported on the float chamber, a longitudinally movable sleeve valve to control the admission of carbureted air from the mixing chamber to the gas chamber, an inlet port disposed in the underside of the mixing chamber and a needle valve having its stem extending above the outside of the mixing chamber, the valve coöperating with the inlet port to regulate the admission of gasolene from the float chamber to the mixing chamber, said sleeve valve being slotted longitudinally to straddle the needle valve.

4. In a carbureter, the combination of a mixing chamber having an air inlet port, a longitudinally movable sleevelike air valve disposed within the mixing chamber to control the opening of the air port, a gasolene chamber communicating with the mixing chamber, a needle valve to regulate the admission of gasolene from the gasolene chamber to the mixing chamber, an externally screw threaded sleeve mounted in the shell of the mixing chamber and supporting the needle valve, an arm secured to said screw threaded sleeve, and a link connection between said arm and the stem of the sleevelike air valve, said arm being slotted longitudinally to permit the connection of the link to the arm to be moved toward or from the axis of the threaded sleeve.

5. In a carbureter, the combination of a cylindrical mixing chamber having an air inlet port and a gasolene inlet port, a gas chamber integral with the mixing chamber and having a flat underside, a gasolene chamber fitting against the underside of the gas chamber, a conduit to conduct the gasolene from the gasolene chamber to the mixing chamber, a valve to regulate the flow of gasolene to the mixing chamber and a longitudinally movable sleeve valve to regulate the admission of air to the mixing chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,156,085. APPARATUS FOR FORMING ARTICLES OF PLASTIC MATERIAL. CHARLES J. KIRK, New Castle, Pa. Filed Mar. 3, 1913. Serial No. 751,871. (Cl. 25—129.)



1. In a mold for casting siphon jet closets, the combination of the top, side and bottom members conforming with the outer surfaces of the closet, with a core of substantially the same material as the closet conforming to the interior surfaces of the siphon and siphon jet passage walls supported upon the base member and adapted to be covered with a deposit of the closet material and form a homogeneous part of the completed closet.

2. In a mold for casting siphon jet closets, the combination of the top, bottom and side members conforming to the outer surfaces of the closet, with a core of substantially the same material as the closet conforming to the bottom of the intake arm and the top of the discharge arm of the siphon and having a siphon jet passage depression in its side adapted to be covered with a deposit of the closet material and form a homogeneous part of the completed closet.

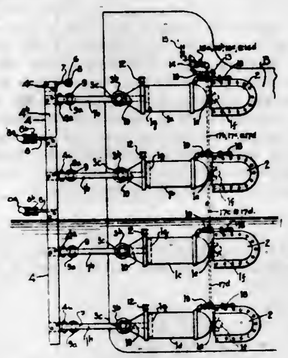
3. In an earthenware closet mold, top, side and bottom members of porous material conforming to the outer surfaces of the closet, and a permanent inner siphon and siphon jet passage wall forming core of material adapted to be covered with a deposit of the closet material and form an integral part of the completed closet.

4. In a mold for casting siphon jet closets, the combination of the top, side and bottom members conforming to the outer surfaces of the closet and siphon jet passage, with a core of substantially the same material as the closet conforming to the inner surfaces of the siphon, spud, and siphon jet passage from the spud, adapted to be covered with a deposit of the closet material and form an integral part of the completed closet.

5. In a mold for casting siphon jet closets, the combination of the top, side and bottom members conforming to the outer surfaces of the closet and siphon jet passage, with a core of substantially the same material as the closet conforming to the inner surfaces of the siphon, spud, siphon jet chamber, and jet passage way leading from the spud to the chamber, adapted to be covered with a deposit of the closet material and form an integral part of the completed closet.

[Claims 6 and 7 not printed in the Gazette.]

1,156,086. FENDER FOR SHIPS. MICHAEL KUNIK, Chicago, Ill. Filed Dec. 2, 1914. Serial No. 875,090. (Cl. 114—219.)



1. The combination in a fender for ships, of a plurality of pivotally mounted air cylinders, rams, and means for supporting said cylinders.

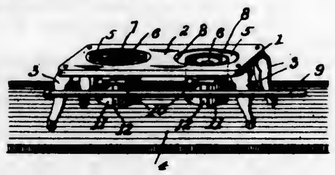
2. The combination in a fender for ships, of a plurality of pivotally mounted air cylinders, horizontal and vertical rams and means for supporting said cylinders.

3. The combination in a fender for ships, of a plurality of pivotally mounted, pairs of air cylinders, horizontally and vertical rams attached thereto and means for supporting said cylinders to permit horizontal movement.

4. The combination in a fender for ships, of a plurality of pivotally mounted pairs of air cylinders, horizontal and vertical rams and resilient means for retaining said cylinders in parallel alinement with the center line of the ship and means for supporting said cylinders arranged to permit horizontal movement of same.

5. The combination in a fender for ships, of a plurality of air cylinders connected vertically and horizontally with rams, means for supporting said cylinders arranged to permit horizontal angular movement of said cylinders and resilient means arranged to retain said cylinders in parallel alinement with the longitudinal center line of the ship.

1,156,087. FLAME-SHIELD FOR GAS-STOVES. ELMA P. KUPFER, Leonia, N. J. Filed June 28, 1915. Serial No. 36,690. (Cl. 126—214.)



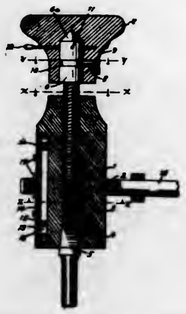
1. A flame shield for gas stoves comprising a vertical tubular member to surround a burner and rest removably upon the base level of a stove independently of the stove and burner and extend up to the bottom of the grid of the stove, said tubular member having a slot extending upward from its bottom edge to fit around the gas pipe of the stove.

2. The combination with a gas stove having a burner, a gas supply pipe leading to the burner, and a removable grid arranged above the burner and resting directly upon the top of the stove, of a tubular flame shield removably fitted around the burner and terminating at its upper end just below the grid, the lower end of the shield extending below the burner and being supported independently of the stove and burner.

3. The combination with a gas stove having a burner, a gas supply pipe leading to the burner, and a removable grid above the burner, of a tubular flame shield removably fitted around the burner and having a slot entering at its lower end and fitting around the gas supply pipe, said shield resting at its lower end upon the base level of the stove independently of the stove and burner and terminating at its upper end just below the grid.

4. The combination with a gas stove having a top plate provided with openings, legs supporting said top plate on a suitable platform, burners arranged below said openings in the top plate and above the platform, gas supply pipes leading to the burners, and removable grids fitting said openings, of tubular flame shields surrounding the burners and having slots fitting over the gas supply pipes, said shields resting at their lower ends upon the platform independently of the stove and burner and terminating at their upper ends just below the grids.

1,156,088. DRILL-HOLDER. HARRY C. LAWSON, McGregor, Tex. Filed Mar. 5, 1914. Serial No. 822,609. (Cl. 77—7.)

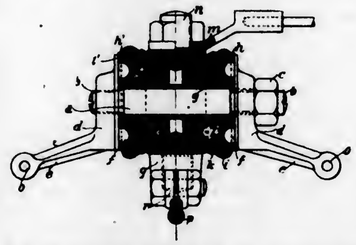


1. A drill holder comprising a socket member of rectangular cross section, one face of said member being formed with a rectangular depression, a plate mounted in said depression, springs interposed between the plate and the depression wall parallel to said plate and a plurality of ribs rigidly mounted upon the exterior face of the plate projecting from the recess, said ribs being transverse of the axis of the drill holder and serving to prevent longitudinal motion of a wrench engaged between two of said ribs.

2. In a drill holder, a socket member having a recess in one side, and a spring pressed plate confined in said recess and having provision for retaining an operating tool on the socket member at various predetermined heights.

3. In a drill holder, a socket member having an elongated vertical recess on one side, a plate disposed in said recess, keepers secured on the member and projecting into the path of the plate, springs mounted in the recess and exerting an outward pressure against the plate, and transverse ribs provided on the outer side of the plate.

1,156,089. INSULATOR FOR OVERHEAD CONDUCTORS OF ELECTRIC LINES. FERDINAND LIBANO, Trieste, Austria-Hungary. Filed May 23, 1914. Serial No. 840,539. (Cl. 191—40.)



1. An insulator for overhead wires of electric lines having a strap provided with a central bore, a line wire clamp formed on said strap, the bore of said strap deflecting away from the axis and toward both outer ends thereof, a conical insulating member secured in each outer end of said strap with its smaller base directed toward the smaller base of the other insulating member, their conical surfaces corresponding to the deflecting surfaces of the strap, there being concentric central bores provided in said insulating members, a bolt secured in the bores of said insulating members, supporting brackets mounted on each end of said bolt and having shoulders abutting against the respective broad bases of said insulating members, and a nut on said bolt to secure said brackets against said insulating members.

2. In an insulator for overhead electric wires, the combination with a horizontally extending supporting member, shoulders on said supporting member facing one another, conical insulating members mounted on said supporting member, one secured against each of the shoulders, and a line clamp strap supported by said insulating members and tending to press the insulating members away from one another and against the shoulders when in supporting position.

3. In an insulator for overhead electric wires, the combination with a horizontally extending supporting member, shoulders on said supporting member facing one another, conical insulating members mounted on said supporting member, one secured against each of the shoulders, and a line clamp strap supported by said insulating members and tending to press the insulating members away from one another and against the shoulders when in supporting position, and washers enveloping said insulating members to compensate for irregularities of the surfaces of said insulating members.

4. In an insulator for overhead electric wires, the combination with a horizontally extending supporting member, shoulders on said supporting member facing one another, conical porcelain members mounted on said supporting member, one secured against each of the shoulders, a strap supported by said porcelain members and tending to press the same away from one another and against the shoulders when in supporting position, a feed line securing shoe on said strap, a line clamp on said strap, and soft metal washers secured around said porcelain members to compensate for irregularities of its surfaces, and thus to prevent chattering of such porcelain members.

5. In an insulator for overhead electric wires, the combination with a horizontally extending supporting member, a pressure absorbing insertion on said supporting member, conical insulating members mounted on said insertion, a soft metal washer on the conical surfaces of said insulating members, and a line clamp strap supported by said insulating members, being separated therefrom by said soft metal washer, and tending to press the insulating members away from one another when in supporting position.

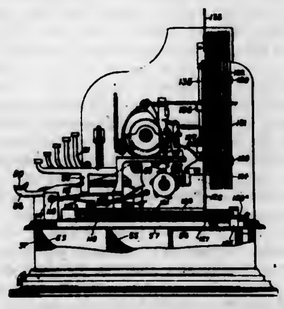
[Claims 6 and 7 not printed in the Gazette.]

1,156,090. COLLAR FOR GARMENTS. SAMUEL A. MYERS, Boston, Mass. Filed Jan. 2, 1912. Serial No. 668,955. (Cl. 2—62.)



In a collar for a coat, the combination of a non-absorbent fabric forming the outside and the crest of the collar; a body of absorbent material forming a secondary crest, on the inner side of the collar projecting inward toward the wearer's neck close to and parallel with the said crest of non-absorbent material, and guarding the latter from contact with the neck; and a body of absorbent material connected with said secondary crest and normally free from contact with the wearer's neck, into which body moisture may pass therefrom and thence be dissipated.

1,156,091. CASH-REGISTER INDICATOR. CARL L. NELSON, Seattle, Wash., assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Original application filed June 10, 1905, Serial No. 264,610. Divided and this application filed Jan. 15, 1914. Serial No. 812,269. (Cl. 235—23.)



1. In a cash register, the combination of an operating element, a lever connected therewith, a catch on the lever, an indicating device comprising a series of vertically movable indicator-holders, a bar located below said holders, means for moving said indicating device so as to bring any desired one of the holders above the bar, means for raising the bar, and means for bringing the catch on said lever into engagement with the bar, whereby the manipulation of the operating means will depress the bar.

2. In a cash register, the combination of an operating bar, a lever connected with said bar so as to be depressed when the operating bar is depressed, a spring-catch upon the lever, an indicating device, and a bar connected with the indicating device and adapted to be engaged by said catch, whereby the operation of said first-named bar will operate the indicating device.

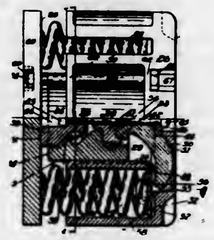
3. A cash register having a pivoted operating bar, a pivoted lever provided with a slot, a projection from said operating bar passing through said slot, a pivoted catch upon the lever, an indicating device and operating connections, and a spring for operating said catch; said catch being provided with a slanting surface whereby it can be made to ride along said connections and engage them when the catch passes beyond the rear surface of the connection.

4. A cash register having a pivoted operating bar, a pivoted lever provided with a slot, a projection from said operating bar passing through said slot, a spring-catch upon said lever, a drawer adapted to be opened when the operating bar is depressed, and means connected with the drawer for engaging said catch and actuating it.

5. In a cash register, the combination of an operating bar, a lever, means connected with the operating bar for depressing the lever, a spring-catch on the lever, resilient means for raising the lever and the operating bar, means for holding the lever and operating bar in depressed position, a drawer, and means for releasing said last-named means when the drawer is closed.

[Claims 6 to 31 not printed in the Gazette.]

1,156,092. FRICTION DRAFT-GEAR FOR RAILWAY-CARS. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chicago, Ill. Filed Oct. 22, 1912. Serial No. 727,164. (Cl. 213—64.)



1. A draft gear for railway cars comprising a shell provided with a central friction chamber and parallel adjacent spring chambers, friction compression resisting members with the friction chamber and springs within the spring chambers, and friction means for operatively connecting the friction compression resisting members with said springs.

2. A draft gear for railway cars comprising a shell provided with a central friction chamber and parallel adjacent spring chambers, friction compression resisting members within the friction chamber and springs within the spring chambers, and means for operatively connecting the friction compression resisting members with said springs, said means comprising curved shoes engaging the friction compression resisting members at one end and the springs at the other end.

3. In a railway draft rigging, a cushioning member comprising a shell having a central friction chamber and parallel adjacent spring chambers, a wedge and friction shoes within said friction chamber, and springs within the spring chambers, openings within said shell between the friction chambers and spring chambers, and shoes passing through said openings engaging the friction compression resisting members at one end and the springs at the other end.

4. In a draft rigging for railway cars, a cushioning member comprising a shell, a friction chamber and adjacent spring chambers in said shell, said spring chambers being arranged on opposite sides of said friction chambers, the said chambers being closed at their rear end, openings provided between each spring chamber and the friction

chamber, friction compression resisting members within the friction chamber, springs within the spring chamber, the rear inner face of the shell being provided along the said openings with a friction face, friction shoes having friction faces each engaging one of said friction faces of the shell, and in engagement with the friction compression resisting members at one end and the springs at the other end.

5. In a draft rigging for railway cars, a cushioning member comprising a shell having a friction chamber and spring chambers adjacent and parallel thereto, friction compression resisting members within the friction chambers, and springs within the spring chambers, a shoe for each spring chamber engaging the springs therein at one end and engaging the friction members within the friction chamber at the other end.

[Claims 6 to 28 not printed in the Gazette.]

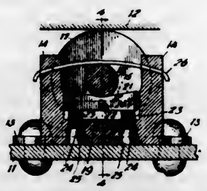
1,156,093. WHITE-METAL CASTING AND THE METHOD OF MAKING SAME. CHARLES PACK, New York, N. Y., assignor to Doehler Die Casting Company, a Corporation of New York. Filed June 19, 1914. Serial No. 846,197. (Cl. 22—200.)

1. The herein described method of producing finished white metal castings consisting in alloying from 80 to 91 parts of aluminum with from 20 to 9 parts of copper, and pouring the molten alloy in a metallic mold maintained at a temperature below the fusing point of the alloy, whereby the surface of the casting is chilled, and drawing the casting from the mold immediately following the solidification shrinkage whereby excessive contraction of the casting in the mold is avoided.

2. The herein described method of producing finished white metal castings consisting in alloying from 80 to 91 parts of aluminum with from 20 to 9 parts of copper, and pouring the molten metal under pressure in a metallic mold maintained at a temperature below the fusing point of the alloy, whereby the surface of the casting is chilled, and drawing the casting from the mold immediately following the solidification shrinkage whereby excessive contraction of the casting in the mold is avoided.

3. A finished, pressure die cast white metal casting composed of an alloy of from 80 to 91 parts of aluminum and from 20 to 9 parts of copper having a chilled outer stratum or surface.

1,156,094. ROLLER SIDE BEARING. CALVIN B. PATCH, Glenellyn, Ill., assignor to William H. Miner, Chazy, N. Y. Filed Oct. 9, 1914. Serial No. 865,813. (Cl. 64—64.)



1. In a roller side bearing, a bearing plate having fixed tread surfaces, an anti-friction roller mounted on said plate and having trunnions of reduced diameter adapted to bear and roll on said tread surfaces, and depressible centering plates for said roller engaging the trunnions thereof, said plates having inclined tread surfaces.

2. In a roller side bearing for railway cars, a bearing member adapted to be secured to a truck and having a fixed tread surface, an anti-friction roller bodily movably mounted on said bearing plate, and a movable tread surface mounted on said bearing plate having inclined tread surfaces normally holding said roller out of engagement with the fixed tread surface and adapted to be depressed to permit the roller to engage the tread surface.

3. In a roller side bearing for railway cars, a bearing plate having parallel, spaced fixed tread surfaces, a roller mounted between said tread surfaces and having trunnions of reduced diameter extending from the sides thereof, and a movable plate mounted in each of said tread surfaces, said plates being spring controlled and normally lifting said trunnions out of engagement with the fixed tread surfaces.

4. In a roller side bearing for railway cars, the combination with a bearing plate having fixed tread surfaces, an anti-friction roller having trunnions adapted to bear on said fixed surfaces, and movable tread surfaces engaging said trunnions and adapted to elevate the latter, under normal conditions, from engagement with the fixed tread surfaces.

5. In a roller side bearing for railway cars, a bearing plate adapted to be secured to a bolster and having spaced, parallel fixed tread surfaces, an anti-friction roller having trunnions adapted to engage and bear on said tread surfaces, a movable plate associated with each of said fixed tread surfaces and adapted to engage the trunnions, each of said plates having inclined tread surfaces to thereby return the roller to its normal central position, means for preventing accidental removal of the roller from the bearing plate, and springs actuating said movable plates.

1,156,095. SAFETY CEMENT RAILROAD-TIE. WILLIAM M. PERKINS, North Manchester, Ind. Filed Feb. 8, 1915. Serial No. 6,869. (Cl. 238—3.)



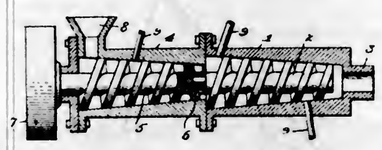
1. A composite railroad tie, comprising oppositely disposed members, metallic loop members reinforcing said oppositely disposed members, a metallic structure mounted in the looped portion of each of said metallic means, and pivoted connecting means, connecting said oppositely disposed members, and pivoted through said metallic structures to allow of resilient play of said members.

2. A composite railroad tie composed of oppositely disposed concrete members having transverse vertically disposed apertures therein, sleeves mounted in said apertures, a looped metallic band above and below each of said concrete members, said bands having apertures registering with the apertures in said concrete members, reinforcing fastening means passed through said sleeves and locking said metallic bands and linking means pivoted in the loop portion of said bands to allow of resilient play of each of said concrete members.

3. A composite tie comprising oppositely disposed concrete members having longitudinal recesses in the top and bottom portions, a metallic looped band, seated in said recesses the loop portions thereof extending beyond the inner ends of said concrete members, metallic structures mounted in said looped portions, pivoted connecting means mounted through said metallic structures and connecting said concrete members, transverse locking reinforcing elements mounted through said concrete members and said metallic bands to reinforce and lock the same in position, a rail plate, a rail mounted upon said rail plate, and means locking said rail to a portion of said transverse locking means.

4. A composite tie comprising oppositely disposed members, loop reinforcing members, metallic members in said loop members, pivoted linking means mounted on said metallic members and abutting said loop portions, a rail plate mounted upon each of said oppositely disposed members, a rail mounted upon said rail plates, and bolt means passing through said loop members and said oppositely disposed members, a portion of which operate to fasten said rails, the lower ends of said reinforcing means operating to anchor said tie to its bed to prevent displacement therefrom.

1,156,096. APPARATUS FOR TREATING PLASTIC MATERIAL. RAYMOND B. PRICE, New York, N. Y., assignor to Rubber Regenerating Company, a Corporation of Indiana. Filed Mar. 26, 1913. Serial No. 756,885. (Cl. 18—12.)



1. Apparatus for treating material, embodying continually operable tubing mechanism adapted for continually receiving material at one end and delivering it at the other end, an exit aperture at said delivery end adapted to form the material, an open feed for said tubing mechanism positioned at the receiving end of the mechanism, means for exerting a vacuum on the material in said apparatus, and means for sealing said apparatus against ingress of air through the feed side to the area of vacuum application.

2. Apparatus for treating material, embodying continually operable tubing mechanism adapted for continually receiving material at one end and delivering it at the other end, an exit aperture at said delivery end adapted to form the material, an open feed for said tubing mechanism positioned at the receiving end of the mechanism, a feed mechanism operating in conjunction with said open feed for feeding the material to said tubing mechanism and for sealing said apparatus on that side, and means for exerting a vacuum on the material in said apparatus.

3. Apparatus for treating material, embodying continually operable tubing mechanism adapted for continually receiving material at one end and delivering it at the other end, an exit aperture at said delivery end adapted to form the material, a screw feed for the same positioned at the receiving end of the mechanism, an open hopper for said screw feed, and means for exerting a vacuum on the material in said apparatus.

4. Apparatus for treating material, embodying continually operable tubing mechanism adapted for continually receiving material at one end and delivering it at the other end, an exit aperture at said delivery end adapted to form the material, a screw feed for the same positioned at the receiving end of the mechanism, the two being disposed tandem, an open hopper for said screw feed, and means for exerting a vacuum on the material in said apparatus.

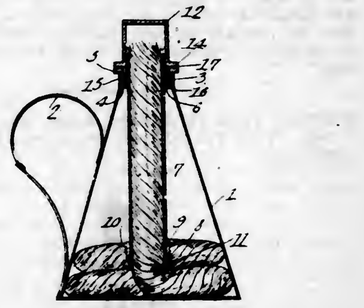
5. Apparatus for treating material, embodying a tubing mechanism, a screw feed for the same, the two being disposed tandem and having an enlarged area at the point of discharge from the screw feed mechanism to the tubing mechanism, and means for exerting a vacuum on the material at substantially said point.

[Claims 6 to 8 not printed in the Gazette.]

1,156,097. LOCOMOTIVE-TORCH. ASHBY STEWART REECE, Huntington, W. Va. Filed Feb. 24, 1915. Serial No. 10,829. (Cl. 67—55.)

1. A torch of the class described comprising a receptacle; a wick tube mounted to reciprocate in the receptacle; interengaging elements on the lower end of the wick tube and on the receptacle for holding the wick tube elevated; and a cap adapted to cover the upper end of the wick tube when the tube is telescoped into the receptacle, the cap and the receptacle being provided with interengaging elements.

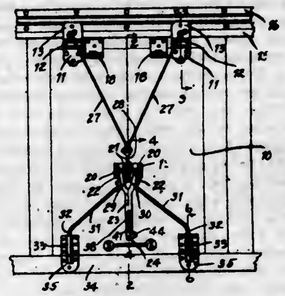
2. In a torch of the class described, a receptacle provided at its upper end with internal threads; a tube slidable in the receptacle and provided at its lower end with external threads adapted to engage the threads of the receptacle; and a cap housing the upper end of the tube when the tube is telescoped into the receptacle, the cap having external threads adapted to engage the threads of the receptacle.



3. In a torch of the class described, a receptacle including a neck having a duct; a wick tube slidable in the neck, the wick tube and the neck being provided with interengaging elements for holding the wick tube elevated; and a cap for the upper end of the wick tube, the cap and the neck being provided with interengaging elements, a portion of the cap constituting a closure for the duct when the cap is in place.

4. In a torch of the class described, a receptacle comprising a neck having a duct; a tube slidable in the neck, the lower end of the tube and the neck having interengaging elements adapted to hold the tube elevated, the tube being provided at its lower end with an outstanding flange coacting with the neck to limit the upward movement of the tube, the inner end of the duct opening into the receptacle between the wall of the receptacle and the periphery of the flange when the flange coacts with the neck.

1,156,098. CAR-DOOR. WILLIE L. RENNER and MARK A. BROWN, Dublin, Tex. Filed Mar. 18, 1914. Serial No. 825,647. (Cl. 20—24.)



1. The combination with a car door, and a track therefor, of a bracket mounted on the door, a pair of vertically swinging levers pivotally mounted on the bracket, hangers, double hinge connections between the hangers and the door, connections between the hangers and one of the levers, locking bolts slidably mounted on the door and pivotally connected to the other lever, the said levers being provided with slots, a staple carried by the door and received in the slots, and an auxiliary locking device carried by one of the levers for engagement in the staple.

2. The combination with a car door, frame, and track, of hangers mounted on the track, double hinge connec

tions between the hangers and door, a pair of levers pivotally mounted on the door, locking bolts carried by the door for coöperation with a part of the frame, links connecting one of said levers and the hangers whereby the door is capable of being lifted and swung from its frame and connections between the sliding bolts and the other lever for releasing the bolts, and means carried by one of the levers for automatically locking the levers to the door.

1,156,099. VEHICLE-WHEEL. LOREN RISK, Waterloo, Iowa. Filed Feb. 1, 1915. Serial No. 5,477. (Cl. 152—32.)



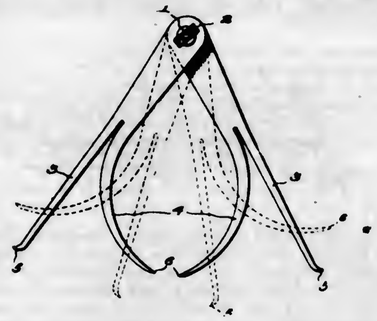
1. In combination, a wheel center having a rim, a pair of tires mounted independently about said rim, and a plurality of H-shaped arciform plate-springs medially secured in spaced relation to each other upon the said rim and having their spaced ends bearing yieldingly against the said tires, and means on said tires for limiting the rotation thereof relative to said rim and said springs.

2. In combination, a wheel center having a relatively wide rim, a pair of narrower outer rims mounted about said wide rim and spaced therefrom, each narrower rim having tire-retaining means, and having inwardly-directed flanges on their adjacent parts, connecting-means between said flanges permitting limited movements to each relative to the other, spaced stops mounted about the inwardly-directed faces of said outer rims, and H-shaped plate-springs mounted on the outer face of the said wide rim, with their spaced members seated astride the said inwardly-directed flanges of the outer rims to limit transverse movements thereof relative to the wide rim, the extremities of the said spring-members bearing yieldingly against the inner rims adjacent to but spaced from said spaced stops thereon.

3. In combination, a wheel-rim, a pair of outer rims located side-by-side about and spaced from said wheel-rim, each of said outer rims having means adapted to detachably secure a tire thereon, and each having an inwardly-directed flange: said flanges being located adjacent to each other, and plate-springs secured to the said wheel-rim and having their free ends yieldingly contacting with said outer rims, each spring being divided into members set astride the flanges of the outer rims to limit lateral movements of said rims relative to said wheel-rim.

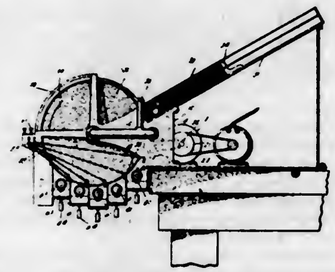
1,156,100. CALIPERS. CHARLES ROTH, New Philadelphia, Ohio, assignor of one-half to Joseph Yaggi, New Philadelphia, Ohio. Filed Sept. 24, 1914. Serial No. 863,338. (Cl. 33—149.)

A device of the type described including a pair of members pivotally connected together at their normally upper or inner ends to allow of the reversal of the positions of said members, each member being split or bifurcated, the resultant two limbs of each member being arranged one to extend in a straight line and the other being of



quadrant formation said limbs or branches having oppositely projecting terminals.

1,156,101. CURRENCY-HANDLING MACHINE. FREDERICK L. SATTLEY, Indianapolis, Ind. Filed May 12, 1911. Serial No. 626,831. (Cl. 235—91.)



1. In a currency handling machine, the combination of means for supporting a stack of currency, means for successively withdrawing the initial piece from such stack, selector mechanism for selectively releasing the pieces from the withdrawing means, and a magnifying glass arranged between the withdrawing means and the selector means over the path of travel of the withdrawal currency.

2. In a currency handling machine, the combination of means for supporting a stack of currency, means for successively withdrawing the initial piece from such stack, and manually controlled selector mechanism for selectively releasing the pieces from the withdrawing means.

3. In a currency handling machine, means for supporting a stack of currency, a movable suction member arranged to engage the initial piece of currency and move transversely of the stack, means for selectively causing the withdrawal of currency from the suction member, and a magnifying glass arranged over the path of movement of the suction member between the currency-stack support and the selective withdrawing means.

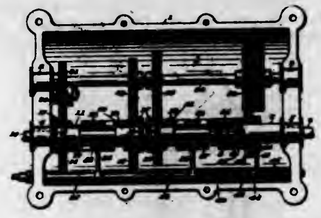
4. In a currency handling machine, means for supporting a stack of currency, a movable suction member arranged to engage the initial piece of currency and move transversely of the stack, and means for selectively causing the withdrawal of currency from the suction member.

5. In a currency handling machine, means for supporting a stack of currency, a movable suction member arranged to engage the initial piece of currency and move transversely of the stack, a plurality of selective stripper fingers arranged adjacent said movable suction member, a plurality of receptacles one for each stripper finger, means by which said stripper fingers may be selectively

brought into stripping position relative to the suction member, means controlled by the suction member for automatically withdrawing an actuated stripper finger from stripping position, means normally tending to withdraw each receptacle from receiving position, means for temporarily retaining each receptacle in receiving position, and means associated with each stripper finger for intermittently actuating the retaining means to permit automatic withdrawal of the associated receptacle from receiving position.

[Claims 6 to 47 not printed in the Gazette.]

1,156,102. CHANGEABLE-SPEED GEAR MECHANISM. HENRY L. SCHENCK, Decatur, Ill. Filed Apr. 7, 1915. Serial No. 19,652. (Cl. 74—59.)



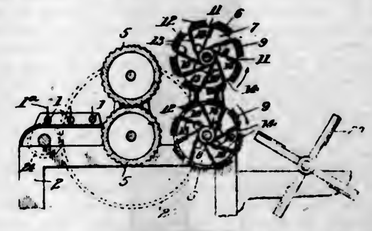
1. In a speed change mechanism and in combination, a driving shaft, a driven shaft in alinement therewith, a counter shaft parallel to said driving and driven shafts, a plurality of meshing gears on said shafts whereby various speeds including reverse, are provided, the gears on the driven shaft being loosely mounted thereon but prevented from longitudinal movement relative thereto, the gear on the driving shaft being slidable thereon, the gear on the counter shaft with which said sliding gear meshes, being greater in width, said driven shaft having a plurality of double clutch members slidably arranged thereon to rotate therewith, said driving shaft having a double clutch member fixed thereto adapted to engage and drive said sliding gear in one position, said slidable clutch members on the driven shaft being adapted to be moved to connect said gears to said driven shaft to rotate said driven shaft and one of said double clutch members on said driven shaft being adapted to engage said fixed clutch member on the drive shaft so as to provide a direct drive, a rod for operating the first one of said slidable double clutch members, a second rod telescopically mounted in said first mentioned rod to operate said second double clutch member, said second rod having a socket in its end, an additional rod slidably mounted in said socket, an arm connected to said sliding gear on said driving shaft and mounted on said additional rod, resilient means bearing against said arm for normally holding the said sliding gear in engagement with said fixed double clutch on said drive shaft, the end of said second rod being adapted to engage said arm to move said sliding gear out of engagement with said fixed clutch on said driving shaft, when said second sliding double clutch on the driven shaft is moved into engagement with the said fixed double clutch on the driving shaft.

2. In a mechanism of the character described, and in combination, a driving shaft, and a driven shaft in alinement therewith, a counter shaft, meshing gears on said shafts whereby various speeds may be provided, a double clutch member fixed on said driving shaft, the gear on said driving shaft being movable thereon and having a clutch face, the gear on said counter shaft with which said movable gear meshes being of greater width, double clutch members mounted to slide on said driven shaft to connect said gears thereto, one of said slidable clutch members being adapted to engage said fixed clutch member, to provide a direct drive, a rod for actuating said slidable clutch member and connections between said rod and said movable gear to move said gear, including means for normally holding said gear in engagement with said fixed clutch member, said connections being so arranged that when said rod is actuated to place said slidable clutch member in engagement with said fixed clutch member, the operative connection between said movable gear and said fixed clutch member is broken; and a rod for actuating said other slidable double clutch member, said first mentioned rod extending through said second mentioned rod.

3. In a mechanism of the character described, and in combination, a driving shaft, and a driven shaft in alinement therewith, a counter shaft, meshing gears on said shafts whereby various speeds may be provided, a double clutch member fixed on said driving shaft, the gear on said driving shaft being movable thereon and having a clutch face, the gear on said counter shaft with which said movable gear meshes being of greater width, double clutch members mounted to slide on said driven shaft to connect said gears thereto, one of said slidable clutch members being adapted to engage said fixed clutch member, a rod for actuating said last connections to move said movable gear, a rod for actuating said other slidable double clutch member, said first mentioned rod extending through said second mentioned rod, said second mentioned rod having a socket formed in the end thereof, a rod slidably positioned in said socketed end, a connection between said movable gear and said last mentioned rod, means for normally holding said connection so that said movable gear is in engagement with said fixed clutch, the end of said second mentioned rod being adapted to engage said connection so as to move said movable gear and break the connection with said fixed clutch.

4. In a mechanism of the character described, and in combination, a driving shaft, and a driven shaft in alinement therewith, a counter shaft, meshing gears on said shafts whereby various speeds may be provided, a double clutch member fixed on said driving shaft, the gear on said driving shaft being movable thereon and having a clutch face, the gear on said counter shaft with which said movable gear meshes being of greater width, double clutch members mounted to slide on said driven shaft to connect said gears thereto, one of said slidable clutch members being adapted to engage said fixed clutch member, a rod for actuating said last mentioned slidable double clutch member, another rod for actuating said other slidable double clutch member, said first mentioned rod extending through said second mentioned rod, said first mentioned rod having a socket provided in the end thereof, an additional rod slidably positioned in said socketed end, a shifting arm connected to said movable gear and slidably mounted on said additional rod, said shifting arm being adapted to be engaged by the end of said first mentioned rod, whereby the movable gear is moved from engagement with the fixed clutch, and resilient means bearing against said shifting arm to normally hold said movable gear in engagement with said fixed clutch.

1,156,103. MACHINE FOR DECORTICATING FIBER. OWEN SHERMAN, New Bedford, Mass., assignor to The Hollingsworth & Vose Co., Boston, Mass., a Corporation of Massachusetts. Filed Feb. 24, 1912. Serial No. 679,735. (Cl. 13—2.)



1. In a machine of the character described, a hollow cleaning roll having longitudinal slots in its periphery, openings in its heads, fan blades arranged interiorly there-

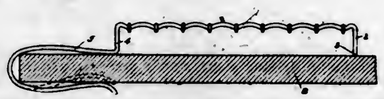
of and secured to revolve therewith, and means to adjust said fan blades with respect to said longitudinal slots.

2. In a machine of the character described, a hollow cleaning roll having longitudinal slots in its periphery, openings in its heads, and fan blades arranged interiorly thereof, each of said blades being positioned obliquely to the radius of the roll which cuts its outer edge, and having its inner edge advanced in the direction of rotation of said roll.

3. In a machine of the character described, a hollow cleaning roll having longitudinal slots in its periphery and openings in its heads, a hub arranged within said roll, fan blades mounted on said hub also within the roll, and adjustable means for securing said hub whereby said fan blades may be positioned at various points with respect to said longitudinal slots.

4. In a machine of the character described, a hollow cleaning roll having longitudinal slots in its periphery and openings in its heads, a shaft extending through the center of said roll and to which the latter is secured, a hub mounted on said shaft within the roll, fan blades attached to the hub also within the roll, and adjustable means for securing said hub to said shaft.

1,156,104. REST FOR SAD-IRONS. ELLA M. SKINNER, Chicago, Ill. Filed Sept. 16, 1914. Serial No. 861,984. (Cl. 68—27.)



1. A rest for sad irons made up of a piece of springy wire having its intermediate portion bent into a frame comprising two parallel side bars connected together at one end by a depending U-shaped foot and each having a downwardly-projecting leg at its other end, the free ends of the aforesaid wire beginning at the lower ends of said legs being bent into hook-like spring jaws arranged in separated vertical planes, and a series of cross wires extending between and connected at their ends to said side bars.

2. A rest for sad irons made up of a piece of springy wire having its intermediate portion bent into a frame comprising two parallel side bars connected together at one end by a depending U-shaped foot and each having a downwardly-projecting leg at its other end, the free ends of the aforesaid wire beginning at the lower ends of said legs being bent into hook-like spring jaws arranged in separated vertical planes, and a series of cross wires extending between and connected at their ends to said side bars, the cross wires being higher at points where they engage with the side bars than at poluts between the side bars.

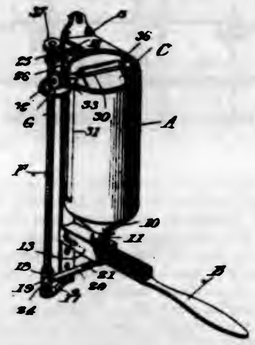
1,156,105. NUT-LOCK. OTIS H. SLEEPER, Exeter, N. H. Filed Sept. 8, 1914. Serial No. 860,688. (Cl. 151—24.)



1. A lock nut comprising an internally threaded nut having a dove tailed groove across its inner face parallel to its axis, a dove tailed locking piece having threads corresponding to the threads of said nut and having a slight radial play in said groove, means at the ends of said groove for confining said locking piece against longitudinal displacement therein, and a radially adjustable tightening member having a bearing on said locking piece.

2. A lock nut comprising an internally threaded nut having a laterally undercut groove across its inner face parallel to its axis, a laterally extended locking piece having its portion exposed along the inner opening of said groove threaded in correspondence with the threads of said nut and having a slight radial play in said groove, means at the ends of said groove for confining said locking piece against longitudinal displacement therein, and a radially adjustable tightening member having a bearing on said locking piece.

1,156,106. TOOTH-PASTE-DISPENSING DEVICE. RUSSEL SUTHERLAND SMART, Ottawa, Ontario, Canada. Filed Oct. 24, 1914. Serial No. 868,478. (Cl. 221—60.)



1. A dispensing device comprising a container adapted to receive a collapsible tube and formed with an opening through which material from the tube may be extruded, a valve member controlling the opening, a spindle adapted to be turned by the valve member and means operated by turning of the spindle for squeezing the sides of the collapsible container.

2. A dispensing device comprising a collapsible tube, a pair of compression members adapted to engage the sides of the collapsible tube, a valve member adapted to control the passage of material from the mouth of the tube, and means operated by the valve member for drawing the compression members closer together.

3. A dispensing device adapted to dispense a quantity of material onto a tooth brush or the like comprising a container for a tube of tooth paste or the like having an opening through which the paste or the like may be extruded, and means operable by the tooth brush or the like for exerting a pressure on the tube in a direction toward the opening to thereby extrude the tooth paste or the like through the opening onto the brush.

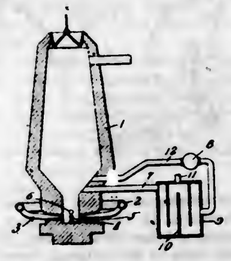
1,156,107. PRODUCTION OF ANHYDROUS HYDROSULFITES FROM AQUEOUS HYDROSULFITE SOLUTIONS. HEINRICH SPECKETER and GUSTAV MÜNCH, Griesheim, Germany, assignors to Chemische Fabrik Griesheim-Elektron, Frankfort-on-the-Main, Germany, a Corporation of Germany. Filed July 3, 1913. Serial No. 777,306. (Cl. 23—18.)

1. In the manufacture of cyanids, the process which cent. anhydrous hydrosulfite comprising mixing with an aqueous hydrosulfite solution an organic base and evaporating said solution to dryness, the amount of said base being in excess of that which is removed by the evaporation of the water of the solution.

2. The hereindescribed method of producing a high per cent. anhydrous hydrosulfite comprising mixing anilin with an aqueous hydrosulfite solution and evaporating said solution to dryness, the amount of anilin employed being such that it is present as a free base after the water of the solution is evaporated and is removed by the subsequent distillation.

3. The hereindescribed method of producing a high per cent. anhydrous hydrosulfite comprising mixing with an aqueous hydrosulfite solution an organic base and evaporating said solution to dryness while constantly agitating, the amount of said base being in excess of that which is removed by the evaporation of the water of the solution.

1,156,108. PROCESS OF MAKING CYANIDS. ARTHUR C. SPENCER and KARL P. MCELROY, Washington, D. C. Filed June 3, 1911. Serial No. 630,973. (Cl. 23—13.)



1. In the manufacture of cyanids, the process which comprises passing on ignited mixture comprising carbon, slag forming substances and a native mineral comprising silicate of alkali downward against an upward blast of air under gas producer conditions throughout such passage and collecting the cyanid formed.

2. In the manufacture of cyanids, the process which comprises passing an ignited mixture comprising a natural silicate containing alkali, slag-forming substances, carbon and a reducible iron compound downward against an upward blast of air under gas producer conditions and collecting the cyanid formed.

3. In the manufacture of cyanids, the process which comprises passing an ignited mixture comprising a natural silicate containing potash, slag-forming substances and carbon downward against an upward blast of air under gas producer conditions and collecting the cyanid formed.

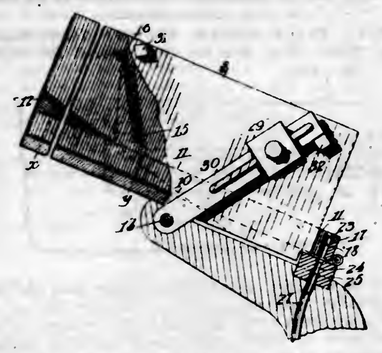
4. In the manufacture of cyanids, the process which comprises passing an ignited mixture comprising a natural silicate containing potash, slag-forming substances, carbon, and a reducible iron compound downward against an upward blast of air under gas producer conditions and collecting the cyanid formed.

5. In the manufacture of cyanids, the process which comprises passing an ignited charge downward through a shaft chamber against a blast of air and under gas producer conditions, said charge comprising a silicate containing alkali, slag forming substances, a reducible iron compound and carbon, and withdrawing a current of vapors and gases from a point of high temperature in the progress of said charge, abstracting alkali cyanid from said current and returning the current to the chamber and charge.

[Claims 6 to 12 not printed in the Gazette.]

1,156,109. NAILING MECHANISM FOR BOX-MACHINES. WILLIAM X. STEVENS, Washington, D. C., assignor to Ella L. Barton, Jacksonville, Fla. Filed Sept. 12, 1911. Serial No. 648,913. (Cl. 1—16.)

1. In mechanism for automatically nailing boxes, a hopper hung to be tipped backward and forward and having rails in pairs to receive nail bodies between them, and standing above the level of the bottom, the bottom having inclined portions rising rearward higher than the said rails and slanting roof-shaped transversely to the tops of the rails, and guards pivoted above each pair of rails in front of the elevated rear portions thereof and arranged to rest upon the tops thereof and hold the nails collected in the slots in front thereof during the upward tilting of the front of the hopper, substantially as set forth.



2. A nail feeding mechanism comprising an oscillatory hopper having a bottom formed with a series of parallel slots and inclined portions rising rearwardly and above said slots and slanting roof-shaped transversely to said slots, and a reversible guard pivoted above each slot in front of the elevated rear portions and adapted to hold the nails collected in said slots in front thereof during the oscillation of said hopper when in use, any one or more of said guards adapted to be oscillated at any time into such a position as to prevent the passage of nails along their respective slots during the oscillation of said hopper when such slots are not in use, substantially as set forth.

1,156,110. MOTOR-DRIVEN SLEIGH. JOHN W. STOBIE, Madison, Me. Filed Mar. 16, 1915. Serial No. 14,785. (Cl. 21—47.)



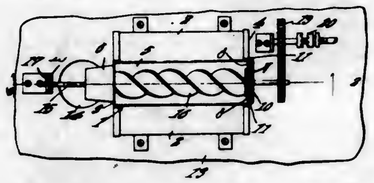
1. The combination, with an automobile with sled runners sustaining the same, of a tractor for driving the automobile, means pivotally connecting the tractor to the axle of the automobile, means for delivering power from the automobile to the tractor for actuating the latter, a lever pivotally connected to the tractor and fulcrumed on the axle of the automobile and extending forwardly therefrom, and a cushioned connection between the forward end of the lever and the automobile, substantially as set forth.

2. The combination, with an automobile with sled runners sustaining the same, of a tractor for driving the automobile, meons pivotally connecting the tractor to the axle of the automobile, means for delivering power from the automobile to the tractor for actuating the latter, a lever pivotally connected to the tractor and fulcrumed on the axle of the automobile and extending forwardly therefrom, the forward end of the lever being formed with an eye, a rod connected with the automobile and extending through the eye, and a cushion carried by the rod and engaging the forward end of the lever tensioned to resist depression of such forward end, substantially as set forth.

3. The combination, with an automobile and sled runners sustaining the same, of a radius rod having a journal connection with each end of the live axle of the automobile and extending thence rearwardly, a stub axle carried by each radius rod, a traction wheel journaled on each stub axle, means for delivering power from the live axle of the automobile to each traction wheel, a counter-balance

lever pivoted to the inner end of each stub axle and extending forwardly therefrom and fulcrumed intermediate its ends to the load-carrying axle of the automobile, and a movable connection between the forward end portion of each lever and the automobile, substantially as set forth.

1,156,111. TRACK-SANDER. EDWARD P. TABOR, Worcester, Mass. Filed June 28, 1915. Serial No. 36,786. (Cl. 105—180.)

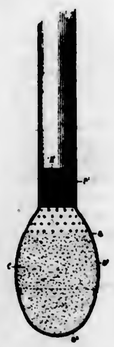


1. A track sander comprising an upright sand box having upwardly converging sides, a concaved bottom, an upper longitudinal filling slot, and a delivery spout at one end adjacent its bottom, and a shaft journaled through the other end of the sand box adjacent the bottom thereof and having a conveyer worm within the sand box adjacent the bottom thereof and projecting into said spout.

2. A track sander comprising a sand box having a delivery spout at one end, a vertical slot at its other end, and a seat at the lower end of said slot, a shaft seated in said seat and having a conveyer worm within the sand box projecting to said spout, and a vertically slidable closure carried by the second mentioned end of the sand box to close said slot and to hold the shaft seated in said seat.

3. A track sander comprising a sand box having a delivery spout at one end, a vertical slot at the other end, a notch at the lower end of the slot, and guides along the edges of the slot, a shaft seated in said notch and having a conveyer worm within the sand box extending from the second mentioned end thereof into said spout, and a vertically movable plate engaging said guides to close said slot and having a notch at its lower end receiving said shaft.

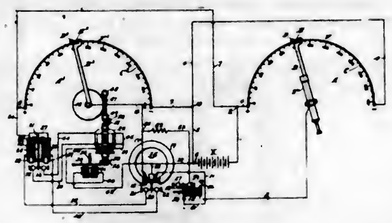
1,156,112. CLOTHES-STICK. ANNA S. TAYLOR, New York, N. Y. Filed Feb. 16, 1915. Serial No. 8,512. (Cl. 68—11.)



1. A clothes stick, comprising a stick having a threaded end and a perforate egg or bulb-shaped receptacle having a threaded neck screwing on the threaded end of the stick and adapted to be filled with a washing compound, the said receptacle having a smooth surface throughout its entire extent to prevent injury to delicate fabrics when using the clothes stick.

2. A clothes stick, comprising a stick having a threaded end, and a perforate egg or bulb-shaped receptacle provided with a threaded neck adapted to screw on the said threaded end of the stick, the said receptacle being provided with a screw cap to permit of opening the receptacle for filling the same with a washing compound to be dissolved in the wash water, the said receptacle having a smooth surface throughout its entire extent.

1,156,113. AZIMUTH AND OTHER INDICATOR. GEORGE S. TIFFANY, Summit, N. J., assignor to Gray National Telautograph Company, New York, N. Y., a Corporation of Virginia. Filed Mar. 15, 1912. Serial No. 683,988. (Cl. 177—351.)



1. Means for causing a member to move in accordance with the movements of another member at a distant point, comprising a Wheatstone bridge, having movable contacts at the ends of its bridging circuit, and means, comprising a motor, a motor circuit, an electrically operated switch for controlling the motor circuit, and a relay in the bridging circuit controlling said switch, for moving one of said contacts in accordance with the movements of the other.

2. Means for causing a member to move in accordance with the movements of another member at a distant point, comprising a Wheatstone bridge, having movable contact-carrying members at the ends of its bridging circuit, a motor for moving and an electrically operated brake for stopping one of the said members, a motor circuit including the motor and brake and means, comprising an electrically operated switch and a relay in the bridging circuit controlling said switch, for controlling said motor and brake to produce movements of the said member corresponding to movements of the other member.

3. Means for contemporaneously reproducing at a distant point the pivotal movements of a body, comprising a Wheatstone bridge, pivoted contact-carrying members at the ends of its bridging circuit, and means, comprising a motor, a motor circuit, an electrically operated switch arranged to control the motor circuit, and a relay in the bridging circuit controlling said switch, for causing movements of one of said members corresponding to the movements of the other.

4. Means for contemporaneously reproducing at a distant point the pivotal movements of a body, comprising a Wheatstone bridge having arcuate conductors in its arms, pivoted members carrying contacts at the ends of the bridging circuit traveling on said arcuate conductors, and means, comprising a motor, a motor circuit, an electrically operated switch arranged to control said motor circuit, and a relay in the bridging circuit controlling said switch, for moving one of said members in accordance with the other.

5. Means for producing movements of a member by and in accordance with the movements of another member, comprising a circuit having a transmitting part, a receiving part, and a bridging part having movable contacts at its ends adapted to bridge between corresponding points in said transmitting and receiving parts of the circuit, and means, comprising a motor, a motor circuit, an electrically operated switch arranged to control the motor circuit, and a relay in the bridging part of the circuit controlling said switch, for moving one of said contacts in accordance with the other.

[Claims 6 to 15 not printed in the Gazette.]

1,156,114. SELF-CLOSING OIL-CUP. DANIEL H. TWAITS, Chicago, Ill. Filed Dec. 30, 1913. Serial No. 809,462. (Cl. 184—91.)



1. The combination of an oil cup having an open upper end, a substantially flat cover adapted to close said upper end, a spring secured to said cover having an intermediate coil near one side of the cup and having portions extending from the coil and engaging the sides of the cup whereby said cover may be swung open upwardly substantially about the coil as a hinge.

2. The combination of an oil cup having an open upper end, a substantially flat cover adapted to close said upper end, a spring having two legs one of which is secured to said cover, the other of which engages the side of the oil cup, and an intermediate coil adjacent the side of the oil cup, said coil forming a hinge about which the cover is swung when it is opened upwardly.

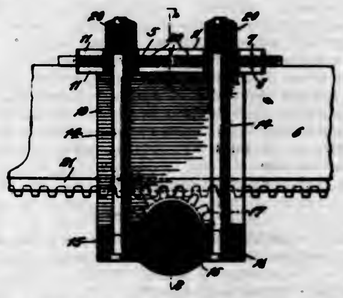
3. The combination of an oil cup having an open upper end, a substantially flat cover adapted to close said upper end, a spring having two legs one of which is secured to the cap near one side thereof and the other of which engages the side of the cup, and a coil between said legs tending to draw the leg attached to the cover downwardly, said coil being adjacent one side of the oil cup and forming a hinge about which the cover swings when opened upwardly.

4. The combination of an oil cup having an open upper end, a cover for closing said open end, a spring having a loop secured to the cover near one side thereof, the sides of said loop extending substantially across the interior of the cup, two coils in said spring, said spring having two portions extending from each of said coils and engaging the sides of the oil cup.

5. The combination of an oil cup having an open upper end, a cover for closing said upper end, a spring having a loop secured to the cover near one side thereof, the sides of said loop extending across the cup, coils in said spring, a pin carried by the cup extending through said coils and forming a hinge about which the cover swings, and projecting portions of the spring engaging the sides of the cup said spring being so arranged that the loop tends to pull downwardly thereby holding the cover in position.

[Claims 6 to 9 not printed in the Gazette.]

1,156,115. REVERSIBLE SADDLE-PLATE. ELLISON EDWARD VANDERHOEF, Ruth, Nev., assignor to Edgar Allen American Manganese Steel Company, Augusta, Me., a Corporation of Maine. Filed Mar. 16, 1915. Serial No. 14,808. (Cl. 74—84.)



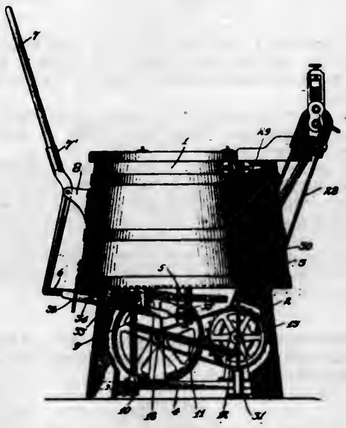
1. A saddle plate for dipper handles comprising a reversible body with upper and lower wearing faces, and means disposed upon the upper and lower faces adapted to form guides or runners for the dipper handle.

2. A saddle plate comprising a body with upper and lower wearing faces, and oppositely projecting ribs extending longitudinally of said wearing body.

3. A saddle plate comprising a wearing plate-like body with upper and lower wearing faces, and ribs extending longitudinally of said wearing body and projecting from the upper and lower wearing faces thereof.

4. A saddle plate comprising a plate-like body with upper and lower wearing faces, and registering ribs formed upon, and projecting to opposite sides of, the upper and lower wearing faces, and spaced symmetrically about the longitudinal medium line of the plate-like body, said plate-like body provided with openings intermediate said ribs, and reinforcing ribs surrounding the sides of said opening and merging into and forming a part of the afore-mentioned ribs.

1,156,116. WASHING-MACHINE GEARING. WILLIAM H. VOSS, Davenport, Iowa. Original application filed Mar. 2, 1912, Serial No. 681,228. Divided and this application filed Apr. 13, 1914. Serial No. 831,382. (Cl. 74—50.)



1. In combination with a support, a vertical shaft mounted in said support and adapted to oscillate a pinion on said shaft, a reciprocatory rack for oscillating said shaft, clutch mechanism operatively positioned between said rack and said shaft, a hand lever pivoted to the side of the support for operating the rack, a rocking arm pivotally mounted on one end upon the support and pivotally connected at the other end to the rack, a link connecting said rocking arm with a power momentum device, and said power momentum device.

2. In apparatus of the class described, a support, an oscillatory shaft therein, a pinion on said shaft, a hand lever, a rack pivotally connected to the hand lever for driving said shaft, a rocking arm operated by said rack, a pitman on said rocking arm, and a power momentum device operable by said pitman.

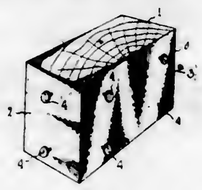
3. In apparatus of the class described, a support, an oscillatory shaft therein, a pinion on said shaft, a hand lever, a rack pivotally connected to the hand lever for driving said shaft, a rocking arm operated by said rack, a pitman on said rocking arm, a power momentum device operable by said pitman and a clutch for operatively connecting or disconnecting said rack from said shaft.

4. In apparatus of the class described, a support, a vertical reciprocatory shaft therein, a lever pivoted to the side of the support and having a rack pivotally connected therewith, a pinion loosely mounted on said shaft and a clutch for operatively connecting or disconnecting said

pinion with said shaft, said rack meshing with said pinion, a rocking arm pivotally mounted on the support and pivotally connected with said rack, a power momentum device, and a link connecting said rocking arm with said power momentum device.

5. In apparatus of the class described, a support, an oscillatory shaft mounted in the lower portion of said support, and projecting upwardly therein, a power momentum device, a compound lever system for operating said power momentum device, including a simple lever system for operating said oscillatory shaft.

1,156,117. PAVING-BLOCK. HARRY E. WARDEN, Detroit, Mich. Filed Apr. 17, 1915. Serial No. 21,957. (Cl. 94—8.)



1. A pavement composed of blocks, spacing members carried by walls of said blocks and abutting walls of other blocks, and shields on said spacing members between said blocks.

2. A pavement composed of blocks, interlocking members connecting said blocks, and shields on said interlocking members between said blocks.

3. A pavement composed of blocks, and block equalizing and spacing members adapted to be forced in an end wall and side wall of each block and having heads abutting and bracing end and side walls of adjoining blocks, said members being forced in said blocks to a depth to compensate for irregularities in the size of said blocks, whereby undersized blocks have side and end walls braced by adjoining blocks.

1,156,118. CENTRIFUGAL FAN. ROBERT WARG, Milwaukee, Wis. Filed Apr. 13, 1914. Serial No. 831,531. (Cl. 230—11.)



1. A centrifugal fan, comprising a rotary drum-like member having numerous elongated blades arranged lengthwise obliquely with relation to the axis of rotation of the member to form comparatively a large intake chamber, approximately one half of the number of blades extending obliquely in the opposite direction from the remaining blades, one end of the said member being open to permit unobstructed ingress of the fluid to be moved, and supporting means for said member which will freely permit the tangential escape of the fluid from the blades of said member.

2. A centrifugal fan, comprising a rotary drum-like member having a plurality of circumferential lines of numerous elongated blades arranged lengthwise obliquely with relation to the axis of rotation of the member to form comparatively a large intake chamber, the blades of one circumferential line extending at an angle with relation to the blades of the adjacent circumferential line, one end of said member being open to permit unobstructed ingress of the fluid to be moved, and supporting means for said member which will permit the free tangential escape of the fluid from the blades of said member.

3. A centrifugal fan, comprising a rotary drum-like member having a plurality of circumferential lines of numerous elongated blades arranged lengthwise obliquely with relation to the axis of rotation of the member to form comparatively a large intake chamber, the blades of one circumferential line extending at an angle with relation to the blades of the adjacent circumferential line and crossing the radial plane of said blades, and supporting means for said member which will permit the free tangential escape of the fluid from the blades of said member.

4. A centrifugal fan, comprising a rotary drum-like member having an inner and an outer circumferential line of numerous elongated blades arranged lengthwise obliquely with relation to the axis of rotation of the said member to form comparatively a large intake chamber, one end of said member being open to permit the ingress of the fluid to be moved, the blades of the inner circumferential line being arranged to direct the fluid passing between the said blades toward the rear portion of the said member and the blades of the outer circumferential line being arranged to direct the fluid passing between said blades toward the front portion of said member, and supporting means for said member which will permit the free tangential escape of the fluid from the blades of said member.

5. A centrifugal fan, comprising a pair of spaced annular plates, inner and outer circumferential lines of numerous elongated blades extending obliquely from plate to plate and connected thereto, the blades of one circumferential line extending obliquely in the opposite direction to the blades of the other line, one of said plates having a central opening, a hub portion connected to one of the plates, and supporting means for said hub portion which will permit the free tangential escape of the fluid from the blades.

[Claims 6 and 7 not printed in the Gazette.]

1,156,119. NON-INFLAMMABLE SOLVENT FOR PAINTS AND THE LIKE. GEORGE WHIGELT, New York, N. Y. Filed Feb. 12, 1913. Serial No. 747,952. (Cl. 87—5.)

1. The herein described composition of matter, containing a "halogen derivative of acetylene" constituent and a "halogen derivative of glycerin or glycol" constituent in such proportions as to form a non-inflammable solvent for paints and the like.

2. The herein described composition of matter, containing a "halogen derivative of acetylene" constituent and a metallic soap constituent in such proportions as to form a non-inflammable solvent for paints and the like.

3. The herein described composition of matter, containing a "halogen derivative of acetylene" constituent, a "halogen derivative of glycerin or glycol" constituent, and an "oil" constituent in such proportions as to form a non-inflammable solvent for paints and the like.

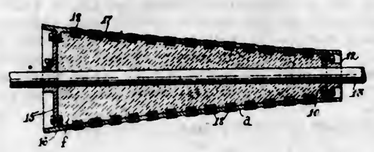
4. The herein described composition of matter, containing a "halogen derivative of acetylene" constituent, a "halogen derivative of glycerin or glycol" constituent, and a metallic soap constituent in such proportions as to form a non-inflammable solvent for paints and the like.

5. The herein described composition of matter, containing a "halogen derivative of acetylene" constituent, a "halogen derivative of glycerin or glycol" constituent, an "oil" constituent, and a metallic soap constituent in such proportions as to form a non-inflammable solvent for paints and the like.

[Claim 6 not printed in the Gazette.]

1,156,120. PULLEY. LAWRENCE WHITCOMB, Brookline, Mass., assignor to The Cork Insert Company, Boston, Mass., a Corporation of Maine. Filed Dec. 18, 1911. Serial No. 666,391. (Cl. 64—17.)

1. As an improved article of manufacture, a pulley having a substantially thin metal rim portion provided with a plurality of holes or openings extended through it, a body of substantially light, normally plastic, non-metallic material, capable of being easily drilled and located within said rim and provided with sockets which register with the holes in said rim, retaining walls for said normally plastic material within said rim, and inserts of cork forming part of the outer surface of said rim and extended through the holes in said rim into the sockets in the normally plastic material.



2. As an improved article of manufacture, a pulley having a substantially thin metal rim portion provided with a plurality of holes or openings extended through it, a body of substantially light non-metallic material capable of being easily drilled and located within said rim and provided with sockets which register with the holes in said rim, said material being normally plastic to enable it to be molded or pressed within the rim of the pulley and capable of hardening when dried, means for confining the said plastic material within the said rim, and inserts of non-metallic material forming part of the outer surface of said rim and extended through the holes in said rim into said sockets.

3. As an improved article of manufacture, a pulley provided with a substantially thin conical metal rim having a plurality of holes extended through it, substantially light non-metallic normally plastic material capable of being easily drilled and substantially filling the said conical rim and having a plurality of sockets registering with the holes in said rim, retaining walls for said normally plastic material, said walls being located near the ends of the conical rim, and inserts of non-metallic material forming part of the outer surface of said rim and extended through the holes in said rim into said sockets.

4. As an improved article of manufacture, a pulley having a substantially thin metal rim, a body portion of substantially light normally plastic material within said rim capable of being easily drilled, and inserts of non-metallic material forming part of the outer surface of said rim and extended through said rim into said normally plastic material, substantially as described.

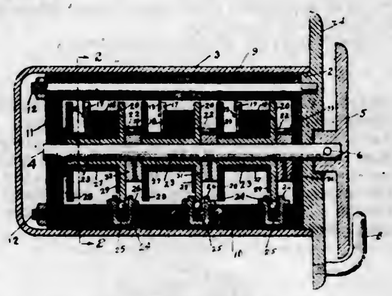
5. As an improved article of manufacture, a pulley having a substantially thin metal rim, a body portion of plaster of Paris substantially filling the space within said rim, and inserts of non-metallic material forming part of the outer surface of said rim and extended through said rim into said plaster of Paris body, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,156,121. COMBINATION-SWITCH. ALVIA F. WIAN, Columbus, Ohio, assignor, by direct and mesne assignments, of one-half to Harry C. Dunning and one-half to Charles E. Dennis, Columbus, Ohio. Filed Apr. 4, 1914. Serial No. 829,657. (Cl. 175—282.)

1. A combination switch comprising a plurality of switch devices, each switch device including a rotatable switch member, a central shaft upon which said members are loosely mounted, means for temporarily holding said members in any position, a collar for each switch device rigidly mounted on said shaft, and lost motion connecting means between each collar and its respective switch member so that each collar may be given a partial revolution without rotating its switch member, said connecting means being arranged to have different amounts of lost motion.

2. A combination switch comprising a plurality of switch devices, each switch device including a rotatable switch member, a shaft upon which said rotatable switch members are loosely mounted, and a lost motion connecting means between said switch members and said shaft so that said shaft may be given a partial rotation without causing engagement of the connecting means, said connecting means being arranged to have different amounts of lost motion.



3. A combination switch comprising a plurality of switch devices, each switch device including a rotatable switch member, a shaft upon which said rotatable switch members are loosely mounted, a collar for each switch device rigidly mounted on said shaft, all of said collars being provided with a cut out portion said cut-out portions being of varying sizes, and a pin connection between each of said cut out portions and the respective switch members.

4. A combination switch comprising a plurality of switch devices, each switch device including a rotatable switch member, a ratchet wheel forming a portion of each switch member, a shaft upon which said ratchet wheels are loosely mounted, a spring pressed ball engaging each of said ratchet wheels to temporarily hold them in any position, a collar for each switch member rigidly carried by said shaft, each of said collars being provided with a cut-out portion, and a pin carried by each ratchet adapted to enter the cut-out portion of said collars.

1,156,122. FIBROUS COMPOSITION AND PROCESS OF MANUFACTURE. JAMES C. WOODLEY, Evanston, Ill. Substitute for application Serial No. 796,143, filed Oct. 20, 1913. This application filed Feb. 11, 1915. Serial No. 7,551. (Cl. 106—31.)

1. The process of producing a substantially homogeneous fibrous gummy mass which consists in superficially coating a fibrous mass with a gummy material, and disintegrating the fibrous mass in the resulting gummy mixture, without destroying the fibrous character of said mass, substantially as described.

2. The process of producing a substantially homogeneous fibrous gummy mass which consists in superficially coating a fibrous mass with a gummy material and subjecting the resulting gummy mixture to a pulling operation sufficient to disintegrate the fibrous material without destroying its fibrous condition and to cause it to be distributed and interlaced throughout the gummy material, substantially as described.

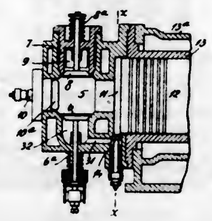
3. The process of producing a substantially homogeneous fibrous gummy mass which consists in disintegrating a gummy mixture comprising a fibrous mass in intimate adhering contact with a gummy asphalt without destroying the fibrous condition of said mass, so as to produce a homogeneous fibrous gummy product, substantially as described.

4. The process of producing a substantially homogeneous fibrous gummy mass which consists in applying superficially to a fibrous mass a coating of bituminous material in a gummy condition, and disintegrating the fibrous mass in the resulting gummy mixture, without destroying the fibrous character of said mass so as to produce a homogeneous fibrous gummy product, substantially as described.

5. The process of producing a substantially homogeneous fibrous gummy mass which consists in superficially coating fibrous material with a hot bituminous material, allowing the coated fiber to stiffen to a gummy condition, and disintegrating the fibrous material in the gummy mixture without destroying the fibrous character of said material so as to produce a homogeneous fibrous gummy product, substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

1,156,123. VALVE AND VALVE-GEAR OF INTERNAL-COMBUSTION ENGINES. LEON WYGODSKY, New York, N. Y., assignor to Wygodsky Engine Company, New York, N. Y., a Corporation of Delaware. Original application filed Aug. 30, 1911, Serial No. 646,888. Continuation application filed Mar. 21, 1913, Serial No. 755,950. Divided and this application filed Dec. 26, 1913. Serial No. 808,901. (Cl. 123—90.)



1. An internal combustion engine comprising in combination an engine cylinder, a combustion chamber communicating therewith, a main exhaust valve opening from the combustion chamber and a supplemental exhaust valve of smaller diameter than the main valve, opening from the cylinder; said cylinder provided with a supplemental exhaust passage, in which such supplemental exhaust valve is located, which supplemental exhaust valve is in unobstructed communication, except as to the closing of such passage by such supplemental exhaust valve, with the engine cylinder, at all times; whereby the supplemental exhaust valve acts also as a relief valve.

2. An internal combustion engine comprising in combination an engine cylinder, a main exhaust valve therefor, a main exhaust passage leading from said valve, a supplemental exhaust valve located at the bottom of said cylinder, and of smaller diameter than the main exhaust valve, and a supplemental exhaust passage leading from said supplemental exhaust valve to said main exhaust passage; such supplemental exhaust passage being in unobstructed communication, except as to the closing of such passage by such supplemental exhaust valve, with the engine cylinder, at all times; whereby the supplemental exhaust valve acts also as a relief valve.

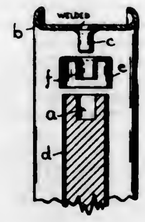
3. An internal combustion engine comprising in combination an engine cylinder, a combustion chamber communicating with the engine cylinder, a main exhaust valve opening from said combustion chamber, a supplemental exhaust valve opening from the engine cylinder, and means for opening said supplemental exhaust valve in advance of the opening of the main exhaust valve; said cylinder provided with a supplemental exhaust passage, in which such supplemental exhaust valve is located, which supplemental exhaust valve is in unobstructed communication, except as to the closing of such passage by such supplemental exhaust valve, with the engine cylinder, at all times; whereby the supplemental exhaust valve acts also as a relief valve.

4. An internal combustion engine comprising in combination an engine cylinder, a piston therein, a removable head for said cylinder having in it a main exhaust valve and a main exhaust passage, said cylinder head having a recess forming substantially a continuation of the engine cylinder, and a supplemental passage leading from such recess of the cylinder head to the main exhaust passage of said cylinder head, and a supplemental valve normally closing said supplemental passage.

5. An internal combustion engine comprising in combination an engine cylinder, a main exhaust valve therefor, and a supplemental exhaust valve of smaller diameter than the main valve, and means for opening said supplemental valve in advance of the opening of the main valve, whereby the pressure in the cylinder is released prior to the opening of the main exhaust valve; said cylinder provided with a supplemental exhaust passage, in which such supplemental exhaust valve is located, which supplemental exhaust valve is in unobstructed communication, except as to the closing of such passage by such supplemental exhaust valve, with the engine cylinder, at all times; whereby the pressure in the cylinder is released prior to the opening of the main exhaust valve, and the supplemental exhaust valve acts also as a relief valve.

[Claims 6 to 11 not printed in the Gazette.]

1,156,124. WHEEL. LEONARD A. YOUNG, Highland Park, Mich. Filed Feb. 11, 1915. Serial No. 7,570. (Cl. 21—69.)



1. In a wheel, the combination of a metal rim having perforations with the circumjacent metal forced inward to form a countersink for each perforation, headed studs secured in the perforations and the countersunk metal so as to have the tops of their heads flush with the inner surface of the rim, and a plurality of spokes having mortised ends, said studs being arranged to fit in the mortises of the spoke ends to tie the spokes and rim together.

2. In a wheel, the combination of a metal rim provided with inwardly projecting integral tenons, a plurality of spokes having mortises in their ends, a thimble fitting over the end of each spoke and having a sleeve portion that fits into the mortises to line the same, the said tenons being arranged to fit into the mortises with the sleeve porion of the thimble, substantially as described.

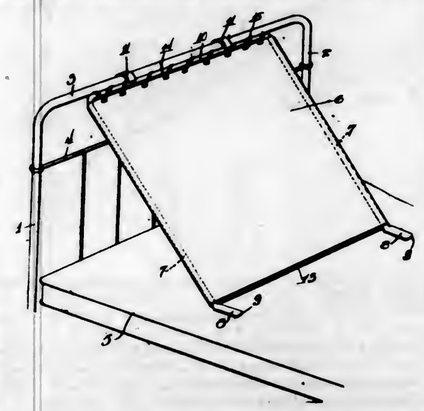
3. A composite wheel, having in combination, a flexible metal rim free of any member that serves as a felly, having inwardly projecting integral tenons, a plurality of wooden spokes secured to the rim by interlocking with said integral tenons, and metal sheathings for the spokes completely insheathing the spokes, substantially as described.

4. A composite wheel, having in combination, a flexible metal rim free of any rigid member that serves as a felly, the said rim being provided with inwardly projecting integral metal tenons, and a plurality of wooden spokes having mortises in their ends, the said spokes being secured to the metal rim by the tenons engaging in the ends of the spokes.

1,156,125. HEAD AND BACK REST. MATTIE E. AHLBORN, Dayton, Ohio. Filed Apr. 25, 1914. Serial No. 834,481. (Cl. 5—43.)

A head and back rest for beds including a frame formed from a single piece of rod metal and bent upon itself into a substantially U-shaped configuration to provide a pair of spaced parallel supporting legs, elongated flat feet formed on each of said legs by flattening the terminals thereof, the edges of said feet being rounded to prevent

the tearing of the bed clothes when the device is in position, said feet being disposed at an angle to said legs, flat hook-like engaging members formed integral with the vertex of the frame and adapted for engagement with the cross piece of a bed for maintaining the vertex in close parallel relation therewith, a pillow support slip removably arranged about the legs for yieldingly supporting



the back and head of a patient, said pillow support slip being provided with a plurality of uniformly spaced openings adjacent the upper marginal edge thereof, and a piece of tape passing through said openings and about the vertex of said frame alternately throughout the vertex of the frame for removably holding said support in a position adjacent the vertex of the frame.

1,156,126. TIME-SWITCH. JOHAN M. ANDERSEN, Boston, Mass., assignor to Albert and J. M. Anderson Manufacturing Company, Boston, Mass., a Corporation of Maine. Filed July 23, 1908. Serial No. 444,979. (Cl. 161—27.)



1. In an apparatus of the class described, in combination, a circuit controller provided with a movable member, a motor to move said member, a time train or clock mechanism, a selective mechanism operated thereby, a detent device rotatable by said motor, an escapement lever provided with a finger coöperating with the detent device to restrain said motor and with a second finger coöperating with said selective mechanism to enable the latter to disengage the first-mentioned finger from said detent device, and a rock-shaft provided with an arm coöperating with the escapement lever to turn the same and remove the escapement lever from the influence of the selective mechanism and also to disengage the first-mentioned finger from the detent device, substantially as described.

2. In an apparatus of the class described, in combination, a circuit controller provided with a movable member, a motor to move said member, a disk rotated by said motor, a connecting link eccentrically and pivotally connected with said disk at one end and provided at its other end with a slot, a rocking device, a toggle mechanism connecting said rocking device with said movable member, an arm on said rocking device extended radially therefrom and into the slot of said link, a time train or clock mechanism, and a selective device operated by said clock mechanism and controlling the said motor, substantially as described.

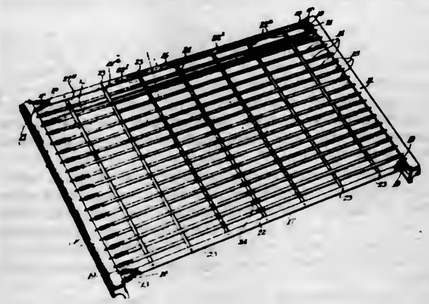
3. In an apparatus of the class described, in combination, a motor, a detent device rotatable by said motor and provided at its opposite ends with a plurality of detents in substantially close proximity to each other, an escapement lever provided with a finger coöperating with said detents at each end of said device in succession, a tripping device to actuate said escapement lever, a selective mechanism actuating said tripping device, and a time train or clock mechanism for operating said selective mechanism, substantially as described.

4. In an apparatus of the class described, in combination, a motor, a detent lever rotatable by said motor and provided at its opposite ends with detent arms separated from but in close proximity to each other, an escapement lever provided with a finger coöperating with the detent arms at each end of the said detent lever in succession, a tripping device to actuate said escapement lever, a selective mechanism actuating said tripping device, and a time train or clock mechanism for operating said selective mechanism, substantially as described.

5. In an apparatus of the class described, in combination, a motor, a disk rotated by said motor, a detent lever rotatable with said disk, an escapement lever coöperating with said detent lever, a tripping device for said escapement lever, a selective device for operating said tripping device, a time train for operating said selective device, a rock shaft provided with a crank coöperating with said escapement lever to remove the latter from the influence of the said tripping device and to disengage the escapement lever from the detent lever, and means for holding said rock-shaft in its active position, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

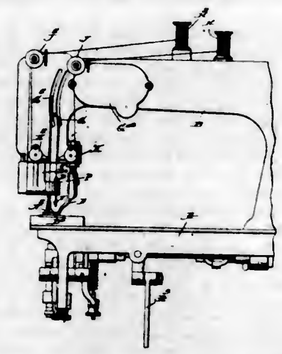
1,156,127. METALLIC FABRIC. WILLIAM B. ANDERSON, Chicago, Ill., assignor to Haggard and Marcusson Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 11, 1914. Serial No. 831,110. (Cl. 5—39.)



A device of the character described comprising a resilient fabric, composed of uniformly separated, longitudinal slats and similar transverse slats interwoven together to provide a flat surface; a supporting frame; springs connecting said longitudinal members at each individual end to said frame; means to prevent relative, axial movement of said longitudinal members but to permit relative transverse movement thereof at or near the longitudinal central zone of the structure, and means positioned at

both sides of the central zone lengthwise of the device to prevent transverse movement of said longitudinal members but to permit axial movement thereof.

1,156,128. TWO-NEEDLE BLINDSTITCH SEWING-MACHINE. WOLF ARBETTER, Chelsea, Mass., assignor to Arbetter Felling Machine Company, Boston, Mass., a Corporation of Maine. Filed June 2, 1908. Serial No. 436,224. (Cl. 112—24.)



1. A blind stitch sewing machine comprising a work support, two reciprocating needles located and operating side by side and at one side of the work support, means for reciprocating the said needles in alternation with their penetrating movements in the same direction, and stitch forming mechanism complemental to said needles located and operating at the same side of the work support as the needles.

2. A blind stitch sewing machine, comprising a work support, stitch forming mechanism located and operating at one side of the work support, said stitch forming mechanism including two needles reciprocating in paths extending in the same general direction and having their penetrating movements in alternation and in the same direction.

3. A blind stitch sewing machine comprising a work support, and stitch-forming mechanism located and operating at one side of the work-support including two reciprocating needles having their penetrating movements in alternation, and a single complemental thread-carrying stitch-forming device coöperating with both needles alternately.

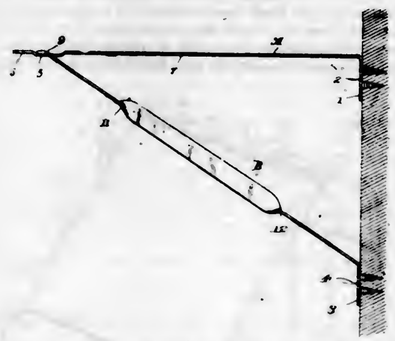
4. A blind stitch sewing machine comprising a work support, two oscillating curved needles located and operating side by side and at one side of the work support, means for oscillating the said needles in alternation with their penetrating movements in the same direction, and stitch-forming mechanism complemental to said needles located and operating at the same side of the work support as the needles.

5. A blind stitch sewing machine comprising a work-support and stitch-forming mechanism located and operating at one side of the work support including two oscillating curved needles having their penetrating movements in alternation, and a single complemental thread-carrying stitch-forming device coöperating with both needles alternately.

[Claims 6 to 16 not printed in the Gazette.]

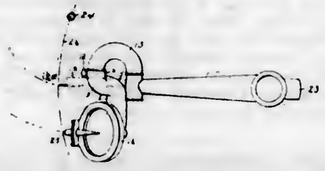
1,156,129. BRACKET. BRUNO ALBERT BERGER, Richmond, Va. Filed May 9, 1914. Serial No. 837,476. (Cl. 248—18.)

A bracket comprising a supporting member, and a bracing member, one of said members having its extremity reduced to form a projecting tongue which is bent at an angle corresponding with the plane of the other member, and said other member being formed with a downward offset and an opening therein to receive said tongue and



permit the latter to lie below the top surface of the supporting member.

1,156,130. ADAPTER FOR TALKING-MACHINES. PLINY CATUCCI, Newark, N. J., assignor to A. F. Meisselbach & Brother, a Corporation of New Jersey. Filed Jan. 28, 1914. Serial No. 814,867. (Cl. 181—3.)



1. An adapter for talking machines comprising a tubular member having a tone arm clamping thimble at one end and a sound box thimble at its opposite end, said tubular member being reversely bent between its ends to bring the sound box thimble substantially at right angles to, and the extreme end thereof to the rear of the tone arm thimble with the axis of said sound box thimble lying at an angle of substantially 15 degrees with the main axial plane of said tubular member.

2. An adapter for talking machines, comprising a rigid tubular member having a clamping thimble at one end for connection to the tone arm of a talking machine, said tubular member being reversely bent between its ends to bring its outer free end substantially at right angles to said clamping thimble with the extreme free end opening to the rear of and toward the extended axis of said clamping thimble.

3. An adapter for talking machines comprising a tubular member having a clamping thimble at one end thereof adapted for securing said member to the oscillating goose neck of a talking machine tone arm, said member being reversely bent to bring its opposite end to the rear of the axis of and at right angles to the clamping thimble with the axis of said opposite end lying at an angle of substantially 15 degrees above the main axial plane of the tubular member.

4. An adapter for talking machines comprising a tubular section having rectangular elbows at each end thereof, the outer ends of said elbows lying at an angle of 15 degrees apart, a second tubular section integral with one of said elbows, and a rectangular elbow and a clamping device upon the free end of said second section, the axis of said last named elbow lying forward of the open end of the elbow at the opposite end.

5. In a device of the class described, the combination of a tone arm pivoted to swing in a horizontal plane, a pivoted goose-neck upon the free end of said tone arm,

and a rigid tubular adapter secured to the free end of said goose-neck, said adapter being reversely bent to bring its free end to the rear of the extended axis of the outer end of said goose neck whereby when a sound box is secured to the free end of said adapter the stylus of said sound box will swing in the arc of a circle passing through the center of rotation of the talking machine record.

1,156,131. WIRE-BOUND ARTICLE. EDWARD I. BRADDOCK, Winchester, Mass., assignor, by direct and mesne assignments, to Lamb & Nash Company, Kittery, Me., a Corporation of Maine. Filed Sept. 25, 1913. Serial No. 791,856. (Cl. 217—91.)



1. A firkin comprising a hollow non-metallic member having thereon a wire hoop composed of a plurality of convolutions soldered together and embedded in the outer surface of said member with the convolutions of the wire set and substantially relieved from tension.

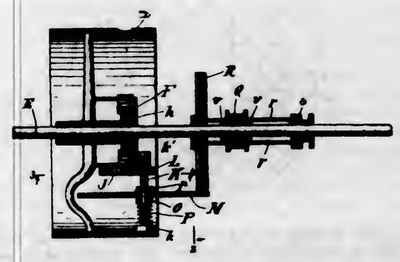
2. A firkin comprising a hollow non-metallic member having thereon a wire hoop composed of a plurality of convolutions soldered together and embedded in the outer surface of said member with the convolutions of the wire set and substantially relieved from tension, said hoop having bent portions which are embedded in the said member.

3. A firkin comprising a hollow, non-metallic member having thereon a wire hoop composed of a plurality of convolutions secured on the said member by the contraction of the wire into a set condition substantially free from tension, substantially as described.

4. A firkin comprising a hollow, non-metallic member having thereon a wire hoop secured thereon by the contraction of the wire into a set condition substantially free from tension and provided with bent ends which are embedded in said member.

5. An article comprising a hollow member having thereon a wire hoop composed of a plurality of convolutions soldered together and secured on the said member by the contraction of the wire into a set condition substantially free from strain, substantially as described.

1,156,132. REVERSIBLE-SPEED PULLEY. FRANK M. CHAPMAN, Fort Edward, N. Y., assignor of three-eighths to Fred A. Bratt and three-eighths to Robert McWhorter, Fort Edward, N. Y. Filed Oct. 15, 1912. Serial No. 725,776. (Cl. 74—34.)

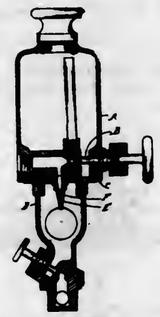


1. A change speed device comprising a shaft, a gear connected directly to said shaft and constituting one of the elements of a differential mechanism, a friction wheel mounted for axial movement and rotation upon said shaft and constituting a second element of said differential mechanism, a main driving member loosely mounted upon said shaft, a friction disk mounted upon said main driving member, said friction disk being engaged with the periphery of said friction wheel, and gearing connecting said friction disk to said gear, said main driving member, said friction disk and said gearing constituting the third element of said differential mechanism; substantially as described.

2. A change speed device comprising a differential mechanism, a shaft, one element of said differential mechanism being connected directly to said shaft, a second element of said differential mechanism which is rotatable upon said shaft, a friction disk carried by said second element of said differential mechanism and geared to said first element, and a third element of said differential mechanism consisting of a friction wheel axially movable upon said shaft and having its periphery engaged with said friction disk; substantially as described.

3. The combination with a shaft, of a gear fast on said shaft, a pulley loosely mounted on said shaft, a friction disk mounted for rotation within said pulley, a gear train connecting said friction disk with said gear on said shaft, said friction disk having its face lying parallel to said shaft, a second pulley mounted for rotation upon said shaft, a friction wheel mounted for longitudinal and rotary movement upon said shaft and driven from said second pulley, said friction wheel being designed for engagement with the surface of said disk, and means for moving said friction wheel axially upon said shaft; substantially as described.

1,156,133. LUBRICATOR. CHARLES H. CROCKETT, Detroit, Mich., assignor to Detroit Lubricator Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 29, 1913. Serial No. 787,373. (Cl. 184—96.)



1. In a lubricator, the combination with a casing containing the sight feed chamber, of a tapered nozzle provided with a bore having a tapered end terminating a substantial distance above the tip thereof, the tip being slitted in an axial plane and intersecting the bore above the tapered end thereof, thereby providing substantially opposed plane surfaces for the adherence of lubricant and lateral relief passages.

2. In a lubricator, the combination with a casing containing the sight feed chamber, of a tapered nozzle having a bore and a tip provided with planar surfaces, said tip being slitted, whereby the lubricant is guided to a point near the center of the planar surfaces by means of the tapered end of the bore, and the extreme upper end of the slit communicating with the bore to provide a lateral relief passage for the relief of pressure.

3. In a lubricator, the combination with a casing containing the sight feed chamber, of a nozzle for discharging the lubricant therein, said nozzle being provided with a lateral relief passage above its discharge end and presenting sufficient surface in adhesive contact with the drop to hold the same against fluctuating pressures.

1,156,134. PROCESS OF PRODUCING DERIVATIVES OF N-HOMOLOGUES OF THE NORHYDROHYDRASTININ. HERMAN DECKER, Hanover, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Jan. 2, 1913. Serial No. 739,735. (Cl. 23—24.)

1. The process of producing alkyl derivatives of norhydrohydrastinin substances from homopiperonylamin which comprises subjecting the homopiperonylamin to the following steps,—condensing with an aldehyde, closing of the chain to form a ring by condensation and alkylizing at the nitrogen atom.

2. The process of producing alkyl derivatives of norhydrohydrastinin substances from homopiperonylamin which comprises subjecting the homopiperonylamin to condensation with an aldehyde to form a condensation product, and subsequently to the steps of condensing to close the chain to form a ring and alkylizing at the nitrogen atom.

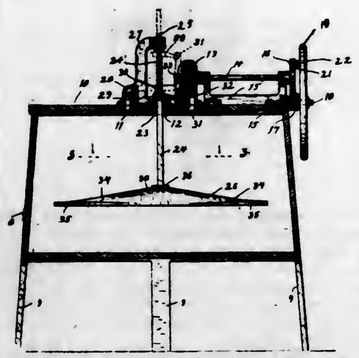
3. The process of producing alkyl derivatives of norhydrohydrastinin substances from homopiperonylamin which comprises subjecting the homopiperonylamin to condensation with an aldehyde to form a condensation product, subsequently converting the open chain of such condensation product into a ring by condensation, and alkylizing the resulting nonhydrohydrastinin substance.

4. The process of producing norhydrohydrastinin substances from homopiperonylamin which comprises condensing homopiperonylamin with an aldehyde to form an open chain condensation product, and converting the open chain of the resulting condensation product into a ring by condensation in the presence of a condensing agent.

5. The process of producing alkyl derivatives of norhydrohydrastinin substances which comprises subjecting the primary condensation products of homopiperonylamin and aldehydes to the following steps,—closing of the chain to form a ring by condensation and alkylization at the nitrogen atom.

[Claims 6 to 8 not printed in the Gazette.]

1,156,135. DRIVING MECHANISM. JOHN P. DORAN, Jefferson, Wis. Filed Nov. 26, 1913. Serial No. 803,093. (Cl. 74—14.)



1. In a washing machine, the combination of a vertical shaft, a horizontal shaft having a geared connection with the vertical shaft and adapted to continuously rotate the same, a connection between the two shafts for reciprocating the vertical shaft while it is being rotated, and means for rotating the horizontal shaft.

2. In a washing machine, the combination of a support, a gear wheel mounted on said support, a vertical shaft extending slidably through the gear wheel and rotated thereby, a horizontal shaft mounted above the support and having a pinion in mesh with the gear wheel for continuously rotating said vertical shaft, a cranked connection between the horizontal shaft and the vertical shaft for reciprocating the vertical shaft while it is being rotated, and means for rotating the horizontal shaft.

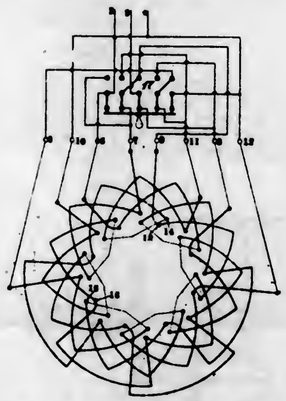
3. In a washing machine, the combination of a support, a gear wheel mounted on said support and provided with a rectangular bore, a vertical shaft slidably extending through the bore, the portion of the shaft which engages the gear being rectangular in cross section, a horizontal shaft mounted above the support and having a pinion in mesh with the gear wheel for continuously rotating said vertical shaft, a cranked connection between the two shafts for reciprocating the vertical shaft while it is being rotated, and means for rotating the horizontal shaft.

4. In a washing machine, the combination of a support, a gear wheel mounted on the support and provided with a rectangular bore, a vertical shaft slidably extending through the bore, the portion of the shaft which engages the gear wheel being rectangular in cross section, a horizontal shaft mounted above the support and having a pinion in mesh with the gear wheel, a cranked member connected to the inner end of the horizontal shaft, an arm journaled on the vertical shaft and having a universal joint connection with the outer end of the cranked member, and means for rotating the horizontal shaft.

5. In a washing machine, the combination of a support, a gear wheel mounted on the support and provided with a rectangular bore, a vertical shaft slidably extending through the bore, the portion of the shaft which engages the gear being rectangular in cross section, a collar mounted on the shaft above the upper end of the squared portion to form a bearing part, an arm journaled on the bearing part, a horizontal shaft mounted above the support and having a pinion in mesh with the gear wheel, a crank arm having a hinged connection with the inner end of the horizontal shaft and also having a ball and socket connection with the vertical shaft arm to reciprocate the said vertical shaft, a fly wheel mounted on the support and having a connection with the horizontal shaft, and means for rotating the horizontal shaft.

[Claims 6 to 10 not printed in the Gazette.]

1,156,136. METHOD OF OPERATING POLYPHASE MOTORS. HARRY W. DOUBRAVA, Hackensack, N. J., and JOSEPH HEINRMAN, New York, N. Y., assignors to Wagner Electric Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 13, 1914. Serial No. 831,435. (Cl. 172—280.)



1. The method of operating polyphase motors which comprises supplying, at starting, the current of at least one phase to inducing conductors distributed over arcs aggregating a greater number of degrees than the aggregate of the arcs over which the inducing conductors extend to which the current of said phase is supplied in normal operation.

2. The method of operating polyphase motors which comprises supplying the current of each phase, at starting, to inducing conductors distributed over arcs aggregating a desired number of degrees and supplying the current of each phase to inducing conductors distributed over arcs aggregating a smaller number of degrees for normal operation of the machine.

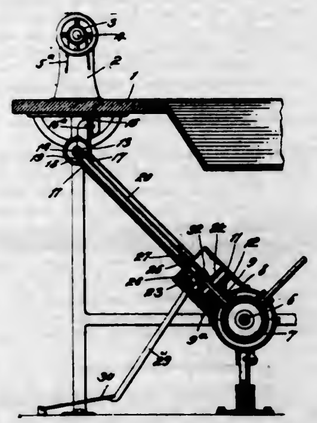
3. The method of operating n-phase motors which comprises supplying the current of each phase to conductors distributing over arcs aggregating $720/n$ electrical degrees at starting and supplying the current of each phase to conductors distributing over arcs aggregating $360/n$ electrical degrees for normal operation.

4. The method of operating n-phase motors which comprises supplying, at starting, the current of each phase to inducing conductors distributed over more than $360/n$ electrical degrees and supplying, in normal operation, the current of each phase to inducing conductors distributed over a smaller number of electrical degrees.

5. The method of operating from a polyphase supply motors provided with a plurality of inducing windings displaced from each other, which comprises supplying at starting current from each supply phase to at least parts of two inducing windings displaced from each other, and supplying current from each supply phase to only one of the inducing windings in normal operation.

[Claims 6 and 7 not printed in the Gazette.]

1,156,137. SEWING-MACHINE POWER-TRANSMITTER. JACOB FISCHER, Roseville, N. J., and DANIEL BRANDENSTEIN, New York, N. Y. Filed Jan. 27, 1915. Serial No. 4,588. (Cl. 74—7.)



1. A power transmitter for sewing machines comprising a main driving shaft supported beneath the sewing machine table; a beveled gear upon said main driving shaft; a counter driving shaft; a beveled gear carried by said counter driving shaft; a belt pulley on said counter driving shaft for connection with the shaft of the sewing machine head; an intermediate shaft; a beveled gear located at each end of said intermediate shaft, in mesh with the gears upon said main driving shaft and said counter driving shaft, respectively, whereby said main and counter driving shafts are connected; a clutch interposed in and controlling the connection of said belt pulley with said main driving shaft.

2. A power transmitter for sewing machines comprising a main driving shaft supported beneath the sewing machine table; a beveled gear upon said main driving shaft; a counter driving shaft; a beveled gear carried by said counter driving shaft; a belt pulley on said counter driving shaft for connection with the shaft of the sewing machine head; an intermediate shaft; a beveled gear located at each end of said intermediate shaft, in mesh with the gears upon said main driving shaft and said counter driving shaft, respectively, whereby said main and counter driving shafts are connected; a clutch interposed in and controlling the connection of said belt pulley with said main driving shaft, means for maintaining said clutch in inoperative position and a treadle to actuate said clutch.

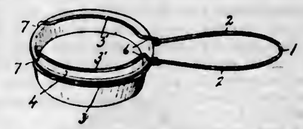
3. A power transmitter for sewing machines comprising a main driving shaft located beneath the sewing machine table; a beveled gear upon said main driving shaft; a counter driving shaft; a beveled gear carried by said counter driving shaft; a belt pulley on said counter driving shaft for connection with the shaft of the sewing machine head; an intermediate shaft; a beveled gear located at each end of said intermediate shaft; in mesh with the gears upon said main driving shaft and said counter driving shaft, respectively, whereby said main and counter driving shafts are connected; a clutch interposed in and controlling the connection of said belt pulley with said main driving shaft, means for maintaining said clutch in inoperative position and a treadle to actuate said clutch.

4. A power transmitter for sewing machines comprising a substantially horizontal main driving shaft supported beneath the sewing machine table; a beveled gear upon said main driving shaft; a counter driving shaft, substantially parallel with said main driving shaft; a beveled gear carried by said counter driving shaft; a belt pulley on said counter driving shaft for connection with the shaft of the sewing machine head; a transverse intermediate shaft; a beveled gear located at each end of said transverse intermediate shaft, in mesh with the gears upon said main driving shaft and said counter driving shaft, respectively, whereby said main and counter driving shafts are connected; a clutch interposed in and controlling the connection of said belt pulley with said main driving shaft.

5. A power transmitter for sewing machines comprising a substantially horizontal main driving shaft supported beneath the sewing machine table; a beveled gear upon said main driving shaft; a counter driving shaft, substantially parallel with said main driving shaft; a beveled gear carried by said counter driving shaft; a belt pulley on said counter driving shaft for connection with the shaft of the sewing machine head; a transverse intermediate shaft; a beveled gear located at each end of said transverse intermediate shaft, in mesh with gears upon said main driving shaft and said counter driving shaft, respectively, whereby said main and counter driving shafts are connected; a clutch interposed in and controlling the connection of said belt pulley with the main driving shaft, and a treadle to actuate said clutch.

[Claim 6 not printed in the Gazette.]

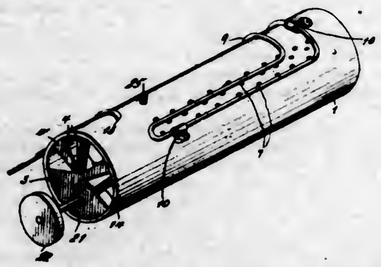
1,156,138. LIFTER. HARRY C. GATES, Proctor, Vt. Filed Mar. 7, 1913. Serial No. 752,648. (Cl. 65—32.)



A plate-lifter comprising a single piece of spring wire, bent abruptly upon itself to provide a U-shaped stiff bight portion and a handle consisting of elongated divergent members connected at their rear ends and having their forward ends offset and curved outward to provide two lowered members extending from said handle of oppositely-disposed gripping jaws, then offset and oppositely-inclined to provide two opposed V-shaped gripping seats at the front ends of said jaws, then outwardly curved to provide the upper members of the jaws in planes above but parallel with the planes of the lower jaw members, then again offset and inclined to co-act with the rear offsets of the lower member to form V-shaped seats at the rear ends of the jaws, and finally twisted around the for-

ward ends of the divergent handle members, the planes of said upper and lower jaw members being respectively above and below the plane of the handle, and said front and rear V-shaped seats being in the same plane with said handle to clamp a plate edge at four points two of which are on one side and the other two at the opposite side of the longitudinal center line of the handle, said front V-shaped seats being arranged to grip the plate edge prior to its engagement by the rear V-shaped seats.

1,156,139. GAS-GENERATING BURNER. JOSHUA H. GRIFFITH, Ellis, Kans. Filed Feb. 2, 1915. Serial No. 5,784. (Cl. 158—65.)

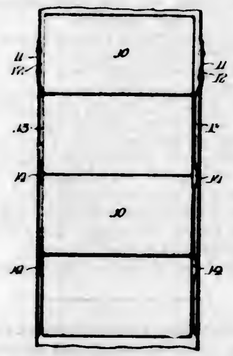


1. In a gas generating burner of the class described, the combination of a casing, a central partition carried within said casing, forming a mixing chamber and a gas chamber, said partition provided with an integral vertical wall extending at right angles thereto forming an air chamber, said partition terminating at a spaced distance from one end of said casing to communicate said mixing and gas chambers, and means for supplying said mixing chamber with vaporized oil, said air chamber having openings to the outside air and communicating with said mixing chamber whereby air is supplied to the mixing chamber, said gas chamber having openings for the exit of gas to be burned.

2. In a gas generating burner of the class described, the combination of a casing, said casing provided with a closed end, a head carried by the opposite end of said casing and provided with a plurality of openings for allowing the air to be admitted into the interior of said casing, a partition carried within the central portion of said casing and extending in a horizontal plane, said partition provided with a vertical wall at one end, the opposite end of said partition terminating at a spaced distance from the closed end of said casing, said partition forming a mixing chamber therebelow and a gas chamber thereabove, said casing provided with a plurality of apertures communicating with the interior of said gas chamber, an air chamber formed at one end of said casing and communicating with said mixing chamber, means for supplying said mixing chamber with vaporized oil whereby the air from said air chamber may pass into the mixing chamber and be mixed with the vaporized oil for producing a gas whereby the gas may pass upwardly into said gas chamber and be expelled therefrom through said apertures when the device is in operation.

3. In a gas generating burner of the class described, the combination of a casing, said casing provided with a gas chamber and a mixing chamber, said chamber communicating with each other, said casing also provided with an air chamber communicating with said mixing chamber, a tapering valve casing carried within said air chamber and extending into said mixing chamber, a rotatable valve member carried within said valve casing, said valve member being adapted to open and close said valve casing, an oil pipe carried upon the upper portions of said casing, said casing being provided with a plurality of apertures communicating with said gas chamber, whereby the flames caused by the burning of the gas passing from said casing will vaporize the oil within said pipe, said pipe provided with a depending neck and communicating with said valve casing, said valve member being adapted to regulate the supply of vaporized oil passing into the mixing chamber whereby the mixing of the air and vaporized oil within the mixing chamber will form a gas which may pass into said gas chamber so as to be exhausted therefrom and be ignited.

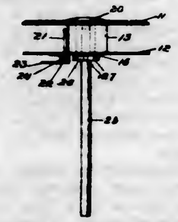
1,156,140. VENDING DEVICE. BENJAMIN M. HAIR, Chicago, Ill. Filed Feb. 19, 1914. Serial No. 819,630. (Cl. 211—8.)



1. A display and vending device having a back, opposite side walls, inwardly-directed flanges at the fronts of the side walls, the space between the flanges being open to expose the contents of the device, and the side walls being provided with depressions in their inner faces, and leaf springs extending longitudinally within the device adjacent the side walls thereof, each spring having one end free and its other end offset and secured within one of the depressions, substantially as and for the purpose described.

2. A display and vending device having a back, opposite side walls, inwardly-directed flanges at the fronts of the side walls, the space between the flanges being open to expose the contents of the device, and the side walls being provided with depressions in their inner faces, and leaf springs extending longitudinally within the device adjacent the side walls thereof, each spring having one end free and its other end offset and secured within one of the depressions, intermediate portions of the springs having projections bent therein to bear against the respective side walls, substantially as and for the purpose described.

1,156,141. RIBBON-SPOOL FOR TYPE-WRITING MACHINES. EDWARD B. HESS and LEWIS C. MYERS, Brooklyn, N. Y., assignors, by mesne assignments, to Royal Typewriter Company, Inc., New York, N. Y., a Corporation of New York. Filed Nov. 15, 1913. Serial No. 801,167. (Cl. 242—70.)



1. A ribbon spool having two depending projections on its bottom plate in combination with a vertical spool supporting shaft having a lateral extension with openings for receiving one of said depending projections, the other projection being movable and adapted to contact with the trip device of a reversing mechanism.

2. A ribbon spool for typewriting machines comprising two plates and a hollow core to which the plates are fastened and a bearing piece disconnectedly held centrally between the plates and interlocked therewith, the said hollow core affording the only means for holding the parts together.

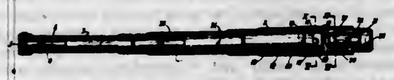
3. A ribbon spool for typewriting machines comprising two plates each having a series of slots or openings and a hollow core having lugs on its ends adapted to enter the slots of the plates and to which the plates are fastened by riveting and a bearing piece disconnectedly held centrally between the plates and interlocked therewith, the said hollow core affording the only means for holding the parts together.

4. A ribbon spool for typewriting machines comprising two plates and a hollow core to which the plates are fastened, a bearing piece disconnectedly held centrally between the plates, and having a central bore extending through it, the said hollow core affording the only means for holding the parts together and a cap adapted to cover the central part of the top plate and its attached parts and having a stem seated in the central bore of the bearing piece.

5. A ribbon spool for typewriting machines comprising two plates and a hollow core to which the plates are fastened, a bearing piece disconnectedly held centrally between the plates and having a central bore extending through it, the said hollow core affording the only means for holding the parts together, a cap adapted to cover the central part of the top plate and its attached parts and having a stem seated in the central bore of the bearing piece, a projection depending from the bottom plate, and a vertical shaft on which the spool is seated and having a lateral extension provided with a plurality of openings with any of which the depending projection is adapted to engage.

[Claim 6 not printed in the Gazette.]

1,156,142. DOLLY-BAR. HERBERT H. HUGHES, St. Louis, Mo. Filed Aug. 21, 1913. Serial No. 785,890. (Cl. 78—53.5.)



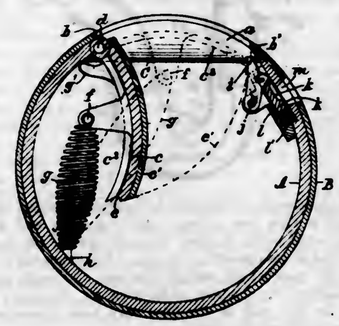
1. A dolly-bar comprising a hollow casing, said casing varying in internal diameter to form shoulders in different portions of the length thereof, a sectional plunger in said casing, a plurality of springs to hold the plunger at one end of its lengthwise travel, said springs engaging the shoulders in the casing, means connecting the casing to the plunger for limiting endwise movement of the plunger, and a rivet snap detachably secured in the end of one section of said plunger.

2. A dolly-bar comprising a hollow casing, a plunger lengthwise movable therein, said plunger having a plurality of shoulders thereon and having a rivet snap detachably secured on one end thereof, and yielding means for holding said plunger at one end of its lengthwise movement within the casing, said yielding means comprising separate and independently operating springs, one end of said springs being in engagement with the casing, and the other end thereof engaging the shoulders on said plunger.

3. A dolly-bar comprising a hollow casing, a sectional plunger lengthwise movable in the casing, a rivet snap removably secured to the plunger, separate means for yieldingly holding each of said plunger sections at one end of the lengthwise travel thereof, and means connecting the plunger and casing for limiting the lengthwise travel of the plunger in the casing.

4. A dolly-bar comprising a hollow casing, a plunger lengthwise movable therein and having a rivet snap detachably secured on one end, and yielding means for holding the plunger at one end of its lengthwise movement in the casing, said means including a plurality of separate and independently operating springs, one end of said springs connecting with the plunger, and the other end thereof engaging with the casing.

1,156,143. BOWLING-BALL WITH INWARDLY-OPENING DOOR. JOHN W. HYATT, East Orange, N. J. Filed July 2, 1915. Serial No. 37,765. (Cl. 46—4.)



1. A bowling ball having a hand-hole with a door, means for holding the door normally closed, and means for displacing the door inwardly to open the hand-hole when required.

2. A hollow bowling ball having a hand-hole with a door, means for holding the door normally closed, a latch for locking the door, means for retracting the latch to open the door when required, and a grip or hand-hold within the ball accessible to the hand-hole.

3. A bowling ball having an oblong hand-hole with door jointed at one end to swing inwardly and having a latch to hold it closed, and a rib at one side of the hand-hole to furnish a grip for the fingers.

4. A bowling ball having an oblong hand-hole with door jointed at one end to swing inwardly, a spring to close the door, a latch to hold the door closed, and a rib at one side of the hand-hole to furnish a grip for the fingers.

5. A bowling ball having an oblong hand-hole with door jointed at one end to swing inwardly, a spring-stud upon the inner side of the door, a spring jointed to such stud to close the door and having a fulcrum nearly in line with the stud and the door-hinge when the door is opened, and a latch to hold the door closed.

[Claims 6 to 8 not printed in the Gazette.]

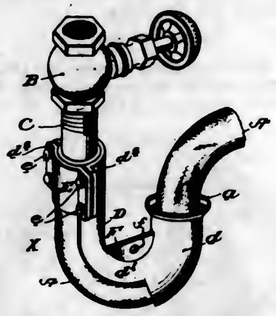
1,156,144. GAME-BALL WITH COMPOSITION COATING. JOHN W. HYATT and CHARLES E. HYATT, East Orange, N. J. Filed July 2, 1915. Serial No. 37,778. (Cl. 46—4.)



1. A ball having a metallic core provided upon its surface with undercut cavities and having a coating of plastic material pressed closely upon the core and having an engagement with the undercut cavities.

2. A ball having a metallic core provided upon its surface with a wire-net attached thereto, as by solder, and having a coating of plastic material pressed closely upon the wire-net and engaging its undercut cavities.

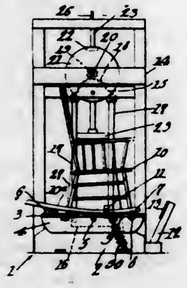
1,156,145. PIPE-COUPLING. ALLEN R. JENKINS, Durant, Miss. Filed June 5, 1915. Serial No. 32,420. (Cl. 137—90.)



1. A hose-support adapted to be applied to the coupling between a pipe and a hose having at one end a rigid, curved, cylindrical portion through which the hose extends and at its opposite end means for clamping it to the end of the hose which engages the pipe and being provided intermediate its opposite ends with an opening through which the free end of the hose may pass laterally when disengaged from the pipe.

2. The combination with a pipe, a hose attached thereto, a curved support having an outer portion through which the hose extends and which is connected by a stiffened web to an inner portion clamped to that end of the hose which is attached to the pipe and having also an opening between its opposite ends through which the hose may pass laterally when disengaged from the pipe.

1,156,146. CHURN-ACTUATING MECHANISM. ERASTUS T. JONES, Wayland, Tex., assignor of one-half to Charles H. Stanton, Waco, Tex. Filed Oct. 9, 1914. Serial No. 865,893. (Cl. 185—26.)

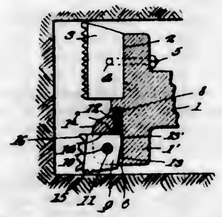


1. In a device of the character described, a base, an oscillatory platform mounted thereon, a pair of cleats mounted on the platform to engage the rockers of a rocking chair, one of the cleats being adjustable, means carried by the platform between the cleats for securing the rockers upon the platform between the cleats, a dasher, and means operatively connecting the dasher and platform for operating the dasher when the platform is oscillated.

2. In a device of the character described, a base, an oscillatory platform mounted thereon, the base having a standard at one side of the platform, a rotary dasher staff carried by the standard, a lever fulcrumed to the standard and having an upper segment, a link connecting the lever and platform, and a train of gears carried by the standard for rotating the dasher staff and including a gear engaging said segment.

3. In a device of the character described, a base, a platform mounted for oscillatory movement upon the base, a chair secured upon the platform, a foot rest carried by the forward end of the base, a standard attached to the base at the side of the said platform, a dashed stamp carried by the standard, means carried by the standard and operatively connecting the dasher staff and platform, and a spring between the platform and base whereby the spring tends to swing the chair toward the foot rest.

1,156,147. ROCK-REAMER FOR DRILL-HEADS. JOHN P. KARNS, Boulder, Colo., assignor to J. P. Karns Tunneling Machine Co., Boulder, Colo. Filed Mar. 28, 1913. Serial No. 757,451. (Cl. 125—14.)



1. In a device of the class described, a head; an end cutter carried thereby; and a reamer mounted on the head and including a front cutting edge and a side cutting edge, one corner of the reamer being in advance of the cutter and operating by impact to move both of the cutting edges of the reamer to active positions, the reamer having angularly disposed edges which contact simultaneously with the head to support the reamer in active position, the reamer being bodily and eccentrically movable about a fixed point to effect a shifting of the reamer.

2. In a device of the class described, a head; an end cutter on the head; and a reamer mounted on the head and including a front cutting edge and a side cutting edge, one corner of the reamer being in advance of the cutter and operating by impact to move both of the cutting edges of the reamer to active position, the reamer having angularly disposed transverse and longitudinal edges, the longitudinal edge engaging the head to hold the cutting edges in active position, and the transverse edge engaging the head to hold the cutting edges in inactive position, the reamer being bodily and eccentrically movable about a fixed point to effect a shifting of the reamer; and spring means coacting with the reamer to shift the same to inactive position.

1,156,148. SHUTTLE-RELEASE MECHANISM. JOHN W. KILLPATRICK, Lowell, Mass. Filed Aug. 21, 1914. Serial No. 857,894. (Cl. 139—29.)



1. In a loom the combination with a lay beam, shuttle boxes at each end of the lay beam, shuttle binders carried at each end of the lay beam in such position as to bear against the shuttle when the shuttle is in the shuttle box at that end of the lay beam, light binder springs which bear one against each shuttle binder, a protector shaft, a protector shaft spring, and a breast beam, of binder-fingers fixed to the protector shaft in such position as to each bear against a shuttle binder, a pawl having a nose at one end and pivoted at the other end to a binder finger, a returning spring between the pawl and binder finger, a tooth pivoted to the breast beam in position to engage the nose on the pawl, and a checking spring in engagement with said tooth as described.

2. In a loom the combination with a lay beam, shuttle boxes at each end of the lay beam, shuttle binders carried at each end of the lay beam in such position as to bear against the shuttle when the shuttle is in the shuttle box at that end of the lay beam, a protector shaft, a protector shaft spring, and a breast beam, of binder-fingers fixed to the protector shaft in such position as to each bear against a shuttle binder, a pawl having a nose at one end and pivoted at the other end to a binder finger, a tooth pivoted to the breast beam in position to engage the nose on the pawl, and a checking spring in engagement with said tooth as described.

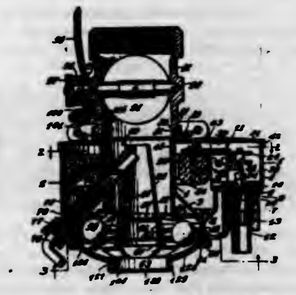
3. In a loom the combination with a lay beam, shuttle boxes at each end thereof, shuttle binders carried by the lay beam and adapted to engage the shuttle, light binder springs which engage each shuttle binder, a protector shaft, a protector shaft spring, and a breast beam, of binder fingers carried by the protector shaft in such position as to each bear against a shuttle binder, a pawl pivoted at one end to a binder finger and having a nose at the other end the front face of which slopes upward and forward and the back face of which is substantially vertical, a returning spring between the pawl and binder finger, a tooth pivoted to the breast beam in a position to engage the nose on the pawl and having a front face which is substantially parallel with the back face of the nose on the pawl, and a checking spring engagement with said tooth as described.

4. In a loom the combination with a lay beam, a shuttle binder, a protector shaft on the front of the lay beam, a protector shaft spring, and a breast beam, of a binder finger carried by the protector shaft in such position as to bear against the shuttle binder, a pawl having a nose at one end and pivoted at the other end to the binder finger, a tooth pivoted to the breast beam in position to engage the nose on the pawl, and a checking spring in engagement with said tooth as described.

5. In a loom the combination with a lay beam, shuttle boxes at each end thereof, shuttle binders carried at each end of the lay beam in such position as to engage the shuttle, a protector shaft journaled on the front of the lay beam, a protector shaft spring, and a breast beam, of binder fingers carried by the protector shaft in such position as to each bear against a shuttle binder, and means which include a checking tooth attached to the breast beam, and a checking tooth spring for checking the movement of the binder fingers as the lay beam recedes from the breast beam without checking the movement of the lay beam.

[Claims 6 to 8 not printed in the Gazette.]

1,156,149. CARBURETER. FRANK L. KINGSTON, Cleveland, Ohio. Filed May 6, 1912. Serial No. 695,425. (Cl. 48—155.2.)



1. In a carbureter, the combination with an annular reservoir having a cylindrical inner wall, of a chimney member defining a carbureting chamber, said member having a cylindrical tubular extension traversing said inner wall, the upper end of said extension being deflected outwardly so as to interlock with the upper end of the said inner wall.

2. In a carbureter, the combination with an annular receptacle having a cylindrical inner wall, and an outwardly and downwardly flaring portion at the lower end of said wall, of a chimney member having a cylindrical tubular extension traversing said innner wall, and a downwardly and outwardly flaring portion adapted to engage the similar portion of said receptacle, the upper end of said extension being deflected outwardly so as to interlock with the upper end of the said inner wall and draw together said flaring portions.

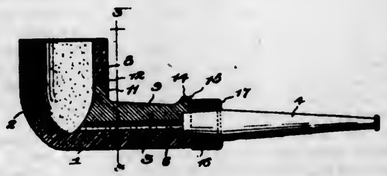
3. In a carbureter, the combination with an annular receptacle the inner wall whereof projects above the outer wall and has its upper end outwardly flared, of a chimney member secured within said inner wall and defining a carbureting chamber, the upper end of said member being flared into engagement with said first flared portion, a tubular casing having an inclined head projecting into the flaring upper end of said chimney and having an abrupt shoulder, and a clamping ring embracing the abrupt portion of said head and the flaring portion of said wall.

4. In a carbureter, the combination with an annular receptacle the inner wall whereof projects above the outer wall and has its upper end outwardly flared, and an air regulating member secured within said inner wall, of a tubular casing having an inclined head projecting into the flaring upper end of said wall and having an abrupt shoulder, a cover for said receptacle and having an aperture receiving said inner wall, and a clamping ring embracing said head and the flared portion of said inner wall and engaging the top of said cover.

5. In a carbureter, the combination, with an annular recepetacle, the inner wall whereof projects above the outer wall and has its upper end outwardly flared, of a tubular casing secured in alinement with said inner wall, a cover for said receptacle and having an upwardly convex top, said cover being formed with an aperture receiving said inner wall, and a split clamping-ring having an inclined portion, engaging the inclined portion of said wall and a flat portion engaging the top of said cover, whereby said cover is secured in place and the cover aperture is closed.

[Claims 6 to 35 not printed in the Gazette.]

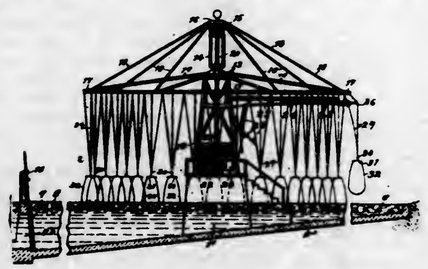
1,156,150. SMOKING-PIPE. ALEXANDER D. KNEUPER, Cranford, N. J., assignor to A. D. Kneuper Specialty Company, Newark, N. J. Filed Sept. 3, 1914. Serial No. 860,051. (Cl. 131—12.)



1. A smoking pipe including a bowl, a stem formed integral thereon having a smoke duct, the outer end of said stem being threaded, said stem being provided with a longitudinal key-way opening at its inner side in the said smoke duct and terminating in and continuing for a portion of the length of said bowl, the upper wall of said key way in the bowl being beveled, a key section snugly fitting the key-way in said stem and having a projection at the inner end thereof fitting the key way in the bowl, the upper end of said projection being beveled coincident to the beveling of the wall of said bowl, an upwardly projecting lug formed adjacent the outer end of said section, and means engaged with the outer threaded end of said stem and the projecting lug on the outer end of the section to force the latter in place.

2. A smoking pipe including a bowl, a stem formed integral thereon having a longitudinal smoke duct therein, said stem having its outer end threaded and being provided with a longitudinal key-way opening at its inner side in the said smoke duct and terminating in and continuing upwardly for a portion of the length of said bowl, the upper wall of said keyway in said bowl being beveled, a wedging key section fitting the key-way of said stem and having its inner end designed to conform to the inner outline of said bowl, a projection also formed on the inner end of said key-section fitting the key-way of said bowl and having its upper end beveled coincident to the beveled wall of said bowl, an additional projection formed on the upper edge of said key section adjacent its outer end and having the outer end wall thereof beveled and an internally threaded ferrule engaged with the threaded end of said stem and adapted for engagement with the beveled end wall of the last mentioned projection to force and lock said key section in place.

1,156,151. ROUNDABOUT FOR AQUATIC USE. ROBERT L. KOHLER, Cleveland, Ohio, assignor to The Sea Swing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 10, 1915. Serial No. 7,425. (Cl. 46—27.)



1. The combination of a central supporting tower, a turntable, a spring support between the tower and the turntable, to permit the latter to tilt vertically, and carriers hanging from the outer part of the turntable.

2. The combination of a central supporting tower, a turntable mounted thereon, slings, cables connecting the slings and the turntable, and a wheel supported in the path of the cables in horizontal position for the cables to ride thereover and thereby lift and drop the slings as the turntable rotates.

3. The combination of a central supporting tower, a turntable mounted thereon, carriers suspended by cables from the rim of the turntable, and a horizontal wheel movable into and out of the path of the cables, and adapted to engage the same to lift and drop the carriers.

4. The combination of a central supporting tower, a turntable mounted thereon and including a central part having a spring connection to the rim thereof whereby the rim may tilt vertically as it rotates, and carriers suspended from said rim.

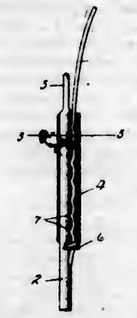
5. The combination of a central supporting tower, a vertical shaft therein, and a turntable mounted on the tower and including a bearing plate, compression bars pivoted thereto, a rim fastened to the outer ends of said bars, an upper ring surrounding and spaced from said shaft, tension bars between the ring and the rim, and a coiled spring between the bearing plate and the said ring.

[Claim 6 not printed in the Gazette.]

1,156,152. FISH-HOOK. CHARLES A. KRENRICK, Akron, Ohio. Filed Sept. 29, 1914. Serial No. 864,157. (Cl. 43—7.)

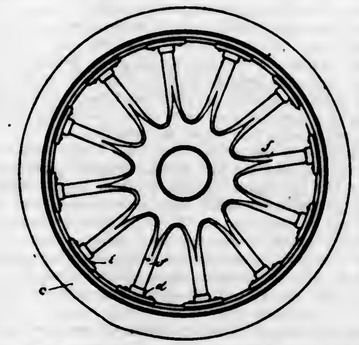
1. The combination of a fish hook, a snell, and a clamping band for securing said snell to said hook, said snell extending through said band, and said band having its edges overlapping.

2. The combination of a fish hook, a snell, and a clamping band for securing said snell to said hook, said hook having its upper end flattened to prevent said band slipping, said band extending from approximately the center of the shank of said hook to said flattened portion, and



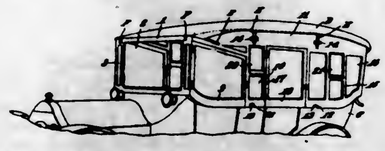
said snell extending through said band and having a knot formed on its free end to prevent it pulling through said band, and said band bent around said hook and snell so that its ends overlap.

1,156,153. VEHICLE-WHEEL. RUDOLF KRONENBERG, Obligs, Germany. Filed Jan. 26, 1914. Serial No. 814,503. (Cl. 21—69.)



In a vehicle wheel having a solid rubber tire, a rim, a central annular ridge on the inner face of said rim, a shoe-shaped member having outwardly directed flanges to engage upon said ridge, spoke ends secured to said shoe-shaped member and bolts to hold together said rim and said shoe-shaped member.

1,156,154. INCLOSURE FOR AUTOMOBILES. CHARLES F. KURTZ and JOHN KURTZ, Bethlehem, Pa. Filed Jan. 22, 1914. Serial No. 813,740. (Cl. 21—62.)



1. An inclosure for automobiles including an open front frame, side frames having means thereon for engaging the supports of the automobile top, and doors hingedly and adjustably connected to the front frame for closing openings in the side frames.

2. An inclosure for automobiles, including side frames adapted to be fitted between the supports of an automobile top and the sides of the automobile body, there being notches in the lower edge of each frame for the reception of brackets on the automobile body, openings in the side frames, a front frame interposed between the front ends of the side frames, and separate from said side frames, and doors hingedly and adjustably connected to the sides of the front frame and adapted to close said openings in the side frames.

3. An inclosure for automobiles, including side frames each having an opening, there being notches in the lower edges of the side frames for engaging brackets outstanding from the body of an automobile, said side frames being insertible between the top and body of an automobile and between the top supports and the body of the automobile, a front frame between the front ends of the side frames, and doors hingedly and adjustably connected to the sides of the front frame and adapted to close said openings in the side frames.

4. An inclosure for automobiles, including side frames each having an opening, there being notches in the lower edges of the side frames for engaging brackets outstanding from the body of an automobile, said side frames being insertible between the top and body of an automobile and between the top supports and the body of the automobile, a front frame between the front ends of the side frames, doors hingedly and adjustably connected to the sides of the front frame and adapted to close said openings in the side frames, means upon the side frames for engaging the top supports to hold said side frames in upstanding positions and close to the supports.

1,156,155. VEHICLE-TIRE. NORMAN R. LANDIS, Portland, Oreg. Filed Mar. 5, 1914. Serial No. 822,654. (Cl. 152—13.)



1. A tire comprising an inner non-expansible tube, a wrapping encircling the said tube, a layer of mucilaginous substance interposed between the tube and the said wrapping and binding the wrapping to the tube, a covering encircling the said wrapping, a layer of mucilaginous substance interposed between the covering and the wrapping, and binding the covering to the wrapping, and a shoe inclosing the said covering, said tube, wrapping and covering being relatively vulcanized.

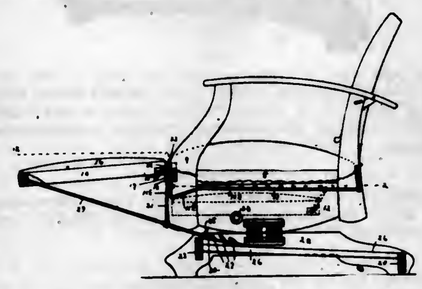
2. A tire comprising an inner tube, a wrapping encircling the same, a covering encircling the wrapping, layers of mucilaginous substance, one of said layers lying between the tube and the wrapping and the other lying between the wrapping and the said covering, and a shoe partially inclosing the covering and secured thereto.

3. A tire comprising an inner tube, a wrapping encircling the same, a covering for the wrapping, means interposed between the tube and the said wrapping and the wrapping and the said covering, for securing the wrapping rigidly to the tube and the covering rigidly to the wrapping, and a shoe partially inclosing the said covering.

4. In a tire, an inner tube, a wrapping thereon, a covering for the wrapping, layers of mucilaginous substance, one of said layers lying between the tube and wrapping and the other between the wrapping and covering, said tube and wrapping and wrapping and covering being vulcanized to each other.

1,156,156. EXTENSIBLE FOOT-REST FOR CHAIRS. CHARLES A. LEE, Oneida, N. Y. Filed Jan. 15, 1914. Serial No. 812,333. (Cl. 155—9.)

1. The combination in a chair and an extensible foot rest, of a chair seat frame, oppositely disposed guide rods secured to and located beneath the frame and extending from front to back, a foot rest adapted to be housed beneath said frame, a bail having its ends pivotally secured to the sides of said rest and having its loop slidingly mounted on said guide rods and adapted to carry the rear of said rest when housed, sockets in the front of the seat frame, rigid hooks projecting rearwardly from the rear of said rest and adapted to removably engage said sockets and means including a rearwardly and downwardly slanting brace beneath said rest for supporting the front of said rest in extended position.



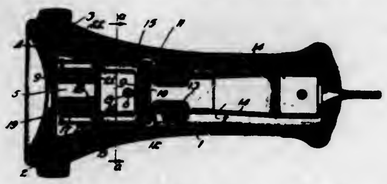
2. The combination in a chair and an extensible foot rest, of a chair seat frame, oppositely disposed guide rods secured to and located beneath the frame and extending from front to back, a foot rest adapted to be housed beneath said frame, a bail having its ends pivotally secured to the sides of said rest and having its loop slidingly mounted on said guide rods and adapted to carry the rear of said rest when housed, sockets in the front of the seat frame, rigid hooks projecting rearwardly from the rear of said rest and adapted to lockingly engage said sockets on outward pressure of said rest and to be removed therefrom upon the rest being temporarily moved inwardly and upwardly and a brace having its forward end secured to said rest and its rearward end slanting downwardly, said brace adapted to support the outer end of said rest when extended and to keep said hooks in locking engagement with said sockets.

3. The combination in a chair and an extensible foot rest, of a chair seat frame, oppositely disposed guide rods secured to and located beneath the frame and extending from front to back, a foot rest adapted to be housed beneath said frame, a bail having its ends pivotally secured to the sides of said rest and having its loop slidingly mounted on said guide rods and adapted to carry the rear of said rest when housed, sockets in the front of the seat frame, rigid hooks projecting rearwardly from the rear of said rest and adapted to removably engage said sockets, a brace having its forward end secured to said rest and its rearward end slanting downwardly, a notched rack below the seat frame adapted to detachably support the rearward end of said brace and a cord secured to said brace toward its rear end and extending upward to the rear of the rest whereby an upward tension imparted to said cord will remove the rearward end of said brace from engagement with said notched rack and allow said brace to pass rearwardly when the rest is to be housed.

1,156,157. RECEIVER. OSCAR M. LEICH, Genoa, Ill., assignor to Cracraft, Leich Electric Company, Genoa, Ill. Filed Mar. 30, 1914. Serial No. 828,199. (Cl. 179—117.)

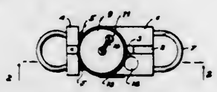
1. A telephone receiver having a diaphragm, an actuating coil, a cup of magnetic material within which said coil is mounted and engaging at its periphery with said diaphragm, a bridge secured rearwardly of said cup, connecting terminals carried by said bridge, a weight forming no part of the magnetic circuit carried by said bridge, and conducting bars extending from said connecting terminals to within the cup.

2. A telephone receiver having a diaphragm, a cup of magnetic material associated at its periphery with said diaphragm, a magnetic pole piece secured to said cup, a removable spool mounted on said pole piece, a coil carried



by said spool, a bridge secured rearwardly of said cup, connecting terminals carried by said bridge, a weight forming no part of the magnetic circuit carried by said bridge, and conducting bars extending from said connecting terminals to within the cup.

1,156,158. CIGAR-CUTTER. HENRY LEIDEL, New York, N. Y. Filed June 14, 1913. Serial No. 773,617. (Cl. 131—38.)



1. A cigar cutter comprising in combination, two elements so arranged that each has a rectilinear movement with respect to the other, one of said elements having an opening therethrough, a cutting member carried by the other element and mounted to rotate around a relatively fixed point on the same and arranged to move across said opening, said member having a sharp peripheral edge curved concentric with said point, and a pin fixed to said first mentioned element, and said member having a radial slot for the reception of said pin, said pin being so placed that a perpendicular bisector of its path of movement will pass approximately through the axial point of said member whereby the maximum angular movement of said member is obtained for a given movement of said element.

2. A cigar cutter comprising in combination, two elements so arranged that each has a rectangular movement with respect to the other, one of said elements having an opening therethrough, a cutting member carried by the other element and mounted to rotate around a relatively fixed point on the same, said member having a sharp peripheral edge curved concentric with said point and arranged to move across said opening, and a pin fixed to said first mentioned element on the opposite side of the line of travel of said point from said opening, said member having a radial slot for the reception of said pin, said pin being so placed that a perpendicular bisector of its path of movement will pass approximately through the axial point of said member whereby the maximum angular movement of said member is obtained for a given movement of said element.

1,156,159. SHINGLE AND SLAT GAGE. MICHAEL J. LEONARD, Scranton, Pa. Filed Nov. 28, 1914. Serial No. 874,525. (Cl. 33—188.)

1. The herein described gage for laying shingles and the like, the same comprising a base adapted to be supported on the roof parallel with the eaves; a pair of struts whereof each is composed of a series of links of equal length movably connected with each other, and a lowermost L-shaped link having one arm pivoted to the lower link of the series and the other arm connected with said base; and a gage proper adopted to lie against the upper ends of the uppermost links.

2. The herein described gage for laying shingles and the like, the same comprising a base adapted to be supported on the roof parallel with the eaves; a pair of struts whereof each is composed of a series of links of equal length detachably connected with each other, and a lowermost L-shaped link having its upper end pivotally connected with the lowermost link of the series and its lower arm provided with key-hole slots by means of which it may be detachably connected to said base; and a gage proper adapted to lie against the upper end of the uppermoat links.



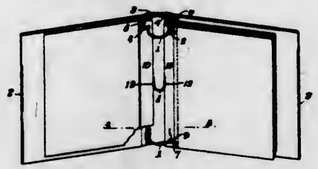
3. The herein described gage for laying shingles and the like, the same comprising a base adapted to be supported on the roof parallel with the eaves; a pair of struts whereof each is composed of a series of links of equal length pivotally connected with each other, and a lowermost L-shaped link having one arm pivoted to the lower link of the series and the other arm connected with said base; and a gage proper adapted to lie upon the roof against the upper ends of the uppermost links, said gage being made in sections connected to each other by detachable hinges.

4. The herein described gage for laying shingles and the like, the same comprising a base adapted to be supported on the roof parallel with the eaves, a pair of struts whereof each is composed of a series of links of equal length pivotally connected with each other and the lower link of the series connected with said base; a gage proper, and a pair of stepped blocks secured to the lower edge of said gage whereby such edge or any of the steps may be placed in engagement with the upper ends of the uppermost links, for the purpose set forth.

5. In a shingling gage, the combination with a base, and a gage proper; of a pair of struts whereof each is composed of a lower link adapted to be connected to said base, and a series of duplicate links whose lower ends are rounded and whose upper ends are cut off straight, and pivotal connections between the upper end of each link and the lower end of the one above.

[Claims 6 to 8 not printed in the Gazette.]

1,156,160. TEMPORARY BINDER. LAWRENCE F. LEWIS, New York, N. Y., assignor to Handifolio Company, a Corporation of New York. Filed Nov. 1, 1910. Serial No. 590,103. (Cl. 129—18.)



1. In a temporary binder, the combination with a pair of covers, of a support between the covers, stationary holding members of unbroken arch form mounted on the support, a flexible carrier provided with oppositely disposed entering notches, and turning notches angularly arranged thereto and permitting a free turning engagement with the holding members.

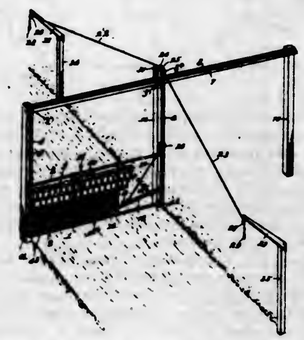
2. In a temporary binder, the combination with a pair of covers, of a support between the covers, stationary holding members of unbroken arch form mounted on the support, a flexible carrier provided with oppositely disposed entering notches and turning notches angularly arranged thereto and permitting a free turning engagement with the holding members, and a curved spreading guide located on the support between the holding members.

3. In a temporary binder, the combination with a plurality of holding members and a support therefor, of a flexible carrier having oppositely disposed entering notches for engagement with the holding members, and turning notches for permitting the carirer to have a free turning engagement with the holding members.

4. In a temporary binder, the combination with a plurality of holding members and a support therefor, of a flexible strip having oppositely disposed entering notches extending inward from the top and bottom edges of the strip for entering engagement with the holding members, and turning notches of greater dimensions connected to the entering notches at substantially right angles whereby the strip may have a free turning engagement with the holding members.

5. A carrier of flexible material for use in binders having rigid stationary holding members, said carrier having oppositely disposed entering notches extending inward from the top and bottom edges of the carirer for entering engagement with the holding members, and turning notches connected with the entering notches at substantially right angles thereto and of greater dimensions than the entering notches, whereby the carrier may have a free turning engagement with the holding members.

1,156,161. GATE-OPERATOR. ALVAN W. LIGHTBURNE, Liberty, Mo. Filed Mar. 22, 1915. Serial No. 16,072. (Cl. 39—30.)



1. In combination with a sliding gate and a post adjacent thereto, a toggle lock composed of two pivoted members, a lever having a vertical and a lower horizontal arm, the latter pivoted between its ends to the lower horizontal rail of the gate and having a finger at its free end which engages beneath one of said members, a stop on the top rail of the gate, and a coil spring connected to the upper end of the vertical arm of the lever and to the top rail of the gate to pull the vertical arm toward and in engagement with the stop.

2. In combination with a central and end posts spaced therefrom, a horizontal rail connected centrally to the central post and at its ends to the end posts, a gate slidable on the rail, a pair of pivotally connected members one of which is pivoted above the central post base thereto and the other of which is pivoted to the bottom gate rail, a housing secured to the central post on an outer side face thereof and having a pair of pulleys therein, a table connected to the free end of the member pivoted to the central post and being arranged exteriorly of said side face of the central post and being engaged with the rollers, said cable having a pair of strands, said rail having a groove in its rear face which with said side face of the central post forms a passage through which said strands pass, a second housing having a pair of rollers secured to the top of the central post, said strands engaging the respective last named rollers, and means on opposite sides of the central post to movably support each strand.

1,156,162. LUBRICATING DEVICE FOR SPRINGS. THEODORE LINDENBERG, Grandview Heights, Ohio. Filed May 24, 1915. Serial No. 30,237. (Cl. 21—50.)



1. In combination with a leaf spring, a layer of felt or the like mounted in coöperative relation with the leaves of said spring, and a protector covering for said felt formed of a plurality of plate sections pivoted together.

2. In combination with a leaf spring, a layer of felt or the like lying against the side portion thereof, a protector covering for said felt formed of a plurality of plate sections pivoted together and arranged to lie on top of said felt, and means for holding said covering in such position.

3. In combination with a leaf spring, a layer of felt or the like lying against each of the side portions thereof, a protector covering for each felt formed of a plurality of plate sections pivoted together and arranged to lie on top of the felt layers,, and lacing cords for holding the opposing coverings in position on the spring.

4. In combination with a leaf spring, a layer of felt or the like lying against each of the side portions thereof, a protector covering for each felt formed of a plurality of plate sections pivoted together and arranged to lie on top of the felt layers, ears on said plate sections bent to over-lie the top and bottom portions of the spring, and lacing cords engaging said overlying lips and secured to hold said opposing coverings in position on the spring.

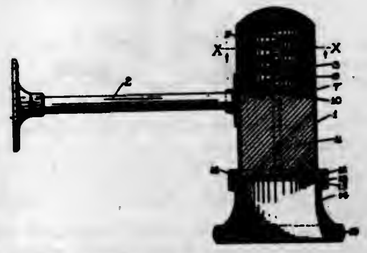
1,156,163. MANUFACTURE OF INSULATORS FOR HIGH-POTENTIAL ELECTRIC CONDUCTORS. FRED M. LOCKE, Victor, N. Y. Original application filed Mar. 9, 1909, Serial No. 482,382. Divided and this application filed Jan. 19, 1915. Serial No. 3,075. (Cl. 106—12.)

1. An insulator for line conductors formed by fusing a vitrifiable base and boron material into a homogeneous body.

2. An insulator for line conductors formed by fusing a glass base and boron material into a homogeneous body.

3. An insulator for high voltage current formed by fusing a vitrifiable base and boron material into a homogeneous body, and shaping the fused mass to desired form.

1,156,164. SOAP-DISPENSER. EDWARD G. LOVERING, Detroit, Mich. Filed Jan. 25, 1915. Serial No. 4,216. (Cl. 146—11.)



1. In a soap dispenser, a container for a cake of soap having an open, circumferentially flanged, lower end, a ring supported on the flange, a dispensing tube supported by the ring, a cutter carried in the upper end of the dispensing tube providing a closure for the container, the

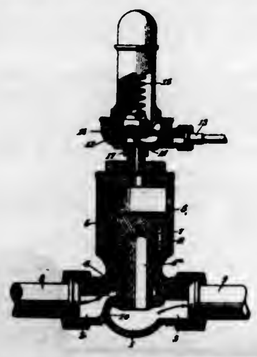
lower end of the dispensing tube being formed to provide a hand-hold, and means for holding a cake of soap in contact with the cutter.

2. In a soap dispenser, a cylindrical container having a lower open end provided with a circumferential flange, a ring supported by said flange, said ring being provided with an internally threaded portion, a dispensing tube threaded for engagement with said ring, the upper end of said tube being annularly recessed, a plate provided with radial cutters carried in said recess providing a closure for the container, said dispensing tube being formed to provide a hand-hold and also being adapted to seat in the ring whereby the ring and tube are freely rotatable on the container flange, and means for holding a cake of soap in contact with the cutter.

3. In a soap dispenser, a cylindrical container having a lower open end provided with a circumferential flange, a ring having a flange engaging over the flange of the container and rotatable thereon, said ring having an annular threaded recess, a dispensing tube threaded for engagement in said ring and seating in said recess whereby the end of the tube is held from frictional contact with the end of the container, the threaded end of the dispensing tube having an annular internal recess, a plate supported in said recess provided with radial cutters forming a closure for the container; the lower end of said tube being formed to provide a hand-hold, and means for holding a cake of soap in contact with the cutter.

4. In a soap dispenser, a container for a cake of soap having a lower open end provided with a circumferential flange, a ring supported on the flange, a dispensing tube supported by the ring and held from frictional contact with the end of the container whereby the tube and ring are freely rotatable relative to the container when assembled, a cutter carried in the upper end of the dispensing tube providing a closure for the container, the lower open end of the dispensing tube being greater in diameter than the container end thereof, said lower end of the tube having an external serrated flange providing a hand-hold, and means for holding a cake of soap in contact with the container.

1,156,165. PUMP-GOVERNOR. JOHN MCMANAMY, Grand Rapids, and ANDREW REID, Saginaw, Mich. Filed Apr. 20, 1914. Serial No. 833,120. (Cl. 103—93.)



1. The method of controlling an air compressor engine, consisting of interposing a throttle valve in the exhaust of the same and providing automatic means for adjusting the valve to restrict the exhaust from the compressor engine as the air pressure produced by the compressor is increased.

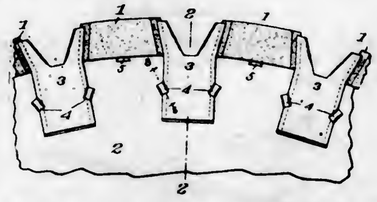
2. In combination with an air compressor engine, a throttle valve arranged in the exhaust passage of the same, and means for automatically closing said valve operated by air pressure produced by the compressor.

3. A compressor governor, comprising a throttle valve arranged in the exhaust passage of the compressor engine, a cylinder and piston to adjust the valve, means for admitting pressure to the piston to close the throttle, a spring to open the throttle and a vent opening between the cylinder and the outlet side of the throttle.

4. A compressor governor, comprising a throttle valve arranged in the exhaust passage of the compressor engine, a cylinder and piston to adjust the valve, means for automatically admitting pressure to the cylinder above the piston to close the throttle, a spring to open the throttle, and a vent opening communicating with the cylinder beneath the piston and with the outlet side of the throttle.

5. A compressor governor, comprising a throttle valve arranged in the exhaust passage of the compressor engine, a cylinder in axial alinement with said valve, a valve stem projecting into said cylinder, said valve and stem being axially chambered and said chamber opening through the lower end of the valve and communicating with the exhaust side of the throttle when the valve is closed, a piston in said cylinder attached to the upper end of said stem, means for automatically admitting pressure to the upper side of the piston to close the valve, a spring to open the valve and a vent opening in the valve stem communicating with the cylinder beneath the piston and with the said chamber in the stem.

1,156,166. STONE-SAW. WILLARD F. MEYERS, Long Island City, N. Y. Filed June 20, 1912. Serial No. 704,709. (Cl. 125—18.)



1. A stone saw comprising a blade having a recess in its edge, an abrasive tooth projecting from the edge of the blade and provided with a tooth-strengthening reinforcing projection entering the said recess and serving to prevent the tooth breaking when it becomes worn, and tooth-holding members on the blade engaging the ends of the tooth and projecting beyond the edge of the blade for wearing down with the tooth.

2. A stone saw comprising a blade having a recess in its edge, an abrasive tooth covering the recess at the edge of the blade and projecting from the edge of the blade, a tooth-reinforcing anchor projecting inward from such tooth and anchored in the said recess to strengthen the tooth against breaking when worn, and tooth-holding members on the blade engaging the ends of the tooth and projecting beyond the edge of the blade for wearing down with the tooth.

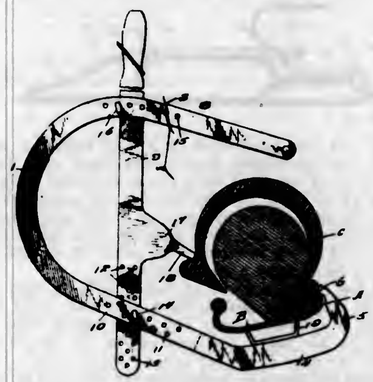
3. A stone saw comprising a blade having a recess in its edge, an abrasive tooth covering the recess at the edge of the blade and projecting beyond the edge of the blade, a tooth-strengthening reinforcing-anchor adhesively attached to the abrasive tooth and anchored in the recess in the blade to prevent breaking of the tooth when worn, and tooth-holding members on the blade engaging the ends of the tooth and projecting beyond the edge of the blade for wearing down with the tooth.

4. A stone saw comprising a blade, abrasive teeth projecting from the edge of the blade, and a tooth-holding member anchored to the blade and having two spaced tooth-engaging prongs engaging two adjacent abrasive teeth to hold the teeth on the blade and adapted to wear down with the abrasive teeth.

5. A stone saw comprising a blade, abrasive teeth tapered in length from their base portions toward their cutting edges projecting from the edge of the blade, and a tooth-engaging wedge anchored to the blade and having spaced flaring prongs engaging the tapered portions of two adjacent abrasive teeth to hold the teeth on the blade.

[Claims 6 to 15 not printed in the Gazette.]

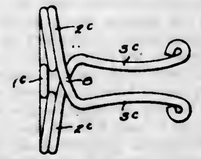
1,156,167. TIRE-TOOL. CLARENCE M. MILLS, Phillipsburg, Kans., assignor to The Essenkay Products Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 8, 1914. Serial No. 811,023. (Cl. 157—6.)



1. A device of the type described including an approximately U-shaped member having bifurcated legs, one end of said member being adapted to engage the rim of a wheel from the inner surface and a lever pivoted at one end to one leg of said U-shaped member, with its other end working between the bifurcated portions of the other leg thereof, said lever having an arm with one end arranged to engage a flanged edge of the tire of the wheel, and means for the retention of said lever between said bifurcated portions of said other leg of the U-shaped member.

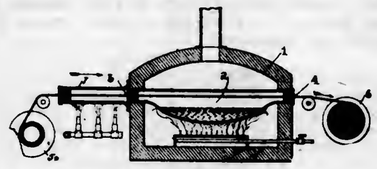
2. A device of the type described, including an approximately U-shaped member with substantially parallel legs, both being downwardly inclined with respect to their position in use, the lower leg having in continuation of its inclined portion a horizontal portion to extend below the wheel-rim, said horizontal portion having an upwardly and inwardly inclined terminal for engaging the wheel-rim at one edge, the legs of said U-shaped member being bifurcated, the resultant furcations having coincident adjusting apertures, and a lever pivoted at one end to one leg of said U-shaped member with its other end working between the bifurcated portions of the other leg thereof, said lever having an arm with one end arranged to engage a flanged edge of the tire of the wheel, and means to effect engagement between said adjusting apertures and said lever.

1,156,168. BROOM AND TOOL HOLDER. MARTIN MINNICH, Covington, Ohio. Filed Mar. 6, 1915. Serial No. 12,661. (Cl. 24—257.)



A broom and tool holder formed from a single length of wire and including a vertically disposed suspending loop formed by a crimp in the middle portion of the wire, said suspending loop being adapted to fit over a nail and bear against a vertical support, vertically disposed spring coil portions formed at the base of the suspending loop and having their rear faces in the plane of the suspending loop so as to bear against the vertical support, and opposed clamping jaws formed by extending the ends of the wire outwardly from the spring coil portions in a plane at substantially right angles thereto, said clamping jaws being crossed at the inner ends thereof and at a point slightly below the upper end of the suspending loop so that the projecting end of the nail upon which the device is hung will be engaged by the said crossed inner ends of the jaws to prevent the device from being accidentally lifted from position.

1,156,169. ALLOY-SURFACED METAL. JOHN F. MONNOT, New York, N. Y., assignor, by mesne assignments, to Duplex Metallic Company, a Corporation of Pennsylvania. Filed June 15, 1908. Serial No. 438,680. (Cl. 29—182.)



1. As a new article of manufacture, a shaped article composed of a ferrous metal base having a filmiform, cohering welded-on, compacted and coextended coating of a non-ferrous metal, said coating being superficially alloyed with a third alloy-forming metal.

2. As a new article of manufacture, a shaped article composed of a ferrous metal base having a filmiform, cohering welded-on, compacted and coextended coating of copper, said coating being superficially alloyed with a third alloy-forming metal.

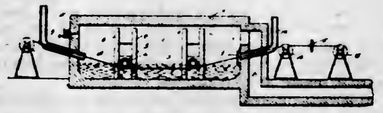
3. As a new article of manufacture, a shaped article composed of a ferrous metal base having a filmiform, cohering welded-on, compacted and coextending coating of copper, said coating being superficialy alloyed with zinc.

4. As a new article of manufacture, a shaped article composed of a steel core having a filmiform, cohering, welded-on, compacted coating of a non-ferrous ductile metal of high melting point, said coating being impregnated and alloyed with a third alloy-forming metal.

5. As a new article of manufacture, a shaped article composed of a steel core having a filmiform, cohering, welded-on, compacted coating of copper, said coating being impregnated and alloyed with a third alloy-forming metal.

[Claims 6 to 11 not printed in the Gazette.]

1,156,170. ALLOY-SURFACED WIRE AND PROCESS OF PRODUCING THE SAME. WILLIAM MARSHALL PAGE, Philadelphia, Pa. Filed Jan. 21, 1910. Serial No. 539,289. (Cl. 91—70.2.)



1. In the manufactur of protected steel wire, the process which comprises passing steel wire through a molten bath comprising copper under circumstances permitting the formation of a cohering surface coat consisting of an iron-copper alloy and removing the excess of coating metal.

2. In the manufacture of protected steel wire, the process which comprises passing steel wire through a molten bath comprising copper under circumstances permitting the removal of the superficial carbon of the steel and the formation of a cohering coat consisting of iron-copper alloy.

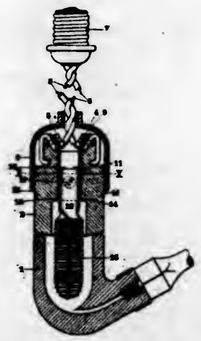
3. In the manufacture of protected steel wire, the process which comprises passing steel wire through a molten bath comprising copper under circumstances permitting the removal of the superficial carbon of the steel and the formation of a cohering coat consisting of iron-copper alloy, and removing the excess of coating metal.

4. In the manufacture of protected steel wire, the process which comprises oxidizing the surface of a steel wire, re-reducing such surface to form superficial pure iron and producing a thin cohering surface coating consisting of iron-copper alloy with such superficial pure iron.

5. In the manufacture of protected wire, the process which comprises removing the superficial carbon of steel wire by oxidation and thereafter producing a thin, cohering surface layer consisting of copper-iron alloy on the decarbonized surface.

[Claims 6 to 9 not printed in the Gazette.]

1,156,171. CARBONIZING PIPE-BOWLS. WESLEY A. PAUL, Moline, Ill. Filed Apr. 4, 1914. Serial No. 829,666. (Cl. 219—19.)



1. A device for carbonizing or drying the interior of pipe-bowls or the like, comprising a heat conducting member to be inserted in the bowl, and means to close the bowl against the admission of air.

2. A device for carbonizing or drying the interior of pipe-bowls or the like, comprising a heat conducting member to be inserted in the bowl and a member to fit the edge of the bowl to close the latter against the admission of air.

3. A device for carbonizing or drying the interior of pipe-bowls or the like, comprising a heat conducting member to be inserted in the bowl, means to connect said member with a source of heat supply, and a member to fit the edge of the bowl to close the latter against the admission of air.

4. A device for carbonizing or drying the interior of pipe-bowls or the like, comprising a member to close the pipe-bowl against the admission of air, a second member carried by the first member and adapted to be inserted in the pipe-bowl, a heat conductor carried by the second member and in contact with a conductor on the first member, and means to connect the conductor on the first member with a source of heat supply.

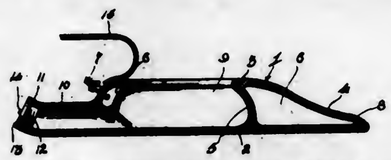
5. A device for carbonizing or drying the interior of pipe-bowls or the like, comprising a member to close the pipe-bowl against the admission of air and having a central opening, a second member carried in said opening and adapted to be inserted in the pipe-bowl, a heat conductor carried by the second member and in contact with a conductor on the first member, and means to connect the conductor on the first member with a source of heat supply.

[Claims 6 to 8 not printed in the Gazette.]

1,156,172. BED-PAN. ISABELLA POINDEXTER, Prineville, Oreg. Filed Feb. 23, 1915. Serial No. 10,060. (Cl. 4—19.)

1. A bed pan constructed of rubber having a hard rigid bottom and flexible sides.

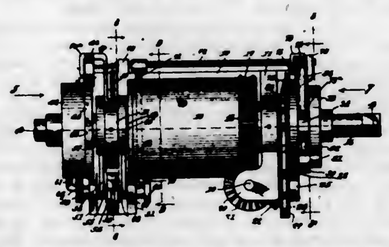
2. A bed pan constructed of rubber having a rigid bottom, and upstanding flexible sides, said sides being constructed of connected inner and outer spaced walls for leaving an air space therebetween for the purpose of inflating the sides of the bed pan.



3. A bed pan constructed or rubber having a rigid bottom and upstanding flexible sides, said sides being constructed of connected inner and outer spaced walls for leaving an air space therebetween for the purpose of inflating the sides of the bed pan, an outlet spout formed upon said bed pan and communicating with the interior thereof, and a plug inserted in the outer end of said outlet spout for forming a closure therefor.

4. A bed pan constructed of rubber having a rigid bottom and upstanding flexible sides, said sides being constructed of connected inner and outer spaced walls for leaving an air space therebetween for the purpose of inflating the sides of the bed pan, an outlet spout formed upon said bed pan and communicating with the interior thereof, a plug inserted in the outer end of said outlet spout for forming a closure therefor, a cover having one end secured to the upper surface of said bed pan, and being constructed of flexible material.

1,156,173. STARTING DEVICE FOR INTERNAL-COMBUSTION ENGINES. PHILIP POVLOTZKY, Chicago, Ill. Filed June 1, 1914. Serial No. 842,178. (Cl. 123—187.)



1. In a starting device for internal-combustion engines, a starting shaft, a sleeve loosely mounted on said shaft, a rotatable member loosely mounted on the sleeve, a spring connected at one end to said member and at the other end to the sleeve, a rotatable element loose on the shaft, a pivoted clutch member carried by said element, a rotatable member fast on the starting shaft and having an abutment engageable by the clutch member, a gearing between the rotatable element and the first-mentioned rotatable member for turning the latter in a direction to wind the spring, and means controlled by the first-mentioned rotatable member for tripping the clutch member.

2. In a starting device for internal-combustion engines, a starting shaft, a sleeve loosely mounted on said shaft, a rotatable member loosely mounted on the sleeve, a spring connected at one end to said member and at the other end to the sleeve, a rotatable element loose on the shaft, a pivoted clutch member carried by said element, a rotatable member fast on the starting shaft and having an abutment engageable by the clutch member, a gearing between the rotatable element and the first-mentioned rotatable member for turning the latter in a direction to wind the spring, a pivoted member having a projecting arm and a connection with the clutch member, a rock-shaft, a finger on the rock-shaft adapted to intercept the pivoted member to swing the same to trip the clutch member, an arm extending from the rock-shaft, and means actuated by the first-mentioned rotatable member for rocking the arm to actuate the rock-shaft.

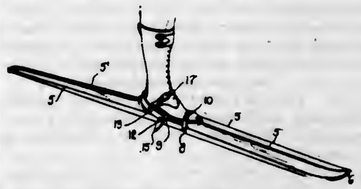
3. In a starting device for internal-combustion engines, a starting shaft, a sleeve loosely mounted on said shaft, a rotatable member loosely mounted on the sleeve, a spring connected at one end to said member and at the other end to the sleeve, a rotatable element loose on the shaft, a pivoted clutch member carried by said element, a rotatable member fast on the starting shaft and having an abutment engageable by the clutch member, a gearing between the rotatable element and the first-mentioned rotatable member for turning the latter in a direction to wind the spring, a pivoted member having a projecting arm and a connection with the clutch member, a rock-shaft, a finger on the rock-shaft adapted to intercept the arm of the pivoted member to swing said member to trip the clutch member, an arm extending from the rock-shaft, a cam engageable by the arm of the rock-shaft, a pawl-and-ratchet mechanism for actuating the cam, and an eccentric driven by the first-mentioned rotatable member and operatively connected to the pawl-and-ratchet mechanism to actuate the same.

4. In a starting device for internal-combustion engines, a starting shaft, a sleeve loosely mounted on said shaft, a rotatable member loosely mounted on the sleeve, a spring connected at one end to said member and at the other end to the sleeve, a rotatable element loose on the shaft, a pivoted clutch member carried by said element, a rotatable member fast on the starting shaft and having an abutment engageable by the clutch member, a gearing between the rotatable element and the first-mentioned rotatable member for turning the latter in a direction to wind the spring, a pivoted member having a projecting arm and a connection with the clutch member, a rock-shaft, a finger on the rock-shaft adapted to intercept the arm of the pivoted member to swing said member to trip the clutch member, an arm extending from the rock-shaft, a cam engageable by the arm of the rock-shaft, a pawl-and-ratchet mechanism for actuating the cam, and means actuted by the first-mentioned rotatable member for operating the pawl-and-ratchet mechanism.

5. In a starting device for internal-combustion engines, a starting shaft, a sleeve loosely mounted on said shaft, a rotatable member loosely mounted on the sleeve, a spring connected at one end to said member and at the other end to the sleeve, a rotatable element loose on the shaft, a pivoted clutch member carried by said element, a rotatable member fast on the starting shaft and having an abutment engageable by the clutch member, a gearing between the rotatable element and the first-mentioned rotatable member for turning the latter in a direction to wind the spring, a pivoted member having a projecting arm and a connection with the clutch member, a rock-shaft, a finger on the rock-shaft adapted to intercept the arm of the pivoted member to swing said member to trip the clutch member, an arm extending from the rock-shaft, a rotatable member for swinging the arm to actuate the rock-shaft, and means actuated by the first-mentioned rotatable member for actuating the last mentioned rotatable member.

[Claims 6 to 28 not printed in the Gazette.]

1,156,174. SNOW-SHOE. MYRON W. RALL, Gardiner, Mont. Filed Mar. 13, 1915. Serial No. 14,186. (Cl. 46—67.)



1. The combination with a snow shoe, of a creeper device pivotally mounted upon said shoe and held in effective position and against pivotal movement in one direction by the engagement of the heel therewith.

2. The combination with a snow shoe, of a creeper attachment pivotally and removably mounted upon the body of the shoe and held in effective position against pivotal movement in one direction by the engagement of the heel therewith.

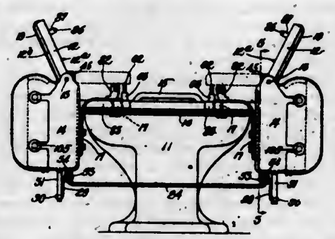
3. The combination with a snow shoe, of a creeper attachment pivotally mounted upon opposite sides of the shoe body and terminating at one end in a gripping point, a portion of the creeper extending over the top of the shoe body for engagement of the heel therewith whereby the gripping point is held in its effective position.

4. The combination with a snow shoe, of a creeper attachment consisting of an elongated U-shaped bar pivotally mounted at its ends upon opposite sides of the shoe body and terminating at one end in an annularly disposed gripping point, the intermediate portion of said bar extending over the top of the shoe body for engagement of the heel therewith whereby the gripping point is held in its effective position.

5. The combination with a snow shoe, of a creeper attachment including a U-shaped bar, a bolt extending transversely through the shoe body and projecting beyond the opposite sides thereof, said creeper bar and the bolt being provided with means for removably holding the ends of the bar in connected relation with the bolt, said bar at one of its ends terminating in an angularly disposed gripping point, the intermediate portion of the bar extending over the top of the shoe for engagement of the heel therewith whereby the gripping point is held in effective position.

[Claims 6 to 8 not printed in the Gazette.]

1,156,175. ASEPTIC WATER-CLOSET. WARREN C. REES, Somerville, Mass., assignor to Aseptic Service Company, Boston, Mass., a Corporation of Maine. Filed June 6, 1914. Serial No. 843,442. (Cl. 4—18.)



1. The combination of a pivotally mounted seat adapted to be raised and lowered about its pivot, said seat being normally in its raised position when not in use, a covering strip passing over the seat, a drawing off device for said seat, means for moving said device through a given distance whereby to shift the covering strip across the seat, said means being connected to the seat so as also to lower the same, and take up means for the strip.

2. In a water closet, the combination of a bowl, a seat pivotally mounted adjacent to the rim of said bowl and normally placed in a raised or upright position, a flexible covering extending over the surface of said seat, and means for advancing said covering to place a fresh portion of the same over the seat when the latter is brought into horizontal position, and means for taking up an extent of the covering equal to that so drawn over the seat.

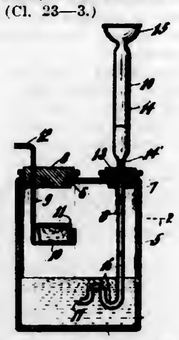
3. The combination of a pivotally mounted seat, means normally holding said seat in a raised position above its pivot, a covering strip passing over the seat, a supply container from which said strip passes, means for drawing a definite length of the strip across the seat, and a take-up spool for winding up an equivalent length of the strip.

4. In a water closet, the combination of a bowl, a seat pivotally mounted adjacent to the rim of said bowl arranged to be placed in horizontal position for use and to be raised when not in use, automatic means for raising the seat and normally holding it in raised position, means for causing a covering element to be fed over the seat when the seat is placed in horizontal position, and a take-up device for the covering element thus drawn over the seat.

5. The combination of a seat, a supply container for a covering member located at one side of the seat, from which the covering member issues and passes over, around, and under, the seat, a guard extending across the part of the member which passes under the seat, and means located at the same side of the seat with the container for feeding the covering member to place fresh portions thereof on the seat.

[Claims 6 to 34 not printed in the Gazette.]

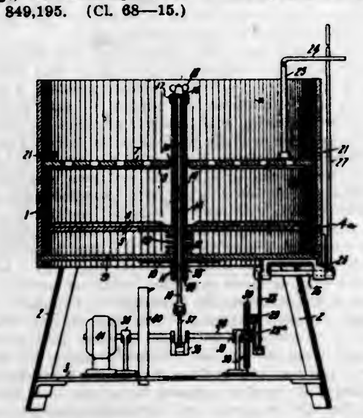
1,156,176. APPARATUS FOR DETERMINING THE PERCENTAGE OF LIME IN MATERIALS. MAX O. REICHE, Milwaukee, Wis. Filed Mar. 8, 1913. Serial No. 752,952. (Cl. 23—3.)



1. Apparatus for determining the percentage of lime in materials, comprising a gas generating receptacle having a charging opening provided therein, a graduated gas indicating tube connected to said receptacle, a stopper for the charging opening, a cup holder carried thereby, and a cup carried by the holder.

2. Apparatus for determining the percentage of lime in materials, comprising a gas generating receptacle having a charging opening provided therein, a graduated gas indicating tube connected to the receptacle and extending therein to a point adjacent to the bottom portion of said receptacle, said tube having a gas sealing trap provided at its lower end portion, a stopper for the charging opening, a cup holder extending through the stopper, and a cup for the holder which may be moved to discharge its contents into the receptacle when the stopper is covering the charging opening.

1,156,177. WASHING-MACHINE. EDWIN E. RIGGS, McKeesport, Pa., assignor of one-half to Fannie A. B. Riggs, East McKeesport, Pa. Filed July 6, 1914. Serial No 849,195. (Cl. 68—15.)

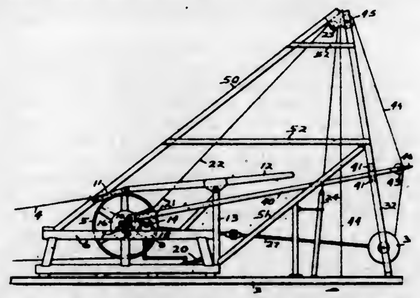


1. A washing machine, comprising a stationary tank, a perforated agitator therein, a rub board lying above said agitator, and means for positively raising and lowering said agitator and oscillating said rub board.

2. A washing machine, comprising a stationary tank, a perforated agitator therein, a perforated rub board lying above said agitator, an operating member, and connections between said member and agitator for raising and lowering said agitator, and between said member and rub board for oscillating the same.

3. A washing machine, comprising a stationary tank, a perforated agitator therein, a rub board lying above said agitator, means for positively raising and lowering said agitator and oscillating said rub board, and a spring for limiting downward movement of said agitator.

1,156,178. DEEP-WELL-DRILLING MACHINERY. ARTHUR W. RINEBOLD, Risingsun, Ohio. Filed June 6, 1914. Serial No. 843,409. (Cl. 255—11.)



1. The combination of a crank shaft having a crank, a spudding rod connected to the crank, a wheel located at the end of the spudding rod, a fork having prongs located on opposite sides of the sheave, and a drill cable operated by the spudding rod.

2. The combination of a crank shaft, a spudding rod connected to the crank shaft, a standard rigging, beams located on opposite sides of the spudding rod for guiding the spudding rod, a sheave located in the end of the spudding rod and having a guiding fork, and a drill cable passing over the sheave and operated by the spudding rod.

3. The combination of a sill, a standard rig supported on one end of the sill, an engine supported on the other end of the sill, a drilling mechanism having a walking beam located intermediate the standard rig and the engine and supported on the sill, means for connecting the drilling mechanism with the engine and a beam connected to the top of the standard rig and to the end of the drilling mechanism remote from the standard rig, the sill made of a single I-beam and extending the whole length under the standard rig, walking beam and engine along each side.

4. The combination of a sill, a standard rig supported on one end of the sill, an engine supported on the other end of the sill, a drilling mechanism having a walking beam located intermediate the standard rig and the engine and supported on the sill, a beam for connecting the drilling mechanism remote from the standard rig and to the top of the standard rig, a pair of beams connecting the central portion of the standard rig with the other end of the drilling mechanism, a pair of tie-beams connecting the central portion of the first-named beam to the central portion and on each side of the standard rig.

1,156,179. PAPER-FASTENER. IRVIN RITTENHOUSE, Washington, D. C., assignor to Horace F. Clark, Washington, D. C. Filed Mar. 10, 1910. Serial No. 548,339. (Cl. 24—153.)



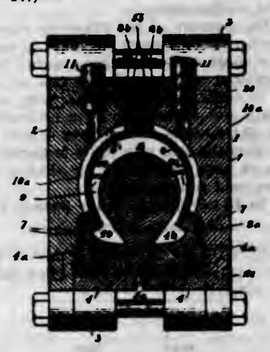
1. A flat file fastener comprising a base and a pliable fastening strip removably carried thereby, said base formed with portions spaced apart from the main body between which the fastening strip is engaged, the side edges of the main body of the base beveled to lie in the same plane as the inner surfaces of the spaced apart portions.

2. A flat file fastener, comprising a base having spaced apart end portions extending parallel therewith, the connecting portions provided with perforations, a pliable fastening strip inserted through the perforations under the spaced apart portions and over the main body portion adapted to be bent up over the end portions, said end portions extending beyond the fastening strip on each side thereof.

3. A flat file fastener, comprising a base having inturned end portions, the connecting edges of the inturned end portions provided with perforations, a pliable fastening strip inserted through the perforations adapted to be bent up over the inturned end portions.

4. A flat file fastener, comprising a base having inturned end portions, the connecting edges of the inturned portions provided with perforations, a pliable fastening strip inserted through the perforations adapted to be bent up over the inturned end portions, the side edges of the main body portion beveled to lie in the same plane with the inner surface of the inturned end portions.

1,156,180. TIRE-MOLD. WILLIAM A. ROBBINS, Glen Ridge, N. J. Filed Apr. 26, 1913. Serial No. 768,699. (Cl. 18—17.)



1. The combination in a fluid pressure tire mold comprising two rigid outer members and two rigid inner members, a rigid core positioned centrally interior to said outer members and clamped in place between said two inner members, and two flexible watertight formative diaphragm members forming a tire receiving chamber, said diaphragm members being clamped at their outer abutting free annular edges between the abutting edges of the outer members at the tread portion of the tire being treated, and at their inner free annular edges between the outer and inner members at the clencher portions of the tire being treated.

2. The combination in a fluid pressure tire mold comprising rigid and removable and enveloping parts, rigid inner cheek rings between said parts, of bead recesses formed into the said cheek rings, a rigid central positioning and internal forming part, and a flexible water tight formative diaphragm clamped between said enveloping part and cheek rings.

3. The combination in a fluid pressure tire mold comprising rigid outer enveloping members, a rigid finished core positioned centrally interior to said enveloping members, outer cheek rings between said enveloping members, and a flexible water tight formative diaphragm making tight joints with said enveloping members adjacent to its heel and crown, said cheek rings forming contour limiting means for the tread portion of said tire.

4. The combination in a fluid pressure tire mold comprising two rigid outer enveloping members and two rigid inner enveloping members, a rigid core positioned centrally interior to said outer enveloping members and clamped in place between said two inner enveloping members, said enveloping members inclosing a forming chamber, and two flexible water-tight formative diaphragm members dividing said forming chamber into a pressure transmitting chamber and tire receiving chamber, said diaphragm members being clamped at their outer abutting free annular edges between the abutting edges of the outer enveloping members at the tread portion of the tire being treated, and at their inner free annular edges between the outer and inner enveloping members at the clencher portions of the tire being treated.

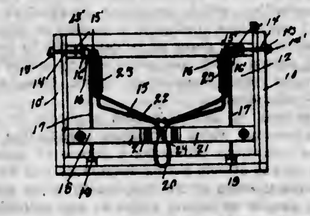
5. The combination in a fluid pressure tire mold comprising two rigid outer annular members and two rigid inner annular members, a rigid core positioned centrally interior to said outer annular members and clamped in place between said inner annular members, and a flexible water-tight formative diaphragm forming a tire receiving chamber, said diaphragm clamped at its inner free annular edges between the outer and inner annular members at the clencher portions of the tire being treated.

1,156,181. FOOD AND CONFECTIONERY COMPOUND. HUBER H. ROOT and LLEWELLYN W. BOYDEN, Medina, Ohio. Filed Apr. 21, 1913. Serial No. 762,558. (Cl. 127—4.)

1. A food compound in the form of an article of manufacture, consisting of a piece of comb honey, and a coating of another element of food that closes the cells of the comb.

2. A food compound in the form of an article of manufacture, consisting of a piece of comb honey, and a chocolate coating that closes the cells of the comb.

1,156,182. WAGON END-GATE. THOMAS RYAN, Churdan, Iowa. Filed Sept. 9, 1914. Serial No. 860,862. (Cl. 21—21.)



The combination with a wagon box, of an end gate mounted therein, apertured brackets mountes on the sides of the box, a yoke movable mounted on the gate and having laterally directed portions formed on the arms thereof disposed in the apertured brackets, sleeves rigidly mounted on the laterally directed portions, vertically movable locking bolts pivotally carried by the sleeves, a guide bracket carried by the gate and receiving the said locking bolts therethrough, said bracket having a central recess for the reception of a portion of the said yoke, brackets carried by the box below the gate for the reception of the bolts, a yoke carried by the gate and operatively engaged with the first named yoke, and detent members carried by the guide bracket for retaining the first yoke in the recess.

1,156,183. RAILWAY-SWITCH. LEE G. SAINT, Mount Sterling, Ohio, assignor of one-fifth to A. Seymour Thomas, one-fifth to Willis Jones, one-fifth to Chas. H. Clark, and one-fifth to Zebulon D. Fisher, Mount Sterling, Ohio. Filed Feb. 12, 1915. Serial No. 7,803. (Cl. 104—24.)

In an automatic railway switch, the combination of main and branch line rails, one of said main line rails being continuous and the other broken, a sliding switch support, main and branch line switch rails on said support, sliding trip members arranged in the main and branch

lines, contacts upon said trip members arranged in spaced relation to the adjacent rails, a rock shaft provided with cranks, connecting rods between said cranks and said sliding switch support, gears upon the said shaft and rack bars upon the trip devices meshing with said gears to rock said shaft.



1,156,184. RUBBER SUBSTANCE AND PROCESS OF MAKING SAME. PHILIP SCHIDROWITZ and HAROLD ALBERT GOLDSBOROUGH, London, England. Filed Jan. 4, 1915. Serial No. 486. (Cl. 18—50.)

1. The hereinbefore described process of manufacturing a porous or spongy rubber composition which comprises coagulating rubber latex under conditions producing a porous or spongy coagulum and fixing the pores by vulcanization.

2. The process of manufacturing a porous or spongy rubber composition which comprises coagulating rubber latex under conditions producing a porous or spongy coagulum, and fixing the pores by vulcanization of the wet coagulum by means of vulcanizing agents which are added at any suitable stage of the process.

3. The process of manufacturing a porous or spongy rubber composition which comprises coagulating rubber latex under conditions producing a porous or spongy coagulum, purifying or separating the coagulum, and fixing the pores by vulcanization of the wet coagulum by means of vulcanizing agents which are added at any suitable stage of the process.

4. The process of manufacturing a porous or spongy rubber composition which comprises coagulating rubber latex under conditions producing a porous or spongy coagulum, and fixing the pores by vulcanization by means of vulcanizing agents which are added at any suitable stage of the process, said coagulation being brought about during the vulcanization.

5. The process of manufacturing a porous or spongy rubber composition which comprises coagulating rubber latex under conditions producing a porous or spongy coagulum, by means of cold acting coagulants and fixing the pores by vulcanization of the wet coagulum by means of vulcanizing agents which are added at any suitable stage of the process.

[Claims 6 to 24 not printed in the Gazette.]

1,156,185. BREAD-MOLDING MACHINE. JOHN A. SCHREIBER, Bridgeport, Conn. Filed Apr. 7, 1914. Serial No. 830,144. (Cl. 107—9.)



1. A molding machine of the character described comprising a carrier, a dough rolling member supported above and transversely of the carrier, and provided with a concaved face of such a shape and size as to cause the fore edge of the mass of dough to move upwardly and backwardly by a continuous rolling motion until the mass is formed in a roll, means for periodically oscillating said dough rolling member to release the rolled mass of dough, and means for shaping the mass after it is released by said rolling means.

2. A molding machine of the character described comprising a carrier, a dough rolling member supported above and transversely of the carrier, and provided with a concaved face of such shape and size as to cause the fore edge of the mass of dough to move upwardly and backwardly by a continuous rolling motion until the mass is formed in a roll, and means for shaping the rolled mass.

3. A molding machine of the character described comprising a carrier, means for supplying a mass of dough to said carrier in sheet form, a dough rolling member supported above and transversely of the carrier and provided with a concaved face of such shape and size as to cause the fore edge of the mass of dough to move upwardly and backwardly by a continuous rolling motion until the mass is formed in a roll, and means for shaping the rolled mass.

4. A molding machine of the character described comprising a carrier, means for supplying a mass of dough to said carrier in sheet form, a dough rolling member supported above and transversely of the carrier and provided with a concaved face of such shape and size as to cause the fore edge of the mass of dough to move upwardly and backwardly by a continuous rolling motion until the mass is formed in a roll, means for periodically oscillating said dough rolling member to release the rolled mass of dough, and means for shaping the mass after it is released by said rolling means.

5. A molding machine of the character described comprising a carrier, a rock shaft arranged transversely of said carrier, a dough rolling member attached to said rock shaft and provided with a concaved face of such shape and size as to cause the edge of the mass of dough to move upwardly and backwardly by a continuous rolling motion until the mass is formed into a roll, means for periodically actuating said rock shaft to permit the intercepted dough to pass, and means for shaping the dough after it passes said rolling device.

[Claims 6 to 29 not printed in the Gazette.]

1,156,186. METHOD OF MAKING COMPOSITE PILES. FRANK SHUMAN, Philadelphia, Pa. Filed Mar. 7, 1906. Serial No. 304,677. (Cl. 72—81.)



The mode herein described of forming a composite wooden and concrete pile; said mode consisting in first driving a wooden pile alone into the ground to the extent of its length; second, mounting the driving form upon the end of the wooden pile and centering it thereon; placing a casing around the driving form and resting it upon the exposed end of the wooden pile; driving the casing into the end of the wooden pile for a given distance to form a water tight joint; then driving the said wooden pile to a point below the surface of the ground through the medium of the superimposed driving form, the casing being driven simultaneously with the pile; then withdrawing the driving form, leaving the casing in the ground; and then filling the casing with concrete to complete the pile structure.

1,156,187. GARMENT-SUPPORTER. EDMUND M. SMEDBERG, New York, N. Y. Filed Apr. 10, 1913. Serial No. 760,177. (Cl. 241—25.)



1. A trousers supporter comprising a supporting member adapted to engage the armhole of a vest and means for connecting said supporting member with the trousers.

2. A trousers supporter comprising a supporting member provided with means to engage the lower edge of the armhole of a vest and a connecting member detachably fastened to said supporting member provided with means for engaging the trousers.

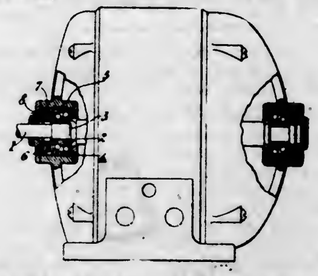
3. A trousers supporter comprising a supporting member provided with two downwardly extending gripping portions adapted to engage the lower edge of the armhole of a vest and a connecting member fastened to said supporting member, provided with means for engaging the waistband of the trousers.

4. A trousers supporter comprising a supporting member provided with means to engage the lower edge of the armhole of a vest and one or more flexible bands fastened to said supporting member and depending therefrom.

5. A trousers supporter comprising a supporting member provided with means to engage the lower edge of the armhole of a vest and one or more flexible bands detachably fastened to said supporting member and depending therefrom.

[Claims 6 to 8 not printed in the Gazette.]

1,156,188. JOURNALING DEVICE FOR SHAFTS AND OTHER PARTS. CARL AUGUST THEODOR SÖRENSEN, Gottenborg, Sweden, assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden, a Corporation of Sweden. Filed Mar. 24, 1915. Serial No. 16,575. (Cl. 64—36.)



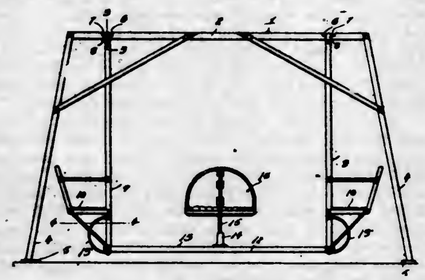
1. The combination with a ball set for supporting radial load and a ball set for receiving axial thrust of spring means for applying load to the thrust receiving set only.

2. The combination with a ball set for supporting radial load and a ball set for receiving axial thrust of a spring, and means for communicating the pressure of the spring to the axial thrust receiving set and applying load thereto, the radial load supporting set being free of such spring applied load.

3. In a ball bearing, the combination with a ball set for supporting radial load, and a ball set for receiving axial thrust of a spring, and means for communicating the pressure of the spring to the said bearing for applying load to the thrust receiving set, the radial load supporting set being free of such spring applied load.

4. The combination with a shaft of a pair of ball bearings carrying the same, said ball bearings comprising sets for supporting radial loads and sets for receiving the axial thrust in opposite directions, a pair of springs, and means for communicating the pressure of the springs to the respective axial thrust receiving sets and applying load thereto, the radial load supporting sets being free of such spring applied load.

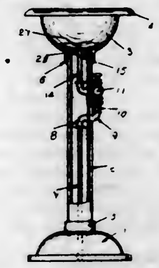
1,156,189. SWING. VIRGIL STOHLER, Conneaut, Ohio. Filed Feb. 12, 1914. Serial No. 818,305. (Cl. 155—35.)



1. A swing comprising a leg supported frame, the side bars of which are provided with recesses, clips engaging the bases of the recesses, bars having their upper ends connected to the clips, seats supported by the bars, and a platform including side bars, the ends of which are pivotally connected to the lower ends of the bars.

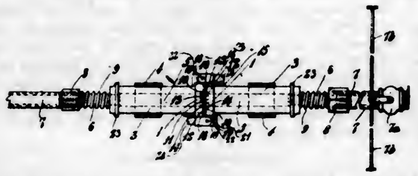
2. A swing comprising a leg supported frame, the said frame including side bars and end bars and the side bars each having spaced depressions therein in which knife edges are formed, flat metallic clips mounted for oscillation on said knife edges, bars secured to the clips and depending therefrom, and a platform pivotally mounted on and supported by the lower ends of said bars, the contacting surfaces of the clips and the knife edges being sufficient to maintain the bars in a vertical position against a considerable force.

1,156,190. DRINKING-FOUNTAIN AND FAUCET. GEORGE EDWARD SWEET, Toronto, Ontario, Canada. Filed Nov. 17, 1913, Serial No. 801,483. Renewed June 10, 1915. Serial No. 33,391. (Cl. 137—109.)



A drinking fountain comprising in combination, a base and a bowl, a hollow stand positioned between said base and bowl and supporting the latter, a water supply pipe terminating in said bowl and having its end portions contained within said base and standard, the intermediate portion of said supply pipe having a U-shaped portion, the loop of said U-shaped portion positioned without said standard, and a water pressure faucet disposed in said loop, substantially as described.

1,156,191. TRAIN-PIPE COUPLING. JOSEPH THIEM, Newport, Ky. Filed June 23, 1915. Serial No. 35,767. (Cl. 188—18.)



1. In a train-pipe coupling, in combination with train pipes, inversely disposed mated coupling heads, air-tight connecting mean clamped between them, each coupling head having a pipe extending rearwardly therefrom, which pipes communicate through said coupling heads brought together as aforesaid, each of said pipes extending into a respective train pipe, and a stuffing box on each train pipe around the one of said pipes extending thereinto.

2. In a train-pipe coupling, in combination with train pipes, inversely disposed mated coupling heads, air-tight connecting means clamped between them, each coupling head having a pipe extending rearwardly therefrom, which pipes communicate through said coupling heads brought together as aforesaid, each of said pipes extending into a respective train pipe, and a stuffing box on each train pipe around the one of said pipes extending thereinto, and a spring interposed between each of said coupling heads and the respective stuffing box.

3. In a train-pipe coupling, in combination with train pipes, inversely disposed mated coupling heads, air tight connecting means between said heads, a rearwardly extending neck on each coupling head, a hanger flanking said neck and secured to a railway vehicle centrally thereof under the coupling thereof, each coupling head and its neck having a passage therethrough, a pipe fixed in the rear end of each neck and communicating with the respective passage, movable connection between each of said pipes and a respective train pipe, and a spring interposed between each neck and the respective train pipe around the pipe that is fixed to the neck.

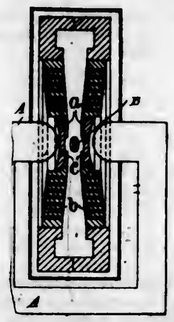
4. In a train-pipe coupling, in combination with train pipes, inversely disposed mated coupling heads, air-tight connecting means between said heads, a rearwardly extending neck on each coupling head, a hanger flanking said neck and secured to a railway vehicle centrally thereof under the coupling thereof, each coupling head and its neck having a passage therethrough, a pipe fixed in the rear end of each neck and communicating with the respective passage, each of said pipes extending into a respective train pipe, and a stuffing box on each train pipe around the respective pipe extending thereinto.

5. In a train-pipe coupling, in combination with train pipes, inversely disposed mated coupling heads, air-tight connecting means between said heads, a rearwardly extending neck on each coupling head, a hanger flanking said neck and secured to a railway vehicle centrally thereof under the coupling thereof, each coupling head and its neck having a passage therethrough, a pipe fixed in the rear end of each neck and communicating with the respective passage, each of said pipes extending into a respective train pipe, a stuffing box on each train pipe around the respective pipe extending thereinto, and a helical spring around each of said pipes between the neck and the stuffing box.

[Claims 6 to 14 not printed in the Gazette.]

1,156,192. APPARATUS FOR IMPROVING THE STABILITY OF FURNACES WITH MAGNETICALLY-EXTENDED ELECTRIC ARCS. EINAR TROYE, Christiania, Norway, assignor to Norsk Hydro-Elektrisk Kvaelstofaktieselskab, Christiania, Norway. Filed Feb. 18, 1915. Serial No. 9,062. (Cl. 204—31.)

1. In an electric arc-disk furnace with magnetically extended flame, the combination with the electrodes thereof; of means adjacent the foot points of the arc to maintain a stationary portion of air or gas of comparatively great conductibility adjacent said electrodes to secure a steadily burning arc and enable the electrode distance to be increased.



2. In an electric arc-disk furnace with magnetically extended flame, means consisting of ribs or shoulders partly separating the portions of the furnace wall adjacent the ignition points of the arc from the outer portions of the furnace lining for maintaining adjacent the foot points of the arc a stationary portion of air or gas of comparatively great conductibility with the object of securing a steadily burning arc and enabling the electrode distance to be increased.

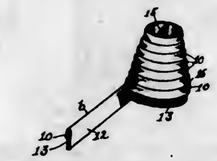
3. In an electric arc furnace having a magnetically dispersed arc, the combination with the electrodes of said furnace; of a central furnace portion whose walls are thinner than the main portion, and means to maintain a substantially quiescent body of air or gas within the furnace at such thin-walled portion.

4. In an electric furnace having a spread arc, the combination with the electrodes thereof; of a furnace wall adjacent the electrodes having a central recess or depression adjacent the electrode points and one or more ribs surrounding said recess or depression.

5. In an electric furnace having a magnetically dispersed arc, the combination with the electrodes thereof; of means to produce a substantially quiescent zone of air or gas at the electrodes and the furnace walls at the highly heated zone, this portion of said furnace walls being much thinner than the remaining portion, and means to supply air to the outer surface of said thinner, heated wall portion.

[Claims 6 to 8 not printed in the Gazette.]

1,156,193. HOLLOW BODY OF FIBROUS MATERIAL. JOHN C. WARD, Quincy, Mass., assignor of one-half to William J. Bigley, Somerville, Mass. Filed Dec. 15, 1914. Serial No. 877,437. (Cl. 242—122.)



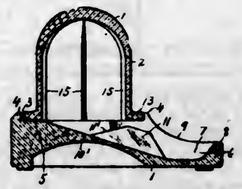
1. A hollow body composed of a strip of fibrous material folded at one edge to form a folded portion and a body portion of greater width, and wound into a plurality of overlapping convolutions which are fastened together.

2. A hollow body composed of a strip of fibrous material folded at one edge and wound into a plurality of overlapping convolutions which are cemented together with the folded body portion of one convolution cemented to the unfolded body portion of a preceding convolution.

3. A hollow body composed of a series of convolutions of a strip of fibrous material having on one surface a coating of adhesive material and provided at one edge with a fold of narrower width than the body portion of said strip, the folded portion of one convolution being cemented to the exposed portion of the next preceding convolution by the adhesive coating thereon.

4. A hollow body composed of a strip of fibrous material folded at one edge and wound into a plurality of overlapping convolutions, the convolutions between the ends of said body having three layers of fibrous material cemented together.

1,156,194. OFFICE-DESK UTENSIL. JAMES V. WASHBURNE, Fulton, N. Y. Filed Mar. 23, 1915. Serial No. 16,834. (Cl. 211—8.)



1. In a holder for paper clips and similar small articles, the combination of a tray having an inclined bottom and a partition lengthwise thereof, and a magazine for the articles rotatably mounted on the tray and having an open bottom directly over a portion of the partition.

2. In a holder for paper clips and similar small articles, the combination of a tray having an inclined bottom and a delivery pocket at the forward end of the incline, a magazine for the articles rotatably mounted directly upon a portion of the tray directly over the inclined bottom, and a flange on the inclined bottom projecting under the open lower end of the magazine in close proximity thereto for engaging and separating the adjacent articles from the main body as the magazine is rotated.

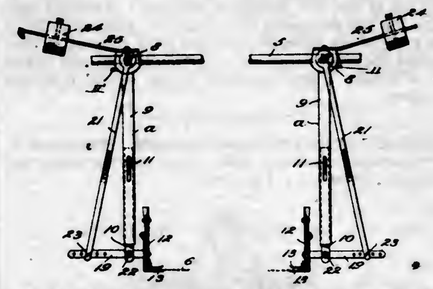
3. In a holder for paper clips and similar small articles, the combination of a tray having an inclined bottom and a circular recess in its top extending around the sides and rear end of the inclined bottom, and a magazine for the articles having an open lower end seated in said recess and rotatable therein, said magazine being provided with inwardly projecting fins to cause the articles therein to engage adjacent articles and cause the entire body of such articles to rotate with the magazine.

4. In a holder for paper clips and similar small articles, the combination of a tray having an inclined way, a magazine having its lower end open and rotatably mounted on the tray directly above a portion of the inclined way, and an upward projection on the inclined portion of the tray directly under the open end of the magazine for engaging and separating the lowermost articles from the main body thereof.

5. In a holder for paper clips and similar small articles, the combination of a tray having an inclined way, a magazine having its lower end open and rotatably mounted on the tray directly above a portion of the inclined way, and an upward projection on the inclined portion of the tray directly under the open end of the magazine for engaging and separating the lowermost articles from the main body thereof, said magazine being provided with inwardly projecting fins to cause the entire body of articles to be agitated as the magazine is rotated.

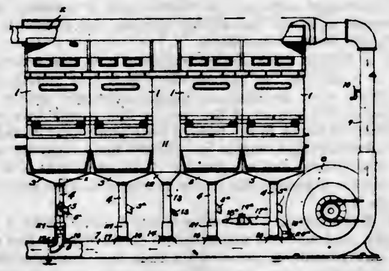
1,156,195. ATTACHMENT FOR OIL-CLOTH MACHINES. EGIDIUS WIESER, Passaic, N. J. Filed Nov. 4, 1913. Serial No. 799,185. (Cl. 91—53.)

1. Apparatus for preventing the flowing of oily substances over the sides of the strip of fabric to which said substance is applied in a machine for making oil cloth, comprising a support, and a plurality of vertically disposed boards arranged for bearing on the opposite sides of the fabric strip and pivotally connected to the said support.



2. Apparatus for preventing the flowing of oily substance over the sides of the strip of fabric to which said substance is applied in a machine for making oil cloth, comprising a support, and a plurality of counter-balanced boards arranged for bearing on the opposite sides of the fabric strip and pivotally connected to the said support.

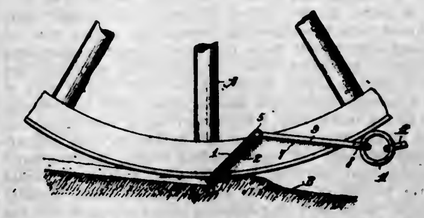
1,156,196. PNEUMATIC SEED AND DUST CONVEYER FOR COTTON-GINS. SILAS WILLIS, Noble, Okla. Filed June 2, 1914. Serial No. 842,408. (Cl. 13—19.)



1. A pneumatic conveyer adapted to be connected to a battery of cotton gins and including a main pneumatic conveyer pipe, independent seed pipes leading from the various gins to the main pneumatic conveyer pipe, and means in each seed pipe for diverting the seed whereby the seed of any gin may be collected separately.

2. A pneumatic seed conveyer for use in connection with a battery of cotton gins, including a main pneumatic conveyer pipe, independent seed pipes leading from the several gins to the main pneumatic conveyer pipe, a lateral discharge spout projecting from each of the seed pipes, and a valve mounted within each of the seed pipes so as to close the lateral spout when in one position and cause the seed to be diverted through the same when in another position, thereby enabling the seed from any gin to be collected separately when desired.

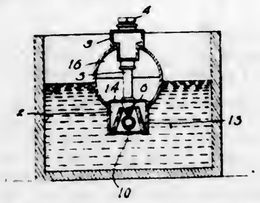
1,156,197. WHEEL-LOCK. FRED E. WINCHESTER, Manderson, Wyo. Filed Dec. 20, 1913. Serial No. 807,942. (Cl. 21—8.)



A device of the class described, the combination of a U-shaped member adapted to span a wheel felly, and upon

the cross bar of which member the wheel is adapted to rest, a second U-shaped member spanning the wheel felly forward of the first mentioned member, a removable coupling pin for detachably connecting the adjacent ends of the arms of the members, said pin being adapted to bear against the inner periphery of the wheel felly, and means for attaching a draft member to the second U-shaped member.

1,156,198. GASOLENE-TANK HEATER. THEODORE G. WISSINGER, Lewisburg, Ohio. Filed Feb. 20, 1915. Serial No. 9,759. (Cl. 126—360.)



1. A floating tank heater including a hollow float, a fuel supply tank mounted thereon, a burner arranged in the bottom of the float, a fuel supply pipe leading from the tank to the burner, heavy heat retaining and radiating bars arranged adjacent the burner, and a spreader plate arranged over the burner for causing the flames to act upon the walls of the float.

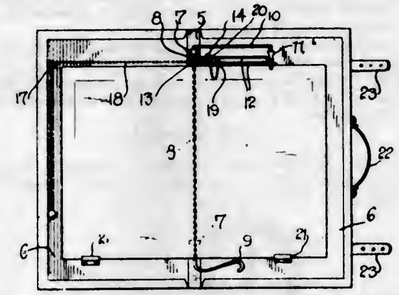
2. A floating tank heater including a hollow float having a pocket in the bottom thereof, a fuel supply tank mounted upon the float, a burner arranged within the pocket of the bottom of the float, a fuel supply pipe leading from the tank to the burner, heat retaining and radiating bars arranged within the pocket upon opposite sides of the burner, and a spreader plate arranged over the burner for deflecting the flames laterally against the walls of the float.

3. A floating tank heater including a hollow float, a fuel supply tank mounted upon the top of the float, a fuel supply pipe extending downwardly from the tank, a horizontal generator tube communicating with the fuel supply pipe and arranged adjacent the bottom of the float, a nozzle at the end of the generator tube, said nozzle being offset downwardly and facing rearwardly, a burner tube carried by the generator tube and having an open end arranged opposite the nozzle, and spreading means for causing the flames from the burner to act upon the walls of the float.

4. A floating tank heater including a hollow float, a fuel supply tank mounted upon the top thereof, a fuel supply pipe extending downwardly from the tank, a horizontal generator tube communicating with the fuel supply pipe, a nozzle at the end of the generator tube, said nozzle being offset downwardly and facing rearwardly, an arm pendent from the generator tube, a horizontal burner tube mounted upon the arm and having an open end arranged opposite the nozzle, heat retaining bars extending longitudinally along opposite sides of the burner tube, and a spreader plate arranged over the burner for deflecting the flames laterally into engagement with the walls of the float.

5. A floating tank heater including a hollow float having a pocket in the bottom thereof, a fuel supply tank mounted upon the top of the float, a fuel supply pipe extending downwardly from the tank, oppositely extending horizontal generator tubes communicating with the fuel supply pipe, a nozzle carried by the outer end of each of the generator tubes, said nozzles being offset downwardly and facing rearwardly, a horizontal burner tube carried by each of the generator tubes and having an open end arranged opposite the corresponding nozzle, longitudinally disposed heat retaining bars arranged within the pocket at the bottom of the float and extending along opposite sides of the burners, and deflector plates arranged over the burners for directing the flames into engagement with the walls of the float.

1,156,199. MUSIC-SHEET TURNER. HIRAM C. ANDERSON, Westchester, N. Y., and JAMES GAFFNEY, Roselle, N. J. Filed Oct. 9, 1914. Serial No. 865,901. (Cl. 84—17.)



1. In a sheet turning device, a rod, turning arms loosely mounted at one of their ends upon said rod and provided upon their other ends with sheet clamping means, a flexible element connected at spaced points in its length to the respective turning arms and adjacent to said rod, whereby the arms may be successively swung upon the rod to turn the respective sheets by a series of pulls upon the flexible element.

2. In a sheet turning device, a rotatably mounted rod having a turning arm on one end provided with means for attaching a sheet thereto, additional turning arms loosely mounted at one of their ends upon said rod and also each provided with sheet clamping means, and manually operable flexible means permanently connected directly to each of said additional arms to independently operate the same and successively turn the sheets held thereby.

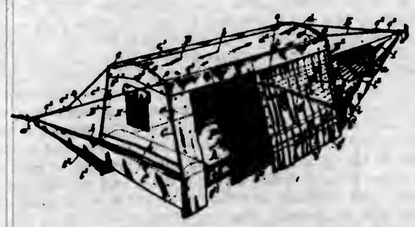
3. In a sheet turning device, a rotatably mounted rod having a turning arm on one end provided with means for attaching a sheet thereto, additional turning arms loosely mounted at one of their ends upon said rod and also each provided with sheet clamping means, a flexible element attached at one of its ends to one of said additional arms and slidably connected to the other of said arms, said latter arm being provided with a stop to limit the movement of said element with respect thereto in one direction, whereby said arm is first actuated when the flexible element is pulled to turn the sheet held thereby, the sheet held by the other arm being turned by a further pull of said element.

4. In a sheet turning device, a rotatably mounted rod having a turning arm on one end provided with means for attaching a sheet thereto, additional turning arms loosely mounted at one of their ends upon said rod and also each provided with sheet clamping means, each of said arms being provided with an eye intermediate of its ends, a chain connected to one of said eyes, and a ring carried by said chain and slidably engaged upon the other of the additional arms, the eye in said arm limiting the sliding movement of the ring thereon in one direction, whereby when the chain is pulled said arm is first actuated to turn the sheet held thereby, the sheet held by the other arm to which the chain is connected being turned by a further pull of said chain.

1,156,200. HAMMOCK AND HAMMOCK ATTACHMENT. DANNIE G. ASHWORTH and ALBERT P. ASHWORTH, West Brookville, N. Y. Filed June 1, 1914. Serial No. 842,206. (Cl. 5—10.)

1. A hammock-attachment comprising head and foot canopy-supporting frames, said head frame having tubular socket pieces adapted to be attached to the hammock in which the lower ends of said side rods are adapted to fit, and means for holding said side rods in said socket pieces, said means comprising a spring arm attached to said socket piece and a cross-cut in said socket piece and side rod into which said spring arm is adapted to fit.

2. A hammock-attachment comprising head and foot canopy-supporting frames, said foot frame having a tubular bottom piece in which the ends of said side pieces of said foot frame are adapted to fit, said tubular bottom piece being adapted to be attached to a hammock and act as a spreader therefor.



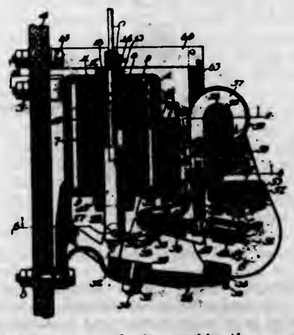
3. A hammock attachment comprising a canopy-supporting frame comprising a bottom piece, said frame being of less width at its bottom than the breadth of the hammock, said bottom piece of the frame being adapted to be attached to said hammock and act as a spreader therefor, said hammock being adapted to fold up at its edges against the sides of said frame to form side pieces and to hold said frame in position.

4. A hammock attachment comprising head and foot canopy-supporting frames, said foot frame having a tubular bottom piece adapted to be attached to the hammock in which the ends of said side pieces of said foot frame are adapted to fit, said foot frame being of less width at its bottom than the breadth of the hammock, whereby said hammock is adapted to fold up at its edges against the sides of said frame.

5. A hammock attachment comprising head and foot canopy-supporting frames and means for supporting said frames in upright position, each of said means comprising a chain or cord attached to a frame at opposite sides thereof, and a pulley attached to the hammock through which the chain which passes from one side of the frame to the other passes, and is free to run, dipping to one side of said frame being substantially unopposed by said chain.

[Claims 6 to 12 not printed in the Gazette.]

1,156,201. ELECTRIC SWITCH OR CONTACTOR. THOMAS E. BARNUM, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Aug. 27, 1907. Serial No. 390,306. (Cl. 175—281.)



1. In an electric switch, in combination, a support, a contact arm pivotally mounted thereon, a coöperating yielding contact mounted on said support and projecting in an opposite direction to said arm and toward the pivot thereof and an electromagnetic winding mounted on said support between the supporting points of said contacts to actuate said contact arm.

2. In an electric switch, in combination, a support, a contact arm pivotally mounted thereon, a coöperating laminated brush fixed to said support and extending obliquely with respect to said arm and in an opposite direction thereto or toward its pivot and an electromagnetic winding mounted on said support between the pivot of said contact arm and the point of support of said brush to actuate said contact arm.

3. In an electric switch, in combination, a magnet frame, a pivoted contact arm and a coöperating laminated contact brush mounted on opposite sides of said frame to project in opposite directions or each toward the supporting point of the other, and a solenoid mounted in said frame and having its plunger connected to said contact arm at a point contiguous to the point of engagement between said contact arm and said laminated brush.

4. In combination, a movable contact arm, a pivoted contact holder, a contact carried by said holder and adapted to be engaged by said movable contact arm, a rod threaded into a support, a spring surrounding said rod and exerting a yielding force upon said holder when the contact carried by said holder is engaged by said movable contact arm, said rod being extended through said contact holder and provided with a cross piece which sets in a slot formed therefor in said contact holder.

5. In an electric switch, in combination, a pivoted contact arm, a stationary contact support adjacent to the free end thereof, an auxiliary contact and a laminated brush mounted in a crossed relation on said support to be engaged by said contact arm, said laminated brush being obliquely disposed to project away from said auxiliary contact and toward the pivot of said contact arm.

[Claims 6 to 14 not printed in the Gazette.]

1,156,202. BREAST-SHIELD. ALEX C. BARRETT, Montgomery, Ala. Filed Sept. 3, 1914. Serial No. 860,116. (Cl. 128—4.)

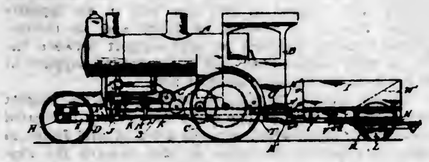


A breast shield comprising a body portion made bell-shape to be fitted over the nipple and come to a bearing at its inner edge upon the breast with a fluid chamber in the forward part thereof, a stem formed to extend from the top of said body and provided with an outlet passage therethrough, a check valve provided to close said outlet against the ingress of fluid, a nursing nipple connected around the outlet stem, an open stem formed to extend from the side of the body portion, and an open tube connected with said second stem to be received in the mouth of a person to permit the exertion of a suction to draw the milk from the breast into said bell and subsequently to discharge breath into said bell to unseat the check valve and discharge the contents of the bell through said nursing nipple.

1,156,203. TRACTION-ENGINE. JOHN B. BARTHOLOMEW, Peoria, Ill., assignor, by mesne assignments, to Avery Company, a Corporation of Illinois. Filed Aug. 7, 1907, Serial No. 387,540. Renewed Mar. 19, 1915. Serial No. 15,574. (Cl. 21—114.)

1. The combination with the traction engine, of the tender vehicle, the hinging devices between the tender and the engine adapted to hold the tender against movement across the longitudinal vertical planes of the engine but permit it to swing around a transverse line, the single ground wheel supporting the tender and situated in the

central longitudinal vertical planes of the engine, substantially as set forth.



2. The combination with the traction engine, of the tender vehicle hinged on a transverse line to the engine and held against transverse movement relative to the engine, the single supporting and steering wheel below the tender in the central longitudinal plane thereof, the horizontally swinging frame for said wheel, the anti-friction bearing between the said swinging frame and the tender, and means controlled by the engineer while on the engine for turning the frame, substantially as set forth.

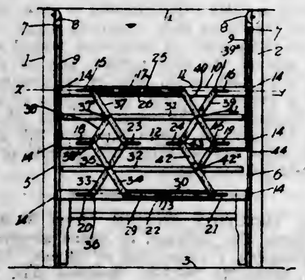
3. The combination of the engine, the tender hinged to the engine on a transverse line and held against movement relative to the engine in transverse planes, the supporting and steering wheel under the tender situated in the central, longitudinal, vertical planes of the tender and engine, said wheel being constructed with a wide peripheral wall or tire and adapted to be turned around a vertical axis, and means controlled by the engineer while on the engine for turning the said wheel around said vertical axis, substantially as set forth.

4. The combination of the traction engine having steerable front wheels, the tender hinged to the engine on a transverse axis and held against movement in transverse planes relative to the engine, the supporting wheel beneath the tender mounted to turn around a vertical axis, and a coupler for a rear vehicle arranged to turn with the said wheel relatively to the tender, substantially as set forth.

5. The combination with the traction engine having steerable front wheels, of the tender hinged to the engine on a transverse line and held against movement in transverse planes relative to the engine, the supporting and steering wheels beneath the tender, the frame for said wheel adapted to swing in a horizontal plane relative to the tender, and a coupler for a rear vehicle carried by the swinging frame, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

1,156,204. ELEVATOR-GATE. JOSEPH CHARLES BENNETT, Toronto, Ontario, Canada, assignor to Otis-Fensom Elevator Company, Limited, Toronto, Canada. Filed Apr. 24, 1915. Serial No. 23,592. (Cl. 39—24.)

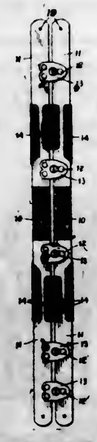


1. In an elevator gate, the combination with the side guides having a suitable stop at the top thereof, of a gate comprising a plurality of parallel main bars having longitudinal slots therein, intermediate bars located alternately between the aforesaid bars, a set of crossed links located at each side of the gate and pivotally connected to each intermediate bar at each end, bolts extending through the ends of the cross links and through the slots of the main bars, means independent of the bars of the gate for connecting the upper end of each set of crossed links together and the lower end of each set of crossed links together, and counterweighted cords connected to the center bar of the gate.

2. In an elevator gate, the combination with the side guides having a suitable stop at the top thereof, of a gate comprising a plurality of parallel main bars having longitudinal slots therein, intermediate bars located alternately between the aforesaid bars, a set of cross links located at each side of the gate and pivotally connected to each intermediate bar, bolts extending through the ends of the cross links and through the slots of the main bars, and lever bars pivotally carried by the top and bottom bars of the gate for connecting the upper end of each set of cross links together and the lower end of each set of cross links together, and counterweighted cords located at each side of the gate and connected to the center bar of the gate.

3. In an elevator gate, the combination with the side guides having a stop at the upper end thereof, of an elevator gate comprising a plurality of main bars slidably supported on the side guides, the upper and lower bar of which is provided with longitudinal slots in proximity to each end thereof, and a longitudinal slot located intermediately of the length thereof and the center bar with longitudinal slots in proximity to each end thereof, and a pair of longitudinal slots located at each side of the center of the bar, lever bars, bolts extending through the lever bars, and center slot of the upper and lower main bars, intermediate cross bars located alternately between the main bars, a series of cross links connected to the ends of the lever bars and pivotally connected intermediate of their length to the intermediate bars, and bolts extending through the ends of the cross links and the slots of the main bars and a counterweighted cord connected to the center main bar of the gate.

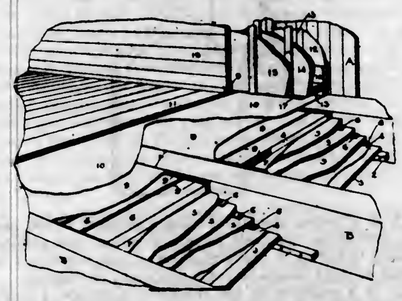
1,156,205. EXTENSIBLE CORSET CLASP OR STAY. WILLIAM BIRSE, Bridgeport, Conn., assignor to Birdsey, Somers Company, Bridgeport, Conn., a Corporation of New York. Filed July 30, 1914. Serial No. 854,084. (Cl. 2—76.)



1. An extensible corset clasp comprising end members having spaced apart fastening elements secured on one side, a central member in engagement with the other side of said members and provided at its ends with ways lying between certain of said fastening elements and adapted to receive the end members and to permit the end members and corresponding fastening elements to slide freely relatively to said central member.

2. An extensible corset clasp comprising pairs of end members having spaced apart eyes and corresponding studs secured on one side, central members in engagement with the other side of said end members and provided with ways lying between certain of said eyes and studs respectively and adapted to receive the end members, whereby the end members are permitted to slide freely relatively to the central members.

1,156,206. CAR INSULATION. ALFRED G. BROWN, Winona, Minn., assignor to Union Fibre Company, Winona, Minn., a Corporation of Minnesota. Filed Jan. 10, 1913. Serial No. 741,223. (Cl. 20—5.)



1. A floor construction for cars, comprising in combination with floor timbers, a built-up insulating structure contained wholly between said timbers, said insulating structure consisting of a plurality of layers of insulation supported by said timbers, filler blocks inserted in spaced relation across the openings between said timbers and above said insulation, and a plastic material poured around said filler blocks and filling the remainder of the space to the upper level of the floor timbers, and the flooring laid over said timbers.

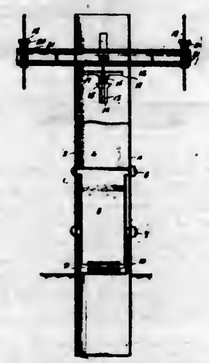
2. A floor construction for cars, comprising in combination with floor timbers, a false flooring provided between said timbers, and an insulating structure built-up upon said false flooring said insulating structure consisting of a plurality of layers of insulation laid upon said false flooring, filler blocks laid upon said insulation, and water proofing material surrounding said blocks and filling space between said timbers to the upper level thereof, and a flooring laid upon said timbers.

3. A floor construction for cars, comprising in combination with floor timbers, a false flooring supported between said timbers, and an insulating structure supported by said false flooring, said insulating structure consisting of layers of insulation laid upon said false flooring, filler blocks laid upon said insulation and extending across the space between said timbers, and a plastic water-proofing material separating said blocks from one another and from said timbers, said plastic material also filling the remainder of the space between said timbers to the upper level of the latter.

4. A floor construction for cars, comprising in combination with floor timbers, a false flooring mounted between said timbers, and a built-up insulation laid upon said false flooring, said insulation consisting of a plurality of layers of insulating material, filler blocks laid upon said insulating material and spaced from one another and from said timbers, and a plastic water-proofing material poured around said filler blocks and filling the remainder of the space between said timbers to the upper level thereof, said plastic material and filler blocks protecting said insulation from damage by articles driven into said insulation.

5. A car floor and wall construction, comprising in combination, floor timbers and car framing, a false flooring supported between said timbers and providing channel-like spaces therebetween, a plurality of layers of insulation laid upon said false flooring, layers of insulation also secured to said car framing, filler blocks placed in said channel-like spaces above said insulation in water-proofed relation thereto, a plastic water-proofing material spacing said blocks from one another and from said timbers, said plastic material also filling the remainder of said spaces to the upper level of said timbers, a flooring laid upon said timbers, a water proofing material interposed between said timbers and said floor and extending below the inner layers of insulation on said car frame, and vertically overlying the lower portion of the outer layer of insulation on the car frame, and a layer of water proofing plastic between said floor and the lower inner edge of the insulation of the car wall.

1,156,207. POST. CHARLES C. CHERRY, Hidalgo, Ill. Filed Apr. 20, 1915. Serial No. 22,672. (Cl. 68—12.)



1. A support for clothes lines comprising a post, a shaft journaled in the post, means for rotating the shaft, means for holding the shaft in adjusted position, and resilient means for connecting a line to the post which when the shaft is rotated will elevate the line and place the same under tension.

2. A support for clothes lines comprising a post, a shaft journaled in the post, means for rotating the shaft, means for holding the shaft in adjusted position, resilient means for connecting a line to the post which when the shaft is rotated will elevate the line and place the same under tension, and means for regulating the height and tension on the lines.

3. A clothes line supporting device comprising a post, a shaft journaled in the post, means for rotating the shaft, means for holding the same in adjusted position, means mounted upon the ends of the shaft for connecting a pair of lines to the shaft, means for retaining said connecting means in position on the shaft, and means for adjusting the retaining means, said connecting means adapted to raise the lines and place tension thereon when the shaft is rotated and said retaining means adapted to independently control the height and tension of each line.

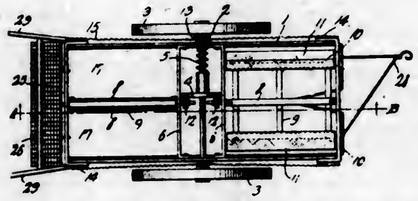
4. A clothes line supporting device comprising a post, resilient means for connecting a line to the post, means for placing tension on the line and an adjustable brace carried by the post and adapted to hold the post in upright position against the tension of the line.

5. A clothes line supporting device comprising a post, a shaft journaled in the post, spiral springs connected to opposite ends of the shaft and having tangential ends provided with line engaging hooks, retaining keys passing through the shaft and straddling certain coils of the spring, said retaining members having bifurcated ends for supporting the tangential ends of the spring, and means for rotating the shaft and holding the same in adjusted position.

1,156,208. MACHINE FOR REMOVING BOLL-WEEVIL. JOHN ROBERT CHRISTOPHER, Maben, Miss. Filed Aug. 19, 1914. Serial No. 857,535. (Cl. 43—1.)

A machine of the class described, including a revoluble wheel supported axle, a frame tiltably mounted at its center upon the axle, a foraminous housing arched over

the frame and extending downwardly from the sides thereof, said housing being open at the bottom and front end, the upper portion of the rear end of the housing being closed by an integral foraminous wall, a foraminous apron depending from said end wall and adapted to close the lower portion of the rear end of the housing, oppositely disposed pans extending longitudinally of the lower portion of the housing, connections between the sides of the housing and the respective pans, means on said con-



nections for thrusting the pans yieldingly toward each other, the inner sides of the pans being arranged along forwardly diverging lines at the front ends thereof, the inner side walls of said pans overhanging the bottoms of said pans, alining longitudinal shafts supported by the frame and within the housing, beaters mounted for rotation with the respective shafts, and coöperating means upon the axle and longitudinal shafts for driving the beaters at the same or different speeds.

1,156,209. CORNER PUTTY-KNIFE. BERT CHURCHILL, Toulon, Ill. Filed Mar. 31, 1915. Serial No. 18,335. (Cl. 18—3.5.)



1. A corner putty knife including a blade formed with two longitudinally extending arms arranged at substantially right angles to each other and terminating at their outer ends in square edges, and a handle applied to the inner end of the blade.

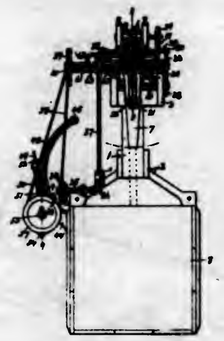
2. A corner putty knife including a blade formed with a pair of arms arranged at substantially right angles to each other and terminating at their outer ends in square edges, one of the arms gradually decreasing in width and merging into the opposite arm at the inner end of the blade, and a handle applied to the said opposite arm of the blade.

3. A corner putty knife formed from a single piece of sheet material and including an integral blade and handle, the blade being constructed with a main arm and an auxiliary arm projecting from one edge of the main arm and arranged at substantially right angles thereto, while the handle is constructed by rolling the edges of an extension of the main blade into a substantially tubular formation.

4. A corner putty knife formed from a single piece of sheet material and including an integral blade and handle, the blade being formed with a main arm and an auxiliary arm projecting at substantially right angles from one edge thereof, the two arms terminating at their free ends in square edges while the auxiliary arm gradually decreases in width at its inner end and merges into the main arm, the handle having a tubular formation and being provided by rolling the edges of an extension at the inner end of the main arm of the blade.

1,156,210. SLIVERING-MACHINE. CHARLES ALFRED CLARK, Auburn, N. Y. Filed May 7, 1914. Serial No. 836,883. (Cl. 19—5.)

1. In a slivering machine, the combination with an oscillatory sliver-delivery guide mounted on the delivery end of the machine of means for simultaneously moving said guide in reverse directions at right angles to its oscillatory movement for laying the plaits of successive tiers in the same direction.



2. A slivering machine having a delivery chute, means for oscillating the chute in one direction, and additional means including a traversing screw for moving it in a plane at right angles to such oscillatory movement.

3. In a machine of the character described, a delivery chute for the sliver, means including a traversing screw for moving the chute in reverse directions, and additional means including an eccentric for moving it in a different plane.

4. In a machine of the character described, a vibratory delivery chute for the sliver, actuating means therefor, and mechanism synchronized with the movements of the delivery chute for packing down the sliver as it is deposited from said chute.

5. In combination with a slivering machine in which the fiber is combed and delivered in the form of a single continuous ribbon or sliver, an oscillatory sliver-receiving tube attached to the delivery end of the slivering machine, means for oscillating the guide tube at a relatively rapid rate of movement in the direction of length of the fiber as delivered from the machine, and additional means for oscillating the guide tube at a relatively low rate of speed in a direction at substantially right angles to the first-named direction of movement for laying the sliver plates in successive tiers in the same direction without twisting.

1,156,211. MOVING-PICTURE APPARATUS. JAMES J. CONNELLY, Buffalo, N. Y. Filed Nov. 13, 1914. Serial No. 871,937. (Cl. 88—19.)



1. In a moving picture apparatus, the combination of a casing having a view opening therein, a rotatable picture carrier mounted within said casing having outwardly extending flanges at the ends thereof, a number of clamping blocks arranged around said carrier between said flanges, picture-carrying strips adapted to be inserted between said blocks, means for securing said blocks and strips on said carrier, and means for rotating said carrier.

2. In a moving picture apparatus, the combination with a two-part casing having circular openings formed at the central portion of the ends thereof and a view aperture therein, flanges extending inwardly from the edges of said openings, a picture carrier mounted to rotate on said flanges, picture-supporting strips mounted on said carrier, means for reinforcing the lower portion of said strips, means for momentarily arresting and flexing the picture-carrying strips as they approach the view aperture, and means for rotating said carrier in said casing.

3. In a moving picture apparatus, the combination of a casing having a view aperture therein, a rotatable picture carrier in said casing, segmental blocks mounted on the periphery of said picture carrier and having grooves in the outer edges thereof, picture-carrying strips interposed between said blocks and having holes in the inner end portions thereof adapted to register with the grooves in the segmental blocks, relatively shorter reinforcing strips inserted between the blocks and the picture-carrying strips having holes therein registering with the grooves in the blocks and the holes in said strips, and a wire passing through the holes in the picture-carrying strips and the reinforcing strips and lying in said grooves in the blocks and adapted to hold the blocks and strips in position on said carrier.

4. In a moving picture device, a rotatable picture carrier having outwardly extending flanges at the ends thereof, wedge-shaped blocks surrounding said carrier between said flanges, picture-carrying strips interposed between said blocks, shorter reinforcing strips inserted between the blocks adjacent to the lower portion of said picture-carrying strips, and means for retaining the strips and the blocks in position on the periphery of the carrier.

5. In a moving picture apparatus, the combination with a two-part telescopic casing having a view aperture therein, of a clip having parts thereof adapted to embrace the walls of the casing at the sides of the view aperture and act as a securing device for the parts of the casing, and a tongue on said clip adapted to extend inwardly into the view aperture.

[Claims 6 to 9 not printed in the Gazette.]

1,156,212. SELF-CLEARING TRACTOR-WHEEL. ALBERT E. COOK, Odebolt, Iowa, and THOMAS VAN TUYL, Kankakee, Ill.; said Van Tuyl assignor to said Cook. Filed Dec. 6, 1911. Serial No. 664,162. (Cl. 21—214.)

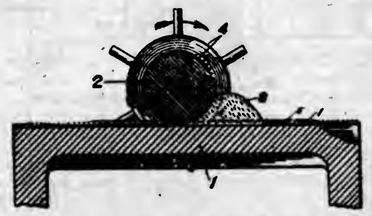


1. In a device of the class described the combination with a tractor wheel having a corrugated tire with grooves extending peripherally around the same and having flat tread surfaces between the grooves, of a plurality of chains laid in parallel relation one in each of said grooves, and pointed lugs bearing against the flat tread surfaces of said wheel and disposed between said grooves and connected to adjacent chains and held in position thereby.

2. The combination with a tractor wheel having a peripherally grooved tire with flat tread surfaces between the grooves, of a plurality of chains laid around the wheel in parallel relation in said grooves independent of positive connection with the wheel, means for tightening and loosening said chains, and a pointed tractor lug disposed at various points on the flat tread surfaces of the wheel between the grooves and connected to adjacent chains lying in said grooves.

3. In a device of the class described the combination with a tractor wheel having a plurality of continuous parallel peripheral grooves extending thereabout affording flat tread surfaces therebetween, of chains unconnected with the wheel and laid in said grooves, and a plurality of tractor lugs arranged in staggered relation loosely on the periphery of the wheel between the grooves therein resting on the flat tread surfaces, said lugs connected to and held at the proper position relative one another by adjacent chains.

1,156,213. PROCESS OF MAKING CORRUGATED WIRE-GLASS. WALTER COX and ARNO SHUMAN, Philadelphia, Pa., assignors to Pennsylvania Wire Glass Manufacturing Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Apr. 18, 1911. Serial No. 621,751. (Cl. 49—86.)

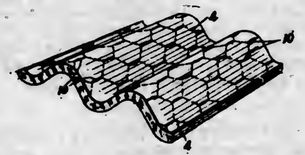


1. The process of making corrugated wire glass which consists in rolling a corrugated sheet of glass of practically the same thickness throughout all points of the corrugations and inclosing in it as it is rolled a previously corrugated and crimped wire netting or mesh.

2. The process of making corrugated wire glass which consists in placing a crimped sheet of wire netting on a lengthwise corrugated table, corrugating the sheet of wire by passing over it a corrugated roll, and then embedding the sheet of wire near the center of a corrugated sheet of glass by rolling the sheet of corrugated glass of practically the same thickness throughout upon said table and netting with said roll.

3. The process of making corrugated wire glass which consists in corrugating a crimped sheet of wire netting, placing the same on a lengthwise corrugated table and rolling a corrugated sheet of glass of substantially the same thickness throughout on said table by means of a corrugated roll whereby the corrugated netting is inclosed in the corrugated sheet, substantially as described.

1,156,214. CORRUGATED WIRE-GLASS. WALTER COX and ARNO SHUMAN, Philadelphia, Pa., assignors to Pennsylvania Wire Glass Manufacturing Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Apr. 18, 1911. Serial No. 621,752. (Cl. 49—92.)



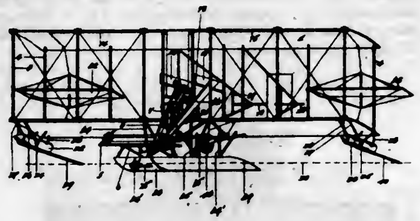
1. A corrugated sheet of glass in which each surface presents a continuous curve and repeatedly crosses the median plane of the sheet and having inclosed in it a corrugated sheet of wire netting.

2. A sheet of wire glass corrugated alike on both faces and of practically the same thickness at all points of the corrugations and having a wire mesh inclosed between the surfaces of the sheet and in which the distance from center to center of the corrugations is at least three times the thickness of the glass.

1,156,215. HEAVIER-THAN-AIR FLYING-MACHINE. GLENN H. CURTISS, Hammondsport, N. Y. Original application filed Aug. 22, 1911, Serial No. 645,340. Divided and this application filed Dec. 2, 1913. Serial No. 804,153. (Cl. 244—2.)

1. A flying machine comprising one or more aerial supporting surfaces and a landing chassis having a nose portion upon which the machine initially impacts in alighting, a driving motor of relatively heavy mass mounted above said chassis and behind said nose portion, and a relatively heavy shock absorbing brace extending directly

between the said motor and the point of impact of the nose of said chassis.



2. In a flying machine, one or more aerial supporting surfaces, a landing chassis having a nose portion upon which impact is made in alighting, a platform mounted in an elevated position above said chassis and behind the nose portion thereof, said platform being adapted to support a body of relatively heavy mass during the flight of the machine, and a relatively heavy beam brace connected to said platform at its upper end and extending forwardly and downwardly in a straight line between said platform and said nose portion and connected to said nose portion of the chassis at its lower end.

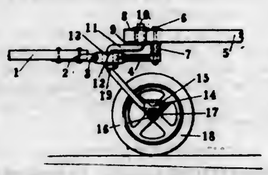
3. A flying machine comprising one or more aerial supporting surfaces, and a floating device below the same adapted to support said machine upon the water, said floating device having an upwardly inclined prow for receiving the initial impact in alighting, a driving motor of relatively heavy mass supported above said floating device and behind said prow, and a relatively heavy shock-absorbing brace extending downwardly and forwardly from said motor support to said upwardly inclined prow.

4. In a flying machine, a frame, an engine supported by the frame, a carriage frame supporting said frame, front and rear carrying wheels rotatively mounted on the carriage frame and disposed respectively fore and aft of the engine, and an upwardly and rearwardly inclined brace secured at its lower end to the carriage frame, and secured at its upper end to the engine.

5. In a flying machine, a frame, an engine supported by the frame, a carriage frame supporting said frame, carrying wheels mounted on the carriage frame, two braces having their forward ends secured to the carriage frame adjacent to the front end thereof and extending upwardly and rearwardly and having their rear ends secured to the engine, an operating lever pivoted to said two braces, and a seat secured to said braces between the lever and engine.

[Claims 6 and 7 not printed in the Gazette.]

1,156,216. TONGUE-TRUCK FOR HARVESTERS. JOSEPH DAIN, Moline, Ill., assignor to Deere & Company, Moline, Ill., a Corporation of Illinois. Filed Jan. 13, 1913. Serial No. 741,764. (Cl. 21—63.)



1. A tongue truck for harvesting machines or the like, having in combination an axle having supporting wheels, a stub tongue, a standard pivoted on the stub tongue and axle and adapted to be swung laterally and having an intermediate portion bent to form a crank, and a pole tongue pivoted on the stub tongue and engaging with the crank portion of the standard.

2. A tongue truck for harvesting machines or the like, comprising an axle having supporting wheels, a stub tongue, a standard pivoted on the stub tongue and axle and bent intermediate its ends to form a crank, and a pole tongue pivoted on the stub tongue and having a sliding engagement with the crank portion of the standard.

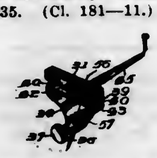
3. A tongue truck for harvesting machines or the like having in combination an axle having supporting wheels, a stub tongue, a standard pivoted on the stub tongue and axle and bent intermediate its ends to form a crank, and a pole tongue pivoted to the stub tongue to swing laterally and engaging with the crank portion of the standard, the distance between the pivot of the pole tongue on the stub tongue and the point of engagement of the pole tongue with the crank portion of the standard decreasing as the pole tongue is swung laterally.

4. A tongue truck for harvesting machines or the like having in combination, an axle having supporting wheels, a stub tongue, a standard pivotally connecting said stub tongue and axle and bent intermediate its ends to form a crank, a pole tongue pivoted on the stub tongue to swing laterally and having a sliding engagement with the crank portion of the standard, the distance between the pivot of the pole tongue on the stub tongue, and the point of engagement of the pole tongue with the crank portion of the standard decreasing as the pole tongue is swung laterally.

5. A tongue truck for harvesting machines or the like having in combination, an axle having supporting wheels, a stub tongue, a standard pivotally connecting said stub tongue and axle and bent intermediate its ends to form a crank, a portion of said crank extending substantially parallel with the stub tongue, and a pole tongue pivoted on the stub tongue and having a sliding engagement with the crank portion of the standard.

[Claim 6 to 16 not printed in the Gazette.]

1,156,217. SOUND-BOX. ALBERT C. DIEHL, Camden, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Aug. 31, 1910. Serial No. 579,835. (Cl. 181—11.)



1. A stylus mounting formed of a unitary piece of material having a central aperture forming spaced posts, the opposite sides of which are provided with recesses having sloping walls which approach substantially a knife edge and form a flexible web connection of negligible thickness between the parts of said mounting which are disposed upon the opposite sides thereof.

2. A stylus mounting comprising stationary and vibratory portions, formed of a unitary piece of material and provided with a central aperture forming spaced posts connecting the stationary portion of said mounting with the vibratory portion of said mounting, and having notches disposed in the opposite sides of said posts, and providing gradually converging walls which approach substantially a knife edge, and which abruptly diverge therefrom to provide a fulcrum the axis of oscillation of which is invariable.

3. A stylus mounting comprising a stationary support, and a relatively vibratory needle holder joined in unitary relation therewith by flexible connectors having angular notches forming shoulders, and providing reduced regions adjacent to said shoulders which form a fulcrum the axis of oscillation of which is invariable.

4. A stylus mounting comprising a unitary structure forming a needle holder and a stationary support joined by a flexible connection having opposed notches, the angles of which provide a fulcrum forming an axis of oscillation which is invariable, and means to prevent the oscillation of said needle holder beyond a predetermined limit.

5. A stylus mounting comprising a unitary structure forming a needle holder and a stationary support joined by a flexible connection having angular recesses, the opposed angles of which provide a fulcrum the axis of oscillation of which is invariable, and means carried by one of said members and extending in close proximity to the other of said members, operative to prevent relative distortion of said members beyond a predetermined range of movement.

[Claims 6 to 14 not printed in the Gazette.]

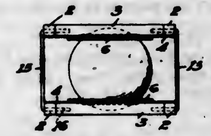
1,156,218. HYDROAEROPLANE. ROBERT CHARLES EDWARDS, Cannelton, Ind., assignor of one-half to Otto Kniesche, Tell City, Ind. Filed Oct. 1, 1914. Serial No. 864,469. (Cl. 244—2.)



1. A hydroaeroplane comprising a boat, bowed braces secured longitudinally to the bottom thereof, planes secured to the upper ends of said braces, resilient cross bars fastened to said bowed braces and projecting beyond the opposite sides of the car, and floats rigidly secured to the ends of said resilient bars.

2. A hydroaeroplane comprising a boat having an offset under the rear portion thereof, straps secured to the bottom of said boat adjacent to its opposite edges, bowed braces engaging said straps, a plane secured to said braces, straps secured to said bowed braces, resilient bars passing through said straps upon the braces and projecting beyond the opposite sides of the boat, floats rigidly fastened to the ends of said bars.

1,156,219. EGG-FILLER. JAMES W. EGGLESTON, Minneapolis, Minn. Filed Jan. 13, 1914. Serial No. 811,837. (Cl. 217—27.)



1. An egg filler comprising upper and lower panels, each having side rails and cross bars at intervals between them, and plates secured to said rails and cross bars, said plates having holes oppositely arranged therein adapted to receive eggs fitting within said holes and held by the walls thereof against lateral movement, and means having angled ends to engage sockets in said panels for holding them in parallel relation with one another and resisting exterior or interior pressure thereon.

2. An egg filler comprising panels arranged in parallel relation with one another and having opposing openings therein to receive the eggs placed between said panels, said panels having sockets formed therein and rods having ends bent to enter said sockets and resist exterior pressure on said panels.

3. An egg filler comprising an upper and a lower panel, each having side rails and intermediate cross bars between them, sheets of straw-board secured to the opposing faces of said panels and having openings therein at intervals opposite one another to receive the eggs placed between said panels, said panels having sockets therein and rods having ends bent at right angles to their middle portions and fitting within said sockets and holding said panels in parallel relation with one another.

4. The combination, with a case, of a plurality of egg fillers fitting therein, said fillers being rectangular in form and comprising parallel side rails and intermediate cross bars securing them together, plates secured to the opposing faces of said rails, said rails having sockets extending inwardly at intervals therein, rigid means having ends to enter said sockets for holding said rails and plates apart and in parallel relation with one another and resisting outward and inward pressure.

1,156,220. PROCESS OF PRODUCING TITANIUM-OXYGEN COMPOUNDS FROM ILMENITE OR TITANIFEROUS IRON ORES AND OTHER MATERIALS. PEDER FARUP, Trondhjem, Norway. Filed June 26, 1914. Serial No. 847,513. (Cl. 23—13.)

1. The process of producing titanium oxygen compounds from materials containing titanium and iron which comprises the steps of treating the titanium iron material with sulfuric acid, heating the mass so obtained to a temperature at which the titanium sulfates are decomposed while the iron sulfates remain substantially unaltered, and thereupon leaching the resulting mass.

2. The process of producing titanium oxygen compounds from material containing titanium and iron, which comprises treating the material with sulfuric acid to produce sulfates of titanium and of iron, heating the mass so obtained to decompose the titanium sulfates without decomposing the iron sulfates, removing the sulfate of iron, then heating the product in the presence of chlorid and leaching the resulting chlorid product.

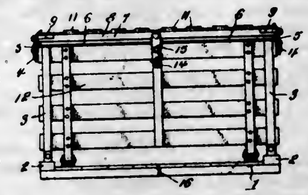
3. The process of producing titanium oxygen compounds from materials containing iron and titanium, which comprises the steps of treating the titanium iron material with sulfuric acid, heating the mass so obtained to a temperature of about 600° C., at which the titanium sulfates are decomposed and titanious oxids obtained, while the iron sulfates remain substantially unchanged and supplying air or roaster gases to the mass during this heating operation, to produce sulfuric acid and subjecting the resulting mass to leaching.

4. The process of producing titanium oxygen compounds from materials containing titanium and iron which comprises the steps of treating the titanium iron material with sulfuric acid, heating the mass so obtained to a temperature at which the titanium sulfates are decomposed while the iron sulfates remain substantially unaltered, and thereupon leaching the resulting mass, adding a chlorid to the residuum obtained by this leaching, heating the mixture, and subjecting the resulting mass to leaching.

5. The process of producing titanium oxygen compounds from materials containing titanium and iron which comprises the steps of treating the titanium iron material with sulfuric acid, heating the mass so obtained to a temperature at which the titanium sulfates are decomposed while the iron sulfates remain substantially unaltered, and leaching the resulting mass, adding a chlorid to the residuum obtained by this leaching, heating the mixture to about 700° C. and leaching the resulting mass.

[Claims 6 and 7 not printed in the Gazette.]

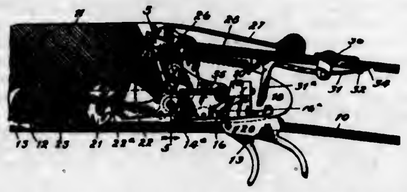
1,156,221. COLLAPSIBLE CRATE. FRED A. FOCKS, Crane, Mo. Filed June 6, 1914. Serial No. 843,471. (Cl. 217—47.)



In a folding shipping crate, a bottom member, a top member, guiding members comprising looped strands of wire extended centrally through the top member and having their terminals connected at the sides of the top member, end members hinged to the bottom member and adapted to fold thereon, side members hinged to the bottom member and having slidable connection with one strand of each of the combined guiding and reinforcing members,

said side members adapted to fold upon the end members and the top to fold upon the side members, and means for connecting the top to the end members when the crate is in a set up position or to the bottom member when the crate is collapsed.

1,156,222. BREECH-LOADING FIREARM. GEORGE HENRY GIDDINGS, Ilion, N. Y. Filed Mar. 2, 1914. Serial No. 821,947. (Cl. 42—45.)



1. In a break down gun, the combination with a barrel and frame, of a spring actuated hook carried by said barrel, a hammer and sear and safety arm carried by the frame, a push rod adapted to operate upon said safety arm and a cocking lever adapted to be engaged by the barrel hook and operate upon the hammer and push rod as set forth.

2. In a break down gun, the combination with a hammer and spring of a sear and spring, a safety rod slidably mounted on the gun frame and having a post adapted to co-act with the sear, a push rod for engaging said post and a cocking lever adapted to operate upon the hammer and push rod.

3. In a break-down gun, in combination, a hammer, a hammer spring, a sear, a sear spring, a cocking lever, a safety rod slidably mounted on the gun frame, said safety rod being formed with a post adapted to co-act with the sear and with a spring arm terminating with an idle roll, a notch in the frame to receive said roll, and a second notch in said frame with an inclined wall to automatically move the said spring arm and the connected post to their operative or "safe" positions.

4. In a break-down gun, in combination, a removable side-plate, a hammer and a sear mounted on said side-plate, a cocking lever pivotally mounted in the frame, a cocking lever hook hung in the barrel lug, and means consisting of a push-rod and co-acting fore-end iron for retaining the said hook in operative relation to the cocking lever.

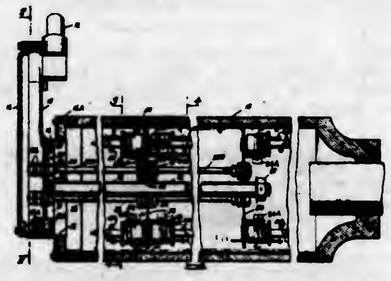
5. In a break-down gun, the combination with the barrels having a barrel lug, a hook pivoted therein, spring actuated in one direction, a plunger rod adapted to counter-act the effect of said spring, a fore-end iron adapted to contact with said plunger rod and hold the same in engagement with the hook, of a cocking lever adapted to engage at its forward end the hook and barrel lug, the rear end of said cocking lever being adapted to operate upon hammers, a push rod adapted to be operated upon also by said cocking lever, a safety arm adapted to be engaged by the rear end of said push rod, said safety arm being adapted to co-act with sears coöperating with the hammers as set forth.

[Claim 6 not printed in the Gazette.]

1,156,223. ELECTRIC LAUNDRY-ROLL. WILLIAM S. HADAWAY, Jr., New Rochelle, N. Y. Filed Mar. 9, 1914. Serial No. 823,371. (Cl. 219—37.)

1. A laundry roll heater comprising a central supporting rod, sheet metal disks secured to the rod and spaced apart thereon, a plurality of combined truss-rods and bus-bars uniformly spaced about the central rod, each connected to and electrically insulated from the disks, a plurality of contact sockets secured to the disks and extending in parallelism with the bus-bars, and heating units having contact plugs removably mounted in the sockets.

2. A laundry roll heater comprising a plurality of substantially parallel bus-bars, means near one end for supporting the bus-bars, spaced disks secured to and supported by the bus-bars but electrically separated therefrom, contact sockets mounted near the periphery of the disk, and heating units having contact plugs coöperating with the sockets.



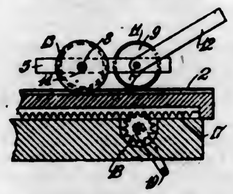
3. A laundry roll heater comprising a plurality of substantially parallel bus-bars, a disk secured at right angles to the bus-bars and electrically insulated therefrom, and a plurality of contact sockets secured near the periphery of the disk and extending in parallelism with the bus-bars, said bus-bars constituting truss-rods for the heater.

4. A laundry roll heater comprising a plurality of substantially parallel bus-bars, a sheet metal disk secured to the bus-bars and electrically insulated therefrom, a pair of contact sockets mounted near the periphery of the disk on opposite sides thereof and comprising a single central fastening means extending through the disk and constituting an independent contact within each of the sockets.

5. A heater comprising a plurality of bus bars, means for supporting the bus bars, spaced members secured to and supported by the bus bars but electrically separated therefrom, and electric heating units removably secured to the members and electrically connectel to the bus bars.

[Claims 6 and 7 not printed in the Gazette.]

1,156,224. DEVICE FOR CUTTING GOLD-LEAF. LEON M. HARWOOD, Springfield, Mass. Filed Mar. 19, 1915. Serial No. 15,591. (Cl. 164—78.)



1. A device for cutting metallic leaf having a leaf supporting member, a coöperating cutter, a support therefor, leaf retaining means adjacent to the cutter at its opposite faces, and acting to tension the leaf and hold it to the supporting member, in advance of, and during the cutting operation.

2. A device for cutting metallic leaf, having a grooved leaf supporting member, a coöperating cutter operating in the groove in the member, a support for the cutter, retaining means, adjacent to the cutter at its opposite faces, and acting to tension the leaf and hold it to the supporting member in advance of, and during the cutting operation.

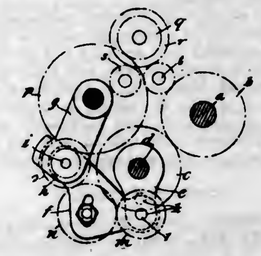
3. A device for cutting metallic leaf, a grooved leaf supporting member therefor, a knife operating in the groove in the supporting member, retaining means adjacent to the opposite faces of the knife and traveling therewith, acting to tension the leaf, and hold it to the supporting member, in advance of, and during the cutting operation.

4. A device for cutting metallic leaf, a leaf supporting member therefor, a support for a coöperating, loosely mounted cutter, retaining means adjacent to the cutter at its opposite faces and acting to tension the leaf and hold it to the supporting member in advance of and during the cutting operation.

5. A device for cutting metallic leaf, having a grooved leaf supporting member, a support, a coöperating cutter loosely mounted in the support and operating in the groove in the leaf supporting member, retaining means adjacent to the cutter at its opposite faces, and acting to tension the leaf, and hold it to the supporting member, in advance of, and during the cutting operation.

[Claims 6 and 7 not printed in the Gazette.]

1,156,225. DRIVING MECHANISM FOR THE DRAWING-OFF OR DETACHING ROLLERS OF COMBING-MACHINES. PAUL AUGUST HELMBOLD and JULIUS WEINBRENNER, Alsace, Germany. Filed Mar. 25, 1914. Serial No. 827,223. (Cl. 19—6.)



1. In a driving mechanism for the detaching roller of a combing machine, the combination of a toothed wheel geared to the detaching roller, a radial arm mounted to swing around the axis of the said toothed wheel, a spindle carried rotatably by the free end of the said arm, a pinion fixed on the said spindle and in gear with the said toothed wheel, a second pinion fixed on the said spindle, and a crank mechanism interposed between the driving shaft of the machine and the said toothed wheel and comprising a crank arm, a connecting rod coupled to the said arm and to the spindle on which the aforesaid pinions are mounted, and a gear wheel fixed on the crank arm and geared to the second pinion on the aforesaid spindle.

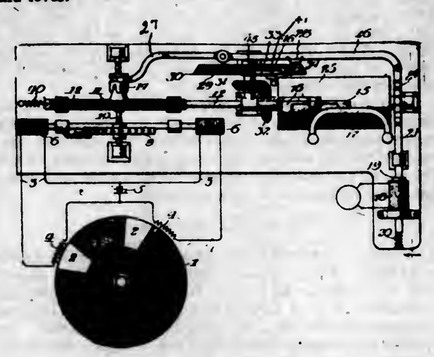
2. A driving mechanism for the detaching roller of a combing machine, comprising a crank shaft geared to the driving shaft of the machine, a toothed wheel mounted rotatably on an intermediate shaft and geared to the detaching roller, a crank arm fixed on the said crank shaft, a crank pin carried by the said crank arm, a radial arm mounted to swing around the axis of the aforesaid toothed wheel, a spindle rotatably carried by the said radial arm near its free end, a gear wheel fixed on the said spindle and in gear with the aforesaid toothed wheel, a connecting rod pivotally mounted at one end upon the said spindle and at its other end upon the aforesaid crank pin, a gear wheel mounted non-rotatably relatively to the crank arm on the said crank pin, a second gear wheel fixed on the aforesaid spindle, and an intermediate gear wheel mounted rotatably on the connecting rod and gearing on the one hand with the said second gear wheel and on the other hand with the gear wheel on the crank pin, substantially as set forth.

1,156,226. RECORDING ELECTRIC METER. ALFRED HESS, Chicago, Ill. Filed Aug. 15, 1911. Serial No. 644,240. (Cl. 234—5.5.)

1. In a recording meter in combination, a plurality of selenium cells, means for varying the resistance of said cells in definite succession, and means for forming a record governed by the variations in resistance of said cells.

2. In a recording meter in combination, a reciprocable shaft, a lever pivoted to said shaft having a pen on each end, and means for depressing first one end and then the other end of said lever.

3. In a recording meter in combination, an arm, a lever pivoted to said arm having a pen at each end, and means for depressing first one end and then the other end of said lever.

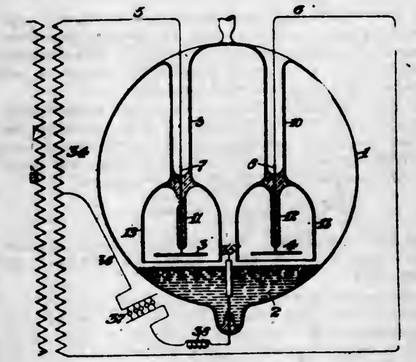


4. In a recording meter in combination, a record receiving blank, a plurality of tracing means for coöperating therewith, and means for engaging said tracing means with said blank one after the other.

5. In a recording meter in combination, a revolving shaft, a reciprocating element, two selenium cells, and means controlled by said cells for producing a complete reciprocation of said element for each revolution of said shaft.

[Claims 6 to 24 not printed in the Gazette.]

1,156,227. LOW-RESISTANCE VAPOR ELECTRIC DEVICE. PETER COOPER HEWITT, New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Aug. 14, 1907. Serial No. 388,465. (Cl. 175—354.)



1. A vapor electric apparatus comprising an exhausted container, positive and negative electrodes therein, the positive electrode being located and supported within the region in which the negative electrode component of the total fall of potential occurs.

2. A vapor electric apparatus comprising an exhausted container, positive and negative electrodes therein, said container being shaped to offer cooling surface for said apparatus, the positive electrodes being located and supported within the dark space in the neighborhood of the negative electrode.

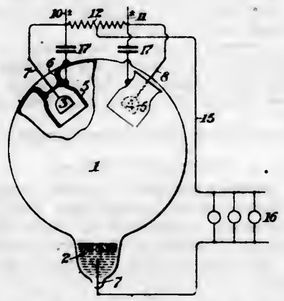
3. A vapor electric apparatus comprising an exhausted container, positive and negative electrodes therein, the said positive and negative electrodes being separated by less than a critical distance, the limit of which is the dark space adjacent to the negative electrode, whereby the total

fall of potential between the terminals of the apparatus is materially less than 14 volts.

4. In a vapor electric device, an exhausted container, a negative electrode therein of volatile self-reconstructing material, and a positive electrode therein of solid material, the said positive electrode being located within a critical region limited by the negative electrode and the region of approximately the same potential adjacent to said negative electrode.

5. In a vapor electric apparatus comprising an exhausted container, a cathode with a dark space adjacent thereto, an anode located in said dark space in fixed relation to said cathode, an anode stem connected to said anode and an insulating covering for said stem, said covering being integral with said container.

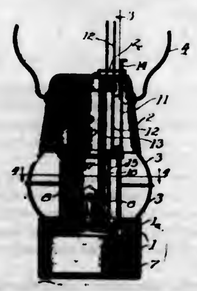
1,156,228. CONTROLLING MEANS FOR VAPOR APPARATUS. PETER COOPER HEWITT, Ringwood Manor, N. J., assignor to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Jan. 20, 1905, Serial No. 241,947. Divided and this application filed Dec. 7, 1914. Serial No. 875,947. (Cl. 176—42.)



1. The combination with an evacuated electric apparatus, of a plurality of electrodes, an electrified conductor, means for impressing electric variations on said electrified conductor and a condenser between the source of said variations and said electrified conductor.

2. The combination with an evacuated electric apparatus, of a plurality of electrodes, a metal electrified conductor, means for impressing electric variations on said electrified conductor and a condenser between the source of said variations and said electrified conductor.

1,156,229. LANTERN. EDWARD R. HIBBARD, Chicago, Ill. Filed Nov. 10, 1913. Serial No. 800,064. (Cl. 240—39.)

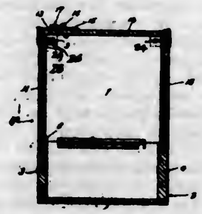


1. A device of the class described comprising a lighting element, a diaphanous tubular movable member, an outer casing inclosing said tubular member and having an opening substantially in register with said lighting element, a member secured to said movable member for moving said member toward and away from said lighting element and being of a length substantially equal to the distance which the tubular member is adapted to be moved, said member being provided with a slot having an offset therein a member extending into the slot and forming a means for securing said tubular member against movement with relation to said outer casing when in engagement with the offset in the slot.

2. A device of the class described comprising a lighting element, a plurality of diaphanous movable members, an outer casing inclosing said members and having an opening substantially in register with said lighting element, members secured to each of the diaphanous movable members and extending through the casing in different planes, a member mounted on the casing and extending into the path of all of said members, said member coöperating with the members which are attached to the movable tubular members and forming a means for supporting the tubular members in one position.

3. A device of the class described comprising a lighting element, a plurality of diaphanous movable members, an outer casing inclosing said members and having an opening substantially in register with said lighting element, a member extending from each of said movable members and through a slot in the casing, a member extending across each of said slots, and engageable with one or more of the members which extend from the diaphanous movable members, to hold said members within the casing.

1,156,230. CRATE. JOHN HOLBROOK, Byesville, Ohio. Filed June 23, 1914. Serial No. 846,893. (Cl. 217—15.)



1. A knock-down crate including a bottom box-like section comprising a base, ends and sides, the sides having their inner faces channeled to provide shoulders which are arranged flush with the upper edges of the ends, and plates hingedly secured to the ends of the box, side members hingedly secured to the sides of the box, top members hingedly secured to the sides and the end plates adapted when the device is collapsed, to rest upon the shoulders provided by the sides to form a closure for the box-shaped bottom.

2. A knock-down crate including a box-like bottom section, the sides of which projecting beyond the ends and having their inner faces channeled to provide shoulders which are flush with the ends, side and end plates hingedly secured to the sides and ends of the base, a top comprising two members of unequal width, one of which being hingedly connected with each of the side plates, means, comprising mechanism arranged between the ends and sides for securing the crate in the set-up position, the end plates adapted to rest upon the shoulders of the sides of the base when the crate is collapsed and the side plates with their top sections swung to overlie the end plates and each other, and means for securing the crate in a knock-down position.

3. A collapsible crate including a box-like base having its sides elevated above its ends and the inner faces of the said sides channeled to provide shoulders which are arranged flush with the ends, side and end plates hingedly connected with the respective sides and ends of the plates, a top comprising two sections of unequal width, one of which being hingedly secured to each of the respective side plates, brackets upon the side plates and longitudinally adjustable locking members upon the end plates adapted to co-act with the brackets for sustaining the ends locked upon the side plates.

4. In a collapsible crate including a box-like base having its sides elevated above its ends and the inner faces of the said sides channeled to provide shoulders which are arranged flush with the ends, side and end plates hingedly connected with the respective sides and ends of the plates, a top comprising two sections of unequal width, one of which being hingedly secured to each of the respective side plates, angular brackets having key-hole slots upon the side plates, and longitudinally movable shank members having bits adapted to be passed through the key-hole slots and turned to engage with the sides of the brackets to engage the brackets to sustain the side plates locked upon the end plates.

5. A collapsible crate including a box-like base having its sides elevated above its ends and the inner faces of said sides channeled to provide shoulders which are arranged flush with the ends, side and end plates hingedly connected with the respective sides and ends of the plates, a top comprising two sections of unequal width, one of which being hingedly secured to each of the respective side plates, longitudinally movable key members upon the side plates, brackets upon the side plates having key-hole slots adapted to receive the bits of the keys on the end plates, and means arranged upon the brackets engaging with the bits of the keys for preventing the rotation of the keys.

[Claims 6 and 7 not printed in the Gazette.]

1,156,231. BUTTON-FIXTURE. ALFRED HOLTER, Bjukan, Norway. Filed Feb. 2, 1915. Serial No. 5,702. (Cl. 24—108.)



1. A button fastener comprising a staple having pointed barbed legs adapted to be pushed through a piece of fabric with its barbed legs fitting into the holes of a button, and a receiving staple having tubular ends adapted to receive said legs and formed with inward upturned lips adapted to engage said barbed legs.

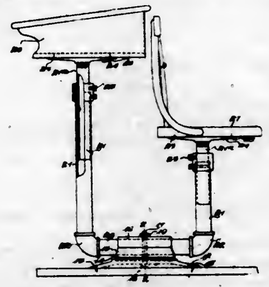
2. A button fastener comprising a staple having pointed barbed legs adapted to be pushed through a piece of fabric with its barbed legs fitting into the holes of a button, a receiving staple having tubular ends adapted to receive said legs and formed with inward upturned lips adapted to engage said barbed legs, and a wear plate interposed between the base of the barbed legs and the ends of the receiving staple, for the purpose specified.

1,156,232. SUPPORTING STRUCTURE FOR DESKS, CHAIRS, &c. GEORGE M. HUNTLEY, Everett, Mass. Filed Dec. 11, 1914. Serial No. 876,686. (Cl. 155—34.)

1. A supporting structure comprising a base adapted to be attached to a floor and provided with a socketed cradle, a U-shaped supporting member including a neck seated on the cradle and twin standards projecting upwardly from the neck at opposite sides of the base, a king-bolt passing through the base and neck, and preventing rotative, endwise, and sidewise movements of the neck, and holding-down means coöperating with said bolt in preventing upward movements of the neck.

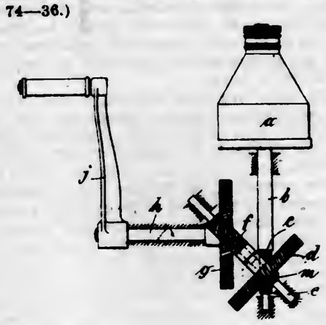
2. A supporting structure comprising a base adapted to be attached to a floor and provided with a socketed cradle, a U-shaped supporting member including a neck seated on the cradle and twin standards projecting upwardly from the neck at opposite sides of the base, a cap bearing on said neck, and a king-bolt passing through the base, neck, and cap, and provided with a clamping nut bearing on the cap.

3. A supporting structure comprising a base including a bottom member adapted to be attached to a floor, and formed to serve as a turn-table support, a turn table rotatively adjustable on said support and having a two-part socket, and a king-bolt extending through the bottom member, turn table and socket, and having means for compressing the socket and securing the turn table and socket in any position to which they may be adjusted, and



a U-shaped supporting member including a neck extending through said socket and apertured to receive the king-bolt, and twin standards projecting upwardly from the neck at opposite sides of the base and having attaching devices at their upper ends, the supporting member being rotatively adjustable with the turn table and socket, and secured by said socket and bolt in any position to which it may be adjusted.

1,156,233. GEARING FOR CENTRIFUGAL MACHINES. GUSTAF WILHELM JOHANSSON and JOHANNES VALDEMAR MÄRTEN RISBERG, Södertelje, Sweden, assignors to Aktiebolaget Baltic, Södertelje, Sweden, a Corporation of Sweden. Filed Sept. 28, 1911. Serial No. 651,785. (Cl. 74—36.)

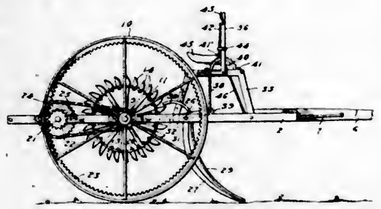


1. In a gearing for centrifugal liquid separators and the like, the combination of an auxiliary shaft, a pinion adapted to slide on the shaft, a driving wheel engaging the pinion, the axis of the pinion forming an angle of about 45 degrees with the axis of the driving wheel, a coupling member fixed on the pinion, a wheel on the auxiliary shaft, said wheel constituting a coupling member coöperating with the first mentioned coupling member, a drum and gearing connections between the same and the wheel on the auxiliary shaft, substantially as described and for the purpose set forth.

2. In a gearing for centrifugal liquid separators and the like, the combination of an auxiliary shaft, a pinion adapted to slide on the shaft, a driving wheel engaging the pinion, the axis of the pinion forming an angle of about 45 degrees with the axis of the driving wheel, a coupling member fixed on the pinion, a wheel loosely mounted on the auxiliary shaft, said wheel constituting a coupling member coöperating with the coupling member first mentioned, a shoulder on the auxiliary shaft on the opposite

side of the wheel last mentioned with relation to the pinion, a drum, and gearing connections between the same and the wheel on the auxiliary shaft, substantially as described and for the purpose set forth.

1,156,234. STALK-CUTTER. DAVID G. JONES, Emerson, Iowa. Filed May 9, 1914. Serial No. 837,531. (Cl. 55—118.)



1. In a stalk cutter, cutting and supporting means for the stalks, lifting means for the stalks, and means associated with the lifting means and coöperating with the cutting means and supporting means for guiding the stalks and for guarding the lifting means.

2. A stalk cutter including a wheeled frame, a cutting and supporting mechanism mounted thereon, lifting means coöperating therewith, guiding and guarding means carried by said lifting means, and means for raising and lowering said lifting means.

3. A stalk cutter including a supporting frame, cutting and supporting means for the stalks mounted thereon, lifting means associated therewith, and resilient members carried by the lifting means for guiding the stalks and for protecting the lifting means.

4. A stalk cutter including a frame, supporting wheels therefor, a rotating cylinder on said frame having a plurality of cutting elements extending therefrom, supporting means for the stalks coöperating with the cutting elements, lifting means for the stalks, guiding and guarding means carried by the lifting means and associated with the supporting and cutting means, and means for raising and lowering the lifting means.

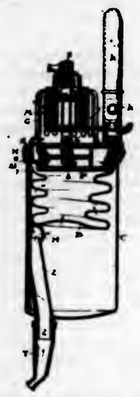
5. A stalk cutter including a frame, a shaft rotatably mounted in said frame, supporting wheels rotatably mounted upon the free ends of said shaft, a cylinder rotatably mounted upon said shaft, a plurality of cutting elements extending from said cylinder and arranged spirally thereabout, means connecting the cylinder and the supporting wheels for increasing the speed of the cylinder, a plurality of spaced apart pins mounted and arranged in alinement with said cutting elements, said pins supporting stalks and facilitating the cutting of the same, a rake bar disposed in front of said pins, resilient members carried by the teeth of the rake bar for guarding the teeth and guiding the stalks to said supporting pins, and means for raising and lowering said rake bar.

[Claims 6 to 8 not printed in the Gazette.]

1,156,235. HANDHOLD VACUUM-CLEANER. JAMES B. KIRBY, Cleveland, Ohio. Filed June 11, 1910. Serial No. 566,307. (Cl. 83—47.)

1. A vacuum machine having a dust receptacle provided with an inlet tube projecting into the same through the bottom thereof and next to the wall at one side and a dust guard closed over the top of said inlet tube and open at its side for the escape of dust into the said receptacle, and a dust intercepting bag of woven fabric suspended from about the top of said receptacle and a suction fan communicating with the interior of said bag.

2. A vacuum cleaning device comprising a receptacle having a dust inlet tube extending through its bottom to a point about the middle of the receptacle and a dust bag suspended within the top thereof and extending when in its expanded condition below the mouth of the inlet tube, means on the top of said receptacle and bag adapted to create suction through said bag, and a dust guard closed over the top of said inlet tube and open at its side to admit dust laden air to the receptacle, said dust guard being of substantial width whereby it acts to prevent closure of the inlet tube by the bag and as a baffle for the dust laden air tending to throw down the larger particles before the air passes to the bag.



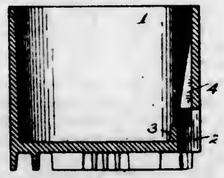
3. In a suction cleaner, a casing having a pump chamber, a rotary pumping device therein, and an elongated dust detaining bag arranged with its longitudinal axis substantially coincident with the axis of said pumping device and with its mouth surrounding said pump chamber, the interior of said bag being in communication with the interior of said chamber.

4. In a suction cleaner, a casing having a pump chamber therein, a motor supported concentric with said pump chamber, a rotatable pumping device in said chamber and operatively connected to the motor, an elongated dust detaining bag arranged with its longitudinal axis substantially coincident with the longitudinal axis of the pumping device and motor and having its mouth surrounding said pump chamber, the interior of said bag being in communication with the interior of said pump chamber and the parts being so arranged that the air discharged from said pump chamber will pass around said motor.

5. In a suction cleaner, a supporting element comprising an annular bag-support and a motor support substantially concentric therewith, a motor carried by said motor support having its shaft substantially parallel to the axis of said bag support, a rotary suction-producing device operatively connected to said motor and located inside said bag support, and an elongated dust detaining bag having one end closed and having its mouth secured to said annular bag-support, there being a passageway inside said bag-support establishing communication between said suction producing device and the bag interior.

[Claim 6 not printed in the Gazette.]

1,156,236. MELTING-CUP. GEORGE E. LEE, Cleveland, Ohio, assignor to The George E. Lee Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 8, 1913. Serial No. 783,718. (Cl. 22—80.)



1. A melting cup adapted to receive an ingot of material to be melted, said cup being provided with an outlet opening at one side thereof, and means associated with the said cup, for engaging the ingot to guide the ingot away from the outlet opening.

2. A melting cup adapted to receive an ingot of material to be melted, said cup being provided with an outlet opening, a projection carried upon the interior of the cup above the opening, for engaging the ingot to guide the ingot away from the opening.

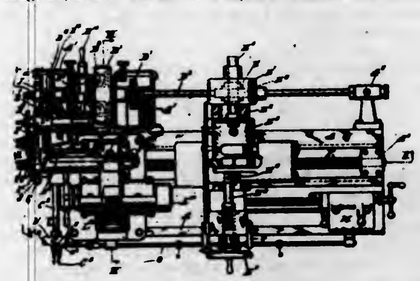
3. A melting cup adapted to receive material to be melted in solid form, said cup being provided with an outlet opening, a wedge-shaped ridge upon the interior wall of said cup above the opening, the widest end of said ridge being adjacent the said opening.

4. A melting cup adapted to receive material to be melted in solid form, said cup being provided with an outlet opening in one side thereof and a dam surrounding said opening for the purpose described.

5. A melting cup adapted to receive an ingot of material to be melted, said cup being provided with an opening, a dam upon the inside of the cup and surrounding the said opening, and means upon the interior of said cup above the opening for guiding the ingot supplied in said cup away from the opening.

[Claim 6 not printed in the Gazette.]

1,156,237. THREAD-MILLING MACHINE. ERNEST J. LEES, Cleveland, Ohio, assignor to The Lees-Bradner Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 27, 1913. Serial No. 786,878. (Cl. 10—154.)



1. In a machine of the character described, the combination with a frame, a cutter carrying head mounted to slide longitudinally in opposite directions on said frame, a rotary work holder and a drive member of a driven member, connections between said driven member and said head and between said driven member and said work holder for operating said head and said work holder in either direction accordingly as said driven member is operated, gearing connected with said drive member and arranged to rotate said driven member in one direction, separate gearing connected with said drive member and arranged to rotate the driven member in the opposite direction, and means for connecting either of said gearing to said driven member.

2. In a machine of the character described, the combination with a frame, a cutter carrying head mounted to slide longitudinally in opposite directions on said frame, a rotary work holder and drive member, of a driven member, connections between said driven member and said head and between said driven member and said work holder for operating said head and said work holder in either direction accordingly as said driven member is operated, gearing connected with said drive member and arranged to rotate said driven member in one direction, separate gearing having a power transmitting ratio different from the first mentioned gearing and connected with said drive member and arranged to rotate the driven member in the opposite direction, and means for connecting either of said gearing to said driven member.

3. In a machine of the character described, the combination with a frame, a cutter carrying head mounted to slide longitudinally in opposite directions on said frame, a rotary work holder and a drive member, of a driven member, connections between said driven member and said head and between said driven member and said work holder for operating said head and said work holder in either direction accordingly as said driven member is operated, gearing connected with said drive member and arranged to rotate said driven member in one direction, separate gearing connected with said drive member and arranged to rotate the driven member in the opposite direction, and means for connecting either of said gearing to said driven member, the elements constituting the gearing for rotating the driven member in one direction being changeable.

4. In a machine of the character described, the combination with a frame, a cutter carrying head mounted to slide longitudinally in opposite directions on said frame, a rotary work holder and a drive member, of a detachable driven member, connections between said driven member and said head and between said driven member and said work holder for operating said head and said work holder in either direction accordingly as said driven member is operated, gearing connected with said drive member and arranged to rotate said driven member in one direction, separate gearing connected with said drive member and arranged to rotate the driven member in the opposite direction, and means for connecting either of said gearing to said driven member, the elements constituting the gearing for rotating the driven member in one direction being changeable.

5. In a machine of the character described, the combination with a frame, a cutter carrying head mounted to slide longitudinally in opposite directions on said frame, a rotary work holder and a driven member, connections between said driven member and said head and between said driven member and said work holder for operating said head and said work holder in either direction accordingly as said driven member is operated, gearing connected with said drive member and arranged to rotate said driven member in one direction, separate gearing connected with said drive member and arranged to rotate the driven member in the opposite direction, and means for connecting either of said gearing to said driven member, the elements constituting the separate gearing being changeable.

[Claims 6 to 11 not printed in the Gazette.]

1,156,238. BATHING-CAP. ISAAC W. LITCHFIELD, Newton, Mass. Filed Oct. 17, 1913. Serial No. 795,636. (Cl. 2—106.)



1. As a new article of manufacture, a bathing-cap having a longitudinally extensible pneumatic edge-portion adapted to be inflated for engaging the head of the wearer, substantially as described.

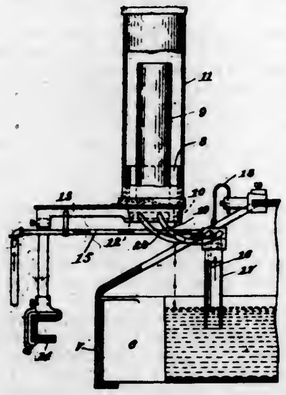
2. As a new article of manufacture, a bathing-cap having an inflatable rubber tube attached to its edge-portion and extended entirely around it having means for inflating it for engaging the head of the wearer, substantially as described.

3. As a new article of manufacture, a bathing-cap having a pneumatic edge-portion extended entirely around it and a flexible tube connected therewith with a closing-valve for inflating said pneumatic edge-portion for engaging the head of the wearer, substantially as described.

4. As a new article of manufacture, a bathing-cap having a pneumatic edge-portion extended entirely around it and a flexible tube connected therewith with a closing-

valve for inflating said pneumatic edge-portion for engaging the head of the wearer, and means to confine said tube when not in use, substantially as described.

1,156,239. REGULATOR FOR MELTING-POTS. JOSEPH H. LOWDEN, Cincinnati, Ohio, assignor to The George E. Lee Company, a Corporation of Ohio. Filed Aug. 6, 1913. Serial No. 783,367. (Cl. 22—80.)



1. The combination of a main pot, a melting pot discharging into the same, a burner for heating the latter, and a fuel supply conduit to the burner, said conduit extending into the main pot and having a supply opening which is opened and closed by the metal in said main pot, as it falls and rises.

2. A fuel regulator for metal pots, comprising, in combination with the pot, a burner for heating metal supplied to said pot, and means controlled directly by the height of metal in said pot for governing the fuel supply to said burner, including a conduit depending into the pot in position to be opened and closed by the metal therein, as it falls and rises.

3. The combination with a metal pot, and a burner for heating metal supplied thereto, of a fuel supply conduit leading to said burner and having a part which dips into said pot and is provided with a supply opening controlled by the height of metal in said pot.

4. The combination with a metal pot, and a burner for heating metal supplied thereto, of outer and inner fuel supply pipes depending into the pot, one of said pipes communicating with the burner, and the other with the fuel supply, the inner pipe having an opening communicating with the outer pipe and located above the lower end of the latter and adapted to be closed and opened by the rise and fall of the metal in the pot.

5. The combination with a metal pot, and a burner for heating metal supplied thereto, of outer and inner fuel supply pipes depending into the pot, one of said pipes communicating with the burner and the other with the fuel supply, the inner pipe having an opening communicating with the outer pipe and located above the lower end of the latter and adapted to be closed and opened by the rise and fall of the metal in the pot, and a pilot light adjacent to the burner.

[Claims 6 to 13 not printed in the Gazette.]

1,156,240. LIQUID-SAMPLING DEVICE. GEORGE L. MCKAY, Evanston, Ill. Filed Aug. 10, 1914. Serial No. 856,128. (Cl. 137—18.)

1. In a liquid sampling device, two telescopic tubes having slots through their walls, such tubes being adapted for rotation and for endwise sliding movement with respect to each other, means for limiting such sliding movement, and a piston within such inner tube.

2. In a liquid sampling device, two telescopic tubes having slots through their walls, such tubes being adapted for rotation and for endwise sliding movement with respect to each other, a detachable collar on the end of the inner tube, and a piston within such inner tube.

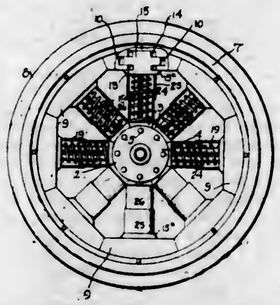


1,156,241. PIPE-HANGER. CLYDE S. MCKINLEY, East St. Louis, Ill. Filed Oct. 24, 1914. Serial No. 868,475. (Cl. 248—32.)



A pipe-hanger consisting of a structure which comprises a body-part and two spaced parallel flanges which project from two opposite edges of this body-part and of which they form integral parts, all three being of substantially equal dimensions so as to produce a compact, block-shaped structure, a ring-shaped bearing adapted to have limited contact with a pipe to be supported and projecting at right angles outwardly from the center of one of the sides of the structure and midways between two of the opposite edges of this particular side and a set-screw seated in one of the flanges and adapted to effect clamping attachment of the structure by co-action with the other flange.

1,156,242. CUSHION-WHEEL. CHARLES T. MILLER, Menard, Ill. Filed Feb. 10, 1915. Serial No. 7,333. (Cl. 152—48.)

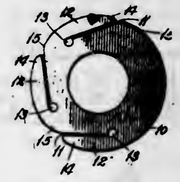


1. In cushion wheel, a hub, a rim including a plurality of felly sections, each felley section being formed with a longitudinally extending recess, having a relatively contracted mouth open upon the inner face of the section, a slide disposed in each recess but shorter than the recess and having longitudinal movement therein and acting to compress the air in the recess upon such a longitudinal movement, a telescopic spoke connecting the hub to the slide, and a spring bearing against the hub surrounding said spoke and bearing against the corresponding slide.

2. A cushion wheel comprising a hub, a rim including a plurality of felly sections carried upon the inner face of the rim, each of said sections having a longitudinally extending recess having a relatively contracted mouth opening toward the hub, a slide mounted in each of the recesses but shorter than the corresponding recess adapted to compress the air in said recess upon a movement of the slide in either direction, said slide being formed upon its inner face with a pair of bores, the hub being formed upon its outer face with a corresponding pair of bores, tubular spoke members, one mounted in the bore of the hub and extending partly into the corresponding bore of the slide and the other mounted in the other bore of the slide and extending partly into the corresponding bore of the hub, spoke members constituting pistons, one extending from the slide into the corresponding tubular spoke member and the other extending from the hub into the corresponding spoke member, and springs each surrounding each pair of telescopic spoke members and resisting inward movement of the rim relative to the hub.

3. In a cushion wheel, a hub and a rim, a plurality of pairs of tubular spoke members, one spoke member of each pair being mounted in the hub and the other in the rim, a plurality of pairs of spoke members constituting pistons, one member of each pair extending from the rim into the corresponding tubular spoke member extending from the hub and the other extending from the hub into the corresponding tubular spoke member extending from the rim, and resilient means resisting inward movement of the rim relative to the hub.

1,156,243. NUT-LOCK. WINFIELD O. MILLIKIN, Detroit, Mich. Filed Feb. 14, 1913. Serial No. 748,828. (Cl. 151—53.)

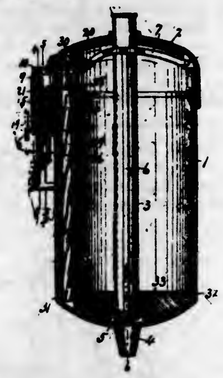


1. As a new article of manufacture, a spring washer having a central aperture and slots extending along lines that are chords of the circumference, the resultant arms being off-set and the adjacent marginal portions of the washer in rear of said arms being pointed with the tips thereof bent oppositely to the off-set arms.

2. The combination with a threaded bolt, of a polygonal nut-engaging the bolt, and a substantially circular washer having a central aperture and slots extending along lines that are chords of the circumference, the resultant arms being off-set and the adjacent marginal portions of the washer in rear of said arms being pointed with the tips thereof bent oppositely to the off-set arms for the purpose specified.

1,156,244. LIQUID-MEASURING APPARATUS. STEPHEN A. MISCHANSKI and MICHAEL PAWLOWSKI, Syracuse, N. Y.; said Mischansky assignor to said Pawlowski. Filed Sept. 24, 1914. Serial No. 863,271. (Cl. 221—115.)

1. A liquid measuring device comprising a liquid receiver having an inlet and an outlet and co-axial valve seats therefor, a valve controlling both the inlet and outlet and normally closing the inlet, means operable at will for setting the valve to close the outlet and open the inlet to allow the flow of liquid into the receiver, means adjustable from a normal position for holding the valve in the last named position while a predetermined quantity of liquid is entering the receiver, and means actuated by the inflowing liquid for restoring the holding means to its normal position and allowing the valve to close the inlet and open the outlet when such predetermined quantity has entered the receiver.



2. In a liquid measuring device of the character described, a liquid receiver having an outlet in one end and an inlet tube extending from the opposite end to a point in proximity to the outlet and in registration therewith, a valve coöperating with the adjacent end of the inlet and outlet to control the inlet and outlet of liquid, means normally holding the valve in position to close the inlet, additional means operable at will to shift the first named means to open the valve from the inlet and to close it against the outlet, a detent operable at will to hold the last named means against return to its normal position while liquid is entering the receiver, and means actuated by the rise of the liquid in the receiver for tripping the detent and allowing the valve to return to its normal position only after a predetermined quantity of liquid has entered the receiver.

3. In a liquid measuring device of the character described, a liquid receiver having an inlet and an outlet, a valve mechanism controlling both inlet and outlet and normally closing the inlet, mechanism including coöperating locking members for holding the valve in its normal position, one of said locking members being movable from its locking position to open the valve from the inlet and close it against the outlet, the other locking member being adjustable relatively to the first named locking member to hold the latter in its released position, and means actuated by the rise of liquid in the receiver for restoring the second named locking member to its normal position and permitting the restoration of the first named locking member to its normal position for opening the valve from the outlet and closing it against the inlet.

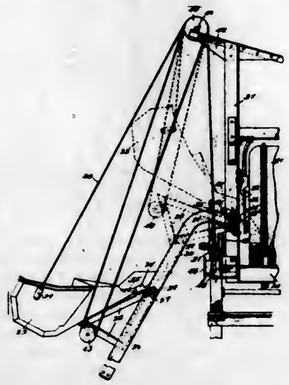
4. In a liquid measuring apparatus, a receiver having an inlet conduit therein extending from the top to a point in proximity to the bottom and an outlet in the bottom, the lower end of the inlet conduit and outlet being provided with co-axial valve seats, a valve coöperating with said seats to control the inlet and outlet of the liquid and normally closing the inlet, means operable at will for setting the valve to close the outlet and open the inlet, means adjustable at will and coöperating with the setting means for temporarily holding the latter in its set position to allow the liquid to enter the receiver, a float actuated by said inflowing liquid, means operated by the float for shifting the holding means from its holding position, and thereby releasing the valve-setting means, and means for restoring the valve and its setting means to their normal positions when released.

5. In a liquid measuring apparatus, in combination with a liquid receiver having an inlet and an outlet and co-axial valve seats therefor, a valve coöperating with said

seats to control the inlet and outlet of the liquid to and from the receptacle and normally closing the inlet, self-retracting means operable at will for setting the valve to open the inlet and close the outlet, means adjustable at will and coöperating with the valve-setting means for temporarily holding the latter in its adjusted position to allow the liquid to enter the receiver, a float in the receiver actuated by the rise of liquid therein, and means actuated by the float for shifting the holding means from its holding position and thereby releasing the valve-setting means to allow the valve to close the inlet and open the outlet.

[Claims 6 to 11 not printed in the Gazette.]

1,156,245. LOADING APPARATUS. ALFRED D. MOSBY, Chicago, Ill., assignor to Marsh Capron Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 29, 1911. Serial No. 651,912. (Cl. 214—8.)



1. In apparatus of the character described, the combination with a track, of a car which runs on the track, a bucket pivoted to the car, and hoisting mechanism which draws the car up the track to its stationary position and thereafter tilts said bucket on its pivot, said hoisting mechanism engaging the car to maintain it stationary while the bucket tilts.

2. In apparatus of the character described, the combination with a track, of a car which runs on the track, a bucket movably connected with the car, and hoisting mechanism which draws the car up the track to its stationary position and thereafter moves said bucket away from the car into discharging position, said hoisting mechanism engaging the car to maintain it stationary during the discharge of the bucket.

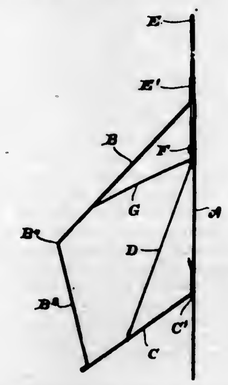
3. In apparatus of the character described, the combination with a track, of a car which runs on the track, a bucket movably connected with the car, and a hoisting cable which engages the car and bucket so as to first elevate the car to its stationary position and then tilt the bucket with respect to the car.

4. In apparatus of the character described, the combination with a track, of a car which runs on the track, a bucket pivoted at its forward end to the car, and a hoisting cable which engages the car and bucket so as to first elevate the car to its stationary position at the upper end of the track and then tilt the bucket with respect to the car.

5. In apparatus of the character described, the combination with a supporting framework, of a track, a carriage which runs on the track, a bucket pivoted to the carriage, a hoisting cable which engages the carriage and bucket so as to first elevate the carriage and then tilt the bucket with respect to the carriage, a drum on which the cable is wound, a driving mechanism for the drum, a clutch mechanism comprising an operating lever, an angular rocking member pivoted on the frame, one arm of which is adapted to engage said clutch lever, and a finger on the bucket adapted to engage the other arm of the rocking member substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,156,246. FORM FOR PRESERVING AND DISPLAYING WAISTS AND OTHER GARMENTS. HERMAN MOSCHCOWITZ, New York, N. Y. Filed Dec. 23, 1914. Serial No. 878,740. (Cl. 211—13.)



In an improvement of the kind described, a back member shaped to display and preserve the form of a garment, a bust form capable of folding against the back member or extending therefrom, with means for extending and supporting said bust form, comprising a supporting member flexibly attached to the back member and to the bust form and also capable of folding against the part A, and a spring capable of supporting and maintaining the bust form in position and of folding against the back member and means for securing the spring to the back part, substantially as described.

1,156,247. GRAB-FORK. ED MURRAY, University Place, Nebr., assignor to Noah White and Frank L. Turner, Lincoln, Nebr. Filed Apr. 5, 1915. Serial No. 19,166. (Cl. 57—40.)



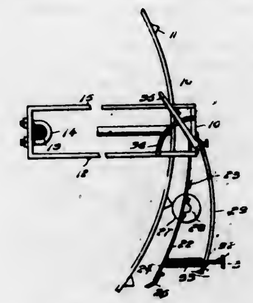
1. A grab fork comprising crossed members, teeth pivotally mounted on the lower ends of said crossed members, rocker bars connected with said teeth, and means on the upper ends of said crossed members and engaging said rocker bars, whereby the crossed members are moved together and said teeth are rocked inwardly with the initial lifting movement.

2. A grab fork comprising crossed members having pivotal connection, and having bell crank levers mounted on their upper ends, teeth pivotally mounted on the lower ends of said crossed members and having lever ends, rocker bars connected with the lever ends and to said bell crank levers, and means engaging the rocker bars whereby the cross members are moved together and the teeth are rocked with the initial lifting-movement of the fork.

3. A grab fork comprising crossed members having pivotal connection, teeth pivotally mounted on the lower ends of said crossed members, bell crank levers pivotally mounted on the upper ends of said members, pulleys carried by said bell crank levers, a rope run over said pulleys and adapted for lifting the fork, and rocker bars connecting the bell crank levers and teeth whereby the latter are moved toward each other with the initial tightening of the rope.

4. A grab fork comprising a double series of crossed bars having pivotal connection, rods extending through the outer ends of each of said series of bars, teeth pivotally mounted on said rods and having levers, end straps connecting the upper ends of the bars in each series and having ears extending parallel in a central position, hanger rods connected with said first named rods and provided with a pulley, a rope run over said pulley and adapted for supporting the fork in open position, bell crank levers pivoted between the ears of said straps, straps connecting the lever ends of said teeth and having ears at central positions, rocker bars connecting the ears of said bell crank levers and the strap ears at opposite sides of the fork, pulleys mounted on the opposite ends of said bell crank levers, and a rope run over said pulleys and adapted for rocking the teeth and then lifting the fork in closed position when the rope is tightened.

1,156,248. TRACTION-WHEEL SCRAPER. ROBERT S. NICHOL, Brooking, Saskatchewan, Canada. Filed Nov. 4, 1913. Serial No. 799,235. (Cl. 21—23.)

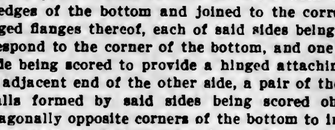


The combination with a traction wheel having cross cleats, of a pivotal scraper overhanging the tread of said wheel, said scraper including a blade adapted to contact with and remove accumulations from the wheel tread, a roller carried by said scraper and spaced from said blade at a distance substantially equal to the distance between adjacent cleats of said wheel, said roller riding upon the tread and riding over said cleats to position said blade in engagement with said cleats and lift said blade over said cleats, means for holding said scraper in operative position, and means for holding said scraper in released position.

1,156,249. SEWING-MACHINE. FRED A. READ, Lynn, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed Mar. 31, 1915. Serial No. 18,385. (Cl. 112—4.)

1. In a sewing machine, the combination with a bed plate having a work-bending groove, of a bender, a bender carrier mounted for vertical sliding movement through the bed plate, and means for operating said carrier.

2. In a sewing machine, the combination with a bed plate having a work-bending groove, of a bender, a bender carrier mounted for vertical sliding movement through the bed plate, a shaft beneath the bed plate, and cam means on the shaft for directly operating the bender carrier.



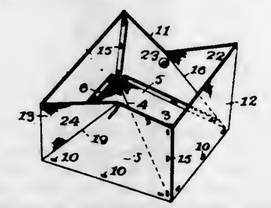
3. In a sewing machine, the combination with a bed plate having a work-bending groove, of a grinding member depending from the bed plate, a bender carrier slidable vertically in said guiding member and through the bed plate, a bender sustained by said carrier, and means to actuate said carrier.

4. In a sewing machine, the combination with a bed plate having a work-bending groove, of a guiding member associated with the bed plate and depending therefrom, a bender carrier extending through the bed plate and slidably mounted in said guiding member for movement at right angles to the plane of the bed plate, and means to actuate said bender carrier.

5. In a sewing machine, the combination with a bed plate having a work-bending groove, of a guiding member associated with the bed plate and depending therefrom, a bender carrier extending through the bed plate and slidably mounted in said guiding member for movement at right angles to the plane of the bed plate, a shaft beneath the bed plate, and cam means on the shaft engaging and operating the bender carrier.

[Claims 6 and 7 not printed in the Gazette.]

1,156,250. FOLDING BOX AND COVER. JAMES A. SCOTT, Worcester, Mass. Filed July 24, 1913. Serial No. 780,901. (Cl. 229—41.)



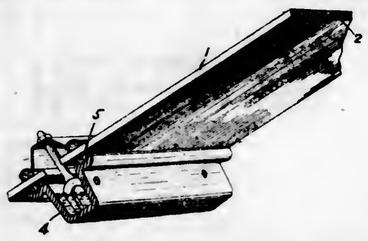
A folding box, having a rectangular bottom, scored along its edges to provide hinged upstanding flanges, said bottom being scored diagonally, walls for said box, consisting of a pair of sides each co-extensive with two adjacent edges of the bottom and joined to the corresponding hinged flanges thereof, each of said sides being scored to correspond to the corner of the bottom, and one end of each side being scored to provide a hinged attaching edge for the adjacent end of the other side, a pair of the opposite walls formed by said sides being scored obliquely from diagonally opposite corners of the bottom to intermediate points along their upper edges, whereby the said opposite walls may be folded upon themselves as they are folded inwardly upon the bottom.

1,156,251. SKYLIGHT. ARNO SHUMAN, Philadelphia, Pa., assignor to Pennsylvania Wire Glass Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Jan. 24, 1914. Serial No. 814,020. (Cl. 108—16.)

1. A skylight at an angle less than twenty degrees to the horisontal having grooves running in the direction of its length and of such width and depth that water of condensation travels in the grooves as distinguished from the edges of the ribs or projections.

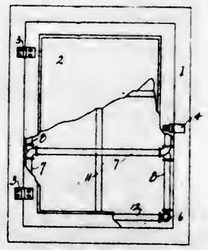
2. A sheet of glass having in the face thereof parallel open channels not exceeding one eighth of an inch in width at the pitch line and of which the depth exceeds the

width at the pitch line and which constitute segments of capillary tubes adapted to hold water within them.



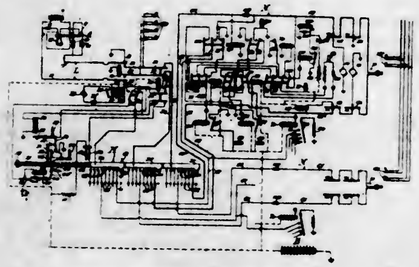
3. A sheet of skylight glass having in the face thereof parallel open channels of rounded cross-section not exceeding one eighth of an inch in width at the pitch line and of which the depth exceeds the width at the pitch line and which constitute segments of capillary tubes.

1,156,252. REFRIGERATOR. CARL G. SIMON, Seattle, Wash.; George Olson, administrator of said Simon, deceased, assignor to L. H. Markham and C. E. Taylor, King county, Wash. Filed Apr. 1, 1912, Serial No. 687,851. Renewed Jan. 11, 1915. Serial No. 1,721. (Cl. 257—22.)



A refrigerator comprising in combination, a chest, an arrangement of pipes removably mounted within the same, comprising an inlet and an outlet pipe, a pair of horizontal pipes, communicating with the outlet pipe, and a series of vertical pipes connected to the horizontal pipes in staggered relation to each other at their lower ends and bent so as to form shelves, and connected at their upper ends with a horizontal pipe communicating with the inlet pipe.

1,156,253. TELEPHONE SYSTEM. LE ROY W. STANTON, Cleveland, Ohio, assignor of one-half to Francis W. Dunbar, Chicago, Ill. Filed Nov. 8, 1912. Serial No. 730,283. (Cl. 179—27.)



1. A telephone system comprising circuits severally available for calling purposes, an operator's telephone set common to said circuits, automatic switch mechanism for extending said circuits to said set, means under the control of an operator for further extending such extended circuits, and means for indicating to a party calling over one of said circuits when the operator's receiver is in circuit ready for the operator to receive such party's order.

2. A telephone system comprising a circuit available for calling purposes, an operator's telephone set for use with said circuit, other circuits for use with said set, automatic switch mechanism for extending said first mentioned circuit to said set, means under the control of an operator for further extending such extended circuit, and means for indicating to a party calling over said first mentioned circuit when the operator's receiver is in circuit ready for the operator to receive such party's order.

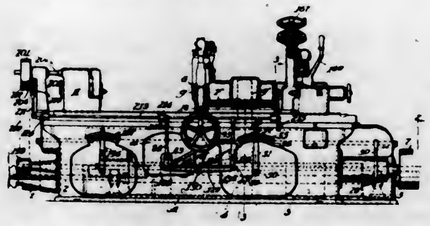
3. A telephone system comprising circuits severally available for calling purposes, operators' telephone sets available for connection to said circuits, means responsive to calls over said circuits to connect said sets to different calling circuits, means for indicating to such calling parties when the operators' sets are respectively in circuit ready for the operators to receive orders from such parties and means for freeing each said connecting means for further service after the receipt of the order over the connections established by it.

4. A telephone system comprising lines severally available for calling purposes, link-circuits available for connection to said lines, an operator's telephone set common to said link-circuits, means responsive to the initiation of a call over any of said lines to connect the calling line to an idle one of said link-circuits, means for indicating to the calling party when the operator's receiver is in circuit ready for the operator to receive such party's order and means operative after the receipt of said order to free said connecting means for further service.

5. A telephone system comprising lines severally available for calling purposes, link-circuits available for connection to said lines, operators' sets available for connection to said link-circuits, means responsive to the initiations of calls over said lines to connect the calling lines to idle ones of said link-circuits, means for indicating to the calling parties when the operators' sets are in circuit ready for the operators to receive such parties' orders, and means for freeing each said connecting means for further service after the receipt of the order over the connections established by it.

[Claims 6 to 81 not printed in the Gazette.]

1,156,254. GRINDING-MACHINE. ULRICH STEINER, Waynesboro, Pa., assignor to Landis Tool Company, Waynesboro, Pa., a Corporation. Filed July 27, 1912. Serial No. 711,935. (Cl. 51—4.)



1. A grinding machine embodying work supporting mechanism and grinding mechanism, said grinding mechanism mounted upon a traversing carriage, means for traversing said carriage comprising a driving shaft, gearing connecting said driving shaft with the power shaft embodying a reversing mechanism, said reversing mechanism, means for shifting said reversing mechanism both automatically and manually, and means for locking said reversing mechanism with the driving mechanism out of gear, substantially as set forth.

2. A grinding machine comprising work supporting and driving mechanism, a grinding wheel carriage, mechanism for traversing said carriage, means for varying the speed of said work drive, and a main driving shaft geared to operate both the carriage drive and the work drive, substantially as set forth.

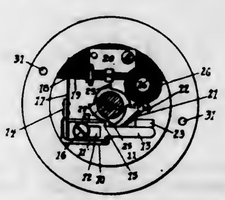
3. A grinding machine comprising work supporting and driving mechanism, means for varying the speed of the work drive, a grinding wheel carriage, mechanism for traversing said grinding wheel carriage, means for varying the speed of the grinding wheel carriage, and a single driving shaft geared to operate both sets of mechanism, substantially as set forth.

4. A grinding machine comprising a frame, a grinding wheel carriage, means for traversing said grinding wheel carriage, change speed gear interposed between the driving shaft and the carriage operating the shaft, said change speed gear comprising a pair of opposed concave friction disks loosely mounted on a shaft and connected by interposed disks mounted on a swiveled frame, one of said concave disks being formed with tapered faces on its exterior surface, an equalising ring pivotally mounted on a hub and formed with cam faces adapted to operate upon the tapered faces of said disks, said hub keyed to the shaft, and means for turning said swiveled frame for varying the speed, substantially as set forth.

5. A grinding machine comprising work supporting and driving mechanism, a grinding wheel carriage, mechanism for traversing said carriage, said mechanism including a change speed gearing comprising a pair of opposed concave disks operatively connected by a pair of interposed friction disks mounted on a swiveled frame, means for swiveling said frame and securing it in position, and an equalising ring mounted on a hub and engaging the outer surface of the adjacent disks by tapered faces, and said hub keyed to the driving shaft, substantially as set forth.

[Claims 6 to 20 not printed in the Gazette.]

1,156,255. COMBINED TIMER AND DISTRIBUTER. ARTHUR L. STRAHLE, Benson, Nebr., assignor of one-half to Leonidas P. Byars, Benson, Nebr. Filed Mar. 4, 1914. Serial No. 822,304. (Cl. 123—168.)



1. A combined timer and distributer of the specified class, comprising a pair of contacts in the primary circuit, contacts in the secondary circuit, and means operated by the timer shaft for rubbing said pair of points back and forth against each other, and for producing successive contacts in the secondary circuit.

2. A combined timer and distributer of the specified class, comprising a pivoted slide carrying one of the contact points of the primary circuit, a rotating timer cam actuating the slide, and a lubricating brush contacting with the cam.

3. A combined timer and distributer of the specified class, comprising a timer shaft, a distributer located in the secondary circuit of the induction coil and operated by the timer shaft, a pair of contact points for opening and closing the primary circuit, a pivoted slide, movable both longitudinally and rotarily, a spring arm outstretched from the slide, a pair of contact points in the primary circuit, one of these points being stationary and the other being carried by the arm, a spring actuating the slide longitudinally to bring the points into juxtaposition without contact, and a cam keyed on the timer shaft, and intermittently turning the slide pivotally in a direction to rub the contact points together.

4. A combined timer and distributer of the specified class, comprising a timer shaft, a cam thereon, a distributer connected with the secondary circuit and operated by the timer shaft, a pivoted slide movable both longitudinally and pivotally by the cam, and a pair of contact points in the primary circuit, which are separated and approximated by the longitudinal movements of the slide and are rubbed together by its pivotal movements.

5. A combined timer and distributer of the specified class, comprising a timer shaft, a distributer operated thereby in the secondary circuit, a cam on the shaft, a slide operated both pivotally and longitudinally by the cam, a spring arm projecting laterally from the slide, and a pair of contact points in the primary circuit, one of these points being stationary and the other being carried by the free end of the arm; whereby the longitudinal movements of the slide separate and approxmate the contact points, and the pivotal movement of the same rubs the points together.

[Claims 6 to 8 not printed in the Gazette.]

1,156,256. TORCH. FRANK J. TAYLOR, Houston, Tex. Filed May 21, 1914. Serial No. 840,104. (Cl. 220—74.)

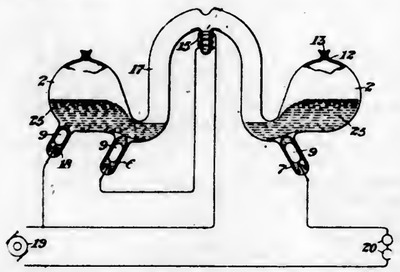


1. A device of the character described including a fuel chamber provided with an orifice one end of which is flared and whose other end is reduced, a conical shaped plug conforming in shape to and fitting in the flared end of said orifice, and a reduced neck extending from the plug, a removable bushing engaging with the reduced portion of the inlet, said neck engaging with said bushing and being detachable therefrom and securing said plug in position against the flared portion of the inlet.

2. A device of the character described including a fuel chamber having a flared fuel inlet, the outer portion of the inlet being blank and the inner portion being exteriorly threaded, a conical shaped plug fitting in the blank portion of said inlet and reduced exteriorly threaded neck carried by the plug, a bushing having a threaded engagement with the threaded portion of the inlet, said neck engaging with said bushing and securing said plug in position in the flared portion of the inlet, and the cap detachably engaging with the chamber and inclosing said plug.

3. A device of the character described including a fuel chamber having a fuel inlet one end of which is flared forming a blank seat and the other end of which is reduced and interiorly threaded, a conical shaped plug fitting in said seat, a reduced neck carried by the plug and exteriorly threaded, a bushing screwed into the threaded portion of the inlet into which the neck is screwed whereby the plug is held in direct contact with the seat, and a protector surrounding said plug and carried by said chamber.

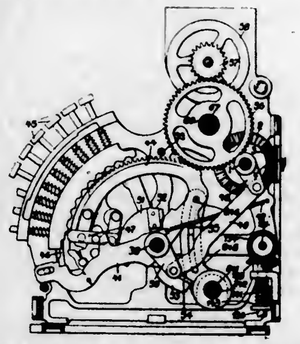
1,156,257. GAS OR VAPOR ELECTRIC APPARATUS. PERCY H. THOMAS, Upper Montclair, N. J., assignor to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Sept. 12, 1912, Serial No. 719,923. Divided and this application filed Dec. 4, 1913. Serial No. 804,569. (Cl. 176—42.)



1. A mercury vapor apparatus comprising a central inverted U-shaped light-giving portion completely filled with mercury under non-operating condition, a regulating chamber connected through a mercury trap with each end of the inverted U-shaped portion, said chambers being open to the air, means for forcing a separation between the columns of mercury in said U-shaped portion and means for permitting the escape of mercury vapor to said chambers against atmospheric pressure upon the attaining of any excess over normal pressure in the said central portion.

2. A mercury vapor lamp, comprising a tubular light giving portion, atmospheric chambers on each end of said portion, mercury traps between each of said chambers and said light giving portion, means for generating a pressure in said light giving portion in excess of the pressure in said chambers, said means including a suitable source of current and connection to the interior of said lamp, and means located in said mercury traps for minimizing the conduction of heat from the central light giving portion to the said chambers.

1,156,258. CASH-REGISTER. EDWARD J. VON PEIN, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Dec. 11, 1911. Serial No. 665,086. (Cl. 235—3.)



1. In an accounting machine, the combination with a motor, of a motor circuit including a switch, driving mechanism operated by the motor, a plurality of totalizers, mechanism for operatively connecting any one of said totalizers with the driving mechanism, and a key having suitable connections for closing the motor switch, controlling said connecting mechanism, and the driving mechanism.

2. In an accounting machine, the combination with a motor, a motor circuit including a motor switch, differential mechanism driven by the motor, a plurality of totalizers, mechanism for operatively connecting any one of said totalizers with the differential mechanism, and a key having suitable connections for closing the motor switch, controlling said connecting mechanism, and the differential operation of the differential mechanism.

3. In an accounting machine, the combination with totalizer operating mechanism, of a rotatable reel in which is mounted a plurality of totalizers, key controlled positioning mechanism for said reel whereby any desired totalizer may be operatively connected with said operating mechanism, a manually operable lever whereby the totalizer reel may be set to different positions, and means controlled by said lever for preventing operation of said key controlled positioning mechanism when the lever is moved out of normal position.

4. In an accounting machine, the combination with totalizer operating mechanism, of a plurality of totalizers, key controlled positioning mechanism for said totalizers whereby any desired totalizer may be operatively connected with said operating machanism, a manually operable means whereby the totalizers may be set to different positions, and a locking mechanism controlled by said manually operable means for preventing operation of said key controlled positioning mechanism when said manually operable means is moved out of normal position.

5. In an accounting machine, the combination with totalizer operating mechanism, of a plurality of totalizers mounted on a movable frame, and key controlled mechanism suitably constructed to position said totalizer frame so as to bring the desired totalizer into operative relationship with the totalizer operating mechanism, and for controlling a differential accounting operation of a selected totalizer.

[Claims 6 to 38 not printed in the Gazette.]

1,156,259. UNDERFRAME-REINFORCEMENT. ARTHUR H. WESTON, Baltimore, Md. Filed Nov. 25, 1914. Serial No. 873,880. (Cl. 105—76.)



1. In an underframe, reinforcement for wooden frame cars, wooden center sills, a U shaped central beam between the sills extending from bolster to bolster, the U shaped beam having bottom flanges which engage the bottoms of the sills, the legs of the U engaging the inner faces of the sills.

2. In an underframe, reinforcement for wooden frame cars, wooden center sills, a U shaped central beam between the sills extending from bolster to bolster, the U shaped beam having bottom flanges which engage the bottoms of the sills, the legs of the U engaging the inner faces of the sills, and two draft plates secured to each end of the central beam and abutted against the same.

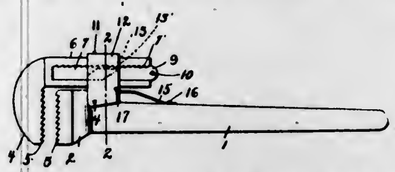
3. In an underframe, reinforcement for wooden frame cars, wooden center sills and a central longitudinal reinforcing beam spanning the sills between the bolsters, the beam being of U shaped cross-section with bottom flanges, the legs of the U being engaged by the inner faces of the sills and the bottom faces of the sills being engaged by the flanges whereby the reinforcing beam is caused to inclose and engage two faces of each center sill.

4. In an underframe, reinforcement for wooden frame cars, wooden center sills, a central reinforcing beam between the sills, the beam being of U shaped cross-section with bottom flanges, the legs of the U being engaged by the inner faces of the sills and the bottom faces of the sills being engaged by the flanges whereby the reinforcing beam is caused to inclose and engage two faces of each center sill, and longitudinal timbers secured to the bottoms of the sills and covering the flanges.

5. In an underframe, reinforcement for wooden frame cars, wooden center sills, a central reinforcing beam between the sills, the beam being of U shaped cross-section with bottom flanges, the legs of the U being engaged by the inner faces of the sills and the bottom faces of the sills being engaged by the flanges, tie plates connecting the flanges, the same being placed at intervals throughout the length of the beam and vertical and horizontal bolts tying the whole together.

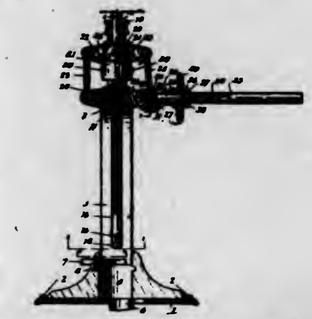
[Claim 6 not printed in the Gazette.]

1,156,260. PIPE-WRENCH. LEE WHITCOMB, Elwood, Ill. Filed Apr. 28, 1915. Serial No. 24,455. (Cl. 81—103.)



In a pipe wrench, the combination with a handle having a stationary jaw at one end thereof, of a sliding jaw provided with a shank portion having grooves in opposite sides thereof, the top walls of said grooves being provided with teeth, an inverted U-shaped yoke member pivotally connected at its lower forward portion with the stationary jaw, vertically arranged rhomboidal lugs integral with and extending inward from the sides of the yoke member and adapted to lie in the grooves of the shank of the sliding jaw, said lugs having teeth adapted to engage with the teeth of the walls of the grooves, a member extending transversely of the yoke below the lugs, and a spring fastened at one end to the handle and adapted to bear at its opposite end against the transverse member.

1,156,261. MANDREL-PRESS. HENRY P. WHITE, Kalamazoo, Mich., assignor to Atlas Press Co., Kalamazoo, Mich., a Corporation. Filed Apr. 15, 1913. Serial No. 761,191. (Cl. 29—85.)



1. In a mandrel press, the combination of a supporting frame, the upper part of said frame being provided with a pair of alined openings, a ram slidably suspended in said openings, means for balancing said ram, said rame being provided between its ends with upwardly inclined ratchet teeth, downwardly pointing ratchet pawls adapted to engage said ratchet teeth, means for pressing said pawls into engagement with said teeth, the pawls being arranged to automatically recede when pressure is withdrawn.

2. In a mandrel press, the combination of a supporting frame, a ram suitably suspended in said frame, a sectional ratchet device adapted to surround the ram at a point in the upper part of the frame, said ratchet device comprising an upper casing, diametrically opposed pins on said casing, working beams journaled on said pin, a slotted flange on the lower end of said casing, an annular seat in the bottom thereof, a lower casing secured inside the flange in the upper casing by means of screws passing through said slots, an annular bead in the inner top surface of said lower casing, pawls provided with grooved seats adapted to receive the annular bead, the inner top surface of said pawls being provided with grooves, a coiled spring seated in the annular seat of the top casing and engaging in said grooves, said pawls being secured to the upper casing by means of dowel pins, each pawl being provided with a plurality of teeth, means for holding said lower casing fixed relative to the frame and means for applying pressure to said working beam, all coacting substantially as described for the purpose specified.

3. In a mandrel press, the combination of a double column frame, provided with an opening in the base, a mandrel holder suspended in said opening, an adjustable work plate resting upon the top surface of the base of said frame, a pair of alined openings in the upper part of said frame, a ram suspended in said openings, means for balancing said ram, said ram being provided between its ends with upwardly projecting ratchet teeth, a sectional ratchet device surrounding said ram at a point between the openings in said frame, a plurality of multiple tooth pawls adapted to engage the ratchet teeth on said ram, spring members frictionally engaging the opposite sides of said sectional ratchet device to hold it in whatever position it may come to rest, a pair of working beams journaled at the opposite sides of said ratchet device, a link connecting the back ends of said working beams to a rigid fulcrum on the back side of the frame, a movable cross-head, links connecting the front ends of said working beams to said movable cross-head, a lever member pivoted to said frame, said cross-head being slidably mounted in said lever member, means for moving said cross head with respect to said lever member to vary the distance between the pivot of said lever member and the fulcrum of the lower end of said connecting link, all coacting substantially as described for the purpose specified.

4. In a mandrel press structure, the combination of a suitable base with a supporting frame thereon provided with a pair of guide openings at the upper end thereof, a ram disposed and guided through said openings and provided with upwardly-projecting ratchet teeth, a pawl head consisting of a pair of members, one of which is movable upon the other, segmental pawls in said head surrounding the said ram, and a spring for forcing the same normally out of engagement and means engaging one of the members to throw the pawl into engagement on the downward movement of said ratchet device, all coacting substantially as described for the purpose specified.

5. In a mandrel press, the combination with a suitable base of a supporting frame thereon, a ram with ratchet teeth thereon, a pawl head for engaging the same, a work beam connected by a suitable link to lugs on the said frame and journaled on the said pawl head, a lever fulcrumed to a lug on the said supporting frame, a link connection from the said lever to the said work beam and means for adjusting the connection of the link to the said lever, all coacting substantially as described for the purpose specified.

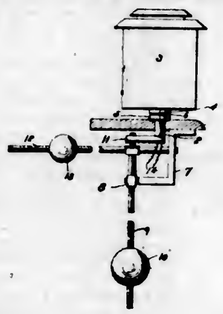
[Claims 6 to 19 not printed in the Gazette.]

1,156,262. HEADLIGHT FOR LOCOMOTIVES. JOHN H. WHITING, Punxsutawney, Pa., assignor to International Motor Co., Punxsutawney, Pa. Filed Apr. 29, 1915. Serial No. 24,705. (Cl. 240—62.)

1. The combination with a support having an opening, a head-light having a pivotal support extending through said opening, an angle bracket depending from said support, a pendulum supported by said bracket, a connection between the pendulum and the pivotal head-light support, and means for preventing shocks due to the sudden movements of the pendulum.

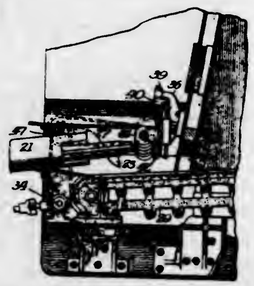
2. The combination with a support formed with an opening, of a rotatable head-light having a depending central pivot, an angle bracket secured to said support, and

provided with a bearing, a pendulum journaled upon said bearing, an arm connecting said pendulum and the pivotal support of the head-light, a horizontally disposed rod supported upon said vertical pendulum rod and guided by said bracket, and a weight supported on said rod.



3. The combination with a support formed with an opening, of a rotatable head-light provided with a hollow pivotal support extending through said opening, co-acting ball bearing disks between the head-light and support, an angle bracket secured to said support and provided with a bearing, a weighted pendulum journaled upon said bearing, an arm connecting said pendulum and pivotal support, a horizontal rod loosely journaled in said bracket and a weight on said rod.

1,156,263. LOCOMOTIVE-STOKER. AUGUSTINE R. AYERS, Chicago, Ill., assignor of one-half to John J. Bernet, Chicago, Ill. Original application filed May 26, 1913, Serial No. 769,840. Divided and this application filed Aug. 20, 1914. Serial No. 857,635. (Cl. 110—101.)



1. In a device of the class described, the combination with a locomotive of an endless grate, means for supplying fuel to said grate, and means for distributing said fuel over the surface of said grate, said means including vertically-adjustable deflectors located at the point of fuel supply and means for vertically adjusting each end of each deflector, substantially as described.

2. In a device of the class described, the combination with a locomotive of an endless movable grate, means for supplying fuel to said grate at one end thereof, a pair of deflectors located at the point of fuel supply, and means for vertically adjusting both ends of both said deflectors, whereby to control the height of fuel fed to said grate, substantially as described.

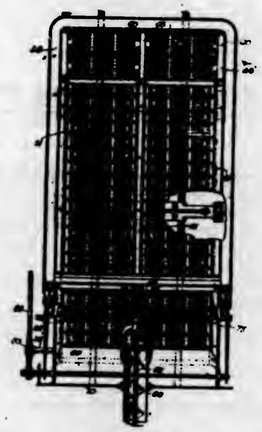
3. In a device of the class described, the combination with a locomotive of an endless movable grate, means for supplying fuel to said grate at one end thereof, and a pair of screw conveyers vertically adjustable and arranged for rotation, whereby to distribute fuel over the surface of said grate, substantially as described.

4. In a fuel feeding device, the combination of a pair of transverse spreaders, means for moving said spreaders independently at the outer ends thereof, and separate means for vertically moving both said spreaders at the adjacent ends thereof, substantially as described.

5. In a fuel feeding device, the combination of a moving grate, a pair of transversely arranged spreaders, a leveling plate associated with said spreaders, and means for vertically adjusting said apreaders and plate, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,156,264. STOKER FOR LOCOMOTIVES. AUGUSTINE R. AYERS, Chicago, Ill., assignor of one-half to John J. Bernet, Chicago, Ill. Filed May 26, 1913. Serial No. 769,840. (Cl. 110—42.)



1. In a device of the class described, the combination with a supporting-frame of a plurality of grate-bars, connecting-links for said grate-bars, and removable guide-members supported by said frame, between which said grate-bars are adapted to be moved, and by means of which said connecting-links are maintained in operative relation to said grate-bars, substantially as described.

2. In a device of the class described, the combination of side and center frame-members, guides carried by said members, grate-bars mounted for movement between said guides, links connecting adjacent grate-bars, said links being held in position by coöperation with said guide-bars, substantially as described.

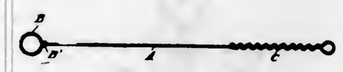
3. In a chain-grate, the combination of connected grate-bars, and a three-plane sprocket over which said grate passes and by means of which the grate is driven, one portion of said sprocket causing the driving of the grate, another portion supporting the grate-bars, and another portion supporting the connecting-links between adjacent bars, substantially as described.

4. In a chain-grate, the combination of grate-bars, links connecting said bars, and a sprocket over which said grate passes at its limit of travel, said sprocket consisting of a toothed portion and two flat-sided portions, said flat-sided portions being arranged with their flat sides in different planes, one of said flat-sided portions forming a support for the grate-bars and the other flat-sided portion forming a support for connecting-links between adjacent bars, substantially as described.

5. In a device of the class described, the combination with a supporting frame, a plurality of grate bars, links connecting adjacent bars, rigid guide plates associated with said frame and tending to maintain the outer links in position, and a removable guide member at the center and tending to maintain the inner links in position, substantially as described.

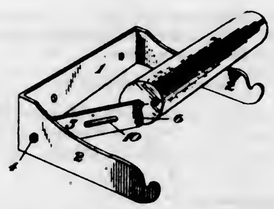
[Claims 6 and 7 not printed in the Gazette.]

1,156,265. BAG-TIE. ADELMER M. BATES, Chicago, Ill., assignor to Bates Valve Bag Company, Chicago, Ill., a Corporation of West Virginia. Filed Dec. 29, 1913. Serial No. 809,216. (Cl. 24—27.)



A wire tie for bags and the like having a loop at one end and bent back upon itself at the other end, so as to form a double-wire portion made up of a straight portion and a crooked portion twisted therearound, and a loop at the other end of the wire formed by the wire end slidably engaging the body of the wire to leave the loop free to contract.

1,156,266. TOILET-PAPER HOLDER. SAMUEL J. BENS, Berkeley, and ALBERT B. HUBBARD, Oakland, Cal. Filed Jan. 29, 1914. Serial No. 815,222. (Cl. 211—31.)



A toilet paper holder consisting of a sheet metal frame having an open front, a paper roll support, a connecting arm between the paper support and one of the arms of the frame, said connecting arm carrying the paper roll support at its front end and pivoted at its rear end to the said arm of the frame, the said connecting arm being provided with means for retarding the unwinding of the roll, substantially as described.

1,156,267. NECKLACE-CLASP. HENRY BLANK, Glen Ridge, N. J., assignor to Whiteside & Blank, a Corporation of New Jersey. Filed Sept. 11, 1911. Serial No. 648,653. (Cl. 24—230.)



In a clasp, the combination of a female member comprising a socket with opposite lateral interior projections therein, a male member adapted to enter said socket and having a body portion with opposite lateral resilient tongues adapted to normally engage said projections and be released therefrom by compression toward said body portion, said body portion being perforated transverse to the plane of itself and said resilient tongues, and a lock member on the female member adapted to project into said perforation of the male member when the male and female members are in locked engagement and hold said body portion against lateral movement in the plane of itself and said tongues, whereby equal compression of said tongues is permanently insured, said lock member and male and female members adapted to be operated independent of each other in opening and closing the clasp.

1,156,268. COMBINED TIRE-VALVE AND PRESSURE-GAGE. OSCAR F. E. BROMBERG, San Diego, Cal. Filed May 10, 1915. Serial No. 27,026. (Cl. 152—12.)



1. In a device of the class described, the combination of a tire valve stem, a cylindrical piece secured thereon provided with a curved valve seat with ports leading directly therefrom to the inner surface of said cylindrical piece, a valve mounted in said curved seat, an air conducting tube secured in said cylindrical piece, a valve stem mounted in said tube extending through the outer surface of said cylindrical piece, means for holding said valve seated, a plunger reciprocally mounted in said cylindrical piece, a pressure indicating means in connection therewith and a spring for regulating the movement of said plunger.

2. In a device of the class described, the combination of a tire valve stem, a cylindrical piece secured thereon provided with a valve seat near the lower end thereof adjacent the upper end of said valve stem with ports leading therefrom to the inner surface of said cylindrical piece, a valve mounted in said seat, a tube secured centrally in said cylindrical piece, means for closing the upper end of said cylindrical piece, a valve stem mounted in said tube and said closing means extending through the upper end thereof for operating said valve, a spring for holding said valve seated, a plunger reciprocally mounted in said cylindrical piece, a pressure indicating means in connection therewith and a spring for regulating the movement of said plunger.

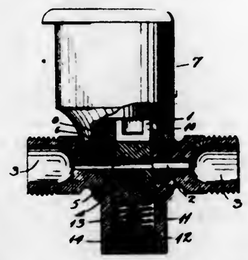
3. In a device of the class described, the combination of a tire valve stem, a cylindrical piece secured thereon provided with a valve seat with ports leading therefrom to the inner surface of said cylindrical piece, a valve mounted in said valve seat, a tube secured centrally in said cylindrical piece, a plug secured in the upper end of said cylindrical piece, a valve stem mounted in said tube and said plug, extending through the upper end of said plug for operating said valve, a spring for holding said valve seated, a plunger reciprocally mounted in said cylindrical piece provided with an annular upwardly extended flange, pressure indicating means in connection therewith and adjustable means for regulating the movement of said plunger.

4. In a device of the class described, the combination of a tire valve stem, a cylindrical piece secured thereon provided with a valve seat in the lower end thereof, adjacent the upper end of said valve stem with ports leading therefrom to the inner surface of said cylindrical piece, a valve mounted in said valve seat, a tube secured centrally in said cylindrical piece, means for closing the upper end of said cylindrical piece, a valve stem mounted in said tube and said closing means extending through the upper end of said closing means for operating said valve, a spring for holding said valve seated, a plunger reciprocally mounted in said cylindrical piece, pressure indicating means in connection therewith and adjustable means for regulating the movement of said plunger.

5. In a device of the class described, the combination of a tire valve stem, a cylindrical piece secured thereon provided with a curved valve seat forming a pocket between the upper end of said valve stem and said valve seat with ports leading therefrom to the inner surface of said cylindrical piece, a valve mounted in said pocket, a tube secured centrally in said cylindrical piece, a plug secured to the upper end of said cylindrical piece and fitting on said tube, a plunger reciprocally mounted in said cylindrical piece provided with an upwardly extended annular flange, a pressure indicating means in connection therewith, a compression spring adjustably mounted around said tube adapted to regulate the movement of said plunger and a means for operating said valve through said tube and extending out through the upper end of said plug.

[Claim 6 not printed in the Gazette.]

1,156,269. STOP-COCK. ROBERT WILCOX BULL, Los Angeles, Cal., assignor of one-half to William B. Frazer, Los Angeles, Cal., and one-tenth to William B. Frazer, trustee, Los Angeles, Cal. Filed Mar. 26, 1912. Serial No. 686,448. (Cl. 137—7.)



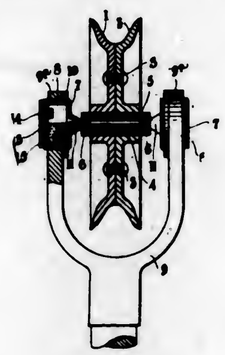
1. A stop cock comprising a body, a barrel depending from the body, a lock plug rotatably and yieldably mounted within the barrel, the said plug having a slot in the upper end thereof for engagement by a key whereby the plug may be rotated, and means for limiting the movement of the plug in the direction in which the key is inserted during the rotation of the plug.

2. A stop cock comprising a barrel portion, a lock plug rotatably mounted therein adapted to be rotated by a key inserted in one end thereof, resilient means engaging the other end of the plug for normally holding the same in position and a stop pin within the barrel adjacent the said resilient means adapted to serve as a pivot in case the plug is pressed toward the same during its rotation by the key, the end of the pin and the adjacent face of the plug being normally in slight spaced relation.

3. A stop cock comprising a barrel, a lock plug rotatably mounted therein, resilient means for supporting the lock plug within the barrel, the said plug being constructed and arranged to be engaged by a key and rotated and means to control the compression of the resilient means during the rotation of the plug and to act as a pivot for the latter.

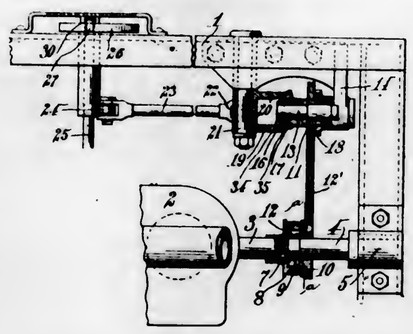
1,156,270. TROLLEY-WHEEL. SAMUEL GORDON BUSKARD, Hamilton, Ontario, Canada, assignor of one-sixth to Levi Lyons, one-sixth to Frederick G. Mummery, and one-sixth to Henry Carpenter, Hamilton, Canada. Filed Apr. 10, 1914. Serial No. 830,934. (Cl. 64—27.)

In a device of the character described, the combination with the trolley wheel and harp of the trolley pole, of an axle extending through the trolley wheel and rigidly secured thereto, said axle having conical shaped indentures in the ends thereof, oil reservoirs threaded into the upper ends of the harp, lock nuts for holding said oil reservoirs in position, removable inwardly extending hollow conical projections suitably threaded into the inner ends of the oil reservoirs, said projections inserted into the indentures in the ends of the axle and having slots extending through each of the projections with the interior of the projections,



said slots extending from the apex to a point intermediately of their width, and wicks extending into the slots and down into the oil reservoirs.

1,156,271. MOTION TRANSLATION AND TRANSMISSION MECHANISM. THOMAS CARROLL, Dayton, Ohio. Filed Oct. 20, 1913. Serial No. 796,158. (Cl. 74—27.)



1. In a motion translation and transmission mechanism, means for translating and converting reciprocating motion into rotatry motion comprising two shafts arranged in angular relation one to the other, a mutilated bevel gear having a shoulder on one side of the teeth thereof mounted on one of said shafts, and reciprocating gears mounted on the other of said shafts and arranged to alternately engage the teeth of said bevel gear, said reciprocating gears having oppositely disposed shoulders formed thereon adapted to alternately engage the shoulder on the bevel gear, whereby the reciprocatory movement of said reciprocating gears is limited at substantially each complete rotation of the bevel gear.

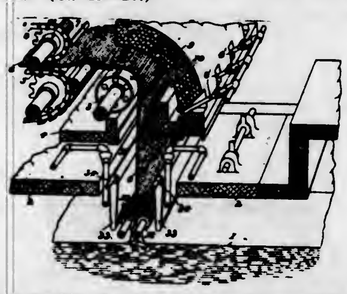
2. In a motion translation and transmission mechanism, the combination with two oscillatory reciprocating driving gears mounted on a common axis and having a shoulder formed on each at opposite ends thereof, of a continuously rotatable bevel gear arranged to alternately mesh with said reciprocating gears, said bevel gear having a shoulder formed on one side thereof, and the axis of which lies at a right angle to the axis of the reciprocating gears, and means for imparting reciprocatory movement to said reciprocating gears, substantially as specified.

1,156,272. DETACHABLE GEAR-SHIFTING LEVER. HARRY S. CASS, Chicago, Ill., assignor, by direct and mesne assignments, to Lever-Lock Company, a Corporation of Illinois. Filed Feb. 11, 1915. Serial No. 7,500. (Cl. 74—39.)



In lever mechanism, the combination of a lever member, a supporting member therefor, a rectangular key end on one of said members having grooves and ridges, and the other member having a grooved and ridged socket for receiving said key end.

1,156,273. MEANS FOR DRAWING SHEET-GLASS. IRVING W. COLBURN, Franklin, Pa., assignor, by mesne assignments, to Toledo Glass Company, Toledo, Ohio, a Corporation of Ohio. Filed Aug. 14, 1908. Serial No. 448,485. (Cl. 49—17.)



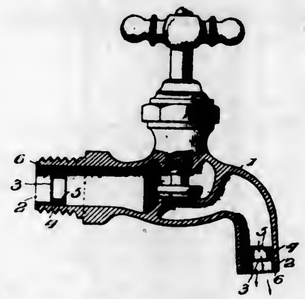
1. In a machine for drawing figured sheet glass from a mass of molten glass, a pair of sheet-drawing and sheet-figuring rolls located at the sheet-forming point and in contact with the sheet from edge to edge, and means for driving said rolls.

2. In a machine for drawing figured sheet glass from a mass of molten glass, a pair of sheet-drawing width-maintaining sheet-figuring rolls located at the sheet-forming point and in contact with the sheet from edge to edge, and means for driving said rolls.

3. In a machine for drawing figured sheet glass from a mass of molten glass, a pair of figured drawing rolls extending across and contacting with the sheet from edge to edge at the sheet-forming point, and means for driving said rolls, whereby the sheet is simultaneously drawn, figured, and width-maintained by the single pair of rolls.

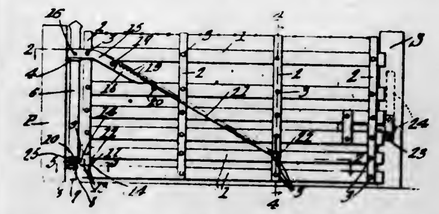
4. In glass-drawing apparatus, the combination of a receptacle for containing a mass of molten glass, a pair of oppositely disposed parallel width-maintaining rolls extending transversely across said receptacle, yielding bearings for the shafts of said rolls, gearing connecting said rolls, and a drive shaft operatively connected to the shaft of one of said rolls, said drive shaft turning in a bearing movable in unison with the bearing of one of said rolls.

1,156,274. STRAINER FOR FAUCETS. JEREMIAH COMENY, York, Pa. Filed May 25, 1915. Serial No. 30,448. (Cl. 210—6.)



A strainer comprising a shell having an outer flange at one end and its opposite end portion recurved, and a cup-shaped sleve arranged within the shell and having its rim or wall confined between the shell and the recurved end portion thereof.

1,156,275. GATE. CHARLES W. COX, Winchester, Ind. Filed Dec. 15, 1914. Serial No. 877,362. (Cl. 39—18.)



1. In a gate structure, a gate comprising rails and stiles pivoted together, a hanger bar pivoted to the gate and having an inclined rack slidably engaging one of the rails, and an inclined rod pivoted to the gate and engageable with the rack, the rod and rack being approximately in alinement.

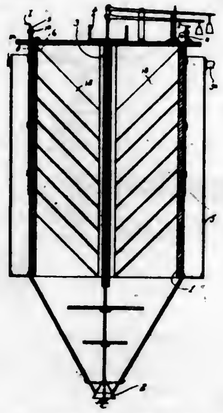
2. In a gate structure, a gate comprising rails and stiles pivoted together, a hanger bar pivoted to the gate and having an inclined rack having a fork at its lower end straddling and slidably engaging one of the rails, and an inclined rod pivoted to the gate and engageable with the rack, the rod and rack being approximately in alinement.

1,156,276. SLIME-THICKENER FOR DEWATERING MINE-TAILINGS. WILTON E. DARROW, Sutter Creek, Cal. Filed Feb. 8, 1915. Serial No. 6,694. (Cl. 210—5.)

1. A device of the character described comprising a receptacle having a central inlet pipe extending to a point near the bottom thereof, a plurality of openings in the side of said receptacle, another receptacle disposed around said first named receptacle and having its side walls spaced from the side walls of said first named receptacle, said openings communicating with said second named receptacle, and a plurality of deflectors arranged in said first named receptacle, as described.

2. A device of the character described comprising a receptacle having a central inlet pipe extending to a point near the bottom thereof, a plurality of openings in the side of said receptacle, another receptacle disposed around said first named receptacle and having its side walls spaced from the side walls of said first named receptacle, said openings communicating with said second named receptacle, and a plurality of deflectors arranged in said first named receptacle, the top level of said first named re-

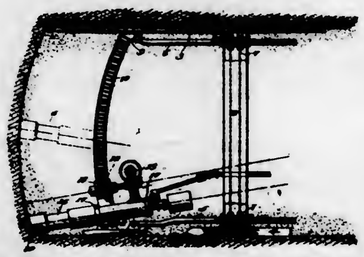
ceptacle being higher than that of said second named receptacle, as described.



3. A device of the character described comprising a receptacle, an inlet pipe projecting into said receptacle to a point near the lower end thereof, another receptacle disposed around said first named receptacle and having its side walls spaced from the side walls of said first named receptacle, a plurality of openings in the side of said first named receptacle, means for adjusting the size of said openings, and a plurality of deflectors in said first named receptacle, as described.

4. A device of the character described comprising a receptacle, means for admitting a flow of watered mine tailings into said receptacle, said receptacle being provided with a plurality of openings in its side to allow of the outlet of said flow, and means for adjusting the size of said openings to regulate the outward flow in proportion to the inlet flow so as to hold said watered mine tailings at a predetermined level within said first named receptacle, as described.

1,156,277. TUNNELING-MACHINE. WILLIAM E. DEAN, Superior, Wis. Filed Sept. 12, 1912. Serial No. 720,077. (Cl. 125—14.)



1. A tunneling machine, comprising a vertically disposed support, horizontally adjustable arms carried by the support, shoes carried by the outer ends of the support, segmental rack bars pivotally connecting the shoes, a drill support surrounding the rack bars, a battery of drills carried by the support, pinions carried by the drill support and meshing with the rack bars, and means for rotating said pinion whereby the battery of drills may be moved in an arc of a circle.

2. A drilling machine comprising a vertically disposed support, horizontally arranged adjustable arms carried by the upper and lower ends of said support, shoes pivotally carried by the outer ends of the said arms, segmental racks connecting the upper and lower shoes, a drill support surrounding the rack bars, a battery of drills carried by the support, pinions carried by the drill support and meshing with the rack bars, means for rotating said pinions whereby the battery of drills may be moved in an arc of a circle.

3. A drilling machine, comprising a vertically disposed frame, horizontally arranged rods extending through the said frame at its upper and lower ends, and screw threaded sprockets on said rods within the frame, means for operating said sprockets whereby the rods are longitudinally adjustable, shoes carried by the outer ends of the rods, segmental rack bars connecting the upper and lower shoes, a drill support surrounding the rack bars, a battery of drills carried by the support, pinions carried by the support and meshing with the rack bars, and a worm driving said pinions whereby the battery of drills may be moved vertically in an arc of a circle.

4. A drilling machine, comprising a vertically disposed frame, horizontally arranged rods extending through the frame at its upper and lower ends and threaded, sprockets on said threaded rods within the frame, means for moving the said sprockets in unison, shoes pivoted and carried by the outer ends of the rods, rack bars rigidly carried by the upper shoe and having its lower end pivotally connected to the lower shoe, a drill support surrounding the rack bars, a battery of drills carried by the support, pinions carried by the support and meshing with the rack bars, and a worm driving said pinions, whereby the battery of drills may be moved vertically in an arc of a circle.

5. A drilling machine comprising a vertically disposed frame, horizontally arranged rods extending through the frame at its upper and lower ends and threaded, sprockets on said threaded rods within the frame, means for moving the said sprockets in unison, shoes carried by the outer ends of the rods, rack bars rigidly carried by the upper shoe and having its lower end pivotally connected to the lower shoe, a drill support surrounding the rack bars, a battery of drills carried by the support, pinions carried by the support and meshing with the rack bars, a worm for driving said pinions, and means for driving said worm substantially as shown and described.

[Claims 6 to 8 not printed in the Gazette.]

1,156,278. VACUUM-HORSESHOE. JAMES M. DOVE, Chicago, Ill., assignor to Charles P. Dryden, Chicago, Ill. Filed Oct. 14, 1912. Serial No. 725,649. (Cl. 168—28.)

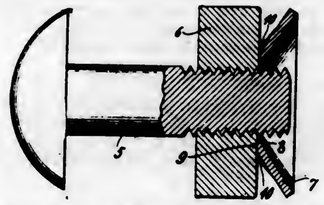


An article of the character described, comprising a rubber pad having a thick heel cushion and a relatively thin front and side portion which extends the entire width of the pad in front of the heel portion, the said heel cushion extending the entire width of the pad at the rear side and provided with a forwardly projecting narrower portion of the same thickness which is adapted to lie between the ends of the shoe, said thick heel cushion and its projecting narrow portion having a single suction recess formed therein in which forms a relatively large downwardly opening cavity below the frog only of the foot and protects said frog from undue pressure.

1,156,279. NUT-LOCK. GEORGE H. DUKE, Hotchkiss, Colo. Filed Dec. 17, 1914. Serial No. 877,670. (Cl. 157—30.)

1. A nut lock washer which is dished before application, and has a bolt orifice, the wall of the orifice being shaped to produce a continuous cutting edge on the concave side of the washer.

2. A nut lock washer which is dished before application, and has a bolt orifice, the wall of the orifice being shaped to produce a cutting edge on the concave side of the washer, said cutting edge being continuous and extending transversely of the threads of the bolt receiving the washer.

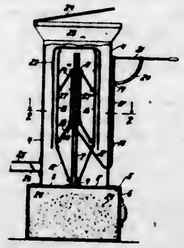


3. A nut lock washer which is dished before application and has a bolt orifice, the apex of the washer being trimmed off in a plane parallel to the base of the washer to produce a cutting edge on the concave side of the washer.

4. A nut lock washer which is dished before application and has a bolt orifice, the apex of the washer being trimmed off in a plane parallel to the base of the washer to produce a cutting edge on the concave side of the washer, said cutting edge being continuous and extending around the bolt shank receiving the washer, and transversely of the threads of said bolt shank.

5. A nut lock washer which is dished before application, and has a bolt orifice, the wall of the orifice being shaped to produce a cutting edge on the concave side of the washer, and nut-engaging ridges on the convex side of the washer.

1,156,280. APPARATUS FOR CLEANING BAGS. JOHN G. ELLENDT, Rochester, N. Y. Filed Jan. 16, 1913. Serial No. 742,494. (Cl. 15—8.)

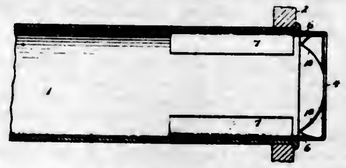


1. In an apparatus of the class described, an outer casing, an upright standard therein, a slide on said standard, upright slats on opposite sides of said standard, links pivoted to said slats and said slide, means to reciprocate said slide on said standard, and means to limit the endwise movement of said slats, whereby said slats are vibrated radially of said standard.

2. In an apparatus of the class described, an outer casing, an upright standard therein, a slide on said standard, upright slats on opposite sides of said standard, links pivoted to said slats and said slide, means to reciprocate said slide on said standard, and means to limit the endwise movement of said slats, whereby said slats are vibrated radially of said standard, said reciprocating means comprising a connecting bar secured to said slide, and means outside the casing for operating said bar.

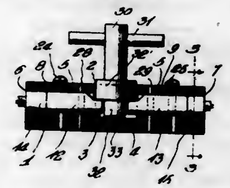
1,156,281. RETARDER FOR BOILER-TUBES. DANIEL E. ERICKSON, Berkeley, Cal., assignor to Robert S. Moore, San Francisco, Cal. Filed June 17, 1914. Serial No. 845,630. (Cl. 110—97.)

A retarder for boiler tubes consisting of a piece of spring sheet metal having a centrally apertured central portion, narrow necks extending at right angles from said central portion and enlarged extensions adapted to be retained by spring pressure in the interior of the tube, said central portion having parts adapted to be bent back to



abut against the end of the tube or boiler sheet to limit the inward movement of the retarder in the tube.

1,156,282. ELECTRIC SWITCH. WILLIAM H. FARMER, Boothbay Harbor, Me., assignor of one-third to Henry I. Phinney, Boothbay Harbor, Me. Filed July 22, 1915. Serial No. 41,361. (Cl. 175—282.)



A switch comprising a one piece insulator block having a centrally disposed recess with a countersunk internally threaded portion therein, said block having a pair of diametrically extending passages from the recess to the ends of the block and a pair of vertically extending passages bisecting each of the first mentioned passages, conductors positioned in the diametrically extending passages projecting in spaced relation in the recess, said conductors having openings therethrough alined with the vertical passages and sockets in their outer ends to receive wires, pins extending through two of said vertical passages to hold said conductors in the block, set screws positioned in the remaining vertical passages to lock the wires in the sockets, and a movable screw member positioned in said recess operatively engaging the countersunk portion of the same and having an enlarged portion for contact with the spaced conductors in the recess.

1,156,283. DRAW-BAR-CENTERING MECHANISM. FREDERICK S. GALLAGHER, Chicago, Ill., assignor, by mesne assignments, to Waugh Draft Gear Company, a Corporation of Illinois. Filed Oct. 30, 1905. Serial No. 285,125. (Cl. 213—42.)



1. In a draft-rigging mechanism, the combination with a draw-bar and a yoke pivotally connected to the shank of said draw-bar, of a draw-bar centering means pivotally connected to said yoke and operating laterally upon the draw-bar, substantially as described.

2. In a draft-rigging mechanism, the combination with a draw-bar and a yoke pivotally connected to the shank of said draw-bar, of a draw-bar centering means pivotally mounted concentric with the pivotal connection of said draw-bar and yoke and operating laterally upon the draw-bar, substantially as described.

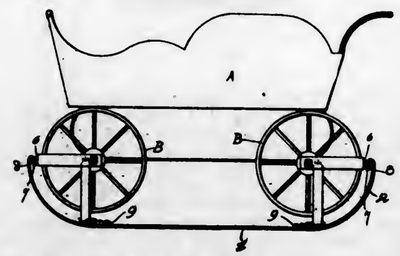
3. In a draft-rigging mechanism, the combination with a draw-bar and a yoke pivotally connected to the shank of said draw-bar, of a draw-bar centering means connected to said yoke and operating laterally upon the draw-bar upon the outer side faces thereof, substantially as described.

4. In a draft-rigging mechanism, the combination with a draw-bar and a yoke pivotally connected to the shank of said draw-bar, of a draw-bar centering means connected to said yoke and including a spring located at least in part inwardly of a vertical wall of the draw-bar shank and outwardly of a horizontal wall of said shank, substantially as described.

5. In a draft-rigging mechanism, the combination with a draw bar and a yoke pivotally connected to the shank of said draw bar, of thrust means comprising a member pivoted coincident with the pivotal connection of the yoke and draw bar and a second member separably carried by the first member, said thrust members lying on opposite sides of the yoke and draw bar and spring means tending to draw said separable members together.

[Claims 6 to 11 not printed in the Gazette.]

1,156,284. COMBINED WHEEL-GUARD AND SLEIGH-RUNNER. WILLIAM ELMO GRAHAM, Grand Junction, Colo. Filed Sept. 29, 1914. Serial No. 864,140. (Cl. 21—96.)



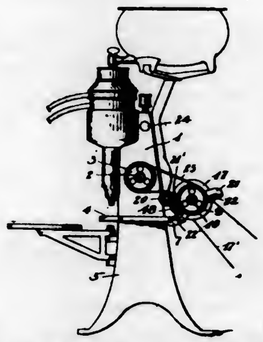
1. A combined wheel guard and sleigh runner for vehicles including a bar having a curved end, a substantially horizontal supporting member having means for securing it to an axle, the said curved end of the bar being pivoted to the supporting member to enable the bar to swing to a position above or below the axle, a locking member pivoted to the said supporting member and arranged to be moved above and below the same, and means carried by the bar for detachably engaging the locking member whereby the latter will be held against movement and retained in its up or down position.

2. A combined wheel guard and sleigh runner for vehicles including a bar having curved ends, fixed substantially U-shaped supporting members having means for securing them to the axles of a vehicle and disposed substantially in a horizontal plane, the curved ends of the bar being each secured to a supporting member, a substantially U-shaped locking member pivoted to the supporting member and means for detachably securing the locking member to the said bar.

3. A combined wheel guard and sleigh runner for vehicles including a bar having curved ends, fixed U-shaped supporting members having means for securing them to the axles of a vehicle and being disposed in substantially a horizontal plane, the curved ends of the bar being each pivoted to a supporting member, substantially U-shaped locking members pivoted to the supporting members adjacent to the ends thereof, means for detachably securing the U-shaped locking members to the supporting members, and means for holding the locking members in adjusted position.

4. The combination with a vehicle, of a combined wheel guard and sleigh runner comprising a bar having a curved end, a supporting member secured to the axle of the vehicle, the curved end of the bar being pivoted to the said supporting member to enable the bar to swing to a position above or below the wheels of the vehicle, a substantially U-shaped locking member carried by the supporting member and pivoted at one end thereto, said locking member being provided with spaced slots arranged to engage with the adjacent axle of the vehicle, and a spring clip mounted on the bar and arranged to engage the locking member to hold the same in adjusted position.

1,156,285. CENTRIFUGAL MACHINE. SELDEN H. HALL, Poughkeepsie, N. Y., assignor to The De Laval Separator Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 2, 1914. Serial No. 822,020. (Cl. 64—5.)



1. A self-contained attachment for a centrifugal machine consisting of a driving shaft, a lever, an idler carried by said lever, a spring for actuating said lever and a drip shelf removable from said machine, all of said elements other than said drip shelf being supported by said drip shelf independently of the base of said machine and removable simultaneously with said shelf from the machine.

2. A self-contained attachment for a centrifugal machine consisting of a driving shaft, a lever, an idler carried by said lever, a drip shelf removable from said machine, all of said elements other than said drip shelf being supported by said drip shelf independently of the base of said machine and removable simultaneously with said shelf from the machine, and a spring for actuating said lever, in combination with a driven pulley, a shaft for the same forming part of the centrifugal machine, and a belt loosely connecting said pulleys, against the tight side of which belt said spring holds said idler in yielding engagement.

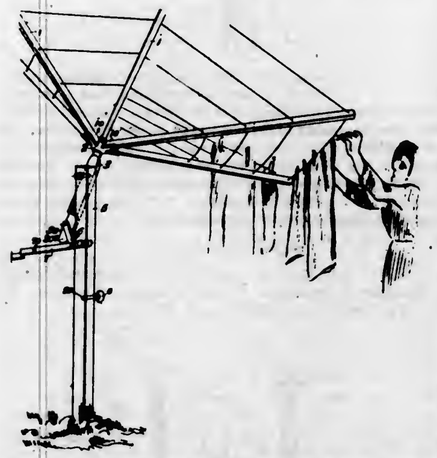
3. A self-contained attachment for a centrifugal machine consisting of a driving shaft, a lever, an idler carried by said lever, a drip shelf removable from said machine, a spring between the power arm of said lever and said drip shelf for actuating said lever, all of said elements other than said drip being supported by said drip shelf independently of the base of said machine and removable simultaneously with said shelf from the machine, in combination with a driven pulley, a shaft for the same forming part of the centrifugal machine, and a belt loosely connecting said pulleys, against the tight side of which belt said spring holds said idler in yielding engagement.

4. A self-contained attachment for a centrifugal machine consisting of a driving shaft, a lever of the first class, an idler carried by said lever, a drip shelf removable from said machine, all of said elements other than said drip shelf independently of the base of said machine being supported by said drip shelf and removable simultaneously with said shelf from the machine, and a spring connected to the power arm of said lever for actuating said lever, in combination with a driven pulley, a shaft for the same forming a part of the centrifugal machine, and a belt loosely connecting said pulleys, against the tight side of which belt said spring holds said idler in yielding engagement.

5. A self-contained attachment for a centrifugal machine consisting of a driving shaft, a lever of the first class, an idler carried by said lever, a drip shelf removable from said machine, a spring connected between the power arm of said lever and said drip shelf for actuating said lever, all of said elements other than said drip shelf independently of the base of said machine being supported by said drip shelf and removable simultaneously with said shelf from the machine, in combination with a driven pulley, a shaft for the same forming a part of the centrifugal machine, and a belt loosely connecting said pulleys, against the tight side of which belt said spring holds said idler in yielding engagement.

[Claims 6 to 9 not printed in the Gazette.]

1,156,286. CLOTHES-REEL. JOSEPH THOMAS HARBIN, St. Johns, Oreg. Filed May 6, 1915. Serial No. 26,338. (Cl. 68—34.)



1. In a clothes reel, a post, a bar pivoted on one side of the post to swing laterally thereof, a reel rotatably mounted on the upper end of the bar, a lever pivoted on that side of the post on which the bar swings and at a point above the lower end of the said bar, said lever being swingable in the direction of movement of the said bar and a connection between the post and the bar that holds the bar to the vertical position when swung in parallelism with the lever and a detent for holding the lever in parallelism with the bar whereby to lock the reel to its elevated and horizontal positions.

2. In a clothes reel, a post, bar pivoted on one side of the post to swing laterally thereof, a reel rotatably mounted on the upper end of the bar, a lever pivoted on that side of the post on which the bar swings and at a point above the lower end of the said bar, said lever being swingable in the direction of movement of the said bar, and a connection between the lever and the bar for swinging the said bar to the tilted or vertical positions, the said connection including a link member pivoted at its lower end to the lever and pivoted at the upper end to the bar at a point below the pivot of the lever and a detent for holding the lever and the reel bar to the vertical position.

1,156,287. CASTER. WILLIAM F. HARRIS, San Francisco, Cal. Filed Apr. 6, 1915. Serial No. 19,574. (Cl. 16—165.)

1. The combination with a member to be supported, of a caster member mounted therein and movable into and out of supporting position, a spring coacting with the caster member and tending to project the member to supporting position, and means for retracting the said member against the tension of the spring.



2. The combination with a member to be supported, of a caster member mounted therein and movable into and out of supporting position, a spring coacting with the said member and tending to project the same to supporting position, an adjusting lever mounted in the said member, and connection between the lever and the said caster member, the lever being movable to retract the caster member against the tension of the spring and to permit the member to be projected by the expansion of the spring.

3. The combination with a member to be supported, of a caster member mounted therein and movable into and out of supporting position, a spring bearing at one end against the member and tending to project the same to supporting position, a lever mounted within the member above the spring, and a flexible connecting element connected to the lever and to the said caster member and extending within the spring.

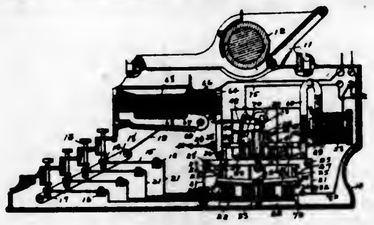
4. The combination with a member to be supported, of a caster member mounted therein and movable into and out of supporting position, means tending to project the member to supporting position, a lever pivotally mounted within the said member and having a handle portion and spaced portions, the pivot for the lever being located adjacent the inner ends of the spaced portions thereof, a pin extending between the outer ends of the said spaced portions, and a flexible element connected to the said pin and to the said caster member.

5. The combination of a member to be supported provided with a bore and with a recess in communication with the upper end of the bore, of a caster member slidably disposed within the lower portion of the bore, a spring bearing at its lower end against the caster member and at its upper end against an abutment within the bore, a lever pivotally mounted within the recess and having arms extending at opposite sides of its pivot, one arm constituting a handle member for swinging the lever, and a flexible element connected to the other arm of the lever and to the said caster member and extending within the bore and within the said spring.

1,156,288. ELECTRIC TYPE-WRITER. ERNEST HAUSBERG, Des Moines, Iowa. Filed Oct. 13, 1909. Serial No. 522,413. (Cl. 197—14.)

1. In a device of the class described, the combination of key bars, type bars, a selective electromagnet for each key bar, means for establishing an electric circuit through the corresponding electromagnet upon a depression of a key bar, a selective armature for each electromagnet, a circuit closing device connected with and operated by each selective armature, a type bar operating electromagnet, means operated by said circuit closing device for establishing an electric circuit through it when any one of said circuit closing devices is in closed position, an armature for said magnet, a universal bar operatively connected with the said armature, and means interposed between the

selective armatures and the type bars for operatively connecting a type bar to the universal bar when the corresponding selective armature is operated.



2. In a device of the class described, the combination of key bars, type bars, a selective electromagnet for each key bar, means for establishing an electric circuit through the corresponding electromagnet upon a depression of a key bar, a selective armature for each electromagnet, a circuit closing device operatively connected with each selective armature, a type bar operating electromagnet, means for establishing an electric circuit through it when any one of said closing device is operated, an armature for said magnet, a universal bar operatively connected with the said armature, and means interposed between the selective armatures and the type bars for operatively connecting a type bar to the universal bar when the corresponding selective armature is operated, and means for locking said circuit closing device for a limited time in closed position.

3. In a device of the class described, a key bar, a selective electromagnet, means actuated by the key bar for establishing an electric circuit through the selective magnet, a selective armature for the magnet, a circuit closing device connected with and operated by the selective armature, a type bar, a type bar operating electromagnet, means for establishing an electric circuit through it by means of said circuit closing device, a type bar operating armature for said magnet, and means operated by the type bar operating armature for actuating the type bar when the said armature is attracted to its magnet.

4. In a device of the class described, a key bar, a selective electromagnet, means actuated by the key bar for establishing an electric circuit through the selective magnet, a selective armature for the magnet, a circuit closing device operatively connected with the selective armature, a type bar, a type bar operating electromagnet, means for establishing an electric circuit through it by means of said circuit closing device, a type bar operating armature for said magnet, and means operated by the type bar operating armature for actuating the type bar when the said armature is attracted to its magnet, and means for automatically locking the said circuit closing device for a limited time in closed position.

5. In a device of the class described, a key bar, a selective electromagnet, means actuated by the key bar for establishing an electric circuit through the selective magnet, a selective armature for the magnet, a circuit closing device operatively connected with the selective armature, a type bar, a type bar operating electromagnet, means for establishing an electric circuit through it by means of said circuit closing device, a type bar operating armature for said magnet, and means operated by the type bar operating armature for actuating the type bar when the said armature is attracted to its magnet, and means for automatically locking the said circuit closing device in closed position, and means for automatically releasing said locking device, at the end of the type bar stroke.

[Claims 6 to 32 not printed in the Gazette.]

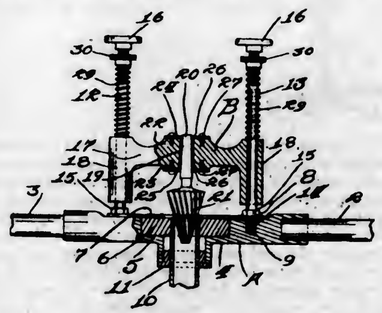
1,156,289. FISHING-TOOL. CHARLES W. HENDERSON, Strathmore, Cal. Filed Jan. 5, 1914. Serial No. 810,494. (Cl. 57—9.)

1. In a device for recovering lost tools and casing, a fishing tool, a jar device attached thereto, a cable connecting with the jar device, whereby a series of jerks may be imparted to the fishing tool, and an auxiliary cable connected intermediate the fishing tool and the jar device through which a constant pull may be exerted on the fishing tool simultaneous with the jerking action thereon.



2. A fishing tool apparatus, comprising a fishing tool of the usual construction having a tapered bore extending transversely therethrough, a jar device connected therewith, an operating cable connected to the jar device, and an auxiliary cable, the lower end of said cable being secured in the transverse bore of said fishing tool, whereby a constant pull may be exerted on the fishing tool through the auxiliary cable simultaneous with the jarring action imparted thereto by the operating cable.

1,156,290. REAMER ATTACHMENT FOR DIE-STOCKS. DELBERT HITCHCOCK, St. Paul, Minn. Filed Dec. 22, 1914. Serial No. 878,478. (Cl. 77—73.)



1. In combination with a die stock, a reamer, a holder for said reamer having a socket to receive and hold the shank of the reamer in working position and a pair of sleeves near the extremities of said yoke, a pair of guide arms upon which said sleeves are slidably mounted, said arms being secured by their ends to the body of the die stock, compression springs on said guides pressing downwardly against said sleeves on said yoke and means for adjustably compressing said springs on said guides to vary the pressure at which the reamer is pressed by the yoke into engagement with its work.

2. In combination with a die stock and a reamer, a yoke frame having guide sleeves upon its ends and an opening between its ends into which the shank of said reamer is received freely, plates mounted upon said frame having openings to receive and hold the shank of said reamer, said plates being movably supported upon said frame so that their positions may be varied to change the angle at which said reamer is supported, guides mounted upon said die stock upon which said sleeves are slidably mounted, compression springs on said guide rods pressing downwardly upon said frame to force said reamer into engagement with its work and means on said guides for changing the compression of said springs.

1,156,291. DISINTEGRATOR ATTACHMENT FOR ELEVATOR-BUCKETS. CHARLES C. JACOBS, Amboy, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Dec. 1. 1911. Serial No. 663,205. (Cl. 37—39.)



1. In an excavator, a back and forth operating bucket, means for disintegrating the ground, and mechanism for operating the bucket to gather the dirt loosened by said means, said means comprising a gang of cutting disks having a common axis disposed behind and across the path of travel of said bucket, and means for holding the gang in working position, whereby said disks are maintained at a cutting depth below the said bucket, said bucket having an independent and separate connection with said last mentioned means.

2. In an excavator, a back and forth operating bucket, means for breaking up or disintegrating the ground, and mechanism for operating the bucket to gather the dirt loosened by said means, said means comprising a plurality of cutting disks arranged together in a gang, disposed behind said bucket, and means for holding the gang in working position, whereby said disks are maintained at a cutting depth below the said bucket, said bucket having an independent and separate connection with said last mentioned means.

3. In an excavator, a bucket, means for disintegrating the ground, mechanism for operating the bucket to gather the dirt loosened by said means, said means comprising a gang of rotary cutting disks extending across the path of travel of the said bucket, and a runway for holding said gang to its work, whereby said disks are maintained at a cutting depth below the said bucket, said gang being pivoted on said bucket, together with means for varying the distance between said runway and disintegrating means to regulate the cutting depth of the latter, said bucket having independent and separate connection with said runway.

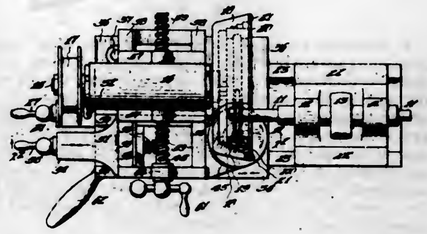
4. In an excavator, a back and forth operating bucket, means for disintegrating the ground, and mechanism for operating the bucket to gather the dirt loosened by said means, said means having a plurality of devices arranged together in a gang to rake the surface of the ground to be traveled over by said bucket, disposed behind said bucket, operating with the same degree of efficiency when the bucket moves either backward or forward, and means whereby said bucket and devices are held to their work independently of each other.

5. In an excavator, a bucket, means for disintegrating the ground, mechanism for operating the bucket to gather the dirt loosened by said means, said means being disposed behind the bucket, and a runway upon which the bucket is movable back and forth, whereby the ground is disintegrated in rear of the bucket while the latter is collecting the dirt loosened by the previous backward motion thereof, together with means for varying the distance between said runway and disintegrating means to regulate the cutting depth of the latter.

[Claims 6 to 28 not printed in the Gazette.]

1,156,292. GRINDING-MACHINE. LOUIS E. JOHNSON and SAMUEL STROM, Los Angeles, Cal. Filed Mar. 2, 1915. Serial No. 11,556. (Cl. 51—4.)

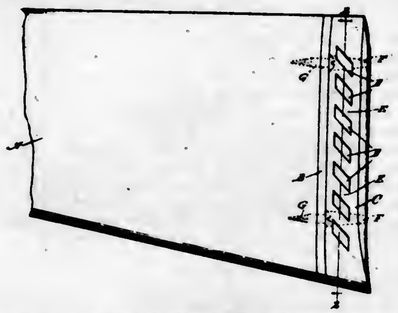
1. A grinding machine comprising a supporting structure, a standard rigidly secured to said structure, a grinding spindle journaled in bearings in said standard, a grinding wheel mounted on said grinding spindle, a work spindle, a chuck mounted on said work spindle, a head in which said work spindle is journaled, an attachment slide in which said head is slidably mounted, means for moving said head in said slide, a pivoted plate in which said attachment slide is slidably mounted, means for moving said slide in said plate, a base plate to which said pivoted plate is pivoted, means by which said pivoted plate may be rotated on said base plate, a work table to which said base plate is secured, a cross slide in which said work table is slidably mounted, means for moving said work table in said cross slide, a bracket fixed on said supporting structure at such a height as to place the work spindle and the grinding spindle in the same horizontal plane, means for slidably securing the cross slide in said bracket, and means for moving said slide in said bracket.



2. A grinding machine comprising a supporting structure, a standard formed integrally with said structure, grinding spindle bearings secured in said standard, a grinding spindle turning in said bearings, a grinding wheel secured on a projecting end of said grinding spindle, a work spindle, a chuck secured on said work spindle in which the work to be mounted is secured, a head in which said grinding spindle turns, an attachment slide, means for securing said head in said slide so that the head is restrained to move in a straight line transversely of the work spindle, means for adjusting the position of said head on said slide, a pivoted plate, means for securing said attachment slide in said pivoted plate so that the attachment slide is restrained to move in a straight line parallel to the axis of the work spindle, means for adjusting the position of the attachment slide on the pivoted plate, a base plate, means for pivoting the pivoted plate on said base plate, a work table, means for securing the base plate to the work table, a cross slide, means for securing the work table in said cross slide so that the work table is restrained to move in a straight line at right angles to the grinding spindle, means for adjusting the position of the work table in said cross slide, a bracket secured to said supporting structure and so placed that said work spindle and said grinding spindle are in the same horizontal plane, means for securing the cross slide in the bracket so that the cross slide is restrained to move in a straight line parallel to the grinding spindle, and means for adjusting the position of said cross slide in said bracket.

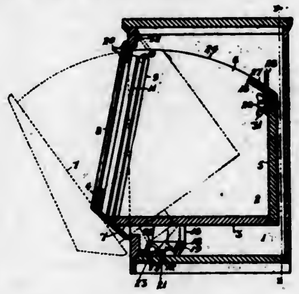
3. An attachment for grinding machines having a fixed grinding spindle and a work table adjustable in the direction of the axis of the grinding spindle and independently adjustable in a direction at right angles to the axis of the grinding table, said attachment comprising a work spindle, a chuck mounted on said work spindle, a head in which said work spindle is journaled, an attachment slide in which said head is slidably mounted, means for moving said head in said slide, a pivoted plate in which said attachment slide is slidably mounted, means for moving said slide in said plate, a base plate to which said pivoted plate is pivoted, means by which said pivoted plate may be rotated on said base plate, and means for securing said base plate to the work table of the grinding machine.

1,156,293. RECOIL-PAD FOR GUNS. WALTER R. JORGENSON, Chicago, Ill. Filed Mar. 15, 1915. Serial No. 14,494. (Cl. 42—74.)



A recoil-pad having a soft-rubber cushion with oblong holes cut entirely through the cushion and slanting at an angle of, preferably, forty-five degrees toward the toe and the heel of the cushion, leaving partitions or walls of rubber between the holes, which fold each on the other and act in unison when the gun is discharged and pressure is brought to bear on the surface of the pad, and spring back in their normal position when the pressure is relieved, thereby taking up the shock ordinarily felt by the person firing the gun, the cushion being mounted on a suitable base for attachment to a gun.

1,156,294. BIN. HENRY KARP, San Francisco, Cal. Filed Jan. 8, 1914. Serial No. 810,914. (Cl. 211—6.)



In combination with a casing having a bottom, a front wall and an opening formed in the front wall above the bottom, a bin movable through said opening, spaced blocks secured to the casing bottom at the ends thereof and having lateral pivot pins which extend longitudinally of the casing and toward each other, a pair of hinge elements secured to the bottom of the bin in depending relation thereto, said hinge elements having substantially inverted U-shaped openings at their front ends and having their bottom faces extending upwardly at an incline from said openings to the rear ends of said elements whereby to form track surfaces which are located below the bin bottom and between the sides thereof to engage with and slide on the pins to cause the U-shaped openings to receive the pins, the hinge elements being received in the space between the blocks and having their outer side faces engaged with the inner side faces of the blocks.

1,156,295. CHUCK. JULIUS KLEINERTZ, Braunsfeld, near Cologne, Germany. Filed Dec. 4, 1914. Serial No. 875,544. (Cl. 29—124.)

1. In a chuck an annular shell having a plurality of internal cam faces arranged in different cross-sectional planes, a body having approximately radial slots and rotatable in said shell, a plurality of jaws, each movable rectilinearly and rotatably in one of said slots, said jaws having lugs bearing against said cam faces, the lugs of one jaw lying in different planes from the lugs of any other jaw and each lug bearing against a separate cam face.



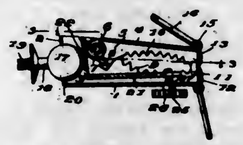
2. In a chuck, an annular shell having a plurality of internal cam faces arranged in different cross-sectional planes, a body having approximately radial slots and rotatable in said shell, a plurality of jaws, each movable rectilinearly and rotatably in one of said slots, said jaws having lugs bearing against said cam faces, the lugs of one jaw lying in different planes from the lugs of any other jaw and each lug bearing against a separate cam face, said cam faces extending around almost the whole periphery of the shell.

3. In chuck an annular shell having a plurality of internal cam faces arranged in different cross-sectional planes, a body having approximately radial slots and rotatable in said shell, a plurality of jaws, each movable rectilinearly and rotatably in one of said slots, said jaws having lugs bearing against said cam faces, the lugs of one jaw lying in different planes from the lugs of any other jaw and each lug bearing against a separate cam face, the jaws being each provided with a guide cam arranged in substantially the same plane.

4. In a chuck, an annular shell having a plurality of internal cam faces arranged in different cross-sectional planes, a body having approximately radial slots and rotatable in said shell, a plurality of jaws, each movable rectilinearly and rotatably in one of said slots, said jaws having lugs bearing against said cam faces, the lugs of one jaw lying in different planes from the lugs of any other jaw and each lug bearing against a separate cam face, the side faces of each jaw normally bearing against the side of the slot having projections adapted to prevent a close contact of the surfaces.

5. In a chuck, the combination with an annular shell having a plurality of internal cam faces arranged in different cross-sectional planes, and a body having approximately radial slots rotatable in said shell, of a plurality of jaws of irregular section each movable rectilinearly and rotatably in one of said slots, the one side face of each jaw being normally disposed approximately radially in the shell, the other side face of each jaw normally bearing against the one side of the slot containing the same, and the inner front face of each jaw being disposed eccentrically to the axis of oscillation of the jaw, one of the jaws having one lug located in the middle thereof adapted to coact with one cam face, and each of the other jaws having two lugs located symmetrically at either side of the plane containing the former lug and adapted to coact with the other cam faces.

1,156,296. CAMERA-SUPPORT. JOHN H. KLENCK, Warren, Pa. Filed Aug. 18, 1914. Serial No. 857,358. (Cl. 248—30.)



1. In a device of the class described, pivotally connected jaws, means for closing the jaws, one of said jaws being provided with a bearing portion, a supporting element having a head disposed against the said bearing portion, a member pivotally connected to the said jaw and having a bearing portion located opposite the first mentioned bearing portion and coacting with the head, and means upon the said jaw coöperating with the said member and adjustable to bring the bearing portion of the member into binding engagement with the said head of the supporting element.

2. In a support of the class described, a jaw having a bearing portion provided with a seat, a supporting element having a head fitting within the seat and angularly adjustable, a jaw pivoted to the first-mentioned jaw, a clamping member comprising a body portion and a clamping head, the clamping head being provided with pivot lugs mounted in the sides of the first-mentioned jaw and the said head of the clamping member resting against the head of the supporting element, and means coöperating with the body portion of the clamping member operable to adjust the said member to bring its clamping head more or less firmly into engagement with the head of the supporting element.

3. In a support of the class described, a jaw having a bearing portion provided with a seat, a supporting element having a head fitting within the seat and angularly adjustable, a jaw pivoted to the first-mentioned jaw, a clamping member comprising a body portion and a clamping head, the clamping head being provided with pivot lugs mounted in the sides of the first-mentioned jaw and the said head of the clamping member resting against the head of the supporting element, and means coöperating with the body portion of the clamping member operable to adjust the said member to bring its clamping head more or less firmly into engagement with the head of the supporting element, the said body portion of the clamping member being located between the said jaws.

4. In a support of the class described, a jaw having spaced side portions and an end portion, the latter being provided with a seat and the side portions being provided in their edges with notches, a clamping member having a head provided with lugs pivotally engaging in the said notches, the head being located opposite the said seat, a jaw pivoted to the first-mentioned jaw, and a supporting element having a head disposed within the said seat and engaged by the head of the clamping member, and means for adjusting the clamping member upon its pivot lugs.

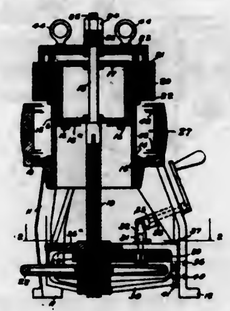
5. In a support of the class described, a jaw having spaced side portions and an end portion, the latter being provided with a seat and the side portions being provided in their edges with notches, a clamping member having a head provided with lugs pivotally engaging in the said notches, the head being located opposite the said seat, a jaw pivoted to the first-mentioned jaw, a supporting element having a head disposed within the said seat and engaged by the head of the clamping member, and a set screw carried by the first-mentioned jaw and having threaded engagement with the said clamping member and adjustable to cause the head of the clamping member to more or less firmly bind the head of the supporting element.

1,156,297. METHOD OF ASSEMBLING CORES OF ELECTRICAL APPARATUS. EARLE R. KNIGHT, Norwood, Ohio, assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Original application filed Nov. 30, 1910, Serial No. 594,813. Divided and this application filed Dec. 11, 1913. Serial No. 806,109. (Cl. 29—84.)

1. A method of assembling a laminated core in a dynamo-electric machine which comprises forming the core exterior to the machine, forcing the core into the yoke of said machine, and securing the core in fixed position in said yoke.

2. A method of assembling a laminated core in electrical apparatus, which comprises forming the core exterior to said apparatus, forcing said core into the frame of said apparatus, and securing said core in fixed position relative to said frame.

3. A method of assembling a core made up of a plurality of laminations in a dynamo-electric machine, which comprises forming said core of said laminations on a member exterior to said machine, actuating said member to force said core into the yoke of said machine, and then removing said member from said core.

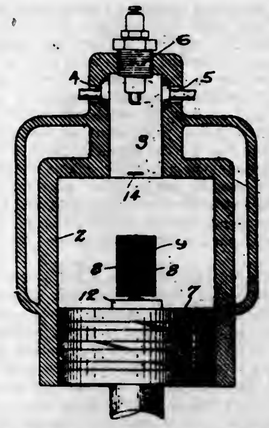


4. A method of assembling a laminated core in a dynamo-electric machine, which comprises compressing a plurality of laminations and securing said laminations in such compressed condition on a part exterior to said machine, actuating said part to insert said core in the frame of said machine, securing said core in said frame, and then removing said part from said core.

5. A method of assembling a core in a dynamo-electric machine, which comprises forcing and holding together a plurality of annular laminations on a member having a guiding portion for said laminations, inserting said member and core within the frame of said machine, securing said core in said frame, and withdrawing said guiding portion from said core.

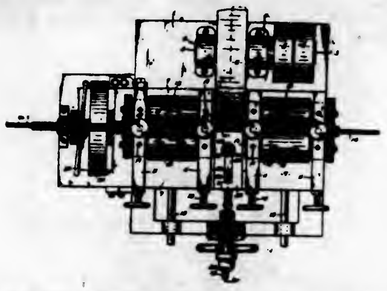
[Claims 6 to 8 not printed in the Gazette.]

1,156,298. INTERNAL-COMBUSTION ENGINE. GUSTAVE A. KROHN, Coarsegold, Cal. Filed Apr. 25, 1912. Serial No. 693,101. (Cl. 123—145.)



In an internal combustion engine, a cylinder having a chamber formed in the end thereof, a piston in said cylinder, a plurality of vertically arranged thin metallic plates spaced apart from each other arranged on said piston and thermally insulated therefrom, said plates being arranged to lie in said chamber when the piston reaches the end of its stroke, means for introducing air into said cylinder and a port arranged in the lower end of said chamber adapted to permit a charge of combustible to be projected against the edges of said plates.

1,156,299. WIRE-FINISHING MACHINE. ANDREW LILLJQUIST, Syracuse, N. Y. Filed Feb. 24, 1912. Serial No. 679,608. (Cl. 51—10.)



1. In a wire finishing machine, a bed, a rotatable abrading member supported thereby, a carriage movable upon the bed toward and from the operative face of the abrading member, means for shifting the carriage, means mounted in the carriage for feeding the element to be operated upon in a direction across the operative face of the abrading member, and additional means mounted in the carriage for holding said element in coöperative relation with the feeding means and in a predetermined position relative to said operative face of the abrading member, substantially as and for the purpose described.

2. In a wire finishing machine, a bed, a rotatable abrading member supported thereby, a carriage movable upon the bed toward and from the operative face of the abrading member, means for shifting the carriage, means mounted in the carriage for feeding the element to be operated upon in a direction across the operative face of the abrading member, and additional means mounted in the carriage for holding said element in coöperative relation with the feeding means and in a predetermined position relative to said operative face of the abrading member, said means including a part adjustable in the carriage and toward and from said operative face of the abrading member, substantially as and for the purpose specified.

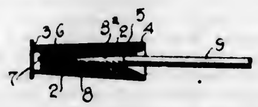
3. In a wire finishing machine, a bed, a rotatable abrading member supported thereby, a carriage movable upon the bed toward and from the operative face of the abrading member, means for shifting the carriage, means mounted in the carriage for feeding the element to be operated upon in a direction across the operative face of the abrading member, and additional means mounted in the carriage for holding said element in coöperative relation with the feeding means and in a predetermined position relative to said operative face of the abrading member, said additional means including a part adjustable toward and from said operative face of the abrading member and an additional part carrying the first-named part and adjustable in a direction perpendicular to the direction of movement of the first-named part, substantially as and for the purpose set forth.

4. In a wire finishing machine, a bed, a rotatable abrading member supported thereby, a carriage movable upon the bed, means for shifting the carriage toward and from the operative face of the abrading member, means for feeding the element to be operated upon, said means including rotary members located on opposite sides of the abrading member and mounted in the carriage and driving means therefor also mounted in the carriage, means mounted in the carriage in advance of the operating face of the abrading member for holding the element to be operated upon in a predetermined position in relation thereto, and additional holding means for said element located between the first-named holding means and said rotary member of the feeding means, substantially as and for the purpose described.

5. In a wire finishing machine, a rotatable abrading member, and means for feeding the element to be operated upon across the operative face thereof and supporting it in a predetermined relation thereto, said means including a coarse adjusting mechanism and a fine adjusting mechanism, the coarse adjusting mechanism including a carriage, and the fine adjusting mechanism including parts supported by the carriage and adjustable in the direction of movement thereof, substantially as and for the purpose specified.

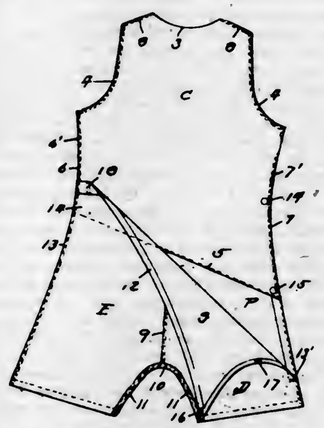
[Claims 6 to 10 bot printed in the Gazette.]

1,156,300. HAT-PIN GUARD. RUSSELL L. LONG, Morgantown, W. Va. Filed Jan. 16, 1915. Serial No. 2,660. (Cl. 24—155.)



A hat pin guard comprising a metallic shell having a reentrantly conical portion at its entrance end, a pair of longitudinaly tapering oppositely disposed fingers extending from the inner end of the conical portion, disposed in approximately parallel relation but converging toward the inner end of the shell, said fingers being transversely concave and spaced from each other, and an annular filling of yielding material disposed within the shell, filling the space between said fingers and the shell and the space between the lateral edges of said fingers whereby the filling will come into frictional engagement with the pin.

1,156,301. UNION UNDERGARMENT. PHILIP A. LUCKETT, Salisbury, Md. Filed Aug. 7, 1915. Serial No. 44,253. (Cl. 2—144.)

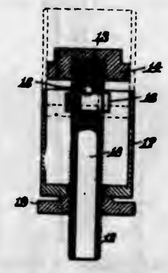


1. A union garment having a waist section including a back-piece having its integral lower edge inclined throughout its entire width from side to side, said garment having a posterior opening formed below the bottom edge of the back-piece, and extending down the outside of one leg, and a drop seat flap for said opening having its upper portion adapted to overlie the inclined lower edge portion of the back piece from side to side of the garment, one side only of said flap being permanently secured to one side of the garment to substantially the upper edge of said flap.

2. A union garment having a waist section including a back piece having its lower edge inclined throughout its entire width from side to side from a point adjacent the waist line at one side to a point below the waist line at the opposite side, said garment having a posterior opening formed below the back piece and extending across substantially the entire back of the garment and down the outside of one leg thereof to a point above the lower end of said leg, and a drop seat flap adapted to cover said opening and to overlap the lower portion of the back from side to side of the garment, when closed, one side only of said flap being permanently secured to one side of the garment to substantially the upper edge of said flap.

3. A union garment having a waist section including a one-piece back portion which is longer on one side than on the other, the shorter side of the back portion terminating at its lower end at substantially the waist line, while the longer end of the back portion terminates at its lower end below the waist line, said garment having a posterior opening extending substantially entirely across the garment at aproximately the waist line and down the outside of one of the legs of the garment, said leg being permanently closed below the opening, and a drop seat flap adapted for covering the opening, said flap being permanently fastened at one side to the adjacent portions of the garment and overlapping the lower section at the shorter side of the back, the opposite free side of the flap being detachably connected with the portions of the garment adjacent thereto, including the longer side edge portion of the back portion, said flap having its top portion overlapping the lower portion of the back portion from side to side, when closed.

1,156,302. GREASE-CUP. JOSEPH MATTHEWS, Newburyport, Mass., assignor of one-half to William H. Hastings, Malden, Mass. Filed Mar. 18, 1915. Serial No. 15,986. (Cl. 184—43.)



1. In a device of the class described, the combination of a tubular member closed at its outer end and having an opening therethrough adjacent said closed end, said member being of the same diameter throughout and having a helical thread from end to end; a cap secured to said closed end; a cup-shaped member surrounding said tubular member and movable relatively thereto and a member threaded to the inner end of said tubular member.

2. In a device of the class described, the combination of a threaded tubular member closed at its outer end and having an opening therethrough adjacent said closed end; a sleeve on said tubular member and adjustable thereon to regulate the discharge through said opening; a cap secured to said closed end; and a cup-shaped member surrounding said tubular member and movable relatively thereto.

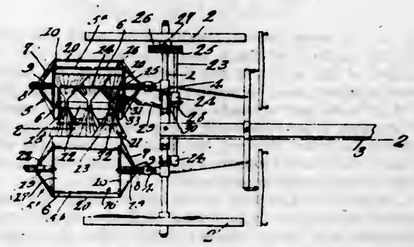
3. In a device of the class described, the combination of a threaded tubular member closed at its outer end and having an opening therethrough adjacent said closed end; a sleeve threaded to said tubular member and adjustable thereon to regulate the discharge through said opening; a cap secured to said closed end, and a cup-shaped member surrounding said tubular member and movable relatively thereto.

4. In a device of the class described, the combination of a threaded tubular member closed at its outer end and having an opening therethrough adjacent said closed end; a cap secured to said closed end; and a cup-shaped member surrounding said tubular member and movable relatively thereto; and a nut on said tubular member adapted to control the movement in one direction of said cup-shaped member relatively to said cap.

5. In a device of the class described, the combination of a tubular member closed at its outer end and having a side opening therein adjacent its closed end; a cap secured to the closed end thereof; a cup-shaped member on said tubular member freely movable lengthwise thereof; and adjustable means on said tubular member for limiting the inward movement of said cup-shaped member.

[Claims 6 to 10 not printed in the Gazette.]

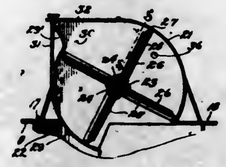
1,156,303. INSECT-COLLECTING ATTACHMENT FOR CULTIVATORS. HUGH C. MATERHOFF, Basic, Miss. Filed Dec. 15, 1914. Serial No. 877,389. (Cl. 43—1.)



1. An insect collecting device embodying a beam, a pan disposed therebelow and embodying a bottom having inclined triangular ends, the edges of the said ends having upwardly projecting complementing arms receiving the beam, one edge of the bottom having an upturned flange terminally secured to the respective arms, and retaining means carried by the arms and engaging the said beam.

2. In an insect collecting mechanism, a beam, a receiver disposed therebelow and connected thereto, a rotary agitator embodying a pair of bars clamped together over a portion of the beam to rotate thereon, palmetto leaves having their stems secured to the said bars and projecting in opposite directions therefrom, and U-shaped springs secured to the said bars and having their intermediate portions bearing against the said leaves.

1,156,304. ODORLESS GARBAGE-RECEPTACLE. ERNEST O. MESSMORE, Tipton, Ind. Filed Oct. 13, 1914. Serial No. 866,500. (Cl. 220—115.)

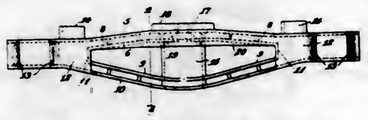


A garbage receptacle comprising a body, a casing mounted on the body, said casing having an access opening, a rotary element within the casing, a plurality of radially extending blades carried by the rotary element, flexible packing members carried by the ends and sides of the blades and bearing against the walls of the casing, and means carried by the rotary element for turning the said element in step by step fashion to bring each of the blades successively beneath the access opening and into position to discharge its contents into the receptacle.

1,156,305. CAST TRUCK-BOLSTER. YUSKE MIYASAKI, McKees Rocks, Pa. Filed Feb. 15, 1915. Serial No. 8,267. (Cl. 105—104.)

1. A cast truck bolster including spaced longitudinally extending parallel chord members, one of said members being provided upon its edges with longitudinally extending flanges projecting beyond the corresponding edges of the other chord member and in opposed relation thereto.

2. A cast truck bolster including spaced parallel longitudinally extending chord members, one of said members having flanges formed on its longitudinal edges extending toward the other chord member and beyond said member in spaced relation to the longitudinal edges thereof.



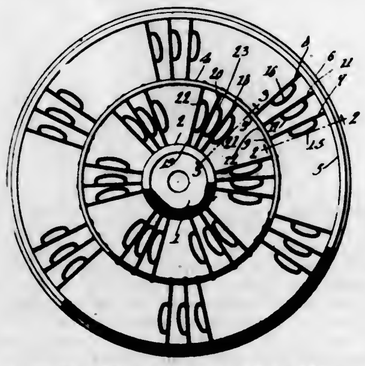
3. A cast truck bolster consisting of upper and lower pairs of longitudinal chord members integrally connected together at the center of the bolster, the top and bottom chord members being integrally connected to each other at their ends, and separate integral connections between the opposed upper and lower chord members at the ends thereof, the space between the integrally connected ends of the latter chord members and the central vertical truss of the bolster being unobstructed.

4. A cast truck bolster consisting of upper and lower pairs of chord members, a central vertical truss integrally connecting said chord members to each other, the opposed chord members in the upper and lower pairs being integrally connected together at their extremities but unconnected between such terminal connections and the central vertical truss of the bolster, and vertically disposed flanges formed upon the longitudinal edges of one of the upper chord members.

5. A cast truck bolster consisting of upper and lower pairs of longitudinal chord members integrally connected at their ends, a central vertical truss integrally connecting the chord members to each other, the opposed chord members in the upper and lower pairs being spaced apart to provide unobstructed longitudinally extending openings through the bolster between said vertical truss and the ends of said chord members, and vertically disposed longitudinally extending flanges formed upon the edges of the uppermost chord member.

[Claims 6 to 12 not printed in the Gazette.]

1,156,306. SPRING-WHEEL. ABRAHAM MORGAN, Independence, Mo. Filed Mar. 15, 1915. Serial No. 14,454. (Cl. 152—28.)



1. A spring wheel embodying spaced parts; and a spring spoke connecting said parts, the intermediate portion of the spoke being bent and crossed upon itself to form a loop extending longitudinally of the spoke.

2. A spring wheel embodying spaced parts; and a spring spoke connecting said parts, the intermediate portion of the spoke being bent and crossed upon itself to form a loop extended longitudinally of the spoke, the loop lying in a plane which defines an acute angle with the medium plane of the wheel.

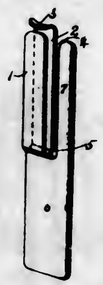
3. A spring wheel embodying spaced parts; and crossed spring spokes connecting said parts, the intermediate portions of the spokes being bent and crossed upon themselves to form loops extended longitudinally of the spokes, the loops projecting in opposite directions with respect to the median plane of the wheel.

4. A spring wheel embodying spaced parts; and crossed spring spokes connecting said parts, the intermediate portions of the spokes being bent and crossed upon themselves to form loops extended longitudinally of the respective spokes, the loops projecting in opposite directions with respect to the median plane of the wheel, the loops being disposed at an angle to the median plane of the wheel.

5. A spring wheel embodying spaced parts; crossed spring spokes connecting said parts; a third spoke connecting said parts and located between the crossed spokes, the third spoke being disposed approximately parallel to the medium plane of the wheel, all of the spokes being bent and crossed upon themselves to form loops which extend longitudinally of the respective spokes.

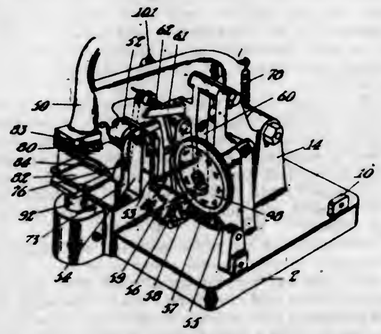
[Claim 6 not printed in the Gazette.]

1,156,307. COLLAR-RECREASER. AUGUST MORGANFIELD, Junction City, Kans. Filed July 19, 1915. Serial No. 40,552. (Cl. 68—11.)



An article of manufacture of the class described comprising a tongue adapted to be placed within the fold of a collar, and an elongated lip provided with a shoulder projection adapted to overlap such fold.

1,156,308. THEFT-PROOF STAMP-AFFIXING MACHINE. LIONEL G. H. PALMER, Roslindale, Mass., assignor to Stampafix Company, Inc., Boston, Mass., a Corporation of Massachusetts. Filed Feb. 25, 1911. Serial No. 610,822. (Cl. 216—29.)



1. A machine of the class described having, in combination, a stamp affixing device, means for feeding a strip of stamps thereto, means located between said feeding means and said affixing device for receiving the stamps in a flat condition and then imparting to the strip a curvature transversely, and moistening means for operating on the strip where it is so curved.

2. A machine of the class described having, in combination, a stamp affixing device, means for feeding a strip of stamps thereto, and a chute for said strip leading toward said affixing device, a portion thereof having a width less than that of the strip.

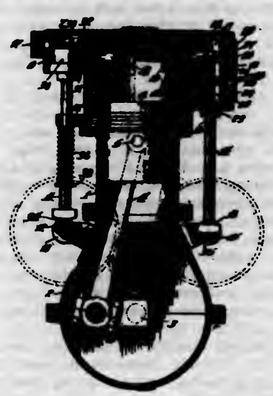
3. A machine of the class described having, in combination, a stamp affixing device, a holder for a strip of stamps, a chute, a roller for feeding the strip from the holder to the chute, said chute having a gradually decreasing width whereby the strip may be transversely curved in passing therethrough.

4. A machine of the class described having, in combination, a reel for a gummed strip, feeding means for the strip, a moistening device movable in a path adjacent to the gummed side of the strip, and means for transversely curving said strip at a point in line with the path of said moistening device.

5. A machine of the class described having, in combination, a reel for a gummed strip, feeding means for the strip, a moistening device disposed adjacent to the gummed side of the strip, and means for engaging the edges of the strip near said moistening device and bowing the strip at its center away from said device.

[Claims 6 to 20 not printed in the Gazette.]

1,156,309. VALVE OF INTERNAL-COMBUSTION ENGINES. WASHINGTON I. PHIPER, Collinsville, Ill. Filed Feb. 11, 1914. Serial No. 817,964. (Cl. 123—188.)



1. In an internal combustion engine, a valve comprising a pair of split sleeves, a seat for one of said sleeves, a valve rod for said seat, said sleeves abutting each other when mounted over said valve rod, and a clamping member having passageways formed therein mounted on said valve rod adapted to clamp said sleeves and said seat together.

2. In an internal combustion engine, a valve comprising a pair of split sleeves of uniform thickness, said sleeves being mounted endwise to each other, and means for securing said rings to a valve rod.

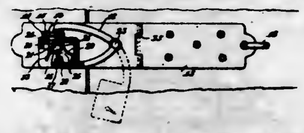
3. In an internal combustion engine, a valve comprising a pair of split sleeves, ports formed in one of said sleeves, said sleeves being mounted endwise over a valve rod, and a member carried by said rod adapted to clamp said sleeves together.

4. In an internal combustion engine, a valve comprising a split sleeve, a seat for said sleeve, said seat being mounted on a valve rod, and means mounted on one end of said rod for securing said sleeve and seat to said valve rod.

5. In an internal combustion engine, a valve cylinder, a valve for said cylinder, said valve comprising a split sleeve and a seat for said sleeve, said seat being mounted on a valve rod, and means for securing said sleeve and said seat to said rod, said seat forming an end wall to said valve cylinder.

[Claims 6 to 8 not printed in the Gazette.]

1,156,310. HASP-LOCK. FREDERICK POHLE, Jr., Honesdale, Pa. Filed Mar. 6, 1915. Serial No. 12,569. (Cl. 70—5.)

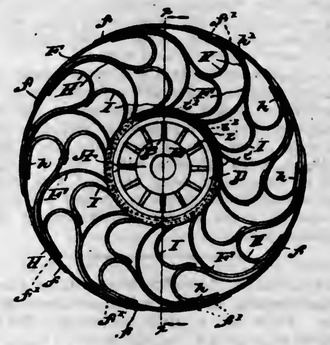


1. A lock of the character described, comprising a hasp secured at one end to one door and provided with a slot in its other end adapted for detachable engagement with a locking staple in another door, and a lock pivoted to said hasp, said lock embodying a shackle pivoted on the lock pivot and provided with an extension for engaging through said locking staple to engage the lock on its other arm.

2. A lock of the character described, comprising a hasp having a hinge intermediate its ends to provide front and rear portions, said rear portion being adapted to be secured to one door and said front portion being provided with a slot adapted for detachable engagement with a locking staple in another door, and a lock pivoted upon said front portion, said lock embodying a shackle pivoted on the lock pivot and provided with an extension for engagement through said locking staple to engage the lock on its other arm.

3. A lock of the character described, comprising a reversible hasp having counter-sunk pivot-head recesses in both faces and a slot in one end thereof, a locking member pivoted thereon, and a removable pivot for said locking member having heads on each end thereof, said locking member embodying a hinged reversible shackle one arm of which is provided with an extension and the other arm provided with counter-sunk pivot-head recesses in both faces and a lock with which said extension engages.

1,156,311. SPRING-TIRE. EDWARD K. RABEY, Deanes, Va. Filed Dec. 16, 1914. Serial No. 877,558. (Cl. 152—29.)

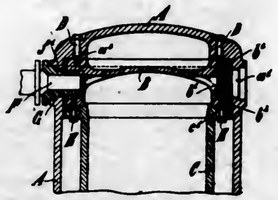


1. A resilient tire arrangement for wheels, comprising a series of metal strips bent to form substantially U-shaped springs having their outer ends overlapping and secured together, and their inner ends adapted to be fastened to the felly band of the wheel, with a series of auxiliary springs interposed between said first-mentioned springs and connected to the same and to each other, substantially as and for the purpose described.

2. The combination with a wheel provided with a felly and felly band, of a series of resilient metal strips bent to form substantially U-shaped springs, having their inner

ends secured to said felly band, and their outer ends overlapping the adjacent springs and secured thereto, with a series of intermediate resilient strips bent to form substantially U-shaped springs connected to the first-mentioned springs and to each other, the whole forming a compound spring tire, substantially as described.

1,156,312. CYLINDER FOR INTERNAL-COMBUSTION ENGINES. CONRAD REGENBOGEN and PAUL ALEXANDER RITTER, Kiel, Germany. Filed Dec. 24, 1913. Serial No. 808,590. (Cl. 123—193.)



1. A cylinder for internal combustion engines having a closed, surrounding jacket with an integral head and a liner therein; an interchangeable cap-shaped cover attached to the liner and removable therewith while so attached, said over surrounding the combustion chamber which cover is capable of expanding freely together with said liner both in an axial and a radial direction within said jacket.

2. A cylinder for internal combustion engines having a closed, surrounding jacket with an integral head and a liner therein; an interchangeable cap-shaped cover attached to the liner and removable therewith while so attached, said cover surrounding the combustion chamber which cover is capable of expanding freely together with said liner both in an axial and a radial direction within said jacket; the cover being made of specially strong material such as wrought iron, steel or the like by forging, casting or pressing.

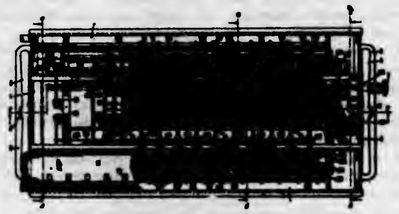
3. A cylinder for internal combustion engines having a closed, surrounding jacket and a liner therein; an interchangeable cap-shaped cover detachably connected to said liner and surrounding the combustion chamber which cover is capable of expanding freely both in an axial and a radial direction within said jacket, valves opening into the combustion chamber, the seats of said valves being rigidly connected to the cover while they pass through the cylinder jacket in a manner which permits of a sliding movement relative to said jacket.

4. A cylinder for internal combustion engines having a closed, surrounding jacket and a liner therein; an interchangeable cap-shaped cover surrounding the combustion chamber and situated intermediate said liner and jacket which cover is capable of expanding freely both in an axial and a radial direction within said jacket, the cap-shaped cylinder cover being provided with two annular flanges, one of which serves to connect the cover to the liner, and the other for the transmission of stresses to the cylinder jacket.

1,156,313. CALCULATING-MACHINE. PAUL REISS, Berlin, Germany, assignor to Benno Knecht, Berlin, Germany. Filed Oct. 9, 1912. Serial No. 724,830. (Cl. 235—73.)

1. In a calculating machine, the combination with a computing device of a plurality of racks for actuating said computing device, a movable carrier for the same mounted to bring the racks into and out of engagement with said computing device, actuating means for said carrier, a series of cranks of progressively increasing eccentricity connected with the several racks respectively to reciprocate the same an actuation, and means for actuating said cranks in dependence from said rack carrier.

2. In a calculating machine, the combination with computing devices of an actuating carriage, racks carried by said carriage for actuating the said computing devices, said carriage being movable with a reciprocatory motion to bring the racks into and out of engagement with said computing devices, said racks being supported for a reciprocating movement upon said carriage, two cams adapted to reciprocate the said carriage and connected by a series of cranks and progressively increasing eccentricity and adapted to reciprocate the racks upon said carriage during the reciprocation thereof with progressively increasing strokes, and means for rotating the said cams and the said cranks.



3. In a calculating machine, two sets of computing devices each carried by a slide, one actuating carriage carrying racks for actuating said two sets of computing devices and movable with a reciprocatory motion to bring the racks into and out of engagement with said computing devices, said racks being supported for a reciprocating movement upon said carriage, and each rack being adapted to actuate simultaneously upon both computing devices, actuating means for said carriage comprising a series of cranks of progressively increasing eccentricity coupled with the several racks respectively, and means for actuating said cranks in dependence from said carriage.

4. In a calculating machine, two sets of computing devices each carried by a slide, one actuating carriage carrying racks for actuating said two sets of computing devices and movable with a reciprocatory motion to bring the racks into and out of engagement with said computing devices, the said racks being supported for a reciprocating movement upon said carriage, and each rack being adapted to actuate simultaneously upon both computing devices, two cams adapted to reciprocate said carriage and connected by a series of cranks of progressively increasing eccentricity and adapted to reciprocate said racks upon the carriage during the reciprocation thereof with progressively increasing strokes, and means for rotating said cams and said cranks.

5. A calculating machine comprising two computing devices and an actuating device for the same having two sets of actuating shafts, each set acting upon one of said two computing devices, said actuating shafts being arranged side by side and the shafts of the one set alternating with the shafts of the other set.

[Claims 6 to 13 not printed in the Gazette.]

1,156,314. CONNECTOR FOR GROUND-TERMINALS. ALFONSO R. RHEINBERGER, St. Paul, Minn. Filed Jan. 10, 1910. Serial No. 537,199. (Cl. 173—273.)



The combination with a ground rod having a passage therethrough, of a line wire to be secured thereto, an elongated cone-shaped terminal connector extending through said passage and consisting of a pair of coöperating sections adapted to receive and clamp said line wire between them, said connector being provided with an enlarged driving head at one end and gradually tapering therefrom to a point adjacent its other end, each of the sections forming the connector being bent from said point to form elongated oppositely flaring portions for preventing the accidental removal of said connector from said rod and forming guides to facilitate the insertion of said line wire into said connector, the length of said connector between its head and flaring portions being greater than the length of said passage within which said connector may be moved to release said line wire.

1,156,315. ELECTRODE. WILLSON H. ROWLEY, University, Mo. Filed Dec. 16, 1913. Serial No. 806,998. (Cl. 204—29.)



1. An electrode, comprising a frame in the form of a grid, a body of active material in the form of fiber, the individual filaments of which are united with said frame and between their ends shaped over said grid to produce an uneven surface.

2. An electrode, comprising a frame in the form of a grid, a body of active material in the form of fiber, the individual filaments of which are united with said frame and between their ends shaped over said grid to produce an uneven surface, and a body of active material comprising an oxid of lead applied to said uneven surface.

3. In an electrode, a pair of frames comprising grids, a screen of metal lead fiber, the filaments of which are united with said frames and shaped over said grids to produce uneven surfaces, and a body of active material comprising an oxid of lead enveloped between said uneven surfaces.

4. In an electrode, a pair of frames comprising grids, screens of metal lead fiber, the filaments of which are united with said frames and their bodies shaped over said grids to present uneven surfaces, bodies of active material comprising an oxid of lead supported by said screens, and a screen of metal lead fiber interposed between said oxid bodies, the filaments of which last mentioned screen are united with said frames.

5. In an electrode, a grid-like frame, a body of active material in the form of a porous veil of metal lead filaments secured to said frame and covering the grids thereof, and a body of active material comprising an oxid of lead supported by said veil and held separated from the grids of the frame by said veil.

[Claims 6 to 8 not printed in the Gazette.]

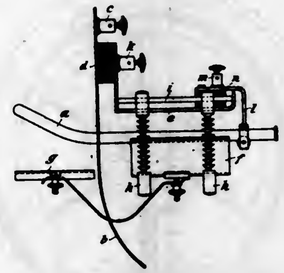
1,156,316. PROCESS OF MAKING ELECTRODES. WILLSON H. ROWLEY, St. Louis, Mo. Filed Apr. 5, 1915. Serial No. 19,406. (Cl. 204—29.)

1. The process of making electrodes which consists in filling into the electrode plate active material in the form of paste, taking up, by absorption, the excess moisture from the surfaces only of the active material and applying pressure to expedite the absorption and to uniformly dispose the active material in the plate.

2. The method of making electrodes, which consists in, first, applying to a suitable frame, a paste comprising an oxid of lead, second, in partially eliminating the moisture from the surfaces only of the paste, third, treating the partially moist ridden surfaces to a bath of a solution of sulfuric acid, whereby to produce a compact layer which prevents too rapid drying of the paste obviating "checks" and falling of the paste from its frame.

3. The process of making electrodes, which consists in filling the electrode plate with active material in the form of paste, partially eliminating the moisture from the surfaces only of the active material and chemically treating the partially moist ridden surfaces to render them more compact than the remaining active material.

1,156,317. ELECTROMEDICAL APPARATUS. CARLOS SANTOS, Lissabon, Portugal, and RUDOLF BOERNER, Berlin, Germany, assignors to Siemens & Halske A. G., Siemensstadt, near Berlin, Germany, a Corporation of Germany. Filed Apr. 24, 1914. Serial No. 834,279. (Cl. 174—89.)



1. In an electro-medical apparatus for diathermic treatment the combination of a tube-shaped effective electrode adapted to be introduced into a cavity of the body, and a plurality of indifferent electrodes arranged in different positions on the outer surface of the body for leading the current in different ways and heating definite parts of said cavity.

2. In an electro-medical apparatus for diathermic treatment the combination of a tube-shaped effective electrode adapted to be introduced into a cavity of the body, a plurality of indifferent electrodes, and oscillating circuits including some of said indifferent electrodes and commonly said effective electrode.

3. In an electro-medical apparatus for treatment of the urethra virilis, the combination of a tube-shaped effective electrode adapted to be introduced into the urethra, a multi-part indifferent electrode adapted to surround the organ in longitudinal direction, a second electrode adapted to be laid to the perineum, which second electrode may be conductively connected to the former, and a third indifferent electrode in the form of an apron adapted to be laid to the thighs and the abdomen.

4. In an electro-medical apparatus for diathermic treatment the combination of a tube-shaped effective electrode adapted to be introduced into a cavity of the body, a plurality of indifferent electrodes positioned to lead the current through different parts of said body, and regulating means for controlling the heat imparted to said different parts.

5. In an electro-medical apparatus for diathermic treatment the combination of a tube-shaped effective electrode adapted to be introduced into a cavity of the body, a plurality of indifferent electrodes, oscillating circuits commonly including said tube-shaped electrode and some of said indifferent electrodes, and means for regulating the current strength in said oscillating circuits.

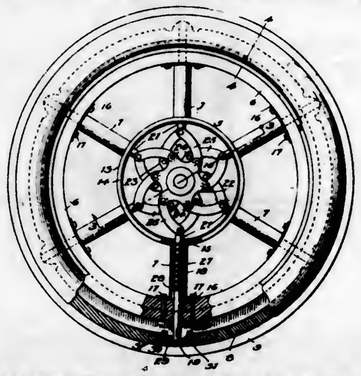
[Claims 6 to 9 not printed in the Gazette.]

1,156,318. VEHICLE-WHEEL. FERDINAND A. SCHAEFER, Raspeburg, Md., assignor of one-half to George R. Riggs, Washington, D. C. Filed June 26, 1915. Serial No. 36,421. (Cl. 152—48.)

1. In a wheel, the combination of a plurality of radially arranged spoke members, toggle means connected to the spoke members, said means being adapted on a radial displacement of one spoke member to cause a like movement in a radial direction of all of the other spoke members.

2. In a wheel, the combination of a rigid floating rim, a plurality of radially arranged spoke members, a hub member, toggle means connected to said spoke members, said means being adapted on a relative displacement of said hub and rim members to produce a displacement of some of the spoke members and means for returning said spoke members to normal.

8. In a wheel, the combination of a hub member, a rim member, a plurality of movable spoke members and means connecting the spoke members and adapted to convert a compression strain on one spoke member into a tension strain upon the other spoke members.

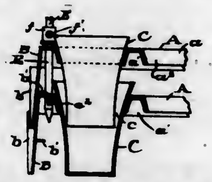


4. In a wheel, the combination of a hub member, a rim member, a plurality of rigid movable spoke members, connecting said hub and rim members, and rotatable means connecting the spoke members and adapted to convert a compression strain on one spoke member into a tension strain upon the other spoke members.

5. In a wheel, the combination of a plurality of resiliently mounted spoke members, a hub member, a rim member and means adapted in any given position of rotation of the wheel to convert a compression strain upon one or more spoke members into a tension strain upon the remaining spoke members.

[Claims 6 to 13 not printed in the Gazette.]

1,156,319. COMMUNION-SERVICE. JACOB SCHAUB, Logan, Utah. Filed May 8, 1912. Serial No. 695,832. (Cl. 65—53.)



1. In a device of the class described, the combination of a plurality of container-carrying members positioned one upon the other, a plurality of locking rods passing through end portions of said container-carrying members, each rod having locking engagement with said members, and a handle detachably connected to said locking rods and operating to retain said rods in locking engagement with said members.

2. In a device of the class described, the combination of a plurality of carrying members positioned one upon the other, containers positioned in said members for the containers of one member to nest into the containers of another member, and means for retaining said carrying members in a connected condition to facilitate handling thereof.

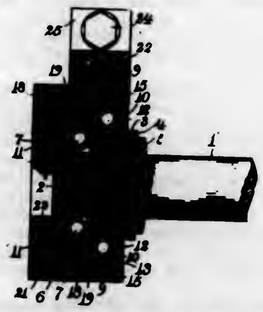
3. A device of the class described embodying a plurality of carrying members perforated for the reception of a number of containers, containers positioned in the openings of said members and supported thereby, the containers of one carrying member nesting within the containers of an adjacent carrying member, and means for locking the carrying members in such relation to each other that the containers supported by one carrying member are free from contact with the containers of a lower carrying member.

4. A device of the class described embodying a plurality of carrying members positioned one above the other, each member having openings, and containers fitted in said openings and supported by said members, the containers of one member nesting within the containers of an adjacent member, the surfaces of said nested containers being free from contact, thereby leaving free spaces between the nested containers.

5. In a device of the class described, the combination of a plurality of carrying members, and a plurality of series of containers supported by said carrying members, the containers of one series being nested with reference to the containers of an adjacent series, the surfaces of the nested containers being free from contact, thereby leaving free spaces between said nested containers.

[Claims 6 to 11 not printed in the Gazette.]

1,156,320. BALL-BEARING. MIKARL A. SCUTERUD, Arlington Heights, Mass., assignor to Choralcelo Manufacturing Company, Boston, Mass., a Corporation. Filed Oct. 20, 1910. Serial No. 588,114. (Cl. 64—49.)



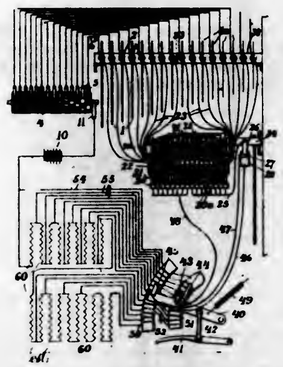
1. A ball bearing comprising a shaft, a collar threaded upon said shaft and having a cylindrical periphery, a nut for securing said collar in place when adjusted, an integral cup having two raceways and balls therein, one raceway and its balls coacting with the end of said collar, and the other raceway and its balls coacting with the periphery of said collar, said cup having an annular groove and notches communicating therewith, and a locking ring having lugs adapted to pass through said notches into said groove.

2. A ball bearing comprising a shaft, a collar thereon having a cylindrical periphery, an integral cup having two raceways and balls therein, one raceway and its balls coacting with an end of said collar, and the other raceway and its balls coacting with the periphery of said collar, means for longitudinally adjusting said collar on said shaft, and means fitted within the mouth of said cup for preventing the escape of the balls from the last-named raceway.

3. A ball bearing comprising a shaft having a portion thereof threaded, a collar internally threaded to fit said threaded portion and having a flat end and a cylindrical periphery, an integral cup having two raceways and balls therein, one raceway and its balls coacting with said flat end, and the other raceway and its balls coacting with said periphery, a check nut on said threaded portion of the shaft for locking said collar in its adjusted positions, and means fitted within the mouth of said cup for preventing the escape of the last-mentioned balls.

1,156,321. EXPRESSION DEVICE FOR MUSICAL INSTRUMENTS. MELVIN L. SEVERY, Arlington Heights, and GEORGE B. SINCLAIR, Winthrop, Mass., assignors to Choralcelo Company, Boston, Mass., a Corporation of Maine. Filed June 6, 1907. Serial No. 377,571. (Cl. 84—131.)

1. A musical instrument comprising magnetically attractive sonorous bodies, electromagnets adapted for actuating said bodies, means including circuits for delivering electric pulsations to said electromagnets, a resistance common to all the circuits of said electromagnets, and means for simultaneously switching different amounts of resistance into the circuits of the different electromagnets.



2. A musical instrument comprising sonorous bodies, electromagnets for their actuation, means including branch circuits, one to energise each of said electromagnets, a resistance common to all said branch circuits, and means for switching in at will different amounts of resistance, and at the same time automatically proportioning the resistance switched into the circuits of one part of the instrument relative to the resistance switched into the circuits of another part of the instrument.

3. A musical instrument comprising sonorous bodies, electromagnets for their actuation, means including branch circuits, one to energise each of said electromagnets, a resistance common to all said branch circuits, and means for switching in at will different amounts of resistance and automatically maintaining an excess of such resistance in the circuits of the upper notes of the instrument as compared with the resistance in the circuits of the lower notes of the instrument.

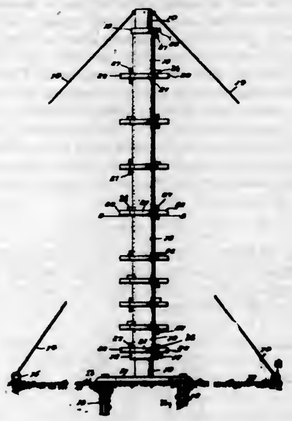
4. A musical instrument comprising sonorous bodies, electromagnets for their actuation, means including branch circuits, one to energise each of said electromagnets, a resistance common to all said branch circuits, an interval coupler, and means automatically operated by said coupler to switch in an increased amount of resistance when such coupler acts to multiply the number of simultaneously vibrated sonorous bodies.

5. A musical instrument comprising sonorous bodies, electromagnets for their actuation, means including branch circuits, one to energise each of said electromagnets, a resistance common to all said branch circuits, means for varying the amount of resistance at will, an interval coupler, and means automatically operated by the movement of said coupler to increase the amount of resistance.

[Claims 6 to 22 not printed in the Gazette.]

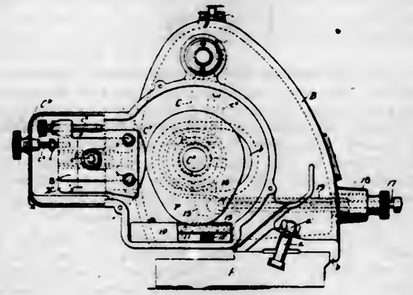
1,156,322. WIRE-STRETCHER. MATTHEW E. SEWALT, Lovington, N. Mex. Filed Oct. 20, 1913. Serial No. 796,337. (Cl. 256—41.)

A wire fence stretcher comprising a standard having openings at intervals in its length, cylindrical members slipped upon the standard, each having an opening to register with an opening of the standard, stop collars at the upper and lower ends of the standard to properly position the cylindrical members thereon, a collar secured to the lower end of each of the cylindrical members and formed with a lateral extension to receive a wrench, and a pawl pivoted to the lateral extension and adapted to rest thereon and upon the collar and serving to secure the cylindrical member to the standard against vertical or retrograde movement and having a portion projecting to form



a finger piece and to be engaged by the wrench fitted to the lateral extension to press the pawl inward.

1,156,323. CAM-GRINDER ATTACHMENT FOR GRINDING-MACHINES. HARRY T. SHEARER, Waynesboro, Pa., assignor to Landis Tool Company, Waynesboro, Pa., a Corporation of Pennsylvania. Filed Dec. 19, 1910, Serial No. 598,226. Renewed Aug. 26, 1915. Serial No. 47,485. (Cl. 51—4.)



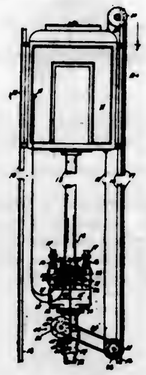
1. A cam grinding attachment for grinding machines comprising suitable supports mounted on the work table of the machine, a swinging frame mounted on said supports, a mandrel mounted in bearings in said frame, means for driving said mandrel, a pattern corresponding in shape to the work to be ground mounted on said mandrel, a stationary shoe mounted in line with said pattern with its face adapted to contact with the periphery of said pattern and formed with its bearing surface of a curvature corresponding substantially to the curvature of the grinding wheel, means on said mandrel for securing the work to be ground in line with said pattern, and means for holding said pattern yieldingly in contact with said shoe, substantially as set forth.

2. A cam grinder attachment for grinding machines comprising a support formed to inclose the working parts of said attachment and mounted upon the work-table of the machine, a swinging frame mounted on a pivot journaled in the upper end of said support, said frame being formed with bearings in its lower end, a mandrel journaled in said bearings and extending through slots in the ends of said supports, means for driving said mandrel,

a pattern mounted on one of the projecting ends of said mandrel, the work mounted on the other end of said mandrel, and a stationary shoe mounted in line with the said pattern and adapted to serve as a bearing therefor during the operation, substantially as set forth.

3. A cam grinder attachment for grinding machines comprising a support mounted on the work-table of the machine, a frame pivoted in said support, a mandrel journaled in bearings in said frame, a pattern mounted on said mandrel, means for driving said mandrel, a stationary rest for said pattern, a lubricant container mounted beneath said pattern and formed with an opening through which a part of said pattern is adapted to project at each revolution thereof, and the work also mounted on said mandrel, substantially as set forth.

1,156,324. SAFETY-GRIP FOR PLUNGERS OF ELEVATORS. WALTER E. SMALL and HARRY R. HILTON, Los Angeles, Cal. Filed Mar. 8, 1915. Serial No. 12,978. (Cl. 187—38.)



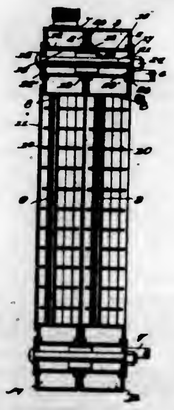
1. The combination with a fluid-operated elevator including a plunger, of a device including jaws adapted to grip the plunger and arranged adjacent to said plunger, mechanism for rendering said device ineffective, including a shaft, a wedge thereon adapted to fit between said jaws, a finger on said shaft, and a pivotally mounted dog adapted to engage said finger, and manually controlled means connected with said dog to operate the latter to render said device effective to grip the plunger.

2. The combination with a fluid-operated elevator including a plunger, of a device including jaws adapted to grip the plunger and arranged adjacent to said plunger, mechanism for rendering said device ineffective, including a shaft, a wedge thereon adapted to fit between said jaws, a finger on said shaft, and a pivotally mounted dog adapted to engage said finger, automatically-actuated mechanism connected with the dog to operate the latter to render said device effective to grip the plunger, and manually controlled means connected with said dog to operate the latter to render said device effective to grip the plunger.

3. The combination with a fluid-operated elevator including a plunger, of a device, including jaws, adapted to grip the plunger and arranged adjacent to said plunger, mechanism for rendering said device ineffective, including a shaft, a wedge thereon adapted to fit between said jaws, a finger on said shaft, and a pivotally mounted dog to engage said fingers, a trip finger operatively connected to said dog, and a rotatable member having parts thereon adapted to engage said trip finger when the speed of rotation of said rotatable member reaches a predetermined limit.

4. The combination with a fluid-operated elevator including a plunger and a car thereon, of a device, including jaws, adapted to grip the plunger and arranged adjacent to said plunger, mechanism for rendering said device ineffective, including a shaft, a wedge thereon adapted to fit between said jaws, a finger on said shaft, and a pivotally mounted dog to engage said finger, a trip finger operatively connected to said dog, a rotatable member operatively connected to said car, and parts on said rotatable member adapted to engage said trip finger when the speed of rotation of said rotatable member reaches a predetermined limit.

1,156,325. AUTOMOBILE-RADIATOR. FREDERICK W. SPENCER, Ionia, Mich., assignor of one-fourth to Thomas M. Kowalski, Ionia, Mich. Filed Mar. 28, 1914. Serial No. 827,929. (Cl. 257—125.)

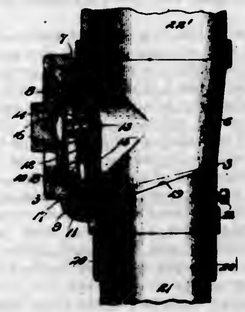


1. A radiator comprising a plurality of juxtaposed similar hollow frame-like sections having openings in their front and rear walls in coincident relation, a plurality of tubes connecting the inner walls of each of the sections, other tubes between the front and rear walls of each of the sections in line with the openings therein and having their extremities formed with outer flanges, bushings extending across the joints formed between the sections and entering the opposing ends of the flanged tubes, gaskets mounted upon the bushings, washers closing the openings in the outer walls of the sections, and tie-bolts passing through the washers and the flanged tubes and connecting the several sections.

2. A water cooling radiator for internal combustion engines, the same comprising a plurality of juxtaposed similar hollow frame-like sections having openings in their front and rear walls in coincident relation, tubes extending across the space formed between the inclosing hollow members of each of the sections and connecting the inner walls thereof, other tubes disposed between the front and rear walls of each of the sections in line with the openings formed in such walls and having their extremities outwardly flanged and such tubes having openings in their sides, bushings extending across the joints formed between the sections and having their ends inserted in the opposing ends of adjacent flanged tubes, gaskets mounted upon the bushings between the sections, washers closing the openings in the outer walls of the sections, and tie-bolts passing through the washers, flanged tubes and bushings and connecting the several parts.

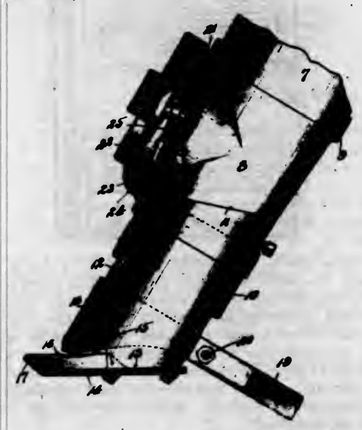
1,156,326. VALVE FOR STREET-SPRINKLERS. FRANK A. STIERS, St. Louis, Mo., assignor of one-half to Philip R. Walsh, St. Louis, Mo. Filed Apr. 28, 1914. Serial No. 834,984. (Cl. 137—4.)

1. A valve casing adapted for use in the supply pipe of a street sprinkler, consisting of a tapering pipe section adapted to constitute a part of the said supply pipe, the said pipe section being formed with a lateral extension, a swing valve for closing the said supply pipe, and a mounting for the valve arranged to maintain the latter when open in a position within the said lateral extension of the valve casing and with its face presenting a surface substantially flush with the inner surface of the casing and complementary to the opposing inclined surface thereof.



2. A valve casing adapted for use in the supply pipe for a street sprinkler head, consisting of a pipe section tapering toward an internal valve seat, the plane of which seat is inclined to the axis of the casing, the valve casing being formed with a lateral extension, a swing valve for closing the supply pipe, adapted to rest upon the said valve seat, and means for lifting the valve from its seat and moving it across the tapering part of the casing and into the said lateral extension.

1,156,327. STREET-SPRINKLER. FRANK A. STIERS, St. Louis, Mo., assignor of one-half to Philip R. Walsh, St. Louis, Mo. Filed Apr. 28, 1914. Serial No. 834,985. (Cl. 137—64.)



1. A cylindrical sprinkler head having a circumferential discharge slit and a deflecting plate below the discharge slit arranged at an obtuse angle to the longitudinal axis of the head, and means for controlling the size and shape of the slit, consisting of a band concentric with the sprinkler head, and adjustable relative thereto both axially and circumferentially, the band having an edge that is substantially parallel with the deflecting plate when the band occupies a central position.

2. In a street sprinkler, the combination of a water supply conduit, a deflecting plate at the end thereof disposed at an obtuse angle to the longitudinal axis of the conduit, there being a slit between the deflector and the end of the conduit through which water is discharged, and a regulating band surrounding and supported by the said conduit, and adjustable both longitudinally and circumferentially thereon, the edge of the band toward the discharge slit being substantially parallel with the deflecting plate when the band occupies a central position.

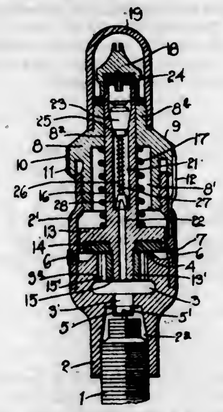
3. In a street sprinkler, the combination of an unobstructed delivery pipe across the end of which is located a deflecting plate arranged at an angle to the longitudinal axis of the pipe, the end of the pipe being in part cut away whereby there is formed a curved discharge slit above the deflecting plate, and a regulating band supported upon and surrounding the pipe adjacent to its discharge end and adjustable both longitudinally and circumferentially relative thereto, the band having a part of maximum axial dimension adapted to extend across the discharge slit, from which part its axial dimensions diminish, whereby the edge that is toward the deflecting plate operates to change the shape of the discharge slit as the band is circumferentially adjusted.

4. In a sprinkler head, the combination of a delivery pipe across the end of which is located a deflecting plate arranged at an obtuse angle to the longitudinal axis of the pipe, there being a curved discharge slit between the end of the pipe and the deflecting plate, and means for regulating both the width of the said discharge slit and its shape, consisting of a frictionally held band surrounding the sprinkler head, the band being adjustable longitudinally, to vary the width of the slit, and its edge toward the deflecting plate being so shaped that when the band is adjusted circumferentially the shape of the slit is changed, one end or the other thereof being more or less closed accordingly as the band is adjusted.

5. The combination of a straight, inclined and unobstructed conduit adapted to be attached to a source of water supply, a deflecting plate arranged at the lower end of said conduit and partially spaced therefrom to form a curved discharge slit, the said deflecting plate being arranged at an obtuse angle to the longitudinal axis of said conduit and being provided with an upturned flange arranged at an obtuse angle to the body of the deflecting plate, whereby the gravity of the oncoming supply stream may be fully utilized, and the water, deflected and spread by the plate and its flange, is precipitated on the street surface in a substantially vertical direction, after being first discharged into the air.

[Claim 6 not printed in the Gazette.]

1,156,328. PRESSURE-REGULATING DEVICE FOR TIRE-VALVES. CHARLES HENERY THAYER, Elmira, N. Y., assignor of one-fourth to George P. Ransom, one-fourth to George A. Gucker, and one-fourth to Mortimer L. Sullivan, Elmira, N. Y. Filed Feb. 16, 1915. Serial No. 8,521. (Cl. 152—12.)



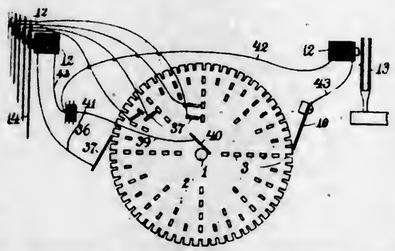
1. A pressure regulating device for tire valves including a valve body having a threaded bore for engagement upon the stem of the tire valve and provided with means

for opening said valve, said body also having an air receiving pocket and a passage connecting said pocket with said bore, said body being further provided with a relatively large longitudinal opening communicating with the opposite side of the pocket at one of its ends, a knife edge valve seat formed in the body at the opposite end of said opening, a valve in the body, a gasket carried by the valve for engagement with said seat, a retaining member for said gasket snugly fitting within the latter opening of said body and constituting a guide for the valve, said retaining member being opposed to said air pocket and presenting an extended surface against which the excess pressure in the tire may act to unseat the valve, said body adjacent to the valve seat being provided with a plurality of air exhaust ports.

2. A pressure regulating device for tire valves including a valve body provided with means for detachable engagement upon the stem of a tire valve, means on said body for opening said valve, said body having an air receiving pocket and a longitudinal opening communicating therewith, a valve seat formed in the body at one end of said opening, a spring pressed valve having a stud normally disposed within said opening, a gasket carried by the valve for engagement upon said seat, and a retaining member threaded upon said stud to retain the gasket in place, said member having portions contacting with the wall of said longitudinal opening to guide the valve in its movement, said body adjacent to the valve seat being provided with a plurality of exhaust ports.

3. The combination with the inflating valve of a pneumatic wheel tire, of a combined auxiliary inflating valve and pressure regulating device including a body formed in two sections having detachable threaded engagement with each other, one of said sections having an interiorly threaded stem for detachable engagement upon the stem of the tire valve, said latter section being provided with a valve seat, a spring pressed pressure regulating valve mounted in the other body section for engagement upon said seat, an adjustable extension threaded in the latter body section and engaged with the valve spring to regulate the tension thereof, said pressure regulating valve having a stem longitudinaly movable in said extension, said stem being longitudinally bored to provide an air passage through which air may be admitted to the tire valve, auxiliary inflating valve mechanism arranged in the bore of said valve stem, a cap threaded upon the outer end of said stem to close the bore thereof, and a protecting hood disposed over said cap and threaded upon the adjustable extension of said body.

1,156,329. INSTRUMENT FOR THE PRODUCTION OF MUSICAL TONES FORMING A TEMPERED SCALE. EDWARD G. THOMAS, Brookline, Mass., assignor, by mesne assignments, to Choralcelo Company, Boston, Mass., a Corporation of Maine. Filed June 2, 1910. Serial No. 564,703. (Cl. 84—43.)



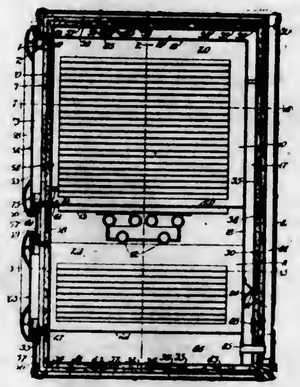
1. A plurality of sirens adapted to produce a series of pulsations having the respective frequencies of the vibrations of the notes of a musical scale; and means for reinforcing said pulsations, said means comprising a series of reinforcing members each tuned to the pulsation it reinforces, all in combination.

2. The combination of a plurality of siren rotors adapted to produce pulsations having the respective frequencies of the vibrations of the notes of a musical scale; means for reinforcing said pulsations, said means comprising a series of reinforcing members each tuned to the pulsation it reinforces; and speed-governing means for said rotors.

3. The combination of a series of disks each having several annular rows of blast openings, the number of openings of the respective rows forming a geometrical series; means for delivering a fluid under pressure to said openings; and means for rotating said disks with angular velocities increasing regularly throughout the series, the ratio between the velocities of successive disks being everywhere substantially one to the twelfth root of two.

4. The combination of a series of duplicate disks having each several annular rows of blast openings, the numbers of such openings forming a geometrical series; means for delivering fluid under pressure to such openings; and means for rotating said disks, said means embracing a pair of gears connecting each disk to the one next higher in rotative speed, one gear in each pair having one hundred and eighty-five teeth and the other one hundred and ninety-sixth teeth.

1,156,330. STOVE. STEPHEN S. THOMAS, Warren, Ohio, assignor to The Ecothermal Company, Warren, Ohio, a Corporation of Ohio. Filed Aug. 29, 1912. Serial No. 717,741. (Cl. 126—39.)



1. In a stove, the combination of an oven, a burner beneath the same, inclosures for providing passages from the burner upward at the sides of the oven, other inclosures for providing passageways across the top of the oven and down behind the same, partitions in said passages for deflecting and distributing the gases along a plurality of paths to obtain a uniform distribution of the gas currents, and an inclosure of heat insulating material surrounding the oven, burner, and passages, substantially as described.

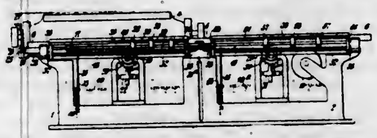
2. In a stove, the combination of an oven, inclosures for providing passages upward at the sides of the oven, other inclosures for providing a passage across the top of the oven and down behind the same, means for deflecting and distributing the flow of gases in the passages along a plurality of paths for the purpose of effecting a uniform distribution of the gases, and means for initially heating the gases, substantially as described.

3. In a stove, the combination of an oven, inclosures for providing passages upward at the sides of the same, other inclosures for providing a passage across the top of the oven and down behind the same, partitions between the side passages and the top passage, there being perforations in said partitions of sizes varying accordingly to the lengths of the gas paths, partitions in the top and back passages, there being openings in said partitions varying in size according to the lengths of the gas paths, whereby the resistances of all the gas paths are substantially the same, and means for initially heating the gases, substantially as described.

4. In a stove, the combination of an oven, inclosures for providing passages upward at the sides of the same, other inclosures for providing passages across the top of the oven and down behind the same, a burner beneath the oven, an inclosure of heat insulating material incasing the oven, burner, and passages, a cover surrounding the inclosure of heat insulating material and spaced therefrom a desired distance in its back side to provide an air space, a pair of flues located in said air space behind the downwardly extending passage, a connection from one of said flues to the lower ends of the upwardly extending passages, and a connection from the other flue to the lower end of the downwardly extending passage, substantially as described.

5. In a stove the combination of an oven, inlet and outlet gas connections, passages adjacent the walls, back, and top of the oven for the flow of gas from the inlet connection to the outlet connection, a heater located at a convenient point adjacent to the inlet connection, and means for distributing and directing the gases along a plurality of paths, adjacent to each of the surfaces of the oven, whereby the gases flowing adjacent each surface of the oven maintain the same general direction of movement and whereby a substantially uniform distribution of heat in the oven is obtained, substantially as described.

1,156,331. TYPE-WRITING MACHINE. FRANK C. UASSAUCK, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 28, 1914. Serial No. 814,858. (Cl. 197—176.)



1. In a typewriting machine, the combination with a plurality of type sets, of a rack bar associated with each type set, stops adjustable along the rack bars, and a key connected to operate both of said rack bars.

2. In a typewriting machine, the combination of a plurality of type systems, a carriage movable into coöperative relation to either system, tabulator stops for each type system, a tabulator key, and means operated thereby for operating the stops for both type systems.

3. In a typewriting machine, the combination with machine frames, of a tabulator rack on each frame, stops on said racks, means connecting said racks for operation as a unit, and a key to operate said racks.

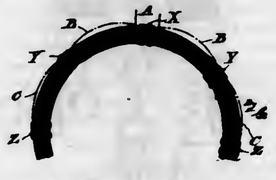
4. In a typewriting machine, the combination with machine frames, of a stop frame on each of the machine frames, stops adjustable along the stop frames, means forming a rigid connection between said stop frames, a key, and operating connections between the key and said frames.

5. In a typewriting machine, the combination with a plurality of type sets, of a carriage shiftable into operative relation to either type set, a separate escapement mechanism for each type set, tabulator stops for the carriage when in operative relation to either type set, and a key controlling said stops.

[Claims 6 to 22 not printed in the Gazette.]

1,156,332. PAPER KEG. BERT C. VAUGHN, Brooklyn, N. Y. Filed Aug. 4, 1915. Serial No. 43,613. (Cl. 229—67.

1. A paper keg having a body portion comprising a paper tube formed of a plurality of layers of spirally wound superimposed webs of paper cemented together with silicate of soda, paper heads within said body portion, said paper heads comprising paper boards built up of superimposed sheets of paper cemented together under pressure by silicate of soda, inside head paper hoops also within said body portion and abutting said heads on each side thereof to hold said heads in position, chime hoops comprising superimposed layers of paper cemented together with silicate of soda, said chime hoops having their outer edges substantially coincident with the outer ends of said body portion and being of a width sufficient to lap said inside hoops to provide a reinforcing portion at the ends of said keg, staples penetrating through said hoops and said body portion to secure these members together, supporting hoops intermediate the ends of said keg to support the side walls thereof, said intermediate supporting hoops comprising sections of a paper tube formed of superimposed paper webs cemented together with silicate of soda, and staples spaced at intervals around said intermediate hoops to anchor said hoops and said body portion at predetermined intervals in such manner that forces tending to crush said body portion adjacent said intermediate hoops are transmitted through said staples as tension members and to said intermediate hoops as a compression member to sustain said body portion under such forces.



2. As an article of manufacture, a paper keg having a body portion comprising a section of a cylinder whose wall is composed of superimposed layers of paper cemented together by silicate of soda, heads secured within the ends of said body portion, and a supporting hoop intermediate the ends of said body portion and constructed to sustain the part of said body portion intermediate the heads, staples penetrating said supporting hoop and said body portion, said staples being spaced apart at predetermined intervals to separate and localize the attachment of said hoop to said body portion in such manner that forces tending to crush said body portion are transmitted through said staples to said hoop to render said hoop a compression member tending to resist such forces.

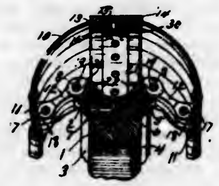
3. As an article of manufacture, a paper keg comprising a body portion formed of superimposed layers of paper cemented together with silicate of soda, a supporting hoop upon the exterior of said body portion, said supporting hoop comprising superimposed layers of paper cemented together by silicate of soda, and spaced apart anchoring means for anchoring said hoop to said body portion at a plurality of spaced apart circumferential intervals to transmit crushing forces upon said body portion to said hoop to enable said hoop to act as a compression member to absorb the said forces.

1,156,333. SECTIONAL SPRING-TIRE. GEORGE H. VOGEL, BRITTON D. LOBDELL, and JOSEPH E. BALL, Syracuse, N. Y.: said Lobdell assignor to said Vogel and said Ball. Filed Dec. 24, 1912. Serial No. 738,504. (Cl. 152—8.)

1. In combination with the rim of a vehicle wheel, a tire comprising a circular series of spring segments surrounding the rim and having their opposite sides provided with outwardly converging links pivoted to corresponding sides of the rim and constituting the only means of connecting the tire to the rim.

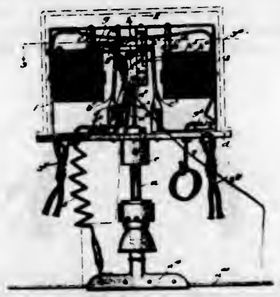
2. In combination with the rim of a vehicle wheel, a tire comprising a circular series of spring segments surrounding the rim and having their opposite sides provided with outwardly converging links pivoted to corresponding

sides of the rim and constituting the only means of connecting the tire to the rim, said rim and links having co-



operative means for limiting the outward swing of the links.

1,156,334. ELECTRICAL SIGNALING SYSTEM AND APPARATUS. CHARLES W. WARD, Lakewood, Ohio. Filed Nov. 1, 1911. Serial No. 658,048. (Cl. 246—54.)



1. A trolley actuated switch comprising relatively movable contacts, an operating member therefor having a determinate total range of operative movement and having operative engagement with said contacts through a portion of said movement only, an electric circuit controlled by said contacts, and a latch temporarily retaining said contacts in the positions to which they are moved by said operating member, together with tripping means controlled from said electric circuit to trip said latch and free the contacts therefrom.

2. A contact device comprising a support, normally separated contacts, means adapted to be actuated by a passing car for closing said contacts together, mechanical means for maintaining said contacts in engagement when initially closed, and electromagnetic means controlled by said contacts and adapted when energized to disengage said mechanical means and maintain said contacts closed independently.

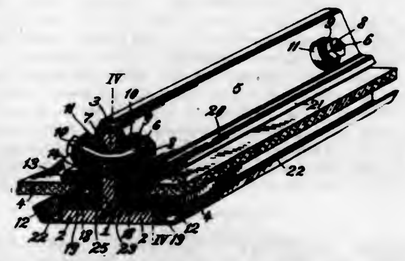
3. A contact device comprising a support, normally separated contacts, mechanical means adapted to be actuated by a passing car for closing said contacts together, a latch adapted to hold them together when so closed, and electromagnetic means controlled by the contacts adapted to trip the latch and maintain the contacts closed independently thereof.

4. A contact device comprising an electromagnet, an armature for said electromagnet, relatively movable contacts adapted to be closed by said armature and engaging each other through an extended range of movement of said armature, a circuit for said electromagnet closed by said contacts, primary operating means for said contacts having a determinate range of operative movement during a portion only of which it is in operative connection with said contacts, and a temporay latch adapted to retain said contacts closed until said electromagnet is energized and said latch tripped upon the energization of said electromagnet, whereby the electromagnet thereafter has exclusive control of said contacts.

5. A contact device comprising an electromagnet, a pair of relatively movable contacts controlled thereby and having a yielding engagement with each other, a primary operating member for said contacts having a determinate range of operative movement during a portion only of which it is in operative engagement with said contacts, a temporary latch retaining said contact in the position to which it is moved by said operating member, and an electric circuit for said electromagnet controlled by said contacts and including electromagnetic tripping means for said temporary latch, whereby said contacts are controlled wholly by said electromagnet after energization of the same.

[Claims 6 to 23 not printed in the Gazette.]

1,156,335. GLAZING CONSTRUCTION. WILLIAM P. WAUGH, Montclair, N. J. Filed Mar. 16, 1912. Serial No. 684,205. (Cl. 108—16.)



1. In glazing construction, a load-supporting member comprising a T bar, the web of which extends outward between the edges of panes of glass to be supported by said bar, the flanges of said bar forming glass-supporting ledges, strips of waterproofing, non-capillary material supported on said ledges, panes of glass supported on said strips, second strips of said material resting on said panes of glass, third pieces of said material inserted between the edges of said panes and the web of the load-supporting bar, the inner edges of said second strips abutting against said third pieces, and a glass-retaining cap extending over the top of the web of the load-supporting bar, and adapted to exert pressure both downwardly and inwardly on said second strips.

2. In glazing construction, a load-supporting bar having glass-supporting surfaces, strips of glass-bedding material resting upon each of said surfaces, and means for retaining said strips in position comprising clips, the end portions of which rest upon said glass-supporting surfaces under said strips, said end portions having portions struck up therefrom and entering the glass-bedding material.

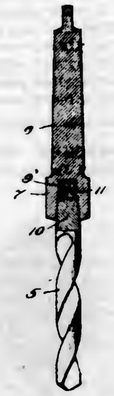
3. In glazing construction, a load-supporting member comprising a web and a glass-supporting ledge, a strip of glass-bedding material resting upon said ledge, and means for retaining said strip in position comprising a clip, a portion of which is bent over said web, another portion of said clip being provided with means for engaging said strip.

4. In glazing construction, a load-supporting member comprising a web and a glass-supporting ledge, a strip of resilient glass-bedding material resting upon said ledge, and means for retaining said strip in position comprising a clip, a portion of which is bent over said web, the end portion of said clip passing between said ledge and said strip and being provided with means to prevent lateral movement of the strip.

5. In glazing construction, a load-supporting member comprising a web and a glass-supporting ledge, a strip of glass-bedding material resting upon said ledge, and means for retaining said strip in position comprising a clip, a portion of which is bent over said web, the end portion of said clip passing between said ledge and said strip and being provided with a prong struck up therefrom and entering the material of the strip.

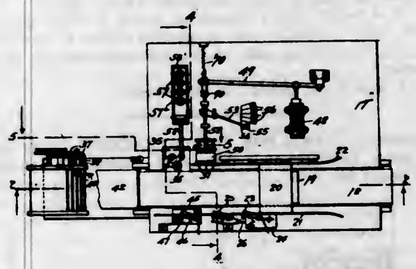
[Claims 6 to 15 not printed in the Gazette.]

1,156,336. CUTTING-TOOL. SAMUEL A. WEGLAND, Chicago, Ill., assignor to Rich Tool Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 16, 1912. Serial No. 691,167. (Cl. 77—67.)



In a device of the class described, the combination of a shank member formed of axle steel, and provided in its lower end with a circular socket, having the lower portion of its walls tapering toward its inner end, and having that portion of its walls above said tapered portion threaded, a cutting member formed of tool steel, and provided at its upper end with a circular portion tapered to engage the tapered part of said socket, and having its extreme end portion threaded to engage a threaded part of the socket, the tapered portion of the cutting member being of a size whereby, when the two members are connected together, the surfaces of the tapered portions of the members will engage prior to the threaded end of the cutting member reaching the terminus of the threaded portion of the socket, substantially as described.

1,156,337. TILE MEASURING, MARKING, AND SORTING MACHINE. THEODORE S. WOOD, New York, N. Y. Filed July 1, 1911. Serial No. 636,430. (Cl. 101—186.)



1. In an organized tile measuring machine, a carrier, or conveyer, means to operate the same, means to centralise a tile on said conveyer, means to bring a measuring apparatus into contact with said tile after being centralised on said conveyer, means independently of said conveyer-operating-means to operate said tile measuring apparatus said tile measuring apparatus being adapted to be set in motion by the passage of a tile through said centralising means, and means in combination with said measuring means to determine and print on said tile a mark indicating the size thereof.

2. In a tile measuring apparatus, a carrier or conveyer adapted to carry a tile and means to operate the same, guide plates adapted to position a tile on said conveyer, measuring apparatus normally out of the line of travel of a tile on said conveyer, means forming a part of said machine positioned to operate said measuring apparatus to bring it into contact with a tile when positioned by said plates, and means to contact with a tile when engaged by said guide plates to set in motion said measuring means, for the purpose set forth.

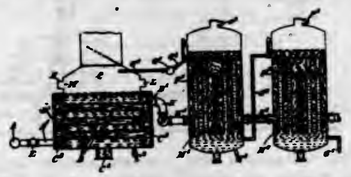
3. In a tile measuring machine, a carrier or conveyer adapted to carry a tile through the machine and means to operate the same, means to position a tile on said carrier, means forming a part of said machine and positioned normally out of the line of travel of said tile and operable independently of said carrier-operating means adapted to ascertain the length of said tile, and means to mark a symbol on said tile, for the purpose set forth.

4. In an organized tile measuring machine, a carrier adapted to convey a tile through said machine and means to operate the same, means to position a tile on said carrier, a slidable head normally out of the line of travel of a tile on said carrier, means forming a part of said machine and operable independently of said carrier-operating-means to bring said head into engagement with a tile when engaged by said positioning means, and means adapted to be positioned by said head to mark a symbol on the tile, for the purpose set forth.

5. In an organized tile measuring machine, a carrier adapted to convey a tile through said machine and means to operate the same, means to position a tile on said carrier, a slidable head normally out of the line of travel of a tile on said carrier, means forming a part of said machine and operable independently of said carrier-operating-means to operate said head, and means to set said head-operating-means in motion when said tile-positioning-means is in engagement with a tile, for the purpose set forth.

[Claims 6 to 20 not printed in the Gazette.]

1,156,338. APPARATUS FOR HEATING AND EVAPORATING LIQUIDS. OTTO K. ZWINGENBERGER, Perth Amboy, N. J., assignor to The Roessler & Hasslacher Chemical Co., New York, N. Y., a Corporation of New York. Original application filed Nov. 25, 1911, Serial No. 662,276. Divided and this application filed Dec. 6, 1912. Serial No. 735,204. (Cl. 127—9.)



1. In an apparatus for heating and evaporating liquids by hot gases coming directly from industrial sources as specified, the combination of a main gas pipe, a plurality of primary evaporation vessels, connection pipes between said vessels and the main pipe, means for regulating the quantity of gas flowing through said connection pipes, a main gas collector, connection pipes between the primary evaporation vessels and the main gas collector, a boiler system and a connection between said main gas collector and said boiler system.

2. In an apparatus for heating and evaporating liquids by hot gases coming directly from industrial sources as specified, the combination of a main gas pipe, a system of primary evaporation vessels, connection pipes between said vessels and the main pipe, means for regulating the flow of gas through said connection pipes, a main gas collector, connection pipes between the primary evaporation vessels and the main gas collector, a main boiler system, a connection between said main gas collector and said boiler system and an auxiliary boiler system in connection with said main boiler system.

3. In an apparatus for heating and evaporating liquids by hot gases coming directly from industrial sources as specified, the combination of a main gas pipe, a system of primary evaporation vessels, connection pipes between

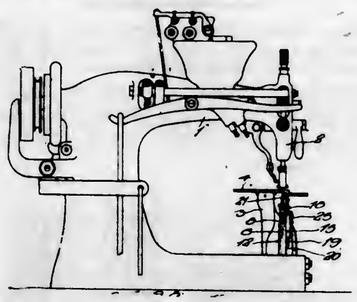
said vessels and the main pipe, valves in said connection pipes, means controlling the operation of said valves to regulate the flow of gas through said connection pipes, a main gas collector, connection pipes between the primary evaporation vessels and the main gas collector, a boiler system and a connection between said main gas collector and said boiler system.

4. In an apparatus for heating and evaporating liquids by hot gases coming directly from industrial sources as specified, the combination of a main gas pipe, a system of primary evaporation vessels, connection pipes between said vessels and the main pipe, means for regulating the flow of gases through said connection pipes, a main gas collector, connection pipes between the primary evaporation vessels and the main gas collector, a boiler system and a connection between said main gas collector and said boiler system.

5. In an apparatus for heating and evaporating liquids by hot gases coming directly from industrial sources as specified, the combination of a main gas pipe, a plurality of primary evaporation vessels, connection pipes between said vessels and the main pipe, means for regulating the quantity of gas flowing through said connection pipes, suitable passageways for the gases in each of the primary evaporation vessels, a main gas collector, connection pipes between the primary evaporation vessels and the main gas collector, a system of boilers and a connection between said main gas collector and said boiler system.

[Claims 6 to 11 not printed in the Gazette.]

1,156,339. WORK-FEEDING ATTACHMENT FOR SEWING-MACHINES. CHARLES AUGUSTINE, Hermann, Mo. Filed Dec. 3, 1914. Serial No. 875,296. (Cl. 112—28.)



1. The combination with a sewing machine having an upright rocking bar with a needle bar extending therethrough, of a feeding attachment comprising a casing fixed to said rocking bar, a member slidable vertically in said casing and having a forked foot straddling said needle bar above the projection thereon, and a head at the other end of said sliding bar having a feed rack offset therefrom.

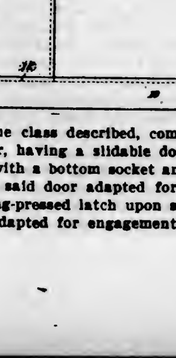
2. The combination with a sewing machine having an upright rocking bar and a vertically reciprocatory needle bar, of a feeding attachment mounted on said rocking bar and comprising a casing having a member slidably mounted therein and provided at one end with work engaging teeth and at its other end with a needle bar engaging member, and yieldable means for retracting said slidable element and normally holding it in lowered position.

3. A work feeding attachment for sewing machines comprising a casing, means for attaching it to a support, a bar slidable in said casing and having a laterally extending forked foot at one end and an offset feed rack at its other end, and a coiled spring connected at one end with said bar and at the other end with said casing.

4. A work feeding attachment for sewing machines comprising a casing, means for attaching it to a support, a bar slidable in said casing and having a laterally extending forked foot at one end and an offset feed rack at its other end, and a coiled spring connected at one end with said bar and at the other end with said casing, said feed rack being adjustably mounted on said bar to vary its extent of projection.

5. A feeding attachment for sewing machines comprising an attaching casing, a bar slidably mounted in said casing and having a laterally extending forked foot at one end thereof and an offset feed rack at the other end, means on said bar for limiting its movement in said casing, and a coiled spring connecting said casing and bar for holding said bar normally in retracted position and for returning it to retracted position after it has been projected.

1,156,340. TENNIS-RACKET. FREDERICK J. BANCROFT, Pawtucket, R. I. Filed July 7, 1915. Serial No. 38,415. (Cl. 46—24.)



1. A tennis racket formed of continuous strips of wood, combined with a strip of raw hide incorporated in the bow throughout its length.

2. A tennis racket comprising a plurality of bow strips of wood, a strip of raw hide interposed between the strips, and means for uniting all the strips.

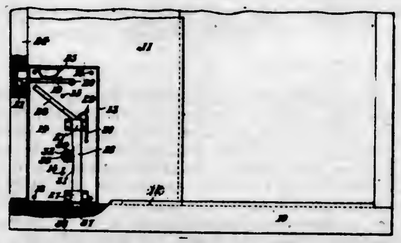
3. A tennis racket comprising a plurality of bow strips, a strip of raw hide interposed between the other strips throughout their length, and a net uniting all the strips.

4. A tennis racket comprising bow strips of wood, a strip of raw hide interposed between the first mentioned strips throughout their length, a throat piece, and a reinforcing strip of raw hide on the throat piece.

5. A tennis racket comprising a bow, a throat piece in the bow, a handle, and reinforcing strips of raw hide upon the exterior only of the bow adjacent the throat piece.

[Claim 6 not printed in the Gazette.]

1,156,341. LOCK FOR SLIDING DOORS. EMERY BÁRSONY, Castleton-on-Hudson, N. Y. Filed Feb. 18, 1915. Serial No. 9,097. (Cl. 70—31.)



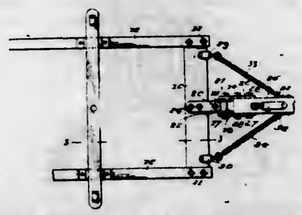
1. A device of the class described, comprising in combination with a car, having a slidable door, the sides of said car provided with a bottom socket and a side slot, a shiftable bolt upon said door adapted for seating within said socket, a spring-pressed latch upon said door engaging said bolt and adapted for engagement with said slot.

2. A device of the class described, comprising in combination with an elevator car having a slidable door, the sides of said car provided with a bottom socket and a side slot, a sliding bolt upon said door, resilient normally projecting means for said bolt, an upper arm on said bolt, a latch engaging said arm and adapted for projecting within said slot, and a resilient member adapted for lowering said latch.

3. A lock comprising a casing, a spring pressed hooked latch pivoted within said casing and projecting therefrom, a slidable bolt mounted within said casing and having an extension at one end positioned within the path of movement of the said latch and having its other end beveled and normally positioned outwardly of the casing, manual retracting means for the said bolt, automatic projecting means for the said bolt and resilient shifting means for the said latch.

4. In combination with a slidable door having a cut-away corner portion and a keeper side notch and bottom socket in the door casing, a lock casing secured within said cut-away portion, a spring-pressed latch having one end pivoted within the lock casing and its other end hooked and extending outwardly thereof in vertical alinement with the said notch, a shiftable bolt vertically positioned within the said casing and having its lower end beveled and normally projecting outwardly of the casing in the same vertical plane as the said socket, an angular extension upon the upper end of the said bolt in engagement with the said latch when the bolt is retracted, automatic projecting means for the said bolt, said bolt provided with the toothed side portion, a pinion in constant mesh with the said toothed portion and having a spindle provided with a key-receiving rectangular bore.

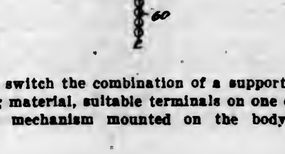
1,156,342. DRAFT-TONGUE COUPLING. CHARLES M. BEACH, Martel, Ohio. Filed Dec. 21, 1914. Serial No. 878,319. (Cl. 21—36.)



1. A draft tongue coupling including a rigid member adapted to be connected to a vehicle, bearing plates secured to the upper and lower faces of the member, a draft tongue, bearing plates secured to the opposite side faces of the draft tongue, a coupling member including spaced pairs of perforated ears arranged at right angles to each other, one pair of ears fitting between the bearing plates on the draft tongue and the other pair of ears fitting between the bearing plates on the rigid member, a horizontal pivot bolt extending through the bearing plates on the draft tongue and the adjacent perforated ears, a vertically disposed pivot bolt extending through the bearing plates on the rigid member and the adjacent pair of perforated ears, the horizontal pivot bolt being disposed in advance of the vertical pivot bolt, and flexible brace members disposed on opposite sides of the vertical pivot bolt and forming a flexible connection between said rigid member and the draft tongue, said brace members being attached to the draft tongue in advance of the horizontal pivot bolt.

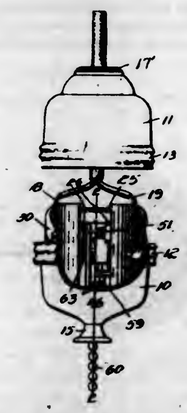
2. A draft tongue coupling including a rigid member adapted to be connected to a vehicle, bearing plates secured to the upper and lower faces of the rigid member, holding devices disposed on opposite sides of said bearing plates, a draft tongue, holding-devices secured to the draft tongue, bearing plates secured to the side faces of the draft tongue at the rear of the holding devices thereon, a coupling member including spaced pairs of perforated ears, one pair of perforated ears fitting between the bearing plates on the draft tongue and the other pair of said perforated ears fitting between the bearing plates on the rigid member, a horizontal pivot bolt extending through the bearing plates on the draft tongue and the adjacent perforated ears, a vertical pivot bolt independent of the holding devices on the rigid member extending through the bearing plates on said rigid member and through the adjacent perforated ears, and converging brace members forming a flexible connection between the holding members on the rigid member and the holding members on the draft tongue, the horizontal pivot bolt being disposed in advance of the vertical pivot bolt and said vertical pivot bolt being arranged in substantially horizontal alinement with the ends of the holding devices on the rigid member.

1,156,343. WINDOW SHADE AND CURTAIN HOLDER. FREDRICK F. BETHKA, Schenectady, N. Y. Filed Sept. 1, 1914. Serial No. 859,596. (Cl. 156—24.)



An adjustable means for mounting a window shade and curtain pole holder made up of two like portions, each comprising a plate provided with a longitudinal slot therethrough; grooves formed along the sides of the plate by turning over the edges thereof; a block provided with flanges adapted to reciprocate in said grooves on the plate; a shade bracket mounted on said block adapted to hold one end of the shade holder; a curtain bracket formed with a curved portion for the support of the curtain pole; means on said curtain bracket for registering with and reciprocating in said grooves along the sides of the plate; and a spring attached to said plate for engaging and holding said curtain bracket in the desired position.

1,156,344. PULL PENDENT SWITCH. FAY A. BROGDEN, Syracuse, N. Y., assignor to Pass & Seymour, Inc., Solvay, N. Y., a Corporation of New York. Filed July 12, 1912. Serial No. 709,043. (Cl. 175—290.)



1. In a switch the combination of a supporting body of insulating material, suitable terminals on one end thereof, switching mechanism mounted on the body, operating

means for said switching mechanism, and a casing inclosing said body and comprising two detachably connected parts, each inclosing a portion only of the insulating body, one of said parts being rigidly secured to the insulating body so as to leave the upper portion of the body and said terminals exposed when the other part of the casing is removed, whereby access may be had to the terminals without disconnecting one part of the casing from the insulating body.

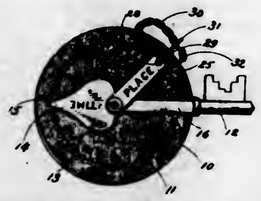
2. In an electric appliance the combination of a supporting body comprising insulating material, suitable terminals on the side of said body near one end thereof, a casing for said body comprising two detachably connected parts, one of said parts being of such size as to inclose only a portion of said body, leaving exposed the side thereof near said terminals, and means for attaching said one part of the casing to the insulating body, the construction and arrangement being such that access may be had to said terminals without detaching said one part of the casing from the insulating body.

3. In a switch, the combination of a supporting body of insulating material comprising two sections spaced apart, suitable terminals on said body, switching mechanism supported on said body between said sections, and adapted to electrically connect said terminals, a casing completely inclosing said body and comprising two detachably connected parts, a threaded member embedded in each section of the insulating body, and screws accessible from the exterior of the casing and engaging one of the parts of the casing and said threaded member in each of said sections of the insulating body whereby said sections and one part of the casing are all rigidly connected together.

4. In an electric switch the combination of a supporting body comprising two spaced blocks of insulating material, one of said blocks having a reduced section or boss with inclines arranged on the peripheral face thereof and extending into the space between said blocks, switch contacts on alternate inclines, a conducting plate rotatably mounted on an axis concentric with the boss and having resilient contact fingers disposed at right angles thereto and engaging the inclines on the boss, and means for rotating said plate to make and break the circuit.

5. In an electric switch the combination of a supporting body of insulating material, a pivot pin mounted thereon, contacts on said body, and a switch member for successively connecting and disconnecting said contacts, said switch member comprising a flat plate of conducting material having a central opening to fit said pivot pin, spring fingers having ends secured to the ends of the plate at opposite sides of the center and having their broad faces disposed at right angles to the broad face of said plate, the free ends of the fingers being reversely disposed with respect to the secured ends, curving about the pivotal axis of the plate and tending to spring inwardly toward the center of the plate and into contact with said contacts.

1,156,345. KEY-TAG. CHARLES E. BURNAP, Chicago, Ill. Filed Aug. 5, 1910. Serial No. 575,767. (Cl. 116—31.)



1. The combination with a key, of a room-tag, and means for temporarily securing them in certain relative positions, said key and tag carrying indicia which by the cooperation of both key and tag can be made to furnish information.

2. In combination with a key, of a room-tag, said key and tag carrying indicia which by the coöperation of both key and tag can be made to furnish information, and means for temporarily securing them in certain coöperative relative positions, said key when thus coöperating being incapable of use with its lock.

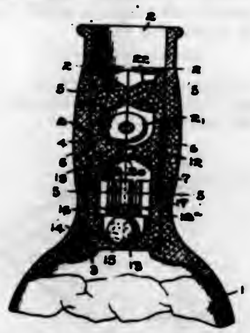
3. In combination with a key, of a room-tag, said key and tag carrying indicia which by the coöperation of both key and tag can be made to furnish information, means for temporarily securing them in any one of certain coöperative relations, and connections between the key and the tag which permit their being brought in said varying cooperative relations, and prevent their being entirely separated.

4. In combination with a key carrying a pointer, of a room-tag carrying a plurality of indications with which the pointer is adapted to coöperate one at a time, and connections between said key and tag which permit of their being set with the pointer coöperating with any desired one of the indications.

5. In combination with a key carrying a pointer, of a room-tag carrying two sets of indications, an auxiliary pointer, and connections between said key, tag and auxiliary pointer which permit of the two pointers being set in coöperation with any one of each of their respective sets of indications.

[Claims 6 to 15 not printed in the Gazette.]

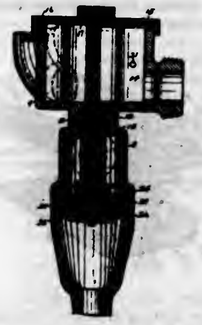
1,156,346. NON-REFILLABLE BOTTLE. FREDERICK W. CASSIDY, Philadelphia, Pa. Filed Apr. 8, 1915. Serial No. 19,882. (Cl. 215—62.)



1. The combination with a bottle neck, of a casing in the bottle neck, a valve in the casing, a baffle in the casing above the valve, said casing comprising two longitudinal sections, a spring band around the casing securing the halves together, said casing and neck having annular grooves receiving the spring band, the upper edges of the band engaging in the groove of the bottle neck, the lower edges of the band engaging in the groove of the casing, and said band at a point above its lower edge having outwardly bowed portions bearing against the face of the bottle neck, and said band having an inwardly projecting bead between its ends bearing against the casing, substantially as described.

2. The combination with a bottle neck, of a casing secured within the bottle neck, said casing having a valve seat at its lower end, and a plurality of internal baffles at its upper end, a weight in the casing located above the valve, said casing constructed to limit the movement of the weight in both directions, said casing comprising two longitudinal sections, a spring band around the casing securing the halves together, said casing and neck having annular grooves receiving the spring band, the upper edges of the band engaging in the groove of the bottle neck, the lower edges of the band engaging in the groove of the casing, and said band at a point above its lower edge having outwardly bowed portions bearing against the face of the bottle neck, and said band having an inwardly projecting bead between its ends bearing against the casing, substantially as described.

1,156,347. GAS-VALVE. HARRY A. COCHRAN, Houston, Tex., assignor to American Automatic Water Heater Co., doing business in Texas, a Corporation of Arizona. Filed Dec. 2, 1913. Serial No. 804,808. (Cl. 126—351.)



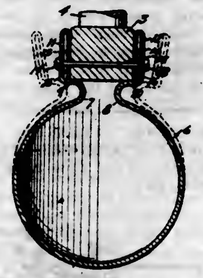
1. A device of the character described including two chambers, a water inlet and outlet for one of said chambers and a gas inlet and outlet for the other of said chambers, a valve having an internally threaded socket for closing said gas outlet, a means for securing said valve against rotation, a rotatable shaft, one end of which has a threaded connection in said socket and the other end of which projects into the first mentioned chamber, a gate fixed to said shaft and located in the first mentioned chamber, so as to be operated by the current passing therethrough and partially rotate said shaft in one direction, so as to move the valve lengthwise, in one direction relative to the shaft, and a resilient member operatively connected with the shaft and tending to rotate the same in the opposite direction, when the current is cut off and move the valve in the opposite direction.

2. A device of the character described including two chambers, a neck connecting said chambers, a water inlet and outlet for one of said chambers and a gas inlet and outlet for the other of said chambers, a circular valve, having an internally threaded socket member upstanding therefrom, a seat with which the valve coöperates to open and close said gas outlet, laterally extending arms carried by said valve and engaging with the seat and securing said valve against rotation, a rotatable shaft, one end of which has a threaded connection in said socket and which extends through said neck and whose other end projects into the first mentioned chamber, a gate fixed to said shaft and located in the first mentioned chamber so as to be operated by the current passing therethrough and partially rotate said shaft in one direction, so as to move the valve lengthwise with respect to the shaft, against said seat, and a coil spring surrounding said shaft and operatively connected therewith and tending to rotate the same in the opposite direction, when the current is cut off, and move the valve, in the opposite direction and from the seat.

1,156,348. SPRING-TIRE. WILLIAM DE FREES, Hawthorne, Cal. Filed June 24, 1914. Serial No. 847,006. (Cl. 152—8.)

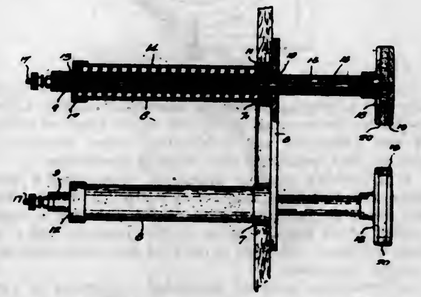
1. A spring tire, comprising an annular metallic tube substantially circular in cross section having opposite extending U-shaped portions extending around its inner periphery terminating at their outer edges in flanges adapted to extend on opposite sides of the wheel felly, and spring tongues formed on the inner edges of said flanges extending parallel therewith adapted to bear against the opposite sides of the wheel felly.

2. A vehicle tire, comprising a tube of resilient metal bent to conform to the circumferential periphery of a wheel felly and having oppositely extending U-shaped portions on its inner periphery terminating in outwardly extending portions adapted to engage the outer periphery of the wheel felly and terminating in flanges adapted to extend on opposite sides of the wheel felly, inwardly extending tongues on said flanges adapted to bear against



the sides of the wheel felly, and means for securing said flanges to the felly, whereby said tongues are rendered under tension.

1,156,349. CONNECTOR FOR ELECTRICAL CONDUCTORS. HUGH E. DENMAN, Slayden, Tex. Filed Jan. 31, 1914. Serial No. 815,852. (Cl. 173—332.)



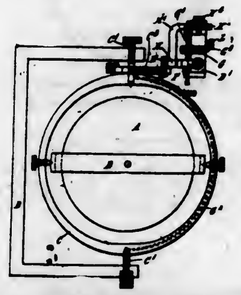
1. A device of the character described consisting of a pair of hollow members and an inner tube extending lengthwise through each of said members, a means carried by each of said tubes for limiting its movement in one direction, a resilient cushion resisting against the corresponding tubes when moved in the other direction, and forming yieldable seats therefor, an electrical conductor extending axially through each of said tubes, insulating material surrounding each of said conductors, a head secured on one end of each of said tubes, each head carrying, on its outer face, a convex insulated metallic plate with which the conductor of the corresponding tube connects and binding posts carried by the other ends of said tubes.

2. A device of the character described consisting of a pair of hollow members, an inner tube extending lengthwise through each of said members, a means carried by each of said tubes for limiting its movement in one direction, a resilinet cushion surrounding each tube and resisting against said tube when the tube is moved in the other direction, an electrical conductor extending axially through each tube, insulating material surrounding each conductor, a binding post carried by one end of each tube and an enlarged head circular in form carried by the other end of each tube, the outer end of each head being formed of a convex metallic plate in connection with the conductor of its corresponding tube and an insulator interposed between said plate and the tube carrying the same.

3. A device of the character described consisting of a pair of hollow members, an inner tube extending lengthwise through each of said members, a shoulder carried by each of said tubes and engaging with its corresponding member and limiting its movement in one direction, a

resilient cushion surrounding each tube and forming a resilient seat for the tube, when the tube is moved in the other direction, an electrical conductor, extending axially through each tube, insulating material surrounding each conductor, a binding post, carried by one end of each tube, the outer end of each head being convex and formed of a metallic plate, in connection with the conductor of its corresponding tube and an insulator interposed between said plate and the tube carrying the same.

1,156,350. GYROSCOPIC STEERING MECHANISM FOR AUTOMOBILE TORPEDOES. FRANK W. DODD, Weymouth, England. Filed June 2, 1915. Serial No. 31,788. (Cl. 114—24.)



1. Gyroscopic steering apparatus comprising a gyroscope and a steering mechanism controlled thereby, having means for discharging an air-jet under directive control of said gyroscope, and jet-actuated means operated by said jet and controlling said steering mechanism.

2. Gyroscopic steering apparatus comprising a gyroscope and a steering mechanism controlled thereby, having means for discharging an air-jet including a nozzle carried by the gimbal system of the gyroscope, and a jet-actuated means operated by said jet and controlling said steering mechanism.

3. Gyroscopic steering apparatus comprising a gyroscope and a steering mechanism controlled thereby, having means for discharging an air-jet including a nozzle carried by the gimbal system of the gyroscope and so mounted that such air-jet issues from it in radial direction and hence produces no rotative effect on the gimbal system, and a jet-actuated means operated by said jet and controlling said steering mechanism.

4. Gyroscopic steering apparatus comprising a gyroscope and a steering mechanism controlled thereby, having means for discharging an air-jet under directive control of said gyroscope, and an air-driven motor operated by such jet and operatively connected to control said steering mechanism.

5. Gyroscopic steering apparatus comprising a gyroscope and a steering mechanism controlled thereby, having means for discharging an air-jet under directive control of said gyroscope, and a reversible fan driven by said jet and operatively connected to control said steering mechanism.

[Claims 6 to 12 not printed in the Gazette.]

1,156,351. SUPPORTING AND GLAZING CONSTRUCTION FOR SKYLIGHTS AND LIKE STRUCTURES. THOMAS I. DUFFY, Chicago, Ill., assignor, by mesne assignments, to The Weatherproof Construction Company, a Corporation of New York. Filed Nov. 30, 1908. Serial No. 465,320. (Cl. 108—16.)

1. In a skylight and like structure, a load carrying member comprising a flat bar arranged on edge, a glass carrying ledge extending laterally from said member, a pane of glass supporting on the ledge, a yieldingly supported glazing bar engaging at one margin said load carrying member, a sealing strip engaged between the other margin of said glazing bar and the pane of glass, said sealing strip being made of relatively soft impressible material which is formed with a groove on its upper side to receive the margin of the glazing bar and on its lower side with laterally separated, longitudinal glass engaging lips, said lips being adapted to be separated under the pressure of the glazing strips and to conform to the inequalities of the face of the glass.



2. In a skylight and like structure, a load-carrying member provided with a laterally extending glass-carrying ledge, a pane of glass supported on said ledge and a cushioning strip made of comparatively soft impressible material between said ledge and pane having a plurality of longitudinally arranged laterally separated glass engaging ribs of V shaped section.

3. In a skylight and like structure, wherein the upper courses of the glass panes are arranged in overlapping relation to the lower courses, a load carrying member, glass carrying ledges extending laterally from the load carrying member and arranged in successively lower planes, and glazing bars at the sides of the load carrying member and arranged to press on the surface of the glass panes, the load carrying member having a longitudinal shoulder against which the adjacent margins of the glazing bars bear, the margins of the glazing bars which bear against said shoulders being included obliquely to the planes of the glass panes upon which said glazing bars press.

4. In a skylight and like structure, wherein the upper courses of the glass panes are arranged in overlapping relation to the lower courses, a load carrying member comprising a flat bar arranged on edge, glass carrying ledges extending laterally from the load carrying member, a glazing bar arranged obliquely to the load carrying member, the load carrying member being provided with a longitudinal shoulder against which the glazing bars bear, means for providing a weather-proof joint between the other margins of the glazing bars and glass, and means for resiliently supporting the glazing bars on the glass and load carrying member, the margins of the glazing bars engaging said shoulder being arranged obliquely to the planes of the glass panes upon which said glazing bars press.

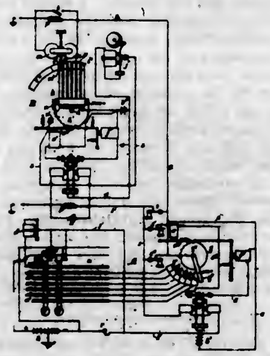
5. In a skylight and like structure, a glazing bar having a marginal portion adapted for engagement with a supporting or load carrying structure, and an oblique portion adapted at its other margin for engagement with the glass of the skylight or like structure, the edge of the marginal portion of the glazing bar supported by said member being cut obliquely to the line which separates the latter marginal portion and oblique portion of the bar.

[Claims 6 to 20 not printed in the Gazette.]

1,156,352. SELECTIVE SYSTEM AND APPARATUS. JOHN F. ENGLE, Cleveland, Ohio. Filed May 5, 1909. Serial No. 494,079. (Cl. 177—338.)

1. In selective switching apparatus, the combination with a switch of the class described, comprising a plurality of sets of contracts, of a circuit including an electromagnet, and means operated thereby for effecting the bodily movement of said switch, and a second circuit including an electromagnet, and means governed thereby for selecting certain contacts from each set and closing all of said selected contacts in series as said bodily movement takes place, substantially as set forth.

2. A selective signaling system, comprising two line conductors, circuit-controlling apparatus and a source of electrical energy associated therewith at a central office, a plurality of sub-stations adapted to be individually selected thereby, each equipped with a permutating switch comprising a plurality of separable contacts through each of which a signaling circuit is adapted to close in series relation, an electro-magnet controllable over one line conductor and means operated thereby for effecting the actuation of said switch, and a second electro-magnet controllable over the other line conductor and means operated thereby for modifying the electrical relations of the permutating switch contacts, substantially as set forth.



3. In apparatus of the class described, the combination with a rotary member, of a plurality of separable switch contacts mounted thereon through which a circuit is adapted to be established in series relation, an electromagnetic means for advancing the rotary member step-by-step, a second electro-magnetic means adapted to modify the electrical relation of said contacts, and circuit-controlling apparatus for actuating the switch contacts, substantially as set forth.

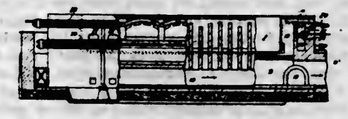
4. In a selective signaling system, the combination with the line conductors thereof, of a source of electrical energy and suitable circuit-controlling apparatus associated therewith, a plurality of stations connected with said line conductors, each of which is equipped with a permutating switch, comprising a rotary member, a plurality of differently connected separable switch contacts mounted thereon through which a circuit is adapted to be established in series relation, an electro-magnet and means operated thereby for advancing the rotary member step-by-step, and a second electro-magnet and means operated thereby adapted to modify the electrical relation of said contacts, said magnets being respectively controllable over the line conductors, substantially as set forth.

5. In a selective signaling system, the combination with the line conductors thereof, of a source of electrical energy and suitable circuit-controlling apparatus associated therewith, a plurality of stations connected with said line conductors, each of which is equipped with a permutating switch, comprising a rotary member, a plurality of differently connected separable switch contacts mounted thereon through which a circuit is adapted to be established in series relation, an electro-magnet and means operated thereby for advancing the rotary member step-by-step, a second electro-magnet and means operated thereby adapted to modify the electrical relation of said contacts, and a restoring electro-magnet for returning the apparatus to its initial position, said magnets being respectively controllable over the line conductors, substantially as set forth.

[Claims 6 to 15 not printed in the Gazette.]

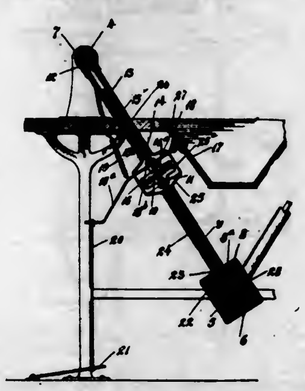
1,156,353. GALVANIZING-FURNACE. CHARLES FELL, Elyria, Ohio, assignor to National Tube Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Nov. 12, 1914. Serial No. 871,741. (Cl. 122—6.)

1. In a galvanising furnace, a galvanising pot, means for heating the pot, and a conduit adjacent to the intersection of the side walls with the bottom of the pot to conduct a cooling medium therethrough and prevent overheating the pot at the junction of the sides and bottom thereof.



2. A galvanising furnace comprising a built up galvanising pot formed of metal plates riveted together at the intersection of the side walls with the bottom and end walls, and pipes adjacent to the riveted joints in said pot arranged to convey a cooling medium therethrough and thereby prevent over-heating of the joints of said pot.

1,156,354. SEWING-MACHINE POWER-TRANSMITTER. JACOB FISCHER, Roseville, N. J., assignor of one-half to Daniel Brandenstein, New York, N. Y. Filed Nov. 11, 1914. Serial No. 871,469. (Cl. 74—7.)

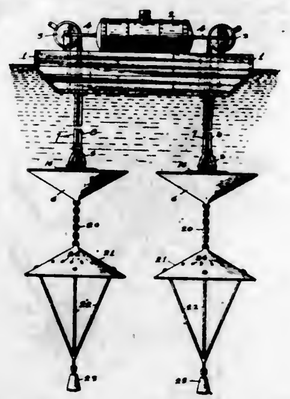


1. A power transmitter for sewing machines comprising a driving gear, supported beneath the sewing machine table; a driven gear secured upon the driving shaft of the sewing machine head; a transmitter shaft consisting of a lower shaft section and an upper shaft section in alinement with one another and extending from the driving gear upwardly to the driven gear upon the sewing machine head; a beveled gear upon the lower end of said lower shaft section, in engagement with said driving gear; a bevsled gear upon the upper end of said upper shaft section, in engagement with the driven gear upon the sewing machine head; a clutch member upon each end of said shaft sections opposite the end carrying the respective beveled gears; spring actuated means for maintaining said clutch members apart and a treadle for bringing said clutch members into engagement with one another against the tension of said spring actuated means.

2. A power transmitter for sewing machines comprising a driving gear, supported beneath the sewing machine table; a driven gear secured upon the driving shaft of the sewing machine head; a transmitter shaft consisting of a lower shaft section and an upper shaft section in alinement with one another and extending from the driving gear upwardly to the driven gear upon the sewing machine head; a beveled gear upon the lower end of said lower shaft section, in engagement with said driving gear; a beveled gear upon the upper end of said upper shaft section, in engagement with the driven gear upon the sewing machine head; a clutch member upon each end of said shaft sections opposite the end carrying the respective beveled gears; means for maintaining said clutch members apart and a treadle for bringing said clutch members into engagement with one another.

3. A power transmitter for sewing machines comprising a driving gear, supported beneath the sewing machine table; a driven gear secured upon the driving shaft of the sewing machine head; a transmitter shaft consisting of a lower shaft section and an upper shaft section in alinement with one another and extending from the driving gear upwardly to the driven gear upon the sewing machine head; a beveled gear upon the lower end of said lower shaft section, in engagement with said driving gear; a beveled gear upon the upper end of said upper shaft section, in engagement with the driven gear upon the sewing machine head; a clutch member upon each end of said shaft sections opposite the end carrying the respective beveled gears; spring actuated means for maintaining said clutch members apart and means for bringing said clutch members into engagement with one another.

1,156,355. WAVE-MOTOR. HERBERT E. FISHER, San Francisco, Cal. Filed Aug. 3, 1914. Serial No. 856,310. (Cl. 253—9.)



1. A wave motor comprising a suitable float; an air receiver on the float; a pair of collapsible members suspended from the float and arranged to be expanded and to take in air when raised by the action of waves on the float and to be collapsed by the pressure of the surrounding water and to compress air into the receiver when the said collapsible members are lowered by the action of waves on the float.

2. A wave motor comprising a suitable float; an air receiver on the float; a pair of collapsible members suspended from the float and arranged to be expanded and to take in air when raised by the action of waves on the float and to be collapsed by the pressure of the surrounding water and to compress air into the receiver when the said collapsible members are lowered by the action of waves on the float; and means for retarding the downward and upward movement of the collapsible members.

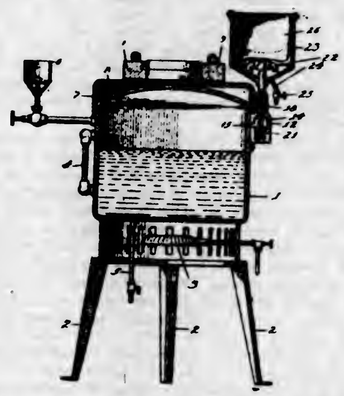
3. A wave motor comprising a suitable float; an air receiver on the float; a pair of collapsible members suspended from the float and arranged to be expanded and to take in air when raised by the action of waves on the float and to be collapsed by the pressure of the surrounding water and to compress air into the receiver when the said collapsible members are lowered by the action of waves on the float; and a retarding anchor secured to each collapsible member and adapted to retard the downward and upward movement thereof.

4. A wave motor comprising a suitable float; an air receiver on the float; a pair of collapsible members suspended from the float; a tube connected with each collapsible member and the receiver; a second tube connected to each collapsible member and the atmosphere, said collapsible members being adapted to be expanded when raised by the action of the waves on the float and to draw in air through the tube leading to the atmosphere and to be collapsed by the pressure of surrounding water when lowered by the action of waves on the float and to force the air in the collapsible member through the first mentioned tube into the receiver; and a retarding anchor suspended from each collapsible member and adapted to retard the upward and downward movement of each collapsible member.

5. A wave motor comprising a suitable float; an air receiver on the float; a pair of collapsible members suspended from the float; a tube connected with each collapsible member and the receiver; a second tube connected to each collapsible member and the atmosphere, said collapsible members being adapted to be expanded when raised by the action of the waves on the float and to draw in air through the tube leading to the atmosphere and to be collapsed by the pressure of surrounding water when lowered by the action of waves on the float and to force the air in the collapsible member through the first mentioned tube into the receiver; a retarding anchor suspended from each collapsible member and adapted to retard the upward and downward movement of each collapsible member; means for preventing the air from escaping through the second mentioned tube when the collapsible member is collapsed; and means for preventing air from escaping through the first mentioned tube when the collapsible member is expanded.

[Claim 6 not printed in the Gazette.]

1,156,356. HAT-BLOCKING APPARATUS. LOUIS FLICKER, San Francisco, Cal. Filed Aug. 24, 1914. Serial No. 858,569. (Cl. 223—23.)

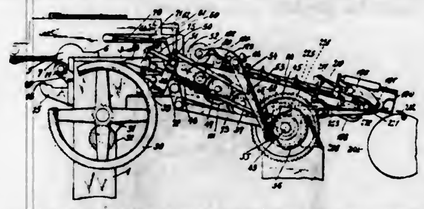


1. In a device of the character described, a steam boiler; a steaming receptacle connected to the said boiler, the top of the receptacle being open; an inner fabric lining for the walls of the said receptacle; and means operatively connected to the receptacle and the boiler and arranged to deliver steam into the said receptacle when the same is pressed downward.

2. In a device of the character described, a steam boiler; a valve casing secured to the side of and connected with the steam boiler and having a vertically disposed bore therein with a reduced portion and a seat thereto; a hollow stem having apertures and a valve upon the lower end thereof slidably mounted in the reduced portion of the bore; means for normally retaining the valve on the seat; a steaming receptacle secured to the top of the hollow stem; and means secured to the top of the hollow stem and within the receptacle and arranged to impart a whirling motion to the steam emanating from the said stem.

3. In a device of the character described; a steam boiler; a valve casing secured to the side of and connected with the steam boiler and having a vertically disposed bore therein with a reduced portion and a seat thereto; a hollow stem having apertures and a valve upon the lower end thereof slidably mounted in the reduced portion of the bore; means for normally retaining the valve on the seat; a steaming receptacle secured to the top of the hollow stem; a plurality of inclined nozzles secured to the hollow stem and within the receptacle and arranged to impart a whirling motion to steam emanating from the said nozzles.

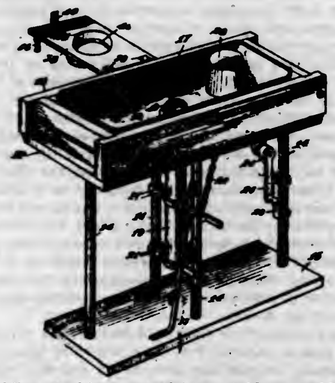
1,156,357. SHEET-FEEDING MACHINE. RUFUS A. FREEMAN, Flushing, N. Y., assignor to The Autopress Company, a Corporation of New York. Filed Oct. 8, 1910. Serial No. 585,955. (Cl. 101—36.)



1. A sheet feeding machine including in combination, sheet forwarding means, automatic sheet separating means, comprising separating devices and a supporting structure therefor, a frame, pivoted connections between said frame and said supporting structure of the sheet separating means, whereby said separating means may be swung into and out of position to deliver the separated sheets to said sheet forwarding means, and a hand feed board for delivering sheets to said sheet forwarding means when said automatic sheet separating means is out of said delivering position, said supporting structure serving as a support for said feed board.

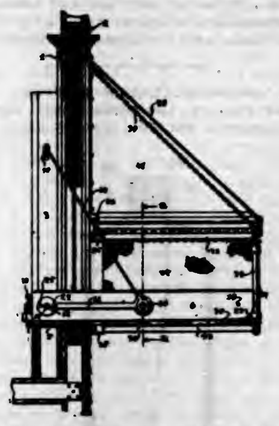
2. A sheet feeding machine including in combination, sheet forwarding means, automatic sheet separating means comprising separating devices and a supporting structure therefor, a frame, pivotal connections between said frame and said supporting structure, whereby said supporting structure may be swung toward said sheet forwarding devices to bring the delivering end of said sheet separating means into position to deliver the separated sheets thereto, or said supporting structure may be swung away from said sheet forwarding devices so as to project from said frame away from said sheet forwarding devices to serve as a support for a hand feed board in position to deliver sheets to said sheet forwarding devices.

1,156,358. MOLDING-MACHINE. LEO G. HAASE, Pasadena, Cal. Filed Jan. 5, 1914. Serial No. 810,825. (Cl. 25—41.)



A molding machine, comprising a table, a mold box, a pallet carrying plate adjustably supported on said table within said mold box, a pair of parallel supporting standards beneath said table, a depending member connected to said plate extending between and parallel with the standards, brackets on said member slidably engaging the standards, a sprocket chain connected with said member, a sprocket engaging said chain, a counterweight on said chain, means for manually rotating said sprocket to raise and lower the depending member and the pallet carrying plate, means engageable with said depending member for maintaining and supporting it in its elevated position, comprising a spring pawl disposed to engage one of said brackets and a removable pallet plate adjustably mounted on said pallet carrying plate.

1,156,359. ADJUSTABLE BED. JOHN H. HENDRICK, Denver, Colo. Filed Oct. 10, 1914. Serial No. 866,053. (Cl. 5—54.)



1. In a device of the character described, the combination with a bed adjustable through a window between two positions of use respectively interior and exterior to a sleeping chamber, of a pair of vertically elongated casings disposed respectively at each side of the window within the sleeping chamber, a bench extending between said casings substantially at the level of the window sill, said bench supporting one end of the bed in either specified position and also in a third upright position, and weights arranged within the two casings to counterbalance the bed when the same is being elevated or lowered.

2. In a device of the character described, the combination with a bed adjustable through a window between two positions of use respectively interior and exterior to a sleeping chamber, of a bench mounted adjacent to the sill of said window and substantially on a level with said sill, said bench supporting one extremity of the bed in either of its specified positions and supporting the entire bed in a third upright position, and means engaging the bed to maintain it in its upright position.

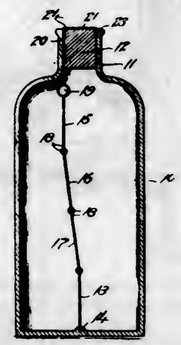
3. In a device of the character described, the combination with a bed, adjustable through a window between two positions of use respectively interior and exterior to a sleeping chamber, of a pair of swinging arms correlated with the bed at each side of the same, each having one of its extremities pivotally engaging one side of the bed and having its other end pivotally mounted adjacent to the lower portion of the window frame, and casings arranged adjacent to the window frame and pivotally supporting said arms.

4. In a device of the character described, the combination with a bed adjustable through a window between two positions of use respectively interior and exterior of a sleeping chamber, of a pair of arms disposed at each side of the bed, supporting the same while being adjusted, and a sleeping compartment outside of the window inclosing the bed in its exterior position, said arms and bed

arranged to swing through the window frame and sleeping compartment in varying the positions of use of said bed.

5. In a device of the character described, the combination with a bed, adjustable through a window between two positions of use, respectively interior and exterior to a sleeping chamber, of a pair of vertically elongated casings, disposed at each side of the window within the sleeping chamber, a bench mounted between said casings substantially level with the window sill, supporting one extremity of the bed in either of its specified positions, the bed being also adaptable to a position upright upon said bench, a pair of arms correlated with the bed at each side of the same, each having one of its extremities pivotally engaging one of said casings just above said bench, and having its other end pivotally engaging the adjacent side of the bed midway between the ends of the same, weights arranged within said casings to counterbalance the bed, means for locking said arms in either of their two horizontal positions, and means for engaging the extremities of said arms which are pivotally mounted on the casing, with the adjacent extremity of the bed.

1,156,360. NON-REFILLABLE BOTTLE. CLAIBOURNE FREMONT JACKSON, Las Minas, Cuba. Filed Sept. 30, 1914. Serial No. 864,319. (Cl. 215—112.)



1. A bottle provided with an outlet neck, a stopper fitting within said neck, and an indicator, said indicator comprising an inner link mounted in the bottom of said bottle, an outer link having its free end portion flattened, the outer link being formed of brittle material, a weight carried by said outer link, links connecting said outer link with said inner link, said outer link being passed between said stopper and bottle neck, and being then bent to extend across said stopper and having its end portion bent and driven between said stopper and bottle neck.

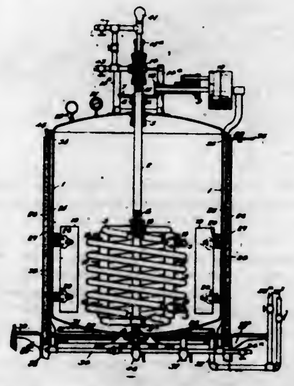
2. A bottle provided with an outlet neck, a stopper in said outlet neck, and an indicator formed of a plurality of links, the inner link being mounted in the bottom of said bottle and the outer link being formed of brittle material and having its free end portion flattened and passed between said stopper and bottle neck and being then bent to extend across the said stopper and having its end portion bent and driven between said stopper and bottle neck.

3. A receptacle provided with an outlet neck, and an indicator within said receptacle formed of a plurality of loosely connected links, the inner link being embedded in the bottom of said bottle and the outer link being formed of brittle material and having its free end portion flattened whereby the flatened portion of the outer link may be bent to secure a stopper in said neck and broken when bent to permit the stopper to be removed.

4. A receptacle provided with an outlet neck, and an indicator positioned within said receptacle and formed of a plurality of links, the inner link being connected with said receptacle and the outer link being formed of breakable material whereby the outer link may be passed through the outlet neck and bent to secure a stopper within the outlet neck and broken when bent in an opposite direction to permit of the withdrawal of the stopper.

5. A receptacle provided with an outlet neck, a stopper in the outlet neck of said receptacle, and an indicator including a plurality of links, the inner one of said links being connected with the body portion of said receptacle and the outer one of said links being formed of breakable material and being passed between said stopper and the outlet neck of said receptacle and bent to extend across the outer end of said stopper.

1,156,361. APPARATUS FOR TREATING LIQUIDS. AAGE JENSEN, San Francisco, Cal. Filed July 31, 1914. Serial No. 854,332. (Cl. 257—107.)



1. In an apparatus such as described, the combination with a closed container embodying means for introducing and withdrawing the liquid to be treated, and an agitator in the bottom portion of said container, of means for raising the temperature of the liquid contained in the bottom portion of the container, and means for raising the temperature within the container above said liquid to a higher degree than the bottom of the container.

2. In an apparatus such as described, the combination with a closed container and agitator therein, of a jacket surrounding the same, means for maintaining a flow of treating fluid in the bottom portion of the jacket, and means for maintaining the areas within the upper portions of the jacket and container at a higher temperature than that of the said treating fluid and fluid being treated.

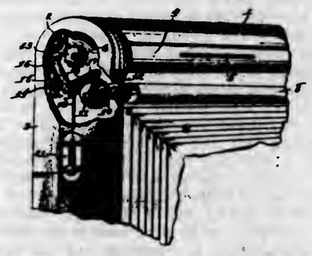
3. In an apparatus such as described, the combination with a closed container for the liquid to be treated, and means for producing a vacuum in the container, of a tubular shaft arranged vertically in the container for the ingress and egress of treating fluid, an agitator carried by and having a duct therein in communication with the shaft, said agitator being located only in the lower half of the container, whereby the upper part of the container is left free from obstruction, means for rotating the shaft and coil and for supplying treating fluid thereto, and means for maintaining the temperature within the upper part of the container above that of the lower part.

4. In an apparatus such as described, the combination with a closed container for the liquid to be treated and a closed jacket around the same, of an inlet for supplying treating fluid to the bottom of the jacket, an overflow pipe leading from the jacket at a point substantially midway of its height and an inlet for treating medium in the top of the jacket whereby the temperature in the top of the jacket may be kept above that of the treating fluid in the bottom of the jacket.

5. In an apparatus such as described, the combination with a closed container for the liquid to be treated and a closed jacket around the same, of an overflow pipe leading from the jacket at a point substantially midway of its height, means for supplying a treating fluid to said jacket for discharge through the overflow pipe, means for supplying a treating medium to the upper portion of the jacket whereby the temperature of the jacket above said overflow pipe may be kept above that of the treating fluid, an agitator within the container having a duct extending therethrough, and means for supplying a circulation of treating fluid through said duct, said agitator and duct being located substantially wholly below the level of the overflow pipe from the jacket.

[Claims 6 to 9 not printed in the Gazette.]

1,156,362. CAMERA. HENRY W. JOHNSON, Ocala, Fla. Filed July 14, 1914. Serial No. 850,971. (Cl. 95—31.)



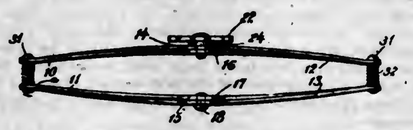
1. A camera comprising in combination, a case provided with a double wall at one side thereof and said walls spaced apart, a winding roll mounted within the case and provided with a winding key extending through the double walled portion to be accessible from the exterior of the case, a measuring roll mounted within the case to have the film bear thereagainst during the winding operation to cause turning of said measuring roll, means mounted between the double walled portion to be actuated by said measuring roll upon winding of the proper length of film upon said winding roll to stop movement of the winding roll, and manually operable means connected with said stop means and extending through the outer wall of the case to be accessible to permit actuation to release said stop means.

2. A camera comprising in combination, a case provided with a double wall at one side thereof and said walls spaced apart, a winding roll mounted within the case and provided with a winding key extending through the double walled portion to be accessible from the exterior of the case, a measuring roll mounted within the case to have the film bear thereagainst during the winding operation to cause turning of said measuring roll, means mounted between the double walled portion to be actuated by said measuring roll upon winding of proper length of film upon said winding roll to stop movement of the winding roll, manually operable means connected with said stop means and extended through the outer wall of the case to be accessible to permit actuation to release said stop means, and means connected with said measuring roll to permit setting of the same to measure the predetermined length of film from any given point thereon.

3. A camera comprising in combination, a case provided with a double wall at one side thereof and said walls spaced apart, a winding roll mounted within the case and provided with a winding key extending through the double walled portion to be accessible from the exterior of the case, a measuring roll mounted within the case to extend parallel with said winding roll in a relation that the film passes thereover and causes turning of the measuring roll during the winding operation, a ratchet wheel mounted on the spindle of said winding roll to be inclosed within the double wall portion, a gear wheel mounted adjacent the spindle of the measuring roll, a gear wheel carried by said spindle to mesh with said first gear wheel, a slotted disk carried by said first gear wheel, a bell crank shaped lever mounted within the double wall portion to have one end thereof bear against said slotted disk, and at the opposite end provided with a dog to engage with the teeth of the ratchet wheel upon registry of the slot of the disk with the end swung adjacent thereto and to thus stop turning movement of the winding roll in a direction to wind the film thereonto.

4. A camera comprising in combination, a case provided with a double wall at one side thereof and said walls spaced apart, a winding roll mounted within the case and provided with a winding key extending through the double walled portion to be accessible from the exterior of the case, a measuring roll mounted within the case to extend parallel with said winding roll in a relation that the film passes thereover and causes turning of the measuring roll during the winding operation, a ratchet wheel mounted on the spindle of said winding roll to be inclosed within the double wall portion, a gear wheel mounted adjacent the spindle of the measuring roll, a gear wheel carried by said spindle to mesh with said first gear wheel, a slotted disk carried by said first gear wheel, a bell crank shaped lever mounted within the double wall portion to have one end thereof bear against said slotted disk, and at the opposite end provided with a dog to engage with the teeth of the ratchet wheel upon registry of the slot of the disk with the end swung adjacent thereto and to thus stop turning movement of the winding roll in a direction to wind the film thereonto, means connected with one of the arms of said lever and extending through a slot provided in the exterior wall to be manually moved to release said lever from the ratchet engaged position, and means carried by said measuring roll to permit manual movement thereof to measure the length of film from any predetermined point along the length thereof.

1,156,363. RACKET-PRESS. WILLIAM A. JOHNSON, Yonkers, N. Y. Filed May 28, 1912. Serial No. 700,318. (Cl. 46—24.)



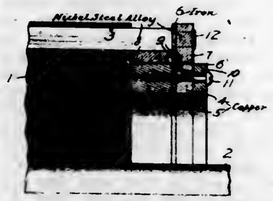
1. A racket press comprising a pair of double members each having a pair of bows, and adjustable means at their respective ends for setting the bows at a fixed maximum distance apart, said double members being centrally pivoted together and adapted to be swung on their pivots into and out of clamping position on a racket frame, independently of said adjustable means.

2. A racket press comprising an inner double bowed member and an outer double bowed member each composed of a pair of superposed flat bows, the corresponding bows

of each pair being pivotally connected at their centers and adapted to be swung on their central pivots into and out of clamping engagement with a racket frame, four corners of said press being located in a common plane, posts affixed to said four corners and means carried by said posts adapted to maintain opposite members of the press in alinement and to adjustably fix the other four corners of the press at predetermined distances from the first named four corners whereby the press is adapted for use on rackets of varying thicknesses.

3. A racket press comprising an inner double bowed member and an outer double bowed member each composed of a pair of superposed flat bows, two of said bows being pivotally connected at their centers and having posts affixed at their ends, screws carried by the ends of the other two of said bows and threaded into said posts adapted to maintain opposite members of the press in alinement, springs surrounding said posts and screws for holding the opposite members of the press at a fixed distance apart and means for locking said pairs of bows against relative movement about said pivotal connections, whereby the press may be adjusted to accommodate the thickness of the racket and the double bowed members thereof swung into and out of clamping position on a racket frame.

1,156,364. INDUCTION-MOTOR. BURTON MCCOLLUM, Washington, D. C. Filed Feb. 25, 1915. Serial No. 10,607. (Cl. 172—120.)



1. In an induction motor of the squirrel cage type, a short circuiting device comprising a low resistance ring not directly connected to the bars of the squirrel cage, and a resistor element interposed between and electrically and mechanically connected to both the low resistance ring and the bars of the squirrel cage, said resistor element consisting of a metal disk having a positive temperature coefficient of resistance, and characterized by an abrupt rise of resistance at a critical value of current, and so proportioned that the normal full load currents are below the critical current value and the starting currents are above the critical value of current.

2. In an inductive motor of the squirrel cage type, a short circuiting device comprising a low resistance ring not directly connected to the bars of the squirrel cage, a resistor element of high positive temperature coefficient of resistance interposed between and electrically and mechanically connected to both the low resistance ring and the bars of the squirrel cage, and rings of relatively high resistivity mounted on the said low resistance ring on each side of the said resistor element, and out of contact therewith for a short distance substantially as shown, one of said high resistance rings being mechanically connected to all of the bars of the said squirrel cage, and the surfaces of contact between said rings having a high resistance.

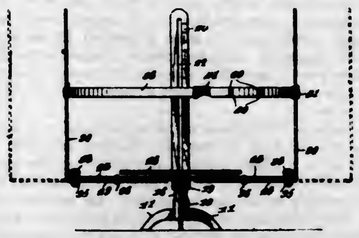
3. In an induction motor of the squirrel cage type, a short circuiting device comprising a low resistance ring not directly connected to the bars of the squirrel cage, a resistor element of high positive temperature coefficient of resistance interposed between and electrically and mechanically connected to both the low resistance ring and the bars of the squirrel cage, and rings of relatively high resistivity mounted on the said low resistance ring on each side of the said resistor element, and out of contact therewith for a short distance substantially as shown, one of said high resistance rings being mechanically connected to all of the bars of the said squirrel cage, and the surfaces of contact between said rings having a high resistance by tarnishing.

4. In an induction motor of the squirrel cage type, a short circuiting device comprising a low resistance ring not directly connected to the bars of the squirrel cage, a resistor element of high positive temperature coefficient of resistance interposed between and electrically and mechanically connected to both the low resistance ring and the bars of the squirrel cage, and rings of relatively high resistivity mounted on the said low resistance ring on each side of the said resistor element and out of contact therewith for a short distance substantially as shown, one of said high resistance rings being mechanically connected to all of the bars of the said squirrel cage, the surfaces of contact between said rings having a high resistance, and said high resistance rings being firmly connected mechanically to the said low resistance rings.

5. In an induction motor of the squirrel cage type, a short circuiting device comprising a low resistance ring not directly connected to the bars of the squirrel cage, a resistor element of high positive temperature coefficient of resistance interposed between and soldered to both the low resistance ring and the bars of the squirrel cage, and rings of relatively high resistivity mounted on the said low resistance ring on each side of the said resistor element and out of contact therewith for a short distance substantially as shown, one of said high resistance rings being mechanically connected to each of the said bars by riveting, substantially as described, and the surfaces of contact between said rings having a high resistance.

[Claims 6 to 10 not printed in the Gazette.]

1,156,365. SKIRT-MARKER. KATE C. MCLAREN, Oakland, Cal. Filed May 4, 1915. Serial No. 25,797. (Cl. 33—10.)



1. In a device of the character described, a body structure, a pedestal arranged thereon, a transverse supporting rod carried by said supporting structure, brackets carried by said supporting rod and adjustable with respect thereto, a circular band structure adjustable vertically with respect to said brackets, a marking apparatus, and means to support said marking apparatus in proximity to said band structure.

2. In a device of the character described, a supporting structure, a pedestal carried thereby, a supporting rod carried by said supporting structure, said supporting rod carrying a plurality of adjustable brackets, a circular band structure carried by said brackets and adjustable vertically with respect thereto, an arm revolubly mounted on said body structure, a bracket carried by said arm, and a marking apparatus carried by said last mentioned bracket and coöperating with said band structure for the purpose specified.

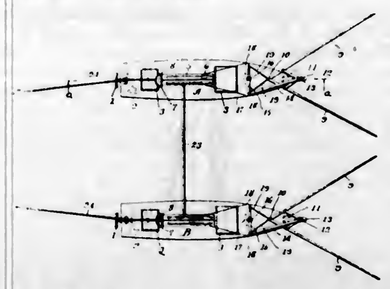
3. In a device of the character described, a supporting structure, a pedestal arranged thereon, a transverse rod carried by said supporting structure, a plurality of brackets adjustably supported by said transverse rod, said brackets provided with vertically extending slots, a band structure, means carried by said band structure and engageable with said slots whereby said band structure may be held in vertical adjusted position with respect to said brackets, an arm revolubly mounted on said supporting structure, a bracket adjustably supported by said arm, and a marking apparatus carried by said last mentioned bracket and designed to coöperate with said band structure for the purpose specified.

4. In a device of the character described, a supporting structure, an arm revolubly mounted thereon, a transverse rod carried by said supporting structure, a pedestal supported by said supporting structure above said arm and said rod, a bracket adjustably supported at each end of said rod, a circular band structure carried by said brackets and adjustable vertically with respect thereto, a substantially L-shaped bracket adjustably supported by said arm, a marking apparatus adjustably supported by said L-shaped bracket, and marking apparatus designed to coöperate with said circular band structure for the purpose specified.

5. In a device of the character described, a body structure, having a reduced extension, a rod having a portion thereof bent to form a vertical sleeve, said sleeve embracing said reduced extension, a transverse supporting rod carried by said body structure, a pedestal arranged on said body structure above said transverse rod, brackets adjustably supported by said transverse rod, an adjustable circular band structure carried by said brackets and adjustable vertically with respect thereto, a bracket adjustably supported by said arm and a marking apparatus carried by said last mentioned bracket and coöperating with said band structure for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

1,156,366. COLLISION-PREVENTION DEVICE. CARL MARTIN, New York, N. Y. Filed Sept. 18, 1914. Serial No. 862,260. (Cl. 177—311.)

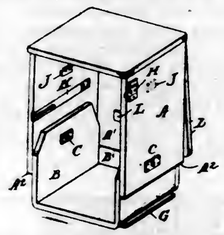


1. In a collision prevention device, two floats connected together and adapted to travel in advance of a vessel on opposite sides of the bow thereof, a normally open switch carried on each float, a pair of feelers pivotally mounted on each float and extending horizontally outboard thereof at an angle to each other, and operative connections between the feelers and the switches whereby when any of the feelers strike against an obstruction the switch is thrown into closed position.

2. In a collision prevention device, two floats each provided with a propeller and a motor for driving the propeller, a standard carrying at its upper extremity a housing for a lamp, a pair of divergently extending pivoted feelers, an electrical switch for controlling a signal circuit, an operative connection between the switch and the feeler whereby upon movement of the latter the switch is thrown, and a cross piece connecting the standards of the two floats.

1,156,367. COMBINED MACHINE-COVER AND CHAIR. ABRAHAM MASLER, New York, N. Y. Filed Dec. 20, 1912. Serial No. 737,877. (Cl. 45—120.)

1. In a device of the character described, the combination of an open-bottomed cover made in two sections, each section having four sides and inclosing an uninterrupted space extending from the closed end of one section to the closed end of the other section, a hinged connection between the two sections permitting one section to be turned to a position within the other.



2. A combined cover for machines and other articles and chair, comprising a plurality of movably connected sections forming in one position a cover with an opening in one side, and in another position a chair with an elevated compartment within the same and a door closing said compartment, the height of the chair being less than the length of the cover, and the lower extremity of the chair, which in the cover position is disposed vertically being provided with yielding material for the purpose of preventing slipping, and serving the purpose of a packing between the edges of the sections while in the cover position.

3. In a device of the character described, the combination of a box or cover having five closed sides and one open side and composed of a plurality of sections movably connected, one of said sections adapted to be moved to a position to partly close the open side of the other section, means for securing the parts so moved in that position, and a back support movably mounted on one section of said cover and within the dimensions thereof, and adapted to be moved to a position in which it projects beyond the same to form a support, and means for securing the same in its extended position, the said movement of the said section causing a shortening of the length of the box so that when it is placed on end it will, with said back support form a chair of suitable proportions.

4. In a device of the character described, the combination of an open-bottomed cover made in two sections, each section having four sides and inclosing an uninterrupted space extending from the closed end of one section to the closed end of the other section, a hinged connection between the two sections permitting one section to be turned to a position within the other, the closed end of the said inside section constructed and arranged to form a shelf or partition within the other.

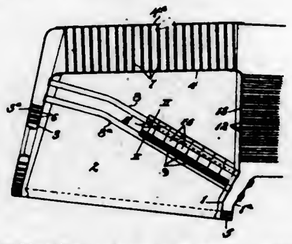
5. In a device of the character described the combination of an open-bottomed cover made in two sections, each section having four sides and inclosing an uninterrupted space extending from the closed end of one section to the closed end of the other section, a hinged connection between the two sections permitting one section to be turned to a position within the other, and a piece of yielding material on one edge of one of the sections adapted to rest upon the floor when the sections are in the last-named position and to form a packing between the opposite edges of the two sections when they are in another position.

[Claim 6 not printed in the Gazette.]

1,156,368. LOCOMOTIVE-FIRE-BOX CONSTRUCTION. LE GRAND PARISH, New York, N. Y. Filed May 15, 1914. Serial No. 838,654. (Cl. 110—87.)

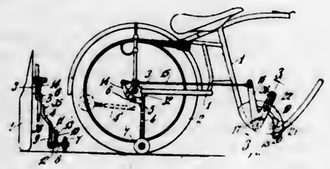
1. In combination, a locomotive fire box having water walls and a flue sheet, a plurality of flues extending through the flue sheet and forwardly thereof, two rows of circulation tubes inclining rearwardly and upwardly from a point below the flues and connecting the front and rear water walls of the box, one of said rows being located above the other and spaced apart to permit the introduction of locomotive fire box arch bricks between the rows, and an arch supported on the circulation tubes

extending from a point adjacent the front water wall of the fire box rearwardly a portion of the distance to the rear water wall, said arch comprising a plurality of removable refractory arch bricks arranged in rows, the wing rows of bricks being supported on the end members of the rows of circulation tubes and on the side sheets, and the central rows of bricks being supported on circulation tubes extending in different planes so as to provide spaces between the rows, whereby the bricks are subjected to the cooling action of the tubes and the gases of combustion are thoroughly mixed, while the ends of the fines are protected.



2. In combination, a locomotive fire box having water walls and a flue sheet, a plurality of flues extending through the flue sheet and forwardly thereof, two rows of circulation tubes connecting the front and rear water walls of the fire box and extending rearwardly and upwardly from the front wall at a point beneath the flues, the tubes of one row being located substantially vertically above the tubes of the other row and the two rows being spaced apart to permit the introduction of arch bricks therebetween, and an arch supported on the circulation tubes extending from a point adjacent the front water wall of the fire box rearwardly a portion of the distance to the rear water wall to protect the ends of the flues, said arch comprising a plurality of removable refractory arch bricks arranged in rows, the wing rows of bricks being supported on one of the end members of the rows of circulation tubes and on the side sheet, and the central rows of bricks being arranged on circulation tubes extending in different planes so as to provide lateral gaps between the rows, whereby the bricks are subjected to the cooling action of the tubes and the gases of combustion are thoroughly mixed.

1,156,369. CYCLE-STAND. ABRAHAM PAVA, Springfield, Mass. Filed Mar. 10, 1915. Serial No. 13,375. (Cl. 208—77.)



1. In a cycle-stand construction, the combination with the frame of the vehicle, a supporting arm pivotally connected to the rear fork and spaced laterally from the rear wheel of the vehicle, a resiliently mounted roller slidably connected to the lower end of the arm, a lever pivotally connected to a part of the vehicle and in convenient reach of the operator, connecting means between the lever and said arm, means to retain said arm in a vertical position, and means to move the same into an operative position, as described.

2. In a cycle stand-support, in combination with the rear fork of a motorcycle, a supporting arm pivotally connected thereto, a roller, means to slidably secure the same at the lower end of said arm, a lever connected to the upper end of the arm, a link connected to said lever, a V-shaped lever pivotally connected to the framework of the vehicle and attached to said link, a plate to retain the V-sheped lever in two positions depending upon whether the roller is in operative or inoperative position, and a latch device designed to be operated by the foot of the rider, to retain the V-sheped lever in either one of said positions.

3. In a vehicle stand support, in combination with the vehicle, a supporting arm formed with a slot at its lower end, a shaft in said slot, a supporting roller on the outer end of the shaft, elastic means to retain the roller in a downward position, a lever pivotally attached to the rear fork of the motorcycle, one arm of the lever being connected to said roller supporting arm, a link connected to the other arm, a V-sheped lever to one arm of which the link is connected, the other arm of the V-shaped lever having a horizontally extending foot plate formed thereon, a sliding bolt passed through said arm for retaining the supporting roller in either its operative or inoperative position, and a spring actuated device to throw the roller into its supporting position when the sliding bolt is released, as described.

4. In a vehicle stand support, the combination, a supporting arm, a two-arm lever pivotally secured to a part of the framework near the rear axle, means for detachably connecting the arm thereto, a foot lever, connecting means between the two-arm lever and the foot-lever, means to retain the foot-lever in different positions to retain the supporting arm in either an operative or inoperative position, as described, and means to automatically move the arm to its supporting position when the foot-lever is released or unlocked.

1,156,370. HOLDER ATTACHMENT. MAGGIE POMEROY, McKenzie, N. D. Filed Jan. 4, 1915. Serial No. 514. (Cl. 224—29.)



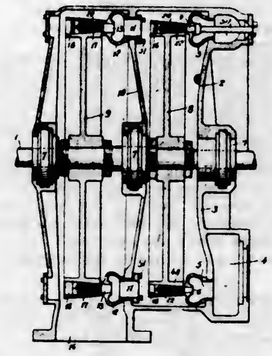
1. A holding attachment comprising a bag, a plurality of supporting members for connecting the bag on the dash board of a vehicle, said supporting members having eyes formed in their outer ends, and a rod slidably engaged with said eyes for supporting one edge of the bag in a rigid position.

2. A holder attachment comprising a bag, a plurality of supporting members for supporting the ends of the bag, means for connecting said members to the dash board of a vehicle, eyes formed in the outer ends of said sliding members, and a rod slidably engaged with said eyes for supporting one edge of the bag in a rigid position.

3. A holder attachment comprising a bag, spaced apart supporting members, supporting the respective ends of the bag, curved extensions formed on each of said members, means for securing said extensions to a supporting structure, eyes formed in the outer ends of said supporting members, and a rod slidably engaged with said eyes for supporting one edge of the bag in a rigid position.

1,156,371. ELASTIC-FLUID TURBINE. CHARLES BEMIS REARICK, New London, Conn. Filed Mar. 9, 1914. Serial No. 823,398. (Cl. 121—58.)

1. In elastic fluid turbines, a nozzle member having expanding nozzles, a coöperating turbine wheel having a wheel rim, a shrouding ring supported in connection with said wheel rim to form a flaring annular passage extending across the wheel, a series of thin annular friction drive plates arranged in spaced relation in said flaring passage, a series of curved impulse vanes interposed between adjacent friction drive plates and formed with integral retaining lugs to interlock with sockets in said plates, the receiving ends of said plates being beveled and arranged in inclined stepped back position to be engaged progressively by the motive fluid entering said flaring passage to provide a series of narrow channels for the motive fluid of progressively increasing width as the motive fluid moves across the wheel, and a series of impulse blades arranged between said wheel rim and said shrouding ring beyond the discharge ends of said friction drive plates to be acted on by the motive fluid discharged by the frictional drive members.



2. In elastic fluid turbines, a nozzle member having nozzles, a coöperating turbine wheel having a wheel rim, a shrouding ring supported in connection with said wheel rim to form a flaring annular passage extending across the wheel, a series of thin friction drive plates arranged in spaced relation in said flaring passage, a series of curved impulse vanes interposed between adjacent friction drive plates and formed with integral retaining lugs to interlock with sockets in said plates, the receiving ends of said plates being beveled and arranged in inclined stepped back position to be engaged progressively by the motive fluid entering said flaring passage to provide a series of narrow channels for the motive fluid of progressively increasing width as the motive fluid moves across the wheel, and a series of impulse blades arranged between said wheel rim and said shrouding ring beyond the discharge ends of said friction drive plates to be acted on by the motive fluid discharged by the frictional drive members.

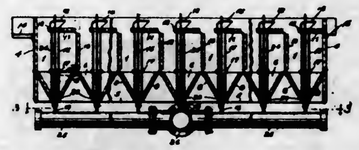
3. In elastic fluid turbines, a nozzle member having nozzles, a coöperating turbine wheel having a wheel rim, a shrouding ring supported in connection with said wheel rim to form a flaring annular passage extending across the wheel, a series of thin friction drive plates arranged in spaced relation in said flaring passage, a series of curved impulse vanes interposed between adjacent friction drive plates to provide a series of narrow channels for the motive fluid of increasing width as the motive fluid moves across the wheel, and a series of impulse blades beyond the discharge ends of said friction drive plates to be acted on by the motive fluid discharged by the frictional drive members.

4. In elastic fluid turbines, a turbine wheel having a wheel rim, a shrouding ring supported in connection with said wheel rim to form a flaring annular passage extending across the wheel, a series of thin annular friction drive plates arranged in spaced relation in said flaring passage, a series of curved impulse vanes interposed between adjacent friction drive plates and formed with integral retaining lugs to interlock with sockets in said plates, the receiving ends of said plates being beveled and arranged in inclined stepped back position to be engaged progressively by the motive fluid entering said flaring passage to provide a series of narrow channels for the motive fluid as the motive fluid moves across the wheel.

5. In elastic fluid turbines, a turbine wheel having a wheel rim, a shrouding ring supported in connection with said wheel rim to form a flaring annular passage extending across the wheel, a series of thin annular friction drive plates arranged in spaced relation in said flaring passage, a series of curved impulse vanes interposed between adjacent friction drive plates and formed with integral retaining lugs to interlock with sockets in said plates to provide a series of narrow channels for the motive fluid as the motive fluid moves across the wheel.

[Claims 6 to 42 not printed in the Gazette.]

1,156,372. AGITATOR FOR ORE TREATMENT. CYRUS ROBINSON, Mount Vernon, N. Y., assignor to Metallurgical Engineering & Process Corporation, a Corporation of New York. Filed Aug. 16, 1912. Serial No. 715,515. (Cl. 75—86.)



1. In an agitator for ore treatment, the combination of a receptacle adapted to contain a mixture of solvent solution and finely divided ore, a vertical tube mounted in the receptacle and terminating at its lower end above the bottom of the receptacle, an air nozzle at the bottom of the receptacle below and closely adjacent the lower end of the tube, means for delivering air to the nozzle to agitate the mixture in the tube and force it upward therethrough, means supplemental to the receptacle for receiving the mixture from the upper end of the tube, and means for entering the nozzle to cut down the effective cross area thereof.

2. In an agitator for ore treatment, the combination of a receptacle adapted to contain a mixture of solvent solution and finely divided ore, a vertical tube mounted in the receptacle and terminating at its lower end above the bottom of the receptacle, an air nozzle at the bottom of the receptacle below and closely adjacent the lower end of the tube, means for delivering air to the nozzle to agitate the mixture in the tube and force it upward therethrough, means supplemental to the receptacle for receiving the mixture from the upper end of the tube, and means automatically tending to enter the nozzle to reduce the effective cross area thereof and finally close it as the air pressure is diminished.

3. In an agitator for ore treatment, the combination of a receptacle adapted to contain a mixture of solvent solution and finely divided ore, a vertical tube mounted in the receptacle and terminating at its lower end above the bottom of the receptacle, an air pipe connected with the receptacle at the bottom thereof below the lower end of the tube for delivering a stream of air to agitate the mixture in the tube and force it upward therethrough, means supplemental to the receptacle for receiving the mixture from the upper end of the tube, and a device adjacent the end of the air pipe for distributing the air and causing it to be delivered to the mixture for movement upward through the tube along a plurality of relatively widely separated lines.

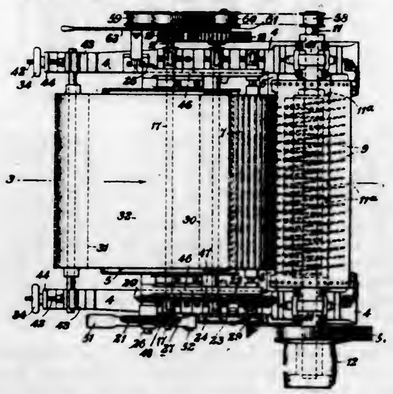
4. In an agitator for ore treatment, the combination of a receptacle adapted to contain a mixture of solvent solution and finely divided ore, a vertical tube mounted in the receptacle and terminating at its lower end above the bottom of the said receptacle, an air pipe having a terminal nozzle positioned directly below the lower end of the tube and provided with a valve seat, a valve closure

adapted to rest upon the said valve seat, a valve stem connected at its lower end to the valve closure and extending vertically upward therefrom through the tube, and a guide for the upper end of the stem.

5. In an agitator for ore treatment, the combination of a receptacle adapted to contain a mixture of solvent solution and finely divided ore, a vertical tube mounted in the receptacle and terminating at its lower end above the bottom of the said receptacle, a shelf having an aperture through which the upper end of the tube projects, a deflector above the upper end of the tube, an air pipe having a terminal nozzle positioned directly below the lower end of the tube and provided with a valve seat, a valve closure adapted to rest upon the said valve seat, and a valve stem connected at its lower end to the valve closure and extending vertically upward therefrom through the tube and through a suitable aperture in the deflector.

[Claims 6 to 12 not printed in the Gazette.]

1,156,373. MACHINE FOR SHREDDING PAPER-STOCK. GEORGE D. RYTHER, Carthage, N. Y., assignor to Ryther & Pringle Co., Carthage, N. Y., a Corporation of New York. Filed Apr. 15, 1915. Serial No. 21,489. (Cl. 92—20.)



1. A shredding machine, comprising a frame, a series of stationary, and a series of rotary, shredding knives mounted in the frame in position to co-act; means for rotating the rotary shredding knives; feed rolls mounted in the frame, adjacent to the shredding knives, and gears, operatively connected with the rotary shredding knives and with the feed rolls, for positively driving each feed roll independently of the other but at the same correlative speed, and proportionate to the speed of the rotation of the disintegrating shredding knives; substantially as herein shown and described.

2. A shredding machine comprising a frame, a series of stationary, and a series of rotary, shredding knives mounted in the frame in position to co-act; means for rotating the rotary shredding knives; feed rolls mounted in the frame, adjacent to the shredding knives; a conveyer set up in the frame in coöperative connection with the feed rolls; transmission gears operatively connected with the means for rotating the rotary shredding knives, and also with the feed rolls, and with the conveyer, for positively driving each feed roll independently of the other, and also the conveyer, at a speed proportionate to the speed of the rotary shredding knives; substantially as herein shown and described.

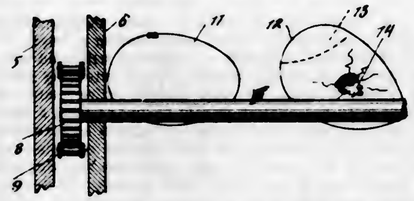
3. A shredding machine comprising a frame, a shaft, a series of circular saw-like blades mounted on the shaft at an angle deviating from right angle to the axis of the shaft, and spaced apart by correspondingly shaped washers, the saw-blades and washers being secured together, and to the shaft, constituting a compact cylindrical shredding implement; feed rolls mounted in fixed bearings on the frame, a feed roll, mounted in bearings set on a movable frame, and means for moving the feed roll in and out of coöperative position with the other feed roll; a conveyer set up in the frame in coöperative connection with the feed rolls; transmission gears operatively connected with the rotary shredding knives, and also with each of the feed rolls, and with the conveyer, for positively driving each feed roll independently of the other, and also the conveyer, at a speed proportionate to the speed of the rotating circular shredding blades; substantially as herein shown and described.

4. The combination mechanism for disintegrating paper stock, and with means for actuating the mechanism, of a pair of feed rolls, mounted in coöperative position relatively to the disintegrating mechanism, and of gears for positively driving each of the feed rolls independently of the other, but at the same correlative speed to the speed of the disintegrating mechanism; substantially as herein shown and described.

5. The combination with mechanism for disintegrating paper stock, and with means for actuating the disintegrating mechanism, of a pair of feed rolls rotatably mounted in coöperative position relatively to the disintegrating mechanism, of gears for positively driving each of the feed rolls independently of the other, but at the same correlative speed to the speed of the disintegrating mechanism, and of means for continuously conveying the material to be operated upon to the feed rolls, at the same rate of speed as the feed rolls are driven; substantially as herein shown and described.

[Claims 6 and 7 not printed in the Gazette.]

1,156,374. METHOD OF ARTIFICIAL INCUBATION. ORIE SHACKELFORD, Fairmont, W. Va. Filed Dec. 8, 1914. Serial No. 876,049. (Cl. 119—35.)

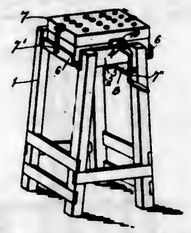


1. The method of incubating eggs, which consists in pivotally suporting the eggs whereby they are free to tilt upon their transverse axes upon the development of the embroyonic chickens therein, maintaining the eggs at a temperature suitable for incubation for a suitable length of time, and removing the eggs which remain substantially horisontal from the presence of the other eggs when the other eggs have tilted to a position oblique to the perpendicular.

2. The herein described method of incubating eggs, which consists in freely pivotally supporting each egg at points arranged upon the opposite sides thereof while the lower portion of the egg is wholly unsupported whereby it is free to tilt upon its traverse axis upon the development of the embryonic chicken therein, maintaining the eggs at a temperature suitable for incubation for a suitable length of time, and removing the eggs which remain substantially horizontal from the presence of the other eggs when the other eggs have tilted to a position oblique to the perpendicular.

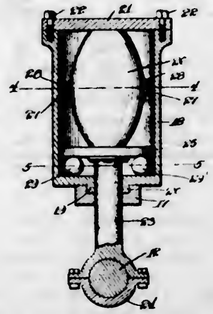
1,156,375. BOTTLED-LIQUID-MIXING MACHINE. JOHN SJAUKEN, Hoboken, N. J. Filed Feb. 24, 1915. Serial No. 10,358. (Cl. 226—9.)

1. In a bottled liquid mixing machine, a frame, horizontally extending spaced bars secured to the upper end thereof, stub shafts revolubly mounted in said bars, a U-shaped yoke having resilient arms secured to and depending from said shafts, a platform mounted on the yoke and adapted to support a box, one of said shafts being extended and having a crank handle on the end thereof, a notched plate secured to the adjacent bar, the said crank handle being constructed and arranged to fit into said notch and the resilient arms to frictionally engage the box supported on the platform.



2. In a bottled liquid mixing machine, a frame having horizontally disposed spaced bars on the upper end thereof, a platform revolubly mounted between said bars, a stub shaft yieldably associated with said platform and having a crank handle on one end thereof, a plate having a notch therein secured to the side bar adjacent the crank handle, and resilient means for moving the said crank handle into the said notch.

1,156,376. SHOCK-ABSORBER. HAROLD T. SMITH, Coeymans, N. Y. Filed Nov. 14, 1913. Serial No. 801,034. (Cl. 21—50.)



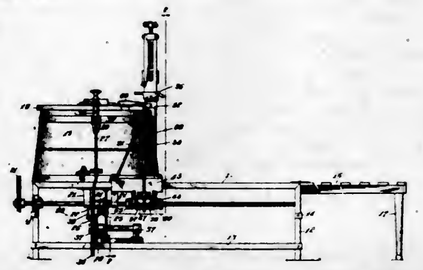
1. A shock absorber comprising a cylinder, a piston slidably mounted in said cylinder, a head at the inner end of said piston, a resilient block positioned in said cylinder between said piston head and one end of said cylinder, resilient means extending from the walls of said cylinder for holding said block in spaced relation to the walls of said cylinder, and resilient means in said cylinder between said piston head and the opposite end of said cylinder.

2. A shock absorber comprising a cylinder, a piston slidably mounted in said cylinder, an elongated block of resilient material between said piston and one end of said cylinder, yieldable means positioned between said block and the walls of said cylinder for holding said block in spaced relation to the walls of said cylinder, and resilient supporting means between said piston and the opposite end of said cylinder.

3. A shock absorber comprising a housing, a piston slidably mounted in said housing and provided with a head at its inner end, resilient means positioned between the head of said piston and one end of said housing, and means for yieldably holding said resilient means in spaced relation to the walls of said housing.

1,156,377. GEARING. FREDERICK SNOW, Perry, Iowa, assignor to Globe Manufacturing Company, a Corporation of Iowa. Filed Mar. 17, 1913. Serial No. 754,685. (Cl. 74—59.)

1. In a mechanism of the class described, the combination of a power shaft, gear mechanism driven by said shaft and movable along the same, an upright shaft controlled through said gear mechanism, a pair of work shafts operatively connected to be driven by said vertical shaft, said work shafts adapted to swing about said upright shaft, said work shafts being movable into a new operative position when said gear mechanism is moved along said power shaft.



2. In a mechanism of the class described, the combination of a platform, a power shaft supported under said platform from end to end, a pair of supports mounted to slide along said platform, a vertical shaft journaled within one of said supports, reversible driving connections between said vertical shaft and said power shaft, and a pair of work shafts positioned above said supports and movable therewith, said work shafts being driven by said vertical shaft and adapted to swing around.

3. In a mechanism of the class described, the combination of a platform, a pair of trucks slidably mounted upon the platform, a support carried by each truck, a power shaft carried by the platform, a shaft journaled within one of the supports, clutch mechanism movable along said power shaft with the supports, said clutch mechanism being operatively connected with the shaft carried by one of said supports, a pair of work shafts pivotally supported upon the support carrying the shaft and operatively connected with the last said shaft for the purpose specified.

4. In a mechanism of the class described, the combination of a platform having rails along its edges, supporting means mounted to slide along said rails, a vertical shaft carried by said supporting means, a frame positioned above said supporting means and having a pair of work shafts geared to said vertical shaft, a power shaft under said platform, and reversible clutch mechanism movable along said power shaft and operatively connected with said vertical shaft to start or reverse said work shafts at the will of the operator.

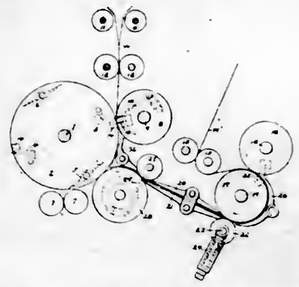
5. In a mechanism of the class described, the combination of a platform having a track-way, supporting means mounted to slide along said platform, a frame carried by said supporting means, a pair of work shafts in said frame, a vertical shaft movable with said supporting means and operatively connected with said work shafts, a horizontal shaft geared to said vertical shaft, a power shaft under said platform, and reversible clutch mechanism movable along said power shaft and operatively connected between said power shaft and said horizontal shaft to control the movement of the pair of work shafts.

[Claims 6 to 11 not printed in the Gazette.]

1,156,378. PRINTING-MACHINE. WILLIAM SPALCKHAVER, Brooklyn, N. Y., assignor, by mesne assignments, to R. Hoe and Co., New York, N. Y., a Corporation of New York. Filed May 22, 1907. Serial No. 374,992. (Cl. 101—120.)

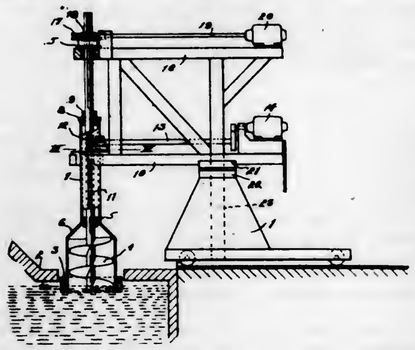
1. The combination with a collecting cylinder, of a forwarding cylinder provided with folding means co-acting therewith, said cylinders being provided with coöperating cutting devices, means on the forwarding cylinder for taking sheets from the collecting cylinder, web delivering means, means for advancing sheets at a lesser speed than the speed of the web, and means for bringing the sheets up to the speed of, and delivering them to the forwarding

cylinder beyond the cutting line for association with and to be folded off with the collecting sheets delivered to said cylinder by the collecting cylinder, substantially as described.



2. The combination with a collecting cylinder, of a forwarding cylinder provided with folding means co-acting therewith, said cylinders being provided with cutting devices, web delivering means, means on the forwarding cylinder for taking sheets from the collecting cylinder, web delivery devices for said cylinders, web cutting devices, means for advancing a web, said means running at a lesser surface speed than the speed of the web delivery devices, means for cutting sheets from this web, and means for bringing the sheets up to the speed of, and delivering them to the forwarding cylinder beyond the cutting line to be associated with and to be folded off with the sheets delivered to it by the collecting cylinder, substantially as described.

1,156,379. APPARATUS FOR REMOVING GLASS. THOMAS SPILLANE, New Bethlehem, Pa., and THOMAS BRINNING, Mount Vernon, Ohio. Filed June 11, 1914. Serial No. 844,400. (Cl. 49—62.)

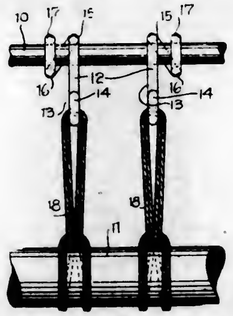


1. A device for removing glass from a pot or drawing ring, comprising a vertical spiral, a cylindrical casing surrounding the spiral, means for moving the spiral and casing vertically and laterally, and means for rotating the spiral.

2. A device for removing glass from a pot or drawing ring, comprising a vertical spiral having its lower end formed into an inclined skimming plate, a cylindrical casing surrounding the spiral, means for moving the spiral vertically and laterally, and means for rotating the spiral.

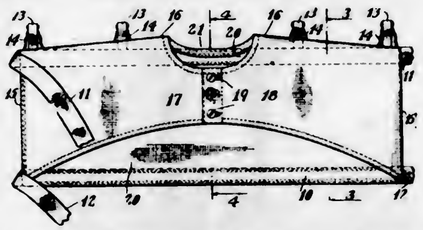
1,156,380. HANGER. CALVIN A. SWEET, Yankton, S. D. Filed Oct. 29, 1913. Serial No. 798,090. (Cl. 248—33.)

A hanger including a body, a helical convolution formed at one end thereof, that portion of the convolution which is adapted to sustain the pull upon the hanger being in the same plane with the body thereof, and an eye formed at the other end of the body, said eye being disposed in the



plane of the body member and at right angles to the axis about which the convolution is wound.

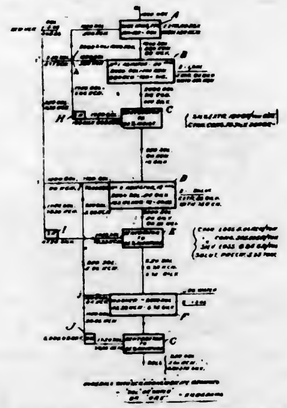
1,156,381. HOLDING ARRANGEMENT FOR CHILDREN'S BEDS. JAMES WARREN THAYER, Greenburg, N. Y. Filed Oct. 30, 1913. Serial No. 798,174. (Cl. 5—3.)



A structure of textile material constructed to form a broad flat band, tapes along the edges of said band forming reinforcements therefor and extending beyond the ends of the band transversely for fastening said band across a bed, said structure being constructed to form loose front flaps jointed to said band at the upper edge and both ends thereof, the ends of said flaps being of less width than that of the band, the inner upper portions of said flaps being fashioned to fit freely about the neck of a person, and means for fastening the ends of the flaps together; and a plurality of flexible tapes transverse to the band affixed at intervals along the upper edge of the band, and a clasp near the end of each of said tapes.

1,156,382. PROCESS OF EXTRACTING METALS FROM ORES. ROBERT S. TOWNE, New York, and CYRUS ROBINSON, Mount Vernon, N. Y., assignors to Metallurgical Engineering & Process Corporation, a Corporation of New York. Filed July 14, 1910. Serial No. 572,024. Renewed Mar. 8, 1915. Serial No. 12,913. (Cl. 75—185.)

1. The herein described process for effecting the separation of soluble values from a mass, it consisting in subjecting the mass to the action of a solvent solution of comparatively high dissolving efficiency for a comparatively short period of time, positively and actively agitating the mass and the solution during the said period, subjecting the mass to a positive and active dehydration, thereby withdrawing from it a major portion of the solution together with the dissolved values contained therein, subjecting the remaining mass to the action of a similar solvent solution of comparatively low dissolving efficiency for a comparatively long period of time, positively and actively agitating the mass and the solution during the said period, subjecting the mass to a second positive and active dehydration thereby withdrawing from it a major portion of the second solution together with the dissolved values contained therein, and extracting the dissolved values from each of the said withdrawn solutions independently of the other.



2. The herein described process for effecting the separation of soluble values from a mass, which consists in subjecting the mass to the action of a solvent solution of comparatively high dissolving efficiency for a comparatively short period of time, positively and actively agitating the mass and the solution during the said period, subjecting the mass to a dehydrating action thereby withdrawing from it a major portion of the solution together with the dissolved values contained therein, subjecting the remaining mass to the action of a similar solvent solution of comparatively low dissolving efficiency for a comparatively long period of time, positively and actively agitating the mass and the solution during the said period, subjecting the mass to a second dehydrating action thereby withdrawing from it a major portion of the second solution together with the dissolved values contained therein, extracting the dissolved values from each of the said solutions independently of the other, and returning each of the said solutions to its initial point of action.

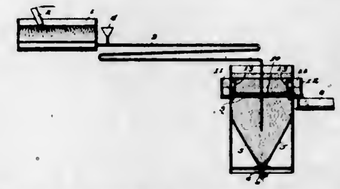
3. The herein described process for effecting the separation of metal from an ore mass, which consists in subjecting the mass for a comparatively short period of time to the action of a solvent solution adapted to dissolve the desired metal and having a relatively high dissolving efficiency, relatively violently agitating the ore mass and the solution during the said period, subjecting the mass to a dehydrating action thereby separating from it all but a small portion of the solution together with the dissolved metal contained therein, mixing with the mass and the unseparated solution a second solvent solution of relatively low dissolving efficiency, agitating the resultant mixture relatively less violently for a comparatively long period of time, and subjecting the mass to a second dehydrating action thereby again separating from it all but a small portion of the solution together with the dissolved metal contained therein.

4. The herein described process of separating metallic values from an ore mass, which consists in supplying to a receptacle the said ore mass and a solvent solution adapted to dissolve the desired values, the dissolving efficiency of the said solution being comparatively high, relatively violently agitating the mixture of ore and solution for a comparatively short period of time while in the said receptacle, separating from the mass the major portion of the solution together with the dissolved values contained therein, delivering the ore mass to another receptacle together with a solvent solution of comparatively low dissolving efficiency, agitating the second mixture of ore and solution relatively less violently for a comparatively long period of time while in the said second receptacle, again separating from the moss the major portion of the solution together with the dissolved values contained therein, extracting from each of the said separated solutions independently of the other of said dissolved values, and returning each of the said solutions after the extraction of the said dissolved values to its point of initial action.

5. The herein described process of extracting soluble metallic values from ore, which consists in continually moving the ore along a path and subjecting it to a plurality of series of continuous operations at successive parts of the path, each series involving the action upon the ore of a body of a solvent solution, the subsequent separation from the ore of a part of the body of solution, and the return of a part of the separated solution to its initial point of action, and in continually supplying to each body of solution an amount of free liquid equivalent to that carried from the body by the ore.

[Claims 6 to 15 not printed in the Gazette.]

1,156,383. PROCESS OF PRECIPITATING AND SEPARATING METALS FROM SOLUTION. ROBERT S. TOWNE, New York, and CYRUS ROBINSON, Mount Vernon, N. Y., assignors to Metallurgical Engineering & Process Corporation, a Corporation of New York. Filed Sept. 12, 1912. Serial No. 720,019. (Cl. 75—18.)



1. The herein described process of precipitating and separating dissolved values from a solution, which consists in causing a continuous stream of the solution to flow along a prolonged unbroken pathway, mingling with the stream of solution while thus flowing a precipitant in finely divided form to effect mixing, agitating, dissolving and precipitating, forming a stationary liquid body of approximately predetermined volume relatively elongated vertically and having at its bottom a relatively large region of quiescence and at its top a relatively large region for dissolving and precipitating, causing the aforesaid stream while maintaining its continuity to flow into the said fluid body at an intermediate level above the said region of quiescence and below the said region of dissolving and precipitating, causing the precipitated values to settle by gravity downward through the liquid body, removing the said values at the lower part of the liquid body, causing the solution liquid to pass upward through the liquid body away from the points of feeding to effect continued dissolving and precipitating, and discharging the solution liquid at the top of the said liquid body.

2. The herein described process of precipitating and separating dissolved values from a solution, which consists in causing a continuous stream of the solution of uniform cross area throughout to flow along a prolonged unbroken inclosed pathway, mingling with the stream of solution while thus flowing a precipitant in finely divided form to effect mixing, agitating, dissolving and precipitating, forming a stationary liquid body of approximately predetermined volume relatively elongated vertically and having at its bottom a relatively large region of quiescence and at its top a relatively large region for dissolving and precipitating, causing the aforesaid stream while maintaining its continuity to flow into the said fluid body at an intermediate level above the said region of quiescence and below the said region of dissolving and precipitating, causing the precipitated values to settle by gravity downward through the liquid body, removing the said values at the lower part of the liquid body, causing

the solution liquid to pass upward through the liquid body away from the points of feeding to effect continued dissolving and precipitating, and discharging the solution liquid at the top of the said liquid body.

3. The herein described process of precipitating and separating dissolved values from a solution, which consists in forming a relatively large body of the solution, causing a continuous stream of the soluton to flow from the said body along a prolonged unbroken pathway, mingling with the stream of solution while thus flowing a precipitant in finely divided form to effect mixing, agitating, dissolving and precipitating, forming a stationary liquid body of approximately predetermined volume relatively elongated vertically and having at its bottom a relatively large region for dissolving and precipitating, causing the aforesaid stream while maintaining its continuity to flow into the said fluid body at an intermediate level above the said region of quiescence and below the said region of dissolving and precipitating, causing the precipitated values to settle by gravity downward through the liquid body, removing the said valves at the lower part of the liquid body, causing the solution liquid to pass upward through the liquid body away from the points of feeding to effect continued dissolving and precipitating, and discharging the solution liquid at the top of the said liquid body.

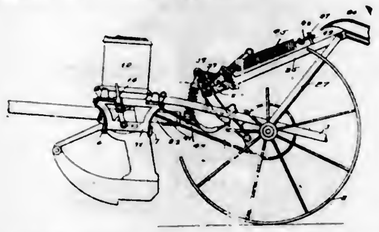
4. The herein-described process of separating dissolved values from a solution containing a precipitant, it consisting in forming a relatively stationary vertically elongated body of approximately predetermined volume of said fluid, supplying a stream of the fluid to the said relatively stationary volume at a point above the bottom to provide a relatively large region of quiescence at the bottom, and at the top a region for the final escape of the fluid, causing the values after precipitating to settle by gravity downward through the said body of liquid and removing them from the quiescent lower part thereof, causing the solution fluid to pass upward away from the points of feeding to elevated planes of discharge, and subjecting the solution to a filtering action at points adjacent the points of discharge and uniformly distributed horizontally over the entire cross area of the body of liquid.

5. The herein described process of precipitating and separating dissolved values from a solution, which consists in mingling with the solution a precipitant in finely divided form to effect precipitation, causing the solution and precipitant to flow along an extended pathway to permit prolonged mixing, agitating, dissolving and precipitating, forming of the fluid a stationary body of approximately predetermined volume relatively elongated vertically, and having at the bottom a relatively large region of quiescence, and at the top region for the continuance of the dissolving and precipitating action, supplying a stream of the fluid with the aforesaid contents to the aforesaid relatively stationary volume, causing the precipitated values to settle by gravity downward through the body of liquid, removing the said values at the lower part of the liquid body, causing the solution fluid to pass upward away from the points of feeding to a point of discharge, and subjecting the solution fluid to the action of a body of precipitant before it reaches the said point of discharge.

[Claim 6 not printed in the Gazette.]

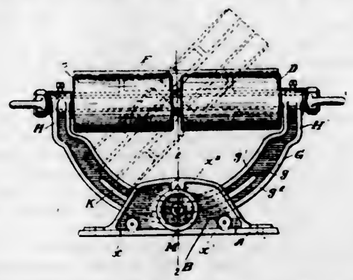
1,156,384. TOOL-SHIFTING MECHANISM FOR AGRICULTURAL IMPLEMENTS. CHARLES E. WHITE, Moline, Ill., assignor to Deere & Mansur Co., a Corporation of Illinois. Filed Nov. 10, 1910. Serial No. 591,647. (Cl. 111—6.)

1. In a mechanism for shifting vertically, and locking, the earth-working tools of agricultural implements, the combination of a rear wheel-mounted frame carrying a seat and a front tool-carrying frame pivoted together and vibrating vertically in opposite directions, around an axis normally movable downward under the gravity of the frames, a vertically vibratable foot-lever system carried by the main frame and movable bodily vertically therewith and flexibly connected to the tool-carrying frame for lifting, lowering and adjusting the latter, two independent sets of locking devices, one of said sets locking the frames in their uppermost positions only, and two power-applying lever-like devices in said system, respectively accessible to the feet of the driver, one for both unlocking said system and pushing down the tools into the earth and the other for both unlocking said system and elevating both the frames to inoperative positions.



2. In a mechanism for shifting, vertically, and locking, the earth-working tools of agricultural implements, the combination of a rear wheel-mounted frame carrying a driver's seat and a front tool-carrying frame pivoted together and vibrating in opposite directions, on an axis normally free to move downward at all working points of the frames, a foot lever system carried by the main frame and flexibly connected to the tool-carrying frame for lifting, lowering and adjusting the latter, two independent sets of locking devices, one for holding the frames locked in one relation only, to wit, when in their uppermost positions, and the other for holding them against displacement in one direction from either of several positions corresponding to working positions of the tools, and two power-applying lever-like devices in said system respectively accessible to the feet of the driver while in said seat, one for releasing the first said lock and permitting the tool frame to be lowered to either of several working positions, and the other for releasing the second aforesaid lock and elevating both the frames to their uppermost inoperative positions.

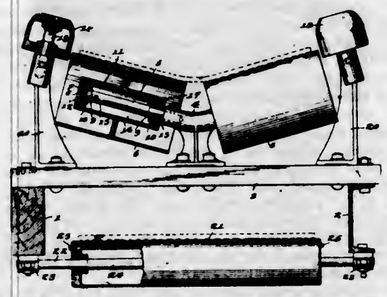
1,156,385. CONVEYER. FREEMAN R. WILLSON, Jr., Columbus, Ohio, assignor to The Jeffrey Manufacturing Co., a Corporation of Ohio. Original application filed Aug. 3, 1905, Serial No. 272,597. Divided and this application filed Oct. 30, 1908, Serial No. 460,319. Renewed Mar. 12, 1915. Serial No. 13,971. (Cl. 193—25.)



1. In a conveyer belt support, the combination of a stationary base, a pulley carrying frame mounted to have pivotal movement relative to the said stationary base about an axis parallel to a supported belt, said frame of a semicircular form consisting in cross section of a web with upper and lower flanges, anti-friction rollers mounted in the base and engaging the upper and lower flanges of the pulley carrying frame, the web of said frame being provided along a portion of its center line with a curvilinear slot, and means for clamping said web section to the base portion, substantially as set forth.

2. In a conveyer belt support, the combination of a pulley carrying frame having an arcuate supporting bar centered about an axis parallel with a supported belt and provided with a concentric arcuate slot, a stationary main frame having two parallel vertical walls on each side of the supporting bar, pins extending perpendicularly between the walls, pulleys on the pins in engagement with the outer and the inner curved surfaces of the supporting bar, and a device for locking the carrying frame in adjusted position.

1,156,386. BELT-IDLER. WALTER J. ARMSTRONG, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed Dec. 27, 1913. Serial No. 809,106. (Cl. 64—36.)



1. In a belt idler, the combination of an idler pulley having a central lubricant chamber with an opening at each end, means secured to the pulley for closing the opening at one end, the said means having a central lubricant aperture therein, a spindle extending through the other aperture and through the chamber and having therein a lubricant passageway registering with the said lubricant aperture and extending to the said chamber, and bearings positioned in the chamber.

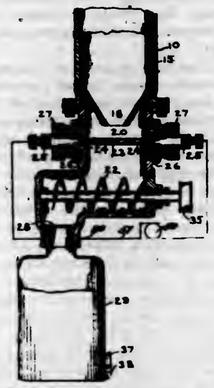
2. In a belt idler, the combination of an idler pulley having a central lubricant chamber, a spindle extending through the said chamber and having therein a lubricant passageway extending from one end thereof to the chamber, and two ball bearings positioned in the chamber each having its non-rotating member secured to the spindle and its rotating member secured to the pulley, the rotating member adjacent the said passageway having a lubricant aperture registering therewith.

3. In a belt idler, the combination of an idler pulley having a central lubricant chamber with an opening at each end, a spindle extending through the said chamber and having therein a lubricant passageway extending from one end thereof to the chamber, and two ball bearings positioned in the chamber each having its non-rotating member secured to the spindle and its rotating member fitted into the corresponding opening in the pulley to close it, the rotating member adjacent the said passageway having a lubricant opening registering therewith.

1,156,387. APPARATUS FOR OBTAINING PEAT. ELLIS BARTHOLOMEW, Toledo, Ohio, assignor to The National Peat Refining Company, Cleveland, Ohio, a Corporation of Delaware. Filed Dec. 22, 1913. Serial No. 808,213. (Cl. 204—64.)

1. In a separator, the combination of an outer and an inner shell having a hopper at its lower end the two shells being located in spaced relation, a stirrer contained in the shell, a grate heater located beneath the lower end of the shell, the separator having outlets located around and above the delivery end of the hopper, the space between the shells of the separator adapted to be filled with the gas arising around the hopper.

2. In a separator, the combination of an inner and outer shell, the lower end of the inner shell forming a hopper and a grate of electrodes located below and near the hopper to form a clear annular space for collecting the gases, the outer shell having an outlet for gases and vapors located beside the hopper above the grate.



3. In an apparatus for separating peat products, the combination of two bins and a separator hermetically sealed, the separator connected between the bins, a conveyer for conveying the contents of one bin to the separator, the separator having a hopper and a stirrer, a grate of electrodes for receiving the contents of the separator through the hopper, a conveyer for directing the material from the grate to the second bin, means for directing some of the gas formed at the grate, through the separator and to the bin from which material is received by the separator.

4. In an apparatus for separating peat products, the combination of two bins and a separator hermetically sealed, the separator connected between the bins, a conveyer for conveying the contents of one bin to the separator, the separator having an inner shell, the shell having a hopper at its lower end and a stirrer, a grate of electrodes for receiving the material from the separator through the hopper, located close to the hopper, and forming a clear annular space for collecting the gases formed at the grate, the outer wall of the separator having outlets located above the lower edge of the hopper, a conveyer for directing the material from the separator to the second bin.

1,156,388. PROCESS OF OBTAINING POTASSIUM CHLORID. JOSEPH A. BRADBURN, Syracuse, N. Y. Filed July 2, 1915. Serial No. 37,694. (Cl. 23—22.)

1. The herein described process of treating Great Salt Lake water and other similar saline liquors for obtaining potassium chlorid, which consists in subjecting the liquor to refrigeration for crystallizing out the greater portion of the sodium sulfate, removing the crystallized sodium sulfate from the liquor, concentrating the resultant liquor by evaporation for crystallizing out the greater portion of the sodium chlorid, removing the crystallized sodium chlorid from the liquor, adding magnesium chlorid to the concentrated liquor, subjecting the resultant liquor to hot evaporation for further concentrating it and crystallizing out the greater portion of the remaining sodium chlorid, removing the last named crystallized sodium chlorid from the hot liquor, cooling the hot liquor for obtaining crude crystals of potassium chlorid, separating the crude crystals of potassium chlorid from the liquor, and washing the crude crystals of potassium chlorid.

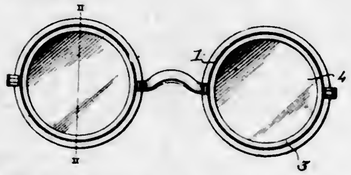
2. The herein described process of treating Great Salt Lake water and similar saline liquors for obtaining potassium chlorid, which consists in removing from the liquor the greater portion of the sodium sulfate, concentrating the resultant liquor by evaporation whereby the greater portion of the sodium chlorid crystallizes out, removing the crystallized sodium chlorid, adding magnesium chlorid to the concentrated liquor, subjecting the resultant liquor

to the action of hot evaporation for crystallizing out the greater portion of the remaining sodium chlorid, removing the last named sodium chlorid from the liquor, cooling the hot liquor for obtaining crude crystals of potassium chlorid, separating the crude crystals of potassium chlorid from the liquor, and washing the crude crystals of potassium chlorid.

3. The herein described process of treating Great Salt Lake water and similar saline liquors for obtaining potassium chlorid, which consists in subjecting the liquor to the action of refrigeration for crystallizing out the greater portion of the sodium sulfate, removing the crystallized sodium sulfate from the liquor, adding magnesium chlorid to the liquor, subjecting the resultant liquor to the action of evaporation for concentrating it and crystallizing out the sodium chlorid, removing the crystallized sodium chlorid from the liquor, cooling the liquor for obtaining crude crystals of potassium chlorid, separating the crude crystals of potassium chlorid from the liquor, and cleaning the crude crystals of potassium chlorid.

4. The herein described process of treating Great Salt Lake water and similar saline liquors for obtaining potassium chlorid, which consists in subjecting the liquor to the action of refrigeration for crystallizing out the greater portion of the sodium sulfate, removing the crystallized sodium sulfate from the liquor, adding magnesium chlorid to the liquor, subjecting the resultant liquor to the action of evaporation for concentrating it and crystallizing out the sodium chlorid, removing the crystallized sodium chlorid from the liquor, cooling the liquor for obtaining crude crystals of potassium chlorid, and separating the crude crystals of potassium chlorid from the liquor.

1,156,389. GOGGLES. LUCIAN W. BUGBEE, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass. Filed July 9, 1915. Serial No. 39,015. (Cl. 2—149.)



1. In an eye protector of the character set forth, the combination with a frame, of a lens loosely mounted in the frame, and means for yieldingly holding the lens at the front of the frame.

2. In an eye protector, the combination with a frame, of a lens mounted in the frame, and a compressible retaining device normally holding the lens forward in the frame, whereby pressure against the lens will permit the same to move rearwardly relative to the frame, substantially as described.

3. An eye protector comprising a frame, a lens slidably mounted within said frame, means bearing against said lens for yieldably supporting the same, and means permitting of the insertion of said last named means within the frame and preventing its accidental removal therefrom.

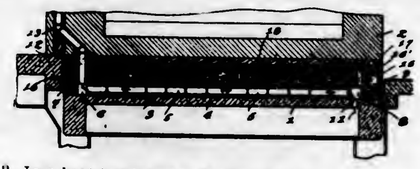
4. An eye protector comprising a frame, a lens slidably mounted therein and means for permitting of yielding sliding movement of the lens in one direction, said means being detachable from the frame.

5. An eye protector comprising a frame, a lens movable therein and detachable spring means for permitting of yieldable movement of the lens in one direction.

[Claim 6 not printed in the Gazette.]

1,156,390. INSULATING MEANS FOR BAKE-OVENS. CORRY B. COMSTOCK, New York, N. Y. Filed Oct. 8, 1913. Serial No. 794,142. (Cl. 107—55.)

1. In a heat insulating means for bake ovens, the combination of a plurality of parallel horizontal ducts adapted to lie underneath the oven, means forming a transverse passage connecting the ducts at one end, other means forming a transverse passage connecting the ducts at the other end, means for admitting air to the first said passage, and flues for receiving air from the second said passage and conducting it upward.



2. In a heat insulating means for bake ovens the combination of a plurality of parallel horizontal ducts adapted to lie underneath the oven the center ducts being shorter than those at the sides and all of the ducts terminating at one end in the same transverse vertical plane, means forming a transverse passage connecting the ducts at the last said end, other means forming a plurality of transverse passages respectively connecting the longer side ducts, and the shorter center ducts, means for admitting air to the last said passages, and flues for receiving air from the first said passage and conducting it upward.

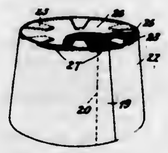
3. In a supporting and heat insulating means for bake ovens, the combination of a plurality of hollow tiles set on end and adapted to lie underneath the oven, and a packing substance within the open spaces of the tiles for resisting the transmission of heat.

4. In a supporting and insulating means for bake ovens, the combination of a plurality of hollow tiles set on end and adapted to lie underneath the oven, a packing substance within the open spaces of the tiles for resisting the transmission of heat, a layer of heat insulating material above the tiles, and a layer of heat insulating material below the tiles.

5. In a heat insulating means for bake ovens, the combination of a plurality of parallel horizontal ducts adapted to lie underneath the oven, means for admitting air to each of the ducts at one end, flues for receiving air from each of the ducts at the other end and conducting it upward and a heat insulating means above the said ducts and interposed between them and the oven.

[Claim 6 not printed in the Gazette.]

1,156,391. SANITARY CAP FOR DRINKING-GLASSES. JAMES ARTHUR CONARD, Atlanta, Ga. Filed June 1, 1914. Serial No. 842,070. (Cl. 65—16.)

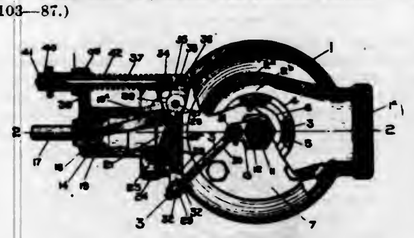


1. A sanitary cap for drinking glasses comprising a tubular body provided at its upper end with a plurality of inwardly extending right angular tongues, the tongues being bent to form between them at the top edge of the body vent openings leading into the said body, and a top over the tongues.

2. A sanitary cap for drinking glasses to protect the contents thereof, said cap comprising a lateral section formed from an arcuate blank having tongues at one edge, said blank being rolled with its ends overlapped and secured together and the tongues bent inwardly so that the intervening spaces form at the upper edge of the section vent openings leading into the cap, and a closure for the top of the cap.

3. A non-liquid holding cap for drinking glasses and the like, comprising an arcuate flange of substantially uniform width and having its inner and outer edges located on concentric circles, said inner edge being cut to provide a plurality of tongues with intervening spaces whereby when the blank is rolled openings will be provided at the bases of said spaces to allow ventilation of the contents of the glass and the ends of the blank will be disposed in overlapped relation, means connecting said ends, said tongues being directed radially inward, and a circular top over the tongues.

1,156,392. REGULATOR. RUDOLPH CONRADER, Erie, Pa. Filed Nov. 14, 1910. Serial No. 592,346. (Cl. 103—87.)



1. In a regulator, the combination of a controlling valve; a pressure device; a pitman actuated by the pressure device; a pivoted link controlling the path of movement of the end of the pitman; a pivoted lever having a different center than the link operated upon by the pitman, the pitman sliding toward and from the pivot of the lever under the influence of the link and varying the ratio of movement toward and from the pivot of the lever with a given movement of the lever in different parts of the path of the end of the pitman acting on the lever; a connection between the lever and the valve; a counter-pressure device acting on the lever; and means for adjusting the relative initial positions of the pitman and lever to vary the change or leverage on the lever with a given movement of the pitman.

2. In a regulator, the combination of a controlling valve; a pressure device; a pitman actuated by the pressure device; a pivoted link controlling the path of movement of the end of the pitman; a pivoted lever having a different center than the link operated upon by the pitman, the pitman sliding toward and from the pivot of the lever under the influence of the link and varying the ratio of movement toward and from the pivot of the lever with a given movement of the lever in different parts of the path of the end of the pitman acting on the lever; a connection between the lever and the valve; a counter-pressure device acting on the lever; means for adjusting the relative initial positions of the pitman and lever to vary the change or leverage on the lever with a given movement of the pitman; and a device for varying the force of the counter-pressure device.

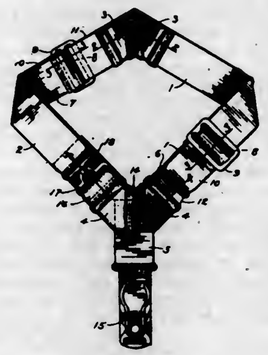
3. In a regulator, the combination of a rotative controlling valve; a pressure device; a pitman actuated by the pressure device; a pivoted link controlling the path of movement of the end of the pitman; a pivoted lever having a different center than the link operated upon by the pitman, the pitman sliding toward and from the pivot of the lever under the influence of the link and varying the ratio of movement toward and from the pivot of the lever with a given movement of the lever in different parts of the path of the end of the pitman acting on the lever; a link connected to the lever; a crank on the valve connected with the link; means for adjusting the link; a counter-device acting on the lever; and means for adjusting the relative initial positions of the pitman and lever to vary the change of leverage on the lever with a given movement of the pitman.

4. In a regulator, the combination of a controlling valve; a pressure device; a pitman actuated by the pressure device; a pivoted link controlling the path of movement of the end of the pitman; a pivoted lever having a different center than the link operated upon by the pitman, the pitman sliding toward and from the pivot of the lever under the influence of the link and varying the ratio of movement toward and from the pivot of the lever with a given movement of the lever in different parts of the path of the end of the pitman acting on the lever; a connection between the lever and the valve; a counter-pressure device acting on the lever; means for adjusting the relative initial positions of the pitman and lever to vary the change of leverage on the lever with a given movement of the pitman; and means for adjusting the connetcion between the lever and the valve.

5. In a regulator, the combination of a controlling valve; a cylinder; a piston operating in the cylinder; a pitman actuated by the piston; links pivoted at the side of the axis of the piston, and controlling the path of movement of the end of the pitman; a lever pivoted at the opposite side of the axis of the piston operated upon by the pitman; a connection between the lever and the valve; a spring connected to the lever; means for adjusting the initial position of the lever; and means for adjusting the spring.

[Claim 6 not printed in the Gazette.]

1,156,393. GARTER. AUGUSTA PICKERING COOLBROTH, Cambridge, Mass. Filed June 3, 1914. Serial No. 842,768. (Cl. 241—6.)



1. A garter of the class described comprising a hose engaging member and a pair of limb encircling members attached to said hose engaging member at an obtuse angle and meeting each other at substantially a right angle in the rear.

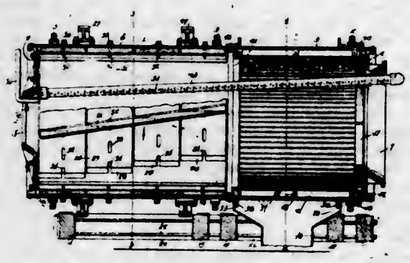
2. A garter of the class described comprising a pair of limb encircling members and united in the rear at an upwardly pointed angle and in the front at a downwardly pointed angle.

3. A garter of the class described comprising a pair of limb encircling members formed of straight webs of material and united in the rear at an upwardly pointed angle and in the front at a downwardly pointed angle.

4. A garter of the class described formed of webs of material and consisting of lateral sections having oppositely disposed points of juncture at angles of substantially 90° or greater and a hose engaging member dependingly attached to said garter at one of said points of juncture, whereby the portions of said lateral sections intermediate of their ends are brought into substantially vertical edgewise position relative to the limb.

5. A garter of the class described formed of webs of nonelastic material and consisting of lateral sections having oppositely disposed front and rear points of juncture, in the form of attached web pieces, and a hose engaging member dependingly attached to the front web pieces whereby the portions of said lateral sections between their ends are brought into substantially vertical edgewise position relative to the limb, and means for adjusting the effective encircling capacity of said lateral sections.

1,156,394. ORE DISINTEGRATING AND SCREENING MACHINE. GEORGE WOODSON CROWE, Santa Cruz, Cal. Filed Sept. 16, 1913. Serial No. 790,059. (Cl. 83—9.)



1. In an ore reducer, a rotary shell, a lining for said shell composed of wearing plates disposed in circumferential rings about the interior of said shell and arranged with the junctures of the plates of one ring circumferentially and successively advanced with respect to the junctures of the plates of the next adjacent ring throughout the length of the lining, and disintegrating bars disposed along said plates and covering the junctures of the plates abreast of which the bar is disposed.

2. In an ore reducer, a rotary shell, a lining for said shell composed of wearing plates disposed in circumferential rings about the interior of said shell with the meeting junctures of the plates of the successive rings being circumferentially advanced with respect to the first ring in one direction longitudinally of the shell, and a disintegrating member disposed longitudinally of the shell and covering the junctures of the plates along which it is mounted.

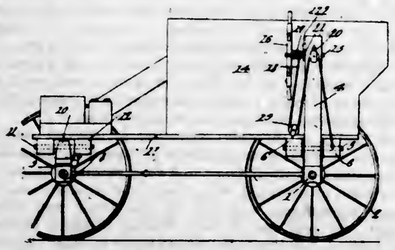
3. In an ore reducer, a rotary shell, a lining for said shell composed of wearing plates arranged to break joints, and a disintegrating element disposed on said plates in a position to cover the joints between the same.

4. In an ore reducer, a rotary shell, a lining for said shell composed of wearing plates having end meeting margins disposed parallel with the longitudinal axis of said shell and the plates being arranged so that the joints between adjacent sets of plates will be out of alinement, and means positioned over said joints and secured against the plates to cover the joints thereof.

5. In an ore reducer, a rotary shell, a lining for said shell composed of wearing plates disposed in circumferential rings with the meeting ends of said plates disposed in parallel relation with the longitudinal axis of said shell and the plates of one ring being disposed to lock their meeting ends out of alinement with respect to the plates of another ring, and a disintegrating bar disposed on said plates and locked to cover said meeting ends.

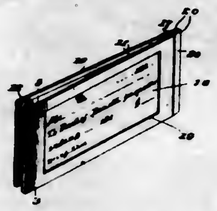
[Claims 6 to 12 not printed in the Gazette.]

1,156,395. THRESHING-MACHINE. CHARLES F. DEMPSEY, Vancouver, Wash. Filed Apr. 17, 1915. Serial No. 22,163. (Cl. 21—186.)



A threshing attachment for harvesters, comprising a wheel supported structure having front and rear upstanding alining portions adjacent one side of the structure, a standard adjacent the other side of the structure, a platform, transverse beams pivotally connected, adjacent one end, to the upstanding portions and supporting the platform, certain of said beams straddling the standard, a windlass supported by the standard, pulleys connected to one of the beams and to the upper portion of the standard respectively, a cable secured to the windlass and to another beam and engaging the pulleys at intermediate points, means for rotating the windlass, and means for holding the windlass against retrograde movement under the weight of the platform and its contents.

1,156,396. TICKET OR CARD EXHIBITOR. GERALD H. DENIO, Eaton, Colo. Filed Apr. 17, 1914. Serial No. 832,565. (Cl. 40—10.)



1. A device of the character described formed from a strip of suitable resilient sheet metal and including spaced wings joined by a connecting portion substantially U-shaped in cross section disposed between the inner extremities of said wings, said connecting portion acting to normally hold the outer extremities of the wings together, longitudinally extending flanges formed on the side edges of the strip, the portion of said flanges overlapping the connecting portion being bent down to rest against the inner face of said connecting portion, said flanges providing guide ways upon each of said wings, the wings being formed with suitable apertures and adapted to carry, in said guide ways, tickets each visible through the aperture of the wing by which it is carried, and terminal lips formed on the free extremities of said wings and extending from the adjacent extremities of said flanges, said lips providing stop shoulders for the tickets supported by the wings.

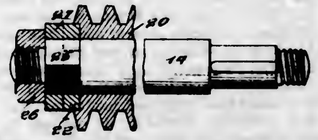
2. A ticket holder including spaced wings resiliently joined by a connecting portion projecting inwardly between the wings, said wings being disposed to embrace a support and being adapted to carry tickets, the said connecting portion providing a shoulder arranged to abut the adjacent edge of the support to limit the wings in their inward movement upon the support.

3. A ticket holder formed from a strip of suitable resilient sheet metal and including spaced clamping members joined by a connecting portion disposed between adjacent extremities thereof, flanges formed on the confronting faces of said members, the flanges of each member being disposed to removably support a ticket, said clamping members being formed to visibly support the tickets carried by said flanges and being adapted to bear upon opposite sides of a support with said connecting portion abutting the adjacent edge of the support, and a shoulder formed on each of said members and arranged to abut the support in the path of each of said tickets.

4. A device of the character described including clamping members adapted to embrace a support and formed to visibly support tickets removable at the free ends of said members, and transversely extending lips carried by the said members and each adapted to abut the support in the path of one of said tickets.

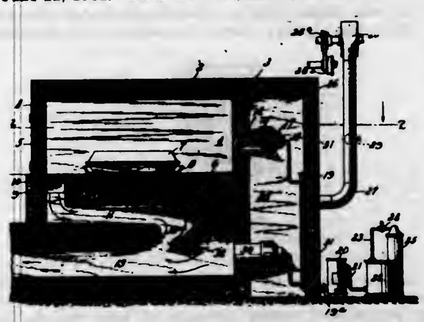
5. A device of the character described including clamping members adapted to embrace a support to seat against opposite faces thereof and formed to visibly support a ticket, removable at one end of one of said members, and a lip carried by the said member and adapted to abut the support in the path of the ticket.

1,156,397. SAFETY DEVICE FOR POWER TRANSMISSION. HENRY BEECHER DIEDORFF, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed July 24, 1908. Serial No. 445,233. Renewed Mar. 19, 1915. Serial No. 15,573. (Cl. 74—8.)



The combination in a power transmitting mechanism, of a power transmitting shaft having a part circular in cross section and an adjacent part polygonal in cross section, a power transmitting sleeve journaled upon the circular shaft part and provided with oppositely disposed notches in the end adjacent the polygonal shaft part, and an integral washer having a central aperture polygonal in cross section with its walls adapted to receive and closely engage the polygonal shaft part and provided with oppositely disposed integral lugs adapted to engage the edges of the notches in the sleeve, the washer being formed of material which is relatively frangible as compared with those of the shaft and sleeve.

1,156,398. CREMATORY. ADALBERT K. FISCHER, Philadelphia, Pa., assignor to Schutte & Koerting Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 22, 1912. Serial No. 705,184. (Cl. 110—3.)



1. Cremation apparatus comprising a primary combustion hearth chamber, a secondary combustion chamber in communication and arranged in series therewith, flame producing means opening into each combustion chamber above the base thereof, means for supplying fluid fuel to said flame producing means and means for simultaneously varying in like degree the action of said flame producing means.

2. Cremation apparatus comprising a hearth chamber, an auxiliary combustion chamber receiving effluent gases therefrom, an individual jet flame producing means for each chamber and a preheater chamber in heat-receiving relationship to both said chambers and arranged to deliver warmed air to both said flame producing means.

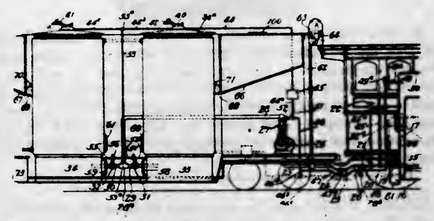
3. Cremation apparatus comprising a pair of combustion chambers having individual axial flame-producing means and arranged in series, one such chamber being a hearth chamber and the other a flue chamber, a preheater in heat-receiving relation to both said combustion chambers and serving as a source of warm air supply to both said combustion chambers, and positively acting means for discharging warm air from said preheater through said flame producing means.

4. In a cremation apparatus, a refractory walled crematory chamber, firing means therefor, an air heating chamber in heat receiving relationship thereto and controllable positively acting means for alternately blowing air from said heating chamber to the firing means in relatively small volume and for blowing large volumes of rapidly moving air therefrom to said cremation chamber to effect cooling of said chamber after a combustion operation.

5. In cremation apparatus, the combination with a refractory walled crematory chamber and a communicating preheater chamber in heat-receiving relation thereto, of positively acting means for blowing a large volume of rapidly moving air through said preheater chamber and said crematory chamber, whereby said crematory chamber may be cooled after a combustion operation by warmed air.

[Claims 6 to 14 not printed in the Gazette.]

1,156,399. PORTABLE GAS-PRODUCER FOR LOCOMOTIVES. BENJAMIN Q. P. FOSS, Chicago, Ill. Filed Mar. 22, 1910, Serial No. 550,918. Renewed Apr. 19, 1915. Serial No. 22,497. (Cl. 48—91.)



1. The combination of a locomotive, a car, a gas producer on said car, means connecting said gas producer with the fire box of said locomotive, means to diminish the flow of gas to said fire box when the steam consumption is small, and a normally closed overflow valve for said producer arranged to open when the flow of gas to said fire box is diminished.

2. The combination of a locomotive, a car, a gas producer on said car, means connecting said gas producer with the fire box of said locomotive, means to diminish the flow of gas to said fire box when the steam consumption is small, a normally closed overflow valve for said producer arranged to open when the flow of gas to said fire box is diminished, and a pilot light adapted to burn constantly adjacent said overflow valve.

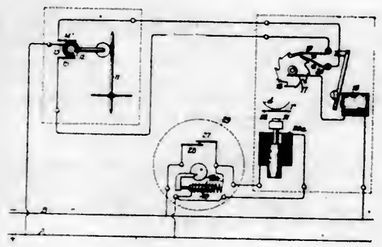
3. The combination of a locomotive, a car, a gas producer on said car, means connecting said gas producer with the fire box of said locomotive, means to diminish the flow of gas to said fire box when the steam consumption is small, a normally closed overflow valve for said producer arranged to open when the flow of gas to said fire box is diminished, a pilot light adapted to burn constantly adjacent said overflow valve, and an inclosing casing for said valve and light.

1,156,400. CLOCK-DRIVEN CONTROLLER. CHESTER I. HALL, Chicago, Ill., assignor, by mesne assignments, to Chicago Electric Meter Company, Chicago, Ill., a Corporation of Illinois. Filed July 15, 1911. Serial No. 638,661. (Cl. 234—35.)

1. In combination, a pair of line limbs, a bridge between said limbs including a magnetizing coil and a pair of time closed contacts, a watt meter, printing wheels advanced with the operation of said watt meter, electromagnetic mechanism for recording the position of said printing wheels, said contacts adapted for closing a circuit through said magnetising coil and said electromagnetic mechanism, said magnetizing coil being arranged to open said contacts and means for adjusting said coil to determine the period of energization of the electromagnetic mechanism.

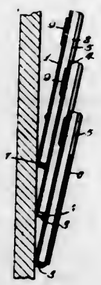
2. In combination, a pair of line limbs, a bridge between said limbs including a magnetising coil and a pair of time closed contacts, a watt meter, printing wheels advanced with the operation of said watt meter, electromagnetic mechanism for recording the position of said printing wheels, said contacts adapted for connecting said

magnetizing coil and said electromagnetic mechanism in bridge with the line limbs, said magnetizing coil being arranged to open said contacts, and means for adjusting said coil to determine the period of energization of the electromagnetic mechanism.



3. In combination, recording mechanism, electromagnetic devices for actuating said recording mechanism, time controlled mechanism, a pair of contacts closed by said time controlled mechanism to control the energizing circuit of said electromagnetic devices, a magnetizing coil for opening said contacts, and means for adjusting said coil to determine the period of energization of the electromagnetic devices.

1,156,401. CARD-RACK. WILLIAM D. HAWLEY, Syracuse, N. Y., assignor to Monitor Time Clock Co., Syracuse, N. Y., a corporation of New York. Filed Nov. 14, 1910. Serial No. 592,201. (Cl. 40—124.)



1. A card rack comprising a plurality of units, duplicates of each other, each unit having a back and lengthwise sides, the units being arranged one in front of the other, and the sides being formed of metal, and each side having a lengthwise portion thereof deflected outwardly to provide a lengthwise bead, and having another lengthwise portion deflected outwardly to provide a lengthwise groove between the bead and the front edge of the side, the beads of one unit fitting into the grooves of the contiguous unit, substantially as and for the purpose described.

2. A card rack comprising a plurality of units, duplicates of each other, each unit having a back and lengthwise sides, the units being arranged one in front of the other and the sides being formed of metal and each side having a lengthwise portion at the base thereof deflected outwardly to provide a lengthwise bead and having another lengthwise portion at the front edge thereof deflected outwardly laterally from the plane of the major part of said side farther than the bead projects in order to provide a lengthwise groove located to receive the bead of the next unit, the beads of one unit fitting into the grooves of the contiguous unit, substantially as and for the purpose specified.

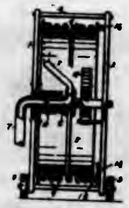
3. A card rack comprising a plurality of units, duplicates of each other, each unit having a back and lengthwise sides, the units being arranged one in front of the other, and the sides being formed of metal and having their bases fixed to the back, and being free to yield laterally throughout their length, and each side being provided on its outer face with a lengthwise bead, and on its inner face with a lengthwise groove, the beads of one unit fitting into the grooves of the contiguous unit, substantially as and for the purpose set forth.

4. A card rack comprising a plurality of units, duplicates of each other, each unit having a back and lengthwise sides formed of a single piece of metal, the units being arranged one in front of the other, and the sides being free to yield laterally throughout their length, and each side having a lengthwise portion thereof deflected outwardly to provide a lengthwise bead and having another lengthwise portion deflected outwardly to provide a lengthwise groove between the bead and the front edge of the side, the beads of one unit fitting into the grooves of the contiguous unit, substantially as and for the purpose described.

5. A card rack comprising a plurality of units, duplicates of each other, each unit having a back and lengthwise sides formed of a single piece of metal, the units being open at their front and arranged one in front of the other, and the back of any one of the intermediate units closing the front of the next unit in the rear thereof, and being spaced apart from the back of said unit in the rear thereof, the sides having outwardly projecting portions, and the front portions of the sides of any one of the intermediate units engaging the margins of the back and the front faces of the outwardly projecting portions of the sides of the contiguous unit, substantially as and for the purpose specified.

[Claims 6 to 10 not printed in the Gazette.]

1,156,402. HOSE-REEL. ADAM HEIM, Connersville, Ind. Filed Aug. 31, 1914. Serial No. 859,324. (Cl. 242—86.)

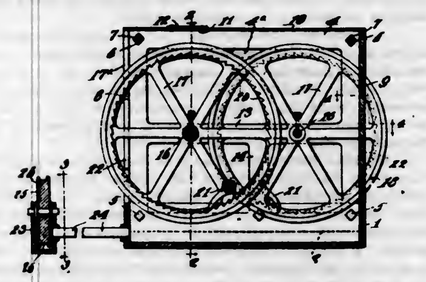


1. In a hose reel the combination with a support, a reel journaled thereon and provided with a projecting pin near its periphery, a spring arranged to turn the reel for winding a hose thereon, of a gravity latch pivotally secured on the support and formed with an inclined notch adapted to automatically engage or disengage the pin under respective different speeds of the reel by the action of the spring, for the purpose specified, and a fixed stop for limiting the disengaging movement of the latch.

2. In a hose reel the combination of a support, a reel journaled thereon and provided with a projecting pin on one end near its periphery, a spring arranged to turn the reel for winding the hose thereon, a gravity latch pivotally secured to the support in the path of the pin and formed with a rearwardly inclined notch adapted to detachably engage with the pin, for locking or releasing the reel as actuated by the spring under respective different predetermined speeds, and fixed stops for limiting the movement of the latch in respective opposite directions.

1,156,403. ANIMAL-OILER. HENRY W. HOWARD, Shenandoah, Iowa. Filed June 11, 1914. Serial No. 844,526. (Cl. 119—157.)

1. In a device of the character described, a casing including a lower pan and having an opening above the pan, and a rubbing wheel mounted for rotation within the casing above the pan, the lower portion of the rubbing wheel projecting into the pan, one portion of the rubbing wheel projecting through the said opening, the rubbing wheel having an internal series of ratchet teeth, and a pawl carried by the casing and coöperable with the said ratchet teeth so that the exposed portion of the wheel can only move upwardly.



2. In a device of the character described, a pan, side members attached to the sides of the pan and having openings between the ends thereof, the side members having bearings adjacent their ends, cross shafts having their terminals journaled in the bearings, and rubbing wheels mounted on the said shafts and having their remote portions projecting through the said openings, the lower portions of the said wheels projecting into the pan, the wheels having an internal series of ratchet teeth adjacent the side members, and pawls pivoted to the side members and coöperating with the respective ratchet teeth.

1,156,404. LOOM-SHUTTLE. ALFRED ISHERWOOD, New Bedford, Mass. Filed June 16, 1913. Serial No. 774,077. (Cl. 139—46.)



1. In a loom-shuttle having a threader and a cop-cavity, a plate secured to the threader and extending the length of the cop-cavity, whereby a space is provided between said plate and one wall of the shuttle to be traversed by the filling thread when the shuttle is moving in one direction, the upper edge of said plate being inclined frontwardly.

2. In a loom-shuttle having a threader and a cop-cavity, a plate integral with the threader and extending the length of the cop-cavity, whereby a space is provided between said plate and one wall of the shuttle to be traversed by the filling-thread when the shuttle is moving in one direction, the upper edge of said plate being inclined frontwardly.

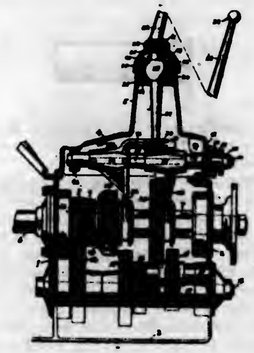
3. In a loom-shuttle having a cop-cavity, a threader having a sheet-metal extension secured thereto and extending the length of the cop-cavity, and means spacing said extension from one wall of the shuttle, the upper edge of said extension being inclined frontwardly.

4. In a loom-shuttle having a threader and a cop-cavity, a plate secured to the threader and extending the length of the cop-cavity, whereby a space is provided between said plate and one wall of the shuttle to be traversed by the filling-thread when the shuttle is moving in one direction, the upper edge of said plate being inclined frontwardly and its inward end being secured in a groove in said shuttle.

5. In a loom-shuttle having a threader and a cop-cavity, a plate integral with the threader and extending the length of the cop-cavity, whereby a space is provided between said plate and one wall of the shuttle to be traversed by the filling-thread when the shuttle is moving in one direction, the upper edge of said plate being inclined frontwardly and its inward end being secured in a groove in said shuttle.

[Claims 6 to 26 not printed in the Gazette.]

1,156,405. GEAR-SHIFTING MECHANISM. FRANK JOHNSON, Detroit, Mich. Filed June 28, 1915. Serial No. 36,634. (Cl. 74—5.)



1. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a second shaft revolubly mounted substantially parallel to the first, two heads slidable on said second shaft, forks extending from said heads into engagement with the slidable gears, an interlock to prevent both of the heads being moved from neutral position, and means to shift the heads, forks and gears.

2. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a second shaft revolubly mounted substantially parallel to the first, means for longitudinally adjusting said shaft, two heads slidable on said second shaft, forks extending from said heads into engagement with the slidable gears, an interlock to prevent both of the heads being moved simultaneously from neutral position, and means to shift the heads, forks and gears.

3. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a second shaft revolubly mounted substantially parallel to the first, two heads slidable on said second shaft, forks extending from said heads into engagement with the slidable gears, said shaft having a transverse hole, said heads being each provided with a depression in alinement with said hole when the heads and yokes are in neutral positions, a pin slidable in said hole of such greater length than the diameter of the shaft that it extends into at least one of said depressions and always prevents the movement of one of the heads, and means to shift the heads, forks and gears.

4. In a change-speed gearing, the combination of a gear box having a cover, a pedestal mounted on the cover, a shaft and gears mounted in said gear box, two of said gears being slidable on the shaft, a second shaft revolubly mounted substantially parallel to the first shaft, two heads slidable on said second shaft, forks extending from said heads into engagement with the slidable gears, an interlock to prevent both of the heads from being moved at the same time, and a shifting lever mounted intermediate its ends at the top of the pedestal and extending into engagement with said heads to shift the heads, forks and gears.

5. In a change-speed gearing, the combination of a gear box, a shaft and gears mounted therein, two of said gears being slidable on the shaft, a second shaft revolubly mounted substantially parallel to the first, two heads independently slidable on said second shaft, said second shaft having a longitudinal key-way, means mounted on one of the heads and extending into said key-way to prevent said head from turning on the shaft, means to prevent relative rotation between said heads, forks extending from said head into engagement with the slidable gears, an interlock to prevent both of the heads being moved simultaneously, and means to shift the heads, forks and gears.

[Claims 6 to 13 not printed in the Gazette.]

1,156,406. CARTRIDGE-SHELL. LIVINGSTON B. KEPLINGER, New Orleans, La., and WARREN E. KEPLINGER, Cincinnati, Ohio. Filed Feb. 5, 1915. Serial No. 6,229. (Cl. 102—17.)



1. A reinforcement for a cartridge shell having its edge slitted, free to expand, and arranged to surround the explosive containing portion of the shell.

2. A cartridge shell comprising an end cup having the edge thereof slitted and free to expand, and being adapted to fit over the end of a shell with the slitted edge surrounding the explosive containing portion of said shell.

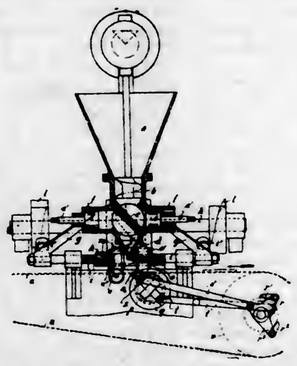
3. A cartridge shell comprising a tube, a reinforcing ring having its edge slitted, free to expand, and surrounding the explosive containing portion of said tube.

4. A cartridge shell comprising a tube, a reinforcing end cup positioned over one end of said tube, free to expand, and having slits therein at the edge thereof adjacent the explosive containing portion of said tube.

5. An end cup for a cartridge shell comprising a cylindrical tube having slits extending from the edge of the inner end thereof toward the outer end, the slitted portion of said cup being free to expand, and adapted to overlie the explosive containing portion of said tube.

[Claims 6 to 13 not printed in the Gazette.]

1,156,407. APPARATUS FOR DIVIDING MORE OR LESS THICK LIQUID OR PASTY MATERIALS—FOR INSTANCE, CHOCOLATE AND THE LIKE. FRIEDRICH WILHELM KETTNER, Altona, Germany, assignor to the Firm of Hermann Bauermeister Maschinenfabrik u. Mühlenbauanstalt G. M. B. H., Altona-Ottensen, Germany. Filed Mar. 9, 1915. Serial No. 13,170. (Cl. 107—14.)



1. Machine for dividing more or less liquid materials comprising two cylinders and two pistons working in the cylinders, a rotatable valve adapted to feed the said material to the cylinders, a reciprocating member releasably connected with the pistons, so as to positively operate the pistons in one direction and to allow the material to operate the pistons in the other direction.

2. Machine for dividing more or less liquid materials comprising two cylinders and two pistons working in the cylinders, a rotatable valve adapted to feed the said material to the cylinders, a reciprocating member releasably connected with the pistons and consisting of a sectional spindle, a left and right handed nut engaging the two sections of the spindle, a shaft and two cams mounted on the shaft and adapted to operate the reciprocating member.

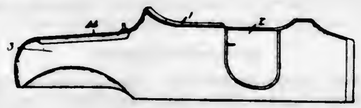
3. Machine for dividing more or less liquid materials comprising two cylinders and two pistons working in the cylinders, a rotatable valve adapted to feed the said material to the cylinders, a reciprocating member releasably connected with the pistons, a shaft and two cams mounted on said shaft adapted to operate the reciprocating member, a cam disk mounted on the center of the said shaft and adapted to operate the rotatable valve.

4. Machine for dividing more or less liquid materials comprising two cylinders and two pistons working in the cylinders, a rotatable valve adapted to feed the said material to the cylinders, a reciprocating member releasably connected with the pistons, arms on the reciprocating member loosely engaging the pistons and adapted to be fastened to the said pistons.

5. Machine for dividing more or less liquid materials comprising two cylinders and two pistons working in the cylinders, a rotatable valve adapted to feed the said material to the cylinders, a reciprocating member releasably connected with the pistons and consisting of a sectional spindle, a left and right handed nut engaging the two sections of the spindle, a shaft and two cams mounted on the shaft and adapted to operate the reciprocating member, a hand operated gear adapted to adjust the right and left handed nut.

[Claims 6 to 8 not printed in the Gazette.]

1,156,408. COLLAPSIBLE VEHICLE-SEAT. FREDERICK KIEHLER, Detroit, Mich. Filed Aug. 19, 1914. Serial No. 857,443. (Cl. 21—43.)



1. In combination, a vehicle body comprising a bottom, sides, a rear end and a top, said top and bottom being spaced somewhat from one another to provide storage space and said top having an opening therein, a seat-back mounted to swing vertically in respect to the body from a position in which it is adapted to constitute a rest for the back of the user to a position in which it serves as a closure for the opening, said seat-back, when in the latter position, being arranged to lie substantially in the plane of the top of the vehicle body whereby the storage space is largely rendered available for storage purposes and having its lower end, when in the former position, inclosed by the sides and rear end of the body, and means, comprising fixed pivots, for connecting the seat-back to the body.

2. In combination, a vehicle body comprising a bottom, sides, a rear end and a top, said top and bottom being spaced somewhat from each other to provide storage space and said top having an opening therein, a cross-wall joining the sides of the body at a point near the rear end, a seat back mounted to swing vertically in respect to the body from a position in which it is adapted to constitute a rest for the back of the user to a position in which it serves as a closure for the opening, said seat back when in the latter position, being arranged to lie substantially in the plane of the top of the vehicle body whereby the storage space is largely rendered available for storage purposes, said cross-wall, together with the sides and rear end of the body, forming a compartment in which the lower end of the seat back is received when in position to serve as a rest for the user.

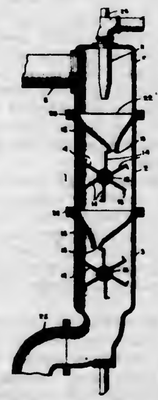
3. In combination, a vehicle body comprising a bottom, sides and a top, said top and bottom being spaced somewhat from each other to provide storage space and said top having an opening therein, a cross-wall joining the sides of the body at a point near the rear end, a seat back mounted to swing vertically in respect to the body from a position in which it is adapted to constitute a rest for the back of the user to a position in which it serves as a closure for the opening, said seat back when in the latter position, being arranged to lie substantially in the plane of the top of the vehicle body whereby the storage space is largely rendered available for storage purposes, and means for forming a trough along a portion of the edge of the opening in the top, said trough leading to the space at the rear of the cross-wall, whereby water that leaks between the seat back and the corresponding edge of the opening may be received and conducted to the space at the rear of the cross-wall.

4. In combination, a vehicle body comprising a bottom, sides, a rear end and a top, said top and bottom being spaced somewhat from each other to provide storage space and said top having an opening therein, a cross-wall joining the sides of the body at a point near the rear end, a seat back mounted to swing vertically in respect to the body from a position in which it is adapted to constitute a rest for the back of the user to a position in which it serves as a closure for the opening, said seat back when in the latter position, being arranged to lie substantially in the plane of the top of the vehicle body whereby the storage space is largely rendered available for storage purposes, means for forming a trough along a portion of the edge of the opening in the top, said trough leading to the space at the rear of the cross-wall, whereby water that leaks between the seat back and the corresponding edge of the opening may be received and conducted to the space at the rear of the cross wall, a closure extending between the lower portion of the cross-wall and the rear end of the body for excluding dust, said closure having an opening through which water discharged from the trough may pass out of the vehicle body.

5. In combination, a vehicle body comprising a bottom, sides and a top, said top and bottom being spaced somewhat from one another to provide storage space and said top having an opening, a seat back mounted to swing vertically in respect to the body from a position in which it is adapted to constitute a rest for the back of the user to a position in which it serves as a closure for the opening, said seat back, when in the latter position, being arranged to lie substantially in the plane of the top of the vehicle body whereby the storage space is largely rendered available for storage purposes, a latch lever pivoted in the body, and means, carried by the seat back, with which the latch lever is adapted to engage for holding the seat back in the first mentioned position.

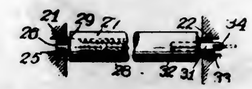
[Claims 6 to 30 not printed in the Gazette.]

1,156,409. APPARATUS FOR MIXING MASH. JULIUS KLEIN, Cambridge, Mass. Filed July 12, 1915. Serial No. 39,298. (Cl. 195—27.)



A mash-mixing device comprising a sectional conduit, bladed mixing elements rotatably mounted in said sections, the blades of said elements having serrated flanges at their peripheries, spout elements interposed between the sections and arranged to deliver the liquid passing therethrough and having their egress ends situated at one side of the axial line of the conduit, and means to introduce molasses and water to the upper end of the conduit.

1,156,410. ADJUSTABLE SHADE-ROLLER DEVICE. ARTHUR E. LEARY, Shrewsbury, Mass. Filed Feb. 1, 1912. Serial No. 674,658. (Cl. 156—27.)



1. In a shade roller device, the combination of a shade roller having a non-circular spindle and a circular spindle, said roller being vertically movable, and the circular spindle having a diametrical slot in its end, a bar movable edgewise into and out of said slot for controlling the rotation of said spindle, and means for moving the bar.

2. The combination of a shade-roller spindle having a slot, a bar having a thin edge for entering the slot in the shade roller spindle, springs for pushing said bar away from the spindle, and a screw and nut for moving it in opposition to the springs.

3. The combination of a casing having a vertical slot therein, undercut along both sides, and having a cylindrical socket at the top, a holder slidable in the undercut portion of the slot, a cylindrical casing mounted in said socket, having a flat projection thereon extending into the wood of the casing to keep it stationary, a winding drum in the cylindrical casing having means for raising said holder, and a shade roller having a spindle supported by the holder.

4. In a shade roller device, the combination of a vertically movable pair of holders for the ends of a shade roller, yielding means for elevating said holders, a shade roller having a spring ratchet device by which the roller can be held from rotating, and external manually operated means for positively preventing the rotation of said shade roller, whereby when the positive means is in operation the roller can be raised and lowered by the manipulation of the shade.

5. In a shade roller device, the combination of a pair of holders for the ends of the shade roller mounted to move up and down, a flexible connection for supporting a shade roller having a non-cylindrical spindle and a cylindrical spindle, the non-cylindrical spindle being held from rotating in one of said holders, and the cylindrical spindle rotatably mounted in the other, said shade roller having a spring ratchet device by which the roller can be held from rotating, and external manually operated means for positively preventing the rotatable spindle from rotating, whereby when the last named means is in operation the roller may be raised and lowered by the manipulation of the shade.

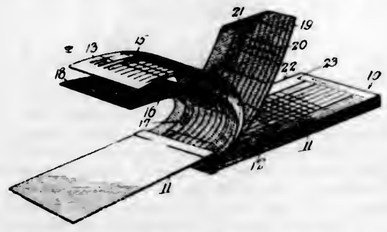
[Claims 6 to 10 not printed in the Gazette.]

1,156,411. MANIFOLDING-BOOK. EDWARD ZUVER LEWIS, Chicago, Ill., assignor to The General Manifold and Printing Company, Franklin, Pa., a Corporation of Pennsylvania. Filed Oct. 25, 1912. Serial No. 727,656. (Cl. 11—23.)

1. A manifolding book comprising a plurality of sets of sheets bound in book or pad form, each set comprising four sheets; the first three sheets of the set being of comparatively light material and the fourth sheet of the set being of heavier material; the first, second and fourth sheets of each set being provided with corresponding indicia on their front faces; the first and third sheets of each set being provided on their back faces with transfer material; the third sheet being provided on its face with indicia different from that of the first-second and fourth sheets; and the second sheet being provided on its back with indicia similar to that on the face of the third sheet, but said indicia being in reversed order.

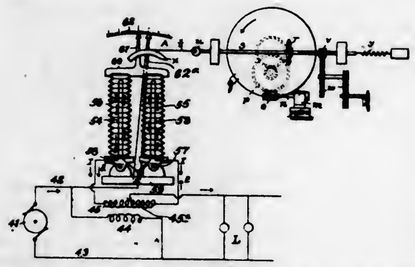
2. A manifolding book comprising a plurality of sets of sheets bound in book or pad form, each set comprising

four sheets; the first three sheets of the set being of comparatively light material and the fourth sheet of the set being of heavier material; the first, second and fourth sheets of each set being provided with corresponding indicia on their front faces; the first and third sheets of each set being provided on their back faces with transfer material; the third sheet being provided on its face with in-



dicia different from that of the first, second and fourth sheets; the second sheet being provided on its back with indicia similar to that on the face of the third sheet, but said indicia being in reversed order; and all of said sheets except the first being provided near their bound ends with lines of weakening by means of which they may be detached from the book or pad.

1,156,412. ELECTRIC WATTMETER. PAUL M. LINCOLN, Pittsburgh, Pa. Filed Nov. 5, 1913. Serial No. 799,320. (Cl. 171—34.)



1. A wattmeter comprising two derived circuits each traversed by two superposed currents one of which is proportional to the voltage and the other to the amperage of the circuit the energy of which is to be measured, the said currents being additive in one of the circuits and opposed in the other, means associated with each of the said derived circuits for receiving and temporarily storing, during a definite time period, the energy effects therein, and means indicating the difference between the average stored energy effects of the derived circuits, during said predetermined time period, substantially as described.

2. A wattmeter comprising two derived circuits each traversed by two superposed currents one of which is proportional to the voltage and the other to the amperage of the circuit the energy of which is to be measured, the said currents being additive in one of the circuits and opposed in the other, devices associated with each of the said derived circuits for receiving and temporarily storing the heat produced therein, means for adjusting the ratios of the thermal capacities of the heat-storage devices to the rate at which heat is radiated therefrom, and means for measuring the difference of the average heating effects of the derived circuits during a predetermined time period.

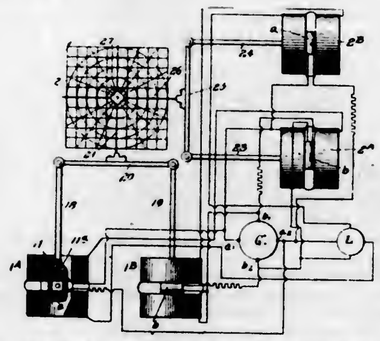
3. A wattmeter comprising two derived circuits each traversed by two superposed currents one of which is proportional to the voltage and the other to the amperage of the circuit the energy of which is to be measured, the said currents being additive in one of the circuits and opposed in the other, devices associated with each of the said derived circuits for receiving and temporarily storing the heat produced therein, means for measuring the difference of the average heating effects of the derived circuits during a predetermined time period, and integrating mechanism controlled by the said indicating means.

4. A wattmeter comprising two derived circuits each traversed by two superposed currents one of which is proportional to the voltage and the other to the amperage of the circuit the energy of which is to be measured, the said currents being additive in one of the circuits and opposed in the other, devices associated with each of the said derived circuits for receiving and temporarily storing, during a definite time period the heat produced therein, means for indicating the difference of the average heating effects of the derived circuits during a predetermined time period, and a maximum demand index actuated by the said indicating means.

5. A wattmeter comprising two derived circuits each traversed by two superposed currents one of which is proportional to the voltage and the other to the amperage of the circuit the energy of which is to be measured, the said currents being additive in one of the circuits and opposed in the other, two expansible bodies having adjustable time lag respectively heated by the currents traversing the said circuits, and an indicator actuated by the relative expansion of the said bodies.

[Claims 6 to 16 not printed in the Gazette.]

1,156,413. VOLT-AMPERE METER. PAUL M. LINCOLN, Pittsburgh, Pa. Filed Nov. 29, 1913. Serial No. 803,681. Renewed Sept. 13, 1915. Serial No. 50,525. (Cl. 171—95.)



1. The method of measuring the volt-amperes of an alternating current circuit which comprises moving one indicator in proportion to the true watts of the circuit to be measured, and moving another indicator in proportion to the wattless component of the current in the circuit, and moving an index by the conjoint action of said two indicators, whereby to show the true watts, the wattless component, the volt-amperes and the power factor, substantially as described.

2. The method of measuring the volt-amperes of an alternating current circuit by resolving the volt-amperes of the circuit into two components at an electrical angle to each other, utilizing said components to produce indicating motions at a mechanical angle to each other approximately equal to said electrical angle, and combining said motions to control an index, substantially as described.

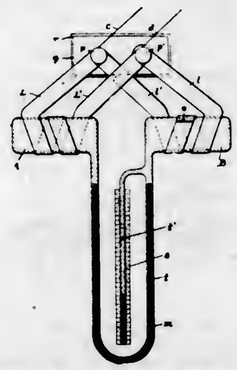
3. The method of measuring the electrical quantities pertaining to an alternating current circuit, which consists in separately measuring several components of the apparent energy of the current traversing the circuit, and combining the said component measurements to produce a joint indication, substantially as described.

4. A volt-ampere meter comprising mechanism moved by the proportional to the true energy of the circuit to be measured, mechanism moved by and proportional to the wattless component of the current and an indicator operated by the joint action of said mechanisms.

5. A volt-ampere meter comprising a plurality of watt meters in different phases of a circuit and a mechanism moved thereby proportional to the true energy of the circuit, combined with a plurality of watt meters in different phases of the wattless component of the current and mechanism moved thereby and proportional thereto, and means indicating the combined movements of said mechanisms, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,156,414. ELECTRIC INDICATOR. PAUL M. LINCOLN, Pittsburgh, Pa. Filed Nov. 12, 1914. Serial No. 871,692. (Cl. 171—308.)



1. An electric indicator operating by differential temperature changes between two chambers, comprising an active chamber carrying a heating winding and an inactive chamber made of the same size and form provided with a dummy winding like the winding of the active chamber, except that as an electric circuit it is open.

2. An ammeter operating by comparative changes of temperature between two expansion elements, one of which is heated by the current to be measured, comprising an active element so heated, and an idle element of the same structure and the same heat dissipating capacity, substantially as described.

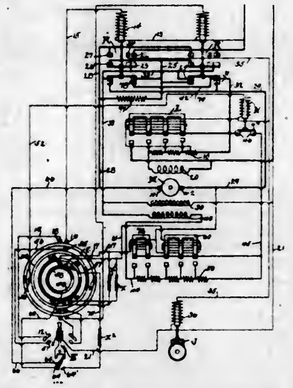
3. An ammeter comprising two air bulbs connected by a U tube containing a liquid, means to register the movements of the liquid upon differential expansion of the bulbs, a winding having proper leads and adapted for heating one of the bulbs, and an exact duplicate but open circuit winding with leads for the other bulb, substantially as described.

4. In an ammeter operating by relative differences of temperature between two heated elements, a device for equalizing the dissipation of heat comprising like structure on the two elements except that one structdre conducts electricity and the other does not, electrical connectors for said structures, and means for equalizing the temperature between such connectors.

5. An ammeter comprising two bodies of identical heat absorbing and dissipating qualities, devices to measure differences of temperature between said bodies, means for heating one of said bodies by a current whose amperage is to be measured, said heating means being designed to affect equally both of said bodies, in respect of absorbing or dissipating heat other than that due to the current being measured.

1,156,415. ELECTRICAL CONTROLLING APPARATUS. DAVID L. LINDQUIST, Yonkers, N. Y., assignor to Otis Elevator Company, New York, N. Y., a Corporation of New Jersey. Filed July 31, 1912. Serial No. 712,508. (Cl. 172—152.)

1. In hoisting apparatus, the combination of an electric motor, an extra field circuit, resistance in said circuit, an electro, responsive device operating at a certain power to vary said resistance during the slowing down of the motor in one direction, and means to modify the power of said device and effect a different rate of slowing down in the reverse direction.



2. The combination of an electric motor, a load carrying device, an extra field circuit for the motor comprising sectional resistance, an electromagnet connected in a circuit across the motor and controlling said resistance, and means for introducing resistance in the magnet circuit when the motor operates in one direction and for completing a circuit to said magnet independent of the resistance when the motor operates in the opposite direction.

3. The combination of an electric motom, a load carrying device, slow down apparatus comprising an extra field circuit in shunt to the motor and sectional resistance in said circuit, an electromagnet connected in a circuit in shunt to the motor and controlling said resistance, a resistance in the electromagnet circuit as the load carrying device is moved in one direction, and means to complete a circuit to said magnet independent of said resistance as the load carrying device is moved in the other direction.

4. In hoisting mechanism, the combination of an electric motor, a load carrying device, reversing switches, slow down apparatus comprising an extra field circuit, resistance in said circuit, an electromagnet adapted to be connected in parallel with the motor armature and controlling said resistance, a resistance for the electromagnet circuit, and an automatic controller comprising means to establish a circuit through the said electromagnet and its resistance as the load carrying device approaches one limit of travel and to complete the magnet circuit independently of the resistance as the load carrying device approaches its limit of travel in the reverse direction.

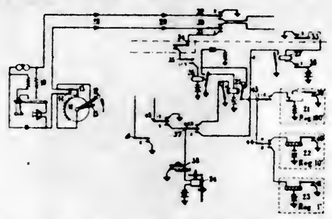
5. In hoisting mechanism, the combination of a motor, apparatus operated threby, slow down mechanism comprising an electro responsive device controlling the slowing down of said apparatus at different periods in its operation, and means to automatically vary the power of said electro-responsive device and thereby effect different rates of slowing down for different periods of operation.

[Claims 6 to 12 not printed in the Gazette.]

1,156,416. TELEPHONE-EXCHANGE SYSTEM. FRANK R. MCBERTY, Antwerp, Belgium, assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Jan. 21, 1914. Serial No. 813,407. (Cl. 179—18.)

1. The combination with a progressively operable switch, continuously operating power means and an electromagnet for associating said power means with said switch, of means including a sending device having a contact in circuit with a winding of said electromagnet adapted by variable intermittent operation of said contact to variably adjust said switch, the extent of move-

ment of said switch being independent of the rate of intermittent operation of said device.



2. The combination with a progressively operable switch, continuously operating power means and an electromagnet for associating said power means with said switch, of means for advancing said switch in steps by intermittently varying the current in a winding of said electromagnet, and means for fixing the extent of movement of the switch at each step independently of the rate of intermittent current variation in said winding.

3. In a telephone exchange system, an impulse receiving circuit, a relay in said circuit, a variably operable switch, a constantly operating power means, a magnet for associating said switch with said power means upon the closure of a single contact of said relay, means for opening and closing said contact, and means whereby after a definite movement of said switch it will be stopped until said contact is again closed.

4. In a telephone exchange system, an impulse receiving circuit, a relay in said circuit, a variably-operable power-driven switch adapted to be moved under the control of a single contact of said relay, and a local circuit controlled by said switch itself adapted to stop said switch after it has moved a definite distance in response to the closure of said contact and until said contact is again closed.

5. In a telephone exchange system, a power-driven switch adapted to be moved to any one of a plurality of positions, a differentially-wound electromagnetic clutch for applying the power to said switch, an external control circuit the closure of which will start said switch in motion, and a local circuit the closure of which when such external control circuit is closed will bring such switch to a stop.

[Claims 6 to 18 not printed in the Gazette.]

1,156,417. METHOD AND APPARATUS FOR CLEANING PIPES. JAMES J. MCCARTY, Boston, Mass. Filed Nov. 3, 1913. Serial No. 798,808. (Cl. 137—70.)



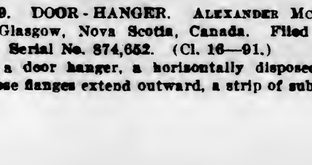
1. The method of removing obstructions of rust, and the like, from branch pipes of a water main, which consists in inserting into the discharge end of the pipe a plastic mass of paper pulp, then forcing the mass through the pipe against the obstruction by fluid pressure, to cause the same to expand laterally and close the pipe tightly, and thereafter increasing the fluid pressure to dislodge the obstruction and force it into the main.

2. The method of removing obstructions of rust, and the like, from branch pipes of a water main, which consists in inserting into the discharge end of the pipe a plastic, disintegrated mass of fibrous material, then forcing the mass through the pipe against the obstruction by water under pressure, to cause the mass to expand laterally and close the pipe tightly, and then increasing the pressure of the water against the mass to dislodge the obstruction and force it, with the mass, into the main, where the mass may become disintegrated.

3. The method of removing rust obstructions and the like, from branch pipes of a water-main, which consists in inserting into the discharge end of the pipe a mass of thin paper, then introducing water into the pipe, and applying pressure thereto to force the mass through the pipe and cause the mass to become plastic and expand laterally and close the pipe tightly when the obstruction is encountered, and then increasing the water pressure against the mass until the obstruction is dislodged and forced, with the mass, into the main.

4. In combination with a pipe, means for cleaning the same, comprising a mass of plastic, disintegrated material, adapted to be shaped into a cylindrical mass of substantial length and of equal cross-sectional area to that of said pipe, and fluid-pressure devices to force said mass against an obstruction in the pipe to cause lateral expansion of the mass to provide a tight-fitting piston to which the water pressure is applied to force an obstruction from the pipe.

1,156,418. POWER ATTACHMENT FOR MOTOR-CARS. ANDREW M. MCGILL and LUCIEN B. HOWLAND, Toronto, Ontario, Canada. Filed Feb. 8, 1915. Serial No. 6,968. (Cl. 21—90.)



1. A power attachment for motor cars, comprising, a cantaliver shaped frame rigidly secured at one end to the frame of the car and having its downwardly sloping sides converging to the outer end, a journal bearing arranged at the outer end of said frame, and a supplementary shaft detachably connected to the engine shaft and journaled in said bearing.

2. A power attachment for motor cars, comprising, an extension member adapted to be secured to the frame of the car, a supplementary shaft connected to the engine shaft and extending forwardly and journaled in said extension member, and means operatively connected to said supplementary shaft for directing a current of air toward the front of the radiator of the car.

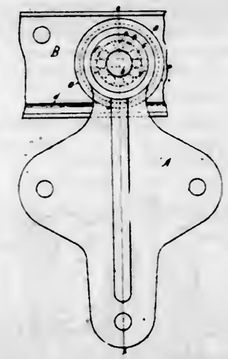
3. A power attachment for motor cars, comprising, an extension member adapted to be secured to the frame of the car, a supplementary shaft connected to the engine shaft and extending forwardly and journaled in said extension member, and a fan attached to said supplementary shaft adapted to direct a current of air against the radiator of the car.

4. A power attachment for motor cars, comprising, an extension member adapted to be secured to the frame of the car, a supplementary shaft connected to the engine shaft and extending forwardly and journaled in said extension member, a fan attached to said supplementary shaft, and apron extensions on said extension member adapted to direct the current of air from the lower half of the fan in an upward direction toward the radiator of the car.

5. A power attachment for motor cars, comprising, a rigid bracket member secured to the front of the frame of the car and extending forwardly therefrom having side members of rigid angle section and a depressed central web forming a supporting strut adapted to engage the car frame centrally of its width, journals supported on said bracket in alinement with the engine shaft, an auxiliary shaft detachably connected to said engine shaft and journaled in said bearings and extending beyond the forward end, and a pulley secured to the outer end of said shaft.

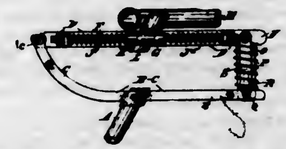
1,156,419. DOOR-HANGER. ALEXANDER MCPHERSON, New Glasgow, Nova Scotia, Canada. Filed Nov. 30, 1914. Serial No. 874,652. (Cl. 16—91.)

1. In a door hanger, a horisontally disposed channel iron whose flanges extend outward, a strip of substantially semi-circular formation in cross section secured in rigid relation to the upper face of the lowermost flange to form a track, a hanger iron whose upper end is formed to provide a relatively long bearing extending transversely of the hanger iron beyond the front and rear faces of the same, a grooved wheel to roll on said track, an axle for the wheel whose outer end projects beyond the outer end of said bearing, anti-friction rollers disposed between the bearing and the axle, the anti-friction rollers being of substantially the same length as the bearing, a collar detachably secured to the projecting outer end of the axle and engaging the outer end of the bearing to confine said rollers within the bearing and to hold said wheel against lateral displacement with relation to the inner end of the bearing.



2. In a door hanger, a horizontally disposed channel iron whose flanges extend outward and the inner faces of which diverge outward, a strip of substantially semi-circular formation in cross section secured to the upper face of the lowermost flange to form a track, a hanger iron whose upper end is formed to provide a bearing, a grooved wheel to roll on said track, the outer side of the wheel being of slightly greater diameter than the inner side thereof, an axle for the wheel mounted in said bearing, anti-friction rollers disposed between the bearing and the axle, and means to detachably secure the axle in the bearing.

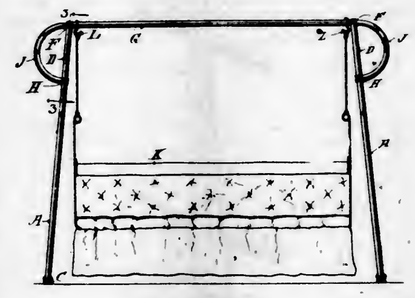
1,156,420. SHOCK-ABSORBER FOR THE HANDLE-BARS OF MOTOR-CYCLES. JOHN PERCY MACLEAN, Hamilton, New South Wales, Australia. Filed Jan. 23, 1915. Serial No. 3,890. (Cl. 208—125.)



1. In a cycle, the combination with the steering stem and the handle bar, of a tiller bracket carried by the steering stem, a frame pivoted to the bracket, a floating socket for the handle bar mounted within the frame, and resilient means for maintining the said socket centrally within the frame.

2. In a cycle, the combination with the steering stem and the handle bar, of a tiller bracket carried by the said stem, a vertically movable frame pivoted to the bracket, a floating socket for the handle bar mounted within the frame for horisontal movement, resilient means for maintaining the said socket centrally within the frame, and resilient means connecting the frame with the bracket for resisting and cushioning vertical movement of the former.

1,156,421. HAMMOCK-STAND. WILFRID A. MANCHER, Newark, N. J., assignor to Newark Spring Mattress Company, Newark, N. J., a Corporation of New Jersey. Filed Feb. 6, 1912. Serial No. 675,862. (Cl. 5—32.)



1. A hammock stand comprising end frames spaced apart from each other and a member extending between and to which the upper ends of the end frames are secured, said connecting member having integral ends extended beyond the end frames and bent or curved downwardly and rearwardly, and secured to said end frames below their upper ends.

2. A hammock stand comprising end frames, each end frame including vertical members inclined toward each other for the lower portion of their length and in parallel relation for the upper portion of their length, said parallel portions of each end frame being detachably secured together and a horizontal connecting member clamped between the upper part of the parallel portions of the end frame members, and having integral ends extended beyond the end frames and bent downwardly and rearwardly into position to be received and clamped between the lower part of the parallel portions of the end frames.

3. A hammock stand comprising end frames each including vertical members separated at their lower ends and brought together at their upper ends, a separating bar connecting the lower ends of each pair of said vertical members, means for securing together the upper ends of said members, and a horisontal member passing between and connecting the upper ends of one pair of said vertical members to the other upper ends of the pair thereof, said horisontal member having integral extending ends, said extending ends being bent or curved downwardly and rearwardly and received and secured between said frame members at a point below their upper ends.

1,156,422. METAL POLE. CHARLES LOUIS MICHOD, Chicago, Ill. Filed Aug. 3, 1914. Serial No. 854,707. (Cl. 189—25.)

1. A wire supporting pole comprising a plurality of L-shaped angle irons perforated at intervals and having similarly shaped separate anchor bases permitting said angle irons to be placed side by side in pairs with their apexes toward each other, a plurality of diagonal braces lying in substantially the same plane separating the pairs and connecting two pairs of angle irons to form a pole of greater cross sectional width in a direction transverse to that of the supported wires whereby said pole is inflexible in said direction when properly embedded in the ground at its lower end.

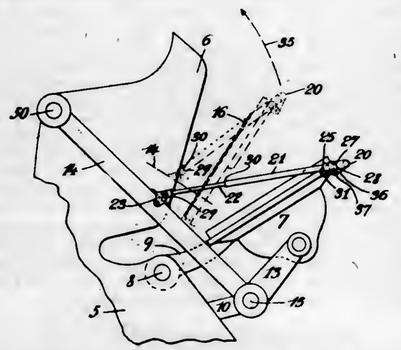
2. A wire supporting pole comprising a plurality of angle irons perforated at intervals and having similarly shaped separate anchor bases permitting said angle irons to be placed side by side in pairs with their apexes toward and adjacent each other, braces between each angle iron and outer edges of its anchor base, a plurality of diagonal braces lying in substantially the same plane separating the pairs and connecting two pairs of angle irons to form a pole of greater cross sectional width in a direc-

tion transverse to that of the supported wires whereby said pole is inflexible in said direction when properly



embedded in the ground at its lower end, and a cross arm connected at the upper end of the pole.

1,156,423. SAFETY-GUARD FOR PRINTING-MACHINES. LEWIS E. MORRISON, Newark, N. J., assignor to Humana Company, a Corporation of New Jersey. Filed Dec. 18, 1914. Serial No. 877,850. (Cl. 101—15.)



1. A guard for printing presses or similar machines having a movable platen or jaw and movable members coöperating therewith, said guard comprising a hand lifting cross bar and collapsible side bars carrying said cross bar and secured to said movable members, whereby said cross bar is moved across the position of the operator's hand as said platen closes.

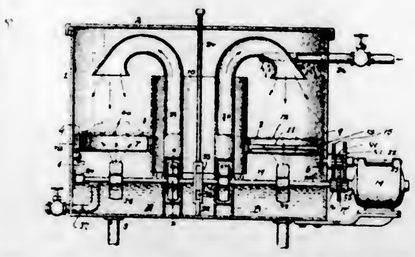
2. A guard for printing presses or similar machines having a movable platen or jaw and movable members coöperating therewith, said guard comprising a hand lifting cross bar and collapsible side bars secured to said platen and carrying said cross bar and secured to said movable members, whereby said cross bar is moved across the position of the operator's hand as said platen closes.

3. The combination with a movable platen, of a guard mounted on said platen and adapted to be raised and lowered with respect to the same during the movement thereof, means for operating said guard, collapsible side bars for the latter and coöperating stops formed on said collapsible side bars for maintaining the guard in its relative position to the said platen for a predetermined length of time during the closing movement of the said platen.

4. The combination with a movable platen, of a guard mounted on said platen and adapted to be raised above the same during the closing movement thereof, collapsible side bars carrying said guard and provided with coöperating stops for preventing the guard from rising during the first part of the movement of the platen, said collapsible side bars serving as a means for operating said guard to reach its highest position as the said platen completes its closing movement.

5. A guard for printing presses or similar machines having a movable platen or jaw and movable operating members therefor, said guard comprising a hand lifting cross bar and collapsible side bars carrying said cross bar and pivoted to the said platen and the said movable operating members therefor, whereby said cross bar is moved across the position of the operator's hand as said platen closes and a flexible guarding member secured to said cross bar and said platen and adapted to cover the space between the said two elements when the said cross bar is lifted by the said collapsible side bars.

1,156,424. MACHINE FOR WASHING DISHES. THOMAS E. MURRAY, New York, N. Y. Filed Oct. 19, 1914. Serial No. 867,291. (Cl. 141—9.)



1. A dish-washing machine, comprising a tank, a rotary horizontal perforated table for dishes to be washed disposed in said tank, a pipe extending from the bottom of said tank and having its delivery opening directly above said table, a motor shaft entering said tank, and two impellers on said shaft, one of said impellers being disposed below said table to project liquid upwardly thereon, and the other of said impellers being disposed in said pipe to force liquid through said pipe.

2. A dish-washing machine, comprising a tank, a motor shaft entering the same, a rotary horizontal perforated table for dishes to be washed disposed in said tank and driven by said shaft, impellers on said shaft, and a pipe inclosing one of said impellers and having its delivery opening directly above said table.

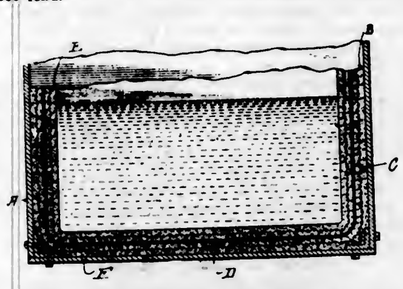
3. A dish-washing machine, comprising a tank, a motor shaft entering the same, a rotary horizontal perforated table for dishes to be washed disposed in said tank, speed reducing gear between said shaft and said table, and means actuated by said shaft for projecting liquid upon opposite sides of said table.

4. A dish-washing machine, comprising a tank, a rotary perforated table therein for dishes to be washed, a partition dividing the lower portion of said tank into two compartments, a valve in said partition, an inlet in one of said compartments and an outlet in the other of said compartments whereby said liquid is caused to pass successively through said compartments, and means in each of said compartments for projecting washing liquid upon opposite sides of satd table.

1,156,425. LINING FOR TANKS. THOMAS E. MURRAY, New York, N. Y. Filed Mar. 13, 1915. Serial No. 14,065. (Cl. 206—2.)

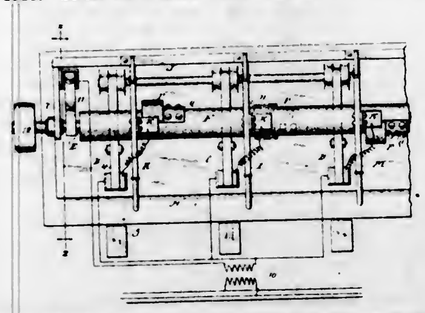
1. An impervious acid-proof lining for metal tanks, comprising two layers of concrete, and an interposed layer of sheet metal non-attackable by said acid.

2. An impervious acid-proof lining for metal tanks, comprising two layers of cement, and an interposed layer of sheet lead.



3. An impervious acid-proof lining for metal tanks, comprising two layers of reinforced concrete, and an interposed layer of sheet lead.

1,156,426. APPARATUS FOR ELECTRIC WELDING. THOMAS E. MURRAY, New York, N. Y. Filed Apr. 23, 1915. Serial No. 23,284. (Cl. 219—4.)



1. An apparatus for electric welding, comprising a plurality of devices for contacting the members of a plurality of pairs of bodies to be welded, a source of welding current, means for switching the whole current from said source into each of said contacting devices and automatically operating means for determining successive time periods during which said switching means may be closed.

2. An apparatus for electric welding, comprising a plurality of devices for contacting the members of a plurality of pairs of bodies to be welded, a source of welding current, means at each contacting device for switching the whole current from said source into said contacting device, and automatically operating means for determining successive time periods during which said switching means may be closed.

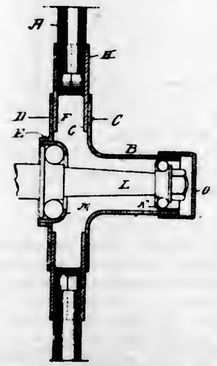
3. An apparatus for electric welding, comprising a plurality of devices for contacting the members of a plurality of pairs of bodies to be welded, a source of welding current connected in parallel to said devices, and means in each branch circuit for switching the whole current from said source into each of said contacting devices and automatically operating means for determining successive time periods during which said switching means may be closed.

4. An apparatus for electric welding, comprising a plurality of devices for contacting the members of a plurality of pairs of bodies to be welded, a source of alternating current, a transformer, a plurality of devices for contacting the members of a plurality of pairs of bodies to be welded connected in the secondary circuit of said transformer, and means for closing said secondary circuit to each of said contacting devices and automatically operating means for determining successive time periods during which said circuit-closing means may be operated.

5. An apparatus for electric welding, comprising, at successive stations, a plurality of devices for contacting the members of a plurality of pairs of bodies to be welded, means at each station and actuated by a operator at said station for controlling said contacting devices, means for closing circuit through said pairs of bodies, and automatically operating means for determining successive time periods during which said circuit-closing means may be operated.

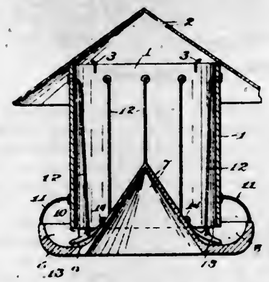
[Claims 6 to 12 not printed in the Gazette.]

1,156,427. VEHICLE-WHEEL. THOMAS E. MURRAY, New York, N. Y. Filed May 28, 1915. Serial No. 30,934. (Cl. 21—60.)



A vehicle wheel of metal, comprising tubular spokes, a hub comprising a tubular portion having a circumferential flange and an annular disk, and junction pieces, each having a tubular portion to receive a spoke and two parallel flat plates integral with said tubular portion; the said plates fitting between and being homogeneously united to said disk and said flange.

1,156,428. SWINE-FEEDER. JOHN F. MYERS, Millersburg, Ohio. Filed Feb. 6, 1915. Serial No. 6,493. (Cl. 119—54.)



The combination with a ring feeding trough having a cone-shaped closed center, and a cylinder suspended over the trough so as to form an annular passage between the cylinder and the base of the cone, a plurality of agitators pivoted to the cone and projecting radially therefrom, and rods pivoted to the cylinder for suspending the agitators.

1,156,429. HOLLOW SHOE-FORM. SEYMOUR M. NILES, Saugus, Mass. Filed Jan. 2, 1913. Serial No. 739,689. (Cl. 12—128.)

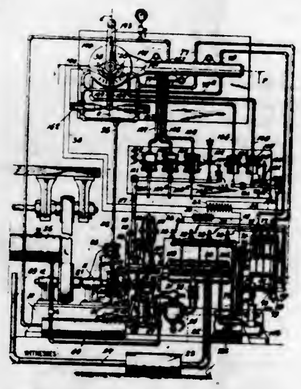
1. A hollow metallic shoe form or last having a brace rod extending from the interior surface of one wall to the

interior surface of another wall, said brace being formed with a recess in each end, and the inner surfaces of the said walls having integral therewith protuberances which engage the recesses in said braces.



2. An integral, hollow, seamless metallic shoe form or last closed on all sides and having a brace rod extending from the interior surface of one wall to the interior surface of another wall, said brace being formed with a recess in each end and the inner surfaces of the said walls having integral therewith protuberances which engage the said braces in said recesses.

1,156,430. CONTROLLER FOR INTERNAL-COMBUSTION ENGINES. CHARLES O. PEARSON, New York, N. Y. Filed Aug. 17, 1908. Serial No. 448,876. (Cl. 123—41.)



1. An internal combustion engine, a pressure pump arranged to be driven thereby, a starting device for the engine, a throttle valve and a spark mechanism for controlling the speed of the engine, and manual means for directing the pressure generated by said pump and causing said pressure to actuate the starting device, the throttle valve and to control the spark mechanism.

2. An internal combustion engine, a centrifugal governor and intermediate mechanical connections between the engine and the governor arranged to automatically control the speed of the engine, and a manually controlled fluid pressure actuator arranged to shift the relative positions of said connections step by step to thereby modify the effect of the governor and to cause the engine to run at a desired rate of speed.

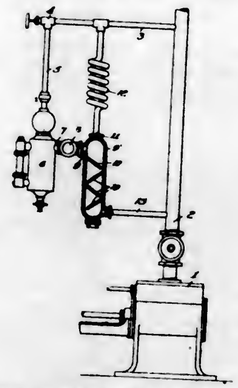
3. An internal combustion engine, a starting device therefor, means driven by the engine for obtaining a fluid pressure supply, a centrifugal governor arranged to control the speed of the engine, and manually operated means for directing the fluid pressure and causing said pressure to actuate the starting device, and to modify the effect of the centrifugal governor.

4. An internal combustion engine, a pressure pump arranged to be driven thereby, a starting device for the engine, a centrifugal governor arranged to control the speed of the engine, and a valve; and connections between the pump, the valve, the starting device, and the governor whereby the pressure may be directed from a point removed from the engine to cause said pressure to actuate the starting device and to modify the effect of the centrifugal governor.

5. An internal combustion engine, a pressure pump arranged to be driven thereby, a starting device for the engine, a speed controlling mechanism comprising a centrifugal governor, a manually operated valve, and connections between the pump, the valve, the starting device, and the speed controlling mechanism whereby the pressure may be directed to cause said pressure to actuate the starting device and to modify the effect of the centrifugal governor.

[Claims 6 to 56 not printed in the Gazette.]

1,156,431. METHOD OF LUBRICATING ENGINES. WILLIAM S. PEAVEY, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a Corporation of Indiana. Filed Mar. 5, 1915. Serial No. 12,423. (Cl. 184—55.)



1. The method of lubricating a steam engine which consists of the following procedure, mixing a lubricating oil and water to form an emulsion, and introducing the emulsion into the steam supply on its way to the engine.

2. The method of lubricating a steam engine which consists of the following procedure, continually mixing a lubricating oil and water to form an emulsion and introducing the emulsion as it is formed into the steam supply on its way to the engine.

3. The method of lubricating a steam engine which consists in the following procedure, mixing a lubricating oil and water under a temperature upward of about 150° F. to form an emulsion, and introducing the emulsion into the steam supply on its way to the engine.

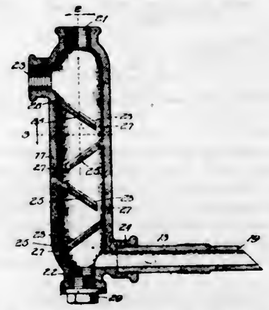
4. The method of lubricating a steam engine which consists in the following procedure, continuously mixing a lubricating oil and water, under a temperature of upward of 150° F. to form an emulsion, and introducing the emulsion as it is formed into the steam supply on its way to the engine.

5. The method of lubricating a steam engine which consists of the following procedure, mixing a lubricating oil and water, in an atmosphere of steam, to form an emulsion, and introducing the emulsion into the steam supply on its way to the engine.

[Claims 6 and 7 not printed in the Gazette.]

1,156,432. MEANS FOR LUBRICATING STEAM-ENGINES. WILLIAM S. PEAVEY, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a Corporation of Indiana. Filed Mar. 5, 1915. Serial No. 12,424. (Cl. 184—55.)

1. In combination with a steam supply pipe for an engine to be lubricated, an emulsifier chamber, means for supplying regulated quantities of lubricant thereto, means for supplying water thereto, means for forming the water and lubricant into an emulsion, and means for supplying the emulsion to the said steam supply pipe.



2. In combination, a pipe supplying steam to an engine to be lubricated, an emulsifier chamber, means for supplying a regulated supply of lubricant thereto, a condenser, means for supplying steam from the said pipe to the said condenser, means for mingling the regulated supply of lubricant and the water of condensation from the said condenser to form an emulsion, and means for supplying the emulsion to the said steam supply pipe.

3. In combination, a pipe supplying steam to an engine to be lubricated, an emulsifier body, means for supplying a lubricant in regulated quantities to the emulsifier body, means for simultaneously supplying water to the emulsifier body, means located within the said body for intermingling the lubricant and water to form an emulsion, and means for supplying the said emulsion to the said steam supply pipe.

4. In combination, a pipe supplying steam to an engine to be lubricated, a condenser having communication with said pipe, an emulsifying chamber located to receive water of condensation from the said condenser, means for supplying lubricant to the said chamber, means within the chamber for intermingling the water and lubricant to form an emulsion, and means for feeding the said emulsion to the said steam supply pipe.

5. In combination, a pipe supplying steam to an engine to be lubricated, a condenser having communication with the said pipe, a vertically arranged emulsifying chamber, means for supplying water of condensation from the said condenser to the top of the said chamber, means for simultaneously supplying lubricant to the top of the said chamber, means forming an interrupted passage from the top to the bottom of said chamber whereby the water and lubricant become commingled during the movement through the said passage, and a connection from the bottom of the said chamber to the said steam supply pipe.

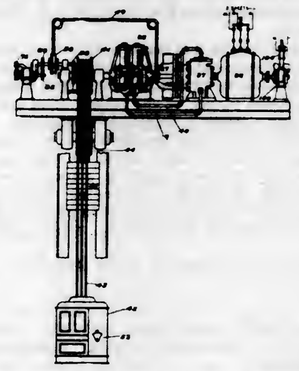
[Claims 6 to 8 not printed in the Gazette.]

1,156,433. HYDRAULIC ELEVATOR. CHARLES R. PRATT, Montclair, N. J., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 10, 1913. Serial No. 753,180. (Cl. 138—15.)

1. In an elevator, the combination with a constantly rotating shaft, a hoisting drum or sheave, fluid power transmission mechanism operatively connecting said shaft and sheave, and electrically controlled differential mechanism for controlling said power transmission mechanism.

2. In an elevator the combination with a constantly rotating shaft, a hoisting drum or sheave, fluid power transmission mechanism operatively connecting said shaft and sheave, and differential mechanism connected to said drum or sheave for controlling said power transmission mechanism.

3. In an elevator, the combination with a constantly rotating shaft, a hoisting drum or sheave, fluid power transmission mechanism arranged to transmit power from said shaft to a load carrying device associated with said drum or sheave, differential mechanism operatively connected to said drum or sheave and to a motor, and means for controlling said motor to effect the control of the said power transmission mechanism.

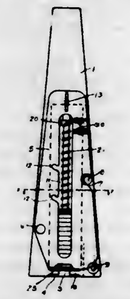


4. In an elevator, the combination with a constantly rotating shaft, a hoisting drum or sheave, fluid power transmission mechanism arranged to transmit power from said shaft to a load carrying device associated with said drum or sheave, differential mechanism operatively connected to said drum or sheave and to an electric motor, and means for controlling said motor to effect the control of the said power transmission mechanism.

5. In an elevator, the combination with a constantly rotating shaft, a hoisting drum or sheave, fluid power transmission mechanism arranged to transmit power from said shaft to a load carrying device associated with said drum or sheave, differential mechanism operatively connected to said drum or sheave and to a motor, and means located on said load carrying device for controlling said motor to effect the control of the said power transmission mechanism.

[Claims 6 to 16 not printed in the Gazette.]

1,156,434. WASHER-HOLDER RIVET-SET. NICK RAPTIAS, Birmingham, Ala. Filed Mar. 22, 1915. Serial No. 16,257. (Cl. 218—19.)



1. A hand riveting tool comprising a rivet set and having a washer holding receptacle provided with a rivet receiving slot and a washer discharge slot which merge into each other, as and for the purposes described.

2. A hand riveting tool comprising a rivet set and having a holding pocket therein, the pocket bottom having a radial bottom slot and a side washer discharge slot, which slots join at the side edge of the pocket to permit a rivet to engage and remove a washer with it, and means to control the delivery of washers therefrom.

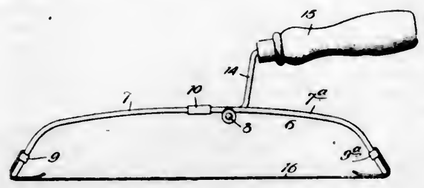
3. A hand riveting tool comprising a rivet set and having a washer holding pocket therein, said pocket having a side washer discharging slot and a bottom which has a rivet receiving slot therein leading from an intermediate point to and connecting with said side slot, means to center and successively present a number of washers against said bottom with their center openings alining with said bottom slot, and a movable closure for said side slot, substantially as described.

4. A hand riveting tool comprising a rivet set and having a washer holding chamber therein, and a movable cover for said chamber, there being a slot in the bottom of said chamber adapted to receive and guide a rivet end thereinto to engage and withdraw therefrom a washer.

5. A hand riveting tool comprising a rivet set and having a washer holding pocket having an open side, a movable cover over said side opening, a bottom wall of the pocket having an opening extending from its center through its open side edge, and means to guide and center washers over said bottom opening, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,156,435. SHOE-POLISHING DEVICE. CARL ROSEN, Chicago, Ill. Filed Apr. 22, 1915. Serial No. 23,066. (Cl. 15—16.)



1. A polishing device of the character described, comprising a folding frame formed of sections hinged endwise together and provided with means for releasably securing them in their unfolded and distended operative position, and a polishing-strip fastened to extend between the outer frame-ends out of contact with the frame between said ends in the distended, operative condition of the device.

2. A polishing device of the character described, comprising a folding frame formed of sections having a hinge-pintle connecting them endwise together, a handle carried by said pintle, means for releasably securing the sections in their unfolded and distended operative position, and a polishing-strip fastened to extend between the outer frame-ends.

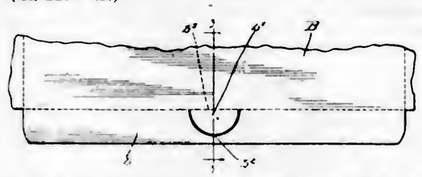
3. A polishing device of the character described, comprising a folding frame formed of sections hinged endwise together, tongues extending from an end of one section, a ferrule adjustably supported on the other section to engage said tongues for releasably securing the sections in their unfolded and distended operative position and release said tongues to permit folding of the sections, and a polishing-strip fastened to extend between the outer frame-ends.

4. A polishing device of the character described, comprising a folding frame formed of curved sections hinged endwise together and provided with means for releasably securing them in unfolded and distended operative position, and bars extending across the sections near their outer ends and forming with the latter fastening means for the ends of a polishing-strip.

5. A polishing device of the character described, comprising a folding frame formed of sections composed of wire, a pintle to which the ends of one section are fastened and about which the ends of the companion-section are coiled and extended in tongues, a ferrule adjustably supported on said first-named section to releasably engage said tongues, and a polishing-strip fastened to extend between the outer frame-ends.

[Claims 6 and 7 not printed in the Gazette.]

1,156,436. EGG-BOX. WILLIAM A. SCHURMANN, Philadelphia, Pa. Filed Aug. 3, 1914. Serial No. 854,603. (Cl. 220—43.)

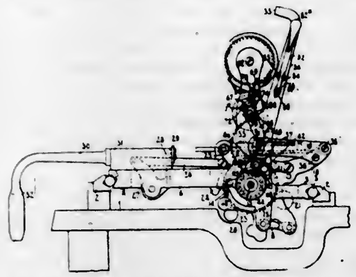


1. In a paper box, a cover provided with a flap on its front edge adapted for engagement with the inner side of the front wall of the box and having a sealing tab formed therein, said sealing tab having a hinge connection and a readily breakable connection with said flap, whereby a partly formed tab is provided which will retain its alinement with said flap until the breakable connection is separated.

2. In a paper box, a cover provided with a flap on its front edge adapted for engagement with the inner side of the front wall of the box and having a sealing tab formed therein, said sealing tab having a flexible connection with said cover on the folding line of said flap to form a hinge, and having a readily breakable connection with the body of said flap, whereby a partly formed tab is provided which will retain its alinement with the body of the flap until the breakable connection is separated.

3. In a paper box, a cover provided with a flap on its front edge and having a sealing tab formed therein, said flap adapted to be bent at right angles to said cover to engage the inner face of the front wall of the box, and said tab being formed by cutting through said flap in a plurality of places leaving a long connection with said cover on the bending line of the flap to form a hinge, and a breakable connection with the body of the flap, whereby said flap can be bent without dislocating the tab therefrom in order that the tab may be positioned with the flap, and said breakable connection separated to permit fastening of said tab and use thereof as a sealing member against the outer face of said front wall.

1,156,437. TYPE-WRITING MACHINE. WILLIAM GARFIELD SHELDON, London, England, assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed July 18, 1914. Serial No. 851,729. (Cl. 197—132.)



1. In a typewriting machine, the combination of a platen, tally sweep mechanism including a finger piece, tally feed mechanism, devices operative from said finger piece for actuating said tally feed mechanism, and means including a finger piece in juxtaposition to said first recited finger piece for controlling said devices.

2. In a typewriting machine, the combination of a platen, tally sweep mechanism including a finger piece, tally feed mechanism, devices operative from said finger piece for actuating said tally feed mechanism, and means concurrently operative with said finger piece for positioning said devices so that they will be inoperative.

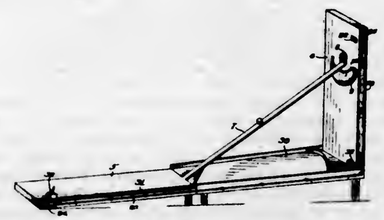
3. In a typewriting machine, the combination of a platen, platen sweep mechanism including a finger piece, tally feed mechanism including a second finger piece, and operative connections between said mechanisms controlled by a third finger piece.

4. In a typewriting machine, the combination of a platen, platen sweep mechanism including a finger piece, tally feed mechanism including a second finger piece, and operative connections between said mechanisms controlled by a third finger piece, said first named finger piece and said third finger piece being concurrently operative.

5. In a typewriting machine, the combination of a platen, platen sweep mechanism including a finger piece, tally feed mechanism including a second finger piece, and operative connections between said mechanisms controlled by a third finger piece, said third finger piece being arranged in proximity to the first named finger piece and being operative by the same hand that operates said first named finger piece and concurrently therewith.

[Claims 6 to 22 not printed in the Gazette.]

1,156,438. GAME. JOSEPH FOURESTIER SIMPSON, Vineland, N. J. Filed Jan. 26, 1915. Serial No. 4,422. (Cl. 46—61.)



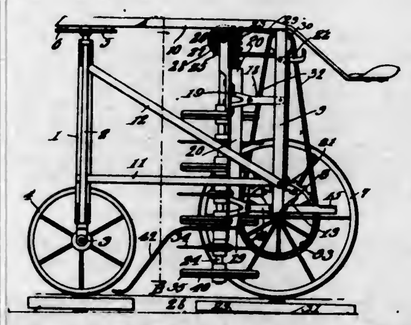
1. In a bowling game, in combination, an alley, a target, and a narrow upwardly inclined plane forming a bridge from the top of which the ball passes to said target.

2. In a bowling game, in combination, an alley, an apertured target to the rear of said alley, and an inclined bridge, narrower than said alley, connecting said alley and target.

3. In a bowling game, in combination, an alley, an apertured target to the rear of said alley, an upwardly inclined bridge, narrower than said alley, connecting said alley and target, and a pocket carried by said target beneath said bridge.

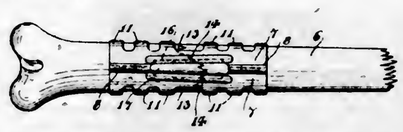
4. In a bowling game, in combination, an alley, an apertured target to the rear of said alley, an upwardly inclined bridge, narrower than said alley, connecting said alley and target, and a counting means adapted to be operated by a ball passing through an aperture in said target.

1,156,439. MACHINE FOR CUTTING STALKS. CULLEN R. SMITH, Perris, Cal. Filed Feb. 15, 1915. Serial No. 8,263. (Cl. 55—62.)



A stalk cutter including a wheel supported structure adapted to straddle and move longitudinally of a row, revoluble superposed means supported by said structure for distorting the standing stalks into a waved shape, and means carried by said structure for cutting into the stalks at the outer sides of the bends thereof.

1,156,440. FRACTURE-CLAMP. JOHN X. SMITH, Watertown, N. Y. Filed Jan. 29, 1915. Serial No. 4,978. (Cl. 128—52.)



1. A bone clamp comprising a pair of plates hinged together along longitudinal edges, each of said plates having a plurality of fingers projecting from the edge thereof opposite the hinged edge and curved toward the similar fingers projecting from the other plates thereby to form an inclosing structure, each of said plates having a lug projecting from the outside thereof and coacting to form a keyway paralleling the hinged edges and a key adapted to be inserted in said key-way thereby to prevent relative opening movement of said plates.

2. A bone clamp comprising a pair of plates hinged together along longitudinal edges, each of said plates having a plurality of fingers projecting from the edge thereof opposite the hinged edge and curved toward the similar fingers projecting from the other plates thereby to form an inclosing structure, each of said plates having a lug projecting from the outside thereof and coacting to form a wedge shaped key-way paralleling the hinged edges and a key adapted to be inserted in said key-way thereby to force the plates into different clasping position, so as to prevent relative opening movement of said plates.

3. A device of the class described comprising a pair of plates, a hinge connection between adjacent edges of said plates, each plate having a finger projecting from the edge opposite the hinged edge and curved toward the similar finger projecting from the other plate thereby to form a substantially cylindrical clasp with the hinged edges positioned to the outside of the cylindrical outline formed by the fingers so as the hinged part of the device may be spaced from the object clasped by the fingers.

4. A device of the class described comprising a pair of plates, a hinge connection between adjacent edges of said plates, each plate having a finger projecting from the edge opposite the hinged edge and curved toward the similar finger projecting from the other plate, thereby to form a substantially cylindrical clasp with the hinged edges positioned to the outside of the cylindrical outline formed by the fingers so that the hinged part of the device may be spaced from the object clasped by the fingers and means for locking the plates against an opening movement.

5. A bone clasp including a pair of spaced apart ring bands connected together and each band comprising two separate parts adapted partially to encircle the bone on opposite sides of the fracture and leave the fracture free of any contact with the clasp and means associated with the bands for securely maintaining the same in their bone engaging position.

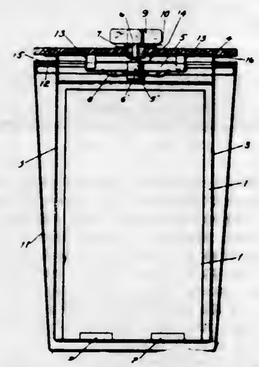
[Claims 6 to 10 not printed in the Gazette.]

1,156,441. DEVICE FOR WATERPROOFING CAMERAS. WILLIAM S. STEARNS, Cambridge, Mass. Filed Feb. 12, 1915. Serial No. 7,735. (Cl. 206—46.)

1. The combination of a camera with a combination supporting and closure plate therefor, a casing for said camera, and means to operatively hold said casing and closure plate in sealed relationship to protect said camera from moisture.

2. The combination of a camera with an apertured protective casing therefor, a cover for the aperture in said casing, means to support said camera from said cover, and means to fasten said cover to said casing when said camera is in position in the latter.

3. The combination of a camera with an apertured protective casing therefor, a cover for the aperture in said casing, means to support said camera from said cover, means to lock said cover to said casing when the camera is in position in the latter, and means to actuate said locking means.

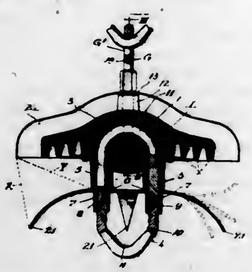


4. The combination of a camera which is longer one way than another, with a correspondingly shaped casing therefor, a cover for said casing, means to normally hold said camera and cover in spaced relationship, a locking device in the space between said camera and cover, and means to operatively engage said locking device and a part of said casing.

5. The combination of a camera with a casing therefor, a cover for said casing, means to connect said camera to said cover, said camera and at least a part of said cover having a space therebetween, a locking device in said space, and means to operatively engage said locking device with a part of said casing.

[Claim 6 not printed in the Gazette.]

1,156,442. INSULATOR. LOUIS STEINBERGER, Brooklyn, N. Y. Filed Apr. 17, 1914. Serial No. 832,616. (Cl. 175—30.)



1. An insulator formed of a body portion of insulating material, a pair of spaced metallic parts projecting from one surface of said body portion providing attaching means for the insulator, sleeves formed upon and projecting from said body portion through which said metallic parts extend, a member extending between said metallic parts U-shaped to form a single seat between the ends of said sleeve for attaching a support, and means for attaching a conductor to said insulator.

2. An insulator formed of a body portion of insulating material, a pair of spaced metallic parts projecting from one surface of said body portion providing attaching means for the insulator, sleeves formed upon and projecting from said body portion through which said metallic parts extend, said metallic parts having flanges adjacent their ends overlying the ends of said sleeves serving to protect the ends of said sleeves, means connected to said metallic parts beyond the flanges thereon and extending therebetween so as to serve as a seat between said metallic parts for the attachment of a support, said seats forming means having portions to detachably engage over said metallic parts into engagement with said flanges whereby said seat forming means is rendered detachable, and means for attaching a conductor to said insulator.

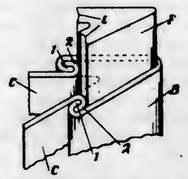
3. An insulator formed of a body portion of insulating material, having a pair of sleeves formed integral therewith and projecting from one surface thereof, a U-shaped strain member partly embedded in said body portion having its legs projecting outwardly therefrom through said sleeves, a U-shaped connecting member extending between and connecting the legs of the strain member beyond said sleeves providing a seat serving as attaching means for the insulator, flanges formed upon said legs of the strain member overlapping a portion of said sleeves to protect said sleeves, a cross bar extending between the legs of the connecting member to protect the surface of the insulator intermediate the sleeves, and a second strain member projecting from the opposite surface of the insulator.

4. An insulator formed of a body portion of insulating material, having a pair of sleeves formed integral therewith and projecting from one surface thereof, opposed U-shaped strain members partly embedded in said body portion, one of said strain members having its legs projecting outwardly from the body portion through said sleeves, means extending between and connecting said legs beyond said sleeves serving as attaching means for the insulator, and a flange projecting from said body portion surrounding said sleeves to protect said sleeves.

5. An insulator formed of a body portion of insulating material, a pair of spaced metallic parts projecting from one surface of said body portion providing attaching means for the insulator, sleeves formed upon and projecting from said body portion through which said metallic parts extend, a brace bar extending between said metallic parts adjacent the outer ends of said sleeves, said brace bar being spaced from the surface of the insulator body intermediate the sleeves and serving to protect said portion of the insulator body, and means for attaching a conductor at the opposite surface of the body.

[Claims 6 to 25 not printed in the Gazette.]

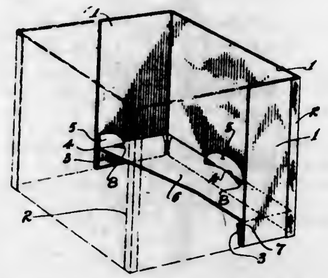
1,156,443. DESK. FRANK B. STEVENS, Whitesboro, N. Y. Filed Feb. 12, 1912. Serial No. 677,017. (Cl. 45—6.)



In a desk, the combination of two panels having their edges overturned outwardly and spaced from each other, an angle corner piece having its edges overturned inwardly to engage the overturned edges of the respective panels, and a key inserted in said corner piece and on opposite corners engaging and separately locking each of said panels to the corner piece and allowing the removal of either panel longitudinally of the key without releasing the joint made by the other panel, the corner piece and the key.

1,156,444. FOLDING PAPER BOX. WALTER L. STEVENS, New York, N. Y. Filed July 2, 1915. Serial No. 37,628. (Cl. 229—23.)

1. A collapsible paper box comprising united collapsible side walls having inturned flange portions constituting stop members for the box bottom and provided also with headed tabs, in combination with a box bottom having tab slots differing in shape from the permanent cross-section of the tab heads, whereby the latter automatically interlock with the box bottom when pushed through said slots and the said bottom is secured against upward as well as downward displacement.



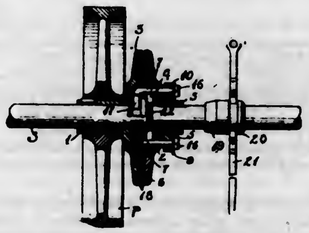
2. A collapsible paper box comprising side walls folded up from a single blank, with inturned flanges forming a stop for the box bottom and having headed tabs projecting from the edges of the flanges, in combination with a box bottom having tab slots therein to receive the tabs and to interlock automatically therewith to prevent upward displacement of the box bottom.

3. A collapsible paper box comprising united collapsible side walls having a series of inturned headed tabs on its lower edge, one or more of said tabs having relatively slender necks and wide heads, combined with a box bottom having tab slots differing in shape from the normal cross-sectional shape of the tab heads and adapted to interlock therewith when said heads are pushed through said slots.

4. A collapsible box body comprising side walls with upturned tabs having slender necks and relatively large heads, combined with a box bottom having downturned flanges on three or more sides and with tab slots formed therein inward of and adjacent to the said downturned flanges, the said slots differing in shape from the normal cross-section of the tab heads whereby they lock automatically therewith to hold the box bottom against upward and downturned displacement.

5. A collapsible paper box comprising side walls having inturned flanges, each of said flanges having a headed tab thereon with relatively slender neck portions, in combination with a box bottom having downturned flanges and tab slots formed therein inward of and adjacent to said flanges, the said slots differing in shape from the normal cross-section of the tab heads and adapted to interlock automatically therewith to hold the bottom against displacement with relation to the side walls.

1,156,445. FRICTION-CLUTCH. JACOB H. STULL, Fremont, Ohio. Filed Nov. 19, 1914. Serial No. 873,023. (Cl. 192—8.)



1. A friction clutch comprising an elongated sleeve adapted to be loosely mounted on a shaft and having a flange at one end, a friction disk secured to said sleeve at a point spaced inward from said flange, a second sleeve adapted to be disposed on the shaft in alinement with said first mentioned sleeve and having a friction disk on its inner end, said disk having apertures therein, a collar slidably mounted on said second sleeve outside said friction disk, means carried by said collar and extending through the apertures in the friction disk of said sleeve and having elements for engaging the first mentioned sleeve, and means for operating said collar to move said disks toward each other.

2. A friction clutch comprising an elongated sleeve having a friction disk fixed thereto at a point intermediate of its ends, said disk having a concaved central portion, a second sleeve having a friction disk mounted on one end, a collar mounted on said second sleeve and having adjustable elements extending through the disk on said second sleeve, said elements and said first mentioned sleeve having coöperating engaging means, and means for moving said collar to bring said coöperating means into action for moving said disks toward each other into frictional engagement.

3. A friction clutch comprising an elongated sleeve having a friction disk fixed thereto at a point intermediate of its ends, said disk having a concaved central portion, a second sleeve having a friction disk mounted on one end, a collar mounted on said second sleeve and having adjustable elements extending through the disk on said second sleeve, said elements and said first mentioned sleeve having coöperating engaging means, levers fulcrumed on said collar and extending laterally therefrom in outward direction, and means for engaging said levers to move said collar outwardly and thereby interlock the engaging elements carried by the two sleeves.

4. A friction clutch comprising two longitudinally alining sleeves having friction disks on their adjacent ends, the disk on one sleeve being spaced from the inner end thereof, a longitudinally sliding collar mounted on the other sleeve and having rods adjustably mounted therein, said rods extending through the disk on the sleeve on which said collar is mounted and having inturned arcuate arms on their inner ends, and a flange on the other sleeve for engagement by said arms, and means for moving said collar to bring said arms and flange into forcible engagement thereby moving the disks toward each other into frictional engagement.

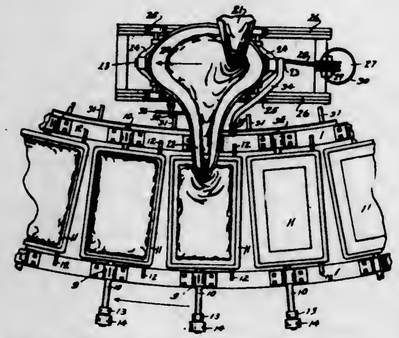
5. In a friction clutch the combination with a shaft, a sleeve slidably keyed to said shaft and provided with a friction disk at one end, said disk having apertures therein adjacent said shaft, a collar mounted on said sleeve, longitudinally adjustable members carried by said collar and extending through the apertures in said disks with their inner ends provided with laterally extending inwardly projecting arcuate arms, another sleeve mounted on said shaft and having a flange at its inner end, a friction disk secured thereto and spaced from said flange, the arcuate arms carried by the first mentioned sleeve encircling said last mentioned sleeve between said friction disk and flange, cam levers carried by said collar, and means for engaging said levers to retract said collar and thereby move said sleeves toward each other to bring their friction disks into gripping relation.

[Claim 6 not printed in the Gazette.]

1,156,446. CASTING-MACHINE. ROGER TAYLOR and LUKE A. MILBY, Selby, Cal. Filed Feb. 11, 1914. Serial No. 817,963. (Cl. 22—64.)

1. In a casting machine, the combination with a moving frame; of a mold mounted thereon; a lug extending from the frame and moving therewith; a pouring spoon movably mounted on tracks substantially parallel with the direction of motion of the mold therepast; means acting on the pouring spoon to actuate it in the opposite direction to the motion of the mold therepast; a latch connected to the pouring spoon and normally lying in the path of motion of said lug, whereby when the latch is engaged by the lug the pouring spoon is moved with the mold; and means for releasing the latch from engagement with the lug.

2. In a casting machine, the combination with a moving frame; of a mold mounted thereon; a lug extending from the frame and moving therewith; a cam piece connected to said mold and moving therewith, said cam having a depression in its operative surface; a pouring spoon movably mounted on tracks substantially parallel with the direction of motion of the mold therepast; a lever mounted on the pouring spoon whereby it may be tipped, said lever engaging said cam piece whereby when the lever is in engagement with the depressed portion thereof the pouring spoon is tipped down to pour and when it is in engagement with any other portion thereof it is tipped up to hold the molten substance therein; means acting on the pouring spoon to actuate it in the opposite direction to the motion of the mold therepast; a latch connected to the pouring spoon and normally lying in the path of said lug, whereby when the latch is engaged by the lug the pouring spoon is moved with the mold, said latch being so positioned as to be engaged by the lug when the lever is in engagement with the cam depression; and means for releasing the latch from engagement with the lug.

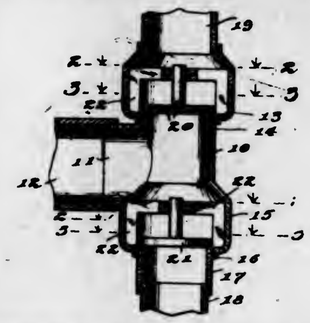


3. In a casting machine, the combination with a rotating ring-shaped frame; a mold mounted thereon; a lug extending from the frame adjacent to the mold; a ring-shaped cam plate secured to the frame and having a depression in its operative surface adjacent to the mold; a pouring spoon mounted adjacent the frame and adapted to be moved and tipped; a latch connected to the pouring spoon and adapted to be engaged by the lug whereby the pouring spoon is moved with the frame when said parts are in engagement; means for returning the pouring spoon when said parts are not in engagement; and means secured to the pouring spoon and engaging said cam plate and so positioned as to engage the depression therein only when the lug is in engagement with said latch whereby the pouring spoon is tipped down to pour when the lug is in engagement with the latch and is tipped up to hold the molten substance when said parts are not in engagement.

4. In a casting machine, the combination with a moving frame; of a mold mounted thereon on horizontal pivots; a lever secured to said mold and adapted to turn it on its pivots; and a pair of stationary trip bars, positioned successively in the path of motion of said lever, the first trip bar being adapted to engage the lever as it moves therepast and thereby to cause said mold to be overturned, and the second trip bar being adapted to engage the lever when in its reversed position as it moves therepast and thereby to cause said mold to be returned to its normal position.

5. In a casting machine, the combination with a supporting frame; of a mold reversibly mounted thereon on horizontal pivots, the axis of said pivots being positioned to one side of the center of gravity of said mold; and lugs secured to said mold, and positioned thereon on the opposite side of the center of gravity from said pivots, and resting on said frame, whereby the rotary motion of the mold on its pivots is limited and the mold is held in either of its positions.

1,156,447. EXHAUST FOR INTERNAL-COMBUSTION ENGINES. JOHN M. UNDERWOOD, Paris, Ark. Filed Dec. 11, 1913. Serial No. 805,967. (Cl. 123—194.)



The combination with an exhaust pipe of an internal combustion engine of a casing connected to the pipe, an outwardly opening valve for the casing controlling the issuance of exhaust gases therefrom, and an inwardly opening valve controlling the admission of air to the casing, said first mentioned valve being adapted to remain open and said second mentioned valve being adapted to remain closed during the exhaust stroke of the engine and while the exhaust valve of the engine is open, said first mentioned valve being adapted to close and said second mentioned valve being adapted to open to admit air to the casing and exhaust pipe of the engine immediately subsequent to the closing of the exhaust valve of the engine.

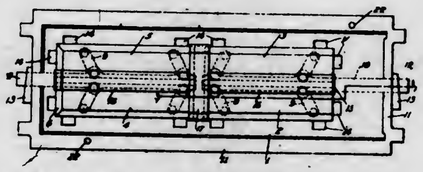
1,156,448. MANUFACTURE OF BURTON SALTS. ROBERT WAHL, Chicago, Ill. Filed June 13, 1914, Serial No. 844,893. Renewed Apr. 12, 1915. Serial No. 20,943. (Cl. 23—13.)

1. The process of manufacturing salts for burtonizing brewing waters and containing as principal ingredients precipitated calcium sulfate and sodium chlorid, which consists in mixing calcium chlorid with Glauber salts in a molten condition.

2. The process of manufacturing salts for burtonizing brewing waters and containing as principal ingredients precipitated calcium sulfate and sodium chlorid, which consists in heating and thereby melting Glauber salts, mixing calcium chlorid with the liquefied Glauber salts, and separating the resultant liquor out of the product.

3. As a new article of manufacture, salts for burtonizing brewing waters, consisting of a paste-like product containing calcium sulfate in a wholly and readily soluble condition, sodium chlorid and magnesium sulfate.

1,156,449. MOLDING APPARATUS. JOHN B. WALKER, Birmingham, Ala. Filed Mar. 31, 1915. Serial No. 18,281. (Cl. 22—126.)



1. In a molding apparatus, the combination with a drag, of a sectional core arbor mounted thereon, a plurality of plungers, means actuated by each plunger to adjust an independent group of arbor sections, and means to releasably hold the plungers in predetermined position relative to the drag, substantially as described.

2. In a molding apparatus, the combination with a drag, of a sectional core arbor mounted thereon, a plurality of oppositely and laterally movable plungers, means to operably connect a different group of arbor sections to each plunger, and devices to releasably hold the plungers and arbor sections in predetermined position relative to the drag, substantially as described.

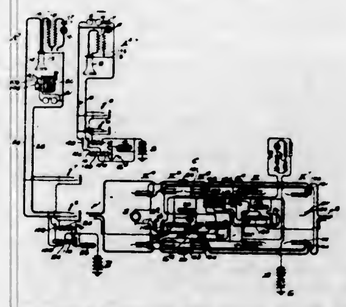
3. In a molding apparatus, the combination with a drag, of a sectional core arbor mounted thereon, a plurality of laterally movable plungers, an independent operating mechanism actuated by each plunger and connected to a group of arbor sections, and keys to releasably hold the plungers and arbor sections in predetermined position relative to the drag, substantially as described.

4. In a molding apparatus, a drag, a core arbor formed in two pairs of relatively adjustable sections, means on the drag to limit the expanding movements of the arbor sections, and an independently movable actuating means for adjusting each pair of arbor sections, substantially as described.

5. In a molding apparatus, the combination with a drag having side and end stop lugs, of a core arbor seated centrally on the drag and divided along vertical planes into a plurality of relatively movable sections, a plurality of plungers controlling said sections, and releasable means which actuate the plungers to expand and hold the arbor sections against said stop lugs, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,156,450. CORD-CIRCUIT FOR TELEPHONE SYSTEMS. BERNARD D. WILLIS, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 4, 1911. Serial No. 652,754. (Cl. 179—27.)



1. In a telephone system, a cord circuit, a relay bridged across the talking circuit, a second relay normally short-circuited through springs of the first-mentioned relay, means for momentarily energizing the first-mentioned relay to remove the short-circuit from the second relay, means for energizing the second relay when the short-circuit is removed, means controlled by the second relay, when energized, to maintain the short-circuit open, and a lamp adapted to be lighted by the energization of the second relay.

2. In a telephone system, a cord circuit, a relay bridged across said cord circuit, a second relay having a coil normally short-circuited through the springs of said first-mentioned relay, means controlled by said second relay, when energized, to maintain the short-circuit open, and a supervisory signal controlled by said second relay.

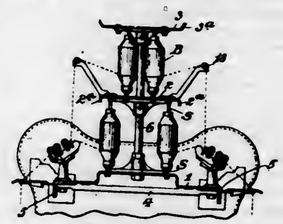
3. In a telephone system, a cord circuit, a three-conductor plug therefor, a relay bridged across said cord circuit, a second relay connected to the sleeve of said plug, a supervisory signal controlled by said second relay, and a short-circuit for said second relay controlled by said bridged relay.

4. In a telephone system, a cord circuit, a relay bridged across said cord, a plug for said cord, a second relay connected to a contact of said plug, a normally closed short-circuit for said second relay, means for opening said short-circuit upon energization of said bridged relay, and a supervisory signal controlled by said second relay.

5. In a telephone system, a cord circuit, a relay bridged across said cord, a second relay, a normally closed short-circuit about said second relay, means controlled by said bridged relay for opening said short-circuit, means controlled by said second relay for maintaining said short-circuit open, and a supervisory signal controlled by said second relay.

[Claims 6 to 56 not printed in the Gazette.]

1,156,451. ROVING-CREEL. WILLIAM O. ALDRICH, Whitinsville, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Sept. 9, 1908. Serial No. 452,288. (Cl. 242—131.)



1. In a creel, the combination of a perforated sheet metal creel-board having down-turned flanges on its opposite margins, tubular top-holder thimbles secured in some of the perforations therein and skewer-steps of porcelain seated in the other of said perforations and loosely confined therein against dislodgment.

2. In a spinning frame, a roving-creel, comprising in combination, two sheet-metal plates forming the creel-boards, the upper of said plates being supplied with top-holder thimbles of greater length than the thickness of the plate and the lower plate being provided with corresponding skewer-steps inserted in perforations therein and provided with head flanges supporting said steps in the perforations with their bearing-surfaces substantially flush with the top of said plate and their bases projecting below the same, and means for adjusting the height of said upper creel-board plate above the lower plate.

3. In a roving-creel for spinning frames, an upper creel-board formed of a sheet-metal plate having a perforation therein, in combination with a top-holder thimble secured in registry with said perforation and forming a downward extension thereof, the lower extremity of said thimble being turned upwardly toward said sheet-metal plate and adapted to receive the skewer top.

4. In a creel, a perforated sheet metal creel-board and a skewer top holder consisting of a thimble seated in a perforation thereof and having an outwardly turned flange on its lower portion bent into engagement with the margin of said perforation.

5. In a creel, a series of superposed creel-boards, the middle one of which is formed of a sheet-metal plate of general rectangular form presenting a continuous smooth upper surface between its opposite longitudinal side margins, in combination with a plurality of skewer steps seated in perforations in said plate and a plurality of independent, tubular skewer top holders projecting downwardly from the under side of said plate.

[Claims 6 to 17 not printed in the Gazette.]

1,156,452. INSULATING COMPOSITION. LEO H. BAEKELAND, Yonkers, N. Y., assignor to General Bakelite Company, New York, N. Y., a Corporation of New York. Filed Oct. 24, 1911. Serial No. 656,491. (Cl. 106—15.)

1. An insulating composition for impregnating coils or like purposes, containing a phenolic condensation product and a solvent therefor, said solvent being immiscible with water, possessing high dielectric properties, and having a

boiling-point above 120° C., the components of the composition proportioned to render the mass fluid or mobile at normal or somewhat higher temperatures, but transformable at higher temperatures into an infusible mass which is elastic while hot.

2. An insulating composition for impregnating coils or like purposes, containing a phenolic condensation product and a solvent therefor, said solvent being a liquid immiscible with water, possessing high dielectric properties, and having a boiling-point above 120° C., the components of the composition proportioned to render the mass fluid or mobile at normal or somewhat higher temperatures, but transformable at higher temperatures into an infusible mass which is elastic while hot.

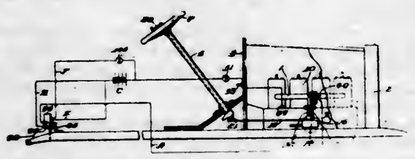
3. An insulating composition for impregnating coils or like purposes, containing a phenolic condensation product and a solvent therefor, said solvent being immiscible with water, possessing high dielectric properties, having a boiling-point above 120° C., said condensation product and solvent proportioned to render the mass initially fluid or mobile at normal or somewhat higher temperatures, but transformable by heat, without substantial evaporation, into an infusible, more or less gelatinous mass, softening under the effects of heat.

4. An insulating composition for impregnating coils or like purposes, containing a phenolic condensation product and a solvent therefor, said solvent being immiscible with water, possessing high dielectric properties, having a boiling-point above 120° C., and containing a cyclic hydrocarbon, said condensation product and solvent proportioned to render the mass initially fluid or mobile at normal or somewhat higher temperatures, but transformable by heat, without substantial evaporation, into an infusible, more or less gelatinous mass, softening under the effects of heat.

5. An insulating composition for impregnating coils or like purposes, containing a phenolic condensation product and a solvent therefor, said solvent being a liquid immiscible with water, possessing high dielectric properties, having a boiling-point above 120° C., and containing a plurality of liquid cyclic hydrocarbons, said condensation product and solvent proportioned to render the mass initially fluid or mobile at normal or somewhat higher temperatures, but transformable by heat, without substantial evaporation, into an infusible, more or less gelatinous mass, softening under the effects of heat.

[Claims 6 to 8 not printed in the Gazette.]

1,156,453. SIGNALING SYSTEM FOR AUTOMOBILES OR THE LIKE. EDWARD T. BANES, Ogontz, Pa. Filed July 14, 1914. Serial No. 850,856. (Cl. 177—389.)



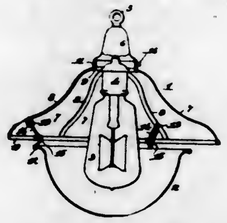
1. The combination in a rear signaling system for automobiles or the like, of an internal combustion motor having an intake pipe, means for closing said intake pipe, a rear signal, a source of electrical energy, an electric circuit, including said rear signal and said source of electrical energy, and means adjacent said intake pipe operative through the movement of said closing means to make and break said circuit as said intake pipe is closed or opened.

2. The combination in a rear signaling system for automobiles or the like, of an internal combustion motor having an intake pipe, means for closing said intake pipe, an electrically operated rear signal, a source of electrical energy, an electric circuit including said signal and said source of energy, and means adjacent said intake pipe and comprising a pair of substantially inclosed converging springs operative by the movement of said closing means to make and break said circuit as said intake pipe is closed or opened.

3. The combination in a rear signaling system for automobiles or the like, of a rear signal, a source of electrical energy, an electric circuit including said signal and said source of energy, an internal combustion motor, a carbureter having an auxiliary air valve, and means comprising a plurality of movable springs adjacent said air valve operative by the movement of said valve to make and break said circuit as the speed of said motor is varied.

4. The combination in a rear signaling system for automobiles or the like, of a rear signal, an internal combustion motor, a carbureter having an auxiliary air valve, an electric circuit including said rear signal and a source of electrical energy, and means operative by the motion of said auxiliary air valve to make and break said circuit as the speed of said motor is varied.

1,156,454. ELECTRIC-LIGHTING FIXTURE. GEORGE W. BAYLEY, New York, N. Y., assignor to Bayley & Sons, Inc., Brooklyn, N. Y., a Corporation of New York. Filed June 4, 1915. Serial No. 32,216. (Cl. 240—92.)



1. An electric lighting fixture having a shade and dish, the shade being formed of a plurality of panels formed of glass, said panels being secured together by ribs, top binding channels and bottom binding channels, each of the shape of a flat ring with inclined walls to accommodate the inclination of the panels at the edges thereof, means for securing the ribs to the channels, and means for connecting the dish to the shade.

2. An electric lighting fixture having a shade and dish, the shade being formed of a plurality of panels formed of glass, said panels being secured together by ribs of H-shaped cross-section, top binding channels and bottom binding channels, each of the shape of a flat ring with inclined walls to accommodate the inclination of the panels at the edges thereof, the flanges on the ribs being cut away adjacent to the two channels and the web part of the ribs entering the channels and secured thereto, and means for connecting the dish to the shade.

3. An electric lighting fixture having a shade and dish, the shade being formed of a plurality of panels formed of glass, said panels being secured together by ribs, top binding channels and bottom binding channels, each of the shape of a flat ring with inclined walls to accommodate the inclination of the panels at the edges thereof, the dish being formed of glass with a binding channel on the edge, hooks carried by the said channel, eyes carried by the ribs of the shade and links carried by the eyes and engaging with the hooks, a collar connected to the top binding channel of the shade, a canopy engaging with the collar, and a lamp socket carried by the canopy.

4. An electric lighting fixture having a shade and dish, the shade being formed of a plurality of panels formed of glass, said panels being secured together by ribs of H-shaped cross section, top binding channels and bottom binding channels, each of the shape of a flat ring with inclined walls to accommodate the inclination of the panels at the edges thereof, the flanges on the ribs being cut away adjacent to the two channels and the web part of the ribs entering the channels and secured thereto, the dish being formed of glass with a binding channel on the edge, hooks carried by the said channel, eyes carried by the ribs of the shade, and links carried by the eyes and engaging with the hooks.

5. An electric lighting fixture having a shade and dish, the shade being formed of a plurality of panels formed of glass, said panels being secured together by ribs of H-shaped cross-section, top binding channels and bottom binding channels, each of the shape of a flat ring with inclined walls to accommodate the inclination of the panels at the edges thereof, the flanges on the ribs being cut away adjacent to the two channels and the web part of the ribs entering the channels and secured thereto, the dish being formed of glass with a binding channel on the edge, hooks carried by the said channel, eyes carried by the ribs of the shade, and links carried by the eyes and engaging with the hooks, a collar connected to the top binding channel of the shade, a canopy engaging with the collar, and a lamp socket carried by the canopy.

1,156,455. MUD-RING. WILLIAM L. BEAN, Chicago, Ill. Filed Apr. 28, 1915. Serial No. 23,278. (Cl. 122—369.)



1. In combination with a locomotive fire-box and the outside or wrapper sheet, a mud-ring comprising a comparatively thick body, constituting a beam portion, having upwardly presented integral sides to provide a channel, the upper ends of the sides being of a thickness substantially equal to the thickness of the wrapper-sheet and the fire-box walls and welded thereto.

2. A mud-ring for locomotive boilers, comprising a beam forming body-portion tapering in a downwardly presented flange or leg and in parallel upwardly presented sides, the height of the sides being substantially equal to the distance between the sides so as to provide a channel corresponding in width with that of the water-legs of the boiler, the upper edges of the sides being beveled to provide enlarged welding surfaces.

3. A mud-ring for the water-legs of locomotive boilers, composed of a beam forming body-portion having upwardly extending sides of different thicknesses to correspond substantially to the thicknesses of the respective walls of the water-legs of the boiler and arranged to be welded thereto.

4. A mud-ring for locomotive-boilers, formed of a single beam forming portion, the upper part whereof is substantially U-shape in cross-section so as to provide a channel corresponding in width with the side water-spaces or legs of the boiler, with the sides of the mud-ring being of thicknesses corresponding substantially to the thicknesses of the respective side walls of said water-spaces or legs and provided with enlarged welding surfaces.

5. A mud-ring for locomotive boilers, formed of a single, beam forming portion provided with a channel substantially of equal height and width, the side walls of the channel being of unequal thickness to correspond with the respective walls of the water-legs or spaces of the boiler.

[Claim 6 not printed in the Gazette.]

1,156,456. DISPENSING-RECEPTACLE. AUGUST BECK, Cranford, N. J., assignor of one-half to Philip D. Campbell, Newark, N. J. Filed Nov. 5, 1914. Serial No. 870,407. (Cl. 182—28.)

1. A device of the character described, comprising in its construction a receptacle for powder or the like, a cover provided with perforations on one side of said receptacle, a shutter adapted to open and close said perforations, a cover for said receptacle, and means whereby the removal of the receptacle cover actuates said shutter to close the said perforations, said means comprising engaging parts moving said shutter when the receptacle cover is moved to separate it from the receptacle.



2. A device of the character described, comprising in its construction a receptacle for powder and the like, a shutter adapted to open and close the said receptacle, a cover for said receptacle, and means whereby the removal of the cover actuates said shutter to close the said perforations and the replacement of said cover actuates said shutter to open said perforations, said means comprising engaging parts moving the said shutter when the cover is moved to separate it from the receptacle or replace it.

3. The combination of a receptacle for powder and the like, said receptacle having an opening for the discharge of its contents, a device for opening and closing the opening, a cover for said receptacle and a connection between the cover and the said device comprising separable engaging parts incapable of separation while in one position and movable to another position permitting separation, whereby the movement of the cover to remove it from the receptacle causes the said device to close the opening thereof.

4. A device of the character described, comprising a receptacle for powder and the like, a cover provided with an opening on one side of said receptacle, a shutter adapted to open and close said opening, a cover for said receptacle and means whereby the removal of the cover actuates said shutter to close the said perforations, said means also acting to cause the replacement of the cover to actuate said shutter to open the perforations, said means consisting of engaging parts permitting the independent movement of the cover in one direction and preventing the independent movement of cover and shutter in another direction, and a device for applying the powder normally located in proximity to the opening when the cover is in position on the receptacle, and means for connecting said device with the cover, said means making it removable therewith whereby it may be used independently of said receptacle, and whereby when it is removed the receptacle will remain closed so as to prevent the escape of powder or the like in all positions.

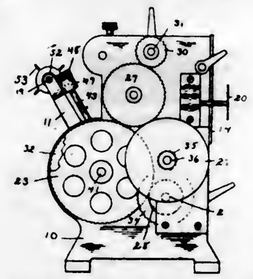
5. A device of the character described, comprising in its construction a receptacle for powder and the like, one of the sides of the said receptacle being perforate, a shutter adapted to open and close said perforations, a cover for said receptacle, and means comprising a connection permitting relative movement in one direction and preventing relative movement in another direction, whereby the removal of the cover closes the said perforations, said means also acting to cause the replacement of said cover to open the perforations.

[Claims 6 to 9 not printed in the Gazette.]

1,156,457. MOVING-PICTURE MACHINE. GEORGE W. BINGHAM, New Britain, Conn. Filed Jan. 11, 1915. Serial No. 1,685. (Cl. 88—18.)

1. In a moving picture machine, a set of film moving wheels, a main sprocket gear inter-connecting the said wheels, a balance wheel and mechanism connected thereto, a main driving gear operatively connected to the said balance wheel, a shaft member comprising an inner portion and a sleeve portion inclosing the same, the said main sprocket gear mounted on the inner portion, the said main driving gear mounted on the said sleeve portion, moving means for rotating the said inner portion, means interconnecting the said sleeve portion and moving means permitting alternatively synchronous and differential movement of the said inner portion and sleeve portion, and the said last named means comprising a worm gear mounted

on the said sleeve portion and a worm mounted on the inner portion.



2. In a moving picture machine, a set of film moving wheels, a main sprocket gear inter-connecting the said wheels, a balance wheel and mechanism connected thereto, a main driving gear operatively connected to the said balance wheel, a shaft member comprising an inner portion and a sleeve portion inclosing the same, the said main sprocket gear mounted on the inner portion, the said main driving gear mounted on the said sleeve portion, moving means for rotating the said inner portion, means interconnecting the said sleeve portion and moving means permitting alternatively synchronous and differential movement of the said inner portion and sleeve portion, the said last named means comprising a worm gear mounted on the said sleeve portion and a worm mounted on the inner portion, and means for rotating the said worm on its axis responsive to movement of the said moving means.

3. In a moving picture machine, a set of film moving wheels, a main sprocket gear inter-connecting the said wheels, a balance wheel and mechanism connected thereto, a main driving gear operatively connected to the said balance wheel, a shaft member comprising an inner portion and a sleeve portion inclosing the same, the said main sprocket gear mounted on the inner portion, the said main driving gear mounted on the said sleeve portion, moving means for rotating the said inner portion, means interconnecting the said sleeve portion and moving means permitting alternatively synchronous and differential movement of the said inner portion and sleeve portion comprising a worm and means permitting of coupling the said worm to the said moving means.

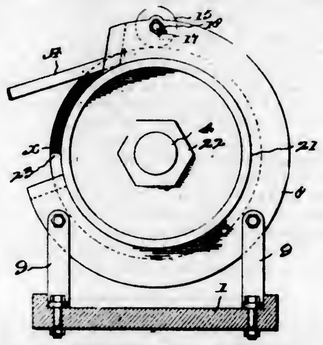
4. In a moving picture machine, a set of film moving wheels, a main sprocket gear inter-connecting the said wheels, a balance wheel and mechanism connected thereto, a main driving gear operatively connected to the said balance wheel, a shaft member comprising an inner portion and a sleeve portion inclosing the same, the said main sprocket gear mounted on the inner portion, the said main driving gear mounted on the said sleeve portion, moving means for rotating the said inner portion, a worm gear on the said sleeve portion, a worm mounted on the said inner portion, and means for rotating the said worm on its axis responsive to movement of the said moving means.

5. In a moving picture machine, film moving means, shutter operating mechanism, a shaft composed of a pair of shaft members comprising an inner shaft member and an outer sleeve member, the said film moving means being connected to one of the said shaft members and the said shutter operating mechanism being connected to the other of the said shaft members, and a worm and worm gear serving as means for operatively connecting the said shaft members.

[Claims 6 to 9 not printed in the Gazette.]

1,156,458. MACHINE FOR MANUFACTURING STRIP-SAWS. GEORGE L. BLANCHARD, Montgomery, Ala. Filed Jan. 23, 1915. Serial No. 3,982. (Cl. 29—23.)

1. In a machine for forming spiral strips, the combination of a stationary head, a rotatable head, a mandrel and a knurled element associated with said rotatable head and coöperable with the stationary head to form a spiral, and means for guiding a strip between said rotatable and stationary heads, substantially as described.



2. In a machine for forming spiral strips, the combination of a stationary head, a rotatable head, a mandrel carried by said rotatable head and associated with the stationary head, a knurled member carried by the rotatable head for feeding the strip, and means for guiding the strip between said rotatable and stationary heads, substantially as described.

3. In a machine for forming spiral strips, the combination of a stationary head, a rotatable head, a mandrel carried by said rotatable head and associated with the stationary head, a knurled ring carried by the rotatable head and surrounding the mandrel for feeding the strip, and adjustable means for guiding the strip between the knurled ring and the stationary head, substantially as described.

4. In a machine for forming spiral strips, the combination of a stationary head having a recessed face, a rotatable head having a mandrel fitting within said face, a knurled ring carried by the rotatable head and surrounding said mandrel for feeding the strip, and adjustable means for guiding the strip between said knurled ring and the stationary head, substantially as described.

5. In a machine for forming spiral strips, the combination of a stationary head, a rotatable head, a mandrel carried by the rotatable head and associated with the stationary head, a knurled member carried by the rotatable head for feeding the strip, a thrust head engaging said stationary head on the side opposite said rotatable head, and adjustable means for guiding the strip between said knurled member and the stationary head, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

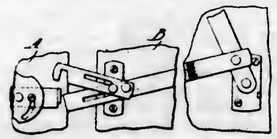
1,156,459. EGG-GRIP. WILLIAM M. BROWN, Newark, N. J. Filed Mar. 1, 1910, Serial No. 546,670. Renewed June 11, 1915. Serial No. 33,626. (Cl. 65—22.)



1. As a new article of manufacture, an egg-grip made of a single piece element having resiliency and made in the form of a tubular body open at both ends said ends providing egg-receiving and gripping openings, said body having a contracted part, said part forming oppositely disposed seats, and the said body being made with a longitudinally extending open part to permit spreading of either of the said end-portions of the body when the opposite open end-portion is contracted, so as to receive and grip an egg, substantially as and for the purposes set forth.

2. As a new article of manufacture, an egg-grip made of a single-piece element having resiliency and made in the form of a tubular body open at both ends, said ends providing egg-receiving and gripping openings, said body having a contracted part, said part forming oppositely disposed seats, and the said body being made with a longitudinally extending open part to permit spreading of either of the said end-portions of the body when the opposite open end-portion is contracted, and one of said end-portions being smaller than the other end-portion, so as to receive and grip eggs of different sizes, substantially as and for the purposes set forth.

1,156,460. COMBINED TABLE LOCK AND OPENER. GEORGE T. BUDDLE, Chicago, Ill. Filed Oct. 19, 1914. Serial No. 867,428. (Cl. 45—9.)



1. The combination with a keeper, of a guide, a member slidably engaging the guide, means for shifting the slidable member in one direction to push against the keeper, a keeper engaging latch pivotally connected to the slidable member, and means on the latch and movable against the guide during the pushing movement of the slidable member, to shift the latch out of engagement with the keeper, and, during the opposite movement of the slidable member, to shift the latch into engagement with the keeper.

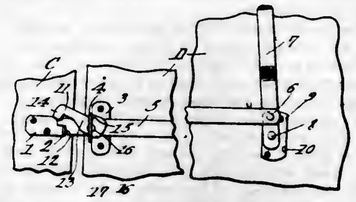
2. The combination with a keeper, of a latch strip having a longitudinal slot merging at one end into an obliquely disposed slot, a guide member extending into said slot, means for shifting the latch strip in one direction to thrust against the keeper while the guide member is within the longitudinal slot, and to disengage the latch strip from the keeper while the guide member is within the obliquely disposed slot, a hooked member pivotally connected to the latch strip, and adapted to engage the keeper to pull thereon during the movement of the latch strip in the opposite direction, said hooked member having a longitudinal slot merging at one end in an obliquely disposed slot, the guide member extending into the slot.

3. The combination with a keeper having a projecting portion, of a latch strip having a longitudinal slot merging at one end into an obliquely disposed slot, a fixed guide stud extending into the slot, means for shifting the latch strip in one direction to thrust against the projecting portion of the keeper while the guide stud is in the longitudinal slot and to disengage the latch strip from the keeper when the stud is in the obliquely disposed portion of the slot, a hooked member pivotally mounted on the guide stud and having a longitudinal slot merging at one end into an obliquely disposed slot, said guide stud projecting into the slot in said hooked member, said hooked member constituting means for engaging the projecting portion of the keeper.

4. The combination with a keeper having a projecting portion, of a guide member, a latch strip having a longitudinal slot into which the guide member extends, means for sliding said latch strip longitudinally to thrust against the keeper, and a keeper engaging hook movable with the latch member and having a longitudinal slot merging at one end into an obliquely disposed slot, said guide member extending into the slot and coöperating with the walls thereof to shift the hook laterally out of engagement with the keeper during the pushing operation by the latch strip.

1,156,461. COMBINED TABLE LOCK AND OPENER. GEORGE T. BUDDLE, Chicago, Ill. Filed Oct. 30, 1914. Serial No. 869,488. (Cl. 45—9.)

1. The combination with a keeper having a projecting ear, of a guide member, a slidable member within the guide member, means for shifting said slidable member in one direction to push against the keeper, a keeper engaging latch pivotally connected to the slidable member, and means upon the latch and coöperating with the guide for shifting said latch out of engagement with the keeper during the completion of the pushing movement of the slidable member.



2. The combination with a keeper, of a guide member, a slidable member within the guide member, means for shifting the slidable member in one direction to push against the keeper, a keeper engaging latch pivotally connected to the slidable member, and a projecting portion upon the latch and movable against the guide during the pushing movement of the slidable member to shift the latch out of engagement with the keeper.

1,156,462. PROCESS OF SOFTENING AND STRENGTHENING DEGUMMED VEGETABLE FIBERS. GEORGE D. BURTON, Boston, Mass., assignor to The Burton Company, Boston, Mass., a Corporation of Massachusetts. Filed July 5, 1913. Serial No. 777,499. (Cl. 13—5.)

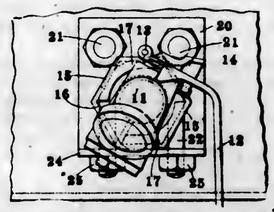
1. As an improvement in the art of softening and strengthening degummed vegetable fibers, the process herein described which consists in treating the degummed fiber with a solution consisting of glycerin and sodium carbonate.

2. As an improvement in the art of softening and strengthening degummed vegetable fibers, the process herein described which consists in treating the degummed fiber with a solution consisting of approximately two parts of glycerin and one part of sodium carbonate.

3. As an improvement in the art of softening and strengthening degummed vegetable fibers, the process herein described which consists in treating the degummed fiber with glycerin and sodium carbonate dissolved in hot water.

4. As an improvement in the art of softening and strengthening degummed vegetable fibers, the process herein described which consists in treating the degummed fiber with approximately two part of glycerin and one part of sodium carbonate dissolved in hot water.

1,156,463. COMBINED ANGLE-COCK AND TRAIN-PIPE CLAMP. STERLING H. CAMPBELL, St. Louis, Mo., assignor to Railway Devices Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 3, 1914. Serial No. 875,307. (Cl. 188—8.)



1. The combination with a supporting member, of a pair of co-acting parts adapted to receive a train pipe and the head of an angle cock, and a bolt for securing the said parts to said member and around the train pipe and angle cock.

2. The combination with a supporting member, of a pair of co-acting parts adapted to receive a train pipe and the head of an angle cock, and a U-bolt for passing around said parts for securing the same to said member.

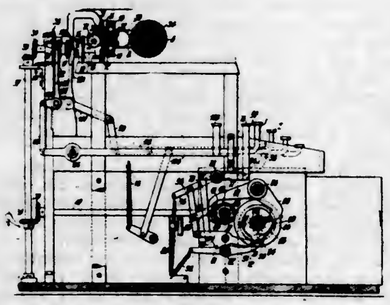
3. The combination with a supporting member, of a pair of like parts arranged in reverse position and co-acting to form a housing adapted to receive a train pipe and the head of an angle cock, and a bolt for securing said parts to said member.

4. The combination with a supporting member, of a pair of like parts arranged in reverse position and co-acting to form a housing adapted to receive a train pipe and the head of an angle cock, and a U-bolt surrounding said parts and attaching the same to said member.

5. The combination with a supporting member, of a pair of like parts arranged in reverse position and co-acting to form a housing adapted to receive a train pipe and the head of an angle cock, said housing being provided at the juncture of its parts with recesses for the passage of the handle of the angle cock, and a loop for securing said parts to said member.

[Claims 6 to 15 not printed in the Gazette.]

1,156,464. TYPE-WRITING MACHINE. SAMUEL E. CARLIN, Chicago, Ill., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Original application filed June 26, 1909, Serial No. 504,595. Divided and this application filed Feb. 21, 1913. Serial No. 749,775. (Cl. 197—60.)



1. The combination, with a carriage; of a platen rotatably mounted on said carriage to travel therewith; a motor; driving connections leading from said motor and ramifying separately to said carriage and to said platen; and controlling mechanism for enabling said motor to actuate said ramifications concurrently, thereby to traverse said carriage and to rotate said platen during the travel of the latter with said carriage.

2. The combination, with a carriage; of a platen rotatably mounted on said carriage to travel therewith; a source of power; driving connections leading from said source of power and ramifying separately to said carriage and to said platen; and key-actuated controlling mechanism for enabling said source of power to actuate said ramifications concurrently, thereby to traverse said carriage and to rotate said platen during the travel of the latter with said carriage.

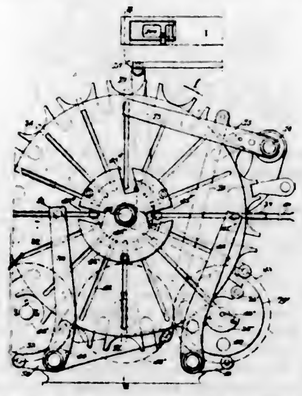
3. The combination with a carriage, of a platen rotatably mounted on said carriage, a motor, driving connections between said motor and said carriage and said platen, controlling mechanism for determining whether said carriage shall be traversed or said platen shall be rotated, and selective controlling devices for determining the definite extent of movement.

4. The combination with a carriage, of a platen rotatably mounted on said carriage, a motor, driving connections between said motor and both said carriage and said platen, controlling mechanism for determining whether said carriage or said platen shall be driven from said motor, and selective controlling devices for determining both the direction and definite extent of drive by said motor.

5. The combination with a carriage, of a platen rotatably mounted on said carriage, a motor, a normally inactive driving train leading from said motor, driving connections between said train and said platen, driving connections between said train and said carriage, and a plurality of connections, any one of which may render said train active to afford different definite extents of drive by said motor, each of said connections corresponding to different space movements of said platen or said carriage.

[Claims 6 to 79 not printed in the Gazette.]

1,156,465. APPARATUS FOR DISTRIBUTING AND FILLING CIGARETTES INTO CASES. LOUIS CHAMBON, Paris, France. Original application filed Jan. 3, 1913, Serial No. 739,954. Divided and this application filed Mar. 31, 1914. Serial No. 828,531. (Cl. 93—6.)

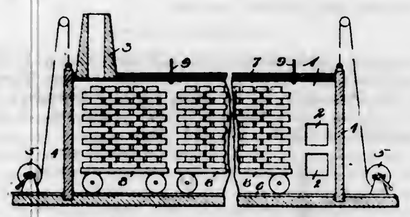


1. In an improved apparatus for distributing and filling cigarettes into cases, previously formed and presented to the apparatus in question with open mouths, and for gumming and closing the filled cases, and for transferring finally the same to a receiving box, a device adapted to receive the cases previously formed with open mouths and to present them to further operating parts, the said device including two vertical cheeks parallel to the longitudinal axis of the machine, a horizontal shaft about which the said cheeks are adapted to rotate intermittently, radial grooves in the said cheeks, slides adapted to move in the said grooves, a cell carried by each slide, lateral rollers carried by each slide, stationary circular grooves adapted to engage the said lateral rollers and thereby to retain the said slides at the inner ends of the said radial grooves, notches in the said circular grooves, to permit disengagement of the said rollers therefrom at the correct periods of time and positions, oscillating levers adapted to engage by their ends the said rollers, operating devices moving the said levers so as to push outwardly the slide and corresponding cell when the cheeks are at rest, the arrangement being such that the cell is brought on to the forming block of the machine and takes therefrom a cigarette case, and by following rotary movements of the said cheeks is then brought opposite a table for distributing the cigarettes and filling the case therewith, and by further rotary movements of the said cheeks the filled case is brought to the apparatus for gumming and closing it, whereafter the slide which carried the case is returned to the inner ends of the grooves which carry it.

2. In an improved apparatus for distributing and filling cigarettes into cases, previously formed and presented to the apparatus in question with open mouths, and for gumming and closing the filled cases, and for transferring finally the same to a receiving box, a device for gumming and closing the filled case and for transferring it to a receiving box, comprising a movable finger adapted to engage beneath the case so as to detach it from the cell during the return movement of the latter, a movable finger adapted to gum the closing flap of the case, a folder adapted to fold the said flap against the case, a pusher mounted on a carriage which also carries the said folder, so that the latter presses the case against the said pusher, the arrangement being such that the said carriage is reciprocated so as to introduce the filled and closed case into a receiving box where it is held pressed against the cases previously introduced into the said receiving box.

3. In an improved apparatus for distributing and filling cigarettes into cases, previously formed and presented to the apparatus in question with open mouths, and for gumming and closing the filled cases, and for transferring finally the same to a receiving box, the combination of an apparatus for distributing the cases; and a device for distributing the cigarettes and filling them into the open cases, said device comprising a blade wheel, a box containing cigarettes whereinto the said blade wheel extends, the said blade wheel being situated in the vertical middle plane of the apparatus which distributes the cases, the said wheel being intermittently rotated synchronously with the apparatus which distributes the cases; a small notched cylinder co-acting with the blade wheel and insuring regular discharge for the cigarettes from the said box, a receiving table whereonto the said blade wheel brings the cigarettes, a movable blade adapted to separate and guide the desired number of the cigarettes on the said table, a hand adapted to press lightly the cigarettes on the said table and a reciprocating pusher adapted to act on the ends of the cigarettes and to introduce them altogether into the case.

1,156,466. PROCESS OF TREATING FULLERS' EARTH. RICHARD CLAUS, deceased, East Orange, N. J., by Ida Claus, executrix, Montague township, Sussex county, N. J. Filed Dec. 27, 1913. Serial No. 808,946. (Cl. 34—24.)



1. In the process of treating fullers' earth the improvement which comprises subjecting moist fullers' earth to a temperature above the boiling point of water without overheating it for an extended period until the moisture is substantially all driven off and subsequently reducing the same to subdivided form.

2. In the improved process of treating fullers' earth the improvement which comprises inclosing it in a chamber and passing gases through said chamber heated to a temperature above the boiling point of water, without overheating the earth, until the moisture is substantially all driven off and subsequently reducing the same to subdivided form.

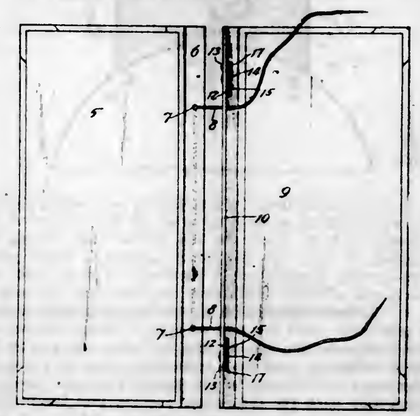
3. In the process of treating fullers' earth the improvement which consists in partially drying the same at a temperature below the boiling point of water and subsequently passing gases heated to a point above the boiling point of water over the same while confined in a suitable chamber for an extended period, without overheating the earth, until the moisture is substantially all driven off and subsequently reducing the same to subdivided form.

4. In the process of treating fullers' earth the improvement which consists in forming the crude fullers' earth into bricks, permitting the same to partially dry in the atmosphere and then subjecting the bricks to gases heated to a point above the boiling point of water and passed over the same while confined in a closed chamber for an extended period, without overheating the earth, until the moisture is substantially all driven off and subsequently reducing the same to subdivided form.

5. In the process of treating fullers' earth the improvement which consists in forming the same into bricks, partially drying the same and then passing gases over the same heated to a temperature between 120° and 300° Celsius for an extended period until substantially all the moisture is driven off and subsequently reducing the same to subdivided form.

[Claims 6 to 8 not printed in the Gazette.]

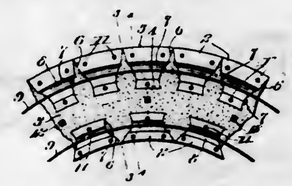
1,156,467. BINDER. ROBERT J. DAVIS, Chicago, Ill., assignor to Emily V. Methven, Chicago, Ill. Filed Sept. 28, 1914. Serial No. 863,821. (Cl. 129—41.)



1. A binder comprising two cover-members, cords having their free ends passed from one cover through perforations in the other, and clips on the last-named cover-member, said clips being formed of sheet metal bent upon itself to form flat hook-like members riveted to the cover and rivets whereby the clips are secured to the cover, said rivets having their heads lying between the surfaces of the hook to form an abutment for the cord.

2. A binder comprising two cover-members, cords having their free ends passed from one cover through perforations in the other, and clips on the last-named cover-member, said clips being formed of sheet-metal bent upon itself to form flat hook-like members riveted to the cover, and rivets whereby the clips are secured to the cover, said rivets having their heads lying between the surfaces of the hook to form an abutment for the cord, the upper part of the clips being perforated to permit the introduction of the rivets.

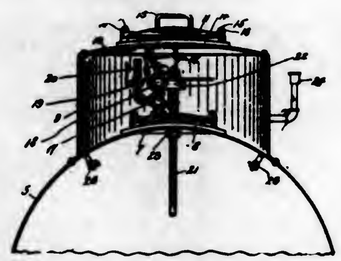
1,156,468. BRICK CHIMNEY STRUCTURE. FRANK DOCHNAL, St. Louis, Mo. Filed May 2, 1914. Serial No. 835,880. (Cl. 72—93.)



A wall structure having a horizontally endless central plastic wall, stay members fastened therein, linings of bricks, one on the exterior and the other on the interior of said wall, vertical stay members passing through said bricks, said bricks being reduced inwardly by the pro-

vision of inclined walls and grooves at the sides thereof, said bricks being provided with grooves on their upper nad lower faces communicating with the grooves at the side thereof to receive plastic material and endless stay members in said grooves and material therein.

1,156,469. SAFETY DEVICE FOR TANKS. HENRY L. DODGE, Stockton, Cal. Filed Mar. 21, 1914. Serial No. 826,266. (Cl. 220—120.)



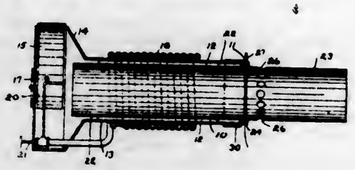
1. The combination of a tank having an opening, a cover for said opening, a dome mounted on the tank over the opening and its cover, the top of the dome having an opening, a cover for the dome opening, a relief valve establishing communication between the tank and the dome, and a valved outlet from the dome into the tank.

2. The combination with a tank having a top opening, a removable cover for said opening, a dome mounted on the tank over the opening and its cover, the top of the dome having an opening, a removable cover for the dome opening, a relief valve in the dome, said valve having a connection with the tank cover opening into the interior of the tank, and an air vent valve coupled to said connection.

3. The combination with a tank having a top opening, a removable cover for said opening, a dome mounted on the tank over the opening and its cover, the top of the dome having an opening, a removable cover for the dome opening, a relief valve in the dome, said valve having a connection with the tank cover opening into the interior of the tank, an air vent valve coupled to said connection, and a valved outlet from the dome into the tank.

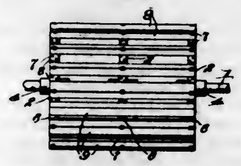
4. The combination with a tank having a top opening, a removable cover for said opening, a dome mounted on the tank over the opening and its cover, the top of the dome having an opening, a removable cover for the dome opening, a relief valve in the dome, said valve having a connection with the tank cover opening into the interior of the tank, and a valved outlet from the dome into the tank.

1,156,470. HYDROCARBON-BURNER. JOHN R. DONNELLY, Fort Wayne, Ind., assignor to Wayne Process Company, Fort Wayne, Ind., a Corporation. Filed Dec. 26, 1911. Serial No. 667,739. (Cl. 158—79.)



In a device of the class described the combination of a vaporizing coil, a bushing within the coil, a nozzle connected to the coil for discharging vapor therefrom into the bushing and a perforated gate within the bushing for restricting the flow of the vapor therethrough.

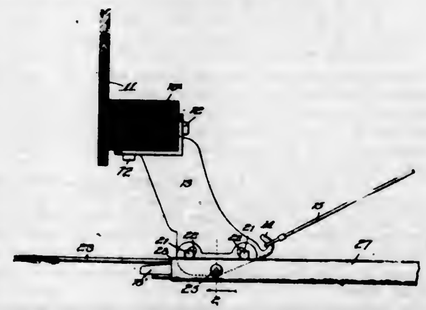
1,156,471. TRACTION-WHEEL. GEORGE W. ELLIOTT, De Smet, S. D. Filed May 10, 1913. Serial No. 766,717. (Cl. 21—216.)



1. In a wheel, spur members on the periphery of the wheel, made separate from each other and arranged at an angle to each other and to the periphery of the wheel with their innermost edges contiguous to the wheel and their outermost edges contiguous to each other and distance from the periphery of the wheel, thereby providing a spur having a pointed edge to engage the ground and having angle or inclined sides from the pointed edge toward the periphery of the wheel, abutment members on the periphery of the wheel for each spur member, and fastening means tending to spread the members at their innermost edges.

2. In a wheel, spur members on the periphery of the wheel, made separate from each other and arranged at an angle to each other and to the periphery of the wheel with their innermost edges contiguous to the wheel and their outermost edges contiguous to each other and distanced from the periphery of the wheel thereby providing a spur having a hollow portion for the purpose specified and having a pointed edge to engage the ground and having angle or inclined sides from the pointed edge toward the periphery of the wheel, cleats on the periphery of the wheel, one cleat for each spur member, said spur members adjacent their innermost edges abutting said sleats, and a fastening bolt passing through said periphery of the wheel and intermediate the spur members having a head engaging both of said members.

1,156,472. OVERHEAD TRACK-JOINT AND SUPPORTING MEANS THEREFOR. HENRY L. FERRIS, Harvard, Ill., assignor to Hunt, Helm, Ferris & Company, Harvard, Ill., a Corporation of Illinois. Filed Feb. 19, 1915. Serial No. 9,284. (Cl. 104—181.)



1. In apparatus of the class described, a rigid track, a flexible track, and a joint member securing the end of said flexible track to the end of said rigid track in the vertical plane of and with its upper surface substantially flush with the upper surface of said rigid track.

2. In apparatus of the class described, a rigid track, a joint member carried by the end of said rigid track and in the vertical plane of and substantially flush with the upper surface thereof, and a flexible track having its end secured to said joint member and extending outwardly therefrom in alinement with and substantially flush with the upper surface thereof, whereby the rigid track, joint member and flexible track lie in a single straight line.

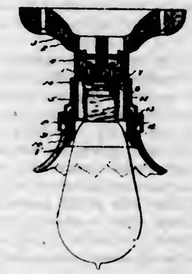
3. In apparatus of the class described, a rigid track, a hollow-joint member carried by the end of said rigid track, and a flexible track-member having one end secured in the vertical plane of and within the said hollow-joint member and extending outwardly therefrom in alinement with the said rigid track.

4. In apparatus of the class described, a rigid track, a hollow-joint member carried by the end of said rigid track, a flexible track having its end extending within the said hollow-joint member and return-bent in a vertical plane therein, and means for securing the bent end of the flexible track member within the said hollow-joint member.

5. In apparatus of the class described, a rigid track, a hollow-joint member carried by the end of said rigid track, a filler-block lying within the said hollow-joint member, and a flexible track having one end entering the joint member and bent to embrace the filler-block therein, the said flexible track extending outwardly from the joint member in alinement with the said rigid track.

[Claims 6 to 14 not printed in the Gazette.]

1,156,473. SHADE-HOLDER. GEORGE A. GAUTHIER, Hartford, Conn., assignor to The Arrow Electric Company, Hartford, Conn., a Corporation of Connecticut. Filed June 12, 1914. Serial No. 844,624. (Cl. 240—115.)



1. A shade holder comprising a supporting member, a shade holding member independent of but having its upper end fitting and adapted to be slid longitudinally upon the supporting member, fingers on the shade member normally out of engagement with but adapted to be engaged with parts of the supporting member, and a collar adapted to be slid longitudinally onto the shade member into contact with the fingers and force them out of normal position into engagement with the supporting member so as to detachably lock said supporting and shade holding members together.

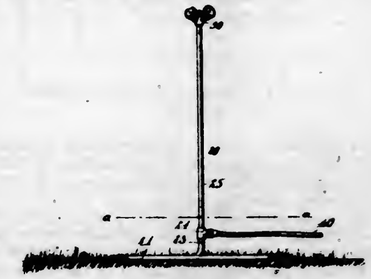
2. A shade holder having a base member, a slotted hub projecting from the base member, a shade member with its upper end fitted onto said hub, fingers on the shade member and having their ends normally out of engagement with but adapted to be engaged with walls of the slots in said hub, and a collar fitting and sliding longitudinally on the hub and the upper part of the shade member into contact with the fingers and force the ends of the fingers into the slots in the hub.

3. A holder having a base member with a slotted hub, a shade member adapted to fit said hub, means for securing a shade to said shade member, spring arms carried by the shade member and adapted to engage the slots in the hub of the base member, and a collar sliding on the hub of the base member and adapted to hold the spring arms in the slots in the hub of the base member and said collar having means whereby it is held by said spring arms from accidental movement.

4. A shade holder having a supporting member with a hub projecting therefrom, a shade member fitting said hub and having means for engaging the inside of a shade, a cap screwed on the shade member and coöperating with said means thereon for securing a shade thereto, fingers on the shade member normally out of engagement with but adapted to be forced into engagement with the supporting member, and a collar fitting said members and adapted to slide longitudinally thereon into contact with the fingers and force them out of normal position and into engagement with the supporting member so as to lock the members together.

5. A shade holder having a base member with a hub projection therefrom a shade member fitting said hub and having means for engaging the inside of a shade, a cap screwed on the shade member and coöperating with said means thereon for securing a shade thereto, spring fingers to connect the members, said fingers being normally out of engaging position, and a collar fitting said members and adapted to slide longitudinally thereon into contact with the fingers and force them out of normal position and into engaging position so as to lock the members together.

1,156,474. SPRINKLING OR SPRAYING DEVICE. BERT L. GIFFORD, Barker, N. Y. Filed July 28, 1913. Serial No. 781,534. (Cl. 137—86.)



1. A sprinkling or spraying nozzle comprising a casing having two diverging exit tubes and a plurality of inlet openings arranged at an angle to each other, a supply pipe threaded into any one of said inlet openings, and means for closing the remaining inlet openings.

2. A nozzle comprising a casing having diverging exit tubes, an inlet opening in the plane of said exit tubes, a second inlet opening at an angle of 45 degrees to said first-mentioned inlet opening and a third inlet opening at an angle of 90 degrees to said first-mentioned opening, a supply pipe threaded into one of said openings, and means for closing the other openings.

3. A spraying nozzle comprising a casing having two diverging exit tubes and an expansion chamber common to both of said tubes, said casing having also a plurality of inlet openings opening into said expansion chamber, a supply pipe fitted to any one of said inlet openings, means for closing the other openings, a twirler located in each exit tube, and a disk closing the end of each exit tube held spaced from its coöperating twirler, said disks being fastened to the exit tubes and each having a central exit opening.

4. A spraying nozzle comprising a casing having an exit opening and a plurality of inlet openings arranged at different angles with reference to said exit opening, a supply pipe connected to any one of said inlet openings, and means for closing the other inlet opening or openings.

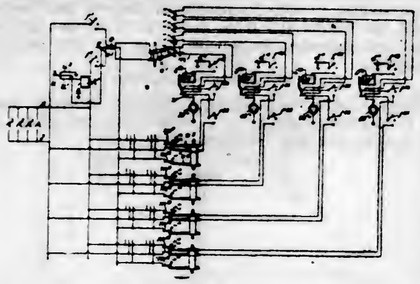
5. A spraying nozzle comprising a casing having a plurality of inlet openings, a second casing also provided with a plurality of inlet openings, and means of connection between any of the inlets of said casings so as to dispose one at any of a plurality of angles with respect to a supply pipe and the other at any of a plurality of angles with respect to the first.

[Claim 6 not printed in the Gazette.]

1,156,475. AUTOMATIC TELEPHONE-EXCHANGE SYSTEM. CHARLES LANE GOODRUM, Rochester, N. Y., assignor, by direct and mesne assignments, to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Mar. 10, 1905. Serial No. 249,380. (Cl. 179—17.)

1. In an automatic telephone system, a central exchange including a connector switch, subscribers' lines extending

therefrom, a plurality of subscribers' stations, a plurality of sources of characteristic signaling current, each connector switch being associated with but one of said sources, a signaling device individual to each subscriber's station responsive to a characteristic signaling current, a plurality of subscribers' stations, and a plurality of said devices connected to one of said lines, and means whereby subscribers connected to other lines may select and call one of the said plurality of subscribers.



2. In a telephone system, a central exchange including a connector switch, subscribers' lines extending therefrom, a plurality of subscribers' stations, a plurality of sources of characteristic signaling current, one of said sources being associated with each connector switch, a signaling device individual to each station responsive to a characteristic signaling current, a plurality of said devices connected to one of said lines, and means at the central station controlled by the subscriber for automatically selecting and calling any one of said plurality of subscribers.

3. In a telephone exchange system, a subscriber's line and a plurality of subscribers' stations connected thereto, automatic connective means for said line common to all of said subscribers whereby the line may be connected with other lines as determined by any one of said subscribers, and other automatic connective means associated with the first means but individual to the several subscribers on the line whereby any one subscriber can be selected and called to the exclusion of the others.

4. In a telephone exchange system, a central office and subscribers' lines leading therefrom, a plurality of subscribers' stations on one line, automatic switching apparatus at the central office for interconnecting the lines, a portion of said apparatus being individual to the lines whereby calls incoming from the subscriber to the central office may result in connection with other subscribers as required, and another portion of said apparatus common to the subscribers, together with means whereby the selection of a subscriber's common switching apparatus will automatically select suitable current to send over the proper path to call the individual subscriber desired.

5. In a telephone exchange system, a central office and subscribers' lines leading therefrom, one or more of said lines having a plurality of stations connected thereto, automatic switching apparatus for each line whereby the lines may be interconnected, said switching apparatus comprising connection terminals individual to the line, each brought into service in response to a call over its line for connection with other lines, and other connection terminals individual to the subscribers for calling said subscribers in completing connections originating at other stations, each adapted for calling its own subscriber only, irrespective of other connections.

[Claims 6 to 23 not printed in the Gazette.]

1,156,476. COMBINED EGG-TESTER AND MAILING-TUBE. GEORGE W. GOUDY, Highland, N. Y. Filed Apr. 15, 1915. Serial No. 21,518. (Cl. 98—6.)

1. A combined egg tester and mailing tube comprising a longitudinally-extending, slightly tapering tubular body having its smaller end circular in cross section and its larger end elliptical in cross section, the wall of the body adjacent the larger end thereof being diametrically oppositely longitudinally extended to form a pair of outwardly projecting lips, the edges of said lips being defined by rearwardly extending reverse curves whereby the interior periphery of said end is adapted to contact with the surface of an egg maintained with its major axis parallel to the longer transverse axis of said body.



2. A combined egg tester and mailing tube comprising a longitudinally-extended body of relatively small taper and elliptical in cross section adjacent its larger extremity, the wall of said body adjacent the ends of the minor axis of its cross-sectional ellipse being horizontally extended to form a pair of diametrically opposed projecting lips having reversely curved profiles, whereby the end of said body is adapted to register with the surface of an egg maintained in contact with said end with its major axis substantially parallel to the major axis of said cross-sectional ellipse.

3. A combined egg tester and mailing tube comprising a longitudinally extended body of relatively small taper circular in cross section adjacent the smaller end and elliptical in cross section adjacent the larger end and having a pair of outwardly extending diametrically opposed lips adjacent said last-mentioned end, the edges of said lips being defined by rearwardly extending reverse curves whereby the interior periphery of said end is adapted to register substantially at all points with the surface of an egg with said lips embracing the egg when the latter is maintained in contact with said end with its major axis parallel to the greatest transverse diameter of the body.

4. A combined egg tester and mailing tube comprising a tubular body having a relatively small taper and elliptical in cross section adjacent the larger end, the wall of said body adjacent said end being outwardly longitudinally extended to form a pair of oppositely disposed lips having curved edges, whereby said end is adapted to register with the surface of an egg when maintained in contact therewith.

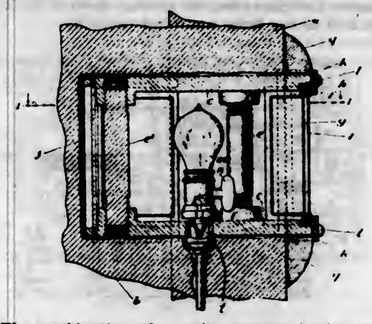
5. A combined egg tester and mailing tube comprising a tubular slightly tapering body having its wall adjacent its larger end longitudinally extended to form a pair of diametrically opposed lips having their edges defined by reverse curves, whereby the periphery of said end is adapted to register with the surface of an egg.

1,156,477. LIGHTING APPARATUS. WILLIAM M. GROSVENOR, Grantwood, N. J. Filed July 31, 1909. Serial No. 510,659. (Cl. 240—2.)

1. The combination of a wall structure having two or more walls at an angle to one another separating three chambers or more and provided with a cavity having three or more openings into the respective chambers, a frame mounted in said cavity having three or more openings corresponding to those in the cavity, a source of light in said frame and cavity adapted to light all three of said chambers or more, closers for all of said openings in said frame adapted to permit the passage of light therethrough, and means whereby one of the closers may be slid back to permit of access to the source of light.

2. The combination of a wall structure separating two chambers or more and provided with a cavity having two or more openings into the respective chambers, a frame mounted in said cavity having two or more openings corresponding to those in the cavity, a source of light in said frame and cavity adapted to light the two of said chambers or more, closers for all of said openings in said frame adapted to permit the passage of light therethrough,

and means whereby one of the closers may be slid back to permit of access to the source of light, one or more of said closers being translucent to exclude vision from one chamber to another.



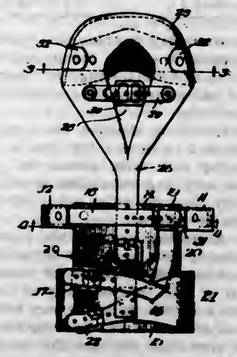
3. The combination of a wall structure having two or more walls at an angle to one another separating three chambers or more and provided with a cavity having three or more openings into the respective chambers, a frame mounted in said cavity having three or more openings corresponding to those in the cavity, a source of light in said frame and cavity adapted to light all three of said chambers or more, and three closers or more, one for each of said openings in said frame adapted to permit the passage of light therethrough, one or more of said closers being translucent to exclude vision from one chamber to another.

4. The combination of a wall provided with a cavity having windows on both sides of said wall, a frame within said cavity having top and bottom members with curved extensions substantially fitting the walls of said windows and provided with guides for window glasses, a lamp within said frame, and curved window glasses for the windows slidably held within the guides between said top and bottom members.

5. The combination of a wall provided with a cavity having openings on both sides thereof, a frame within said cavity having top and bottom members adjustable toward and from each other and substantially fitting against the walls of said openings, a source of light within said frame, a frame fitting each window, a window glass for each opening held between said frame and said top and bottom members, a shutter for each window, and a facing piece between the wall and said top and bottom members.

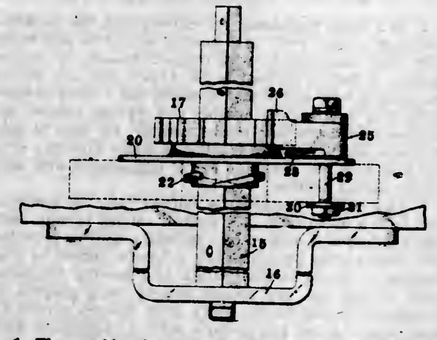
[Claims 6 to 14 not printed in the Gazette.]

1,156,478. HUSKING DEVICE. SYLVESTER HANKINS, Zearing, Iowa. Filed Dec. 31, 1914. Serial No. 879,819. (Cl. 130—4.)



In a hand husking device, the combination of a palm engaging member and a finger engaging husking implement adjustably connected, said finger engaging implement embodying a closed hood for receiving and inclosing only the ends of the fingers, said hood being shorter at the front than at the back, a toothed plate connected with the hood, the ends of the plate extending over the sides of the hood, the sides of the back of the hood converging to form a centrally disposed narrow tongue integral therewith and extending along the back of the hand, said hood having a cut out portion extending into the tongue, and a strap and buckle connected with the hood and extending across the cut out portion beyond the edge of the toothed plate on the hood to contract that portion of the hood, the space between the palm engaging member and the toothed plate at the front of the device being entirely unobstructed and exposing the front of the fingers.

1,156,479. BRAKE MECHANISM. LOUIS A. HOERR, St. Louis, Mo. Filed Oct. 2, 1913. Serial No. 792,919. (Cl. 188—55.)



1. The combination with a brake staff of a base plate having an opening through which said staff passes, a ratchet wheel surrounding said staff, said ratchet wheel being provided with a threaded hub adapted to project through said opening to prevent longitudinal movement.

2. The combination with a brake staff, of a base plate having an opening through which said staff passes, said ratchet wheel being provided with a threaded hub adapted to project through said opening and engage with the plate to prevent longitudinal movement, a pawl carried by said base plate and projecting beneath said ratchet wheel, a flange carried by said pawl and projecting beneath said wheel to prevent longitudinal movement of the pawl.

3. The combination with a brake staff, of a base plate having an opening through which said staff passes, said opening being provided with threads arranged at an angle to the axis of the staff, a ratchet wheel surrounding said staff, said ratchet wheel being provided with a hub adapted to project through said opening and having inclined threads to coöperate with the threads of said opening.

4. The combination with a brake staff, of a base plate having an opening through which said staff passes, said opening being provided with threads inclined to the axis of the brake staff, a ratchet wheel surrounding said staff, said ratchet being provided with a hub having inclined threads adapted to coöperate with the threads in said opening, a pawl carried by said base plate, and a flange on said pawl projecting beneath said wheel to prevent longitudinal movement of said pawl.

1,156,480. BRAKE MECHANISM. LOUIS A. HOERR, St. Louis, Mo. Filed Aug. 24, 1914. Serial No. 858,250. (Cl. 188—57.)

1. In a brake mechanism for railway cars, the combination with a brake staff, of a member carried by said staff and non-rotatable with respect thereto, said member being provided with ratchet teeth on its upper face, a second member arranged above said first named member, a handle adapted to be thrown into and out of engage-

ment with said second named member, and a third member mounted to move vertically with respect to said second named member but to be incapable of rotation relative thereto, said third named member being provided with ratchet teeth normally held in engagement with the teeth on said first named member by gravity



2. In a brake mechanism for railway cars, the combination with a brake staff, of a member carried by said brake staff and nonrotatable with respect thereto, a second member, a handle adapted to be thrown into and out of engagement with said second member, and a third member carried by said second member and having ratchet engagement with said first named member, all three of said members being capable of rotation in either direction with the staff when the handle is out of engagement with said second named member.

3. In a brake mechanism for railway cars, the combination with a brake staff, of a member carried by said staff and non-rotatable with respect thereto, a housing provided with downwardly projecting pin, a handle carried by said housing, a second member within said housing and rotatable on said pin, said second member being adapted to be engaged by said handle, and a third member carried by said second member and having a ratchet engagement with said first named member.

4. In a brake mechanism for railway cars, the combination with a handle, of a hollow member adapted to be rotated thereby, a brake staff, a second hollow member secured to said brake staff and provided with teeth, and said hollow members forming a housing and a toothed member having movement in said housing in the direction of the length of the staff and coöperating with said second named hollow member to form a ratchet.

5. In a brake mechanism for railway cars, the combination with a handle, of a hollow member adapted to be rotated thereby, a brake staff, a second hollow member secured to said brake staff and provided with teeth, said hollow members forming a housing and a toothed wheel having movement in said housing in the direction of the length of the staff and coöperating with said second named hollow member to form a ratchet.

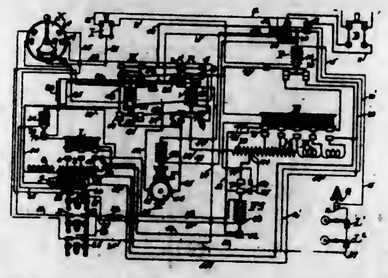
[Claims 6 and 7 not printed in the Gazette.]

1,156,481. ELECTRICAL CONTROLLING APPARATUS. JOHN D. IHLDER, New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 5, 1912. Serial No. 713,270. (Cl. 172—152.)

1. The combination of an electric motor, slow down mechanism operable to apply a retarding action to the motor proportional to the speed of the motor, a manual device for effecting the operation of said slow down mechanism, and automatic means to effect a modified operation of the slow down mechanism.

2. The combination of an electric motor, controlling apparatus therefor comprising manually controlled means automatically operable to effect a slowing down action on the motor proportional to the motor speed, and automatic mechanism to cause said slowing down means to produce a more powerful slowing down action also in proportion to the motor speed.

3. The combination of an electric motor, controlling mechanism therefor comprising an extra field circuit, resistance in said circuit, an electromagnet controlling said resistance, circuits for said electromagnet in parallel with the motor armature, and containing different amounts of resistance, and separate means for establishing said electro-magnet circuits during the slowing down of the motor, one of said means being controlled manually.

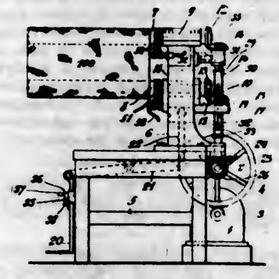


4. The combination of an electric motor, controlling mechanism therefor comprising a load magnet, resistance controlled thereby in a circuit of the motor, manually controlled means for establishing a circuit through the said magnet in slowing down the motor, and means to introduce resistance into said magnet circuit, and thereby effect a modified slowing down operation.

5. The combination of an electric motor, controlling mechanism therefor comprising a load magnet, means controlled thereby to effect a reduction of the motor speed, resistance, a manual lever operable to effect the completion of a circuit through the load magnet and said resistance, and means operable independently of the manual lever to establish a circuit through the load magnet independently of said resistance.

[Claim 6 not printed in the Gazette.]

1,156,482. SACK-STRETCHING MACHINE. ALEXANDER V. JENSEN, Devils Slide, Utah. Filed Dec. 17, 1914. Serial No. 877,660. (Cl. 26—16.)



1. In a sack stretching machine the combination of a pair of rolls adapted to receive the sack to be stretched, means for heating said rolls, means for operating one of the rolls toward and away from the other roll and means for rotating the rolls.

2. In a sack stretching machine, the combination of a pair of rolls adapted to receive the sack to be stretched, means for heating said rolls, means for rotating said rolls inside the sack and expanding means for forcing the one roll away from the other roll inside the sack and while said rolls are rotated.

3. In a sack stretching machine, the combination of a plurality of pairs of rolls, each pair being adapted to receive a sack to be stretched, means for operating the one roll in each pair of rolls independently of the other pairs of rolls to permit a sack to be drawn over said pair, means for heating the rolls and means for rotating the same.

4. In a sack stretching machine the combination of a pair of rolls adapted to receive the sack to be stretched, one of said rolls being operable toward and away from the other roll, means for adjusting the extent of the movement of the one roll away from the other roll and means for operating the said rolls.

5. In a sack stretching machine the combination of a pair of rolls adapted to receive the sack to be stretched, one of said rolls being operable toward and away from the other roll, means for adjusting the extent of the movement of the said one roll and means for operating the rolls.

[Claims 6 to 9 not printed in the Gazette.]

1,156,483. BRAKE ARRANGEMENT FOR SIX-WHEEL CAR-TRUCKS. BYRAM W. KADEL, Roanoke county, Va. Filed Feb. 26, 1915. Serial No. 10,798. (Cl. 188—24.)



1. In a brake arrangement for six-wheel car trucks, the combination with three brake beams of a similar number of brake levers, the said beams being fulcrumed to the said levers respectively between the extremities thereof, an equalising lever, a lever-actuating member for each of said brake levers, the said lever-actuating members being pivotally connected at one end to their said brake levers respectively at one of the extremities of the said brake levers, and all of said lever-actuating members being pivotally connected to the said equalizing lever at their other ends, the other extremities of two of the said brake levers being fulcrumed, and actuating means pivotally connected to the other extremity of the third brake lever.

2. In a brake arrangement for six-wheel car trucks, the combination with three brake beams of a live lever to which is fulcrumed between the extremities thereof one of the said brake beams, a lever-actuating member pivotally connected at one end to the one extremity of the said live lever and at the other end to the brake mechanism of the car body, two dead levers, each of which is fulcrumed at one extremity to some convenient part of the car or truck and to each of which is fulcrumed between the extremities thereof one of the remaining two of the said brake beams, an equalising lever, and three lever-actuating members, each of which is pivotally connected at one end to the said equalising lever and at their other ends to the other extremities of the said live and dead levers.

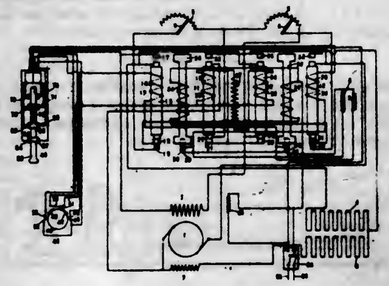
3. In a brake arrangement for six-wheel car trucks, a live lever, a brake beam fulcrumed to the said live lever between the extremities thereof, a lever-actuating member pivotally connected at one end to one extremity of the said live lever, an equalising lever to which is pivotally connected the other end of said lever-actuating member, a second lever-actuating member pivotally connected at one end to the said equalizing lever, a dead lever to which is pivotally connected at one of the extremities thereof the other end of the said second lever-actuating member, the other extremity of the said dead lever being fulcrumed to some convenient part of the truck or car, a second brake beam fulcrumed to the said dead lever between the extremities thereof, a third lever-actuating member pivotally connected at one end to the said equalising lever, a second dead lever to which is pivotally connected at one of the extremities thereof the other end of the said third lever-actuating member, the other end of the said second dead lever being fulcrumed to some convenient part of the truck or car, a third brake beam fulcrumed to the said second dead lever between the extremities thereof, and a fourth lever-actuating member pivotally connected to the other extremity of the said live lever and by means of which the entire brake mechanism may be actuated as described.

4. In a brake arrangement for six-wheel car trucks, a live lever, a brake beam fulcrumed to the said live lever between the extremities thereof, a compression member pivotally connected at one end to one extremity of the said live lever, an equalising lever to which is pivotally connected the other end of said compression member, a tension member pivotally connected at one end to the said equalising lever, a dead lever to which is pivotally connected at one of the extremities thereof the other end of the said tension member, the other extremity of the said dead lever being fulcrumed to some convenient part of the truck or car, a second brake beam fulcrumed to the said dead lever between the extremities thereof, a second compression member pivotally connected at one end to the said equalising lever, a second dead lever to which is pivotally connected at one of the extremities thereof the other end of the said second compression member, the other end of the said second dead lever being fulcrumed to some convenient part of the truck or car, a third brake beam fulcrumed to the said second dead lever between the extremities thereof, and a tension member pivotally connected to the other extremity of the said live lever and by means of which the entire brake mechanism may be actuated as described.

5. In a brake arrangement for six-wheel car trucks, a live lever, a brake beam fulcrumed to the said live lever between the extremities thereof, a compression member pivotally connected at one end to one extremity of the said live lever, an equalising lever to which is pivotally connected between the extremities thereof the other end of said compression member, a tension member pivotally connected at one end to the said equalizing lever at one of the extremities thereof, a dead lever to which is pivotally connected at one of its extremities the other end of the said tension member, the other extremity of the said dead lever being fulcrumed to some convenient part of the truck or car, a second brake beam fulcrumed to the said dead lever between the extremities thereof, a second compression member pivotally connected at one end to the other extremity of the said equalising lever, a second dead lever to which is pivotally connected at one of its extremities the other end of the said second compression member, the other end of the said second dead lever being fulcrumed to some convenient part of the truck or car, a third brake beam fulcrumed to the said second dead lever between the extremities thereof, and a tension member pivotally connected to the other extremity of the said live lever and by means of which the entire brake mechanism may be actuated as described.

[Claim 6 not printed in the Gazette.]

1,156,484. SYSTEM OF MOTOR CONTROL. SAMUEL H. KEEFER, deceased, Plainfield, N. J., by Mae A. Keefer, administratrix, Plainfield, N. J., assignor to Niles-Bement-Pond Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 17, 1913. Serial No. 754,753. (Cl. 172—179.)



1. Apparatus of the character described comprising, in combination, a motor, automatic means comprising devices for controlling the direction of rotation of said motor, and other devices for controlling the acceleration of said motor, means for governing the operation of all of said devices of said automatic means, a second means for governing independently of and to the exclusion of said first named governing means the operation of those devices of said automatic means that control the direction

of rotation of said motor while rendering inoperative those devices of said means that control the acceleration of said motor.

2. Apparatus of the character described comprising, in combination, means adapted to influence the operation of a motor in two directions and at a plurality of speeds, means adapted to energize said first means to rotate the motor in either direction at one of said speeds, and means adapted to energize said first means to rotate the motor in either direction at another speed and to render the said first means inoperative.

3. Apparatus of the character described comprising, in combination, a motor, a pilot switch, a switching device controlled thereby for starting and accelerating the motor, and a master switch for starting or stopping the motor independently of the pilot switch, a circuit of the pilot switch extending through the master switch so as to be broken when said master switch is operated.

4. Apparatus of the character described comprising, in combination, a motor, a pilot switch, switching devices governed thereby for controlling the starting and accelerating of the motor respectively, and a master switch adapted to cause operation of the starting device independently of the pilot switch without permitting operation of the accelerating device.

5. Apparatus of the character described comprising, in combination, a motor, a pilot switch, a starting device and an accelerating device governed by said pilot switch, and a master switch connected and adapted to govern the operation of the starting device independently of the pilot switch, the controlling circuit of the accelerating device passing through the pilot switch and the master switch and being broken by operation of said master switch.

[Claims 6 to 8 not printed in the Gazette.]

1,156,485. MANUFACTURE OF FIGURED PILE FABRICS. OSCAR KOHORN, Chemnitz, Germany. Filed Apr. 17, 1914. Serial No. 832,643. (Cl. 139—9.)



The method of weaving pile fabric having a binding warp, a backing warp, and a pile warp composed of a plurality of pile warps of different colors, which consists in lifting the binder warps to form a shed with the pile warps, passing a weft through said shed, raising the pile threads to form a shed with the binder warps, passing a weft through said shed and douping loops of selected threads of the pile warp under and around the corresponding binding and backing warp threads to form pile loops, substantially as and for the purpose set forth.

1,156,486. VEHICLE-WHEEL. CHARLES E. KREBS, Chicago, Ill., assignor to Forsyth Brothers Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 26, 1913. Serial No. 808,769. (Cl. 21—69.)



1. In a sheet metal wheel, a hollow shell comprising a pan-like hub portion and spoke portions formed integral therewith, the hub portion having a depression extending inwardly from one side with its bottom wall in contact with the wall of the opposite side of the wheel, plates overlying the depression on opposite sides of the wheel, and means connecting the plates whereby to clamp the walls of the shell in abutting contact at the depressed portion, substantially as described.

2. In a sheet metal wheel, a hollow shell comprising a pan-like hub portion and spoke portions formed integral therewith, the hub portion having on one side an annular depression with its bottom wall in contact with the wall of the opposite side of the wheel, face plates on opposite sides of the wheel and overlying the depression, and means connecting plates whereby to clamp the bottom wall of the depression in abutting contact with the opposite wall of the wheel, substantially as described.

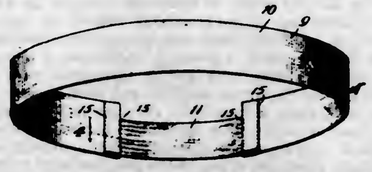
3. In a sheet metal wheel, a hollow shell comprising a pan-like hub portion and spoke portions formed integral therewith, the hub portion having a depression extending inwardly from each side thereof with its bottom wall in contact with the bottom wall of the corresponding depression formed in the opposite side of the wheel, hub face plates overlying the depressions, and means connecting the face plates whereby to clamp the bottom walls of the depressions in abutting contact, substantially as described.

4. In a sheet metal wheel, a hollow shell comprising a hub portion and spoke portions formed integral therewith, the hub portion having an annular depression extending inwardly from each side thereof with its bottom wall in contact with the bottom wall of the corresponding depression formed in the opposite side of the wheel, hub face plates overlying the depressions, and means connecting the face plates whereby to clamp the bottom walls of the depressions in abutting contact, substantially as described.

5. In a sheet metal wheel, a hollow shell divided in a medial plane of the wheel and comprising similar halves each having a hub portion and spoke portions formed integral therewith, each hub portion having an annular depression extending inwardly with its bottom wall in contact with the bottom wall of the corresponding depression formed in the opposite half of the wheel, hub face plates overlying the depressions, and means connecting the face plates whereby to clamp the bottom walls of the depressions in abutting contact, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,156,487. HAT OR CAP. SAMUEL KUNSTADTER, Chicago, Ill. Filed July 16, 1915. Serial No. 40,249. (Cl. 2—106.)

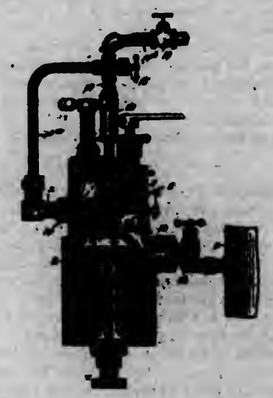


In a band for hats or caps, the combination of an inner and an outer band section of comparatively pliable material, an intermediate band section confined between said inner and outer sections and formed of a section of relatively stiff material, and a section of elastic, the ends of the section of relatively stiff material being bent back upon themselves reversely to provide spaces or pockets into which the ends of the said elastic section extend, and stitching securing the ends of said elastic section to the ends of said section of relatively stiff material, in the position stated, and securing the said folded portions in position.

1,156,488. DROP-FEED LUBRICATOR. FRANK LOWRY, Loudonville, Ohio, assignor to The Ohio Grease Company, Loudonville, Ohio, a Corporation of Ohio. Filed June 22, 1914. Serial No. 846,459. (Cl. 184—50.)

1. A lubricator including an outer case forming a grease chamber, a wall forming a feed chamber within the grease chamber, a feed port leading directly downward from the grease chamber into the upper end of the feed chamber, a discharge tube leading from the lower end of the feed chamber, and a steam tube leading through the upper end of the grease chamber into the upper end of the feed chamber.

2. A lubricator including a feed chamber having a pendent nipple in its upper end, a discharge tube leading from its lower end and a steam tube leading into its upper end, the bottom of the feed chamber being inclined in the path of drops falling from the nipple, and a baffle plate shielding the nipple and directing the steam along and across the inclined bottom.



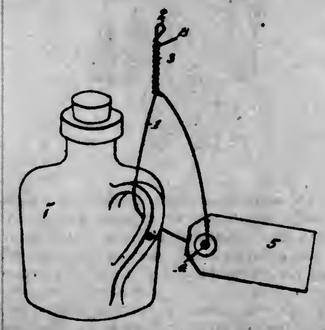
3. A lubricator including a feed chamber having a pendent nipple in its upper end, a discharge tube leading from its lower end and a steam tube leading into its upper end, the bottom of the feed chamber being inclined in the path of drops falling from the nipple, and a baffle plate directing the steam along and across the inclined bottom.

4. A lubricator including a feed chamber having a pendent nipple in its upper end, a discharge tube leading from its lower end and a steam pipe leading into its upper end, an inclined surface in the feed chamber in the path of drops falling from the nipple, and a baffle plate shielding the nipple and directing the steam along and across the inclined surface.

5. A lubricator including a feed chamber having a pendent nipple in its upper end, a discharge tube leading from its lower end and a steam pipe leading into its upper end, an inclined surface in the feed chamber in the path of drops falling from the nipple, and a baffle plate directing the steam along and across the inclined surface.

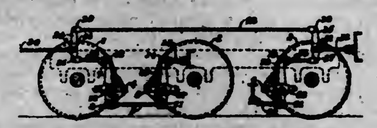
[Claims 6 and 7 not printed in the Gazette.]

1,156,489. TAG-FASTENER. WILLIAM R. MACINTOSH, Buffalo, N. Y. Filed Sept. 22, 1914. Serial No. 862,953. (Cl. 40—21.)



A tag fastener comprising a wire having a body, and a coil forming a continuation of one end of the body and wound loosely around the adjacent part of the same and having its convolutions separated from each other to permit the opposite end of said body to be wound upon the same between the convolutions of said coil.

1,156,490. BRAKE ARRANGEMENT FOR SIX-WHEEL CAR-TRUCKS. JOHN A. FILCHER, Roanoke, Va. Filed Feb. 26, 1915. Serial No. 10,793. (Cl. 188—24.)



1. In a brake arrangement for six-wheel car trucks the combination with three brake beams of a similar number of brake levers, the said beams being fulcrumed to the said levers respectively between the extremities thereof and said beams being adapted to serve an outside pair, the middle pair, and the other outside pair of truck wheels respectively, a lever-actuating member pivotally connecting the corresponding extremities of the first two of the said brake levers and forming fulcrums therefor, a fulcrum for the other extremity of the second of the said brake levers, an additional fulcrum for the one extremity of the third of said brake levers, a pair of equalising levers fulcrumed between their extremities, a lever-actuating member pivotally connecting the corresponding extremities of the said equalising levers, an additional pair of lever-actuating members pivotally connecting the other extremities of the said equalising levers with the other extremities of the said first and third brake levers, and a lever-actuating member pivotally connected to one of the said levers at a fulcrum point thereof.

2. In a brake arrangement for six-wheel car trucks the combination with three brake beams of a similar number of brake levers, the said beams being fulcrumed to the said levers respectively between the extremities thereof and said beams being adapted to serve an outside pair, the middle pair, and the other outside pair of truck wheels respectively, a lever-actuating member pivotally connecting the corresponding extremities of the first two of the said brake levers, a fulcrum for the other extremity of the second of the said brake levers, an additional fulcrum for the one extremity of the third of said brake levers, a pair of equalising levers fulcrumed between their extremities, a lever-actuating member pivotally connecting the corresponding extremities of the said equalising levers, an additional pair of lever-actuating members pivotally connecting the other extremities of the said equalising levers with the other extremities of the said first and third brake levers, and a lever-actuating member pivotally connected to one of the said equalising levers at the fulcrum point thereof, whereby the said mechanism may be actuated.

3. In a brake arrangement for six-wheel car trucks, an equalising lever, a lever-actuating member pivotally connected to the said equalising lever at one of the extremities thereof, a live brake lever to which is pivotally connected at one extremity the other end of said lever-actuating member, a brake beam fulcrumed to the said live brake lever between the extremities thereof, a second lever-actuating member pivotally connected to the said live brake lever at the other of its extremities, a dead brake lever to which is pivotally connected at one of its extremities the other end of the said second lever-actuating member, a second brake beam fulcrumed to the said dead brake lever between the extremities thereof, the other extremity of the said dead brake lever being fulcrumed, a second dead brake lever the one extremity of which is fulcrumed, a third brake beam fulcrumed to the said second dead brake lever between the extremities thereof, a second equalising lever fulcrumed between its extremities, a third lever-actuating member pivotally connected at one end to the one extremity of the said second equalising lever and at the other end to the other extremity

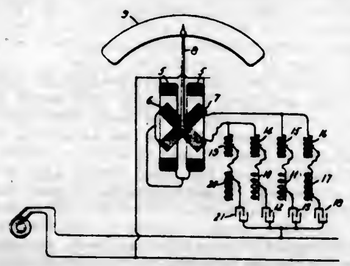
of the said second dead brake lever, a fourth lever-actuating member pivotally connecting the other extremities of the said first and second equalizing levers, and means from the brake mechanism of the car body, pivotally connected to one of the said levers at a fulcrum point, whereby the entire mechanism may be actuated.

4. In a brake arrangement for car trucks, a fixed portion of the car or truck having an opening therethrough, in combination with a brake lever and a push fulcrum therefor, the said fulcrum having a shank portion adapted to be received and guided by the said opening and a body portion forming a shoulder, the said shoulder being adapted to abut the material adjacent the said opening in pushing, and means on the said fulcrum for the attachment thereto of the said brake lever.

5. In a brake arrangement for car trucks, a fixed portion of the car or truck having an opening therethrough, in combination with a brake lever and a swinging push fulcrum therefor, the said fulcrum having a shank portion adapted to be received and guided by the said opening and having a shoulder adjacent the said shank portion, the said shoulder being adapted to swingingly abut the material adjacent the said opening in pushing, and means on the said fulcrum for the attachment thereto of the said brake lever.

[Claim 6 not printed in the Gazette.]

1,156,491. FREQUENCY-INDICATOR. DAVID B. PRICE, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed July 13, 1912. Serial No. 709,240. (Cl. 172—245.)



1. A frequency indicator comprising relatively movable elements, one of said elements having two windings exerting opposing forces on the other element, means for tuning the circuit of each of said windings for different frequencies, means for accentuating the torque of one of said windings at frequencies differing considerably from the frequency for which the circuit of said winding is tuned, and indicating means actuated by the movable element.

2. A frequency indicator comprising relatively movable elements, one of said elements having two windings exerting opposing forces on the other element, means for tuning the circuit of one of said windings for one frequency, means for tuning the circuit of the other winding for a lower frequency, means for accentuating the torque exerted by said last mentioned winding at frequencies lower than that for which the circuit of said winding is tuned, and indicating means actuated by the movable element.

3. A frequency indicator comprising relatively movable elements, one of said elements having two windings exerting opposing forces on the other element, means for tuning the circuit of one of said windings for relatively high frequencies, means for tuning the circuit of the other winding for relatively low frequencies, means for accentuating the torque exerted by said first winding at frequencies far higher than that for which the circuit of said winding is tuned, means for accentuating the torque exerted by said second winding at frequencies far lower than that for which the circuit of said winding is tuned, and indicating means actuated by the movable element.

4. A frequency indicator comprising relatively movable elements, one of said elements having two windings exerting opposing forces on the other element, means for tuning the circuit of each of said windings for different frequencies, auxiliary means for tuning the circuit of one of said windings for a still different frequency, and indicating means actuated by the movable element.

5. A frequency indicator comprising relatively movable elements, one of said elements having two windings exerting opposing forces on the other element, means for tuning the circuit of one of said windings for one frequency, means for tuning the circuit of the other winding for a lower frequency, an inductance in parallel with said last mentioned means, and indicating means actuated by the movable element.

[Claims 6 to 10 not printed in the Gazette.]

1,156,492. METHOD OF DRAWING REFRACTORY MATERIALS FOR INCANDESCENT LAMPS. HERMANN CARL GUSTAV REMANÉ, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed May 22, 1912. Serial No. 698,902. (Cl. 205—19.)

1. The step in the method of drawing into wire a metal capable of forming an unctuous decomposable sulfid which consists in coating the metal to be drawn with said sulfid of said metal and drawing the coated metal.

2. The method of drawing wire from refractory metals which consists in coating the metal to be drawn with a sulfid of a metal of the chromium group which forms an unctuous decomposable sulfid, drawing the wire and decomposing the sulfid.

3. The method of drawing wire from tungsten which consists in coating the mass of metal to be drawn with an unctuous compound of tungsten decomposable by heat to leave an adherent coating of tungsten upon the mass of metal, drawing the wire, and decomposing the tungsten compound.

4. The method of drawing tungsten wire which consists in coating the tungsten with an unctuous decomposable sulfid of a metal of the chromium group, drawing the wire and then decomposing the sulfid.

5. The method of drawing tungsten wire which consists in coating the metal with sulfid of tungsten, drawing the wire and then decomposing the sulfid.

1,156,493. SHAFT-COUPLING. RICHARD H. RICE, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 7, 1912. Serial No. 719,098. (Cl. 64—18.)



1. A shaft coupling which comprises two smooth face plates, one of which has an annular groove in its face coaxial with the cylindrical periphery of the other, a ring entering said groove and surrounding the other face plate, and means for fastening said face plates together.

2. A shaft coupling which comprises two smooth face plates, one of which has an annular groove in its face coaxial with the cylindrical periphery of the other, a ring entering said groove and surrounding the other face plate, and means for retaining said ring in place and for fastening said face plates together.

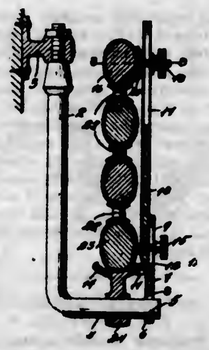
3. A shaft coupling which comprises two smooth face plates, one of which has an annular groove in its face coaxial with the cylindrical periphery of the other, a ring entering said groove and surrounding the other face plate, an annular clamping member engaging with said ring, and means for fastening together the two face plates and the clamping member.

4. A shaft coupling which comprises two smooth face plates, one having a groove coaxial with and flush with the cylindrical periphery of the other, a ring surrounding the latter and entering said groove, an annular member having a flange overlapping said ring, and bolts passing through said face plates and annular member.

5. A shaft coupling which comprises two smooth face plates, one of which has an annular groove in its face coaxial with the cylindrical periphery of the other, a ring entering said groove and surrounding the other face plate, and means for clamping said ring to said other face plate and for fastening said face plates together.

[Claim 6 not printed in the Gazette.]

1,156,494. ADJUSTABLE BOW-SOCKET AND REST-CLAMP. GEORGE E. ROBINSON, Eugene, Oreg. Filed July 28, 1914. Serial No. 853,743. (Cl. 21—61.)



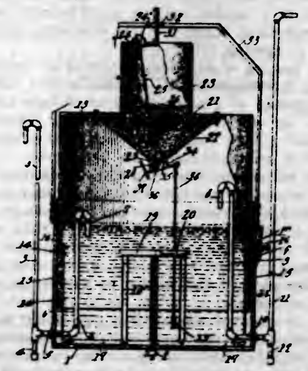
1. An adjustable bow socket comprising a support, said support provided with a laterally extending end, a notch formed near one end of said laterally extending end, a socket member carried by said laterally extending end, said socket member provided with an elongated slot, an adjustable link adapted to be carried by a bow, means for holding said adjustable link at a set angle relative to a bow, adjustable means carried by said link for engaging said notch in said laterally extending end of said support for holding said link in engagement with said support, and means engaging said slot in said socket for holding said link in engagement with said socket.

2. An adjustable bow socket comprising a support, said support provided with a laterally extending end, a notch formed near one end of said laterally extending end, a socket member carried by said laterally extending end, said socket member provided with an elongated slot, an adjustable link adapted to be carried by a bow, means for holding said adjustable link at a set angle relative to a bow, adjustable means carried by said link for engaging said notch in said laterally extending end of said support for holding said link in engagement with said support, and said link provided with an upwardly extending end adapted to fit in said elongated slot in said socket for firmly holding said link in engagement with said socket.

3. A device of the class described comprising a support, a socket member carried by said support, a supporting plate adapted to be carried by a bow, said supporting plate provided with a locking rib, a threaded pin extending from said rib, a primary link provided with a longitudinally extending slot fitting over said threaded pin, notches formed upon said primary link for engaging said rib, means for locking said supporting plate and adapted to engage said rib upon said plate, means for clamping said plate in engagement with said rib, means formed upon said plate for engaging said socket member, and an adjustable link carried by said plate for engaging said support.

4. In a device of the class described the combination with a plurality of bows, a support, a socket member carried by said support, said socket member adapted to support a bow, each bow provided with spacing means, a primary link carried by one of said bows, a locking plate carried by one of said bows and engaging said primary link for holding the same at a set angle relative to said bow, said socket member provided with an elongated notch, said primary link provided with an upturned end for fitting in said notch for clamping said bows in a set position, and an adjustable link carried by said primary link and engaging said support for holding said primary link in engagement with said support.

1,156,495. ACETYLENE-GAS GENERATOR. ERNEST M. RODEBAUGH, Long Bottom, Ohio. Filed Mar. 27, 1914. Serial No. 827,697. (Cl. 48—58.2.)



1. An acetylene gas apparatus, including a generator, a buoyant bell disposed therein, a carbid holder carried by the bell, a screen to be submerged, and a combined sludge stirrer and support for said screen mounted for disposition within the generator carried bodily with the bell.

2. An acetylene gas apparatus, including a generator, a buoyant bell disposed therein, a carbid holder carried by the bell, a screen to be submerged, and a combined sludge stirrer and support for said screen mounted for disposition within the generator carried bodily with the bell, the connection between the same and the bell being a sliding connection of limited extensibility, whereby the sludge stirrer normally rests upon the bottom of the generator.

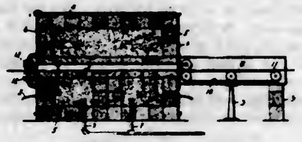
3. An acetylene gas apparatus, including a generator, a buoyant bell disposed therein, a carbid holder carried concentrically of the top of the bell, a screen to be submerged, a support for said screen slidably connected to the bell for disposition within the generator, the screen thereof being adapted to extend above the bottom of the generator and in line to receive the carbid emptied from the holder.

4. An acetylene gas apparatus, including a generator, a buoyant bell disposed therein, a carbid holder carried concentrically of the top of the bell, a screen to be submerged, a support for said screen slidably connected to the bell for disposition within the generator, the screen thereof being adapted to extend above the bottom of the generator and in line to receive the carbid emptied from the holder, and a sludge stirrer also connected to and carried by the bell.

5. An acetylene gas apparatus, including a generator, a buoyant bell disposed therein, a carbid holder carried by the bell, a plurality of rods slidably connected to the bell for movement below the rim thereof into the generator, a

sludge stirrer connected to the lower ends of the rods for disposition upon the bottom of the generator, a screen support connected to and carried by the sludge stirrer, and a screen mounted in said support.

1,156,496. PROCESS FOR ANNEALING MAGNETIC MATERIAL. WILLIAM E. RUDER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 14, 1912. Serial No. 720,340. (Cl. 148—21.)



1. The process of treating silicon steel which consists in passing it through a heating zone supplied with a non-oxidizing atmosphere, supplying sufficient heat thereto during its passage through said zone to heat the steel to a temperature above 800° C. and then transferring the said steel to a cooling zone in good thermal relation to the atmosphere in which the rate of cooling approximates the rate of heating.

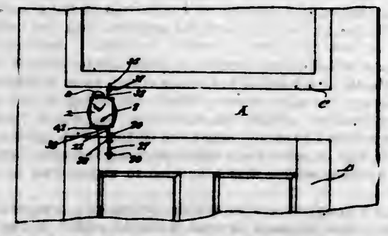
2. The process of annealing silicon steel which consists in feeding it through a zone supplied with a reducing gas and maintained at a temperature of at least 1000° C. at such rate as will impart to the steel a temperature of about 1000° C. and then cooling said steel to the ordinary temperature at substantially the same rate.

3. The process of annealing silicon sheet steel which consists in passing the same through a heating zone supplied with a non-oxidizing gas, and maintained at a temperature of about 1300°–1500° C., at a rate which will impart to said sheets a temperature of at least 1000° C., transferring said steel to a cooling zone also supplied with a non-oxidizing gas and cooling at a rate approximating the rate of heating.

4. The process of annealing silicon sheet steel which consists in passing the same continuously through a zone charged with hydrogen and maintained at a temperature of about 1300° to 1500° C. at a rate which will impart to said sheets a temperature of about 1000° C. in an interval of time not substantially greater than a few minutes, and then withdrawing the steel from said zone to immediately cool the same to ordinary temperatures at approximately the same rate.

5. The process of annealing silicon steel to improve its magnetic properties, which consists in introducing isolated sheets of such steel into a heating zone charged with hydrogen and maintained at the minimum temperature of about 1000° C., retaining the sheets in the heating zone until they have attained a temperature of about 1000° C. and then removing the sheets from said zone and cooling at a rate approximately the rate of heating.

1,156,497. BURGLAR AND FIRE ALARM. MARK J. RYAN, Cincinnati, Ohio. Filed July 1, 1913. Serial No. 776,869. (Cl. 116—44.)



1. In combination with the actuating element of an alarm apparatus, a trigger lever to hold the same, a spring pressed catch having a cam surface to hold the trigger lever in set position, and means, operated by a door, window or the like, to move the trigger lever to releasing position.

2. In combination with the actuating element of an alarm apparatus, a trigger lever to hold the same, an attacher adjustably secured to the trigger lever, and a trip carried by the attacher and adapted to be arranged in the path of a door, window or the like for operation thereby when the door or window is open, the said trip being pivotally connected to the attacher and being provided with a cam arm to permit the closing of the door or window without affecting the trigger lever.

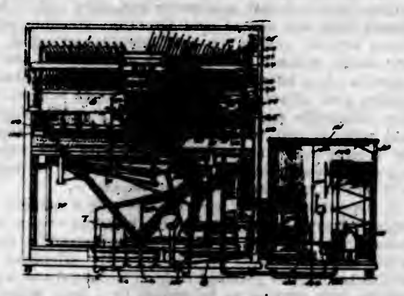
1,156,498. END-GATE. WADE H. SEALS, Rossville, Ill. Filed Nov. 9, 1914. Serial No. 871,117. (Cl. 21—21.)



1. An end-gate comprising hingedly connected sections, an arm secured to each section and adapted to overlie the other section when said sections are alined, means for locking said sections in alinement, and angular extensions on said arms respectively engageable against the outer faces of the sides of a wagon when the gate is applied.

2. An end-gate comprising hingedly connected sections, an arm secured to each section and adapted to overlie the other section when said sections are alined, a latch carried by one section and automatically engageable with the arm on the other section to lock said sections in alinement, and angular extensions on said arms respectively engageable against the outer faces of the sides of a wagon when the gate is applied.

1,156,499. AUTOMATIC MUSICAL INSTRUMENT. JULIUS SCHWARZ, North Tonawanda, N. Y., assignor to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y., a Corporation of New York. Filed Aug. 19, 1912. Serial No. 715,752. (Cl. 84—198.)



1. The combination of a piano-action, manual keys therefor, a pipe-stop, a single pneumatic action controlling both the piano action and the pipe-stop, automatic means controlling said pneumatic action, auxiliary means also controlling said pneumatic action and actuated by the piano-keys.

2. The combination of a piano action, keys for playing the same manually, a pipe-stop, a pneumatic action controlling said stop, a duct-board connected with said pneumatic action, and movable relatively to the piano-keys and valves controlling the ducts of said board and arranged to be actuated by the piano-keys.

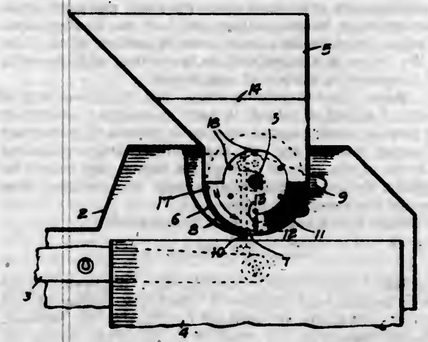
3. The combination of a piano action, keys for playing the same manually, a pipe-stop, a pneumatic action controlling said stop, a duct-board connected with said pneumatic action, and valves controlling the ducts of said board, said piano keys having parts arranged to engage said valves and the duct-board being movable to bring said valves into or out of operative relation with said parts.

4. The combination of a piano action, manual keys therefor having upward projections, a pipe-stop, a pneumatic action controlling said stop, a duct board connected with said pneumatic action and movable lengthwise of said keys, and valves controlling the ducts of said board and adapted to be actuated by said projections.

5. The combination of a piano action, manual keys therefor having projections, a pipe-stop, a pneumatic action controlling said stop, a duct board connected with said pneumatic action and pivoted to swing lengthwise of said keys, and valves applied to the ducts of said board and arranged to be engaged by said projections when the board is moved to its operative position.

[Claims 6 to 17 not printed in the Gazette.]

1,156,500. SCALE. CHARLES H. SCOTT, Minneapolis, Minn.; Blanche Scott executrix of said Charles H. Scott, deceased. Filed July 20, 1912. Serial No. 710,706. (Cl. 73—173.)



1. The combination, with a feed hopper for an automatic weigher, said hopper having independent feed and dribble openings arranged in the lower part thereof, of an upright plate arranged within said hopper and separating the passages leading to said openings, and means arranged within said hopper and operating above said plate for feeding the material over said plate to said dribble opening.

2. The combination, with a feed hopper for an automatic weigher, said hopper having a feed opening and an independent dribble opening, both openings being located in the bottom of said hopper, of means arranged within said hopper causing the entrance to said dribble opening to be above the level of said feed opening, and means operating adjacent to said dribble opening for agitating the material in said hopper and positively feeding it to said dribble opening.

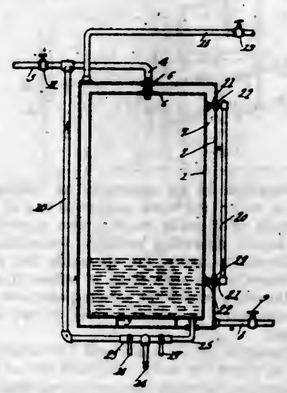
3. A scale comprising a feed hopper for an automatic weigher, said hopper having a feed opening and a dribble opening, an upright plate separating said openings, a cut-off device operating to close said feed opening, and means arranged within said hopper to sweep over said plate and positively deliver the material to the dribble opening.

4. A scale comprising a feed hopper for an automatic weigher, said hopper having a feed opening, a cut off plate for said opening, a scale pan operatively connected with said cut off plate, a block arranged in said hopper and having a recess therein forming a dribble opening, and a plate bridging said openings and means arranged to sweep over said plate and positively deliver a portion of the material in said hopper to said dribble opening.

5. A scale comprising a feed hopper for an automatic weigher, said hopper having a feed opening, a scale pan and a cut off plate connected therewith, said hopper having a dribble opening, a shaft extending through said hopper, disks mounted thereon, rods secured to said disks and adapted to sweep over said dribble opening and positively deliver a portion of the material in said hopper to said dribble opening.

[Claims 6 to 19 not printed in the Gazette.]

1,156,501. STEAM-CONDENSER. ZACHARY T. SCOTT, Austin, Tex. Filed Feb. 17, 1915. Serial No. 8,838. (Cl. 257—28.)



1. In a device of the class described, a condenser; a steam pipe communicating with the condenser adjacent its top; an outlet for the water of condensation; and means for selectively delivering to the outlet, steam, and water of condensation from the condenser.

2. In a device of the class described, a condenser; a casing having an outlet; valves in the casing and located upon opposite sides of the outlet; a conduit leading from one end of the casing to the lower portion of the condenser; and a steam supply pipe comprising branches, one of which branches enters the condenser adjacent its top, the other of which branches communicates with the other end of the casing.

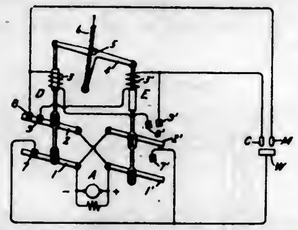
3. In a device of the class described, a condenser; a steam pipe communicating with the condenser adjacent its top; an outlet for the water of condensation; and means for selectively delivering to the outlet, steam from the steam pipe, and water of condensation from the condenser.

4. In a device of the class described, a condenser; a jacket completely inclosing the condenser; a cold water supply pipe discharging into the jacket; a cold water outlet pipe leading from the jacket; valves in the cold water pipes; a steam pipe embodying a branch passing through the jacket and entering the condenser adjacent the top of the condenser; and a branch leading downwardly to a point adjacent the bottom of the jacket; a valve in the steam pipe and controlling both branches; a casing into one end of which the last specified branch opens; a pipe leading from the other end of the casing through the jacket and communicating with the condenser; an outlet for the casing; and valves in the casing upon opposite sides of the outlet.

1,156,502. ARC-WELDING. JOHN A. SAHDS, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 11, 1914. Serial No. 837,701. (Cl. 219—8.)

1. In an arc welding system, a source of current, two operating electrodes normally operating on opposite sides of the source of current, means between which and either of said electrodes the arc is to be drawn, and automatic means for changing the connections of the first mentioned means from one side of said source of current to the other as one electrode is brought into operation after the other electrode has been used.

2. In an arc welding system, the combination with the work, a source of current, and two operating electrodes, one operating as a positive pole and the other operating as a negative pole, of automatic means controlled by each of the operating electrodes for connecting the work to either side of the source of current, depending upon which of said electrodes is selected for an operation.



3. In combination, in an apparatus for welding by an electric arc, in which the work comprises one of the electrodes, a source of electric current, two operating electrodes of different operating polarity, switching mechanism, and automatic means for operating the switching mechanism, whereby the contacting of either of said electrodes with the work causes the selected electrode and the work to be connected to opposite sides of the source of electric current.

4. In combination, in an apparatus for welding by an electric arc, in which the work comprises one of the electrodes, a source of current, two operating electrodes of different operating polarity, and two interlocked electromagnetically actuated switches controlling the circuit arrangements of the operating electrodes and of the work, each of said operating electrodes having circuit connections with the actuating coil of one of said switches whereby the contacting of either of said electrodes with the work automatically causes the selected electrode and the work to be connected to opposite sides of the source of current.

5. In combination, in an apparatus for electric arc welding, in which the work comprises one of the electrodes, a source of current, two operating electrodes of different operating polarity, and two mechanically interlocked electromagnetically actuated double pole snap switches controlling the circuit arrangements of the operating electrodes and of the work, each of said operating electrodes having circuit connections with the actuating coil of one of said switches whereby contacting of either of the electrodes with the work automatically causes the selected electrode and the work to be connected to opposite sides of the source of current.

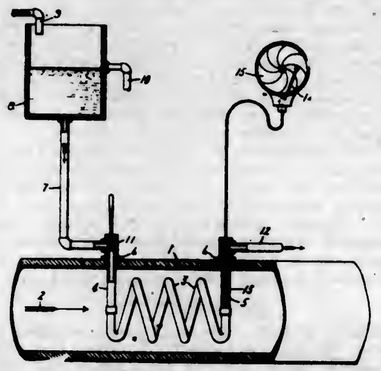
[Claim 6 not printed in the Gazette.]

1,156,503. STEAM-FLOW METER. LUCIAN A. SHELDON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 24, 1912. Serial No. 673,196. (Cl. 73—167.)

1. The method of determining the flow of a continuously flowing heated fluid passing through a conduit which consists in extracting a small percentage of the heat of the fluid by means of another flowing fluid so that the heat extracted has a definite relation to the rate of flow, and measuring the heat thus extracted.

2. The combination of a main through which a heated fluid flows, a means located in said main for extracting amounts of heat from the fluid that have a definite relation to the rate of flow of the fluid, an indicator device that is calibrated in terms of the rate of flow of the fluid, and means for utilizing the heat thus obtained to vary the position of the indicator device.

3. The method of measuring the flow of steam through a conduit which consists in continuously passing a stream of water at a constant rate of flow in heat exchanging relation to the steam so as to continuously absorb a small proportion of the heat of the steam, which proportion bears a definite relation to the rate of flow, and measuring the change in temperature of said water.

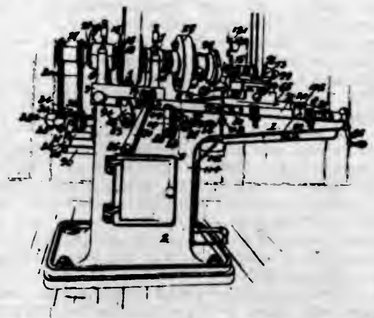


4. The method of measuring steam flow, which consists in continuously subjecting relatively small and equal quantities of water to the heating effect of the flowing steam in equal times so that only a small portion of the heat of the steam is transmitted to the water, and observing the temperature change of said water.

5. Means for determining steam flow, which consists of a coil of piping arranged in heat exchanging relation to the flowing steam, means whereby a stream of water may be passed through the coil, a measuring device calibrated in terms of the rate of flow of the steam, and means for utilizing the temperature of the water to vary the indications of the measuring device.

[Claims 6 to 8 not printed in the Gazette.]

1,156,504. GRINDING-MACHINE. WILLIAM CURRY STEPHENSON and ALFRED J. DRAPALIK, Rocky Mount, N. C., assignors of one-half to Charles M. Newman, Rocky Mount, N. C. Filed Jan. 22, 1915. Serial No. 3,806. (Cl. 51—4.)



1. In a grinding machine, a bed, a spindle stock on the bed, a chuck spindle mounted on the stock, and means for turning said spindle; a grinder tool carriage movable along the bed toward and from the chuck, and means for rotating the tool; mechanism for effecting the movements of the tool carriage; and means for driving said mechanism from said spindle.

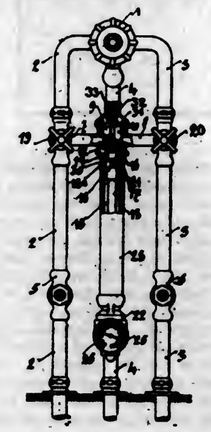
2. In a grinding machine, a bed, a spindle stock on the bed, a chuck spindle mounted on the stock, means for turning said spindle; a grinder tool carriage movable along the bed toward and from the chuck, means for rotating the tool; mechanism for effecting the movements of the tool carriage, means for driving said mechanism from said spindle, said driving means including a shiftable clutch element, loose clutch pulleys coöperative with said element and rotatable in opposite directions, and a reversing gear connected with said shiftable clutch element, said reversing gear including a slide bar, stops on said bar and a stop engaging finger carried by said grinder tool carriage, said reversing gear including a rock shaft, a weighted arm on said rock shaft, a lever connected to said shiftable clutch element, a connection between said lever and said rock shaft, a slide bar, stops on said slide bar, and a stop engaging finger on said tool carriage, and an operating connection between said bar and said rock shaft for moving said rock shaft to convey said weighted lever beyond the "dead" center.

[Claims 6 to 28 not printed in the Gazette.]

1,156,505. APPARATUS FOR AUTOMATICALLY REGULATING THE TEMPERATURE OF A SUPPLY OF LIQUID. GUIDO STERN, Frankfort-on-the-Main, Germany, assignor to the Firm of Bamberger Leroi & Company, Frankfort-on-the-Main, Germany. Filed Aug. 25, 1913. Serial No. 786,473. (Cl. 236—5.)

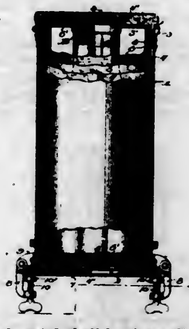
1. In an apparatus for the purpose set forth, the combination of supply conduits for two liquids at different temperatures, a delivery conduit joined to said supply conduits, a mixing valve at the junction of said supply conduits with said delivery conduit, branch conduits joined to said supply conduits, two way valves at the junctions of said branch conduits with said supply conduits, a second delivery conduit joined at one end to said branch conduits and at the other end to the first mentioned delivery conduit, valves severally controlling the flow of liquid from said branch conduits to said second delivery conduit, and a thermostatic device influenced by the temperature in said second delivery conduit, arranged to actuate the last mentioned valves, whereby the opening of either of the last mentioned valves is accomplished by the closing of the other valve.

2. A device of the kind described comprising a main pipe and a thermostat supporting pipe, a hot and cold water pipe supported on opposite sides of the thermostat supporting pipe, the hot and cold water pipes being in communication with the main pipe at the upper ends thereof, branch pipes for connecting the hot and cold water pipes with the thermostat supporting device at a point below the ends of the hot and cold water pipes, a valve casing connecting the thermostat supporting pipe and branch pipes, valves in the valve casing, said valves having openings adapted to aline with the interior of the branch pipes, a thermostat for supporting the valves,



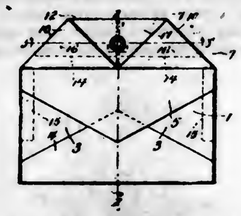
said thermostat being positioned in the thermostat support pipe, whereby water flowing through the branch pipes and thermostat supporting pipe causes the openings of one valve to aline with its adjacent branch pipe while the opposite valve prevents communication between the thermostat supporting pipe and the valve adjacent the second mentioned branch pipe.

1,156,506. RECEPTACLE FOR ORIGINAL CONTAINERS. THEODOR STROTHMANN, Milwaukee, Wis. Filed Dec. 23, 1913. Serial No. 808,490. (Cl. 220—98.)



A cylindrical metal shell having a lining comprising first a layer of wood in contact with the metal shell, an inner lining of felt and a filler layer of asbestos between the felt and wood, the edges of said layers terminating flush with the edges of the metallic shell to present exposed flat end faces, a circular metallic lid and bottom member adapted to be fitted over the shell ends, the said lid and bottom members being permanently fitted with linings comprising, first, a wood layer in abutment with the metal, second, a filler layer of asbestos and, third, an outer facing composed of felt, the said felt facing of the bottom and lid members being in direct engagement with the flat end faces comprising the metal shell and laminated lining whereby a non-metallic joint is effected between the members constituting the shell body and bottom and lid member, and means for permanently securing the bottom member to the shell body.

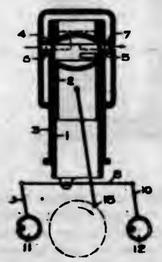
1,156,507. PARCEL-POST ENVELOP. HARRY A. TRUSCOTT, Washington, D. C. Filed Nov. 10, 1914. Serial No. 871,872. (Cl. 229—74.)



1. An envelop comprising a body portion having a sealing flap, and a substantially rectangular extension between said body portion and said flap, said extension being provided along its side edges with inturned flanges provided with free extensions having gummed faces, said extension being doubled so as to dispose the flap in sealing position, and then folded from opposite sides on diagonal lines to provide portions, each composed of a plurality of thicknesses of material, and having said portions disposed in lapping arrangement, and fastening means passing through said lapping portions and uniting the same, said means being adapted for the passage of a fastening cord or thong, and said gummed flanges being adapted for attachment to each other or to the plies of the extension and to have their extensions secured within the envelop body.

2. An envelop comprising a body portion having a sealing flap, and a substantially rectangular extension between said body portion and said flap, said extension being doubled by folding it on a line parallel with the body portion and so as to dispose the flap in sealing position, and then folded from opposite sides on diagonal lines to provide portions, each composed of a plurality of thicknesses of material, and having said portions disposed in lapping arrangement, and fastening means passing through said lapping portions and uniting the same, said means being adapted for the passage of a fastening cord or thong.

1,156,508. VALVE-OPERATING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. RUDOLPH UHTEL, Niederschoneweide, Germany, assignor to General Electric Company, a Corporation of New York. Filed Jan. 7, 1911. Serial No. 601,379. (Cl. 128—75.)

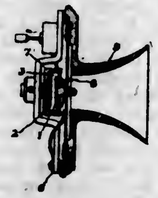


1. In an internal combustion engine, the combination of a cylinder having admission and exhaust ports through its wall adjacent the head of the cylinder, a piston, a tubular slide valve arranged between the piston and the cylinder wall and controlling said ports, and means for moving said valve comprising a shaft which rotates at engine speed, a half-speed shaft, eccentrics on said shafts, and a lever connected to said valve and operated by said eccentrics.

2. In an internal combustion engine, the combination of a cylinder having admission and exhaust ports through its wall, a piston, a tubular slide valve arranged between the piston and the cylinder wall and controlling said ports, and means for moving said valve comprising a shaft which rotates at engine speed, a half-speed shaft, eccentrics on said shafts, and a lever having its two ends connected to said eccentrics and operatively connected at an intermediate point to the valve.

3. In an internal combustion engine, the combination of a cylinder having admission and exhaust ports through its wall adjacent the head of the cylinder, said ports lying in substantially the same cross-sectional plane, a piston, a tubular slide valve arranged between the piston and the cylinder wall controlling said ports, and means for moving said valve comprising two eccentrics, one rotating at twice the speed of the other, and means connecting said eccentrics with the valve, said means comprising a lever attached at one point to the valve and at two other points to the eccentrics.

1,156,509. MICROPHONE. EZECHIEL WEINTRAUB and LEVI B. MILLER, Lynn, Mass., assignors to General Electric Company, a Corporation of New York. Filed Jan. 31, 1914. Serial No. 815,682. (Cl. 179—190.)



1. A microphone having a member consisting of conductive carbon made by carbonizing a resinous condensation product, and having hardness at least about 6 on the Mohs scale.

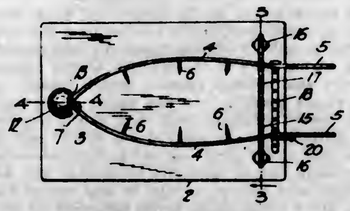
2. A microphone containing granules consisting of conductive carbon made by carbonizing a resinous phenolic condensation product and being hard enough to scratch glass.

3. A microphone containing granules comprising conductive carbon having a hardness of at least about 6 on the Mohs scale, a shiny surface and a concholdal fracture.

4. A microphone containing conductive granules of a carbonized resinous phenolic condensation product.

5. Conductive carbon granules, suitable for use in a microphone, having a hardness of at least about 6 on the Mohs scale, a shiny surface and a concholdal fracture.

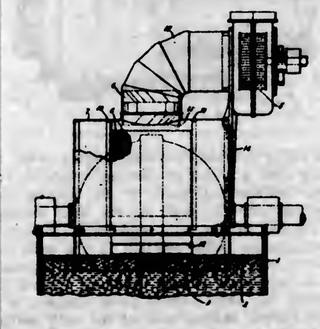
1,156,510. MEAT-HOLDER. EDWIN F. WELZ, Denver, Colo. Filed Apr. 14, 1915. Serial No. 21,287. (Cl. 17—14.)



1. In a meat-holder, a holding element comprising two members articulately connected by an exteriorly spherical joint, and a base having supporting means for said element, including an open cup-shaped socket adapted to partially admit said joint, whereby the element may be lifted free from the supporting means or turned to reverse its position with relation to the base.

2. In a meat-holder, a holding element comprising two members articulately connected by an exteriorly spherical joint, and a base having supporting means for said element, including a member capable of locking the element against lateral displacement and an open, cup-shaped socket adapted to partially admit said joint, whereby the element may be lifted free from the supporting means or turned to reverse its position with relation to the base.

1,156,511. COOLING-LIQUID ECONOMIZER. JAMES J. WOOD, Fort Wayne, Ind., assignor to General Electric Company, a Corporation of New York. Filed Nov. 28, 1913. Serial No. 803,429. (Cl. 261—3.)



1. In combination, a tank containing liquid, a heated member revolving therein and splashing said liquid, means about said revolving member for breaking up into particles the liquid which has been splashed, means for forcing cooling air about said particles, and a baffle member in the path of the cooling air for preventing the escape of said particles of liquid with said cooling air.

2. In combination, a tank containing liquid, a heated member revolving therein and splashing said liquid, a sieve about said revolving member for breaking up into particles the liquid which has been splashed, and a fan for forcing cooling air about said particles.

3. In combination, a tank containing liquid, a heated member revolving therein and splashing said liquid, a sieve about said revolving member for breaking up into particles the liquid which has been splashed, a fan for forcing cooling air about said particles, and a baffle member in the path of the cooling air for preventing the escape of said particles of liquid with said cooling air.

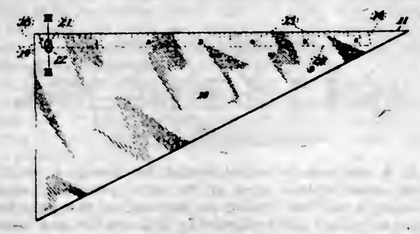
4. In combination, a tank containing liquid, a heated member revolving therein and splashing said liquid, a sieve for receiving said liquid which has been splashed, and means for forcing cooling air over said sieve.

5. In combination, a tank containing liquid, a heated member revolving therein and splashing said liquid, a sieve for receiving said liquid which has been splashed, means for forcing cooling air over said sieve, and a baffle member in the path of the cooling air for preventing the escape of said liquid with said cooling air.

[Claims 6 to 11 not printed in the Gazette.]

1,156,512. DRAFTING INSTRUMENT. RUFUS B. ALLYN, Colorado Springs, Colo. Filed June 16, 1915. Serial No. 34,421. (Cl. 33—104.)

1. A drafting triangle having a centrally-positioned edge socket provided with parallel oblique ends and having an oval-shaped perforation communicating between one face of the triangle and a point adjacent the bottom of the said socket, a projection within the said socket upon the wall thereof opposite the said perforation and being in alinement with the said perforation, the said perforation having its inner edge inclined to a point adjacent the bottom of the socket at the inner edge of the said opposite wall thereof, the said scale being provided with a recess adjacent one end thereof and removably positioned over the said projection when the scale is seated within the said socket with the ends of the scale lying in parallelism with the ends of the socket.



2. A drafting instrument formed of transparent material provided with a longitudinal slot socket in its operative straight edge, the end walls of the said socket being arranged obliquely with respect to said straight edge and in parallelism, and a rhomboidal-shaped scale member removably retained within the said socket.

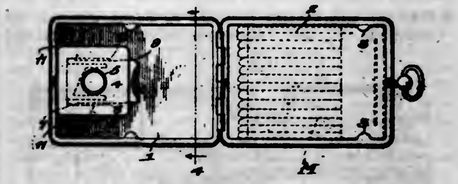
3. A transparent drafting instrument having a slot socket in the operative straight edge thereof, the opposite ends of the said socket being inclined and parallel to each other, a graduated scale positionable within the said socket and substantially conforming to the configuration thereof, and disengageable connections between the said scale and instrument.

4. A device of the class described, comprising a transparent drafting instrument having a receiving slot socket in the edge thereof and having a side perforation therein communicating with the said socket, a transparent scale removably positioned within the said socket and lying inwardly of the said perforation, engaging means for the said scale carried by a wall of the said socket and the said perforation having an inner oblique guiding edge inclined toward the adjacent edge of the said scale.

5. A drafting instrument having an edge socket therein having one inwardly inclined retaining end, the said instrument being provided with a receiving perforation in one face thereof communicating with the said socket, a projection within the said socket opposite the said perforation, a transparent scale having one end thereof conforming to and being in engagement with the said retaining end of the socket when the scale is operatively positioned in the latter, the said scale being provided with a recess adjacent its opposite end adapted for the removable reception of the said projection.

[Claim 6 not printed in the Gazette.]

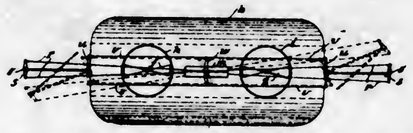
1,156,513. COMBINED MATCH-CASE AND CIGAR-CUTTER. EDWARD L. ANDERSON, Attleboro, Mass., assignor to R and G Company, Attleboro, Mass. Filed Feb. 13, 1915. Serial No. 7,948. (Cl. 206—35.)



1. A case composed of two hinged parts, means borne by one of the parts to releasably engage and retain a package of matches therein, a cigar cutter hinged to the other part, and spring means to engage the cutter to hold same against said other part or in position out of engagement with said other part.

2. A case composed of two hinged parts, a leaf spring having corrugations and right angular ends movably connected to one of the parts, and a cigar cutter pivoted to said spring ends and engaged with said corrugations.

1,156,514. STEERING APPARATUS FOR AIRSHIPS. LOUIS C. BADEAU, New York, N. Y. Filed Jan. 3, 1910. Serial No. 536,024. (Cl. 244—10.)



1. A machine for aerial navigation having a longitudinal propeller-tube open at its ends, propelling means therein, a vertical rudder at one end of the propeller-tube, a vertical pivot supporting said rudder, and means for materially displacing said pivot in a direction sidewise of the pivot and of the machine and for swinging the rudder in the opposite direction about the axis of the pivot so as to dispose the rudder diagonally across the end of the tube.

2. A machine for aerial navigation having a longitudinal propeller-tube open at its ends, propelling means therein, two vertical rudders located, respectively, at the two open ends of said propeller-tube, vertical laterally movable pivots supporting said rudders, and means for materially displacing said pivots in a direction sidewise of the pivots and of the machine and for swinging the rudders in the opposite direction about the axes of the pivots so as to dispose the rudders diagonally across the ends of the tube.

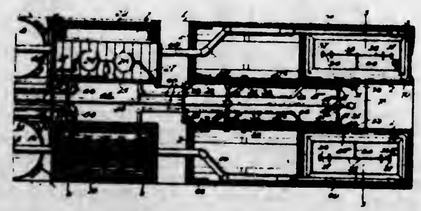
3. A machine for aerial navigation having a longitudinal propeller-tube open at its ends, two vertical rudders located, respectively, at the two open ends of said propeller-tube, said rudders being both mounted on laterally movable pivots, and common operating means associated with both rudders whereby said pivots are moved laterally simultaneously and in opposite directions and said rudders are turned in unison and substantially in parallelism.

4. A machine for aerial navigation comprising an elongated buoyant container, a longitudinal propeller tube therein open at its ends, propelling means therein, a vertical rudder located at one of the open ends of the propeller-tube, a vertical pivot supporting said rudder adjacent one of the ends thereof, and controlling means for materially displacing said pivot in a direction sidewise of the pivot and of the machine and for swinging said rudder about the axis of the pivot so as to dispose the rudder diagonally across the end of the tube.

5. A machine for aerial navigation having a longitudinal propeller-tube open at its ends, a bracket extending forward from an open end of said propeller-tube, being pivoted to the frame of the machine at its inner end, and a vertical rudder pivoted at its outer end to the outer end of said bracket.

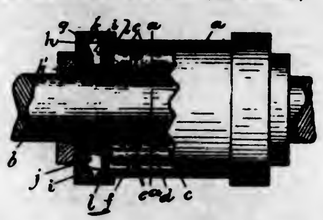
[Claims 6 to 8 not printed in the Gazette.]

1,156,515. FISH-CAR. CHARLES E. BARBA, Altoona, Pa. Filed Jan. 31, 1911. Serial No. 605,828. (Cl. 119—5.)



In a car for transporting live fish, including a fish tank, an aerating system including a supply connection with the train supply pipe and having a discharge connection for the bottom of the tank, a water circulating system for the tank including an injector arranged to discharge purified water into the top portion of the tank, and means for supplying air to the injector from the train supply pipe.

1,156,516. ROLLER-BEARING. EDWIN BRUCE BARNHARDT, Orangeville, Ontario, Canada, and WILLIAM NEWTON BARNHARDT, Central Islip, N. Y. Filed Dec. 18, 1913. Serial No. 807,500. (Cl. 64—62.)



1. In a roller bearing, the combination with a shaft and bearing case, a series of bearing rollers arranged in longitudinal relation internally of the bearing case, end caps engaging over the ends of the said bearing case, channels formed in the said end caps, tapered radial rollers arranged in radial relation in the said channels, spacer rollers interposed between the said tapered radial rollers, a contact plate loosely engaging against the said radial rollers, the said contact plate adapted to engage against the conical shaped ends of the said bearing rollers, substantially as described.

2. In a roller bearing, the combination with a shaft and bearing case, of a series of bearing rollers arranged in longitudinal relation therewith, said bearing rollers interposed by spacer rollers of a lesser diameter, binding rings adapted to maintain the said spacer rollers in their relative position with said bearing rollers, the ends of said bearing rollers being conical shaped, end caps engaging over the ends of the said bearing case, tapered radial rollers arranged in radial relation at an angle with the said bearing rollers, a contact plate interposed between the ends of the said bearing rollers and against the said radial rollers, substantially as described.

3. In a roller bearing, the combination with a shaft and bearing case, of a series of spaced bearing rollers arranged longitudinally therewith, of end caps engaging over the ends of the said bearing case, of a circular channel formed in the adjacent face of the said end caps, tapered radial rollers arranged in radial relation in the said channels, spacer rollers adapted to turn on pintle ends interposed between each of the said radial rollers, a contact plate interposed and engaging between the conical ends of the bearing rollers and the tapered radial rollers and adapted to turn in unison, substantially as described.

4. In a roller bearing, the combination with a shaft and bearing case, of a series of bearing rollers arranged in longitudinal direction internally therewith, spacing rollers arranged between the said bearing rollers, grooves formed in the ends of said bearing rollers, binding rings surrounding the said binding and spacing rollers, said binding rings engaging in the said grooves, a series of radial rollers arranged radially at an angle with the said bearing rollers, spacing rollers engaging between the said radial rollers, the said radial and spacing rollers adapted to travel in radial rotation in a circular channel formed in the djacent face of the end caps, said end caps adapted to engage over the ends of the said bearing case, a contact plate interposed between the ends of said bearing rollers and the said radial rollers, substantially as described.

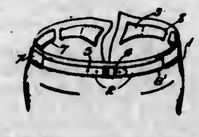
1,156,517. GLOVE. EDWIN T. BASKIN, Independence, Mo. Filed Aug. 10, 1914. Serial No. 855,980. (Cl. 2—9.)

1. A glove comprising body sections having integral finger and palm portions; the palm portions of each section being inset from the finger portions and the palm portion of one section having a thumb recess, a thumb section having a seat equal in size to the recess in the palm portion, a facing attached to the inner face of the thumb section and having a seat registering with the seat in said section, and a wrist section attached to the palm portions and thumb section.



2. A glove comprising a section having third and fourth fingers integrally connected with an inset palm portion, a first and second finger section having an inset palm portion provided with a thumb recess, a thumb section having a seat corresponding to the recess in the first and second finger section, means for securing the free edges of the inset palm portions together, means for securing the edges of the palm recess and thumb seat together, a wrist section, and means for securing the wrist section to all of the sections.

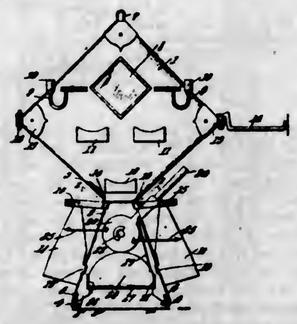
1,156,518. WAIST-CLOSURE. EDWIN T. BASKIN, Independence, Mo. Filed Oct. 12, 1914. Serial No. 866,298. (Cl. 2—143.)



1. The combination with a garment, having spaced slots at each side thereof, of a housing located between and having open ends located adjacent the slots at each side of the garment, and a belt having a free portion run through the housing and one or both of the slots at each side of the garment.

2. The combination with a grament, having spaced slots at each side thereof, of an inner and an outer housing attached to each side of the garment between the spaced slots, and a belt run through a housing and one or both of the slots at each side of the garment.

1,156,519. TOILET-STAND. CARL BAUER, Wolfe, W. Va. Filed Feb. 14, 1914, Serial No. 818,734. Renewed Aug. 31, 1915. Serial No. 48,352. (Cl. 45—38.)



1. In a wash stand, a back, a pair of coöperating arcuate basin-supporting arms pivoted thereto, brace members secured to the said arms and pivoted to the back, and actuating means carried by the back and operatively connected to the said brace members to swing the same.

2. In a wash stand, a back, a pair of coöperating arcuate basin-supporting arms and a pair of wings pivoted to the back, the arms and wings being secured together, and an oscillatory actuating member carried by the back between the wings and linked thereto.

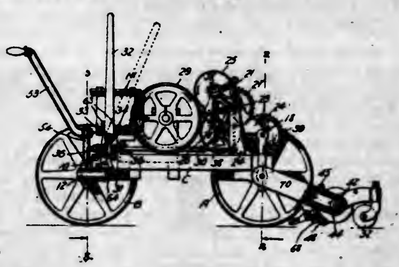
3. In a wash stand, a back, a shelf and a pair of side wings hinged thereto, and actuating means carried by the back and operatively connected to the said shelf and wings for simultaneously swinging the same to and from the plane of the back.

4. In a wash stand, a back, a shelf and a pair of side wings hinged thereto, actuating means carried by the back and operatively connected to the said shelf and wings for simultaneously swinging the same to and from the plane of the back, and coöperating arcuate basin-supporting arms carried by the upper ends of the said wings.

5. In a wash stand, a back, a shelf and a pair of side wings hinged thereto, a pair of coöperating basin-supporting arms pivoted to the back and secured to the upper ends of the said wings, and actuating means carried by the back and operatively connected to the said shelf and wings for simultaneously swinging them to and from the plane of the back.

[Claim 6 not printed in the Gazette.]

1,156,520. MOTOR-DRIVEN LAWN-MOWER. SAMUEL EDWARD BEMLER, Waynesboro, Pa. Filed Dec. 29, 1914. Serial No. 879,561. (Cl. 56—19.)



1. In a power driven mower the combination of a frame, traction and steering wheels supporting the frame, gear wheels journaled on the frame and connected to drive the traction wheels, a cage swingingly mounted on the frame, transmission gearing journaled in said cage and having driving connection with said gear wheels, a motor mounted on the frame and adapted to have two independent driving connections with said transmission gearing, means for swinging the cage to effect either of said driving connections, and a cutter mechanism having independent driving connection with the motor, substantially as set forth.

2. In a power driven mower the combination of a frame, traction and steering wheels supporting the frame, gear wheels journaled on the frame and connected to drive the traction wheels, a swinging cage fulcrumed co-axially with one of said gear wheels, a transmission gearing journaled in said cage and having constant driving connection with one of said gear wheels, a motor mounted on the frame and adapted to have two independent driving connections with said transmission gearing, means for swinging the cage to effect either of said motor driving connections, and a cutter mechanism having independent driving connection with the motor, substantially as set forth.

3. In a power driven mower the combination of a frame, traction and steering wheels supporting the frame, a bracket mounted on the frame, a gear wheel journaled on the bracket and connected to drive the traction wheels, a cage fulcrumed on the bracket coaxially with said gear wheel, a transmission gearing journaled in said cage and having constant driving connection with said bracket gear wheel, a motor mounted on the frame and adapted to have two independent driving connections with said transmission gearing, means for swinging the cage to effect

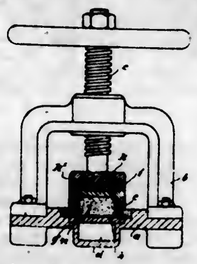
either or neither of said motor driving connections, and a cutter mechanism having independent driving connection with the motor, substantially as set forth.

4. In a power driven mower the combination of a frame, traction and steering wheels supporting the frame, a bracket mounted on the frame, a gear wheel journaled on the bracket and connected to drive the traction wheels, a cage fulcrumed on the bracket coaxially with said gear wheel, a transmission gearing journaled in said cage comprising a pair of friction gear wheels and having constant driving connection with said bracket gear wheel, a motor mounted on the frame and adapted to having driving engagement with either or neither of said friction gear wheels, a lever fulcrumed on the frame and connected to actuate the cage, and a cutter mechanism having independent driving connection with the motor, substantially as set forth.

5. In a power driven mower the combination of a frame, traction and steering wheels supporting the frame, a shaft journaled in the frame and having pinions in driving engagement with said traction wheels, a compensating gear mounted on said shaft, a bracket mounted on the frame, a pinion journaled on said bracket and meshing with said compensating gear, a cage fulcrumed on the bracket, a transmission gearing comprising a pair of friction gears journaled in the cage and having constant engagement with said bracket pinion, a motor mounted on the frame and adapted to have driving engagement with either or neither of said friction gears, means for actuating the cage to effect neutral or driving connection with the motor, and a cutter mechanism having independent driving connection with the motor, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,156,521. TOY BRICK-PRESS. EMIL CARIUS, Taucha, near Leipzig, Germany. Filed Nov. 30, 1914. Serial No. 874,875. (Cl. 25—83.)



In a molding press the combination of a bed plate having a depression, whereby an open ended channel is formed, and a mold on said bed plate, said mold consisting of side and end walls, a cover plate vertically movable between said side and end walls, a removable press plate adapted to be inserted beneath the cover plate during the pressing operation and having flanges adapted to bear on the mold for limiting the downward movement of the press plate, and a loose floor plate covering said channel and adapted to be separately withdrawn.

1,156,522. WINDOW-CLEANER. ODIN G. CLAY, Washington, D. C. Filed Apr. 8, 1915. Serial No. 20,086. (Cl. 15—59.)

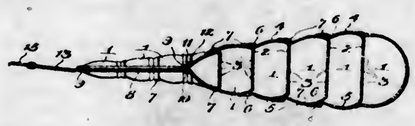
1. In a window cleaner, a traveler mounted to reciprocate in one plane; a scraper carrier mounted to reciprocate on the traveler toward and from scraping position at an angle to the plane in which the traveler reciprocates; a wedge movably interposed between the carrier and the traveler and constituting means for advancing the carrier to scraping position when the wedge and the traveler are moved in one direction; means assembled with the wedge for moving the wedge and the traveler in said direction; and means for moving the traveler in an opposite direction.

2. In a window cleaner, a traveler mounted to reciprocate in one plane; a scraper carrier mounted to reciprocate on the traveler toward and from scraping position at an angle to the plane in which the traveler reciprocates; a wedge movably interposed between the carrier and the traveler and constituting means for advancing the carrier to scraping position when the wedge and the traveler are moved in one direction; means assembled with the wedge for moving the wedge and the traveler in said direction; means for moving the traveler in an opposite direction; and a resilient connection between the traveler and the carrier, whereby the traveler and the carrier will be drawn together, thereby to move the wedge on the carrier and the traveler in the last specified direction.



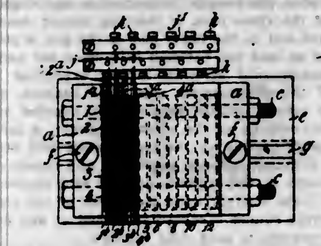
3. In a window cleaner, a traveler mounted to reciprocate in one plane; a scraper carrier mounted to reciprocate on the traveler toward and away from scraping position at an angle to the plane in which the traveler reciprocates; a movable actuating element interposed between the carrier and the traveler and constituting means for advancing the carrier to scraping position when the actuating element and the traveler are moved in one direction; means assembled directly with the actuating element for moving the actuating element independently of the traveler, the actuating element subsequently coacting with the traveler to move the same in said direction; and means for moving the traveler in an opposite direction.

1,156,523. INVALID-CUSHION. JOHN A. CLEMENS, Providence, R. I., assignor to Davol Rubber Company, Providence, R. I. Filed Dec. 28, 1914. Serial No. 879,302. (Cl. 5—1.)



An invalid cushion comprising a non-inflatable flap adapted to rest on a bed, anchoring means on one side thereof, and an inflatable cushion body consisting of a series of sections of U-cross section, the forward section of the series having its free side edges secured to the flap opposite from the anchoring means and each succeeding section being of greater height than the preceding section and having its free side edges secured to the next preceding section at a point adjacent the wall connecting the sides of the latter section, the connecting wall of each section except the last being perforated and constituting a partition between two adjacent sections, and end closures connecting the ends of the series of sections and the flap, said cushion being provided with an opening bounded by the flap and the adjacent sections.

1,156,524. SELENIUM CELL ESPECIALLY ADAPTED FOR USE IN CONNECTION WITH TELEGRAPHY. KENWRICK C. COX, Norfolk Island. Filed June 2, 1915. Serial No. 31,787. (Cl. 219—68.)

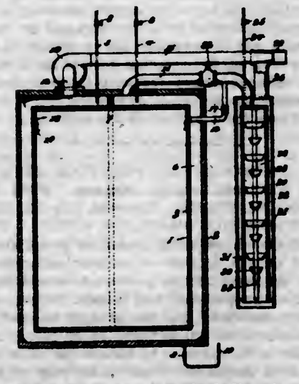


1. A selenium cell comprising a plurality of alternately arranged plates of conducting material and plates of insulating material, with the plates of conducting material thinner than and at the edges projecting beyond the plates of insulating material, and films of selenium covering the edges of the insulating plates between and connecting with the projecting edges of the conducting plates, whereby the area of the exposed surface of the selenium is greater than the combined exposed area of the edges of the conducting plates.

2. A selenium "cell" comprising a plurality of alternately arranged plates of conducting and insulating material, alternately arranged lugs on the conducting plates connected up in groups, a plurality of corresponding perforations in each of said plates, the perforations in the conducting material being larger than those in the insulating material and the insulating plates being of smaller size than the said conducting plates, a pair of rigid terminal blocks outside said plates, bolts passing through said plates and terminal blocks and serving to clamp the whole together, and a film of selenium disposed between the projecting edges of the conducting plates substantially as described.

3. A selenium cell comprising metallic plates approximating .003 of an inch in thickness separated by insulating plates approximating .01 of an inch in thickness with the metallic plates having edge portions projecting beyond the like edges of the insulating plates, and films of selenium on the said edges of the insulating plates in contact with the conducting plates and approximating .001 of an inch in thickness.

1,156,525. REFRIGERATING APPARATUS. CASSIUS M. GAY, Los Angeles, Cal. Filed Nov. 18, 1912. Serial No. 731,987. (Cl. 99—14.)



1. A refrigerating apparatus including in combination inner and outer casings forming an air space between the same, said inner casing being adapted to form a storage compartment and having an absorbent material on its outer surface, means for supplying moisture to said absorbent material, a dehydrator located outside of said outer casing, a conveyer pipe connecting said dehydrator to the air space between said casings and means for drawing air through the dehydrator and about said storage compartment.

2. A refrigerating apparatus including in combination inner and outer casings forming an air space between the same, said inner casing being adapted to form a storage compartment and having an absorbent material on its outer surface, means for supplying moisture to said absorbent material, a dehydrator located outside of said outer casing, a conveyer pipe connecting said dehydrator to the air space between said casings and means for drawing air through the dehydrator and about said storage compartment, said connecting means between the dehydrator and the air space having a valve therein whereby the air passing the valve may be caused to expand as it comes in contact with said moistened surface.

3. A refrigerating apparatus including in combination a main refrigerator having imperforate inner and outer casings, said inner casing having an absorbent material on its outer surface, means for supplying moisture to said absorbent material, means for supplying the air space between said inner and outer casings with desiccated air, and means for exhausting the air from said air space, whereby said air is caused to expand as it comes in contact with said moistened surface.

4. A refrigerating apparatus including in combination a main refrigerator, having inner and outer casings, said inner casing being separated from said outer casing to form an air space, and having an absorbent material on its outer surface, means for supplying moisture to said absorbent material, a conveyer pipe for directing air to said air space, means for supplying said conveyer pipe with desiccated air, a valve in said conveyer pipe for regulating the supply, and an exhaust fan for withdrawing the air from said air space, whereby said air is caused to expand as it comes in contact with the moisture in said absorbent material.

5. A refrigerating apparatus including in combination a main refrigerator, having inner and outer casings, said inner casing being separated from said outer casing to form an air space, and having an absorbent material on its outer surface, means for supplying moisture to said absorbent material, a conveyer pipe for directing air to said air space, a valve in said conveyer pipe for regulating the supply, and an exhaust fan for withdrawing the air from said air space, whereby said air is caused to expand as it comes in contact with the moisture in said absorbent material, and an auxiliary refrigerating apparatus for cooling and desiccating the air which passes through said conveyer pipe.

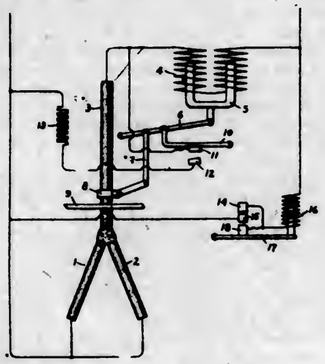
[Claims 6 to 8 not printed in the Gazette.]

1,156,526. TESTING CUT-OUT FOR ARC-LAMPS. EMILE J. GUAY, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Continuation in part of application Serial No. 544,572, filed Feb. 18, 1910. This application filed July 20, 1911. Serial No. 639,513. (Cl. 176—92.)

1. In an arc lamp, a pair of electrodes, means for establishing the arc, a normally closed shunt path across the electrodes, means for opening said shunt path by the arc establishing means, a normally high resistance shunt path across the terminals of the lamp, and means for making this shunt of comparatively low resistance when a predetermined voltage is impressed across the same.

2. In an arc lamp, a pair of electrodes, means comprising a magnet and its armature for striking the arc, a shunt path across the arc including said magnet, means responsive to the movement of the armature for opening said shunt path, a normally high resistance shunt path across the terminals of the lamp, and means for making this shunt of comparatively low resistance when a predetermined voltage is impressed across the same.

3. In an arc lamp, a pair of electrodes between which the arc is maintained and upon one or both of which a non-conductive layer may be formed, means for establishing the arc, a testing shunt path connected across the arc, means for open circuiting said shunt path by the arc establishing means, a normally high resistance shunt path across the terminals of the lamp, and means for making this shunt path of comparatively low resistance when the arc establishing means is actuated and the arc fails to start, thereby impressing a relatively high voltage across said second shunt path.

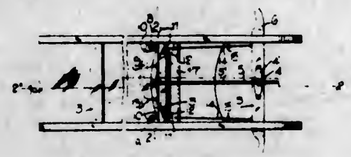


4. In an arc lamp, a pair of electrodes between which the arc is maintained and upon one or both of which a non-conducting layer may be formed, means for establishing the arc including a magnet and its armature, a shunt path connected across said electrodes in series with the magnet, means responsive to the movement of said armature for open circuiting said shunt path, and a second shunt path of lower resistance connected across the lamp comprising a two-branch air gap, a low resistance magnet in series therewith, and means for closing one air gap branch by the said low resistance magnet.

5. In an arc lamp, a pair of coöperating electrodes, means comprising a magnet for separating the electrodes to establish the arc, a shunt path connected across the electrodes comprising a resistance and a pair of contacts one of which is movable in response to the movement of the armature of said magnet and adjusted to open the shunt path of said contacts prior to the separation of the electrodes, a high resistance shunt path connected across the terminals of the lamp, and means for making this shunt path of comparatively low resistance when a predetermined voltage is impressed across the same.

[Claim 6 not printed in the Gazette.]

1,156,527. SLED. RICHARD H. HAMEL, Fall River, Mass. Filed Oct. 17, 1914. Serial No. 867,185. (Cl. 21—94.)



1. The combination with a sled including a body having spaced parallel rigid runners extending to the forward end of the sled and copnected at intervals by cross bars, of a steering runner swivelly connected at its forward end to one of said cross bars, manually operated means carried by the sled and operatively connected to the rear end of the steering runner for moving the same at an angle with relation to the rigid runners and means yieldingly urging the steering member downward.

2. The combination with a sled including a body and spaced parallel rigid runners connected at intervals by cross bars, of a pin loosely connected to and depending from one of the cross bars, a steering runner connected at its forward end to the lower end of the pin, a steering bar mounted on said pin between said cross bar and said steering runner, said steering runner extending longitudinally of the sled between said rigid runners, spaced transversely extending bars connected to another of said cross bars rearwardly of the steering runner, a laterally projecting plate carried by the rear end of said steering runner and disposed between said bars, and means operatively connected to the opposite ends of said steering bar and to said plate whereby upon movement of the steering bar the steering runner is moved to extend at any desired angle with relation to said rigid runners.

3. In combination with a sled including a body and spaced parallel rigid runners connected at intervals by cross-bars, of a pin loosely connected to and depending from one of the cross bars, a steering runner connected at its forward end to the lower end of the pin, a steering bar mounted on said pin between said cross bar and said steering runner, said steering runner extending longitudinally of the sled between said rigid runners, spaced transversely extending bars connected to another of said cross bars rearwardly of the steering runner, a laterally projecting plate carried by the rear end of said steering runner and disposed between said bars, brackets extending inwardly from said rigid runners adjacent the rear end of said steering runner, rollers carried by said brackets, and operating cords connected at their forward ends to the opposite ends of said steering bar, said cords extending around said rollers and being connected to the outer ends of said plate.

4. In combination with a sled including a body and spaced parallel rigid runners connected at intervals by cross bars, of a pin loosely connected to and depending from one of the cross bars, a steering runner connected at its forward end to the lower end of the pin, a steering bar mounted on said pin between said cross bar and said steering runner, said steering runner extending longitudinally of the sled between said rigid runners, bolts depending from the opposite ends of one of said cross bars rearwardly of the steering runner, spaced transversely extending bars loosely mounted on said bolts, a laterally projecting plate carried by the rear end of said steering runner and disposed between said bars, springs mounted on said bolts to normally force said plates downwardly to dispose the lower edge of said steering runner below the lower edges of said rigid runners, and means operatively connected to the opposite ends of the steering bar and to said plate whereby upon movement of the steering bar the steering runner is moved to extend at any desired angle with relation to said rigid runners.

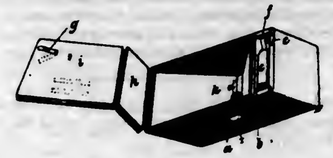
5. A dirigible sled including spaced runners, a steering runner pivotally mounted at its forward end for movement in a horisontal and in a vertical plane, manually operable means for swinging the steering runner in a horisontal plane, and resilient means engaging the rear end of the steering runner and urging it downward.

[Claims 6 and 7 not printed in the Gazette.]

1,156,528. PHOTOGRAPHIC-PRINTING APPARATUS. THEODOR HARRMS, Leipsig, Germany. Filed June 26, 1913, Serial No. 775,922. Renewed July 22, 1915. Serial No. 41,396. (Cl. 95—73.)

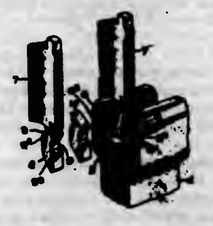
1. A photographic printing apparatus comprising a box, a lid hinged thereto, a negative support adjacent the top of said box, an electric battery secured in said box, a circuit, a lamp secured to said box in said circuit, a pivoted contact bridge device arranged in said lid adapted to close said circuit when the lid is fastened to place, reflecting plates arranged in the box to reflect the rays onto the negative, and a screen or cover on the top of the lamp bulb to prevent direct rays from reaching the negative, substantially as described.

2. A photographic printing apparatus comprising a box, a lid therefor, an electric battery contained in said box, a circuit, a lamp secured in said box connected in said circuit, a negative, a support therefor adjacent the lid of said box, a pivoted contact bridge device arranged upon



the lid of the box, for completing the circuit when the lid is closed, reflecting plates arranged in the box to reflect the rays on the negative, and an opaque cover provided for said lamp serving to prevent direct rays from reaching the negative.

1,156,529. TURBINE BUCKET-WHEEL. RUDOLPH HILLNER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 10, 1914. Serial No. 844,197. (Cl. 121—57.)

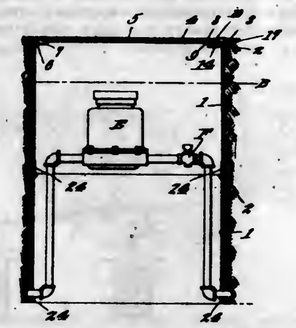


1. The combination with a turbine rotor having an undercut slot with tapered upper surfaces upon each side of the mouth of the slot, of a bucket having notches in its base with tapered surfaces to take against the tapered surfaces of the slot, said base being parallelogrammatic in section with its longer sides of greater length than the greatest width of the slot, and its shorter sides substantially parallel to the side walls of the slot, and of less thickness than the narrowest width of the slot.

2. A turbine rotor comprising a web member having an undercut slot in its periphery with tapered upper surfaces upon each side of the mouth of the slot, a plurality of buckets mounted therein each having a base of less thickness than the narrowest width of the slot and parallelogrammatic in section with its longer sides of greater length than the maximum width of the slot, and its shorter sides substantially parallel to the side wall of the slot, said base being provided with tapered surfaces which coöperate with the upper tapered surfaces of the under-cut slot for wedging the bucket base against the bottom of the slot, and spacing pieces between the respective buckets having substantially the same formation as the base of said buckets.

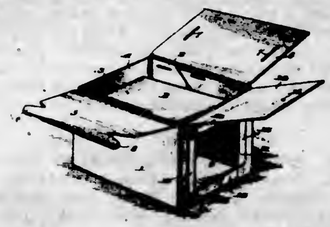
1,156,530. METER-BOX. HARRY HAMMOND HOWELL, Hope, Ark. Filed Sept. 23, 1913. Serial No. 791,288. (Cl. 187—13.)

The combination with a cover having a depression therein and a key retaining lug integral with the cover and overhanging the depression, of a head mounted for rotation in the depression, a button under the cover and revoluble with the head, means extending from the cover for limiting the rotation of the button, a key having a socket for the reception of the head, said key being insertible into the depression, and a flange extending partly around the key adapted to receive the lug between the ends of the flange when the key is inserted into the depression, said



flange coöperating with the lug to prevent withdrawal of the key when the button is turned out of locking position.

1,156,531. BOX. FRANK KAYS and ROBERT W. ROGERS, Meridian, Miss. Filed Jan. 15, 1914. Serial No. 812,805. (Cl. 229—23.)



1. A folding box comprising a rectangular piece of material having an integral flap at the center of three of its sides, and having an opening formed adjacent to one of these flaps, and a receptacle inserted through said opening, the open end of which is covered by the adjacent flap, and a fastening means located at one side of the opening to fasten the flap.

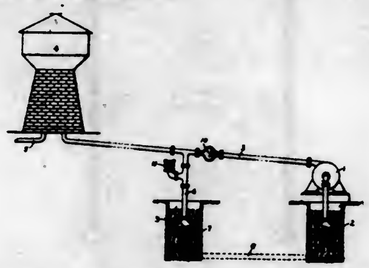
2. A folding box comprising a rectangular piece of material, the rectangular portion having perforations at all four edges, integral flaps formed at the centers of three of the edges, the box folded in alinement with the edges of the flaps and diagonally through the corners between said lines in alinement with the flap edges, means passing through the perforations for securing the box, an opening formed adjacent to the intermediate edge flap, an inner receptacle inserted through said opening, one end of said receptacle secured to the box opposite said opening, and the flaps resulting from the formation of said opening secured to the inner receptacle, two of the edge flaps forming the cover for the box, and the third for the open end of the inner receptacle.

1,156,532. PREVENTING WATER-HAMMER IN PIPES. WALTER KISSEL, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Dec. 8, 1910. Serial No. 596,203. (Cl. 137—71.)

1. The combination with a main pipe, of a pump for forcing liquid therethrough, a branch pipe leading from the main pipe near the pump, a reservoir arranged below the main pipe and to which said branch pipe leads, a check valve in the branch pipe, and a check valve in the main pipe between the branch pipe and the pump.

2. The combination with a pump, of a main delivery pipe through which liquid is forced by the pump, a reservoir arranged below the main pipe, a branch pipe leading

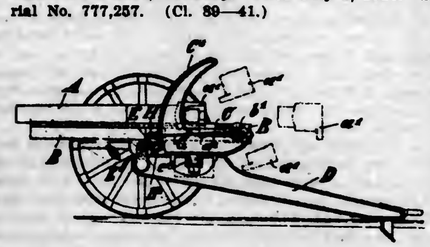
downward from the main pipe adjacent the pump to the reservoir, a check valve in the branch pipe that prevents flow from the main pipe into the reservoir, a check valve in the main pipe between the branch pipe and the pump that prevents flow toward the pump, and a relief valve connected to the branch pipe.



3. The combination with a pump having an inlet pipe and discharge pipe, of means for preventing water hammer in said discharge pipe comprising a branch pipe, a reservoir arranged below the discharge pipe into which the branch pipe leads, check valves in the discharge and branch pipes, and a safety valve on the branch pipe.

4. The combination of a main storage reservoir, a pump, a suction pipe therefor, a discharge main connecting the delivery side of the pump to the main storage reservoir, a check valve in the discharge main which prevents flow in the main toward the pump, an auxiliary reservoir, a branch pipe leading from the discharge main to the auxiliary reservoir, and a check valve in said branch pipe which opens toward the discharge main.

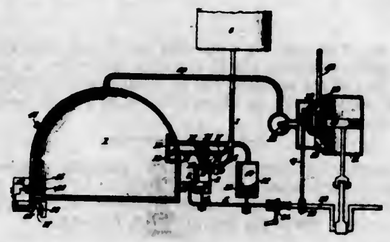
1,156,533. RECOIL-GUN ON WHEELED GUN-CARRIAGE. NORBERT KOCH, Essen-Rellinghausen, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed July 3, 1913. Serial No. 777,257. (Cl. 89—41.)



1. In a wheeled carriage for a recoil gun, having a trail; a top carriage with vertical pivot mounted to rotate on said trail, a slide carrier on which the gun is mounted to recoil, an extension on said slide carrier to the rear of the gun breech, a pair of horisontal trunnions at the rear end of said extension and bearings for said trunnions on the rear end of said top carriage; an elevating gear for elevating said slide carrier with the gun around the axis of said trunnions, said elevating gear comprising an upwardly extending toothed sector carried by the forward end of said top carriage, a pinion in mesh therewith, revolubly mounted on said slide carrier, and driving means for said pinion; a recoil brake for the gun constructed to automatically diminish the length of the recoil when the gun barrel is elevated so that the gun breech cannot strike against the trail sides in any elevation of the gun.

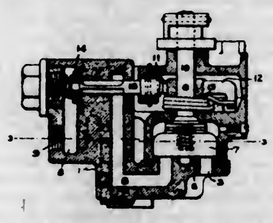
2. In a wheeled carriage for a recoil gun, having a trail; a top carriage with vertical pivot mounted to rotate on said trail, a slide carrier on which the gun is mounted to recoil, an extension on said slide carrier to the rear of the gun breech, a pair of horisontal trunnions at the rear end of said extension and bearings for said trunnions on the rear end of said top carriage; an elevating gear for elevating said slide carrier with the gun around the axis of said trunnions, said elevating gear comprising a toothed sector on said top carriage, a pinion in mesh therewith, revolubly mounted on said slide carrier, a worm gear actuating said pinion, bevel gears and a hand wheel for training said worm and mounted on one of said trunnions; a recoil brake for the gun constructed to automatically adjust the length of the recoil when the elevation of the gun barrel is changed so that the gun breech cannot strike against the trail sides in any elevation of the gun.

1,156,534. HEAT-ENGINE. FRANCIS B. LATADY, Birmingham, Ala. Filed Oct. 14, 1910. Serial No. 587,139. (Cl. 60—37.)



In combination with an expansive engine having a D-valve, a separate combined storage and combustion chamber having a capacity in excess of a single engine charge and operable to ignite the charges of gaseous fuel within said chamber, means for admitting an initial charge of combustible gas, a source of constant supply of combustible gas, a supply pipe leading from said source to the chamber, a pump communicating with said pipe between said source and the chamber, a two-way cut-off valve, a branch pipe between said valve and the supply pipe, check valves between the pump and supply pipe and between the chamber and supply pipe, an air-supplying pump, a main driving shaft connected to the engine, a pump-operating shaft in alinement with the main shaft, a clutch between said shafts, and a crank handle on said pump shaft, substantially as described.

1,156,535. VALVE. BENJAMIN LEWIS, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 29, 1913. Serial No. 781,757. (Cl. 137—26.)



1. A valve casing provided with ports, a passage for admitting fluid to the valve seat and passages from the valve seat to the ports, a rotatable surface valve on the seat for directing the flow of fluid between the desired passages, a puppet valve in the admission passage tending to close this passage, and means for rotating the rotatable valve and for unseating the puppet valve when fluid is to be directed from the admission passage to another.

2. A valve casing provided with ports, a passage for admitting fluid to the valve seat and passages from the valve seat to the ports, a rotatable surface valve on the seat for directing the flow of fluid between the desired passages, a puppet valve in the admission passage tending to close this passage, and a stem for rotating the rotatable valve provided with a cam adapted to engage and unseat the puppet valve when the admission passage is connected to another passage by the rotatable valve.

3. A valve casing provided with ports, a valve seat, an admission passage to the seat and passages between the seat and the ports, a rotatable surface valve on said seat, a stem for rotating said valve provided with a cam surface, a portion of the admission passage extending to opposite the cam on the stem, and a puppet valve in that part of said admission passage with its stem perpendicular to the rotatable valve stem adapted to be engaged by said cam surface.

1,156,536. ILLUMINATING APPARATUS. WILFRID LUMLEY, Conneaut, Ohio, assignor to General Electric Company, a Corporation of New York. Filed Apr. 22, 1913. Serial No. 762,841. (Cl. 240—78.)



1. An illuminating apparatus comprising an inner ring, means for supporting said ring, and an annular inclosure disposed outside of said rig and supported thereby, said support being arranged to allow the ready removal of said inclosure.

2. An illuminating apparatus comprising a plurality of superposed rings joined together, means attached to the uppermost of said rings for supporting the said rings from above, a plurality of superposed inclosure sections surrounding said rings, and means for allowing the ready removal of any one of the said inclosure sections.

3. An illuminating apparatus comprising a plurality of superposed rings joined together, a plurality of superposed inclosure sections surrounding the said rings and supported thereby, and a light source supported by one of said rings.

4. An illuminating apparatus comprising a ring, means for supporting the ring from above, and a pair of superposed inclosure sections surrounding the said ring and having their adjacent ends supported by said ring.

5. An illuminating apparatus comprising a ring, means for supporting the same from above, and a pair of superposed inclosure sections having a space between their adjacent edges and supported at said edges by the said ring.

[Claims 6 and 7 not printed in the Gazette.]

1,156,537. ILLUMINATING APPARATUS. WILFRID LUMLEY, Conneaut, Ohio, assignor to General Electric Company, a Corporation of New York. Filed Apr. 22, 1913. Serial No. 762,842. (Cl. 240—78.)

1. An illuminator comprising an inner ring, an annular inclosure surrounding the said ring and made up of a plurality of overlapping sections, and means carried by the said ring for supporting each of the said sections.

2. An illuminator comprising an inner ring, an annular inclosure surrounding the said ring and made up of a plurality of overlapping sections, and detachable means carried by the said ring for supporting each of the said sections.

3. An illuminator comprising an inner ring, an annular inclosure surrounding the said ring and made up of a plurality of overlapping sections, means carried by the said ring for supporting each of the said sections, and means for preventing the transmission of light at the junction of the said sections.

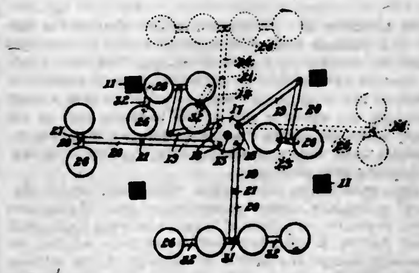
4. An illuminator comprising an inner ring, a pair of superposed inclosure members surrounding the said ring and supported thereby at their adjacent edges, each of said members comprising a plurality of separable sections, and a light source supported within the said inclosure members by the said ring.



5. An illuminator comprising a bowl composed of a number of overlapping pieces of glass, an interior structure for supporting said pieces, and attachment means for securing said pieces to said structure comprising fasteners extending through holes in said pieces and in portions of the supporting structure aforesaid.

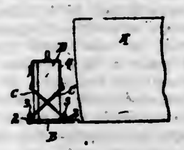
[Claim 6 not printed in the Gazette.]

1,156,538. CHAIR ATTACHMENT FOR TABLES. JACOB MARKOWICS, Arnold City, Pa. Filed Mar. 18, 1915. Serial No. 15,183. (Cl. 45—34.)



The combination with a table top; of a centrally depending shaft carried by the table top, a disk fixed to the shaft in spaced relation below the table top, a link pivoted to said disk at one end, a second link pivoted to the free end of the first link, a third link pivoted intermediate its ends to the remaining end of the second link, seats carried by the ends of the third link, other links pivoted to said seats adjacent their peripheries and seats carried by the remaining ends of the last mentioned links.

1,156,539. BAGGAGE-CARRIER FOR AUTOMOBILES. JAMES B. MARQUIS, Norwich, N. Y. Filed Dec. 5, 1914. Serial No. 875,596. (Cl. 224—29.)

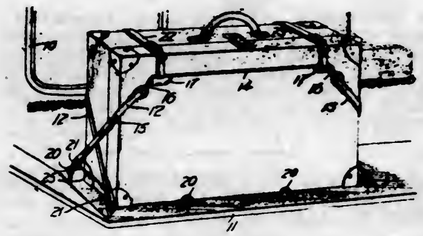


1. A baggage carrier for automobiles having in combination two pairs of eyelets secured to the running board of the automobile, a pair of bails so spaced apart as to receive an article of baggage between them, hooked connections between the bails and the eyelets, and buckle straps connecting the two bails and passing over the article of baggage between the bails.

2. A baggage carrier for automobiles having in combination two pairs of eyelets secured to the running board of the automobile, a pair of crossed bails mounted in the eyelets and adapted to receive an article of baggage between them, and buckle straps connecting the two bails and passing over the article of baggage between the bails.

3. A baggage carrier for automobiles having in combination two pairs of eyelets secured to a suitable support, a pair of crossed bails swingingly mounted in the eyelets and adapted to receive between them an article of baggage one of the bails being slightly smaller than the other so as to project therethrough, and straps connecting the two bails and passing over the article of baggage.

1,156,540. BAGGAGE-CARRIER FOR AUTOMOBILES. JAMES B. MARQUIS, Norwich, N. Y. Filed June 2, 1915. Serial No. 31,720. (Cl. 224—29.)



1. In a vehicle, the combination with a support for baggage, of a baggage carrier comprising a pair of members adapted to receive an article of baggage between them, each member having its ends connected to said support at one side of the baggage and being arranged to pass around and engage the opposite side of the baggage, and an adjustable securing device connecting the two members intermediate their ends and passing over the article of baggage between said members.

2. In a vehicle, the combination with a support for baggage, of a baggage carrier comprising a pair of members adapted to receive an article of baggage between them, each member having flexible inextensible portions adapted to frictionally engage the article of baggage at the corners thereof, each member having its opposite ends flexibly connected to said support, and a flexible adjustable securing device connecting the two members intermediate their ends and passing over the article of baggage between said members.

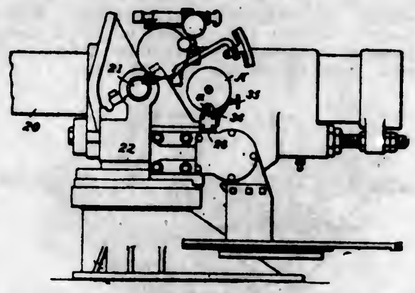
3. In a vehicle, the combination with a support for baggage, of a baggage carrier comprising a pair of bails adapted to receive an article of baggage between them, each bail comprising parts which are readily bendable at the corners of the baggage and adapted to closely engage the article of baggage, means whereby said bails are connected to the support, and an adjustable securing device connecting the two bails intermediate their ends and passing over the article of baggage between them.

4. A baggage carrier for automobiles, comprising the combination of a support for the baggage, a pair of members adapted to receive an article of baggage between them, each member having its ends spaced apart and flexibly connected to said support, each member having flexible portions which closely fit the edges of the baggage at certain points, a link connecting said flexible portions, and an adjustable securing device connecting the members intermediate their ends and passing over the article of baggage between said members.

5. A baggage carrier for automobiles, comprising the combination of a support for the baggage, a pair of crossed members adapted to receive an article of baggage between them, each member having its ends spaced apart and flexibly connected to said support, each member having flexible portions which closely fit the edges of the baggage at certain points, a link connecting said flexible portions and having an eye therein, and an adjustable securing device passing through the eyes of the links and connecting the two members intermediate their ends and passing over the article of baggage between said members.

[Claims 6 and 7 not printed in the Gazette.]

1,156,541. TRAINING AND ELEVATING MECHANISM FOR GUNS. JOHN F. METZ and HERMAN G. JAKOBSON, South Bethlehem, Pa., assignors to Bethlehem Steel Company, South Bethlehem, Pa., a Corporation of Pennsylvania. Filed July 15, 1908. Serial No. 443,700. (Cl. 89—41.)



1. In training mechanism for guns, the combination with a gun and its sighting devices, of a crank shaft mounted in a suitable bearing, and means for adjusting said shaft about an intersecting axis perpendicular thereto.

2. In training mechanism for guns, the combination with a gun and its sighting devices, of a crank shaft mounted in a suitable bearing and provided with two oppositely disposed crank handles, and means for adjusting said crank shaft and bearing about an intersecting axis perpendicular thereto.

3. In training mechanism for guns, the combination with a gun and its sighting devices, of a crank shaft mounted in a suitable bearing and provided with two oppositely disposed crank handles, and means for adjusting said crank shaft and bearing about an intersecting axis perpendicular thereto to vary the planes of movement of the crank handles relatively to the gun.

4. In training mechanism for guns, the combination with a gun and its mount of a drive shaft, a crank shaft connected with the drive shaft by bevel gearing, and means for adjusting the crank shaft about the axis of the drive shaft, whereby its relation to the gun is changed without changing its relation to the drive shaft.

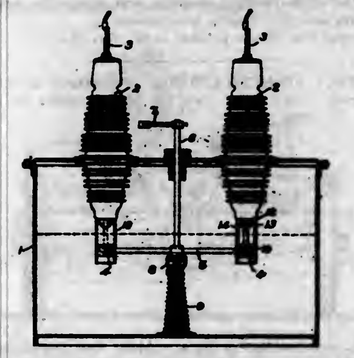
5. In training mechanism for guns, the combination with a gun and its mount of a standard, a drive shaft adapted to turn in said standard, a bracket mounted on said standard and capable of adjustment about the axis of the drive shaft, a crank shaft mounted in said bracket, and gearing connecting said crank shaft and drive shaft.

[Claims 6 to 9 not printed in the Gazette.]

1,156,542. ELECTRIC SWITCH. EZRA B. MERRIAM, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 11, 1915. Serial No. 7,598. (Cl. 175—282.)

1. An electric switch comprising an outer vessel partially filled with oil, an inner arc restraining vessel closed at one end and open at the other end and mounted in said outer vessel with its open end submerged in the oil, and relatively movable coöperating contacts mounted to separate under the oil and draw an arc transverse to the longitudinal axis of said inner vessel.

2. An electric switch comprising a vessel partially filled with oil, an arc restraining bell having an opening in one side and mounted in said vessel with its open end submerged in the oil, a fixed contact in said bell, and a coöperating movable contact of a size to pass through said opening with slight clearance and mounted to move horizontally into and out of said bell through the opening in the side thereof to coöperate with said stationary contact.

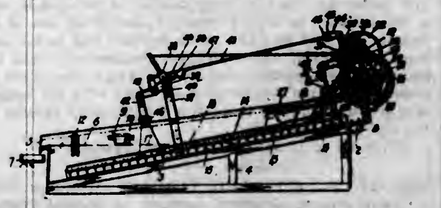


3. An electric switch comprising a vessel partially filled with oil, two insulated terminals extending into said vessel to a point beneath the surface of the oil, an arc restraining bell mounted on but insulated from each terminal, each of said bells having an opening in one side and mounted with its open end submerged in the oil in said vessel, and a horizontal bridging contact mounted to rotate about a vertical axis with its ends of a size to pass through said opening with slight clearance, and in position to pass into and out of the arc restraining bells through the openings in the sides thereof to coöperate with the terminals in said bells.

4. An electric switch comprising a vessel partially filled with oil and having therein a vertical arc restraining chamber with a restricted opening in one wall, said chamber having its upper end closed and its lower end open and normally submerged in the oil in said vessel, and relatively movable coöperating contacts mounted to separate in said vessel and draw a substantially horizontal arc in said chamber, one of said contacts being mounted to move into and out of said chamber through the opening in the wall thereof with slight clearance between said contact and the walls of said opening.

5. An electric switch comprising a vessel partially filled with oil, a plurality of arc restraining bells, each having an opening in one wall thereof and mounted in said vessel with their open ends submerged in oil and their closed ends above the surface of the oil, and relatively movable coöperating contacts mounted to separate in said vessel beneath the oil and draw a substantially horizontal arc, one of said contacts being mounted to traverse said arc restraining bells through the openings in the sides thereof.

1,156,543. ORE-CLASSIFIER. DAVID J. NEVILL, Denver, Colo, assignor to The Dorr Cyanide Machinery Company, Denver, Colo., a Corporation. Filed Jan. 28, 1913. Serial No. 744,644. (Cl. 193—11.)



1. In apparatus of the character described, a reciprocating rake having a pair of slotted hangers, and means for movably suspending said rake, including a pivotally mounted yoke extending loosely in the slots of said hangers.

2. In apparatus of the character described, a three-armed lever, a bell-crank operatively connected with one of said arms, a rake movably suspended from said bell-crank and an other arm of said lever, mechanism for imparting a reciprocating movement to said rake, and a cam coöperative with said mechanism for engagement with the third arm of said lever to move the latter about its fulcrum at determinate points in said movement.

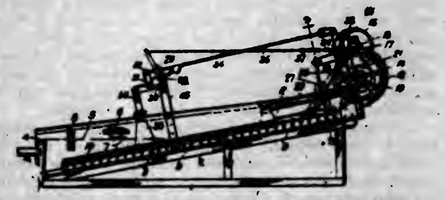
3. In apparatus of the character described, a three-armed lever, a bell-crank, a rake movably suspended from arms of said bell-crank and said lever, a rod connecting the other arm of the bell crank with another arm of said lever, mechanism for imparting a reciprocating movement to said rake, and a cam coöperative with said mechanism for engagement with the third arm of said lever to move the latter about its fulcrum at determinate points in said movement.

4. In apparatus of the character described, a three-armed lever, a bell-crank, a rake movably suspended from arms of said bell crank and said lever, a rod connected at one of its ends with an arm of said bell-crank and longitudinally movably connected at its opposite end with another arm of said lever, mechanism for imparting a reciprocating movement to said rake, and a cam coöperative with said mechanism for engagement with the third arm of said lever to move the latter about its fulcrum at determinate points in said movement.

5. In apparatus of the character described, a three-armed lever, a bell-crank, a rake movably suspended from arms of said bell-crank and said lever, a rod connected at one of its ends with an arm of said bell-crank, a link adjustably attached to the other end of said rod and loosely connected with an other arm of said lever, mechanism for imparting a reciprocating movement to said rake, and a cam coöperative with said mechanism for engagement with the third arm of said lever to move the latter about its fulcrum at determinate points in said movement.

[Claims 6 to 19 not printed in the Gazette.]

1,156,544. ORE-CLASSIFIER. DAVID J. NEVILL, Denver, Colo., assignor to The Dorr Cyanide Machinery Company, a Corporation of Colorado. Original application filed Jan. 28, 1913, Serial No. 744,644. Divided and this application filed June 17, 1914. Serial No. 845,576. (Cl. 83—81.)



1. In an apparatus of the character described, a settling trough having a draining area, and a reciprocating rake comprising longitudinal bars and transverse scraper blades secured thereto, one of said bars having an offset portion over said area whereby the blades adjacent said portion are disposed obliquely with relation to the others.

2. In apparatus of the character described, a draining support, and a reciprocating rake extending thereover, and including a transverse blade the lower edge of which slants toward a side of said support.

3. In apparatus of the character described, a draining support, and a reciprocating rake extending thereover and including a series of transverse blades part of which have their lower edges slant toward a side of said support.

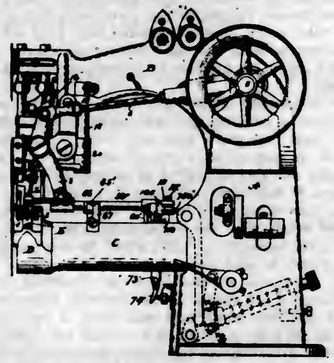
4. In apparatus of the character described, a draining support, and a reciprocating rake extending thereover and including a transverse blade the lower edge of which extends obliquely with relation to a horizontal line intersecting the line of motion.

5. In apparatus of the character described, a draining support, and a reciprocating rake extending thereover and

including a series of transverse blades part of which have their lower edges extending obliquely with relation to a horizontal line intersecting the line of motion.

[Claim 6 not printed in the Gazette.]

1,156,545. SEWING-MACHINE FEEDING AND RUFFLING MECHANISM. LANSING ONDERDONK, New York, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 18, 1903. Serial No. 181,660. (Cl. 112—8.)



1. A blind stitch sewing machine including in combination a work support, a rib carried thereby for crimping the material, a needle reciprocating transversely of said rib, a looper coöperating therewith to form stitches, and a feeding mechanism comprising two feed members located upon opposite sides of a horizontal plane passing through the needle at the stitching point, means for operating said feeding members and means for relatively adjusting the movements thereof to impart differential movements thereto.

2. A blind stitch sewing machine including in combination, a needle, a looper coöperating therewith, means for crimping the material whereby said needle may enter and emerge on the same face of the material, a main feeding mechanism, a supplemental feeding mechanism operated from the main feeding mechanism, and moving forward and backward and upward and downward, and means for adjusting the supplemental feeding mechanism independently of the main feeding mechanism, whereby the movements of the supplemental feeding mechanism may be varied with respect to the main feeding mechanism.

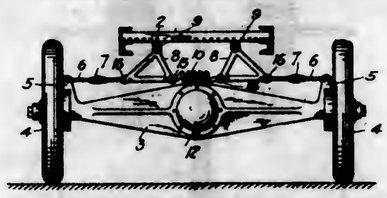
3. A blind stitch sewing machine including in combination, a work support, having feed openings, a crimping ridge located between said feed openings, a needle reciprocating transversely of the line of feed, a looper coöperating with said needle, a main two part lower feed operating through said openings in the work support, and adapted to engage the fabric upon opposite sides of the crimping ridge, and a top feeding device adapted to engage the fabric between the parts of the main feeding device.

4. A blind stitch sewing machine including in combination, a work support having feed openings, a crimping ridge located between said feed openings and carried by the work support, a needle reciprocating transversely of the line of feed, a looper coöperating therewith, a main two part lower feed operating through the openings in said work support and adapted to engage the fabric upon opposite sides of the crimping ridge, a top feeding device adapted to engage the fabric between the parts of the main feeding device, and means for adjusting the throw of the top feeding device independently of the main feeding device, whereby a differential movement may be imparted to the two said feeding mechanisms.

5. A sewing machine including in combination, stitch forming mechanism, a work support having feed openings formed therein, a crimping ridge located between said openings, a main two part feeding mechanism, engaging the material on opposite sides of said crimping ridge through the openings in the work support, a top feeding mechanism including a fabric engaging device bearing upon the ridge forming member, and means for operating the main and top feeding mechanisms.

[Claims 6 to 18 not printed in the Gazette.]

1,156,546. VEHICLE-SPRING. FREDERICK J. PALMER, Denver, Colo. Filed Feb. 10, 1915. Serial No. 7,238. (Cl. 21—50.)



1. In combination with a vehicle, two complementary elements at opposite sides of the longitudinal axis thereof, each comprising a transmission member having a pivotal connection with an axle of the vehicle, and a link having three points for connection, at two of which it is pivotally attached respectively to the said member and to the vehicle body, and a spring attached to the links of the said elements at the third point of the same.

2. In combination with a vehicle, two complementary elements at opposite sides of the longitudinal axis thereof, each comprising a transmission member having a pivotal connection with an axle of the vehicle and a link pivotally suspended from the vehicle body and connected with the member at one side of the vertical passing through its point of suspension, and a spring connected with the links of the said elements at points at the sides of their said verticals opposite to those at which the transmission members are connected.

3. In combination with a vehicle, two complementary elements on opposite sides of the longitudinal axis thereof, each comprising a link pivoted to the vehicle body, an arm extending laterally from an axle of the vehicle, and a transmission member pivotally connected at one of its ends to the said link and at its opposite end to the said arm, and resilient means yieldingly maintaining said elements in their normal condition in which they support the vehicle body in substantially parallel relation to the said vehicle axle.

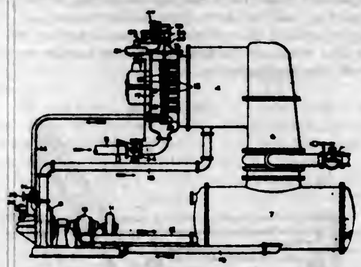
4. In combination with a vehicle, two complementary elements on opposite sides of the longitudinal axis thereof, each comprising a link pivoted to the vehicle body, an arm extending laterally from an axle of the vehicle, and a transmission member pivotally connected at one of its ends to the said link and at its opposite end to the said arm, and a spring connecting said elements at points normally in a plane with the points of connection of the transmission members with the respective arm and link.

5. In combination with a vehicle, two complementary elements on opposite sides of the longitudinal axis thereof, each comprising a link pivoted to the vehicle body, an arm extending laterally from an axle of the vehicle, and a transmission member pivotally connected at one of its ends to the said link and at its opposite end to the said arm, and resilient means yieldingly maintaining said elements in their normal condition in which the points of connection of the transmission elements with the respective arm and link are in a plane substantially parallel to the axis of the said axle.

[Claims 6 to 11 not printed in the Gazette.]

1,156,547. ELASTIC-FLUID TURBINE. WILHELM PAPE, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Apr. 2, 1915. Serial No. 19,044. (Cl. 121—118.)

1. In combination, a main turbine, an auxiliary turbine exhausting into an intermediate stage of the main turbine, means responsive to the speed of the main turbine for regulating the supply of elastic fluid thereto, and means responsive to both the speed of the main turbine and to the speed of the auxiliary turbine for regulating the supply of elastic fluid to the auxiliary turbine.



2. In combination, a main turbine, an auxiliary turbine exhausting into an intermediate stage thereof, a speed governor responsive to the speed of the main turbine, valve mechanism operated thereby for controlling the admission of elastic fluid to both turbines, a speed governor responsive to the speed of the auxiliary machine, and valve mechanism operated thereby for controlling the admission of elastic fluid to the auxiliary machine.

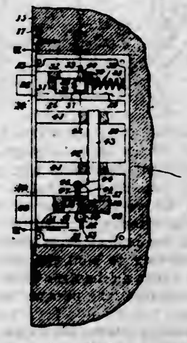
3. In combination, a main turbine, an auxiliary turbine exhausting into an intermediate stage thereof, valve means controlling the admission of elastic fluid to the main turbine, valve means controlling the admission of elastic fluid to the auxiliary turbine, a speed governor responsive to the speed of the main turbine and connected to both said valve means and arranged to operate first the valve means of the auxiliary turbine and then that of the main machine, a second valve means controlling the admission of elastic fluid to the auxiliary turbine, and a governor therefor responsive to the speed of the auxiliary machine.

4. In combination, a main turbine, an auxiliary turbine having its exhaust connected to an intermediate stage thereof, and a governor responsive to the speed of the main turbine for controlling the supply of elastic fluid to both turbines.

5. In combination, a main turbine, an auxiliary turbine having its exhaust connected to an intermediate stage thereof, a governor responsive to the speed of the main turbine for controlling the supply of elastic fluid to both machines, and a governor responsive to the speed of the auxiliary turbine for controlling the supply of elastic fluid to it alone.

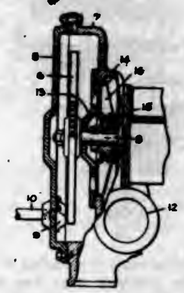
[Claims 6 and 7 not printed in the Gazette.]

1,156,548. COMBINED DOOR LATCH AND LOCK. JOHN PERICH, Logan, W. Va. Filed Mar. 1, 1915. Serial No. 11,189. (Cl. 70—29.)



A device of the class described, comprising a casing, a locking bolt slidably mounted within said casing provided with a single slot extending from side to side thereof, vertically sliding tumblers adapted to having their lower ends engaged in the single slot, and interlock with said bolt and being arranged in parallelism, lugs carried by said tumblers and being arranged in different horizontal planes, and a key having wards of different lengths adapted to engage said lugs to simultaneously remove the tumblers from engagement with the bolt.

1,156,549. ELASTIC-FLUID TURBINE. EDWARD C. PERRY, Jr., West Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Apr. 9, 1914. Serial No. 830,805. (Cl. 121—118.)



1. The combination in a turbine, of a casing, a bucket wheel therein, a nozzle for supplying motive fluid to the wheel, an exhaust conduit, and means forming a restricted passage for conveying motive fluid from the casing to the conduit, which passage is of such area as to maintain the pressure in the casing above that in the exhaust conduit.

2. The combination in a turbine, of a casing, a bucket wheel therein, a nozzle for supplying motive fluid to the wheel, and a restricted exhaust opening in the casing the area of which bears a definite relation to the nozzle area and is such that with normal admission pressure within the casing will be slightly above that outside the same.

3. The combination in a turbine, of a casing, a bucket wheel therein, a nozzle for supplying motive fluid to the wheel, and an exhaust conduit, said casing having a series of openings therethrough forming a restricted passage for motive fluid from the casing to the exhaust conduit said openings being of such area and bearing such relation to the nozzle area that with normal admission pressure the pressure in the casing is above that outside the same.

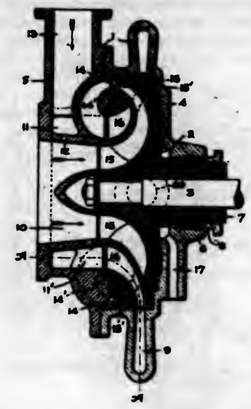
4. The combination in a turbine, of a casing, a shaft, a bucket wheel carried by the shaft within the casing, a nozzle for supplying motive fluid to the wheel, said casing having a restricted exhaust opening the area of which bears a definite relation to the nozzle area, and an impeller wheel mounted on said shaft outside the casing and adjacent the exhaust opening, said impeller wheel having its vanes reversely arranged to the buckets of the turbine wheel.

5. The combination in a turbine, of a casing, a shaft projecting into the casing, a bucket wheel mounted on the shaft within the casing, means for supplying motive fluid to the wheel, an exhaust conduit, said casing having a series of openings therethrough forming a restricted passage for motive fluid from the casing to the exhaust conduit, and an impeller wheel mounted on said shaft outside the casing and adjacent said openings, the vanes of said impeller wheel being reversely arranged to the buckets of the turbine wheel.

1,156,550. CENTRIFUGAL THROWING-PUMP. ALFRED PETER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Feb. 27, 1914. Serial No. 819,270. (Cl. 230—14.)

1. A centrifugal throwing pump having a vapor suction chamber, an impeller provided with a plurality of sets of vanes through which the liquid is successively fed, and

means for feeding the liquid from one of said sets to another in the form of slugs or pellets, said means comprising a plurality of spaced nozzles, the passages between which are in communication with the vapor suction chamber.



2. A centrifugal throwing pump having a vapor suction chamber, an impeller provided with two sets of vanes through which the liquid is successively fed, and means for feeding the liquid from the first set to the second set in the form of slugs or pellets, said means comprising a plurality of spaced nozzles, the passages between which are in communication with the vapor suction chamber.

3. A centrifugal throwing pump having a vapor suction chamber, an impeller provided with two sets of vanes through which the liquid is successively fed, and spaced passages for directing the liquid from the first set to the second set, the spaces between said passages communicating with said suction chamber.

4. A centrifugal throwing pump having an inlet opening for connection to the supply of active fluid, a second inlet opening for connection with the chamber from which fluid is to be drawn, an impeller having two sets of vanes, one set being in communication with the first inlet opening to receive active fluid therethrough, and the second set being in communication with the second inlet opening, and means for directing the active fluid from the first set of vanes to the second set.

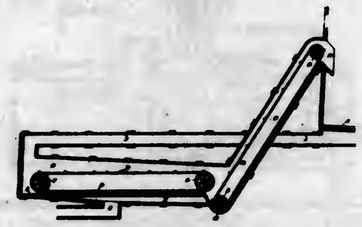
5. A centrifugal throwing pump having a centrally located inlet opening for connection to the supply of active fluid, a vapor suction chamber surrounding said opening, a second inlet opening leading to the vapor suction chamber, an impeller having two sets of vanes, one set being in communication with the first named inlet opening, and the second set being in communication with the vapor suction chamber, and spaced directing nozzles having their inlet ends alined with the discharge ends of the first set of vanes, and their outlet ends alined with the inlet ends of the second set of vanes whereby such nozzles act to direct the active fluid from the first set to the second set of vanes.

[Claim 6 not printed in the Gazette.]

1,156,551. WASTE-SULFITE-LIQUOR SAVE-ALL. JACOB C. POLLANZ, Oregon City, Oreg. Filed Mar. 29, 1915. Serial No. 17,794. (Cl. 92—30.)

1. In a save-all for waste sulfite liquor, the combination with a blow-pit, of a drain from the blow-pit bottom, a screening chamber, with flat screen plates arranged therein on an inclined plane, means for removing the fiber from the top of the screen plates, which consists of a moving endless chain with suitable floats attached thereto, an endless carrier to convey the screened fibers back to the blow-pit and a drain at the bottom of said screening chamber to carry off the waste liquor.

2. In a save-all for waste sulfite liquor, the combination with several blow-pits, of drains from the bottom of each blow-pit, a screening chamber, with flat screen plates arranged therein on an inclined plane, means for scraping the deposited fiber from said screen plates, which consists of a moving endless chain with floats thereon, an endless carrier to convey the screening back to one of the blow-pits, and a drain at the bottom of said screen chamber to carry off the waste liquor.

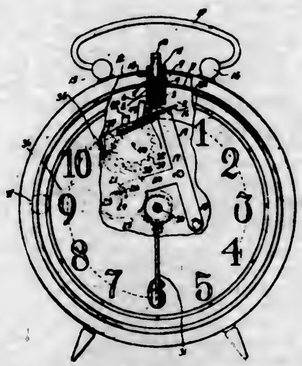


3. In a save-all for waste sulfite liquor, the combination with a blow-pit, of a drain from the bottom of the blow-pit, a screening chamber, means for scraping the fiber off the screen plates and a carrier to convey the fiber from the screening chamber.

4. In a save-all for waste sulfite liquor, the combination of a drain from the blow-pit bottom, a screening chamber with screen plates therein arranged on an inclined plane, means for scraping the deposited fiber from the screen plates and a carrier to take the recovered fiber from the screen chamber.

5. The method of reclaiming fibers from waste sulfite liquor by a continuous system which consists of draining the waste liquor from the blow-pit through a screen chamber and returning the recovered fiber to a blow-pit.

1,156,552. EIGHT-DAY ALARM-CLOCK. WILSON E. PORTER, New Haven, Conn., assignor to New Haven Clock Co., New Haven, Conn., a Corporation. Filed June 19, 1914. Serial No. 846,202. (Cl. 58—17.)

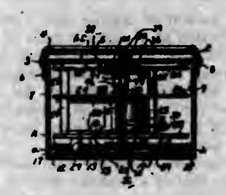


1. In an eight-day alarm clock, the combination with a time-mechanism, of an alarm-mechanism having a stop-member, a combined alarm-stop and alarm let-off lever operated by the said time-mechanism, and a plunger directly engaging the said lever for moving the same into position for being directly engaged by the said stop-member for stopping the said alarm-mechanism, the said lever and plunger co-acting to hold the said lever in position to restrain the alarm-mechanism until the lever is automatically released from the plunger by the action of the time-mechanism.

2. In an eight-day alarm clock, the combination with the case thereof, of a clock-movement comprising time and alarm-mechanisms, the latter having a stop-member, of a combined alarm-stop and alarm let-off, lever, means for operating the same periodically by the time mechanism, a plunger mounted in the said case in position to directly engage the said lever for moving the same into position for being directly engaged by the said stop-member for stopping the alarm-mechanism and hence the alarm, the said plunger and lever co-acting to hold the lever in its alarm-restraining position until the said lever is automatically released from the said plunger by the time-mechanism.

3. In an eight-day alarm clock, the combination with the clock case, of time and alarm mechanisms, the latter including an alarm-wheel provided with an alarm-cam and operating cone, a lever adapted to be moved in one direction by the said cone, a spring for moving the lever in the opposite direction, a plunger connected with the clock case and provided with a conical head for co-action with the lever which is moved by the said head into its alarm-stop position and which is released from the said head by the action of the time mechanism.

1,156,553. RIM-WINDING CLOCK. WILSON E. PORTER, New Haven, Conn., assignor to New Haven Clock Co., New Haven, Conn., a Corporation. Filed Sept. 5, 1914. Serial No. 860,472. (Cl. 58—46.)



1. In a rimless clock, the combination with the winding-and-setting trains thereof, of a rotary and laterally movable winding-and-setting rim, an internal gear rotated by the said rim and normally in mesh with the winding train, a longitudinally movable and rotary transmission-shaft movable into its setting position by the lateral movement of the said rim and provided at one end with a wheel meshing into the said internal gear and its opposite end with a wheel for co-action with the setting train.

2. In a rimless clock, the combination with the winding-and-setting trains thereof, of a rotary and laterally movable winding-and-setting rim, an internal gear connected with the said rim and rotated thereby, a longitudinally movable and rotary transmission-shaft movable into its setting position by the lateral movement of the said rim and provided at one end with a wheel constantly meshed into the said internal gear, and at its opposite end with an intermediate setting-wheel having yielding connection with it and co-acting with the setting train when the shaft is moved into its setting position.

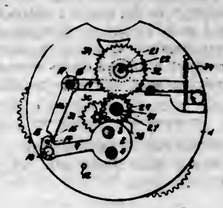
3. In a rimless clock, the combination with the winding-and-setting trains thereof, of a rotary and laterally movable winding-and-setting rim, an internal gear rotated by the said rim and normally in mesh with the winding-train, a longitudinally movable and rotary transmission-shaft provided at one end with an operating disk engaged by the teeth of the internal gear, whereby the shaft is moved into its setting position upon the lateral movement of the said rim, and the said shaft being provided at one end with a wheel constantly meshing into the said gear, and at its opposite end with a wheel for co-action with a setting-train but normally cleared therefrom.

4. In a rimless clock, the combination with the winding-and-setting trains thereof, of a rotatable and laterally movable winding-and-setting rim, an internal gear connected with the rim and rotated thereby, a spring for maintaining the internal gear normally in mesh with the winding-train, a longitudinally movable and rotary transmission-shaft provided at one end with a wheel meshing into the said internal gear, and at its opposite end with an intermediate setting-wheel movable into and out of mesh with a member of the setting-train, means whereby the rim when moved laterally, moves the said shaft longitudinally from its winding to its setting position, a spring for holding the said shaft in its normal retired position, and a spring for holding the said wheel in its normal position upon the said shaft.

5. In a rimless clock, the combination with an outer and inner shell, of a rotary and laterally movable winding-and-setting rim mounted upon the forward end of the said inner shell, an internal gear located within the rear end of the said inner shell, a spring connected with the back of the outer shell and engaged with the rear end of the inner shell for holding the latter in its retracted position within the former, winding-and-setting trains, the former being normally in mesh with the said gear, and a transmission-shaft normally in mesh with the said gear and longitudinally moved thereby to connect the shaft with the setting-train at which time the said gear is demeshed from the winding-train.

[Claim 6 not printed in the Gazette.]

1,156,554. ALARM-CLOCK. WILSON E. PORTER, New Haven, and FRANK S. CORNWELL, Woodmont, Conn., assignors to New Haven Clock Co., New Haven, Conn., a Corporation. Filed July 2, 1915. Serial No. 37,724. (Cl. 58—17.)



1. In an eight-day alarm clock, the combination with the time- and alarm-mechanisms thereof, of an indicator connected with the said mechanisms and operated thereby, whereby the indicator is gradually moved by the time-mechanism in one direction throughout an alarm-interval of twenty-four hours and tripped at the termination of the said twenty-four hour alarm-interval by the alarm-mechanism.

2. In an eight-day alarm clock, the combination with the time- and alarm mechanisms thereof, of a semaphore gradually moved in one direction throughout an alarm-interval of twenty-four hours by the time-mechanism and tripped at the end of the said twenty-four hour alarm-interval by the alarm-mechanism, whereby the position at any given time of the alarm-mechanism with respect to the time of tripping is indicated by the semaphore.

3. In an eight-day alarm clock, the combination with the time- and alarm-mechanisms thereof, of a dial having a sight-opening, a semaphore located directly back of the said sight-opening and provided upon its outer face with means to indicate the two twelve-hour phases of a twenty-four hour alarm-interval, and means connecting the said idicator with the said time- and alarm-mechanisms, whereby the indicator is gradually moved throughout a twenty-four hour alarm-interval by the time-mechanism and tripped at the end of the said interval by the alarm-mechanism.

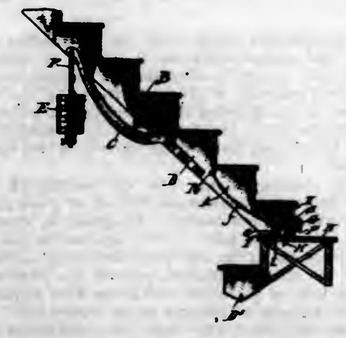
4. In an eight-day alarm clock, the combination with the time- and alarm-mechanisms thereof, of a dial having a sight-opening, a semaphore located back of the said sight-opening and provided upon its face with two spots located one above the other, and connection between the said semaphore and the time- and alarm-mechanisms, whereby the semaphore is gradually moved in one direction throughout a twenty-four hour alarm-interval and tripped at the end of the said interval by the alarm-mechanism.

1,156,555. FRICTION-CLUTCH. SAMUEL W. RHOADS, Farmington, Ill. Filed Oct. 23, 1914. Serial No. 868,343. (Cl. 192—13.)



In a device of the class described, a shaft, a drum member rotatable at times in connection with said shaft, a carrying disk rigidly connected upon said shaft, a plurality of clutch shoe members eccentrically pivoted to said carrying disk, pivot pins for the clutch shoes, their friction surfaces concentric with the friction surface of the drum member, spring members connected with the disk and with each of said clutch shoes for holding the latter normally out of frictional contact with the drum member, lever members pivoted intermediate their ends upon the pivot pins for the clutch shoes, said lever members provided with portions at their outer ends to engage the free ends of the clutch shoes, and their inner ends extending into proximity to the shaft, a shiftable member on the shaft provided with a cone portion adapted to engage and shift the lever members to effect the movement of the clutch shoes in contact with the drum member and a suitable lever for moving said shiftable member lengthwise of said shaft.

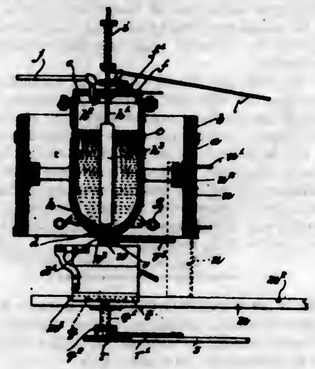
1,156,556. AUTOMATIC STAIR-DOOR. WILLIAM F. RODGERS, St. Louis, Mo. Filed Jan. 20, 1915. Serial No. 3,390. (Cl. 20—10.)



A landing, stairs overlying each other and leading upwardly and downwardly therefrom, a counterbalanced hinged door section comprising several of the lowermost steps of the upper flight of stairs, said door having a spring catch located in the lowermost riser and engaging the landing to lock the door section, and said catch having means connected therewith readily operable by the foot from one side of the riser and having other means extending out a substantial distance over the stairs leading down and operable therefrom.

1,156,557. ART OR METHOD OF AND APPARATUS FOR CASTING FLUID METALS. OLIVER G. SANDAGE, New York, N. Y., assignor of two-thirds to Doehler Die Casting Company, a Corporation of New York. Filed Aug. 1, 1913. Serial No. 782,396. (Cl. 22—200.)

1. An art or method of casting fluid metals embodying therein the subjection of a confined mass of molten metal contained in a bottom pour melting pot to fluid under pressure, thereafter permitting a small portion of the molten metal to flow downwardly through the outlet port of said melting pot and into a mold under such pressure and thereafter simultaneously closing said port and forcing the metal therein outwardly of said melting pot.



2. An art or method of casting fluid metals embodying therein the subjection of a confined mass of molten metal contained in a bottom pour melting pot to fluid under pressure, permitting said air or gas to expand by permitting the molten metal to flow through the outlet port of said melting pot into a mold and thereafter simultaneously closing said port and forcing the metal therein outwardly of said melting pot.

3. An art or method of casting fluid metals embodying therein the subjection of a confined mass of molten metal contained in a bottom pour melting pot to fluid under pressure, thereafter permitting a small portion of the molten metal to flow downwardly through the outlet port of said melting pot and into a mold under such pressure, simultaneously closing said port and forcing the metal therein outwardly of said melting pot, and relieving the pressure within said melting pot.

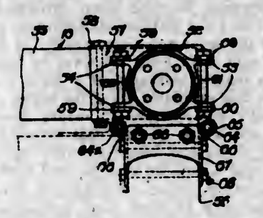
4. An art or method of casting fluid metals, embodying therein the fusion of a mass of metal in a bottom pour melting pot by a flame directed adjacent the outlet port of said pot, normally confining said metal within said pot, subjecting the entire mass of molten metal while so confined to fluid under pressure, thereafter permitting a small portion of the molten metal to flow downwardly through the outlet port of said melting pot and into a mold under such pressure and thereafter simultaneously closing said port and forcing the metal therein outwardly of said melting pot.

5. An art or method of casting fluid metals, embodying therein the fusion of a mass of metal in a bottom pour melting pot by a flame directed adjacent the outlet port of said pot, normally confining said metal within said pot, subjecting the entire mass of molten metal while so confined to fluid under pressure, thereafter permitting a small portion of the molten metal to flow downwardly through the outlet port of said melting pot and into a mold under such pressure, simultaneously closing said port and forcing the metal therein outwardly of said melting pot, and relieving the pressure within said melting pot.

[Claims 6 to 20 not printed in the Gazette.]

1,156,558. DERRICK. MICHAEL J. SAEGEN, Chicago Ill., assignor to Saegen Derrick Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 23, 1913. Serial No. 808,360. (Cl. 212—61.)

1. In a derrick, the combination of a base, a mast extending from the base, a boom extending from the mast, a freely detachable connection between the boom and mast, companion horizontally disposed removable members lying at opposite sides of the mast for locking the mast to the base, said members extending in the same direction, one of said locking members serving, when the other locking member is removed, as a pivot about which the mast is swung into folded condition upon the base, substantially as described.



2. In a derrick, the combination of a base, a mast extending from the base, a boom extending from the mast, a freely detachable connection between the boom and mast, companion sets of ears on the base, companion sets of ears on the lower end of the mast, said latter ears being arranged to aline with the ears on the base and a horizontally disposed removable locking member passing through each alined set of ears, said members extending in the same direction, one of said locking members serving, when the other locking member is removed, as a pivot about which the mast is swung into folded condition upon the base, substantially as described.

3. In a derrick, the combination of a base, a mast extending from the base, a boom extending from the mast, said base comprising members arranged at right angles to one another and companion oppositely disposed parallelly extending members arranged at the juncture of the base, members for locking said base members together, one of said locking members serving, when the other locking member is removed, as a pivot about which one of said base members is swung into parallel relation with the other base member, substantially as described.

4. In a derrick, the combination of a base, a mast extending from the base, a boom extending from the mast, said base comprising right angled members, an end piece one each of said base members, each of said end pieces being formed with oppositely disposed apertured ears, the ears on one member being arranged to aline with the ears on the other member when said members are in angled relation, and a removable member passing through the apertures of each set of alined ears and acting as locking members, one of said locking members serving, when the other locking member is removed, as a pivot about which one of said base members is swung into parallel relation with the other base member, substantially as described.

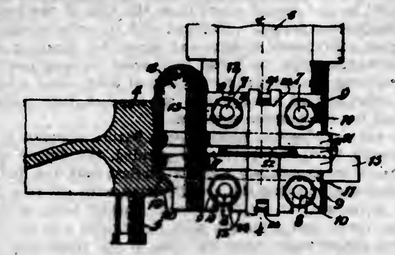
5. In a derrick, the combination of a mast having a longitudinal bore therethrough, a boom extending from the mast, a drum lying on the under side of the boom, a sheave frame on the outer end of the boom, said frame being arranged to simultaneously receive a lower and upper sheave, said lower sheave being adapted to receive a cable passing to the drum, and said upper sheave being adapted to receive a cable passing to the bore in the mast, substantially as described.

[Claim 6 not printed in the Gazette.]

1,156,559. GUARD FOR TURNING-MACHINES. ROBERT L. SHANNON, McKees Rocks, Pa., assignor of one-half to Edward McFarland, McKees Rocks, Pa. Filed May 6, 1914. Serial No. 836,765. (Cl. 82—34.)

1. A guard for boring machines comprising a vertically disposed elongated semi-cylindrical hollow guard member, a support therefor, a tool carrier and means for detachably connecting said support with the tool carrier to position the guard in close proximity to one side of the work and the cutting end of the tool.

2. A guard for turning machines comprising a hollow vertical elongated guard member, a support therefor, a tool carrier and means carried by the support for detachably connecting the latter with the tool carrier to position the said member in close proximity to one side of the work and cutting end of the tool.



3. A guard for turning machines comprising a guard member, a support therefor, a bar connected with said support, and means carried by the bar and capable of engaging with the tool carrier for detachably securing said member to said carrier and further for maintaining the member in proximity to the work and the cutting end of the tool.

4. A guard for machines comprising a guard member, a support therefor, a bar connected with said support, a tool carrier arranged on said support, means carried by the bar and engaging with the tool carrier for detachably securing said member to said carrier and further for maintaining the member in proximity to the work and the cutting end of the tool, and a handle for said support.

1,156,560. INCANDESCENT-ELECTRIC-LAMP FIXTURE. ELDA G. SMITH and FLORIAN J. MANTEL, Syracuse, N. Y., assignors to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed Apr. 24, 1911. Serial No. 622,899. (Cl. 240—7.)



1. An incandescent electric lamp fixture adapted to be supported by a wall having an opening, the fixture comprising a support for the lamp movable for carrying the lamp out of and into the opening, and having an additional movement for centering the lamp relatively to such opening, substantially as and for the purpose set forth.

2. An incandescent electric lamp fixture adapted to be supported by a wall having an opening, the fixture comprising a support for the lamp movable for carrying the lamp out of and into such opening, said support also having additional movement for centering the lamp relatively to such opening when the lamp is moved relatively to the opening, said support being arranged to move about axes located on opposite sides of the opening, and the lamp being carried in front of a straight line passing through such axes, substantially as and for the purpose described.

3. An incandescent electric lamp fixture adapted to be supported by a wall having an opening, the fixture comprising a frame movable about an axis and including a

support for the lamp, said support being pivoted to the frame and extending in a radial direction relatively to the axis of the frame and being arranged with its pivotal axis parallel to and spaced apart from the axis of the frame, the supporting normally arranged with its outer margin in advance of its inner margin, and means for engaging said outer margin when the frame approaches its open position and causing the support to fulcrum at such outer margin and effect pivotal movement of the support, substantially as and for the purpose specified.

4. An incandescent electric lamp fixture adapted to be supported by a wall having an opening, the fixture comprising a frame movable about a vertical axis and having means for supporting the electric lamp with its axis parallel to the axis of the frame, said support being pivoted to the frame and arranged with its pivotal axis parallel to and spaced apart from the axes of the frame and the lamp, and having its outer margin normally arranged in advance of its inner, means for engaging said outer margin when the frame approaches its open position and causing the support to fulcrum at such outer margin and effect pivotal movement of the support about its fulcrum point, substantially as and for the purpose set forth.

5. An incandescent electric lamp fixture adapted to be supported by a wall having an opening, the fixture comprising a frame movable about an axis and including a support for the lamp, said support being pivoted to the frame and extending in a radial direction relatively to the axis of the frame and being arranged with its pivotal axis parallel to and spaced apart from the axis of the frame, the support being normally arranged with its outer margin in advance of its inner margin, means for engaging said outer margin when the frame approaches its open position and thereby causing the support to fulcrum at such outer margin, and effect pivotal movement of the support, when the frame approaches its open position, and means for restraining movement of the outer margin of the support during the initial part of the closing movement of the frame, substantially as and for the purpose described.

[Claims 6 to 19 not printed in the Gazette.]

1,156,561. RUBBER-PRESERVATIVE COMPOSITION. SAMUEL T. SMITH, Blue Island, Ill. Filed Jan. 16, 1914. Serial No. 812,429. (Cl. 134—1.)

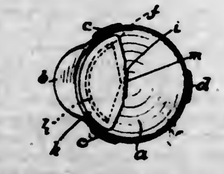
1. A rubber preservative compound comprising in combination cocoa-butter, castor-oil and gasolene.

2. In a rubber preservative compound, the combination of cocoa-butter, castor-oil and gasolene in substantially the proportions of two ounces to two quarts to one quart respectively of said ingredients.

3. In a rubber preservative compound, the combination of cocoa-butter, castor oil and a volatile detergent in proportions substantially as described.

4. In a rubber preservative compound the combination of a material of cocoa butter like characteristics, a material of castor oil like characteristics and a volatile detergent in proportion substantially as described.

1,156,562. BOTTLE-CLOSURE. OTTO SPAHR, Philadelphia, Pa. Filed Dec. 19, 1914. Serial No. 878,029. (Cl. 215—34.)



1. A bottle cap or closure comprising a disk, a laterally extending upwardly inclined spout extending along the edge of the disk for a distance substantially greater than the width of the spout measured radially of the disk, the disk back of said spout being cut away to form a pouring orifice opposite ends of which extend substantially beyond radii of the disk between which the entire spout is contained, and a movable gate for said orifice.

2. A bottle cap or closure comprising a disk, a laterally extending upwardly inclined spout extending along the edge of the disk for a distance substantially greater than the width of the spout measured radially of the disk, the disk back of said spout being cut away to form a pouring orifice whose length, measured at a right angle to that radius of the disk extending along the center of the spout, is substantially greater than its width measured along said radius, and whose opposite ends extend substantially beyond radii of the disk between which the entire spout is contained, and a movable gate for said orifice.

3. A bottle cap or closure comprising a disk, a laterally extending upwardly inclined spout projecting from the disk, there being a pouring orifice in the disk back of the spout, a downwardly bent lip along the front wall of said orifice, two downwardly extending carved flanges beyond and adjacent to opposite ends of the spout and located opposite the ends of said orifice, the semi-circumference of the disk opposite the spout having a flanged portion of less strength than the first mentioned flanges, whereby when the said disk is applied to a bottle neck with the flanged portion thereof engaging the outer wall thereof, the lip will be held firmly against the inner wall of the bottle neck.

4. A bottle cap or closure comprising a disk, there being a pouring orifice in the disk and a slot adjacent to the pouring orifice, a spout projecting from the disk in front of the pouring orifice, a swinging gate for said orifice, and a weighted flange on the gate extending through the slot and adapted to effect the opening of the gate when the bottle is tilted toward a horizontal position.

5. A bottle cap or closure comprising a disk, a laterally extending upwardly inclined spout whose length, measured along the edge of the disk, is substantially greater than its width measured radially of the disk, the disk between its center and the spout being cut away to form a pouring orifice whose length, measured at a right angle to that radius of the disk extending along the center of the spout, is substantially greater than its width measured along said radius and approximates the length of the spout, and a downwardly bent lip along the front wall of said orifice adapted for engagement with the inside of the rim of the bottle neck.

1,156,563. MACHINE FOR WASHING PRINTERS' FURNITURE. FREDERICK W. STEINER, Chicago, Ill. Filed Dec. 3, 1914. Serial No. 875,281. (Cl. 101—52.)



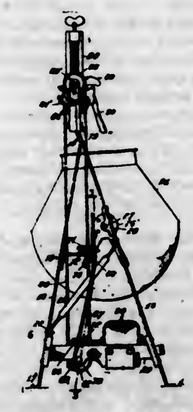
1. A machine of the character described comprising a perforate drum; a closed casing structure, upon which the drum is mounted; a semi-cylindrical tray for containing a detergent mounted within said structure below the drum and means for relatively moving said tray and drum to include the lower portion of the drum within the tray.

2. A Machine of the class described comprising a three wall structure, open at one side; a door for closing said side opening; a cover for closing the open top end of the structure; a perforate drum, mounted in said open end; a tray for containing a detergent normally at the bottom end of said structure; means to raise the tray to encompass part of said drum and means, operable by said cover to close the side door.

3. A machine of the character described comprising a three wall structure, open at one side; two doors hinged on opposite sides of the opening for closing said opening; a cover for closing the open top end of the structure; a perforate drum mounted in said open end; a tray for containing a detergent normally at the bottom end of said structure; means to raise the tray to encompass part of said drum; means to hold the tray in elevated position; means operable by said cover to close the side doors when the cover is lowered and a spring to open the doors when the cover is raised.

4. In a machine of the character described, a drum comprising end disks and a circumferentially extending perforate sheet metal wall; a lining of softer material for said wall having perforations registering with those of the sheet metal wall; a door for said drum comprising a portion of the wall of said structure slidable axially to open same; a shaft upon which said drum is adapted to be rotated and means to rotate said drum.

1,156,564. GEARING. CARL W. SWANSON, Chicago, Ill. Filed Mar. 8, 1912. Serial No. 682,401. (Cl. 74—14.)



1. In a device of the character described, a frame; a part to be driven at will mounted therein; a power appliance adapted to be constantly run; means, including a clutch movable "in" and "out", to operatively connect and to disconnect said part-to-be-driven and the power appliance; clutch-shifting means; and a latch for holding said part-to-be-driven at rest, coöperating also with the clutch-shifting means, said latch restrained by the clutch-shifting means against movement to latching position when the clutch-shifting means is in clutch-"in" position, and said latch when in latching position restraining said clutch-shifting means against movement to clutch-"in" position.

2. In a device of the character described, a frame; a part to be oscillated at will mounted therein; a power appliance for moving it adapted to be constantly run; means, including a clutch movable "in" and "out" operatively to connect and to disconnect, respectively, said oscillatable part and the power appliance; a clutch-shifting lever; and an oscillating latch coöperating with said oscillatable part and said clutch-shifting lever, and having parts to simultaneously lock said lever in clutch-"out" position and the oscillatable part in stationary position, said latch restrained by said clutch-shifting lever against movement to locking position when the lever is in clutch-"in" position.

3. In a device of the character described, a frame; a part to be oscillated at will mounted therein; a power appliance for moving it adapted to be run constantly; means including a clutch movable "in" and "out" operatively to connect and to disconnect, respectively, said oscillatable part and said power appliance; a clutch-shifting lever; a latch-receiving part on said oscillatable part; an oscillatable latch carried by the frame, and disposed at an angle to the plane of movement of said latch-receiving part, said latch having a nose thrown into or out of latching position by oscillation of the latch, means for cooperating with the lever, when the latter is in clutch-"out" position to prevent movement of said lever to clutch-"in" position, and means for coöperation with said lever to prevent movement of the latch to latching position when the lever is in clutch-"in" position.

4. In a device of the character described, a frame provided with brackets, a part to be oscillated, a plate secured upon each end thereof and provided with trunnions for engagement in said brackets to support said parts for oscillation in the frame, one of said plates provided with a radial arm, spring-engaging means upon the end of said arm, a lever pivoted on the trunnion, said lever being shorter than the arm of the plate, spring engaging means on the end of the lever, a laterally resilient spring secured between the arm and lever normally holding said arm and lever parallel, and means to oscillate the lever for oscillation of the oscillatable part through the agency of said spring.

5. In a device of the character described a part to be oscillated, a power driven element, and means to connect said part and power element comprising a shaft, clutch means to connect the shaft and power element, a lever pivoted coaxially with said part, a spring connected between the end of said lever and a point of said part spaced from the axis thereof, and connections between the lever and the shaft for oscillation of said part through the spring and lever, said connections including a yielding pitman.

[Claims 6 to 11 not printed in the Gazette.]

1,156,565. FASTENING DEVICE FOR PACKAGES. WILLIAM T. TIMMERMAN, New York, N. Y. Filed Apr. 18, 1914. Serial No. 832,764. (Cl. 24—30.5.)



1. A fastening device for packages and the like comprising two strands of flexible material and an abutment adjacent to one end of said strands, said flexible strands having at least one turn around the package with the loose end portions crossing over and extending beyond the abutment, one on each side thereof, then passing over and between the strands and beneath the abutment and outwardly between themselves.

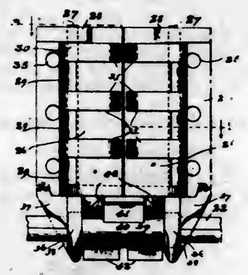
2. A fastening device for packages and the like comprising an open member of rigid material having a curved

portion, a piece of flexible material doubled to form a loop and two strands passing through the curved portion of the open member and also through the loop and being drawn tightly to bring the loop outside the said curved portion, and said loop forming an abutment, said flexible strands having at least one turn around the package with the loose end portions crossing over and extending beyond the abutment, one on each side thereof, then passing over and between the strands adjacent to the abutment, then under the said abutment and outwardly between themselves.

3. A fastening device for bags, packages and the like, comprising two strips or cords provided at one end thereof with an abutment and a part to be grasped for the purpose of releasing said device, said two strips or cords having at least one turn around the bag or package, and the other end portions thereof passing over and in between said strips at a point in the rear of said abutment and extending beneath and beyond the same.

4. A fastening device for bags, packages and the like, comprising two strips or cords provided with an abutment near one end thereof, said strips or cords having a turn around the bag or package, and the other end portions thereof passing over and in between said strips or cords at a point in the rear of said abutment, extending beneath and beyond the same and adapted to be grasped and pulled in one direction to tighten the fastening, and a finger hold adjacent to the abutment to be grasped to pull the abutment in the opposite direction to release the fastening.

1,156,566. FREIGHT-CAR STAKE-POCKET. CORNELIUS H. VANDONK, Wells, Mich. Filed Jan. 15, 1915. Serial No. 2,311. (Cl. 105—173.)



1. The combination of a car stake pocket provided with a gate member adapted to swing on a substantially vertical pivot, a horizontal shaft, and an interengaging member carried respectively by said gate member and said shaft, and adapted positively to effect both opening and closing pivotal movements of said gate upon rotation of said shaft.

2. The combination of a car stake pocket provided with a gate member adapted to swing on a substantially vertical pivot and form a closure for said pocket, adapted, upon its rotary movement, to open said closure and release the stake, a shaft, and cams respectively carried by said gate member and said shaft, coöperating to effect rotation of said gate member upon rotation of said shaft.

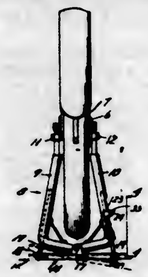
3. The combination of a car stake pocket provided with a gate member adapted to swing on a substantially vertical pivot, a horizontal shaft journaled in the lower end of said pocket beneath the bottom wall of the pocket opening, and interengaging cams carried respectively by said shaft and by the lower end of said gate member and adapted to effect rotation of said gate member to open said pocket upon rotation of said shaft.

4. The combination of a car stake pocket provided with a pair of opposed gate members mounted on vertical pivots on either side of the pocket opening and adapted to swing outwardly away from each other to release the stake, and common actuating means for rotating said gate members in either directions.

5. The combination of a car stake pocket provided with a pair of opposed gate members mounted on vertical pivots at the sides of the pocket opening and adapted to swing outwardly to release the stake, a horizontal shaft having its axis a substantial distance beneath the bottom of the pocket opening, cams carried by the lower ends of said gate members beneath the bottom wall of said pocket, and a common cam element carried by said shaft and adapted to coöperate with the gate cams to effect rotation of said gate members.

[Claims 6 to 10 not printed in the Gazette.]

1,156,567. STAND FOR MOTOR-CYCLES. HERBERT VERMEER, Los Angeles, Cal. Filed June 15, 1914. Serial No. 845,071. (Cl. 208—77.)



1. In a motorcycle stand, the combination with a supporting frame pivoted to a motorcycle frame, of a base plate pivotally connected to said supporting frame, and means for locking said base plate at various inclinations in relation to the supporting frame.

2. A motorcycle stand, comprising a U-shaped member pivotally connected to the motorcycle frame, a base plate pivotally mounted on the connecting portion of the U-shaped frame, a latch, and means connecting with said base and coöperating with said latch for locking the base plate at various inclinations in relation to the U-shaped frame.

3. In a motorcycle stand, a tubular U-shaped frame, a base plate pivotally connected to the connecting portion of said frame, a rod engaging the base plate and projecting into one of the tubular side members of the frame and formed with a series of notches, and a spring pressed latch mounted on the side member of the frame and adapted to extend through a longitudinal slot on said frame into engagement with the notches on the rod to lock the latter and the base plate against movement in adjusted positions.

4. In a motorcycle stand, a U-shaped member adapted to be connected to the motorcycle frame, a channel-iron base plate pivotally connected to the connecting portion of the U-shaped member having a slot adjacent one end thereof, a rod extending through said slot and having a head on its end on the underside of the base plate, said rod having a series of notches formed thereon, and means on the U-shaped member engageable with said notches for holding the base-plate at various inclinations.

5. A support of the character described comprising a member pivotally attached to the rear of a motor cycle frame, a tread bar pivotally attached to the lower end of the said member, rods pivotally attached to the outer ends of the tread bar and telescoping within the said member, and means for holding the said rods in their adjusted position within said member.

[Claims 6 and 7 not printed in the Gazette.]

1,156,568. STAND FOR MOTOR-CYCLES. HERBERT VERMEER, Los Angeles, Cal. Filed Oct. 19, 1914. Serial No. 867,356. (Cl. 208—79.)

1. In a motorcycle stand, the combination with a supporting frame, of a base plate pivotally connected to said supporting frame, means for locking said base plate on opposite sides of said frame at various inclinations in relation thereto, and means for releasing the base plate operable from either side of the frame.



2. A motorcycle stand comprising a U-shaped member pivotally connected to the motorcycle, a base-plate pivotally mounted on the connecting portion of the U-shaped frame, a latch for locking the base-plate at various inclinations to the U-shaped frame, and means for operating said latch from either side of the frame.

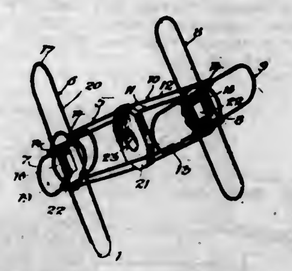
3. A motorcycle stand, comprising a supporting frame pivoted to a motorcycle frame, a base-plate pivotally connected to said supporting frame, means for locking said base-plate at various inclinations in relation to the supporting frame, and means for operating the locking means from either side of the supporting frame.

4. In a device of the character described, a supporting frame, a base-plate pivotally connected to said frame, a pair of rocker arms pivotally mounted on opposite sides of the frame, means on said base-plate detachably engageable with said rocker arms for locking the base-plate at various inclinations in relation to the frame, and means whereby when either rocker arm is actuated the other rocker arm will be operated simultaneously therewith.

5. In a motorcycle stand, a frame, a base-plate pivotally connected to said frame, a pair of upwardly extending rods connected to said base plate, a pair of rocker arms pivoted on the frame on opposite sides thereof, means on said rocker arms for engaging the rods for holding the latter against movement, and connections between the rocker arms, whereby when either of the rocker arms is actuated the other will be operated therewith.

[Claims 6 to 8 not printed in the Gazette.]

1,156,569. WIRE-REEL. MILTON W. WATKINS, De Kalb, Ill. Filed Feb. 8, 1915. Serial No. 6,769. (Cl. 242—77.)



1. A reel of the class described comprising a center piece, end pieces, plates arranged at each end of said center piece, each plate having a polygonal opening therein, and means for detachably connecting said end pieces to said center piece, substantially as described.

2. A reel of the class described comprising a center piece, end pieces, plates arranged at each end of said center piece, each plate having a polygonal opening therein, means for detachably connecting said end pieces to said center piece, and an auxiliary crosswise extending supporting piece for the center piece, substantially as described.

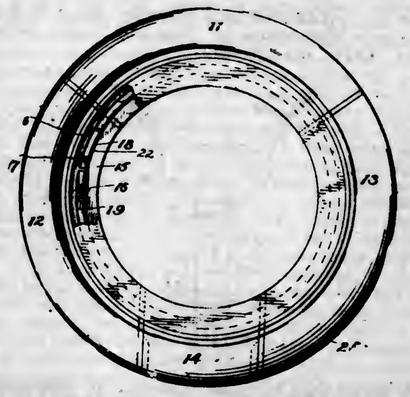
3. A reel of the class described comprising a center piece substantially rectangular in outline, and formed with an outwardly extending bend at each corner, plates at each end of said center piece, each of said plates having a polygonal opening therein, end pieces, and means for detachably connecting said end pieces to said center piece, substantially as described.

4. A reel of the class described comprising a center piece substantially rectangular in outline and formed with an outwardly extending bend at each corner, plates secured at each end of said center piece and lying to the inside of said bends, end pieces, one of said end pieces lying within the bends at that end of the reel with which it is associated, and the other end piece lying between the first mentioned end piece and the plate at that end of the reel, substantially as described.

5. A reel of the class described comprising a center piece substantially rectangular in outline formed with an outwardly extending bend at each corner, plates secured to each end of said center piece and lying to the inside of said bends, end pieces, one of said end pieces lying within the loop at that end of the reel with which it is associated, the other end piece lying between the first mentioned end piece and the plate at that end of the reel, and both of said end pieces being outwardly bent to prevent longitudinal displacement thereof, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,156,570. CORE FOR MANUFACTURE OF PNEUMATIC-TIRE CASINGS. PARK E. WELTON, Akron, Ohio, assignor to Katherine B. Welton, Akron, Ohio. Filed Dec. 18, 1913. Serial No. 807,397. (Cl. 18—45.)



1. An annular knock-down core comprising several arc-shaped sections, and having, when the sections are accurately assembled, an inwardly extended horizontal flange in the upper surface of which is an annular groove having a cylindrical outer periphery, combined with a split spring ring which lies in said groove and has a tapered outer periphery, and a binding ring having a cylindrical outer periphery for engagement with the cylindrical outer periphery of the above mentioned annular groove and having in its lower face an annular groove whose periphery is tapered to correspond with the taper of the split ring which projects into said groove.

2. An annular knock-down core comprising several arc-shaped sections and having, when the sections are accurately assembled, an inwardly extended horizontal flange in the upper surface of which is an annular groove whose outer periphery is cylindrical, and whose inner periphery is undercut, combined with a split spring ring which lies in said groove and has a tapered outer periphery and a tapered inner periphery for engaging the undercut periphery of the annular groove in the core flange above mentioned, and a binding ring having a cylindrical outer periphery for engagement with the cylindrical outer periphery of the groove in the core flange, and having in its lower face an annular groove whose outer periphery is tapered to correspond with the taper of the split ring

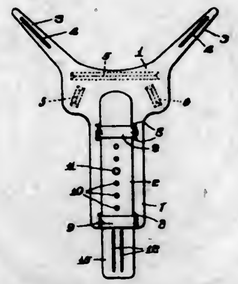
which projects into it when the binding ring is inserted into the annular groove in the core flange.

3. The combination, with a plurality of core segments each having an arcuate recess therein having spaced concentric walls one of the walls being tapered and said recesses forming, when the segments are assembled, a complete annular recess, one of the concentric walls whereof is tapered, of a ring coöperating with such annular recess and comprising an outer ring and an inner ring one of said rings being split and having a surface tapered complementarily to the tapered wall of said recess.

4. The combination, with a plurality of core segments each having an arcuate recess therein having spaced concentric walls the inner wall being tapered, said recesses forming, when the segments are assembled, a complete annular recess, the inner wall whereof is tapered and a ring coöperating with such annular recess and comprising an outer continuous ring and an inner split ring, the inner split ring having its inner surface tapered complementarily to the tapered wall of said recess.

5. In a device of the character described, a ring core formed of abutting sections having inwardly extending portions, said portions being channeled on one of their faces to form a complete annular groove, the inner wall whereof is undercut, an inner cut ring member having its inner surface shaped complementarily to the undercut wall of said groove, and an outer wedge-ring member disposed in said groove coacting with said first member for drawing the sections firmly together at their abutting faces.

1,156,571. OVERSHOE FOR HORSES. ELIAS S. WILLIAMSON, Philadelphia, Pa. Filed July 3, 1915. Serial No. 37,816. (Cl. 168—30.)

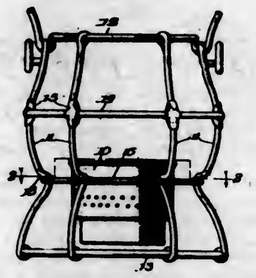


1. An overshoe for horses comprising, in combination, two metal parts the front one of which is provided with calks and with extensions adapted to engage the sides of the hoof and the rear one of which is adjustably carried by the front one and furnished with an extension adapted to engage the rear side of the hoof, a means for locking one plate to the other, and a strap carried by said extensions for fastening said overshoe to the hoof.

2. In an overshoe for horses, in combination, a metal part the forward end of which is provided with extensions adapted to be bent up to engage the sides of the hoof, the under side of which is provided with calks, and which is furnished with a rearwardly extending part cut and bent to form keepers, a second metal part slidingly carried by the keepers of the first part and the rear end of which is furnished with an extension for engaging the rear side of the hoof, a means for securing the two said parts together, and a strap for securing said extensions to the hoof.

3. In an overshoe for horses, in combination, a metal part the forward end of which is provided with slotted extensions adapted to be bent up to engage the sides of the hoof and the under part of which is provided with calks, and which is furnished with a rearwardly extending part cut and bent to form keepers, a second metal part carried by the keepers of the first part and furnished with a slotted extension at its rear end adapted to be bent up to engage the rear side of the hoof, means for securing the two said parts together, a strap passing through the slots in said extension for securing them to the hoof, and a buckle upon said strap.

1,156,572. GUARD-FRAME FOR LANTERNS. WARD W. WILLITS, Highland Park, Ill., assignor to The Adams & Westlake Company, a Corporation of Illinois. Filed June 1, 1914. Serial No. 842,171. (Cl. 240—40.)

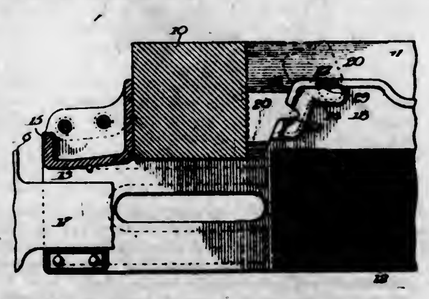


1. A guard frame for lanterns comprising a plurality of upright members and a plurality of circumferential members, and a ring adapted to encircle the guard hoop of the lantern and having outstanding loops encircling the upright members.

2. A guard frame for lanterns comprising a plurality of upright members and a plurality of circumferential members, and a ring adapted to encircle the guard hoop of the lantern and having outstanding arms each attached to one of the upright members.

3. In a guard frame for lanterns, in combination, a plurality of upright members and a plurality of circumferential members, a wire band adapted to hold the guard hoop of the lantern and having integral outstanding arms, each arm being a loop inclosing one of the uprights.

1,156,573. DRAFT-PLATE FOR RAILWAY-CARS. HENRY I. WRIGLEY, Chicago, Ill., assignor to Universal Draft Gear Attachment Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 23, 1914. Serial No. 863,111. (Cl. 213—42.)



1. A draft plate having a draft horn offset inwardly from the body of the plate, the front face of the horn being inclined and provided with lateral flanges, a wedge-block applied to such inclined face and having lugs hooking around the flanges.

2. A draft plate having a draft horn, the front face of which is inclined and provided with lateral flanges, a wedging block applied to such inclined face and having lugs hooking around the flanges, one of such flanges being recessed to permit the entrance of one of the lugs.

3. A draft plate having a draft horn the front face of which is inclined and provided with lateral flanges, a wedging block applied to such inclined face and having lugs hooking around the flanges, one of such flanges having a shouldered end adapted to be bent down to prevent the disengagement of the lug.

1,156,574. METHOD OF FORMING PAVING-BRICK. JAMES GEORGE ADDAMSON, Renton, Wash., assignor to Denny-Renton Clay & Coal Co., Seattle, Wash., a Corporation of Washington. Filed Dec. 22, 1914. Serial No. 878,520. (Cl. 25—1.)



1. The herein described method of forming paving-brick, consisting in cutting a moving body of clay into side-cut brick blocks, turning said blocks into endwise relation, advancing said blocks, and molding the surface of said column of blocks as it is progressively advanced.

2. The herein described method of forming paving-brick, consisting in cutting a moving body of clay into side-cut brick blocks, separating said blocks in spaced relation, turning said blocks into endwise relation, advancing said blocks in an endwise column, and molding the surface of said column of blocks as it is progressively advanced.

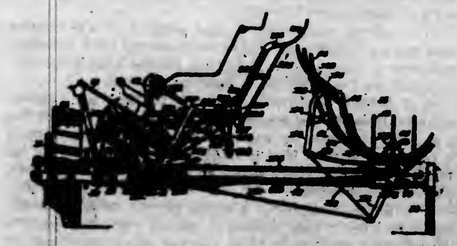
3. The herein described method of forming paving brick, consisting in cutting a moving body of clay into side-cut brick blocks, turning said blocks into endwise relation, advancing said blocks in said endwise relation, and molding the surface of said blocks as they are advanced.

4. The herein described method of forming paving brick, consisting in cutting a moving body of clay into side-cut brick blocks, separating said blocks in spaced relation, turning said blocks into endwise relation, advancing said blocks in said endwise relation, and molding the surface of said blocks as they are advanced.

5. The herein described method of forming paving brick, consisting in cutting a moving body of clay into side-cut brick blocks, separating said blocks in spaced relation, turning said blocks into endwise relation, advancing said blocks in an endwise column, raising a ridge upon the side surface of said column as it is advanced, and depressing or removing a portion of said ridges to provide spaced lugs projecting from the side-cut surface of said blocks.

[Claims 6 and 7 not printed in the Gazette.]

1,156,575. HARVESTING-MACHINE. LOUIS ANDERSON, Chicago, Ill. Filed Mar. 13, 1914. Serial No. 824,291. (Cl. 56—121.)



1. In a harvesting machine, in combination, a traveling frame, a trough shaped shock former carried by the frame and normally occupying a horizontal bundle collecting position, means for turning the shock former to an upright position for the discharge of its load through its top by the forward travel of the frame with the contents of the shock former engaged with the ground and a shock compressing plunger carried by the shock former and movable downwardly thereon when the shock former has been turned to an upright position.

2. In a harvesting machine, in combination, a traveling frame, a trough shaped shock former carried by the frame and normally occupying a horizontal bundle collecting position, means for turning the shock former to an upright position for the discharge of its load through its top by the forward travel of the frame with the contents of the shock former engaged with the ground, a shock compressing plunger carried by the shock former and movable downwardly thereon when the shock former has been turned to an upright position, and means for moving the shock former backwardly with respect to the frame to temporarily compensate for the forward travel of the frame during the operation of the said shock compressing plunger.

3. In a harvesting machine, in combination, a traveling frame, a trough shaped shock former carried by the frame and normally occupying a horizontal bundle collecting position, means for turning the shock former to an upright position for the discharge of its load through its top by the forward travel of the frame with the contents of the shock former engaged with the ground, wings movable laterally over the shock former for compressing its contents during the said turning of the shock former and a shock compressing plunger carried by the shock former and movable downwardly thereon when the shock former has been turned to an upright position.

4. In a harvesting machine, in combination, a traveling frame, a trough shaped shock former carried by the frame and normally occupying a horizontal bundle collecting position, means for turning the shock former to an upright position for the discharge of its load through its top by the forward travel of the frame with the contents of the shock former engaged with the ground, wings movable laterally over the shock former for compressing its contents during the said turning of the shock former, a shock compressing plunger carried by the shock former and movable downwardly thereon when the shock former has been turned to an upright position and means for moving the shock former backwardly with respect to the frame to temporarily compensate for the forward travel of the frame during the operation of the said shock compressing plunger.

5. In a harvesting machine, in combination, a traveling frame, a trough shaped shock former carried by the frame and normally occupying a horizontal bundle collecting position, means for turning the shock former to an upright position for the discharge of its load through its top by the forward travel of the frame with the contents of the shock former engaged with the ground, means acting to laterally compress the contents of the shock former during the said turning of the same and means acting to press downwardly upon the end of the contents of the shock former when the same has been turned to the said upright position.

[Claims 6 to 24 not printed in the Gazette.]

1,156,576. CLUTCH MECHANISM. VINCENT G. APPLE, Dayton, Ohio, assignor to The Apple Electric Company, Dayton, Ohio, a Corporation of Ohio. Original application filed June 1, 1914, Serial No. 842,206. Divided and this application filed Mar. 1, 1915. Serial No. 11,180. (Cl. 192—22.)

1. In a power transmitting mechanism, the combination of a primary rotatable member; a secondary rotatable member; means connecting the said members including a normally inoperative one way roller clutch, and centrifugally operated means for conditioning said roller clutch for operation.

2. In a power transmission mechanism, the combination of a primary shaft; a secondary shaft; means connecting the two shafts, and including a normally inoperative one way roller clutch, and speed responsive means for conditioning said clutch for operation.

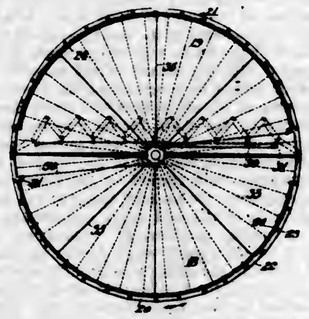
3. In a power transmission gearing mechanism, the combination of a primary shaft; a secondary shaft; means

connecting the shafts comprising a normally inoperative one way roller clutch, and centrifugally operated means for moving said roller radially into operative position.



4. In a power transmission mechanism, the combination of a primary rotatable member; a second rotatable member; means connecting the two members and including a one way roller clutch, said clutch comprising spaced apart roller positioning disks; a plurality of rollers; a ring between said disks having a roller engaging cam rotatable relative to said disks and speed responsive means for rotating said ring relative to the disks, and causing movement of the rollers radially with respect to the rotatable members.

1,156,577. AEROPLANE-PROPELLER. ARTHUR BRATT, San Fernando, Cal. Filed Sept. 24, 1914. Serial No. 863,392. (Cl. 170—161.)



1. A propeller comprising blades of flexible material, and heavy members secured to the periphery of said blades in such a manner as to hold the blades in their extended position by centrifugal force when the blades are rotated.

2. A propeller comprising a shaft, arms rigidly secured to said shaft, blades of flexible material secured to said arms, and heavy members so secured to said blades as to hold them in the extended position by centrifugal force as the shaft is rotated.

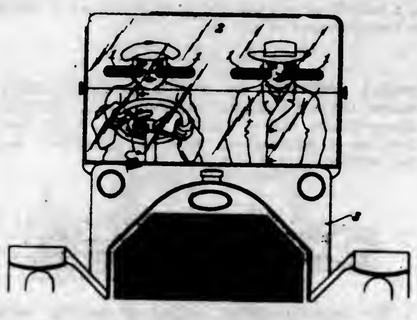
3. A propeller comprising a shaft, arms rigidly secured to said shaft, blades of flexible material secured to said arms, and chains so secured to said blades as to hold them in the extended position by centrifugal force as the shaft is rotated.

4. A propeller comprising a shaft, arms rigidly secured to said shaft, blades of flexible material secured to said arms, a heavy flexible member secured to the periphery of said blades, and guy wires for restraining said blades in their extended position.

5. A propeller comprising a shaft, arms rigidly secured to said shaft, blades of flexible material secured to said arms, a heavy flexible member secured to the periphery of said blades, means for drawing said flexible member approximately parallel to said arms, and guy wires for restraining said blades in their extended position.

[Claims 6 to 8 not printed in the Gazette.]

1,156,578. LIGHT-OBSTRUCTER. LOUIS A. SHERCKE, St. Louis, Mo. Filed Sept. 20, 1913. Serial No. 790,871. (Cl. 21—146.)



In combination with the glass wind shield of a motor vehicle, a plurality of light obstructers directly affixed in a permanent position on a face of the wind shield in spaced relation, with their major axes in horizontal alinement and disposed slightly lower than the line of vision.

1,156,579. BOBBIN. GEORGE HILLARD BENJAMIN, New York, N. Y. Filed June 25, 1912. Serial No. 705,727. (Cl. 242—120.)



1. A bobbin comprising a shank portion, an annular base having its internal wall carried upward for a sufficient distance to insure centering of the bobbin upon a spindle, and a clutch portion adapted to coact with the stem of a spindle when placed upon a spindle.

2. A bobbin comprising a shank portion, an annular base having its internal wall carried upward for a sufficient distance to insure centering the bobbin upon a spindle, and a clutch portion forming a part of the interior wall of said annular portion.

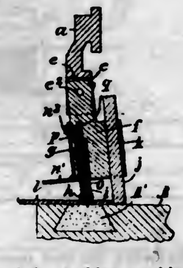
3. A bobbin comprising a base shaped as an annulus and having its internal wall carried upward for a sufficient distance to insure centering of the bobbin upon a spindle, and said wall constructed to serve as a clutch.

4. A bobbin comprising a shank portion, an annular metallic base having its internal wall carried upward for a sufficient distance to insure centering of the bobbin upon a spindle, and such wall provided with a clutch on its interior adapted to coact with the stem of a spindle when placed upon a spindle.

5. A bobbin comprising a shank portion, a metallic annulus forming a head shaped to inclose the lower portion of the outer wall, the bottom, and the whole inner wall of the head of the shank, and formed on its interior to serve as a clutch to cooperate with the stem of a spindle when placed upon a spindle.

[Claim 6 not printed in the Gazette.]

1,156,580. MACHINE FOR MARKING BUTTONHOLES. WILLIAM T. BENJAMIN, Newark, N. J., assignor to Shoe Manufacturers' Supply Company, Newark, N. J., a Corporation of New Jersey. Filed Sept. 21, 1914. Serial No. 862,660. (Cl. 164—93.)



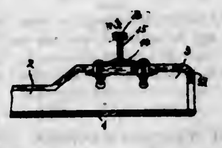
1. In a buttonhole marking machine, the combination, with a supporting plate, of a crosshead movable to and from the plate with a series of carriers adjustable upon the crosshead, each carrier having a marker and a vertical socket with a gage-bar mounted movably therein at a suitable distance from the marker and resting normally upon the plate to gage the edge of the material in relation to the marker.

2. In a buttonhole marking machine, the combination, with a supporting plate, of a crosshead movable to and from the plate with a series of carriers adjustable upon the crosshead, a holder hinged to move laterally upon each carrier and provided with a marker and with a vertical socket having a gage-bar mounted movably therein at a suitable distance from the marker, and resting normally upon the plate to gage the edge of the material in relation to the marker.

3. In a buttonhole marking machine, having a supporting plate, a crosshead movable to and from the same and a series of carriers adjustable upon the crosshead; the combination, with each carrier, of a holder pivoted to swing laterally thereon, and provided with a marker and with a spring-stripper operating in connection with the marker, and with a gage-bar movable vertically upon the holder and resting normally upon the plate to gage the edge of the material in relation to the marker.

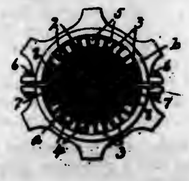
4. In a buttonhole marking machine, the combination, with a supporting plate, of a crosshead movable to and from the same, a series of carriers adjustable upon the crosshead, a holder hinged upon each carrier and provided with a marker, a spring connecting the carrier and holder to press the holder normally forward, and a finger-piece with means for securing it detachably to one of the holders for gaging the end-mark upon the material.

1,156,581. COMBINED RAIL TIE AND FASTENER. JAMES H. BENNER, Akron, Ohio. Filed Aug. 21, 1914. Serial No. 857,926. (Cl. 238—5.)



In a device of the class described, a rail fastener comprising a head, the sides of which are designed to form clamping jaws, and the one end wall thereof being beveled, one of said jaws having flat right angular bottom, inner side and top walls, and the other of said jaws having flat right angular bottom and inner side walls and an upwardly and outwardly beveled top wall, a downwardly and outwardly inclined extension formed on the referred to end wall of the head and providing a continuation for the beveled end wall and having a threaded lateral projection at the free end thereof, and a turn buckle for engagement with said threaded projection to connect the same with another member.

1,156,582. BUSHING. LEROY A. BIGGAR, Oneida, N. Y. Filed Oct. 20, 1910. Serial No. 588,043. (Cl. 74—8.)



A sheet metal bushing for pulleys composed of similar half sections corrugated transversely from edge to edge and having their corrugations deeper at one end than at the opposite end, and separate devices for clamping the ends of the sections upon a shaft.

1,156,583. ELECTRIC-CONDUIT FITTING. CARL H. BISSELL and FLOYD SMITH, Syracuse, N. Y., assignors to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Original application filed Oct. 6, 1910, Serial No. 585,627. Divided and this application filed Mar. 18, 1912. Serial No. 684,370. (Cl. 247—5.)



1. An electric conduit fitting comprising a hollow body open at its top, and having means for supporting an electrical appliance therein, the body also having means for connection with a conduit and an extension located at one end of the body and having an opening in the top thereof, the extension being provided with means for supporting an electrical appliance on the exterior thereof, substantially as and for the purpose described.

2. An electric conduit fitting comprising a hollow body open at its top and having an extension at one side of the open top, the extension having a flat top formed with an opening and means for supporting an electrical appliance on the exterior thereof with its base mounted on said wall above the opening, substantially as and for the purpose specified.

3. An electric conduit fitting comprising a hollow body open at its top, and having an extension at one end of the body, the extension being formed with means for connection with a conduit and the extension being also formed with an opening in its top and means for supporting an electrical appliance thereon with its base mounted over said opening, substantially as and for the purpose set forth.

4. An electric conduit fitting comprising a hollow body open at its top and having means for supporting an electrical appliance therein, the body also being formed with a portion at one side of the open top for supporting a switch connected to the appliance within the body, substantially as and for the purpose described.

5. An electric conduit fitting comprising a hollow body open at its top, the body having means for supporting an electrical appliance therein, and having an extension at one side of the open top, the extension having its bottom flush with the bottom of the body and having its upper wall inclined and converging toward the end of the fitting and the inclined top being formed with an opening and being designed to support on the exterior thereof an elec-

trical appliance designed to be connected to the electrical appliance within the body, substantially as and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

1,156,584. POISON-TABLET. MOSES E. BLOOM, New York, N. Y. Filed Dec. 29, 1913. Serial No. 809,172. (Cl. 167—6.)



1. In a poison-tablet, the combination of a guard having a serrated edge and a poisonous preparation securely fastened to said guard.

2. In a poison-tablet, the combination of a guard having a serrated edge and provided with an opening, and a poisonous preparation molded to and interlocked with said guard.

3. In a poison-tablet, the combination of a guard having its edge provided with prongs and a poisonous preparation securely fastened to the guard, said guard consisting of a rigid substance inert to the chemical action of the poisonous preparation and to the solution resulting from the dissolving of the poisonous preparation in a liquid.

4. In a poison-tablet, the combination of a guard having a serrated edge, and a poisonous preparation molded thereto, said guard being composed of a rigid substance inert to the chemical action of the poisonous preparation and to the solution resulting from the dissolving of the poisonous preparation in a liquid.

5. In a poison-tablet, the combination of a guard with an opening therein and having its edge provided with prongs, and a poisonous preparation interlocked with said guard by molding the preparation through said opening and to the faces of said guard, said guard consisting of a rigid material inert to the chemical action of the poisonous preparation and to the solution resulting from the dissolving of the poisonous preparation in a liquid.

[Claims 6 to 10 not printed in the Gazette.]

1,156,585. ELECTRIC-LIGHT FIXTURE. WILLIAM JAMES BOHAN, St. Paul, Minn. Filed Sept. 18, 1914. Serial No. 862,285. (Cl. 240—81.)

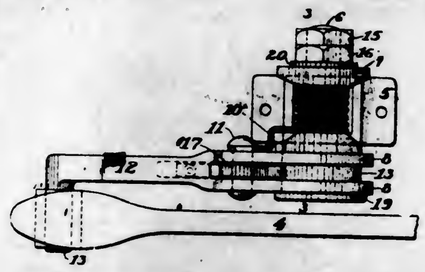


1. An electric fixture comprising a base, a reflector, and a socketed stem uniting the base and reflector, such parts being formed integrally, the socket walls being provided with integral shoulders constituting seats and points of attachment for an electric bulb.

2. In an electric fixture comprising a shade having a tubular stem provided with an outwardly facing shoulder forming a seat and point of attachment for an electric bulb, such parts being integral.

3. An electric lamp-fixture comprising, in combination, a stem having a seat for a lamp socket, a reflector for a lamp carried by such socket, and arms projecting from the stem and carrying the reflector, the stem arms and reflector being integral.

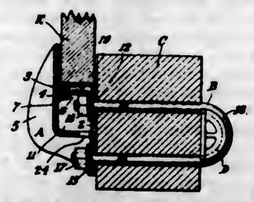
1,156,586. CUSHIONING DEVICE FOR FOOT-LEVERS. THOMAS K. COOPER, St. Louis, Mo. Filed Sept. 10, 1913. Serial No. 789,062. (Cl. 74—81.)



1. In a cushioning device for foot levers, in combination, a standard; a bolt mounted through said standard; a cylindrical block carried by said bolt; a lever-bar mounted around said block; a dog carried by said lever-bar; and spring-mechanisms for yieldingly holding the lever-bar in normal position and for holding the dog in contact with the peripheral face of the block.

2. In a cushioning device for foot levers, in combination, a standard; a bolt mounted through said standard; a cylindrical block carried by said bolt; a lever-bar mounted around said block; a dog carried by said lever-bar; a spring-mechanism of adjustable tension for yieldingly holding the lever-bar in normal position; and a spring-mechanism for holding the dog in contact with the peripheral face of the block.

1,156,587. CAR-DOOR BRACKET. JACOB J. BYERS, Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 27, 1912. Serial No. 738,824. (Cl. 16—89.)



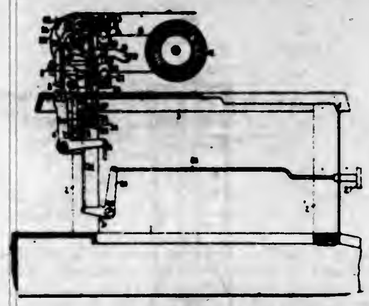
1. In a car door bracket, an inclosed chamber, a securing bolt, one end of which is positioned in said chamber, one wall of the chamber having an aperture therein, and a closure for said aperture, said closure being secured to the bracket by the bolt.

2. A car door bracket having an inclosed chamber therein, and a U-shaped bolt for fastening the bracket to the car, one of the arms of said bolt terminating within the said chamber.

3. A car door bracket comprising a base plate, apertures in the plate for the reception of bolting members, a chamber adjacent to one of said apertures, an opening in the chamber for access to the bolt therein, and a closure for the opening.

1,156,588. TYPE-WRITING MACHINE. DANIEL A. CARPENTER, New York, N. Y., assignor, by mesne assignments, to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Aug. 26, 1910. Serial No. 579,078. (Cl. 197—176.)

1. In a typewriting machine comprising tabulating mechanism, the combination in the tabulating mechanism of a stop-bar movable endwise to change its position on its support, the bar being thus movable in both directions from the position which it naturally occupies on its support, and automatic restoring means tending to prevent such a movement of the bar in either direction and operative on the bar when it is thus moved in either direction to force it back to its natural position on its support.



2. In a typewriting machine comprising tabulating mechanism, the combination in the tabulating mechanism of a stop-bar movable endwise to change its position on its support, the bar being thus movable in both directions from the position which it naturally occupies on its support, and automatic restoring means tending to prevent such a movement of the bar in either direction and operative on the bar when it is thus moved in either direction to force it back to its natural position on its support, said restoring means including a pair of springs.

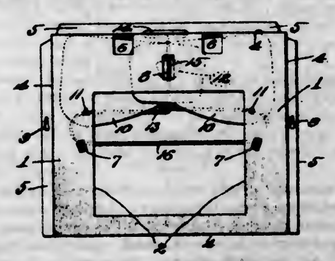
3. In a typewriting machine comprising tabulating mechanism, the combination in the tabulating mechanism of a stop-bar movable endwise to change its position on its support, the bar being thus movable in both directions from the position which it naturally occupies on its support, and automatic restoring means tending to prevent such a movement of the bar in either direction and operative on the bar when it is thus moved in either direction to force it back to its natural position on its support, said restoring means including a pair of volute springs.

4. In a typewriting machine, a stop-bar movable endwise on its support in both directions from its normal position thereon, in combination with automatic restoring means and adjusting devices.

5. In a typewriting machine, a stop-bar loosely mounted on its support and having two oppositely-facing shoulders, combined with collars fitting loosely on the bar and normally resting against said shoulders and against surfaces of said support, and with cushions bearing against the collar and tending to keep them in contact with said shoulders and surfaces.

[Claims 6 to 12 not printed in the Gazette.]

1,156,589. ATTACHMENT FOR TRAP-NESTS. FRANK N. CORDELL, St. Louis county, Mo. Filed May 22, 1915. Serial No. 29,742. (Cl. 119—49.)



1. A trapping device for the entrance of a nest or coop for fowls, said device comprising a frame adapted to be removably supported over said entrance, said frame having an opening therein adapted to form a door-way for said entrance, a pair of doors for said door-way pivotally attached to said frame, each of said doors being adapted to swing on its pivotal attachment in a plane substantially parallel to the plane of said frame, a member having one end pivotally attached to the upper portion of said frame, said member being adapted normally to suspend from its pivotal attachment vertically adjacent the inner wall of said frame, a forwardly protruding member borne by said pivotally attached member adjacent said second opening, said forwardly protruding member being adapted to support said doors releasably in open position and to protrude forwardly through said second opening, and means borne by the free end of said pivotally attached member adapted to engage a portion of the body of a fowl entering said nest or coop through said door-way to release said support to permit said doors to drop to closed position.

2. A trapping device for the entrance of a nest or coop for fowls, said device comprising a frame adapted to be removably supported over said entrance, said frame having an opening therein adapted to form a door-way for said entrance, a pair of doors for said opening pivotally attached to said frame, each of said doors being adapted to swing on its pivotal attachment to describe an arc in a plane substantially parallel to the plane of said frame, a member having one end pivotally attached to said frame, means borne by said member intermediate its attached end and its free end adapted releasably to support said doors in open position, means borne by the free end of said member adapted to engage a portion of the body of a fowl entering said nest or coop through said door-way to release said support to permit said doors to drop to closed position, and means borne by said frame adapted to limit the arcual swing of said doors in their movement from open to closed position.

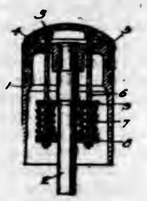
3. A trapping device for the entrance of a nest or coop for fowls, said device comprising a frame adapted to be removably supported over said entrance, said frame surrounding an opening adapted to form a door-way for said entrance, a pair of doors for said opening pivotally attached to said frame, each of said doors being adapted to swing on its pivotal attachment to describe an arc in a plane substantially parallel to the plane of said frame, each of said doors having an opening in its free end, said frame having a marginal opening therein above said door-way, said marginal opening and said opening in the free ends of said doors being adapted to form a common opening when said doors are swung to open position, a member having one end pivotally attached to said frame, means borne by said member adjacent said marginal opening, said means being adapted to protrude through said common opening when said doors are in open position to support said doors releasably in said open position, and means borne by the free end of said member adapted to engage a portion of the body of a fowl entering said nest or coop through said door-way to release said support to permit said doors to drop to closed position.

4. In a trapping device for the entrance of a nest comprising a frame, a swinging member pivotally supported from the top of the frame, a hook carried by said member intermediate its ends, said frame having an opening through which the hook may project, a pair of doors pivotally mounted on said frame to move in a plane substantially parallel to the plane of the frame, said doors each being provided with an opening which registers with the said opening in the frame when the doors are in open position, whereby the said hook may project therethrough to lock the doors in open position, and means borne by the free end of said member to engage the body of a fowl entering said nest through said doorway to release said support to permit the doors to drop to closed position.

1,156,590. PISTON FOR INTERNAL-COMBUSTION ENGINES. GEORGE K. DAVOL, San Francisco, Cal. Filed Oct. 5, 1911. Serial No. 652,921. (Cl. 123—193.)

1. In an internal combustion engine, the combination of a cylinder, a piston capable of reciprocation in said cylinder, a protective cap substantially covering the end of the piston which would otherwise be exposed to the working

gases, said cap being held against the end of the piston by spring pressure.



2. The combination of a piston for internal combustion engines, a cap or shield, for the working end of the piston, a layer or thickness of non-conducting material interposed between the said cap or shield and the said piston, and a spring or springs arranged to draw the said cap or shield and the said piston together.

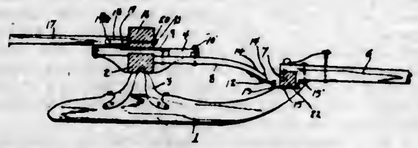
3. In an internal combustion engine, the combination of a cylinder, a piston capable of reciprocation in said cylinder, a protective cap or shield substantially covering the end of the piston against which the working gases act, and a helical metal spring or springs holding said cap against the end of the piston.

4. In an internal combustion engine, the combination of a cylinder, a piston capable of reciprocation in said cylinder, a protective cap or shield substantially covering the inner end of the piston against which the working gases act, and one or more helical metal springs disposed within said piston and arranged to draw said cap or shield against the said inner end of the piston.

5. In an internal combustion engine, the combination of a cylinder, a piston capable of reciprocation within said cylinder, the inner end of said piston being constructed to receive the pressure of the working gases within the cylinder, a protective cap or shield substantially covering said inner end of the piston, a rod or rods secured at one end to said cap or shield and extending into said piston, and a spring or springs engaging the inner end of said rods to hold the cap against the piston.

[Claims 6 and 7 not printed in the Gazette.]

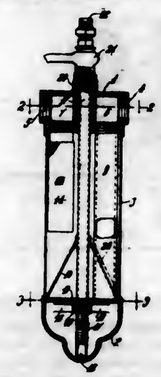
1,156,591. BOB-SLED. CHRIS EGELAND, Stoughton, Wis., assignor to Stoughton Wagon Company, Stoughton, Wis., a Corporation of Wisconsin. Filed Mar. 27, 1912. Serial No. 686,496. (Cl. 21—48.)



In a bob sled, the combination of a connecting bar having its rear end rigidly connected with the sled beam, the upper surface of said bar being slightly below the upper surface of said beam, a plate rigidly connected with the front end of said bar provided with an aperture, a vertical member rigidly connected with the rear end of the tongue of said sled, and extending vertically through said aperture, and a plate rigidly connected at two opposing sides with said beam and at its front side with said connecting bar, all substantially as and for the purpose specified.

1,156,592. FILTERING APPARATUS. JOHN B. DAVIS, Springfield, Mass., assignor to Gilbert & Barker Manufacturing Company, West Springfield, Mass., a Corporation of Massachusetts. Filed Apr. 17, 1915. Serial No. 21,998. (Cl. 210—16.)

1. A filter comprising in combination, a casing formed with an inlet and outlet at one end thereof, a filter at the other end of said casing forming a partition therein, a connection from said inlet extending through and below said filter, said connection arranged to support the filter, and a second filter connected to said outlet and arranged above said first named filter.

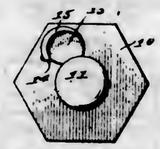


2. A filter comprising in combination, a casing having an inlet and outlet at one end thereof, a filter within said casing at the other end thereof arranged to partition said casing, a connection from said inlet extending through and below said filter, a second filter above said first named filter connected with said outlet, a tube extending from below said first named filter through the opposite end of said casing and a valve on the end of said tube.

3. A filter comprising in combination, a casing having inlet and outlet passages, a pipe connected to said inlet passage, a filter supported on said pipe and arranged to partition said casing, said pipe extending entirely through said filter, a second filter connected to said outlet passage and arranged above said first named filter, a tube extending from below said first named filter near one end of said casing through the opposite end thereof, and a valve on the end of the tube.

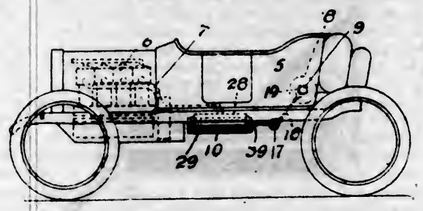
4. A filter comprising a casing, a cap member at each end of said casing, an inlet and outlet passage formed in one of said cap members, a pipe from said inlet passage within said casing, a filter supported on said pipe and forming a partition wall within said casing, said pipe extending through and below said filter, a second filter connected to said outlet passage, and arranged above said first named filter, a tube secured to the other cap member and extending from a position below said filter near one end of said casing to and without the other end of said casing and a valve on the end of said tube, said tube arranged to clamp said casing between said cap members.

1,156,593. NUT-LOCK. DANIEL F. FASSETT, Fairmount, Ill., assignor of one-half to Joseph A. Shipps, Fairmount, Ill. Filed Aug. 21, 1914. Serial No. 857,928. (Cl. 151—25.)



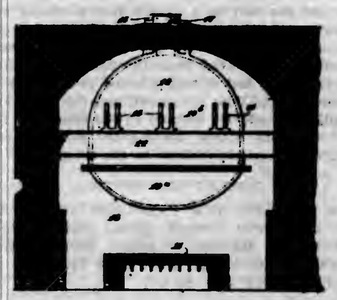
In a nut lock a bolt provided with a threaded end, a nut screwed upon the threaded end of said bolt and having its outer face provided with a cut out forming a seat communicating with the threaded opening of said nut and having one side portion enlarged to provide an abutment shoulder, and a locking element formed of tapered resilient material fitting in said pocket and conforming to the contour thereof and having its larger end portion engaging said abutment shoulder and having its tapered end portion terminating in teeth engaging the threads of said bolt.

1,156,594. ELECTRIC-GENERATOR-OPERATING DEVICE. WILLIAM S. FISCUS, Steubenville, Ohio. Filed Dec. 11, 1913. Serial No. 806,070. (Cl. 123—194.)



In a device of the class described, a frame of a vehicle, an internal combustion engine mounted at the forward end thereof, an exhaust conduit therefor, an electric generator mounted at the rear end of said frame including a drive shaft, a turbine in connection with the exhaust conduit, including a rotor and drive shaft, said turbine forming a muffler for the engine and the rotor and shaft therefor being driven from the exhaust, a transmission shaft having universal joints at its ends connected with the ends of the rotor and generator drive shafts, whereby to actuate the generator from the exhaust of the combustion engine.

1,156,595. RETORT-FURNACE. WILLIAM E. FLETCHER, Tamaqua, Pa., assignor to Atlas Powder Company, Wilmington, Del., a Corporation of Delaware. Filed Jan. 3, 1914. Serial No. 810,286. (Cl. 23—1.)



1. A retort furnace wherein the course of the products of combustion from the source of heat supply to the outlet is in a direction substantially parallel to the bottom of the retort, and having a pocket enveloping the retort between said source of heat supply and the outlet.

2. A retort furnace wherein the course of the products of combustion from the source of heat supply to the outlet is downward, and wherein the retort is located above the source of heat supply.

3. A retort furnace having its source of heat supply and its outlet at opposite sides of the furnace and having the retort in a pocket above and out of the course of the products of combustion from the source of heat supply to the outlet, and separated from the walls of the furnace to form a "blind" passage.

4. A retort furnace having its source of heat supply and its outlet at opposite sides of the furnace and having the retort in a pocket above and out of the course of the products of combustion from the source of heat supply to the outlet, and separated from the walls of the furnace to form a "blind" passage, an enlarged expansion chamber being provided beneath the retort and between the source of heat supply and the outlet.

5. A retort furnace having the retort located in a pocket out of the course of the products of combustion from the source of heat supply to the outlet and separated from the walls of the furnace to form a "blind" passage into communication with the space connecting the source of heat supply with said outlet.

[Claims 6 and 7 not printed in the Gazette.]

1,156,596. MOVING-PICTURE MACHINE. TOMAS PROCTOR HALL, Vancouver, British Columbia, Canada. Filed Jan. 15, 1912. Serial No. 671,341. (Cl. 88—16.8.)



1. In a moving picture machine, the combination with a housing, an aperture therein, and a film adapted to pass across the aperture, of a reflecting device situated within the housing and presenting a reflecting surface, opposite to and moving in unison with the portion of the film opposite to the aperture, the transverse axis of the said reflecting surface being at an angle to the transverse axis of the film and adapted to deflect an image from the film to one side of the line of travel of the latter, and a lens between the film and the reflecting device, and adapted to be traversed by the incident and reflected rays.

2. In a moving picture machine, the combination with a housing having an aperture therein, and a film adapted to pass across the said aperture, of a single reflecting surface comprising a revolving series of mirrors all similarly inclined in the longitudinal line of a common axis and adapted to deflect an image from the film to one side of the said aperture, and a lens between the film and the mirrors.

3. In a moving picture machine the combination with a housing having an aperture therein, and a film adapted to pass across the said aperture, of a reflecting device including a wheel rotatably mounted within the housing and a single series of mirrors carried by the wheel and inclined in the longitudinal axial line of the latter to deflect an image from the film to one side of the said aperture, a double convex lens between the film and the mirrors and lying parallel to the latter, and operating means for simultaneously moving the film and the wheel.

4. In a moving picture machine the combination with a housing having two parallel apertures at the front thereof, and a film adapted to pass across one of the said apertures, a reflecting device including a wheel rotatably mounted opposite the center of said apertures and having gear teeth upon the periphery thereof, a ring of channel-cross section mounted upon the wheel, a series of adjoining mirrors exposed to the film and mounted within the ring, being set at an angle to each other and inclined inwardly in the longitudinal axial line of the wheel, a lens between the film and the mirrors and lying parallel with the latter, a gear wheel operated from the exterior of the housing and intermeshing with the teeth of the mirror carrying wheel and an operative connection between the gear wheel and one of the said reels, substantially as described and for the purpose set forth.

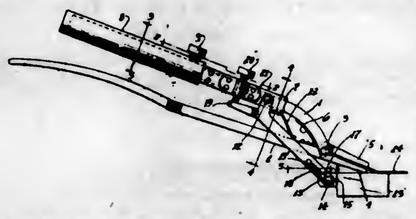
5. The combination with a moving film, of a reflecting device reflecting an image from the film, a lens common to and in the path of both the incident and reflected rays and means for moving the reflecting device in unison with the film.

[Claims 6 to 14 not printed in the Gazette.]

1,156,597. WIRE-STRETCHER. ANDERS CONRAD HANSON, Red Oak, Iowa. Filed June 17, 1914. Serial No. 845,563. (Cl. 254—79.)

1. In a wire stretcher, a pair of levers pivoted together and terminating in jaws, a telescoping handle carried by one of said levers, a fulcrum for said handle, a gripping block pivotally carried by said fulcrum, flexible means connecting said fulcrum and gripping block whereby the latter is retained in operative position and means carried by

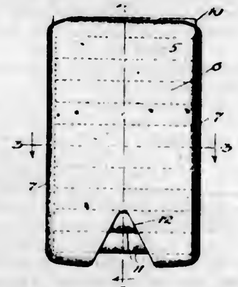
said handle for engagement with said fulcrum whereby the same may be caused to drive said gripping block into the work.



2. In a wire stretcher, a pair of levers pivoted together and terminating in jaws, a telescoping handle carried by one of said levers, a slotted fulcrum for said handle, a gripping block terminally carried by said fulcrum, a spring-pressed pin disposed in the slotted portion of said fulcrum and in engagement with said gripping block and means carried by said handle for engagement with said fulcrum whereby the same may be made to drive said gripping block into the work.

3. In a wire stretcher, a pair of levers pivoted together and terminating in jaws, a telescoping handle carried by one of said levers, a fulcrum for said handle, a gripping block pivotally carried by said fulcrum, means connecting said fulcrum and gripping block for retaining the latter in operative position, a spring carried by said handle frictionally engaging said fulcrum and a thumb screw carried by said handle for engagement with said fulcrum whereby the latter may be caused to drive said gripping block into the work.

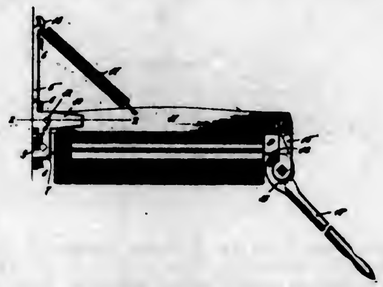
1,156,598. CIGARETTE-CASE. THOMAS F. HATHAWAY, Elgin, Ill., assignor to Elgin American Manufacturing Co., Elgin, Ill., a Corporation of Illinois. Filed Dec. 19, 1914. Serial No. 878,114. (Cl. 206—41.)



In a device of the class described, the combination of a case formed of two companion sections connected together by a spring hinge, each section curving at the edges thereof, with the rear and side edges adapted to engage when the device is closed, each section being cut away to provide an opening extending from the forward end thereof toward the rear thereof, and provided with a second cut-away portion at their forward ends to provide a tapered opening extending at right angles to the first mentioned openings and from the forward edges of the first mentioned openings to adjacent the sides of the section, whereby said sections are in engagement only at the sides thereof referring to their forward ends, substantially as described.

1,156,599. DEVICE FOR CLOSING SHEET-METAL SEAMS. JOSEPH L. HEMP, St. Louis, Mo. Filed July 14, 1913. Serial No. 778,942. (Cl. 113—84.)

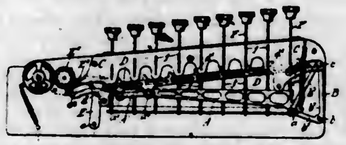
1. In a device for closing sheet metal seams, a jaw having a straight operating margin, a second elastic jaw having a normally curved operating margin, and means for moving one of the jaws toward the other jaw so that the jaw having the curved face will be straightened out for the purposes stated.



2. In a machine for closing sheet metal seams, a bracket, a housing carried by said bracket, a pair of arms projecting laterally from said housing, a jaw, having a straight face, rigidly yet detachably secured to said housing, a second, elastic, jaw having a curved face pivotally secured to said housing between said arms, a spring arranged between said bracket and said pivoted jaw for normally holding said jaw removed from the fixed jaw, a link secured to the outer end of said pivoted jaw, a cam pivotally secured to said link, and an operating lever for said cam.

3. In a machine for closing sheet metal seams, a bracket, a housing carried by said bracket, a pair of arms projecting laterally from said housing, a jaw, having a straight face, rigidly yet detachably secured to said housing, a second jaw having a curved face pivotally secured to said housing between said arms, a spring arranged between said bracket and said pivoted jaw for normally holding said jaw removed from the fixed jaw, a link secured to the outer end of said pivoted jaw, a cam pivotally secured to said link, an operating lever for said cam, and an adjustable device secured to the fixed jaw for engagement with the article bearing the seam to prevent movement of the article relative to the machine.

1,156,600. ADDING AND CALCULATING MACHINE. ALLEN A. HORTON, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 15, 1914. Serial No. 861,782. (Cl. 235—82.)



1. In an adding machine, the combination with a main actuating lever, fulcrumed near one end and operatively connected with an adding mechanism at its opposite end, through mechanism operating to increase the movement of the adding mechanism relative to the movement of the lever as the latter is moved away from normal position of a plurality of operating keys arranged in a row parallel with said actuating lever and provided with contact surfaces or projections located immediately adjacent and at approximately uniform distances from the contact surface or edge of said lever, whereby said keys are given a substantially uniform touch in their coöperation with said lever.

2. In an adding machine, the combination with a main actuating lever mounted at one end upon a rising and falling or floating fulcrum and operatively connected at its opposite end with an adding mechanism, of a plurality of operating keys arranged in a row parallel with said actuating lever and provided with contact faces or projections located immediately adjacent and at approximately uniform distances from the contact surface or edge of said lever, whereby said keys are given a substantially uniform touch in their coöperation with said lever.

3. In an adding machine, the combination of a main actuating lever mounted at its rear end upon a rising and falling or floating fulcrum, a rocking support for said fulcrum, an operating rack for the adding mechanism at the front end of the actuating lever, a connecting bar or link between said rack and the rocking support for the fulcrum of the actuating lever, a connection between the front end of the actuating lever and said bar or link independent of the operating rack, and a plurality of operating keys arranged in a row parallel with the actuating lever and having contact surfaces or projections located immediately adjacent and at approximately uniform distances from the contact surface or edge of said lever, whereby said keys are given a substantially uniform touch in their coöperation with said lever.

4. In an adding machine, the combination with a main actuating lever mounted at its rear end upon a rising and falling or floating fulcrum, a bell crank lever mounted at the rear end of the actuating lever and having a lower approximately horisontal arm which carries the fulcrum for said lever, and an approximately vertical arm extending above said fulcrum, an operating rack for the adding mechanism located at the front end of the actuating lever, a connecting bar or link pivoted at its front end to said rack and at its rear end to the vertical arm of the bell crank lever, a pivoted link connecting the front end of the actuating lever with the connecting bar or link, and a plurality of keys arranged in a row parallel with the main actuating lever and provided with contact surfaces or projections located immediately adjacent and at approximately uniform distances from the contact edge or surface of said lever, whereby said keys are given a uniform touch in their coöperation with said lever.

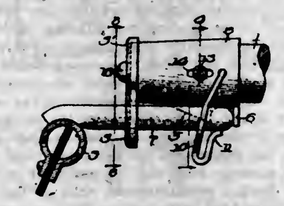
5. In an adding machine, the combination of a main actuating lever mounted at its rear end upon a rising and falling or floating fulcrum, a bell crank lever mounted in rear of said actuating lever and having a vertically extending arm and a forwardly extending approximately horisontal arm, which latter carries the fulcrum for the actuating lever, an operating rack for the adding mechanism pivotally supported near the front end of the actuating lever to swing forwardly and backwardly, a connecting bar or link pivoted at its front end to said rack and at its rear end to the vertical arm of the bell crank lever, a link pivoted at its front end to the main actuating lever near the front end of the latter and at its rear end to the connecting bar or link at a point removed from the front end of said bar or link, and a plurality of operating keys arranged in a row parallel with the actuating lever and provided with contact surfaces or projections located immediately adjacent and at approximately uniform distances from the contact surface or edge of said lever, whereby said keys are given a substantially uniform touch in their coöperation with said lever.

[Claims 6 to 12 not printed in the Gazette.]

1,156,601. HANDLE STRUCTURE. PETER G. JACOBSON, Chicago, Ill. Filed Aug. 27, 1914. Serial No. 858,998. (Cl. 15—24.)

1. A handle structure including a loop member for application to the device to which a handle is to be supplied; a handle part complemental to the loop member and carrying a pair of lugs between which the bight portion of said loop member may be received and also carrying a projection provided with a loop opening through which a portion of the loop may be passed to enable its bight portion to be interposed between said lugs; and a holding device for engaging said loop to hold its bight portion in position between said lugs.

2. A handle structure including a loop member for application to the device to which a handle is to be supplied; a handle part complemental to the loop member and carrying a pair of lugs between which the bight portion of said loop member may be received and also carrying a projection provided with a loop opening through which a portion of the loop may be passed to enable its bight portion to be interposed between said lugs; and a ball mounted upon the part of the handle structure carrying the lugs and having a portion adapted to be engaged with the loop member to hold the bight portion of the loop member in position between the lugs.



3. A handle structure including a loop member for application to the device to which a handle is to be supplied; a handle part complemental to the loop member and carrying a pair of lugs between which the bight portion of said loop member may be received and also carrying a projection provided with a loop opening through which a portion of the loop may be passed to enable its bight portion to be interposed between said lugs; and a ball mounted upon the part of the handle structure carrying the lugs and having a portion adapted to be engaged with the loop member to hold the bight portion of the loop member in position between the lugs, said ball carrying a spring portion, which is a part thereof, that engages the bight portion of the loop member.

4. A handle structure including a loop member for application to the device to which a handle is to be supplied; a handle part complemental to the loop member and carrying a pair of lugs between which the bight portion of said loop member may be received and also carrying a projection provided with a loop opening through which a portion of the loop may be passed to enable its bight portion to be interposed between said lugs; and a spring holding device mounted upon the part carrying the lugs and adapted to be engaged with the loop member to hold it in position between the lugs.

1,156,602. COMPARTMENT-INFLATER FOR SHIPS. MORRIS KASSER and JOSEPH B. KASSER, San Francisco, Cal. Filed Nov. 7, 1914. Serial No. 871,425. (Cl. 114—68.)



1. A ship having compartments, each of the compartments being provided with an opening in one wall; a

valve casing within the compartment and alined with the opening; a collapsible bag connected to the valve casing; a valve in the casing to control the passage of gas therethrough to the bag; a float to control the valve to permit such passage when the compartment is flooded; and a compressed air receptacle inserted through the said opening and fixed to the valve casing to supply compressed air to the latter.

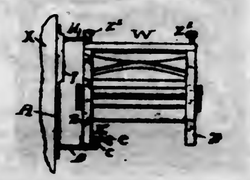
2. A ship having compartments, each of the compartments being provided with an opening in one wall; a compressed air receptacle inserted through the said opening and having a normally closed check valve therein; a valve casing within the compartment and alined with the opening and adapted to connect with the compressed air receptacle; a collapsible bag connected to the valve casing; a valve in the casing to control the passage of gas therethrough to the bag and adapted to open the check valve within the compressed air receptacle; and a float to control such passage when the compartment is flooded.

3. A ship having compartments, each of the compartments being provided with an opening in one wall; a compressed air receptacle inserted through said opening and having a normally closed check valve therein; a valve casing within the compartment alined with the opening therein and adapted to connect with the compressed air receptacle; a collapsible bag connected to the valve casing; a cup-shaped valve within the casing to control the passage of gas therethrough and adapted to open the check valve within the compressed air receptacle; and means adapted to control the cup-shaped valve to permit such passage when the compartment is flooded.

4. A ship having compartments, each of the compartments being provided with an opening in one wall; a compressed air receptacle inserted through said opening and having a normally closed check valve therein; a valve casing within the compartment and alined with the opening and adapted to connect with the compressed air receptacle and to retain the said receptacle within the compartment; a collapsible bag connected to the valve casing; a cup-shaped valve within the casing to control the passage of gas therethrough and adapted to open the check valve within the compressed air receptacle; and a float operatively connected to the cup-shaped valve and adapted to control the valve to permit such passage when the compartment is flooded.

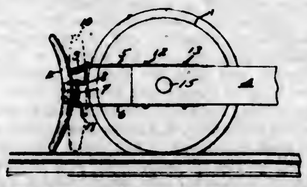
5. A ship having compartments, each compartment being provided with an opening in one wall; a compressed air receptacle inserted through the opening and having an externally threaded extension on the inner end and an annular flange on the outer end thereof; a valve casing within the compartment and alined with the opening, said valve casing being provided with a threaded aperture adapted to connect with the threaded extension of the compressed air receptacle and to thereby retain the same within the compartment and the annular flange thereof against the outer wall of the said compartment; a collapsible bag connected to the valve casing; a cup-shaped valve in the casing to control the passage of gas therethrough and adapted to open the check valve within the compressed air receptacle; and a float to control the valve to permit such passage when the compartment is flooded.

1,156,603. DISPLAY DEVICE. FREDERIC KIEFER, Chicago, Ill. Filed Apr. 25, 1914, Serial No. 834,326. Renewed Aug. 16, 1915. Serial No. 45,822. (Cl. 211—12.)



In a display device for wringers, the combination of a vertical base provided with a horizontal table and a vertical guide, a pivoted member on said table adapted to support the vertical member of a wringer, means to attach said member thereto, a member adjustably movable vertically in said guide and horizontally adjustable means to attach said movable member to said vertical member of a wringer, said horizontally adjustable attaching means being attainable with said pivoted member, all adapted to hold said wringer displayed in said device in a vertical position, with said wringer movable in a substantially horizontal plane.

1,156,604. WHEEL-TREAD FENDER. JOHN HENRY KUHNS, Germantown, Ohio. Filed Sept. 30, 1913. Serial No. 792,581. (Cl. 105—131.)



1. A car fender comprising a frame, a wheel mounted laterally of said frame, bracket arms disposed in vertical spaced-apart relation in advance of and in alinement with said wheel, a vertical pivot mounted in said bracket arms, a guard secured to said pivot, and means for preventing said guard moving toward said wheel.

2. A device of the character described comprising a frame, a wheel disposed laterally of said frame, a vertically-disposed fender mounted in advance of and in alinement with said wheel, means whereby said fender is held against movement toward said wheel, and means whereby said fender may rock in the direction of said frame.

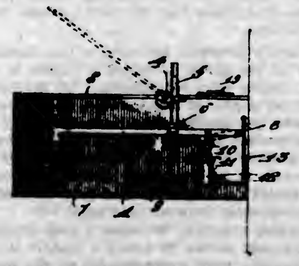
3. A device of the character described comprising a frame, a wheel disposed laterally of said frame, brackets secured to said frame and having portions deflected over in advance of said wheel, a vertical pivot mounted in said brackets, a guard secured upon said brackets, said guard at one edge contacting said brackets and being tiltable around one edge thereof toward said frame, and means for yieldably opposing the movement of said guard.

4. In combination a frame, a wheel disposed laterally of said frame, a flange on the inner side of said wheel, a vertically-disposed guard disposed in alinement with said wheel laterally of said flange, means for movably supporting said guard, means for holding said guard against movement toward said flange, and means whereby said guard may move parallel to said flange.

5. A device of the character described comprising a wheel, a flange on said wheel, a side frame adjacent said wheel, a guard, means carried by said side frame for holding said guard substantially in alinement with said wheel, means for preventing the movement of said guard in the direction of the said flange, and means whereby said guard may rock toward said side frame.

[Claims 6 and 7 not printed in the Gazette.]

1,156,605. CUSPIDOR. CHARLES H. LANE, Dallas, Oreg. Filed Oct. 6, 1914. Serial No. 865,332. (Cl. 4—40.)



A cuspidor comprising a casing, a cover therefor, a rod carried by said cover, one end of said rod projecting be-

yond the side of the casing, a gear wheel mounted on said rod, a container within said casing, an air pump mounted exteriorly of said casing, a lever pivotally mounted upon said casing, a link connecting said lever with said pump, a rack bar slidably arranged in guide members mounted exteriorly of said casing, said bar engaging said gear, and a pipe connecting said pump with said container for conveying a quantity of air to said container upon actuation of said lever.

1,156,606. PROCESS OF TREATING ALUMINUM SCREENINGS, DROSS, SLAGS, OR ANALOGOUS ALUMINOUS MATERIALS. JAMES WRIGHT LAWRIE, Aurora, Ill. Filed Aug. 10, 1914. Serial No. 856,047. (Cl. 75—18.)



1. The process of treating aluminum skimmings, screenings, slags and analogous aluminous materials, which consists in mixing the said material with a solution of alkaline caustic, and utilising the heat of the resulting reaction in dissolving the aluminous content of said material.

2. The process of treating aluminum skimmings, screenings, dross, slags and analogous aluminous materials, which consists in mixing the said material with a solution of alkaline caustic in a substantially closed vessel, and utilising the heat of the resulting reaction in dissolving the aluminous content of said material.

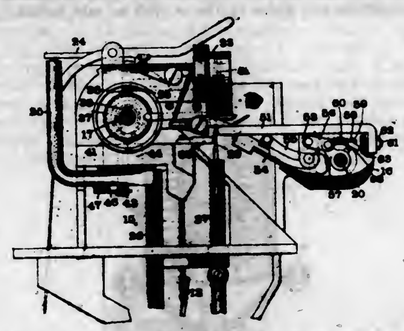
3. The process of treating aluminum skimmings, screenings, dross, slags and analogous aluminous materials, which consists in mixing the said material with a solution of alkaline caustic, utilising the heat of the resulting reaction to dissolve the larger part of the aluminous content of the material, subsequently driving the residual gases out of the mixture, and then dissolving the additional available aluminous content of the material by the application of heat from an external source.

4. The process of treating aluminum skimmings, screenings, dross, slags and analogous aluminous materials, which consists in mixing the said material with a solution of alkaline caustic, utilising the heat of the resulting reaction in dissolving the aluminous content of said material, and precipitating from the resulting aluminate solution the zinc, copper and other impurities.

5. The process of treating aluminum skimmings, screenings, dross, slags and analogous aluminous materials, which consists in mixing the said material with a solution of alkaline caustic, utilising the heat of the resulting reaction to dissolve the larger part of the aluminous content of the material, subsequently driving the residual gases out of the mixture, then dissolving the additional available aluminous content of the material by the application of heat from an external source, separating the resulting aluminate solution from the solid residue, treating the latter with acids, and precipitating the copper from the resulting solution.

[Claims 6 to 9 not printed in the Gazette.]

1,156,607. SEWING-MACHINE. JOHN G. LEWIS, St. Louis, Mo. Filed Mar. 12, 1906. Serial No. 305,479. (Cl. 112—24.)



1. In a sewing machine, stitch forming mechanism comprising, in combination, a looper having its plane of movement parallel to the needle, a reciprocating needle, adjustable means to vibrate said needle laterally and with respect to said looper between selected paths of reciprocation in a field of vibration, which said paths of reciprocation intersect different points in the looper-break path, and means for forming substantially the same width of loop to receive the looper in all the lateral positions to which the needle may be vibrated.

2. In a sewing machine, stitch forming mechanism comprising, in combination, a looper having its plane of rotation parallel to the needle and rotating unidirectionally, a reciprocating needle, adjustable means to vibrate said needle laterally and with respect to said looper between any selected paths of reciprocation within a field of vibration, which said paths of reciprocation intersect different points in the circular path of the looper-beak, and means for forming substantially the same width looper-beak-receiving loop in all of the lateral positions to which the needle may be vibrated.

3. In a sewing machine, stitch forming mechanism comprising, in combination, a looper, a needle vibrating between different paths of reciprocation which intersect the looper-beak path at different points in said looper-beak path and also at different points in the length of the needle-paths, of means for effecting coöperation of the looper-beak with the needle at substantially uniform time in the cycle of machine-operation, in any of the lateral positions of the needle.

4. In a sewing machine, the combination of a looper, a needle vibrating laterally between paths which intersect different points in the looper-beak path, means for varying the thrust of the needle to effect its uniform passage past the looper-beak path in the different lateral positions of the needle, and compensating mechanism acting in harmony with the vibration of the needle and effecting coöperation of the looper-beak with the needle at substantially uniform time in the cycle of machine-operation.

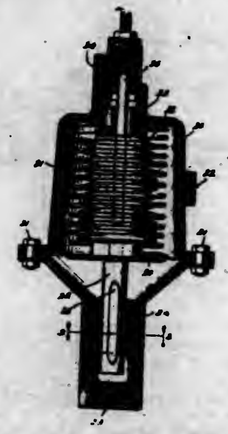
5. In a sewing machine, the combination with a laterally vibrating needle-holder, and a looper, of a rotating gearing for actuating the looper, and operating connections between the needle-holder and gearing for accelerating or retarding the looper-actuating gear-member as the needle-holder moves in vibration.

[Claims 6 to 37 not printed in the Gazette.]

1,156,608. MEANS FOR OILING EXPLOSION-MOTORS. HOWARD C. MARMON, Indianapolis, Ind. Filed June 5, 1915. Serial No. 32,440. (Cl. 184—6.)

1. In combination, an internal combustion engine having an intake for explosive mixture, a lubricant supply pipe for said engine, means operated by the engine for forcing lubricant through such pipe, a valve in said pipe, and means for controlling said valve by the vacuum in said intake.

2. In combination, an internal combustion engine having an intake for explosive mixture, a lubricant supply pipe for said engine, a valve in said pipe, and means for controlling said valve by the vacuum in said intake.



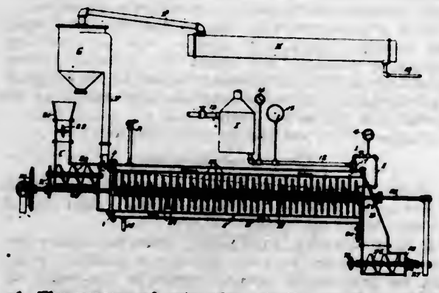
3. In combination, an internal combustion engine having an intake for explosive mixture, a lubricant supply pipe for said engine, means operated by the engine for forcing lubricant through such pipe, a valve in said pipe, and a compression shell mechanically connected to said valve and pneumatically connected to said intake so as to vary in size in accordance with variations in the vacuum in such intake.

4. In combination, an internal combustion engine having an intake for explosive mixture, a lubricant supply pipe for said engine, a valve in said pipe, and a compression shell mechanically connected to said valve and pneumatically connected to said intake so as to vary in size in accordance with variations in the vacuum in such intake.

5. In combination, an internal combustion engine having an intake for explosive mixture, a lubricant supply pipe for said engine, means operated by the engine for forcing lubricant through such pipe, a valve in such pipe, and means responsive to the vacuum in such intake for varying the opening of such valve inversely as such vacuum.

[Claims 6 to 8 not printed in the Gazette.]

1,156,609. METHOD AND APPARATUS FOR EXTRACTING NICOTIN FROM TOBACCO MATERIAL. ROBERT G. MEWBORNE, Louisville, Ky., assignor to The Kentucky Tobacco Product Company, a Corporation of New Jersey. Filed July 8, 1912. Serial No. 708,162. (Cl. 167—4.)



1. The process of extracting nicotin or other volatile constituents from tobacco dust or other comminuted or divided tobacco material, which consists in maintaining the material in a suspended or cloud form, and passing a gaseous extracting agent through the material to carry off the nicotin or other constituents with the extracting agent.

2. The process of extracting nicotin or other volatile constituents from tobacco dust or other comminuted or divided tobacco material, which consists in passing the tobacco material continuously through a chamber and continuously agitating the material in the chamber to maintain it in suspended or cloud form, and passing a gaseous extracting agent through the material in a direction opposite to the movement of the material to carry off the nicotin or other constituents with the extracting agent.

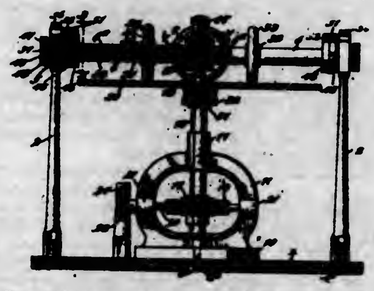
3. The process of recovering nicotin or other volatile constituents from tobacco dust or other comminuted or divided tobacco material, which consists in maintaining the material in a suspended or cloud form, and passing a gaseous extracting agent through the material to carry off the nicotin or other constituents with the extracting agent, and treating the agent after passage through the material for the recovery of the nicotin or other constituents.

4. The process of extracting nicotin or other volatile constituents from tobacco dust or other comminuted or divided tobacco material, which consists in maintaining the material in a suspended or cloud form, and passing steam through the material and preventing condensation of the steam in the material.

5. The process of extracting nicotin or other volatile constituents from tobacco dust or other comminuted or divided tobacco material, which consists in maintaining the material in a suspended or cloud form, and passing superheated steam through the material and maintaining such a temperature in the extracting chamber as to prevent condensation in the material.

[Claims 6 to 13 not printed in the Gazette.]

1,156,610. ELEVATOR-DESPATCHER. GEORGE W. MEYERS, Chicago, Ill. Filed Oct. 12, 1914. Serial No. 866,199. (Cl. 177—336.)



1. In a device of the class described, the combination with an electrically operated signal element and circuit means for energizing the same, of an element rotating at constant speed, a circuit breaker for controlling the signal element and transmitting mechanism operating said circuit breaker and operated by said constant speed element, said transmitting mechanism including a variable speed gear for the purpose described.

2. In a device of the class described, the combination with an electrically operated signal element and a circuit means for energizing the same, of a disk rotating at constant speed, a circuit breaker for controlling the signal element, and transmitting mechanism operating said circuit breaker, said transmitting mechanism including a friction wheel driven by said disk and adjustable toward and from the axis of said disk and mechanical connections between said wheel and said circuit breaker.

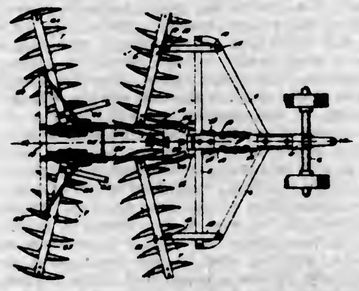
3. In an elevator despatcher the combination of a disk rotating at constant speed, a friction wheel driven by said disk and adjustable toward and from the axis of rotation thereof, an electrically controlled signal element, and a circuit therefor, said circuit including a terminal and a rotary contacter coöperating therewith for making and breaking the circuit, said contacter being rotated by said friction wheel.

4. In an elevator despatcher, the combination of a signal element and its electric circuit, a stationary terminal in said circuit, a rotary contact also in circuit and adapted to engage said terminal, said contact approximating the outline of a snail cam with a shoulder at one point in its periphery, and an insulating rider normally holding the terminal out of engagement with said rotary contact, said terminal projecting beyond said rider to thereby momentarily engage the contact after the shoulder of the contact has rotated out from under the rider.

5. In an elevator despatcher, the combination of a signal element and its electric circuit, a rotating driving disk, a friction wheel driven by said disk, a hollow shaft on which said wheel is longitudinally slidable, a circuit breaker operated by said shaft, means connected to said wheel for driving said shaft and means for adjusting the position of said wheel lengthwise of said shaft to thereby vary the distance of the friction wheel from the axis of rotation of the disk.

[Claims 6 to 10 not printed in the Gazette.]

1,156,611. HARROW. CLEMENT W. MICHAEL, Racine, Wis., assignor to J. I. Case Plow Works, Racine, Wis., a Corporation of Wisconsin. Filed Aug. 10, 1914. Serial No. 856,032. (Cl. 55—83.)



1. In a double harrow, a front and rear frame, means upon the respectivce frames for forming a double connection between the same, one of said means being angularly adjustable in a horizontal plane to vary the normal angular relation of the frames to each other.

2. In a device of the class described, a front frame and a rear frame, a pair of pin and slot connections between said frames comprising an angularly adjustable plate whereby the normal angular relation of the frames may be varied.

3. In a double harrow, a front frame and a rear frame, means upon the front frame carrying a pair of slots, means upon the rear frame carrying pins engaging and movable within the respective slots, one of said means being adjustable to vary the normal angular relation of said frames.

4. In a device of the class described, a front harrow section having a plate pivoted upon the rear end of it, means for adjusting said plate about its pivot and for maintaining it in adjusted position, a rear harrow section and a pair of reaches extending from said rear harrow section and engaging said plate.

1,156,612. SPRINKLER FOR IRRIGATING SYSTEMS. LON MORRELL, Jacksonville, Fla., assignor to John P. Campbell, Jacksonville, Fla. Filed Dec. 4, 1914. Serial No. 875,472. (Cl. 137—59.)

1. In a device of the character described, in combination, a circular chamber having substantially tangential water inlets, and a central outlet, an oscillating nozzle connected with said outlet, a turbine within said chamber, and means connected with said turbine for positively rotating said casing in a step by step manner and oscillating said nozzle at each step.

2. In a device of the character described, in combination, a circular casing having an inlet and a central outlet through which water is adapted to pass, a turbine within said chamber adapted to be rotated by the incoming water prior to its passing out through said outlet, a nozzle supported by said casing connected with said outlet and adapted to oscillate about a horizontal axis, a gear for said chamber and mechanical connections between said turbine and gear for continuously turning the latter, means between said gear and nozzle for continuously oscillating the nozzle, and means associated with said gear for intermittently rotating said casing step by step.



3. In a device of the character described, in combination, a circular casing having an inlet and a central outlet through which water is adapted to pass, a turbine within said chamber adapted to be rotated by the incoming water prior to its passing out through said outlet, a nozzle connected with said outlet and adapted to oscillate about a horizontal axis, a gear for said chamber, mechanical connections between said turbine and gear for continuously turning the latter, means between said gear and nozzle for continuously oscillating the nozzle, a fixed ratchet surface and an eccentrically mounted pawl associated with said gear wheel adapted to coact with said ratchet and positively and intermittently rotate said casing about a vertical axis.

4. In a device of the character described, in combination a coupling having a ratchet associated therewith, a casing mounted on said coupling, said casing inclosing a circular chamber connected with said coupling by diverging pipes having substantially tangential entrances to the chamber, a nozzle mounted on said casing communicating with the interior thereof adapted to oscillate about a horisontal axis, a turbine within said casing, a worm adapted to be actuated by said turbine, a gear meshing with said worm, and means actuated by said gear for oscillating said nozzle and to coact with said ratchet thereby completely rotating said casing.

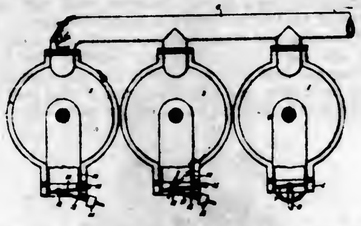
5. In a device of the character described, in combination, a coupling having a ratchet associated therewith, a casing mounted on said coupling, said casing inclosing a circular chamber connected with said coupling by diverging pipes entering said chamber, a nozzle mounted on said casing and communicating with the interior thereof adapted to oscillate about a horisontal axis, a turbine within said casing, a worm adapted to be actuated by said turbine, a gear meshing with said worm, and means between said gear and nozzle and between said gear and ratchet for continuously oscillating said nozzle and progressively rotating said casing.

[Claims 6 and 7 not printed in the Gazette.]

1,156,613. CENTRIFUGAL COMPRESSOR. SANFORD A. MOSS, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Mar. 12, 1915. Serial No. 13,915. (Cl. 230—11.)

1. The combination with a plurality of centrifugal compressors having inlet conduits, and having discharge con-

duits which are connected in parallel to discharge into a common blast main, of valve means arranged in the conduits of some of said machines which automatically close in case there is a tendency to force fluid backward through said machine or machines.



2. The combination with a plurality of centrifugal compressors having inlet conduits, and having discharge conduits which are connected in parallel to discharge into a common blast main, of an automatic valve biased to closed position arranged in the inlet of one or more of said machines.

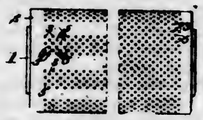
3. The combination with a plurality of centrifugal compressors having inlet conduits, and having discharge conduits which are connected in parallel to discharge into a common blast main, of a manually controlled valve in the inlet of one of said machines, and an automatic valve which opens inwardly and is biased toward closed position in the inlet of each of the remaining machines.

4. The combination with a plurality of centrifugal compressors having inlet conduits, and having discharge conduits which are connected in parallel to discharge into a common blast main, of a manually controlled valve in the inlet of one of said machines, an automatic valve which opens inwardly and is biased toward closed position in the inlet of each of the remaining machines, and means for fastening said last named valve or valves in closed position.

5. The combination with a plurality of centrifugal compressors having inlet conduits, and having discharge conduits which are connected in parallel to discharge into a common blast main, of automatic valve means arranged in the inlet of one or more of said machines, and adjustable means for biasing each valve to closed position.

[Claims 6 and 7 not printed in the Gazette.]

1,156,614. PLATEN FOR TYPE-WRITING MACHINES. WILLIAM REDFORD MULOCK, Winnipeg, Manitoba, Canada. Filed June 29, 1915. Serial No. 37,066. (Cl. 197—147.)



1. A platen for typewriting machines, the platen having a surface layer of a resilient substance, and spaced pieces of harder material embedded in said surface layer with their outer faces flush with the outer surface of said layer.

2. A platen for typewriting machines, the platen having a surface layer of a resilient substance, and spaced pins made of a harder material and embedded in said surface layer with their ends flush with the outer surface thereof.

3. A platen having a surface layer of a resilient substance, and spaced metal pins embedded in said surface layer with their ends flush with the outer face thereof.

4. A platen having a surface layer of a resilient substance, and spaced pins made of harder material and embedded in said surface layer, said pins being disposed substantially at right angles to the outer face of said surface layer and having their outer ends flush with such outer face.

5. A platen for typewriting machines, the platen having a surface layer of a resilient substance, and spaced pieces of harder material embedded in said surface layer with their outer faces flush with the outer surface of said layer, the size and spacing of said pieces being such that each type of the machine will necessarily strike at least one of said pieces.

[Claims 6 to 16 not printed in the Gazette.]

1,156,615. AUTOMOBILE-LOCK. JAMES A. MURPHEY, Philadelphia, Pa., and FRANK S. THOMPSON, Atlantic City, N. J. Filed Mar. 17, 1915. Serial No. 14,948. (Cl. 70—90.)



1. The combination with a rotary steering wheel of an automobile; of a rotary steering shaft rigidly connected with said wheel; a stationary bearing tube in which said shaft is journaled; two annular members respectively screwed upon the hub of said wheel and the adjoining end of said tube; removable means normally preventing rotation of said annular members relatively to the hub and tube with which they are respectively connected; said annular member carried by said wheel hub having an unsymmetrical lock casing socket extending parallel with the axis of said shaft, in eccentric relation with the latter; the other of said annular members having a circumferential series of lock bolt sockets with their axes extending parallel with said shaft axis, arranged to successively register with said casing socket when said wheel is turned; each of said lock bolt sockets having an undercut annular flange surrounding an opening which is unsymmetrical in relation to the axis of the respective socket; a key lock, portable independently of said members, including a casing removably fitted to said casing socket, so that it cannot turn therein, a rotary bolt which is fitted to any of said bolt sockets and may be turned by the key of said lock, means, controllable by said key, normally maintaining said bolt stationary in said lock casing, and a head on said bolt extending in unsymmetrical relation with its axis, adapted to pass freely through the unsymmetrical opening in any of said bolt sockets when said bolt is in unlocked position; said head being constructed and arranged to engage the flange in any of said bolt sockets when turned to locked position by said key.

2. The combination with a rotary steering wheel of an automobile; of a rotary steering shaft operatively connected with said wheel; a stationary bearing tube in which said shaft is journaled; two annular members respectively rigidly connected with said wheel and the adjoining end of said tube; said annular member connected with said wheel having an unsymmetrical lock casing socket extending parallel with the axis of said shaft, in eccentric relation with the latter; the other of said annular members having a circumferential series of lock bolt sockets with their axes extending parallel with said shaft axis, arranged to successively register with said casing socket when said wheel is turned; each of said lock bolt sockets having an undercut annular flange surrounding an opening which is unsymmetrical in relation to the axis of the respective socket; a key lock, portable independently of said members, including a casing removably fitted to said casing socket, so that it cannot turn therein, a rotary bolt which is fitted to any of said bolt sockets and may be turned by the key of said lock, means, controllable by said key, normally maintaining said bolt stationary in said lock casing, and a head on said bolt extending in unsymmetrical relation with its axis, adapted to pass freely through the unsymmetrical opening in any of said bolt sockets when said bolt is in unlocked position; said head being constructed and arranged to engage the flange in any of said bolt sockets when turned to locked position by said key.

3. The combination with a rotary steering wheel of an automobile; of a rotary steering shaft rigidly connected with said wheel; a stationary bearing tube in which said shaft is journaled; two annular members respectively screwed upon the hub of said wheel and the adjoining end of said tube; removable means normally preventing rotation of said annular members relatively to the hub and tube with which they are respectively connected; said annular member carried by said wheel hub having an unsymmetrical lock casing socket extending parallel with the axis of said shaft, in eccentric relation with the latter; the other of said annular members having a circumferential series of lock bolt sockets with their axes extending parallel with said shaft axis, arranged to successively register with said casing socket when said wheel is turned; each of said lock bolt sockets having an undercut annular flange surrounding an opening which is unsymmetrical in relation to the axis of the respective socket; a key lock, portable independently of said members, including a casing removably fitted to said casing socket, so that it cannot turn therein, a rotary bolt which is fitted to any of said bolt sockets and may be turned by the key of said lock, means, controllable by said key, normally maintaining said bolt stationary in said lock casing, and a head on said bolt extending in unsymmetrical relation with its axis, adapted to pass freely through the unsymmetrical opening in any of said bolt sockets when said bolt is in unlocked position; said head being constructed and arranged to engage the flange in any of said bolt sockets when turned to locked position by said key.

4. The combination with a rotary steering wheel of an automobile; of a rotary steering shaft operatively connected with said wheel; a stationary bearing tube in which said shaft is journaled; two annular members respectively rigidly connected with said wheel and said tube; said annular member connected with said wheel having a lock casing socket; the other of said annular members having a series of lock bolt sockets, arranged to successively register with said casing socket when said wheel is turned; each of said lock bolt sockets having an undercut opening; a key lock, portable independently of said members including a casing fitted to said casing socket, so that it cannot turn therein, and a rotary bolt which is fitted to any of said bolt sockets and may be turned by said key, means, controllable by said key, normally maintaining said bolt stationary in said lock casing; and a head on said bolt extending in unsymmetrical relation with its axis, adapted to pass freely through the unsymmetrical opening in any of said bolt sockets when said bolt is in unlocked position; said head being constructed and arranged to engage the flange in any of said bolt sockets when turned to locked position by said key.

5. The combination with a rotary steering wheel of an automobile; of a rotary steering shaft operatively connected with said wheel; a stationary bearing tube in which said shaft is journaled; two annular members respectively rigidly connected with said wheel and said tube; said annular member connected with said wheel having a lock casing socket; the other of said annular members having a series of lock bolt sockets, arranged to successively register with said casing socket when said wheel is turned; each of said lock bolt sockets having an undercut opening which is unsymmetrical in relation to the axis of the respective socket; a key lock, portable independently of said members, including a casing removably fitted to said casing socket, so that it cannot turn therein, a rotary bolt which is fitted to any of said bolt sockets and may be turned by the key of said lock, means, controllable by said key, normally maintaining said bolt stationary in said lock casing, and a head on said bolt extending in unsymmetrical relation with its axis, adapted to pass freely through the unsymmetrical opening in any of said bolt sockets when said bolt is in unlocked position; said head being constructed and arranged to engage the flange in any of said bolt sockets when turned to locked position by said key.

[Claims 6 to 21 not printed in the Gazette.]

1,156,616. METAL CAR-ROOF. WALTER P. MURPHY, Chicago, Ill. Filed Dec. 22, 1911, Serial No. 667,297. Renewed Mar. 13, 1915. Serial No. 14,290. (Cl. 105—5.)

1. A car roof comprising carlines having lateral flanges projecting from their sides below their tops, purlins secured to and projecting above said lateral flanges with their tops below the tops of the carlines, a ridge piece arranged on the tops of said carlines and secured thereto and having lateral flanges projecting from its sides below their tops, and roof sheets having upturned marginal flanges on three edges supported on said purlins and on the flanges of said ridge piece between the carlines with their marginal flanges arranged adjacent to the sides of said carlines and ridge piece and below the planes of the top thereof, respectively.



2. A car roof comprising a substructure, metal roof sheets thereon extending from the eaves toward the ridge, metal seam covers overlying the adjacent side margins of said sheets without binding said sheets and means for loosely securing the same to the roof substructure at the ridge, metal ridge covers overlying the adjacent ridge margins of said sheets without binding said sheets and means for rigidly securing the same to the roof substructure, said sheets being provided with upstanding flanges at their side and ridge margins and with upstanding corrugations adjacent to the side margins, said seam covers and ridge covers being longitudinally formed to receive said flanges beneath the same and out of contact therewith, the sides of said seam and ridge covers terminating in flanges resting on said sheets between the said marginal corrugations and flanges.

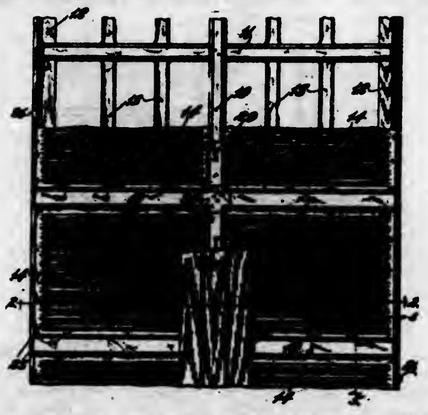
3. A car roof comprising a substructure, metal roof sheets thereon extending from the eaves toward the ridge, metal seam covers overlying the adjacent side margins of said sheets and means for loosely securing the same to the roof substructure at the ridge, metal ridge covers overlying the adjacent ridge margins of said sheets, and means for rigidly securing the same to the roof substructure, said sheets being provided with upstanding flanges at their side and ridge margins and with upstanding corrugations adjacent to the side margins, said seam covers and ridge covers being longitudinally formed to receive said flanges beneath the same, the sides of said seam and ridge covers terminating in flanges resting on said sheets between the said marginal corrugations and flanges.

4. A car roof comprising a substructure, metal roof sheets thereon extending from the eaves toward the ridge, metal seam covers overlying the adjacent side margins of said sheets without binding said sheets and means for loosely securing the same to the roof substructure at the ridge, metal ridge covers overlying the adjacent ridge margins of said sheets without binding said sheets and means for rigidly securing the same to the roof substructure, said sheets being provided with upstanding flanges at their side and ridge margins and with upstanding corrugations adjacent to the side margins, said seam covers and ridge covers being longitudinally formed to receive said flanges beneath the same and out of contact therewith, the sides of said seam and ridge covers terminating in flanges resting on said sheets between the said marginal corrugations and flanges.

5. In a car roof, a substructure comprising metal carlines supported on the side plates, a continuous metal ridge piece having lateral base flanges supported on said carlines and purlins extending lengthwise of said car beneath said carlines, in combination with roof sheets extending between said carlines from the eaves toward the ridge and supported on said purlins and on said ridge piece flanges, said roof sheets being contained within the vertical space limits of said substructure.

[Claims 6 to 15 not printed in the Gazette.]

1,156,617. CAR-ROOF. WALTER P. MURPHY, Chicago, Ill. Original application filed Dec. 22, 1911, Serial No. 667,297. Divided and this application filed Apr. 10, 1915. Serial No. 20,393. (Cl. 108—5.)



1. An all steel car roof comprising side plates, carlines having vertical stiffening members, purlins attached to the bottoms of said carlines with their tops below the tops of the carlines, a ridge piece secured to the carlines, and dished flanged roof sheets arranged on said purlins between the carlines with their margins spaced from the latter, said roof sheets being supported intermediate their side margins on said side plates, purlins and ridge piece, and seam covers straddling said carlines and roof sheet flanges and having downturned side walls resting flatwise on the dished portions of said roof sheets.

2. A car roof comprising side plates, carlines, purlins and a ridge piece, and flanged roof sheets dished upwardly at their side margins arranged between the carlines with their flanges spaced from the latter, said roof sheets supported on said side plates, purlins and ridge piece and non-rigidly attached to the car by resilient means coöperating with their dished margins within their flanges.

3. An all steel car roof comprising carlines, purlins, and ridge piece, dished roof sheets having integral side and ridge flanges non-rigidly supported on said purlins and ridge piece between the carlines, and retaining strips having flanged portions bearing upon the dished portions of said roof sheets substantially as described.

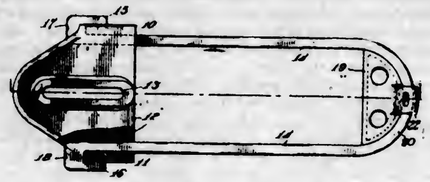
4. A car roof comprising a substructure, metal roof sheets thereon extending from the eaves toward the ridge, metal seam covers overlying the adjacent side margins of said sheets and means for securing the same to the roof substructure, said sheets being provided with dished side marginal portions and upstanding flanges along their side edges and with upstanding corrugations adjacent to said marginal portions, said seam covers being longitudinally formed to receive said flanges beneath the same, the sides of said seam covers terminating in lateral flanges resting on said dished side marginal portions of the sheets.

5. A car roof having a substructure comprising carlines, roof sheets supported on said substructure and having upstanding edge flanges with their extremities bent down, the margins of said roof sheets adjacent to said flanges being raised clear of the general plane of the roof sheets and overlapping the carlines and spaced therefrom, and seam covers spanning said edge flanges and having edge portions coöperating with said raised margins for holding said roof sheets in position.

[Claims 6 to 12 not printed in the Gazette.]

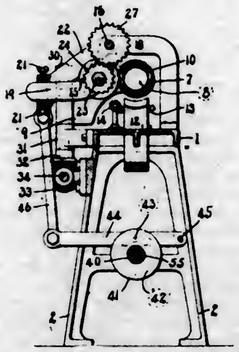
1,156,618. YOKE FOR DRAFT-GEARS. CHARLES J. NASH, Chicago, Ill., assignor to Universal Draft Gear Attachment Co., Chicago, Ill., a Corporation of Illinois. Filed Apr. 28, 1913. Serial No. 764,101. (Cl. 213—42.)

1. In a draft gear yoke, in combination, a socketed head and a strap comprising side members, the forward ends of which extend through the head and are folded back along the outer faces of the walls thereof.



2. In a draft gear yoke, in combination, a socketed head and a U-shaped strap, the forward ends of the strap projecting through the head and being provided with hooks which receive the forward edges of the walls of the head and have a bearing on the outer faces thereof in a direction perpendicular to the axis of the yoke.

1,156,619. CAN-MAKING MACHINE. JAMES L. NEEL, Cedar Rapids, Iowa, assignor of one-half to Albert C. Kipp, Cedar Rapids, Iowa. Filed Oct. 23, 1914. Serial No. 868,187. (Cl. 93—36.)



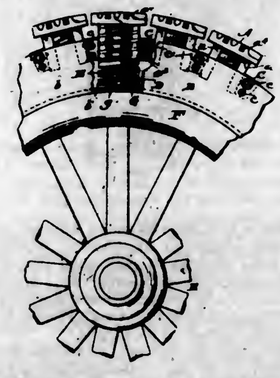
1. A machine of the character described comprising a rotatable mandrel adapted to receive a tube, said mandrel being provided with an annular groove, a presser member movable toward said mandrel to force a portion of said tube into said annular groove, a cutting device movable toward said mandrel and having a cutting edge adapted to be positioned in said groove, a drive shaft, and means, operable by said drive shaft, for actuating all of said parts.

2. A machine of the character described comprising a mandrel for supporting a tube, means for operating upon the tube held by said mandrel, end bearings supporting said mandrel, one of said end bearings being movable toward and away from an end of the mandrel to permit the application of a tube to the mandrel, and mechanism, associated with said means for operating upon the tube, adapted to operate the last mentioned end bearing after the tube has been operated upon by said means.

3. A machine comprising a mandrel adapted to receive a tube, operating devices, including a cutting device and a pressing device associated with said mandrel, for cutting and pressing the tube held by said mandrel, a driven shaft provided with means for actuating said pressing device and thereafter actuating said cutting device, a drive shaft for operating said driven shaft, manually operable means for uniting said drive shaft with said driven shaft, and means for automatically releasing said driven shaft from said drive shaft after the cutting operation.

1,156,620. RESILIENT TREAD FOR VEHICLE-WHEELS. JASPER P. MURRAY, Cleveland, Ohio. Filed Feb. 19, 1914. Serial No. 819,647. (Cl. 152—8.)

1. The combination of a wheel rim having side flanges, a spring seat fixed to said rim and having an externally threaded boss extending radially outward therefrom, a coil spring which is screwed upon said threaded boss, an externally threaded block which is screwed into the outer end of said spring, a tread plate having guide members which pass between and engage said rim flanges, a coil-spring which surrounds the coil spring first mentioned and engages said tread plate and said spring seat, a bolt passing through said tread plate and screwing into said externally threaded block, thereby expanding the first mentioned spring and compressing the other spring.



2. The combination of a wheel rim having side flanges, a spring seat fixed to said rim and having an externally threaded boss extending radially outward therefrom, a coil spring screwed upon said threaded boss, an externally threaded block screwed into the outer end of said spring and has an external angular boss, a tread plate having guide members which pass between and engage said rim flanges,—which tread plate has on its under face, an angular recess which receives the angular boss referred to, a compressed coil spring which engages at its inner end with said spring seat and at its outer end with said tread plate, a bolt passing through said tread plate and screwing into said externally threaded block thereby holding the angular boss in said angular recess.

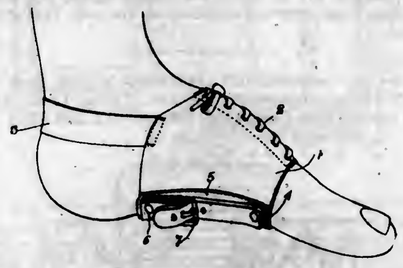
3. The combination with a wheel rim, having two side flanges, spaced distance blocks which lie between and are secured to said side flanges, and a plurality of tread plates which lie outside of the rim flanges,—each of said tread plates having four legs which go between and have a guiding engagement with the adjacent side flanges and the two adjacent distance blocks,—said legs having laterally projecting shoulders, pins fixed to said distance blocks and lying outside and in the path of said shoulders, a spring lying between the tread plate and the rim and inside of the space bounded by the four legs of said tread plate, and acting to yieldingly press said tread plate outward.

1,156,621. FOOT-CORSET. JOSEPH O'DWYER, New York, N. Y., assignor to Launcelot O'Dwyer, New York, N. Y. Filed Sept. 5, 1913. Serial No. 788,225. (Cl. 128—52.)

1. In a device of the character described, a narrow curved resilient brace, and a thin flexible support for said brace arranged to retain the brace beneath and along the inner margin of the foot in a position to exert pressure on said inner margin only, and means for adjusting the curvature of said brace.

2. In a device of the character described, a flexible body portion or jacket adapted to extend about the foot, a narrow curved brace supported by said jacket beneath the inner margin of the foot in a position to exert pressure on said inner margin only, and means to adjust the curvature of said brace.

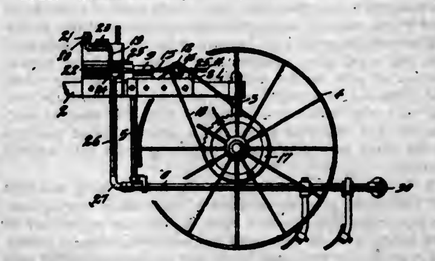
3. In a device of the character described, a body portion or jacket adapted to extend about the body of the foot, a narrow curved strip of resilient metal carried by said jacket in such a position that when the jacket is on the foot the strip of metal will be beneath the inner margin of the arch of the foot, a strap secured at one end to the adjacent end of said strip of metal, and a buckle secured to the other end of said strip of metal and coöperating with said strap to adjust the curvature of said strip.



4. A device of the character described comprising a body portion, a jacket of flexible material adapted to extend about the foot, said jacket having a narrow pocket extending longitudinally at one side thereof and arranged to engage the inner margin of the arch of the foot, and a curved brace of resilient material mounted in said pocket.

5. A device of the character described comprising a body portion, a jacket of flexible material adapted to extend about the foot, said jacket having a narrow pocket extending longitudinally at one side thereof and arranged to engage the inner margin of the arch of the foot, a curved brace of resilient material mounted in said pocket, and an adjusting device mounted on the outside of said pocket and connected with said brace.

1,156,622. SPRAYING ATTACHMENT FOR CULTIVATORS. FRANK OLDHAM, Dallas, Tex. Filed June 1, 1915. Serial No. 31,327. (Cl. 97—35.)



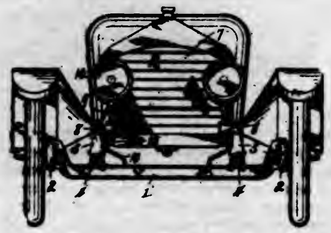
1. The combination with the frame, ground wheels and gangs of a cultivator; of a spraying attachment comprising, a tank mounted on the frame, an air compressor plant mounted on the frame and having operative connection with one of the ground wheels, an air line connection between the said plant and the tank, a fluid conveying connection extending from the tank and including a flexible element, and a nozzle mounted at the rear end of one of the gangs, the gang having provision for conveying the fluid from the conveying connection to the nozzle.

2. The combination with the frame, ground wheels and gangs of a cultivator; of a spraying attachment comprising, a fluid tank mounted on the frame, an air compressor plant mounted on the frame and having operative connection with one of the wheels of the cultivtor, an air line connection between the plant and the tank, a fluid conveying connection leading from the tank and including a flexible element, and a nozzle mounted on the rear end of one of the gangs and having fluid connection with the conveying connection.

3. The combination with the frame, ground wheels and the tubular gangs of a cultivator; of a spraying attach-

ment comprising, a fluid tank mounted on the frame, an air compressor plant mounted on the frame and driven by one of the ground wheels, an air pipe leading from the plant to the tank and including a check valve, a distributing pipe extending from the tank and directed downward, a flexible pipe secured to the distributing pipe, an elbow coupled with the flexible pipe, said elbow being attached to forward end of one of the tubular gangs, and an inwardly directed nozzle mounted on the rear end of said gang.

1,156,623. HEADLIGHT-TURNING MEANS FOR VEHICLES. ORMOND H. PADDOCK, Toledo, Ohio. Filed Aug. 24, 1914. Serial No. 858,285. (Cl. 240—62.)



1. In a vehicle, a steering wheel, a head-lamp mounted for horizontal pivotal movements, means having connection with and movable upon a steering movement of said wheel, a double-link connection between said lamp and a swinging point on said means, the point of connection of said links when the steering wheel and lamp are in straight-ahead position substantially falling on a line which is equidistant from predetermined positions of said swinging point during a swinging movement thereof and produced through the swinging axis of such point.

2. In a vehicle, a steering wheel, a head-lamp mounted for horizontal pivotal movements, mechanism having connection with and movable upon a steering movement of said wheel, an arm connected to and having coaxial swinging movements with said lamp, and means connecting said arm and a swinging point on said means, the point of connection of said means and arm when the steering wheel and lamp are in straight-ahead position substantially falling on a line which is equidistant from the neutral position of said swinging point and a predetermined position of the same to which it may be swung from said neutral position.

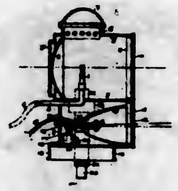
3. In a vehicle, a steering wheel, a head-lamp mounted for horizontal pivotal movements, mechanism having connection with and movable upon a steering movement of said wheel, an arm connected to and having coaxial swinging movements with said lamp, and means connecting said arm and a swinging point on said mechanism, the connection between said means and arm being of a pivotal nature and, when the steering wheel and lamp are in straight-ahead position, substantially falling on a perpendicular line which bisects a chord of a predetermined curve described by said swinging point.

4. In a vehicle, a steering wheel, a head-lamp mounted for horizontal pivotal movements, mechanism having connection with and movable upon a steering movement of said wheel, an arm connected to and having coaxial swinging movements with said lamp, and means connecting said arm and a swinging point on said mechanism, the connection between said means and arm being of a pivotal nature and, when the steering wheel and lamp are in straight-ahead position, substantially falling on the produced center radius line of one arc of movement of said swinging point from straight-ahead position.

5. In a vehicle, a steering wheel, a head-lamp mounted for horizontal pivotal movements, means having connection with and movable upon a steering movement of said wheel, a double-link connection between said lamp and a swinging point on said means, the point of connection of said links when the steering wheel and mechanism are in straight-ahead position substantially falling on the produced center radius line of one arc of movement of said swinging point from straight-ahead position.

[Claims 6 to 10 not printed in the Gazette.]

1,156,624. DUPLEX LIGHTING SYSTEM. JAMES R. PAGIN, Valparaiso, Ind. Filed Feb. 3, 1911. Serial No. 606,416. (Cl. 240—41.)



1. In duplex lighting systems, a suitable casing, a plurality of unit sources of illumination, separate reflectors held in a fixed relation to each unit, means for holding said units adjacent to each other on a common support independently of said casing, means adapted to retain said units in differential adjustment with respect to each other, and a housing common to both units.

2. In duplex lighting systems, a suitable casing, differential and separate sources of illumination, supports within said casing for the sources of illumination, separate reflectors for each source and means for maintaining the parts in adjustable and operative relation to each other.

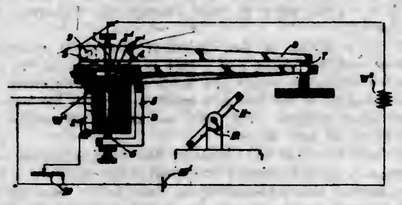
3. A duplex lighting system comprising a plurality of sources of illumination, a common support therefor, a suitable casing common to both sources to house the same, suitable reflecting means for each source, means for supporting reflectors and illuminators as independent pairs and independent units, in converging axial alinement with respect to each other.

4. A duplex lighting system, a reflector and an illuminator considered as a complete unit, another reflector and a dissimilar illuminator composing a separate unit, a common support for both units, a suitable single casing for housing the same and means for holding said units on different planes with respect to their axes.

5. A duplex lighting system comprising dissimilar sources of illumination, and separate reflectors therefor, one illuminator and a reflector constituting a pair or group, separate fastenings for each group, and a support comprising a single casing in common for two groups, whereby they may be handled as a single unit.

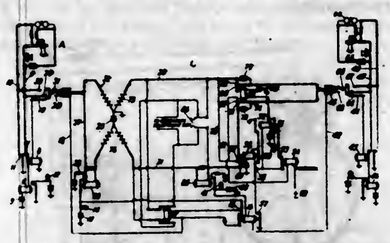
[Claims 6 to 10 not printed in the Gazette.]

1,156,625. WIRELESS RECEIVING IMPROVEMENT. GREENLEAF WHITTIER PICKARD, Amesbury, Mass., assignor to Wireless Specialty Apparatus Company, New York, N. Y., a Corporation of New York. Filed Aug. 1, 1910. Serial No. 574,778. (Cl. 179—171.)



In an amplifier, the combination with a microphone, of a regulating magnet therefor having its coil in circuit therewith, and an adjustable magnet in the vicinity of said regulating magnet for varying the field of the latter.

1,156,626. TELEPHONE SYSTEM. RALPH L. QUAGE, New York, N. Y., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed May 1, 1914. Serial No. 835,749. (Cl. 179—73.)



1. A telephone system comprising telephone lines terminating at a central office, normally open link conductors thereat for connecting said lines in pairs, means associated with said link conductors for automatically applying ringing current to the called line upon connecting said link conductors therewith, means for automatically removing the ringing current from the called line, and means associated with said link conductors for slowly closing said normally open link conductors after the removal of the ringing current.

2. A telephone system comprising telephone lines terminating at a central office, normally open link conductors thereat for connecting said lines in pairs, means associated with said link conductors for automatically applying ringing current to the called line upon connecting said link conductors therewith, means for automatically removing the ringing current from the called line, and a slow acting relay associated with said link conductors and actuated after the ringing current is removed from the line for closing said normally open link conductors.

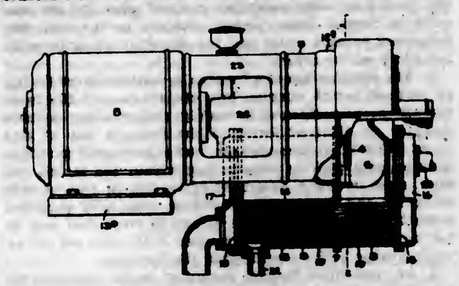
3. A telephone system comprising telephone lines terminating in a central office, link conductors thereat for connecting said lines in pairs, at least one of said conductors being normally open, means associated with said link conductors for automatically applying ringing current to the called line upon connection of said link conductor therewith, means for automatically removing the ringing current from the called line, and means associated with said link conductors and actuated after removal of the ringing current for closing said normally open link conductor.

4. A telephone system comprising telephone lines terminating in a central office, link conductors thereat for connecting said lines in pairs, at least one of said conductors being normally open, means associated with said link conductors for automatically applying ringing current to the called line upon connection of said link conductor therewith, an electromagnetic device for automatically removing the ringing current from the called line, and means associated with said link conductors and actuated after removal of the ringing current for closing said normally open link conductor.

5. A telephone system comprising telephone lines terminating in a central office, link conductors thereat for connecting said lines in pairs, at least one of said conductors being normally open, means associated with said link conductors for automatically applying ringing current to the called line upon connection of said link conductor therewith, a relay for automatically removing the ringing current from the called line, and an electromagnetic relay associated with said link conductor and energized after removal of the ringing current for closing said normally open link conductor.

1,156,627. ELASTIC-FLUID TURBINE. RICHARD H. RICE, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Apr. 27, 1915. Serial No. 24,227. (Cl. 221—57.)

1. The combination with a horizontal elastic fluid turbine, of a condenser therefor comprising a casing arranged directly beneath the turbine and having a contour which conforms to that of the turbine casing.



2. The combination with a horizontal elastic fluid turbine, of a condenser therefor located directly beneath the turbine casing, said condenser having a portion of its casing formed integral with the turbine casing.

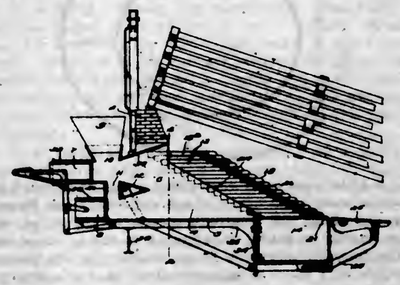
3. The combination with a horizontal elastic fluid turbine, of a condenser therefor located directly beneath the turbine casing and having a contour which conforms to that of the turbine casing, the portion of the condenser casing adjacent the final stage of the turbine being formed integral with the turbine casing so that the tubes of the condenser are all exposed at one end directly to the final wheel chamber of the turbine.

4. The combination with a horizontal elastic fluid turbine, of a condenser therefor located directly beneath and shaped to conform to the outline of the turbine casing, said condenser casing being in direct communication with the final wheel chamber.

5. The combination with a condenser having supporting feet and flanges on opposite sides, of an elastic fluid turbine having a removable cover which is seated on said flanges.

[Claims 6 to 8 not printed in the Gazette.]

1,156,628. FURNACE. ROBERT S. RILEY, Providence, R. I., assignor to American Engineering Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 2, 1909. Serial No. 480,823. (Cl. 110—44.)



1. A furnace, including an inclosure, a vertical fuel passage or retort of less width than the inclosure of the furnace and formed with an inclined rear mouth opening into the interior of the furnace, means for admitting air on each side of the retort mouth, horizontally reciprocating top and bottom pushers in the front of said retort for feeding fuel therethrough, and an inlet above said pushers, the retort having a passage extending substantially vertically directly from the inlet to the bottom of the retort in rear of said bottom pusher, whereby fuel may be forced into the lower portion of the fuel bed by the lower pusher without being previously acted on by the upper pusher.

2. A furnace, a fuel guiding retort formed as a separate entity extending into the furnace and having upright side walls, fuel feeding means in the forward portion of said retort arranged to travel back and forth in the general

direction of the retort, and removable frames placed one upon another so as collectively to form conduits for air and having emission apertures in their sides, the air conduits so formed being placed adjacent to the rear terminations of said walls and separated by approximately the width of the retort.

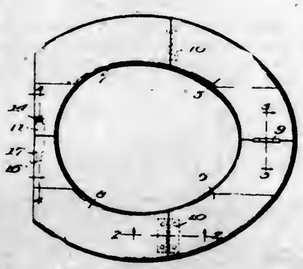
3. The combination of a furnace, a vertical retort having an inclined mouth opening into the furnace at the front thereof, backwardly and forwardly reciprocating pushers mounted at different levels in the forward end of said retort to feed fuel therethrough, and a horizontal partition between said pushers terminating within the retort, the said retort having a fuel inlet at its top in rear of said plungers, and a passage extending past said partition beneath said inlet, whereby a stream of fresh fuel may be fed by a lower pusher and merged with that fed by an upper pusher before issuing into the furnace.

4. An underfeed furnace including in its construction a retort having a substantially horizontal bottom and upright sides terminating in a sloping mouth, a fuel pusher arranged to travel back and forth in a line adjacent to the bottom of said retort, a second fuel pusher arranged to reciprocate back and forth in the upper part of the retort, and a fuel inlet opening into the forward end of the fuel passage and in rear of the first-named pusher, whereby green fuel may be fed directly from the inlet to the rear part of the fuel bed without being subjected to the heat of the fire in the forward part of the furnace.

5. A furnace inclosure, a vertical fuel retort passing through a wall of the furnace and opening within the furnace inclosure, and superposed frames situated at the sides of the retort mouth inside the furnace and forming air conduits for feeding air to the fuel, said frames having lateral openings for emission of the air.

[Claims 6 to 15 not printed in the Gazette.]

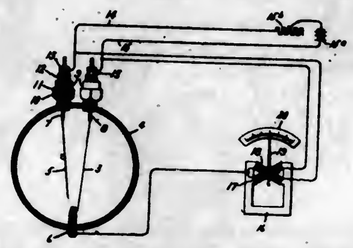
1,156,629. COLLAPSIBLE AND PORTABLE TOILET-SEAT COVER. ABRAHAM RIVERA, Sonsonate, Salvador. Filed June 9, 1915. Serial No. 33,080. (Cl. 4—18.)



1. A toilet seat cover comprising a pair of forward and a pair of rear segments, a hinge connecting the forward segments along the longitudinal axis of the cover, said hinge having its leaves countersunk in the adjacent ends of the forward segments, hinges connecting the forward segments with the rear segments along lines in advance of the transverse axis of the device, said last hinges being secured to the under faces of the forward and rear segments, and a latch pivoted within a recess in the rear edge of one of the rear segments and provided with a head, said latch being adapted to be engaged within a recess provided in the rear edge of the opposite rear segment for bracing the cover in position along its longitudinal axis, and a thumb hold provided on the latch.

2. A toilet seat cover comprising forward and rear segments hingedly connected together along lines to one side of the transverse axis of the cover, the forward segments of the device being hingedly connected together, and a latch pivotally connected to one of the rear segments and being adapted to detachably engage the opposite rear segment for bracing the cover against collapse along its longitudinal axis.

1,156,630. METHOD OF AND MEANS FOR MEASURING THE FLOW OF FLUIDS. MARION A. SAVAGE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 14, 1914, Serial No. 818,679. Renewed Apr. 29, 1915. Serial No. 24,796. (Cl. 73—167.)



1. The method of measuring the flow of fluid through a conduit which consists in measuring the ratio between two resistors having resistances which are variable in accordance with their temperatures, one of which is heated to a temperature higher than that of the fluid being metered and is subjected to the cooling action of the fluid flowing thereover, and the other of which is maintained by contact with the fluid at the temperature of the fluid.

2. The method of measuring the flow of fluid through a conduit having arranged therein two resistors connected in series, resistances which are variable in accordance with their temperatures, one having a higher resistance than the other, which consists in passing an electric current through the resistors to raise the resistor of higher resistance to a temperature higher than that of the flowing fluid and measuring the ratio between the resistances.

3. Apparatus for measuring the flow of fluid through a conduit comprising two electrical resistors having resistances which are variable in accordance with their temperatures arranged in the conduit, means for passing an electric current through one of said resistors to heat the same, and means for measuring the ratio of the resistance values of said resistors.

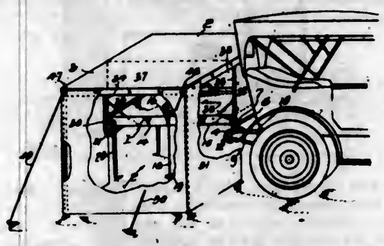
4. Apparatus for measuring the flow of fluid through a conduit comprising a radiator in the form of an electrical resistor of relatively high resistance, a second electrical resistor of relatively low resistance, both said resistors being arranged in said conduit and having resistances which are variable in accordance with their temperatures, means for passing an electric current through said first named resistor to heat the same, and means for measuring the ratio of the resistance values of said resistors.

5. Apparatus for measuring the flow of fluid through a conduit comprising a radiator in the form of an electrical resistor of relatively high resistance, a second electrical resistor of relatively low resistance, said resistors having resistances which are variable in accordance with their temperatures and both said resistors being arranged in said conduit and connected in series, means for passing an electric current through said resistors to heat the radiator, and means for measuring the ratio of said resistances.

1,156,631. AUTOMOBILE-BED. THEODORE F. SCHAICK, Long Beach, Cal. Filed Mar. 11, 1915. Serial No. 13,798. (Cl. 5—52.)

1. An automobile bed construction, comprising a folding bed frame adapted for attachment to an automobile, a roller at the outer end of the bed frame when unfolded, and a tent canvas attached to the opposite end of the bed frame from the roller and extending upwardly over the bed and attached to the roller, and bows for stretching and supporting the canvas.

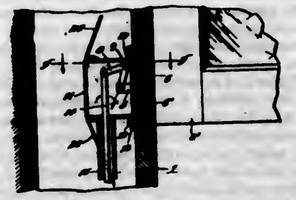
2. In an automobile bed construction, a bed section adapted for attachment to an automobile and to swing from a horizontal position to a vertical position, legs for supporting the swinging end of the bed section, a second bed section hinged to the first bed section and adapted to fold upon the first bed section and to swing to a straight line with the first bed section, a roller carried by the outer end of the second bed section, a canvas attached to the outer end of the first bed section and extending over the bed sections to the roller, and bows at the outer ends of the bed sections for supporting the canvas.



3. In an automobile bed construction, a folding bed adapted for attachment to an automobile, a canvas attached to one end of the folding bed, a spring roller at the other end of the folding bed and attached to the canvas, folding bows extending upwardly from the bed for supporting the canvas, and side curtains attached to the central portion of the canvas.

4. In an automobile bed construction, a folding bed frame, a roller at one end of the bed frame, a canvas attached to the other end of the bed frame and extending over the bed frame and attached to said roller, a pawl wheel rigid with the roller, means for operating the pawl wheel for stretching the canvas, and a pawl for holding the canvas stretched.

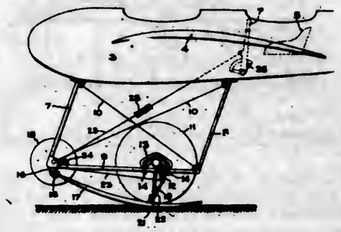
1,156,632. WINDOW-SASH LOCK. FRANK C. SCHOENHERR, Milwaukee, Wis., assignor of one-half to Julius P. C. Pacius, Milwaukee, Wis. Filed July 8, 1914. Serial No. 849,725. (Cl. 16—119.)



1. The combination of a window frame and a pair of sashes slidably mounted therein, said sashes having spaced openings in corresponding lateral edges thereof; a pair of bolts slidably mounted in said frame adjacent said edges of said sashes for engagement with said openings; means for simultaneously moving said bolts into and out of engagement with said openings, said means comprising a vertically movable member; a bell crank lever arranged between the rearward ends of said bolts; a yoke operatively connecting one end of said bell crank lever with the rearward ends of said bolts, the opposite end of said bell crank lever being connected with said member whereby, upon vertical movement of said member, said bolts will be simultaneously operated; manually depressible means; and a bell crank lever operatively connecting said depressible means with the opposite end of said lever whereby, upon depression of said depressible means, said member will be actuated, substantially as described.

2. The combination of a window frame and a pair of sashes slidably mounted therein, said sashes having spaced openings in corresponding lateral edges thereof; a pair of bolts slidably mounted in said frame adjacent said edges of said sashes for engagement with said openings; means for simultaneously moving said bolts into and out of engagement with said openings, said means comprising a vertically movable member; a bell crank lever arranged between said bolts having one end operatively connected with one end of said member with said bolts whereby, upon vertical movement of said member, said bolts will be simultaneously operated; manually depressible means; a bell crank lever operatively connecting said depressible means with the opposite end of said lever whereby, upon depression of said depressible means, said member will be actuated to move said bolts to inoperative position; and a compression spring coöperating with said depressible means for normally holding said bolts in operative position, substantially as described.

1,156,633. BRAKE FOR FLYING-MACHINES. JOSEF SCHROEDER, Tegel, Germany, assignor to General Electric Company, a Corporation of New York. Filed May 21, 1913. Serial No. 768,979. (Cl. 244—2.)



1. In a flying machine, the combination of a frame, an axle, road wheels mounted on the axle, elastic means connecting the axle to the frame, a brake shoe pivotally attached to the frame at its forward end, a spring that normally holds the rear end of the brake above the point of contact between the wheel and ground, and means connecting the rear end of the brake to the axle, and controllable by the operator for increasing the stress on the spring and moving the rear end of the brake to a point below the wheels so that it will strike the ground in advance thereof.

2. In a flying machine, the combination of a body, a depending frame, road wheels, an axle therefor, elastic means for attaching the axle to the frame, a brake shoe pivotally attached at its forward end to the frame and extending rearwardly beyond the axle, and means interposed between the axle and shoe for depressing the same to a point below the point of contact between the wheels and ground.

3. In a flying machine, the combination of a body, a depending frame, road wheels, an axle therefor, elastic means for attaching the axle to the frame, a brake shoe pivotally attached at its forward end to the frame and extending rearwardly beyond the axle, a toggle interposed between the elastically supported axle and the shoe to depress the latter, and means controllable by the operator for moving the members of the toggle.

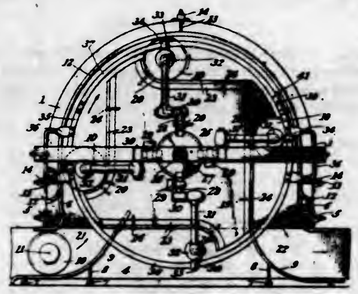
4. In a flying machine, the combination of a body, a depending frame, road wheels, an axle therefor, elastic means attaching the axle to the frame, a brake shoe pivotally attached at its forward end to the frame and extending rearwardly beyond the axle, a toggle interposed between the elastically supported axle and the shoe to depress the latter, means controllable by the operator for moving the members of the toggle, and a spring which normally tends to hold the toggle in collapsed position and to raise the shoe above the point of contact between the wheels and ground.

5. In a flying machine, the combination of a body, a depending frame, road wheels, an axle therefor, elastic means for attaching the axle to the frame, a brake shoe attached to the frame by a universal joint at its forward end and extending rearwardly beyond the axle, a cross-

head that is attached to the shoe by a universal joint, toggles between the cross-head and the elastically supported axle, spring means that tend to life the shoe, means for straightening the members of the toggles to depress the rear end of the shoe, and a handle on the body whereby the operator can actuate said means.

[Claim 6 not printed in the Gazette.]

1,156,634. ROTARY CAN-TIPPING MACHINE. HAROLD E. SHAW, Maywood, Ill. Filed Jan. 7, 1915. Serial No. 964. (Cl. 113—91.)



1. In a machine of the character described, the combination with an endless can conveyer, of a bed arranged adjacent thereto, curved guides leading from the endless conveyer to guide the cans to and from said bed, a rotary can carrier for receiving the cans from said conveyer, and means rotating with said can carrier to solder the center opening in said cans and means for determining the length of time said soldering means operate upon the cans.

2. In a machine of the character described, the combination with an endless can conveyer, of a bed arranged adjacent thereto, curved guides leading from the endless conveyer to guide the cans to and from said bed, guides for the cans in communication with said conveyer, a rotary can carrier for receiving the cans from said conveyer, and means rotating with said can carrier to solder the center opening in said cans and means for determining the length of time said soldering means operate upon the cans.

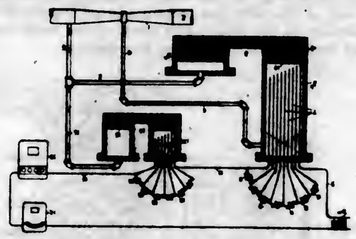
3. In a machine of the character described, the combination with an endless can conveyer, of a bed arranged adjacent thereto, curved guides leading from the endless conveyer to guide the cans to and from said bed, a rotary can carrier for receiving the cans from said conveyer, adjusting means carried by the said can carrier, and means rotating with said can carrier to solder the center opening in said cans and means for determining the length of time said soldering means operate upon the cans.

4. In a machine of the character described, the combination with an endless can conveyer, of a bed arranged adjacent thereto, curved guides leading from the endless conveyer to guide the cans to and from said bed, a rotary can carrier for receiving the cans from said conveyer, and means rotating with said can carrier to solder the center opening in said cans, said means consisting of a gas supply chamber, and a series of soldering implements in communication with said chamber and means operating upon the soldering implements to determine the length of time the implements shall be applied in finishing the soldering.

5. In a machine of the character described, the combination with a can conveyer, curved guides leading from the endless conveyer to guide the cans to and from said bed, a bed to receive the cans from said conveyer, a rotary can carrier, a series of rotary soldering implements disposed above the center of the cans, and a track upon which the said implements travel and are guided and means operating upon the soldering implements to determine the length of time the implements shall be applied in finishing the soldering.

[Claims 6 to 15 not printed in the Gazette.]

1,156,635. FLOW-METER. JOHN W. SHEPHERSON, Johnstown, Pa., assignor to General Electric Company, a Corporation of New York. Filed Oct. 15, 1910. Serial No. 587,144. (Cl. 177—351.)



1. The combination with a conduit for elastic fluids, of an agent therein for creating a pressure difference which bears a definite relation to the rate of flow, a U-shaped vessel containing a body of mercury, pipes connecting the respective legs of the vessel to said agent, a resistance means associated with the vessel and arranged to have its resistance varied by the rise and fall of the mercury in the vessel, a source of constant potential, an integrating wattmeter in series with said source and said resistance means, and means connected with the conduit and controled by the pressure of the fluid therein for varying the current through the meter to compensate for variations of the static pressure of said elastic fluid.

2. The combination with a conduit for gaseous fluids, of a Venturi tube therein, a U-shaped vessel containing a body of mercury, a plurality of stationary wires terminating at different distances above the mercury in one leg of said vessel, a pipe connecting said leg with throat of said tube, a pipe connecting the other leg of said vessel with the up-stream section of said tube, resistances between said wires, a source of constant potential, an integrating wattmeter in series with said source, an integrating wattmeter in series with said source and said resistance, and means connected with the conduit and controlled by the pressure of the fluid therein for varying the current through the meter to compensate for variations of the static pressure of said gaseous fluid.

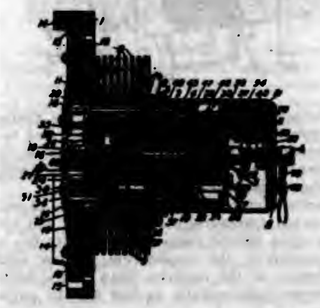
3. The combination with a conduit for conveying elastic fluids, of an agent located in the conduit that creates a pressure difference whose value bears a definite relation to the rate of flow of fluid, two closed U-shaped vessels each containing a body of liquid that is a conductor of electricity, means communicating the pressure difference created by the agent to the upper portion of one of the vessels, a connection between the other vessel and the conduit, two groups of resistance coils, means whereby the coils are cut in and out by the rise and fall of the liquid in said vessel, a source of electric current connected in series with the bodies of liquid and the resistance coils, and electrical indicating and registering devices in circuit with said coils.

4. The combination with a conduit for gaseous fluids, of a Venturi tube therein, a U-shaped vessel containing a body of mercury, a plurality of wires terminating at different distances above the mercury in one leg of said vessel, a pipe connecting said leg with the throat of said tube, a pipe connecting the other leg of said vessel with the up-stream section of said tube, resistances between said wires, a source of constant potential, an integrating wattmeter in series with said source and said resistances, a closed vessel containing a volume of air, means for varying the pressure of said air in response to variations in the pressure in the conduit, and a resistance device controlled by said means and air pressure for varying the current in the wattmeter circuit.

5. The combination with a conduit through which elastic fluid flows, of an agent located in the conduit that creates a pressure difference whose value bears a definite relation to the rate of flow of the fluid, a U-shaped vessel containing a body of liquid that is a conductor of electricity, means communicating the pressure difference created by the agent to the vessel so that the body of liquid is moved by said pressure difference, a plurality of stationary conductors terminating at different distances from the normal level of the liquid in one leg of the vessel, resistances between the conductors, a source of electric current, an electric meter in circuit with the source and resistance, another resistance in said circuit, and a device connected with said conduit and responsive to the pressure in the conduit for varying the last resistance.

[Claim 6 not printed in the Gazette.]

1,156,636. TELEPHONE-REPEATER. HERBERT E. SHREVE, Short Hills, N. J., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed May 25, 1911. Serial No. 629,261. (Cl. 179—170.)



1. In a telephone repeater, the combination of a frame comprising contact springs and binding posts, of a block, transmitting and receiving elements mounted therein, circuit terminals for said elements secured to said block and adapted to engage said contact springs, said block being adapted for insertion in said frame to complete the connections of said elements to said binding posts.

2. In a telephone repeater, the combination with a frame comprising a base and socket, contact springs and binding posts, of a cylindrical block, transmitting and receiving elements secured to said block, terminals for said elements mounted upon said block, said block being adapted for insertion in the socket of said frame in position for engagement of said terminals with said contact springs, and a pin carried by said block and registering with a slot in said socket to lock said block within said socket.

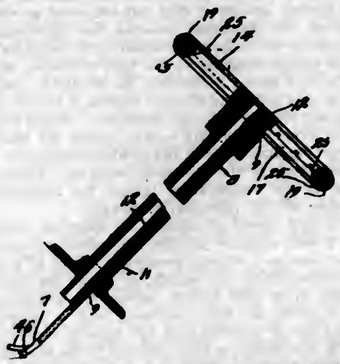
3. In a telephone repeater, the combination of a frame having contact springs and a heat radiator, of a block adapted to engage said frame, transmitting and receiving elements mounted upon said block and terminal connections upon said block for said elements adapted to engage said contact springs.

4. In a telephone repeater, the combination of an electromagnetic receiver and a granular transmitter placed in operative relation to said receiver, said transmitter having a thermostatic diaphragm and being connected in circuit with said receiver, said diaphragm being arranged to bow outwardly and thereby to relieve the pressure on the granules in said transmitter upon an increase of current in said circuit and said receiver being also adapted by magnetic attraction to bow said diaphragm outwardly upon an increase of current in said circuit.

5. In a telephone repeater, the combination of a receiver having a magnetising winding and a granular transmitter in operative relation to said receiver, said transmitter having a thermostatic diaphragm forming one wall of the granular chamber, and a local circuit including said magnetising winding and said transmitter, said thermostatic diaphragm and said magnetising winding being arranged and adapted jointly to relieve the pressure on the granules of said transmitter upon a tendency thereof to pack by causing said diaphragm to bow inwardly.

[Claims 6 to 12 not printed in the Gazette.]

1,156,637. HEATED AUTOMOBILE STEERING-WHEEL. REX M. SHULTS, Ignacio, Colo. Filed Mar. 20, 1915. Serial No. 15,763. (Cl. 237—21.)



1. In combination with a steering column having a recess extending the length of the column and being crescent-shaped in cross section, a heating tube seated in said recess and having two passages, one having connections with the water jacket of the engine, the other having connections with the engine pump, said tube of the column terminating adjacent the steering wheel into two branches, each fitting one side of a spoke of the steering wheel and extending about the rim of the wheel and merging into the opposite rim.

2. In combination with a stationary tubular column, a hollow steering column rockable in the stationary column adapted to contain a part of the connections between the throttle or carbureter control and the carbureter, said rockable column having its wall longitudinally depressed, a steering wheel movable with the rockable column, the rim of the wheel being formed with a recess extending annularly about the inner lower portion of the rim, one of the spokes of the wheel having oppositely arranged recesses extending longitudinally of the spoke, a fluid containing tube fitting the recess of the rim and merging into two sections fitting the recesses of the spoke, the two sections of the tube which fit the recesses of the spoke merging into a single tube fitting the depression of the rockable column and being secured thereto to rock therewith, said single tube of the rockable column having two passages, one having connections with the engine jacket, and the other with the engine pump, and means for controlling the heating fluid.

1,156,638. FLOW-METER. LAWRENCE A. SIMMONS, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 18, 1914. Serial No. 811,853. (Cl. 73—167.)



1. In a flow meter, a conduit, a heat radiating element therein so arranged that there is a transfer of heat between it and the flowing stream of fluid, a source supply-

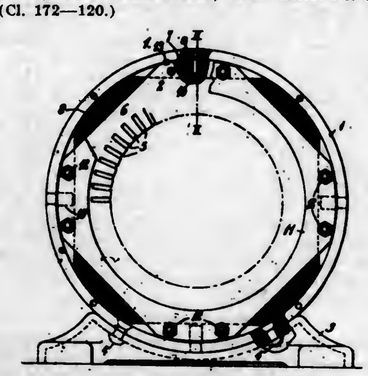
ing energy to the radiating element to heat the same, means for regulating the supply from said source to maintain the radiating element substantially at a constant temperature, means independent of the radiating element and the flowing stream of fluid but subjected to the temperature of the radiating element for measuring the temperature of the radiating element, and means for measuring the energy supplied to the heat radiating element.

2. In a flow meter, a conduit, an electrical resistance forming a heat radiating element therein, a source of electrical energy connected to the resistance, means for regulating the supply from said source, means for measuring the energy supplied thereto, and means independent of the resistance value of the electrical resistance element but subjected to the temperature thereof for indicating the temperature of the electrical resistance.

3. In a flow meter, a conduit, an electrical resistance forming a heat radiator therein, said electrical resistance being arranged as a tubular member, a source of electrical energy connected to the resistance, means for regulating the supply from said source, means for measuring the energy supplied to the resistance, and a temperature indicating device inserted into the tubular member.

4. In a flow meter, a tube adapted to be inserted into the path of flow of a fluid, an electrical resistance arranged on said tube and forming a heat radiator, a source of electrical energy connected to the resistance, means for regulating the supply from said source, means for measuring the energy supplied to said resistance, and means in said tube for indicating the temperature of said resistance.

1,156,639. DYNAMO-ELECTRIC MACHINE. CHARLES W. STARKER, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 6, 1911. Serial No. 631,615. (Cl. 172—120.)



1. A dynamo-electric machine comprising a smooth-bore frame having inwardly projecting pins and a supporting base, a laminated core member provided with means independent of the frame for clamping its laminæ together and with recesses to receive the inwardly projecting pins.

2. A dynamo-electric machine comprising a hollow cylindrical frame having inwardly projecting side pins and a laminated core member having means independent of the frame for clamping the laminæ together and recesses to receive said pins.

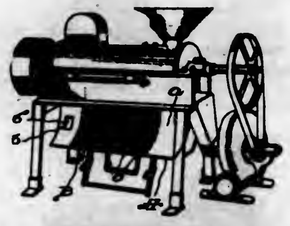
3. A dynamo-electric machine comprising a hollow cylindrical frame having a plurality of inwardly projecting pins and a laminated core structure having means independent of the frame for clamping the laminæ together and grooves in its outer surface to receive said inwardly projecting pins.

4. A dynamo-electric machine comprising a hollow cylindrical frame having a plurality of inwardly projecting pins, a core structure comprising a plurality of similar plates disposed in skewed or staggered groups to provide grooves in its outer surface for the reception of said inwardly projecting pins.

5. A dynamo-electric machine comprising a substantially cylindrical frame having internal projections, and a core member comprising substantially rectangular laminæ some of which are circumferentially displaced to form lateral grooves to receive said internal projections.

[Claims 6 and 7 not printed in the Gazette.]

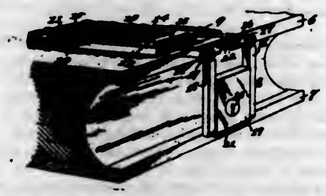
1,156,640. SCREEN FOR RICE-CLEANING MACHINES. NATHAN S. STERN, New Orleans, La. Filed Dec. 24, 1914. Serial No. 878,889. (Cl. 83—30.)



1. A screen for use in machines of the character described curved transversely of its length, and having its central portion slotted transversely and its receiving end portion imperforate and adapted to turn the grain lengthwise thereon, substantially as described.

2. A screen for use in machines of the character described curved transversely of its length, and having its central portion slotted transversely and its two end portions imperforate, the imperforate portion being of a greater length at the receiving than at the delivery end of the screen, substantially as and for the purposes described.

1,156,641. BOOK-LOCK. WILLIAM E. S. STRONG, Falmouth township, Barnstable county, Mass., and NELSON MACY, Greenwich, Conn. Filed Aug. 10, 1914, Serial No. 856,043. Renewed June 30, 1915. Serial No. 37,394. (Cl. 24—2.)



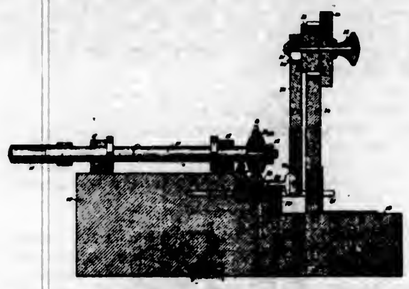
1. The combination with the covers of a book, of a lock casing slidable in one cover, and a lock member on the other cover, said first named cover being recessed to receive said lock casing.

2. The combination with the covers of a book, of a lock casing slidable in one cover, a frame in said cover for guiding said lock casing, and a lock member on the other cover, the surfaces of said covers being unbroken.

3. The combination with the covers of a book, of two jointed bars guided in one cover, a lock casing carried at the outer ends thereof, a lock member on the other cover, and means for limiting the outward movement of said bars, the surfaces of said covers being unbroken.

1,156,642. KEY-CUTTING MACHINE. ARCHIBALD E. SUTCLIFF, Syracuse, N. Y., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Nov. 3, 1913, Serial No. 798,909. Renewed Dec. 31, 1914. Serial No. 879,959. (Cl. 90—13.2.)

1. In a key cutting machine, the combination of a base, means to secure a key in definite position upon the base, said securing means permitting, however, a certain amount of rotation of the key around its axis, a rotary cutting device journaled in fixed position upon the base and adapted to act upon the key bit, and an actuator serving to rotate the key around its axis while the bit is being cut by the cutting device.



2. The combination of a base, a key clamping device having definite position with respect to the base and including relatively fixed and removable members having registering key shank grooves, the removable member having a slot through which the key bit is adapted to project upwardly, a rotary cutting device, means to rotate the cutting device and maintain the same in definite position with respect to the key clamping devices, and a hand controlled actuator serving to rotate the key slowly and gradually while being cut.

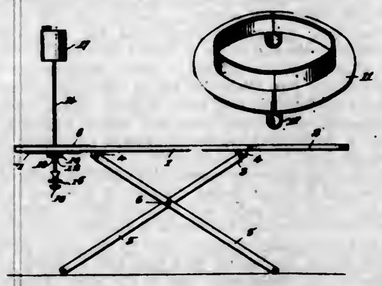
3. In a key cutting device, the combination of a base, a rotary cutting device journaled upon the base, means to operate the cutting device, a key clamping device adjacent the cutting device serving to hold a key in definite axial position with respect to the cutting device, and a hand controlled actuator serving to rotate the key while being cut, said actuator including an arc-shaped rack having its center coaxial with the key, and means operating over said rack and having loose engagement with the bilt of the key.

4. In a key cutting machine, the combination of means to secure a key with its axis in fixed position, rotary cutting devices coöperating with the key bit, and means to rotate the key around its fixed axis while being cut by said cutting device, whereby the cut surfaces are formed on arcs having centers coincident with the axis of the key.

5. A key cutting machine comprising a base, a shaft journaled on said base and carrying a cutter, means for holding a part of the key in fixed relation to the base, and means for swinging the key with respect to said cutter, while it is being cut thereby; substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,156,643. COLLAPSIBLE IRONING-BOARD. EDWARD SUTTER, Burke, S. D. Filed June 18, 1913. Serial No. 773,534. (Cl. 126—44.)

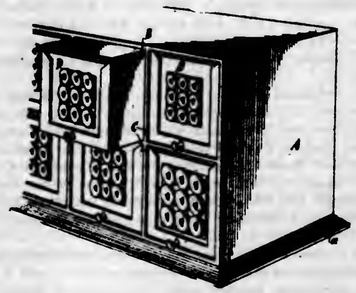


1. In combination with a suitable support, a heater arranged beneath an opening formed in said support, a fuel supply pipe having an extension formed at one end thereof to which the heater is connected, a bracket secured to the said support and adapted to surround the said opening to form a pivotal support means for the said extension of the fuel pipe, the said pipe adapted to be swung from its point of pivotal connection, as and for the purpose set forth.

2. In combination with a suitable support, a heater arranged beneath an opening formed in one end of the said support, a bracket secured to the said support, the bracket adapted to surround the said opening, said bracket having diametrically opposite depending portions formed integrally therewith, a fuel supply pipe having an extension formed at one end thereof adapted to be pivotally supported by the depending portions of the said bracket, means secured to the said support adapted to engage the said fuel supply pipe for retaining the latter in vertical position, and means secured to said support adapted to engage the said fuel pipe when swung out of vertical position for retaining the same in collapsed position, as and for the purpose set forth.

3. In combination with a suitable support, a heater arranged beneath an opening formed within one end of the said support, a bracket secured upon the under face of the said support, said bracket surrounding the said opening, diametrically opposite depending portions formed integrally with the bracket, a pivotally supported fuel supply pipe having an extension formed at the lower end thereof adapted to extend through the said depending portion of the bracket, the said extension of the fuel pipe forming a pivotal support for the heater, a spring arm having an offset formed therein, said arm being secured to the support adjacent said fuel pipe, the latter adapted to normally fit within the said cut out portion for positioning the burner directly beneath the said opening and in an operative position, and means including a resilient plate member secured to the said support, said plate member being adapted for engagement with the said fuel supply pipe for supporting the same when in collapsed condition, as and for the purpose set forth.

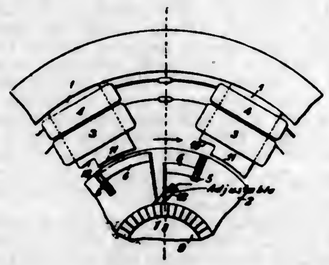
1,156,644. BUTTON-CONTAINER. FREDERICK C. VETTER, Muscatine, Iowa, assignor to Hawkeye Pearl Button Company, Muscatine, Iowa, a Corporation of Iowa. Filed Mar. 12, 1915. Serial No. 14,005. (Cl. 211—40.)



1. An article container having at one end thereof a strip conforming to the outer dimensions of the container and lying flatwise thereupon, and a cover secured to said strip having marginal flanges adapted to overlap and be attached to the sides of the container, thereby forming, between the front end of the container and the strip, guides for the reception of display cards, substantially as described.

2. An article container having attached to one end thereof a strip conforming to the outer dimensions of the container and lying flatwise thereupon, and a cover attached to said strip having inner inturned marginal portions covering the inner edge of said strip and outer marginal flanges adapted to overlap and be attached to the sides of the container, thereby forming between the front end of the container and the strip, guides within which display cards may be slidably fitted, substantially as described.

1,156,645. DYNAMO-ELECTRIC MACHINE. MILES WALKER, Hale, England, assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 16, 1910. Serial No. 561,749. (Cl. 171—228.)



1. In a direct current or double current dynamo electric generator, the combination with an armature, a commutator cylinder to which the armature coils are connected, and a set of adjustable brushes, of a field magnet, the polar projections of which are divided in a line parallel to the axis of the armature into two unequal well defined portions to provide a greater air gap under the smaller portion located under the leading pole tip than under the remaining larger portion of the pole face.

2. In a dynamo-electric machine, the combination with an armature, a commutator cylinder to which the armature coils are connected, and an adjustable set of brushes, of a field magnet the polar projections of which are divided in a line substantially parallel to the axis of the armature into two well defined portions having air-gaps of different lengths, the portion having the longer air-gap being disposed on the side of the polar projection approached by the armature when the machine is operated as a generator.

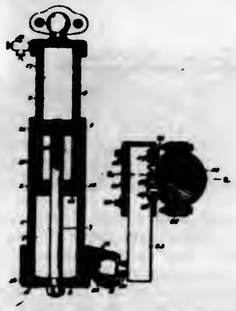
3. In a dynamo-electric machine, the combination with an armature, a commutator cylinder to which the armature coils are connected, and an adjustable set of brushes, of a field magnet having a plurality of polar projections severally provided with well defined zones of different flux densities, the zone of the lower density being disposed under the leading pole tip when the machine is operated as a generator.

4. In a dynamo-electric machine, the combination with an armature, a commutator cylinder to which the armature coils are connected, and an adjustable set of brushes, of a field magnet having polar projections that are severally recessed under the leading pole tip to produce a weak uniform magnetic field under that portion of the projection through which the conductors move when the brushes make contact with their corresponding commutator segments.

5. In a rotary converter, the combination with a rotatable armature having a commutator cylinder, and a field magnet structure having zones of relatively weak flux density under the leading pole tips, of a set of brushes cooperating with the commutator cylinder and adapted for adjustment within said zones of weak flux density, whereby the direct-current voltage may be varied.

1,156,646. SHOCK-ABSORBER. RAYMOND R. WALKER, Follansbee, W. Va. Filed Mar. 8, 1915. Serial No. 12,721. (Cl. 21—50.)

1. A shock absorber comprising a pair of cylinders one of which is telescoped within the other, each cylinder having its outer end closed and the inner cylinder having its inner end closed, a piston disposed within said inner cylinder, a piston rod extending from said piston through the closed inner end of said inner cylinder and being fixed to the closed outer end of the outer cylinder, an inlet port for admitting air to the outer cylinder, a port for admitting air from said outer cylinder to the inner cylinder between the inner closed end of the latter and said piston, and a port leading through the piston and piston rod permitting communication between the portions of said inner cylinder at opposite sides of said piston, the last mentioned port opening at its lower end at a distance from the piston and being adapted to be closed by the inner closed end of said inner cylinder upon close approach of said end and said piston.



2. A shock absorber comprising a pair of cylinders one of which is telescoped within the other, each cylinder having its outer end closed and the inner cylinder having its inner end closed, a piston disposed within said inner cylinder, a piston rod extending from said piston through the closed inner end of said inner cylinder and being fixed to the closed outer end of the outer cylinder, an inlet port for admitting air to the outer cylinder, a check valve controlling said port, a port for admitting air from said outer cylinder to the inner cylinder between the inner closed end of the latter and said piston, a check valve controlling the last mentioned port, and a port leading through the piston and piston rod permitting communication between the portions of said inner cylinder at opposite sides of said piston, the last mentioned port opening at its lower end at a distance from the piston and being adapted to be closed by the inner closed end of said inner cylinder upon close approach of said end and said piston.

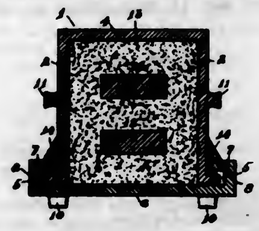
3. A shock absorber comprising a pair of telescoped cylinders movable with respect to each other, said cylinders having their outer ends closed and the inner cylinder having its inner end closed to form a chamber at the outer end of said outer cylinder, a piston dividing the inner cylinder into two chambers, means affording communication for air between said two chambers, except when said piston and said closed inner end closely approach each other, means permitting the passage of air from the first mentioned chamber to the middle chamber, a check-valve controlled passage for admitting atmospheric air to said first mentioned chamber, and means maintaining said piston in fixed relation to the other cylinder.

4. A shock absorber comprising a pair of telescoped cylinders movable with respect to each other, said cylinders having their outer ends closed and the inner cylinder having its inner end closed to form a chamber at the outer end of said outer cylinder, a piston dividing the inner cylinder into two chambers, means affording communication for air between said two chambers, except when said piston and said closed inner end closely approach each other, a check-valve controlled passage for admitting air from the first mentioned chamber to the middle chamber, a check-valve controlled passage for admitting atmospheric air to said first mentioned chamber, a port for exhausting air from the outer end of said inner cylinder, said port opening into said cylinder at a distance from its outer end and being adapted to be closed by the piston when the latter closely approaches said end, and a piston rod attached to the closed outer end of the outer cylinder and extending through the closed inner end of the inner cylinder whereby said piston is maintained in fixed relation to said outer cylinder.

5. A shock absorber comprising a pair of telescoped cylinders movable with respect to each other, said cylinders having their outer ends closed and the inner cylinder having its inner end closed to form a chamber at the outer end of said outer cylinder, a piston dividing the inner cylinder into two chambers, means affording communication for air between said two chambers, means permitting the passage of air from the first mentioned chamber to the middle chamber, a passage for admitting atmospheric air to said first mentioned chamber, a check valve in said passage for preventing the escape of air from said first mentioned chamber when said cylinders move inward with respect to each other whereby an air cushion is formed in said chamber, and means maintaining said piston in fixed relation to the outer cylinder, and adjustable means for connecting the outer cylinder to a vehicle axle.

[Claims 6 to 8 not printed in the Gazette.]

1,156,647. CARBONIZING OR PACK-HARDENING BOX. MERRITT D. WILBUR, Rochester, N. Y., assignor of one-half to Francis P. Cannon, Syracuse, N. Y. Filed Mar. 23, 1915. Serial No. 16,439. (Cl. 148—14.)



1. The combination, in a device of the character and for the purpose described, of a box having one side open, a cover slidable on and off of said box, projections formed on said cover, flanges on side walls of said box, cooperating flanges on said cover adapted to engage said first named flanges in overlapping relation, said box adapted to be placed in a furnace, bottom side up, with the cover forming a base supported above the furnace floor by said projections, and means as lugs formed on said box adapted to be engaged by a suitable device therefor when placing the box in or removing it from a furnace.

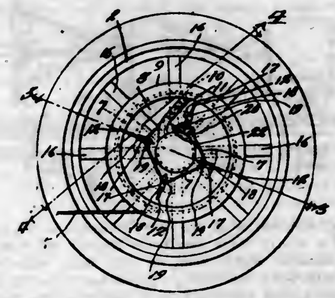
2. The combination, in a device of the character and for the purpose described, of a box having one side open, a cover slidable on and off of said box, flanges extending outwardly from side walls of said box, sides on said cover, and flanges extending inwardly therefrom adapted to engage said first named flanges in overlapping relation.

3. The combination, in a device of the character and for the purpose described, of a box member having one side open, a member for closing said open side, flanges extending outwardly from side walls of said box, sides on said closing member, flanges extending inwardly therefrom adapted to engage said first named flanges in overlapping relation, and projections formed on one of said members for supporting said box above the floor of a furnace.

4. The combination, in a device of the character and for the purpose described, of a box having one side open, a cover slidable on and off of said box, flanges extending outwardly from side walls of said box, sides on said cover, flanges extending inwardly therefrom adapted to engage said first named flanges in overlapping relation, and projections formed on said cover, said box adapted to be placed in a furnace, bottom side up, with the cover forming a base supported above the furnace floor by said projections.

5. The combination, in a device of the character and for the purpose described, of a box comprising side and bottom walls and having an open top, a cover removable therefrom and having its edges extending at all points beyond said side walls, projections formed on said cover, said box adapted to be placed in a furnace, bottom side up, with said cover forming a base supported above the furnace floor by said projections, and coöperating members formed integrally with said side walls and along the edges of said cover adapted to engage in overlapping relation to hold the box and cover against separation when the device is being overturned.

1,156,648. EMERGENCY-WINDLASS FOR AUTOMOBILES. ORSON H. WILLARD, Cottage Grove, Oreg. Filed Apr. 8, 1915. Serial No. 19,955. (Cl. 242—95.)



1. An emergency draft windlass for the purpose described provided with a flexible draft member, comprising a drum having radially movable clamping means engaging between the spokes of an automobile wheel, said clamping means having elements to be engaged by said draft member to draw the clamping means in engagement with the spokes of the wheel for detachably clamping the drum to the wheel.

2. An emergency draft windlass for the purpose described provided with a flexible draft member comprising a drum having radially movable wedges to wedge between the spokes of an automobile wheel, said wedges having elements about which the draft member is designed to be wound for drawing the wedges toward the center of the drum to detachably clamp the drum to the wheel, said drum having an opening in its cylindrical wall through which the draft member may pass for winding upon the drum.

3. An automobile emergency draft windlass for the purpose set forth, comprising a windlass drum having a socket to engage the hub of an automobile wheel and provided with radial slots substantially V-shaped clamping members engaging said slots having grooves engaging and wedging between the spokes of the wheel, retainers for holding the clamping members movably in said slots, said retainers having enlargements provided with grooves, in which grooves a draft element winds for drawing the clamping members radially toward the hub for detachably clamping the drum to the wheel, said drum having an opening through which said draft element passes to wind upon the drum.

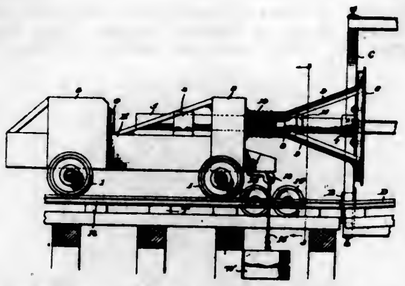
1,156,649. BUFFER FOR RAILWAYS. ALEXANDER H. WOOD, Petros, Tenn. Filed Dec. 16, 1914. Serial No. 877,471. (Cl. 104—229.)

1. In an apparatus of the nature described, the combination of a rotatable and longitudinally yielding buffer head located at approximately the height of a car body, and means for supporting and rotating a car in engagement with said buffer head, the car and the buffer head rotating in unison, substantially as described.

2. In an apparatus of the nature described, the combination of a rotary track section, a body, a buffer head on said body, wheels supporting said body for travel of the body on the track, and means acting yieldingly at a point on the track to move said body on said wheels to a chosen position on the track for bringing a running car to rest on said track section, substantially as described.

3. In an apparatus of the nature described, the combination of a rotary track section, a body, a rotary buffer

head on said body, wheels supporting said body for travel of the body on the track, and means acting yieldingly at a point on the track to move said body on said wheels to a chosen position on the track for bringing a running car to rest on said track section, substantially as described.



4. In an apparatus of the nature described, the combination of a rotary track section, a body, a rotatable and endwise movable buffer head on said body, wheels supporting said body for travel of the body on the track, and means acting yieldingly at a point on the track to move said body on said wheels to a chosen position on the track for bringing a running car to rest on said track section, substantially as described.

5. In an apparatus of the nature described, the combination of a buffer body, wheels supporting said body for travel of the body on the track, and means engaging the buffer body and acting yieldingly relative to a chosen point on the track to permit said body to move to either side of said point for bringing a running car to rest on said track at a fixed distance from said point, substantially as described.

[Claims 6 to 21 not printed in the Gazette.]

1,156,650. BASING INCANDESCENT LAMPS. GILBERT WRIGHT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 2, 1915. Serial No. 5,652. (Cl. 176—32.)



1. The combination with an incandescent lamp bulb having a recess in the base thereof, of a lamp base having a threaded shell contact, a central contact insulated therefrom and a clamping member connected to said central contact and engaging the recess in the bulb to secure the base to the bulb.

2. The combination with an incandescent lamp bulb having an annular groove around the base thereof, of a lamp base having a threaded shell contact, an insulating member within said contact having a central opening, a clamping member within said opening having prongs thereon engaging the groove in the lamp bulb and a screw member engaging said clamping member in holding it in engagement with said insulating member and said lamp bulb.

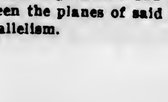
3. The combination with an incandescent lamp bulb having an annular groove around the base thereof, of a lamp base having a threaded shell contact, a clamping member engaging the groove in the bulb and a screw member, the head of which is adapted to serve as a central contact, engaging said clamping member and holding it in engagement with said bulb.

4. The combination with an incandescent lamp bulb of a lamp base having a threaded shell contact, a central contact insulated therefrom and a clamping member connected to said central contact and engaging said bulb to secure the base to the bulb.

5. A base for an incandescent lamp comprising a threaded shell contact, a central contact insulated therefrom and a clamping member connected to said central contact and adapted to secure the base to a lamp bulb.

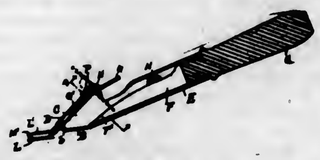
[Claims 6 to 16 not printed in the Gazette.]

1,156,651. CUFF-LINK. FRANK W. YOUNG, Providence, R. I. Filed Mar. 24, 1915. Serial No. 16,595. (Cl. 24—102.)



A cuff retainer comprising a substantially W shaped resilient yoke member adapted to engage and retain the individual edges of the cuff in spaced apart relation the elongated side arms of the yoke being adapted to extend along and embrace the opposite outside portions of the cuff, the ends of said arms being folded back upon themselves, and button-hole engaging members fixed to said inturned ends and extending inward toward each other, the inner ends of said members nearly contacting, whereby the yoke arms are caused to spring apart to permit the cuff fabric to pass between in positioning said yoke on the cuff.

1,156,652. FRUIT AND VEGETABLE SLICER. THOMAS MCG. AIKEN, Pittsburgh, Pa. Filed Jan. 27, 1915. Serial No. 4,648. (Cl. 146—7.)



1. A household tool comprising a handle, a guiding device and a blade-like cutter carried by handle, the guiding device having a straight bearing surface extending in the direction of movement of the tool and the blade-like cutter having its width dimension extending in the same direction with its cutting edge disposed transversely to said direction of movement, the cutter and guiding device being spaced apart in the direction of said movement and with the straight guiding surface and transverse dimension of the cutter lying in parallel planes, and means for varying the distance between said planes.

2. A household tool comprising a body having its under side straight in the direction of movement of the body to form a guiding surface, a handle projecting from the body, a cutter spaced from the body in the direction of movement of the tool with the cutter straight in said direction and lying in a plane parallel with the guiding surface of the body, and a cutter support secured to the body and adjustable thereon in a straight line oblique to the planes of said guiding surface and cutter for varying the distance between the planes of said parts without disturbing their parallelism.

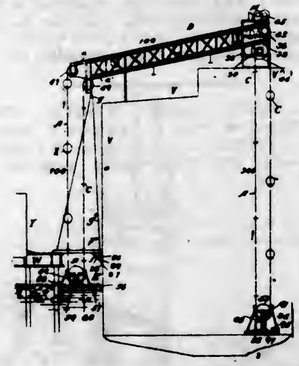
3. A household tool comprising a body having its under side formed with a flat guiding surface and with a handle portion inclined upwardly and rearwardly from said surface, a flat cutter at one side of the guiding surface and in a plane beneath and parallel therewith, and a cutter support carried by the body and movable thereon in a right line for maintaining the flat guiding surface and flat cutter parallel in all positions of adjustment.

4. A household tool comprising a body having its under side formed with a flat guiding surface and with a handle elevated above said surface, a flat cutter parallel with the flat guiding surface, cutter-supporting means movable on the body for maintaining the flat cutter parallel with the flat guiding surface in all positions of adjustment, the guiding surface and the cutter being spaced apart in the direction in which the tool is moved by the handle.

5. A household tool comprising a body having its under side formed with a flat guiding surface, a handle projecting from the body at one side of the guiding surface and a flat cutter at the opposite side of and in a plane parallel with the flat guiding surface, a cutter support movable on the body for varying the distance between the parallel planes of the guiding surface and cutter, the support being movable in a direction to maintain such parallelism in all positions of the cutter.

[Claims 6 to 9 not printed in the Gazette.]

1,156,653. SHIP LOADER OR UNLOADER. BENJAMIN H. ALVEY, Elizabethtown, Ky. Filed Oct. 14, 1910. Serial No. 587,098. (Cl. 193—8.)



1. In a conveyer, the combination of a frame having upper and lower tracks at each side, an endless traveler engaging the upper and lower tracks at one side throughout a part of its length, a second endless traveler engaging the upper and lower tracks at the other side of the frame, said travelers being of length greater than the frame and having their end portions depending from the ends of the latter, package carriers arranged between the travelers and suspended from the latter, the said carriers being pivotally connected at their upper ends with the travelers and having their lower ends provided with package-carrying portions which project forward and rearward from the plane of the travelers, means whereby the endless travelers at one end of the conveyer are weighted to take up slack therein, the latter ends of the travelers being unsupported, and means connected to the frame and engaging the travelers and imparting movement to the latter, comprising separate driving gears respectively engaging the working and returning runs of the travelers, a common power shaft and separate gearings between the power shaft and the driving gears arranged to drive the latter simultaneously in directions one the reverse of the other and at substantially the same speed.

2. In a conveyer, the combination of a frame having upper and lower tracks at each side, an endless traveler engaging the upper and lower tracks at one side throughout a part of its length, a second endless traveler engaging the upper and lower tracks at the other side of the frame, said travelers being of length greater than the frame and having their end portions depending from the ends of the latter, package carriers arranged between the travelers and suspended from the latter, the said carriers being pivotally connected at their upper ends with the travelers and having their lower ends provided with package-carrying portions which project forward and rearward from the plane of the travelers, means whereby the endless travelers at one end of the conveyer are weighted to take up slack therein, the latter ends of the travelers being unsupported, and means connected to the frame and engaging the travelers and imparting movement to the latter, comprising a common power shaft having a plurality of gears, gears engaging one run of the travelers, other gears movable in the same direction as the latter gears, and respectively intermeshed with certain of the gears on the power shaft, gears engaging the other runs of the travelers, gears movable with and in the same direction as the last mentioned ears and having an intermediate driving connection to the remaining gears on the power shaft, the several gears being proportioned and thus arranged to drive the working and returning runs of the travelers simultaneously and at the same speed in directions one the reverse of the other.

3. A ship loader or unloader comprising an endless traveling conveyer guided to provide an intermediate section and sections depending from the ends thereof, said conveyer having pivotally-suspended package carriers, a loading device supported in operative relation with one of said end sections, said loading device being provided with means for supporting packages in the path of the package-carriers and arranged to be moved on its support with swinging movement of said section, the latter having traveling movement relatively to said device and extending below said device and being freely suspended.

4. In a ship loader or unloader, the combination with an endless traveling conveying means provided with pivotally suspended package carriers, said conveying means having a suspended section, of a movably-supported platform arranged above the lower end of the suspended section and having package-supporting elements operatively related to the package carriers, the platform having means through which the suspended section travels to a place below the package-supporting elements of the platform and which means guides the suspended section.

5. In a ship loader or unloader, the combination with an endless traveling conveying means provided with pivotally suspended package carriers, said conveying means having a suspended section, of a movably-supported platform arranged above the lower end of the suspended section and having package-supporting elements operatively related to the package carriers, the platform having means through which the suspended section travels to a place below the package-supporting elements of the platform and which means guides the suspended section, and said suspended section having means separate from the platform and below the latter for weighting it.

[Claims 6 to 31 not printed in the Gazette.]

1,156,654. FLY-NET. EDWARD W. ANDBERGG, Algoma, Wis., assignor to Gem Hammock & Fly Net Co., Milwaukee, Wis. Filed Apr. 16, 1914. Serial No. 832,142. (Cl. 54—81.)

1. In a horse fly net, a bar and parallel cords crossing the bar in pairs, the cords of each pair being twisted together at the middle of the bar, and lines of stitching extending along the edges of the bar and through the cords on either side of the twist thereof.

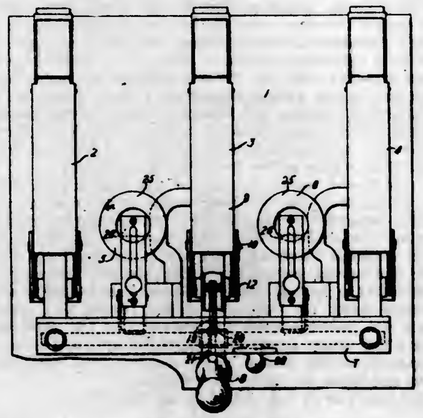
2. In a fly net, a bar comprising two strips of webbing, one placed upon another, parallel cords crossing the bar in pairs, the cords of each pair being twisted together in the middle of the bar between the strips of webbing, and lines of stitching extending along the edges of the strips of webbing to secure them together and passing through the cords on either side of the twist thereof, the twist of the cords between the strips of webbing forming an enlargement to prevent the slipping of the cords.

3. In a horse fly net, a bar and parallel cords crossing the bar in pairs, the cords of each pair being twisted together at the middle of the bar and at a point midway between their parallel lines and being transposed at the



opposite sides of the bar, and lines of stitching extending along the edges of the bar and through the cords at points in the parallel portions thereof on opposite sides of the twist thereof.

1,156,655. CIRCUIT-INTERRUPTING DEVICE. WALTER M. AUSTIN, Swissvale, and JOSEPH N. MAHONEY, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 14, 1913. Serial No. 795,109. (Cl. 175—267.)



1. A circuit interrupter comprising a plurality of movable contact members operatively connected together, a movable contact member independent of said contact members, two levers pivotally mounted on said independent contact member, an operating lever, a latch pivotally mounted on said lever and operatively connected to one of said levers, said latch serving to restrain said operatively connected movable contact members, and the other of said levers having means for restraining said independent movable contact member in its closed position, and means for operating said levers to trip said interrupter.

2. A circuit interrupter comprising a plurality of movable contact members, a bar for connecting said plurality of movable contact members together, a movable contact member independent of said contact members, two levers pivotally mounted on said independent contact member, an operating lever, a latch operatively connected to one of said levers, said latch serving to connect said bar and said operating lever together, and the other of said levers having means for restraining said independent movable contact member in its closed position, and means for operating said levers to trip said interrupter.

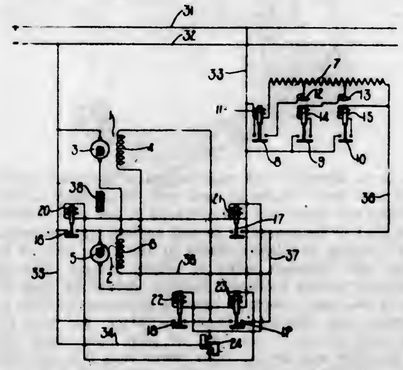
3. A circuit interrupter comprising three movable contact members, a bar for operatively connecting two of said movable contact members together, an operating mechanism comprising a latch for engaging said bar, two trip coils, two pivotally mounted levers, means actuated by said trip coils for engaging said levers, one of said levers being adapted to latch the movable member that is not connected to the bar in its closed position, and means for operatively connecting the other lever to the latch that engages the said bar.

4. In a circuit interrupting device, the combination with a plurality of movable contact members, of a bar for connecting all but one of said contact members together, an operating mechanism comprising a trip coil, two levers pivotally mounted on said contact member that is not connected to the bar, an operating lever, a tripping bar actuated by said trip coil and adapted to engage said levers, one of said levers being adapted to restrain the contact member that is not connected to said bar, and a latch operatively connected to the other of said levers for operatively connecting said connecting bar and the said operating lever.

5. A circuit interrupter comprising a plurality of contact arms, a bar for connecting said plurality of contact arms together, a movable contact arm independent of said plurality of contact arms, a tripping device, two pivotally mounted levers, an operating lever, one of said levers being adapted to restrain said independent arm in its closed position, and a latch operatively connected to the other of said levers for latching said operating lever to said connecting bar.

[Claims 6 to 11 not printed in the Gazette.]

1,156,656. MOTOR-CONTROL SYSTEM. HOWARD L. BEACH, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Nov. 28, 1913. Serial No. 803,516. (Cl. 172—179.)



1. In a motor control system, the combination with a source of current, and two series-wound motors connected thereto, said motors comprising armatures and field magnet windings, of means comprising a plurality of magnetic switches for simultaneously reversing the direction of flow of current through the armature of one motor and through the field magnet winding of the other motor without altering the electrical connections of the other armature and field magnet winding.

2. In a motor control system, the combination with a source of current, and two series-wound motors electrically connected thereto and to each other, said motors comprising armatures that are mechanically connected and field magnet windings, of means for simultaneously reversing the electrical connections of the armature of one motor and of the field magnet winding of the other motor and maintaining the electrical connections of the other armature and field magnet winding.

3. In a motor control system, the combination with a source of current, of two series-wound motors comprising armatures and field magnet windings, two electrical circuits connected in parallel relation to said source, one of said circuits being permanently connected thereto, each of said circuits comprising the armature of one motor and the field magnet winding of the other motor, and means for controlling the direction of flow of current through one of said circuits.

4. In a motor control system, the combination with a source of current, of two electrical circuits connected in parallel relation to said source, one of said circuits being permanently connected thereto, two series-wound motors, each of which comprises an armature in one of said circuits and a field magnet winding in the other of said circuits, and means for simultaneously reversing the electrical connections of one of said armatures and of one of said field magnet windings.

5. In a motor control system, the combination with a source of current, of a plurality of series-wound motors comprising armatures and field magnet windings, a plurality of parallel circuits connected in parallel relation to said source, one of said circuits being permanently connected thereto, each of said circuits comprising the armature of one motor and the field magnet winding of another motor, and means for controlling the electrical connections of said circuits.

[Claims 6 and 7 not printed in the Gazette.]

1,156,657. SWAB-UNLOADER. HOWARD F. BEAM, Harmony, Pa. Filed June 15, 1915. Serial No. 34,139. (Cl. 166—19.)



1. The combination of a cylinder open at its opposite ends for the passage of liquid, a ported piston movable in the cylinder, a valve for the piston port, a spring for opposing movement of the piston in the direction in which the valve moves when closing, and means made operative by movement of the piston in opposition to the spring for opening said valve and releasing fluid confined in the cylinder.

2. The combination of a cylinder open at its opposite ends for the passage of liquid and with one end of the cylinder adapted to communicate with a liquid container, a piston movable in the cylinder, a spring for opposing movement of the piston in response to weight or pressure of the liquid within the container, the piston being ported and a check valve for the port with said valve adapted to open toward the container, and means made operative by the spring-opposed movement of the piston for opening said valve and releasing liquid from the container.

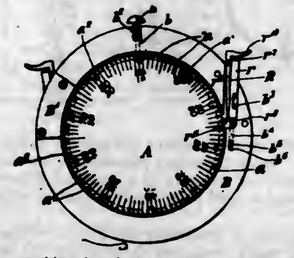
3. The combination with a well swab having a tubular body open at its opposite ends for the admission and discharge of liquid, of a cylinder adapted to connect with the lower end of said body, a ported piston movable within the cylinder, a spring for opposing movement of the piston in direction away from the body, a downwardly closing check valve for the piston port, and means made operative by the movement of the piston in opposition to the spring and under the weight of fluid above the check valve for opening said valve and discharging sufficient liquid from above the swab to permit the piston to return to normal position under the influence of the spring and thereby close the valve and stop such discharge.

4. The combination of a cylinder open at its opposite ends for the passage of liquid, a ported piston movable in the cylinder, a spring for opposing movement of the piston, a check valve for the piston port, and means affording a limit to the movement of the check valve with the piston whereby when the piston exceeds such limit the piston port is opened for the passage of fluid.

5. The combination with a well swab having a tubular body open at its opposite ends for the admission and discharge of liquid, of a cylinder adapted to connect with the lower end of said body, a ported piston movable within the cylinder, a spring for opposing movement of the piston in direction away from the body, a check valve for the piston port having a vertical stem, and a support with relation to which the stem has limited movement whereby when the spring-opposed movement of the piston exceeds the limited movement of the check valve the piston port is opened.

[Claims 6 to 8 not printed in the Gazette.]

1,156,658. DIAL FOR COMBINATION-LOCKS. WILLIAM T. BENHAM, Rising Sun, Ind. Filed Jan. 5, 1914. Serial No. 810,353. (Cl. 70—56.)



1. In a combination lock having a rotatable dial and a fixed rim, a circular notched rack on the dial, such notches constituting a unit gage for running the combination of the lock to which the dial is applied; said dial having, also, groups of lock combination units; means upon the fixed rim adapted to rotate the dial in either direction by contact with the notches of the rack, and a plunger upon the fixed rim normally out of contact with the groups of lock combination units but adapted to be contacted with them at will.

2. A rotatable dial for combination locks, having a fixed rim, a circular notched rack on the dial, such notches constituting a unit gage for running the combination of the lock to which the dial is to be applied, holes in the dial, such holes constituting a gage for groups of lock combination units, a pawl upon the rim adapted to rotate the dial by contact with the notches of the rack, and a plunger upon the rim adapted to be contacted with the holes in the dial at will.

1,156,659. DIAL FOR COMBINATION-LOCKS. WILLIAM T. BENHAM, Norwood, Ohio. Filed Mar. 8, 1915. Serial No. 12,910. (Cl. 70—56.)

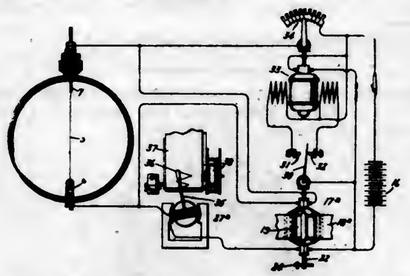


1. In a combination lock, a rotatable dial provided with graduations upon its surface arranged in concentric cir-

cles, representing, respectively, single units, uniform groups of units, and the starting point in the count, and an indicator adapted to be adjusted to contact with the surface of the dial at either circle of said graduations, at will.

2. In a combination lock, a chambered dial-casing, a rotatable dial constituting a face plate for the casing-chamber, said dial plate having graduations arranged upon its inner surface in concentric circles for designating single units, uniform groups of units, and a common starting point, respectively, and an indicator arranged within the casing chamber adapted to bear outwardly by manipulation against the inner face of the dial; and a manipulating handle carrying the indicator and extending outwardly through the dial-casing.

1,156,660. METHOD AND APPARATUS FOR MEASURING THE FLOW OF FLUIDS. ERNST J. BERG, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 22, 1914. Serial No. 833,804. (Cl. 73—167.)



1. The method of measuring the flow of steam, air and other fluids, which comprises determining the amount of energy required to maintain at a constant temperature a body upon which said fluid exerts a cooling action as it flows.

2. The method of measuring the flow of steam, air and other fluids, which comprises determining the amount of electrical energy required to maintain at a constant temperature higher than the temperature of the fluid, an electrical resistance means upon which the flowing stream of fluid exerts a cooling action dependent upon its rate of flow.

3. The method of measuring the flow of steam, air and other fluids, which comprises determining the amount of electrical energy required to maintain at a constant temperature higher than the temperature of the fluid, an electrical resistance means immersed in the flowing stream of fluid and exposed to the mean velocity thereof.

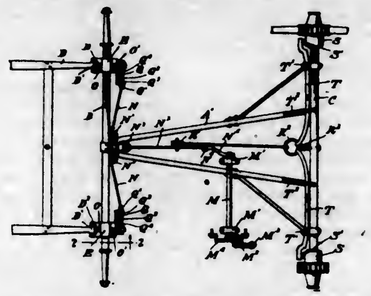
4. The method of determining the flow of steam, air and other fluids, which comprises heating by an electric current to a temperature higher than the temperature of the fluid, a means arranged in such relation to the flowing fluid that its temperature is affected by the fluid, and determining the flow by measuring the heating current.

5. The method of determining the flow of steam, air and other fluids, which comprises heating a suitable means by an electric current, said means being arranged in such relation to the flowing fluid that a transfer of heat will take place between them, varying the heating current to maintain said means at a constant temperature, and determining the flow by measuring the heating current.

[Claims 6 to 22 not printed in the Gazette.]

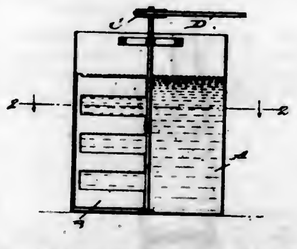
1,156,661. SHAFT-RELEASING AND BRAKE-APPLYING DEVICE FOR VEHICLES. EDWARD C. BLISS, Waverly, Ohio. Filed Mar. 23, 1915. Serial No. 16,396. (Cl. 21—75.)

An apparatus for detaching shafts from running gears of vehicles and applying brakes to the wheels thereof, comprising a clamping plate adapted to be fitted over an axle and provided with downwardly projecting lugs, said plate having a forwardly projecting portion with a recess in its under edge, and a rearwardly and upwardly projecting portion which is apertured, a pivotal clamping member pivotally mounted underneath the portion which is adapted to engage the axle and having a grooved jaw, coöperating with the forwardly projecting portion of the plate, a



spring interposed between the plates, said pivotal plate having one arm upwardly curved and apertured, a spring-pressed pin adapted to engage registering apertures in the rearwardly projecting portion of said plate, brakes, and connections between the same and said spring-actuated pin.

1,156,662. PROCESS OF OBTAINING MAGNESIA. JOSEPH A. BRADBURN, Syracuse, N. Y. Filed Nov. 28, 1914. Serial No. 874,424. (Cl. 23—13.)

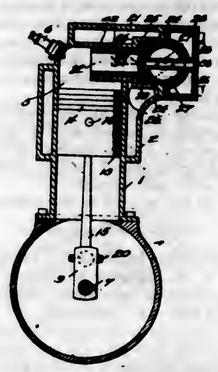


1. The herein described process of producing magnesia from a dolomitic substance containing carbonate of calcium and magnesium, which consists in calcining said substances at a temperature not higher than necessary to decompose the calcium carbonate and magnesium carbonate, treating the calcined product with water to form a milk, stirring the same until hydration is sufficiently complete, mixing the milk thus prepared with a solution of sodium and ammonium chlorids, distilling the solution thus treated to free the same from ammonia, treating the residual solution with calcined dolomite whereby magnesium hydrate is precipitated from the solution and magnesium oxid is separated from the calcined dolomite, collecting the magnesium hydrate and the magnesium oxid each separately from the liquor, and calcining the magnesium hydrate.

2. The herein described process of producing magnesia from a dolomitic substance containing carbonate of calcium and magnesium, which consists in calcining said substances, treating the calcined product with water to hydrate the same, mixing the hydrated solution with a solution of sodium and ammonium chlorids, distilling the solution to free the same from ammonia, treating the residual solution with calcined dolomite whereby magnesium hydrate is precipitated from the solution and magnesium oxid is separated from the calcined dolomite, collecting the magnesium hydrate and the magnesium oxid each separately from the liquor, and calcining the magnesium hydrate.

8. The herein described step in the process of producing magnesia from a dolomitic substance, which consists in treating calcined dolomite with a liquor containing calcium chlorid, sodium chlorid, and magnesium chlorid, in sufficient quantities to precipitate magnesium hydrate and separate magnesium oxid.

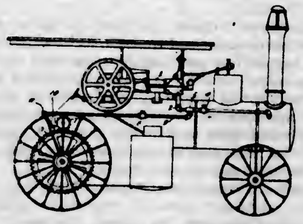
1,156,663. INTERNAL-COMBUSTION ENGINE. FRED D. CALKINS and ALFRED C. JOHNSON, Sunnyvale, Cal. Filed May 8, 1912. Serial No. 695,848. (Cl. 123—80.)



1. An engine of the character specified, comprising a cylinder provided at one end with an explosion chamber having a lateral extension, said extension having tubular passages at substantially a right angle to the axis of the cylinder, a shell in each passage, the outer ends of the shells being concave transversely to form an inner bearing section for the valve, an outer bearing section connected to the extension and coöperating with the outer ends of the shells to form a substantially cylindrical valve chamber, a valve in the chamber, the shells and the outer section having ports in alinement and the valve having ports for connecting the first-named ports, and springs pressing the shells toward the outer section to compensate for wear and to prevent leakage when the ports are in register.

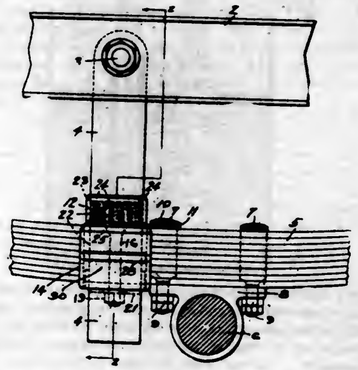
2. An engine of the character specified, comprising a cylinder having at one end an explosion chamber, said chamber having a lateral extension provided with passages at approximately a right angle to the axis of the cylinder, an outer valve chamber section secured to the extension, a valve in the chamber, a shell in each passage, the outer ends of the shells being shaped to fit the valves, and yielding means for pressing the shells toward the valve to prevent leakage between the valve and the chamber and to compensate for wear.

1,156,664. GEARING-LUBRICATOR. TONY CHOLIN, Chinook, Mont. Filed June 9, 1913. Serial No. 772,614. (Cl. 184—1.)



A lubricator for engines of the type described, including an exhaust-pipe leading from the engine-cylinder, said exhaust-pipe having two branches, a controlling valve in each branch, an element to be lubricated, and one of said branches adapted to discharge on said element.

1,156,665. SHOCK-ABSORBER. ANDREW CHRISTIANSON, Butler, Pa. Filed July 14, 1913. Serial No. 778,960. (Cl. 21—105.)



1. In a shock absorber for vehicles, the combination of a member secured to the vehicle body, a second member supported by the axle, said second member having a friction face, and a movable friction plate therein between which said first member passes, a spiral spring parallel with said movable friction plate and interposed between a shoulder formed on said movable friction plate and said second member normally forcing said friction plate upwardly, and a roller pawl interposed between said movable friction plate and said second member.

2. In a shock absorber for vehicles, the combination of a member secured to the vehicle body, a second member supported by the axle, said second member having a friction face and a movable friction plate therein between which said first member passes, a spring interposed between the upper end of said movable friction plate and said second member, and a roller pawl interposed between said movable friction plate and said second member.

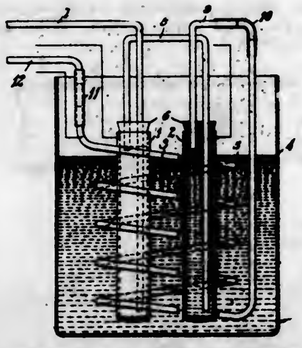
3. In a shock absorber for vehicles, the combination of a member secured to the vehicle body, a second member supported by the axle, said second member having a stationary friction face and a movable friction plate in said second member between which said first member passes, an overhanging portion at the upper end of said movable plate, a spring interposed between said overhanging portion and said second member, and a roller pawl interposed between said movable friction plate and said second member.

4. In a sohck absorber for vehicles, the combination of a member secured to the vehicle body, a second member supported by the axle having a stationary friction face, a movable friction plate in said second member between which and said stationary friction face said first member passes, a hood at the upper end of said movable friction plate, a spring in said hood and bearing against said second member and a roller pawl interposed between said movable friction plate and said second member.

1,156,666. ELECTROLYTIC RECTIFIER. LEWIS W. CHUBB, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 21, 1910. Serial No. 598,635. (Cl. 175—315.)

1. In an electrolytic rectifier, the combination with a body of electrolyte, a pair of tubular film-forming electrodes, and a liquid-conducting tube between the top of one and the bottom of the other electrode, of a helical pipe electrode surrounding said tubular electrodes and having

one end in communication with the interior of one of them, and means for connecting one of the tubular electrodes and the free end of the helical pipe electrode to a supply of cooling liquid.



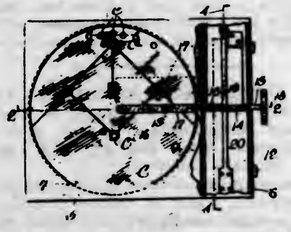
2. The combination with a receptacle containing an electrolyte, of a plurality of electrodes submerged therein, said electrodes generating heat at their surfaces at different rates when current is passing therebetween, means for first passing a cooling fluid through the interior of an electrode having relatively large heat generating capacity, and for subsequently passing said cooling fluid through an electrode having relatively small heat-generating capacity.

3. In an electrolytic rectifier, the combination with a receptacle containing an electrolyte, of an active electrode of film-forming material submerged therein, an electrode of inert conducting material submerged therein, connections for passing current between said electrodes, and means for passing a cooling fluid through the interior of said active electrode and for subsequently passing it through the interior of the inert electrode.

4. In an electrolytic rectifier, the combination with a receptacle, of an electrolyte therein, an active electrode of high heat-generating capacity arranged in the central portion of said receptacle, an inert electrode of small heat-generating capacity arranged about said active electrode, and means for passing a stream of cooling fluid through said active electrode and for subsequently passing said cooling fluid through the inert electrode.

5. The method of cooling two electrodes of an electrolytic device which have different heat-generating capacities which comprises circulating the electrolyte over the electrode of high heat-generating capacity at a greater rate than over the electrode of low heat-generating capacity, and in addition, passing a stream of cooling fluid through the electrode of high heat-generating capacity and subsequently passing said cooling fluid through the electrode of low heat-generating capacity.

1,156,667. GAME APPARATUS. JAMES E. CHURCH, Cambridge, Mass. Filed Feb. 1, 1915. Serial No. 5,394. (Cl. 46—57.)



1. Game apparatus of the nature described comprising a boundry, a game field releasably associated with said boundry, and means for moving markers within said boundary.

2. Game apparatus of the nature described comprising a boundary, a game field releasably associated with said boundry, and spring actuated means for operating markers within said boundary.

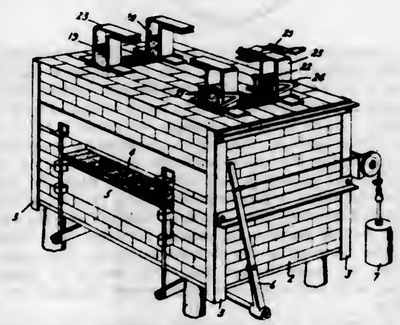
3. Game apparatus of the nature described comprising a boundary, a field support associated with said boundary and having field positioning and registering means, a field removably associated with said support, and means for movably operating markers within said boundary.

4. Game apparatus of the nature described comprising a boundary, a field support mounted to swing relative to said boundary and having field positioning and registering means, fields adapted to be interchangeably mounted on said support, and means for movably operating markers within said boundary.

5. Game apparatus of the nature described comprising an annular boundary, a marker moving means extending within said boundary, a field support having field positioning and registering means, and a game field removably associated with said support.

[Claims 6 to 13 not printed in the Gazette.]

1,156,668. ELECTRIC FURNACE. EDGAR F. COLLINS, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 17, 1914. Serial No. 832,489. (Cl. 204—64.)



1. An electric furnace comprising walls of refractory materials inclosing a heating chamber, a heater of refractory material on the floor of said chamber, the upper wall of said chamber consisting of difficultly oxidizable refractory material having a higher resistance when cold than said floor heater and having a negative temperature resistance coefficient, constituting a heater over said chamber, and common means for passing electrical energy through both said heaters.

2. In an electric furnace, the combination of a heater of granular conductive material, vertical channels at each end of said heater, upwardly extending columns of granular conductive material therein contacting with said heater and comprising particles in a finer state of subdivision than said heater and electrodes embedded in said columns.

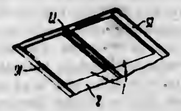
3. In an electric furnace, the combination of a refractory frame containing substantially vertical channels, a refractory supporting bed located below said channels, a coarsely granular carbonaceous material on said bed, said material constituting a heater, electrodes in said channels, and carbonaceous material in said channels more finely sub-divided than said heater material surrounding said electrodes and electrically connecting each of said electrodes respectively to the heater.

4. An electric furnace comprising a refractory hearth, a refractory conductive granular material on said hearth, refractory walls inclosing the hearth, the upper wall being in part conducting and containing upwardly extending channels, a refractory conductive material in said channels more finely comminuted than the material on said hearth and electrically contacting therewith and electrodes transversely movable in said channels embedded in said finely comminuted material.

5. An electric furnace comprising a refractory hearth, lump shaped carbonaceous material on said hearth, walls of refractory compound containing silicon and carbon inclosing a space above said hearth the upper wall being in part conducting and containing upwardly-extending channels, finely comminuted carbonaceous material passing through a screen having about 80 meshes to the square inch in said channels contacting with the material on said hearth and a plurality of electrodes embedded in the material in said channels.

[Claim 6 not printed in the Gazette.]

1,156,669. ANTISMUT-WEB FOR PRINTED SHEETS. CHARLES P. COTTRELL, Westerly, R. I., assignor, by mesne assignments, to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of Delaware. Filed Jan. 7, 1913. Serial No. 740,619. (Cl. 84—1.)



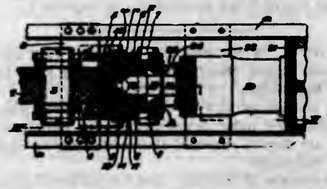
1. An anti-smut web adapted to be wound in a roll with printed sheets and having longitudinally arranged thickened edge and intermediate portions having between them depressed surfaces for receiving the sheets.

2. An anti-smut web adapted to be wound in a roll with printed sheets and having folded over edges and a longitudinal thickened portion having between them depressed surfaces for receiving the sheets.

3. An anti-smut web adapted to be wound in a roll with printed sheets and having its side edges folded over and permanently united to the web leaving a longitudinally arranged intermediate portion, for receiving the sheets.

4. An anti-smut web adapted to be wound in a roll with printed sheets and having its side edges folded over and permanently united to the web and a longitudinally arranged intermediate strip permanently united to the web.

1,156,670. DRAFT-GEAR. JOHN F. COURSON, Pitcairn, Pa. Filed July 16, 1914. Serial No. 851,272. (Cl. 213—64.)



1. In a friction draft gear, the combination with car framing, of a shock absorbing element adapted to transmit strains to the car framing, a drawbar, and intervening co-acting face-to-face wedge mechanism embodying plural faced wedge members, some of said members having alternating overlapping portions, a central buffing wedge, an embracing wedge box, and means connecting said box to the drawbar.

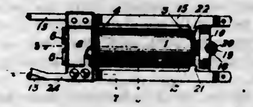
2. In a friction draft gear, the combination with car framing, of a shock absorbing element adapted to transmit strains to the car framing, a drawbar, and intervening co-acting face-to-face wedge mechanism embodying plural faced wedge members, a central buffing wedge, an embracing wedge box, and links connecting the wedge box with the drawbar.

3. In a friction draft gear, the combination with car framing, of a shock absorbing element adapted to transmit strains to the car framing, a drawbar, transverse stops, a follower, laterally movable wedges abutting forwardly against the follower, a co-acting wedge box embracing said wedges, means connecting the wedge box and drawbar, and a central member adapted to transmit movement from the laterally movable wedges to the shock absorbing element.

4. In a friction draft gear, the combination with car framing, of a shock absorbing element adapted to transmit strains to the car framing, a drawbar, transverse stops, a follower, laterally movable wedges abutting forwardly against the follower, a co-acting wedge box embracing said wedges and abutting rearwardly against the shock absorbing element, means connecting the wedge box and drawbar, and a central member adapted to transmit movement from the laterally movable wedges to the shock absorbing element.

5. In combination, a shock absorber operatively mounted in car framing, a drawbar, a follower, transverse stops, and wedge mechanism between the follower and the shock absorber comprising a wedge box connected to the drawbar, plural co-acting wedges within the wedge box, and a central buffing wedge engaging said wedges and extending rearwardly through the wedge box and engaging the shock absorber.

1,156,671. ELECTROMAGNETIC RELAY. EDWARD B. CRAFT, Hackensack, N. J., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Sept. 29, 1910. Serial No. 584,456. (Cl. 175—325.)



1. An electromagnetic relay comprising a core having forward and rearward extensions, a coil about said core, a flat armature mounted on said rearward extension, and having its free end contiguous to said forward extension, and contact springs also mounted on said rearward extension controlled by said armature.

2. An electromagnetic relay comprising a core having forward and rearward extensions, a coil about said core, a flat U-shaped armature mounted on said rearward extension and embracing said coil, said armature having its free end contiguous to said forward extension and contact springs also mounted on said rearward extension, said contact springs being controlled by said armature.

3. An electromagnetic relay comprising a flat core, a flat armature mounted upon a rearward extension of said core and having its free end contiguous to a forward extension of said core, said core and said armature being arranged flatwise in substantially the same plane, and said armature constituting a return pole piece between the forward and rearward extensions of said core and forming therewith a substantially complete magnetic circuit.

4. An electromagnetic relay having a flat core, and a flat armature extending along two sides of said core, said armature being mounted upon a rearward extension of said core and constituting return pole pieces for the forward and rearward extensions of said core, said core and said armature being arranged flatwise in substantially the same plane.

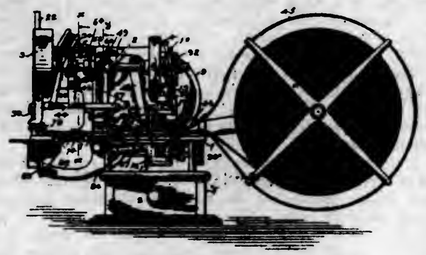
5. An electromagnetic relay comprising a flat core and a flat flexibly mounted U-shaped armature, said core and said armature being arranged flatwise in substantially the same plane.

[Claims 6 to 9 not printed in the Gazette.]

1,156,672. PIN-TICKET MACHINE. HARRY G. DAVIS, Philadelphia, Pa., assignor to The H. G. Davis Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 4, 1913. Serial No. 782,867. (Cl. 93—88.)

1. In a machine of the character described employing ticket material arranged in a strip, means for intermittently advancing the strip a predetermined step of variable length, the combination with ticket attaching and

ticket severing means, of a reciprocatory strip feeding head adapted to engage the ticket strip at a predetermined point, and means for causing the feeding head to overrun the point of engagement with the feeding strip to compensate for variations in the length of the advance steps through which the strip is fed, substantially as specified.



2. In a machine of the character described employing ticket material arranged in a strip, means for intermittently advancing the strip a predetermined step of variable length, the combination with ticket attaching and ticket severing means, of a reciprocatory strip feeding head having a uniform degree of movement and adapted to engage the strip of ticket material at a particular point in its path of travel, and means for varying the path of travel of the feeding head in relation with the point of engagement of the head with the strip whereby the head will be caused to engage the strip correspondingly earlier or later in its path of movement to advance the strip a greater or less distance.

3. In a machine of the character described employing ticket material arranged in a strip, means for intermittently advancing the strip a predetermined step of variable length, the combination with ticket attaching and ticket severing means, of a reciprocatory strip feeding head adapted to engage the strip at a particular point in its path of travel and means for relatively varying the point of engagement of the strip and head and the path of travel of the head to cause the head to engage the strip earlier or later in its path of travel and thereby vary the degree of advance movement of the strip.

4. In a ticket attaching machine, ticket feeding mechanism, ticket attaching members relatively movable to and from each other to secure the ticket to the goods, an oscillatory support for one of said members, and means for shifting the axis of the oscillatory support to move the ticket attaching member carried thereby into and out of operative position.

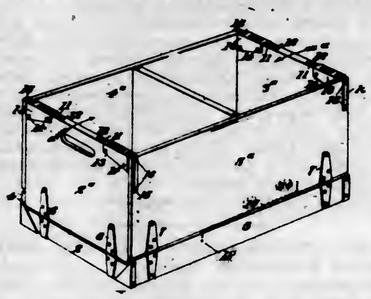
5. In a ticket attaching machine, opposing ticket attaching members coöperating one with the other to secure the ticket to the goods, a movable support for one of said members, a revoluble eccentrically mounted member controlling the movable support, and adapted by its rotary movement to cause the ticket attaching member carried thereby to be moved into and out of operative position.

[Claims 6 to 34 not printed in the Gazette.]

1,156,673. FOLDING BOX. GUSTAV DIECKMANN, San Francisco, Cal. Filed July 14, 1914. Serial No. 850,926. (Cl. 217—15.)

1. In a folding box, a bottom having rigid side and end sections and hinged side and end sections on the respective rigid side and end sections, and springs for the adjacent rigid and hinged side sections each composed of a rod having right angular oppositely disposed ends, the body of the rod being interposed between the adjacent edges of the rigid and hinged side sections and the said rod ends being secured to the respective rigid and hinged side sections.

2. In a folding box, hinged side and end sections, an inverted U-shaped bracket secured to the top edge of one section and having a top cut-out part at its center, said top edge of said section being cut-away beneath the top of the bracket, a spring catch beneath the bracket top, and a latch secured to the other section and being engageable beneath the top of the bracket and with said catch.



3. In a folding box, hinged side and end sections, one of two adjacent sections having a tongue and the other a groove to receive the tongue, a latch on the section having the tongue extending above the tongue but being spaced from the outer side face of the tongue so that the tongue will, when its section is folded, hold the latch out of contact with any part of the box that the tongue engages with, and a catch on the section having the groove to engage the latch.

4. In a folding box, hinged side and end sections, one of two adjacent sections having a tongue and the other a groove to receive the tongue, a latch on the section having the tongue extending above the tongue but being spaced from the outer side face of the tongue so that the tongue will, when its section is folded, hold the latch out of contact with any part of the box that the tongue engages with, a catch on the section having the groove to engage the latch, and a housing for the catch which projects beyond the latter so as to protect same.

5. In a folding box, hinged side and end sections, an L-shaped latch secured to the outer side face and top edge of one section and having a downturned end which extends on the inner side face of said section, the top edge of the other adjacent section being beveled, a catch secured to said top edge of the other section and being engageable with said downturned latch end, a housing extending over the catch and secured to the second named section, and a tongue on the first named section extending beyond the downturned latch end and being receivable in a groove provided therefor in the second named section.

[Claims 6 and 7 not printed in the Gazette.]

1,156,674. PROCESS OF MAKING CATALYZERS. CARLETON ELLIS, Montclair, N. J. Filed June 30, 1915. Serial No. 37,244. (Cl. 23—23.)

1. The process of making catalytic material which comprises dissolving pure nickel hydrate in ammonia, incorporating air floated charcoal therewith, drying and reducing with hydrogen.

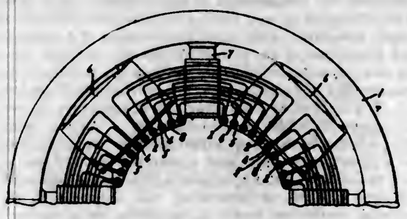
2. The process of making catalytic material which comprises dissolving pure nickel hydrate in ammonia, incorporating demineralized and air floated charcoal therewith, drying and reducing with hydrogen.

3. The process of making catalytic material which comprises dissolving pure nickel hydrate in an aqueous ammoniacal solvent, incorporating finely divided charcoal therewith, drying and reducing with a reducing gas.

4. The process of making a catalyzer adapted for hydrogenating fatty oils which comprises dissolving nickel hydroxid in an aqueous ammoniacal solvent with finely-divided charcoal material, in heating to eliminate ammonia and reducing the hydrate to the metallic state and charging the charcoal with hydrogen.

5. The process of making a duplex catalyzer which comprises mixing a basic solution of nickel material free from catalyzer poisons or salts with pure finely-divided charcoal material, drying and reducing the basic nickel material substantially to the metallic state.

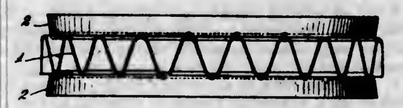
1,156,675. DYNAMO-ELECTRIC MACHINE. HERMANN F. T. ERBEN and WILLIAM J. DELLES, Schenectady, N. Y., assignors to General Electric Company, a Corporation of New York. Filed Mar. 19, 1913. Serial No. 755,536. (Cl. 171—228.)



1. In a dynamo electric machine, a field member having definite pole pieces, and a compensating winding arranged in slots in the pole faces and the pole tips of said pole pieces, said compensating winding comprising substantially cylindrical rods and substantially cylindrical tubes surrounding said rods, said tubes being insulated from said rods and said pole pieces.

2. In a dynamo electric machine, a field member having definite pole pieces, and a compensating winding arranged in slots in the pole faces and the pole tips of said pole pieces, said compensating winding comprising substantially cylindrical rods, substantially cylindrical tubes surrounding said rods, said tubes being shorter than said rods and insulated from said rods and said pole pieces, and clips on the ends of said rods and said tubes whereby said rods and tubes are connected up to form a continuous winding.

1,156,676. WHEEL. EDWARD FERRIS, Minneapolis, Minn., assignor to William Schwab, Minneapolis, Minn. Filed Nov. 16, 1914. Serial No. 872,276. (Cl. 21—216.)



1. A wheel comprising a web and laterally spaced tread flanges, the former having a circumferentially corrugated outer portion to which the said tread flanges are rigidly secured.

2. A wheel comprising a web and laterally spaced tread flanges, the former having a circumferentially corrugated outer portion to which the said tread flanges are rigidly secured, the said corrugations extending radially between said tread flanges and forming openings through which the dirt may crowd upward between said flanges.

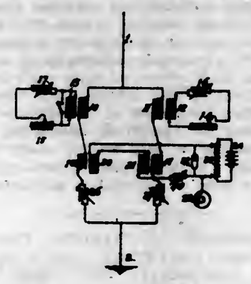
3. A wheel comprising a web and laterally spaced tread flanges, the former having a circumferentially corrugated outer portion to which the said tread flanges are rigidly secured, the said corrugations extending radially between said tread flanges and forming openings through which the dirt may crowd upward between said flanges, and the said corrugations radially inward of said flanges having obliquely offset shoulders serving to clear the said web of the inwardly crowded dirt.

4. A wheel comprising a web and laterally spaced tread flanges, the former having a circumferentially corrugated outer portion to which the said tread flanges are rigidly secured, and the tread faces of which flanges diverge outwardly.

5. A wheel comprising a web and laterally spaced tread flanges, the former having a circumferentially corrugated outer portion to which the said tread flanges are rigidly secured, the corrugated outer edge of said web projecting materially beyond said tread flanges.

[Claims 6 to 8 not printed in the Gazette.]

1,156,677. APPARATUS FOR THE TRANSMISSION OF ENERGY BY ELECTRIC OSCILLATION. REGINALD A. FESSENDEN, Washington, D. C., assignor, by mesne assignments, to Samuel M. Kintner, Pittsburgh, Pa., and Halsey M. Barrett, Bloomfield, N. J., receivers. Filed Aug. 26, 1904. Serial No. 222,299. (Cl. 250—20.)



1. Apparatus for wireless signaling, comprising a circuit having branches rendered resonant simultaneously to several oscillation frequencies not harmonic to one another, and an auxiliary signaling apparatus in a circuit linked with said branch circuits, substantially as described.

2. Apparatus for wireless signaling, comprising two local branch circuits of similar construction and normally equal, combined with a third circuit having electrical constants differing therefrom to a small but definite degree, and adapted to be energized by said branch circuits.

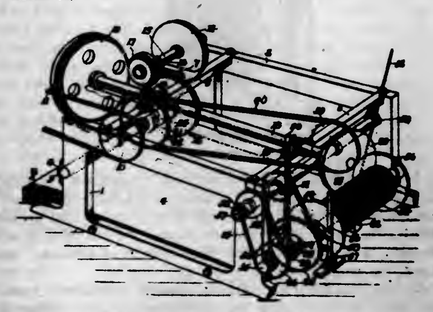
3. Apparatus for wireless signaling, comprising an auxiliary and two similarly constructed parallel branch receiving circuits, the latter being normally equal and containing like inductive devices arranged to oppose each other in their effects on the receiver.

4. Wireless signaling apparatus, comprising two parallel circuits similarly constructed and having the same electrical characteristics, and a third circuit connected therewith and having inductive devices with constants differing to a slight but predetermined degree from those of the parallel circuits, said inductive devices being connected to oppose each other in the third circuit.

5. A wireless receiving system, including in combination two parallel circuits, and a receiving circuit connected therewith by similarly constructed transformers with similar electric constants, said transformers being connected to oppose each other in the receiving circuit, a closed circuit resonant to the frequency of the signaling oscillations and inductively connected with one of said similarly constructed parallel circuits, the latter circuits being equal except as affected by the closed circuit.

[Claims 6 and 7 not printed in the Gazette.]

1,156,678. OIL-WELL RIG. THOMAS FONTENOT, Ged, La. Filed Sept. 19, 1914. Serial No. 862,484. (Cl. 255—7.)

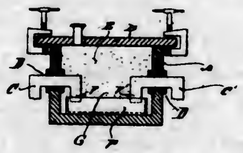


1. A combined hoisting and spudding apparatus comprising a pair of side members, a main drive shaft ex-

tending transversely between said members, a drilling shaft extending longitudinally of said side members, a counter shaft provided with means for operating said drilling shaft from the drive shaft, a hoisting mechanism, and means for operatively connecting either said hoisting mechanism or said drilling shaft to the main drive shaft.

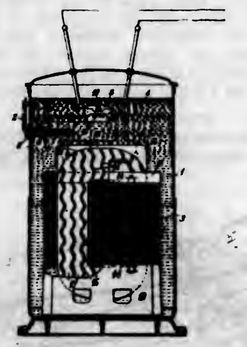
2. A combined hoisting and spudding apparatus comprising a pair of side members, a main drive shaft extending transversely between said members at one end thereof, a drilling shaft extending longitudinally of said side members, a counter shaft above said drive shaft provided with means for operating said drilling shaft from the drive shaft, a hoisting mechanism at the opposite end of said members, means for operatively connecting either said hoisting mechanism or said drilling shaft to the main drive shaft, and a variable speed transmission device for controlling the speed of the hoisting mechanism.

1,156,679. METHOD OF CHANGING THE COMPOSITION OF IRON AND STEEL. BRUCE FORD, Philadelphia, Pa. Filed Apr. 13, 1905. Serial No. 255,359. (Cl. 204—64.)



The method of carburizing iron and steel which consists in melting and liquefying the entire mass of the metal in a chamber from which air is excluded to prevent oxidizing the medium, covering the molten metal with a suitable medium adapted to give carbon to the metal absorptively, and applying electric energy to the body or mass of the metal sufficient to maintain the molten condition of the metal and until its composition is changed by such absorptive contact.

1,156,680. TEMPERATURE-INDICATOR. CHARLES LE G. FORTESCUE, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 21, 1911. Serial No. 609,941. (Cl. 73—52.)



1. The combination with electrical apparatus enveloped in a cooling medium, and a temperature-indicating device associated therewith and adapted to be influenced by said cooling medium, of stationary means for influencing said device in acordance with the current traversing said electrical apparatus.

2. The combination with an electric conductor, a cooling medium enveloping the same, and a thermometer for indicating the temperature of said conductor and adapted to be influenced by said cooling medium, of electro-thermal means associated with said thermometer for influencing said thermometer in proportion to the current traversing said electrical conductor.

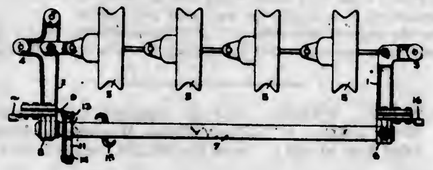
3. The combination with an electric conductor, a cooling medium enveloping the same, and a thermometer for indicating the temperature of said conductor and adapted to be influenced by said cooling medium, of electro-thermal means associated with said thermometer for influencing said thermometer in proportion to the current traversing said electrical conductor, the relative influences being proportioned in accordance with predetermined conditions.

4. The method of indicating the temperature of electrical apparatus which is enveloped in a cooling medium, that consists in heating a thermometer in proportion to the current traversing said apparatus and at the same time exposing it to the influence of said cooling medium.

5. The method of indicating the temperature of an electrical conductor which is enveloped in a cooling medium, that consists in exposing a temperature-indicating device to the influence of said cooling medium and also to the current traversing said electrical conductor, said influences being proportioned in accordance with operating conditions.

[Claims 6 to 15 not printed in the Gazette.]

1,156,681. ELECTRIC SWITCH. HENRY G. FRENCH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 21, 1914. Serial No. 826,432. (Cl. 175—282.)



1. In an electric switch, the combination of a switch blade and spring locking members surrounding said blade, each of said locking members having one end pivotally mounted and the other end free to slide over a fixed stud.

2. In combination in an electric switch, a switch blade, contact clips, a member having a Y-shaped slot in alinement with said clips and spring members on each side of the slot to hold the blade in its closed position.

3. Locking means for a knife blade switch comprising spring members adapted to surround the blade of said switch, each of said spring members having one end pivotally mounted and the other end free to slide over a fixed stud.

4. In combination in an electric switch, a switch blade, a member having a Y-shaped slot for guiding and receiving said blade and spring members carried by said guide member and adapted to surround the blade.

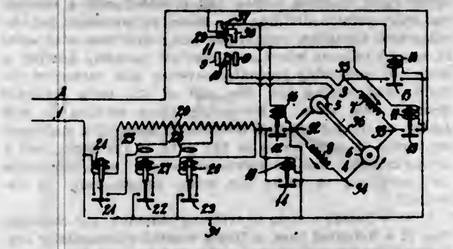
5. In an electric switch, the combination of a switch blade, a member having a Y-shaped slot for guiding and receiving said blade, and spring members pivotally mounted on each side of said slot and adapted to hold the blade in place when the switch is closed.

[Claims 6 to 8 not printed in the Gazette.]

1,156,682. MOTOR-CONTROL SYSTEM. EDWARD A. HANFF, Wilkinsburg Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 4, 1913. Serial No. 804,648. (Cl. 172—179.)

1. In a motor control system, the combination with a source of current, of a circuit comprising a plurality of motors, of means for connecting said source to said circuit at a plurality of corresponding points to rotate said motors in one direction and for connecting said source to said circuit at other corresponding points to rotate the motors in the reverse direction.

2. In a motor control system, the combination with a source of current, of a circuit comprising the armatures and the field windings of a plurality of series-wound motors, and means for successively connecting the terminals of said source to pairs of corresponding points in said circuit to form similar parallel branches.



3. In a motor control system, the combination with a source of current, of a circuit comprising the armatures and field windings of a plurality of series-wound motors, and means for connecting each terminal of said source to either terminal of one of said field windings.

4. In a motor control system, the combination with a source of current, of a plurality of similar circuits connected in parallel relation to said source, each of said circuits comprising a series-wound motor, and means for reversing the flow of current through a corresponding portion of each of said circuits.

5. In a motor control system, the combination with a source of current, of a circuit comprising two series-wound motors having armatures and field windings, and means for successively connecting said source to the terminals of each of said motors and then connecting said source to said circuit intermediate the armature and the field winding of each motor.

[Claims 6 and 7 not printed in the Gazette.]

1,156,683. GUN-CLEANER. JOHN HAVLICEK and JAMES B. SCULLANE, Springfield, Mass. Filed Mar. 1, 1915. Serial No. 11,390. (Cl. 42—91.)



1. A gun cleaner having a body portion and end loops, said body portion consisting of twisted strands, and a cleaning coil surrounding each of the said body strands and held by the engagement of the strands in their twisted relation.

2. A gun cleaner having a body portion consisting of twisted strands, and a cleaning coil surrounding each of the said strands and held in place by the engagement of the strands in their twisted relation.

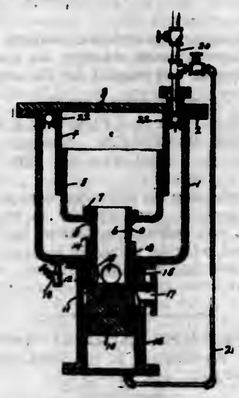
3. A gun cleaner having a body portion and end loops, said body portion consisting of twisted strands, and a cleaning coil surrounding each of the said body strands and held by the engagement of the strands in their twisted relation, the ends of the body strands being bent to form the said end loops.

4. A gun cleaner having a body portion consisting of twisted strands, and a cleaning coil surrounding each of the said strands and held by the engagement of the strands in their twisted relation, each of the said cleaning coils having convolutions greater in diameter than the diameter of the said body strands.

5. A gun cleaner having a body portion consisting of twisted strands, and a cleaning coil surrounding each of the said strands and held by the engagement of the strands in their twisted relation, each of the said cleaning coils having convolutions greater in diameter than the diameter of the said body strands, and each of the said convolutions of the coils being of polygonal shape.

[Claim 6 not printed in the Gazette.]

1,156,684. STEAM-TRAP. JOHN M. HIGGINS, Youngstown, Ohio. Filed Dec. 31, 1914. Serial No. 879,853. (Cl. 137—103.)



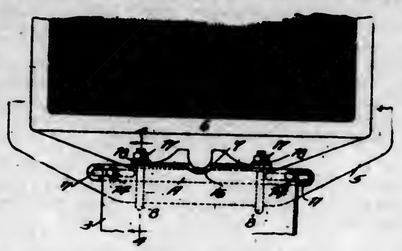
1. In a steam trap, a body having an interior depending skirt, a circular perforated steam discharge pipe at the top of the body surrounding the skirt, a water bucket slidable within the skirt, a tubular member depending from the bucket bottom, a housing depending from the bottom of the body and having a lateral discharge, a piston valve connected to said member and having the lower part thereof slidable in the housing, a sleeve secured to the bottom of the body and projecting above and below said bottom and having valve seats on its ends the lower of which valve seats is for engagement with the piston valve, a valve connected to the bucket for engagement with the upper valve seat of the sleeve, said member having ports above the valve to communicate with the housing discharge, and means to supply steam to the circular pipe and to the housing below the piston valve.

2. In a steam trap, a body, a housing depending from said body and having a lateral discharge passage, a water bucket within said body, a tubular member slidably disposed within said housing and depending from and opening into said bucket, said member being provided with ports for communicating with said discharge passage and having a closed bottom provided with an annular upwardly facing valve face, a sleeve secured to the bottom of the body and projecting above and below said bottom and having valve seats on its ends, the lower of said valve seats being designed to have said valve face seat thereon, said bucket having an annular downwardly facing valve face provided on the under side thereof for seating upon the upper valve seat of said sleeve, a skirt depending from the top of said body into embracing relation to said bucket, means for conveying steam to the interior of said body outside said skirt, and means for conveying steam to the interior of the housing below the closed bottom of said tubular member.

1,156,685. LICENSE-TAG BRACKET. MAURICE HOLLAND, Providence, R. I. Filed Apr. 17, 1914. Serial No. 832,517. (Cl. 21—90.)

A bracket comprising a body formed of a rigid strip of material having slots occurring adjacent its ends, ears

formed on the strip and extending at right angles thereto and provided adjacent their outer ends with slots, said

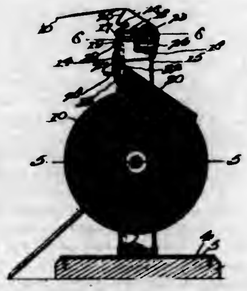


body having its upper edge provided centrally with a recess to receive a starting crank whereby the bracket may be utilized as a bearing and support for the crank.

1,156,686. NEGATIVE-POLE PLATE FOR SECONDARY OR STORAGE BATTERIES. GEORGE M. HOWARD, Philadelphia, Pa. Filed Feb. 16, 1910. Serial No. 544,250. (Cl. 204—29.)

A negative pole plate the active material of which is dry and contains metallic lead, whereby it will receive its charge readily, and sufficient sulfate of lead for binding the metallic lead, whereby it may be shipped and handled, and which is also substantially free from oxid, whereby it will not heat when immersed in electrolyte.

1,156,687. STRIP-MOISTENING MACHINE. HERMON W. HOWARD, Washington, D. C. Filed Sept. 28, 1914. Serial No. 863,942. (Cl. 91—14.5.)



1. In a portable strip moistening machine, the combination of a frame, a spindle journaled in said frame, a ball arranged to engage the opposite ends of said spindle, a strip roll mounted on said spindle, a moistener supported in said frame and arranged in the path of said strip, and a knife supported in proximity to said moistener for severing the strip, substantially as described.

2. In a portable strip moistening machine, the combination of a frame, a hollow spindle journaled through said frame, a ball provided with inturned ends arranged to detachably engage the projecting hollow ends of said spindle, a strip roll mounted on said spindle, a moistener supported in said frame and arranged in the path of said strip, and a knife located in proximity to said moistener for severing the strip, substantially as described.

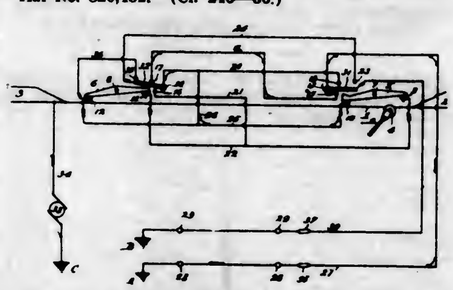
3. In a portable strip moistening machine, the combination of a frame provided with a recess therein, a hollow spindle removably journaled in said frame, a ball provided with inturned ends arranged to detachably engage the hollow projecting ends of said spindle, a strip roll mounted on said spindle, a moistener for the strip comprising a container fitted in the recess in said frame, a spindle mounted in said container and arranged with its ends projecting to engage the adjacent walls of the frame whereby to maintain the container in position, and an absorbent roll mounted on said spindle and revolving in said container, and a spring-mounted knife located in proximity to said moistener for severing the strip, substantially as described.

4. In a strip moistening machine, the combination of a frame constructed of sheet metal arranged substantially rectangular in cross section and provided with a vertical cut-away portion dividing the frame to provide a pair of channeled uprights, said frame being provided with slots in spaced relation above said vertical cut-away portion, a strip roll removably journaled between said channeled uprights and having the free end of the strip threaded through said slots, a tensioning plate secured to said frame, means for varying the tension thereof, a moistener supported in said frame in the path of the strip, and a spring-mounted knife constructed integral with the frame and arranged to sever the strip, substantially as described.

5. In a portable strip moistening machine, the combination of a weighted base, a frame erected substantially centrally on said base and constructed of sheet metal arranged substantially rectangular and formed with a vertical cut-away portion dividing the frame to provide a pair of vertical uprights, a hollow spindle removably journaled through said uprights, a ball formed with inturned ends detachably engaging the hollow projecting ends on said spindle, a moistener supported in said frame and in the path of the strip, a guard plate mounted over said strip roll and extending beneath the moistener, and a spring-mounted knife located on said frame in proximity to the moistener for severing the strip, substantially as described.

[Claim 6 not printed in the Gazette.]

1,156,688. ELECTRIC RAILWAY-SIGNAL. JOHN B. HOWELL, Leavenworth, Kans. Filed Feb. 24, 1914. Serial No. 820,432. (Cl. 246—36.)



1. In a block-signaling system, the combination of two circuits containing safety and danger signals at each end of the block, a switch adjacent one end of the block and communicating with a terminal of each circuit, two contact-points adapted to be engaged by said switch, a second switch adjacent the opposite end of the block and in circuit with said contact-points, a wire extending from one switch to the other, said switches being arranged to simultaneously engage or disengage the terminals of said wire, a trolley-actuated switch at each end of the block to control the first-mentioned switches, said trolley-actuated switches having tappets to alternately engage the trolley wire, wires connecting said tappets in pairs, a wire 21 leading from one of the last-mentioned wires to a point adjacent the second switch to be contacted thereby, and a wire 36 leading from a tappet on one of the trolley-actuated switches to a point adjacent the second switch to be contacted thereby.

2. In a block signaling system, a drop-switch at each end of the block, two contact-points located above each drop-switch, a contact-point beneath each drop-switch, a trolley-controlled rockable switch beneath each drop-switch to alternately throw the same into engagement with the adjacent upper and lower contact-points, tappets at the ends of each rockable switch to alternately contact

the trolley-wire, signals at the ends of the block, and circuits leading to said signals and controlled by the switches.

1,156,689. COMPOSITION-BODY BRAKE-SHOE. HARRY JONES, Suffern, N. Y., assignor to American Brake Shoe & Foundry Company, Mahwah, N. J., a Corporation of New Jersey. Filed Aug. 25, 1913. Serial No. 786,433. (Cl. 188—82.)



1. A back for a brake shoe comprising a back proper and renewable end pieces separate from said back and secured thereto by casting the same thereon.

2. In a brake shoe, a supporting back; blocks formed from cast metal and secured to said back by being cast thereon, and which blocks extend toward the wearing face of the shoe; and a mass of material supported by said back and filling the space between said blocks.

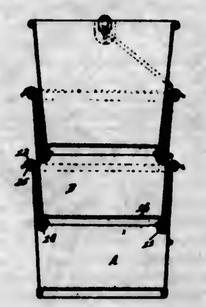
3. In a brake shoe, a supporting back; end pieces formed from cast metal and secured one to each end of said back by being cast thereon, whereby the ends of the back become embedded in the end pieces, and which latter extend to the wearing face of the shoe; and a mass of material supported by said back and filling the space between said end pieces.

4. In a brake shoe, a supporting back; end pieces formed from cast metal and secured one to each end of said back by being cast thereon, whereby the ends of the back become embedded in the end pieces, and which latter extend to the wearing face of the shoe and are provided with integrally formed lugs adapted to be engaged by the ends of a brake head; and a mass of material supported by said back and filling the space between said end pieces.

5. In a brake shoe, a supporting back formed from sheet metal and having downwardly extending side flanges; end pieces formed from cast metal and secured one to each end of said back by being cast thereon, whereby the ends of the back become embedded in the end pieces, and which end pieces extend to the wearing face of the shoe; and a mass of material supported by said back and filling the space between said end pieces.

[Claims 6 and 7 not printed in the Gazette.]

1,156,690. STACKING CANS. WHITFIELD H. JONES, Jr., Etna, Pa., assignor to Pittsburgh Can Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 22, 1915. Serial No. 3,742. (Cl. 220—38.)



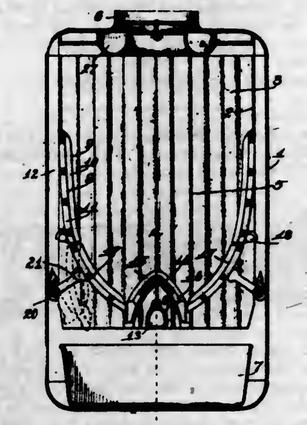
1. The combination with a plurality of similar frusto-conical containers nested one within the other, of means for supporting said containers in their nested condition and preventing them from becoming wedged one within the other, said means comprising a plurality of clips, each clip being bent over at one end to engage the mouth of a container and at the other end to engage the base of the container next above it, and said clips being of a length to support the containers just above wedging point.

2. The combination with a plurality of similar frusto-conical containers nested one within the other, of clips for maintaining said containers loosely in their nested condition, each of said clips comprising a member bent at one end to engage over the top of a container and at the other end to engage under the base of the container next above it, and having a projecting portion at one end extending backwardly from the hook to engage against the side of the container opposite to said projection.

3. The combination with a plurality of containers disposed in nested relation, of clips for maintaining the containers loosely in their nested condition, each of said clips comprising a member bent at one end to engage over the top of one container and bent at the other end to engage under the bottom of the next container above it, and having outwardly extending projections at the ends extending backwardly from the hook for engaging against the sides of the containers opposite to said projections.

4. A clip of the character described formed from a single blank of sheet metal, and including a flat body portion, terminally located integral lips extended at acute angles to the body portion, and ribs formed at the junction of each of said ribs with the body portion by striking the metal outwardly.

1,156,691. INCINERATOR. BERTRAND B. KAHN, Cincinnati, Ohio, assignor to The Estate Stove Company, Hamilton, Ohio. Filed Mar. 29, 1915. Serial No. 17,645. (Cl. 110—18.)



1. An incinerator comprising, an incinerator chamber, a grate therefor, vertical ribs disposed on the inner surface of chamber walls to hold the material inwardly and form vertical flues between the material and the walls for the upward passage of heat, and a gas-burner disposed across the chamber parallel with the ribbed chamber-walls and having gas ajutages adapted to deliver flames to said flues, combined substantially as set forth.

2. An incinerator comprising, an incinerator chamber, grate portions of the walls of such chamber, ribs disposed on the inner surface of said grate portions and adapted to form flues to receive the heat from the gas burner, and a gas-burner disposed across the chamber parallel with the ribbed chamber walls and having gas ajutages adapted to deliver flames to said flues, combined substantially as set forth.

3. An incinerator comprising, a casing provided with a feed-door and an ash-door and a chimney outlet, an incinerator-chamber disposed within the casing and having its walls separated from the casing by side passages communi-

cating with the chimney outlet, grate portions for the walls of the incinerator-chamber, a gas burner disposed at the base of the incinerator-chamber, ribs disposed on the inner-surface of such grate portions and adapted to form flues to receive the heat from the gas burner, and ports through the grate portions between said ribs and placing said flues in communication with said side passages, combined substantially as set forth.

4. An incinerator comprising, a casing provided with a feed-door and an ash-door and a chimney-outlet, an incinerator-chamber disposed therein and having its walls separated from the walls of the casing by side passages in communication with the chimney-outlet, fixed grate portions forming parts of the side walls of the incinerator-chamber, a gas burner disposed across the incinerator-chamber, a hood over and free from the gas burner, dumping grate sections hinged at their tops and forming downwardly and inwardly curved prolongations of the fixed grate portions and having their lower edges normally contiguous to said hood, and mechanism for swinging the lower edges of said dumping grate downwardly away from said hood, combined substantially as set forth.

5. An incinerator comprising, a casing provided with a feed-door and an ash-door and a chimney-outlet, an incinerator-chamber disposed therein and having its walls separated from the walls of the casing by side passages in communication with the chimney-outlet, fixed grate portions forming parts of the side walls of the incinerator-chamber, a gas burner disposed across the incinerator-chamber, a hood over and free from the gas burner, dumping grate sections hinged at their tops and forming downwardly and inwardly curved prolongations of the fixed grate portions and having their lower edges normally contiguous to said hood, mechanism for swinging the lower edges of said dumping grates downwardly away from said hood, and downwardly projecting prongs provided at the sides of the hood at their points of contiguity with the lower edges of the dumping grates, combined substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,156,692. WATER-MOTOR. JOSEPH W. KINNEY, Goldcreek, Mont. Filed Nov. 12, 1914. Serial No. 871,772. (Cl. 170—86.)



1. In a water motor, the combination of a receptacle having an inlet opening at one end, a gate pivotally mounted at the opposite end of the receptacle approximately centrally of said end, a power conduit connected to the receptacle at one side and having its entrance between the pivot of the gate and one side of the receptacle, said receptacle having an outlet opening between the other side of the pivot from that above mentioned and the opposite side of the receptacle, said gate being movable on its pivot for coaction with the last mentioned side of the receptacle to permit passage of water through the power conduit aforesaid and when swung in the opposite direction to coact with the first mentioned side of the receptacle for interrupting passage of water through the conduit and directing said water through the outlet, and power instrumentalities arranged in the conduit for actuation by the water when passing therethrough.

2. In a water motor, the combination of a receptacle, a conduit communicating therewith, through which water from the receptacle is adapted to be directed, a gate controlling passage of water into the conduit, power mechanism cooperating with the conduit and adapted for actuation by water passing therethrough, brake means and means operable by the gate for controlling the actuation of the power mechanism by the brake means aforesaid.

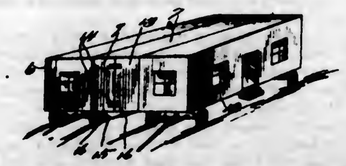
3. In a water motor, the combination, with a receptacle, of a conduit communicating therewith through which water from the receptacle is adapted to be directed, a gate controlling the passage of water into the conduit, power mechanism adapted to be actuated by the water passing through said conduit, and brake means for controlling movement of the power mechanism operable by the grate in movement of the same for cutting off from or admitting water to the conduit aforesaid.

4. In a water motor, the combination with a receptacle through which water is adapted to pass, of power mechanism adapted to be operated by the water from the receptacle, a gate in said receptacle for controlling the actuation of said mechanism by the water, a brake controlling the operation of the mechanism aforesaid, and brake applying means intermediate the brake and the gate and adapted to be actuated by the latter.

5. In a water motor, the combination, with a receptacle through which water is adapted to pass, of power mechanism adapted to be operated by the water from the receptacle, a gate in said receptacle for controlling the actuation of said mechanism by the water, a brake controlling the operation of the mechanism aforesaid, and means carried by the gate for releasing the brake upon actuation of said mechanism by the water and applying the brake when the water is shut off from the mechanism.

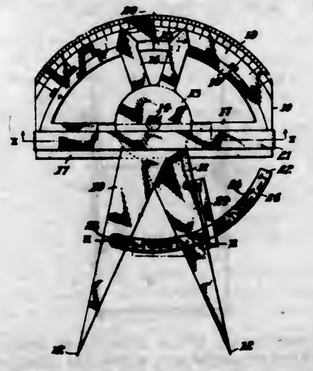
[Claims 6 to 8 not printed in the Gazette.]

1,156,693. COMBINATION VAN-WAGON. MARVIN VASTINE KOGER, Rogersville, Tenn. Filed Mar. 30, 1915. Serial No. 18,162. (Cl. 21—7.)



A combination van wagon made up of sections, each having hinged walls forming the sides of the van and movable extension ends, means for fastening said movable ends together, the side of one section being hinged at the top and the side of the other hinged at the bottom and adapted to be held in alinement with the tops and bottoms respectively of the sections to form a closure for the space intermediate the latter.

1,156,694. GEAR-TEETH CALIPERS. THOMAS KOPIN, SKI, Rochester, N. Y. Filed May 3, 1915. Serial No. 25,489. (Cl. 33—148.)



In combination, a pair of caliper arms provided with work-engaging ends and having oppositely disposed heads,

a pivot connecting the heads, indicating fingers extending from the heads, and a segmental scale plate having its base pivotally mounted on the pivot and provided with a pair of arcuate scales over which the indicating fingers travel, said scales extending both directions from a central zero point.

1,156,695. BEARING. LOUIS J. KOZUB, Pittsburgh, Pa. Filed Mar. 2, 1911. Serial No. 611,868. (Cl. 64—55.)



1. In combination, a continuous integral annular bushing having a cylindrical unbroken wall and of uniform gage, and a spindle-bearing comprising a housing embracing the bushing and adapted to be adjusted to compress the same to compensate for wear thereof.

2. In combination, a continuous integral annular bushing having a cylindrical unbroken wall and of uniform gage, a housing having a cylindrical cavity and a slotted division at one side, and means for adjusting the sides of said division toward each other to compress the bushing to compensate for wear thereof.

3. In combination, a continuous integral annular bushing having an interior weakening groove extending from end to end and partially through the wall of the bushing and substantially parallel to the axis thereof, the remainder of the surface of the bushing containing the groove being smooth and unbroken, a housing having a cylindrical cavity and a slotted division at one side, and means for adjusting the sides of said division toward each other to compress the bushing to compensate for wear thereof.

4. The combination with a housing having a cylindrical cavity and means for adjustment of the housing, of a continuous integral annular bushing of uniformly thin metal with an unbroken wall, said bushing being capable of adjustment by compression within the housing to compensate for wear of the bushing.

1,156,696. ELECTRODE. CARL R. KRUMBEIN, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Continuation in part of application Serial No. 700,819, filed May 31, 1912. This application filed June 28, 1913. Serial No. 776,241. (Cl. 176—136.)

1. An arc light electrode containing a material or materials yielding a substantially white flaming or luminous arc and a steadier consisting principally of a lithium compound.

2. An arc light electrode containing titaniferous material, and a small percentage of lithium compound.

3. An arc light electrode, containing titanium as the preponderating light-giving material, and a small percentage of lithium compound.

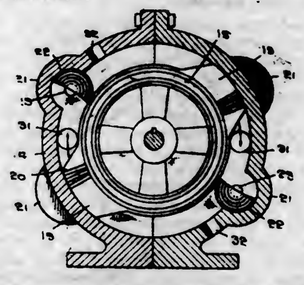
4. An arc light electrode containing titanium carbid and a small percentage of lithium compound.

5. An arc light electrode composed of a magnetic mixture, and a small percentage of lithium compound.

1,156,697. ROTARY ENGINE. ALEXIS L. LAMAR, Pittsburg, Kans., assignor of one-half to George A. Morning, one-eighth to W. P. Allen, and one-eighth to Neal Allen. Filed Dec. 3, 1913. Serial No. 804,424. Renewed Mar. 9, 1915. Serial No. 13,220. (Cl. 123—15.)

1. In a rotary engine the combination with a casing having a substantially cylindrical chamber formed therein, of means for subdividing said chamber into piston compartments with a spaced valve chamber interposed therebetween, a compression rotor mounted in one of said piston compartments, an engine rotor mounted in the other of said piston compartments, a valve mounted in said valve compartment and adapted to rotate with said rotors, pairs of oppositely disposed blades formed on each of said rotors so that the center line of each pair maintains a constant angle with the other pair, oppositely disposed rotary abutments recessed into the walls of said casing and adapted to coact with said blades in forming separate chambers in each of said piston compartments, and means coacting with said valve for intermittently and successively connecting each of said separate chambers of said compression compartment with the corresponding chamber of said engine compartment.

2. In a rotary engine the combination with a casing having a substantially cylindrical chamber, partitions subdividing said chamber into piston compartments and a valve chamber positioned therebetween, a compression rotor mounted in one of said compartments, an engine rotor mounted in the other of said compartments, a valve mounted in said valve compartment and adapted to rotate with said rotors, oppositely disposed blades formed on each of said rotors, oppositely disposed rotary abutments recessed into the walls of each piston compartment to subdivide the same into two separate chambers and means coacting with said valve for establishing communication between each chamber of said compression compartment with the corresponding chamber of the engine compartment at the end of the rotary blade stroke of the former and at the beginning of the rotary blade stroke of the latter.



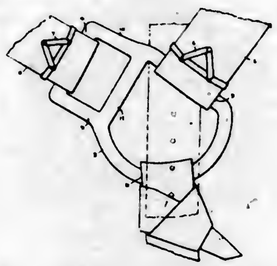
3. In a rotary engine the combination with a casing having a substantially cylindrical chamber formed therein, of partitions subdividing said chamber into piston compartments with a valve chamber interposed therebetween, a compression rotor mounted in one of said piston compartments, an engine rotor mounted in the other of said piston compartments, a valve mounted in said valve compartment and adapted to rotate with said rotors, oppositely disposed blades formed on each of said rotors, oppositely disposed rotary abutments recessed in the walls of said casing and adapted to coact with said blades in forming separate chambers in each of said piston compartments and means coacting with said valve for intermittently and successively connecting each of said separate chambers of said compression compartment with the corresponding chamber of said engine compartment.

4. In a rotatry engine the combination with a casing having a substantially cylindrical chamber, of partitions subdividing said chamber into piston compartments and a valve chamber positioned therebetween, a compression rotor mounted in one of said compartments, an engine rotor mounted in the other of said compartments, a valve mounted in said valve compartment and adapted to rotate with said rotors, pairs of oppositely disposed blades formed on each of said rotors so that the center line of each pair maintains a constant angle with the center line of the other pair, oppositely disposed rotary abutments recessed into the walls of each piston compartment to subdivide the same into two separate chambers, and means coacting with said valve for establishing communication between each chamber of said compression compartment and the corresponding chamber of the engine compartment at the end of the roter blade stroke of the former and at the beginning of the roter blade stroke of the latter.

5. In a rotary engine the combination with a casing having a substantially cylindrical chamber formed therein, of means for subdividing said chamber into piston compartments with a spaced valve chamber interposed therebetween, a compression rotor mounted in one of said piston compartments, an engine rotor mounted in the other of said piston compartments, a valve mounted in said valve compartment and adapted to rotate with said rotors, oppositely disposed blades formed on each of said rotors, a pair of oppositely disposed rotary abutments recessed into the walls of each of said piston compartments so that the center line of each pair maintains a constant angle with the center line of the other pair, said abutments being adapted to coact with their respective blades in forming separate chambers in each of said piston compartments and means coacting with said valve for intermittently and successively connecting each of said separate chambers in said compression compartment with the corresponding chamber of said engine compartment.

[Claim 6 not printed in the Gazette.]

1,156,698. SADDLE-RIGGING. WILLIAM CHARLTON LAWRENCE, Portland, Oreg. Filed Jan. 5, 1915. Serial No. 6608. (Cl. 54—46.)



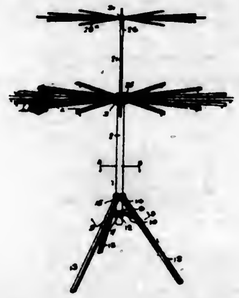
1. An attachment for saddles comprising the combination with a pair of rigging straps of a ring-like member, having a bar portion which is curved inwardly its full length, extensions integral with the ring-like member and a bar integral with the outer ends of the said extensions, said bar being likewise curved inwardly its full length, said rigging straps engaging said curved bars and said ring-like member having a brace portion positioned at the inner ends of said extensions.

2. In a rigging construction for saddles, a metallic ring-like member having its inner edges rounded and its outer edges tapered to a point, said ring-like member having a bar section curved inwardly its full length around which is adapted to be looped a rigging strap, said ring-like member having integral extensions, and a bar integral with the outer ends of said extensions to receive the loop portion of a rigging strap, said bar being also curved its full length, and said ring-like member having a brace portion positioned at the inner ends of said extensions.

1,156,699. CLOTHES-RACK. WILLIAM T. MAXWELL, Pittsburgh, Pa., assignor of one-half to John Gass, Pittsburgh, Pa. Filed Nov. 3, 1914. Serial No. 870,111. (Cl. 68—84.)

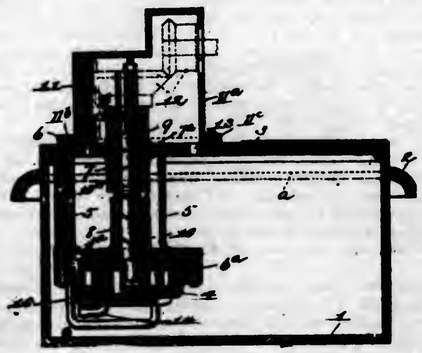
1. In a clothes-hanger, the combination of a column, a series of radially swinging-arms carried thereby adapted to be moved into parallel relation with said column and surrounding same, a collar slidable on said column, legs, toggle-links connecting said collar and said legs, and a ring inclosing the upper ends of said legs and surrounding said column.

2. In a clothes-hanger, the combination of a column, series of radially swinging-arms carried thereby adapted to be brought into parallel position with said column and surrounding same, a collar slidable on said collar, legs, toggle-links engaging said collar and said legs, said legs



having notches at the upper ends thereof, and a ring engaging said notches and surrounding said column.

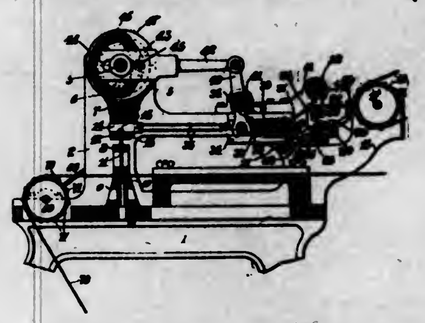
1,156,700. COOLING AND LUBRICATING DEVICE FOR VACUUM-PUMPS. GERALD DE COURCY MAY, Washington, D. C. Filed June 28, 1915. Serial No. 36,861. (Cl. 184—31.)



1. In a cooling and lubricating device for pumps of the rotary type having a shaft, an oil casing, a cover therefor, a housing upon said cover, means for suspending a pump upon the under side of said cover, all portions of said pump being below the oil level and the pump shaft extending through said cover and into said housing, a bearing carried by said cover for said shaft, said bearing extending below the oil level, means for drawing oil upwardly through said bearing, means for carrying oil downwardly into said pump, means for rotating the pump shaft, a suction pipe passing through said cover and to said pump, and a discharge pipe from said pump, said discharge pipe terminating within the casing and above the oil level, said cover being provided with openings to permit drainage of oil from said housing into said casing.

2. A cooling and lubricating device for pumps comprising an oil receptacle, a cover loosely fitting thereon, depending standards detachably secured to the underside of the cover, a rotary pump supported from the lower ends of said standards, a vertically arranged bearing formed on said cover and extending downwardly into said receptacle and below the normal oil level, a pump shaft journaled in said bearing, a suction pipe passing through the cover to said pump, a discharge pipe leading upwardly from said pump to a point adjacent said cover and above the oil level, said cover having an opening in alinement with said discharge pipe, and means for normally closing said opening, as and for the purpose set forth.

1,156,701. MACHINE FOR MAKING MASTER-SHEETS. PHILIP JACOB MIAEL, Summit, N. J. Filed July 21, 1914. Serial No. 852,133. (Cl. 164—114.)



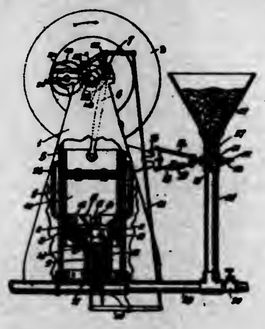
1. In a machine for making perforated music sheets, the combination with a drum over which a perforated pattern sheet is passed, which is to control the operation of punches, of means for feeding the pattern sheet step by step, each of the same length, means for feeding the sheet in which the perforations are to be made step by step, each of the same length, which steps of movement of the second sheet are to be a predetermined and uniform multiple of the steps of the pattern sheet, whereby the sheet in which the perforations are made remains at rest while the pattern sheet is moved the number of its steps of movement corresponding to one step of the sheet which is being perforated, punches above the sheet being perforated, means for operating the punches at the proper time, punch selector means and means for controlling the selector means from the pattern sheet passing over its drum, substantially as set forth.

2. In a machine for making perforated music sheets, the combination with two drums, for moving sheets to be passed over them, which drums engage said sheets, of a selector mechanism controlled from the sheet on one drum, a punch mechanism controlled by said selector mechanism and serving for making perforations on the sheet passed over the other drum, means for moving each drum step by step, the steps of the drum over which the sheet being perforated is passed being greater than the steps of the drum over which the pattern sheet is passed and means for making one step of the drum over which the sheet being perforated is passed, during a fixed and determinate number of steps, greater than one, of the drum over which the pattern sheet is passed, whereby the drum over which the sheet being perforated is passed remains at rest during the time that the drum over which the pattern sheet is passed makes the predetermined number of steps, substantially as set forth.

1,156,702. ENGINE FOR UTILIZING POWDERED FUEL. WILLIAM G. MINER, Cincinnati, Ohio. Filed June 22, 1914. Serial No. 846,436. (Cl. 123—28.)

1. In combination in an internal combustion engine, a cylinder, a cylinder head spaced away from said cylinder and provided with an inlet and an exhaust passage, a piston mounted within said cylinder and provided with a sleeve adapted to reciprocate within the space between the cylinder and the cylinder head, and means mounted on said cylinder head adapted to remove and divert the products of combustion from said sleeve, toward said exhaust passage.

2. In an internal combustion engine, the combination of a cylinder, a cup-shaped cylinder head spaced away from said cylinder, and having an inwardly inclined top edge, a piston mounted in said cylinder and provided with a sleeve, said sleeve being adapted to reciprocate in the space between the cylinder head and the cylinder, a packing ring rectangular in cross section mounted on the cylinder head and adapted to engage the interior of the sleeve, a second ring adapted to engage the interior of the sleeve mounted on the inwardly inclined top edge of the cup-shaped cylinder head and adapted to remove and divert the products of combustion from the inner walls of the sleeve to the interior of the cylinder head.

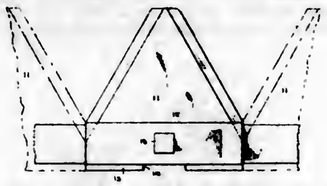


3. In combination in an internal combustion engine, a cylinder, a cup-shaped cylinder head spaced away from said cylinder and having an inwardly inclined top edge, a piston mounted in said cylinder and provided with a sleeve, said sleeve being adapted to reciprocate in the space between the cylinder head and the cylinder, a packing ring rectangular in cross section mounted on the cylinder head and adapted to engage the interior of the sleeve, a second ring adapted to engage the interior of the sleeve mounted on the inwardly inclined top edge of the cup-shaped cylinder head and adapted to remove and divert the products of combustion from the inner walls of the sleeve to the interior of the cylinder head, and a third ring located between the second mentioned ring and the first mentioned ring and adapted to engage the interior of the sleeve.

4. An internal combustion engine adapted to the use of powdered fuel comprising a cylinder, a cup-shaped cylinder head spaced away from the cylinder and having an inwardly inclined top edge, a piston mounted in said cylinder and provided with a sleeve, said sleeve being adapted to reciprocate in the space between the cylinder head and the cylinder, a packing ring rectangular in cross section mounted on the cylinder head and adapted to engage the interior of the sleeve, a second ring adapted to engage the interior of the sleeve mounted on the inwardly inclined top edge of the cup-shaped cylinder head, and adapted to remove and divert the products of combustion from the inner walls of the sleeve to the interior of the cylinder head, and an exhaust valve located in the cylinder head adapted to permit the discharge of the products of combustion from the cylinder.

5. In combination in an internal combustion engine adapted to the use of powdered fuel, a cylinder, a cup-shaped cylinder head spaced away from the cylinder and having an inwardly inclined top edge, a piston mounted in the cylinder and provided with a sleeve, said sleeve being adapted to reciprocate in the space between the cylinder head and the cylinder, a packing ring rectangular in cross section mounted on the cylinder head and adapted to engage the interior of the sleeve, a second ring mounted on the inwardly inclined top edge of the cup-shaped cylinder head and adapted to remove and divert the products of combustion from the inner walls of the sleeve to the interior of the cylinder head, a third ring located between the first and second mentioned rings in engagement with the interior wall of the sleeve and adapted to assist the second mentioned ring in removing and diverting the products of combustion from said wall to the interior of the cylinder head, and an exhaust valve located in the cylinder head adapted to permit the discharge of the products of combustion.

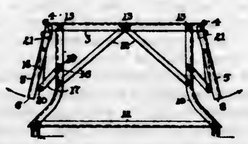
1,156,703. MEANS FOR SECURING CUTTING SECTIONS OR KNIVES TO SICKLE OR CUTTER BARS. ROBERT O. MOBERG, Richardson, Wis. Filed Mar. 25, 1915. Serial No. 16,933. (Cl. 56—44.)



1. In a device of the character described, the combination with a cutter bar provided with angular bosses at intervals projecting therefrom and extending from the front to the rear edge thereof, of cutting devices each having a notch extending inwardly from its rear edge of a size and shape to encompass the bosses, upwardly bowed clips, screws adapted to pass through said clips and into the bosses, said screws engaging said clips at their longitudinal centers and adapted to direct downward pressure thereon when the screws are turned into the bosses, whereby said clips will be brought from a bowed position to a substantially flat position, the ends of the clips directing downward pressure on the top of the base edges of the cutting device.

2. A device of the character described, the combination with a cutter bar provided with bosses on one side extending the full width of the bar and provided with centrally threaded openings, of cutting devices provided with central angular notches, of a contour to fit closely upon said bosses, bow-shaped resilient clips each provided with a central perforation, each placed with its ends resting upon the outer edges of each cutting device and its center perforation in alinement with the threaded opening of the boss over which the clip is positioned, and an angular headed screw adapted to pass through the perforation of the clip and into the threaded opening of the boss whereby when said screw is threaded into said boss, the clip will be flattened out and its ends brought into strong resilient contact with the cutting device.

1,156,704. FOLDING COUCH. JACOB L. MOORE and FORY LE MUSSER, Butler, Pa.; said Musser assignor to Pittsburgh-Hickson Company, Butler, Pa., and said Moore assignor to Moore Manufacturing Company, Muncie, Ind. Filed Mar. 30, 1914. Serial No. 828,127. (Cl. 5—16.)



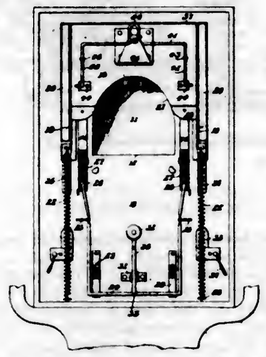
1. In a folding couch, a frame, a hinged side section, a pair of links pivotally connected with each other and with said frame and section respectively, and a spring clip adapted to engage and hold said links in buckled relations during folding movements of said section.

2. In a folding couch, a frame, a hinged side section, a brace link pivoted to said section, a pilot link pivotally connected with said brace link and adapted to have a slidable connection with said frame, and a spring clip upon said section to engage and hold said brace link during folding movements of said section.

3. In a folding couch, a frame, a hinged section, a brace link connected with said section, a pilot link connected to said brace link having a slotted end detachably and slidably connected with said frame, and means to effect a reverse buckling movement of the links upon a lowering folding movement of said section.

4. A couch frame having a folding section and a pair of pivotally-connected links at each end of said section connected with said frame and adapted to have limited sliding contact at their ends on said frame, said links being adapted to be buckled when said section is in use.

1,156,705. FIRE-ALARM BOX. ALOYS MÖZDZIERZ, Shelton, Conn. Filed June 24, 1915. Serial No. 36,098. (Cl. 177—379.)



1. A device of the class described comprising in combination with a fire alarm box having a hand-entrance opening in the front wall thereof, a yoke plate slidably positioned within the said box transversely of the said opening, resilient actuating means for the said plate, engaging means for the said plate, a trip lever for the said engaging means positioned beneath the said opening, terminal contact plates carried interiorly of the box, fire alarm system circuit wires electrically connected to the said contact plates, switch blades connected to the said yoke plate and having paths of movement in the same plane as the said contact plates, and electrical connections between the said switch blades.

2. A device of the class described comprising in combination with a fire alarm box having a hand-entrance opening in the front wall thereof, a yoke plate slidably positioned within the said box transversely of the said opening, resilient actuating means for the said plate, engaging means for the said plate, a trip lever for the said engaging means positioned beneath the said opening, locking bolts for the said yoke plate, resilient projecting means for the said bolts, and key operated releasing means for the said bolts, terminal contact plates carried interiorly of the box, fire alarm system circuit wires electrically connected to the said contact plates, switch blades connected to the said yoke plate and having paths of movement in the same planes as the said contact plates, and electrical connections between the said switch blades.

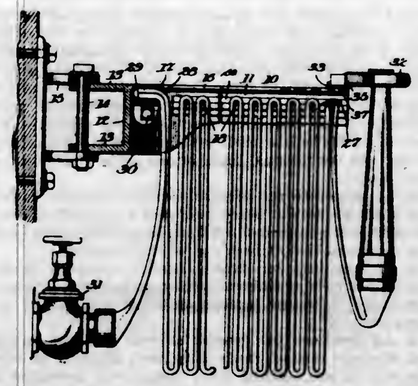
3. A device of the class described comprising a fire alarm box having a hand-opening in the front wall thereof, parallel guides positioned at opposite sides of the said opening, angle irons longitudinally positioned within the said guides, a yoke plate connecting the said angle irons and having a lower curved edge lying adjacent the said opening, resilient connections between the lower ends of the said angle irons and the lower portion of the said box, depending toothed racks carried by the said yoke plate, a bail having terminal teeth in normal resilient engagement with the said racks, a pivoted lever in operative engagement with the said bail, and an operating hand knob upon the said bail positioned within the box directly beneath the said opening.

4. A device of the class described comprising a fire alarm box having a hand-opening in the front wall thereof, parallel guides positioned at opposite sides of the said opening, angle irons longitudinally positioned within the said guides, a yoke plate connecting the said angle irons and having a lower curved edge lying adjacent the said

opening, resilient connections between the lower ends of the said angle irons and the lower portion of the said box, depending toothed racks carried by the said yoke plate, a bail having terminal teeth in normal resilient engagement with the said racks, a pivoted lever in operative engagement with the said bail, an operating hand knob upon the said bail positioned within the box directly beneath the said opening, switch blades projecting from the said angle irons, an electrical connecting switch between the said angle irons, terminal plates positioned within the paths of movement of the said switch blades, and fire alarm system circuit wires attached to the said terminal plates.

5. A device of the class described comprising a fire alarm box having a hand-opening in the front wall thereof, parallel guides positioned at opposite sides of the said opening, angle irons longitudinally slidable within the said guides, a yoke plate connecting the said angle irons and having a lower curved edge lying adjacent the said opening, resilient connections between the lower ends of the said angle irons and the lower portion of the said box, depending toothed racks carried by the said yoke plate, a bail having terminal teeth in normal resilient engagement with the said racks, a pivoted lever in operative engagement with the said bail, an operating hand knob upon the said bail positioned within the box directly beneath the said opening, switch blades projecting from the said angle irons, an electrical connecting switch between the said angle irons, terminal plates positioned within the paths of movements of the said switch blades, and fire alarm system circuit wires attached to the said terminal plates, an angular lever pivoted to the said yoke plate, toothed plates rigidly mounted beneath the said yoke plate, locking bolts transversely shiftable through the said yoke plate and having paths of movement in the same plane as the said toothed plates, the said bolts being operatively connected between the said angular lever, a curved retaining spring for the said angular lever having a central extension provided with an inclined edge, a shifting key pintle for the said angular lever journaled in the said curved spring and a projecting ward upon the said pintle operatively positioned in contact with the said extension edge.

1,156,706. HOSE-RACK. CHARLES NUHRING, Cincinnati, Ohio. Filed Mar. 17, 1914. Serial No. 825,342. (Cl. 137—31.)



1. A hose-rack comprising in combination a body including parallel arms, a looped strip secured longitudinally along the inner side of one of said arms, and providing therewith a series of inclosed horizontal openings, hose supporting pins having vertically positioned looped portions pivoted in said openings, and a continuous strip carried by the inner face of the opposite arm and providing a rest for the free ends of said pins.

2. A hose-rack comprising in combination a body including parallel arms, a looped strip secured longitudinally along the inner side of one of said arms, and providing therewith a series of inclosed horizontal openings, hose supporting pins having their ends looped into vertical members having permanent engagement with said inclosed openings, and a continuous strip carried by the inner face of the opposite arm and providing a rest for the free ends of said pins.

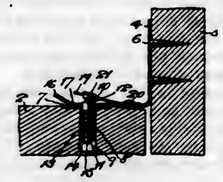
3. A hose-rack comprising in combination a body including parallel arms, a horizontal looped strip secured longitudinally along the inner side of one of said arms, and providing therewith a series of inclosed horizontal openings, hose supporting pins each having an eye formed at one end and engaging one of said inclosed openings, the eyes lying in vertical relation to the horizontal openings, and a continuous strip carried by the inner face of the opposite arm and providing a rest for the opposite ends of said pins.

4. A hose-rack comprising in combination a body including parallel arms, an element consisting of a plurality of integral loops, said element being secured longitudinally along the inner side of one of said arms and forming with the face of the latter, a series of inclosed openings lying in a horizontal plane, hose supporting pins pivotally secured in said openings, the engaging portions of said pins lying vertically with relation to said horizontal plane, and a continuous strip carried by the inner face of the opposite arm and providing a rest for the free ends of said pins.

5. A hose rack provided with a fixed pocket for the reception of a fold in the hose to choke the latter against passage of water.

[Claims 6 to 12 not printed in the Gazette.]

1,156,707. SHUTTER-FASTENER. JOHN PACELLI, New York, N. Y. Filed Feb. 16, 1915. Serial No. 8,612. (Cl. 16—23.)



1. A shutter fastener comprising a sill member provided with a spring actuated plunger, a shutter member adapted to interlock with said plunger, and a spring arm carried by the shutter member for depressing the plunger to release the members.

2. A shutter fastener comprising a sill member provided with a spring-actuated plunger, a shutter member having a hole therein for receiving the plunger, and a spring arm carried by the shutter member adapted to engage said plunger through said hole to release the members.

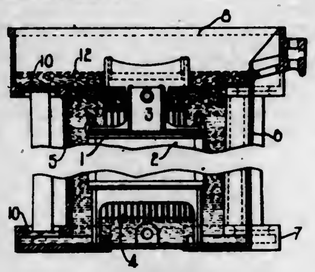
3. A shutter fastener comprising a sill member provided with a spring-actuated plunger, a shutter member having a hole therein for receiving said plunger, a spring arm carried by the shutter member, and a plug secured to the spring arm adapted to engage said plunger through said hole to release the members.

4. A shutter fastener comprising a sill member provided with a spring-actuated plunger, a shutter member provided with a horizontal arm, a groove terminating in a hole in said arm for the reception of the plunger, a spring arm carried by said horizontal arm, and a plug secured to the spring arm adapted to engage said plunger through said hole to release the members.

1,156,708. TRANSFORMER-CASING. EMERSON G. REED, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Nov. 5, 1913, Serial No. 799,275. Renewed Jan. 11, 1915. Serial No. 1,568. (Cl. 237—16.)

1. A fluid-containing casing for electrical apparatus comprising a cast iron body and end members, plates cast

in the end members and provided with openings, and tubes projecting through the openings and secured to the plates by continuous autogenous joints, said tubes establishing auxiliary communication between the chambers formed by the said end members.



2. A fluid-containing casing for electrical apparatus comprising a cast iron tank, plates provided with openings cast in at each extremity of the tank, and tubes projecting through the said openings and secured to the plates by continuous autogenous joints.

3. A fluid-containing casing for electrical apparatus comprising a cast iron tank, plates cast in the end portions of the tank, and tubes located outside the body portion of the tank and connecting its end portions to provide the circulation of liquid therethrough, said tubes secured to the said plates by continuous autogenous joints.

4. The combination with a transformer, of a fluid-containing casing therefor, said casing comprising a cast iron body portion and end members cast integral therewith, plates cast in the end members, and tubes secured to the plates by continuous autogenous joints, said tubes being disposed about the body portion and headed into the chambers provided by the end members for establishing independent communication therebetween.

5. A casing comprising a cast iron portion, an apertured plate cast into said portion, and a tube projecting through an aperture in said plate and secured to the plate by a continuous autogenous joint.

[Claims 6 to 9 not printed in the Gazette.]

1,156,709. UMBRELLA AND PARASOL FRAME. JAMES ROSE, Lancaster, Pa., assignor of one-half to David Rose, Lancaster, Pa. Filed Jan. 11, 1911. Serial No. 602,003. (Cl. 135—31.)



1. An umbrella or parasol rib composed of parts connected by a joint, and a flat spring arranged on the outer faces of the parts and permanently located over the joint, each end of the spring being attached to a part of the rib.

2. An umbrella or parasol rib composed of parts connected by a joint, and a flat spring arranged on the outer faces of the parts extending over the joint and tending to maintain the parts in alinement, the spring being permanently located over the joint and each end of the spring being attached to a part of the rib.

3. An umbrella or parasol rib having a joint therein, a flat spring having one end rigidly attached to the outer face of one part of the rib and having the other end attached to the other part and capable of sliding thereon, the spring extending over the joint connecting the parts.

4. An umbrella or parasol rib made in sections joined at their ends, and a spring extending over the point of juncture, one end of the spring being rigidly connected to one section and the other end thereof being slidably connected to the other section.

5. An umbrella or parasol rib made in sections joined at their ends, and a spring extending over the point of juncture, one end of the spring being bent to closely inclose one section and the other end being bent to loosely inclose the other section.

[Claims 6 and 7 not printed in the Gazette.]

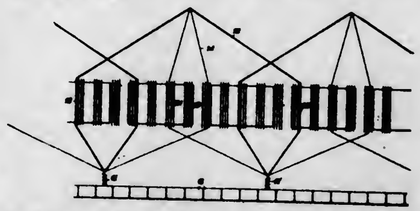
1,156,710. METHOD OF MAKING TERMINAL DEVICES. BERTRAND P. ROWE, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 26, 1910. Serial No. 583,910. (Cl. 113—116.)



1. The method of forming a terminal member that consists in enlarging one end of a tube and then flattening and perforating the enlarged end.

2. The method of forming a terminal member that consists in causing a sheet metal tube to differ in diameter at its ends and then flattening and perforating the larger end.

1,156,711. ARMATURE-WINDING. YASUDIRO SAKAI, East Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Feb. 3, 1910. Serial No. 541,850. (Cl. 172—276.)



1. An armature for dynamo-electric machines having two windings each comprising a plurality of coils, the coils of the respective windings being connected together in pairs both at their terminals and at intermediate points.

2. An armature for dynamo-electric machines comprising two windings each consisting of a plurality of coils, the coils of the respective windings being connected together in pairs both at their terminals and at intermediate points, and the terminal leads of one set of coils crossing each other.

3. An armature for dynamo electric machines having two windings, each of which comprises a plurality of coils, the coils of the respective windings being different in pitch and interconnected at each end of the armature.

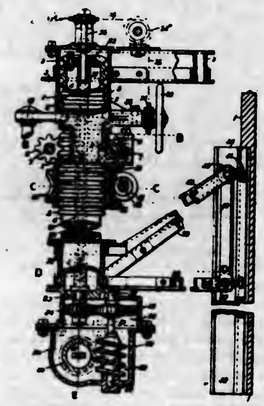
4. An armature for dynamo-electric machines having two sets of coils of different pitch corresponding points of which are connected together only at each end of the armature.

5. An armature for dynamo electric machines having two windings each of which comprises a plurality of coils, the coils of one winding being respectively connected at each end of the armature to, and located within the arcs subtended by, the coils of the other winding.

[Claims 6 to 10 not printed in the Gazette.]

1,156,712. VEHICLE PROPELLER-ACTUATING MECHANISM. ROBERT COOKE SAYER, Redland, Bristol, England. Filed Aug. 14, 1912. Serial No. 715,090. (Cl. 115—12.)

1. The combination with a body, vehicle or the like of propelling and steering apparatus comprising a tubular guide member fixed vertically on the body or vehicle, a hanging bearing member comprising a tube mounted to slide telescopically in the tubular guide and provided with annular teeth, pinions mounted on the fixed tubular guide and meshing with the teeth on the bearing member, means for actuating the pinions to raise and lower the bearing member in the guide member, means for rotating the toothed bearing member about a vertical axis, a casing on the lower end of the toothed bearing member, a pinion and gear in said casing, a horizontal shaft extending on each side of said toothed tube bearing member and actuated by said pinion and gear, propellers fixed on said shaft, a telescopic shaft within the bearing member and geared to said horizontal shaft and means to turn said shaft and the propellers about their axes.



2. The combination with a body, vehicle or the like of propelling and steering apparatus comprising a tubular guide member fixed vertically on the body or vehicle, a hanging bearing member comprising a tube mounted to slide telescopically in the tubular guide and provided with annular teeth, pinions mounted on the fixed tubular guide and meshing with the teeth on the bearing member, means for actuating the pinions to raise and lower the bearing member in the guide member, a worm wheel mounted concentric to the toothed tube of the bearing member, a sliding key and groove connection between the worm wheel and toothed tube, means to rotate both about a vertical axis, propelling means mounted to rotate in the lower end of the bearing member and means extending through the bearing member for rotating the propelling means about a horizontal axis, substantially as described.

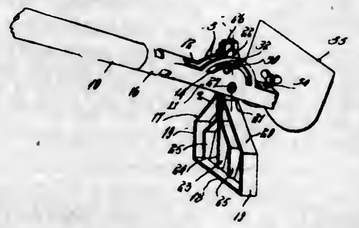
1,156,713. HORSESHOE-CALK. FREDERICK SCHMIDT, Dalton, Pa., assignor of one-half to Alexander P. Botscheller, Dalton, Pa. Filed Jan. 23, 1915. Serial No. 3,993. (Cl. 168—41.)



1. In a horseshoe, a shoe body, and forward and rear calks fixed to and depending from the body and having lower portions of concavo-convex form in cross-section terminating in square and beveled lower ends; the convex sides of the forward calks being arranged foremost, and the convex sides of the rear calks being arranged rearmost, and the concavo-convex portions of the forward calks being inclined downwardly and forwardly from the vertical, and the concavo-convex portions of the rear calks being inclined downwardly and rearwardly from the vertical.

2. As a new article of manufacture, a one-piece horseshoe calk comprising an upwardly-tapered vertical shank, an enlargement at the lower end of the shank and adapted to be spaced from the underside of a shoe body, said enlargement having an underside flat and unobstructed and disposed throughout its area at right angles to the vertical center of the shank, and a portion, of concavo-convex form in cross-section, depending from the said enlargement and inclined from the vertical.

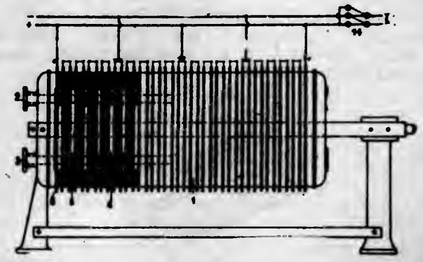
1,156,714. COMBINED HOE AND WEEDER. SAMUEL M. SCHROEDER and JOHN E. NORWOOD, Baltimore, Md. Filed Apr. 1, 1915. Serial No. 18,568. (Cl. 55—40.)



1. A garden tool comprising a handle, a head mounted on one end of said handle, said head having a longitudinal slot, arcuate extensions on opposite sides of the head formed with arcuate slots registering one with the other and disposed concentrically with circular openings formed in the sides of said head intermediate the ends of and communicating with said longitudinal slot, a band hoe having slotted shanks disposed within said longitudinal slot, a crust cutter having a slotted shank disposed between the shanks of said hoe, a pivot passed through said circular opening and through the slots of the hoe and the crust cutter, and a clamping bolt passed through said arcuate slots and through the slots of the hoe and crust cutter, whereby the hoe and crust cutter may be locked in adjusted positions at various relative angles.

2. A garden tool comprising a handle, a longitudinally slotted head mounted on the handle, extensions on the head, a band hoe having slotted shanks disposed within the slot, a crust cutter having a slotted shank arranged between the shanks of the hoe, a pivot pin passed through the head and slots of the hoe and crust cutter, and a clamping bolt passed through the extensions and adjustable longitudinally thereof, said bolt being also passed through the slots of the hoe and crust cutter, as and for the purpose set forth.

1,156,715. ELECTRO-OSMOTICAL FILTER-PRESS. BOTHO SCHWERIN, Frankfort-on-the-Main, Germany, assignor to Gesellschaft für Elektro-Osmose M. B. H., Frankfort-on-the-Main, Germany, a Corporation. Filed Apr. 8, 1913. Serial No. 759,798. (Cl. 204—5.)



1. An electro-osmotical filter press comprising perforated electrodes defining therebetween a space of constant volume, means to supply electric current to the electrodes, means to supply a suspension to the space.

2. An electro-osmotical filter press comprising perforated electrodes defining therebetween a space, means to pass current between the electrodes, means to supply suspension to the space, the electrodes being stationary to keep the space at constant volume.

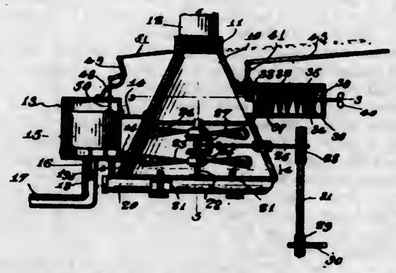
3. An electro-osmotical filter press comprising perforated electrodes, defining a space of constant volume, means to pass current between the electrodes, means to supply suspension to the space, filter cloths mounted on the adjacent sides of the electrodes.

4. An electro-osmotical press comprising perforated electrodes defining therebetween a space of constant volume, means to pass current between the electrodes, means to supply suspension to the space, and means to hold the electrodes and the suspension therebetween against movement.

5. An electro-osmotical filter press comprising a pair of perforated electrodes, an electrode locked between said pair, means to charge the pair at a potential different from the electrode between the pair, there being defined between the pair of electrodes a space, means to supply a suspension to the space.

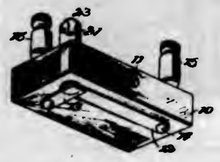
[Claims 6 and 7 not printed in the Gazette.]

1,156,716. CARBURETER. WILLIAM PARLEY SHORBS, Antonito, Colo. Filed Oct. 16, 1912. Serial No. 726,131. (Cl. 48—165.)



In a carbureter, the combination with a conical carbureting chamber having a closed bottom and means at the top for attachment to an engine, a fuel feed pipe extending across the bottom of the chamber and having an upright nozzle opening through said bottom into the conical chamber, a revoluble stand shaft located within the chamber, a pair of oppositely rotatable agitators on said shaft, each agitator including a plurality of feathered or inclined perforated blades, the said chamber having an air inlet located above the said agitators, a shaft journaled in the side of the casing and having a portion projecting into said casing, power transmission connections between the stand shaft and the last mentioned shaft, and power transmission means connected with the outer end of the last mentioned shaft and adapted to be connected with an engine shaft.

1,156,717. AUTOMATIC FIRE-ALARM. JAMES B. SMITH, Manchester, N. H. Filed Aug. 7, 1914. Serial No. 855,666. (Cl. 200—33.)



1. A circuit closer including a contact, a second contact movable under pressure to engage the first, a weight adapted, when released, to engage the second contact to move it into enagement with the first, and means for normally supporting the weight above the contact which it is to engage, said means including fusible supporting abutments, and a retaining guide leading to the contact.

2. A circuit closer including a supporting body, contacts secured to the body with their ends overlapping and spaced, said body being provided with an opening above the overlapping ends of the contacts, and means for supporting a weight in position to pass through such opening, when released, to engage the upper contact and force it into engagement with the other contact.

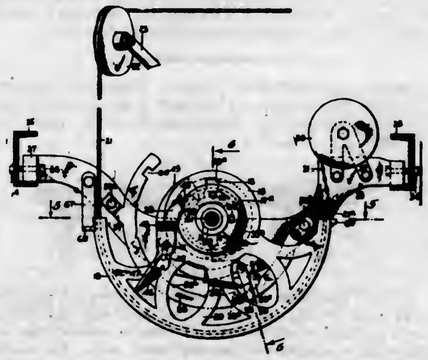
3. A circuit closer including a supporting body, contacts secured to the body with their ends overlapping and spaced, said body being provided with an opening above the overlapping ends of the contacts, and means for supporting a weight in position to pass through such opening, when released, to engage the upper contact and force it into engagement with the other contact, said means including a tubular supporting member extending into the opening, and fusible abutments formed interiorly of the upper portion of the supporting member.

4. A circuit closer including a base, contacts carried by the base and having overlapping spaced free terminals, the base being provided with an opening in vertical alinement with the overlapping terminals, a tubular supporting member extending at its lower end into the opening and provided at its upper end with a plurality of fingers, fusible abutments formed on the inner faces of the fingers, and a weight supported by these abutments and proportioned, when released, by melting of the abutments, to pass through the supporting member and opening of the base to engage one contact and force it into engagement with the other.

5. A circuit closer including a base, contacts carried by the base and having overlapping spaced free terminals, the base being provided with an opening in vertical alinement with the overlapping terminals, a tubular supporting member extending at its lower end into the opening and provided at its upper end with a plurality of fingers, fusible abutments formed on the inner faces of the fingers, and a weight supported by these abutments and proportioned, when released by melting of the abutments, to pass through the supporting member and opening of the base to engage one contact and force it into engagement with the other, each of said fingers being provided with an opening to receive a portion of the fusible compound to anchor the abutments in place.

[Claims 6 to 9 not printed in the Gazette.]

1,156,718. ENGINE-STARTER. REUBEN ABRAHAM STABLER, Muncy, Pa. Filed Dec. 24, 1914. Serial No. 878,890. (Cl. 123—185.)



1. In an engine starter, a driven element having a ratchet adapted to be applied to an engine shaft, a drive element in which the driven element is received, manually controlled means to turn the drive element, means to return the drive element to the initial position, a bushing loose in the drive element, said drive element having a limited turning movement on the bushing, a pawl rockably mounted on the bushing to engage the ratchet, said pawl being engageable by the drive element, and a holding device yieldingly engaging the bushing to retain the same and the pawl during the initial movement of the drive element.

2. In an engine starter, a driven element having a ratchet and adapted to be applied to an engine shaft, a drive element, means to actuate said drive element, a pawl rockably mounted and adapted to turn with the drive element, a member mounted to turn with the drive element and having a finger adapted to engage the pawl to release the same from the ratchet; a dog pivoted on said member, and a curved track over which said dog is adapted to travel, said track having means to engage said dog upon a retrograde movement of the drive member.

3. In an engine starter, a driven element having a ratchet and adapted to be applied to an engine shaft, a drive element, means to actuate said drive element, a pawl rockably mounted and adapted to turn with the drive element, a member mounted to turn with the drive element and having a finger adapted to engage the pawl to release the same from the ratchet, a spring pressed dog pivoted on the said member and a curved track over which said dog is adapted to travel, said track having a series of notches to engage said dog upon a retrograde movement of the drive member, and having a depression at each end of the series of notches to receive the dog and to permit it to reverse its angular position on the curved member.

1,156,719. FLOAT-VALVE MECHANISM. ROBERT L. STOKES, Cincinnati, Ohio, assignor to Will H. Darrow, Cincinnati, Ohio. Filed Aug. 29, 1914. Serial No. 859,218. (Cl. 137—104.)

1. In a float valve mechanism, a valve stem having its upper end extending into an anti-water hammer device in combination with an inflated rubber bag positioned within said anti-water hammer device and supported by said float valve stem.

2. In a float valve mechanism, an arm consisting of an arm proper, a screw passing transversely and downwardly therethrough, a standard extending integrally upward from said arm, a set-screw passing horizontally and transversely through said standard and in the same plane as that of said arm, a hanger pivoted on said arm and near said standard, another hanger having in upward-extending arm pivoted on said first named arm near said last named hanger and at the pivoted end of said stem, said screw and said hangers being adapted to engage a valve actuating lever and regulate its movement upward, said set-screw being adapted to engage the upper end of said hanger having an upward-extending arm and to force said hanger out of a perpendicular position.

3. In a valve mechanism a valve actuating closing lever having a flat, rectangular-shaped free end adapted to retard the upward movement of said lever through the water of a flushing tank.

4. In a valve mechanism, a valve actuating lever having a flat, rectangular-shaped free end in combination with a float and a float arm, said arm consisting of an arm proper, a screw passing transversely and downwardly therethrough, a standard extending integrally upward from said arm, a set-screw passing horizontally and transversely through said standard and in the same plane as that of said arm, a hanger pivoted on said arm and near said standard, another hanger having an upward-extending arm pivoted on said first-named arm near said last named hanger and at the pivoted end of said last named arm, said screw and said hanger being adapted to engage said valve actuating lever and regulate its movement upward, said set-screw being adapted to engage the upper end of said hanger having an upwardly extending arm and to force it out of a perpendicular position.

5. In a valve mechanism and in combination; a flushing tank; an inlet pipe having a separate downward extension; a water cup adapted to unite the upper ends of said inlet pipe and said downward extension; an anti-water hammer device attached to said water cup; a rubber bag positioned within said anti-water hammer device; a valve stem positioned within said downward extension of said inlet pipe and extending upward through said water cup and into said anti-water hammer device, said stem having mounted thereon a cup-shaped valve with a separate seat therein, said valve being positioned within said water cup; a valve actuating lever having a flat, rectangular-shaped free end, the other end of said lever being mounted on a stud extending laterally from the outside face of said water cup, said lever having a perforation through the extreme end of such mounted end portion; a rod adapted to engage said perforation by means of a hooked upper end; a foot having a recess in its upper face attached to the lower end of said rod, said foot being adapted to support said valve stem which in turn is adapted to support the said rubber bag; a float and an arm therefor, said arm having a perforation through its free end, a screw passing through said arm near said float, a standard rising upward therefrom and a hanger depending therefrom near said screw, another hanger having an upward-extending arm depending therefrom near said standard; a second standard extending integrally and laterally from the outside face of said water cup, said standard having a perforation through the free end thereof adapted to receive a screw, said screw being adapted to receive the perforated, bifurcated end of said float arm; said screw and said hangers of said float arm being adapted to engage said valve actuating lever, said screw passing through said first atandard of said float stem being adapted to engage said upward-extending arm and push said hanger out of a perpendicular position upon upward movement of the float; said rubber bag being adapted to receive yieldably the impact of the water rushing into said anti-water hammer device at the time of the closing of said valve.

1,156,720. TOBACCO-POUCH. WALTER H. STROMBYER, New York, N. Y. Filed Oct. 23, 1914. Serial No. 868,224. (Cl. 206—38.)

1. A tobacco pouch in the form of a wallet having a transverse pocket for the reception of the tobacco, the pocket being secured along its sides and one end to the body of the wallet, and secured along a portion of the other end so as to form a restricted mouth at said end, the mouth of said pocket being at one side of the wallet

and having a closing device intermediate the sides of the mouth to allow of closing or opening the mouth, the mouth when in open position forming an outlet for the tobacco and the said pocket, when the edges are pressed toward each other forming a chute leading to the open mouth.

2. A tobacco pouch, comprising a sheet of flexible material, a pocket extension terminating on the inner face of the sheet and adapted to hold tobacco, the pocket having its mouth at one side of the sheet, a fastening device for closing the mouth intermediate of its sides, the mouth when open forming an outlet for the tobacco, a flap formed at one end of the sheet, and a receiving pocket for the flap at the other end of the sheet.

3. A tobacco pouch, comprising a sheet of flexible material, a pocket extending transversely on the inner face of the sheet and adapted to hold tobacco, the pocket having its mouth at one side of the sheet, a fastening device for closing the mouth intermediate of its sides, the mouth when open forming an outlet for the tobacco, the said sheet having one end forming a flap extending beyond the pocket, and a holding device on the said flap for holding a package of cigarette paper.

4. A tobacco pouch, comprising a sheet of flexible material, a pocket extending transversely on the inner face of the sheet and adapted to hold tobacco, the pocket having its mouth at one side of the sheet, and a fastening device for closing the mouth intermediate of its sides, the mouth when open forming an outlet for the tobacco, one end of the said sheet being bent back upon the outer face of a portion of the pocket and having its sides fastened thereto, the other end of the said sheet forming a closing flap adapted to be passed with its free end under the said other end.

5. A tobacco pouch, comprising a sheet of flexible material, a pocket extending transversely on the inner face of the sheet and adapted to hold tobacco, the pocket having its mouth at one side of the sheet, a fastening device for closing the mouth intermediate of its sides, the mouth when open forming an outlet for the tobacco, one end of the said sheet being bent back upon the outer face of a portion of the pocket and having its sides fastened thereto, the other end of the said sheet forming a closing flap adapted to be passed with its free end under the said other end, and a holding device on the inner face of the said closing flap for holding a package of cigarette paper.

[Claims 6 and 7 not printed in the Gazette.]

1,156,721. CONVEYER. OTTO STRUNK, Friemersheim, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed July 9, 1913. Serial No. 778,089. (Cl. 80—48.)



1. A conveyer mechanism comprising a series of stationary bars and a series of movable bars parallelly positioned in a plurality of groups, the movable bars of one group adapted to move in a transverse direction relative to the direction of movement of the bars of the other group.

2. A conveyer mechanism comprising a series of stationary bars and a series of movable bars parallelly positioned in a plurality of groups, the movable bars of one group adapted to move in a transverse direction relative to the direction of movement of the bars of the other group; the ends of the movable bars of the first group, when in their forward position, adapted to engage between the ends of the stationary bars of the other group.

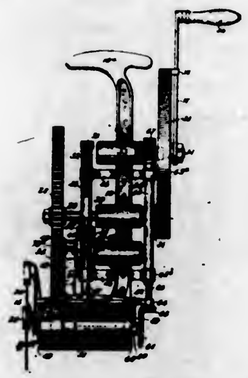
3. A conveyer mechanism comprising a series of stationary bars and a series of movable bars parallelly positioned in a plurality of groups, the movable bars of one group adapted to move in a transverse direction relative to the direction of movement of the bars of the other group, the ends of the movable bars of the several groups adapted alternately to engage between the ends of the stationary bars of one of the groups.

4. A conveyer mechanism comprising a series of stationary bars and a series of movable bars parallelly positioned in a plurality of groups, the movable bars of one group adapted to move in their longitudinal direction and the movable bars of another group adapted to move in their transverse direction.

5. A conveyer mechanism comprising a series of stationary bars and a series of movable bars parallelly positioned in a plurality of groups, the movable bars of one group adapted to move in their longitudinal direction and the movable bars of another group adapted to move in their transverse direction, and means for moving the bars of the second group both in the transverse and the vertical direction.

[Claims 6 to 9 not printed in the Gazette.]

1,156,722. SAWING-MACHINE. GEORGE J. TAFFAN, Tulalip, Wash. Filed Aug. 19, 1914. Serial No. 857,486. (Cl. 143—47.)



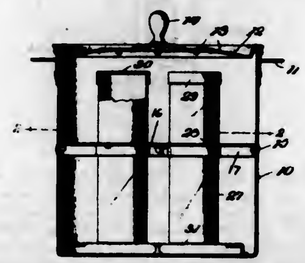
1. In a sawing machine, a frame, a saw mounted for rotating on the frame, a roller mounted on the frame for rotating on a member to be cut by the saw, a vertical shaft, gearing connecting the shaft with the roller, a horizontal shaft disposed above the roller, a worm and worm wheel connecting the two shafts, a wheel with inner gear teeth mounted on the second mentioned shaft, a third shaft having a horizontal axis and disposed between the roller and the second mentioned shaft, two gear wheels on the third shaft, one meshing with the inner gear teeth and a gear wheel mounted for rotating with the saw and meshing with the other gear wheel on the third mentioned shaft.

2. In a sawing machine, a frame, a roller mounted on the frame for rotating on a member to be cut by the saw, a vertical shaft, gearing connecting the shaft with the roller, a horizontal shaft, a worm and worm wheel connecting the two shafts, a wheel with inner gear teeth mounted on the second mentioned shaft, a third shaft having a horizontal axis and disposed between the roller and the second mentioned shaft, two gear wheels on the third shaft, one meshing with the inner gear teeth, a fourth shaft, a saw mounted on the fourth shaft, a gear wheel on the fourth shaft and meshing with the other gear wheel on the third mentioned shaft, a pulley on the fourth shaft, a fifth shaft disposed above the fourth shaft, a pulley on the fifth shaft, a belt connecting the pulleys, and a fly-wheel affixed for rotating with the fifth mentioned shaft.

3. In a sawing machine, a frame having a sleeve, a saw mounted for rotating on the frame, a rod extending in the sleeve, resilient means for holding the rod extended, a roller frame secured to the rod, a roller rotatably mounted in the roller frame and means for rotating the saw and the roller.

4. In a sawing machine, a frame having a sleeve, a saw mounted for rotating on the frame, a rod extending into the sleeve, resilient means for holding the rod extended, a roller frame secured to the rod, a roller mounted for rotating on the roller frame, a bearing on the roller frame, a shaft journaled in the bearing, gearing connecting the shaft and the roller, a bearing in the first mentioned frame, a shaft journaled in the last mentioned bearing and telescoping with the first mentioned shaft and means for rotating the second mentioned shaft and the saw.

1,156,723. STEAM-BAKER. ETTA L. THOMAS, Corning, Iowa. Filed June 16, 1913. Serial No. 774,000. (Cl. 53—2.)



In combination, a vessel having studs projecting inwardly from its wall, a tray removably fitted within the vessel and having a downwardly extending flange in which are formed downwardly opening bayonet slots to lockingly engage the inwardly projecting studs of the vessel, said tray having an opening and a flange surrounding such opening and depending therefrom, the depending flange and adjacent part of the tray having inwardly and upwardly opening bayonet slots partly formed therein and a second vessel removably supported in the opening of the tray and having outwardly extending studs to enter the said bayonet slots, formed in the tray and depending flange, to lockingly engage the bayonet slots and hold the second vessel against vertical movement.

1,156,724. PUMP MECHANISM. ELMER B. THOMPSON, Des Moines, Iowa. Filed June 3, 1914. Serial No. 842,712. (Cl. 230—80.)

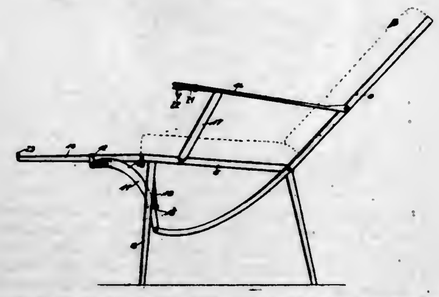


1. A pump comprising a stationary outer cylinder, a hollow support therefor communicating with the same and having intake and exhaust ports, an eccentrically movable inner cylinder within the said outer cylinder for contact at one point in its periphery with the wall of the latter, a wing at the periphery of the inner cylinder and extended into the hollow support, a plate flexibly connecting the wing with one wall of the support below one of the ports to shut off communication between the spaces at opposite sides of the said wing within the cylinder and support, and resilient means for cushioning the plate.

2. A pump comprising a stationary outer cylinder, a hollow support therefor communicating with the same and having intake and exhaust ports, an eccentrically movable inner cylinder within the said outer cylinder for contact at one point in its periphery with the wall of the latter, a wing at the periphery of the inner cylinder and extended into the hollow support, a plate flexibly connecting the wing with one wall of the support below one of the ports to shut off communication between the spaces at opposite sides of the said wing within the cylinder and support, resilient means for cushioning the plate, and a deflector extension within the support below the other port.

3. A pump comprising a stationary outer cylinder, a hollow support therefor communicating with the same and having intake and exhaust ports, an eccentrically movable inner cylinder within the said outer cylinder for contact at one point in its periphery with the wall of the latter, a wing at the periphery of the inner cylinder and extended into the hollow support, a plate flexibly connecting the wing with one wall of the support below one of the ports to shut off communication between the spaces at opposite sides of the said wing within the cylinder and support, resilient means for cushioning the plate, a deflector extension within the support below the other port, and means for moving the inner cylinder.

1,156,725. CHAIR. HENRY HARRISON TURNER, Northfield, Minn. Filed Nov. 25, 1914. Serial No. 873,857. (Cl. 155—16.)



1. In a chair, a seat section, a back portion mounted to swing on the rear part of said seat section, a leg support mounted to swing in the front of said seat section, a sector connecting the back portion to the leg support, said sector having spaced notches, and means normally tending to engage said notches whereby said back portion and leg support may be locked to said seat section in different predetermined positions.

2. In a chair, a seat section, a back portion mounted to swing in the rear of the said seat section, said back portion having a part thereof extending under the seat section, a leg support mounted to swing in the front of said seat section, a sector connecting the part of the back portion extending below the seat to said leg support, said sector having spaced notches, and locking means normally tending to engage a notch of said sector.

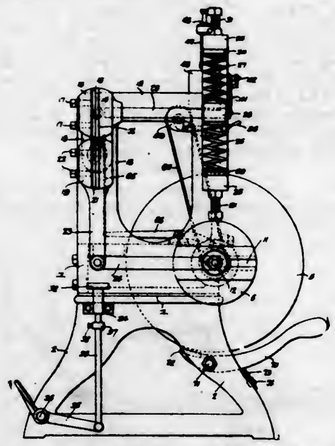
3. In a chair, a seat section, a back portion mounted to swing in the rear of the seat section, a leg support mounted to swing in the front of said seat section, a sector connecting the back portion to the leg support, said sector having spaced notches, locking means normally tending to engage the notches of said sector, means for placing said locking mechanism into inoperative position.

4. In a chair, a seat section, a back portion, a leg support, said back portion and leg support being mounted to swing, a sector connecting the back portion to the leg support whereby said back portion and leg support swing in

unison, an arm support connecting the back portion to the seat section, and locking means adapted to engage the sector in predetermined places for locking the swinging movement of the back and foot rest.

5. In a chair, a seat section, a swinging back portion, a leg support mounted to swing, means connecting the back portion to the leg support, arm supports connecting the back portion to the seat section and adapted to participate in the movement of the back portion, a lock engaging the means connecting the back portion to the leg support whereby the same are prevented from swinging, a crank, a rod connecting the crank to the lock, a lever associated with one of the arm supports, a rod connecting said lever to the crank, and means associated with the lever for rendering the same inoperative.

1,156,726. FATIGUE-TESTING MACHINE. GEORGE B. UPTON, Ithaca, N. Y., and GEORGE W. LEWIS, Swarthmore, Pa., assignors to Tinius Olsen Testing Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 12, 1913. Serial No. 800,614. (Cl. 73—51.)



1. A fatigue testing machine consisting of two jaws for holding a piece to be tested; arms respectively projecting from said jaws, one parallel with gripping faces of the jaws and one substantially at right angles thereto; means for oscillating the arm of one of the jaws to alternately bend the test piece in opposite directions; and springs operative on opposite sides of the arm of the other jaw for opposing movement thereof.

2. A fatigue testing machine consisting of a vertical supporting standard; two oscillatory jaws, one above the other, for holding a piece to be tested, the upper jaw being pivoted to the standard; means for oscillating the lower jaw to alternately bend the test piece in opposite directions; an arm projecting from the upper jaw; and springs operative on said arm for opposing movement of the lower jaw.

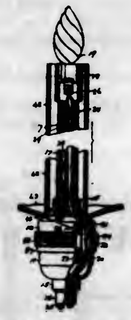
3. A fatigue testing machine consisting of a supporting frame; a jaw pivoted to said frame and having a slotted extension; an arm projecting from said jaw; springs confined between portions of said frame and said arm for opposing movement thereof; a second jaw having a portion operative in the extension of the first jaw; and means for oscillating the second jaw.

4. A fatigue testing machine consisting of a supporting frame; a jaw pivoted to a substantially vertical portion of said frame; a second jaw; means on one of said jaws for limiting movement of the other away from it, each of said jaws having a slot across its face, and said slots being in line; springs for opposing movement of the first jaw on its pivot; and means for mechanically oscillating the second jaw.

5. A fatigue testing machine consisting of a vertical supporting standard; two oscillatory jaws, one above the other for holding a piece to be tested, the upper jaw being pivoted to the standard; means for oscillating the lower jaw to alternately bend the test piece in opposite directions; an arm projecting from the upper jaw; and springs operative on said arm for opposing movement of the lower jaw; with means for limiting downward movement of the lower jaw when the test piece breaks.

[Claims 6 to 15 not printed in the Gazette.]

1,156,727. ELECTRIC FITTING. CHARLES WAGNER, Brooklyn, N. Y., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed July 9, 1913. Serial No. 778,098. (Cl. 240—52.)



1. An electric fitting of the type described, comprising a switch, an insulating body on which the same is mounted, a casing inclosing the switch, wire conduits secured at opposite ends of the casing for leading wires to and from the switch, and a candelabrum supported on one end of the casing, substantially as described.

2. An electric fitting of the type described, comprising a switch, an insulating body on which the same is mounted, a two-part casing sleeved together and provided with coöperating readily detachable latching elements, and wire conduits secured at opposite ends of the casing for leading wires to and from the switch, and a candelabrum supported on one end of the casing.

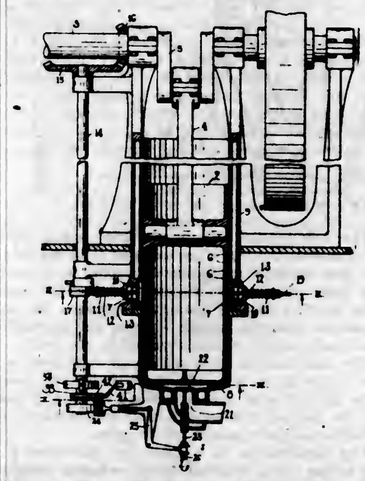
3. An electric fitting of the type described, comprising a switch, an insulating body on which the same is mounted, a casing inclosing the same, a ratchet for operating the switch, a ring surrounding said casing and an operative connection between said ring and the ratchet whereby said switch may be actuated together with wire conduits secured to opposite ends of the casing for leading wires to and from the switch, and a candelabrum seated on one end of said casing and surrounding the conduit attached thereto, substantially as described.

4. An electric fitting of the type described, comprising a switch, an insulating body on which the same is mounted, a casing inclosing the same, and circumferentially slotted, a ratchet for operating the switch and a member moving therewith projecting through said slot in the casing to afford an operative connection for actuating the switch together with wire conduits secured to opposite ends of the casing for leading wires to and from the switch, and a candelabrum seated on one end of said casing and surrounding the conduit attached thereto, substantially as described.

1,156,728. INTERNAL-COMBUSTION ENGINE. NATHANIEL B. WALES, Saginaw, Mich. Filed June 19, 1914. Serial No. 846,104. (Cl. 123—193.)

1. In an engine of the type described, an inverted cylinder, with air ports at an interval from fuel and exhaust ports, and a piston in sliding engagement with the portion of the cylinder beyond the air ports arranged to form a free air passage between the air ports and the other ports when in compression position of restricted section.

2. In an engine of the type described, a cylinder closed at its lower end, air valves controlling ports into the cylinder between the ends thereof, an exhaust valve controlling an exhaust port in the lower end of the cylinder, a fuel starting and supply fitting discharging through a port into the cylinder through the lower end thereof, connections for supplying fuel and air under pressure greater than the maximum cylinder pressure to the fuel fitting and mechanism for operating the respective valves in timed relation to the movement of the piston.



3. In an engine of the type described, an inverted cylinder with air ports between the ends thereof, a fuel supply fitting discharging into the cylinder at a distance below the air ports, a fuel fluid supply valve for the fitting, a reciprocating supply member for positively forcing a fuel charge into the fitting, a valve adapted to admit air under pressure greater than the cylinder pressure to the fitting for ejecting fuel therefrom, and mechanism for operating said valves in timed relation to the engine cycle.

4. In an engine of the type described, an inverted cylinder and a piston the upper portion of which is in sliding engagement with the cylinder and the other portion of which is adapted to form a compression zone surrounding the piston.

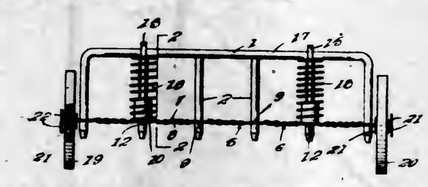
5. In an engine of the type described, an inverted cylinder with air inlet ports around the upper end thereof, a fuel supply fitting discharging into the cylinder's base at a distance below the air inlet ports, a fuel fluid supply valve for the fitting, a reciprocating fuel supply member for positively forcing a powdered fuel charge into the fitting, a valve adapted to admit air under pressure greater than the maximum cylinder compression pressure to the fitting for ejecting fuel therefrom, and mechanism for operating said valves in timed relation to the engine cycle.

[Claims 6 to 13 not printed in the Gazette.]

1,156,729. RAKE-CLEANER. WILLIAM WATSON, Benton, Ill. Filed July 3, 1915. Serial No. 38,019. (Cl. 56—146.)

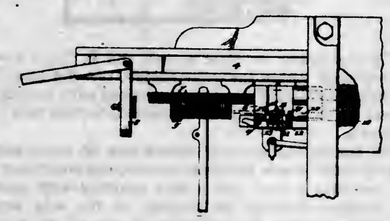
1. In a rake cleaner, the combination, of a rake head of ordinary construction including a base and a plurality of raking teeth, of a bar provided with rake teeth receiving portions, a pair of wheels rotatably mounted upon the outer ends of said bar and outwardly of the outermost of the rake teeth, and means for yieldingly connecting said bar to the base of said rake head.

2. In a rake cleaner, the combination, of a bar having a plurality of rake teeth receiving portions, a pair of wheels rotatably mounted upon the outer ends of said bar, sleeves connected to said bar, tongues formed upon said sleeves and extending upwardly therefrom, said tongues having their upper ends bent to form hooks for extending over the base of said rake head, and springs coiled about said sleeves and said tongues for yieldably connecting said bar to said rake head.



3. In a rake cleaner, the combination, of a rake head of ordinary construction including a base and a plurality of raking teeth, a pair of strands of wires twisted for forming a bar, portions of said strands of wire being free from twisted connection and bowed outwardly for forming receiving portions for said rake teeth, wheels mounted upon the outer ends of said strands of wire outwardly of the outermost teeth of said rake head, the ends of said strands of wire being bent transversely to the strands for locking said wheels upon said strands, and means for yieldably connecting said bar to the base of said rake head.

1,156,730. LINOTYPE-MACHINE. JACOB WEISSINGER, New York, N. Y. Filed Feb. 4, 1915. Serial No. 6,043. (Cl. 199—7.)



1. The combination with a linotype machine provided with a plurality of matrices having reference characters thereon, a detachable distributer box, and a lower, front, distributer screw; of an abrasive element, in the path of said matrices to be distributed, projected through the front plate of and portable with said box, and means for operatively connecting said element with said lower, front, distributer screw.

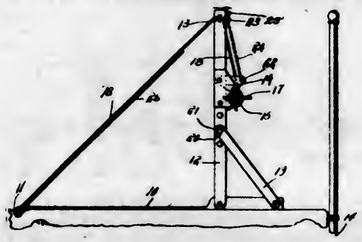
2. The combination with a linotype machine provided with a plurality of matrices having reference characters thereon, a detachable distributer box, and a lower, front, distributer screw; of a disk projected through the front plate of and portable with said box in the path of the characters on said matrices, and means for operatively and detachably connecting said element with said lower, front, distributer screw.

3. The combination with a linotype machine provided with a plurality of matrices having reference characters thereon, a detachable distributer box, and a lower, front, distributer screw; of a plate secured to the front of said box, a shaft carried by said plate, a disk revoluble with said shaft, a pinion on said shaft, a supplemental shaft geared to said pinion, and gears connecting said supplemental shaft and said lower, front, distributer screw, the front of said box being slotted to receive said disk and permit the same to bear on said matrices in the positions of said characters in the movement of said matrices to be distributed.

1,156,731. BED-SUPPORT. SWAN J. WEBSTER, Boone, Iowa. Filed Nov. 23, 1914. Serial No. 873,592. (Cl. 5—43.)

A back rest for a bed comprising a horizontal frame, vertically disposed parallel uprights pivoted to the rear

portion of the frame, a pawl and ratchet winding drum mounted transversely on the uprights, movable braces carried by the frame arranged for adjustable engagement with the uprights, a second frame pivotally connected to



the forward end of the first frame, a canvas strip secured to the second frame, and wound upon the drum, and a guiding roller mounted in the upper end of the uprights and receiving the canvas strip thereover.

1,156,732. COMBINED CIGARETTE AND MATCH BOX. THOMAS H. WHITE, Baltimore, Md., assignor of one-third to George J. Eder, Baltimore, Md. Filed Oct. 1, 1914. Serial No. 864,453. (Cl. 206—48.)



1. A box having an outer section and an inner section slidably fitted within the outer section, the said inner section including a front and a back provided with interfitting tongues dividing the interior of the said section into compartments.

2. A box having an outer section and an inner section slidably fitted within the outer section, the said inner section including a front and a back provided with interfitting tongues dividing the interior of the said section into compartments, the formation of one of the tongues providing one of the compartments with an open side.

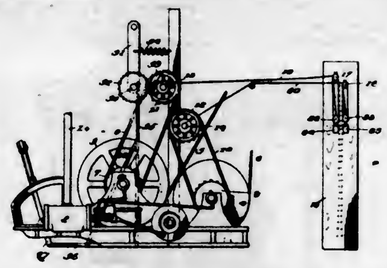
3. A box having an outer section and an inner section slidably fitted within the outer section, the said inner section including a front and a back provided with interfitting tongues dividing the interior of the said section into compartments, the formation of one of the tongues providing one of the compartments with an open side, and one wall of the outer section being provided with an opening arranged to be in communication with the said open side of the said compartment when the inner section is slid to one position.

4. A box comprising an outer section and an inner section slidably fitted therein, the said inner section including a front and a back provided with tongues, one of said tongues being provided with a slit and the other tongue being fitted through the slit, the said tongues when assembled constituting a partition dividing the interior of the said inner section.

1,156,733. INDICATOR FOR HOISTING AND CONVEYING APPARATUS. DAVID P. WILLIAMS, Whitney, N. C. Filed Nov. 19, 1914. Serial No. 873,067. (Cl. 116—31.)

1. An indicator for hoisting and conveying mechanism comprising an indicator board provided with indicia indicating the limit of travel of the hoisting and conveying members, shiftable devices adapted to be placed at points along said indicia to denote the points of stoppage of the hoisting and conveying members, respectively, indicator members disposed in front of the indicator board, and means for moving the said indicator members along said indicia according to the movement of the hoisting and conveying members.

2. The combination of an indicator board having a series of sockets therein, a peg adapted to be seated in any one of said sockets, an indicator movable along the line of the sockets, a drum, a winding shaft, gearing whereby the winding shaft will be actuated by the drum, and a flexible connection between the winding shaft and the indicator.



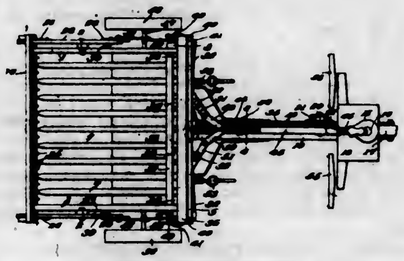
3. The combination of an indicator board having a series of sockets therein, a peg adapted to be seated in any one of said sockets, an indicator weight, a pointer projecting from said weight toward the line of sockets, a winding shaft, a flexible connection between the winding shaft and the indicator weight, a drum, and gearing whereby the winding shaft will be actuated by the drum.

4. The combination of a drum, an indicator, a shaft geared to the drum, a second shaft, a flexible connection between the indicator and the second shaft, and yieldable means for holding said second shaft in operative engagement with the shaft geared to the drum.

5. The combination of a drum, an indicator, a shaft geared to the drum, a second shaft, swinging hangers carrying said second shaft, a flexible connection between the indicator and said second shaft, a spring acting on said swinging hangers to hold the second shaft in operative engagement with the shaft geared to the drum, and means for moving said second shaft away from the shaft geared to the drum.

[Claim 6 not printed in the Gazette.]

1,156,734. HAY OR SHOCK LOADER. HENRY W. WILLIS, Lansford, N. D. Filed Apr. 17, 1914. Serial No. 832,544. (Cl. 56—66.)



1. In a machine for the purpose set forth, the combination of a wheeled frame having forwardly projecting teeth, a draft bar pivotally connected at its front end to and extending rearwardly from said wheeled frame, a support for the rear end of the draft bar, intermeshing gears on the rear side of the frame and on the draft bar, means on the draft bar for operating said gears, and means on the draft bar for locking said gears against movement.

2. The combination of a wheeled frame having forwardly projecting teeth and provided with a projection on its rear side, a draft bar consisting of a pair of beams pivoted at their front ends directly to said projection, a support for the rear end of the draft bar, a gear on said projection between the beams, a gear housed between the beams and meshing with first-mentioned gear, and means mounted on the beams to actuate said last-mentioned gear.

3. In a machine for the purpose set forth, the combination of a wheeled frame having forwardly projecting teeth, a gear on the rear side of the frame disposed in a vertical plane, a draft bar comprising a pair of parallel beams pivoted at their front ends to said gear and receiving the same between them, a gear pivoted between the beams and meshing with said first-mentioned gear, a lever fulcrumed on the draft bar, a link connecting the lever with the last-mentioned gear, and a support for the rear end of the draft bar.

4. The combination of a frame, a gate pivotally mounted upon the frame, a draft bar pivoted to and extending rearwardly from the frame, a lever mounted upon the said draft bar, interengaging means on the draft bar and the frame for oscillating the frame, connections between said means and the lever, means for pivotally moving the gate, and connections between the said means and the lever.

1,156,735. GAS-FIRE. WALTER AUDARE WILSON, Armley, Leeds, England. Filed July 7, 1915. Serial No. 38,570. (Cl. 126—127.)



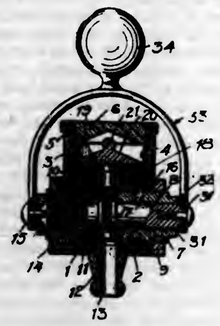
1. A radiant consisting of an open-work front and an imperforate back spaced apart, forming an unobstructed upwardly and rearwardly curved flue shaped first in the initial direction of the flame and then to a curve to which the unobstructed flame is attracted in a direction from the vertical toward the horisontal.

2. A radiant consisting of an open-work front and an imperforate back spaced apart, forming an unobstructed upwardly and rearwardly curved flue shaped first in the initial direction of the flame and then to a curve to which the unobstructed flame is attracted in a direction from the vertical toward the horisontal, said flue tapering from its lower to its upper end.

3. A gas fire, designed to resemble a coal fire, comprising an upwardly and rearwardly curved radiant consisting of an open-work front and an imperforate back spaced apart, forming an unobstructed flue shaped first in the initial direction of the flame and then to a curve to which the unobstructed flame is attracted in a direction from the vertical toward the horisontal, and a back support spaced from said radiant.

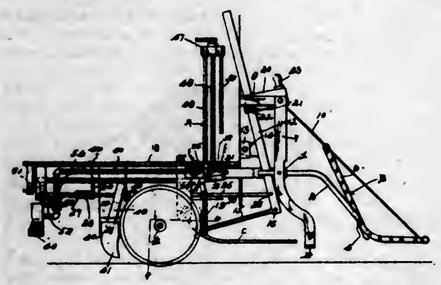
1,156,736. DRAFT-ARM FOR SODA-FOUNTAINS. BEATTIE R. WORLEY and GEORGE H. KELLINGTON, Decatur, Ill. Filed Aug. 31, 1914. Serial No. 859,427. (Cl. 225—28.)

1. A draft arm for soda fountains including a cylindrical body, said body having a transverse aperture therethrough and being provided with a longitudinal bore communicating with the aperture, an angular extension on the body, said angular extension being provided with an enlarged bore communicating with the transverse aperture, a cam operatively mounted within the longitudinal bore in the body, a valve slidable in the bore in the angular extension, the upper wall of the valve being conical, a tubular nozzle secured to the valve and arranged to direct the flow of the liquid when the valve is open, the cylindrical extension being provided with an inlet opening, said inlet opening being located at a point slightly above the valve when the same is seated and means controlling the operation of the cam whereby the valve is controlled.



2. A draft arm for soda fountains including a cylindrical body, said cylindrical body being provided with an axial bore and having a transverse bore communicating with the axial bore, a cylindrical extension on the body, said extension projecting laterally therefrom and being provided with an enlarged bore, the lower terminal of the enlarged bore communicating with the transverse bore in the body, a valve slidable in the bore in the cylindrical extension, means within the transverse bore in the body controlling the operation of the valve, and a discharge nozzle formed integral with the valve and projecting downwardly therefrom, said discharge nozzle projecting into the axial bore in the body, the cylindrical extension being provided with an inlet opening at a point slightly above the valve seat, said inlet opening being so positioned that the pressure of the liquid will hold the valve closed.

1,156,737. CAR-FENDER. WILLIAM C. ABBOTT, Baltimore, Md. Filed Nov. 25, 1914. Serial No. 874,031. (Cl. 105—250.)



1. The combination with a car, of a main fender slidably mounted on the car, an auxiliary fender pivotally mounted beneath the car in rear of the main fender, an upright operating lever fulcrumed intermediate of its ends at a point between the said fenders and having its lower arm operatively connected with the main fender so as to move upon the inward movement of the said main fender, means extending from the lower arm of the operating lever to the auxiliary fender for swinging the same downward when the said lower arm moves rearwardly, an operating rod slidably mounted on the car and connected with the operating lever, and brake mechanism connected with the operating rod.

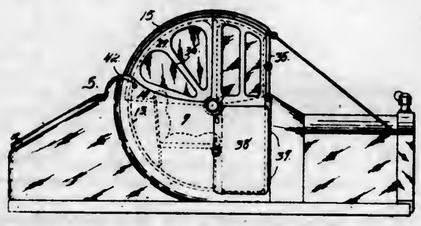
2. In a car fender the combination with a car, having a brake and provided with propelling means, of a main fender slidingly supported on the car, an auxiliary fender hinged to the car in rear of the main fender and normally disposed in an inoperative position, an operating lever pivotally mounted intermediate of its ends and operatively connected with the main fender so as to move therewith,

an operating rod slidably carried by the car and pivotally connected with the said operating lever, a rod connected with the auxiliary fender and pivotally connected with the operating lever, means for operatively connecting the operating rod with the brake, whereby when the operating rod is moved in one direction the brake will be applied, spring means for normally holding the operating rod in an inoperative position, means to releasingly hold the lever in an inoperative position, the last mentioned means being connected with the main fender and adapted to be moved to releasing position, when the said main fender is struck and means for connecting the operating rod with the propelling means of the car for stopping the latter.

3. In a car fender the combination with a car having a brake and provided with propelling means, of a main fender slidably mounted on the car, an auxiliary fender movably mounted on the car in rear of the main fender and normally disposed in inoperative position, an operating lever operatively connected with the main fender to move with the same, an operating rod slidably mounted on the car and pivotally connected with the operating lever, means for connecting the auxiliary fender with the operative lever, means for operatively connecting the said rod with the brake, means for releasingly holding the operating lever in an inoperative position, the last mentioned means being operatively connected with the main fender and adapted to be moved to a releasing position when the main fender is struck, and means for operatively connecting the said rod with the propelling means for stopping the car when the main fender is struck.

4. In a car fender the combination with a car, of a main fender yieldably mounted on the car, an auxiliary fender adjustably connected with the car and arranged in rear of the main fender, an operating lever located between and connected with the said fenders and adapted to move upon the yielding of the main fender, an operating rod slidably mounted on the car and connected with the said operating lever, a switch carried by the car, and a bell crank lever fulcrumed on the car and having one arm connected with the said operating rod and its other arm connected with the said switch.

1,156,738. DISAPPEARING TOP FOR AUTOMOBILE-BODIES. CHARLES L. ANDERSON, Denver, Colo. Filed July 28, 1914. Serial No. 853,601. (Cl. 21—62.)



1. A vehicle body including walls hollow at both sides and in the rear, and a top member adjustable to enter the pocket of the hollow walls or to close the top of the body, as may be desired, the said member having arms hinged at their forward extremities and spaced to form side openings and hinged side members adjustable independently of the top member to enter said pocket at the sides and also to close the side openings of the first named top member.

2. A vehicle body including walls hollow at both sides and in the rear, a top member adjustable to enter the pocket of the hollow walls or to close the top of the body, as may be desired, the said member having arms hinged at their forward extremities and spaced to form side openings, hinged side members adjustable to enter said pocket at the sides and also to close the side openings of the first named top member, additional side members adapted to occupy a position in front of the first named members, and also adjustable to enter the side portions of the said pocket, and means for securing the side and top members in the desired position of adjustment.

3. A vehicle body having hollow walls and coaxially hinged top and side members adapted to enter the pocket of the walls and adjustable independently of each other to close the body at the top and sides.

4. A vehicle body having hollow walls and coaxially hinged top and side members adapted to enter the pocket of the walls and adjustable independently of each other to close the body at the top and sides, and means for securing the said members in the desired position of adjustment.

5. A vehicle body having hollow walls and coaxially hinged top and side members adapted to enter the pocket of the walls and adjustable independently of each other to close the body at the top and sides, and means for securing the said members in the desired position of adjustment, said means including a clamping nut threaded in the hinged pin of the members.

[Claims 6 and 7 not printed in the Gazette.]

1,156,739. LOCKING-CLAMP. JOHN CLAYTON BACKUS, Smethport, Pa. Filed June 11, 1915. Serial No. 33,583. (Cl. 70—17.)



1. A clamp comprising pivoted jaws, a key operated locking mechanism for holding the jaws against spreading from either one of a plurality of positions, and a guard comprising projecting parts one of such parts normally obstructing access to the locking mechanism and the remaining projecting part being inclined to ride upon the proper key and admit of the obstructing part being withdrawn from the path of the key when introducing the same into the lock to effect release of the jaws.

2. A clamp comprising pivoted jaws, the pivotal ends of the jaws forming opposed inclosing walls, upper and lower plates closing the space formed between the side walls to form a case and a key operated locking mechanism disposed within such case and adapted to prevent spreading of the jaws from either one of a plurality of positions.

3. A clamp comprising a fixed jaw having spaced side wings at one end, a pivoted jaw having toothed segments at one end which are disposed within the wings of the fixed jaw, locking dogs carried by the fixed jaw and adapted to engage the toothed segments to hold the jaws against spreading from either one of a plurality of positions, and a key for effecting simultaneous release of the locking dogs from the toothed segments.

4. A clamp comprising a fixed jaw having transversely spaced wings, a pivoted jaw provided with transversely spaced toothed segments arranged to lie against the inner faces of the said wings, a partition disposed within the space formed between the front and rear walls comprised between the pivotal ends of the jaws and forming a key-space, and locking means adapted to coact with the toothed segments and adapted to be actuated by a key inserted in the said key space.

5. A clamp comprising pivoted jaws having their pivotal ends spaced apart, a toothed segment upon one of the jaws, a partition disposed in the space formed between the pivoted ends of the jaws to form a key-space, a locking device arranged to coact with the toothed segment to prevent spreading of the jaws from either one of a plurality of positions, and a guard adapted to normally obstruct the key-passage to the locking device and adapted to be actuated by the proper key when inserted for effecting release of the locking device.

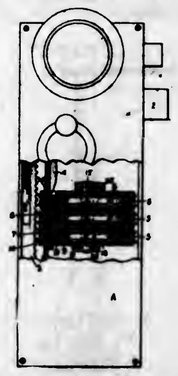
[Claims 6 to 12 not printed in the Gazette.]

1,156,740. BLANKET-HOLDER. CHARLES M. BERDAN, Maywood, N. J. Filed Jan. 8, 1915. Serial No. 1,171. (Cl. 24—73.)



A blanket holder including a strip of elastic material having the end portions doubled, an attaching plate adjustably positioned on said doubled ends, means for securing the doubled end portions to the attaching plate, blanket securing means carried by the attaching plate, and means for securing the doubled end portions together.

1,156,741. TUMBLER FOR COMBINATION-LOCKS. NAUM SHAMUS-GORGIS BESHAROV, Paterson, N. J. Filed Nov. 28, 1914. Serial No. 874,406. (Cl. 70—53.)



1. A tumbler for a combination lock comprising a ring, a circular body disposed within and connected with the ring, there being an approximately circular slot between the ring and body, said body being made of a plurality of plates separably connected and provided with radial slots lying in the plane of division of the plates, sliding gates in each slot and of round cross-section, a spring behind each gate for forcing the same outwardly, a projection on each gate and arranged to engage one of the plates to limit the outward movement of the gates, and spring-pressed catches arranged within the body to engage the gates when in open position, said body having in its periphery recesses into which the gates normally extend and through any one of which a key is adapted to pass to force the gate open while the bolt of the lock is being thrown to locking position, the catch of the open gate being automatically released by the key during its return movement.

2. A tumbler for a combination lock to control the operation of the bolt thereof, said tumbler comprising a body having one or more recesses through which a key is adapted to pass during the throwing of the bolt to and from locking position, said body being made of separably connected plates each having oppositely-disposed grooves forming guideways, gates slidable in the said guideways and of round cross-section and adapted normally to close the recesses of the body, means for urging the gates outwardly, stops on the gates arranged to engage one of the plates to limit the outward movement of the gates, and spring-pressed catches arranged in the body and adapted to be automatically projected into engagement with the gate when the latter is in open position and to be automatically released by a key passing the open gate in order to permit the gate to return to normal position when the key has passed.

3. A tumbler of the class described comprising inner and outer plates, a hub on one of the plates and extending through the other plates, said plates having their peripheries provided with registering recesses, sliding gates mounted between two of the plates to normally close the recesses, springs interposed between the gates and said hub for normally holding the gates outwardly, spring-pressed catches mounted in one of the outer plates, whereby any gate will be held in open position, there being openings in the middle plate registering with the spring-pressed catches, and projections on the other outer plate to enter the openings of the inner plate for holding the spring-pressed catches in place.

4. In a combination lock, the combination of a key-carrying element movable with the bolt of the lock, a plurality of spaced projections thereon, a key on the element spaced from the projections, a plurality of tumblers movable with respect to each other and to the said element, a plurality of spring-pressed gates on each tumbler, means carried by the tumbler whereby a gate when thrown open by engagement with the key is automatically held in open position, said tumblers each having its rim and body portion of the same thickness axially and the body portion being made of separable plates, and one of the plates at each tumbler being of smaller diameter than the others, whereby the projections and one extremity of the key can lie in the same plane with the smaller plates of the tumblers when the key-carrying element is in a position corresponding to the locking position of the bolt.

5. In a combination lock, a tumbler having a recess through which a key is adapted to pass, a sliding gate in the tumbler and normally closing the recess, and a catch in one side of the recess to engage and hold the gate in open position, said gate being of round cross-section and the side of the recess opposite from the catch having a guide groove in which the gate slides.

[Claim 6 not printed in the Gazette.]

1,156,742. SUBSTITUTE FOR LAMPBLACK. GEORGE G. BLANDONE, CHARLES W. NICHOLS, and FAURIE BRUGUIERE, New Orleans, La. Filed Apr. 1, 1915. Serial No. 18,593. (Cl. 134—60.)

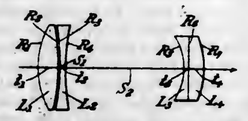
1. A substitute for lamp black consisting of pulverized burned rice hulls and chaff.

2. A substitute for lamp black which consists of the pulverized charred hulls and chaff of a grain.

3. The method of forming a substitute for lamp black which consists in burning the hulls and chaff of grain and in pulverizing the charred remains thereof.

4. The method of forming a substitute for lamp black which consists in burning rice hulls, in passing the burned products through rollers, and in further treating the resultant product to reduce it to a fine powder.

1,156,743. OBJECTIVE FOR PHOTOGRAPHIC AND LIKE PURPOSES. LIONEL BARTON BOOTH, Cambridge, England. Filed Jan. 25, 1915. Serial No. 4,334. (Cl. 88—57.)



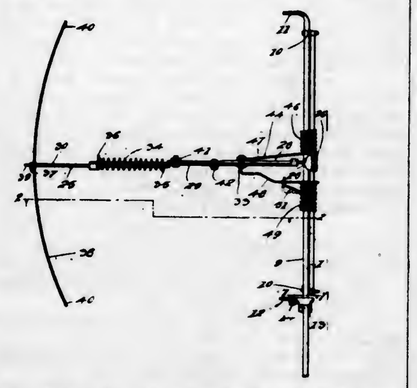
1. A spherically, chromatically and astigmatically corrected telephoto objective consisting of a group of two oppositely disposed lenses having an air space between the pair of facing surfaces, and a second group of two lenses arranged in contact and cemented together, said second group arranged in axial alinement and spaced apart from the first group, the power of the cemented surface being dispersive or substantially zero, and the power of the pair of facing surfaces being dispersive, while the power of one group is dispersive and at least numerically equal to that of the other group.

2. A spherically, chromatically and astigmatically corrected telephoto objective consisting of a group of two

oppositely disposed lenses having an air space between the pair of facing surfaces, and a second group of two lenses arranged in contact and cemented together, said second group arranged in axial alinement and adjustably spaced apart from the first group, the power of the cemented surface being dispersive or substantially zero, and the power of the pair of facing surfaces being dispersive, while the power of one group is dispersive and at least numerically equal to that of the other group.

3. A spherically chromatically and astigmatically corrected telephoto objective consisting of a group of two oppositely disposed lenses having a hair space between the pair of facing surfaces, and a second group of two lenses arranged in contact and cemented together, said second group arranged in axial alinement and spaced apart from the first group, the power of the cemented surface being dispersive or substantially zero, and the power of the pair of facing surfaces being dispersive, while the power of one group is dispersive and numerically greater than that of the other group.

1,156,744. SACK-HOLDER. HENRY L. BORSTELMAN, Small, Idaho. Filed Feb. 19, 1915. Serial No. 9,364. (Cl. 83—26.)



1. In a sack holder, an attaching plate, a bar pivotally connected to the lower edge of said attaching plate, means for normally holding said bar in facial engagement with said attaching plate, a sack engaging hook formed integrally with one end of said pivoted bar, a collar slidably mounted upon the end of said bar remote from said sack engaging hook, means for holding said collar in various adjusted positions, and a sack engaging hook formed upon said collar.

2. In a sack holder, an attaching plate, a bar pivotally connected to said plate, a sack engaging hook formed integrally with said bar at one end of the same, a collar slidably mounted upon said bar remote from said hook, means for holding said collar in adjusted position, a sack engaging hook formed upon said collar, a catch pivotally connected to said attaching plate and provided for engaging the upper edge of said pivoted plate for holding said pivoted plate in facial engagement with said attaching plate, and a spring operatively connected to said plate for automatically moving said pivoted plate into facial engagement with said attaching plate after movement therefrom.

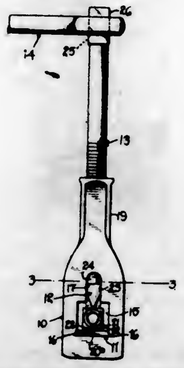
3. In a sack holder, a supporting plate, sack engaging means carried by said plate, a spreader arm pivotally carried by said plate and extending outwardly therefrom for engagement with a section of a sack for holding the same open, means carried by said plate and engaging said spreader arm for automatically forcing said spreader arm out of a sack engaging position, means carried by said plate and engaging said sack engaging means for holding it in a sack supporting position, said means automatically operable by the movement of said spreader arm out of a sack engaging position, for releasing said sack engaging means.

4. In a sack holder, an attaching plate, a bar pivotally carried by said plate, means for normally holding said bar in facial engagement with said attaching plate, sack engaging hooks carried by said bar, and means for holding said bar in facial engagement with said plate.

5. In a sack holder, an attaching plate, a bar pivotally carried by said plate, means for normally holding said bar in facial engagement with said attaching plate, said engaging hooks carried by said bar, means for holding said bar in facial engagement with sack plate, a spreader arm pivotally connected to said attaching plate and composed of a plurality of adjustably connected sections, a sack engaging bar carried by the outer end of said spreader arm, means carried by said plate for automatically moving said spreader arm out of a sack engaging position, and means for holding said spreader arm in a sack engaging position.

[Claim 6 not printed in the Gazette.]

1,156,745. TOOL FOR SPLITTING NUTS. JOSEPH D. BRADY, Pineville, La. Filed May 1, 1915. Serial No. 25,321. (Cl. 81—201.)



A nut splitting tool comprising a flat rectangular body having a rectangular opening therein and a longitudinal slot communicating with the inner end of said opening, said body being provided on one end with a longitudinally extending, internally threaded sleeve and a longitudinal opening connecting the bore of said sleeve with said slot, a rectangular splitting head slidably mounted in the slot and having a shank engaged in said longitudinal opening, the opposite side faces of said head being flush with the corresponding faces of the body, and a screw threaded in said sleeve to engage the shank and force the head into engagement with a nut mounted in said opening, said splitting head and shank, when the nut is removed, being laterally movable through the opening and slot in the body.

1,156,746. COIN-CONTROLLED DISPENSING APPARATUS. CHARLES H. BRAZELL, St. Louis, Mo. Filed Jan. 10, 1914. Serial No. 811,463. (Cl. 194—80.)

A coin actuated mechanism for dispensing apparatus including a supporting plate, means for delivering articles in succession upon said plate, push plates slidably connected to the supporting plate, operating bars slidably connected to the supporting plate in alinement with the push plates, resetting plates fixed to the push plate and having sliding connection with the operating bars, inclined coin chutes adapted to deliver coins onto the supporting plate between the proximate ends of the operating bars and push bars, each of said chutes being formed with an opening in its upper portion for the gravitation therethrough of coin other than the predetermined coin, and a V-shaped deflecting plate carried by the supporting plate between said chutes and having its extremities disposed directly below the openings in said chutes so as to



receive and deflect the coins delivered through the openings.

1,156,747. ADJUSTABLE CRUTCH. INA M. BRISCOE and COLB BRISCOE, Castle Rock, Colo. Filed Dec. 22, 1914. Serial No. 878,524. (Cl. 135—50.)



1. A support for walking comprising a tubular sleeve including two sections, adjusting means located between the sections, and a shank inserted in said sleeve and adapted to coöperate with said adjusting means, whereby the length of the support may be varied.

2. A support for walking including a tubular sleeve composed of two sections, a collar, into the opposite extremities of which the sleeve sections are fitted, the extremities of the sections within the collar being spaced, a nut located within the collar and between the spaced extremities of the sections, and a shank threaded into the nut for purposes of adjustment.

3. A support for walking including a tubular sleeve composed of two sections, a collar, into the opposite extremities of which the sleeve sections are fitted, the extremities of the sections within the collar being spaced, a nut located within the collar and between the spaced extremities of the sections, and a shank threaded into the nut for purposes of adjustment, said shank having a longitudinal slot and a device supported from the sleeve and engaging the said slot in the shank to prevent rotation of the latter within the sleeve.

4. A support for walking composed of upper, lower and intermediate sleeve sections, collars respectively connecting the upper and lower sections with the adjacent extremities of the intermediate section, nuts located within the respective collars and shanks threaded into the respective nuts for purposes of adjustment.

5. A support for walking composed of upper, lower and intermediate sleeve sections, collars connecting the upper and lower sections with the adjacent extremities of the intermediate section, nuts located within the respective collars and fitted into the space between the sections, and shanks entering the sleeve sections and having threaded parts engaging the respective nuts for purposes of adjustment, the nuts being free to rotate within the collars and the latter being open to give access to the nuts.

[Claims 6 to 11 not printed in the Gazette.]

1,156,748. SPRING AND PRESSER-BAR FOR FOUNTAIN-PENS. EDWIN F. BARTRAM, Jr., Jersey City, N. J., assignor to L. E. Waterman Company, New York, N. Y., a Corporation of New York. Filed Mar. 19, 1915. Serial No. 15,422. (Cl. 120—46.)



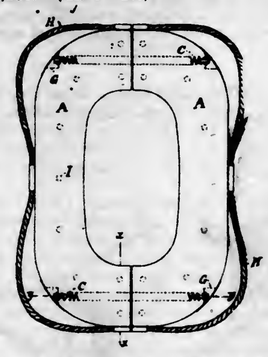
1. A fountain pen comprising a barrel, an ink-containing sack therein, a presser bar element for the sack, a return spring element for the presser bar, and a pivotal connection between the said elements, said connection comprising a member on one element and a slot in the other element in which the member interlocks.

2. A fountain pen including a barrel, an ink-containing sack in the barrel, a presser bar for compressing the sack, and a return spring for the presser bar, said return spring including a T-shaped extremity, and the presser bar having means with which the T-shaped extremity interlocks for pivotally connecting the presser bar and spring.

3. A fountain pen including a barrel, an ink-containing sack in the barrel, a presser bar having intermediate its ends a slot disposed obliquely to the length of the bar, and a spring having a T-shaped extremity engaged in the slot to pivotally connect the bar and spring.

4. A presser bar for a fountain pen, and a return spring having its extremity detachably and pivotally connected with the presser bar at a point intermediate the ends of the latter.

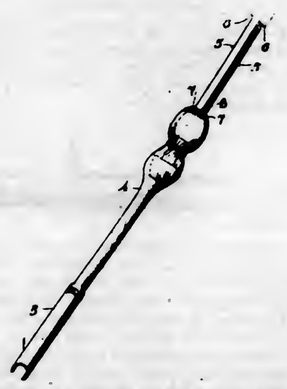
1,156,749. LIFE-SAVING BELT OR BUOY. JAMES BROWN, Liverpool, England. Filed Jan. 14, 1915. Serial No. 2,180. (Cl. 9—17.)



1. A life-saving belt or buoy, comprising two sections formed of laminated cork, the ends of the sections normally abutting, and each provided with an opening adapted to aline with an opening in the abutting end of the opposite section; and an elastic connecting member housed in said alined openings and connected to the sections, whereby the ends of the sections will be normally held in contact with each other but may be separated in the act of placement of the belt or buoy upon the body of the user.

2. In a life saving belt or buoy the combination of two buoyant members and elastic connecting pieces therefor comprising helical springs contained within holes in the buoyant members and secured at the outer ends to washer plates located in the recesses at the outer ends of the holes.

1,156,750. MOP. JOSIE M. BROWER, Bartlesville, Okla. Filed Mar. 22, 1915. Serial No. 16,158. (Cl. 141—10.)



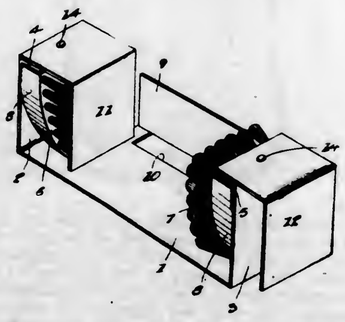
1. In a mop the combination of a main handle, a removable concavo-convex shell-like member partially encircling and frictionally engaging said main handle, and a dish cloth connected to one end of each of said members.

2. In a mop, the combination of a cylindrical main handle, a resilient longitudinally split tubular member adapted to spring around and encircle said main handle for holding them in operative engagement, and a dish cloth connected to one end of each of said members.

3. In a mop the combination of a cylindrical main handle having a flattened face, a longitudinally split tubular portion encircling said main handle at the flattened portion thereof, and a dish cloth connected to one end of each of said members.

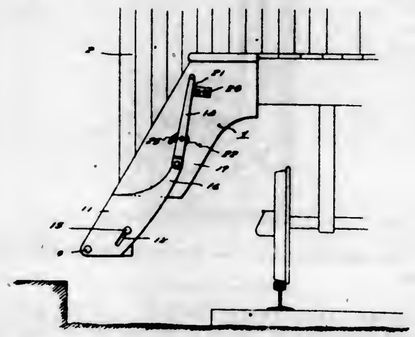
4. In a mop the combination of a cylindrical main handle having flattened diametrically opposite faces, a longitudinally split spring metal tubular member for engagement with said flattened handle member, and a dish cloth connected to one end of each of said members.

1,156,751. SHOE-CLEANER. WARD G. CALLENDER, Mansfield, Ohio. Filed Aug. 22, 1914. Serial No. 858,074. (Cl. 15—2.)



In a shoe cleaner, a supporting base formed of a single piece of sheet metal having its ends bent upwardly and horizontally to provide brush supporting elements, brushes secured to said horizontally bent ends, and angled plates pivoted on a vertical axis to said horizontally bent end pieces for protecting said brushes.

1,156,752. FOLDING CAR-STEP. SOCRATES A. CAMPBELL, Mound Valley, Kans. Filed May 29, 1915. Serial No. 31,276. (Cl. 105—86.)



1. The combination with an ordinary permanent flight of steps of a railway coach, of a riser hingedly connected to the under surface of the lowermost tread of said flight of steps, a tread pivotally connected to said riser, a pair of plates pivotally connected to said tread and said riser and extending upwardly along the sides of said flight of steps, extensions formed upon said plates, a crank shaft rotatably carried by said permanent flight of steps, a lever carried by said crank shaft, said lever being pivotally connected to one of said plates for moving said steps into or out of a folded portion upon movement of the lever, the other of said plates being operatively connected to the crank portion of said crank shaft.

2. The combination with an ordinary permanent flight of steps of a railway coach, of a riser hingedly connected to the under surface of the lowermost tread of said flight of steps, a tread pivotally connected to said riser, a pair of plates pivotally connected to said tread and said riser and extending upwardly along the sides of said flight of steps, extensions formed upon said plates, a crank shaft rotatably carried by said permanent flight of steps, a lever carried by said crank shaft, said lever being pivotally connected to one of said plates for moving said steps into or out of a folded position upon movement of the lever, the other of said plates being operatively connected to the crank portion of said crank shaft, means for limiting the upward movement of said lever, and means for holding said lever in a downward position against the weight of said foldable step.

1,156,753. WALL-BOARD. PATRICK JOSEPH CAREY, New York, N. Y. Filed Apr. 23, 1915. Serial No. 23,395. (Cl. 154—45.9.)



1. In an article of manufacture, a pulp board and stiff fire-proof vulcanized fiber board secured to one or both sides of the pulp board.

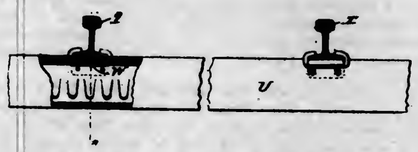
2. In an article of manufacture, a pulp board, stiff fire-proof vulcanized fiber board and water-proof material by which the vulcanized fiber board is attached to the sides of the pulp board.

3. In an article of manufacture, a pulp board, and vulcanized fiber boards secured to a side of the said pulp board and extending beyond the central portion of the pulp board, to be secured to an adjacent member disposed within the vulcanized fiber board and against the central portion of the pulp board.

4. In an article of manufacture, a pulp board, and a vulcanized fiber board secured to the side of the pulp board and extending beyond the pulp board, to be attached to a similar pulp board extending beyond an attached vulcanized fiber board when the first-mentioned vulcanized fiber board abuts against the said attached vulcanized fiber board.

5. In an article of manufacture, a pulp board, and vulcanized fiber boards secured to the sides of the pulp board and extending therebeyond for embracing pulp board extending beyond similar vulcanized fiber boards secured to its sides.

1,156,754. CHAIR OR SOCKET FOR THE RAILS OF RAILWAYS AND THE LIKE. JESSE THOMAS CARNEY, Rio de Janeiro, Brazil. Filed July 29, 1914. Serial No. 853,928. (Cl. 238—2.)



1. A chair, preferably of wrought iron or steel for rails and which has two vertical parallel flanges for fixing it on to the vertical plate of a sleeper characterised by having a cylindrical or similar convex surface with the generatrices in a cross-wise sense of the rail which rests solely upon one of these generatrices and not upon any other part of the chair.

2. A chair for rails having vertical parallel flanges for securing the same to the vertical plate of a sleeper, the chair having a cylindrical or similar convex surface on which the rail rests, an indented jaw-clasp formed on the chair, and a stop block affixed to the chair by screws and coöperating with the said jaw clasp to hold the rail in its place upon the said chair.

3. A chair for rails having downwardly extending spaced vertical parallel flanges forming a groove between the same, to receive a member of a sleeper, the bottom of said groove being oblique in a direction cross-wise of the rail, the flanges being provided with perforations for securing the same to said member of the sleeper, and means for holding the rail in position on the chair.

4. The combination with a rail, a sleeper having a vertical plate, and a metal chair for the rail having two vertical flanges for securing the chair on the vertical plate of the sleeper, the flanges forming a groove between them to receive the said vertical plate, the bottom wall of said groove being oblique in a direction crosswise of the rail, of means engaging the rail to hold the same on the chair.

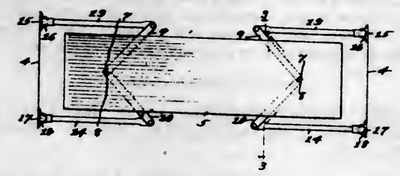
5. The combination with a rail, a sleeper having a vertical plate, and a metal chair for the rail having its upper face provided with a surface on which the rail is adapted to rest, the said chair having two downwardly extending vertical parallel flanges and a groove between the flanges to receive the upper part of the vertical plate of the sleeper, the bottom wall of the said groove being inclined in a direction cross-wise of the rail, means for securing the flanges and the said plate together and means for holding the rail in place on the chair.

[Claim 6 not printed in the Gazette.]

1,156,755. EXTENSION-SHELVES. MARK J. CASEY, New Richmond, Wis. Filed Mar. 31, 1915. Serial No. 18,269. (Cl. 211—27.)

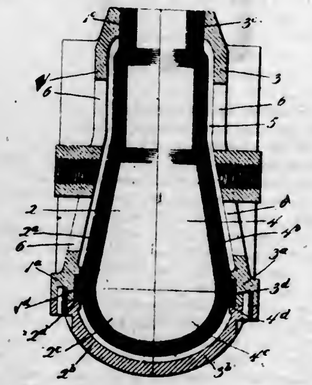
1. The combination with a cabinet, of a shelf, two bars in pivotal connection with each other and with said shelf, at each end thereof, an arm in pivotal connection with each bar, and means for pivotally mounting said arms in said cabinet.

2. The combination with a cabinet, of a shelf, two bars in pivotal connection with each other and with said shelf, at each end thereof, two arms in normal parallelism at each shelf end in pivotal connection with the corresponding bars, and clips for rotatably holding said arms in said cabinet.



3. The combination with a cabinet, of a shelf, two bars in pivotal connection with each other and with said shelf, at each end thereof, said bars being offset to bear against the under side of said shelf, two arms in normal parallelism at each shelf end in pivotal connection with the corresponding bars, and clips for rotatably holding said arms in said cabinet.

1,156,756. GLASS-BLOWING MOLD. BENJAMIN DAY CHAMBERLIN, Corning, N. Y., assignor to Empire Machine Company, Portland, Me., a Corporation of Maine. Filed May 31, 1912. Serial No. 700,831. (Cl. 49—69.)



1. In a device of the character described, the combination with an outer supporting shell, of an inner mold section formed of low heat conducting material, the outer shell being separated from the mold section by an intervening space in communication with the exterior of the shell.

2. In a device of the character described, the combination with an outer supporting shell, of an inner mold section formed of carbon material, the outer shell being separated from the mold section by an intervening space in communication with the exterior of the shell.

3. In a device of the character described, the combination with an outer supporting shell, of a carbon mold section contained therein and spaced therefrom, the shell having apertures communicating from its exterior to the spacing between the mold section and the shell.

4. In a device of the character described, the combination with an inner mold section formed of carbon material and forming an inclosed mold cavity, of an outer supporting shell substantially inclosing the inner mold section, the outer shell abutting upon and supporting the inner section in continuous zones near the top and bottom of such section, and being separated from the inner mold section at other points by an intervening space in communication with the exterior of the shell.

5. In a device of the character described, the combination with an inner mold section formed of carbon material and forming an inclosed mold cavity, of an outer supporting shell surrounding the inner mold section on its sides and bottom, the outer shell abutting upon and supporting the inner section in a zone adjacent to the top of the inner section, and in a zone adjacent to the bottom of the inner section, intervening spaces being formed between the inner mold section and the outer shell at other points, in communication with the exterior of the shell.

1,156,757. UNDERGARMENT. LAURA IDA COLLETT, Nevada, Mo. Filed Sept. 23, 1914. Serial No. 863,058. (Cl. 2—41.)



1. As an article of manufacture, a woman's undergarment having a knit tubular body adapted to fit the wearer from under the armpits downward to a distance below the abdominal region, the upper end of the said knit tubular body being provided with an annular beading overlying the wearer's bust and extending under the armpits, and a draw string held in the said beading to permit of drawing the entire upper end of the undergarment tight around the wearer's body to hold the undergarment in place, the said draw string having an elastic middle portion and non-elastic side and end portions.

2. As an article of manufacture, a woman's undergarment having a knit tubular body adapted to fit the wearer from under the armpits downward to a distance below the abdominal region, the upper end of the said knit tubular body being provided with an annular beading overlying the wearer's bust and extending under the armpits, and a draw string held in the said beading to permit of drawing the entire upper end of the undergarment tight around the wearer's body to hold the undergarment in place, the said draw string having an elastic middle portion and non-elastic side and end portions, the said middle and end portions being detachably connected with each other.

3. As an article of manufacture, a woman's undergarment comprising a knit tubular body extending at its lower end to the lower end of the abdominal region and slightly contracted at said end, the said body fitting at its upper end under the arm pits, and a draw-string at the upper end of the tubular body for contracting the same, to hold the garment in place, the draw-string having an elastic back portion and non-elastic side and front portions.

4. As an article of manufacture a woman's undergarment comprising a knit tubular body, adapted to fit at its upper end under the armpits of the wearer, and a draw-string at the upper end of the tubular body for contracting the same, the draw string having a back portion of elastic webbing and side and front portions of non-elastic material, and fastening devices for detachably connecting the ends of the back portion with the rear terminals of the side and front portions.

1,156,758. SHOE-LACE KNOTTER. JOHN T. COONEY, Denver, Colo. Filed Dec. 14, 1914. Serial No. 877,072. (Cl. 24—117.)



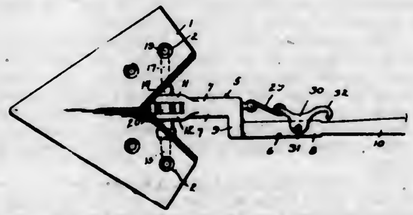
1. A shoe lace knotter comprising a member applied to the upper extremity of the tongue of a shoe and the said member provided with four distinct noncommunicating openings adapted to receive the lace, for the purpose set forth.

2. An article of the class described comprising a member bent to form four loops, and means for securing the said member to and offsetting the latter from the tongue of a shoe, said means adapted to extend through the tongue and engage the surface of the same adjacent the wearer.

3. A shoe lace knotter comprising a member bent to form four loops intermediate its extremities, said extremities being bent downwardly, then outwardly and downwardly again, terminating in pointed projections, said projections adapted to be inserted through the tongue of a shoe and engage the surface of the latter next to the wearer, for the purpose set forth.

4. A shoe lace knotter comprising a member applied to the upper extremity of the tongue of a shoe and offset therefrom, said member provided with four openings adapted to receive the lace, and a pair of outwardly projecting teeth formed upon its upper edge, for the purpose set forth.

1,156,759. TOOL. JOHN CRAIG, Alta Vista, Kans. Filed Mar. 19, 1915. Serial No. 15,482. (Cl. 81—3.)



1. In a tool as described, a body portion, a sleeve rotatably carried by one end of said body portion, an arm swivelly connected to one end of said sleeve, a second arm adjustably connected to the opposite end of said sleeve, and means for moving said adjustable arm inwardly or outwardly with respect to said sleeve upon rotation of the sleeve, said arms having their ends bent for operative engagement with a share.

2. In a lister share holding tool, a body, a share engaging member rotatably carried by one end of said body and extending transversely thereto, and means for adjusting the length of said lister share engaging member.

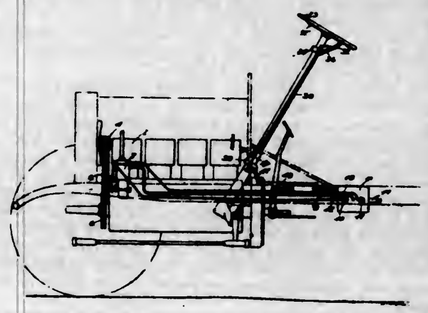
3. In a tool for holding lister shares, a body having a hand grip formed on one end thereof, a transversely extending sleeve rotatably carried by the other end of said body, an arm swivelly connected to and extending longitudinally from one end of said sleeve, an arm adjustably carried by and extending longitudinally from said sleeve oppositely to said swiveled arm, said arms having their outer ends angled for operative engagement with a share, and means carried by said body for arresting rotation of said sleeve.

4. In a tool for holding lister shares, a body, a hand grip formed upon one end of said body, the other end of said body being bifurcated for forming spaced arms, bearing openings formed within said spaced arms, a sleeve rotatably mounted within said bearing openings, an arm swivelly connected to and extending longitudinally from one end of said sleeve, a second arm adjustably connected to said sleeve and extending longitudinally from the end of said sleeve opposite to said swivelly connected arm, a ratchet mounted upon said sleeve intermediate of said spaced arms, a catch carried by said body, and means for moving said catch into or out of engagement with said ratchet.

5. In a tool for holding lister shares, a body having a hand grip formed upon one end thereof, the other end of said body being bifurcated for forming spaced arms, said spaced arms being provided with alining bearing openings, a sleeve rotatably mounted within said bearing openings, a ratchet mounted upon said sleeve intermediate of said spaced arms, a catch adjustably carried by said body, a thumb lever pivotally connected to said body and operatively connected to said catch for moving it out of engagement with said ratchet, a spiral spring for automatically moving said catch into engagement with said ratchet upon release of said pivoted lever, an arm swivelly connected to and extended longitudinally from one end of said sleeve, a second arm adjustably carried by and extending longitudinally from said sleeve oppositely to said swiveled arm, said swiveled arm and said adjustable arm having their outer ends bent substantially at right angles to the body portion thereof, for insertion through the openings in a lister share.

[Claim 6 not printed in the Gazette.]

1,156,760. AUTOMATIC CONTROL FOR AUTOMOBILES. JOSEPH J. CURRY, New York, N. Y. Filed Oct. 31, 1914. Serial No. 869,589. (Cl. 21—90.)



1. In an automatic control for automobiles, a controlling pedal connected with the clutch for operating the same, a controlling pedal connected with the brake for operating the same, a piston connected with each of said pedals, a cylinder surrounding each of said pistons, means for supplying air under pressure to said cylinders, and manually controlled means for turning on the air to said pistons, said manually controlled means including springs for actuating the manually controlled means when said manually controlled means have been released.

2. In an automatic control for automobiles, a piston rod connected with the clutch lever, a piston rod connected with the brake lever, a piston for each of said piston rods, a cylinder surrounding each of said pistons, a spring arranged in each of said cylinders normally holding said pistons in a retracted position whereby said levers will be held in such a position as to have the brakes disconnected and the clutch applied, means for supplying air to each of said pistons, a valve for each of said pistons for controlling said air supply to the cylinders, a manually operated lever structure arranged adjacent the steering wheel of the automobile, spring means for moving said lever structure in one direction, and means for connecting said lever structure and said valves whereby whenever said lever structures are operated by said springs said valves will be turned for admitting air under pressure into said cylinders.

3. In a device of the character described, the combination with an automobile, of a pair of air brake cylinders connected with the clutch and with the brake of the automobile, of a valve for each of said cylinders, means for supplying air to said cylinders through said valves, a system of operating members connected with each of said valves for rotating the valves in one direction, retractile means for moving the valves in the opposite direction, a pivotally mounted lever connected with each of said systems of operating members, and a spring for each of said levers for holding the same in a predetermined position, whereby said valves will be open, said levers adapted to be normally held manually in such a position as to hold said valves closed.

4. In a device of the character described, a pair of arc-shaped members adapted to be arranged adjacent the steering wheel of an automobile, an arm rigidly secured to each of said arc-shaped members, means for pivotally mounting said arm, a rod pivotally connected with each of said arms and designed to be reciprocated thereby, a spring acting on said arms for normally holding said arc-shaped members away from said steering wheel, an air brake mechanism connected with the brake of the automobile, a similar mechanism connected with the clutch of the automobile, and means connected to said air brake mechanisms, and to said reciprocating rods for transmitting motion from the reciprocating rods to the air brake mechanisms, whereby whenever said springs acting on said levers are permitted to actuate said levers said air brake mechanisms will be actuated, said arc-shaped members being designed to be manually held in engagement with said steering wheel against the action of said springs, whereby the air brake mechanisms are held out of operation.

5. In a device of the character described, a pneumatically actuated mechanism for disconnecting the clutch of an automobile, means for supplying air to said pneumatic means, a valve for regulating the amount of air supply to said pneumatic means, a connecting rod or cable connected with said valve, movable means for actuating said rod or cable, a manually operated member for holding said movable means in a predetermined position, and a spring for moving said means so that said valve will be opened, said spring actuating said movable means when said manually controlled member has been released.

[Claim 6 not printed in the Gazette.]

1,156,761. SLEEPING-EYES FOR DOLLS. OTTO ERNEST DENIVELLE, Mount Vernon, N. Y. Filed Dec. 15, 1914. Serial No. 877,363. (Cl. 46—40.)



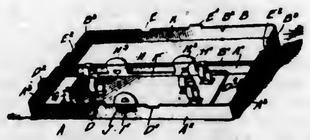
1. A doll's head provided with eye sockets cast in the material of the head, eyeballs mounted to turn in said

sockets, and a single pivot rod upon which said eyeballs are mounted to swing, the ends of said rod embedded in the side walls of the head and passing through the sockets and eyeballs, whereby the eyeballs are maintained in proper alinement and position.

2. An eyeball for dolls' heads formed of wood and having a flattened portion and a disk attached to the said flattened portion and having printed on its face a representation of the iris of the human eye.

3. An eyeball for dolls' heads formed of wood and having a flattened portion and a disk attached to the said flattened portion and having printed on its face a representation of the iris of the human eye, the portions of the eyeballs at the sides of the said flattened portion being provided with a coating of white enamel and the portion of the eyeball above the said flattened portion being provided with a coating of flesh color.

1,156,762. CASE. FAIRLEIGH S. DICKINSON, Rutherford, N. J. Filed Oct. 27, 1914. Serial No. 868,813. (Cl. 206—43.)



1. A case comprising a body provided at the front with a slot, a cover hinged to the back of the body, and a supporting plate adapted to be inserted into the said body, the said supporting plate being provided at the rear edge with an upwardly extending retaining flange, the latter and the back of the body having interlocking means, the upper end of the said flange projecting above the body and being bent rearwardly to bear on the inner face of the back of the cover when the latter is in closed position, the said supporting plate being provided at the front with an upwardly extending integral spring catch having a finger piece projecting into the said slot, the said spring catch and the front of the cover having interlocking means engaging one the other on closing the cover to lock the latter when in closed position.

2. A case, comprising a body provided at the front with a slot, a cover hinged to the back of the body, and a supporting plate adapted to be inserted into the said body, the said supporting plate being provided at the rear edge with an upwardly extending retaining and cover opening flange, the latter and the back of the body having interlocking means, the said supporting plate being provided at the front with an upwardly extending integral spring catch having an integral finger piece projecting into the said slot, the upper end of the said spring catch extending above the top of the body and being provided with a lug, and the front of the said cover being provided with a keeper adapted to engage the said lug on closing the cover.

3. A case, comprising a body having an opening in its front wall and an indentation in its rear wall, a cover hinged to the body, and having a keeper on the inner face of its front wall, and a plate in the body and having means for supporting an article, said plate being provided at its front with a spring catch having a member projecting through the slot of the body and at its rear with a flange having an integral lug projecting into the indentation of the body, the upper end of the flange extending above the top of the body and bent rearwardly to bear against the inner face of the rear wall of the cover.

1,156,763. PIN-JOINT. JAMES A. DORAN, Providence, R. I. Filed Feb. 24, 1914. Serial No. 820,684. (Cl. 24—160.)

1. As an article of manufacture, a pin-joint, comprising a single piece having ear and base extension portions, said piece slitted from its ends toward the center and upon opposite sides to form the ears with a connecting web at their bases, said ears extending upwardly to receive a pin-tongue, and the remaining portion forming similar or substantially equal base extensions of the connecting web at the front and rear of said ears and projecting beyond the ears upon opposite sides, said joint adapted to be set and positioned upon an article and sustained in position by said base extensions while being soldered to said article.



2. As an article of manufacture, a pin-joint, comprising a single piece, having ear and base extension portions, said piece slitted from its ends toward the center and upon opposite sides to form the ears with a connecting web at their bases, said ears extending upwardly to receive a pin-tongue, and the remaining portion of the piece left flat and forming similar or substantially equal base extensions of the connecting web at the front and rear of said ears and projecting beyond the ears upon opposite sides, said joint adapted to be set and positioned upon an article and sustained in position by said base extensions while being soldered to said article.

1,156,764. WRENCH. CHARLES DRUCK, Wasco, Cal. Filed Apr. 16, 1915. Serial No. 21,735. (Cl. 81—172.)



1. A wrench of the class specified comprising a tubular stock with movable nut engaging means and an interiorly located cross-pin at one end, and a stem telescopically fitted in and extensible in relation to said stock and having its end within the stock formed with a cross slot to engage said cross-pin to prevent rotation of the stem when the latter is projected to its predetermined maximum extent within the stock, the exterior end of the stem having a cylindrical head fixed thereon.

2. A wrench of the class specified comprising a tubular stock with nut engaging means at one end and a cap on the opposite end having an annular end flange around an opening therethrough of less dimensions than the bore of the stock, the flange of the cap being disposed a distance in rear of the adjacent end of the stock, an annular packing held between the annular flange of the cap and the end of the stock and projecting into the stock, and a stem extensibly mounted in the stock and movable through the said cap and packing and having a head on its end exterior of the stock, the packing frictionally engaging the stem and obviating loose movement of the latter in the stock.

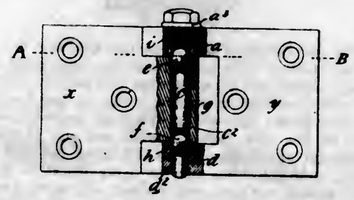
3. A wrench of the class specified comprising a tubular stock with movable nut engaging means and an interiorly located cross-pin at one end and friction means at the opposite end, and a stem extensibly mounted in the stock and having engagement with said friction means and also provided with a slot at its end within the stock to engage the said cross-pin to prevent rotating movement in the stock of the stem when the latter is fully projected within the stock, the friction means obviating too loose movement of the stem relatively to the stock when the stem is extended outwardly from the stock and the slot in the stem disengages from the pin in the stock, the end of the stem exterior of the stock being provided with a head.

4. A wrench of the class specified comprising a stock with an exteriorly screw-threaded slotted extremity, a pair of gripping jaws mounted in said slotted extremity and having shanks with outer regular convex edges, a spring having legs engaging the inner edge of the said jaw shanks, and a sleeve of elongated form adjustably mounted on the said screw-threaded extremity of the stock and having slots in the front end thereof to permit the jaws to move outwardly, the intermediate portion of the sleeve being thickened.

5. A wrench of the class specified comprising a tubular stock having an inner groove and also provided with movable nut engaging means and an interiorly located cross-pin, and a stem telescopically fitted in and extensible in relation to said stock and having its end within the stock formed with a cross-slot to engage the said cross-pin and also provided with a pin having a projecting end to engage the groove in the stock, the exterior end of the stem having a cylindrical head fixed thereon.

[Claim 6 not printed in the Gazette.]

1,156,765. BALL-BEARING HINGE. CLEMENT ANDERSON ELY, Wolverhampton, England. Filed July 29, 1915. Serial 42,653. (Cl. 16—107.)

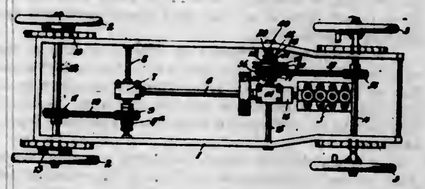


1. A ball bearing hinge comprising the leaf *x* formed with one or more knuckles, the leaf *y* formed with two or more knuckles to co-act with the knuckle or knuckles on the part *y*, each knuckle having an axial hole, a pintle section for each of said holes, each pintle section having a ball seat in both of its ends, and balls arranged in said seats to connect the pin pieces axially in line in an antifrictional manner, substantially as described.

2. A ball bearing hinge comprising the leaf *x* formed with one or more knuckles, the leaf *y* formed with two or more knuckles to co-act with the knuckle or knuckles on the part *y*, some of said knuckles having tapered pintle holes, tapered pintle sections arranged in said holes, a screw plug adjustably engaging a hole in another of the knuckles, the opposing ends of the pintle sections having ball seats, and balls applied to the seats to connect the pintle sections axially in line in an antifrictional manner, substantially as described.

3. A ball bearing hinge comprising the leaf *x* formed with one or more knuckles, the leaf *y* formed with two or more knuckles to co-act with the knuckle or knuckles on the part *y*, each of said knuckles having an axial hole, a pintle section arranged in each of said holes and having its ends expanded and provided with ball seats, and balls arranged in said seats to connect the pintle sections axially in line in an anti-frictional manner, substantially as described.

1,156,766. MOTOR-VEHICLE DRIVING MECHANISM. WILLIAM J. EVANS, Pilot Mound, Iowa. Filed Oct. 28, 1914. Serial No. 869,106. (Cl. 21—90.)



1. An automobile provided with front and rear wheels, power means for propelling the automobile, driving connections between the power means and the rear wheels, and driving connections between the power means of the front wheels comprising two rotatable members, one provided with a one-way ratchet wheel, and the other with engaging pawls therefor, driving connections between the ratchet wheel member and the front wheels, and a counter shaft carrying the two rotatable members and arranged for connection to the power unit of the automobile.

2. In a front wheel driving mechanism for automobiles also provided with a rear wheel drive, an equalizer therefor comprising two rotatable members one provided with a one-way ratchet wheel and the other with engaging pawls therefor, the ratchet wheel member of the equalizer being also provided with means for the transmission of power to the front wheels, and a counter-shaft carrying the equalizer and arranged for connection to the power unit of the automobile, the member of the equalizer provided with the ratchet wheel being also provided with a brake member.

3. In a front wheel drive for automobiles also provided with a rear wheel drive, an equalizer for the front wheel drive comprising a counter-shaft connected to the power unit of the automobile, two rotatable members both loosely mounted on the counter-shaft, one of the rotatable members having means for driving connection to the front wheels, and said members having respective pawl and ratchet engaging means, and a clutch on the counter-shaft for coupling one of the members of the equalizer thereto.

4. In a front wheel drive for automobiles also provided with a rear wheel drive, an equalizer for the front wheel drive comprising a counter-shaft connected to the power unit of the automobile, two rotatable members both loosely mounted on the counter-shaft, one of the rotatable members having means for driving connection to the front wheels, and said members having respective pawl and ratchet engaging means, and a clutch on the counter-shaft for coupling one of the members of the equalizer thereto, that member of the equalizer having means for connection to the front wheel drive being also provided with braking means.

5. In a front wheel drive for automobiles also provided with a rear wheel drive, an equalizer for the front wheel drive comprising a shaft, a hub mounted loosely thereon and formed with a radial flange and with a ratchet wheel extending therefrom in overhanging spaced relation to the shaft, another hub telescoping into the ratchet wheel portion of the first-named hub and provided with a radial flange in spaced relation to the first-named flange, said second-named flange having pawls thereon in operative relation to the ratchet wheel and said second-named hub being provided with clutch teeth on the end remote from the flange, and slidable clutch collar keyed to the shaft in operative relation to the teeth of the second-named hub, the first-named hub being also provided with means for the transmission of power therefrom.

[Claims 6 to 14 not printed in the Gazette.]

1,156,767. CONTAINER. JOHN J. FARRAR, Rapid City, S. D. Filed Aug. 20, 1913. Serial No. 785,659. (Cl. 229—12.)

1. A container composed of telescoping tubular members adapted to compact a charge of material by end compression, said sections presenting dome-shaped ends to crowd the material at the ends of the container when the sections are telescoped, said dome-shaped ends comprising tongues constituting closures of the said ends, and dome-shaped layers of sheet material at the exterior and interior of the tongues and united to the latter.

2. A container comprising a body formed of tubular sections having closed ends, one of said sections having a lateral charging opening between its ends, the said body sections being slidable on each other to cover the opening in the one section by the other section, the sections being capable of additional compressing movement after the closing of the opening to compress the contained material after the opening is closed.

3. A container comprising a body formed of tubular sections having closed ends, one of said sections having a

lateral charging opening between its ends, the said body sections being slidable on each other to cover the opening in one section by the other section, the sections being capable of continued movement to compress the material after the closing of the opening, the ends of the respective sections merging into adjacent side portions thereof on rounding lines to crowd the material laterally at the ends of the container.



4. A container composed of telescoping tubular members adapted to compact a charge of material by end compression, said sections being formed of paper having longitudinal slits at the ends presenting tongues, said tongues being inturned on rounding lines starting outward from the bases of the tongues and constituting end closures of the container, and dome-shaped layers of sheet material at the interior and exterior of the tongues, the dome-shaped ends serving to crowd a charge material at the ends as the members of the container are telescoped.

1,156,768. LUBRICATOR. FREDERICK FISCHTER, Philadelphia, Pa., assignor of one-half to Oscar H. Lucker, Philadelphia, Pa. Filed Aug. 26, 1914. Serial No. 858,667. (Cl. 184—76.)



1. The combination of a receptacle for holding solid lubricant having an outlet; a valve for said outlet; a spring normally holding said valve closed; a stirrer in addition to the spring carried on the valve and extending into the container; a member connected to the valve and extending outside the container; and a fluid receiving vane connected to said outwardly extended part of said member.

2. The combination in a lubricator of a container having an outlet; a valve for said outlet; a spring normally holding the valve closed; a member connected to the valve and extending outside the container; a steam receiving vane on the outer portion of said member; and adjustable means for limiting the amount of opening of the valve.

3. The combination of a lubricator of a container having an outlet; a valve for said outlet having a stem; a spring acting on said stem to keep the valve normally seated; an adjusting screw in line with the valve stem to limit the amount of movement of the valve; an actuating member connected to the valve and extending outside the container; with a steam receiving vane on said member.

4. The combination in a lubricator of a container having an outlet provided with a serrated surface; a valve having a serrated stem coacting with the serrations of said outlet for grinding solid lubricant; and means for periodically actuating said valve.

5. The combination in a lubricator of a container having an outlet provided with a serrated wall; a valve having a serrated stem formed to coact with the serrations of the outlet wall to cause a discharge of material when said valve is actuated; and means for periodically moving the valve.

[Claims 6 and 7 not printed in the Gazette.]

1,156,769. DETACHABLE SHOE-HEEL. CHARLES W. FORTIN, Brockton, Mass. Filed Nov. 25, 1914. Serial No. 873,981. (Cl. 36—42.)



A shoe heel including a body portion having a flat lower face and provided with a substantially rectangular recess opening through the forward edge thereof, the walls defining said recess being beveled, a lift having a substantially rectangular upstanding attaching member medially formed on one side thereof and at one end of the lift, the adjacent upper face of the lift being flat and unobstructed, said attaching member being insertible in said recess through the open end thereof and being provided with beveled side walls adapted to engage said first mentioned walls with the flat upper face of the lift seating uniformly against the adjacent flat face of the body portion, the body portion being provided medially with alined bores adjacent the forward end thereof and said attaching member being provided with a channel alining with said bores and terminating in spaced relation to the upper face of the lift, and a key formed from a length of resilient wire removably fitted in said bores and channel for yieldably connecting the lift with the body portion, the said key piercing the body portion of the heel and resting within the said channel in spaced relation to the body of the lift.

1,156,770. CALCULATOR. GEORGE M. FRITZ, Indianapolis, Ind. Filed Nov. 30, 1914. Serial No. 874,734. (Cl. 235—84.)



1. A mechanical calculator including a pair of concentrically arranged disks and one of greater diameter than the other, and a single means for centrally engaging and rotating said disks simultaneously or the smaller disk independently of the larger disk, as desired.

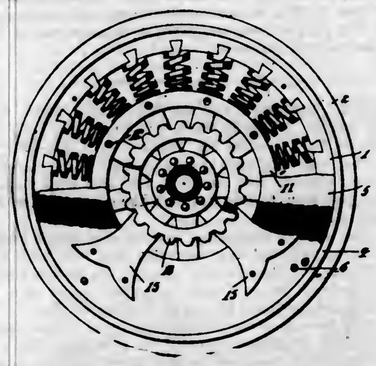
2. A mechanical calculator including a pair of concentrically arranged disks and one of greater diameter than the other, an arbor on which the large disk is secured, a finger piece to which the small disk is secured and means for frictionally combining said finger piece with the arbor when forced inward so that said finger piece will cause rotation of both disks.

3. A mechanical calculator including a casing, a finger piece rotatably mounted in one side of the casing, a small disk secured thereto, an arbor slidably mounted in said finger piece, a large disk secured to said arbor, and means for frictionally locking said finger piece and arbor together when desired.

4. A mechanical calculator including a casing, a finger piece rotatably mounted in one side of the casing, a small disk secured thereto, an arbor slidably mounted in said finger piece, a large disk secured to said arbor, said arbor having an inclined surface, and a split sleeve extending inward from said finger piece so that when the finger piece is pushed inward, the split sleeve will frictionally grasp the arbor and enable the finger piece to rotate both disks.

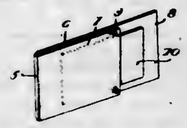
5. A mechanical calculator including a casing, a finger piece rotatably mounted in one side of the casing, a small disk secured thereto, an arbor slidably mounted in said finger piece, a large disk secured to said arbor, said arbor having an inclined surface, a recess in said arbor with sloping surfaces, and a split sleeve extending inward from said finger piece with its inner end normally lying in said recess and adapted when pressed inward to frictionally engage the large portion of said arbor and cause the simultaneous rotation of both disks.

1,156,771. SPRING-WHEEL. WILLIAM R. GILMORE, Richmond, Cal. Filed Feb. 10, 1914. Serial No. 817,858. (Cl. 152—37.)



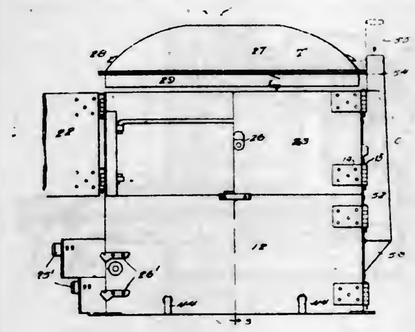
In a spring wheel, the combination of inner and outer parts, one of such parts having laterally extending L-shaped sockets, and cushioning springs interposed between the two parts, each of said springs having its upper end bent to conform with the socket and extending diametrically across the top of the spring and loosely mounted within the socket, and means over the entrance of the socket and contacting with a portion of the upper end of said spring for preventing any accidental displacement of the latter from said socket.

1,156,772. NAME-PLATE FOR EYEGLASS-CASES AND THE LIKE. HOMER R. GOODELL, Memphis, Tenn. Filed Jan. 27, 1915. Serial No. 4,733. (Cl. 40—10.)



As a new article of manufacture, the combination with an article to be identified having a lining provided with a sight opening and adjacent the opening with a slit, of a name card pocket formed from an integral blank of transparent flexible material, the blank being substantially rectangular in form and being folded along a line laterally displaced from a point midway between the ends of the blank whereby to form the walls of the pocket, one of said walls being of greater length than the other and projecting beyond the mouth of the pocket, and means securing the corners of the shorter wall to the longer wall, the said pocket being inserted beneath the lining of the said article to be identified with the shorter wall of the pocket exposed beneath the sight opening in the lining and with the projecting end portion of the longer wall of the pocket extending beneath the said slit.

1,156,773. BARBECUE-FURNACE. JOSEPH G. GORDON, Birmingham, Ala. Filed Aug. 26, 1915. Serial No. 47,492. (Cl. 126—9.)



1. A knockdown stove comprising a skeleton framework including corner posts having holes; a wall consisting of a panel across the upper portion of the front, a full panel at one side, a full panel at the rear having an outlet for the products of combustion, a panel across the lower portion of the remaining side, certain of said panels having holes registering with those in the posts, pins detachably engaging said holes, detachable connections between the panels where they meet, oven doors closing the space above the smaller side panel, and other doors closing the space below the front panel; a grate raised above an ash pit, a transverse member above the grate between the fire pot and oven, and a top above such oven.

2. A field stove comprising a skeleton framework, a wall made in panels surrounding and detachably connected to said framework, certain of such panels being hinged whereby they serve as doors and the rear panel having an upright opening with flanges along its sides connected to constitute a flue communicating with the interior of the stove, a screen across the upper portion of said flue, a grate within the stove, and screen supported therein and arched over said grate to cover a fire pot which communicates at its rear end with said flue.

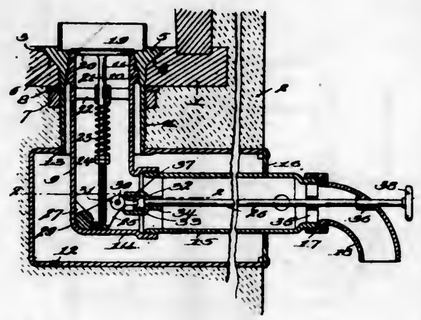
3. A knockdown stove structure comprising four upright posts each having perforated ears near its upper and lower ends, top and bottom side and cross bars having hooked extremities removably engaging said ears, a surrounding wall made up of panels detachably connected with each other, certain of them being hinged to serve as doors, means for detachably securing the panels to the posts and for fastening the doors when closed, and a top having a skirt fitting inside the upper edge of the wall.

4. A knockdown stove structure comprising four upright posts each having perforated ears near its upper and lower ends, top and bottom side and cross bars having hooked extremities removably engaging said ears, a surrounding wall made up of panels detachably connected with each other, certain of them being hinged to serve as doors, means for detachably securing the panels to the posts and for fastening the doors when closed; a lining made up of side plates adapted to stand inside said posts and a rear plate having means at its ends to detachably engage the rear ends of the side plates, means for detachably securing the front ends of the side plates to the front of the posts, and a top whose edges engage the wall.

5. A knockdown stove comprising a skeleton framework, a wall inclosing the same and having doors, a lining within the framework along the sides and across the rear end of the stove and rising for substantially half the height of the wall, the rear panel of the lining having an outlet flue, a grate within the lining, and an element across the top of the lining dividing the fire pot from the oven.

[Claims 6 to 9 not printed in the Gazette.]

1,156,774. BEER-FAUCET. WILHELM GRIESSER, St. Louis, Mo. Filed Dec. 12, 1912. Serial No. 736,410. (Cl. 137—27.)



1. In a faucet of the class specified, the combination of a pair of pipes connected end to end at right angles, the one pipe being provided with a nozzle at its free end, a valve seated in the free end of the other pipe and having an axial stem depending through the interior of the said pipe, an operating rod slidably mounted in the interior of the pipe having the nozzle and projecting exteriorly of the said nozzle, and means disposed wholly within the pipes adjacent to the juncture of the latter and loosely engaged by the end of the valve rod and of the push rod, the valve rod being provided with means for restoring all of the parts to normal position when released.

2. In a faucet, the combination of a vertical pipe, a valve seated in the upper end of said pipe and provided with a depending operating rod arranged in the interior thereof, a horizontal pipe connected at its lower end to the lower end of the vertical pipe and provided at its outer end with a nozzle, a slidable push rod axially mounted within said horizontal pipe and projecting through the nozzle for operation, and a rocking means interposed between the inner adjacent ends of the valve rod and push rod and with which the latter rods have loose contacting engagement, the rocking means being wholly inclosed within a portion of the vertical pipe.

3. In a faucet, the combination of a vertical and a horizontal pipe connected end to end at right angles, the horizontal pipe being provided with a nozzle, a valve seated in the free end of the vertical pipe and having an axial rod depending through and arranged wholly within the vertical pipe, a rocker wholly inclosed within the pipes at the junction thereof and having one portion loosely bearing and fulcruming upon the lower portion of the vertical pipe and provided with a base on which the lower end of the valve rod has unattached contacting bearing, and a push rod mounted in the horizontal pipe and having the inner end portion thereof also loosely engaging a part of the rocker, the valve rod being provided with means for restoring all of the parts to normal position when released.

4. In a faucet, the combination of vertical and horizontal pipes connected end to end at right angles, the horizontal pipe being provided with a nozzle at its free end, a valve seated in the free end of the vertical pipe and having an axial rod arranged wholly within and depending through the interior of the vertical pipe, a rocker mounted within and wholly inclosed by the said pipes at the junction thereof and having a rounded extremity loosely bearing and fulcruming upon the lower portion of the vertical pipe and also provided with a base on which the lower end of the valve rod has loose contacting bearing, an arm pivotally connected to the upper portion of the rocker, an operating rod slidably mounted in the interior of the horizontal pipe and projecting exteriorly through the nozzle and also having at its inner end a socketed head wherein the arm of the rocker loosely projects and bears upon said head for swinging the rocker inwardly to elevate the valve rod and open the valve, and means engaging the valve rod for restoring all of the parts to normal position when the operating rod is released.

5. In a faucet, the combination of a vertical pipe provided at its upper end with a valve, a horizontal pipe connected at its lower end to the lower end of the vertical pipe and provided at its outer end with a nozzle, a valve rod depending from the valve at the upper end of the vertical pipe and located wholly interiorly of the latter pipe, an operating push rod extending through the horizontal pipe to the vertical pipe and having its outer extremity projecting through the nozzle, means in the lower portion of the vertical pipe and wholly inclosed by the latter and engaged by the lower end of the valve rod and the inner extremity of the operating push rod whereby the push rod is caused to elevate the valve rod and open the valve, the said means being loosely disposed in the lower portion of the vertical pipe, and means on the valve rod for restoring the parts to normal position when the push rod is released.

1,156,775. PROCESS OF EXTRACTING IRON FROM ITS ORES. HERBERT HAAS, San Francisco, Cal. Filed Oct. 20, 1913. Serial No. 796,227. (Cl. 75—14.)

1. The process of making iron or steel which consists in smelting, without first reducing, iron ores with necessary fluxes, and then forcing through the molten mass finely divided oil.

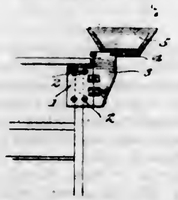
2. The process of making iron or steel which consists in smelting, without first reducing, iron ores with necessary fluxes, and then forcing through the molten mass oil that has been finely divided by subjecting it to a high pressure and forcing it through a small aperture.

3. The process of making iron or steel which consists in smelting, without first reducing, iron ores with necessary fluxes, and then forcing through the molten mass oil that has been finely divided by subjecting it to a high temperature and forcing it through a small aperture.

4. The process of making iron or steel which consists in smelting, without first reducing, iron ores with necessary fluxes, and then forcing through the molten mass oil that has been finely divided by forcing it at a high pressure and temperature through an atomizer.

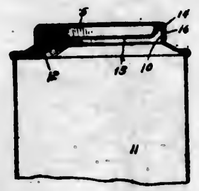
5. The process of making iron or steel by smelting iron ores with necessary fluxes without first reducing the oxids and forcing through the molten iron oxids while they are in the liquid molten state petroleum at a temperature above its ordinary flashpoint and preventing its evaporation before it is released by keeping it in the heater and container under pressure sufficiently high, so that all of the petroleum will remain a liquid while in the heater and container, but will be transformed into a finely atomized vapor as soon as it issues from the atomizer orifice.

1,156,776. CHAIR ATTACHMENT. OTTO HANSON, Bruno, Minn. Filed Feb. 13, 1915. Serial No. 818,566. (Cl. 5—59.)



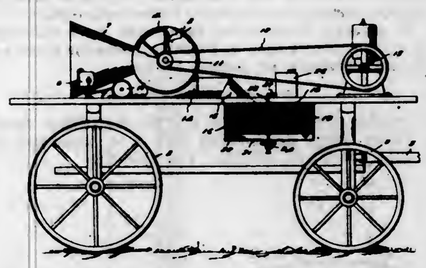
In a bed attachment, the combination with a crib having a reinforced bottom, of means for connecting the crib to said bed, said means including a hingedly connected standard having its upper end mortised into the reinforced bottom of the crib and permitting the latter to swing to one side of the bed.

1,156,777. CAN-CLOSURE. BENJAMIN HELLER, Chicago, Ill. Filed May 27, 1914. Serial No. 841,377. (Cl. 220—77.)



The combination with a metal can having a cylindrical neck provided at its upper end with a flat inturned flange bent downwardly at its inner edge; of a friction cover whose body lies in a plane below said flange and whose edge is turned upward and fits closely within the downturned portion of the flange with a wedging action, said edge having an outturned flange overlying that of the neck; and a slip cover including a flat body spaced from that of the friction cover and extending over said outturned flange, and a cylindrical skirt depending from the periphery of its flat body and frictionally inclosing said neck.

1,156,778. MACHINE FOR CATCHING INSECTS. WILLIAM L. HESTERLY, Morgan City, La. Filed Jan. 15, 1915. Serial No. 2,388. (Cl. 43—1.)



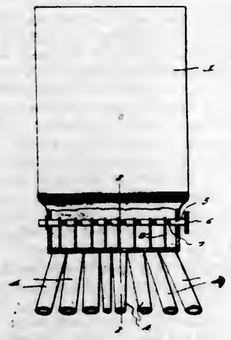
1. In a machine of the character described, the combination with a fan casing, an intake nozzle, lights, and a discharge pipe leading from the fan casing, of a wire cloth cage for receiving the insects, said cage having a deflector partition of heavy wire cloth, and a water tank hinged below the end of said cage, and a burner for heating the water in said tank.

2. In a machine of the character described, the combination of a vehicle body, a fan casing mounted on the vehicle body, an intake pipe connected to the casing, a flaring intake element connected to the pipe, a discharge pipe connected to the casing, a cage in which said pipe discharges, said cage having a water tank hinged to the lower end thereof, and a burner for heating the water in said tank.

1,156,779. LUBRICATING DEVICE. JOHN V. HOFFMAN, Bellwood, Nebr. Filed May 15, 1915. Serial No. 28,428. (Cl. 184—81.)

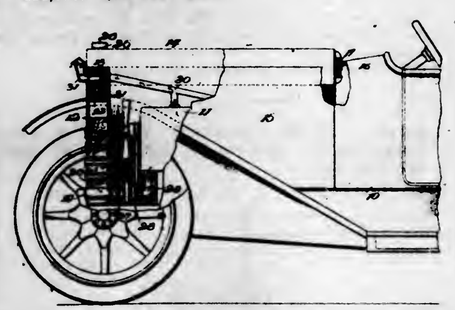
1. A lubricating device of the character described including a reservoir, a plurality of lubricant connecting pipes leading from the reservoir, valves in the lower ends of the pipes, a shaft rotatable within the reservoir and means connected to the valves and arranged to be wound upon the shaft to control the flow of liquid through the pipes.

2. A lubricating device of the character described, a reservoir, pipes connected to the reservoir, and leading therefrom, valves located near the mouths of the pipes, a shaft rotatable in the reservoir, and flexible members



connecting the valves with the shaft, whereby when the shaft is rotated the valves will be open.

1,156,780. COMBINED FUEL AND COOLING SYSTEM FOR VEHICLE-ENGINES. FRANK HONNOLD, Luton, Iowa, assignor of one-fourth to Leonard L. Harris, Hubbard, Nebr. Filed July 13, 1914. Serial No. 850,777. (Cl. 123—188.)



1. In a combined fuel and cooling system for internal combustion engines, the combination with an internal combustion engine having a cooling jacket, of a radiator, a fuel supply tank, means for supplying fuel from the tank to the radiator, said means automatically maintaining a predetermined level of liquid fuel in the radiator, a pipe leading from the lower part of the radiator to the lower part of the cooling jacket of the engine, a pipe leading from the upper part of the cooling jacket of the engine to the upper part of the radiator at a level below that of the fuel, means for supplying air at the point of discharge of such pipe, and a pipe leading from the radiator above the fuel level and adapted for attachment to the intake port of a carbureter.

2. A combined fuel and cooling system for internal combustion engines including a radiator, a fuel tank, means communicating between the fuel tank and radiator for maintaining a constant level of fuel in the radiator, a pipe provided with a pump adapted for communication with the cooling jacket of an engine, tubular couplings extending transversely of the radiator at either side, a plug closing the outer end of one of the couplings, a pipe leading from the inner end of said coupling and adapted for attachment to the intake port of a carbureter, the other of said couplings being provided with a screened opening intermediate its length, a pipe leading from the inner

end of said latter coupling and adapted for communication with the cooling jacket of an engine, and an air intake member communicating with the outer end of said latter coupling.

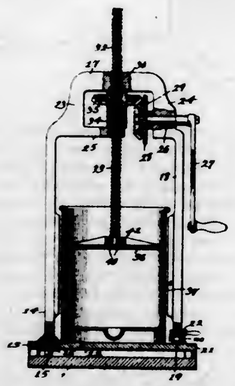
3. A combined fuel and cooling system for internal combustion engines including a radiator, a fuel tank, means for supplying fuel from the tank to the radiator, said means automatically maintaining a constant level in the radiator, a pipe adapted to communicate between the lower portion of the radiator and cooling jacket of an engine, an inspirator nozzle extending into the radiator below the fuel level therein, a pipe leading from said nozzle and adapted for communicative attachment with the upper portion of the cooling jacket of the engine, an air supply pipe communicating with the inspirator nozzle intermediate its length, and a pipe communicating with the radiator above the fuel level and adapted for attachment to the intake port of a carbureter.

4. In a combined fuel supply and cooling system for internal combustion engines, the combination with an engine having a cooling jacket, of a cooling radiator, a fuel supply tank, automatic means coöperating between the tank and radiator for maintaining a predetermined liquid level in the radiator, communicating means between the radiator and cooling jacket of the engine, and a pipe leading from the radiator above the liquid level and adapted for attachment to the intake port of a carbureter.

5. In a combined fuel and cooling system for internal combustion engines, the combination with an engine having a cooling jacket, a radiator, and means establishing circulative communication between the jacket and radiator, of a fluid tight reservoir at a higher level than the radiator, a pipe leading from the reservoir to the radiator at a level at which fuel is to be maintained therein, and a fluid conducting means leading from the radiator at a point above the liquid level therein to supply fuel to the engine.

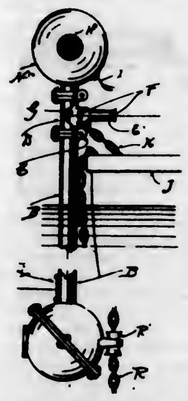
[Claims 6 to 8 not printed in the Gazette.]

1,156,781. DOMESTIC UTENSIL. JAMES N. JACKSON, Millersville, Ill. Filed Feb. 20, 1915. Serial No. 9,665. (Cl. 100—44.)



A device of the class described, comprising a base, a frame thereover comprising standards, a cross-head joining the tops thereof, and a forked arm beneath and parallel with said cross-head extending to a point approximately midway between said standards, a vertically movable element guided in said cross-head and said arm, a crank-shaft in said frame in operative connection with said element, and means in operative connection with the lower end of said element for operating on farm products in desired manner.

1,156,782. DEVICE FOR UNDER-WATER EXPLORATION. CHARLES FRANCIS JENKINS, Washington, D. C. Filed Dec. 16, 1914. Serial No. 877,594. (Cl. 88—1.)

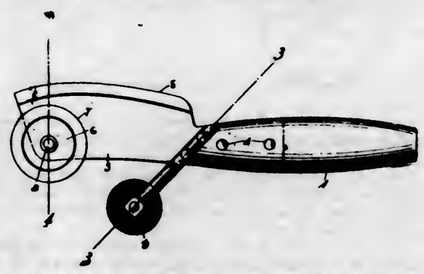


1. A device for exploring under-water areas, consisting of a rigid tubular body of lighter weight than the water it displaces, and flexible means for holding it partially submerged when in use.

2. A device for exploring under-water areas, consisting of a rigid tubular body having an electro-magnet mounted thereon whereby it may be instantly attached or detached at any underwater point on the side of a ship afloat.

3. A device for exploring under-water areas consisting of a rigid tubular body and flexible means for guiding it to, and securing it in, position for use.

1,156,783. COMBINATION PAPER-HANGING TOOL. JAMES HENRY KANE, Jersey City, N. J. Filed Oct. 21, 1914. Serial No. 867,738. (Cl. 216—61.)



1. In a paper hanger's tool, a flat blade for trimming the edge of a strip of paper, a wheel journaled on said blade formed with a cutting edge for trimming the ends of said strip of paper, a roller connected with one end of said knife and a single handle for operating all of said devices.

2. In a device of the character described, a flat knife formed with a rounded cutting edge, a disk formed with an edge at its periphery, means for pivotally mounting said disk at one end of said knife, a pair of brackets rigidly secured to said knife near the shank, a roller journaled in said brackets, and a handle rigidly secured to the shank of said knife so as to operate said knife, said roller and said disk.

1,156,784. MOLASSES AND SYRUP PITCHER. WILLIAM L. KING, Houston, Mo. Filed Nov. 30, 1914. Serial No. 874,830. (Cl. 65—31.)

A pitcher having a body provided with an inwardly extending flange around a portion of its upper edge, said flange being inclined inwardly and downwardly, a spout structure secured to the interior of said body and positioned directly below the inwardly inclined flange, said spout structure comprising a curved plate secured to the body portion adjacent its upper edge, a downwardly ex-



tending inclined drip catch lip formed from the upper edges of said plate, its lower portion being curved upward to form a concaved spout tapered toward its upper terminal, said spout extending upward beyond the inturned flange on the body portion and inclined toward the same.

1,156,785. LIQUID-STRAINER. ARTHUR WILLIAM KLEMT, New York, N. Y. Filed Jan. 25, 1915. Serial No. 4,208. (Cl. 210—16.)



1. In combination with a liquid tank, a strainer at the bottom thereof extending toward the top of the tank and removable from said tank through the top, and means engaging and locking said strainer in the tank to the top.

2. In combination with a liquid tank, a water-trap at the bottom thereof, and a strainer within the tank associated with the trap and removable therefrom through the top of the tank and means detachably engaging the top and the strainer.

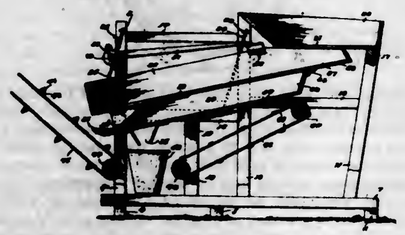
3. In combination with a liquid tank, a water-trap positioned at the bottom thereof, an outlet tube associated with said trap and projecting into the tank, a tubular strainer surrounding said outlet tube and removably engaging said trap, said tubular strainer projecting through the top of the tank, and means for locking said projecting end substantially as and for the purpose set forth.

4. In combination with a liquid tank having alining openings in the bottom and top thereof, a cup engaging the bottom opening and forming a water-trap, said cup having an outlet tube projecting into the tank, a tubular strainer surrounding said outlet tube and engaging the cup, said tubular strainer projecting through the top opening of the tank, and means associated with the top opening whereby the tubular strainer is locked in the tank.

5. In combination with a liquid tank having alining openings in the bottom and top thereof, a cup engaging the bottom opening and forming a water-trap, said cup having a central socket, an outer tube within said socket projecting into the tank, a tubular strainer surrounding said outlet tube and removably engaging the socket, said tubular strainer projecting through the top opening of the tank, said tubular strainer having means whereby the outlet tube forms a guide for said tubular strainer, and means associated with the top opening whereby the tubular strainer is locked in the tank.

[Claims 6 to 8 not printed in the Gazette.]

1,156,786. POTATO-SORTER. JOHN KRENTZ and MARTIN KRENTZ, Westfield, Wis. Filed Feb. 10, 1914. Serial No. 817,819. (Cl. 130—32.)



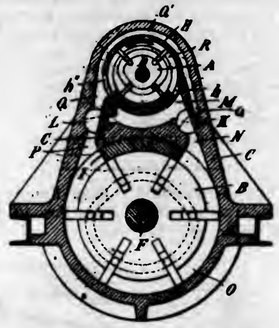
In a vegetable sorter, the combination with a hopper, of a shaking screen below said hopper, said screen of relatively large mesh, a second screen below the first mentioned screen and in communication therewith, the second screen being of smaller mesh, a downwardly and upwardly extending discharge spout on said first mentioned screen and closing the lower end of the chamber between the screens, a framework, means for pivotally supporting said screens on the framework, means for shaking said screen and means for receiving the material discharged from said screens.

1,156,787. FLUID-OPERATED POWER-TRANSMISSION APPARATUS. HUGO LENTZ, Berlin-Halensee, Germany. Filed Oct. 27, 1914. Serial No. 868,878. (Cl. 138—22.)

1. The combination of a rotary pump having suction and delivery ports, a suction chamber connected with said suction port, an auxiliary or delivery chamber connected with said delivery port, a by-passage extending circumferentially of the pump and connected with said suction chamber, passages each adapted to serve as a suction passage or as a delivery passage, a valve controlling the connection of one of said passages with the suction chamber and with the auxiliary chamber, and another valve controlling the connection of the other passage with the delivery chamber and with the by-passage.

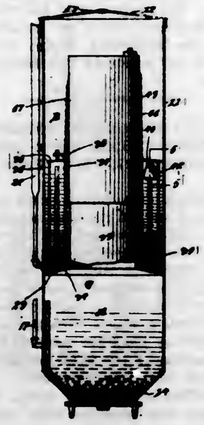
2. The combination of a rotary pump having suction and delivery ports, two passages each adapted to serve either as a suction passage or as a delivery passage, two connections leading from each of said passages, one to the suction port of the pump and the other to the delivery port thereof, and valves controlling said connections, one of said valves having its rotary solid portion greater circumferentially than the land between the respective passage and the connection to the suction port, yet smaller than the aggregate width of said passage and connection and of the land between them, whereby said valve may be turned into a position in which it throttles said passage as well as said suction connection while leaving the corresponding delivery connection fully open.

3. The combination of a rotary motor, a rotary pump having suction and delivery ports, a suction chamber connected with said suction port, an auxiliary or delivery chamber connected with said delivery port, a by-passage connected with said suction chamber, suction and pressure passages connected with said motor, a valve controlling the connection of said suction chamber with said auxiliary chamber and with said suction passage, and another valve controlling the connection of said auxiliary



chamber with said by-passage and with said pressure passage, the last-named valve having its rotary solid portion greater circumferentially than the land between said pressure passage and said by-passage, yet smaller than the aggregate width of said land and of the ports leading to said pressure passage and by-passage respectively, whereby said valve may be turned to a position in which it throttles said pressure passage as well as said by-passage while leaving the connection to the auxiliary chamber fully open.

1,156,788. ACETYLENE-GENERATOR. MILES EDWARD LOEHR, Claypool, Ind. Filed June 26, 1913. Serial No. 775,991. (Cl. 48—52.)



1. In an acetylene generator, a generating chamber, a carbid hopper arranged to feed carbid into said generating chamber, a shaft rotatably mounted within the carbid hopper, means carried by the shaft for feeding a charge of carbid to the generating chamber during the rotation of the shaft, a stub shaft rotatable relative to the first mentioned shaft, a pair of fusees secured to the stub shaft, a gas bell, flexible connections between said drums and said gas bell, means tending to rotate said stub shaft in one direction to wind said flexible connections on said fusees during the upward movement of said gas bell, and means for locking the first and second mentioned shafts together for rotation in the opposite direction during the downward movement of said gas bell.

2. In an acetylene generator, a main outer casing, an inner casing mounted within said outer casing, a generating chamber formed in said inner casing, a removable carbid hopper arranged in said inner casing, means for feeding a charge of carbid to the generating chamber, comprising a rotatable shaft, a plurality of radial arms on the lower terminal of said shaft, and arranged to force the carbid through an opening in the hopper into said generating chamber, a pair of fusees, means for rotatably supporting said fusees, a gas bell, a plurality of flexible elements connecting the gas bell with the fusees and adapted to be wound thereon upon the upward movement of the gas bell, means carried by one of the fusees for rotating said first named shaft upon the movement of the fusees in one direction, means for rotating the fusees upon the upward movement of the gas bell, said gas bell adapted to rotate said fusees when moving downwardly to operate said first named shaft and permit a charge of carbid to be deposited into the generating chamber.

3. In an acetylene generator, a generating chamber, a carbid hopper arranged to feed carbid into said generating chamber, a shaft rotatably mounted within said carbid hopper, means carried by the shaft for feeding a charge of carbid to the generating chamber during the rotation of the shaft, a stub shaft rotatable relative to the first mentioned shaft, a pair of fusees secured to the stub shaft, a gas bell, flexible connections between said fusees and said bell, means tending to rotate said stub shaft in one direction to wind said flexible connections on said fusees during the upward movement of said gas bell including a gravity actuated weight and a flexible member trained over a pulley on said stub shaft, and means for locking the first and second mentioned shafts together for rotation in the opposite direction during the downward movement of said gas bell.

1,156,789. ADJUSTABLE BRAKE-ROD. DAVID C. LOUGH, Greenland, W. Va., assignor of one-half to Clarence E. Reed, Greenland, W. Va. Filed Mar. 20, 1915. Serial No. 15,817. (Cl. 74—47.)



1. An adjustable brake rod comprising a guide, a rod connected to the guide, a lever connected to the rod, an adjustable bar mounted in said guide, and a spring actuated pin for holding said bar in adjusted position, a clevis connected to the end of the bar and a spring actuated pin for engaging a brake beam.

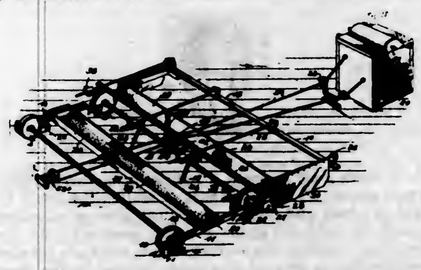
2. An adjustable brake rod comprising a guide casing, a rod connected to said casing and a lever connected to said rod, a brake rod or bar mounted in said guide and provided with a series of perforations, a pin connected to the guide and extending through the same, a keeper connected to the guide, a spring connected to said pin and mounted in said keeper, and a clevis having a spring actuated pin connected to said bar.

1,156,790. FLOOR SCRAPER OR CLEANER. PAUL B. LUETHJOHN, Cleveland, Ohio. Filed Dec. 1, 1913. Serial No. 804,129. (Cl. 214—10.)

1. A scraper including a frame, rods swingingly mounted upon the frame and extending rearwardly thereof, a scraper blade supported by said rods, and adjustable weights slidable upon the free ends of the rods.

2. A scraper including a wheeled frame, rods swingingly mounted in the frame, a scraper blade supported by the intermediate portions of said rods and downwardly depending prongs, swingingly mounted upon the rods at the rear of the scraper blade.

3. A scraper including a wheeled frame, a scraper blade swingingly mounted on the frame, and a trough carried by the frame and provided with a feed slot.

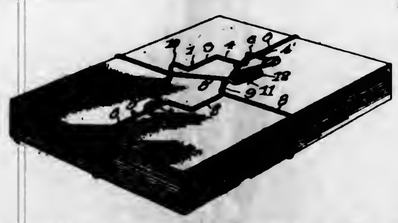


4. A scraper including a wheeled frame having spaced side members, a scraper blade swingingly carried by the frame and a trough extending transversely of the frame between the side members and provided in its bottom with a longitudinal feed slot, said trough having outwardly and downwardly directed lips at its ends engaging the side members of the frame to support the trough.

5. A scraper including a wheeled frame adapted for forward and rearward movement, a scraper blade swingingly carried by the frame, means for moving the frame forwardly or backwardly, and means independent of said means for automatically raising the blade upon rearward movement of the frame.

[Claims 6 to 13 not printed in the Gazette.]

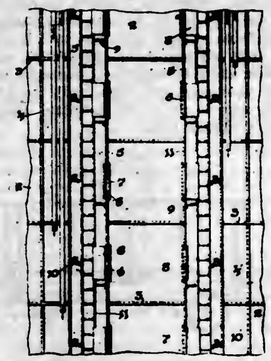
1,156,791. PACKAGE-TIE. ROBERT LEE LYNCH, Campbellsburg, Ky. Filed Mar. 22, 1915. Serial No. 16,207. (Cl. 24—18.)



A package tying device of the character described comprising a single piece of wire bent to form a rectangular frame, each of the side pieces of said frame being arched upwardly midway their lengths to form alined shoulders having one of their edges projecting vertically therefrom, one of the end pieces of said frame being provided with an outwardly extending knot engaging loop, the other end piece being offset upwardly midway its length, the portion adjacent the offset portion of said end piece forming a vertically projecting shoulder, one of the side pieces of said frame being bent forwardly and then doubled upon itself to form an upwardly extending gripping member, said doubled portion being bent outwardly and rearwardly upon itself to form a rearwardly extending gripping member.

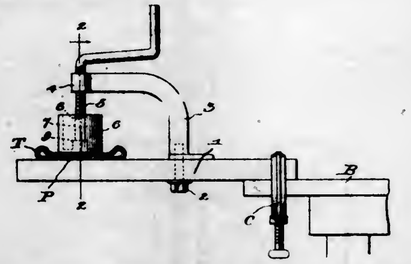
1,156,792. PNEUMATIC CONTROL OF INFLOWING WATER IN DAMAGED SHIPS. ARTHUR RICHARD MCAVOY, Collie, Western Australia, Australia. Filed Nov. 17, 1914. Serial No. 872,598. (Cl. 114—68.)

1. In an apparatus of the character described the combination with air compressing means and air distributing means comprising a main reservoir and subsidiary reservoirs connected thereto, a delivery pipe from each subsidiary reservoir to the member to be supplied, of a plurality of air-tight compartments having inspection shafts interposed between them, the aforementioned air delivery pipes each entering a compartment, and means for varying the pressure of the air admitted to a compartment or compartments.



2. In an apparatus of the character described, the combination with air compressing and distributing means, of a plurality of air tight compartments, means for detecting the damaged compartment and subsidiary reservoirs separate from the compressing means connected to each compartment, and means for supplying compressed air to the damaged compartment from the reservoir connected thereto.

1,156,793. VULCANIZER. ABEL MAGRI and ARTHUR V. GRIFFETH, Port Washington, N. Y. Filed Oct. 26, 1914. Serial No. 868,710. (Cl. 18—18.)

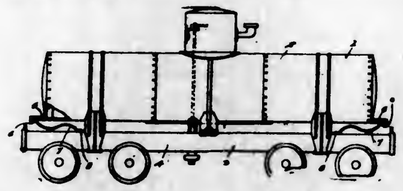


A vulcanizer comprising a flat horizontal rectangular base plate, a clamp for securing one end thereof to a horizontal support, an inverted L-shaped bracket having at its lower end a foot secured to the upper side of the base plate at the intermediate portion thereof, a rigid nut carried by the other end of said bracket and having an upright axis, a fire pot between the nut and the base plate having a central post provided in its upper end with a cavity, and a clamping screw threaded through the nut and having its lower end received by the aforesaid cavity.

1,156,794. OIL-TANK CAR. EDWARD MARTINSON, Superior, Wis. Filed Feb. 8, 1915. Serial No. 6,912. (Cl. 105—264.)

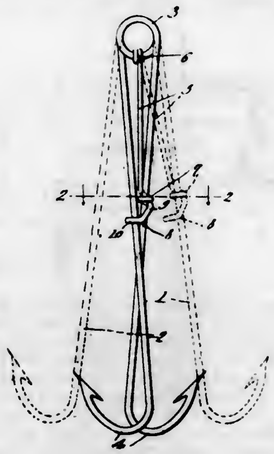
1. In a tank car, the combination with an ordinary car truck, of a fluid retaining tank having extensions formed upon the ends of said tank and integrally with the construction thereof, brackets having substantially horizontal portions formed thereupon for attachment to said car truck, and substantially arcuate horizontal portions formed upon the upper ends of said brackets for engagement with said projections for supporting said tank upon said truck, said brackets extending inwardly of the ends of said tank and secured to said truck for supporting the strain of the tank inwardly of the ends of the truck.

2. In a tank car, the combination with an ordinary car truck, of a fluid retaining tank having extensions formed upon the ends of said tank and integrally with the construction thereof, supporting brackets for said tank having their upper ends curved for lying in snug engagement with the under surfaces of said extension, said brackets having their lower ends horizontal for engagement with an ordinary car truck, the intermediate portions of said brackets being curved upwardly and downwardly to provide for a compensating movement of the brackets upon expansion or contraction of said tank.



3. In an oil tank structure, the combination of an ordinary fluid retaining tank, a truck for supporting said tank, of brackets for supporting said tank above said truck, said brackets being constructed of sheet metal and curved sinuously intermediate of their ends to permit of compensating movement of said brackets upon expansion or contraction of said fluid tank.

1,156,795. FISH-HOOK. CLAYTON C. MAU, Fredonia, N. Y. Filed Jan. 2, 1915. Serial No. 234. (Cl. 43—31.)



1. A device of the character described comprising a pair of separable shanks having a coil connecting them at one end and having hooks at their free ends, and an element having portions at its ends embracing the aforesaid coil and one of the shanks intermediate the ends thereof, the portion of said element which embraces the shank having a catch for the engagement of the other shank.

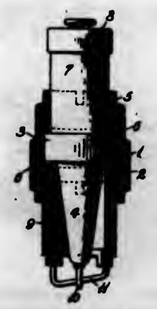
2. A device of the character described, comprising a pair of shanks connected at one end by a coil, and having hooks at their free ends, and a wire element having a coil at one end embracing the aforesaid coil, and having a coil adjacent its other end embracing the intermediate portion of one of the shanks, the last mentioned coil of the wire element having a finger projecting therefrom, and the finger being provided at its free end with a hook for the engagement of the other shank.

1,156,796. SPARK-PLUG. JOHN W. MEAKER, Detroit, Mich. Filed Oct. 5, 1912. Serial No. 724,007. (Cl. 123—169.)



In a spark plug, a nipple, a body of insulating material secured therein by means effectively sealing the joints between the body and nipple, a terminal member extending through the body, the nipple with the contained body, terminal and securing means forming in effect an integral structure, and a bushing detachably secured to the lower end of the nipple and provided with electrodes adapted to coöperate with the terminal and forming a part of the said integral structure when the latter is applied to the bushing, the bushing providing means for maintaining the integral structure in a motor whereby the integral structure may be bodily removed and replaced without disturbance of the parts, and the nipple so housing the bushing when the plug is mounted in a motor that the bushing and the joint between the bushing and nipple are concealed, the bushing and nipple coacting to maintain the proper spark gap whenever reassembled.

1,156,797. SPARK-PLUG. JOHN W. MEAKER, Detroit, Mich. Filed Jan. 2, 1913. Serial No. 739,908. (Cl. 123—169.)



1. A spark plug comprising an interiorly screwthreaded casing, an exteriorly screwthreaded nipple in engagement with said casing and protruding from the lower end thereof and adapted to be limited in its movement relatively to said casing and provided with a spark terminal near the outer end, a body of insulating material having an intermediate enlarged portion in the casing and carrying a terminal stem co-acting with the nipple terminal, a packing member between the inner end of the nipple and the enlarged portion of the body, and a bushing in screwthreaded engagement with the casing encircling the body and forcing the latter against the packing ring and toward the nipple end.

2. A spark plug comprising an interiorly screwthreaded casing, an exteriorly screwthreaded nipple in engagement with said casing protruding from the lower end thereof and having a spark terminal near the outer end, means within the casing forming a shoulder for limiting the movement of the nipple relatively to the casing, a body of insulating material having an intermediate enlarged portion in the casing and carrying a terminal stem coacting with the nipple terminal, packing between the inner end of the nipple and the enlarged portion of the body, and a bushing engaging the casing and encircling the body for forcing the latter against the packing ring toward the nipple end.

1,156,798. NUT. JOHN W. MEAKER, Detroit, Mich. Filed June 9, 1913. Serial No. 772,553. (Cl. 85—32.)



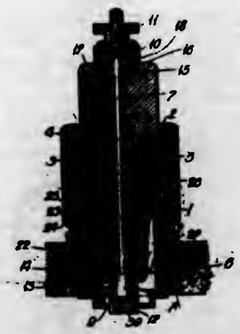
1. A nut having a square or polygonal body and a base flange of a diameter not less than the greatest diameter of the body, said flange being integrally attached to the body around the bore of the nut and bent outwardly into abutment with the outer portion of the base.

2. A nut comprising a body of stock bar cross section having a base flange of a diameter not less than the greatest diameter of the body, said finger being integral with the body adjacent the bore of the nut and abutting the base of the body around the marginal portion thereof.

3. A nut comprising a body of stock bar dimensions and contour, and a base flange that is integrally formed with the body adjacent the bore of the nut and extends outwardly and abuts the outer marginal portions of the base face.

4. A nut comprising a body of stock bar dimensions and contour, and a base flange that is integrally formed with the body adjacent the bore of the nut and extends outwardly and abuts the outer marginal portions of the base face, the base being slightly concaved.

1,156,799. SPARK-PLUG. JOHN W. MEAKER, Detroit, Mich. Filed Aug. 15, 1914. Serial No. 856,882. (Cl. 123—169.)



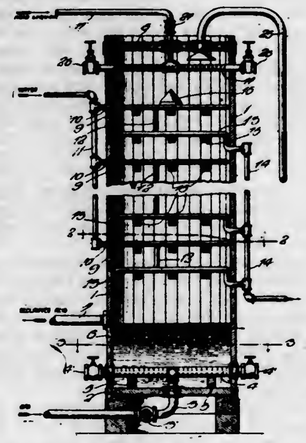
1. In a spark plug, the combination of a casing having an inwardly projecting portion forming an annular shoulder, an insulating member formed with an upper annular shoulder to oppose the shoulder on the casing and with a reduced end portion forming a lower annular shoulder, a channel ring with its closed side in contact with the lower side of said lower annular shoulder and the outer wall of the channel bent outwardly into contact with the wall of the casing, a locking ring having screw-threaded engagement with the casing and encircling the reduced end of the insulating member and formed with an annular flange engaging the channel independently of said outwardly bent wall of said ring to lock the insulating member in the casing against the shoulder on the casing.

2. In a spark plug, the combination of a casing having an internal annular shoulder at its upper end and internally screw-threaded at its lower end, an insulating member formed with a shoulder to oppose the shoulder on the casing and with a reduced lower end forming an annular shoulder at a distance below the first named shoulder thereon, a packing ring to engage said lower shoulder on said member, an externally screw-threaded ring surrounding the reduced lower end of the member and engaging the screw-threaded portion of the casing, said ring being formed with an annular portion to engage the packing ring, a nipple externally screw-threaded throughout its length to engage the screw-threaded portion of the casing below the ring and abutting said ring to lock the nipple with one end projecting from the casing to form means for attaching the plug to an engine cylinder, said nipple being formed with a sparking terminal point at its lower end, and an electrode carried by the insulating member and provided with a sparking terminal adjacent to the said point on the nipple.

3. In a spark plug, the combination of an internally screwthreaded casing, an insulating member in the casing having a downwardly facing shoulder, a channel shaped packing member engaging the shoulder, a ring having screw-threaded engagement with the casing and opposed to said shoulder to form a seat for the packing ring, and a nipple exteriorly screwthreaded to engage the casing below said ring and project from the casing to form means for attaching the plug to an engine cylinder, said nipple being adjustable in the casing independently of said ring.

4. In a spark plug, the combination of a casing having an internal annular shoulder near its upper end and internally screw-threaded at its lower end, an insulating member in said casing formed with a shoulder opposing the shoulder on the casing and with a reduced lower end forming an annular shoulder at a distance below the other shoulder thereon, a packing engaging the lower shoulder on said member to seal the joint between said member and the casing, a ring secured in the casing, and opposing said lower shoulder to hold said packing seated thereon and said insulating member seated against the shoulder on the casing, with its upper end projecting through the open upper end of the casing, and an exteriorly screw-threaded nipple engaging the interior screw-thread of the casing with its lower end projecting from the lower end of the casing to form means for attaching the plug to an engine cylinder and with its upper end opposing the ring to lock the nipple in the casing, and limit its inward movement therein.

1,156,800. RECLAIMING APPARATUS FOR USE IN CONNECTION WITH PULP-MILLS. GEORGE ERNEST MILLER, Madison, Me. Filed Jan. 25, 1915. Serial No. 4,829. (Cl. 23—13.)



1. A reclaimer for pulp mills comprising an upright housing having a perforated acid liquor inlet pipe extending horizontally across the upper end of the housing and projecting on opposite sides thereof, normally closed couplings on the opposite ends of said pipe, an acid trap at the bottom of said housing, an acid discharge pipe for said trap spaced above the bottom of said housing, a gas inlet pipe into said trap, and acid liquor cooling coils disposed above said discharge pipe and below said inlet pipe.

2. A reclaimer for pulp mills comprising an upright housing having an acid liquor inlet at its upper end, an acid trap at its lower end, an acid discharge pipe for said trap spaced above the bottom of said housing, acid liquor cooling coils disposed between said discharge pipe and said inlet, a pair of crossed horizontal perforated gas inlet pipes extending across the lower end of the housing and projecting on opposite sides thereof, and normally closed couplings on the opposite ends of said pipes.

3. A reclaimer for pulp mills comprising an upright housing having an acid liquor inlet at its top, an acid trap at its bottom, a gas inlet into said trap, a plurality of horizontal vertically spaced coils disposed between the acid liquor inlet and the trap, a cold fluid supply pipe with which the inlet ends of said coils are connected, an additional series of horizontal vertically spaced coils interposed between the first named coils and having their inlet ends connected to the outlet ends of the first mentioned coils, and a cold fluid discharge pipe with which the outlet ends of the additional coils are connected.

4. A reclaimer for pulp mills comprising an upright housing having an acid liquor inlet at its top, an acid trap at its bottom, a gas inlet into said trap, a plurality of horizontal vertically spaced coils disposed between the acid liquor inlet and the trap, a cold fluid supply pipe with which the inlet ends of said coil are connected, an additional series of horizontal vertically spaced coils interposed between the first named coils and having their inlet ends connected to the outlet ends of the first mentioned coils, a cold fluid discharge pipe with which the outlet ends of the additional coils are connected, and a cone-shaped spreader disposed between the acid liquor inlet and the plurality of cooling coils.

5. A reclaimer for pulp mills comprising an upright housing having a perforated acid liquor inlet pipe extending horizontally across the upper end of the housing and projecting on opposite sides thereof, normally closed couplings on the opposite ends of said pipe, an acid trap at the bottom of the housing, an acid discharge pipe for said trap spaced above the bottom of said housing, a perforated gas inlet pipe extending horizontally across the lower end of the housing and projecting on opposite sides thereof, normally closed couplings on the opposite ends of said pipe, a plurality of horizontal vertically spaced coils disposed between the acid liquid inlet and the trap, a cold fluid supply pipe with which the inlet ends of said coils are connected, an additional series of horizontal vertically spaced coils interposed between the first named coils and having their inlet ends connected to the outlet ends of the first mentioned coils, and a cold fluid discharge pipe with which the outlet ends of the additional coils are connected.

1,156,801. MANUFACTURE OF STARCH. CHARLES C. MOORE, Washington, D. C., assignor of one-half to Frederick C. Stevens. Filed Jan. 20, 1913. Serial No. 743,066. (Cl. 127—23.)

1 In the manufacture of valuable products from succulent vegetable materials, the process which comprises roughly comminuting such materials, drying to substantial desiccation at temperatures below the hydrolysing point of starch, dry grinding the desiccated materials, adding water, re-grinding to secure more complete separation of starch granules from cellular matter, and recovering starch from the resulting mixture.

2. In the manufacture of valuable products from succulent vegetable materials, the process which comprises roughly comminuting such materials, drying to substantial desiccation at temperatures below the hydrolysing point of starch, dry grinding to a fineness of at least 80 mesh, and recovering starch by wet methods.

3. In the manufacture of valuable products from succulent vegetable materials, the process which comprises roughly comminuting such materials, drying to substantial desiccation, grinding the desiccated materials, adding water, re-grinding to secure more complete separation of starch granules from mixture.

4. In the manufacture of valuable products from succulent vegetable materials, the process which comprises roughly comminuting such materials, drying to substantial desiccation at temperatures below the hydrolysing point of starch, dry grinding the desiccated materials, wet grinding the finely ground product, obtaining a starch milk from the resulting starchy magma, and treating said starch milk to obtain starch therefrom.

5. In the manufacture of valuable products from a succulent starch-yielding vegetable material, the process which comprises desiccating the said vegetable material to obtain a product containing all the solid matter thereof, fine-grinding such product while dry, treating with liquid to obtain starch milk, and recovering starch therefrom.

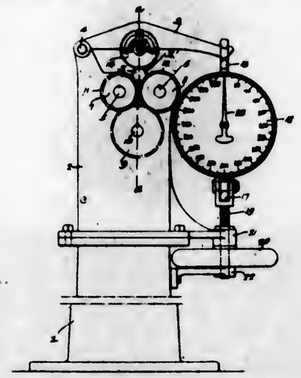
[Claims 6 to 12 not printed in the Gazette.]

1,156,802. CUSHION-TIRE. ALFRED NELSON, Camden, N. J. Filed June 7, 1915. Serial No. 32,672. (Cl. 152—8.)



A tire comprising a plurality of pivotally connected sections, each including a pair of offset hollow blocks, resiliently supported ground engaging blocks disposed in the hollow blocks, and means for detachably clamping the ends of the tire together around the rim of the wheel.

1,156,803. ABRASION-TESTING MACHINE. GEORGE L. NORRIS, Pittsburgh, Pa., assignor to Tinius Olsen Testing Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 2 1913. Serial No. 792,977. (Cl. 73—51.)



1. The combination in an abrasion testing machine of means including two members having differential surface speeds and independently operated to both abrade a test piece; and means for causing said abrading means to operate under a predetermined load.

2. The combination in an abrasion testing machine of means for rotatably supporting a test piece including a rotary abrading member having a cylindrical surface engaging the test piece in position to rotate the same; and means for applying a predetermined load to said test piece; with means for causing slip between said member and the test piece.

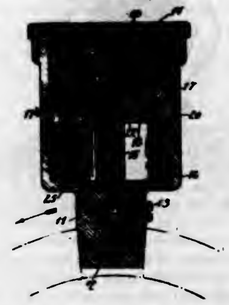
3. The combination in an abrasion testing machine of a supporting frame; two rolls mounted to both engage a test piece; means for causing said rolls to have differential surface speeds with means for pressing such piece into engagement with said rolls.

4. The combination in an abrasion testing machine of a supporting structure; a plurality of rolls carried thereby and mounted to engage a test piece; means for driving two of said rolls so that they have different surface speeds; and means for positively forcing said rolls and the test piece together.

5. The combination in an abrasion testing machine of a plurality of driven rolls mounted to support a test piece; means for causing one of said rolls to have a certain speed different from the other; a load-applying beam; a third roll carried by said beam in position to engage the test piece; and means for forcing said beam with its roll toward the test piece.

[Claims 6 to 12 not printed in the Gazette.]

1,156,804. GREASE-CUP. THOMAS OPIE ORGAN, Philadelphia, Pa. Filed Aug. 6, 1914. Serial No. 855,405. (Cl. 184—43.)



1. In a grease cup, a cup body having a feed bore, a closure therefor, a tube rising in the cup and leading to the feed bore, and a piston comprising separate front and rear members independently movable in the cup, the feed tube extending through said piston, the one member of the piston loosely embracing the tube and having a grease-tight fit at its periphery against the wall of the cup body, and the other member having a grease-tight fit on the tube and free at its periphery.

2. In a grease cup, a cup body having a feed outlet, an inner tube in register with the feed outlet, and a piston movable in the cup along said feed tube, said piston comprising independently movable juxtaposed rigid disks in contact with each other adjacent to the bores thereof, and spaced from each other outward from the contacting surfaces, to permit a tilting of one rigid disk relatively to the other.

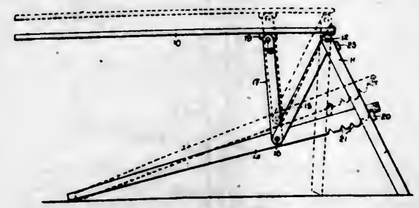
3. In a grease cup, a cup body having a feed outlet, a central feed tube leading to the feed outlet, and a piston in said cup, the piston comprising a disk provided with a peripheral flange in grease-tight contact with the wall of the cup body, and a second disk within the flange of the first disk and in grease-tight contact with the feed tube, the said disks being in contact at their opposed faces and relatively movable whereby any tendency of either one to tilt will be corrected by the other.

4. In a grease cup, a cup body having a feed outlet, an inner feed tube leading to the feed outlet, and a piston slidable on the feed tube, said piston comprising two disks contacting with each other adjacent to the feed tube, the one disk having a grease-tight contact with the wall of the cup body and the other having a grease-tight contact with the feed tube, the said disks being in contact at their opposed faces and relatively movable whereby any tendency of either one to tilt will be corrected by the other.

5. A piston for grease cups having a center feed tube, said piston comprising two disks having bores to receive the feed tube of the grease cup, one disk having an annularly grooved periphery for contact with the wall of a grease cup, and the other disk having an annularly grooved bore, the wall of which is adapted for contact with the feed tube of a grease cup, the said disks being in contact at their opposed faces and relatively movable whereby any tendency of either one to tilt will be corrected by the other.

[Claim 6 not printed in the Gazette.]

1,156,805. IRONING-BOARD. RAY BURDETTE PALMER, Norwich, N. Y. Filed Dec. 12, 1914. Serial No. 876,799. (Cl. 68—10.)



1. An ironing board and supporting means therefor, said means comprising a pair of legs pivotally hung at their upper ends to the board near one end of the latter, bars pivotally hung at their upper ends, said bars and said legs having a common pivotal center, a second pair of legs, strut elements, means pivotally connecting the said bars with the strut elements at their lower ends and with the second pair of legs between the ends of the latter, means to detachably pivot the upper ends of the strut elements to the board at a point distant from the pivoting of the said bars, and means to adjustably support the upper ends of the second pair of legs on the first pair of legs between the top and bottom of the latter.

2. An ironing board and supporting means therefor, the said supporting means comprising legs pivotally connected at their upper ends with the board near one end of the latter, bars pivotally hung on the board near said end, strut elements detachably and pivotally engaging the board at a point distant from the pivoting of the said bars, additional legs, means pivotally suspending the additional legs on the lower ends of the said bars and struts, and means to detachably support the upper ends of the additional legs on the first legs.

3. An ironing board and supporting means therefor, said supporting means comprising a pair of legs, a transverse cleat on which said legs are pivoted at their upper ends, bars pivoted on said cleat and extending therefrom at an angle to the said legs, strut elements, a transverse rod connecting the upper ends of the said strut elements, bearing means on the board distant from the cleat for detachably receiving the second transverse rod to permit the said strut elements to rock on or to be disengaged from said bearing means, a transverse rod connecting the lower ends of the said bars and the lower ends of the said struts, and legs pivotally hung between the ends thereof on the last mentioned transverse rod, the first legs having a cross bar between the top and bottom thereof, and the second legs having at the upper end series of notches to adjustably and detachably engage said cross bar.

4. An ironing board having legs pivotally connected at their upper ends with the board, additional legs, members pivotally connected at their upper ends with the board and pivotally connected at their lower ends with the said additional legs between the ends of the latter, additional members pivotally connected at their lower ends with the additional legs and detachably engaging at their upper ends with the board, and means to support the upper ends of the additional legs.

1,156,806. [WITHDRAWN.]

1,156,807. WINDOW-SHADE. JOHN W. PEPPLE, San Antonio, Tex. Filed Aug. 6, 1913. Serial No. 783,486. (Cl. 156—27.)

1. In a curtain fixture, the combination, with a horizontal shaft adapted to be mounted at the upper portion

of a window frame, and a pair of rotatable elements carried thereby; of a pair of spring brackets adapted for attachment to said frame below said shaft and provided with rollers; a pair of flexible endless elements connecting said rotatable elements and said rollers and normally tensioned by said spring brackets; and a curtain roller having its opposite ends connected to said flexible elements.



2. In a curtain fixture, the combination, with a horizontal shaft adapted to be mounted at the upper portion of a window frame, and a pair of rotatable elements carried thereby; of a pair of spring brackets having their upper ends adapted for attachment to said frame below said shaft and their lower ends forked, the forked end of each bracket having a roller mounted therein; a pair of flexible endless elements connecting said rotatable elements and said rollers and normally tensioned by said spring brackets; and a curtain roller having its opposite ends connected to said flexible elements.

3. In a curtain fixture, the combination, with a horizontal shaft adapted to be mounted at the upper portion of a window frame, and a pair of rotatable elements carried thereby; of a pair of spring brackets adapted for attachment to said frame below said shaft and provided with rollers; a pair of flexible endless elements connecting said rotatable elements and said rollers and normally tensioned by said spring brackets; a curtain roller having its opposite ends connected to said flexible elements; and retaining means adapted for connection to said frame adjacent the inner stretch of one of said flexible elements and normally engaged by the same under the tension of the adjacent spring bracket to hold the curtain roller in adjusted position.

4. In a curtain fixture, the combination with a pair of endless chains adapted to be arranged at opposite sides of a window frame, and means for supporting said chains at opposite ends; of a curtain roller having its opposite ends connected to said chains; and a toothed retaining device adapted for connection to said frame adjacent the links of the inner stretch of one chain, the supporting means at one end of said chain being adapted to normally force the said inner stretch thereof into engagement with said retaining device, to hold the curtain roller in adjusted position.

5. In a curtain fixture, the combination of a horizontal shaft adapted to be mounted at the top of a window frame; a pair of pinions secured to the ends of said shaft; a pair of spring brackets adapted to be fastened at their upper ends to said frame below and in line with said pinions and provided at their lower ends with revoluble elements; a pair of endless chains connecting said pinions and revoluble elements; a curtain roller connected at opposite ends to said chains; and a toothed retaining device adapted for attachment to said frame adjacent the inner stretch of one of said chains, said chains being normally tensioned, and said inner stretch normally engaged with said retaining device, by the action of said spring brackets.

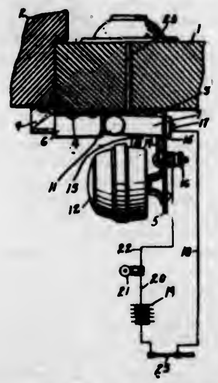
[Claims 6 and 7 not printed in the Gazette.]

1,156,808. **BUST-REDUCER BRASSIÈRE.** MARIE PERILLAT, New York, N. Y., assignor to Ye Lady's Outfitterie, a Copartnership composed of Sidney H. Burns and Charles D. Perillat, New York, N. Y. Filed May 24, 1913. Serial No. 769,583. (Cl. 2—87.)



In a brassière of the character set forth, the combination of a pair of side backs, an elastic strap connecting the same together at the back, each of the side backs being provided with one or more diagonally extending casings extending from one end to the other, a stiffener in each of said casings, a breast piece secured at one end to the outer end of each of the side backs, said piece being formed convex and wider at the middle than at its ends and provided with elastics extending from one end to the other, means connected to each of the breast pieces maintaining it substantially in definite form vertically, means to secure the free ends of the breast pieces together in the front, and straps and tabs serving to maintain the brassière in definite position vertically.

1,156,809. **BURGLAR-ALARM BOLT.** THOMAS L. PIDGEON, St. Barnabe, Quebec, Canada. Filed Mar. 17, 1915. Serial No. 15,120. (Cl. 177—314.)

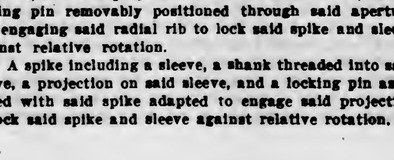


1. In a device of the class described, the combination with a slidable bolt for locking the door, means for supporting the bolt in such manner that it may have a rocking movement, a mechanically operated bell and an electrically operated bell operatively connected to said bolt in such manner that when a rocking motion is imparted thereto they will be simultaneously rung.

2. In a device of the class described, an angular base plate, a bolt slidably mounted on the said base plate, means for supporting the bolt in such manner that it may have rocking movement, a mechanically operated bell having a push button engaging said bolt, a binding post on said bolt, a contact on said base plate insulated therefrom, a circuit including a source of electrical supply and a bell having the said contact and binding post as terminals, the said push button and contact being so arranged that upon the rocking movement of the bolt the mechanically operated bell will be rung and the bolt will engage the contact and cause the electrically operated bell to be rung.

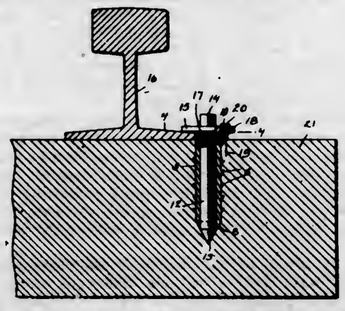
3. In a device of the class described, a base plate, a bolt slidably mounted thereon constructed and arranged to lock a door, means for supporting the bolt on the base plate in such manner that it may have rocking movement, a mechanically operated bell including a push button mounted on said base plate, the said push button being arranged to bear against the bolt, means for rocking the bolt to operate said push button to ring the bell, an electric bell, and means to ring the electric bell upon the inward movement of the push button.

1,156,810. **WIRE CLOTHES-PIN.** THOMAS M. PRICE and JOHN W. TILLMAN, Cooper, Tex. Filed Jan. 15, 1914. Serial No. 812,291. (Cl. 24—139.)



A clothes pin constructed of a single piece of wire bent to form an upright ring, the end portions of the wire meeting at the top of the ring, one of said portions being there coiled to provide a horizontal eye, and the other end portion being continued upwardly through said eye and then bent downwardly across the center of the ring to form a gripping finger, the latter having its intermediate portion curved into the ring and bent to form an upright coil, said coil acting as a combined clothes line stop and resilient connection between the two ends of the finger, and the lower end of the latter being curved outwardly to facilitate the engagement of the pin with the line.

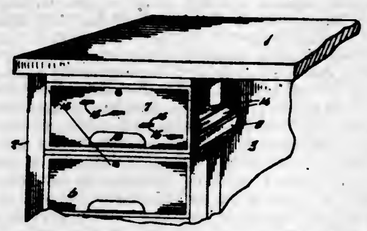
1,156,811. **SPIKE.** LLEWELLYN E. PRINCE, West Warren, and FLOYD J. MERRILL, Windham, Pa. Filed Feb. 15, 1915. Serial No. 8,367. (Cl. 85—23.)



1. A spike including a sleeve, a plurality of anchoring projections on said sleeve, a spike threaded into said sleeve, an annular flange on said spike having a transverse aperture, a radial projection or rib on said sleeve, and a locking pin removably positioned through said aperture and engaging said radial rib to lock said spike and sleeve against relative rotation.

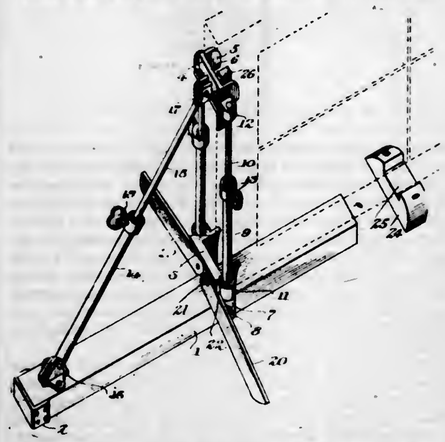
2. A spike including a sleeve, a shank threaded into said sleeve, a projection on said sleeve, and a locking pin associated with said spike adapted to engage said projection to lock said spike and sleeve against relative rotation.

1,156,812. **REFERENCE DEVICE FOR DESKS AND THE LIKE.** EDWIN R. PROBERT, Covington, Ky., assignor to The Moeschl-Edwards Corrugating Company, Covington, Ky., a Corporation of Kentucky. Filed Feb. 7, 1913. Serial No. 746,769. (Cl. 45—2.)



A ready-reference file device comprising a vertical series of horizontal plates of metal or other suitable material adapted to receive duly-attached paper sheets of classified information on one or both faces of each plate, reinforcing hems made along the opposite longitudinal edges or sides of each plate, indexed tabs or handles projecting from the outer ends of the respective plates, a drawer-front having short slots or elongated openings made therein and adapted to freely accommodate the said indexed tabs or handles of each of said plates so that the outer ends of said indexed tabs can project a suitable viewing and manipulating distance from the face of said drawer-front and so that each plate can be drawn outwardly with said drawer-front independent of the other plates, and crimped sheets or strips of metal forming guide-ways adapted to the sliding and supporting engagement of the opposite longitudinal edges or sides of said plates.

1,156,813. **SASH AND DOOR HOLDER.** PETER W. RASMUSSEN, Crawford township, Antelope county, Nebr. Filed July 3, 1915. Serial No. 38,002. (Cl. 144—296.)



1. A carpenter's implement including a base strip, a supporting member pivotally connected thereto, and comprising approximately U-shaped head and foot members, and telescopic connectors between said members.

2. A carpenter's implement including a base strip, a supporting member pivotally connected thereto, and comprising approximately U-shaped head and foot members, and telescopic connectors between said members, and a brace strut involving telescopically connected members, said members being respectively pivoted to the base strip and to the supporting member.

3. A carpenter's implement including a base strip, a supporting member pivotally connected thereto, and com-

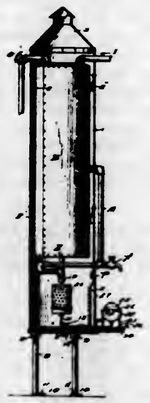
prising approximately U-shaped head and foot members, and telescopic connectors between said members, and lateral brace members pivotally connected to the supporting member.

4. A carpenter's implement including a base strip, a supporting member pivotally connected thereto, and comprising approximately U-shaped head and foot members, and telescopic connectors between said members, and lateral brace members pivotally connected to the supporting member, and means carried by the supporting member for bracing the lateral strips against upward movement.

5. A carpenter's implement including a base strip, a supporting member pivotally connected thereto, and comprising approximately U-shaped head and foot members, and telescopic connectors between said members, and lateral brace members pivotally connected to the supporting member, the foot section of the supporting member having a ledge to overlie and bear upon the lateral brace strips when the latter are positioned for use.

[Claims 6 to 8 not printed in the Gazette.]

1,156,814. WATER-HEATER. CHARLES E. REED, Bartow, Fla. Filed Feb. 24, 1915. Serial No. 10,291. (Cl. 122—19.)



1. In a water heater, the combination with a stand boiler and its inlet and outlet pipes, a jacket inclosing the boiler and constituting a flue, the jacket extending beneath the lower end of the boiler and having an opening in its front side, and a supporting stand for the jacket; of a shelf extending through said opening inside and outside the jacket and having guides along its edges, a slide having flanged edges movably mounted in said guides and a handle at its front end, a heating element mounted on said slide and including a burner at its inner end, and a shield rising from the slide forward of the burner and adapted to close said opening.

2. In a water heater, the combination with a stand boiler and its inlet and outlet pipes, a jacket inclosing the boiler and constituting a flue, the jacket extending beneath the lower end of the boiler and having an opening in its front side, and a supporting stand for the jacket; of a shelf extending through said opening inside and outside of the jacket and having guides along its edges, a slide above the shelf having its edges movably mounted in said slides, a shield rising from the mid-length of the slide and adapted to close said opening in the jacket, the shield having a hole, and a heater including a burner mounted on the slide at one side of said shield, a tank mounted thereon at the other side, and a pipe connecting these elements and passing through said hole.

3. In a water heater, the combination with a stand boiler having inlet and outlet pipes, a pipe connecting its mid-length with its lower end and having a coil standing beneath said end, and a jacket surrounding the boiler and constituting a flue, the jacket depending below the boiler and having a hole in its front; of a shelf leading through said hole, a slide movably mounted on the shelf, a shield rising from its mid-length and adapted to close the hole, and a heater comprising a burner on the inner end of the shelf adapted to stand under the coil when the shield closes said hole, a tank on the outer end of the shelf, and connections between the burner and the tank.

4. In a water heater, the combination with a stand boiler, an upright cylindrical casing inclosing the boiler and extending above and below it, brackets spacing these elements to produce an annular space around the boiler, the casing having a hole in its front below said boiler, and a heating unit adapted for insertion and removal through said hole; of a stand comprising a ring beneath the lower end of the casing, longitudinally adjustable legs supporting said ring, angle brackets within the casing, and bolts connecting said brackets with the ring.

1,156,815. COMBINED VANITY-BOX AND PROGRAM. WILLIAM G. RESTORFF, Washington, D. C., assignor of one-half to Martin McDonald, Washington, D. C. Filed Mar. 18, 1914. Serial No. 825,629. (Cl. 206—38.)



1. In an article of the class described, a back, containers supported by the back in juxta-position to each other, a pad upon the back adjacent one of said containers, and a lid for each container and a cover for the pad, the lids and cover being hingedly connected with the walls of one of said containers.

2. In an article of the class described, containers supported in juxta-position to each other, a pad supported adjacent one of said containers, and a lid for each container and a cover for the pad, the lids being hingedly connected with one wall of one of the containers and the cover for the pad being hingedly connected with the opposite wall of the said container.

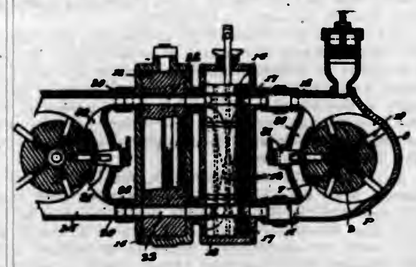
3. In an article of the class described, containers supported in juxta-position to each other, a lid for each container, the said lids and one wall of one of the containers being provided with intermitting pintle lugs, a pintle pin passed through said lugs and hingedly connecting the said lids with the said wall, a pad, and a cover for the pad hingedly connected to the opposite wall of the said container.

4. In an article of the class described, containers supported in juxta position to each other, one of said containers being provided upon one wall with spaced pintle lugs, a lid for the other container provided at one end with spaced pintle lugs, a lid for the first-mentioned container provided with spaced pintle lugs fitting between the lugs upon the said wall of the container and the lugs of the first-mentioned lid, a pintle pin fitted through the lugs, and means upon the said wall of the said first-mentioned container for limiting the opening movement of the lid of the second-mentioned container.

5. In an article of the class described, containers supported in juxta position to each other, one of said containers being provided upon one wall with spaced pintle lugs, a lid for the other container provided at one end with spaced pintle lugs, a lid for the first-mentioned container provided with spaced pintle lugs fitting between the lugs upon the said wall of the container and the lugs of the first-mentioned lid, a pintle pin fitted through the lugs, a spring upon the pintle pin between the lugs upon the container arranged to swing the lid for the second-mentioned container to open position, and a guard upon the said wall of the first-mentioned container extending across the space between the said lugs upon the said wall and constituting a guard for the said spring.

[Claims 6 to 11 not printed in the Gazette.]

1,156,816. HYDRAULIC TRANSMISSION MECHANISM. CHARLES C. RICH, Mount Vernon, N. Y., assignor to The Hydro-Kinetic Transmission Company, Mount Vernon, N. Y., a Corporation of Maine. Filed July 23, 1910. Serial No. 573,566. (Cl. 138—3.)



1. In hydraulic transmission mechanism, a pump, a motor, a speed controlling valve interposed between the pump and motor and controlling the communication between the two, and a reversing valve mechanism interposed between the pump and speed controlling valve, said reversing valve mechanism including a casing with pairs of opposite ports and a longitudinally slidable piston in said casing, said piston being formed with grooves and cross passages, the grooves being spaced from each other a distance equal to the distance between the pairs of opposite ports of the casing, and the cross passages terminating correspondingly at a distance apart equal to the distance between said pairs of ports, for the purpose specified.

2. In a hydraulic transmission mechanism, a pump, a plurality of motors, a speed controlling valve mechanism interposed between the pump and the motors, said valve mechanism including a spool formed with branch passages extending therethrough and arranged to establish communication between the pump and both motors simultaneously, the spool being also formed with peripheral grooves extending longitudinally and arranged to connect the outlet and inlet ports of the respective motors and pump, whereby to permit them to run free and independent of each other, the spool being further formed with another groove arranged to permit one motor to run free and disconnected from the pump with the valve in such position that its transverse passages will establish communication between the other motor and the pump.

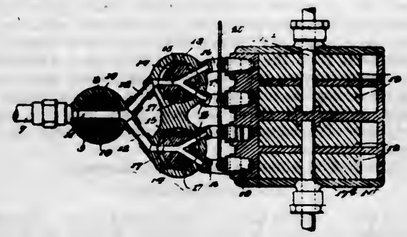
3. In hydraulic transmission mechanism, a pump, a motor, a speed controlling valve interposed between the pump and motor and controlling the communication between the two, and a reversing valve mechanism also interposed between the pump and motor, said reversing valve mechanism including a cylinder with opposite ports, and a longitudinally movable piston in said cylinder, the piston being formed in its periphery with annular grooves and with cross passages, for the purpose specified.

4. In hydraulic transmission mechanism, a pump, a motor, a speed controlling valve interposed between the pump and motor and controlling the communication between the two, and a reversing valve mechanism also interposed between the pump and motor, said reversing valve mechanism including a cylinder with opposite ports, and a longitudinally movable piston in said cylinder, the piston being formed in its periphery with annular grooves and with cross passages, the piston being further formed with displacement passages extending therethrough from end to end.

5. Hydraulic transmission mechanism comprising a pump, a motor, a cylindrical valve casing disposed between the pump and the motor having spaced ports in its walls near each end, one port near each end being in communication with the pump and the other port being in communication with the motor, a reversing valve slidable longitudinally in said casing and provided near each end with a duct disposed in a radial plane of the valve to directly connect the ports at the adjacent end of the valve casing, said valve being further provided with a pair of diagonally extending ducts disposed in offset relation to the first-mentioned ducts and each adapted to connect that port at one end of the casing which is in communication with the pump with that port at the opposite end of the casing which is in communication with the motor, and means for shifting the valve whereby to bring either set of ducts into communication with the ports.

[Claim 6 not printed in the Gazette.]

1,156,817. HYDRAULIC TRANSMISSION MECHANISM. CHARLES C. RICH, Mount Vernon, N. Y., assignor to The Hydro-Kinetic Transmission Company, Mount Vernon, N. Y., a Corporation of Maine. Filed July 23, 1910. Serial No. 573,567. (Cl. 138—3.)



1. In hydraulic transmission mechanism, the combination of a pair of duplex motors, shaft sections to which the rotors of said motors are respectively connected, speed controlling valves arranged to control the inlet and outlet ports of all of the motors simultaneously or of one part of each duplex motor independently of the other, a reversing valve mechanism co-acting with said speed controlling valves, means for operating the speed controlling valves, means for operating the reversing valve mechanism, a pump operatively connected to the motors through the speed controlling valves and reversing valve mechanism, and means for actuating said pump. controlling valves, and means for actuating said pump.

2. In hydraulic transmission mechanism, the combination of a pair of duplex motors, shaft sections to which the rotors of said duplex motors are connected respectively, a valve casing, a pair of speed controlling valves mounted in said casing and arranged to open the inlet and outlet ports of all of the motors simultaneously, or of one part of each duplex motor independently of the other, a reversing valve mechanism including a cylinder operatively connected to said valve casing and arranged to pass the motive fluid to and from the same, a single pump the outlet and inlet portions of which are connected to the cylinder, the cylinder and reversing valve forming a part thereof being interposed between the pump and both of said speed controlling valves and serving both of the latter, means for simultaneously moving said speed controlling valves, and means for actuating said pump.

3. In hydraulic transmission mechanism of the character described, the combination of a pump, a motor, a speed controlling valve interposed between the motor and

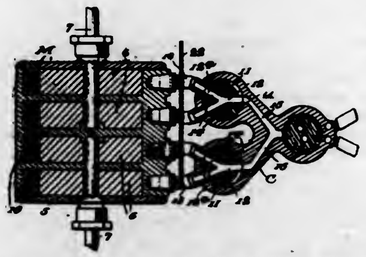
pump, and a reversing valve interposed between the speed controlling valve and the pump and embodying a piston formed with straight transverse passages extending therethrough and with oppositely extending oblique peripheral grooves, said passages being adapted to pass the fluid from and to the pump and motor in a direction to propel the motor forwardly, and the grooves being arranged to change the direction of flow from the valve and motor rearwardly.

4. In hydraulic transmission mechanism, the combination of a pair of duplex motors including each two rotors, shaft sections to which the rotors of said motors are respectively connected, a pump, means for operating the pump, selecting valves whereby the motive fluid may be directed to both of the rotors of each pair or to only one of said rotors, said selecting valves being arranged to connect the inlet and outlet ports of the motors with each other and thereby disconnect the motors from the pump, a reversing valve mechanism interposed between the pump and the selecting valves and the motors, means for actuating the selecting valves, means for actuating the reversing valve mechanism, the motors being formed with by-pass openings whereby to connect the inlet and outlet ports of the motors with each other independently of the selecting valves, and means for simultaneously operating the valves in said by-passes.

5. In hydraulic transmission mechanism, the combination of a pair of duplex motors including each two rotor shaft sections to which the shaft sections of said motors are respectively connected, a pump, means for operating the pump, means whereby the outlet and inlet ports of the pump may be connected directly to the outlet and inlet ports of the several motors or to the outlet and inlet ports of one motor of each pair of rotors, said means also being arranged to connect the inlet and outlet ports with each other and thereby disconnect said outlet and inlet ports from the pump, a reversing valve mechanism interposed between the pump and the motors, and means for connecting the inlet and outlet ports of each motor together to thereby disconnect said ports from the pump and allow the motors to operate independently of the pump.

[Claims 6 to 8 not printed in the Gazette.]

1,156,818. HYDRAULIC TRANSMISSION MECHANISM. CHARLES C. RICH, Mount Vernon, N. Y., assignor to The Hydro-Kinetic Transmission Company, Mount Vernon, N. Y., a Corporation of Maine. Filed July 23, 1910. Serial No. 573,568. (Cl. 138—3.)



1. In hydraulic transmission mechanism, the combination of pumping mechanism, a plurality of hydraulic motors, the pumping mechanism being set with its ports facing the ports of the motors, a single valve casing interposed between the pumping mechanism and the motors and closely coupled directly thereto in communication with the ports thereof, speed controlling valves mounted in said casing and operable to pass the fluid to and from the pumping mechanism and the motors simultaneously and to also pass the motive fluid from and to the pumping mechanism, and to sundry of said motors independently of the others, whereby to secure different speeds, and a single reversing valve also embodied in the same casing with the speed controlling valves and interposed between the latter and the pumping mechanism, so as to control the direction of flow of the motive fluid to and from the speed controlling valves and also through the same to the motors.

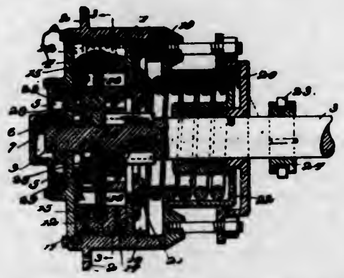
2. In hydraulic transmission mechanism, the combination of pumping mechanism, a plurality of sets of hydraulic motors, a single valve casing interposed between the pumping mechanism and the sets of motors, having a portion disposed directly opposite each set of motors and in communication with the ports thereof, speed controlling valves mounted in said casing and operating to pass fluid to and from the pumping mechanism and the motors simultaneously and to also pass the motive fluid from and to the pumping mechanism, and to certain of said motors independently of the other motors whereby to secure different speeds, and a single reversing valve mounted in the same casing with the speed controlling valves and interposed between the latter and the pumping mechanism to control the direction of flow of the motive fluid to and from the speed controlling valves and also through the same to the motors.

3. In hydraulic transmission mechanism, the combination with pumping mechanism, of opposed shaft sections, a plurality of motors mounted on each of said shaft sections, means for directing fluid from the pumping mechanism in one direction through all of the motors on each shaft or through certain of the motors on each shaft, and means for reversing the direction of movement of the flow through said motors.

4. In hydraulic transmission mechanism, a pair of pumps, bevel gear wheels disposed between said pumps for operating the same, a prime mover engaging both of said gear wheels, a plurality of sets of hydraulic motors, each set comprising a plurality of motors, means for directing fluid from both of said pumps in one direction through all of the motors of both sets, or through certain of the motors of both sets, and means for reversing the direction of movement of the flow through said motors.

5. In hydraulic transmission mechanism, the combination with pumping mechanism, of two pairs of hydraulic motors, two valve chambers, one for each pair of motors, each valve chamber having two pairs of passages extending one pair to each of the motors of a pair, valves one in each valve chamber adapted to direct fluid either into both motors connected thereto or only into one of said motors, a reversing valve chamber having ducts leading therefrom to the first named valve chambers, and having a duct leading therefrom to the pumping mechanism, and a valve in said chamber for reversing the flow of motive fluid through the motors.

1,156,819. CLUTCH. CHARLES CLAYTON RICH, Mount Vernon, N. Y., assignor to The Hydro-Kinetic Transmission Company, a Corporation of Maine. Filed Oct. 9, 1911. Serial No. 653,681. (Cl. 192—18.)



1. A fluid pressure clutch, including a driven shaft, a rotor mounted thereon, a casing in which the rotor is eccentrically mounted and movable longitudinally, the line of shaft being considered, and means for moving said rotor toward and away from one head of the casing to compress the fluid between the circular wall of the casing and the

rotor, upon the movement of the rotor longitudinally in one direction and to provide a free space for the circulation of the fluid between said head and the adjoining face of the rotor upon the longitudinal movement of the rotor in the opposite direction.

2. A fluid pressure clutch including a driven shaft, a rotor movable longitudinally thereon but compelled to turn therewith, the shaft being longitudinally movable, a casing in which the rotor is mounted, means tending to move the rotor in one direction in the casing, a jaw carried by the casing and a jaw carried by the shaft, the shaft being movable independently of the rotor in a longitudinal direction to effect the engagement of the two jaws.

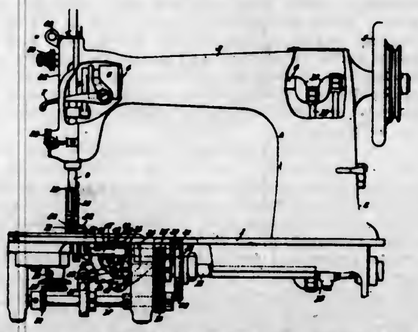
3. A fluid pressure clutch including a driven shaft, a rotor mounted thereon, a casing in which the rotor is mounted, means tending to move the rotor in a direction to hydraulically connect the rotor and casing, and means whereby a movement of the shaft longitudinally independent of the rotor will subsequently mechanically connect said shaft and casing.

4. In a clutch of the character described, the combination of a longitudinally movable driven shaft, a rotor mounted on said shaft, the shaft being capable of a limited longitudinal movement independent of the rotor, means for moving the rotor in a direction to hydraulically connect the rotor and casing, the rotor being compelled to turn with the shaft, and means for mechanically connecting the casing and shaft upon a continued movement of the shaft independently of the rotor.

5. A fluid pressure clutch including a driven shaft, a rotor splined thereon, a casing in which the rotor is mounted, the rotor being formed in one side with a chamber, means for moving the rotor in a direction to hydraulically connect the casing and rotor, a jaw carried by the casing, and a complemental jaw carried by the shaft and mounted for movement in said chamber, for the purpose specified.

[Claims 6 to 10 not printed in the Gazette.]

1,156,820. OVEREDGE SEWING-MACHINE. JOHN C. RINGS, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed June 6, 1914. Serial No. 843,334. (Cl. 112—24.)



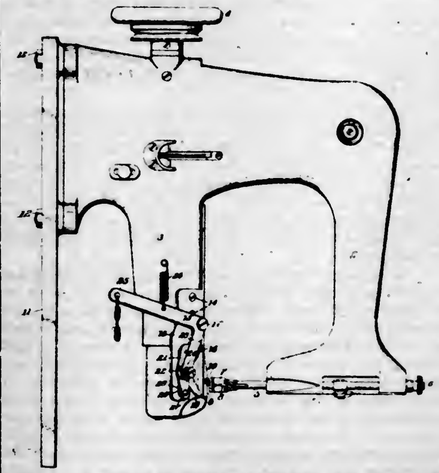
1. In an overseaming sewing machine, the combination with a stitch-forming and cloth-feeding mechanism including a throat-plate, a needle provided with an upper thread and a loop-taker provided with a mass of under thread, of a needle-thread looper actuated to deliver said upper thread in the form of a loop over the free edge of the fabric being acted on and present said loop beneath said fabric to be entered by said needle and concatenated with said under thread, said actuating means including a cam member having one complete actuation to a like actuation of the needle for giving to said looper rocking movements, and a cam-member having two complete actuations to one of said needle to give to said looper oppositely directed lateral movements at the upper, and at the under side of said throat-plate.

2. In an overseaming sewing machine, the combination with a stitch-forming and cloth-feeding mechanism including a throat-plate, a needle carrying an upper thread and a loop-taker provided with a mass of under thread, of a needle-thread looper actuated to deliver said upper thread in the form of a loop over the edge of the fabric and present said loop beneath said throat-plate to be entered by said needle and concatenated with said under thread, said actuating means including a cam-member for giving to said looper substantially uniform rocking movements and a cam-member for giving to said looper accelerated and retarded lateral movements, in the formation of a given stitch.

3. In an overseaming sewing machine, the combination with a stitch-forming and cloth-feeding mechanism including a rock-shaft, a bell-crank lever, a throat-plate, a needle provided with an upper thread and a loop-taker provided with a mass of under thread, of a needle-thread looper actuated to deliver said upper thread in the form of a loop over the free edge of the fabric being acted on and present said loop beneath said fabric to be entered by said needle and concatenated with said under thread, said actuating means including a heart-shaped cam-member operatively connected with said looper through said rock-shaft, and an eccentric cam-member operatively connected with said looper through the bell-crank lever, said rock-shaft and bell-crank lever acting to transmit to said looper rocking and lateral movements, respectively.

4. In an overseaming sewing machine, the combination with a stitch-forming and cloth-feeding mechanism including a rock-shaft provided with a looper carrying bracket, a bell-crank lever, a throat-plate, a needle provided with an upper thread and a loop-taker provided with a mass of under thread, of a needle-thread looper actuated to deliver said upper thread in the form of a loop over the free edge of the fabric being acted on and present said loop beneath said fabric to be entered by said needle and concatenated with said under thread, said actuating means including a heart-shaped cam-member operatively connected with said looper through said rock-shaft and looper carrying bracket, and an eccentric cam-member operatively connected with said looper through the bell-crank lever, said rock-shaft and bell-crank lever acting to transmit to said looper carrying bracket, rocking and lateral movements, respectively.

1,156,821. THREAD-CUTTING MECHANISM FOR SEWING-MACHINES. ALBERT RONTKE, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Aug. 2, 1912. Serial No. 712,843. (Cl. 112—33.)

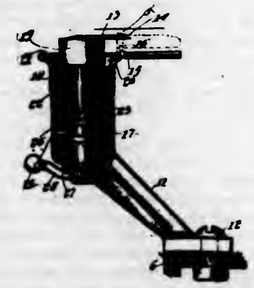


1. In a sewing machine, the combination with a bed-plate, of a thread-cutting mechanism normally located at

one side of the line of seam formation, said cutting mechanism comprising a cutter-actuating lever provided with pivotally attached cutting blades resiliently held in cutting relationship and movable across the line of seam formation, each of said blades being provided with a guide arm, of stationary guiding elements in effective relation with said guide arms to impart shearing movements to said blades as the latter are moved across the line of seam formation.

2. In a sewing machine, the combination with a bedplate, of a thread-cutting mechanism normally located at one side of the line of seam formation, said cutting mechanism comprising a cutter base-plate secured to said bedplate, a cutter-actuating lever pivotally mounted on said base-plate and provided with pivotally attached cutting blades resiliently held in cutting relationship, each of said blades being provided with a guide arm in effective relationship with said base-plate to impart shearing movements to said blades as the latter are moved across the line of seam formation.

1,156,822. RIND-CUTTING MACHINE. GEORGE J. SAYER, Chicago, Ill. Filed July 11, 1914. Serial No. 850,460. (Cl. 17—24.)



1. A rind cutting attachment for meat slicing machines comprising a knife adapted to project into the path of the meat as it moves toward the slicing knife to cut an incision in said meat, a carrier for said knife, and means for actuating said carrier to move said knife into and out of the path of said meat and simultaneously raise and lower said knife to control the thickness of the rind strip.

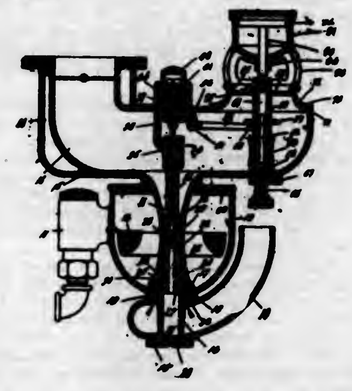
2. A rind cutting attachment for meat slicing machines comprising a knife adapted to project into the path of the meat as it moves toward the slicing knife to cut an incision in said meat, a carrier for said knife upon which said knife is eccentrically mounted, and means for rotating said carrier and simultaneously raising or lowering the same to thereby control both the depth and the thickness of the rind strip.

3. A rind cutting attachment for meat slicing machines comprising a knife adapted to project into the path of the meat as it moves toward the slicing knife to cut an incision in said meat, a carrier for said knife upon which said knife is eccentrically mounted, a support for said carrier, and means including an inclined runway for rotating said carrier to thereby control the elevation of said knife and the depth of the projection of said knife into the meat.

4. A rind cutting attachment for meat slicing machines comprising a knife adapted to project into the path of the meat as it moves toward the slicing knife to cut an incision in said meat, a carrier for said knife upon which said knife is eccentrically mounted, a support for said carrier, and means including an inclined runway for rotating said carrier to thereby control the elevation of said knife and the depth of the projection of said knife into the meat, said inclined runway having a plurality of steps to serve as resting positions for said meat carrier.

5. A rind cutting attachment for meat slicing machines comprising a knife adapted to project in one of its limiting positions into the path of the meat as it moves toward the slicing knife to cut an incision in said meat, a face plate, a carrier for said knife, and means for actuating said carrier to project said knife into the path of the said meat and simultaneously raise said carrier, or to retract and lower the said knife whereby the said knife is lowered upon said face plate so that said face plate serves as a guard for the knife edge when not in use, said face plate having a size sufficient to project beyond the edge of said knife when said knife is in its lowermost position thereon.

1,156,823. CARBURETER. GEORGE M. SCHEELER, Indianapolis, Ind., assignor to Frank H. Wheeler, Indianapolis, Ind. Filed Feb. 5, 1912, Serial No. 675,429. Renewed Sept. 4, 1915. Serial No. 49,121. (Cl. 48—154.1.)



1. A carbureter comprising a main hollow body forming a mixture chamber and having a mixture outlet, an air inlet, and a depending tubular stem forming a primary mixture inlet intermediate the said air inlet and mixture outlet and not in alinement therewith, a fuel nozzle arranged in said stem and having an upwardly directed discharge end with a needle valve seat formed therein, a needle valve projected downwardly into said seat, a carrier head for said needle valve, an axially adjustable connection between said carrier head and the needle valve, an air valve arranged in the air inlet, and intermediate connections between the said air valve and the needle valve head whereby opening movement of the air valve will produce proportioned opening movement of the needle valve.

2. A carbureter comprising a main hollow body forming a mixture chamber and having a mixture outlet, an air inlet, and a depending tubular stem forming a primary mixture inlet intermediate the said air inlet and mixture outlet and not in alinement therewith, a fuel nozzle arranged in said stem and having an upwardly directed discharge end with a needle valve seat formed therein, a needle valve projected downwardly into said seat, a carrier head for said needle valve, an air valve arranged in the air inlet, and intermediate connections between the said air valve and the needle valve head whereby opening movement of the air valve will produce proportioned opening movement of the needle valve.

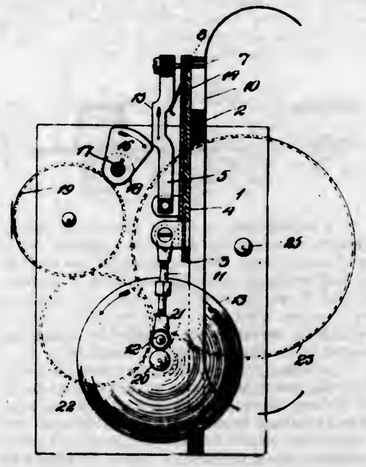
3. A carbureter comprising a main hollow body having an air inlet, a mixture outlet, and a depending tubular stem forming a primary mixture inlet, a fuel nozzle arranged within said tubular stem and communicating with a fuel sump therein, a fuel reservoir surrounding said depending stem and communicating with the fuel nozzle by passages extending from the fuel reservoir to said sump, a primary air inlet structure sleeved upon the depending stem and communicating with the interior thereof, and a clamping nut threaded upon the said stem and clamping both the primary air inlet structure and the fuel reservoir in place upon the stem.

4. In a carbureter, a fuel nozzle having a discharge outlet and a needle valve seat adjacent said outlet, a needle valve associated with said valve seat and extending above the same, a head to which said needle valve is flexibly connected, and a tubular guard surrounding said needle valve for the major portion of its length above the valve seat, said nozzle and said tubular guard having interengaging portions.

5. A carbureter comprising a main hollow body forming a mixture chamber having an air inlet, a mixture outlet, and having a primary mixture inlet passage intermediate the air inlet and the mixture outlet, a fuel nozzle arranged within said primary mixture inlet passage, a valve associated with said fuel nozzle, a head carrying said valve, a connection between said head and valve whereby the valve may be adjusted relative to the head and the valve seat, an air valve associated with the air inlet, a lever connecting the air valve and fuel valve head, and a rotatable eccentric support for the fulcrum of said lever whereby the valve may be adjusted relative to its seat independent of the connection between the valve and the valve carrying head.

[Claims 6 to 8 not printed in the Gazette.]

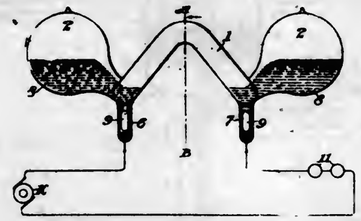
1,156,824. MOTION-PICTURE MACHINE. OSCAR SCHWIMMER, Los Angeles, Cal. Filed Nov. 4, 1912. Serial No. 729,491. (Cl. 88—18.4.)



1. In a motion picture machine, a perforated film, a rake to engage the perforations in said film, a slide on which said rake is pivotally supported, a fly wheel, an adjustable connection between said fly wheel and slide to transmit reciprocatory movement to said rake, a shaft, a cam on said shaft and in operative relation to said rake, means to rotate said cam synchronously with the reciprocation of said rake to cause said rake to engage the perforations in and advance said film in one direction, and a spring to cause a disengagement of said rake from the perforations in said film at the end of a movement thereof in one direction.

2. In a motion picture machine, a film, and a means to intermittently move said film comprising a film engaging member, a slide on which said member is mounted, a disk, an adjustable crank connection between said slide and disk, means to impart movement to said disk to reciprocate said slide, a cam independently mounted and in operative relation to said cam member to cause said member to engage said film during the reciprocation thereof in one direction, means to rotate said cam synchronously with the reciprocation of said slide, and a spring on said slide to disengage said member from said film at the end of a movement thereof in one direction.

1,156,825. GAS OR VAPOR ELECTRIC APPARATUS. PERCY H. THOMAS, Upper Montclair, N. J., assignor to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Sept. 12, 1912. Serial No. 719,923. (Cl. 176—43.)



1. A mercury vapor lamp comprising a W-shaped container, the central portion constituting a light giving-path and the end portions enlarged to act as condensing chambers, mercury in the lower portions of said container acting as electrodes and as seals between the center portion and the end portions in the non-operating and in the subnormal condition of the lamp, said end portions acting as condensing chambers during the steadying operations when the mercury vapor pressure in the central portion of the condenser causes an escape of vapor to said condensing chambers.

2. In a vapor apparatus, steadying means comprising a main operating portion, electrodes therein and supplementary condensing surface normally closed from said main portion, in combination with means responsive to pressure above normal in the operating portion permitting escape of vapor from the operating portion to the supplementary condensing surface.

3. A vapor device, comprising three parts, namely, a central portion containing mercury and two condensing chambers, and means including a W shaped container and pivoting means permitting movement of the container to separate the mercury in said central portion into two electrodes and thereafter to enable vapor to escape from said central portion to the condensing chambers on any excess of pressure above a definite minimum.

4. The method of regulating the vapor pressure in the vapor path of a high pressure mercury vapor apparatus, which consists in utilizing the excess mercury vapor pressure accompanying an abnormal rise in the temperature of the lamp to open a free passage for the escape of the mercury vapor into a fresh condensing space.

5. A mercury vapor apparatus comprising a sealed container exhausted to a high degree of purity and a central light-giving portion normally filled with mercury in the non-operating position, and means for utilizing outwardly generated heat to establish a vapor path in said central portion and inwardly generated pressure to limit the further development of said pressure but only when a certain predetermined minimum is reached.

[Claim 6 not printed in the Gazette.]

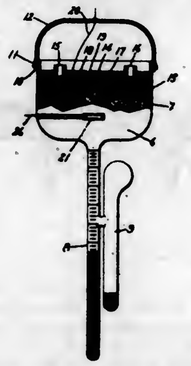
1,156,826. ELECTROLYTIC METER. JAMES NORWOOD TUTTLE, Harwichport, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 11, 1912. Serial No. 725,219. (Cl. 171—266.)

1. In an electrolytic meter having a mercury anode, an electrolyte, and a diaphragm forming a support for the mercury anode, said diaphragm being finely woven of a material permeable to, unaffected by and substantially nonshrinking in said electrolyte.

2. In an electrolyte meter having a mercury anode, an electrolyte, and a diaphragm of silk forming a support for the mercury anode, said diaphragm being permeable to the electrolyte and impermeable to mercury.

3. In an electrolytic meter having a mercury-anode, an electrolyte, and a diaphragm of belting cloth forming a support for the mercury anode.

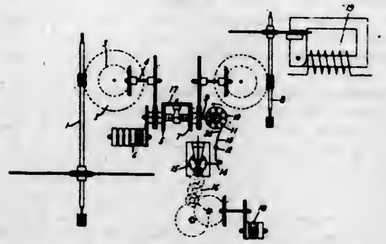
4. An electrolytic meter having a mercury anode, an electrolyte, and a diaphragm of finely woven silk fabric separating the mercury anode and the electrolyte.



5. An electrolytic meter having a mercury anode, an electrolyte, a mercury cathode, and a diaphragm of silk separating the mercury cathode from the electrolyte, said diaphragm being permeable to the electrolyte and impermeable to mercury.

[Claims 6 to 12 not printed in the Gazette.]

1,156,827. ELECTRIC METER. JOSEPH VIVELL, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed May 24, 1912. Serial No. 699,424. (Cl. 171—272.)



1. The combination with an electric meter having a rotatable shaft, of a time-keeping mechanism, a register operatively related to said mechanism, means for locking said time-keeping mechanism to prevent its operation, and means for unlocking said time-keeping mechanism when the speed of rotation of said shaft exceeds a predetermined value whereby a registration is obtained upon said register of the total length of time the rate of metering of electric energy exceeded said predetermined value.

2. The combination with an electric metering mechanism, of a time-keeping mechanism, a register operatively related to said time-keeping mechanism and adapted to register the length of time said time-keeping mechanism operates, means normally locking said time-keeping mechanism to prevent its operation, and means for unlocking said time-keeping mechanism when the rate of metering of electric energy exceeds a predetermined value.

3. The combination with a time-keeping mechanism, of means responsive to the rate of consumption of electric energy in an electrical installation, a register operatively related to said time-keeping mechanism and adapted to register the length of time said time-keeping mechanism operates, means for locking said time-keeping mechanism to prevent its operation, and means operatively related to said first mentioned means and including a differential gearing for unlocking said time-keeping mechanism when the rate of consumption of electric energy exceeds a predetermined value.

4. The combination with a time-keeping mechanism, of a register operatively related thereto and adapted to register the length of time said mechanism operates, means responsive to the rate of consumption of electric energy in an electrical installation, means for normally preventing the operation of said time-keeping mechanism, and means operatively related to said first mentioned means for permitting said time-keeping mechanism to operate when the rate of consumption of electric energy exceeds a predetermined value whereby the total length of time that the rate of consumption of electric energy exceeded said predetermined value is registered upon said register.

5. The combination with an electric meter having a rotatable shaft, of a time-keeping mechanism, a register operatively related to said time-keeping mechanism and adapted to register the length of time said time-keeping mechanism operates, means normally preventing the operation of said time-keeping mechanism, and means including a time actuated member coöperating with the rotatable shaft of said meter and adapted to permit the operation of said time-keeping mechanism when the speed of rotation of said shaft exceeds a predetermined value whereby the total length of time that the rate of metering of electric energy exceeded said predetermined value is registered on said register.

[Claims 6 to 10 not printed in the Gazette.]

1,156,828. HAY-BALER. ISAAC E. WARD, Andale, Kans., assignor to The Fouquet-Ward Bale Tying Company, Andale, Kans., a Corporation of Kansas. Filed June 2, 1913. Serial No. 771,345. (Cl. 100—24.)



1. In a baling press, a baling chamber, a packer working therein, means at one side of the chamber for supporting a division block, an arm mounted for rocking movement and arranged to coöperate with a division block upon said supporting means to move the block into the baling chamber when the arm is rocked in one direction, and a slidably mounted cam arranged for actuation by the movement of the packer to rock the said arm.

2. In a baling press, a baling chamber, a packer working therein, means at one side of the chamber for supporting a division block, an arm mounted for rocking movement and arranged to coöperate with a division block upon said supporting means to move the block into the supporting chamber when the arm is rocked in one direction, a cam member arranged for actuation by movement of the packer to rock the arm, and means for holding the said cam in inactive relation to the packer, the said means being arranged for actuation by movement of a bale to release the cam for actuation.

3. In a baling press, a baling chamber, a packer working therein, means at one side of the chamber for supporting a division block, an arm mounted for rocking movement and arranged to coöperate with a division block upon said supporting means to move the block into the baling chamber when the arm is rocked in one direction, a cam mounted for sliding movement and for lateral movement and in its latter movement being arranged to be brought into and out of coöperative relation to the packer, the said cam being arranged for coöperation with the said arm when moved by the packer to rock the arm, and means for holding the cam in position out of the path of movement of the packer, the said means being arranged for actuation to release the cam for actuation.

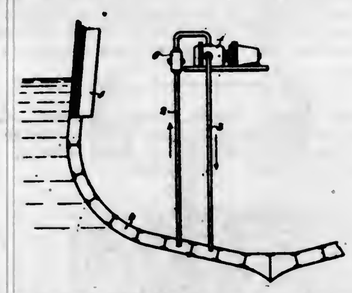
4. In a baling press, a baling chamber, a packer working therein, means at one side of the chamber for supporting a division block, an arm mounted for rocking movement and arranged to coöperate with a division block upon said supporting means to move the block into the baling chamber when the arm is rocked in one direction, a cam

mounted for sliding movement and for lateral movement and in its latter movement being arranged to be brought into and out of coöperative relation to the packer, the said cam being arranged for coöperation with the said arm when moved by the packer to rock the arm, and means for holding the cam in position out of the path of movement of the packer, the said means being arranged for actuation by the movement of a bale to release the cam for actuation by the packer.

5. In a baling press, a baling chamber, a packer working therein, means at one side of the chamber for supporting a division block, an arm mounted for rocking movement and arranged to coöperate with a division block upon said supporting means to move the block into the baling chamber when the arm is rocked in one direction, a member mounted beside the chamber and movable into and out of coöperative relation to the packer and arranged when in coöperative relation to the packer to be actuated by the movement of the packer and to rock the said arm, means for moving the said member into coöperative relation to the packer, and means arranged to restrain the member against such movement.

[Claims 6 to 14 not printed in the Gazette.]

1,156,829. COOLING DEVICE FOR ELECTRICAL MACHINES MOUNTED ON VESSELS. HEINRICH WEISS, Vienna, Austria-Hungary. Filed Aug. 5, 1915. Serial No. 43,884. (Cl. 257—1.)



1. The combination of a vessel having an air container, one wall of which is formed by the outer shell of the vessel and is in contact with the water in which the vessel floats, an air-jacketed motor or machine, conduits connecting the air container and the air jacket and forming therewith a closed air circuit, and means for maintaining a circulation of air in said circuit.

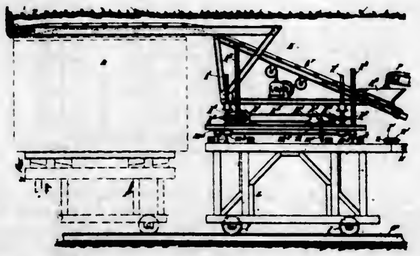
2. The combination of a vessel having inner and outer shells defining an air space, a motor or engine having an air jacket, conduits connecting the air jacket with the air space between the shells and forming therewith a closed air circuit, and means for maintaining a circulation of air through said circuit.

3. The combination of a vessel having inner and outer shells defining an air space, a motor or engine having an air jacket, conduits connecting the air jacket with the air space between the shells and forming therewith a closed air circuit, means for maintaining a circulation of air through said circuit, and a float valve to prevent the entrance of water through the inlet end of the inlet conduit.

1,156,830. METHOD OF AND APPARATUS FOR TUNNEL-WORK. EDWARD G. WILLIAMS and ELMER H. BROWN, Washington, D. C. Filed July 15, 1907. Serial No. 383,929. (Cl. 25—131.6.)

1. In a machine for tunnel work, the combination, with an arch form and a side-wall form, of an arch-concrete placing device arranged to place material over the arch-form, and an angularly movable conveyer arranged to supply material to the arch-concrete placing device and to the side-wall form.

2. In a machine for tunnel work, the combination, with an arch form, and a side-wall form, of an arch-concrete placing device arranged to place material over the arch form, and a concrete supplying mechanism arranged to supply material interchangeably to the arch-concrete placing device and to the side-wall form.



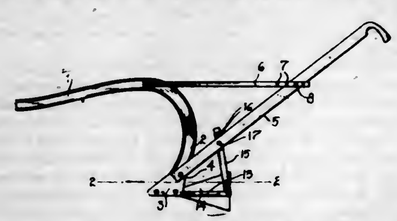
3. In a machine for tunnel work, the combination, with an arch form, and a pair of side-wall forms, of an arch-concrete placing apparatus mounted between the side-wall forms and arranged to place material over the arch-form, and an angularly movable concrete supplying mechanism arranged to supply material interchangeably to either side-wall form and also to the arch-concrete placing device.

4. In apparatus for constructing tunnels, the combination of an arch form, side-wall forms arranged in advance of the arch form, a concrete-placing mechanism arranged to place material over the arch form, a conveyer, and means for imparting an angular movement to the conveyer whereby it may supply material to the concrete placing mechanism or behind the side forms.

5. In apparatus for constructing tunnels, the combination of parallel tracks, an arch form arranged to travel on the outer tracks, a concrete-placing mechanism arranged to travel on the inner track, and to supply material over the arch form, and side forms arranged to travel on one rail each of both tracks.

[Claims 6 to 18 not printed in the Gazette.]

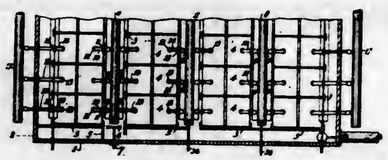
1,156,831. PLOW. SPENCER A. BARKER, Deport, Tex., assignor of one-half to William R. Magill, Deport, Tex. Filed Aug. 19, 1914. Serial No. 857,547. (Cl. 97—26.)



1. A plow including a beam, a standard, a knife blade, means pivotally connecting the blade adjacent to the lower end of the standard, handles pivotally connected to the standard above the pivot of the blade, an adjustable connection between the rear end of the blade and the handles, and an adjustable connection between the beam and the handles.

2. A plow including a beam, a standard, a pair of foot plates secured to the lower end of the standard on opposite sides thereof, a rearwardly extending knife bar pivotally secured at its forward terminal between the foot plates, a knife blade secured to the bar, handles pivotally connected to the standard above the pivot of the knife bar, an adjustable connection between the beam and the handles, brace members pivotally connected at its lower end to the knife bar, at the rear end thereof, said braces being pivotally connected at their upper ends to the handles and being adjustable with respect thereto, whereby the angle between the knife bar and the handles may be varied.

1,156,832. ICE-MACHINE. WILLIAM BLANKNER, Cleveland, Ohio, assignor of one-half to Charles G. Urshel, Trenton, N. J. Filed Oct. 6, 1914. Serial No. 865,253. (Cl. 62—108.)



1. In ice-making apparatus, the combination of a tank adapted to contain water to be congealed; a portable ice-mold positioned within said tank and having uninclosed ends and double walls spaced apart, the outer wall having an exterior covering of matter non-conductive of heat and cold; conduits for a refrigerant; readily-detachable connections intermediate said conduits and the space between the walls of said ice-mold; and means for forcing a current of the water contained in said tank through the said ice-mold.

2. In ice-making apparatus, the combination of a tank adapted to contain water to be congealed; conduits for a refrigerant; a portable ice-mold having uninclosed ends and double walls spaced apart, the entire exterior wall being covered with matter non-conductive of heat and cold, said mold being positioned in said tank with its open ends disposed in a substantially horizontal plane; connections intermediate said conduits and the space between the double walls of said ice-mold; means for passing a current of the water contained in said tank through the said ice-mold, and means whereby said ice-mold may be removed from said tank to harvest the ice formed therein.

3. In ice-making apparatus, in combination, a plurality of individual ice-molds freely open at their ends and having double walls spaced apart for the passage of a refrigerant, the outer walls and ends thereof being exteriorly covered with matter non-conductive of heat and cold; a water-receptacle within which said ice-molds are positioned in series; supply and exit headers for the refrigerant extending along the opposite ends of the said ice-molds, said headers having valved branches for each ice-mold; inlet and outlet pipe-sections for each mold; and means for creating a gentle flow of water through the molds during the freezing operation.

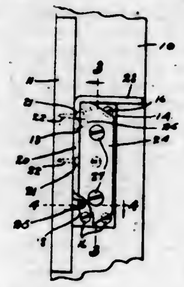
4. Apparatus for making ice-blocks from undistilled water; comprising a tank for containing the water, a plurality of open-ended double-walled refrigerating molds located substantially horizontally in said tank, and means for creating a gentle flow of water through said molds, thereby preventing the accumulation of impurities in suspension in said water in the forming ice, while permitting the ice to form in the molds in close correspondence to the formation of natural ice in flowing streams.

5. An ice-making apparatus, provided with a series of individual ice molds freely open at their ends and having double walls spaced apart for the passage of a refrigerating liquid, a water receptacle within which said molds are arranged in series, each mold standing on one of its inclosed sides; means for creating a gentle horizontal flow of water through the molds during the freezing operation, supply and exit headers for the refrigerating liquid extending along the opposite ends of the molds, said headers having valved branches for each mold, and inlet and outlet pipe sections for each mold, joined to said valved branches by detachable couplings.

[Claims 6 to 9 not printed in the Gazette.]

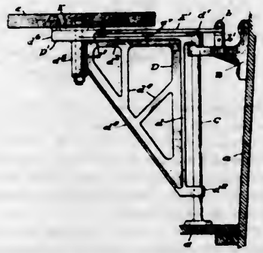
1,156,833. BED. ALFRED M. BONHARD, Cleveland, Ohio. Filed July 5, 1912, Serial No. 707,688. Renewed Mar. 3, 1915. Serial No. 11,876. (Cl. 5—55.)

In a device of the character indicated, the combination of an end-plate adapted to be mounted on the side post of the end of a bed, said end-plate being provided with a series of openings to receive screws for securing said end-plate to said post and also with a plurality of screw-threaded openings and having in one edge thereof a recess, a rail-plate adapted to be secured at one end of a side rail of a bed on the inner face thereof, said rail-plate having a series of openings through which screws may be passed for securing said rail-plate to the rail, said rail-plate being provided at its upper end with a horizontally



arranged flange and along one edge with a vertically arranged flange, said vertically arranged flange being provided on its outer surface with a lug adapted to enter the recess in the end plate and also having a series of openings which register with the screw-threaded openings in said end-plate and screws passing through said openings in said flange and into the screw-threaded openings in said end-plate.

1,156,834. SEAT. BRUCE BORLAND, Chicago, Ill., assignor to The Borland-Grannis Company, Chicago, Ill., a Corporation of New Jersey. Filed June 6, 1912. Serial No. 701,946. (Cl. 155—22.)



1. In a device of the class described, a horizontally swinging arm having a pivotal support, a disk on the free end of the arm, a base having a seat portion and rotatably mounted on the disk, a link pivoted at its outer end on the base and at its other end eccentric to the pivot of the arm, and co-acting means on the link and arm to cause the outer end of the link to cross the arm when the latter is swung on its pivot.

2. In a device of the class described, a bracket, a horizontally swinging arm having a pivotal support on the bracket, a disk on the free end of the arm having a pair of stops, a base having a seat portion and rotatably mounted on the disk, a link pivoted at its outer end on the base in the line of the stops and at its other end on the bracket eccentric to the pivot of the arm, and co-acting means on the link and arm to cause the outer end of the link to cross the arm when the latter is swung on its pivot.

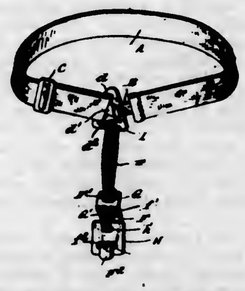
3. In a device of the class described, a bracket, a horizontally swinging arm having a pivotal support near the end of the bracket, a disk on the free end of the arm having opposite stops, a base having a seat portion and rotatably mounted on the disk, a link pivoted at its outer end on the base in the line of the stops and at its other end on the bracket in the rear of the pivot of the arm, and co-acting projections on the link and arm to cause the outer end of the link to cross the arm when the latter is swung on its pivot.

4. In a device of the class described, a horizontally swinging arm having a pivotal support, a disk on the free end of the arm, a base having a seat portion and rotatably mounted on the disk, a link overlying the arm and pivoted at its outer end on the base and at its other end in the rear of the pivot of the arm, a downwardly projecting lug on the link, and a pair of upwardly projecting lugs on the arm spaced apart to allow the lug on the link to pass between them and adapted to pivot the same when the arm is swung on its pivot.

5. In a device of the class described, a horizontally swinging arm having a pivotal support, a disk on the free end of the arm, a base having a seat portion and rotatably mounted on the disk, a link overlying the arm and pivoted at its outer end on the base and at its other end in the rear of the pivot of the arm, stops on the base coöperating with the link, a downwardly projecting lug on the link, and a pair of upwardly projecting lugs on the arm spaced apart to allow the lug on the link to pass between them and adapted to pivot the same when the arm is swung on its pivot.

[Claims 6 to 8 not printed in the Gazette.]

1,156,835. GARMENT-SUPPORTER. DANIEL G. BUTTS, New Orleans, La., assignor to The Ivory Garter Company, New Orleans, La., a Corporation of Louisiana. Filed Oct. 11, 1910. Serial No. 586,512. (Cl. 24—245.)

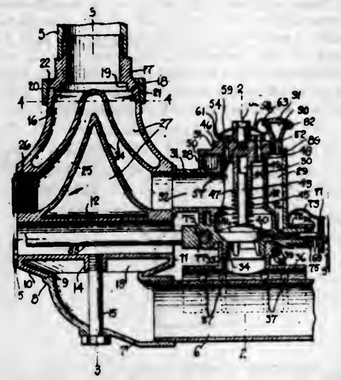


1. In a garment supporter, the combination with a supporting member of elastic vulcanized rubber, of connecting and clasp members to which the elastic vulcanized rubber supporting member is connected formed of celluloid neutral under oxidising conditions in its effect on the vulcanised rubber supporting member whereby the life of the rubber is prolonged.

2. In a garment supporter, the combination with a pliant supporting member having elastic vulcanised rubber incorporated therein, of a garment engaging clasp depending therefrom formed of non-metallic substance neutral in its effect on vulcanised rubber and embodying a clasp base having its upper and lower ends offset from the plane of the body and an aperture in its upper end for the reception of the pliant member and a clasp plate having an aperture therein for the reception of the lower off-set end of the base and a second aperture for the reception of the pliant member, the upper edge of the plate lying below the upper offset end of the base when the parts are in garment engaging position.

3. In a garment supporter, the combination with a pliant supporting member, of a garment engaging clasp depending therefrom and embodying a clasp base formed of celluloid having an aperture at the upper end for the passage of the pliant member and having its lower end offset and extended downwardly and a flat clasp plate formed of celluloid having an aperture therein for the reception of the offset portion of the base and an aperture near the top for the reception of the pliant member, the upper end of the plate being below the upper end of the base and the lower end of the plate confined behind the offset end of the base when the parts are in garment engaging position.

1,156,836. CARBURETER. CHARLES H. DIENER, Philadelphia, Pa. Filed Oct. 7, 1914. Serial No. 865,530. (Cl. 48—150.1.)



1. In a carbureter, the combination with the exhaust pipe of an engine, of a body provided with an exhaust receiving chamber and a gas passage extending through said body and opening upon the opposite sides thereof, a carbureter proper mounted upon the exhaust pipe and having a valve opened by suction whereby air is drawn into the carbureting chamber over the exhaust pipe, said carbureting chamber being connected to one end of the gas passage, fuel and water supply pipes extending through the exhaust receiving chamber of said body, and a single valve to uniformly control the flow of the fuel and water to the carbureter.

2. In a carbureter, the combination with the exhaust pipe of an engine, of a body connected to the exhaust pipe provided with an exhaust receiving chamber and a gas passage having diverging portions extending through the chamber and opening upon the opposite sides of said body, a carbureter proper mounted upon the exhaust pipe and connected to one end of said gas passage, a valve normally closing communication between the carbureting chamber and the atmosphere adapted to be opened by suction whereby air is drawn into the chamber over the exhaust pipe, said carbureter being provided with a fuel receiving chamber, a valve to control the supply of fuel to the carbureting chamber, fuel and water supply pipes extending through the exhaust chamber of said body, and a single valve to simultaneously and uniformly vary the feed of fuel and water through said pipes to the carbureter.

3. In a carbureter, the combination with the exhaust pipe of an engine, of a body connected to the exhaust pipe and provided with a gas passage having diverging portions opening upon opposite sides of said body, and said body being further provided with a tube below the gas passage, a carbureter proper mounted upon the exhaust pipe and connected to one end of the gas passage, a spring held valve opened by suction whereby air is drawn over the exhaust pipe into the carbureting chamber, an adjustable air valve to provide a constant supply of air to the chamber, fuel and water supply pipes extending through the tube of said body, said carbureter having passages opening upon the valve seat with which the respective pipes are connected, and a single adjustable valve for simultaneously and uniformly controlling the supply of oil and water to said passages.

4. In a carbureter, a body having an exhaust chamber and a gas passage including diverging portions opening upon the relatively opposite ends of said body, a tube integrally connecting the ends of said body and extending

through said exhaust chamber, a carbureter proper in communication with one end of the gas passage, and oil and water supply pipes extending through said tube and connected to the carbureter.

5. In a carbureter, a body having an exhaust chamber and a gas passage including diverging portions opening upon the relatively opposite ends of said body, a tube integrally connecting the ends of said body and extending through said exhaust chamber, a carbureter proper in communication with one end of the gas passage, oil and water supply pipes extending through said tube and connected to the carbureting chamber, and a valve for simultaneously and correspondingly varying the supply of oil and water to the carbureting chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,156,837. AUTOMATIC GRAVITY-VALVE. WALTER J. DOAN and HARRY C. DOAN, Richmond, Ind. Filed Jan. 2, 1914. Serial No. 809,967. (Cl. 137—32.)



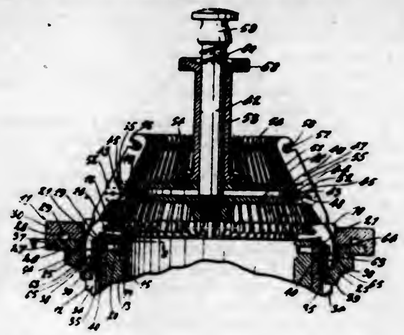
1. An automatic gravity valve for steam radiators, comprising a main body having a chamber therein, a bottom closing the lower end of said body, an abutment extending inwardly from the upper end of the body and having a central aperture therethrough, a valve-seat tapering downwardly from said abutment, a cup-member corresponding with said valve seat and adapted to contact therewith and to close both the aperture in the abutment and the aperture in the valve seat, the interior of the cup-member opening upward, a dome detachably secured on the upper end of the body and having a vent formed through its upper end, and resilient means for preventing the cup-member from contact with the dome, all substantially as shown and described.

2. An automatic gravity valve, comprising a body having a chamber therein, a stem extending out from the body and adapted to be connected to a radiator, an abutment formed integral with the upper end of the body, a downwardly tapering seat formed integral with the center of the abutment and extending down therefrom, a cup-shaped valve member adapted to rest in said seat and opening upward and having notches formed in its upper edge, a dome detachably secured on the upper end of the body and having a vent aperture formed therethrough, all substantially as shown and described and for the purposes set forth.

3. An automatic gravity air valve comprising in combination a main body, a downwardly convergently formed valve-seat located in and concentric with said body with a central aperture therethrough at its lowest point, a stem extending out from the body and located below the valve seat, there being inlet means through the stem to said aperture, a downwardly tapering valve member adapted to contact with all of the valve seat and close said aperture, the same being entirely free to be raised by pressure which may enter through said stem and adapted to automatically close by gravity when said pressure is removed, a cap removably connected around the upper end of the body and extending thereabove, there being a small aperture formed through the top of said cap to allow egress of air when the said valve member is lifted.

1,156,838. CLEANING MECHANISM FOR CIRCULAR-KNITTING MACHINES. WILLIAM FISCHER, New Richmond, Ohio, assignor of one-half to Louis Blumenstein, New Richmond, Ohio. Filed Oct. 26, 1914. Serial No. 868,663. (Cl. 66—19.)

1. In a cleaning mechanism for circular knitting machines, the combination of a head, finger-arms pivoted thereto in radial arrangement, said arms having fingers at their lower ends, means for swinging said finger-arms on their pivots, said fingers having cleaning ends which are spaced apart for being received in the spaces between the sinkers of a knitting machine and having inwardly extending cleaning ends for contacting the lint surrounding the needle-cylinder of said knitting machine.



2. In a cleaning device for circular knitting machines, the combination of a head, finger-arms pivoted thereto in radial arrangement, said finger-arms provided with curved fingers at their lower ends which are bowed radially outward and having lower inwardly extending cleaning ends, said fingers spaced apart for being received in the spaces between the sinkers of a circular knitting machine and into the needle space between the needle cylinder and cam-ring support for contacting the lint in said spaces, and means for swinging said arms on their pivots for urging said cleaning ends toward said needle-cylinder.

3. In a cleaning device for circular knitting machines, the combination of a head, finger-arms pivoted thereto in radial arrangement, said finger-arms provided with cleaning fingers, means for normally urging said fingers in one direction, and a plate provided with slots in which said finger-arms are received and with contact-parts for said finger-arms for urging said fingers in the opposite direction.

4. In a cleaning device for circular knitting machines, the combination of a head, a stem extending therefrom, finger-arms pivoted to said head in radial arrangement, said finger-arms provided with cleaning fingers, a plate provided with radially arranged slots through which said finger-arms extend, the walls of said slots forming guiding means for said finger-arms, and a bearing extending from said plate about said stem, and constructed and arranged for swinging said finger-arms by relative longitudinal movement between said stem and bearing.

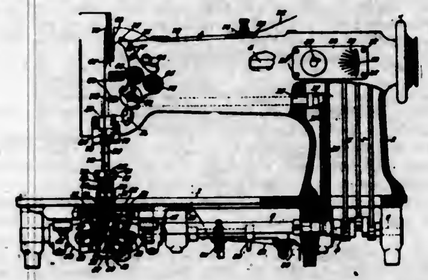
5. In a cleaning device for circular knitting machines, the combination of a plate, a clamp-ring, said plate and clamp-ring provided with registering radial slots, finger-arms provided with bearing-holes, a pivot-ring received through said bearing-holes, means for clamping said pivot-ring between said clamp-ring and plate with said finger-arms in said slots in radial arrangement, said finger-arms provided with cleaning fingers at their lower ends, and means for swinging said finger-arms on said pivot-ring in paths radial with relation to said plate and clamp-ring.

[Claims 6 and 7 not printed in the Gazette.]

1,156,839. SEWING-MACHINE. CHARLES F. GRAY, Sierra Madre, Cal., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Feb. 10, 1914. Serial No. 817,737. (Cl. 112—22.)

1. In an organized sewing machine for effecting at a single operation a seam construction including a lock-stich and a chain-stitch seam, the combination with a single needle-bar provided with a multiple of needles of a chain-stitch looper and rotary loop-takers, the latter provided with a mass of under thread.

2. In a sewing machine, the combination with a plurality of reciprocating needles, of circularly-moving loop-takers coöperating with two of said needles and formed with thread cavities containing masses of lower thread embraced by the paths of movement of their respective beaks, and a chain-stitch looper having a needle-loop detaining blade coöperating with another of said needles intermediate said loop-takers.



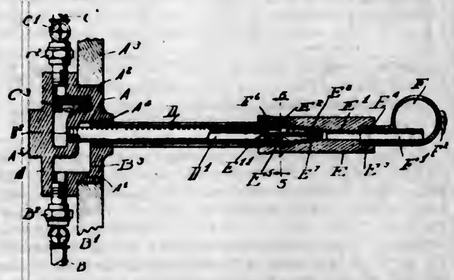
3. In an organized sewing machine for effecting at a single operation a seam construction including a lock-stitch and a chain-stitch seam, the combination with multiple needles, of a chain-stitch looper having one complete actuation to one complete action of its coacting needle and a rotary loop-taker, the latter provided with a mass of under thread and having a multiple of complete actuations to one complete action of its coacting needle.

4. In an organized sewing machine for effecting at a single operation a seam construction including a lock-stitch and a chain-stitch seam, the combination with a single needle-bar provided with a multiple of needles, an upper main-shaft, a loop-taker, a loop-taker actuating shaft provided with an eccentric, of a chain-stitch looper and looper carrier, the latter operatively connected with said eccentric.

5. In an organized sewing machine for effecting at a single operation a seam construction including a lock-stitch and a chain-stitch seam, the combination with an upper main-shaft, a needle-bar provided with a threaded needle for effecting a chain-stitch seam and a threaded needle for effecting a lock-stitch seam, a lower looper actuating shaft, and a chain-stitch looper and a loop-taker each provided with an under thread, of an under thread take-up operatively connected with said latter shaft and an upper thread take-up operatively connected with said main-shaft, the former take-up acting to control the chain-stitch looper thread and the upper take-up the sewing threads for effecting the lock-stitch seam, the downward movement of the latter take-up also acting to control the formation of the chain-stitch seam.

[Claim 6 not printed in the Gazette.]

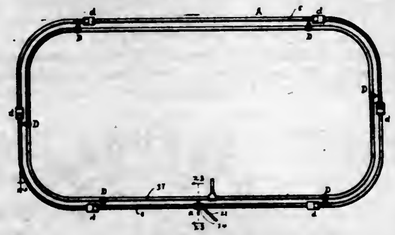
1,156,840. ATOMIZER. HARRY A. GRINE, Los Angeles, Cal., assignor of one-half to Fred C. Nelles, Los Angeles, Cal. Filed June 21, 1912. Serial No. 704,949. (Cl. 158—78.)



4. An atomizer head comprising a substantially circular drum, a supply pipe therefor projecting tangentially thereinto beyond the center thereof and discharging against the curved circular wall, a spray discharge outlet located in said circular wall in the path of the fluid leaving the supply pipe.

2. An atomizer head comprising a substantially circular drum, a supply pipe therefor projecting tangentially thereinto beyond the center thereof and discharging against the curved circular wall, a spray discharge outlet slot, said slot extending transversely across the path of the material leaving the supply pipe.

1,156,841. SYSTEM AND MEANS OF CONTROL. JOHN S. HADDEN, Huntington Park, and FREDERICK H. JOHNSON, South Pasadena, Cal., assignors to Hadden Automatic Sprinkler Company, Los Angeles, Cal., a Corporation of California. Filed July 16, 1914. Serial No. 851,379. (Cl. 137—66.)



1. An improved system and means of control, comprising a plurality of separate operative devices; an actuator, and means for causing the actuator to independently visit said devices and actuate the same; means being provided whereby the period of each actuation may be varied by independently varying the period of dwell of the actuator at each of said devices.

2. Improvements of the character disclosed, comprising a plurality of separate devices, a plurality of separate controlling means, one for each of said devices, an actuator, and means for causing the actuator to independently visit and operate upon said separate controlling means; said latter means comprising a fluid circuit within which the actuator traverses under pressure applied to the fluid thereof; each of said separate controlling means comprising a cylinder, a piston therein, stop means carried by the piston and normally disposed in the path of the actuator, and means withdrawing said last named means from the path of the actuator, upon a predetermined movement of the piston.

3. Improvements of the character disclosed, comprising a plurality of separate devices, a plurality of separate controlling means, one for each of said devices, an actuator, and means for causing the actuator to independently visit and operate upon said separate controlling means; said latter means comprising a fluid circuit within which the actuator traverses under pressure applied to the fluid thereof; each of said separate controlling means comprising a cylinder, a piston therein, stop means carried by the piston and normally disposed in the path of the actuator, and means withdrawing said last named means from the path of the actuator, upon a predetermined movement of the piston; said last named means being adjustable.

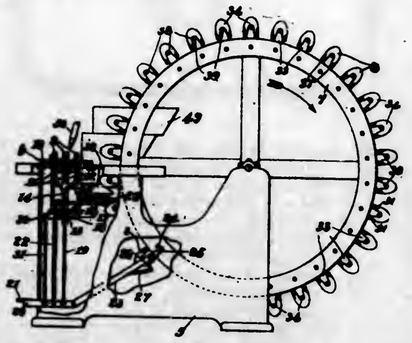
4. Improvements of the character disclosed, comprising a plurality of separate devices, a plurality of separate controlling means, one for each of said devices, an actuator, and means for causing the actuator to independently visit and operate upon said separate controlling means; said latter means comprising a fluid circuit within which the actuator traverses under pressure applied to the fluid thereof; each of said separate controlling means comprising a cylinder, a piston therein, stop means carried by the piston and normally disposed in the path of the actuator, and means withdrawing said last named means from the path of the actuator, upon a predetermined movement of the piston; said cylinder being provided

with a dashpot which coöperates with said piston to vary the rate of motion thereof.

5. Improvements of the character disclosed, comprising a plurality of separate devices, a plurality of separate controlling means, one for each of said devices, an actuator, and means for causing the actuator to independently visit and operate upon said separate controlling means; said latter means comprising a fluid circuit within which the actuator traverses under pressure applied to the fluid thereof; each of said separate controlling means comprising a cylinder, a piston therein, stop means carried by the piston and normally disposed in the path of the actuator, and means withdrawing said last named means from the path of the actuator, upon a predetermined movement of the piston; said cylinder being provided with a dashpot which coöperates with said piston to vary the rate of motion thereof; said controlling means further including a supplementary cylinder, a piston therein, and a by-pass between the cylinder and the fluid circuit.

[Claims 6 to 11 not printed in the Gazette.]

1,156,842. HEEL-BUILDING MACHINE. ALEXANDER A. HUDSON, Cincinnati, Ohio. Filed Mar. 8, 1915. Serial No. 12,753. (Cl. 12—50.)



1. In combination in a heel building machine, a blank assembling device, clamps, a rotatable support for said clamps located adjacent to said assembling device, a treadle bar, and means operatively connecting the treadle bar with the clamp support and the blank assembling device, whereby movement of said treadle bar causes a simultaneous movement of said assembling device and said clamp support.

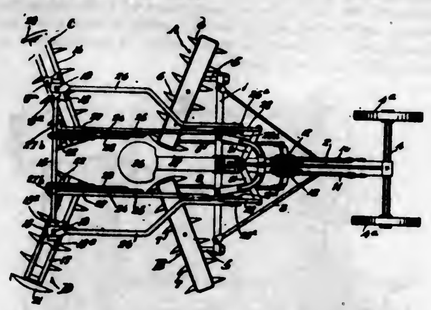
2. A heel building machine comprising a blank assembling device, a series of clamps rotatively mounted adjacent to the assembling device, and means adapted to simultaneously operate the assembling device and release the clamps.

3. In a heel building machine the combination of a blank assembling device, a series of clamps rotatively mounted adjacent to the assembling device, and means adapted to simultaneously operate the assembling device, rotate the clamps, and release the clamps.

4. In combination in a heel building machine, a blank assembling device, a series of clamps, and a vertically rotatable wheel adapted to mount the clamps on its rim adjacent to the blank assembling device, each of said clamps consisting of a base, a jaw reciprocally mounted at one end of the base, a jaw adjustably mounted at the opposite end of the base, means adapted to swivelly mount the second mentioned jaw in its adjusted positions, and a second means adapted to move the first mentioned jaw toward the second mentioned jaw to clamp a heel block between them.

1,156,848. DISK HARROW. JAMES H. IMUS, Dayton, Ohio. Filed May 27, 1915. Serial No. 30,723. (Cl. 55—83.)

1. In a disk harrow, a front and a rear frame portion, each having a pair of disk gangs pivotally mounted thereon on opposite sides of the median line of draft, pivoted members on the front frame, side bars on the rear frame and pivotal connection therefor to the pivoted members, for the purpose described.



2. In a disk harrow, a front and a rear frame portion, each having a pair of disk gangs pivotally mounted thereon on opposite sides of the median line of draft, pivoted members on the front frame, side bars on the rear frame and pivotal connection therefor to the pivoted members at each side of the median line of draft, for the purpose described.

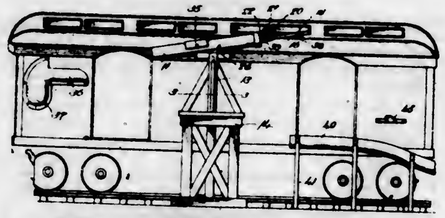
3. In a disk harrow, a front and a rear frame portion, each having a pair of disk gangs pivotally mounted thereon on opposite sides of the line of draft, pivoted bars on the front frame, and coupling bars secured to the rear frame, and pivotally connected to said pivoted bars, for the purpose described.

4. In a disk harrow, a front and a rear frame portion, each having a pair of disk gangs pivotally mounted thereon on opposite sides of the line of draft, pivoted bars on the front frame, coupling bars secured to the rear frame, and pivotally connected to said pivoted bars, and means on the forward frame for retaining the said pivoted bar in proper horizontal position, for the purpose described.

5. In a disk harrow, a front and a rear frame portion, each having a pair of disk gangs pivotally mounted thereon on opposite sides of the line of draft, pivoted bars on the front frame, and forwardly extending members secured to the rear frame, and pivotally connected to said pivoted bars and raceways for said pivoted bars mounted on the forward frame, for the purpose described.

[Claims 6 to 9 not printed in the Gazette.]

1,156,844. MAIL-CATCHER. CLAIBOURNE FREMONT JACKSON, Las Minas, Cuba. Filed Oct. 8, 1914. Serial No. 864,911. (Cl. 258—7.)



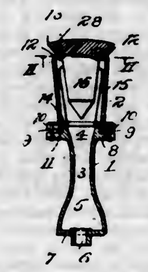
1. In an apparatus of the character described, a receiving trough, a suspending arm provided with a cut out, a sack holding element, a block extending from said sack holding element through the cut out of said suspending arm and provided with a notch, a latch pivotally connected with said suspending arm and extending through the notch of said block to releasably hold the same in the cut out of said arm, a lever extending from said catch, and means extending from said trough to engage said lever and move the same to move said catch out of engagement with said block and permit a sack to drop into said trough.

2. In an apparatus of the character described, a track device comprising a trough and an actuating element extending above said trough, and a car device comprising a suspending arm, a sack holding element, and means movably connected with said suspending arm for engaging said sack holding element to releasably hold the same in engagement with said arm, said last mentioned means including a lever extending for engagement by the actuating element of said track device to cause the last mentioned means to be moved to a position to release said sack holding element.

3. In an apparatus of the character described, a train device including a supporting arm provided with an opening, a sack holding element including a block extending through the opening of said arm and provided with a cut out forming a seat, a catch pivotally connected with said supporting arm and extending into said seat to releasably hold said block in engagement with said arm, and a lever extending from said catch to permit said catch to be moved to an inoperative position.

4. In an apparatus of the character described, a receiving trough, a support, a gun carried by said support, a plunger slidable in said gun, resilient means for holding said plunger in a normal position, means for moving said plunger to a set position, said gun provided with an opening intermediate its ends, door means for closing said opening, an enlargement on the under side of said gun, a collar on said enlargement, a bracket depending from said collar, a pawl slidable through said enlargement and said bracket and projecting into said gun, a collar on said pawl, resilient means engaging said last mentioned collar and said bracket for holding said pawl in a set position, and means carried by said pawl whereby the same may be operated, substantially as described.

1,156,845. BURNER. RICHARD R. JAMES, Brooklyn, N. Y. Filed Feb. 24, 1913. Serial No. 750,335. (Cl. 158—108.)



1. In a burner, a mixing chamber provided with discharge orifices, a baffle extending across said orifices to form contracted passages leading thereto, said baffle being arranged to diverge from the inner wall of said discharge chamber, and a perforate screen substantially parallel to said baffle and between it and the inner wall of said chamber.

2. A burner provided with a mixing chamber and with discharge orifices adjacent the upper end of said chamber, a perforate screen extending around the inner wall of said chamber, said screen being spaced therefrom to form a discharge chamber communicating with said orifices, and a baffle or spreader depending from the top wall of said burner intermediately of said orifices and within said screen, said baffle or spreader being thus adapted to form a contracted passage between itself and said perforate screen.

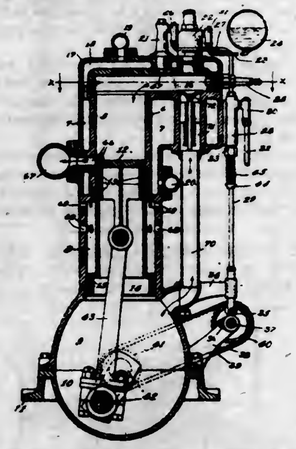
3. In a burner, the combination with a shell, comprising a lower portion adapted to be connected up with a gas supply pipe and an upper portion, said shell being provided with an overhanging flange and a plurality of circumferentially arranged discharge orifices below said flange, of a baffle or spreader depending from the upper portion of said shell between said orifices to form a contracted passage leading to said orifices, said shell portions being releasably connected, and a perforate screen surrounding said baffle or spreader.

4. In a burner, the combination with a shell, comprising a lower portion adapted to be connected up with a gas supply pipe and an upper portion, said shell being provided with an overhanging flange and a plurality of circumferentially arranged discharge orifices below said flange, of a baffle or spreader depending from the upper portion of said shell between said orifices to form a contracted passage leading to said orifices, said shell portions being releasably connected, and a perforate screen surrounding said baffle or spreader, said screen being secured in position by means of said baffle or spreader.

5. A burner provided with a mixing chamber having laterally discharging orifices, a baffle or spreader depending between said orifices and forming with the inner wall of said chamber a passage leading to said orifices, and a perforate screen extending through said passage between the inner wall of said chamber and said baffle or spreader.

[Claims 6 and 7 not printed in the Gazette.]

1,156,846. INTERNAL-COMBUSTION ENGINE. OLOF JOHNSON, Seattle, Wash. Filed Feb. 3, 1914. Serial No. 816,153. (Cl. 123—32.)

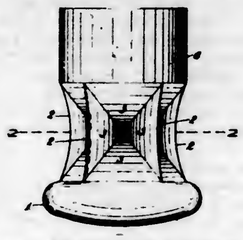


1. The method of operating a two cycle internal combustion engine that is provided with a passageway adapted to admit into its cylinder two different grades of fuel each at required different times together with air requisite for combustion, which method consists, first, admitting to said passage-way a spray of highly inflammable and refined fuel and a charge of air under pressure in opposition to the spray whereby to thoroughly commingle the spray and air, then in compressing the vapor of the charge of highly inflammable and refined fuel in said passageway by a compression stroke of the engine's piston, then igniting the vapor thus compressed, then admitting a spray of a lower grade of fuel into said compression space to mix with and be ignited by the flame of said compressed vapor whereby pressure is created to produce a power or stroke of said piston.

2. In an internal combustion engine, the combination with a cylinder that is provided on one side thereof near its top portion with an ignition chamber that is connected therewith by a passageway, of a piston disposed to reciprocate within said cylinder, an injector adapted to be operated by pressure within said cylinder to deliver a highly inflammable fuel into said ignition chamber whereby said fuel may be compressed within said ignition chamber upon the upward stroke of said piston, a spark plug to

ignite said fuel whereby a flame will be produced in said passageway, an injector disposed in said passageway to spray crude fuel into said flame, and means for causing a current of fresh air to circulate through said ignition chamber and said cylinder to cool said spark plug and said injectors and scavenge said cylinder.

1,156,847. FORMER FOR SELF-CLOSING POUCHES. WILLIAM W. MACDONALD, Somerville, Mass. Filed May 4, 1915. Serial No. 25,831. (Cl. 18—41.)

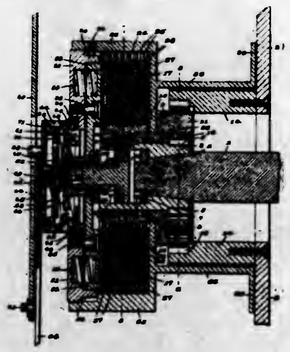


1. In a pouch former of the character specified, the combination of a body-forming part, a neck-forming part comprising a plurality of rib-forming members having recesses between them arranged to assist the proper location of folds and creases necessary to close the neck upon the twisting and flattening of the neck of the pouch formed thereon, and a rim-forming part.

2. In a device of the character specified a neck-forming part having a plurality of recesses, each having a plurality of angularly disposed facets arranged to form a neck, which, upon the twisting and flattening thereof, folds so as to close.

3. In a device of the character specified a neck-forming part having a plurality of recesses, each having four angularly disposed facets forming radial grooves from the centers of said recesses for the purpose specified.

1,156,848. CHANGE-SPEED DRIVING MECHANISM. FRANK EDGAR MILLER, New York, N. Y. Filed Oct. 13, 1913. Serial No. 794,801. (Cl. 74—34.)



1. In a driving mechanism and in combination, a main driving element, a secondary driving element, a main driven element and a secondary driven element, all arranged in concentric relation, a clutch for connecting the main driven element with either of the driving elements, a second clutch for establishing a driving connection between the main driven element and the secondary driven element, a single actuating element and mechanism operated thereby for operating the clutches, substantially as and for the purpose described.

2. In a driving mechanism and in combination, a main driving element, a secondary driving element, a main driven element and a secondary driven element, all arranged in concentric relation, a clutch for connecting the main driven element with either of the driving elements, a second clutch for establishing a driving connection between the main driven element and the secondary driven element, a single actuating element and mechanism operating thereby for operating the clutches, the clutches and actuating element being also arranged concentric with the driving and driven elements, substantially as and for the purpose specified.

3. In a driving mechanism, a main driving element comprising an engine shaft and a member carried thereby and provided at one end with a clutch face and at its opposite end with a gear, a secondary driving element comprising a ring journaled on said member and provided at one end with a clutch face and at its other end with means for supporting a gear, an annular fixed rack, a gear carried by said supporting means and permanently in mesh with said rack and with the gear of the first-named member, a main driven member, a clutch sleeve keyed thereto and provided at opposite ends with clutch faces complemental to the clutch faces aforesaid, a secondary driven member, a clutch interposed between the same and the main driven member, and means for releasing the last-named clutch and for shifting the clutch sleeve comprising a cam ring having two sets of cams, and a lever connected to the ring for turning the same about its axis, substantially as and for the purpose described.

4. In a driving mechanism, a main driving element comprising an engine shaft and a member carried thereby and provided at one end with a clutch face and at its opposite end with a gear, a secondary driving element comprising a ring journaled on said member and provided at one end with a clutch face and at its other end with means for supporting a gear, an annular fixed rack, a gear carried by said supporting means and permanently in mesh with said rack and with the gear of the first-named member, a main driven member, a clutch sleeve keyed thereto and provided at opposite ends with clutch faces complemental to the clutch faces aforesaid, a secondary driven member, a clutch interposed between the same and the main driven member, and means for releasing the last-named clutch and for shifting the clutch sleeve, substantially as and for the purpose specified.

5. In a driving mechanism, a main driving element comprising an engine shaft and a member carried thereby and provided at one end with a clutch face and at its opposite end with a gear, a secondary driving element comprising a ring journaled on said member and provided at one end with a clutch face and at its other end with means for supporting a gear, an annular fixed rack, a gear carried by said supporting means and permanently in mesh with said rack and with the gear of the first-named member, a main driven member, a clutch sleeve keyed thereto and provided at opposite ends with clutch faces complemental to the clutch faces aforesaid, a secondary driven member, a clutch interposed between the same and the main driven member, and means for releasing the last-named clutch and for shifting the clutch sleeve comprising a cam ring movable about its axis, and means for oscillating said ring, substantially as and for the purpose set forth.

[Claims 6 to 27 not printed in the Gazette.]

1,156,849. HAND-OPERATED CAR-BRAKE. JAMES A. NOBLE, New York, N. Y., assignor to E. L. Noble, Brooklyn, N. Y. Filed Sept. 17, 1914. Serial No. 862,188. (Cl. 254—149.)

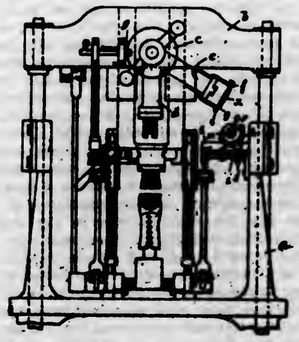
1. A brake having an internal and external gear and a sheave, a chain operable therewith, a ratchet and dog operable with said gears, and means for operating said dog by the motion of said chain, as and for the purpose set forth.

2. A hand operated car brake provided with a flexible member, a sheave having a spiral groove, means for rotating said sheave, a ratchet formed integral with said sheave, a dog operable therewith, and an automatically operated means operated by the movement of said flexible member for operating said dog, as and for the purpose set forth.



3. A hand operated car brake having a sheave with a spiral groove, means for rotating said sheave, a ratchet formed integral with said sheave, a dog operable therewith, and a manually and automatically operated means for operating said dog, as and for the purpose set forth.

1,156,850. TOP-LIFT-CEMENTING MEANS FOR HEEL-NAILING MACHINES. GEORGE M. PETTENGILL, Haverhill, Mass., assignor to Haverhill Shoe Machinery Company, a Corporation of Maine. Filed Nov. 18, 1910, Serial No. 592,978. Renewed Jan. 8, 1914. Serial No. 811,097. (Cl. 1—35.)



1. In a heeling machine, a vertically reciprocating top-lift holder, adapted to support a top lift in a position oblique to the vertical and facing downward, and a cementing device arranged directly in the path of movement of the lift as it is carried downward in said position by the holder.

2. In a heeling machine, a vertically reciprocating carrier having a top-lift holder thereon adapted to support a lift in a position oblique to the vertical and facing downward, during a downward movement of said carrier, and a cementing device arranged directly beneath said holder in position to be engaged by a lift held thereby on downward movement of the carrier.

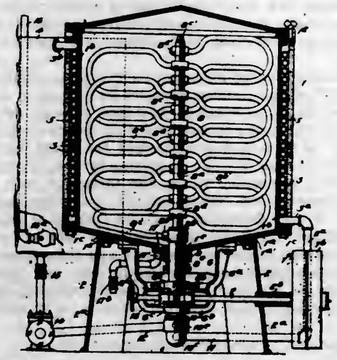
3. In a heeling machine, a vertically reciprocating cross-head and a turret mounted thereon having an arm provided with a top-lift holder at its end arranged to hold the lift at right angles to said arm, means for locking the turret in a position in which said arm extends obliquely downward, and a cement holder mounted directly beneath said holder in position to be engaged by the lift held thereby on downward movement of the cross-head.

4. In a heeling machine, a vertically reciprocating carrier having a top-lift holder movably mounted thereon, and means for locking said holder in position to hold a lift with one side oblique to the vertical and facing downward during a downward movement of the carrier, and means for yieldingly supporting said cementing device beneath said holder in position to engage a lower portion of the side of a lift held thereby, and to be held in engagement therewith during a portion of said downward movement.

5. In a heeling machine, a vertically reciprocating carrier having a top-lift holder movably mounted thereon, and means for locking said holder in position to hold a lift with one side oblique to the vertical and facing downward during a downward movement of the carrier, a cementing roll, and means for supporting said roll to rotate about a horizontally disposed axis, beneath a lift held by said holder, in position to be engaged by the lift and to roll across a portion thereof during said downward movement.

[Claims 6 to 16 not printed in the Gazette.]

1,156,851. HEATING OR COOLING APPARATUS. LENOX S. PROUTS, Canton, Ohio, assignor to The Miller Pasteurizing Machine Company, Canton, Ohio, a Corporation of New Jersey. Filed Jan. 24, 1912. Serial No. 673,138. (Cl. 257—107.)



1. In an apparatus of the class described, the combination of a tank having a bottom formed with an opening, a two-way medium carrying member rotatably mounted in the opening in said bottom and forming liquid tight inlet and outlet connections to and from the interior of said tank, the said member including a hollow shaft extending longitudinally of the tank and forming one way through said medium carrying member, a plurality of pipe loops connected together in series to form a conduit which is connected at its opposite ends to said member and the free end of said shaft, the said loops being supported by and extending laterally from said shaft to opposite sides thereof and the loops on each side of said shaft being disposed in inclined planes parallel to each other, means for supplying a medium to the other way of said medium carrying member, and means for rotating said member.

2. In an apparatus of the class described, the combination of a tank having a bottom formed with an opening, a two-way medium carrying member rotatably mounted in the opening in said bottom and forming liquid tight inlet and outlet connections to and from the interior of said tank, the said member including a hollow shaft extending longitudinally of the tank and forming one way through said medium carrying member, a plurality of pipe loops connected together in series to form a conduit which is connected at its opposite ends to said member and the free end of said shaft, the said loops being supported by and extending laterally from said shaft to opposite sides thereof and the loops on each side of said shaft being disposed in inclined planes parallel to each other, and each loop being enlarged to extend above and below sections of ad-

joining loops, means for supplying a medium to the other way of said medium carrying member, and means for rotating said member.

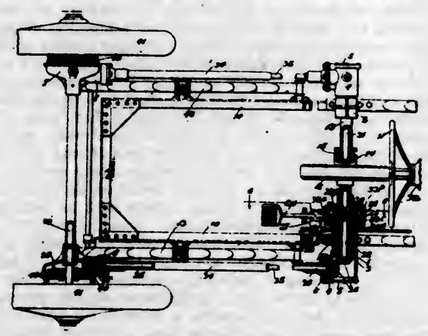
3. In an apparatus of the class described, the combination of a tank having a bottom formed with an opening, a medium carrying member rotatably mounted in the opening in the bottom of the tank, the said member comprising a hollow shaft, a sleeve fixed to and surrounding the lower portion of said shaft, a plurality of connected loops carried by the shaft for circulating a medium, a connection between the upper loop and the upper end of the shaft, a connection between the lower loop and said sleeve, and a coupling formed with openings communicating with said shaft and sleeve, the coupling being provided with a flanged annulus forming a thrust bearing and end wall for said sleeve.

4. In an apparatus of the class described, the combination of a tank having a bottom formed with an opening, a medium carrying member rotatably mounted in the opening in the bottom of said tank, the said member comprising a hollow shaft provided with a plurality of hollow connectors spaced from each other from end to end thereof, the uppermost connector communicating with the upper end of said shaft, a series of loops arranged on opposite sides of the shaft and each having its opposite ends connected to adjoining connectors and each connector forming a conduit between one end of each loop on one side of the shaft and the adjacent end of a loop on the opposite side of the shaft and means for supplying a medium to the lowermost loop, and means for rotating said member.

5. In apparatus of the class described, the combination of a tank having a bottom formed with a bearing opening, a medium carrying member extending through and rotatably mounted in the opening, the said member comprising a hollow shaft, a sleeve surrounding the lower portion of the shaft, a series of connected loops carried by the shaft and having connection at one end therewith, and a connection between the other end of the loops and said sleeve, a hanger depending from the bottom of said tank and provided with a pair of spaced cross bars formed with alined bearings to receive the shaft and sleeve, means including a gear fixed to said sleeve between the cross bars of said hanger for rotating said medium carrying member, and connections below said hanger with said shaft and sleeve.

[Claims 6 to 11 not printed in the Gazette.]

1,156,852. POWER-TRANSMISSION MECHANISM. THOMAS G. VAN SANT, Poplar Bluff, Mo., assignor of one-half to Samuel G. Dorman, Poplar Bluff, Mo. Filed June 27, 1914. Serial No. 847,752. (Cl. 21—90.)



1. In a motor vehicle, the combination of a hollow shaft, bearings in which said shaft is journaled, two shafts journaled in and wholly supported by said hollow shaft, a gear on each of said last-named shafts, a support on said hollow shaft adjacent to said gears, two pinions carried by said support meshing with the gear on one of said shafts, two additional pinions carried by said support meshing with the gear on the other of said shafts, bearings adjacent to the outer ends of said two shafts, transmission shafts journaled in said bearings, and gearing for revolving said transmission shafts by said two shafts.

2. In a motor vehicle, the combination of a frame, bearings on said frame, a hollow shaft journaled in said bearings, two shafts journaled in said hollow shaft, a gear on each of said two shafts, a casing on said hollow shaft inclosing said gears, two short shafts in said casing, pinions supported by said two short shafts meshing with the gear on one of said first-named two shafts, two additional short shafts in said casing, pinions on said last-named short shafts meshing with the gear on the other of said first-named two shafts, a bearing at the outer end of each of said first-named two shafts, a transmission shaft journaled in each of said last-named bearings, and gearing for revolving said transmission shafts by said two shafts.

3. In a motor vehicle, the combination with the chassis, of bearing members attached to the chassis near the forward end thereof, a tubular shaft journaled in said bearing members transversely of the chassis, two axially alined shafts within said tubular shaft, means for revolving said tubular shaft, differential gear mechanism for driving said two shafts from said tubular shaft, driving connections between said two shafts and the rear wheels of the vehicle, casings in which said connections are supported, and connections between said casings and said bearing members whereby the entire propelling force applied to the rear wheels is imparted to the chassis adjacent to the ends of said two shafts and said tubular shaft.

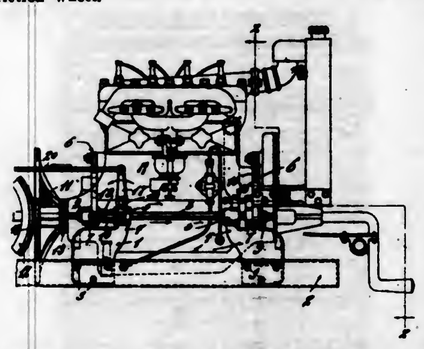
4. In a motor vehicle, the combination with the chassis, the rear axle, and springs for supporting the rear portion of said chassis upon said rear axle, of a tubular shaft supported transversely of the chassis adjacent to the forward end thereof, two axially alined shafts within said tubular shaft, means for revolving said tubular shaft, differential gear mechanism for driving said two shafts from said tubular shaft, driving connections between said two shafts and the rear wheels of the vehicle, casings in which said connections are supported, connections between said casings and the rear axle, and connections between said casings and the chassis adjacent to the outer ends of said two shafts and said tubular shaft whereby the entire propelling force applied to the rear wheels is imparted to the chassis adjacent to the ends of said shafts.

5. In a motor vehicle, the combination with the rear wheels, the axle for the rear wheels, the chassis, and springs supporting said chassis upon said axle, of bearings near the forward end of said chassis, housing members journaled in said bearings, a tubular shaft journaled in said housing members, two shafts journaled in said tubular shaft and having their ends extending into said housing members, differential gear mechanism for driving said two shafts from said tubular shaft, casings connecting said rear axle with said housing members whereby the propelling force imparted to the rear wheels is transmitted to the forward portion of said chassis, shafts mounted in said casings, and gear mechanism for driving said last-named shafts and thereby the rear wheels from said two shafts.

[Claims 6 to 12 not printed in the Gazette.]

1,156,853. MOTOR-VEHICLE. THOMAS G. VAN SANT, Poplar Bluff, Mo., assignor of one-half to Samuel G. Dorman, Poplar Bluff, Mo. Filed June 27, 1914. Serial No. 847,754. (Cl. 21—90.)

1. In a motor vehicle, the combination with a chassis, and a friction wheel supported on an axis transversely of the chassis, of supporting members extending longitudinally of the chassis, guides upon which said supporting members are movable longitudinally of the chassis, a motor supported by and movable with said supporting member longitudinally of the chassis, a driving friction disk mounted on an axis extending longitudinally of the chassis driven by said motor and movable longitudinally with said motor, means actuating said motor in a direction longitudinally of the chassis effectively to hold said driving friction disk in contact with said friction wheel, and manipulative means for moving said supporting members and thereby said motor and said friction disk longitudinally of the chassis in a direction away from said friction wheel.



2. In a motor vehicle, the combination with a chassis having longitudinally extending side members, yokes rigidly supported by said side members, a driven friction wheel supported in a fixed longitudinal adjustment with respect to said chassis, a motor, cross heads secured to said motor bearing formed in said yokes, rods secured to said cross heads and being movable in said bearings, a driving element associated with said motor, automatic means actuating said motor toward said driven wheel, and manual means for moving said motor away from said driven wheel, substantially as specified.

3. In a motor vehicle, the combination with a chassis, of yokes rigidly supported by said chassis, bearings formed at each side of said yokes, rods secured to the motor at either side and adapted to slide in said bearings, springs actuating said rods in one direction with respect to said yokes, and manual means for actuating said rods in the opposite direction in opposition to said springs.

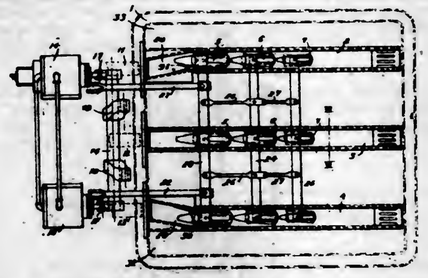
4. In a motor vehicle, the combination with a chassis having side members, longitudinally alined brackets at each side of said chassis rigidly supported by said side members, a motor, supports for said motor, said supports including a pair of longitudinally arranged parallel rods slidably mounted in said bearings, automatic means for shifting said supports and thereby said motor in one direction, adjustable abutments limiting the automatic movement of said supports and said motor, and manual means for shifting said supports and said motor in the opposite direction, substantially as specified.

5. In a motor vehicle, the combination with a chassis, and a friction wheel whose axis extends transversely of the chassis, of bearings near each side of the chassis, supporting members supported by said bearings and slidable on said bearings longitudinally with respect to the chassis, a support mounted on said supporting members and movable therewith longitudinally of the chassis, and a friction disk carried by said support, means actuating said support in a direction longitudinally of the chassis to position to contact said friction disk with said friction wheel, manipulative means operable to slide said supporting members on said bearings longitudinally of the chassis to move said friction disk out of contact with said friction wheel, and a motor for actuating said friction disk.

[Claims 6 to 16 not printed in the Gazette.]

1,156,854. AUTOMATIC STOKER MECHANISM. CHARLES D. YOUNG, Pittsburgh, Pa. Filed May 10, 1911. Serial No. 626,876. (Cl. 110—44.)

1. In combination in automatic stoker mechanism, a furnace, a plurality of underfeed troughs extending longitudinally thereof, feed means at the end of each trough, an auxiliary feed piston in each trough guided for right line movement therein, a transverse bar connected to all of said auxiliary pistons, and means for reciprocating the said bar with the bar held at right angles to its path of movement the said troughs being slotted to receive and guide the said bar.



2. In combination in automatic stoker mechanism, a furnace, a plurality of underfeed troughs extending longitudinally thereof, feed means at the end of each trough, a plurality of auxiliary feed pistons in each trough, a plurality of transverse bars each connected to an auxiliary feed piston in each trough, means lying on opposite sides of one of the troughs for connecting the bars together so that they move in unison, and means for reciprocating the said bars.

3. In combination in automatic stoker mechanism, a furnace, a plurality of underfeed troughs extending longitudinally thereof, feed means at the end of each trough, a plurality of auxiliary feed pistons in each trough, a plurality of transverse bars each connected to an auxiliary feed piston in each trough, means for connecting the bars together so that they move in unison, and means for reciprocating the said bars, the said troughs being slotted to receive and guide the said bars.

4. In combination in automatic stoker mechanism, a furnace, a plurality of underfeed troughs extending longitudinally thereof, movable grate bars, means for rocking the grate bars extending to the rear, transverse rotary means having connection with the said means for reciprocating them, operating means at the front end of the furnace at one side thereof, and connecting means between such last means and the rotary means and lying at the side of the furnace.

5. In combination in automatic stoker mechanism, a furnace, a plurality of underfeed troughs extending longitudinally thereof, movable grate bars lying between and at the sides of the troughs, means for rocking the grate bars extending to the rear, transverse shafts at the rear of the furnace, provided with rocker arms for reciprocating the said means, rocker arms at the ends of such shafts, operating means at the front end of the furnace at one side thereof provided with operating cranks, and connecting rods connecting such cranks and the rocker arms at the ends of the said shafts.

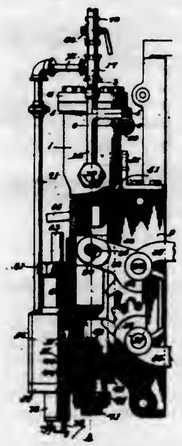
[Claims 6 to 10 not printed in the Gazette.]

1,156,855. FLUID-ACTUATED MOTOR. GEORGE AKANS, Atlanta, Ga., assignor to said George Akans, trustee. Filed Oct. 21, 1914. Serial No. 867,825. (Cl. 121—45.)

1. In a mechanism of the nature described, the combination of a fluid-actuated expansion chamber comprising fixed and movable portions, a normally-closed main valve for admitting fluid into said chamber, yielding means tending to close said valve, transmission mean (separate from said yielding means) for opening said valve, and automatic means for interrupting the action of said transmission means, whereby the valve is freed for closing, substantially as described.

2. In a mechanism of the nature described, the combination of a fluid-actuated expansion chamber comprising fixed and movable portions, a normally-closed main valve for admitting fluid into said chamber, yielding means

tending to close said valve, transmission means separate from said yielding means and controlled by the operator for opening said valve, and automatic means for interrupting the action of said transmission means, whereby said valve is freed for closing, substantially as described.



3. In a mechanism of the nature described, the combination of a main fluid-actuated expansion chamber comprising fixed and movable portions, a normally-closed main valve for admitting fluid into said chamber, yielding means tending to close said valve, transmission means for opening said valve, and a second fluid-actuated expansion chamber for interrupting the action of said transmission means, whereby the main valve is freed for closing, substantially as described.

4. In a mechanism of the nature described, the combination of a main fluid-actuated expansion chamber comprising fixed and movable portions, a normally-closed main valve for admitting fluid into said chamber, yielding means tending to close said valve, transmission means controlled by the operator for opening the main valve, and a second fluid-actuated expansion chamber for interrupting the action of said transmission means, whereby the main valve is freed for closing, substantially as described.

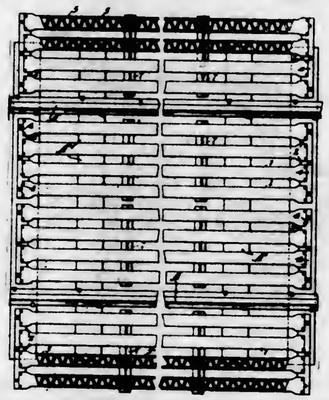
5. In a mechanism of the nature described, the combination of a main fluid-actuated expansion chamber comprising fixed and movable portions, a normally-closed main valve for admitting fluid into said chamber, yielding means tending to close said valve, transmission means for opening said valve, and a second fluid-actuated expansion chamber communicating with the main expansion chamber for interrupting the action of said transmission means, whereby the main valve is freed for closing, substantially as described.

[Claims 6 to 40 not printed in the Gazette.]

1,156,856. CATTLE-GUARD. IRVIN L. BOLINGER, Chicago, Ill.; Mrs. Ruth K. Page sole heir of said Bolinger, deceased. Filed Dec. 2, 1912. Serial No. 734,463. (Cl. 256—17.)

1. A cattle-guard comprising a plurality of spaced tooth bars provided with marginal flanges, the teeth on said bars being formed from the portions of said bars between the flanges and comprising spaced series of teeth arranged substantially in the planes of said marginal flanges thereon, substantially as described.

2. A cattle-guard comprising transverse end frame members, and a plurality of spaced tooth bars secured to said end frame members, the lateral edges of said tooh bars being bent to form marginal flanges, and the teeth on said bars being formed from the portions of said bars between the flanges and comprising spaced series of teeth arranged substantially in the planes of said marginal flanges thereon, substantially as described.



3. A cattle-guard comprising transverse end frame members, a plurality of spaced tooth bars secured to said end frame members, the lateral edges of said tooth bars being bent to form marginal flanges, and the teeth on said bars being formed from the portions of said bars between the flanges thereon, a transverse support or supports intermediate said end frame members provided with slots which receive the marginal flanges on said tooth bars, and means for connecting said tooth bars and intermediate transverse supports, substantially as described.

4. A cattle-guard comprising transverse end frame members, a plurality of spaced tooth bars secured to said end frame members, the lateral edges of said tooth bars being bent to form marginal flanges thereon, and a transverse angle bar or bars intermediate the end frame members, said angle bar or bars being provided with slots which receive the marginal flanges on said tooth bars and the portions of said marginal flanges which engage said slots being swaged laterally to interlock said ribs or flanges with the sides of said slots, substantially as described.

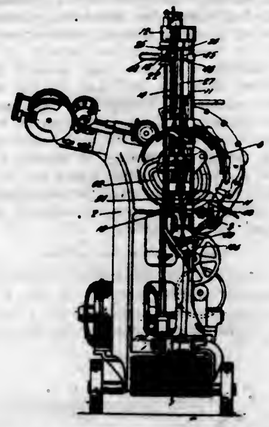
5. A cattle-guard comprising end frame members, a plurality of spaced tooth bars secured to said end frame members, the lateral edges of said tooth bars being bent to form marginal flanges and the teeth on said bars being formed from the portions of said bars between the flanges thereon and being arranged substantially in the planes of said marginal flanges, and a transverse support or supports intermediate said end frame members provided with slots which receive the marginal flanges on said tooth bars, and means for connecting said tooth bars and intermediate transverse supports, substantially as described.

1,156,857. AMMUNITION. WILLIAM H. BUELL, New Haven, Conn., assignor, by mesne assignments, to Union Metallic Cartridge Company, Bridgeport, Conn., a Corporation of Connecticut. Original application filed Oct. 21, 1913, Serial No. 796,441. Divided and application filed June 18, 1914, Serial No. 845,875. Divided and this application filed Dec. 1, 1914. Serial No. 875,023. (Cl. 102—18.)

1. A rim fire cartridge comprising a shell made of brass and having in its head a circular recess, and a non-mercuric priming compound in said recess.

2. A rim fire cartridge comprising a bullet, powder, a shell made from brass and having a head provided with a circular recess and a non-mercuric priming compound in said recess.

1,156,858. TAKE-OFF MECHANISM FOR GLASS-BLOWING PIPES. BENJAMIN D. CHAMBERLIN, Corning, N. Y., assignor to Empire Machine Company, Portland, Me., a Corporation of Maine. Original application filed Aug. 24, 1912, Serial No. 716,915. Divided and this application filed Jan. 4, 1915. Serial No. 505. (Cl. 49—1.)



1. In a glass blowing machine, the combination with a pivoted frame, of a blow-pipe chuck thereon, means for releasing the blow-pipe from the chuck, and a take-off device pivoted to the frame and supporting the blow-pipe in a vertical position when released from the chuck.

2. In a glass blowing machine, the combination with a pivoted frame having a substantially horisontal normal position, and a vertical molding position, of means for releasably holding a gathering iron in the frame, and a take-off mechanism receiving the gathering iron and supporting it vertically when the frame returns to normal position.

3. In a glass blowing machine, the combination with releasable pipe retaining means normally holding the pipe substantially horisontal and movable for presenting it vertically for molding, and a take-off mechanism receiving the pipe and supporting it vertically when released by the retaining means after the molding.

4. In a glass blowing machine the combination with a pivoted frame having a substantially horisontal position and a vertical molding position, of means for releasably holding a pipe in the frame, means actuated on the return of the frame to horisontal position for releasing such means, and a take-off lever pivoted to the frame and receiving the pipe and supporting it vertically when the frame returns to normal position.

1,156,859. SPRING. JOHN R. HAMILTON, St. John, New Brunswick, Canada, assignor of one-half to Arthur H. Likely, St. John, Canada. Filed Jan. 22, 1913. Serial No. 743,493. (Cl. 21—50.)



1. A globular spring having separated curved arms.

2. A globular spring having separated curved arms with their ends secured together.

3. A globular spring consisting of separated curved arms, a hub to which these arms are attached at one end, the outer ends of the arms being secured together.

4. The combination of several globular springs, consisting of several members each in one homogeneous piece and arranged to support one another on the line of resistance to pressure.

5. The combination of several globular springs, consisting of several members each in one homogeneous piece and arranged to support one another on the line of resistance to pressure, with a rod secured at one end to the springs and at the other end passing loosely through holes in the springs.

1,156,860. MAGAZINE-PENCIL. WILLIAM R. HEYLMUN, Iola, Kans., assignor of one-half to E. B. Carney, Wheeling, W. Va. Filed Dec. 31, 1914. Serial No. 879,820. (Cl. 120—14.)



1. A magazine pencil comprising a tubular casing having a reduced extremity, a partition in the casing, a tapering tubular member within the reduced portion of the casing, a tapered block conforming to said tubular member, a coiled spring having one end bearing against said partition and its opposite end engaging said block to force the latter forward, a sleeve for carrying the lead points surrounding the reduced portion of the casing, said block engaging the lead to force the latter forwardly, and means for securing the sleeve to the casing.

2. A magazine pencil comprising a casing, a tapering sleeve removably secured to one end of the casing, a writing point carried by said sleeve, a second sleeve carried by the casing and lying within the first named sleeve, a block slidably mounted in the second sleeve and engaging the writing point, and means for maintaining said block in engagement with the writing point.

3. A magazine pencil comprising a casing, a tapering sleeve carried thereby, a writing point mounted in the sleeve, a second sleeve carried by the casing and lying within the first mentioned sleeve, a block carried by the second sleeve, and engaging the writing point to maintain same in operative position, and spring means for maintaining said block in engagement with the writing point.

4. A magazine pencil comprising a casing having a reduced portion on one end thereof, a sleeve having a portion thereof formed to engage the reduced portion of the casing and having a tapering portion, a writing point carried by the tapering portion, a second tapering sleeve within the first mentioned sleeve, a partition in the casing, a tapering block slidable in the second sleeve and engaging the writing point, and means engaging the partition and the tapering block to secure the writing point in position.

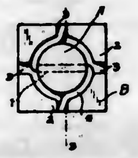
5. A magazine pencil comprising a casing, a tapering sleeve carried by one end thereof, a writing point in the tapering sleeve, a second tapering sleeve lying within the first named sleeve and carried by the casing, a tapering block carried by the second sleeve and engaging the writing point, a partition in the casing, and a coil spring having one end engaging the said sliding block and its opposite end engaging said partition to hold the writing point in position.

1,156,861. LOCKING DEVICE. OSCAR V. PAYNE, Takoma Park, Md. Filed Dec. 5, 1914. Serial No. 875,700. (Cl. 151—5.)

1. In combination with a shank having a cavity disposed transversely thereof, a collar adapted to surround the shank, said collar being provided with spaced channels positioned at predetermined intervals transversely thereof and having their inner extremities spaced from the bore of said collar, and a pliable key adapted to be inserted through the cavity of the shank with its extremities positioned within the channels of the collar.

2. In combination with a shank having a cavity disposed transversely thereof, a collar adapted to surround the shank, said collar being provided with spaced channels

positioned at predetermined intervals transversely thereof and having their inner extremities spaced from the bore of said collar, and a pliable key adapted to be inserted through the cavity with its extremities positioned within the spaced channels of the collar, said key being of such a length as to maintain its extremities within the spaced channels of the collar upon relative rotation of said shank and collar.

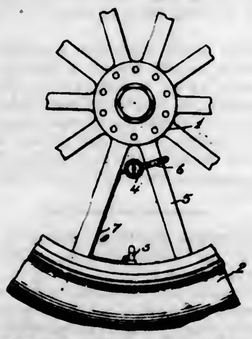


3. In combination with a shank having a cavity disposed transversely thereof, a collar adapted to surround the shank, said shank and collar being capable of relative axial rotation, said collar being provided with channels having their inner extremities spaced from the bore of said collar, said channels of the collar and the cavity of the shank being adapted to initially register, and a pliable key inserted in the cavity and within the channels when said cavity and channels are in register.

4. In combination with a shank having a cavity disposed transversely thereof, a collar adapted to surround the shank, said shank and collar being capable of relative axial rotation, said collar being provided with channels having their inner extremities spaced from the bore of said collar, said channels of the collar and cavity of the shank being adapted to initially register, and a pliable key inserted in the cavity and within the channels when said cavity and channels are in register, said key being adapted to be flexed exteriorly of the shank upon relative rotation of the shank and collar.

5. In combination with a threaded shank having a cavity disposed transversely thereof, a nut adapted to coact with said shank, said nut being provided with spaced projections on a face thereof, and a pliable key adapted to be positioned within the cavity of the shank and between the projections of the nut, said projections being so positioned as to force the key in close proximity with the threads of the shank upon relative rotation of the shank and nut.

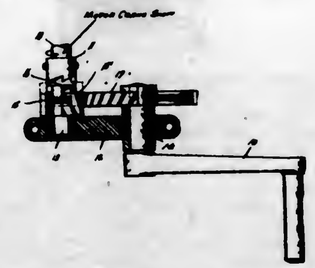
1,156,862. PNEUMATIC-TIRE GAGE. RICHARD C. SIBLEY, Boston, Mass. Filed Apr. 26, 1910. Serial No. 557,732. (Cl. 177—351.)



1. The combination with a vehicle wheel, and a pneumatic tire on said wheel, of means for indicating the pressure in the tire, comprising a telltale adapted to be mounted on the body of a vehicle to which said wheel is attached, a pressure gage secured to the wheel and connected with the tire, said gage including an indicator movable in response to changes of pneumatic pressure, an electric circuit with which said indicator is connected, a series of separate contacts with which said indicator is adapted to make contact, and separate branch circuits in which said contacts are connected with the telltale, each branch circuit including a pair of slip contacts, one of which is relatively stationary and the other of which is carried by the wheel.

2. The combination with a vehicle wheel, the axle on which said wheel is mounted, and a pneumatic tire on said wheel of a telltale for indicating a pressure in the tire comprising a series of electrically actuated elements adapted to be mounted on the vehicle to which said wheel is attached, a pressure gage secured to the wheel and connected with the tire and having an indicator movable in response to changes of pneumatic pressure and electric contact pieces arranged so as to be successively brought in contact with said indicator when the latter is so moved, a plurality of branch circuits each connected to one of said contact pieces and to one of said telltale members, and said branch circuits including complemental sliding contact members secured to the wheel and the wheel axle respectively.

1,156,863. GEARED-UP STARTER. DALMAR T. BROWNLEE, Indianapolis, Ind., assignor to The F. W. Spacke Machine Company, Indianapolis, Ind., a Corporation of Indiana. Filed June 5, 1914. Serial No. 843,150. (Cl. 74—36.)



The combination of a driving gear, a driven gear journaled upon a stud shaft, the said two gears having meshing spiral teeth and the driven gear being axially movable upon the stud shaft, and friction means arranged within the driven gear to lightly resist rotation thereof, the said friction means comprising a spring and friction block mounted in a transverse bore of the stud shaft.

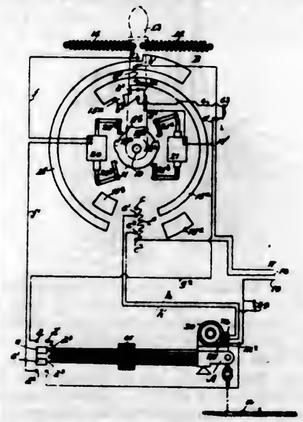
1,156,864. COMPUTING WEIGHING APPARATUS. HENRY A. CARPENTER and ARTHUR W. WARNER, Sewickley, Pa., assignors to Riter-Conley Manufacturing Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed July 10, 1914. Serial No. 850,209. (Cl. 73—100.)

1. In weighing mechanism, a scale beam, permanently free to move to balance a weight shiftable thereon, an electric motor for shifting the weight, switch mechanism within the motor circuit for controlling the activity of the motor, and means for controlling the movements of the switch mechanism to close the motor circuit and including an auxiliary circuit having fixed contacts in the path of movement of the scale beam.

2. In weighing mechanism, a scale beam, permanently free to move to balance a weight shiftable thereon, an electric motor for shifting the weight, switch mechanism within the motor circuit for controlling the activity of the motor, and means for controlling the movements of the switch mechanism to close the motor circuit and including an auxiliary circuit having fixed contacts in the path of movement of the scale beam, said switch mechanism being operative to control the direction of movement of the motor, whereby the weight is shiftable to provide gross and tare weights from a single point.

3. In weighing mechanism, a scale beam, permanently free to move to balance a weight shiftable thereon, an

electric motor for shifting the weight, switch mechanism within the motor circuit for controlling the activity of the motor, means for controlling the movements of the switch mechanism to close the motor circuit and including an auxiliary circuit having fixed contacts in the path of movement of the scale beam, said switch mechanism including a pivoted handle having a normal position, and circuit make and break devices movable with said handle, the operation of said devices being dependent upon the position of the scale beam relative to said contacts.



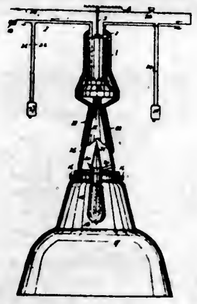
4. In weighing mechanism, a scale beam, permanently free to move to balance a weight shiftable thereon, an electric motor for shifting the weight, and switch mechanism within the motor circuit for controlling the activity of the motor, and means for controlling the movements of the switch mechanism to close the motor circuit and including an auxiliary circuit having fixed contacts in the path of movement of the scale beam, said switch mechanism including movable circuit make and break devices, the operation of said devices being dependent upon the position of the scale beam relative to said contacts.

5. In weighing mechanism, a scale beam, permanently free to move to balance a weight shiftable thereon, an electric motor for shifting the weight, and switch mechanism within the motor circuit for controlling the activity of the motor, and means for controlling the movements of the switch mechanism to close the motor circuit and including an auxiliary circuit having fixed contacts in the path of movement of the scale beam, said switch mechanism including movable circuit make and break devices, the operation of said devices being dependent upon the position of the scale beam relative to said contacts, the movement of said devices in one direction being at will.

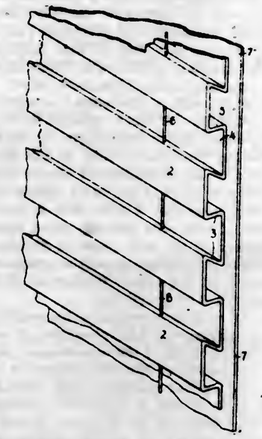
[Claims 6 to 51 not printed in the Gazette.]

1,156,865. SOUND AND LIGHT AMPLIFIER. HORACE J. FARRAR, Seattle, Wash., assignor to Universal High Power Telephone Company, King county, Wash. Filed Jan. 27, 1914. Serial No. 814,845. (Cl. 179—178.)

In a combined light and sound device, the combination of a hollow circular member having its lower end internally threaded and which is adapted to contain the receiving end of a telephone, means for suspending the said member to a ceiling, a circular plate having a threaded periphery by means of which the plate is removably attached to the said circular member, the said plate being provided with an aperture through its center, a hornlike member and means for removably securing its smaller end to the said plate so that the aperture in the plate communicates with the interior of the horn-like member, means on the lower edge of the said hornlike member for removably securing a lamp shade thereto, arms extending across the bottom of the hornlike member, a light socket supported by means of the said arms, a cone shaped member mounted above the said socket and whose base is of about the same diameter as that of the socket, the said arms supporting both the socket and the cone, and the apex of the said cone being pointed toward the source of sound.



1,156,866. LATH-BOARD. SILAS M. FORD, St. Paul, Minn. Filed July 14, 1914. Serial No. 850,913. (Cl. 20—13.)



1. A lath board comprising a sheet of flexible waterproof material corrugated to form interspaced projections and intermediate depressions, and reinforcing strips incorporated in the sheet and extending transversely of the corrugations for holding the corrugations to form.

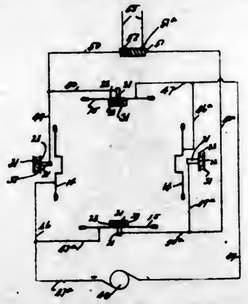
2. A lath board comprising a sheet of flexible material corrugated to form interspaced projections and intermediate depressions, and metal strips piercing the projections and passing transversely through the same whereby to hold them from collapsing.

3. A lath board comprising a sheet of flexible material corrugated to form interspaced lath projections and intermediate depressions and reinforcing strips piercing the projections and passing transversely through the same just under the lath faces thereof, whereby to hold the projections from collapsing.

1,156,867. UNIVERSAL SOUND-TRANSMITTING MEANS. PAUL J. HACKETT, Seattle, Wash., assignor to Universal High Power Telephone Company, King county, Wash. Filed July 6, 1914. Serial No. 849,270. (Cl. 179—135.)

1. The combination in an electrical sound-transmitting device having a plurality of sound tubes communicating with a common source of sound, of a plurality of diaphragms arranged in pairs, a granule resistance cell

mounted upon each diaphragm, and a fixed and movable electrode within each of said cells whereby the granules associated with one diaphragm only of each pair are acted upon by the outward swelling of that diaphragm.



2. The combination in an electrical sound-transmitting device having a plurality of sound tubes communicating with a common source of sound, of a plurality of diaphragms arranged in pairs, a granule resistance cell mounted upon each diaphragm, and a fixed and a movable electrode within each of said cells whereby the granules associated with one diaphragm of each pair only are compressed by the outward swelling of that diaphragm and the corresponding granules of the other diaphragm of that pair are allowed to move away from each other.

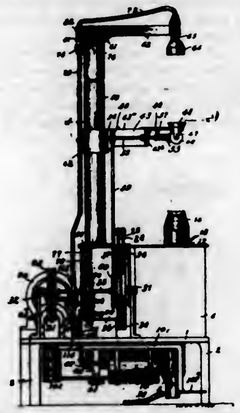
3. The combination with a telephone transmitter of the type having a plurality of tubes communicating with a common sound passage and a diaphragm for each tube, of means for increasing the sensitiveness of the diaphragms, said means including an arrangement of the diaphragms in oppositely disposed pairs, a granular resistance cell affixed to each diaphragm and a fixed and a movable electrode within each of said cells whereby when sound waves impinge against any of the said pairs of diaphragms one diaphragm of each pair compresses the granules within its resistance cell and the other diaphragm of that pair loosens the granules within its cell.

4. The combination with a telephone transmitter having a common sound passage and diaphragms, of means for increasing the sensitiveness of the diaphragms, said means including an arrangement of the diaphragms in oppositely disposed pairs, a granular resistance cell affixed to each diaphragm and a fixed and a movable electrode within each of said cells whereby when sound waves impinge against any of the said pairs of diaphragms one diaphragm of each pair compresses the granules within its resistance cell and the other diaphragm of that pair loosens the granules within its resistance cell.

1,156,868. GLASS-BLOWING MACHINE. VERNON M. DORSEY, Laurel Grove, Md., assignor to Empire Machine Company, Portland, Me., a Corporation of Maine. Filed Feb. 15, 1908, Serial No. 416,152. Renewed May 31, 1912. Serial No. 700,800. (Cl. 49—18.)

1. In a mold lifting and closing mechanism for a glass blowing machine, the combination with a vertically movable separable mold, of mechanism for lifting the mold, mechanism for closing the mold having a support independent of the movement of the mold lifting mechanism, means for simultaneously actuating the mold lifting and mold closing mechanisms and for independently imparting a further movement to the mold closing mechanism while the mold lifting mechanism remains stationary, substantially as described.

2. In a mold closing and lifting mechanism for a glass blowing machine, the combination of a plunger, a separable mold carried on the plunger, means for lifting and lowering the plunger, a collar movable on the plunger and connected with the mold to close it, means for moving the plunger and means having a support independent of the movement of the plunger for imparting motion to the collar simultaneously with the movement of the plunger and for then moving the collar on the plunger, substantially as described.



3. In a mold lifting and closing mechanism for a glass blowing machine, the combination with a mold tank, of a plunger, having a cross-head thereon, a guide for the plunger and guides for the cross-head located in the tank, a separable mold mounted upon the cross-head, a collar mounted upon the plunger and connected with the parts of the molds and means having a support independent of the movement of the plunger for simultaneously moving the collar and plunger and for imparting independent motion to the collar upon the plunger, substantially as described.

4. In a mold lifting and closing mechanism for a glass blowing machine, the combination of a mold tank, having a well in the bottom thereof, a plunger fitting within the well and projecting into the tank and forming with the well a dash pot, means for moving the plunger, a separable mold carried on the plunger and means for opening and closing the mold, substantially as described.

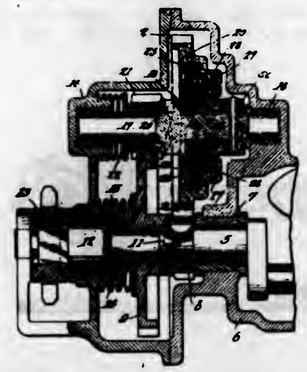
5. In a mold lifting and closing mechanism for a glass blowing machine, the combination with a mold tank, having guides therein, and a well located at the bottom of the tank, of a plunger within the well and forming therewith a dash pot, a cross-head upon the plunger engaging the guides within the tank, a separable mold located on the cross-head, a collar movable upon the plunger and connected with the mold sections, levers pivoted within the tank connected with the plunger and with the collar thereon and means for simultaneously lifting the levers and for independently imparting further movement to the lever actuating the collar, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,156,869. GEARING. FRANK H. WALKER, Lacon, Ill., assignor to Bullock Tractor Co., Chicago, Ill., a Corporation of Illinois. Filed Aug. 29, 1914. Serial No. 859,182. (Cl. 74—7.)

1. A gearing for internal combustion engine starters, comprising a starter shaft, a pinion fast on the starter shaft, a spur gear loose on the starter shaft, a driving connection between the spur gear and the shaft of the engine to be started, a coupling between the pinion and the spur gear, which coupling is disconnected when the starter shaft is driven by its motor, a counter-shaft, a spur gear mounted on the counter-shaft and in mesh with the aforesaid pinion, a pinion loose on the counter-shaft and in mesh with the first-mentioned spur gear, a driving connection between the second-mentioned spur gear and the counter-shaft, and a driving connection between the spur gear and the pinion of the counter-shaft, said connection separating when the pinion is driven at a greater speed than the spur gear.

2. A gearing for internal combustion engine starters, comprising a starter shaft, a pinion fast on the starter shaft, a spur gear loose on the starter shaft, a driving connection between the spur gear and the shaft of the engine to be started, interlocking ratchet teeth on the spur gear and on the pinion, said teeth slipping when the starter shaft is driven by its motor, the spur gear being slidable on the starter shaft, a counter-shaft, a spur gear mounted on the counter-shaft and in mesh with the aforesaid pinion, a pinion loose on the counter-shaft and in mesh with the first-mentioned spur gear, a driving connection between the second-mentioned spur gear and the counter-shaft, and a driving connection between the spur gear and the pinion of the counter-shaft, said connection separating when the pinion is driven at a greater speed than the spur gear.



3. A gearing for internal combustion engine starters, comprising a starter shaft, a pinion fast on the starter shaft, a spur gear loose on the starter shaft, a driving connection between the spur gear and the shaft of the engine to be started, a coupling between the pinion and the spur gear, which coupling is disconnected when the starter shaft is driven by its motor, a counter-shaft, a spur gear mounted on the counter-shaft and in mesh with the aforesaid pinion, a pinion loose on the counter-shaft and in mesh with the first-mentioned spur gear, a driving connection between the second-mentioned spur gear and the counter-shaft, a ratchet collar on the counter-shaft, and a ratchet on the second-mentioned pinion interlocking with the ratchet collar, said pinion being slidable on the counter-shaft to effect separation of the ratchets when the pinion of the counter-shaft is driven at a greater speed than the spur gear of the counter-shaft.

4. A gearing for internal combustion engine starters, comprising a starter shaft, a pinion fast on the starter shaft, a spur gear loose on the starter shaft, a driving connection between the spur gear and the shaft of the engine to be started, a coupling between the pinion and the spur gear, which coupling is disconnected when the starter shaft is driven by its motor, a counter-shaft, a spur gear mounted on the counter-shaft and in mesh with the aforesaid pinion, a pinion loose on the counter-shaft and in mesh with the first-mentioned spur gear, and a driving connection between the second-mentioned spur gear and the counter-shaft, said connection disengaging when the counter-shaft is overloaded.

REISSUES.

13,991. AUTOMATIC PLATE-VALVE. ROBERT MEYER, Mülheim-Ruhr, Germany, assignor, by mesne assignments, to C. P. Coleman and G. M. P. Murphy, receivers of International Steam Pump Company, a Corporation of New Jersey. Filed Aug. 2, 1915. Serial No. 43,354. Original No. 1,019,683, dated Mar. 5, 1912, Serial No. 579,144. (Cl. 137—32.)

1. An automatic plate-valve of the type described, comprising in combination a valve-seat having recesses with inclined faces, a thin elastic plate or strip extending into said recesses, and a cap or arrester having a recess of arc-shaped section holding the plate or strip on the valve seat and exactly determining the upward movement of the same.

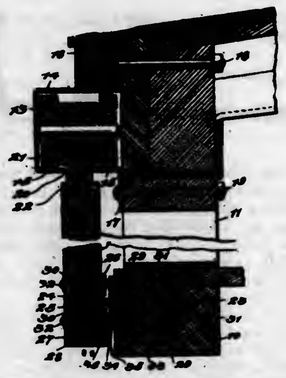


2. An automatic plate-valve of the type described, comprising in combination a valve-seat having two recesses with inclined faces, a thin elastic, oblong, metal plate extending into said recesses, and a cap having a curved recess and two recesses at the ends of the plate for holding the plate on the valve-seat and exactly determining the upward movement of the same, substantially as shown.

3. An automatic plate-valve of the type described, comprising in combination a valve-seat, a thin elastic plate or strip forming a valve and having both ends free to permit bending of the plate on a uniform bending line in opening, and a cap or arrester holding the plate on the valve-seat and determining the opening movement of the same.

4. An automatic plate-valve of the type described, comprising in combination a valve-seat, a thin elastic plate or strip forming a valve and having both ends free to permit bending of the plate on a uniform bending line in opening, and a cap or arrester determining the opening movement of the plate and having recesses at the ends of the plate for holding the plate in position on the valve seat.

13,992. CAR-DOOR. JAMES W. RUMSEY, Chicago, Ill., assignor of one-half to Oscar Hogin, Calif., Cal. Filed Feb. 12, 1913. Serial No. 747,935. Original application filed Nov. 17, 1910, Serial No. 592,917. Divided and application filed Feb. 2, 1911, Serial No. 606,274. Original No. 1,027,156, dated May 21, 1912. (Cl. 20—22.)



1. In combination with a car body having a door opening in a vertical wall thereof, a door sliding over the opening in front of the plane of the said vertical wall of the car body, the door being larger than the opening and overlying the said vertical wall of the car below the opening, and continuous intercalating T-slot and T-rail members, one of such members extending horizontally across the inside face of the door for its entire width and the other of such members extending horizontally across the said vertical wall of the car below the door opening, the T-slot member being countersunk in the face of the part across which it extends.

2. In combination with a car body having a door opening in a vertical wall thereof, a continuous T-rail extending horizontally across the said vertical wall of the car body below the door opening, a door sliding over the opening in front of the plane of the said vertical wall of the car body, the door being larger than the opening and ex-

tending below the same for its entire width, the said extended part of the door being provided with a continuous horizontally disposed T-slot upon its inside face, said T-slot being extended across the entire width of the door and being engaged with the said T-rail, the throat of the T-slot being of less width than the head of the T-rail and embracing the web of the said T-rail behind the head, and means covered by the door for securing the T-rail to the said vertical wall of the car body.

3. In combination, a car body having a door opening in its side wall, a door, devices at the upper end of the door for slidingly supporting it on the car structure, and means at the lower edge of the door for slidingly confining it to the car structure, the lower edge of the door on its inner face being provided with a longitudinal recess at a point below the door opening, said means consisting of a plate or flange fastened to the inner face of the door and a rail fastened to the car body, the head of said rail projecting outwardly from the car body and into the recess in the door and engaging behind the flange or plate.

4. In combination, a car body having a door opening in its side wall, a door, devices at the upper end of the door for slidingly supporting it on the car structure, and means at the lower edge of the door for slidingly confining it to the car structure, the lower edge of the door on its inner face being provided with a longitudinal recess at a point below the door opening, said means consisting of a plate or flange fastened to the inner face of the door at a point above said recess and a rail fastened to the car body, the head of said rail projecting outwardly from the car body and into the recess in the door, said flange or plate depending to a point behind the head of the rail.

13,993. TENNIS-SHOE. NELSON E. TOUALEY, Watertown, and CHARLES H. ROPER, Belmont, Mass., assignors to Hood Rubber Co., a Corporation of Massachusetts. Filed July 1, 1915. Serial No. 37,618. Original No. 1,115,875, dated Nov. 3, 1914, Serial No. 774,219. (Cl. 36—32.)



1. A tennis shoe, or shoe having a fabric upper and a composition rubber sole, including sole, instep and heel portions, and a composition rubber heel attached to the heel portion and comprising comparatively thin vertical and bottom walls defining a large chamber, and an integral partition extending across the chamber, the upper edges of the vertical wall and partition being attached to the heel portion of the sole.

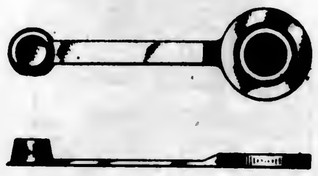
2. A tennis shoe, or shoe having a fabric upper and a rubber sole comprising sole, instep and heel portions, and a heel attached to the heel portion and comprising a rubber composition shell forming a large chamber and spaced apart partitions integral with the shell extending across the chamber, the upper edges of the partitions and front wall of the shell being provided with passages.

3. A tennis shoe, or like shoe having a fabric upper and composition rubber sole, including sole, instep and heel portions, and a composition rubber heel comprising vertical and bottom walls defining a large chamber, said chamber having a passageway communicating the interior of the heel with the exterior atmosphere, and the bottom wall of the heel having integral therewith and projecting upwardly therefrom a member finding a bearing at its upper edge against the heel portion of the rubber sole, the upper edge of the vertical wall being vulcanised to the heel portion of the rubber sole.

4. A tennis shoe having a fabric upper and a rubber sole vulcanised thereto and including sole, instep and heel portions, and a rubber heel comprising vertical and bottom walls defining a large chamber, the portion of the vertical wall adjacent the instep of the shoe having a passageway in its upper edge, and said edge of the vertical wall on opposite sides of the passageway and throughout its extent being vulcanised to the heel portion of the rubber sole, and a part integral with and projecting upwardly from the bottom wall of the heel between opposite sides of the vertical wall thereof and bearing at its upper edge against the bottom of the heel portion of the rubber sole.

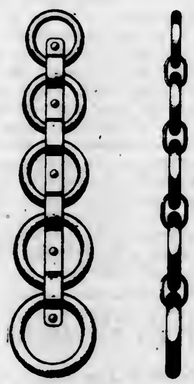
DESIGNS.

47,942. GOLF-TEE. HAMILTON ABERT, Passaic, N. J. Filed July 14, 1915. Serial No. 39,913. Term of patent 7 years.



The ornamental design for a golf tee, as shown.

47,943. HARNESS ORNAMENT. ANDREW ALBRIGHT, Jr., New York, N. Y. Filed Aug. 3, 1914. Serial No. 854,884. Term of patent 14 years.



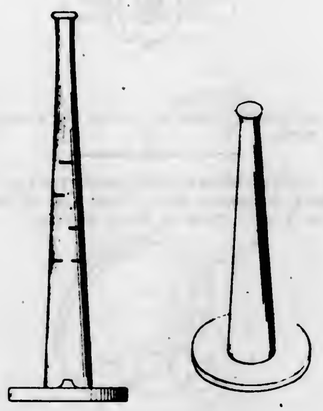
The ornamental design for a harness ornament, as shown.

47,944. TIRE. HARRY C. ARNOLD, Malden, Mass. Filed June 9, 1915. Serial No. 33,195. Term of patent 14 years.



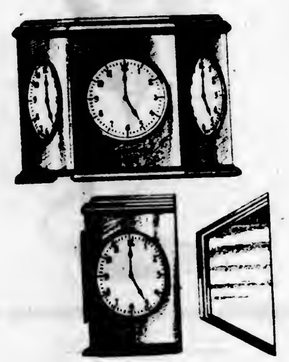
The ornamental design for a tire, as shown.

47,945. CASING FOR COIN-ACTUATED MACHINES. WILLIAM L. BRATTON, Brooklyn, N. Y., assignor to Willard G. Bratton, Pittsburgh, Pa. Filed Aug. 17, 1914. Serial No. 857,270. Term of patent 3½ years.



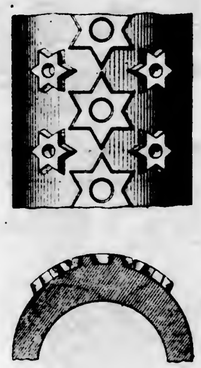
The ornamental design for a casing for coin actuated machines, as shown.

47,946. CLOCK. WALTER G. CAMPBELL, Marysville, Ohio. Filed June 18, 1915. Serial No. 34,932. Term of patent 14 years.



The ornamental design for a clock, as shown.

47,947. TIRE-CASING. JAMES H. CHRISTIAN, Detroit, Mich. Filed June 28, 1915. Serial No. 36,878. Term of patent 14 years.



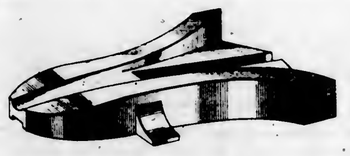
The ornamental design for a tire casing as shown.

47,948. DISPENSING DEVICE. ROBERT A. COURTNEY, Baltimore, Md. Filed May 21, 1915. Serial No. 29,672. Term of patent 3½ years.



The ornamental design for a dispensing device, as shown.

47,949. CAR-REPLACER. HARRY A. EATON, Illmo, Mo. Filed Feb. 6, 1915. Serial No. 6,599. Term of patent 14 years.





The ornamental design for a car replacer, as shown.

47,950. HAIR-FASTENER. GEORGE A. GLEESON, Chicago, Ill. Filed May 1, 1915. Serial No. 25,290. Term of patent 7 years.



The ornamental design for a hair fastener as shown.

47,951. CAT STATUETTE. EMMA JANE HANEY, Seneca Falls, N. Y. Filed Nov. 12, 1914. Serial No. 871,800. Term of patent 7 years.



The ornamental design for a cat statuette, as shown.

47,952. BODY FOR A MASSAGE DEVICE. AUGIE L. HANSEN, Evanston, Ill., assignor to Chicago Title & Trust Co., trustee, a Corporation of Illinois. Filed Mar. 7, 1912. Serial No. 682,265. Term of patent 14 years.



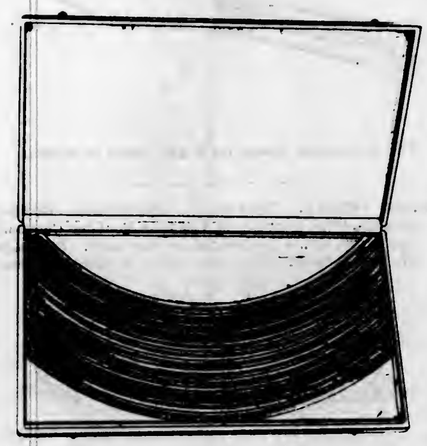
The ornamental design for a body for a massage device as shown.

47,953. ATTACHMENT-PLUG RECEPTACLE. HARVEY HUBBELL, Bridgeport, Conn. Filed Apr. 14, 1915. Serial No. 21,476. Term of patent 14 years.



The ornamental design for an attachment plug receptacle, substantially as shown.

47,954. DISPLAY-CABINET. MAURICE J. KARPELES, Providence, R. I. Filed July 23, 1915. Serial No. 41,603. Term of patent 7 years.



The ornamental design for a display cabinet, as shown.

47,955. DISPLAY-CABINET. MAURICE J. KARPELES, Providence, R. I. Filed July 23, 1915. Serial No. 41,605. Term of patent 7 years.



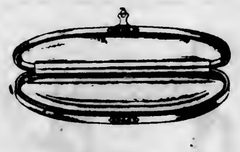
The ornamental design for a display cabinet, as shown.

47,956. DISPLAY-CABINET. MAURICE J. KARPELES, Providence, R. I. Filed July 23, 1915. Serial No. 41,606. Term of patent 7 years.



The ornamental design for a display cabinet, as shown.

47,957. DISPLAY-CABINET MAURICE J. KARPELES, Providence, R. I. Filed July 23, 1915. Serial No. 41,607. Term of patent 7 years.



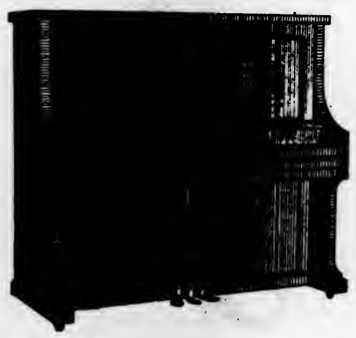
The ornamental design for a display cabinet, as shown.

47,958. ARTICLE OF MANUFACTURE. GUSTAV A. KELCH, New York, N. Y. Filed July 22, 1915. Serial No. 41,405. Term of patent 3½ years.



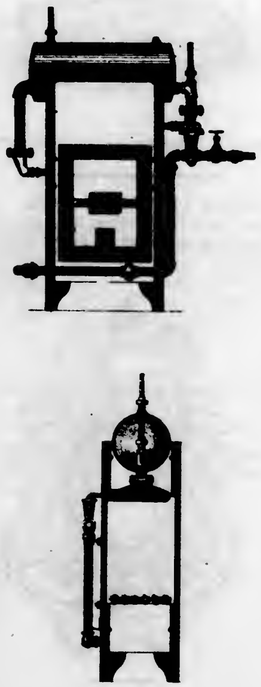
The ornamental design for an article of manufacture as shown.

47,959. PLAYER-PIANO CASE. WALTER LANE, Holland, Mich., assignor to Bush & Lane Piano Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 7, 1914. Serial No. 875,983. Term of patent 14 years.



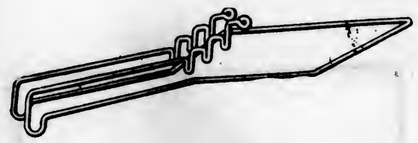
The ornamental design for a player-piano case, as shown.

47,960. WATER-HEATER. HERBERT J. LONG, New Brunswick, N. J., assignor to The Long-Landreth-Schneider Company, New Brunswick, N. J. Filed July 26, 1915. Serial No. 42,096. Term of patent 14 years.



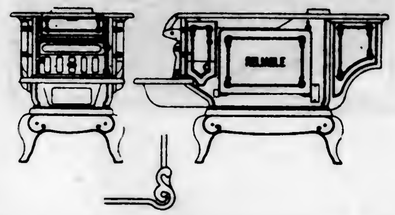
The ornamental design for a water heater as shown.

47,961. PAN-LIFTER. WILLIAM H. MCDONOUGH, Deming, N. Mex. Filed July 15, 1915. Serial No. 40,181. Term of patent 14 years.



The ornamental design for a pan lifter, as shown.

47,962. STOVE. WILLIAM L. MERSFELDER, Kennedy Heights, Ohio, assignor to The Star Foundry Company, Covington, Ky., a Corporation of Kentucky. Filed Apr. 27, 1915. Serial No. 24,358. Term of patent 14 years.



The ornamental design for a stove, as shown.

47,963. RUBBER-TIRE TREAD. NORMAN J. MOONEY and FRANK MOONEY, San Francisco, Cal. Filed June 23, 1915. Serial No. 35,978. Term of patent 14 years.



The ornamental design for a rubber tire tread as shown.

47,964. ELECTRIC SIGN. MORTIMER NORDEN, New York, N. Y., assignor to Joseph Norden, New York, N. Y. Filed July 2, 1915. Serial No. 37,776. Term of patent 7 years.



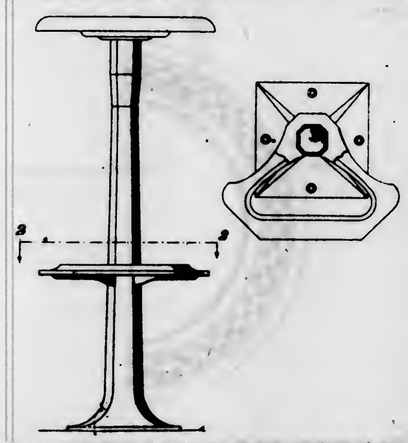
The ornamental design for an electric sign, as shown.

47,965. SIGN. JOHN L. QUINN, Los Angeles, Cal., assignor to Standard Oil Company, Richmond, Cal., a Corporation of California. Filed Mar. 25, 1915. Serial No. 17,078. Term of patent 3½ years.



The ornamental design for a sign as shown.

47,966. COUNTER-STOOL. HENRY R. REISCHMANN, New York, N. Y. Filed June 21, 1915. Serial No. 35,465. Term of patent 3½ years.



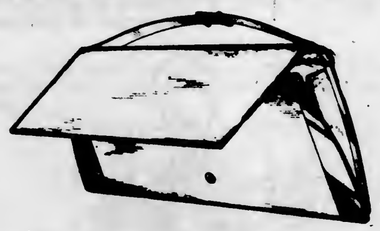
The ornamental design for a counter stool, as shown.

47,967. ATTACHING-PLATE FOR HAMES. WILLIAM H. ROTTGER, Farmington, Mo. Filed Apr. 3, 1915. Serial No. 19,078. Term of patent 14 years.



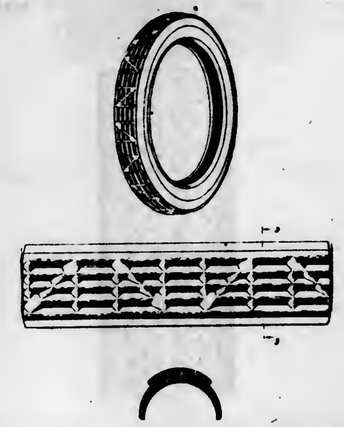
The ornamental design for an attaching plate for hames, as shown.

47,968. HAND-BAG. LOUIS A. SAMSTAG, New York, N. Y. Filed Aug. 2, 1913. Serial No. 782,726. Term of patent 3½ years.



The ornamental design for a hand-bag, as shown.

47,969. TIRE-TREAD. DAVID SPENCE, Norwalk, Conn. Filed Aug. 9, 1915. Serial No. 44,660. Term of patent 14 years.



The ornamental design for a tire tread as shown.

47,970. FILTER. JAMES FRANK STOCKING, East Orange, N. J. Filed Mar. 2, 1915. Serial No. 11,570. Term of patent 14 years.



The ornamental design for a filter, as shown and described.

47,971. HAIR-PIN. MELVIN C. STONE, Reading, Mass. Filed May 22, 1915. Serial No. 29,915. Term of patent 7 years.



The ornamental design for a hair pin, showing my new design.

47,972. TIRE-TREAD. RUSSELL F. TRALL, Toledo, Ohio, assignor to The Toledo Ford-Tire Company, Toledo, Ohio, a Corporation of Ohio. Filed July 2, 1915. Serial No. 37,773. Term of patent 3½ years.



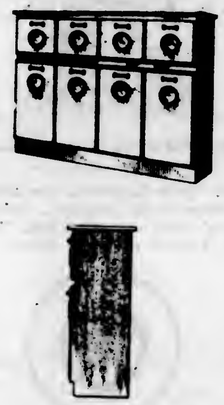
The ornamental design for a tire tread, substantially as shown and described.

47,973. SOCKET-COVER FOR LIGHTING-FIXTURES. GEORGE M. TEPPER, New York, N. Y., assignor to National Metal Spinning & Stamping Company, New York, N. Y., a Corporation of New York. Filed May 24, 1915. Serial No. 30,231. Term of patent 7 years.



The ornamental design for a socket cover for lighting fixtures, as shown.

47,974. GROCERY-BIN. NICKOLAS J. WEBBE, Chicago, Ill. Filed June 14, 1915. Serial No. 34,090. Term of patent 14 years.



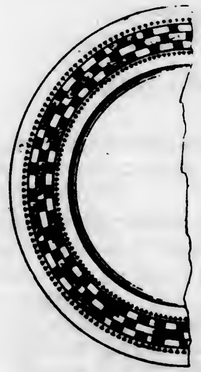
The ornamental design for a grocery bin, as shown.

47,975. PLATE. AKSEL WESTERLIND, Chicago, Ill., assignor to The Meyercord Company, Chicago, Ill. Filed July 1, 1915. Serial No. 37,602. Term of patent 3½ years.



The ornamental design for a plate as shown.

47,976. PLATE. AKSEL WESTERLIND, Chicago, Ill., assignor to The Meyercord Company, Chicago, Ill. Filed July 1, 1915. Serial No. 37,601. Term of patent 3½ years.



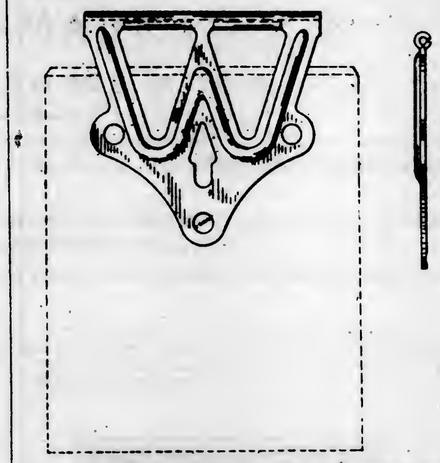
The ornamental design for a plate as shown.

47,977. WRENCH. GEORGE W. WHITE, Kansas City, Kans. Filed Mar. 25, 1915. Serial No. 17,068. Term of patent 7 years.



The ornamental design for a wrench, as shown.

47,978. STORAGE-BATTERY HANDLE. THEODORE A. WILLARD, Cleveland, Ohio, assignor to The Willard Storage Battery Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 6, 1915. Serial No. 38,822. Term of patent 7 years.



The ornamental design for a storage battery handle substantially as shown.

47,979. PICTURE. JOHN WOJCIK, Chicago, Ill. Filed June 18, 1915. Serial No. 34,967. Term of patent 7 years.



The ornamental design for a picture, as shown.

TRADE-MARKS

PUBLISHED OCTOBER 12, 1915.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 66,653. (CLASS 11. INKS AND INKING MATERIALS.) WILLIAM A. DAVIS CO., Boston, Mass. Filed Nov. 1, 1912.

TREASURY

Particular description of goods.—Writing-Inks.
Claims use since Aug. 1, 1872.

Ser. No. 78,018. (CLASS 39. CLOTHING.) MAX GREENBERG & COMPANY, New York, N. Y. Filed May 6, 1914.



Particular description of goods.—Ladies' M[illegible]s Costumes, Waists, and Dresses.
Claims use since Mar. 20, 1914.

Ser. No. 79,064. (CLASS 37. PAPER AND STATIONERY.) THE JOHN HOBERG COMPANY, Green Bay, Wis. Filed June 13, 1914.



No claim being made to the words "Toilet" and "Tissue."
Particular description of goods.—Toilet-Paper.
Claims use since Mar. 18, 1914.

Ser. No. 79,070. (CLASS 37. PAPER AND STATIONERY.) THE JOHN HOBERG COMPANY, Green Bay, Wis. Filed June 13, 1914.



Particular description of goods.—Toilet-Paper.
Claims use since Sept. 1, 1913.

Ser. No. 79,569. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) HOME GOLF GAME COMPANY, Chicago, Ill. Filed July 6, 1914.

HOME

Particular description of goods.—Game-Boards.
Claims use since Apr. 22, 1914.

Ser. No. 80,007. (CLASS 39. CLOTHING.) SARAH E. HALL, Chicago, Ill. Filed July 27, 1914.

BALDWIN

Particular description of goods.—Bonnets and Hats.
Claims use since February, 1906.

Ser. No. 80,187. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) PLANTOR AKTIENGESELLSCHAFT FÜR PLATTEN-SPRECHMASCHINEN, Charlottenburg, near Berlin, Germany. Filed July 30, 1914.

Plantor

Particular description of goods.—Talking-Machines and Accessories—viz., Records, Diaphragms, Horns, Sound-Boxes, Record-Holders, Needle-Boxes, Talking-Machine Needles, Record-Albums, Motors, Turn-Tables, Turn-Table Brakes, Sound-Arms, Sound-Arm Carriers, Motor-Handles, and Dictating-Machines.
Claims use since the 4th of December, 1912.

Ser. No. 81,423. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) F. C. HUYCK & SONS, Albany, N. Y. Filed Sept. 23, 1914.

"KENWOOD TAN-JACKET"

No claim being made to the word "Tan-Jacket" apart from the mark shown in the drawing.
Particular description of goods.—Paper-Making Felts.
Claims use since about Aug. 1, 1914.

Ser. No. 82,532. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUIS C. WEDGEFUTH, Yonkers, N. Y. Filed Nov. 11, 1914.

IODOSOL

Particular description of goods.—A Preparation of Iodin for Internal Treatment in Venereal Diseases, Made Soluble by Secret Process, Non-Alcoholic.
Claims use since May 5, 1904.

Ser. No. 85,022. (CLASS 2. RECEPTACLES.) HYMAN & OPPENHEIM, New York, N. Y. Filed Mar. 8, 1915.



Particular description of goods.—Loose-Leaf Envelops Provided with a Perforated Attached Stub.
Claims use since Jan. 1, 1915.

Ser. No. 86,507. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CARBONA PRODUCTS COMPANY, East Orange, N. J., and New York, N. Y. Filed May 10, 1915.

CARBONA
LAUNDRY SOAP

No claim being made to the words "Laundry Soap."
Particular description of goods.—Soap.
Claims use since Apr. 6, 1915.

Ser. No. 86,610. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) FLINT, BLOOD & CO. INC., Providence, R. I. Filed May 14, 1915.



Particular description of goods.—Finger-Rings.
Claims use since May 13, 1915.

Ser. No. 87,305. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JARMON AND CO., INC., New York, N. Y. Filed June 15, 1915.



No claim being made for the words "Jarmon's" and "Shampoo Poudre" apart from the mark shown in the drawing; but applicant does not intend thereby to waive any rights it otherwise has in the use of those words.
Particular description of goods.—A Powdered Soap Adapted for Use in Washing the Hair.
Claims use since Jan. 1, 1915.

Ser. No. 87,473. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KANSAS CITY WHOLESALE GROCERY CO., Kansas City, Mo. Filed June 21, 1915.

AMERICAN BEAUTY

Particular description of goods.—Baking-Powder.
Claims use since June 1, 1915.

Ser. No. 87,581. (CLASS 37. PAPER AND STATIONERY.) THE MYSELL-ROLLINS BANK NOTE COMPANY, San Francisco, Cal. Filed June 23, 1915.



Particular description of goods.—Writing and Printing Paper.
Claims use since May 15, 1910.

Ser. No. 87,783. (CLASS 37. PAPER AND STATIONERY.) JOHN P. MORTON & COMPANY, Louisville, Ky. Filed July 6, 1915.



No claim is made to the words "School Series Approved," "Writing Tablets," "Name," "School," and "Trade."
Particular description of goods.—Paper Tablets and Note-Books.
Claims use since Apr. 22, 1915.

Ser. No. 87,831. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) NAPTHA WASHING TABLET CO., Chicago, Ill. Filed July 8, 1915.



No claim being made to the words "Naptha Washing Tablets" and "No Rubbing."
Particular description of goods.—Washing-Tablets Which are Lozenge-Shaped Disks Compounded for Cleaning, Polishing, and Washing Purposes.
Claims use since June 1, 1915.

Ser. No. 87,857. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) THE SHEFFIELD SILVER CO., New York, N. Y. Filed July 9, 1915.



The representation of the bust shown in the design is fanciful, no claim being made for the words "Sheffield S. Co."
Particular description of goods.—Hollow Silverware and other Forms of Silver or Silver-Plated Utensils.
Claims use since Dec. 15, 1908.

Ser. No. 87,902. (CLASS 2. RECEPTACLES.) JEAN J. VANDERVEER, Brattleboro, Vt. Filed July 12, 1915.

UP-TO-YOU

Particular description of goods.—Boxes.
Claims use since June 29, 1915.

Ser. No. 87,956. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SALUX DRUG COMPANY, St. Louis, Mo. Filed July 15, 1915.

SALKO

Particular description of goods.—Liquid Headache Remedy, Shaving-Lotion for Use After Shaving, Hair-Tonic, Liver-Tonic, Family-Liniment, Cough-Syrup, Syrup-of-Tar and Wild-Cherry Compound, Syrup-of-Figs and Senna Compound, Nerve and Muscle Tonic, Rheumatism and Gout Remedy, Chill and Fever Tonic, Compound Sarsaparilla, Emulsion of Cod-Liver Oil, Kidney and Backache Remedy, Tasteless Cordial of Cod-Liver Extract, Dyspepsia and Heartburn Remedy.
Claims use since the 10th day of March, 1915.

Ser. No. 87,980. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) AMERICAN BLOWER COMPANY, Detroit, Mich. Filed July 17, 1915.

ABC

Particular description of goods.—Rotary Fans and Blowers for Use in Ventilating and Heating, Including Disk Fans, Centrifugal Fans, and Multistage Fans; Forced-Draft Apparatus; Blacksmiths' Forges; Steam-Traps for Heating Apparatus; Heating Coils or Radiators; Hoods, Blast-Gates, Registers, and Dampers, (for Controlling Air or Gases in Heating or Ventilating,) Air-Washers, Humidifiers, and Spray-Chambers, (for Moistening or Purifying Air for Ventilating,) All as Used in or Adapted for Ventilating or Heating Systems.
Claims use since Oct. 12, 1895.

Ser. No. 88,101. (CLASS 2. RECEPTACLES.) ART METAL CONSTRUCTION CO., Jamestown, N. Y. Filed July 22, 1915.

AMCO

Particular description of goods.—Safety-Deposit Boxes.
Claims use since July 8, 1915.

Ser. No. 88,102. (CLASS 25. LOCKS AND SAFES.) ART METAL CONSTRUCTION CO., Jamestown, N. Y. Filed July 22, 1915.

AMCO

Particular description of goods.—Safes.
Claims use since July 8, 1915.

Ser. No. 88,175. (CLASS 37. PAPER AND STATIONERY.) TOWER MANUFACTURING & NOVELTY COMPANY, New York, N. Y. Filed July 24, 1915.

HONOR BRIGHT

Particular description of goods.—Stationery and Supplies Consisting of Pads, Tablets, White and Colored Crayons, Ink and Lead-Pencil Erasers, Blackboard-Erasers, Penholders, Steel Pen-Points, Loose-Leaf Covers, Pencil-Boxes, Letter-Files, and Rulers.
Claims use since June 1, 1915.

Ser. No. 88,230. (CLASS 5. ADHESIVES.) BOSTON BLACKING COMPANY, Portland, Me., and Cambridge, Mass. Filed July 27, 1915.

Be-Be-Co

Particular description of goods.—Adhesive Cement, Milliners' and Hatters' Glue, and Leather-Cement.
Claims use since July 20, 1915.

Ser. No. 88,451. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) VEL-O MANUFACTURING CO., Elizabeth City, N. C. Filed Aug. 5, 1915.

VEL-O



Particular description of goods.—A Toilet Lotion for the Skin.
Claims use since July 29, 1915.

Ser. No. 88,709. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HOLMAN SOAP CO., Chicago, Ill. Filed Aug. 20, 1915.

MOORAC

Particular description of goods.—Face-Powders, Cold-Creams, Peroxid Creams, Greaseless Face-Creams, Camphorated Face-Creams, Massage-Creams, Rouge, Cucumber Creams, Liquid Shampoo, Bay-Rum, Almond and Benzoin Creams, Witch-Hazel and Lemon Creams, Witch-Hazel Lotions, Florida Toilet Water, Hair-Tonic and Dandruff Remedy, Complexion-Powders, Toilet Waters, Antiseptic Shaving-Creams, Theatrical Rouge, Perfumes, Smelling-Salts, Tooth-Paste, Tooth-Powder, Antiseptic Tooth-Wash.
Claims use since August, 1911.

Ser. No. 88,824. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KALI MANUFACTURING CO., Philadelphia, Pa. Filed Aug. 26, 1915.

KMCO

KALI

No claim being made for the use of the word "Kali" apart from the mark shown in the drawing.
Particular description of goods.—Bleaching Compositions.
Claims use since Nov. 1, 1914.

Ser. No. 88,998. (CLASS 43. THREAD AND YARN.) CYNTHIA MILLS, East Boston, Mass. Filed Sept. 3, 1915.

LUS

Particular description of goods.—Cotton Yarns.
Claims use since Jan. 14, 1915.

Ser. No. 89,054. (CLASS 2. RECEPTACLES.) CHICAGO MILL AND LUMBER COMPANY, Chicago, Ill. Filed Sept. 7, 1915.

DREADNAUGHT

Particular description of goods.—Wire-Bound Boxes and Crates, Wooden Boxes and Crates, Boxes Made of Solid Fiber, Boxes Made of Corrugated Fiber-Board, Combination-Boxes Made of Fiber and Wood, and Chicken-Coops.
Claims use since on or about June 1, 1915.

Ser. No. 89,105. (CLASS 2. RECEPTACLES.) MAIN BROTHERS BOX & LUMBER CO., Karnak, Ill. Filed Sept. 8, 1915.

MaBro

Particular description of goods.—Box-Shooks.
Claims use since July 31, 1915.

Ser. No. 89,154. (CLASS 27. HOROLOGICAL INSTRUMENTS.) ONEIDA COMMUNITY, LIMITED, Oneida, N. Y. Filed Sept. 11, 1915.

COMMUNITY

The word "Community."
Particular description of goods.—Watches and Clocks.
Claims use since on or before October, 1914.

Ser. No. 89,205. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) BURNER CORPORATION, New York, N. Y. Filed Sept. 15, 1915.

Nedick's

Particular description of goods.—Orange-Juice.
Claims use since Aug. 23, 1915.

TRADE-MARK REGISTRATIONS GRANTED

OCTOBER 12, 1915.

106,084. PERFUMES. AGRA COMPANY, Detroit, Mich.
Filed February 10, 1915. Serial No. 84,421. PUBLISHED AUGUST 3, 1915.

106,085. RUBBER VEHICLE-TIRES. AKRON TIRE CO., INC., New York, N. Y.
Filed May 8, 1915. Serial No. 86,467. PUBLISHED AUGUST 3, 1915.

106,086. PAINTS AND VARNISHES FOR PROTECTION AGAINST ATMOSPHERIC INFLUENCES. AKTIENGESELLSCHAFT JOHANNES JEBRICH, Charlottenburg-Berlin, Germany.
Filed August 26, 1914. Serial No. 80,808. PUBLISHED AUGUST 3, 1915.

106,087. GASOLENE. AMERICAN OIL PROCESSES LIMITED, Denver and Loomis, Colo.
Filed April 24, 1915. Serial No. 86,174. PUBLISHED AUGUST 3, 1915.

106,088. MANUFACTURED FLAGS. ANNIN & Co., New York, N. Y.
Filed May 22, 1915. Serial No. 86,816. PUBLISHED AUGUST 3, 1915.

106,089. SPARK-PLUGS AND VALVE-LIFTERS. THE AUBURN IGNITION MFG. CO., Auburn, N. Y.
Filed April 30, 1915. Serial No. 86,286. PUBLISHED AUGUST 3, 1915.

106,090. TRACING-PAPER. CRANE & Co., Dalton, Mass.
Filed April 1, 1915. Serial No. 85,603. PUBLISHED AUGUST 3, 1915.

106,091. CARBURETER. DIAMOND CARBURETOR COMPANY, INC., Jersey City, N. J.
Filed March 4, 1915. Serial No. 84,924. PUBLISHED AUGUST 3, 1915.

106,092. FOUNTAIN-PENS. EAGLE PENCIL COMPANY, New York, N. Y.
Filed May 27, 1915. Serial No. 86,930. PUBLISHED AUGUST 3, 1915.

106,093. FOUNTAIN-PENS. EAGLE PENCIL COMPANY, New York, N. Y.
Filed May 27, 1915. Serial No. 86,931. PUBLISHED AUGUST 3, 1915.

106,094. TOOL-STEEL. FIRTH-STERLING STEEL COMPANY, McKeesport, Pa.
Filed April 26, 1915. Serial No. 86,206. PUBLISHED AUGUST 3, 1915.

106,095. LUBRICATING OILS AND GREASES. FISKE BROTHERS REFINING CO., New York, N. Y.
Filed April 29, 1915. Serial No. 86,266. PUBLISHED AUGUST 3, 1915.

106,096. LINSEED-OIL. W. R. GRACE & Co., New York, N. Y.
Filed June 7, 1915. Serial No. 87,168. PUBLISHED AUGUST 3, 1915.

106,097. CAKES AND CRACKERS. THE GROCERS' BISCUIT COMPANY, Louisville, Ky.
Filed June 21, 1915. Serial No. 87,467. PUBLISHED AUGUST 10, 1915.

106,098. STEEL PENS. HINKS, WELLS & Co., Birmingham, England.
Filed July 10, 1914. Serial No. 79,706. PUBLISHED AUGUST 3, 1915.

106,099. STEEL PENS. HINKS, WELLS & Co., Birmingham, England.
Filed July 10, 1914. Serial No. 79,708. PUBLISHED AUGUST 3, 1915.

106,100. STEEL PENS. HINKS, WELLS & Co., Birmingham, England.
Filed July 10, 1914. Serial No. 79,709. PUBLISHED AUGUST 3, 1915.

106,101. STEEL PENS AND PENHOLDERS. HINKS, WELLS & Co., Birmingham, England.
Filed July 10, 1914. Serial No. 79,710. PUBLISHED AUGUST 3, 1915.

106,102. NON-ELECTRIC MARINE MOTORS. HOOPER MANUFACTURING COMPANY, Freeport, Ill.
Filed June 15, 1914. Serial No. 79,105. PUBLISHED AUGUST 3, 1915.

106,103. DISINFECTANT. CALVIN T. HOOD, Chicago, Ill.
Filed April 16, 1915. Serial No. 85,987. PUBLISHED AUGUST 3, 1915.

106,104. BEER. INDEPENDENT BREWING COMPANY OF PITTSBURGH, Pittsburgh, Pa.
Filed May 22, 1915. Serial No. 86,823. PUBLISHED AUGUST 3, 1915.

106,105. BEER. INDEPENDENT BREWING COMPANY OF PITTSBURGH, Pittsburgh, Pa.
Filed May 22, 1915. Serial No. 86,824. PUBLISHED AUGUST 3, 1915.

106,106. BEER. INDEPENDENT BREWING COMPANY OF PITTSBURGH, Pittsburgh, Pa.
Filed May 22, 1915. Serial No. 86,825. PUBLISHED AUGUST 3, 1915.

106,107. BEER. INDEPENDENT BREWING COMPANY OF PITTSBURGH, Pittsburgh, Pa.
Filed May 22, 1915. Serial No. 86,826. PUBLISHED AUGUST 3, 1915.

106,108. POWDERED WAX, PREPARED WAX, WOOD-DYE, PASTE WOOD-FILLER, VARNISH-REMOVER, AND FLOOR-CLEANER. S. C. JOHNSON & SON, Racine, Wis.
Filed May 4, 1915. Serial No. 86,366. PUBLISHED AUGUST 3, 1915.

106,109. FURNITURE-POLISH, POLISH FOR PIANOS, AUTOMOBILES, CARRIAGES, POLISHES FOR WOODWORK, WOODEN FLOORS, AND WOOD GENERALLY. HARRY H. JUBLG, New York, N. Y.
Filed May 3, 1915. Serial No. 86,351. PUBLISHED AUGUST 3, 1915.

106,110. INSECTICIDE. CLARENCE E. KENYON, Great Falls, Mont.
Filed August 14, 1914. Serial No. 80,566. PUBLISHED SEPTEMBER 29, 1914.

106,111. ENAMEL, STEEL, AND TIN WARE. LALANCE & GROSJEAN MFG. CO., New York, N. Y.
Filed March 19, 1915. Serial No. 85,259. PUBLISHED AUGUST 3, 1915.

106,112. CORN-GRINDERS, CORN-MILLS, AND COFFEE-MILLS. LANDERS, FRARY & CLARK, New Britain, Conn.
Filed May 14, 1915. Serial No. 86,613. PUBLISHED AUGUST 3, 1915.

106,113. PLOWSHARES. MATT MARRS, Racine, Wis.
Filed April 9, 1915. Serial No. 85,818. PUBLISHED AUGUST 3, 1915.

106,114. PAPER-MAKING MACHINERY. J. MARX & COMPANY, London, England.
Filed August 30, 1912. Serial No. 65,568. PUBLISHED AUGUST 3, 1915.

106,115. MOVING-PICTURE FILMS. MELIES MFG. CO., New York, N. Y.
Filed June 3, 1915. Serial No. 87,079. PUBLISHED AUGUST 3, 1915.

106,116. COUGH-SYRUP. EDWARD R. MILLER, Dayton, Ohio.
Filed March 24, 1915. Serial No. 85,376. PUBLISHED AUGUST 3, 1915.

106,117. CERTAIN NAMED FOODS. NATIONAL GROCERY COMPANY, Jersey City, N. J.
Filed January 20, 1915. Serial No. 83,979. PUBLISHED MAY 4, 1915.

106,118. PIPES AND TUBES. NATIONAL TUBE COMPANY, Pittsburgh, Pa.
Filed January 11, 1912. Serial No. 60,728. PUBLISHED AUGUST 3, 1915.

106,119. CERTAIN NAMED FOODS. THE NEW WOOSTER PRESERVING CO., Wooster, Ohio.
Filed July 20, 1914. Serial No. 79,947. PUBLISHED JUNE 8, 1915.

106,120. SALVE COMPOUND FOR THE TREATMENT OF CUTS, SORES, AND BRUISES. AUGUST PAVELL, Tempe, Ariz.
Filed November 30, 1914. Serial No. 82,986. PUBLISHED AUGUST 3, 1915.

106,121. COLD-CREAM. THE POMPEIAN MFG. CO., Cleveland, Ohio.
Filed April 30, 1915. Serial No. 86,299. PUBLISHED AUGUST 3, 1915.

106,122. BLEND OF STRAIGHT WHISKIES. R. M. ROSE COMPANY, Chattanooga, Tenn.
Filed December 20, 1913. Serial No. 74,743. PUBLISHED MAY 26, 1914.

106,123. MEAT-CHOPPERS AND PARTS THEREOF. SANDER MFG. CO., Newark, N. J.
Filed April 19, 1915. Serial No. 86,057. PUBLISHED AUGUST 3, 1915.

106,124. BEER. SEATTLE BREWING AND MALTING CO., Seattle, Wash.
Filed August 25, 1914. Serial No. 80,805. PUBLISHED FEBRUARY 9, 1915.

106,125. TIRE FILLERS AND PATCHES FOR CEMENTING. SERVICE MOTOR SUPPLY COMPANY, Chicago, Ill.
Filed March 3, 1915. Serial No. 84,908. PUBLISHED AUGUST 3, 1915.

106,126. SOAP. JOHN T. STANLEY CO., INC., New York, N. Y.
Filed May 10, 1915. Serial No. 86,529. PUBLISHED AUGUST 3, 1915.

106,127. SOAP. JOHN T. STANLEY CO., INC., New York, N. Y.
Filed May 18, 1915. Serial No. 86,715. PUBLISHED AUGUST 3, 1915.

106,128. INSULATED WIRE AND CABLES. THE WHITNEY BLAKE COMPANY, New Haven, Conn.
Filed May 7, 1915. Serial No. 86,462. PUBLISHED AUGUST 3, 1915.

106,129. PERFUMES, TOILET WATERS, FACE-POWDERS, TOILET POWDERS, SACHET-POWDERS, TOILET CREAMS, AND ROUGES. THE C. B. WOODWORTH SONS CO., Rochester, N. Y.
Filed January 15, 1915. Serial No. 83,887. PUBLISHED AUGUST 3, 1915.

106,130. COMPOSITION FOR USE IN PREPARING A SOFT DRINK. FRANK C. YORK, Salina, Kans.
Filed May 1, 1914. Serial No. 77,944. PUBLISHED AUGUST 3, 1915.

106,131. CERTAIN NAMED MEASURING AND SCIENTIFIC APPLIANCES AND PARTS THEREOF. CARL ZEISS, Jena, Germany.
Filed January 20, 1915. Serial No. 83,988. PUBLISHED MARCH 16, 1915.

106,132. CERTAIN NAMED MEASURING AND SCIENTIFIC APPLIANCES AND PARTS THEREOF. CARL ZEISS, Jena, Germany.
Filed January 20, 1915. Serial No. 83,989. PUBLISHED MARCH 16, 1915.

106,133. SEPARATORS AND PARTS THEREOF. AKTIEBOLAGET ESKILSTUNA SEPARATOR, Eskilstuna, Sweden.
Filed March 5, 1915. Serial No. 84,948. PUBLISHED AUGUST 3, 1915.

106,134. TOILET-PAPER. ALBANY PERFORATED WRAPPING PAPER CO., Albany, N. Y.
Filed April 5, 1915. Serial No. 85,684. PUBLISHED AUGUST 3, 1915.

106,135. COOKING UTENSILS MADE OF ALUMINUM OR ALLOYS OF ALUMINUM. THE ALUMINUM COOKING UTENSIL CO., Pittsburgh, Pa.
Filed May 2, 1913. Serial No. 70,168. PUBLISHED AUGUST 3, 1915.

106,136. RIVETS AND BURS. THE AMERICAN BRASS COMPANY, Ansonia, Conn.
Filed May 14, 1915. Serial No. 86,607. PUBLISHED AUGUST 3, 1915.

106,137. METAL DISH-PANS. AMMIDON & CO., Baltimore, Md.
Filed April 20, 1915. Serial No. 86,065. PUBLISHED AUGUST 3, 1915.

106,138. GROUND AND CALCINED GYPSUM PLASTER. ARIZONA GYPSUM PLASTER CO., Douglas, Ariz.
Filed May 29, 1915. Serial No. 86,983. PUBLISHED AUGUST 3, 1915.

106,139. CUTTING AND MILLING MACHINES. JOHN C. BACKERT, Brooklyn, N. Y.
Filed May 17, 1915. Serial No. 86,657. PUBLISHED AUGUST 3, 1915.

106,140. LEATHER-FLEXING MACHINES, LEATHER-BREAKING MACHINES, LEATHER-TEMPERING MACHINES, AND PARTS THEREOF. THE BAGLEY MACHINERY COMPANY, Lynn, Mass.
Filed May 24, 1915. Serial No. 86,843. PUBLISHED AUGUST 3, 1915.

106,141. POLISHES FOR RESTORING THE FINISH ON VARNISHED-SURFACE WORK. BERRY BROTHERS, Detroit, Mich.
Filed April 22, 1915. Serial No. 86,097. PUBLISHED AUGUST 3, 1915.

106,142. LINIMENT FOR EXTERNAL AND INTERNAL USE FOR ANIMALS AND POULTRY. JOHN WALTER BLAIZE, Robstown, Tex.
Filed June 3, 1915. Serial No. 87,065. PUBLISHED AUGUST 3, 1915.

106,143. VARNISHES. HENRY L. CALMAN, New York, N. Y.
Filed May 28, 1915. Serial No. 86,949. PUBLISHED AUGUST 3, 1915.

106,144. GINGER-ALE, SARSAPARILLA, BIRCH-BEER, ORANGE PHOSPHATE, ROOT-BEER, AND LEMON-SOUR. CLICQUOT CLUB COMPANY, Providence, R. I., and Millis, Mass.
Filed June 2, 1915. Serial No. 87,047. PUBLISHED AUGUST 3, 1915.

106,145. SALT. COUTO & CO., Rio de Janeiro, Brazil.
Filed March 24, 1915. Serial No. 85,363. PUBLISHED AUGUST 3, 1915.

106,146. POLISH FOR FURNITURE, FLOORS, VEHICLE-BODIES, AND OTHER ARTICLES OF WOOD. JESSE G. CROLL & SON, Philadelphia, Pa.
Filed May 27, 1915. Serial No. 86,929. PUBLISHED AUGUST 3, 1915.

106,147. SENSITIZED PHOTOGRAPHIC PAPER. EASTMAN KODAK CO., Rochester, N. Y.
Filed April 21, 1915. Serial No. 86,062. PUBLISHED AUGUST 3, 1915.

106,148. PAINT-OILS, LACQUERS, ENAMELS, VARNISHES, AND DRY, PASTE, AND READY-MIXED PAINTS. ARMIN BICHLER, Brooklyn, N. Y.
Filed May 6, 1915. Serial No. 86,426. PUBLISHED AUGUST 3, 1915.

106,149. DISINFECTANT, DEODORIZER, AND BLEACHING AGENT. THE ELECTRO CHEMICAL COMPANY, Dayton, Ohio.
Filed June 10, 1915. Serial No. 87,215. PUBLISHED AUGUST 3, 1915.

106,150. VARNISH. THE FORBES VARNISH COMPANY, Cleveland, Ohio.
Filed May 11, 1914. Serial No. 78,196. PUBLISHED AUGUST 3, 1915.

106,151. SHAMPOO-POWDER. FRANK H. GASSOLO, Chicago, Ill.
Filed April 17, 1915. Serial No. 86,015. PUBLISHED AUGUST 3, 1915.

106,152. TOOTHACHE REMEDY. MACARIO GENNARELLI, South Chicago, Ill.
Filed June 16, 1915. Serial No. 87,342. PUBLISHED AUGUST 3, 1915.

106,153. LINIMENT. HALLA DAGGER MEDICINE COMPANY, Great Falls, Mont.
Filed May 12, 1915. Serial No. 86,572. PUBLISHED AUGUST 3, 1915.

106,154. LUBRICATING-OILS AND GASOLENE. THE HAWKEYE OIL COMPANY, Waterloo, Iowa.
Filed January 15, 1915. Serial No. 83,876. PUBLISHED MARCH 23, 1915.

106,155. TREATMENT FOR DYSPEPSIA, KIDNEY AND LIVER COMPLAINTS. JOSEPH AUGUSTUS HEINTZELMAN, Philadelphia, Pa.
Filed June 3, 1915. Serial No. 87,075. PUBLISHED AUGUST 3, 1915.

106,156. EYELETING-MACHINES. IDEAL SPECIALTIES MFG. CORP., New York, N. Y.
Filed May 21, 1915. Serial No. 86,805. PUBLISHED AUGUST 3, 1915.

106,157. WALL-PAPERS. IMPERIAL WALL PAPER COMPANY, Glens Falls, N. Y.
Filed May 13, 1915. Serial No. 86,596. PUBLISHED AUGUST 3, 1915.

106,158. RAILROAD-SPREADERS, RAILROAD SNOW-PLOWS, AND RAILROAD-FLANGERS. THE O. F. JORDAN COMPANY, East Chicago, Ind.
Filed April 3, 1915. Serial No. 85,672. PUBLISHED AUGUST 3, 1915.

106,159. CATALYTIC AGENT FOR CAUSING THE PRECIPITATION OF SUGAR IMPURITIES. KIESELGUHR COMPANY OF AMERICA, Los Angeles, Cal.
Filed February 9, 1914. Serial No. 75,803. PUBLISHED AUGUST 3, 1915.

106,160. LIQUID AND SALVE TO BE USED IN THE TREATMENT OF SKIN DISEASES. JOHN LANGAN, Yonkers, N. Y.
Filed June 9, 1915. Serial No. 87,206. PUBLISHED AUGUST 3, 1915.

106,161. HUMIDIFIERS USED IN CIGAR SHOW-CASES. LOHEIDE MANUFACTURING COMPANY, St. Louis, Mo.
Filed April 3, 1915. Serial No. 85,674. PUBLISHED AUGUST 3, 1915.

106,162. NON-ALCOHOLIC FRUIT PUNCH IN CONCENTRATED SYRUP FORM. ALFRED MCLEOD LUCKETT, Fort Worth, Tex.
Filed May 7, 1915. Serial No. 86,453. PUBLISHED AUGUST 3, 1915.

106,163. NON-ALCOHOLIC FRUIT PUNCH IN CONCENTRATED SYRUP FORM. ALFRED MCLEOD LUCKETT, Forth Worth, Tex.
Filed June 21, 1915. Serial No. 87,476. PUBLISHED AUGUST 3, 1915.

106,164. REMEDY FOR THE EYES. JACOB LUTZENBERG, Easton, Pa.
Filed December 18, 1914. Serial No. 83,380. PUBLISHED APRIL 6, 1915.

106,165. LAMP-GLASSES AND LAMP-GLOBES. MACBETH-EVANS GLASS COMPANY, Pittsburgh, Pa.
Filed May 19, 1915. Serial No. 86,730. PUBLISHED AUGUST 3, 1915.

106,166. LAMP-GLASSES AND LAMP-GLOBES. MACBETH-EVANS GLASS COMPANY, Pittsburgh, Pa.
Filed May 19, 1915. Serial No. 86,740. PUBLISHED AUGUST 3, 1915.

106,167. TANKS FOR WATER-CLOSETS. THOMAS MADDOCK'S SONS CO., Trenton, N. J.
Filed April 27, 1915. Serial No. 86,229. PUBLISHED AUGUST 3, 1915.

106,168. COAL. THE MAYNARD COAL COMPANY, Columbus, Ohio.
Filed May 28, 1915. Serial No. 86,967. PUBLISHED AUGUST 3, 1915.

106,169. DENTIFRICE-DISPENSERS. JULIUS L. MENDEL, New York, N. Y., assignor of one-half to Louis Bergman, New York, N. Y.
Filed November 12, 1914. Serial No. 82,544. PUBLISHED MARCH 9, 1915.

106,170. ELECTRIC STOVES, RANGES, HEATERS, IRONS, HOT-PLATES, TOASTERS, AND BROILERS. THE MICHIGAN STOVE COMPANY, Detroit, Mich.
Filed June 4, 1915. Serial No. 87,103. PUBLISHED AUGUST 3, 1915.

106,171. MEDICATED PLASTER. DIRK NYBAKKEN, New York, N. Y.
Filed May 11, 1915. Serial No. 86,548. PUBLISHED AUGUST 3, 1915.

106,172. TONIC LAXATIVES. N. Y. INTERNATIONAL CHEMICAL CO. INC., New York, N. Y.
Filed May 24, 1915. Serial No. 86,865. PUBLISHED AUGUST 3, 1915.

106,173. REMEDY FOR THE TREATMENT OF CERTAIN NAMED DISEASES. J. N. MURDOCH COMPANY, Parkersburg, W. Va.
Filed June 11, 1915. Serial No. 87,255. PUBLISHED AUGUST 3, 1915.

106,174. FERTILIZERS. OLD BUCK GUANO CO., INC., Richmond, Va.
Filed December 2, 1914. Serial No. 83,023. PUBLISHED FEBRUARY 16, 1915.

106,175. VIRUSES, SERUMS, TOXINS, AND ANTITOXINS. PARKE, DAVIS & CO., Detroit, Mich.
Filed April 27, 1915. Serial No. 86,233. PUBLISHED AUGUST 3, 1915.

106,176. NON-ALCOHOLIC CARBONATED BEVERAGE. RAVENEL S. PATTERSON, Columbia, S. C.
Filed June 27, 1913. Serial No. 71,411. PUBLISHED AUGUST 3, 1915.

106,177. SOAP. PEET BROS. MFG. CO., Kansas City, Kans.
Filed March 29, 1915. Serial No. 85,519. PUBLISHED AUGUST 3, 1915.

106,178. COMBUSTIBLE GAS FOR USE AS FUEL. PINTSCH COMPRESSING COMPANY, New York, N. Y.
Filed April 8, 1915. Serial No. 85,785. PUBLISHED AUGUST 3, 1915.

106,179. METALLIC VALVES FOR GENERAL USE. THE WM POWELL CO., Cincinnati, Ohio.
Filed March 31, 1915. Serial No. 85,588. PUBLISHED AUGUST 3, 1915.

106,180. EAST INDIA SILVER-LEAD, CEYLON PLUMBAGO, AND FLAKE GRAPHITE. HARRY M. RIDDLE, Asbury, N. J.
Filed September 15, 1914. Serial No. 81,274. PUBLISHED AUGUST 3, 1915.

106,181. OINTMENT. WALTER B. RIDGELY, Baltimore, Md.
Filed April 30, 1915. Serial No. 86,301. PUBLISHED AUGUST 3, 1915.

106,182. ADHESIVE. EDWIN A. ROGERS, Boston, Mass.
Filed May 19, 1915. Serial No. 86,751. PUBLISHED AUGUST 3, 1915.

106,183. MEDICATED CEREAL FOR CHRONIC CONSTIPATION. WALTER AMES RULLMAN, Red Bank, N. J.
Filed May 8, 1915. Serial No. 86,489. PUBLISHED AUGUST 3, 1915.

106,184. CARBON-ERADICATOR. SPD. ACCESSORIES Co., New York, N. Y.
Filed June 1, 1915. Serial No. 87,039. PUBLISHED AUGUST 3, 1915.

106,185. STERIZED SOLUTION OF IODIN. SHARP & DOHME, Baltimore, Md.
Filed May 8, 1915. Serial No. 86,492. PUBLISHED AUGUST 3, 1915.

106,186. COOKING RANGES AND STOVES AND HEATING-STOVES. THE STAMFORD FOUNDRY COMPANY, Stamford, Conn.
Filed May 13, 1913. Serial No. 70,409. PUBLISHED AUGUST 3, 1915.

106,187. PHONOGRAPHS. TALKING DOLL & NOVELTY Co., INC., New York, N. Y.
Filed May 11, 1915. Serial No. 86,556. PUBLISHED AUGUST 3, 1915.

106,188. HAIR-COLOR RESTORERS AND HAIR-REMOVERS. EMIL TAUSIG, New York, N. Y.
Filed May 1, 1915. Serial No. 86,336. PUBLISHED AUGUST 3, 1915.

106,189. TALKING-MACHINES. THE TAUX-WEL TALKING MACHINE COMPANY, Gloucester, N. J.
Filed April 23, 1915. Serial No. 86,164. PUBLISHED AUGUST 3, 1915.

106,190. MEDICINAL TONIC AND DIGESTIVE POWDER. ANTONINO VIRDONE, New York, N. Y.
Filed April 24, 1915. Serial No. 86,192. PUBLISHED AUGUST 3, 1915.

106,191. PIANOS. WAGNER PIANO COMPANY, New York, N. Y.
Filed May 12, 1915. Serial No. 86,584. PUBLISHED AUGUST 3, 1915.

106,192. COMMERCIAL MOTOR-VEHICLES. WICHITA FALLS MOTOR CO., Wichita Falls, Tex.
Filed April 14, 1915. Serial No. 85,951. PUBLISHED AUGUST 3, 1915.

LABELS

REGISTERED OCTOBER 12, 1915.

18,796.—*Title:* "CASH PREMIUM COFFEE, MONEY IN EVERY PACKAGE." (For Coffee.) OLIVER H. BAUGHMAN, Logansport, Ind. Filed April 24, 1915.

18,797.—*Title:* "ALBIFINE." (For a Cosmetic.) FLORENTINE J. HAMP, Duluth, Minn. Filed August 7, 1915.

18,798.—*Title:* "NEW FIVE." (For Cigars.) A. C. HENSCHEL & Co., Chicago, Ill. Filed August 20, 1915.

18,799.—*Title:* "LA CASERA." (For Cigars.) KOHL & HERMAN, Marshfield, Wis. Filed June 19, 1915.

18,800.—*Title:* "McMAHON'S DIAMALT HEALTH BREAD." (For Bread.) McMAHON BROS., Pittsfield, Mass. Filed July 1, 1915.

18,801.—*Title:* "BUTLER-CREAM BREAD." (For Bread.) RALPH L. NAPIONER, Kansas City, Mo. Filed September 7, 1915.

18,802.—*Title:* "THE NATIONAL CHOLERA REMEDY." (For a Remedy for Hog-Cholera.) THE NATIONAL HOG CHOLERA REMEDY COMPANY, Wildwood, N. J. Filed August 7, 1915.

PRINTS

REGISTERED OCTOBER 12, 1915.

4,080.—*Title:* "ALVIN SILVER PLATE." (For Alvin Silver.) ALVIN MANUFACTURING COMPANY, Sag Harbor, N. Y. Filed September 7, 1915.

4,081.—*Title:* "CINCINNATI AUTOMATIC PEDESTAL OPERATING TABLE." (For Operating-Tables.) THE MAX WOCHER & SON CO., Cincinnati, Ohio. Filed August 13, 1915.

4,082.—*Title:* "ECONOMY IN THE HOME." (For Black Dye.) EDWARD J. REILLY, Baltimore, Md. Filed August 2, 1915.

4,083.—*Title:* "OILS THAT LUBRICATE MOST." (For Oils.) VACUUM OIL COMPANY, New York, N. Y. Filed September 7, 1915.

4,084.—*Title:* "OILS THAT LUBRICATE MOST." (For Oils.) VACUUM OIL COMPANY, New York, N. Y. Filed September 7, 1915.

4,085.—*Title:* "OILS THAT LUBRICATE MOST." (For Oils.) VACUUM OIL COMPANY, New York, N. Y. Filed September 7, 1915.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

DECISIONS OF THE U. S. COURTS.

U. S. District Court—Southern District of New York.

THE VACUUM CLEANER COMPANY *v.* AMERICAN ROTARY VALVE COMPANY.

Decided September 30, 1915.

1. VALIDITY AND INFRINGEMENT—VACUUM-CLEANER.

The Kenney Patent No. 847,947, for vacuum cleaning apparatus, *Held* valid and infringed as to claims 1, 3, and 4. Claim 2 and the single claim of Kenney Patent No. 847,948 *Held* void for lack of patentable novelty.

2. SAME—COMMERCIAL UTILITY.

Large commercial utility *Held* to resolve in favor of the patent any doubt as to its validity.

Mr. Charles Neave, Mr. William G. McKnight, Mr. Vernon M. Dorsey, and *Mr. Frank C. Cole* for the plaintiff.

Mr. W. Clyde Jones and *Mr. John Robert Taylor* for the defendant.

SUIT for infringement of claims 1, 2, 3, and 4 of U. S. Letters Patent No. 847,947, dated March 19, 1907, application filed November 29, 1901, and the single claim of U. S. Letters Patent No. 847,948, application filed March 16, 1903, each for "apparatus for removing dust." For convenience the patents will be called the first patent and the second patent.

MAYER, *Dis. J.:*

The object of the first patent is stated in the specification as follows:

> The object of the invention is to provide an apparatus by which the cleaning or removing of dust may be accomplished with ease and despatch and to practically clean any suitable surface, object, or article from every adhering particle of dust or dirt which can be removed.
>
> In the present invention suction is utilized, so that the dust or dirt is sucked into the apparatus and entirely removed from the compartment or room in which the dust was originally. The apparatus employed comprises in combination a suction-nozzle adapted to be moved over the surface to which it is applied for cleaning and having a narrow inlet-slot, a suction creating device capable of maintaining a sufficient vacuum, and impurities-collecting means between the nozzle and suction-creating device and suitably connected therewith for removing the impurities from the air. When the apparatus is employed for cleaning carpets or other fabrics, the air is forced to penetrate the fabric at the suction-nozzle, whereby the dust is removed from the body of the fabric as well as from the surface without subjecting the fabric to any mechanical action that will wear it away. * * * *The slot is restricted and narrow, and the bounding and defining lips thereof are so disposed that the outward mouth of the slot lies in what when the cleaner is in use constitutes the contact surface of the implement, so that it will hug the surface to be cleaned.*

The claims are:

> 1. In a suction cleaning apparatus, the combination of a suction-nozzle adapted to be moved over the surface to which it is applied for cleaning and having a narrow inlet-slot, a suction-creating device capable of maintaining a sufficient vacuum, and impurities-collecting means between the nozzle and the suction-creating device and suitably connected therewith for removing the impurities from the air, substantially as described.
>
> 2. In an apparatus for removing dust or dirt, the combination of a suction-creating device capable of maintaining a sufficient vacuum, an inlet head or shoe having an unobstructed elongated slot and so constructed that the edges of the slot may be brought into contact with the surface of the object to be cleaned, and a separator intermediate of and suitably connected with the suction-creating device and the inlet head or shoe for removing the dust from the air, substantially as described.
>
> 3. In a suction-cleaning apparatus, the combination of a suction-nozzle adapted to be moved over the surface to which it is applied for cleaning and having a narrow inlet-slot, a power operated suction-pump, and impurity-collecting means between said nozzle and pump adapted to remove the impurities from the air and prevent fouling the pump while permitting the working vacuum to be maintained at the nozzle, substantially as described.
>
> 4. A cleaner comprising a suction-chamber, provided with a narrow inlet-slot, the slot being bounded and defined by lips which lie in the contact-surface of the cleaner, with the outward mouth of the slot lying in the plane of this contact-surface, substantially as described.

The defenses are (1) anticipation, (2) lack of novelty, (3) prior use and (4) non-infringement.

The commercial vacuum-cleaner art has grown to substantial proportions and has been developed in two general directions: (1) the installation of plants in large buildings and (2) the use in smaller areas, business and home, of single implements operated by hand or electric motive power.

So rapidly has the commercial art grown that this suit seems to involve a controversy of substantial importance financially (the gross business of the Vacuum Company from 1905 to September 27, 1907, aggregating over eight hundred thousand dollars and the plaintiff, as the Vacuum Company's reorganized successor, having received since 1909 about two hundred and seventy thousand dollars in license fees), and thus the defendant has presented a vigorous defense, especially in respect of the prior art and a certain prior use, known in the litigation as the Westman defense.

There is no doubt that Kenney, the patentee, was the founder of the present vacuum-cleaner commercial art and that, prior to his time, efforts in the same direction resulted either in indifferent success or in absolute failure, although as far back as 1869, inventors had turned their attention to the subject-matter here concerned. (McGaffey Patent No. 91,145, same as Lake British patent).

Defendant insists that the development of the art is largely due to natural increase of building and greater desire for easy and effective methods of

cleanliness and also to the warnings of scientific men in respect of badly-behaved germs which find their nesting and developing places more particularly in dust-laden fabrics and floors; but I suppose that even in 1869 prudent housewives and others would have welcomed a labor-saving device for removing dust from floors and furniture and, as early as 1896, Messrs. Young and Douglas appreciated the problem of seeking out the—

many nooks and corners not accessible to the broom where the dust and dirt settle and accumulate making nesting places for microbes and breeding disease. * * *

But, neither they nor any one else prior to Kenney accomplished the result sufficiently to found or maintain any substantial business enterprise based upon their alleged inventions.

The success of Kenney was not accidental nor is this a case where previous meritorious inventions have failed for want of capital.

Kenney was almost the story-book inventor. In 1901, when he made his invention, he had a cash capital of not more than five hundred dollars and he was working on a salary of forty dollars to fifty dollars per week.

Mr. Foley, consulting engineer during the construction of the Frick Building in Pittsburgh, met Kenney in New York in 1901 and learning of Kenney's apparatus, went to Kenney's small room in Trinity Place where experimental work was being carried on. Foley was sufficiently impressed so that, after negotiation, the Kenney system was installed in the Frick Building in May 1902. The public demonstration of the operation of the Kenney vacuum cleaning installations was described in some Pittsburgh newspapers and, thereafter, the business grew by leaps and bounds and after some changing of hands, the patents are now owned by this plaintiff.

A history of the prior art will help to show why Kenney succeeded, where others theretofore failed.

Like many combination patents, the principal elements of claims 1, 2, 3, of the first patent, speaking broadly, were old, *i. e.* (1) a suction-creating device, (2) a cleaning-tool and (3) a separator. In claim 4 for the cleaning-tool, the emphasized characteristics are (1) a narrow inlet-slot, bounded by (2) lips which lie in the contact-surface of the cleaner with the outward mouth of the slot lying in the plane of this contact-surface.

The testimony of the two experts, Professors Reeve and Kinealy, and the demonstrations in the court-room, were interesting and to the point but the situation gets down to the proposition that Kenney taught the art that the essential element was a narrow elongated slot capable of contact or sealing with the surface to be cleaned. This element cooperating with the others produces for all practical purposes, a vacuum whereby the dirt is sucked up as distinguished from an air-current where the material is blown up and some of it escapes although the surface seems to the layman's eye to be cleaned.

The prior art proceeded on the theory of non-contacting or non-sealing slots or impracticable wide slots, and some of the illustrative apparatus, from a practical standpoint, were grotesque.

McGaffey (No. 91,145 of 1869) depended on a—

strong current of air * * * to take up the dust and dirt.

The opening in the lower portion of the sweeper implement, situated near the front edge when in use, came—

near the floor or carpets, leaving only sufficient space between to allow small particles of dust and dirt to pass under it. * * *

The model from the files of the Patent Office fully illustrates this theory and, thus it appears, that instead of contact or sealing as in Kenney, there is not any close contact nor any suggestion of the so-called vacuum idea.

In 1883, Leaycroft (No. 279,572) approached the problem on the theory of a sweeping apparatus in which the dirt is removed from the surface to be swept by brushes and a current of air used to convey the dirt into a retainer.

Cummings in 1891 (No. 460,935) shows a cleaning-tool, the edges of the slot of which are adapted to rest upon the surface to be cleaned but the opening in the bottom of the cleaning-tool is very wide.

Obviously, if Cummings had any thought of producing a vacuum the tool was impracticable because it would be sealed to the surface to be cleaned and not be movable for practical purposes.

Much was made of the British Howard and Taite Patent No. 10,271 of 1896, and defendant produced a model (Defendant's Exhibit No. 243) so constructed that the slot, though curved in outline, lies in a plane surface so that it would make contact when moved over the surface, but I do not accept this as a correct representation and it is certainly inconsistent with Figures 1 and 3 of the drawings. On the other hand, plaintiff's model (Plaintiff's Exhibit 24) is correct and is useful by way of illustrating the specification particularly where it is provided that—

if the front end of the apparatus be passed over a cushion * * * such dust will be sucked up with the air current, * * *

and that—

the inlet or inlets is or are moved over and *near* to the surface of a dusty cushion or other dusty article.

In other words, Howard and Taite failed to realize the theory of close contact and the production of a vacuum instead of an air-current.

J. J. Harvey (No. 577,854 of 1897) did not get away from the air-current idea and had no conception of sealing contact, as is shown by his Fig. 14 where the nozzle is open at both ends. The combined area of the openings at the ends of the slots is greater than that of the outlet-pipe and it is obvious that the device could not secure a practical vacuum at the slot.

In Westman (No. 628,505 of 1899) the inlet-slot is not narrow and the theory is to abrade the carpet and liberate the dust which is then removed by a revolving brush and drawn by suction through a flexible hose into a settling-box, some of the dust undoubtedly passing on into an exhaust-fan.

The Westman is certainly far removed from similarity to the Kenney first patent.

Much reliance is placed by defendant on the C. J. Harvey patent (No. 673,603 of May 7, 1901).

There is no reference in the specification to the dimensions of the slot in the nozzles shown in Figs. 3 and 5 and nothing to show that the slots are to seal with the surface to be cleaned.

In Figs. 1, 2 and 3 a circular nozzle is shown surrounded by a brush and bellows arrangement while in Figs. 4 and 5, although there is "an elongated nozzle" it is shown as being elevated above the surface by means of rollers.

The scientific discussion of this patent may be found by those who are interested in the testimony of Professors Reeve and Kinealy, but, the actual operation of the model (Defendant's Exhibit No. 285) made in accordance with Fig. 5 of the patent is its own condemnation; for, as a practical device, it was shown to be hopeless.

The other patents cited in the prior art are not of sufficient merit to require comment.

From the foregoing it will be seen that there is no patent which anticipates and the many efforts prior to Kenney only serve to fortify the presumption of patentability which goes with the grant.

But, if there were any doubt, commercial utility has resolved the doubt. I am a strong believer in the rule as to commercial utility. It often pierces a labyrinth of the technique of science and the law and applies the experience of the big workaday outside world. It places achievement above forgotten files and file-wrappers. It is frequently an aid to the conclusion that what seems simple to-day was an unsolved problem yesterday.

But, as we are dealing with an actual litigation, it becomes necessary to examine the claims in their bearing on validity and infringement.

The important point about Kenney's invention was the construction of the cleaning-tool and almost every word in claim 4 is significant. So, also, in claims 1, 2 and 3, the combination of the tool described in claim 4 must appear, else the claim may be invalid or an alleged infringing device may not deserve condemnation.

It will be noted that in claims 1 and 3 the *inlet-slot* is described as "narrow" just as it is in claim 4 but in claim 2 the reference is to an "unobstructed elongated slot" and the word "narrow" is omitted.

Of course, as is well known, an applicant for a patent will use varying phraseology in his claim in order to obtain as comprehensive a patent as possible or and by such use, to avoid the pitfalls of language, so that later if one claim is inaptly worded, some other claim will stand the test of attack.

But where, as here, the patent is not entitled to too broad a scope, the omission of the word narrow must be regarded as significant and the context does not help it out.

In view of the prior art, this claim must be held to be void (Cummings and C. J. Harvey patents, more especially).

Claim 1 (as well as 2) is attacked because of the use of the words "sufficient vacuum."

What was said in *Woerheide* v. *H. W. Johns-Manville Co.* (215 F. R., 604; 220 F. R., 674) applies here. It is not possible when dealing with fractional niceties, to use any safer language else the risk is run of escape from the patent by some technical scientific variations.

As relating to infringement, it is clear that plaintiff's Exhibits 3U and 3V, which are cleaners faced with felt, do not infringe but, it is claimed, that because the felt may or will wear away, contributory infringement must be found. There is no evidence to show any intent to use wrongfully these implements and, in point of fact, I think there is not any such intention; but, in any event, plaintiff must produce some evidence before defendant can be held guilty of this tort.

In arriving at these conclusions, I have considered it unnecessary to discuss the details of the development of the art as relating to motive power and separators because I have accepted these elements as old. Further, I have not overlooked the decisions of foreign courts but I am quite in agreement with the views of Judge Dodge as stated in *Haskell Golf Ball Co.* v. *Sporting Goods Sales Co.*, (210 F. R., at p. 628.)

But, even if the records were precisely the same, I am bound to reach an independent conclusion and, although the decisions referred to are entitled to great respect, yet we all know how even in our own courts, judges of long experience and recognized ability, often differ because of the very nature of the subject, on questions of patentable novelty and infringement.

Finally, the Westman defense is to be considered. From the mass of testimony taken and the earnest argument, it is apparent that the defendant relies strongly on this defense. To attempt to review the testimony *pro* and *con* would be to extend this opinion almost to the length of the combined briefs. I am not convinced beyond a reasonable doubt, in the main for the following reasons which I will summarize:

1. The conflict of testimony in respect of a device as to the identity of which there is nothing but oral testimony.

2. The failure of Westman to accomplish any substantial results although living in Richmond and Norfolk, both fair-sized communities and especially the failure of the apparatus at the Hotel Walton, Philadelphia, and Hotel Chamberlain at Old Point Comfort.

3. Westman's letter to his nephew in December 1900 and the correspondence with the Roots Company.

4. The fact that Westman obtained a patent No. 628,505 in 1899 which, in no way, approaches the Kenney idea but is along a different theory. In this connection, I am not unmindful of the summing up of defendant's counsel but, as Westman applied for one patent, I do not see why if he had the device claimed, he should not have applied for a patent for that.

In brief, this branch of the case must be governed by the principles stated in such cases as *Emerson & Norris Co.* v. *Simpson Bros. Corp.*, (202 F. R., 747, at p. 750;) *De Laski & Thropp, &c., Co.* v. *Fisk Rubber Co.*, (218 F. R., 458;) *The Barbed Wire Patent*, (143 U. S., 275;) *Deering* v. *Winona Harves-*

ter Works, (155 U. S., 286;) *Lalance & Grosjean Co.* v. *Habermann Mfg. Co.*, (53 F. R., 875.)

I, therefore, conclude that claim 2 of the first patent is invalid but that claims 1, 3 and 4 are valid and infringed except as indicated *supra*.

As to the second patent, I think it is invalid for lack of patentable novelty and, as this result seems inevitable once the art is understood, I see no value in any discussion of this patent.

Plaintiff may propose a decree on five days' notice in accordance herewith, but without costs.

Adverse Decisions in Interference.

PATENT No. 1,128,972.

On August 27, 1915, a decision was rendered that John Emil William Greve was not the first inventor of claims 1 and 2 of his Patent No. 1,128,972, subject, "Counting device for computing-machines," and no appeal having been taken within the time allowed such decision has become final.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 5, 1915.

Detroit Electric Soap Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Barclay & Co., 26 Beaver street, New York, N. Y., for registration of a trade-mark and trade-mark registered October 6, 1891, No. 20,188, to Detroit Electric Soap Company, Detroit, Mich., and a notice of such declaration sent by registered mail to said Detroit Electric Soap Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Detroit Electric Soap Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 1, 1915.

Patterson & Cross, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Gowan-Lenning-Brown Co., Nos. 227–261 South Fifth avenue west, Duluth, Minn., for registration of a trade-mark and a trade-mark registered March 29, 1904, No. 42,302, to Patterson & Cross, No. 53 River street, Chicago, Ill., and a notice of such declaration sent by registered mail to said Patterson & Cross at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Patterson & Cross, their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 25, 1915.

James Lunham Grant, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of McLeod & Ormsbee, 9 Liberty street, Utica, N. Y., for registration of a trade-mark and trade-mark registered July 9, 1895, No. 26,799, to James Lunham Grant, No. 5 Rainford Square, Liverpool, England, and a notice of such declaration sent by registered mail to said Grant at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said James Lunham Grant, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

Changes in Classification.

(ORDER No. 2,223.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 5, 1915.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In class 21, Carriages and Wagons, (Division X,) abolish the following subclasses:

Spring-gear—	**Springs—**
99. Axle cross,	103. Elliptic,
101. Lever,	51. Platform,
100. Longitudinal,	104. Shackles,
98. Side-bar cross.	53. Torsion.
50. **Springs—**	
102. Bolster,	

(Note.—Attention is called to the fact that subclass 97, Spring-gear, is not abolished and that the subclass title "Springs" still controls one subclass—105, Braces and equalisers.)

In class 74, Machine Elements, (Division XII,) abolish the following subclasses:

72. **Elastic tension devices—**	**Elastic tension devices—**
73. Compression—	76. Tension—
74. Single—	77. Single.
75. Draw-bars inclosed,	68. **Springs.**

In class 105, Railway Rolling Stock, (Division XXXIV,) abolish the following subclasses:

24. **Springs—**	**Springs—**
117. Coil—	123. Multiple-disk,
118. Cap and bed plates,	134. Pneumatic,
119. Coil and rubber,	124. Rubber—
120. Conical volute,	125. Cap and bed plates,
121. Elliptic—	126. Zigzag.
122. Cap and bed plates,	

The patents contained in the subclasses above abolished have been placed for the most part in class 267, Spring Devices, hereinafter established. Some have been placed in class 21, Carriages and Wagons, subclasses 97, Spring-gear, and 105, Springs, Braces and equalisers.

Establish in Division X the following class, the patents in subclasses 10 to 15 having been taken without change from the correspondingly-entitled subclasses 72 to 77 abolished in class 74, Machine Elements, and those in the remainder of the subclasses having been taken for the most part from the other abolished subclasses:

CLASS 267.—SPRING DEVICES. (X.)

Subclasses.

26. **Banding—**	**Compound—**
27. Leaf—	22. Leaf and fluid pressure,
35. Bands,	17. Leaf and torsion—
34. Cap and bed plates,	18. Platform.
36. Elliptic, end-joints,	48. **Deformable.**
32. Elliptic and leaf,	10. **Elastic tension devices—**
37. End connections,	11. Compression—
28. Inclosed,	12. Single—
30. Platform—	13. Drawbars inclosed.
31. Parallel springs,	14. Tension—
33. Structure,	15. Single.
29. Twin.	50. **Fluid pressure—**
52. **Braces—**	51. Platform.
53. Sliding guides.	40. **Fluid pressure and liquid.**
42. Coil—	8. **Lever—**
47. Cap and bed plates,	9. Platform.
44. Form and structure—	1. **Miscellaneous.**
45. Conical volute,	4. **Parallel depression—**
46. Frictional coil,	5. Positive connections—
43. Platform.	6. Duplex—
16. **Compound—**	7. Single point.
23. Coil and deformable,	2. **Springs and retarders—**
24. Coil and fluid pressure,	3. Coil and frictional.
25. Deformable and fluid pressure,	38. **Torsion—**
19. Leaf and coil—	40. Coil—
20. Platform,	41. Volute,
21. Leaf and deformable,	39. Platform.

THOMAS EWING,
Commissioner.

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 219—No. 3. TUESDAY, OCTOBER 19, 1915. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS.

	Page.
ISSUE OF OCTOBER 19, 1915	591
DISCLAIMER	591
ADVERSE DECISIONS IN INTERFERENCE	591
AMENDMENTS TO AMENDMENTS	591
APPLICATIONS UNDER EXAMINATION	592
PATENTS GRANTED	593
REISSUES	870
DESIGNS	886
TRADE-MARKS—REGISTRATION APPLIED FOR	895
TRADE-MARK REGISTRATIONS GRANTED	917
TRADE-MARK REGISTRATIONS RENEWED	927
LABELS AND PRINTS	928
COMMISSIONER'S DECISIONS—	
Gregory, Jackson, and Connet v. Ledoux	929
Welch v. Auñero	930
Welch v. Auñero	931
Ex parte The Illinois Seed Co	931
ADJUDICATED PATENTS	931
PAYMENT OF FEES IN GERMANY	932
INTERFERENCE NOTICES	932

ISSUE OF OCTOBER 19, 1915.

Patents	791—No.	1,156,870 to No. 1,157,660,	inclusive.
Designs	42—No.	47,980 to No. 48,021,	inclusive.
Trade-Marks	344—No.	105,193 to No. 105,536,	inclusive.
Labels	5—No.	18,803 to No. 18,807,	inclusive.
Prints	15—No.	4,086 to No. 4,100,	inclusive.
Reissues	6—No.	13,994 to No. 13,999,	inclusive.
Total	1203		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	6	1	North Carolina	4	.....
Arizona	1	.....	North Dakota	2	.....
Arkansas	5	.....	Ohio	50	26
California	44	9	Oklahoma	6	.....
Colorado	5	3	Oregon	5	1
Connecticut	10	7	Pennsylvania	88	32
Delaware	1	1	Rhode Island	9	7
Florida	5	2	South Carolina	1	3
Georgia	3	2	South Dakota	5	.....
Idaho	.....	.....	Tennessee	3	3
Illinois	91	23	Texas	15	5
Indiana	9	4	Utah	2	.....
Iowa	12	.....	Vermont	1	.....
Kansas	7	2	Virginia	8	2
Kentucky	4	3	Washington	5	2
Louisiana	3	2	West Virginia	2	1
Maine	5	4	Wisconsin	20	4
Maryland	6	14	Wyoming	.....	.....
Massachusetts	45	21			
Michigan	28	5	Alaska, District of	.....	.....
Minnesota	15	1	Canal Zone	.....	.....
Mississippi	2	.....	District of Columbia	9	7
Missouri	21	9	Hawaii Territory	.....	.....
Montana	1	.....	Philippine Islands	1	.....
Nebraska	9	1	Porto Rico	.....	.....
Nevada	2	.....	U. S. Army	.....	.....
New Hampshire	2	1	U. S. Navy	.....	.....
New Jersey	40	18			
New Mexico	1	.....	Total to residents of the United States	736	343
New York	122	113			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	2	3	Netherlands	.....	.....
Belgium	.....	1	New South Wales	2	.....
Brazil	.....	.....	New Zealand	.....	.....
British West Indies	.....	.....	Portugal	.....	.....
Canada	13	1	Queensland	.....	.....
Cape Colony	.....	.....	Roumania	.....	.....
Chile	.....	.....	Russia	.....	.....
Costa Rica	.....	.....	Scotland	.....	1
Cuba	1	.....	South Australia	.....	.....
Denmark	1	1	Spain	.....	1
England	17	4	Sweden	1	.....
Finland	.....	.....	Switzerland	3	.....
France	8	2	Transvaal, South Africa	.....	.....
Germany	19	7	Victoria	2	.....
Guatemala	.....	.....	Wales	1	.....
India	.....	.....	Western Australia	1	.....
Ireland	1	.....			
Italy	.....	.....	Total to residents of foreign countries	72	21
Luxemburg	.....	.....			
Mexico	.....	.....			

Disclaimer.

1,037,149.—*Oscar Katzenberger*, Chicago, Ill. ALINING-PLATES FOR FLOOR-HINGES. Patent dated August 27, 1912. Disclaimer filed October 6, 1915, by the patentee.

Enters this disclaimer—

"To claim 1 and that claim only of his Patent No. 1,037,149 in said specification, which claim is in the following words:

"In a floor hinge for doors, the combination of a floor plate having a circular pocket in the upper face thereof, a cam-carrying member having an adjusting plate constituting part thereof, a circular boss depending from the under side of said adjusting plate and rotatably mounted in said pocket, and means maintaining said cam-carrying member in adjusted position relative to said floor plate."

Adverse Decisions in Interference.

PATENT No. 1,128,520.

On September 18, 1915, a decision was rendered that Louis Rosenbaum was not the first inventor of the subject-matter covered by claims 1 and 2 of his Patent No. 1,128,520, subject, "Pressing-machines," and no appeal having been taken within the time allowed such decision has become final.

Amendments to Amendments.

RULE 74. When an amendatory clause is amended, it must be wholly rewritten, so that no interlineation or erasure shall appear in the clause, as finally amended, when the application is passed to issue. If the number or nature of the amendments shall render it otherwise difficult to consider the case or to arrange the papers for printing or copying, the Examiner or Commissioner may require the entire specification to be rewritten.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business October 16, 1915.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended.	No. of applications awaiting action.
214	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Aug. 12	July 15	512
126	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	Apr. 24	Aug. 2	578
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	Sept. 27	Sept. 27	84
282	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	May 6	Sept. 23	596
167	5. Bookbinding; Harvesters; Jewelry; Music.	July 14	Aug. 24	353
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar. 12	Sept. 17	485
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	July 26	Aug. 26	501
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	May 14	Sept. 9	1197
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Mar. 16	Sept. 27	566
235	10. Carriages and Wagons.....	July 9	Aug. 23	813
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Sept. 4	Oct. 4	121
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	July 19	Aug. 9	661
229	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Aug. 7	Aug. 28	517
267	14. Compound Tools; Cutting and Punching Shears and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	May 20	Sept. 8	282
206	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	June 7	Aug. 27	541
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Apr. 19	Aug. 16	508
208	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	July 20	Sept. 7	176
227	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Sept. 3	Sept. 8	262
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	July 16	Sept. 2	228
179	20. Artificial Limbs; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Safes; Undertaking.	Sept. 21	Sept. 16	234

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended.	No. of applications awaiting action.
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	July 1	Aug. 9	356
240	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Sept. 7	Sept. 4	304
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	June 23	June 21	495
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	June 16	Aug. 14	465
215	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Sept. 15	Sept. 15	132
106	26. Electricity, Generation; Motive Power.	Apr. 9	June 21	636
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Aug. 20	Sept. 7	331
65	28. Internal-Combustion Engines....	July 26	Aug. 14	409
147	29. Cooperage; Fire-Escapes; Ladders; Rools; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Wood-working; Woodworking-Tools.	Aug. 7	Sept. 1	372
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Aug. 12	Sept. 21	262
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	July 16	Sept. 2	292
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	Apr. 8	Sept. 8	717
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	July 31	Aug. 23	425
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	July 13	Aug. 19	303
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	June 2	Sept. 21	756
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	July 3	Sept. 15	728
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Apr. 21	June 26	824
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationary; Stone-Working; Wells.	July 15	July 27	547
221	39. Water Distribution.....	July 7	Aug. 24	302
220	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Apr. 12	Sept. 17	922
126	41. Railway Draft Appliances; Resilient Tires and Wheels.	June 18	Sept. 4	456
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	June 10	June 10	351
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Aug. 13	July 12	244

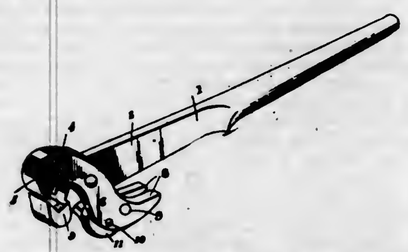
Oldest new case, Mar. 12; oldest amended, June 10.
Total number of applications awaiting action..... 20,734

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks.....	Aug. 20	Sept. 18	811
	Designs.....	June 9	Sept. 25	444
	Labels and Prints.....	Sept. 13	Sept. 8	86

PATENTS

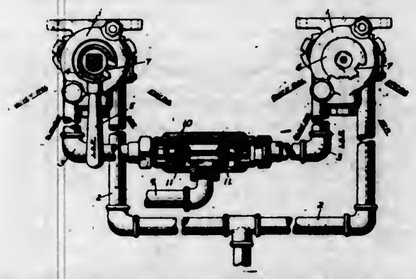
GRANTED OCTOBER 19, 1915.

1,156,870. SPIKE-EXTRACTOR. PIETRO AIAZZI, Winnemucca, Nev. Filed Oct. 8, 1913. Serial No. 794,094. (Cl. 254—22.)



A spike extractor comprising a lever, a jaw provided on the end of said lever, said jaw having a flat lower surface and a rounded outer face, the inner face of said jaw being inclined at an angle to the base and adapted to abut against the under side of the head of the spike when the spike is partly extracted, a second jaw pivotally connected to the lever, said jaw comprising a bifurcated member fitting over the flat portion of the lever and pivoted thereto, and a jaw member disposed opposite the integral jaw, said jaw member having an angularly disposed inner face, the bifurcated portion of the jaw being curved downwardly, a roller journaled in the lower part of the curved portion thereof and adapted to ride on the surface from which the spike is being extracted.

1,156,871. BRAKE-VALVE DEVICE. BURTON S. AIKMAN, Milwaukee, Wis., assignor to National Brake & Electric Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 16, 1915. Serial No. 8,466. (Cl. 188—7.)



1. A brake valve device for fluid pressure brakes having the usual brake application positions and a brake valve handle removable only in one of said application positions.

2. A brake valve device for fluid pressure brakes comprising means for effecting the supply and release of fluid to and from the brake cylinder and a brake valve handle for operating said means and removable only in emergency application position.

3. A brake valve having an emergency application position and provided with a brake valve handle and means for preventing removal of the handle except in emergency position.

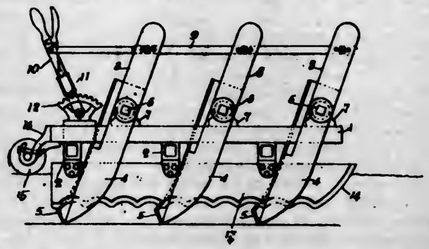
4. In a fluid pressure brake, the combination with two brake valves for straight air, and a handle for said valves, removable only in brake application position, of a double check valve operated by the fluid supplied from one brake valve in handle off position for closing communication from that brake valve to the brake cylinder while holding communication open from the other or operating brake valve to the brake cylinder.

1,156,872. SUCTION RELIEF-VALVE. JAMES T. ATWOOD, Rockford, Ill. Filed Apr. 23, 1914. Serial No. 833,998. (Cl. 137—53.)



A suction relief-valve comprising a cylindrical casing adapted to be connected with a vacuum system, said casing providing a chamber open at its inner end and having an outer end wall provided with a port surrounded by an inwardly facing valve-seat, a valve-stem extending through said port, a valve-disk carried by said stem having its outer end shaped to fit said valve-seat and provided at its inner end with a radially disposed annular flange spaced from the surrounding walls of said chamber and presenting an outer surface of greater area than the effective area of said port and disposed within said chamber above the lower edges of the chamber walls when the valve is in closed position, means outside the chamber for guiding said valve-stem, and a spring acting on said stem to normally urge the valve toward its seat, the area of the space between the periphery of the flange and the surrounding chamber walls being less than the effective area of said port so that the flange is moved inwardly beyond the ends of the chamber walls when the valve is initially opened and serves to retain the valve in open position so long as the area of the space between said ends of the chamber walls and said flange exceeds the area of said space between the periphery of the flange and the surrounding chamber walls.

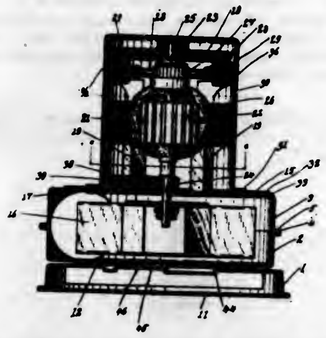
1,156,873. SOIL-PULVERIZER. FERDINAND BALDWIN, near North Hampton, Ohio, assignor of one-half to Horace L. Heistand, Clark county, Ohio. Filed Apr. 29, 1914. Serial No. 835,326. (Cl. 55—23.)



In an implement of the character described, a main frame, a plurality of transverse shafts mounted on said

main frame, a series of blades carried by each of said shafts, a plurality of longitudinal blades mounted on said frame, extending lengthwise of said implement and arranged between the blades on said shafts, an operating lever, and means for connecting said operating lever with the several shafts to enable said blades to be simultaneously adjusted relatively to said longitudinal blades.

1,156,874. SUCTION-CLEANER. EDWARD M. BARNES, Hastings, Mich., assignor to Advance Mfg. Co., Hastings, Mich. Filed June 10, 1913. Serial No. 772,750. (Cl. 172—36.)



1. The combination of a driven member casing having an opening in the top through which a driven member may be introduced, a motor frame comprising bottom and top members, the bottom member being a base-plate with posts thereon, the edges of the base plate projecting beyond the posts, the top member being provided with cross arms at each end, the ends of the arms being disposed above the posts, a motor comprising a shaft, a commutator, and field magnets, said field magnets being arranged on said posts and secured by screws arranged through the ends of the arms of the top frame member and through said field magnets and tapped into said posts, said shaft being disposed in bearings on said top and bottom frame members and being adapted to receive a driven member below said bottom frame member base plate, commutator brush holders arranged through said top frame member arms, a supporting ring embracing said frame posts and resting on and secured to said driven member casing, and a motor casing having a flange at its lower end resting on said supporting ring, said motor casing flange, supporting ring, and frame base plate being secured together by screws arranged therethrough.

2. The combination of a driven member casing having an opening in the top through which a driven member may be introduced, a motor frame comprising bottom and top members, the bottom member being a base-plate with posts thereon, the edges of the base plate projecting beyond the posts, the top member being provided with cross arms at each end, the ends of the arms being disposed above the posts, a motor comprising a shaft, and filed magnets, said field magnets being arranged on said posts and secured by screws arranged through the ends of the arms of the top frame member and through said field magnets and tapped into said posts, said shaft being disposed in bearings on said top and bottom frame members and being adapted to receive a driven member below said bottom frame member base plate, a supporting ring embracing said frame posts and resting on and secured to said driven member casing, and a motor casing having a flange at its lower end resting on said supporting ring, said motor casing flange, supporting ring, and frame base plate being secured together by screws arranged therethrough.

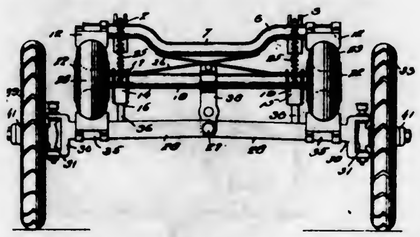
3. The combination of a driven member casing having an opening through which a driven member may be introduced, a motor frame comprising bottom and top members, the bottom member being a base plate with posts thereon, the top member being provided with cross arms at each end, the ends of the arms being disposed above the posts, said frame being removably mounted on said driven member casing, a motor comprising a shaft, a commutator, and field magnets, said field magnets being arranged on said posts and secured by screws arranged through the ends of the arms of the top frame member and through said field magnets and tapped into said posts, said shaft being disposed in bearings in said top and bottom frame members and being adapted to receive a driven member below said bottom frame member base plate, commutator brush holders arranged through said top frame member arms, and a removable motor casing.

4. The combination of a driven member casing having an opening through which a driven member may be introduced, a motor frame comprising bottom and top members, the bottom member being a base plate with posts thereon, the top member being provided with cross arms at each end, the ends of the arms being disposed above the posts, said frame being removably mounted on said driven member casing, a motor comprising a shaft, and field magnets, said field magnets being arranged on said posts and secured by screws arranged through the ends of the arms of the top frame member and through said field magnets and tapped into said posts, said shaft being disposed in bearings in said top and bottom frame members and being adapted to receive a driven member below said bottom frame member base plate, commutator brush holders arranged through said top frame member arms, and a removable motor casing.

5. The combination of a driven member casing having an opening through which a driven member may be introduced, a motor frame comprising bottom and top members, the bottom member being a base plate with posts thereon, the top member being provided with cross arms at each end, the ends of the arms being disposed above the posts, said frame being mounted on said driven member casing, a motor comprising a shaft, a commutator, and field magnets, said field magnets being arranged on said posts and secured by screens arranged through the ends of the arms of the top frame member and through said field magnets and tapped into said posts, said shaft being disposed in bearings in said top and bottom frame members and being adapted to receive a driven member below said bottom frame member base plate, and commutator brush holders arranged through said top frame member arms.

[Claims 6 to 12 not printed in the Gazette.]

1,156,875. VEHICLE CONSTRUCTION. REGINALD CLEVELAND BARTLETT, Toronto, Ontario, Canada. Filed Jan. 13, 1914. Serial No. 811,880. (Cl. 21—50.)



1. In vehicle construction, a truck comprising upper and lower members each having transverse and longitudinal bars and running gear, the lower ones of said transverse bars being supported on the axles by pneumatic cushions and the upper ones being separated from the lower ones by the same pneumatic cushions.

2. In vehicle construction, a truck having upper and lower members supported on a running gear and fluid cushions extending from between the axles of the running gear to between the upper and lower members and forming resilient supports within the frames and for said frames on said running gear.

3. In vehicle construction, running gear and a truck frame formed of upper and lower members separated by pneumatic cushions, said cushions being also introduced between said lower member and the axles of the running gear.

4. In vehicle construction, running gear and a truck frame formed of upper and lower members having regulating springs therebetween and pneumatic cushions within said frame members and between said truck frame and the running gear.

5. In vehicle construction, running gear and a truck frame having upper and lower members, pneumatic ring shaped cushions between said members and between said frame and running gear and flexible connections securing said frame to said running gear.

[Claims 6 to 15 not printed in the Gazette.]

1,156,876. CLAMP FOR SALES-BOOK PADS. GEORGE H. BAUGHMAN and FRANK J. SEMRADEK, Chicago, Ill. Filed Aug. 29, 1914. Serial No. 859,146. (Cl. 129—35.)

1. A clamp for binders comprising a stationary clamping member, a movable clamping member coöperating therewith, one of said members provided with a longitudinal inclined slot, a bolt extended through said slot and adapted to engage both members, and means for securing said bolt in said slot.

2. A clamp for binders comprising a stationary clamping member, a movable clamping member coöperating therewith, one of said members provided with a longitudinal inclined slot, a device extended through said slot and adjustable therein, and means for securing said device in its adjusted position in said slot.

3. A clamp for binders comprising a stationary clamping member, a movable clamping member coöperating therewith, one of said members provided with a longitudinal inclined slot, a bolt extended through said slot and adapted to adjustably engage both members, and means for securing said bolt in its adjusted position.

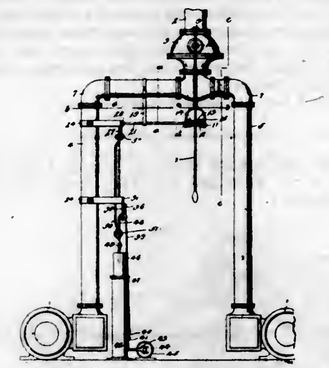
4. A clamp for binders comprising a substantially L-shaped clamping jaw, an inverted correspondingly shaped clamping jaw, the vertically disposed members of both jaws slidably engaging each other and one of said vertical members provided with an inclined longitudinal slot, a transverse bolt extended through said slot and adapted to engage both members, and means for securing said bolt in said slot.

5. A clamp for binders comprising a stationary clamping member, a movable clamping member coöperating therewith, each of said members provided with an inclined longitudinal slot, means movable longitudinally in said slots and adapted to open and close said clamping members, and a device for securing said means.

[Claims 6 to 9 not printed in the Gazette.]

1,156,877. OVERHOIST AUTOMATIC CUT-OFF. MATHEW BEAM, Old Forge, Pa. Filed Feb. 4, 1914. Serial No. 816,592. (Cl. 136—11.)

1. In overhoist cutoff mechanism of the class described the combination of an endwise movable element for operating a throttle valve lever, a supporting guide for said endwise moving element, a lever to which said element is connected, a bell crank lever connected to the first-named lever to operate the same, a weight, means including a dog to support the weight in raised position, and a link connecting said weight to the bell crank lever.



2. In overhoist cutoff mechanism of the class described the combination of an endwise movable element for operating a throttle valve lever, a supporting guide for said endwise moving element, a lever to which said element is connected, a bell crank lever connected to the first-named lever to operate the same, a weight, means including a dog to support the weight in raised position, a link connecting said weight to the bell crank lever, said link being adjustably connected to said bell crank lever to vary the throw of the latter, a trip element to release the dog and an actuating mechanism to automatically operate the trip element.

1,156,878. PACK-CARRIER. GEORGE A. BLAIN, Long Lake, Minn. Filed Dec. 17, 1914. Serial No. 877,675. (Cl. 224—5.)



1. A pack carrier, comprising shoulder saddles, front and rear rigid yokes connecting said shoulder saddles and holding the same properly spaced, and means for supporting a pack from said yokes.

2. A pack carrier, comprising shoulder saddles, front and rear rigid yokes, connecting said shoulder saddles and holding the same properly spaced, and means for supporting a pack from said yokes, one of the arms, of one of said yokes, being detachably secured to the respective shoulder saddle.

3. A pack carrier, comprising shoulder saddles, front and rear rigid yokes connecting said shoulder saddles, and means for supporting a pack from said yokes, in a manner to permit the weight of the pack to be shifted in respect to said shoulder saddles.

4. A pack carrier, comprising shoulder saddles, front and rear rigid yokes, means flexibly connecting the arms of said yokes to the said shoulder saddles, and means for supporting a pack from said yokes.

5. A pack carrier, comprising shoulder saddles, front and rear yokes having relatively long and relatively short arms, means flexibly connecting the arms of said yokes to said shoulder saddles, and means for supporting a pack from said yokes, the means for supporting the pack from one of said yokes being adjustable thereon, for the purpose of shifting the weight of the pack with respect to the shoulder saddles.

[Claims 6 to 9 not printed in the Gazette.]

1,156,879. SOLDIER'S SHIELD. HENRY J. BROWN, New York, N. Y. Filed Dec. 31, 1914. Serial No. 879,919. (Cl. 89—36.)



1. A shield of the character described comprising a plurality of strips having rule joint hinges at their edges, and an intermediately pivoted retainer adapted to be arranged transversely to said strips for holding the shield in erected position, said retainer being also adapted to be turned to lie parallel to the longitudinal axis of the shield when the same is to be rolled up for transportation.

2. A shield of the character described comprising a plurality of strips rule jointed at their edges, said joints being constructed to limit the opening of said shield to an arcuate shape, and a spring retainer arranged transversely of said strips for supporting the shield in erected position for use.

3. A shield of the character described comprising a body portion adapted to be rolled up when not in use, a transverse retainer for supporting the body portion in open position, said retainer having a slot in its lower end, and a spike having an adjusting bolt fitting in said slot, whereby said spike may be turned parallel with the bottom edge of the body of the shield for the purpose specified.

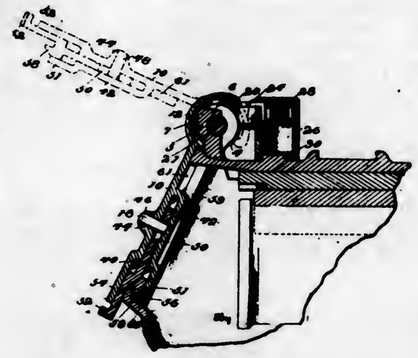
4. A shield of the character described comprising a body portion adapted to be rolled up when not in use, a transverse retainer pivoted at an intermediate point to be turned transversely of the body portion for supporting the same in open position, or to be turned longitudinally of the body portion when the latter is to be rolled up, and locking means at the upper end of the retainer and upper edge of the shield for securing the retainer in its transverse position.

5. A shield of the character described comprising a body portion having longitudinal slots near its lower edge, channeled spikes having pins to slide in said slots, said spikes being thereby adapted to be fitted over the lateral edges of the body portion of the shield when the latter is erected, or folded longitudinally of the shield when the latter is to be collapsed.

[Claims 6 and 7 not printed in the Gazette.]

1,156,880. LID FOR JOURNAL-BOXES. PERRY BROWN, Coraopolis, Pa. Filed Dec. 21, 1911. Serial No. 667,246. (Cl. 64—23.)

1. In a journal box in combination with bearings on the upper part thereof, a lid having its upper portion hinged to said bearings, said upper portion having a cam projecting therefrom with two cam faces substantially at right angles to each other, and said box having a spring pressed plunger located in working relation to said cam adapted to project against one portion of said cam to hold the lid open, the other part of said cam slightly overhanging said plunger when the lid is closed whereby a lock is formed.



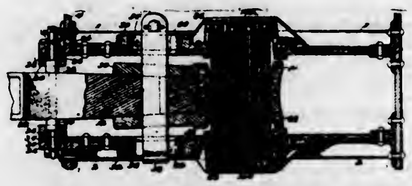
2. In a journal box and in combination with bearings on the upper part thereof, a lid having its upper portion hinged to said bearings, said upper portion having a cam projecting rearwardly, said box having a wedge shaped member, and a casing having a recess to fit over said wedge shaped member, and a spring pressed plunger within said casing working against said cam to hold the lid in position.

3. In a journal box and in combination with bearings on the upper part thereof, a lid having its upper portion hinged to said bearings, said upper portion having a cam projecting rearwardly, said box having a wedge shaped member having notches therein, and a casing having a recess to fit over said wedge shaped member, said casing having a member adapted to be moved into said notches to lock the casing in position, and a spring pressed plunger within said casing working against said cam to hold the lid in position.

4. In a journal box and in combination with bearings on the upper part thereof, a lid having its upper portion formed with two lugs or bearings connected by a hood, a pin passing through the bearings of said lid and said box and hinging the lid to the box, the aforesaid hood protecting the parts and having a cam projecting rearwardly, said box having a spring pressed plunger working against said cam to hold the lid in position.

5. In a journal box, a lid, and a device for holding the same in position comprising a casing, a plunger working therethrough, the box having a wedge shaped member with notches therein and the casing having a recess within which said wedge shaped member fits, and the casing having a member adapted to be moved into one of said notches to lock the casing in position.

1,156,881. DRAFT-RIGGING. PERRY BROWN, Coraopolis, Pa. Filed Oct. 2, 1912, Serial No. 723,521. Renewed Oct. 8, 1914. Serial No. 865,777. (Cl. 213—42.)



1. In a draft mechanism and in combination with longitudinal sills of a car having openings therein, spring plates having their ends passing through the openings in said longitudinal sills, and pockets secured to said sills and projecting outwardly therefrom for receiving and inclosing the vertical sides and ends of the projecting portions of said spring plates.

2. In a draft mechanism and in combination with longitudinal sills of a car having openings therein, spring plates having their ends passing through the openings in said longitudinal sills, and pockets secured to said sills and projecting therefrom for receiving and inclosing the vertical sides and ends of the projecting portions of said spring plates, said pockets having an opening through which the spring plates may be inserted.

3. In draft mechanism and in combination with longitudinal sills of a car having openings therein, spring plates having their ends passing through the openings in said longitudinal sills, and integral pockets secured to the exterior faces of said sills for receiving the projecting portions of said spring plates, said pockets forming a complete housing for the projecting ends of said plates.

4. In draft mechanism and in combination with the longitudinal sills of a car having openings therein, spring plates having their ends passing through the openings in said longitudinal sills, pockets secured to the exterior faces of said sills for receiving the projecting portions of said spring plates, one of said pockets having a dovetailed slot therein through which the spring plates may be inserted, and a key fitting said dove-tailed slot and closing the opening.

1,156,882. PUMP. JOHN T. S. BROWN, Jr., Prospect, Ky. Filed Nov. 18, 1914. Serial No. 872,700. (Cl. 103—70.)



1. In a pump, a valve comprising a supporting block having a convex top, a resilient member extended from said block and secured thereon by adjustable attachment means positioned respectively on each side of the apex thereof, said resilient member having elongated openings near the outer ends thereof, and a valve connected to said member by means of bolts passing through said openings.

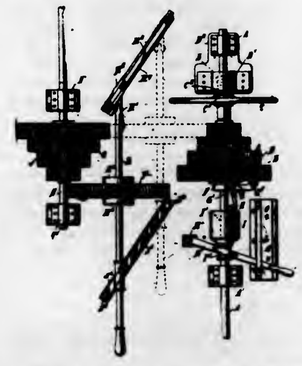
2. In a pump, a supporting block with a convex top secured on the inner wall of the pump cylinder, a resilient member extended from said block and secured thereon by adjustable attachment means positioned respectively on each side of the apex thereof, said resilient member having elongated openings near the outer end thereof, a valve connected to said member by means of bolts passed through said openings, and means extended from the walls of the cylinder to limit the travel of the valve.

3. In a pump the combination of a valve chamber having a port, a convex seat adjacent said port, a strap adjustably mounted on said convex seat and a valve carried by said strap and adapted to open and close the port in the valve chamber.

4. In a pump, the combination of a valve chamber having a port, a convex seat adjacent said port, a flexible strap adjustably mounted on said convex seat and a valve carried by said strap and adapted to open and close the port in the valve chamber.

5. In a pump the combination of a valve chamber having a port, a convex seat adjacent said port, a flexible strap mounted on said seat and adjustably secured thereon by fastening devices located at opposite sides of the crown of the convex seat and a valve carried by said strap and adapted to open and close the port in the valve chamber.

1,156,883. TRANSMISSION-CONE-GEARING APPARATUS. ELMER F. BUBB, Chicago, Ill. Filed June 24, 1914. Serial No. 847,110. (Cl. 74—58.)



1. A double cone transmission gear mechanism comprising a driven and a driving shaft, a speed cone fixed to the driven shaft and a loosely mounted cone upon the driving shaft, a collar fixed to the driving shaft, a pivotal member rotating with the driving shaft, means for throwing the same into engagement with the loosely mounted cone thereon, a transmission shaft and gearing loosely mounted thereon, and means for moving the transmission shaft intermediate the speed cones.

2. A double cone transmission gear mechanism comprising a driven and a driving shaft, a speed cone fixed to the driven shaft and a loosely mounted cone upon the driving shaft, a collar fixed to the driving shaft, a pivotal member rotating with the driving shaft, means for throwing the same into engagement with the loosely mounted cone thereon, a transmission shaft and gearing loosely mounted thereon, means for moving the transmission shaft intermediate the speed cones, and means for locking the transmission shaft in different positions.

3. A double cone transmission gear mechanism comprising a driven and a driving shaft, a speed cone fixed to the driven shaft and a loosely mounted cone upon the driving shaft, a collar fixed to the driving shaft, a spring-pressed member pivotally mounted thereon, a clutch member for engagement with said pivotal member, the latter being adapted to engage a recess in the cone upon the driving shaft, means for moving the cone upon the driving shaft in frictional contact with said collar to impart initial rotary movement to the cone, a pivotally mounted transmission shaft, a gear wheel loosely mounted thereon, and means for moving the transmission shaft to bring the gear wheel thereon to intermesh with the various stepped portions of the two cones.

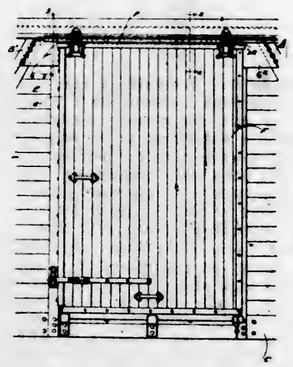
4. A doube cone transmission gear mechanism comprising a driven and a driving shaft, a speed cone fixed to the driven shaft and a loosely mounted cone upon the driving shaft, a collar fixed to the driving shaft, a spring-pressed member pivotally mounted thereon, a clutch member for engagement with said pivotal member, the latter being adapted to engage a recess in the cone upon the

driving shaft, means for moving the cone upon the driving shaft in frictional contact with said collar to impart initial rotary movement to the cone, a pivotally mounted transmission shaft, a gear wheel loosely mounted thereon, means for moving the transmission shaft to bring the gear wheel thereon to intermesh with various stepped portions of the two cones, and means for holding the transmission shaft in different adjusted positions.

5. A double cone transmission gear mechanism comprising a driven and a driving shaft, a speed cone fixed to the driven shaft and a loosely mounted cone upon the driving shaft, a collar fixed to the driving shaft, a spring-pressed member pivotally mounted thereon, a clutch member for engagement with said pivotal member, the latter being adapted to engage a recess in the cone upon the driving shaft, means for moving the cone upon the driving shaft in frictional contact with said collar to impart initial rotary movement to the cone, a pivotally mounted transmission shaft, a gear wheel loosely mounted thereon, means for moving the transmission shaft to bring the gear wheel thereon to intermesh with various stepped portions of the two cones, a grooved member positioned in diagonal relation to the transmission shaft and adapted to receive the latter, and means for holding the transmission shaft in an adjusted position.

[Claims 6 to 8 not printed in the Gazette.]

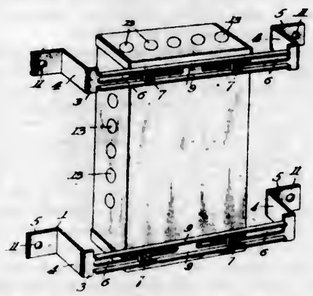
1,156,884. TRACK STRUCTURE FOR FREIGHT-CAR DOORS. RICHARD WEBB BURNETT, Montreal, Canada, assignor to Camel Company, Chicago, Ill., a Corporation of Maine. Filed Feb. 23, 1915. Serial No. 10,017. (Cl. 20—22.)



1. In a freight car, the combination with the side thereof having a door opening, of a track beam secured to the car side above the door opening and having a flange depending from the under surface thereof, a door controlling the door opening, hangers secured to the top of the door in sliding engagement with said track beam, an angle beam secured to the top of the door having a vertical flange extending behind the depending flange of the track beam, and a horizontal flange overlying the top of the door, the ends of the horizontal flange of said angle beam being turned upwardly to prevent water from flowing from the upper surface of said angle beam around the front and rear edges of the door.

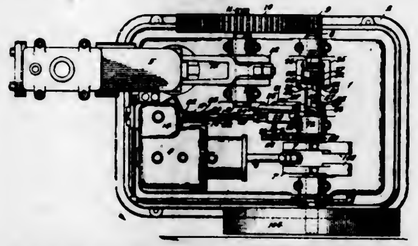
2. In a freight car, the combination with the side thereof having a door opening, of a track beam secured to the car side above the door opening and having a flange depending from the under surface thereof, a door controlling the door opening, hangers secured to the top of the door in sliding engagement with said track beam, a Z-beam secured to the top of the door and projecting beyond the front and rear edges thereof, and having a vertical flange extending behind said depending flange of the track beam, the horizontal web of said Z-beam overlying the top of the door and having its ends turned upwardly to prevent water from flowing from said beam down the front and rear edges of the door opening.

1,156,885. OUTLET-BOX BRACKET. JAMES C. CAINE, Denver, Colo., assignor of one-half to The New England Electric Company, Denver, Colo., a Corporation of Colorado. Filed Dec. 12, 1911. Serial No. 665,360. (Cl. 247—5.)



An integral outlet-box bracket having end-securing portions and an intermediate, longitudinally slotted offset portion forming an outlet-box seat, screw-bolts and nuts for adjustably securing the outlet-box within said offset portion and longitudinal ribs struck up from the metal of the offset portion and at right-angles thereto and providing a locking channel for the securing nuts.

1,156,886. INTERNAL-COMBUSTION ENGINE. EARL CANEDY, Chicago Heights, Ill., assignor to Kewanee Water Supply Company, Kewanee, Ill., a Corporation of Illinois. Filed Dec. 7, 1910. Serial No. 596,024. (Cl. 123—99.)



1. In apparatus of the described class, the combination with an internal combustion engine, including a crank shaft, valve operating and igniting mechanism, of a set of speed governing weights fulcrumed to said shaft and adapted to rotate therewith, a non rotatable member movable along the shaft and provided with a flange encircling the shaft, a loose collar encircling said member and shaft and adapted to be pushed against said flange, arms integrally connected with the governing weights and projecting transversely of the shaft into a position to engage and actuate said collar in the direction of said flange when the governing weights move outwardly, and a trip lever loosely connected with said longitudinally movable member and adapted to control the speed of the engine, said longitudinally movable member and trip lever being otherwise free to move independently of the valve operating mechanism.

2. In apparatus of the described class, the combination with an internal combustion engine and shaft, of a sleeve loosely mounted thereon, and movable longitudinally, a collar loose on the sleeve, a flange fast on the sleeve, against which the collar may move, a set of governing weights pivotally supported from the shaft, and adapted

to actuate the collar and sleeve, a projection on said collar loosely engaged by the governing weights, to rotate the collar, and means for transmitting the motion of said sleeve to control the speed of the engine.

3. In apparatus of the described class, the combination with an internal combustion engine including an exhaust valve, ignition circuit and piston operated shaft, of a sleeve loosely mounted on the shaft, and movable longitudinally, a collar loose on the sleeve, a flange fast on the sleeve, against which the collar may move, a set of governing weights pivotally supported from the shaft, and adapted to actuate the collar and sleeve, a projection on said collar loosely engaged by the governing weights, to rotate the collar, and means for transmitting the motion of said sleeve to control the speed of the engine, said motion transmitting means comprising a member for opening the exhaust valve, a trip lever loosely engaged by said sleeve and adapted when actuated by the sleeve to speed checking position to engage said member and hold the exhaust valve of the engine in open position, and means connected with said trip lever for controlling an igniter circuit.

4. In apparatus of the described class, the combination with an internal combustion engine provided with an exhaust valve, of an engine shaft, a sleeve loosely mounted thereon, and movable longitudinally, a collar loose on the sleeve, a flange fast on the sleeve, against which the collar may move, a set of governing weights pivotally supported from the shaft, and adapted to actuate the collar and sleeve, a projection on said collar loosely engaged by the governing weights to rotate the collar, and means for transmitting the motion of said sleeve to control the speed of the engine, said motion transmitting means comprising a latch and catch trip mechanism controlling the exhaust valve of the engine, and including a lever loosely engaged by said sleeve, said lever being free to move independently to a limited extent when being actuated to speed checking position.

5. In an internal combustion engine, having a valve controlling rod provided with a catch plate, the combination with the catch plate of a spring retracted trip lever having a beveled seating end, adapted to engage in a notch in the catch plate, and speed controlled means for actuating said lever into engagement with the catch plate; said speed controlled means including a free moving non-rotatable sliding member provided with a slot in which the trip lever loosely engages; said trip lever being free to move independentiy of the actuating means into the catch plate notch when its beveled end is engaged by said plate.

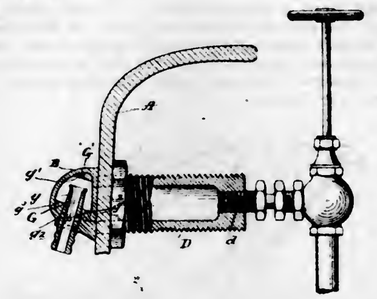
[Claims 6 to 10 not printed in the Gazette.]

1,156,887. ELECTRIC SWITCH, FUSE, AND PROTECTOR THEREFOR. EDWARD CHARPIER, Chicago, Ill. Filed Feb. 13, 1914. Serial No. 818,444. (Cl. 175—278.)



A combined switch fuse and protector comprising a casing, conductors therein, an insulating block supported in the casing, spring strips forming the terminals of the respective conductors and secured in spaced relation to said block, each of said strips including two normally spaced sections, a member rotatably mounted within the casing adjacent the block, independent strips carried by said member to fit between the sections of the respective strips, fuses connecting said last mentioned strips, a block carried by and movable with said member, said block being arranged beyond the casing and formed with a notch for each fuse line of the member, each fuse having a notch in alinement therewith, and means secured upon the casing to coöperate with the notches to temporarily restrain the movement of the member in connected relation.

1,156,888. MANIFOLD OUTLET. MERLE COUP, Cleveland, Ohio. Filed Apr. 12, 1915. Serial No. 20,670. (Cl. 4—24.)



1. In combination with a bath tub, an independent manifold chamber, separate inlet tubes for hot and cold water integral therewith, and an annular outlet member extending beyond the lower wall of said chamber into said chamber and in the direction of the upper wall, but having its inner end spaced therefrom.

2. In combination with a bath tub, an independent vertically placed manifold chamber, supported thereon, integral inlets for hot and cold water respectively entering said chamber from the rear, and a common supply nozzle communicating with said chamber at its lower edge, said supply nozzle extending inwardly into said chamber, and having its base curved to direct the flow of water toward the inner extremity of the nozzle.

3. In combination with a tub, a manifold chamber, integral inlets for hot and cold water inserted through the wall of said tub, and secured thereto, and communicating with said chamber, a common central supply nozzle projecting adjustably into said chamber through the lower edge of said chamber, and deflecting means in the upper wall of said chamber opposite said nozzle.

4. In combination with a bath tub, a closed manifold chamber separate integral inlets for hot and cold water communicating at spaced positions with the rear wall of said chamber, and an inclined supply nozzle extending inwardly into said chamber through and beyond the lower wall thereof, substantially as described.

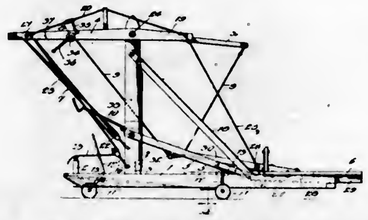
5. In combination with a bath tub, a manifold chamber, spaced inlet pipes for hot and cold water communicating with said chamber, a supply nozzle communicating with the lower edge of said chamber, and projecting inwardly into said chamber, and means in the outer wall of said chamber opposite the opening of the nozzle for directing the currents of hot and cold water to the inlet opening of said nozzle.

[Claims 6 to 8 not printed in the Gazette.]

1,156,889. DIRT, SAND, AND MANURE LOADER. LAUREN A. CRIST, Marion, Kans. Filed Mar. 23, 1914. Serial No. 826,714. (Cl. 214—3.)

1. A loading device comprising a supporting structure, an arm pivoted thereto and projecting therefrom, a platform pivotally supported upon said arm, a lever pivoted intermediate its ends to said supporting structure above said arm, a connection between said lever and said arm, means for rocking said lever to raise said arm, an arm projecting from said platform to one side of its pivotal axis, a contact surface on the first mentioned arm, and a flexible element secured at its ends to said lever on opposite sides of its pivot and passing around said contact surface, the arm on said platform being connected to said element and one end of said element having a releasable connection with said lever.

2. A loading device comprising a supporting base, a post rising therefrom, an arm pivoted near the lower end of said post and projecting therefrom, a platform pivoted eccentrically upon the outer end of said arm, a lever pivoted intermediate its ends near the upper end of said post, a connection between one end of said lever and said arm, a guide on said arm, an arm projecting from said platform, a drum revolubly mounted on the opposite end of said lever, a cable secured at one end to said drum and at its opposite end to the portion of the lever on the opposite side of its pivot, said cable passing around said guide and being secured to the arm on said platform, and releaseable means for locking said drum against rotation in one direction.



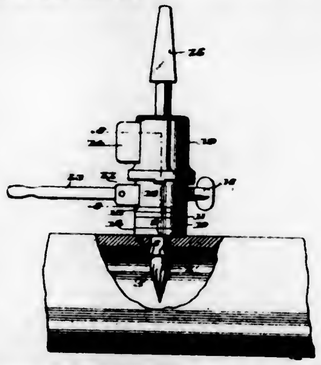
3. A loading device comprising a pair of spaced supporting bars, a post rising therefrom, a pair of forwardly projecting arms pivoted at their rear ends to the lower portion of said post, said arms having upturned forward extremities, a platform eccentrically pivoted to said upturned portions, an arm extending rearwardly from said platform, a pulley journaled between said first mentioned arms, a lever pivoted intermediate its ends to the upper portion of said post, connections between said first mentioned arms and the forward end of said lever, a manually operated drum on the rear portion of said lever, releasable means for preventing movement of said drum in one direction, a cable secured at its opposite ends to the forward end of said lever and said drum, said cable passing beneath said pulley and having a connection with the arm on said platform, and means for pulling the rear end of said lever downwardly to raise said platform.

4. In a loading device, a supporting post, a pair of upwardly swinging arms pivoted at their rear ends to opposite sides thereof, a cross bar connecting the forward ends of said arms, a platform pivoted on said arms, a lever comprising a pair of longitudinal bars pivoted on opposite sides of said post and spaced at their opposite ends, links depending from the forward ends of said bars and connected to said arms, a guide between said arms, a drum revoluble between the rear portions of said bars, releasable means for arresting movement thereof in one direction, and a cable secured at its opposite ends to said drum and the forward portion of said lever, said cable passing around said guide and having a connection with said platform for retaining the latter in a horizontal position until said releasable means is tripped.

1,156,890. PIPE-PATCHING DEVICE. WILLIAM H. CROW, San Ysidro, Cal. Filed July 28, 1914. Serial No. 853,728. (Cl. 137—99.)

1. In a pipe patching device, a plug comprising a core having one end thereof enlarged circumferentially and formed to provide a reamer body adapted to penetrate the pipe, a sleeve surrounding said core immediately adjacent to the enlarged end portion thereof and designed to follow the reamer into the pipe, and means for removing said core relatively to said sleeve in a direction reverse to the first movement thereof whereby the sleeve will be expanded in the opening in the pipe.

2. In a pipe patching device, a plug adapted to penetrate the pipe and capable of expansion succeeding the application of the same to the pipe, a chuck for forcing the plug into the pipe, said chuck comprising two sections capable of relative rotary movement, means holding said sections against relative movement in the application of the plug to the pipe, said means also operable to hold one section against movement while allowing the rotation of the other section, and means operable from the movable section to expand the plug.



3. In a pipe patching device, a plug comprising a core having one end thereof enlarged circumferentially and formed to provide a reamer bit adapted to penetrate the pipe, a sleeve surrounding said core immediately adjacent to the handle end portion thereof and designed to follow the reamer into the pipe, a flange on the upper end of said sleeve, a second sleeve surrounding said core coaxial with the first sleeve and having the outer surface thereof non-circular in cross section, a nut threaded onto said core adjacent to said last sleeve and means acting upon said last sleeve to rotate the plug as an entirety to pass the latter into the pipe or adapted to operate the nut independently of the remaining parts of the plug whereby the core will be drawn through the first sleeve to expand the latter in the opening in the pipe.

4. In a pipe patching device, a plug comprising a core having one end thereof enlarged circumferentially and formed to provide a reamer bit adapted to penetrate the pipe, a sleeve surrounding said core immediately adjacent to the enlarged end portion thereof and designed to follow the reamer into the pipe, a second sleeve surrounding the core coaxial with the first sleeve and rotatable with the core, a nut threaded upon the end of the core adjacent to said sleeve, a chuck comprising a section surrounding said second sleeve, and a section surrounding said nut, and means whereby both sections may be rotated simultaneously, and the second section rotated independently of the first section.

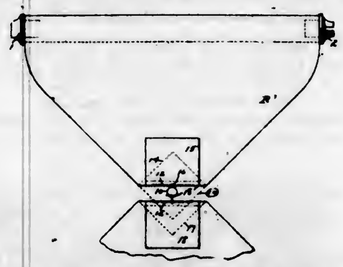
5. In a pipe patching device, a plug comprising a core having one end thereof enlarged circumferentially and formed to provide a reamer bit adapted to penetrate the pipe, a sleeve surrounding said core immediately adjacent to the enlarged end portion thereof and designed to follow the reamer into the pipe, a second sleeve surrounding the core coaxial with the first sleeve and rotatable with the core, a nut threaded upon the end of the core adjacent to said last sleeve, a chuck comprising a section surrounding said second sleeve, a section surrounding said nut, and means locking said sections together for simultaneous movement and operable to release said sections whereby the second section may be actuated independently of the first section.

[Claim 6 not printed in the Gazette.]

1,156,891. MUSIC-ROLL. GEORGE HOWLETT DAVIS, West Orange, N. J. Filed Feb. 24, 1915. Serial No. 10,350. (Cl. 84—162.)

1. A perforated music roll, comprising a perforated sheet, and a pair of supporting plugs secured to the rear end thereof.

2. A perforated music roll, comprising a perforated music sheet, and a pair of supporting plugs secured to the rear end thereof, one of said plugs having means thereon for connecting said roll to the driving mechanism of a player instrument.



3. A perforated music roll, comprising a perforated music sheet having a portion of the rear end thereof permanently coiled into a tube, and a supporting plug inserted into each end of said tube.

4. A perforated music roll comprising a perforated music sheet having a portion of the rear end thereof coiled into a tube, a driving plug permanently secured in one end of said tube, and a supporting plug inserted into the opposite end of said tube.

5. A perforated music roll, comprising a perforated music sheet, having a portion of the rear end thereof coiled into a tube, a flange driving plug permanently secured into one end of said tube, and a flanged supporting plug inserted into the opposite end of said tube.

[Claims 6 to 13 not printed in the Gazette.]

1,156,892. METHOD OF MACHINING METALS AND OTHER VERY HARD AND HIGHLY-RESILIENT MATERIALS. CHARLES ALPHONSE CLÉMENT DE LA POIX DE FRÉMINVILLE, Paris, France. Filed June 19, 1915. Serial No. 35,148. (Cl. 29—148.)

1. A method of machining metals and other very hard and highly resilient materials, consisting of facilitating and producing to a certain degree, in the work to be machined, the formation of centers for the production of a "cracking" or "splintering" effect when the action of the tool intervenes, this result being obtained by an energetic refrigeration extending to a depth at least reaching the zone which, for the effort developed by the tool, may be considered as that containing the said centers.

2. A method of machining metals and other very hard and highly resilient materials, consisting in facilitating and producing to a certain degree, in the work to be machined, the formation of centers for the production of a "cracking" or "splintering" effect when the action of the tool intervenes, this result being obtained by an energetic refrigeration extending to a depth at least reaching the zone which, for the effort developed by the tool, may be considered as that containing the said centers, the tool being raised, at the beginning of the work, to a suitable temperature in order to avoid its deterioration by action of the low temperature at the contact with the work under treatment.

1,156,893. STOP-WATCH. FREDERIC A. DE LAY, Aurora, Ill. Filed Aug. 1, 1913. Serial No. 782,418. (Cl. 58—76.)

1. In combination, a watch case, driving mechanism within the watch case, an indicating hand, devices for operatively connecting said indicating hand and driving mechanism, a stem extending from the watch case for manually controlling said connecting devices, and electromagnetic means independent of said stem and disposed within the watch case for controlling said connecting devices.

2. In combination, driving mechanism, an indicating hand, devices for operatively connecting the indicating hand with the driving mechanism, means for manually controlling said connecting devices, and electromagnetic means independent of the manual controlling means, said electromagnetic means adapted to control said connecting devices.



3. In a stop watch, a cam wheel, means for manually advancing said wheel step by step, a second hand, driving means, a gear wheel operating with said second hand, a pinion adapted to mesh with said gear wheel, a follower carrying said pinion and coöperating with said cam wheel, said follower being raised and lowered by said cam wheel to bring the pinion out of and into mesh with said gear wheel, an armature on said follower, and an electromagnet controlling the position of said follower by its influence on said armature.

4. In combination, an indicating device, driving means, means for operatively connecting said indicating device and said driving means, manual means for controlling said connecting means, and electromagnetic means for controlling said connecting means, said electromagnetic means comprising an electromagnet and an armature carried by the connecting means.

5. A stop watch comprising, in combination, driving mechanism, an indicating device, mechanism for operatively connecting the indicating device with the driving mechanism, electromagnetic controlling mechanism, a cam wheel arranged when in one position to prevent said connecting mechanism from being operated, and manually actuated means for operating said cam to place said connecting mechanism under the control of said electromagnetic controlling mechanism.

[Claims 6 to 10 not printed in the Gazette.]

1,156,894. PROCESS FOR TREATING TEXTILES USED IN AERONAUTICS AND AVIATION, AND THE AEROPLANE-FRAMEWORK PRODUCED THEREBY. EMMANUEL AUGUSTIN JOSEPH DESCAMPS, Raiseux, France, assignor to Société Leduc, Heitz et Cie., Raiseux, France. Filed Oct. 6, 1911. Serial No. 653,253. (Cl. 91—68.)

1. The process of applying a textile fabric to a framework or body consisting in fastening the fabric to the framework or body, impregnating the fabric with a liquid cellulose-ester varnish and evaporating the solvent of the varnish, whereby said fabric is rendered impervious and stretched tautly.

2. The process of applying a textile fabric to a framework or body consisting in fastening the fabric to the framework or body, impregnating the fabric with a cellulose-ester varnish dissolved in solvents having similar boiling points and vapor tensions, and evaporating the solvents of the varnish, whereby said fabric is rendered impervious and stretched tautly.

3. The process of applying textile fabrics to the framework of aeroplanes, consisting in fastening the fabric to the framework, impregnating the fabric with a liquid cellulose-ester varnish and evaporating the solvent from

said varnish, whereby said fabric is stretched tightly upon the framework, the interstices of said fabric filled, and the fibers, including the superficial fibers are closely cemented together, so that the surface of the fabric presents a smooth, hard, impervious surface to the air.

4. An aeroplane, framework having a textile fabric fixed thereto, said textile fabric being impregnated with a cellulose-ester, said cellulose-ester causing a shrinking of the fabric and thereby imparting a contractile stress through the body of the fabric to the framework, whereby the fabric is tautly stretched upon said framework, said cellulose-ester also augmenting the tensile strength of said fabric whereby said fabric possesses greater resistance to stresses tending to flex or elongate the same.

5. An aeroplane, framework having a textile fabric fixed under tension thereto, said textile fabric being impregnated with a cellulose-ester, said cellulose-ester causing a shrinking of the fabric and thereby imparting a contractile stress through the body of the fabric to the framework, whereby a supplementary tension is applied to said fabric and the fabric is tautly stretched upon said framework, said cellulose-ester also augmenting the tensile strength of said fabric whereby said fabric possesses greater resistance to stresses tending to flex or elongate the same.

1,156,895. VENEER PAD. LOUIS F. FLIPSE, Sheboygan, Wis., assignor, by mesne assignments, to Corrugated Veneer Packing Products Company, a Corporation of Wisconsin. Filed Feb. 25, 1909, Serial No. 480,001. Renewed Mar. 5, 1914. Serial No. 822,769. (Cl. 229—90.)



1. A flexible packing pad comprising a strip of wood veneer bent to form a series of strengthening and cushioning corrugations with the side walls thereof extending transversely through the pad, the corrugations at one end of the pad being adapted to force transversely between the corrugations of the opposite end to interlock therewith and thereby connect the overlapping ends of the pad, substantially as described.

2. A flexible packing pad comprising an integral strip of wood veneer bent to form a series of parallel, strengthening and cushioning corrugations extending transversely of the grain of the wood, the side walls of each corrugation being inclined inwardly toward each other at the open side thereof, said pad being bendable about an article and the corrugation at one end of the pad being adapted to be forced transversely between the corrugations of the opposite end to interlock therewith and thereby connect the overlapping ends of the pad, substantially as described.

3. A flexible packing pad comprising a strip of wood veneer bent to form a series of parallel self sustaining corrugations with the grain or fiber of the wood at an angle thereto, the side walls of each corrugation being inclined toward each other at the open side of the pad and the outer portions thereof being connected to the side walls by rounded corners, substantially as described.

4. A packing pad comprising a strip of wood veneer bent to form a series of straight, parallel, self-sustaining corrugations with the grain or fiber of the wood substantially at right angles to said corrugations, the side walls of said corrugations extending transversely through the pad and the outer portions thereof being arch-like in section on at least one side of the pad, and being connected to the side walls by rounded corners, substantially as described.

1,156,896. METHOD OF AND APPARATUS FOR PRODUCING AND EXHIBITING COMPOSITE PICTURES. JOHN E. GARRETTE, Cincinnati, Ohio, assignor of one-third to James M. Wagner and one-third to Adolph Fuerhammer, Chicago, Ill. Filed Feb. 17, 1915. Serial No. 8,770. (Cl. 88—24.)



1. The method of producing composite pictures, which consists in producing a pictorial representation of a fixed scene, producing pictorial representations of successive stages of a moving scene, leaving a part of said representation of the fixed scene clear, and confining said representations of the moving scene to a space adapted for projection through said clear space left in said representation of the fixed scene.

2. The method of producing and exhibiting composite pictures, which consists in producing a pictorial representation of a fixed scene, producing pictorial representations of successive stages of a moving scene, leaving a part of said representation of the fixed scene void whereby a void space is left in the projection thereof, and confining said representations of the moving scene to a space adapted for projection upon the void space left by projection of said representation of the fixed scene, and then bringing the representations of the successive stages of the moving scene successively into alinement with said representation of the fixed scene, and projecting said scenes together, with the representations of the stages of the moving scene projected in said void space left by the projection of said representation of the fixed scene.

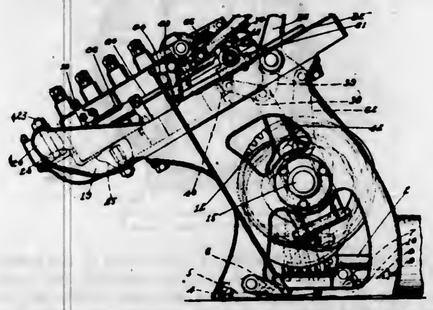
3. The method of producing composite pictures, consisting of producing a slide of a fixed scene, and producing a film of a moving scene, leaving a clear space on the slide, and confining the representation of the moving scene on said film, so that the projection of the moving scene will be confined to the clear space on the slide.

4. The method of producing and exhibiting composite pictures, consisting of producing a slide of a fixed scene, and producing a film of a moving scene, leaving a void space on the slide, and confining the representation of the moving scene on said film, so that the projection of the moving scene will be confined to the void space represented by the projection of the slide, and then shifting said film to bring its views of the moving scene successively into alinement with said slide, and projecting said slide and film together, whereby the moving scene is projected on said space represented by the projection of said slide.

5. The method of producing and exhibiting composite pictures, which consists in producing a pictorial representation of a fixed scene, producing pictorial representations of successive stages of a moving scene, leaving a part of said representation of the fixed scene void whereby a void space is left in the projection thereof, and confining said representations of the moving scene to a space adapted for projection upon the void space left by projection of said representation of the fixed scene, and then bringing the representations of the successive stages of the moving scene successively into alinement with said representation of the fixed scene, and coloring said representation of the fixed scene, whereby it will be projected in colors, and projecting said scenes together, with the representations of the stages of the moving scene pictured in said void space left by the projection of said representation of the fixed scene.

[Claims 6 to 19 not printed in the Gazette.]

1,156,897. MACHINE FOR SHAPING THE MATERIALS OF THE REAR PORTION OF A BOOT OR SHOE UPPER. JOSEPH GOULDBOURN, ARTHUR BATES, and ARTHUR ERNEST JERRAM, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 31, 1913. Serial No. 809,662. (Cl. 12—97.)



1. A machine for molding the rear portions of shoe upper materials, having, in combination, an inside former and outside formers and supporting and operating mechanism therefor all arranged with the working plane at a slight inclination to the horizontal and at an elevation allowing the operator to look down into the work, said machine being open below the inside former and also around the inside former to allow the work to be applied to said former and supported by the operator from underneath while being put under compression, substantially as and for the purposes described.

2. A machine for molding the rear portions of shoe upper materials, having, in combination, an inside former and outside formers and supporting and operating mechanism therefor, the support for resisting pressure of the outside formers against the inside former comprising a yoke extending forwardly in the working plane of the machine and then upturned to a plane above the work engaged portions of said inside former to afford clearance for the forward portion of the shoe upper.

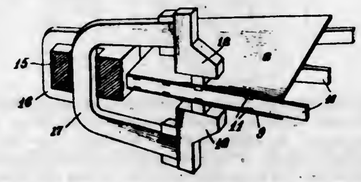
3. A machine for molding the rear portions of shoe upper materials, having, in combination, a machine frame the upper part of which is inclined forwardly with its top surface sloping downwardly toward the operator at an elevation at which the operator can readily observe the location of the upstanding margin of the heel portion of the work, an inside former supported on said frame to permit the work to be positioned upon it from underneath and to afford clearance in front thereof for the forward portion of the shoe upper, coöperating outside formers, and wipers for wiping the upstanding margin of the work down upon the inside former.

4. A machine for molding the rear portions of shoe upper materials, having, in combination, an inside former shaped like the rear portion of a last and having its front end upturned to provide an attaching portion extending above its work shaping portion to provide an unobstructed work receiving space in front of said former and below and on all sides thereof, coöperating outside formers and operating mechanism to open and retract the outside formers.

5. A machine for molding the rear portions of shoe upper materials, having, in combination, a frame having a head extended forwardly in two lateral arms, a cross-beam connecting the front ends of said arms and provided with a seat, an inside former having an upwardly and forwardly extended attaching portion shaped to fit the seat on the cross-beam, means retaining the former on its seat all arranged to present an unobstructed space around the work embraced portions of the inside former for the presentation, support and adjustment of the work; outside formers and operating means therefor.

[Claims 6 to 41 not printed in the Gazette.]

1,156,898. PROCESS OF MAKING SHEET-METAL DOORS, PARTITIONS, AND THE LIKE. JAMES H. GRAVELL, Philadelphia, Pa., assignor to Hale and Kilburn Company, Philadelphia, Pa., a Corporation of Delaware. Filed Dec. 16, 1912. Serial No. 736,903. (Cl. 219—10.)



1. The process of making a sheet-metal door, partition or the like, consisting in arranging a plurality of thin flat metal strips in definite relation to each other on edge, said strips having raised projections at spaced intervals along their edges, supporting said strips in such relation by a supporting member transverse thereto, placing the strips thus arranged between two parallel sheet-metal plates with each strip disposed in a plane transverse to the planes of said plates, and then welding each of said plates of each of said strips through said raised projections, substantially as set forth.

2. The process of making a sheet-metal door, partition or the like, consisting in arranging a plurality of thin flat metal strips in definite relation to each other on edge, said strips having raised projections at spaced intervals along their edges, supporting said strips in such relation by a supporting member transverse thereto, said strips being secured together by a mortised connection with said member, so arranged that no surface of said member projects beyond an edge plane of said strips, placing the strips thus arranged between two parallel sheet-metal plates with each strip disposed in a plane transverse to the planes of said plates, and then welding each of said plates to each of said strips through said raised projections, substantially as set forth.

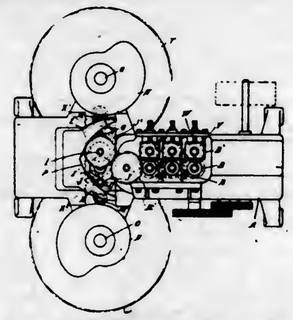
1,156,899. MACHINE FOR BENDING METAL. OTTO J. GROEHN, Detroit, Mich., assignor to Briscoe Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 22, 1912. Serial No. 727,109. (Cl. 153—54.)

1. A machine for bending sheet metal strips in the plane of the main portion thereof, comprising a guide for engaging opposite edge portions of the strip to hold the same from relative inward movement, a second guide similarly formed and engaging the strip, means for feeding the strip through said guides, and coacting means for moving one of said guides laterally with respect to the other guide.

2. A machine for bending sheet metal strips in the plane of the main portion thereof comprising a pair of guides for engaging different longitudinal portions of the strip and holding the opposite edges thereof from relative inward movement, means for feeding the strip through said guides, and coacting means for laterally adjusting one of said guides.

3. A machine for bending sheet metal strips, comprising means engaging the opposite edge portions of said strips for holding same from inward movement, means similarly engaging an advanced portion of said strip and laterally

adjustable with respect to said first-mentioned means, and coacting means for simultaneously, longitudinally advancing the strip and for adjusting said laterally-adjustable edge-engaging means.

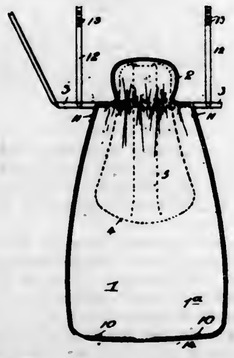


4. A machine for forming sheet metal strips, comprising a guide for engaging the opposite edge portions of a straight strip, an advance guide similarly engaging the edge portion of the strip and laterally adjustable, means for advancing the strip through said guides, and coacting means for laterally adjusting said advance guide and for turning said guide to correspond to the bending of the strip.

5. A machine for bending sheet metal strips, comprising a guide for engaging a straight sheet metal strip, a pair of rolls engaging an advanced portion of said strip and holding the opposite edges thereof from relative movement, means for simultaneously advancing said strip through said guides and for laterally adjusting the advanced guide, and coacting means for turning the axial plane of said rolls to maintain the tangent relation thereof to the portion of the work in engagement therewith.

[Claims 6 to 9 not printed in the Gazette.]

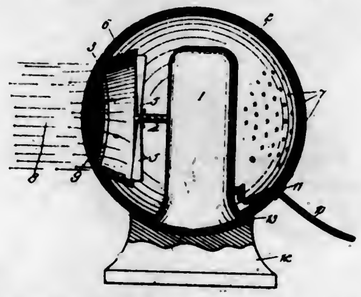
1,156,900. APRON. REBECCA L. GUGGENHEIMER, New York, N. Y. Filed May 4, 1915. Serial No. 25,667. (Cl. 2—54.)



1. The combination of an apron having a bib portion, with a protector located along the face of the apron, said apron being of greater length than the protector adapted to be folded upwardly in front of the latter, means to detachably connect the lower portion of the apron with a portion of the apron near the waist line, and means to detachably connect the protector with the apron adjacent its waist line and with the upper part of the bib portion of the apron.

2. The combination of an apron having a bib portion, with a protector located along a face of the apron, said apron being of greater length than the protector adapted to be folded upwardly in front of the latter, means to detachably connect the lower portion of the apron with a portion of the apron near the waist line, and means to detachably connect the protector with the apron adjacent its waist line and with the upper part of the bib portion of the apron, said protector being plaited and narrow at the waist portion and extended wider at the lower portion.

1,156,901. FAN-MOTOR. CHESTER I. HALL, Chicago, Ill., assignor to Chicago Electric Meter Company, a Corporation of Illinois. Filed Dec. 23, 1912. Serial No. 738,118. (Cl. 230—1.)



1. In combination, a motor, a fan secured to the motor shaft and driven thereby, a spherical inclosing shell surrounding the fan and motor, a directing nozzle in the shell for projecting air through the shell and from the fan in a substantially uniform column, a protecting screen extending over the discharge end of the said directing nozzle, said shell having a plurality of intake holes formed through its side opposite to the directing nozzle, and a supporting base having a concave upper surface for engaging said shell, a friction pad on said base whereby the spherical inclosing shell may be positioned so as to direct a stream of air from said nozzle at any angle, including vertical.

2. In combination a substantially spherical hollow casing, a support for said casing, said support comprising a concave surface on which said casing rests, an opening in said casing, a motor mounted in said casing and fixed thereto and a fan operatively connected with said motor located within said casing arranged to project a stream of air through the opening in the casing, said casing being free to be turned on its support whereby the stream of air emitted from the opening in the casing may be directed as desired.

3. In combination a substantially spherical hollow casing, an opening in the casing, a motor fixed within the casing, a fan connected with said motor located within said casing adjacent said opening and arranged to project a stream of air from the casing, said spherical casing being adjustably mounted so that the stream of air emitted therefrom may be directed as desired.

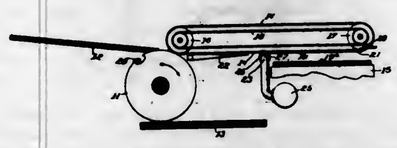
1,156,902. WRENCH. WALTER L. HANNSE, Hondo, Tex. Filed May 25, 1914. Serial No. 840,901. (Cl. 81—125.)



A wrench comprising an elongated bar having a central enlarged portion provided with a receiving socket formed

on one face of the enlargement and extending therefrom, the opposite walls of the socket member having openings, the enlargement having openings at opposite sides of the socket member, levers disposed through the openings of the enlargement and centrally pivoted therein, pins carried by the levers and engaged through the openings of the socket member, handle members on the other end of the lever and disposed at the other side of the enlargement and springs connected to the handles and to the enlargement for rocking the levers on their pivots and holding the pins engaged through the openings of the socket member.

1,156,903. DELIVERY MECHANISM FOR PRINTING-PRESSES. CARL HENDERSON, Oak Park, Ill., assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 24, 1914. Serial No. 858,222. (Cl. 101—29.)



1. In a sheet delivery mechanism, the combination with traveling means for engaging the sheet, of a member having a perforate surface traversed by the sheet, means to cause suction through the perforate surface of the member upon the sheet to exert restraining tension thereon, and means to move the perforate member in the same general direction as the sheet but at a slower speed, the suction acting on the sheet during a portion at least of the time when it is under the control of the sheet conveying means.

2. In a sheet delivery mechanism, the combination with gripper mechanism for engaging the forward end of the sheet and conveying the same, of a member having a perforate surface traversed by the trailing portion of a sheet, means to cause suction through the perforate surface of the member upon the sheet to exert restraining tension thereon, and means to move the perforate member in the same general direction as the sheet but at a slower speed, the suction acting on the sheet during a portion at least of the time when it is under the control of the gripper mechanism.

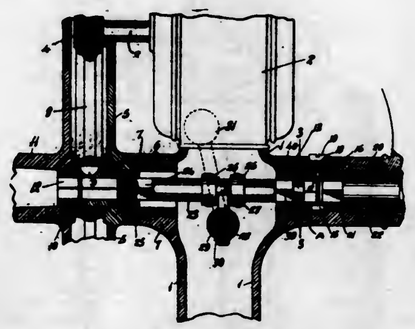
3. In a sheet delivery mechanism, the combination with traveling means for conveying the sheet, of a suction member having a perforated surface traversed by the trailing portion of the sheet to exert restraining tension thereon, and a moving foraminous apron interposed between the perforate suction surface and the sheet, said apron moving in the same general direction as the sheet, the conveying means and the restraining mechanism acting for a time independently and for a time concurrently upon the sheet.

4. In a sheet delivery mechanism, the combination with traveling means for conveying the sheet, of a suction member having a perforated surface traversed by the trailing portion of the sheet to exert restraining tension thereon, and a moving foraminous apron interposed between the perforate suction surface and the sheet, said apron moving in the same general direction as the sheet and at a slower speed, the conveying means and the restraining mechanism acting for a time independently and for a time concurrently upon the sheet.

5. In a sheet delivery mechanism, the combination with traveling means for conveying the sheet, of a suction tube having a perforated surface traversed by the trailing portion of the sheet to exert restraining tension thereon, and a foraminous apron interposed between the perforate suction surface and the sheet, said apron moving in the same general direction as the sheet and at a slower speed, the conveying means and the restraining mechanism acting for a time independently and for a time concurrently upon the sheet.

[Claims 6 and 7 not printed in the Gazette.]

1,156,904. CLUTCH MECHANISM FOR GRINDERS AND CHOPPERS. HERBERT L. JOHNSTON, Troy, Ohio, assignor to The Hobart Manufacturing Company, Troy, Ohio, a Corporation of Ohio. Filed Mar. 1, 1915. Serial No. 11,350. (Cl. 192—9.)



1. In combination with a power driven rotatable member, a casing, means for mounting a device to be operated on said casing, means for connecting the rotatable member to the shaft of such device, a sliding shaft mounted in said casing having movable connection with the rotatable member, another means on said casing for mounting a device to be operated, connection from the sliding shaft to the shaft of such device, and means for sliding said shaft out of its connection.

2. In a device of the character described, the combination with a driving member, of a clutch member having movable connection therewith, a squared portion on the clutch member, a driven member, said driven member having a similarly squared socket, and a rounded end on the clutch member to lie in said socket when the squared portion is withdrawn to serve as a guide.

3. In a device of the character described, the combination with a driving member, of a clutch member having movable connection therewith, a squared portion on the clutch member, a driven member, said driven member having a similarly squared socket, and a rounded end on the clutch member to lie in said socket when the squared portion is withdrawn to serve as a guide, the walls of said socket having rounded depressions to properly journal the rounded member.

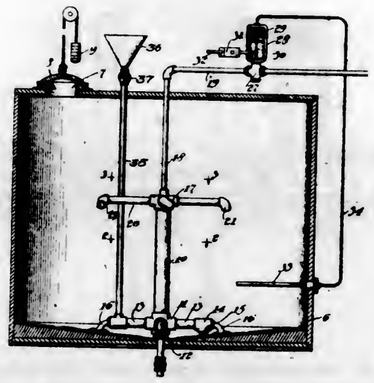
4. In a device of the character described, the combination with a driving member, of a clutch member having movable connection therewith, a squared portion of the clutch member, a driven member, said driven member having a similarly squared socket, and a rounded end on the clutch member to lie in said socket when the squared portion is withdrawn to serve as a guide, the walls of said socket having rounded depressions to properly journal the rounded member, and notches in the end of said socket forming portion of the driven member having their deepest portion adjacent to the corner of said socket, to draw said squared clutch portion into proper meshing position.

5. In a device of the character described, the combination with a driving member, of a clutch member having movable connection therewith, a squared portion on the clutch member, a driven member, said driven member having a similarly squared socket, and a rounded end on the clutch member to lie in said socket when the squared

portion is withdrawn to serve as a guide, and notches in the end of said socket forming portion of the driven member having their deepest portion adjacent to the corner of said socket, to draw said squared clutch portion into proper meshing position.

[Claims 6 to 9 not printed in the Gazette.]

1,156,905. APPARATUS FOR TREATING FATS AND OILS. PAUL GUSTAV KAISER and BALTHASAR E. REUTER, Chicago, Ill. Filed Nov. 20, 1913. Serial No. 802,025. (Cl. 87—4.)



1. In combination, a tank, and combined heating and agitating mechanism for said tank, said heating and agitating mechanism comprising a passage having both ends thereof communicating with the tank, a nozzle in said passage arranged to discharge steam toward the outlet end of the passage, means for supplying steam under pressure to said nozzle and means for supplying treating material through said passage.

2. In combination, a tank, and combined heating and agitating mechanism for said tank, said heating and agitating mechanism comprising a passage having both ends thereof communicating with the tank, the inlet end of the passage located below the normal level of the tank contents, means in said passage for discharging steam toward the outlet end of the passage and a treating material supply pipe terminating in said passage at the intake end thereof.

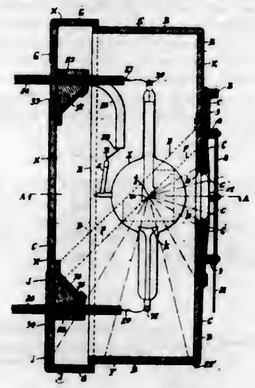
3. In combination, a tank, and combined heating and agitating mechanism for said tank comprising a passage communicating with the contents of the tank, means for admitting steam under pressure to said passage intermediate its ends to heat and agitate the contents of the tank and means for supplying treating material to said passage.

4. In combination, a tank, a pipe within said tank, a nozzle within said pipe arranged to project fluid under pressure toward the upper end of said pipe, and means for supplying heated fluid under pressure to said nozzle to heat and agitate the contents of the tank, said nozzle comprising a plurality of superposed hollow inverted truncated cones, webs connecting said truncated cones and a plurality of apertures through each of said webs.

5. In combination, a tank, a pipe vertically disposed within said tank, a plurality of intake pipes radiating from the lower end of said first pipe, a plurality of discharge pipes radiating from the upper end of said first pipe, a nozzle within said first pipe arranged to discharge fluid under pressure toward the upper portion of said first pipe, and means for supplying the fluid under pressure to said nozzle.

[Claims 6 to 13 not printed in the Gazette.]

1,156,906. RADIATION-SHIELD. EDWIN W. KELLY, Philadelphia, Pa. Filed Nov. 18, 1912. Serial No. 732,055. (Cl. 250—84.)



1. The combination with an X-ray tube, of a shield inclosing the same and comprising a mass of ray absorptive material varying in thickness between its inner and outer faces with distance from the focus spot of said tube and varying in thickness in a radial direction from said focus spot with distance from said focus spot.

2. The combination with an X-ray tube, of a shield support having a surface varying in distance from the focus spot of said tube, a shield comprising ray absorptive material disposed upon said surface, said ray absorptive material having different thicknesses measured normally to said surface and different thicknesses measured radially from the focus spot of said tube.

3. The combination with an X-ray tube, of a shield support having a surface varying in distance from the focus spot of said tube, a shield comprising ray absorptive material disposed upon said surface, said ray absorptive material having different thicknesses measured normally to said surface and different thicknesses measured radially from the focus spot of said tube, said thicknesses diminishing with increasing distances from the focus spot of said tube.

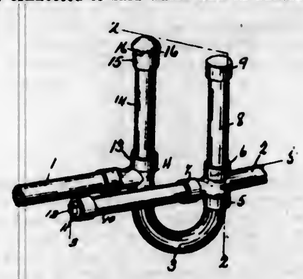
4. The combination with an X-ray tube, of a shield support therefor comprising a member having a substantially flat surface, a shield of ray absorptive material disposed upon said surface, said ray absorptive material diminishing in thickness normally to said surface and radially from the focus spot of said tube with increasing instances from the focus spot of said tube.

5. The combination with an X-ray tube, of a shield therefor comprising a support, ray absorptive material having an aperture in front of the focus spot of said tube, said ray absorptive material diminishing in thickness in a direction away from said aperture, a sheet of ray absorptive material on said support in the active hemisphere in front of the focus spot, and a sheet of ray absorptive material of different thickness on said support back of said focus spot.

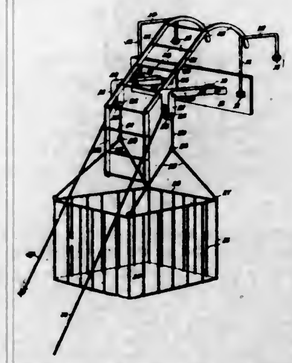
[Claims 6 to 13 not printed in the Gazette.]

1,156,907. SEWER-TRAP. NATHAN H. KING, Solvay, N. Y. Filed Mar. 28, 1913. Serial No. 757,334. (Cl. 182—12.)

In a sewer trap, a U-shaped tubular section, a three-way union connected to one end of said section, an inlet pipe connected to said union, a clean-opt pipe connected to said union and extending vertically from the union and in substantial alinement with the adjacent portion of the U-shaped section, a four-way union connected to the other end of said U-shaped section, an outlet pipe connected to said union, a clean-out pipe connected to said union and vertically disposed and in substantial alinement with the adjacent end of the U-shaped section and a second clean-out pipe connected to said union and in substantial alinement with the outlet pipe and upwardly inclined as it extends from said union, and separate closures for said clean-out pipes.



1,156,908. FIRE-ESCAPE. JOSEPH KISH, Cobalt, Ontario, Canada. Filed Aug. 16, 1915. Serial No. 45,843. (Cl. 227—11.)



1. A fire escape including a wall plate, a pair of hook members hingedly connected to the ends of the plate, a pair of outstanding arms hingedly connected to said plate inwardly of the hook arm connection, downwardly-projecting extensions carried by said arms, sheave pulleys mounted in said extensions, a ladder including a section fixed to said arms, a swinging ladder section carried by the fixed section, a cable passing over said sheave pulleys, and a passenger car supported by said cable.

2. A fire escape including a wall plate, hook arms carried thereby, outstanding arms pivoted to said wall plate, a ladder section fixed to said arms, hooks carried by the inner end of said ladder, and a car supported on said arms adapted for vertical movement.

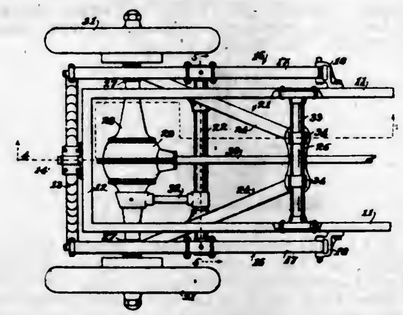
3. A fire escape including a wall plate, hook arms carried thereby, a ladder associated with said plate, means carried by said plate for supporting the latter, and a cable-supported car associated with said means.

4. A fire escape comprising in combination with a plate provided with hook arms and outstanding arms, a ladder fixed to said arms, hooks carried by the inner ends of the ladder side rails, and a cable-supported car associated with said arms.

1,156,909. VEHICLE-SPRING. EMIL KOBB, New York, N. Y., and RALPH PEARSON THOMPSON, Leipsic, Ohio. Filed Dec. 31, 1914. Serial No. 879,860. (Cl. 21—50.)

1. In a vehicle, the combination of a main frame having two side rails, a supplemental frame, a cross rod secured between said side rails at the intermediate portion of the vehicle, coil springs resiliently connecting the front end of said supplemental frame with said cross rod, a shaft casing secured to the rear end portion of said supplemental frame, a tubular cross member at the intermediate part of the supplemental frame, a second cross rod extending through said tubular member, a pair of spring members one connected at its middle portion to each end of said second cross rod, said pair of springs having their end portions secured to the main frame.

said supplemental frame with said cross rod, the supplemental frame having ground wheels carried thereby at the rear end, a cross member at the intermediate part of the supplemental frame, and a pair of spring members one connected at its middle portion to each end of said cross member, said pair of spring members having their end portions secured to the main frame.



2. In a vehicle, the combination of a main frame having two side rails, a supplemental frame, a cross rod secured between said side rails at the intermediate portion of the vehicle, coil springs resiliently connecting the front end of said supplemental frame with said cross rod, the supplemental frame having ground wheels carried thereby at the rear end, a tubular cross member at the intermediate part of the supplemental frame, a second cross rod extending through said tubular member, and a pair of spring members one connected at its middle portion to each end of said second cross rod, said pair of spring members having their end portions secured to the main frame.

3. In a vehicle, the combination of a main frame having two side rails and a rear rail connecting the two side rails with one another, a cross rod secured between said side rails at the intermediate part of the vehicle, a supplemental frame, coil springs resiliently connecting the front end of said supplemental frame with said cross rod, the supplemental frame having ground wheels carried thereby at the rear end, a cross member at the intermediate part of the supplemental frame, a pair of spring members one connected at its middle portion to each end of said cross member, and a rear spring member connected at its middle portion to the middle portion of said rear rail, said side spring members each being connected at one of its ends to a side rail and at its other end to one of the ends of said rear spring member.

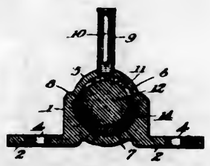
4. In a vehicle, the combination of a main frame having two side rails, a supplemental frame, a cross rod secured between said side rails at the intermediate portion of the vehicle, pins extending downwardly from said cross rod, the front end of the supplemental frame being slidably mounted on the pins and securely anchored thereby, spring seats at the lower ends of the pins, coil springs mounted between the spring seats and the front end of said supplemental frame to normally maintain the front end in raised position and to absorb the lighter shocks, the supplemental frame having ground wheels carried thereby at the rear end, a cross member at the intermediate part of the supplemental frame, and a pair of spring members one connected at its middle portion to each end of said cross member, said pair of spring members having their end portions secured to the main frame.

5. In a vehicle, the combination of a main frame having two side rails, a supplemental frame, a cross rod secured between said side rails at the intermediate portion of the vehicle, spring means resiliently connecting the front end of said supplemental frame with said cross rod, a shaft casing secured to the rear end portion of said supplemental frame, a tubular cross member at the intermediate part of the supplemental frame, a second cross rod extending through said tubular member, a pair of spring members one connected at its middle portion to each end of said second cross rod, said pair of springs having their end

portions secured to the main frame, and a torsion rod for connecting the shaft casing with said tubular cross member to safeguard the shaft casing against twisting, the torsion rod being fixedly secured to the shaft casing and the tubular cross member.

[Claim 6 not printed in the Gazette.]

1,156,910. BEARING FOR PEANUT-PICKERS. THOMAS M. LILLISTON, Suffolk, Va. Filed Jan. 5, 1914. Serial No. 810,474. (Cl. 64—24.)



1. In a bearing for a peanut picking machine, in combination, a rigid fixed casing, said casing being provided with wing members for attaching the casing in position, said casing being also provided with a body portion having semi-cylindrical bores therein, one of said bores being larger than the other, a bearing lining of resilient material loosely mounted in said larger bore, a wiping lining of spongy material loosely mounted in the smaller bore, a shaft in said bearing between said linings, and collars on the shaft to maintain said linings within the casing.

2. In a bearing for a peanut picking machine and the like, in combination, a rigid fixed casing, said casing being provided with a body portion having semi-cylindrical bores therein, said bores having a common axis, one of said bores being larger than the other, shoulders formed within said body portion by surfaces joining said bores, a bearing liner seated in the larger bore and being of a thickness greater than the depth of said shoulders and projecting inwardly beyond the shoulders, a wiping liner of spongy material seated in the smaller bore and having the edges thereof engageable with the projecting portions of the bearing liner to prevent said wiping liner from being displaced by rotation, a shaft seated on said bearing liner and beneath said wiping liner, and collars slidably mounted upon said shaft.

3. In a bearing for peanut picking machines and the like, in combination, a rigid fixed casing, said casing being provided with two semi-cylindrical bores diametrically disposed on opposite sides of a common axis, one of said bores being formed on a curve having a larger radius than the other, a bearing liner loosely mounted in the larger bore, a wiping liner loosely mounted in the smaller bore, a shaft mounted to rotate between said liners, and means carried by said shaft to retain said liners within said casing.

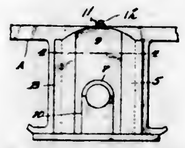
4. In a device of the class described in combination, a rigid casing having a transverse opening to form seats for bearing liners, a bearing liner loosely mounted in said casing and slidable longitudinally therein, a wiping liner loosely mounted in said casing above said bearing liner, said wiping liner being also slidable longitudinally within said casing, a shaft adapted to rotate between said liners, and means to prevent excessive longitudinal movement of said liners.

5. In a bearing of the class described, a rigid casing having an opening therein, a wooden bearing liner seated in said opening and loosely mounted therein, a shaft rotatable on said wooden bearing liner, a wiping liner above said wooden bearing liner and exerting pressure upon said shaft to seat said shaft against the wooden bearing liner, and means for retaining said liners within said casing.

[Claims 6 and 7 not printed in the Gazette.]

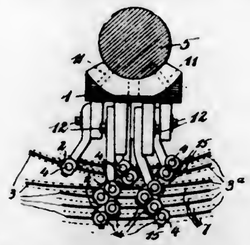
1,156,911. DRIVING-BOX AND HUB-LINER FOR LOCOMOTIVES. THOMAS A. MCKEAN, Hagerstown, Md. Filed Feb. 27, 1915. Serial No. 11,078. (Cl. 105—113.)

1. In a driving box, a liner inset within the outer face of the driving box and removable therefrom, a brass within the driving box for preventing the working downwardly of the liner, and a clamp on the driving box to prevent the working upwardly of the said liner.



2. In a driving box having a guideway in its outer face, a liner correspondingly shaped to the guideway and slidable therein for permitting the insertion and removal thereof, a crown brass within the driving box to prevent the downward movement of the liner, and a clamp carried by the driving box for preventing upward movement of the liner.

1,156,912. STATIONARY NON-BRUSH DEVICE FOR WOOL-COMBERS. FRANK B. MCMAHON, New York, N. Y. Filed July 20, 1915. Serial No. 40,994. (Cl. 19—17.)

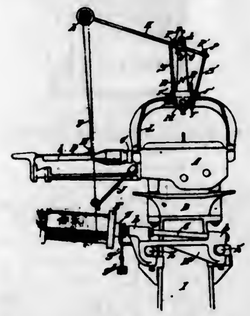


1. In a device of the kind described, a supporting plate, having a slot therein for means of adjustment, attached to the column of a wool combing machine, a plurality of radial arms or holders, slotted for means of adjustment, and attached rigidly to the said supporting plate, a plurality of pistons passing through chambers in said holders and attached to narrow blades by slotted shoulders and pivot joints, a plurality of narrow blades attached to and held in proper positions centrally between the rows of pins, a collar containing a set screw and a set pin, for means of adjustment, at one end of said pistons, a spring on the ends of the pistons, for the purpose of yielding and for acting upon the piston to bring it back to its original position when it becomes displaced, the construction of the holder and the arrangement of the radial arms and pistons being adapted to prevent any side or radial motion of the blades, thereby protecting the pins on the circles from harm.

2. In a wool combing machine the combination of a supporting plate, a plurality of radial arms or holders secured rigidly to the said supporting plate, a plurality of pistons held in position by said radial arms or holders, a plurality of blades attached to said pistons by a plurality of pivot joints, a spring attached to said pistons causing them to yield and to return to their original positions, thereby causing the wool to be pressed gently into the needles of the comb and to prevent any harm to the needles or machine should the machine become clogged or should a foreign substance get into the circles, all substantially as described.

1,156,913. COMPENSATOR DEVICE FOR CONTROLLING THE UNWINDING OF YARN, THREAD, OR SIMILAR MATERIALS. GEORGE MARCROFT, Providence, R. I., assignor to Universal Winding Company, Portland, Me., a Corporation of Maine. Filed Feb. 24, 1914. Serial No. 820,600. (Cl. 242—133.)

1. In a compensator-device for controlling the unwinding of yarn, thread or the like, the combination with a pivoted arm, of a guide at the end of said arm over which the yarn draws, a spring engaging the arm on one side of its pivot to resist its movement under the influence of increasing tension of draft on the yarn, and a second spring engaging the arm on the opposite side of its pivot to resist its movement under action of the first spring to prevent the arm from rebounding when the tension on the yarn is relieved.



2. In a compensator-device for controlling the unwinding of yarn, thread or the like, the combination of a pivoted arm adapted to be operated upon by the running yarn, of a spring secured to said arm at one side of its pivot to control its movement under the action of increasing tension on the yarn, a second spring secured to the arm on the opposite side of its pivot to check its movement under the action of the first spring, and means to adjust said springs in relation to the pivot of the arm to regulate the balance of the springs.

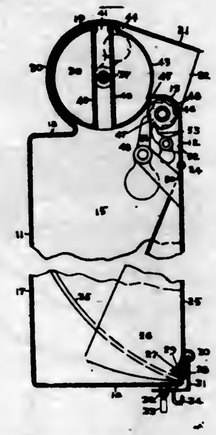
3. In a compensator-device for controlling the unwinding of yarn, thread or the like, the combination with a pivoted arm adapted to be operated upon by the running yarn, of a spring connected to said arm at one side of its pivot, a second spring connected to the arm on the opposite side of its pivot to check the movement of the arm under the action of the first spring, means to adjust the connecting-means for the springs along the arm in relation to its pivot, and means to vary the tension of the springs.

4. In a compensator-device for controlling the unwinding of yarn, thread or the like, the combination with a standard, of an arm pivoted on said standard to adapt it to be operated upon by the running yarn, springs connected to the arm on the opposite sides of its pivot, means to adjust the points of connection of the springs along the arm, rods connected to the opposite ends of the springs, and means for securing the rods to the standard to allow longitudinal adjustment thereof to vary the tension of the springs.

5. In a compensator-device for controlling the unwinding of yarn, thread or the like, the combination with a standard, of an arm pivoted on said standard to adapt it to be oscillated from variations in the tension of the yarn operating thereupon, springs connected with said arm on opposite sides of its pivot, rods mounted to slide in bearings on the standard and connected to the opposite ends of the springs, and means to secure the rods in their bearings to allow adjustment thereof to vary the tension of the springs.

1,156,914. LETTER-BOX. WILLIAM C. MARTINEAU, Albany, N. Y. Filed Mar. 29, 1911. Serial No. 617,691. (Cl. 232—50.)

A mail box including a body portion; a head comprising an arc-shaped portion and a hood; an approximately cylindric roll rotatably mounted in said head, a substantial segment of said roll being of a diameter to fit within said arc-shaped portion and a second segment thereof being of somewhat reduced diameter, whereby two longitudinal shoulders are formed in said roll; and a stop for alternately engaging each of said shoulders.



1,156,915. NON-REMOVABLE BOTTLE-STOPPER. LEON JULES MAZOYER, West Hoboken, N. J. Filed Jan. 22, 1915. Serial No. 3,662. (Cl. 215—54.)

The combination of a bottle having a neck provided with an inner shoulder, with a cork adapted to fit the shoulder and extend below the same, an apertured stopper receiving the cork and extending below it, said stopper being provided with a retainer extending transversely at its inner end below the cork, said retainer having its marginal portion projecting outwardly to engage said shoulder in a neck, said shoulder being above the retainer.

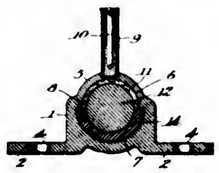
1,156,916. SPEED-GOVERNED STOPPING MECHANISM. ARTHUR A. MERRITT, Worcester, Mass., assignor to Willcox & Gibbs Sewing Machine Co., New York, N. Y., a Corporation of New York. Filed Oct. 12, 1910. Serial No. 586,687. (Cl. 74—46.)

1. The combination with a driven shaft, of coöperating stop-members adapted to be engaged with each other to stop the shaft; and locking means for positively locking said members against movement toward each other but adapted to automatically unlock the same when the rotation of the shaft is reduced from a relatively high speed to a predetermined lower speed.

portions secured to the main frame, and a torsion rod for connecting the shaft casing with said tubular cross member to safeguard the shaft casing against twisting, the torsion rod being fixedly secured to the shaft casing and the tubular cross member.

[Claim 6 not printed in the Gazette.]

1,156,910. BEARING FOR PEANUT-PICKERS. THOMAS M. LILLISTON, Suffolk, Va. Filed Jan. 5, 1914. Serial No. 810,474. (Cl. 64—24.)



1. In a bearing for a peanut picking machine, in combination, a rigid fixed casing, said casing being provided with wing members for attaching the casing in position, said casing being also provided with a body portion having semi-cylindrical bores therein, one of said bores being larger than the other, a bearing lining of resilient material loosely mounted in said larger bore, a wiping lining of spongy material loosely mounted in the smaller bore, a shaft in said bearing between said linings, and collars on the shaft to maintain said linings within the casing.

2. In a bearing for a peanut picking machine and the like, in combination, a rigid fixed casing, said casing being provided with a body portion having semi-cylindrical bores therein, said bores having a common axis, one of said bores being larger than the other, shoulders formed within said body portion by surfaces joining said bores, a bearing liner seated in the larger bore and being of a thickness greater than the depth of said shoulders and projecting inwardly beyond the shoulders, a wiping liner of spongy material seated in the smaller bore and having the edges thereof engageable with the projecting portions of the bearing liner to prevent said wiping liner from being displaced by rotation, a shaft seated on said bearing liner and beneath said wiping liner, and collars slidably mounted upon said shaft.

3. In a bearing for peanut picking machines and the like, in combination, a rigid fixed casing, said casing being provided with two semi-cylindrical bores diametrically disposed on opposite sides of a common axis, one of said bores being formed on a curve having a larger radius than the other, a bearing liner loosely mounted in the larger bore, a wiping liner loosely mounted in the smaller bore, a shaft mounted to rotate between said liners, and means carried by said shaft to retain said liners within said casing.

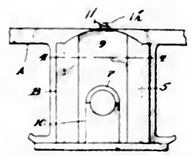
4. In a device of the class described in combination, a rigid casing having a transverse opening to form seats for bearing liners, a bearing liner loosely mounted in said casing and slidable longitudinally therein, a wiping liner loosely mounted in said casing above said bearing liner, said wiping liner being also slidable longitudinally within said casing, a shaft adapted to rotate between said liners, and means to prevent excessive longitudinal movement of said liners.

5. In a bearing of the class described, a rigid casing having an opening therein, a wooden bearing liner seated in said opening and loosely mounted therein, a shaft rotatable on said wooden bearing liner, a wiping liner above said wooden bearing liner and exerting pressure upon said shaft to seat said shaft against the wooden bearing liner, and means for retaining said liners within said casing.

[Claims 6 and 7 not printed in the Gazette.]

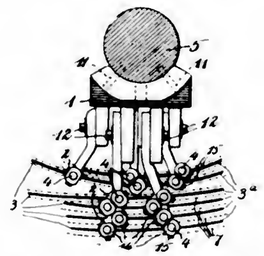
1,156,911. DRIVING-BOX AND HUB-LINER FOR LOCOMOTIVES. THOMAS A. MCKEAN, Hagerstown, Md. Filed Feb. 27, 1915. Serial No. 11,078. (Cl. 105—113.)

1. In a driving box, a liner inset within the outer face of the driving box and removable therefrom, a brass within the driving box for preventing the working downwardly of the liner, and a clamp on the driving box to prevent the working upwardly of the said liner.



2. In a driving box having a guideway in its outer face, a liner correspondingly shaped to the guideway and slidable therein for permitting the insertion and removal thereof, a crown brass within the driving box to prevent the downward movement of the liner, and a clamp carried by the driving box for preventing upward movement of the liner.

1,156,912. STATIONARY NON-BRUSH DEVICE FOR WOOL-COMBERS. FRANK B. MCMAHON, New York, N. Y. Filed July 20, 1915. Serial No. 40,994. (Cl. 19—17.)



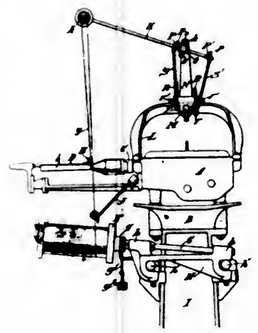
1. In a device of the kind described, a supporting plate, having a slot therein for means of adjustment, attached to the column of a wool combing machine, a plurality of radial arms or holders, slotted for means of adjustment, and attached rigidly to the said supporting plate, a plurality of pistons passing through chambers in said holders and attached to narrow blades by slotted shoulders and pivot joints, a plurality of narrow blades attached to and held in proper positions centrally between the rows of pins, a collar containing a set screw and a set pin, for means of adjustment, at one end of said pistons, a spring on the ends of the pistons, for the purpose of yielding and for acting upon the piston to bring it back to its original position when it becomes displaced, the construction of the holder and the arrangement of the radial arms and pistons being adapted to prevent any side or radial motion of the blades, thereby protecting the pins on the circles from harm.

2. In a wool combing machine the combination of a supporting plate, a plurality of radial arms or holders secured rigidly to the said supporting plate, a plurality of pistons held in position by said radial arms or holders, a plurality of blades attached to said pistons by a plurality of pivot joints, a spring attached to said pistons causing them to yield and to return to their original positions, thereby causing the wool to be pressed gently into the needles of the comb and to prevent any harm to the needles or machine should the machine become clogged or should a foreign substance get into the circles, all substantially as described.

1,156,913. COMPENSATOR DEVICE FOR CONTROLLING THE UNWINDING OF YARN, THREAD, OR SIMILAR MATERIALS. GEORGE MARCROFT, Providence, R. I., assignor to Universal Winding Company, Portland, Me., a Corporation of Maine. Filed Feb. 24, 1914. Serial No. 820,600. (Cl. 242—133.)

1. In a compensator-device for controlling the unwinding of yarn, thread or the like, the combination with a

pivoted arm, of a guide at the end of said arm over which the yarn draws, a spring engaging the arm on one side of its pivot to resist its movement under the influence of increasing tension of draft on the yarn, and a second spring engaging the arm on the opposite side of its pivot to resist its movement under action of the first spring to prevent the arm from rebounding when the tension on the yarn is relieved.



2. In a compensator-device for controlling the unwinding of yarn, thread or the like, the combination of a pivoted arm adapted to be operated upon by the running yarn, of a spring secured to said arm at one side of its pivot to control its movement under the action of increasing tension on the yarn, a second spring secured to the arm on the opposite side of its pivot to check its movement under the action of the first spring, and means to adjust said springs in relation to the pivot of the arm to regulate the balance of the springs.

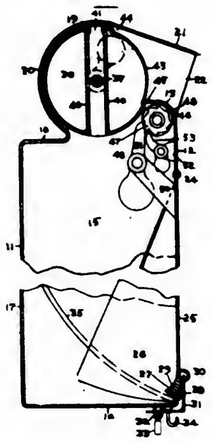
3. In a compensator-device for controlling the unwinding of yarn, thread or the like, the combination with a pivoted arm adapted to be operated upon by the running yarn, of a spring connected to said arm at one side of its pivot, a second spring connected to the arm on the opposite side of its pivot to check the movement of the arm under the action of the first spring, means to adjust the connecting-means for the springs along the arm in relation to its pivot, and means to vary the tension of the springs.

4. In a compensator-device for controlling the unwinding of yarn, thread or the like, the combination with a standard, of an arm pivoted on said standard to adapt it to be operated upon by the running yarn, springs connected to the arm on the opposite sides of its pivot, means to adjust the points of connection of the springs along the arm, rods connected to the opposite ends of the springs, and means for securing the rods to the standard to allow longitudinal adjustment thereof to vary the tension of the springs.

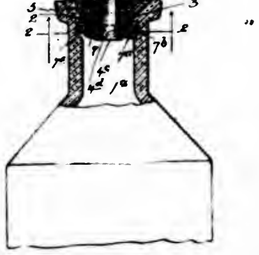
5. In a compensator-device for controlling the unwinding of yarn, thread or the like, the combination with a standard, of an arm pivoted on said standard to adapt it to be oscillated from variations in the tension of the yarn operating thereupon, springs connected with said arm on opposite sides of its pivot, rods mounted to slide in bearings on the standard and connected to the opposite ends of the springs, and means to secure the rods in their bearings to allow adjustment thereof to vary the tension of the springs.

1,156,914. LETTER-BOX. WILLIAM C. MARTINEAU, Albany, N. Y. Filed Mar. 29, 1911. Serial No. 617,691. (Cl. 232—50.)

A mail box including a body portion; a head comprising an arc-shaped portion and a hood; an approximately cylindric roll rotatably mounted in said head, a substantial segment of said roll being of a diameter to fit within said arc-shaped portion and a second segment thereof being of somewhat reduced diameter, whereby two longitudinal shoulders are formed in said roll; and a stop for alternately engaging each of said shoulders.



1,156,915. NON-REMOVABLE BOTTLE-STOPPER. LEON JULES MAZOYER, West Hoboken, N. J. Filed Jan. 22, 1915. Serial No. 3,662. (Cl. 215—54.)

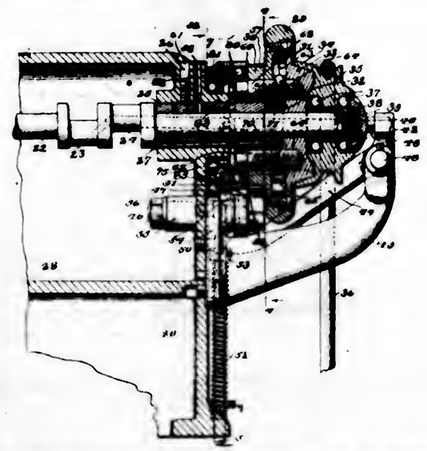


The combination of a bottle having a neck provided with an inner shoulder, with a cork adapted to fit the shoulder and extend below the same, an apertured stopper receiving the cork and extending below it, said stopper being provided with a retainer extending transversely at its inner end below the cork, said retainer having its marginal portion projecting outwardly to engage said shoulder in a neck, said shoulder being above the retainer.

1,156,916. SPEED-GOVERNED STOPPING MECHANISM. ARTHUR A. MERRITT, Worcester, Mass., assignor to Wilcox & Gibbs Sewing Machine Co., New York, N. Y., a Corporation of New York. Filed Oct. 12, 1910. Serial No. 586,687. (Cl. 74—46.)

1. The combination with a driven shaft, of coöperating stop-members adapted to be engaged with each other to stop the shaft; and locking means for positively locking said members against movement toward each other but adapted to automatically unlock the same when the rotation of the shaft is reduced from a relatively high speed to a predetermined lower speed.

2. The combination with a driven shaft, of coöperating stop-members adapted to be engaged with each other to stop the shaft; and locking means automatically controlled by the speed of rotation of the shaft to positively lock the stop-members against movement toward each other until the rotation of the shaft is reduced from a relatively high speed to a predetermined lower speed and to then automatically unlock the same.



3. The combination with a driven shaft, of coöperating stop-members adapted to be engaged with each other to stop the shaft; locking means automatically controlled by the speed of rotation of the shaft to positively lock the stop-members against movement toward each other until the rotation of the shaft is reduced from a relatively high speed to a predetermined lower speed and to then automatically unlock the same; and means for moving said stop-members into engagement when thus unlocked.

4. The combination with a driven shaft, of coöperating stop-members adapted to be engaged with each other to stop the shaft; and a centrifugally controlled locking device rotatable with the shaft and acting to positively lock said members against movement toward each other until a predetermined speed limit is reached, and to then automatically unlock the same.

5. The combination with a driven shaft, of coöperating stop-members adapted to be engaged with each other to stop the shaft, one of said members being relatively fixed and the other rotatable with the shaft and movable into and out of engagement with the fixed member; and a centrifugally controlled locking device also rotatable with the shaft and acting to positively lock said movable member against movement toward the fixed member until a predetermined speed limit is reached and to then automatically unlock the movable member to permit the same to be moved into engagement with the fixed member.

[Claims 6 to 26 not printed in the Gazette.]

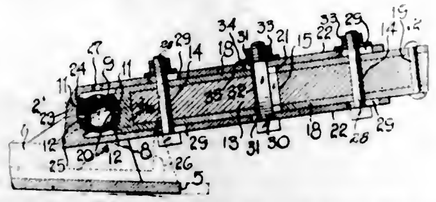
1,156,917. TOWEL-CABINET. EDWARD M. MIKKELSEN, Chicago, Ill. Filed May 12, 1911. Serial No. 626,661. (Cl. 45—32.)

A towel cabinet having a soiled-towel compartment in the uppermost portion thereof comprising two sides, a back connected to the rear portions of the sides, a bottom extending from the back toward the plane of the front edges of the sides and connected to the sides, a front part connected to the front edge of the bottom and also to the sides and extending vertically behind said plane, the upper edge of said front part having a recess therein, a top part connected to said back and said sides and having its front edge connected to the upper edge of said front part, said front edge having a recess therein corresponding to the recess in the upper edge of said front part, said two recesses together forming an aperture in the angle formed by said front and top parts, and a door hingedly connected to a part of the cabinet and normally extending



across the recess in said front part and to the plane of said top part.

1,156,918. PITMAN-COUPLING. WALTER S. MINOR, Cunningham, Tenn. Filed Nov. 23, 1914. Serial No. 873,566. (Cl. 74—17.)



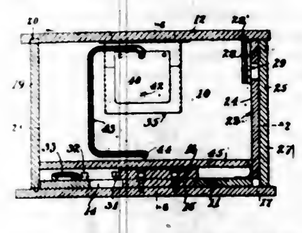
1. A pitman coupling including a spherical male coupling element on the reciprocating part, two female coupling sections having longitudinally extending straps adjustable upon each other, said female sections being provided with concave bearing surfacts for engagement upon opposite sides of the spherical male coupling element, a fastening bolt extending through the pitman and the straps of the female coupling sections to secure the latter in their adjusted positions to the pitman, and means for adjusting said fastening bolt longitudinally of the pitman.

2. A pitman coupling including a spherical male coupling element on the reciprocating part, two female coupling sections having superposed longitudinally extending straps and provided with opposed concave bearing surfaces for engagement upon opposite sides of the male coupling element, said straps being provided with longitudinal slots, a bolt extending transversely through the pitman and through said slots to secure the female coupling elements in their adjusted positions upon the pitman, and removable spacing means arranged in the bolt opening through the pitman whereby the bolt may be adjusted longitudinally of the pitman.

3. A pitman coupling including a spherical male coupling element on the reciprocating part provided with spherical enlargements upon opposite sides, female coupling sections each including longitudinally extending parallel straps integrally connected at one of their ends, the straps of one section being permanently secured to the pitman and the straps of the other section superposed upon the first named straps, each of said female sections being provided with a concave bearing face for engagement upon one of the enlargements of the male coupling element, and means for adjustably clamping the last named female section upon the pitman against relative movement with respect to the other female section.

1,156,919. CASH-BOX. ERNEST MONTELBONE, Jersey City, N. J. Filed Apr. 22, 1915. Serial No. 22,989. (Cl. 46—41.)

1. A cash box having a top piece, a floor member, and a door, locking means attached to said door for locking the same in place, and a panel disposed on said door to conceal the locking means from view, said floor member being slidable and anchoring said panel in closed position, and permitting removal of said panel when in open position, the floor member, when in closed position, also preventing the opening of said door by obstructing the path of movement of such door and when slid into open position being moved out of the path of movement of said door.



2. A cash box comprising a frame member having a top piece and an inner floor member, an outer floor member slidably mounted on said inner floor member, a door hingedly connected to said inner floor member, said outer floor member, when in closed position, being disposed in the path of movement of the lower end of said door and thereby preventing the opening of said door.

3. A cash box comprising a frame member having a top piece and an inner floor member, an outer floor member slidably mounted on said inner floor member, a door hingedly connected to said inner floor member, said outer floor member, when in closed position, being disposed in the path of movement of the lower end of said door and thereby preventing the opening of said door, a panel slidably mounted between said top piece and outer floor member, locking means on said panel, said panel being slidable to move its locking means into engagement with said outer floor member when said outer floor member is in closed position and thereby preventing the movement of said outer floor member.

4. A cash box comprising a frame member having a top piece and an inner floor member, an outer floor member slidably mounted on said inner floor member, a door hingedly connected to said inner floor member, said outer floor member, when in closed position, being disposed in the path of movement of the lower end of said door and thereby preventing the opening of said door, locking means on said door for locking said door to said top piece, a panel on said door for concealing said locking means from view, said floor member obstructing the path of movement of said panel and thereby preventing the removal of said panel.

5. A cash box having a top piece and a floor member, a door at one end disposed between the two, locking means attached to said door for locking the same in place, a panel disposed on said door to conceal the locking means from view, said panel being slidably mounted in a path transversely of said top piece and floor member and anchored in place when said floor member is in closed position, said floor member being slidably mounted to be moved into an open position where it will permit the withdrawal of said panel and thereby expose said locking means to be unlocked, and means for locking said movable floor member in closed position.

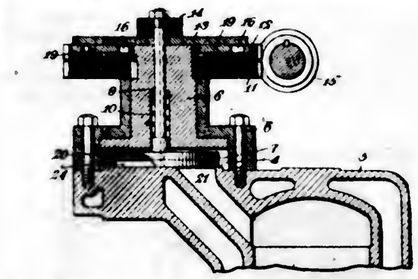
[Claims 6 to 15 not printed in the Gazette.]

1,156,920. VALVE MECHANISM. FRANK L. MORSE, Ithaca, N. Y. Filed Apr. 1, 1913, Serial No. 758,154. Renewed Feb. 18, 1915. Serial No. 9,180. (Cl. 136—7.)

1. A valve mechanism comprising a valve having a movement in a succession of complete traverses, and means coöperating with the valve operating mechanism for shifting the path described in each successive traverse.

2. A valve mechanism comprising a continuously operating valve moving in a succession of complete traverses, and means operating automatically to shift the path of each successive traverse.

3. A valve mechanism comprising a continuously operating valve moving in a succession of complete traverses, and means coöperating with the valve operating mechanism for changing the paths of the successive traverses relative to each other.

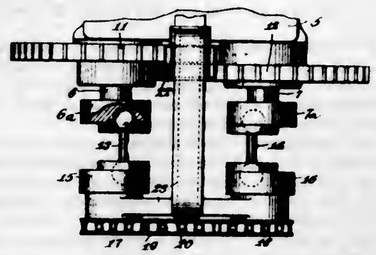


4. A valve mechanism comprising a continuously operating valve moving in a succession of complete traverses in one direction, and means coöperating with the valve operating mechanism for imparting a relatively transverse movement to the valve at the same time to change the paths of the successive traverses relative to each other.

5. A valve mechanism comprising a rotary valve with means for rotating the same, and a shifting device cooperating with said rotating means for changing the paths described by any point on the valve during the successive revolutions.

[Claims 6 to 10 not printed in the Gazette.]

1,156,921. VALVE-OPERATING MECHANISM. FRANK L. MORSE, Ithaca, N. Y. Filed Apr. 1, 1913, Serial No. 758,155. Renewed Feb. 18, 1915. Serial No. 9,181. (Cl. 136—7.)



1. In a valve mechanism, the combination with a cylindrical valve and seat, of a driving connection for turning said valve, and means coöperating with said driving connection for effecting a relative longitudinal movement between the valve and seat to shift the path described during its successive traverses.

2. In a valve mechanism, the combination with a rotary cylindrical valve and seat, of a driving connection for rotating said valve, and means coöperating with said driving connection for effecting a relative longitudinal movement between the valve and seat to shift the path described during its successive revolutions.

3. In a valve mechanism, the combination with a rotary cylindrical valve and seat, of a driving connection for rotating said valve, and means operating automatically to shift the valve to change the path described by a given point thereof during the successive revolutions.

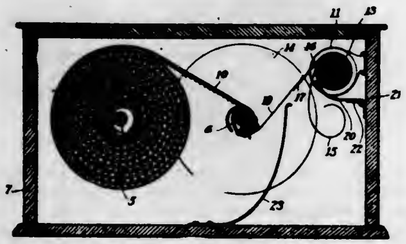
4. In a valve mechanism, the combination with a rotary cylindrical valve and seat, of a driving connection for rotating said valve, a link bar pivotally connected at the end of the valve, and means coöperating with said driving connection for actuating said link bar and causing a longitudinal movement of the valve during its successive revolutions.

5. In a valve mechanism, the combination with a rotary cylindrical valve and seat, of a driving connection for ro-

tating said valve, and a link bar eccentrically connected by a universal joint at the end of the valve for causing a longitudinal movement thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,156,922. ROLL-FILM-DEVELOPING APPARATUS. BENJAMIN J. NABIEF and FARNUM F. DORSEY, Rochester, N. Y., assignors, by direct and mesne assignments, to Ansco Company, Binghamton, N. Y., a Corporation. Filed Apr. 28, 1915. Serial No. 24,589. (Cl. 95—90.5.)



1. In roll-film developing apparatus, the combination, with a reel-support and a rewinding device, of means for engaging the end of the backing-strip as the film is unwound from the reel and automatically separating it from the film while the film is rewound.

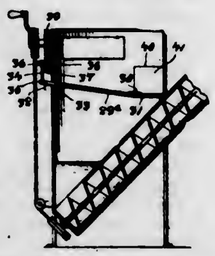
2. In roll-film developing apparatus, the combination, with a reel-support and a rewinding device, of a guide located adjacent the film-reel and adapted to enter between the roll and the end of the backing-strip so as to separate the latter automatically from the film as the film is unwound from the reel.

3. In roll-film developing apparatus, the combination, with a reel-support and a rewinding device, of a guide located adjacent the rewinding device and adapted to deflect the backing-strip from the film during the rewinding operation.

4. In roll-film developing apparatus, the combination, with a reel-support and a rewinding device, of means located adjacent the reel-support and the rewinding device and constituting a receptacle to receive the backing-strip and retain it while the film is rewound.

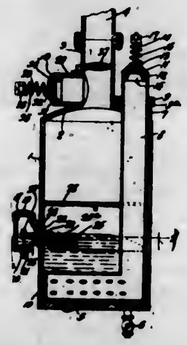
5. The combination, with a film-reel, a reel-support, and a rewinding device, of a film-strip; a backing-strip extending only to the advance-end of the film-strip; a leader extending from the film-strip and adapted for attachment to the rewinding device; and means for receiving the backing-strip and for retaining it separate from the film-strip during the rewinding of the latter.

1,156,923. ASH-SIFTER. WILLIAM J. NETHERCOTT, Kerrobert, Saskatchewan, Canada. Filed Aug. 5, 1913. Serial No. 783,124. (Cl. 88—60.)



A device of the class described comprising a receptacle, the said receptacle having its bottom wall inclined downwardly and forwardly and provided at its lower edge with a discharge opening, the side walls of the said receptacle having their lower portions inclined downwardly and inwardly toward the discharge opening, a sifter screen mounted within the receptacle above the inclined portions of the side walls thereof, the said screen being adapted to be inclined downwardly and rearwardly and having its rear edge spaced from the rear wall of the receptacle, and a horizontally arranged shelf mounted in the receptacle between the rear wall of the same and the rear edge of the screen.

1,156,924. CARBURETER. THEODORE J. NICHOLS, Bellevue, Tex., assignor of one-half to John S. Nichols, Bellevue, Tex. Filed Mar. 9, 1915. Serial No. 13,187. (Cl. 48—166.)



A carbureter comprising an upright casing having an upper outlet and a fuel inlet member at one side, an air inlet pipe slidable through the top of the casing and extending downwardly therein adjacent that side of the casing opposite the fuel inlet member, the lower end of the air inlet pipe having an apertured nozzle projecting to the opposite side of the casing, a U-shaped float within the casing above said nozzle and standing astride said pipe, a lever fulcrumed within the fuel inlet member and having one arm attached to the intermediate portion of the float, and a valve carried by the other arm of the lever and arranged to control the inlet of fuel into the fuel inlet member.

1,156,925. SHOULDER-REST FOR VIOLINS AND OTHER MUSICAL INSTRUMENTS. BERNHARD POEHLAND, Brooklyn, N. Y. Filed Nov. 23, 1914. Serial No. 873,522. (Cl. 84—115.)



1. As a new article of manufacture, a shoulder-rest for violins and other musical instruments comprising a padded cushion adapted on one side to engage the face of the casing of the instrument and having at its ends flexible securing-connections for engagement respectively with the tail-piece-post of the instrument and the usual projecting portion of the casing of the instrument at the side thereof.

2. As a new article of manufacture, a shoulder-rest for violins and other musical instruments comprising a padded cushion adapted on one side to engage the face of the casing of the instrument and having at its ends flexible securing-connections for holding under a yielding tension the rest against the instrument, one of said connections being adapted to engage the tail-piece-post of the instrument and the other the usual projecting portion of the casing of the instrument at the side thereof, and one of said connections being of elastic material.

3. As a new article of manufacture, a shoulder-rest for violins and other musical instruments comprising a padded cushion adapted on one side to engage the face of the casing of the instrument and having at its ends flexible

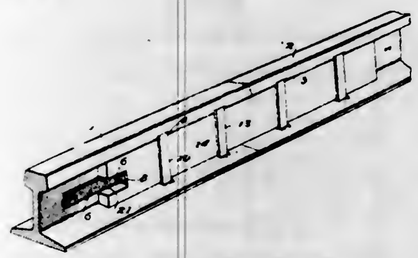
securing-connections respectively adapted to be hooked upon the tail-piece-post of the instrument and the usual projecting portion of the casing of the instrument at the side thereof.

4. As a new article of manufacture, a shoulder-rest for violins and other musical instruments comprising a padded cushion adapted on one side to engage the face of the casing of the instrument and having at its ends flexible securing-connections respectively adapted to be hooked upon the tail-piece-post of the instrument and the usual projecting portion of the casing of the instrument at the side thereof, and said connections being elastic bands.

5. As a new article of manufacture, a shoulder rest for violins and other musical instruments comprising an elongated padded cushion equipped at its ends with means for engagement respectively with the tail-piece-post of the the instrument and the usual projecting portion of the casing of the instrument at the side thereof, said cushion comprising an inner base partition, padding on each side thereof, and covering fabrics secured over said paddings, the rest at one side of said partition being comparatively flat to engage the instrument and the rest at the other side of said partition presenting a substantial convexity or mound effect to engage the shoulder of the player.

[Claim 6 not printed in the Gazette.]

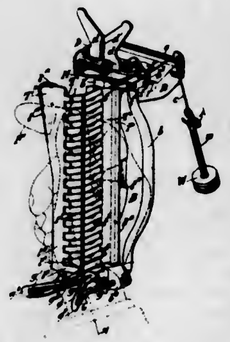
1,156,926. RAIL-JOINT. MICHAEL PUSATERI, McDonald, Pa. Filed Feb. 16, 1915. Serial No. 8,560. (Cl. 239—9.)



1. In a rail joint, the combination with two rails having abutting ends, the said rails having a plurality of transverse openings, bolt members upon the rails, springs for forcing the bolts beyond the webs of each of the rails, fish plates, one of said fish plates being provided with laterally extending bails which are adapted to pass through the openings in the rails and project beyond the opposite sides thereof, said fish plate having its inner face formed with a pocket to receive one of the spring pressed bolts, the other fish plate also having its inner face provided with a pocket and adapted to be moved longitudinally of the rails between the said rails and the bails and to have its pocket receive the spring pressed bolt of the second mentioned rail.

2. In a rail joint, two rails having registering openings, both of said rails having their webs and a portion of their heads and base flanges provided with transverse openings, each of the rails having its web provided with a longitudinally extending spring member, the free end of which being provided with a bolt which passes through an elongated opening in the web of the said rail and the said bolts entering from the opposite sides of the respective rails, and each of the said springs being further provided with U-shaped members, fish plates, one of said fish plates having one of its ends channeled and provided with a slot and being further provided with a plurality of bails which are adapted to pass through the openings in the rails, the inner face of the said member being further provided with a pocket to engage the projecting bolt of one of the rails, and the openings in the said fish plate adapted to receive the U-shaped member of one of the springs of one of the rails, the second fish plate having one of its ends bifurcated and provided with a longitudinally extending groove terminating in a pocket and the said groove having its walls beveled toward the said bifurcated end, said plate adapted to be moved longitudinally within the projecting bails of the first mentioned plate and to have its pocket receive the projecting bolt of the second rail.

1,156,927. TENSION DEVICE. FESTUS S. RAND, Providence, and GEORGE N. TAYLOR, East Providence, R. I., assignors to Universal Winding Company, Portland, Me., a Corporation of Maine. Filed Apr. 20, 1914. Serial No. 833,305. (Cl. 242—153.)



1. In a tension-device for applying tension to a traveling yarn, the combination of two members arranged to press upon the yarn running between them, with a projection on one of said members formed with an inclined face adapted to be engaged by the operator's hand during the movement made in drawing the yarn up between the members so that said member will be forced away from the other member to allow free entrance of the yarn therebetween.

2. In a tension-device, the combination of two members, one fixed and the other hinged to swing toward and away therefrom, said hinged member provided with a projection on its outer edge having an inclined face adapted to be engaged by the operator's hand during the movement made thereby in drawing the yarn up between the members to force the hinged member back from the fixed member to allow free entrance of the yarn therebetween.

3. In a tension-device, the combination with a fixed member, of a movable member arranged in opposition thereto and adapted to press upon the yarn as it draws between the two members, said movable member having a triangular finger-piece with an inclined face adapted to be engaged by the operator's hand in drawing the yarn up between the members to force said movable member away from the fixed member and allow free entrance of the yarn therebetween.

4. In a tension-device, the combination with two members arranged opposite each other, of means to press said members together to apply tension to the yarn as it draws between them, with one or each of said members having a wedge-shaped projection on its outer edge adapted to be engaged by the operator's hand during the movement made thereby in drawing the yarn up between the members to force said members apart and allow free entrance of the yarn therebetween.

5. In a tension-device, the combination with two grid-like plates formed with parallel bars across which the yarn draws, of means to press one plate toward the other to sinuate the course of the yarn as it passes over the bars, with one or each of the plates having a projection on its outer edge formed with an inclined face adapted to be engaged by the operator's hand to force the plates apart to facilitate threading the yarn therebetween.

[Claims 6 and 7 not printed in the Gazette.]

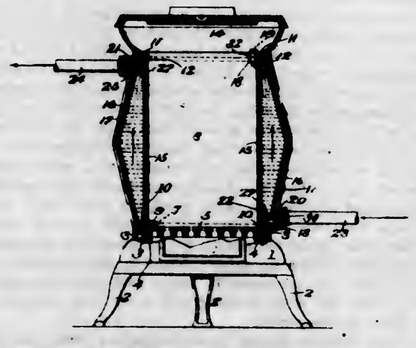
1,156,928. PROCESS OF PUNCHING. WAYNE RAWLEY, Pittsburgh, Pa., assignor to Blaw Steel Construction Company, Hoboken, N. J., a Corporation of New Jersey. Filed May 19, 1914. Serial No. 839,509. Cl. 164—125.)



1. A process of punching a series of holes with a predetermined spacing in a blank, which consists in positioning the blank and punching a set of holes therein while the blank is in such position, some of which holes are spaced apart distances substantially multiples of the distances of the said predetermined spacing, feeding the blank ahead a predetermined distance, and punching another set of holes in the blank while in such position, some of which holes lie between the holes of the first set having the multiple distance spacing, and similarly repeating the operation until the blank is provided with the desired series of holes spaced with exact and approximate regularity.

2. A process of punching a series of holes with a predetermined spacing in a blank, which consists in positioning the blank and punching a set of holes therein while the blank is in such position, some of which holes are spaced apart distances substantially multiples of the distances of the said predetermined spacing, and some of which are spaced apart the desired final spacing, feeding the blank ahead a predetermined distance, and punching another set of holes in the blank while in such position, a part of which lie between the holes of the first set having the multiple distance spacing, and similarly repeating the operation until the blank is provided with the desired series of holes, a part of which are regularly spaced and a part of which are spaced with approximate regularity.

1,156,929. HOT-WATER STOVE. SAMUEL V. REEVES, Haddonfield, N. J. Filed June 12, 1915. Serial No. 33,660. (Cl. 122—155.)



1. A water jacket for a fire pot, comprising a casing having its inner wall of uniform diameter and its outer wall of greatest diameter at a medial point equidistant from its top and bottom, the outer wall of said jacket converging from said medial point toward the ends of the casing with the same inclination with respect to the longitudinal axis of the casing, and the end faces of said casing having the same conformation, whereby the water jacket is reversible end for end.

2. A water jacket for a fire pot, comprising a casing having its inner wall of uniform diameter and its outer wall of greatest diameter at a medial point equidistant from its top and bottom, the outer wall of said jacket converging from said medial point toward the ends of the casing with the same inclination with respect to the longitudinal axis of the casing, and the end faces of said casing each having an outwardly extending flange of the same conformation, whereby the water jacket is reversible end for end.

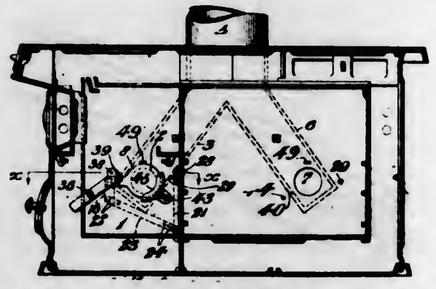
3. A water jacket, comprising a casing having a chamber provided with an inlet and an outlet, the inner wall of said casing opposite to said inlet being of increased thickness, and a heat conveyer and water distributer carried by the portion of said wall of increased thickness.

4. A water jacket, comprising a casing having a chamber provided with an inlet and an outlet, the inner wall of said casing in proximity to said inlet being of increased thickness, and a heat conveyer and water distributer adjustably carried by the portion of said wall of increased thickness.

5. A water jacket, comprising a casing having a chamber therein having its greatest diameter equidistant from the ends thereof and provided with an inlet at one end and an outlet at the other end, the inner wall of said casing opposite said inlet being of increased thickness and having a recess therein, and a heat conveyer and distributer comprising a member having one end adapted to engage said recess and its opposite end extending into said inlet.

[Claims 6 to 12 not printed in the Gazette.]

1,156,930. AUTOMATIC DUST-DAMPER FOR STOVES. SAMUEL V. REEVES, Haddonfield, N. J. Continuation of application Serial No. 852,349, filed July 22, 1914. This application filed Aug. 9, 1915. Serial No. 44,422. (Cl. 126—1.)



1. The combination with the ash pit, the dust flue, and the actuating member of a grate, of a damper controlling said flue, a counterbalance for said damper, and an arm operatively connected with said damper and in proximity to said member, whereby upon the assembling of a shaker element with said member said damper will be moved to open communication between said ash pit and dust flue.

2. The combination with the ash pit, the dust flue, and the actuating member of a grate, of a damper controlling said flue, a counterbalance for said damper, and an arm operatively connected with said damper and in proximity to said member, whereby upon the assembling of a shaker element with said member said damper will be moved to open communication between said ash pit and dust flue, and said counterbalance effecting the return of said damper to its initial or closed position.

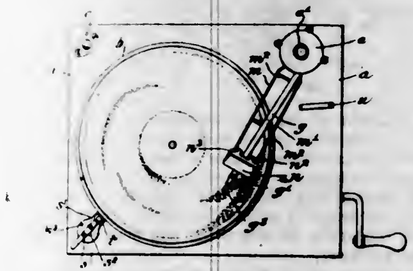
3. The combination with the ash pit, the dust flue, and the actuating member of a grate, of a damper controlling said flue, a counterbalance for said damper, an arm operatively connected with said damper and in proximity to said member, whereby upon the assembling of a shaker element with said member said damper will be moved to open communication between said ash pit and dust flue, said counterbalance effecting the return of said damper to its initial or closed position, and means to stop said damper on its return movement to its initial position.

4. The combination with the ash pit, the dust flue, and the actuating member of a grate, of a damper controlling said dust flue, an arm in proximity to said member and adapted to be moved by the assembling of a shaker element with said member, and means to operatively connect said arm to said damper to effect a right or a left hand arrangement of said damper, and the movement of said arm effecting the opening of said damper.

5. The combination with the ash pit, the dust flue, and the actuating member of a grate, of a damper controlling said flue, a counterbalance for said damper, and an arm operatively and adjustably connected with said damper and in proximity to said member, whereby upon the assembling of a shaker element with said member said damper will be moved to open communication between said ash pit and dust flue.

[Claims 6 to 8 not printed in the Gazette.]

1,156,931. PHONOGRAPH. CLINTON B. REPP, Plainfield, N. J. Filed Mar. 15, 1913. Serial No. 754,445. (Cl. 181—7.)



1. A phonograph embodying therein a stationary diaphragm, a transmitter arm, means whereby vibrations passing through said arm are transmitted to said diaphragm, tensioning means for said diaphragm, a pivotal weighted supporting arm, and connections between said supporting arm and said transmitter arm.

2. A phonograph embodying therein a stationary diaphragm, a transmitter arm, means whereby vibrations passing through said arm are transmitted to said diaphragm, tensioning means for said diaphragm, a pivotal supporting arm, and connections between said supporting arm and said transmitter arm embodying therein a weighted body of a mass sufficient to absorb vibrations, or to be irresponsive to vibrations passing thereto.

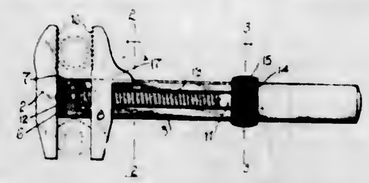
3. A phonograph embodying therein a stationary diaphragm, a transmitter arm, means whereby vibrations passing through said arm are transmitted to said diaphragm, tensioning means for said diaphragm, a pivotal weighted supporting arm, and connections between said supporting arm and said transmitter arm embodying therein a flexible member carried by said supporting arm and connected with said transmitter arm.

4. A phonograph embodying therein a stationary diaphragm, a transmitter arm, means whereby vibrations passing through said arm are transmitted to said diaphragm, tensioning means for said diaphragm, a pivotal supporting arm, and connections between said supporting arm and said transmitter arm embodying therein a weighted body of a mass sufficient to absorb vibrations, or to be irresponsive to vibrations passing thereto, and a flexible member carried by said weighted body and connected with said transmitter arm.

5. A phonograph embodying therein a stationary diaphragm, a transmitter arm, means whereby vibrations passing through said arm are transmitted to said diaphragm, tensioning means for said diaphragm, a pivotal supporting arm, and connections between said supporting arm and said transmitter arm embodying therein a weighted body of a mass sufficient to absorb vibrations, or to be irresponsive to vibrations passing thereto, pivotally connected with said supporting arm adjacent the free end thereof, a flexible member carried by said weighted body, and connections between said flexible member and said transmitter arm adjacent the free end thereof.

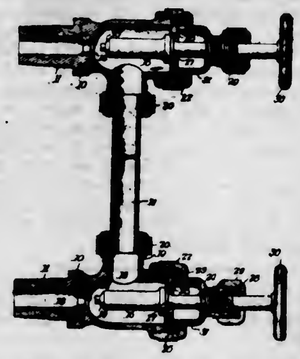
[Claims 6 to 15 not printed in the Gazette.]

1,156,932. QUICK-ACTING WRENCH. FRED G. ROCKWOOD, Mendota, Wis. Filed Feb. 6, 1915. Serial No. 6,510. (Cl. 81—159.)



A wrench comprising a handle shank having a solid portion, a jaw mounted thereon, longitudinally extending parallel portions and a handle, the solid portion being formed upon its inner face with a socket, a shaft disposed between said parallel portions and having a prolongation bearing in said socket, the shaft having oppositely disposed interrupted screw threaded faces, a collar mounted upon the shank adjacent the handle thereof and having screws engaged with the shaft, said screws acting as stops limiting the collar to a quarter turn, and a movable jaw mounted upon the handle shank for sliding movement and having oppositely disposed interrupted screw threaded faces adapted to be engaged with the screw threaded faces of the shaft upon a quarter turn of the shaft in one direction.

1,156,933. SAFETY WATER-GAGE COCK. WILLIAM N. ROWE, Hibbing, Minn. Filed Dec. 6, 1912. Serial No. 735,228. (Cl. 73—54.)

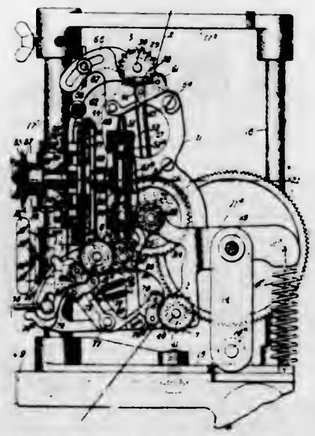


1. In a device of the class described, the combination of upper and lower gage cocks having a gage glass therebetween, each cock comprising a casing having an inner valve seat, a separable member provided with a second valve seat, valves controlled by a single stem and adapted to act upon said valve seats singly, and a vented bonnet secured to each casing, substantially as described.

2. In a device of the class described, the combination of upper and lower cocks having a gage glass therebetween, each cock including a casing forming a chamber and provided with a valve seat at one end, a closure for the opposite end of said chamber, said closure having a second valve seat, means for clamping said closure in position, and a valve stem carrying valve members adapted to cooperate with said seats alternately, substantially as described.

3. In a device of the class described, the combination of upper and lower gage cocks and a gage glass located therebetween, each cock including a chambered casing having an inner valve seat at one end a disk closing the opposite end of said casing and providing an outer valve seat, a bonnet outside of said disk, a clamping nut for holding said disk and said bonnet in engagement with said casing, and a stem provided with valves adapted to cooperate with said seats in succession, substantially as described.

1,156,934. REGISTERING DEVICE FOR A MOVING-PICTURE MACHINE. EBERHARD SCHNEIDER, New York, N. Y. Filed Oct. 22, 1907. Serial No. 398,579. (Cl. 88—18.)



1. In a registering device for a moving picture machine the combination of a support, a vertical standard rigidly secured to said support, a film guide having a projection aperture secured to said standard, means for feeding a film past said aperture, a frame for supporting said feeding means pivoted to said support and a vertically adjustable element on said standard connected to said frame.

2. In a registering device for a moving picture machine the combination of a support, a vertical standard rigidly secured to said support, a film guide having a projection aperture secured to said standard, means for feeding a film past said aperture, a frame for supporting said feeding means pivoted to said support, a vertically movable member on said standard to which said frame is pivotally attached, and means for moving said member comprising a toothed rack on said standard, and a hand wheel provided with a pinion meshing with said rack rotatably mounted on said member.

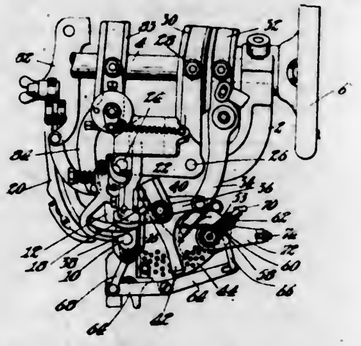
1,156,935. HORSESHOE. LEVI SCHWOYER, Pottstown, Pa. Filed Feb. 20, 1915. Serial No. 9,669. (Cl. 168—33.)



As a new article of manufacture, a toe calk constructed of a single blank of material formed to provide spaced depending lugs, and an intermediate vertically rising lug, and a horizontal body portion provided with an integral rearwardly located lug and a forwardly located vertical passage, the passage being located in the same longitudinal line with the lug, the bottom surface of the horizontal portion being provided with a circular recess opening directly into said passage.

1,156,936. EYELETING-MACHINE. RALPH C. SIMMONS, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 2, 1910. Serial No. 590,272. (Cl. 218—15.)

1. A machine of the class described having, in combination, a supporting frame, work-engaging means mounted therein, means for moving said frame to feed the work, said means including a transversely oscillating lever and pivoted transmitting links, and feed regulating means comprising an angularly adjustable guideway for controlling the direction of movement of said transmitting links.



2. A machine of the class described having, in combination, a supporting frame, work-engaging means mounted therein, means for moving said frame to feed the work, said means including a transversely oscillating lever and pivoted transmitting links, feed regulating means comprising a guideway, a coöperating roller mounted at the point of connection of said links, and means for adjusting said guideway.

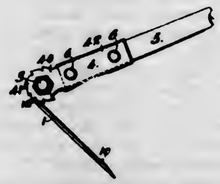
3. A machine of the class described having, in combination, work-engaging devices, a supporting frame therefor, a link pivoted thereto and having one end guided in a rectilinear path, means acting through said link to move the frame for feeding the work, and means for changing the direction of movement of the guided end of said link to regulate the extent of feeding movement.

4. A machine of the class described having, in combination, punching devices, oscillatory work-feeding means, and means actuated by said work-feeding means in its feeding movement for varying the extent of the feeding movement.

5. A machine of the class described having, in combination, setting devices, a carrier therefor movable in feeding the work, and means actuated by the carrier in its feeding movement for regulating the extent of the feeding movement.

[Claims 6 to 17 not printed in the Gazette.]

1,156,937. GARDEN IMPLEMENT. JAMES SINNOTT, Chatham, Ill. Filed June 2, 1915. Serial No. 31,754. (Cl. 55—42.)



1. A garden implement comprising a handle having a bifurcated head, the said head having arbitrarily arranged sets of peripheral notches, a blade including a curved portion that terminates in an eye, said blade having oppositely disposed shoulders for engaging the sets of notches in the handle head, a clamp bolt engaging the bifurcated head of the handle, and the eye of blade, one set of the said notches, the curved portion of the blade, and the pivotal connection for the blade, being relatively arranged so that the blade is foldable flatwise against the handle.

2. A garden implement comprising a handle, a blade, and means for adjustably connecting the blade whereby

the said blade may be positioned to project at any angle to the handle, said means comprising oppositely disposed heads pendent from the handle, a combined pivot and clamp bolt for engaging the heads, said heads having arbitrarily arranged opposite sets of peripheral notches, the blade having opposite shoulders and a loop member between the shoulders for pivotally engaging the bolt, said loop member, the inner edge of the blade, and the pivot bolt being relatively so arranged that said edge of the blade is flush with the peripheral edges of the notched heads.

3. A garden implement comprising a handle, a pair of oppositely disposed resilient disks secured to and pendent from the lower end of the handle, a bolt and clamp nut cooperating with the disks, the said disks each having a series of radial notches in their peripheral edges, an edge sharpened blade one end of which terminates in a digging element, the other end of which has oppositely disposed shoulders and an extension projected from the shouldered portions, the said extension being curved upwardly and terminating in an eye, that pivotally engages the clamp bolt, the shoulders and the extension of the blade being relatively arranged whereby the blade can be adjusted to bring the shoulders of the blade into engagement with any set of the peripheral notches in the disk members of the handle.

1,156,938. TRANSMISSION-GEARING. ALFRED B. SMALL and CARLETON C. SMALL, Lake City, Fla. Filed Sept. 29, 1914. Serial No. 864,139. (Cl. 74—59.)



1. In a transmission gearing, a driving shaft, a main transmission shaft, a counter-shaft parallel to said transmission shaft, a set of gears on the transmission shaft, a set of complemental gears on the counter-shaft, clutch members on the corresponding extremities of said transmission shaft and countershaft, a clutch member on the adjacent extremity of said driving shaft, and means for shifting the last named clutch member into engagement with either of the first mentioned clutch members, and locking and unlocking means for the gears on the shaft.

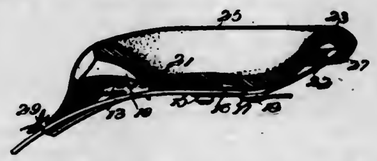
2. In transmission gearing, a longitudinally and laterally movable driving shaft, a main transmission shaft, a countershaft parallel to said transmission shaft, a set of gears on the transmission shaft, a set of complemental gears on the countershaft, clutch members on the corresponding extremities of said transmission shaft and countershaft, a clutch member on the adjacent extremity of said driving shaft, means for shifting the last named clutch member into engagement with either of the first mentioned clutch members, and locking and unlocking means for the gears on one shaft.

3. In transmission gearing, a driving shaft, a main transmission shaft, a counter-shaft parallel to said transmission shaft, a set of gears on the transmission shaft, a set of complemental gears on the counter-shaft, chains connecting complemental gears of said sets causing the transmission shaft and countershaft to revolve in the same direction, clutch members on the corresponding extremities of said transmission shaft and countershaft, a clutch member on the adjacent extremity of said driving shaft, means for shifting the last named clutch member into engagement with either of the first mentioned clutch members, and locking and unlocking means for the gears on one shaft.

4. In transmission gearing, a driving shaft, a main transmission shaft, a counter-shaft parallel to said transmission shaft, a set of gears on the transmission shaft, a set of complemental gears on the countershaft, chains connecting complemental gears of said sets causing the transmission shaft and countershaft to revolve in the same direction, clutch members on the corresponding extremities of said transmission shaft and countershaft, a clutch member on the adjacent extremity of said driving shaft, means for shifting the last named clutch member into engagement with either of the first mentioned clutch members, locking and unlocking means for the gears on one shaft, and intermeshing spur gears on the transmission shaft and countershaft one of which is adapted to be thrown and out of locked engagement with its shaft to reverse the direction of rotation of said shafts.

5. In transmission gearing, a longitudinally and laterally movable driving shaft, a main transmission shaft, a countershaft parallel to said transmission shaft, a set of gears on the transmission shaft, a set of complemental gears on the countershaft, clutch members on the corresponding extremities of said transmission shaft and countershaft, a clutch member on the adjacent extremity of said driving shaft, means for shifting the last named clutch member into engagement with either of the first mentioned clutch members, locking and unlocking means for the gears on one shaft, and means for yieldingly holding said driving shaft toward either the transmission shaft or countershaft.

1,156,939. SEAT CUSHION AND COVER. WILLIAM J. SMITH, Max, N. D., assignor of one-half to Peter D. Podhola, Max, N. D. Filed Feb. 25, 1915. Serial No. 10,481. (Cl. 155—22.)

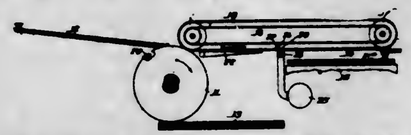


1. The combination with a seat and seat post secured to each other by a bolt and nut, of a cushion and a cover for the cushion, straps carried by the cushion, a washer interposed between the seat post and nut, and means for attaching the straps to the washer.

2. The combination with a seat and seat post secured to each other by a bolt and nut, of a cushion and a cover for the cushion, straps carried by the cushion, a washer interposed between the seat post and nut, and means for attaching the straps to the washer, said means including extensions formed upon the washer, and buckles carried by the extensions.

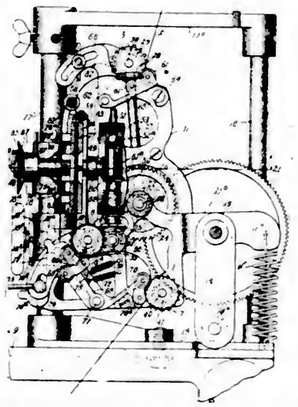
3. The combination with a seat and seat post and a bolt and nut connecting the same, of a cushion for the seat, a washer disposed between the seat post and the nut and secured in place by the said nut, the washer having arms extending laterally toward opposite sides of the seat and having an arm extending rearwardly toward the rear side of the seat, buckles permanently connected with the said arms at their extremities, and straps carried by the cushion and adjustably engageable with the said buckles.

1,156,940. DELIVERY MECHANISM FOR PRINTING-PRESSES. BURT D. STEVENS, Riverside, Ill., assignor to The Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 10, 1913, Serial No. 800,016. Renewed Mar. 17, 1915. Serial No. 15,081. (Cl. 101—31.)



1. The combination with a printing couple, of sheet delivery mechanism comprising gripper means arranged to take the sheet from the printing couple and to convey the same therefrom, restraining means acting concurrently

1,156,934. REGISTERING DEVICE FOR A MOVING-PICTURE MACHINE. EBERHARD SCHNEIDER, New York, N. Y. Filed Oct. 22, 1907. Serial No. 398,579. (Cl. 88—18.)



1. In a registering device for a moving picture machine the combination of a support, a vertical standard rigidly secured to said support, a film guide having a projection aperture secured to said standard, means for feeding a film past said aperture, a frame for supporting said feeding means pivoted to said support and a vertically adjustable element on said standard connected to said frame.

2. In a registering device for a moving picture machine the combination of a support, a vertical standard rigidly secured to said support, a film guide having a projection aperture secured to said standard, means for feeding a film past said aperture, a frame for supporting said feeding means pivoted to said support, a vertically movable member on said standard to which said frame is pivotally attached, and means for moving said member comprising a toothed rack on said standard, and a hand wheel provided with a pinion meshing with said rack rotatably mounted on said member.

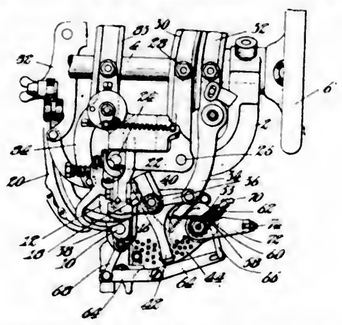
1,156,935. HORSESHOE. LEVI SCHWOYER, Pottstown, Pa. Filed Feb. 20, 1915. Serial No. 9,669. (Cl. 168—33.)



As a new article of manufacture, a toe calk constructed of a single blank of material formed to provide spaced depending lugs, and an intermediate vertically rising lug, and a horizontal body portion provided with an integral rearwardly located lug and a forwardly located vertical passage, the passage being located in the same longitudinal line with the lug, the bottom surface of the horizontal portion being provided with a circular recess opening directly into said passage.

1,156,936. EYELETING-MACHINE. RALPH C. SIMMONS, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 2, 1910. Serial No. 590,272. (Cl. 218—15.)

1. A machine of the class described having, in combination, a supporting frame, work-engaging means mounted therein, means for moving said frame to feed the work, said means including a transversely oscillating lever and pivoted transmitting links, and feed regulating means comprising an angularly adjustable guideway for controlling the direction of movement of said transmitting links.



2. A machine of the class described having, in combination, a supporting frame, work-engaging means mounted therein, means for moving said frame to feed the work, said means including a transversely oscillating lever and pivoted transmitting links, feed regulating means comprising a guideway, a coöperating roller mounted at the point of connection of said links, and means for adjusting said guideway.

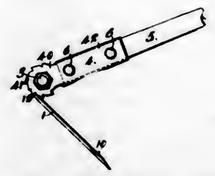
3. A machine of the class described having, in combination, work-engaging devices, a supporting frame therefor, a link pivoted thereto and having one end guided in a rectilinear path, means acting through said link to move the frame for feeding the work, and means for changing the direction of movement of the guided end of said link to regulate the extent of feeding movement.

4. A machine of the class described having, in combination, punching devices, oscillatory work-feeding means, and means actuated by said work-feeding means in its feeding movement for varying the extent of the feeding movement.

5. A machine of the class described having, in combination, setting devices, a carrier therefor movable in feeding the work, and means actuated by the carrier in its feeding movement for regulating the extent of the feeding movement.

[Claims 6 to 17 not printed in the Gazette.]

1,156,937. GARDEN IMPLEMENT. JAMES SINNOTT, Chatham, Ill. Filed June 2, 1915. Serial No. 31,754. (Cl. 55—42.)



1. A garden implement comprising a handle having a bifurcated head, the said head having arbitrarily arranged sets of peripheral notches, a blade including a curved portion that terminates in an eye, said blade having oppositely disposed shoulders for engaging the sets of notches in the handle head, a clamp bolt engaging the bifurcated head of the handle, and the eye of blade, one set of the said notches, the curved portion of the blade, and the pivotal connection for the blade, being relatively arranged so that the blade is foldable flatwise against the handle.

2. A garden implement comprising a handle, a blade, and means for adjustably connecting the blade whereby the said blade may be positioned to project at any angle to the handle, said means comprising oppositely disposed heads pendent from the handle, a combined pivot and clamp bolt for engaging the heads, said heads having arbitrarily arranged opposite sets of peripheral notches, the blade having opposite shoulders and a loop member between the shoulders for pivotally engaging the bolt, said loop member, the inner edge of the blade, and the pivot bolt being relatively so arranged that said edge of the blade is flush with the peripheral edges of the notched heads.

3. A garden implement comprising a handle, a pair of oppositely disposed resilient disks secured to and pendent from the lower end of the handle, a bolt and clamp nut cooperating with the disks, the said disks each having a series of radial notches in their peripheral edges, an edge sharpened blade one end of which terminates in a digging element, the other end of which has oppositely disposed shoulders and an extension projected from the shouldered portions, the said extension being curved upwardly and terminating in an eye, that pivotally engages the clamp bolt, the shoulders and the extension of the blade being relatively arranged whereby the blade can be adjusted to bring the shoulders of the blade into engagement with any set of the peripheral notches in the disk members of the handle.

1,156,938. TRANSMISSION-GEARING. ALFRED B. SMALL and CARLETON C. SMALL, Lake City, Fla. Filed Sept. 29, 1914. Serial No. 864,139. (Cl. 74—59.)



1. In a transmission gearing, a driving shaft, a main transmission shaft, a counter-shaft parallel to said transmission shaft, a set of gears on the transmission shaft, a set of complemental gears on the counter-shaft, clutch members on the corresponding extremities of said transmission shaft and countershaft, a clutch member on the adjacent extremity of said driving shaft, and means for shifting the last named clutch member into engagement with either of the first mentioned clutch members, and locking and unlocking means for the gears on the shaft.

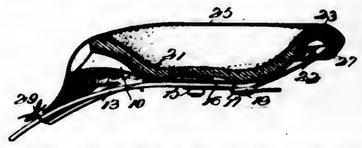
2. In transmission gearing, a longitudinally and laterally movable driving shaft, a main transmission shaft, a countershaft parallel to said transmission shaft, a set of gears on the transmission shaft, a set of complemental gears on the countershaft, clutch members on the corresponding extremities of said transmission shaft and countershaft, a clutch member on the adjacent extremity of said driving shaft, means for shifting the last named clutch member into engagement with either of the first mentioned clutch members, and locking and unlocking means for the gears on one shaft.

3. In transmission gearing, a driving shaft, a main transmission shaft, a counter-shaft parallel to said transmission shaft, a set of gears on the transmission shaft, a set of complemental gears on the counter-shaft, chains connecting complemental gears of said sets causing the transmission shaft and countershaft to revolve in the same direction, clutch members on the corresponding extremities of said transmission shaft and countershaft, a clutch member on the adjacent extremity of said driving shaft, means for shifting the last named clutch member into engagement with either of the first mentioned clutch members, and locking and unlocking means for the gears on one shaft.

4. In transmission gearing, a driving shaft, a main transmission shaft, a counter-shaft parallel to said transmission shaft, a set of gears on the transmission shaft, a set of complemental gears on the countershaft, chains connecting complemental gears of said sets causing the transmission shaft and countershaft to revolve in the same direction, clutch members on the corresponding extremities of said transmission shaft and countershaft, a clutch member on the adjacent extremity of said driving shaft, means for shifting the last named clutch member into engagement with either of the first mentioned clutch members, locking and unlocking means for the gears on one shaft, and intermeshing spur gears on the transmission shaft and countershaft one of which is adapted to be thrown and out of locked engagement with its shaft to reverse the direction of rotation of said shafts.

5. In transmission gearing, a longitudinally and laterally movable driving shaft, a main transmission shaft, a countershaft parallel to said transmission shaft, a set of gears on the transmission shaft, a set of complemental gears on the countershaft, clutch members on the corresponding extremities of said transmission shaft and countershaft, a clutch member on the adjacent extremity of said driving shaft, means for shifting the last named clutch member into engagement with either of the first mentioned clutch members, locking and unlocking means for the gears on one shaft, and means for yieldingly holding said driving shaft toward either the transmission shaft or countershaft.

1,156,939. SEAT CUSHION AND COVER. WILLIAM J. SMITH, Max, N. D., assignor of one-half to Peter D. Podhola, Max, N. D. Filed Feb. 25, 1915. Serial No. 10,481. (Cl. 155—22.)

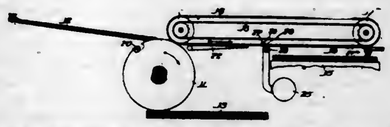


1. The combination with a seat and seat post secured to each other by a bolt and nut, of a cushion and a cover for the cushion, straps carried by the cushion, a washer interposed between the seat post and nut, and means for attaching the straps to the washer.

2. The combination with a seat and seat post secured to each other by a bolt and nut, of a cushion and a cover for the cushion, straps carried by the cushion, a washer interposed between the seat post and nut, and means for attaching the straps to the washer, said means including extensions formed upon the washer, and buckles carried by the extensions.

3. The combination with a seat and seat post and a bolt and nut connecting the same, of a cushion for the seat, a washer disposed between the seat post and the nut and secured in place by the said nut, the washer having arms extending laterally toward opposite sides of the seat and having an arm extending rearwardly toward the rear side of the seat, buckles permanently connected with the said arms at their extremities, and straps carried by the cushion and adjustably engageable with the said buckles.

1,156,940. DELIVERY MECHANISM FOR PRINTING-PRESSES. BURT D. STEVENS, Riverside, Ill., assignor to The Miehle Printing Press & Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 10, 1913, Serial No. 800,016. Renewed Mar. 17, 1915. Serial No. 15,081. (Cl. 101—31.)



1. The combination with a printing couple, of sheet delivery mechanism comprising gripper means arranged to take the sheet from the printing couple and to convey the same therefrom, restraining means acting concurrently

with the grippers but upon the unprinted side of the rear portion of the sheet to exert tension thereon in opposition to the gripper means, the grippers and the restraining means arranged to release the sheet in the order named.

2. The combination with a printing couple, of sheet delivery mechanism comprising grippers arranged to engage the front edge of the sheet and to draw the same from the printing couple and to convey the same therefrom, restraining means acting concurrently with the grippers but upon the unprinted side of the trailing portion of the sheet to exert tension thereon in opposition to the grippers, and means to release the sheet from the grippers and to interrupt the action of the restraining means upon the sheet in the order named.

3. The combination with a printing couple, of a delivery mechanism comprising a traveling gripper mechanism for taking and conveying the sheet therefrom, and a suction device arranged to act simultaneously therewith upon the trailing portion of the unprinted side of the sheet to exert a tension thereon, said suction device being stationary during its action on the printed sheet.

4. The combination with a printing couple, of a delivery mechanism, a traveling gripper mechanism for taking and conveying the sheet therefrom, of a suction device arranged to be traversed by the unprinted side of the moving sheet and to exert a tension thereon, said suction device being stationary when acting upon the sheet.

5. The combination with a printing couple, of a delivery mechanism comprising a traveling gripper mechanism for taking and conveying the sheet therefrom, a suction device arranged to act simultaneously therewith upon the trailing portion of the unprinted side of the sheet to exert a tension on the sheet, and means to periodically render the suction device inoperative, said suction device being stationary while acting on the sheet.

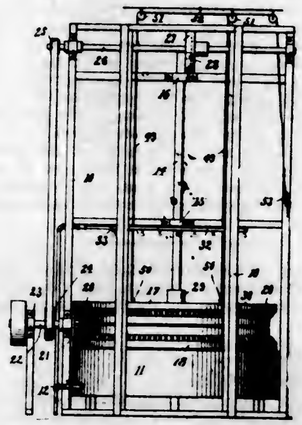
[Claims 6 to 10 not printed in the Gazette.]

1,156,941. BOILER FEED-WATER REGULATOR. WILLIE JUDSON STEVENS, Portland, Me., assignor to Stevens Regulator Co., Portland, Me. Filed Aug. 24, 1914. Serial No. 858,381. (Cl. 137—101.)



In boiler feed water regulator, a valve casing having a seat; a cylinder comprising a cross wall; a cap on the cylinder and provided with a fluid pressure inlet; a stem slidable in the cross wall; a valve on the stem and coöperating with the seat; a primary spring coacting with the valve and the casing to hold the valve seated; a head on the stem, one end face of the head bearing against the cap and the periphery of the head being engaged slidably with the cylinder, the cap having a concavity into which the inlet opens when said end face of the head is in contact with the cap, the head being adjustable longitudinally of the stem to permit the head to abut against the cap when the valve coöperates with the seat, thereby to reduce the strain on the valve; a securing means adjustable on the stem and engaging the head to hold the head against longitudinal movement on the stem in the direction of the cap, the securing means being housed in the concavity whereby said end of the head may abut against the cap; and a secondary spring engaging both the head and the cross wall, the secondary spring constituting an assisting means for the primary spring and constituting also means for holding the head against movement on the stem in the direction of the cross wall.

1,156,942. HAT-SIZING MACHINE. ELBERT S. STOCKER and FREDERICK A. STACY, Danbury, Conn. Filed Sept. 15, 1910. Serial No. 582,119. (Cl. 38—8.)



1. A hat sizing machine, comprising two or more sections rotatably mounted to move in a horizontal plane, means for moving one of the said sections in a forward direction and means for moving the other section in an opposite direction to roll a hat body therebetween, and means for imparting to said sections additional radial movements.

2. A hat sizing machine, comprising a pair of flat perforated sections arranged one above the other and rotatably mounted to move in a horizontal plane, means for moving one of the said sections in a forward direction and means for moving the other section in an opposite direction to roll a hat body therebetween, and means for supplying water thereto and through the perforations to shrink said hat bodies.

3. A hat sizing machine, comprising a pair of flat sections rotatably mounted to move in a horizontal plane and intermediate of which a hat body may be placed, means for moving one of the said sections in a forward direction and means for moving the other section in an opposite direction to roll a flatly disposed hat body therebetween, and means for imparting to said sections alternate inward and outward sidewise movements.

4. A hat sizing machine, comprising a pair of perforated rotary wheels connected to be driven in opposite directions, a series of attached sections arranged within the wheels and adapted to roll hat bodies therebetween to shrink the same, and means for supplying a stream of water through the said perforations.

5. A hat sizing machine, comprising a pair of rotary wheels connected to be driven in opposite directions, a series of sections arranged within the wheels and intermediate of which hat bodies may be arranged, and means for imparting to said sections radial movements.

[Claims 6 to 12 not printed in the Gazette.]

1,156,943. GATE-HINGE. AUGUST SUNDH, Hastings-upon-Hudson, N. Y. Filed Feb. 10, 1915. Serial No. 7,230. (Cl. 16—163.)

1. In a hinge, the combination of an upper stationary member having telescopic walls, a lower member adapted to be partly revolved and having walls telescopically engaging said stationary member, one member being formed with an inclined surface, and means formed integral with the lower member and slidably engaging the inclined surface of the other member, to suspend the lower member from the upper stationary member, said means being within the telescopic walls of said members.



2. In a hinge, the combination of an upper stationary member having telescopic walls, a lower member adapted to be partly revolved and having walls telescopically engaging said stationary member, one member being formed with an inclined surface, and means formed integral with the other member and slidably engaging the inclined surface of the first named member, to suspend the lower member from the upper stationary member, said means being within the telescopic walls of said members.

3. In a hinge, the combination of an upper stationary member having telescopic walls, a lower member adapted to be partly revolved, and having walls telescopically engaging said stationary member, one member being formed with an inclined surface, guiding means carried by the upper member for guiding the lower member, means formed integral with the one member to slidably engage the inclined surface of the other member, to suspend the lower member from the upper stationary member, said means being within the telescopic walls of said members.

4. In a hinge, the combination of one upper stationary member and one lower member adapted to be partly revolved, one member being formed with an inclined surface, means formed integral with the other member and slidably engaging the inclined surface of the first named member to suspend one member to the other, an oil bath for lubricating the inclined surface of the one member and the carrying means of the other member, said oil bath being confined in the lower member.

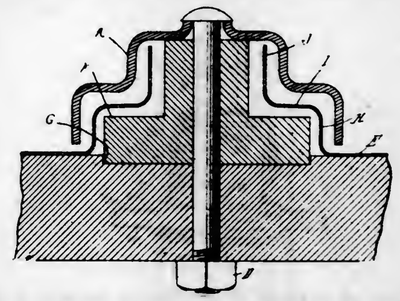
5. In a hinge the combination of coöperating telescopic members, one upper member being stationary and having two telescopic walls, the lower one being adapted to partly revolve and suspended from the upper member and arranged with walls to telescopically engage the upper member, and mechanism in said members to automatically control the lower partly revolving member.

[Claims 6 to 9 not printed in the Gazette.]

1,156,944. CAR-ROOF. WILLIAM D. THOMPSON, Detroit, Mich., and SPENCER OTIS, Chicago, Ill., assignors to Hutchins Car Roofing Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 30, 1910. Serial No. 600,180. (Cl. 108—5.)

1. In a metal car roof, the combination with load-supporting carlines, of metal load-supporting sheets having their edges arranged to form a weather proofing flexible joint in connection with the carlines, and means for supporting the edge of the sheet suspended from the carlines.

2. A metal roof for cars, comprising channel load-supporting carlines, load-supporting roofing sheets arranged below and between the carlines, roofing sheet supports, and hangers for suspending the supports from the carlines at a point above the plane of the sheet.



3. In a metal car roof, the combination with load-supporting channel carlines, of load-supporting roof sheets arranged below and between the carlines, roof sheet supports and means extending from the upper portions of the carlines downward to and suspending said supports.

4. In a metal car roof, the combination with load-supporting carlines of inverted U-section, of a plurality of load-supporting roof sheets arranged below the carlines, with the respective adjacent edges of said sheets lying under and capped by the carlines, and means within and below the carlines suspended therefrom for holding the roof sheet edges in position under said carlines.

5. In a flexible metal car roof, the combination of side plates, load-sustaining roofing sheets extending across and overlapping said side plates and having flanged edges, carlines secured to said side plates intermediate said sheets and extending over and weather-proofing the flanged edges of the latter permitting freedom for relative movement of the sheets, and means suspended from said carlines for normally supporting said sheets intermediate said side plates.

[Claims 6 and 7 not printed in the Gazette.]

1,156,945. AUTOMOBILE-JACK. HENRY A. TIMM, Caledonia, Mich. Filed Sept. 8, 1914. Serial No. 860,668. (Cl. 254—39.)



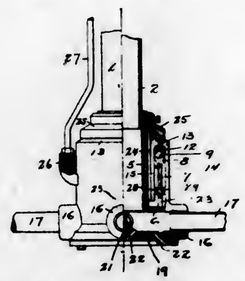
An automobile jack comprising, a base plate, bearings secured to one end of said base plate, rails pivotally secured to said bearings and in spaced relation to each other, an inverted U-shaped member pivotally secured to the other end of the base plate beneath the free end of the rails, roller bearings mounted on said U-shaped member and arranged to contact with the lower faces of the rails and means secured to said U-shaped member to raise the rails about their pivots and maintain the same in their raised positions.

1,156,946. AGITATOR. ALBERT E. VANDERCOOK, Alameda, Cal., assignor, by mesne assignments, to California Macvan Co., San Francisco, Cal., a Corporation of California. Original application filed Nov. 12, 1912, Serial No. 800,721. Divided and this application filed Mar. 26, 1914. Serial No. 827,472. (Cl. 75—66.)

1. In an apparatus of the character described, a vessel, a stationary conductor depending into said vessel, and a hollow armed structure rotatably mounted on said conductor.

2. In an apparatus of the character described, a vessel, a stationary conductor depending into said vessel, and

a hollow armed structure adapted to be rotated by the reaction of liquid discharging therefrom rotatably supported on the lower end of said conductor.



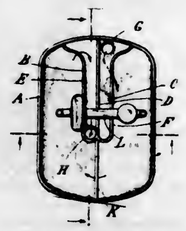
3. In an apparatus of the character described, a vessel, a stationary conductor depending into said vessel through which liquid passes downwardly, a hollow armed structure adapted to be rotated by the discharge of liquid therefrom arranged at the lower end of said conductor and arranged to receive liquid therefrom, and an antifriction bearing arranged between said conductor and rotatable structure.

4. The combination with a vessel adapted to contain a liquid, of a stationary element depending into said vessel and extending below the normal surface of the liquid therein, a rotatable element mounted on said stationary element below the surface of the liquid and spaced from the bottom of said vessel, and a liquid sealed bearing arranged between said elements.

5. The combination with a vessel adapted to contain a liquid, of a stationary depending conductor through which liquid passes downwardly, extending below the surface of said liquid, a rotatable structure adapted to be rotated by the reaction of the liquid passing therethrough from said conductor, mounted on said conductor below the surface of the liquid in the vessel and spaced from the bottom of said vessel, and a liquid sealed bearing arranged between said structure and conductor.

[Claims 6 to 13 not printed in the Gazette.]

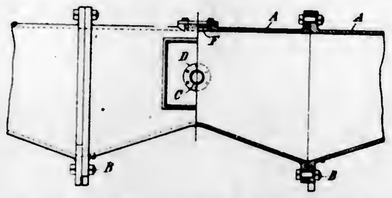
1,156,947. APPARATUS FOR STERILIZATION OF FLUIDS BY ULTRA-VIOLET RAYS. MAX VON RECKLINGHAUSEN, New York, N. Y., assignor to The R. U. V. Company, Inc., New York, N. Y., a Corporation of New York. Filed Mar. 14, 1914. Serial No. 824,653. (Cl. 210—1.)



1. A device for the sterilization of fluids by ultra-violet rays, comprising in combination a main receptacle for containing the fluid, two narrow compartments formed in the center of the same and constituting inlet and outlet compartments with overflow edges, the said compartments dividing that portion of the receptacle which they occupy into two parts, pipes communicating with the said compartments, and a source of ultra-violet rays supported over said edges, these parts being so constructed and proportioned that a normal supply of fluid entering the inlet compartment must expand and flow over the edge of the same into the main receptacle in a thin film, and enter the outlet compartment from said receptacle over the edge of the same in a similar film.

2. A device for the sterilization of fluid by ultra-violet rays, comprising in combination a main receptacle for containing the fluid, two narrow compartments formed in the central portion of the same, forming inlet and outlet compartments with extended overflow edges and dividing the portion of the main receptacle which they occupy into two portions, pipes communicating with said compartments, a source of ultra-violet rays supported over the said edges, and a baffle plate arranged in the undivided portion of the receptacle where the main flow of liquid occurs, these parts being so constructed and proportioned that a normal supply of fluid entering the inlet compartment must expand and flow over the edges of the same in a thin film, be stirred in its passage through the main receptacle, and enter the outlet compartment in the form of a film extending over the edges of the same.

1,156,948. STERILIZING APPARATUS. MAX VON RECKLINGHAUSEN, New York, N. Y. Filed Jan. 18, 1915. Serial No. 2,796. (Cl. 210—1.)



1. An apparatus for sterilizing fluids, comprising, in combination, a channel or conduit with contracted portions, but with an air pass or path along its top unobstructed at its upper side, chambers with walls transparent to ultra-violet rays located at the contracted portions, and ultra-violet lamps contained in such chambers.

2. An apparatus for sterilizing, comprising, in combination, a channel or conduit with contracted portions, but with a path along its top unobstructed at its upper side, and composed of sectional units adapted for connection in series, and each containing a contracted part, chambers with walls transparent to ultra-violet rays contained in the contracted parts, and ultra-violet lamps within said chambers.

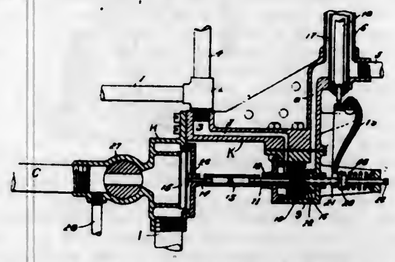
3. A sectional unit for a sterilizing apparatus, comprised of a section of a channel or conduit having a contracted portion, but a path along its upper side unobstructed along its top, in combination with means at its ends for attachment to another section, and a chamber with walls transparent to ultra-violet rays located in the contracted part.

4. A sectional unit for a sterilizing apparatus, comprising in combination a section of a conduit having a contracted part but straight along its upper side, means at its ends for attachment to another section, a chamber or tube extending through the contracted part with walls transparent to ultra-violet rays, and a lamp box secured to the side of the section over the opening of said tube or chamber.

5. A sectional unit for sterilizing apparatus, comprising in combination, a section of a conduit having a contracted portion, but straight along its upper side, means at its ends for attachment to another section, a chamber extending through the contracted part with walls transparent to ultra-violet rays, a lamp box secured to the section over the opening of said chamber, and a hand or peep hole over said chamber.

1,156,949. WATER-HEATER CONSTRUCTION. FRANK L. O. WADSWORTH, Sewickley, Pa. Filed Dec. 26, 1911. Serial No. 667,947. (Cl. 126—351.)

1. In an automatic water heater, a burner, a gas valve for controlling the supply of gas to the burner, a pair of pressure chambers connected to portions of the heater having different water pressure when the outlet from the heater is open, a member actuated by the differential pressures in the chambers for opening the gas valve, and a thermostatic means governed by the heated water and arranged so as to move the said member back toward the position at which the gas valve is closed in case the temperature of the water in the heater rises above a predetermined point, the parts being arranged so that a yielding closure of the gas valve is secured under all conditions and so that the thermostat means may continue in its closing movement after the gas valve is closed.

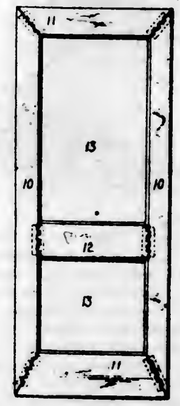


2. In an automatic water heater, a burner, a gas valve for controlling the supply of gas to the burner, a pair of pressure chambers connected to portions of the heater having different water pressure when the outlet from the heater is open, a member actuated by the differential pressures in the chambers and arranged so as to pull the gas valve open when the differential pressure is applied to the member, and a thermostatic means governed by the heated water and arranged so as to force the said member back to normal position and cause the closure of the gas valve when the temperature of the water in the heater rises above a predetermined point, there being a lost motion connection between the thermostatic means and the gas valve whereby the thermostatic means may continue its valve closing movement after the gas valve is closed, without imposing additional strain thereon.

3. In an automatic water heater, a conduit through which the water passes to be heated, a burner, a gas valve for controlling the supply of gas to the burner, a pair of pressure chambers lying outside the conduit but connected to portions of the conduit having different water pressure when the outlet from the heater is open, means actuated by the differential pressures in the chambers for opening the gas valve, and a thermostatic means mounted independently of the said member and arranged with a space between the parts of the said water actuated means and the thermostatic means when the outlet from the heater is closed and the water below a predetermined temperature but governed by the heated water and arranged so as to move the said water actuated means back toward the position at which the gas valve is closed in case the temperature of the water in the heater rises above a predetermined point.

1,156,950. DOOR. JOHN G. WALLACE and ALFRED BELL, Philadelphia, Pa., assignors to Hale and Kilburn Company, Philadelphia, Pa., a Corporation of Delaware. Filed Nov. 6, 1913. Serial No. 799,430. (Cl. 189—46.)

1. In a door, the combination of a frame comprising hollow sheet-metal stiles and rails, a stile and rail having abutting mitered ends, a pair of sheet-metal securing devices, secured respectively within the stile and rail at the adjoining ends thereof, each having parallel flanges secured to the inner surfaces of the side sheets of its frame member, with integral metal loops extending transversely between said flanges and within the adjacent frame member, the loops on one device extending into spaces between the loops on the other device, and a metal key inserted through all of said loops and lying within said frame parallel to the mitered joint of said rail and stile, and serving to maintain the mitered ends of said rail and stile in close engagement, said key being of such length as to extend between the inner and outer sheets of the frame, and to contact the same, substantially as set forth.



2. In a door comprising hollow sheet metal stiles and rails secured together, a pair of interlocking sheet-metal channels one having parallel flanges secured to the inner surfaces of the side sheets of a rail adjacent the end thereof, and integral loops extending between said flanges and into the interior of the adjacent stile, the other having parallel flanges secured to the inner surfaces of the side sheets of the stile to be connected to said rail, and having integral loops extending into spaces between the loops of the other channel, and metal key means inserted through all of said loops and serving to draw said stile and rail into close engagement, substantially as set forth.

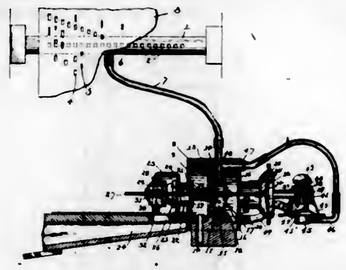
3. In a door, two hollow frame-members, securing devices secured within the end of each of said members, projecting therefrom and adapted to enter the other member, and two keys coacting with said securing devices to secure said members together, one of said keys being movable lengthwise and then laterally into securing position and the other key being movable lengthwise into securing position into space occupied by the other key prior to its lateral movement, substantially as set forth.

4. In a door comprising a frame made of stiles and rails, the combination of a hollow sheet-metal cross rail, a hollow sheet-metal stile, the intermediate portion of which is to be connected to the end of said rail, a sheet metal channel having flanges secured to the inner surfaces of the side sheets of the rail adjacent the end thereof, and integral loops extending between said flanges and through an opening formed in the stile into the interior of the latter, a sheet metal channel having flanges similarly secured within the stile, adjacent said opening, and having integral loops extending through said openings into the interior of the rail between the loops of said first channel, said rail and stile having panel supporting flanges abutting each other adjacent the joint between said stile and rail, and said rail having an opening therein to one side of the said flange of the stile, and metal key means inserted through said opening and through all of said loops and serving to draw said stile and rail into close engagement, substantially as set forth.

1,156,951. PNEUMATIC PIANO-PLAYER. EUGENE C. WAMELINK, Cleveland, Ohio. Filed Mar. 29, 1909. Serial No. 486,372. (Cl. 84—168.)

1. In a piano player, a tracker board, a chest, a power pneumatic for each note, valve mechanism for controlling each power pneumatic, motor means for actuating said valve mechanism, and a single governing device actuated

by outside air for controlling the operation of the motor means.



2. In a pneumatic piano player, in combination, a tracker board, a pneumatic action having a single connection with the tracker board and comprising a power pneumatic, a vacuum chest communicating with the power pneumatic, a valve for closing such communication, means operated by air from the tracker board for operating said valve and establishing communication between the power pneumatic and the vacuum chest, another valve arranged between said valve and the vacuum chest normally tending to throttle the same opening and prevent the passage of air from the power pneumatic to the vacuum chest, and a device actuated by the tracker board air for shifting such governing means and permitting the power pneumatic to operate to an extent directly in accordance with the volume of air admitted from the tracker board, and means for varying the volume of air admitted by the tracker board.

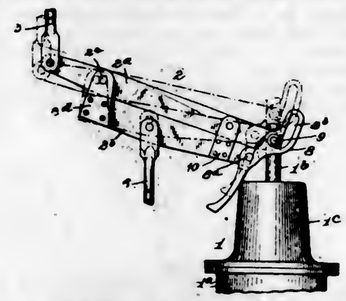
3. In a piano player action, in combination, a vacuum chest, a power pneumatic, a controlling valve for said power pneumatic, a valve stem carried thereby, a sleeve surrounding said stem, a throttling valve carried thereby, a secondary pneumatic for operating said stem, a primary pneumatic for shifting said secondary pneumatic, and another pneumatic connected to said sleeve and to the casing and adapted to control the throttling valve.

4. In a power pneumatic action, in combination, a vacuum chest having a partition therein separating it into two chambers, a power pneumatic, a suitable connection for the power pneumatic and having a port leading into one of the chambers of the vacuum chest, a controlling valve arranged in the connection between the vacuum chest and the power pneumatic, a rod for operating said valve, a secondary pneumatic for shifting said rod, a primary pneumatic for controlling the operation of the secondary pneumatic, a sleeve mounted upon said rod, a throttling valve mounted on said sleeve and adapted to normally seat upon the port leading to the power pneumatic, a pneumatic connected to said sleeve and to the partition for shifting said throttling valve against its normal tendency, and a flexible seal between the partition and said sleeve to permit the latter to move freely.

5. In a pneumatic piano player action, in combination, a vacuum chest having a partition therein separating it into two chambers, a power pneumatic, a suitable connection having a port establishing communication between the power pneumatic and one of the chambers of the vacuum chest, a controlling valve mounted in said connection, a valve rod for operating said controlling valve and extending through the vacuum chest and through said partition, a secondary pneumatic for shifting said valve, a primary pneumatic for said secondary pneumatic, a sleeve upon said rod, a valve mounted upon said sleeve and adapted to throttle the opening leading to the power pneumatic from the vacuum chest, a pneumatic connected at its center to said sleeve and at its periphery to the partition, a flexible seal between the partition and said sleeve, and a spring normally tending to shift said throttling valve against its seat.

[Claim 6 not printed in the Gazette.]

1,156,952. LIGHT AND LOAD BRAKE. FRANK D. WARD, New York, N. Y., assignor to Sauvage Ward Brake Company, Inc., a Corporation of Delaware. Filed May 15, 1912. Serial No. 697,356. (Cl. 188—24.)



1. A brake comprising in combination brake-operating cylinder and piston means; brake means; a compound lever operatively connecting the first named means with the second, said lever being a floating lever with resistance applied thereto between its ends, said lever consisting of two pivotally connected levers, to one of which the aforesaid brake means is connected, and to the other of which the resistance is applied; and means which locks said levers together to act as one during the first part of the stroke of the cylinder and piston means, and which unlocks them during the latter part of said stroke.

2. A brake comprising in combination brake-operating cylinder and piston means; brake means; a compound lever operatively connecting the first named means with the second, said lever being a floating lever with resistance applied thereto between its ends, said lever consisting of two levers, to one of which the aforesaid brake means is connected, and to the other of which the resistance is applied, said two levers being fulcrumed together between their respective connections with said brake means and said resistance; and means which locks said levers together to act as one during the first part of the stroke of the cylinder and piston means, and which unlocks them during the latter part of said stroke.

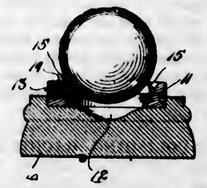
3. A brake comprising in combination brake-operating cylinder and piston means; brake means; a compound lever operatively connecting the first named means with the second, said lever being a floating lever with resistance applied thereto between its ends, said lever consisting of two pivotally connected levers, to one of which the aforesaid brake means is connected, and to the other of which the resistance is applied; and means which locks said levers together to act as one during the first part of the stroke of the cylinder and piston means, and which unlocks them during the latter part of said stroke, said last named means comprising a member pivoted to one of said levers and having a slot and pin connection with the other lever, said slot having a locking notch which is occupied by the pin during the first part of said stroke and from which the pin is released during the latter part of the stroke to permit the pin to travel in the slot and thereby permit the levers to separate.

4. A brake comprising in combination brake-operating cylinder and piston means; brake means; a compound lever operatively connecting the first named means with the second, said lever being a floating lever with resistance applied thereto between its ends, said lever consisting of two levers, to one of which the aforesaid brake means is connected, and to the other of which the resistance is applied, said two levers being fulcrumed together between their respective connections with said brake means and said resistance; and means which locks said levers together to act as one during the first part of the stroke of the cylinder and piston means and which unlocks them during the latter part of said stroke, said last named means comprising a member pivoted to one of said levers and having a slot and pin connection with the other lever, said slot having a locking notch which is occupied by the pin during the first part of said stroke and from which the pin is released during the latter part of the stroke to permit the pin to travel the slot and thereby permit the levers to separate.

5. A brake comprising in combination brake-operating cylinder and piston means; brake means; a compound lever operatively connecting the first named means with the second, said lever being a floating lever with resistance applied thereto between its ends, said lever consisting of two pivoted together levers, to one of which the aforesaid brake means is connected, and to the other of which the resistance is applied; and means which locks said levers together to act as one during the first part of the stroke of the cylinder and piston means, and which unlocks them during the latter part of said stroke, said last named means comprising a member pivoted to one of said levers and having a slot and pin connection with the other lever, said slot having a locking notch which is occupied by the pin during the first part of said stroke and from which the pin is released during the latter part of the stroke to permit the pin to travel the slot and thereby permit the levers to separate.

[Claims 6 to 13 not printed in the Gazette.]

1,156,953. DEVICE FOR TRUING SPHERICAL BODIES. SAM J. WARLICK and JAMES H. BUNKER, Kiowa, Kans. Filed Nov. 12, 1913. Serial No. 800,667. (Cl. 82—1.)



1. In a device of the class described the combination of a base having a circular recess formed in its top and said recess having its bottom dished centrally, a ring removably seated in said recess, and an inward directed annular knife element formed integral with the ring at one end thereof.

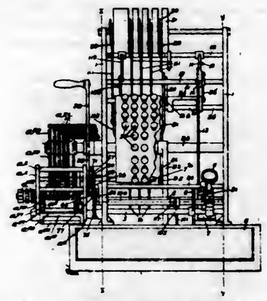
2. In a device of the class described, the combination of a base having a circular recess formed in its top, and a ring removably secured in said recess and having an inwardly directed annular knife element.

1,156,954. INSECTICIDE. ROBERT E. WATSON, Alva, Fla. Filed July 3, 1913. Serial No. 777,222. (Cl. 167—6.)

An insecticide in powdered form capable of having certain of its ingredients combine in the presence of water and including aceto-arsenate of copper, arsenate of lead, and slaked lime, said ingredients when in solution combining to form, in addition to the primary ingredients, acetate of lime, arsenate of copper and a double arsenate of copper and lead.

1,156,955. CHECK-PRINTER AND CASH-REGISTER. BYRON BLISS WELLS, Columbus, Ohio, assignor, by mesne assignments, to The American Cash Register Manufacturing Company, a Corporation of Ohio. Filed Jan. 30, 1911, Serial No. 605,552. Renewed Mar. 22, 1915. Serial No. 16,267. (Cl. 235—3.)

1. In a combined printer and cash register, an adding mechanism and a printing mechanism, operating devices for said adding mechanism, a separate operating device for said printing mechanism capable of an initial movement independently thereof, and means whereby the initial movement of said operating device for the printing mechanism causes an operation of said adding mechanism operating devices.



2. In a combined printer and cash register, an adding mechanism and a printing mechanism, operating devices for said adding mechanism, a separate operating device for said printing mechanism capable of an initial movement independently thereof, means whereby the initial movement of said printing mechanism operating device causes an operation of the adding mechanism operating devices, and means independent of said printing mechanism operating device for also causing an operation of said adding mechanism operating devices.

3. In a combined printer and cash register, an adding mechanism and a printing mechanism, operating devices for said adding mechanism, a separate operating device for the printing mechanism capable of an initial movement independently thereof, means whereby the initial movement of the printing mechanism operating device causes an operation of said adding mechanism operating devices, and a key independent of said printing mechanism operating device for also causing a partial operation of said adding mechanism operating devices.

4. In a combined printer and cash register, an adding mechanism and a printing mechanism, operating devices for said adding mechanism, controlling keys for said adding mechanism together with means for locking said keys, a separate operating device for said printing mechanism capable of an initial movement independently thereof, and means whereby the initial movement of said printing mechanism operating device causes the locking of said keys.

5. In a combined printer and cash register, an adding mechanism and a printing mechanism, operating devices for said adding mechanism, controlling keys for said adding mechanism together with means for locking said keys, a separate operating device for said printing mechanism capable of an initial movement independently thereof, and means whereby the initial movement of said printing mechanism operating device causes the locking of said keys, and means independent of said printing mechanism operating device for also causing the locking of said keys.

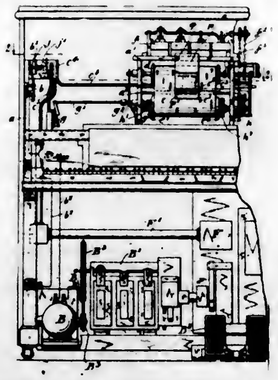
[Claims 6 to 38 not printed in the Gazette.]

1,156,956. AUTOMATIC PLAYER-PIANO. JOHN A. WESER, New York, N. Y. Filed May 26, 1913. Serial No. 769,849. (Cl. 84—161.)

1. In combination with an automatic motor-operated player piano and a music sheet operatively mounted therein, means to stop the travel of the music sheet, independent means to stop the motor and devices controlled by a perforation in the music sheet to initiate the operation of both said means.

2. In combination with an automatic motor-operated player piano and a music-sheet operatively mounted therein, independent pneumatically operated devices controlled by a single perforation in the music sheet to stop simultaneously both the motor and the travel of the music sheet.

3. In combination with an automatic electro-motor-operated player piano the circuit therefor and a music sheet operatively mounted therein, a carrier roll, a winding roll, means to rotate the winding roll, devices to stop the travel of the music sheet and independent devices to interrupt simultaneously the circuit, both of said devices being controlled by a single perforation in the music sheet.

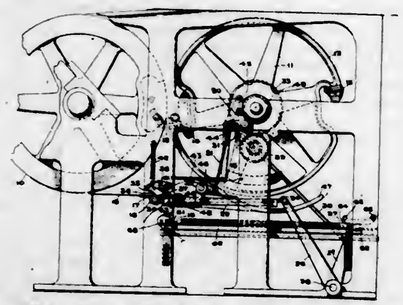


4. In combination with a player piano and a music sheet operatively mounted therein, a carrier roll for the music sheet, a winding roll, a drive shaft on which the latter is loosely mounted, means to engage operatively the drive shaft with the winding roll, devices controlled by a perforation in the music sheet to disengage the winding roll from the drive shaft and independent means operable simultaneously to stop the rotation of the drive shaft.

5. In combination with a player piano and a music sheet operatively mounted therein, a carrier roll for the music sheet, a winding roll, means to rotate the winding roll, means to release the winding roll from the rotating means, driving means with which the roll has a frictional engagement after the operation of the releasing means whereby the rotation of the winding roll is continued momentarily in the same direction, and devices to initiate the operation of the releasing means.

[Claims 6 to 11 not printed in the Gazette.]

1,156,957. SHEET-DELIVERY MECHANISM. JOSEPH WHITE, Piscataway township, N. J., assignor to Hall Printing Press Company, Dunellen, N. J., a Corporation of New Jersey. Filed Mar. 11, 1913. Serial No. 753,475. (Cl. 101—29.)



1. A flat reciprocatable sheet supporting carriage, means to feed a sheet thereto, a stop, independent of said carriage, to limit the motion of a sheet on said carriage and in relation thereto and means to reciprocate said carriage constructed and arranged to move said carriage from beneath the sheet in the same direction in which the sheet was fed to it, while the head thereof is positioned against said stop and supported on said carriage.

2. A flat reciprocable sheet supporting carriage, means to feed a sheet thereto, means to reciprocate said carriage constructed and arranged to move it in the same direction as the sheet is fed to it and at a less speed, and a stop, independent of said carriage and constructed and arranged to limit the motion of the sheet on the carriage as the sheet is fed to said carriage and to hold the sheet from moving with said carriage as said carriage passes from under the sheet.

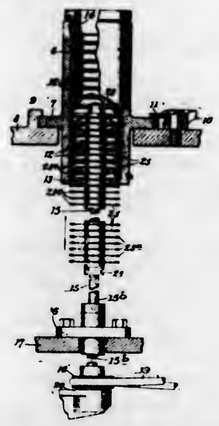
3. A flat reciprocable sheet supporting carriage, means to feed a sheet thereto, a stop, independent of said carriage, to limit the motion of a sheet on said carriage and in relation thereto, means to prevent any reverse motion of the sheet, and means to reciprocate said carriage, constructed and arranged to move said carriage from beneath the sheet in the same direction in which the sheet was fed to it, while the head thereof is positioned against said stop and supported on said carriage.

4. A flat reciprocable sheet supporting carriage, means to feed a sheet thereto, a stop, independent of said carriage, to limit the motion of a sheet on said carriage and in relation thereto, a pressure member arranged to press the sheet to said carriage to prevent reverse motion of the sheet, and means to reciprocate said carriage, constructed and arranged to move said carriage from beneath the sheet in the same direction in which the sheet was fed to it, while the head thereof is positioned against said stop and supported on said carriage.

5. A movable sheet carriage, means to feed a sheet thereto at a high speed in relation to said carriage, a stop arranged to contact with the head of the sheet to limit its motion, a pressure member arranged to press the sheet to said carriage to prevent reverse motion of the sheet, means to move said carriage in the direction in which the sheet was fed to it, to remove the sheet therefrom and means to move said pressure member downward after said carriage has passed from under the sheet.

[Claims 6 to 25 not printed in the Gazette.]

1,156,958. RING-POLISHING MACHINE. GEORGE M. WHITIN, Whitinsville, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Apr. 18, 1914. Serial No. 832,729. (Cl. 51—4.)



1. Ring polishing apparatus comprising the combination of a support, a holder thereon adapted to receive a stack of spinning rings, retaining means for holding the rings against movement within the holder, a polishing member adapted to rotate within the holder and comprising a plurality of flexible polishing elements adapted to bear on the interior of said stack of rings by their centrifugal action, and means for relatively traversing said member and rings, substantially as set forth.

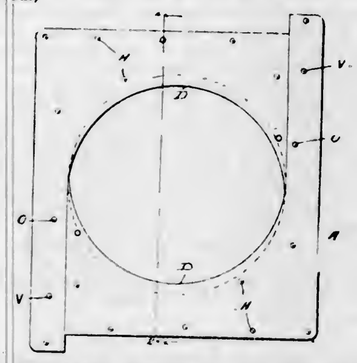
2. Ring polishing apparatus comprising the combination of a support, a tubular holder open at one end and adapted to receive a stack of interiorly-flanged rings in axial alinement, means for detachably mounting the holder upon the support, retaining means on the holder for holding the rings therein against movement, a rotatable polishing member in axial alinement with the holder, a plurality of polishing elements clamped on said member which are yieldable in the direction of the axis of the member, means for rotating said member within the stack, and means for relatively traversing said stack and member in the direction of their common axis, substantially as set forth.

3. The combination of a holder for a stack of interiorly-flanged rings and a rotary polishing member for polishing the interior surfaces of the rings comprising a shaft, a plurality of flexible polishing elements mounted upon the shaft, spacing means between adjacent elements separating them in the direction of the shaft and polishing material applied only to the peripheral edges of said elements whereby such material acts on the rings by the force of centrifugal action.

4. The combination of a tubular holder open at its ends, an inwardly projecting flange at one end of the holder, an annular retainer adapted to be inserted in the opposite end of the holder to retain rings therein against movement, a polishing member rotating within the holder, means for rotating said member, and means for moving the polishing member and holder relatively in the direction of their axis to carry the member within the holder, substantially as set forth.

5. Ring polishing apparatus comprising, in combination with a suitable holder for the rings, a shaft, a plurality of annular spacers disposed along the shaft, a plurality of polishing elements of flexible material on the shaft interposed between the spacers with their outer portions projecting laterally unsupported a substantial distance beyond the spacers and polishing material upon the free edges of said projecting and unsupported portions of said elements, substantially as set forth.

1,156,959. DUST-GUARD. LACEY Y. WILLIAMS, Toledo, Ohio. Filed Oct. 15, 1914. Serial No. 866,799. (Cl. 64—22.)

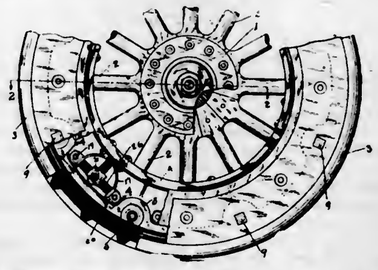


1. A dust guard consisting of two complemental L-shaped sections, each section having a long arm and a short arm and a semicircular bearing edge, and the said sections oppositely disposed to each other to form a substantially circular opening; both of said sections comprised of sheets of wood with the grains of the wood angularly disposed and the sheets riveted together; and springs secured to the adjacent long and short arms of the sections for forcing the bearing edges of the sections against a journal.

2. A dust guard consisting of two complemental L-shaped sections, each section having a long arm and a short arm and a semicircular bearing edge, and the said sections oppositely disposed to each other to form a substantially circular opening; both of said sections comprised of sheets of wood with the grains of the wood angularly disposed and the sheets glued or cemented and riveted together; and spring means for forcing the bearing edges of the sections against a journal.

3. A dust guard consisting of two complemental L-shaped sections, each section having a long arm and a short arm and a semicircular bearing edge, and the said sections oppositely disposed to each other to form a substantially circular opening; both of said sections comprised of sheets of wood with the grains of the wood angularly disposed and the sheets riveted together; also each of said long arms being provided with a recess formed by removing a part of the central sheet of wood; a coiled spring and a staple within each recess, the staple secured to a short arm and movable within the recess, and the spring anchored to the short arm at one end by the staple and at the other end to the long arm by a rivet; and guiding pins or rivets passed through the long arms and the staples.

1,156,960. SPRING VEHICLE-WHEEL. FREEMAN R. WILLSON, Worthington, Ohio. Filed Apr. 15, 1914. Serial No. 831,896. (Cl. 152—38.)



1. A spring vehicle wheel comprising a hub and spoke portion, a tread portion, a channel member divided into circular sections and adapted to be held together forming a portion of said tread portion, cross pins having tapered ends adapted to seat themselves in tapered apertures in said split channel sections, and a plurality of clusters of springs symmetrically arranged around and carried by said spoke portion, each cluster being arranged to coöperate with one of said cross pins.

2. A spring vehicle wheel comprising a hub and spoke portion, a tread portion, a plurality of sets of springs carried by one of said portions, a cross head structure disposed between the springs of each set and carried by the other of said portions, caps for the ends of said springs arranged to slidingly engage their cross head structures, and means independent of said springs for connecting said caps to prevent the complete expansion of the springs.

3. A spring vehicle wheel comprising a hub and spoke portion, a tread portion, a plurality of sets of springs carried by one of said portions, a cross head structure disposed between the springs of each set and carried by the other of said portions, caps for the ends of said springs arranged to slidingly engage their respective cross head structures, and means for holding said springs laterally rigid but permitting compression thereof.

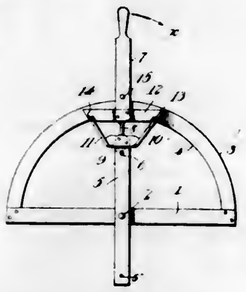
4. A spring vehicle wheel comprising a hub and spoke portion, a tread portion, a plurality of sets of springs carried by one of said portions, a cross head structure disposed between the springs of each set and carried by the other of said portions, and caps for the ends of said springs arranged to have a sliding bearing contact only on said cross head structure.

5. A spring vehicle wheel comprising a hub and spoke portion, a tread portion, a plurality of sets of springs carried by one of said portions, a cross head structure disposed between the springs of each set and carried by the

other of said portions, said springs being arranged to cooperate with said cross heads but not permanently connected therewith, and means for holding said springs in restrained position as regards complete expansion but permitting compression thereof when actuated by movement of said cross heads.

[Claims 6 and 7 not printed in the Gazette.]

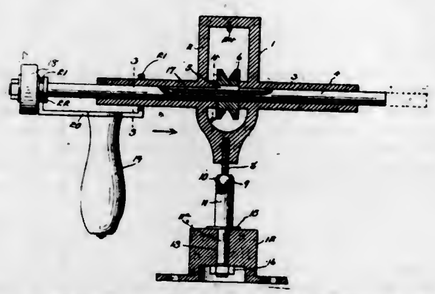
1,156,961. LEVER. BENJAMIN H. WITHERBEE, Red Cloud, Nebr. Filed Dec. 30, 1913. Serial No. 809,511. (Cl. 74—39.)



1. In combination, a pivotally supported lever having a flexible part intermediate of its ends, a locking bar with an inner edge in an arc of a circle, a detent secured to said lever below said flexible part having opposite ends in frictional engagement with said inner edge, and a striker plate secured to said lever above said flexible part the ends of which are notched, said striker arranged to engage said detent to disengage the same, said notches engaging said detent to limit the movement of the fixed end of said lever.

2. In a device of the character described, a pivotally supported lever comprising a flat bar which at a point intermediate of its ends is twisted at right angles to provide a flexible part, a locking bar with an inner edge in an arc of a circle, a detent secured to said lever below said flexible part having opposite ends in frictional engagement with said inner edge, and a striker plate secured to said lever above said flexible part the ends of which are notched, said striker arranged to engage said detent to disengage the same, said notches engaging said detent to limit the movement of the flexed end of said lever.

1,156,962. INTERNAL GRINDER. JAMES WILSON, Watertown, S. D. Filed Dec. 7, 1914. Serial No. 875,821. (Cl. 51—4.)

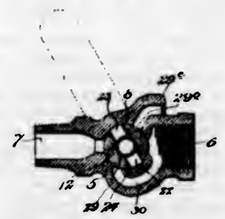


1. A device of the character described including a slidable tool mandrel, a driving pulley thereon having a sliding connection therewith, a bracket for said mandrel, a base, a pivoted connection between said base and bracket and resilient means connected to said bracket to yieldingly retain the same in operative position.

2. A device of the type described, including a bracket or support, comprising a grinding tool equipped mandrel, a frame-like member having a tubular bearing extending from said frame-like member, said mandrel being equipped with a driving pulley having a sliding connection with said mandrel, and means for supporting said frame-like member, having adjustable connection therewith and a post, said adjustable connection having a ball and socket joint connection with said post.

3. A device of the character described, including a slidable tool mandrel, a driving pulley thereon having a sliding connection therewith, a bracket for said mandrel, a base, a ball and socket connection between said base and said bracket and resilient means connected to said bracket to yieldingly retain the same in operative position.

1,156,963. VALVE. NORMAN E. WOODS, Richmond, Va. Filed Apr. 20, 1914. Serial No. 833,171. (Cl. 83—47.)



1. A valve of the character described comprising a casing having inlet, outlet and exhaust ports, a manually operable rotary plug valve in said casing provided with a central longitudinal passage for coöperation with said ports, a screen fitted in said passage so as to provide pockets on opposite sides of the valve and screen, and means for permitting rotation of the valve in one direction and holding the valve against rotation in the opposite direction.

2. A valve of the character described comprising a casing having inlet, outlet and exhaust ports, a manually operable rotary plug valve in said casing provided with a central longitudinal passage for coöperation with said ports, a circular screen fitted in said passage concentric with the axis of the valve so as to provide pockets on opposite sides of the valve and screen, and means for permitting rotation of the valve in one direction and holding the valve against rotation in the opposite direction.

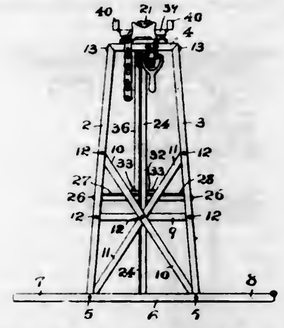
3. In a valve of the character described comprising a casing having inlet, outlet and exhaust ports, a manually operable rotary plug valve in said casing provided with a central longitudinal passage for coöperation with said ports, a screen fitted in said passage so as to provide pockets on opposite sides of the valve and screen, and means for permitting rotation of the valve in one direction and holding the valve against rotation in the opposite direction, the said exhaust port being provided with a guard portion rendering said port of angular form so as to prevent the introduction of an implement whereby the screen may be perforated.

1,156,964. ELECTRICITY-METER. RUDOLF ZIEGENBERG, Berlin-Schoeneberg, Germany, assignor to Johannes Elster, Berlin, Germany. Original application filed Apr. 16, 1913, Serial No. 761,603. Divided and this application filed Oct. 3, 1914. Serial No. 864,776. (Cl. 171—211.)



In a commutator for a multiple pole direct current meter, the combination of a plurality of metal strips, each having a hole for the passage of a spindle, said strips being disposed so that the holes coincide with each other, and each strip forms a plurality of commutator segments.

1,156,965. PIPE-FITTER'S VISE-BENCH. FREDERICK ACKERMAN, North Bergen, N. J. Filed July 27, 1915. Serial No. 42,181. (Cl. 29—1.)



1. A pipe fitter's vise bench comprising a supporting frame-work and a table-like member mounted on said frame-work, said frame-work comprising a pair of front uprights and a base-bar connected with the lower ends of said uprights, said base-bar having its end-portions extending laterally beyond the said lower ends of the uprights, and of sufficient length to receive the foot of the operator, so as to provide pressure-receiving foot-pieces.

2. A pipe fitter's vise bench comprising a supporting frame-work and a table-like member mounted upon said frame-work, said frame-work comprising a pair of front uprights and a base-bar connected with the lower ends of said uprights, said base-bar having its end-portions extending laterally beyond the said lower ends of the uprights, and of sufficient length to receive the foot of the operator so as to provide pressure-receiving foot-pieces, and a downwardly and rearwardly extending leg also comprising a part of the said frame-work.

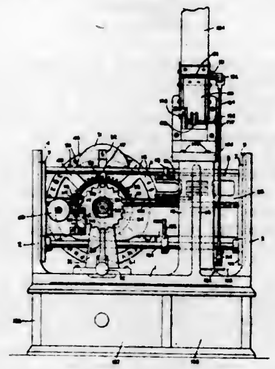
3. A pipe fitter's vise bench comprising a supporting frame-work consisting of a pair of front uprights and a base-bar connected with the lower ends of said uprights, said base-bar having its end-portions extending laterally beyond the said lower ends of the uprights and of sufficient length to receive the foot of the operator, so as to provide pressure-receiving foot-pieces, a connecting member at the upper end-portions of the said uprights, a horizontal frame extending rearwardly from said connecting member, a plate providing a table mounted in said horizontal frame, and a rearwardly and downwardly extending leg pivotally connected with said horizontal frame.

4. A pipe fitter's vise bench comprising a supporting frame-work consisting of a pair of front uprights and a base-bar connected with the lower ends of said uprights, said base-bar having its end-portions extending laterally beyond the said lower ends of the uprights so as to provide pressure-receiving foot-pieces, a connecting member at the upper end-portions of the said uprights, a horizontal frame extending rearwardly from said connecting member, a plate providing a table mounted in said horizontal frame, a rearwardly and downwardly extending leg pivotally connected with said horizontal frame, a supporting bar pivotally connected with said leg, and a work-supporting guard mounted upon said supporting bar.

5. A pipe fitter's vise bench comprising a supporting frame-work consisting of a pair of front uprights and a base-bar connected with the lower ends of said uprights, said base-bar having its end-portions extending laterally beyond the said lower ends of the uprights so as to provide pressure-receiving foot-pieces, a connecting member at the upper end-portions of the said uprights, a horizontal frame extending rearwardly from said connecting member, a plate providing a table mounted in said horizontal frame, a rearwardly and downwardly extending leg pivotally connected with said horizontal frame, angularly disposed brace-rods pivotally connected with said front uprights, an end-member connected with each brace-rod, said end-member embracing a portion of said leg, and a pin for detachably connecting said end-members with said leg.

[Claims 6 to 11 not printed in the Gazette.]

1,156,966. PRINTING-MACHINE. MARCUS O. ANTHONY, Englewood, N. J., assignor to A. Kimball Company, New York, N. Y., a Corporation of New York. Filed June 27, 1914. Serial No. 847,698. (Cl. 101—130.)



1. In a machine of the class described, printing mechanism including a chase, a type magazine, and means for transferring said chase from printing position into proximity to said magazine whereby the type may be introduced from said magazine directly into said chase and means for advancing the chase step by step as successive type are introduced.

2. In a machine of the class described, printing mechanism including a chase, a chambered type magazine and a guideway for said chase whereby the same may be shifted from printing position into proximity to said magazine to permit the introduction of type from said magazine directly into said chase, or the distribution of the type from said chase into the proper chambers of the magazine and means for advancing the chase step by step as successive type are introduced into or removed from the chase.

3. In a machine of the class described, printing mechanism including a chase having a series of type receiving recesses, a chambered type magazine and a guideway for said chase whereby the same may be shifted from printing position into proximity to said magazine to permit the introduction of type from said magazine directly into the respective recesses of said chase, or the distribution of the type from said chase directly into the proper chambers of the magazine, and means for preventing the improper distribution of the type.

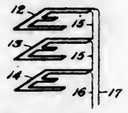
4. In a machine of the class described, printing mechanism including a chase, a chambered type magazine and a guideway for said chase whereby the same may be shifted from printing position into proximity to said magazine to permit the introduction of type directly from said chase into the proper chambers of the magazine, and means for preventing the improper distribution of the type comprising coöperating ribs or grooves upon each type and the wall of its chamber so disposed as to prevent the introduction of any type other than the one designed to be received by this particular chamber.

5. In a machine of the class described, printing mechanism including a chase, a rotatable cylindrical type magazine having a series of circumferentially arranged chambers each of which is adapted to receive a plurality of type, a guideway for said chase normal to the axis of the

magazine to permit the same to be placed in printing position or in proximity to the delivery end of said magazine, means for selecting the type and means for transferring the same from the type chambers of the magazine directly into the chase.

[Claims 6 to 32 not printed in the Gazette.]

1,156,967. ELECTRIC INCANDESCENT LAMP. ARTHUR E. APPLEYARD, Ashland, Wis. Filed Feb. 13, 1914. Serial No. 818,474. (Cl. 176—14.)

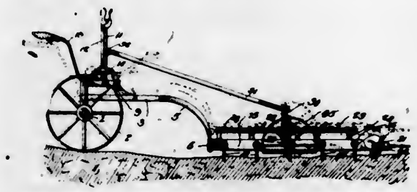


1. An electric incandescent lamp comprising a plurality of separate filament members of like form, each of which defines the outline of a sign character, said members being arranged one behind another, and non-incandescent conductors connecting said members in series.

2. An electric incandescent lamp comprising a plurality of separate filament members of like form such as an alphabetic or numeric character, said members being arranged one behind another, non-conducting supports sustaining said members independently of each other, and non-incandescent conductors connecting said members in series.

3. An electric incandescent lamp comprising a filament member the ends of which are adjacent each other, said member being formed to define the outling of a sign character of greater thickness than said member.

1,156,968. SELF-DUMPING DRAG-HARROW. WILLIAM S. BALES, Kopperl, Tex. Filed Sept. 27, 1913. Serial No. 792,154. (Cl. 55—34.)



In a device of the class described the combination with a harrow supporting frame, said supporting frame consisting of a pair of parallel bars, each of said bars having an offset end, a pair of frame beams, socket portions carried at the rear end of said frame beams, harrow bars carried by said beams, said offset ends fitting into said socket portions, and an axle supporting said supporting frame, runners carried by said harrow bars, and means engaging said runners for bodily raising said harrow bars upwardly.

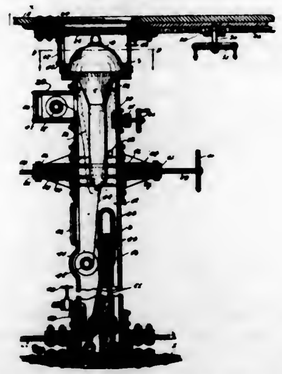
1,156,969. ARTIFICIAL FILAMENT AND OTHER PRODUCT. WALLACE APPLETON BEATTY, New York, N. Y., assignor, by direct and mesne assignments, to George W. Beadle, New York, N. Y. Filed Jan. 3, 1913. Serial No. 740,079. (Cl. 106—40.)

1. The herein described new article of manufacture consisting of a woven fabric comprising threads containing as an essential element a mixture of dioxy-diphenyl-dimethyl-methane and cellulose acetate, substantially as described.

2. The herein described new article of manufacture consisting of a thread adapted to be woven into a fabric and containing as an essential element a mixture of dioxy-diphenyl-dimethyl-methane and cellulose acetate, substantially as described.

3. The herein described new article of manufacture consisting of a fiber adapted to be twisted into a thread and containing as an essential element a mixture of dioxy-diphenyl-dimethyl-methane and cellulose acetate, substantially as described.

1,156,970. SAFETY APPARATUS FOR SUBMARINES. MARCEL JOSEPH LEON PAUL BONARD, Montreal, Quebec, Canada. Filed Apr. 21, 1914. Serial No. 833,455. (Cl. 114—16.7.)



1. An apparatus of the character described comprising, a submarine hull provided with an opening, a well erected within the same and inclosing said opening, short chains within said well and solidly connected to said hull, clamping jaws slidably mounted within said well and adapted to simultaneously grip a lifting cable and close off the lower part of said well, and means for connecting said short chains to a lifting cable.

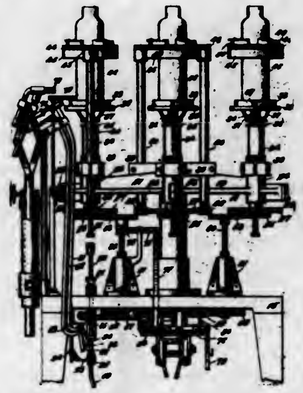
2. An apparatus of the character described comprising, a submarine hull provided with an opening, a well erected within the same and inclosing said opening, short chains within said well and solidly connected to said hull, clamping jaws slidably mounted within said well and adapted to simultaneously grip a lifting cable and close off the lower part of said well, means for removing the water from the lower part of the well when the said clamping jaws have been closed, and means for permitting entrance to the lower part of the said well.

3. An apparatus of the character described comprising a submarine hull provided with an opening, a well erected within the same and inclosing said opening and adapted to receive a signaling buoy, means for normally closing the said opening, operating means therefor, means within the well for expelling the buoy therefrom and operable from within the said hull, short chains located within the lower part of the said well and securely fastened to the said hull, clamping jaws slidably mounted within the well and adapted to be forced together upon a lifting cable lowered into the well so as to simultaneously grip the same and form a water tight closure above the said chains, operating means therefor, means for removing the water from the lower part of the well when the said clamping jaws have thus been closed, and means for permitting entrance to the lower portion of the said well.

4. In combination, a hull, a rescue chamber suspended therein and provided at its top with an opening through the said hull, means for normally closing the said opening, operating means therefor, means for permitting entrance to the said chamber, a well extending to the top and bottom of the said hull and communicating with an opening through the hull at its upper end, means for normally closing the said opening, operating means therefor, short chains in the lower part of the said well secured to the said hull, means for gripping a cable lowered into the said well and for forming a water tight closure across the well above the said chains, operating means therefor, means for removing water from the lower part of the well when the gripping means are closed, and means for permitting entrance into the lower part of the said well.

5. In combination; a submarine hull; a rescue chamber suspended therein and provided, at its top, with an opening extending through the said hull; a slidably mounted gate adapted to normally close the said opening; operating means therefor, such means being adapted to be operated from within the said chamber, from within the said hull, or from without the hull; a water tight door adapted to permit entrance to the said chamber; means for securing the said door closed and operable either from within the chamber or from within the hull; means for emptying the said chamber of water controlled from within the said chamber; means for emptying the chamber of water controlled from within the said hull; a well extending from top to bottom of said hull and provided in its upper end with an annular shoulder adapted to form a seat for the head of a headed signaling buoy and to hold the same suspended within the said well, the said well communicating at its upper end with an opening through the said hull; means located within the said well for lifting a buoy seated therein; operating means therefor operable from within the said hull; a sliding gate adapted to normally close the said opening at the upper end of the well; means for operating the said gate from within the said hull; short chains located in the lower part of the said well and securely fastened to the hull; clamping jaws slidably mounted at each side of the well, above the said chains, and adapted to simultaneously grip a cable lowered into the said well and to form a water tight closure across the well; means for operating the said jaws from within the hull; means for removing water from the lower part of the well when the said jaws are in operative position; and means for permitting access to the lower part of the said well.

1,156,971. MACHINE FOR THE MANUFACTURE OF VACUUM-RECEPTACLES. WILLIAM R. BURROWS, Newark, N. J. Filed Mar. 14, 1911. Serial No. 614,288. (Cl. 49—7.



1. In a machine for aiding in the closing together of the lower portion of the side walls of a partly formed outer member of a vacuum-receptacle below and spaced from the closed bottom of the inner member thereof, a chuck-mechanism having means to engage the sides of said outer member, a supporting mechanism to receive the lower end of said outer member at a distance below said inner member, means for rotating said mechanisms and the members carried thereby, a burner for directing a flame against said lower portion of the outer member during such rotation, whereby a tool may be applied for moving the softened lower wall portions of the outer member inwardly during such rotation, to close the same together below said inner member, means for temporarily arresting the rotation of said mechanisms and members prior to the closing of the lower end of the outer member, a jet burner for softening a spot in the lower part of said outer member, and pneumatic means for forming a hole through the same at said spot.

2. In a machine for aiding in the closing of the lower portion of the outer member of a vacuum-receptacle with relation to the closed bottom of the inner member thereof, a chuck mechanism comprising a ring gear wheel adapted to receive within it the outer receptacle-member containing the inner member and having releasable clamping means for engaging the side surfaces of the same, a frame supporting said ring gear wheel, a support for the lower open end of said outer member, a rod (31) constituting a part of said support, a sleeve (25) connected with said rod, a gear wheel connected with said sleeve, means for imparting rotary motion to said gear wheel, and a rod having pinions in mesh with said gear wheel and said ring gear wheel for assuring simultaneous rotation of said clamping means and said support, combined with a burner for directing a flame against the lower portion of said outer member during its rotation for enabling the closing inwardly of the same by an applied tool.

3. In a machine for aiding in the closing of the lower portion of the outer member of a vacuum-receptacle with relation to the closed bottom of the inner member thereof, a chuck mechanism comprising a ring gear wheel adapted to receive within it the outer receptacle-member containing the inner member and having releasable clamping means for engaging the side surfaces of the same, a frame supporting said ring gear wheel, a support for the lower open end of said outer member, a manually releasable clutch mechanism for engaging the lower edge of said outer member and connecting the same with said support, a rod (31) constituting a part of said support, a sleeve (25) connected with said rod, a gear wheel connected with said sleeve, means for imparting rotary motion to said gear wheel, and a rod having pinions in mesh with said gear wheel and said ring gear wheel for assuring simultaneous rotation of said clamping means and said support, combined with a burner for directing a flame against the lower portion of said outer member during its rotation for enabling the closing inwardly of the same by an applied tool.

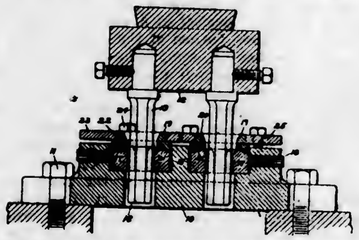
4. In a machine for aiding in the closing of the lower portion of the outer member of a vacuum-receptacle with relation to the closed bottom of the inner member thereof, a chuck mechanism comprising a ring gear wheel adapted to receive within it the outer receptacle-member containing the inner member and having releasable clamping means for engaging the side surfaces of the same, a frame supporting said ring gear wheel, a support for the lower open end of said outer member, clutch arms pivoted to said support and adapted at their upper end to engage the lower part of said outer member for connecting the same with said support, a vertically movable disk engaging the lower ends of said clutch arms for operating the same, a spring acting against said disk to close said arms against the receptacle-member, a spool below said disk for manual movement against the same to open said arms from said member, a rod (31) constituting a part of said support, a sleeve (25) connected with said rod, a gear wheel connected with said sleeve, means for imparting rotary motion to said gear wheel, and a rod having pinions in mesh with said gear wheel and said ring gear wheel for assuring simultaneous rotation of said clamping means and said support, combined with a burner for directing a flame against the lower portion of said outer member during its rotation for enabling the closing inwardly of the same by an applied tool.

5. In a machine for aiding in the closing of the lower portion of the outer member of a vacuum-receptacle with relation to the closed bottom of the inner member thereof, a chuck mechanism comprising a ring gear wheel adapted to receive within it the outer receptacle-member containing the inner member and having releasable clamping means for engaging the side surfaces of the same, a frame supporting said ring gear wheel, a support for the lower open end of said outer member, a tubular rod (31) constituting a part of said support, a sleeve (25) connected with said rod, a gear wheel connected with said sleeve, means for imparting rotary motion to said gear wheel,

and a rod having pinions in mesh with said gear wheel and said ring gear wheel for assuring simultaneous rotation of said clamping means and said support, combined with a burner for directing a flame against the lower portion of said outer member during its rotation for enabling the closing inwardly of the same by an applied tool, means for temporarily arresting the rotation of said chuck-mechanism and members prior to the closing of the lower end of the outer member, a jet-burner for softening a spot in the lower part of said outer member, and means for directing air under pressure through said tubular rod to within said outer member for blowing a hole outwardly through the same at said spot.

[Claims 6 and 7 not printed in the Gazette.]

1,156,972. APPARATUS FOR FORMING HOLLOW ARTICLES BY DIES. HJALMAR G. CARLSON, Worcester, Mass., assignor to Rockwood Sprinkler Company of Massachusetts, a Corporation of Massachusetts. Filed Dec. 28, 1914. Serial No. 879,339. (Cl. 113—43.)



1. In a device for producing hollow articles from sheet metal blanks, the combination of a die, a second die located adjacent to and centered with respect to the first die and having a different cross section, and a punch having a cross section similar to that of the second die and movable through the first die directly into the second die.

2. In a device for producing hollow articles from sheet metal blanks, the combination with two dies arranged axially in alinement with each other, both dies having passages therethrough, the passage in the first die being larger than the passage in the second die and of different shape, a punch movable through the passages in both dies, and means connected with the dies for centering them with respect to each other.

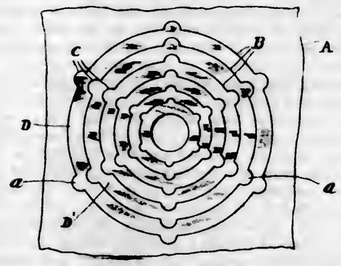
3. In a device for producing hollow articles from sheet metal blanks, the combination of a reducing die having a passage therethrough of circular cross section and flared out at the entrance end, and a second die centered with respect to the reducing die and provided with a passage smaller than the passage in the reducing die and of polygonal cross section and flaring out at the surface nearest the reducing die and formed at the surface of substantially the same shape as that of the passage through the reducing die, means coöperating with said dies for centering them with respect to each other, and a punch adapted to pass through the reducing die into the second die and having a cross section similar to the cross section of the passage through the second die.

4. In a device of the character described, the combination of a die bed having a recess in its face, an inner die adapted to be received in said recess and provided with a passage therethrough, an outer die having a passage therethrough larger than the passage in the inner die and centered on said inner die, and means for adjusting the inner die in said recess and securing it in adjusted position.

5. In a device of the character described, the combination of a die bed having a plurality of recesses therein, a plurality of dies arranged in each recess, one die of each set being seated at the bottom of the recess, means for adjusting the last named dies in their respective recesses and securing them in adjusted positions, and a plunger block having a series of punches in fixed position thereon, one for each set of dies.

[Claims 6 to 10 not printed in the Gazette.]

1,156,973. METHOD OF MAKING NUTS AND THE LIKE. HJALMAR G. CARLSON, Worcester, Mass., assignor to Rockwood Sprinkler Company of Massachusetts, Worcester, Mass., a Corporation of Massachusetts. Original application filed Feb. 1, 1913, Serial No. 745,527. Divided and this application filed Feb. 24, 1914. Serial No. 820,500. (Cl. 10—86.)

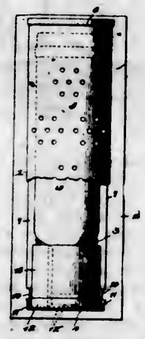


1. The method of making nuts which consists in punching from a sheet of metal a series of concentric rings each of a general circular shape by a series of successive punching operations, the periphery of each ring, except the outside one, being substantially coincident with the internal boundary of the next larger one, and each ring having ribs on its outer surface spaced from each other and cut from the material of the next larger ring in position to register with the corresponding recesses thereof.

2. The method of making nuts and the like which consists in punching from a sheet of metal a series of concentric rings of a general circular shape, and providing thereon external ribs, the ribs being formed from material cut from the circular inner edge of the next larger ring, and screw threading the arcuate portions of the inner surface of each ring.

3. The method of making metal articles which consists in punching from a sheet of metal a series of concentric rings each of a general circular shape, the periphery of each ring, except the outside one, being substantially coincident with the internal boundary of the next larger one, and providing each ring with ribs on its outer surface spaced from each other and cut from the material of the next larger ring to form internal recesses therein, the ribs of each ring being in position to register with the recesses thereof.

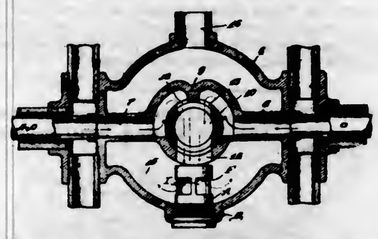
1,156,974. SELF-FEEDING DISINFECTING AND DEODORIZING DEVICE. GEORGE F. CHAPMAN, Natick, Mass. Filed Dec. 5, 1913. Serial No. 804,849. (Cl. 220—141.)



In a disinfecting device, a casing comprising a back plate having offset side flanges, rearwardly extending projections on said flanges adjacent their lower ends, a bottom plate extending forwardly from said back plate, a hood disposed outwardly of said bottom plate and having

inwardly extending side flanges slidably engaging the rear faces of said first named flanges, said last named flanges being cut away adjacent their lower ends to form prongs engaging over said projections for preventing downward movement of said hood, an inwardly extending projection on the top of said back plate, a flanged cover plate seated upon the top edges of said back plate and hood, and means carried by said cover plate and engaging beneath said last named projection.

1,156,975. DEVICE FOR MIXING GASES. ALBERT CHARLES CLARK, Chicago, Ill., assignor to A. C. Clark & Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 1, 1914. Serial No. 828,649. (Cl. 48—180.)



1. In apparatus of the character described and having a casing formed with an annular chamber and central valve means for supplying different gases in a common radial stream, a cylindrical shell having a base portion seated in the outer wall of said annular chamber and a perforated central portion and an open-ended inner portion arranged to receive said stream of gases axially adjacent said valve means, and spirally inclined deflecting means arranged to produce an eddy in said stream.

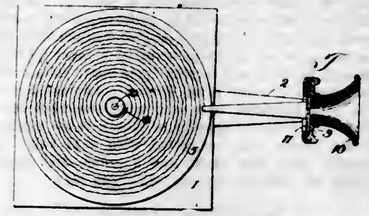
2. In apparatus of the character described and having a casing formed with an annular chamber and central valve means for supplying different gases in a common radial stream, a cylindrical shell having a base portion seated in the outer wall of said annular chamber and a perforated central portion and an open-ended inner portion arranged to receive said stream of gases axially adjacent said valve means, two spider frames arranged respectively in said base portion and said inner portion, and a screw fan mounted axially of the shell in said spider frames.

3. In apparatus of the character described and having a casing formed with an annular chamber and central valve means for supplying different gases in a common radial stream, a cylindrical shell having a base portion seated in the outer wall of said annular chamber and a perforated central portion and an open-ended inner portion arranged to receive said stream of gases axially adjacent said valve means, a transparent window closing the outer end of said base portion, two spider frames arranged respectively in said base portion and said inner portion, and a screw fan mounted axially of the shell in said spider frames.

1,156,976. APPARATUS FOR RECORDING AND REPRODUCING SOUNDS OR SIGNALS. EDWARD E. CLEMENT, Washington, D. C. Original application filed Nov. 14, 1905, Serial No. 287,328. Divided and this application filed Nov. 29, 1911. Serial No. 663,115. (Cl. 181—1.)

1. In an apparatus for recording and reproducing speech or signals, the combination of a magnetizable body having a magnetized trace of substantially uniform intensity and following an undulatory path corresponding to sound valves, a second magnetizable body connected to a sounding device, and means for subjecting said second magnetizable body to the action of said magnetized trace whereby the undulations of the trace are transmitted in vibrations to the sounding device.

2. In an apparatus for recording and reproducing speech or signals, the combination of a magnetizable body having a magnetic trace of uniform magnetic strength and following an undulatory path corresponding to sound waves, a magnetic device of constant magnetic strength, a sounding device connected with said magnetic device, and means for effecting compound relative movement between said body and said magnetic device whereby the magnetized part of said body will act in passing upon said magnetic device.



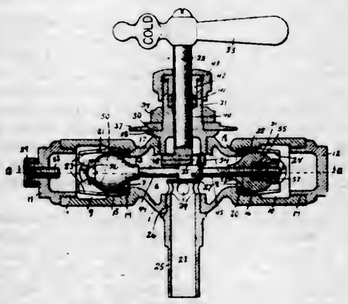
3. In an apparatus for recording and reproducing sound, the combination of a magnetic body having upon it a continuous magnetic trace of substantially constant strength or intensity extending in a sinuous path, a movable magnetic pole piece, a vibrating device, connecting means between said pole piece and said vibrating device, together with means for producing compound relative motion between the magnetic body and the movable pole piece whereby the latter will follow the general path of said magnetic trace, and will be affected by the sinuosities thereof, and will in turn produce corresponding movements of the vibrating device.

4. In an apparatus for recording and reproducing sound and signals, the combination of a magnetic body having a continuous magnetized trace therein of substantially constant strength or intensity extending in a wavy path, a receiver magnet and diaphragm, and means for subjecting said magnet to the action of said wavy trace of magnetism, whereby it will tend to follow said trace and thus vibrate its diaphragm.

5. In an apparatus for recording and reproducing sound, the combination of a magnetic body having a continuous magnetic trace thereon of substantially constant strength or intensity extending in a wavy path, a magnet, a diaphragm, means for producing motion of said magnetic body and for exposing said magnet to the action of said wavy trace of magnetism during said movement, and means for transmitting from said magnet to said diaphragm the waves or vibrations thus magnetically set up.

[Claim 6 not printed in the Gazette.]

1,156,977. VALVE. JACOB CLOOS, Milwaukee, Wis.; Arthur R. Barry administrator of said Cloos, deceased. Filed Apr. 13, 1914. Serial No. 831,401. (Cl. 137—26.)

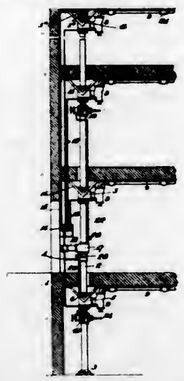


1. In a valve, the combination of a body provided with a mixing chamber and waterways in communication therewith and an outlet therefrom, said waterways being provided with shoulders and screw-threads, of packing seated against said shoulders, screw-threaded bushings screwed

in said waterways against said packing and having their outer ends notched to regulate the passage of water, globular, metallic valve plugs fitting substantially water tight in said bushings to co-act with the notched ends thereof to regulate the passage of water, a crank disk, and valve stems connecting said valve plugs with said crank disk.

2. In a valve, the combination of a body provided with a mixing chamber and waterways in communication therewith and an outlet therefrom and a table in the mixing chamber, said waterways being provided with shoulders and screw threads, of packing seated against said shoulders, screw-threaded bushings screwed in said waterways against said packing and having their outer ends notched, globular, metallic valve plugs fitting substantially water tight in said bushings to co-act with the notched ends thereof to regulate the passage of water, valve stems provided with crank pins connected with said valve plugs and resting upon said table, and a crank disk provided with crank pin holes to receive said crank pins.

1,156,978. STAND-PIPE AND SPRINKLER SYSTEM. WILLIAM F. CONRAN, Jr., Brooklyn, N. Y. Filed Nov. 17, 1908. Serial No. 463,018. (Cl. 169—20.)



1. In a stand-pipe system for buildings, the combination of a movable stand-pipe, one or more nozzles for projecting a stream from said pipe, valves carried by said pipe for controlling the flow to said nozzles, means for controlling said valves from a common point, a sprinkler system and controlling valves connected to said stand-pipe at several points, means for controlling said valves from a common point, and connections between said stand-pipe and sprinkler system for permitting movement of the former without affecting the latter.

2. In a stand-pipe system for buildings, the combination of a movable stand-pipe, one or more nozzles for projecting a stream from said pipe, valves carried by said pipe for controlling the flow to said nozzles, means for controlling said valves from a common point, a sprinkler system and controlling valves connected to said stand-pipe at several points, means for controlling said valves from a common point, means for preventing movement of the controlling valve casings, and connections between said stand-pipe and sprinkler system for permitting movement of the former without affecting the latter.

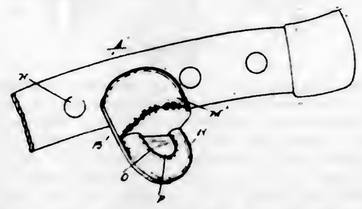
3. In a stand-pipe system for buildings, the combination of a rotary stand-pipe, one or more nozzles for projecting a stream from said pipe, valves carried by said pipe for controlling the flow to said nozzles, a sprinkler system and controlling valves in each branch of the sprinkler system, a series of independent pipes leading to each controlling valve from a common point or operating station, a valve at the operating station for connecting each control pipe with the stand-pipe to control the flow of water, for affecting the opening or closure of said controlling valves, and connections between said stand-pipe and sprinkler system for permitting movement of the former without affecting the latter.

4. In a stand-pipe system for buildings, the combination with a movable stand-pipe, a nozzle and a controlling valve carried by said pipe at several points, means for controlling said valves from a common point, of a sprinkler system and controlling valves connected to the pipe at several points, and a system of hydraulic control for the controlling valves of each branch of the sprinkler system, said control system being supplied with water through a connection made at or near the top of the standpipe.

5. In a stand-pipe system for buildings, the combination with a movable stand-pipe of a stationary sprinkler system and controlling valves connected to the standpipe at several points, and a system of hydraulic control for the controlling valves of each branch of the sprinkler system, said control system being supplied with water through a connection made at or near the top of the standpipe.

[Claims 6 to 8 not printed in the Gazette.]

1,156,979. RUPTURE APPLIANCE. GEORGE D. COOPER, St. Johns, Mich. Filed Mar. 31, 1913. Serial No. 758,006. (Cl. 128—26.)



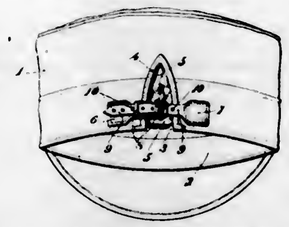
1. A rupture pad composed of two sections, one of said sections projecting inwardly beyond the other and the last-mentioned section provided with a U-shaped body-engaging portion providing a depression, said depression being reinforced by a reinforcing button.

2. A rupture pad composed of two sections, one of said sections projecting inwardly beyond the other, and the other of said sections having a body-engaging portion having a ridge of substantially uniform height throughout.

3. A rupture pad composed of two sections, one of said sections projecting inwardly beyond the other, the other of said sections having a body-engaging portion of substantially uniform height throughout, and being provided with a centrally-located depression.

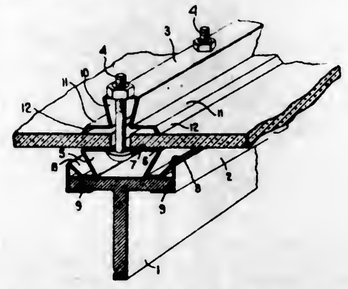
4. A rupture pad composed of two adjoining sections, one of said sections projecting inwardly a considerable distance beyond the other, said inwardly-projecting section having a comparatively wide flat inner face, and the wall intermediate the sections lying in a plane substantially at right angles to the plane of said inner face.

1,156,980. CAP. WILLIAM S. COPPERS, Belleville, Kans. Filed Sept. 22, 1914. Serial No. 862,983. (Cl. 2—106.)



A cap provided with a sweat band and having the material of both the body of the cap and the sweat band cut out from the lower edge of the cap toward the crown thereof with the cut-out portion completely severing the sweat band and extending into the body of the cap above the sweat band and with the cut-out tapering toward the crown of the cap, a tapering insert of cloth thinner than the body of the cap at the sweat band portion, said insert being attached to the cap and sweat band at the opposite edges of the cut-out, and a take-up strap and buckle on the exterior of the band portion of the cap with the strap attached to the cap at one side of the cut-out and the buckle at the other side thereof, and the strap being of a length to permit the extension of the cap to the full width of the insert, whereby the insert when the cap is contracted is multi-folded upon itself to constitute a protecting cushion between the buckle and the head of the wearer without the entire thickness of the multi-folded portions exceeding the thickness of the cap at the margin of the cut out.

1,156,981. GLAZING-STRIP. WILLIAM W. CROCKER, Somerville, Mass. Filed Oct. 3, 1913. Serial No. 793,091. (Cl. 108—16.)

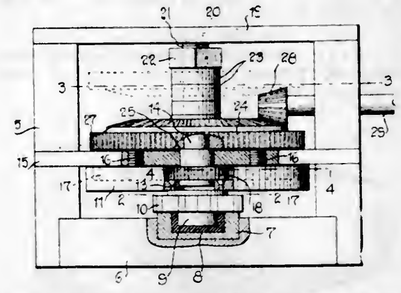


1. In a device of the character described, the combination with a T-shaped sash bar, of a combined glass-supporting and gutter-forming member mounted thereon and consisting of a single strip of sheet metal bent to present two parallel gutters which rest on the upper surface of the sash bar, the portion of said strip between the gutters being elevated from the top of the sash bar and presenting a flat glass-receiving surface, each of the outer edges of said strip being bent downwardly and then inwardly underneath the edges of the sash bar thereby to embrace said edges, a retaining member situated above the glass-supporting member and constructed to clamp the glass against the glass-receiving surface, and bolts extending through said retaining member and the glass-receiving portion of the glass-supporting member to hold the retaining member in position.

2. In a device of the character described, the combination with a T-shaped sash bar, of a combined glass-supporting and gutter-forming member mounted thereon and consisting of a single strip of sheet metal bent to present two parallel gutters which rest on the upper surface of the sash bar, the portion of said strip between the gutters being elevated from the top of the sash bar and presenting a flat glass-receiving surface, each of the outer edges of said strip being bent downwardly and then inwardly underneath the edges of the sash bar thereby to embrace said edges, a retaining member situated above the glass-supporting member and presenting a channel-shaped body portion and laterally-extending wings at the edge of the bottom portion, the edges of the wings being bent downwardly to constitute resilient glass-engaging edges, and bolts extending upwardly through the glass-receiving surface and through the channel-shaped portion of the retaining member to hold the latter in position.

3. In a device of the character described, in combination, a T-shaped sash bar, a glass-supporting member mounted thereon, consisting of a single strip of sheet metal so bent that its central portion provides an elevated flat glass-receiving surface with gutters at each side thereof, the edges being bent to embrace the flanges of the T-shaped sash bar to secure the strip thereto, a retaining member consisting of a single strip of sheet metal, its central portion being shaped to form an inverted channel, its lateral portions extending laterally with downwardly turned edges to provide flexible portions to yieldably engage the glass to hold it in place against the glass-supporting member and bolts to connect the retaining member to the glass-supporting member.

1,156,982. LEVER-ACTUATED POWER-TRANSMISSION GEARING. JOHN THOMAS DANIEL, Columbia, Tenn. Filed Nov. 11, 1914. Serial No. 871,522. (Cl. 74—7.)



1. In a power transmission gearing, a driving shaft, a driven shaft, a reversible gear member on said driving shaft provided with an annular series of gear teeth upon one face, a pinion on the driven shaft, means for securing said gear member upon the driving shaft with its teeth in engagement with the teeth upon either side of said pinion to rotate the driven shaft in either direction, and means for rotating said driving shaft.

2. In a power transmission gearing, a driving shaft provided with an annular shoulder, a driven shaft, a gear member arranged upon the driving shaft and provided with an annular series of teeth upon one face, a pinion upon the driven shaft to mesh with said teeth, a nut threaded upon one end of the driving shaft, a plurality of washers arranged between said nut and the gear member to clamp said member against the shoulder and with its teeth in engagement upon one side of the pinion of said driven shaft, said member being adapted to be removed and reversed upon the shaft and the spacing washers arranged between the same and the shoulder of said shaft, whereby the teeth of said member may be engaged upon the opposite side of said pinion and rotation of the driven shaft reversed, and means for rotating the driving shaft.

3. In a power transmission gearing, a vertically disposed driving shaft, a support therefor, a rotatable element, an internal gear fixed upon said element, gears mounted upon the support and meshing with said internal gear, a pinion on the shaft with which said latter gears are in mesh, a reversible gear member mounted upon the driving shaft, a driven shaft, a pinion fixed upon said driven shaft engaging said latter gear, means for securing said gear upon the vertical driving shaft for rotation therewith in engagement with either one of opposite sides of the pinion, whereby the rotation of the driven shaft may be reversed, and manually operable means for positively operating said rotary element.

4. In a power transmission gearing, a driving shaft, a driven shaft, a reversible driving member removably mounted upon said driving shaft, a power transmission element on the driven shaft, a plurality of spacing collars upon the driving shaft to retain the driving member thereon in coöperative engagement in either of its positions with the element on the driven shaft, and means for rotating said driving shaft.

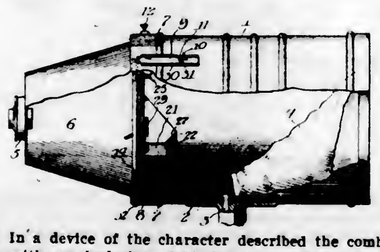
5. In a power transmission gearing, a driving shaft, a driven shaft, a reversible driving member removably mounted upon the driving shaft, a power transmission element fixed on the driven shaft, a plurality of collars removably mounted upon the driving shaft to retain the

driving member thereon in either of its positions in cooperative engagement with said driven element, a nut threaded upon the driving shaft to clamp said driving member and the collars together for rotation with said shaft, and means for rotating said driving shaft.

1,156,983. PROCESS FOR MAKING SILK FELTABLE. GOTTFRIED DIESSER, Zurich, Switzerland. Filed May 20, 1914. Serial No. 839,864. (Cl. 38—7.)

A process of making silk capable of being felted, consisting in exposing the silk to the action of liquid or gaseous formic acid to form a fibrous pulp and subsequently drying the silk.

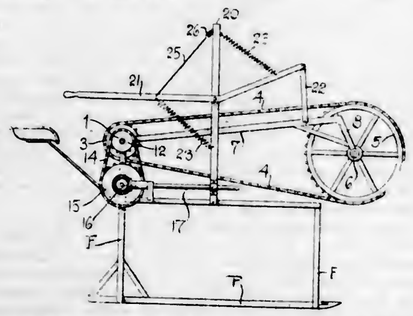
1,156,984. PHOTOGRAPHIC APPARATUS. DAVID DIMENTBERG, Chicago, Ill. Filed Apr. 22, 1912. Serial No. 692,245. (Cl. 95—11.)



1. In a device of the character described the combination with an inclosing shell forming a dark chamber, means therein for holding a sensitized element, a closure for one extremity of said shell, a lens structure carried by said closure, flexible entrance means for said shell to permit accessibility to said element, and means for adjustably holding said closure upon said shell, said means including an arm carried by the closure and a coöperating element therefor carried by the shell.

2. In a device of the character described the combination with an inclosing shell forming a dark chamber, means therein for holding a sensitized element, a closure for one extremity of said shell, a lens structure carried by said closure, and means for adjustably holding said closure upon said shell, said means including an arm carried by the closure, a coöperating element therefor carried by the shell, and a set screw to permanently secure said closure and shell together.

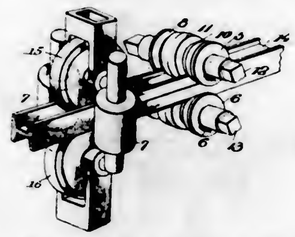
1,156,985. GRAIN-GATHERING DEVICE. PHILIP F. DUERR, Alvo, Nebr. Filed Mar. 13, 1915. Serial No. 14,149. (Cl. 56—22.)



1. A device of the character described comprising two parallel shafts, a sprocket secured adjacent each extremity of said shafts, one of said sprockets being loosely mounted, endless members disposed around corresponding sprockets of the shafts, slats connecting the endless members, and means coacting with the loosely mounted sprocket for causing the same to rotate in unison with its shaft, said loosely mounted sprocket serving as a medium to vary the angle of the slats relatively to the endless members.

2. A device of the character described comprising two parallel shafts, a sprocket secured adjacent each extremity of said shafts, one of said sprockets being loosely mounted, endless members disposed around corresponding sprockets of the shafts, slats connecting the endless members, means coacting with the loosely mounted sprocket for causing the same to rotate in unison with its shaft, said means comprising a member affixed to the shaft, and a latch carried thereby capable of detachable engagement with the loosely mounted sprocket, said loosely mounted sprocket serving as a medium to vary the angle of the slats relatively to the endless members.

1,156,986. ROLLING-MILL. WILLIAM A. DUNN, Duluth, Minn. Filed Aug. 14, 1914. Serial No. 856,788. (Cl. 80—34.)



1. In a rolling mill, in combination, a pair of superposed rolls, a pair of vertically disposed side gaging rolls, said first mentioned rolls being provided with grooves formed with flanges and longitudinally curved portions adjacent the grooves adapted to crowd the metal into the flange groove.

2. In a rolling mill, in combination, a pair of superposed rolls, one of said rolls having a flange groove, one side of which is convexly curved in the direction of its length to crowd the metal into said flange groove.

3. In a rolling mill, in combination, a pair of grooved rolls, each of said rolls having an outside curved portion adapted to force the metal into the grooves as the ingot is fed therethrough, a second pair of horizontally disposed rollers adapted to work between the flanges formed by the grooved rolls, said last mentioned horizontally disposed rollers being relatively narrow and U-shaped frames for said last mentioned rollers.

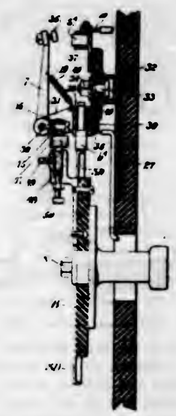
4. In a rolling mill, in combination, a pair of grooved rolls, each of said rolls having an outside curved portion adapted to force the metal into the grooves as the ingot is fed therethrough, and a second pair of horizontally disposed rollers, same being relatively narrow, U-shaped carrying frames therefor, vertically disposed side gaging rolls adapted to coact with the sides of the ingot as it is passed through the last mentioned pair of horizontally disposed rollers, to force the metal closely against the sides of said rollers and form the flanges on the beam.

5. In a rolling mill of the character described, in combination, horizontally disposed shaping rolls provided with grooves formed with flanges the portions adjacent the grooves being of curved contour to force the outer edge of the ingot into the grooves, a second set of horizontally disposed solid tread rollers superposed with relation to each other and journaled within carriers.

[Claim 6 not printed in the Gazette.]

1,156,987. AUTOMATIC ELEVATOR CONTROL. EDWARD L. DUNN, Worcester, Mass., assignor, by mesne assignments, to Standard Plunger Elevator Company, Worcester, Mass., a Corporation of Massachusetts. Filed Sept. 12, 1913. Serial No. 789,489. (Cl. 172—152.)

1. In an automatic elevator, the combination with reversible controlling means, of main up and down magnets for operating said means, an indicator movable synchronously with the car having separated up and down sides respectively connected to said up and down magnets, circuits corresponding to the several floors leading from said indicator, each circuit terminating in a brush bearing on said indicator, said brushes being transferred from one side of said indicator to the other as the car passes the corresponding floor, a normally closed switch in each circuit, a holding magnet corresponding to each floor circuit, means for selectively energizing one of said floor magnets to start the car, and means operated by said indicator for mechanically opening said switches to stop the car at the floor whose magnet was energized.



2. In an automatic elevator, the combination with reversible controlling means, of main up and down magnets for operating said means, an indicator movable synchronously with the car having up and down sides respectively connected to said up and down magnets, circuits corresponding to the several floors leading from said indicator, each circuit being transferred from one side of said indicator to the other as the car passes the corresponding floor, a holding magnet corresponding to each floor circuit, means for selectively energizing said floor magnets to start the car to a predetermined floor and maintaining a circuit through said indicator to said main and floor magnets, a normally closed floor switch in each of said floor circuits adjacent said indicator, and means carried by the indicator for mechanically operating said switches whereby to stop the car when the predetermined floor circuit is opened by said indicator.

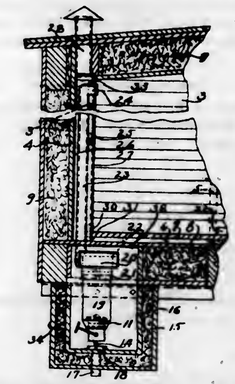
3. In an automatic elevator system, the combination with reversible controlling means, of up and down controlling magnets therefor, means for establishing a running circuit to one of said magnets, a plurality of circuit closers for said magnets corresponding to a plurality of floors, an indicator driven with the car and having an up and a down side respectively in circuit with said controlling magnets, floor circuits from said circuit closers to said indicator, said circuits being transferred from one side of said indicator to the other as the car passes the corresponding floor, a series of normally closed floor switches arranged to be mechanically opened as said circuits are transferred, and means between said up and down sides of said indicator for sucessively actuating said switches to stop the car when a live floor circuit is opened.

4. In an automatic elevator, an indicator comprising a reversible shaft, a pair of separated circular contact segments driven by said shaft, a cam between said contacts, and a series of switches arranged concentrically with said contact segments, each switch having a lever projecting into the path of said cam, said levers being successively actuated by the cam.

5. In an automatic elevator, an indicator comprising a reversible shaft, a pair of separated circular contact segments driven by said shaft, a cam between and moving with said contact segments, and a series of relatively fixed, normally closed switches arranged concentrically with said contact segments, each switch having a lever arm projecting into the path of said cam, said lever arms being successively actuated by the moving cam and being circularly adjustable relatively to said cam.

[Claims 6 to 12 not printed in the Gazette.]

1,156,988. HEATER-CAR. JAMES P. ELMER, St. Paul, Minn., assignor to Moore Patent Car Company, a Corporation of South Dakota. Filed Apr. 12, 1910. Serial No. 555,122. (Cl. 237—33.)



1. A car body having double walls and a double floor forming communicating air passages which also communicate with the upper and lower portions of the lading chamber, a closed heater chamber below the car body having an air inlet to admit fresh air, a ventilating flue extending from the bottom to the top of said car body having a communication near its lower end with said air passages in the floor of said body, a communication near its lower end with the lower portion of the lading space within said body and an exit near its upper end to the outer atmosphere, a plurality of heaters in said heater chamber, and a hot air duct from each of said heaters passing upwardly through said ventilating flue and into the upper portion of the lading chamber, whereby one or more of said heaters may be operated and warm air circulated into the upper portion of the lading chamber and cold vitiated air is conducted from the lower portion of the lading chamber through the passages in the floor of the car body and directly into the ventilating flue and thence to the outer atmosphere, said hot air ducts being adapted by contact of the surfaces of their walls with the air in said ventilating flue to heat and drive the cold vitiated air received from the car body to the outer atmosphere.

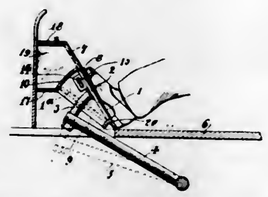
2. A car body having a passage in its floor communicating with the lower portion of its lading chamber, a ventilating flue comprising plates forming a conduit recessed into the wall of the car, part of said plates forming the innermost and side walls of said conduit and the remaining forming a cover for the conduit lying substantially flush with the inner surface of the wall of the car body, the lower end of said conduit being in communication with said passage in the floor of the car body, and the cover of said conduit being formed with openings near the floor of the car body for conducting cold and vitiated air from the lower portion of the lading chamber into said conduit, a heater near the lower end of the conduit and a hot air flue in connection with said heater passing upwardly through said conduit and opening into the upper portion of the lading chamber, for the purposes specified.

1,156,989. COVER FOR MILK-BOTTLES. PASQUINO FERRARI, Fall River, Mass. Filed May 26, 1914. Serial No. 841,052. (Cl. 215—9.)



A bottle closure including a circular skirt, a circular body disk secured to the center of the skirt, the said skirt being crimped adjacent the periphery of the disk to provide an annular lip, laterally spaced upon one side of the disk and extending inwardly thereover, the said lip being adapted to engage over the periphery of a second disk adapted to seat upon said first mentioned disk, the outer margin of the skirt being folded along pairs of diagonally extending fold lines to produce a depending rim consisting of a plurality of contiguous overlapping trapezoidal sections, the periphery of the skirt being provided with a series of circumferentially spaced scallops forming the base edges of said sections.

1,156,990. PEDAL-LOCKING MECHANISM. EUGENE S. FOLJAMBE, Philadelphia, Pa. Filed Nov. 18, 1910. Serial No. 593,042. (Cl. 74—81.)

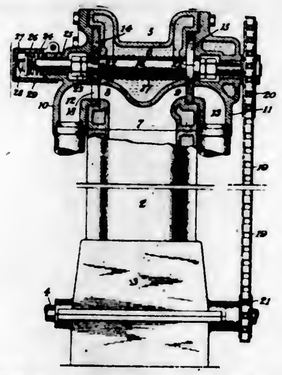


1. In a device of the class described, the combination with a platform having an opening therein, of a mechanism actuating shaft mounted beneath said platform for rotary movement about a fixed axis, a lever arm operatively connected to said shaft and extending toward said opening, a foot plate fitting within said opening and normally disposed in position substantially flush with the top of the platform so as to form a continuity of floor surface therewith, a connection with said foot plate and said lever whereby stepping on said plate will rotate said shaft said platform being provided with a toe guard curved to the arc of movement of the plate, outlining the forward portion of the opening and depending from the top of said platform whereby the toe of the operator is held from slipping off the plate in all positions of the plate when depressed from its normal position.

2. In a device of the class edscribed, the combination with a platform having an opening therein, of a mechanism actuating shaft mounted beneath said platform for rotary movement about a fixed axis, a lever arm operatively connected to said shaft and extending toward said opening, a foot plate fitting within said opening and normally disposed in position substantially flush with the top of the platform so as to form a continuity of floor surface therewith, a connection with said floor plate and said lever whereby stepping on said plate will rotate said shaft, said platform being provided with a toe guard curved to the arc of movement of the plate, outlining the forward portion of the opening and depending from the top of said platform whereby the toe of the operator is held from slipping off the plate as soon as the plate is depressed, and a locking means controlled from the top of the platform for maintaining said plate in one of its positions.

3. In a device of the class described, the combination of a floor, a platform inclined at an angle to said floor and co-acting therewith to form a heel rest for the operator's foot when actuating the device, said platform having an opening therein adjacent the jointure of the floor and platform, a foot plate fitting within said opening and normally disposed in position substantially flush with the top of the platform so as to form a continuity of surface therewith, a lock carried by said platform below the top surface thereof and having means for engaging said pedal when in depressed position to hold the same, a guard plate outlining a portion of said opening and depending from said platform in position to shield the lock, and mechanism operatively connected to said pedal and retained in position by said lock.

1,156,991. VALVE MECHANISM. JOHN GOOD, Brooklyn, N. Y. Filed Mar. 3, 1914. Serial No. 822,247. (Cl. 136—7.)



1. In apparatus of the kind described, the combination with a pressure chamber, of two rotary valve members united to each other and subject to the chamber pressure in opposite directions, one of said valve members presenting a larger pressure area than the other, whereby said united valve members are subject to differential pressure, and valve seats to which the valves are held by such differential pressure.

2. In apparatus of the kind described, the combination with a pressure chamber of two rotary valves rotated by a shaft to which each is secured and subject to the chamber pressure in opposite directions, one of said valves presenting a larger pressure area than the other whereby both are subject to a differential pressure, and valve seats to which the valves are held by such differential pressure.

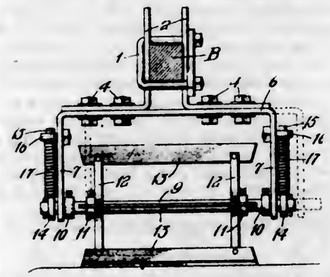
3. In apparatus of the kind described, the combination with a pressure chamber, of two rotary valves united to each other and subject to fluid pressure in opposite directions, one of such valves presenting a larger effective pressure area than the other, a valve seat for such valves and means independent of the fluid pressure for urging the valves upon their seats.

4. In apparatus of the kind described, the combination with a pressure chamber, of two rotary valves subject to the same fluid pressure in directions tending to balance the pressure acting on one of said valves against that acting on the other, the valves being connected together so that pressure may be transmitted from one to the other: and means for exerting independent pressure to urge said valves in the same direction toward their respective seats.

1,156,992. STALK AND STRAW CHOPPER. WALLACE W. GRAY and FRANK P. WITZSCHE, Lott, Tex. Filed Nov. 9, 1914. Serial No. 871,161. (Cl. 55—61.)

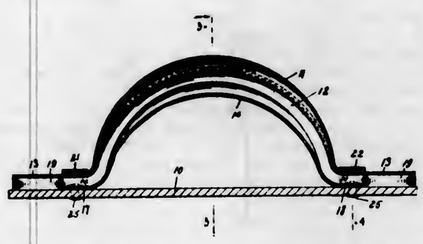
1. A device of the character described comprising an attaching bracket designed for connection to a plow beam, an inverted U-shaped frame secured to said bracket, said frame having upright slots in its parallel arms, a shaft projecting through said slots and a rotary cutter mounted on the shaft between the arms, guides projecting laterally from said arms, upright rods slidable in said guides and having eyes surrounding the shaft, and coiled springs encircling said rods and interposed between the guides and the eyes.

2. A device of the character described comprising a pair of spaced L-shaped brackets movable one toward the other and designed for connection to a plow beam, an inverted U-shaped frame beneath the horizontal arms on said brackets and adjustably secured thereto, the parallel upright arms in said frame having upright slots, a transverse



shaft mounted for vertical movement in said slots, a rotary cutter mounted on said shaft between the arms, guides projecting laterally from said arms, upright rods slidable in said guides and having eyes encircling the shaft, and coiled springs encircling said rods and interposed between the guides and the eyes.

1,156,993. SUITCASE-HANDLE. DANIEL GREEN, New York, N. Y. Filed Jan. 16, 1915. Serial No. 2,606. (Cl. 190—57.)



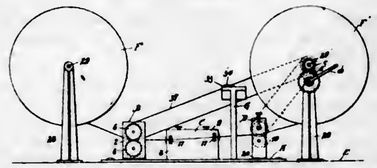
1. A handle for bags or suit-cases comprising a rigid upper shell of bail-shape form provided with longitudinal shoulder portions of curved cross section, and a rigid lower shell having upwardly bent longitudinal edges overlapping and reinforcing the entire shoulder portions of said upper shell and forming with said upper shell a hollow body of substantially oval cross section.

2. A handle for bags or suit-cases comprising a rigid upper shell of bail-shape form provided with longitudinal shoulder portions of curved cross section, a rigid lower shell having upwardly bent longitudinal edges overlapping and rinforcing the entire shoulder portions of said upper shell and forming with said upper shell a hollow body of substantially oval cross section, box-shaped end portions on said upper shell located in substantially one plane and being of greater width than said shell, and flat end portions on said lower shell entering the end portions of said upper shell.

3. A handle for suit-cases comprising a shell of bail-shape form provided with shoulders extending along the entire bail, a second shell adapted to engage the shoulders of said first shell and forming with the same a hollow body of substantially oval cross section, and box-shaped end portions on said body, angularly disposed to said bail and located in one plane and being of greater width than the shells forming the bail.

4. A handle for suit-cases comprising a shell of bail-shape form provided with shoulders extending along the entire bail, a second shell adapted to engage the shoulders of said first shell and forming with the same a hollow body of substantially oval cross section, and box-shaped end portions on said body, angularly disposed to said bail and located in one plane, being of greater width than the shells forming the bail and integral with said first shell.

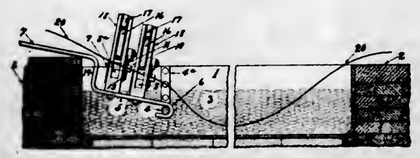
1,156,994. MOTION-PICTURE-FILM RENOVATOR. BEATRICE H. GREENE, Binghamton, N. Y., assignor to Douglas V. Ashley, Binghamton, N. Y. Filed Dec. 2, 1913. Serial No. 804,187. (Cl. 15—8.)



1. A motion picture film renovator mounted between supports for two film reels, one of which supports is provided with reel revolving means, said renovator comprising a pair of rotary cleaning brushes between which a film is adapted to be drawn when wound from one to the other reel and loose dirt removed, driving means between said revolving means and the brushes, a cleaning box in the line of travel of said film containing a yieldingly held mat and a positively adjustable coöperating mat for wiping both sides of said film, and a pair of coöperating absorbent rollers beyond the cleaning box for drying said film.

2. A motion picture film renovator mounted between spaced upright supports for two film reels, one of which supports is provided with reel revolving means, said renovator comprising a pair of rotating cleaning brushes, geared together, between which a film is adapted to be drawn when wound from one to the other reel and loose dirt removed, driving means connected to said revolving means and one of said brushes, a cleaning box in the line of travel of said film containing a spring sustained lower mat and an adjustable coöperating upper mat for wiping both sides of said film, means for varying the pressure between said mats, and a pair of coöperating rollers beyond the cleaning box provided with removable absorbent coverings and adjustable to and from each other for drying both surfaces of said film.

1,156,995. METHOD OF COATING METAL. JOHN A. HANLON, Pittsburgh, Pa., assignor to Hanlon-Gregory Galvanizing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Sept. 18, 1912. Serial No. 721,080. (Cl. 91—59.4.)

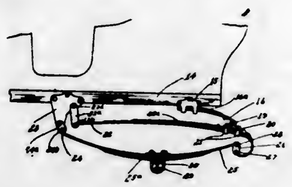


1. The method of coating metal strips, consisting in passing the same through a bath of molten metal at a rate of speed faster than the natural rate of flow of the molten metal on said strips at or near the bath, to wit, at a speed in excess of fifty feet per minute, and applying edged scrapers with material pressure to both sides of the strips and thereby scraping off the surplus molten metal and dross before it solidifies and spreading and pressing the remaining thin coating into the pores of the base material to thereby form a firm bond or physical connection between the strip and coating metal.

2. The method of coating steel or iron strips with softer metal, consisting in passing the same through a molten bath of the softer metal at a rate of speed faster than the natural rate of flow of the molten metal on

said strips at or near the bath, to wit, at a rate of speed in excess of fifty feet per minute, and after it has left the bath and before the molten metal has left the strip forcibly scraping both sides of the strip to thereby remove the surplus coating metal and dross before it solidifies and spread and thin the remaining coating and force it into the pores of the strip to thereby form a firm physical bond or connection therewith and a thin permanent coating for the same.

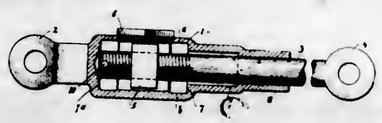
1,156,996. VEHICLE-SPRING. RUDOLPH HAUPT, Fresno, Cal. Filed July 13, 1914. Serial No. 850,662. (Cl. 21—50.)



1. A device of the character described comprising the combination with a vehicle, of a spring member clamped to the axle of said vehicle, one end of said spring member being flexibly connected with the frame of said vehicle, another spring flexibly connected with the other end of said first named spring, the other end of said second named spring being flexibly connected with said vehicle independently of said first named spring, and a short auxiliary spring pivotally connected to said second named spring at one end and clamped to said vehicle at its other end, as described.

2. A device of the character described comprising the combination with a vehicle, of a spring clamped to the axle of the vehicle, one end of said spring being flexibly connected with the frame of said vehicle, another spring flexibly connected with the other end of said first named spring at one end and with the frame of said vehicle at the other end, a clamp adjustably secured to said second named spring, and a third spring having one end clamped to the frame of said vehicle and the other end pivotally mounted on said clamp, as described.

1,156,997. CONNECTION ADJUSTMENT. STANLEY W. HAYES, Geneva, N. Y. Filed Dec. 16, 1908. Serial No. 467,908. (Cl. 85—36.5.)



1. A connection adjustment for the operating lines of track appliances, comprising a frame or casing having provisions for attachment to one of the elements of the operating line, a nut non-rotatably held by said casing and having limited longitudinal movement with respect thereto, and a longitudinally movable rod threaded to said nut and provided with means for attachment to the other of said elements.

2. A connection adjustment for the operating lines of track appliances, comprising a frame or casing provided with opposing abutments, a rod longitudinally and rotatably movable with respect to said abutments, a nut held against rotation by said frame or casing, and threaded to said rod between the abutments thereof.

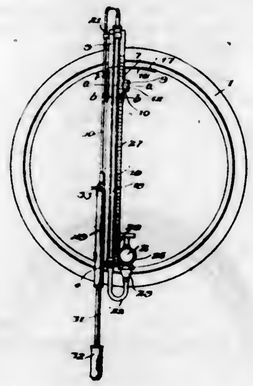
3. A connection adjustment for the operating lines of track appliances, comprising a closed casing or inclosure provided with interior abutments, a rod longitudinally and rotatably movable within said inclosure and a nut threaded to said rod and movable longitudinally therewith within said casing and having non-rotatable engagement with the latter.

4. A connection adjustment for the operating lines of track appliances, comprising a frame or casing provided with opposing abutments, a rod co-acting endwise with one of said abutments and a device adjustably carried on said rod and co-acting with the other abutment.

5. A connection adjustment for the operating lines of track appliances, comprising a closed casing having provisions for attachment to one of the elements of the operating line and further provided with interior, fixed and opposing abutments and with a bearing at one end, and means for alternate engagement with the said abutments consisting of a longitudinally movable rod entering and terminating within said casing, said rod having an unthreaded portion working in said bearing and a threaded portion within the casing, and a nut adjustably carried by the threaded portion of said rod and designed to move therewith longitudinally in the casing.

[Claims 6 to 14 not printed in the Gazette.]

1,156,998. MEASURING INSTRUMENT. JOHN HEBERLING, Rochester, N. Y. Filed Oct. 17, 1913. Serial No. 795,801. (Cl. 73—54.)



1. A measuring instrument of the class described comprising a gage tube, means for connecting said gage tube to a container to receive liquid from such container, means for expelling liquid from said gage tube into the container by way of said connecting means and a valve for opening or closing the upper end of the gage tube to permit the escape of air from the tube during the gaging operation and to prevent the escape of air during the expelling operation.

2. A measuring instrument of the class described comprising a gage tube, means for connecting the lower end of said gage tube with a container whose contents is to be measured, expelling means connected to the upper end of said gage tube to expel the contents of the gage tube into the container by way of the connecting means and a valve interposed between the expelling means and the tube to open and close the tube in order to permit the escape of air during the gaging operation and to prevent the escape of air during the expelling operation.

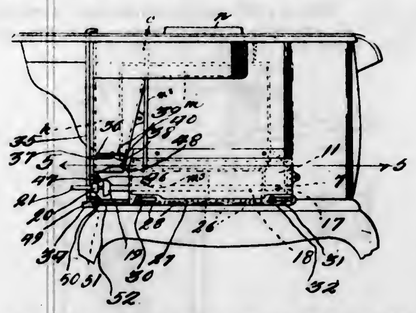
3. In a measuring instrument, the combination with a gage tube, of a socket member having a flexible connection with the lower end of the gage tube, an air compressor connected to the upper end of the gage tube to expel liquid from the gage tube and a valve for permitting the escape of air from the gage tube during the gaging operation and for closing the tube against the escape of air during the expelling operation.

4. A measuring instrument of the class described comprising a gage tube, means connecting the lower end of said gage tube with a container whose contents is to be measured, and a pump having connection with the upper end of the gage tube, said connection being provided with a valve to permit atmospheric pressure to be obtained within the top of the gage tube.

5. A measuring instrument of the class described comprising a suitable support, a gage tube arranged on said support, means for connecting the lower end of said tube with a container whose contents is to be measured, a pump having its cylinder secured to the support parallel with and near the lower end of the gage tube, and a connection between the upper end of the pump cylinder and the upper end of the gage tube.

[Claims 6 to 14 not printed in the Gazette.]

1,156,999. COMBINED COAL AND GAS RANGE. GEORGE E. HEIDBREDER, Quincy, Ill. Filed July 20, 1915. Serial No. 40,913. (Cl. 126—36.)



1. In a range, the combination of casing having an oven having an angular space adjacent the lower rear wall and the lower part of one of the end walls constituting a heating space, a gas burner tube in said space and provided with a valve, and apertures of communication between the space and the lower part of the oven, and means for opening and closing the valve.

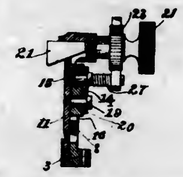
2. In a range, the combination of casing having an oven having an angular space adjacent the lower rear wall of the lower part of one of the end walls constituting a heating space, a gas burner tube in said space and provided with a valve, and apertures of communication between the space and the lower part of the oven, and means for opening and closing the valve, the lower wall of the space at the rear of the oven having openings, a slide damper controlling said openings and having connections with the operating means of the valve, whereby the slide damper may be opened or closed as the valve is operated.

3. In a range, the combination of casing having an oven having an angular space adjacent the lower rear wall and the lower part of one of the end walls constituting a heating space, a gas burner tube in said space and provided with a valve, and apertures of communication between the space and the lower part of the oven, and means for opening and closing the valve, the lower wall of the space at the rear of the oven having openings, a slide damper controlling said openings and having connections with the operating means of the valve, whereby the slide damper may be opened or closed as the valve is operated, the bottom of the space at the end wall of the oven having triangular shaped openings, an oscillatory damper for controlling said triangular openings, said oscillatory damper having a notch and angular end connections with the slide damper to be operated simultaneously with the slide damper and the operation of the valve.

4. In a range, the combination of casing having an oven having an angular space adjacent the lower rear wall and the lower part of one of the end walls constituting a heating space, a gas burner tube in said space and provided with a valve, and apertures of communication between the space and the lower part of the oven, and means for opening and closing the valve, the lower wall of the space at the rear of the oven having openings, a slide damper controlling said openings and having connections with the operating means of the valve, whereby the slide damper may be opened or closed as the valve is operated, a flue or passage adjacent one end wall of the oven having communication with the outlet flue of the range and an opening of communication with the oven, a damper to control the opening of communication between the oven and the flue and provided with a connection with the valve operated means so as to be opened or closed at the same time the valve is operated.

5. In a range, the combination of casing having an oven having an angular space adjacent the lower rear wall and the lower part of one of the end walls constituting a heating space, a gas burner tube in said space and provided with a valve, and apertures of communication between the space and the lower part of the oven, and means for opening and closing the valve, the lower wall of the space at the rear of the oven having openings, a slide damper controlling said openings and having connections with the operating means of the valve, whereby the slide damper may be opened or closed as the valve is operated, the bottom of the space at the end wall of the oven having triangular shaped openings, an oscillatory damper for controlling said triangular openings, said oscillatory damper having a notch and angular end connections with the slide damper to be operated simultaneously with the slide damper and the operation of the valve, a flue or passage adjacent one end wall of the oven having communication with the outlet flue of the range and an opening of communication with the oven, a pivoted damper to control the opening of communication between the oven and the flue and provided with a connection with the valve operating means so that the pivoted damper may be opened or closed at the same time the valve is operated and simultaneously with the oscillatory and slide dampers.

1,157,000. TRIMMING MECHANISM FOR SEWING-MACHINES. JAMES HINKLEY, Hagaman, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 1, 1910. Serial No. 574,879. (Cl. 112—6.)



1. The combination of trimming members, means for adjusting the position of one trimming member relative to the other including means for holding said trimming members in adjusted position and means for locking said holding means.

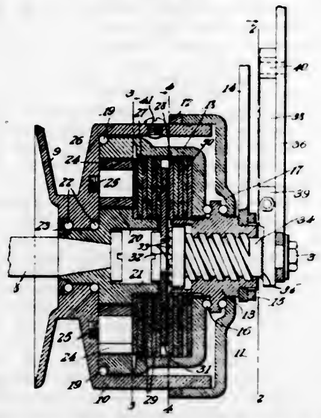
2. The combination of trimming members, means for adjusting the position of one trimming member relative to the other and for simultaneously locking and holding said members in their relative adjusted positions.

1,157,001. SPEED-CHANGING TRANSMISSION-GEARING. CHARLES L. HOWARD, Capay, Cal. Filed Apr. 22, 1913. Serial No. 762,763. (Cl. 74—34.)

1. The combination with a driving element, of a driven element carrying a casing, a central pinion keyed to the end of said driving element, planetary pinions carried by said driven element, a shell rotatable in said casing and having teeth meshing with said planetary pinions, means for locking said shell with said central pinion, and for locking said shell stationary.

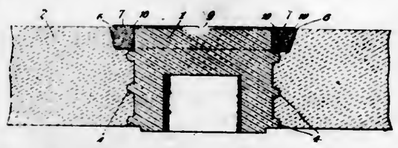
2. The combination with a casing having a driven element attached thereto, of a driving element, a central pinion fixed to the end of said driving element, a shell rotatable in said casing and having interior teeth formed in one end thereof, planetary pinions carried by said driven element and meshing with said central pinion and

the teeth on said shell, a sleeve rotatable in the cover of said casing, a stationary support and clutching means operated thereby for locking said shell with either said driving element or said stationary support.



3. In combination a shaft, a pulley having a drum surrounding said shaft, a sleeve fixed in position in alinement with said shaft, a shell surrounded by said drum and mounted loosely on said sleeve, means actuated by the shaft to rotate the shell, a member arranged to reciprocate between the inner end of the shaft and the sleeve, and means coöperating with said first named means and engaged by said reciprocating member in one direction to cause said pulley to rotate at high speed and in the opposite direction to cause the rotation of the pulley at low speed.

1,157,002. VAULT-LIGHT. CHARLES B. JACOBS, Port Chester, N. Y., assignor to American Abrasive Metals Company, New York, N. Y., a Corporation of New York. Filed Mar. 21, 1911. Serial No. 616,043. (Cl. 94—7.)



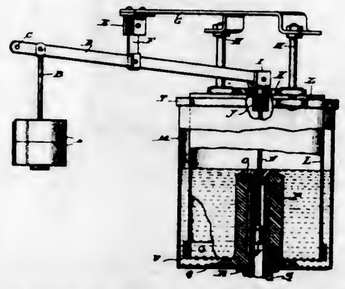
1. A vaultlight including in combination, a lens having a main body portion downwardly tapering and a flange projecting outwardly from the upper part to form a shoulder, a tread ring surrounding the flange, an anchor ring surrounding the body portion beneath the shoulder, and means for detachably securing the tread ring in the anchor ring.

2. A vaultlight including in combination a lens having a main body portion downwardly tapering and a flange projecting outwardly from the upper part to form a shoulder, a tread ring surrounding the flange and comprising a base of cast iron, and a layer of granular hard mineral elements embedded in its upper surface, an anchor ring surrounding the body portion beneath the shoulder and means for detachably securing the tread ring in the anchor ring.

3. A vaultlight including in combination, a lens having a main body portion downwardly tapering and a portion above and projecting outwardly from said first named portion so as to form a shoulder, said shoulder tapering upwardly, a tread ring surrounding the upper portion of said lens and projecting slightly above the same and comprising a base of cast iron and a layer of granular corundum embedded in the upper surface of said base and partly exposed to prevent slipping and protect the cast iron, from abrasion, an anchor surrounding the lens beneath said shoulder and tread and projecting outwardly beyond said tread ring, means for detachably securing said tread ring to said anchor, a layer of resilient waterproof material interposed beneath the rings and the lens, and said tread ring having formed in its upper portion a plurality of sluices to drain water from the surface of the lens.

4. A vaultlight including in combination, a lens having a main body portion downwardly tapering and a flange projecting outwardly from the upper part to form a shoulder, a tread ring surrounding the flange and an anchor ring surrounding the body portion and extending inwardly beneath said shoulder and outwardly beyond said tread ring.

1,157,003. STEAM-FURNACE-REGULATING SYSTEM. NELSON B. JOHNSON, Webster, Mass. Filed Aug. 10, 1914. Serial No. 856,136. (Cl. 236—6.)



1. In a device for regulating a steam heating furnace, the combination of a receptacle, an open bottom receptacle vertically movable therein, said receptacles having a liquid seal therein, means for introducing steam from the steam space of the boiler of the furnace to be regulated into the interior of the inner receptacle, a lever connected with the inner receptacle, and means for connecting the lever with the dampers of the furnace.

2. In a device for regulating a steam heating furnace, the combination of a receptacle, an open bottom receptacle vertically movable therein, said receptacles having a liquid seal therein, means for introducing steam from the steam space of the boiler of the furnace to be regulated into the interior of the inner receptacle, means connected with said inner receptacle for operating the dampers of the furnace as the inner receptacle moves, and means for stopping the entrance of steam into the inner receptacle when the inner receptacle rises to a predetermined height.

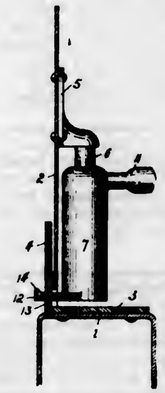
3. In a device for regulating a steam heating furnace, the combination of a receptacle, an open bottom receptacle vertically movable therein, said receptacle having a liquid seal therein, means for introducing steam from the steam space of the boiler of the furnace to be regulated into the interior of the inner receptacle, means connected with said inner receptacle for operating the dampers of the furnace as the inner receptacle moves, and means for reducing the entrance of steam into the inner receptacle when the inner receptacle rises to a predetermined height.

4. In a device for regulating a steam heating furnace, the combination of a receptacle, an open bottom receptacle vertically movable therein, said receptacles having a liquid seal therein, means for introducing steam from the steam space of the boiler of the furnace to be regulated into the interior of the inner receptacle, a port through which the steam enters said inner receptacle, said port having a valve seat, and a valve for nearly closing said port movable with the inner receptacle.

5. In a device for regulating a steam heating furnace, the combination of a receptacle, an open bottom receptacle vertically movable therein, said receptacles having a liquid seal therein, means for introducing steam from the steam space of the boiler of the furnace to be regulated into the interior of the inner receptacle, a port through which the steam enters said inner receptacle, said port having a valve seat, and a valve for said port, flexibly connected with the top of said inner receptacle.

[Claims 6 to 9 not printed in the Gazette.]

1,157,004. CATCH FOR AUTOMOBILE-HOODS. THOMAS J. KEHOE, Toledo, Ohio. Filed Mar. 4, 1914. Serial No. 822,326. (Cl. 70—82.)



1. The combination with a fixed part and a part movable relative thereto, said fixed part having an opening therein, of a stem carried by the movable part, a member mounted for rotary and yielding axial movements on said stem and having a control handle, and a catch finger projecting from opposite side thereof, the catch finger being adapted to project into said fixed part opening and to coöperate therewith to retain the parts in rigid relation.

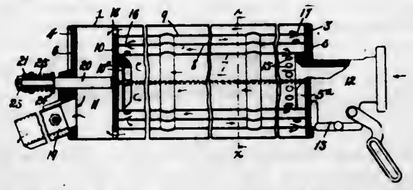
2. The combination with an automobile hood and a sill strip, said strip having an opening therein, of a bracket carried by a side of the hood and having a stem disposed in spaced relation to the hood and projecting toward the adjacent free edge thereof, and a member mounted for rotary and yielding axial movements on said stem and having a catch finger for insertion within the sill strip opening when in register therewith.

3. The combination with a sill strip having an upstanding flange provided with an opening and a hood having a side edge lapping said flange, of a stem carried by a side of the hood in spaced substantially parallel relation thereto and projecting to adjacent its lower edge, a member mounted for rotary and axial movements on said stem and having a catch finger and a control handle projecting from opposite sides thereof, the finger being adapted to project within said flange opening, and means resisting an axial movement of the member in one direction on the stem.

4. A catch comprising a bracket part having a stem projecting therefrom, a cylindrical member mounted on said stem and having one end contracted and forming a bearing around the stem, a plunger carried by the stem for working within the outer end of said member, a coiled compression spring encircling the stem within said member and having its opposite ends thrust against the contracted end of the member and said plunger, and a catch finger projecting laterally from said member.

5. The combination with a fixed part having a catch opening therein, and a part which is movable with respect to said fixed part, of a bracket fixed to said movable part in spaced relation to an edge thereof and having a stem which projects toward the adjacent edge of the movable part in spaced substantially parallel relation to said part, a barrel mounted for longitudinal reciprocatory movements on said stem and having its bore larger than said stem and having the end thereof which is adjacent to the bracket contracted to fit the stem for sliding and turning movements thereon, said barrel having a lever member projecting transversely from one end portion thereof, and a tongue projecting transversely from the opposite end portion thereof, said tongue being normally disposed in spaced relation to the opening in said stationary part and movable into register with said opening by lengthwise movements of the barrel on said stem and into said opening by turning movements of the barrel on said stem, a coiled compression spring encircling the stem within said barrel and a plunger part removably carried at the outer end of said stem for movement into the barrel and for receiving the outer end thrust of said spring.

1,157,005. EXHAUST-MUFFLER. THOMAS J. KEHOE, Toledo, Ohio. Filed Sept. 12, 1914. Serial No. 861,396. (Cl. 121—116.)



1. In a muffler, a plurality of drum-like baffling elements arranged one within another and having radially projecting integral interengaging portions which rigidly connect said elements.

2. In a muffler, a plurality of drum-like baffling elements having integral interengaging flange-like parts disposed diametrically thereof and rigidly connecting the elements.

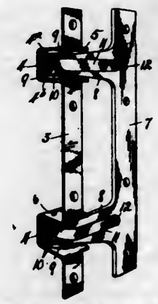
3. In a muffler, a plurality of drum-like baffling elements disposed one within another in spaced relation and each having flanges projecting radially therefrom with a flange of one secured to and coöperating with the flanges of the other elements to rigidly connect said elements.

4. In a muffler, a plurality of drum-like baffling elements disposed one within another and each having a pair of longitudinally extending flanges projecting from opposite sides thereof and coöperating to interconnect the elements in rigid spaced relation.

5. In a muffler, a plurality of drum-like baffling elements disposed one within another and each composed of semicircular parts having their adjoining edges outwardly flanged with one flange at each side of the inner element extended outwardly between the adjacent flanges of the other elements and coöperating therewith to secure the elements in rigid spaced relation.

[Claims 6 to 16 not printed in the Gazette.]

1,157,006. HINGE. THOMAS J. KEHOE, Toledo, Ohio. Filed Oct. 19, 1914. Serial No. 867,500. (Cl. 16—5.)



1. A hinge having interengaging male and female members, pintles pivotally connecting said members in inter-

engaging relation, and means removably secured to and carried by one of said members and coacting with said pintles to retain them in member-connecting position.

2. A hinge having interengaging male and female members, pintles pivotally connecting said members in interengaging relation, and a spring finger removably secured to one of said members and coacting with said pintles to retain the same in assembled relation.

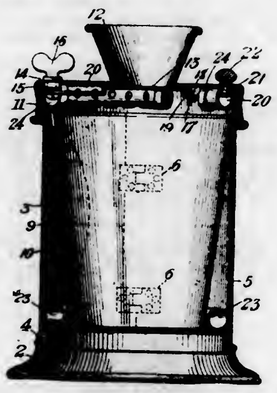
3. A hinge having interengaging male and female members, the male member being of L-form and having ears projecting from a part thereof, pintles pivotally connecting said ears and the female member, and a spring finger removably secured to the male member and engaging said pintles to secure them in assembled relation.

1,157,007. NUT-LOCK. HENRY LANDUA, Kiel, Wis. Filed Sept. 15, 1913. Serial No. 789,727. (Cl. 151—11.)



In a device of the character described, a screw threaded bolt having an end face provided with ratchet teeth in a plane at right angles to said bolt, a screw threaded nut adapted to encircle said bolt, and a spring arm extending spirally around the bolt in the direction of its length, said spring arm being secured at one end to the nut and being yieldable substantially from said fixed end to the opposite free end thereof, which said free end is adapted to engage the surface of and press against the ratchet teeth of the bolt whereby to prevent reverse rotation of said nut.

1,157,008. SANITARY GARBAGE-RECEIVER. ANTHONY ED. LANG, Buffalo, N. Y. Filed Jan. 9, 1915. Serial No. 1,273. (Cl. 220—115.)



1. A receiver for garbage and the like comprising an outer casing, an inner self-supporting paper receptacle designed to be supported on the bottom of said casing and to receive the garbage, and means to permit the paper receptacle to be removed laterally from the casing.

2. A receiver for garbage and the like, comprising a cylindrical casing, a cylindrical self-supporting paper receptacle adapted to be positioned therein, and a door so mounted on the casing as to permit lateral movement of the paper receptacle to and from the casing.

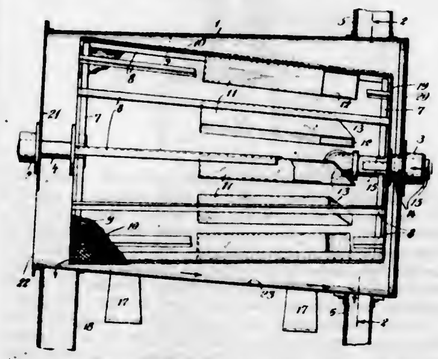
3. A receiver for garbage and the like, comprising a longitudinally divided cylindrical casing, the sections thereof being hingedly connected, and a destroyable and fragile but self-supporting receptacle adapted to be supported on the bottom of said casing and removed laterally from the casing.

4. A receiver for garbage and the like, comprising an outer casing and an inner destroyable and fragile but self-supporting receptacle adapted to be supported on the bottom of said casing to receive the garbage, and means to permit said receptacle to be removed laterally from the casing.

5. A receiver for garbage and the like, comprising a cylindrical longitudinally divided casing, the sections thereof being hingedly connected, a removable cover associated with the casing and adapted when in position to hold said sections in closed position, and means associated with the meeting edges of said sections to frictionally produce a tight closure and to hold the sections together to facilitate positioning of the cover.

[Claim 6 not printed in the Gazette.]

1,157,009. SELF-ROTATING SCREEN. FRANCISCO LARA, Trinidad, Cuba, assignor to Fulton Iron Works, St. Louis, Mo., a Corporation of Missouri. Filed June 26, 1915. Serial No. 36,470. (Cl. 210—14.)



1. In self-rotating screens, a substantially conical frame covered with screen material and formed of spiders and connected angle iron ribs, trunnions formed on said spiders and engaging bearings to support the lower part of the screen in inclined position, the trunnion adjacent the smaller end of said screen being hollow, a supply pipe extending through said hollow trunnion and having a supply spout within the screen extending toward its descending side, substantially closed operating buckets mounted within said screen on said ribs and formed with a receiving opening and with an inclined directing plate to be engaged by the liquor from the supply spout, said buckets receiving liquor from said spout to cause the continued rotation of said screen, a plate substantially closing the smaller end of said screen, a waste discharge chute coöperating with the lower larger open end of said screen from which the more solid material is discharged, an operatively arranged conical casing substantially inclosing said conical frame and forming at its lower portion a liquor conduit directing the liquor from said waste discharge chute, a liquor drain communicating with said conduit and a vapor pipe connected to said casing adjacent the upper portion thereof.

2. In self-rotating screens, a substantially conical frame covered with screen material and formed of spiders and connected ribs, trunnions formed on said spiders and engaging bearings to support the lower part of the screen in inclined position, the trunnions adjacent the smaller end of said screen being hollow, a supply pipe extending through said hollow trunnion and having a supply spout within the screen extending toward its descending side, operating buckets mounted within said screen and formed with a receiving opening and with an inclined directing

plate to be engaged by the liquor from the supply spout, said buckets receiving liquor from said spout to cause the continued rotation of said screen, a plate substantially closing the smaller end of said screen, a waste discharge chute coöperating with the lower larger open end of said screen from which the more solid material is discharged, and an oppositely arranged conical casing substantially inclosing said conical frame and forming at its lower portion a liquor conduit directing the liquor from said waste discharge chute.

3. In self-rotating screens, a substantially conical frame covered with screen material and formed of spiders and connected ribs, trunnions formed on said spiders and engaging bearings to support the lower part of the screen in inclined position, the trunnion adjacent the smaller end of said screen being hollow, a supply pipe extending through said hollow trunnion and having a suply spout within the screen extending toward its descending side, operating buckets mounted within said screen and receiving liquor from said spout to cause the continued rotation of said screen, a waste discharge chute coöperating with the lower larger open end of said screen from which the more solid material is discharged and a casing substantially inclosing said conical frame and forming at its lower portion a liquor conduit directing the liquor from said waste discharge chute.

4. In self-rotating screens, a substantially conical frame covered with screen material and formed of spiders and connected angle iron ribs, trunnions formed on said spiders and engaging bearings to support the lower part of the screen in inclined position, the trunnion adjacent the smaller end of said screen being hollow, a supply pipe extending through said hollow trunnion and having a supply spout within the screen extending toward its descending side, substantially closed operating buckets mounted within said screen on said ribs and formed with a receiving opening and with an inclined directing plate to be engaged by the liquor from the supply spout, said buckets receiving liquor from said spout to cause the continued rotation of said screen, a plate substantially closing the smaller end of said screen, a waste discharge chute coöperating with the lower larger open end of said screen from which the more solid material is discharged, and a liquor conduit directing the liquor away from said waste discharge chute.

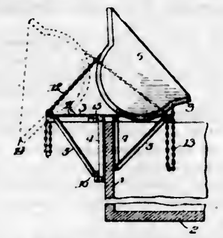
5. In self-rotating screens, a substantially conical frame covered with screen material and formed of spiders and connected ribs, trunnions formed on said spiders and engaging bearings to support the lower part of the screen in inclined position, the trunnion adjacent one end of said screen being hollow, a supply pipe extending through said hollow trunnion and having a supply spout within the screen extending toward its descending side, operating buckets mounted within said screen and formed with a receiving opening and with an inclined directing plate to be engaged by the liquor from the supply spout, said buckets receiving liquor from said spout to cause the continued rotation of said screen, a plate substantially closing the smaller end of said screen, a waste discharge chute coöperating with the lower larger open end of said screen from which the more solid material is discharged, and a liquor conduit directing the liquor away from said waste discharge chute.

[Claims 6 to 18 not printed in the Gazette.]

1,157,010. MOVABLE LOADING-HOPPER. ALBERT P. LEE, Chicago, Ill. Filed Oct. 29, 1912. Serial No. 726,308. (Cl. 214—1.)

1. A device of the character described having two elements comprising a framework, each element consisting of a rail and downwardly projecting portions adapted to straddle a wall, the protruding ends of each element being mounted to swing inwardly toward said wall, and a hopper adapted to ride upon said elements and to hold said elements in position.

2. A device of the character described having a framework including a rail and means for setting said framework to straddle a wall, a movable hopper movable upon said rail, the protruding end of said rail being mounted to swing toward said wall, and means for defining the throw of said hopper.



3. A device of the character described having a framework including a runway and means for setting said framework to straddle a wall, a movable hopper upon said runway, and means whereby the protruding end of said runway may be swung inwardly.

4. A device of the character described having a framework including a rail and means for setting said framework to straddle a wall, a movable hopper tiltable in opposite directions from its upright position movable upon said rail, and means whereby the protruding end of said rail may be collapsed.

5. A loading and unloading apparatus comprising a skelton framework, a movable hopper thereon, means whereby said hopper can roll unobstructedly on said frame work from either side to the other of its central position, said opposite limiting positions representing respectively charge receiving and discharging positions, means to limit the movement of said hopper in one of its limiting positions so that it is tilted sufficiently to receive a charge, and means to automatically limit the movement of the hopper to its limiting alternative position whereby it is tilted sufficiently to discharge its load.

[Claims 6 and 7 not printed in the Gazette.]

1,157,011. ELECTRIC APPARATUS FOR MOTOR-VEHICLES. HARRY WARD LEONARD, Bronxville, N. Y.; Carolyn G. Leonard, administratrix of said Harry Ward Leonard, deceased, assignor to H. Ward Leonard, Incorporated, a Corporation of New York. Filed Jan. 18, 1910. Serial No. 538,762. (Cl. 171—313.)



1. The combination of a source of mechanical power capable of being varied from zero to a maximum speed, a dynamo armature adapted to be driven by said source, a storage battery, connecting means therefor, an electromagnetic winding in said connecting means, a vibratory switch element adapted to be vibrated between its open and closed positions in response to maximum and minimum current passing through said winding, and an electromagnetic winding for controlling the voltage generated by said armature, the current passing through said last named winding being controlled by said switch element.

2. In an automatic charging apparatus, a storage battery, a dynamo armature, means for connecting said storage battery with said dynamo armature, a magnetic coil for controlling the voltage produced by said armature, a vibratory switch element adapted to control the current in said magnetic coil, and means for vibrating said switch element comprising an electromagnetic winding responsive to current delivered by said dynamo whereby the charging current automatically controls itself.

3. In combination, a storage battery, a dynamo armature, a magnetic coil for controlling the voltage produced

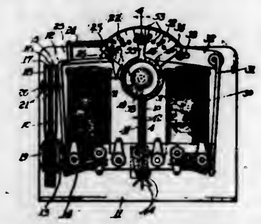
by said armature, a vibratory switch element for controlling the current in said coil, and an electroresponsive winding responsive to a predetermined condition of the energy in the charging circuit and controlling the vibration of said switch element.

4. In a battery charging and incandescent lighting system, the combination of a battery, a dynamo for charging the battery, a plurality of incandescent lamps connected with the battery, and automatic controlling means for fluctuating the voltage of the dynamo between limits and thereby maintaining a substantially constant average current delivered by the dynamo armature, irrespective of the number of incandescent lamps in use, said means comprising a vibratory switch and a winding carrying the current delivered from the dynamo armature to said battery and lamps.

5. In an automatic battery charging system, a source of power whose speed must be varied over a wide range to meet conditions in practice, a battery charging dynamo armature driven thereby, a storage battery, and an automatic vibratory controller, said controller comprising a stationary switch contact element, a coöperating movable switch contact element, a magnetic armature whose movement controls the movement of said movable contact element, a spring tending to hold said movable contact element in its closed position, a coöperating magnetic winding connected in a circuit containing the dynamo armature, said magnetic winding and the battery in series, and a shunt winding for controlling the voltage generated by the dynamo armature, the current in said shunt winding being controlled by said contact elements, whereby when the speed of the source of power increases sufficiently, the current through said magnetic winding controls itself by causing the battery charging energy to be automatically controlled to give rapid fluctuations thereof and produce a suitable average charging current.

[Claims 6 to 16 not printed in the Gazette.]

1,157,012. CIRCUIT-CONTROLLING DEVICE. MAURICE LEVISON, Chicago, Ill., assignor to Chicago Signal Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 6, 1912. Serial No. 718,839. (Cl. 177—339.)



1. Means for indicating maintenance of uniform circuit conditions for a predetermined time comprising, in combination, a circuit, the closure whereof is to be indicated, an electro-responsive device therein, a self restoring movable part restrainable against restoration during and by the energisation of said electro-responsive device, means to move said movable part at a known rate, signaling means operable by said movable part after predetermined movement for indication of the continuous closure of said circuit for the predetermined time, and means operated by said movable part to maintain the signal in operation regardless of subsequent deënergisation of the said circuit.

2. In a device of the character described, an electro-responsive device, for connection in a circuit, a self restoring movable part restrainable against restoration during and by the energisation of said electro-responsive device, means to move said movable part at a known rate, holding means for said movable part and signaling means, both operable by said movable part after a predetermined movement, whereby the signal once operated is maintained in operation.

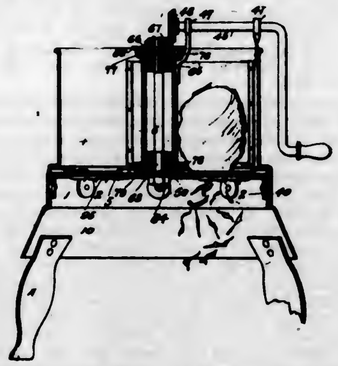
3. In a device of the character described, an electro-responsive device, a self restoring movable part restrainable against restoration during and by the energization of said electro-responsive device, means to hold said movable part, and signaling means, both operable in response to actuation by said movable part after a predetermined movement, means to release said holding means, and means to vary said predetermined movement of said part necessary for operation of said signaling means and holding means.

4. In a device of the character described, an electro-responsive device, contacts for controlling a signal circuit, and means to operate said contacts including a movable part, timed means for moving said movable part intermittently, means associated with said movable part for operation of said contacts after a predetermined number of effective intermittent movements of the movable part, means responsive to energization of the electro-responsive device for rendering effective said movements of the movable part, means automatically to maintain said contacts closed, and manual releasing means therefor.

5. In a device of the character described, an electro-responsive device, means to energize it, a holding circuit for said electro-responsive device, an annunciator circuit, contacts for controlling the holding circuit for the electro-responsive device and the annunciator circuit, and means to operate said contacts including a part movable from normal position, timed means for moving said part from normal position toward contact-operating position, and means responsive to energization of said electro-responsive device to prevent return of said movable part to normal position during continuance of the energization of said electro-responsive device.

[Claims 6 to 14 not printed in the Gazette.]

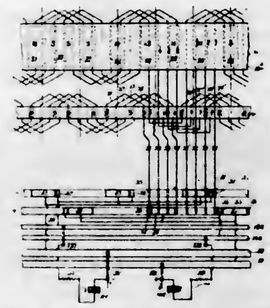
1,157,013. VEGETABLE-SLICER. ELIAS LEWIS, Terre Haute, Ind. Filed Mar. 26, 1914. Serial No. 827,331. (Cl. 146—11.)



1. In a vegetable slicer, a base including a rim, bearing rollers mounted on the walls of said rim, a hopper including an enlarged shouldered rim to fit over said base rim and leave a cutter disk receiving space, a cutter disk located in said space and resting on said rollers, said cutter disk having a hub, a tube post, the lower end of which projects over and receives said hub, said tube post extending upwardly through said hopper, a shaft projecting through said tube post and held in said cutter disk hub, a bearing plug on said shaft fitted into the upper end of said tube post, means for turning said shaft, and division plates connecting said tube post with said hopper and holding said tube post in position.

2. In a vegetable slicer, a base including a rim, bearing rollers mounted on the walls of said rim, a hopper including an enlarged shouldered rim to fit over said base rim and leave a cutter disk receiving space, a cutter disk located in said space and resting on said rollers, said cutter disk having a hub, a tube post, the lower end of which projects over and receives said hub, said tube post extending upwardly through said hopper, a shaft projecting through said tube post and held in said cutter disk hub, a bearing plug on said shaft fitted into the upper end of said tube post, means for turning said shaft, and division plates connecting said tube post with said hopper and holding said tube post in position, said tube post having ball races at each end, bearing balls in said ball races, the balls in the lower ball race engaging said cutter disk, said bearing plug having a flange to engage the balls in the upper race substantially as shown and described.

1,157,014. DYNAMO-ELECTRIC MACHINE. HANS LIPPELT, New York, N. Y. Filed Sept. 1, 1911. Serial No. 647,140. (Cl. 171—228.)



1. In a dynamo electric machine: the combination with suitable means for producing a magnetic field, an armature having windings of the open coil type, and a suitable commutator and brushes arranged to maintain the armature windings in circuit during predetermined periods; of means to check the flow of current in the armature circuits in one direction only, and means to introduce said checking means into the armature circuits at predetermined periods.

2. In a dynamo electric machine: the combination with suitable means for producing a magnetic field, an armature having windings of the open coil type, and a suitable commutator and brushes arranged to maintain the armature windings in circuit during predetermined periods; of means to check the flow of current in the armature circuits in one direction only, and means to introduce said checking means into the armature circuits shortly before the armature windings are disconnected from the terminals of the machine.

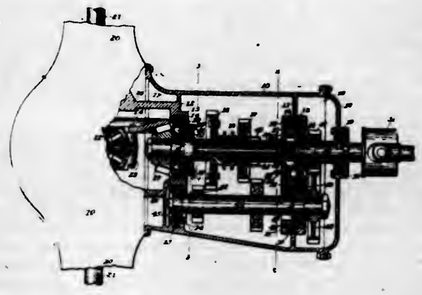
3. In a dynamo electric machine: the combination with suitable means for producing a magnetic field, an armature having windings of the open coil type, and a suitable commutator and brushes arranged to maintain the armature windings in circuit during predetermined periods; of means to check the flow of current in the armature circuits in one direction only, means to introduce said checking means into the armature circuits shortly before the armature windings are disconnected from the terminals of the machine, and means to disconnect said checking means shortly after it is introduced into the armature circuits.

4. In a dynamo electric machine: the combination with suitable means for producing a magnetic field, an armature having windings of the open coil type, and a suitable commutator and brushes arranged to maintain the armature windings in circuit during predetermined periods; of one or more electrolytic cells, and means to introduce a said cell into the armature circuits at predetermined periods to check the flow of current in an armature circuit and in one direction only.

5. In a dynamo electric machine: the combination with suitable means for producing a magnetic field, an armature having windings of the open coil type, and a suitable commutator and brushes arranged to maintain the armature windings in circuit during predetermined periods; of one or more electrolytic cells, means to introduce a said cell into the armature circuits shortly before the armature windings are disconnected from the terminals of the machine to check the flow of current in an armature circuit and in one direction only, and means to disconnect said cell shortly after it is introduced into the armature circuits.

[Claims 6 to 20 not printed in the Gazette.]

1,157,015. TRANSMISSION MECHANISM FOR MOTOR-VEHICLES. ALLEN LOOMIS, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 3, 1910. Serial No. 590,583. (Cl. 74—58.)



1. In a transmission mechanism for motor vehicles, the combination of a casing having transverse end walls and a transverse intermediate wall, alined driving and driven shafts mounted independently in bearings in the end walls and intermediate wall, a countershaft mounted in the casing, gears connecting said shafts and including sliding gears adapted to move into and out of mesh, and means for directly connecting said alined shafts.

2. In a transmission mechanism for motor vehicles, the combination of a casing having transverse end walls and a transverse intermediate wall, alined driving and driven shafts mounted independently in bearings in the end walls and intermediate wall, a counter-shaft mounted in the casing, gears connecting said shafts and including sliding gears adapted to move into and out of mesh, and means shiftable with said sliding gears for directly connecting said alined shafts when said sliding gears are out of mesh.

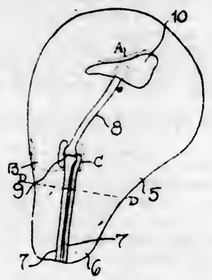
3. In a transmission mechanism for motor vehicles, the combination of a casing having transverse end walls and a transverse intermediate wall, alined driving and driven shafts mounted independently in bearings in the end walls and intermediate wall, a counter-shaft mounted in the casing, gears connecting said shafts and including sliding gears adapted to move into and out of mesh, and a clutch operated by said sliding gears for connecting said alined shafts for direct drive of one by the other.

4. In a transmission mechanism for motor vehicles, the combination with a driving shaft, an alined driven shaft, a shiftable member on the driven shaft adapted to connect said shafts for direct transmission, a bevel pinion on said driven shaft, and a bevel gear in mesh therewith, of a casing for the gearing, and bearings in the casing for said driven shaft on either side of said shiftable member.

5. In a transmission mechanism for motor vehicles, the combination with a casing, of a driving shaft in said casing adjacent one end thereof, an alined driven shaft, a shiftable member on the driven shaft adapted to connect said shafts for direct transmission, a bevel pinion on said driven shaft, a bevel gear in mesh therewith, and bearings in the casing for said driven shaft on either side of said shiftable member.

[Claims 6 to 24 not printed in the Gazette.]

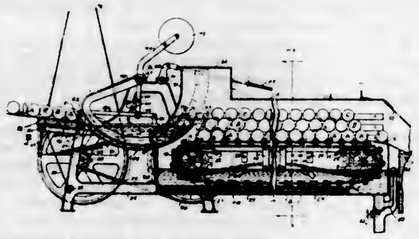
1,157,016. PROCESS FOR PREPARING FOODS. FREDERICK W. LOTZ, Philadelphia, Pa. Filed Mar. 20, 1915. Serial No. 15,907. (Cl. 99—11.)



1. The herein described method of preparing hams which consists in removing the blade and leg bones from the body of the ham, then cutting off the shank and removing the meat therefrom and placing the same within the cavities resulting from the removal of said bones, and finally compressing the ham into a molded form and cooking the same while in the mold.

2. The herein described method of preparing hams which consists in first removing the skin and fat from the exterior of the ham, then making incisions in the body of the ham and removing the blade and leg bones therefrom, then cutting off the shank of the ham and removing the meat from said shank and placing the same within the cavities resulting from the removal of the bones, then closing the incisions, and finally placing the ham into a suitable mold and compressing the same both longitudinally and transversely and cooking the ham while in said mold.

1,157,017. STERILIZING-MACHINE. HARRY W. LOWE, Florence, Nebr. Filed Dec. 16, 1913. Serial No. 806,996. (Cl. 126—272.)



1. In a sterilizing machine, a heating vessel, an endless conveyer disposed in said vessel and having horizontally spaced parallel rollers, means for placing rows of cylindrical cans on said conveyer rollers, means for continuously revolving the rollers, and means for intermittently actuating the conveyer.

2. In a sterilizing machine, a heating vessel, an endless conveyer disposed horizontally in said vessel and having transverse rollers, actuating means for revolving said rollers, and separate actuating means for advancing the conveyer.

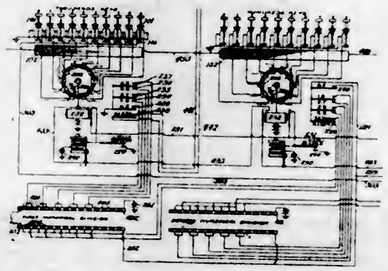
3. In a sterilizing machine, a heating vessel, a conveyer disposed in said vessel and having a series of transverse rollers spaced apart horizontally, continuously moving means engaging said rollers for revolving the same, and means for intermittently moving the rollers horizontally.

4. In a sterilizing machine, a tank, transverse shafts journaled on parallel axes near opposite ends of the tank, means for revolving one of the shafts continuously, means for revolving the other shaft intermittently, sprocket-wheels secured on the intermittently-moving shaft, other sprocket-wheels revolubly mounted on the other shaft, an endless conveyer apron extending around said sprocket-wheels and horizontally between them, said conveyer having transverse rollers, sprocket-wheels secured on the continuously moving shaft, other sprocket-wheels revolubly mounted on the intermittently moving shaft, and endless chains extending over said sprockets and having portions engaging the conveyer rollers to revolve the same.

5. In a machine of the class described, a conveying mechanism having a series of horizontally spaced rollers adapted to support a plurality of cylindrical cans in horizontally spaced relation to each other, means for moving the conveyer rollers horizontally, supporting means on which the rollers rest, and means for moving said supporting means transversely of the rollers to continuously revolve the same.

[Claims 6 to 12 not printed in the Gazette.]

1,157,018. TELEPHONE-EXCHANGE SYSTEM. FRANK R. MCBERTY, New Rochelle, N. Y., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Aug. 9, 1909. Serial No. 511,983. (Cl. 179—27.)



1. In an automatic sender apparatus, the combination with a plurality of sets of manually operable contact devices, of an automatic register associated with each set of contact devices and operating in accordance with the condition of said contact devices, and a selection controlling mechanism governed by a plurality of said registers.

2. In an automatic sender apparatus, the combination with a plurality of sets of manually operable contact devices, of an automatic register associated with each set of contact devices and operating in accordance with the condition of said contact devices, and a selector controlling mechanism having a plurality of divisions of terminals and a contact member coöperating with said terminals and through which the controlling function is exercised, said terminal divisions being connected with said registers.

3. A sender apparatus comprising a plurality of sets of keys, an electro-mechanical register governed by each set of keys, a switching mechanism associated with each register and having contact devices, and a selection controlling mechanism provided with divisions of terminals connected with the contacts of said switching mechanism and a brush coöperating with the terminals.

4. A sender apparatus for telephone line selecting systems comprising a set of keys, a register electromechanism having terminals connected to said keys and a contact brush movable over said terminals, a switching mechanism having contact springs and spring-actuating members coöperating with said register brush, and a selection controlling electromechanism provided with terminals connected with the springs of the switching mechanism and having a brush coöperating with said last mentioned terminals.

5. In a telephone switching system, an apparatus for controlling a plurality of classes of selection comprising sets of contact devices corresponding to said classes, and a point finder electromechanism having a plurality of divisions of terminals and a selection controlling contact member coöperating therewith, certain of the divisions of said point finder mechanism being in circuit with said contact devices of one class, and register mechanism interposed between said contact devices of another class and other of the point finder divisions.

[Claims 6 to 50 not printed in the Gazette.]

1,157,019. CHUTE. WILLIAM LEGGETT MCCABE, Portland, Oreg. Filed Oct. 6, 1914. Serial No. 865,331. (Cl. 193—29.)



1. The combination with a chute having holes at intervals therein; of a baffle consisting of a rope rove in and out through said holes with its upper stretches inside the chute and overlying the face of its bottom, and means for holding the rope in place.

2. A baffle for chutes and other inclined elements down which substances are to slide, the same consisting of a flexible member extending across the bottom of said element in stretches with both ends of each stretch connected with the bottom.

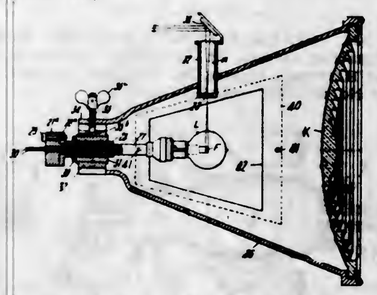
3. A baffle for chutes and other inclined elements down which substances are to slide, the same consisting of a rope rove through holes in said element with its upper stretch extending obliquely across the face thereof.

4. The combination with a chute comprising upright sides, and a bottom having holes therein; of a baffle consisting of a flexible member rove through said holes with its upper stretches extending across the face of the bottom and its lower stretches underlying the same.

5. An inclined chute comprising a bottom and upright sides; combined with flexible baffles disposed at intervals along the chute and extending across the face of its bottom and nearly to its sides.

[Claim 6 not printed in the Gazette.]

1,157,020. MEANS FOR AND PROCESS OF ADJUSTING INCANDESCENT LAMPS. DANIEL J. MCCARTHY, Wilkinsburg, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Mar. 13, 1914. Serial No. 824,472. (Cl. 240—44.)



1. In combination, a body, an incandescent electric lamp, means for adjustably supporting said lamp on the said body, and optical means for determining when the filament of said lamp occupies a given position with relation to said body.

2. In combination, a body, an incandescent electric lamp, means for adjustably supporting said lamp on the said body, and optical means having a fixed relation to said body for determining when the filament of said lamp occupies a given position with relation to said body.

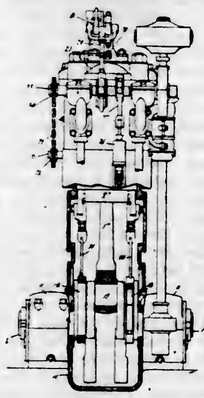
3. In combination, a body, an incandescent electric lamp, means for adjustably supporting said lamp on the said body, means for determining when the filament of said lamp occupies a given position with relation to said body, and means for locking the lamp in the adjusted position.

4. In combination, an incandescent electric lamp, an optical device for projecting a beam of light from said lamp, means for adjustably mounting the lamp with relation to said optical device, and means associated with the optical device for determining when the filament of said lamp occupies a given position with relation to said device.

5. In combination, an incandescent electric lamp, an optical device for projecting a beam of light from said lamp, means for adjustably mounting the lamp with relation to said optical device, and optical means having a fixed relation to said optical device for determining when the filament of said lamp occupies a given position with relation to said optical device.

[Claims 6 to 14 not printed in the Gazette.]

1,157,021. INTERNAL-COMBUSTION ENGINE. NORMAN MCCARTY, Indianapolis, Ind., assignor to Lyons-Atlas Company, Indianapolis, Ind., a Corporation of Indiana. Filed Feb. 24, 1912. Serial No. 679,731. (Cl. 123—65.)



1. An internal combustion engine, comprising a main shell having an air inlet port and an exhaust port, a sleeve movably mounted in said shell and having an air inlet passage and an exhaust passage passing therethrough and arranged to intermittently register at their outer ends with the air inlet port and exhaust port respectively of the shell, said sleeve having a water compartment formed between its bore and its exterior, means for maintaining a flow of cooling fluid through said compartment, a closure for one end of said sleeve, a piston reciprocably mounted within said sleeve and coöperating with the closure to form a combustion chamber within the sleeve, a shaft, a connection between said piston and shaft, a connection between said shaft and sleeve for shifting the sleeve relative to the inlet and exhaust ports of the shell, means for injecting fuel into the interior of the combustion chamber, and means for supplying air to the air inlet port of the shell.

2. An internal combustion engine, comprising a main shell having an air inlet port and an exhaust port, a sleeve movably mounted in said shell and having an air inlet passage and an exhaust passage passing therethrough and arranged to intermittently register at their outer ends with the air inlet port and exhaust port re-

spectively of the shell, said sleeve having a cooling compartment formed between its interior and its exterior, means for maintaining a flow of cooling fluid through said compartment, a closure for one end of said sleeve, a piston reciprocably mounted within said sleeve and coöperating with the closure to form a combustion chamber within the sleeve, a shaft, a connection between said piston and shaft, a connection between said shaft and sleeve for shifting the sleeve relative to the inlet and exhaust ports of the shell, means for injecting fuel into the interior of the combustion chamber, an air compressor chamber arranged in the shell, a piston fitting said compressor chamber and carried by the sleeve, and means for controlling the flow of air to said compressor chamber and from said compressor chamber to the air inlet port of the shell.

3. In an internal combustion engine, the combination of a main shell having an axial bore with an enlarged end, the said shell having an air inlet port leading into its main portion and an exhaust port leading from its main portion, a sleeve fitted within said main portion and axially reciprocable therein, said sleeve having an air inlet port through its wall and an exhaust port through its wall, which ports are arranged for intermittent registry with the air inlet and the exhaust ports respectively of the shell, said sleeve having a water compartment formed between its base and its exterior, means for maintaining a flow of cooling fluid through said compartment, a compressor piston carried by the sleeve and fitting the enlarged end of the bore of the shell, a head closing the end of the enlarged bore of the shell, a supplemental head projected in to the bore of the sleeve, a work piston reciprocably mounted within the bore of the sleeve, a crank shaft, a connection between said crank shaft and work piston, means connected with the crank shaft for reciprocating the sleeve within the shell, and means for controlling the flow of air to the compressor chamber and from the compressor chamber to the air ports of the shell.

4. In an internal combustion engine, the combination of a main shell having an axial bore with an enlarged end, the said shell having an air inlet port leading into its main portion and an exhaust port leading from its main portion, a sleeve fitted within said main portion and axially reciprocable therein, said sleeve having an air inlet port through its wall and an exhaust port through its wall, which ports are arranged for intermittent registry with the air inlet and the exhaust ports respectively of the shell, said sleeve having a water compartment formed between its base and its exterior, means for maintaining a flow of cooling fluid through said compartment, a compressor piston carried by the sleeve and fitting the enlarged end of the bore of the shell, a head closing the end of the enlarged bore of the shell, a supplemental head projected into the bore of the sleeve, a work piston reciprocably mounted within the bore of the sleeve, a crank shaft, a connection between said crank shaft and work piston, an eccentric carried by the crank shaft in substantial alinement with the crank, a connection between said eccentric and the sleeve, and means for controlling the flow of air to the compressor chamber and from the compressor chamber to the air ports of the shell.

1,157,022. VESSEL. ALEXANDER MCDOUGALL, Duluth, Minn. Filed Feb. 14, 1914. Serial No. 818,649. (Cl. 114—5.7.)



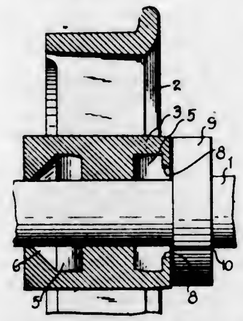
1. A vessel comprising a navigable hull substantially rectangular in midship cross section, a wedge shaped forward end with vertical sides throughout, a stern having its underquarters well cut away and a super-imposed rectangular shaped cabin carried by the hull and substantially the same width thereof.

2. A vessel comprising a navigable hull substantially rectangular in midship cross section, a wedge shaped forward end with vertical sides throughout, a regular ship shape stern portion, a superstructure spaced above the hull and supported upon a plurality of cylindrical shaped members.

3. A vessel comprising a navigable hull substantially rectangular in midship cross section, a wedge shaped forward end with vertical sides throughout, a cut-away ship shape stern, a superstructure shaped above the hull, turrets supporting the superstructure in such a manner as to expose the larger portion of the main deck of the hull to the wash of abnormal seas.

4. A vessel comprising a hull substantially rectangular in cross section throughout, except in its lower after quarters which are cut away in regular ship shape form, a central bulkhead dividing the hull into two equal parts longitudinally, fixed turrets mounted upon the hull and supporting a superstructure of a construction similar to that of the hull and turrets.

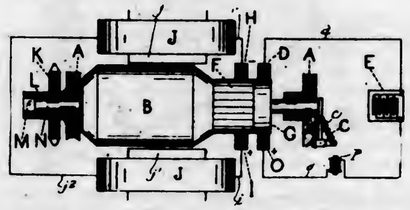
1,157,023. LUBRICATING DEVICE. WILLIAM MCLAUGHLIN, Scranton, Pa. Filed Mar. 4, 1914. Serial No. 822,414. (Cl. 64—26.)



1. A wheel including a hub, the bore thereof at one extremity being enlarged to afford an oil cellar and having a plurality of longitudinally disposed spiral grooves arranged therealong and in communication at one of their ends with the oil cellar, the opposite ends of the grooves being partially closed.

2. A wheel including a hub, the bore thereof at one extremity being enlarged to afford an oil cellar and having a plurality of longitudinally disposed spiral grooves arranged therealong and in communication at one of their ends with the oil cellar, and lips projecting inwardly from the bottoms of the grooves at their opposite ends and partially closing such ends.

1,157,024. DYNAMO-ELECTRIC MACHINE. HOWARD MCQUILLIN, Chicago, Ill., assignor of one-half to William H. Duggan, Chicago, Ill. Filed Mar. 13, 1914. Serial No. 824,421. (Cl. 171—313.)



1. A dynamo electric machine having field windings, an armature and an axially movable commutator; an insulated extension of the commutator: line brushes normally bearing on said extension, field excitation brushes connected to the field windings and normally bearing on the commutator and means, operable by the rotation of the armature, to shift the active portion of the commutator to position under said line brushes.

2. A dynamo electric machine having a field magnet and winding, an axially movable armature and commutator and an insulated extension of the commutator, in combination with brushes normally bearing on said extension; brushes bearing on the active portion of said commutator, to energize the field magnet winding, whereby the armature is laterally moved on its axis to shift the active portion of the commutator under just mentioned brushes when the armature is rotated and the field magnet energized thereby.

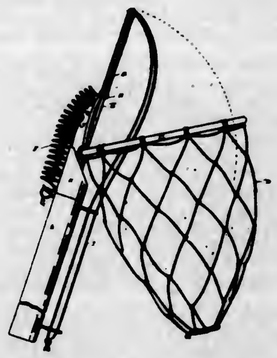
3. A shunt wound dynamo electric machine having field windings, an axially movable commutator, and an insulated commutator extension; in combination with a set of collecting brushes, normally bearing on said extension and another set of collecting brushes bearing on the active portion of the commutator, the latter being connected to the field windings, whereby to move an active part of said commutator under the first pair of brushes by the axial movement of the armature when the field windings are energized by rotation thereof.

4. A dynamo electric machine having an axially movable armature and commutator and two sets of collecting brushes; means for supporting one set of brushes out of contact with the commutator; a storage battery; a circuit connecting said battery to the latter set of brushes; a circuit connecting the other set of brushes to the field windings of the dynamo, whereby to energize the field magnet when the armature is rotated thereby to slidably move the armature thereunder and simultaneously move the commutator under the battery circuit brushes to connect them to the battery to close circuit between the armature and battery; means to oppose the axial movement of the armature, and means, energized by the battery circuit to disable said opposing means.

5. A dynamo electric machine having an axially movable armature, movable in response to energization of its field magnets; yielding means of variable resistance to return said armature to normal position when the fields are deënergized the resistance of the yielding means being smallest when the armature is at the end of its magnetically actuated movement and means for changing the dynamo circuits, effected by movement of said armature.

[Claims 6 and 7 not printed in the Gazette.]

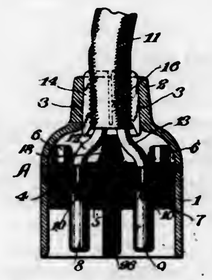
1,157,025. FRUIT-PICKER. COLIN MANN, Southport, Me. Filed Dec. 9, 1914. Serial No. 876,373. (Cl. 56—99.)



1. In a fruit picker, a pole, a long horseshoe-shaped fixed jaw attached to one end of said pole, a horseshoe-shaped jaw of smaller size pivotally attached to said fixed jaw and adapted to coöperate therewith, said movable jaw having a cross bar intermediate its ends, a receptacle attached to said fixed jaw, a retracting coil spring connected one end to the pole and the other end to said cross bar and means for forcing the movable jaw beyond the fixed jaw, whereby the fruit is forced from the branch without cutting the stem.

2. In a fruit picker, a pole, a fixed jaw secured to the pole, a movable jaw pivotally mounted thereon and adapted to coöperate with said fixed jaw, a ferrule with a vertically curved extension attached to the end of the pole and a coil spring having one end attached to the end of the pole at a point spaced apart from the end thereof and the other end attached to the movable jaw and adapted to extend over said extension.

1,157,026. PLUG-SWITCH. WILLIAM F. MESCHENMOSER, New Dorp, N. Y. Filed Oct. 20, 1911. Serial No. 655,728. (Cl. 173—332.)



1. A plug switch member comprising an insulating block, plug contact-pins adapted to enter sockets in the coöperating member of the connector by endwise movement of the plug-switch member and loosely fitted into passages in the block to permit sidewise play limited by the walls of the passage, said contact-pins having recesses in which the bared ends of the conductors are secured and transverse pins adapted to secure the contact pins to said block, said transverse pins entering a solid part of the contact pins and out of engagement with the bared ends of said conductors.

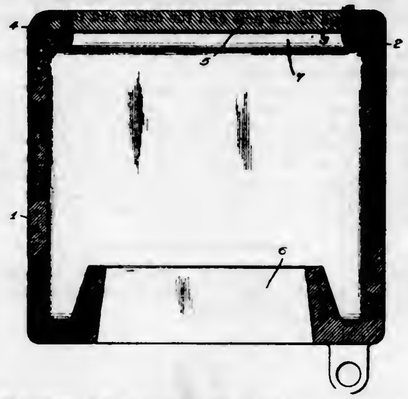
2. A plug switch member comprising an insulating block, having passages in which solid contact-pins are fitted with an allowance for slight sidewise play, said contact-pins having the bared ends of the conductors soldered to them, and means for pivotally mounting said contact pins in said block to permit slight sidewise movement of the pin in the passage in the block limited by the side walls thereof, said means engaging said contacts remote from the bared ends of the conductors.

3. A plug receptacle comprising an insulating block, spring contact sleeves loosely fitted into passages in said block to permit slight sidewise play limited by the walls of the passage and having recesses in which the bared ends of the conductors are soldered and transverse pins loosely and pivotally mounting said contact sleeves in said block, said pins entering a solid part of said contacts remote from the ends of the conductors.

1,157,027. SAFE CONSTRUCTION. MOSES MOSLER, Cincinnati, Ohio, and CARL BARTELS, Hamilton, Ohio, assignors to The Mosler Safe Company, New York, N. Y. Filed Feb. 9, 1915. Serial No. 7,126. (Cl. 109—1.)

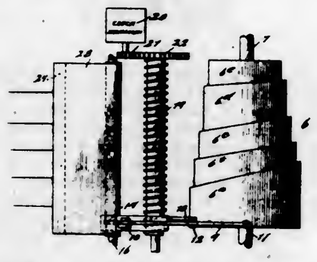
Safe-construction comprising, a safe-wall provided with an opening and with an inward projection at the margin of the opening, rivets integrally formed with said projection and extending outwardly, and a plate resting on said projection and having perforations near its margin

to engage said rivets, said plate having its outer dimension less than its inner dimension, and the margin of



said opening being swaged about and into contact with the edge of the plate, combined substantially as set forth.

1,157,028. MECHANISM FOR REGULATING THE CHARGING RATE OF STORAGE BATTERIES. WARREN NOBLE, Orchard Lake, Mich., assignor to Sangamo Electric Company, Springfield, Ill., a Corporation of Illinois. Filed Nov. 23, 1911. Serial No. 662,046. (Cl. 171—229.)



1. In an apparatus for varying the resistance in an electric circuit, in combination, an electrical resistance, a platen having a physical contour varying in elevation longitudinally thereof, a bearing device adapted to bear upon said platen, mechanism for causing said bearing device to transverse the varying contour of said platen, and circuit making-and-breaking devices operated by the movement of said bearing device relative to the carrying contour of said platen to vary the resistance in the circuit.

2. In an apparatus for varying the resistance in an electric circuit, in combination, an electrical resistance, a platen having a physical contour varying in elevation longitudinally thereof, a bearing device adapted to bear upon said platen, mechanism for causing said bearing device to traverse the varying contour of said platen, mechanism operated by the movement of said bearing device relative to the varying contour of said platen to vary the resistance in the circuit, and means for varying the intervals between successive variation of resistance.

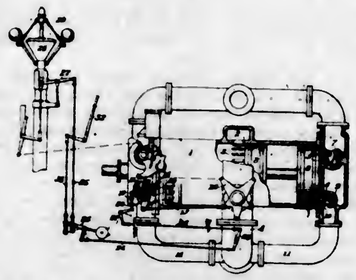
3. An apparatus for varying the resistance in an electrical circuit, comprising a resistance, a member adapted to be actuated to include more or less resistance in the circuit during different intervals, and a controller controlling the actuation of said member, said controller and member being relatively adjustable to vary the length of certain of such intervals.

4. In combination, an electric circuit, a variable resistance, a stepped drum, a bearing device adapted to be yieldingly held in contact with the surface of said drum, means for giving to said bearing device a movement longitudinal of said drum, and means operated by said bearing device as it moves longitudinally of said drum to progressively vary said resistance.

5. In combination, an electric circuit, a resistance, a drum adapted to be rotated to set the same in any desired position and provided with a series of steps of progressively diminishing diameter, a lever adapted to yieldingly bear at one end upon the surface of said drum, means for causing said lever to move longitudinally of said drum, and means operated by the passing of said lever from step to step on said drum to progressively vary said resistance.

[Claims 6 to 17 not printed in the Gazette.]

1,157,029. ENGINE. BRUNO V. NORDBERG, Milwaukee, Wis. Filed Jan. 28, 1914. Serial No. 814,883. (Cl. 121—103.)



1. In an engine the combination with a cylinder having a central exhaust port and a piston adapted at the limits of its movement in opposite directions to open said port, of auxiliary exhaust valves, means for operating said valves, and a governor connected with said valve operating means and adapted when the engine runs below a certain speed to cause the opening of said valves during the latter part of the return strokes of the piston.

2. In an engine the combination with a cylinder having a central exhaust port and auxiliary exhaust ports at the ends and a piston adapted adjacent to the limits of its movement in opposite directions to uncover said central port, of valves controlling said auxiliary exhaust ports, valve operating mechanism comprising rocker arms connected with said valves, rocking levers, trip hooks pivoted to said levers and adapted to engage with said arms to open said valves on the latter part of the return strokes of the piston, releasing levers adapted to hold said hooks out of operative position, and means for turning said releasing levers into position to render said valves active or inactive.

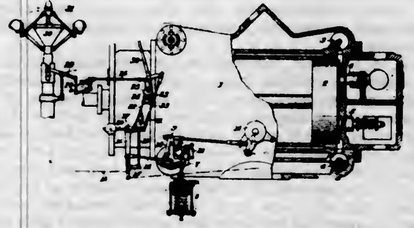
3. In an engine the combination with a cylinder having a central exhaust port and a reciprocating piston adapted at the limits of its movement in opposite directions to open said port, of auxiliary rotative exhaust valves, valve gear for opening and closing said valves comprising arms fixed on the valve stems, valve operating levers fulcrumed concentrically with the valve stems, trip hooks pivoted to said levers and adapted to engage with said arms and to open the valves on the latter part of the return strokes of the piston, knock-off levers adapted to turn said trip hooks out of operative position, and a governor connected with said knock-off levers and adapted when the engine attains a certain speed to shift them into releasing position.

4. In an engine the combination with a cylinder having a central exhaust port and auxiliary exhaust ports at the ends, and a piston adapted to uncover said central port adjacent to the limits of the movement of the piston in opposite directions, of valves controlling said auxiliary exhaust ports, valve operating mechanism comprising rocker arms connected with said valves, rocking levers, trip hooks pivoted to said levers and adapted by engagement with said arms to open said valves during the latter part of the return strokes of the piston, releasing levers adapted to hold said hooks out of operative position, and means for shifting said releasing levers into position to render said valves active or inactive, said hooks being provided with shoulders adapted by engagement with said arms to close said valves just before the beginning of the working strokes of the piston in whichever position the releasing levers may be.

5. In an engine the combination with a cylinder having a central main exhaust port, auxiliary exhaust ports at the ends, and a reciprocating piston adapted at the limits of its movement in opposite directions to uncover the central exhaust port, of auxiliary rotative exhaust valves controlling the auxiliary exhaust ports, valve gear for opening and closing said valves comprising arms fixed on the valve stems, valve operating levers fulcrumed concentrically with the valve stems, trip hooks pivoted to said levers and adapted by engagement with said arms to open said valves during the latter part of the return strokes of the piston, knock-off levers adapted to turn said hooks out of operative position, and a governor connected with said knock-off levers and adapted to shift them into releasing position when the engine attains a certain speed, said hooks being provided with shoulders which are adapted to close said valves just before the beginning of the working strokes of the piston, when the knock-off levers are in either position.

[Claims 6 to 13 not printed in the Gazette.]

1,157,030. COMPRESSION-CONTROLLING MECHANISM FOR ENGINES. BRUNO V. NORDBERG, Milwaukee, Wis. Filed Jan. 28, 1914. Serial No. 814,884. (Cl. 121—103.)



1. In an engine the combination of an exhaust valve, valve operating mechanism comprising closing means, opening means and releasing means, and a governor connected with the releasing means and adapted when the engine attains a certain speed to release and permit the valve to close before the piston reaches the end of its exhaust stroke and when the engine runs below that speed, to hold the valve open approximately to the end of the exhaust stroke of the piston.

2. In an engine the combination of an exhaust valve, valve operating mechanism comprising means tending to close the valve, opening means and releasing means, and a governor connected with the releasing means and adapted when the engine attains a certain speed to release and permit the valve to close at such a point in the exhaust stroke of the piston that the working fluid confined in the cylinder will be compressed to its initial pressure at the end of such stroke and when the engine runs below that speed, to hold the valve open approximately to the end of the exhaust stroke of the piston.

3. In an engine the combination of a cylinder provided adjacent to its ends with exhaust valves, valve operating mechanism comprising means tending to close the valves, opening means and releasing means, a weighted lever connected with said releasing means and tending when free to delay the closing of said valves, and a governor connected with said lever and adapted when the engine attains a certain speed to shift said releasing means into position to permit the valves to close before the piston reaches the end of its exhaust strokes and when the engine runs below that speed, to shift said releasing means into position to hold the valves open approximately to the end of the exhaust strokes of the piston.

4. In an engine the combination of a cylinder provided adjacent to its ends with exhaust valves, valve operating mechanism comprising means tending to close the valves, opening means and releasing means, a weighted lever connected with said releasing means and tending when free to delay the closing of the valves, a stop for limiting the movement of said lever in the direction of delayed release and arranged to release and permit the valves to close near the end of the exhaust strokes of the piston, and a governor connected with said lever and adapted when the engine attains a certain speed to shift said releasing means into position to release and permit the valves to close at such points in the exhaust strokes of the piston that the working fluid will be compressed approximately to its initial pressure at the ends of such strokes.

5. In an engine the combination of a cylinder having exhaust valves at the ends, valve operating mechanism comprising closing means, opening means and releasing means, a weighted lever connected with and tending to shift said releasing means into position to release and permit the valves to close at the end of the exhaust stroke of the piston, a cam adapted to shift said lever in the opposite direction and a governor connected with said cam and adapted when the engine attains a certain speed to shift said cam, lever and releasing means into position to release and permit the valves to close before the piston reaches the ends of its exhaust strokes.

[Claims 6 to 8 not printed in the Gazette.]

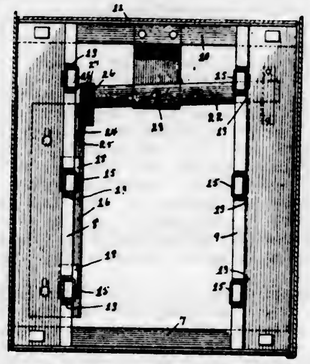
1,157,031. WINDOW CONSTRUCTION. JOSEPH F. O'BRIEN, New York, N. Y. Filed Sept. 16, 1913. Serial No. 790,096. (Cl. 20—52.1.)



1. In a window construction, the combination of a frame having grooves therein, the outer sides of which are bowed, substantially straight flexible guides in said grooves having sash slots therein, a sash in said slots, and means at the lower end of said sash for securing the same in one of its positions with said guides fitting the bowed sides of said grooves.

2. In a window construction, the combination of a frame having grooves therein, the outer sides of which are bowed, substantially straight flexible guides secured at one end in said grooves and having sash slots therein, a sash in said slots, a ledge extending across said frame parallel with the sash, and means secured to the lower edge of the sash and adapted to engage said ledge to secure the sash in one of its positions with the guides fitting the bowed sides of the grooves.

1,157,032. DRAWER-LOCKING MECHANISM. ENOCH OHNSTRAND, Syracuse, N. Y., assignor to U. S. Steel Furniture Company, Syracuse, N. Y., a Corporation of New York. Filed Oct. 28, 1912. Serial No. 728,125. (Cl. 45—94.)



1. In combination with a plurality of drawers, drawer locking mechanism comprising a pivoted operating member adapted to be engaged by one of the drawers to be moved to locking position, and a vertically-movable common locking bar for the other drawers, said locking bar moving to locking position when the operating lever is moved by the drawer and being movable relatively to said operating lever to permit the other drawers to close after the first drawer has closed.

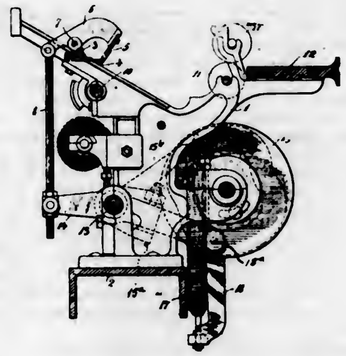
2. In combination with a plurality of drawers, drawer locking mechanism comprising a common locking member for the drawers, a pivoted operating lever resiliently connected to the locking member, and a movable member adapted to coöperate with the operating lever to shift the locking member to locking position.

3. The combination with a plurality of drawers having projections at their rear ends provided with beveled portions and downwardly opening notches, of a vertically movable locking member arranged in rear of the drawers and having portions adapted to enter said notches upon the upward movement of said member, an operating lever pivotally mounted in rear of the drawers and lying transversely of the line of movement of said drawers, one end of said operating member being resiliently connected to the locking member, and a drawer arranged above the first named drawers and provided with an extension at its rear formed with a beveled portion adapted to coöperate with the free end of the operating lever.

4. In combination with a plurality of drawers, drawer locking mechanism comprising a pivoted operating member adapted to be engaged by one of the drawers to be moved to locking position, a common locking bar for the drawers movable upwardly to locking position and having drawer-engaging means rigid therewith, and a spring connecting said lever and the locking bar to cause the locking bar to move to locking position when the operating lever is moved by the drawer and to permit the bar to move relatively to said operating lever to permit the other drawers to close after the first drawer has closed.

1,157,033. NIPPER-MOTION DRIVE FOR COTTON-COMBERS. HENRY A. OWEN, Whitinsville, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Oct. 26, 1909. Serial No. 524,691. (Cl. 19—6.)

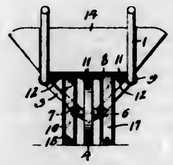
1. In a comber having several comber heads, the combination with nipper-knives of the respective comber heads, a common nipper-shaft having fast thereon a number of nipper-shaft arms, and adjustable connections between said nipper-shaft arms and said nipper-knives, of a nipper-cam, a member reciprocated thereby, a common nipper-lever fast on said nipper-shaft and adapted to be operated by said member to rock said shaft, one of the two last-recited elements having an adjustable abutment, and a normally-stressed spring-yielding driving connection between said elements holding said adjustable abutment against the other of said elements and permitting the reciprocating member to move relatively to the nipper-lever during the normal operation of the machine.



2. In a comber, the combination with nipper-knives of a number of combing heads, a nipper-shaft, and connections between said nipper-shaft and nipper-knives, of a nipper-cam, a member reciprocated thereby, a nipper-lever fast on said shaft, said nipper-lever being forked with one of its arms coöperating as an abutment with said member, and a spring connecting the other arm of said nipper-lever with said member and maintaining the latter against said abutment.

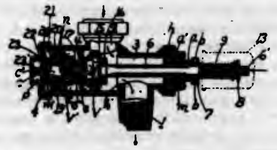
3. In a comber, the combination with nipper-knives of a number of combing heads, a nipper shaft, and connections between said nipper-shaft and nipper-knives, of a nipper-cam, a member fulcrumed on said shaft and reciprocated by said cam, a forked nipper-lever fast on said shaft and comprising a short arm and a long arm, said short arm coöperating as an abutment with said member and the latter being extended beyond its point of engagement with said cam away from said long arm, and a spring connecting such extension of said member with said long arm and constituting a yielding driving connection therebetween normally holding said short arm in contact with said member.

1,157,034. WHEELBARROW. JOHN C. PAGE, Brawley, Cal. Filed Sept. 29, 1914. Serial No. 864,135. (Cl. 21—68.)



In a wheel barrow a V-shaped tubular frame having its rear ends upturned and bent to form handles, cross bars connecting the side members of said frame and having eyes engaging said side members, a body bearing on said cross bars, legs under the rear cross bar, braces connecting the lower ends of the legs to the front cross bar, bolts securing said braces and also securing the front cross bar to the body and bolts securing the legs to the rear cross bar and also securing the latter to the body.

1,157,035. FLUSH-VALVE. PETER J. PAULY, Jr., and GUY TANNER, St. Louis, Mo. Filed Apr. 12, 1915. Serial No. 20,903. (Cl. 137—93.)



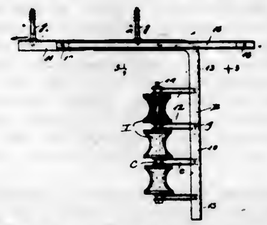
1. A flush-valve provided with a casing chambered for the passage of liquid and having intake and discharge means communicating with said chamber, a valve-seat in the casing interposed between the points of intake and discharge, a ported main valve normally engaging said seat, a ported balanced starting valve seating against the main valve opposite the intake, the valves operating in the chamber of the casing, a spring-controlled operating stem fixed to the starting valve and passing loosely through the main valve, the latter having a limited movement along the stem to and from the starting valve, a limited movement of the stem in a given direction separating the valves and establishing communication between the intake and discharge through the ports of the main valve, means on the stem for unseating the main valve with a further movement of the stem in the same direction, thereby establishing direct communication between the intake and discharge through the casing chamber, a member carried by the starting valve provided with a chamber in free communication with the ports of the valve and with an opening through which the liquid in the chamber of the valve-casing traversing the valve may freely circulate, and a ported check or retarding valve provided with a hollow stem loosely operating through said opening and terminating in a head in the chamber of the member aforesaid.

2. In a flushing apparatus of the character described, a starting valve comprising a member having a chamber opening through one end of the valve, a series of radial grooves on the end of the valve leading to the chamber, radial ports leading through the valve body from the interior of the chamber, a chambered cap carried by the valve and having its bottom spaced from the grooved end of the valve, said bottom being provided with an opening, a perforated disk valve in the chamber of the cap coöperating with the grooved end of the starting valve, and a ported stem forming a part of the disk valve and operating freely in and through the opening of the cap bottom.

3. In a flushing apparatus of the character described, a valve-casing, a valve-supporting and operating reciprocating stem passed through one end of the casing, a stuffing box comprising a packing ring and screw gland traversed by said stem, the outer end of the stem being provided with a reduced screw-threaded extension, a nut passed over the same and shouldered against the stem, a protecting cap screwed over the screw-threaded extension and terminating at its inner end in a flange, a ring passed over the cap and provided with a shoulder adapted to foul the flange on the cap with an attempted removal of said cap, a shell screwed to the ring and valve casing and provided with openings to afford access to the screw gland, an expansion spring coiled about the stem and interposed between the gland and nut on the stem, and a clamping nut on the screw-threaded portion of the shell operating in conjunction with the ring to grip a suitable wall or fixed support between them, the said support being provided with an opening for the insertion of the shell.

1,157,036. INSULATOR-SUPPORTING FIXTURE. CHARLES L. PEIRCE, Jr., Pittsburgh, Pa., assignor of one-half to Hubbard & Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 8, 1914. Serial No. 855,779. (Cl. 173—321.)

1. An insulator support comprising a vertical part having spaced apart flanges, a plurality of laterally extending supporting members each having a hole at its outer end to receive a bolt and secured at its inner end to the flanges of the vertical part, and a bolt extending through the holes of the supporting members for receiving insulators.



2. An insulator supporting fixture comprising a supporting body having spaced apart flanges, supporting frames extending laterally from said supporting body, each frame being formed by bending a single piece of metal, the end of each frame being secured to the opposite flanges of the supporting body, and a rod detachably applied to the various frames for receiving insulators.

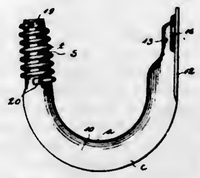
3. An insulator supporting fixture comprising a body part in the form of a sheet metal channel, a plurality of supporting arms each having a hole at its outer end and secured at its inner end to the opposite flanges of said body part, and a detachable insulator supporting rod engaging in the alined holes of said arms.

4. An insulator supporting fixture comprising a supporting member in the form of a channel bar, a plurality of V-shaped supporting frames extending from said supporting member and each provided with a hole at its outer end, each frame being secured at its inner corners to the opposite flanges of said supporting channel member, and an insulator supporting rod having detachable engagement in the alined holes of said frames.

5. An insulator supporting fixture comprising a vertical supporting part having spaced apart parallel flanges, a tier of arms extending laterally and secured at their inner ends to said flanges, the outer ends of said arms being adapted to detachably receive a rod, said rod being adapted to receive and to confine insulators between the outer ends of said arms, and a horizontal part extending from said vertical supporting part and overhanging said arms.

[Claims 6 to 10 not printed in the Gazette.]

1,157,037. INSULATOR-SUPPORTING STRUCTURE. CHARLES L. PEIRCE, Jr., Pittsburgh, Pa., assignor of one-half to Hubbard & Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 8, 1914. Serial No. 855,780. (Cl. 173—321.)



1. An insulator supporting bracket stamped entire from a flat piece of sheet metal and comprising a U-shaped body part of U-shaped cross section, wings extending laterally from the inner upper end of the body to form a mounting base for the bracket, and the outer upper end of the body part having the limbs brought together to form a cylindrical seat for insulator thimbles.

2. An insulator supporting bracket formed entire from a flat piece of sheet metal and comprising a U-shaped body part of U-shaped cross section, the inner upper end of the body being closed, wings extending from the inner upper end forming a supporting base for the bracket, and

the outer upper end of the body being shaped to receive insulator thimbles.

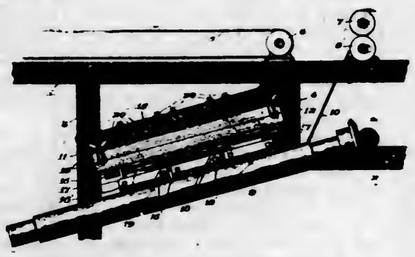
3. An insulator supporting bracket formed from a single piece of sheet metal and comprising a flat base part, a U-shaped body part of U-shaped cross-section extending from said base and the outer end of said body being shaped to form a support for insulator thimbles.

4. An insulator supporting bracket comprising a U-shaped body part of U-shaped cross section formed integral of sheet metal, the outer end of said body being open but the inner end being closed, wings extending laterally and upwardly from said edges of said inner end to form a supporting base, and the outer end of said body part being bent into cylindrical form to form a support for insulators.

5. An insulator supporting bracket formed entire of sheet metal and comprising a U-shaped body part of U-shaped cross section, the outer end of said body part being bent into conical form to provide a seat for insulator supports, wings extending laterally and upwardly from the edges at the inner end of the body, and laterally extending ridges in said wings apertured at their ends for the reception of bolts.

[Claim 6 not printed in the Gazette.]

1,157,038. CORN-HUSKING MACHINE. GEORGE L. PHELPS, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed July 1, 1912. Serial No. 706,865. (Cl. 130—5.)



1. In a corn handling machine, an elongated downwardly converging ear retarder of substantially uniform wedge shaped cross section throughout its length.

2. In a corn handling machine, a freely movable elongated ear retarder having the cross section of a downwardly converging truncated wedge throughout its length.

3. In a corn husker, an ear retarder of substantially V-shaped cross section, a support having arms journaled in one end thereof, and a second supporting member in which said support is bodily movable.

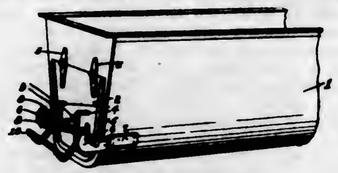
4. In a corn husker, an elongated ear retarder of substantially V-shaped cross section, a plurality of supports pivoted in the opposite ends thereof, and a second supporting member for said supports in which the latter are freely movable bodily independently one of the other.

5. In a corn husker, a frame, a plurality of husking rolls, a plurality of transversely extending crank shafts above the same, a longitudinally extending member connected between the cranks of said shafts, and a plurality of independently movable retarders carried between said member and said rolls and operatively connected to the former having either end of the same freely movable toward or away from said member and rolls.

[Claims 6 to 9 not printed in the Gazette.]

1,157,039. FASTENING DEVICE. JAMES EDWARD PIERCE, Albion, Mich., assignor to The Union Steel Screen Company, Albion, Mich. Filed Feb. 11, 1915. Serial No. 7,644. (Cl. 70—103.)

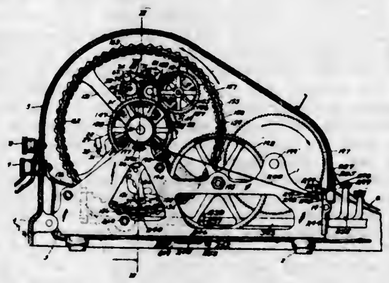
1. In a fastening device, the combination with a closure hinged at its upper end, of a pair of fixed keepers having upturned outer ends disposed at the sides of said closure, a locking bar, a pair of U-shaped locking bar retaining members carried by said closure and loosely retaining said locking bar for rotative and lateral movement, so that it may be engaged with and rocked upon said keepers or be lifted therefrom, locking cams fixed on said locking bar, and a handle for said locking bar, said cams being positioned to be actuated by the downward movement of said handle whereby the locking bar may be engaged with the keepers and the cams actuated by a continuous downward movement and the cams released and the locking bar disengaged from the keepers and the closure opened by a continuous upward movement.



2. In a fastening device, the combination with a hinged closure, of a pair of fixed keepers facing the hinge of said closure, a locking bar, a U-shaped locking bar retaining member carried by said closure and loosely retaining said locking bar for rotative and lateral movement so that it may be engaged with said keepers or be disengaged therefrom, locking cams fixed on said locking bar, and a handle for said locking bar, said cams being positioned to be actuated by the movement of said handle away from the closure hinge whereby the locking bar may be engaged with the keepers and the cams actuated by a continuous movement and the cams released and the locking bar disengaged from the keepers and the closure opened by a continuous movement.

3. In a fastening device, the combination with a closure, of fixed keepers, a locking bar, locking bar retaining members carried by said closure and loosely retaining said locking bar for rotative and lateral movement so that it may be engaged with said keepers or disengaged therefrom, a cam fixed on said locking bar and a handle for said locking bar whereby it may be adjusted laterally to engage and disengage the same with said keepers and rotated to actuate said cam.

1,157,040. TELEGRAPH-TRANSMITTER. EDWIN H. PIERSEN, Topeka, Kans. Filed Dec. 17, 1912. Serial No. 737,239. (Cl. 178—83.)



1. In a telegraph transmitter, an individual character member for each of a plurality of designated characters, a plurality of setting devices for each character member, and means for successively actuating said setting devices to set said character member in operative position.

2. In a telegraph transmitter, an individual character member for each of a plurality of designated characters, an individual group of setting devices for successively actuating each character member, and means for successively actuating the setting devices of each group prior to the actuation of the character members.

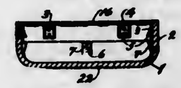
3. In a telegraph transmitter, an individual character member for each of a plurality of designated characters, a plurality of individually operable setting devices for each character member, and means for successively actuating the setting devices to set said character members in operative position.

4. In a telegraph transmitter, a plurality of independently operable character members each having indents corresponding to a telegraphic character, a circuit closer adapted for actuation by said indents, a plurality of independently operable setting devices for tripping each character member into functional position, and means on each character for determining the functional period of that member.

5. In a telegraph transmitter, an individual character member for each of a plurality of designated characters, a set of independently operable setting devices for each character member, and a single member for actuating any of the setting devices in its set.

[Claims 6 to 115 not printed in the Gazette.]

1,157,041. STOVE-DOOR. FRANK W. REYNOLDS, Mansfield, Ohio. Filed Dec. 4, 1912. Serial No. 734,815. (Cl. 126—190.)



1. In a stove door, the combination of a series of lugs forming lateral projections on the inner surface of the walls thereof, the said lugs being tapered from a point adjacent the upper edge of the said walls to the said projections, a second series of lateral projections formed below the first mentioned series, and a lining having flanges formed thereon, said flanges having cut away portions at each end thereof, and being provided with a series of apertures adapted to engage the first mentioned series of projections, the lower edge of the said flanges being adapted to engage the said second mentioned series of projections, substantially as, and for the purpose set forth.

2. A stove door comprising a back, side walls and end walls, a plurality of inwardly projecting, tapered lugs on the inner surface of said walls, a lining having flanges formed thereon, said flanges being cut away at each end thereof, and being adapted to engage said lugs, the exposed edges of said walls and the lining forming a smooth plane surface, substantially as described.

3. A stove door comprising a back, side walls and end walls, a series of lugs forming lateral projections on the inner surface of said walls, a lining having flanges formed thereon, said flanges being cut away at each end thereof, and being provided with a series of apertures adapted to engage the said projections, the inner surface of said walls and said lining forming a perfectly smooth plane surface, substantially as described.

4. A stove door comprising side walls and end walls, a series of lugs forming lateral projections on the inner surface of said walls, the said lugs being tapered from a point adjacent the upper edge of the said walls to the said projections, a lining having flanges formed thereon, the said flanges being cut away at each end thereof and being provided with a series of apertures adapted to engage the said projections, the said lining and upper edge of said walls forming a smooth plane surface, substantially as described.

1,157,042. METRONOME. CARL A. RICHMOND, Chicago, Ill. Filed June 23, 1911. Serial No. 634,925. (Cl. 58—130.)

1. A metronome comprising a flexible graduated tape, a bob, means to adjust the bob at any desired graduation on the tape, a flat member attached to the end of the tape and adapted to go between the leaves of a book, and means to engage the plate and the bob with one another when the device is not in use.



2. A metronome comprising a flat plate adapted to go between the leaves of a book, a flexible graduated tape having one end thereof connected to the end of said plate, a hollow bob, and a winding drum within said bob, the other end of said tape passing into the bob and being connected to said drum, the graduations of said tape being adapted to register with the place where the tape enters the bob and thereby indicate the "time" at which the device will operate as a pendulum.

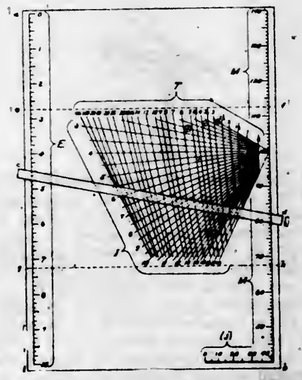
3. A metronome comprising a flat member adapted to go between the leaves of a book, a flexible tape connected to one end thereof by means of a joint permitting universal angular movement of the tape with respect to the said member without flexing the tape, a bob at the other end of the tape, and means to wind the tape in or out of the bob and thereby adjust the bob on the tape at any desired distance from said flat member.

4. A metronome comprising a flexible graduated tape, a flat member attached to one end of the tape and adapted to engage with a book, a bob, a winding drum carried by the bob, said tape winding upon said drum, and means for fastening the bob directly to the flat member, comprising a rigid attachment of the bob adapted to be engaged by the flat member.

5. A metronome comprising a flexible graduated tape, a flat member attached to the tape and adapted to slip between the leaves of a book, a bob also attached to the tape, means to adjust the length of the tape between said member and bob, and means carried by the bob adapted to engage directly with the flat member when the device is not in use.

[Claims 6 and 7 not printed in the Gazette.]

1,157,043. DEVICE FOR COMPUTING VALUATIONS OF INVESTMENT SECURITIES. CARL A. RICHMOND, Tyngsboro, Mass. Filed May 19, 1915. Serial No. 29,252. (Cl. 235—89.)



1. In a device for computing security valuations, a plane surface with two straight graduated scales thereon, one for the expressed rate of interest, the other for the

market value, and two sets of intersecting curves on said surface, one set corresponding to different income rates of interest and the other set corresponding to different periods of time to maturity of the security, and in combination therewith a straightedge lying across said plane surface to coöperate with said scales and sets of curves.

2. In a device for computing security valuations, a plane surface with two straight graduated scales thereon, one for the expressed rate of interest, the other for the market value, a set of straight lines radiating from the par point of the scale of market values toward the division points of the other scale, said radiating lines corresponding to different income rates of interest, and a set of curves intersecting said lines, said curves corresponding to different periods of time to maturity of the security, and in combination therewith a straight-edge lying across said plane surface to coöperate with said scales and sets of curves.

3. In a device for computing security valuations, a plane surface with two straight graduated scales thereon, one for the expressed rate of interest, the other for the market value, a set of straight lines radiating from the par point of the scale of market values toward the division points of the other scale, said radiating lines corresponding to different income rates of interest, and a set of curves intersecting said lines, said curves corresponding to different periods of time to maturity of the security, and in combination therewith a straight-edge lying across said plane surface to coöperate with said scales and sets of curves, each such curve intersecting each radiating line at a point so that the following four values belong together consistently, namely, the income rate corresponding to that line and the time corresponding to that curve and any two values on the two scales at points thereof in alinement with the intersection.

4. In a device for computing security valuations, a rectangular sheet of paper with two straight graduated scales close to the side edges of the sheet, one scale for the expressed rate of interest, the other for the market value, and two sets of intersecting curves on said sheet between said scales and restricted to the middle part of the length of the sheet whereby the ends of said sheet can be folded over the middle portion without creasing said curves, one set of said curves corresponding to different income rates of interest and the other set corresponding to different periods of time to maturity of the security, and in combination with said sheet a straight edge to coöperate with said scales and sets of curves.

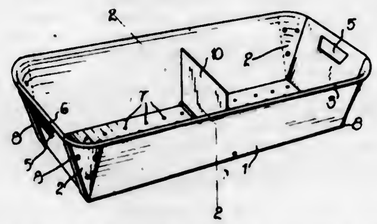
1,157,044. SAFETY-RAZOR. AUGUST R. RIEGER, Chicago, Ill. Filed Feb. 17, 1915. Serial No. 8,745. (Cl. 30—12.)



1. In a safety razor, the combination of a stock having a pair of flat webs extending in an inclined direction to each other and secured together in a resilient manner by a connecting back web, the free end of one web constituting a guard and the other web having holding means for a razor blade, and an adjusting screw having bearing in the back web with its inner end adapted to bear against the inclined surfaces of the pair of webs to effect an adjustment of the same, substantially as set forth.

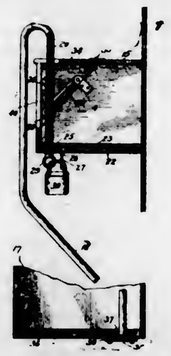
2. In a safety razor, the combination of a stock having a pair of flat webs extending in an inclined direction to each other and secured together in a resilient manner by a connecting back web, the free end of one web constituting a guard and the free end of the other web having lateral hook shaped holding ears for a razor blade, a central spring finger on the back web adapted for engagement in a notch in the back edge of a razor blade, and an adjusting screw having bearing in the back web with its inner end adapted to bear against the inclined surfaces of the pair of webs to effect an adjustment of the same, substantially as set forth.

1,157,045. METALLIC BASKET. ELLIS A. RISHER, O'Neill, Nebr. Filed July 18, 1914. Serial No. 851,777. (Cl. 220—14.)



A basket for the purpose described including a perforated bottom, side and end walls formed integral with the bottom, said side and end walls being flared upwardly and outwardly, said side and end walls being overlapped and secured together at their end portions, beading formed at the upper edges of the side and end walls, a reinforcing rod arranged with the beading, a shaft pivotally mounted at its opposite ends in the side walls of the basket and a partition plate having its lower edge rolled around said shaft, the rolled edge of said partition plate frictionally engaging the bottom of said basket.

1,157,046. TOWEL-CABINET. JACQUES ROUSSO, Chicago, Ill. Filed Jan. 12, 1912. Serial No. 670,776. (Cl. 45—82.)



1. In a device of the class described, a towel support; and a retaining member extending upwardly from said support and then downwardly sufficiently to constitute a suitable guide for a towel while in use, substantially as described.

2. In a device of the class described, an elevated towel support; and a retaining member extending upwardly from said support and then downwardly sufficiently below said support to constitute a suitable guide for a towel while in use, substantially as described.

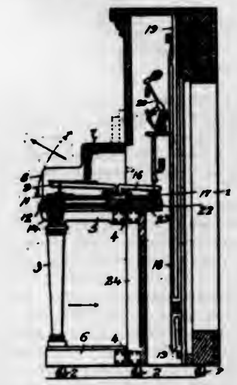
3. In a device of the class described, an elevated towel support; and a retaining member extending upwardly from said support and then downwardly sufficiently below said suport, said retainer being provided below said support with a substantially vertical portion of considerable length to constitute a suitable guide for a towel while in use, substantially as described.

4. In a device of the class described, an elevated towel support; and a retaining member extending upwardly from said support, then outwardly and downwardly sufficiently below said support, then inclined rearwardly and dowawardly under said support and then downwardly substantially vertically to constitute a suitable guide for a towel while in use, substantially as described.

5. In a device of the class described, a towel support; and a retaining member extending upwardly from adjacent the outer edge of said support and then downwardly sufficiently to constitute a suitable guide for a towel while in use, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,157,047. DETACHABLE KEYBOARD FOR PIANOS. HAROLD ROWNTREE, Kenilworth, Ill. Filed Feb. 9, 1915. Serial No. 7,215. (Cl. 84—141.)



1. In a piano, the combination with a main piano body containing key sections and a keyboard containing coöperating key sections, said key board adapted to be detached from said body.

2. In a piano, the combination with a main piano body containing key sections and a keyboard containing coöperating key sections, legs attached to said piano and forming a suport for said key-board, and means for detaching said key-board and its key sections from said main piano body and its key sections and from said support.

3. In a piano, the combination with a main piano body and a key board and coöperating key sections contained in said body and said key board, legs attached to said piano and forming a suport for said key board, and means for detaching said key board from said main piano body and support, said legs being foldable against said main piano body when said key board is detached.

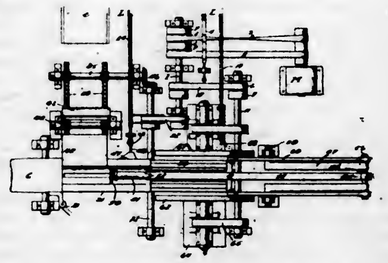
4. In a piano, the combination with a main piano body, a key board, keys therefor divided into coöperating sections and attached respectively to said main piano body and said key board, and means for readily removing said key board.

5. In a piano, a main body and action, operating keys for the action, said keys made in coöperating sections, one section of each key being mounted in the main piano body, and a detachable key board carrying the other key sections.

[Claims 6 to 8 not printed in the Gazette.]

1,157,048. AMMUNITION-HOIST. ANTONIO V. SANTARSIERO, Port Chester, N. Y., assignor to Antonio Bucci, Port Chester, N. Y. Filed Dec. 16, 1914. Serial No. 877,561. (Cl. 89—46.)

1. In an ammunition hoist, the combination with the shell-handling mechanism, and the ramming mechanism; of a main driving shaft, independent connections between it and said mechanisms, sliding controls for said connections, and mechanical means on said shell-handling mechanism and ramming mechanism for positively actuating said controls.



2. In an ammunition hoist, the combination with the shell-handling mechanism, and the ramming mechanism, each having an actuating shaft; of a main driving shaft, independent connections between it and said actuating shafts, independent controls for said mechanisms, connections between said driving shaft and a source of power for rotating the former in one direction or the other, and a third control for these connections.

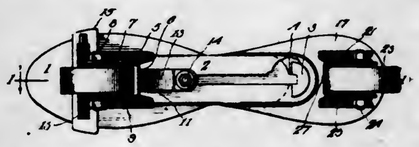
3. In an ammunition hoist, the combination with the shell-handling mechanism, and the ramming mechanism, each having an actuating shaft; of a main driving shaft, independent connections between it and said actuating shafts, sliding controls for said connections, levers for manually actuating said controls, and mechanical means on said shell-handling mechanism and ramming mechanism for positively actuating said controls.

4. In an ammunition hoist, the combination with a shell carriage behind the gun, an elevator for raising shells and delivering them one by one to said carriage, and carriage-actuating mechanism connected with the elevator shaft; of a rammer movably mounted on the carriage, rammer-actuating mechanism, a rammer shaft by which it is driven, a driving shaft, connections between the latter and said other shafts, and controls for said connections.

5. In an ammunition hoist, the combination with a shell carriage behind the gun, an elevator for raising shells and delivering them to said carriage, and carriage-actuating mechanism connected with the elevator shaft; of a rammer movably mounted on the carriage, rammer-actuating mechanism, a rammer shaft by which it is driven, a driving shaft, connections between the latter and said other shafts, means for interrupting and restoring said connections at will, manual controls for said means, a connection between the driving shaft and a source of power for turning the former in either direction, and a third control for said connection.

[Claims 6 to 11 not printed in the Gazette.]

1,157,049. SKATE. KARL SCHULTZ, Berwyn, Ill. Filed May 10, 1915. Serial No. 27,245. (Cl. 46—51.)



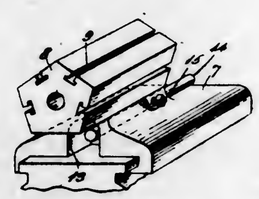
1. A skate comprising a heel member having a forwardly extending longitudinally recessed portion and a central longitudinal slot in said forwardly extending portion, and a toe member having a rearwardly extending

portion adapted to lap upon and slide in the longitudinal recess of the heel member, a tongue at its rear extremity adapted to fit against the undersurface of the heel member, and an oblique neck extending through the longitudinal slot of the heel member and connecting the tongue to the rear extremity of the toe member.

2. A skate comprising a heel member having a forwardly extending longitudinally recessed portion and a central longitudinal slot in said forwardly extending portion, and a toe member having a rearwardly extending portion adapted to lap upon and slide in the longitudinal recess of the heel member, a tongue at its rear extremity adapted to fit against the undersurface of the heel member, and an oblique neck extending through the longitudinal slot of the heel member and connecting the tongue to the rear extremity of the toe member; said rearwardly extending portion, tongue and neck being integral.

3. A skate comprising a heel member having a forwardly extending longitudinally recessed portion and a central longitudinal slot in said forwardly extending portion, and a toe member having a rearwardly extending portion adapted to lap upon and slide in the longitudinal recess of the heel member, a tongue at its rear extremity adapted to fit against the undersurface of the heel member, and an oblique neck extending through the longitudinal slot of the heel member and connecting the tongue to the rear extremity of the toe member, a wheel support extending from the heel member, a wheel support extending from the toe member, a brace extending diagonally from the wheel support attached to the toe member, and a bolt extending through the said brace, the slot of the heel member and the rearward extension of the toe member for securing the said brace to the said members and also fastening said members together.

1,157,050. METAL-WORKING MACHINE. LEON F. SCHULZE and ROBERT SCHULZE, Cleveland, Ohio. Original application filed Dec. 19, 1908, Serial No. 468,280. Divided and this application filed Oct. 4, 1912. Serial No. 723,939. (Cl. 29—37.)

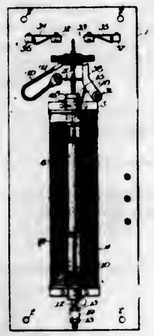


1. In a metal working machine, in combination, a frame, a spindle head having a plurality of spindles, and a longitudinally movable tool support having a plurality of faces substantially parallel with the axis of the spindle carrier, a number of the faces being arranged within the circle described by the spindles and carrying tools, and another of the faces engaging the frame and forming the support for the tool support.

2. In a metal working machine, in combination, a frame, a spindle head having a plurality of spindles, and a longitudinally movable tool support having a plurality of faces substantially parallel with the axis of the spindle carrier, a number of the faces being arranged within the circle described by the spindles and carrying tools, and another of said faces being outside of the circle described by the spindles and engaging the frame to form a support for the tool support.

3. In a metal working machine, in combination, a frame, a spindle head having a plurality of spindles, a longitudinally movable tool support having a plurality of tool bearing faces substantially parallel with the axis of the spindle carrier and arranged within the circle described by the spindles, and an integral supporting portion extending to the rear of the forward end of the tool support and engaging the frame.

1,157,051. DEVICE FOR PROTECTING INDUCTION-MOTORS AND THE LIKE. EDMUND O. SCHWEITZER, Chicago, Ill. Filed Aug. 3, 1912. Serial No. 713,139. (Cl. 175—294.)



1. A device of the class specified comprising vertically arranged magnetic coils adapted for connection in a polyphase circuit, a vertically movable core member having a core influenced by said coils so as to shift said core member vertically and upwardly upon a reversal of phase in said coils, circuit connections arranged to be closed upon an upward movement of said core member, and a spring controlled latch adapted to engage and hold said core member when elevated to an extent to close the circuit.

2. A reverse phase relay comprising in combination, a solenoid, a magnetic member mounted within said solenoid adapted to move axially thereof, a spindle connected to said member, a contact carried by said spindle, a disk also carried by said spindle, a pivoted arm, and a spring throwing said arm against the edge of said disk in the normal position of said member, said arm being adapted to engage the face of said disk upon the movement of said member in one direction.

1,157,052. HORSESHOE AND CALK. THOMAS SHEPHERD, Dingmans Ferry, Pa. Filed Mar. 15, 1915. Serial No. 14,432. (Cl. 168—42.)

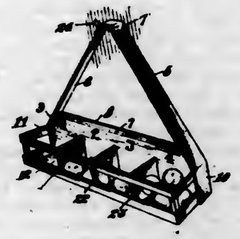


1. The combination with a shoe having a threaded recess therein extending but part way through the shoe, of a calk comprising a tubular shank section adapted to be threaded into the recess, a body section of relatively soft metal having a tapered bore extending longitudinally therethrough and communicating with the tubular shank, and a tapered core pin of relatively hard material passing through the bore of the body section and having its inner end adapted to bear against the bottom wall of the recess and its outer end to project slightly beyond the outer or ground engaging end of the calk body.

2. The combination with a horse shoe having a threaded recess therein opening through the outer face of the shoe, of a calk having a tubular shank section threaded into the recess and a tapered body section of relatively soft material formed integral with the shank section, said tapered body section having a tapered bore extending longitudinally therethrough and communicating with the tubular shank, and a core pin tapered to correspond to

the taper of the bore passing through said bore and adapted to bear at its inner end against the bottom wall of the recess of the shoe and to project at its outer end beyond the ground engaging end of the calk.

1,157,053. COMBINED TRIANGLE BALL RACK AND CARRIER. JOHN A. SMITH, San Gabriel, Cal. Filed Feb. 23, 1915. Serial No. 9,794. (Cl. 46—6.)



1. A structure for pocket billiard balls, comprising in combination a triangle, and a ball rack having a plurality of compartments secured to the triangle at the side opposite the triangle apex and with the open side facing the apex.

2. A structure for pocket billiard balls, comprising in combination a triangle, and a ball carrier secured to the triangle at the side opposite its apex with the open side facing the apex, and walls dividing the carrier into compartments.

3. A structure for pocket billiard balls, comprising in combination two walls secured to each other to form an angle, a third wall secured to the aforesaid wall with its plane at right angles thereto, and forming therewith a triangle, and a rack secured to the third wall with the open side facing the apex of the triangle.

4. A structure for pocket billiard balls, comprising in combination two vertically disposed walls secured to each other to form an angle, a horizontally disposed wall secured between said vertical walls to form the third side of a triangle and a back for a rack, a base secured to said back, and walls secured to said base to form a rack compartment.

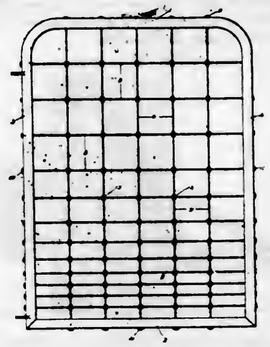
5. A structure for pocket billiard balls, comprising in combination two vertically disposed walls secured to each other to form an angle, a horizontally disposed wall secured between said vertical walls to form the third side of a triangle and a back for a rack, a base secured to said back, a front wall secured to said base having openings therein for exposing the balls to view, and side walls secured to said base and front wall to form a compartment.

[Claim 6 not printed in the Gazette.]

1,157,054. WIRE GATE. WILLIAM H. SOMMER, Peoria, Ill. Filed Dec. 10, 1913. Serial No. 805,848. (Cl. 256—73.)

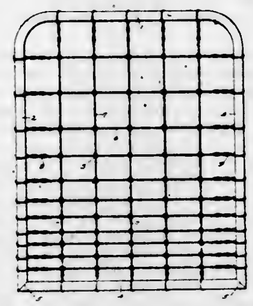
1. In a gate, the combination of a frame, including top and bottom and end bars each having wire receiving openings; a plurality of line wires, the opposite ends of which pass through the openings in the respective end bars of said frame, the opposite ends of each wire being headed; a plurality of picket wires, said picket wires crossing said line wires, their upper and lower ends passing respectively through the openings in the top and bottom bars of the frame, the opposite ends of said picket wires being headed; and means connecting the picket wires to the line wires where they intersect.

2. In a gate, the combination of a frame, including top and bottom and end bars each having wire receiving openings; a wire mesh secured within said frame, the opposite ends of certain of said wires passing through the openings in the opposite end bars of said frame and being headed, and the opposite ends of certain other of said



wires passing respectively through the openings in the top and bottom bars of said frame and being headed.

1,157,055. GATE. WILLIAM H. SOMMER, Peoria, Ill. Filed Jan. 24, 1914. Serial No. 814,199. (Cl. 256—73.)



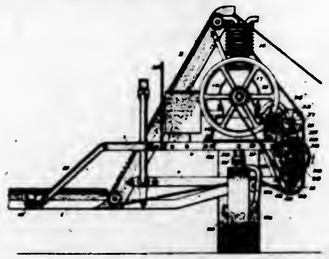
1. In a gate, a frame comprising top, bottom and end bars, and a rigid wire body for said frame, each wire of said body having its ends passed around bars of the frame and joined to itself by right and left intertwists.

2. In a gate, a frame comprising integral top and end bars formed into an inverted U, a bottom bar connected to the ends of said end bars by a miter-joint, and a rigid wire body for said frame, said wire body including longitudinal and vertical wires, the ends of each of said wires being passed around a bar of the frame and joined to itself by being twisted therewith.

1,157,056. MOTOR ATTACHMENT FOR HARVESTERS. JOHN A. STONE, Chicago, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Aug. 12, 1911. Serial No. 643,672. (Cl. 56—33.)

1. In a motor attachment for harvesters, a frame comprising a plurality of parallel sill members, a draft member rigidly attached thereto and disposed in a plane at right angles to the same, a second draft member attached to the opposite side thereof and disposed diagonally to said first mentioned draft member, an engine mounted upon said frame, a transport wheel mounted beneath said frame, a power shaft disposed substantially parallel to said first mentioned draft member and journaled in said frame, operative connections between said power shaft and said engine, a clutch intermediate said shaft and

said engine, and means for operating said clutch carried by said frame and accessible from the seat of a harvester when said first mentioned draft connection is attached to the stubbleward side thereof and said second mentioned draft member is attached to the frame thereof at a point adjacent the cutting mechanism.



2. In a motor driven harvester, a harvester, a draft link pivotally attached to the stubbleward side thereof and extending rearward thereof, a second draft link pivotally attached to the frame of said harvester at a point intermediate the ends of the cutter frame and extending rearward and stubbleward therefrom, a frame attached to the rear ends of said draft members and disposed substantially in line with the main wheel of the harvester, a source of power mounted on said frame, and a transport wheel pivotally connected beneath said frame disposed in the line of draft and substantially beneath said source of power.

3. In a motor driven harvester, a harvester, a frame, a transport wheel beneath the frame, and operative connections between said harvester and frame whereby one may rise and fall independently of the other including a draft link disposed in the line of draft of said frame, attached thereto and pivotally connected to the stubbleward side of the harvester frame at a point inside the harvester frame and adjacent the axis of the main wheel, said draft link being bowed intermediate its ends.

4. A motor attachment for harvesters including, in combination, a motor supporting frame adapted to trail in rear of a harvester, said frame including front and rear sill members extending transversely relative to the line of draft, a draft member having its rear end secured to the stubbleward ends of said front and rear sill members, said draft member being extended forward parallel with the line of draft and having means at its front end whereby it may be pivotally connected with a harvester, a supplemental draft member having its rear end secured to the grainward ends of said front and rear sill members, said supplemental draft member extending forward and grainward from said motor supporting frame and provided at its front end with a universal coupling mechanism whereby it may be connected with a harvester.

5. A motor attachment for harvesters including, in combination, a motor supporting frame adapted to trail in rear of a harvester, said frame including front and rear sill members extending transversely relative to the line of draft, a draft member having its rear end secured to the stubbleward ends of said front and rear sill members, said draft member being extended forward parallel with the line of draft and having means at its front end whereby it may be pivotally connected with a harvester, a supplemental draft member having its rear end secured to the grainward ends of said front and rear sill members, said supplemental draft members extending forward and grainward from said motor supporting frame and provided at its front end with a universal coupling mechanism whereby it may be connected with a harvester, a bracket member having opposite ends thereof secured to said front and rear sill members intermediate their ends and provided with a vertically arranged sleeve portion, a caster wheel supporting arm having a vertically arranged stem adapted to be received by said sleeve, and a caster wheel journaled upon said arm.

1,157,057. METAL CAP FOR ELECTRIC INCANDESCENT LAMPS. EMIL STREHLER, Stein, Switzerland. Filed May 9, 1912. Serial No. 696,192. (Cl. 176—37.)

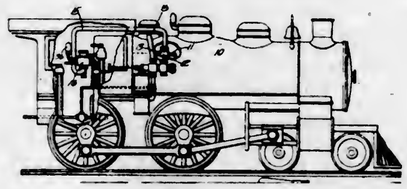


1. Metal cap for electric incandescent lamps, comprising in combination, a contact cap open at its lower end and provided at said end with a circular rim, a cap for the reception of the glass bulb provided at its upper end with a circular rim, the rim of one of said caps surrounding the adjacent rim of the second cap, and a ring of insulating material deformable in a cold state arranged between said two rims and held in place thereby.

2. Metal cap for electric incandescent lamps comprising in combination, a contact cap open at its lower end and having at said end a rim consisting of two parallel flanges, a ring of insulating material deformable in a cold state inserted between said two flanges, and a cap for the reception of the glass bulb provided with an inwardly bent upper rim sprung into said insulating ring to securely connect the cap for the glass bulb to the contact cap.

3. In an electric incandescent lamp, a cap or collar member for holding the smaller end of an incandescent bulb, one end of said collar having a continuous flange portion of less diameter than its body, a screw-threaded cap to be secured to said collar member, said screw-threaded cap having formed at one end thereof a continuous peripheral engaging portion in forced interfitting engagement with said flange, and an insulation deformable in the cold and clamped between said interlocking portions and held in place by the resiliency thereof.

1,157,058. SAFETY ATTACHMENT FOR BOILERS. CHARLES W. SULLIVAN, Los Angeles, Cal. Filed Apr. 21, 1915. Serial No. 22,894. (Cl. 122—504.)



1. In a safety attachment for boilers the combination of a boiler, a fusible plug mounted on the crown sheet thereof, said plug comprising a tubular casing and adapted to establish communication between the interior of the boiler and the interior of said casing when the water within the boiler falls below a predetermined level, a pipe leading from said plug to the exterior of the boiler, a valve casing mounted on said pipe, a whistle, a fluid fuel supply for the boiler, an injector for the boiler, separate conduits connecting said whistle, said fuel supply and said injector with said valve casing, a check valve disposed in the conduit leading to said fuel supply and adapted to close the same, a check valve disposed in the conduit leading to said injector and adapted to establish communication with a source of air thereby making the injector inoperative, and a valve body within said valve casing normally closing said conduits and adapted to establish communication between the interior of the boiler and said conduits when the fusible plug is melted, whereby said whistle and said check valves will be operated, substantially as described.

2. In a safety attachment for boilers the combination of a boiler, a fusible plug mounted on the crown sheet thereof, a pipe leading from said plug to the exterior of the boiler, said plug being adapted to establish communication between the interior of the boiler and the interior of said pipe when the water within the boiler falls below a predetermined level, a whistle, a fluid fuel supply for the boiler, an injector for the boiler, separate conduits connecting said whistle, said fuel supply and said injector with said valve casing, a check valve disposed in the conduit leading to said fuel supply and adapted to close the same, a check valve disposed in the conduit leading to said injector and adapted to establish communication with a source of air thereby making the injector inoperative, and a valve body within said valve casing normally closing said conduits and adapted to establish communication between the interior of the boiler and said conduits when the fusible plug is melted, whereby said whistle and said check valves will be operated, substantially as described.

3. In a safety attachment for boilers the combination of a boiler, a fusible plug mounted within the boiler, a pipe leading from said fusible plug to the exterior of the boiler, said plug being adapted to establish communication between the interior of the boiler and the interior of said pipe when the water within the boiler falls below a predetermined level, a valve casing mounted on said pipe, an injector for the boiler, a conduit connecting said injector with said valve casing, a check valve disposed in said conduit and adapted to establish communication with a source of air, thereby making the injector inoperative, and a valve body within said valve casing normally closing said conduit and adapted to establish communication between the interior of the boiler and said conduit when the fusible plug is melted, substantially as described.

4. In a safety attachment for boilers the combination of a boiler, a fusible plug mounted on the crown sheet thereof, a pipe leading from said plug to the exterior of the boiler, said plug being adapted to establish communication between the interior of the boiler and the interior of said pipe when the water within the boiler falls below a predetermined level, a whistle, a fluid fuel supply for the boiler, an injector for the boiler, separate conduits connecting said whistle, said fuel supply, and said injector with said pipe, a check valve disposed in the conduit leading to said injector adapted to establish communication with a source of air, thereby making the injector inoperative, a check valve disposed in the conduit leading to said fuel supply and adapted to close same, and means normally closing said conduits and adapted to establish communication between the interior of the boiler and said conduits when the fusible plug is melted, whereby said whistle and said check valves will be operated, substantially as described.

5. In a safety attachment for boilers, the combination of a boiler, a fusible plug mounted on the crown sheet thereof, a pipe leading therefrom to the exterior of the boiler, said plug being adapted to establish communication between the interior of the boiler and the interior of said pipe when the water within the boiler falls below a predetermined level, a valve casing mounted on said pipe, a whistle, a fluid fuel supply for the boiler, an injector for the boiler, means within said valve casing operative when the fusible plug is melted to operate the whistle, to shut off the fuel supply, and to render the injector inoperative, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,157,059. VALVE-OPERATING MECHANISM. JOHN H. SWAN, Chicago, Ill., assignor to Klipfel Manufacturing Co., Chicago, Ill., a Corporation of Illinois. Filed Sept. 11, 1914. Serial No. 861,277. (Cl. 236—8.)

1. In a valve-operating mechanism, the combination of means having a passage for fluid therein, a valve controlling the flow of fluid through said passage, a fluid-controlled diaphragm, a cam and a spring element carried by said valve and diaphragm and co-acting with each other for causing the shifting of said valve through the actuation of said diaphragm, an adjustable device for regulating the tension of said spring, and means controlling the actuation of said diaphragm.

2. In a device of the class described, the combination of a valve and diaphragm associated with a quick-throw device comprising a cam and a lever, resilient arms for coacting with said cam, secured to said lever and extending parallel therewith, and a clip embracing said arms, slidably mounted on said lever for adjusting the resiliency of said arms with respect to said cam.



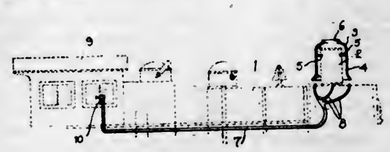
3. In a valve-operating mechanism, the combination of a frame having a fluid passage extending therethrough, a valve controlling the flow of fluid through said passage, a fluid-controlled diaphragm, a cam carried by said diaphragm, and comprising two conical portions arranged base to base, a lever connected to shift said valve, a spring rod extending transversely to the axis of said cam and carried by said lever and coacting with the conical portions of said cam to shift said valve through the actuation of said diaphragm, and means controlling the actuation of said diaphragm.

4. In a valve-operating mechanism, the combination of a frame having a fluid passage extending therethrough, a valve controlling the flow of fluid through said passage, a fluid-controlled diaphragm, a cam carried by said diaphragm, and comprising two conical portions arranged base to base, a lever connected to shift said valve, a resilient fork carried by said lever and coacting with the conical portions of said cam to shift said valve through the actuation of said diaphragm, and means controlling the actuation of said diaphragm.

5. In a valve operating mechanism, the combination of a frame having a fluid passage extending therethrough, a valve controlling the flow of fluid through said passage, a fluid-controlled diaphragm, a cam carried by said diaphragm and comprising two cones arranged base to base, a lever pivotally mounted on said frame and connected to shift said valve, resilient arms secured to said lever and forming a fork yieldingly engaging said cones so as to actuate said lever by the shifting of said cam, and mechanism controlling the actuation of said diaphragm.

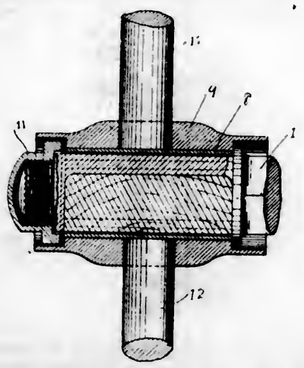
[Claims 6 to 9 not printed in the Gazette.]

1,157,060. SMOKE-STACK ATTACHMENT. JOHN T. SWEENEY, Chillicothe, Mo. Filed Aug. 8, 1914. Serial No. 855,851. (Cl. 110—131.)



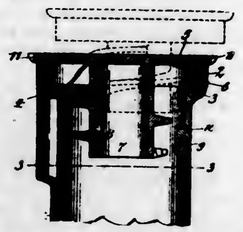
In combination with a smoke stack, a casing surrounding the upper end of said stack and in predetermined spaced relation thereto, the opposite ends of said casing being open, the upper end of the casing terminating above the stack and the lower end of the casing terminating above the lower end of the stack, and means for forcing a draft through the casing, said means comprising a plurality of equidistantly spaced pipes discharging within the lower end of the casing.

1,157,061. VEHICLE AXLE AND WHEEL-MOUNTING. SAMUEL TATLOW, St. Cloud, Fla. Filed Feb. 13, 1914. Serial No. 818,520. (Cl. 21—4.)



The hereindescribed vehicle axle and wheel mounting comprising an axle having an integral spindle projecting from the end thereof, said spindle being disposed in a plane parallel to the major axis of the axle and below the horizontal center thereof, in combination with a dummy fitted to the spindle within a hub, said dummy being formed of wood and filling the space within the hub not occupied by the spindle, and roller bearings on said spindle and dummy.

1,157,062. COVER-FASTENING FOR STOP-COCK BOXES. WILLIAM PERRY TAYLOR, Buffalo, N. Y. Filed May 13, 1914. Serial No. 838,300. (Cl. 137—13.)



1. A cover for a pipe having an internal locking lug on one side of its bore while the opposite side of said bore is unprovided with a locking lug, comprising a disk adapted to extend over the upper end of the pipe, an annular depending flange adapted to engage with the outer side of said pipe, a shank depending from the underside of the disk and adapted to extend downwardly along the inner end of said lug, and a screw thread arranged on the exterior of said shank and extending at least one complete turn circumferentially around the same, the peripheral diameter of said thread being less than the distance from the inner edge of said locking lug to the diametrically opposite part of the bore of the pipe, said shank and thread being movable downwardly between said lug and the opposite side of the pipe and then laterally for engaging said thread with said lug before said flange engages with the periphery of said pipe.

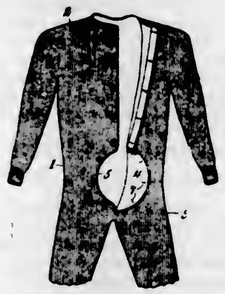
2. The combination of a pipe provided on one side of its upper end with an internal locking lug and on its opposite side below the plane of the locking lug with a shifting lug having an inclined face which slopes inwardly and downwardly, and a cover comprising a disk adapted to extend over the top of the pipe, a shank depending from the disk, and a screw thread arranged on the exterior of said shank and adapted to engage with the inclined face of said shifting lug and to be moved laterally thereby so as to engage another part of said thread with the underside of said locking lug.

3. The combination of a pipe having a flange at its upper end and a locking lug on one side of its bore, and a cover having a disk extending over the top of said pipe, an annular flange surrounding the flange of the pipe, a shank depending from said disk, and a screw thread extending at least one turn around the shank and engaging the underside of said locking lug, the peripheral diameter of said thread being less than the distance from the inner end of said lug to the diametrically opposite part of the bore of said box, said shank and thread being movable downwardly between said lug and the opposite side of the pipe and then laterally for engaging said thread with said lug before said flange engages with the periphery of said pipe.

4. The combination of a pipe having a flange at its upper end, a locking lug on one side of its bore, a shifting lug arranged on the opposite side of the bore of the box below the plane of the locking lug and having an inwardly and downwardly inclined face, and a cover having a disk extending over the top of said pipe, an annular flange surrounding the flange of the pipe, a shank depending from said disk, a screw thread extending at least one turn around the shank and engaging the underside of said locking lug, the peripheral diameter of said thread being less than the distance from the inner end of said lug to the diametrically opposite part of the bore of said pipe, and a part of said thread on one side of said shank being adapted to engage said inclined lug for shifting a part of the thread on the opposite side of the shank underneath said locking lug.

5. The combination of a pipe provided on one side of its bore adjacent to the outer end thereof with an inwardly projecting locking lug, and a cover having a disk adapted to extend over the outer end of the pipe, a marginal flange adapted to engage the periphery of the pipe, a shank projecting from the underside of said disk into the pipe, and a screw thread arranged on the outer side of said shank and adapted to engage with the underside of said lug, said shank being of such length and said thread being of such diameter that the initial engagement of said thread with the underside of said lug may be effected by inserting the shank and thread into the pipe while the same and the disk and flange are tilted relatively to the pipe.

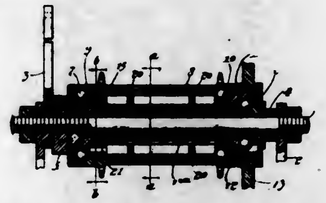
1,157,063. UNDERGARMENT. HAROLD L. TITTERENCE, Chester, Pa. Filed Nov. 21, 1914. Serial No. 878,377. (Cl. 2—144.)



1. An undergarment provided with an opening extending from the waist line toward the crotch with the extremities of the opening in the median line of the front of the garment and provided with a flap or fly extended laterally from said median line to a greater distance midway of its length than at the ends, and the matching portion of the garment being correspondingly recessed or cut away, and said garment at the fly portion being provided with suitable fastening devices.

2. An undergarment provided with a fly extending from the waist portion toward the crotch portion and convexly curved laterally of the length of the garment with the extremities of the fly in the median line of the front of the garment, that portion of the garment matching the fly being concavely curved and related to the fly to be overlapped by said fly, both the fly and the matching portion being provided with coacting fastening means.

1,157,064. COASTER-BRAKE. JOHN J. TOBIN, Chicago, Ill., assignor to Tobin Manufacturing Company, Chicago, Ill. Filed July 14, 1913. Serial No. 778,972. (Cl. 208—57.)



1. In a device of the character described the combination with a wheel hub, of a driving element, radially shifting means driven by said driving element interposed between said element and said hub to drive or brake said hub adapted to engage opposing portions of the inner periphery of said hub depending upon the direction of force exerted by said driving element, and stationarily mounted means adapted to coöperate with said radially shifting means when in one of its alternative positions.

2. In a device of the character described, the combination with a wheel hub, of a driving element, means driven thereby to engage opposing portions of the interior periphery of said hub depending upon the direction of force exerted by said driving element to thereby drive or brake said hub, and means coöperating with said first aforesaid means for braking purposes when in one of its alternative positions.

3. In a device of the character described the combination with a wheel hub, of a driving element, shifting means including a pair of relatively oppositely movable sections shiftable transversely of said hub interposed between said element and said hub adapted to occupy alternative hub engaging positions depending upon the direction of force exerted by said driving element, and stationarily mounted means adapted to coöperate with said sections when in one of their alternative positions.

4. In a device of the character described the combination with a wheel hub, of a driving element, shifting means including a pair of relatively oppositely movable sections interposed between said element and said hub adapted to occupy alternative positions depending upon the direction of force exerted by said driving element, and stationarily mounted means adapted to coöperate with said first aforesaid means when in one of its alternative positions, said driving element including a pinion and said sections being provided with racks meshing with said pinion.

5. In a device of the character described the combination with a wheel hub, of a driving element, shifting means including a pair of relatively oppositely movable sections interposed between said element and said hub adapted to occupy alternative positions depending upon the direction of force exerted by said driving element, and stationarily mounted means adapted to coöperate with said sections when in one of their alternative positions, said driving element including the pinion, and said sections being provided with racks meshing with said pinion.

[Claims 6 to 14 not printed in the Gazette.]

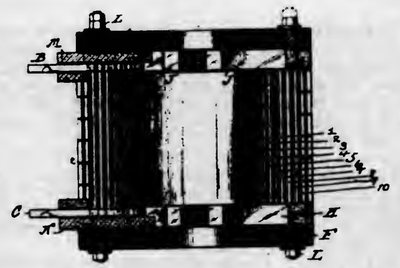
1,157,065. DUPLEX CONTINUOUS HINGE. HAROLD B. TODD, Philadelphia, Pa. Filed May 17, 1915. Serial No. 28,758. (Cl. 16—11.)

1. A duplex continuous hinge comprising a pair of butt members having alternating spaces and pintle-receiving eyes in combination with an intermediate plate common to both butt members and having eyes for the spaces of the butt members, both plate and butt members being apertured for attachment to objects hinged, and pintles joining the butt members and the plate.



2. A duplex hinge comprising a central plate, apertured for attachment to an object hinged and carrying eyes on opposite edges, butt members, similarly apertured upon opposite sides of the plate and plural in number upon one side of the plate, having eyes alining respectively with the eyes upon the opposite edges of the plate and coöperating pintles connecting the eyes of the butt members and plate.

1,157,066. REACTOR. PHILIP TORCHIO, New York, N. Y. Filed Apr. 24, 1914. Serial No. 834,068. (Cl. 171—242.)



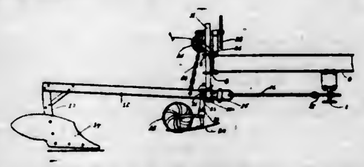
1. A reactor, comprising a plurality of coaxial helical coils seated one within the other and connected in parallel and having a permanently maintained air space within the innermost coil.

2. A reactor comprising a plurality of coaxial helical coils seated one within the other, connected in parallel and having ventilating spaces between them and a permanently maintained air space within the innermost coil.

3. A reactor, comprising a plurality of coaxial helical coils seated one within the other and connected in parallel, top and bottom headers, blocks adjacent to each of said headers having inward extensions receiving said coils between them, intermediate spacing blocks between said first-named blocks, and bolts extending through said headers, blocks and spacing blocks.

4. A reactor, comprising a plurality of coaxial helical coils seated one within the other and having a permanently maintained air space within the innermost coil.

1,157,067. GANG-PLOW FRAME. DANA S. TROTH, Stockton, Cal. Filed Nov. 14, 1914. Serial No. 872,130. (Cl. 97—70.)



A device of the character described comprising the combination with a main frame having a draft means, of a plurality of independent plow frames, each having an independent draft connection with said first named frame, each plow frame comprising a pair of members spaced

apart forming an intermediate slot, a guide member slidably mounted through the slot in each plow frame, said guide members being guided vertically adjacent said first named frame, as described.

1,157,068. MOTOR-VEHICLE. JESSE G. VINCENT, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 22, 1912. Serial No. 732,942. (Cl. 74—34.)



1. In a motor vehicle, the combination with the supporting axle, of a wheel having a hub mounted in supporting bearings on said axle, gears in the hub connecting the wheel and axle, some of said gears being adapted to rotate with the wheel and about their own axes, and a driving shaft extending through the axle and connected to said gears.

2. In a motor vehicle, the combination with the supporting axle, of a wheel supported in bearings and adapted to rotate thereon, gears mounted in the wheel to rotate therewith and on their own axes and connected to operate the wheel, and a driving shaft extending through the axle and connected to said gears.

3. In a motor vehicle, the combination with the supporting axle, of a wheel supported in bearings and adapted to rotate thereon, a gear secured to the axle, planetary gears in mesh with said gear, and a driving shaft extending through the axle and connected to said planetary gears.

4. In a motor vehicle, the combination with the supporting axle, of a wheel supported in bearings and adapted to rotate thereon, planetary reduction gears connected to the axle and wheel, and a driving shaft extending through the axle and connected to operate the planetary gears.

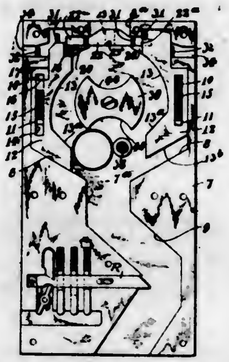
5. In a motor vehicle, the combination with the axle having a spindle, of a wheel having a hub mounted on spaced bearings on said spindle, a gear secured to the spindle between said bearings, a pair of gears mounted in said hub with one of the pair in mesh with the first said gear, a driving shaft extending into the hub, a gear on said shaft in mesh with the other gear of said pair, and means on the wheel for housing all of said gears.

[Claims 6 and 7 not printed in the Gazette.]

1,157,069. COIN-OPERATED VENDING-MACHINE. JOHN A. WEBSTER, Rutherford, N. J., assignor to Autosales Gum and Chocolate Company, New York, N. Y., a Corporation of New York. Filed Dec. 16, 1912. Serial No. 737,060. (Cl. 194—65.)

1. In a coin-operated vending machine having a plurality of compartments and a common coin-slot therefor, coin-operated mechanism associated with each compartment for controlling the same, means for closing said slot, and means whereby said mechanisms are adapted to normally hold said slot-closing means out of operative position and to release the same into closing position only when all of said mechanisms are in predetermined position.

2. In a coin-operated two-compartment vending machine having an independent lid for each compartment, a coin-slot common to both of said compartments, means for closing said slot, and coin-operated mechanism for controlling said lids and adapted to normally hold said slot-closing means out of operative position and to release the same into closing position only when both of said lids are open.



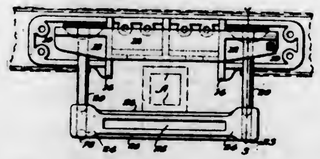
3. In a coin-operated two-compartment vending machine having an independent lid for each compartment, a coin-slot common to both of said compartments, means normally tending to close said coin-slot, movable members for normally locking said lids and adapted when in normal position to hold said means in an inoperative position, and coin-controlled mechanism to move said locking members for releasing said slot-closing means.

4. In a coin-operated vending machine, the combination of a casing having two compartments, an independent lid for each compartment, a coin-slot common to both of said compartments, locking means for each of said lids, a hand-operated coin-controlling device adapted to move said locking means into releasing position so as to unlock the lids, and means for automatically closing said coin-slot when the lids of both compartments are unlocked, said slot-closing means being held in retracted or inoperative position by said locking means when one or both of said lids are locked.

5. In a coin-operated vending machine having two compartments and a coin-slot arranged midway between the same, means for closing said slot, and coin-controlled mechanism on each side of said coin-slot for controlling said compartments and normally holding said slot-closing means out of operative position, said mechanism being adapted to release said means into closing position only when both mechanisms are in predetermined position.

[Claims 6 to 9 not printed in the Gazette.]

1,157,070. DRAW-BAR CARRY-IRON. CHARLES T. WESTLAKE and CHARLES S. SHALLENBERGER, St. Louis, Mo., assignors to Flory Carry Iron Company, St. Louis, Mo., a Corporation of Delaware. Filed Mar. 28, 1914. Serial No. 826,563. (Cl. 213—42.)



1. In a draw bar carrier, the combination with hangers provided at their lower ends with trunnions, of a carry iron provided with a pair of oppositely disposed draw bar bearing faces, the same being located at different distances from the longitudinal axis of the carrier, the end portions of said carry iron being provided with slots, and oppositely disposed pairs of bearings formed in the end portions of said carry iron to the sides of the slots therein which bearings are adapted to receive the trunnions on the hangers.

2. In a draw bar carrier, a support provided with openings, there being sockets formed around said openings and there being a slot formed in said suport from one of the openings therein to the end of said support, hangers, heads on the upper ends thereof, which heads are adapted to engage in the sockets around the openings, a carry iron pivotally connected to said hangers, and a removable member seated in the support and bridging the slot therein.

1,157,071. INTERNAL-COMBUSTION PUMP. CHARLES E. WHITE, San Francisco, Cal. Filed Nov. 13, 1913. Serial No. 801,275. (Cl. 160—1.)



1. An internal combustion pump comprising a combustion chamber; a discharge; a suitable liquid intake; and means secured to the combustion chamber and the discharge and intake and adapted to contain a normally balanced column of liquid above the intake.

2. An internal combustion pump comprising a combustion chamber; a discharge; a suitable liquid intake; and parallel pipes secured to the combustion chamber and the discharge and intake and adapted to contain a normally balanced column of liquid above the intake.

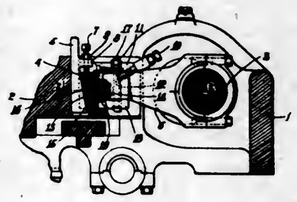
3. An internal combustion pump comprising a combustion chamber; a discharge; parallel pipes secured to the combustion chamber and the discharge and adapted to contain a normally balanced column of liquid therein; and a suitable liquid intake secured to the lower ends of the parallel pipes and adapted to admit liquid into the parallel pipes when the column of liquid therein moves in either direction.

4. An internal combustion pump comprising a combustion chamber; a discharge; parallel pipes secured to the combustion chamber and the discharge and adapted to contain a normally balanced column of liquid therein; a suitable liquid intake secured to the lower ends of the parallel pipes and adapted to admit liquid into the said pipes when the column of liquid therein moves rapidly and continuously in either direction; and means adapted to normally close the discharge and to be opened by the upward movement of the column of liquid within the discharge pipe.

5. An internal combustion pump comprising parallel expansion and discharge pipes adapted to contain a normally balanced column of liquid therein; a suitable liquid intake secured to the lower ends of the parallel pipes; a compression pipe having a normally closed liquid discharge; and means for causing the column of liquid to rise in the discharge pipe and to compress the air above the liquid into a suitable receiver, to draw liquid into the said discharge pipe through the liquid intake and to open the normally closed discharge.

[Claims 6 to 8 not printed in the Gazette.]

1,157,072. CONNECTION. RICHARD LESTER WILCOX, Waterbury, Conn., assignor to The Waterbury Farrel Foundry and Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed Mar. 5, 1915. Serial No. 12,301. (Cl. 74—17.)



1. In a device of the character described, the combination with a pitman; of an independent member; and means for operatively securing said pitman to said independent member, comprising a shaft journaled in said independent member with oppositely disposed longitudinal recesses therein, and a separable member connected with said pitman having an interlocking engagement with the recesses in said shaft.

2. In a device of the character described, the combination with a pitman; of an independent member; and means for operatively securing said pitman to said independent member, comprising a shaft journaled in said independent member, with oppositely disposed longitudinal recesses therein, and having a fixed connection with said pitman by the engagement of a lip upon said pitman with a recess in said shaft.

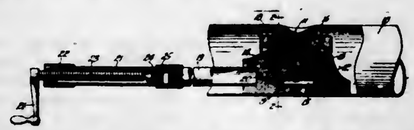
3. In a device of the character described, the combination with a pitman; of an independent member; means for operatively securing said pitman to said independent member, comprising a shaft having recesses therein journaled in said independent member, and having a fixed connection with said pitman by the engagement of lips thereon with the recesses in said shaft; and means for relatively adjusting the position of one of said lips.

4. The combination with a pitman and an independent member; of means for forming an operative connection therebetween, said means comprising a shaft having longitudinal recesses journaled in said independent member, a lip on said pitman having engagement with one of said recesses; a member having a lip thereon in engagement with one of said recesses; and means for movably connecting the same with said pitman.

5. In a device of the character described, the combination with a pitman, one end of which moves in a rotary path; of an independent member, having a reciprocatory movement; and means for operatively securing said pitman to said independent member at the end thereof opposite to the end moving in the rotary path, said means comprising a shaft journaled in said independent member and having a clamp connection with said pitman.

[Claims 6 to 10 not printed in the Gazette.]

1,157,073. PIPE OR CASING DENT REMOVER. LAWRENCE F. BAASH, Fillmore, Cal. Filed Feb. 13, 1915. Serial No. 9,212. (Cl. 153—80.)



1. A casing dent remover comprising a body having an arcuate lower face and forming a tubular chamber on its upper face, a plunger reciprocally mounted in said chamber, a shoe having a transverse arcuate face, a ball and socket connection between said shoe and plunger whereby the shoe may have a swivel movement, and fluid operating

means for reciprocating said plunger, substantially as described.

2. A casing dent remover comprising a body having an arcuate lower face and forming a tubular chamber on its upper face, a plunger reciprocally mounted in said chamber, a shoe having a transverse arcuate face, a swiveled connection between said shoe and plunger, and means for operating said plunger from a remote point, said last mentioned means comprising a fluid conduit leading to the lower part of said tubular chamber and a plunger for forcing the fluid through said conduit into said chamber, substantially as described.

1,157,074. BROOM. LUCIAN BLACKARD, Hayti, Mo. Filed Mar. 24, 1915. Serial No. 16,731. (Cl. 15—20.)



1. A broom including a handle, a pair of wire receiving plates secured to the handle at diametrically opposite points thereof, independent bundles of material constituting the brush portion of the broom, said bundles being disposed against the outer faces of the plates and a wire passing through the plates and about the bundles for securing the same against the plates.

2. A broom including a handle, a pair of wire receiving plates secured to the handle at diametrically opposite points thereof, two independent bundles of material constituting the brush portion of the broom, a wire passing through the plates and about the bundles for securing the same against the plates, and a pair of head plates detachably secured to the handle, said head plates being disposed to bear against opposite faces of the head of the brush portion to close the space between the upper ends of the two bundles.

3. A broom including a handle, a pair of wire receiving plates detachably secured thereto at diametrically opposite points, said plates being arranged in parallel relation to each other and being each provided with terminal apertures, separate bundles of material constituting the brush portion of the broom, there being a bundle disposed against each plate, a wire passing through the apertures of the plate and about the bundles for securing the same against the plates and handle, and a pair of head plates detachably secured to the handle and positioned to bear against the bundles on opposite sides thereof, said head plates being also disposed to conceal the space between those terminals of the bundles which are attached to the handle.

4. A broom including a handle, wire receiving plates detachably secured thereto at diametrically opposite points and in parallel relation to each other, separate bundles of brush forming material, a wire passing through the plates and about the bundles for securing the same to the handle and plates, and a pair of head plates detachably secured to the handle, said head plates being disposed in parallel spaced relation to each other and at right angles to the wire receiving plates, each of said head plates including a rectangular body portion, and a plurality of laterally extending fingers, said body portion being adapted to bear against the handle, and said finger members being adapted to engage against the bundles of material.

5. A broom including a handle, parallel wire receiving plates secured thereto, bundles of brush forming material disposed against the wire receiving plates, a wire passing through the plates and about the bundles, and a pair of head plates detachably secured to the handle on opposite sides of the broom, said plates being disposed at right angles to the wire receiving plates.

[Claims 6 to 8 not printed in the Gazette.]

1,157,075. ELECTRIC-LAMP SOCKET. CHARLES D. BLACKBURN, Lime, Colo. Filed Apr. 21, 1914. Serial No. 833,539. (Cl. 173—340.)

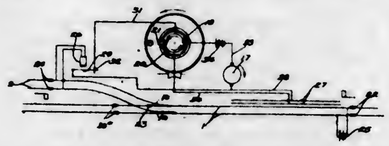


1. A socket provided with a neck terminating in an enlarged head overhanging the body portion of the socket and terminating in fingers extending in spaced relation to the neck to provide pockets, contacts positioned in said pockets, and conductors leading from said contacts through said neck and through said head having their outer end portions extending into said pockets sharpened.

2. A socket provided with a neck terminating in a head extending beyond the neck and having depending fingers extending in spaced relation to the neck, said socket being provided with passage ways leading through said neck and through said head across said fingers and having their end portions extending downwardly and communicating with said pocket, contacts positioned in said socket, and conductors leading from said contacts through said passage-ways into said socket and having their outer end portions sharpened.

3. A one-piece socket having a neck terminating in an enlarged head provided with depending fingers positioned in spaced relation to said neck and the body portion of said socket, contacts positioned within said socket, and conductors extending from said contacts through said neck and head and terminating in depending end pieces extending into the space between said fingers and neck and having their outer end portions sharpened.

1,157,076. ELECTRICAL SWITCH-ACTUATING MECHANISM. WILLIAM J. BOHAN, St. Paul, Minn. Filed Aug. 3, 1914. Serial No. 854,718. (Cl. 104—155.)



1. An electric switch actuating mechanism comprising a "to and fro" switch throwing device, a motor for operating said switch throwing device, and a motor controlling circuit including terminal trolley lines, both independent of the rails.

2. An electrical switch actuating mechanism comprising a "to and fro" switch throwing device, a continuous direction motor for operating said switch throwing device, and electric motor actuating connections and cooperating devices arranged to close the motor circuit on the approach side of the switch and cause the said motor to move the switch throwing device in one direction, and arranged to automatically close said motor circuit on the other side of said switch and cause said motor to again operate in the same direction and impart the reverse switch operating movement to said switch throwing device.

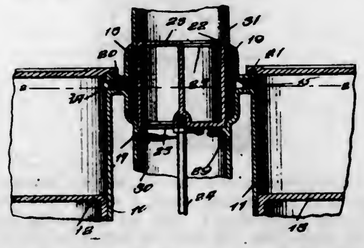
3. The combination with the rails of a main line, branch line and coöperating switch arranged in an insulated track section and connected to a source of electrical energy, of a "to and fro" switch throwing device, a continuous direction motor for operating said switch throwing device, and electric circuit connections including said motor and a source of electrical energy, and comprising terminal trolley lines and a circuit selector.

4. The combination with the rails of a main line, branch line and coöperating switch arranged in an insulated track section and connected to a source of electrical energy, of a "to and fro" switch throwing device, a continuous direction motor for operating said switch throwing device, electric circuit connections including said motor, a source of electrical energy, terminal trolley lines, a circuit closer, a magnet normally holding said circuit closer in a circuit closing position and itself connected across the branch line rails, and a source of electrical energy connected across the main line rails.

5. The combination with the rails of a main line, branch line and coöperating switch arranged in an insulated track section, of a source of electrical energy connected across the approach ends of the insulated section of the main line, a magnet connected across the branch line rails of said insulated section, a "to and fro" switch throwing device, a continuous direction motor for operating said switch throwing device, a circuit selector including continuous and sectional contacts and a coöperating brush, which brush receives movement from said motor, terminal trolley lines extended a limited distance along the track rails, a source of electrical energy connected to the continuous contact of said circuit selector and to one side of said motor, a lead connecting one of the said trolley lines to the other side of said motor and to one of the contact sections of said circuit selector, a circuit closer in the latter noted lead between said motor and sectional contact, which circuit closer is normally held closed by said magnet, and another lead connecting the other trolley line to the other sectional contact of said circuit selector.

[Claims 6 to 14 not printed in the Gazette.]

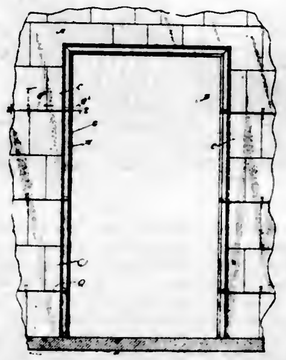
1,157,077. GAS-ENGINE VALVE. HIRAM V. BOWMAN, Toledo, Ill. Filed Apr. 25, 1912. Serial No. 693,148. (Cl. 123—59.)



An engine valve comprising the combination with an open-ended cylindrical casing of an annular shoulder formed on the inner periphery of the casing, a cylindrical hollow valve body rotatable in the casing and seated on the shoulder, a central partition disposed in the valve body and provided at its lower end with a threaded socket and an actuating stem threadedly engaged in the socket.

1,157,078. FIREPROOF BUILDING CONSTRUCTION. JACOB G. BRAUN, Chicago, Ill. Filed Apr. 29, 1912. Serial No. 693,972. (Cl. 189—46.)

1. In a construction of the class described, the combination of a fireproof wall, a frame having a series of concealed ribs, and a device consisting of a member riveted to said ribs and extending into said wall, and tension exerting mechanism for adjustably keying said device in said wall to anchor said wall and frame firmly in relative position.



2. In a construction of the class described, the combination of a fireproof wall, a metallic door or like frame, having concealed instanding ribs, a flat metallic plate having hooked slotted ends interlocked with said ribs and concealed in said wall, a concealed metallic extension in said plate extending a distance into the wall, a key slot adjacent the inner end of said extension, and a wedging key passing through said slot in engagement with the material of said wall for drawing and maintaining the frame into position with respect to said wall.

3. In a construction of the class described, the combination with a wall composed of fireproof tile-brick, of a metallic door frame having integral concealed ribs, a flat metallic plate concealed in said wall having slotted hooked portions into the slots of which said ribs project and are swaged to interlock said plate and door frame, a metal strap extension of considerable length bolted to said metal plate and embedded in said wall, a slot adjacent the end of said strap metal extension, and a metallic key passing through said slot in wedging engagement with the walls of adjacent tile bricks for drawing and anchoring said frame into position with respect to said wall.

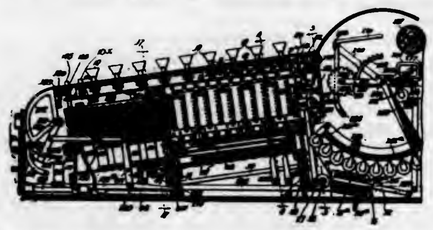
4. In a construction of the class described, the combination with a wall composed of fire proof material, of a metallic door frame of U-shaped section having ribs on the three interior walls of the U-frame, a flat metallic plate within said frame having slotted hooked portions into the slots of which said ribs project and are swaged to interlock said plate and door frame, an anchoring device secured to said plate, and means for exerting tension on said anchoring device to hold said plate firmly against said wall.

5. In fire proof building constructions, the combination with a wall composed of fire proof tile brick, a metallic door frame of U-shaped section, integral ribs on the three interior walls of said frame, a metallic plate within said frame having slotted hooked portions into the slots of which said ribs project and are swaged to interlock said plate and door frame, a metal strap extension secured to said plate and embedded in said wall, a slot adjacent the end of said strap, and a metallic key passing through said slot in wedging engagement with the walls of adjacent tile bricks for drawing and anchoring said frame into position with respect to said wall.

1,157,079. ELECTROCALCULOGRAPH. JOHN BRICKEN, Maywood, Ill., assignor of two-thirds to Reuben Marks, Des Moines, Iowa. Filed Aug. 29, 1911. Serial No. 646,664. (Cl. 235—60.)

1. In an electrical computing machine, a series of digit lines corresponding to the different digits, digit keys for controlling the closure of said digit lines, a series of re-

sult lines representing the results of computations adapted to be performed on said machine, and switching mechanism for extending said digit lines to said result lines.



2. In an electrical computing machine, a series of digit lines corresponding to the different digits, digit keys for controlling the closure of said digit lines, a series of result lines likewise corresponding to the different digits, and means for extending said digit lines to said result lines in accordance with predetermined computations.

3. In an elecirical computing machine, a series of digit lines corresponding to the different digits, digit keys for controlling the closure of said digit lines, a series of result lines likewise corresponding to the different digits, a switchboard provided with connecting circuits for extending any one of said digit lines to any one of said result lines, and means for selecting a particular connecting circuit of said switchboard in accordance with a predetermined computation.

4. In an electrical computing machine, a series of digit lines corresponding to the different digits, digit keys for controlling the closure of said digit lines, a series of result lines likewise corresponding to the different digits, a switchboard provided with connecting circuits for extending any one of said digit lines to any one of said result lines, said connecting circuits being arranged to connect said lines in accordance with mathematical tables, and means for automatically controlling the selection of a connecting circuit of said switchboard.

5. In an electrical computing machine, the combination with a series of digit lines corresponding to the different digits, of a series of result lines each representing a different digit of a mathematical computation, means for setting the machine for mathematical computations, and switching means responsive thereto for extending said digit lines to said result lines in accordance with a mathematical computation for which the machine is set.

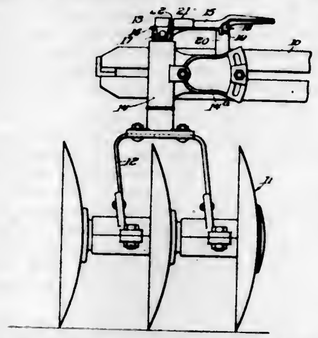
[Claims 6 to 43 not printed in the Gazette.]

1,157,080. DISK GANG FOR USE IN HARROWS AND SIMILAR TILLAGE IMPLEMENTS. FREDRICK A. BUCKNAM, Auburn, N. Y., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Dec. 22, 1913. Serial No. 808,131. (Cl. 97—37.)

1. In a tillage implement, a transverse frame member, a disk gang carrying a vertical shaft, a bracket to receive said shaft mounted upon the frame member and movable about a fore and aft pivot, a horisontally arranged lever on said shaft, a sector on said lever, a detent lug carried on said bracket and projecting upwardly to engage the sector, and means for maintaining said lever and sector in engaged relations.

2. In a tillage implement, a transverse frame member, a disk gang carrying a vertical shaft, a bracket to receive said shaft carried on the frame member and capable of lateral and axial adjustment thereon, a horisontally arranged hinged lever detachably carried on said shaft, a sector and detent for said lever and bracket, and means for moving said lever bodily and yieldingly holding it in position where the sector and detent are engaged.

3. In a tillage implement, a disk gang, a pivotal member on which said disk gang is carried, a lever hinged thereto, a sector and detent for said lever, a housing formed on said lever adjacent to the pivotal member, and a coiled spring carried in said housing between the pivotal member and said lever for yieldingly holding said sector and detent in engagement.

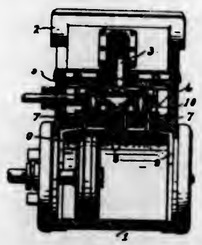


4. In a tillage implement, a frame, a disk gang therefor, a pivotal member for connecting said disk gang to the frame, a lever hinged to said pivotal member, a sector formed on said lever, a detent fixed on said frame, and means arranged between said pivotal member and lever and capable of moving said lever bodily about its pivot point with said pivotal member for the purpose of yieldingly holding said sector in engagement with the detent.

5. In a tillage implement, a frame, a di gang therefor, a vertical shaft connected with said gang and rotatably mounted on said frame, a lever hinged to said vertical shaft and extending horisontally therefrom, a sector and detent for said lever, and means arranged between said vertical shaft and said lever for yieldingly holding said sector and detent in engagement.

[Claim 6 not printed in the Gazette.]

1,157,081. VALVE MECHANISM. FRANK DAVID BUTLER, Burlington, Iowa. Filed Mar. 5, 1915. Serial No. 12,269. (Cl. 136—8.)



1. In combination with the cylinder of a steam engine, having inlet and exhaust ports, a steam chest having a steam inlet connection, a valve for controlling the passage of steam from the inlet connection to the cylinder, said valve having a circular flange, a plurality of packing rings supported by said flange, the lower packing ring being split and a plurality of weighted levers engaging said split ring to force the uppermost ring into engagement with the cover of the steam chest to form a continuous steam tight fit.

2. A slide valve for a steam engine having a body portion, a flange upstanding therefrom, said body portion having a plurality of steam supply ports with which the chamber or compartment provided by said upstanding flange, is in constant communication, said ports or passages serving as inlet passages for live steam, said body portion also having ports or passages opening without said upstanding flange, said ports or passages being exhaust ports or passages.

3. A slide valve for a steam engine, including a body portion substantially rectangular in shape and having a circular upstanding flange, said body portion having a plurality of built-up extended portions which provide ports or passages communicating within said upstanding flange and which provide inlet ports or passages for live steam, said body portion also having an additional inlet passage located intermediate said first mentioned ports or passages and communicating within said upstanding flange, said body portion also having a plurality of other ports or passages communicating without said upstanding flange and providing exhaust ports or passages for the exhaust steam.

4. In combination with a cylinder of a steam engine having inlet and exhaust ports for each end, a reciprocating slide valve therefor, having an upstanding flange portion adapted to receive steam from the source of steam supply, a plurality of inlet ports or passages communicating within said flange portion and adapted to register with said inlet and exhaust ports and said valve having a plurality of exhaust ports communicating without said flange and adapted to register with said inlet and exhaust ports.

5. In combination with a cylinder and steam chest of a steam engine, said steam chest being mounted on said cylinder and having a substantially flat valve seat with ports or passages communicating with opposite ends of said cylinder, a reciprocating slide valve fitting within said steam chest and having an upstanding flange portion adapted to embrace the inlet from the source of steam supply, said valve having a plurality of inlet ports or passages communicating within said upstanding flange and adapted to register with said inlet and exhaust ports for the cylinder, said valve also having a plurality of exhaust ports communicating without said upstanding flange and adapted to register with said inlet and exhaust ports for said cylinder, these ports or passages being so arranged as to provide a double admission and a double exhaust.

[Claims 6 to 8 not printed in the Gazette.]

1,157,082. PISTON-RING PLIERS. DONALD J. CAMPBELL, Muskegon Heights, Mich. Filed Oct. 16, 1913. Serial No. 795,598. (Cl. 81—8.)

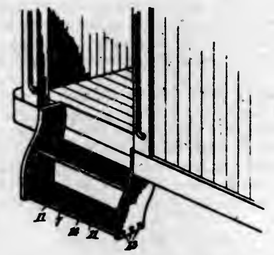


1. Piston ring pliers, comprising a pair of jaws movable toward and away from each other, lugs on the ends of the jaws and at adjacent sides thereof, and adjustable stops adjacent to the lugs to engage the side of the ring.

2. Piston ring pliers, comprising a pair of pivoted handles, jaws projecting from the handles and moved apart by the handles when the same are moved toward each other, inclined lugs on the ends of the jaws and at adjacent sides of the same, stops opposite the lugs to engage opposite sides of the ring, and screws to adjust the stops toward and away from the lugs.

1,157,083. STEP-TREAD. JAMES F. CLARKE, Los Angeles, Cal. Filed July 8, 1915. Serial No. 37,992. (Cl. 105—85.)

1. A step tread, comprising a frame having a plurality of oppositely disposed rod receiving openings, rods passing through said openings and extending longitudinally across said frame, and a series of transversely tapered tread members having apertured hubs engaged by said rods.



2. A step tread, comprising a frame having a plurality of oppositely disposed rod receiving openings, rods passing through said openings and extending longitudinally across said frame, rods extending transversely of said frame, removable tie members securing the longitudinal and transverse rods, and a series of removable tread members supported on said frame having apertured hubs engaged by said longitudinal rods.

3. A step tread, comprising a frame having a plurality of oppositely disposed bolt receiving openings, bolts passing through said openings and extending longitudinally across said frame, bolts extending transversely of said frame, removable tie members securing the longitudinal and transverse bolts, and a series of transversely tapered removable tread members having apertured hubs engaged by said longitudinal bolts.

4. A step tread, comprising a rectangular frame, a plurality of transversely tapered tread members formed with serrated upper edges, spacing hubs formed on opposite sides of the tread members having apertures therein, and bolts passing through said apertured hubs and through the end members of the frame to secure the tread members and the frame together.

5. A step tread, comprising a rectangular frame provided with an interior flange, a plurality of transversely tapered tread members resting upon said flange, spacing hubs formed on opposite sides of the tread members having apertures therein, bolts passing through said apertured hubs and through the end members of the frame, bolts passing through said frame transverse to said first named bolts and tie members securing said first named bolts and said transverse bolts.

1,157,084. COUPLING SHANK AND YOKE CONNECTION. WALTER E. COFFIN, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 31, 1915. Serial No. 18,230. (Cl. 213—42.)

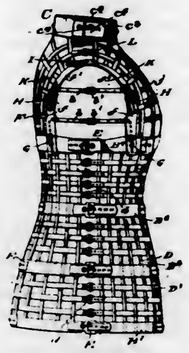


1. In a coupler shank and yoke connection, a draft rigging yoke having upper and lower arms, a vertical portion connecting said arms at their rear ends, the forward ends of said arms having integral enlarged bosses of greater vertical depth than the thickness of the arms, a pin hole in each of said bosses, a coupler shank seating between said bosses and having a pin hole registering with the holes in said bosses for reception of a pivot pin, the bosses having vertically-extending faces at their forward ends, projections on the top and bottom of the coupler shank, having vertically-extending and forwardly-flaring faces adapted to coöperate with the forward faces of the bosses to permit the coupler to angle laterally, said projections having rearwardly-extending lips adapted to overlie said bosses and having a buffing bearing against the ends of

the pivot pin, the yoke and coupler shank being adapted to be disengaged after removal of the pin by a longitudinal movement of either of said members.

2. In a coupler shank and yoke connection, a draft rigging yoke of U-shape, having at its forward ends integral enlarged bosses, a coupler shank having an extension seated between said bosses, said bosses and extension being apertured for the reception of a pivot pin, projections on the top and bottom of the coupler shank having forwardly flaring vertical faces adapted to coöperate with the forward faces of the bosses to permit the coupler to angle laterally, said projections also having rearwardly-extending lips adapted to overlie said bosses and having recesses therein for the ends of the pivot pin, the yoke and coupler shank being adapted to be disengaged by a longitudinal movement of either thereof after removal of the pivot pin.

1,157,085. GARMENT-FITTER. ISAAC COHEN, Gloucester, Mass. Filed Oct. 24, 1914. Serial No. 868,452. (Cl. 33—15.)

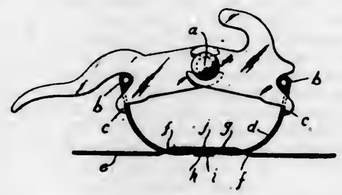


1. A garment fitting frame, comprising vertical pairs of strips one at the front and one at the rear of the frame, means for detachably connecting the strips of each pair together, a series of horizontally arranged bands adjustably secured to said vertical strips, means for adjusting said horizontally arranged bands to vary their diameter, arm frames provided with means for adjusting them, means for adjustably connecting the arm frames with the upper horizontally arranged band, shoulder bands, means for adjusting their length, means for adjustably connecting the shoulder bands with the upper horizontally arranged bands, and flexible strips arranged horizontally and vertically between said horizontal and vertical bands interlaced with each other and which are adjustable relatively to each other and to said horizontal and vertical bands.

2. A garment fitting frame, comprising vertically arranged pairs of strips, one at the front and one at the rear, means for detachably connecting the strips of each pair together, a collar band attached to the vertically arranged strips, means for adjusting the collar band to vary its diameter, a series of horizontally arranged bands adjustably connected with the vertical strips, means for adjusting the horizontal bands to vary their diameter, arm frames, means for adjusting them to vary their size and shape, means for adjustably connecting the shoulder frames with the upper one of the horizontally arranged bands, shoulder bands, means for adjustably connecting them with the upper one of the horizontally arranged bands, flexible strips arranged vertically and held in place by said bands, flexible strips arranged horizontally and interlaced with said flexible vertical strips, and means for varying the lengths of said horizontally arranged flexible strips.

3. A garment fitting frame, comprising vertically arranged pairs of strips, one at the front and one at the rear, means for detachably connecting the strips of each pair together, horizontally arranged bands adjustably secured to said vertically arranged strips, means for adjusting said horizontally arranged bands to vary their diameter, arm frames, means for adjustably connecting the arm frames with the upper one of said horizontally arranged bands, shoulder bands adjustably connected with the upper one of said horizontally arranged bands, flexible strips arranged horizontally and vertically and held in place by said bands; and an outer frame applied to said garment fitting frame, comprising vertically arranged portions detachably connected with each other, horizontally arranged bands supported thereby and adjustable vertically thereon, shoulder bands adjustably connected with the upper one of said horizontally arranged bands, and set screws carried by said horizontal bands and said shoulder bands, the inner ends of which engage bands of the garment fitting frame and serve to bend them and hold them in place.

1,157,086. LATCH-SPRING FASTENER. BASIL R. CRAMPTON, Detroit, Mich., assignor to Crampton Automatic Pressure Fastener Company, Detroit, Mich., a Corporation of Michigan. Filed July 31, 1915. Serial No. 42,908. (Cl. 70—119.)



1. In a latch, the combination of a pair of toggle arms, a U-like spring upon the free end of which the toggle arms are pivoted, and a base plate provided with a portion arranged to form a free space or chamber thereunder, the said U-like spring being fastened at its middle to the under side of said portion, and the said legs of the U-like spring curved upward at the ends of said portion, substantially as described.

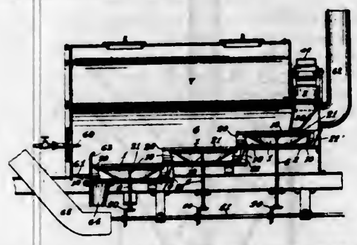
2. In a latch, the combination of a pair of toggle arms, a U-like flat spring upon the ends of which the toggle arms are rotatably mounted, a base provided with a pair of slots and a boss between the pair of slots, the said U-like spring passing through the slots and under the boss.

3. In a latch, the combination of a pair of toggle arms, a flat U-like spring upon whose ends the toggle arms are rotatably mounted, a base provided with a pair of slots and a boss raised between the slots, the said U-like spring passing through the slots and under the boss, and means for helping retain the said U-like spring in a given position with respect to the base plate.

4. In a latch, the combination of a pair of toggle arms, a U-like flat spring upon the ends of which the toggle arms are pivoted, a base plate provided with a pair of slots, and a boss raised between the slots, said U-like spring passing through the slots and under the boss, the said metal forming the base being struck out in lugs which are bent over to engage the sides of the spring under the boss.

5. In a latch, the combination of a pair of toggle arms, a flat U-like spring upon the free ends of which the toggle arms are pivoted, a base plate provided with a pair of slots, and a boss raised between the slots, the said U-like spring passing through slots and under the boss, means for connecting the sides of the spring with the said boss, said spring being provided with a central opening and the said boss being provided with a struck-in portion which engages in said opening to position the said spring with respect to the base.

1,157,087. APPARATUS FOR DRYING GRANULAR MATERIALS. JOSEPH G. CROSS, Seattle, Wash., assignor of one-half to Raymond W. Fenn, Seattle, Wash. Filed Mar. 25, 1915. Serial No. 16,847. (Cl. 34—23.)



1. In a drier, a member revoluble in a substantially horizontal plane, and having wings on its lower side extending from its periphery downward to the plane of the bottom of the member, means for turning the same, and means for feeding the material to be dried upon said revoluble member.

2. In a drier, a cupped or dish-like member mounted to turn upon a substantially vertical axis, and having wings on its lower side extending from its periphery downward to the plane of the bottom of the member, means for turning the same and means for feeding the material to be dried upon said dish-like member.

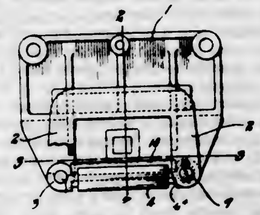
3. In a drier, a member revoluble in a substantially horizontal plane, and having wings on its lower side extending from its periphery downward to the plane of the bottom of the member, means for turning the same, and means for feeding the material to be dried upon said revoluble member, and a furnace inclosing said parts.

4. In a drier, a cupped or dish-like member mounted to turn upon a substantially vertical axis and having wings on its lower side extending from its periphery downward to the plane of the bottom of the member, means for turning the same, means for feeding the material to be dried upon said dish-like member, and means for heating said dish-like member and its contents.

5. In a drier, in combination, a series of shallow receiving members mounted to be turned each upon its respective axis, said axis being substantially vertical, and said members being located each to receive the materials discharged from the preceding one of the series, and means for heating said receiving members and the contents thereof.

[Claims 6 to 16 not printed in the Gazette.]

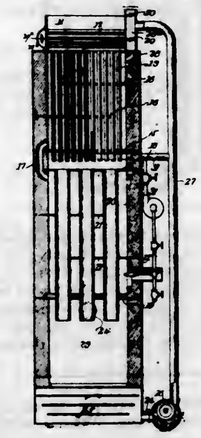
1,157,088. DRAW-BAR CARRY-IRON. EUGENE H. CROWN, Sacramento, Cal., assignor to Flory Carry Iron Company, St. Louis, Mo., a Corporation of Delaware. Filed Mar. 6, 1914. Serial No. 822,890. (Cl. 213—42.)



1. The hereindescribed carry iron comprising an elongated member provided with a plurality of longitudinally disposed grooves, the faces of which are arranged at different distances from the horizontal center of said member, a roller loosely mounted in the uppermost one of said grooves, shoulders at the ends of said grooves for holding the roller against longitudinal movement, and ears on the ends of said member, which ears are adapted to be secured to suitable supports.

2. The hereindescribed carry iron comprising an elongated member provided with a plurality of roller seats arranged at different distances from its horizontal center, whereby the elevation of the uppermost seat can be varied by reversing the carry iron, a roller loosely mounted on the uppermost seat, and ears on the ends of said carry iron, portions of which ears serve as shoulders to hold the roller against longitudinal movement.

1,157,089. METHOD OF MAKING GAS. SAMUEL M. DARLING, Chicago, Ill. Filed Oct. 5, 1912. Serial No. 724,036. (Cl. 48—203.)



1. The herein described method of treating carbonaceous material to be fed to a gas producer which consists in heating the material to vaporize the occluded moisture by heating means other than the gas producer, incandescing the material to carbonize the same by heating means other than the gas producer, feeding the carbonized material in an incandescent condition to the gas producer, and drawing off the produced gas.

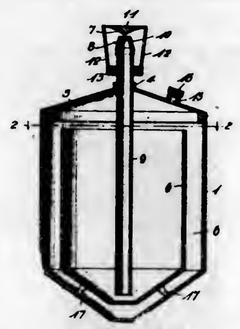
2. The herein described method of making gas, which consists in heating carbonaceous material to be fed to a gas producer to vaporize the occluded moisture by heating means other than the gas producer, incandescing the material to carbonize the same by heating means other than the gas producer, drawing off the volatile matter and fixed gases, feeding the carbonized material in an incandescent condition to a gas producer, conducting the vaporized moisture, volatile matter and fixed gases to the combustion zone of the gas producer, and drawing off the produced gas.

3. The herein described method of making gas which consists in externally heating a closed chamber containing carbonaceous material to vaporize the drive off the moisture in such carbonaceous material, conducting the dried material to a second chamber and externally heating the second chamber to raise the material to incandescence and thereby carbonizing the same, drawing off the volitile matter and fixed gases produced by the carbonizing step, feeding the incandescent carbonized material into a gas producer chamber, conducting a portion of the vaporized moisture and fixed gases to the combustion zone of the gas producer, and drawing off the produced gas.

1,157,090. FIRE-EXTINGUISHER. HOWARD W. DOUGHTY, Amherst, Mass. Filed Feb. 10, 1913, Serial No. 747,510. Renewed Apr. 12, 1915. Serial No. 20,945. (Cl. 169—14.)

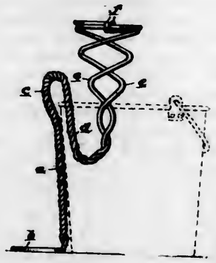
A fire extinguisher comprising two containers arranged one within the other and spaced apart, the other con-

tainer being closed at both ends, and the inner container permanently closed at its lower end and open at its upper end, said inner container terminating at its upper end below the top of said outer container and being filled with a fire extinguishing liquid, a filling opening in the top of said outer container positioned over the upper end of said inner container, the chamber formed between said con-



tainers having therein a substance for rapidly generating a pressure producing gas when heated, said substance being lighter than and not mixable with the extinguishing liquid whereby it will flow over the top of said inner container into the space between said containers, and a distributing tube extending through the top of said outer container to a point near the bottom of the inner container.

1,157,091. MOP-WRINGER. ARTHUR B. DOUGLASS, Chariton, Iowa. Filed Apr. 2, 1915. Serial No. 18,700. (Cl. 15—12.)

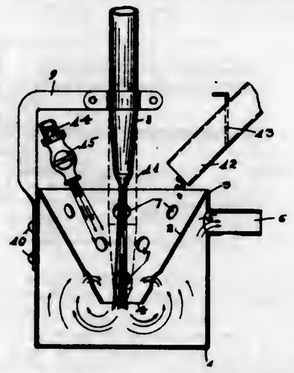


1. A mop wringer consisting of a single strand of wire formed into a base loop, a twisted standard whose upper end is bent downwardly so as to depend into the bucket, the lower end of this downwardly-bent part being in turn bent upwardly and the wires of this upwardly-bent part being extended upwardly and formed into spirals whose coils widen upwardly, the upper extremities of each of said wires being connected to the top coil of the other wire.

2. A mop wringer consisting of a means for supporting the wringing device in the pail, and the wringing device consisting of two upstanding spiral wires whose coils widen upwardly and are flattened at opposite sides to give the coils an approximately oval shape in plan.

1,157,092. MIXER AND DISINTEGRATOR. CHARLES T. DU RELL, Los Angeles, Cal. Filed Jan. 5, 1915. Serial No. 709. (Cl. 83—73.)

A device for the purpose described, consisting of a casing having an outlet near its upper edge, a truncated cone connected at its upper and larger end to the upper end of said casing and having openings in its sides, feeding means suitably arranged to the device having adjusting means adapted to discharge different solids and liquids into said cone in certain quantities, and a vortex jet suitably



supported on said casing and adapted to discharge into said cone, all substantially as described.

1,157,093. BANDEAU FOR HATS AND THE LIKE. FERDINAND E. ENGLISH, St. Louis, Mo. Filed Apr. 12, 1915. Serial No. 20,768. (Cl. 2—108.)



1. An approximately ring-shaped bandeau for hats and the like, the same having a body-portion comprising an outermost non-elastic, but laterally resilient warp strand, an inner elastic warp strand normally approximately concentric with said outermost strand, and a plurality of fabric woof threads.

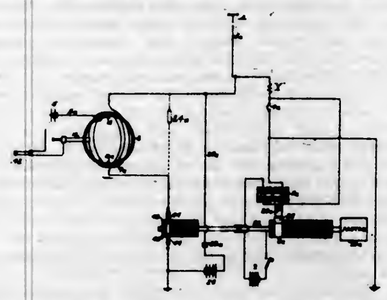
2. An approximately ring-shaped bandeau for hats and the like, the same having a body-portion comprising an outermost non-elastic, but laterally resilient warp strand, a plurality of inner elastic warp strands normally approximately concentric with one another and with said outermost strand, and a plurality of fabric woof threads.

3. An approximately ring-shaped bandeau for hats and the like, the same having a body-portion comprising an outermost non-elastic, but laterally resilient warp strand, a plurality of inner elastic warp strands normally approximately concentric with one another and with said outermost strand, and a plurality of fabric woof threads, said elastic warp strands being in graduated stretched to relatively unstretched condition as they lie innermost from said outermost strand.

4. An approximately ring-shaped bandeau for hats and the like, the same having a woven body-portion integrally comprising an outermost laterally resilient spring-steel warp strand, a plurality of inner elastic warp strands normally approximately concentric with one another and with said outermost strand, and a plurality of fabric woof threads, said elastic warp strands being in graduated stretched to relatively unstretched condition as they lie innermost from said outermost strand.

5. An approximately ring-shaped bandeau for hats and the like, the same having a woven body-portion integrally comprising an outermost laterally resilient spring-steel warp strand, a plurality of inner elastic warp strands normally approximately concentric with one another and with said outermost strand, and a plurality of fabric woof threads, said elastic warp strands being in graduated stretched to relatively unstretched condition as they lie innermost from said outermost strand, and means for securing the bandeau in approximately ring-shaped form.

1,157,094. TRANSMITTING AND RECEIVING SIGNALS. REGINALD A. FESSENDEN, Washington, D. C., assignor, by mesne assignments, to Samuel M. Kintner, Pittsburgh, Pa., and Halsey M. Barrett, Bloomfield, N. J., receivers. Original application filed June 2, 1900, Serial No. 18,878. Divided and application filed Mar. 29, 1901, Serial No. 53,441. Divided and this application filed May 4, 1904, Serial No. 206,392. Renewed Sept. 10, 1915. Serial No. 50,106. (Cl. 250—9.)



1. In the art of electric signaling, the method of simultaneously sending and receiving signals which comprises rendering the receiver at the sending station alternately responsive and unresponsive periodically while sending, the period of interruption being too short to interfere with the received signals and the receiver being responsive during the intervening non-sending intervals.

2. In wireless telegraphy, the method of simultaneously sending and receiving messages which comprises shifting the antenna alternately to association with the sending and receiving apparatus while sending, the periods of interruption of the receiving apparatus being too short to permit interference with signals composed of trains of separate groups of waves, and the signal being sent occupying the interval of interruption, substantially as described.

3. In the art of wireless signaling, the method which consists in transmitting electrical signals, each signal consisting of a train of rapidly succeeding groups of impulses, and rendering the receiver at the sending station unresponsive during the times of generation of such groups of impulses in the train, while leaving it responsive during the time intervals between the separate groups in a train.

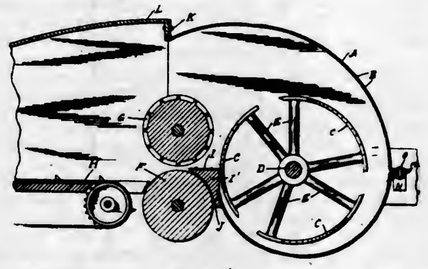
4. In the art of wireless signaling, the method which consists in generating signals consisting each of a train of separate groups of electromagnetic waves, and cutting out the sensitive member of a receiving apparatus at the sending station during the time of actual generation of each group, and cutting the same in during the intervals between times of generation.

5. In the art of wireless signaling, the method which consists in generating a train of separated groups of electric impulses to form a signal, and rendering a receiver at the sending station insensitive during the times of such generation of individual groups in the train, and rendering said receiver sensitive during the intervening time intervals.

[Claims 6 to 9 not printed in the Gazette.]

1,157,095. COMMINUTING ATTACHMENT FOR FEED-CUTTERS. ORLANDO C. FRICK, Manitowoc, Wis., assignor to Smalley Manufacturing Co., Manitowoc, Wis., a Corporation of Wisconsin. Filed Aug. 22, 1913. Serial No. 786,079. (Cl. 146—29.)

1. The combination with a feed cutter provided with a shear bar and rotary cutting knives, of a screen having one margin supported in close proximity to the knives underneath the shear bar, said screen extending from such supporting margin downwardly and rearwardly, and then upwardly in a spiral curve, following, but continuously diverging from the circle described by the knives, said screen being provided with apertures through which comminuted material may pass.



2. The combination with a feed cutter provided with a shear bar and rotary cutting knives, of a screen having one margin supported in close proximity to the knives underneath the shear bar, said screen extending from such supported margin downwardly and rearwardly, and then upwardly and forwardly over the knives in a spiral curve, following, but continuously diverging from the circle described by the knives, said screen being provided with apertures through which comminuted material may pass, and the upper margin of said screen being supported above and in front of the knives, the lower and rear portions of said screen being in sufficiently close proximity to the knives to permit the material to be carried along its surface by the knives into progressively widening space.

3. The combination with a feed cutter provided with a shear bar and rotary cutting knives, of a screen having one margin supported in close proximity to the knives underneath the shear bar, said screen extending from such supported margin downwardly and rearwardly and then upwardly in a spiral curve, continuously diverging from the circle described by the knives, said screen comprising a piece of sheet metal having perforations, the walls of which are straight and form sharp angles with the interior surface of the screen to facilitate breaking and pulverising such material as may catch in the perforations, the lower and rear portions of said screen being in sufficiently close proximity to the knives to permit the material to be carried along its surface by the knives into progressively widening space.

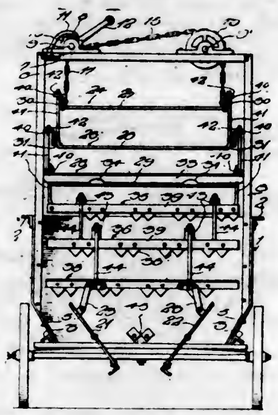
1,157,096. CONCRETE-MIXER. HENRY FUEHRER, Hazleton, Pa. Filed Dec. 7, 1914. Serial No. 875,879. (Cl. 83—73.)

1. A concrete mixer comprising a receptacle having a plurality of vertical movable mixing members mounted therein and each composed of spaced elements, the elements of the several members being so positioned as to lie side by side in substantially horizontal alinement when the members are in lowered inoperative position to form an auxiliary bottom for said receptacle and which operate when raised to cut through and mix the contents of said receptacle.

2. A concrete mixer comprising a receptacle having a plurality of superposed vertically movable mixing members mounted therein, each composed of spaced elements those of one member being arranged in staggered relation to those of an adjacent member, the elements of the several members being so positioned as to lie side by side in substantially horizontal alinement when the members are in lowered inoperative position to form an auxiliary bottom for said receptacle.

3. A concrete mixer comprising a receptacle having a plurality of superposed vertically movable mixing members mounted therein, coöperating rigid elements carried by said members and engaged to guide said members in their

vertical movement and to prevent lateral movement thereof, and means for raising said members successively.

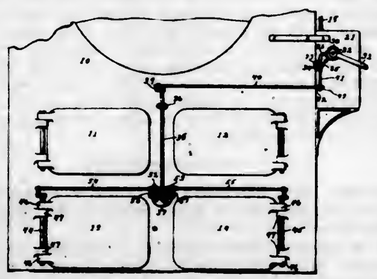


4. A concrete mixer comprising a receptacle having a plurality of vertically movable mixing members mounted therein and means for limiting the extent of movement of each member relatively to the other.

5. A concrete mixer comprising a receptacle having a plurality of vertically movable mixing members mounted therein, said members being each composed of a plurality of transversely extending longitudinally spaced rods, the rods of one member being arranged in staggered relation to those of the next member.

[Claims 6 to 22 not printed in the Gazette.]

1,157,097. DRAFT-CONTROLLING MECHANISM FOR SMOKE-CONSUMING FURNACES. ELI R. GREENE, Des Moines, Iowa. Filed Jan. 25, 1915. Serial No. 4,389. (Cl. 110—55.)



1. In a furnace having hinged bottom draft devices and valve-controlled forced draft devices, a motor, a countershaft mounted for rotation, driving connections between said motor and countershaft, connections between said countershaft and the valve of said forced draft devices, an upright shaft mounted for rotary oscillation, said upright shaft and countershaft being formed with cranks on their adjacent ends, a pitman pivotally connecting said cranks, said upright shaft also being formed with oppositely extending arms, connecting-rods pivotally connected at one end to said oppositely extending arms, and connections between said connecting rods and said bottom draft devices.

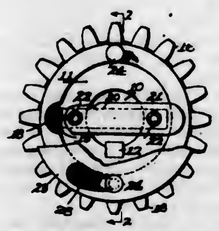
2. In a furnace having hinged bottom draft devices and valve-controlled forced draft devices, a motor, a countershaft mounted for rotation, driving connections between said motor and countershaft, connections between said countershaft and the valve of said forced draft devices, an upright shaft mounted for rotary oscillation, said upright shaft and countershaft being formed with cranks on their adjacent portions, a pitman pivotally connected at one end to the crank of said upright shaft, an arm adjustably secured to the opposite end portion of said pitman and removably connected to the crank of said countershaft, and connections between said upright shaft and the bottom draft devices.

3. In a furnace having hinged bottom draft devices and valve-controlled forced draft devices, a motor, a countershaft mounted for rotation, driving connections between said motor and countershaft, connections between said countershaft and the valve of said forced draft devices, an upright shaft mounted for rotary oscillation, connections between said countershaft and upright shaft, crank arms fixed to and projecting from said bottom draft devices, oppositely extending arms on said upright shaft, and pivotal connections between said oppositely extending arms and the crank arms of said bottom draft devices.

4. In a furnace having bottom draft devices and valve-controlled forced draft devices, a motor having a crank shaft, a countershaft mounted for rotation, intermeshing pinions on said countershaft and crank shaft, a third shaft mounted for rotation, a pinion fixed to the latter shaft and engaging the pinion of the countershaft, the pinion on the said third shaft being of materially less diameter than the pinion of the crank shaft, connections between the third shaft and the valve of the forced draft devices, connections between the countershaft and the bottom draft devices, and means for positively stopping said crank shaft.

5. In a furnace having bottom draft devices and valve-controlled forced draft devices, a casing, a crank shaft journaled therein, a spring fixed to said casing and crank shaft and adapted to be wound on the latter, a cylinder in said casing provided with an inlet valve and an outlet valve, a piston mounted for reciprocation in said cylinder and connected to said crank shaft, a liquid in said casing and adapted to be forced in and out of said cylinder by the action of said piston, a countershaft journaled in said casing, driving connections between the crank shaft and countershaft, connections between said countershaft and the valve of the forced draft devices, and connections between the countershaft and the bottom draft devices.

1,157,098. TRANSMISSION DEVICE. HARRY S. GREENE, Woonsocket, R. I., assignor to Woonsocket Napping Machinery Company, Woonsocket, R. I., a Corporation of Rhode Island. Filed July 7, 1915. Serial No. 38,530. (Cl. 74—8.)

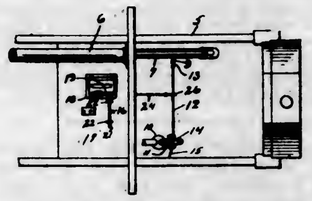


1. A transmission device having, in combination, a driven member, a driving member rotatable thereon, and connections between said members, said connections comprising a compound key having one part engaging the driven member and a second part engaging the driving member, said parts being secured to each other by shearing pins of soft metal extending through said parts and secured therein.

2. A transmission device having, in combination, a driven member, a driving member rotatable thereon, and connections between said members, said connections comprising a two-part compound key extending transversely of the axis of rotation of said members and having the parts thereof held together by shearing pins, the two parts of said key each engaging transversely-disposed recesses in the end portions of said driven and said driving members respectively.

3. A transmission device having, in combination, a shaft, a shouldered sleeve fixed thereon projecting beyond the end of said shaft and having a transverse keyway formed in the projecting portion thereof, a driving pinion rotatable on said sleeve and having an inwardly-projecting annular portion engaging the shoulder on said sleeve, thereby preventing relative axial movement of said pinion in one direction, and a cap plate secured to said pinion and preventing relative movement of the pinion and shaft in the opposite direction, said pinion projecting beyond the end of said sleeve, and having a pair of transversely-disposed recesses formed in its end portion, and said pinion and sleeve being relatively connected by a two-part compound key, one part thereof fitting the transverse keyway in said sleeve, and the second part engaging the transverse recesses in said pinion, the two parts of said key being secured to each other by soft metal shearing pins extending axially therethrough.

1,157,099. FOOT-ACCELERATOR FOR FORD AUTOMOBILE-ENGINES. GILBERT S. GUNDERSON, Colfax, Wis. Filed Aug. 31, 1914 Serial No. 859,473. (Cl. 74—81.)



In an accelerator for automibiles, the combination with an explosive engine including a carbureter and throttle arm, of a rotatable control rod, an arm on said control rod, a flexible and pliable connection between the throttle arm and the arm on the control rod, means for normally holding the throttle arm in position to close the throttle, a rotatable crank shaft extending substantially parallel to the flexible and pliable connection, a link connecting said shaft and the flexible and pliable connection whereby rotation of the shaft will exert a force on said connection transversely of the latter and draw the ends thereof together, and foot operated means for rotating the crank shaft.

1,157,100. ELECTRIC HEATING DEVICE. WILLIAM S. HADAWAY, Jr., New York, N. Y. Filed Sept. 5, 1911. Serial No. 647,602. (Cl. 219—19.)



1. In an electric heating device, the combination of a plurality of nested receptacles, one of said receptacles carrying a heating unit between its walls, the outer surface of said receptacle and the inner surface of an adjacent receptacle being highly polished.

2. In an electric heating device, a plurality of nested receptacles, one of said receptacles carrying a resistance unit of reflexed resistance wire between its walls and the outer surface of said receptacle and the adjacent surface of the adjacent receptacle being highly polished.

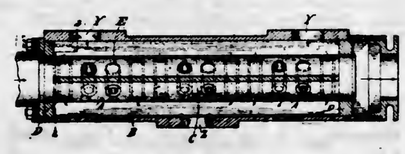
3. In an electric chocolate warmer, a plurality of nested pans, a heating pan between said pans having heating means distributed over the bottom and sides of said pan, and means for reflecting the heat generated by said unit and retaining the same within said pans.

4. In an electric chocolate warmer, a plurality of nested pans having rounded bottoms, and a heating pan arranged between said pans and conforming to the shape thereof, adjacent surfaces of certain of said pans being highly polished to reflect the heat generated by said unit.

5. In an electric chocolate warmer, a plurality of nested chocolate pans having curved bottoms, the middle of said pans being provided with a heating unit comprising reflexed resistance wire wound in convolutions upon an insulating base, and means for reflecting the heat waves generated by said unit and confining the same within the outer receptacle.

[Claims 6 to 27 not printed in the Gazette.]

1,157,101. VAPORIZER FOR USE WITH INTERNAL-COMBUSTION ENGINES. THOMAS ERNEST HALLIDAY, Bishopstoke, England. Filed Mar. 31, 1913. Serial No. 758,001. (Cl. 257—241.)



1. In combination, a vapor pipe, a jacket around said pipe provided with intake and outlet openings for exhaust gas, webs connecting the vapor pipe and the jacket, the said webs and vapor pipe together forming a partition in the said jacket, internally tapered cross tubes arranged within the vapor pipe and communicating at their opposite ends with the spaces surrounding the said vapor pipe and adapted to conduct the exhaust gas from one side of the partition to the other, the cross tubes being so arranged that the larger end of the bores is at the intake end of the said tubes.

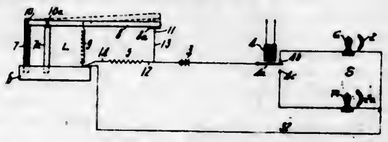
2. In combination, a vapor pipe, a jacket around said pipe provided with intake and outlet openings for exhaust gas, webs connecting the vapor pipe and the jacket, the said webs and vapor pipe together forming a partition in the said jacket, internally tapered cross tubes arranged within the vapor pipe and communicating at their opposite ends with the spaces surrounding the said vapor pipe and adapted to conduct the exhaust gas from one side of the partition to the other, the cross tubes being mounted spirally throughout the length of said vapor pipe and with the larger end of the bores at the intake end of the said cross tubes.

1,157,102. SIGNAL. CLINTON O. HARRINGTON, Edgewood borough, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed July 12, 1913. Serial No. 778,783. (Cl. 177—352.)

1. In combination, a signal comprising a lamp adapted to give indications both in daylight and at night, means for causing illumination of said lamp at one intensity for daylight indications and at a lower intensity for night indications, and means responsive to changes from daylight to darkness and vice-versa for controlling said means.

2. In combination, a signal comprising a lamp adapted to give indications both in daylight and at night, means

for causing a plurality of different intensities of illumination of said lamp, and means responsive to variations of external light for controlling said means.



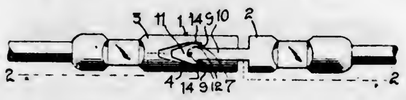
3. In combination, a signal comprising a lamp, and means responsive to variations of external light for causing a plurality of different intensities of illumination of said lamp.

4. In combination, a signal comprising a lamp adapted to give indications both in daylight and at night, and means responsive to external light for causing illumination of said lamp at one intensity in daylight and at a lower intensity at night.

5. In combination, a signal comprising a lamp adapted to give indications both in daylight and at night, means for causing illumination of said lamp at one intensity for daylight indications and at a lower intensity for night indications, and means responsive to external light for controlling said means.

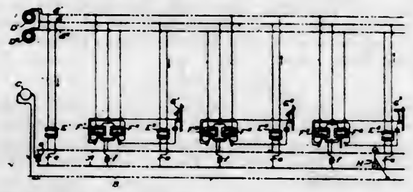
[Claims 6 to 11 not printed in the Gazette.]

1,157,103. ROD-COUPLING. SALEM R. HART, Cleveland, Okla., assignor of one-half to John L. Primm, Cleveland, Okla. Filed Nov. 28, 1914. Serial No. 874,563. (Cl. 255—80.)



A rod coupling consisting of a female member having one extremity bifurcated, the free extremities of the opposed walls of the kerf being provided with inwardly disposed shoulders, the lower edges of which being substantially V-shape and undercut, and a male member provided with an extension adapted to be accommodated within the kerf of the female member, the free extremity of the extension being provided with a head having its inner faces substantially V-shape in form and undercut to interlock with the shoulders of the female member.

1,157,104. BLOCK-SIGNAL SYSTEM. LAURENCE A. HAWKINS, Schenectady, N. Y., assignor, by mesne assignments, to The Union Switch and Signal Company, a Corporation of Pennsylvania. Filed Aug. 6, 1906. Serial No. 329,347. (Cl. 246—36.)



1. In combination with an electric railway having both rails conductively continuous for all currents, a plurality of sources of current connected at intervals across the rails, the current from adjacent sources differing in character from each other and from the power-current, track-relays connected across the rails each responsive to current of one character and not to that of another, and signals controlled by said relays.

2. In combination with an electric railway having both rails conductively continuous for all currents, a plurality of sources of high-frequency alternating-current connected at intervals across the rails, the currents from adjacent sources differing in character, track-relays connected across the rails each responsive to current of one character and not to that of another, and signals controlled by said relays.

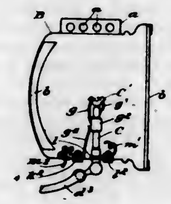
3. In combination with an electric railway having both rails conductively continuous for all currents, a plurality of sources of alternating-current connected at intervals across the rails, adjacent sources being of different frequency, track-relays connected across the rails responsive to alternating-current of only one frequency, and signals controlled by said relays.

4. In combination with an electric railway having both rails conductively continuous for all currents, a plurality of sources of high-frequency alternating-current connected at intervals across the rails, track relays connected across the rails at points intermediate adjacent sources, there being two relays for each source and controlled thereby, and signals controlled by said relays, one signal being controlled by a pair of adjacent relays.

5. In combination with an electric railway having both rails conductively continuous for all currents, two sources of alternating-currents of different frequencies connected across the rails a distance apart, a block signal for the portion of track between said sources, and signal-controlling means connected across the rails at a point between said sources and arranged to put said signal at danger upon a failure of current from either of said sources.

[Claims 6 to 52 not printed in the Gazette.]

1,157,105. LIGHTING SYSTEM FOR MOTOR-VEHICLES. ROBERT HEAD, New York, N. Y., assignor to James T. Outerson, New York, N. Y. Filed Nov. 8, 1910. Serial No. 591,224. (Cl. 175—115.)



1. In a device of the class described, the combination of a casing provided with a duct, a valve having a threaded stem coöperating with said duct for the purpose of allowing or precluding the passage of material through said duct, an electric circuit having a pair of spaced contacts positioned adjacent the valve stem, circuit closing means positioned adjacent the spaced contacts and mounted on the valve stem, a tension member normally retaining the circuit closing means out of engagement with the contacts, and valve operating means detachably mounted on the valve stem, and adapted for engagement with the circuit closing means, whereby the actuation of the valve operating means, operates the valve to allow the passage of material through the duct, and simultaneously brings the circuit closing mechanism into engagement with the spaced contacts, such valve operating means being thereafter adapted to be removed from the valve stem whereupon the tension member is adapted to return the circuit closing means to its initial position.

2. In a device of the class described, the combination of a casing provided with a duct, a valve having a threaded stem coöperating with said duct for the purpose of allowing or precluding the passage of material through said duct, an electric circuit having a pair of spaced contacts positioned adjacent the valve stem, circuit closing means loosely mounted on the valve stem, a tension member normally retaining the circuit closing means out of engagement with the contacts, and valve operating means detachably

mounted on the valve stem, and adapted for engagement with the circuit closing means, whereby the actuation of the valve operating means, operates the valve to allow the passage of material through the duct, and simultaneously brings the circuit closing mechanism into engagement with the spaced contacts, such valve operating means being thereafter adapted to be removed from the valve stem whereupon the tension member is adapted to return the circuit closing means to its initial position.

3. In a device of the class described, a casing having a passage therein, inlet and outlet ducts communicating with said passage, a threaded needle valve extending into the passage of the casing and adapted to coöperate with a valve seat intermediate the inlet and outlet ducts for the purpose of governing the flow of material through the latter, and means for actuating said needle valve, in combination with an electric circuit having spaced contacts exterior of the casing, a rotatable member loosely mounted on the stem of the needle valve and provided with a conducting portion adapted to engage with the contacts of the electric circuit for the purpose of completing the same, means for normally maintaining the rotatable member in its inoperative position, and coöperating means on the rotatable member and on the valve operating means for moving the former into a position to complete the circuit when the latter is operated to allow of the passage of material through the outlet of the casing.

4. In a device of the class described, a casing provided with a duct, and a needle valve projecting into said duct for governing the flow of gas therethrough, said needle valve having a stem extending exteriorly of the casing, in combination with an electric circuit having spaced contacts, a rotatable circuit closing member coöperating with said contacts, a spring for normally maintaining the circuit open, means detachably mounted on the valve stem for operating the valve, and coöperating means mounted on the circuit closing member and on the valve operating means for actuating the former to close the circuit against the tension of the spring when the latter is operated to open the valve, said spring being operable to return the circuit closer to its normally open position, upon the removal of the valve operating means from the valve stem.

5. In a device of the class described, a casing provided with a duct, and a needle valve projecting into said duct for governing the flow of gas therethrough, said needle valve having a stem extending exteriorly of the casing, in combination with an electric circuit having spaced contacts, circuit closing mechanism coöperating therewith, a spring for normally maintaining the circuit closing member in its circuit opening position, and means for operating the valve to allow of the flow of gas through the duct and for simultaneously shifting the circuit closer to its circuit-closing position, said valve actuating means being operable to release the circuit-closing mechanism, whereupon the spring operates to return the same to its normally open position.

1,157,106. FISHING-POLE. JOHN G. HEINAICH, Jr., New Rochelle, N. Y. Filed Mar. 21, 1914. Serial No. 826,259. (Cl. 43—16.)

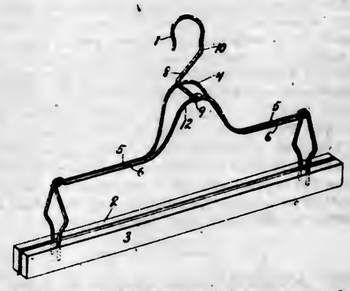


1. In a fishing pole, a line guide comprising an apertured portion having an attaching portion for securing it to a pole or section thereof, said apertured portion having a cut-out in the operative part thereof, and a spring-actuated gate connected to the apertured portion and adapted to overlie the same at one end of the cut-out, said gate being designed to be moved on its connection for opening the cut-out to permit the line to be passed into or out of the apertured portion in a plane at right angles to the length of the line.

2. In a fishing pole line guide, an open-like body, an attaching portion integral therewith for mounting the body on the pole, said body, having a cut-out with one end thereof slotted and bounded on two sides by walls of the body, and a gate pivoted in said cut-out to provide oppositely extending arms, one of which overlies the cut-out and the other of which is movably disposed in the slotted end of the cut-out, means to normally hold the gate in the last-named position, and means at the arm of the gate engaging in the slotted end of the cut-out for swinging said arm outwardly and to swing the other arm inwardly, whereby to permit the line to be passed through the cut-out in either direction at any point between the ends of the line.

3. A line guide for fishing poles, comprising a circular portion having an attaching part to engage around a pole, said circular portion being in the form of a ring having a cut-out in its wall at a point substantially of maximum distance from the pole and attaching part, said cut-out having a slotted portion at one end bounded on three sides by portions of the circular portion, a gate pivoted in the cut-out between two of said sides and between its ends to provide two arms, one bridging the cut-out beyond the pivot of the gate to swing inwardly and the other arm engaging in the slot and adapted to swing outwardly, springs mounted on the pivot and engaging the circular portion and gate respectively, to hold said arms in the first-named positions thereof, and a lug projecting outwardly from the latter arm to permit the arms to be moved to the last-mentioned positions by moving the gate in its pivot, as and for the purposes specified.

1,157,107. BINDING AND SUSPENDING DEVICE. SAMUEL G. HERRMANN, New York, N. Y. Filed Apr. 29, 1914. Serial No. 835,255. (Cl. 211—13.)



A hanger comprising a pair of jaws separated at the top, one of said jaws twisted upon the other between the top and bottom forming a bearing, substantially rigid binding means adapted to draw said separated tops of said jaws in the direction of each other and bring the bottoms of said jaws upon the article to be suspended thereby, and said binding means pivotally secured upon one of said jaws.

1,157,108. BROOM. ROBERT A. HOUSTON, Fort Dodge, Kans. Filed July 28, 1915. Serial No. 42,293. (Cl. 15—19.)

1. In a broom, a handle, a socket member secured to one end thereof, a brush head adapted to be detachably mounted in said socket member, a clamping device secured to the handle and having means for engaging and holding the brush head in said socket member, and a ring slidably engaging the handle and adapted when moved thereon to the proper position to hold the clamping device engaged with the brush head.

2. In a broom, a handle, a socket member secured to one end thereof, brush head adapted to be detachably mounted

in said socket member, a spring clamping member attached to the handle and having means for engaging the brush head and holding it in said socket member, and a ring slidably mounted on the handle and adapted to slide onto the clamping member so as to hold the clamping member engaged with the brush head.



3. In a broom, a handle, a socket member secured to one end thereof, a brush head adapted to be detachably mounted in said socket member, a V shaped clamping member secured to the handle and having the free ends of its arms inwardly extending and adapted to enter the brush head and retain it in said socket member, and means for releasably holding said V shaped clamping member engaged with said brush head.

4. In a broom, a handle, a socket member secured to one end thereof, a brush head adapted to be detachably mounted in said socket member, a V shaped clamping member secured to the handle and having the free ends of its arms inwardly extending and adapted to enter the brush head and retain it in said socket member, and a ring slidable on the handle onto and off from the arms of said V shaped member and adapted when slid to the proper position to releasably hold said arms engaged with said brush head.

5. In a broom, a handle, a socket member secured thereto and adapted to receive a brush head, a curved spring clamping member pivoted at its upper end to the handle and having an inwardly turned lower end adapted to engage the brush head, and a ring slidably mounted on the handle and adapted to embrace and hold said clamping member in the brush head engaging position.

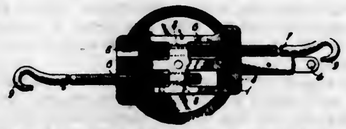
1,157,109. JOINTER-GUARD. ANDREW F. HOWE, Granite City, Ill. Filed July 17, 1913. Serial No. 779,569. (Cl. 144—251.)



1. In a jointer guard, the combination of a hood member extending above the table and adjustable relative thereto, a plurality of separately movable fingers pivotally supported upon said hood member and extending in advance of the cutter to form a shield and supported above the table, said fingers having upwardly and forwardly directed ends adapted to ride over the work presented to the cutter in such fashion that the fingers engaged by the work are swung upwardly to permit its passage, the fingers not so engaged remaining in their normal position whereby to form guards at the sides of the work.

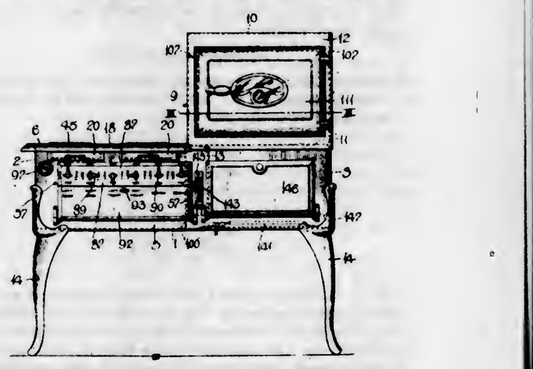
2. In a jointer guard, the combination of a work table for supporting the material to be operated upon, a bar arranged above said table, means whereby said bar may be instantaneously adjusted to different heights above the table, a set of independently movable guard arms carried by said bar, said guard arms having their lower free ends extending upwardly and outwardly at an angle whereby when the material to be operated upon is passed under the arms it will contact with said extensions and lift the respective guard arms in its path, and means carried by said bar for engaging said guard arms in their normal or lower position, whereby the forwardly and upwardly extending portions of the arms are maintained in such angular relation to the work table in different vertical adjustments of the bar that the guard arms are always in proper position to be lifted by contact with the material to be operated upon irrespective of the thickness of said material.

1,157,110. WIRE-TIGHTENER. ANDREW P. JOHNSON, Detroit, Mich. Filed Aug. 8, 1912, Serial No. 714,070. Renewed Aug. 23, 1915. Serial No. 46,943. (Cl. 254—67.)



A wire stretcher comprising an oblong plate having longitudinal parallel slots and the ends thereof at opposite sides provided with offset portions and transverse slots, the first mentioned slots providing a spider and all of said slots cooperating in providing a series of walls and said walls having alining openings formed therein, the openings in the end walls enlarged, end thrust collars adjustably mounted in the enlarged openings, threaded draw rods extending through said collars and said slots and enlarged openings, interiorly screwthreaded beveled pinions carried by said draw rods within said transverse slots, anti-frictional bearings interposed between the sides of said pinions, said collars, and the walls of said transverse slots, a beveled gear wheel rotatively supported by the spider of said plate and having teeth meshing with the teeth of said pinions, and an extensible off-set handle carried by said gear wheel to facilitate imparting movement to said wheel and longitudinal movement to said draw rods.

1,157,111. ELECTRIC COOKING-RANGE. WILLIAM J. KEMP, Detroit, Mich., assignor to The Michigan Stove Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 26, 1914. Serial No. 879,215. (Cl. 219—35.)



1. In an electric range, a heating top, heating elements in said heating top, a terminal box below said top and having electrical connections with all of said heating elements, said terminal box being bodily removable from said heating top, and indicating devices in front of said terminal box for predetermining the operation of said heating elements.

2. In an electric range, a heating top, a main oven, a warming oven, heating elements in said ovens and said heating top, a unitary terminal box for said heating elements and having closed conduits extending in the direction of said heating elements, and indicating devices in front of said terminal box for predetermining the operation of said heating elements.

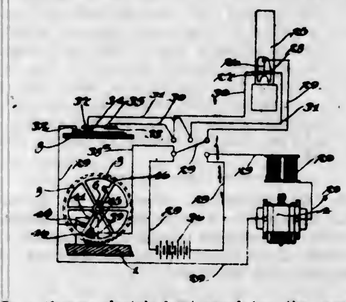
3. In an electric range, a casing having a heating top, heating elements in the heating top of said casing, a terminal box in said casing below said heating elements, said terminal box being bodily removable from said casing and comprising a switch plate, switches carried thereby, a transverse member, liquid shedding conduits connecting said plate and said member, and wires in said conduits connecting said switches and said heating elements.

4. In an electric range, the combination with a plurality of heating elements, of a unitary terminal box detachably mounted in said range and bodily removable therefrom, said terminal box including grouped liquid shedding conduits extending in the direction of said heating elements.

5. In an electric range, the combination with a casing and a plurality of heating elements, of a unitary terminal box detachably mounted in said casing and bodily removable therefrom, said terminal box including switches, liquid shedding conduits extending from said switches in the direction of said heating elements, and indicating devices for predetermining the operation of said switches.

[Claims 6 to 16 not printed in the Gazette.]

1,157,112. THERMO-ELECTRIC HEAT-REGULATING SYSTEM. LOUIS A. LARSON, Minneapolis, Minn. Filed Feb. 16, 1914. Serial No. 819,057. (Cl. 236—4.)



1. In a thermo-electric heat regulator, the combination with an electric motor and a transmission mechanism driven thereby, of a thermostat, electric circuits and automatic switches for controlling said motor by opening and closing the motor circuit, automatic means for mechanically disconnecting said motor from said transmission mechanism, when the latter has been given its interval of movement, and an electro-magnet in the motor circuits operative to couple said motor to said transmission mechanism when the motor circuit is closed.

2. In a thermo-electric heat regulator, the combination with an electric motor and a transmission mechanism driven thereby, of a thermostat, electric circuits and automatic switches for controlling said motor, means for automatically disconnecting said motor from said transmission mechanism, when the latter has been given its interval of movement, and a frictional retarding device or brake operative on certain of the movable elements of said transmission mechanism to assist in stopping the same when the motor is disconnected therefrom.

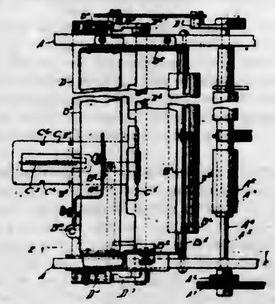
3. In a thermo-electric heat regulator, the combination with an electric motor and a transmission mechanism driven thereby, of a thermostat, electric circuits connecting said motor and thermostat with a source of electrical energy, and an automatic reversing switch and a shunting switch, both operated by said transmission mechanism, the said reversing switch operating under the control of said thermostat to start said motor into action and said shunting switch operating subsequently to short-circuit the motor circuit and cut out said thermostat, the said transmission mechanism serving to intermittently reverse the action of said reversing switch, and to leave said shunt switch open when said transmission mechanism is at rest.

4. In a thermo-electric heat regulator, the combination with an electric motor and a transmission mechanism driven thereby, of a thermostat, electric circuits connecting said motor and thermostat with a source of electrical energy, a reversing switch in the thermostat operated alternately by said transmission mechanism, a shunt switch in a shunt across the motor circuit, and devices carried by one of the movable elements of said transmission mechanism operative on said shunt switch to close the same by the initial movement of said transmission mechanism and to again open the same by the final movement of said transmission mechanism.

5. In a thermo-electric heat regulator, the combination with an electric motor and a transmission mechanism driven thereby, of a thermostat, electric circuits connecting said motor and thermostat with a source of electrical energy, a reversing switch in the thermostat operated alternately by said transmission mechanism, a shunt switch in a shunt across the motor circuit, devices carried by one of the movable elements of said transmission mechanism operative on said shunt switch to close the same by the initial movement of said transmission mechanism and to again open the same by the final movement of said transmission mechanism, a normally inoperative coupling for connecting said motor to said transmission mechanism, and an electro-magnet in the motor circuit operative on said coupling device to connect said motor to said transmission mechanism while, and only while the motor circuit is closed.

[Claims 6 to 8 not printed in the Gazette.]

1,157,113. ENVELOP SEALING AND STAMPING MACHINE. JOHN E. LEDERMAN, Chicago, Ill., assignor, by mesne assignments, to Multipost Company, Rochester, N. Y., a Corporation of New York. Original application filed Oct. 2, 1911, Serial No. 652,229. Divided and this application filed June 24, 1912. Serial No. 705,406. (Cl. 101—39.)



1. In an envelop feeding machine, an envelop hopper the bottom of which is open to permit the flap of the lowermost envelop to drop down, means for engaging said flap to feed the envelop transversely from the hopper, and a reciprocating false bottom arranged to close the open bottom of the hopper as the lowermost envelop is being removed.

2. In an envelop sealing and stamping machine an envelop hopper the bottom of which is open to permit the flap of the lowermost envelop to drop down, an envelop

feeding plate arranged to engage with the flap of the lowermost envelop and a reciprocating false bottom located above said feeding plate.

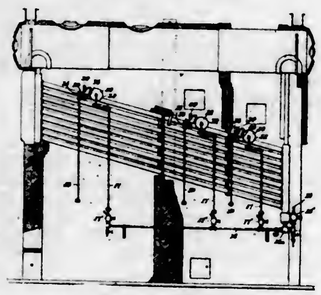
3. In an envelop sealing and stamping machine an envelop hopper the bottom of which is open to permit the flap of the lowermost envelop to drop down, an envelop feeding plate arranged to engage with the flap of the lowermost envelop and a reciprocating false bottom located above said feeding plate, and means for interposing said bottom between said feeding plate and the envelop before the feeding plate commences to move the bottom envelop in the hopper.

4. In an envelop sealing machine, an envelop hopper having a two-part bottom, one of which parts is arranged to be withdrawn from below the envelops, leaving the hopper bottom open to permit the flap of the lowermost envelop to drop down, a reciprocating envelop feed plate, and means for causing the movable part of the hopper bottom to reciprocate in unison with the feed plate.

5. In an envelop feeding machine a hopper having an open bottom through which the flap of the lowermost envelop may drop, a feeding plate and means for reciprocating said plate to engage the flap and feed the envelop laterally out of the hopper and reciprocating means for supporting the envelops in said hopper while said feeding plate is operating.

[Claims 6 to 17 not printed in the Gazette.]

1,157,114. BOILER-TUBE CLEANER. FREDERICK W. LINAKER, Dubois, Pa., assignor to The Vulcan Soot Cleaner Co., of Pittsburg, Pa., Dubois, Pa., a Corporation of New Jersey. Filed Apr. 23, 1915. Serial No. 23,364. (Cl. 122—392.)



1. In a tube cleaner, a fluid distributing pipe arranged transversely of the tubes of a boiler above the same and adapted for step by step adjustment on its axis, said pipe having outlet openings in its walls, and a plurality of stationary nozzles in which the pipe is adjustable, said nozzles having discharge ports with which the outlet openings in the pipe are brought into coincidence as the pipe is adjusted.

2. In a boiler tube cleaner, a fluid distributing pipe arranged transversely of the tubes of a boiler above the same and adapted for step by step adjustment on its axis, said pipe having outlet openings in its walls, a plurality of stationary discharge nozzles in which the pipe is adjustable, said nozzles having discharge ports with which the outlet openings in the pipe are brought into coincidence as the pipe is adjusted, and means for adjusting said pipe.

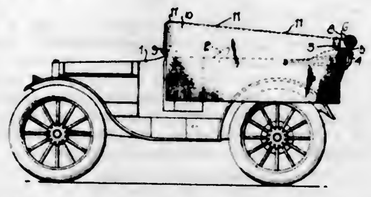
3. In a boiler tube cleaner, a fluid distributing pipe disposed transversely of the tubes of a boiler and having multiple outlets, stationary discharge nozzles in which said pipe is received and wherein it is adjustable, said nozzles having discharge ports with which the outlets in the pipe are brought into coincidence as the pipe is adjusted, a fluid supply communicating with the distributing pipe, and means for adjusting said pipe in said nozzles.

4. In a boiler tube cleaner, a fluid distributing pipe arranged transversely of the tubes of a boiler for adjustment on its axis and provided with multiple series of outlet openings, stationary nozzles in which said pipe is adjustable, said nozzles having discharge ports so arranged that in one position of the distributing pipe one series of outlet openings in the pipe are coincident with discharge ports of the nozzle and discharge the fluid toward one side of the boiler and in another position of the pipe, another series of the openings therein coincide with different nozzle ports to discharge fluid toward the opposite side of the boiler.

5. In a boiler tube cleaner, a fluid distributing pipe arranged transversely of the tubes of a boiler for adjustment on its axis and provided with outlet openings, and stationary nozzles in which the pipe is adjustable having discharge orifices and arranged throughout the pipe to project fluid from the pipe downwardly in oblique lines toward one side of the boiler in one position of the pipe and in another position of the pipe to project the fluid downwardly in oblique lines toward the opposite side of the boiler.

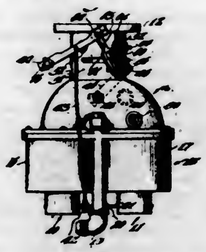
[Claims 6 to 18 not printed in the Gazette.]

1,157,115. AUTOMOBILE-COVER. WALTER LUTHER MCINTYRE, Memphis, Tenn. Filed Oct. 17, 1914. Serial No. 867,220. (Cl. 21—62.)



A cover for automobiles or similar vehicles comprising spaced standards fixed to the rear of the vehicle, arms hingedly connected to the standards, a tubular casing supported between said arms, and provided with an elongated slot, a spring actuated roller arranged within said casing, a curtain normally wound upon said roller and adapted to be extended through said slot to the front of the vehicle, means for securing the outer end of the curtain when in an operative position and removable side curtains detachably connected to the first curtain when the same is in an extended position as and for the purpose set forth.

1,157,116. CARBURETER. CHARLES A. MAINO and PHILLIP PELLEGRINI, Los Angeles, Cal., assignors to United States Carburetor Company, Los Angeles, Cal., a Corporation of California. Filed Apr. 14, 1914. Serial No. 831,839. (Cl. 48—150.1.)



1. A carbureter comprising a heavy liquid carbureting chamber, a light liquid carbureting chamber, a spray nozzle for injecting a heavy liquid into said heavy liquid carbureting chamber in such a manner as to produce therein an explosive mixture of air and heavy liquid vapor, a spray nozzle for injecting a light liquid into said light liquid carbureting chamber in such a manner as to produce therein an explosive mixture of air and light liquid vapor, a common cover for said chambers having an inverted Y-shaped opening therein, one of the short branches of said Y-shaped opening connecting with the light liquid carbureting chamber, the other short branch of the Y-shaped opening connecting with the heavy liquid carbureting chamber and the long branch of the Y-shaped opening connecting with the intake manifold of the engine, walls forming a heating chamber in said cover about the branch of the Y-shaped opening which communicates with the heavy liquid carbureting chamber, means for passing hot exhaust vapors through said heating chamber, and a flap valve placed at the junction of the long and short branches to regulate the proportion of vapor passing from each of the short openings into the long opening.

2. A carbureter comprising a heavy liquid carbureting chamber, a light liquid carbureting chamber, a spray nozzle for injecting a heavy liquid into said heavy liquid carbureting chamber in such a manner as to produce therein an explosive mixture of air and heavy liquid vapor, a spray nozzle for injecting a light liquid into said light liquid carbureting chamber in such a manner as to produce therein an explosive mixture of air and light liquid vapor, a common cover for said chambers having an inverted Y-shaped opening therein, one of the short branches of said Y-shaped opening connecting with the light liquid carbureting chamber, the other short branch of the Y-shaped opening connecting with the heavy liquid carbureting chamber and the long branch of the Y-shaped opening connecting with the intake manifold of the engine, walls forming a heating chamber in said cover about the branch of the Y-shaped opening which communicates with the heavy liquid carbureting chamber, means for passing hot exhaust vapors through said heating chamber, means for simultaneously regulating said throttle valve and jet means, and a flap valve placed at the junction of the long and short branches to regulate the proportion of vapor passing from each of the short openings into the long opening.

[Claims 3 to 6 not printed in the Gazette.]

vapor, a common cover for said chambers having an inverted Y-shaped opening therein, one of the short branches of said Y-shaped opening connecting with the light liquid carbureting chamber, the other short branch of the Y-shaped opening connecting with the heavy liquid carbureting chamber and the long branch of the Y-shaped opening connecting with the intake manifold of the engine, and a flap valve placed at the junction of the long and short branches to regulate the proportion of vapor passing from each of the short openings into the long opening.

2. A carbureter comprising a heavy liquid carbureting chamber, a light liquid carbureting chamber, a spray nozzle for injecting a heavy liquid into said heavy liquid carbureting chamber in such a manner as to produce therein an explosive mixture of air and heavy liquid vapor, a spray nozzle for injecting a light liquid into said light liquid carbureting chamber in such a manner as to produce therein an explosive mixture of air and light liquid vapor, a common cover for said chambers having an inverted Y-shaped opening therein, one of the short branches of said Y-shaped opening connecting with the light liquid carbureting chamber, the other short branch of the Y-shaped opening connecting with the heavy liquid carbureting chamber and the long branch of the Y-shaped opening connecting with the intake manifold of the engine, walls forming a heating chamber in said cover about the branch of the Y-shaped opening which communicates with the heavy liquid carbureting chamber, means for passing hot exhaust vapors through said heating chamber, and a flap valve placed at the junction of the long and short branches to regulate the proportion of vapor passing from each of the short openings into the long opening.

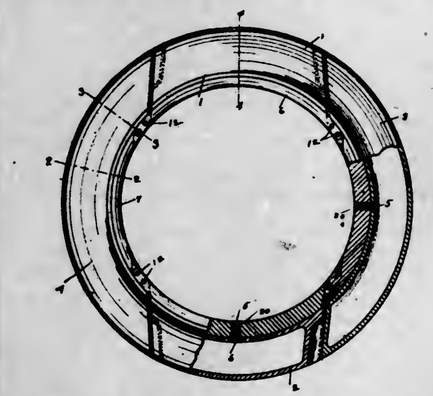
3. A carbureter comprising a heavy liquid carbureting chamber, a light liquid carbureting chamber, a spray nozzle for injecting a heavy liquid into said heavy liquid carbureting chamber in such a manner as to produce therein an explosive mixture of air and heavy liquid vapor, a spray nozzle for injecting a light liquid into said light liquid carbureting chamber in such a manner as to produce therein an explosive mixture of air and light liquid vapor, a common cover for said chambers having an inverted Y-shaped opening therein, one of the short branches of said Y-shaped opening connecting with the light liquid carbureting chamber, the other short branch of the Y-shaped opening connecting with the heavy liquid carbureting chamber and the long branch of the Y-shaped opening connecting with the intake manifold of the engine, a throttle valve for regulating the total amount of mixture passing from the long branch into the carbureter, walls forming a heating chamber in said cover about the branch of the Y-shaped opening which communicates with the heavy liquid carbureting chamber, means for passing hot exhaust vapors through said heating chamber, and a flap valve placed at the junction of the long and short branches to regulate the proportion of vapor passing from each of the short openings into the long opening.

4. A carbureter comprising a heavy liquid carbureting chamber, a light liquid carbureting chamber, a spray nozzle for injecting a heavy liquid into said heavy liquid carbureting chamber in such a manner as to produce therein an explosive mixture of air and heavy liquid vapor, a spray nozzle for injecting a light liquid into said light liquid carbureting chamber in such a manner as to produce therein an explosive mixture of air and light liquid vapor, a common cover for said chambers having an inverted Y-shaped opening therein, one of the short branches of said Y-shaped opening connecting with the light liquid carbureting chamber, the other short branch of the Y-shaped opening connecting with the heavy liquid carbureting chamber and the long branch of the Y-shaped opening connecting with the intake manifold of the engine, a throttle valve for regulating the total amount of mixture passing from the long branch into the carbureter, means for simultaneously regulating said throttle valve and jet means, and a flap valve placed at the junction of the long and short branches to regulate the proportion of vapor passing from each of the short openings into the long opening.

5. A carbureter comprising a heavy liquid carbureting chamber, a light liquid carbureting chamber, a spray nozzle for injecting a heavy liquid into said heavy liquid carbureting chamber in such a manner as to produce therein an explosive mixture of air and heavy liquid vapor, a spray nozzle for injecting a light liquid into said light liquid carbureting chamber in such a manner as to produce therein an explosive mixture of air and light liquid vapor, a common cover for said chambers having an inverted Y-shaped opening therein, one of the short branches of said Y-shaped opening connecting with the light liquid carbureting chamber, the other short branch of the Y-shaped opening connecting with the heavy liquid carbureting chamber and the long branch of the Y-shaped opening connecting with the intake manifold of the engine, a throttle valve for regulating the total amount of mixture passing from the long branch into the carbureter, walls forming a heating chamber in said cover about the branch of the Y-shaped opening which communicates with the heavy liquid carbureting chamber, means for passing hot exhaust vapors through said heating chamber, means for simultaneously regulating said throttle valve and jet means, and a flap valve placed at the junction of the long and short branches to regulate the proportion of vapor passing from each of the short openings into the long openings.

[Claims 6 to 9 not printed in the Gazette.]

1,157,117. COLLAPSIBLE CORE. THOMAS MIDGLEY, Sr., and THOMAS MIDGLEY, Jr., Worthington, Ohio. Filed July 16, 1914. Serial No. 851,269. (Cl. 18—45.)



1. A collapsible core comprising an annular body formed of a plurality of segments, and a corresponding set of ring sections formed separately from said segments but held in place thereon by a connection formed by casting said segments onto said sections.

2. A collapsible core comprising an annular body formed of a plurality of segments, a corresponding set of ring sections formed separately from said segments but held in place thereon by a connection formed by casting the segments onto said sections, and means for detachably securing said ring sections together.

3. A collapsible core comprising an annular body formed of a plurality of segments, ring sections corresponding in number and length with the number and length of segments, said sections being formed separate from said segments but held in place thereon by a connection formed by casting the inner portion thereof centrally onto said sections, and means for detachably securing said ring sections together.

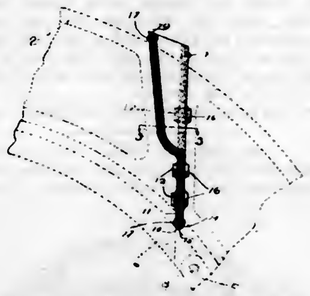
4. A collapsible core comprising an annular body formed of a plurality of segments, ring sections corresponding in number and length with the number and length of segments, said sections being formed with outstanding ribs whose top edge portions are wider than the portions com-

necting with said sections, a connection between each segment and its corresponding ring section formed by casting the segments onto said sections to embrace said ribs, and means for detachably securing said ring sections together.

5. A collapsible core comprising an annular body formed of a plurality of segments, ring sections corresponding in number and length with the number and length of segments, tongue and slot connections between said sections, a second tongue carried by certain of said sections adapted to overlie said tongue and slot connections, and a connection between each section and its respective segment formed by casting the segments onto said sections.

[Claims 6 to 15 not printed in the Gazette.]

1,157,118. METHOD OF CONSTRUCTING COLLAPSIBLE CORES. THOMAS MIDGLEY, Sr., and THOMAS MIDGLEY, Jr., Worthington, Ohio. Filed July 16, 1914. Serial No. 851,270. (Cl. 22—203.)



1. The method of constructing collapsible cores which consists in assembling a plurality of ring sections to form a complete ring, placing said assembled sections in a mold, and casting a core onto said sections.

2. The method of constructing collapsible cores which consists in assembling a plurality of ring sections to form a complete ring, placing said assembled sections in a mold, placing a set of division members in said mold in definite relation with said ring sections to cause the core to be formed in sections, and casting a corresponding set of core segments onto said sections.

3. The method of constructing collapsible cores which consists in detachably connecting together a plurality of ring sections to form a complete ring, placing said assembled sections in a mold, placing a set of separable division members in said mold adjacent the points of jointure of said ring sections, and casting a corresponding set of core segments onto said sections and onto said members.

4. The method of constructing collapsible cores which consists in detachably connecting together a plurality of ring sections to form a complete ring, baking a suitable sand core onto said assembled sections leaving the outer edge portions free, placing said assembled ring and said core in a mold, placing a set of separable division members in said mold adjacent the points of jointure of said ring sections and casting a corresponding set of core segments onto said sections and onto said members.

5. The method of constructing collapsible cores which consists in assembling a plurality of ring sections to form a complete ring, baking a suitable sand core onto said sections leaving the outer edge portions free, placing said assembled ring and sand core in a mold, and casting a core onto said sections.

[Claims 6 to 14 not printed in the Gazette.]

1,157,119. DOLL-EYE ADJUSTER. SUSAN T. MORI, Meadow Valley, Cal. Filed Sept. 29, 1914. Serial No. 864,156. (Cl. 46—40.)

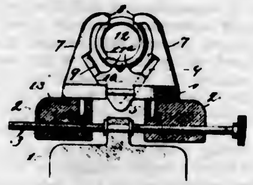
1. The combination with a doll head having eye openings therein, of an eye-carrying yoke pivotally mounted therein, a rod connected to the yoke, said rod being constructed and arranged to lie in a substantially vertical position when the eyes are open and a substantially horizontal position when the eyes are closed, revolubly mounted means for engaging one side of the said rod to maintain the rod in its vertical position and to engage the other side of the said rod to maintain the same in its horizontal position and means for limiting the rotative movement of the said aforementioned means.



2. In combination with a doll head provided with a swinging eye carrying yoke having a weighted arm depending therefrom, the eyes being swung into their open or closed position by the effect of gravity on said weighted arm, means for locking said eye carrying yoke in its horizontal or vertical position, said means comprising a rod journaled in said head, a milled head on the outer end of said rod whereby it may be turned, an extension on the inner end of said rod engageable with said weighted arm when said doll is in an erect position, a second extension on said first extension engageable with said weighted arm when said weighted arm is in a vertical position with the doll disposed in a horizontal position, and a lateral extension on said rod engageable with a stop in said head when said second named extension is engaged with said weighted arm.

3. The combination with a doll head having eye openings therein, of an eye carrying yoke pivotally mounted in said head, a rod secured to said yoke and extending outwardly therefrom, said rod being slightly inclined from the vertical when the eyes are closed, a horisontally disposed rod revolubly mounted in said head and having an angularly extending portion on the end thereof arranged to engage the said rod and to bind the same in its inclined position upon the rotation thereof.

1,157,120. ENGRAVER'S RING-CLAMP. ARTHUR HALFDAN MYHRE, Tacoma, Wash. Filed Feb. 5, 1915. Serial No. 6,290. (Cl. 81—4.)



The combination with the jaws of an engraver's block, a sectional base, means carried by each section of the base for securing the same to one of said jaws, ring gripping arms carried respectively by said sections, and a ring engaging sector arranged between said arms and sections and movable with respect to them, said sector having a setting ring socket.

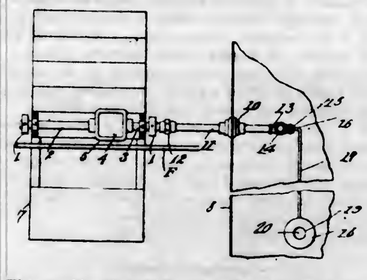
1,157,121. CYLINDER FOR WASHING-MACHINES. OLE K. OFFEN, Chicago, Ill. Filed May 17, 1915. Serial No. 28,690. (Cl. 68—18.)

A washing cylinder to be rotated in one direction in a receptacle of water and having a plurality of circumferentially spaced longitudinally extending gaps in its curved wall, longitudinally disposed lifting flanges extending inwardly from the front edges of the gaps and lying substantially at right angles to said curved wall of the cylinder, gratings extending inwardly from the rear edges of



the gaps, and dash boards leading rearwardly from predetermined points on the flanges to the gratings.

1,157,122. STOCK-WATERING APPARATUS. ALFRED I. RALSTON, Weeping Water, Nebr. Filed Feb. 27, 1915. Serial No. 10,996. (Cl. 119—76.)



1. The combination with a supply tank, of a trough, a tiltable platform adjacent the trough, a pipe discharging into the trough, said platform constituting means for rotating the pipe, one end portion of the pipe being extended radially to constitute an arm within the tank, a receptacle carried by the arm and having an inlet, and a valve within the receptacle for closing the inlet.

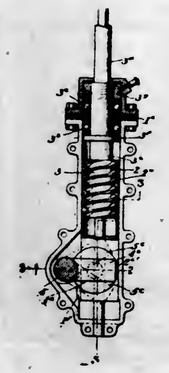
2. The combination with a tank, of a trough, a pipe mounted for rotation and discharging into the trough, said pipe having a radial arm formed at one end thereof, a receptacle carried by said arm and communicating therethrough with the trough, said receptacle having an inlet, a float valve for closing the inlet, the said receptacle being submerged within the contents of the tank, and normally located below the level of the trough, and stock operated means for rotating the pipe to raise the arm and receptacle above the bottom of the trough to supply the trough from the receptacle.

3. The combination with a trough and a tank, of a supply pipe extending from the tank to the trough and mounted for rotation, said pipe having one end portion extended radially to form an arm, a receptacle carried by the arm and having an inlet, a float valve for closing the inlet, said receptacle being normally located below the plane of the bottom of the trough, and stock operated means for rotating the pipe to lift the receptacle above the level of the bottom of the tank, said receptacle being constantly submerged within the contents of the tank.

4. The combination with a tank and a trough, of a pipe mounted for rotation and discharging into the trough, one end of the pipe being extended radially to form an arm within the tank, a receptacle carried by the arm and having an inlet in the top thereof, a float valve in the receptacle for closing the inlet, said receptacle being normally positioned below the plane of the bottom of the trough, a platform, and means operated by the platform when depressed, for rotating the pipe to elevate the receptacle above the plane of the bottom of the trough.

5. The combination with a tank and a trough, of separate water conductors for establishing communication between the tank and trough, said conductors being mounted for rotation and having one end extended radially to form an arm, a receptacle supported by the arm and in communication with the conductors, said receptacle having an inlet, a float valve within the receptacle for closing the inlet, said receptacle being normally located below the plane of the bottom of the trough and being constantly submerged by the contents of the tank, a heater below the trough, means for conveying hot products of combustion from the heater and along the conductors and through the tank, and stock operated means for rotating the conductors to elevate the receptacle above the plane of the bottom of the trough.

1,157,123. STEERING-GEAR. DAVID E. ROSS, La Fayette, Ind., assignor to Ross Gear and Tool Company, La Fayette, Ind., a Corporation of Indiana. Filed July 21, 1913. Serial No. 780,258. (Cl. 74—79.)



1. In combination, a casing, a sliding actuating member therein; means for operating said member; a shaft provided with crank fingers entering circular recesses in opposite sides of said actuating member in axial parallelism with said shaft; and parti-cylindric members in said recesses at opposite sides of said fingers, whereby when the actuating member is operated the shaft is rocked.

2. In combination, a casing, a slidable actuating member therein provided with cylindric recesses in its opposite sides in axial parallelism with the rocker shaft; a screw for reciprocating said actuating member; a rocker shaft beside said actuating member provided with crank fingers entering said recesses; and parti-cylindric blocks in the recesses engaging said crank fingers; whereby the angular motion of said crank fingers relative to the actuating member is compensated for.

3. In combination; a casing; a reciprocating actuating member therein provided with parti-cylindric recesses in its opposite sides in axial parallelism with the rocker shaft; a worm shaft for moving said member longitudinally; a rocker shaft having crank fingers entering said recesses; and parti-cylindric blocks placed in said recesses on opposite sides of said crank fingers; whereby when the actuating member is moved longitudinally said shaft is rocked and the angular motion of the crank fingers relative to said actuating member is automatically compensated for.

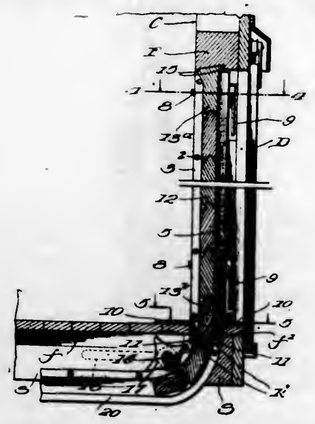
4. In combination, a casing, a slidable actuating member therein provided with cylindric recesses in its opposite

sides in axial parallelism with the rocker shaft; means for reciprocating said actuating member; a rocker shaft beside said actuating member provided with crank fingers entering said recesses, and rotatable disks in the recesses having opposite parti-cylindric segments engaging said crank fingers; whereby the angular motion of said crank fingers relative to the actuating member is compensated for.

5. In combination; a casing; a reciprocating actuating member therein provided with parti-cylindric recesses in its opposite sides in axial parallelism with the rocker shaft; means for moving said member longitudinally; a rocker shaft having crank fingers entering said recesses; and rotatable disks pivotally mounted in said recesses and having parti-cylindric segments on opposite sides of and engaging said crank fingers; whereby when the actuating member is moved longitudinally said shaft is rocked and the angular motion of the crank fingers relative to said actuating member is automatically compensated for.

[Claims 6 to 11 not printed in the Gazette.]

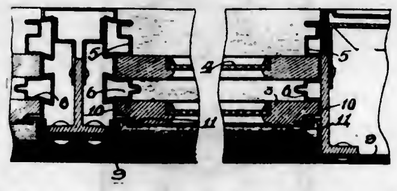
1,157,124. GRAIN-CAR DOOR. MARTIN A. RUBLE and CARL M. STEVENS, Esmond, N. D. Filed Sept. 3, 1914. Serial No. 860,076. (Cl. 20—32.)



1. The combination with an upright rectangular frame and a vertically movable closure therein, of upright flat plates secured to the inner sides of the upright side bars of the frame and continuing throughout the length thereof, said plates having notches in their outer edges, upright rigid clamping rails carried by the inner edge portions of the plates and continuing throughout the length thereof, upright movable clamping rails contacting with the outer edge portions of said plates and continuing throughout the length thereof, perforated ears projecting laterally from said movable rails through said notches in the plates, horizontal screws revolubly mounted in and held against longitudinal shifting in said ears, threaded ears formed on the outer sides of said plates and into which said screws are threaded, and means for rotating said screws, the edges of the closure being slidable between the fixed and movable rails.

2. The combination with an upright rectangular frame having a longitudinal slot in and continuing throughout the length of its sill, and a vertically movable closure in said frame, the lower end of said closure depending through said slot, of a pair of flat plates secured to the top of said sill on opposite sides of said slot, longitudinal flanges depending from the inner edges of said plates into the slot, said flanges being substantially V-shape in cross section and having the outer sides of their angles disposed inwardly adjacent the closure, and means on the upper and lower ends of said closure to wedge between said flanges, when the closure is open or closed.

1,157,125. WEATHER-STRIP. HARRY H. SCHROYER, Chicago, Ill., assignor to The Acme Supply Company, a Corporation of Illinois. Filed Mar. 12, 1913. Serial No. 753,759. (Cl. 189—65.)



1. In a car window construction, a window post, a sliding window sash, a cheek plate secured on the window post, a flange on said cheek plate engaging the outer face of said sash, and a bar on said sash overlying said flange.

2. In car window construction, the combination with the sliding sashes of adjacent windows, of a cheek plate secured on the window post between said windows, flanges on said cheek plate engaging the outer faces of the adjacent window sashes to afford a seal therefor, and bars on said sashes overlying said flanges.

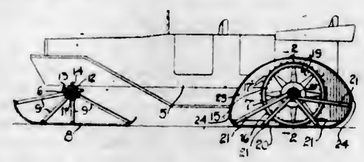
3. In a device of the class described, the combination with the grooved sliding sashes of adjacent windows, of cheek plates secured on the window posts between said windows, flanges on each of said cheek plates engaging in the grooves of adjacent window sashes to afford a seal therefor, and bars on said sashes overlying said flanges.

4. In a car window construction, a series of sliding grooved sashes, an integral flange member between each of said sashes affording means engaging in the grooves of adjacent sashes to afford a guide and sealing means therefor, and bars on said sashes overlying said flanges.

5. In a car window construction, a window post, a channeled member extending around the exterior thereof, a grooved sliding sash on each side of said window post, flanges on said channeled member adapted to engage in the said grooves to afford a guide and seal therefor, and bars on said sashes overlying said flanges.

[Claim 6 not printed in the Gazette.]

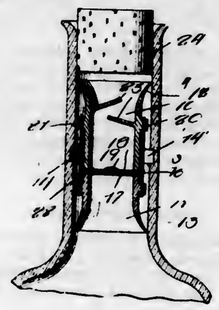
1,157,126. AUTOMOBILE SLEIGH. THEODORE H. F. SCHWOCH, Greenwood, Wis. Filed Feb. 20, 1915. Serial No. 9,624. (Cl. 21—47.)



The combination with a vehicle axle and a driving wheel fixed thereon, of a runner provided with a central slot to accommodate the driving wheel, an annulus mounted on the axle, a plurality of braces secured to the opposite longitudinal edges of the runner and connected to said annulus, housing sections hingedly connected at one of their ends to the opposite ends of the runner, the other ends of said sections meeting above said driving wheel, means for detachably connecting the same, and side plates secured to the housing sections for entirely inclosing the driving wheel and runner braces and afford a protecting guard for the latter.

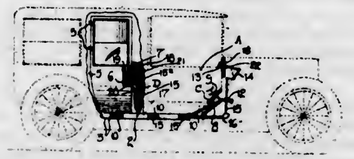
1,157,127. NON-REFILLABLE BOTTLE. FRANK P. SMITH, Ferguson, Mo. Filed Nov. 12, 1913. Serial No. 800,633. (Cl. 215—65.)

The combination with the neck of a bottle having a circumferential groove interiorly thereof, of a device for insertion in the neck of the bottle comprising a pair of tubular sections arranged in adjustment, an apertured disk disposed between the tubular sections, a flap valve carried by the disk, an opened spring ring secured intermediately to the upper section, and engaging with its ends in the groove of the bottle, oppositely extending in-



clined baffle walls, in the upper section, the remote ends of the sections being outwardly flared, and touching the interior of the bottle neck, each of the sections having a circumferential rib provided with diametrically opposite vertical openings, and members secured in said openings for holding the sections firmly clamped together and the disk therebetween.

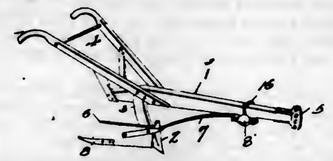
1,157,128. DOOR-OPERATING MECHANISM FOR AUTOMOBILES. WILLIAM G. SODT, Dubuque, Iowa. Filed Feb. 10, 1915. Serial No. 7,414. (Cl. 268—5.)



1. The combination with a vehicle having doors and a spring urging the opening of said doors; of a tube having branches opening adjacent the hinged edges of the doors, a cable in said tube having branches connected to the hinged edges of the doors, a pedal operatively connected to the cable whereby the cable may be retracted to close the doors against the action of the springs, a latch mounted upon the door and engaging with the side wall of the vehicle, and pedally actuated means for shifting the latch from its engagement with the wall of the vehicle.

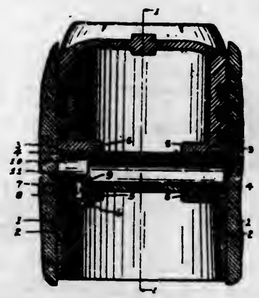
2. A vehicle having a pair of doors, springs urging said doors to open position, latching members coacting with each door and normally holding them closed, a tube disposed beneath the floor of the vehicle and extending from the front of the vehicle rearward and having branches extending toward the hinged side of each door and also having branches extending toward the free edge of each door, a cable disposed within said tube and having branches extending through the first named branches and operatively connected to the respective doors at the hinged sides thereof, a pedal mounted in the forward portion of the automobile, and operatively connected to said cable to cause its retraction upon a depression of the pedal to thereby cause the closing of the doors against the action of said springs, independent latch operating means disposed in the forward portion of the vehicle, and cables extending from said operating means through said tube and through the second named branches and being connected to said latching device.

1,157,129. PLOW-FENDER. JACOB M. STARR, Newnan, Ga. Filed June 26, 1915. Serial No. 36,440. (Cl. 97—4.)



The combination with a transverse bar formed with a shoulder bearing adapted to receive a plow beam which is bolted thereto, and a ball at the free end of the bar, of a pair of clamp plates formed with a socket to receive a fender shank, said clamp plates each having a semispherical socket portion embracing the ball, and clamp bolts and nuts for securing said plates together.

1,157,130. PISTON. CHARLES B. STEBBINS, Three Rivers, Mich., assignor to Sheffield Car Company, Three Rivers, Mich. Filed June 25, 1915. Serial No. 36,305. (Cl. 74—85.)



1. The combination with a cylinder, of a hollow piston having piston pin bores through the walls thereof and inwardly projecting flanges about the bores, one of said flanges having a locking pin hole therethrough, a tubular piston pin having a transverse locking pin hole therein registering with said locking pin hole in said flange, a headed locking pin disposed in said holes in said piston pin and flange with its head on the inside of the piston pin, and a locking pin retaining plug disposed in said piston pin, said plug being retained by the wall of said cylinder, its inward movement being limited by said locking pin.

2. The combination of a hollow piston having piston bores through the walls thereof and inwardly projecting flanges about the bores, one of said flanges having a locking pin hole therethrough, a tubular piston pin having a transverse locking pin hole in said flange, a headed locking pin disposed in said holes in said piston pin and flange with its head on the inside of the piston pin, and a locking pin retaining plug disposed in said piston pin to engage and retain said locking pin.

3. The combination with a cylinder, of a hollow piston having a piston pin bore in the wall thereof and an inwardly projecting flange about the bore, said flange having a locking pin hole therethrough, a tubular piston pin having a transverse locking pin hole therein registering with said locking pin hole in said flange, a locking pin disposed in said holes in said piston pin and flange and removable from the inside of the piston pin, and a locking pin retaining plug disposed in said piston pin to engage and retain said locking pin, said plug being retained by the wall of said cylinder.

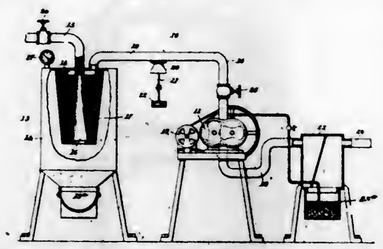
4. The combination of a hollow piston having a piston pin bore in the wall thereof and an inwardly projecting

flange about the bore, said flange having a locking pin hole therethrough, a tubular piston pin having a transverse locking pin hole therein registering with said locking pin hole in said flange, a locking pin disposed in said holes in said piston pin and flange and removable from the inside of the piston pin, and a locking pin retaining plug disposed in said piston pin to engage and retain said locking pin.

5. The combination with a cylinder, of a piston having a piston pin bore therein, a tubular piston pin having a transverse locking pin hole therein, there being a locking pin hole in said piston registering therewith, a headed locking pin disposed in said holes in said piston pin and piston with its head on the inside of the piston pin, and a locking pin retaining plug disposed in the end of said piston pin and shouldered to engage and overlap said locking pin, said plug being retained by the wall of said cylinder, its inward movement being limited by said locking pin.

[Claim 6 not printed in the Gazette.]

1,157,131. METHOD OF CLEANING SCREENS OF VACUUM CLEANING APPARATUS. WILLIAM S. SUTTON, Rockford, Ill., assignor to Houston Manufacturing Company, a Corporation of Illinois. Filed Jan. 2, 1912, Serial No. 668,891. Renewed Aug. 17, 1915. Serial No. 46,017. (Cl. 83—47.)



1. The method of cleaning the screen in the separator of a vacuum cleaning apparatus which consists in sealing the air intake, exhausting the air from said separator, discontinuing said exhausting operation and sealing said separator, and then causing a series of sudden inrushes of air, at atmospheric pressure, to enter said separator in a direction opposite to that of the flow of air during said exhausting operation whereby to produce a series of pulsations or compression shocks within said separator acting upon said screen to dislodge solid matter adhering thereto, substantially as specified.

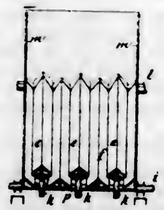
2. The method of cleaning the screen in the separator of a vacuum cleaning apparatus which consists in sealing the air intake, exhausting the air from said separator by means of a suitable exhausting apparatus, discontinuing said exhausting operation, sealing said separator against the inflow of air from said exhausting apparatus, and then interruptedly admitting air at atmospheric pressure to said separator at a point intermediate said separator and exhausting apparatus and causing the same to enter the screen therein and successively dilating the same by means of the produced series of pulsations or compression shocks in order to dislodge solid matter adhering to said screen, substantially as specified.

3. The method of cleaning the screen in the separator of a vacuum cleaning apparatus having a relief valve intermediate said separator and its exhausting apparatus, which consists in sealing the air intake, exhausting the air from said separator, discontinuing said exhausting operation, sealing said separator against the inflow of air from said exhausting apparatus, and then actuating said relief valve whereby to admit air at atmospheric pressure interruptedly to said separator to produce a series of air impulses adapted to enter the screen therein and successively dilate the same in order to dislodge solid matter adhering to said screen, substantially as specified.

4. The method of cleaning the screen in the separator of a vacuum cleaning apparatus which consists in sealing the air intake, exhausting the air from the separator, sealing the air exhaust, and then causing a series of sudden inrushes of air successively to enter the separator in a direction opposite to that of the flow of air during the exhausting operation whereby the screen is subjected to a series of successive shocks which agitate the screen and dislodge solid matter adhering thereto, substantially as specified.

5. The method of cleaning the screen in the separator of a vacuum cleaning apparatus which consists in sealing the air intake, exhausting the air from the separator, sealing the air exhaust, and then causing a sudden inrush of air to enter the separator in a direction opposite to that of the flow of air during the exhausting operation whereby the screen is agitated to dislodge solid matter adhering thereto, substantially as specified.

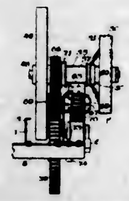
1,157,132. AUXILIARY BOTTOM. KAI WARMING, Copenhagen, Denmark, assignor to Aktieselskabet Dansk Svovlsyre- & Superphosphatfabrik, Copenhagen, Denmark. Filed Jan. 12, 1914. Serial No. 811,780. (Cl. 214—1.)



1. A bottom for emptying containers for comminuted materials comprising a plurality of substantially inverted V-shaped bars adapted to support the said materials, means for moving certain of the said bars up and down, each second of the said bars overlapping the adjacent bars so as to form in a certain position a closed bottom.

2. A bottom for emptying containers for comminuted materials comprising a plurality of substantially inverted V-shaped bars adapted to support the said materials, means for moving certain of the said bars up and down, each second of the said bars overlapping the adjacent bars and closing means arranged on the latter adapted to coact with the said overlapping bars.

1,157,133. POWER-TRANSMISSION GEARING. HENRY A. WATERMAN, LYFORD C. BRADLEY, and WILLIAM K. ANDREW, Milwaukee, Wis., assignors, by mesne assignments, to International Harvester Corporation, a Corporation of New Jersey. Filed Apr. 30, 1910. Serial No. 558,651. (Cl. 74—88.)



A power transmitting gear mechanism including, in combination, a gear supporting frame including a vertically arranged bracket, a primary power transmitting shaft carried by said frame, a secondary power transmitting shaft carried by said frame, a gear wheel secured to said secondary shaft, a sleeve loosely journaled upon said primary shaft, and clutch mechanism operative to connect said sleeve with said shaft, a pinion slidably mounted upon said sleeve and adapted to rotate therewith, a countershaft journaled in a bearing forming part of said bracket, pinions secured to opposite ends of said countershaft, one of said pinions engaging with said gear wheel and the other adapted to mesh with said sliding pinion, and means for controlling the position of said sliding pinion in a manner to cause it to engage with said countershaft pinion or said gear wheel or remain in a neutral position, said means including a vertical shaft mounted in bearings carried by said bracket and having an arm secured to its upper end and engaging with said sliding pinion, an arm secured to the lower end of said shaft, a bell crank lever mounted upon said gear frame, a hand lever mounted upon said gear frame, and link connections between said hand lever and said bell crank lever and between the latter and the arm at the lower end of said vertical shaft.

1,157,134. LIQUID RHEOSTAT. DIDRIK WELGE, South Porcupine, Ontario, Canada. Filed Dec. 16, 1914. Serial No. 877,564. (Cl. 219—57.)



1. A liquid rheostat of the single tank type provided with three live blades, each V-shaped in plan, said blades being arranged so that the halves of each blade are substantially equally spaced respectively from one half of each of the two other blades.

2. A liquid rheostat of the single tank type provided with three live blades, each V-shaped in plan, said blades being arranged so that the halves of each blade are substantially equally spaced respectively from one half of each of the two other blades; and a three-bladed neutral plate set between the live blades and having its parts equally spaced therefrom.

3. A liquid rheostat of the single tank type provided with three live blades, said blades being shaped and arranged to form in the liquid of the tank paths of equal resistance between each blade and each of the others.

4. A liquid rheostat of the single tank type provided with three live blades, said blades being shaped and arranged to form in the liquid of the tank paths of equal resistance between each blade and each of the others; and a three-bladed neutral plate set between the live blades and equally spaced therefrom.

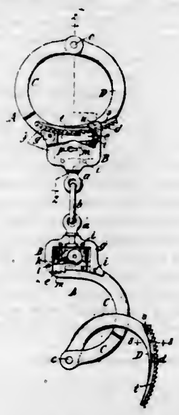
1,157,135. HANDCUFF. JOSEPH H. WESSON and EDWARD S. POMEROY, Springfield, Mass., assignors to Smith & Wesson, Springfield, Mass. Filed Jan. 2, 1915. Serial No. 68. (Cl. 70—24.)

1. A handcuff comprising opposite plates and a spacer between them fastened together to provide a lock recess within the spacer, combined with a lock adapted for subsequent insertion into such recess.

2. A handcuff comprising opposite plates and a spacer between them fastened together to provide a lock recess within the spacer, combined with a lock inserted removably in said recess.

3. A handcuff comprising opposite plates and a spacer between them fastened together to provide a lock recess within the spacer, combined with a lock adapted for insertion in said recess, a part of the lock and said plates having coinciding holes, and a fastening introduced through said holes to hold the lock in place.

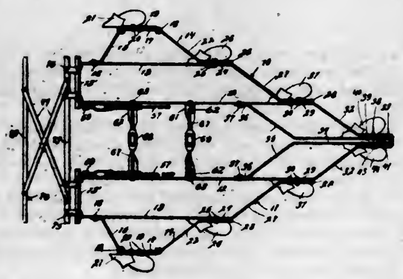
4. A handcuff having a swinging arm and having its body portion formed with a lock recess opening on the side toward the arm, combined with a self-contained lock adapted to engage said arm, inserted removably through such opening into such recess, and irremovable therefrom except through such opening, whereby it cannot be removed when the arm is in the locked position.



5. A handcuff having a swinging arm adapted to turn through a complete circle, said arm formed with a concentric shoulder and the lock member having a projection engaging such shoulder.

[Claim 6 not printed in the Gazette.]

1,157,136. GANG-PLOW. FRANK S. WILLIAMS, Kendaia, N. Y. Filed Sept. 10, 1914. Serial No. 861,118. (Cl. 97—67.)



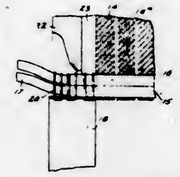
1. In a gang plow of the character described, the combination with a plurality of separate frame-sections adapted to be arranged side by side and reversed with relation to each other, of laterally spaced plow sharers carried by each frame section, a plurality of approximately vertical members to be carried by each frame-section and adapted to extend upwardly and downwardly beyond the same for a substantial distance, means whereby the approximately vertical members may be rigidly and detachably connected with the opposite sides of the frame-section when the frame-section is reversed with relation to the other frame-section, means detachably connecting the lower ends of the opposite approximately vertical members, and means detachably connecting the upper ends of said opposite approximately vertical members.

2. In a gang plow of the character described, the combination with a plurality of separate frame-sections, of laterally spaced turning plow shares carried by each frame-section and facing in the same direction, a plurality of substantially vertical hinge members to be carried by each frame-section and extending upwardly and

downwardly beyond the same for a substantial distance, means whereby the hinge members may be rigidly and detachably connected with the opposite sides of the frame-section when the frame-section is reversed with relation to the other frame-section, means pivotally connecting the lower ends of the opposite hinge members, and adjustable means connecting the upper ends of the opposite hinge members whereby the frame-sections may be turned upon their longitudinal axes.

3. In a gang plow of the character described, the combination with a plurality of separate frame-sections, of laterally spaced turning plow shares carried by each frame-section and facing in the same direction, a plurality of substantially vertical hinge members to be carried by each frame-section and extending upwardly and downwardly beyond the same for a substantial distance, means whereby the hinge members may be rigidly and detachably connected with the opposite sides of the frame-section when the frame section is reversed with relation to the other frame-section, means pivotally connecting the lower ends of the transverse pairs of hinge members, and turn buckles connecting the upper ends of the transverse pairs of hinge members, substantially as described.

1,157,137. DYNAMO-ELECTRIC MACHINE. ROBERT B. WILLIAMSON, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed July 28, 1911. Serial No. 641,137. (Cl. 171—252.)



1. In a dynamo-electric machine, a core, windings carried by said core, and means secured to said windings to diminish the noise set up by fluid circulation within said machine.

2. In a dynamo-electric machine, the combination of a core having a winding and ventilating passageways, and means secured to said winding for diminishing the noise set up by fluid circulation within said machine.

3. In a dynamo-electric machine, the combination of a core, conductors carried thereby, ventilating segments secured to the ends of said core adjacent said conductors, and means obstructing the spaces between said conductors and opposite said ventilating segments.

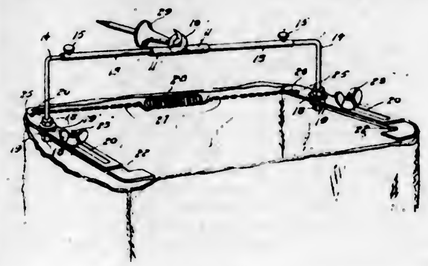
4. In a dynamo-electric machine, the combination of a core, segments provided with ventilating openings secured to the ends of said core, windings carried by said core, and means for preventing the circulation of fluid currents through said ventilating segments and portions of said windings in a radial direction.

5. In a dynamo-electric machine, the combination of a core, means for maintaining said core in position, said means having ventilating passageways therein, and a winding, portions of which extend beyond the end of said core forming passageways for circulating fluid currents, and means for covering said last mentioned passageways opposite said ventilating passageways.

[Claims 6 to 14 not printed in the Gazette.]

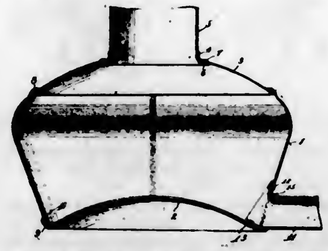
1,157,138. BAG-HOLDER. GEORGE J. WUNDER, Howard, S. D. Filed Jan. 29, 1914. Serial No. 815,216. (Cl. 83—26.)

A bag holder comprising an inverted U-shaped member provided with means for the suspension thereof, a pair of arms pivotally mounted on the lower ends of the arms of the U-shaped member, the said pivotal arms extending forwardly and rearwardly of the pivots thereof, and a re-



silient connection between the rearward portions of said arms.

1,157,139. TURPENTINE-STILL KETTLE. JULIUS ZIESOLZ, Valdosta, Ga. Filed Dec. 24, 1914. Serial No. 878,888. (Cl. 220—125.)



In a turpentine still kettle, the combination with a body portion and a bottom, of an outlet pipe carried thereby, said body portion being provided with an opening for the reception of said outlet pipe, said outlet pipe having a flange formed on one edge thereof, said flange extending substantially at right angles to the surface of said outlet pipe, and gradually increasing to an obtuse angle opposite said right angle portion, flanges surrounding said opening in said body portion and a flange formed on said bottom, rivets for securing said flanges on said outlet pipe to said bottom and said body portion, said flange on said outlet pipe having its edge adjacent said bottom and said body portion beveled, and brazing material adapted to be disposed between said flange on said outlet pipe and said body portion and said bottom in the opening provided by said beveled portion to provide a tight connection.

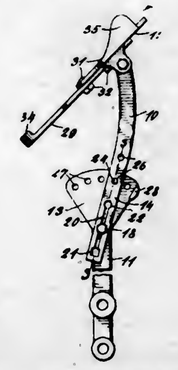
1,157,140. FOOT-LEVER. TORVAL J. ANDERSON, Rockdale, Wis. Filed Dec. 7, 1914. Serial No. 875,951. (Cl. 74—81.)

1. A lever comprising sections which are pivotally connected to permit angular adjustment, and a bolt passing transversely through the sections to provide the pivotal connection therebetween, one of the sections being slotted longitudinally, through which slot the pivot bolt passes to permit longitudinal adjustment of the sections, and means for locking the sections in adjusted position.

2. A lever comprising sections, one of which is adjustable lengthwise and angularly with respect to the other, means for locking the sections in adjusted position, and a safety stop for the first-mentioned section, operable on failure of the locking means.

3. A lever comprising sections, one of which is adjustable lengthwise and angularly with respect to the other, means for locking the sections in adjusted position, and a safety stop on the second-mentioned section in the path of the first-mentioned section.

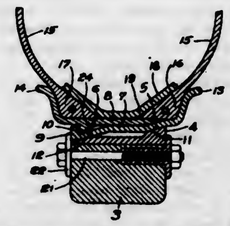
4. A lever comprising sections, one of which is forked to straddle the other section, the fork branches being slotted longitudinally, and portions of the slots being enlarged, a pivot bolt carried by the other section and having ends which are oblong in cross-section and extend into the aforesaid slots, the minor dimensions of the oblong portions of the bolt corresponding to the width of the slots and the major dimensions of said bolt portions corresponding to the enlarged portions of the slots, and a latch pin carried by the first-mentioned section, the fork branches having longitudinally spaced apertures, and the second-mentioned section having a curved series of apertures for the latch pin.



5. A lever comprising sections, one of which is forked to straddle the other section, the fork branches being slotted longitudinally, and portions of the slots being enlarged, a pivot bolt carried by the other section and having ends which are oblong in cross-section and extend into the aforesaid slots, the minor dimensions of the oblong portions of the bolt corresponding to the width of the slots and the major dimensions of said bolt portions corresponding to the enlarged portions of the slots, a nut screwed on the bolt, a latch pin, and a spring tongue carrying the latch pin, said spring tongue being secured to one of the fork branches by the aforesaid bolt, the fork branches having longitudinally spaced apertures, and the second-mentioned section having a curved series of apertures for the latch pin.

[Claim 6 not printed in the Gazette.]

1,157,141. DEMOUNTABLE TIRE-RIM. BERT C. BALL and LEWIS EDWARD YOUNIE, Portland, Oreg. Filed Feb. 5, 1912. Serial No. 675,561. (Cl. 152—21.)



1. In a demountable tire rim, the combination of two rim parts, the first part separated transversely and having a tire retaining flange at one edge, and an exterior locking shoulder at the side of the assembled rim the more remote from the tire retaining flange on said first part; and a second part forming a complete ring and having an interior locking shoulder engaging the exterior locking shoulder on the first part, having a tire retaining flange at its edge, and having a lip extending inwardly from the locking shoulder overlapping the first part to a point adjacent to the tire retaining flange on the first rim part and adapted to form a closure with a tire edge engaging the tire retaining flange on the first rim part.

2. In a demountable tire rim, the combination of two rim parts, the first part forming a complete ring and having an interior locking shoulder; and a second part separated transversely and having an exterior shoulder thereon for engaging said interior shoulder, said rim parts having tire retaining flanges thereon sloping outwardly from the bottom of the assembled rim and tending to collapse said parts under the lateral pressure of the tire, the separated rim part having its ends abutting and adapted to be brought into engagement by the collapsing movement incident to the inflation of the tire to prevent the separation of the ends when the tire is demounted and inflated.

3. In a demountable tire rim, the combination of two rim parts, the first part separated transversely and having a tire retaining flange at one edge, and an exterior locking shoulder at the side of the assembled rim and more remote from the tire retaining flange on said first part; and a second part forming a complete ring and having an interior locking shoulder engaging the exterior locking shoulder on the first part, having a tire retaining flange at its edge, and having a lip extending inwardly from the locking shoulder overlapping the first part to a point adjacent to the tire retaining flange on the first rim part and adapted to form a closure with a tire edge engaging the tire retaining flange on the first rim part, said tire retaining flanges sloping outwardly from the bottom and tending to collapse the parts under the lateral pressure of an inflated tire on said retaining flanges, the separated rim part having its ends abutting and adapted to be brought into engagement by the collapsing movement incident to the lateral pressure of an inflated tire on the flanges to prevent the separation of the ends when the tire is demounted and inflated.

4. In a demountable tire rim, the combination of an annulus having an interior shoulder; a rim part secured thereto, said rim part being separated transversely and having an exterior shoulder engaging said interior shoulder, said shoulders being undercut adjacent to the ends of said rim part, and having a tire retaining flange thereon, said tire flange sloping outwardly and tending to collapse said rim part under the lateral pressure of an inflated tire and the ends of said rim part abutting and adapted to be brought into engagement by the collapsing movement incident to the lateral pressure of an inflated tire to prevent the separation of the ends when the tire is demounted and inflated.

5. In a demountable tire rim, the combination of two rim parts, the first part forming a complete ring having an interior shoulder thereon, and a tire retaining flange thereon; and a second rim part separated transversely and having an exterior shoulder thereon for engaging said interior shoulder, said shoulders being undercut adjacent to the ends of the separated rim part, the said second rim part having a tire retaining flange thereon, said tire retaining flanges sloping outwardly and tending to collapse said separated rim part by the lateral pressure of an inflated tire thereon, and the separated rim part having its ends abutting and adapted to be brought into engagement by the collapsing movement incident to a lateral pressure of an inflated tire to prevent the separation of the ends when the tire is demounted and inflated.

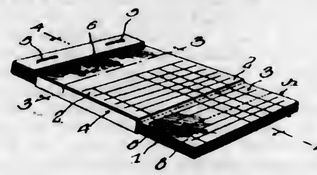
[Claim 6 not printed in the Gazette.]

1,157,142. MANIFOLDING SALES-BOOK. RALPH R. BARBER, Harrison, Ark. Filed June 1, 1915. Serial No. 31,517. (Cl. 11—23.)

1. A manifolding sales book comprising a supporting base, a plurality of sets of original and duplicate leaves superposed on each other, the original and duplicate leaves alternating, a transfer element arranged between said original and duplicate leaves, the duplicate leaves projecting at the lower ends beyond the originals and provided on said projecting ends with a sticker.

2. A manifolding sales book comprising a supporting base, a plurality of sets of original and duplicate leaves

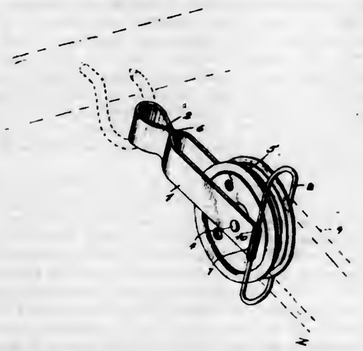
superposed on each other, the original and duplicate leaves alternating, a transfer element arranged between said original and duplicate leaves, the duplicate leaves projecting at the lower ends beyond the originals and a rest on which said slips are adapted to be placed when written on attached to the base of said sales book.



3. A manifolding sales book comprising a supporting base, original and duplicate leaves arranged thereon in superposed relation, the originals alternating with the duplicates, said original leaves being carbon coated on their under or inner faces, the duplicate leaves extending at their lower ends beyond the originals and divided by transverse rows of perforations into detachable strips, said strips being provided on their under faces with an adhesive.

4. A manifolding sales book comprising a supporting base, a plurality of sets of original and duplicate leaves superposed on each other, the original and duplicate leaves alternating, a transfer element arranged between said original and duplicate leaves, the duplicate leaves projecting at the lower ends beyond the originals and a rest on which said slips are adapted to be placed when written on hingedly connected at one edge to one edge of said base and adapted to extend across the face of said book.

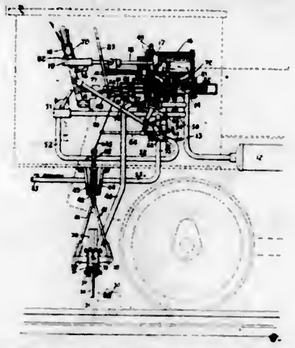
1,157,143. CLOTHES-LINE PULLEY. CHARLES L. BLODGETT, Alameda, Cal. Filed Sept. 24, 1914. Serial No. 863,355. (Cl. 254—197.)



A device of the class described comprising a frame, a pulley carried thereby, said frame provided with parallel side portions having bowed cylindrical portions at their outer ends and extending at an angle to said frame, a retaining link comprising an elongated elliptical body portion fitting within said cylindrical portions and straddling said pulley for constituting a retaining means for holding a cable upon said pulley, said cylindrical portions provided with inwardly punched tongues upon their respective sides for biting into said retaining link for locking said link against transverse movement relative to said frame.

1,157,144. AUTOMATIC TRAIN-STOPPING MECHANISM. WERNER BEUTEL, Bridgeport, Conn., assignor of one-third to Randall D. Hillebrant, Bridgeport, Conn. Filed Dec. 28, 1914. Serial No. 879,240. (Cl. 246—59.)

1. In a mechanism of the character described, the combination with a throttle lever, operating means therefor, an emergency brake valve, an oscillatable stopping cylinder, stopping piston and stopping rod, and connections between the stopping cylinder and the emergency brake valve for opening said valve by successive steps, of means for supplying the throttle lever operating means and the stopping cylinder with air under pressure, and connections between the throttle lever operating means and the stopping cylinder, engagement of the stopping rod with a plurality of contact elements causing oscillation of the stopping cylinder and actuation of the throttle lever and emergency brake valve.



2. In a mechanism of the character described, the combination with an oscillatable stopping cylinder, stopping piston and stopping rod, of a throttle lever, an emergency brake valve, intermediate connections between the stopping cylinder and the emergency brake valve whereby oscillation of the cylinder will actuate said valve, and pressure operated means controlled by said cylinder for actuating the throttle lever.

3. In a mechanism of the character described, the combination with an oscillation stopping cylinder, a stopping piston and stopping rod, a plurality of contact elements adapted to be engaged by the stopping rod and means for supplying air under pressure to said cylinder to retain the piston and rod in the engaging position, of an emergency brake valve, operating means therefor and connections intermediate the stopping cylinder and said operating means for progressively actuating the emergency brake valve when the stopping cylinder is oscillated by the contact elements.

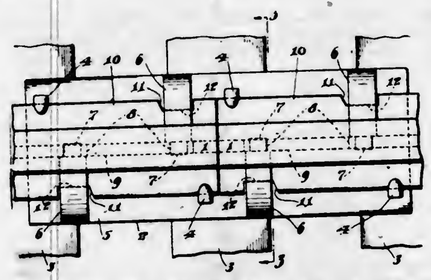
4. In a mechanism of the character described, the combination with an oscillatable stopping cylinder, stopping piston and stopping rod, and means for supplying air under pressure to said cylinder to retain the piston and rod in the engaging position, of an emergency brake valve, connections intermediate said valve and the stopping cylinder and a plurality of contact elements adapted to be engaged by the stopping rod, successive engagements of the stopping rod with contact elements partly opening and then fully opening said valve.

5. In a mechanism of the character described, the combination with an oscillatable stopping cylinder, stopping piston and stopping rod, and means for supplying air under pressure to the cylinder to retain the piston and rod in the engaging position, of a throttle lever, an emergency brake valve, connections intermediate the stopping cylinder and the throttle lever and emergency brake valve, and a plurality of contact elements adapted to be engaged by the stopping rod, whereby successive engagements of the stopping rod with contact elements will actuate the throttle lever, partly open and then fully open the emergency brake valve.

[Claims 6 to 23 not printed in the Gazette.]

1,157,145. RAIL-JOINT. SAMUEL W. BROWN, Klingerstown, Pa. Filed Mar. 24, 1915. Serial No. 16,587. (Cl. 239—6.)

1. In a rail joint, the combination with two rails located end to end and having openings in their webs, of a chair supporting both rails, said chair having a pair of brackets at each end, the brackets of each pair reversely positioned and located out of alinement with each other, said brackets at their inner ends bearing against the webs of the rails, and having lugs thereon projected into the openings in the webs of the rails, substantially as described.



2. In a rail joint, the combination with two rails located end to end and having openings in their webs, of a chair supporting both rails, said chair having a pair of brackets at each end, the brackets of each pair reversely positioned and located out of alinement with each other, said brackets at their inner ends bearing against the webs of the rails, and having lugs thereon projected into the openings in the webs of the rails, and said rails having recesses in their base flanges receiving the brackets, substantially as described.

3. In a rail joint, the combination with two rails located end to end and having openings in their webs, of a chair supporting both rails, said chair having a pair of brackets at each end, the brackets of each pair reversely positioned and located out of alinement with each other, said brackets at their inner ends bearing against the webs of the rails, and having lugs thereon projected into the openings in the webs of the rails, said chair adapted to be turned to a position at an angle to the rails to release the lugs from the rails, substantially as described.

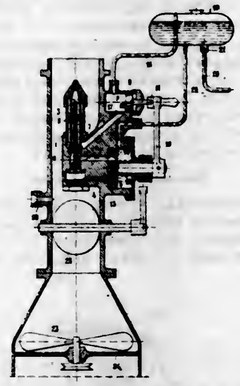
4. In a rail joint, the combination with two rails located end to end and having openings in their webs, of a chair supporting both rails, said chair having a pair of brackets at each end, the brackets of each pair reversely positioned and located out of alinement with each other, said brackets at their inner ends bearing against the webs of the rails, and having lugs thereon projected into the openings in the webs of the rails, said rails having recesses in their base flanges receiving the brackets, said chair adapted to be turned to a position at an angle to the rails to release the lugs from the rails, substantially as described.

5. In a rail joint, the combination with two rails located end to end and having openings in their webs, of a chair supporting both rails, said chair having a pair of brackets at each end, the brackets of each pair reversely positioned and located out of alinement with each other, said brackets at their inner ends bearing against the webs of the rails, and having lugs thereon projected into the openings in the webs of the rails, said rails having recesses in their base flanges receiving the brackets, said chair adapted to be turned to a position at an angle to the rails to release the lugs from the rails, said chair having spike receiving openings therein adapted to receive spikes bearing against the base flanges of the rails securing the chair against movement, and the rails against movement relative to the chair, substantially as described.

[Claim 6 not printed in the Gazette.]

1,157,146. PRESSURE-CARBURETER. CLAUDE MARIUS CARREL, Paris, France, assignor to himself and Leon Noel Maurier, Paris, France. Filed Feb. 1, 1915. Serial No. 5,429. (Cl. 48—150.3.)

1. A pressure carbureter comprising, in combination, a sprayer consisting of three concentric nozzles; a fuel tank; a compressed-air supply pipe leading into the bottom of said tank; a cylinder having a passage leading therefrom to the outer nozzle; a pipe leading from the top of said tank to said cylinder, to supply fuel-charged air from the former to the latter; a piston working in said cylinder to control the delivery of the charged air therefrom through said passage to said outer nozzle; a controlling chamber having a pair of passages leading therefrom to the intermediate and inner nozzles; a member rotatably mounted in said chamber and formed with a pair of orifices adapted to alternately open and close the second-named passages; a fuel-supply pipe leading from said tank to said chamber; and means for operating said piston and said rotatably-mounted member.



2. A pressure carbureter comprising, in combination, a sprayer consisting of three concentric nozzles; a fuel tank; a compresed-air supply pipe leading into the bottom of said tank; a cylinder having a passage leading therefrom to the outer nozzle; a pipe leading from the top of said tank to said cylinder, to supply fuel-charged air from the former to the latter; a piston working in said cylinder to control the delivery of the charged air therefrom through said passage to said outer nozzle; a controlling chamber having a pair of passages leading therefrom to the intermediate and inner nozzles; a member rotatably mounted in said chamber and formed with a pair of orifices adapted to alternately open and close the second-named passages; a fuel-supply pipe leading from said tank to said chamber; and a manually operable device for simultaneously operating said piston and said rotatably-mounted member.

3. A pressure carbureter comprising, in combination, a sprayer consisting of three concentric nozzles; a fuel tank; a compressed air-supply pipe leading into the bottom of said tank; a cylinder having a passage leading therefrom to the outer nozzle; a pipe leading from the top of said tank to said cylinder, to supply fuel-charged air from the former to the latter; a piston working in said cylinder to control the delivery of the charged air therefrom through said passage to said outer nozzle, a controlling chamber having a pair of passages leading therefrom to the intermediate and inner nozzles; a member rotatably mounted in said chamber and formed with a pair of orifices adapted to alternately open and close the second-named passages; a fuel-snpply pipe leading from said tank to said chamber; and a manually-operable device connected to rotate said rotatably-mounted member and provided with a cam for simultaneously operating said piston.

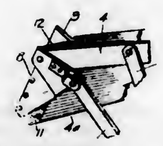
4. A pressure carbureter comprising, in combination, a sprayer consisting of three concentric nozzles; a fuel tank; a compressed air-supply pipe leading into the bottom of said tank; a cylinder having a passage leading therefrom to the outer nozzle; a pipe leading from the top of said tank to said cylinder, to supply fuel-charged air from the former to the latter; a piston working in

said cylinder to control the delivery of the charged air therefrom through said passage to said outer nozzle; a controlling chamber having a pair of passages of different areas leading therefrom to the intermediate and inner nozzles; a plate rotatably mounted in said chamber and having a pair of orifices of different sizes adapted to alternately open and close the second-named passages; a fuel-supply pipe leading from said tank to said chamber; and operating means for said plate and said piston.

5. A pressure carbureter comprising, in combination, a sprayer consisting of three concentric nozzles; a fuel tank; a compressed air-supply pipe leading into the bottom of said tank; a cylinder having a passage leading therefrom to the outer nozzle; a pipe leading from the top of said tank to said cylinder, to supply fuel-charged air from the former to the latter; a piston working in said cylinder to control the delivery of the charged air therefrom through said passage to said outer nozzle; a controlling chamber having a pair of passages leading therefrom to the intermediate and inner nozzles; a plate rotatably mounted in said chamber and having a pair of orifices for controlling the second-named passages; and a common operating device for said plate and said piston.

[Claim 6 not printed in the Gazette.]

1,157,147. DUMP-CAR. ROY E. CARTZDAFNER, Columbus, Ohio, assignor to The Kilbourne and Jacobs Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed Sept. 16, 1914. Serial No. 862,088. (Cl. 105—191.)



1. In a dump car having a pivoted bar mounted at one end thereof, and a vertical supporting arm pivotally secured thereto, a door pivotally suspended from said bar, a rigid hinge like member secured to the end of the door and formed to receive the end of said bar and to coöperate in providing the pivotal connection between said bar and door, and having a rearwardly extending portion, and an arm pivotally associated with said extending portion and said vertical arm whereby said door is positively swung to open position and retracted to closed position and securely maintained therein.

2. In a dump car having a side door, a horizontal bar mounted on the end of said car from which said door is pivotally suspended, a vertical supporting bar pivotally associated with said horizontal bar, a reinforcing hinge like member mounted on the end of said door, a connecting arm pivotally associated at its ends with said vertical bar and said reinforcing member whereby said door is swung to open position positively as the car bed is dumped, and said door is swung to closed position positively as said car bed is righted and maintained therein.

3. In a dump car having a side door, a horizontal bar mounted on the end of said car from which said door is pivotally suspended, means for causing said door to swing open as said car bed is dumped, and means carried by said door adapted to engage said bar to prevent the overthrow of said door in its opening movement.

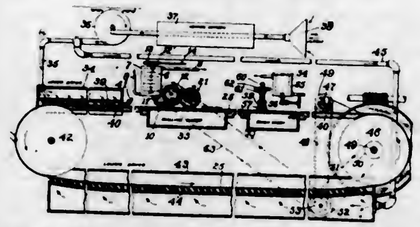
1,157,148. FLEXIBLE SHAFT. GEORGE T. BOND, Huntington, W. Va. Filed Oct. 31, 1914. Serial No. 869,564. (Cl. 64—30.)

1. A flexible shaft composed of a strip of flexible metal having a multiplicity of spiral twists, cross sections of the strip at all points having their centers in alinement with the edges of the strip extending in the direction of the length of the shaft, said shaft being uniformly flexible in all directions throughout its length.

2. As an improved article of manufacture a shaft composed of a flat strip of metal having a multiplicity of spiral twists extending throughout its length, cross sections of the strip at all times having their centers in alinement, the edges of the strip extending in the direction of the length of the shaft and the material thereof extending through the axial center of the shaft, said shaft being uniformly flexible throughout the entire length thereof.



1,157,149. APPARATUS FOR MAKING SHEET MATERIAL. HENRY M. CONOVER, Washington, D. C. Filed Dec. 27, 1913. Serial No. 809,082. (Cl. 18—15.)

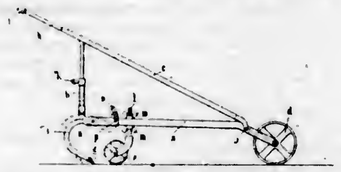


1. In combination in apparatus of the class described for making film material, a moving carrier, means for delivering the material in warm fluid condition upon said carrier in a thin film, means for chilling said carrier to cause the liquid to congeal as soon as it contacts with the carrier, said material and carrier being non-adhesive relative to each other, means for drying the film on the carrier and means for stripping all the material from said carrier in the form of a film, substantially as described.

2. In combination in apparatus of the class described for making film material, a moving carrier, means for delivering the material in warm fluid condition upon said carrier, in a thin film, means for chilling said carrier to cause the liquid to congeal as soon as it contacts with the carrier, said material and carrier being non-adhesive relative to each other, means for drying the film on the carrier, means for stripping all the material from said carrier in the form of a film, and means for waxing the carrier before it reaches the point where the material is chilled on the carrier to secure the non-adhesive relation between the carrier and the material, substantially as described.

3. In combination in apparatus of the class described for making film material, a moving carrier, means for delivering the material in warm fluid condition upon said carrier in a thin film, means for chilling the carrier to cause the liquid to congeal as soon as it contacts with the carrier and thereby prevent spreading on the carrier, a roll for stripping the material from the carrier and storing the film upon itself, said roll being located at a sufficient distance apart from the delivering and chilling point to allow said film to dry, a compensating drive for said roll to prevent undue strain on the dry film as the stripped and stored film increases in diameter, means for warming and lubricating the carrier, said warming, lubricating and chilling means being located between the point where the film is stripped from the carrier and the point where the warm fluid is delivered onto the carrier, substantially as described.

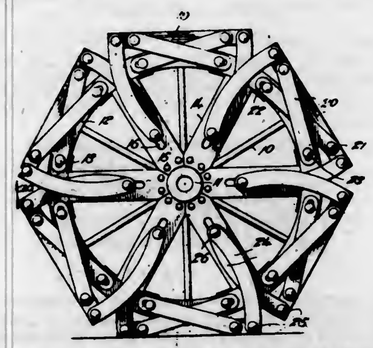
1,157,150. WEED-CUTTER OR CULTIVATOR. DOMINIQUE JAMES EUGÈNE CONTI, Roanne, France. Filed Sept. 20, 1912. Serial No. 721,455. (Cl. 97—42.)



1. A weed cutter or cultivator comprising a triangular frame supported on a front and a rear wheel, said wheels being arranged in the longitudinal plane of the frame and in line with each other, said frame comprising a longitudinal base member, a vertically adjustable upright at the rear end of the said base member consisting of two parts telescopically arranged, an inclined tie-bar connecting the upper end of the upper part of the upright with the forward end of the base member, the front end of said tie-bar being pivoted to the base member, and a tool holder pivotally mounted on the base member of the frame at a point in rear of the rear wheel.

2. A weed cutter or cultivator comprising a frame, a front and a rear wheel for supporting said frame, said rear wheel being carried by a fork, a shank for said fork adjustably connected with the frame, and a tool-holder pivotally connected with the frame.

1,157,151. TRACTION-WHEEL. THOMAS B. CRABTREE, Hanford, Cal. Filed July 30, 1914. Serial No. 854,175. (Cl. 21—150.)



1. A wheel including a hub and a rim, plates secured to said rim, slotted arms extending from said plates and connected with said hub, shoes positioned about said rim, links pivotally connected with said shoes and slidably connected with said rim, pins slidably mounted in the slots of said arms, and curved links pivotally connected with said shoes and rotatably mounted upon said pins.

2. A wheel including a hub and a rim, slotted arms extending from said hub to said rim, shoes positioned about said rim, links pivotally connected with said shoes and slidably connected with said rim, pins slidably mounted in the slots of said arms, and links pivotally connected with said shoes and rotatably mounted upon said pins.

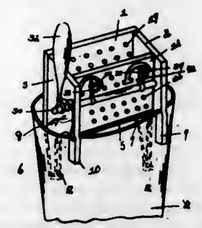
3. A wheel including a hub and a rim, arms extending from said rim to said hub, shoes positioned about said rim, links pivotally connected with said shoes and slidably connected with said rim, and links pivotally connected with said shoes and slidably connected with said arms.

4. A wheel including a hub and a rim, supporting members extending from said rim to said hub, shoes positioned about said rim, rigid members pivotally connected with said shoes and slidably connected with said rim, and rigid guiding members pivotally connected with said shoes and slidably connected with said supporting members.

5. A wheel attachment comprising shoes, supporting members, guiding members pivotally connected with said shoes and slidably connected with said supporting members, and other supporting members pivotally connected with said shoes and having their opposite end portions adapted for sliding engagement with a wheel.

[Claims 6 and 7 not printed in the Gazette.]

1,157,152. MOP-WRINGER. MILTON E. DAVIS, Canastota, N. Y. Filed Jan. 30, 1911. Serial No. 605,441. (Cl. 15—12.)



1. In a mop wringer, a front-board, side members and a presser board, said side members having depending portions provided with a plurality of cutouts and the presser board having studs whereon to swing the presser board from any pair of such cutouts.

2. In a mop-wringer, a front-board, side members having depending portions with a plurality of cutouts, said cutouts being adaptable for the interchangeable mounting of a presser-board, a presser-board, means for actuating said presser-board upon its mounting and for permitting it to yield at any point in squeezing a mop.

3. In a mop-wringer of the character described, a front-board, side members and a presser-board, said front-board having wings adapted to engage with the top edge of a pail and means slidingly mounted upon said wings whereby to adjust the height of the mop-wringer with reference to the edge of the pail, substantially as described.

4. A mop-wringer having a front-board with ends extended beyond the edge of the pail and members slidingly mounted on the said ends whereby to adjust the height of the wringer above the pail, side pieces cutout to provide a recess for the top of the pail, the parts which depend within the pail having lugs bearing against the pail supporting said parts clear of the pail.

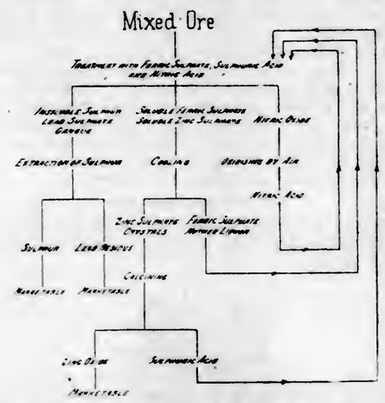
5. In a mop-wringer, the combination of side pieces provided with depending portions, each having a plurality of recesses at the lower end, a presser-board with depending portions adapted to mount the board interchangeably in a selected pair of said recesses, a shaft, an arm carried thereon, a lever member pivoted on the presser-board, a link connecting the arm and the lever member and a spring operative by the rotation of the shaft to cause pressure of the presser-board whereby by reason of a given mounting of the presser-board and the action of the spring to adapt the wringer to act on mops of different size.

[Claims 6 to 9 not printed in the Gazette.]

1,157,153. PROCESS FOR THE INDUSTRIAL SEPARATION OF LEAD AND ZINC CONTAINED IN THE STATE OF SULFIDS IN ORES. GUY DE BECHI, London, England. Filed Mar. 29, 1913. Serial No. 757,694. (Cl. 75—18.)

1. A process for the industrial separation of lead and zinc contained in the state of sulfids in ores consisting

in reducing the ore to an impalpable powder, treating said powder by a mixture of ferric sulfate, sulfuric acid and nitric acid, whereby the sulfids are transformed into sulfates with formation of free sulfur, and separating the zinc solution from the lead sulfate by filtration.

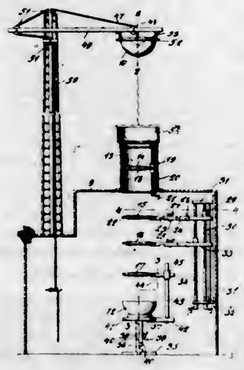


2. A process for the industrial separation of lead and zinc contained in the state of sulfids in ores, consisting in reducing the ore to an impalpable powder, treating said powder by a mixture of ferric sulfate, sulfuric acid and nitric acid, whereby the sulfids are transformed into sulfates with formation of free sulfur, separating the zinc sulfate from the lead sulfate by filtration, and regenerating the sulfuric acid of the zinc sulfate.

3. A process for the industrial separation of lead and zinc contained in the state of sulfids in ores, consisting in reducing the ore to an impalpable powder, treating said powder by a mixture of ferric sulfate, sulfuric acid and nitric acid, whereby the sulfids are transformed into sulfates with formation of free sulfur, separating the zinc sulfate from the lead sulfate by filtration, regenerating the sulfuric acid of the zinc sulfate, and extracting the sulfur from the insoluble residue.

4. The process of extracting lead and zinc from ores, comprising reducing the ores to a fine powder, and subjecting said powder to the action of a ferric salt solution containing nitric acid, whereby said ferric salt is maintained oxidized during the extraction of the ore.

1,157,154. OBSERVATION APPARATUS. JOSEPH DE FALCO, Vineland, N. J. Filed Apr. 7, 1915. Serial No. 19,699. (Cl. 88—1.)



1. In an observation apparatus, an elevated spherical mirror, a screen on which the image reflected by the mirror is displayed, the displaying surface of said screen being concave, a stand supporting the screen, a rotatable standard carried by the stand, and a lens holder slidably mounted on the standard above the screen.

2. In an observation apparatus, an elevated spherical mirror, a screen on which the image reflected by the mirror is displayed, the displaying surface of said screen being concave, a stand supporting the screen, a rotatable standard carried by the stand, and a lens holder slidably mounted on the standard above the screen and adjustable laterally relative to the standard.

3. In an observation apparatus, an elevated spherical mirror, a screen on which the image reflected by the mirror is displayed, the displaying surface of said screen being concave, independently rotatable screw stems, a nut mounted for travel on one of the stems, the other stem passing loosely through the nuts, a second nut mounted for travel on the second-mentioned stem, the first-mentioned stem passing loosely through said nut, and lens supports carried by the nuts, said lens supports being located above the screen.

4. In an observation apparatus, an elevated spherical mirror, a screen on which the image reflected by the mirror is displayed, the displaying surface of said screen being concave, independently rotatable screw stems, a nut mounted for travel on one of the stems, the other stem passing loosely through the nut, a second nut mounted for travel on the second-mentioned stem, the first-mentioned stem passing loosely through said nut, and lens supports carried by the nut, said lens supports being located above the screen, and said supports comprising bracket arms pivoted to the nuts.

5. In an observation apparatus, an elevated spherical mirror, a screen on which the image reflected by the mirror is displayed, the displaying surface of said screen being concave, independently rotatable screw stems, a nut mounted for travel on one of the stems, the other stem passing loosely through the nut, a second nut mounted for travel on the second-mentioned stem, the first-mentioned stem passing loosely through said nut, and lens supports carried by the nuts, said lens supports being located above the screen, and comprising bracket arms pivoted to the nuts, said bracket arms comprising adjustably connected sections.

[Claim 6 not printed in the Gazette.]

1,157,155. HARROW FOR ATTACHMENT TO SEED-DRILLS. WALTER ARNOLD DEUTSCHER, Murtoa, Victoria, Australia. Filed Mar. 18, 1915. Serial No 15,158. (Cl. 97—44.)



1. Improvements in and connected with harrows for attachment to seed drills, consisting in the combination with a seed drill having hoes and a lateral footboard, of a folding harrow disposed behind the hoes and below the footboard.

2. Improvements in and connected with harrows for attachment to seed drills, consisting in the combination with a drill having hoes and a lateral footboard, of a harrow disposed behind the hoes and below the footboard, said harrow consisting of a series of folding pivoted sections and means for attaching the harrow to the hoes.

3. Improvements in and connected with harrows for attachment to seed drills, consisting in the combination with a hoe drill of a harrow comprising a series of folding pivoted sections, each section having a series of tines, means secured to the harrow for attaching the same to the hoes and permitting vertical movement of the harrow in relation to the said hoes.

4. Improvements in and connected with harrows for attachment to seed drills, consisting in the combination with a hoe drill of a harrow comprising a series of folding pivoted sections, each section having a series of tines, a plurality of vertically movable draw straps secured to the harrow and passing around the hoes of the drill, and means for adjusting the vertical movement of the draw straps in relation to the hoes.

5. Improvements in and connected with harrows for attachment to seed drills, consisting in the combination with a hoe drill of a harrow having a front tine support and a back tine support each consisting of a plurality of folding pivoted sections, a series of tines carried by each support, said tines being zig-zagged in relation to each other, means for uniting the front and back tine supports, and means for attaching the harrow to the drill hoes.

[Claims 6 to 9 not printed in the Gazette.]

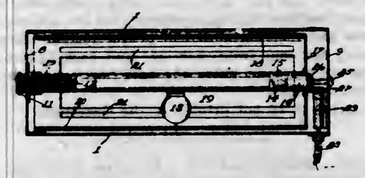
1,157,156. VEHICLE WHEEL-RIM. RALPH W. DICK, Fort Wayne, Ind., assignor to Louis Rastetter & Son, a Copartnership existing between Elizabeth Rastetter and William C. Rastetter, Fort Wayne, Ind. Filed Mar. 16, 1914. Serial No. 824,880. (Cl. 21—180.)



1. In a rim for wheels of the class described, a wooden rim having an opening for the valve stem of the tire; a metallic rim surrounding the wooden rim, its ends meeting at the valve-stem opening therein and each having a portion thereof pressed downwardly into the opening against the adjacent wall thereof; and an eyelet extending through the opening, and holding the downwardly pressed portion of each end of the metallic rim in place.

2. A rim for wheels consisting of a wooden rim and an outer metallic rim extending around the former, and an eyelet extending through the wooden rim at the juncture of the ends of the metallic rim and securing the respective meeting ends.

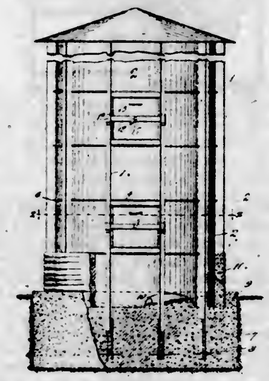
1,157,157. INDICATOR FOR VEHICLES. JACKSON F. FRAZER, San Francisco, Cal., assignor of one-half to Hans Carl Neilsen, San Francisco, Cal. Filed Apr. 19, 1915. Serial No. 22,258. (Cl. 40—77.)



1. An indicator for vehicles comprising an open ended tubular casing having an aperture in its side wall, removable end members for closing the ends of said casing, a tubular supporting shaft carried by one of said end members, a tubular shell rotatably mounted in said casing and formed at its surface with apertures adapted on the rotation thereof to register with the aperture of the casing, a tubular stub shaft carried by the closed end of said shell for reception in one end of said end tubular supporting shaft, a gear on one end of said stub shaft, a coöperating gear carried by one of the end members, means for operating said last mentioned gear, and means for threading into said supporting shaft and extended through said stub shaft and one end of said member for maintaining the said gears in operative relation.

2. An indicator for vehicles comprising an open ended tubular casing having apertures in its side wall, end members for closing the ends of said casing, a tubular supporting shaft carried by one of said end members and extending into said casing, a threaded bushing carried by the free end of said shaft, a tubular shell rotatably mounted in said casing, said shell being open at one end and inclosing said shaft, and formed on its surface with apertures adapted on the rotation thereof to register with the apertures in the casing, a tubular stub shaft carried by said closed end of said shell, for reception in the open end of said supporting shaft, a gear carried by the outer end of said stub shaft, and operating means carried by the other end of said members and coöperating with said gear, and a securing means extending through said last mentioned member and through said tubular stub shaft into said threaded bushing for securing said members in place.

1,157,158. SHEET-METAL TANK. OWEN K. HARRY, Dallas, Tex. Filed Nov. 19, 1914. Serial No. 872,945. (Cl. 189—3.)



1. The combination in a storage tank construction, of a plurality of vertical studs having recesses cut in their inner edges, a plurality of sheet metal sections arranged in courses, each section having an outstanding single flange along edge, and a folded outstanding flange along the opposite edge of each section, the single flange of one section engaging in the folded flange of the next adjacent section, and the folded flanges engaging in recesses of the studs, whereby each course of sections is supported directly by the studs.

2. In a tank construction, the combination with a vertical wall comprising a plurality of flange sections forming horizontal outstanding seams, of a plurality of vertical supporting studs having recesses cut in their edges adjacent to each of the seams and into which said seams fit, whereby each of the sections is supported directly by said studs.

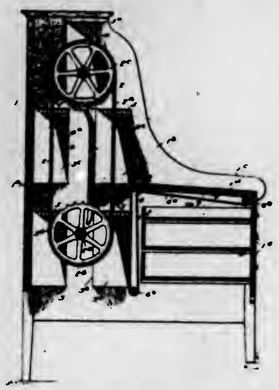
1,157,159. FILING APPLIANCE. HARRY J. HICK, Alliance, Ohio, assignor, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Dec. 16, 1909. Serial No. 533,387. (Cl. 45—3.)

1. In a filing appliance, the combination of a table, an endless movable device, and a plurality of sets of normally upright leaves pivotally supported on said device at spaced intervals from each other, and arranged to be moved thereby to an operative position for swinging the leaves of each set on their pivotal supports forward and downward upon the table.

2. In a filing appliance, the combination of a table, an endless movable device, and a plurality of sets of normally upright leaves pivoted together and fulcrumed by the foremost leaf on said device at spaced intervals from each other, and arranged to be moved thereby to an operative position for swinging the leaves on said fulcrum forward and downward upon the table.

3. In a filing appliance, the combination of a table, an

endless movable device, a plurality of sets of normally upright leaves pivotally supported on said device at spaced intervals from each other, and arranged to be moved thereby to an operative position for swinging the leaves of each set on their pivotal supports forward and downward upon the table, and releasable means for locking the leaves in upright position.



4. In a filing appliance, the combination of an endless movable device, a plurality of sets of holders supported on said device at spaced distances from each other and arranged to be moved thereby to an operative position, a freely movable endless web adapted to serve as an index for the said holders, and means between the sets of holders and the web and arranged to be engaged by said sets of holders for moving the said web therewith.

5. In a filing appliance, the combination of an endless movable device, a plurality of sets of holders supported on said device at spaced distances from each other and arranged to be moved thereby to an operative position, a freely movable web adapted to serve as an index for the sets of holders, members carried by the web and arranged to be engaged by the sets of holders for moving the web therewith, and a guide member for guiding each set of holders during its engagement with said members.

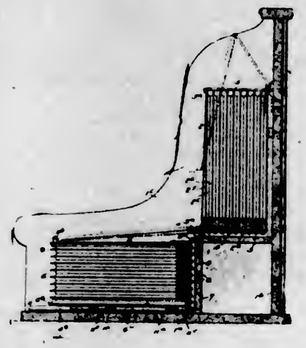
[Claims 6 to 11 not printed in the Gazette.]

1,157,160. FILING APPLIANCE. HARRY J. HICK and ALBERT F. STAPLES, Alliance, Ohio, assignors, by mesne assignments, to The McCaskey Register Company, (incorporated in 1914,) Alliance, Ohio, a Corporation of Ohio. Filed Aug. 20, 1910. Serial No. 578,137. (Cl. 45—2.)

1. In a filing appliance, the combination of a set of leaves normally arranged in a vertical position, means permitting said leaves to swing relative to each other, a separate set of leaves normally arranged in a horizontal position, connections between them permitting them to swing relative to each into a vertical position, and means for slidably supporting said separate set of leaves, the upright set of leaves coöperating with said supporting means to guide the operated leaves of said separate set in their up and down movements.

2. In a filing appliance, the combination of a set of leaves normally arranged in a vertical position, means permitting said leaves to swing relative to each other, a separate set of leaves normally arranged in a horizontal position, connections between them permitting them to swing relative to each into a vertical position, and means for slidably supporting said separate set of leaves, and permitting the opposite end leaves thereof to move at fixed angles to each other as any of the leaves between them are operated, the said horizontal leaves being arranged forward of said upright leaves whereby the uppermost end leaf of the horizontal leaves is slidably supported by said upright leaves when in operated position.

3. In a filing appliance, the combination of a set of leaves normally arranged in a vertical position, means permitting said leaves to swing relative to each other, a separate set of leaves normally arranged in a horizontal position, connections between them permitting them to swing relative to each into a vertical position, means for slidably supporting said separate set of leaves, the upright set of leaves coöperating with said supporting means to guide the operated leaves of said separate set in their up and down movements, and anti-friction means interposed between said upright set of leaves and the uppermost leaf of the horizontal set of leaves.

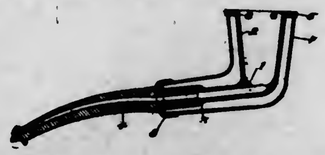


4. In a filing appliance, the combination of a set of leaves normally arranged in upright position, a separate set of leaves normally arranged in horizontal position, and devices for guiding the movements of those leaves of the latter set which are operated, including slide means interposed between the uppermost leaf of the said set of leaves and the frontmost leaf of the other set.

5. In a filing appliance, the combination of a set of leaves normally arranged in upright position, a support for the said leaves relative to which the leaves swing from normal position to a horizontal position, a separate set of leaves normally arranged in a horizontal position, a back relative to which the last mentioned leaves swing from normal position to a substantially upright position, gearing between the last mentioned leaves, and slide means interposed between the uppermost leaf of the horizontal set of leaves and the frontmost leaf of the upright leaves and the back, the said frontmost leaf and back operating to slidably support and guide the said horizontal leaves as they are operated.

[Claims 6 to 18 not printed in the Gazette.]

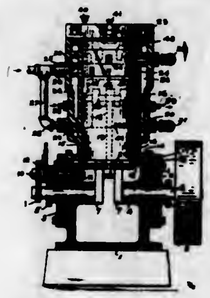
1,157,161. SMOKING-PIPE. WILLIAM HILL and LAWRENCE GARDELLA, Oroville, Cal. Filed Jan. 12, 1915. Serial No. 1,768. (Cl. 131—12.)



A tobacco pipe comprising a bowl and stem supporting portion, the bowl provided with an annular flange at its upper end and the stem supporting portion formed with an annular groove at its outer end, a protecting covering surrounding the exterior of said bowl and stem supporting portion and comprising a plurality of members spaced from each other and from the bowl and stem supporting

member, and each secured at one end in said flange and at its opposite end in said groove.

1,157,162. COMBINED PACKING-RING AND VALVE. BERTRAM C. KENYON, Mishawaka, Ind., assignor of one-half to Dodge Manufacturing Company, Mishawaka, Ind., a Corporation of Indiana. Filed Oct. 20, 1913. Serial No. 796,306. (Cl. 123—80.)



1. In internal combustion engines, a packing ring having a series of ports formed therein, the said ring being discontinuous diagonally to the axis thereof.

2. In internal combustion engines, a packing member comprising a discontinuous ring having two series of openings formed therein, the same being disposed at differential angular relations.

3. In internal combustion engines, a rotatable sleeve operable in a cylinder, a toothed flange at its inner end, a reduced diameter at its outer end, a packing ring thereon, ports in the sleeve and ring in registry with each other, means adapted to cause the ring to rotate with the sleeve, a retaining member secured on the sleeve at its outer end adapted to hold the packing ring in endwise position, a suitable cylinder, a head projecting into the sleeve, packing means on such head, and means for delivering lubricant adjacent the extreme outer end of the sleeve.

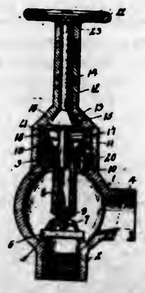
4. In internal combustion engines, a rotatable sleeve, a cylinder surrounding the same, a piston slidably active therein, a packing ring carried by the sleeve, a diagonal slot, outlet and inlet openings formed in said ring and means for holding the ring on the sleeve without destroying its elasticity.

5. In internal combustion engines, a cylinder, a piston operable therein, main inlet and outlet ports of maximum area, supplemental intake and outlet openings of reduced area, suitable valvular control for said ports and a series of adjacently placed apertures adapted to gradually control the openings.

[Claims 6 to 12 not printed in the Gazette.]

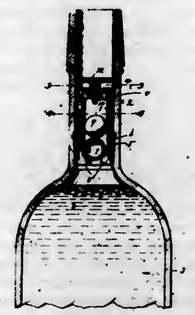
1,157,163. VALVE. EDWARD KING, Washington, D. C. Filed Mar. 30, 1915. Serial No. 18,173. (Cl. 137—4.)

1. In valve construction, a casing having inlet and outlet openings, a valve arranged within said casing, a bonnet on one end of said casing, a sleeve-like extension formed on the upper end of said bonnet, said extension and bonnet, at the juncture thereof, being formed to provide a tapering seat, a stem rotatably mounted in said sleeve-like extension, a plug on the lower end of said stem having the side thereof tapered to conform to the taper of said seat and engaging said seat, a spider within said bonnet, a diaphragm interposed between said spider and the lower end of said plug and having the peripheral edge thereof engaging said spider and the central portion abutting said plug to hold the plug in snug engagement with said seat whereby a fluid-tight joint is formed, a connection between the lower end of said plug and said valve whereby the valve may be moved to opened and closed positions in the rotation of said stem, and means for revolving said stem, the under-surface of said diaphragm being in open communication with the interior of said valve casing to receive the pressure of the fluid passing therethrough whereby the plug will be forced into engagement with the seat to compensate for wear between the parts.



2. A hand operated valve comprising a casing having inlet and outlet ports and a valve seat formed therein between said ports, a valve disk co-acting with said seat and movable into and out of engagement therewith, a nipple formed on said casing co-axial with said valve seat, a bonnet carried by said nipple, a yoke secured to said valve disk within said casing, a tubular section having the lower end thereof closed and engaging the central portion of said yoke, the lower closed end of said section and the adjacent portion of said yoke being formed with alining openings, a pivot bolt passed through said openings and forming a swivel connection between said section and yoke, said tubular section having the upper end portion thereof exteriorly screw threaded and having the bore therein angular in cross section, a spider carried by said bonnet, a collar on the lower end of said spider receiving the upper end of said tubular section and interiorly screw threaded, a stem extending through the upper end of said bonnet and capable of rotation, a shank on the lower end of said stem disposed within the upper end of said tubular extension and of a cross sectional shape corresponding to that of the bore of said tubular extension whereby the tubular section will be rotated in the rotation of said shank and stem, the threaded connection between said collar and tubular section, serving to move the tubular section longitudinally in the rotation thereof whereby the valve disk may be engaged with and disengaged from said seat for rotating said stem.

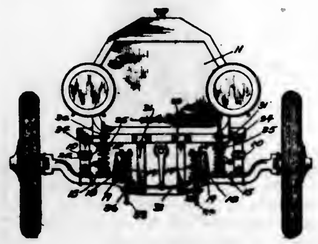
1,157,164. NON-REFILLABLE BOTTLE. FRIEDRICH KUHLES, Maywood, N. J. Filed June 11, 1915. Serial No. 33,445. (Cl. 215—62.)



A non-refillable bottle having a neck provided with a lower groove, a sleeve centered within said neck and of a diameter to form an annular passage therebetween, a flexible gasket encircling the sleeve and adapted to be pro-

jected into said lower groove through said annular passage, a valve seat formed in the sleeve, a spherical float adapted to engage the seat, a spherical weight adapted to engage the float, an apertured plug fitted into the top of the sleeve, a neck extending upwardly from the plug, and a disk carried by the neck and projecting over the sleeve.

1,157,165. SHOCK-ABSORBER FOR AUTOMOBILES. JAMES C. LEAHAN, Philadelphia, Pa. Filed Apr. 17, 1912, Serial No. 691,499. Renewed Mar. 16, 1915. Serial No. 14,751. (Cl. 21—105.)



1. A shock absorber for vehicles having compressible springs comprising a pair of reversely operating devices, each device consisting of a fixed guide piece, a plunger working therethrough vertically but locked against lateral and rotary movement with respect thereto, a cushion between the guide piece and plunger, means for rigidly securing said guide piece to a non-vertically movable part of a vehicle, a tappet member for operating the plunger consisting of a support fixed to the vertically movable vehicle body, a stem passing through said support and vertically adjustable through the same and means for clamping said stem in adjusted position, whereby when the vehicle springs are compressed one of said devices will operate to retard such compression and reversely the other device will serve to prevent the sudden return of said vehicle springs.

2. A shock absorber for vehicles having compressible springs comprising a pair of reversely operating devices, each device consisting of a fixed guide piece, a plunger having a plate at one end said plunger working vertically through said guide piece but locked against lateral and rotary movement with respect thereto, a cushion between the guide piece and the plate of the plunger, means for rigidly securing said guide piece to a non-vertically movable part of a vehicle, a tappet member for operating said plunger consisting of a support fixed to the vertically movable vehicle body, a vertically disposed adjustable stem terminating in a plate for abutting against the plunger plate, means for clamping said stem in adjusted position and a pliable facing for one of said plates, whereby when the vehicle springs are compressed one of said devices will operate to retard such compression and reversely the other device will serve to prevent the sudden return of said vehicle springs.

3. A shock absorber for vehicles having compressible springs comprising a pair of reversely operating devices each device consisting of a fixed guide piece, a plunger working therethrough vertically but locked against lateral and rotary movement with respect thereto, a cushion between the guide piece and plunger, means for rigidly securing said guide piece to a non-vertical movable part of a vehicle, a tappet member for operating the plunger consisting of a support fixed to the vertically movable vehicle body, a screw-threaded stem adjustable vertically through said support and lock nuts for holding the screw-threaded stem in adjusted position, whereby when the vehicle springs are compressed one of said devices will operate to retard such compression and reversely the other device will serve to prevent the sudden return of said vehicle springs.

1,157,166. TOY. ROMAN LUKSTAT, Philadelphia, Pa. Filed July 1, 1915. Serial No. 37,458. (Cl. 46—14.)

1. A toy of the character described, comprising a casing, a shaft mounted in the casing and projecting therefrom, a toy wind mill secured to the outer end of the



shaft, a drum loose on the shaft, a cord secured to and wound upon the drum, said cord projecting from the casing, a ratchet clutch connecting the drum and the shaft, and elastic means connected to the drum and adapted to turn the same in one direction, substantially as described.

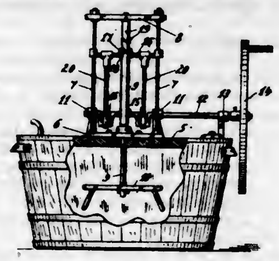
2. A toy of the character described, comprising a casing, a shaft mounted in the casing and projecting therefrom, a toy wind mill secured to the outer end of the shaft, a drum loose on the shaft, a cord secured to and wound upon the drum, said cord projecting from the casing, a ratchet clutch connecting the drum and the shaft, and elastic means holding the ratchet clutch in operative engagement and operating to wind the drum in one direction, substantially as described.

3. A toy of the character described, comprising a casing, a shaft mounted in the casing and projecting therefrom, a toy wind mill secured to the outer end of the shaft, a drum loose on the shaft, a cord secured to and wound upon the drum, said cord projecting from the casing, a ratchet clutch connecting the drum and the shaft, elastic means connected to the drum and adapted to turn the same in one direction, said elastic means comprising a coiled spring located around the shaft, secured at one end to the casing, and at its other end to the drum, substantially as described.

4. A toy of the character described, comprising a casing, a shaft mounted in the casing and projecting therefrom, a toy wind mill secured to the outer end of the shaft, a drum loose on the shaft, a cord secured to and wound upon the drum, said cord projecting from the casing, a ratchet clutch connecting the drum and the shaft, elastic means holding the ratchet clutch in operative engagement and operating to wind the drum in one direction, said elastic means comprising a coiled spring located around the shaft, secured at one end to the casing, and at its other end to the drum, substantially as described.

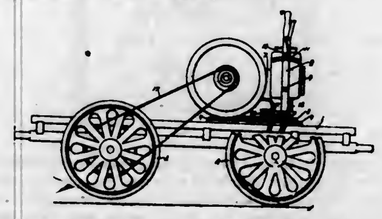
5. A toy of the character described, comprising a casing, a shaft projecting through the casing, a toy wind wheel on the outer end of the shaft, a drum mounted loosely on the shaft, a cord wound upon and secured to the drum, said cord projecting from the casing, a pin on the shaft in the casing, a ratchet clutch carried by the drum and engaging the pin, and a coiled spring located around the shaft, secured at one end to the casing, and at its other end to the drum, substantially as described.

1,157,167. GEARING. HENRY W. MCNEIL, Sinton, Tex. Filed Oct. 25, 1912. Serial No. 727,698. (Cl. 74—40.)



In a device of the character described, the combination with a support, of a crank shaft mounted upon said support adjacent to the surface thereof, means for imparting rotation to said crank shaft, standards mounted upon said support, a cross-piece slidably engaging the free end portions of said standards, connecting rods, each having one of its extremities engaged by said crank shaft and the other by said cross-piece, a dasher shaft rotatably supported by and traversing said support and provided with spiral depressions upon its curved surface, a collar integrally supported by said cross-piece and traversed by said dasher shaft and means integrally projecting from and supported by said collar and engaging said spiral depressions effecting rotation of said dasher shaft upon sliding displacement of said collar longitudinally of said dasher shaft, all arranged so that continuous rotation of said crank shaft imparts reciprocating rotation of said dasher shaft.

1,157,168. ENGINE-MOUNTING. CHARLES G. MAHANA, Three Rivers, Mich., assignor to Sheffield Car Company, Three Rivers, Mich. Filed Aug. 9, 1915. Serial No. 44,399. (Cl. 105—217.)



1. In a structure of the class described, the combination with an engine, of a base having facing groove-like ways therein, said engine having slide members disposed in said ways whereby the engine is slidably supported on the base, a lever mounted on said engine and provided with a laterally projecting fulcrum pin at its lower end, a retaining ratchet for said lever, a yoke-like fulcrum link pivotally mounted on said base to embrace the lower end of said lever above its fulcrum pin and having a plurality of downwardly facing notches therein adapted to receive said fulcrum pin, and a spring acting on said fulcrum link to hold it in engagement with said pin.

2. In a structure of the class described, the combination with an engine, of a base on which said engine is adjustably mounted, a lever mounted on said engine and provided with a laterally projecting fulcrum pin at its lower end, a retaining ratchet for said lever, a yoke-like fulcrum link pivotally mounted on said base to embrace the lower end of said lever above its fulcrum pin and having a plurality of downwardly facing notches therein adapted to receive said fulcrum pin, and a spring acting on said fulcrum link to hold it in engagement with said pin.

3. In a structure of the class described, the combination with an engine, of a base on which said engine is mounted for adjustment, a lever pivotally mounted on said engine, said lever being provided with means for retaining it in its adjusted positions and having a laterally projecting pin at its lower end, a fulcrum link pivotally mounted on said base and having a plurality of notches therein adapted to receive said pin, and a spring for holding said link in engagement with said pin.

4. In a structure of the class described, the combination with an engine, of a base on which said engine is mounted for adjustment, a lever pivotally mounted on said engine and provided with means for retaining it in its adjusted positions, a fulcrum pin on said lever, and a fulcrum link mounted on said base, said fulcrum pin being adjustably engaged with said link.

5. In a structure of the class described, the combination with an engine, of a base on which said engine is mounted for adjustment, a lever pivotally mounted on said engine and provided with means for retaining it in its adjusted positions, a fulcrum pin on said lever, and a fulcrum link mounted on said base.

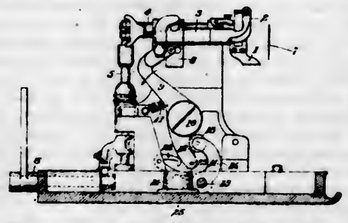
1,157,169. MORDANT-DYEING AZO DYE. CHARLES METTLER, Basel, Switzerland, assignor to J. R. Geigy S. A., Basel, Switzerland. Filed Nov. 3, 1914. Serial No. 870,041. (Cl. 8—1.)

The herein-described azo dye having most probably the following formula:



and which can be obtained by heating the azo dyestuff from diazotized ortho-chloro-meta-amino-benzoic acid and salicylic acid with alkalis to a raised temperature, which new dyestuff dyes wool from an acid bath a yellow level shade, which shade on a subsequent treatment with chromium-compounds is converted into a bright green-yellow tint, this tint being distinguished by its great fastness to light, potting and milling, and which coloring matter forms, when pulverized a yellow powder, dissolving in water to a yellow solution, which on the addition of caustic soda lye turns to orange and which solution on the addition of diluted hydrochloric acid separates light brown flakes, but not on addition of acetic acid in presence of acetate and which coloring matter is slightly soluble in alcohol with yellow coloration; dissolving in concentrated sulfuric acid to a dark orange solution and yielding upon reduction amino-salicylic acid.

1,157,170. CONTROLLING DEVICE FOR OPERATING IMPLEMENTS IN SEWING-MACHINES. JAMES R. MOFFATT, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 11, 1911. Serial No. 659,747. (Cl. 112—29.)



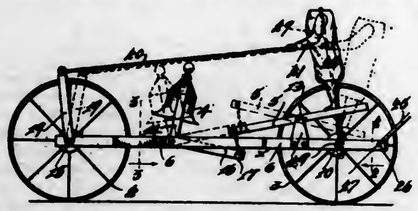
1. In a sewing machine, the combination of an operating implement adapted to be shifted from one position to another, means for shifting said implement including a lever, a spring for moving the lever in one direction, manually operated means for moving the lever in the opposite direction, a movable locking device for holding said lever from movement by said spring, and means operated upon the return movement of said manually operated means for releasing said movable locking device.

2. In a sewing machine, the combination of an operating implement adapted to be shifted from one position to another, means for shifting said implement including a lever, a spring for moving the lever in one direction, treadle controlled means for moving the lever in the opposite direction, a latch for locking said lever from movement by said spring, and means operated upon the return movement of the treadle for releasing said latch.

3. In a sewing machine, the combination of an implement adapted to be shifted from one position to another, means for shifting the same including a shifting lever, a spring for moving said lever in one direction, a rock lever having an arm for engaging said shifting lever for moving the same against the action of the spring, a latch for holding said shifting lever against movement by the spring, and devices operated upon the return movement of the rock lever for releasing said latch.

4. In a sewing machine, the combination of an implement adapted to be shifted from one position to another, means for shifting the same including a shifting lever, a spring for moving said lever in one direction, a rock lever having an arm for engaging said shifting lever for moving the same against the action of the spring, a latch for holding said shifting lever against movement by the spring, and devices operated upon the return movement of the rock lever for releasing said latch, said devices including a treadle for moving the rock lever to shift the implement against the action of the spring, and a spring for returning the treadle to release the latch.

1,157,171. TOY VEHICLE. JOHN L. MOORE, New York, N. Y., assignor to Ferdinand Strauss, Yonkers, N. Y. Filed June 23, 1915. Serial No. 35,764. (Cl. 46—45.)



1. In a toy-vehicle, a frame, wheels carried thereby, a platform pivotally secured to the frame, means operable by the movement of the wheels to rock the platform upon its pivotal support, a figure carried by said platform, arms carried by said figure, a yoke pivoted to said frame at its forward end, a link connecting said yoke and the arms of said figure, whereby said figure and said yoke will move in unison when said vehicle is propelled, a yoke-frame carried by the frame of the vehicle, an arm carried by said yoke-frame, a link connecting said arm and said platform, and a sound-producing element carried by said yoke-frame.

2. In a toy-vehicle, a frame open at one end thereof, a wheel carried by said frame and located in the open end thereof, a yoke carried by the supporting pin for said wheel and extending over said wheel, a pair of wheels located at the opposite end of said frame, an axle therefor, a crank-arm carried by said axle, a platform carried by and pivotally secured to the vehicle-frame, a link connecting said platform and said crank-arm, a figure carried by said platform, a yieldable support for said figure, and a link connecting said figure and the yoke at the open end of the vehicle-frame.

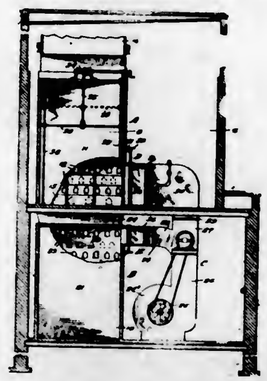
3. In a toy-vehicle, a frame open at one end thereof, a wheel carried by said frame and located in the open end thereof, a yoke carried by the supporting pin for said wheel and extending over said wheel, a pair of wheels located at the opposite end of said frame, an axle therefor, a crank-arm carried by said axle, a platform carried by and pivotally secured to the vehicle-frame, a link connecting said platform and said crank-arm, a figure carried by said platform, a yieldable support for said figure, a link connecting said figure and the yoke at the open end of the vehicle-frame, a support pivotally secured to the frame of the vehicle, a sound-producing element carried by said support, and means connecting said support and said table.

4. In a toy, a movable platform, means to impart movement thereto, a yieldable support carried by the platform, a figure carried by said yieldable support, a frame for said platform, a link secured at one end thereof to said figure, the other end of said link extending to the front end of the frame for said platform, and a support for said link carried by said frame at the front end thereof.

5. In a toy, a movable platform, means to impart movement thereto, a yieldable support carried by the platform, a figure carried by said yieldable support, a frame for said platform, a link secured at one end thereof to said figure, the other end of said link extending to the front end of the frame for said platform, a support for said link carried by said frame at the front end thereof, a handle for said frame, and resilient arms carried by said handle to releasably engage said frame.

[Clam 6 not printed in the Gazette.]

1,157,172. GRAIN DRIER AND COOLER. FULTON R. MORRIS, Milwaukee, Wis., assignor to Morris Grain Drier Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 19, 1912. Serial No. 732,356. (Cl. 34—34.)



1. A grain drier and cooling apparatus comprising in combination, a drier chamber, a cooler chamber to which said drier chamber delivers the material acted upon, unitary means for forcing the air through both said drier and cooler chambers separately, and means for heating the air delivered to said drier chamber prior to its entering the same, substantially as and for the purpose set forth.

2. A grain drier and cooling apparatus comprising in combination, a drier chamber, a cooler chamber to which said drier chamber delivers the material acted upon, unitary means for forcing the air through both said drier and cooler chambers separately, and means for heating the air delivered to said drier chamber prior to its entering the same, and after leaving said last-mentioned means, substantially as and for the purpose set forth.

3. A grain drier and cooling apparatus comprising in combination, a drier chamber, a cooler chamber to which said drier chamber delivers the material acted upon, a blower, a way from the egress of said blower to conduct air to be forced through said cooler chamber, a second way from the egress of said blower to conduct air to be forced through said drier chamber, and means for heating the air passing through said second way, substantially as and for the purpose set forth.

4. A grain drier and cooling apparatus comprising in combination, a drier chamber, a cooler chamber to which said drier chamber delivers the material acted upon, a blower, a way from the egress of said blower to conduct air to be forced through said cooler chamber, a valve in said way, a second way from the egress of said blower to conduct air to be forced through said drier chamber, a valve in said second way, and means for heating the air passing through said second way, substantially as and for the purpose set forth.

5. A grain drier and cooling apparatus comprising in combination, a drier chamber, a cooler chamber to which said drier chamber delivers the material acted upon, a blower, a main duct for the egress of said blower, a branch way from said duct to conduct air to be forced through said cooler chamber, a second branch way from said duct to conduct air to be forced through said drier chamber, and means for heating the air passing through said second branch way, substantially as and for the purpose set forth.

[Claims 6 to 20 not printed in the Gazette.]

1,157,173. SANITARY DRINKING-FOUNTAIN. PHILIP MUELLER, Decatur, Ill., assignor to H. Mueller Mfg. Co., Decatur, Ill., a Corporation of Illinois. Filed May 11, 1912. Serial No. 696,695. (Cl. 137—110.)



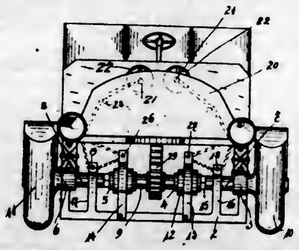
1. A drinking fountain nozzle provided with a substantially spherical hollow head with an opening in the top thereof, a tube having an uninterrupted bore for the flow of the drinking stream disposed within said head and having an enlarged upper end within the opening in the hollow spherical head of a size to form a narrow annular passage communicating with the hollow head to emit an independent protecting curtain of water surrounding the drinking stream and wholly separated therefrom.

2. A drinking fountain nozzle provided with a substantially spherical hollow head, a tube for the drinking stream disposed in said head, passages for discharge of a protecting curtain of water surrounding said drinking stream tube, and means adjustably mounted on the drinking stream tube for regulating the water curtain.

3. A drinking fountain nozzle provided with a substantially spherical hollow head with an outwardly flaring opening through the top thereof, a tube having an uninterrupted bore for the flow of the drinking stream disposed within said head and formed with an outwardly flaring upper end within said flaring opening and spaced therefrom to form a narrow annular passage for the discharge of an independent protecting curtain of water surrounding the drinking stream and directed away therefrom so as not to coalesce therewith.

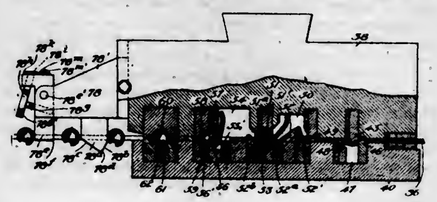
4. A drinking fountain nozzle provided with a substantially spherical hollow head with an opening in the top thereof, a tube having an uninterrupted bore for the flow of the drinking stream disposed within said head and having an enlarged upper end within the opening in the hollow spherical head of a size to form a narrow annular passage communicating with the hollow head and having an outwardly and upwardly flaring peripheral wall to emit an independent protecting curtain of water surrounding the drinking stream and diverging outwardly therefrom.

1,157,174. MOTOR-VEHICLE. JOSEF NEZNALSKI and JOSEF MASLANIK, McKees Rocks, Pa. Filed Dec. 9, 1914. Serial No. 876,294. (Cl. 21—90.)



In a motor vehicle of the class described, a body, a frame suspended from the forward portion thereof and provided with bearings at its ends, axle sections rotatably mounted in said bearings, wheels carried on the outer ends of said axle sections, an intermediate driving section arranged in longitudinal alinement between the aforesaid axle sections, a pair of substantially vertical supporting arms pivoted at their lower ends to the frame, bearing members carried by said supporting arms and rotatably receiving the intermediate axle therein to support the latter in position, the outer ends of said last mentioned bearings being adapted for engagement respectively with the inner ends of the first mentioned axle sections, whereby to connect the latter to the intermediate axle section, means for oscillating said pivotal supporting arms, whereby to connect and disconnect the intermediate and first mentioned axle sections and means for driving said intermediate axle section.

1,157,175. CHAIN-LINK AND THE PROCESS OF MAKING AND ASSEMBLING SAME. HERMAN OSSWALD, Greenlawn, N. Y., assignor, by mesne assignments, to Locke Steel Chain Company, Great River, N. Y., a Corporation of New York. Original application filed May 12, 1908, Serial No. 432,502. Divided and this application filed July 18, 1914. Serial No. 851,819. (Cl. 59—12.)



1. The process of making a drive chain link from a blank of sheet metal, said link having side bars, a relatively small end bar and a relatively large end bar or end hook, consisting in the following steps: first, scoring the metal blank to define the inner edges of the side bars of the link; then substantially simultaneously crimping the central portion of the blank between said lines of score, transversely severing said central portion adjacent to said crimping, tearing the two sections of the center portion thus formed from the said side bars and bending them away from each other; then crimping the free end of the shorter center section, crimping the front end of the link blank and throwing around the free end of the longer center section; then crimping the rear end of the blank and throwing around the free end of the small center section, shaping the front end of the link blank into final form and at the same time throwing still farther around the free end of the longer center section; and then rolling up the free ends of both center sections into final shape.

2. The process of making sheet metal drive chain links having end bars struck from the metal at the center of each link blank consisting in the following steps; first, scoring the metal blank to define the inner edges of the side bars of the link; then crimping the narrow lip of the large end bar, transversely severing the metal of the blank between the said lines of score and tearing the free ends of the central portion from the side bars and bending the narrow lip for the small end bar away from the free end of the said narrow lip for the large end bar; then crimping the narrow lip for the small end bar, throwing around the narrow lip for the large end bar, and crimping the wide lip for the large end bar; then crimping the wide lip for the small end bar and at the same time throwing around the narrow lip for the small end bar, shaping the wide lip for the large end bar into substantially final form and at the same time throwing around the narrow lip for the large end bar; and then rolling up both narrow lips of the end bars into final shape.

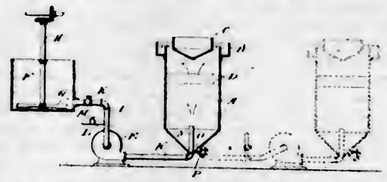
3. The process of transforming a strip of metal into a series of connected drive chain links, consisting in the following progressive steps of formation for each link, between each of which steps the metal strip is fed forward; first, scoring the metal strip to define the inner edges of the side bars of the link; then substantially simultaneously crimping the center portion of the link blank between said lines of score, transversely severing said center portion adjacent to said crimping, tearing the sections of said center portion thus formed from the side bars and bending them away from each other; then crimping the free end of the shorter center section, crimping the front end of the link blank and throwing around the free end of the longer section; then crimping the rear end of the link blank and throwing around the free end of the smaller center section, shaping the front end of the link blank into final form and at the same time throwing still farther around the free end of the longer center section, and then commencing to roll up the larger center section, severing the partly formed link from the strip of metal and shaping the ends of both of said center sections into final shape, the larger section about the small end bar of the next preceding link in the series.

4. The process of making sheet metal chain links having end bars struck from the metal at the center of each link blank, consisting in first scoring the metal blank to define the inner edges of the side bars of the link prior to the performing of any shaping operation on said blank; then transversely severing the center portion of the link blank between said lines of score and tearing the said sections of said central portion thus formed from the side bars and commencing the formation of the end bars by bending said center sections away from each other, and thereafter shaping the smaller center section and the metal at the end of the link to which it is attached to form a small end bar, and the longer center section and the metal of the end of the link to which it is attached to form a large end bar.

5. The process of making sheet metal chain links having end bars struck from the metal at the center of each link blank, consisting in the following steps; first, scoring the metal blank to define the inner edges of the side bars of the link; then substantially simultaneously crimping the central portion of the blank between said lines of score; transversely severing said central portion adjacent to said crimping, tearing the two sections of the center portion thus formed from the said side bars and bending them away from each other; then crimping the free end of the shorter center section, crimping the front end of the link blank and throwing around the free end of the longer center section; then crimping the rear end of the blank and throwing around the free end of the small center section, shaping the front end of the link blank into final form, at the same time throwing still farther around the free end of the longer center section and severing the metal blank; and then rolling up the free ends of both center sections into final shape.

[Claims 6 to 29 not printed in the Gazette.]

1,157,176. SEPARATION OF METALLIC SULFIDS FROM ORES. THOMAS MACKELLAR OWEN, Sydney, New South Wales, Australia, assignor to Edward William Culver, Sydney, New South Wales, Australia. Filed Feb. 27, 1914. Serial No. 821,473. (Cl. 83—85.)



1. In selective or preferential froth flotation separation of metallic sulfids from slimes, the herein described process for augmenting the flotative quality of certain sulfids in relation to certain other sulfids, which consists in adding to and agitating with the pulp a limited proportion of alkaline permanganate.

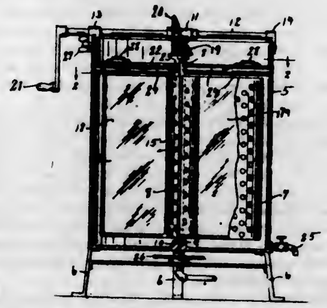
2. The herein described improved process of preferential or selective froth flotation of lead and zinc sulfids, which consists in subjecting slimes to contact with alkaline permanganate in solution, agitating the slimes in water containing a flotation medium, removing the leady float concentrate, adding acid, re-agitating and removing the zincy float concentrate.

1,157,177. PROCESS FOR ACCELERATING THE VULCANIZATION OF NATURAL OR ARTIFICIAL CAOUTCHOUC OR CAOUTCHOUC-LIKE SUBSTANCES. STANLEY JOHN PEACHEY, Heaton Chapel, Stockport, England. Filed Feb. 12, 1915. Serial No. 7,805. (Cl. 18—53.)

1. Accelerating the vulcanisation of natural or artificial caoutchouc or caoutchouc-like substances by vulcanizing the same in the presence of paranitrosodimethylanilin or of its homologues.

2. Accelerating the vulcanization of natural or artificial caoutchouc or caoutchouc-like substances by vulcanizing the same in the presence of paranitrosodimethylanilin or of its homologues, substantially as set forth in the examples herein given.

1,157,178. WASHING-MACHINE. JOSEPH C. PETIT, Los Angeles, Cal., assignor of one-half to Charles E. Hall, Los Angeles, Cal. Filed Jan. 9, 1915. Serial No. 1,293. (Cl. 68—18.)



1. A washing machine comprising an outer cylindrical non-revoluble casing open at the top; an inner perforated cylindrical casing revolubly mounted within the outer casing, said inner casing being open at the top and being shorter than the outer casing, the walls and bottoms of said casings being spaced apart; a central perforated tube secured to the bottom of said inner casing and extending to the top thereof; imperforate partitions connecting the outer wall of said tube to the inner wall of said inner casing whereby said inner casing is divided into a plurality of separate compartments; means to revolve said inner casing; a closure for the top of said outer casing mounted therein at a point slightly above the top of the inner casing; and radial horizontally opening troughs secured to said closure on the under side thereof.

2. A washing machine comprising an outer cylindrical non-revoluble casing open at the top; an inner perforated cylindrical casing revolubly mounted within the outer casing centrally thereof, said inner casing being open at the top and being shorter than the outer casing, the walls and bottom of said casings being spaced apart; an upwardly extending perforated tube mounted within said inner casing centrally thereof and secured thereto at its lower end and extending to the top thereof; a plurality of imperforate partitions in said inner casing extending from the walls thereof to the outer walls of said tube and forming a plurality of independent chambers therein; a vertically extending shaft passing through the bottom of the inner casing centrally thereof and in rigid engagement therewith, the lower end thereof being adapted to form a pivot for the inner casing; a bevel gear secured upon the upper end of said shaft; another shaft mounted horizontally in bearings secured to the top of the outer casing; a bevel gear on said shaft meshing with said first mentioned gear; a crank on said horizontal shaft whereby the same may be rotated; a closure for the top of the outer casing mounted therein at a point slightly above the top of the inner casing; and horizontally opening radial troughs secured to the under side of said closure.

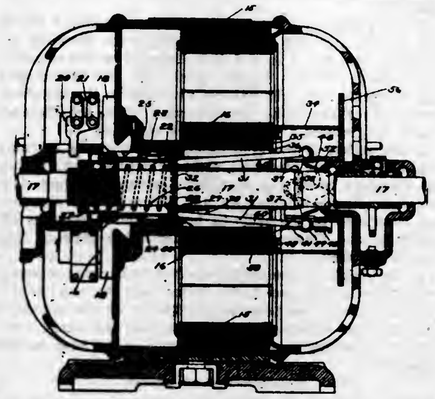
3. The combination with a cylindrical outer non-revoluble casing having legs, a bearing on the bottom centrally thereof, and a closure for the top, said closure having radial U-shaped troughs secured to the underside thereof; of an inner perforated cylindrical casing revolubly mounted within said outer casing; a vertically extending shaft having its lower end passing through the bottom of the inner casing in rigid engagement therewith adapted to be received in the bearing of the outer casing to form a pivot for the inner casing; a horizontal shaft revolubly mounted in bearings secured to the top of the outer casing; a bearing on said shaft in which the upper end of the vertical shaft is revolubly mounted; a bevel gear on the upper end of said vertical shaft; a bevel gear on said horizontal shaft meshing with the gear on the vertical shaft whereby said shafts are rotated in unison; a crank on the end of the horizontal shaft for rotating the same; and an upwardly extending perforated tube surrounding said vertical shaft within the inner casing and secured to said casing at its lower end; and a plurality of imperforate partitions extending from said tube to the inner wall of the inner casing whereby said inner casing is divided into a plurality of separate chambers.

1,157,179. CENTRIFUGAL CIRCUIT-CHANGING DEVICE FOR ELECTRIC MOTORS. EDWIN S. PILLSBURY, St. Louis, Mo., assignor to Century Electric Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 23, 1915. Serial No. 9,986. (Cl. 172—279.)

1. In combination, a stator, a shaft journaled therein, a rotor on said shaft, a circuit-changing member carried by said shaft and adapted to slide longitudinally thereon, levers pivoted on the shaft and connected to said circuit-changing member, and centrifugal weights pivotally connected to said levers.

2. In combination, a stator, a shaft journaled therein, a rotor on said shaft, a circuit-changing member carried by said shaft and adapted to slide longitudinally thereon, a pair of opposite bell-cranks fulcrumed on said shaft with a common plane of movement containing the axis of the shaft, a pair of weights pivotally attached to corresponding ends of respective bell-cranks, and rods connecting the remaining ends of said bell-cranks to said circuit-changing member.

3. In combination, a stator, a shaft journaled therein, a rotor on said shaft, a circuit-changing member carried by said shaft and adapted to slide longitudinally thereon, a pair of bell-cranks fulcrumed on said shaft with a common fulcrum axis at a right angle with the axis of



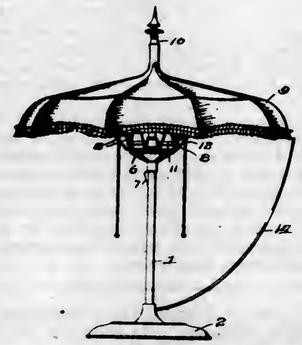
the shaft and in the same plane therewith, a pair of weights pivotally attached to corresponding ends of the respective bell-cranks, and rods connecting the remaining ends of said bell-cranks to said circuit-changing member.

4. In combination, a stator, a shaft journaled therein, a rotor on said shaft, a circuit-changing member carried by said shaft and adapted to slide longitudinally thereon, a pair of bell-crank yokes on opposite sides of the shaft and pivoted at their ends on pins fixed relatively to the shaft, the axis of these pivots for each bell-crank intersecting the shaft at a right angle to its axis, a pair of weights pivotally attached to corresponding ends of the respective bell-cranks, and rods connecting the remaining ends of said bell-cranks to said circuit-changing member.

5. In combination, a stator, a shaft journaled therein, a rotor on said shaft, a circuit-changing member carried by said shaft and adapted to slide longitudinally thereon, a cylindrical shell fixed on said shaft at one end of the rotor, mechanism comprising centrifugal weights adapted to fasten in said shell and an operative connection from said mechanism to said circuit changing member.

[Claims 6 to 10 not printed in the Gazette.]

1,157,180. LAMP STANDARD AND SHADE HOLDER. JAMES ROSE, Lancaster, Pa., assignor of one-half to David Rose, Lancaster, Pa. Filed Mar. 12, 1913. Serial No. 753,731. (Cl. 240—117.)



1. An article of the kind described comprising a standard, a disk attached to the standard, arms pivotally at-

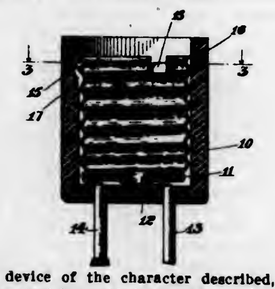
tached to the disk, a second disk arranged on the standard and slidable thereon, braces connecting the second disk and the arms, and light fixtures attached to the standard between the disks, the radii of the disks being greater than the distance which the fixtures project from the standard.

2. An article of the kind described comprising a standard, a disk attached to the standard, arms pivotally attached to the disk, a second disk arranged on the standard and slidable thereon, braces connecting the second disk and the arms and light fixtures attached to the standard, the radii of the disks being greater than the distance which the fixtures project from the standard.

3. An article of the kind described comprising a standard, a disk on the standard, light fixtures extending from the standard below the disk, arms pivotally attached to the disk, means movable up and down on the standard and connected to the arms by braces, and a base for the standard, the diameter of the base being greater than that of the disk.

4. An article of the kind described comprising a standard, pivoted arms, means for connecting the arms to the standard, means movable longitudinally of the standard, a connection between such means and the arms, light fixtures extending from the standards, and a base for the standard.

1,157,181. ELECTRIC SOCKET. FRANCIS M. ROSENFELD, New York, N. Y., assignor to Import Sales Company, a Corporation of New York. Filed Mar. 1, 1915. Serial No. 11,166. (Cl. 173—262.)



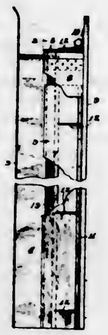
1. In a device of the character described, a shell of insulating material provided on its interior surface with a plurality of recesses and a socket located in said chamber and provided upon its external surface with projections adapted to be forced into said recesses whereby the said projections constitute the sole means for preventing movement of said socket with respect to said shell.

2. In a device of the character described, a cylindrical shell of insulating material provided on its interior surface with a plurality of recesses and a cylindrical socket of sheet metal located in said shell and provided at its upper edge with projections integral therewith and adapted to be forced into said recesses whereby the said projections constitute the sole means for preventing rotary and longitudinal movement of said socket with respect to said shell.

3. In a device of the character described, a cylindrical shell of insulating material provided on its interior surface with a plurality of wedge-shaped recesses, and a cylindrical socket of sheet metal located in said shell and having its upper edge cut to form projections integral therewith and adapted to be forced into said recesses whereby the said projections constitute the sole means for preventing rotary and longitudinal movement of said socket with respect to said shell.

1,157,182. METAL VESTIBULE-DIAPHRAGM. THOMAS H. RUSSUM, Baltimore, Md. Filed Feb. 12, 1915. Serial No. 7,819. (Cl. 105—61.)

1. In a vestibule diaphragm of the class described, a stationary section, a section telescoping therewith at top and sides, and means holding one of said sections yieldably against the other section at all points.



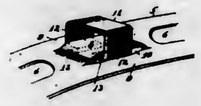
2. In a vestibule diaphragm of the class described, a stationary section, a section telescoping therewith at the top and sides, and means holding said latter section yieldably against said stationary section at all points.

3. In a vestibule diaphragm of the class described, an inner stationary section, an outer section fitting thereover at the top and sides and adapted to slide thereon, said outer section comprising a plurality of spring impelled members bearing yieldably upon the outer surface of said inner member at all points.

4. In a device of the class described, the combination with a stationary section comprising top and sides, of a similar movable section interfitting therewith, and hinged connections on the top and side of said movable section spring-pressed toward said stationary section to permit an angular movement between said sections.

5. In a device of the class described, a stationary inverted U section, and a movable inverted U section coacting therewith, said movable section comprising top and side hingedly mounted spring-pressed members movable independently of one another.

1,157,183. BACK FOR BRAKE-SHOES. FITZ WILLIAM SARGENT, Mahwah, N. J., assignor to American Brake Shoe & Foundry Company, Mahwah, N. J., a Corporation of New Jersey. Filed July 27, 1915. Serial No. 42,137. (Cl. 188—82.)



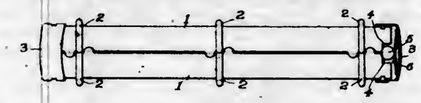
1. A reinforcing back for brake shoes provided with spaced slits and with an off-set portion thereintermediate, and a lug extending through said slits.

2. A reinforcing back for brake shoes provided with spaced slits, and with the portion therebetween offset and defining confronting openings, and a lug with the sides thereof extending through said openings.

3. A reinforcing back for brake shoes provided with spaced slits with the sides thereof oppositely offset and defining confronting openings, and a lug with the sides extending through said openings and bent into engagement with the lower surface of said back.

4. A reinforcing back for brake shoes provided with spaced slits, the portions of the back lying therebetween being upwardly bent, and the portions lying to the sides of said slits being downwardly offset, and a lug with the ends thereof extending through said slits.

1,157,184. LOOSE-LEAF BINDER. JOHN SCHADE, Jr., Brooklyn, N. Y., assignor to National Blank Book Company, Holyoke, Mass., a Voluntary Trust Association of Copartnership having as trustees J. W. Towne, F. B. Towne, E. S. Towne, J. M. Towne, and F. W. Wilson. Filed Feb. 24, 1915. Serial No. 10,257. (Cl. 129—24.)



1. In a loose leaf binder, a support, a prong carrying member rockingly mounted thereon, a loosely mounted spring impelled element engaging said member at its edge and tending to override the latter and to hold the same in position with the prongs opened or closed.

2. In a loose leaf binder, a support, a prong carrying member rockingly mounted thereon, and a spring impelled element mounted and contained within restricted limits to prevent accidental displacement of said element, the latter always tending to override said member.

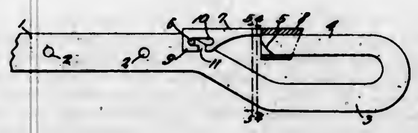
3. In a loose leaf binder, a pair of pivotally connected prong carrying members, a support therefor, and a spring impelled element constantly under tension which tends normally to override said members.

4. In a loose leaf binder, a pair of pivotally connected prong carrying members, a support therefor, said members capable of rocking movements within said support, and a loosely mounted spring impelled element engaging said members and always acting to maintain the members with the prongs in either open or closed position.

5. In a loose leaf binder, a support, a pair of prong carrying members mounted thereon and capable of rocking and having pivotal relation at their inner edges, and a loosely mounted spring impelled element engaging said members and normally tending to keep them out of alinement.

[Claims 6 to 22 not printed in the Gazette.]

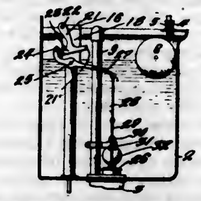
1,157,185. TRACE-HOOK. RUFUS J. SCHROCK, Logan-ton, Pa. Filed May 3, 1915. Serial No. 25,532. (Cl. 24—241.)



1. A trace connector comprising a shank terminated in a hook having a bill; a transverse projection on the shank; and a latch slidable longitudinally of the bill, the latch comprising a socket receiving the bill, and wings located on opposite sides of the shank, one wing having a longitudinal projection-holding slot and being provided in its edge with a projection-receiving mouth communicating with the slot.

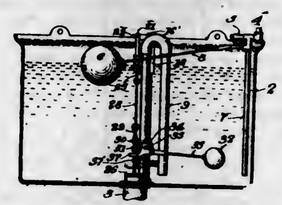
2. A trace connector comprising a shank terminated in a hook having a bill; a transverse projection on the shank and a latch slidable longitudinally of the bill, the latch comprising a socket receiving the bill, and wings located on opposite sides of the shank, one wing having a longitudinal projection-holding slot and being provided in its edge with a projection-receiving mouth communicating with the slot, the inner edge of the bill being beveled at its edge to permit the projection to pass through the mouth when the latch is tilted.

1,157,186. AUTOMATIC FLUSHING MECHANISM FOR CLOSETS. GEORGE SCHWIBINGER, Milwaukee, Wis., assignor to Rundle-Spence Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed July 2, 1910. Serial No. 570,040. (Cl. 4—5.)



In a device of the described class, a water closet, a water tank located above said closet, a duct leading from said tank to said closet and a valve for closing said duct, in combination with the mechanism herein described for automatically opening said valve, consisting in the combination of a two armed lever for raising said valve, the arms of which lever are of unequal lengths, a swinging member pivotally supported above the short arm of said lever a vertically sliding member upon which said swinging arm is mounted a sleeve inclosing said sliding member, a rearwardly extending lug formed in connection with said swinging member and adapted to bear against one side of the inclosing sleeve of said vertical sliding member, the long arm of said lever being connected with said valve, a seat pivotally connected with said closet, means for communicating motion from said seat to and for raising said swinging member as a downward pressure is communicated to said seat, a spring for forcing said swinging member down upon the short arm of said lever as the downward pressure upon said seat is removed, whereby said valve is raised and the contents of said tank is discharged into said closet.

1,157,187. AUTOMATIC FLUSHING MECHANISM FOR CLOSETS. GEORGE SCHWIBINGER, Milwaukee, Wis., assignor to Rundle-Spence Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Apr. 19, 1915. Serial No. 22,349. (Cl. 4—5.)



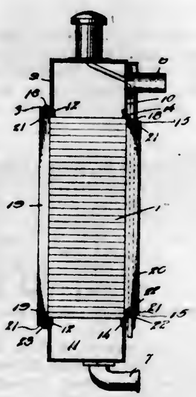
1. In a device of the described class, the combination with a water closet cistern having a discharge valve, of a valve rod, a conical stop affixed to said rod, a bracket rigidly supported above said valve, a float, a float supporting rod pivotally connected at one end with said bracket, a latch hinged at one end to said float rod and adapted to bear at its opposite end against said conical stop, the free end of said latch being adapted to be raised by contact with said conical stop as the latter is raised, and to drop back beneath said stop as the latter passes said latch, said latch being adapted when beneath said conical stop to retain said valve in its open position, whereby the float supporting water is permitted to escape and said float to descend, whereby said latch is withdrawn from beneath said stop when said valve will again drop to its seat.

2. In a device of the described class, the combination with a water closet cistern having a discharge valve, of a valve rod, a conical stop affixed to said rod, a bracket rigidly supported above said valve, a float, a float supporting rod pivotally connected at one end with said bracket,

said bracket being provided with an aperture for the reception of said valve rod, a latch hinged at one end to said float rod and adapted to bear at its opposite end against said conical stop, the free end of said latch being adapted to be raised by contact with said conical stop as the latter is raised, and to drop back beneath said stop as the latter passes said latch, said latch being adapted when beneath said conical stop to retain said valve in its open position, whereby the float supporting water is permitted to escape and said float to descend, whereby said latch is withdrawn from beneath said stop when said valve will again drop to its seat.

3. In a device of the described class, the combination with a water closet cistern having a discharge valve, of a valve rod, a conical stop affixed to said rod, a bracket rigidly supported above said valve, a float, a float supporting rod pivotally connected at one end with said bracket, said bracket being provided with an aperture for the reception of said valve rod, said bracket being formed of two members adjustably connected together, an adjustable screw having threaded bearings in said bracket and adapted to serve as a stop to limit the upward movement of said valve, a latch pivotally connected at one end to said float rod and adapted to bear at its opposite end against said conical stop, the free end of said latch being adapted to be raised by contact with said conical stop as the latter is raised, and to drop back beneath said stop as the latter passes said latch, said latch being adapted when beneath said conical stop to retain said valve in its open position, whereby the float supporting water is permitted to escape and said float to descend, whereby said latch is withdrawn from beneath said stop when said valve will again drop to its seat.

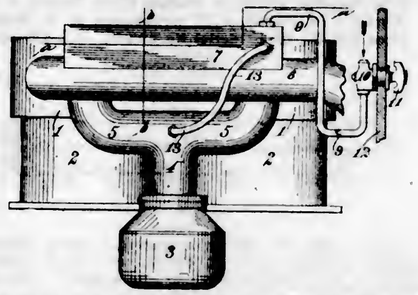
1,157,188. RADIATOR. HENRY T. SMITH, Providence, R. I. Filed Feb. 12, 1914. Serial No. 818,216. (Cl. 257—125.)



A radiator of the class described, comprising a casing and a radiating member, the latter constructed to fit within the former, curved spring flanges on both the casing and said member adapted to fit into each other, and split wire rings laid around the flanges on the casing and provided with means to tighten them to bind the flanges together.

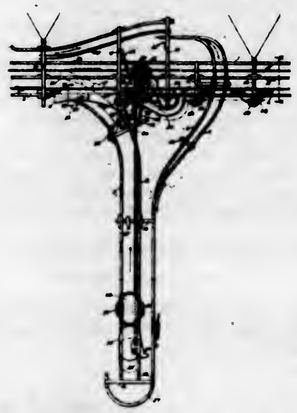
1,157,189. AIR-HEATER FOR GASOLENE-ENGINES. JOHN O. SNYDER, Dayton, Ohio. Filed Feb. 23, 1915. Serial No. 9,811. (Cl. 257—241.)

The combination with an intake and an exhaust manifold, of an air box mounted on said exhaust manifold and subject to the heat therefrom, an inlet pipe forming a communication between said air box and the atmosphere, a valve located at the free end of said pipe and controlling the passage of air to said box, said pipe permitting said valve to be located at a point convenient to the operator, and an outlet pipe connecting said air box with the intake



manifold and through which heated air is discharged from the air box to said intake manifold.

1,157,190. CABLE-CARRIER SYSTEM. FRED R. TAISEY, Lowell, Mass., assignor to The Lamson Company, Boston, Mass., a Corporation of New Jersey. Filed July 17, 1913. Serial No. 779,449. (Cl. 186—15.)



1. In a cable carrier apparatus, a track, a cable for propelling carriers along said track, mechanism for delivering a carrier to said track at a determined point therein, and means, co-acting with said mechanism and movable in accordance with actuations thereof into and out of the path of a part of a succeeding carrier traversing said track, for freeing from propulsive effort one of said carriers until the other has been moved into a determined position with respect to said point.

2. In a despatch system, a way, means for propelling carriers along said way, mechanism for delivering a carrier to said way at a determined point therein, and means, co-acting with said mechanism and movable in accordance with actuations thereof into and out of the path of a part of a succeeding carrier traversing said way, for freeing from propulsive effort and checking forward movement of one of said carriers until the other has been moved into a determined position with respect to said point.

3. In a cable carrier apparatus, a track, a cable for propelling carriers along said track, power driven hoisting mechanism for elevating carriers from a point below said track substantially up to the level of the latter, means for operatively engaging said carriers with said cable, and a trip co-acting with said mechanism and movable in accordance with actuations thereof into and out of the path

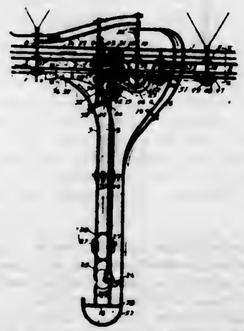
of a succeeding carrier traversing said track, for freeing from propulsive effort one of said carriers until the other has been moved into a determined position with respect to the point in said track at which said mechanism delivers carriers thereto.

4. A cable carrier system comprising two fixed main track sections, a fixed auxiliary track section and a movable track section along which carriers travel from one of said fixed main track sections to the other, a cable for propelling carriers along said fixed main track sections, and means, movable in accordance with said movable track section, for controlling the movements of a carrier traveling along one of said fixed track sections.

5. In a cable carrier apparatus, a track, a cable for propelling carriers along said track, mechanism for delivering a carrier to said track at a determined point therein, means for operatively engaging said carrier with said cable and means for preventing a collision involving said carrier and a second carrier traversing said track past said point, said last mentioned means including provisions for giving said first mentioned carrier the right of way over the second carrier and for releasing said second mentioned carrier from said cable.

[Claims 6 to 60 not printed in the Gazette.]

1,157,191. CABLE-CARRIER SYSTEM. FRED R. TAISEY, Lowell, Mass., assignor to The Lamson Company, Boston, Mass., a Corporation of New Jersey. Original application filed July 17, 1913, Serial No. 779,449. Divided and this application filed Jan. 8, 1914. Serial No. 810,979. (Cl. 186—15.)



1. In cable carrier apparatus, a track, a cable for propelling carriers along said track, an auxiliary track for directing carriers into engagement with said first mentioned track, a flexible element for propelling carriers along said auxiliary track toward said main track, means for actuating said flexible element by power derived from said cable, means for freeing said flexible element from the action of said cable, and means controlled by a carrier traversing said first mentioned track, for rendering operative said means for freeing said flexible element.

2. In a cable carrier apparatus, a track, a cable for propelling carriers along said track, an auxiliary track for directing carriers into engagement with said first mentioned track, means for propelling carriers along said auxiliary track toward said main track, said means being adapted to be operated by power derived from said cable, means for freeing said propelling means from the action of said cable, and provisions for rendering said last mentioned means operative by the passage of a carrier traversing said main track past a determined point in the latter.

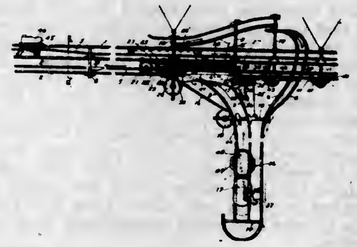
3. In a cable carrier apparatus, a track, a cable for propelling carriers along said track, an auxiliary track for directing carriers into engagement with said first mentioned track, means for propelling carriers along said auxiliary track toward said first mentioned track, and means, controlled by a carrier traversing said first mentioned track, for rendering inoperative said propelling means.

4. In a cable carrier apparatus, a track, a cable for propelling carriers along said track, an auxiliary track for directing carriers into engagement with said first mentioned track, means for propelling carriers along said auxiliary and first mentioned tracks, means for checking the progress of a carrier moving along said auxiliary track, and means, controlled by a carrier traversing said first mentioned track, for actuating said checking means.

5. In cable carrier apparatus, a track, a cable for propelling carriers along said track, means for delivering carriers to said track by power derived from said cable, said carrier delivering means comprising a reciprocable pusher and means for guiding said pusher, and means controlled by a carrier traversing said track for rendering said pusher substantially inoperative.

[Claims 6 to 25 not printed in the Gazette.]

1,157,192. CABLE-CARRIER SYSTEM. FRED R. TAISEY, Lowell, Mass., assignor to The Lamson Company, Boston, Mass., a Corporation of New Jersey. Original application filed July 17, 1913, Serial No. 779,449. Divided and this application filed Jan. 8, 1914. Serial No. 810,980. (Cl. 186—15.)



1. Cable carrier apparatus comprising a main track, an auxiliary track, a carrier to travel along said track, a continuously driven cable adjacent said main track, a tractor having means for engaging said cable, means whereby said tractor may propel said carrier along said auxiliary track toward said main track, and automatic means for engaging said tractor with said cable.

2. Cable carrier apparatus comprising a main track, an auxiliary track, a carrier to travel along said track, a continuously driven cable adjacent said main track, a tractor having means for engaging said cable, means whereby said tractor may propel said carrier along said auxiliary track toward said main track, and automatic means for disengaging said tractor from said cable.

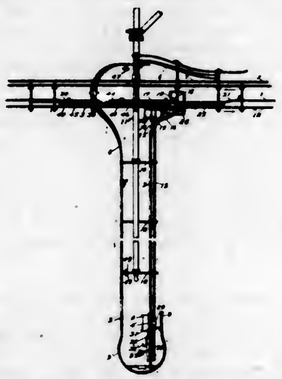
3. Cable carrier apparatus comprising a main track, an auxiliary track, a carrier to travel along said track, a continuously driven cable adjacent said main track, a tractor having means for engaging said cable, means whereby said tractor may propel said carrier along said auxiliary track toward said main track, and automatic means for engaging said tractor with said cable and for disengaging it therefrom, thereafter.

4. Cable carrier apparatus comprising a track, a guideway in substantial parallelism therewith, a carrier adapted to travel on said track, a tractor to travel on said guideway, a cable to propel said carrier along said track, means to connect said tractor with said cable, and means whereby said tractor may operatively position said carrier with respect to said cable.

5. Cable carrier apparatus comprising a way, a carrier adapted to travel along said way, a power driven cable, a carriage having means to engage said cable, means to propel said carrier along said way by a movement of said carriage, and means to automatically disconnect said carriage and cable.

[Claims 6 to 25 not printed in the Gazette.]

1,157,193. CABLE-CARRIER APPARATUS. FRED R. TAISEY, Lowell, Mass., assignor to The Lamson Company, Boston, Mass., a Corporation of New Jersey. Filed Feb. 24, 1914. Serial No. 820,721. (Cl. 186—15.)



1. Cable carrier drop-station apparatus comprising an elevated forwarding track adapted to convey carriers flatwise past the drop-station, an auxiliary track leading up from the station to said track and adapted to enter said carriers upon said forwarding track along a path the latter part of which is substantially in the plane of said track, through a gap in one of the rails of the latter, a switch movable about a substantially vertical axis and adapted to guide carriers traversing said forwarding track past said station safely by said gap, means including a cable for positively propelling a carrier along said auxiliary track from said station toward said switch, and for thereafter propelling said carrier along said track, and means to move said switch automatically in at least one direction.

2. Cable carrier drop-station apparatus comprising an elevated forwarding track adapted to convey carriers flatwise past the drop-station, an auxiliary track leading up from the station to said track and adapted to enter said carriers upon said forwarding track along a path the latter part of which is substantially in the plane of said track, through a gap in one of the rails of the latter, a switch movable about a substantially vertical axis and adapted to guide carriers traversing said forwarding track past said station safely by said gap, means including a cable for positively propelling a carrier along said auxiliary track from said station toward said switch and for thereafter propelling said carrier along said track, and means to move said switch substantially horizontally to open communication between said auxiliary and forwarding tracks and to thereafter return said switch automatically to a position to leave the forwarding track clear for through carriers passing said station thereover.

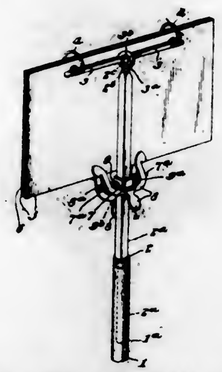
3. Cable carrier drop-station apparatus comprising an elevated forwarding track adapted to convey carriers flatwise past the drop-station, an auxiliary track leading up from the station to said track and adapted to enter said carriers upon said forwarding track along a path the latter part of which is substantially in the plane of said track, through a gap in one of the rails of the latter, a switch adapted to guide carriers traversing said forwarding track past said station safely by said gap, means including a cable for positively propelling a carrier along said auxiliary track from said station toward said switch and for thereafter propelling said carrier along said track, and means to move said switch, to open communication between said auxiliary and forwarding tracks, when said propelling means is rendered operative to despatch a carrier from said station.

4. Cable carried drop-station apparatus comprising an elevated forwarding track adapted to convey carriers flatwise past the drop-station, a fixed curved auxiliary track up and around which a carrier may be propelled from the station to said forwarding track, a switch at the point of delivery of said carrier to said forwarding track, and means co-acting with said auxiliary track and switch, to enter said carrier upon said forwarding track along a path the latter part of which is substantially in the plane of said forwarding track and which leads into the latter through but one of the rails thereof.

5. Cable carrier drop-station apparatus comprising an elevated forwarding track adapted to convey carriers flatwise past the drop-station, a fixed curved auxiliary track up and around which a carrier may be propelled from the station to said forwarding track, a switch at the point of delivery of said carrier to said forwarding track, and means, co-acting with said auxiliary track and switch, to enter said carrier upon said forwarding track laterally through but one of the rails of said forwarding track.

[Claims 6 to 26 not printed in the Gazette.]

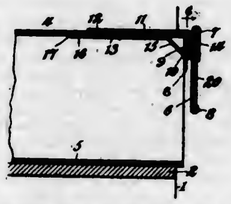
1,157,194. MUSIC-HOLDER. MARION A. TEVENS, West Chester, Pa. Filed Aug. 29, 1913, Serial No. 787,247. Renewed Apr. 24, 1915. Serial No. 23,767. (Cl. 45—62.)



1. In a music holder, a rod, means comprising loops for holding separate sheets so that they can be turned to opposite sides of said rod, and clamping means for engaging sheets on opposite sides of said rod.

2. In a music holder, a rod, a cross bar swiveled on said rod, loops carried by said cross bar and adapted for holding separate sheets so that they can be turned over said cross bar, and a clamp movable on said rod and adapted for simultaneously engaging sheets oppositely disposed with reference to said rod.

1,157,195. INDEX-TAG. CHARLES B. ULRICH, Houghton, Mich. Filed Feb. 12, 1914. Serial No. 818,361. (Cl. 40—10.)



1. An identification device for rolls of drawings and the like, comprising a disk-like face member with an elongated holding member projecting from the rear of the face member adjacent to one edge of the latter and adapted to engage the roll close to the edge thereof, the face member having oppositely-disposed marginally located inturned devices formed on it and extending over the face remote from the holding member toward the center of the face member for retaining the edge portions of a disk-shaped card, said card retaining devices being separated on opposite sides of the face member by less than the diameter of the card and sufficiently to permit the card to be sprung out of engagement with the retaining devices without permanently bending the card.

2. An identification device comprising a face member and a holding member therefor projecting rearwardly from the face member near one edge thereof, and said face member being provided with spaced marginal oppositely located card holding means adapted to temporarily retain an identification card, one of said card holding means being located at the same marginal portion of the face member as the holding member for the identification device and of greater marginal extent than the other card holding means, whereby the shorter card holding means provides for the springing out of the card from the card holding members without permanently bending the card.

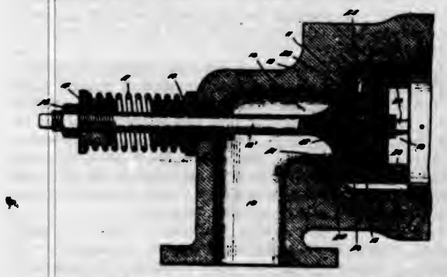
3. An identification device comprising a plate-like face member of disk form with peripherally extended overhanging marginal return flanges constituting card holding means adapted to temporarily retain an identification card, one of said card holding means being of greater peripheral extent than the other and said other card holding means being located diametrically opposite to an intermediate point of the first-named card holding means, whereby the shorter card holding means provides for the springing out of an inserted card from the card holding members without permanently bending the card, and a holding member for the face member projecting rearwardly therefrom near one edge thereof.

4. An identification device comprising a plate-like face member of substantially disk form with peripherally extended overhanging marginal return flanges in opposed relation one to the other, one of said flanges being of greater peripheral length than the other and the second one being situated diametrically opposite to the mid-point of the first flange, and a holding member on and projecting rearwardly from the face member adjacent to that edge of the latter having the longer flange, said holding member being in substantially perpendicular relation to the plane of the face member.

5. An identification device comprising a plate-like face member and a clip member firmly secured to the face member adjacent to one edge thereof and provided with leg portions for engaging opposite sides of material to which the device is applied, the face member having opposed spaced locking tongues projecting rearwardly therefrom and the clip member being provided with an intermediate connecting part for the leg portions about which the opposed locking tongues of the face member are clamped.

[Claims 6 to 9 not printed in the Gazette.]

1,157,196. VALVE. CASIMIR VON PHILP, South Bethlehem, Pa., assignor to Bethlehem Steel Company, South Bethlehem, Pa., a Corporation of Pennsylvania. Filed Jan. 2, 1913. Serial No. 739,853. (Cl. 137—32.)

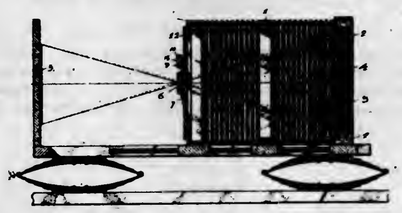


1. In a high pressure fluid valve structure, the combination with a casing having a valve chamber, a passage leading into the chamber, and an annular valve seat in said chamber surrounding the passage, of a valve having a portion within and nearly filling the mouth of said passage, and an annular portion within the chamber adapted to rest on said seat, a packing ring of flexible material between said portions, the outer portion of the packing ring being arranged to rest on the valve seat and the inner portion being seated on that part of the valve within the passage, the valve and packing seats being in planes at right angles to the axis of the valve and the valve being constructed to admit pressure to the back of the packing.

2. In a high pressure valve structure, the combination with a casing having a valve chamber, a passage leading into the chamber and an annular valve seat in said chamber surrounding the passage, of a valve having a portion within and nearly filling the mouth of said passage, and an annular portion within the chamber adapted to rest on said seat, a flexible packing ring of rectangular cross section within said annular portion, the outer portion of the packing ring having a seat on the casing, and the inner portion being seated on that part of the valve within the passage, all valve and packing seats being in planes at right angles to the axis of the valve and the valve being constructed to admit pressure to the back of the packing.

3. In a high pressure valve structure, the combination with a casing having a valve chamber, a passage leading into the chamber and an annular valve seat in said chamber surrounding the passage, of a valve having a portion within and nearly filling the mouth of said passage, and an annular nut portion 13 having threaded engagement with the valve body and adapted to rest on said seat, the valve body and nut portion having between them an annular space of rectangular cross section, and a packing ring of flexible material loosely fitted in said annular space, the outer portion of the packing ring being arranged to rest on a seat surrounding the mouth of the passage and the inner portion being seated on that part of the valve within the passage, the valve and packing seats being in planes at right angles to the axis of the valve and the valve being constructed to admit pressure to the back of the packing.

1,157,197. PRINTING-PLATE FOR COLORED PHOTO-ENGRAVING AND THE PROCESS FOR PRODUCING THE SAME. FLETCHER V. WALSH and COLVIN M. REED, San Francisco, Cal. Filed Sept. 1, 1914. Serial No. 860,112. (Cl. 101—205.)



1. Printing plates for a colored photo-engraving process comprising a series of half-tone plates whereon the lines running in one direction and formed of dots or lines on one plate will register with similar lines on the other plates, and the lines running at right angles to the first mentioned lines and likewise formed of dots or lines will overlap and lie parallel to lines running in the same direction on every other plate of the series.

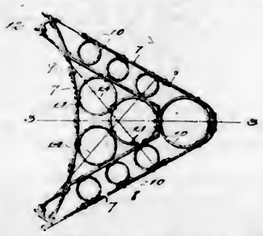
2. The process of producing color printing plates which consists of projecting the subject onto the exposed negatives through a screen and of shifting the projection on each successive negative exposed so that the resulting dots or lines on one plate will uniformly overlap the dots or lines on every other plate.

3. The process of producing color printing plates which consists of projecting the subject onto the exposed nega-

tives through a screen and of shifting the projection on each successive negative exposed an equal amount so that the resulting dots or lines on one plate will uniformly overlap the dots or lines on every other plate.

4. The process of producing color printing plates which consists of projecting the subject onto the exposed negatives through a screen and of shifting the projection on each successive negative exposed an equal amount on a line parallel with one set of lines on the screen so that the resulting dots or lines on one plate will uniformly overlap the dots and lines on every other plate.

1,157,198. FENDER. MAHLON WARNER, Millville, N. J., assignor of one-half to Zeb Gaskill, Millville, N. J. Filed May 1, 1914. Serial No. 835,723. (Cl. 105—254.)

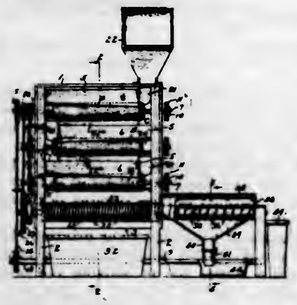


1. A fender consisting of a plurality of triangular frames spaced apart, one above the other, uprights connecting said frames, interior triangular frames arranged within those first mentioned and spring rings inserted between said triangular frames, said rings having their diameters in the plane of the frame, the said frames being constructed of a spring material.

2. A fender consisting of a plurality of triangular frames arranged one above the other and spaced apart, uprights connecting said triangular frames, horizontally arranged interior triangular frames carried by the rear members of the first mentioned triangular frames, spring rings placed within said second mentioned triangular members, and spring rings placed between the first and second triangular members, said rings being also arranged in horizontal planes.

3. A fender of the kind described comprising horizontally arranged triangular members spaced apart, uprights connecting said members, means for detachably securing the said fender to the wheel guards of an automobile, spring rings carried by said horizontal members, and a suitable fabric inclosing the sides of the said fender.

1,157,199. NUT SHELLER AND SEPARATOR. DICK B. WILLIAMS, New Orleans, La., assignor to Louisiana Nut & Produce Company, New Orleans, La., a Corporation of Louisiana. Filed Apr. 9, 1915. Serial No. 20,257. (Cl. 146—3.)



1. A nut sheller and separator, including a shelling unit consisting of a pair of spaced rolls carrying shell picking means, and a fixed rebound impact-surface overlying the rolls.

2. A nut sheller and separator, including a shelling unit consisting of a pair of horizontal spaced rolls carrying shell picking means, and a fixed rebound impact-surface overlying the rolls.

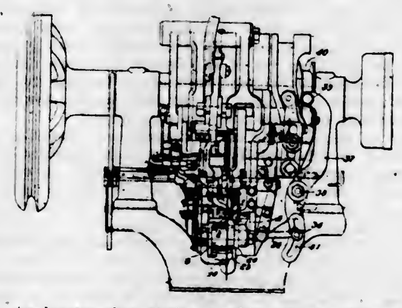
3. A nut sheller and separator, including a shelling unit consisting of a pair of horizontal spaced rolls carrying shell picking means, and a longitudinally flaring fixed rebound member overlying the rolls.

4. A nut sheller and separator, including a shelling unit consisting of a pair of spaced rolls rotating in the same direction but at different speeds and carrying shell picking means.

5. A nut sheller and separator, including a shelling unit consisting of a pair of horizontal spaced rolls rotating in the same direction but at different speeds and carrying shell picking means, and a longitudinally flared rebound impact member overlying the rolls.

[Claims 6 to 16 not printed in the Gazette.]

1,157,200. INSEAM-SHOE-SEWING MACHINE. FREDERICK L. ALLEY, Sydney, New South Wales, Australia, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 13, 1913. Serial No. 741,776. (Cl. 112—20.)



1. An inseam shoe sewing machine, having, in combination, stitch forming devices including a curved hook needle, a back rest support, a back rest to bear against the upper at the side of the last and below the bottom of the last when the shoe is in sewing position movably mounted on the support, and means for moving the back rest on its support always in a direction to advance the work engaging portion thereof.

2. An inseam shoe sewing machine, having, in combination, stitch forming devices, a back rest slide, a rotary back rest mounted on the back rest slide to engage the shoe and means for rotating the back rest always in the same direction.

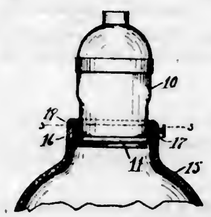
3. An inseam shoe sewing machine, having, in combination, stitch forming devices including a curved hook needle, a back rest support, a rotary back rest to bear against the upper at the side of the last and below the bottom of the last when the shoe is in sewing position mounted on the back rest support, and means for rotating the back rest always in a direction to advance the work engaging portion thereof.

4. An inseam shoe sewing machine, having, in combination, stitch forming devices including a curved hook needle, a back rest support, a back rest to bear against the upper at the side of the last and below the bottom of the last when the shoe is in sewing position movably mounted on the support, and means for moving the back rest on the support always in a direction to advance the work engaging portion thereof in timed relation to the operation of the stitch forming devices.

5. An inseam shoe sewing machine, having, in combination, stitch forming devices including a curved hook needle, a movable back rest to bear against the upper at the side of the last and below the bottom of the last when the shoe is in sewing position constructed to provide an endless surface for engagement with the shoe, and means to actuate the back rest to advance the shoe engaging portion thereof.

[Claims 6 to 10 not printed in the Gazette.]

1,157,201. SHADE-SUPPORT. FREDERIC BARR, Woodhaven, N. Y. Filed July 23, 1915. Serial No. 41,577. (Cl. 240—114.)



1. In combination with a fixture provided with a bead, a shade having a neck portion encircling the fixture above the bead and provided with openings through the same, a ring about the fixture above the bead provided with screw seats in line with the openings in the neck of the shade and shade-supporting screws disposed in the openings in the neck of the shade and engaged in the screw seats in the ring.

2. In combination with a fixture provided with a bead, a shade having a neck portion encircling the fixture above the bead and provided with openings through the same, a substantially continuous ring about the fixture above the bead and provided with screw seats in line with the openings in the neck of the shade and shade-supporting screws disposed in the openings in the neck of the shade and engaged in the screw seats in the ring.

3. In combination with a fixture provided with a bead, a shade having a neck portion encircling the fixture above the bead and provided with openings therethrough, nuts disposed between the fixture and the neck of the shade and resting on said bead and supporting screws passed through the openings in the neck of the shade into engagement with said nuts.

4. The combination with a lamp shade having a neck portion provided with openings therethrough, of a ring disposed closely adjacent and substantially engaging one face of the neck portion of said shade and provided with screw sockets in line with the openings in the neck portion and supporting screws disposed in said openings in the neck portion and screwed into the screw sockets in the ring.

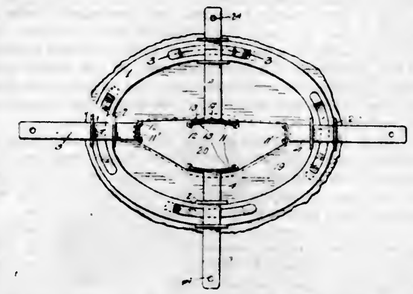
5. In shade supports, the combination with a shade provided with openings through the neck portion thereof, of screw seat members provided with screw seats in line with the openings in the neck of the shade and having reversely directed portions looped over the upper edge of the neck of the shade and supporting screws disposed in the openings in the neck of the shade and engaged in the screw seats aforesaid.

[Claims 6 and 7 not printed in the Gazette.]

1,157,202. SURGICAL APPARATUS. URI C. BATES and JEROME MCLELAND, Seattle, Wash. Filed Oct. 14, 1913. Serial No. 795,078. (Cl. 128—24.)

1. In apparatus of the class described, a frame having an interior space, an elastic lining adapted to underlie said frame and formed with an opening arranged symmetrically relative to said frame-space, and means slidably connected to said frame and extending through said opening whereby the said opening may be adjustably distended.

2. In apparatus of the class described, a frame having an unobstructed interior space, an elastic lining adapted to underlie said frame comprised of a diaphragm having a centrally disposed opening having a tubular connection, and means slidably connected to said frame and extending into said tubular portion whereby the latter may be distended.



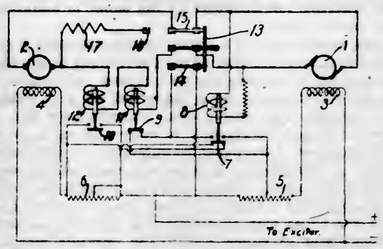
3. In apparatus of the class described, a frame having an unobstructed interior space, an elastic lining adapted to underlie said frame comprised of a diaphragm having a centrally disposed opening having a tubular connection, a plurality of retractors slidably connected to the frame having their inner end extending within said space, each said end adapted to engage said tubular portion and adjustably retain the same in distended condition.

4. In apparatus of the class described, an annular frame provided with radially directed guide apertures, retractor devices each comprising a bar slidably receivable in said apertures and formed with a downwardly directed shield on their inner ends, a lining adapted to be interposed between said frame and the patient having an opening therein arranged symmetrically relative to said frame, said lining adapted to be engaged by said shield to adjustably distend said opening.

5. In apparatus of the class described, an annular frame provided with radially directed guide apertures, retractor devices each comprising a bar slidably receivable in said apertures and formed with a downwardly directed shield on their inner ends, spring-pressed means securing said devices in adjusted positions, a lining adapted to be interposed between said frame and the patient having an opening therein arranged symmetrically relative to said frame, said lining adapted to be engaged by said shield to adjustably distend said opening.

[Claims 6 to 11 not printed in the Gazette.]

1,157,203. CONTROL SYSTEM FOR ELECTRIC MOTORS. HOWARD L. BEACH, Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed June 9, 1914. Serial No. 843,915. (Cl. 171—312.)



1. In a motor control system, the combination with a motor, and a generator for supplying energy to the motor, of a plurality of electromagnetic switches operating at a predetermined value of current supplied to said motor for gradually increasing the generator voltage to a normal value and then gradually decreasing the field excitation of said motor.

2. In a motor control system, the combination with a motor, and a generator in circuit therewith, of automatic means for gradually increasing the voltage of the generator to a normal value and then gradually decreasing the field excitation of said motor.

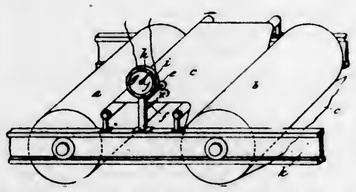
3. In a motor control system, the combination with a generator and a motor connected in series relation, of means operating at a predetermined voltage of said generator for controlling the field excitation of the motor, and means operating in accordance with the value of the current supplied to said motor for controlling the voltage of the generator.

4. In a motor control system, the combination with a generator and a motor connected in series relation and provided with field windings and resistors in circuit with said windings, of means controlled in accordance with the voltage of said generator for controlling said resistors.

5. In a motor control system, the combination with a generator and a motor connected in series relation and provided with separately excited field windings, of means operating at a predetermined value of the generator voltage for controlling the excitation of the generator field winding, and means operating at a predetermined value of the current supplied to said motor for controlling the excitation of the motor field winding.

[Claim 6 not printed in the Gazette.]

1,157,204. APPARATUS FOR CONTROLLING THE THICKNESS OF PAPER. HOWARD BROWN, Springfield, Mass. Filed Oct. 1, 1912. Serial No. 723,283. (Cl. 92—46.)



1. The combination of a paper making machine, a paper thickness gage mounted at a point in said machine where the paper is sufficiently formed to determine its thickness together with operable mechanism controlled by the movement of said gage to change the amount of paper stock fed to the machine to keep the thickness of the paper made within desired limits.

2. The combination of a paper making machine, means located at a point in the machine where the paper is sufficiently formed to determine its thickness and movable by changing thicknesses of the paper, together with mechanism operable to control the feed of paper stock to the machine controlled by the movement of said first mentioned means, whereby the thickness of the paper is maintained at the desired point.

3. The combination of a paper making machine, a valve operable to control the feed of the paper stock to the paper carrying medium in the machine, means for testing the thickness of the paper being made located at a suitable point, together with mechanism controlled by the last mentioned means and operable to move said valve, whereby the thickness of the paper manufactured is determined.

4. The combination of a paper making machine, means to feed paper stock thereto, devices, located in contact with the paper at a point in the machine where the thickness of the paper may be determined, movable on changing thicknesses of paper, electrically operable means to control the feed of the paper stock, and electrical connections between said devices and said operable means whereby the movement of said devices on changing thicknesses of paper controls said electrical connections and determines the thickness of the paper made.

5. In a paper making machine, the combination of means to feed paper stock to the machine, and a controlling valve therefor, electrically controlled means operable to open and close said valve, a device movable on changing thicknesses of the paper, together with electrical connections from said device to said controlled means arranged for a movement of the device in one direction to cause the valve to open and a movement thereof in the other direction to cause the valve to close, whereby the movement of the device controls the thickness of the paper manufactured.

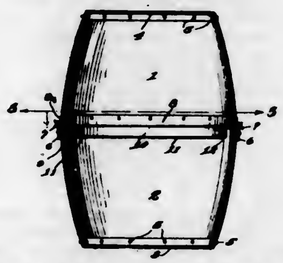
[Claims 6 to 16 not printed in the Gazette.]

1,157,205. RAIL-JOINT. NICHOLAS BROZORICH, Albia, Iowa. Filed Aug. 24, 1914. Serial No. 858,284. (Cl. 239—8.)



In a rail joint, a pair of rails, one of the same having an aperture formed therein adjacent its abutting end with one of the walls at said aperture being rounded, the other of said rails having a hook projecting from its abutting end having an inclined face adapted to ride the rounded face of said aperture whereby the positioning of said hook in said opening is facilitated to secure the abutting ends of said rails together.

1,157,206. SHIPPING-RECEPTACLE. EDWARD J. BUTTERFIELD, Chamberlain, S. D. Filed Mar. 13, 1913. Serial No. 754,044. (Cl. 220—4.)

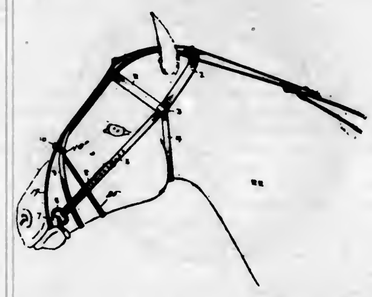


1. A shipping receptacle, including an upper and a lower section, a hoop mounted upon and carried by the said lower section and passing annularly thereabout, said hoop having openings therein adjacent the upper marginal edge thereof, and thumb screws mounted in said openings for engagement with the said upper section, and a partitioning element carried by the upper section and disposed slightly below the upper marginal edge of the lower section, as and for the purpose set forth.

2. A shipping receptacle including an upper and a lower section, an annular flange secured to the inner surface of said upper section adjacent the lower end thereof, said flange having an annular shoulder and a portion extending downwardly from said shoulder and spaced from the lower marginal edge of the said upper section, and a ring engageable about said downwardly extending portion whereby to secure a fabric cover over said section, said fabric serving as a means to prevent the contents of said sections from mingling.

1,157,207. OVERDRAW-BRIDLE. BENJAMIN F. CAYFORD, Skowhegan, Me. Filed Nov. 30, 1914. Serial No. 874,816. (Cl. 54—6.)

1. A bridle comprising a crown piece, brow-bands, check rein, cheek straps, and a bit connected with the cheek straps, a nose band provided with guides and keepers, an over draw bit projecting through the guides, an under draw strap projecting through the keepers and having branches connected with the check rein, and means for holding the branches of the under draw strap slidably connected with the crown piece.



2. A bridle comprising a crown piece, brow band, check rein, cheek straps, and a bit connected with the cheek straps, a nose band provided with guides and keepers, an over draw bit projecting through the guides, an under draw strap projecting through the keepers and having branches connected with the check rein, means for holding the branches of the under draw strap slidably connected with the crown piece, and an over draw strap adjustably connecting the nose band and crown piece.

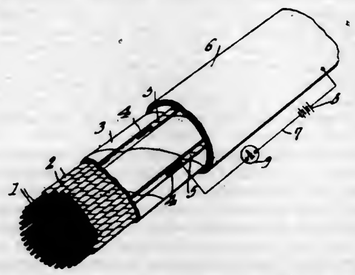
3. A bridle comprising a crown piece, brow band, check rein, cheek straps, and a bit connected with the cheek straps, a nose band provided with guides and keepers, an over draw bit projecting through the guides, an under-draw strap projecting through the keepers and having branches connected with the check rein, means for holding the branches of the under draw strap slidably connected with the crown piece, an over draw strap adjustably connecting the nose band and crown piece, and an adjustable jaw holding strap connected with the ends of the nose band.

4. A bridle comprising, a crown piece, a brow strap, a check rein, a throat latch strap, the ends of said straps being connected together, a bit, cheek straps connected at their upper ends to said connecting points of said strap and looped through said bit at their lower portions, the looped ends of said jaw straps being buckled to the cheek straps, an under draw strap mounted between said looped portions of said cheek strap and running under the jaws of a horse, an overdraw bit having an elongated upper portion thereto, a nose band mounted upon said over draw bit and supporting said under draw strap, an adjustable strap mounted upon said nose band strap and adapted to encircle the jaws of a horse to retain them closed, adjustable means to connect the upper ends of said under draw strap to a check rein, and an over draw check strap connected at one end to the upper looped portion of said over draw bit at one end and adjustably connected to a check rein at its other end, said bridle being adapted to retain the mouth of a horse forwardly and upwardly to support the mouth of a horse in such retained position and to prevent the undue opening of the mouth of the horse while so retained.

1,157,208. ELECTRIC CABLE. JOSEPH L. CONRAD, Durham, N. C., assignor of one-third to Thomas D. Wright and one-third to Arvid S. Halstrom, Durham, N. C. Filed Dec. 8, 1914. Serial No. 876,152. (Cl. 173—264.)

1. An electric cable comprising a moisture-proof sheath, an insulated conducting core therein, a detector conductor within the sheath, and an absorbent moisture-attracting insulation for the detector conductor to enable a detecting circuit to be established through the detector conductor in the presence of moisture within the sheat.

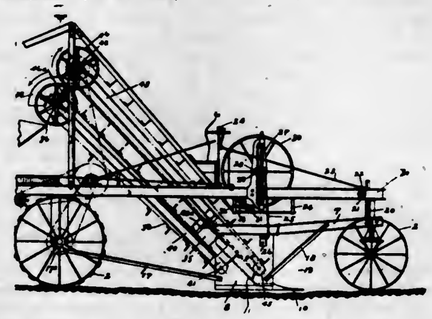
2. An electric cable comprising a moisture-proof sheath, a conductor core therein, a moisture-proof insulation surrounding the core, a detector conductor between the said insulation and sheat, and an absorbent moisture-attracting insulation for the detector conductor to enable a detecting circuit to be established through the detector conductor in the presence of moisture within the sheath.



3. An electric cable comprising a moisture-proof sheath, an insulated conductor core therein, a detector conductor within the sheath, and an insulation for the detector conductor impregnated by a moisture-attracting substance, to enable a detecting current to be established through the detector conductor in the presence of moisture within the sheath.

4. An electric cable comprising a moisture-proof sheat, a conductor core therein, a moisture-proof insulation surrounding the core, a detector conductor between the insulation and sheath, and an insulation for the detector conductor impregnated by a moisture-attracting substance, to enable a detecting circuit to be established through the detector conductor in the presence of moisture within the sheath.

1,157,209. EXCAVATING-MACHINE. PEARL D. CONVERSE, Columbus, Ohio. Filed Dec. 11, 1911. Serial No. 665,181. (Cl. 37—25.)



1. An excavating machine comprising superposed elevating elements, each of said elements having one end pivotally mounted, said pivotal connections being at opposite ends of said elements, and means whereby one end of one of said elements is movable about the corresponding end of the adjacent elevating element as a center.

2. An excavating machine comprising superposed elevating elements, the upper of said elements having its upper end pivotally supported and its lower end movable about the upper end as a center, the lower of said elements having its lower end pivotally supported and its upper end movably mounted, and means whereby the upper end of the lower elements is movable about the pivoted end of the upper element as a center when the lower end of the lower element is given movement with respect to the excavator.

3. An excavating machine comprising superposed elevating elements, the upper of said elements having its upper end pivotally supported and its lower end movable about the upper end as a center, and a link connection between

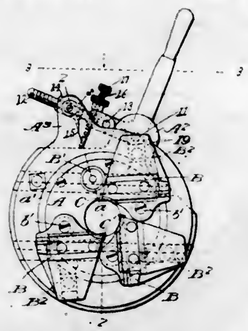
the upper ends of said elements, the said upper end of the lower element being thereby movable about the upper end of the upper element as a center, the lower end of the lower element being pivotally supported.

4. An excavating machine comprising superposed elevating elements, a confining casing adjacent the lower ends of said elements, the lower end of the lower of said elements being pivotally mounted upon said casing and having its upper end movably supported, the upper end of the upper of said elements being pivotally mounted and having its lower end freely movable within said casing about its upper end as a center, and a throat plate carried by said casing and extending upward between the lower ends of said elements.

5. An excavating machine comprising superposed elevating elements, a confining casing adjacent the lower ends of said elements, the lower end of the lower of said elements being pivotally attached to said casing, the upper end of the upper of said elements being pivotally mounted and having its lower end freely movable within said casing about the upper end as a center, a link connection between the upper end of said upper element and the upper end of said lower element, a trough within which said elements operate, and a throat plate carried by said casing and extending upward between the lower ends of said elements.

[Claim 6 not printed in the Gazette.]

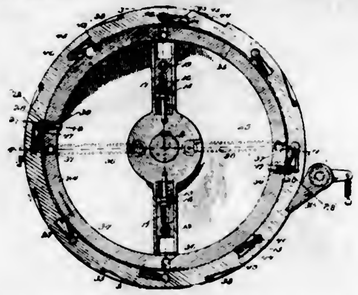
1,157,210. DIE-HEAD. HENRY L. FISHER, Waynesboro, Pa., assignor to Landis Machine Company, Waynesboro, Pa., a Corporation. Filed Mar. 21, 1911. Serial No. 615,881. (Cl. 10—100.



In a die-head designed for manual opening and closing the combination of a body, cutter-holders mounted to oscillate in said body, and means for opening and closing the die by hand comprising a ring mounted to rotate on said body and connected to said cutter-holders, a toggle lever fulcrumed on said body and having a screw-threaded part extending through a pivoted block mounted on said ring, nuts on said screw-threaded part for adjusting the length of the connection and regulating the size of the die, and a stop adjustably mounted in a perforation in said lever and adapted to strike on a part of said body and limit the break of said toggle in an inward direction, substantially as set forth.

1,157,211. SELF-STARTER FOR ENGINES. EUGENE A. FORD, Uxbridge, Mass. Filed Dec. 18, 1911. Serial No. 666,380. (Cl. 123—179.)

1. In an engine starter, the combination with a shaft adapted to be driven by the engine and connected to the pistons thereof, and means other than the engine for rotating said shaft and thereby starting the engine, said means comprising a rotatable reservoir or chamber for the storage of fluid under pressure, pumping means for pumping fluid into said reservoir carried by the latter and rotating therewith, a fluid-expansion non-combustion motor arranged with its driven part to rotate said shaft, and means under control of an operator for admitting fluid under pressure from the reservoir or chamber to said fluid pressure motor.



2. The combination with a shaft to be driven by the engine and connected to the pistons thereof, of a fly-wheel embodying in its construction a source of fluid supply and a fluid pressure motor adapted to rotate said shaft to start the engine, and means under control of an operator for supplying motive fluid to said motor from said source of fluid supply.

3. The combination with a shaft to be driven by the engine and connected to the pistons thereof, of a fly-wheel embodying in its construction a source of fluid supply and means driven by said fluid for actuating said shaft to start the engine.

4. A fly-wheel embodying in its construction a storage chamber or receptacle for motive fluid under pressure, a moving element, and means for admitting fluid under pressure from said chamber or receptacle to said moving element.

5. A fly-wheel embodying in its construction a storage chamber or receptacle for motive fluid under pressure, a fluid-pressure non-combustion motor, and means for admitting fluid under pressure from said reservoir to said motor.

[Claims 6 to 17 not printed in the Gazette.]

1,157,212. FORGING-DIES. WILLIAM D. FORSYTH, Youngstown, Ohio, assignor to Railway Products Corporation, Buffalo, N. Y., a Corporation of New York. Filed Nov. 27, 1914. Serial No. 874,191. (Cl. 113—49.)



1. A lower die having a longitudinal recess therein, said recess being deepest throughout a region midway of the ends of said die, said recess near the ends of said die being rectangular in the cross-section, the bottom of said recess between the deepest part thereof and the parts thereof which are rectangular in the cross-section inclining upwardly and outwardly, said lower die having two auxiliary recesses in the bottom of said recess near each side wall of said recess, and an upper die coöperating with said lower die and having a flange along each lower longitudinal edge thereof, said flanges projecting downwardly below the under surface of said upper die and extending for part of the length of said upper die at its middle, said flanges of said upper die entering said auxiliary recesses of said lower die when the upper die and the lower die are brought together.

2. An upper forging die whose under surface has a flat face for part of its length at each end thereof and a flat face for part of its length at the middle thereof, said middle face lying in a plane parallel to and below the plane of said end faces, the under surface of said die between said middle under face and each end under face having upwardly and outwardly inclined faces, each inclined face having a longitudinal recess therein which is U-shaped in cross-section, said upper die having a flange projecting downwardly below said middle under face on each side thereof, and a lower die coöperating with said upper die and having a longitudinal recess therein adapted to receive said upper die, the bottom of said recess and the under surface of said upper die being equidistant throughout when the upper die and the lower die are brought together, said lower die having two auxiliary recesses in the bottom of said recess near each side wall thereof, the flanges of said upper die entering said auxiliary recesses when the upper die and the lower die are brought together.

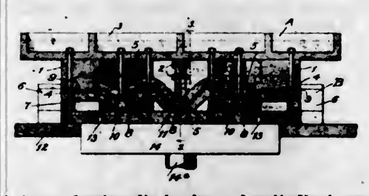
3. A lower forging die having a comparatively narrow recess in its upper face, the end portions of said recess being substantially rectangular in cross-section, the bottom of said recess throughout the middle portion thereof being below the plane of the bottom of said recess at the end portions thereof, said recess being wider for a portion of its length at its middle than at its ends, the side portions of said lower die on each side of said recess constituting means for holding the side portions of a blank against downward movement, and an upper die coöperating with said lower die and having a downwardly projecting portion shaped to conform to the shape of said recess of said lower die.

4. A lower forging die comprising two side members and a middle member, one side member being arranged on each side of said middle member, said middle member having a flat upper face at each end and a longitudinal ridge near its middle, the upper edge of said ridge being below the plane of said end faces of said middle member, the upper surfaces of said side members at their middles being above the plane of said end faces of said middle member, said middle member being movable vertically between said side members, and an upper die coöperating with said lower die and having its under surface shaped to conform to the upper surface of said middle member of said lower die and its sides shaped to conform to the space between the side members of said lower die, said upper die having a longitudinal groove in its under face arranged to coöperate with the ridge of said middle member of said lower die.

5. A lower forging die having a longitudinal recess therein, the side portions of said lower die on each side of said recess constituting means for holding the side portions of a blank against downward movement, said recess being deepest throughout a region midway of the ends of said lower die, said lower die having a longitudinal ridge along the bottom of said recess for part of the length of said lower die at its middle, and an upper forging die cooperating with said lower die and having a longitudinal groove in its under face, said ridge of said lower die entering said groove of said upper die when said dies are brought together.

[Claims 6 to 11 not printed in the Gazette.]

1,157,213. FORGING-DIES. WILLIAM D. FORSYTH, Youngstown, Ohio, assignor to Railway Products Corporation, Buffalo, N. Y., a Corporation of New York. Filed Nov. 27, 1914. Serial No. 874,192. (Cl. 113—49.)



1. A lower forging die having a longitudinal recess in the upper face thereof, said recess throughout the end portions of said die being channel-shaped, the bottom of said recess throughout the middle portion of said die being formed with a series of straight hollows, and an upper forging die coöperating with said lower die and having the end portions thereof rectangular in cross-section to conform to the end portions of the recess in said lower die said upper die having throughout the middle portion of its under face a series of ridges, said ridges corresponding in shape and position to said hollows.

2. A lower forging die having a longitudinal recess in the upper face thereof, the bottom of said recess throughout the middle portion of said die being formed with a series of transverse hollows V-shaped in cross-section, and an upper forging die coöperating with said lower die and having on the under face thereof throughout a region midway of its ends a series of transverse ridges, said ridges corresponding in shape and position to said hollows and being adapted to enter said hollows.

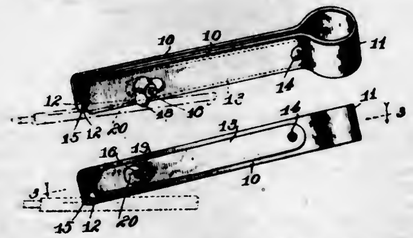
3. A lower forging die having a longitudinal recess in the upper face thereof, said recess throughout the end portions of said die being channel-shaped, the bottom of said recess throughout the middle portion of said die being formed with a series of straight hollows, said recess being widest throughout a region midway of the ends of said die, and an upper die coöperating with said lower die and having a downwardly projecting portion shaped to conform to the shape of said recess in said lower die.

4. A lower forging die having a longitudinal recess in the upper face thereof, the end portions of said recess being channel-shaped, the bottom of said recess throughout the middle portion of said die having a series of transverse hollows therein, said die consisting of a middle member and two side members, one side member being arranged on each side of said middle member, the upper surface of said middle member constituting the bottom of said recess, the inner side walls of said side members constituting the side wall of said recess, said middle member being movable vertically between said side members.

5. A lower forging die having a longitudinal recess in its upper face, said recess throughout a region midway of the ends of said die being wider than at the ends of said die, the bottom of said recess throughout the middle portion of said die being formed with a series of transverse hollows, and an upper forging die coöperating with said lower die, said upper die being shaped to enter said recess and having ridges throughout the middle portion of its under surface which are adapted to enter said hollows.

[Claims 6 to 10 not printed in the Gazette.]

1,157,214. INSULATION-CUTTER. LEON GENIN, Chicago, Ill. Filed Sept. 23, 1914. Serial No. 863,082. (Cl. 81—9.5.)



1. An insulation cutter comprising a pair of parallel strips forming a combined blade holder and handle and having their edges chamfered on their inner opposed sides at one end to form a guide groove, a blade pivotally mounted between said strips with its cutting edge lying in said groove, and means for clamping said strips on said blade.

2. An insulation cutter comprising a pair of parallel strips forming a combined blade holder and handle and having their edges chamfered on their inner opposed sides at one end to form a guide groove, a blade disposed between said strips with its cutting edge lying in said groove, means for adjusting the depth of said cutting edge relatively to said groove, and means for clamping said strips on said blade.

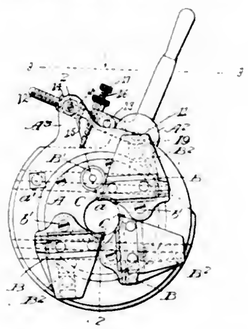
the upper ends of said elements, the said upper end of the lower element being thereby movable about the upper end of the upper element as a center, the lower end of the lower element being pivotally supported.

4. An excavating machine comprising superposed elevating elements, a confining casing adjacent the lower ends of said elements, the lower end of the lower of said elements being pivotally mounted upon said casing and having its upper end movably supported, the upper end of the upper of said elements being pivotally mounted and having its lower end freely movable within said casing about its upper end as a center, and a throat plate carried by said casing and extending upward between the lower ends of said elements.

5. An excavating machine comprising superposed elevating elements, a confining casing adjacent the lower ends of said elements, the lower end of the lower of said elements being pivotally attached to said casing, the upper end of the upper of said elements being pivotally mounted and having its lower end freely movable within said casing about the upper end as a center, a link connection between the upper end of said upper element and the upper end of said lower element, a trough within which said elements operate, and a throat plate carried by said casing and extending upward between the lower ends of said elements.

[Claim 6 not printed in the Gazette.]

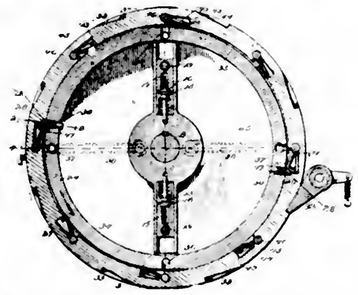
1,157,210. DIE-HEAD. HENRY L. FISHER, Waynesboro, Pa., assignor to Landis Machine Company, Waynesboro, Pa., a Corporation. Filed Mar. 21, 1911. Serial No. 615,981. (Cl. 10—100.



In a die-head designed for manual opening and closing the combination of a body, cutter-holders mounted to oscillate in said body, and means for opening and closing the die by hand comprising a ring mounted to rotate on said body and connected to said cutter-holders, a toggle lever fulcrumed on said body and having a screw-threaded part extending through a pivoted block mounted on said ring, nuts on said screw-threaded part for adjusting the length of the connection and regulating the size of the die, and a stop adjustably mounted in a perforation in said lever and adapted to strike on a part of said body and limit the break of said toggle in an inward direction, substantially as set forth.

1,157,211. SELF-STARTER FOR ENGINES. EUGENE A. FORD, Uxbridge, Mass. Filed Dec. 18, 1911. Serial No. 666,390. (Cl. 123—179.)

1. In an engine starter, the combination with a shaft adapted to be driven by the engine and connected to the pistons thereof, and means other than the engine for rotating said shaft and thereby starting the engine, said means comprising a rotatable reservoir or chamber for the storage of fluid under pressure, pumping means for pumping fluid into said reservoir carried by the latter and rotating therewith, a fluid-expansion non-combustion motor arranged with its driven part to rotate said shaft, and means under control of an operator for admitting fluid under pressure from the reservoir or chamber to said fluid pressure motor.



2. The combination with a shaft to be driven by the engine and connected to the pistons thereof, of a fly-wheel embodying in its construction a source of fluid supply and a fluid pressure motor adapted to rotate said shaft to start the engine, and means under control of an operator for supplying motive fluid to said motor from said source of fluid supply.

3. The combination with a shaft to be driven by the engine and connected to the pistons thereof, of a fly-wheel embodying in its construction a source of fluid supply and means driven by said fluid for actuating said shaft to start the engine.

4. A fly-wheel embodying in its construction a storage chamber or receptacle for motive fluid under pressure, a moving element, and means for admitting fluid under pressure from said chamber or receptacle to said moving element.

5. A fly-wheel embodying in its construction a storage chamber or receptacle for motive fluid under pressure, a fluid-pressure non-combustion motor, and means for admitting fluid under pressure from said reservoir to said motor.

[Claims 6 to 17 not printed in the Gazette.]

1,157,212. FORGING-DIES. WILLIAM D. FORSYTH, Youngstown, Ohio, assignor to Railway Products Corporation, Buffalo, N. Y., a Corporation of New York. Filed Nov. 27, 1914. Serial No. 874,191. (Cl. 113—49.)



1. A lower die having a longitudinal recess therein, said recess being deepest throughout a region midway of the ends of said die, said recess near the ends of said die being rectangular in the cross-section, the bottom of said recess between the deepest part thereof and the parts thereof which are rectangular in the cross-section inclining upwardly and outwardly, said lower die having two auxiliary recesses in the bottom of said recess near each side wall of said recess, and an upper die coöperating with said lower die and having a flange along each lower longitudinal edge thereof, said flanges projecting downwardly below the under surface of said upper die and extending for part of the length of said upper die at its middle, said flanges of said upper die entering said auxiliary recesses of said lower die when the upper die and the lower die are brought together.

2. An upper forging die whose under surface has a flat face for part of its length at each end thereof and a flat face for part of its length at the middle thereof, said middle face lying in a plane parallel to and below the plane of said end faces, the under surface of said die between said middle under face and each end under face having upwardly and outwardly inclined faces, each inclined face having a longitudinal recess therein which is U-shaped in cross-section, said upper die having a flange projecting downwardly below said middle under face on each side thereof, and a lower die coöperating with said upper die and having a longitudinal recess therein adapted to receive said upper die, the bottom of said recess and the under surface of said upper die being equidistant throughout when the upper die and the lower die are brought together, said lower die having two auxiliary recesses in the bottom of said recess near each side wall thereof, the flanges of said upper die entering said auxiliary recesses when the upper die and the lower die are brought together.

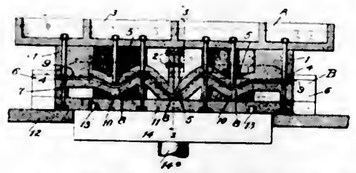
3. A lower forging die having a comparatively narrow recess in its upper face, the end portions of said recess being substantially rectangular in cross-section, the bottom of said recess throughout the middle portion thereof being below the plane of the bottom of said recess at the end portions thereof, said recess being wider for a portion of its length at its middle than at its ends, the side portions of said lower die on each side of said recess constituting means for holding the side portions of a blank against downward movement, and an upper die coöperating with said lower die and having a downwardly projecting portion shaped to conform to the shape of said recess of said lower die.

4. A lower forging die comprising two side members and a middle member, one side member being arranged on each side of said middle member, said middle member having a flat upper face at each end and a longitudinal ridge near its middle, the upper edge of said ridge being below the plane of said end faces of said middle member, the upper surfaces of said side members at their middles being above the plane of said end faces of said middle member, said middle member being movable vertically between said side members, and an upper die coöperating with said lower die and having its under surface shaped to conform to the upper surface of said middle member of said lower die and its sides shaped to conform to the space between the side members of said lower die, said upper die having a longitudinal groove in its under face arranged to coöperate with the ridge of said middle member of said lower die.

5. A lower forging die having a longitudinal recess therein, the side portions of said lower die on each side of said recess constituting means for holding the side portions of a blank against downward movement, said recess being deepest throughout a region midway of the ends of said lower die, said lower die having a longitudinal ridge along the bottom of said recess for part of the length of said lower die at its middle, and an upper forging die coöperating with said lower die and having a longitudinal groove in its under face, said ridge of said lower die entering said groove of said upper die when said dies are brought together.

[Claims 6 to 11 not printed in the Gazette.]

1,157,213. FORGING-DIES. WILLIAM D. FORSYTH, Youngstown, Ohio, assignor to Railway Products Corporation, Buffalo, N. Y., a Corporation of New York. Filed Nov. 27, 1914. Serial No. 874,192. (Cl. 113—49.)



1. A lower forging die having a longitudinal recess in the upper face thereof, said recess throughout the end portions of said die being channel-shaped, the bottom of said recess throughout the middle portion of said die being formed with a series of straight hollows, and an upper forging die coöperating with said lower forging die and having the end portions thereof rectangular in cross-section to conform to the end portions of the recess in said lower die said upper die having throughout the middle portion of its under face a series of ridges, said ridges corresponding in shape and position to said hollows.

2. A lower forging die having a longitudinal recess in the upper face thereof, the bottom of said recess throughout the middle portion of said die being formed with a series of transverse hollows V-shaped in cross-section, and an upper forging die coöperating with said lower die and having on the under face thereof throughout a region midway of its ends a series of transverse ridges, said ridges corresponding in shape and position to said hollows and being adapted to enter said hollows.

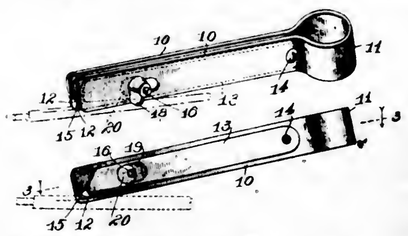
3. A lower forging die having a longitudinal recess in the upper face thereof, said recess throughout the end portions of said die being channel-shaped, the bottom of said recess throughout the middle portion of said die being formed with a series of straight hollows, said recess being widest throughout a region midway of the ends of said die, and an upper die coöperating with said lower die and having a downwardly projecting portion shaped to conform to the shape of said recess in said lower die.

4. A lower forging die having a longitudinal recess in the upper face thereof, the end portions of said recess being channel-shaped, the bottom of said recess throughout the middle portion of said die having a series of transverse hollows therein, said die consisting of a middle member and two side members, one side member being arranged on each side of said middle member, the upper surface of said middle member constituting the bottom of said recess, the inner side walls of said side members constituting the side wall of said recess, said middle member being movable vertically between said side members.

5. A lower forging die having a longitudinal recess in its upper face, said recess throughout a region midway of the ends of said die being wider than at the ends of said die, the bottom of said recess throughout the middle portion of said die being formed with a series of transverse hollows, and an upper forging die coöperating with said lower die, said upper die being shaped to enter said recess and having ridges throughout the middle portion of its under surface which are adapted to enter said hollows.

[Claims 6 to 10 not printed in the Gazette.]

1,157,214. INSULATION-CUTTER. LEON GENIN, Chicago, Ill. Filed Sept. 23, 1914. Serial No. 863,082. (Cl. 81—9.5.)



1. An insulation cutter comprising a pair of parallel strips forming a combined blade holder and handle and having their edges chamfered on their inner opposed sides at one end to form a guide groove, a blade pivotally mounted between said strips with its cutting edge lying in said groove, and means for clamping said strips on said blade.

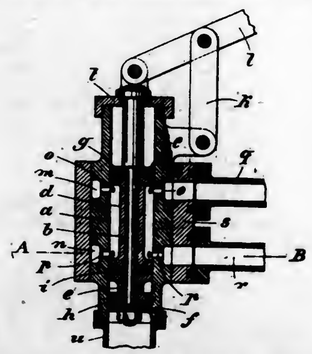
2. An insulation cutter comprising a pair of parallel strips forming a combined blade holder and handle and having their edges chamfered on their inner opposed sides at one end to form a guide groove, a blade disposed between said strips with its cutting edge lying in said groove, means for adjusting the depth of said cutting edge relatively to said groove, and means for clamping said strips on said blade.

3. An insulation cutter comprising a pair of parallel strips forming a combined blade holder and handle and having their edges chamfered on their inner opposed sides at one end to form a guide groove, a blade pivotally mounted at its rear end between said strips with its forward cutting edge lying in said groove, means for adjusting the depth of said cutting edge relatively to said groove, and means for clamping said blade between said strips.

4. An insulation cutter comprising a pair of parallel strips forming a combined blade holder and handle and having their edges chamfered on their inner opposed sides to form a guide groove, a slotted blade pivotally mounted at its rear end between said strips with its forward cutting edge lying in said groove, a cam mounted in the slot of said blade, means for turning said cam whereby to adjust the depth of said cutting edge relatively to said groove, and means for clamping said blade between said strips.

5. An insulation cutter comprising a pair of parallel strips forming a combined blade holder and handle and having their edges chamfered on their inner opposed sides at one end to form a guide groove, a slotted blade pivoted at its rear end between said strips with its forward cutting edge lying in said groove, a bolt extending through said strips and the slot of said blade, a cam fast on said bolt and engaging said slot whereby to adjust the depth of said cutting edge relatively to said groove, a clamp nut having threaded engagement with one end of said bolt, and a cam-shifting nut fast on the other end of said bolt.

1,157,215. VALVE FOR HYDRAULIC MACHINES. HUGO GILLE, Huckingen-on-the-Rhine, Germany. Filed June 24, 1914. Serial No. 847,150. (Cl. 138—[illegible].)

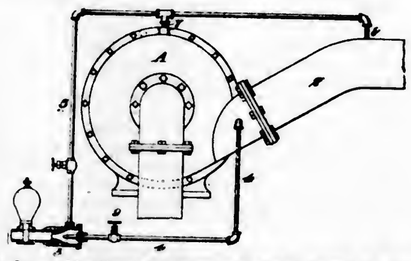


1. In a controlling apparatus for hydraulic machines, the combination of a cylinder provided with openings through which liquid is adapted to flow to the hydraulic machine, a packing piston located within said cylinder and adapted to be brought into register with said openings to prevent the flow of liquid therethrough and a protecting piston also located within said cylinder and adapted to restrict the passage of liquid through said openings before the packing piston is brought into register therewith.

2. In a controlling apparatus for hydraulic machines, the combination of a cylinder provided with openings through which liquid is adapted to flow to the hydraulic machine, a packing piston located within said cylinder and adapted to be brought into register with said openings to prevent the flow of liquid therethrough, and a protecting piston movable with said packing piston and adapted to restrict the passage of liquid through said openings before the packing piston is brought into register therewith.

3. In a controlling apparatus for hydraulic machines, the combination of a cylinder provided with openings through which liquid is adapted to flow to the hydraulic machine, a reciprocable member located within said cylinder, a packing piston secured to said member and adapted to be brought into register with said openings to prevent the flow of liquid therethrough, a protecting piston also secured to said member and adapted to restrict the passage of liquid through said openings before the packing piston is brought into register therewith and means for reciprocating said member at will.

1,157,216. AUTOMATIC AIR-EXHAUST FOR CENTRIFUGAL PUMPS. CARL E. GRUNSKY, San Francisco, Cal. Filed May 14, 1914. Serial No. 838,427. (Cl. 103—43.)



1. In combination with a pump having a discharge pipe, an aspirator connected to the discharge pipe of the pump, a second connection between the aspirator and discharge located in advance of the point where the aspirator is connected to the discharge, and a connection between the high point of the pump and the second named connection between the aspirator and discharge.

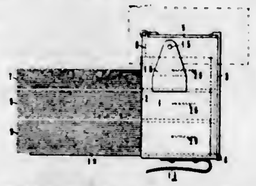
2. In combination with a centrifugal pump having a discharge pipe, an aspirator with a water pipe connection with the discharge pipe of the pump and an air pipe connection between the aspirator and the summit points of the discharge pipe and pump.

3. In combination with a centrifugal pump having a discharge pipe, an aspirator connected to the discharge pipe of the pump and actuated with water from the discharge pipe and an air pipe connection between the aspirator and the summit points of the discharge pipe and pump.

4. In combination with a centrifugal pump having a discharge pipe, an aspirator connected to the discharge pipe of the pump and actuated with water from the discharge pipe of the pump, an air pipe connection between the air chamber of the aspirator and the highest point of the pump, and a second air pipe connection between the aspirator and the summit points on the discharge pipe.

5. In combination with a centrifugal pump having a discharge pipe, an aspirator with a water pipe connection with the discharge pipe of the pump, an air pipe connection between the air chamber of the aspirator with the highest point of the pump and a second air pipe connection between the aspirator and the summit points on the discharge pipe.

1,157,217. SALES-CHECK HOLDER. LOUIS F. HAGEMAN, Jr., Niagara Falls, N. Y., assignor to American Sales Book Company, Limited, Toronto, Canada, a Corporation of Ontario. Filed Jan. 20, 1912. Serial No. 672,441. (Cl. 211—37.)



1. In a device of the character described, in combination, a casing adapted to hold a set of leaves and having a permanently open side through which said set of leaves

is adapted to extend, movable adjacent walls, a gripper member associated with one of said walls, said adjacent walls being movable into positions to form sides of said casing and to cause said gripper member to grip said set of leaves, a catch on one of said walls and a catch member on another of said walls adapted to coöperate with said first catch to secure said walls in casing-forming position and said gripper member in gripping portion.

2. In a device of the character described, in combination, a casing adapted to hold a set of leaves and having a permanently open side through which said set of leaves is adapted to extend, movable adjacent walls, a gripper member associated with one of said walls, said adjacent walls being movable into positions to form sides of said casing and to cause said gripper member to grip said set of leaves, a catch on one of said walls, and a catch member on another of said walls adapted to coöperate with said first catch to secure said walls in casing-forming position and said gripper member in gripping position, and means adapted to disengage said catch members.

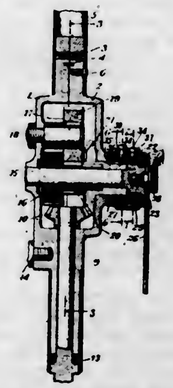
3. In a device of the character described, in combination, a casing adapted to hold a set of leaves and having a permanently open side through which said set of leaves extends, movable adjacent walls, a gripper member associated with one of said walls, said adjacent walls being movable into positions to form sides of said casing and to cause said gripper member to grip said set of leaves, a catch on one of said walls, a catch member on another of said walls coöperating with said first catch to secure said walls in casing-forming position and said gripping members in gripping position, means for disengaging said catch members, and a seal defacing member operated by said disengaging means.

4. In a device of the character described, in combination, a casing permanently open at one side and adapted to receive a set of leaves, a wall opposite said open side, movable to permit the set of leaves to be moved relative to said casing, and means adapted to grip the set of leaves to hold a portion of each leaf in said casing.

5. In a device of the character described, in combination, a casing permanently open at one side and adapted to receive a plurality of pads, a wall opposite said open side, movable to permit the plurality of pads to be introduced into said casing, gripping means adapted to prevent relative movement of said pads in said casing, and means adapted to prevent the removal of the stubs of said pads except in the path of their introduction.

[Claims 6 and 7 not printed in the Gazette.]

1,157,218. BREAST-DRILL. OSCAR D. HAPGOOD, Orange, Mass., assignor to Goodell-Pratt Company, Greenfield, Mass., a Corporation of Massachusetts. Filed Apr. 7, 1914. Serial No. 830,121. (Cl. 145—67.)



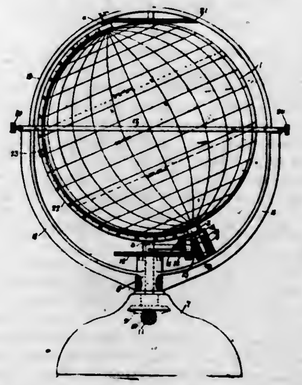
1. In a breast drill, a frame, a spindle rotatably mounted therein, concentric shafts rotatably mounted in said frame, said shafts being provided with recesses, high and low speed gears interposed with respect to said shafts and said spindle, an annulus rotatable on the shafts, a handle attached to said annulus, pawls supported by said annulus and fitting the shafts, said pawls being adapted to engage said recesses, and a ring shiftably mounted on said annulus and having oppositely acting camming surfaces for moving said pawls alternately into and out of the recesses for interchangeably throwing the gears into and out of operation.

2. In a tool, in combination, a frame, a spindle rotatably mounted therein and provided at its inner end with a bevel pinion, concentric shafts rotatably mounted in said frame, a bevel gear secured to one of said shafts and meshing with said bevel pinion, a stud, a pinion and a gear wheel secured to one another and rotatably mounted upon said stud; gear wheel secured to the second of said concentric shafts and meshing with said pinion on said stud, a pinion loosely mounted on said second shaft and meshing with the gear wheel on said stud, said last mentioned pinion being secured to said bevel gear mounted on said first mentioned shaft, a crank handle and means for operatively connecting said handle to either of said concentric shafts.

3. In a tool, in combination, a frame comprising recessed members and means for holding said members in position, a spindle rotatably mounted in said frame, concentric shafts rotatably mounted in said frame, intermeshing gearing carried on said shaft housed within said recessed members and opcratively connected to said shafts and to said spindle, a crank handle, and means for connecting said handle to either one of said concentric shafts for raising and lowering the speed of the spindle.

4. In a tool, in combination, a frame, a spindle rotatably mounted therein, a pinion secured to said spindle, concentric shafts rotatably mounted in said frame, intermeshing gearing operatively connected to said shafts and to said pinion, a crank handle, and means for operatively connecting said crank handle to either one of said concentric shafts and freeing said handle from operative connection with the other one of said concentric shafts whereby the speed of the spindle is varied.

1,157,219. TERRESTRIAL GLOBE. MERRILL W. HARD, Dayton, Ohio, assignor to William F. Eckart, Cleveland, Ohio. Filed Dec. 5, 1914. Serial No. 875,582. (Cl. 35—3.)



1. The combination with a globe mounted for rotation about both a vertical axis and an inclined axis, of a band supported adjacent to said globe, arranged to define the path of the end of the inclined axis of said globe, and provided with a scale.

2. The combination with a globe mounted for rotation about both a vertical axis and an inclined axis, of a band supported adjacent to said globe, arranged to define the

path of the end of the inclined axis of said globe, said band being scaled to correspond to the division of time for the year, whereby said globe may be adjusted to demonstrate the inclination of the earth's axis at any selected time during the year.

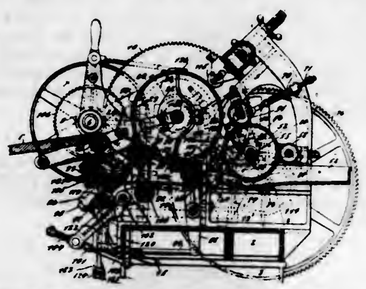
3. The combination with a globe mounted for rotation about a vertical axis and about an axis inclined at 23½° to said vertical axis, of a band arranged above said globe concentrically to said vertical axis and spaced 23½° therefrom, said band being scaled to indicate the days of the month whereby the movement of the globe about its vertical axis will cause the globe to assume the position of the earth on that day of the month adjacent to which the end of the inclined axis is positioned.

4. The combination with a globe mounted for rotation about both a vertical axis and an inclined axis, a band arranged above said globe concentrically to said vertical axis and an indicator supported adjacent to and adjustable over the face of the globe to indicate the movement of any part of the globe relatively to said band.

5. The combination with a globe mounted for rotation about both a vertical axis and an inclined axis, of a time band arranged circumferentially of said globe in the plane of its greatest horizontal diameter, a date band supported above said globe to define the path of movement of the end of said inclined axis, and a scale mounted for movement about said inclined axis, and arranged to intersect said time band.

[Claims 6 to 13 not printed in the Gazette.]

1,157,220. TUBE-MAKING MACHINE. EDGAR M. HAWKINS, Rochester, N. Y., assignor to M. D. Knowlton Company, Rochester, N. Y., a Corporation of New York. Filed May 19, 1913. Serial No. 768,545. (Cl. 93—81.)



1. In a machine of the class described, the combination with tube-winding means, of paste-applying means, means tending to move the paste-applying means into operative relation with the tube-winding means, means to normally prevent such movement of the paste-applying means, and means operable upon said last-named means at a predetermined point during the operation of the tube-winding means to permit movement of the paste-applying means into operative relation with the tube-winding means.

2. In a machine of the class described, the combination with tube-winding means, of paste-applying means, means tending to move the paste-applying means into operative relation with the tube-winding means, means to normally prevent such movement of the paste-applying means, means operable upon said last-named means at a predetermined point during the operation of the tube-winding means to permit movement of the paste-applying means into operative relation with the tube-winding means, and means operable during the operation of the tube-winding means to shift the paste-applying means to its inoperative position.

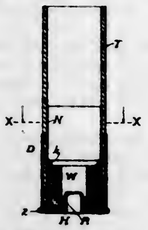
3. In a machine of the class described, the combination with a rotary mandrel, of paste-applying means, means for moving the paste-applying means into operative relation with the mandrel, a latch device for normally holding the paste-applying means in its inoperative position, and means to release said latch device to permit the paste-applying means to move into operative relation with the mandrel.

4. In a machine of the class described, the combination with a rotary mandrel, of paste-applying means, means for moving the paste-applying means into operative relation with the mandrel, a latch device for normally holding the paste-applying means in its inoperative position, and an element rotatable with the tube-winding means to act on said latch device and permit the paste-applying means to move into operative relation with the mandrel.

5. In a machine of the class described, the combination with a rotary mandrel, of paste-applying means, means tending to move the paste-applying means into operative relation with the mandrel, a latch device for normally holding the paste-applying means in its inoperative position, a cam operable upon said latch device to permit the paste-applying means to move to its operative position, and a cam for shifting the paste-applying means back to its inoperative position.

[Claims 6 to 31 not printed in the Gazette.]

1,157,221. CARTRIDGE. FRANK O. HOAGLAND, Bridgeport, Conn., assignor to Union Metallic Cartridge Company, Bridgeport, Conn., a Corportion of Connecticut. Filed Nov. 22, 1912. Serial No. 732,804. (Cl. 102—17.)

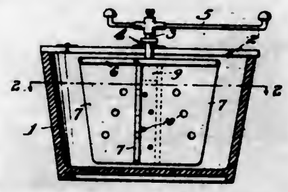


1. A cartridge shell having an outer shell tube, a tubular reinforce within the outer shell tube, a tubular base wad molded in place in said reinforce and having at its forward end two annular and contiguous zones comprising an outer zone of relatively low density and lesser resistance, and the inner zone of relatively higher density and having this dense inner zone with its forward surface substantially in a transverse plane, and a packing flange located forward of said outer zone of lower density and integrally connecting with said dense inner end zone, said packing flange having its forward surface comprising a conical surface extending forwardly and outwardly from the plane surface of said inner zone, said annular outer zone of lesser resistance being located below said packing flange, and yieldingly supporting said flange under an increasing gas pressure, substantially as described.

2. A cartridge having an outer paper shell tube, a metallic tubular reinforce within said outer tube, a tubular base wad molded in place in said reinforce and having at its forward end two annular and contiguous zones comprising an outer zone of relatively low density and lesser resistance, and the inner zone of relatively high density and having this dense inner zone with its forward surface substantially in a transverse plane, and a packing flange located forward of said outer zone of lower density and integrally connecting with said dense inner end zone, said packing flange having its forward surface comprising a conical surface extending forwardly and outwardly from the plane surface of said inner zone, said annular outer zone of lesser resistance being located below said packing flange, and yieldingly supporting said flange under an increasing gas pressure, substantially as described.

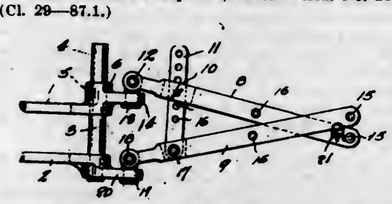
1,157,222. WASHING-MACHINE AGITATOR. JEREMIAH M. HOFFMAN, Reading, Pa., assignor of one-half to Henry Howard Hoffman, Reading, Pa. Filed Feb. 9, 1915. Serial No. 6,985. (Cl. 68—15.)

1. An agitator for washing machines comprising four vertical blades joined at their inner extremities in a manner to form a rectangular space or opening, said inner ends being perforated whereby a circulation of liquid may be had through said rectangular opening.



2. In a washing machine agitator, a centrally disposed shaft, a top piece to which the shaft is attached, and a plurality of blades secured to the under side of the top piece and arranged tangentially to the axial line of the shaft, the inner edges of which blades extend beyond said axial line and form a hollow space in the center of the agitator, said blades being perforated to permit circulation of liquid through said space.

1,157,223. VALVE-LIFTER. LEWIS H. HOLCOMB, Columbus, Ohio. Filed Apr. 22, 1915. Serial No. 23,058. (Cl. 29—87.1.)

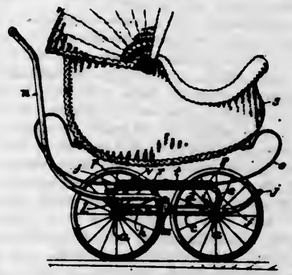


1. A device as described comprising a pair of pivotally joined lever handles, a pair of jaws one of which has a straight line movement relative to the other, and a swivel joint between each jaw and its handle permitting the jaws to swing at right angles to the plane of the handles.

2. A post a jaw fixed thereon and a jaw slidable on the post, a pair of lever handles pivoted to the jaws and pivoted together, and a swivel joint between the handles and jaws.

3. A post a jaw fixed thereon and a parallel jaw slidable on the post, a pair of lever handles pivoted to the jaws, and an adjustable pivotal link connecting said handles, and a swivel joint between each handle and its jaw.

1,157,224. GO-CART. FREDERICK HYDE, Philadelphia, Pa., assignor to Moses L. Bloch, Philadelphia, Pa. Filed Oct. 1, 1914. Serial No. 864,410. (Cl. 21—12.)



1. A go-cart comprising axles and wheels, a lower frame, an upper frame, a body supported on the upper frame, the upper frame being pivoted on the lower frame so as to turn thereon horizontally, and lifting means connecting the lower frame with the axles and adapted to be operated to raise the lower frame from its normal lower position to enable the upper frame when turned to clear the tops of the wheels.

2. A go-cart comprising axles and wheels, a body, a lower frame, an upper frame pivoted on a vertical axis centrally of the lower frame and comprising side bars curved front and rear to afford a spring support for the body, and lifting means connecting the lower frame with the axles and adapted to be operated to raise the lower frame from its normal lower position.

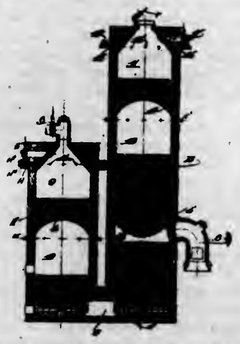
3. A go-cart comprising axles and wheels, side bars rigidly connecting the axles, a lower frame above the side bars, parallel links connecting the side bars and the lower frame, an upper body-supporting frame pivoted on the lower frame so as to turn thereon horizontally, and means to move the links toward either a horizontal or a vertical position, thereby moving the lower part of the upper frame either below the level of the tops of the wheels or above that level, thus permitting the upper frame to be turned on its pivot when elevated.

4. A go-cart comprising axles and wheels, side bars rigidly connecting the axles, a lower frame above the side bars, links pivotally connected to the rear portions of the side bars and lower frame, a lever the ends of which extend parallel to the rear links and are pivotally connected to the front portions of the side bars and lower frame, and an upper body supporting frame pivoted on a vertical axis centrally of the lower frame.

5. A go-cart comprising axles and wheels, side bars rigidly connecting the axles; a lower frame comprising lower and upper side bars connected at front and rear, cross-bars connecting the last named side bars, and a longitudinally centrally extending bar connecting the cross bars; an upper frame comprising side bars, spring body supporting members connecting with the last named side bars at front and rear, cross bars connecting the last named side bars, and a longitudinally centrally extending bar connecting the last named side bars and pivotally supported on the longitudinally extending bar of the upper frame; and means connecting the lower frame with the axle and permitting it to be raised from its normal depressed position.

[Claims 6 to 10 not printed in the Gazette.]

1,157,225. METHOD OF MANUFACTURING ILLUMINATING-GAS FROM LIQUID HYDROCARBONS. EDWARD C. JONES and LEON B. JONES, San Francisco, Cal. Filed May 23, 1912. Serial No. 699,132. (Cl. 48—74.)



The process of manufacturing gas from liquid hydrocarbon which consists in first heating a suitable heat retaining chamber, secondly shutting off the source of said heat and then for a period of the run introducing an active heat producing gas together with steam to form an active atmosphere to remove the deleterious products of combustion left in the heat retaining chamber after the heating operation, and thirdly injecting liuid hydrocarbon into said chamber filled with said active gases to be initially acted upon by the atmosphere of active gases produced

during the second step of the process, and at the same time maintaining throughout this period an active atmosphere whereby the liquid hydrocarbon is converted into a fixed gas.

1,157,226. CONCRETE-CASING. JOHN W. KENNY, New York, N. Y. Filed Jan. 26, 1912. Serial No. 673,535. (Cl. 137—28.)

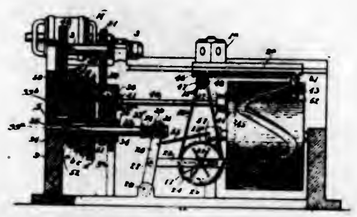


1. In a sectional casing adapted to be filled with concrete or the like, the combination of a plurality of casing sections with a sleeve section permanently secured in one end of each of said casing sections and having a projecting portion adapted to be loosely fitted into the opposite end of an adjoining casing section, the projecting portion of said sleeve section being free from positive connection with said adjoining casing section and spaced therefrom whereby to allow of the lateral adjustment of said casing sections relative to each other, and to permit of the entry of concrete between said sleeve and said casing section in order to hold the several parts duly secured together, substantially as specified.

2. In a sectional casing adapted to be filled with concrete or the like, the combination of a plurality of casing sections with a sleeve disposed in one end of each of said casing sections and arranged partly within and partly without said casing section, and means for permanently securing the inclosed end of said sleeve to said casing end in position to receive loosely the end of an adjoining casing section, the projecting portion of said sleeve section being free from positive connection with said adjoining casing section and spaced therefrom whereby to allow of the lateral adjustment of said casing sections relative to each other, and to permit of the entry of concrete between said sleeve and said casing section in order to hold the several parts duly secured together, substantially as specified.

3. In a sectional casing adapted to be filled with concrete or the like, the combination of a plurality of casing sections of uniform internal diameter with a relatively short sleeve section having one end disposed within one end of one of said casing sections, and having its other end projecting beyond the end of said casing section, and a series of inwardly extending projections on said casing section engaging the inclosed portion of said sleeve section whereby to secure said sleeve section in position therein to receive, upon its projecting end, the opposite end of a corresponding casing section, the projecting portion of said sleeve section being free from positive connection with said adjoining casing section and spaced therefrom whereby to allow of the lateral adustment of said casing sections relative to each other, and to permit of the entry of concrete between said sleeve and said casing section in order to hold the several parts duly secured together, substantially as specified.

1,157,227. MECHANICAL LATHE CONTROL. HERBERT KIENZLE, New York, N. Y. Filed June 4, 1914. Serial No. 842,826. (Cl. 29—64.)



1. The combination in a power driven turret lathe with a reciprocating rotatable turret and a rotary spindle, of a series of stepped change-speed gears rigidly mounted on a rotatable shaft, a plurality of independently rotatable change-speed gears, both said sets of gears being constantly in mesh, a constantly rotating shaft arranged interiorly of said second set of gears, actuating means actuated by the movement of said turret, a first sprocket wheel operably connected to said actuating means, an auxiliary shaft, a second sprocket wheel on said auxiliary shaft, a sprocket chain connecting said first sprocket wheel with said second sprocket wheel, a cam wheel on said shaft, and means for connecting said cam wheel to intermittently rotate with said shaft, said second rotatable shaft being reciprocably mounted and connected with said cam wheel so as to be reciprocated, thereby to select any one of said change-speed gears and to lock them to said interior shaft.

2. The combination in a power driven turret lathe with a reciprocating rotatable turret and a rotary spindle, of a series of stepped change-speed gears rigidly mounted on a rotatable shaft, a plurality of independently rotatable change-speed gears, both said sets of gears being constantly in mesh, a constantly rotating shaft arranged interiorly of said second set of gears, actuating means actuated by the movement of said turret, a first sprocket wheel operably connected to said actuating means, an auxiliary shaft, a second sprocket wheel on said auxiliary shaft, a sprocket chain connecting said first sprocket wheel with said second sprocket wheel, a cam wheel on said shaft, means for connecting said cam wheel to intermittently rotate with said shaft pins on said cam wheel at various distances from the center, and along radial lines in the face of said cam wheel, a cam faced plate adapted to be engaged by said pins, said second rotatable shaft being reciprocably mounted, and means connecting said cam faced plate with said second rotatable shaft so as to reciprocate said second rotatable shaft, thereby to select any one of said change-speed gears and to lock them to said interior shaft.

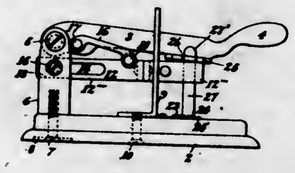
3. The combination in a power driven turret lathe with a reciprocating rotatable turret and a rotary spindle, of a series of stepped change-speed gears rigidly mounted on a rotatable shaft, a plurality of independently rotatable change-speed gears, both said sets of gears being constantly in mesh, a constantly rotating shaft arranged interiorly of said second set of gears, actuating means actuated by the movement of said turret, a first sprocket wheel operably connected to said actuating means, an auxiliary shaft, a second sprocket wheel on said auxiliary shaft, a sprocket chain connecting said first sprocket wheel with said sprocket wheel, a cam wheel on said shaft, means for connecting said cam wheel to intermittently rotate with said shaft, pins on said cam wheel at various distances from the center, and along radial lines in the face of said cam wheel, a cam faced plate adapted to be engaged by said pins, a thrust rod on which said cam faced plate is secured, said second rotatable shaft being reciprocably mounted, and a link pivotally mounted and connecting said thrust rod with said second rotatable shaft so as to reciprocate said second rotatable shaft by the actuation of said cam wheel and thereby to select any one of said change-speed gears and to lock them to said interior shaft.

4. The combination in a power driven turret lathe with a reciprocating rotatable turret, a rotary spindle, and driving means for said rotatable spindle, of a change-speed mechanism connected to said driving means, actuating means operated by said turret, a first sprocket wheel actuated by said actuating means, an auxiliary shaft, a second sprocket wheel on said auxiliary shaft, a sprocket chain connecting said first sprocket wheel with said second sprocket wheel, a cam wheel on said shaft, and means for connecting said cam wheel to intermittently rotate with said shaft, said change-speed mechanism being connected with said cam wheel thereby to be actuated to change the speed of said driving means.

5. The combination in a power driven turret lathe with a reciprocating rotatable turret, a rotary spindle, driving means for said rotary spindle, of a change-speed mechanism connected to control the speed of said driving means, a cam wheel, and operable connections connecting said cam wheel with said turret thereby to actuate the cam wheel by the movement of said turret, said change-speed mechanism being connected with said cam wheel, thereby to be actuated to change the speed of said driving means.

[Claims 6 to 12 not printed in the Gazette.]

1,157,228. PAPER PERFORATING AND FILING DEVICE. FRED J. KLEIN, New York, N. Y. Filed May 14, 1913. Serial No. 767,513. (Cl. 129—4.)



1. In a paper filing device, the combination of paper fastener base holding means which release the fastener on drawing it forward, fastener tongue supporting means having straight line engaging and releasing movements, and means for forcing the papers onto the fastener tongues to perforate and file them.

2. In a paper filing device, the combination of a base, paper fastener holding means carried thereon which release the fastener on drawing it forward, fastener tongue supporting means having right line engaging and releasing movements, and means for forcing the papers onto the fastener tongues to perforate and file them.

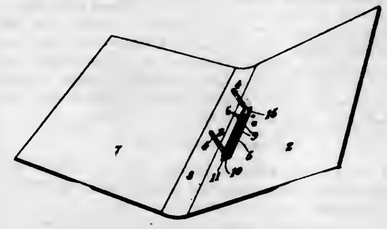
3. In a paper filing device, the combination of fastener base holding means which release the fastener on drawing it forward, fastener tongue alining and supporting means having engaging and releasing movements at right angles to the tongues, and means for forcing the papers onto the fastener tongues to perforate and file them.

4. In a paper filing device, the combination of fastener base holding means which release the fastener on drawing it forward, means for forcing the papers onto the fastener tongues to perforate and file them, a member having means for alining the fastener tongues and for supporting them in position when alined, and means connected with the perforating and filing means for imparting right line engaging and releasing movements to said alining and supporting member

5. In a paper filing device, the combination of a base, a lever mounted on said base, a bar secured to said lever at right angles to the longitudinal axis thereof and having two paper perforating slots, one on each side of said axis, fastener base holding means which release the fastener on drawing it forward, means for alining and supporting the outer parts of the fastener tongues when perforating papers, and means for positively connecting the alining and supporting means with the lever for imparting engaging and releasing movements thereto.

[Claims 6 to 9 not printed in the Gazette.]

1,157,229. PAPER FILING AND BINDING DEVICE. FRED J. KLEIN, New York, N. Y. Filed Sept. 18, 1913. Serial No. 790,390. (Cl. 129—25.)

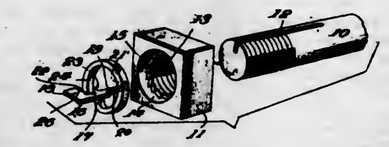


1. In a paper filing and binding device, the combination of a file base, a fastener member having two tongues to be pushed through papers and a corrugated base portion wider than said tongues and integral therewith, and means incorporated in said file base, and embodying a pair of parallel flanges for engaging and holding the fastener member by the two upper, longitudinal edges and the lower portions of the corrugations of its base portion.

2. In a paper filing and binding device, the combination of a pair of flexibly connected file covers, a detachable fastener member embodying a pair of tongues and a corrugated base portion wider than said tongues and integral therewith, and means incorporated in one of said file covers for engaging and holding said fastener member by the two upper, longitudinal edges and the lower portions of the corrugations of its base portion.

3. In a paper filing and binding device, the combination of two file covers, a flexible back joining said covers, a detachable fastener member embodying two tongues to be pushed through papers and integral with a corrugated base portion wider than said tongues, means embodying a pair of parallel flanges, incorported in one of said covers, for engaging and holding the fastener member by the two upper, longitudinal edges and the bottom portions of the corrugations of its base, and means for preventing endwise movement of the fastener member.

1,157,230. NUT-LOCK. WARNER KLETTKE, Escanaba, Mich. Filed Dec. 17, 1914. Serial No. 877,770. (Cl. 151—9.)



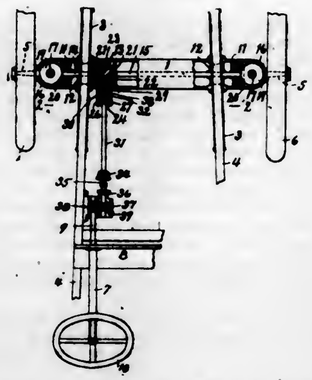
1. A device of the character described including a nut disposed for engagement with a bolt and having a locking ring seat formed therein, said seat terminating at its inner extremity in a rack, and a locking member including a key operatively engaging the bolt and having a shoulder formed thereon having locking engagement with the teeth of the rack, and a locking ring carried by said key and resting in said seat, said ring having locking engagement with the teeth of said rack and coacting with said shoulder in holding the nut against retrograde movement.

2. A device of the character described including a bolt having a slot formed therein, a nut engaging the bolt and provided with a locking ring seat terminating at its inner extremity in a rack, and a locking member including a key removably fitted in said slot and provided with a shoulder having locking engagement with the teeth of the rack, and a split locking ring carried by said key and resting in said seat, said locking ring being provided at its free extremity with a tooth having locking engagement with the teeth of the rack and coacting with said

shoulder of the key in holding the nut against retrograde movement.

3. A device of the character described including a bolt having a slot formed therein, a nut engaging the bolt and provided with a rack, and a locking member including a key having a shank removably fitted in said slot, the said shank being notched at its inner extremity and upon one edge to provide a shoulder adapted for engagement over the free end face of the bolt with said notch bearing within said slot, and a locking ring carried by said key and selectively engaging the teeth or the rack.

1,157,231. STEERING-GEAR. SZCZEPAN KUZDZIAL, Holyoke, Mass. Filed May 22, 1915. Serial No. 29,784. (Cl. 21—196.)



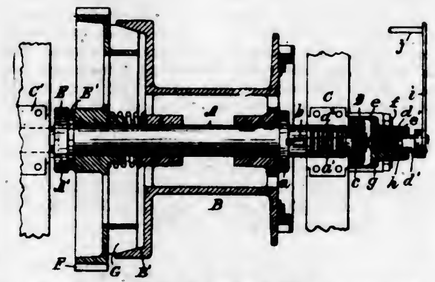
1. Steering gear comprising a hollow axle provided with interior bearings, stub-axles having spindles journaled in said axle, gears secured on said spindles, independent shafts journaled in said bearings, gears secured on said shafts, at their outer ends, to intermesh with said spindle gears, gears secured on the adjacent ends of said shafts, an intermediate gear journaled in said axle and intermeshing with said last-mentioned gears on said shafts, a steering-post, and a flexible driving connection between said intermediate gear and said post.

2. The combination, in steering gear for vehicles, with the steering-post of a vehicle, of a hollow front axle provided with interior bearings and with an exterior sleeve adjacent to one of such bearings, stub-axles having vertical spindles journaled in said axle, independent shafts journaled in said bearings, actuating means between said shafts and said spindles, gears secured on the adjacent ends of said shafts, a horizontal spindle and sleeve connected and respectively journaled in said bearing to which said first-mentioned sleeve is adjacent and in the latter, an intermediate gear mounted on said horizontal spindle to rotate therewith, said intermediate gear intermeshing with said first-mentioned gears, a head arranged to slide in said spindle sleeve, means to connect said spindle sleeve and head rotatably together, a shaft loosely connected with said head, a shaft adjacent to said steering-post, a universal coupling connection between said last-mentioned shafts, and engaging driving members on said post and said shaft which is adjacent thereto.

3. The combination, in steering gear for vehicles, with the steering-post a vehicle, of a hollow front axle having slotted ends and provided with interior bearings, horizontal stub-axles having vertical spindles journaled in said axle, said stub-axles extending through and operating in the slots in the ends of said front axle, independent shafts journaled in said bearings, engaging driving members on said shafts and spindles, gears secured on the adjacent terminals of said shafts, a rotary member journaled in said axle and carrying an intermediate gear which intermeshes with said first-mentioned gears, a shaft operated by said steering-post, and a shaft having flexible connections, with said shaft operated by said post and with said rotary member.

4. The combination, in steering gear for vehicles, with the steering-post of a vehicle, of a hollow front axle provided with interior bearings, stub-axles having spindles journaled in said axle, independent shafts journaled in said bearings, means to actuate said spindles from said shafts, means to rotate said shafts in opposite directions, and flexible driving means between said steering-post and said rotary driving means for said shafts.

1,157,232. INTEGRAL NUT AND BEARING FOR FRICTION-CLUTCHES. ASHER LAMBERT, Newark, N. J. Filed Apr. 29, 1915. Serial No. 24,681. (Cl. 192—8.)



1. In a hoister having a drum-shaft with bearings near its opposite ends and having a thrust-collar attached thereto outside of one of the bearings, the combination, with such bearing, of a claw having a hollow body to fit over the said thrust-collar, and having formed integral therewith a nut for a thrust-screw and a bearing for the stem of the screw outside of such nut.

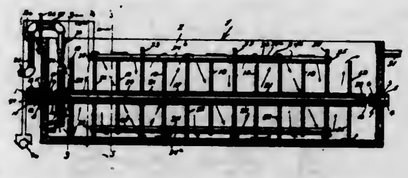
2. In a hoister, the combination, with a drum-shaft with bearings near its opposite ends and having a thrust-collar attached thereto outside of one of the shaft-bearings, of a claw having a hollow body fitted over the said thrust-collar and attached to the said bearing and having a nut for a thrust-screw, with a bearing outside of the nut for the stem of the screw and a screw fitted to such nut and bearing and provided with a lever to turn the screw, the nut being relieved from the lateral pressure of the lever by the said outside bearing.

3. In a hoister, the combination, with a drum-shaft with bearings near its opposite ends and having a shaft-thrust-collar attached thereto outside of one of the bearings, of a driver-thrust-collar attached thereto inside of the opposite bearing, with a driving-gear rotatable upon the shaft adjacent thereto and a friction-driver attached to its inner face, a drum mounted to turn upon the shaft between the bearings and fitted to engage the friction-driver, a pin fitted movably in the opposite end of the shaft to press the drum endwise, and a claw having a hollow body fitted outside of the shaft-thrust-collar and attached to the adjacent shaft-bearing and having integral therewith a nut for a thrust-screw and a bearing outside of the nut for the shank of such screw, with a screw fitted to such nut and bearing and having a lever for turning the screw.

1,157,233. WATER-PURIFYING DEVICE. LUTHER C. LASHMET, Jacksonville, Ill. Filed Nov. 14, 1914. Serial No. 872,172. (Cl. 204—25.)

1. A water purifier comprising a tank of non-conducting material, a plurality of stationary electrodes therein, said electrodes being connected by rods, a shaft revoluble within said tank, and a plurality of electrodes on said shaft and disposed between said stationary electrodes, said sets of electrodes being connected with the terminals of a source of current.

2. A water purifier comprising a tank of non-conducting material, a plurality of stationary electrodes therein, rods connected with a source of current passing through and connecting said electrodes, a shaft revoluble within said tank and extending through said stationary electrodes and insulated therefrom, and a plurality of electrodes on said shaft and disposed between said stationary electrodes, said second named electrodes receiving their current from said shaft.



3. A water purifier comprising a tank of insulating material provided with outlet and inlet pipes, said inlet pipe having a nozzle on its inner end for causing a forced stream, a plurality of stationary metal plates disposed therein, a shaft journaled in said tank and extending through said plates and insulated therefrom, a plurality of metal plates on said shaft and disposed between said first named plates, said sets of plates being connected with the terminals of a source of current, and means for rotating said shaft, said means being operated by the flow of water into said tank through said nozzle.

4. A water purifier comprising a tank of insulating material provided with an outlet and an inlet pipe, said inlet pipe having a nozzle on its inner end for causing a forced stream, a plurality of stationary metal plates disposed therein, a shaft journaled in said tank and extending through said plates and insulated therefrom, a plurality of metal plates on said shaft and disposed between said first named plates, said sets of plates being connected with the terminals of a source of current, and means for rotating said shaft, said means comprising a water wheel secured on said shaft and disposed to be rotated by the flow of water from said nozzle.

5. A water purifier comprising a tank formed of insulating material, inlet and outlet pipes communicating with said tank, a plurality of spaced metallic plates within said tank and connected with each other, alternate ones of said plates resting upon the bottom of said tank and the other alternate ones being spaced above the bottom thereof, a shaft journaled in said tank and extending through said plates and insulated therefrom, a plurality of metallic disks secured upon said shaft and disposed between and in spaced relation to said first named plates, said sets of plates being connected with the terminals of a source of current and consequently having opposite polarity, and means for rotating said shaft.

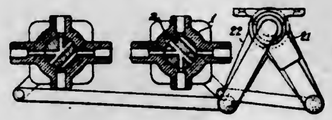
1,157,234. FLEXIBLE HYDRAULIC WATERPROOF COMPOUND. ALFRED F. LESTER, Detroit, Mich. Filed May 18, 1914. Serial No. 839,276. (Cl. 106—34.)

1. A flexible hydraulic waterproof compound comprising substantially forty parts of hydraulic cement, thirty-two parts of powdered gypsum, twenty parts of powdered calcined gypsum, one part of powdered hydrate of lime, and four parts of fire clay.

2. A flexible hydraulic waterproof compound comprising substantially forty per cent. of hydraulic cement, thirty-two per cent. of powdered gypsum, twenty per cent. of powdered calcined gypsum, one per cent. of powdered hydrate of lime, four per cent. of fire clay, and three per cent. of a fibrous bonding substance.

3. A flexible hydraulic waterproof compound comprising substantially forty per cent. of hydraulic cement, thirty-two per cent. of powdered gypsum, twenty per cent. of powdered calcined gypsum, one per cent. of powdered hydrate of lime, four per cent. of fire clay, and three per cent. of shredded wood.

1,157,235. VALVE. JAMES F. MCELROY, Albany, N. Y.; Susie Hale McElroy, executrix of said James F. McElroy, deceased, assignor to Consolidated Car-Heating Company, a Corporation of West Virginia. Filed Feb. 15, 1909. Serial No. 477,868. (Cl. 138—2.)



1. The combination with two separate motor-controlling valves, of adjacent operating handles therefor forming the respective halves of a common loop handle.

2. The combination with two separate motor-controlling valves, of parallel operating shafts therefor, and handles on the respective shafts, forming respectively the two halves of a common loop handle.

3. The combination with two separate motor-controlling valves, of concentric operating shafts therefor, and operating handles on said shafts, forming the respective halves of a common loop handle.

1,157,236. TRAIN-PIPE END VALVE. JAMES F. MCELROY, Albany, N. Y.; Susie Hale McElroy, executrix of said James F. McElroy, deceased, assignor to Consolidated Car-Heating Company, a Corporation of West Virginia. Filed Apr. 24, 1909. Serial No. 492,070. (Cl. 188—8.)



1. An operating device for a train-pipe end-valve comprising a rock shaft in operative connection with the valve, a crank arm rigidly secured at one end to said rock shaft, and a sectional yielding operating link connected at one end to the other end of said crank arm.

2. An operating device for a train-pipe end-valve comprising a rock shaft in operative connection with the valve, a crank arm rigidly secured at one end to said rock shaft, a sectional yielding operating link connected at one end to the other end of said crank arm, the other end of said link being provided with a handle.

3. An operating device for a train-pipe end-valve, comprising a valve-shaft, a vertically moving handle-bar extending through the car floor and a stop for holding said bar in its depressed position.

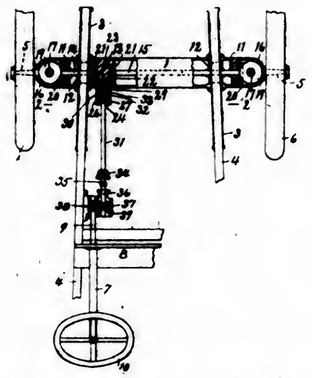
4. An operating device for a train-pipe end-valve, comprising a valve-shaft, vertically moving handle-bar therefor extending through the car floor, and stops for holding the bar in both its raised and closed positions.

5. An operating device for a train-pipe end-valve, comprising a horizontal shaft in operative connection with

shoulder of the key in holding the nut against retrograde movement.

3. A device of the character described including a bolt having a slot formed therein, a nut engaging the bolt and provided with a rack, and a locking member including a key having a shank removably fitted in said slot, the said shank being notched at its inner extremity and upon one edge to provide a shoulder adapted for engagement over the free end face of the bolt with said notch bearing within said slot, and a locking ring carried by said key and selectively engaging the teeth of the rack.

1,157,231. STEERING-GEAR. SZCZEPAN KUZDZIAL, Holyoke, Mass. Filed May 22, 1915. Serial No. 29,784. (Cl. 21—196.)



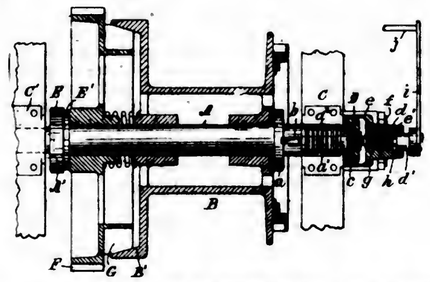
1. Steering gear comprising a hollow axle provided with interior bearings, stub-axles having spindles journaled in said axle, gears secured on said spindles, independent shafts journaled in said bearings, gears secured on said shafts, at their outer ends, to intermesh with said spindle gears, gears secured on the adjacent ends of said shafts, an intermediate gear journaled in said axle and intermeshing with said last-mentioned gears on said shafts, a steering-post, and a flexible driving connection between said intermediate gear and said post.

2. The combination, in steering gear for vehicles, with the steering-post of a vehicle, of a hollow front axle provided with interior bearings and with an exterior sleeve adjacent to one of such bearings, stub-axles having vertical spindles journaled in said axle, independent shafts journaled in said bearings, actuating means between said shafts and said spindles, gears secured on the adjacent ends of said shafts, a horizontal spindle and sleeve connected and respectively journaled in said bearing to which said first-mentioned sleeve is adjacent and in the latter, an intermediate gear mounted on said horizontal spindle to rotate therewith, said intermediate gear intermeshing with said first-mentioned gears, a head arranged to slide in said spindle sleeve, means to connect said spindle sleeve and head rotatably together, a shaft loosely connected with said head, a shaft adjacent to said steering-post, a universal coupling connection between said last-mentioned shafts, and engaging driving members on said post and said shaft which is adjacent thereto.

3. The combination, in steering gear for vehicles, with the steering-post a vehicle, of a hollow front axle having slotted ends and provided with interior bearings, horizontal stub-axles having vertical spindles journaled in said axle, said stub-axles extending through and operating in the slots in the ends of said front axle, independent shafts journaled in said bearings, engaging driving members on said shafts and spindles, gears secured on the adjacent terminals of said shafts, a rotary member journaled in said axle and carrying an intermediate gear which intermeshes with said first-mentioned gears, a shaft operated by said steering-post, and a shaft having flexible connections, with said shaft operated by said post and with said rotary member.

4. The combination, in steering gear for vehicles, with the steering-post of a vehicle, of a hollow front axle provided with interior bearings, stub-axles having spindles journaled in said axle, independent shafts journaled in said bearings, means to actuate said spindles from said shafts, means to rotate said shafts in opposite directions, and flexible driving means between said steering-post and said rotary driving means for said shafts.

1,157,232. INTEGRAL NUT AND BEARING FOR FRICTION-CLUTCHES. ASHER LAMBERT, Newark, N. J. Filed Apr. 29, 1915. Serial No. 24,681. (Cl. 192—8.)



1. In a holster having a drum-shaft with bearings near its opposite ends and having a thrust-collar attached thereto outside of one of the bearings, the combination, with such bearing, of a claw having a hollow body to fit over the said thrust-collar, and having formed integral therewith a nut for a thrust-screw and a bearing for the stem of the screw outside of such nut.

2. In a holster, the combination, with a drum-shaft with bearings near its opposite ends and having a thrust-collar attached thereto outside of one of the shaft-bearings, of a claw having a hollow body fitted over the said thrust-collar and attached to the said bearing and having a nut for a thrust-screw, with a bearing outside of the nut for the stem of the screw and a screw fitted to such nut and bearing and provided with a lever to turn the screw, the nut being relieved from the lateral pressure of the lever by the said outside bearing.

3. In a holster, the combination, with a drum-shaft with bearings near its opposite ends and having a shaft-thrust-collar attached thereto outside of one of the bearings, of a driver-thrust-collar attached thereto inside of the opposite bearing, with a driving-gear rotatable upon the shaft adjacent thereto and a friction-driver attached to its inner face, a drum mounted to turn upon the shaft between the bearings and fitted to engage the friction-driver, a pin fitted movably in the opposite end of the shaft to press the drum endwise, and a claw having a hollow body fitted outside of the shaft-thrust-collar and attached to the adjacent shaft-bearing and having integral therewith a nut for a thrust-screw and a bearing outside of the nut for the shank of such screw, with a screw fitted to such nut and bearing and having a lever for turning the screw.

1,157,233. WATER-PURIFYING DEVICE. LUTHER C. LASHMET, Jacksonville, Ill. Filed Nov. 14, 1914. Serial No. 872,172. (Cl. 204—25.)

1. A water purifier comprising a tank of non-conducting material, a plurality of stationary electrodes therein, said electrodes being connected by rods, a shaft revoluble within said tank, and a plurality of electrodes on said shaft and disposed between said stationary electrodes, said sets of electrodes being connected with the terminals of a source of current.

2. A water purifier comprising a tank of non-conducting material, a plurality of stationary electrodes therein, rods connected with a source of current passing through and connecting said electrodes, a shaft revoluble within said tank and extending through said stationary electrodes and insulated therefrom, and a plurality of electrodes on said shaft and disposed between said stationary electrodes, said second named electrodes receiving their current from said shaft.



3. A water purifier comprising a tank of insulating material provided with outlet and inlet pipes, said inlet pipe having a nozzle on its inner end for causing a forced stream, a plurality of stationary metal plates disposed therein, a shaft journaled in said tank and extending through said plates and insulated therefrom, a plurality of metal plates on said shaft and disposed between said first named plates, said sets of plates being connected with the terminals of a source of current, and means for rotating said shaft, said means being operated by the flow of water into said tank through said nozzle.

4. A water purifier comprising a tank of insulating material provided with an outlet and an inlet pipe, said inlet pipe having a nozzle on its inner end for causing a forced stream, a plurality of stationary metal plates disposed therein, a shaft journaled in said tank and extending through said plates and insulated therefrom, a plurality of metal plates on said shaft and disposed between said first named plates, said sets of plates being connected with the terminals of a source of current, and means for rotating said shaft, said means comprising a water wheel secured on said shaft and disposed to be rotated by the flow of water from said nozzle.

5. A water purifier comprising a tank formed of insulating material, inlet and outlet pipes communicating with said tank, a plurality of spaced metallic plates within said tank and connected with each other, alternate ones of said plates resting upon the bottom of said tank and the other alternate ones being spaced above the bottom thereof, a shaft journaled in said tank and extending through said plates and insulated therefrom, a plurality of metallic disks secured upon said shaft and disposed between and in spaced relation to said first named plates, said sets of plates being connected with the terminals of a source of current and consequently having opposite polarity, and means for rotating said shaft.

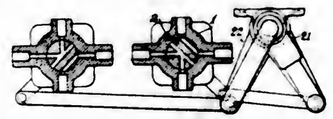
1,157,234. FLEXIBLE HYDRAULIC WATERPROOF COMPOUND. ALFRED F. LESTER, Detroit, Mich. Filed May 18, 1914. Serial No. 839,276. (Cl. 106—34.)

1. A flexible hydraulic waterproof compound comprising substantially forty parts of hydraulic cement, thirty-two parts of powdered gypsum, twenty parts of powdered calcined gypsum, one part of powdered hydrate of lime, and four parts of fire clay.

2. A flexible hydraulic waterproof compound comprising substantially forty per cent. of hydraulic cement, thirty-two per cent. of powdered gypsum, twenty per cent. of powdered calcined gypsum, one per cent. of powdered hydrate of lime, four per cent. of fire clay, and three per cent. of a fibrous bonding substance.

3. A flexible hydraulic waterproof compound comprising substantially forty per cent. of hydraulic cement, thirty-two per cent. of powdered gypsum, twenty per cent. of powdered calcined gypsum, one per cent. of powdered hydrate of lime, four per cent. of fire clay, and three per cent. of shredded wood.

1,157,235. VALVE. JAMES F. MCELROY, Albany, N. Y.; Susie Hale McElroy, executrix of said James F. McElroy, deceased, assignor to Consolidated Car-Heating Company, a Corporation of West Virginia. Filed Feb. 15, 1909. Serial No. 477,868. (Cl. 138—2.)

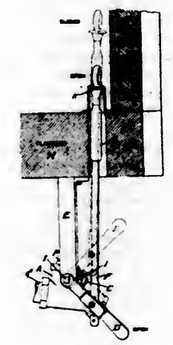


1. The combination with two separate motor-controlling valves, of adjacent operating handles therefor forming the respective halves of a common loop handle.

2. The combination with two separate motor-controlling valves, of parallel operating shafts therefor, and handles on the respective shafts, forming respectively the two halves of a common loop handle.

3. The combination with two separate motor-controlling valves, of concentric operating shafts therefor, and operating handles on said shafts, forming the respective halves of a common loop handle.

1,157,236. TRAIN-PIPE END VALVE. JAMES F. MCELROY, Albany, N. Y.; Susie Hale McElroy, executrix of said James F. McElroy, deceased, assignor to Consolidated Car-Heating Company, a Corporation of West Virginia. Filed Apr. 24, 1909. Serial No. 492,070. (Cl. 188—8.)



1. An operating device for a train-pipe end-valve comprising a rock shaft in operative connection with the valve, a crank arm rigidly secured at one end to said rock shaft, and a sectional yielding operating link connected at one end to the other end of said crank arm.

2. An operating device for a train-pipe end-valve comprising a rock shaft in operative connection with the valve, a crank arm rigidly secured at one end to said rock shaft, a sectional yielding operating link connected at one end to the other end of said crank arm, the other end of said link being provided with a handle.

3. An operating device for a train-pipe end-valve, comprising a valve-shaft, a vertically moving handle-bar extending through the car floor and a stop for holding said bar in its depressed position.

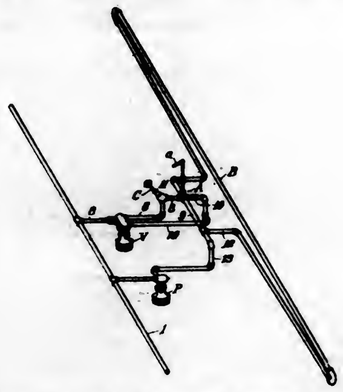
4. An operating device for a train-pipe end-valve, comprising a valve-shaft, vertically moving handle-bar therefor extending through the car floor, and stops for holding the bar in both its raised and closed positions.

5. An operating device for a train-pipe end-valve, comprising a horizontal shaft in operative connection with

the valve, a bracket suspended from the undersurface of the car floor and in which said shaft is mounted and a vertical operating handle for said shaft extending through the car floor.

[Claims 6 to 11 not printed in the Gazette.]

1,157,237. STEAM-HEATING SYSTEM. JAMES F. MCELROY, Albany, N. Y., assignor to Consolidated Car-Heating Company, a Corporation of West Virginia. Filed July 2, 1912. Serial No. 707,276. (Cl. 237—6.)



1. The combination with a source of steam supply and a radiator, of a pipe connection between the steam supply and both terminals of the radiator, a thermostatic regulator controlling the pipe connection, a pressure trap in communication with one terminal of said radiator, and means in said pipe connection whereby the steam may be caused to flow through the radiator in one direction to the thermostat of the regulator, or through the radiator in the opposite direction to the trap, and excluded from the radiator.

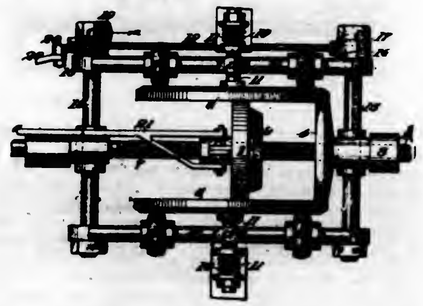
2. The combination with a source of steam supply, and a radiator, of a thermostatic vapor regulator interposed between the steam supply and the radiator, means connecting the regulator with one terminal of the radiator, a pressure trap connected with the other terminal of the radiator, and means whereby steam may be selectively caused to flow to the radiator in either direction, and the outflow of the radiator likewise caused to flow either to the trap or to the thermostat of the regulator, according to the direction of inflow of the steam into the radiator.

3. The combination with a source of steam supply, and a radiator, of a thermostatic vapor regulator interposed between the steam supply and the radiator, means connecting the regulator with one terminal of the radiator, a pressure trap connected with the other terminal of the radiator, and a manually operated valve provided with means for selectively causing the steam to flow to the radiator in either direction, and to cause the outflow of the radiator to flow either to the trap or to the thermostat of the regulator according to the direction of inflow of the steam into the radiator.

4. The combination with a radiator and a source of steam supply, of a pipe connection between the steam supply and one terminal of the radiator, a branch connection between the pipe and the other terminal of the radiator, a thermostatic vapor regulator connected with said branch and interposed between the steam supply and the radiator, said regulator being in communication with said branch connection, a pressure trap also connected with the last mentioned terminal of the radiator, and a valve provided with means whereby steam may be selectively caused to flow to the radiator in either direction, and the outflow of the radiator likewise caused to flow either to the trap or to the thermostat of the radiator, according to the direction of inflow of the steam into the radiator.

5. In a steam heating system, a radiator, a steam supply therefor, a thermostatic vapor regulator interposed between the steam supply and the radiator, a pressure trap in connection with the radiator, and means whereby the steam is caused to flow through the radiator in one direction and to return to the regulator, or caused to flow through the radiator in the opposite direction to the trap and to be excluded from the regulator.

1,157,238. MULTIPLE-DISK POWER TRANSMISSION. CHESTER MCLAREN, Oakland, Cal. Filed June 18, 1914. Serial No. 845,824. (Cl. 74—26.)



1. The combination in a power transmitting apparatus, of alined driving and driven shafts, a clutch member fixed upon the driving shaft, a clutch member splined and slidable upon the driven shaft to and from engagement with the clutch of the driving shaft so that said shafts may be directly connected for uniform rotary movement, frictional disks disposed upon opposite sides of said clutch members, each disk adaptable to engage both of said members, a mechanism for controlling the pressure of said disks upon opposite sides of the clutch members, and a connection between said mechanism and the clutch shifting device whereby the shiftable clutch member may be disengaged from the driving clutch member without bringing the friction disks into driving engagement with the clutch members.

2. In a power transmitting apparatus, the combination with alined driving and driven shafts, of a clutch member fixed to the driving shaft, a clutch member splined and slidable upon the driven shaft, beams disposed in spaced relation, on opposite sides of the alined shafts, anti-friction rollers mounted on each beam, bosses formed upon the ends of the beams, tension members engaged in the bosses, the bosses of one beam having cam faces, cams mounted on one of the ends of the tension members and engaged with the first cam faces, friction disks yieldably supported by the beams and disposed parallel with the alined shafts and having their outer faces engaged by the rollers, and means for rotating the second cams whereby the rollers and beams are moved toward each other, thereby holding the friction disks in engagement with the clutch members.

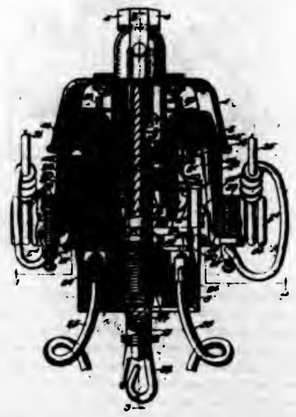
3. In a power transmitting apparatus, the combination with alined driving and driven shafts, of clutch members mounted on the respective shafts, tension members disposed transversely thereof, beams slidable on the members, anti-friction rollers mounted on the beams, friction disks rotatably supported by the beams and having their outer surfaces engaged by the rollers, one of said beams having cam faces on its ends, cams rotatably supported by one of the ends of the tension members and means for rotating the rotatable cams to control the pressure of the rollers on the disks and to hold the disks in frictional engagement with the clutch members.

4. In combination with a driving and driven shaft and clutch members mounted respectively on said shafts, a beam arranged on one side of the shafts, friction disks on the beam, means on the beam to engage the outer face of the disk, a pair of means to slidably support the beam, cams formed on the ends of the beam, cams rotatable on the beam supporting means and means to rotate the rotatable cams in unison to cause same to move the beam toward the shafts.

5. In combination with a driving and driven shaft and means to couple said shafts, movable means to engage the coupling means, and unitary means to both actuate the coupling means and the movable means to cause the latter to be engaged with the coupling means.

[Claim 6 not printed in the Gazette.]

1,157,239. CUT-OUT PULLEY. ARTHUR C. MCWILLIAMS, South Bend, Ind. Filed May 21, 1914. Serial No. 839,962. (Cl. 240—66.)



1. In a device of the class described, the combination with a hoisting rope, of an insulator hollowed out on the under side to form a canopy, said insulator having a central opening and being provided with two line terminals, a metallic canopy surmounting said insulator, said metallic canopy having an opening for the hoisting rope, an insulating block attached to the lower end of said rope, a pair of terminals mounted on said block, a contact ring mounted on said block and connected to one of the said terminals thereon, a spring switch connected to one of the line terminals and located chiefly within the insulator, a metallic element also located chiefly within the insulator and connected to the remaining line terminal thereon, the resilience of said spring switch tending to cause it to engage said metallic element to close the line circuit therethrough, said spring switch being in position to be engaged by said contact ring when the latter is raised and to be forced by it to open position, away from said metallic element, and means for positioning said contact ring and enabling it to overcome the thrust of said spring switch, said positioning means including a conductor for closing the circuit from said conductive element to the remaining terminal on said block.

2. In a device of the class described, the combination of a stationary insulator deeply chambered on the under side and provided with two line terminals, a vertically movable insulating block provided with two lamp terminals, two concentric rings mounted on said block and connected individually to the terminals thereon, said rings when raised being adapted to enter the chamber in said insulator, a spring switch connected to one of the line terminals, resilient fingers mounted in said insulator within the chamber thereof, said fingers being in position to engage one of said contact rings when the latter are raised to thereby guide the other of said rings against said spring switch to move the latter to open position, one of said fingers being connected to the remaining line terminal on the insulator, and a contact within the chamber in the insulator electrically connected to one of said line terminals and located in a position to be engaged by said spring switch when the latter is released.

3. In a device of the class described, the combination of a one-piece insulator having a recess in the bottom and provided with a line terminal, a vertically movable insulator block provided with lamp terminals, two upright contact rings mounted on said block and adapted to enter said recess, said rings being individually connected to said lamp terminals, a spring switch on said insulator connected to one of the line terminals and adapted to be opened by one of said rings when the latter are in raised position, means for positioning said rings to thereby overcome the thrust of the switch, said positioning means being adapted to convey current from one of said contact rings to the remaining lamp terminals, and a contact mounted on said insulator and electrically connected to the last mentioned line terminal, said contact being in position to be engaged by said spring switch when the latter is released and being removable whereby, by the removal of said contact or the substitution thereof by an insulating element, the device may be converted from a "series" device to a "multiple" one.

4. In a supporting mechanism for electric lamps, the combination of a stationary insulator provided with line terminals, a vertically movable insulating block for supporting the lamp, contacts on said block for conveying current to and from the lamp, a spring switch connected to one of said line terminals on the insulator, said switch being in position to be repressed by one of the contacts on the vertically movable block, means for conveying current from the other contact on the vertically movable block to the remaining line terminal on the insulator, and a clip on said insulator electrically connected to the last mentioned line terminal and being located in position to be engaged by said switch when the latter is released, said clip being removable, for the purpose described.

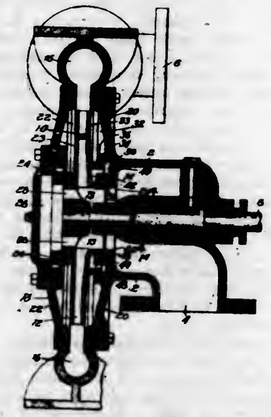
5. In a cut-out pulley for electric lamps, the combination, with a hoisting rope and pulley, of a canopy whereon said pulley is mounted, a tubular extension depending from said canopy and provided with internal cams, a vertically movable element provided with contacts for the lamp, said vertically movable element being provided with a collar rotatable thereon about the vertical axes thereof, said collar being non-movable relatively to said vertically movable element, said collar having lateral projections small enough to enter into said tubular extensions on the canopy and coöperate with the cams therein, an insulator secured to the canopy and provided with line terminals, and connections upon said insulator for connecting the line terminals thereon with the respective vertically movable contacts, said connections including a spring switch repressible by one of said vertically movable contacts and a removable clip located in position to be engaged by said switch when the latter is released.

[Claim 6 not printed in the Gazette.]

1,157,240. BALANCED CENTRIFUGAL PUMP. MARTIN B. MACNEILL, Beloit, Wis., assignor to Fairbanks, Morse & Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 28, 1913. Serial No. 751,220. (Cl. 253—200.)

1. In a centrifugal pump, in combination with a case and a rotatable and axially movable impeller without auxiliary vanes said impeller being located within the case adjacent to one wall thereof adapted to pump liquid through and out of the case and in so doing form a vacuum within the case; means tending to move the impeller toward said wall of the case, the impeller so fitting the wall of the case that a pressure chamber is formed between the wall and the impeller, having a pressure surface on the impeller opposing said moving means and of greater pressure capacity than said moving means, and that a relatively small entrance passageway is formed for the entrance of pressure liquid to said pressure chamber which remains of constant area regardless of the axial position of the impeller with reference to the case and that a relatively larger discharge passageway is formed between the end of the face of the impeller perpendicular to its axis and an abutting portion of the case, said last passage va-

rying in size with the axial movement of the impeller and leading to said vacuum.

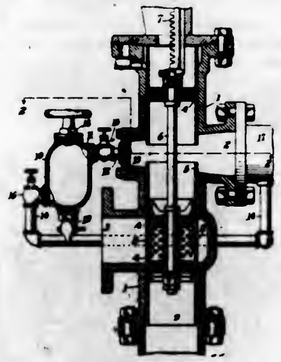


2. In a centrifugal pump, in combination with a case and a rotatable and axially movable impeller without auxiliary vanes said impeller being located within the case adjacent to one wall thereof adapted to pump liquid through and out of the case and in so doing form a vacuum in the case, means tending to move the impeller into contact with said wall of the case, spaced apart annular interfitting members extending from the impeller and case forming a pressure chamber between the wall of the case and the impeller, having a pressure surface on the impeller opposing said moving means and of greater pressure capacity than said moving means, certain of said interfitting parts between the impeller and the case forming a relatively small constant area entrance passageway for the entrance of pressure liquid to said pressure chamber regardless of the axial position of the impeller and other of the said interfitting parts forming a larger discharge passageway leading to said vacuum, said discharge passageway including at one point a portion of the side wall of the case and a relatively wide abutting end of a hub of the impeller whereby the area of the discharge passageway is automatically varied in size in accordance with the axial position of the impeller with reference to the wall of the case, for the purposes set forth.

3. In a vertical centrifugal pump, in combination with a case and a rotatable and axially movable impeller without auxiliary vanes, said impeller being located within the case adjacent to one wall thereof adapted to pump liquid through and out of the case and in so doing form a vacuum within the case; means tending to move the impeller toward said wall of the case, the impeller so fitting the wall of the case that a pressure chamber is formed between the wall and the impeller, having a pressure surface on the impeller opposing said moving means and of greater pressure capacity than said moving means, and that a relatively small entrance passageway is formed for the entrance of pressure liquid to said pressure chamber which remains of constant area regardless of the axial position of the impeller with reference to the case and that a relatively larger discharge passageway is formed between the end of the face of the impeller perpendicular to its axis and an abutting portion of the case, said last passage varying in size with the axial movement of the impeller and leading to said vacuum.

1,157,241. LUBRICATING SYSTEM. HARRY C. MARTIN, Philadelphia, Pa. Filed Apr. 26, 1915. Serial No. 23,882. (Cl. 184—6.)

1. In a device of the character stated, a valve casing provided with a thoroughfare having an intermediate chamber, said casing also having an inlet and outlet communicating with said throughfare, a valve member for controlling communication between said inlet and outlet, a pressure main connected to said inlet, a lubricator receptacle having communication with said intermediate chamber, and a by-pass between said pressure main and said lubricator receptacle whereby in closed position of said valve the pressures at opposite sides of said receptacle are balanced, while in open position of said valve a difference of pressure is created to cause the lubricant to be ejected into said valve casing.



2. In a device of the character stated, a valve casing provided with a thoroughfare having an intermediate chamber, said casing also having an inlet and outlet communicating with said thoroughfare, a valve member for controlling communication between said inlet and outlet, a pressure main connected to said inlet, a lubricator receptacle having communication between its upper end and said intermediate chamber, and a by-pass between said pressure main and the lower end of said lubricator receptacle whereby in closed position of said valve the pressures at opposite sides of said receptacle are balanced, while in open position of said valve a difference of pressure is created to cause the lubricant to be ejected into said valve casing.

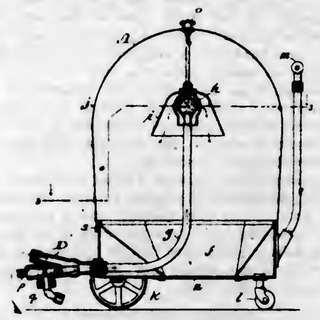
3. In a device of the character stated, a valve casing provided with a thoroughfare having an intermediate chamber, said casing also having an inlet and outlet communicating with said thoroughfare, a valve member for controlling communication between said inlet and outlet, a pressure main connected to said inlet, a lubricator receptacle having communication with said intermediate chamber, and means to create a difference of pressure at the discharge end of said lubricator whereby the lubricant is ejected into said valve casing to mix with the motive fluid.

4. In a device of the character stated, a valve casing provided with a thoroughfare having an intermediate chamber, said casing also having an inlet and outlet communicating with said thoroughfare, a valve member for controlling communication between said inlet and outlet, a pressure main connected to said inlet, a lubricator receptacle having communication with said intermediate chamber, valves for respectively controlling the inlet to and outlet from said lubricator receptacle, and a by-pass between said pressure main and said lubricator receptacle whereby in closed position of said valve the pressures at opposite sides of said receptacle are balanced, while in open position of said valve a differential condition is created to cause the lubricant to be ejected into said valve casing.

5. In a device of the character stated, a valve casing provided with a thoroughfare having an intermediate chamber, said casing also having an inlet and outlet communicating with said thoroughfare, a valve member for controlling communication between said inlet and outlet, a pressure main connected to said inlet, a lubricator receptacle having communication with said intermediate chamber, means to create a difference of pressure at the discharge end of said lubricator whereby the lubricant is ejected into said valve casing to mix with the motive fluid, and means to cause an intermixing of the lubricant with the motive fluid.

[Claims 6 to 8 not printed in the Gazette.]

1,157,242. DUST-COLLECTOR. FRANK J. MATCHETTE, Milwaukee, Wis., assignor, by mesne assignments, to Richmond Radiator Company, New York, N. Y., a Corporation of Delaware. Filed Sept. 24, 1904. Serial No. 225,761. (Cl. 83—47.)



In a pneumatic apparatus for conveying and separating dust and dirt from air, the combination of a dust separator comprising a catch basin having an opening in the bottom provided with a closure, a bell-shaped deflector supported above said basin, a strainer open to the atmosphere and enveloping said deflector together with said basin, a pipe leading into the separator and opening into said deflector, a dust laden air conveying pipe connected with the pipe leading to said deflector, and means to exhaust air from said pipe and force it with entrained dust and dirt into the deflector in said separator, substantially as described.

1,157,243. TYPE-BAR-MACHINE ATTACHMENT. JOSEPH U. MEISTRELL, Brooklyn, N. Y. Filed May 3, 1915. Serial No. 25,468. (Cl. 199—9.)



1. In an attachment for type bar making machines, the combination with a tappet adapted to strike the type bars on their faces and plane them as they are delivered, of means connected with a moving part of the machine to operate the tappet.

2. In an attachment for type bar making machines, the combination with a tappet hinged to the frame of the machine and in front of the type bar faces and adapted to strike them, of adjacent moving means to operate the tappet.

3. In an attachment for type bar making machines, the combination with a tappet hinged in front of the galley of the machine and adapted to engage the faces of the type bars, of a projection connected with a moving part of the machine to operate the tappet on the face of the type.

4. In an attachment for type bar making machines, the combination with a bracket secured to the machine adjacent to the galley, of a tappet pivoted in the bracket and at the front of the galley, and means carried by a moving part of the machine for operating the tappet to plane the type bar faces while in the galley.

5. In an attachment for type bar making machines, the combination with a tappet arm pivoted on the machine frame in front of the galley, a pivot, yielding fingers on the pivot and connected with the arm, and a moving stud to operate on one side of the fingers and swing the tappet.

[Claims 6 to 11 not printed in the Gazette.]

1,157,244. MAIL-CATCHER. WILLIAM T. MERCER, Wilmington, N. C. Filed Feb. 18, 1914. Serial No. 819,565. (Cl. 104—4.)



1. In a mail catcher a track comprising a main rail, upper and lower rails, and a guard extending in alinement with said upper rail, and a carriage slidably connected with said track, said carriage including a body portion, main supporting wheels mounted upon said main rail, a lower guiding roller engaging said lower rail, and an upper roller engaging said upper rail and the inner face of said guard.

2. In a mail catcher a track, and a catching element mounted upon said track, said catching element comprising a carriage including a plate forming a body portion and having its upper and lower end portions provided with pivot ears, guiding rollers rotatably mounted between said pivot ears and extending through an opening formed in said plate, main supporting wheels rotatably connected with said plate intermediate said guiding rollers.

3. In a mail catcher a track comprising a main rail, upper and lower guiding rails extending parallel to said main rail, a supporting strip extending above said upper guide rail, a depending guarding strip carried by said supporting strip and extending parallel to said upper guide rail, and a carriage provided with supporting wheels mounted upon the main rail of said track and having upper and lower guiding rollers engaging said guide rails with the upper guide rollers engaging said guard strip.

4. In a mail catcher a track comprising a main rail, guiding rails positioned above and below said main rail and extending parallel to the same, a supporting strip extending above said upper guide rail, and a guard strip carried by said supporting strip and extending parallel to said upper guide rail.

1,157,245. BOBBIN CASE AND TENSION. CHARLES LOUIS MILLER, Norwood, and FRANK BABB FREEMAN, Cincinnati, Ohio, assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 28, 1910. Serial No. 558,204. (Cl. 112—23.)

1. A shuttle tension device having, in combination, a bobbin case open at one side, a bobbin within the case and having a central aperture extending therethrough, a headed bolt within the aperture, means normally tending to move the bolt in a direction to draw the head within the bobbin, and retarding means held by the bolt in frictional engagement with one face of the bobbin.

2. A shuttle tension device having, in combination, a bobbin case open at one side, a bobbin rotatively mounted

therein, a bolt extending through the bobbin and provided with a head projecting beyond the outer surface of the same, a spring coöperating with the bolt and normally tending to move the bolt in a direction to draw the head within the bobbin, and a member detachably mounted on the head of the bolt and frictionally engaging the outer surface of the bobbin.



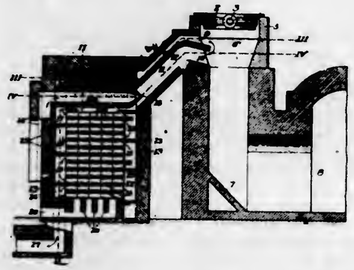
3. A shuttle tension device having, in combination, a bobbin case open at one side and provided with a hollow centrally arranged stud, a bobbin journaled on said stud, a headed bolt supported within said stud for yielding longitudinal movement, and a retarding member arranged to engage beneath the bolt head whereby the retarding member is held in frictional engagement with one face of the bobbin.

4. A shuttle tension device having, in combination, a bobbin case open at one side, a bobbin rotatably mounted therein, a bolt extending through the center of the bobbin provided with a head projecting beyond the outer surface of the same, means normally tending to move the bolt in a direction to draw the head within the bobbin, and a plate adapted to engage the bobbin beneath the bolt head, the outer face of the plate having a countersunk portion to receive the head of the bolt wherein it is held by the inward movement of the bolt and accidental movement of the plate is avoided.

5. A shuttle tension device having, in combination, a bobbin case open at one side having a centrally arranged hollow stud provided with an inwardly flanged end, a bobbin journaled on said stud, a headed bolt within said stud provided at one end with a squared nut seated within a squared opening within the bobbin case, a coiled spring within the stud between said nut and flanged end and surrounding the bolt, and a plate arranged to be seated beneath the head of the bolt and held by said spring in frictional contact with one face of the bobbin.

[Claims 6 to 9 not printed in the Gazette.]

1,157,246. REGENERATIVE GLASS-DRAWING FURNACE. WILLIAM L. MONRO, Pittsburgh, Pa., assignor to Window Glass Machine Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed June 23, 1913. Serial No. 775,252. (Cl. 49—53.)



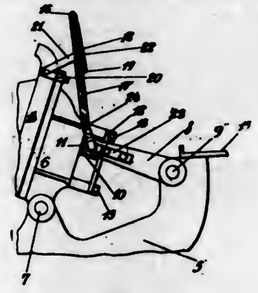
1. A glass-drawing furnace having a well and a drawing pot supported on the upper part of the well, the well having below the pot a side inlet port and a gas-supply nozzle projecting into said port, a recuperator at one side of said well having an outlet connection into said port, and an outlet passage from the well to the recuperator, said recuperator having a natural draft upward flow air circulation, substantially as described.

2. A glass-drawing furnace having a well and a drawing pot supported on the upper part of the well, the well having below the pot a side inlet port and a gas-supply nozzle projecting into said port, a recuperator at one side of said well having an outlet connection into said port, and an outlet passage from the well to the recuperator, said recuperator being of the single pass, upward flow, natural draft type, substantially as described.

3. A glass-drawing furnace having a well and a drawing pot supported on the upper part of the well, the well having below the pot a side inlet and a gas-supply nozzle projecting into said port, a recuperator at one side of said well having an outlet connection into said port, and an outlet passage from the well to the recuperator, said recuperator having an air supply inlet at its lower portion and vertical up-flow passages arranged to give a single natural draft up-pass to the air from the inlet to said port, substantially as described.

4. A glass-drawing furnace having a vertical well and a glass pot mounted at its upper portion, the well having an inlet port at one side thereof, and a gas supply discharging into said port, together with a recuperator arranged to deliver an upward flow of hot air into said port at the point of gas supply and beyond the recuperator, substantially as described.

1,157,247. SAFETY-GUARD FOR PRINTING-PRESSES. LEWIS E. MORRISON, Newark, N. J., assignor to Humana Company, a Corporation of New Jersey. Filed Dec. 17, 1914. Serial No. 877,665. (Cl. 101—15.)



1. In a printing press or similar machine the combination with a platen and its operating means, of a guard, means for operating said guard across the position of the operator's hand and comprising brackets secured to said operating means, a pivotal connection between said brackets and the guard and links pivoted to the latter and the said platen.

2. In a printing press or similar machine the combination with a platen and oscillating members for operating the same, of a guard adapted to be moved across the position of the operator's hand, brackets secured to said members, pivotal connections between the guard and the said brackets and pivoted link connections interposed between the said guard and the platen.

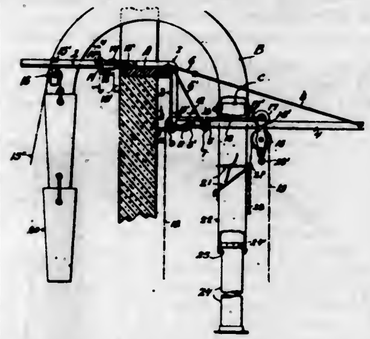
3. In a printing press or similar machine the combination with a platen, of a guard comprising a cross bar and two side bars, a guarding member secured to said cross and side bars, link connections between the side bars and said platen and pivotal connections between said side bar and the platen operating means.

4. In a printing press or similar machine the combination with a platen and its operating means, of a guard adapted to be moved from a position immediately adjacent to and substantially flush with the upper edge of the platen to a position elevated above the latter, means for operating said guard comprising pivotal connections between the guard and said operating means and link connections pivoted to said guard and the said platen adjacent its upper edge.

5. In a printing press or similar machine the combination with a platen and its operating means, of a guard comprising a cross bar and two side bars, a guarding member of slightly flexible material secured to said cross and side bars, pivotal connections between the latter and said operating means and link connections between said side bars and the said platen.

[Claim 6 not printed in the Gazette.]

1,157,248. BLOWER-PIPE-ASSEMBLING DERRICK. TIMOTHY MULLOWNEY, Milwaukee, Wis. Filed July 23, 1914. Serial No. 852,632. (Cl. 104—4.)



1. A derrick for attachment to the sill of a storage structure window comprising an inwardly extended arm adapted to rest upon the window sill having a depending leg arranged to lie against the outer wall of the structure, the leg being provided with a horizontally extended foot, a spar extending from the foot, a truss-rod connecting the arm and spar, an adjustable sill-gripping foot carried by the arm arranged to clamp said sill in opposition to the leg portion of the arm, and strain opposing means associated with the leg for engagement with the outer walls of the structure.

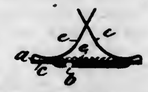
2. A derrick for attachment to the sill of a storage structure window comprising a base member having an inwardly extended arm adapted to rest upon the window sill, the base member being provided with a depending leg and a horizontally extended foot, a spar in pivotal union with the base member foot, a truss-rod connecting said base member and end of the spar, an adjustable sill-gripping foot carried by the arm of the base member arranged to clamp the sill in opposition to the leg portion of the base member, and adjustable toes extending from the base member for engagement with the outer wall of the structure.

3. A derrick for attachment to the sill of a storage structure window comprising a base member having an inwardly extended arm adapted to rest upon the window sill, the base member being provided with a depending leg and a horizontally extended foot, a spar in pivotal union with the base member foot, a truss-rod connecting said base member and end of the spar, an adjustable gripping foot mounted upon the arm of the base member having toes extending therefrom for engagement with the upper face of the sill and the inner side face thereof, a laterally disposed heel-bar carried by the leg portion of the base member, and wall-engaging toes extending from the heel bar.

4. A derrick attachable to the sill of a storage structure window comprising a base member having an inwardly projecting arm, downwardly extended leg and horizontally extended foot portion, an adjustable gripping foot carried by the arm, adjustable toe strips carried by the foot, a spar in pivotal union with the base member foot, truss-rods for sustaining the spar and foot, and sheave-carrying trolleys supported by the arm and spar.

5. A derrick attachment for window sills comprising an arm extending inwardly from the window, a spar extending outwardly therefrom, means for sustaining the derrick in connection with a window-sill, a load-sustaining shiftable trolley mounted upon the arm, a load-sustaining shiftable trolley mounted upon the spar, and means for adjusting the last mentioned trolley back and forth upon the spar.

1,157,249. SAFETY-RAZOR. WILLIAM EDMUND O'REILLY, London, England. Filed May 12, 1914. Serial No. 838,008. (Cl. 30—12.)



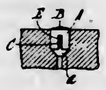
1. A safety razor comprising a blade, a guard, means for securing the blade to the guard, comprising a longitudinal projection upon the guard having a slot at each end engaging the blade, flexible handle members formed integrally with the guard and normally disposed in a plane parallel with the plane of the guard, and means for connecting the handle members when in position for use.

2. A safety razor comprising a blade, a guard capable of flexure in the direction of its length, a longitudinal projection on said guard having a slot at each end engaging the blade, flexible handle members disposed one at each end of the guard and normally disposed in a plane parallel with the plane of the guard and means for connecting the handle members when in position for use.

3. A safety razor comprising a blade, a guard capable of flexure in the direction of its length, a longitudinal projection on said guard having a slot at each end engaging the blade, flexible handle members disposed one at each end of the guard and normally disposed in a plane parallel with the plane of the guard and means for connecting the handle members when in position for use.

4. A safety razor comprising a blade, a guard, means for securing the blade to the guard, flexible handle members capable of being disposed in a plane parallel to the plane of the guard and permanently attached at one end to the guard and normally having their opposite ends free, and means upon said free ends whereby they may be connected when required for use.

1,157,250. CLOSURE FOR OILING-DUCTS. JOHN L. OSGOOD, Buffalo, N. Y. Filed Mar. 3, 1914. Serial No. 822,243. (Cl. 184—89.)



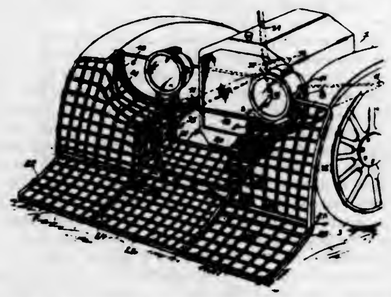
1. In a closure for oil ducts, the combination of a single-piece integral shell which is adapted to be located in a retaining cavity and has an open inner end and an oil inlet orifice in its outer end, and a spring-seated valve in said shell for closing said inlet orifice, said shell having laterally yielding side walls at its inner end which contract when the shell is forced into said cavity and which grip the walls of the cavity to frictionally hold said shell in said cavity.

2. In a closure for oil ducts, the combination of a shell which is adapted to be located in a retaining cavity and has an open inner end and an oil inlet orifice in its outer end, and a spring-seated valve in said shell for closing said inlet orifice, the inner end of said shell being bifurcated, whereby the bifurcated portions of the shell are pressed toward each other when the shell is forced into said cavity, and frictionally grip the side walls of the cavity.

3. In a closure for oil ducts, the combination of a shell which is adapted to be located in a retaining cavity and has an open inner end and an oil inlet orifice in its outer end, and a spring-seated valve in said shell for closing said inlet orifice, said shell having a slot in its side wall extending to the inner end of the shell through which the oil can discharge from the shell and which permits the inner end of the shell to be contracted when placed into said cavity and to yieldingly grip the walls of the cavity to hold the shell in place therein.

4. In a closure for oil ducts, the combination of a single-piece integral shell having at one end an inlet orifice surrounded by a valve seat and at the other end a discharge opening surrounded by an inturned flange forming a bearing for a spring, a ball valve in the shell adapted to engage said seat for closing the inlet orifice, and a spring for yieldingly seating said valve, said spring bearing at one end against said ball valve and at its other end on said inturned flange, said shell having a longitudinal slot in its side wall open at said other end of the shell through which the oil can discharge from said shell.

1,157,251. AUTOMOBILE-FENDER. WALDO F. PEREZ, Chicago, Ill., assignor to The Standard Fender Company, Inc., Chicago, Ill., a Corporation of Delaware. Filed Oct. 11, 1913. Serial No. 794,672. (Cl. 105—252.)



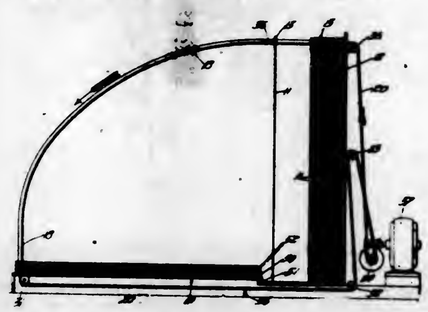
1. The combination with the chassis frame of an automobile, of a fender including a frame having frame members disposed one upon each of the side bars of the chassis frame in crossed relation with respect thereto and having a portion curved upwardly and laterally beyond one side of the respective chassis bar, and a portion extending downwardly at the other side of the chassis bar, clip plates disposed one upon each of the frame members and one beneath each of the chassis bars, and bolts secured through the sets of clip plates and extending at opposite sides of the respective chassis bars and at opposite sides of the respective frame members.

2. The combination with the chassis frame of an automobile, of a fender including a frame having frame members disposed one upon each of the side bars of the chassis frame and having a portion curved upwardly and laterally beyond one side of the respective chassis bar, and a portion extending downwardly at the other side of the chassis bar, clip plates disposed one upon each of the frame members and one beneath each of the chassis bars, bolts secured through the sets of clip plates and extending at opposite sides of the respective chassis bars and at opposite sides of the respective frame members, and braces secured to the said curved portions of the frame members and extended rearwardly and connected to the said chassis bars.

3. The combination with the chassis frame of an automobile, of a fender including a frame having frame members disposed one upon each of the side bars of the chassis frame and having a portion curved upwardly and laterally beyond one side of the respective chassis bar, and a portion extending downwardly at the other side of the chassis bar, clip plates disposed one upon each of the frame members and one beneath each of the chassis bars, bolts secured through the sets of clip plates and extending at opposite sides of the respective chassis bars and at opposite sides of the respective frame members, braces secured to the said curved portions of the frame members and extended rearwardly and connected to the said chassis bars, the frame of the fender also including spaced intermediate frame bars extending upwardly and rearwardly between the chassis bars, and a cross bar extending between and secured to the chassis bars rearwardly of the clip plates, the said intermediate frame members being secured at their rear and upper ends to the said curved bar.

4. A fender of the class described, having relatively rigid intermediate and side catching and supporting surfaces, the side surfaces being sloped toward the intermediate surface and being abruptly terminated to provide substantially vertical guard portions at the opposite sides of the said intermediate.

1,157,252. DISPLAY DEVICE. WILLIAM T. PHILLIPS and THOMAS C. DE LISLE, Los Angeles, Cal. Filed July 7, 1914. Serial No. 849,623. (Cl. 211—22.)



1. A device of the character described for displaying flexible articles, comprising a horizontal display base, arch supports extending from one edge of said base to points above the opposite edge of the base, hangers adapted to travel along said arch supports and adapted to each support one of said articles, the hangers being normally in position on the higher parts of said arches so that the articles are normally vertically suspended over the edge of the base, and means to move the hangers one by one along the arches to their lower ends, the contour of the arches and travel of the hangers being such that the articles are laid out flat upon the base in the manner described.

2. A device of the character described for displaying flexible articles, comprising a horizontal display base, arch supports extending from one edge of said base to points above the opposite edge of the base, hangers adapted to travel along said arch supports and adapted to each support one of said articles, the hangers being normally in position in the higher parts of said arches so that the articles are normally vertically suspended over one edge of the base, and means to move the hangers one by one along the arches to their lower ends, said means including endless flexible members paralleling the arches, and hanger engaging means in said flexible members, the contour of the arches and travel of the hangers being such that the articles are laid out flat upon the base in the manner described.

3. A device of the character described, comprising a horizontal display base, a vertical frame rising at one edge of the base, rug supporting arches reaching from the upper part of the vertical frame to the opposite edge of the display base, said arches having substantially horizontal portions near the vertical frame, rug hangers normally resting upon the horizontal upper portions of the arches adjacent each other parallel to the said frame so that rugs supported from said hangers will hang vertically against each other, flexible chains paralleling the arches, means to move said chains longitudinally, and dogs pivotally mounted on the chains and adapted to engage the hangers one at a time.

4. A device of the character described, comprising a horizontal display base, a vertical frame rising at one edge of the base, rug supporting arches reaching from the upper part of the vertical frame to the opposite edge of the display base, said arches having substantially horizontal portions near the vertical frame, rug hangers normally resting upon the horizontal upper portions of the arches adjacent each other parallel to the said frame so that rugs supported from said hangers will hang vertically against each other, flexible chains paralleling the arches, means to move said chains longitudinally, and dogs pivotally mounted on the chains and adapted to engage the hangers one at a time, said dogs each having a notch adapted to engage a hanger and having a projection adapted to engage an adjacent hanger to prevent the notch from engaging the one hanger.

5. A device of the character described, comprising a horizontal display base, a vertical frame rising at one edge of the base, rug supporting arches reaching from the upper part of the vertical frame to the opposite edge of the display base, said arches having substantially horizontal portions near the vertical frame, rug hangers normally resting upon the horizontal upper portions of the arches adjacent each other parallel to the said frame so that rugs supported from said hanger will hang vertically against each other, flexible chains paralleling the arches, means to move said chains longitudinally, and dogs pivotally mounted on the chains and adapted to engage the hangers one at a time, said dogs each having a notch adapted to engage a hanger and having a projection forward of the notch in the direction of movement of the chain and dog, said projection adapted to engage an adjacent hanger and prevent the notch from engaging the one hanger, whereby the notch can only engage the outermost one of the assembly of hangers.

[Claims 6 to 12 not printed in the Gazette.]

1,157,253. PROCESS FOR THE MANUFACTURE OF AMMONIA FROM ITS ELEMENTS. MATHIAS PIER, Berlin, Germany. Filed Nov. 24, 1913. Serial No. 802,750. (Cl. 23—21.)

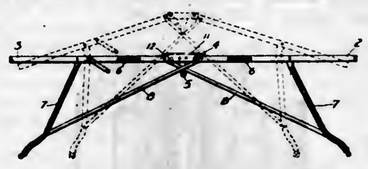
1. A process for the manufacture of ammonia from its elements, said process consisting in uniting the elements to be combined by bringing them into contact with catalytic agents of the platinum group carried by a carrier having therein a combination of an alkali.

2. A process for the manufacture of ammonia from its elements, said process consisting in uniting the elements to be combined by bringing them into contact with catalytic agents containing rhodium.

3. A process for the manufacture of ammonia from its elements, said process consisting in uniting the elements to be combined by bringing them into contact with catalytic agents containing rhodium carried by a carrier having therein a substance containing an alkali.

1,157,254. LOCKING MEANS FOR FOLDING COTS OR COUCH-BEDS. HENRY JOHN QUINCY, Brooklyn, N. Y., assignor to Englander Spring Bed Company, Brooklyn, N. Y., a Corporation of New York. Filed June 13, 1914. Serial No. 844,840. (Cl. 5—5.)

1. In a folding cot, the combination of a plurality of cot sections foldable transversely of the cot and spaced apart at their inner ends, a single pair of legs pivotally secured to each section between its inner and outer ends, a bar connecting each pair of legs with the opposite section, a rigid hinge member pivotally connected to the inner ends of said sections for maintaining said sections spaced apart thereby to permit the legs and bars to be folded inside of said sections when the structure is folded, and means for locking the cot sections when unfolded thereby to prevent premature collapse thereof and comprising a locking device supported to swing in the plane of the top of said cot.



2. In a folding cot, the combination of a plurality of cot sections foldable transversely of the cot and spaced apart at their inner ends, a single pair of legs pivotally secured to each section between its inner and outer ends, a bar connecting each pair of legs with the opposite section, a rigid hinge member pivotally connected to the inner ends of said sections for maintaining said sections spaced apart thereby to permit the legs and bars to be folded inside of said sections when the structure is folded, and means for locking the cot sections when unfolded thereby to prevent premature collapse thereof, said locking means comprising a bar pivoted to one of said sections and adapted to connect with the other of said sections across the top of said hinge member.

3. In a folding cot, the combination of a pair of cot sections foldable transversely of the cot and spaced apart at their inner ends, a single pair of legs pivoted to each section nearer its outer than its inner ends, bars connecting the legs of one section with the opposite section, a rigid hinge member pivotally connected to the inner ends of said sections to maintain said sections spaced apart thereby to permit the legs and bars to be folded inside of said sections when the structure is folded, and means for locking the cot sections thereby to prevent premature collapse thereof and comprising a device located over the top of the hinge member.

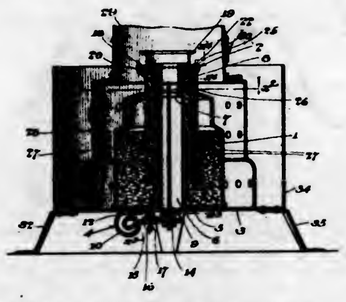
4. In a folding cot, the combination of a pair of foldable cot sections, a rigid hinge member pivotally connected to and intermediate the inner ends of said sections, said member overlapping the tops of said sections, a single pair of legs for supporting each section, means connecting the pair of legs of each section with the opposite section, and means overlapping said hinge member and pivoted to one section and shiftably connected to the other for preventing the premature collapse of the cot sections.

5. In a folding cot, the combination of a pair of foldable cot sections, a rigid hinge member at each side thereof to which the inner ends of the foldable cot sections are pivoted, said member overlapping the inner ends of said sections, a drop-formed bar connecting said members, a single pair of legs pivoted to each of said sections, a pair of brace bars pivotally connected to the pair of legs of each section and to the opposite cot section, and means adjacent to the hinge connections of the folding cot sections for preventing the premature collapse thereof, said means comprising a bar pivoted to one section and hooked to the other, said bar shaped to overlap the rigid hinge members.

1,157,255. THERMOSTATIC HEATER. JOHN L. QUINN, Los Angeles, Cal., assignor to Standard Oil Company of California, San Francisco, Cal., a Corporation of California. Filed Feb. 3, 1914. Serial No. 816,278. (Cl. 236—5.)

1. A thermostatic heater, comprising a fuel receptacle, a main wick in said receptacle, and adapted to be projected above the same, a central air tube within the wick and extending above the oil receptacle, a burner mounted on the top of the receptacle and surrounding the wick in an engagement therewith, said burner extending flush with the top of the air tube and having a notch cut in its upper edge, a pilot flame opposite said notch and thermostatic means for projecting the wick above the burner and air tube by which time it is ignited by the pilot flame.

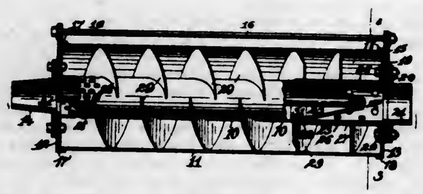
2. In a heater the combination with a wick support and a wick adjustably mounted upon the support, of a pilot flame located near the wick and theremostatically operated means for moving the wick upwardly to cause it to be initially lighted by the pilot flame.



3. In a heater the combination of a wick support and a vertically adjustable wick mounted upon the support, of a pilot flame, means to shield the wick from the pilot flame and thermostatically operated means for moving the shielding means in unshielding position and the wick in position to be lighted initially by the pilot, said means also operating to move the shielding means into shielding position at a predetermined time.

4. In a heater the combination with a movable wick, of a pilot flame, means to automatically move the wick into position whereby it will be lighted initially by the pilot flames when the atmospheric temperature drops below a predetermined point, and means operated by said last mentioned means when the atmospheric temperature passes above a predetermined point to extinguish the flame of the wick and shield the wick from the flame.

1,157,256. MUFFLER. EDMUND SCHMITT, Bridgeport, Conn. Filed July 31, 1912, Serial No. 712,457. Renewed May 15, 1914. Serial No. 838,891. (Cl. 121—116.)



1. A muffler consisting of an inner tube, an outer tube, end-plates, the end-plates having inlet and outlet openings, and a series of helical plates between the inner and outer tubes, the plates being disposed around the inner tube so that their ends form an opening between them whereby they form a continuous irregular channel.

2. A muffler consisting of an inner tube, an outer tube, the inner tube having openings near its ends, end-plates having inlet and outlet openings to the inner tube, helical plates surrounding the inner tube and arranged so that their ends are spaced apart, and a deflecting plate at the inlet end of the inner tube.

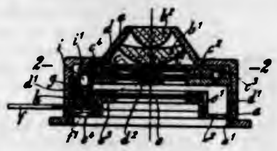
3. A muffler consisting of an inner tube, an outer tube, the inner tube having openings near its ends, end-plates having inlet and outlet openings to the inner tube, helical plates surrounding the inner tube and arranged so that their ends are spaced apart, a deflecting plate near the inlet end of the inner tube, and an open-ended pipe passing from the plate into the inner tube.

4. A muffler consisting of an inner tube, an outer tube, the inner tube having openings near its ends, end-plates having inlet and outlet openings to the inner tube, helical plates surrounding the inner tube and arranged so that their ends are spaced apart, a cone placed within the inner tube beyond the openings at its inlet end, and a pipe extending along the inside of the inner tube to approximately the outlet end thereof.

5. A muffler consisting of an inner tube, an outer tube, end-plates, each end-plate having an opening communicating with the inner tube, the inlet end of the inner tube being cut away to form large openings, a baffle-plate in the inner tube adjacent to its cut away end, plates arranged between the inner and the outer tubes to form a circuitous passage, the outlet end of the inner tube being perforated, and a removable sleeve having perforations therein adapted to fit within the inner tube between the baffle-plate and the inlet end of the inner tube.

[Claims 6 to 13 not printed in the Gazette.]

1,157,257. MICROSCOPE-CONDENSER. HENRY SIEDENTOPF, Jena, Germany, assignor to the Firm of Carl Zeiss, Jena, Germany. Filed Aug. 31, 1914. Serial No. 859,577. (Cl. 88—39.)



1. In a microscope condenser adapted for both dark-ground illumination and light-ground illumination a central stop for use with the former kind of illumination, an iris diaphragm for use with the latter kind of illumination and a handle adapted to operate the said diaphragm and adapted also to render the said stop operative and inoperative.

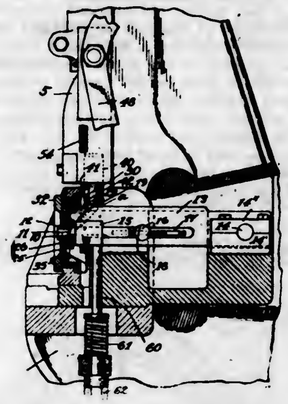
2. In a microscope condenser adapted for both dark-ground illumination and light-ground illumination a central stop for use with the former kind of illumination, an iris diaphragm for use with the latter kind of illumination, a handle adapted to operate the said diaphragm and means for rendering the said stop operative and inoperative, comprising means for releasably coupling the diaphragm and the stop in such a manner that, on the stop reaching its inoperative position, the diaphragm aperture corresponds to the size of the stop.

3. In a microscope condenser adapted for both dark-ground illumination and light-ground illumination a central stop for use with the former kind of illumination, an iris diaphragm for use with the latter kind of illumination, a handle adapted to operate the said diaphragm and adapted also to render the said stop operative and inoperative, and a light-absorbing disk corresponding to the size of the stop, adapted to become operative on the stop becoming inoperative.

1,157,258. MACHINE FOR CASTELLATING NUTS. OSCAR A. SMITH and BENJAMIN F. RINDFLEISCH, Cleveland, Ohio, assignors to The National-Acme Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 21, 1914. Serial No. 852,168. (Cl. 10—72.)

1. In a machine of the class described, the combination of a reciprocating ram, a nut-blank die, means located at one side of said die for supporting it, a punch formed to castellate nut blanks and extending transversely to the direction of reciprocation of the ram, said die constructed to receive the punch at its opposite side, and means for delivering the power of the ram to the punch adjacent to the cutting part thereof from a point in the rear of such part.

2. In a machine of the class described, the combination of a reciprocating ram, a nut blank die, a nut castellating punch extending transversely to the direction of reciprocation of the ram, and means for delivering the power of the ram to the punch adjacent to the cutting part thereof from a point in the rear of such cutting part, said means comprising an inclinedly located lengthwise sliding member with one end in position to be engaged by the ram and the other end in engagement with the punch.



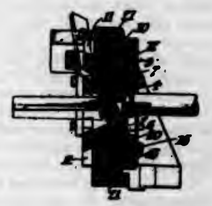
3. In a machine of the class described, the combination of a reciprocating ram, a nut-blank die, means located at one side of said die for supporting it, a punch formed to castellate nut blanks and free of connection with said ram, said die constructed to receive the punch at its opposite side, and means for delivering the power of the ram to the punch adjacent to the cutting part thereof from a point in the rear of such cutting part and forward of the rear end of such punch.

4. In a machine of the class described, the combination of a reciprocating ram, a die, a punch free of connection with said ram, and means for delivering the power of the ram to the punch adjacent to the cutting part thereof from a point in the rear of such cutting part, said means comprising an inclinedly located member having one end in position to be engaged by the ram and the other end in position to engage the punch.

5. In a machine of the class described, the combination of a reciprocating ram, a die, a punch extending transversely to the direction of reciprocation of the ram, means for delivering the power of the ram to the punch adjacent to the cutting part thereof from a point in the rear of such cutting part, and means for indexing the die and the blank carried thereby.

[Claims 6 to 116 not printed in the Gazette.]

1,157,259. DIE. OSCAR A. SMITH and BENJAMIN F. RINDFLEISCH, Cleveland, Ohio, assignors to The National-Acme Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Original application filed July 21, 1914, Serial No. 852,168. Divided and this application filed Dec. 10, 1914. Serial No. 876,407. (Cl. 10—72.)



1. A die comprising a disk having a bore provided with a projecting hub having a plurality of equally spaced slots each extending radially entirely through the hub.

2. A die comprising a disk having a bore provided with a projecting slotted hub and a clearance way surrounding said hub.

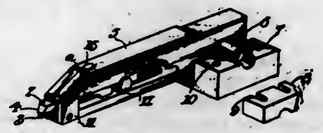
3. A die comprising a disk having a flanged periphery and a bored hub extending in the same direction as the flange and having slots communicating with the bore.

4. A die comprising a disk having a flanged periphery and a bored hub extending in the same direction as the flange and having slots communicating with the bore, and a clearance way between said hub and peripheral flange, said flange having a location slot in its periphery.

5. A die comprising a slotted disk, a die carrier having slots corresponding in number with the slots of the die for permitting the indexing of said die, and means for securing the die within said carrier.

[Claims 6 to 18 not printed in the Gazette.]

1,157,260. PUNCH. OSCAR A. SMITH and BENJAMIN F. RINDFLEISCH, Cleveland, Ohio, assignors to The National-Acme Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Original application filed July 21, 1914, Serial No. 852,168. Divided and this application filed Dec. 10, 1914. Serial No. 876,408. (Cl. 164—124.)



1. In a punch adapted to operate in a direction transverse to its length and having along one side face thereof a rib-formed cutting portion having parallel side walls.

2. A punch adapted to operate in a direction transverse to its length and having a rib-formed cutting portion having parallel side walls, said rib-formed cutting portion extending lengthwise of the punch along its underside.

3. In a punch adapted to operate in a direction transverse to its length and having a rib-formed cutting portion having parallel side walls, said rib-formed cutting portion extending lengthwise of the punch and midway thereof.

4. A punch adapted to operate in a direction transverse to its length and having along one side face thereof a rib-formed cutting portion having parallel side walls, said rib-formed cutting portion terminating in a widened shank.

5. A punch adapted to operate in a direction transverse to its length and having along one side face thereof a rib-formed cutting portion having parallel side walls, said rib-formed cutting portion terminating in a widened shank provided at the forward end thereof with a bevel portion.

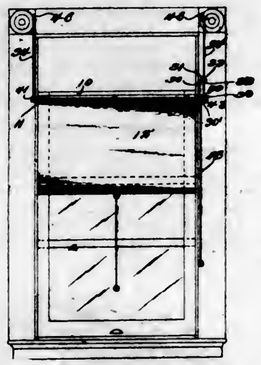
[Claims 6 to 19 not printed in the Gazette.]

1,157,261. VENTILATING SHADE-ROLLER. HARRY T. STAATS, Townsend, Del. Filed Mar. 4, 1914. Serial No. 822,319. (Cl. 156—27.)

1. A shade roller mounted upon a main shaft, a tubular casing secured to said main shaft, a coil spring mounted thereon, a spool mounted upon each end of the main shaft, each of said spools having a cord wound thereon, said cord having one end secured to said spools and the other end extending therefrom and secured to a window facing, a sleeve mounted upon the main shaft between one end of said roller and one of said spools and held against displacement by the same, a guide arm extending upwardly therefrom and terminating in another arm having an aperture formed therein as a guide means for the cord extending from one of said spools and an operating arm extending downwardly from said sleeve as and for the purpose set forth.

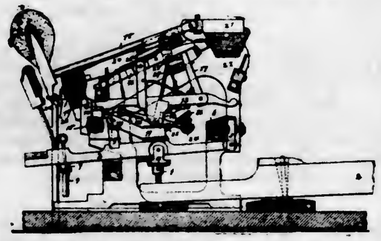
2. A shade roller comprising a casing, a main shaft mounted therein and extending therefrom a limited distance at both ends thereof, a tubular casing mounted within the first mentioned casing and secured to said main

shaft, a coil spring mounted upon said last mentioned tubular casing and having one end secured thereto, a capping plug secured at one end of said roller and extending therein a limited distance and having secured thereto the opposite end of said coil spring, a spool mounted upon the extended ends of said main shaft, a sleeve mounted upon the said main shaft intermediate one end of the roller and one of said spools, said sleeve being rotatable therebetween and having a plurality of notches formed therein,



a plurality of dogs mounted upon one end of said roller for engagement with one of said notches, one of said spools having a cuplike inner face formed thereon and a plurality of dogs mounted therein for engagement with another of said notches, a guide arm extending upwardly from said sleeve and terminating in an outwardly extending arm having an aperture formed therein and an operating arm extending downwardly from said sleeve as and for the purpose set forth.

1,157,262. PIANISSIMO DEVICE FOR GRAND-PIANO ACTIONS. ALBERT T. STRAUCH, New York, N. Y. Filed May 26, 1915. Serial No. 30,492. (Cl. 84—61.)



1. In a grand piano action, a frame, a key, an oscillative member pivoted to the frame and operable by the key, a lost motion lever carried by the oscillative member, a support engaging said lever, a hammer rest rail, and means operable by said rail for tilting the lost motion lever.

2. In a grand piano action, a frame, a key, an oscillative member pivoted to the frame and operable by the key, a mechanically-actuated sticker engaging the oscillative member, a lost motion lever carried by the oscillative member, a support engaging said lever, a hammer rest rail, and means operable by said rail for tilting the lost motion lever.

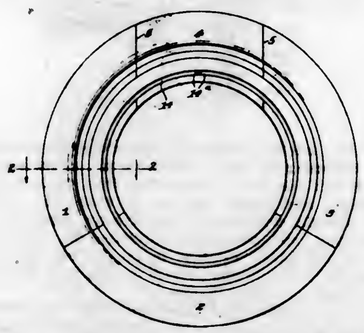
3. In a grand piano action, a frame, a key, an oscillative member, pivoted to the frame and operable by the key, a flange on the oscillative member, a lost motion lever pivoted to said flange and having a foot adapted to rest on the oscillative member, a support engaging said lever, a hammer rest rail, and means operable by said rail for tilting said lever.

4. In a grand piano action, a frame, a key, an oscillative member pivoted to the frame and operable by the key, a lost motion lever carried by said oscillative member, a support engaging the lever, a pair of pivoted arms, a hammer rest rail carried by said arms, hangers depending from the arms, a lost motion rod operably connected to the hangers, and means on the lever for engaging said rod.

5. In a grand piano action, a frame, a key, an oscillative member pivoted to the frame and operable by the key, a lost motion lever carried by said oscillative member, a support engaging the lever, a pair of pivoted arms, a hammer rest rail carried by said arms, hangers depending from the arms, a lost motion rod operably connected to the hangers, and a finger extending forwardly from the lever and engaging the rod.

[Claims 6 to 8 not printed in the Gazette.]

1,157,263. TIRE-CORE. EARLE E. TANNAR, Akron, Ohio. Filed Mar. 12, 1914. Serial No. 824,127. (Cl. 18—45.)



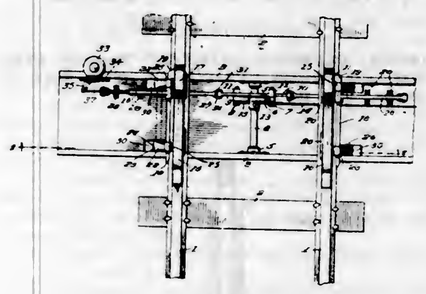
1. The combination, with a plurality of core segments each having an arcuate recess therein one of the lateral surfaces whereof is tapered or inclined and adapted, when the segments are assembled, to form a complete annular recess, of an outer ring section and an inner ring section adapted to be inserted into said recess, one of said ring sections being continuous and the other section being a split ring, one of said ring sections having a surface inclined complementarily to the inclined surface of the recess, and a lost-motion connection between the inner and the outer ring sections.

2. The combination, with a plurality of core segments each having an arcuate recess therein the inner surface whereof is tapered or inclined and adapted, when the segments are assembled, to form a complete annular recess, of an outer ring section and an inner ring section adapted to be inserted into said recess, the outer ring section being continuous and the inner ring section being a split ring, the inner surface whereof is inclined complementarily to the inclined surface of the recess, and a lost-motion connection between the inner and the outer ring sections.

3. The combination, with a plurality of core segments each having an arcuate recess the inner face whereof is inclined and adapted when the segments are assembled, to form a complete annular recess, of a ring coöperating with said recess, said ring comprising an outer continuous ring of less width than said recess and an inner split ring having its inner surface inclined complementarily to the inclined surface of the recess, one of said ring sections being provided with a tongue and the other with a groove of greater width than said tongue, whereby a lost-motion connection is provided between said sections.

4. The combination, with a plurality of core segments having an arcuate recess one of the inner faces whereof is inclined and adapted, when the segments are assembled, to form a complete annular recess, of a ring coöperating with said recess, said ring comprising a continuous ring of less width than said recess and a split ring having a surface inclined complementarily to the inclined surface of the recess, one of said ring sections being provided with a tongue and the other with a groove of greater width than said tongue, whereby a lost-motion connection is provided between said sections.

1,157,264. RAILROAD-SKATE. ARTHUR TAYLOR, Centralia, Ill. Filed July 18, 1915. Serial No. 39,622. (Cl. 104—227.)



1. In combination with the rails, and the holding skates for the rails, of a pit arranged transversely of the track beneath the rails, a shaft journaled transversely of the pit at each rail and on the outer side thereof, a pair of parallel arms extending upward from each shaft, and having a connection with the adjacent skate to lift the skate from the rail and swing it outwardly away from the rail when the shaft is oscillated in the proper direction, operating means for simultaneously swinging the skates in opposite directions arranged transversely of the pit between the rails, said mechanism comprising a shaft having a cross head, means connected with the ends of the cross head for oscillating the shaft, a slide bar in the pit at the outer side of each rail and having guided movement transversely of the rail, a link connecting each slide bar to one end of the cross head, and a connection between the outer end of each link and the adjacent skate.

2. In combination with the rails, and the holding skates for the rails, of a pit arranged transversely of the track beneath the rails, a shaft journaled transversely of the pit at each rail and on the outer side thereof, a pair of parallel arms extending upward from each shaft, and having a connection with the adjacent skate to lift the skate from the rail and swing it outwardly away from the rails when the shaft is oscillated in the proper direction, operating means for simultaneously swinging the skates in opposite directions arranged transversely of the pit between the rails, said mechanism comprising a shaft having a cross head, means connected with the ends of the cross head for oscillating the shaft, slide bars having guided movement transversely of the rails and connected to the ends of the cross heads at their inner ends and to the skates at their outer ends to swing the skates on to and away from the rails when the slide bars are moved in opposite directions.

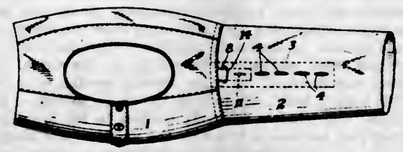
3. In combination with the rails, and the holding skates for the rails, of a pit arranged transversely of the track beneath the rails, a shaft journaled transversely of the pit at each rail and on the outer side thereof, a pair of parallel arms extending upwardly from each shaft, and having a connection with the adjacent skate to lift the skate from the rail and swing it outwardly away from the rail when the shaft is oscillated in the proper direction, operating means for simultaneously swinging the skates in opposite directions arranged transversely of the pit between the rails, said mechanism comprising a shaft having a cross head, means connected with the ends of the cross head for oscillating the shaft, and a connection between the ends of the cross head and the skates for simultaneously swinging the skates in opposite directions when the shaft is oscillated.

4. The combination with the rails and the skates adapted to be seated upon the rails for checking the movement of a car, each skate having at the outer side thereof an arm rigidly connected therewith and having that end toward which the cars are moving free from the skate, operating mechanism for simultaneously moving the skates in opposite directions, shafts journaled at the outer sides of the skates and connected with the operating mechanism for oscillating the shafts when the said mechanism is operated, and a pair of arms on each shaft and provided with bearings for engaging the adjacent arm of the skate.

5. In combination with the rails, of a pair of holding skates for the rails, a pair of arms for each skate, a shaft journaled at the outer side of each skate, the adjacent arms being rigid with the shaft, each pair of arms having registering bearings at their upper ends and each skate having a rigid arm extending longitudinally thereof and connected to the skates at the end remote from the approaching cars, said arms being adapted to engage the bearings, and means for simultaneously oscillating the arms in opposite directions.

[Claims 6 to 13 not printed in the Gazette.]

1,157,265. ADJUSTABLE SLEEVE. WILLIAM TUTELMAN, Philadelphia, Pa. Filed Sept. 8, 1913, Serial No. 788,504. Renewed Mar. 15, 1915. Serial No. 14,514. (Cl. 2—94.)



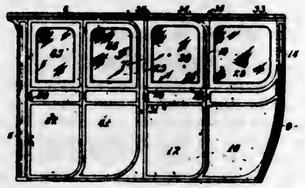
1. Sleeve adjusting means comprising a strip having its side portions adjacent to one end thereof folded over toward each other to bring their edges into proximity to each other and to form a relatively narrow portion, the said strip being secured to the inner side of a sleeve at its inner end portion by the threads of button holes formed in said sleeve and strip, and the said relatively narrow strip being folded upon itself and provided with a button hole, and being then folded over the edge of the sleeve and secured in such folded over position by the threads by which the sleeve is secured in an arm-hole of a garment.

2. The combination of a shirt sleeve, a strip secured thereto upon its interior side at its inner end portion, said strip having a tongue-like portion folded over the edge of said sleeve and secured in such folded over position by the threads which secure the sleeve in the arm-hole of the shirt body, the said sleeve and strip having button holes extending longitudinally thereof, the threads of which secure said strip to said sleeve, and also having a transversely extending button hole situated adjacent to the edge of the sleeve for the reception of said tongue-like portion, substantially as described.

3. The combination of a shirt sleeve, a strip secured thereto upon its interior side at its inner end portion, said strip having a tongue-like portion folded over the edge of said sleeve and secured in such folded over position by the threads which secure the sleeve in the arm hole of the shirt body, and the said sleeve and strip having a transversely extending slit situated adjacent to the edge of the sleeve for the reception of said tongue-like portion.

1,157,266. CONVERTIBLE VEHICLE-BODY. WILLARD IRVING TWOMBLY, New York, N. Y., assignor to Twombly Motors Company, New York, N. Y., a Corporation of New York. Original application filed Mar. 4, 1910, Serial No. 547,207. Divided and this application filed Feb. 10, 1911. Serial No. 607,737. (Cl. 21—14.)

1. In a vehicle body, the combination with the floor and a fixed roof, of removable sides for said body extending from the roof to the floor comprising a pair of hingedly connected sections, one section adapted to be removably secured in a fixed position and the other section serving as a door for the vehicle body.



2. The combination with a vehicle body having a fixed roof, of means to close the sides between the roof and floor, comprising a pair of pivotally connected sections, one section constituting a door; and means to releasably secure the said sections between the roof and floor, consisting of pins projecting from the lower edge of said section to engage in openings in the floor, and coöperating latch mechanism connected to the upper end of said section and the door to draw and lock said section in position.

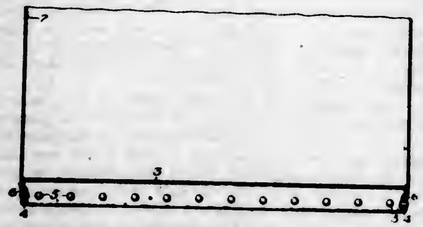
3. In a vehicle body, the combination with the floor and a fixed roof, of removable sides for said body extending from the roof to the floor, each side consisting of hingedly connected sections; means to releasably secure the sides in position, comprising pins projecting from the lower edge of one section to engage in sockets in the floor, and cooperating latch mechanism connected to the top of said section and the roof, the other section serving as a door for the vehicle body; windows in the upper portion of said sections; and window receiving pockets in the lower portion of said sections into which the windows are adapted to be dropped, substantially as and for the purpose specified.

4. The combination with a vehicle body having a fixed roof, of removable means to close the space between the roof and floor comprising a pair of pivotally connected sections, one section adapted to be removably secured in a fixed position and the other section serving as a door, substantially as and for the purpose specified.

1,157,267. [WITHDRAWN.]

1,157,268. [WITHDRAWN.]

1,157,269. CAN OR RECEPTACLE. PATRICK WALL, Pittsburgh, Pa. Filed Apr. 24, 1912. Serial No. 692,937. (Cl. 220—137.)



A rectangular can or receptacle having a sheet metal body and a sheet metal bottom, the bottom and body having rounded unbeaded corner portions, and the bottom, which is inset with respect to the lower edge of the body, having a depending flange which is continuous entirely around the can, said flange being bent upwardly and outwardly to form a pocket in which the lower edge portion of the body seats, the latter together with the inner portion of the said flange being offset inwardly, and rivets uniting the parts, said rivets being below the said offset, and their headed outer ends, by reason of said offset, being within the plane of the outer surface of the portion of the body above the offset, substantially as described.

1,157,270. BLASTING-CARTRIDGE. WILHELM WEBER, Hayingen, Germany. Filed July 8, 1915. Serial No. 38,692. (Cl. 102—6.)



1. A blasting cartridge, consisting of an outer casing, an organic non-inert absorbent for liquid air within said casing, a perforated storage tube for liquid air surrounded by said absorbent, a separate package of metallic powder inside said casing, and a primer in contact with said metallic powder, substantially as and for the purpose described.

2. A blasting cartridge, consisting of a double walled outer casing, a corrugated layer of paper intermediate of the walls of said outer casing, an organic non-inert absorbent for liquid air, a perforated storage tube for liquid air inside said casing and surrounded by said absorbent, a separate package of metallic powder inside said casing, and a primer in contact with said metallic powder, substantially as and for the purpose described.

3. A blasting cartridge, consisting of a double walled outer casing, a corrugated layer of paper intermediate of the walls of said outer casing, an organic non-inert absorbent for liquid air within said casing, a perforated storage tube for liquid air surrounded by said absorbent and projecting from said outer casing, a perforated stopper for the outer end of said perforated tube, a separate package of metallic powder inside said casing, and a primer in contact with said metallic powder, substantially as and for the purpose described.

4. A blasting cartridge, consisting of a double walled outer casing, a corrugated layer of paper intermediate of the walls of said outer casing, channels on the exterior of said outer casing adapted to receive priming wires, an organic non-inert absorbent for liquid air, a perforated storage tube for liquid air surrounded by said absorbent and projecting from said outer casing, a perforated stopper for the outer end of said perforated tube, a separate package of metallic powder inside said casing, a primer inside said package in contact with said metallic powder, and a pair of priming wires embedded in said channels and connected to said primer, substantially as and for the purpose described.

5. A blasting cartridge, consisting of an outer casing, an organic non-inert absorbent for liquid air, a perforated storage tube for liquid air inside said casing and surrounded by said absorbent, a separate package containing metallic powder to the amount of about ⅓ of the capacity of the cartridge, and a primer in contact with said metallic powder, substantially as and for the purpose described.

[Claims 6 and 7 not printed in the Gazette.]

1,157,271. STABLE BORON NITRID AND THE PROCESS OF MAKING THE SAME. GEORGE WEINTRAUB, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Feb. 3, 1913. Serial No. 745,819. (Cl. 204—64.)

1. The process which consists in heating chemically unstable boron nitrid to a temperature of about 2000° C. surrounded by a protective atmosphere until no more fumes are evolved.

2. The process which consists in heating chemically unstable boron nitrid to a temperature of about 2000° C. surrounded by an atmosphere of gas suppressing the decomposition of the nitrid.

3. An article of manufacture comprising boron nitrid, stable with respect to hot water.

4. A composition of matter comprising boron nitrid substantially stable with respect to water and oxygen at an elevated temperature.

1,157,272. RESILIENT WHEEL. CHARLES A. WHALE and JAMES H. BLACK, Portland, Oreg. Filed Jan. 22, 1915. Serial No. 3,762. (Cl. 152—22.)

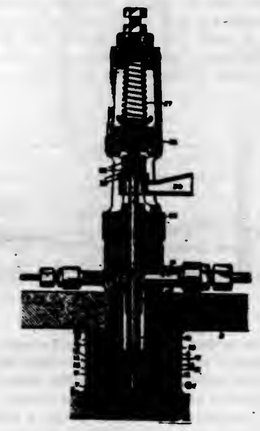
1. In a resilient wheel, a hollow wheel rim provided with two series of small cylinders radially disposed therein and communicating with the interior thereof, pistons working in said small cylinders and projecting radially outwardly from said hollow rim, a series of tread members pivotally attached to the outer ends of said pistons, each tread member being connected at its opposite ends to opposite pistons and extending transversely of said rim, and a resilient medium consisting of a heavy liquid and air filling said hollow rims and said pistons, whereby the movements of the pistons within the small cylinders are yieldingly retarded by said medium, substantially as described.

2. In a resilient wheel, a hollow wheel rim provided with two series of small cylinders radially disposed therein and communicating with the interior thereof through restricted openings in the sides of said cylinders, said cylinders being anchored at their outer and inner ends in the outer and inner walls of said hollow wheel rim, two series of pistons working in said small cylinders and projecting radially outwardly from said hollow rim, a series of tread members pivotally attached to the outer ends of said pistons, each tread member being connected at its opposite ends to opposite pistons and extending transversely of said rim, and a resilient medium consisting of a heavy liquid and air filling said hollow rims and said pistons, whereby the movements of the pistons within the small cylinders are yieldingly retarded by said medium, substantially as described.

3. A wheel rim of the character described comprising a hollow rim provided with partition members dividing it into separate chambers, two series of small cylinders arranged side by side and radially disposed within each chamber, pistons working in said cylinders, tread members transversely disposed and pivotally connected at their opposite ends with opposite pistons projecting from said wheel rim and said cylinders, and a resilient medium consisting of oil and air within said rim chambers and said cylinders, said cylinders communicating through restricted openings in their sides with the interior of the rim chambers, substantially as described.

4. A resilient wheel rim comprising a hollow rim, two series of small cylinders, radially disposed therein side by side around the interior of said rim, pistons working in said cylinders and projecting radially outwardly from said rim, and a series of tread members transversely disposed around said rim and each pivotally connected at its opposite ends to opposite pistons, substantially as described.

1,157,273. FUEL-INJECTOR. GEORGE EDWARD WINDELER, Stockport, England, assignor to General Electric Company, a Corporation of New York. Filed May 22, 1914. Serial No. 840,252. (Cl. 123—131.)



1. A fuel injector comprising a casing having an outlet, a needle valve, a series of perforated and spaced washers, a member supported by the casing adjacent the outlet and having passages for fuel and air that discharge into the outlet, a conduit delivering fuel to the top of the upper washer, and a conduit admitting compressed air to the casing, in combination with an anti-splashing device which is situated in the casing between the fuel and air conduits and in close proximity to the first of the series of washers so as to form a chamber into which the fuel is delivered, said anti-splashing device having an opening through which compressed air passes before it strikes the fuel.

2. In a fuel injector, the combination of a casing having an outlet, a plurality of perforated washers mounted within the casing, spacers between the washers, a needle valve that extends through the washers and spacers, a seat for the valve carried by the casing, an anti-splashing device comprising a disk located in front of and separated from the first washer by a chamber adapted to receive fuel, said disk having through ports, a conduit for discharging fuel into said chamber, and a conduit for admitting high pressure air to the casing on the opposite side of said device from the fuel receiving chamber.

3. In a fuel injector, the combination of a casing having an outlet a tubular sheath located in the casing, a nut secured to the sheath and provided with passages extending toward the outlet, a plurality of perforated washers mounted on the sheath and separated one from the other, a needle valve that extends through the sheath, a seat for the valve carried by the casing, an anti-splashing device comprising a disk located in front of the first washer and provided with ports that diverge toward the washers, a conduit for admitting fuel to the region between said disk and said first washer, and a conduit for admitting high pressure air to the casing on the inlet side of the disk.

1,157,274. DOOR-SPRING. WILLIAM W. WOLFE, East Highlands, Cal. Filed July 14, 1914. Serial No. 850,991. (Cl. 16—9.)

1. A door spring comprising a bell-crank plate mounted on the door with its turning axis at right angles to the central axis upon which the door swings, a stirrup connected with one of the arms of said bell-crank plate and pivoted to the door post, and a spring connected with the remaining arm of said plate and secured at its free end to the door.

2. A door spring comprising a bell-crank plate, a curved member pivotally mounted at its one end upon the door post and connected with said bell-crank plate in a manner that as the door is opened the plate is swung about its pivotal mounting, and a coil spring connected with the free arm of said bell-crank plate and attached to the door to resiliently oppose swinging and to return the bell-crank plate to the normal position.



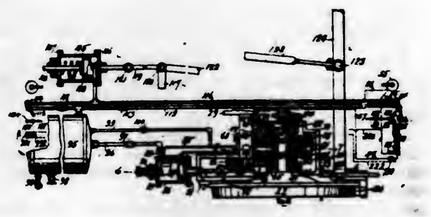
3. A door spring comprising a bell-crank plate mounted on the door, a link pivotally connected with one of the arms of said plate, a curved stirrup connected with said link and pivoted to the door post, a second link connected with the remaining arm of the plate, a spring connected at its one end with the door and at its remaining end with said second link.

4. A door closing spring comprising a bell-crank plate, a pivot pin passed through the central bearing of said bell-crank plate to mount said plate upon the door with its turning axis at right angles to the axis on which the door swings, a coil spring connected with one of the arms of said plate, a connection between their free end of said spring and the door to hold said spring in tension, a curved member connected with the free arm of said bell-crank plate and a pivotal connection between said curved member and the member to which the door is hinged.

1,157,275. CLUTCH AND REGULATING MECHANISM. EDWARD W. WOOLLEY, Jersey City, N. J. Filed Nov. 13, 1909. Serial No. 527,847. (Cl. 230—24.)

1. In a vehicle the combination of a rotating element, a clutch connected up with said element, an electromagnet connected up with the clutch coacting between the members thereof, a compressor coacting with the clutch, the said magnet controlled by the pressure of the fluid produced by the compressor, a regulating cylinder coacting with the pressure of the fluid, a piston in the cylinder, said piston and cylinder having means to allow the escape of some of said fluid at the downstroke of the piston and means in the regulating cylinder to perform another function.

2. The combination of a compressor to compress a fluid, a rotating element, a clutch connected up with said element, connections between the clutch and compressor to operate the latter and electric means to control one of the members of said clutch by the pressure of said fluid, a regulating cylinder coacting with said pressure, said piston and cylinder having means to allow the escape of fluid therefrom and means in the regulating cylinder to perform another function.



3. The combination of a compressor to compress a fluid, an adjustable clutch connected up with said compressor, electric means controlling a movable member of said clutch, said electric means controlled by the pressure of said fluid, a regulating cylinder co-acting with said fluid having means to allow the escape of some of the fluid from the cylinder and means in the regulating cylinder to blow a signal.

4. The combination of a rotative element, one member of a clutch fastened to said element, a second member of the clutch slidably connected to the rotative element, a compressor connected up with said second member of the clutch, electric means to move said slidable member, means to control the said elecetric means by the pressure of the fluid produced by the compressor, a regulating cylinder coacting with said fluid, a piston for the cylinder, the said piston and cylinder having means to enhance the descent of the piston in the cylinder and means in the regulating cylinder to blow a whistle.

5. The combination of a rotative element, one member of a clutch fastened to said element, a movable member for said clutch, a compressor connected with the movable member to compress a fluid, an electromagnet connected with the first member of the clutch, a pair of electric feed wires for the magnet, an electric switch connected up with the feed wires, a regulating cylinder to open and close said switch, the operations of said cylinder controlled by the pressure of the fluid, a piston for the cylinder, the said piston and cylinder having means to enhance the descent of the piston and means in the regulating cylinder to operate a signal.

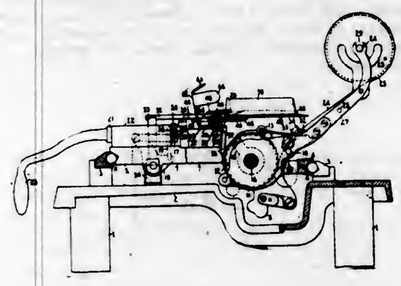
[Claims 6 and 7 not printed in the Gazette.]

1,157,276. TYPE-WRITING MACHINE. CLIO B. YAW, Arlington, N. J., assignor to Remington Typewriter Company, Ilion, N. Y., a Corporation of New York. Filed Apr. 29, 1913. Serial No. 764,300. (Cl. 197—133.)

1. In a typewriting machine, the combination of two cooperating paper shearing elements, and means operating automatically at will to effect relative movement of said elements transversely of the plane of the paper, the paper being severed during and by reason of such automatically effected transverse movement.

2. In a typewriting machine, the combination of a traveling platen carriage, two relatively movable paper shearing elements both mounted on said carriage, and means operative automatically at will to effect relative movements between said elements transversely of the platen to sever he paper.

3. In a typewriting machine, the combination of a traveling platen carriage, two relatively movable paper shearing elements both mounted on said carriage, and means for effecting relative movements between said elements transversely of the platen to sever the paper, said means operating automatically during the carriage travel and being rendered effective thereby.

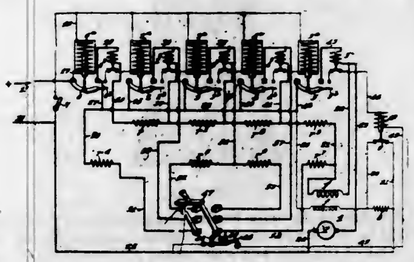


4. In a typewriting machine, the combination of a traveling platen carriage, two elements relatively movable transversely of the platen of shear paper, and means operating automatically during traveling movements of the carriage to effect such relative movement, the operation of said automatic means being due solely to the traveling movements of the carriage.

5. In a typewriting machine, the combination of a traveling platen paper carriage, two elements relatively movable transversely of the platen to cut paper supported on said carriage, and means including a stationary device operating automatically to effect such relative movement during traveling movements of the carriage.

[Claims 6 to 40 not printed in the Gazette.]

1,157,277. MOTOR-CONTROLLER. CHARLES W. YERGER, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed June 22, 1911. Serial No. 634,712. (Cl. 172—288.)



1. The combination with an electric motor, of accelerating means therefor and electrical means for compensating for load variations in starting to thereby adapt said accelerating means to changes in the load on the motor.

2. The combination with an electric motor, of power controlling means therefor to accelerate the same by successive increments of power and means to adjust said former means to different load conditions by varying the individual values of said power increments.

3. In a controller for electric motors in combination, a plurality of resistances, a plurality of separately actuated switches controlling said resistances to gradually accelerate the motor, a plurality of auxiliary resistances and means for connecting each of said auxiliary resistances in parallel with one of said first mentioned resistances to vary the amount of current supplied to the motor during the acceleration thereof.

4. In a controller for electric motors in combination, a plurality of resistances, a plurality of the separately actuated switches for controlling said resistances to gradually accelerate the motor, a plurality of auxiliary resistances and a single switch for connecting each of said auxiliary resistances in parallel to one of said first mentioned resistances to vary the amount of current supplied to the motor during the acceleration thereof.

5. The combination with an electric motor, of current controlling means therefor to accelerate the same by a given number of current increments, and means for varying the individual values of said current increments to compensate for the effect of load variations on said motor in starting.

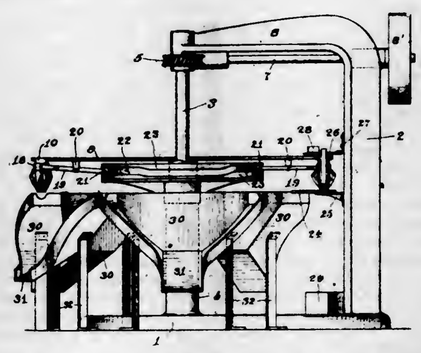
[Claims 6 to 18 not printed in the Gazette.]

1,157,278. CAN-BODY. JOHN M. YOUNG, San Francisco, Cal. Filed Oct. 31, 1912. Serial No. 728,928. (Cl. 220—93.)



A can body having an overlapping side seam portion composed of more than one thickness of metal, said overlapping seam portion being partly cut away at the extremity of one of its ends to prevent the protrusion of the metal when the can body is flanged.

1,157,279. GRADER. JOHN M. YOUNG, San Francisco, Cal. Filed Oct. 21, 1914. Serial No. 867,786. (Cl. 130—32.)



1. In an apparatus for the described purpose comprising a vertically disposed tubular guiding means for receiving the material to be graded, a tapered variable outlet down-

wardly extended from said guiding means and formed of coöperating sections, and means co-acting with said variable outlet for controlling the opening thereof upon the movement of said guiding means.

2. An apparatus for the described purpose, comprising a plurality of vertically disposed tubular open ended guiding means, each adapted for receiving a single article to be graded, a tapered variable outlet downwardly extended from each of said guiding means and formed of a plurality of coöperating segments, means for receiving the graded articles as the same pass from said guiding means, and means coacting with said variable outlet for controlling the opening thereof as said guiding means successively coöperate with said graded article receiving means.

3. An apparatus for the described purpose, comprising a plurality of vertically disposed open ended tubular guiding means and a plurality of receiving means, one movable relative to the other, said guiding means each adapted for receiving a single article to be graded, and each receiving means adapted for receiving the graded articles, a tapered variable outlet downwardly extended from each of said guiding means and formed of a plurality of cooperating segments, and means coacting with said variable outlets for controlling the opening thereof on the movement of said guiding and receiving means relative to each other.

4. An apparatus for the described purpose, comprising a vertically disposed open ended tubular guide member for receiving the articles to be graded, a tapered variable controlled outlet downwardly extended from the guide and formed of a plurality of segments, devices associated with said outlet and carried by said tubular guide for actuating said controlled outlet, and means associated with said devices to control the movements thereof to vary the outlet of the guide proportionately to the size of the article to be discharged therefrom.

5. In an apparatus for the described purpose, comprising a vertically disposed open ended tubular guide for receiving the articles to be graded and provided at its lower end with a tapered variable outlet formed of cooperating segments, and means for operating said segments to vary the outlet of the guide proportionately to the size of the article to be discharged therefrom.

[Claims 6 to 13 not printed in the Gazette.]

1,157,280. DRAWN ELECTRODE. WILLIAM G. ABBOTT, Jr., Milford, N. H., assignor to General Electric Company, a Corporation of New York. Filed Apr. 24, 1912. Serial No. 692,955. (Cl. 176—121.)



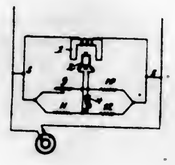
1. A drawn arc-light electrode composed of a metal sheath and arc feeding material compacted therein.

2. A flexible drawn arc-light electrode composed of a metal sheath filled with compacted arc feeding material.

3. A drawn arc-light electrode composed of a sheath of mild steel having arc feeding material compacted therein.

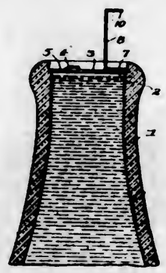
4. A drawn arc-light electrode composed of a sheath of mild steel having a magnetite mixture as the arc feeding material compacted therein.

1,157,281. APPARATUS FOR PRODUCING DIRECTIVE FORCES BY INDUCTION IN ALTERNATING-CURRENT CIRCUITS. HENRI ABRAHAM, Paris, France, assignor to Henri Abraham et Jules Carpentier, Paris, France. Filed Feb. 24, 1912. Serial No. 679,654. (Cl. 172—245.)



An alternating current meter comprising an electromagnet, an unrestrained movable coil in the field of said magnet connected to the same source of current as said magnet, and a self-induction in shunt with said movable coil, the self-induction in shunt with the coil producing an effect in said coil opposite to the deviating effect produced by said field on said coil, whereby the coil comes to rest in a position of stable equilibrium, without the intervention of mechanical force, in accordance with the electrical conditions of the circuit as regards resistances and reactances, but independent of the potential.

1,157,282. CLOSURE FOR MILK BOTTLES OR JARS. HARRY G. ALDRIDGE, Rochester, N. Y. Filed Sept. 15, 1914. Serial No. 861,796. (Cl. 215—14.)



1. A closure for milk bottles comprising a circular disk having a discharge opening entirely surrounded by the material of the disk and also having a spout-forming portion cut from the material of the stock at one edge of the discharge opening, the spout-forming portion being separated from the remaining portion of the disk by a score so that it may be bent outwardly from the plane of the disk.

2. A closure for milk bottles comprising two circular disks formed from a single blank and folded one upon another, one of said disks being provided with a discharge opening and the other of said disks closing said opening and being provided with a score extending from one edge thereof to another to permit a portion of said disk to swing to open and close the opening, said scored disk being slightly smaller in diameter than the one with the opening and the swinging portion of the scored disk being wider than the other portion.

3. A closure for milk bottles comprising two circular disks formed from one piece of material and folded one upon the other, one of said disks being provided with an opening entirely surrounded by the material and the other of said disks having a transverse score permitting a portion thereof to bend relatively to the other portion to act as a cover for the opening, the swinging portion of the scored disk being wider than the other portion.

4. A closure for milk bottles comprising two circular disks formed from one piece of material and folded one upon the other at one side thereof, one of said disks being provided with a discharge opening and the other of said disks being provided with a transverse score at an angle to the fold and also with a tongue to one side of a central line through the two disks before they are folded.

1,157,283. BLACK FINISH. MARK A. ATUESTA, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 9, 1915. Serial No. 33,202. (Cl. 91—70.)

1. The method of producing a rust-proof black finish on ferrous articles which consists in coating them with zinc, heating them in charred bone dust mixed with carbonaceous binder, and subsequently quenching them in carbonaceous liquid.

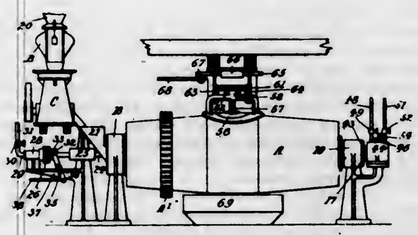
2. The method of producing a rust-proof black finish on ferrous articles which consists in coating them with zinc, heating them in finely divided phosphorous-containing carbonaceous material mixed with black carbonaceous binder, and subsequently quenching them in oil.

3. The method of producing a rust-resisting black finish on ferrous articles which consists in heating them in charred bone dust mixed with carbonaceous binder and subsequently quenching them in carbonaceous liquid.

4. The method of producing a rust-proof black finish on ferrous articles which consists in sherardising them, heating them in charred bone dust mixed with tarry binder at a temperature below the fusion point of the sherardizing coat, and subsequently quenching them in oil.

5. The method of producing a black finish on ferrous articles which consists in heating such articles in charred bone dust mixed with liquid coal tar and subsequently quenching them in boiled linseed oil.

1,157,284. APPARATUS FOR HYDRATING LIME. MOIS H. AVRAM, New York, N. Y., assignor to Standard Silica Brick Machinery Company, Wilmington, Del. Filed Sept. 16, 1913. Serial No. 790,011. (Cl. 222—4.)



1. Apparatus for hydrating lime comprising a rotary drum, a surrounding jacket, means for introducing predetermined quantities of unslacked lime and moisture into said drum, and means for conducting the steam generated during hydration from the drum into the jacket.

2. Apparatus for hydrating lime comprising a rotary drum, a surrounding jacket, means for introducing predetermined quantities of unslaked lime and moisture into said drum, means for conducting the steam generated during hydration from the drum into the jacket, and means for subsequently discharging the hydrated lime from the drum.

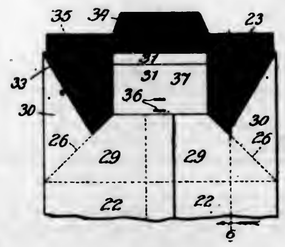
3. Apparatus for hydrating lime comprising a rotary drum, a surrounding jacket, a valve-controlled duct connecting the interior of the drum with the jacket, and a valve-controlled duct connecting said jacket with the atmosphere.

4. Apparatus for hydrating lime comprising a rotary drum, a surrounding jacket, a pair of trunnions at the ends of the drum, means for introducing unslaked lime and moisture through one of said trunnions, and means in the other trunnion for connecting the jacket with the interior of the drum and with the atmosphere.

5. Apparatus for hydrating lime comprising a rotary drum, a surrounding jacket, means for introducing unslaked lime and moisture into the drum, means for connecting the jacket with the interior of the drum and with the atmosphere and a steam supply pipe adapted to be connected with the jacket.

[Claims 6 to 8 not printed in the Gazette.]

1,157,285. BOX. SIEGMUND BACHMANN, Chicago, Ill. Filed Nov. 11, 1910. Serial No. 591,749. (Cl. 229—34.)



1. A collapsible box formed of a base, walls extending therefrom, and corner extensions connected with walls of the box and lying against adjacent box-walls, said extensions lying at their extremities against adjacent walls of the box and being of a height substantially equal to the heights of the walls against which they lie to form braces therefor, said extensions containing diagonal folding lines and being slit along lines extending at an angle to said base from their upper edges to said diagonal folding lines.

2. A collapsible box formed of a base, walls extending therefrom, and corner extensions connected with walls of the box and lying against adjacent box-walls, the extremities of said extensions lying in mutually overlapping condition against adjacent box-walls and being of a height substantially equal to the heights of the walls against which they lie to form braces therefor, said extensions containing diagonal folding lines and being slit along lines extending at an angle to said base from their upper edges to said diagonal folding lines, for the purpose set forth.

3. A collapsible box formed of a base, walls extending upwardly therefrom, corner-extensions connected with walls of the box and lying against adjacent box-walls, said extensions being foldable along diagonal folding lines and each partially severed from its upper edge to its diagonal folding line, and flaps on the walls of the box against which said extensions lie engaging with the box at their free edges intermediate said lines of partial severance and overlapping at their ends said extensions.

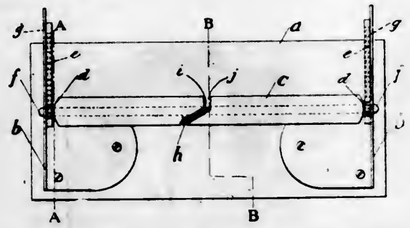
4. A collapsible box formed of a base, walls extending upwardly therefrom, corner-extensions on walls of the box foldable along diagonal folding lines and formed of sections certain of which are connected with the other portions of the box merely along said folding lines, said last referred to sections being turned back and lying against

adjacent box-walls to which they are secured, each of said extensions being slit along lines extending at an angle to said base from its upper edge to its diagonal folding line, and means on the box-walls engaging with the movable portions of said extensions for holding the box in set-up condition.

5. A collapsible box formed of a base, walls extending upwardly therefrom, corner-extensions lying between adjacent ends of the box-walls and hingedly connected therewith, said extensions being foldable along diagonal folding lines and each partially severed from edges thereof to its diagonal folding line from opposite sides thereof to afford in each extension two sections hingedly connected together and both connected with the box-walls, and a third section hinged to one of said two sections, said third sections lying against adjacent box-walls, and means on the box-walls engaging with the movable portions of said extensions for holding the box in set-up condition.

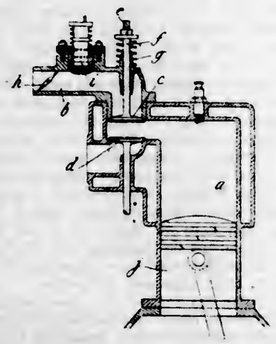
[Claims 6 to 15 not printed in the Gazette.]

1,157,286. PAPER-HOLDER. BURDETTE S. BAYLE, Ambridge, Pa. Filed Oct. 14, 1914. Serial No. 866,659. (Cl. 211—31.)



In a paper holder, the combination, with a rectangular roll shaft for engaging the roll of paper, said shaft having a hole at its axis, and having a notch in one of its sides, arranged at its middle part and communicating with the said hole, a spindle slidable in the said hole and having a circumferential groove which registers with the said notch, a spring arranged in the notch and secured to one side of the rectangular shaft with its free end projecting beyond its opposite side and with its middle part engaging with the said groove, and means for supporting the said spindle and shaft.

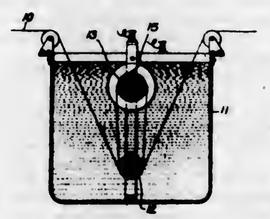
1,157,287. INTERNAL-COMBUSTION ENGINE. LOUIS HENRI LIBERT BELLEM and GASTON JEAN-BAPTISTE BRÉGÉRAS, Neuilly-sur-Seine, France. Filed Mar. 2, 1912. Serial No. 681,115. (Cl. 123—35.)



1. In an internal combustion motor using fuel of low volatility, the combination of a cylinder, a piston therein, an intake passage opening into the top of the cylinder, an inlet valve at the mouth of the said passage, and an atomiser located in the said passage ahead of the valve and adapted to operate under the influence of a vacuum, the said valve being arranged to open only when the piston is at the end of its intake stroke in order to create a vacuum in the cylinder.

2. In an internal combustion motor using fuel of low volatility, the combination of a cylinder, a piston therein, an intake passage opening into the top of the cylinder, a throttle valve in said passage, an inlet valve at the mouth of said passage communicating with the cylinder, an atomizing valve located in said passage intermediate the throttle valve and inlet valve and adapted to operate under the influence of a vacuum, the said inlet valve being arranged to open only when the piston is at the end of its intake stroke in order to create a vacuum in the cylinder, and an exhaust valve in said cylinder.

1,157,288. MANUFACTURE OF FINE REFRACTORY-METAL WIRES. FRITZ BLAU, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Jan. 31, 1912. Serial No. 674,476. (Cl. 29—148.)



1. The method of producing very fine tungsten wire of uniform surface and cross-section which consists in reducing the size of slender tungsten wire free from the ordinary crystalline structure of tungsten by electrolytic corrosion.

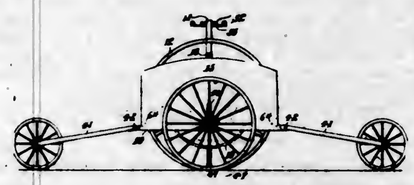
2. The method of producing very fine refractory metal wire of uniform diameter and surface which consists in subjecting slender wire that has been deprived of its crystalline structure by mechanical working, to electrolysis, as anode in a bath of suitable electrolyte.

3. The method of producing very fine tungsten wire of uniform diameter and surface which consists in electrolytically corroding slender tungsten wire which has been deprived of its crystalline structure by mechanical working while hot by passing it at a uniform rate of speed through an alkaline bath as anode in such a manner that a considerable length of wire is in the bath while supplying current to the wire at a number of points from a plurality of electrically parallel anode contacts traversed by the wire in its passage through the bath, so as to obtain a uniform corrosion.

4. The method of producing very fine tungsten wire of uniform diameter and surface which consists in reducing the size of tungsten wire, the metal of which has been deprived of its crystalline structure by mechanical working while hot by successive stages of electrolytic corrosion with suitable electrolyte, and counteracting the relative magnification of the inequalities of the wire resulting from this electrolytic reduction in size by drawing of the wire between the stages of the electrolytic treatment.

5. The process of producing very fine tungsten wire of uniform surface and cross-section which consists in repeatedly hot-working a body of tungsten to change its structure from crystalline to fibrous and at the same time to reduce its cross-section and then further reducing its cross-section by electrolysis with said wire as anode.

1,157,289. MOTOR-PLOW. ARCHIE J. BLAUVELT, Erin, N. Y. Filed Oct. 24, 1914. Serial No. 868,464. (Cl. 21—114.)



1. A device of the class described comprising a platform, a traction wheel journaled thereto, a post upon said platform, a stub shaft journaled in said post, a driven gear and pinion fixed to said stub shaft, operative engagement between said pinion and the traction wheel, a motor shiftably mounted upon said platform, a driving pinion for said motor, a sprocket chain over said driven gear and adapted for engaging said driving pinion when the motor is at its opposite extremes of movement.

2. A device of the class described, comprising a platform, a traction wheel journaled at one side of said platform, a ground wheel of lesser diameter than said traction wheel and journaled at the opposite side of the platform, vertical adjusting means for said ground wheel positioned upon said platform, a motor longitudinally slidable upon the platform, operative connections between the said motor and traction wheel releasable upon a central positioning of the motor and adjusting means upon the platform for slidably moving the said motor.

3. A device of the class described, comprising a platform, angular frames hinged to the opposite ends of the platform, steering wheels at the sides of said frame and at the ends thereof, a side wall upon said platform, a projecting arm at the top of said wall, a cross arm upon said projecting arm, projecting axles for said steering wheels, steering rods pivoted to the free ends of said axles and having spaced adjacent ends having toothed inner faces, a vertical rod journaled in said projecting arm, a pinion at the lower end of said vertical rod in mesh with the teeth of the said steering rods, a gear at the upper end of said vertical rod, steering members journaled at the opposite ends of the said cross arm, worms at the outer end of said steering members in mesh with the said rod gear, and hand turn wheels at the opposite ends of said steering members.

4. A device of the class described, comprising a platform, a traction wheel and a ground wheel at the opposite sides thereof, a shiftable balancing motor upon said platform, operative connections between said motor and traction wheel, means for longitudinally moving the said motor, frames hinged to the opposite ends of said platform, steering wheels at the opposite ends of said frames, and means for laterally moving the said steering wheels.

5. A motor plow comprising a frame, shiftable counterbalancing means upon the said frame for propelling the device in opposite directions and tiltably operably adjusting the said frame.

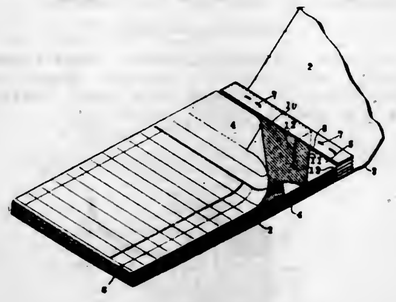
[Claim 6 not printed in the Gazette.]

1,157,290. MANIFOLDING SALES-BOOK. EDWARD KIRBY BOTTLE, Elmira, N. Y., assignor to American Sales Book Company, Limited, Toronto, Canada, a Corporation of Ontario, Canada. Filed July 23, 1913. Serial No. 780,639. (Cl. 11—23.)

1. In a manifolding sales book, in combination, a pad, and a single face carbon sheet having a portion of one edge turned under to form an irregularity for use as a thumb notch.

2. In a manifolding sales book, in combination, a pad, and a single faced carbon sheet having a turned under corner providing a space to permit the operator to grasp the next set of leaves.

3. In a manifolding sales book, in combination, a carbon sheet, and a pad composed of original and duplicate leaves, the duplicate leaves being connected or bound together at one end and the carbon sheet bound with the connected ends of the duplicate leaves, the carbon sheet having a reinforced portion at one corner adjacent its bound edge.

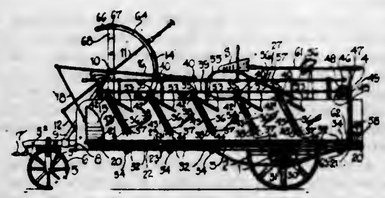


4. In a manifolding sales book, in combination, a carbon sheet, and a pad composed of original and duplicate leaves, the duplicate leaves being connected or bound together at one end, and the carbon sheet bound with the connected ends of the duplicate leaves, the carbon sheet having a portion thereof cut and turned under to provide a reinforcement therefor.

5. In a manifolding sales book, in combination, a carbon sheet, and a pad composed of original and duplicate leaves, the duplicate leaves being connected or bound together at one end and the carbon sheet bound with the connected ends of the duplicate leaves, and having its upper corner adjacent its bound edge cut and turned under, providing means to prevent soiling the fingers when manipulating the book.

[Claims 6 to 10 not printed in the Gazette.]

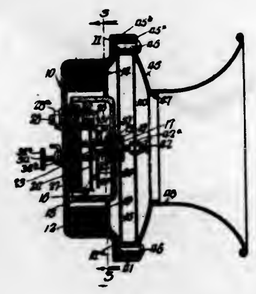
1,157,291. SELF-LOADING VEHICLE. OLLIE W. BRADSHER, Harrisburg, Ark. Filed Feb. 18, 1915. Serial No. 9,109. (Cl. 37—32.)



1. In combination, a wheel supported shaft, a body mounted upon said shaft and capable of rocking movement thereon, the forward end of said body being open, a forward wheel supported axle, supporting members projecting upwardly from the arms, a double lever pivotally engaged with the supporting members, the lower extremities of said lever being operatively engaged with the body at a point in advance of the pivotal connection between the arms and the body, coacting locking means carried by the lever and the body, and a ground engaging element carried by the forward extremity of the body.

2. In combination with a body, a plurality of bars disposed transversely thereof and arranged in predetermined longitudinal adjustment and capable of rocking movement, rock arms depending from the bars, pulverizing rollers rotatably mounted in the lower extremities of the rock arms, means common to each of the bars for imparting rocking movement thereto whereby the pulverizing rollers may be raised or lowered, a rotatable element loosely mounted on each of the bars, an operative connection between said element and the adjacent roller, and means common to each of the elements for rotating the same in unison.

1,157,292. AUTOMOBILE-HORN. HOMER A. BERTZ, Jackson, Mich., assignor to Mineraliac Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 28, 1914. Serial No. 879,267. (Cl. 177—7.)



1. A horn comprising a cuplike casing, an annular magnetic coil in said casing, a flat disk spring, a cuplike armature carried by said spring, means for attaching said armature to said spring, normally engaging contact members fixed in said casing within the plane of said armature and a resonant diaphragm adapted to be struck by said attaching means.

2. A horn comprising a cuplike casing, an annular magnetic coil in said casing, means for retaining said coil in said casing, a flat disk spring, a cuplike armature carried by said spring, means for attaching said armature to said spring, normally engaging contact members fixed in said casing within the plane of said armature and a resonant diaphragm adapted to be struck by said attaching means.

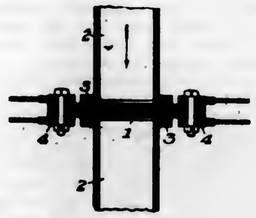
3. A horn comprising a cuplike casing, an annular magnetic coil in said casing, a ring for retaining said coil in position therein, a flat disk spring, a cuplike armature carried by said spring located in said casing in the plane of said coil and retaining ring, means for attaching said armature to said spring, normally engaging spring contact members located in said casing and a resonant diaphragm adapted to be struck by said attaching means.

4. A horn comprising a cuplike casing, an annular coil in said casing, a flat disk spring, a cuplike armature carried by said spring, means for attaching said armature to said spring, normally engaging spring contact members fixed in said casing and adapted to be disengaged by said armature and spring retaining means, means operable from without the casing for regulating the distance through which the armature moves before said attaching means disengages said normally engaging contact members, and a resonant diaphragm adapted to be struck by said armature and spring attaching means after said contact members have been disengaged.

5. A horn comprising a cuplike casing, an annular magnetic coil in said casing, a flat disk spring, a cuplike armature carried by said spring, means for attaching said armature to said spring, said means comprising a clamping screw having a head at one end engaging one face of said spring disk, said screw extending through said disk and armature, a spacing washer interposed between said spring disk and armature and lock nuts rigidly securing said armature to screw, a pin carried by the opposite end of said screw but insulated therefrom, normally engaging spring contact members fixed in said casing and adapted to be disengaged by the insulated pin on said armature and spring attaching screw, and a resonant diaphragm adapted to be struck by said clamping screw head.

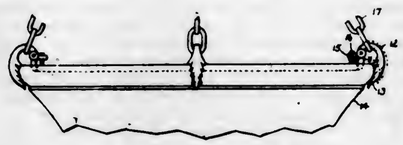
[Claims 6 to 10 not printed in the Gazette.]

1,157,293. APPARATUS FOR THE MANUFACTURE OF CHEMICAL COMPOUNDS. CLARENCE J. BROCKBANK, Niagara Falls, Ontario, Canada, assignor to The Carborundum Company, Niagara Falls, N. Y., a Corporation of Pennsylvania. Filed Jan. 7, 1914. Serial No. 810,758. (Cl. 204—31.)



In apparatus for the manufacture of chemical compounds by a catalytic process, a converter containing a porous diaphragm carrying a catalyzer in its interstices, said converter being composed of compacted carborundum without foreign binding material, and means for electrically heating said carborundum by passing current therethrough.

1,157,294. ELECTRIC-LIGHTING FIXTURE. CARL A. BROWN, Fostoria, Ohio, assignor to General Electric Company, a Corporation of New York. Filed Mar. 26, 1914. Serial No. 827,309. (Cl. 240—91.)



1. A fixture-bowl support comprising an annular frame adapted to lie within the upper edge of said bowl, fingers mounted on said frame and movable relative thereto, said fingers extending below said frame, and adjustable means for holding said fingers in position for engaging said fixture bowl.

2. A fixture-bowl support comprising an annular frame adapted to lie within the upper edge of said bowl, fingers pivoted at their upper portions to said frame and extending below the same, and adjustable means for holding said fingers in position for engaging said fixture-bowl.

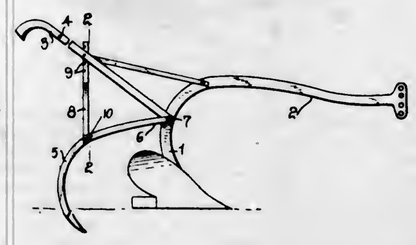
3. A fixture-bowl support comprising a frame, transversely extending fingers pivoted to said frame and having apertured lugs extending from the ends thereof adjacent to said frame and adjusting screws extending through said apertures and engaging said frame to hold said fingers in desired positions.

4. In a lighting fixture, a bowl support comprising a frame, bowl engaging fingers mounted on said frame and movable relatively thereto, suspension means engaging said fingers and means independent of said suspension means for adjusting the positions of said fingers relative to said frame.

5. In a lighting fixture a bowl support comprising a frame, transversely extending fingers pivotally mounted on said frame, suspension means engaging said fingers and means independent of said suspension means for adjusting the positions of said fingers relative to the frame.

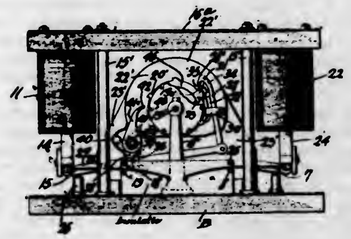
[Claims 6 to 10 not printed in the Gazette.]

1,157,295. SUBSOILER. THOMAS C. BUSBEE, Andalusia, Ala., assignor of one-half to Ander J. Busbee, Andalusia, Ala. Filed July 31, 1915. Serial No. 42,937. (Cl. 97—82.)



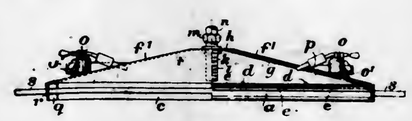
In combination with a plow beam provided with handles, a subsoiler stock pivotally engaged with the beam, bracing strips pivotally engaged with the subsoiler stock and provided with longitudinally spaced recesses, and endwise adjustable headed members carried by the handles of the plow beam with which the bracing strips are adapted to engage, said headed members being capable of adjustment to clamp the strips against displacement.

1,157,296. ELECTRIC SIGNAL DEVICE. ALVA HAYS CAVEN, Youngwood, Pa. Filed May 7, 1914. Serial No. 837,043. (Cl. 175—281.)



A circuit controlling device, including a base, a frame carried by the base, two solenoids carried by the frame and projecting toward said base, a step-by-step rotary switch controller operatively connected to the cores of the solenoids, whereby one core operates the switch in one direction while the other core operates it in the opposite direction, a block of insulation carried by the base between the solenoids, two pairs of contacts carried by said block, and a pair of resilient switch members carried by the block and disposed between the contacts of the respective pairs, the switch members coöperating with the solenoid cores to be operated thereby for engaging the respective contacts.

1,157,297. APPARATUS FOR USE WHEN PAVING ROADS AND THE LIKE. WILLIAM BLACKWELL COWELL, Catford, England. Filed Mar. 15, 1915. Serial No. 14,412. (Cl. 94—6.)



1. An apparatus for drying and heating the surface of, or material laid on, a road or road foundation, comprising a shallow box inclosed on all sides, having an open bottom, a diaphragm made of a material capable of absorbing and giving off heat and situated a little above the basal edges of the box, a roof or top of a form rising toward the middle to allow for the uniform distribution of heat, and means for supplying heat to the interior of the box.

2. An apparatus for drying and heating the surface of, or material on, a road or road foundation, comprising a shallow box inclosed on all sides, having an open bottom, a perforated diaphragm made of a material capable of absorbing and giving off heat and situated a little above the basal edges of the box, a roof or top of a form rising toward the middle to allow for the uniform distribution of seat, and means for supplying heat to the interior of the box.

3. An apparatus for drying and heating the surface of, or material laid on a road or road foundation, comprising a shallow box inclosed on all sides, having an open bottom, a roof or top of a form rising toward the middle to allow for the uniform distribution of heat, means for supplying heat to the interior of said top, and a diaphragm made of a material capable of absorbing and giving off heat and situated at the junction of the sides of the box and the top.

4. An apparatus for drying and heating the surface of, or material laid on a road or road foundation, comprising a shallow box inclosed on all sides, having an open bottom, a low roof or top of truncated pyramidal form, means for supplying heat to the interior of the said top, and a diaphragm made of a material capable of absorbing and giving off heat and situated at the junction of the sides of the box and the top.

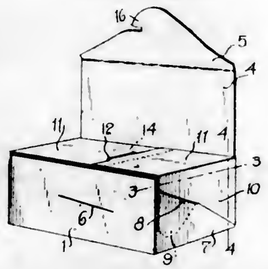
5. An apparatus for drying and heating the surface of, or material laid on a road or road foundation, comprising a shallow box inclosed on all sides, having an open bottom, a low roof or top of truncated pyramidal form, means for supplying heat to the interior of the said top and a perforated diaphragm made of a material capable of absorbing and giving off heat and situated at the junction of the sides of the box and the top.

[Claims 6 and 7 not printed in the Gazette.]

1,157,298. PAPER BOX. MORTON H. DAGUE, Newport, Ark. Filed Dec. 19, 1914. Serial No. 878,167. (Cl. 229—36.)

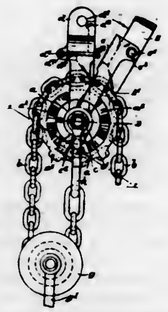
A box of the character described comprising a front section provided with end flaps having slots produced therein longitudinally thereof and at their inner extremities, said front section intermediate its length being provided with a longitudinally disposed slot, a bottom section

provided with end flaps, a back section provided with end flaps, said end flaps of the back section being provided with top flaps and with depending tongues insertible through the slots of the end flaps of the front section, a top section, a tuck flap carried by the top section, said tuck flap being provided with a hook tongue insertible through the slot of the front section, the outer end portion



of one of the top flaps being provided adjacent its outer extremity with a transversely disposed slit, and the outer portion of the second top flap being provided with a hook tongue adapted to be inserted through the slit of the first mentioned top flap, the end flaps of the bottom section being of a length less than the end flaps of the front and back sections.

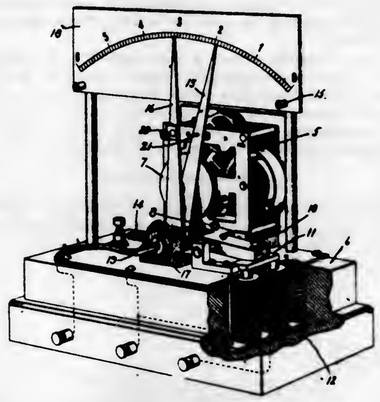
1,157,299. HAULING APPARATUS. JOHN DAVIES, Miskin, Mountain Ash, and JOHN DAVIES, Penrhiwceiber, Wales. Filed Jan. 10, 1914. Serial No. 811,424. (Cl. 74—31.)



1. A hauling apparatus consisting of a grooved chain-wheel, an axle for the wheel, a forked bracket carrying the axle and formed with a recess, an open-link chain upon the chain-wheel, a spring-controlled pawl pivotally suspended in said recess, there being a projecting nose on said pawl engaged in the chain-links, an operating lever pivoted on said axle, ratchet-pawls carried in the operating lever, there being ratchet-teeth formed in the faces of the chain-wheel, as described.

2. A hauling apparatus consisting of a grooved chain-wheel, an axle for said wheel, a bracket carrying the axle, an open-link chain upon the chain-wheel, a spring-pawl in said bracket to engage the chain, a two-part operating lever with one part pivoted on said axle, there being lugs formed at the outer end of said lever-part, a second lever part articulated in the lugs, an extension of said second part to engage in the chain-links, an extension of said first lever-part beyond the axle of the chain-wheel, ratchet pawls in the extension of said first lever-part, there being ratchet teeth in the faces of the chain-wheel, as described.

1,157,300. ELECTRIC TIMING DEVICE. JOHN T. DEMPSTER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 8, 1913. Serial No. 740,084. (Cl. 161—26.)



1. An electric timing device comprising in combination a movable member, an electric circuit including electro-responsive means for retaining said member in a desired position, a time actuated driving means, an actuator adapted to be driven by said time-actuated driving means, circuit-controlling means included in the electric circuit of said electro-responsive means and operatively related to said actuator, means tending to return said actuator to an initial position, electro-responsive means for placing said actuator in operative engagement with said driving means, and circuit-controlling means actuated by the movement of said member to its aforementioned retained position and operatively related to said last mentioned electro-responsive means for making and interrupting the operative engagement between said actuator and said means.

2. An electric time actuated mechanism comprising in combination, a time actuated driving means, an electric circuit including an electromagnet, an armature for said electromagnet, a pivoted lever adapted to be rocked by said armature, an actuator carried by said lever and adapted to engage with said driving means, means tending to return said actuator to an initial position, and means for controlling said electric circuit.

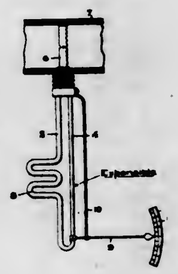
3. An electric timing device comprising in combination, a member whose movement is to be timed, an electric circuit including electro-responsive means for retaining said member in a desired position for a predetermined time, time actuated means for controlling said circuit, a second electric circuit including electro-responsive means for controlling said time actuated means, and means coöperating with said member for controlling said second electric circuit.

4. An electric timing device comprising in combination, a member whose movement is to be timed, an electric circuit including electro-responsive means for retaining said member in a desired position for a predetermined time, a fixed contact and a movable contact in said circuit, a time actuated driving means, an actuator adapted to be driven by said driving means and operatively connected to said movable contact, a second electric circuit including electro-responsive means for placing said actuator in operative engagement with said driving means, contacts in said second circuit, and means controlled by said member for operating said last mentioned contacts.

5. An electric timing device comprising in combination, a time actuated driving means, an electric circuit including an electro-magnet, an armature for said electro-magnet, a pivoted lever adapted to be rocked by said armature, an actuator carried by said lever and adapted to engage with said driving means, means tending to return said actuator to an initial position, a fixed contact and a movable contact in said circuit, said movable contact being operated by said actuator, and a second electric circuit including electro-responsive means for placing said actuator in operative engagement with said driving means and for disconnecting such engagement when said movable contact engages said fixed contact.

[Claim 6 not printed in the Gazette.]

1,157,301. FLOW-METER. AUSTIN R. DODGE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 1, 1914. Serial No. 835,691. (Cl. 73—167.)



1. In a flow meter, the combination of an agent adapted to create a pressure difference which bears a definite relation to the rate of flow, an expansible tube connected at one end to the leading side of the agent, and means connecting the other end of the expansible tube to the trailing side of the agent, said means being constructed and arranged so that the expansible tube may expand and contract due to temperature changes while said means remains at substantially the same temperature.

2. In a flow meter, the combination of an agent adapted to create a pressure difference which bears a definite relation to the rate of flow, an expansible tube connected at one end to the leading side of the agent, means connecting the other end of the expansible tube to the trailing side of the agent, said means being constructed and arranged so that the expansible tube may expand and contract due to temperature changes while said means remains at substantially the same temperature, and an indicating device responsive to variations in the length of said expansible tube.

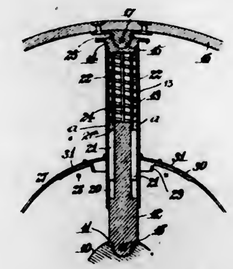
3. In a flow meter, the combination of an agent for creating a pressure difference which bears a definite relation to the rate of flow, and a U-tube connected thereto, one leg of said U-tube being made of expansible material, and the other leg being reversely bent upon itself to render it elastic.

4. In a flow meter, the combination of a nozzle plug, a U-tube connected to and carried by said plug, one leg of said U-tube being made of expansible material and the other leg being elastic, an indicating device, and means connecting the expansible leg to the indicating device.

5. In a flow meter, the combination of a nozzle plug, a U-tube connected to and carried by said plug, one leg of said U-tube being made of expansible material, and the other leg being reversely bent upon itself to render it elastic, an indicating device, and means connecting the expansible leg to the indicating device.

[Claims 6 to 13 not printed in the Gazette.]

1,157,302. WHEEL. JAMES Y. DOWNING, Jackson, Miss. Filed May 15, 1914. Serial No. 838,889. (Cl. 152—47.)



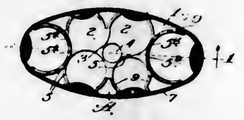
1. A resilient wheel comprising a hub, a rim concentrically disposed with respect to said hub, ear members fixed to the inner periphery of the rim at diametrically opposite points, inner and outer sections forming spokes extending radially from the hub to the rim, the inner sections being telescoped within the outer sections, socket members threaded in the outer ends of the outer sections and receiving the ear members, pivots connecting the socket and ear members, pivots connecting the inner sections to the hub, each inner section being formed with diametrically opposed guide channels, one pair of channels opening through the outer end of the inner section, abutments closing the other pair of channels at the outer end of the inner section, blocks slidably fitted in the closed channels, hook rods connected with the blocks, a coiled compression spring mounted within each of the outer sections and engaged at one end of the hook rods, and bars fixed to the socket members and working in the open pair of channels and having abutment shoulders engageable with the inner ends of the springs.

2. A resilient wheel comprising a hub, a rim concentrically disposed with respect to said hub, ear members fixed to the inner periphery of the rim at diametrically opposite points, inner and outer sections forming spokes extending radially from the hub to the rim, the inner sections being telescoped within the outer sections, socket members threaded in the outer ends of the outer sections and receiving the ear members, pivots connecting the socket and ear members, pivots connecting the inner sections of the hub, each inner section being formed with diametrically opposed guide channels, one pair of channels opening through the outer end of the inner section, abutments closing the other pair of channels at the outer end of the inner section, blocks slidably fitted in the closed channels, hook rods connected with the blocks, a coiled compression spring mounted within each of the outer sections and engaged at one end of the hook rods, bars fixed to the socket members and working in the open pair of channels and having abutment shoulders engageable with the inner ends of the springs, and resilient washers surrounding the ear members for closing the socket members.

1,157,303. SAVINGS-BANK. CHARLES FISHER, Chicago, Ill., assignor to The Automatic Recording Safe Company, Chicago, Ill., a Corporation of Illinois. Original application filed Mar. 11, 1912, Serial No. 683,178. Divided and this application filed Apr. 24, 1913. Serial No. 768,327. (Cl. 232—4.)

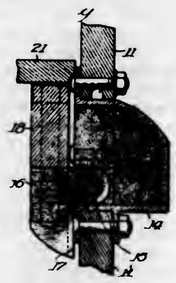
1. In a savings-bank, the combination of a body equipped with coin-chambers, a casing, a plate applied to the top-wall of said casing and having a lock-chamber formed therein, a pair of oppositely movable bolts in said lock-chamber, a filler in said lock-chamber above said bolts,

said filler having openings therein, and a bent spring having arms provided with down-turned extremities extending through the openings in said filler, and engaging perforations in said bolts.



2. In a savings bank, the combination of a body equipped with coin-chambers, a casing, a plate applied to the top-wall of said casing and formed with a lock-chamber, a pair of oppositely movable bolts in said lock-chamber, a filler in said lock-chamber above said bolts, said filler and plate provided with complemental spring-receiving recesses, and a bent spring received in said recesses and having arms provided with down-turned extremities extending through openings in said filler and engaging said bolts.

1,157,304. RAILWAY-CAR. WILLIAM E. FOWLER, Sr., Chicago, Ill., assignor to The Fowler Car Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 16, 1914. Serial No. 872,345. (Cl. 105—15.)



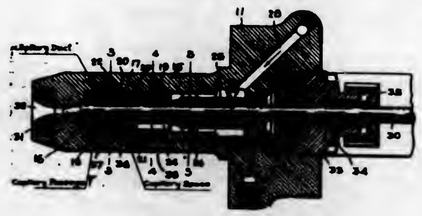
1. In a railway car, the combination of walls, brackets pivoted in said walls, each of said brackets being composed of an angular member provided with a horizontal and a vertical portion, said horizontal and vertical portions lying upon and against the wall respectively and sustaining a load independent of the pivot therefor, substantially as described.

2. In a railway car, the combination of a wall having an opening therein, a bracket mounted for pivotal movement in said opening, said bracket having a horizontal portion adapted to rest upon the floor of said opening, and a vertical portion adapted to lie against the wall adjacent to said opening whereby a load is sustained by said bracket independent of the pivot, substantially as described.

3. In a railway car, the combination of a wall having an opening, a metal pocket set in said opening, and a bracket pivoted in said pocket, the pivotal connection permitting limited bodily movement of the bracket, whereby said bracket may be locked in said pocket, substantially as described.

1,157,305. PULVERIZER FOR OIL-ENGINES. WILLIAM H. FROST, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Oct. 11, 1912. Serial No. 725,148. (Cl. 123—131.)

1. In a fuel pulverizer, the combination of a casing having a discharge opening, means located therein containing an orifice and also a capillary passage for the fuel, the latter communicating with the orifice, an annular supply chamber which supplies fuel to the capillary passage, said passage acting to prevent the flow of fuel by gravity from the chamber, a conduit for supplying fuel under pressure and in suitable quantities to the chamber, means supplying an elastic fluid under pressure to the orifice, and a valve which passes through the means and controls the passage of elastic fluid and fuel from the casing.



2. In a fuel pulverizer, the combination of a casing having a discharge opening, a means located therein which contains an open ended bore and a plurality of capillary ducts opening into the bore, a supply chamber that is common to the ducts and supplies fuel thereto, said ducts acting to prevent the flow of fuel by gravity into the bore, a means adapted to supply fuel under pressure to the chamber in measured quantities, a means adapted to supply elastic fluid under pressure to said bore so that in flowing therethrough it passes the discharge ends of said capillary ducts, and a controlling valve that extends through said member.

3. In a fuel pulverizer, the combination of a casing having a discharge opening, a hollow means located therein which contains a plurality of ducts opening into its bore, there being a capillary space or spaces communicating with said ducts, a chamber for supplying fuel under pressure to the said capillary space and ducts, said space or spaces acting to prevent the flow of fuel by gravity, a controlling valve, and means for supplying an elastic fluid under pressure to the bore of said member and to one end of the capillary space or spaces.

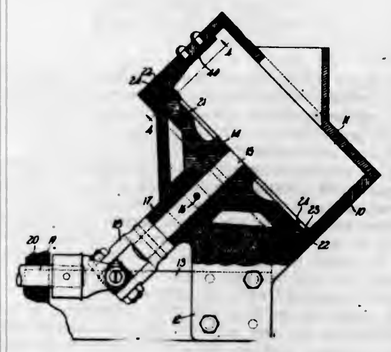
4. In a fuel pulverizer, the combination of a casing having a discharge opening, a means located therein having a central bore, a plurality of tangentially arranged capillary ducts which extend through the means to said bore, there being a capillary space or spaces that communicate with the ducts, an annular chamber which supplies fuel to the capillary space or spaces and also to the ducts, said ducts acting to prevent the flow of fuel by gravity into the bore, a controlling valve, and means for supplying air under pressure to convey the fuel from said capillary ducts and capillary space or spaces into and through said bore.

5. In a fuel pulverizer, the combination of a casing having an opening, a means located therein comprising an end plate and tubular portion which contain capillary ducts extending toward the center, a retaining portion which surrounds a part of the tubular portion and is separated therefrom by one or more capillary spaces, a chamber supplying fuel to the capillary space and ducts, said capillary space or spaces acting to prevent the flow of fuel by gravity, a means supplying fuel to the chamber, a means for supplying elastic fluid to the capillary space and passages, and a controlling valve.

[Claims 6 to 17 not printed in the Gazette.]

1,157,306. HOPPER FOR FEEDING RIVET-CAPS. ARTHUR R. HAVENER, Waltham, Mass., assignor to Judson L. Thomson M'f'g. Co., a Corporation of Massachusetts. Filed June 12, 1915. Serial No. 33,655. (Cl. 218—21.)

1. A hopper for feeding rivet caps provided with a recess in one face thereof and having an inwardly projecting annular flange surrounding said recess having, in combination, a casing, a picker plate rotatably mounted in said casing and having an inclined upper face and a projection on said upper face arranged to project into said recess, said projection having a head thereon constructed and arranged to project laterally therefrom and between said flange and the base of said rivet cap.



2. A hopper for feeding rivet caps provided with a recess in one face thereof and having an inwardly projecting annular flange surrounding said recess having, in combination, a casing, a picker plate rotatably mounted in said casing and having an inclined upper face and a projection on said upper face arranged to project into said recess, said projection having an annular flange thereon constructed and arranged to project laterally therefrom and between said rivet cap flange and the base of said rivet cap.

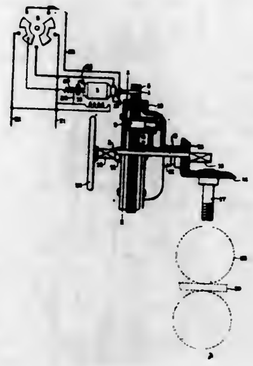
3. A hopper for feeding rivet caps provided with a recess in one face thereof and having an inwardly projecting annular flange surrounding said recess having, in combination, a casing, a picker plate rotatably mounted in said casing and having an inclined upper face and a projection on said upper face arranged to project into said recess, said projection having a lateral projection thereon constructed and arranged to project between said flange and the base of said rivet cap.

4. A hopper for feeding rivet caps provided with a recess in one face thereof and having an inwardly projecting annular flange surrounding said recess having, in combination, a casing, a picker plate rotatably mounted in said casing and having an inclined upper face and a pin projecting from said upper face and arranged to project into said recess, said pin having an annular flange on its outer end and an annular groove in its periphery adjacent to said flange, said flange constructed and arranged to project between said rivet cap flange and the base of said rivet cap.

5. A hopper for feeding rivet caps provided with a recess in one face thereof and having an inwardly projecting annular flange surrounding said recess having, in combination, a casing, a picker plate rotatably mounted in said casing and having an inclined upper face and a projection on said upper face arranged to project into said recess, said projection having a head thereon constructed and arranged to project laterally therefrom and between said flange and the base of said rivet cap, a raceway leading out of said casing and a device adjacent to the upper end of said raceway constructed and arranged to coöperate with said picker plate and said projection to lift said rivet cap from said projection and allow said rivet cap to enter said raceway.

[Claim 6 not printed in the Gazette.]

1,157,307. DRIVING MECHANISM. CLARK T. HENDERSON, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed May 13, 1914. Serial No. 838,408. (Cl. 74—34.)



1. The combination with a member to be power operated, of power transmitting gearing therefor including a normally free gear having a manual restraining device associated therewith to effect and limit power transmission to said member, said gear and said device being movable together and forcibly freed from manual restraint upon obstruction of movement of said member for abruptly terminating power transmission thereto.

2. The combination with a member to be power operated, of power transmitting gearing therefor including a normally free gear having a hand grip rotatable therewith, said gear being restrainable by manual restraint of said hand grip for effecting power transmission to said member proportional to such manual restraining force.

3. The combination with a member to be power operated, of power transmitting gearing therefor including a gear normally free to receive the power and a hand grip rotatable with said gear to be manually restrained for thereby diverting the power to said member and to be forcibly released from manual restraint upon obstruction of movement of said member for abruptly restoring the power to said gear.

4. In combination, a driven member and means for effecting a power drive thereof, said means including a braked member adapted to slip for limiting the force exerted on said driven member by said means and capable of manual operation to drive said driven member.

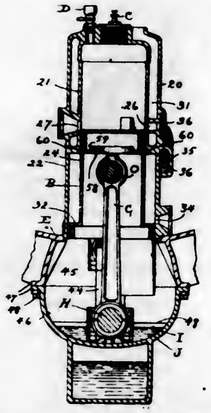
5. In combination, a power driving member, a member to be driven, a train of constantly meshing gears between said members including a normally free gear capable of manual restraint to establish the power driving connection to said member to be driven, and to maintain said connection only while the force required to drive said member to be driven does not exceed a predetermined proportion of the restraining effort exerted on said free member, said gear being also capable of manual operation to drive said member to be driven.

[Claims 6 to 12 not printed in the Gazette.]

1,157,308. LUBRICATION OF INTERNAL-COMBUSTION ENGINES. JOHN J. HOGAN, West Haven, Conn., assignor to Joseph E. Hubinger, New Haven, Conn. Original application filed June 2, 1911, Serial No. 630,762. Divided and this application filed Jan. 25, 1912. Serial No. 673,479. (Cl. 121—115.)

In an internal combustion engine, a cylinder, a piston fitted therein and having a wrist-pin, a crank, a connect-

ing rod arranged between the wrist-pin and crank, and a casing containing an oil supply into which the said crank dips, the said piston being open at the lower end and closed at the upper end and having its hollow interior open from end to end of said piston and substantially unobstructed except by said wrist-pin, the said piston being



provided with an annular lip on its inside periphery above the wrist-pin and connecting rod and forming an oil pocket effective to receive oil splashed by said crank, said piston also having ducts leading from said oil pocket through the piston wall to the outer periphery of the said piston.

1,157,309. ARTIFICIAL-TOOTH FACING AND BACKING THEREFOR. GUSTAV HOLTZ, Gouldsboro, Pa. Filed Jan. 16, 1915. Serial No. 2,691. (Cl. 32—9.)

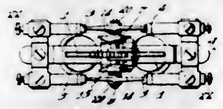


A backing for use with a tooth facing having an inset rear face terminating in a lateral shoulder spaced from the biting edge of the facing and with a central longitudinal anchoring channel opening along one long side toward the inset face and having the prolongation entering the body of the tooth facing from the shoulder toward the biting edge, comprising a single plate formed intermediately into a longitudinal rib and a longitudinal neck along one side of the rib and narrower than said rib, and said plate extending from that portion of the neck remote from the rib in opposite directions from a mid-line and terminating at one end in a flange offset from that face of the plate remote from the rib and stopping short of the corresponding end of the rib.

1,157,310. ELECTRIC SWITCH. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Apr. 8, 1912. Serial No. 689,290. (Cl. 175—293.)

1. In an electric switch, in combination, a spindle, a plurality of spaced cams fixed therein, a resilient member confined between said cams for moving the same, operating means for said member, and a movable contact associated with said cams.

2. In an electric switch, in combination, an operating rack, a pinion meshing therewith, a cam mounted coaxially with said pinion, a resilient device carried by said pinion and bearing against said cam to impart an accelerated movement to the latter upon operation of said pinion, and a contact member movable with said cam.



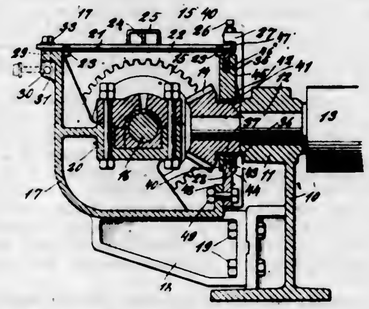
3. In an electric switch, in combination, a pivoted member having a cam surface disposed in the direction of its axis, operating means therefor including a pinion and a spring-pressed device carried thereby and biased against said cam, and contacts movable with said member.

4. In an electric switch, in combination, two relatively movable and co-axially pivoted members having engaging parts, one part being yieldable and resiliently bearing against the other to alternately impede and impel movement of one member in one direction during movement of the other member in the other direction, operating means for said last mentioned member, and a movable contact associated with the other member.

5. In an electric flush switch, in combination, a pair of rectilinearly movable racks having push button extremities, a pinion meshing with said racks and interlocking the same to move in opposite directions, a pair of co-axially pivoted members disposed on opposite sides of said pinion and having convex cams projecting toward the same, and resilient means carried by said pinion and confined between said cams to receive and store energy during initial movement of said pinion and to thereafter expend such energy in imparting accelerated movement to said pivoted members in a direction opposite to the movement of said pinion.

[Claims 6 and 7 not printed in the Gazette.]

1,157,311. GUARD FOR LUBRICATING DEVICES. CHARLES KUDERER, Pittsburgh, Pa. Filed Oct. 19, 1914. Serial No. 867,386. (Cl. 64—22.)

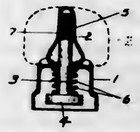


1. The combination of a lubricant trough having an opening in one of its walls to accommodate a rotatable element, the edge of the opening at the bottom thereof having a recess, a gland seating in the opening and having a top recess, a spring located in the first mentioned recess and bearing against the bottom of the gland, a joint bar extending across the top portion of the trough opening and extending into the top recess of the gland, and a spring in said top recess between the inner end thereof and the joint bar.

2. The combination of a lubricant trough having an opening in one of its walls to accommodate a rotatable element, a gland seating in said opening and having a marginal flange on one side seating against one face of the aforesaid trough wall, outstanding lugs on the gland, and springs between the lugs and the other face of the trough wall.

3. The combination of a lubricant trough having an opening in one of its walls to accommodate a rotatable element, a gland seating in said opening and having a marginal flange on one side seating against one face of the aforesaid trough wall, outstanding lugs on the gland, springs between the lugs and the other face of the trough wall, the edge of the trough opening at the bottom thereof having a recess, and the gland having a top recess, a spring located in the first mentioned recess and bearing against the bottom of the gland, a joint bar extending across the top portion of the trough opening and extending into the top recess of the gland, and a spring in said top recess between the inner end thereof and the joint bar.

1,157,312. VEHICLE CURTAIN-FASTENER. FRANK LAISLE, Augusta, Ky., assignor to The F. A. Neider Company, Augusta, Ky., a Corporation of Kentucky. Filed Apr. 24, 1915. Serial No. 23,736. (Cl. 24—221.)

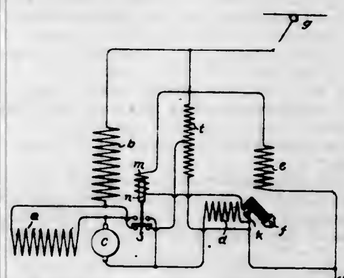


1. A vehicle curtain fastener comprising a base, a hollow seamless head mounted on the base, and a pin pivotally mounted in the base and secured to the head by compression of the sides of the head into engagement with the pin.

2. A vehicle curtain fastener comprising a base, a pin pivotally mounted at one of its ends in the base, a hollow seamless head having an imperforate top and being secured to the other end of the pin by having its sides compressed into engagement therewith.

3. A vehicle curtain fastener comprising a base, a pin pivotally mounted at one of its ends in the base and having its opposite end externally screw-threaded, and a hollow seamless head having its sides compressed into engagement with the screw-threaded end of the pin.

1,157,313. ELECTRIC-MOTOR CONTROL. MARIUS C. A. LATOUR, Paris, France, assignor to General Electric Company, a Corporation of New York. Original application filed Feb. 23, 1909, Serial No. 479,550. Divided and this application filed Oct. 3, 1913. Serial No. 793,085. (Cl. 172—276.)



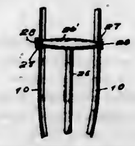
1. The combination with an alternating current motor of the commutator type provided with brushes, of controlling means for short circuiting the commutator brushes, and a device having one winding connected in shunt relation to the terminals of the motor and a second winding connected in series relation with the motor for actuating said controlling means.

2. The combination with an alternating current motor of the commutator type provided with brushes, of controlling means for short-circuiting the commutator brushes, a device having one winding connected in shunt relation to the terminals of the motor and a second winding connected in series relation with the motor, and a movable member inductively related to said windings and adapted to actuate said controlling means.

3. The combination with an alternating current motor of the commutator type provided with brushes and adapted to be connected as a repulsion motor and as a series repulsion motor, controlling means for changing the connections of the motor from the repulsion motor connection to the series repulsion motor connection, and a device responsive to the apparent resistance of the motor for actuating said controlling means.

4. The combination with an alternating current motor of the commutator type provided with brushes and adapted to be connected as a repulsion motor and as a series repulsion motor, controlling means for changing the connections of the motor from the repulsion motor connection to the series repulsion motor connection, a device having one winding connected in shunt relation to the terminals of the motor and a second winding connected in series relation with the motor, and a movable member inductively related to said windings and adapted to actuate said controlling means.

1,157,314. CRUTCH. EDWARD P. LE COMPTE and RUBIN COLVIN, Park City, Utah. Filed Apr. 4, 1914. Serial No. 829,531. (Cl. 135—53.)



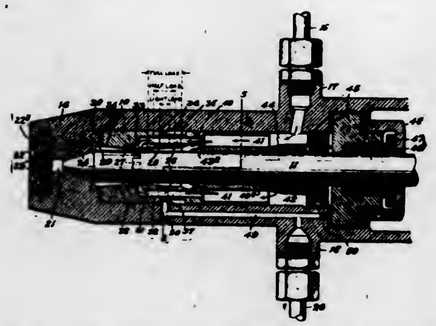
1. A crutch of the character described, comprising a body portion including a pair of spaced arms provided at their upper ends with headed studs, and an arm-rest provided near its ends with key-hole openings to receive the headed studs.

2. A crutch of the character described, comprising a longitudinally split metallic tube forming a lower tubular portion and upwardly extending spaced hollow arms having their concave surfaces arranged innermost, a foot element extending into the lower tubular portion, an arm rest arranged adjacent the upper ends of the spaced arms, means detachably connecting said arms and arm rest and adapted to disconnect them upon the inward movement of said arms toward each other, and a hand grip arranged beneath the arm rest with its ends extending into the concave surfaces of said arms to be held thereby against lateral displacement with relation thereto.

1,157,315. FUEL-INJECTOR. HERMANN LEMP, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Aug. 5, 1913. Serial No. 783,143. (Cl. 123—131.)

1. In a fuel injector, the combination of a casing, an outlet therefor, a valve controlling the outlet, a mixer located in the casing which is provided with an opening larger than the valve and through which it passes, a plurality of individual and longitudinally extending passages in the mixer, each arranged to receive a portion of the fuel charge, said passages communicating at one end with the central opening and at the other end with a supply of elastic fluid, a conduit supplying elastic fluid under pressure to the opening and to the passages, a fuel supply chamber, a conduit delivering fuel thereto, and an annular capillary conduit means receiving fuel from the chamber and delivering it directly to all of the passages against the pressure therein, said means also serving to prevent the flow of fuel from the chamber by gravity.

2. In a fuel injector, the combination of a casing, an outlet therefor, a valve controlling the outlet, a mixer which surrounds the valve, is separated therefrom by a fluid carrying space and has a number of longitudinally extending fuel passages opening into said space, a fuel supply chamber, capillary conduit means which receive fuel from the chamber and deliver it in the form of small bodies to each of the passages where it is exposed on both ends to elastic fluid pressure, the cross-sectional area of each of the passages being greater than that of the portion of the conduit means directly admitting fuel thereto, a conduit for supplying elastic fluid to said space and to the passages, and a conduit supplying fuel to the supply chamber under a pressure greater than that of the elastic fluid.



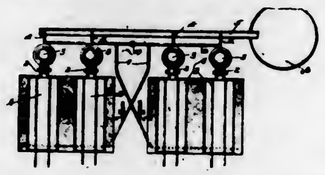
3. In a fuel injector, the combination of a casing, an outlet therefor, a valve controlling the outlet, a mixer in the casing which has a main passage for elastic fluid and a plurality of individual smaller passages in shunt relation thereto and communicating therewith at both ends, each being arranged to receive and temporarily hold a portion of the fluid charge, a fuel supply chamber, a capillary conduit means for conveying fuel from the chamber and delivering a portion of it to said shunt passages, said conduit means being adapted to prevent the free flow of fuel into the passages, and a conduit for supplying fuel under pressure to the chamber and forcing regulated amounts therefrom through said means.

4. In a fuel injector, the combination of a casing, an outlet therefor, a valve controlling the outlet, a seat in the casing which surrounds the valve, a member which surrounds the valve and contains passages for elastic fluid, a mixer that is held at its ends by the seat and member and is provided with numerous and independent fuel receiving passages that are open at both ends, a cut-away portion of the periphery of the member forming a fuel supply chamber, an annular capillary conduit means which receive fuel from the chamber and deliver a portion of it to each of the passages, and a conduit for supplying fuel under sufficient pressure to the chamber to force fuel from the chamber through said means.

5. In a fuel injector, the combination of a casing, an outlet therefor, a seat in the casing which has a bore that diverges toward the outlet, a mixer which has a plurality of individual open ended fuel passages that communicate at one end with the smaller part of said bore, said mixer having a bore that gradually converges toward the seat, a member that contains passages for conveying elastic fluid to the fuel passages and to said bore, and which surrounds the mixer to form the outer walls of its fuel passages, a valve that passes through the seat, mixer and member, and controls the outlet, a cut-away portion in the periphery of the member forming a fuel supply chamber, the outer wall of which is formed by the casing, a conduit means receiving fuel from the chamber and delivering a portion of it to each of said passages, and conduits for supplying elastic fluid to said passages and bores and fuel to the chamber.

[Claims 6 to 10 not printed in the Gazette.]

1,157,316. PROCESS FOR THE DESTRUCTIVE DISTILLATION OF WOOD. BENTON R. LYSTER and MORTON J. LYSTER, Whitefield, N. H. Filed Dec. 11, 1913. Serial No. 806,061. (Cl. 203—6.)



1. The method of conducting destructive distillation of wood, which comprises distilling the charges in retorts by external heat, and introducing non-condensable gases relatively rich in oxids of carbon, produced by one retort or set of retorts during a relatively early stage of distillation, into a retort or set of retorts during the progress therein of a relatively later stage of distillation which would ordinarily be characterized by the production of non-condensable gases relatively rich in hydrocarbons, whereby additional amounts of the desired products are formed.

2. The method of conducting destructive distillation of wood, which comprises introducing charges into a plurality of retorts and externally firing the several retorts so as to effect destructive distillation of the charges, operations being so conducted that the different retorts or sets of retorts are a substantial stage apart in the distilling process, and introducing into each retort or set of retorts, after the termination of an early stage of distillation therein and during the progress of a further stage, non-condensable gases given off by another retort or set of retorts when in an early stage of their run, whereby additional amounts of the desired products are formed.

1,157,317. IRONING-BOARD. MAUD M. MCCULLOUGH, St. Louis, Mo. Filed Jan. 7, 1915. Serial No. 1,057. (Cl. 68—1.)



1. An ironing board made in sections, and a cover overlying said sections and secured to said sections, whereby the same are held together.

2. An ironing board made in sections, bow clamps hinged to the outer ends thereof, and a cover overlying said sections, the ends of which cover are adapted to be clamped between the ends of the board and said bow clamps whereby the sections of the board are held together.

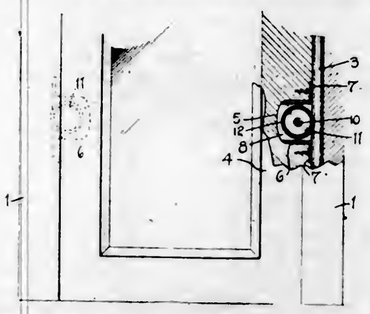
3. An ironing board, and a transversely disposed bail hinged to the underside thereof near one end, the space between which bail and ironing board is adapted to receive a flat support such as the corner of a table, said bail being adapted to swing upward against the underside of said board when the latter is positioned on top of the table.

4. An ironing board made in sections, a cover overlying said sections for holding the same together, and means on each section for gripping the edges of said cover to hold the same in taut condition on the assembled board.

1,157,318. SASH-HOLDER. JOSEPH W. MCLEAN, Tucson, Ariz. Filed July 19, 1915. Serial No. 40,758. (Cl. 16—54.)

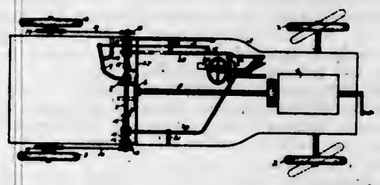
1. In combination with a window frame and a sliding sash, a tube of compressible material carried by a vertical stile of the frame, and a roller removably mounted in the sash and engageable with the compressible strip of the frame, the periphery of the roller being compressible.

2. In combination with a window frame and a sliding sash, a vertical stile of said frame being provided with a groove, a tube of compressible material positioned within



the groove and substantially entirely confined therein, and a roller mounted upon the sash and engageable with the tube, the periphery of the roller being compressible.

1,157,319. DIFFERENTIAL MECHANISM FOR AUTOMOBILES. ANTHONY S. MANISCALCO, Houston, Tex. Filed Dec. 12, 1914. Serial No. 876,817. (Cl. 21—90.)

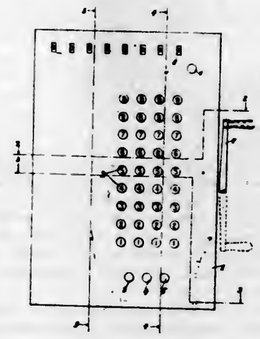


A device of the character described including a frame work, steering wheels and traction wheels, supporting the same, a steering post in operative connection with the steering wheel, a motor, a transverse counter shaft in operative connection with the motor, a means in operative connection with said counter shaft and said traction wheels, and delivering power from the former to the latter, clutches mounted on said shaft, and provided to connect and disconnect the same from said power-delivering means, a lever fulcrumed upon the frame work and pivoted at one end to each of said clutches, the other ends of said levers converging together and a manual means between the converging ends of said levers, whereby said ends may be forced apart and both traction wheels simultaneously declutched from the counter shaft.

1,157,320. CALCULATING-MACHINE. FRANK L. MARTINDALE, Bay City, Mich. Filed Aug. 30, 1912. Serial No. 717,961. (Cl. 235—79.)

1. In a calculating machine, register wheels; a pair of movable plates operatively connected to each register wheel; said plates being arranged in pairs; nine groups of stops carried by each plate; each group comprising nine stops arranged transversely of said plate; a movable latch in proximity to each group of stops; means for moving said latch into operative relation with one of said groups of stops on each plate of a pair; means for moving said latch into alinement with any stop of said group; means for moving said latch when so alined with said stop through a fixed distance of travel; the distance from said latch, when at the beginning of its travel, to the stops of said pair of plates being pre-determined fractions of the travel of the latch, whereby said latch will move said stops and the plates of said pair predetermined distances to cause the register wheels connected to said plate, to register pre-determined numbers.

2. In a calculating machine, a register wheel; a movable plate operatively connected to said register wheel; nine groups of stops carried by said plate; each group comprising nine stops arranged transversely of said plate; nine movable latches; means for moving each of said latches into operative relation with one of said groups of stops; means for moving said latch into alinement with any stop of said group; means for moving said latch when so alined, with said stop through a fixed distance of travel; the distance from said latch, when at the beginning of its travel, to said stop being a predetermined fraction of the travel of the latch, whereby said latch will move said stop and plate a pre-determined distance to cause said register wheel to register a pre-determined number.



3. In a calculating machine, a register wheel; a movable plate operatively connected to said register wheel; nine groups of stops on said plate; each group comprising nine stops; a latch adapted to engage one of the stops of each group; means for bringing said latch into engagement with said stop, and for moving said latch through a fixed distance of travel; the distance from said latch, when at the beginning of its travel, to said stop being a predetermined fraction of the travel of the latch, whereby said latch will move said stop and plate a pre-determined distance to cause said register wheel to register a pre-determined number.

4. In a calculating machine, a product-selecting device comprising two movable members; one of said members being a movable plate; nine groups of stops on said plate; each group comprising nine stops; the other member being a latch adapted to contact with one of the stops of each group; means for bringing said latch and said stop into engagement; one of said members adapted to move through a pre-determined distance and to engage the other of said members and move it through a pre-determined fraction of said distance; a register device and means operatively connecting said register device and said last-mentioned member to cause said register device to indicate a numeral of said product.

5. In a multiplying machine, the combination of a keyboard, a plurality of depressible keys, riders adapted to be depressed by said keys, means for moving said riders laterally; movable latch-actuating contact-members located in the path of travel of said riders; a guiding frame adapted to move in two directions; the movement of said frame in one direction being through a constant distance; movable latches on said guiding frame; movable plates; a plurality of stops carried by said plates; said stops being located at a predetermined distance from the extremity of travel of said latch, whereby a movement through a predetermined distance is imparted to said plates; number wheels; and means connecting said plates and wheels whereby said plate in moving through said predetermined distance actuates one of said wheels to expose a predetermined number.

[Claims 6 to 11 not printed in the Gazette.]

1,157,321. COLLAR SHAPING AND EDGING MACHINE. SAMUEL S. MATTHEWS, Mansfield, Ohio, assignor to National Chemical Company, Syracuse, N. Y., a Corporation of New York. Filed May 24, 1912. Serial No. 699,404. (Cl. 68—9.)



1. In a shaping and edging machine for collars, a frame, a vertical shaft mounted on said frame, means to impart movement to said vertical shaft, pivotal arms independently mounted on said frame, automatic means to impart a vertical oscillating movement to said pivotal arms, shaping heads mounted on said frame, and collar supports mounted on the free ends of the pivotal arms to contact with said heads.

2. In a shaping and edging machine for collars, a frame, a vertical shaft mounted on said frame, means to impart movement to said vertical shaft, pivotal arms independently mounted on said frame, automatic means to impart a vertical oscillating movement to said pivotal arms, shaping heads mounted on said frame, collar supports mounted on the free ends of the pivotal arms to contact with said heads, automatic means to rotate said arms in a horizontal plane, and a clutch mechanism to throw the machine in and out of operation.

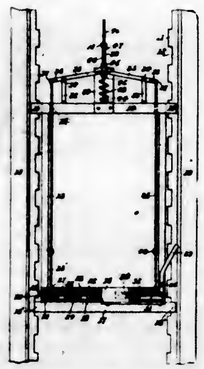
3. In a shaping and edging machine for collars, a frame, a vertical shaft mounted on said frame, means to impart movement to said vertical shaft, pivotal arms independently mounted on said frame, automatic means to impart a vertical oscillating movement to said pivotal arms, shaping heads mounted on said frame, collar supports mounted on the free ends of the pivotal arms to contact with said heads, a clutch mechanism to throw the machine in and out of operation, and automatic means to swing the pivotal arms and collar supports to and from their working positions.

4. In a shaping and edging machine for collars, a frame, a vertical shaft mounted on said frame, means to impart movement to said vertical shaft, pivotal arms independently mounted on said frame, automatic means to impart a vertical oscillating movement to said pivotal arms, shaping heads mounted on said frame, collar supports mounted on the free ends of the pivotal arms to contact with said heads, a clutch mechanism to throw the machine in and out of operation, automatic means to swing the pivotal arms and collar supports to and from their working positions, and means to yieldingly lock said collar supports in their vertical working positions for a pre-determined time.

5. In a shaping and edging machine for collars, a frame, a vertical shaft mounted on said frame, means to impart movement to said vertical shaft, pivotal arms mounted on said frame, automatic means to impart a vertical movement to said pivotal arms, automatic means to swing said arms to and from their working positions, shaping heads mounted on said frame, collar supports mounted on the free ends of the pivotal arms, and means to maintain the collar supports on a plane irrespective of the position of the pivotal arms.

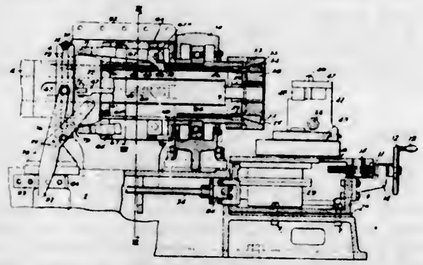
[Claims 6 to 25 not printed in the Gazette.]

1,157,322. ELEVATOR SAFETY DEVICE. GEORGE S. MOGYOROS, Dayton, Ohio. Filed Mar. 19, 1915. Serial No. 15,456. (Cl. 187—84.)



A device of the class described comprising in combination with oppositely-arranged guide strips having oppositely positioned notches therein, an elevator car vertically movable between the said strips, and having chambers in the bottom of said car, right-angular locking bolts slidably mounted within the said sockets and adapted for projecting outwardly in the plane of said notches, projection springs for the said bolts, bolt retaining rods vertically journaled at opposite points in the top and bottom of the said car, an arch bracket carried by the car top, an upright post slidably arranged in the said bracket, a hoisting cable for the car secured to the upper end of the said post, opposite limiting chains connecting the opposite points upon the said arch bracket, and the upper portion of the said post, oppositely arranged levers pivotally mounted intermediate their ends and having their outer ends shiftably pivoted to the upper ends of said rods and their inner ends pivoted to the lower end of the said post, and a coil spring attached between the lower end of the said post and a substantially central point upon the top of the car.

1,157,323. SPINNING APPARATUS. JOHN H. NICHOLSON, Pittsburgh, Pa. Filed July 19, 1915. Serial No. 40,621. (Cl. 113—52.)



1. A spinning machine comprising a rotary power driven work-holding chuck, a swinging spinning tool, and means for positively moving said tool into operative engagement with the work in said chuck, said means including a positively driven manually controlled friction clutch

2. A spinning machine comprising a power driven rotary spindle having a work-holding chuck thereon, means for opening and closing the chuck, a spinning tool carriage, a positively driven friction clutch on the carriage, and a manually controlled lever for operating said clutch in manipulating the spinning tool on said carriage.

3. A spinning machine comprising a power driven spindle having a work-holding chuck thereon, means for opening and closing the chuck, a spinning tool carriage having a tool holding swivel plate, and mechanism for turning the swivel plate to swing the spinning tool, said mechanism having a positively rotated friction wheel, a friction band encircling said wheel, and a hand lever arranged to move the friction band into engagement with the friction wheel to thereby mechanically swing the spinning tool into operative engagement with the work and manually control said swinging movement.

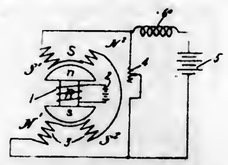
4. A spinning machine comprising a power driven spindle having a work-holding chuck thereon, means for opening and closing the chuck, a spinning tool carriage having a tool holding swivel plate, and mechanism for turning the swivel plate to swing the spinning tool, said mechanism having a friction wheel, wheel driving means operatively connecting the spindle and friction wheel, a friction band encircling said wheel and a hand lever arranged to move the friction band into engagement with the friction wheel to thereby mechanically swing the spinning tool into operative engagement with the work and manually control said swinging movement.

5. A spinning machine comprising a power driven spindle having a work-holding chuck thereon, means for opening and closing the chuck, a tool carriage adjustable toward and away from said chuck, a swivel plate movably mounted on the carriage, a tool holder on the swivel plate movable toward and away from the center of said swivel plate, and means for positively actuating said swivel plate, said means including a friction wheel and friction band and a manually operated hand lever for moving the friction band into gripping engagement with the friction wheel in actuating said spinning tool.

1,157,324. WIRE-FENCE STRETCHER. JOHN OLSON, Belgrade, Minn. Filed Dec. 9, 1914. Serial No. 876,317. (Cl. 254—161.)

The combination with a clamping bar, of a bearing bracket provided with an integral extension having an opening therein, means for securing said bracket to the clamping bar, a drum rotatably mounted in the bearing bracket, a stretching cable connected to said drum, said clamping bar having a circular recess therein of greater diameter than the opening in the bearing extension, a ratchet member fixed upon one end of the drum, and a rigid pawl loosely disposed through the opening in the bearing extension and having an enlarged head on one end loosely fitting in the recess in the clamping bar, the other end of said pawl being tapered for engagement with the teeth of the ratchet member.

1,157,325. DYNAMO-ELECTRIC MACHINE. MENDEL OSNOS, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Mar. 8, 1913. Serial No. 752,937. (Cl. 172—237.)



1. An alternating current machine comprising a rotor member and a stator member, a p-polar winding carried by one of said members and a 2p-polar winding carried by the other of said members, the magnetic circuit of said machine being designed to be normally operated near the point of saturation, and means for supplying direct current to both of said windings.

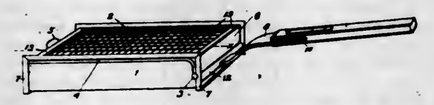
2. An alternating current generator comprising a rotor having a p-polar winding, a stator having a 2p-polar winding, the magnetic circuit of said machine being designed to be normally operated near the point of saturation, and means for supplying direct current to both of said windings.

3. An alternating current generator comprising a rotor having a p-polar winding, a stator having a 2p-polar winding, the magnetic circuit of said generator being designed to be normally operated near the point of magnetic saturation, means for supplying direct current to both of said windings, and means for connecting said stator winding to a work circuit and for selectively directing the induced alternating current and the exciting direct current flowing in the stator winding to the respective circuits.

4. An alternating current generator comprising a rotor having a p-polar winding, means for exciting said rotor winding with direct current, a stator having a winding adapted to normally have induced therein an alternating current of a fundamental frequency, the magnetic circuit of said generator being designed to be normally operated near the point of magnetic saturation, and means for exciting said stator winding with direct current and as a 2p-polar winding when it is desired to induce in said winding alternating current of double the fundamental frequency.

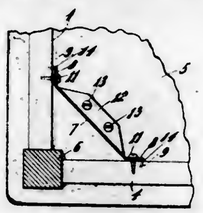
5. An alternating current generator comprising a stator member and a rotor member each carrying a polar winding, one of said windings being arranged to form a greater number of poles than the other, the magnetic circuit of said generator being designed to be normally operated near the point of magnetic saturation, and means for supplying direct current to each of said windings.

1,157,326. POPPER, TOASTER, AND BAKER COMBINED. ROBERT P. RALSTON, New Concord, Ohio. Filed Feb. 27, 1915. Serial No. 10,968. (Cl. 53—5.)



In a device of the character described, having a rectangular body, with hinged lid, and metallic handle, said body comprising vertical sides and open ends excepting metallic rolls across said ends, said vertical sides having slots cut longitudinally therein, extending the entire length thereof and curving downward at one end, said lid being constructed with metallic frame and wire mesh interior and a rod which operates in said longitudinal slots, by means of which said rod can be moved from one end of said device to the other, thereby reversing and inverting said lid, substantially as described.

1,157,327. CLAMP-BRACE. JAIRUS S. RICHARDSON, Sheboygan Falls, Wis. Filed Feb. 14, 1914. Serial No. 818,686. (Cl. 20—92.)



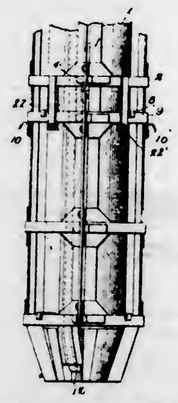
1. A clamp brace, comprising a metal plate having feet at its ends projecting angularly therefrom, and means formed on the ends of said feet for penetrating and positively spacing said feet from the object to which said brace is applied.

2. A clamp brace, comprising a metal plate having feet at its ends projecting angularly therefrom, and means formed on the ends of said feet for penetrating and positively spacing said feet from the object to which said brace is applied, said means embodying extended portions bent angularly to said feet and which are provided with teeth at their extreme edges to form solid portions between the bend and the base of the teeth.

3. A clamp brace, comprising a metal plate having feet at its ends projecting angularly therefrom, a flange extending at right-angles from one of the edges of said plate between the feet, and means formed at the ends of said feet for penetrating and positively spacing said feet from the object to which said brace is applied.

4. In combination with the side pieces of a frame disposed at right-angles to each other and united at their ends, of a clamp brace for securing said side pieces together, said clamp brace comprising a main plate portion extending diagonally between said side pieces, feet at the ends of said main plate portion and bent angularly thereto to lie in parallel relation to said side pieces, means on the ends of said feet for penetrating said side pieces and positively spacing them therefrom, and securing screws engaging said feet for retaining said brace in position.

1,157,328. METHOD AND APPARATUS FOR CONCRETING PILES. EDWARD W. SCOWDEN, Frewsburg, N. Y. Filed May 4, 1912. Serial No. 695,049. (Cl. 20—100.)



1. An apparatus for forming concrete casings around piles comprising means for providing an annular space around a pile consisting of a mold casing, means for discharging concrete under pressure from a portable discharging apparatus, means for conveying said concrete from the discharging apparatus to the bottom of the pile, and means for screening the water within the annular space around the pile from the concrete being discharged.

2. The method of forming the concrete casing around piles, which consists in creating around a pile within the surrounding sea water an annular zone, conveying properly mixed concrete to a point below the surface of the water, shielding the concrete being discharged from the water within the annular zone, and evacuating the annular zone of sea water by replacing it with concrete.

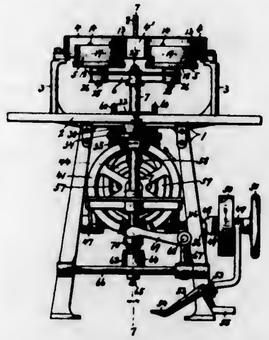
3. The method of forming the concrete casings around piles, which consists of creating around a pile within the surrounding sea water, an annular zone isolated from the surrounding sea water, conveying concrete through a flexible conduit to the bottom of the pile, extending the concrete to a point above the level of the tide, and screening the concrete from the water during said operation.

4. An apparatus of the character described, comprising an annular mold around a pile means for extending said mold to the bottom of the pile, means for discharging concrete under pressure from a portable discharging apparatus, a flexible conduit leading from said discharging apparatus to the annular mold, and screening means adapted for vertical movement separating the water within said mold from the concrete therein.

5. The method of forming a concrete casing around a pile which consists in creating around the pile within the surrounding sea water an annular zone, evacuating the sea water from said zone by filling said zone with fresh water, forcing plastic concrete under pressure into said zone, and causing the incoming concrete to elevate and discharge the water from said zone.

[Claims 6 to 15 not printed in the Gazette.]

1,157,329. COLLAR-FORMING MACHINE. JOHN J. SELTENREICH, Chicago, Ill., assignor to National Chemical Company, Syracuse, N. Y., a Corporation of New York. Filed Mar. 29, 1912. Serial No. 687,153. (Cl. 68—9.)



1. In a collar-ironing machine, a head having a circular groove in its under side, a rotary carrier having a socket, a coil spring seated in the socket and movable therewith into and out of axial alinement with the groove in the head, a circular collar support centrally mounted on said spring, and having a hollow boss surrounding the spring and telescoping in said socket, and a connecting bolt between the carrier and collar support.

2. In a machine for shaping and ironing folded collars, a pair of shaping heads having circular grooves in their undersides, a rotary and auxiliary movable shaft, a frame secured to the upper end of said shaft and provided with separate pairs of sockets spaced equi-distant from the axis of the shaft, collar supporting forms having hollow hubs telescoping in said sockets, coiled springs in said sockets, and hubs for yieldingly supporting the forms, means for rotating the shaft intermittingly to bring each pair of forms successively into registration with the shaping heads, and separate means for moving the shaft axially to force the registering forms into and out of pressing coaction with the heads.

3. In a collar-ironing machine, a shaping head having a circular groove in its under side and a collar support movable into and out of the groove and comprising a base having an inwardly projecting radial pin and a circular sheet metal ring divided through one side and having one of its ends provided with an aperture receiving said pin for holding the ring against relative rotation on its base and permitting said ring to be removed by springing the slotted end inwardly out of engagement with the pin.

4. In a machine for shaping and ironing folded collars, a shaping head having a circular groove in its underside forming inner and outer circular flanges, a portion of the inner flange being cut away to form a recess registering with the groove the outer flange being continuous, a collar supporting form, means for moving the form into and out of pressing coaction with the groove of the head, and a spring finger within the form spring pressed into engagement with the inner fold of the collar to hold the latter on the form, said finger registering with the recess in the head when the form is forced to its pressing position.

5. In a collar-ironing machine, a shaping head having a circular groove in its underside forming inner and outer flanges, a portion of the inner flange being cut away to form a recess for receiving the collar tabs, a circular collar support and a carrier therefor having telescoping connections, a coil spring within said telescoping connections yieldingly supporting the collar support on the carrier, means for moving the carrier rotarily about an axis at one side of the axis of the groove, additional means for reciprocating the carrier, and separate means for holding the collar support against rotary movement relatively to the carrier so as to register a certain portion of the collar support with the recess in the head when the collar support is registered with the circular groove.

[Claims 6 to 18 not printed in the Gazette.]

1,157,330. BOOT AND SHOE. COLUMBUS A. SHARP, Chicago, Ill. Filed Jan. 16, 1914. Serial No. 812,524. (Cl. 36—34.)



1. In a boot or shoe, a heel including two upper lifts of substantially wedge form, the thinner portion of the uppermost lift being forwardly disposed, and an outer sole extending rearwardly between said wedge lifts, the lower wedge lift having its thicker portion disposed forwardly of the heel to arch and support the shank of the outer sole.

2. In a boot or shoe, a heel including two upper lifts of substantially wedge form, the thinner portion of the uppermost being forwardly disposed, an outer sole extending between said lifts, the lower wedge lift having its thicker portions disposed forwardly to arch and support the shank of the outer sole and one of said lifts being formed of yielding material, and lower lifts of unyielding material secured to the lower wedge lift to complete the heel.

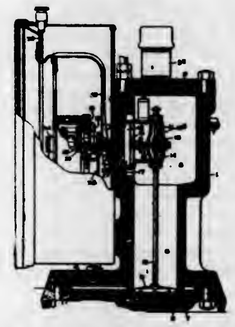
3. In a boot or shoe, a heel including two upper lifts of wedge shaped form, both constructed of yielding material, the thinner portion of the uppermost lift being forwardly disposed, an outer sole extending rearwardly between said wedge lifts, the lower wedge lift having its thicker portion disposed forwardly of the heel to arch and support the shank of the outer sole, and an unyielding lift secured to the lower wedge lift to complete the heel.

4. In a boot or shoe, a heel, and an outer sole extending into the heel, and downwardly below the top of the latter.

5. In a boot or shoe, a heel, and an outer sole extending into the heel at the forward portion thereof and near the top of the heel and extending downwardly toward the rear of the heel and below the top thereof.

[Claims 6 to 11 not printed in the Gazette.]

1,157,331. BEARING FOR FLOW-METERS. LUCIAN A. SHELDON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 15, 1914. Serial No. 856,953. (Cl. 73—167.)



1. In a meter having oscillatory parts for transmitting motion, pivotal means for said parts comprising a bar detachably secured to the framework of the meter, a pin fixed to said bar and projecting on opposite sides thereof, a sleeve surrounding the pin on one side of the bar, and means forming pivots for pivoting the sleeve on the two ends of the pin.

2. In a meter having oscillatory parts for transmitting motion, pivotal means for said parts comprising a bar detachably secured to the framework of the meter, a pin fixed to said bar, a sleeve which surrounds the pin and carries said parts, and means carried by the sleeve and having bearings which engage the ends of the pin to pivot the sleeve on the pin.

3. In a meter having oscillatory parts for transmitting motion, pivotal means for said parts comprising a bar detachably secured to the framework of the meter, a pin fixed to said bar, a sleeve which surrounds the pin and carries said parts, a bearing carried by one end of the sleeve which engages one end of the pin, and a member fixed to the sleeve and carrying a bearing for the other end of the pin.

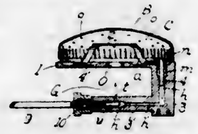
4. In a meter for measuring the flow of liquids, the combination with the dial and pointer, of a bearing for the latter comprising a bar detachably secured to the framework of the meter, a pin rigidly secured to said bar and having pointed ends, a sleeve carrying the pointer and surrounding said pin, a block at one end of the sleeve containing a bearing for one end of the pin, and an arm connected to said sleeve and carrying a bearing engaging the other end of the pin.

5. In a meter for measuring the flow of liquids, the combination with the dial and pointer, of a bearing for the latter comprising a bar detachably secured to the

framework of the meter, a pin rigidly secured to said bar and having pointed ends, a sleeve carrying the pointer and surrounding said pin, a block at one end of said sleeve containing a bearing for one end of said pin, a gear wheel mounted on the sleeve, an arm connected with said gear, and an adjustable stud in said arm containing a bearing for the other end of said pin.

[Claims 6 to 8 not printed in the Gazette.]

1,157,332. OIL-BURNER. FRANK W. SMITH, Tulsa, Okla., assignor, by direct and mesne assignments, of one-fourth to William E. Allison and one-fourth to Wash E. Hudson, Tulsa, Okla. Filed June 23, 1915. Serial No. 35,802. (Cl. 158—69.)



In a burner of the character described, a suitable platform, a vaporizer conduit mounted on top of the same and discharging through and to one side thereof, a member carried by the platform and provided with a passageway for receiving the discharges from said conduit, a leg leading from the member aforesaid beneath the platform and spaced a suitable distance therefrom, said leg being provided with a passage-way forming a continuation of the passage-way of the member aforesaid, the walls of the leg being provided with a port leading from the passage-way thereof and discharging into and across the space between said leg and platform, the latter being provided with an opening traversable by said discharges, a burner head surmounting the platform and inclosing the vaporizer conduit, a distributer supported by the platform within the burner head and having a central portion spaced from the platform and from the burner head, and means for controlling the discharges from the port of the leg aforesaid.

1,157,333. PAIL-HOLDER. ELMER A. SNELL, La Fargeville, N. Y. Filed Jan. 19, 1915. Serial No. 3,148. (Cl. 248—20.)

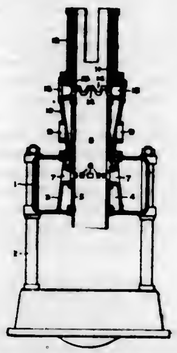


A pail holder comprising a U-shaped bracket provided with means for attachment to a supporting part, pivot and supporting bolts connecting the arms of said bracket, a ring having lateral arms pivotally connected to the pivot bolt and adapted to rest on the supporting bolt when the ring is in supporting position, and a sleeve on the pivot bolt for preventing movement of the arms toward each other.

1,157,334. DIVIDED CYLINDER FOR ENGINES. KARL STEINBECKER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Aug. 7, 1912. Serial No. 713,748. (Cl. 123—193.)

1. A cylinder for an internal combustion engine made in two sections in axial alinement, with their adjacent ends formed with intermeshing teeth which are out of contact so as to leave a continuous zigzag fissure between said sections, to serve as a port for the passage of gases.

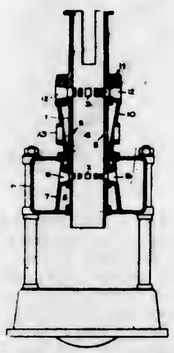
2. An internal combustion engine cylinder having its inner wall which is traversed by the piston made in sections arranged adjacent to each other with their adjacent ends provided with intermeshing teeth forming a zigzag fissure to serve as a port, said cylinder comprising a part having in it an annular passage about the inner wall into which the port opens and the other section extending into said portion and being secured thereto.



3. In an internal combustion engine, the combination of a receiver having openings in its upper and lower walls, a cylinder having its inner wall in two parts, one of said parts being mounted in the openings aforesaid and surrounded by a jacket mounted above the receiver and also supported thereby at its upper end, and the other of said parts being mounted in said jacket and supported thereby.

4. In an internal combustion engine, the combination of a receiver having openings in its opposite walls, a cylinder having its inner wall in two parts one of which is mounted in the openings aforesaid, said cylinder comprising a jacket surrounding a portion of the inner wall outside of the receiver and mounted on one of the receiver walls, and the other of said parts being mounted in said jacket and supported thereby, said receiver having a wall surrounding the first-mentioned part to serve as a jacket for cooling fluid thereabout, and said last-mentioned jacket communicating with the first-mentioned jacket through the opening in the receiver wall on which the latter is mounted.

1,157,335. CYLINDER CONSTRUCTION FOR MULTIPLE-PISTON ENGINES. KARL STEINBECKER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Aug. 7, 1912. Serial No. 713,749. (Cl. 123—193.)



1. An internal combustion engine having a one piece cylinder adapted for use with two oppositely moving pistons, a frame in which said cylinder has a sliding fit,

and means carried by the frame forming a water jacket for the cylinder and also a support for supporting said cylinder at a single point beyond the zone of combustion, whereby said cylinder is free to expand longitudinally through the frame without getting out of alinement.

2. An internal combustion engine having a one piece cylinder for use with two oppositely moving pistons, a frame in which said cylinder has a sliding fit, and a cooling jacket surrounding the zone of combustion of said cylinder, and attached to said cylinder beyond the zone of combustion.

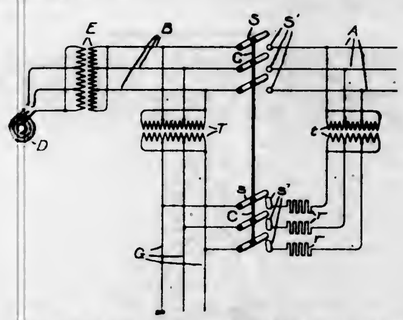
3. An internal combustion engine having a cylinder adapted for use with two oppositely-moving pistons, a frame, and a jacket mounted on the frame, said jacket surrounding the cylinder and supporting it only at one end.

4. An internal combustion engine having a one piece cylinder adapted for use with two oppositely-moving pistons, a frame, a jacket rising above the frame, and a flange on the cylinder resting on the upper end of the jacket and affording the cylinder its sole support.

5. An internal combustion engine having a cylinder adapted for use with two oppositely-moving pistons, a frame, a jacket rising above the frame and surrounding the combustion chamber of the cylinder, a flange on the cylinder resting on the upper end of the jacket and affording the cylinder its sole support and a jacket in said frame surrounding the lower portion of the cylinder.

[Claims 6 and 7 not printed in the Gazette.]

1,157,336. HIGH-POTENTIAL SWITCHING SYSTEM. CHARLES P. STEINMETZ, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 28, 1913. Serial No. 744,603. (Cl. 175—294.)



1. The method of directly connecting a source of energy supply to and disconnecting it from one or more conductors, which consists in providing a separate path for the energy having a permanent lower potential than the source of supply, making the connections in the separate path, then connecting the source of supply directly to the conductors, then directly disconnecting the source of supply from the conductors and then breaking the connections in the separate path.

2. The method of connecting a source of energy supply to a transmission line, which consists in first raising the potential of the line to substantially the potential of the source of energy through a separate path in inductive relation to said source of energy and to said line and always at a lower potential than either said source of energy or said line, and then connecting said line directly to said source of energy.

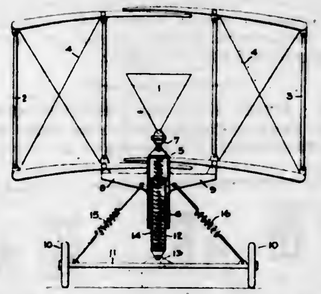
3. The method of disconnecting a source of energy supply from a transmission line, which consists in first opening a direct connection between said line and said source of energy, then maintaining the potential of said line at substantially the potential of said source of energy through a separate path in inductive relation to both said source of energy and said line which path is always of lower potential than either said source of energy or said line, and then opening the circuit through said separate path.

4. The combination with a source of energy and a transmission line, of means for connecting said line to said source of energy comprising, a switch for directly connecting said source of energy to said line, a normally open shunt path to said switch maintained at a lower potential than either of said source of energy or said line, means in said path for raising said line to substantially the potential of said source of energy when said path is closed, and a switch for closing said path prior to the closing of said first switch.

5. The combination of a source of energy and a transmission line, of means for connecting said line to said source of energy comprising, a separate path between said source of energy and said line, contacts in said path maintained at a lower potential than either said source of energy or said line, means for bridging said contacts, and means in inductive relation to said line and to said source of energy for raising the potential of said line to substantially the potential of said source when said contacts are bridged, and means for subsequently short circuiting said path.

[Claims 6 to 11 not printed in the Gazette.]

1,157,337. FLYING-MACHINE. PAUL STUMPF, Hennigsdorf, Germany, assignor to General Electric Company, a Corporation of New York. Filed Nov. 4, 1914. Serial No. 870,226. (Cl. 244—2.)



1. The combination with a flying machine having folding wings, of a truck for supporting the rear ends of the wings and the body when the wings are in folded position comprising wheels, a member adapted to support the body, means resiliently supporting the member on the wheels, and arms carried by the member which engage the wings.

2. The combination with a flying machine having folding wings, of a truck comprising wheels, an axle, and means carried by the axle for supporting the rear ends of the body and the wings independently of each other when the wings are folded and the machine is being transported on the ground.

3. The combination with a flying machine having folding wings, of a truck for supporting the rear ends of the wings and the body when the wings are in folded position comprising wheels, a member pivoted to the body by a universal joint, means resiliently supporting the member on the wheels, and arms carried by the member which engage the wings.

4. The combination with a flying machine having folding wings, of a truck for supporting the rear ends of the wings and the body when the wings are in folded position comprising wheels, a member pivoted to the body by a universal joint, means pivotally and resiliently supporting the member on the wheels, and arms carried by the member which engage the wings.

5. The combination with a flying machine having folding wings, of a truck for supporting the rear ends of the wings and the body when the wings are in folded position comprising wheels, an axle, a support comprising a central member which engages with the body, and a pair of

arms which engage with the wings, means for resiliently and pivotally joining said support to the axle, and spring members connecting the arms with the axle.

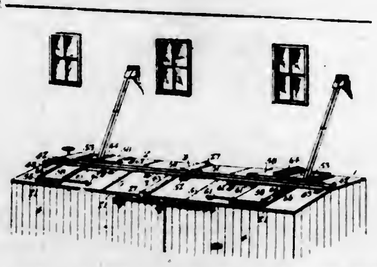
[Claims 6 to 9 not printed in the Gazette.]

1,157,338. POISON-INDICATOR. WALTER C. SWEENEY, Topeka, Kans. Filed Nov. 28, 1914. Serial No. 874,484. (Cl. 215—24.)



A retainer for bottle stoppers formed from a single blank of sheet metal and including a band portion adapted to embrace the neck of the bottle, one terminal of said band being provided with a plurality of longitudinally spaced openings, and the other terminal of the band being provided with longitudinally spaced spurs adapted to be projected through the openings, a plurality of laterally extending retaining members formed on the longitudinal edges of one terminal portion of the band, said retaining members being adapted to be bent to embrace the other terminal portion of the band, an arm extending at right angles to the band, said arm being provided with a plurality of slots and being adapted to be passed over the stopper, and T-shaped projections formed on the band at the intermediate portion thereof, said projections being adapted for insertion through the slots for holding the arm in engagement with the stopper.

1,157,339. STEEL ROOF FOR FREIGHT-CARS. WILSON E. SYMONS, Chicago, Ill. Filed Sept. 14, 1910. Serial No. 582,083. (Cl. 108—5.)



1. A metallic car roof including roof sections provided with an expansion joint having relatively movable overlapped portions, one of the portions being fixed and the other being formed with an arch to span the fixed portion and having its edge extended beyond the arch and supported by and slidable on the fixed portion, said arch being spaced from said fixed portion and having a limited sliding movement.

2. A metallic car roof including roof sections provided with an expansible joint composed of overlapped portions, one of the portions being fixed and provided with an upwardly extending flange and the other portion being arched to form a hollow rib to loosely receive the said flange, and provided at its free edge with an approximately horizontal flange extending beyond the arch and slidably supported by the said fixed portion beyond the upwardly extending flange thereof.

3. In a metallic roofing, the combination with a carline, of a fixed roof section supported by the carline and provided with an upwardly extending flange, fastening devices piercing the roof section and the carline and rigidly securing the former to the latter, and a relatively movable roof section also supported by the carline and bent to form a hollow rib to receive the upwardly extending flange of the first-mentioned section and supported by the latter beyond the said flange.

4. A metallic car roof including relatively movable roof sections and provided with an expansion joint having relatively movable members, a running board composed of sections mounted upon and secured to the roof sections and having a joint arranged adjacent to the expansion joint and provided with relatively movable portions.

5. A metallic car roof including relatively movable sections provided with an expansion joint, one of the sections being fixed to the car at the said joint and the other section being free, a running board support secured to one of the roof sections, and a sectional running board having a joint arranged upon the said support adjacent to the expansion joint of the roof, one of the sections of the running board being fixed to the support and the other being free.

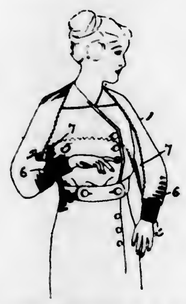
[Claims 6 to 12 not printed in the Gazette.]

1,157,340. VULCANIZER. CHARLES TAARUD, Minneapolis, Minn. Filed June 21, 1912. Serial No. 705,063. (Cl. 18—18.)



In a vulcanizer, a base member, a hollow upper member having an opening in its upper portion and adapted to fit over said base member and having its wall inwardly converging toward said opening, the edge of the wall surrounding said opening overhanging the base portion of said upper member.

1,157,341. SHAWL. GEORGE S. TALLERDAY, Poughkeepsie, N. Y., assignor to Queen City Knitting Mills, Inc., Poughkeepsie, N. Y., a Corporation of New York. Filed Apr. 13, 1915. Serial No. 21,132. (Cl. 2—60.)



1. A scarf or shawl comprising a body portion of the same width, throughout substantially its entire length, adapted to cover the shoulders and the upper portion of the back, and provided at its extremities with means for engaging the wearer's wrists.

2. A scarf or shawl comprising a body portion narrower at its extremities than at its central portion, adapted to cover the shoulders and the upper portion of the back, and provided at its extremities with means for engaging the wearer's wrists.

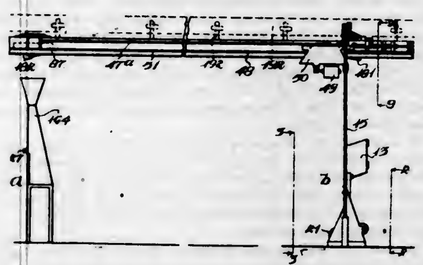
3. A scarf or shawl comprising a body portion adapted to cover the shoulders and back of the wearer, the longitudinal edges of which are unsecured except at a portion of their length toward their extremities, where they are secured together.

4. A scarf or shawl comprising a body portion approximately rectangular in shape and adapted to cover the shoulders and the upper portion of the wearer's back and provided at its extremities with tubular portions to be engaged by the wrists of the wearer.

5. A scarf or shawl comprising a body portion approximately rectangular in shape and folded upon itself to form opposite side portions, the free edges of which are unsecured except at a portion of their length adjacent their extremities, where they are secured together.

[Claim 6 not printed in the Gazette.]

1,157,342. TARGET PLACING AND SHIFTING APPARATUS. WILLIAM I. THOMPSON, Stoneham, Mass., assignor of one-third to Anthony M. Lux and one-third to Walter J. Lux, Woburn, Mass. Filed July 24, 1914. Serial No. 852,968. (Cl. 124—15.)



1. An apparatus of the character stated, comprising a firing station, a target station, a track between said stations, and mechanism controlled from the firing station for transferring a used target from the target station to the firing station, and placing a fresh target in an exposed position at the target station, said mechanism including a carrier movable on said track and having target grippers, means for positively moving targets successively from the target station to said grippers, and means for opening the grippers and releasing the targets at the firing station.

2. An apparatus of the character stated, comprising a firing station, a target station, a track between said stations, and mechanism controlled from the firing station for placing targets at the target station, transferring a used target from the target station to the firing station, releasing the used target at the firing station, and placing a fresh target in an exposed position at the target station, said mechanism including a carrier movable on said track and having target grippers, means for positively moving unused targets successively to the target station, means for positively moving used targets successively from the target station to said grippers, and means for opening the grippers and releasing the targets at the firing station.

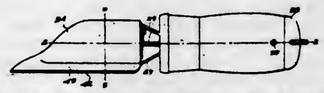
3. An apparatus of the character stated, comprising a firing station, a target station, a track between said stations, and mechanism controlled from the firing station for transferring a used target from the target station to the firing station and placing a fresh target in an exposed position at the target station, said mechanism including target-lifting grippers at the target station, means for closing said grippers on a placed target, means for alternately raising and lower said grippers, means for opening the raised grippers to release the target, and means for engaging the raised target and moving it along said track to the firing station.

4. An apparatus of the character stated, comprising a firing station, a target station, a track between said stations, and mechanism controlled from the firing station for transferring a used target from the target station to the firing station and placing a fresh target in an exposed position at the target station, said mechanism including means for raising a used target from its exposed position, means for releasing the raised target, a carrier movable on said track and having a gripper, means for closing the carrier gipper on the raised taget, and means for propelling the carrier on said track.

5. An apparatus of the character stated, comprising a firing station, a target station, a track between said stations, and mechanism controlled from the firing station for transferring a used target from the target station to the firing station and placing a fresh target in an exposed position at the target station, said mechanism including target-lifting grippers at the target station, a reversible electric motor and means coöperating therewith adapted to raise and lower said grippers, means being provided for closing the grippers on an exposed target when they are lowered, and for opening the grippers when they are raised, a carrier movable on said track, having a gripper adapted to engage a raised target, a reversible electric motor on said carrier, adapted to propel the carrier in either direction on the track, means being provided for closing the carrier gripper on a raised target when the carrier is at the inner end of the track, and for opening said gripper when the carrier is at the outer end of the track, means for starting the carrier motor after the closing of the carrier gripper, means for reversing the carrier motor after the opening of said gripper, and means for stopping the motor when the carrier is returned to the inner end of the track.

[Claims 6 to 10 not printed in the Gazette.]

1,157,343. ELECTRICALLY-HEATED TOOL. WILLIAM I. THOMPSON, Stoneham, Mass., assignor of one-third to Anthony M. Lux and one-third to Walter J. Lux, Woburn, Mass. Filed Feb. 5, 1915. Serial No. 6,253. (Cl. 219—21.)



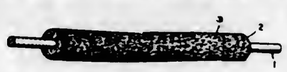
1. An electrically heated tool comprising a body having a burnishing face or faces and a cylindrical socket which is open at one end of the body, an electrical heating unit, a cylindrical casing detachably secured to and inclosing said unit and provided with a shank composed of spaced arms joined to the casing and forming an air-cooled spider, and a tubular portion joined to said arms and spaced from the casing and heating unit thereby, a handle mounted on said tubular portion and held thereby in relatively close proximity to the said casing and unit, and spaced therefrom by said spider, and conducting wires extending through said tubular portion and handle, the heating unit comprising a resistance wire whose terminals project into said spider and being provided with means within the spider for connecting said conducting wires with said terminals, the heating unit and casing being insertible as a single part in said socket, means being provided for detachably connecting the body and heating unit.

2. An electrically heated tool comprising a body having a burnishing face or faces, said body being tubular at one end portion and solid at the opposite end portion, the tubular portion having a cylindrical socket which is open at one end of the body, an electrical heating unit comprising a spool having inner and outer flanges, the outer flange being provided with outwardly projecting binding posts, and a resistance wire wound upon the spool, the terminals of said wire extending through the outer flange and engaging said binding posts, means being provided for detachably connecting the spool and body, a cylindrical casing detachably fitting said socket, seated upon and extending between said flanges, and detachably secured to the spool, said casing being provided with a shank composed of spaced arms forming an air-cooled spider, and a tubular portion projecting from said spider, a handle mounted on the tubular portion of the shank with its inner end in close proximity to the body and heating unit, and spaced therefrom by the spider, and conducting wires extending through the shank and connected with the resistance wire terminals at said binding posts, the spaces between the spider arms not only permitting a free cir-

culation of air to cool the shank, but also permitting access to said binding posts.

3. An electrically heated hammering and burnishing tool comprising a body having a cylindrical socket which is open at one end of the body, the opposite end being closed, a portion of said socket wall having a rounded external face capable of use as a hammer head, while another portion of said wall has a flat burnishing face extending from end to end of the body, and a U-shaped burnishing face inclined relatively to said flat face and intersecting the latter to form an acute angled U-shaped burnishing edge extending along both sides of the body and across its outer end, and an electrical heating unit removably inserted in said socket.

1,157,344. MEANS FOR PREVENTING CORONA LOSS. ELIHU THOMSON, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed Dec. 28, 1912. Serial No. 739,006. (Cl. 173—13.)



1. A high potential conductor comprising a conducting core, and a non-metallic sheath having sufficient radial conductivity to transmit without resistance loss sufficient current to charge the external surface of said sheath to the potential of said core.

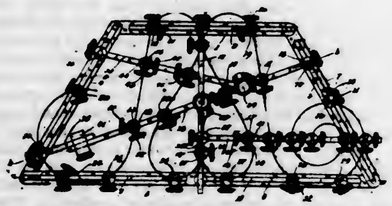
2. A high potential conductor comprising a metal core and a non-metallic sheath having radial conductors distributed through it and in contact with said core to provide a radial conducting path of great total cross-section and extending from said core to the surface of said sheath and having a total cross-section sufficient to eliminate resistance losses in radial flow of current.

3. A high potential conductor comprising a conducting element and a sheath having sufficient conducting particles distributed through the body thereof along said conducting element to permit current to flow from said conducting element to the surface of said sheath with no appreciable resistance loss.

4. A high potential conductor comprising a conducting element and a fibrous sheath for said element having conductive particles so distributed through the body thereof that radial conducting paths in parallel are formed of such aggregate cross-section that current may flow radially through said sheath with substantially no resistance losses.

5. In a high potential conductor for transmission lines, the combination with a conducting element, of a fibrous covering for said element having a smooth outer surface and conducting material uniformly distributed through said covering to form radial conducting paths in parallel and enable current to flow radially through said covering with slight loss at the normal operating voltage of the transmission line.

1,157,345. COMBINED PATTERN-DRAFTING DEVICE. JOHN B. TOTH, Chicago, Ill. Filed Nov. 24, 1914. Serial No. 873,701. (Cl. 33—176.)



1. A device for the purpose set forth comprising a frame including side and end members provided with ribs, holding members shiftably mounted upon said ribs, bars connected to said holding members and further adjustably connected together, and curve retainers mounted upon said ribs and bars and capable of being shifted lengthwise of the ribs and bars.

2. A device for the purpose set forth comprising a frame including side and end members provided with ribs, holding members shiftably mounted upon said ribs, bars connected to said holding members, clamps for adjustably connecting said bars together, and curve retainers mounted upon said ribs and bars and capable of being shifted lengthwise of the ribs and bars, and means for maintaining said curve retainers in a position to which they have been shifted.

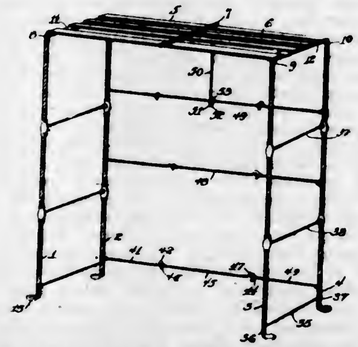
3. A device for the purpose set forth comprising a frame including side and end members provided with ribs, holding members shiftably mounted upon said ribs, bars connected to said holding members, clamps for adjustably connecting said bars together, and curve retainers mounted upon said ribs and bars and capable of being shifted lengthwise of the ribs and bars, and means for maintaining said curve retainers in a position to which they have been shifted, each of said curve retainers having one end thereof provided with a groove flaring from the center toward each end.

4. A device for the purpose set forth comprising a plurality of adjustable bars, means for supporting said bars, clamps for adjustably connecting certain of the said bars together, and curve retainers mounted upon said supporting means and said bars and adjustable longitudinally of said means and said bars.

5. A device for the purpose set forth comprising a plurality of adjustable bars, means for supporting said bars, and curve retainers mounted upon said supporting members and said bars and adjustable longitudinally of said members and said bars, each of said curve retainers having one end provided with a groove flaring from the center toward each end and adapted to receive a flexible strip whereby the walls of the groove will set in the strip in curvilineal form.

[Claims 6 and 7 not printed in the Gazette.]

1,157,346. SANITARY WARDROBE. RETTA H. VANCE, San Francisco, Cal. Filed Oct. 9, 1913. Serial No. 794,230. (Cl. 45—118.)



1. In a skeleton wardrobe or like sanitary frame of the class described, uprights, each composed of end to end connected sections and each section being formed of a plurality of lengths of wire twisted together and having their ends spread apart, means pivotally connecting certain of the meeting spread ends, and means embracing the remaining spread ends to connect the latter in abutting end to end relation, substantially as described.

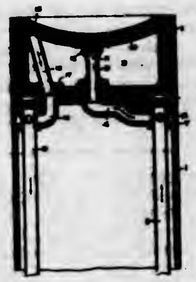
2. In a skeleton wardrobe or like sanitary frame of the class described, upright standards each composed of connected sections and each section comprising a plurality of lengths of wire twisted together and having the ends thereof spread apart, certain of the spread ends having terminal eyes and other of the spread ends having terminals for end to end abutting connection, a link pivoted to the eyed ends and provided with a ring for embracing the abutting terminal ends, substantially as described.

3. In a skeleton wardrobe or like sanitary frame of the class described, upright standards each composed of connected sections and each section comprising a plurality of strands of wire twisted together, the terminals of the meeting ends of adjacent sections being spread outwardly laterally of the longitudinal axis of said sections, certain of the spread ends having eyes formed therein and other of the spread ends being shaped for end to end abutting contact, a link and pintle forming a pivotal connection for the eyed ends and said link having a ring or loop for embracing the abutting ends at the meeting point thereof, and a locking link spanning said connected ends and secured to the twisted portions of the sections, substantially as described.

4. In a skeleton wardrobe or like sanitary frame of the class described, a plurality of sections adapted to be connected to form upright standards, each of said sections comprising a plurality of strands of wire twisted together, the terminals of the meeting ends of adjacent sections being spread outwardly, certain of these spread ends having eyes formed therein and the remaining of these spread ends being shaped to directly abut each other, a link formed with an eye to space said eyed ends, means connecting last said ends with said link eye, a loop formed on the other end of said link to embrace said abutting ends at their meeting point, a locking link spanning said connected ends, means connecting said locking link to the twisted portions of the meeting sections, and socket members formed in said locking link to provide means for connecting adjacent standards formed of such sections.

5. In a skeleton wardrobe or like sanitary frame, a plurality of sections adapted to be connected to form upright standards, each of said sections comprising a plurality of strands of wire twisted together, the terminals of the meeting ends of adjacent sections being spread in the same plane, eyes formed on certain of said spread ends, the remaining ends being adapted to abut each other, a link formed with an eye spacing said eyed ends, means connecting said eyed ends with said link, a loop formed on the other end of said link and at right angles to said link eye to embrace said abutting ends, a locking link spanning said connected ends and secured to the twisted portions of the meeting sections, socket members formed in each locking link to connect adjacent standards formed by such sections, braces formed with eyes and extending between said uprights, and an intermediate spread portion formed in the twisted portion of appropriate sections to anchor the eyed ends of such braces.

1,157,347. PISTON-COOLING MEANS. WILLIAM EVERETT VER PLANCK, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Dec. 26, 1913. Serial No. 808,707. (Cl. 123—176.)



1. In combination, a piston having a chamber, a wall of which is adapted to be heated, a pipe projecting into the chamber for discharging a cooling liquid under relatively high velocity thereinto, means carried by a wall of the chamber for distributing the liquid over the surface of the heated wall, and conduit means for conveying liquid to the pipe and conveying it from the chamber.

2. In combination, a piston having a chamber, one wall of which is adapted to be heated, said wall having a conical projection, a nozzle in the chamber which has a diverging discharge portion that embraces said projection, there being a small annular space between the two and through which liquid is discharged, a conduit for conveying liquid to the nozzle, and a conduit for conveying liquid from the chamber.

3. In a combination, a piston having a chamber, one wall of which is adapted to be heated, said wall having a conical projection, a nozzle located in the axis of the piston and in the chamber which has a diverging discharge portion that embraces said projection, there being a small annular space between the two and through which liquid is discharged, a conduit conveying liquid to the nozzle, and a conduit conveying liquid from the chamber.

4. In a combination, a piston having a chamber, one wall of which is heated during the firing stroke, a nozzle that discharges cooling liquid tangentially along one face of the wall, a recess formed in the wall, a tube that enters the recess and receives liquid therefrom, said recess being in communication with the chamber, a conduit for conveying liquid to the nozzle, and a conduit that receives liquid from the tube and conveys it to a point outside of the piston.

5. In combination, a piston having a chamber, one wall of which is adapted to be heated, said wall having a conical projection, a nozzle in the chamber which has a diverging discharge portion that embraces said projection, there being a small annular space between the two and through which liquid is discharged, a recess formed in sad wall, a tube of lesser diameter than the recess which projects thereinto and is adapted to receive liquid from the chamber, a conduit for conveying liquid to the nozzle, and a conduit that receives liquid from the tube and conveys it to a point outside of the piston.

[Claims 6 and 7 not printed in the Gazette.]

1,157,348. PROCESS FOR PRODUCING OXALIC ACID. EMIL VON PORTHEIM, Prague-Smichow, Austria-Hungary. Filed Oct. 3, 1914. Serial No. 864,882. (Cl. 23—24.)

1. The process of producing oxalic acid from a solution of carbo-hydrates in the presence of nitric acid and a catalyzer, which comprises oxidizing the nitrogen oxid gas escaping during the reaction and introducing such oxidized gas into the solution.

2. The process of producing oxalic acid from a solution of carbohydrate in the presence of a catalyzer, which comprises introducing peroxid of nitrogen (NO_2) into the solution.

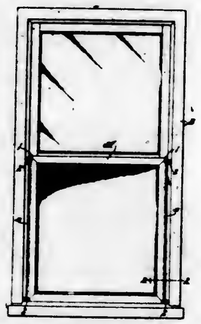
3. The process of producing oxalic acid from a solution containing carbohydrate and a catalyzer in the presence of nitric acid, which comprises introducing into the mixture a higher oxid of nitrogen.

1,157,349. WIRE SCREEN. CHARLES W. WARNHOFF, St. Louis, Mo. Filed Jan. 25, 1915. Serial No. 4,236. (Cl. 156—14.)

1. In a window screen, the combination of a window frame provided with vertically-disposed stop strips, a screen frame having rabbets or recesses formed in the inner faces of its side members so as to receive said stop strips, and laterally-projecting retaining devices on the window frame arranged adjacent the top and bottom of the screen that lap over the front face of the screen frame, said devices having plate-like base portions that are securely connected to the window frame and rigid screen-engaging portions that have curved faces.

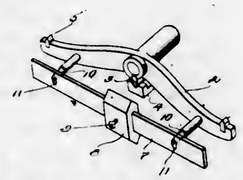
2. A screen molding consisting of a strip of material having a longitudinal groove or slot formed in one of its faces, and having a longitudinal slot or groove formed in its edge that projects inwardly toward the groove or slot just mentioned but does not intersect same.

3. A screen molding consisting of a strip of material provided with a removable original portion that can be detached so as to provide a rabbet or space for receiving



the screen cloth, said removable portion being joined throughout its entire length to the strip.

1,157,350. WEIGHING APPARATUS. JOHN D. WEBBER, Bayonne, N. J., assignor to Automatic Weighing Machine Company, Newark, N. J., a Corporation of New York. Filed Jan. 10, 1913. Serial No. 741,173. (Cl. 73—30.)



1. In a weighing apparatus, the combination with a scale beam of a weight support, a weight adjustable on said support lengthwise of the same, means for securing said weight in adjusted relation to the support, and means connected to and movable with said scale beam for supporting the weight support and permitting it to be freely lifted, reversed end for end and replaced.

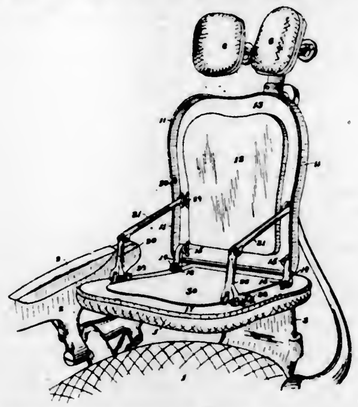
2. In a weighing machine, the combination with an equal-arm scale beam having two supports located on opposite sides of and at equal distances from the beam fulcrum, of a bar carried by said supports and adapted to be freely lifted therefrom, reversed end for end and replaced thereon, a weight adjustable longitudinally on said bar, and means for clamping the weight thereto.

3. In a weighing apparatus, the combination with an equal-arm scale beam having two supports located on opposite sides of and at equal distances from the beam fulcrum, of a bar adapted to be reversed end for end and removably mounted on said supports in either position, a weight adjustable longitudinally on said bar, and means for clamping the weight thereto, the center of gravity of the combined bar and weight in any position thereof being located in a line extending parallel with the beam and intersecting its fulcrum axis.

1,157,351. DENTAL CHAIR. HENRY E. WEBER, Canton, Ohio. Filed Nov. 6, 1911. Serial No. 658,834. (Cl. 155—26.)

1. A chair including a back, a folding seat, hinged links connecting the lower end of the back with the seat at a point adjacent to its lower rear end, whereby the lower end portion of the seat can swing from a position in front of to a position below and in rear of the lower end of the back; and arm links pivoted to the back and seat and each having an upwardly folding intermediate joint with means for stopping the seat in prone position.

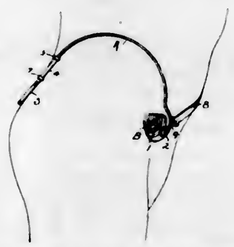
2. A chair including a back, a folding seat, hinged links connecting the lower end of the back with the seat at a point adjacent to its lower rear end, whereby the lower end portion of the seat can swing from a position in front of to a position below and in rear of the lower end of the



back; and arm links pivoted to the back and seat and each having an upwardly folding intermediate joint with means for stopping the seat in prone position with the arm joints above the plane passing through the seat and back pivots.

1,157,352. [WITHDRAWN.]

1,157,353. TRUSS. THOMAS WELCH, Bridgeport, Ohio, assignor of one-half to William V. Campbell, Bridgeport, Ohio. Filed Apr. 27, 1910. Serial No. 557,984. (Cl. 128—26.)

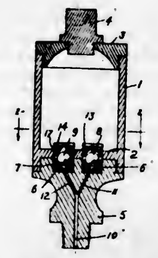


A truss comprising an arched wire terminating in a spiral cone-shaped pad at one end, and having a flat rear pad adjustably connected with its other end, the cone-shaped pad integral with the wire, and the wire forming it extending back approximately through the axial center of the cone and terminating in a loop, and a strap or band connected with the rear pad and with said loop.

1,157,354. AUTOMATIC OIL-CUP. CHARLES J. WOERNER, Hammond, and AMOS M. HUNT, Gibson, Ind. Filed Jan. 29, 1914. Serial No. 815,265. (Cl. 184—76.)

1. A closed oil cup having formed in the bottom thereof two communicating passages leading to a discharge point of the cup, the upper ends of said passages being in the form of valve seats, ball valves resting on said seats, retaining plugs fitted into the bottom of the cup above said ball valves, each of said retaining plugs having a passage extending through the same from the bottom to a point within the oil cup, the parts being so constructed and arranged that when the ball valves rise

one of them closes the passage in its retainer while the other leaves the passage in the corresponding retainer open.



2. A closed oil cup having in the bottom two communicating ports leading to a discharge point of the cup, there being valve seats surrounding said ports, valves resting upon said seats, a retainer for one of the valves constructed and arranged to permit a limited movement of the valve away from its seat and open communication between the corresponding port and the interior of the cup, and a retainer for the other valve having therein a passage communicating with the interior of the cup and adapted to be closed by the corresponding valve when the latter is raised.

3. An inclosed oil cup having in one side two communicating ports leading to a discharge point of the cup, there being conical valve seats surrounding said ports, balls resting upon said seats, a retainer for one of said balls constructed and arranged to permit a limited movement of the ball away from its seat and open communication between the corresponding port and the interior of the cup, and a retainer for the other ball provided with a seat for the ball and a port leading from said seat into the interior of the cup.

4. An inclosed oil cup having in one side two communicating ports leading to a discharge point of the cup, there being conical valve seats surrounding said ports, balls resting upon said seats, a retainer for one of said balls constructed and arranged to permit a limited movement of the ball away from its seat and open communication between the corresponding port and the interior of the cup, and an adjustable retainer for the other ball provided with a seat for the ball and a port leading from said seat into the interior of the cup.

5. An inclosed oil cup having in one side two communicating ports leading to a discharge point of the cup, there being conical valve seats surrounding said ports, balls resting upon said seats, a retainer for one of said balls constructed and arranged to permit a limited movement of the ball away from its seat and open communication between the corresponding port and the interior of the cup, and a retainer for the other ball arranged in the form of a housing having a seat adjustable from and toward the other seat with which that ball coöperates and having also a port leading from the seat into the interior of the cup.

[Claims 6 to 8 not printed in the Gazette.]

1,157,355. METHOD OF BUILDING HEEL-BLANKS. WILLIAM WOLFE and DENNIS PARKS, St. Louis, Mo. Filed Apr. 26, 1915. Serial No. 23,956. (Cl. 12—147.)

1. The method of building heel-blanks which consists in continuously cutting lifts and simultaneously with its cutting superimposing each lift upon, and attaching it to, a preceding lift with accompaniment of pressure, until a heel-blank of the desired height is formed, then forming a second heel-blank upon the first in the same manner, and continuing the above operations while confining a plurality of the heel-blanks thus formed in column formation under pressure and in disconnected relation.

2. The method of building heel-blanks which consists in continuously cutting lifts and simultaneously with its cutting superimposing each lift upon, and attaching it to, a preceding lift with accompaniment of pressure, until a heel-blank of the desired height is formed, then forming in like manner a second heel-blank upon, but in separated relation to, the first heel-blank, and continuing the above operations while confining a plurality of the separated heel-blanks thus formed in column formation and under pressure.



3. The method of building heel-blanks which consists in continuously cutting lifts and simultaneously pressing them into a container, and at the same time superimposing each lift upon, and attaching it to, a preceding lift with accompaniment of pressure, until a heel-blank of the desired height is formed, then forming a second heel-blank upon the first in the same manner, and continuing the above operations while confining a plurality of the heel-blanks thus formed in column formation under pressure and in disconnected relation.

4. The method of building heel-blanks which consists in continuously cutting and pasting lifts, and simultaneously with its cutting superimposing each lift upon a preceding pasted lift with accompaniment of pressure, until a heel-blank of the desired height is formed, then forming a second heel-blank upon the first in the same manner, and continuing the above operations while confining a plurality of the heel-blanks thus formed in column formation under pressure and in disconnected relation.

5. The method of building heel-blanks which consists in continuously cutting and pasting lifts and simultaneously with its cutting superimposing each lift upon a preceding pasted lift with accompaniment of pressure until a heel-blank of the desired height is formed, then forming a second heel-blank upon the first in the same manner, and continuing the above operations while confining the heel-blanks thus formed in column formation under pressure and in disconnected relation until the paste on the heel-blanks in the order of their formation has had time to set.

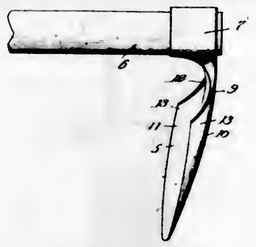
[Claims 6 to 15 not printed in the Gazette.]

1,157,356. HOE. FRANK ZIMA, Humphrey, Nebr. Filed Nov. 16, 1914. Serial No. 872,370. (Cl. 55—5.)

1. In a hoe, a sector shaped blade having a sharpened arcuate cutting edge, and having dull back edges disposed at an obtuse angle to each other, said back edges being disposed at an acute angle to the cutting edge for forming working points, said blade being thicker at its apex and gradually tapering in all directions toward said cutting edge, and a handle socket formed directly upon said blade at the apex of the latter.

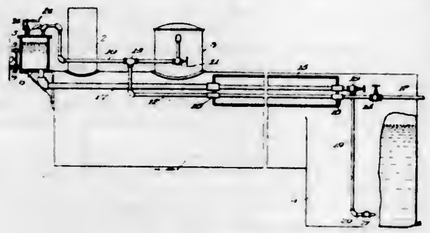
2. In a hoe, a substantially sector shaped blade, said blade having an arcuate sharpened cutting edge, and having substantially straight dulled back edges disposed

at an obtuse angle to each other and at an acute angle to said cutting edge, whereby to form working points at the junction of the back edges with said cutting edges, said blade being of a concavo-convex formation both longitudinally and transversely, and a handle rocket formed at the apex of the blade.



3. In a hoe, a blade of concavo-convex formation longitudinally and transversely having a curved and sharpened cutting edge defined at the edge of the thinnest portion and having back edges angularly disposed with relation to the cutting edge, working points defined at the junction of the back and cutting edges, and means whereby a handle may be connected with the blade.

1,157,357. BOILER-FEEDER. JOHN MILTON ABBOTT, Nebo, Ill. Filed Oct. 21, 1914. Serial No. 867,869. (Cl. 122—458.)



1. A device of the character specified, comprising in combination with a boiler having a steam dome, of a tank or reservoir supported adjacent to the boiler, a pipe leading from the dome to the tank and opening through the top thereof, a T interposed in the length of the said pipe, a valve in the said pipe between the T and the dome, a branch pipe leading from the T to a source of water supply, a valve for controlling the said pipe, a pipe leading from the tank or reservoir rearwardly alongside the boiler, a valve connected with the rear end of the said pipe, a branch pipe leading from the valve to the boiler near the bottom thereof, a check valve in the last-named pipe, an exhaust valve connected with the tank or reservoir at the top thereof, a water gage in connection with the said tank or reservoir, and means for heating the water as it passes to and from the tank or reservoir, said means comprising a casing through which the said pipes pass intermediate their ends, the casing having means for heating the same.

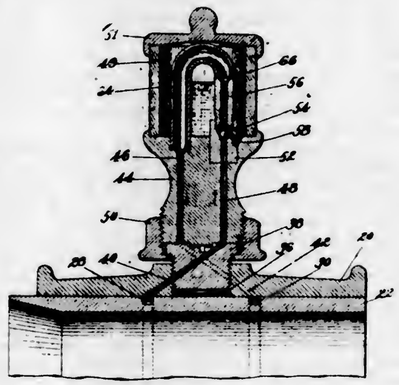
2. A device of the character specified, comprising in combination with a boiler having a steam dome, of a tank or reservoir supported adjacent to the boiler, a pipe leading from the dome to the tank and opening through the top thereof, a T interposed in the length of the said pipe, a valve in the said pipe between the T and the dome, a branch pipe leading from the T to a source of water supply, a valve for controlling the said pipe, a pipe leading from the tank or reservoir rearwardly alongside the boiler, a valve connected with the rear end of the said pipe, a branch pipe leading from the valve to the boiler near the bottom thereof, a check valve in the last named pipe, and an exhaust valve connected with the tank or reservoir at the top thereof.

3. A device of the character specified, comprising in combination with a boiler having a steam dome, of a tank or reservoir supported adjacent to the boiler, a pipe leading from the dome to the tank and opening through the top thereof, a T interposed in the length of the said pipe, a valve in the said pipe between the T and the dome, a branch pipe leading from the T to a source of water supply, a valve for controlling the said pipe, a pipe leading from the tank or reservoir rearwardly alongside the boiler, a valve connected with the rear end of the said pipe, a branch pipe leading from the valve to the boiler near the bottom thereof, a check valve in the last-named pipe, and an exhaust valve connected with the tank or reservoir at the top thereof, a water gage in connection with the said tank or reservoir, and means for heating the water as it passes to and from the tank or reservoir, said means comprising a casing through which the said pipes pass intermediate their ends, the casing having means for heating the same, and a hood inclosing the said casing and the said tank or reservoir.

4. A device of the character specified, comprising in combination with a boiler having a steam dome, of a tank or reservoir arranged adjacent to the dome, a discharge pipe leading from the tank or reservoir to the boiler near the bottom thereof, a steam pipe leading from the dome to the tank, a pipe leading from a source of water supply to the said steam pipe and connected therewith intermediate the ends thereof, and valves for controlling the discharge pipe, the steam pipe, and the water supply pipe, said tank having an exhaust valve.

5. A device of the character specified, comprising in combination with a boiler having a steam dome, of a tank or reservoir supported adjacent to the boiler, a pipe leading from the dome to the tank and opening through the top thereof, a T interposed in the length of the said pipe, a valve in the said pipe between the T and the dome, a branch pipe leading from the T to a source of water supply, a valve for controlling the said pipe, a pipe leading from the tank or reservoir rearwardly alongside the boiler, a valve connected with the rear end of the said pipe, a branch pipe leading from the valve to the boiler near the bottom thereof, a check valve in the last-named pipe, an exhaust valve connected with the tank or reservoir at the top thereof, a water gage in connection with the said tank or reservoir, and means for heating the water as it passes to and from the tank or reservoir, said means comprising a casing through which the said pipes pass intermediate their ends, the casing having means for heating the same, a hood inclosing the said casing and the said tank or reservoir, and a pipe leading from the said tank or reservoir to the said hood.

1,157,358. METHOD OF LUBRICATING FRICTION-SURFACES. ALEXANDER M. ALEXANDER, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 13, 1912. Serial No. 683,411. (Cl. 64—24.)



1. That improvement in the art of lubricating friction surfaces which consists in lifting a thin film of oil into a passage leading to the friction surfaces and creating a flow of gas through said passage toward said surfaces.

2. That improvement in the art of lubricating friction surfaces which consists in creating suction at a point between the friction surfaces to be lubricated, providing a film of oil between said point and an oil supply and affording free communication between said point and a gas supply.

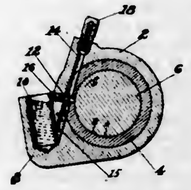
3. That improvement in the art of lubricating friction surfaces which consists in creating suction at a point between the friction surfaces to be lubricated, utilizing the suction so created to force oil on to said surfaces and supplying air freely to said point.

4. That improvement in the art of lubricating friction surfaces which consists in causing a current of gas to urge a thin film of oil toward the surfaces to be lubricated and utilizing surface tension to lift the oil into the range of action of said current of gas to replenish said film.

5. That improvement in the art of lubricating friction surfaces which consists in providing a film of oil along the wall of a restricted passage between the friction surface and an oil supply and causing a current of air to flow along said film from a point above the oil supply to the friction surface and thereby to urge said film toward said surface.

[Claims 6 to 10 not printed in the Gazette.]

1,157,359. LUBRICATING APPARATUS. ALEXANDER M. ALEXANDER, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 13, 1912, Serial No. 683,413. Renewed June 7, 1915. Serial No. 32,733. (Cl. 64—24.)



1. An apparatus of the character described comprising a member having a friction surface, an oil reservoir, a duct leading from said reservoir to said surface and arranged to utilize surface tension to lift oil from the reservoir, and means for causing a current of gas to flow through a portion of said duct to urge the oil therein toward said surface.

2. An apparatus of the character described comprising a member having a friction surface, an oil reservoir, a duct leading from said reservoir to a point on said friction surface and having communication with the atmosphere, said duct being arranged to utilize surface tension to lift oil from the reservoir, and means for creating suction at said point on said friction surface.

3. An apparatus of the character described comprising a member having a friction surface, an oil supply, a duct leading from a point on said surface and between its ends to said oil supply, said supply being so positioned with reference to said point that the oil in traveling along the duct toward said point must be moved through at least a portion of the duct against the influence of gravity, and means for causing a current of gas to flow along a portion of said duct toward said surface.

4. An apparatus of the character described comprising a normally stationary member having a friction surface, a device having a friction surface moving over the friction surface of said member, an oil reservoir, and a duct communicating with the atmosphere and leading from said reservoir to a point between the friction surfaces of said member and said device at which suction is created by the movement of said device, said reservoir being so arranged with reference to said point that the oil in traveling along the duct toward said point must be lifted through at least a portion of the duct against the influence of gravity.

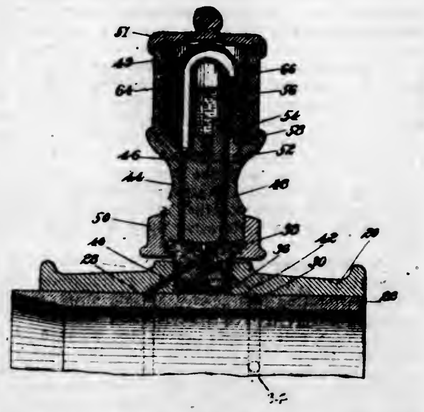
5. An apparatus of the character described comprising a bearing having a friction surface, a member supported for movement on said surface, an oil reservoir, and a duct communicating with the atmosphere and connecting said reservoir with the friction surface of said bearing and arranged to utilize the fluid pressure disturbances created between the friction surfaces of said bearing and member by their relative movement to cause a current of air to pass along said duct toward said friction surface.

[Claims 6 to 17 not printed in the Gazette.]

1,157,360. LUBRICATING APPARATUS. ALEXANDER M. ALEXANDER, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 13, 1912. Serial No. 683,412. (Cl. 64—24.)

1. An apparatus of the character described, comprising a container for holding a body of oil, means for causing gas to pass through the oil in said container and means for conducting the oil entrained by the gas to the surface to be lubricated.

2. An apparatus of the character described, comprising a member having a friction surface, a duct leading to said surface, a container for holding a body of oil and means for causing gas to pass through the oil in said container and to carry oil bubbles into said duct.



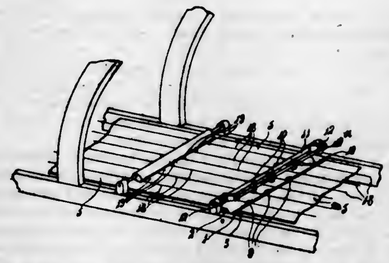
3. An apparatus of the character described, comprising a member having a friction surface, an oil reservoir, an oil duct leading from said friction surface and opening into said reservoir at a point above the level of the oil in the reservoir and means for causing gas to pass through the oil in the reservoir into said duct.

4. An apparatus of the character described, comprising a member having a friction surface, an oil reservoir, an oil duct leading from said friction surface to a point above the level of the oil in the reservoir, means for creating suction at the point at which the duct opens into the friction surface, and connections for conducting air through the oil in the reservoir to said duct.

5. An apparatus of the character described, comprising a member having a friction surface, a duct leading to said surface, means for causing a current of gas to flow along said duct toward said surface, an oil reservoir, and means for forcing gas through the oil in said reservoir and causing it to carry oil bubbles into said duct.

[Claims 6 to 16 not printed in the Gazette.]

1,157,361. RULING-MACHINE. JOSHUA BAILEY, West Bromwich, England. Filed Oct. 29, 1912. Serial No. 728,383. (Cl. 164—100.)



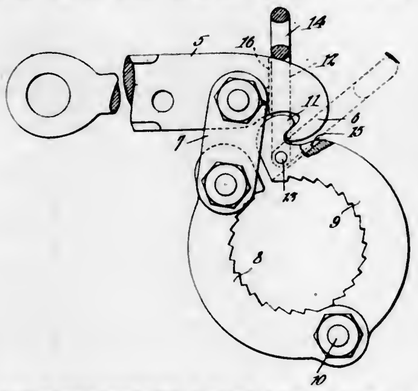
1. In a perforating attachment for ruling machines the combination of a pair of perforating disks one having a series of male projections and the other having a series of female recesses adapted to perforate the paper while under the thread control of the machine; transverse shafts carrying said disks; and gear wheels carried by said shafts and positively connecting said shafts and perforating disks together.

2. In a perforating attachment for ruling machines the combination of a blanket; perforating members; controlling threads and means for diverting the course of the blanket from that of the controlling threads at the point where the perforating members are disposed.

3. In a perforating attachment for ruling machines the combination of a thread control; three transverse rollers disposed adjacent to the thread control; a traveling blanket passing around the said rollers and leaving a free space between the blanket and thread control at this point; a transverse shaft located between said blanket and thread control; a perforating disk carried by said shaft; a second transverse shaft located above the thread control and adjacent to the transverse shaft aforesaid; a second perforating disk carried by the second transverse shaft and co-acting with the first disk; a pair of gear wheels on each of said transverse shafts and positively connecting said shafts together and means for adjusting the position of the perforating disks relatively to each other.

4. In perforating attachment for ruling machines the combination of a thread control; a transverse shaft; a male perforating disk carried by said shaft; a second transverse shaft; a female perforating disk carried by said shaft; a pair of gear wheels one on each of said transverse shafts and positively connecting said shafts together; so arranged that the ruling apparatus and perforating disks operate upon the paper while it is under the same thread control to insure perfect alinement of the rulings and perforations.

1,157,362. WRENCH. LEE J. BLACK, Beaumont, Tex. Filed Apr. 5, 1915. Serial No. 19,218. (Cl. 81—67.)



1. A wrench comprising a handle having a hooked end, a flexible gripping element loosely connected to the handle to the rear of the hook thereof, the free end of said element having a hook adapted to be engaged by the handle hook, and a swinging locking device for the gripping element carried by the free end thereof and engageable over the back of the handle hook to lock said free end of the gripping element to the handle hook.

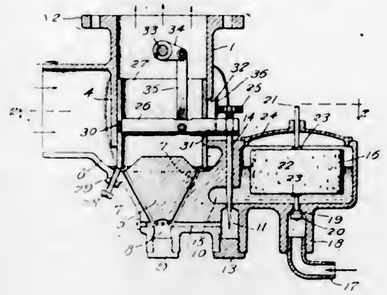
2. A wrench comprising a handle having a hooked end, a flexible gripping element loosely connected to the handle to the rear of the hook thereof, the free end of said element having a hook adapted to be engaged by the handle hook, and a swinging locking device for the gripping element carried by the free end thereof and engageable over the back of the handle hook, the part of the latter which is engaged by the locking device being inclined.

3. A wrench comprising a handle having a hooked end, a flexible gripping element loosely connected to the handle to the rear of the hook thereof, the free end of said element having a hook adapted to be engaged by the handle hook, and a swinging hand-grip carried by the free end of the gripping element and engageable over the back of the handle hook to lock said gripping element.

4. A wrench comprising a handle having a hooked end, a flexible gripping element loosely connected to the handle to the rear of the hook thereof, the free end of said element having a hook adapted to be engaged by the handle hook, said hooks of the handle and the gripping element being recessed, and a shank pivoted in the recess of the gripping element hook and adapted to be swung over into the recess of the handle hook, said shank having a transverse portion at its outer end engageable with the back of the handle hook to lock the gripping element.

5. A wrench comprising a handle having a hooked end, a flexible gripping element loosely connected to the handle to the rear of the hook thereof, the free end of said element having a hook adapted to be engaged by the handle hook, said hooks of the handle and the gripping element being recessed, and a shank pivoted in the recess of the gripping element hook and adapted to be swung over into the recess of the handle hook, said shank having a hand grip at its outer end engageable with the back of the handle hook to lock the gripping element.

1,157,363. CARBURETER. JOHN OSCAR BLOMQUIST, Dorchester, Mass., assignor to Maxin Manufacturing Company, a Corporation of Massachusetts. Filed Nov. 30, 1914. Serial No. 874,703. (Cl. 48—155.1.)



1. A carbureter comprising a substantially cylindrical casing having its lower end closed to form a mixing chamber and adapted for connection at the opposite end with the engine, said casing having an annular trough at the closed end coaxial with the casing for receiving the fuel, and having a lateral air inlet at the trough and communicating with the mixing chamber at the outer side of the trough, the carbureter having a fuel chamber, and a float valve for retaining the fuel in the chamber at a predetermined level, said carbureter having an auxiliary fuel chamber at the closed end and communicating with the trough and with the fuel chamber, a needle valve controlling the communication between the auxiliary and main fuel chambers, a throttle sleeve mounted for movement in the casing toward and from the trough and having its lower end at the center of the trough, means for moving the sleeve and a connection between the sleeve and the needle valve for moving the valve in the same direction as the sleeve, said connection comprising a bar arranged transversely of the sleeve, the casing having a slot through which the bar extends, said bar having an internally threaded opening, and the needle valve having a threaded portion for engaging the opening.

2. A carbureter comprising a substantially cylindrical casing having its lower end closed to form a mixing chamber and adapted for connection at the opposite end with the engine, said casing having an annular trough at the closed end coaxial with the casing for receiving the fuel, and having a lateral air inlet at the trough and communicating with the mixing chamber at the outer side of the trough, the carbureter having a fuel chamber, and a float valve for retaining the fuel in the chamber at a predetermined level, said carbureter having an auxiliary fuel chamber at the closed end and communicating with the trough and with the fuel chamber, a needle valve controlling the communication between the auxiliary and the main fuel chambers, a throttle sleeve mounted for movement in the casing toward and from the trough and having its lower end at the center of the trough, and means for moving the sleeve and a connection between the sleeve and the needle valve for moving the valve in the same direction as the sleeve, said connection being adjustable.

3. A carbureter comprising a substantially cylindrical casing having its lower end closed to form a mixing chamber and adapted for connection at the opposite end with the engine, said casing having an annular trough at the closed end coaxial with the casing for receiving the fuel, and having a lateral air inlet at the trough and communicating with the mixing chamber at the outer side of the trough, the carbureter having a fuel chamber, and a float valve for retaining the fuel in the chamber at a predetermined level, said carbureter having an auxiliary fuel chamber at the closed end and communicating with the trough and with the fuel chamber, a needle valve controlling the communication between the auxiliary and the main fuel chambers, a throttle sleeve mounted for movement in the casing toward and from the trough and having its lower end at the center of the trough, means for moving the sleeve and a connection between the sleeve and the needle valve for moving the valve in the same direction as the sleeve, said connection being adjustable, and an adjustable stop for limiting the downward movement of the throttle sleeve.

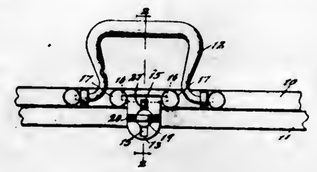
4. A carbureter comprising a substantially cylindrical casing having its lower end closed to form a mixing chamber and adapted for connection at the opposite end with the engine, said casing having an annular trough at the closed end coaxial with the casing for receiving the fuel, and having a lateral air inlet at the trough and communicating with the mixing chamber at the outer side of the trough, the carbureter having a fuel chamber, and a float valve for retaining the fuel in the chamber at a predetermined level, said carbureter having an auxiliary fuel chamber at the closed end and communicating with the trough and with the fuel chamber, a needle valve controlling the communication between the auxiliary and the main fuel chambers, a throttle sleeve mounted for movement in the casing toward and from the trough and having its lower end at the center of the trough, means for moving the sleeve and a connection between the sleeve and the needle valve for moving the valve in the same direction as the sleeve, said connection being adjustable.

5. A carbureter comprising a substantially cylindrical casing having its lower end closed to form a mixing chamber and adapted for connection at the opposite end with the engine, said casing having an annular trough at the closed end coaxial with the casing for receiving the fuel, and having a lateral air inlet at the trough and communicating with the mixing chamber at the outer side of the trough, the carbureter having a fuel chamber, and a float valve for retaining the fuel in the chamber at a predetermined level, a communication between the fuel chamber and the trough, a valve for controlling the said communication, a throttle sleeve mounted for sliding movement in the casing and having its lower end registering with the trough and adapted to dip therein when the sleeve is in closed position, means for moving the sleeve, and a connection between the sleeve and the valve, said connection being adjustable, and comprising a bar arranged diametrically of the sleeve, the casing having an opening through which one end of the bar extends, and the valve having a stem having a threaded engagement with the bar.

[Claims 6 to 8 not printed in the Gazette.]

1,157,364. BAG-LOCK. ALBERT BONIME, Chicago, Ill., assignor to M. Mandel and L. Mandel, Chicago, Ill. Filed Sept. 21, 1914. Serial No. 862,659. (Cl. 70—116.)

1. A bag lock embodying a slotted element pivotally connected with a frame member, a button connected with another frame member and adapted to enter the slot and project beyond the first said element, a portion of the said button adapted to be moved to extend across the slot and over the face of the slotted member, and means for maintaining the said button in locking and in unlocking positions.



2. A bag lock embodying a slotted element pivotally connected with a frame member, a button connected with another frame member and adapted to enter the slot and project beyond the first said element, a portion of the said button adapted to be moved to extend across the slot and over the face of the slotted member, and yielding means for maintaining the said button in its adjusted positions.

3. A bag lock embodying a slotted element pivotally connected with a frame member, a button connected with another frame member and adapted to enter the slot and project beyond the first said element, a portion of the said button adapted to be moved to extend across the slot and over the face of the slotted member, a portion of the said button within the slot, being of a greater diameter in one direction than in the other, the sides of said slot adapted to yield when the said portion of the button is moved crosswise of the slot, the said sides of the slot also having recesses to receive portions of the said button.

4. A bag lock embodying a slotted element pivotally connected with a frame member, a portion of said slot being enlarged and a button connected with another frame member, said button embodying a portion shaped to conform to and substantially fill the said enlarged portion of the slot, said button also embodying a portion shaped to pass through the remaining portion of the slot and beyond the other element and to be moved transversely across the slot and over the face of the slotted element when the two elements are connected, one extremity of the first recited element extending beyond the edge of the outer face of the second recited frame member to form a finger engaging portion.

5. A bag lock embodying separable elements, one of said elements connected with one of the frame members of the purse and pivoted to extend transversely of both frame members when the latter are in a closed position with respect to each other and provided with a slot therethrough, said slot having an enlarged portion, the other of said elements comprising a button connected with the other frame member and adapted to pass through the said slot, the said button having an enlarged portion entering and substantially filling the said enlarged portion of the said slot.

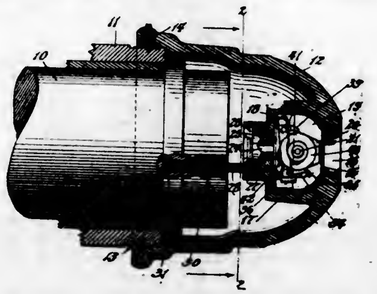
[Claim 6 not printed in the Gazette.]

1,157,365. ODOMETER. HARRY P. C. BROWNE, Brooklyn, N. Y. Filed Jan. 29, 1913. Serial No. 745,008. (Cl. 235—95.)

1. In a device of the class described adapted for attachment to a vehicle wheel, a socket fixed to the vehicle wheel, a base mounted thereon having a shaft passing centrally through said socket, a counter mechanism on said base, a removable disk on said shaft behind said socket having a radial slot, making an angle of substantially forty-five degrees with the horizontal, and a pin fixed to the vehicle axle and extending into said slot, substantially as described.

2. In a device of the class described and in combination with a wheel and a fixed axle, having a recess, a pin having a central bore placed in said recess, a spring attached within said bore having an enlarged portion outside of said bore adapted to be tightly seated within said

recess, and means fixed to said wheel and coöperating with said pin for automatically counting the number of revolutions of said wheel, substantially as described.



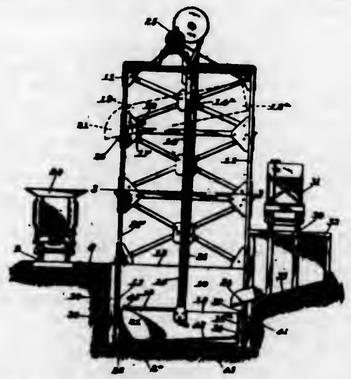
3. In a device of the class described and in combination with a wheel and a fixed axle, having a recess, a sliding pin within said recess, means tending to press said pin outward, and means adapted to move with said wheel and coupling with said pin for automatically counting the number of revolutions of said wheel, substantially as described.

4. In a hub-odometer, a counting device comprising a registering train, including counting wheels, a ratchet wheel driving said wheels, and a shaft mounting said ratchet and connecting same to said wheels; supporting means for said registering train, including a socket, a wall at the end of said socket, a spindle in said socket, a concentric disk at the end of said spindle, and means for affixing said train to said disk; operating means including a yoke spanning said train and said ratchet and arranged to rock back and forward with a second shaft parallel to said first named shaft and affixed at each end to the extremities of said yoke, a block for journaling said second named shaft, a pawl carried by said yoke for engaging said ratchet, a detent pawl mounted upon said block for engaging said ratchet, springs for actuating said pawls, a shaft in said block, and a helical spring encircling same and commanding the backward motion of said yoke; and actuating means, carried by the wall of said supporting means for commanding the forward motion of said yoke, the said actuating means comprising a plane ring concentrically disposed around said disk and spindle, means for affixing said ring to said wall at substantially the end of a given diameter, and adjustable means for elevating the free side of said ring from wall of said supporting means.

1,157,366. TENDER COAL-LOADING APPARATUS. HENRY C. BUCHWALD, Baltimore, Md. Filed Sept. 30, 1914. Serial No. 864,193. (Cl. 214—12.)

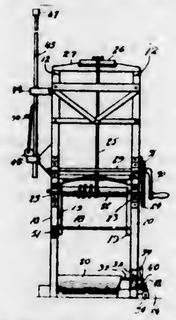
1. In a tender coal-loading apparatus, the combination of a tower provided with two stationary guide-bars attached at opposite sides; a pit in the ground below the bottom of the tower; a downward inclined opening 33, at one side of the tower and leading from the surface to said pit; a vertically sliding door at the lower end of said downward incline; a chute 24, hinged to said incline and adapted to tilt downward when the door is open and project into the pit, and also adapted to turn upward and take position in the space of said incline when the door is closed; and a coal-dumping car movable up and down within the pit and tower and said car automatically raising and lowering said vertical sliding door by said movements.

2. In an apparatus for supplying tenders with coal, the combination of a tower provided with two guide-bars extending vertically from the base to a point above the cross bar 28, near the top of the tower; two laterally projecting pins 18, on the tower at its dumping side; a coal-dumping car vertically movable within the tower and opposite sides of said car provided near its front end with laterally-projecting studs 17, which on the up movement of the car strike against said lateral pins and tilt the car, and said car also provided with a grooved guide-block 15, rigidly secured to the car-side, a second grooved guide-block pivotally secured to the car-sides below said rigidly-secured block, and as the car moves upward the grooves of both upper and lower blocks engaging said



side-bars to the top end of the latter where the said uppermost blocks will disengage from the guide bars but leaving the pivoted guide block engaged, thus the car is automatically tilted and its load dumped through the side of the tower while the pivoted block remains engaged with the guide-bar.

1,157,367. PORTABLE ELEVATOR. THOMAS CAMPFIELD, Unity, Ill. Filed June 22, 1914. Serial No. 846,636. (Cl. 187—11.)

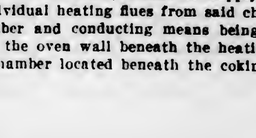


1. A device of the character described comprising a frame, an elevator member vertically movable within said frame, a windlass for moving said elevator member, and means for steadying the device in its position, said means comprising a member secured on the ceiling above the device and provided with a slot and a bar held for vertical movement on said frame and engageable in said slot, and means extending through said bar and engaging a portion of said frame for preventing downward movement of said bar out of said slotted member.

2. A device of the character described comprising a frame, an elevator member vertically slidable therein, guide rollers on the frame, a cable secured to said elevator member and extending upwardly over said rollers, a manually operated mandrel for reeling said cable, guide brackets secured on said frame, a bar vertically slidable within said brackets, a lug on said bar adapted to engage one of said brackets for preventing said bar from slipping through said brackets, said bar being provided with a plurality of openings, a slotted member adapted to be secured upon the ceiling above the device and adapted to receive the end of said bar, and a pin engaging a selected one of said openings and contacting with the top of one of said brackets for preventing downward movement of said bar.

3. In a device of the character described comprising a frame and a manually operated elevator member slidable therein, roller carrying members hinged upon the lower portion of said frame, and means for swinging said members whereby said rollers may be engaged with or disengaged from the floor, said means comprising a rod journaled for rocking movement on the lower portion of said frame, a hand lever formed on one end of said rod, a pair of crank arms formed on said rod, and rings secured on said hinged members and engaged by said crank arms, whereby rocking of said rod will raise or lower said hinged members.

1,157,368. COKE-OVEN. FRANCIS JOSEPH COLLIN, Dortmund, Germany, assignor to Aktien-Gesellschaft für Kohlendestillation, Dusseldorf, Germany. Filed Feb. 21, 1912. Serial No. 679,068. (Cl. 202—9.)



1. In a coking oven the combination of an alined series of combustion flues provided with individual burner nozzles, a chamber located approximately half way of the oven's length, the said chamber being enlarged in comparison with the transverse sectional area of that passage which supplies gas to said chamber from the outside of the oven, a passage leading from said chamber to a plurality of burer nozzles and a gas supply passage connecting said chamber with the gas supply outside of the oven and so arranged as to supply to the said chamber in undivided volume the total quantity of gas required for all the burner nozzles, the said two sets of passages connecting with each other only by reason of their respective connections with the said chamber.

2. In a coking oven a heating wall provided with a series of heating flues, a chamber located in that part of the wall below the plane of said flues and approximately near the center of said oven wall, a passage for supplying gas to said chamber directly and in undivided volume from the outside of said wall; and a second passage extending from said chamber toward the outer end of the wall and supplying a plurality of burner nozzles with gas drawn from said chamber, the said two passages being also located in that part of the wall below the plane of said flues.

3. In a coking oven a heating wall provided with a series of heating flues, a chamber located approximately near the center of said oven wall, nozzles connecting a plurality of said flues directly with said chamber, a passage for supplying gas to said chamber directly and in undivided volume from the outside of said wall; and a second passage extending from said chamber toward the outer end of the wall and supplying a plurality of burner nozzles connecting each of the remaining flues in said series of flues with said second passage.

4. In a horizontal coking oven the combination of a series of coking chambers spaced apart by heating walls, each heating wall being composed of a series of individual heating flues; means for conducting the entire quantity of gas required to supply a predetermined set of said heating flues in undivided volume from the outside of the oven to a chamber located in the lower part of the oven, a chamber to receive said gas supply located approximately at the center of the wall; means to supply the entire series of individual heating flues from said chamber, said means, chamber and conducting means being located in that part of the oven wall beneath the heating flues, an air supply chamber located beneath the coking chambers and passages leading from said air chamber to each heating flue near the point of combustion.

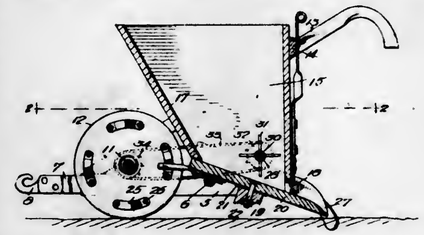
5. In a coking oven a heating wall provided with a series of heating flues, a chamber located approximately near the center of said oven wall, a passage for supplying gas to said chamber directly and in undivided volume from the outside of said wall, and a plurality of distributing passages extending from said chamber toward the outer end of the wall, each supplying a predetermined group of nozzles.

1,157,369. BLACKBOARD-ERASER. RICHARD A. COSTELLO, Chicago Heights, Ill. Filed Dec. 26, 1914. Serial No. 879,036. (Cl. 15—65.)



In a blackboard eraser; the combination with a back piece of a plurality of rubbing members, said rubbing members being scored and turned backwardly at the score to form two attached rubbing strips with continuous squared edges across the cut portion, which said edges are applied to the under side of the said back piece, and rows of stitching engaging the outer faces of said rubbing strips and passed upwardly and diagonally therethrough and through the back.

1,157,370. FERTILIZER-DISTRIBUTER. ALBERT D. COX, Winterville, N. C. Filed Mar. 6, 1915. Serial No. 12,542. (Cl. 111—33.)



1. A fertilizer distributer comprising a frame, a ground wheel journaled thereto, a hopper fixedly carried by the frame and being open at its lower end, a rearwardly inclined cross bar fixedly connected with the frame beneath the hopper, a rearwardly inclined floor supported upon the inclined cross bar beneath the hopper and being pivotally connected with the cross bar at a single point, a second cross bar connected to the frame upon which said second cross bar the said floor in advance of its pivotal point slidably rests, coacting means between the ground wheel and floor for oscillating the latter as the ground wheel rotates, and an agitator arranged within the hopper above the point of support of said floor and adapted to be driven from the ground wheel.

2. A fertilizer distributer comprising a frame, a ground wheel journaled thereto, a hopper fixedly carried by the frame and being open at its lower end, a rearwardly inclined cross bar fixedly connected with the frame beneath the hopper, a rearwardly inclined floor supported upon the inclined cross bar beneath the hopper and being pivotally connected to said cross bar at a single point, a second cross bar connected to the frame and upon which said second cross bar said floor in advance of its pivotal connection slidably rests, and coacting means between the floor and ground wheel for oscillating the former upon rotation of the latter.

3. In a fertilizer distributer, the combination of a fixed hopper, a rearwardy inclined floor unconnected with

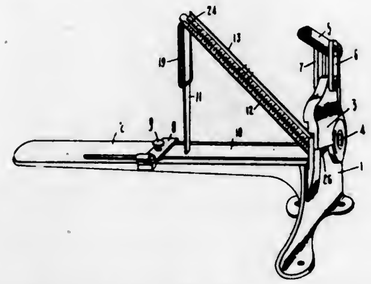
the hopper, a rearwardly inclined cross bar to which the floor is pivotally connected at a single point, means for oscillating the inclined floor upon its pivotal point, and an agitator arranged within the hopper above the floor and being disposed immediately above the portion of the floor resting against the cross bar.

1,157,371. AEROPLANE. JOHN M. DEITRICH, Battle Creek, Mich. Filed Sept. 17, 1913. Serial No. 790,188. (Cl. 244—14.)



In an aeroplane, a main frame, a main sustaining plane carried by said main frame and extending longitudinally of said main frame, said main sustaining plane being curved laterally and being inclined from its rear edge to its front edge, a bottom support carried by said frame, a pair of motors carried by said bottom support, a pair of propellers, one of said propellers being disposed in the rear of said sustaining plane and being driven by one of said motors, and the other propeller being disposed in front of said main sustaining plane and being driven by the other motor, an elevating plane in the rear of one of said propellers, a rudder in the rear of the elevating plane, said motors, propellers, elevating plane, and rudder being disposed symmetrically about the center of gravity of the device.

1,157,372. PRINTER'S MITER-GAGE. PETER EMBSER, New York, N. Y., assignor of one-half to John A. Mansell, New York, N. Y. Filed Apr. 17, 1915. Serial No. 21,991. (Cl. 164—10.5.)



1. A miter gage having a base, an inclined guide mounted thereon and provided with a plurality of spaced slots therein, a stop adapted to coöperate with said guide and means for locking said stop in adjusted position in any one of said slots.

2. A miter gage having a base, an inclined guide mounted thereon and provided with a plurality of spaced slots therein, a slide adapted to move longitudinally with respect to said guide, a stop mounted on said slide and means for retaining said stop in adjusted position in any one of said slots.

3. A miter gage having a base, an inclined guide mounted thereon and provided with a plurality of spaced slots therein, a slide beneath said guide, a stop on said slide and a spring for urging said slide into contact with said guide.

4. A miter gage having a base, an inclined guide mounted thereon, a post for supporting the upper end of said guide, said guide being provided with a plurality of spaced slots therein, a member adapted to slide longitudinally with respect to said guide, a stop on said member adapted to project through any of said slots when in adjusted position and a U-spring surrounding said post and having a portion forcing said member into contact with said guide.

5. A miter gage having a base, an inclined guide mounted thereon, a post for supporting the upper end of said guide, said guide being provided with a plurality of spaced slots therein, a member adapted to slide longitudinally with respect to said guide, a stop on said member adapted to project through any of said slots when in adjusted position, a U-spring surrounding said post and having a portion forcing said member into contact with said guide, and a vertical lateral flange on said guide.

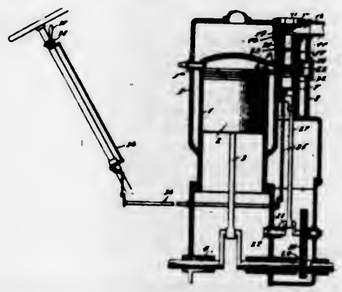
[Claims 6 and 7 not printed in the Gazette.]

1,157,373. SPECTACLE-TEMPLE OF SPIRAL WIRE. JULIUS FABER, Stuttgart, Germany. Filed Dec. 4, 1914. Serial No. 875,444. (Cl. 88—52.)



An elastic spectacle-temple of spiral wire being hollow along its whole length and consisting of several layers of coils, these coils being smaller in diameter at the parts *b* and larger at the parts *c* engaging the ear, the soldering of the spiral to the frame and the stiffening of the hollow temple being rendered possible by means of a core *e* inserted into the free open end of the temple.

1,157,374. VALVE MECHANISM FOR INTERNAL-COMBUSTION ENGINES. THOMAS J. FAY, New York, N. Y. Filed July 5, 1913. Serial No. 777,394. (Cl. 123—75.)



1. A valve mechanism for an internal combustion engine comprising a hollow casing having a port therein, a fixed sleeve spaced from said casing, a reciprocating valve sleeve having its inner and outer surfaces in sliding contact with the outer wall of said fixed sleeve and the inner wall of said casing, respectively, and a packing ring on said stationary sleeve, said valve sleeve being castellated at one end to form ports, and said packing ring bearing continuously against said valve sleeve during the reciprocation of the latter.

2. A valve mechanism for an internal combustion engine comprising a hollow casing having ports for the passage of a fluid, a tubular member in said casing communicating at opposite ends with said ports, said member being spaced from the inner wall of said casing, a reciprocating valve sleeve for controlling one of said ports in sliding contact with the inner wall of said casing and the outer wall of said member respectively, said valve sleeve being castellated at one end and a packing ring on said member bearing continuously against said valve sleeve during its reciprocation.

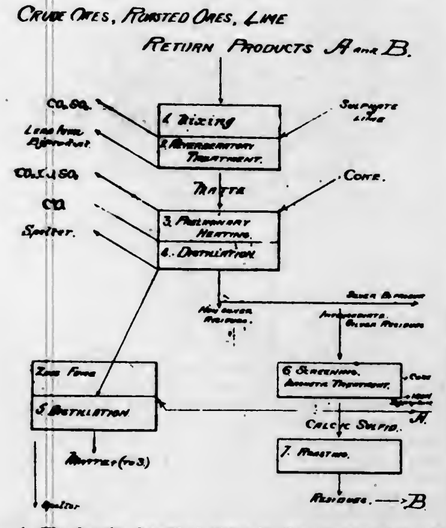
3. A valve mechanism for an internal combustion engine comprising a hollow casing having a port therein, a stationary sleeve within said casing spaced from the inner wall thereof, a packing ring in the outer surface of said sleeve, and a hollow reciprocating slide valve in sliding contact with the inner wall of said casing and the outer surface of said sleeve, said valve being castellated at one end to provide ribs and ports, and said packing ring bearing against said ribs when the valve is in port-opening position.

4. In an internal combustion engine the combination with a working cylinder having a port and a piston therein, of a valve mechanism for controlling the passage of a fluid through said port, said mechanism comprising a reciprocating hollow slide valve having apertures therein communicating with said port in one position thereof, a piston movable within said slide valve and coöperating with said port for restricting the passage through said port irrespective of the position of the slide valve and means operable at will for moving said piston.

5. The combination with a working cylinder of an internal combustion engine having a port and a piston therein, of a valve mechanism for controlling the passage of a fluid through said port comprising a hollow casing having a groove connected with said port in said cylinder, a reciprocating tubular sleeve provided with apertures adapted to register with said groove in one position of the sleeve, said valve casing having an orifice communicating with one end of said sleeve, a piston closing the other end of said sleeve and movable within the same and coöperating with said groove in said casing for throttling the passage of a fluid through said port.

[Claims 6 and 7 not printed in the Gazette.]

1,157,375. PROCESS FOR THE MANUFACTURE OF SPELTER FROM FERRUGINOUS AND ADMIXED ZINC-BLEND ORES. JOHN JAMES FINGLAND, Kaslo, British Columbia, Canada. Filed Sept. 10, 1913. Serial No. 789,098. (Cl. 75—153.)



1. The herein described steps in the process of manufacturing spelter from ferruginous and admixed lead and zinc blende ores, which consists in heating a mixture of crude ore, roasted ore, and lime, thereby forming litharge and maintaining the heat treatment until the litharge has been driven off by volatilization.

2. The herein described steps in the process of manufacturing spelter from ferruginous and admixed lead and zinc blende ores, which consists in heating a mixture of crude ore, roasted ore, and lime, thereby forming litharge and maintaining the heat treatment until the litharge has been driven off by volatilization, and subsequently continuing the heat treatment at a raised temperature until a liquid zinc calcic oxid sulfid matte is produced.

3. The herein described steps in the process of manufacturing spelter from ferruginous and admixed lead and zinc blende ores, which consists in heating a mixture of crude ore, roasted ore, and lime, thereby forming litharge, maintaining the heat treatment until the litharge has been driven off by volatilization, and subsequently continuing the heat treatment at a temperature of substantially 1500° C. until a liquid zinc calcic oxid sulfid matte is produced.

4. The herein described steps in the process of manufacturing spelter from ferruginous and admixed ores, which consists in producing a zinc calcic oxid sulfid matte by heat treatment, cooling and crushing the matte, heating the crushed matte, together with carbonaceous matter out of contact with the air, and subsequently distilling the zinc.

5. The herein described steps in the process of manufacturing spelter from ferruginous and admixed ores, which consists in producing a zinc calcic oxid sulfid matte by heat treatment, cooling and crushing the matte, heating the crushed matte together with carbonaceous matter out of contact with the air, subsequently distilling the zinc, screening the residue, moving the iron by magnetic treatment, and roasting the product.

[Claim 6 not printed in the Gazette.]

1,157,376. DOOR-HOLDER. EMILE FRANCKAERTS, San Francisco, Cal. Filed July 9, 1915. Serial No. 38,869. (Cl. 16—83.)



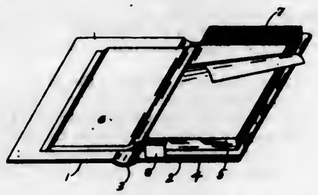
1. The improved reversible door-holder comprising a main casing adapted to be fixed in position, a spring-actuated smaller casing adapted to slide in said main casing, means for locking and tripping the inner casing, a shoe or stop member pivoted in the lower end of the inner casing and its shank projecting upward into the latter, a spring secured to said shank, the inner casing having at diametrically opposite points sockets for receiving the free end of said spring, whereby the shoe is adapted for reversal, as described.

2. The improved reversible door-holder comprising a main casing, a slidable spring-actuated inner casing, means for locking and tripping the latter, a reversible shoe or stop member pivoted in the lower end of the casing and its shank provided with a spring attachment adapted for engagement with either side of the inner casing, and a skeleton base upon which the door-holder proper is secured, said base serving to space the shoe or stop member from the door to which the attachment is applied in the manner described.

1,157,377. THUMB-PIECE FOR MANIFOLD SALES OR ORDER BOOKS. ORLANDO S. GAUCH, Shelby, Ohio, assignor to The Shelby Printing Company, Shelby, Ohio, a Corporation of Ohio. Filed Aug. 19, 1911. Serial No. 645,041. (Cl. 11—23.)

1. In a manifolding book, in combination, a support, a pad upon said support, an auxiliary support hinged to said first support to swing about an axis substantially

parallel to the line of binding of said pad, a second pad mounted on said auxiliary support with its bound end extending transversely to the line of binding of said first pad and positioned to receive between its leaves a leaf of the first pad, and a lifting device upon said auxiliary support adjacent the free ends of the leaves of said second pad.



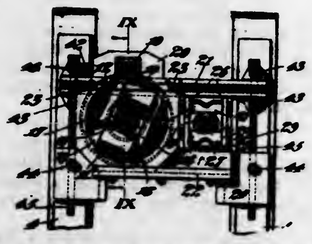
2. In a manifolding book, in combination, a support, a pad upon said support, an auxiliary support hinged to said first support, said first support projecting beyond a free edge of said auxiliary support, a pad upon said auxiliary support positioned to receive between its leaves a leaf of said first pad, and a lifting device secured to said auxiliary support and projecting beyond the same in the direction in which said first support projects, whereby said lifting device is protected by the extended portion of said support.

3. In a manifolding book, in combination, a lifting device having a portion connected with a part of the book and normally lying substantially in the plane thereof, a substantially upright portion, and a thumb engaging portion extending beyond said upright portion substantially in the direction of the plane of the latter.

4. In a manifolding book, in combination, a support, a pad upon said support, an auxiliary support hinged to said first support to swing about an axis substantially parallel to the line of binding of said pad, a second pad mounted on said auxiliary support with its bound end extending transversely to the line of binding of said first pad and positioned to receive between its leaves a leaf of the first pad, said support being extended beyond said auxiliary support, and a lifting device upon said auxiliary support and projecting beyond the same in the direction in which said first support is extended.

5. In a manifolding book, in combination, a support, a pad secured along a portion thereof to said support and adapted to swing with respect thereto, an auxiliary support hinged to said first support to swing toward and from said pad, a second pad having its bound end secured adjacent an edge of said auxiliary support and having its leaves adapted to swing in a direction transverse to the direction of swing of said first pad and adapted to receive between its leaves a leaf of said first pad, a lifting device secured to said auxiliary support adjacent a free corner and extending away therefrom and thence parallel therewith, and an extension upon said first support adapted to inclose and protect said lifting device.

1,157,378. METAL-ROLLING APPARATUS. HARRY R. GEER, Johnstown, Pa. Filed May 31, 1913. Serial No. 770,835. (Cl. 80—53.)



1. A rolling mill guide comprising a pair of rollers revolubly mounted and spaced apart and means for rotatably adjusting said rollers about an axis at an angle to the axes of said rollers and means for laterally adjusting said rollers.

2. A rolling mill guide comprising a pair of rollers revolubly mounted and spaced apart, means for regulating the space between the contiguous surfaces of said rollers, and means for rotatably adjusting the same about an axis at an angle to the axes of said rollers and means for laterally adjusting said rollers.

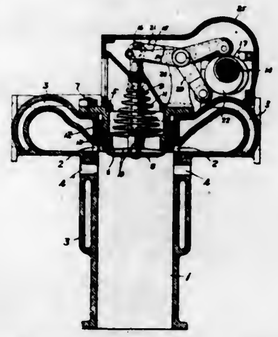
3. A rolling mill apparatus comprising a pair of rollers provided with means for regulating the space between the adjoining surfaces thereof, and means for rotatably adjusting said guides about a line substantially at right angles to the plane of the axes of said rollers at a point midway between the planes of the ends of the said rollers and midway between the said axes, and means for laterally adjusting said rollers.

4. A rolling mill guide comprising a pair of annular rollers mounted on cylindrical bushings, bores in said bushings eccentric with the cylindrical surfaces thereof, a frame adapted to rigidly support the ends of said bushings and a bolt or pin passing through said bore and frame and secured to said bushing whereby said rollers may be spaced apart as desired, the said frame being rotatable about an axis at an angle to the axes of said rollers and laterally adjustable.

5. A rolling mill guide comprising a frame rotatable in a vertical plane, a pair of annular rollers loosely mounted on cylindrical bushings, said bushings being each provided with an axle secured thereto eccentric with its axis, and means for adjustably or rigidly securing the bushings to said frame, whereby the rollers may be spaced apart, as desired.

[Claims 6 to 10 not printed in the Gazette.]

1,157,379. INTERNAL-COMBUSTION ENGINE. WILLIAM F. GIBBS, New York, N. Y. Filed Mar. 10, 1913. Serial No. 753,300. (Cl. 123—75.)



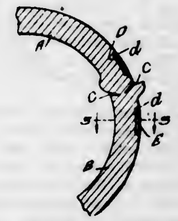
1. In an internal combustion engine the combination of a cylinder having a cylindrical clearance space at one end and having a plurality of exhaust ports located around the cylindrical surface of said clearance space and in the same horizontal plane, a removable cylinder head provided with a tubular externally cylindrical admission projection between which and the end part of the cylinder wall there is an annular space, a puppet valve coöperating with the inner face of said tubular projection to control admission, and a sliding sleeve valve of uniform inside and outside diameter and having a cylindrical exterior adapted to the internal cylindrical surface of the said cylindrical space and arranged to slide on the projection past the exhaust ports in both directions.

2. In an internal combustion engine the combination of a cylinder having a clearance space at one end and a plurality of exhaust ports located around the internal surface of said cylinder in the said clearance space and in the same horizontal plane, a removable cylinder head provided with a tubular admission projection between which and the end part of the cylinder wall there is an annular space, a puppet valve coöperating with the inner face of said tubular projection to control admission, a sliding sleeve valve having a cylindrical exterior adapted to the internal surface of the first mentioned cylinder and arranged to slide past the exhaust ports in both directions, and a cam shaft mounted above the cylinders with cams suitably arranged upon said shaft one being used for positively moving said sliding sleeve valve in one direction by a cam lever pivotally connected with the cylinder head and the other for positively moving the said sliding sleeve valve in the opposite direction by a cam lever pivotally connected with the cylinder head and a third cam suitably mounted on said shaft for positively opening the said puppet valve by a cam lever pivotally connected with the cylinder head, substantially as described.

3. In an internal combustion engine the combination of a cylinder having a cylindrical clearance space at one end and having a plurality of exhaust ports located around the cylindrical surface of said clearance space and in the same horizontal plane, a removable cylinder head provided with a tubular admission projection between which and the end part of the cylinder wall there is an annular space, a puppet valve coöperating with the inner face of said tubular projection to control admission, a sliding sleeve valve having a cylindrical exterior adapted to the internal surface of the said cylindrical space and arranged to slide past the exhaust ports in both directions, and a cam shaft mounted above the cylinders with cams suitably arranged upon said shaft one being used for positively moving said sliding sleeve valve in one direction by a cam lever pivotally connected with the cylinder head and the other for positively moving the said sliding sleeve valve in the opposite direction by a cam lever pivotally connected with the cylinder head and a third cam suitably mounted on said shaft for positively opening the said puppet valve by a cam lever pivotally connected with the cylinder head, substantially as described.

4. In an internal combustion engine, the combination of a cylinder having exhaust ports through its cylindrical wall, an externally and internally cylindrical tubular cylinder head projecting into the cylinder with space between, a puppet valve coöperating with the inner face of the cylinder head to control admission, a cylindrical slide valve of uniform inside and outside diameter and arranged to slide on the tubular head past the ports in both directions, and mechanism for operating the valves, substantially as described.

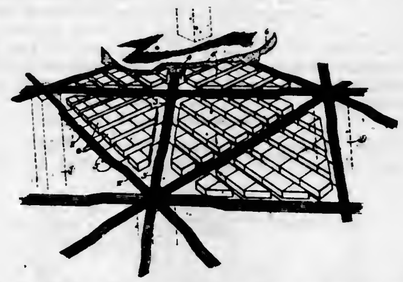
1,157,380. DEVICE FOR MARKING EARTHENWARE. WILLIAM BEALL GRAY, Louisville, Ky., assignor to Martin J. Bannon, Louisville, Ky. Filed Apr. 16, 1914. Serial No. 832,225. (Cl. 40—2.)



1. An identifying means for earthen articles composed of separable sections, comprising a depressed ground on each section, each ground having raised characters, the highest portions of the characters being below the surface of the article, and the arrangement of the characters on the sections of the same article being the same.

2. An identifying means for earthen articles composed of separable sections, comprising a depressed ground on each section, each ground having raised characters, and the arrangement of the characters on the sections of the same article being the same.

1,157,381. REINFORCED CONCRETE CONSTRUCTION. HERBERT P. GREEN, Kansas City, Mo. Filed June 19, 1911. Serial No. 634,007. (Cl. 72—66.)



1. In concrete floor construction, the combination with supporting columns, of direct girder reinforcements supported by the columns, diagonal girder reinforcements also supported by the columns and forming triangular spaces with the direct girder reinforcement, spaced beam reinforcements within said triangular spaces and running parallel to the aforesaid direct girder reinforcements and resting on the latter, as well as on the said diagonal girder reinforcements, tiles between said spaced beam reinforcements, and concrete in the spaces between the tiles, forming integral beams and girders.

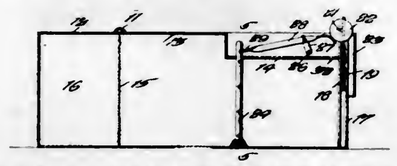
2. In reinforced concrete construction, a monolithic slab in combination with supporting columns, said slab consisting of concrete, tile and reinforcing rods, and comprising a flat ceiling and a flat floor surface with concealed girders and beams therebetween, the girders and beams being formed of the concrete and reinforcing rods between the tile arranged in spaced rows, the beams being between the sides of said spaced rows and the girders being between the ends of said spaced rows, a portion of said girders being inclosing girders, forming the sides of inclosing parallelograms, within the slab, the supporting columns being at the corners thereof, the remaining portion of said girders intersecting at the center of the slab, and being diagonals within said inclosing parallelograms, the beams between said inclosing girders and said diagonals being substantially perpendicular to an adjacent inclosing girder and at a smaller angle with a diagonal, the rods in the girders being continuous beyond the axis of the columns.

3. In a concrete floor construction the combination with a plurality of supports, of reinforcement members laid thereover normally thereto with said respective reinforcement members disposed at right angles to one another to form substantially a rectangular panel between any four of said supports, diagonally disposed reinforcement members laid upon said supports subdividing said rectangular panel into four triangular panels, a plurality of rows of tiles placed end to end laid within each of said triangular panels with the axes of said respective rows parallel to one another in each triangular panel and disposed normal to the axes of the reinforcement members disposed normal to said supports, said tiles in one row spaced from those of another adjacent row permitting concrete to be bonded between the respective rows thereof in each of said triangular panels forming beams within the main rectangular panel which are normal to the reinforcement members bounding said rectangular panel and directed toward the middle thereof, and a plurality of reinforcing members laid between said tiles and molded into the concrete beam so formed.

4. In a concrete panel floor construction a plurality of supports, and a monolithic concrete floor supported thereon, said supports disposed to form the bounding corners of integrally connected rectangular floor panel sections, each panel section divided geometrically into four triangular panel sections, reinforcement members laid upon said supports with their axes disposed coincident with the boundary lines of said triangular panel sections, a

series of rows of tiles places within each triangular panel section, said rows spaced one from another to permit bonding of the concrete therebetween, and all of said rows directed toward the middle of the rectangular floor panel section, the innermost tiles of the rows of tiles of each triangular section having one edge cut away parallel to the boundaries of the triangular panel sections, and reinforcement members laid between said respective rows of tiles and bonded into the concrete molded into the structure.

1,157,382. TRAP. ASA CYRUS GRIFFING, Baskin, La. Filed Apr. 30, 1915. Serial No. 24,880. (Cl. 43—19.)



1. A trap comprising a casing having an entrance therefor and a depressed portion located in the top thereof, a closure for said entrance, a roller carried by said closure, a crank shaft mounted transversely of said depression, a trip arm carried by said crank shaft, one end of said arm being adapted to engage said roller to retain the closure in an elevated position, a shaft rotatably mounted in said casing adjacent said entrance and provided with a notch in the upper end thereof adapted to receive the other end of said trip arm when the closure is in elevated position, and gate members carried by said shaft and adapted to rotate the same to release said notch from engagement with the trip arm thereby permitting the closure to move to the closing position.

2. A trap comprising a casing having hinged covers therefor and a longitudinal depression in the top thereof, said casing being also provided with an opening to form an entrance, a vertically movable closure for said entrance, guides for said closure, a roller carried by said closure, a crank shaft mounted in said depression, a trip arm carried by said shaft, one end of said arm being adapted to engage said roller to retain the closure in an elevated position, a vertical shaft rotatably mounted in said casing adjacent the opening therein, the top of said shaft extending into said depressed portion and being provided with a notch adapted to receive the other end of said trip arm, and gate members carried by said shaft and adapted to rotate the same to release said notch from engagement with the trip arm to permit the closure to move to a closing position.

3. A trap comprising a casing having an entrance and a depressed portion, a closure for said entrance, a gate in said casing, and means mounted in said depressed portion and actuated by the movement of said gate to release said closure.

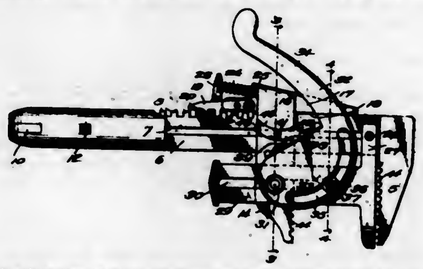
4. A trap comprising a casing having an entrance and a depressed portion, a closure for said entrance, a gate in said casing, and pivoted means mounted in said depressed portion and actuated by the movement of said gate to release said closure.

5. A trap comprising a casing having an entrance, a closure therefor, an animal actuated member adapted for horizontal rotation in said casing, and a pivoted trip mechanism engaging said member and operated by the rotation thereof to release said closure.

[Claims 6 to 8 not printed in the Gazette.]

1,157,383. CLAMP ATTACHMENT FOR WRENCHES. ELI HAKEY, Swanton, Vt. Filed June 4, 1914. Serial No. 842,891. (Cl. 81—180.)

The combination with a wrench having a shank, a movable jaw and a stationary jaw, of a clamp jaw arranged between the movable and stationary wrench jaws, a plate carried by the clamp jaw extending alongside the movable jaw and provided with a longitudinal slot, a removable pin carried by the movable jaw and extending through the slot, a cam lever pivoted upon the pin, cooperating means between the cam lever and clamp jaw for



adjusting the latter relatively to the stationary jaw, and means for maintaining the clamp jaw in adjusted position relatively to the stationary jaw.

1,157,384. SEWING-MACHINE ATTACHMENT. CHARLES A. HANSEN, Elizabeth, N. J., assignor to Alfred H. Bamberger, New York, N. Y. Filed Oct. 5, 1911. Serial No. 652,956. (Cl. 112—9.)



1. A sewing machine attachment comprising a folder having a spirally-conformed portion formed by two substantially parallel guide walls and another spirally-conformed portion substantially coaxial with and extending oppositely to the first mentioned portion.

2. A sewing machine attachment comprising a folder having a spirally conformed portion formed by two substantially parallel guide walls and another spirally conformed portion substantially coaxial with and overlapping said first mentioned portion.

3. A sewing machine attachment comprising a folder having a portion comprising two parallel guide walls of spiral conformation, said spiral gradually decreasing in diameter from the receiving end to the discharge end of the attachment, and another portion comprising a single guide wall of spiral conformation substantially coaxial with the first mentioned portion, and extending spirally in a direction opposite to that of the first mentioned spiral.

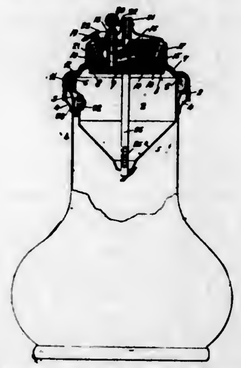
4. A sewing machine attachment comprising a folder having a double-walled portion of the form of a spiral of gradually decreasing diameter, and a single-walled portion overlapping the first mentioned portion near the end of said first mentioned portion of least diameter and extending to said end, said last mentioned portion having a guide edge in the form of a spiral substantially coaxial with and oppositely disposed with respect to said first mentioned spiral.

5. A sewing machine attachment comprising two folders each having a spirally conformed portion formed by two substantially parallel guide walls and another spirally conformed portion overlapping and extending oppositely to the first mentioned portion, said folders being spaced from each other and the spirally conformed portions of each being reversely curved with respect to the corresponding spirally conformed portions of the other.

[Claims 6 to 8 not printed in the Gazette.]

1,157,385. ACETYLENE-GENERATOR. WILLIAM W. HARRIS, New York, N. Y., assignor to Van Gleckland Co., Inc., a Corporation of New York. Filed July 28, 1909. Serial No. 510,065. (Cl. 48—53.3.)

1. In an acetylene generator, the combination with a water reservoir, of a carbid reservoir, and means for feeding the carbid from said carbid reservoir directly into said water reservoir, said feeding means extending through an orifice in said carbid reservoir into said water reservoir, and being guided throughout its operation by the sides of said orifice, the thickness of the sides of said orifice being less than the height of any pocket, said feeding means having one or more partitions forming a plurality of pockets, said partition or partitions being of less horizontal dimension than the horizontal dimension of said orifice to provide an open clearance between said partition or partitions and the sides of said orifice.



2. In an acetylene generator, the combination with a water reservoir, of a carbid reservoir, means for feeding the carbid from said carbid reservoir directly into said water reservoir, said feeding means extending through an orifice in said carbid reservoir into said water reservoir, and being guided throughout its operation by the sides of said orifice, said feeding means having one or more partitions forming a plurality of pockets, said partition or partitions being of less horizontal dimension than the horizontal dimension of said orifice to provide an open clearance between said partition or partitions and the sides of said orifice, and means for suspending said feeding means near its upper end.

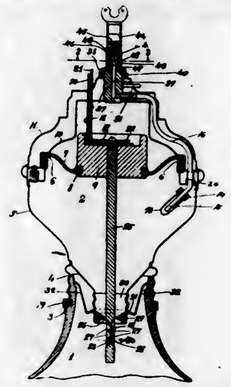
3. In an acetylene generator, the combination with a water reservoir, of a carbid reservoir, feeding means extending through an orifice in said carbid reservoir into said water reservoir, said feeding means comprising a plunger provided on one side of the portion thereof which in operation passes through said orifice with one or more partitions forming a plurality of apertures, the terminus or termini of said partition or partitions being inside the periphery of said plunger to provide an open clearance between said partition or partitions and the edges of said orifice.

4. In an acetylene generator, the combination with a water reservoir, of a carbid reservoir having an upper flexible wall, means for feeding carbid from said carbid reservoir into said water reservoir, said feeding means extending through an orifice in said carbid reservoir into said water reservoir, said feeding means having one or more horizontal partitions forming a plurality of openings, which openings increase in capacity upwardly, said partition or partitions being of less horizontal dimension than the horizontal dimension of said orifice to provide an open clearance between said partition or partitions and the sides of said orifice, and means for suspending said feeding means from said flexible wall.

5. In an acetylene generator, the combination with a water reservoir, of a carbid reservoir having a yieldable wall, means whereby the movement of said yieldable wall is controlled by the pressure of the generated gas, means for feeding carbid from said carbid reservoir into said water reservoir, said feeding means extending through an orifice in said carbid reservoir into said water reservoir and having one or more partitions forming a plurality of pockets of varying capacity, said partition or partitions being of less dimension than the dimension of said orifice to provide an open clearance between the said partition or partitions and the sides of said orifice, and means whereby the movement of said feeding means is controlled by said yieldable wall.

[Claims 6 to 38 not printed in the Gazette.]

1,157,386. ACETYLENE-GENERATOR. WILLIAM W. HARRIS, New York, N. Y., assignor to Van Gleckland Co., Inc., a Corporation of New York. Filed May 5, 1910. Serial No. 559,561. (Cl. 48—53.3.)



1. In an acetylene generator, the combination with a water reservoir, of a carbid reservoir having an orifice, means for feeding carbid from said carbid reservoir, said feeding means extending through said orifice and having a plurality of series of superposed pockets separated by horizontal partitions, the dimensions of said partitions being related to the dimensions of said orifice so as to provide an open clearance between the edges of said partitions and the sides of said orifice, and vertical guiding means disposed between said series of pockets.

2. In an acetylene generator, the combination with a water reservoir, of a carbid reservoir having an orifice, means for feeding carbid from said carbid reservoir, said feeding means extending through said orifice and having a plurality of series of superposed pockets separated by horizontal partitions, the dimensions of said partitions being related to the dimensions of said orifice so as to provide an open clearance between the edges of said partitions and the sides of said orifice, and vertical guiding means carried by said feeding means and disposed between said series of pockets.

3. In an acetylene generator, the combination with a water reservoir, of a carbid reservoir having an orifice, means for feeding carbid from said carbid reservoir, said feeding means extending through an orifice in said carbid reservoir and having a plurality of series of superposed pockets, and vertical guiding partitions disposed between said series of pockets.

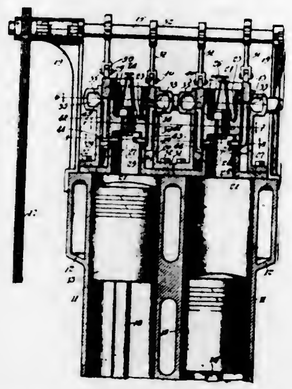
4. In an acetylene generator, the combination with a water reservoir, of a carbid reservoir having an orifice, means for feeding carbid from said carbid reservoir, said feeding means extending through a circular orifice in said carbid reservoir and having a plurality of series of superposed pockets, vertical partitions disposed between said series of pockets, said vertical partitions having an outer contour of a curved surface of less radius than the radius of said orifice and serving to guide said feeding means through said orifice.

5. In an acetylene generator, the combination with a water reservoir, of a carbid reservoir having an orifice, means for feeding carbid from said carbid reservoir, said feeding means extending through said orifice and having a plurality of series of superposed graduated pockets separated by horizontal partitions, the dimensions of said partitions being related to the dimensions of said orifice so as

to provide an open clearance between the edges of said partitions and the sides of said orifice and vertical guiding partitions disposed between said series of pockets.

[Claims 6 to 15 not printed in the Gazette.]

1,157,387. INTERNAL-COMBUSTION ENGINE. GEORGE W. HAURY, Chicago, Ill. Filed Mar. 26, 1914. Serial No. 827,272. (Cl. 123—75.)



1. In a gas engine, a structure encircling a combustion space and comprising concentric stationary walls separated by arcuate spaces, said wall structure having in opposite sides thereof intake and exhaust ports respectively, said ports made through both the inner and outer walls, two opposed arcuate valve-members, respectively controlling the inlet and outlet ports, sliding in said arcuate spaces, and means for independently operating said valves.

2. In a gas engine, a structure encircling a combustion space and comprising concentric stationary walls separated by arcuate spaces, open at one end said wall structure having in opposite sides thereof intake and exhaust ports respectively, said ports made through both the inner and outer walls, two opposed arcuate valve-members, respectively controlling the inlet and outlet ports, sliding in said arcuate spaces, and removable through the open end thereof, and means for independently operating said valves.

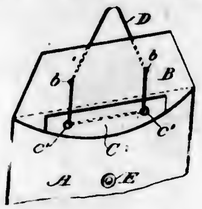
3. In a gas engine, a structure encircling a combustion space and comprising two stationary, spaced-apart, concentric walls having port-couples therethrough, the port-couples in opposite sides of the wall structure being respectively intake and exhaust ports, two arcuate, ported valve members slidable axially in the space between said walls, each controlling a port-couple; and means for independently sliding said valve-members.

4. In a gas engine, a structure encircling a combustion space and comprising two stationary, spaced-apart, concentric walls having port-couples therethrough, in different planes, the port-couples in opposite sides of the wall structure being respectively intake and exhaust ports, two arcuate valve members slidable axially in the space between said walls, each controlling a port-couple and having oppositely facing openings in different planes connected by an internal passage through the valve member; and means for independently sliding said valve-members.

5. In a gas engine, a structure encircling a combustion space and comprising two stationary, spaced-apart, concentric walls having port-couples therethrough, in different planes, the port-couples in opposite sides of the wall structure being respectively intake and exhaust ports, two arcuate valve members slidable axially in the space between said walls, each controlling a port-couple and having oppositely facing openings in different planes connected by an internal passage through the valve member; packing rings on the inner wall above and below the ports in said wall coacting with the inner surfaces of the valve-members.

[Claims 6 to 16 not printed in the Gazette.]

1,157,388. BAG. EMMA HERNHUTER, New York, N. Y. Filed Dec. 11, 1914. Serial No. 876,708. (Cl. 229—53.)



1. A bag having a closure flap with perforations therein, there being registering perforations in the rear portion of the bag, a button on the front of the bag below the edge of the flap so as not to be covered thereby when closed, and a combined handle and closing device consisting of an endless cord passed through said perforations and adapted to have the portion thereof which is arranged on the front of the bag overlap the edge of the flap and caught under said button while the portion of said cord at the rear of the bag serves as a handle.

2. A bag having a closure flap with perforations therein, there being registering perforations in the rear portion of the bag, a button on the front of the bag below the edge of the flap so as not to be covered thereby when closed and substantially equidistant from the perforations in the flap, and a combined handle and closing device consisting of an endless cord passed through said perforations and adapted to have the portion thereof which is arranged on the front of the bag overlap the edge of the flap and caught under said button while the portion of said cord at the rear of the bag serves as a handle, the portion of the cord in front of the bag being then arranged in the form of a V substantially as described.

1,157,389. GAGE. HENRY HESS, Philadelphia, Pa. Filed Oct. 18, 1910. Serial No. 587,702. (Cl. 33—174.)



1. As an article of manufacture a fixed dimension plug gage for exact machine requirements and uses comprising in combination, a handle, a sphere of known diameter and a contrivance for immovably but detachably connecting said sphere and handle together, whereby spheres of different sizes may be interchanged in use with said handle, and each sphere being etched upon its surface with an indication of its own diameter.

2. The gage comprising at least one sphere affording all the gaging contacts of the gage in combination with a support and a member adapted to engage around the sphere beneath its surface for immovably but detachably connecting said sphere to said support.

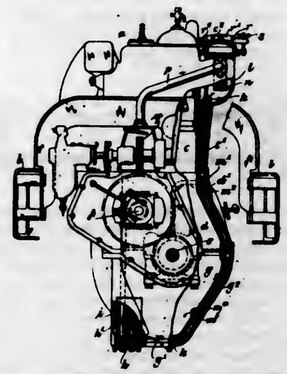
3. A gage comprising at least one sphere affording all the gaging contact of the gage, in combination with a support, and means for immovably but detachably connecting the support to a sphere; said connecting means comprising a wire engaged around the sphere beneath its surface, and a wire clamping device on said support.

4. As an article of manufacture a tolerance gage having at one extremity a gaging sphere, and at its other extremity a handle part, and a point intermediate its extremities a second gaging sphere having a slightly different dimension from the first.

5. As an article of manufacture a tolerance gage having at one point at least one gaging sphere, and at a second point at least one gaging sphere adapted to determine a dimension slightly different from that at the first point, a part extending between the several spheres for connecting them, and a part adapted to serve as a handle; said spheres and said two parts being mutually attachable and detachable.

[Claims 6 to 8 not printed in the Gazette.]

1,157,390. OILING SYSTEM FOR INTERNAL-COMBUSTION ENGINES. EDWARD R. HEWITT, Midvale, N. J., and ALFRED F. MASURY, New York, N. Y., assignors to International Motor Company, New York, N. Y., a Corporation of Delaware. Filed Mar 30, 1915. Serial No. 18,062. (Cl. 184—6.)



1. An oiling system for internal combustion engines comprising, in combination with the engine casing, an oil pump, an oil reservoir mounted on the casing alongside the engine cylinders, whereby the heat of the cylinders and of the oil is directly interchanged, supply conduits between the pump and the reservoir, and distributing conduits for the oil communicating with the reservoir.

2. An oiling system for internal combustion engines comprising, in combination with the engine casing, an oil pump disposed in the bottom thereof, an oil reservoir mounted on the casing alongside the engine cylinders, whereby the heat of the cylinders and of the oil is directly interchanged, supply conduits between the pump and the reservoir, and distributing conduits for the oil communicating with the reservoir.

3. An oiling system for internal combustion engines comprising, in combination with an engine casing having a sub-section thereof, an oil pump disposed in the sub-section, an oil reservoir carried by the casing alongside the engine cylinders, whereby the heat of the cylinders and of the oil is interchanged, supply pipes between the pump and the reservoir and distributing pipes for the oil communicating with the reservoir, all of said pipes being cast in the metal of the engine casing.

4. An oiling system for internal combustion engines comprising, in combination with the engine casing having a sub-section thereof, an oil pump disposed in the sub-section, an oil reservoir carried by the casing alongside the engine cylinders, whereby the heat of the cylinders and of the oil is interchanged, supply pipes between the pump and the reservoir, distributing pipes for the oil communicating with the reservoir and extending to the bearings for the crank shaft, etc., and to the sub-section of the engine casing, all of said pipes being cast in the metal of the engine casing.

5. An oiling system for internal combustion engines comprising, in combination with the engine casing, an oil pump, an oil reservoir cast integral with the cylinder walls of the engine and disposed alongside the cylinders, whereby the heat of the cylinders and of the oil is interchanged, supply conduits between the pump and the reservoir, and distributing conduits for the oil communicating with the reservoir.

[Claims 6 to 8 not printed in the Gazette.]

1,157,391. DEVICE FOR USE IN WIPING PIPE-JOINTS. ROY E. HIGBEE, Windsor, Mo. Filed Jan. 22, 1914. Serial No. 813,790. (Cl. 113—102.)



1. The improved device for the purpose specified, comprising a member adapted to bear upon the sliding nipple; a screw rod; a stop collar on said rod and an adjustable sleeve screwed on the upper end of the rod; a spring bearing in opposite directions against said member and sleeve; jaws pivotally connected and slidable on the said rod, the same being adapted to enter the pipe and grip the same internally; and a spreader applied to the lower portions of said jaws, as described.

2. The improved device comprising a conical member adapted to enter and bear upon a nipple; a screw rod having a stop collar and on which said member is adapted to slide; an adjustable sleeve screwed on the rod, and thus adapted for longitudinal adjustment thereon; a spring acting on the said member and sleeve in opposite directions, jaws which are slidable on the rod and adapted to be inserted in a pipe and to grip the same interiorly; and a device applied to the lower portion of the rod and serving to spread the jaws more or less according to its adjustment, as described.

3. In a device for the purpose specified, the combination, with jaws for gripping a lead pipe interiorly, of a rod provided with a stop collar, and on which said jaws are slidably adjustable; a conical member which is slidable on the upper portion of the rod above the stop collar and having lateral triangular flanges whose wider ends are uppermost, to adapt it to fit nipples of different diameters; a sleeve which is slidable on said member and closed at its outer end, and screwed upon the aforesaid rod; and a spring interposed between such sleeve and the flanged member; as described.

1,157,392. TROLLEY-CONDUCTOR. WILLIAM HOOPES and THEODORE VARNEY, Pittsburgh, Pa. Filed July 17, 1914. Serial No. 851,462. (Cl. 191—41.)



1. An overhead conductor for electric railways comprising long strips of thin and relatively wide material of high conductivity, and relatively short contact strips clamped to the said long strips.

2. A trolley conductor for electric railways comprising a long strip of metal having relatively high conductivity and a plurality of readily replaceable contact pieces of relatively hard metal disposed end-to-end and slightly spaced apart along the said strip.

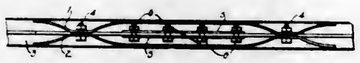
3. A trolley conductor for electric railways comprising a long strip of good-conducting metal and a plurality of readily replaceable contact pieces of relatively hard metal having scarfed ends and disposed along the said strip with slight spaces between them.

4. A trolley conductor comprising long strips of good-conducting material supported end-to-end, relatively short contact shoes of relatively hard material disposed along the bottom edges of said strips and supported thereby and splice bars connecting the adjacent ends of said shoes.

5. A trolley conductor comprising a plurality of long strips of metal disposed end-to-end, contact shoes disposed along the bottom edges of said strips and detachably supported thereby, and splice bars for the adjacent ends of said shoes.

[Claims 6 to 16 not printed in the Gazette.]

1,157,393. TROLLEY-CONDUCTOR. WILLIAM HOOPES and THEODORE VARNEY, Pittsburgh, Pa. Filed July 17, 1914. Serial No. 851,463. (Cl. 191—33.)



1. A trolley conductor comprising long side-by-side strips of relatively high conductivity and relatively short contact shoes of hard metal clamped between said strips and extending in proximity to the lower edges thereof.

2. A trolley conductor comprising side-by-side conducting strips of wave form and contact shoes clamped between the adjacent portions of said strips and extending adjacent to their bottom edges.

3. A trolley conductor comprising side-by-side strips of wave form, contact shoes clamped between the adjacent portions of the strips, and splice plates clamped to the ends of the contact shoes between separated portions of the strips.

4. A trolley conductor comprising side-by-side strips of wave form and contact shoes of inverted T section clamped between said strips and having scarfed ends.

5. A trolley conductor comprising side-by-side strips of wave form alternate portions of which are in juxtaposition and spaced apart, and contact shoes clamped between juxtaposed portions of the strips and extending along the bottom edges of the strips.

[Claims 6 to 12 not printed in the Gazette.]

1,157,394. TROLLEY-CONDUCTOR. WILLIAM HOOPES and THEODORE VARNEY, Pittsburgh, Pa. Original application filed July 17, 1914, Serial No. 851,462. Divided and this application filed Sept. 1, 1915. Serial No. 48,406. (Cl. 191—41.)



1. A trolley conductor comprising long strips of good-conducting material supported end-to-end, resilient members connecting adjacent ends of said strips, and a plurality of contact pieces disposed along the said strips.

2. A trolley conductor comprising a plurality of long strips of metal disposed end-to-end, springs for connecting the ends of said strips together, bridging strips for the joints between said ends, and contact pieces disposed end-to-end along the said long strips.

3. A trolley conductor for electric railways, comprising long end-to-end strips of aluminum, springs interposed between the ends of said strips, bridging strips for spanning the joints between said ends, contact pieces disposed end-to-end and slightly spaced apart, and means for clamping said contact pieces against the bottom edges of said aluminum strips.

4. A trolley conductor comprising long strips of good-conducting material disposed end-to-end, hanger rods disposed at intervals along said strips, resiliently expansible hangers for the adjacent ends of said strips, and contact pieces disposed along the said strips.

5. A trolley conductor comprising a plurality of long strips of metal disposed end-to-end, resiliently expansible hangers for the adjacent ends of said strips, bridging strips for the joints between said ends, and contact pieces disposed end-to-end along the said long strips.

[Claims 6 and 7 not printed in the Gazette.]

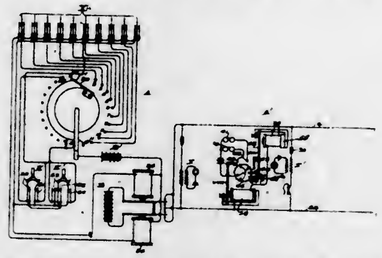
1,157,395. PORTABLE ELECTRIC LIGHT. CONRAD HUBERT, Chatham borough, N. J. Filed Dec. 16, 1914. Serial No. 877,477. (Cl. 240—8.5.)



1. A casing for a portable electric light including a conductive reflector provided with a sicket-receiving opening, a conductive lamp socket in the opening and having retaining flanges at both side of and overlapping upon the reflector, and insulating means interposed between the lamp socket and the reflector and clamped upon the reflector of the flanges of the lamp socket to hold the insulating means and lamp socket in place on the reflector and to insulate the lamp socket from the reflector.

2. A casing for a portable electric light including a conductive reflector provided with a socket-receiving opening, a conductive lamp socket in the opening and having retaining flanges at both sides of the reflector, insulating means interposed between the lamp socket and the reflector and clamped upon the reflector by the flanges of the lamp socket to insulate the lamp socket from the reflector, and a conductive contact plate held in place by one of the flanges of the lamp socket in electrical connection therewith and insulated from the reflector by said insulating means.

1,157,396. SELECTIVE SIGNALING SYSTEM. JOHN A. HULIT, Chicago, Ill., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 3, 1912. Serial No. 723,725. (Cl. 177—343.)



1. In a selective signaling system, a line, a plurality of selectors on said line, means for operating said selectors by impulses of one polarity, means for releasing certain of said selectors by an impulse of reverse polarity, or by a prolonged pause between operating impulses, and means for preventing said reverse impulse or pause from releasing other of said selectors.

2. In a selective signaling system, a line, a plurality of selectors on said line, each of sad selectors including an operating magnet and a slow acting release magnet, means for releasing said selectors upon deënergization of said release magnets, means for transmitting a plurality of groups of impulses through said operating and release magnets to thereby operate said selectors, each of said groups being separated by a prolonged pause to thereby permit the deënergization of said release magnet, and means in certain of said selectors for preventing the de-energization of the release magnet from releasing that particular selector.

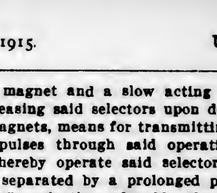
3. In a selective signaling system, a line, a plurality of selectors on said line, each of said selectors including a spring-controlled ratchet, an operating magnet and pawl for operating said ratchet, a holding pawl, a release magnet adapted upon energization to permit said holding pawl to come in contact with said ratchet to hold said ratchet in operated position, and means independent of said release magnet for maintaining said holding pawl in engagement with said ratchet when said ratchet has been advanced a certain predetermined number of steps.

4. In a selective signaling system, a line, a plurality of selectors on said line, each of said selectors including a spring-controlled ratchet, an operating magnet and pawl for operating said ratchet, a holding pawl, a release magnet adapted upon energization to permit said holding pawl to come in contact with said ratchet to hold said ratchet in operated position, and means independent of said release magnet for maintaining said holding pawl in engagement with said ratchet when said ratchet has been advanced a certain predetermined number of steps. and holding means being selectively arranged on the various selectors.

5. In a selective signaling system, a line, a plurality of selectors on said line, each of said selectors including an operating and release magnet bridged across said line, a spring-controlled ratchet wheel, a pawl controlled by said operating magnet for advancing said ratchet, a holding pawl normally disconnected from said ratchet and adapted to be brought into engagement therewith upon energization of said release magnet, and selectively-arranged means for maintaining said holding pawl in engagement with said ratchet independent of said release magnet.

[Claims 6 to 11 not printed in the Gazette.]

1,157,397. WEFT-SEVERING DEVICE FOR AUTOMATIC LOOMS. AUGUST IMBACH, Arlen-Rielasingen, Baden, Germany. Filed May 14, 1915. Serial No. 28,007. (Cl. 139—85.)



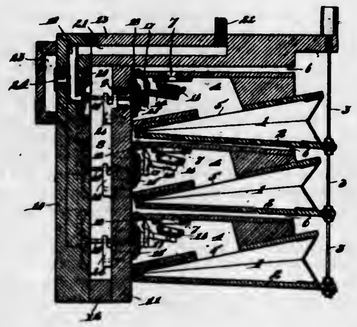
1. In automatic looms, a device for severing weft thread ends on bobbin exchange, comprising a thread severing hammer, a movable carrier for said hammer, an anvil on said carrier opposite to said hammer, a spring tension mechanism for rapidly shifting forward said carrier with its hammer and anvil, means for striking the hammer upon the anvil on the shifting or operative movement of the carrier, locking means for retaining the carrier in a position of rest and releasing means under the control of the bobbin exchange to release said locking means for a first operative movement of the carrier and to maintain said locking means released for a second operative movement of the carrier, substantially as described.

2. In automatic looms, a device for severing weft thread ends on bobbin exchange, comprising a thread severing hammer, an anvil opposite to said hammer, a spring tension operating mechanism for striking the hammer upon the anvil, controlling means under the control of the bobbin exchange to set said operating mechanism into operation on bobbin exchange, said hammer having a broad beveled head end so arranged as to have its thread severing edge immediately in proximity of the fabric edge, substantially as described.

3. In automatic looms, a device for severing weft thread ends on bobbin exchange, comprising a thread severing hammer with a broad beveled head end having its thread severing edge close to the fabric edge, a movable carrier for said hammer, an anvil on said carrier opposite to said hammer, a spring tension mechanism for rapidly shifting forward said carrier with its hammer and anvil, means for striking the hammer upon the anvil on the shifting or operative movement of the carrier, locking means for retaining the carrier in a position of rest and releasing means under the control of the bobbin exchange to release said locking means for a first operative movement of the carrier and to maintain said locking means released for a second operative movement of the carrier, substantially as described.

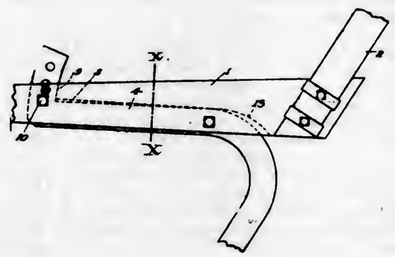
4. In automatic looms, a device for severing weft thread ends on bobbin exchange, comprising a thread severing hammer, a movable carrier for said hammer, an anvil on said carrier opposite to said hammer, a spring tension mechanism for rapidly shifting forward said carrier with its hammer and anvil, means for striking the hammer upon the anvil on the shifting or operative movement of the carrier, a locking pin on the latter, a latch for engaging with said pin to retain the carrier in a position of rest, means under the control of the bobbin exchange for disengaging said latch, a spring actuated pawl combined with said latch for preventing the latter from operative engagement with said locking pin on the first return movement of the carrier to subsequently allow of a second forward movement thereof, and means for rendering said pawl inoperative on the second forward movement of the carrier to allow the latch to take again its operative locking position relatively to the pin of the carrier in order to lock the latter after its second return movement, substantially as described.

1,157,398. PNEUMATIC ACTION. CHARLES J. JOHNSON, Chicago, Ill. Filed Jan. 24, 1914. Serial No. 814,159. (Cl. 84—178.)



A pneumatic action comprising an air chamber having ports in adjacent walls thereof; a swinging valve head carrying two valves in fixed relation to each other and controlling said ports, said valve head being supported by a flexible member secured to a wall of said air chamber by means of a removable plate; and means for swinging said valve head to cause said valves to control said ports to effect operation of said pneumatic, substantially as described.

1,157,399. PLOW. WILLIAM A. KIMBELL, Birmingham, Ala. Original application filed Jan. 23, 1915, Serial No. 3,959. Divided and this application filed June 14, 1915. Serial No. 33,858. (Cl. 97—2.)



1. In a plow, the combination with a beam, of a standard adjustably connected to the beam and formed by a bent metal bar of single thickness, said bar having an upper portion of substantial length and said beam having a longitudinal bottom slot which snugly receives said upper portion of the standard and braces it against lateral strain, means to pivotally connect said standard to the beam, and abutting portions on the beam and standard which are adapted to sustain the thrust strains of the standard.

2. A plow comprising a beam having in its underface a longitudinally disposed slot which is shallow except at its forward end where its depth is increased by a vertical extension of the slot, a standard seated in said slot and pivoted near the rear end thereof to the beam, a vertical extension on the forward end of the standard which is adapted to project into said vertical extension of the slot, the rear edge of said vertical extension on the standard being struck on an arc from the pivot of the standard as a center, and means to fasten the forward end of the standard in adjusted positions in the slot, said means being adapted to permit the rear edge of said standard extension to bear against the rear wall of the vertical extension of the slot.

3. A plow comprising a beam having in its underface a longitudinally disposed slot which is shallow except at its forward end where its depth is increased by a vertical extension of the slot, a standard seated in said slot and pivoted near the rear end thereof to the beam, a vertical extension on the forward end of the standard which is adapted to project into said vertical extension of the slot, the rear wall of the slot and the rear edge of said vertical extension on the standard being struck on arcs from the pivot of the standard as a center, means to fasten the forward end of the standard in adjusted positions in the slot, said pivot and fastening means being adapted to permit the standard at its forward end to bear against the rear wall of the vertical extension of the slot and at its rear end to bear against the upper wall of the slot.

4. In combination, a plow beam having a narrow slot disposed centrally and longitudinally in its under face and having a vertical extension at its forward end, a plow standard having rigid therewith a top bar which fits snugly into said slot and is laterally braced thereby, a vertical perforated lug at the forward end of said bar which fits into said slot extension, a pivot bolt which passes through the rear end of said top bar to secure it and the standard to said beam, said standard having its upper end above said bolt curved relatively to said bolt as a center to maintain in its various adjusted positions a bearing against the top wall of the slot which is correspondingly curved for that purpose, and a cross bolt that passes through one of the perforations in said lug to adjust the standard about its pivot while permitting the lug to bear against the rear wall of said slot extension.

1,157,400. HANDLE FOR SATCHELS AND THE LIKE. CHARLES KOPF, Newark, N. J. Filed Apr. 20, 1915. Serial No. 22,537. (Cl. 190—57.)



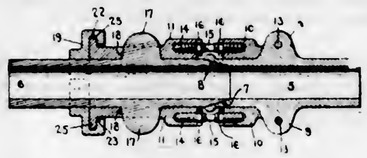
1. A handle of the character described, comprising an upper section having hooked ends, and a lower section adapted to receive said upper section, said lower section having apertured ends, the apertures in the ends of the lower section being in alinement with the hooks of the upper section.

2. A handle of the character described, comprising an upper section having hooked ends, and a lower section adapted to receive said upper section, said lower section having apertured ends, the apertures in the ends of the lower section being in alinement with the hooks of the upper section and a cover for the upper and lower sections.

3. A handle of the character described, comprising an upper section having hooked ends, and a lower section adapted to receive said upper section, said lower section having apertured ends, the apertures in the ends of the lower section being in alinement with the hooks of the upper section and a ring secured in each end of the handle, said rings passing through the apertures of the lower section and the hooks of the upper section.

4. A handle of the character described, comprising an upper sheet metal section, having inturned ends, and a lower sheet metal section adapted to receive said upper section, said lower section having countersunk apertured and slotted ends, said apertures in the ends of the lower section being in alinement with the inturned ends of the upper section.

1,157,401. COUPLING. PAUL FRANCIS LA GREE, Chicago, Ill. Filed May 15, 1914. Serial No. 838,787. (Cl. 137—28.)



1. A coupling of the character set forth, comprising coacting tubular members, an arm pivoted to one member and detachably interlocking with the other member to hold said members against relative longitudinal movements, and a locking device for the arm, slidably mounted on said other member, said arm and device being provided with interlocking means for retaining said device against longitudinal movement when in locking position.

2. A coupling of the character set forth, comprising coacting tubular members, an arm pivoted to one member, and detachably interlocking with the other member, said arm being provided with a lug, and a device slidably and rotatably mounted on said other member, to interlock with said lug on the arm and hold the latter in its interlocking relation.

3. A coupling of the character set forth, comprising coacting tubular members, an arm movably mounted on one member said arm being provided with a lug and detachably interlocking with the other member, and a ring having an internal socket groove opening through one side, said ring being slidable longitudinally of the member over the arm and rotatable to interlock with the lug on said arm.

4. A coupling of the character set forth, comprising coacting tubular members, an arm pivoted to one member and having an interlocking engagement with the other member, said arm having an outstanding ear on its free end, and a ring having an internal socket groove opening through one side and having an enlargement at one point to receive the ear, said ring being slidable longitudinally of the member over the arm and being rotatable to interlock with said ear.

5. A coupling of the character set forth, comprising coacting tubular members, an arm pivoted to one member and having a socket, an outstanding projection on the other member that is received by the socket, said arm having an outstanding ear on its free end, a ring slidably and rotatably mounted on said other member and having an internal socket groove opening through one side to permit the passage of the arm, said groove having an enlargement at one point to permit the passage of the ear, a stop within the socket groove adapted to abut against the arm and limit the rotatable movement of the ring, and stops mounted on said other member on opposite sides of the ring to limit its sliding movement.

[Claims 6 to 8 not printed in the Gazette.]

1,157,402. MANUFACTURE OF PURE LACTIC ACID. MAX LANDAU, Berlin, Germany. Filed July 8, 1915. Serial No. 38,683. (Cl. 23—24.)

1. The manufacture of pure lactic acid by first decolorizing commercial aqueous lactic acid by means of insoluble decolorizing substances, bringing the decolorized commercial aqueous lactic acid to a higher concentration, afterward precipitating sugary or other organic matter by adding alcohol to the concentrated decolorized lactic acid, separating the precipitate and distilling off such alcohol from the liquid.

2. The manufacture of pure lactic acid by first decolorizing commercial aqueous lactic acid, while an indifferent gas is passed through a boiling mixture of such acid and an insoluble decolorizing substance, bringing the decolorized commercial aqueous lactic acid to a higher concentration, afterward precipitating sugary or other organic matter by adding alcohol to the concentrated decolorized lactic acid, separating the precipitate and distilling off such alcohol from the liquid.

3. The manufacture of pure lactic acid by first decolorizing commercial aqueous lactic acid by means of insoluble decolorizing substances, bringing the decolorized commercial aqueous lactic acid to a higher concentration using a vacuum, afterward precipitating sugary or other organic matter by adding alcohol to the concentrated decolorized lactic acid, separating the precipitate and distilling off such alcohol from the liquid.

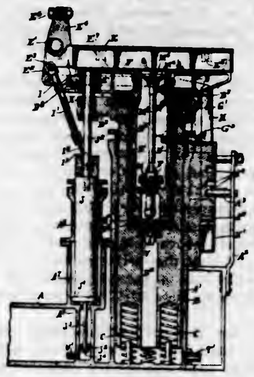
4. The manufacture of pure lactic acid by first decolorizing commercial aqueuos lactic acid, while an indifferent gas is passed through a boiling mixture of such acid and an insoluble decolorizing substance, bringing the decolorized commercial aqueous lactic acid to a higher concentration, by effecting the distillation of the water *in vacuo*, afterward precipitating sugary or other organic matter by adding alcohol to the concentrated decolorized lactic acid, separating the precipitate and distilling off such alcohol from the liquid.

1,157,403. MOLDING-MACHINE. WILFRED LEWIS, Philadelphia, Pa. Filed Jan. 9, 1914. Serial No. 811,131. (Cl. 22—33.)

1. The combination with the base, floating anvil, and mold support of a shockless jar molding machine of a rock-over table hinged to said support, and connections between said table, anvil and base whereby said table may be rocked over by giving said anvil predetermined vertical movements relative to its base.

2. The combination with the base, floating anvil, and mold support of a shockless jar molding machine of a rock-over table hinged to said support, and connections between said table, anvil and base whereby said table may be rocked over by giving said anvil predetermined vertical movements relative to its base, said connections comprising a rocking element pivotally connected to said anvil, a link connection between said element and table, and means connecting said rocking element to said base.

3. The combination with the base, floating anvil and mold support of a jar molding machine, of a rock-over table hinged to said mold support, and connections between said table, anvil and base whereby on a predetermined upward movement of said anvil said table will be given a portion of its rock-over movement and may complete the latter on a subsequent downward movement of said anvil.

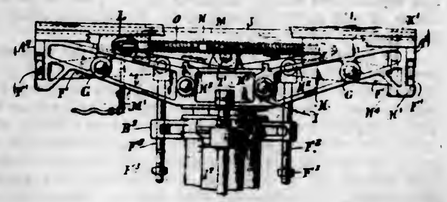


4. The combination with the base, floating anvil and mold support of a jar molding machine, of a rock-over table hinged to said mold support, connections between said table, anvil and base whereby on a predetermined upward movement of said anvil said table will be given a portion of its rock-over movement and may complete the latter on a subsequent downward movement of said anvil, and provisions for adjusting said connections so that upon an initial subsequent upward movement of the anvil the inverted table will move upward without rocking movement and on a further upward movement will make a portion of its return rocking movement and may complete the latter on a subsequent downward movement of said anvil.

5. In combination with the base, floating anvil, and mold support of a jar molding machine, of a rock-over table hinged to said mold support, connections between said table, anvil and base whereby said table will be caused to make a portion of its rock-over movement by a predetermined upward movement of the anvil, and may complete said rock-over movement on a subsequent downward movement of the anvil, and an auxilitry device adapted to impart a thrust to the table tending to complete said rocking-over movement as the upward movement of the anvil ceases and the said downward movement commences.

[Claims 6 to 13 not printed in the Gazette.]

1,157,404. JAR-MOLDING MACHINE. WILFRED LEWIS, Philadelphia, Pa. Filed Jan. 9, 1914. Serial No 811,132. (Cl. 22—90.)



1. A device for the purpose described comprising in combination, a main supporting member, adjustable devices mounted on said member for engaging a mold low-

ered onto said devices, a platform mounted on said member and apertured to permit the passage therethrough of said devices and means for adjusting said platform vertically relative to said member.

2. A device for the purpose described comprising in combination, a main supporting member, an element pivoted thereon, means adjustably mounted on said member for engaging a mold resting on said element to hold said mold against movement relative to said member, a platform mounted on said member and apertured to permit the passage therethrough of said element and means, and means for adjusting said platform vertically relative to said member.

3. A device for the purpose specified comprising in combination, a base, a main supporting member, a beam pivotally connected adjacent its center to said member, a pair of bars supported by said member one at each side of said beam, means for adjusting said bars to cause the latter to bear against the under side of a mold resting on said beam, a table mounted on said member and formed with apertures receiving said beam and bars, and means for adjusting said table from one position in which said beam projects above said table and said beam and bars are free to adjust themselves to accommodate a mold supported thereby into a second position in which said table is substantially flush with the tops of said bars and beam.

4. A device for the purpose described comprising in combination, a main supporting member, adjustable devices mounted on said member for engaging a mold lowered onto said device, a platform mounted on said member and apertured to permit the passage therethrough of said devices, means for imparting vertical movements to said member, and means actuated by a predetermined vertical movement of said member for raising said platform relative to said member.

5. A device for the purpose specified comprising in combination, a base, a main supporting member vertically movable on said base, devices adjustably mounted on said member for engaging a mold lowered onto said device, a platform mounted on said member and formed with apertures through which said devices may project, means for moving said member vertically relative to said base, and means actuated by the relative movements of said member and base for adjusting said platform from one position in which said devices may project above said table, and may be adjusted to accommodate a mold lowered onto them, into a second position in which the tops of said devices are substantially flush with the top of said platform.

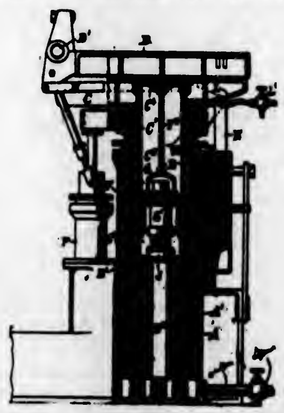
[Claims 6 to 10 not printed in the Gazette.]

1,157,405. MOLDING-MACHINE. WILFRED LEWIS, Haverford, Pa., assignor to The Tabor Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 8, 1914. Serial No. 849,641. (Cl. 121—19.)

1. In a jar molding machine, the combination with an anvil and mold support formed one with a piston and the other with a cylinder in which said piston works, said mold support being formed with a chamber and a supply port opening therefrom to the interior of said cylinder, of means for supplying pressure fluid to said chamber and a valve mechanism comprising parts engaging said anvil and support and thereby actuated by the relative movements of said anvil and support for opening and closing said port.

2. In a jar molding machine, the combination with an anvil and mold support formed one with a piston and the other with a cylinder in which said piston works, said mold support being formed with a chamber and a supply port opening therefrom to the interior of said cylinder, of means for supplying pressure fluid to said chamber and a valve mounted in said mold support and controlling said port and having a depending stem engaging the anvil and holding said valve open when the mold support is in its lower positions.

3. In a jar molding machine, the combination with an anvil and mold support formed one with a piston and the other with a cylinder in which said piston works, said mold support being formed with a chamber and a supply port opening therefrom to the interior of said cylinder, of means for supplying pressure fluid to said chamber and a valve member mounted in said mold support and controlling said port and having a depending stem of adjustable length adapted when contracted in length to engage the anvil and hold said valve open when the mold support is in its lowermost position, and provisions for elongating said stem during an initial upward movement of the piston to maintain said engagement and keep the valve open.



4. In a jar molding machine, the combination with an anvil and mold support formed one with a piston and the other with a cylinder in which said piston works, said mold support being formed with a chamber and a supply port opening therefrom to the interior of said cylinder, of means for supplying pressure fluid to said chamber, and a valve member mounted in said mold support and controlling said port and having a depending stem comprising cooperating piston and cylinder elements whereby the length of said stem may be varied, said stem when contracted in length engaging the anvil and holding said valve open when the mold support is in its lowermost position, and provisions for maintaining pressures at the opposite sides of said piston element to effect an elongation of said stem sufficient to maintain its engagement with the anvil and thereby to keep said valve open on an initial movement of the mold support.

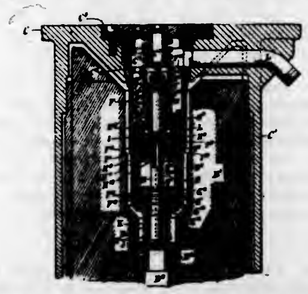
5. In a jar molding machine, the combination with the anvil and molding supporting parts one of which is provided with a port, of a valve member controlling said port and having a valve stem extending into engagement with the other part and comprising a piston and cylinder and means for subjecting one side of the piston first to the pressure at one side, and then to the pressure at the other side of said port to automatically vary the length of said stem.

[Claims 6 to 31 not printed in the Gazette.]

1,157,406. MOLDING-MACHINE VALVE MECHANISM. WILFRED LEWIS, Haverford, Pa. Filed Mar. 13, 1915. Serial No. 14,080. (Cl. 121—19.)

1. In a jar molding machine having mold support and anvil members formed one with a cylinder space and the other with a piston working therein, said mold support being formed with a valve chamber and a port opening therefrom into said cylinder space, the combination with said members of a valve controlling said port, and operating means for said valve located in said chamber.

2. In a jar molding machine having mold support and anvil members formed one with a cylinder space and the other with a piston working therein, said mold support being formed with a valve chamber and a port opening therefrom into said cylinder space, the combination with said members of an apertured inlet valve controlling said port, fluid pressure operating means for said valve including a pilot valve located in said chamber, and a stem passing through the aperture in said inlet valve and adapted to engage the anvil and adjust said pilot valve.



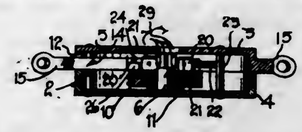
3. In a jar molding machine having mold support and anvil members formed one with a cylinder space and the other with a piston working therein, said mold support being formed with a valve chamber and a port opening therefrom into said cylinder space and said anvil being formed with an exhaust passage leading away from said piston chamber, the combination with said members of an inlet valve controlling said inlet port, an exhaust valve comprising a stem portion passing into said valve chamber, and means located within the valve chamber for bringing about relative movements between said valves.

4. In a jar molding machine having mold support and anvil members formed one with a cylinder space and the other with a piston working therein, said mold support being formed with a valve chamber and a port opening therefrom into said cylinder space and said anvil being formed with an exhaust port leading away from said cylinder space, the combination with said members of an annular inlet valve controlling said inlet port and moving upward into said chamber to open the port, an exhaust valve controlling said exhaust port and comprising a stem portion passing through said annular inlet valve into said valve chamber, and means located within the valve chamber for bringing about relative movements between said valves.

5. In a jar molding machine having mold support and anvil members formed one with a cylinder space and the other with a piston working therein, said mold support being formed with a valve chamber and a port opening therefrom into said cylinder space and said anvil being formed with an exhaust passage leading away from said piston chamber, the combination with said members of an inlet valve controlling said inlet port and moving upward into said chamber to open the port, an exhaust valve comprising a stem portion passing through said annular inlet valve into said valve chamber, a piston and cylinder connection between said valves located within the valve chamber, a pilot valve mechanism actuated by relative movements of said mold support and anvil to effect adjustments of said connection and thereby bring about relative movements of approach and separation between said valves.

[Claims 6 to 14 not printed in the Gazette.]

1,157,407. LOCK. HANNAH LIEN, Minneapolis, Minn. Filed Feb. 19, 1915. Serial No. 9,379. (Cl. 70—27.)

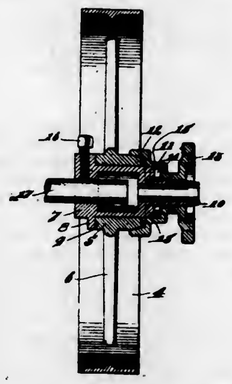


1. A locking device comprising a support, a key actuated rotatable member mounted therein, a plurality of latches carried thereby, a plurality of keepers with which the latches coact, and guides for the keepers mounted on the support, a rotation of the rotatable member in one direction disengaging the latches from the keepers.

2. A locking device comprising a casing, a rotatable member therein, spring actuated latches carried thereby, keepers adapted to be inserted into the casing and coact with the latches, guides for the keepers, a stem on the member, a key engageable with the stem for rotating the member and disengaging the latches from the keepers.

3. A rope connecting device comprising a casing, a rotatable disk therein, latches pivotally connected to said disk, a plurality of hasps insertible into the casing and adapted to be engaged with the pivoted latches, key actuated means for rotating said disk, and lugs carried by the disk for engagement with the latches whereby upon rotation of the disk, said latches will be disengaged from the hasps, as and for the purpose set forth.

1,157,408. FRICTION-CLUTCH. ALBERT MASTER, Park Ridge, Ill. Filed Sept. 16, 1914. Serial No. 861,976. (Cl. 192—7.)



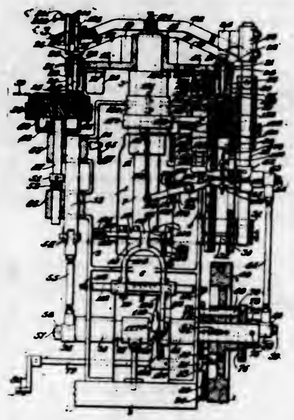
1. A friction clutch comprising a pulley provided with a hub; a head extending through said hub and provided with a threaded extension; a clutch member loose on said extension and arranged to frictionally engage said pulley; a binding member threaded on said extension and arranged to force said clutch member into engagement with said hub; and interlocking lugs on the outer face of said head and on the inner face of said clutch member, substantially as described.

2. A friction clutch comprising a pulley provided with a hub having an external conical friction surface adjacent its outer end; a head extending through said hub and provided with a threaded extension; a clutch member loose on said extension and provided with an internal conical frictional surface arranged to frictionally engage the friction surface on said hub; a binding member threaded on said extension and arranged to force said clutch member into engagement with said hub; and interlocking lugs on the outer face of said head and on the inner face of said clutch member, substantially as described.

1,157,409. COMBINED LIFT-CUTTING AND HEEL-BLANK-BUILDING MACHINE. JOHN E. MITCHELL and DENNIS PARKS, St. Louis, Mo. Filed Nov. 2, 1914. Serial No. 869,740. (Cl. 12—42.)

1. A heel-building machine comprising a heel-blank holder of a length to accommodate a plurality of heel-blanks, and a plurality of means, including a series of dies movable in a horizontal plane, operating, in succession, to cut lifts and deposit them in said holder to form said blanks.

2. A heel-building machine comprising a heel-blank holder of a length to accommodate a plurality of heel-blanks, and a plurality of means operating, in succession, to cut and paste lifts and deposit them in said holder to form said blanks.



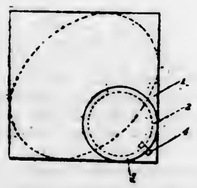
3. A heel-building machine comprising a stationary heel-blank holder of a length to accommodate a plurality of heel-blanks, and a plurality of means including a series of dies movable in a horizontal plane, operating, in succession, to cut lifts and deposit them in said holder to form said blanks.

4. A heel building machine comprising a heel-blank holder open at both ends and of a length to accommodate a plurality of heel-blanks, and a plurality of means, including a series of dies movable in a horizontal plane, operating, in succession, to cut lifts and deposit them in said holder to form said blanks.

5. A heel building machine comprising a heel-blank holder of a length to accommodate a plurality of heel-blanks, lift cutting and ejecting means operating to successively cut lifts and deposit them in said holder to form said blanks, and actuating mechanism for effecting the operations of cutting and ejecting lifts.

[Claims 6 to 56 not printed in the Gazette.]

1,157,410. PROCESS OF MAKING BIFOCAL LENSES. EDWIN C. MORINE, New York, N. Y., assignor, by mesne assignments, to Kryptok Company, New York, N. Y., a Corporation of New York. Filed Oct. 20, 1911. Serial No. 655,797. (Cl. 49—82.1.)



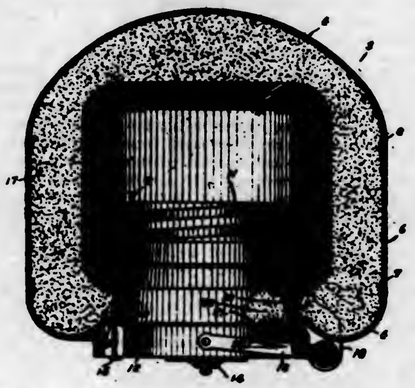
The process of making bifocal lens blanks which consists in forming a concave lenticular surface in one blank element and providing a canal leading from said surface to the exterior surface of said element, then placing a second blank element over said concave surface and applying heat to the assembled elements until they are welded together, whereby air between the elements will be permitted to escape through the canal during the welding operation.

1,157,411. LENS MANUFACTURING. EDWIN C. MORINE, Toledo, Ohio, assignor, by mesne assignments, to Kryptok Company, New York, N. Y., a Corporation of New York. Filed Sept. 16, 1912. Serial No. 720,483. (Cl. 49—82.1.)



In the process of making bifocal lenses, the steps consisting in placing two lens blanks in opposed relation to each other, and inserting between them a cementitious body of definite size capable of maintaining the two blanks in a certain spaced relation to each other as well as to stick them together, and while thus held subjecting the two blanks to heat until they are welded together.

1,157,412. SAFE. MOSES MOSLER, Cincinnati, and CARL BARTELS, Hamilton, Ohio, assignors to The Mosler Safe Company, New York, N. Y. Filed June 12, 1915. Serial No. 33,685. (Cl. 109—4.)



1. A safe comprising, a burglarproof inner safe-body provided in its front wall with a door-jamb extending inwardly from the extreme front of said burglar-proof safe-body and adapted to be closed by a door-member and thereby form a complete burglarproof safe, a jamb-ring rigidly secured to the extreme front of said inner safe concentric with said door-jamb, a shell surrounding said inner safe and secured to the front of the jamb-ring and having a door-opening concentric with the door-opening in the inner safe and jam-ring, a door fitting the jamb-ring, and filling material disposed within the shell around the inner safe and around the jamb-ring, combined substantially as set forth.

2. A safe comprising, a burglarproof inner safe-body provided in its front wall with a door-jamb extending inwardly from the extreme front of said burglarproof safe-body and adapted to be closed by a door-member and thereby form a complete burglarproof safe, a jamb-ring rigidly secured to the extreme front of said inner safe concentric with said door-jamb, a shell surrounding said inner safe and secured to the front of the jamb-ring and having a door-opening concentric with the door-opening in the inner safe and jamb-ring, a door fitting the door-jamb of the inner safe and fitting the jamb-ring, and filling material disposed within the shell around the inner safe and around the jamb-ring, said shell being formed free of exterior angles, combined substantially as set forth.

3. A safe comprising, a burglarproof inner safe-body provided in its front wall with a door-jamb extending inwardly from the extreme front of said burglarproof safe-body and adapted to be closed by a door-member and thereby form a complete burglarproof safe, a jamb-ring rigidly secured to the extreme front of said inner safe concentric with said door-jamb, a shell surrounding said inner safe and secured to the front of the jamb-ring and having a door-opening concentric with the door-opening in the inner safe and jamb-ring, a door fitting the door-jamb of the inner safe and fitting the jamb-ring, and filling material disposed within the shell around the inner safe and around the jamb-ring, hinge-lugs formed with said burglarproof inner safe and projecting outwardly through the front wall of the shell at one side of the jamb-ring, and means connecting said door and hinge-lugs and serving to cause the door to receive support from the inner safe through the medium of the hinge-lugs, combined substantially as set forth.

5. A safe comprising, a burglarproof inner safe-body provided in its front wall with a door-jamb extending inwardly from the extreme front of said burglarproof safe-body and adapted to be closed by a door-member and thereby form a complete burglarproof safe, a jamb-ring rigidly secured to the extreme front of said inner safe concentric with said door-jamb, a shell surrounding said inner safe and secured to the front of the jamb-ring and having a door-opening concentric with the door-opening in the inner safe and jamb-ring, a door fitting the door-jamb of the inner safe and fitting the jamb-ring, filling material disposed within the shell around the inner safe and around the jamb-ring, hinge-lugs formed with said burglarproof inner safe and projecting outwardly through the front wall of the shell at one side of the jamb-ring, and a crane-hinge having pivotal connection with the door and with said hinge-lugs and serving to transmit the vertical strains due to the load of the door to the inner safe through the medium of said hinge-lugs, combined substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,157,413. TOOTH-CLEANER. JOHN BERTRAM NESPER, Narberth, Pa. Filed Jan. 20, 1915. Serial No. 3,289. (Cl. 15—39.)



A tooth cleaner, composed of a single piece of pile fabric having a bead across one end and along one side formed at the seam of the casing and providing a rough surface, and a tooth cleaning cord projecting from the end of the bead and constituting a part of the bead forming means, substantially as described.

1,157,414. DYNAMO-ELECTRIC MACHINE. ALFONS H. NEULAND, Bergenfield, N. J. Filed Feb. 3, 1914. Serial No. 816,157. (Cl. 171—313.)



1. In a generator, the combination with a field magnet having armature poles and supplemental poles, and with an armature adapted to rotate at variable speeds between the armature poles and thereby to have a varying potential generated therein, of means for maintaining a substantially constant potential at varying speeds of the armature comprising a magnetic shunt member rotative between the supplemental poles in magnetic relation thereto and adapted in one position to shunt a minimum number of lines of force and in another position to shunt a maximum number of lines of force, and a winding on the shunt member fed by the varying potential and current from the armature, whereby the shunt member exerts a varying torque on the supplemental poles dependent upon the generated potential and tending to cause the shunt member to rotate to various shunting positions.

2. In a generator, the combination with a field magnet having armature poles and supplemental poles, and with an armature adapted to rotate at variable speeds between the armature poles and thereby to have a varying potential generated therein, of means for maintaining a substantially constant potential at varying speeds of the armature comprising a magnetic shunt member rotative between the supplemental poles in magnetic relation thereto and adapted in one position to shunt a minimum number of lines of force and in another position to shunt a maximum number of lines of force, a winding on the shunt member fed by the varying potential and current from the armature, whereby the shunt member exerts a varying torque on the supplemental poles dependent upon the generated potential and tending to cause the shunt member to rotate to various shunting positions, and retractile means arranged to restrain the shunt member against rotation until a predetermined potential is generated.

3. In a generator, the combination with a field magnet having armature poles and supplemental poles, and with an armature adapted to rotate at variable speeds between the armature poles and thereby to have a varying potential generated therein, and with a consuming circuit, of means for maintaining a substantially constant potential at varying speeds of the armature comprising a magnetic shunt member rotative between the supplemental poles in magnetic relation thereto and adapted when at substantially right angles to the supplemental poles to shunt a minimum number of lines of force and when in line with the supplemental poles to shunt a maximum number of lines of force, retractile means adapted to hold the shunt member in the position at substantially right angles to the supplemental poles and arranged to restrain the shunt member against rotation until a predetermined potential is generated, a winding on the shunt member fed by the varying potential and current from the armature, whereby the shunt member exerts a varying torque on the supplemental poles dependent upon the generated potential tending to cause the shunt member to rotate against the tension of the retractile means toward the position of alinement with the supplemental poles, and

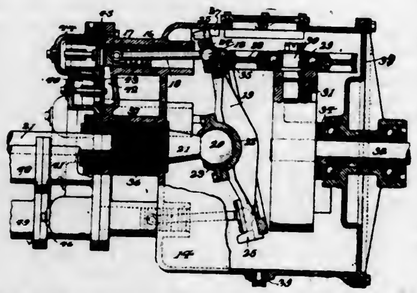
a controlling switch for the consuming circuit arranged to be closed by the shunt member as the shunt member moves to shunting position.

4. In a generator, the combination with a field magnet having compound windings and having armature poles and supplemental poles, and with an armature adapted to rotate at variable speeds between the armature poles and thereby to have a varying potential generated therein, and with a consuming circuit, means for maintaining a substantially constant potential at varying speeds of the armature comprising a magnetic shunt member rotative between the supplemental poles in magnetic relation thereto and adapted in one position to shunt a minimum number of lines of force and in another position to shunt a maximum number of lines of force, a winding on the shunt member fed by the varying potential and current from the armature, whereby the shunt member exerts a varying torque on the supplemental poles dependent upon the generated potential and tending to cause the shunt member to rotate to various shunting positions, and a controlling switch for the consuming circuit arranged to be closed by the shunt member as the shunt member moves to shunting position, the compound winding preventing the retracting of the shunt member when the consuming circuit is closed.

5. In a generator, the combination with a field magnet having compound windings and having armature poles and supplemental poles, and with an armature adapted to rotate at variable speeds between the armature poles and thereby to have a varying potential generated therein, and with a consuming circuit, of means for maintaining a substantially constant potential at varying speeds of the armature comprising a magnetic shunt member rotative between the supplemental poles in magnetic relation thereto and adapted when at substantially right angles to the supplemental poles to shunt a minimum number of lines of force and when in line with the supplemental poles to shunt a maximum number of lines of force, retractile means adapted to hold the shunt member in the position at substantially right angles to the supplemental poles and arranged to restrain the shunt member against rotation until a predetermined potential is generated, a winding on the shunt member fed by the varying potential and current from the armature, whereby the shunt member exerts a varying torque on the supplemental poles dependent upon the generated potential tending to cause the shunt member to rotate against the tension of the retractile means toward the position of alinement with the supplemental poles, and a controlling switch for the consuming circuit arranged to be closed by the shunt member as the shunt member moves to shunting position, the compound winding serving to prevent the retracting of the shunt member when the consuming circuit is closed.

[Claims 6 to 8 not printed in the Gazette.]

1,157,415. FLUID-POWER-TRANSMITTING APPARATUS FOR VEHICLES. HORATIO N. NORTON, Mount Vernon, N. Y. Filed Oct. 28, 1913. Serial No. 797,842. (Cl. 138—22.)



1. A power transmitting apparatus including a prime mover, a fluid operated motor, and means operated by the prime mover for transmitting fluid under pressure to said motor, including a cylinder, a reciprocating piston for said cylinder, and means whereby the outer limit of the stroke of the piston may be varied without varying the inner limit of the stroke thereof for varying the amount of fluid transmitted.

2. A power transmitting apparatus including a prime mover, a fluid operated motor, and means operated by the prime mover for transmitting fluid under pressure to said motor, including a cylinder, a reciprocating piston for said cylinder, means whereby the outer limit of the stroke of the piston may be varied without varying the inner limit of the stroke thereof for varying the amount of fluid transmitted, and means whereby the direction of flow of the fluid to the motor may be changed.

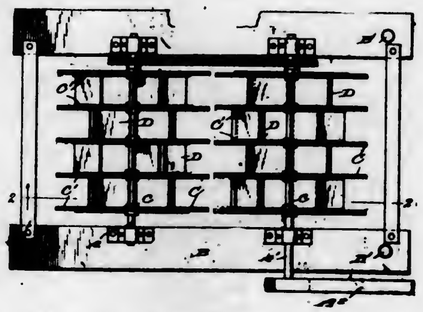
3. A power transmitting apparatus including a prime mover, a fluid operated motor, means operated by the prime mover for transmitting fluid under pressure to said motor, said means including a plurality of cylinders, a piston for each cylinder, devices for reciprocating the pistons, and means for varying the outer limit of the stroke of each piston without varying the inner limit of the stroke thereof for varying the amount of fluid transmitted.

4. A power transmitting apparatus including a prime mover, a fluid operated motor, means operated by the prime mover for transmitting fluid under pressure to said motor, said means including a plurality of cylinders, a piston for each cylinder, devices for reciprocating the pistons, and means for varying the outer limit of the stroke of each piston without varying the inner limit of the stroke thereof for varying the amount of fluid transmitted, said last named means including power operated devices controlled by the operator.

5. A power transmitting apparatus including a prime mover, a fluid operated motor, means operated by the prime mover for transmitting fluid under pressure to said motor, said means including a plurality of cylinders, a piston for each cylinder, devices for reciprocating the pistons, and means for varying the outer limit of the stroke of each piston without varying the inner limit of the stroke thereof for varying the amount of fluid transmitted, said last named means including a shaft and devices whereby said shaft may be rotated at will by said prime mover.

[Claims 6 to 13 not printed in the Gazette.]

1,157,416. WATER-MOTOR. OLIVER HENRY OLIVE, Indianola, Iowa. Filed Oct. 22, 1914. Serial No. 868,017. (Cl. 170—105.)



1. A water motor consisting of a float frame, a pair of undershot water wheels mounted in the float frame and each consisting of a plurality of spaced disks forming channels therebetween, a series of paddles mounted in each of the said channels between the disks, the paddles of each series being disposed at 90° with respect to one another around the wheel, rods connecting and supporting the disks and upon which the inner ends of the said paddles are hingedly connected, each of the said disks having a hub and radially projecting rods extending from the hub and projecting upon alternately opposite sides of the disks whereby to form supports for the paddles to prevent their inward swinging movement in one direction, relatively engageable hooks and eyes carried by the disks and paddles for securing the latter in inoperative positions, the several series of paddles of each wheel being staggered with respect to one another and being in advance of the alined paddle series of the other wheel a distance equal to 45°, and gearing connecting the said wheels and maintaining the same in permanently fixed relation at all times.

2. A water motor consisting of a float frame, a pair of wheels journaled across the float frame in parallel contiguous relation, each wheel consisting of a plurality of spaced disks forming channels therebetween, a series of blades hingedly connected at their inner ends to the disks and disposed in the channels between the disks, the paddles of each series being spaced at 90° with respect to one another and the series of paddles being staggered with respect to one another along each of the wheels, the said wheels being relatively positioned so that their corresponding series of paddles are in advance of one another a distance equal to 45°, and gearing connecting the wheels and maintaining the same in permanently fixed relation at all times.

3. A water motor consisting of a float frame, wheels journaled across the float frame in parallel contiguous relation and rotating in the same direction, each wheel consisting of a plurality of spaced disks forming channels therebetween, a series of blades disposed in each channel and hingedly connected at their inner ends to the adjacent disks, the blades of each series being spaced from one another and the series of blades being staggered with respect to one another along each of the wheels, the said wheels being relatively positioned so that their corresponding series of paddles are in advance of one another, and gearing connecting the wheels.

1,157,417. FLOATING FISH-TRAP. EDWIN N. PAINE, Provincetown, Mass. Filed Jan. 7, 1915. Serial No. 939. (Cl. 43—9.)

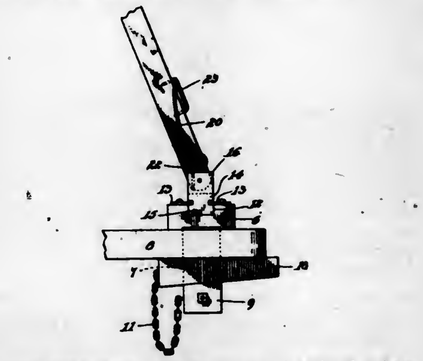


1. A floating fish trap comprising a chamber of netting, a flexible floating frame supporting the upper edge of such chamber, a central tow line connected to diagonally opposite points of said frame in extending forwardly therefrom, a drag connected to the tow line in rear of said frame, whereby to spread open the frame work longitudinally, and tow lines on each side of the trap connected to the intermediate diagonally opposite corners, and spreader members connected to the lateral tow lines and constructed to apply force outwardly, whereby to distend the frame work laterally.

2. A floating fish trap comprising a line adapted to float on the surface of water, a net wall suspended by one edge from said line and weighted at the opposite edge so as to hang vertically, a trap formed as a chamber of netting having a gate at one side adjacent to the rear end of the said wall, a flexible floating frame from which the net forming the chamber is suspended, said frame being connected at longitudinally separated points to the said line, side tow lines connected to intermediate points of the frame work, a drag connected to the central tow line and outwardly inclined drag members or spreaders connected to the side lines and caused by the pressure of the water when the trap is drawn through the water to exert force tending to spread the chamber frame work open laterally.

3. In a trap of the sort described, a net chamber, a flexible buoyant frame from which said chamber is suspended, a tow line connected to said frame at longitudinally separated points, a floating drag attached to said line in rear of the frame, a second line having a connection with the frame at a point intermediate the points of connection thereof with the first line, and a floating motor connected to the second line and arranged to apply force thereto tending to separate the second line from the first line.

1,157,418. ELECTRIC-IRON-CORD TAKE-UP. NELS E. POLSON and HELMER R. PAULSON, La Grange, Ill. Filed Jan. 22, 1915. Serial No. 3,714. (Cl. 248—41.)



1. The combination with an ironing board, of a base block adapted to be secured thereto, said block being provided with a T-slot; a supporting block provided with a T-head engaging said slot; and an upstanding spring-held arm pivoted to said supporting block, substantially as described.

2. The combination with an ironing board, of a base block adapted to be secured thereto, said block being provided with a T-slot; a supporting block provided with a T-head engaging said slot; and an upstanding spring-held arm pivoted to said supporting block and provided at its free end with a notch for the reception of an electric iron cord, substantially as described.

3. The combination with an ironing board, of a base block, said block being provided with a T-slot; a supporting block provided with a T-head engaging said slot; an upstanding spring-held arm pivoted to said supporting block; a hanger depending from said base block; an inwardly off-set wedge abutment on said hanger; and a wedge adapted to coöperate with said abutment to secure said base block to the ironing board, substantially as described.

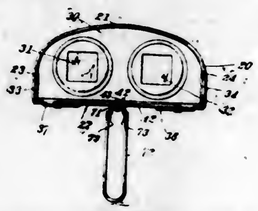
4. The combination with an ironing board, of a base block, said block being provided with a T-slot; a supporting block provided with a T-head engaging said slot; an upstanding spring-held arm pivoted to said supporting block and provided at its free end with a notch for the reception of an electric iron cord; a hanger depending from said base block; an inwardly off-set wedge abutment on said hanger; and a wedge adapted to coöperate with said abutment to secure said base block to the ironing board, substantially as described.

5. As a detachable fastening for electric iron take-ups, a base block; a depending hanger on said block; an inwardly off-set wedge abutment on said hanger; a wedge coöperating with said abutment to secure said block to an ironing board; and a take-up arm mounted on said block, substantially as described.

1,157,419. STEREOSCOPE. HENRY E. RICHMOND, Westwood, N. J., assignor to Underwood and Underwood, Arlington, N. J., a Corporation of New Jersey. Filed May 14, 1914. Serial No. 838,434. (Cl. 88—29.)

1. In a stereoscope, a hood, a lens frame in said hood and means for adjusting the frame longitudinally of the hood.

2. In a stereoscope, a hood, a lens frame in the hood, slides mounted in the hood to move longitudinally thereof, the lens frame being connected to the slide and means for adjusting the frame.



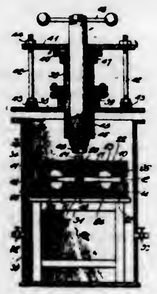
3. In a stereoscope, a hood, a lens frame in the hood, a shaft, a picture holder on said shaft, said shaft being foldable within the hood.

4. In a stereoscope, a hood, a lens frame in the hood, a shaft connected to the hood, a picture holder on said shaft, said holder and shaft being foldable within the hood.

5. In a stereoscope, a hood, a lens frame movable in the hood, a picture holder and means between the frame and holder whereby the frame and the holder may be adjusted simultaneously.

[Claims 6 to 14 not printed in the Gazette.]

1,157,420. APPARATUS FOR MAKING HOLLOW RUBBER ARTICLES. FRED THOMAS ROBERTS, Trenton, N. J., assignor, by direct and mesne assignments, to The Aranar Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 2, 1913. Serial No. 793,026. (Cl. 18—17.)



1. In an apparatus of the class described, the combination of a chamber adapted to contain an atmosphere under pressure, a flask adapted to be located within the chamber and contain an article to be closed in such atmosphere, a screw for forcing the members of the flask together, a wrench for turning the screw, means outside of the chamber for turning the wrench, and means for causing said wrench to follow the screw as the parts of the flask are drawn together.

2. In an apparatus of the class described, the combination of a flask, a screw connected therewith and adapted to bring the two parts of the flask together, a chamber adapted to contain such flask, a rotatable wrench extending from outside into the chamber, and means for causing said wrench to travel lengthwise of its axis as it rotates, whereby it follows the screw as the same brings the parts of the flask together.

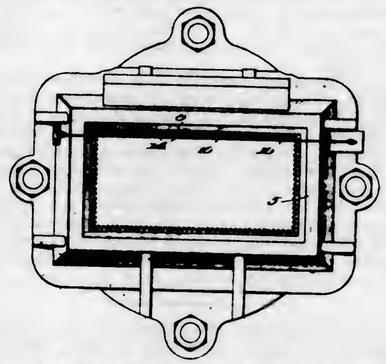
3. In an apparatus of the class described, the combination with a flask and a screw for forcing its members together, of an air-tight tank having a top provided with a guide above said screw, a key whose shank is rotatably mounted within said guide and whose inner end is adapted to engage said screw, means for causing the key while rotating to follow the screw, and means for admitting fluid to said tank.

4. In an apparatus of the class described, the combination with a flask and a headed screw for forcing its members together, of an air-tight tank having a removable cover, a tubular guide mounted in said cover above said screw and having an internal thread, and a key having its outer portion cylindrical and mounted within said guide and having an external thread engaging the threads of the guide, the inner extremity of the key having a socket shaped to engage the head of said screw.

5. In an apparatus of the class described, the combination of a flask, means transportable with the flask parts for forcing the two parts of the flask together and holding them together, a chamber adapted to contain said flask, and a device extending from inside the chamber to the outside and adapted to operate the means which forces the parts of the flask together.

[Claims 6 to 13 not printed in the Gazette.]

1,157,421. PROCESS AND MACHINE FOR MAKING BRICKS. EDWARD H. RODGERS, El Paso, Tex. Filed Aug. 2, 1915. Serial No. 43,148. (Cl. 25—20.)



1. A brick machine including a die having a tubular liner plate having a delivery edge disposed adjacent the delivery end of the die, said delivery edge being inturned and provided with a plurality of teeth extending in angular relation with the adjacent surface of the liner plate, the opposite edge of the liner plate being provided with an outwardly turned flange adapted to be engaged by means for maintaining the liner plate within the die.

2. A brick machine including a die having a liner plate disposed therein, said liner plate being provided with an inturned delivery edge disposed adjacent the delivery end of the die, said delivery edge being transversely slitted to form tongues, said tongues being twisted into angular relation with the plane of the adjacent portion of the liner plate in order to provide teeth, substantially as described.

3. A brick machine including a die having a tubular liner plate having a delivery edge disposed adjacent the delivery end of the die and provided with teeth projecting beyond the inner surface of the body of said liner plate, substantially as set forth.

4. A brick machine including a die having a liner plate provided with a delivery edge having teeth projecting beyond the inner surface of the body of said liner plate.

5. A brick machine including a die having a tubular liner plate whose delivery edge is inturned and toothed, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,157,422. INTERMITTENTLY-OPERATED GAS-VALVE. FRANS JOHAN HENRIK RUSTIGE, Stockholm, Sweden, assignor to Aktiebolaget Lux, a Company Ld, Stockholm, Sweden. Filed Jan. 17, 1914. Serial No. 812,848. (Cl. 67—111.)

1. In intermittently operated gas valves, a member capable of swinging freely according to the laws of a pendulum, an impact member operatively connected to the said swinging member, a valve member having a projection lying in the path of said swinging member, and a discharge channel from said valve member directed toward said impact member.



2. In intermittently operated gas valves, a casing, a shaft journaled therein, a balance having a projection mounted on said shaft, a spring tending to rotate said balance in one direction, an inner casing provided within the first mentioned casing, a valve member mounted within said inner casing, said valve member having a projection lying in the path of the projection of the balance.

3. In intermittently operated gas valves, a member mounted to swing freely according to the laws of a pendulum, a valve casing having a discharge channel, a valve member controlling said channel, means associated with the swinging member for intermittently operating the valve member, and means actuated by the flow of gas through said channel each time the valve is opened for imparting a motive impulse to the swinging member.

4. In intermittently operated gas valves, a member mounted to swing freely according to the laws of a pendulum, a valve casing having a discharge channel, a valve member controlling said channel, means associated with the swinging member for operating the valve member whenever the stroke of the swinging member falls below normal, and means actuated by the flow of gas through said channel each time the valve is opened for imparting a motive impulse to the swinging member.

5. In intermittently operated gas valves, a member mounted to swing freely according to the laws of a pendulum, a valve casing having a discharge channel, a valve member controlling said channel and having an actuating projection disposed in the path of the swinging member to be struck thereby to intermittently operate the valve member, and means actuated by the flow of gas through said channel each time the valve is opened for imparting a motive impulse to the swinging member.

[Claims 6 and 7 not printed in the Gazette.]

1,157,423. BOAT. JOHN J. RYAN, Cincinnati, Ohio, and CHRISTOPHER C. SMITH, Algonac, Mich., assignors to Smith-Ryan Boat and Engine Co., Algonac, Mich., a Corporation of New York. Filed June 17, 1912. Serial No. 704,030. (Cl. 114—66.5.)



1. A boat having a hull of the displacement type with rounded bilges and a transverse step, the cross section of the after stepped portion corresponding in contour substantially to the forward portion and the longitudinal lines of the after portion rounding convexedly, and means for admitting air to the step on each side of the center line of the boat.

2. A boat having a hull of displacement type with rounded bilges, and with a transverse step, the cross section of the stepped portion corresponding in contour substantially to that of another portion, and the longitudinal lines thereof rounding unbrokenly and convexly from the angle of the step into the lines of the other portion, and means for admitting air to the step and for regulating the air supply from an operator's station.

3. A boat having a hull of displacement type with rounded bilges, and with a transverse step, the cross section of the stepped portion corresponding in contour substantially to that of another portion, and means regulatable from the operator's station for admitting air through the step on either side of the center line of the boat as desired.

4. A boat having a hull of displacement type with rounded bilges, and with a transverse step, the cross section of the stepped portion corresponding in contour substantially to that of another portion and the lines thereof rounding unbrokenly and convexly from the angle of the step into the lines of the other portion, and regulatable means for admitting air to the step in line with the direction of travel.

5. A boat having a hull of displacement type with rounded bilges and with a transverse step, the cross section of the after stepped portion corresponding in contour substantially to that of the forward hull portion, and regulatable means for admitting air to the step in line with the direction of travel on each side of the center line of the boat adjustable to restrict and cut off the air supply on one side or the other as desired.

[Claims 6 to 17 not printed in the Gazette.]

1,157,424. WHIP. AUGUST J. SCHMIDT, Chicago, Ill., assignor to Diamond Whip Company, Chicago, Ill., a Corporation of Illinois. Filed May 19, 1915. Serial No. 29,032. (Cl. 231—2.)



1. In a whip, the combination of a handle-stem, having an integral shoulder and a point thereon, a collar on and formed separately from the stem and held thereon adjacent the inner end of the point, a sleeve rotatably held on the stem between the collar and said shoulder, and through which the point can pass longitudinally in placing the sleeve on the stem, and a whip-lash secured to and rotatable with said sleeve, said collar being movable into position to hold the sleeve on the stem after the sleeve has been placed on the stem.

2. In a whip, the combination of a handle-stem, having an integral shoulder and a point thereon, a collar screw-threaded to the stem adjacent the inner end of the point, a sleeve rotatably held on the stem between the collar and said shoulder, and a whip-lash secured to and rotatably held with said sleeve.

3. In a whip, the combination of a handle-stem, having an integral shoulder and a point thereon, a collar on and formed separately from the stem and held thereon adjacent the inner end of the point, a sleeve rotatably held on the stem between the collar and said shoulder, and through which the point can pass longitudinally in placing the sleeve on the stem, and a whip lash comprising strands braided around and covering said sleeve, said collar being movable into position to hold the sleeve on the stem after the sleeve has been placed on the stem.

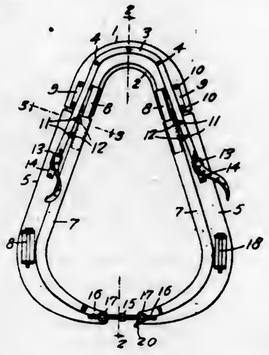
4. In a whip, the combination of a handle-stem, having an integral shoulder and a point thereon, a collar on and formed separately from the stem and held thereon adjacent the inner end of the point, a sleeve rotatably held on the stem between the collar and said shoulder, and a whip lash comprising strands secured around said sleeve and extending loosely around said collar and point, said collar being movable into position to hold the sleeve on the stem after the sleeve has been placed on the stem.

5. In a whip, the combination of a handle-stem, having an integral shoulder and a point thereon, a collar on and formed separately from the stem and held thereon adjacent the inner end of the point, a sleeve rotatably held on the stem between the collar and said shoulder, and

through which the point can pass longitudinally in placing the sleeve on the stem, a whip-lash having strands secured to and braided around said sleeve, and a sheath between said sleeve and said lash, said collar being movable into position to hold the sleeve on the stem after the sleeve has been placed on the stem.

[Claim 6 not printed in the Gazette.]

1,157,425. HORSE-COLLAR. THOMAS SCHOCK, Montello, Nev. Filed Aug. 5, 1915. Serial No. 43,762. (Cl. 54—18.)



1. A collar of the character specified, comprising a neck section and side sections, the neck section being arched to fit the neck, and the side sections having angular portions at their lower ends to extend beneath the neck, each section consisting of a metal shell open at the inner side, and a tubular casing of flexible material fitting within the shell and extending beyond the shell at the inner side thereof, an inner tube or lining of elastic material having a valve at one end and shaped to fit within the three sections from the free inner end of the angular portion of one side section through the other side section to the free end of the angular portion, the valve extending beyond the adjacent section to permit the tube to be inflated, a strap secured to the front of the shell on the neck section and having its ends free, buckles on the shells on the side sections for engaging the ends of the strap, the free edge of the shell of each side section at the front of the section having an integral tubular bead extending the full length thereof and open at the top of the section, a tubular pin rigid with each end of the section and engaging the upper end of the adjacent bead, set screws threaded through the bead to engage the pin to prevent movement thereof with respect to the bead, and a connection between the lower end of the side sections for drawing them toward and from each other.

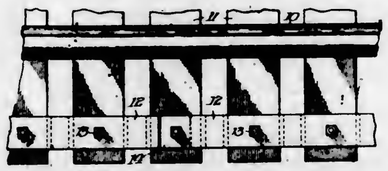
2. A collar of the character specified, comprising a neck section and side sections, the neck section being arched to fit the neck, and the side sections having angular portions at their lower ends to extend beneath the neck, each section consisting of a metal shell open at the inner side, and a tubular casing of flexible material fitting within the shell and extending beyond the shell at the inner side thereof, an inner tube or lining of elastic material having a valve at one end and shaped to fit within the three sections from the free inner end of the angular portion of one side section through the other side section to the free end of the annular portion, the valve extending beyond the adjacent section to permit the tube to be inflated, a strap secured to the front of the shell on the neck sections and having its ends free, buckles on the shells on the side sections for engaging the ends of the strap, a sliding connection between each end of the neck section and the upper end of the adjacent side section, and a connection between the lower ends of the side sections for moving them toward and from each other.

3. A collar of the character specified, comprising a neck section and side sections, the neck section being arched to fit the neck, and the side sections having angular portions at their lower ends to extend beneath the neck, each section consisting of a metal shell open at the inner side, and a tubular casing of flexible material fitting within the shell and extending beyond the shell at the inner side thereof, an inner tube or lining of elastic material having a valve at one end and shaped to fit within the three sections from the free inner end of the angular portion of one side section through the other side section to the free end of the angular portion, the valve extending beyond the adjacent section to permit the tube to be inflated, the shell of each side section having at one edge an integral bead extending the full length of the said edge and open at the top, a pin rigid with each end of the neck section and engaging the upper end of the bead of the adjacent side sections, set screws threaded through the bead into engagement with the pin, and adjustable connections between each side section and the neck section for holding the said sections during adjustment.

4. A collar of the character specified, comprising a neck section and side sections, the neck section being arched to fit the neck, and the side sections having angular portions at their lower ends to extend beneath the neck, each section consisting of a metal shell open at the inner side, and a tubular casing of flexible material fitting within the shell and extending beyond the shell at the inner side thereof, an inner tube or lining of elastic material having a valve at one end and shaped to fit within the three sections from the free inner end of the angular portion of one side section through the other side section to the free end of the angular portion, the valve extending beyond the adjacent section to permit the tube to be inflated, the shell of each side section having at one edge an integral bead extending the full length of the said edge and open at the top, a pin rigid with each end of the neck section and engaging the upper end of the bead of the adjacent side sections, and set screws threaded through the bead into engagement with the pin.

5. A collar of the character specified, comprising an arched neck section and side sections, each side section having an angular portion at its lower end, and each section consisting of a rigid shell open at its inner side, and a casing of flexible material filling the shell and extending beyond the shell at the open side, an inflatable inner tube filling the casings of the three sections, and a slidable connection between the neck section and the side sections.

1,157,426. GUARD-RAIL. EARL B. SCOTT, Joliet, Ill. Filed Apr. 17, 1915. Serial No. 22,055. (Cl. 239—17.)



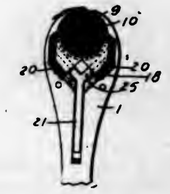
1. In a device of the class described, the combination with railway ties and rails thereon, of metal guard rails adapted to be bolted to said ties parallel to said rails and provided with integral, downwardly-extending tie-spacing members tightly fitted between adjacent ties, bolts, said bolts adapted to extend through said ties and said guard rail and project above the guard rails, and means for securing together the ends of adjacent guard rails.

2. In trestle-work for railways, the combination of ties, railway rails thereon, and metal guard rails parallel to said railway rails and lying on said ties, bolts fastening said guard rails to said ties, tie-spacing members extending below the bottom surface of said guard rail and between adjacent ties, and means for fastening together the ends of contiguous guard rails, substantially as described.

3. In a device of the class described, the combination with railway ties and rails thereon, of metal guard rails adapted to be bolted to said ties parallel to said rails and provided with integral downwardly-extending tie-spacing members fitting between adjacent ties, and means for securing together the ends of adjacent guard rails, substantially as described.

4. In a tie-spacing device, the combination with ties, railway rails secured thereto, of metal guard rails bolted to said ties parallel to said railway rails, and metal tie-spacing members extending downwardly below the bottom surface of said guard rails and between adjacent ties, and integral with said guard rails, substantially as described.

1,157,427. WRENCH. MICHAEL VERN SEIVERT, Elkton, S. D. Filed July 29, 1915. Serial No. 42,501. (Cl. 81—60.)



1. A wrench comprising a shank having a transverse opening at one end circular in cross section and having a radial recess opening at the adjacent end of the shank, a cylindrical chuck having a central opening at the axis of the opening of the shank and a radial recess leading from the opening and adapted to register with the recess of the shank to permit the insertion of a rod or bolt, said chuck having the axial opening counterbored at each end and polygonal in cross section to engage a nut, said chuck having on its periphery oppositely arranged series of ratchet teeth, and having a peripheral groove between the series, a link mounted to slide within the shank to and from the opening, and having a head at the end adjacent to the opening, said head having the edge adjacent to the opening concave and the said edge being adapted to engage the groove of the chuck to prevent axial movement of the chuck, ratchet plates for engaging either series of teeth supported by the link and movable with the head, springs normally pressing the plates and head toward the chuck, said link having a lateral lug at the end remote from the head and the shank having a slot through which the lug extends to permit movement of the link.

2. A wrench comprising a shank having a transverse opening at one end circular in cross section and having a radial recess opening at the adjacent end of the shank, a cylindrical chuck having a central opening at the axis of the opening of the shank and a radial recess leading from the opening and adapted to register with the recess of the shank to permit insertion of a rod or bolt, said chuck having the axial opening counterbored at each end and polygonal in cross section to engage a nut, said chuck having on its periphery oppositely arranged series of ratchet teeth and having a peripheral groove between the series, a link mounted to move longitudinally of the shank within the same toward and from the chuck and having a head for engaging the groove to prevent axial movement of the chuck in the opening, said link carrying ratchet plates cooperating with either series of teeth of the chuck, and means outside the shank for moving the link.

3. A wrench comprising a shank having in one end a bearing opening having a radial recess and a chuck mounted to rotate in the opening, the chuck having an axial opening and a radial recess leading therefrom and adapted to register with the recess of the shank, said chuck being reversible, releasable means for preventing axial movement of the chuck with respect to the shank, said chuck having oppositely arranged series of ratchet teeth, and a pawl in connection with the holding means for the chuck for engaging either of the series to prevent reverse rotation of the chuck.

4. A wrench comprising a shank, having an opening and a chuck rotatable in the shank and reversible in the opening, said chuck having a peripheral groove, and a sliding member mounted to slide on the shank for engaging the groove to prevent axial movement of the chuck in the opening, said chuck having a series of ratchet teeth on each side of the groove and extending peripherally of the chuck, the series being oppositely arranged, and a pawl carried by the sliding member at one side of the groove for engaging either series.

5. A wrench comprising a shank and a chuck mounted to rotate in the shank, said chuck being movable axially with respect to the shank to permit the chuck to be disengaged from the shank, releasable means for preventing rotation of the chuck with respect to the shank in one direction, and means in connection with the said releasable means for preventing axial movement of the chuck in the shank.

[Claim 6 not printed in the Gazette.]

1,157,428. STETHOSCOPE. OSBORNE H. SHEPPARD, Chicago, Ill. Filed Jan. 24, 1914. Serial No. 814,130. (Cl. 181—24.)



1. A stethoscope comprising an air chamber; an outwardly bulging flexible diaphragm fitted over the mouth end of said chamber; and reinforcing wires secured to said diaphragm through their length and arranged to hold said cap in outwardly bulging form, substantially as described.

2. A stethoscope comprising an air chamber; an outwardly bulging rubber cap fitted over the mouth end of said chamber; a reinforcing piece secured to the bulging portion of said cap; and reinforcing wires arranged between said piece and said cap to hold said cap in outwardly bulging form, substantially as described.

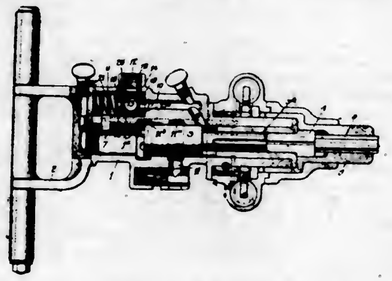
1,157,429. HYPODERMIC SYRINGE. OSBORNE H. SHEPPARD, Chicago, Ill. Filed Oct. 21, 1914. Serial No. 867,748. (Cl. 128—25.)



1. The combination with a hypodermic syringe, of a needle projecting well into the discharge end thereof and provided at its extreme inner end with a flange forming a spreading head situated centrally in the syringe with free space surrounding it so as to insure free circulation under said head, substantially as described.

2. The combination with a hypodermic syringe, of a cap threaded thereon and constituting the discharge end of the syringe; and a needle projecting well into said cap and provided at its extreme inner end with a flange forming a spreading head situated centrally in the syringe with free space surrounding it so as to insure free circulation under said head, substantially as described.

1,157,430. PNEUMATIC TOOL. MATHER W. SHERWOOD, Franklin, Pa., assignor to Chicago Pneumatic Tool Company, Chicago, Ill., a Corporation of New Jersey. Filed Feb. 2, 1914. Serial No. 816,085. (Cl. 121—20.)



1. The combination of a cylinder having ports and passages for the admission and exhaust of motive fluid, a piston reciprocable in the cylinder, and valve mechanism controlling said ports and passages comprising a valve chamber having oppositely arranged seats provided with ports and a valve arranged to vibrate between such seats and to alternately close the ports in the seats, the valve chamber having a motive fluid supply port of less carrying capacity than the ports in the seat and the exhaust port and passage of the cylinder, the valve and its chamber being constructed to provide a space for the motive fluid at each end of the chamber between it and the valve when at such end, whereby the motive fluid in such space will force the valve to the opposite end of the valve chamber when such latter end is at exhaust.

2. The combination of a cylinder having ports and passages for the admission and exhaust of motive fluid, a piston reciprocable in the cylinder, and valve mechanism controlling said admission ports and passages comprising a valve chamber having oppositely arranged seats provided with ports and a valve arranged to vibrate between such seats and to alternately close the ports in the seats, said valve being a ball and the valve chamber having a motive fluid supply port of less carrying capacity than the ports in the seat and the exhaust port and passage of the cylinder, the ball valve in each of its end positions providing a space for the motive fluid between it and the corners of the valve chamber, whereby the valve is forced by the motive fluid in such space at one end of the valve chamber to the opposite end thereof.

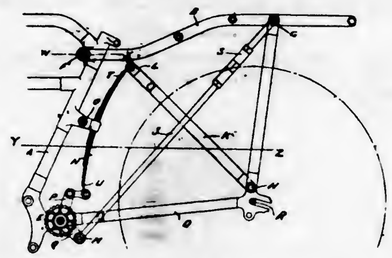
3. The combination of a cylinder having ports and passages for the admission and exhaust of motive fluid, a piston reciprocable therein, and valve mechanism controlling said admission ports and passages comprising a cage formed of a shell and two valve seats provided with ports, a valve located within the shell and arranged to vibrate between the seats and to govern the ports therein, such valve and shell being constructed to provide a space for the motive fluid at each end of the shell between it and the seats, whereby the valve is forced by the motive fluid in such space at one end of the shell to the opposite end thereof, said shell having openings for the admission of the motive fluid.

4. The combination of a cylinder having ports and passages for the admission and exhaust of motive fluid, a piston reciprocable in the cylinder, and valve mechanism controlling said admission ports and passages comprising a cage formed in three separable sections consisting of two valve-seats and a shell, a valve therein, said cylinder having a valve chamber to receive the cage, and yielding means for holding said sections together and the entire valve cage in position within the valve chamber.

5. The combination of a cylinder having ports and passages for the admission and exhaust of motive fluid, a piston reciprocable in the cylinder, and valve mechanism controlling said admission ports and passages comprising a cage formed in three separable sections consisting of two valve seats and a shell, a valve therein, said cylinder having a valve chamber to receive the cage, and a spring for holding the valve cage in position within the valve chamber.

[Claims 6 to 10 not printed in the Gazette.]

1,157,431. REAR FRAMING OF MOTOR-CYCLES AND THE LIKE. GEORGE FEATHERSTONE SHIMMIN, Maryport, England. Filed Jan. 12, 1914. Serial No. 811,634. (Cl. 208—94.)



1. A rear framing for motor cycles comprising, in combination, a set of rods jointed together, and forming a substantial quadrilateral; and resilient means connecting approximately diagonally opposite portions of the quadrilateral.

2. A rear framing for motor cycles comprising, in combination, a set of rods forming a substantial rhomboid; and rods disposed substantially diagonally of said rhomboid and yieldably connecting approximately opposite parts of the frame.

3. A rear framing for motor cycles comprising, in combination, a set of rods forming a rhomboid one of whose corners is located adjacent to the cycle seat, diagonally disposed rods one end of each of which is pivoted at a corner of said rhomboid and the other end of which is movable, and resilient means connecting the movable ends of said diagonally disposed rods, said means including a spring substantially as described.

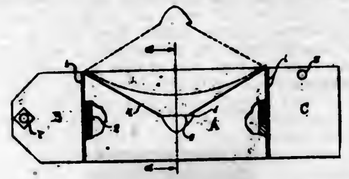
4. A rear framing for motor cycles, comprising, in combination, a set of rods jointed together and forming a substantial rhomboid, one of said rods being the seat pillar tube; diagonal rods pivoted to the rear side of the rhomboid; and means yieldably connecting the diagonal rods to the pillar tube.

5. A rear framing for motor cycles, comprising, in combination, a set of rods jointed together and forming a substantial rhomboid, one of said rods being the seat pillar tube; diagonal rods pivoted to the rear side of the rhomboid; and means yieldably connecting the diagonal rods to the pillar tube; said means comprising a spring having its intermediate part fulcrumed on the pillar tube its upper end engaging one of the diagonal rods and its lower end provided with a connection to the other diagonal rod, said connection including a bell-crank fulcrumed on the lower part of said frame and having one end engaged by the other diagonal rod and the other end connected with said spring.

1,157,432. COMBINED ENVELOP, SHIPPING-TAG, AND INDEX-CARD. RAY R. SIMPSON and JOSEPH S. WILMOTH, Dallas, Tex. Filed Mar. 5, 1914. Serial No. 822,616. (Cl. 11—15.)

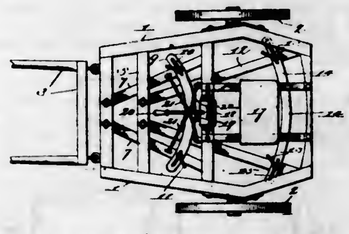
1. In a device of the character described, the combination with an envelop having its lateral edges pasted together, of a shipping tag, and an index card integrally connected with the envelop at the lateral pasted edges thereof.

2. In a device of the character described, an envelop having its front and back portions integral, the lateral edges of said portions being pasted together, in combination with a shipping tag detachably secured to said envelop and projecting beyond a lateral pasted edge thereof.



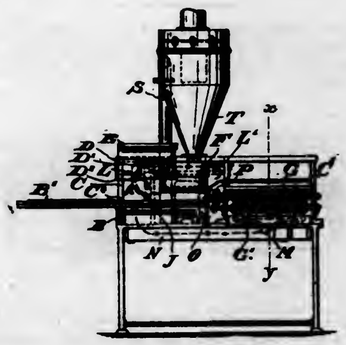
3. In a device of the character described, the combination with an envelop having its front and back portions integral, the lateral edges of said portions being pasted together, of a shipping tag and an index card integrally projecting from opposite lateral edges of the front member of the envelop.

1,157,433. CULTIVATOR. JOHN S. SMITH, Burlington, Wis. Filed May 1, 1914. Serial No. 835,756. (Cl. 97—34.)



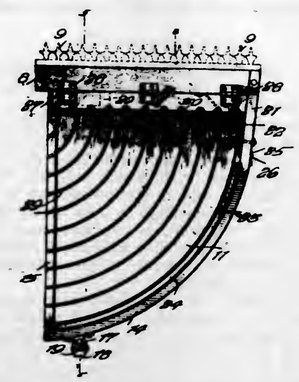
A device of the kind described comprising a wheel frame, depending yokes in longitudinal alinement, a pair of beams pivotally and slidably mounted upon said yokes respectively, said beams being independently adjustable in a horizontal plane, and simultaneously adjustable in a vertical plane, implements carried by one pair of beams and implements carried by the other pair of beams.

1,157,434. BRONZING-MACHINE. MARK SMITH, South Reddish, near Stockport, England, assignor to Taylor, Garnett, Evans & Company Limited, Manchester, England. Filed Nov. 24, 1911. Serial No. 662,116. (Cl. 91—59.)



A bronzing machine comprising an inclosed chamber, a table extending across the front lower portion of said chamber upon which the bronze is adapted to be applied by hand to a flat sheet, power actuated burnishing rollers in another part of said chamber adjacent to but behind said table, a feed table positioned exteriorly of said chamber and adjacent one end wall thereof, said end wall having a slot therein through which a flat sheet may be drawn into the chamber, said front wall of said chamber having a longitudinally disposed opening therein extending the length of the chamber and of dimensions to permit the arms of the operative to enter to manipulate the sheet within the chamber, a transparent top for a part of said chamber providing a sight opening through which the operative may observe the work within the chamber, an air suction device in communication with said chamber, and means for driving said air suction device and burnishing rollers.

1,157,435. GRAIN-SAVER ATTACHMENT FOR REAPERS. WALTER SMITH, Gilman, Ill. Filed May 12, 1915. Serial No. 27,568. (Cl. 56—2.)



1. A grain saving device for reapers including a plate connected with the frame-work of a reaper and supporting a sickle bar, a quadrant shaped receptacle hingedly connected along one of its straight edges to said plate and having an inclined forward edge, said receptacle being provided with a plurality of reinforcing members and with a caster wheel adjustably connected to the receptacle, an arm carried by the said plate, means for detachably connecting the receptacle to the arm, said receptacle being provided along its outer and rear edges with respectively curved and straight stripe forming the side and rear walls of the receptacle, a rail carried by said arm and extending along the curved edge wall of the receptacle, a leaf hingedly connected with said plate, and a plurality of spaced rearwardly extending arcuate fingers arranged concentrically with the outer edge of the receptacle and rigidly connected with the leaf and extending over the receptacle and resting upon the rear wall thereof.

2. In a grain saving device for reapers, a plate connected with the framework of a reaper and providing a support for a sickle bar, a quadrant shaped receptacle hingedly connected along one straight edge with the plate, means whereby the receptacle may be detachably connected in fixed relation with the plate, a caster wheel adjustably connected with the receptacle, a leaf hingedly connected with said plate, and a plurality of arcuate fingers carried by the leaf and extending over said receptacle, said fingers being concentric with the curvature of the outer edge of the receptacle.

3. A device of the class described including a plate connected with the framework of a harvester and supporting a sickle bar, a quadrant shaped receptacle hingedly connected along one straight edge with the plate, means whereby the receptacle may be detachably maintained in fixed position relatively to the plate, a caster wheel adjustably connected with the receptacle, and a plurality of arcuate arms hingedly connected with the plate and bridging the receptacle and being concentric with the outer edge of the receptacle.

4. A device of the class described including a plate connected with a harvester, a substantially quadrant-shaped receptacle hingedly connected with the plate along one straight edge, and a plurality of curved arms concentric with the curvature of the outer edge of the receptacle and connected with the plate and overlying said receptacle, substantially as described.

1,157,436. SOLUTION OF SODIUM ALUMINATE. HOWARD SPENCE and THOMAS JOHN IRELAND CRAIG, Manchester, England, assignors to Company of Peter Spence & Sons Limited, Manchester, England. Filed Aug. 18, 1914. Serial No. 857,318. (Cl. 23—13.)

A solution of sodium aluminate containing an added substance which inhibits the spontaneous precipitation of alumina hydroxid and is not prejudicial to the solution for the purpose for which it is to be used, substantially as set forth.

1,157,437. PROCESS OF RECOVERING POTASH. ARTHUR C. SPENCER, Washington, D. C. Filed Jan. 6, 1912. Serial No. 669,748. (Cl. 23—22.)

1. In the treatment of igneous rocks and minerals carrying potash and silica, the process of recovering potash which comprises heating and maintaining the same at a sintering temperature in the presence of lime in amount at least sufficient to replace said potash and to form dicalcium silicate but not enough to form tricalcium silicate after providing for tricalcium aluminate and tricalcium ferrite, such temperature being maintained until substantially all the potash is removed and recovering the potash fumed off in the sintering.

2. The process of recovering potash from igneous rocks characterized by feldspathoid minerals which comprises heating and maintaining the same in a comminuted form and admixed with calcareous material at a sintering temperature, the amount of such calcareous material being at least sufficient to replace the potash present and to form dicalcium silicate but insufficient to form tricalcium silicate with the silica present after providing for tricalcium aluminate and tricalcium ferrite, and such temperature being maintained until substantially all the potash is removed and recovering the potash fumed off in the sintering.

3. The process of recovering potash from rocks composed of or containing feldspathoid minerals which comprises heating and maintaining such rocks in a comminuted form and admixed with calcareous material at a sintering temperature, the amount of such calcareous material being about that required to form dicalcium compounds with acidic bodies present and such temperature being maintained until substantially all the potash is removed, and recovering the potash fumed off in the sintering.

4. The process of recovering potash from igneous rocks carrying potash in silicate combination which comprises clinkering a comminuted mixture of the rock with calcareous material till substantially all the potash is fumed off, said mixture being proportioned to yield clinker containing at least 1.87 times as much lime as silica but less than 1.7 times as much lime as silica plus alumina plus iron oxid.

5. The process of recovering potash which comprises sintering a comminuted mixture of lime and rock comprising feldspathoid minerals so proportioned that there is sufficient lime equivalent to make Al_2O_3CaO and Fe_2O_3CaO with the alumina and iron oxids present but not sufficient to yield any substantial amount of SiO_23CaO.

[Claims 6 to 12 not printed in the Gazette.]

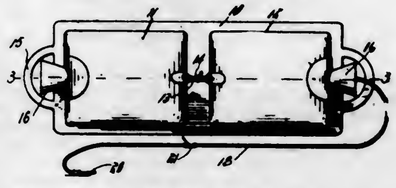
1,157,438. ROOFING MATERIAL. ALEXANDER S. SPIEGEL and LOWELL F. LINDLEY, Chicago, Ill. Filed Jan. 28, 1914. Serial No. 815,058. (Cl. 154—51.)

1. As a new article of manufacture a composition roofing material adapted to be cut into shingles, comprising a single ply fabric having applied thereon a plurality of projecting layers of adhesive and sand in continuous stripe with alternate parallel strips of the exposed felt surface lying between said coated portions, and of substantially the same width so that when cut along the line of two adjoining strips to form shingle stock having one end formed of single layer and the other end, which is to be exposed to the weather, formed with a plurality of protecting layers.



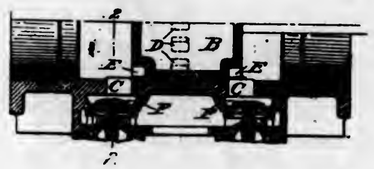
2. As a new article of manufacture, composition roofing material adapted to be used as roofing or shingle stock comprising a single ply fabric having a plurality of continuous strips of layers of adhesive and sand applied to its surface, adapted to be exposed to the weather, the remaining portion forming an underlap being formed of the single ply and being uncoated, said coated and uncoated strips being of substantially equal areas, substantially as described.

1,157,439. COMBINED HOT-WATER BOTTLE AND SYRINGE. MARION E. STARR, Mason City, Iowa. Filed Apr. 28, 1915. Serial No. 24,456. (Cl. 128—47.)



A combined hot water bottle and syringe fountain comprising a base provided with suitable suspending means, a pair of fluid containers supported on the base and provided with combined filling and discharge openings at their outer ends arranged for connection with a fluid conducting pipe, and a valved connection between the inner ends of the containers.

1,157,440. STEAM-ENGINE. ROBERT C. STEVENS, Erie, Pa., assignor to Skinner Engine Company, Erie, Pa., a Corporation. Filed Jan. 5, 1915. Serial No. 550. (Cl. 121—45.)



1. In a steam engine, the combination of a cylinder having a main exhaust port, and an auxiliary exhaust port between said port and the end of the cylinder, and a piston in the cylinder adapted to open and close said ports, said piston being shortened at a point in alinement with said auxiliary exhaust port.

2. In a steam engine, the combination of a cylinder having a main exhaust port, and an auxiliary exhaust port between said port and the end of the cylinder, and a piston in the cylinder adapted to open and close said ports, said piston having a recess in the face thereof in position to register with the said auxiliary port, to delay the point of closure thereof.

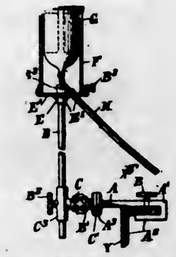
3. In a steam engine, the combination of a cylinder having a main exhaust port at the middle thereof, and an auxiliary exhaust port between said port and each end of the cylinder, and a piston in the cylinder adapted to open and close said ports, said piston having recesses in the opposite faces thereof in position to register with the respective auxiliary exhaust ports for the purpose stated.

4. In a steam engine, the combination of a cylinder having a main exhaust port, and an auxiliary exhaust port between said port and the end of the cylinder, said ports being out of longitudinal alinement, and a piston in the cylinder adapted to open and close said ports, said piston having a recess in the face thereof in position to register with the said auxiliary port and to not register with the said main port.

5. In a steam engine, the combination of a cylinder having a main exhaust port, and an auxiliary exhaust port between said port and the end of the cylinder, said ports being out of longitudinal alinement, and a piston in the cylinder adapted to open and close said ports, said piston having a recess in the face thereof in position to register with the said auxiliary port and to not register with the said main port, and also in such position that the piston may be turned to not register said recess with either of said ports.

[Claim 6 not printed in the Gazette.]

1,157,441. HOSPITAL APPLIANCE. ABRAHAM C. STEVENSON, Philadelphia, Pa., assignor of one-half to Eleanor Ross Stevenson and one-half to Daniel W. Hildreth, Jr., Philadelphia, Pa. Filed Oct. 28, 1914. Serial No. 868,966. (Cl. 5—41.)



A device for the purpose specified comprising a member bifurcated at one end and terminating at its other end in a spindle portion with a flange surrounding the spindle portion at the inner end of the latter, the branches of said bifurcated end being spaced apart and formed each with a back turned portion adapted to take under the horizontal top flange of a bed angle bar side rail on which the said member may rest, a socket member formed with a socket receiving said spindle portion and with a flange surrounding said socket, and formed also with a second socket transverse to the first, said flanges having parts coöperating to hold said socket member and spindle portion in any angular adjustment in which they may be assembled, means for detachably securing said spindle portion in the first mentioned socket, a post received in said transverse socket and adjustable therein in the direction of its length; means for securing said post in said socket in one or another of its different adjustments, and a liquid reservoir supporting means mounted on the upper end of said post.

1,157,442. PROCESS OF MAKING PILES. JOHN STEWART, Washington, D. C., assignor to The Simplex Concrete Piling Company, Washington, D. C., a Corporation of the District of Columbia. Filed May 29, 1912. Serial No. 700,481. (Cl. 72—81.)

1. The process herein described of making concrete piles having a greater diameter at the top than at the bottom, said process consisting in driving a pile form in the ground to the full depth desired; wholly removing the pile form and filling or partly filling the opening thus formed with concrete; then driving the said pile form into the concrete in the opening to a depth less than the depth to which it was previously driven so as to increase the diameter of that portion of the hole in which the concrete was placed and in which the pile form was driven; removing the pile form and filling the opening in the concrete, thus forming a pile having an upper section greater in diameter throughout than the lower section.



2. The process herein described of making concrete piles of a greater diameter at the top than at the bottom, said process consisting in first driving a pile form into the ground to the full depth desired; wholly removing the form and filling or partially filling the opening with concrete and before the concrete is set driving the pile form into the concrete to a depth less than the full depth of the pile so as to force the concrete out laterally to enlarge the opening in the ground; removing the pile form and filling the hole in the concrete with additional concrete; then driving the pile form into the concrete at a less depth than that to which it was previously driven so as to force the concrete laterally to increase the diameter of the opening and the diameter of the finished pile and so as to provide a head of large diameter; and then filling the opening thus formed in the concrete to retain the said concrete in position.

1,157,443. TAPERED-PILE FORM. JOHN STEWART, Washington, D. C., assignor to The Simplex Concrete Piling Company, Washington, D. C., a Corporation of the District of Columbia. Filed May 29, 1912. Serial No. 700,482. (Cl. 72—81.)



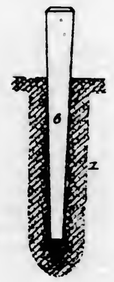
1. The combination of a tapered pile form; a main pile form greater in length than the tapered form and having an external shoulder at its lower end and projecting under

the lower end of the tapered form; means for driving said forms into the ground, the shoulder of the main form engaging the tapered form as the main form is withdrawn from the ground.

2. The combination in a pile, of a main pile form of the full depth of the hole to be formed and having an external collar; a detachable point; a tapered form less in length than the main form, the lower end of said tapered form closely fitting the main form and having an external collar; a head engaging both forms so that they will be driven simultaneously into the ground, the collar on the main form engaging the lower portion of the tapered form as it is withdrawn so that the lower portion of the opening can be filled with concrete while the walls of the upper portion are retained by the tapered form, which is finally removed on the complete withdrawal of the main form.

3. The combination in a pile, of a main hollow pile form of the full depth of the hole to be formed; a detachable point at the lower end of said form; a tapered form less in length than the main form; means whereby the tapered form will be raised by the main form after it has been withdrawn from the lower portion of the hole in the ground so that, on continuing the withdrawal of the main form, the tapered form will also be withdrawn.

1,157,444. METHOD OF PLACING AND DRIVING CONCRETE PILES. JOHN STEWART, Norwood, Ohio, assignor to The Simplex Concrete Piling Company, Washington, D. C., a Corporation of the District of Columbia. Filed Jan. 28, 1914. Serial No. 814,992. (Cl. 72—81.)



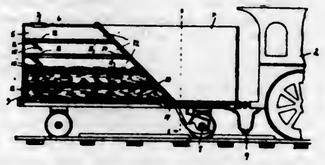
1. The method herein described of driving a pre-molded concrete pile into the ground, said method consisting in first making a hole by driving a preparatory pile to a depth less than the full depth to which the concrete pile is to be driven; removing the preparatory pile; inserting a quantity of cement grout into the hole; and driving a pre-molded concrete pile in the hole to a depth greater than the preparatory pile was driven.

2. The method herein described, of driving pre-molded concrete piles in the ground; said method consisting in first making a hole by driving a preparatory pile to a depth less than the full depth of the concrete pile to be driven; inserting in the hole a quantity of grout in a liquid state; then placing a pre-molded concrete pile in the hole and driving it to the depth required; the grout forming a lubricant for the pre-molded concrete pile as it is driven and filling the voids formed between the walls of the hole and the concrete pile; the concrete, when it sets, forming a solid mass which enters the voids.

1,157,445. LOCOMOTIVE-TENDER. THOMAS STEWART, Philadelphia, Pa. Filed Feb. 5, 1915. Serial No. 6,249. (Cl. 220—125.)

1. A locomotive tender provided with a water tank, a plurality of partitions therein for sub-dividing the same into a number of superimposed compartments, said partitions having openings therein, certain of which are valve controlled.

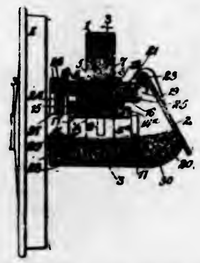
2. A locomotive tender provided with a water tank, a plurality of partitions therein for sub-dividing the same into a number of superimposed compartments, said partitions having openings therein, and valves for controlling certain of said openings.



3. A locomotive tender provided with a water tank, a plurality of partitions therein for sub-dividing the same into a number of superimposed compartments, said partitions having openings therein, valves for controlling certain of said openings, and means for limiting the opening movement of said valves.

4. A locomotive tender provided with a water tank, a plurality of spaced horizontal partitions extending the entire length and width of the tank for dividing the interior thereof into a plurality of relatively low compartments extending the entire length of the water tank, each of said partitions having two different size holes therein, the smaller hole designed principally for the outlet of air, a valve hinged to the underside of each of the partitions for controlling the larger openings, and means for limiting the opening movement of said valves.

1,157,446. JOURNAL-BOX FOR RAILWAY-CARS. HARRY C. STICKEL, Star Junction, Pa. Filed Mar. 24, 1915. Serial No. 16,658. (Cl. 105—243.)



1. The combination with a car truck having a seat therein, of a journal box adapted to said seat, a brass and wedge adapted to the journal box, and a key adapted to engage the wedge and hold it in the box, said box and truck being coactively formed for the reception of the key to be locked together by said key, with the latter locking the wedge and brass to the journal of a car axle.

2. The combination with a car truck frame having a seating recess therein with opposed internal webs each with a notch near one end, of a box having internal housings exteriorly channeled to receive the webs, said housings each having a passage and a corresponding web having a corresponding notch, the brass and wedge adapted to the interior of the box and to the journal of a car axle, and a key adapted to the interior of the box and related to the passages through the housings and the notches in the webs of the truck frame to extend through said passages into said notches to lock the box to the truck frame and to lock the wedge and brass to the journal.

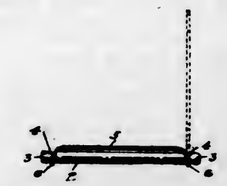
3. The combination with a truck frame and a journal box adapted thereto and provided with a brass and wedge for holding the parts in place, of a key adapted to the interior of the box with the said box and the truck coactively formed and the key being also constructed and arranged to lock the box to the truck frame and to lock the wedge and brass to the journal of a car axle.

4. The combination with a car truck having a journal-box receiving recess with opposed interior webs on opposite sides of the recess and the latter opening downwardly in the normal position of the parts, of a journal box having interior housings with exterior channels for receiving the webs, a brass with side lugs for engaging the housings, a wedge provided with a lip at one end and adapted to rest upon the brass, and a key having a lip at one end adapted to engage the lip on the wedge, the housings within the box being provided with passages therethrough and the webs in the recess of the truck frame having notches therein and the key being of a width to extend through the passages in the housings and enter the notches in the webs, whereby the wedge is held to the brass by the key and the box is locked to the truck frame by the key.

5. The combination with a car truck frame and journal box in removable relation to the car truck frame, of journal bearings for the journal of a car axle adapted to the box, and a key for holding the journal bearings in the box to the car axle journal, said key, box and truck frame being coactively constructed and arranged to lock the journal box to the frame.

[Claims 6 and 7 not printed in the Gazette.]

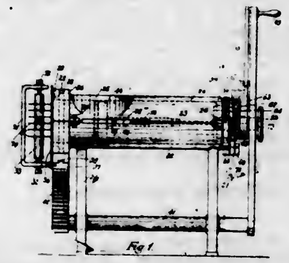
1,157,447. HAIR-CURLER. MAUD W. STODDARD, Minneapolis, Minn. Filed Sept. 30, 1911. Serial No. 652,213. (Cl. 132—18.)



1. A hair curler consisting of a rigid bar having at one end a reduced neck and a head of greater diameter than the neck, and an elastic member attached to one end of the rigid bar and at the other end formed with an expansible eye of smaller diameter than the head of the rigid bar, substantially as described.

2. A hair curler consisting of a rigid bar having at each end a reduced neck and a head of greater diameter than the neck, and an elastic member of lesser length than the bar and formed at each end with an expansible eye of smaller diameter than the head of the rigid bar.

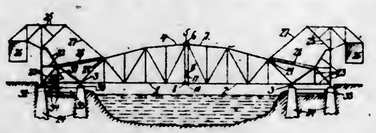
1,157,448. VEGETABLE-CUTTER. ADOLPH STOLTENBERG, New York, N. Y. Filed Apr. 14, 1915. Serial No. 21,288. (Cl. 146—7.)



1. A vegetable-cutter comprising, in combination, a casing, a set of interchangeable cutting means adapted to be removably inserted in the front opening of said casing, another set of cutting means removably mounted in front of said opening, a detachably mounted reciprocating knife adapted to cut in transversely between said first and second-mentioned sets of cutting means, means for feeding vegetables into said casing, means for pushing same against said cutting means in succession and means actuating said pushing means simultaneously with said reciprocating knife.

2. A vegetable-cutter comprising, in combination, a casing, a set of interchangeable cutting means adapted to be removably inserted in the front opening of said casing, another set of cutting means removably mounted in front of said opening, a detachably mounted reciprocating knife adapted to cut in transversely between said first- and second-mentioned sets of cutting means, means for feeding vegetables into said casing, means for pushing same intermittently against said cutting means in succession, means actuating said pushing means simultaneously with said reciprocating knife, and means for regulating the extent of the forward thrust of said pushing means at each successive operation.

1,157,449. BRIDGE. JOSEPH B. STRAUSS, Chicago, Ill. Filed July 8, 1908. Serial No. 442,516. (Cl. 14—21.)



1. A bridge comprising two vertically rotatable sections having free ends which abut when the bridge is closed, a longitudinally disposed interlocking connecting device for said sections, comprising a part in the tension chord of one section and a second part in the tension chord of the other section, the two parts being in longitudinal alinement with each other when the bridge is closed, said two parts automatically engaging when the sections are closed, and resisting parts connected with said two parts for resisting longitudinal separation thereof under tension.

2. A bridge comprising two separable vertically rotatable sections having free ends which abut when the bridge is closed, the other ends of said sections mounted upon supports, two detachable connections between said sections, one connection being a longitudinally disposed interlocking connection in the top chord, and the other connection being a longitudinally disposed interlocking connection in the bottom chord, the parts of said interlocking connections directly engaging with each other when the said sections are closed.

3. A bascule bridge comprising two pivoted sections, and automatic interlocking devices at the abutting ends of said sections which automatically interlock when the two sections are closed and hold the sections against longitudinal separation, so as to form a simple span when the sections are closed.

4. A bridge comprising two sections, a connection between the adjacent ends of said sections comprising a projecting part on one section having an enlarged end and a receiving device on the other section adapted to receive said enlarged end, said projecting part and receiving device pin-connected to the sections, said enlarged end moved into the receiving device by the relative movement of said sections.

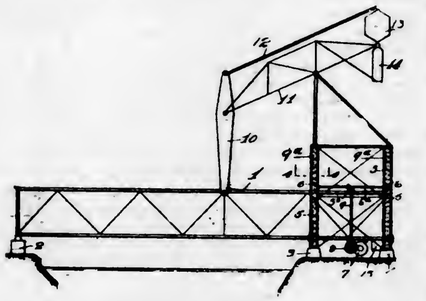
5. A bridge comprising two sections, a connecting device for connecting the adjacent ends of said sections together comprising an interlocking tension connection in the tension chord of the sections, automatically connected and disconnected by the relative movement of the sections.

[Claims 6 to 8 not printed in the Gazette.]

1,157,450. BRIDGE. JOSEPH B. STRAUSS, Chicago, Ill. Filed Oct. 28, 1912. Serial No. 728,103. (Cl. 14—42.)

1. A bridge comprising a vertically movable span, operating mechanism at one end of said span and operatively connected therewith at different points along its length

and a counterbalancing device connected with said span at its center of gravity.



2. A bridge comprising a vertically movable span, a support located at one end of said span, operating mechanism connected with said span, at the support end thereof, at two points along its length, a counterbalancing arm connected to the span at its center of gravity said counterbalancing arm mounted upon said support.

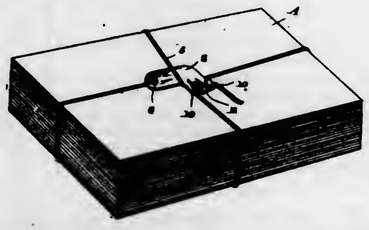
3. A bridge comprising a vertically movable span, a fixed support at one end of said span, separated racks and coöperative toothed wheels connected with said support and span respectively, means for actuating said toothed wheels so as to cause them to move along said racks and a counterweighted arm movably connected with the fixed support said arm connected with said span at a point between its ends.

4. A bridge comprising a vertically movable span, a fixed support at one end of said span, separated racks and coöperative toothed wheels connected with said support and span respectively, means for actuating said toothed wheels so as to cause them to move along said racks and a counterweighted arm movably connected with the fixed support said arm connected with said span at a point between its ends and means associated with said arm for compensating for the pivotal movement thereof so as to allow the span to be moved vertically.

5. A bridge comprising a vertically movable span, a support located at one end of said span, operating mechanism connected with said span, at the support end thereof, at two points along its length, a counterbalancing arm connected to the span at its center of gravity said counterbalancing arm mounted upon said support and means for bringing the center of gravity of the span nearer the end of the span where the operative mechanism is located than to the other end so as to shorten said counterbalancing arm.

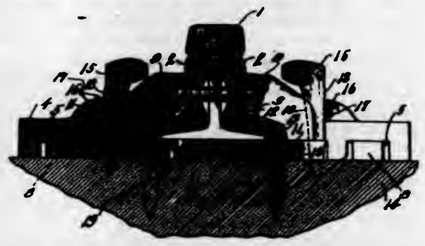
[Claims 6 to 14 not printed in the Gazette.]

1,157,451. PACKAGE-TIE. OTTO W. STUCH and RICHARD E, STURGIS, Allegan, Mich. Filed July 25, 1914. Serial No. 853,108. (Cl. 24—18.)



A package tie comprising a flat plate of substantially L-shape having spaced parallel slots cut in one branch thereof to form intermediate and outer tongues, the outer tongues being bent to form hooks, the intermediate tongue being struck upwardly whereby a major portion thereof will lie substantially in the same plane with the bills of the hooks, and a cord connected with the other branch of the plate for engagement in the two hooks to be engaged by the intermediate tongue for the locking of the cord against sliding movement in the hooks.

1,157,452. COMBINED RAIL JOINT AND CHAIR. SVEN SWANSON and OSCAR SWANSON, Chicago, Ill. Filed July 24, 1915. Serial No. 41,744. (Cl. 239—6.)



1. In combination, rails, fishplates therefor, a rail chair, a clamping member having an upstanding arm adapted for engagement with a fishplate, means interlocking said clamping member with the chair, and means interposed between the arm of said clamping member and the chair for causing clamping action of a fishplate.

2. In combination, rails, fishplates therefor, means locking said plates to the rails, a chair, clamping means movably engaging the chair and coöperating with the locking members aforesaid for preventing displacement thereof, and means for holding said clamping means in coöperative relation with respect to the locking means.

3. In combination, rails, fishplates therefor, means locking said plates to the rails, a chair, clamping means movably engaging the chair and coöperating with the locking means aforesaid for preventing displacement thereof, and adjustable means adapted to be introduced intermediate the chair and the clamping member and having a positive engagement with the chair for holding the clamping member in clamping position.

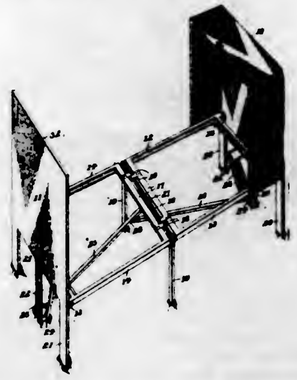
4. In combination, rails, fishplates therefor, a rail chair, a T-shaped clamping member having interlocking connection with said chair, said clamping member being formed with an upstanding arm adjacent to one end for engaging a fishplate, and a wedge shaped actuating member adapted to be driven between the arm of the clamping member and the rail chair, said clamping member having a recess through which said wedge shaped member passes whereby to cause clamping action of said clamping member with respect to a fishplate.

5. In combination, rails, fishplates therefor, a locking pin passing through said fishplates and the rails, a rail chair on which said rails are seated, a movable clamping member disposed at each side of the rails and adapted for engagement with the fishplates, each of said clamping members having a head for interlocking with the rail chair, said clamping members having recesses to receive the locking pin for preventing displacement of the latter, and means interposed between the clamping members and the chair for actuating the former to cause clamping action.

[Claim 6 not printed in the Gazette.]

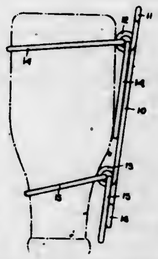
1,157,453. FOLDING BED. MARTIN SZINAK, Cincinnati, Ohio. Filed Apr. 26, 1915. Serial No. 23,884. (Cl. 5—52.)

1. A foldable bed comprising an open sided head casing, a centrally depending bracket carried thereby having opposite inclined slots, a foot board arranged opposite the open side of the said casing and being of substantially the same dimensions as the said opening, a depending bracket upon the said board provided with inwardly inclined opposite slots, similar bottom frames hinged adjacent the lower inner sides of the said casing and board, a transversely-arranged hinge bar between the said frames, central legs swingingly mounted upon the opposite ends of the said hinged bar, struts hingedly connected together and one of the same being pivoted to the said hinge bar, and rods upon the outer free ends of the said struts slidably mounted within the said bracket slots.



2. A device of the class described, comprising a head casing being open at the lower front sides thereof, head legs for the bed mounted upon the said casing, a depending bracket U-shaped in cross section centrally depending from the said casing and having inwardly inclined opposite slots therein terminating at their lower ends in inwardly extending notches, a foot board adapted for reception within the open inner side of the said casing, and oppositely arranged with respect thereto, legs for the said bed upon the said foot board, a bracket centrally depending from the said foot board and having inwardly inclined slots provided with notches at their lower ends, similar rectangular bed bottom frames hingedly connected adjacent the lower inner sides of the said casing and board, a central transversely arranged hinged bar between the said frames, central legs for the bed swingingly mounted upon the opposite ends of the said bar, a strut having one end journaled to the said hinged bar, and extending adjacent the said foot board bracket, a relatively longer strut hingedly connected to the first-named strut adjacent its upper end and having its free end extending adjacent the said casing bracket, transverse end rods upon the said struts in sliding engagement within the said bracket slots and seated within the said slot notches when the bed is in its operative unfolded position.

1,157,454. BOTTLE-DRAINER. CHARLES HENRY TAYLOR, Newburgh, N. Y. Filed Aug. 7, 1915. Serial No. 44,293. (Cl. 141—11.)



1. The herein described bottle drainer comprising a vertical bar having an eye at its upper end and a bracing loop at its lower end and formed with a plurality of forwardly projecting loops between the upper and lower ends, and a plurality of bottle supporting rings pivoted freely in said loops, substantially as set forth.

2. The herein described bottle drainer comprising, in combination, a main rib formed of a single piece of material bent to provide an eye at its upper end, a loop brace at its lower end lying in a plane corresponding to the eye and having formed between the upper and lower ends a pair of spaced circular loops each projecting forwardly from the plane of the rib and brace aforesaid and having a substantially horizontal eye, and bottle supporting rings suspended freely in said loops.

1,157,455. METHOD OF MAKING SULFURIC ACID. EDWIN TAYLOR, New York, and FREDERICK P. BERGH, Yonkers, N. Y. Filed Dec. 31, 1913. Serial No. 809,726. (Cl. 23—1.)

1. A method of producing catalytic reactions which includes, first, providing a material to be acted upon, second, passing said material into a container, and, third, injecting a finely subdivided catalytic agent in the form of a dust cloud into the moving material.

2. A method of producing catalytic reactions which includes, first, providing a material to be acted upon, second, injecting a subdivided catalytic agent therein, and, third, controlling the temperature of the reaction by the direct injection of a temperature affecting medium into the material.

3. A method of producing catalytic reactions which includes, first, providing a material to be acted upon; second, passing said material into a container; third, injecting a finely subdivided catalytic agent in the form of a dust cloud into the moving material; and, fourth, controlling the temperature of the reaction by the direct injection of a temperature affecting medium into the material.

4. A method of producing catalytic reactions which includes, first, providing a material to be acted upon; second, injecting a subdivided catalytic agent therein; and, third, controlling the temperature of the reaction by the direct injection of a stream of air into the material.

5. A method of producing catalytic reactions which includes, first, providing a material to be acted upon; second, passing said material into a container; third, injecting a subdivided catalytic agent into the moving material; fourth, separating the catalytic agent from the material; and, fifth, returning the separated catalytic agent from the point of introduction and injecting it again into the succeeding material.

1,157,456. VACUUM-CLEANER. JAMES H. TAYLOR, Toledo, Ohio. Filed June 12, 1911. Serial No. 632,538. (Cl. 230—11.)



1. In a device of the described character, in combination, a frame, suporting-wheels for the frame, a fan and a fan-casing mounted upon the frame, a shaft for the fan, gears connected with the supporting wheels, two clutches in operative relation to the gears, arranged to positively drive the gearing during both the forward and backward movement of the mechanism, and a third clutch arranged to permit the fan to run independently of the gearing.

2. In a device of the described character, in combination, a frame, a single pair of supporting-wheels journaled upon the frame, a fan and fan-casing mounted upon the frame, a shaft for the fan, a train of gears—intermediate the supporting wheels and the shaft—adapted by the to-and-fro movement of the supporting wheels to rotate the

shaft, a clutch-mechanism in said train of gears which communicates motion to the fan in but one direction, and another clutch mechanism which permits the rotation of the fan in such direction independently of the train of gears.

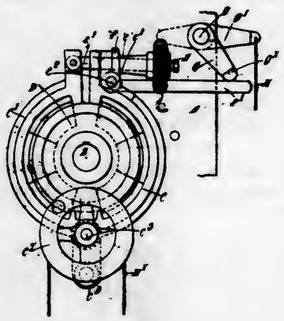
3. In a device of the described character, the combination of a frame, a pair of internally geared supporting wheels journaled upon the frame, a shaft journaled upon the frame, a pair of pinions fixed upon the shaft and in operative engagement with said internal gears, a pair of opposed beveled gear-wheels loose upon said shaft, for each beveled gear-wheel a clutch which operatively engages the wheel with the shaft in but one direction, a fan, a fan-shaft, a beveled pinion loose upon the fan-shaft and engaged at its opposite sides with the beveled gear-wheels, and a clutch which operatively engages the fan-shaft with the beveled pinion only in the direction of the movement of the fan.

4. In a machine of the class described, the combination with a traction wheel for driving, suction producing mechanism adapted to be driven thereby, and driving means between said mechanism and said traction wheel; of clutch means operatively connecting said driving means and said traction wheel, and other clutch means operatively connecting said driving means and said suction producing mechanism.

5. In a machine of the class described, the combination with a traction wheel for driving, suction producing mechanism adapted to be driven thereby, and driving means between said mechanism and said traction wheel; of one-way clutch means operatively connecting said driving means and said traction wheel, and other one-way clutch mechanism operatively connecting said driving means and said suction producing mechanism, whereby rotation of said traction wheel in one direction disconnects said driving means.

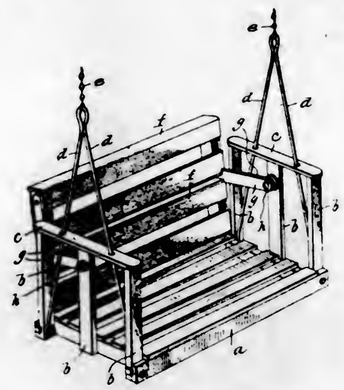
[Claim 6 not printed in the Gazette.]

1,157,457. PAPER-REEL BRAKE. ARTHUR TERREY, Hayes, England, assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 10, 1913. Serial No. 800,093. (Cl. 74—13.)



In a device for controlling the tension of a web, the combination of a reel adapted to have a roll of paper mounted thereon, a pair of brake-shoes pivotally connected together and frictionally engaging said reel between them for controlling the rotation of the reel as the web is drawn therefrom, a screw-threaded eye-bolt pivotally mounted on one of said brake-shoes and adapted to engage a slot in the other brake-shoe, a nut mounted on said eye-bolt for drawing said brake-shoes toward each other for tightening them relative to said reel, a bell-crank lever pivotally mounted on said slotted brake-shoe and having one arm interposed between said nut and the brake-shoe, and means for swinging said bell-crank lever for further tightening said brake-shoes relative to said reel.

1,157,458. PORCH FURNITURE. JAMES E. THOMPSON, Troy, Ala. Filed May 5, 1913. Serial No. 765,595. (Cl. 155—35.)



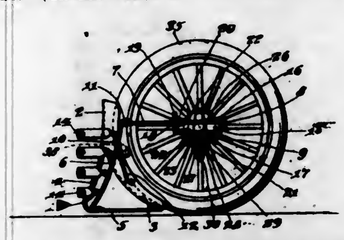
In combination, a seat frame, a vertically arranged arm frame at each end thereof comprising upright members and an arm rest board extending across the tops of said upright members, each board being provided with a pair of separated holes, a back rest pivoted at its opposite ends to the intermediate uprights of the arm frames, said arm frames being connected together only by the seat frame and the back rest, whereby the back rest may be adjusted to rest upon either longitudinal edge of the seat frame, suspension means at each end of the seat frame comprising a pair of rods connected together at their upper ends by a loop and diverging downwardly from said loop, these downwardly diverging parts passing through said holes in the arm rest boards, and means securing the inner faces of the lower extremities of the rods to the lower ends of the outer uprights of the arm frames at points approximately coincident with their connection to the seat frame.

1,157,459. RAILROAD-TIE AND RAIL-LOCK. ALVIN M. THREEWITS, Centerville, Ind. Filed Dec. 3, 1913. Serial No. 804,486. (Cl. 238—4.)



In combination with a hollow metal tie having its top provided with an elongated opening, of a rail clamp including a web or neck having its opposite sides rounded, a head formed with the neck and extending laterally from the rounded sides thereof, said head having its inner face provided with vertically disposed teeth and being formed with a rail engaging flange which extends the entire length of the head beyond the toothed portion thereof, the neck being of a length approximately equaling the thickness of the top of the tie and having its end opposite that provided with its head formed with lateral fingers extending in the same direction as the head, the said fingers adapted to engage with the underface of the top of the tie when the securing member is passed through the openings and rotated therein and the fingers of the web being formed upon their lower corners diametrically opposite that of the flange of the head with an outwardly projecting lug, a wedge member having one of its edges provided with transverse teeth throughout, the said wedge member adapted to be passed through the opening of the tie to bind against the end wall thereof and against the outer face of the clamp to have one of its teeth engage with the lug of the said clamp.

1,157,460 AUTOMOBILE-FENDER. RAY THROCKMORTON, Philadelphia, Pa. Filed Mar. 18, 1915. Serial No. 15,224. (Cl. 105—33.)



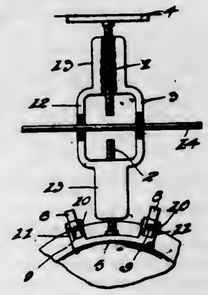
1. A vehicle fender comprising a frame swiveled to the front axle of the vehicle, a pair of wheel guards carried by said frame and arranged to move from side to side therewith, each wheel guard comprising an arcuate rear portion concavo-convex in cross section arranged to partially cover the vehicle wheel, a lower portion or skid, and a forward arcuate portion bowed inward from end to end and concavo-convex in cross section, said forward and rear portions being connected at their upper ends, and a plurality of outwardly bowed springs pivoted to the frame and disposed between the wheel guards.

2. An automobile fender comprising a frame, wheel guards carried by said frame, outwardly bowed springs carried by said frame and disposed between the wheel guards, and means for mounting the frame upon the automobile axle, whereby the same may be moved from side to side with the wheels, and be released to permit the descent thereof when coming in contact with a person or object.

3. An automobile fender comprising a frame, means for mounting said frame upon the axle so that it can move from side to side and be released, wheel guards each comprising an arcuate rear portion concavo-convex in cross section, a lower portion or skid, and a forward arcuate portion bowed in the opposite direction to the rear portion, and concavo-convex in cross section, the upper end of said forward portion being connected with the upper end of the rear portion, and outwardly bowed springs carried by the frame and disposed between the wheel guards.

4. An automobile fender comprising a frame, wheel guards carried thereby arranged to partially inclose the wheels of an automobile and act as a brake when the frame is released, outwardly bowed springs carried by the frame and disposed between the wheel guards, hooks carried by the inner end of the frame, clamps secured to the automobile axle, and swivel plates pivoted upon the clamps and arranged to be engaged by a portion of the frame and the hooks for releasably mounting the fender.

1,157,461. JACK. JAMES W. TUCKER, Argenta, Ark. Filed Jan. 25, 1915. Serial No. 4,279. (Cl. 254—33.)



1. A jack of the class described comprising an adjusting screw and a wheel tread engaging plate having a segmental or concaved face to fit the tread of a wheel, means carried by the plate for engaging the wheel to retain the said plate on the tread and adjusting means coöperating with the screw.

2. A jack comprising an adjusting screw, and a segmental wheel tread engaging plate on said screw, pivoted hooks for engagement with the flange of the wheel carried on said plate to adjust said screw.

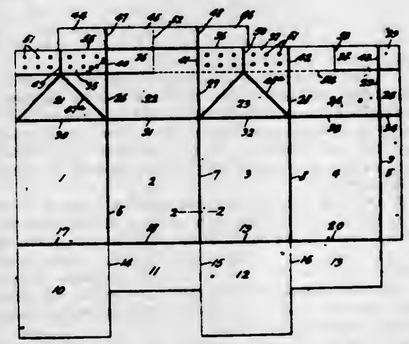
3. A jack comprising a rotatable frame, oppositely threaded adjusting screws movably carried by the frame, an object engaging plate carried on the outer end of one of the screws, an arcuate car wheel tread engaging plate carried on the outer end of the other of the screws and pivoted flange engaging hooks carried by said plate.

4. A jack comprising a rotatable frame, oppositely threaded adjusting screws movably carried by the frame, an object engaging plate carried on the outer end of one of the screws, an arcuate car wheel tread engaging plate carried on the outer end of the other of the screws, pivoted flange engaging hooks carried by said plate, and means to rotate said frame.

5. A jack comprising a skeleton frame, adjusting screws carried by the frame, said frame to be rotated to effect adjustment of the screws, said screws arranged to move outwardly from the frame in the opposite direction, an object engaging member carried upon the outer end of one of the screws, a wheel engaging plate carried upon the other of the screws and flange engaging members carried upon said plate.

[Claim 6 not printed in the Gazette.]

1,157,462. FOLDED-BLANK BOX. JOHN R. VAN WORMER, Toledo, Ohio, assignor to J. R. Van Wormer and Co., Toledo, Ohio. Filed Dec. 15, 1914. Serial No. 877,352. (Cl. 229—17.)



1. A box blank having side-wall portions, bottom-wall portions, top-wall portions, and closure portions; the closure portions being constructed and arranged to be opposed to each other and to project from the top-wall portions, and an end part of said closure portions being divided from the top-wall portions and the remainder of the closure portions by a horizontal weakened line and weakened lines extending from the ends of the horizontal weakened line.

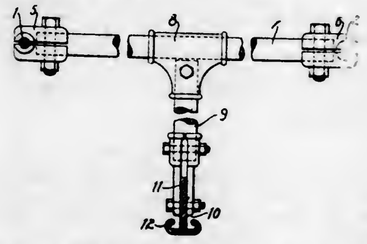
2. A box blank having side-wall portions, bottom-wall portions, top-wall portions, closure portions constructed and arranged to be opposed to each other and to project from the top-wall portions, and closure portions arranged at the opposite sides of the first-named closure portions, with reference to the top-wall portions, and constructed and arranged to be opposed to or lapped against the first-named closure portions; an end part of said closure portions being divided from the top-wall portions and the remainder of the closure portions by a horizontal weakened line and weakened lines extending upwardly from the ends of the horizontal weakened line.

3. A box comprising a top-wall portion, and a closure portion projecting from the top portion; said closure portion having an end part connected by a weakened line with the top portion and connected by another weakened line with the remainder of the closure portion.

4. A box comprising a top-wall portion, and a closure portion projecting from the top portion; said closure portion having an end part connected by a weakened line with the top portion and connected by another weakened line with the remainder of the closure portion, and the said top portion being constructed and arranged to be shaped into a spout subsequently to the removal of said end part of the closure portion.

5. A box comprising a top portion, and a closure portion projecting from the top portion and including a section that is joined to the top portion and the remainder of the projecting closure portion by a weak connection.

1,157,463. CATENARY STRUCTURE. THEODORE VARNEY, Pittsburgh, Pa. Filed July 17, 1914. Serial No. 851,460. (Cl. 191—41.)



1. A double catenary structure for an electric railway comprising two messenger cables disposed in close side-by-side relation in certain places and in spaced-apart relation in certain other places, and single hanger rods for the trolley conductor in both relations.

2. A double catenary structure for an electric railway comprising two side-by-side messenger cables disposed in contact relation in certain places and in spread apart relation in other places, single clamps and single hanger rods for the cables in contact relation, and separate clamps and single hanger rods for the cables in the spread-apart relation.

3. A double catenary structure for an electric railway comprising two side-by-side messenger cables disposed in juxtaposition along certain sections of the track and spaced apart along other sections of the track, single-clamp hangers for the juxtaposed sections, separate clamps and horizontal connecting members for the spaced-apart sections, and single hanger rods adjustably mounted on said connecting members.

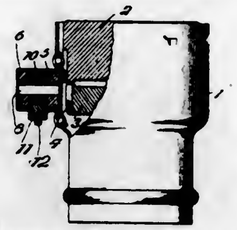
4. A double catenary structure for an electric railway comprising two side-by-side messenger cables adapted for use in juxtaposed or in spread-apart relation and single vertical hangers for suspending a trolley conductor therefrom in each relation.

5. A double catenary structure comprising two side-by-side messenger cables, clamps therefor, rigid horizontal members interposed between corresponding clamps, and substantially vertical trolley wire hangers adjustably suspended from said horizontal members.

[Claims 6 and 7 not printed in the Gazette.]

1,157,464. INCANDESCENT ELECTRIC LAMP. CLARENCE A. VETTER, Pittsburgh, Pa. Filed July 31, 1913, Serial No. 782,374. Renewed Jan. 7, 1915. Serial No. 1,047. (Cl. 173—356.)

1. In an incandescent lamp socket, the combination of a shell, a member rotatable therein, a fitting secured to said shell and provided with a key way and with a threaded bore crossing said key way, a key adapted to enter said key way and engage said rotatable member and hold the same against rotation and having a wrench head, and a set screw adapted to said threaded bore and having a head which is a complement of the wrench head.



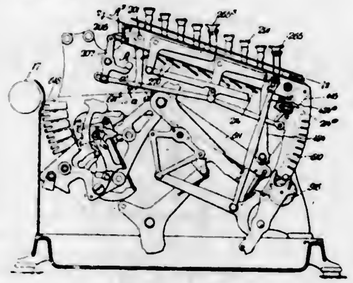
2. In an incandescent lamp socket, the combination of a shell, a member rotatable therein, a fitting secured to said shell and provided with a key way and with a passage crossing said key way, a key adapted to enter said key way and hold said rotatable member against rotation, and a barrier adapted to said crossing passage and having an operating portion adapted to be engaged by the key.

3. In an incandescent lamp socket, the combination of a shell, an insulating body whereof a part is stationary in the shell and a part rotatable with the lamp, means for holding said latter part against rotation, and a barrier arranged to prevent said holding means from engaging said rotatable part.

4. In an incandescent lamp socket, the combination of a shell provided with a key way, of a body of insulating material in said shell and stationary therein, of an insulating disk rotatable relative to said insulating body and with the lamp and located immediately adjacent said insulating body and provided on its periphery with a key engaging part which is removed from the lamp receiving threaded metal sleeve, and a key adapted to be inserted through said key way to engage only said insulating disk.

5. In an incandescent lamp socket, the combination of a shell provided with a key way, of an insulating body stationary in said shell, an insulating disk located directly adjacent said insulating body and rotatable thereon and with the lamp and projecting peripherally beyond the lamp receiving threaded metal sleeve and provided with a key engaging part, and a key adapted to be inserted through the key way in the shell and engage only said insulating disk.

1,157,465. ADDING AND LISTING MACHINE. JESSE G. VINCENT, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 16, 1910. Serial No. 582,330. (Cl. 235—60.)



1. In a machine of the class described, the combination of two accumulating departments each having a distinct set of differentially operable elements, and common means for differentially controlling the operable elements of the two sets to accumulate different amounts in the two departments by the same operation of said means.

2. In a machine of the character described, the combination of two accumulating departments each including a set of accounting elements and amount determining means therefor variously settable to differentially measure movements of accounting elements and common means for differentially controlling the amount determining means in the respective accumulating departments whereby to accumulate different amounts in the two departments by the same operation of said means.

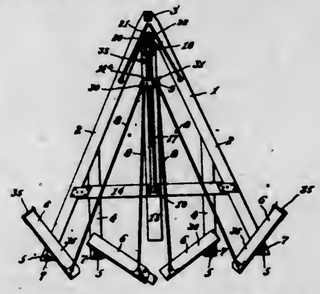
3. In a machine of the character described, the combination with accounting mechanism, of amount-determining mechanism divided into two departments one of which is equipped with manipulating devices, and connections for selectively and differentially setting amount-determining elements of the other department by the use of said manipulating devices.

4. In a machine of the character described, the combination of reciprocatory accounting elements in two departments, a differential stop for measuring movement of a reciprocatory element of one such department, and manipulative devices for differentially measuring movements of a reciprocating element of the other of such departments, said manipulative devices variously positioning the aforesaid differential stop.

5. In a machine of the character described, the combination of two departments of reciprocatory accounting elements, manipulative amount-determining devices for the accounting elements of one department, stop-devices for measuring movements of accounting elements of the other department and controlling connections from the manipulative devices to the last-mentioned stop-devices for permutably setting the latter.

[Claims 6 to 33 not printed in the Gazette.]

1,157,466. CONVEYING AND DISCHARGING APPARATUS. VICTOR VJECHA, Cleveland, Ohio. Filed May 29, 1914. Serial No. 841,739. (Cl. 57—13.)



1. In apparatus of the class described, the combination of a frame; a supporting floor tiltably mounted upon said frame; a screw rotatably mounted upon the latter; a rotatably-stationary nut mounted upon said screw; arms connecting said nut with said floor; and means for rotating said screw whereby said nut may be caused to move and tilt said floor.

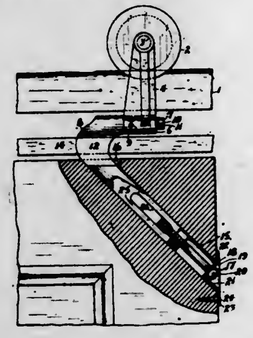
2. In apparatus of the class described, the combination of a frame; a supporting floor tiltably mounted upon said frame; a screw rotatably mounted upon the latter; a rotatably-stationary nut mounted upon said screw; arms connecting said nut with said floor; means for rotating said screw whereby said nut may be caused to move and floor tilt; and means for rendering said nut rotatable with said screw at predetermined positions in its travel.

3. In apparatus of the class described, the combination of a frame; a rotatable screw mounted upon said frame; a nut mounted upon said screw; means for non-rotatably holding said nut; and means located in the path of travel of said nut along said screw adapted to actuate said holding means to release said nut whereby the latter is rendered rotatable.

4. In apparatus of the class described, the combination of a frame; a rotatable screw mounted upon said frame; a nut mounted upon said screw and provided with a circumferentially located ratchet tooth; a strap mounted upon said nut in which the latter is rotatably mounted; a spring-actuated pawl normally engaging said ratchet tooth and mounted upon said strap; and an arm fixed to said frame and lying in the path of movement of said pawl, whereby the latter may be actuated to disengage the said nut and permit the latter to rotate in said strap.

5. In apparatus of the class described, the combination of a frame; a rotatable screw mounted upon the latter; a nut mounted upon said screw; a strap mounted upon the said nut in which the latter is rotatable; a spring-actuated pawl engaging a ratchet tooth formed on the circumference of said nut; a guiding strip parallel with said screw and secured to said frame; a guiding-groove in said strap into which said guiding strip projects; and an arm projecting into the path of movement of said pawl adapted to actuate the latter to disengage said ratchet tooth.

1,157,467. DOOR-HANGER. GEORGE F. VOIGHT, San Francisco, Cal. Filed Sept. 30, 1914. Serial No. 864,257. (Cl. 16—7.)



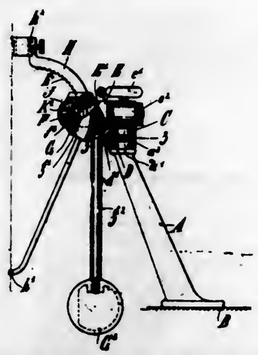
1. The combination with a door having a hole extending obliquely through an upper corner thereof from one side edge to its upper edge, a hanger having a lower portion fitting slidably in said hole and having an upper portion overhanging said lower portion, a plate resting against the side edge of the door and having a portion fitting in the lower end of said hole, and a screw extending through said portion of the plate and having a head housed therein, the shank of the screw threadedly engaging the lower end of the hanger.

2. The combination with a door having a hole extending obliquely through an upper corner thereof, the upper end of the hole being formed in its shorter side with a narrow vertical extension, a hanger having a lower portion fitting slidably in said hole and having an upper portion overhanging said lower portion, the hanger having a narrow portion between said upper and lower portions and adapted to be received by said extension of the hole, a plate resting against the door and having a portion fitting in the lower end of said bore, and a screw extending through said portion of the plate and having a head housed therein, the shank of the screw threadedly engaging the lower end of the hanger, and the lower portion of the hanger having a slot for receiving the shank of the screw.

1,157,468. SIGHTING DEVICE. OTTO RITTER VON ESSENHARD, Bredeney, near Essen-on-the-Ruhr, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Dec. 17, 1913. Serial No. 807,306. (Cl. 33—46.)

1. A sighting device for projectile-ejecting devices on air vehicles comprising a sight member, a reading-off means for indicating the "angles of ejection" of said projectile-ejecting device, said sight member being adjustable to correspond to the "angles of ejection," said means hav-

ing a member provided with an index, a second member carrying two intersecting series of curves, one of said series of curves representing the relations between the height of flight, the time necessary for traversing a horizontal distance proportionate to the height of flight, and the angle of ejection in such a manner, that a constant value of the two first-named magnitudes corresponds to each curve and that the coördinates of each curve represent the angle of ejection and said third magnitude; the other of said series of curves comprising curves of equal speed of flight, the first-named member of the reading-off means and said second member being adjustable relative to each other in the direction of the two coördinates, a gear for adjusting the reading-off means to the coördinate representing the angle of ejection, said gear simultaneously adjusting the angle of ejection of said sight member.



2. A sighting device for projectile-ejecting devices on air vehicles comprising a bracket, a revoluble shaft carried by the bracket, a pendulum hanging freely from said shaft and being provided with a circular guide-way, the axis of which is parallel with said shaft axis, a sight bar having aiming members, said sight bar being mounted to run in said guideway, indicating means actuated by said shaft for showing the angular adjustment of said sight bar, and consisting of a movable member and an index therefore; and a setting member for said index for imparting transversal displacement of said index relative to the direction of movement of said movable member, the setting thus indicating altitude of flight.

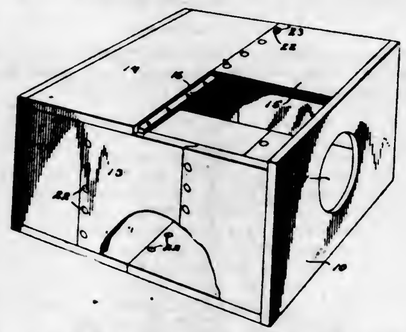
3. A sighting device for projectile-ejecting devices on air vehicles comprising a bracket, a revoluble shaft carried by the bracket, a pendulum hanging freely from said shaft and being provided with a circular guideway, the axis of which is parallel with said shaft axis, a sight bar having aiming members, said sight bar being mounted to run in said guideway, a drum and a pinion rigidly secured on said shaft, teeth on said sight bar in mesh with said pinion, an index for said drum, said drum having a suitable scale for reading the angular movement of said drum and said sight bar, a screw spindle on which said index is seated, said spindle having stationary bearings relative to said bracket, said spindle having a scale for indicating the axial displacement of said index relative said drum, the longitudinal axes of said drum and said spindle being parallel.

4. A sighting device for projectile-ejecting devices on air vehicles comprising a bracket, a revoluble shaft carried by the bracket, a pendulum hanging freely from said shaft and being provided with a circular guideway, the axis of which is parallel with said shaft axis, a sight bar having aiming members, said sight bar being mounted to run in said guideway, a drum and a pinion rigidly secured on said shaft, teeth on said sight bar in mesh with said pinion, an index for said drum, said drum having a suitable scale for reading the angular movement of said drum and said sight bar, a screw spindle on which said index is seated, said spindle having stationary bearings relative to said bracket, said spindle having a scale for indicating the axial displacement of said index relative said drum, the longitudinal axes of said drum and said spindle being parallel, said drum also being provided with a curve chart, each individual curve denoting a constant but different speed from its neighbor.

5. A sighting device for projectile-ejecting devices on air vehicles comprising a bracket, a revoluble shaft carried by the bracket, a pendulum hanging freely from said shaft and being provided with a circular guideway, the axis of which is parallel with said shaft axis, a sight bar having aiming members, said sight bar being mounted to run in said guideway, a drum and a pinion rigidly secured on said shaft, teeth on said sight bar in mesh with said pinion, an index for said drum, said drum having a suitable scale for reading the angular bar movement of said drum and said sight bar, a screw spindle on which said index is seated, said spindle having stationary bearings relative to said bracket, said spindle having a scale for indicating the axial displacement of said index relative said drum, the longitudinal axes of said drum and said spindle being parallel; said drum also being provided with a curve chart, each individual curve denoting a constant but different "stop-time" from its neighbor.

[Claims 6 and 7 not printed in the Gazette.]

1,157,469. SAFE OR VAULT JOINT. HJALMAR CASIMIR VON PHILP, Bethlehem, Pa. Filed July 6, 1915. Serial No. 38,313. (Cl. 109—1.)



1. A lap-joint for vault-walls, comprising a tongue on each plate to be joined, an abutment at the base and point of each tongue, said abutments being perpendicular to the main-plate surface, the intermediary surface joining said abutments running in inclined direction to said abutments, and means to draw said tongues together, said means acting perpendicularly to said intermediary surface whereby pressure is created at the abutments.

2. A lap-joint for vault-walls, comprising a tongue on each plate to be joined, an abutment at the base and point of each tongue, said abutments being parallel, the intermediary surface joining said abutments running in inclined direction to said abutments, and means to draw said tongues together, said means acting perpendicularly to said intermediary surface whereby pressure is created at the abutments, said means comprising bolts having tapered heads engaging in corresponding holes in the tongue of one plate and provided with threaded ends engaging the threaded holes in the tongue of the other plate.

3. A lap-joint for vault-walls, comprising a tongue on each plate to be joined, an abutment at the base and point of each tongue, said abutments being parallel, the intermediary surface joining said abutments running in inclined direction to said abutments, and means to draw said tongues together, said means acting perpendicularly to said intermediary surface whereby pressure is created at the abutments, said means comprising bolts having tapered heads engaging in corresponding holes in the tongue of one plate and provided with threaded ends engaging the threaded holes in the tongue of the other plate, the screw heads being provided with means for suitable engagement with a wrench for drawing up the bolts.

4. A vault-wall composed of a plurality of plates, the adjoining edges of the plates having correspondingly tapered tongues terminating with inter-engaging abutments, said abutments running across the plates and perpendicular to their surface, said tongues having alined bolt holes drilled in perpendicular direction to said taper, the holes being tapped in one plate and provided with conical countersink in the other plate, and suitable bolts for said holes, said bolts having flat faced projections on their heads whereby the bolts may be drawn up tight, thus creating pressure on said abutments.

5. A vault-wall composed of a plurality of plates, the adjoining edges of the plates having correspondingly tapered tongues terminating with inter-engaging abutments, said abutments running across the plates and perpendicular to their surface, said tongues having alined bolt holes drilled in perpendicular direction to said taper, the holes being tapped in one plate and provided with conical countersink in the other plate, and suitable bolts for said holes, said bolts having flat faced projections on their heads whereby the bolts may be drawn up tight, thus creating pressure on said abutments, the projecting portions of the bolt heads being adapted to be cut away after the joints have been formed.

1,157,470. LENS-BLANK MANUFACTURE. EDWARD A. VORNHOLT, Toledo, Ohio, assignor, by mesne assignments, to Kryptok Company, New York, N. Y., a Corporation of New York. Filed Aug. 25, 1913. Serial No. 786,580. (Cl. 49—82.1.)

1. The process of making blanks for bifocal lenses consisting in forming a seat in one lens element, holding a second lens element in tilted relation to said seat by pressure upon the edge of the second element and then subjecting the two elements to heat until the second element has settled into the seat in the first element.

2. The process of making blanks for bifocal lenses consisting in forming a seat in one lens element, supporting a second lens element at one point only adjacent to said seat and subjecting the elements to heat until the second element breaks down and rests throughout its face in contact with said seat.

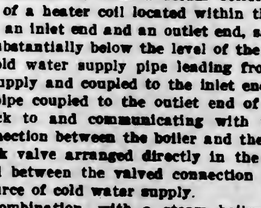
3. The process of making blanks for bifocal lenses which consists in forming a seat in one lens element, placing a second lens element over said seat, holding the second element in a tilted position by pressure upon one edge thereof and subjecting the assembled elements to heat until the second element has settled into the seat in the first element.

4. The process of making blanks for bifocal lenses consisting in forming a curved cavity in one lens element, forming a convex face on a second lens element, pressing the two elements together at one point of contact adjacent the edge of said cavity and thereby tilting one element with respect to the other and subjecting the elements to heat while thus held until the second element falls into and fills the cavity in the first element.

1,157,471. FEED-BAG. GEORGE W. WADDELL, Wilkes-Barre, Pa. Filed Nov. 23, 1914. Serial No. 873,516. (Cl. 119—67.)

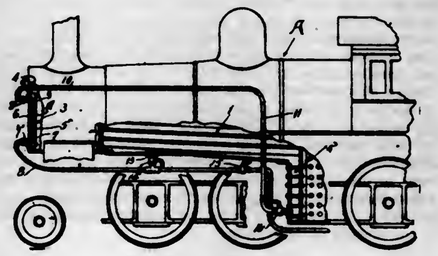
1. A feed bag comprising a rectangular metallic frame having the forward corners thereof coiled to produce eyelets, a bag of textile fabric suspended from the frame, a guard strip disposed across a portion of the forward end of the feed bag and secured to the frame, attaching chains provided with snap hooks secured to the rear end of the frame, and a fastening rope secured to one of the eyelets.

2. A feed bag comprising a rectangular metallic frame having the forward corners thereof coiled to produce eyelets, a bag of textile fabric suspended from the frame, a guard strip disposed across a portion of the forward end of the feed bag and secured to the frame, attaching chains secured to the rear portion of the frame, snap hooks carried by said chains and adapted to be fastened to some suitable portion of the body harness of an animal, a fastening rope secured to one of the eyelets and adapted to pass over a suitable portion of the body harness and be tied to the other eyelet for supporting the forward end of the bag.



3. In a device of the character stated an oblong frame formed from a single bar, the forward corners being coiled to produce eyelets, a bag supported by said frame comprising two sides and a bottom of textile fabric, said sides being so shaped that the rear portion of the bottom slants at a greater angle to the perpendicular than the front portion thereof, a guard strip disposed across the forward end of the bag and secured to the frame, a chain secured to the rear end of the frame adjacent each side, snap hooks secured to said chains and a rope secured to one of the eyelets and adapted to be tied to the other eyelet as shown and described.

1,157,472. FEED-WATER HEATER. CHARLIE V. WALLACE, Tulsa, Okla., assignor, by mesne assignments, to Economy Feed Water Heater Company, Tulsa, Okla., a Corporation. Filed Jan. 11, 1915. Serial No. 1,665. (Cl. 122—426.)

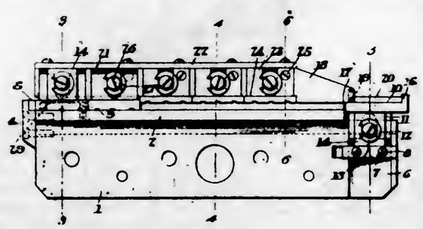


1. The combination, with a steam boiler including a smoke box, of a heater coil located within the smoke box and having an inlet end and an outlet end, said coil being arranged substantially below the level of the water in the boiler, a cold water supply pipe leading from a suitable source of supply and coupled to the inlet end of the coil, an outlet pipe coupled to the outlet end of the coil and leading back to and communicating with the boiler, a valved connection between the boiler and the supply pipe, and a check valve arranged directly in the supply pipe, and located between the valved connection to the boiler and the source of cold water supply.

2. The combination, with a steam boiler including a smoke box, and a door therefor, of a heater coil located within the smoke box and having inlet and outlet ends extending externally through said door, said coil being

located below the level of the water in the boiler, a cold water supply pipe leading from a suitable source of supply to the inlet end of the coil, an outlet pipe leading from the outlet end of the coil back to and communicating with the boiler, a conducting connection between the boiler and the supply pipe, said connection being disposed at a point between the source of water supply and inlet end of the coil, a valve in said connection, a controlling valve in the supply pipe between the source of water supply and said connection, a valve in the outlet pipe, and unions detachably coupling the supply and outlet pipes to the inlet and outlet ends of the coil on the exterior of the door.

1,157,473. TYPE-MOLD BOX. JOHN B. WALSH, Brooklyn, N. Y., assignor of one-fourth to Abraham Coleman and one-fourth to Solomon Coleman, New York, N. Y. Filed Feb. 16, 1915. Serial No. 8,566. (Cl. 199—13.)



1. A mold comprising a body member, a bracket member mounted upon the body member, a cap member adjustably mounted upon the bracket member, plate sections carried by the cap member, and a gage plate detachably mounted on the bracket member and engaging the cap member.

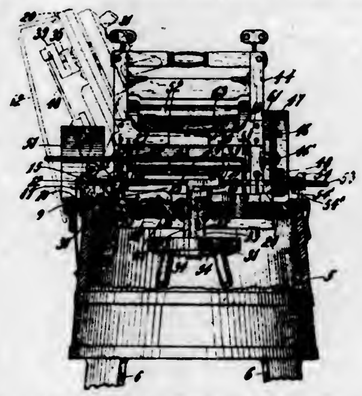
2. A mold comprising a body member, a bracket member mounted upon the body member for adjustment transversely thereof, a cap member carried by the bracket member, plate sections carried by the cap member, and a gage plate detachably mounted on the body member and engaging the bracket member.

3. A mold comprising a body member, a bracket member adjustably mounted thereon, a cap member adjustably mounted upon the bracket member, plate sections carried by the cap member and a gage plate detachably mounted on the bracket member and engaging the cap member.

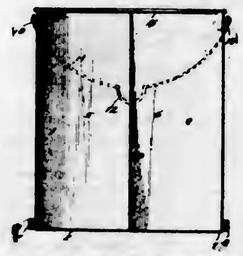
4. A mold comprising a body member, a bracket member mounted upon the body member for adjustment transversely thereof and having a slot disposed longitudinally of the body member, a cap member having a pin entering the said slot, a gage plate mounted upon the bracket member and engaging the cap member, plate sections adjustably mounted upon the cap member, a pin carried by the body member, one of said plate sections having a slot which receives said pin, a cleat carried by the body member and a block inserted in the cleat and engaging the edge of the slotted plate section.

1,157,474. GEARING FOR WASHING-MACHINES. ORLA H. WATKINS, Clinton, Iowa, assignor to Watkins and Fisher, a Copartnership consisting of Orla H. Watkins, Fred J. Fisher, Bruce V. Piper, and Walter C. Fisher, Kenosha, Wis. Filed Nov. 17, 1913. Serial No. 801,378. (Cl. 74—50.)

A gearing device comprising a fixed support, a supporting member hinged to said support, a power shaft on the fixed support, a worm on said shaft, a gear wheel rotatably mounted on the hinged supporting member and in mesh with said worm, a notched plate on the fixed support adjacent the worm, a tongue on the hinged member adjacent the gear, said tongue and notch coöperating to aline the worm and wheel when the hinged member is in closed position, an upright shaft journaled in the hinged supporting member, a lever pivotally secured to the hinged member and having a recess therein, a crank mounted on the upright shaft and slidably and pivotally connected to said lever within the recess thereof, a pitman pivotally connected to said gear wheel and lever whereby the continuous rotation of the power shaft will horizontally reciprocate said upright shaft.

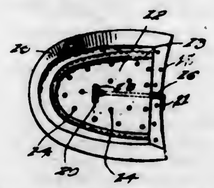


1,157,475. PAINT-POT. ARTHUR C. WEBSTER, Peckville, Pa. Filed Jan. 9, 1915. Serial No. 1,409. (Cl. 91—66.)



In a paint pot, the combination with a cylindrical body having a flat bottom, a transverse vertical partition across the center of said body and rising from its bottom to a point nearly flush with the upper edge of said body so as to divide the latter into separate compartments, and individual outlets from the lowest portions of said compartments; of a cover removably closing the upper end of the body and resting on the upper edge of the partition, ears on the exterior of said body at points on a line at right angles to the plane of said partition, and a wire bail connecting said ears and adapted to pass the edge of the cover, said bail being curved and having an offset at its mid-length, for the purpose set forth.

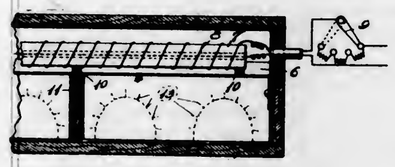
1,157,476. DETACHABLE HEEL. DAVID WEISS, New York, N. Y. Filed June 12, 1915. Serial No. 33,743. (Cl. 36—42.)



1. A detachable heel construction comprising a plate connected to the heel seat portion of a sole, said plate having a slot therein extending transversely of said plate, a detachable heel section, a plate connected to said detachable heel, the plate having a marginal flange to receive the first named plate, said second named plate having a slot, said detachable heel having a recess in alinement with the slot, and a pivoted lock having a T-head to engage said slot when turned and said lock having a finger hold at the breast of the heel.

2. A detachable heel construction comprising a plate connected to the heel portion of the sole, and having a slot therein, a detachable section, a plate connected to said detachable heel and having a recess aliming with the slot in the first named plate, said plates adapted to engage one with the other, and a pivoted lock having a T-head to engage the recess and slot in the two plates to hold them locked together.

1,157,477. SHOE HEATING AND VULCANIZING APPARATUS. THOMAS F. WHELAN, St. Louis, Mo., assignor to Savoday Rack Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 2, 1909, Serial No. 531,009. Renewed Mar. 21, 1914. Serial No. 826,396. (Cl. 34—26.)



1. An apparatus of the character described, in the form of a shoe rack, the same comprising a series of shelves, an elongated compartment arranged along the edge of each shelf, heat generating means in each compartment, means for regulating heat generated thereby, a non-metallic and non-heat conducting lining for said compartment, and a series of openings through which the toes of shoes resting on said shelves may be introduced into the compartment to be heated.

2. In an apparatus of the character described, a support for shoes, in combination with a compartment having a series of openings leading thereinto through which the toes of shoes are introduced into said compartment, the edges around said openings being flexible so as to make close contact with the shoes, a heat generating medium within the compartment, means for regulating the heat thereof, and partition walls within the compartment for preventing undue circulation of air.

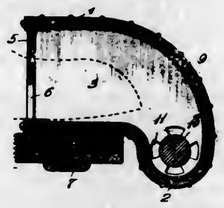
3. An apparatus of the character described in the form of a shoe rock, the same comprising a series of supports for lasted shoes, elongated compartments adjacent said supports for receiving the toes only of the lasted shoes, heat-generating means in each compartment, and means for regulating the heat generated in said compartments.

4. An apparatus of the character described in the form of a shoe rack, the same comprising a series of supports for lasted shoes, elongated compartments adjacent said supports for receiving the toes only of the lasted shoes, continuous heat-generating means extending from end to end of each compartment, and means for regulating the heat generated in said campartments.

5. In an apparatus of the character described, a support for shoes in combination with an elongated compartment having a series of openings leading thereinto through which the toes of shoes are introduced into said comportment, the edges around said openings being of non-heat-conducting material and being made flexible so as to make close contact with the shoes, a heat-generating medium within the compartment, and means for regulating the heat generated thereby.

[Claims 6 to 14 not printed in the Gazette.]

1,157,478. METHOD OF DRYING SHOES. THOMAS F. WHELAN, St. Louis, Mo., assignor to Savoday Rack Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 17, 1909, Serial No. 533,533. Renewed Mar. 9, 1915. Serial No. 13,218. (Cl. 12—142.)



1. The herein described step in the method of manufacturing box toes of shoes which consists in subjecting the toe only of the shoe, while it is stretched over the last and the pores thereof open, to circulating heated air, the upper of said lasted shoe being protected from damage by the heated air.

2. The herein described step in the method of manufacturing box toes of shoes which consists in subjecting the toe portion only of the shoe, while it is stretched over the last and the pores thereof open, to circulating heated air, said air being directed upon the top of the toe of the shoe so as to draw the moisture from the paste through the stretched leather, the upper of the shoe being protected from damage by the circulating heated air during this drying operation.

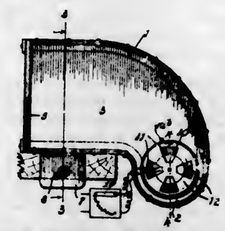
3. The method of drying shoes comprising confining the toes only of the shoes in a chamber while the remaining portions of the shoes project therefrom and creating a heated current of air in said chamber which sweeps over and downwardly upon said toes before passing out of said chamber.

4. A method of drying shoes comprising confining the toes only of the shoes in a chamber while the remaining portions of the shoes project therefrom and creating a heated current of air in said chamber which sweeps over and downwardly upon said toes and then passes out of said chamber through the openings through which the toes extend.

5. The method of drying shoes, which comprises applying to the toe portion only of a shoe heated air of a temperature sufficient to remove the moisture from the box, and protecting the upper of the shoe from damage by said heated air.

[Claims 6 and 7 not printed in the Gazette.]

1,157,479. APPARATUS FOR TREATING UNFINISHED SHOES. THOMAS F. WHELAN, St. Louis, Mo., assignor to The Savoday Rack Company, St. Louis, Mo., a Corporation of Missouri. Filed Aug. 25, 1910. Serial No. 578,930. (Cl. 34—26.)



1. An apparatus for use in the process of treating unfinished shoes, comprising a housing inclosing an open chamber, the front wall of which is partially cut away for the insertion of the toes of shoes, the top and back wall being formed in a curved surface extending from the top of the front wall to a point back of and below the bottom

wall, and a heat generating medium arranged adjacent said curved wall.

2. An apparatus for use in treating unfinished shoes which comprises a heating chamber pivoted with an air space entirely around the toe portion of the shoe, heat generating means within said chamber, there being ventilator openings in the walls of said chamber, means for regulating the size of said openings, there being also openings in the front wall of said chamber of such a size as to receive the toe portions only of the shoes, and means for regulating the heat in said chamber.

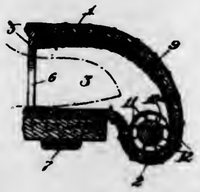
3. An apparatus for treating unfinished shoes, comprising a compartment inclosed by walls, the front wall being partially cut away for the insertion of toes of shoes, the bottom wall acting as a support for the toes of the shoes, and the top and side wall being curved from the top of the front wall to a point below and in the rear of the bottom wall, thus forming an unobstructed compartment for the toe of the shoe, with an air space between the toe and the walls of the compartment, and a heat generating medium arranged adjacent the back wall.

4. An apparatus for treating unfinished shoes, comprising a casing provided with an asbestos lining and having a series of openings for the insertion of the toes of shoes, said casing being provided with a compartment extending below and in the rear of the bottom of the casing in the front portion thereof, and a heating medium located in said chamber for applying heat directly to the toe of the shoe only.

5. An apparatus for treating unfinished shoes, comprising a casing having a plurality of openings therein, partition walls between certain of said openings, said casing being provided with a chamber located below and in the rear of the bottom of the casing in the front portion thereof, and heating devices arranged in said chamber for the purpose of supplying heat to dry out the toes of the shoes.

[Claims 6 to 10 not printed in the Gazette.]

1,157,480. METHOD OF TREATING SHOES. THOMAS F. WHELAN, East Orange, N. J., assignor to Savoday Rack Company, St. Louis, Mo., a Corporation of Missouri. Original application filed Dec. 17, 1909, Serial No. 533,533. Devided and this application filed Mar. 15, 1915. Serial No. 14,415. (Cl. 91—71.)



1. That improvement in processes of refinishing patent leather shoes which comprises subjecting patent leather portions of the shoes to heated air at a sufficient temperature to bake the enamel, said air being confined within a substantially closed compartment around the said patent leather portions.

2. That improvement in processes of refinishing patent leather shoes which comprises confining patent leather portions of the shoes in a chamber while the remaining portions of the shoe upper project therefrom, and subjecting the portions in the chamber to a current of heated air which moves over and downwardly upon said patent leather portions before passing out of said chamber.

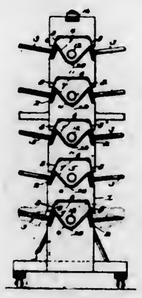
3. That improvement in processes of refinishing patent leather shoes which comprises confining patent leather portions of the shoes in a chamber while other portions project through openings therein, and subjecting the portions in the chamber to a current of heated air which moves over and downwardly upon said patent leather portions and then passes out of said chamber through the said openings.

4. That improvement in processes of repairing damaged patent leather shoes which comprises applying enamel to the damaged patent leather portions of the shoes, confining such portions in a chamber and subjecting them to a current of heated air at a temperature sufficiently high to bake the enamel.

5. That improvement in processes of repairing patent leather shoes which comprises applying enamel to the damaged patent leather portions, and then subjecting the damaged portions to a current of heated air, the remaining portions of the shoe being substantially protected from the circulating heated air during this operation.

[Claims 6 to 9 not printed in the Gazette.]

1,157,481. DEVICE FOR FORMING BOX-TOES ON SHOES. ADAM J. BUCH, Portsmouth, Ohio, assignor, by mesne assignments, to Savoday Rack Company, St. Louis, Mo., a Corporation of Missouri. Filed July 12, 1910. Serial No. 571,605. (Cl. 34—26.)



1. An apparatus for drying shoes, comprising a heating medium adapted to continuously maintain heat of a temperature sufficient to dry out the toe portions of shoes, shoe supports oppositely arranged with reference to said medium and constructed to support shoes with their toes extending toward each other into position to be heated by said medium, and means forming a part of said apparatus for protecting the parts of the shoes other than the toe portions from the heat radiated by said heating medium.

2. An apparatus for drying shoes, comprising a heating medium, shoe supports oppositely arranged with reference to said medium and constructed to support shoes with their toes extending toward each other, and a casing arranged to inclose the toe portions of the shoes constructed and arranged to confine the application of air heated by said medium to the toe portions only of the shoes sustained by said supports.

3. An apparatus of the character described, comprising a casing having apertures in its opposite side walls shaped to receive the toe portions only of shoes, shoe supporting means positioned adjacent to said apertures, and means for heating the interior of said casing.

4. An apparatus of the character described, comprising an elongated casing having apertures in its opposite side walls shaped to receive the toe portions only of shoes, shoe supporting means arranged to sustain shoes with their toes in said apertures, and a heating medium in said casing below the level at which the toe portions of the shoes project therein.

5. A rack for drying the toe portions of shoes, comprising an elongated casing having a series of openings in each of its opposite side walls for the reception of the toe portions only of shoes, shoe supports positioned adjacent to said series of openings and constructed to sustain the shoes with their toes in said openings, and a heating medium in said casing.

[Claims 6 and 7 not printed in the Gazette.]

1,157,482. DEVICE FOR TREATING SHOES. THOMAS F. WHELAN, Kirkwood, Mo., assignor to Savoday Rack Company, St. Louis, Mo., a Corporation of Missouri. Filed May 11, 1911. Serial No. 626,536. (Cl. 12—1.)



1. A device for treating shoes, comprising a shoe-receiving compartment adapted to receive the toe portions of shoes, a fluid-containing compartment having communication therewith and adapted to contain a fluid, and a heating device disposed in said fluid-containing compartment and adapted to vaporize a fluid therein; portions of said shoe-receiving compartment being shaped and arranged to direct vapor arising from said fluid-containing compartment downwardly upon the portion of shoes contained in said shoe-receiving compartment.

2. A device for treating shoes, comprising a shoe-receiving compartment, a chamber adapted for the reception of fluid communicating therewith, vapor-generating means in said chamber, said shoe-receiving compartment being provided with apertures for the reception of a portion of a shoe, said compartment also having a portion adapted to guide vapor arising from said chamber downwardly upon the portions of shoes contained in said compartment.

3. A device for treating shoes, comprising a chamber adapted for the reception of liquid, vapor-generating means located therein, a shoe-receiving casing provided with apertures in opposite sides thereof adapted for the reception of a portion of a shoe, and shoe supports disposed in coöperative relationship to said apertures; said shoe-receiving casing having communication with said chamber by virtue of which vapor may be supplied to said casing from said chamber.

4. A device for treating shoes, comprising vapor-generating means, shoe-receiving compartments disposed laterally at either side of said means and having communication therewith, and shoe supports disposed in coöperative relationship to said shoe-receiving compartment.

5. A device for treating shoes, comprising a casing having a medially disposed trough for the reception of fluid, vapor-generating means therein, said casing being formed with shoe-receiving compartments disposed laterally at either side of said trough and adapted for the reception of portions of shoes, and supports for shoes disposed in coöperative relationship to said casing.

[Claims 6 to 13 not printed in the Gazette.]

1,157,483. APPARATUS FOR TREATING SHOES. THOMAS F. WHELAN, Newark, N. J., assignor to Savoday Rack Company, St. Louis, Mo., a Corporation of Missouri. Original application filed May 11, 1911, Serial No. 626,536. Divided and this application filed Nov. 29, 1911. Serial No. 663,046. (Cl. 34—26.)



1. A rack for drying shoe tips by artificial heat comprising superimposed compartments arranged in pairs and formed by deflecting the top wall of each compartment, the bottom wall of each compartment being deflected downwardly to receive the heating medium.

2. A shoe drying apparatus for drying the tips only of shoes, the same comprising a pair of oppositely arranged elongated compartments having openings through their opposite walls, means for supporting the shoes outside of said openings, and a heating medium intermediate the pair of compartments.

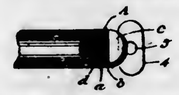
3. A rack for drying shoe tips by artificial heat, comprising a series of pairs of oppositely arranged compartments for receiving parts of shoes, a support for the shoes adjacent and outside each compartment, a single heating device in communication with each pair of said compartments, said compartments having openings communicating with the atmosphere.

4. In a device of the character described, a rack for drying shoes comprising pairs of oppositely arranged heating compartments, said compartments having openings in their outer side walls to receive the tips of shoes, means adjacent said openings to support the shoes and a heating medium arranged in communication with each pair of said compartments.

5. In a device of the character described, a rack for drying shoes comprising pairs of oppositely arranged heating compartments having openings in their outer walls for the reception of tips of shoes, a heater intermediate of said openings and means for supporting the shoes adjacent and outside the said openings.

[Claims 6 to 10 not printed in the Gazette.]

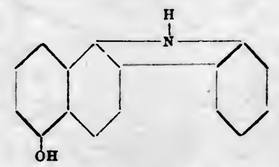
1,157,484. PIPE-LINE FOR OIL-STOVES AND OTHER PURPOSES. FRED E. WHITE, Gardner, Mass., assignor to Central Oil and Gas Stove Co., Gardner, Mass., a Corporation of Massachusetts. Filed May 24, 1915. Serial No. 30,217. (Cl. 137—76.)



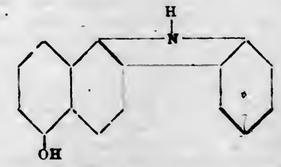
In combination with a pipe line, a disk closing the end thereof, having an opening central thereof, of less diameter than the pipe, a screw plug of uniform diameter throughout and fitting said opening which is threaded to receive it, a handle for the plug and a lead washer carried by the screw plug, and contacting with the disk to make a liquid tight joint, substantially as described.

1,157,485. MANUFACTURE OF BLACK VAT DYE-STUFFS. EDWARD WRAY, Biebrich, Germany, assignor to the Firm of Kalle and Company, Aktiengesellschaft, Biebrich, Germany. Filed July 17, 1913. Serial No. 779,686. (Cl. 8—1.)

1. A process for producing black vat dye-stuffs which consists in condensing mono-chloro-isatin-alpha-derivatives with pheno-oxy-naphtho-carbazole of the following formula,

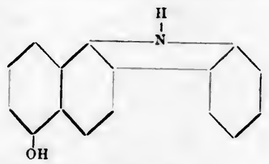


2. A process for producing black vat dye-stuffs which consists in condensing para-chloro-isatin-alpha-para-chloro-anilid with pheno-oxy-naphtho-carbazole of the following formula,



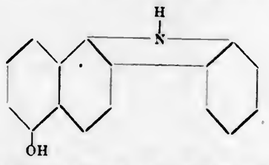
3. A process for producing black vat dye-stuffs which consists in heating mono-chloro-isatin-alpha derivatives

with pheno-oxy-naphtho-carbazole of the following formula:

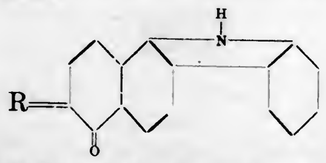


in the presence of acetic anhydrid.

4. A process for producing black vat dye-stuffs which consists in heating in the presence of acetic anhydrid, mono-chloro-isatin-alpha-para-chloro-analid with pheno-oxy-naphtho-carbazole, of the following formula:

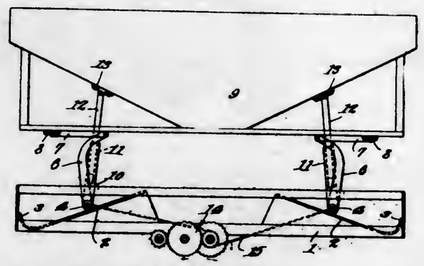


5. As new products black vat dye-stuffs obtainable by combining mono-chloro-isatin-alpha-derivatives with a pheno-oxy-naphtho-carbazole derived from alpha-naphthylamin, said products having the following graphically represented formula:



in which formula R stands for a monochlor-isatin radical.
[Claim 6 not printed in the Gazette.]

1,157,486. DUMP-WAGON. THOMAS WRIGHT, Jersey City, N. J. Filed June 21, 1913. Serial No. 775,115. (Cl. 21—86.)



1. A wagon including a supporting element, a body element, oppositely disposed groups of lifting arms interposed between said elements, each group including a cam-shaped arm and a supplemental arm and a single actuating means for simultaneously shifting said groups toward each other to bring the cam-shaped arm and the supplemental arm of each group successively into action to elevate the body element.

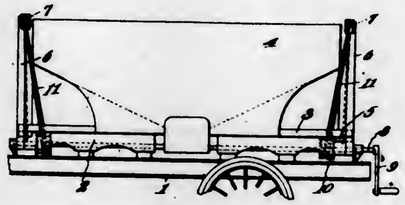
2. A wagon including a supporting element, a body element, oppositely disposed similar groups of lifting arms interposed between said elements, each group including a cam-shaped arm and a supplemental arm, a single actuating means for shifting the groups toward each other upon one of said elements, movable connections between the arms of each group and the other element, said cam-shaped arm and supplemental arm of each group operating successively to elevate the body element relative to the supporting element during the movement of said groups toward each other.

3. A wagon including a supporting element, a body element, oppositely disposed similar groups of lifting arms interposed between said elements, each group including a cam-shaped arm and a supplemental arm pivotally connected movable connections between the arms of each group and one of the elements, and a single actuating means for shifting the opposed groups of arms toward each other upon the other element, the cam-shaped arm and supplemental arm of each group operating successively during such movement, to elevate the body element relative to the supporting element.

4. A wagon including a chassis, a body normally resting thereon, cam-shaped lifting arms oppositely disposed on the chassis, supplemental lifting arms connected to the first named arms, link connections between the cam shaped arms and the body, movable connections between the supplemental arms and the body, and a single actuating means for shifting all of the oppositely disposed arms toward each other simultaneously to bring the supplemental arms and the cam shaped arms successively into action to elevate the body relative to the chassis.

5. A wagon including a supporting structure, a body normally mounted thereon, inclined elements upon the supporting structure and converging upwardly toward the center of the said structure, cam shaped lifting arms oppositely disposed, link connections between said arms and the body, supplemental lifting arms movable with the first named arms, movable connections between said supplemental arms and the body and a single actuating means for shifting all of the oppositely disposed arms simultaneously toward each other and along the inclined elements to bring the supplemental arms and the cam shaped arms successively into action to continuously elevate the body relative to the supporting structure.
[Claims 6 and 7 not printed in the Gazette.]

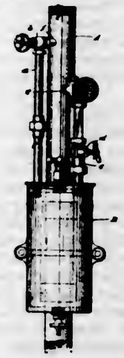
1,157,487. BODY-ELEVATING MECHANISM FOR VEHICLES. THOMAS WRIGHT, Jersey City, N. J. Filed Dec. 27, 1913. Serial No. 809,026. (Cl. 21—86.)



1. An attachment for the chassis of a vehicle, comprising a superstructure adapted to rest upon and to be secured to the chassis, of posts upstanding from said superstructure, a body supporting frame extending between the posts and normally resting upon said superstructure, a body upon said frame, a longitudinally extending shaft journaled upon the superstructure, revoluble elements supported by the posts and adjacent the sides of the two ends of the body, flexible hoisting elements mounted on said revoluble elements and connected to the two sides of each end of the body supporting frame, said shaft being extended beyond the ends of the body supporting frame and constituting means for simultaneously actuating the flexible hoisting elements to raise and lower the frame relative to the superstructure, all portions of the shaft and the parts mounted thereon being disposed above the bottom of the superstructure.

2. An attachment of the class described, including a superstructure adapted to rest upon and be secured to the chassis of a motor vehicle, posts upstanding from the corner portions of the superstructure, a longitudinal shaft journaled within the superstructure, revoluble elements supported by the posts, flexible elevating elements disposed in pairs, the elements of each pair being secured at one end to the shaft, means for adjustably connecting the elements of each pair at their other end, the said flexible elevating elements of each pair coöperating to form a swing, a body supporting frame normally resting on the superstructure and extended at its ends into engagement with the respective swings, and means for rotating the shaft to raise or lower the body supporting frame relative to the superstructure.

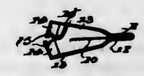
1,157,488. LUBRICATOR. WILLIAM WRIGHT, Bradford, Pa., assignor to Bovaird & Seyfang Manufacturing Company, a Corporation of Pennsylvania. Filed June 19, 1915. Serial No. 35,084. (Cl. 184—50.)



1. In combination a flanged cup adapted to contain lubricant, a pipe connecting therewith adapted to feed steam thereto to raise the oil therein by condensation of the water, a discharge pipe leading from said lubricator cup for the oil or oil and water, and a filling plug for the lubricator cup independent of the steam inlet and oil outlet pipes, said plug having two passages whereby the oil may be supplied to the cup and the pressure within the cup allowed to be vented without interference, substantially as described.

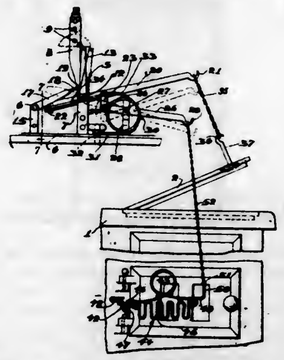
2. In combination a lubricator cup, a steam line, an inlet pipe from said steam line to the lubricator cup for supplying water of condensation to raise the water in said cup, an outlet for the oil and water from the lubricator cup to the steam line, a filling plug having an opening for the inlet of oil and the exit of pressure, said filling plug being independent of the steam inlet, said cup having oil outlet pipes, and a depression or recess in the top thereof adapted to receive the oil and to allow the same to be discharged through the filling plug when the same is open, the said recessed top being subjected to the heating action of the steam and this tending to liquefy the oil, substantially as described.

1,157,489. LETTER-OPENER. HORACE M. YORKE, Freeport, Me. Filed Sept. 22, 1914. Serial No. 862,974. (Cl. 120—35.)



As a new article of manufacture, a letter opener comprising a body formed of a single piece of spring-like material bent in a substantially U-shaped form to provide diverging sides and inwardly bent portions having cutting edges, with one of said portions adapted to overlap the other when pressure is exerted on the sides, and a blade lying between the sides and having its inner end secured rigidly to the body by its inner extremity, said inwardly bent portions being inclined relatively to the longitudinal edges of said body and inclined relatively to each other.

1,157,490. DRAFT-REGULATOR. ANDREW J. ANDERSON, Parsons, Pa. Filed Mar. 5, 1915. Serial No. 12,360. (Cl. 161—8.)



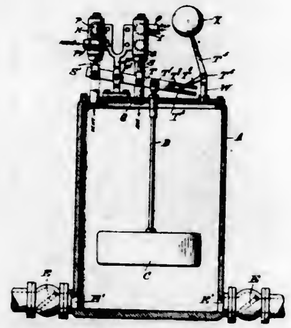
1. A draft regulator of the character described comprising a support, adapted to support an alarm clock, a lever pivoted to the support, said lever engaging the hammer of the alarm clock, an arm pivoted to the support, means carried by the arm to attach the same to a stove lid, an upright, a latch pivoted to the upright, said latch being arranged to engage the arm to hold the stove lid engaging end upwardly, a second upright, a lever pivoted to the second upright, a link connecting the arm with the second mentioned lever, a flexible connection at the free end of the second mentioned lever, a spring arranged to be secured to the slide knob of an ash pit door and to the hinge of said door to cause the slide to open, a retainer pivoted to hold the slide closed, and a flexible connection between the retainer and the last named lever to cause the retainer to release the slide and permit the same to open at a predetermined time.

2. A draft regulator of the character described comprising a base, a support secured to the base, an angular extension at the upper terminal of the support, said angular extension arranged to support an alarm clock, a lever pivoted to the support, an angular extension on the lever to engage the hammer of the alarm clock, an arm pivoted to the support, means carried by the base to release the arm and permit the same to swing downwardly upon movement of the lever, a hook at the end of the arm, a flexible connection secured to the hook, means carried by the flexible connection to hold a stove lid upwardly when the device is in a set position, an upright secured to the base, an arm pivoted to the upright, a link connected to the first and last mentioned arms, a hook at the free end of the last named arm, a flexible connection on the hook, and means carried by the flexible connection to release the slide knob of the feed and ash pit door to permit the same to move and thereby cause the draft to pass through the fire.

1,157,491. AUTOMATIC EJECTOR-VALVE FOR SUMPS. WILLIAM P. ANDERSON, New York, N. Y. Filed July 7, 1914. Serial No. 849,516. (Cl. 103—8.)

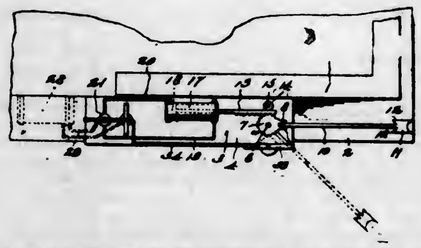
1. A sump valve apparatus comprising, in combination with a sump tank, a fluid pressure casing and a vent casing, each divided by an apertured partition into two compartments, valves regulating the apertures in said casing, stems movable each through an end of the casing and adapted to alternately raise the valves from their seats, a lever pivotally mounted upon the tank and having pivotal connections with said stems, a float having a stem

pivotally connected to said lever, the end of the latter being slotted, an angle lever pivotally mounted upon the sump and having a hook at one end movable within said slot and a weight at its other.



2. In combination with a sump tank, a forked bracket member fastened thereto, valve casings mounted upon the arms of said member, each casing having an apertured partition dividing the casing into two compartments, pipes leading one from each compartment, a valve regulating each opening in said partitions, stems movable one through the end of each casing and adapted to alternately raise the valves from their seats, a lever, pivotally mounted upon said bracket member and having pivotal connections with said stems, one upon either side of the member, one end of said lever being slotted, a float movable through the top of the tank and having pivotal connection with said lever, a post secured to the top of the tank, an angle lever pivotally mounted upon said post, a hook projecting from one arm of the lever and movable within said slot, and a weighted member upon the other end of the angle lever.

1,157,492. POLING DEVICE FOR RAILROAD-CARS. RUSSELL ARTHUR, Erwin, W. Va., assignor of one-third to Elijah P. Cummings, Erwin, W. Va. Filed Jan. 27, 1915. Serial No. 4,713. (Cl. 213—18.)



1. In a poling device for railway cars, a pole mounted for horizontal and pivotal movement, means for moving the pole horizontally, and means for moving the pole vertically, said pole normally lying out of operative relation with said second named means and brought into operative position with respect thereto when moved horizontally in one direction.

2. In a poling device for railway cars, a pole mounted for horizontal and pivotal movement, means for moving the pole horizontally, and means for moving the pole vertically, said pole normally lying out of an operative position relative to said second named means and brought into operative position with respect thereto when moved horizontally in one direction, said first named means being constructed for holding said pole against accidental movement when in a car engaging position.

3. In a poling device for railway cars, a gear rotatably carried by an engine tender, a pole pivotally connected to said gear for vertical movement independent of the gear and for horizontal movement synchronously with the gear, a motor associated with said gear for moving said pole into or out of car engaging position, and manually operable means for controlling the operation of said motor.

4. In a poling device for railway cars, a gear rotatably carried by an engine tender, a pole pivotally connected to said gear for vertical movement independent of the gear and for horizontal movement synchronously with the gear, a motor associated with said gear for moving said pole into or out of a car engaging position, manually operable means for controlling the operation of said motor, and a second motor for engaging said pole when in a car engaging position for moving it in a vertical plane.

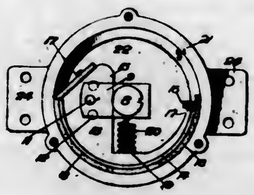
5. In a poling device for railway cars, the combination of a bracket for attachment to the tender of a locomotive engine, a stub axle extending vertically from said bracket, a gear rotatably mounted upon said stub axle, a pole operatively connected to said gear for movement into or out of a car engaging position upon rotation of said gear, and means for automatically rotating said gear.

[Claims 6 to 11 not printed in the Gazette.]

1,157,493. PROCESS FOR MAKING DIE-PLATES. WALTER R. BARDSLEY, Philadelphia, Pa. Filed Jan. 27, 1915. Serial No. 4,765. (Cl. 101—205.)

A method of making a metallic die for use in embossing, consisting in cleansing a metallic surface, coating the same with an albumen solution and drying the same in a subdued light and upon which an impression is made by the use of ink, after which to the surface of the plate is applied a fine opaque powder, afterward exposing the plate to light a sufficient length of time to cause the sensitised solution to the plate to be insoluble in water, afterward washing the plate with a solvent to remove the ink and powder from the plate, then treating the surface of the plate with a coating of lithograph transfer ink, immersing the plate in liquid, washing off the portions which have not been exposed to the light, afterward applying suitable etching powder to the surface and heating until the powder melts, and afterward etching the plate.

1,157,494. SHOCK-ABSORBER FOR VEHICLES. THOMAS ANDREW BELL, Kew, Melbourne, Victoria, Australia. Filed Nov. 10, 1914. Serial No. 871,374. (Cl. 21—105.)



1. Improvements in shock absorbers for vehicles, consisting in a drum, a crank shaft having a crank pin mounted in said drum, a brake segment having a free advancing end pivoted to the crank pin, means for adjusting the crank pin in relation to the segment, said advancing end forming a limit stop to engage the crank, a brake lining carried by the segment and engaging the drum, and a spring disposed between the segment and crank shaft.

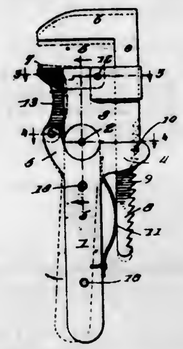
2. Improvements in shock absorbers for vehicles, consisting in a drum, a crank shaft, having a crank pin mounted therein, a brake segment having an advancing end pivoted to the crank pin, a series of adjusting holes in said advancing end, said advancing end forming a limit stop to engage the crank, a spring disposed between the crank shaft and the segment, and means for adjusting the tension of said spring.

3. Improvements in shock absorbers for vehicles, consisting in a drum, a crank shaft having a crank pin mounted therein, a brake segment having an advancing end pivoted to the crank pin, a series of adjusting holes formed in said advancing end, said advancing end forming a limit stop, a brake lining secured to the segment, a spring engaging the segment, a spring chamber formed in the crank shaft, said spring projecting into said chamber, a plunger within the chamber and engaging the spring, and an adjusting screw engaging the plunger.

4. Improvements in shock absorbers for vehicles, consisting in a drum having a back, lugs projecting from said back, a closing plate secured to the drum, a crank shaft mounted within the drum, said shaft having a crank pin, a brake segment having a web pivoted to the crank pin, a series of adjusting holes formed in said web, a rim carried by the web, a brake lining secured to the rim, said segment having a free advancing end forming a limit stop, a protuberance projecting from the web, a spring encircling said protuberance at its one end, the other end of the spring being secured to the crank shaft, a lever secured to one end of the crank shaft, and a link pivoted to the lever, said link being operated by the road inequalities.

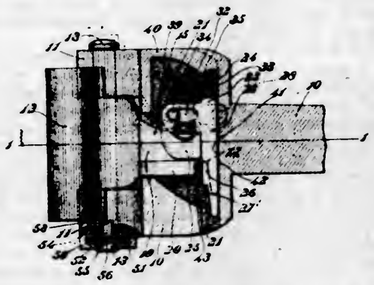
5. Improvements in shock absorbers for vehicles, consisting in a drum having a back, lugs projecting from said back and secured to the vehicle, a closing plate secured to said drum, a crank shaft mounted in said drum, said shaft having a crank pin, a brake segment having a web, said web having a free advancing end and a retarding return end, the advancing end of the web being pivoted to the crank pin, a series of adjusting holes being formed in the advancing end of the web, a rim carried by the web, a brake lining carried by the rim, a protuberance projecting from the web, a spring encircling said protuberance at its one end, said crank shaft having a spring chamber formed therein, the other end of the spring projecting into said chamber, a plunger within the chamber, an adjusting screw carried by the crank shaft and engaging the plunger, a lever secured to one end of the crank shaft, and a link pivoted to the lever, said link being operated by the road inequalities.

1,157,495. NUT-WRENCH. WILLIAM LOUIS BESSOLO, San Diego, Cal. Filed Dec. 11, 1913, Serial No. 805,958. Renewed July 7, 1915. Serial No. 38,511. (Cl. 81—91.)



In a wrench of the type indicated, the combination with a frame, of opposing jaws, one being provided with a ratchet shank which is slidable in the frame and the other pivoted in the front portion of the frame, a handle pivoted to the rear portion of the frame and having opposed lateral arms, one of which is provided with a crosspin engaging the shank of the outer jaw, and a link pivotally connecting the opposite arm of the handle with the pivoted jaw, as described.

1,157,496. CAR-COUPLING. MALCOM L. BLACKMAN, Ozark, Ala. Filed Sept. 5, 1913. Serial No. 788,293. (Cl. 213—10.)



1. An automatic coupling comprising a recessed draw head, a knuckle pivoted to said draw head and having a shank extending into the recesses therein, a locking pin or block in said recess and having a portion coöperating with said shank to lock said knuckle and a portion engaged by said shank as it moves inwardly to couple and positively thrown thereby to bring said locking portion into locking position, and means for operating said locking block, said locking block being disconnected from said draw head and being guided in its movements by engagement of the exterior surfaces thereof with said knuckle shank and the walls of said recess and being supported at all times when released by said operating means upon said shank, and said shank being formed to permit the locking portion of said block to move toward locking position during the inward movement of said shank prior to the locking operation.

2. An automatic coupling comprising a draw head having a recess providing a rear guiding wall and a top wall, a knuckle pivoted to said draw head and having a shank extending into the recess therein, said shank being cut away at its inner end to form a single vertical locking shoulder and a single horizontal supporting shoulder, a locking pin or block having a body portion adapted to rest on the top of said shank when said knuckle is open and to rest upon said supporting shoulder and engage said locking shoulder when said knuckle is closed, said pin or block having also a depending tail piece provided with a shoulder adapted to rest upon said supporting shoulder when said knuckle is closed, and said pin or block being further formed with a rear guiding face coöperating with the rear wall of said recess for controlling the vertical sliding movements of said block and with an upper abutment adapted to engage the top wall of said recess as said block is moved upwardly and about which said block is adapted to rock, and means disposed eccentrically of said abutment for moving said block vertically.

3. An automatic coupling comprising a recessed draw head, a knuckle pivoted to said draw head and having a shank extending into the recess therein, a sliding and rocking locking pin or block in said recess coöperating with said shank and having a horizontally disposed slot, a shaft passing through the side of said draw head and journaled therein to rotate on a fixed axis, a crank arm on said shaft within said recess, and a pin carried by said crank arm and loosely engaging said slot at one side of said block.

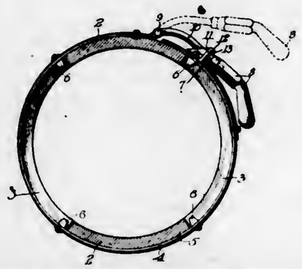
4. An automatic coupling comprising a draw head having a recess providing a rear guiding wall and a top wall; a knuckle pivoted to said draw head and having a shank extending into said recess; a movable locking pin or block having a rear guiding face coöperating with the rear wall of said recess for controlling the vertical sliding movements of said block, an upper rear abutment adapted to engage the top wall of said recess as said block is moved upwardly and about which said block is adapted to rock, and a horizontally disposed slot arranged forwardly of said abutment, said block being formed with portions co-

operating with said shank as said block is moved vertically and rocked; a shaft passing through the side of said draw head and journaled to rotate on a fixed axis; a crank arm on said shaft within said recess; and a pin carried by said crank arm and loosely engaging said slot at one side of said block.

5. An automatic coupling comprising a recessed draw head, a knuckle pivoted to said draw head and having a shank extending into the recess therein, said shank being cut away at its inner end to form a single vertical locking shoulder and a single horizontal supporting shoulder which projects rearwardly beyond said locking shoulder, a sliding and locking pin or block having a body portion providing a shoulder adapted to rest on the top of said shank when said knuckle is open and to rest upon said supporting shoulder and engage said locking shoulder when said knuckle is closed, said pin or block having also a depending tail piece provided with a shoulder adapted to rest upon said supporting shoulder when said knuckle is closed, said shoulders on said pin or block being arranged vertically one above the other, and means for operating said pin or block, said pin or block being loosely disposed in said recess, being guided by engagement of the exterior surfaces thereof with the walls of said recess for free vertical movement in said recess, and being supported at all times when released by said operating means upon said shank.

[Claims 6 and 7 not printed in the Gazette.]

1,157,497. HAND-HOLE COVER FOR GENERATORS. WILLIAM L. BLISS, Niagara Falls, N. Y., assignor, by mesne assignments, to The U. S. Light and Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed Jan. 9, 1912. Serial No. 670,277. (Cl. 172—36.)



1. In combination with a generator casing provided with inspection openings therethrough, a flexible band encircling said casing and covering said openings, means for detachably uniting the ends of said band and drawing the same together, and means for positioning the ends of said hand on said casing to prevent the joint in the band from registering with an inspection opening.

2. In combination, a generally cylindrical casing, an inspection opening therethrough, a flexible strip encircling the casing and closing said opening, means for positioning said strip circumferentially with respect to said casing to insure complete closure of said opening, and means for drawing the ends of said strip together.

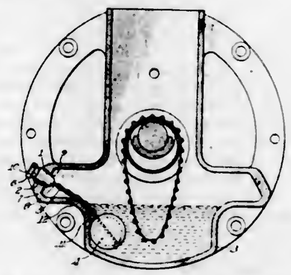
3. In combination, a cylindrical casing, inspection openings therethrough, a flexible strip surrounding the casing and forming an inclosure for said openings, means for positioning said strip circumferentially with respect to said casing to insure complete closure of said openings, and a separable fastener for adjustably drawing the ends of said strip together and detachably holding them in adjusted position.

4. In combination, a generator casing having a hand hole adjacent the brush mechanism, a flexible band adapted to encircle said generator casing to cover said hand hole, positive engaging members carried by the ends of said band, one of said members having an adjustable portion, whereby said members may be drawn toward each other to firmly clamp the band in position, said band comprising a fabric belt having a sheet metal backing riveted thereto, certain of said rivets projecting inwardly and spaced apart a distance nearly equal to the length of said opening, in order to properly position said belt with respect to said generator casing.

5. A hand hole cover comprising a flexible band made up of a belt of compressible fabric and a metallic backing therefor, said elements being riveted together, four of said rivets projecting from the fabric side of said belt in order to engage the end walls of two oppositely arranged openings in a generator casing to properly position said belt applied thereto, said belt having an adjustable wrench at one end and a coöperating bracket at the other end, said wrench and said bracket having positive interlocking engagement when in adjusted position and adapted to be moved out of interlocking engagement upon slight adjustment of said adjustable wrench.

[Claim 6 not printed in the Gazette.]

1,157,498. OIL-WELL CLOSURE. WILLIAM L. BLISS, Niagara Falls, N. Y., assignor, by mesne assignments, to The U. S. Light and Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed May 16, 1912. Serial No. 697,700. (Cl. 184—88.)



In combination, an oil well having an oil inlet provided with tapered walls, a conical plug arranged to fit therein provided with means to permit the same to be grasped by hand, a weight carried within said well, and a flexible connection between said plug and said weight, said well being formed with an inwardly extending shoulder adapted to coöperate with said weight to secure said plug in position.

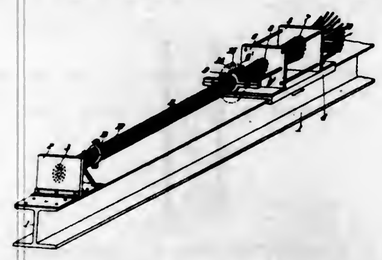
1,157,499. BELT AND BELT-FASTENER. WILLIAM L. BLISS, Niagara Falls, N. Y., assignor, by mesne assignments, to The U. S. Light and Heat Corporation, Niagara Falls, N. Y., a Corporation of New York. Filed Sept. 16, 1912. Serial No. 720,531. (Cl. 24—33.)



1. In combination with a belt having folded ends there being openings through said ends at the folds, pins extending through said openings, and hooks extending through said openings in the ends of said belt engaging said pins and holding said ends together.

2. In combination with a belt having folded ends there being openings through said ends at the folds, pins extending through said openings, said pins having annular recesses between their ends registering with cutaway portions in the ends of said belt, and hooks extending through the openings in said folds engaging said pins and holding said ends together.

1,157,500. APPARATUS FOR MAKING CABLES. FRANZ BRICKERBOHM, Wilhelmsruh, near Reinickendorf-Berlin, Germany. Filed July 22, 1913. Serial No. 780,421. (Cl. 28—21.)

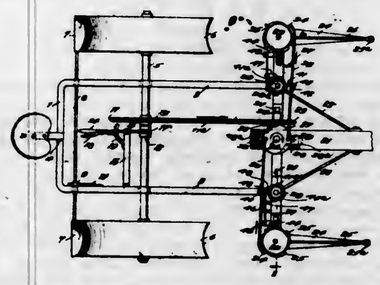


1. In apparatus for making cables comprising parallel wires, the combination of an end plate having wire-receiving holes corresponding in number to the wires of the cable, and a movable guide member including relatively spaced plates connected rigidly together and having wire-receiving holes therein corresponding in number to the holes of the end plate, the holes in the guide plate more remote from the said end plate being spaced farther apart than those in the companion guide plate.

2. In apparatus for making cables comprising parallel wires, the combination of an end plate having wire-receiving holes corresponding in number to the wires of the cable, a movable guide member including relatively spaced plates connected rigidly together and having wire-receiving holes therein corresponding in number to the holes of the end plate, the holes in the guide plate more remote from the said end plate being spaced farther apart than those in the companion guide plate, and a restricting wire clamp carried by the guide member at the end of the same adjacent to the said end plate.

3. In apparatus for making cables comprising parallel wires, the combination of a longitudinal bed, an end plate having holes corresponding in number to the number of wires to form a cable vertically mounted on one end of the bed, and a slide slidable along the bed, said slide comprising two parallel, spaced, rigidly connected guide plates arranged transversely of the bed and each having holes corresponding in number to the number of wires to form a cable, a clamp fixed on the guide plate nearest said end plate and between said plates, the holes in the guide plate more remote from said clamp being arranged farther apart than those in the guide plate nearer to the clamp.

1,157,501. CORN-PLANTER. WOODSON BROWNING, Oklahoma, Okla. Filed Sept. 5, 1914. Serial No. 860,394. (Cl. 14—6.)



1. In a corn planter, the combination with the wheel supported frame, of a disk journaled on the frame to rotate on a vertical axis, a driving connection between the disk and the wheels for moving the said disk a quarter turn for each complete rotation of the wheels, said connection being releasable at the end of each partial movement of the disk, a cam wheel journaled at each side of the disk, a marker operated by each cam wheel, and means in connection with each cam wheel and the adjacent link for imparting a quarter turn to the cam wheel when the disk is moved by the wheels.

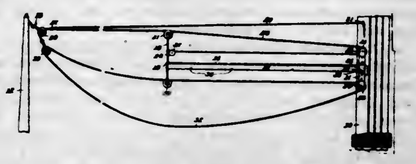
2. In a corn planter, the combination with the seed box and the runner, of a shaft journaled in vertical position between the runner and the seed box, said shaft having spaced radial vanes, an inclosing casing for the shaft, between the seed box and the runner, a seed plate connected to the shaft to rotate therewith and arranged between the seed box and the casing and having an annular series of dropping openings, the runner having an opening at the front of the casing, and the seed box having a single opening with which the openings of the seed plate are adapted to register in succession, each opening of the seed plate being between adjacent vanes.

3. In a corn planter, a wheel supported frame, a seed dropping mechanism at each side of the frame including a seed dropping plate journaled on a vertical axis, each of the plates having teeth on its periphery spaced at angles of 90° with respect to each other, a disk journaled on the frame between the seed plates, a driving connection between the disk and the wheel of the frame for moving the said disk a quarter turn for each complete rotation of the wheel and releasable at the end of each partial movement of the disk, and a link for each seed plate pivoted to the disk at one end and having a catch for engaging the teeth of the adjacent plate at the other.

4. In a corn planter, a wheel supported frame, seed dropping mechanism at each side of the frame, means for operating said mechanism and including a disk journaled between the said mechanisms, a connection between the wheels and the disks for imparting a quarter turn to the disk at predetermined intervals, a plunger movable vertically adjacent to each seed box for marking the ground, a lever pivoted to each plunger at the upper end thereof, a spring normally pressing each plunger upwardly, a cam for engaging the other end of each lever for depressing the plunger, and a connection between the cam and the disk for moving the cam when the disk is moved.

5. In a corn planter, the combination with the wheel supported frame and the seed dropping mechanism at the opposite sides thereof, of a vertically movable plunger adjacent to each of the seed mechanisms, a spring normally holding each plunger lifted, a cam for depressing the plunger, and a common means connected to the wheels of the frame for operating the cams and the feeding mechanisms.

1,157,502. CLOTHES-LINE SUPPORT. FRANK SZ. BUDAJI, New York, N. Y. Filed June 25, 1915. Serial No. 36,230. (Cl. 68—12.)



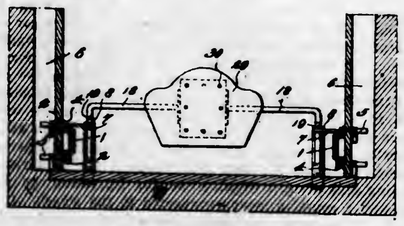
1. A clothes carrier comprising a bracket adapted to be mounted on a window frame having a centrally arranged arm provided with an opening, a bar slidably mounted through the said opening, retaining means for the said bar, a cross-piece at the outer free end of the said bar, upper and lower pulleys journaled at the ends of the said cross-piece, a post pulley adapted to be mounted on a post positioned outwardly of the window and bar, an endless clothes line carried by the said bracket, lower pulley and post pulley, and an adjusting pull cord for the said clothes line.

2. A clothes carrier comprising a bracket adapted to be mounted on a window frame having a centrally arranged

arm provided with an opening, a bar slidably mounted through the said opening, retaining means for the said bar, a cross-piece at the outer free end of the said bar, upper and lower pulleys journaled at the ends of the said cross-piece, a post pulley adapted to be carried by a post positioned outwardly of the window and bar, a retriever carried by the said cross-piece, upper and lower pulleys carried by the said bracket, a pulley rope secured at one end to the said retriever and passing over the said upper pulleys of the said bracket and cross-piece and over the said post pulley, and a pulley secured to the other end of the said pulley rope and over which the said clothes line passes.

3. A clothes carrier comprising a bracket adapted to be mounted on a window frame having a centrally arranged arm provided with an opening, a bar slidably mounted through the said opening, retaining means for the said bar, a cross-piece at the outer free end of the said bar, upper and lower pulleys journaled at the ends of the said cross piece, a post pulley adapted to be carried by a post positioned outwardly of the window and bar, a retriever carried by the said cross-piece, upper and lower pulleys carried by the said bracket, a pulley rope secured at one end to the said retriever and passing over the said upper pulleys of the said bracket and cross-piece and over the said post pulley, a pulley secured to the other end of the said pulley rope and over which the said clothes line passes, a pull core secured at one end to the said pulley rope and having its other end extending adjacent the said window, and adjustment retaining means for the said bar carried by the said bracket.

1,157,503. ADJUSTABLE WINDOW-SCAFFOLD. VAN DYKE BURHANS, New York, N. Y. Filed Nov. 25, 1914. Serial No. 874,044. (Cl. 20—87.)



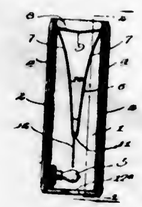
1. A window cleaning scaffold comprising U-shaped supporting devices to be connected at opposite sides of the window frame, L-shaped brackets removably connected to said supporting members, a socket member provided with alined apertures, and adjustable rods having ends seated in said apertures and each provided with a notch to lock it in place, said rods being adjustable at their central portion and having a back rest connected thereto.

2. A window cleaning scaffold comprising supports connected to the window frame, L-shaped members removably connected to said supports, socket members connected to said L-shaped members and provided with alined apertures, adjusting rods mounted in said apertures, said rods each having a squared end, and a disk through which said ends project, said disk also being provided with a circular aperture through which the companion member extends to permit adjustment, and a back rest supported on the parallel portions of said rod.

1,157,504. ILLUMINATED SIGN. JOHN BUTENSCHON, Anniston, Ala. Filed Sept. 30, 1914. Serial No. 864,333. (Cl. 40—133.)

1. An illuminated sign including a casing having a face plate, a source of light composed of one or more electric lamps, a receptacle for a cleansing liquid in said casing, and means for conducting the same to the lamps to keep the lamp globes clear.

2. An illuminated sign including a casing having a face plate, illuminating means within the casing consisting of one or more electric lamps, a reflector forming a conductor, and means for conducting a cleansing fluid from said reflector to the lamp globes to keep the same clear.



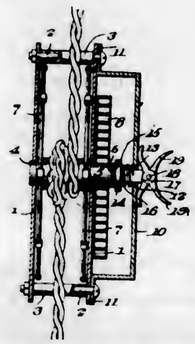
3. An illuminated sign including a casing provided with a catch basin, a face plate, a reflector forming a conductor adapted to receive a cleansing fluid from said catch basin, a source of light within the casing consisting of one or more electric lamps, and means for conducting a cleansing fluid from said reflector to the lamp bulbs to keep the same clear.

4. An illuminated sign including a casing having its top formed to provide a catch basin having openings, a face plate, a reflector forming a channel communicating with said openings, a source of light consisting of one or more electric lamps, and conductors for conveying a cleansing fluid from the channel to the lamps.

5. An illuminated sign including a casing having a catch basin and a face plate, a reflector providing a conductor communicating with the catch basin, electric lamps within the casing, and filaments leading from the channel for conducting a cleansing fluid to the lamps.

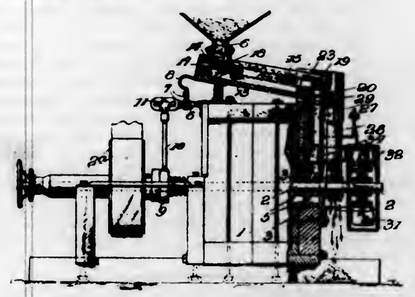
[Claims 6 to 8 not printed in the Gazette.]

1,157,505. TAKE-UP DEVICE FOR ELECTRIC-LAMP CORDS AND THE LIKE. NEIL S. CAMERON, Weed, Cal. Filed Dec. 18, 1914. Serial No. 877,987. (Cl. 242—109.)



In a take-up device of the class described, supporting plates, means holding said supporting plates spaced apart in parallelism, a reel rotatably mounted between said plates and comprising a drum having one end portion projected through one of said plates and beyond the same, a spring surrounding the projecting end portion of said drum and having the inner convolution thereof secured to the drum, a connection between the outer end of said spring and the adjacent supporting plate so that the spring will be placed under tension when the drum is rotated in one direction, a plate engaging the projecting end of said drum, a shaft connected to said plate, a yoke supporting said shaft, levers pivoted to said shaft scissors fashion and having the outer ends thereof formed to provide hand grips and the inner ends formed to provide friction shoes engaging the adjacent portion of said yoke, and a spring acting upon said plate to hold the latter in engagement with the shaft and the friction shoes in engagement with the adjacent portion of said yoke whereby retrograde movement of said drum under the action of said spring will be prevented.

1,157,506. GRINDING-MILL-FEEDING MECHANISM. WILFRED P. CARSON, Winston-Salem, N. C. Filed Mar. 11, 1915. Serial No. 13,672. (Cl. 130—15.)



1. A feed shoe for grinding mills comprising a fixed plate to receive the grain from the hopper, a double screen hinged to said plate and embodying a coarse top screen for the passage of the grain and an under fine screen for the passage of material smaller than the grain, said shoe having a central discharge for the grain and discharges on opposite sides from the central discharge for the material screened from the grain.

2. Grinding mill feeding mechanism comprising a screening shoe adapted to receive the grain from the mill hopper and at its laterally projecting discharge end having a longitudinal central notch providing a grain outlet and outlets for screenings arranged in advance of the grain outlet, and a spout arranged exteriorly of the mill and embodying a top web and vertical wall and a pair of depending spaced vertical flues to receive the screenings from the shoe and a central vertical flue to receive the grain from the shoe, said spout having an elevated deflector between the upper ends of the vertical flues of said pair and a guard extending into said notch of the shoe.

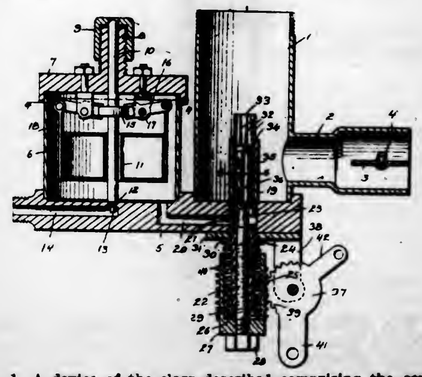
3. A shoe for grain mills comprising a floor and an upright edge wall, a fixed elevated member to receive the grain, and a vertically-swingable double screen at its upper end hinged to said member and normally arranged within said wall and over said floor to receive the grain from said member, said screen having discharge passages for grain and refuse.

4. Grinding mill feeding mechanism comprising an inclined vibratory shoe at its lower end having a longitudinally elongated vertical opening providing a grain outlet, and a spout embodying a top web receiving the lower end of the shoe and having a vertical grain passage alined with said opening and a fixed guard extending into the outer end portion of said opening and arranged in advance of the open upper end of said grain passage, substantially as described.

5. A feed shoe for grinding mills comprising a floor having a central grain discharge through its lower end portion and a guard on said floor forming longitudinal side discharge passages at opposite sides of said grain discharge, a fixed elevated plate at the upper end of the shoe to receive the grain discharged onto the shoe, and a vertically-swingable double screen at its upper end hinged to the lower end of said plate and embodying an upper screening surface to receive the grain from said plate, a deflector centrally arranged on the upper surface of the lower end of said upper screening surface to form longitudinal side discharge passages therefrom directly above said side passages on said floor, and a lower screening surface closed at its lower end and having a central discharge passage registering with said central grain discharge through the floor.

[Claims 6 and 7 not printed in the Gazette.]

1,157,507. CARBURETER. ALOIS ČERNÝ, Shiner, Tex. Filed Apr. 20, 1914, Serial No. 833,176. Renewed Mar. 19, 1915. Serial No. 15,595. (Cl. 48—155.1.)



1. A device of the class described comprising the combination with the mixing chamber of a carbureter and an oil intake pipe leading into the same; of a combined spraying nozzle and valve within said pipe and adapted for longitudinal movement thereof, a portion of said combined spraying nozzle and valve being provided with upwardly facing grooves, said portion of the combined spraying nozzle and valve being normally projected from the end of the oil inlet tube to permit the discharge of oil from said tube in the form of a spray, a sleeve mounted upon said combined spraying nozzle and valve, a thimble mounted upon said combined spraying nozzle and valve, means for resiliently retaining the thimble in normal position, means for varying the position of the thimble and combined spraying nozzle and valve, and means for controlling the last mentioned means.

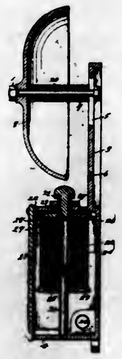
2. A device of the class described comprising the combination with a mixing chamber, an oil inlet pipe of said carbureter; of a combined spraying nozzle and oil inlet controlling valve within the oil inlet pipe, a thimble mounted upon said combined spraying nozzle and oil inlet controlling valve, means engaged with said thimble for retaining said combined spraying nozzle and oil inlet controlling valve in normal position, a valve within the air inlet pipe, means engaged with said thimble for varying the position of the combined spraying nozzle and oil inlet controlling valve, and connections between the last mentioned means and the air inlet controlling valve, whereby the amount of oil entering the mixing chamber will be regulated according to the amount of air fed to said mixing chamber.

1,157,508. SIGNAL-BELL. JOSEPH CHABLAND and RICHARD A. O'CONNOR, Copper Cliff, Ontario, Canada. Filed Sept. 5, 1914. Serial No. 860,501. (Cl. 177—7.)

1. A device of the class described, comprising a base plate, a gong thereon, a spool thereon provided with a magnetic coil arranged in a normally open circuit, a relatively short core in the top of said spool provided with an enlarged head extended thereover to form a hammer, and a supplemental core in the lower part of said spool adapted to be actuated to force said hammer against said gong when said coil is energized.

2. A device of the class described, comprising a base plate, a gong thereon, a spool thereon provided with a magnetic coil arranged in a normally open circuit, a relatively short core in the top of said spool provided with

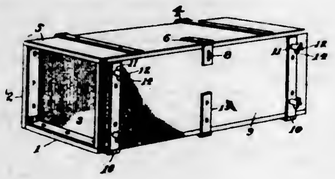
an enlarged head extended thereover to form a hammer, a supplemental core in the lower part of said spool adapted to be actuated to force said hammer against said gong when said coil is energized, and a cap of non-magnetic material on each of the contiguous ends of said cores.



3. A device of the class described, comprising a base plate, a gong thereon, a spool thereon having an upwardly extended tubular member and provided with a magnetic coil arranged in a normally open electrical circuit, a relatively short core in said tubular extension provided with an enlarged head and a flange adapted to inclose said extension when said core is in normal position, and a supplemental core in the lower part of said spool adapted to be actuated to force said first named core against said gong when said coil is energized.

4. A device of the class described, comprising a base plate, a gong thereon, a spool thereon having an upwardly extended member and provided with a magnetic coil arranged in a normally open electrical circuit, a core in said tubular extension, means for limiting the movement thereof inwardly of said spool, and a supplemental core normally at the other end of said spool, said supplemental core being of relatively great length and said first named core of relatively short length, whereby said supplemental core will impinge on said first named core when said coil is energized to drive the latter against said gong, and said first named core will be drawn into said spool by the magnetic attraction thereafter to insure operation of the signal in any position of said spool.

1,157,509. SHIPPING-CRATE. GEORGE A. COLBY, Calgary, Alberta, Canada. Filed July 24, 1914. Serial No. 852,866. (Cl. 217—14.)



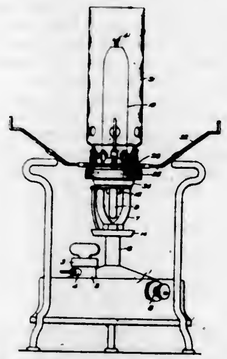
In a crate, a bottom member, a rear member, hinges connecting the rear member to the bottom member, end members hinged to the rear member and abutting against said hinges, a front member hinged to the bottom member and abutting against the ends of said hinges when in operative position, means carried by the end members and co-acting with the front member to secure the crate in operative position, and a cover hinged to the rear member and having means to connect with the front member.

1,157,510. RAIL-JOINT. FRED CORNETTO, Washington, Pa. Filed Mar. 18, 1914. Serial No. 825,720. (Cl. 239—8.)



In a rail joint, two rails having similarly constructed interlocking ends, each including a thickened web, one side of the said web having a longitudinal recess arranged at its upper edge, the rail having its head cut longitudinally and terminating in a transverse shoulder disposed approximately central of the recess in the web, the base terminating even with the head and being cut centrally and longitudinally forming a transverse shoulder disposed directly below the shoulder of the head, the said base having an extending plate projecting beyond its shoulder and terminating approximately with the end of the enlarged web, the under face of the web above the plate being inclined, and a tongue of a size corresponding to the depth and length of the recess in the web, the said tongue being arranged upon the rail opposite the said recess.

1,157,511. ATTACHMENT FOR A BURNER. DAVID DAVIS, New York, N. Y. Filed July 10, 1915. Serial No. 39,116. (Cl. 67—43.)



1. In a device of the character described, a generating device adapted to generate gas from kerosene, said generating device being formed with an intake tubular member, a heater having perforated walls fitting over said tubular member, said perforated walls being at an angle and said perforations being of a proper size for utilizing a certain quantity of the gas for heating said generator, a tubular member extending upwardly from the heater, a gas distributing burner fitting on said tubular member, and means for supporting a mantle over said burner whereby part of the gas is utilized for lighting purposes and part is caused to be used for heating the generator.

2. A device of the character described, comprising a generator, said generator having a removable burner, a heater adapted to be substituted for said burner, said burner being provided with an inclined perforated portion for directing gas downwardly toward the generator, a tubular member extending upwardly from said heater for directing gas upwardly to a mantle, a distributing member carried by said tubular member, a chimney supporting member arranged to rest on said tubular member and to overlap said generator, said chimney supporting member being formed with spaced bars or ribs whereby a proper circulation of air is produced, and means for supporting a mantle over said tubular member.

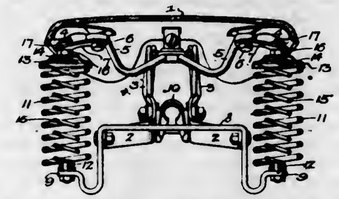
3. In a device of the character described, means for supplying kerosene, a generator for generating the kerosene into gas, said generator including a tubular air and gas inlet, a heating device formed with a tapering outer wall provided with perforations of the proper size for allowing sufficient gas to pass therethrough for maintaining the generator in a proper heated condition, a tubular member extending upwardly from the heater, said tubular member being of less diameter than the periphery of the heater, a burner arranged adjacent the edge of the tubular member for distributing the gas which passes upwardly, means for supporting a mantle over said burner, and means for resting on part of said tubular member for supporting a chimney.

4. In a device of the character described, a generating construction adapted to generate gas from kerosene, said generating construction being provided with an annular chamber adjacent the upper end and a flange extending therefrom, a tubular member extending upwardly from said generating structure, a heater surrounding said tubular member and provided with an inclined side wall having perforations therein whereby the flames extending from said perforations will maintain said annular chamber in a heated condition, a tubular member extending upwardly from said heater, means for supporting a chimney carried by said tubular member, said means being provided with air passageways for permitting a proper amount of air to be fed to said heater without an unnecessary draft, a burner arranged above said tubular member and adapted to cause the gas generated to be divided and part pass upwardly through the burner and part downwardly through the apertures in said heater, and means for supporting a mantle over said burner.

5. In a device of the character described, a gas generating structure provided with a tubular discharge member, a heating device slidingly fitted over said tubular discharge member, said heating device being provided with a tapering outer wall formed with perforations of the proper size for allowing sufficient gas to pass therethrough for maintaining the generator in a proper heated condition, a burner arranged above said tubular member for receiving all of the gas that does not pass downwardly through said perforations, and means maintaining a mantle over said burner.

[Claim 6 not printed in the Gazette.]

1,157,512. CYCLE-SADDLE. MILLER M. DEEM, Reading, Pa., assignor to The Reading Saddle & Manufacturing Company, Reading, Pa., a Corporation of Pennsylvania. Filed Dec. 4, 1913. Serial No. 804,708. (Cl. 208—15.)

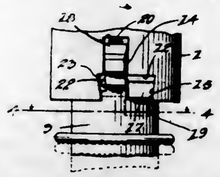


1. In a cycle saddle, in combination with the saddle seat and main frame, a pair of compression springs interposed between said frame and seat and serving to support the latter, said seat resting upon the upper coils of the springs, a second pair of coiled springs interposed between and connected to said frame and seat, said second pair of springs being normally under tension but being adapted, upon depression of the seat, to serve as compression springs to aid in supporting said seat.

2. In a cycle saddle, the combination of the saddle seat, the main support, a main compression spring interposed between said seat and support and secured at its lower end to said support, a cap-plate seated upon the uppermost coil of said main spring, and secured to the saddle seat, a second spring, within the main spring normally under tension and having its lower end secured to the frame, and its upper end secured to said cap-plate.

3. A rear-spring construction for cycle-saddles, comprising a lower bar for securing the springs to the saddle-frame, two pairs of compression springs secured at their lower ends to said bar, each pair comprising inner and outer springs, plates resting upon the upper ends of the outer springs and secured to the upper ends of the inner springs, said plates providing upper and lower seats of different diameters to receive the upper coils of said inner and outer springs, and means for securing said plates to the seat structure.

1,157,513. TAPER DRILL-CHUCK. JAMES A. DOMPIER, Detroit, Mich. Filed Sept. 29, 1914. Serial No. 864,053. (Cl. 29—145.)



1. In a taper drill chuck structure, a drill chuck having a tapering bore, a collet for insertion into said tapering bore, said drill chuck being provided with recesses having angled walls, spring pressed locking lugs carried by said chuck, lugs formed upon said collet for insertion into said recesses and for engagement with said locking lugs whereby they will be forced into binding engagement with one of the side walls of the recesses for securely holding said collet within said chuck, a ring mounted upon the exterior of said chuck for engagement with said locking lugs for moving them out of engagement with said collet carried lugs for permitting of the release of said collet from said chuck.

2. In a taper drill chuck structure, a drill chuck having a tapering bore, a collet for insertion into said bore, an adjustable plug mounted in the inner end of said collet, and a locking screw inserted through said adjustable plug for locking said plug in adjusted position.

3. In a taper drill chuck structure, a drill chuck having a tapering bore, a collet for insertion into said bore, an adjustable plug mounted in the inner end of said collet, a locking screw inserted through said adjustable plug for locking said plug in adjusted positions and means for locking said collet within said tapered bore.

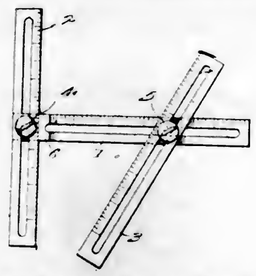
4. In a drill chuck structure, the combination of a drill chuck having a bore, a drill holding collet for insertion into said bore, adjustable means carried by the inner end of said collet for limiting the insertion of said collet into said chuck, and means for locking said collet within said chuck.

5. In a taper drill chuck structure, a drill chuck having a tapering bore, a collet for insertion into said tapering bore, said drill chuck being provided with recesses having angled walls, spring pressed locking lugs carried by said chuck, lugs formed upon said collet for insertion into said recess and for engagement with said locking lugs whereby they will be forced into binding engagement with one of the side walls of the recess for securely holding said collet within said chuck, and adjustable means carried by the inner end of said collet for limiting the insertion of said collet into said tapering bore.

1,157,514. COMBINATION-TOOL FOR CARPENTERS' USE. JOHN LOUIS EARL, Morgan City, La. Filed Apr. 10, 1915. Serial No. 20,484. (Cl. 33—94.)

1. In an improved combination tool for carpenters' use, the combination of a plurality of members slotted throughout their lengths, one of said members constituting a base and constructed solid at one end thereof, a pair of integral lugs formed on said member at the solid end thereof and arranged in spaced relation, one of said lugs terminating short of one side edge of the member and being perforated, said perforated lug being adapted to slidably receive one

of the other slotted members, a clamp screw threaded through the perforation in said lug and having a flange adapted to engage the associated member, a slide mounted in the slot in said base member, and a clamp screw threaded in said slide and provided with a flange adapted to engage a third slotted member, substantially as described.



2. In an improved combination tool for carpenters' use, the combination of slotted members, a base member slotted for the major portion of its length and constructed solid at one end thereof, a pair of spaced lugs arranged transversely on the solid end, the outermost lug terminating short of one side edge of the base member for slidably receiving an associated member and maintaining one end of the latter flush with the side edge of the base member when said members are moved to form a square, a sliding clamp mounted in the slot in said base member and adapted to slidably receive a third slotted member, substantially as described.

3. An improved combination tool for carpenters' use, the combination of a plurality of members slotted throughout their lengths, a base member slotted substantially throughout its length and constructed with a relatively short solid end, a pair of spaced lugs formed integral and arranged transversely of the solid end of said base member, the outermost lug terminating short of one side edge of the base member and being perforated, said outermost lug being arranged to slidably receive one of said slotted members and adapted to maintain one end thereof flush with the edge of the base member when the parts are moved to form a square, a pin threaded through the perforation in said lug and provided with a point projecting beneath said base member, a flange on said pin for engaging the sides of the associated slot member and holding the same in adjusted position, a slide mounted in the slot in said base member, a pin threaded in said slide and provided with a point projecting beneath the latter, and a flange on said pin for engaging a third slotted member for slidably mounting the same on the base member, substantially as described.

4. In an improved combination tool for carpenters' use, the combination of a base member slotted substantially throughout its length and constructed with a relatively short solid end, a fixed clamp on the solid end of said base member, a second member slotted throughout its length and mounted to pivot about said fixed clamp and to slide on said fixed clamp longitudinally of itself, a block fitted to slide in the slot in said base member, a clamp mounted to move with said slide, and a third member slotted throughout its length and mounted to pivot about the movable clamp and to slide on the movable clamp longitudinally of itself, said third member being adapted to move longitudinally of said base member with the slide and movable clamp, substantially as described.

1,157,515. STREET-SIGN. JOSEPH N. EARLY, New York, N. Y. Filed June 17, 1914. Serial No. 845,605. (Cl. 40—145.)

1. A street sign, comprising a standard having shoulders nears its ends and longitudinally extending corrugations and intermediate depressions at spaced points around its circumference, spring metal frames having top and bottom extensions coöperating with said corrugations and depressions to dispose the frames at different angular adjustments relative to the standard, sign plates held in the frames, and clamping means engaged through the frames near their ends and central portions to clamp the same together and secure opposed binding contact of the frames with the standard.



2. The combination with a post and a standard carried thereby, said standard being of reduced diameter relative to the post and having surrounding convex corrugations at spaced points vertically of its height; of signs adjustably carried by said standard, said signs each comprising a pair of frames bulged outward at the centers of their top and bottom portions and tending to bulge outward at their ends, extensions upon the inner faces of the frames providing rabbets, sign plates seated in said rabbets, said frames having their top and bottom extensions provided with corrugations on curved lines conforming to the curvature of the standard, clamping means connecting the frames at either side of the standard, and clamping means connecting the frames at their ends and coöperating with said first named connecting means to draw the frames together and in binding contact with the standard, the release of said clamping means permitting independent angular adjustment of the signs relative to each other and the standard.

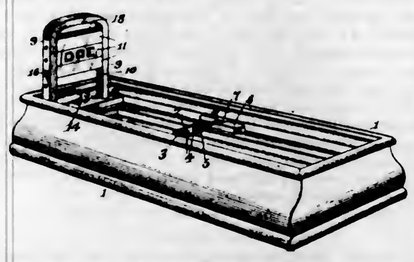
3. A street sign comprising a post having an upper end portion of reduced diameter with shoulders at the upper and lower ends thereof, said upper portion having a series of surrounding corrugations and intermediate depressions at spaced points vertically thereof adjacent to said shoulders, spring metal frames of bowed formation having sign seats at the inner sides thereof and horizontally disposed inwardly projecting notched portions coöperating with the depressions aforesaid and means to clamp the frames on opposite sides of the post in opposed relation and in contact at the ends of the frames, said means holding said projections in engagement with the depressions, whereby turning of the frames and plates on the post is normally prevented, said means being adapted to be operated to permit adjustment of the plates on the post.

4. A street sign comprising a sign bearing part having spaced series of vertically alined circumferential convexed corrugations and intermediate concaved depressions of similar but reverse curvatures, frames having top and bottom portions with extensions projecting inwardly at their intermediate portions, said extensions having their inner edges provided with alternate corrugations and depressions arranged in a concaved line to conform to the curvature of the corrugations of the attaching part, sign plates carried by said frames between said extensions and limited against vertical displacement thereby, said frames being formed at their ends to prevent displacement of the signs horizontally and having bulged end portions and means to clamp said frames together to secure the same against movement on the attaching part said clamping means being adapted to be loosened to permit angular adjustment of said frames.

5. In a street sign, the combination with a post and a sign bearing standard; of a sign adjustably carried by the standard, a socket at the lower end of the standard to receive the upper end of the post and forming a shoulder to support the sign, said socket having a cutaway portion, a jaw fitted in said cutaway portion and means connecting the jaw and socket to clamp the jaw against the post to rigidly secure the attaching standard thereto.

[Claim 6 not printed in the Gazette.]

1,157,516. GRAVE-MOUND FRAME. WILLIAM JOHN EARLY, Catawissa, Mo., assignor of one-half to John M. Early, Catawissa, Mo. Filed Feb. 9, 1914. Serial No. 817,645. (Cl. 125—15.)



A device of the class described comprising an oblong grave mound frame formed of a single piece having spaced sides and ends, and provided at its interior with an integral horizontal flange extending across the inner face of one of the ends of the frame and located below the upper edges thereof, said flange having spaced openings, an upright approximately inverted U-shaped frame formed of a single piece composed of spaced sides provided at their inner edges with longitudinal grooves, and a top portion connecting the sides and closing the grooves at the top of the upright frame, the lower ends of the sides of the upright frame extending down within the grave mound frame and seated upon the said flange and provided with depending tongues secured in the openings of the flange and permanently connecting the two frames, and inscription slides extending across the space between the sides of the upright frame and having their terminals arranged in the said grooves, said inscription slides being introduced into the upright frame before the frames are assembled, and being permanently retained in the upright frame when the two frames are secured together.

1,157,517. FISHING-FLOAT. WILLIAM A. EASLICK, Milan, Mich. Filed May 24, 1915. Serial No. 30,148. (Cl. 43—4.)



1. A float having an eye for the passage of a line therethrough and having a leaf spring extending through said eye for clamping the line therein.

2. A fishing float embodying a body, an eye screw having its shank threadedly engaged into the body, and a leaf spring secured to the body and extending through said eye for clamping a line within the eye.

3. A float embodying a body, a ferrule fitted upon one end thereof, an eye screw having its shank threaded into said end of the body, and a leaf spring having its basal end fitted between said end of the body and the ferrule, the leaf spring having its free portion extended diagonally through the eye of said screw.

1,157,518. STOPPER FOR BOTTLES. GEORGE F. ELLIOTT, Washington, D. C. Filed Dec. 4, 1914. Serial No. 875,511. (Cl. 215—10.)



1. A stopper for bottles, consisting of a metal cup-shaped cap having crimped edges adapted to engage the neck of the bottle, and an integral disk of birch bark comprising a series of the natural laminæ of said bark held in said cap, substantially as described.

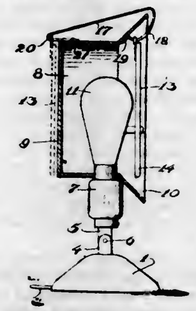
2. A stopper for bottles, consisting of a metal cup-shaped cap having crimped edges adapted to engage the neck of the bottle, and an integral disk of birch bark comprising a series of the natural laminæ of said bark held in said cap, the edges of said disk being provided with fastening means to hold the laminæ thereof against curling, substantially as described.

3. A stopper for bottles, consisting of a metal cup-shaped cap having crimped edges adapted to engage the neck of the bottle, and an integral disk of birch bark comprising a series of the natural laminæ of said bark held in said cap, the edges of said disk being beveled, substantially as described.

4. A stopper for bottles consisting of a metal cup-shaped cap having crimped edges adapted to engage the neck of the bottle, and an integral disk of birch bark comprising a series of the natural laminæ of said bark held in said cap, the edges of said disk being beveled, and said beveled edges being provided with fastening means to prevent the laminæ thereof from curling, substantially as described.

5. A stopper for bottles, consisting of a metal cup-shaped cap, having an inwardly-projecting ring stamped in the bottom thereof, and having crimped edges adapted to engage the neck of the bottle, the said ring being spaced away from said crimped edges, and an integral disk of birch bark comprising a series of the natural laminæ of said bark, and fitting snugly in said cap and projecting beyond the edges of said inwardly-projecting ring, substantially as described.

1,157,519. ADJUSTABLE ELECTRIC-LAMP AND MIRROR FIXTURE. OLIVER B. FAGAN, Georgetown, Ohio. Filed Apr. 26, 1915. Serial No. 23,997. (Cl. 240—4.)

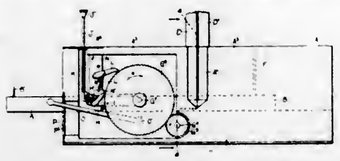


1. A light fixture of the class described comprising a base, a standard rising from the base and having a lamp

socket and a shade and reflector at its upper end, said reflector having an attaching slide thereon, and a mirror slidably connected to the attaching slide and adapted to be arranged either at the front or in rear of the shade and reflector.

2. A light fixture of the class described comprising a base, a standard rising from the base and having a lamp socket and a shade and reflector at its upper end, said reflector having an attaching slide thereon, and a mirror slidably connected to the attaching slide and adapted to be arranged either in front or in rear of the shade and reflector, the shade and reflector being also provided with securing arms having spring catches, to engage the mirror frame.

1,157,520. FEEDING MECHANISM FOR SLICING-MACHINES. HERMANN FISCHER, New York, N. Y. Filed Dec. 12, 1914. Serial No. 876,849. (Cl. 74—54.)



1. A feeding mechanism, comprising a frame, a member mounted to slide lengthwise on the said frame, a lever, means controlled by the movement of the lever for imparting a step by step movement to the said member, a manually controlled actuating rod connected at one end with the lever for actuating the same in one direction, means for imparting a return movement to the rod and lever, a pivoted stop arm arranged in the path of the lever and extending at its outer end beyond the end of the frame, the said arm being adjustable toward and from the lever for limiting the throw of the lever to allow of giving a longer or shorter step by step movement to the said member, and means at the end of the frame for engagement by the stop arm to hold the latter in adjusted position.

2. A feeding mechanism, comprising a frame, a supporting member mounted to slide lengthwise on the said frame, a lever mounted to swing up and down, means controlled by the movement of the lever for imparting a step by step movement to the said supporting member, a manually controlled rod connected at one end with the lever for actuating the same, a spring for returning the rod and lever to normal position, a pivoted stop arm adjustable toward and from the lever for adjusting the throw of the lever to allow of giving a longer or shorter step by step movement to the said supporting member, and means for holding the stop arm in adjusted position.

3. A feeding mechanism, comprising a frame, a supporting plate mounted to slide on the said frame, a rack extending lengthwise on the said supporting plate, a train of gear wheels mounted on the said frame and of which the gear wheel at one end of the train of gear wheels is in mesh with the said rack, a pawl engaging the gear wheel on the other end of the train of gear wheels, a lever carrying the said pawl, manually controlled means engaging the said lever for imparting a swinging motion to the lever to cause the pawl to turn the train of gear wheels and thereby impart a step by step motion to the said supporting plate, a stop arm fulcrumed at its inner end on the said frame and extending into the path of the said lever to limit the swinging motion thereof, the said arm projecting at its outer end beyond the frame, and a notched plate on the end of the frame adapted to be engaged by the said stop arm to hold the latter in an adjusted position.

4. In a feeding mechanism, a movable member provided with a rack, a train of gear wheels one of which is in mesh with the said rack, a pawl engaging one of said gear wheels, a lever carrying the said pawl and mounted to swing up and down, means for imparting a downward swinging motion to the lever to cause the pawl to glide over the teeth of its gear wheel, adjustable means for limiting the downward swinging movement of the lever, means for imparting a return movement to the lever to cause the pawl to turn the train of gear wheels and impart a step by step movement to the said movable member, means for preventing the return movement of the gear wheels, and a fixed stop engaged by the said pawl on the return movement of the lever, the said stop having a beveled portion engaging a corresponding bevel on the pawl to hold the pawl in locked engagement with its gear wheel and also serving to limit the return movement of the lever.

5. In a feeding mechanism for slicing machines, a frame, a supporting plate mounted to slide lengthwise on said frame and adapted to support an article to be sliced, a lever mounted to swing up and down in said frame, means controlled by the movement of the lever for imparting a step by step movement to said supporting plate, an actuating rod connected with the lever for imparting a downward swinging motion to the same, a spring for imparting a return movement to the rod and lever, an adjustable stop arm for limiting the downward swinging movement of the lever, the said stop arm extending in the frame below the lever and fulcrumed at its inner end, the said arm projecting at its outer end beyond the frame, means on the frame for engagement by the said stop arm to hold the latter in adjusted position, and means for limiting the return movement of the lever.

[Clamis 6 to 9 not printed in the Gazette.]

1,157,521. TROUSERS-STRETCHING DEVICE. ERNEST SIMPSON FISHER, Portland, Oreg. Filed June 6, 1914. Serial No. 843,472. (Cl. 223—19.)

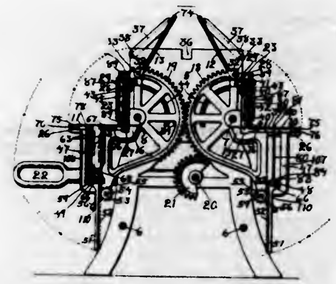


A trousers stretching device comprising strips, alined sockets on the inner edge of said strips adjacent their ends, plates secured to the inner edges of the strips and having apertures therein adapted to register with said sockets, one end of the said plates being bent at right angles, the said bent portion being provided with an eye, rods carried by the inner edge of each strip and projecting toward the similar edge of the adjacent strip and overlapping each other, coiled contractile springs surrounding the overlapping ends of the rods and having the opposite extremities thereof secured to the outer ends of said rods, the outer end of one rod terminating in a loop, and a hook attached to said loop, the free end thereof adapted to engage the eye in one of said plates thereby holding said strips against outward movement under the action of said spring.

1,157,522. MULTIMOLDING CONCRETE-BLOCK MACHINE. FRANK H. FOLDEN, Sioux City, Iowa, assignor to Northwestern Manufacturing Company, Sioux City, Iowa. Filed Dec. 6, 1913. Serial No. 805,061. (Cl. 25—41.)

1. In a concrete block mold, stationary support-plates spaced flatwise, and axially-alined rocking mold carriers

disposed adjacent to the inner faces of and pivoted to rock into and out of the space between the support-plates, in combination with mold end-plates hinged to the rocking carriers to stand backed against the support-plates and in sliding contact therewith when rocked edgewise by the carriers, a tooth on the back of the hinge-base of each end-plate, a groove curved concentrically with the axis of the rocking carriers in the inner face of each support-plate to pass the tooth, and a stop end to each groove disposed to engage the tooth and swing the end-plate flatwise after it is rocked edgewise out of the space between the support-plates.



2. In a concrete block mold, a pair of axially-alined and spaced rocking mold-carriers, and a mold back-plate hinged at its lower edge to the carriers, in combination with stationary support-plates having notches in their top edges, extensions at the ends of the top edge of the back-plate adapted to seat in the notches, and a guide link having one end jointed to one of said extensions and the opposite end jointed to the adjacent support-plate.

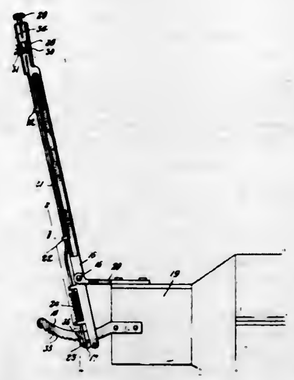
3. In a concrete block mold, stationary support-plates spaced flatwise, and axially-alined rocking mold carriers journaled adjacent to the inner faces of said support-plates to rock into and out of the space therebetween, in combination with mold end-plates hinged at one edge on the rocking carriers to stand backed against the support-plates when rocked into the space therebetween and adapted to rock edgewise into and out of said space in sliding contact with the support-plates and to swing flatwise away from the molded block only when rocked out of said space.

4. In a concrete block mold, a pair of axially-alined rocking mold carriers spaced apart, a radial pallet arm on each carrier, a removable apertured pallet adapted to seat on said arms and span the space therebetween, a core adapted to slide through the aperture of the pallet, and a rearwardly disposed guide-loop on each pallet arm, in combination with a core head-bar attached to the base of the core disposed across the space between said loops and having its ends seated to slide in the loops, outwardly-extended toothed guide-legs on the core head-bar, suitable gearing connected to engage the toothed legs and slide the core head-bar, and a shield-plate rigidly fastened across on the guide-loops and having its outer edge bent onto the outer ends of the loops and notched to form guideways for the toothed legs.

5. In a concrete block mold, a pair of stationary support-plates disposed in spaced relation flatwise, rocking mold carriers journaled to swing mold members in and out of the opposite ends of the space between the support-plates, and suitable mechanism to connect and rock the carriers simultaneously in opposite directions, in combination with opposite mold back-plates hinged at their lower edges to the respective carriers, end extensions on the back-plates to form seat lugs, notched seats at the top centers of the support-plates to receive together the corresponding seat lugs of opposite mold back-plates backed against each other when the molds are rocked to the inward limit, and guide-links connected to the back-plates and to said support-plates.

[Claims 6 to 8 not printed in the Gazette.]

1,157,523. SAFETY LOCKING DEVICE. WILLIAM JOHN FOWLER, Philadelphia, Pa. Filed Apr. 16, 1915. Serial No. 21,746. (Cl. 74—39.)



An emergency brake lever having a pawl, and a segmental ratchet bar engaged by said pawl, said bar having at one end a notch of materially greater depth than the remaining notches or interspaces between the teeth thereof, a spring actuated rod for actuating the pawl, and a detent arranged to engage said rod when the pawl engages the notch of special depth, such engagement producing a movement of the rod of greater extent than when the pawl engages any one of the remaining notches.

1,157,524. INTRADERMIC SYRINGE. WILLIAM H. FURNESS, National Park, N. J., assignor to H. K. Mulford Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 14, 1915. Serial No. 2,198. (Cl. 128—25.)

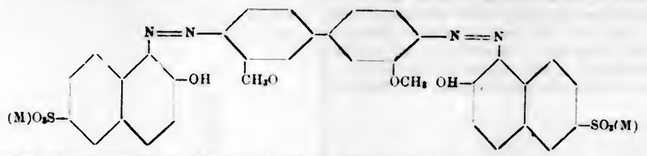


A package consisting of an elongated tube permanently closed at one end; a liquid to be administered within the tube; a puncturable cap sealing the open end of the tube; with a needle having an elongated plunger portion of sub-

stantially uniform diameter and having a volume substantially equal to that of the desired dose of liquid to be administered, for displacing the liquid in the tube when it is forced through the cap into the same.

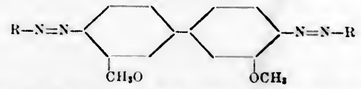
1,157,525. MANUFACTURE OF COLOR-LAKES. ALBERT E. GESSLER, New York, N. Y. Filed Feb. 9, 1912. Serial No. 676,487. (Cl. 8—1.)

1. As a new article of manufacture, lakes containing a disazo dye stuff having probably the formula



where M represents a metal obtained by combining tetrazotized dianisidin and 2 : 6-naphthol-sulfonic acid.

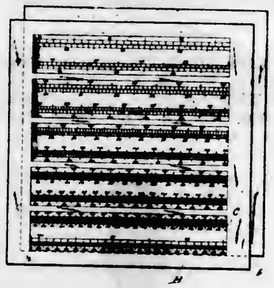
2. As a new article of manufacture, lakes containing a disazo dye stuff having probably the formula



obtained by combining tetrazotized dianisidin, naphthol-mono-sulfonate, where R is the radical of naphthol-mono-sulfonate.

3. As a new article of manufacture, lakes containing disazo dye stuff derived from a combination of 2 : 6-naphthol-sulfonic acid, tetrazotized dianisidin and a copper compound, the so formed dye stuff being characterized by its non-solubility in water, oil, benzole and varnish; it does not sublime, and when reacted upon with concentrated sulfuric acid forms a greenish blue colored solution, and when acted upon with a reducing agent it yields a diamino base and 1-amino-2-naphthol-sulfonic acid 6.

1,157,526. SLIDE-RULE. CLAIR A. GILSON, Niles, Mich. Filed May 9, 1914. Serial No. 837,506. (Cl. 235—70.)

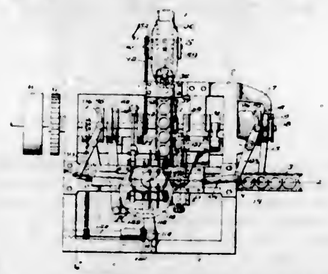


1. In a calculating device, a scale having numerals arranged thereon in rows, the numerals in the row next lowermost being a duplicate of the numerals in the row uppermost, and vice versa, and a slide shiftable over the mentioned scale to coöperate with the numerals thereon, substantially as described.

2. In a calculating device, a scale sheet having numerals arranged thereon in rows, the numerals in the row lowermost being a duplicate of the numerals in the row next uppermost and vice versa, and a slide sheet shiftable over said scale sheet, said slide sheet being provided with openings to expose the numerals on the scale sheet to view, said slide sheet being further provided with numerals adjacent said opening for coöperation with the numerals on the scale sheet, substantially as described.

3. In a calculating device, a scale sheet having numerals thereon arranged in rows, the numerals in the uppermost row being reproduced in the row next lowermost, and the numerals in the lowermost row being reproduced in the row next uppermost, and a slide sheet shiftable over the scale sheet, said slide sheet being provided with openings through which the numerals on the scale sheet are visible, the relative arrangement of the slide sheet upon the scale sheet being adapted to provide for calculation generally in the manner specified.

1,157,527. FISH-CANNING MACHINE. THOMAS GOWEN, Seattle, Wash. Filed Aug. 7, 1914. Serial No. 855,698. (Cl. 226—9.)



1. In a canning machine, the combination with the salting mechanism, and the compressing and packing mechanisms; of a can handler including an angular track one leg of which passes under said salting mechanism and the other leg under the remaining mechanisms, a plunger in the second leg of the track moving across the outlet end of the inlet leg of said track for taking one can at a time from said inlet leg and starting it along the outlet leg, a guard on the plunger closing the outlet end of the inlet leg when the plunger is projected, can gripping mechanism consisting of two jaws projecting through the walls of the second leg of said track, and means for actuating said jaws in timed relation to said plunger to hold a can temporarily beneath the packing mechanism.

2. In a canning machine, the combination with the salting mechanism including a plunger, and the fish-feeding, compressing, and packing mechanisms, the latter including a plunger; of a can holder including a right-angular track one leg of which passes under the plunger of said salting mechanism and the other leg under the remaining mechanisms, a plunger for taking one can at a time from the inlet leg of said track and starting it along the outlet leg, a guard closing the outlet end of the inlet leg when the can plunger is projected, and can gripping mechanism for holding one can at a time beneath the plunger of the packing mechanism.

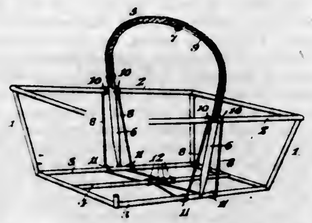
3. In a canning machine, the combination with mechanism for feeding the fish downward, a head bar disposed beneath the same and having a hole out of alinement with the fish feed, and the can handling mechanism for moving a stack of cans under said bar and holding them one at a time beneath said hole; of the packing mechanism including ab ase standing above said head bar and a tubular guide mounted thereupon in line with said hole, a plunger movable in said guide for ejecting a charge of fish through said hole and into a can beneath, a pair of jaws slidably mounted on said head bar and beneath said base and feeding mechanism, and driving mechanism operating in timed relation with said plunger for bringing the jaws together to compress a charge ejected from the feeding mechanism, then moving the jaws in unison to a point where the compressed charge stands beneath said plunger, and, after the latter descends, returning said jaws to their initial position and opening them for the reception of another charge from the feeding mechanism.

4. In a canning machine, the combination with the feeding mechanism including a hopper and means for forcing the fish down through the same, the compressing mechanism including a pair of jaws operating beneath the hopper-spout to compress a charge and then carry it out of alinement with the spout, and means for actuating the jaws; of the packing mechanism including a plunger and means for actuating it to eject the compressed charge from said jaws, and the can-handling mechanism for disposing an empty can beneath the packing mechanism and removing a filled can.

5. In a canning machine, the combination with the feeding mechanism including a hopper and means for forcing the fish down through the same, one side of the hopper being hinged, the compressing mechanism including a pair of jaws operating beneath the hopper-spout to compress a charge delivered by said spout and then carry such charge out of alinement with the spout, means for actuating the jaws, and means for swinging the hinged side of the hopper inward in timed relation with the compressing action of said jaws; of the packing mechanism including a plunger and means for actuating it to eject the compressed charge from said jaws, and the can-handling mechanism for disposing an empty can beneath the packing mechanism and removing a filled can.

[Claims 6 to 12 not printed in the Gazette.]

1,157,528. BASKET. HENRY P. GROSS, Baltimore, Md.; Robert Biggs administrator of said Gross, deceased. Filed Oct. 3, 1914. Serial No. 864,939. (Cl. 217—125.)



1. A basket having sides and a bottom and also having a handle, and a reinforcement comprising wires attached to the handle with their ends extended through the side walls of the basket on opposite sides of the handle where entering the side walls and from thence directed across the bottom of the basket toward the center thereof and permanently secured to the bottom of the basket at the extremities.

2. A basket provided with a handle and with rails at the top and bottom of the sides and also intermediately of the bottom, and a reinforcement comprising wires attached to the handle with their ends extended through the side walls of the basket on opposite sides of the handle where entering the side walls and from thence directed across the bottom of the basket toward the center thereof and secured to the bottom of the basket at the extremities, the wires being twisted about the rails where meeting them.

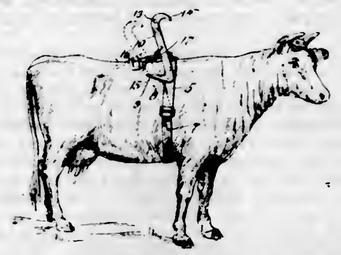
3. A basket having sides and a bottom and also having a handle, and a reinforcement member comprising strands of wire twisted together throughout a portion of their length with the twisted portion overriding the handle of the basket and secured thereto and the remaining portions of the wire strands carried through the side portions of the basket on opposite sides of the handle and thence along the bottom of the basket with the extremities of the wires permanently secured to said bottom of the basket.

4. A basket provided with a handle and with a body having top and bottom rails, and a reinforcement member comprising strands of wire twisted together throughout a portion of their length with the twisted portion overriding and secured to the handle and with the ends of the wires twisted about the top and bottom rails of the basket adjacent to the handle and carried toward the center portion of the bottom of the basket and there permanently secured to said bottom.

5. A basket provided with a handle and top and bottom side rails and an intermediate bottom rail, and a reinforcement member comprising strands of wire twisted together throughout the intermediate portion of their length with the twisted portion secured to the handle in overriding relation thereto and having the ends beyond the twisted portion each twisted about a corresponding top and bottom side rail and thence carried to the intermediate bottom rail and having its extremity twisted thereabout.

[Claim 6 not printed in the Gazette.]

1,157,529. ANIMAL-POKE. WILLIAM A. HAGER, Texhoma, Okla. Filed Jan. 31, 1913. Serial No. 745,464. (Cl. 119—136.)



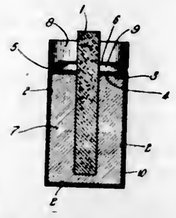
1. In a device of the class described, a saddle member consisting of a rigid back engaging portion and a belly engaging strap, a back engaging prong connected with and lying in the plane of the back engaging portion, extending rearwardly therefrom and lying flatwise for substantially its entire length on the back of the animal to which the device is applied, and a hook member extending upwardly with respect to the back engaging portion and having a terminal hook turned forwardly whereby by the engagement of such hook with an obstruction the rigid back engaging portion of the saddle member will be tilted, causing the free end of the prong to be pressed downward.

2. In a device of the class described, a saddle member consisting of a rigid back engaging portion and a belly engaging strap, a back engaging prong connected with and lying in the plane of the back engaging portion, extending rearwardly therefrom and lying flatwise for substantially its entire length on the back of the animal to which the device is applied, and a hook member extending upwardly with respect to the back engaging portion and having a terminal hook turned forwardly whereby by the engagement of such hook with an obstruction the rigid back engaging portion of the saddle member will be tilted, causing the fre end of the prong to be pressed downward; in combination with spring means for restoring the back engaging portion of the saddle member and related parts to normal position without being tilted.

1,157,530. PROCESS OF PRODUCING MANGANESE DIOXID. FREDERICK D. HARPER, Everett, Mass. Filed Dec. 5, 1913. Serial No. 804,874. (Cl. 23—13.)

The method of treating precipitated manganese dioxid for the purpose set forth, which consists in first subjecting the dried precipitated manganese dioxid in a mold to a pressure sufficient to give to the product substantially the same density as that of the native mineral, and then grinding the same.

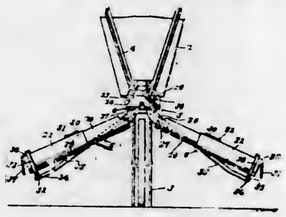
1,157,531. MANUFACTURE OF DRY BATTERIES FOR FLASH-LIGHTS AND OTHER PURPOSES. FREDERICK D. HARPER, Everett, Mass. Filed Feb. 19, 1914. Serial No. 819,838. (Cl. 204—38.)



1. A dry battery comprising a zinc container, a lining therefor of absorbent material, a carbon electrode mounted in a core of depolarizing material snugly fitting within said container, an absorbent paper washer covering the top of said core, a zinc washer provided with an opening leaving a space surrounding the carbon electrode located on the top of said paper and contacting with the walls of the container, means for positively securing the said zinc washer in place, and a covering of sealing material therefor.

2. A dry battery comprising a zinc container, a lining therefor of absorbent material, a carbon electrode mounted in a previously prepared core of depolarizing material snugly fitting within said container, an absorbent paper washer covering the top of said core, a zinc washer on the top of said paper washer, the zinc washer having an opening through which the carbon electrode projects and of sufficient diameter to prevent short circuit, said zinc washer contacting with the walls of the container, the walls of the container extending above the top of the core and provided with a bead for retaining in position said washers substantially as described.

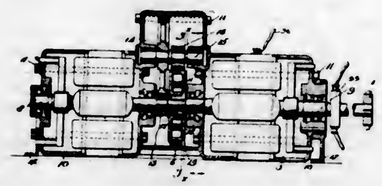
1,157,532. TWO-ROW ATTACHMENT FOR FERTILIZER-DISTRIBUTERS. SYLVESTER Q. HARPER, Fayetteville, Ga. Filed Apr. 10, 1914. Serial No. 831,026.



1. A two-row attachment for fertilizer distributers comprising a receiving and dividing head and a pair of distributing tubes leading therefrom and fed thereby, said distributing tubes being longitudinally extensible, and each comprising an elbow member attached directly to the bottom of the head, a main member attached to said elbow member and a lower member telescopically fitted on said main member, said main member having adjusting openings and said lower member having a spring connected stud for engagement with any of said openings.

2. A two-row attachment for fertilizer distributers comprising a receiving and dividing head for attachment to a fertilizer distributer to receive the fertilizer discharged from the hopper, a pair of oppositely extending downwardly inclined distributing tubes leading from the bottom of said receiving and dividing head, hoods at the outer ends of said distributing tubes and having hooks bearing thereon, clamping bands around said distributing tubes and coacting with said hooks to secure the hoods in place and braces for said distributing tubes for attachment to opposite sides of the fertilizer beam, the said braces being connected to said clamping bands.

1,157,533. STARTER FOR ENGINES. MOSES A. HARRIS, Westfield, N. J., assignor of one-third to Lawrence A. Clark, Westfield, N. J. Filed Nov. 21, 1913. Serial No. 802,277. (Cl. 74—7.)



1. In an engine starter, the combination of an engine shaft, a generator connected to said engine shaft, a motor, gear connections between said motor and generator shafts including an element comprising a pair of flanged members having their flanges fitted together to provide an inclosing casing, a ratchet mounted in one part of said casing, and pawls coöperating with said ratchet and pivoted in the complemental part of the casing.

2. In an engine starter, the combination of an engine shaft, a generator connected to said engine shaft, a motor, gear connections between said motor and generator shafts including an element comprising a pair of interfitted cup-shape members, and a one-way driving connection between said members and inclosed thereby.

3. In an electric starter for automobile engines, an engine shaft, a motor, a generator in line with the motor, a gear connection between the shaft of the motor and the shaft of the generator, said connection including as one member, a two-part casing, one part fitting over the other, a series of abutments, with rocking recesses therein provided in the inner fitting part, pawls with rocking butts seated in said recesses, said abutments being also provided with a series of internal curved ways all on the same radius, a ratchet wheel having exterior bearing surfaces fitting said curved ways, ratchet teeth between said bearing surfaces, and in the plane of the pawls, whereby said casing and ratchet may turn freely in bearing relation in one direction but not in the other, and gearing between the generator and engine shaft.

4. In an electric starter for automobile engines, an engine shaft, a motor, a generator, a train of gears between the shaft of the motor and the shaft of the generator, a two-part casing, one part fitting over the other, the periphery of the outer part being provided with teeth and forming one element of the gear train, a ratchet wheel secured centrally to and within said outer part, abutments within said inner part, pawls mounted on said abutments and turned so as to be engageable by the teeth of said ratchet wheel, said pawl held between the outer and inner parts of the casing, the inner part of the casing being secured to the shaft of the generator, and gearing between the generator and engine shaft.

5. In an electric starter for automobile engines, an engine shaft, a motor, a generator, a train of gears between the shaft of the motor and the shaft of the generator, a two-part casing, the parts interfitting, the periphery of the outer part being provided with teeth and forming one element of the gear train, a ratchet wheel secured centrally to and within said outer part, abutments within said inner part having pivoted pawls provided with rocking butts on said inner parts and provided with weak springs pressing therein toward the ratchet wheel, said pawls held between the inner and outer parts of the casing, the inner part of the casing being secured to the shaft of the generator, and gearing between the generator and engine shaft.

[Claims 6 to 9 not printed in the Gazette.]

1,157,534. ARTIFICIAL-TOOTH FACING WITH BACKING ADJUSTMENT. FRED E. HART, San Francisco, Cal. Filed May 10, 1915. Serial No. 27,202. (Cl. 32—9.)



1. An artificial tooth comprising a facing having a longitudinal groove in its rear side, a metal pin baked into said facing and extending transversely across said groove, a sheet metal backing conforming to the rear side of the facing, a supporting post projecting from said backing and having a T-head adapted to fit within said groove with one part extending back of said pin and the other part bearing at its outer end upon the backing.

2. An artificial tooth comprising a facing having its rear side substantially parallel with the front side and having the base or gingival end extending obliquely thereto and forming an acute angle with the front side, said rear side being provided with a longitudinal groove, a metal pin baked into said facing and extending transversely across said groove, a sheet metal backing conforming to said rear side and to said oblique end, a supporting post projecting from said backing and having a T-head adapted to fit within said groove with one part extending back of said pin and the other part bearing at its outer end against the oblique portion of the backing.

1,157,535. TATTING-SHUTTLE. HARRY E. HARTRANFT, Groton, S. D. Filed Mar. 8, 1915. Serial No. 12,957. (Cl. 66—6.)



1. A shuttle comprising a pair of side members, one having a tube provided with a longitudinal slot, the other having a portion to enter the tube, the said portion having a longitudinal feather to enter the said slot, and a bobbin having a hub adapted to be slipped onto the said tube, the hub having a featherway adapted to register with the said slot and to receive the feather.

2. A shuttle comprising a pair of side members, one having an inwardly projecting tube provided with a longitudinal slot and adapted to be expanded, the other side member having an inwardly projecting portion adapted to enter the said tube and being tapered to expand the said tube, the said portion having a longitudinal feather to enter the said slot, and a bobbin having a hub adapted to be slipped onto the said tube, the hub having a longitudinal featherway adapted to register with the said slot and to receive the feather, and the tube when expanded being adapted to bind within the hub of the bobbin.

1,157,536. HOSE-WASHER. HARRY P. HERRON, Los Angeles, Cal., assignor to H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois. Filed Dec. 10, 1909. Serial No. 532,478. (Cl. 137—28.)

1. As a new article of manufacture, a self-retaining hose washer formed of flexible, elastic, and resilient material; said washer having therethrough a central opening, and provided on its external periphery with a plurality of integral corrugations throughout the length of the washer, forming a series of thin, highly flexible projections to engage the threads of a hose coupling.

2. As a new article of manufacture, a self-retaining hose washer formed of flexible, elastic, and resilient material; said washer having therethrough a central opening, and provided on its external periphery with a plurality of integral, continuous corrugations which encircle the periphery throughout the length of the washer and form a series of thin, highly flexible projections to engage the threads of a hose coupling.



3. As a new article of manufacture, a self-retaining hose washer formed of flexible, elastic, and resilient material; said washer having therethrough a central opening, and provided on its external periphery with a plurality of integral, continuous corrugations formed by a continuous spiral which runs from one end of the washer to the other and forms a series of thin, highly-flexible projections adapted to make threaded engagement with the screw threads of a hose coupling when the washer is forced or screwed into place in a coupling.

1,157,537. SIFTER-TOP. AARON HESS, New York, N. Y. Filed June 12, 1914. Serial No. 844,691. (Cl. 221—62.)

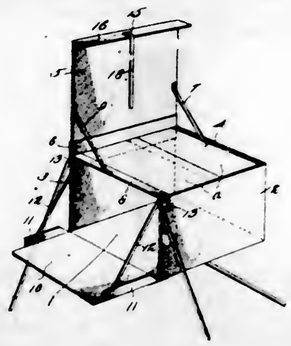


1. In a sifter top for receptacles, a cap structure provided with an apertured top, said top being formed with an opening in one side, an apertured plate arranged beneath said apertured top, said apertured plate being formed with an operating member, said operating member projecting through said opening, said apertured plate being also provided with a pair of upstanding members on the lower side, and an independent bowed spring having one end frictionally engaging the cap structure and the other frictionally engaging said pressed out portions and the bottom of said plate, the shape of said spring being such as to press said plate against said apertured top and to resiliently resist the movement of the plate by said operating member.

2. In a sifter top for receptacles, a cap structure provided with an apertured top, said top being provided with an opening on one side and an indentation on the opposite side, an apertured sliding plate fitting against the top of said cap, said plate being formed with a pair of stops and a manually operable extension, said extension projecting through said aperture in the side of said cap, and a substantially U-shaped spring having one end bent for forming a shoulder and the opposite end cut away for providing overhanging members, said overhanging members interlocking with said stops and said shouldered portion fitting into said recess, said U-shaped member being arranged loosely in position and adapted to press on said plate so as to urge the same against the top of said cap and against a movement caused by the pressure on said extension.

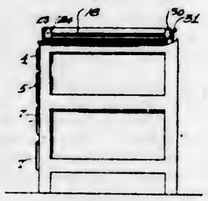
3. In a sifter top for receptacles, a cap provided with an apertured top, a sliding plate arranged against the inner surface of said cap, said cap being formed with a recess therein below said plate and a substantially U-shaped spring having one end engaging said recess and the other said plate for pressing the plate against the upper part of said cap, said U-shaped member being bent at one end for loosely fitting in said recess and with notched portions loosely engaging projections arranged on said plate.

1,157,538. HAT-BOX. HERBERT H. HOLBROOK, Arcadia, Okla. Filed Jan. 25, 1915. Serial No. 4,307. (Cl. 229—44.)



In a hat box having a bottom, side walls and a rear wall, a cover hinged to one end of the side walls, a front wall hinged to the bottom, angular bent side members formed integral with the front wall, a cross piece secured to the front upper edge of side walls, flexible members secured to the brace and to the rear wall; tape members secured to the angular bent side member of the front wall, said tape members extending through slots in the side walls, the free ends of said tape members being adapted when tied together to secure the front wall in a closed position.

1,157,539. SEWING-CABINET. GEORGE P. HUHN, Minneapolis, Minn. Filed Apr. 2, 1914. Serial No. 829,078. (Cl. 45—31.)



1. A device of the class described comprising a frame having a front and end flanges projecting upwardly above the top of said frame, a removable and reversible cover positioned upon the top of said frame and between said end flanges, recessed plates secured to the forward and rear edges of the removable and reversible cover, plates secured to the inner face of the front flange and having offset portions for engagement in the recessed portions of the plate secured to the front edge of said removable and reversible cover, and clamp members projecting upwardly from the back of the frame and provided with projections for removable engagement in the recesses in the plates secured to the rear edge of said removable and reversible cover, whereby said removable and reversible cover may be securely held in position.

2. A device of the class described comprising a cabinet frame having upwardly projecting flanges, formed along its end and frame edges at the top of said cabinet frame, a removable and reversible cover slidably engaged between the end flanges, said cover projecting above the flanges, latch plates secured to the forward and rear edges of said cover and provided with inwardly pressed portions to form sockets, plates secured to the rear face of the front flange and provided with outwardly pressed latch lugs engaged in the sockets of the latch plates carried by the cover at the front of the same, and upwardly projecting spring latch plates secured to the back of the frame and provided in their extended portions with latch lugs removably engaged in the sockets of the latch plates mounted upon the rear edge of said cover, the spring latch plates having their upper ends turned back, whereby said latch plates may be readily grasped to withdraw the latch lugs from the sockets in the latch plates carried by the cover.

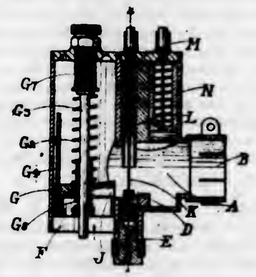
1,157,540. WRENCH. FRANK HUMPHRIS, Kingston-on-Thames, England. Filed Mar. 20, 1915. Serial No. 17,907. (Cl. 81—117.)



1. In an adjustable wrench the combination with a hollow handle, and a member longitudinally adjustable in said handle, of a pair of jaws, parallel links pivotally mounted upon said adjustabe member and connected on either side with each jaw, and links connecting said jaws to a fixed part of said handle.

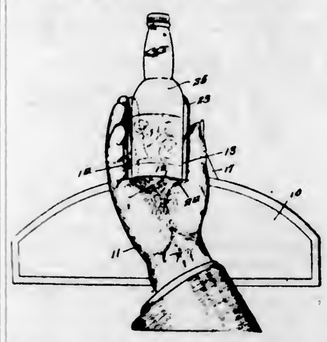
2. An adjustable wrench comprising a hollow handle, a sleeve rotatably mounted on said handle, a nut fixed in said sleeve, a bolt engaged by said nut and formed with a head, a pair of jaws, parallel links pivotally mounted upon said head and connected on either side with said jaws, and links connecting said jaws to a fixed part of said handle.

1,157,541. CARBURETER. PERCY WILLIAM HUSKISSON, Poole, England. Filed Oct. 9, 1914. Serial No. 865,881. (Cl. 48—155.1.)



In combination, a spraying chamber, a jet nozzle projecting through one wall of said chamber, a closed end to said chamber, an air inlet adjacent to said jet nozzle, a spring-loaded valve controlling said inlet, and a groove or channel in said valve varying in depth and adapted to direct the entering air over said jet nozzle at an acute angle to the horizontal plane of the spraying chamber, substantially as set forth.

1,157,542. DISPLAY-STAND. JOSEPH A. IMHOF, New York, N. Y., assignor to Kaufmann & Strauss Co., New York, N. Y., a Corporation of New York. Filed Dec. 23, 1914. Serial No. 878,763. (Cl. 211—24.)



1. In a display stand of the class described, an advertising placard, a card attached to said advertising placard, having bendable away wings formed in said card, an easel attached to said placard having wings bendable away from said placard, a locking tongue to hold said wings in spaced relation and a bendable support carried by said easel to receive the bendable wings from said card.

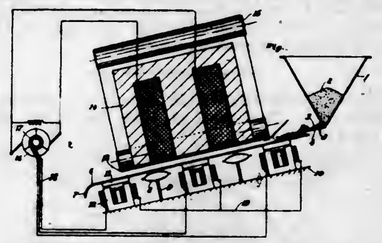
2. In a display stand of the class described, a card, bendable wings formed on said card to receive an article to be displayed therebetween, an easel attached to said card, said easel having a body portion and wings bendable therefrom, a locking tongue for holding said wings in fixed position, said body portion and wings being cut to form a bendable support, said support being bendable from said wings along the line out of alinement of the hinge for said wings.

3. In a display stand of the class described, a card, having fingers indicated thereon, wings bendable therefrom, an easel for maintaining said card in standing position, said easel having a body portion and wings bendable therefrom, said body portion and wings being cut to form a bendable support, said support being hinged to said wings, along lines out of alinement of the hinges for said wings, the wings bendable from said fingers, fitting in the bendable support and the upper end of said body portion of said easel from which said bendable portion is cut together with said bendable portion being adapted to receive and support a container to be displayed.

4. In a display stand of the class described, an easel comprising a body portion, wings bendable from said body portion, a locking means for holding said wings in bent relation to said body portion, a supporting member formed of said body portion and wings, said supporting member comprising that portion of the wings and body portion between lines on said wings, out of alinement of the line of bend for said wings, an edge formed on the body of the easel by said supporting member, said supporting member having lines of scoring thereon to facilitate curving the same to said supporting member to a container and said supporting member in the edge formed thereby serving to support an article to be displayed.

1,157,543. MAGNETIC ORE-SEPARATOR. AUGUST F. JOBKE, Wilkinsburg, Pa., assignor of one-half to John G. Burns, Daniel Bingham, Katherine Crumay, Thomas Higgins, and H. P. Gassam, Pittsburgh, Pa. Filed Feb. 9, 1911. Serial No. 607,518. (Cl. 193—11.)

1. Means for feeding material into a separating gap comprising an inclined conveyer surface adapted to receive the material from a source of supply, and means for moving said surface to cause the material to be intermittently thrown in directions perpendicular to the plane of such surface, whereby the material will be caused to travel lengthwise of the conveyer, said means including electromagnetic mechanism for providing rapid pulsations to the conveyer by magnetic attraction.



2. Means for feeding material into a separating gap, comprising an inclined conveyer adapted to receive the material from a source of supply, and means for providing rapid pulsations of relatively short length to the conveyer by magnetic attraction in directions at right angles to the direction of length of the conveyer to cause the material to travel lengthwise of the conveyer and be intermittently thrown into the space above the surface of the conveyer.

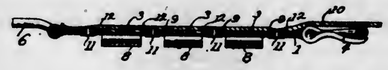
3. Means for feeding material into a separating gap, comprising an inclined conveyer adapted to receive the material from a source of supply, and means for providing rapid pulsations of relatively short length to the conveyer in directions at right angles to the direction of length of the conveyer to cause the material to travel lengthwise of the conveyer and be intermittently thrown into the space above the surface of the conveyer, said means including an electromagnet adapted to move the conveyer in one direction by magnetic attraction.

4. Means for feeding material into a separating gap, comprising an inclined conveyer adapted to receive the material from a source of supply, and means for providing rapid pulsations of short length to the conveyer, in directions to cause the material to be thrown therefrom in a direction perpendicular to the plane of the conveyer surface and opposing gravity, the return movement of the material under the action of gravity placing it in an advanced position with respect to the direction of length of the conveyer.

5. Means for feeding material into a separating gap, comprising an inclined conveyer adapted to receive the material from a source of supply, and means for providing rapid pulsations of short length to the conveyer, in directions to cause the material to be thrown therefrom in a direction perpendicular to the plane of the conveyer surface and opposing gravity, the returning movement of the material under action of gravity placing it in an advanced position with respect to the direction of length of the conveyer, said means including an electromagnet adapted to move the conveyer in one direction by magnetic attraction.

[Claims 6 to 10 not printed in the Gazette.]

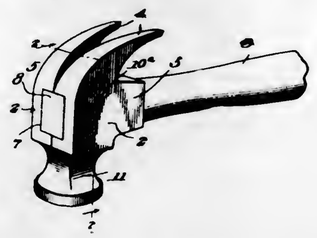
1,157,544. HARNESS ATTACHMENT. CURTIS JOHNSON, Prescott, Iowa. Filed May 18, 1915. Serial No. 28,867. (Cl. 54—1.)



A sheet metal layer for harness having rivet holes located at predetermined distances apart along its longitudinal center, provided with an elongated slot between two of the rivet holes at one end of said layer, and constructed with spurs at the edges at points between the rivet holes, in connection with a buckle the tongue of which extends through the slot, the slotted end of the layer inclosing the pintle of the buckle and with the rivet holes at the opposite ends of the slot in registry, the opposite

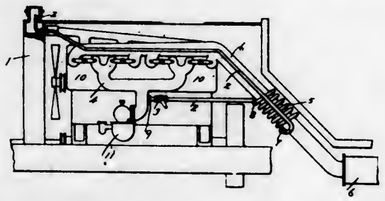
end of said layer inclosing a loop bar, the two rivet holes nearest that end being in registry, strap loops embracing the edges of the layer and fastened thereto by the said spurs, and a wear leather or safe secured to the layer by means of rivets extending through and upset in the several rivet holes hereinbefore specified.

1,157,545. HAMMER-HEAD. LEE ROY G. JOHNSON, Miakka, Fla. Filed Sept. 23, 1914. Serial No. 863,178. (Cl. 145—29.)



The improved hammer-head divided on a central longitudinal line, each separable part or section having a semi-cylindrical, screw-threaded terminal, and the face or striking member having a threaded socket adapted to receive the complete, threaded cylindrical tenon formed by such terminals, as deacribed.

1,157,546. SUPERHEATER. WALTER JOHNSON, Los Angeles, Cal. Filed June 29, 1914. Serial No. 847,958. (Cl. 123—25.)

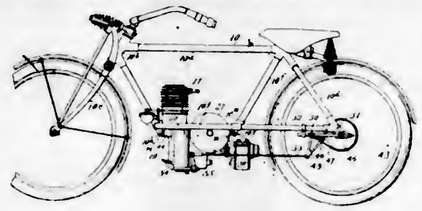


1. The combination with the radiator, intake manifold and exhaust manifold of a gasolene motor, of a tubular super-heating coil encircling the exhaust manifold, and a pipe between the terminals of which said coil is interposed, one end of which pipe leads to and opens in the radiator above the water level therein and the other end of which connects with the intake manifold.

2. A steam and air super-heater for gas engines comprising the combination with a radiator, intake manifold and exhaust manifold of the engine, of a pipe, one end of which opens to the interior of the radiator above the water level therein, and the opposite end of which connects with and opens to the interior of the intake manifold, a regulating valve for controlling the flow of steam and air through said pipe, and a super-heating coil interposed in said pipe and wound around the exhaust manifold, by which steam and air passing through the pipe may be highly heated by radiation of heat from the exhaust manifold.

1,157,547. MOTOR-CYCLE. WILFRED G. JOHNSON, Elyria, Ohio, assignor to W. B. D. Alexander, Cleveland, Ohio. Filed May 22, 1915. Serial No. 29,713. (Cl. 21—90.)

1. In combination in a motor cycle, a frame composed of upper and lower frame members and downwardly extending members connecting the same and a power plant secured to the frame by a two-point suspension connecting the front of the power plant to the frame adjacent the lower end of one of said connecting members of the frame and adjacent the lower frame member or members.



2. In combination in a motor cycle, a frame composed of upper and lower frame members and downwardly extending members connecting the same, a power plant secured to said frame at two points adjacent the lower ends of said connecting members of the frame and adjacent the lower frame member or members.

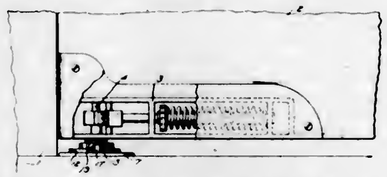
3. In combination in a motor cycle, a frame composed of an upper frame member, a pair of lower frame members spaced apart, and downwardly extending members connecting the upper and lower members and a combined power plant and transmission located between said lower frame members and secured at its front and rear ends to the frame at points adjacent the plane of the lower frame members.

4. In combination in a motor cycle, a frame composed of an upper frame member, a pair of lower frame members spaced apart and downwardly extending members connecting the upper and lower members and a power plant located between said lower frame members and secured to the frame adjacent the lower ends of said downwardly extended connecting members of the frame and adjacent the plane of the lower frame members.

5. In combination in a motor cycle, a frame composed of an upper frame member, a pair of lower frame members and inclined members connecting the upper and lower members, said frame being provided adjacent the lower ends of said downwardly extending connecting members and adjacent the lower frame members with power plant supporting means and a power plant supported between said lower frame members on said supporting means.

[Claims 6 to 22 not printed in the Gazette.]

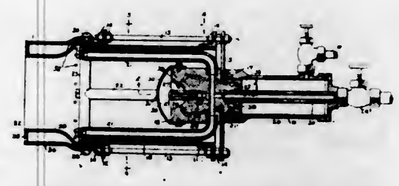
1,157,548. ALINING-PLATE FOR FLOOR-HINGES. OSCAR KATZENBERGER, Chicago, Ill. Filed June 3, 1915. Serial No. 31,851. (Cl. 16—25.)



1. In an alining plate of the character described, the combination with a hinge having a stationary shaft, of a base, an adjustable plate arranged on said base and formed with an aperture for receiving the end of said shaft whereby said shaft and said adjustable plate will move together, means for preventing the removal of said adjustable plate from said base, a pair of posts arranged on said base, and an adjusting set screw arranged in each of said posts, said set screws engaging said adjustable plate for adjusting the position thereof.

2. In an alining plate of the character described, a base plate formed with an aperture therein, a washer arranged in said aperture and connected with a floor hinge, said washer having overhanging members so as to prevent the shaft of said hinge from leaving the plate while allowing a rotary movement of the shaft, an adjustable plate arranged on said base and connected with said shaft so as to rotate therewith, said adjustable plate being formed with a pair of stops, and set screws arranged on said base, said set screws engaging said stops for adjusting the position of said adjustable plate and locking the same in its adjusted position.

1,157,549. OIL-BURNER TORCH. FREDERICK WILLIAM KELLERMANN, New York, N. Y. Filed May 14, 1915. Serial No. 28,232. (Cl. 158—53.)



1. In a device of the nature set forth, the combination of a tubular casing, a head secured adjacent one end of the casing and in spaced relation thereto, a nozzle fitted centrally in said head and lying mainly within the casing, means to supply fluid fuel through the nozzle into the interior of the casing, and a generator of gas within the casing and comprising longitudinal tubes communicating with the nozzle to receive the fluid fuel therefrom, an annular tube receiving the fluid fuel from the tubes aforesaid, and other tubes leading from the annular tube back to the nozzle, substantially as and for the purposes set forth.

2. In a device of the character set forth, the combination of a head, a nozzle fitted therein, a casing surrounding and spaced from the nozzle, means to deliver fluid fuel into and through the nozzle, and a generator of gas secured to the nozzle within the casing, said generator comprising a plurality of longitudinal tubes arranged within and parallel to the casing with their rear ends secured to the nozzle and an annular tube connected to the front ends of the longitudinal pipes and providing communication between them.

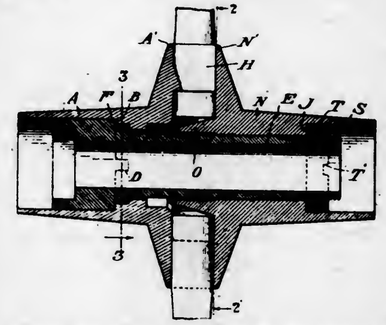
3. The combination of a head, a nozzle having one end secured therein, the main portion of the nozzle lying on one side of the head, a thimble secured to the other end of the nozzle and serving to lock the same to the head, means to deliver liquid fuel into and through the nozzle, means to deliver air through the thimble and thence through the nozzle independently of the means for passing liquid fuel therethrough, and a cap embracing the delivery end of the nozzle and providing therein a mixing chamber for the gas and air delivered thereto.

4. The combination of a nozzle having central axially alined ports spaced from each other, each of said ports having laterally extending ports, means to deliver fluid fuel into one end of the nozzle through one of the first mentioned ports, the fuel passing thence laterally through certain of the lateral ports, means to convey the fuel from the ports last mentioned to the outer ends of the other lateral ports whence it is returned to the nozzle and delivered through the alined port, a tip secured to the delivery end of the nozzle in alinement with the last mentioned port, and means forming a mixing chamber surrounding the tip.

5. The combination of a nozzle, means to hold the nozzle in position, said nozzle being formed with a flaring cavity in its delivery end, a cap embracing said end forming with the cavity a mixing chamber, means to deliver air through the nozzle lengthwise into said chamber, means to deliver liquid fuel into the nozzle remote from the mixing chamber, and a generator of gas receiving the liquid fuel thus delivered and returning it for delivery into the mixing chamber.

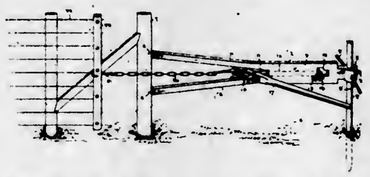
[Claim 6 not printed in the Gazette.]

1,157,550. VEHICLE-HUB. O'DELL KING, JAMES LAWRENCE ORR KING, and THOMAS HALSEY FOX, Sandy Springs, S. C. Filed Jan. 6, 1915. Serial No. 822. (Cl. 21—31.)



A vehicle hub made up of two flanged sections, the flange of one section being provided with tapering lugs, spokes intermediate the latter, the hub portion of the other section provided with a tapering projection upon its inner end and about the marginal edge of the central opening therein, said projection engaging the inner ends of said spokes, the hub section having said lugs being chambered and provided with shoulders upon the surface thereof, a boxing engaging said shoulders, portions of the boxing at points diametrically opposite being provided with lugs for engagement with grooves upon the inner wall of the adjacent hub section, the hub portion of the section having said tapering projection having a recess in its outer end, a threaded nut for engagement with the boxing and adapted to bear against the inner end of the recess in which it is positioned and forming means for holding the two flanged sections in contact with the spokes.

1,157,551. WIRE-STRETCHING APPLIANCE. WILLIAM J. KINGCADE, Freeman, Mo. Filed Dec. 14, 1914. Serial No. 877,199. (Cl. 254—75.)



In a stretching device, the combination with a body having a longitudinally extending bore and a transverse slot communicating with one end of the bore, a socket at one end of the body, arms at the opposite end of the body, prongs at the free ends of said arms, of a shaft extending through the bore of the body, means to removably secure the shaft in said bore, a lever having a slotted end to pivotally receive said shaft, a hook member at each side of the pivoted end of the shaft and pivotally connected in said slotted end, a chain coöperating with said hook to engage and cause wires to stretch when the lever is operated, and an anchoring means coöperating with said socket to hold the body against swinging movement.

1,157,552. HYPODERMIC SYRINGE. GEORGE H. KISPERT, Baltimore, Md., assignor to Winchester Manufacturing Company, Baltimore, Md. Filed May 17, 1915. Serial No. 28,653. (Cl. 128—25.)

1. In a hypodermic syringe, a barrel, a body secured to one end of said barrel, a member adjustably connected to said body, a substantially U-shaped member pivotally con-

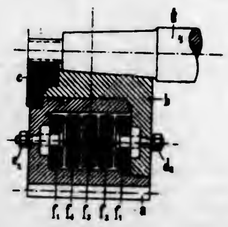
nected to said member, a needle-carrying head adapted for detachable connection to said pivotally connected substantially U-shaped member, for swinging movement into or out of engagement with the open end of said barrel.



2. In a hypodermic syringe, a body portion, a barrel connected to said body portion, a plunger carrying member adjustably connected to said body, a substantially U-shaped member pivotally connected to said plunger carrying member, a head formed upon the vertex of said substantially U-shaped member, a needle supporting head adapted for detachable connection with said U-shaped member carrying head, a hollow needle carried by said needle carrying head, said plunger carrying member adapted for adjustment toward or from said body portion for permitting of swinging movement of said U-shaped member and said needle and needle head into or out of alinement with the open end of said barrel.

3. In a hypodermic syringe, a body portion, a barrel connected to said body portion, a plunger carrying member adjustably connected to said body, a substantially U-shaped member pivotally connected to said plunger carrying member, a head formed upon the vertex of said substantially U-shaped member, a needle supporting head adapted for detachable connection with said U-shaped member carrying head, a hollow needle carried by said needle carrying head, said plunger carrying member adapted for adjustment toward or from said body portion for permitting of swinging movement of said U-shaped member and said needle and needle head into or out of alinement with the open end of said barrel, a plunger carried by said plunger carrying member, including a plunger rod, having an internally screw threaded bore formed in one end thereof, a washer adjustably connected to said plunger rod, a second washer connected to said plunger rod, and a flexible gasket carried by said washers.

1,157,553. FLEXIBLE COUPLING. WALTER KLEINOW, Breslau, Germany. Filed Mar. 1, 1915. Serial No. 11,400. (Cl. 74—41.)

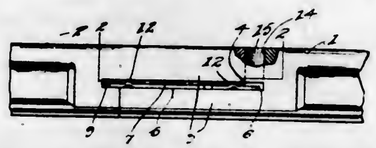


1. As a new means for the resilient coupling of two machine parts a plurality of springs, spirally encompassing the axle side by side, whose points of application are uniformly distributed on both sides around the axle, substantially as set forth.

2. As a new means for the resilient coupling of two machine parts a plurality of springs of a flat sectional area, spirally encompassing the axle edgewise, which springs are secured each at one end by screws to either of the two coupling parts, substantially as set forth.

3. The combination with two coaxial machine parts of springs spirally encompassing the axle side by side, with one of the parts formed as a toothed rim.

1,157,554. RAIL-JOINT. ISAAC J. KNIGHT and JAMES M SMITH, Plainview, Ark. Filed Mar. 30, 1915. Serial No. 18,043. (Cl. 239—8.)

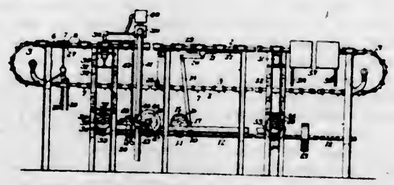


1. In a rail joint, the combination with the rails of a joint, said rails being overlapped and interlocked and formed with alining horizontal recesses of locking plates pivoted to the inner faces of the overlapped portions of the rails and to be moved to engage within the recesses.

2. In a rail joint, the combination with the rails of a joint, said rails being cut away from the upper and lower sides thereof to provide extensions, said extensions overlapping, shoulders being formed by cutting away said rails, said shoulders having dove-tail recesses arranged vertically therein, dove-tail projections carried on the ends of the extensions and arranged to fit within the recesses and a locking plate pivoted upon the inner face of each of said extensions, the locking plate of one rail being arranged to extend into locking engagement with the other rail, each of said rails being formed with a recess in the shoulder thereof.

3. In a rail joint, the combination with the rails of a joint, said rails being cut away from the upper and lower sides thereof to provide extensions, said extensions overlapping, shoulders being formed by cutting away said rails, said shoulders having dove-tail recesses arranged vertically therein, dove-tail projections carried on the ends of the extensions and arranged to fit within the recesses, a locking plate pivoted upon the inner face of each of said extensions, the locking plate of one rail being arranged to extend into locking engagement with the other rail, each of said rails being formed with a recess in the shoulder thereof, said locking plates being formed with spring metal and having an upwardly struck transverse rib thereon to engage within the recess.

1,157,555. APPARATUS FOR THE MANUFACTURE OF INCANDESCENT MANTLES. ELMER L. KNOEDLER, Gloucester City, N. J., assignor to Welsbach Light Company, Gloucester City, N. J., a Corporation of New Jersey. Filed Sept. 30, 1913. Serial No. 792,583. (Cl. 67—100.)



1. Apparatus for the manufacture of mantles, comprising a traveling carrier, a plurality of burners above the carrier, a plurality of muffles below the carrier, a separate vertically movable support on the carrier for each mantle to be treated, and means for raising each muffle into contact with a support on the carrier to thereby raise the mantle to the action of a burner, the muffles having means which coöperate with said supports to center and carry them when so raised, substantially as described.

2. Apparatus for the manufacture of mantles, comprising parallel carrier chains having rollers, tracks for said rollers and forming supports for said chains, a plurality of transverse mantle carrying bars connecting the chains, and each having a plurality of seats for mantle supports; and mantle supports, arranged to be loosely mounted in said seats, substantially as described.

3. Apparatus for the manufacture of mantles, comprising parallel carrier chains having rollers, tracks for said rollers and forming supports for said chains, a plurality of transverse mantle carrying bars connecting the chains and each having a plurality of seats for mantle supports, mantle supports arranged to be loosely mounted in said seats, a plurality of vertically movable muffles below the transverse mantle carrying bars, and means for raising said muffles around the mantles and into lifting engagement with the mantle supports, substantially as described.

4. In apparatus for manufacturing mantles, the combination with parallel carrier chains, tracks for supporting said chains, transverse mantle carrying bars connecting the chains, and means for imparting a step by step movement to said chains comprising reciprocating gripping devices having means for engaging and moving the chains at intervals in one direction, substantially as described.

5. Apparatus for hardening and shaping mantles, comprising parallel carrier chains, means for imparting a step by step movement to said chains, a plurality of transverse mantle carriers having means for detachably engaging the chains, each of said carriers having seats for a plurality of separate mantle supports, together with a plurality of vertically movable muffles, and means for raising said muffles into lifting engagement with the mantle supports, substantially as described.

1,157,556. ARTIFICIAL SAUSAGE-SKIN. CARL LANGE, Friedland, Germany. Filed July 24, 1913. Serial No. 780,891. (Cl. 99—8.)

1. An artificial sausage skin comprising a tube made up of a thin flexible material consisting of the woven parts of animals suitable therefor.

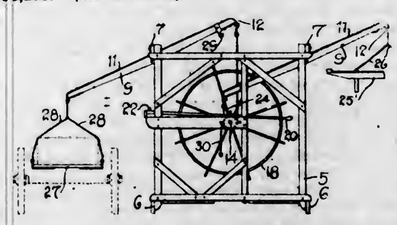
2. An artificial sausage skin comprising a tube made up of a woven, thin flexible material consisting of the sinuous parts of animals.

3. A sausage skin consisting of a tube formed of woven parts of animal bodies suitable therefor.

4. A sausage skin consisting of a tube artificially formed of the sinuous portions of animal bodies.

5. An artificial skin consisting of a tube formed of a woven material subject to shrinkage and expansion the same as the sausage material it is designed to hold.

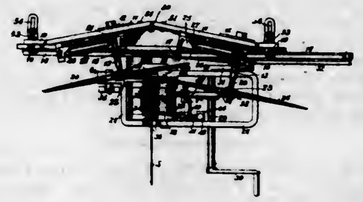
1,157,557. HOISTING APPARATUS. NOVALIS LACROIX, Belle Center, Ohio. Filed Aug. 11, 1914. Serial No. 856,298. (Cl. 254—46.)



1. In an apparatus of the character described, the combination of a frame, two pairs of beams fulcrumed intermediate of their ends in the frame, the respective pairs of beams projecting from opposite sides of the frame, a drum mounted in the frame, flexible elements connected to the inner ends of the beams and adapted for detachable connection with said drum, a wheel centrally secured to the drum whereby the same may be rotated to oscillate said beams, pins projecting radially from the drum, and a lever fulcrumed at one end in the frame and provided with an opening to receive any one of said pins whereby the drum is held against rotation.

2. In an apparatus of the character described, the combination with a frame, two pairs of beams fulcrumed intermediate of their ends in said frame, the respective pairs of beams projecting from opposite sides of the frame, a drum rotatably mounted in said frame, stud bolts fixed in opposite sides of the drum at each end thereof and spaced from each other longitudinally of the drum, flexible elements connected to the inner ends of the beams and adapted for detachable connection with said studs, a sleeve centrally secured upon the drum, a wheel mounted upon said sleeve to rotate the drum, radially disposed pins extending through the drum and sleeve, a locking lever fulcrumed at one end upon the drum and provided with an opening to receive any one of said pins, a hook secured to the inner end of each of the beams, and anchoring means for engagement with said hooks to secure any one of the beams against movement with respect to the frame.

1,157,558. SAW-SHARPENING MACHINE. TITUS H. LAURY, Red Bank, N. J. Filed June 30, 1914. Serial No. 848,182. (Cl. 76—35.)



1. In a saw sharpening machine, the combination of a frame having a pair of guideways arranged therein at an angle to each other, a pair of blocks movable in said guideways, a sleeve secured to each block and extending therefrom at a right angle, a plunger mounted for reciprocation in each sleeve, means connected to each plunger to carry a file with the axis of the file substantially parallel to the adjacent guideway means to reciprocate both blocks and sleeves along the guideways in alternation, means associated with and to cause each file to be lifted out of the plane in which it is active to avoid interference with the next file, and means to support a saw to be acted upon by said files.

2. In a saw sharpening machine, the combination of a frame having a pair of guideways arranged at an angle to each other, a pair of blocks movable in said guideways, a cam block secured to the frame parallel and adjacent to each guideway, said cam block being grooved, a plunger connected to each block movable in the guideways, file holding means connected to the end of the plunger remote from the guiding portion of the frame, and a member extending laterally from the plunger into the grooved portion of the cam block, substantially as and for the purposes set forth.

3. In a saw sharpening machine, the combination of a frame having a guide portion, a block movable along said guide portion, a cam block adjustably connected adjacent and parallel to said guide portion, said cam block having a pair of parallel guide grooves and inclined grooves connecting adjacent ends of said guide grooves, a sleeve secured to the movable block and extending across the plane of the cam block, a plunger carried by the sleeve and reciprocating therein, a pin extending laterally from the plunger into the cam grooves, file holding means carried by

the plunger, and means to reciprocate the guide block, substantially as set forth.

1,157,559. WHEEL. JOHN W. LEWELLEN, Ridal, Pa. Filed June 19, 1913. Serial No. 774,706. (Cl. 152—21.)

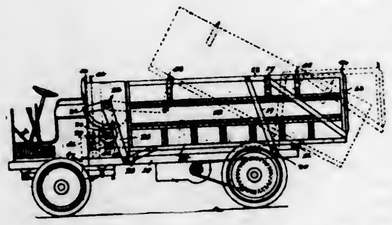


1. The combination of a rim; a relatively fixed flange adjacent one side thereof; a removable flange adjacent the other side of the rim, there being a conical shoe-receiving surface extending toward the central plane of the rim from the fixed flange and a cylindrical shoe-receiving surface extending toward the middle of the rim from the removable flange; with a tire shoe having one of its inner edges formed to fit the conical surface and its other inner edge formed to fit said cylindrical surface.

2. The combination of a rim having two portions of different external diameters of which one has a cylindrical external surface and the other has a conical external surface; with a tire shoe having the interior surfaces of its two edges also of different diameters and formed to fit the external surfaces of said two rim portions respectively.

3. The combination of a rim having a tire retaining flange at one edge and formed with a part of its external surface tapering from said flange to its middle portion, the balance of said surface being cylindrical; a tire shoe mounted on said rim and having one portion of enlarged internal diameter to engage said tapering portion of the rim, while its remaining portion is formed to engage the cylindrical portion of the rim; with means for removably holding the shoe on the rim.

1,157,560. DUMPING MOTOR-TRUCK. CHARLES LYNCH, Hammond, Ind. Filed Aug. 26, 1912. Serial No 716,976. (Cl. 21—20.)

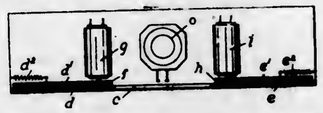


1. In a dumping motor truck, a truck frame, a tilting body pivoted in rear of its longitudinal center to and across the rear end of the truck frame, a shaft mounted in and between side uprights of the truck frame, a pair of arms on said shaft, thrust links connecting the free ends of said arms with the forward portion of said body, segment racks rigid with said arms, a second shaft carrying pinions meshing with said segment racks, and mechanism for turning said last-named shaft in both directions.

2. In a dumping motor truck, a truck frame, a tilting body pivoted in rear of its longitudinal center to and across the rear end of said truck frame, a shaft mounted in and between side uprights of the truck frame, a pair of arms on said shaft, thrust links connecting the free ends of said arms with the forward portion of said body, segment racks rigid with said arms, a second shaft carrying pinions meshing with said segment racks, and a worm-gear drive for said last-named shaft.

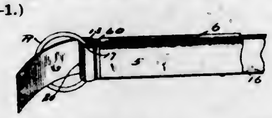
3. In a dumping motor-trock, the combination with the truck-frame, of a tilting body pivoted to and across the rear end of said truck-frame, a shaft mounted in and between side-uprights of the truck-frame, a pair of arms on said shaft, thrust-links connecting the free ends of said arms with the forward portion of said body, segment-racks rigid with said arms, a second shaft carrying pinions meshing with said segment-racks, and power mechanism for turning said last-named shaft in both directions, said power mechanism including a friction-wheel and means for shifting the latter into and out of driven engagement with the engine fly-wheel of the motor-truck.

1,157,561. AUTOMOBILE-SIGNAL. GEORGE F. A. McDOUGALL, Boston, Mass., assignor of one-half to Winslow L. Jenkins, West Somerville, Mass. Filed Sept. 11, 1914. Serial No. 861,186. (Cl. 40—53.)



A device of the class described comprising a casing, said casing having an opening formed centrally in its rear wall, plates slidably mounted in the casing and normally on opposite sides of the opening, and having rack-bars fixed adjacent their lower edges and of the same length as the plates, said plates corresponding in shape and size to the opening, motors mounted in the casing and having their shafts disposed at right angles to the rack-bars, pinions fixed to the motor shafts and in mesh with the rack-bars, means yieldably connecting the plates and casing to normally hold the plates concealed in the casing, and means distant from the casing to start one motor at a time for moving the associated plate to cover said opening.

1,157,562. HARNESS-TRIMMING. ISAIAH MCKNIGHT, Louisville, Ky. Filed Jan. 11, 1915. Serial No. 1,678. (Cl. 54—1.)



1. The herein described strap-end comprising inner and outer members whereof the inner is folded longitudinally so as to be U-shaped in cross section and the outer is folded longitudinally so as to be of inverted U-shape in cross section and arranged to embrace the inner member, the latter being slitted at its rear extremity to form tongues whereof one is bent back and the other is bent back around the first tongue, and the outer member being formed at its rear end with a tongue which is bent back around the bends of the inner member.

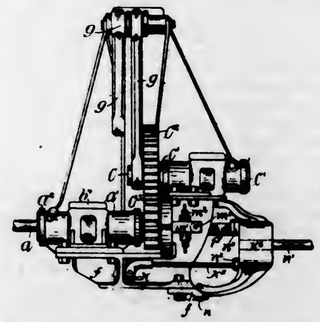
2. The herein described harness element comprising inner and outer members, whereof the inner is folded longitudinally along its transverse center to produce two leaves and is slitted along said central line to produce tongues at the rear extremities of the leaves; and the outer member also is folded longitudinally along its transverse center to produce two leaves, one of which is longer than the other so as to leave a tongue projecting beyond said inner member, the whole for use as set forth.

3. In a harness trimming, the combination with a ring; of a harness element composed of an inner member having a tongue at its rear end passed through the ring and bent back upon itself, and an outer member folded so as to be of inverted U-shape in cross section and arranged with its fold line overlying the upper edge of the inner member and its rear end formed so as to produce a single tongue which is passed through said ring and around the bend of the tongue of the inner member, and stitches holding all parts in place.

4. In a harness trimming, the combination with a ring; of a harness element composed of an inner member folded so as to be of U-shape in cross section and slitted at its rear end into two tongues whereof one is passed through the ring and bent back and the other is passed through the ring and bent back around the first tongue, and an outer member folded so as to be of inverted U-shape in cross section and arranged with its fold line overlying the open upper edge of the inner member.

5. In a harness trimming, the combination with a ring; of a harness element composed of an inner member folded so as to be of U-shape in cross section and slitted at its rear end into two tongues whereof one is passed through the ring and bent back and the other is passed through the ring and bent back around the first tongue, and an outer member folded so as to be of inverted U-shape in cross section and arranged with its fold line overlying the open upper edge of the inner member and its rear end formed so as to produce a single tongue which is passed through said ring and bent back around the bends of the tongues of the inner member, the remaining portion of the outer member being folded down onto said single tongue, and means for securing all parts in place.

1,157,563. WINDMILL. ROBERT MCMULLAN, Fremantle, Western Australia, Australia. Filed Sept. 18, 1913. Serial No. 790,522. (Cl. 170—53.)

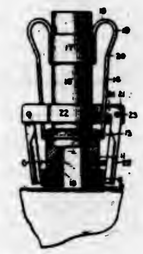


The combination in a windmill, of a tubular mast, an operating rope extending upwardly therethrough, a hollow swivel bracket having a roller therein and comprising an outwardly projecting tubular jaw member, the operating rope extending through the bracket in engagement with the roller and also projecting through the jaw member, a swiveled rudder support having a throat to which the operating rope is terminally attached and also carrying a rudder shaft, the said throat being provided with a lug, a main shaft having wheel operating means associated therewith and a brake wheel secured on the end thereof, and a pivoted block arranged to have frictional contact with the brake wheel and provided with a release spring, said block being engaged by the lug on said throat when the rudder support radially swings to cause contact of the block and lug and thereby arrest and lock the mill against movement until released.

1,157,564. DUST-CAP FOR TIRE-VALVES. HOSEA ALFRED MASON, Taunton, Mass., assignor of one-fourth to Stephen G. O'Neil and one-fourth to William E. Quigley, Taunton, Mass. Filed Mar. 15, 1915. Serial No. 14,550. (Cl. 152—12.)

1. In a device of the class described, a cap, a split nut extending from an end of the cap, and means mounted on the cap for holding the parts of the split nut together with an end of the split nut disposed against the said end of the cap.

2. In a device of the class described, a cap, a split nut having one set of ends disposed at an end of the cap, means mounted on the cap for holding the parts of the split nut together and against the cap, the parts of the split nut having at their other ends means for receiving a washer.



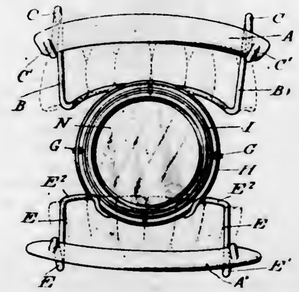
3. In a device of the class described, a cap having an annular bead, a split nut, the parts of which have at one set of ends recesses for receiving the annular bead, and means for holding the parts of the split nut together and with the bead in the recesses.

4. In a device of the class described, a cap, a split nut extending from an end of the cap, supporting means mounted on the cap for yieldingly holding the ends of the split nut at the said end of the cap, and means for engaging the supporting means for holding the parts of the split nut together and against an end of the cap.

5. In a device of the class described, a cap having an annular bead, a split nut, the parts of which have at one set of ends recesses for receiving the annular bead, and at the other set of ends recesses for receiving a washer, and means for holding the parts of the split nut together and with the bead in the first mentioned recesses.

[Claims 6 to 9 not printed in the Gazette.]

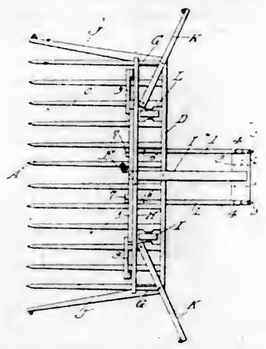
1,157,565. COMBINED DENTAL PROP AND MIRROR. JAMES ERLE MAYER, Bluefield, W. Va. Filed Mar. 15, 1915. Serial No. 14,525. (Cl. 32—27.)



1. A combined dental prop and mirror comprising lip shields, a frame having arms which are bent to form loops integral with said shields, loops adapted for the reception of cotton, said frame having portions bent at angles, and a swiveled mirror mounted upon said frame.

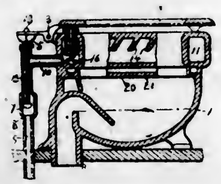
2. A combined dental prop and mirror comprising lip shields, a frame having arms which are bent to form loops and secured to said shields, loops adapted for the reception of cotton, said frame bent at acute angles and extended rearwardly, said frame having a circular outlined portion, a ring swiveled to the frame, and a mirror swiveled to the ring.

1,157,566. CLEARING ATTACHMENT FOR RAKES. JOHN F. MERRELL, Marquette, Kans. Filed Dec. 12, 1914. Serial No. 876,853. (Cl. 56—137.)



A clearing attachment for rakes, including push bars, a cross brace adjustably connecting the rear ends of the bars, downwardly and rearwardly inclined anchoring means attached to said connecting brace, flexible means for attaching said connecting brace to the rear portion of a rake structure, blocks secured to the front ends of the push bars, parallel cross strips adjustably connecting the blocks at right angles to the push bars, said strips being superposed and forming a tine receiving space therebetween and between the blocks, posts connected to the respective strips, a cross strip adjustably connected to the posts, and depending arms carried by said strip, said posts, cross strips and arms constituting a head.

1,157,567. WATER-CLOSET GAGE. GEORGE MIDDLETON, Providence, R. I. Filed Apr. 24, 1915. Serial No. 23,726. (Cl. 4—5.)

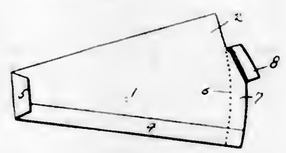


1. An automatic flushing apparatus for water closets comprising a bowl having an annular chamber therein with depending ribs forming compartments in which air is trapped as the water is introduced into the chamber, an inlet pipe leading to said chamber, said chamber having an exit opening leading into the bowl, spring-pressed valves controlling the inlet pipe and exit opening, a seat having a projection adapted to close one valve and allow the other to open as the seat is raised from the bowl.

2. An automatic flushing apparatus for water closets comprising a bowl having an annular chamber therein with depending ribs forming compartments in which air is trapped as the water is introduced into the chamber, an inlet pipe leading to said chamber, said chamber having an exit opening leading into the bowl, spring-pressed valves, one for regulating the pipe through which water is introduced into the chamber and the other for regulating the exit opening from the latter, a seat pivoted upon the bowl and having a projection adapted to close one valve as the other opens and allow the other to open and vice versa.

3. An automatic flushing apparatus for water closets comprising a bowl having an annular chamber therein with depending ribs forming compartments in which air is trapped as the water is introduced into the chamber, an inlet pipe leading to said chamber, said chamber having an exit opening leading into the bowl, a seat pivoted upon the bowl and having a projection with a lead thereon, a spring-pressed valve adapted to regulate the inflow of water through the pipe, a stem connected with said valve extending through an aperture in said projection and head, and a spring-pressed valve adapted to close the exit opening when the seat is down.

1,157,568. PAPER EXTRACT-HOLDING CUP. ANDREW J. MILLS, Weir, Miss. Filed Dec. 17, 1912. Serial No. 737,344. (Cl. 229—53.)



A cup of the character set forth comprising side walls having alined rows of perforations near their upper ends and having their side and bottom edges connected together, the upper portions of the side walls being sealed together at a point adjacent the rows of perforations to close the upper end of the cup and to hold the inner faces of the side walls adjacent the rows of perforations in intimate contact so as to prevent the contents of the cup escaping through the perforations and so as to prevent dust and other foreign matter entering the cup through the perforations, the perforations permitting the connected upper portions of the side walls to be removed when it is desired to use the cup.

1,157,569. PROCESS OF PLATING OR DECORATING CHINAWARE OR GLASSWARE. FREDERICK MOENCH, Rushville, Ill. Filed Apr. 8, 1915. Serial No. 19,879. (Cl. 91—70.1.)

1. The herein described process of plating or decorating glass or ceramic ware, which consists in treating the surface to be decorated or plated with hydrofluoric acid, heating the objects to be plated, rubbing on the heated objects melted metal, and allowing the objects with the metal coat to cool.

2. The herein described process of plating or decorating glass or ceramic ware, which consists in treating the surface to be decorated or plated with hydrofluoric acid, heating the objects to be plated, rubbing on the heated objects melted metal, and allowing the objects with the metal coat to cool gradually.

3. The herein described process of plating glass or ceramic ware, which consists in treating the ware to be plated with hydrofluoric acid, heating the ware, rubbing the heated ware with melted aluminum, and subsequently allowing the ware thus treated to cool.

4. The herein described process of plating glass or ceramic ware which consists in treating the ware with hydrofluoric acid, heating the ware to substantially a red heat, applying melted aluminum to the ware thus treated, rubbing the melted aluminum over the surface of the body to be plated, and subsequently cooling the body.

5. The herein described process of plating glass or ceramic ware which consists in treating the ware with hot hydrofluoric acid, heating the ware to substantially a red heat, applying melted aluminum to the ware thus treated, rubbing the melted aluminum over the surface of the body to be plated, and subsequently cooling the body.

[Claim 6 not printed in the Gazette.]

1,157,570. [WITHDRAWN.]

1,157,571. CARTRIDGE-STOP FOR MAGAZINE-SHOTGUNS. FREDERICK MOENCH, Rushville, Ill. Filed Apr. 22, 1915. Serial No. 23,057. (Cl. 42—17.)



1. The combination with the magazine of a repeating firearm having a series of alined openings in its underside, the same being spaced apart about the length of a cartridge, a corresponding series of spring catches applied to the underside of the magazine and whose heads normally project through the aforesaid openings in engagement with the cartridges, a slidable trip having parts adapted for engaging the free ends of the catches, a retracting spring connected with said trip, and an action-slide operatively connected with the trip to operate as specified.

2. The combination with the magazine of a repeating firearm, the same having a series of openings in its underside, a corresponding series of spring catches whose heads or shoulders are adapted to project through the openings, for engagement with the cartridge heads, a slidable trip arranged parallel to the underside of the magazine, a retracting spring connected with said trip, an action-slide having an attached device which connects it with the trip, and means for limiting the reciprocation of the action-slide, as described.

3. The combination with the magazine of a repeating firearm having a series of alined openings in its underside, a corresponding series of spring catches attached to the underside of the magazine and having heads adapted to project through the openings, for engagement with the cartridges in the magazine, a slidable trip comprising bars and beveled lugs attached thereto and adapted, when the slide is operated, to engage with, and depress, the heads of the said spring catches, a retracting spring connected with such trip, and an action-slide also rigidly connected with the trip and adapted to operate the same, for simultaneously releasing all the spring catches from the cartridges, as described.

4. The combination with a magazine of a repeating firearm having a series of openings in its underside which are spaced apart corresponding to the number of cartridges to be received in the magazine, a series of catches corresponding to the number of openings, springs secured to the magazine and bearing upward against the catches, for holding them normally engaged with cartridges, a slidable trip comprising a longitudinal member having a series of beveled lugs corresponding in number with the catches and adapted to engage the heads of the latter, for depressing them and releasing all the cartridges simultaneously, a retracting spring connected with said member, a sheath or cover applied over the series of catches and also inclosing the slidable trip and the catches, in action-slide applied to the magazine and permanently connected with the slidable trip, the connection being effected by means of one of the beveled lugs, and the sheath or cover having a slot through which said lug projects, whereby the sheath serves as a stop for limiting the reciprocation of the action-slide.

1,157,572. VULCANIZING AND ATTACHING RUBBER. FREDERICK MOENCH, Rushville, Ill. Filed May 27, 1915. Serial No. 30,792. (Cl. 18—59.)

1. The herein described process of attaching rubber to other material which consists in coating said material with a solution of rubber, drying the same, scratching the dried coat into the face of the material to be coated, and applying unvulcanized rubber to the coated material under heat and pressure.

2. The herein described process of attaching rubber to other material, which consists in coating said material with a solution of rubber, drying said coating, scratching the dried coating with a pointed instrument, and applying to the scratched coating unvulcanized rubber under heat and pressure and subsequently relieving the pressure and continuing the heat.

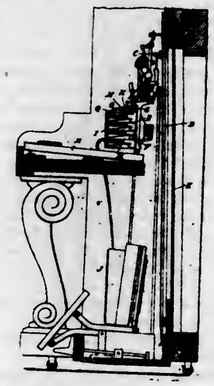
3. The herein described process of simultaneously vulcanizing and attaching rubber to other material, which consists in applying to the material a solution of rubber and allowing the same to dry, scratching the dried coating into the surface or face of the material to be treated, applying unvulcanized rubber to said scratched coating with heat and pressure, and subsequently relieving the pressure and continuing the heat until the rubber is vulcanized.

4. The herein described process of simultaneously vulcanizing and attaching rubber to other material, which consists, in applying to the material a solution of rubber and allowing the same to dry, scratching the dried coating into the surface or face of the material to be treated, applying unvulcanized rubber to said scratched coating with heat and pressure, and subsequently relieving the pressure and continuing the heat at 320° Fahrenheit for one hour.

5. The herein described process of simultaneously vulcanizing and attaching rubber to other material, which consists in giving said material a preliminary coating of rubber dissolved in a mixture of chloroform and gasolene, allowing the coating to dry, scratching the dried coating thoroughly into the face of the material, applying to the scratched coating unvulcanized rubber which is slightly heated, pressing the slightly heated unvulcanised rubber upon the scratched coating, and subsequently heating the rubber coated article for one hour at 320° Fahrenheit until the rubber is well vulcanized and firmly attached to the material.

[Claim 6 not printed in the Gazette.]

1,157,573. COUPLER FOR PIANOS AND PLAYER-PIANOS. JOHN CLIFFORD MOORE and EDWARD L. WINSTON, Rushville, Nebr. Filed Jan. 14, 1914. Serial No. 812,112. (Cl. 84—126.)



1. In a musical instrument of the character described having sets of bass and treble pneumatics, the combination of a piano action, a valve bar extending lengthwise of the instrument above the pneumatics and having air inlet channels, spring-pressed valves mounted on top of the said valve bar and each controlling the inlet of an air inlet channel, the said valves being normally closed, means connecting the said valves with movable members of the piano action to open the said valves, the sets of bass and treble pneumatics being connected with sundry of the bass and treble sounding devices of the piano action, and means connecting the said bass and treble pneumatics with the outlets of corresponding air inlet channels, the valves of which are controlled by sounding devices of higher or lower octaves, the said valve bar being adapted

to be moved out of operative position to prevent the sounding of an octave when a primary sounding device is actuated.

2. In a musical instrument of the character described having sets of bass and treble pneumatics, the combination of a piano action, a valve bar extending lengthwise of the instrument above the pneumatics and having a series of air inlet channels, spring-pressed valves mounted on top of the said valve bar and each controlling the inlet of an air inlet channel, the said valves being normally closed, means connecting the said valves with movable members of the piano action to open the said valves, the sets of bass and treble pneumatics, being connected respectively with sundry of the bass and treble sounding devices of the piano action, means connecting the said bass pneumatics with the outlets of the said air channels, the valves of which are controlled by sounding devices an octave higher, and means connecting the said treble pneumatics with the outlets of the said air channels, the valves of which are controlled by sounding devices two octaves lower, and means for moving the valve bar out of operative position to permit of ordinary playing.

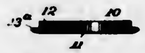
3. In a musical instrument of the character described, the combination of a piano action having bass and treble sounding devices adjustable buttons on sundry of said abstracts of the piano action, a valve bar provided with air inlet channels, spring-pressed valves mounted on the said valve bar and each controlling the inlet of an air inlet channel, the said valves being normally closed and each being adapted to be opened by one of the said buttons on a corresponding abstract, sets of bass and treble pneumatics connected with sundry of the said bass and treble sounding devices, a second adjustable button on each abstract of the piano action each pneumatic engaging a second button on the corresponding abstract, means connecting the said bass and treble pneumatics with the outlets of corresponding air inlet channels, the valves of which are controlled by sounding devices of higher or lower octaves, and means for moving at will the valve bar out of operative position relative to the valve operating buttons, to permit of ordinary hand playing.

4. In a musical instrument of the character described, the combination of a piano action having bass and treble sounding devices adjustable buttons on sundry of the abstracts of the piano action, a valve bar provided with air inlet channels, spring-pressed valves mounted on the said valve bar and each controlling the inlet of an air inlet channel, the said valves being normally closed and each being adapted to be opened by one of the said buttons on a corresponding abstract, sets of bass and treble pneumatics connected with sundry of the said bass and treble sounding devices, a second adjustable button on each abstract of the piano action each pneumatic engaging a second button on the corresponding abstract, flexible tubes connecting the said bass and treble pneumatics with the outlets of corresponding air inlet channels, the valves of which are controlled by sounding devices of higher and lower octaves, a fixed rail on which the said valve bar is hinged, and manually controlled means for swinging the said valve bar into inactive position to disconnect the valves from the said first buttons to permit of hand playing in the ordinary manner.

5. In a musical instrument of the character described, the combination of a piano action having bass and treble sounding devices adjustable buttons on sundry of the abstracts of the piano action, a valve bar provided with air inlet channels, spring-pressed valves mounted on the said valve bar and each controlling the inlet of an air inlet channel, the said valves being normally closed and being each adapted to be opened by one of the said buttons on a corresponding abstract, a second adjustable button on each of the abstracts of the piano action sets of bass and treble pneumatics, of which the bass set of pneumatics is connected with the second abstract buttons of sundry of the said bass sounding devices, and the treble set of pneumatics is connected with the second abstract buttons of sundry of the treble sounding devices, flexible tubes connecting the said bass pneumatics with the outlets of the said air inlet channels, the valves of which are controlled by sounding devices an octave higher, and flexible tubes connecting the said treble pneumatics with the outlets of the said air inlet channels, the valves of which are controlled by sounding devices two octaves lower, the said valve bar being movable at will into inactive position to disconnect the sounding devices of said octaves from the primary sounding devices.

[Claims 6 to 9 not printed in the Gazette.]

1,157,574. SELF-RETAINING COUPLING-WASHER. ROBERT MUELLER, Decatur, Ill., assignor to H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois. Filed June 25, 1910. Serial No. 568,935. (Cl. 137—28.)

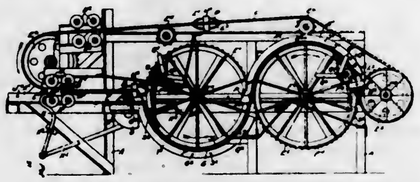


1. A self-retaining washer for hose couplings formed of flexible material and provided with a central opening; said washer having on its external periphery an integral relatively thin rib one face of which is substantially flush with a face of the washer and of such resiliency that it will yield readily to permit the insertion of the washer into a threaded coupling and engage the threads thereof to lock the washer in place after it has been positioned.

2. A self-retaining washer for hose couplings formed of flexible material and provided with a central opening; said washer having on its external periphery an integral relatively thin rib one face of which is substantially flush with a face of the washer and of such resiliency that it will yield readily to permit the insertion of the washer into a threaded coupling and engage the threads thereof to lock the washer in place after it has been positioned, said thread engaging rib being interrupted in the direction of its length to form a series of symmetrically-arranged projections.

3. A self-retaining washer for hose-couplings formed of flexible material and provided with a central opening; said washer having on its external periphery a plurality of symmetrically-arranged projections of less thickness than the body of the washer so as to yield readily to permit the washer to be inserted in a hose coupling and to engage the threads thereof to lock the washer in place therein.

1,157,575. FIBER-CLEANING MACHINE. PETER R. NELSON, Mambajao, Philippine Islands. Filed Jan. 13, 1915. Serial No. 1,944. (Cl. 13—18.)



1. A fiber cleaning machine, comprising revoluble drums, scrapers extending transversely across the peripheral faces of the drums to remove the extraneous matter from both sides of the fibers passing between the said drum faces and the scrapers, and a driven endless carrier having a draw head to which the butt end of the fibers is attached, the draw head drawing the fibers around approximately one-half of one drum with one side of the fibers exposed to the corresponding scraper, and then drawing the fibers around one-half of the other drum with the other side of the fibers exposed to the corresponding scraper to cause the scrapers to clean both sides of the fibers during the successive operations.

2. A fiber cleaning machine, comprising revoluble drums, scrapers extending transversely across the peripheral faces of the drums to remove the extraneous matter from both

sides of the fibers passing between the said drum faces and the scrapers, a driven endless carrier having a draw head to which the butt end of the fibers is attached, the draw head drawing the fibers around approximately one-half of one drum with one side of the fibers exposed to the corresponding scraper, and then drawing the fibers around one-half of the other drum with the other side of the fibers exposed to the corresponding scraper to cause the scrapers to clean both sides of the fibers during the successive scraping operations, and a feed device for feeding the butt end of the fibers to the said draw head prior to the latter reaching the first drum.

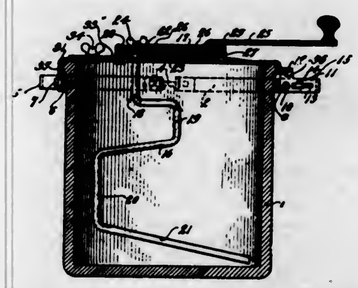
3. A fiber cleaning machine, comprising revoluble drums, scrapers extending transversely across the peripheral faces of the drums to remove the extraneous matter from both sides of the fibers passing between the said drum faces and the scrapers, a driven endless carrier having a draw head to which the butt end of the fibers is attached, the drawhead drawing the fibers around approximately one-half of one drum with one side of the fibers exposed to the corresponding scraper and then drawing the fibers around one-half of the other drum with the other side of the fibers exposed to the corresponding scraper to cause the scrapers to clean both sides of the fibers during the successive scraping operations, and a releasing device in the path of the return run of the endless carrier and its draw head to open the latter for the release of the fibers.

4. A fiber cleaning machine, comprising revoluble drums an endless carrier to which the fibers are fastened, the said carrier passing the fibers around the drums with one side of the fibers outward at one drum and with the other side of the fibers outward at the other drum, and scrapers extending transversely across the peripheral faces of the drums at points where the fibers pass over the drums to clean both sides of the fibers.

5. A fiber cleaning machine, comprising revoluble drums having recesses in their peripheral faces, scrapers extending across the said peripheral drum faces and between which and the drums the fibers pass, and an endless driven carrier passing around the lower portion of one drum and over the upper portion of the other drum, the carrier having a draw head in which the fibers are fastened, the draw head being adapted to pass into the said drum recesses.

[Claims 6 to 27 not printed in the Gazette.]

1,157,576. BREAD-MIXER. WILLIAM P. NELSON, Columbia Falls, Mont. Filed June 21, 1915. Serial No. 35,311. (Cl. 107—38.)



1. In a dough mixing apparatus, the combination with a receptacle, of a mixing member, operating means therefor, means for attaching the operating means to the receptacle including a locking member, said locking member constituting a handle for the receptacle, and means movably mounted on said handle for holding it in locking position.

2. In a dough mixing apparatus, the combination with a receptacle, of a mixing member, operating means therefor, a supporting member for said operating means, a receptacle engaging member, and a movable locking member carried by the latter and adapted to engage the supporting member for holding the operating means in position on the receptacle, said locking member constituting a handle for the receptacle, arranged to assume engaging position upon application of lifting stress thereto.

3. In a dough mixing apparatus, the combination with a receptacle, of a mixing member, operating means therefor, a supporting member for said operating means, a receptacle engaging member, and a locking means carried by the latter and adapted to engage the supporting member for holding the operating means in position on the receptacle, said locking means comprising a movable handle and interlocking means for holding the handle in engaged position.

4. In a dough mixing apparatus, the combination with a receptacle, of a mixing member, operating means therefor, supporting means for the operating means detachably connected to the receptacle at one side, means arranged at the opposite side of the receptacle adapted for engagement with the supporting means at the other side to hold said supporting means on the receptacle, and a locking bar movably carried by the engaging means for holding it in engaging position.

5. In a dough mixing apparatus, the combination with a receptacle, of a mixing member, operating means therefor, an annular band surrounding the receptacle, a handle, fastening members securing the handle to the band and having extensions, and supporting members for the operating means detachably connected to the extensions of said handle fastening members aforesaid.

[Claims 6 to 10 not printed in the Gazette.]

1,157,577. DOUBLE-UNDERREAMER SETTER. CARL L. NICKOLAI, De Beque, Colo., assignor of forty one-hundredths to Edward W. Lloyd, Pueblo, Colo. Filed Oct. 10, 1914. Serial No. 866,130. (Cl. 29—86.1.)

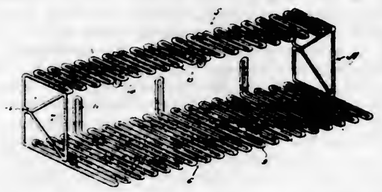


An appliance for the purpose described, comprising a U-shaped frame having notches in the ends of its arms, a stem having a threaded upper end and also having a threaded portion extending through the base bar of the frame, and a nut swiveled in the base bar of the frame and receiving and engaging the last-named threaded portion of the stem.

1,157,578. KNIFE-RACK. DAISY D. PETER, Omaha, Nebr. Filed May 27, 1914. Serial No. 841,374. (Cl. 65—65.)

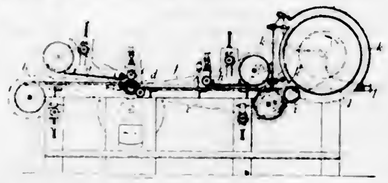
A knife rack formed of a single strand of relatively stiff wire, comprising upper and lower sinuous stretches, the lower stretch being of greater width than the upper stretch, triangular shaped end frames bent from said

strand whereby the upper and lower stretches are braced in parallelism, and extensions formed on certain of the



loops of the sinuous stretches and bent at right angles thereto for the reception of fasteners.

1,157,579. DOUGH-MOLDING MACHINERY. JOHN EDWARD POINTON, Peterborough, England. Filed Dec. 10, 1913. Serial No. 805,747. (Cl. 107—9.)



1. A machine for molding dough lumps into a convolute form, consisting of means for sheeting the dough lumps, means for folding the sheets, and means for convolving the folded sheets into continuous circular coils, as set forth.

2. A machine for molding dough lumps into a convolute form, consisting of means for sheeting the dough lumps, means for stretching the sheets, means for folding the stretched sheets, and means for convolving the folded and stretched sheets into continuous circular coils, as set forth.

3. A machine for molding dough lumps into a convolute form, consisting of means for sheeting the dough lumps, means for folding the sheets, means for compressing the folded sheets, and means for convolving the folded and compressed sheets into continuous circular coils, as set forth.

4. A machine for molding dough lumps into a convolute form, consisting of compression bands between which the dough lumps are sheeted, rolls whereby the sheets are stretched, conical rolls whereby the sheets are folded from opposite sides, a compressor for the folded sheets, and means for convolving the said sheets into continuous circular coils, as set forth.

1,157,580. PENCIL-HOLDER. DAVID A. PROWS, Castlegate, Utah. Filed May 4, 1915. Serial No. 25,747. (Cl. 24—10.)

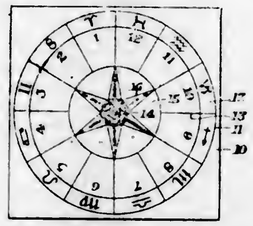


1. A pencil holder of the class described including an approximately U-shaped body adapted to straddle the outer wall of a pocket, a locking lever mounted on the body at the inner side thereof, and arranged to be maintained in its position by the pencil, and means carried by the said body for holding pencils in the pocket.

2. A pencil holder including a substantially U-shaped body portion adapted to straddle the outer wall of a pocket, a locking lever pivoted to the inner side of the body and having engaging means extending inwardly toward the other side of the body for engaging the pocket, and pencil holding means carried by the inner side of the said body and arranged to hold a pencil against the said inner side and against the locking lever.

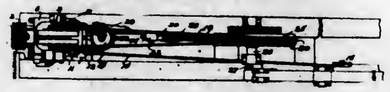
3. A pencil holder including a substantially U-shaped body adapted to straddle the outer wall of a pocket, a locking lever pivotally connected with the inner wall at the lower edge thereof and arranged to engage the pocket and a pencil engaging spring extending across the said inner side of the body above the locking lever and connected with the said body, said spring being adapted to clamp pencils between it and the inner side of the body.

1,157,581. FORTUNE-TELLING DEVICE. AUGUST F. RALDEANO, Poughkeepsie, N. Y. Filed Feb. 12, 1915. Serial No. 7,728. (Cl. 46—41.)



As a new article of manufacture, a fortune telling device comprising a placard having a circle on its face, said circle being divided into divisions denoting the signs of the zodiac, with the back of the placard having a series of answers divided into divisions designated by the signs of the zodiac and corresponding with the signs of the zodiac on the face of the placard, and a rotatable disk-like member on the placard and revolving within said circle, said disk-like member having a star inscribed thereon and having words indicative of events in a person's life, in the pointed portions of the star, the answers in the divisions on the back of the placard being classified in accordance with the words in the pointed portions of the star whereby the indication of one of the pointed portions of the star to one of the signs of the zodiac in the circle will impart to the operator a key for producing the desired answer in the device on the back of said placard.

1,157,582. DRIVING-GEARING FOR WELL-DRILLING APPARATUS. CLARK F. RIGBY, Butler, Pa. Filed May 14, 1913. Serial No. 767,605. (Cl. 74—21.)



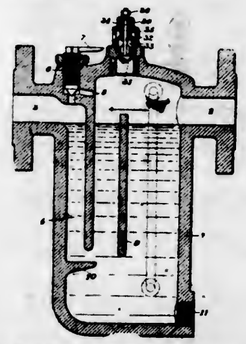
1. The combination of an explosive engine cylinder and piston, a crank shaft, a pair of fly-wheels secured to the shaft, a pitman located intermediate the fly-wheels and operatively connecting the piston and said crank shaft, two sheaves normally loose on the shaft, a set of clutch members for each sheave with one member of each set rigid with the sheave and the other member rigid with a fly-wheel, and means for uniting the clutch members of each set.

2. The combination of an explosive engine and a crank-shaft therefor, fly wheels on the shaft, two sheaves normally loose on the shaft, a set of clutch members for each sheave with one member of each set rigid with the sheave and the other member rigid with a fly wheel, and means for uniting the clutch members of each set.

3. The combination of an explosive engine and a crank-shaft therefor, fly wheels secured to the shaft and formed with clutch faces, two sheaves normally loose on the shaft, a clutch member rigid with each sheave and adapted to coöperate with the clutch face of a fly wheel, and means for effecting such coöperation.

4. The combination of a driving shaft, two driving sheaves normally rotatable on the shaft, a set of clutch members for each sheave with one member of each set secured to a sheave and the other member secured to the shaft, wedges for moving the sheaves on the shaft for engaging the sheave-carried clutch members with the shaft-carried clutch members, a lever to which the wedges are connected, and lever operating means.

1,157,583. MULTIPLIER OF EFFICIENCY FOR FLOAT APPARATUS. OTTO ROSCHANEK, Vienna, Austria-Hungary, assignor to the Firm Hübner & Mayer, Vienna, Austria-Hungary. Filed Sept. 12, 1913. Serial No. 789,575. (Cl. 137—103.)



1. In an attachment for steam traps, a casing having an inlet and an outlet, said attachment being provided with a blow-off passage leading downward from said outlet, said attachment being provided with a bleeder communicating directly between the inlet and outlet portions thereof above the mouth of said passage.

2. In an attachment for steam traps, a casing having an inlet and an outlet, said attachment being provided with a blow-off passage leading downward from said outlet, said attachment being provided with a bleeder communicating directly between the inlet and outlet portions thereof above the mouth of said passage, and a valve controlling said bleeder.

3. In an attachment for steam traps, a casing having an inlet and an outlet, said attachment being provided with a blow-off passage leading downward from said outlet, said attachment being provided with a bleeder communicating directly between the inlet and outlet portions thereof above the mouth of said passage, a valve controlling said bleeder, and a second valve controlling the mouth of said passage.

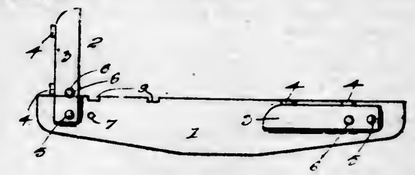
4. In an attachment for steam traps, a casing having an inlet, and an outlet, said attachment being provided with a blow-off passage leading downward from said outlet, said attachment being provided with a bleeder communicating directly between the inlet and outlet portions thereof above the mouth of said passage, and a relief valve in the top of said casing.

5. In an attachment for steam traps, a casing having an inlet and an outlet, said attachment being provided with a blow-off passage leading downward from said outlet, said attachment being provided with a bleeder communicating directly between the inlet and outlet portions thereof above the mouth of said passage, and a baffle across the mouth of said passage.

[Claims 6 and 7 not printed in the Gazette.]

1,157,584. FOLDING BOLSTER-STAKE. WILLETT E. ROSS, Philipstown, N. Y. Filed Mar. 10, 1915. Serial No. 13,512. (Cl. 21—54.)

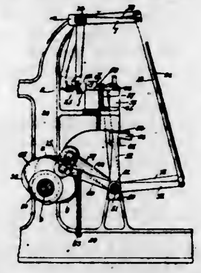
1. The combination with a bolster, of a stake composed of spaced sides pivoted to the bolster at the opposite faces thereof, said side having connecting means arranged to engage the bolster to limit the outward swing of the stake and a removable fastening device piercing the sides and arranged to engage the bolster to limit the inward movement of the stake, said fastening device being removable to permit the stake to fold downwardly and inwardly on the bolster.



2. The combination with a bolster, of a stake composed of spaced sides pivoted at their lower ends to the bolster at opposite sides thereof and adapted to swing upwardly and downwardly and transverse portions connecting the sides of the stake and arranged to rest upon the bolster when the stake is folded, one of the transverse portions being arranged to engage the upper face of the bolster for limiting the outward swing of the stake, and means for limiting the inward movement of the stake.

3. The combination with a bolster, of a stake composed of spaced sides pivoted at their lower ends to the bolster at opposite sides thereof and adapted to swing upwardly and downwardly and transverse portions connecting the sides of the stake and arranged to rest upon the bolster when the stake is folded, one of the transverse portions being arranged to engage the upper face of the bolster for limiting the outward swing of the stake, and a transverse fastening device piercing the sides of the stake and arranged to engage the upper face of the bolster holding the stake in a vertical position against inward movement, said bolster being provided with an opening arranged to receive the said fastening device for securing the stake in folded position.

1,157,585. FOLDING APPARATUS FOR WRAPPING-MACHINES. WILLIAM ROSE, Gainsborough, England. Filed Aug. 6, 1914. Serial No. 855,487. (Cl. 93—6.)



1. A folding device comprising oppositely situated folding elements, said elements being arranged to move in opposite directions and in parallel planes, a creasing blade superimposed on one of said elements and means to project the creasing blade in advance of its supporting element so as to define subsequent lines of folding.

2. A folding device comprising a fold-forming element, a creasing blade superimposed thereon, said fold-forming element and creasing blade being arranged to move in parallel planes, means to move said fold-forming element and creasing blade in unison and means to cause relative movement there-between.

3. A folding device comprising a fold-forming element, a creasing blade superimposed thereon, said fold-forming element and creasing blade being arranged to move in parallel planes, means to oscillate said fold-forming element and creasing blade about a common axis to exteriorly engage the end of a wrapper and means to cause relative

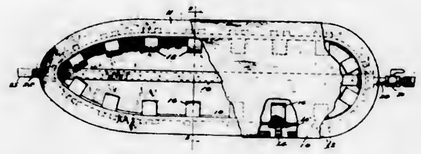
movement between said fold-forming element and the creasing blade.

4. A folding device comprising a fold-forming element, a crease-forming element mounted thereon, both said fold and crease-forming elements being arranged in parallel planes, and stationary means adapted to engage the said creasing blade in its forward movement so as to cause relative movement between the fold-forming element and the creasing blade.

5. A folding device comprising folding elements, a creasing blade superimposed on one of said elements, said elements being arranged to move in parallel planes, means to project the creasing blade in advance of its supporting element and a further folder adapted to be turned in two directions, movement in one direction causing the said folder to come up to one side of the end of a bag, and movement in the other direction causing the folder to exteriorly engage the said side of the bag and turn it downward.

[Claims 6 to 8 not printed in the Gazette.]

1,157,586. GARMENT PRESSING AND STEAMING DEVICE. ABE N. ROSENBLOOM, Philadelphia, Pa. Filed Feb. 3, 1915. Serial No. 5,962. (Cl. 68—9.)



1. An ironing board having a dished upper face, a flexible cover drawn tightly over said board, and pneumatic means for sustaining the center of said cover with yielding force.

2. In a device of the class described, a receptacle, an impervious fabric cover applied over it, and manually controlled means for the introduction of fluid under pressure to the receptacle.

3. In a device of the character described, the combination with a receptacle having an outwardly extending peripheral flange around its open top, and an impervious cover stretched over the receptacle and passing over and around the flange and inward beneath it, of means for clamping the cover to the flange, and manually controlled means for admitting a fluid agent under pressure to the interior of the receptacle.

4. An ironing board having a dished upper face, a flexible cover drawn tightly over said board, and means for selectively admitting steam and air under pressure beneath said cover.

5. In a device of the class described, a receptacle, pervious and impervious fabric covers selectively applied over it, and manually controlled means for the introduction of air and steam under pressure to the receptacle.

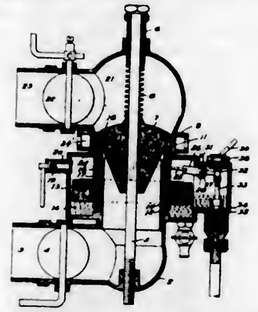
[Claims 6 to 8 not printed in the Gazette.]

1,157,587. CARPENTER'S TOOL. FRANK C. ROWLAND, Hagerman, N. Mex. Filed June 9, 1913. Serial No. 772,661. (Cl. 33—149.)



A tool of the class described comprising a flat body having a recess in one edge opening through one end of the body, an arm having a fixed pivotal connection with the body in said recess and having its outermost edge disposed entirely within the recess when said arm is in folded position, and a projection on the inner end of said arm adapted to extend outwardly of one end of the body when said arm is folded whereby pressure on said projection in one direction will swing said arm out of the recess.

1,157,588. CARBURETER. WILLIAM J. RUBESKY, Minneapolis, Minn. Original application filed July 16, 1910, Serial No. 572,364. Divided and this application filed Jan. 2, 1913. Serial No. 739,650. (Cl. 48—158.)



1. In a carbureter, a wick carrier having inner and outer walls and wick sockets between them, the wall of said carrier having an annular groove therein and ports or openings in the bottom of said groove, for the purpose specified.

2. In a carbureter, a wick carrier having an inner and outer wall and wick sockets between them, said outer wall having a series of annular grooves therein and perforations in the bottoms of said grooves leading to said sockets.

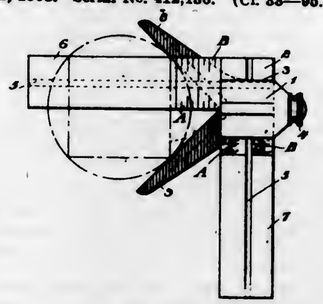
3. In a carbureter, a wick carrier having longitudinal wick sockets therein and a valve seat at one end provided with perforations leading to said sockets, wicks fitting within said sockets, the lower ends of said wicks being exposed, for the purpose specified.

4. In a carbureter, a wick carrier having a valve seat and ports therein, wick sockets communicating with said ports and extending lengthwise of said carrier, wicks fitting within said sockets, the lower ends of said wicks being exposed, for the purpose specified.

5. In a carbureter, an oil reservoir, a cylindrical wick carrier depending therein and having a plurality of wick sockets and an air passage encircled by said carrier, the lower outer walls of said carrier having ports leading from said reservoir to said wick sockets, and the upper inner walls of said carrier having ports leading from said sockets to said air passage.

[Claims 6 to 18 not printed in the Gazette.]

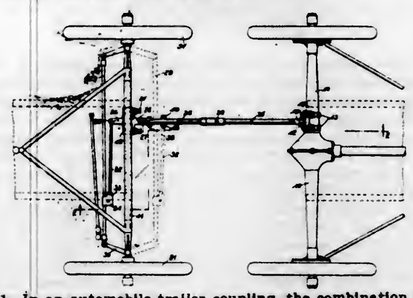
1,157,589. TOOL. ERNEST T. SAVAGE, Bath, Me. Filed Jan. 22, 1908. Serial No. 412,136. (Cl. 33—95.)



A tool for laying off nuts including a two-armed square having on one arm a scale or index A upon which is marked pitch diameters of stock for the production of nuts, and a scale or index B on which is marked the distances across flats of nuts whose pitch diameters are indicated on the scale A, a centering head having jaws adapted to slide on the said arm containing the said scales

or indices, the markings on the said scale of index B being arranged thereon in definite relation to the outer edge of the other square arm, in such manner that a piece of stock turned to a proper pitch diameter as indicated on the scale or index A when placed in the said jaws of the centering head and the latter set on the proper indication on the scale or index B can be scribed along the said outer edge of said other square arm to indicate on said stock one flat face of the nut to be produced.

1,157,590. AUTOMOBILE TRAILER-COUPLING. JOHN A. SCHARF, Richwood, Ohio. Filed Oct. 23, 1914. Serial No. 868,204. (Cl. 21—137.)



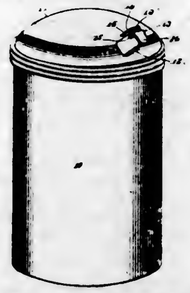
1. In an automobile trailer coupling, the combination of a cradle adapted to embrace the lower portion of the trailer axle, said cradle including a pair of upwardly projecting ears having holes at their upper ends along one edge of the cradle and also including a pair of vertical standards each having a plurality of holes at its free end along the opposite edge of the cradle, a pair of set screws acting through said ears below the holes thereof for binding coöperation with the axle, a cap coöperating with the cradle above the axle and having a pair of fingers projecting through certain of the standard holes, a pair of hooks coöperating with the opposite portion of the cap from the fingers and extending into the holes of the ears aforesaid, and means extending from the cradle to the steering device of the trailer and to the rear axle of the traction vehicle, substantially as and for the purposes set forth.

2. In an automobile trailer coupling, the combination of a cradle adapted to embrace the lower portion of the trailer axle and means including a pair of beveled lugs and a pair of set screws to secure the cradle rigidly to said axle, said cradle also having a lug extending forwardly from the middle thereof and having a vertical hole, a lever of the first class embracing said lug, a pivot pin passing through said lug hole and connecting the lever thereto, the rear arm of the lever extending below the cradle and adapted for movement independently thereof, means to connect the rear end of said arm to the steering gear of the trailer, and means extending forwardly from the front arm of said lever to connect the same with a traction vehicle.

1,157,591. CLOSURE FOR RECEPTACLES. AUGUST W. SCHOENHEIT, Pittsburgh, Pa. Filed Mar. 31, 1914. Serial No. 828,524. (Cl. 221—5.)

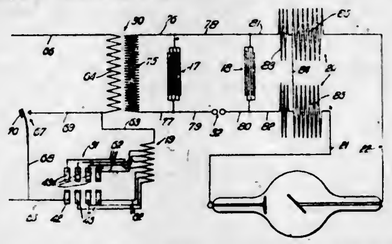
1. In combination with a spout of a receptacle, said spout having a horizontal slot, a lid for the mouth of the spout, said lid consisting of a plate, spaced depending guide lugs struck from the plate, a rearwardly extending tongue formed with the plate, and an intermediate downwardly struck horizontal portion lying between the tongue and the plate and passing through the horizontal slot of the spout, said tongue engaging the outside of the spout to limit the swinging movement of the lid, with the guide lugs bearing against the sides of the spout and guiding the lid in its swinging movement.

2. In combination with a spout of a receptacle, said spout having a horizontal slot, a lid for the mouth of the spout, said lid consisting of a plate, spaced depending guide lugs struck from the plate, a rearwardly extending tongue formed with the plate and an intermediate downwardly struck horizontal portion lying between the tongue and the plate and passing through the horizontal slot of the spout, said tongue engaging the outside of the spout being adapted to limit the swinging movement of the lid, with the guide lugs bearing against the sides of the spout and guiding the lid in its swinging movement, said horizontal downwardly struck portion extending parallel to the plate and said tongue extending laterally to the plate and the downwardly struck portion.



3. The combination with a spout for receptacles, said spout having a horizontal slot, of a lid for closing the mouth of the spout comprising a plate arranged to lie flat on the end of the spout, an angular extension on the lid passing through said slot, an operating tongue on the extension arranged to engage the spout to limit the upward movement of the lid and means carried by the lid for guiding the movement of the plate on the spout, said means being continuously in engagement with the spout.

1,157,592. ELECTRICAL MACHINE. JAMES E. SEELEY, Los Angeles, Cal. Filed Jan. 27, 1913. Serial No. 744,286. (Cl. 250—34.)

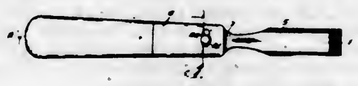


1. In an X-ray machine, a high tension discharge circuit, an energizing circuit for the high tension circuit, an impedance coil and a controller therefor in series in said energizing circuit, and a manually operable switch connected into said circuit around the impedance coil and controller.

2. In an X-ray machine, a high tension discharge circuit, an energizing circuit for the high tension circuit, an impedance coil and a controller therefor in series in said energizing circuit, and a normally open manually operable switch connected into said circuit around the impedance coil and controller.

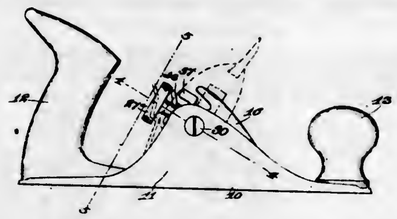
3. In an X-ray machine, a condenser, a high tension discharge circuit therefor, an energizing circuit for the condenser and high tension discharge circuit, an impedance coil in said energizing circuit comprising a plurality of coil sections connected together, a controller in said energizing circuit adapted to throw the coil sections into and out of said circuit, and a normally open manually operable switch connected into said circuit around the impedance coil and controller and adapted to form a low resistance by-pass around the impedance coil and controller.

1,157,593. TOOL-HANDLE FASTENING. THEODORE G. SELLECK, Chicago, Ill., assignor of one-half to John L. Deppen, Chicago, Ill. Filed Jan. 5, 1914, Serial No. 810,436. Renewed Mar. 17, 1915. Serial No. 15,054. (Cl. 145—105.)



The combination with a handle-socket having a cross slot; of a tool having a tang provided with a transverse groove, a sleeve mounted in the handle-socket and receiving the grooved portion of the tang, said sleeve having a portion which is spaced from the wall of the socket and provided with a cross slot registering with the first-mentioned cross slot and the groove of the tang, means for holding the tang against rotary movement in the sleeve, a latch slidable in the cross slot of the sleeve and engageable with the transverse groove of the tang, a finger-piece attached to the latch and passing through the cross slot of the handle-socket to the outside of the latter, and a spring made fast at one end to that portion of the sleeve which is spaced from the wall of the handle-socket, said spring encircling the sleeve externally and having its free end connected to the latch.

1,157,594. BENCH-PLANE. THEODORE G. SELLECK, Chicago, Ill., assignor of one-half to John L. Deppen, Chicago, Ill. Filed Jan. 26, 1914, Serial No. 814,479. Renewed Mar. 17, 1915. Serial No. 15,055. (Cl. 145—14.)



1. A bench-plane comprising a stock having side-pieces, a yoke pivotally mounted between the side-pieces, a bit carrier carried by the yoke and adjustable in the direction of its length, and means for locking the yoke.

2. A bench-plane comprising a stock having side-pieces, a yoke pivotally mounted between the side-pieces, a bit carrier carried by the yoke, an adjusting screw carried by the yoke and having a threaded engagement with the bit carrier, and means for locking the yoke.

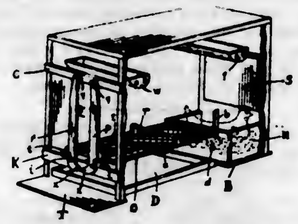
3. A bench-plane comprising a stock having side-pieces, a yoke pivotally mounted between the side-pieces, a bit carrier having longitudinal side grooves, in which the yoke arms seat, means for adjusting the bit carrier in the direction of its length, and means for locking the yoke.

4. A bench-plane comprising a stock having side-pieces, a yoke pivotally mounted between the side-pieces, a bit carrier carried by the yoke and adjustable sidewise and in the direction of its length, and means for locking the yoke.

5. A bench-plane comprising a stock having side-pieces, a yoke pivotally mounted between the side-pieces, a bit carrier carried by the yoke, a pivoted member carried by the bit carrier, an adjusting screw carried by the yoke and having a threaded engagement with the pivoted member, a worm carried by the bit carrier and having a threaded engagement with the free end of the pivoted member, and means for locking the yoke.

[Claim 6 not printed in the Gazette.]

1,157,595. AUTOMATIC TRAP-NEST COOP. CLARK EDWARDS SHARP, Columbus, Ohio. Filed May 21, 1915. Serial No. 29,627. (Cl. 119—50.)



1. A device of the character described comprising a box having an open entrance portion, a pair of vertically disposed slats pivoted at one end and formed with cam formations, the free ends of said slats being movable to open or obstruct said entrance portion, a pivoted bottom for said box, and projections carried by said bottom arranged to coact with said cam formations to actuate said slats when the bottom is moved by the weight of a fowl.

2. A device of the character described comprising a box having an open entrance portion, a pair of vertically disposed slats pivoted at one end and whose opposite ends are movable to open or obstruct said entrance portion, said pivots being offset to be out of vertical alinement with said slats, said slats being formed with cam notches whose bottom edges are disposed substantially at a right angle to the vertical, a pivoted bottom for said box, and forwardly projecting lugs carried by said bottom arranged to coact with said notches to move said slats to either open or closed position by movement of said bottom when moved by the weight of a fowl.

3. A device of the character described comprising a box having an entrance portion, a structure movable to open or close said entrance portion, a pivoted bottom for said box, an operating connection between said structure and said bottom, and a rack and pawl structure operable to prevent tilting of said bottom to actuate said structure.

4. A device of the character described comprising a box having an entrance portion, a structure movable to open or close said entrance portion, a pivoted bottom for said box, an operating connection between said structure and said bottom, an upstanding rack member carried by said bottom, and a pawl movable into a position of engagement with said rack to prevent tilting of said bottom to actuate said structure.

5. A device of the character described comprising a box having an entrance portion, a structure movable to open or close said entrance portion, a pivoted bottom for said box, an operating connection between said structure and said bottom, an upstanding member provided with teeth on opposite faces and pivoted at one end to said bottom, a shoulder element carried by the coop and also provided with teeth to coöperate with the teeth on one side of said upstanding member, and a pawl movable into a position of engagement with the teeth on the other side of said upstanding member to prevent tilting of said bottom to actuate said structure.

1,157,596. LOCK-NUT. MOSES SHERMAN, New York, N. Y., assignor of one-third to Selman Liss and one-third to Bert Rivkin, New York, N. Y. Filed Aug. 22, 1913. Serial No. 786,128. (Cl. 151—19.)

1. In combination, a threaded stem, a nut having a tapered threaded portion, the thread of the stem and the threaded tapered portion of the nut being in register with each other, and a locking member having a tapered recess provided with a thread in register with the tapered thread of the nut and slightly out of register with the thread of the stem, for the purposes described.

2. In combination, a threaded stem, a nut having a tapered threaded periphery and having its bore threaded straight or regular and of the same pitch, the two threads being in register with each other, and a locking member having a tapered threaded recess of the same taper as the nut and the bore thereof having a straight or regular thread of the same pitch as the stem, but so arranged that the space between the ending of the straight thread on the sleeve and the commencing of its tapered thread is different from the dimension of the pitch of the threads.

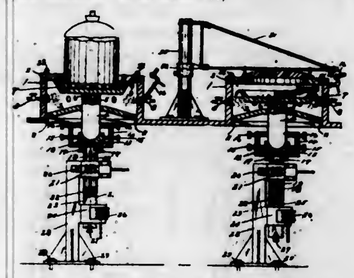
3. In combination, a threaded stem, a nut having a tapered threaded periphery and having its bore threaded straight or regular and of the same pitch, the two threads being in register with each other, and a locking member having a tapered threaded recess of the same taper as the nut and the bore thereof having a straight or regular thread of the same pitch as the stem, but so arranged that the space between the ending of the straight thread on the sleeve and the commencing of its tapered thread is less than the dimension of the pitch of the threads.

4. In combination, a threaded stem, a nut having a tapered threaded periphery and having its bore threaded straight or regular and of the same pitch, the two threads being in register with each other on the half thread, and a locking member having a tapered threaded recess of the same taper as the nut and the bore thereof having a straight or regular thread of the same pitch as the stem, but so arranged that the space between the ending of the straight thread on the sleeve and the commencing of its tapered thread is different from the dimension of the pitch of the threads.

5. In combination, a threaded stem, a nut having a tapered threaded periphery and having its bore threaded straight or regular and of the same pitch, the two threads being in register with each other on the half thread, and a locking member having a tapered threaded recess of the same taper as the nut and the bore thereof having a straight or regular thread of the same pitch as the stem, but so arranged that the space between the ending of the straight thread on the sleeve and the commencing of its tapered thread is less than the dimension of the pitch of the threads.

[Claims 6 to 9 not printed in the Gazette.]

1,157,597. METHOD OF CLEANING POTS. ARTHUR E. SPINASSE, Mount Vernon, Ohio. Filed July 9, 1913. Serial No. 778,029. (Cl. 49—77.)



1. The method of removing unused fused or plastic glass from a circular pot, which consists in rotating said pot about its vertical center at a speed sufficient to cause such glass by its inertia to overcome adhesions to the sides of the pot and its own stringy or viscous nature and thereby remove itself from the said pot.

2. The method of removing unused and stiffening glass from a glass drawing pot, which consists in mounting said pot for circular motion in a horizontal plane and subjecting said pot to such movement in such plane at a speed sufficient to cause the glass to pile up against the wall of the pot and to overflow said wall, thereby cleansing said pot.

3. The method of removing unused and stiffening glass from a glass drawing pot, which consists in mounting said pot for circular motion in a horizontal plane and subjecting said pot to such movement in such plane at a speed sufficient to cause the glass to pile up against the wall of the pot and to overflow said wall, thereby cleansing said pot, the said rotation being effected while the pot is kept hot.

4. The method of removing unused and stiffening glass from a glass drawing pot, which consists in mounting said pot for circular motion in a horizontal plane and subjecting said pot to such motion in such plane at a speed sufficient to cause the glass to pile up against the wall of the pot and to overflow said wall, thereby cleansing said pot, the said rotation being effected while the pot is exteriorly heated, to free the glass more readily from the sides of the pot.

5. The method of cleaning glass from a pot which comprises directing a melting current into said pot and another current against the outside thereof and so moving said pot that the glass flies off by its own inertia.

1,157,598. METHOD OF FORMING SETTINGS FOR PRECIOUS STONES, &c. SAMUEL N. STONE, Attleboro, Mass., assignor to J. J. Sommer and Co., North Attleboro, Mass. Filed Feb. 1, 1915. Serial No. 5,551. (Cl. 29—10.)



1. The method herein set forth of forming a setting of the character designated, consisting essentially in swaging a metallic blank to form a bulbous incipient base, drilling the blank axially, dapping the bulbous base to form an annular series of cup-shaped depressions, slitting the shank longitudinally to form prongs for the reception of the object to be mounted, and reaming out the under side of the base, for the purpose described.

2. The method herein set forth of forming a setting of the character designated, consisting essentially in swaging a cylindrical metallic blank to form a bulbous base with a concavity in its under side, drilling the blank axially, dapping the bulbous base to form an annular series of cup-shaped depressions, slitting the shank longitudinally to form prongs for the reception of object to be mounted, reaming out the under side of the base, and scalloping the edges thereof, substantially as and for the purposes set forth.

1,157,599. PRACTICE EXERCISE-CARD IN MATHEMATICS. JOHN WARD STUDEBAKER, Des Moines, Iowa. Filed May 25, 1915. Serial No. 30,406. (Cl. 35—2.)

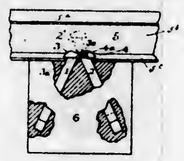


1. In a device of the class described, a card having a plurality of openings, indicating characters on one side of said card adjacent to said openings for mathematical problems, said openings being of such size as to permit pupils to mark through them on paper or the like placed

below the card for setting down the results of the problems indicated on the face of the card, said cards being provided on their reverse sides with indicating characters showing the results of the problems on the face of the card.

2. In a device of the class described, a card having a plurality of openings, indicating characters on one side of said card adjacent to said openings for mathematical problems, said openings being of such size as to permit pupils to mark through them on paper or the like placed below the card for setting down the results of the problems indicated on the face of the card, said cards being provided on their reverse sides with indicating characters showing the results of the problems on the face of the card, said result indicating characters being so arranged adjacent to the openings in the card that when the card is turned over the result of each calculation will be shown adjacent to the calculation made by the pupil through the opening in the card.

1,157,600. RAIL-FASTENING DEVICE. HENRY A. W. THOMASSON, Bellingham, Wash., assignor of one-half to W. F. Dillon, Bellingham, Wash. Filed Jan. 14, 1915. Serial No. 2,105. (Cl. 238—4.)



1. In a rail fastening device the combination with a rail, having a head, a web and a flange; and a cross-tie; of a rail spike having a body; a T-head the lower surface of which is inclined to said body transversely of said head, one side of said head not protruding beyond said body, said spike driven into said cross-tie obliquely to said rail flange and in a plane parallel to said rail web with one arm of said T-head seated on said rail flange.

2. In a rail-fastening device the combination with a flanged rail, and a cross-tie, of two spikes, each having an inclined head, and each driven into said tie obliquely to said flange with said heads seated on said flange and one of said heads lying over and against the other of said heads, substantially as and for the purpose specified.

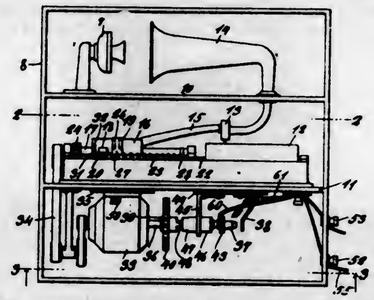
3. In a rail-fastening device the combination with a rail, having a head a web and a flange; and a cross-tie; of two rail spikes each having a body and a transversely-inclined T-head, each of said heads having a striking facet, and the head of the former of said spikes having the beveled surface 3^a, said spikes driven into said cross-tie obliquely to said rail flange and in a plane parallel to said rail web and each having one arm of its T-head seated on said rail flange and one edge of the head of the latter spike lying over and against the said beveled surface 3^a on the head of the former spike.

4. In a rail-fastening device the combination with a concrete tie of a pair of spike casings embedded therein, said casings comprising the ends of a pipe shaped into the form of a triangle.

5. In a rail-fastening device the combination with a flanged rail, and a concrete cross-tie, of a plurality of pairs of spike casings embedded in said tie, each of said pairs of casings comprising the ends of a pipe shaped into the form of a triangle, and a pair of rail spikes, having inclined heads, driven into each of said pair of casings with said heads seated on said flange and one of said heads of each of said pairs of spikes lying over and against the other of said heads.

[Claim 6 not printed in the Gazette.]

1,157,601. BURGLAR-ALARM SYSTEM. SALVATORE D. TOMASO, Chicago, Ill., assignor of one-half to Robert E. Hulsman, Chicago, Ill. Filed Mar. 26, 1915. Serial No. 17,155. (Cl. 179—5.)

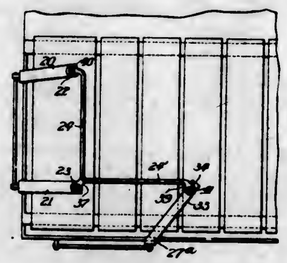


1. The combination of an alarm mechanism including an electric signal circuit, an electric motor for actuating said mechanism, a switch controlling the signal circuit, and means operated by the motor for closing said switch, said means comprising a reciprocatory rod connected to the switch, a gear wheel loose on the rod, said gear wheel having a stud, a stationary member having a recess located opposite the stud, and a pinion on the motor shaft in mesh with the gear wheel when the stud of the latter is outside the recess, said gear wheel dropping out of mesh when the stud registers with and enters the recess, whereby the aforesaid rod is released to close the switch.

2. An electric burglar alarm system comprising an alarm mechanism including an electric signal circuit, an electric motor for actuating said alarm mechanism, a switch controlling the signal circuit, a normally open protective circuit, an energizing circuit for the motor, said circuit being connected to the protective circuit, a switch having connections with the energizing circuit for holding said circuit closed after the protective circuit is closed and thereafter opened, and means operated by the motor for controlling the aforesaid switches.

3. An electric burglar alarm system comprising a telephone circuit, a talking machine the sound waves of which are conducted into the transmitter of the telephone, a switch controlling the telephone circuit, an electric motor operatively connected to the talking machine, a normally open protective circuit, an energizing circuit for the motor, said circuit being connected to the protective circuit, a switch having connections with the energizing circuit for holding said circuit closed after the protective circuit is closed and thereafter opened, and means operated by the motor for controlling the aforesaid switches.

1,157,602. LADDER. HENRY LINWOOD TRIMYER, Portsmouth, Va. Filed Sept. 13, 1911. Serial No. 649,064. (Cl. 105—195.)



1. The combination with a car, of an end ladder and a side ladder, the stiles of said side ladder being bent over the roof of the car, a member connected to the end of one of the stiles of said end ladder being bent over the roof stile extending beyond the end of the other stile, and one of the car and being secured to said member, said member serving as a roof grab for the end ladder.

2. The combination with a car, of an end ladder and a side ladder, one of the stiles of said side ladder being bent over the roof of the car, a member connected to said stile extending beyond the end of the other of said stiles, and one of the stiles of said end ladder being bent over the roof of the car and being secured to said member.

3. The combination with a car, of an end ladder and a side ladder, one of the stiles of said side ladder being bent over the roof of the car, a member connected to said stile extending beyond the end of the other of said stiles, and one of the stiles of said end ladder being bent over the roof of the car and being secured to said extension, said member serving as a roof grab for the end ladder.

4. The combination with a car, of an end ladder and a side ladder, the stiles of said side ladder being bent over the roof of the car, a member connected to one of said stiles extending beyond the end of the other of said stiles, and one of the stiles of said end ladder being bent over the roof of the car and being secured to said member, said member serving as a roof grab for the end ladder.

5. The combination with a car, of an end ladder and a side ladder, one of the stiles of said side ladder being bent over the roof of the car, a member connected to the end of said stile extending beyond the end of the other of said stiles, and one of the stiles of said end ladder being bent over the roof of the car and being secured to said extension, said member serving as a roof grab for the end ladder, and a rung fixed to the bent over portion of the side ladder and serving as a roof grab for the side ladder.

[Claims 6 to 15 not printed in the Gazette.]

1,157,603. RAIL-BOND. CHARLES P. VAILL, Worcester, Mass., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed Aug. 28, 1912. Serial No. 717,488. (Cl. 173—278.)



1. A rail bond having a laminated conductor with the ends of the laminæ welded together to form solid terminals on the ends of the bond, and having an envelop or sheath welded to and covering the terminals, the edges of the laminæ on one side of the terminals forming a flat plane surface and being exposed to permit direct contact of the edge of each lamination with the rails to which the bond is applied.

2. A rail bond having a laminated conductor with the ends of the laminæ welded together to form solid terminals on the ends of the bond, and having an envelop or sheath covering the terminals, the edges of the laminæ on one side of the terminals forming a flat plane surface and being exposed to permit direct contact of the edge of each lamination with the rails to which the bond is applied.

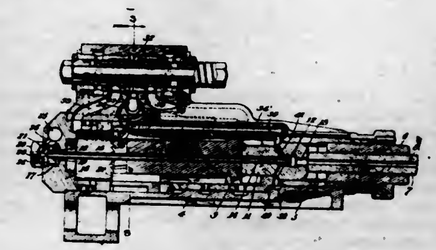
1,157,604. WALKING-STICK TRANSFORMABLE INTO A SEAT. CHARLES VERNET, Dinan, France. Filed June 15, 1910. Serial No. 567,098. (Cl. 155—42.)

In a combined cane and camp stool, an upper tubular member having a head on one end thereof, said head having openings, a tripod pivotally secured to the opposite end of the tubular member, a lower portion comprising tubular members joined together at their ends, said tubular members adapted to surround said tripod, and said tubular members adapted to be positioned in the openings



in the head to form a seat, and a cloth to be positioned on the seat, and means for securing the cloth in position.

1,157,605. MOTOR. DANIEL S. WAUGH, Denver, Colo., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo., a Corporation of Delaware. Filed Dec. 29, 1913. Serial No. 809,236. (Cl. 121—10.)



1. In mechanism of the character set forth, the combination with a cylinder member and a piston operating therein, of a tappet in advance of the piston, means terminating in the tappet for delivering cleansing liquid longitudinally through the tappet, and means for introducing a cleansing fluid laterally into the tappet around the liquid-delivering means.

2. In mechanism of the character set forth, the combination with a cylinder member and a piston operating therein, of a tappet in advance of the piston, a liquid-conducting tube extending through the piston and terminating in the tappet, and means for introducing a cleansing fluid laterally into the tappet around the tube.

3. In mechanism of the character set forth, the combination with a cylinder member and a piston operating therein, of a tappet in advance of the piston having an internal chamber opening through the front end and a lateral port communicating with the chamber, a fluid conducting tube extending through the piston into the chamber and having its front end spaced from the walls thereof and having a snug fit in the rear portion of the tappet, and means for supplying gaseous fluid to the lateral ports.

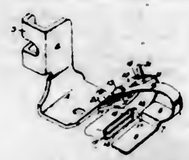
4. In mechanism of the character set forth, the combination with a cylinder member and a piston operating therein, of a rotatable chuck sleeve member mounted in the front end of the cylinder member, one of said members having an annular groove and the sleeve member having lateral ports communicating with the groove and with the bore of the sleeve, a tappet member located in the sleeve member, one of said members having an annular groove in communication with the sleeve ports and the

tappet member having an internal chamber and lateral ports communicating therewith and with the annular groove, means for supplying cleansing fluid to the ports and grooves, and a fluid conducting tube extending longitudinally through the piston and into the internal chamber of the tappet.

5. In mechanism of the character described, the combination with a cylinder member and a piston operating therein, of a tappet located in advance of the piston, said tappet having an internal chamber provided with a reduced outlet opening through its front end, said tappet furthermore having lateral ports communicating with the rear portion of the internal chamber, means for supplying a cleansing fluid to the ports, and a fluid-conducting tube extending longitudinally through the piston and into the internal chamber, said tube terminating short of the front end of said chamber.

[Claims 6 to 13 not printed in the Gazette.]

1,157,606. PIPING ATTACHMENT FOR SEWING-MACHINES. HENRIETTE B. WOEHRLE, Newark, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Dec. 3, 1913. Serial No. 804,332. (Cl. 112—3.)



1. In a piping attachment for sewing machines, a supporting foot, a piping guide comprising a strip of sheet metal bent upon itself to form a folding wall for a piping tape and then inturned to provide a guide-wall for one edge of the tape, a stop carried by said guide for the opposite edge of the tape, and a supporting arm for said piping guide overhanging its tape engaging portion and adjustably supported upon said foot for movement transversely thereof.

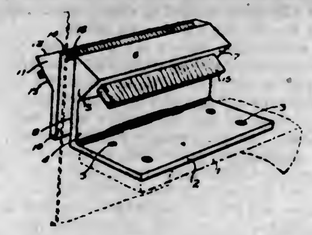
2. In a piping attachment for sewing machines, a supporting foot, a piping-guide having a spring-arm adjustably supported upon said foot, a plate provided with a guide-shoulder disposed forwardly of said foot and with a supporting arm rigidly connected to said foot, and means carried by said supporting arm to embrace the said spring-arm whereby the latter is confined against turning movement.

3. In a piping attachment for sewing machines, a supporting foot provided with an upwardly inclined toe, a piping-guide provided with an overhanging spring-arm adjustably supported upon said toe, said guide being formed of a strip of sheet metal bent upon itself to form a folding-wall for a piping tape, and stops carried by said guide for the edges of said tape.

4. In a piping attachment for sewing machines, a supporting foot provided with an upwardly inclined toe, a plate having a guide-shoulder disposed in alinement with one edge of said toe, a supporting arm for said plate, a fastening screw securing said arm upon the toe, depending lugs carried by said arm and having shoulders abutting said toe, and a piping-guide provided with a spring-arm formed with a longitudinal slot to receive said fastening screw and adapted to slide intermediate said toe and the supporting arm for the plate, and intermediate the depending lugs of said arm.

1,157,607. SAW-GUIDE. HERMAN WOELFFER, West Duluth, Minn. Filed Dec. 12, 1914. Serial No. 876,852. (Cl. 143—160.)

1. A guide for band saws comprising a continuous blade engaging member upon each side of the saw, said members being held in an upwardly inclined position relative to the saw and being of a thickness less than one-tenth the width thereof.



2. A band saw guide comprising a bifurcated support composed of a single piece of metal, elongated inwardly and upwardly inclined slots within the wall of the bifurcated portion of the support, wooden blocks adjustably mounted within the slots and designed to engage the saw blade and being of a thickness not exceeding one tenth the width thereof.

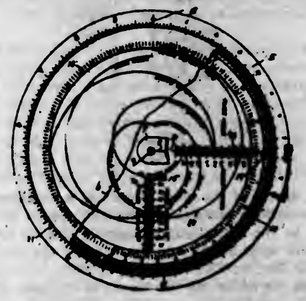
3. A band saw guide comprising a bifurcated support composed of a single piece of metal, the upper terminus of each half of the support being formed into a laterally projecting angularly shaped housing for the adjustable guide for the saw, and the lower portion of one half of the support having formed integral therewith a laterally projecting flange by which the entire support is securely held in place.

1,157,608. TROLLEY. CHARLES W. ARIAL, Colerain, Mass. Filed Feb. 15, 1915. Serial No. 8,173. (Cl. 64—27.)



In a trolley, the combination with the harp, having horizontal axially alined holes in the opposite jaws thereof, and the trolley wheel, of an axle, for supporting the wheel having one end portion of no greater diameter than that of other portions of the length thereof and engaged through the holes in the jaws of the harp and supported by the latter, consisting of a portion having an axial passage extending from its one end to an intermediate part thereof, and having at such intermediate part a connecting short passage or port leading outwardly to its periphery, and a sleeve-like member of larger diameter than the axle proper having a cylindrical passage therethrough screw engaged with and forming a shoulder for the axle proper opposite its non-enlarged end, a grease expelling plug screw-engaged within the outer end of said sleeve-like member, a set screw inserted radially in said sleeve-like member for detachably locking said plug therein, the said so combined and arranged parts permitting the removal of the axle from the harp without the disconnection of the plug-provided sleeve-like member from the axle proper, and means provided at the non-enlarged end of the axle for preventing the displacement of the latter from the jaws of the harp.

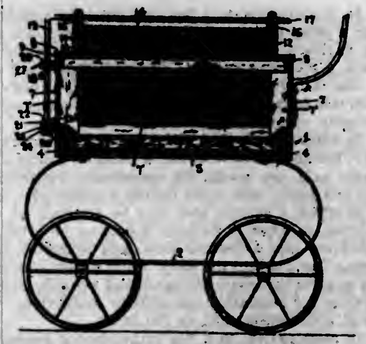
1,157,609. CALCULATOR. CLARENCE F. BACKSTRAND and CHANCE M. HOAG, Riverside, Cal. Filed July 12, 1915. Serial No. 39,290. (Cl. 235—84.)



1. A calculator comprising a disk having delineated thereon a circular logarithmic scale; a circular ratio scale showing ratios from 0 to 1 plus and 0 to 1 minus; a power factor of load curve; phase angle curve; power factor W^1 curve; power factor W^2 curve; and an index point; a transparent disk revolubly mounted on said first disk centrally of the scales thereon, said transparent disk having delineated thereon an index point; a circular logarithmic scale; and two percentage scales comprising a straight vertical and a straight horizontal scale, the vertical scale being at right angles to the horizontal scale; and a transparent arm having a radial hair line index thereon, said arm being revolubly and centrally mounted on said disks, substantially as herein described.

2. A calculator comprising a disk having delineated thereon a circular logarithmic scale, a circular ratio scale showing ratios from 0 to 1 plus and 0 to 1 minus, a power factor of load curve, phase angle curve, power factor W^1 curve, power factor W^2 curve, and an index point; a transparent disk revolubly mounted on said first disk centrally of the scales thereon, said transparent disk having delineated thereon an index point, a circular logarithmic scale, and two percentage scales comprising a straight vertical and a straight horizontal scale, substantially as herein described.

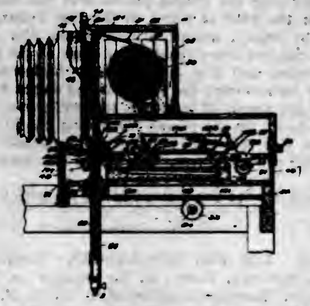
1,157,610. CHILD'S CARRIAGE. THOMAS E. BARTON, Washington, D. C. Filed Nov. 23, 1914. Serial No. 873,587. (Cl. 5—14.)



1. A device of the class described, comprising a body, a top for the body, a supporting member consisting of a horizontal arm and a vertical arm, the horizontal arm being fixed to the top and the vertical arm being slidably and yieldably connected to the body.

2. A device of the class described, comprising a body, said body having screened openings formed therein, a top for the body, said top having an opening formed therein, vertical flanges located at the ends of the opening in the top, a screen connected to the free edges of the flanges and to the top to provide a chamber above the top, and means for locking the top to the body.

1,157,611. PHOTOGRAPHING AND DEVELOPING APPARATUS. GEORGE C. BEIDLER, Rochester, N. Y. Filed Dec. 12, 1912. Serial No. 736,955. (Cl. 95—13.)



1. In a machine relating to photography, means for containing a supply of film, means for drawing the film therefrom, a receptacle positioned to receive the film, a stationary knife near the path of travel of the film, a member movable with relation to the stationary knife, means carried thereby for engaging the film and drawing it from the receptacle, a movable knife co-acting with the stationary knife, means whereby the movable knife is operated after the film is drawn from the receptacle, and means associated with the knife operating means for guarding the stationary knife.

2. In a machine relating to photography, a casing, a source of film supply associated therewith, means within the casing for drawing film from the source of supply, a receptacle to which film is delivered and in which it is supported by the means for drawing the film, a movable member, means carried thereby for drawing the film from the receptacle, a stationary knife adjacent to which the film is supported, a movable knife, means for supporting the movable knife, means for actuating the said supports, a shield for the stationary knife, and means for movably supporting said shield whereby as the movable knife approaches or recedes from the stationary knife the shield is withdrawn from or applied to the stationary knife.

3. In a machine relating to photography, a casing, a source of film supply associated therewith, means for drawing film from the source of supply, a receptacle to which film is delivered by the means for drawing the film, a movable member, a film engaging device associated with the movable member whereby the said film is drawn from the receptacle, a second receptacle to which the film is delivered, means for immersing the film in the second receptacle, means for operating the movable member, means for communicating motion of the movable member to the means for submerging the film, a stationary knife, a shield for the stationary knife actuated by the movable member, and a movable knife actuated by said movable member.

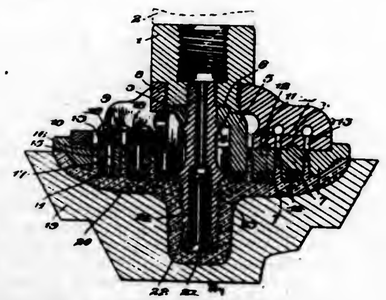
4. In a machine relating to photography, a casing, a source of film supply, means for drawing film therefrom, a member slidable in the casing, means for reciprocating the said member, sliding plates, means for communicating the motion of the sliding member to the plates intermittently, a knife carried by the sliding plates, a stationary knife with which the first mentioned knife coacts, a rod connecting the sliding plates, said rod being located adjacent the path of travel of the film drawn from the source of supply, means for flexing the film around an edge of the

rod below the cutting edges of the knives and for drawing said film approximately horizontally, a receptacle for receiving the film from the means for drawing it from the source of supply, and a receptacle over which the film is drawn by the means for flexing the film, whereby the film will fall into the second mentioned receptacle when cut by the knives.

5. In a machine relating to photography, a casing, a source of film supply, means for drawing film therefrom, a member slidable in the casing, means for reciprocating the said member, sliding plates, means for communicating the motion of the sliding member to the plates intermittently, a knife carried by the sliding plates, a stationary knife with which the first mentioned knife coacts, a rod connecting the sliding plates, said rod being located adjacent the path of travel of the film drawn from the source of supply, means for flexing the film around an edge of the rod below the cutting edges of the knives and for drawing said film approximately horizontally, a receptacle for receiving the film from the means for drawing it from the source of supply, a receptacle over which the film is drawn by the means for flexing the film whereby the film will fall into the second mentioned receptacle when cut by the knives, and means for immersing the film.

[Claims 6 to 14 not printed in the Gazette.]

1,157,612. DIE FOR INSULATORS. CORNELIUS VAN DYKE BENNETT, Victor, N. Y., assignor to The Locke Insulator Manufacturing Company, Victor, N. Y., a Corporation of New York. Filed June 9, 1913. Serial No. 772,580. (Cl. 25—3.)

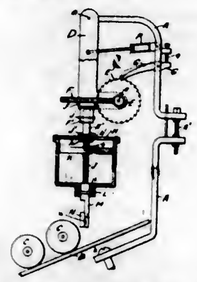


1. In a die of the type described, a central member and a plurality of concentric groove forming members, each provided on its forward edge with a channel in which is yieldingly mounted an annular member, movable in a direction transverse to the working face of the die, whereby said annular member may adhere to the formed body while the remainder of the die is retracted a short distance.

2. In a die of the type described, a central member and an annular groove forming member substantially concentric therewith, said annular groove forming member provided on its forward edge with a channel in which is mounted an annular member, movable in a direction transverse to the working face of the die, whereby said annular member may adhere to the formed body while the remainder of the die is retracted a short distance.

3. In a die of the type described, a central member and an annular groove forming member substantially concentric therewith, said annular groove forming member having its forward edge formed of an annular member movable in a direction transverse to the working face of the die whereby said annular member may adhere to the formed body while the remainder of the die is retracted a short distance to admit air to the formed groove.

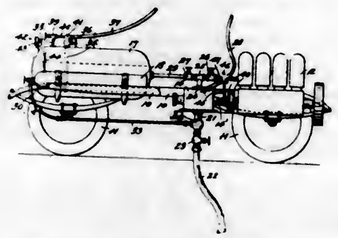
1,157,613. INK-SUPPLYING DEVICE. MORRIS BORSODI, New York, N. Y. Filed Apr. 1, 1914. Serial No. 828,839. (Cl. 101—79.)



1. In a device of the class described, a container having an open mouth, a central spindle and means for holding the same to the container, a movable closure located below the said open mouth and operated by the said spindle, and means for rotating the said spindle, in combination with means for adjusting the degree of rotation of the said spindle.

2. In a device of the class described, a support having rotatable driving means, a container adapted to hold ink, a device located at the top of said container having fixed attaching means and also rotatable attaching means projecting therefrom, and means to secure the said rotatable attaching and driving means together and to detach the same at will, in combination with a movable closure within the container constructed and arranged to be operated by the said rotatable attaching means while the container itself is held from rotation by the fixed attaching means.

1,157,614. FIRE-EXTINGUISHING APPARATUS. CHARLES BRENT, Kenora, Ontario, Canada. Filed Jan. 21, 1914. Serial No. 813,512. (Cl. 169—9.)



1. In combination, in a fire extinguishing apparatus, a motor, a pump adapted to be operated by said motor, said pump having a water inlet connection and a delivery connection, a source of carbonic acid gas, and means whereby a free extinguishing gas may be injected or drawn into the stream of water passing through the pump so as to thoroughly carbonate the same.

2. In combination, in a fire extinguishing apparatus, a vehicle provided with a motor, a pump, a source of free carbonic acid gas, means for operatively connecting the motor and pump, said pump having a water inlet connection to which a suction hose may be attached, an outlet connection to which a delivery hose may be attached, a gas delivery pipe extending from said source of gas for injecting free gas into the water which passes through the pump so as to carbonate the same, and suitable water and gas valves for regulating the relative proportions of free gas and water discharged by the pump.

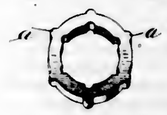
3. In combination, in a fire extinguishing apparatus, a motor, a pump, means for driving said pump from the motor, a tank containing carbonic acid gas, means whereby gas may be delivered into the water which passes through the pump so as to carbonate the same, and means whereby plain water, carbonated water, water with extra gas, or gas alone may be delivered by the apparatus.

4. In a fire extinguishing apparatus, a motor, a pump, means for operating said pump from the motor, a tank containing free carbonic acid gas, said pump having a suction connection and a discharge connection, a gas injector in the suction side of the pump and connected to the tank, and suitable water and gas valves whereby any desired proportions of free gas and water may be forced through the pump.

5. In combination, a fire extinguishing apparatus, a suitable vehicle carrying a motor, a pump adapted to be driven by said motor, a tank, a source of free carbonic acid gas, said pump having a suction pipe connection and a discharge pipe connection the latter communicating with the tank, a pipe leading from the source of gas and arranged to inject the free gas into the stream of water which passes through the pump, and suitable valves in the pipes.

[Claims 6 to 10 not printed in the Gazette.]

1,157,615. NUT. HJALMAR G. CARLSON, Worcester, Mass., assignor to Rockwood Sprinkler Company of Massachusetts, Worcester, Mass., a Corporation of Massachusetts. Filed Feb. 1, 1913. Serial No. 745,527. Renewed Apr. 22, 1915. Serial No. 23,214. (Cl. 85—82.)



1. As an article of manufacture, a nut consisting of a single substantially flat piece of hard metal of a general cylindrical form both internally and externally, having a series of external ribs provided with spaces between them for the reception of the jaws of a wrench, and a corresponding series of internal recesses, forming interruptions of the internal thread.

2. As an article of manufacture, a nut consisting of a single substantially flat piece of metal of a general cylindrical form, having a series of external ribs provided with spaces between them for the reception of the jaws of a wrench, and a corresponding series of internal recesses of substantially the same shape and relative location as said ribs.

3. As an article of manufacture, a circular sheet metal nut having external ribs and internal recesses, both ribs and recesses extending from one side of the nut to the other, and the recesses extending across the entire interior threaded surface.

4. As an article of manufacture, a circular sheet metal nut having external convex ribs and internal concave recesses, both ribs and recesses extending from one side of the nut to the other and registering with each other.

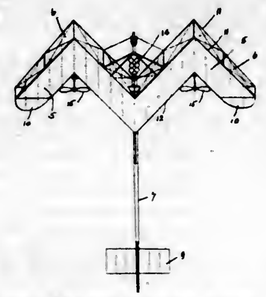
1,157,616. AEROPLANE. CHARLES RUSSELL CLAPP, Evanston, Ill. Filed Aug. 16, 1911. Serial No. 644,413. (Cl. 244—12.)

1. An aeroplane having a plurality of continuous planes arranged one above the other, each plane being slightly in advance of the plane above and each plane having its entering edge both in front and in rear of its transverse geometrical center line.

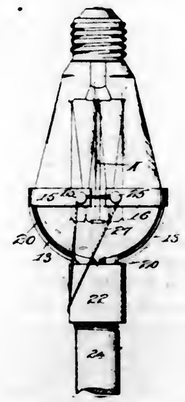
2. An aeroplane having a sustaining plane of multiple V-shape, said plans having substantially equal portions of its entering edge on opposite sides of its transverse geometrical center line relative to its direction of motion.

3. An aeroplane having a plurality of sustaining planes each of multiple V-shape and each arranged slightly in advance of the plane above.

4. An aeroplane having a plurality of sustaining planes each of multiple V-shape and each arranged slightly in advance of the plane above, and each plane having its entering edge both in front and in rear of its transverse geometrical center line.



1,157,617. MEANS FOR ATTACHING AND DETACHING LIGHT-GLOBES. ELWOOD H. CONRAD, Trevorton, Pa. Filed Apr. 23, 1915. Serial No. 23,459. (Cl. 240—101.)



1. In a device of the character described, a body structure, resilient arms carried by said body structure, relatively movable gripping structures, carried by said arms, a handle movably connected to said body and flexible means connecting the free ends of said gripping structures and said handle whereby the independent rotation of said handle will cause the contracting of the free ends of said gripping structures, substantially as described.

2. In a device of the character described, a body structure, resilient arms carried by said body structure, gripping sections carried by said arms, one end of said gripping structures being hingedly connected together, a handle movably connected to said body structure, and means connecting the free ends of said gripping sections and said handle, substantially as described.

3. In a device of the character described, a body structure, arms extending from said body structure, gripping members carried by said arms, one end of said gripping members being hingedly connected, a collar secured to said body structure, a handle in movable relation to said collar, and flexible means connecting the free ends of said gripping members and said handle for the purpose specified.

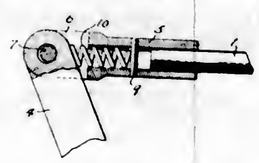
4. In a device of the character described, a body structure, said body structure provided with a series of cut-outs, a plurality of resilient arms, the lower ends of said arms seating in said cut-outs, means to secure said arms

to said body structure, gripping sections carried by said arms, means hingedly connecting one end of said gripping sections, studs secured to said gripping sections, adjacent their free ends, a collar carried by said body structure, a handle in movable relation to said collar, and flexible means connecting said stud members and said handle for the purpose specified.

5. In a device of the character described, a body structure, resilient arms projecting upwardly from said body portion, gripping members carried by said arms, means hingedly connecting one end of said gripping members, a handle, and means operated by said handle for contacting the free ends of said gripping members, substantially as described.

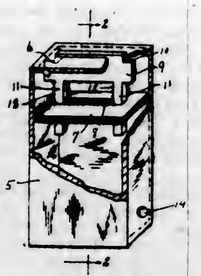
[Claims 6 to 8 not printed in the Gazette.]

1,157,618. COUPLING FOR BRAKE AND TRANSMISSION RODS. LEWIS COTTINGHAM, Delta, Ohio. Filed Apr. 11, 1914. Serial No. 831,268. (Cl. 74—17.)



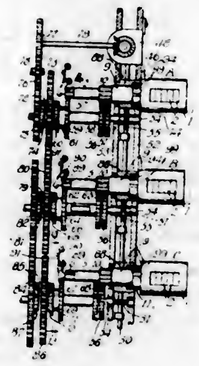
As a new article of manufacture the herein described anti-rattling coupling joint for brakes and the like including a brake rod, a stock formed with a tubular body portion and a bifurcated end arranged in alinement with the bore of the tubular body portion, said tubular body portion being threaded upon the before mentioned rod, a pivot pin connecting the arms of the bifurcated end of the stock, a lever received within the said bifurcation and engaging the pivot pin, a transverse pin passing through the tubular body portion at a point spaced from the end of the rod, and a compression spring received within the tubular body portion of the stock, one end of the spring engaging the transverse pin while the opposite end thereof bears against the end of the lever so as to take up looseness at the joint and prevent rattling.

1,157,619. MOISTENING AND SEALING DEVICE. RICHARD F. CRITTENDEN, Los Angeles, Cal., assignor to Krit-Seal Company, Los Angeles, Cal., a Corporation. Filed May 16, 1914. Serial No. 839,154. (Cl. 120—75.)



A moistening and sealing device comprising a receptacle having a slot in its top and a filling port in one of its other surfaces; a removable closure for said port; a bearing shelf in said receptacle a short distance from the top, said shelf having a slot therein; a stopper having notches at the ends of its upper edge and legs at its lower edge, the upper edge projecting slightly through the slot in the top and the legs projecting through the slot in the bearing shelf; and springs coiled around the edges of the stopper between the shelf and top.

1,157,620. REGISTER-ACTUATING MECHANISM. WILLIAM J. CRUMPTON, Evanston, Ill., assignor, by mesne assignments, to William R. Heath, Buffalo, N. Y. Filed May 12, 1909, Serial No. 495,417. Renewed Mar. 12, 1915. Serial No. 13,970. (Cl. 235—91.)



1. In combination, a source of power, a plurality of registers, and means carried by one of said registers for operatively connecting all of the registers with said source.

2. In a register-actuating mechanism, the combination of a rotatable shaft, a wage-register and a time-register associated therewith, normally inoperative transmission gears adapted to connect said shaft with each of said registers, a loose register adapted to be temporarily connected with said transmission gears, and means carried by said loose register for establishing operative connection between said shaft and transmission gears, whereby the actuations of said shaft are concurrently transmitted to all of said registers in predetermined ratios.

3. In a register-actuating mechanism, the combination of a rotatable shaft, a pair of registers adapted to be concurrently actuated thereby, one of said registers being permanently and the other removably associated with said shaft, and means whereby the removal of said last-mentioned register automatically disconnects both of the registers from said shaft.

4. The combination of a register, mechanism for actuating the same, a loose register adapted to be readily brought into and out of association with said actuating mechanism, and means whereby said loose register when properly associated with said mechanism automatically establishes operative connection between said mechanism and both of the registers, and whereby the removal of said loose register automatically breaks operative connection between said mechanism and both of the registers.

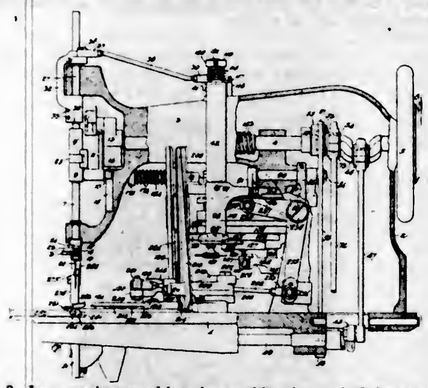
5. The combination of a plurality of registers, mechanism for actuating the same, and means whereby one of said registers controls the connections between said mechanism and each of said registers.

[Claims 6 to 35 not printed in the Gazette.]

1,157,621. BUTTON-FASTENING MACHINE. ALBERT H. DE VOE, Westfield, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed May 16, 1913. Serial No. 767,963. (Cl. 112—32.)

1. In a sewing machine, the combination with stitch-forming and feeding mechanisms, of automatically acting means adapted to control the same for production of groups of tacking stitches each disposed in the direction of feed and spaced at different intervals from the preceding and succeeding groups of tacking stitches and connected therewith by straight-away stitches.

2. In a sewing machine, the combination with stitch-forming and feeding mechanisms, of automatically acting means adapted to control the same for production of groups of tacking stitches each spaced at different intervals from the preceding and succeeding groups of tacking stitches and connected therewith by straight-away stitches, and means for varying the relative lengths of the intervals between said groups of tacking stitches.



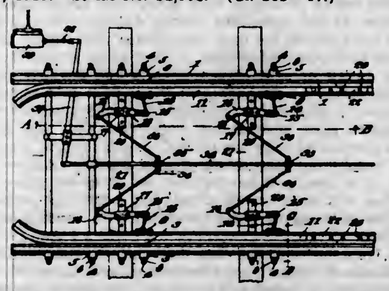
3. In a sewing machine, in combination, stitch-forming mechanism including a reciprocating needle, feeding mechanism, means for imparting to said needle interrupted series of lateral jogging movements, and means connected with the feeding mechanism for producing at intervals feeding movements in groups or successions of different length alternately during the periods of interruption of the needle jogging movements.

4. In a sewing machine, in combination, stitch-forming mechanism including a reciprocating needle, feeding mechanism, means for imparting to said needle interrupted series of lateral jogging movements within the direction of feed, and means connected with the feeding mechanism for producing at intervals feeding movements in groups or successions of different length alternately during the periods of interruption of the needle jogging movements.

5. In a sewing machine, in combination, stitch-forming mechanism including a reciprocating needle, feeding mechanism, means for imparting to said needle interrupted series of lateral jogging movements, means connected with the feeding mechanism for producing at intervals feeding movements in groups or successions of different length alternately during the periods of interruption of the needle-jogging movements, and means for adjusting the relative lengths of the feeding movements of successive groups.

[Claims 6 to 27 not printed in the Gazette.]

1,157,622. RAILWAY-CAR-BRAKING MEANS FOR GRAVITY-YARDS AND THE LIKE. EDWARD H. FRANK, Centralia, Ill., assignor of thirty-three one-hundredths to John W. Frank, Centralia, Ill. Filed May 28, 1915. Serial No. 31,006. (Cl. 188—47.)



1. The combination with traffic rails, of wheel gripping rails extended therealong and normally spaced therefrom, and means for swinging the wheel gripping rails upwardly and laterally to engage the sides of car wheels on the traffic rails.

2. The combination with traffic rails, of wheel gripping rails parallel therewith, an actuating member extending between the gripping rails, and means operated by the movement of said member in one direction, for simultaneously swinging the gripping rails upwardly and outwardly to engage the inner faces of car wheels at points above the traffic rails.

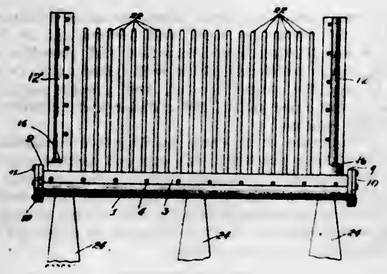
3. The combination with traffic rails, of links pivotally mounted between and adjacent said rails, means for tying said links to the bases of the traffic rails, gripping rails carried by the links and normally supported in upstanding positions at points removed from the traffic rails, and means for simultaneously shifting the links to swing the gripping rails upwardly and outwardly to points above the traffic rails.

4. The combination with traffic rails, of chairs extending under each of the rails, rail engaging means upon each chair, a jaw slidably engaging each chair, said jaw being adapted to engage the outer base flange of the adjacent rail, means adjustably engaging the chair for binding the jaw upon the engaged rail, links pivotally connected to the respective chairs, each link having a seat, gripping rails secured upon the seats, and means for simultaneously swinging the gripping rails upwardly and outwardly to engage car wheels at points above the traffic rails.

5. The combination with traffic rails, of chairs extending under each of the rails, rail engaging means upon each chair, a jaw slidably engaging each chair, said jaw being adapted to engage the outer base flange of the adjacent rail, means adjustably engaging the chair for binding the jaw upon the engaged rail, links pivotally connected to the respective chairs, each link having a seat, gripping rails secured upon the seats, and means for simultaneously swinging the gripping rails upwardly and outwardly to engage car wheels at points above the traffic rails, said means including an actuating rod, levers between the rod and the gripping rails, link connections between said rod and the respective levers, and connections between the levers and the adjacent rail supporting links.

[Claims 6 to 8 not printed in the Gazette.]

1,157,623. ICE-MAKING APPARATUS. EDWARD EARLE GAINER, New York, N. Y., assignor to The Centrifreze Ice Process Company, New York, N. Y., a Corporation of Arizona. Filed June 13, 1912, Serial No. 703,376. Renewed Sept. 12, 1914. Serial No. 861,472. (Cl. 62—162.)



1. Ice making apparatus comprising a header having end freezing plates and between the freezing plates a plurality of upwardly extending vertical pipes for circulation of a freezing medium.

2. Ice making apparatus comprising horizontal headers each having on its sides horizontal flanges and at its ends vertical freezing plates with vertical flanges whereby a plurality of such units may be assembled in tank formation by the use of vertical and horizontal spacers.

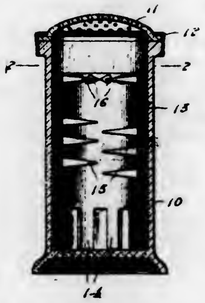
3. Ice making apparatus comprising a plurality of ice plate forming units each unit being composed of a header the upper face of which constitutes part of the floor of a tank, vertically disposed freezing members extending up from said face of the header, said members being adapted for circulation of a freezing medium each header having at its sides downwardly extending vertical flanges and vertical members mounted upon each header adjacent its ends and having outwardly extending flanges whereby a plurality of units may be joined in a tank construction with horizontal spacers forming with the headers the floor of the tank and with vertical spacers forming with the vertical members at the ends of the headers the side walls of the tank.

4. Ice making apparatus comprising the combination of a horizontal header having passages 6, 7, and end freezing plates erected on the header adjacent the respective ends thereof and each having a vertical passage open at the bottom and there in communication with chamber 6 and within the same a pipe open at the top and at the bottom communicating with passage 7.

5. Ice making apparatus comprising the combination of a horizontal header having passages 6, 7, and end freezing plates erected on the header adjacent the respective ends thereof and each having a vertical passage open at the bottom and there in communication with chamber 6 and within the same a pipe open at the top and at the bottom communicating with passage 7, and also having vertical side flanges 14'.

[Claim 6 not printed in the Gazette.]

1,157,624. SALT-SHAKER. FRED GIESENHAUS, Muscatine, Iowa. Filed June 4, 1914. Serial No. 843,001. (Cl. 65—57.)

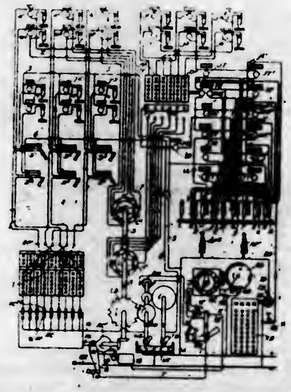


1. A salt shaker, a cylinder loosely mounted within said shaker and having its inner end portion cut to form tongues constituting supporting feet and pounding elements, prongs positioned within said cylinder and extending toward the center thereof, and prongs positioned adjacent the outer end of the cylinder and extending in radiating relation.

2. An agitator of the character described comprising a cylindrical body portion having one end portion provided with longitudinally extending slots forming pounding elements, cutting prongs secured within said body portion at a point intermediate its length, and cutting prongs secured within said body portion adjacent its outer end and positioned in radiating relation.

1,157,625. ACCOUNTING SYSTEM. FREDERICK O. HEUSER, Chicago, Ill., assignor, by mesne assignments, to William R. Heath, Buffalo, N. Y. Filed May 13, 1909, Serial No. 495,717. Renewed Mar. 12, 1915. Serial No. 13,972. (Cl. 235—92.)

1. In a device of the class described, the combination of a source of current, a plurality of branch circuits, a motor driven switch in each circuit for maintaining the closure of the associated circuit during certain periods and maintaining the open condition of the circuit during other predetermined periods, a wage brush or switch common to all of said branch circuits and adapted during every period to establish connection with said source of current, a plurality of electromagnetically actuated wage registers each adapted for connection with any of said branch circuits, and a switch for completing the circuit of said registers successively one at a time.



2. In a device of the class described, the combination of a source of current, a plurality of branch circuits, a motor driven switch in each circuit for maintaining the closure of the associated circuit during certain periods and maintaining the open condition of the circuit during other predetermined periods, the cycle of openings and closures being different in the different switches, a wage brush or switch common to all of said branch circuits and adapted during every period to establish connection with said source of current, a plurality of electromagnetically actuated wage registers each adapted for connection with any of said branch circuits, and a switch for completing the circuit of said registers successively one at a time.

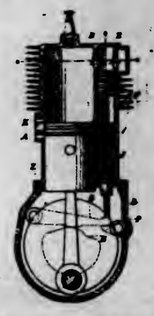
3. In a device of the class described, the combination of a source of current, a plurality of branch circuits, a series of spring jacks connected with each branch circuit, a motor driven switch in each circuit for maintaining the closure of the associated circuit during certain periods and maintaining the open condition of the circuit during other predetermined periods, a wage brush or switch common to all of said branch circuits and adapted during every period to establish connection with said source of current, a plurality of electromagnetically actuated wage registers each adapted for connection with the spring jacks connected with any of said branch circuits, and a switch for completing the circuit of said registers successively one at a time.

4. In a device of the class described, the combination of a source of current, a plurality of branch circuits, a series of spring jacks connected with each branch circuit, a motor driven switch in each circuit for maintaining the closure of the associated circuit during certain periods and maintaining the open condition of the circuit during other predetermined periods, a wage brush or switch common to all of said branch circuits and adapted during every period to establish connection with said source of current, a plurality of electromagnetically actuated wage registers each adapted for connection with the spring jacks connected with any of said branch circuits, a switch for completing the circuit of said registers successively one at a time, and an auxiliary set of spring jacks connected with each branch circuit but located in proximity to the main spring jacks associated with another branch circuit.

5. In a device of the class described, the combination of a source of current, an electrical circuit connected with said source, a switch in said circuit, an electric motor for actuating the switch, a power circuit for the motor, a switch for closing the power circuit, means driven by the motor for opening the switch in the power circuit after a predetermined amount of operation of said motor, and clock controlling mechanism for closing the switch in the power circuit at predetermined intervals of time.

[Claims 6 to 154 not printed in the Gazette.]

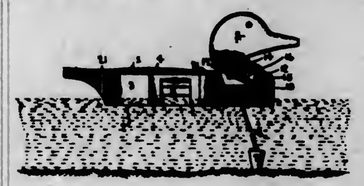
1,157,626. TWO-STROKE INTERNAL-COMBUSTION ENGINE. WILLIAM JEFFARES, Malin, Ireland. Filed July 29, 1915. Serial No. 42,654. (Cl. 123—69.)



1. In a two-stroke internal combustion engine, the combination of a power cylinder a power piston therein, a crank chamber in which air is compressed by the power piston, a transfer passage between said crank chamber and the upper end of said power cylinder, a piston valve cylinder interposed between said transfer passage and said upper end of the power cylinder, a piston valve which normally obstructs the communication between said transfer passage and the power cylinder but at the right time moves to permit the compressed air a clear passage across the piston valve cylinder, and a fuel pump which supplies fuel to the air as it passes through the piston valve cylinder, substantially as set forth.

2. In a two-stroke internal combustion engine, the combination of a power cylinder a power piston therein, a crank chamber in which air is compressed by the power piston, a transfer passage between said crank chamber and the upper end of said power cylinder, a piston valve cylinder interposed between said transfer passage and said upper end of the power cylinder, a piston valve which normally obstructs the communication between said transfer passage and the power cylinder but at the right time moves to permit the compressed air a clear passage across the piston valve cylinder, a spring forcing said valve downward, means operated by the engine for lifting said valve, and means for varying the distance through which said valve drops, substantially as set forth.

1,157,627. DECOY. ALBERT KOYEN and FRANK B. SNYDER, Fremont, Nebr. Filed Apr. 6, 1914. Serial No. 829,881. (Cl. 43—2.)



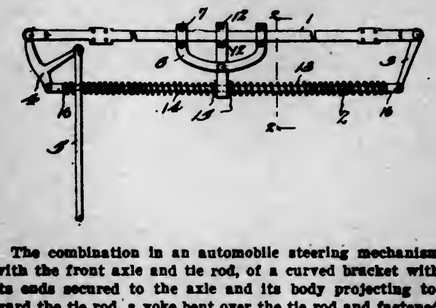
1. In a decoy, a body portion having a head receiving chamber and an attaching chamber; a bar extending across the attaching chamber and secured to the body; a head; and a resilient clip secured to the head and embodying an arm angularly arranged with relation to the head and adapted to engage beneath the bar when the head is in place and to engage with one wall of the head receiving chamber to hold the head therein against movement when the head is in the receiving chamber.

2. In a decoy, a body having a substantially horizontal bar secured to the upper portion thereof with a portion of the bar spaced from a portion of the body; a head; and a resilient clip secured to the head and embodying an arm angularly arranged with relation to the head and adapted for engagement beneath the bar.

3. A decoy, comprising a body and a detachable head, a resilient member for attaching the head to the body, the body having a storage chamber therein to receive the head, said resilient member being engageable with the walls of said chamber to hold the head therein against movement with relation thereto.

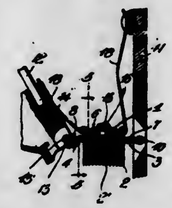
4. A decoy, comprising a body having a head receiving chamber in its bottom open for the entrance of the water of a stream, a separable fastener member on the upper side of the body, a head, and a complementary separable fastener member on the head for engagement with the first mentioned separable fastener member, said complementary separable fastener member being resilient and adapted to engage with one wall of the head receiving chamber to hold the head within the chamber when the head is in said chamber.

1,157,628. STEERING MECHANISM FOR AUTOMOBILES. JAMES P. LAW, Nocona, Tex. Filed Sept. 1, 1914. Serial No. 859,720. (Cl. 21—200.)



The combination in an automobile steering mechanism with the front axle and tie rod, of a curved bracket with its ends secured to the axle and its body projecting toward the tie rod, a yoke bent over the tie rod and fastened at the underside of the bracket and its ends secured to the axle, a washer at each side of the yoke, a spring surrounding and confined on the tie rod and bearing against each washer.

1,157,629. PIANO-ACTION FLANGE. WILLIAM J. LUTHMERS, Olney, Ill. Filed Aug. 3, 1914. Serial No. 854,762. (Cl. 84—101.)



1. A flange for piano actions comprising upper and lower overlying resilient plates U-shaped intermediate their ends, each of said plates being formed with a centrally arranged opening, the openings in the respective plates being disposed in alinement, laterally extending arms carried by the extremities of said plates, the former being reduced at the outer portion thereof, one pair of said arms having the extremities united and formed with a transversely extending opening to form an eye and the other pair thereof being free and formed with coacting grooves in the adjacent face of their extremities.

2. A flange for piano actions comprising upper and lower overlying resilient plates U-shaped intermediate their ends, each of said plates being formed with a plurality of openings, one of the latter being disposed in a plane at right angles to that of the others, the openings in the respective plates being disposed in alinement, laterally extending arms carried by the extremities of said plates, the former being reduced at the outer portion thereof, one pair of said arms having the extremities united and formed with a transversely extending opening to form an eye and the other pair thereof being free and formed with coacting grooves in the adjacent face of their extremities.

3. A flange for piano actions comprising a resilient plate bent intermediate its ends to form an eye, the free ends of said plate being brought to an overlying position and U-shaped intermediate said eye and the extremities of said free ends, said U-shaped portion being formed with a plurality of openings, one of the latter being disposed in a plane at right angles to that of the others, the openings in the respective U-shaped portions being disposed in alinement, and oppositely disposed laterally extending arms formed by said U-shaped portion of the plate, said arms having the outer portion thereof reduced, the free ends of said plate forming one of said arms having transversely extending grooves in the adjacent surfaces of their extremities to coact substantially as and for the purpose set forth.

4. The combination with a main rail, a longitudinally extending rib thereon, a hammer, a damper, and springs to actuate said hammer and damper; of upper and lower U-shaped resilient plates seated upon said rib, each of said plates having therein a centrally arranged aperture, the apertures in the respective plates being disposed in alinement, a screw passing through said apertures and into said rail; laterally extending arms carried by said plates, the former being reduced at the outer ends thereof, one pair of said arms having their extremities united and formed with an eye, the other pair being free and formed at their extremities with coacting channels, a pin extending through said damper and said eye whereby to pivotally support said damper, and a pin extending through said hammer and inclosed by the walls of said channels when said plates have been pressed together by said screw, substantially as and for the purpose set forth.

5. A flange for piano actions comprising upper and lower overlying resilient plates U-shaped intermediate their ends, each of said plates being formed with an opening, the openings in the respective plates being disposed in alinement, laterally extending arms carried by the extremities of said plates, one pair of said arms having their extremities united and formed with a transversely-extending opening to form an eye and the other pair thereof being free and formed with coacting grooves in the adjacent faces of their extremities substantially as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

1,157,630. AUTOMATIC RETRIEVING-TROLLEY. SAMUEL E. MCFARLAND, Long Beach, Cal., assignor to Automatic Retrieving Trolley Corporation, Long Beach, Cal., a Corporation of California. Filed June 1, 1912. Serial No. 701,094. (Cl. 191—89.)

1. A trolley comprising a standard, an oscillating trolley pole mounted on the standard, an oscillating extensible brace mounted on the standard, means to automatically extend the brace, retarding means in opposition to the extending means, a toggle-joint member between the brace and the trolley pole, a stop to cause the toggle-joint to coöperate with the brace to support the pole in operative position, brace setting means to move the toggle member and brace into pole-supporting position, and yielding means to hold the setting means out of operative position.

2. A trolley comprising a trolley pole, a toggle-joint brace having an extensible member connected to the trolley pole, a spring on said member normally tending to extend said member, means operatable by sudden upward movement of the trolley pole to bend the toggle-joint to allow the trolley pole to swing downward, and a second spring bearing on the toggle-joint to aid in bending it.



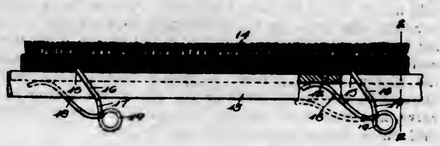
3. A trolley comprising a standard, a trolley pole pivoted to the standard, a jointed brace pivoted at one end to the standard and at the other end to the trolley pole and comprising means to force the trolley pole upward, and means only operatable by sudden upward movement of the trolley pole to bend the brace joint.

4. A trolley comprising a standard, a trolley pole pivoted to the standard, a toggle jointed brace pivoted at one end to the standard, and at its other end to the trolley pole and comprising means to force the trolley pole upward, a stop to prevent bending of the toggle-joint, means operatable by sudden upward movement of the trolley pole to straighten the toggle joint, and adjustable means tending to bend the toggle joint.

5. The combination with a trolley pole and a compressible spring to force the trolley pole upward, of a brace; a toggle-joint member pivotally connecting the pole and brace; means to prevent bending of the toggle-joint and a tripping spring fixed to the toggle-joint member and pressing against the brace for the purpose set forth.

[Claims 6 to 17 not printed in the Gazette.]

1,157,631. MAT FOR RUNNING-BOARDS. MILTON P. MCLAUGHLIN, Wakefield, Mass., assignor of one-half to David J. Hurley, Boston, Mass. Filed Aug. 11, 1915. Serial No. 45,010. (Cl. 15—62.)



A running board mat provided with a securing clip formed from a length of resilient wire and comprising an upper arm inserted in the base portion of the mat; a neck formed to extend across the outer edge of the running board, and an angular, lower arm formed to project under the running board and including a transverse terminal portion, and a torsional coiled portion adapted to press the terminal portion against the under side of either a relatively thick or a relatively thin running board, said terminal portion extending substantially parallel with the outer edge of the running board and being adapted to abut, as a positive stop member, against a downwardly projecting flange at the outer edge of a running board.

1,157,632. COVER-WRENCH FOR FRUIT-JARS. GEORGE H. MAAS, Milwaukee, Wis. Filed Apr. 1, 1912. Serial No. 687,904. (Cl. 65—26.)

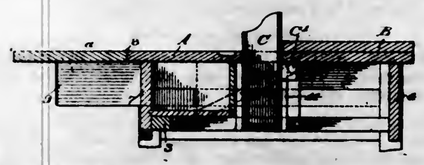
1. The combination with the clamping wire of a cover wrench, of a friction wire spirally wound upon the surface of said clamping wire, said spirally wound wire being adapted to form a friction bearing between the clamping wire and said cover.

2. In a cover wrench, the combination of a pair of handles pivotally connected together at one end, said handles being each provided at intermediate points between their pivotally connected ends and their opposite ends with perforations for the reception of the respective ends of a



clamping wire, a clamping wire having its respective ends inserted through the perforations of said handles respectively, said clamping wire being located on a different plane from the pivotally connected ends of said handles, and a spirally wound friction wire inclosing said clamping wire.

1,157,633. COMBINED TABLE AND WRITING-DESK. JOHN H. MILLER and LOUIS RAAB, Rochester, N. Y., assignors to Miller Cabinet Company, Rochester, N. Y., a Corporation of New York. Filed Feb. 3, 1913. Serial No. 745,795. (Cl. 45—70.)



1. The combination with a table top having an aperture, a leaf hinged to the forward edge of the table and normally covering the aperture and rotatable outwardly to form a desk extension, a sliding bracket for supporting the leaf and operating connections between the leaf and the bracket for projecting and retracting the latter, of a receptacle guided for vertical movement through said aperture and means controlled by the bracket for effecting the vertical adjustment of the receptacle upon the reciprocatory movement of the bracket.

2. The combination with a table top having an aperture, a hinged leaf normally covering the aperture and adjustable to uncover the aperture and to form a desk extension, a pair of sliding brackets movable outwardly to support the leaf in extended position and operating connections between the leaf and brackets, of a receptacle guided beneath the aperture and coöperating cam slots and pins on the brackets and receptacle serving to effect the upward and downward movement of the receptacle.

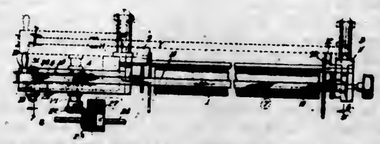
1,157,634. COMBINATION TABLE AND DESK. JOHN H. MILLER and LOUIS RAAB, Rochester, N. Y., assignors to Miller Cabinet Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 29, 1913. Serial No. 809,153. (Cl. 45—91.)



1. The combination with a stationary support, of a movable section pivotally arranged on the support, a movable bracket coöperating with the movable section when the latter is open, a rod pivoted at one end to the bracket and provided at its opposite end with a reduced portion, a shoulder formed on the reduced portion, and a link pivotally mounted on the movable section, said link having a U-shaped cross section and bifurcated at one end to engage the reduced portion on the rod, the upper wall of the link coöperating with the aforementioned shoulder to limit the relative movement of the parts.

2. The combination with a stationary support, of a movable section pivotally arranged on the support, a movable bracket coöperating with the movable section when the latter is open, a rod pivoted at one end to the bracket and provided at its opposite end with a reduced portion, a shoulder formed on the reduced portion, a U-shaped leaf secured to the movable section, a link pivotally mounted at one end to said leaf, the link having a U-shaped cross section and bifurcated at its opposite end to engage the reduced portion on the rod, the upper wall of the link coöperating with the aforementioned shoulder to limit the relative movements of the parts.

1,157,635. DUPLICATING ATTACHMENT FOR CALCULATING-MACHINES. EDWARD F. MUMM, Milwaukee, Wis. Filed Jan. 2, 1915. Serial No. 167. (Cl. 197—153.)



1. A duplicating attachment adapted to be readily applied to adding machines and the like, comprising stationary members adapted to be readily mounted adjacent the ends of a platen and means slidably mounted on said members for supporting a supplementary printing ribbon adjacent the printing line of the platen.

2. A duplicating attachment for adding machines and the like, comprising stationary members adapted to be readily mounted adjacent the ends of a platen, means slidably mounted on said members for supporting a supplementary printing ribbon adjacent the printing line of the platen and means for automatically moving the ribbon lengthwise.

3. A duplicating attachment for adding machines and the like, comprising stationary members adapted to be readily mounted adjacent the ends of a platen and means slidably mounted on said members for supporting a supplementary printing ribbon in a plurality of layers adjacent the printing line.

4. A duplicating attachment for adding machines and the like comprising stationary members adapted to be readily mounted adjacent the ends of a platen, means slidably mounted on said members for supporting a supplementary printing ribbon in a plurality of layers adjacent the printing line of the platen and means for automatically moving the ribbon lengthwise.

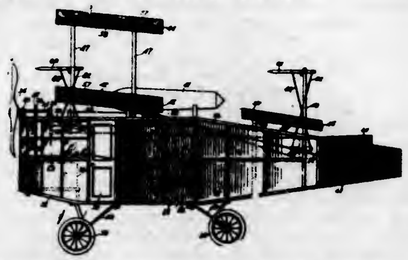
5. The combination with an adding machine of stationary members adapted to be readily attached thereto adjacent the platen thereof and means carried by said members for supporting a supplementary printing ribbon adjacent the printing line of the platen, said means being slidable on said stationary members whereby the ribbon may be removed from the printing line.

[Claims 6 to 23 not printed in the Gazette.]

1,157,636. AIRCRAFT. GEORGE A. OGRISSEK and JOHN JAWORSKY, Los Angeles, Cal. Filed Aug. 27, 1914. Serial No. 858,802. (Cl. 244—29.)

1. An air craft, comprising an inclosed car body; a plurality of masts mounted upon and extended above said body in rectangular arrangement; a plurality of carrying planes rigidly mounted on said masts above said body to form an open channel above said body and below said

planes; a plurality of balancing planes mounted on said masts in transversely disposed bearings; and a manually-operative controlling mechanism for said balancing planes, adapted to dispose said planes reversely.

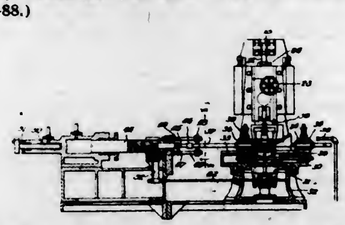


2. An air craft, comprising an inclosed car body; a plurality of masts mounted upon and extended above said body in rectangular arrangement; a plurality of carrying planes rigidly mounted on said masts above said body to form an open channel between said body and said planes; a plurality of balancing planes mounted on said masts in transversely-disposed bearings; a manually-operative controlling mechanism for said balancing planes, adapted to dispose said planes reversely; and automatic means operatively connected with said balancing planes to operate the same correctively, to maintain the longitudinal stability of said air craft.

3. An air craft, having an inclosed car body; a plurality of masts mounted upon and extended above said body in rectangular arrangement; a plurality of carrying planes rigidly mounted on said masts above said body to form an open channel between said body and said planes; a plurality of balancing planes mounted on said masts in transversely disposed bearings; a pendulum swinging in a plane parallel with the axis of said craft for operating said balancing planes reversely; and a manually operable mechanism for controlling said balancing planes and said pendulum.

4. An air craft comprising, a plurality of carrying planes, said planes being bowed lengthwise of the said craft and forming elongated downwardly-opening channels transverse the axis of said craft; and a plurality of fins mounted upon said planes in parallel and relatively juxtaposed relation, said fins being each disposed in a vertical plane, said fins forming in conjunction with said planes, channels disposed above and below said planes, the longitudinal edges of the upper and lower fins being parallel and extending at all points away from the surfaces of said planes, said fins being projected from the upper and lower surfaces of said planes and at all points where said fins are mounted on said planes, a distance sufficiently great to retain the air through which the craft is moving as in a boxed channel.

1,157,637. APPARATUS FOR FORGING COUPLINGS. THOMAS PATTERSON, Elyria, Ohio, assignor to National Tube Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Mar. 29, 1915. Serial No. 17,786. (Cl. 78—88.)



1. Roll welding apparatus, including in combination vertically separable rolls, a plurality of mandrels, means for causing a rotary and vertical movement of each mandrel whereby to bring successive mandrels into register with the rolls and to adjust the mandrels in consonance with the vertical movement of the rolls, and means for ejecting the mandrels from a formed coupling, substantially as described.

2. In a mechanism of the class described, the combination of welding rolls, means for causing a vertical movement of one of said rolls, a revoluble turret, a plurality of mandrels mounted on said turret, each of said mandrels being mounted for bodily vertical movement, and means for simultaneously causing vertical movement of said rolls and one of said mandrels, substantially as described.

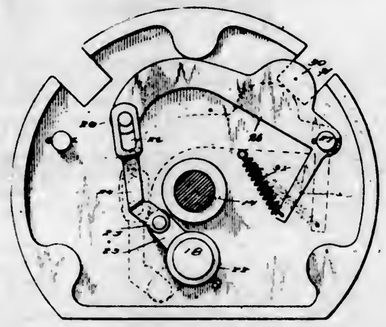
3. In a device of the class described, the combination of welding rolls, means for causing a vertical reciprocation of one of said rolls, a plurality of mandrels, means for bringing said mandrels successively into register with said rolls, and an ejector, the arrangement being such that a coupling is formed and simultaneously a previously formed coupling is stripped from its mandrel, substantially as described.

4. In a device of the class described, the combination of upper and lower welding rolls, means for causing a separation of one of said rolls relative to the other rolls, a turret, a plurality of mandrels on said turret, a Geneva movement for causing a step by step rotation of said turret, and an ejector for stripping the previously formed coupling from said mandrels, substantially as described.

5. In a device of the class described, the combination of welding rolls, a turret, a plurality of mandrels mounted on said turret, an ejector, and means operable on the successive return movements of said ejector for causing a step by step rotation of said turret, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,157,638. SWITCH-STAND. RICHARD L. PRAETORIUS, Smithville, Tex. Filed May 20, 1914. Serial No. 839,762. (Cl. 246—41.)



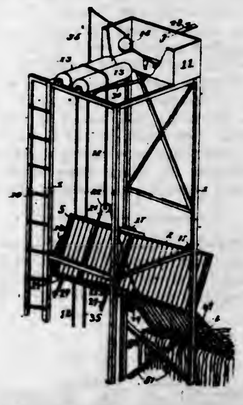
1. In a switch stand, a notched deck, a switch operating spindle, a target operating spindle, a lever for operating the last mentioned spindle, a portion of said lever overlapping a notch of the deck when the target is at danger, means for normally holding said lever in said overlapping position, and a switch operating lever adapted to enter said notch and engage the target lever.

2. In a switch stand, a deck provided with notches; a lever rotatable about the deck and provided with a hinge permitting one section to enter the notches; a target spindle journaled vertically above the deck; a lever beneath the deck adapted to rotate the target spindle; a lever adapted to be actuated by the jointed operating lever; and a link connecting the levers beneath the deck.

3. In a switch stand, a deck provided with notches; a jointed lever fulcrumed centrally of the deck and movable about its periphery and one of the sections adapted to enter the notches; a target spindle erected vertically above the deck; a lever mounted beneath the deck and having a lug extending outwardly into one of the notches of the deck and in the path of movement of the jointed lever; and means connecting the lever beneath the deck with and to rotate the target spindle when the jointed lever enters the notches.

4. In a switch stand, a deck; a target spindle journaled vertically above the deck; a lever pivoted beneath the deck and extending outwardly over a notch formed in the deck; a lever secured to the target spindle beneath the deck; a link connecting the two levers beneath the deck; and a spring adapted to hold the levers beneath the deck yieldingly with the target at danger.

1,157,639. FISHWAY. EDWARD ERNEST PRINCE, Ottawa, Ontario, Canada. Filed Feb. 25, 1914. Serial No. 820,900. (Cl. 43—3.)



1. In a fish-way, the combination of a fish-compartment, means for admitting fish thereto and for retaining them therein, means operating automatically at predetermined intervals for transferring the fish-compartment from one level to another, and automatic means for releasing the fish after the transfer.

2. In a fish-way, the combination of a fish-compartment, means for opening the compartment to admit fish thereto and for closing it to retain them therein, means operating automatically at predetermined intervals for transferring the fish-compartment from one level to another, and automatic means for releasing the fish after the transfer.

3. In a fish-way, the combination of a fish-compartment, automatically operating means for opening the compartment to admit fish thereto and for closing it to retain them therein, means operating automatically at predetermined intervals for transferring the fish-compartment from one level to another, and automatic means for releasing the fish after the transfer.

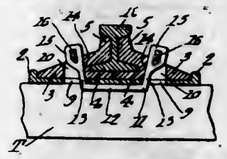
4. In a fish-way, the combination of a guide-way, a fish-compartment in said guide-way, a gate closing the entrance to said fish-compartment; and means on said gate coöperating with said fish-compartment to open and close said gate.

5. In a fish-way, the combination of a guide-way, a reciprocating fish-compartment, a gate closing the entrance to said fish-compartment, a second gate closing said fish-compartment, and means for opening the second gate before the opening of the first gate on the descent of said fish-compartment.

[Claims 6 to 10 not printed in the Gazette.]

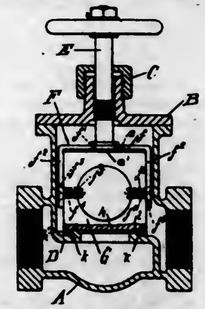
1,157,640. RAIL-JOINT. GEORGE H. RUSSELL, Florence, Ala., assignor of one-half to Peyton Norvell, Florence, Ala. Filed June 28, 1915. Serial No. 36,804. (Cl. 239—6.)

A rail joint embodying a tie plate having upturned lips along its side edges, a pair of chair sections seating upon said plate and having their remote edges engaging said lips, said sections having lower flanges upon which the base flanges of the rails are seatable, and said sections also having portions engageable with the webs of the rails, the tie plates and sections having registering open-



ings, transverse U-shaped yokes having intermediate portions lying against the bottom of said plate and having their arms projecting upwardly through said openings and provided with loops, and taper keys engaged through said loops and seating upon said sections.

1,157,641. VALVE. EMANUEL FISHER, Providence, R. I. Filed Aug. 28, 1912. Serial No. 717,455. (Cl. 137—4.)



1. In a device of the type set forth, the combination of a valve seat comprising a plurality of steps, and a valve comprising a plurality of operating faces, said valve being rotatably mounted whereby the said faces may be brought successively into position to engage with the corresponding steps.

2. In a device of the type set forth, the combination of a valve seat comprising a plurality of steps, and a valve comprisig faces, one of said faces being provided with a cavity adapted to embrace one step, and another face provided with a cavity of less diameter than the first cavity and adapted to embrace another step.

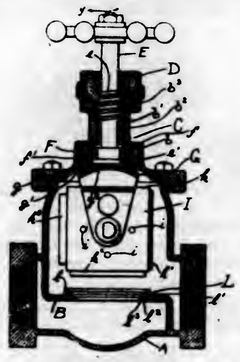
3. In a device of the type set forth, the combination of a valve seat comprising external steps and an internal step, and a valve comprising a plurality of faces, certain of said faces being provided with cavities, and an elevation upon another of said faces, said valve being rotatably mounted whereby the said cavities may be brought successively into position to embrace the external steps, and the elevation may be brought into position to engage the internal step.

4. In a device of the type set forth, the combination of a valve seat comprising two external annular steps of successively less diameter upwardly, and an internal annular step, and a valve comprising four operating faces one of said faces being provided with a cavity adapted to receive as a sliding fit the external step of greater diameter, another of said faces being provided with a cavity of less depth and diameter than the first cavity and adapted to receive as a sliding fit the second external step, and an elevation upon another of said faces of less diameter than the diameter of the second cavity and adapted to register with the internal step.

5. In a device of the type set forth, the combination with the valve casing and valve seat, of a cube valve mounted in the casing above the seat, a yoke attached to opposite sides of the valve, and a valve stem supporting the yoke.

[Claims 6 to 11 not printed in the Gazette.]

1,157,642. VALVE. EMANUEL FISHER, Providence, R. I., assignor to Nellie Fisher, Providence, R. I. Filed Dec. 9, 1913. Serial No. 805,656. (Cl. 137—4.)

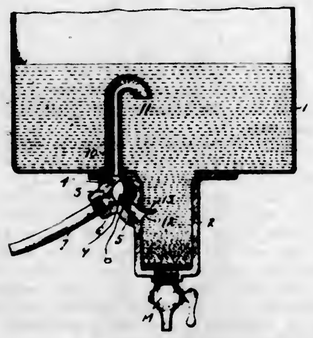


1. In a device of the type set forth, the combination with the valve casing of a valve seat disposed at right angles to the valve stem, a valve stem in the casing movable toward and away from the seat, a yoke upon the valve stem, a valve shaft rotatably mounted in the yoke, and provided with a cavity in its end, a valve upon the valve shaft and a rod in the casing adapted to register in the cavity.

2. In a device of the type set forth, the combination with the valve casing and valve seat, of a valve stem in the casing, a yoke upon the valve stem, a valve provided with a plurality of working faces rotatably mounted in the yoke, means in the casing for rotating the valve, and means for intermittently retaining the valve during its rotation.

3. In a device of the type set forth, the combination with the valve casing and valve seat, of a valve stem in the casing, a yoke upon the valve stem, a valve provided with a plurality of acting faces upon its periphery mounted in the yoke, said valve being provided upon its side face with cavities corresponding in number with the peripheral faces of the valve, a member yieldingly mounted adjacent the valve in the path of rotation of the cavities, and means for rotating the valve.

1,157,643. TANK. ROBERT B. KUHN, Canton, Ohio. Filed June 23, 1914. Serial No. 846,823. (Cl. 158—46.5.)



1. A tank having a sump below and in open communication with the bottom thereof, a discharge pipe, an outlet leading from the tank to the discharge pipe having its receiving mouth above the bottom of the tank, and an outlet leading from the sump to the discharge pipe having its receiving mouth above the bottom of the sump and below the bottom of the tank.

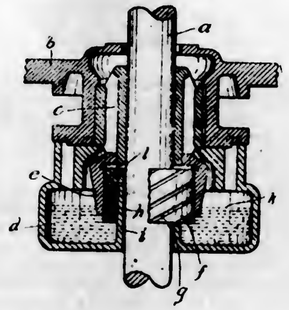
2. A tank having a sump opening downward from the bottom thereof, a discharge pipe, an outlet leading from the tank to the discharge pipe having its receiving mouth above the bottom of the tank, and an outlet leading from the sump to the discharge pipe having its receiving mouth above the bottom of the sump, and a controlling valve at the junction of the outlets with the discharge pipe.

3. A tank having a sump opening downward from the bottom thereof, a discharge pipe, an outlet leading from the tank to the discharge pipe having a downwardly presented receiving mouth above the bottom of the tank, and an outlet leading from the sump to the discharge pipe having a downwardly presented receiving mouth above the bottom of the sump.

4. A tank having a sump opening downward from the bottom thereof, a discharge pipe, an outlet leading from the tank to the discharge pipe having a downwardly presented receiving mouth above the bottom of the tank, and an outlet leading from the sump to the discharge pipe having its receiving mouth above the bottom of the sump.

5. A tank having a sump opening downward from the bottom thereof, a discharge pipe, an outlet leading from the tank to the discharge pipe having its receiving mouth above the bottom of the tank, and an outlet leading from the sump to the discharge pipe having its receiving mouth above the bottom of the sump, there being a deflecting flange in the sump above the receiving mouth of its outlet.

1,157,644. VERTICAL BEARING. WILLIAM J. A. LONDON, Hartford, Conn., assignor to The Terry Steam Turbine Company, Hartford, Conn., a Corporation of Connecticut. Filed July 24, 1911. Serial No. 640,123. (Cl. 64—56.)



1. In a vertical bearing, a housing, a bearing mounted therein, a shaft supported in said bearing and extending through the housing, an oil reservoir at the lower part of the housing, an oil pump in said reservoir, and a pressure chamber having its outlet through said bearing and to which said pump delivers oil under pressure.

2. In a vertical bearing, a housing, a bearing mounted therein, a shaft supported in said bearing and extending through the housing, an oil reservoir at the bottom of the housing, an oil chamber below said bearing and having its outlet therethrough, and an oil pump located between said reservoir and chamber and adapted to deliver oil under pressure from the former to the latter.

3. In a vertical bearing, a housing, a bearing mounted therein, a shaft supported in said bearing and extending through said housing, an annular oil reservoir at the lower part of the housing surrounding the shaft, a hood secured to said bearing, a bushing secured to and rotatable with said shaft and closely fitting within said hood, and an oil chamber located between said bushing and bearing and having its outlet through the latter, said bushing having spirally arranged grooves in its exterior surface.

4. The combination in a vertical bearing with a housing, a bearing located therein, and a shaft supported by the bearing and extending through the housing, of an annular oil reservoir located below the housing and surrounding the shaft, the inner wall of said reservoir being adjacent to said shaft, a bushing secured to said shaft and recessed to fit over the inner wall of said reservoir, a stationary hood within said housing within which said bushing fits closely, and a chamber formed in part by said hood beneath and having its outlet through said bearing, the exterior of said bushing being spirally grooved to act as a pump to raise the oil from said reservoir to said chamber.

5. In a vertical bearing lubricator, the combination with a shaft, a bearing therefor and a lubricant reservoir located underneath the bearing and surrounding the shaft, of a force pump with its inlet immersed in the lubricant in said reservoir, and its outlet at said bearing whereby lubricant is forced through said bearing under pressure.

1,157,645. DISPENSING APPARATUS. WILLIAM MILLARD, New York, N. Y. Filed Dec. 23, 1909. Serial No. 534,708. (Cl. 211—8.)



1. In dispensing apparatus, the combination of means for holding a stack of nested flanged cups, a stationary wedging device adapted to engage the flanges of adjacent cups to separate the same and means for moving the stack of cups into engagement with said wedging device.

2. In dispensing apparatus, the combination of means for holding a stack of nested flanged cups, stationary means having a plurality of surfaces for engaging the cup flanges at a plurality of circumferentially-spaced positions and means for moving the cups to bring the flanges thereof into engagement with said surfaces.

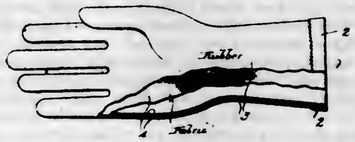
3. In dispensing apparatus, the combination of means for holding a stack of nested flanged cups, a plurality of stationary wedging members adapted to enter between the flanges of adjacent cups at circumferentially-spaced positions, and means for moving the cups so as to bring the flanges thereof into engagement with the wedges and so separate the cups in a direction longitudinal of the stack.

4. The combination with an article receiver mounted to move into either of two extreme positions, of means independent thereof for supporting the articles when the receiver is in one position, and means independent of the receiver for supporting the articles within said receiver when the receiver is in the other position, the means for supporting the articles when the receiver is in the first position being adapted to coöperate with the lowermost article to release the same from its supported position within the receiver in the transit of the receiver from the second to the first position.

5. The combination with an article-receiver mounted to move into different positions, of means operable in one position for withdrawing an article from the receiver and for supporting the withdrawn article, and means acting in another position of the receiver to support the articles in said receiver and deliver the withdrawn article.

[Claims 6 to 21 not printed in the Gazette.]

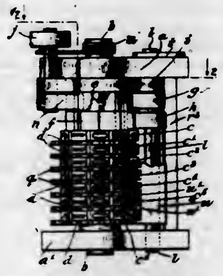
1,157,646. SEAMLESS RUBBER GLOVE. THOMAS W. MILLER, Ashland, Ohio, assignor to The Faultless Rubber Company, Ashland, Ohio, a Corporation of Ohio. Original application filed Sept. 3, 1914, Serial No. 859,993. Divided and this application filed June 11, 1915. Serial No. 33,505. (Cl. 2—9.)



1. A seamless rubber glove provided on its interior surface with a lining of exposed elastic textile fabric, and an intermediate layer of adhesive material.

2. A seamless rubber glove provided on its interior surface with an exposed lining of textile fabric, and an intermediate layer of adhesive material.

1,157,647. NUMBERING-HEAD. JAMES H. REINHARDT, East Orange, N. J., assignor to American Bank Note Company, a Corporation of New York. Filed Feb. 14, 1913. Serial No. 748,457. (Cl. 101—183.)



1. A numbering head embodying therein a series of digit wheels means intermittently actuating the units wheel of said series, a transfer mechanism adapted to carry from a wheel of lower denomination to a wheel of higher denomination embodying therein means holding a wheel of higher denomination against movement except during the carrying operation, means whereby said last named holding means may be rendered inoperative to permit the setting of any of said digit wheels, and means actuated by the means for actuating the units digit wheel whereby after each actuation of said last named means all of the digit wheels will be trued up, alined or justified.

2. A numbering head embodying therein a series of digit wheels, means intermittently actuating the unit wheel, a transfer mechanism adapted to carry from a wheel of lower denomination to a wheel of higher denomination, embodying therein means positively holding a wheel of higher denomination against movement excepting during the carrying operation, and means common to all digit wheels in the series acting independently of the transfer mechanism for alining or justifying each of the digit wheels.

3. A numbering head embodying therein a series of digit wheels rotating about a common axis and each carrying a gear, means adapted to intermittently actuate the unit digit wheel, a transfer mechanism embodying therein a Geneva gear actuated by a digit wheel of lower denomination, and a gear wheel adapted to transmit movement to the wheel of next higher denomination, whereby the wheel

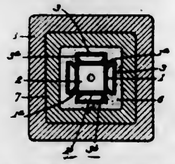
of higher denomination, through said Geneva gear, is held against movement by the wheel of lower denomination, and said wheel of higher denomination will be actuated at proper predetermined times under the control of said wheel of lower denomination and means common to all digit wheels of a series whereby all of said digit wheels will be simultaneously alined or justified to correct any errors of said Geneva gears.

4. A numbering head embodying therein a series of digit wheels rotating about a common axis and each carrying a gear, means adapted to intermittently actuate the unit digit wheel, a transfer mechanism embodying therein a Geneva gear actuated by a digit wheel of lower denomination, and a gear wheel adapted to transmit movement to the wheel of next higher denomination, whereby the wheel of higher denomination, through said Geneva gear, is held against movement by the wheel of lower denomination, and said wheel of higher denomination will be actuated at proper predetermined times under the control of said wheel of lower denomination, and means whereby said Geneva gear may be thrown out of the operative relation to permit the setting of the digit wheels.

5. A numbering head embodying therein a series of digit wheels rotating about a common axis and each carrying a gear, means adapted to intermittently actuate the unit digit wheel, a Geneva gear element rotatable with each of said digit wheels, a transfer mechanism embodying therein a Geneva gear coöperating with the Geneva gear element of a digit wheel of lower denomination, and a gear wheel adapted to transfer movement to the wheel of next higher denomination, whereby the wheel of higher denomination, through said Geneva gear, is held against movement by the wheel of lower denomination, and said wheel of higher denomination will be actuated at proper predetermined times under the control of said wheel of lower denomination, a lock bar common to all of said digit wheels whereby each of said digit wheels will be bought into alinement or justified after each actuation thereof, and means actuating said lock bar in synchronism with the actuation of the means actuating the units digit wheels.

[Claims 6 to 19 not printed in the Gazette.]

1,157,648. CORE-BARREL FOR INGOT-MOLDS. CHARLES G. ROBINSON, Pittsburgh, Pa. Filed Nov. 9. 1914. Serial No. 870,951. (Cl. 22—173.)



1. A core barrel comprising a tapered arbor having a plurality of faces, a stave disposed against each of said faces, said staves being supported by and interlocked with said arbor and preventing movement of the latter with respect thereto except against endwise movement in one direction only, said staves being normally out of engagement with each other and being adapted, when said arbor is removed, to unobstructedly fall inward.

2. A core barrel comprising a tapered arbor of skeleton frame form having a plurality of faces, a stave disposed against each of said faces, said staves being unconnected and independently supported by said arbor in positions wherein they are maintained out of contact, and being adapted, when said arbor is removed from supporting position with respect thereto, to unobstructedly collapse inward slightly before contact thereof is permitted.

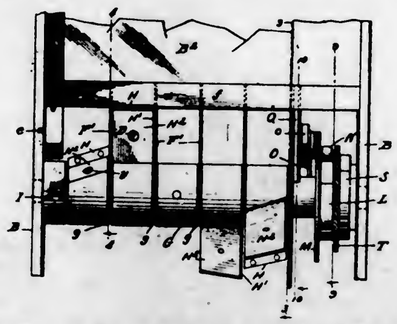
3. A core barrel comprising a tapered arbor of skeleton frame form having a plurality of faces, a stave disposed against each of said faces, said staves being unconnected and supported by said arbor in positions wherein they are maintained out of contact, and being adapted, when said arbor is removed from supporting position with respect thereto, to collapse inward slightly before contact thereof is permitted, and means interlocking said arbor with said staves except against longitudinal movement in one direction only, said staves approximating in width the faces of the arbor and being adapted unobstructedly to come into contact only after the collapse thereof due to the removal of said arbor from stave-supporting position.

4. In a core barrel, a central tapered arbor of skeleton frame form, and a plurality of unconnected, non-engaging and independently mounted staves disposed against the faces of said arbor, said staves having hook-and-eye interlocking connection with said arbor whereby the latter is permitted to be dissociated from said staves by endwise ejection in one direction only, and said staves being adapted to initially collapse before they come into contact.

5. In a core barrel, a central tapered arbor of skeleton frame form, and a plurality of unconnected and independently mounted staves disposed against the faces of said arbor, said arbor being adapted to be dissociated from said staves of endwise ejection only, said staves having their arbor-engaging portions inclined at an angle to and engaging said faces at points removed from the outer angles of the arbor whereby intervening sand-receiving spaces are provided between adjacent staves.

[Claims 6 to 10 not printed in the Gazette.]

1,157,649. MACHINE FOR VENDING STAMPS, TICKETS, COUPONS, &c. WILLIAM G. TEMPLETON, Colorado Springs, Colo., assignor of one-fourth to Harry H. Seldomridge, one-fourth to Charles B. Seldomridge, and one-fourth to Willard N. Burgess, Colorado Springs, Colo. Filed Mar. 12, 1915. Serial No. 13,928. (Cl. 211—33.)



1. In a vending apparatus such as described, a thin broad reservoir having an exit substantially co-extensive with its breadth and adapted for the reception of a sheet of connected articles to be delivered individually, a drum journaled on an axis substantially parallel with the reservoir exit, a plurality of cutters mounted on said drum in stepped relation to each other, means for supporting the bottom row of articles on the sheet in the path of the cutters below the reservoir, and means for rotating the drum step by step for severing the articles from the bottom row of the sheet in succession.

2. In a vending machine such as described, a rotary drum, a plurality of cutters mounted on the drum in stepped relation, a reservoir having an exit opening parallel with the drum for presenting the bottom row of a sheet of articles in the path of the cutters, means intermediate the path of the cutters for supporting the articles against the pressure of the cutters, and means for imparting a step by step rotary movement to the drum and cutters, whereby articles will be successively severed from the said bottom row of the sheet.

3. A vending machine of the class described embodying a rotary drum, a plurality of cutters projecting transversely therefrom in stepped relation and having side and end cutting edges, a broad, thin reservoir for holding a sheet of connected articles and having a broad exit parallel with the axis of the drum through which a row of

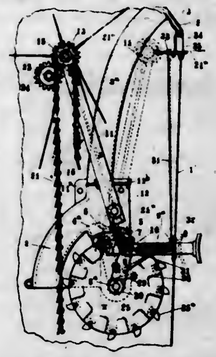
articles may be projected into the path of the cutters, means for clamping the sheet with the lower row of articles in severing position, and means for rotating the drum and cutters step by step and for releasing the clamping means after the last article of a row has been severed.

4. In a vending machine such as described, a rotary drum, a plurality of cutters mounted on the drum in stepped relation and having end and side cutting edges, means for advancing a sheet of connected articles to present a row of said articles in the path of the cutters, fixed cutters and guides intermediate the paths of the movable cutters for supporting the said row of articles against the pressure of the cutters, and means for imparting a step by step rotary movement to the drum and cutters, whereby articles are successively severed from the said row.

5. In a vending machine such as described, a rotary drum, a plurality of cutters mounted on the drum, in stepped relation and having end and side cutting edges, means for advancing a sheet of connected articles into position for a row of said articles to project in the path of the cutters, fixed guiding means extending parallel with and between the paths of the cutters for supporting said row of articles against the pressure of cutters, clamping means for holding the sheet of articles in position, means for imparting a step by step rotary movement to the drum and cutters for severing the articles successively from the row, and means controlled by the movement of the drum for releasing the clamp when all of the articles of a row have been severed.

[Claims 6 to 15 not printed in the Gazette.]

1,157,650. VENDING-MACHINE. CARL E. TURNQUIST and HARLAND E. RICH, Moline, Ill., assignors, by direct and mesne assignments, to The Postal Card Vending Machine Company, a Corporation of Illinois. Filed Sept. 3, 1912. Serial No. 718,840. (Cl. 211—8.)



1. In a vending machine, the combination with an inclosing casing provided with a window and a discharge aperture for a selected article, of a carrier constructed to hold the articles to be vended in separated relation, and pass them successively in review before said window, and into operative relation with said discharge aperture, said carrier being normally freely movable throughout its extent of movement to enable the operator to select a desired article, means for operating said carrier from the outside of the casing, and means for moving the carrier toward the discharge aperture to project the selected article therethrough.

2. In a vending machine, the combination with an inclosing casing provided with a window and a discharge aperture for a selected article, of a carrier constructed to hold the articles to be vended in separated relation, and pass them successively in review before said window, and into operative relation with said discharge aperture, said carrier being normally freely movable throughout its extent of movement to enable the operator to select a desired article, means for operating said carrier from the outside of the casing, means for moving the carrier toward the discharge aperture to project the selected article therethrough and means for discharging the selected article from the carrier.

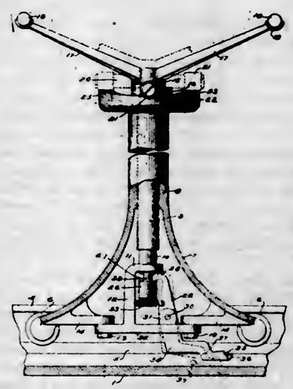
3. In a vending machine, the combination with an inclosing casing provided with a window and a discharge aperture for a selected article, of a carrier constructed to hold the articles to be vended in separated relation, and pass them successively in review before said window, and into operative relation with said discharge aperture, said carrier being normally freely movable throughout its extent of movement to enable the operator to select a desired article, means for operating said carrier from the outside of the casing, said carrier being movable toward and from the discharge aperture, means for normally holding the carrier in position with respect to the discharge aperture without interfering with the travel of the carrier and means for moving the carrier toward the discharge aperture to eject the selected article.

4. In a vending machine, the combination with an inclosing casing, provided with a window, and a discharge aperture, of an endless carrier, constructed to hold the articles to be vended in separated relation, and normally freely movable in a direction longitudinally of the carrier, means including a part extending outside of the casing for causing the travel of said carrier throughout its entire extent, means for moving a portion of said carrier toward the discharge aperture to effect the delivery of the selected card.

5. In a vending machine, the combination with an inclosing casing, provided with a window, and a discharge aperture, of an endless carrier, constructed to hold the articles to be vended in separated relation, and normally freely movable in a direction longitudinally of the carrier, means including a part extending outside of the casing for causing the travel of said carrier throughout its entire extent, a support for one end of said carrier movable toward and from the discharge aperture to effect the discharge of a selected article, and manually operated means extending outside of the casing for operating said movable part.

[Claims 6 to 12 not printed in the Gazette.]

1,157,651. DISPLAY DEVICE. ANTHONY VANDERVELD, Grand Rapids, Mich., assignor to Grand Rapids Show Case Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Feb. 10, 1912. Serial No. 676,700. (Cl. 211—16.)



1. The combination with a cabinet and a revoluble rack movable into and out of the cabinet, of means for automatically righting the rack into a predetermined position relatively to the cabinet when rotated a partial revolution and released.

2. The combination with a cabinet and a revoluble rack movable into and out of the cabinet, of means permitting rotation of the rack in its outer position and also acting, when the rack is rotated from parallel relation with the cabinet and released, to automatically adjust it into its normal or parallel position relatively to the cabinet.

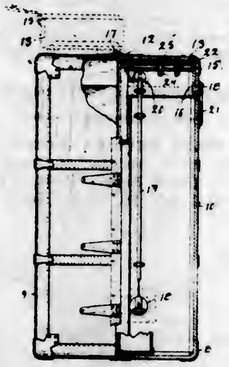
3. The combination with a goods display rack, a reciprocating carriage and a revoluble standard mounted thereon and supporting the rack and gravity means for automatically righting the rack into a predetermined position relatively to the cabinet when rotated a partial revolution in its outward position and released.

4. In a display device the combination of a case or cabinet, a rack movable to and from a position within the cabinet, said rack being freely rotatable when in its outer position and gravity means for automatically rotating the rack into a predetermined position with respect to the case or cabinet when the rack is partially rotated and released.

5. In a display device, the combination of a case or cabinet, a carriage movable to and from a position within the case or cabinet, a flange mounted on the carriage and having its upper surfaces reversely inclined toward each side thereof, a revoluble rack mounted on the carriage and adapted to be rotated when the carriage is in its outer position, supporting devices for engaging the rack and adapted to travel upon the inclined surfaces of the flange and acting automatically to rotate the rack into a predetermined position with relation to the case or cabinet when the rack is partially rotated in its outer position and released.

[Claims 6 to 14 not printed in the Gazette.]

1,157,652. WARDROBE-TRUNK. GEORGE HENRY WHEARY, Racine, Wis. Filed Jan. 2, 1914. Serial No. 809,809. (Cl. 120—13.)



1. A wardrobe trunk, comprising a trunk body divided vertically medially into two sections which are hinged together, one of said sections having an open end and the other section having a closed end, and a cover hinged to the closed end section and adapted to extend only over the open end section when the two sections are in closed position.

2. A wardrobe trunk, comprising a trunk body divided vertically into two sections which are hinged together, one of said sections having an upper open end and the other section having an upper closed end, and a cover hinged to the forward edge portion of the closed end section and adapted to extend over and close the open end of the other section when the two sections are in closed position.

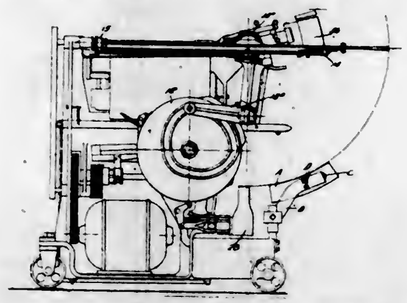
3. A wardrobe trunk, comprising a trunk body divided vertically into two sections which are hinged together, one of said sections having an upper open end and the other section having an upper closed end, the open end section having its upper edge portion recessed, and a cover hinged to the upper forward edge portion of the closed end section and adapted to extend over the open end section when the said sections are in closed position, the said cover being provided with a depending flange which overlaps the open end section and extends into the recess of said section.

4. A wardrobe trunk, comprising a trunk body divided vertically into two sections which are hinged together, one of said sections having an upper open end and the other section having an upper closed end, the closed end section provided with a projecting flange which extends all around the front edges of said section and which is adapted to overlap the forward edges of the other section when both sections are in closed position, the open ended section having its upper portion recessed, and a cover hinged to the upper forward edge portion of the closed end section and adapted to swing over the open end section when the said sections are in closed positions, the said cover being provided with a depending flange which overlaps the open end section and extends into the recess of said section, the rear edges of the cover adapted to be overlapped by the projecting flange of the closed end section.

5. A wardrobe trunk, comprising a trunk divided vertically into two sections which are hinged together, one of said sections having an upper open end and the other section having an upper closed end, a cover hinged to the upper forward edge of the closed end section and adapted to swing over and close the open end section when the sections are in closed position, garment hangers mounted in the open ended section near the cover, and a pad interposed between the cover and the hangers and into which the hangers embed.

[Claims 6 and 7 not printed in the Gazette.]

1,157,653. APPARATUS FOR WORKING GLASS. WILLIAM JAMES WOODS, Corning, N. Y., assignor to Empire Machine Company, a Corporation of Maine. Filed Nov. 30, 1914. Serial No. 874,844. (Cl. 49—20.)

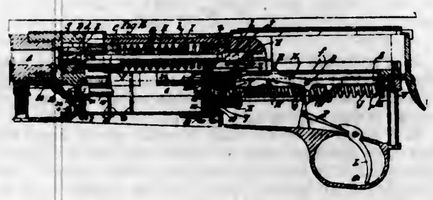


1. The combination with a glass-carrying spindle, of a marvering plate, a wiper plate, a mold mechanism and means for marvering the glass upon the spindle on the marvering plate for forming an initial cavity in such glass by the introduction of puff air, for blocking the puffed blank upon the wiper plate to reduce its diameter, and for positioning the glass in coöperative relation to the mold.

2. The combination with a glass-working spindle, of means for marvering glass thereon, a mold, means for moving the glass from the marvering means to the mold, a wiper plate located adjacent to the path of such movement and adapted to contact with the marvered blank prior to the molding thereof to locally chill a part thereof, which is to be blown, and means for introducing puff air into the marvered blank prior to the action of the wiper plate thereof, and for blowing the marvered glass in the mold subsequent to the action of the wiper plate thereon, substantially as described.

3. The combination with a blowing mold, of a glass-carrying spindle, means for introducing puff air into glass carried by the said spindle to swell the same, means for presenting the glass on the said spindle to the mold, a wiper plate, and means for causing contact between it and a part only of the glass subsequent to the introduction of the puff-air and prior to the closing of the mold whereby the glass is locally chilled and reduced in diameter.

1,157,654. MAGAZINE FOR SMALL-ARMS. JAMES EASTWICK, Fyning Wood, England. Filed June 15, 1915. Serial No. 34,293. (Cl. 42—19.)



1. In a small arm, the combination with a barrel having a chamber at its rear end provided with lugs, of a longitudinally moving bolt having lugs adapted to engage corresponding lugs in the chamber, a part adapted to be transversely reciprocated by the movements of the bolt, a ratchet adapted to be rotated by the reciprocating part and a magazine fast with the ratchet.

2. In a small arm, the combination with a barrel having a chamber at its rear end provided with lugs, of a longitudinally moving bolt having lugs adapted to engage corresponding lugs in the chamber, a toothed plate adapted to be transversely reciprocated by the movements of the bolt, a ratchet adapted to be rotated by the plate and a magazine fast with the ratchet.

3. In a small arm, the combination of a longitudinally moving bolt, a toothed plate adapted to be transversely reciprocated by the movements of the bolt, two ratchet wheels, the one adapted to be rotated by movements in one direction of the plate and the other adapted to be rotated in the same direction by movements in the other direction of the plate and a magazine fast with the ratchet wheels.

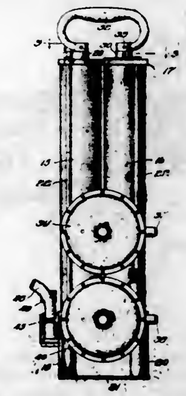
4. In a small arm, the combination of a longitudinally moving bolt, a part adapted to be transversely reciprocated by the movements of the bolt, two ratchet wheels, the one adapted to be rotated by movements in one direction of the reciprocating part and the other adapted to be rotated in the same direction by movements in the other direction of such part and a magazine fast with the ratchet wheel.

5. In a small arm, the combination of a longitudinally moving bolt, a part adapted to be transversely reciprocated by the movements of the bolt, a ratchet wheel adapted to be rotated by the reciprocating part, a spindle secured to the ratchet wheel, a magazine adapted to be rotated by the spindle, and means adapted to be actuated by the insertion of a clip of cartridges for moving the ratchet wheel rearward so as to free it from the actuating mechanism.

[Claims 6 to 24 not printed in the Gazette.]

1,157,655. RESUSCITATING APPLIANCE. GEORGE M. MAYER and FRANK T. FOWLER, Chicago, Ill., assignors, by direct and mesne assignments, to Life Saving Devices Company, a Corporation of Delaware. Filed Apr. 16, 1913. Serial No. 761,587. (Cl. 128—13.)

1. In a device of the class described the combination with an inspirating cylinder, of a reciprocating piston mounted therein adapted to deliver portions of gas from the cylinder under pressure, adjustable means for positively arresting the movement of the piston in one direction for the purpose of varying the volume of gas to be delivered by the piston from the cylinder, and an indicator in association with said adjustable means for indicating a suitable frequency of strokes corresponding to said adjustment.



2. In a device of the class described the combination with an inspirating cylinder, of a reciprocating piston mounted therein and adapted to deliver portions of gas from the cylinder under pressure, adjustable means for positively arresting the movement of the piston in one direction for the purpose of adjusting the volume of gas to be delivered by the piston on each stroke, a scale in conjunction with said adjustable means, markings on said scale indicating ages of patients, and markings on said scales indicating appropriate frequencies of reciprocations corresponding to the several positions of the adjustable means.

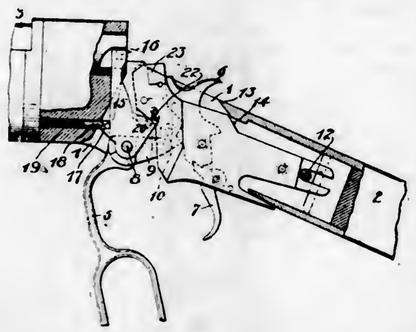
3. In a device of the class described the combination with an inspirating cylinder, of a reciprocating piston mounted therein and adapted to deliver said portions of gas therefrom under pressure, adjustable means for positively arresting the movements of the piston to thereby control volumes of gas to be delivered from the cylinder, and means for indicating appropriate frequencies of reciprocation of the piston corresponding to the several adjustments of said means.

4. In a device of the class described the combination with an inspirating cylinder, of a reciprocating piston mounted therein and adapted to deliver portions of gas therefrom under pressure, a piston rod connected to said piston for the purpose of reciprocating the same, a plurality of stops located at different longitudinal positions of said rod, said stops being placed at different angular positions on the rod, and a rotary stop member adapted to be thrown into position to be engaged by a desired one of the stops on said rod to thereby limit the reciprocation of the piston rod and piston accordingly.

5. In a device of the class described the combination with an inspirating cylinder, of a reciprocating piston mounted therein for the purpose of delivering portions of gas from the cylinder under pressure, a piston rod connected to said piston for reciprocating the same, a plurality of stops located at different longitudinal positions on the rod corresponding to desired extents of piston reciprocation, said stops being placed at varying angular positions on the rod, a rotary member mounted in position to be engaged by a desired one of said stops, to thereby limit the reciprocations of the piston, and a scale in conjunction with said member for the purpose of indicating appropriate frequencies of reciprocation corresponding to the various positions of said member.

[Claims 6 to 10 not printed in the Gazette.]

1,157,656. FIREARM. CARL GUSTAF SWEBILIUS and HANS T. R. HANITZ, New Haven, Conn., assignors to The Marlin Firearms Company, New Haven, Conn., a Corporation of Connecticut. Filed July 29, 1915. Serial No. 42,471. (Cl. 42—23.)



1. In a single shot firearm, a receiver, a barrel having a cartridge chamber at its rear, a combined extractor and ejector arranged adjacent thereto, a breech block movable in said receiver into and out of position relatively to the rear of said barrel and chamber to open and close the latter, with means moved by the breech block on its opening movement to both retract said extractor and to then advance the same to its inactive position.

2. In a single shot firearm, a receiver, a barrel having a cartridge chamber at its rear, a combined extractor and ejector arranged adjacent thereto, a breech block movable in said receiver into and out of position relatively to the rear of said barrel and chamber to open and close the latter, with means moved by the breech block on its opening movement to both retract said extractor and to then advance the same to its inactive position, said means being carried by the breech block.

3. In a single shot firearm, a receiver, a barrel having a cartridge chamber at its rear, a combined extractor and ejector arranged adjacent thereto, a breech block movable in said receiver into and out of position relatively to the rear of said barrel and chamber to open and close the latter, with means operable upon the opening movement of the breech block to both retract said extractor and to then advance the same to its inactive position, said means being carried by the breech block and comprising a spring stud, and a lug.

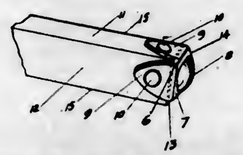
4. In a single shot firearm, a receiver, a barrel having a cartridge chamber at its rear, a combined extractor and ejector arranged adjacent thereto, a breech block movable in said receiver into and out of position relatively to the rear of said barrel and chamber to open and close the latter, with means operable upon the opening movement of the breech block to both retract said extractor and to then advance the same to its inactive position, with means for accelerating the last part of the rearward movement of the extractor to speedily eject a shell.

5. In a single shot firearm, a receiver, a barrel having a cartridge chamber at its rear, a combined extractor and ejector arranged adjacent thereto, a breech block movable in said receiver into and out of position relatively to the rear of said barrel and chamber to open and close the latter, with means operable upon the opening movement of the breech block to both retract said extractor and to then advance the same to its inactive position, said means being carried by the breech block and comprising a spring stud, and a lug, with means for hastening the last part of the rearward movement of the extractor to speedily eject a shell, said means operating to hasten the last part of the forward movement of said extractor to force it fully into and hold it in its inactive position.

[Claims 6 to 9 not printed in the Gazette.]

1,157,657. ANTIFRICTION DEVICE FOR ANGLE-IRON LEGS. CHARLES L. PLUNKETT, Brooklyn, N. Y., assignor of one-half to Max Englander, New York, N. Y. Filed Feb. 17, 1914. Serial No. 819,146. (Cl. 155—33.)

1. A dome of silence having upstanding ears adapted to be attached by riveting.



2. A structure of the class described having metal legs each provided with a slidable floor contact member comprising a convex portion of smooth metal, and rigid upturned means lapping said legs and riveted thereto.

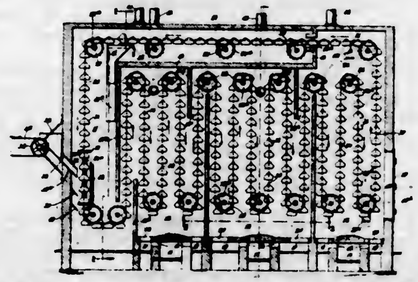
3. A structure of the class described having angle iron legs each provided with a slidable floor contact member comprising a sector-shaped bottom portion having a convex portion of smooth metal and also having rigid upturned ears lapping and riveted to the sides of the legs.

4. A structure of the class described having metal legs each provided with a slidable floor contact member comprising a bottom portion having integrally upturned ears lapping and rigidly secured to the sides of the leg by laterally extending means, and below such bottom portion a convex portion of smooth metal.

5. A structure of the class described having angle iron metal legs each provided with a slidable floor contact member comprising a sector-shaped bottom portion having integrally upturned ears lapping and rigidly secured to the sides of the leg and below such bottom portion a convex portion of smooth metal.

[Claims 6 to 14 not printed in the Gazette.]

1,157,658. DRYING AND BAKING OVEN. GEORGE J. MASHEK, Newark, N. J. Filed Dec. 19, 1912. Serial No. 737,611. (Cl. 34—12.)



1. An apparatus of the character described comprising an oven consisting of a plurality of separate compartments having outlets therein leading from one compartment to the next, means for separately heating said compartments, means for retarding the passage of heated fluid through said outlets, an endless conveyer extending through said compartments and said outlets therein, receptacles arranged upon said conveyer, means for loading said receptacles while in transit, means for maintaining said receptacles in position during said loading operation, and means for tilting said receptacles to discharge the contents thereof after passing through the oven, substantially as specified.

2. An apparatus of the character described comprising an oven consisting of a plurality of separate compartments having outlets therein leading from one compartment to the next, means for retarding the passage of heated fluid through said outlets, means for heating said compartments, an endless conveyer extending through said compartments and said outlets therein, buckets pivotally mounted upon said conveyer, means for loading said buckets while in transit, means for guiding said buckets during said loading operation, means for tilting said buckets to discharge the contents thereof after passing through the oven, and means for conducting the contents of said buckets from the oven, substantially as specified.

3. An apparatus of the character described comprising an oven consisting of a plurality of vertical compartments arranged side by side and provided with outlets at their upper ends, baffle plates arranged in said compartments and extending from the top thereof downwardly in front of said outlets, an endless conveyer arranged in said oven and extending vertically through said compartments and passing through the outlets therein, buckets pivotally mounted upon said conveyer, a chute for conducting the material into said buckets while in transit, means for maintaining said buckets in horizontal position during said loading operation, a guard plate arranged to the rear of said buckets adjacent to the end of said chute, means for maintaining said buckets in horizontal position during the loading operation, a series of inclined deflecting plates arranged below the chute, means arranged upon said bucket adapted to engage with coöperating means arranged within the oven to tilt said buckets to discharge the contents thereof, and a hopper for receiving contents of said bucket and discharging the same from the oven, substantially as specified.

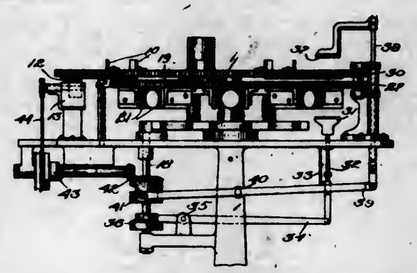
4. An apparatus of the character described comprising an oven consisting of a plurality of vertical compartments having outlets at the top thereof and a longitudinal compartment arranged above certain of said vertical compartments, heating means arranged in each of said compartments, an endless conveyer arranged in said oven and extending through said vertical and horizontal compartments therein, transverse shafts mounted in said oven and extending through said compartments, sprocket wheels arranged upon said shafts, means for actuating said endless conveyer, buckets pivotally mounted upon said endless conveyer, a chute arranged at one end of said oven for delivering the material to be treated to said buckets, guides arranged adjacent to the discharge end of said chute for maintaining said bucket in horizontal position during the loading operation, means arranged adjacent to said chute coöperating therewith to load said buckets evenly, projections arranged upon each of said buckets, cam means arranged within said oven adapted to engage with the projections on said buckets to tilt the same, and a hopper arranged below said cam means and provided with a spout extending through the side of the furnace, substantially as specified.

5. An apparatus of the character described comprising an oven consisting of a plurality of separate vertical compartments having outlets at their tops, a horizontal compartment arranged above certain of said vertical compartments, baffle plates depending from the bottom of said horizontal compartments and extending downwardly in front of said outlets, furnaces arranged in the bases of said compartments, a plurality of horizontal rows of shafts arranged within said oven sprocket wheels thereon; a plurality of said shafts and sprocket wheels being arranged in each compartment, an endless conveyer passing over said sprocket wheels, buckets pivotally mounted upon said conveyer, projections arranged at the opposite ends of said buckets, a chute for conducting material to be treated into said buckets, a pair of vertical guides arranged at the opposite sides of the furnace for receiving the supporting means and the projections on said buckets in order to maintain the same in horizontal position during the loading operation, a guard plate and deflecting plates coöperating with said chute to load said bucket evenly, semicircular plates arranged upon opposite sides of the oven above the loading chute adapted to engage the projections on said buckets to tilt the same, and a hopper having a restricted spout extending through the side of said oven for discharging the material from said oven, substantially as specified.

[Claim 6 not printed in the Gazette.]

1,157,659. [WITHDRAWN.]

1,157,660. LABELING-MACHINE. FREDERICK COATES, Rochester, N. Y., assignor to Standard Automatic Machine Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 2, 1913. Serial No. 804,152. (Cl. 216—54.)



1. Apparatus of the kind described, comprising a rotatable carrier having a series of yielding bottle holding seats about its peripheral portion, said carrier having provision adjacent said seats to receive adhesive and labels, a second carrier equipped with label applying means and mounted to bring said means into coöperative relation with said seats at one part of its movement and out of such relation at another part of its movement, and means for pressing bottles from said seats to be acted on by said label applying means.

2. Apparatus of the kind described, comprising a dial mounted for rotation and equipped with a series of yielding bottle holding seats, a carrier mounted adjacent and parallel to said dial and connected to move in synchronism therewith, said carrier being equipped with label applying means, arranged to be moved into coöperative relation with said seats at one point in their travel and out of coöperative relation at another point, means for supplying adhesive and labels, and means for pressing the bottles from said seats to be acted on by said label applying means.

3. Apparatus of the kind described, comprising a dial mounted for rotation and equipped with yielding bottle holding seats about its peripheral portion, a second dial mounted to turn in parallelism with the first dial and in synchronism therewith, said second dial bearing label applying means movable into and out of coöperative relation with said seats at different parts of the range of movement, label and adhesive supplying means mounted in coöperative relation to a portion of the first named dial extending beyond the second dial, and means for pressing the bottles from said seats to be acted upon by said label applying means.

4. Apparatus of the kind described, comprising a rotary dial equipped with a series of yielding seats in its peripheral portion, a second dial of smaller size mounted adjacent and parallel to said first dial, the centers of said dials being in offset relation, and said second dial bearing label applying means, means for moving said dials in synchronism, means mounted in coöperative relation to a portion of the first named dial extending beyond the second dial for supplying adhesive and labels, and means for pressing the bottles from said seats to be acted upon by said label applying means.

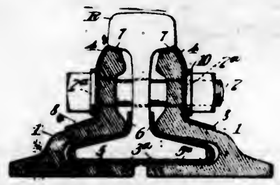
5. Apparatus of the kind described, comprising a lower dial mounted for rotation and bearing label applying means, an upper dial of larger size mounted in offset relation to the lower dial and equipped with a series of yielding bottle holding seats in its peripheral portion, said seats overhanging the lower dial at one part of the rotation, and being in vertical alinement with said label applying means at another part of the rotation, adhesive and label supplying means mounted in coöperative relation with the overhanging portion of the upper dial, and

means for pressing the bottles from said seats when in alinement with said label applying means, there being connections for rotating said dials in synchronism.

[Claims 6 and 7 not printed in the Gazette.]

REISSUES.

13,994. MEANS FOR INSULATING RAIL-JOINTS. BANCROFT G. BRAINE, New York, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed Aug. 8, 1914. Serial No. 855,927. Original No. 1,048,284, dated Dec. 24, 1912, Serial No. 710,716. (Cl. 239—5.)



1. In an insulated rail joint, the rails, a joint bar, and a head section of insulation removably clamped upon the outer side of the bar and engaging beneath the rail heads.

2. In an insulated rail joint, the rails, a joint bar, and a head section of insulation removably clamped upon the outer side of the joint bar.

3. In an insulated rail joint, the rails, a joint bar, and a head section of insulation removably clamped upon the outside of the joint bar and interlocked with the joint bolts.

4. In an insulated rail joint, the rails, a joint bar, and a head section of insulation removably held by the joint bolts upon the outside of the bar and engaging beneath the rail heads.

5. In an insulated rail joint, the rails, a joint bar, and a head section of insulation removably held by the joint bolts upon the outside of the bar.

6. In an insulated rail joint, the rails, the joint bar, and a section of insulation arranged upon the outside of the bar and detachably interlocked with the joint bolts and adapted to be clamped by the heads or ends of the bolts.

7. In an insulated rail joint, the rails, the joint bar, and a section of insulation arranged upon the outside of the bar and detachably interlocked with the joint bolts and adapted to be clamped by the heads or ends of the bolts.

8. In an insulated rail joint, the rails, a joint bar, and a head section of insulation arranged upon the outside of the joint bar and loosely interlocked with the joint bolts, said insulation engaging beneath the rail heads and adapted to be clamped by the heads or nuts of the bolts.

9. In an insulated rail joint, the rails, a joint bar, a head section of insulation arranged upon the outside of the joint bar and having an upper head flange adapted to engage beneath the rail heads and a lower apron extension arranged as an insulating separator between the lower part of the bar and the heads or nuts of the bolts.

10. In a divided-fiber insulated rail joint, the rails, a joint bar, and separate head and base sections of insulation respectively arranged upon the outer and inner sides of the bar, the head section of insulation being retained in place by the bolts and provided with a head flange engaging beneath the rail heads.

11. In an insulated rail joint, the rails, a joint bar, and an outside section of insulation arranged upon the outer side of the bar and having an apron extension at its lower edge.

12. In an insulated rail joint, the rails, a joint bar, and an outside section of insulation arranged upon the outer side of the bar and having an apron extension at its lower edge overlying the flange of the joint bar.

13. In an insulated rail joint, the rails, a joint bar, and insulation upon the external face of the bar arranged as an apron overlying the flange of the joint bar.

14. In an insulated rail joint, the rails, a joint bar, and insulation upon the external face of the bar arranged as a separator covering the outward extension of the joint bar.

15. In an insulated rail joint, the rails, a joint bar, and insulation covering the extension of the joint bar to form an insulating separator between the outward extension of the bar and the heads or nuts of the bolts.

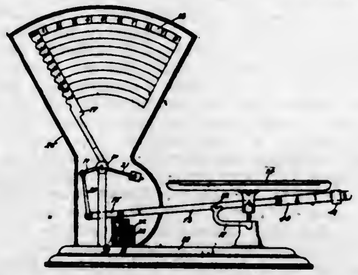
16. In an insulated rail joint, the rails, a joint bar, the joint bolts, and an outside section of insulation arranged as an insulating separator between the lower part of the bar and the heads or nuts of the bolts.

17. In an insulated rail joint, the rails, a joint bar, and an outside section of insulation removably held by the joint bolts upon the outer side of the bar, and having a lower apron extension.

18. In an insulated rail joint, the rails, a joint bar, and an outside section of insulation removably held by the joint bolts on the outer side of the bar and having an apron extension.

19. In an insulated rail joint, the rails, a joint bar, and an outside section of insulation removably held by the joint bolts upon the outer side of the bar, and having an apron extension at its lower edge overlying the flange of the joint bar.

13,995. SCALE. FRANK P. DUNN, Anderson, Ind., assignor, by mesne assignments, to The Computing Scale Company, Dayton, Ohio, a Corporation. Filed Sept. 9, 1907. Serial No. 392,078. Original No. 856,998, dated June 11, 1907, Serial No. 344,018. (Cl. 73—29.)



1. A weighing scale including a scale beam, a load receiving member carried thereby, a weight, a connection between said weight and scale beam whereby said weight acts upon said beam with a force varying inversely with the variations of the load, stationary means independent of the beam for carrying said weight, and means for indicating the effect of an applied load.

2. A weighing scale including a scale beam fulcrumed between its ends and adapted to receive a load at one end thereof and the other end normally overweighted, a weight, a connection between said weight and scale beam whereby said weight acts upon said beam with a force that varies inversely with the variation of the load, stationary means independent of the beam for carrying said weight, and means for indicating the effect of an applied load.

3. In a scale, the combination with a scale beam, a load receiving member carried thereby, and means for indicating the effect of an aplied load, of a weight rigidly connected with the indicating means and which tends to move the indicating means from zero.

4. In a scale, the combination of an oscillatory indicator, a pendulum weight rigidly connected therewith for giving the same a forward movement and which is in a raised position when the indicator is at zero, a load influenced beam, and a connection between said weight and beam whereby they normally hold said indicator at zero and the actuating weight in a raised position when there is no load.

5. A weighing scale including a scale beam fulcrumed between its ends and adapted to receive a load at one end thereof and the other end weighted so that said latter

end of the beam will be normally depressed, an oscillatory pendulum weight, stationary means independent of the beam for supporting said pendulum weight, and a connection between said pendulum weight and the weight on said beam.

6. A weighing scale including a scale beam fulcrumed between its ends and adapted to receive a load at one end thereof and the other end weighted so that said latter end of the beam will be normally depressed, an oscillatory indicator actuated by said pendulum weight, stationary means independent of the beam for supporting said pendulum weight and indicator, and a connection between said pendulum weight and indicator and the weighted end of the beam.

7. In a scale, an oscillatory indicator including an oscillatory indicating bar which at zero is to the left of a vertical line through its fulcrum, a pendulum weight secured thereto near its fulcrum and projecting therefrom to the other side of said vertical line when the indicator is at zero, and a load influenced means for holding said indicator at the zero position and as the load increases permitting said weight to actuate the indicator with a force varying inversely with the load.

8. A weighing scale including a housing, a beam fulcrumed between its ends with one end projecting into the housing, a load receiving member carried on the outer end of the beam and the inner end of the beam being weighted so as to normally overbalance the load receiving member, an indicating chart mounted in the housing, an indicator mounted in the housing and movable across said chart, a connection in the housing between the indicator and the weighted end of the lever and a variably weighted means in the housing and connected with said frame and indicator for controlling the action of the indicator as the load is applied.

9. In a scale, the combination with a pivoted beam adapted to receive a load on one end and having a normally weighted opposite end to oppose an applied load, of a rock shaft, an arm carried by said shaft and connected to the scale beam, an arm carried by said shaft in a normally raised position, a weight on said arm to act upon the scale beam in the direction of the applied load, an indicator scale, and an arm carried by the rock shaft and traversing the scale.

10. In a scale, the combination with a pivoted beam adapted to receive a load on one end and having a normally weighted opposite end to oppose an applied load, of a weight normally in a raised position, a connection between said weight and the scale beam whereby said weight will act upon the scale beam in the direction of the applied load with a variable force as the weight approaches or recedes from its normal position, a dash pot having a passage forming a connection between its ends, a rotatable valve mounted in said passage and having a portion adapted to lie parallel with the passage or transversely across the same, and a piston mounted in the dash pot and connected with the scale beam.

11. In a scale, the combination with a pivoted beam adapted to receive a load on one end and having a normally weighted opposite end to oppose an applied load, of a weight normally in a raised position, a connection between said weight and the scale beam whereby said weight will act upon the scale beam in the direction of the applied load with a variable force diminishing as the weight approaches a lower position, a dash pot having a passage forming a connection between its ends, a rotatable valve mounted in said passage and having a portion adapted to lie parallel with the passage or transversely across the same, and a piston mounted in the dash pot and connected with the scale beam.

12. In a scale, the combination with a pivoted beam adapted to receive a load on one end and having a normally weighted opposite end to oppose an applied load, of a weight normally in a raised position, a connection between said weight and the scale beam whereby said weight will act upon the scale beam in the direction of applied load with a variable force as the weight approaches a lower position, an indicator scale, an indicator connected with the scale beam to move therewith and traverse the scale, a dash pot having a passage forming a connection between its ends, a rotatable valve mounted in said passage and having a portion adapted to lie parallel with the passage or transversely across the same, and a piston mounted in the dash pot and connected with the scale beam.

13. In a scale, the combination with a pivoted beam adapted to receive a load on one end and having a normally weighted opposite end to oppose an applied load, of a rock shaft, an arm carried by said shaft and connected to the scale beam, an arm carried by said shaft in a normally raised position, a weight on said arm to act upon the scale beam in the direction of the applied load, a dash pot having a passage forming a connection between its ends, a rotatable valve mounted in said passage and having a portion adapted to lie parallel with the passage or transversely across the same, and a piston mounted in the dash pot and connected with the scale beam.

14. In a scale, the combination with a pivoted beam adapted to receive a load on one end and having a normally weighted opposite end to oppose an applied load, of a rock shaft, an arm carried by said shaft and connected to the scale beam, an arm carried by said shaft in a normally raised position, a weight on said arm to act upon the scale beam in the direction of the applied load, an indicator scale, an arm carried by the rock shaft and traversing the scale, a dash pot having a passage forming a connection between its ends, a rotatable valve mounted in said passage and having a portion adapted to lie parallel with the passage or transversely across the same, and a piston mounted in the dash pot and connected with the scale beam.

15. In a scale, the combination with a pivoted beam adapted to receive a load on one end and having a normally weighted opposite end to oppose an applied load, of a rotative indicator support, an indicator, a scale traversed by said indicator, a connection between the indicator support and the scale beam, an arm carried by said indicator support in a normally raised position, a weight on said arm to act upon the scale beam in the direction of the applied load, and means connected to said scale connected to one of the movable parts of said structure to regulate the vibration of the beam.

16. In weighing scales, the combination of a beam fulcrumed intermediate its ends, a goods receiver carried by the beam on one side of the latter's fulcrum, a pendulum, fixed bearings from which the latter is wholly suspended, and a connection between the pendulum and the beam on the side of the latter's fulcrum opposite that where the goods receiver is located, the beam preponderating in weight on the side where the pendulum is connected, normally holding the latter and the goods receiver elevated, the pendulum being adapted to descend with the applied load until equilibrium is attained.

17. In weighing scales, the combination of a beam fulcrumed intermediate its ends and having a short arm on one side of the fulcrum and a long arm on the other side of the fulcrum, a goods receiver supported by the short arm, a pendulum, fixed bearings from which the latter is wholly suspended, and a connection between the pendulum and the long arm of the beam such arm preponderating in weight normally elevating the pendulum and the goods receiver, the pendulum being adapted to descend with the applied load until equilibrium is attained.

18. In weighing scales, the combination of a beam fulcrumed intermediate its ends, a goods receiver carried by the beam on one side of the latter's fulcrum, a pendulum, fixed bearings from which the latter is wholly suspended, a fixed plate bearing a table of weights, an index associated therewith and secured to the pendulum, and a connection between the pendulum and the beam on the side of the latter's fulcrum opposite that where the goods receiver is located, the beam prepondrating in weight on the side where the pendulum is connected normally holding the latter and the goods receiver elevated, the pendulum being adapted to descend with the applied load until equilibrium is attained.

19. In weighing scales, the combination of a beam fulcrumed intermediate its ends and having a short arm

on one side of the fulcrum and a long arm on the other side of the fulcrum, a goods receiver supported by the short arm, a pendulum, fixed bearings from which the latter is wholly suspended, a fixed plate bearing a table of weights, an index associated therewith and secured to the pendulum, and a connection between the pendulum and the long arm of the beam, such arm preponderating in weight, normally elevating the pendulum and the goods receiver, the pendulum being adapted to descend with the applied load until equilibrium is attained.

20. In weighing scales, the combination of a beam fulcrumed intermediate its ends, a goods receiver carried by the beam on one side of the latter's fulcrum, a pendulum and journal with a crank arm, fixed bearings for said journal from which the pendulum is wholly suspended, and a link connecting said crank arm with the beam on the side of the latter's fulcrum opposite that where the goods receiver is mounted, the beam preponderating in weight on the side where the link is connected and normally elevating the pendulum and the goods receiver, the pendulum being adapted to descend with the applied load until equilibrium is attained.

21. In weighing scales, the combination of a beam fulcrumed intermediate its ends and having a short arm on one side of the fulcrum and a long arm on the other side of the fulcrum, a goods receiver supported by the short arm, a pendulum and journal with a crank arm, fixed bearings for said journal and from which the pendulum is wholly suspended, and a link connecting said crank arm with the long arm of the beam, such arm preponderating in weight normally elevating the pendulum and the goods receiver, the pendulum being adapted to descend with the applied load until equilibrium is attained.

22. In weighing scales, the combination of a beam fulcrumed intermediate its ends, a goods receiver carried by the beam on one side of the latter's fulcrum, a pendulum and journal with a crank arm, fixed bearings for said journal, a fixed plate bearing a table of weights, an index associated therewith and secured to the pendulum, and a link connecting said crank arm with the beam on the side of the latter's fulcrum opposite that where the goods receiver is mounted, the beam preponderating in weight on the side where the link is connected normally elevating the pendulum and the goods receiver, the pendulum being adapted to descend with the applied load until equilibrium is attained.

23. In weighing scales, the combination of a beam fulcrumed intermediate its ends and having a short arm on one side of the fulcrum and a long arm on the other side of the fulcrum, a goods receiver supported by the short arm, a pendulum and journal with a crank arm, fixed bearings for said journal from which the pendulum is wholly suspended, a fixed plate bearing a table of weights, an index associated therewith and secured to the pendulum, and a link connecting said crank arm with the long arm of the beam, such arm preponderating in weight and normally elevating the pendulum and the goods receiver, the pendulum being adapted to descend with the applied load until equilibrium is attained.

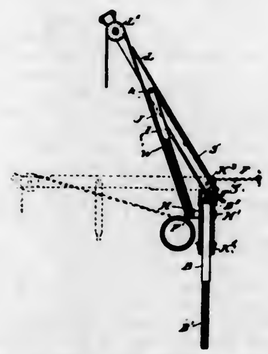
24. In a weighing scale, the combination with a main beam or lever, a goods receiver carried thereby to one side of its pivot or fulcrum, a counter-balance member comprising a pendulum and its journal, and a positively operating connection attached to said member eccentrically with respect to its journal, and applied to the beam on the side of the latter's pivot or fulcrum opposite that where the goods receiver is located, the beam on such side preponderating in weight to normally uphold the goods receiver and normally elevate the pendulum through the positive connection aforesaid and the pendulum being adapted to descend with the applied load until equilibrium is attained.

25. In a weighing scale, the combination with a main beam or lever, a goods receiver carried thereby to one side of its pivot or fulcrum, a pendulum and its journal, the latter having a crank pin in the form of an upwardly directed knife edge bearing, and a link engaging over such knife edge bearing and being connected to the beam on the side of the latter's fulcrum opposite that where the goods receiver is located, the beam preponderating in weight on that side and normally elevating the pendulum by down draft on the said link, the pendulum being adapted to descend with the applied load until equilibrium is attained.

26. In a weighing scale, the combination with a main beam or lever, a goods receiver carried thereby to one side of the pivot or fulcrum, a counter-balance member comprising a pendulum and its journal, a positively operating connection attached to said member eccentrically with respect to its journal and applied to the beam on the side of the latter's pivot or fulcrum opposite that where the goods receiver is located, the beam on such side preponderating in weight to normally uphold the goods receiver and normally elevate the pendulum through the positive connection aforesaid, and indicating means comprising a fixed member and a member operatively connected to the pendulum, the pendulum being adapted to descend with the applied load until equilibrium is attained.

27. In a weighing scale, the combination with a main beam or lever, a goods receiver carried thereby to one side of its pivot or fulcrum, a counter-balance member comprising a pendulum and its journal, a positively operating connection attached to said member eccentrically with respect to its journal and applied to the beam on the side of the latter's pivot or fulcrum opposite that where the goods receiver is located, the beam on such side preponderating in weight to normally uphold the goods receiver and normally elevate the pendulum through the positive connection aforesaid, a fixed plate bearing a table of weights, and an index hand extending adjacent the same and secured to the pendulum, the pendulum being adapted to descend with the applied load until equilibrium is attained.

13,996. HOISTING APPARATUS. WALTER F. GEOGHEGAN, Huntington, N. Y., assignor to Gillis & Geoghegan, New York, N. Y., a Firm. Filed June 9, 1915. Serial No. 33,196. Original No. 1,101,843, dated June 30, 1914, Serial No. 810,646. (Cl. 212—64.)



1. In an apparatus of the character set forth, a standard, means for raising and lowering the same, a rotatable member on the upper end of said standard, a jib pivotally mounted to swing vertically, means movable relatively to the jib to serve as a lever for lifting the same and detachable means between said member and jib for holding the latter at an angle relatively to the former.

2. In an apparatus of the character set forth, a standard, means for raising and lowering the same, a rotatable member on the upper end of said standard, a jib pivotally mounted to swing vertically, means movable relatively to the jib to serve as a lever for lifting the same, detachable means between said member and jib for holding the latter at an angle relatively to the former, and a winding mechanism carried by said member.

3. In an apparatus of the character set forth, a standard, means for raising and lowering the same, a sleeve loosely inclosing the upper end of said standard, a head at the upper end of said sleeve, a winding mechanism carried by said sleeve, a jib pivotally mounted to swing vertically, means movable relatively to the jib to serve as a lever for lifting the same and means for detachably connecting the sleeve and jib.

4. In an apparatus of the character set forth, a standard, means for raising and lowering the same, a jib pivotally mounted to swing vertically, a strut for supporting said jib, and means movably mounted in said jib and arranged to be withdrawn partially therefrom to serve as a lever for lifting said jib.

5. In an apparatus of the character set forth, a standard, means for raising and lowering the same, a rotatable member on the upper end of said standard, a winding mechanism carried by said member, a jib pivotally mounted for movement with the rotatable member, and means slidable within the jib and adapted to serve as a lever for swinging the jib upward on its pivot.

6. In an apparatus of the character set forth, a standard, means for raising and lowering the same, a rotatable member on the upper end of said standard, a winding mechanism carried by said member, a jib pivotally mounted for movement with the rotatable member, means slidable within the jib and adapted to serve as a lever for swinging the jib upward on its pivot, and a strut pivotally mounted on the jib for supporting the latter in elevated position.

7. In an apparatus of the character set forth, a standard, means for raising and lowering the same, a rotatable member mounted on the standard, a jib mounted on said rotatable member, a member movable relatively to the jib and means pivotally connected to the said last-named member for moving the same lengthwise of the jib as the latter is raised and lowered, and a winding mechanism carried by said rotatable member.

8. In an apparatus of the character set forth, a standard, means for raising and lowering the same, a rotatable member at the upper end of said standard, a winding mechanism carried by said rotatable member, a longitudinally slotted jib pivotally mounted on said rotatable member, and strut-bracing means carried by said rotatable member and partially receivable within the slot of said jib.

9. In an apparatus of the character set forth, a standard, means for raising and lowering the same, a rotatable member at the upper end of said standard, a winding mechanism carried by said rotatable member, a jib pivotally mounted on said rotatable member, means serving as a lever for lifting the jib and a strut pivotally mounted at one end on said jib and connected with means movable relatively to said jib.

10. In an apparatus of the character set forth, a hollow post, a standard arranged to slide telescopically therein, means for raising and lowering said standard, a sleeve loosely inclosing the upper end of said standard, a head at the upper end of said sleeve, a ball-bearing between the top of said standard and said head and arranged to support said sleeve, a jib pivotally mounted in said head to swing vertically thereon, and detachable means between said sleeve and jib for holding the latter at an angle relatively to said sleeve.

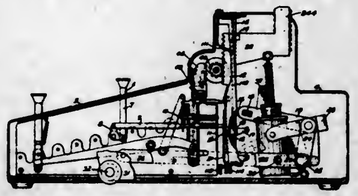
11. In an apparatus of the character set forth, a hollow post, a standard arranged to slide telescopically therein, means for raising and lowering said standard, a sleeve loosely inclosing the upper end of said standard, a head at the upper end of said sleeve, a ball-bearing between the top of said standard and said head and arranged to support said sleeve, a winding mechanism carried by said sleeve, a jib pivotally mounted in said head to swing vertically thereon, and a strut carried by said jib, and means for detachably connecting said strut to said sleeve.

12. In an apparatus of the character set forth, a hollow post, a standard arranged to slide telescopically therein, means for raising and lowering said standard, a sleeve loosely inclosing the upper end of said standard, a jib pivotally mounted on said sleeve and arranged to swing vertically, a strut pivotally mounted in said jib and having a socket at its lower end, and a spur carried by said sleeve and arranged to receive such socket and support said strut and jib.

13. In an apparatus of the character set forth, a hollow post, a standard arranged to slide telescopically therein, means for raising and lowering said standard, a jib pivotally mounted at the upper end of said standard and arranged to swing vertically, a strut pivotally mounted in said jib and adapted to support the latter, and a bar slidably mounted in said jib and arranged to be withdrawn partially therefrom to serve as a lever in lifting said jib and engaging said strut.

14. In an apparatus of the character set forth, a hollow post, a standard arranged to slide telescopically therein, means for raising and lowering said standard, a jib pivotally mounted at the upper end of said standard and arranged to swing vertically, a strut pivotally mounted in said jib, a spur carried by said standard and arranged to engage said strut and support said jib, and a bar slidably mounted in said jib and arranged to be withdrawn partially therefrom to serve as a lever in lifting said jib and engaging said strut and spur, and means for holding said bar against withdrawal.

13,997. CARRYING MEANS FOR ADDING-MACHINES. JASON C. LOTTERHAND, New York, N. Y., assignor to Addometer Corporation, New York, N. Y., a Corporation of Delaware. Filed Sept. 26, 1914. Serial No. 863,765. Original No. 1,104,686, dated July 21, 1914, Serial No. 822,584. (Cl. 235—60.)



1. In a calculating machine, the combination of a set of numeral pinions, an actuator for each pinion, a frame member on which the pinions are pivoted and which is movable to shift the pinions into engagement with and away from the actuators, a set of toothed carrying members one for each pinion arranged to be engaged by the pinions respectively when retracted from the actuator, means for causing the carrying members to advance the pinions a unit distance to carry and controlled from the rotation of the pinions by their respective actuators, and means for shifting the toothed carrying members over to engage their respective pinions when the pinions engage their actuators and to retain the slides and pinions in engagement during the retraction of the pinions from the actuators.

2. In a calculating machine, the combination of a set of numeral pinions, an actuator for each pinion, a frame member on which the pinions are pivoted and which is movable to shift the pinions into engagement with and away from the actuators, a set of toothed carrying members one for each pinion arranged to be engaged by the pinions respectively when retracted from the actuator, means for causing the carrying members to advance the pinions a unit distance to carry and controlled from the rotation of the pinions by their respective actuators, and a restoring bar engaging all of the slides and arranged to regulate the movement of the carrying members to carry, and also arranged to shift the carrying members to engage the pinions when the pinions are in engagement with their actuators and to retain the carrying members and pinions in engagement during the retraction of the pinions from the actuators.

3. In a calculating machine, the combination of a set of numeral pinions, an actuator for each pinion, a frame member on which the pinions are pivoted and which is

movable to shift the pinions into engagement with and away from the actuators, a set of toothed carrying members one for each pinion arranged to be engaged by the pinions respectively when retracted from the actuator, a spring connected with each carrying member arranged to advance the carrying members when in engagement with its pinion to move it a unit distance to carry, a restoring bar connected with all of the carrying members arranged to retract the slides when advanced by their springs, means connecting each carrying member with its pinion for controlling the said carrying movement of the carrying members as each pinion completes a revolution, said slide being also movable to engage the pinions when the pinions engage their actuators, and operating means for the restoring bar arranged to move it to shift the carrying members into engagement with the pinions when the pinions engage their actuators and to retain the carrying members and pinions in engagement during the retraction of the pinions from the actuators.

4. In a calculating machine, the combination of a set of numeral pinions, an actuator for each pinion movable in a fixed path, a frame member on which the pinions are pivoted and which is movable to shift the pinions into engagement with and away from the actuators, a set of slotted toothed slides one for each pinion arranged to be engaged by the pinions respectively when retracted from the actuators, a rod on which the slides are supported at the slotted portions, a spring connected with each slide arranged to advance the slide on the rod when in engagement with its pinion to move the pinion a unit distance to carry, a restoring bar connected with all of the slides to retract them when moved by their springs, means connecting each slide with its pinion for controlling the said carrying movement of the slides as each pinion completes a revolution, said restoring bar being also operated to swing the slides on said rod over to engage the pinions when the latter engage their actuators and to retain the pinions and slides in engagement during the retraction of the pinions from the actuators.

5. In a calculating machine, the combination of a set of numeral pinions, an actuator for each pinion movable in a fixed path, a frame member on which the pinions are pivoted and which is movable to shift the pinions into engagement with and away from the actuators, a set of slotted toothed slides one for each pinion arranged to be engaged by the pinions respectively when retracted from the actuators, a rod on which the slides are supported at their slotted portions, a spring connected with each slide arranged to advance the slide on the rod when in engagement with its pinion to move the pinion a unit distance to carry, said slides each having a second slotted portion, a restoring bar projecting through the latter slotted portion of the slides and arranged to retract the slides when moved by their springs and to permit relative movement of the slides and bar, means connecting each slide with its pinion for controlling the said carrying movement of the slide as each slide completes a revolution, and means for causing the restoring bar to swing the slides on said rod over to engage the pinions when the latter engage their actuators and to retain the pinions and slides in engagement during the retraction of the pinions from the actuators.

6. In a calculating machine, the combination of a set of numeral pinions, an actuator for each pinion, a set of toothed slides one for each pinion, a ledge on each slide, a frame member on which the pinions are pivoted and which is movable to shift the pinions to alternately engage the actuators and the toothed slides, means for causing said movement of the frame member, a cam on each said pinion, a set of detents one for each toothed slide, a catch on each detent normally in engagement with the ledge on its respective slide, each slide being supported for movement to engage its coöperating pinion when the latter engages its respective actuator, each slide being also movable in a path transverse to its said movement whereby it will advance its pinion a unit distance to carry, a stop on each detent arranged to be engaged by said cam on the forward turning of the pinion whereby to shift the detent from normal slide-engaging position, and means for moving the slides in said direction.

7. In a calculating machine, the combination of a set of numeral pinions, an actuator for each pinion, a set of toothed slides one for each pinion, a ledge on each slide, a frame member on which the pinions are pivoted and which is movable to shift the pinions to alternately engage the actuators and the toothed slides, means to cause said movement of the frame member, a cam on each said pinion, a set of detents one for each toothed slide, a catch on each detent normally in engagement with the ledge on its respective slide, each slide being supported for movement to engage its coöperating pinion when the latter engages its respective actuator, each slide being also movable in a path transverse to its said movement whereby it will advance its pinions a unit distance to carry, a stop on each detent arranged to be engaged by said cam on the forward turning of the pinion whereby to shift the detent from a normal slide engaging position, means to normally press the ledge against the said catch and upon release of the slide from the detent by the said cam to advance the plate to turn the pinion of next higher order to carry, and means to shift each toothed slide in timed relation with the movement of the pinions by the frame to retain the slide and pinions in engagement during the return of the pinions to a position free from the rack bars.

8. In a calculating machine, the combination of a set of numeral pinions, an actuator for each pinion, a set of toothed slides one for each pinion, a ledge on each slide, a frame member on which the pinions are pivoted and which is movable to shift the pinions to alternately engage the actuators and the toothed slides, means to cause said movement of the frame member, a cam on each said pinion, a set of detents one for each toothed slide, a catch on each detent normally in engagement with the ledge on its respective slide, each slide being supported for movement to engage its coöperating pinion when the latter engages its respective actuator, each slide being also movable in a path transverse to its said movement whereby it will advance its pinion a unit distance to carry, a stop on each detent arranged to be engaged by said cam on the forward turning of the pinion whereby to shift the detent from a normal slide-engaging position, a spring connected with each slide to normally press the ledge against the said catch and upon release of the slide from the detent by the said cam the spring will advance the plate to turn the pinion of next higher order to carry, and means to shift each toothed slide in timed relation with the movement of the pinions by the frame to retain the slide and pinions in engagement during the return of the pinions to a position free from the rack bars.

9. In a calculating machine, the combination of a set of numeral pinions, an actuator for each pinion, a set of slotted toothed slides one for each pinion, a ledge on each slide, a frame member on which the pinions are pivoted and which is movable to shift the pinions to alternately engage the actuators and the toothed slides, means to cause said movement of the frame member, a cam on each said pinion, a set of detents one for each toothed slide, a spring on each detent, a catch on each detent normally held by the spring in engagement with the ledge on its respective slide, a rod on which each slide is supported at its slotted part for movement to engage its coöperating pinion when the latter engages its respective actuator, each slide being also movable on said rod in a path transverse to its said movement whereby it will advance its pinion a unit distance to carry, a stop on each detent arranged to be engaged by said cam on the forward turning of the pinion whereby to shift the detent from a normal slide engaging position, a spring connected with each slide to normally press the ledge against the said catch and upon release of the slide from the detent by the said cam the spring will advance the plate to turn the pinion of next higher order to carry, said slides each having a second slotted portion, a restoring bar projecting through the latter slotted portion of the slides and arranged to retract the slides when moved by their springs and to permit relative movement of the slides and bar, and means for moving the restoring bar to swing the slides on said rod over to engage the pinions when the latter engage their actuators and to retain the pinions in such engagement when the pinions are retracted from the actuators to normal position.

10. In a calculating machine, the combination of a set of numeral pinions, an actuator for each pinion, a set of slotted toothed slides one for each pinion, a ledge on each slide, a frame member on which the pinions are pivoted and which is movable to shift the pinions to alternately engage the actuators and the toothed slides, means to cause said movement of the frame member, a cam on each said pinion, a set of detents one for each toothed slide, a spring on each detent, a catch on each detent normally held by the spring in engagement with the ledge on its respective slide, a rod on which each slide is supported at its slotted part for movement to engage its coöperating pinion when the latter engages its respective actuator, each slide being also movable on said rod in a path transverse to its said movement whereby it will advance its pinion a unit distance to carry, a stop on each detent arranged to be engaged by said cam on the forward turning of the pinion whereby to shift the detent from a normal slide engaging position, a spring connected with each slide to normally press the ledge against the said catch and upon release of the slide from the detent by the said cam the spring will advance the plate to turn the pinion of next higher order to carry, said slides each having a second slotted portion, a restoring bar projecting through the latter slotted portion of the slides and arranged to retract the slides when moved by their springs and to permit relative movement of the slides and bar, and means for moving the restoring bar to swing the slides on said rod over to engage the pinions when the latter engage their actuators and to retain the pinions in such engagement when the pinions are retracted from the actuators to normal position.

11. In a calculating machine, the combination of a set of numeral pinions, an actuator for each pinion movable in a fixed path, a frame member on which the pinions are pivoted and which is movable to shift the pinions to engage and disengage the actuators, a set of slotted toothed slides one for each pinion arranged to be engaged by the pinions respectively when retracted from the actuators, a rod on which the slides are supported at their slotted portions, a pair of plates one on each side of the machine pivotally mounted in which the ends of said rod are secured, a spring connected with each slide to advance the slide on the rod when in engagement with its pinion to move the pinion a unit distance to carry, a restoring bar connected with all of the slides to retract them when moved by their springs, and means for causing the restoring bar to swing the slides on said rod over to engage the pinions when the latter engage their actuators and to retain the slides and pinions in engagement during the retraction of the pinions from the actuators, said rod-supporting plates being connected with the restoring bar to be swung thereby.

12. In a calculating machine, the combination of a set of numeral pinions, an actuator for each pinion movable in a fixed path, a frame member on which the pinions are pivoted and which is movable to shift the pinions to engage and disengage the actuators, a set of slotted toothed slides one for each pinion arranged to be engaged by the pinions respectively when retracted from the actuators, a pair of plates one pivotally mounted on each side of the machine, a rod carried by said plates on which said slides are supported at their slotted portions, a bar extending across between said plates, a spring connected between each slide and said bar and arranged to advance the slide on the rod when in engagement with its pinion to move the pinion a unit distance to carry, a restoring bar connected with all of the slides to retract them when moved by their springs, and means for causing the restoring bar to swing the slides on said rod over to engage the pinions when the latter engage their actuators and to retain the slides and pinions in engagement during the retraction of the pinions from the actuators, said rod-carrying plates being held in engagement with said restoring bar to be swung thereby.

13. In a calculating machine, the combination of a set of numeral pinions, an actuator for each pinion, a set of slotted toothed slides one for each pinion, a ledge on each slide, a frame member on which the pinions are pivoted and which is movable to shift the pinions to alternately engage the actuators and the toothed slides, a cam on each pinion, a set of detents one for each said slide, a pair of plates one pivotally mounted on each side of the machine, a rod on which said slides are supported at their slotted portions, said rod being mounted in said plates, a bar extending across between said plates, a spring connecting each detent with said bar, a catch on each detent normally held by the spring in engagement with the ledge on its respective slide, a stop on each detent arranged to be engaged by said cam on the forward turning of the pinion whereby to shift the detent from normal slide-engaging position, a spring connecting each slide with said bar to normally press the slide ledge against said catch whereby upon release of the slide from the detent by the cam the spring will advance the plate to turn the pinion of next higher order to carry, and means to shift each toothed slide in timed relation with the movement of the pinions by the frame to retain the slide and pinions in engagement during the retraction of the pinions from the rack bars, said side plates being retained in engagement with the restoring bar by said slide-engaging springs to be rocked thereby.

14. In a calculating machine, the combination of a set of numeral pinions, an actuator for each pinion, a set of slotted toothed slides one for each pinion, a ledge on each slide, a frame member on which the pinions are pivoted and which is movable to shift the pinions to alternately engage the actuators and the toothed slides, a cam on each pinion, a set of detents one for each slide, a pair of plates one pivotally mounted on each side of the machine, a rod supported at its ends in said plates and projecting through said slides at their slotted portion, a bar extending across between said plates, a spring connecting each detent with said bar, a catch on each detent normally held by the spring in engagement with the ledge on its respective slide, a stop on each detent arranged to be engaged by said cam on the forward turning of the pinion whereby to shift the detent from normal slide-engaging position, a spring connecting each slide with said bar to normally press the slide ledge against said catch whereby upon release of the slide from the detent by the cam the spring will advance the plate to turn the pinion of next higher order to carry, said slides each having a second slotted portion, a restoring bar projecting through the latter slotted portions of the slides to retract the slides when moved by their springs and to permit relative movement of the slides and bars, and means for moving the restoring bar to swing the slides on said rod over to engage the pinions when the latter engage their actuators and to retain the pinions in such engagement when the pinions are retracted from the actuators, said side plates being retained by said slide-engaging springs in contact with the restoring bar to be swung thereby.

15. In a calculating machine, the combination of an actuator movable in a fixed path, a numeral pinion movable to engage and disengage the actuator, a carrying plate movable to partake of the movement of the pinion away from the actuator, said plate being also movable in a path transverse to its said movement to effect the carrying operation, and means for causing the plate to assume four different positions in the latter path of movement.

16. In a calculating machine, the combination of a set of actuators, a set of numeral pinions movable to engage and disengage the actuators, a set of carrying plates one for each pinion, a restoring bar connected with each of the plates to control their movements, means to move the plates to carry, a side bar on each side of the machine that is caused to reciprocate, an arm on each side of the machine connected with the restoring bar, a pin on each arm, a hook arm on each side of the machine arranged to engage said pins respectively, a pin on each side bar arranged to engage the hook arm causing it to release the said arms and restoring bars, springs arranged to move the restoring bar upward when released from the hook arm, and means on each side of the machine connected with the side bars and arranged to engage the side arms to shift the restoring bar downward and cause it to re-engage the hook arm.

17. In a calculating machine, the combination of a set of actuators, a set of numeral pinions movable to engage and disengage the actuators, a set of carrying plates one

for each pinion, a restoring bar connected with each of the plates to control their movements, means to move the plates to carry, a side bar on each side of the machine that is caused to reciprocate, an arm on each side of the machine connected with the restoring bar, a pin on each arm, a hook arm on each side of the machine arranged to engage said pins respectively, a pin on each side bar arranged to engage the hook arm causing it to release the said arms and restoring bars, springs arranged to move the restoring bar upward when released from the hook arm, means on each side of the machine connected with the side bars and arranged to engage the side arms to shift the restoring bar downward and cause it to reengage the hook arm in the normal operation of adding, the machine including a totalizing device arranged to disconnect said latter means and prevent movement of the restoring bar during the totalizing operation.

18. In a calculating machine, the combination of a set of actuators, a set of numeral pinions movable to engage and disengage the actuators, a set of carrying plates one for each pinion, a restoring bar connected with each of the plates to control their movements, means to move the plates to carry, a side bar on each side of the machine that is caused to reciprocate, an arm on each side of the machine connected with the restoring bar, a pin on each arm, a hook arm on each side of the machine arranged to engage said pins respectively, a pin on each side bar arranged to engage the hook arm to cause it to release the said arms and restoring bars, springs arranged to move the restoring bar upward when released from the hook arm, a bent lever on each side of the machine arranged to engage said pin on the arm that engages said hook arm, a bar connected with each said bent lever and provided with a lug, and a stop on each of the side bars arranged to engage said lug to swing the bar and bent lever and thereby shift the restoring bar downward causing it to reengage the hook arm.

19. In a calculating machine, the combination of a set of actuators movable in a fixed path, a set of numeral pinions movable to engage and disengage the actuators, a set of carrying slides one for each pinion, a restoring bar connected with all of the slides to control their movements, a spring connected with each slide to move it in one direction to effect the carrying operation, a set of detents one for each slide arranged to coöperate therewith, a cam on each pinion arranged to shift the detent coöperating therewith, a side bar on each side of the machine that is caused to reciprocate, an arm on each side of the machine connected with the restoring bar, a pin on each arm, a hook arm on each side of the machine arranged to engage said pins respectively, a pin on each side bar arranged to engage the hook arm causing it to release the said arms and restoring bars, springs arranged to move the restoring bar upwards when released from the hook arm, and means on each side of the machine connected with the side bars and arranged to engage the side arms to shift the restoring bar downward and cause it to reëngage the hook arm.

20. In a calculating machine, the combination of a set of actuators, a set of numeral pinions movable to engage and disengage the actuators, a set of carrying plates one for each pinion, a restoring bar connected with all of the plates to control their movements, means connected with each plate to move it in one direction to carry, a side bar on each side of the machine that is caused to reciprocate, an arm on each side bar of the machine connected with the restoring bar, means connected with the side bars arranged to shift the arms and restoring bar vertically to control the movement of the carrying plates, a lever pivoted on each side of the machine, a spring controlled arm carried by the restoring bar at each end and engaging said latter lever, and stops on the side bars arranged to swing said levers to cause said spring controlled arms to shift the restoring bar and swing the carrying plates to engage the pinions when the latter are in engagement with their actuators.

21. In a calculating machine, the combination of a set of actuators, a set of numeral pinions movable to engage and discharge the actuators, a set of carrying plates one for each pinion, a restoring bar connected with all of the plates to control their movements, means connected with each plate to move it in one direction to carry, a side bar on each side of the machine that is caused to reciprocate, an arm on each side of the machine connected with the restoring bar, means connected with the side bar arranged to shift the arms and restoring bar vertically to control the movements of the plates to carry, a lever pivoted on each side of the machine, a pin on the lever, a notched arm connected with the restoring bar on each side, a spring on each latter arm pressing it on said latter lever at the notched portion, and stops on the side bars arranged to engage said levers to cause them and the notched arms to shift the restoring bar and swing the carrying plates to engage the pinions when the latter engage their actuators.

22. In a calculating machine, the combination of a set of actuators, a set of numeral pinions movable to engage and disengage the actuators, a set of carrying plates one for each pinion, a restoring bar connected with all of the plates to control their movements, means connected with each plate to move it in one direction to carry, a side bar on each side of the machine that is caused to reciprocate, an arm on each side of the machine connected with the restoring bar, means connected with the side bar arranged to shift the arms and restoring bar vertically to control the movements of the plates to carry, a lever pivoted on each side of the machine, a pin on the lever, a notched arm connected with the restoring bar on each side, a spring on each latter arm pressing it on said latter lever at the notched portion, stops on the side bars arranged to engage said levers to cause them and the notched arms to shift the restoring bar and swing the carrying plates to engage the pinions when the later engage their actuators, and other stops on the side bars arranged to engage said levers and swing them to reëngage the notched arms at the notched portions.

23. In a calculating machine, the combination of a set of actuators movable in a fixed path, a set of numeral pinions movable to engage and disengage the actuators, a set of carrying plates one for each pinion, a restoring bar connected with all of the slides to control their movements, a spring connected with each slide to move it in one direction to effect the carrying operation, a set of detents one for each slide arranged to coöperate therewith, a cam on each pinion arranged to shift the detent coöperating therewith, a side bar on each side of the machine that is caused to reciprocate, an arm on each side of the machine connected with the restoring bar, means connected with the side bars arranged to shift the arms and restoring bar vertically to control the movements of the slides to carry, a lever pivoted on each side of the machine, a spring controlled arm carried by the restoring bar at each end and engaging said latter lever, and stops on the side bars arranged to swing said levers to cause said spring controlled arms to shift the restoring bar and swing the carrying slides to engage the pinions when the latter are in engagement with their actuators.

24. In a calculating machine, the combination of a set of actuators movable in a fixed path, a set of numeral pinions movable to engage and disengage the actuators, a set of carrying plates one for each pinion, a restoring bar connected with all of the plates to control their movements, means connected with each plate to move it in one direction to effect the carrying operation, a side bar on each side of the machine that is caused to reciprocate, an arm on each side of the machine connected with the restoring bar, a pin on each arm, a hook arm on each side of the machine arranged to engage said pins respectively, a pin on each side bar arranged to engage the hook arm causing it to release said arms and restoring bars, springs arranged to move the restoring bar upward when released from the hook arms, means on each side of the machine connected with the side bars and arranged to engage the side arms to shift the restoring bar downward and cause it to re-engage the hook arm, a lever pivoted on each side of the machine, a spring-controlled arm connected with the restoring bar at each end of the bar and engaging said latter levers respectively, and stops on the side bar arranged to swing said levers to cause the spring controlled arms to shift the restoring bar and swing the carrying plates to engage the pinions when the latter are in engagement with their actuators.

25. In a calculating machine, the combination of a set of actuators, a set of numeral pinions movable to engage and disengage the actuators, a set of carrying plates one for each pinion, a restoring bar connected with all of the plates to control their movements, means connected with each plate to move it in one direction to carry, a side bar on each side of the machine that is caused to reciprocate, an arm on each side of the machine connected with the restoring bar, a pin on each arm, a hook arm on each side of the machine arranged to engage the hook arm causing it to release said arms and restoring bars, springs arranged to move the restoring bar upward when released from the hook arms, a bent lever on each side of the machine arranged to engage the pin on each restoring bar arm, a bar on each side connected with said bent lever and provided with a lug, a stop on each side bar arranged to engage said lug and swing said bent levers to depress the side arms and restoring bar and shift the carrying plates to cause the side arms to reëngage the hook arm, a lever pivoted on each side of the machine, a spring controlled arm connected with the restoring bar at each end of the bar and engaging said latter levers respectively, stops on the side bars arranged to swing said levers to cause the spring controlled arms to shift the restoring bar and swing the carrying plates to engage the pinions when the latter are in engagement with their actuators, and other stops on the side bars arranged to engage said levers to have their pins reëngage the notched portions of the said spring controlled arms.

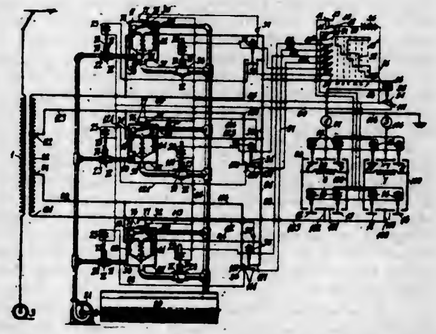
26. In a calculator, the combination of actuators movable in fixed paths, numeral pinions movable to engage and disengage the actuators, carrying plates movable to partake of the movements of the pinions away from the actuators, said plates being also movable in a path transverse to said movements to effect the carrying operation, a pair of swinging arms, a restoring bar carried by said arms, and connected with all of the carrying plates, means for swinging said arms to move the restoring bar and shift the plates to and from the pinions, and means for bodily moving the arms to shift the restoring bar in another direction to effect the carrying movements of the plates.

27. In a calculating machine, the combination with an actuator movable in a fixed path, and a numeral pinion movable to and from the path of the actuator, of a carrying plate, means for moving the plate in one path to effect the carrying operation, means for moving the plate in another path to engage and disengage the numeral pinions, the machine including a totalizing device, and means for causing the operation of the totalizing device to render inoperative said means for moving the plate for the carrying operation.

28. In a calculating machine, the combination of a set of actuators, a set of numeral pinions that are bodily movable to and from the actuators, a set of carrying plates one for each pinion, a pair of side plates pivoted on the machine, a rod mounted at its ends on said plates adjacent their pivots, said carrying plates having slotted portions at which the plates swing on said rod, a cross bar secured at its ends to said pivoted plates, springs connected between said bar and each of the carrying plates to shift the plates, and a restoring bar connected with all of the carrying plates and also engaging said side plates, said bar being movable to rock the carrying plates and also said side plates.

29. In a calculating machine, the combination of a set of actuators, a set of numeral pinions that are bodily movable to and from the actuators, a set of carrying plates one for each pinion, a pair of side plates pivoted on the machine, a rod mounted at its ends on said plates, said carrying plates having slotted portions at which the plates swing on said rod, a cross bar secured at its ends to said pivoted plates, springs connected between said bar and each of the carrying plates to shift the plates, and a restoring bar connected with all of the carrying plates and also engaging said side plates, said bar being movable to rock the carrying plates and also said side plates.

13,998. SYSTEM OF CONTROL. NORMAN W. STORER, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 15, 1914. Serial No. 832,127. Original No. 1,056,852, dated Mar. 25, 1913, Serial No. 631,585. (Cl. 172—179.)



1. In a control system for dynamo-electric machines, the combination with a source of energy and a plurality of dynamo-electric machines adapted to receive energy therefrom, of a plurality of individually adjustable liquid rheostats severally connected to said source of energy for governing the operation of said machines.

2. In a system of control for dynamo-electric machines, the combination with a source of energy, a plurality of liquid rheostats having different voltage connections to said source, and a plurality of dynamo-electric machines adapted to be governed by said rheostats, of means for individually controlling the operation of said rheostats.

3. In a system of control for electric motors, the combination with a source of electrical energy, a plurality of liquid rheostats having different voltage connections to said source, and a plurality of electric motors connected in circuit with said rheostats, of means for controlling the operation of said motors by individually controlling the operation of said rheostats.

4. In a control system for dynamo-electric machines, the combination with a source of energy, a plurality of liquid rheostats having different voltage connections to said source, and a plurality of dynamo-electric machines adapted to be governed by said rheostats, of means for supplying a suitable electrolyte to said rheostats, and means for controlling the supply thereof.

5. In a control system for dynamo-electric machines, the combination with a source of electrical energy, a plurality of liquid rheostats having different voltage connections to said source, and a plurality of dynamo-electric machines adapted to be governed by said rheostats, of means for continuously circulating an electrolyte through said rheostats, and means for successively filling said rheostats with said electrolyte.

6. In a control system for dynamo-electric machines, the combination with a constant potential apparatus, a plurality of liquid rheostats severally connected to intermediate taps in said apparatus, and a plurality of dynamo-electric machines, of means for successively filling said rheostats with said electrolyte, and means for individually controlling the operation of said rheostats.

7. In a control system for dynamo-electric machines, the combination with a source of energy, a plurality of liquid rheostats severally connected to intermediate taps therein and a plurality of dynamo-electric machines adapted to be governed by said rheostats, of means for continuously circulating an electrolyte through said rheostats.

for each pinion, a restoring bar connected with each of the plates to control their movements, means to move the plates to carry, a side bar on each side of the machine that is caused to reciprocate, an arm on each side of the machine connected with the restoring bar, a pin on each arm, a hook arm on each side of the machine arranged to engage said pins respectively, a pin on each side bar arranged to engage the hook arm causing it to release the said arms and restoring bars, springs arranged to move the restoring bar upward when released from the hook arm, means on each side of the machine connected with the side bars and arranged to engage the side arms to shift the restoring bar downward and cause it to reengage the hook arm in the normal operation of adding, the machine including a totalizing device arranged to disconnect said latter means and prevent movement of the restoring bar during the totalising operation.

18. In a calculating machine, the combination of a set of actuators, a set of numeral pinions movable to engage and disengage the actuators, a set of carrying plates one for each pinion, a restoring bar connected with each of the plates to control their movements, means to move the plates to carry, a side bar on each side of the machine that is caused to reciprocate, an arm on each side of the machine connected with the restoring bar, a pin on each arm, a hook arm on each side of the machine arranged to engage said pins respectively, a pin on each side bar arranged to engage the hook arm to cause it to release the said arms and restoring bars, springs arranged to move the restoring bar upward when released from the hook arm, a bent lever on each side of the machine arranged to engage said pin on the arm that engages said hook arm, a bar connected with each said bent lever and provided with a lug, and a stop on each of the side bars arranged to engage said lug to swing the bar and bent lever and thereby shift the restoring bar downward causing it to reengage the hook arm.

19. In a calculating machine, the combination of a set of actuators movable in a fixed path, a set of numeral pinions movable to engage and disengage the actuators, a set of carrying slides one for each pinion, a restoring bar connected with all of the slides to control their movements, a spring connected with each slide to move it in one direction to effect the carrying operation, a set of detents one for each slide arranged to coöperate therewith, a cam on each pinion arranged to shift the detent coöperating therewith, a side bar on each side of the machine that is caused to reciprocate, an arm on each side of the machine connected with the restoring bar, a pin on each arm, a hook arm on each side of the machine arranged to engage said pins respectively, a pin on each side bar arranged to engage the hook arm causing it to release the said arms and restoring bars, springs arranged to move the restoring bar upwards when released from the hook arm, and means on each side of the machine connected with the side bars and arranged to engage the side arms to shift the restoring bar downward and cause it to reëngage the hook arm.

20. In a calculating machine, the combination of a set of actuators, a set of numeral pinions movable to engage and disengage the actuators, a set of carrying plates one for each pinion, a restoring bar connected with all of the plates to control their movements, means connected with each plate to move it in one direction to carry, a side bar on each side of the machine that is caused to reciprocate, an arm on each side bar of the machine connected with the restoring bar, means connected with the side bars arranged to shift the arms and restoring bar vertically to control the movement of the carrying plates, a lever pivoted on each side of the machine, a spring controlled arm carried by the restoring bar at each end and engaging said latter lever, and stops on the side bars arranged to swing said levers to cause said spring controlled arms to shift the restoring bar and swing the carrying plates to engage the pinions when the latter are in engagement with their actuators.

21. In a calculating machine, the combination of a set of actuators, a set of numeral pinions movable to engage and discharge the actuators, a set of carrying plates one for each pinion, a restoring bar connected with all of the plates to control their movements, means connected with each plate to move it in one direction to carry, a side bar on each side of the machine that is caused to reciprocate, an arm on each side of the machine connected with the restoring bar, means connected with the side bar arranged to shift the arms and restoring bar vertically to control the movements of the plates to carry, a lever pivoted on each side of the machine, a pin on the lever, a notched arm connected with the restoring bar on each side, a spring on each latter arm pressing it on said latter lever at the notched portion, and stops on the side bars arranged to engage said levers to cause them and the notched arms to shift the restoring bar and swing the carrying plates to engage the pinions when the latter engage their actuators.

22. In a calculating machine, the combination of a set of actuators, a set of numeral pinions movable to engage and disengage the actuators, a set of carrying plates one for each pinion, a restoring bar connected with all of the plates to control their movements, means connected with each plate to move it in one direction to carry, a side bar on each side of the machine that is caused to reciprocate, an arm on each side of the machine connected with the restoring bar, means connected with the side bar arranged to shift the arms and restoring bar vertically to control the movements of the plates to carry, a lever pivoted on each side of the machine, a pin on the lever, a notched arm connected with the restoring bar on each side, a spring on each latter arm pressing it on said latter lever at the notched portion, stops on the side bars arranged to engage said levers to cause them and the notched arms to shift the restoring bar and swing the carrying plates to engage the pinions when the later engage their actuators, and other stops on the side bars arranged to engage said levers and swing them to reëngage the notched arms at the notched portions.

23. In a calculating machine, the combination of a set of actuators movable in a fixed path, a set of numeral pinions movable to engage and disengage the actuators, a set of carrying plates one for each pinion, a restoring bar connected with all of the slides to control their movements, a spring connected with each slide to move it in one direction to effect the carrying operation, a set of detents one for each slide arranged to coöperate therewith, a cam on each pinion arranged to shift the detent coöperating therewith, a side bar on each side of the machine that is caused to reciprocate, an arm on each side of the machine connected with the restoring bar, means connected with the side bars arranged to shift the arms and restoring bar vertically to control the movements of the slides to carry, a lever pivoted on each side of the machine, a spring controlled arm carried by the restoring bar at each end and engaging said latter lever, and stops on the side bars arranged to swing said levers to cause said spring controlled arms to shift the restoring bar and swing the carrying slides to engage the pinions when the latter are in engagement with their actuators.

24. In a calculating machine, the combination of a set of actuators movable in a fixed path, a set of numeral pinions movable to engage and disengage the actuators, a set of carrying plates one for each pinion, a restoring bar connected with all of the plates to control their movements, means connected with each plate to move it in one direction to effect the carrying operation, a side bar on each side of the machine that is caused to reciprocate, an arm on each side of the machine connected with the restoring bar, a pin on each arm, a hook arm on each side of the machine arranged to engage said pins respectively, a pin on each side bar arranged to engage the hook arm causing it to release said arms and restoring bars, springs arranged to move the restoring bar upward when released from the hook arms, means on each side of the machine connected with the side bars and arranged to engage the side arms to shift the restoring bar downward and cause it to re-engage the hook arm, a lever pivoted on each side of the machine, a spring-controlled arm connected with the restoring bar at each end of the bar and engaging said latter levers respectively, and stops on the side bar arranged to swing said levers to cause the spring controlled arms to shift the restoring bar and swing the carrying plates to engage the pinions when the latter are in engagement with their actuators.

25. In a calculating machine, the combination of a set of actuators, a set of numeral pinions movable to engage and disengage the actuators, a set of carrying plates one for each pinion, a restoring bar connected with all of the plates to control their movements, means connected with each plate to move it in one direction to carry, a side bar on each side of the machine that is caused to reciprocate, an arm on each side of the machine connected with the restoring bar, a pin on each arm, a hook arm on each side of the machine arranged to engage the hook arm causing it to release said arms and restoring bars, springs arranged to move the restoring bar upward when released from the hook arms, a bent lever on each side of the machine arranged to engage the pin on each restoring bar arm, a bar on each side connected with said bent lever and provided with a lug, a stop on each side bar arranged to engage said lug and swing said bent levers to depress the side arms and restoring bar and shift the carrying plates to cause the side arms to reëngage the hook arm, a lever pivoted on each side of the machine, a spring controlled arm connected with the restoring bar at each end of the bar and engaging said latter levers respectively, stops on the side bars arranged to swing said levers to cause the spring controlled arms to shift the restoring bar and swing the carrying plates to engage the pinions when the latter are in engagement with their actuators, and other stops on the side bars arranged to engage said levers to have their pins reëngage the notched portions of the said spring controlled arms.

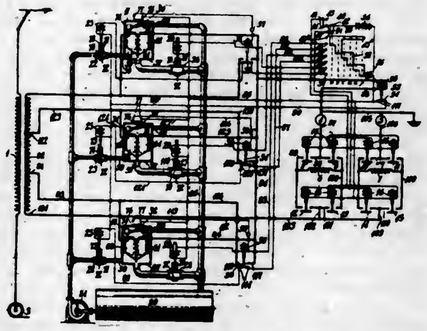
26. In a calculator, the combination of actuators movable in fixed paths, numeral pinions movable to engage and disengage the actuators, carrying plates movable to partake of the movements of the pinions away from the actuators, said plates being also movable in a path transverse to said movements to effect the carrying operation, a pair of swinging arms, a restoring bar carried by said arms, and connected with all of the carrying plates, means for swinging said arms to move the restoring bar and shift the plates to and from the pinions, and means for bodily moving the arms to shift the restoring bar in another direction to effect the carrying movements of the plates.

27. In a calculating machine, the combination with an actuator movable in a fixed path, and a numeral pinion movable to and from the path of the actuator, of a carrying plate, means for moving the plate in one path to effect the carrying operation, means for moving the plate in another path to engage and disengage the numeral pinions, the machine including a totalising device, and means for causing the operation of the totalising device to render inoperative said means for moving the plate for the carrying operation.

28. In a calculating machine, the combination of a set of actuators, a set of numeral pinions that are bodily movable to and from the actuators, a set of carrying plates one for each pinion, a pair of side plates pivoted on the machine, a rod mounted at its ends on said plates adjacent their pivots, said carrying plates having slotted portions at which the plates swing on said rod, a cross bar secured at its ends to said pivoted plates, springs connected between said bar and each of the carrying plates to shift the plates, and a restoring bar connected with all of the carrying plates and also engaging said side plates, said bar being movable to rock the carrying plates and also said side plates.

29. In a calculating machine, the combination of a set of actuators, a set of numeral pinions that are bodily movable to and from the actuators, a set of carrying plates one for each pinion, a pair of side plates pivoted on the machine, a rod mounted at its ends on said plates, said carrying plates having slotted portions at which the plates swing on said rod, a cross bar secured at its ends to said pivoted plates, springs connected between said bar and each of the carrying plates to shift the plates, and a restoring bar connected with all of the carrying plates and also engaging said side plates, said bar being movable to rock the carrying plates and also said side plates.

13,998. SYSTEM OF CONTROL. NORMAN W. STORER, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 15, 1914. Serial No. 832,127. Original No. 1,056,852, dated Mar. 25, 1913, Serial No. 631,585. (Cl. 172—179.)



1. In a control system for dynamo-electric machines, the combination with a source of energy and a plurality of dynamo-electric machines adapted to receive energy therefrom, of a plurality of individually adjustable liquid rheostats severally connected to said source of energy for governing the operation of said machines.

2. In a system of control for dynamo-electric machines, the combination with a source of energy, a plurality of liquid rheostats having different voltage connections to said source, and a plurality of dynamo-electric machines adapted to be governed by said rheostats, of means for individually controlling the operation of said rheostats.

3. In a system of control for electric motors, the combination with a source of electrical energy, a plurality of liquid rheostats having different voltage connections to said source, and a plurality of electric motors connected in circuit with said rheostats, of means for controlling the operation of said motors by individually controlling the operation of said rheostats.

4. In a control system for dyanmo-electric machines, the combination with a source of energy, a plurality of liquid rheostats having different voltage connections to said source, and a plurality of dynamo-electric machines adapted to be governed by said rheostats, of means for supplying a suitable electrolyte to said rheostats, and means for controlling the supply thereof.

5. In a control system for dyanmo-electric machines, the combination with a source of electrical energy, a plurality of liquid rheostats having different voltage connections to said source, and a plurality of dynamo-electric machines adapted to be governed by said rheostats, of means for continuously circulating an electrolyte through said rheostats, and means for successively filling said rheostats with said electrolyte.

6. In a control system for dynamo-electric machines, the combination with a constant potential apparatus, a plurality of liquid rheostats severally connected to intermediate taps in said apparatus, and a plurality of dynamo-electric machines, of means for successively filling said rheostats with said electrolyte, and means for individually controlling the operation of said rheostats.

7. In a control system for dynamo-electric machines, the combination with a source of energy, a plurality of liquid rheostats severally connected to intermediate taps therein and a plurality of dynamo-electric machines adapted to be governed by said rheostats, of means for continuously circulating an electrolyte through said rheostats.

8. In a control system for dynamo-electric machines, the combination with a constant potential apparatus, a plurality of liquid rheostats severally connected to intermediate taps in said apparatus, and a plurality of dynamo-electric machines adapted to be governed by said rheostats, of means for effecting a continuous circulation of an electrolyte through said rheostats, means for causing said rheostats to be filled with electrolyte at a uniform rate, and means for successively governing the operation of said rheostats.

9. In a control system for dynamo-electric machines, the combination with a constant potential apparatus, a plurality of liquid rheostats severally connected to intermediate taps in said apparatus, and a plurality of dynamo-electric machines adapted to be governed by said rheostats, of means for effecting a continuous circulation of an electrolyte through said rheostats, means for causing said rheostats to be filled with the electrolyte at a uniform rate and means for varying the rate of filling.

10. In a control system for dynamo-electric machines, the combination with a constant potential apparatus, a plurality of liquid rheostats severally connected to intermediate taps in said apparatus, and a plurality of dynamo-electric machines adapted to be governed by said rheostats, of a circulating system for effecting a continuous flow of an electrolyte through said rheostats, and means for causing said rheostats to be successively filled with electrolyte.

11. In a control-system for electric motors, the combination with a source of energy, a plurality of liquid rheostats severally connected to intermediate taps in said source, and a plurality of electric motors electrically associated therewith, of means for successively operating said rheostats to effect gradual increases of potential supplied to said motors.

12. In a system of control for electric motors, the combination with a subdivided transformer winding, a plurality of liquid rheostats severally connected to intermediate taps therein, and a plurality of electric motors, of means for successively filling said rheostats with an electrolyte whereby gradual increases of potential supplied to said motors are effected.

13. In a system of control for electric motors, the combination with a subdivided transformer winding, a plurality of liquid rheostats connected thereto, and a plurality of electric motors associated therewith, of means for successively filling said rheostats with a suitable electrolyte, and means associated with each rheostat and dependent upon the height of said electrolyte therein for short circuiting said rheostats.

14. In a control system for electric motors, the combination with a subdivided transformer winding, a plurality of liquid rheostats connected thereto, and a plurality of electric motors adapted to be governed by said rheostats, of means for gradually filling said rheostats with a suitable electrolyte, and means for retarding the normal rate of filling.

15. In a control system for electric motors, the combination with a subdivided transformer winding, a plurality of liquid rheostats connected thereto, and a plurality of electric motors adapted to be governed by said rheostats, of means for continuously circulating an electrolyte through said rheostats, and means dependent upon the current traversing said motors for controlling the rate of flow.

16. In a control system for electric motors, the combination with a supply circuit, a liquid rheostat connected thereto, and an electric motor adapted to receive energy therefrom, of means for continuously circuating an electrolyte through said rheostat, means for causing said electrolyte to gradually fill said rheostat, means for varying the rate of filling, and means dependent upon the height of said electrolyte in said rheostat for short circuiting said rheostat when filled.

17. In a system of control for electric motors, the combination with a constant potential apparatus, liquid rheostats severally connected to intermediate taps therein, electric motors associated therewith, and a continuously circulating electrolyte, of a controller for governing the successive individual operation of said rheostats, whereby gradual increases of potential are supplied to said motors and for controlling the rate of said increases of potential

18. In a control system for electric motors, the combination with a plurality of liquid rheostats, a liquid-containing reservoir, means for delivering said liquid to said rheostats, and means for returning said liquid to said reservoir, of electro-responsive means for selectively controlling the operation of said rheostats and for controlling the rate of liquid circulation.

19. In a control system for electric motors, the combination with a liquid-containing reservoir, a plurality of rheostats associated therewith, and means for providing a continuous circulation of liquid therethrough, of electro-responsive means for causing said rheostats to be separately and gradually filled with said liquid, and means for disposing of excess liquid when a predetermined level is reached.

20. In a control system for electric motors, the combination with a liquid-containing reservoir, a plurality of liquid rheostats associated therewith, and means for providing a circulation of said liquid therethrough, of means associated with each rheostat for normally maintaining a slight circulation of liquid, means for increasing said flow to fill said rheostat, and means for reducing said flow when said rheostat is filled.

21. The combination with a liquid-containing reservoir, and a plurality of tanks associated therewith, each provided with an inlet port, an outlet port and an overflow port, and means for circulating said liquid, of electro-responsive means for closing said outlet port and opening said inlet port whereby said tank is gradually filled with liquid, and automatic means for partially closing said inlet port when the liquid reaches the level of said overflow port.

22. In a control system, the combination with a source of electrical energy, a containing tank, means for discharging said liquid from the bottom of said tank, and coöperating electrodes adapted to be immersed in said liquid, of means for confining the final break to a small body of liquid.

23. In a control system for dynamo electric machines, the combination with a plurality of liquid rheostats, a liquid-containing reservoir and means for continuously circulating the liquid in said reservoir, of electrically controlled means for successively directing the flow of liquid through the several rheostats.

24. In a system of control for electric motors, the combination with a derived source of energy, a plurality of liquid, rheostats severally connected thereto, and a plurality of electric motors severally associated therewith, of means for circulating an electrolyte successively through said rheostats.

25. In a control system for dynamo electric machines, the combination with a derived source of energy, a plurality of liquid rheostats connected thereto, a liquid-containing reservoir and means for continuously circulating the liquid in said reservoir, of means for successively directing the flow of liquid through the several rheostats and means for preventing the filling of more than one rheostat at a time.

26. In a control system for dynamo electric machines, the combination with a derived source of energy, a plurality of liquid rheostats connected to taps therein, and means for circulating a liquid through said rheostats, of means for preventing more than one rheostat being filled at the same time.

27. In a control system for dynamo electric machines, the combination with a derived source of energy, a plurality of liquid rheostats connected to taps therein, and means for circulating a liquid through said rheostats, of means for causing the rheostats to be successively filled and means for causing the liquid in the first rheostat to be substantially discharged prior to the filling of said second rheostat to prevent a local short-circuit across said derived source.

28. In a control system for dynamo electric machines, the combination with a transformer winding having a plurality of taps, a plurality of liquid rheostats severally connected thereto and in series circuit with said dynamo-electric machines, and means for filling said rheostats successively with a body of liquid of means for preventing two rheostats from being filled at the same time.

29. In a control system, the combination with a source of energy and a dynamo-electric machine associated therewith, of a plurality of individually adjustable liquid rheostats adapted to be successively connected to said source of energy and to said dynamo electric machine.

30. In a control system, the combination with a source of energy and a dynamo-electric machine associated therewith, of a plurality of liquid rheostats adapted to be connected in series circuit with said machine for governing the operation thereof.

31. In a control system, the combination with a source of energy and a dynamo-electric machine associated therewith, of a plurality of liquid rheostats adapted to be connected in series circuit with said dynamo-electric machine, and means for controlling the operation of said rheostats.

32. In a control system, the combination with a source of energy and a dynamo-electric machine associated therewith, of a plurality of individually adjustable liquid rheostats adapted to be successively connected to said source of energy and in series circuit with said dynamo-electric machine and means for controlling the operation of said rheostats.

33. In a control system, the combination with a source of energy and a dynamo-electric machine associated therewith, of a plurality of liquid rheostats and a single controller for governing the operation of said rheostats and connecting them successively in circuit with said dynamo-electric machine.

34. In a control system, the combination with a source of energy and a dynamo-electric machine associated therewith, of a plurality of liquid rheostats adapted to be connected to said source of energy for governing the operation of said machines, and means for individually controlling said rheostats and for effecting different rates of operation.

35. In a control system, the combination with a source of energy and a dynamo-electric machine associated therewith, of a plurality of liquid rheostats for governing the operation of said machines, means for supplying an electrolyte thereto, and means for controlling the operation of said rheostats and for determining the height of the electrolyte therein.

36. In a control system the combination with a source of energy and a dynamo-electric machine associated therewith, of a plurality of liquid rheostats for governing the operation of said machines, means for supplying an electrolyte thereto, and means for individually controlling the supply of electrolyte to said rheostats and for determining the height thereof.

37. In a control system, the combination with a source of energy and a dynamo-electric machine associated therewith, of a plurality of liquid rheostats adapted to be successively connected in circuit with said dynamo-electric machine, means for supplying electrolyte to said rheostats, and a controller for governing the operation of said rheostats and having two positions for each rheostat for changing the rate of supply of the electrolyte.

38. In a control system, the combination with a source of energy and a dynamo-electric machine associated therewith, of a plurality of liquid rheostats adapted to be successively connected in circuit with said dynamo-electric machine and a controller for governing the operation of said rheostats and having a "supply" and a "holding" position for each rheostat.

39. In a control system, the combination with a source of energy and a dynamo-electric machine associated therewith, of a plurality of liquid rheostats for governing the operation of said dynamo-electric machine and electro-responsive means dependent upon circuit conditions for governing the operation of said liquid rheostats.

40. In a control system, the combination with a source of energy and a dynamo-electric machine associated therewith, of a plurality of liquid rheostats adapted to be successively connected in the circuit of said dynamo-electric machine, and electro-responsive means associated with said circuit for governing the operation of said rheostats.

41. In a control system, the combination with a source of energy and a dynamo-electric machine associated therewith, of a plurality of liquid rheostats for successively governing the operation of said dynamo-electric machine, and a single means responsive to circuit conditions for controlling the operation of said liquid rheostats.

42. In a control system, the combination with a source of energy and a dynamo-electric machine, of a plurality of liquid rheostats for governing said dynamo-electric machine, electrically controlled inlet and outlet valves for each rheostat, and a controller for governing the operation of said valves of each rheostat.

43. In a control system, the combination with a source of energy and a dynamo-electric machine associated therewith, of a plurality of liquid rheostats for governing the operation of said dynamo-electric machine, means for supplying an electrolyte to said rheostats at different rates and means for successively controlling said rheostats and for selecting the rate of operation thereof.

44. In a control system, the combination with a source of energy and a dynamo-electric machine, of a liquid rheostat for governing the operation thereof, means for continuously supplying an electrolyte thereto, and means for controlling the supply of electrolyte and for substantially holding said electrolyte at any level.

45. In a control system, the combination with a source of energy and a dynamo-electric machine, of a liquid rheostat for governing the operation thereof, means for continuously supplying an electrolyte thereto and means for controlling the rate of supply thereof.

46. In a control system, the combination with a source of energy and a dynamo-electric machine, of a liquid rheostat for governing the operation thereof, said rheostat having an inlet opening and a discharge opening, a body of electrolyte adapted to be supplied to said rheostat, and means for controlling said inlet and said discharge openings.

47. In a control system, the combination with a source of energy and a dynamo-electric machine, of a liquid rheostat for governing the operation thereof, electrically controlled inlet and discharge valves associated with said rheostat, and a controller for governing the operation of said valves.

48. In a control system, the combination with a source of energy and a dynamo-electric machine, of a liquid rheostat for governing the operation thereof, electrically controlled inlet and discharge valves associated with said rheostat, and a controller for effecting a substantially concurrent closure of the discharge valve and opening of the inlet valve.

49. In a control system, the combination with a source of energy and a dynamo-electric machine, of a liquid rheostat for governing the operation thereof, a throttle inlet valve and a discharge valve associated with said rheostat, said throttle inlet valve being normally partially closed, and electro-magnetic means for governing the operation of said valves.

50. In a control system, the combination with a source of energy and a dynamo-electric machine, of a liquid rheostat for governing the operation thereof, a plurality of independent electrically controlled inlet and outlet valves associated with said rheostat, and a master controller for independently actuating said valves.

51. In a control system, the combination with a source of energy and a dynamo-electric machine, of a liquid rheostat for governing the operation thereof, electrically controlled inlet and discharge valves for said rheostat, a body of electrolyte adapted to be supplied thereto and a controller for effecting the closure of said discharge valve and the opening of said inlet valve for filling said rheostat with electrolyte, for effecting the closure of said inlet valve to substantially hold the electrolyte at any level and for opening said discharge valve to empty said rheostat.

52. In a control system, the combination with a source of energy and a dynamo-electric machine, of a liquid rheostat for governing the operation thereof, a normally partially closed inlet valve and a normally open discharge valve for said rheostat, electromagnetic means for control-

ling said valves, a controller for governing said electromagnetic means and an electro-responsive device dependent on circuit conditions for governing the action of one of said valves.

53. In a control system, the combination with a source of energy and a dynamo-electric machine, of a liquid rheostat for governing the operation thereof, a partially closed inlet valve and a discharge valve for said rheostat, means for opening said inlet valve and closing said discharge valve for operating said rheostat, and electro-responsive means for partially closing said inlet valve under predetermined circuit conditions.

54. In a control system, the combination with a source of energy and a dynamo-electric machine, of a liquid rheostat for governing the operation thereof, a body of electrolyte adapted to be supplied to said rheostat, independent inlet and discharge valves therefor, means for actuating said valves for filling said rheostat with electrolyte, and means dependent upon circuit conditions and coöperating with one of said valves for governing the height of the electrolyte in said rheostat.

55. In a control system, the combination with a source of energy and a dynamo-electric machine, of a liquid rheostat for governing the operation thereof, means for continuously circulating an electrolyte through said rheostat, means for causing said electrolyte to fill said rheostat, and manually controlled means for determining the height of said electrolyte.

56. In a control system, the combination with a source of energy and a dynamo-electric machine, of a liquid rheostat for governing the operation thereof, an inlet valve and a discharge valve, means for continuously circulating an electrolyte through said valves and out of contact with the rheostat electrodes when the dynamo-electric machine is at rest, and means for causing said electrolyte to fill said rheostat and for governing the operation thereof.

57. In a control system, the combination with a source of energy and a dynamo-electric machine, of a liquid rheostat for governing the operation thereof, electrically controlled inlet and discharge valves for said rheostat, means for continuously circulating an electrolyte through said rheostat, and a master controller having one position for closing said discharge valve, and another for opening said inlet valve and holding said discharge valve closed.

58. In a control system, the combination with a source of energy, a plurality of liquid rheostats associated therewith, and a dynamo-electric machine adapted to be governed by said rheostats, of means for governing the operation of said rheostats, and means associated with each rheostat for indicating its condition.

59. In a control system, the combination with a source of energy, a plurality of liquid rheostats associated therewith, and a dynamo-electric machine adapted to be governed by said rheostats, of a master controller for successively controlling the operation of said rheostats and a plurality of signaling devices associated with the respective rheostats for indicating their operating condition.

60. In a control system, the combination with a source of energy, a plurality of liquid rheostats associated therewith, and a dynamo-electric machine adapted to be governed by said rheostats, of a signaling-condition reservoir for electrolyte associated with the several rheostats and disposed beneath them, whereby the electrolyte discharged or overflowing from said rheostats draws to a common receiver, means for supplying said electrolyte to said rheostats, and means selectively controlling the operation of said rheostats.

61. In a control system, the combination with a source of energy and a dynamo-electric machine, of a liquid rheostat for governing the operation thereof, a normally partially closed inlet valve, a normally open discharge valve, a controller having one position for closing said discharge valve and another position for opening said inlet valve and maintaining said discharge valve closed, and means independent of said controller for causing said inlet valve to be partially closed under predetermined circuit conditions.

62. In a control system, the combination with a source of energy and a dynamo-electric machine, of a liquid rheostat in circuit with said dynamo-electric machine, means for effecting a continuous circulation of an electrolyte through said rheostat, means for gradually filling said rheostat with electrolyte, and means for retarding the normal rate of filling.

63. In a control system, the combination with a source of energy and a dynamo-electric machine, of a plurality of liquid rheostats having different voltage connections to said source for governing the operation of said machine, and means for individually controlling the operation of said rheostats.

64. In a control system, the combination with a source of energy and a dynamo-electric machine, of a plurality of liquid rheostats having different voltage connections to said source and adapted to govern the operation of said dynamo-electric machine, and means for controlling the operation of said machine by individually controlling the operation of said rheostats.

65. In a control system, the combination with a source of energy and a dynamo-electric machine, of a plurality of liquid rheostats having different voltage connections to said source for governing the operation of said machine, and means for supplying an electrolyte to said rheostat and for controlling the supply thereof.

66. In a control system, the combination with a source of energy and a dynamo-electric machine, of a plurality of liquid rheostats connected to said source for governing the operation of said machine, means for supplying an electrolyte to said rheostats, and means for controlling the supply thereof.

67. In a control system, the combination with a source of energy and a dynamo-electric machine, of a plurality of liquid rheostats connected to said source for governing the operation of said machine, means for continuously circulating an electrolyte, through said rheostats, and means for successively filling said rheostats with said electrolyte.

68. In a control system, the combination with a source of energy and a dynamo-electric machine, of a plurality of liquid rheostats adapted to be connected to said source for governing the operation of said machine, and means for successively filling said rheostats with said electrolyte.

69. In a control system, the combination with a source of energy, and a dynamo-electric machine, of a plurality of liquid rheostats having different voltage connections to said source for governing the operation of said machine, and means for successively filling said rheostats with an electrolyte.

70. In a control system, the combination with a source of energy and a dynamo-electric machine, of a plurality of liquid rheostats having different voltage connecting to said source for governing the operation of said machine, means for continuously circulating an electrolyte through said rheostats and means for successively filling said rheostats with electrolyte.

71. In a control system, the combination with a source of energy and a dynamo-electric machine, of a plurality of liquid rheostats connected to said source for governing the operation of said machine, means for successively filling said rheostats with an electrolyte, and means for individually controlling the operation of said rheostats.

72. In a control system, the combination with constant-potential apparatus and a plurality of liquid rheostats severally connected to intermediate taps in said apparatus, of a dynamo-electric machine adapted to be governed by said rheostats, means for successively filling said rheostats with an electrolyte, and means for individually controlling the operation of said rheostats.

73. In a control system, the combination with a source of energy, a plurality of liquid rheostats severally connected to intermediate taps therein, and a dynamo-electric machine adapted to be governed by said rheostats, of means for continuously circulating an electrolyte through said rheostats.

74. In a control system, the combination with a source of energy, a plurality of liquid rheostats having different connections to said source, and a dynamo-electric machine adapted to be governed by said rheostats, of means for continuously circulating an electrolyte through said rheostats, means for causing said rheostats to be filled with electrolyte at a uniform rate, and means for successively governing the operation of said rheostat.

75. In a control system, the combination with a source of energy, a plurality of liquid rheostats adapted to be connected thereto, and a dynamo-electric machine adapted to be governed by said rheostats, of means for effecting a continuous circulation of an electrolyte through said rheostats, means for causing said rheostats to be filled at a uniform rate and means for varying the rate of filling.

76. In a control system, the combination with a source of energy, a plurality of liquid rheostats having different connections to said source, and a dynamo-electric machine adapted to be governed by said rheostats, of means for filling said rheostats with an electrolyte at a uniform rate, and means for varying the rate of filling.

77. In a control system, the combination with a source of energy, a plurality of liquid rheostats having different connections to said source, and a dynamo-electric machine adapted to be governed by said rheostats, of means for successively filling said rheostats at a normal uniform rate, and means for varying the rate of filling.

78. In a control system, the combination with a source of energy, a plurality of liquid rheostats having different connections to said source, and a dynamo-electric machine adapted to be governed by said rheostats, of a circulating system for effecting a continuous flow of an electrolyte through said rheostats, and means for causing said rheostats to be successively filled with electrolyte.

79. In a control system, the combination with a source of energy, a plurality of liquid rheostats having different connections to said source, and a dynamo-electric machine, of means for successively operating said rheostats to effect gradual increases of potential supplied to said dynamo-electric machine.

80. In a control system, the combination with a source of energy, a plurality of liquid rheostats having different connections to said source, and a dynamo-electric machine, of means for operating said rheostats successively to govern the operation of said dynamo-electric machine, whereby a plurality of economical running positions are secured.

81. In a control system, the combination with a subdivided transformer winding, a plurality of liquid rheostats severally connected to intermediate taps therein, and a dynamo-electric machine, of means for successively filling said rheostats with an electrolyte, whereby gradual increases of potential are supplied to said machine.

82. In a control system, the combination with a subdivided transformer winding, a plurality of liquid rheostats severally connected to different taps thereof, and a dynamo-electric machine, of means for successively filling said rheostats with an electrolyte, whereby the potential supplied to said machine is increased in a series of steps corresponding to the number of rheostats.

83. In a control system, the combination with a subdivided transformer winding, of a dynamo-electric machine and a plurality of liquid rheostats severally adapted to be successively connected to said transformer winding and in circuit with said dynamo-electric machine, and means for filling said rheostats with an electrolyte.

84. In a control system, the combination with a source of energy, a plurality of liquid rheostats severally connected thereto, and a dynamo-electric machine adapted to be governed by said rheostats, of means for successively filling said rheostats with an electrolyte, and means associated with each rheostat and dependent upon the height of electrolyte therein for short-circuiting said rheostat.

85. In a control system, the combination with a source of energy, a plurality of liquid rheostats having different connections thereto, and a dynamo-electric machine adapted to be governed by said rheostats, of means for filling said rheostats with an electrolyte, and means associated with each rheostat for establishing a short-circuit connection when the electrolyte has reached a predetermined height.

86. In a control system, the combination with a source of energy, a plurality of liquid rheostats severally connected thereto, and a dynamo-electric machine adapted to be governed by said rheostats, of means for successively filling said rheostats with an electrolyte and for short-circuiting said rheostats when the electrolyte has reached a predetermined height and for subsequently decreasing the rate of filling.

87. In a control system, the combination with a source of energy, a plurality of liquid rheostats connected thereto, and a dynamo-electric machine adapted to be governed by said rheostats, of means for gradually filling said rheostats with an electrolyte, and means for retarding the normal rate of filling.

88. In a control system, the combination with a source of energy, a plurality of liquid rheostats connected thereto, and a dynamo-electric machine adapted to be governed by said rheostats, of means for successively filling said rheostats with an electrolyte and means dependent upon current traversing said dynamo-electric machine for controlling the rate of filling.

89. In a control system, the combination with a source of energy, a plurality of liquid rheostats connected thereto, and a dynamo-electric machine adapted to be governed by said rheostats, of means for continuously circulating an electrolyte through said rheostats, and means dependent upon circuit conditions for controlling the rate of circulation.

90. In a control system, the combination with a source of energy, a plurality of rheostats having different connections thereto, and a dynamo-electric machine adapted to be governed by said rheostats, of means for continuously circulating an electrolyte through said rheostats, means for successively filling said rheostats, and a single means dependent upon circuit conditions for controlling the rate of filling of all of said rheostats.

91. In a control system, the combination with a source of energy, a liquid rheostat connected thereto, and a dynamo-electric machine adapted to be governed by said rheostats, of means for circulating an electrolyte through said rheostat, means for causing said electrolyte to gradually fill said rheostat, means for varying the rate of filling, and means dependent upon the height of said electrolyte in said rheostat for short-circuiting said rheostat.

92. In a control system, the combination with a source of energy, a plurality of liquid rheostats having different connections thereto, and a dynamo-electric machine, of a system for continuously circulating electrolyte, and means for governing the successive individual operation of said rheostats, whereby gradual increases of potential are supplied to said dynamo-electric machine and for controlling the rate of said increases of potential.

93. In a control system, the combination with a source of energy, a plurality of liquid rheostats and a dynamo-electric machine adapted to be governed by said rheostats, of a liquid containing reservoir, means for delivering liquid to said rheostats, means for returning said liquid to said reservoir, and a master controller for selectively controlling the operation of said rheostats and for controlling the rate of liquid circulation.

94. In a control system, the combination with a plurality of liquid rheostats, a liquid-containing reservoir, and means for circulating a liquid through said rheostats, of means for selectively controlling the operation of said rheostats and for controlling the rate of liquid circulation.

95. In a control system, the combination with a liquid containing reservoir, a plurality of rheostats associated therewith, and means for providing a continuous circulation of liquid therethrough, of means for causing said rheostats to be separately and gradually filled with said liquid, and means for disposing of excess liquid when a predetermined level is reached.

96. In a control system, the combination with a liquid-containing reservoir, a plurality of rheostats associated therewith, and means for supplying liquid to said rheostats, of means for causing said rheostats to be separately and gradually filled with said liquid.

97. In a control system, the combination with liquid containing reservoir, a plurality of rheostats associated therewith, and means for providing a circulation of liquid therethrough, of means associated with each rheostat for normally maintaining a slight circulation of liquid, means

for increasing said flow to fill said rheostat and means for reducing said flow when said rheostat is filled.

98. In a control system, the combination with a liquid-containing reservoir, a plurality of rheostats associated therewith, and means for providing a circulation of liquid therethrough, of means for normally maintaining a slight circulation of liquid through said rheostats, and means for increasing said circulation to fill said rheostats.

99. In a control system, the combination with a source of energy, a liquid rheostat connected thereto and a dynamo-electric machine, of means for providing a circulation of an electrolyte through said rheostat, means for normally maintaining a slight circulation of an electrolyte through said rheostat, and means for increasing said flow of electrolyte to fill said rheostat.

100. The combination with a liquid-containing reservoir, a liquid rheostat associated therewith and provided with an inlet port and an outlet port and means for filling said rheostat with an electrolyte, of controlling means for closing said outlet port and opening said inlet port, for causing said rheostat to be gradually filled, and means for partially closing said inlet port when the rheostat is substantially filled.

101. The combination with a liquid rheostat provided with an inlet valve, an outlet valve and an overflow port, and means for supplying an electrolyte to said rheostat, of controlling means for governing the operation of said valves to effect a gradual filling of said rheostat.

102. The combination with a liquid rheostat provided with an inlet valve, an outlet valve and an overflow port, and means for circulating an electrolyte continuously through said rheostat, of means for controlling the operation of said valves for gradually filling said rheostat, said overflow port permitting a continuous circulation of electrolyte when the rheostat is filled.

103. In a control system, the combination with a source of energy, a dynamo-electric machine and a liquid rheostat in circuit with said machine and connected to said source of energy, of controllable means for filling said rheostat with an electrolyte, means for discharging said electrolyte from the bottom of said rheostat, coöperating electrodes adapted to be immersed in said electrolyte, and means for confining the final break in said circuit to a small body of electrolyte.

104. In a control system for a dynamo-electric machine, the combination with a plurality of liquid rheostats, a liquid-containing reservoir, and means for continuously circulating the liquid in said reservoir, of electrically controlled means for successively directing the flow of liquid through the several rheostats.

105. In a control system, the combination with a source of energy, a plurality of liquid rheostats severally connected thereto, and a dynamo-electric machine adapted to be governed by said rheostats, of means for circulating an electrolyte, succesively through said rheostats.

106. In a control system, the combination with a source of energy, a plurality of liquid rheostats connected thereto, and a dynamo-electric machine adapted to be governed by said rheostats, of means for maintaining a slight circulation of an electrolyte through all of said rheostats, and controllable means for successively increasing the flow of electrolyte through said rheostats.

107. In a control system, the combination with a source of energy, a plurality of liquid rheostats connected thereto, and a dynamo-electric machine adapted to be governed by said rheostats, of means for continuously circulating an electrolyte through said rheostats, means for successively filling said rheostats, and means for preventing the filling of more than one rheostat at a time.

108. In a control system, the combination with a source of energy, a plurality of liquid rheostats connected thereto, and a dynamo-electric machine adapted to be governed by said rheostats, of means for successively filling said rheostats with an electrolyte, and means for preventing the filling of more than one rheostat at a time.

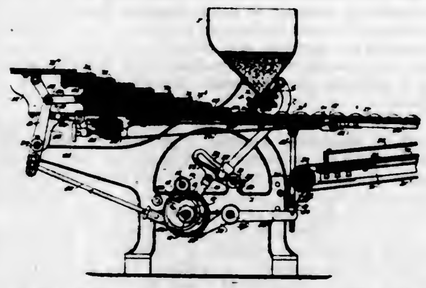
109. In a control system, the combination with a source of energy, a plurality of liquid rheostats connected thereto, and a dynamo-electric machine adapted to be governed by said rheostats, of means for successively filling said rheostats with an electrolyte, and means for preventing more than one rheostat being filled with electrolyte at a time.

110. In a control system, the combination with a source of energy, a plurality of liquid rheostats connected thereto, and a dynamo-electric machine adapted to be governed by said rheostats, of means for filling said rheostats successively with an electrolyte, and means for preventing the filling of another rheostat.

111. In a control system, the combination with a source of energy, a plurality of liquid rheostats having different connections thereto, and a dynamo-electric machine adapted to be governed by said rheostats, of means for circulating an electrolyte through said rheostats, means for causing the rheostats to be successively filled, and means for causing the electrolyte in the first rheostat to be substantially discharged prior to the filling of the second rheostat for preventing a local short-circuit across said source of energy.

112. In a control system, the combination wth a source of energy, a dynamo-electric machine, and a plurality of liquid rheostats having different connections to said source to be connected successively in series circuit with said dynamo-electric machine, and means for filling said rheostats successively with an electrolyte, and means for preventing a plurality of rheostats being filled at the same time.

12,999. DEPOSITING-MACHINE. FREDERICK WESTERMAN, Chicago, Ill. Filed June 1, 1915. Serial No. 31,638. Original No. 1,121,430, dated Dec. 15, 1914, Serial No. 630,268. (Cl. 107—27.)



1. In a machine of the character described, the combination with a depositing mechanism, of means for feeding cakes or the like to said depositing mechanism, comprising two sets of alternately arranged, superposed steps, each comprising a plurality of connected steps, and having a relatively reciprocating movement sufficient to project the cakes or the like from one set of steps to the other at each throw, and means for relatively shifting said sets of steps.

2. In a machine of the character described, the combination with a depositing mechanism having a row of orifices, of means for feeding cakes or the like in rows to said depositing mechanism, comprising two sets of superposed steps, the steps of the one set being arranged between the steps of the other set, and said sets having a relative reciprocating movement sufficient to project the cakes from one step to the next at each throw, one or more of said steps having means for spacing the cakes of each row and mechanism for relatively shifting said sets of feeding steps.

3. In a machine of the character described, the combination with a depositing mechanism, of mechanism for feeding cakes or the like in rows to said depositing mechanism, comprising a set of horizontal, relatively stationary steps, a set of horizontal reciprocating steps connected for unison movement and arranged between the steps of said relatively stationary set, and mechanism for reciprocating said relatively movable steps through a distance substantially equal to the space between the edges of two adjacent steps of said relatively stationary set to project the rows of cakes from one set of steps to the other at each throw, substantially as described.

4. In a machine of the character described, the combination with a depositing device, of a traveling carrier below said device, mechanism for feeding cakes or the like onto said carrier, said feed mechanism comprising two sets of alternately arranged superposed steps having a relative reciprocating movement sufficient to project the cakes from one step to the next at each throw, means for relatively reciprocating said sets of steps, and means for intermittently operating said traveling carrier to deliver the cakes from said depositing device.

5. In a machine of the character described, the combination with a depositing device having a row of orifices, of a traveling carrier band arranged below said depositing device, mechanism for feeding and positioning cakes or the like in rows onto said band and beneath the said row of orifices, said feed mechanism comprising two sets of alternately arranged superposed steps having a relative reciprocating movement sufficient to project the cakes from one step to the next at each throw, one or more of said steps having means for spacing the cakes of each row, means for operating said depositing device and said steps, and means for intermittently advancing said carrier band.

6. In a machine of the character described, the combination with a depositing device, of means for feeding cakes or the like in rows to said depositing device, said feeding mechanism comprising two sets of alternately arranged, relatively reciprocating steps, the inner ends of one or more of said steps having projections for engaging and spacing the cakes.

7. In a machine of the character described, the combination with a depositing device, of mechanism for feeding cakes to said depositing device comprising a series of alternately arranged superposed relatively reciprocating steps, and mechanism for relatively reciprocating said steps and for imparting a relatively greater throw to the lowermost step of the series.

8. In a machine of the character described, the combination with a depositing device having a row of discharge orifices, of means for feeding cakes or the like into position below said discharge orifices, said feeding mechanism comprising a series of alternately arranged relatively stationary and reciprocating steps, the inner operative ends of certain of said steps each having a series of pockets.

9. In a machine of the character described, the combination with a depositing device, of mechanism for feeding the cakes to said depositing device comprising a series of alternately arranged, superposed relatively fixed and movable steps, and mechanism for reciprocating said movable steps and for imparting a relatively greater throw to the lowermost step of the series.

10. In a machine of the character described, the combination with the depositing mechanism having a row of orifices, of a support below said orifices, means for raising and lowering said support, means for feeding the cakes or the like in rows onto said support and below said orifices, said feed mechanism comprising a series of alternately arranged, relatively fixed and movable steps, all of said steps being mounted upon and shifting with said support, and means for reciprocating said relatively movable steps.

11. In a machine of the character described, the combination with a depositing device having a series of orifices, of a traveling carrier and frame therefor arranged below said orifices, said carrier frame being pivotally mounted at its outer end, means for vertically shifting the inner portion of said carrier frame to and from said orifices and feed mechanism mounted on said shifting carrier frame comprising a series of alternately arranged, relatively fixed and reciprocating steps.

12. A machine of the character described comprising a depositing device and an endless traveling carrier band and frame therefor arranged below said depositing device, said frame consisting of two sections hinged together at their inner adjacent ends and pivotally supported at their outer ends, mechanism for vertically shifting the inner hinged ends of said sections to and from said depositing device and means for intermittently advancing said carrier band.

13. A machine of the character described comprising a depositing device and an endless traveling carrier band and frame therefor arranged below said depositing device, said carrier frame consisting of two longitudinal sections hinged together at their inner adjacent ends and pivotally supported at their outer ends, mechanism for vertically shifting the hinged inner ends of said sections to and from said depositing device, a second traveling carrier band for drying boards or the like arranged below the discharge end of said first mentioned carrier band and mechanism for intermittently advancing said carrier bands.

14. In a machine of the class described, the combination with a depositing device, of a carrier below said device comprising an endless carrier band and a carrier frame whereon said band is mounted, said frame being pivotally mounted at the outer discharge end of the carrier, mechanism for vertically shifting said pivoted carrier frame and band to and from said depositing device, a second carrier band and a fixed supporting frame arranged below the outer discharge end of said first-mentioned carrier, and mechanism for intermittently advancing said carrier bands, substantially as described.

15. A machine of the character described comprising a depositing device, a traveling band and frame therefor arranged below said depositing device, said carrier frame consisting of two longitudinal sections hinged together at their inner adjacent ends, the outer ends of said sections being pivotally supported, mechanism for raising and lowering the inner adjacent ends of said carrier frame sections, means for sustaining the discharge end of said carrier frame in a manner permitting the reciprocating movement thereof, feed mechanism for depositing cakes on said carrier band, a second traveling carrier band for supporting trays or the like arranged below the discharge end of said first mentioned carrier band and mechanism for operating said depositing device and for intermittently advancing said carrier bands.

16. In a machine of the character described, the combination with a depositing device having a row of orifices, of a traveling carrier band below said depositing device, mechanism for intermittently and alternately operating said depositing device and said carrier band, a feeding device for moving rows of cakes over the surface of said traveling carrier band, said feeding device having a working edge provided with a series of pockets for receiving the cakes, and mechanism for moving said feeding device to a point adjacent the orifices of said depositing device when the latter and said carrier band are inactive to thereby aline a row of cakes upon said traveling carrier band and beneath said orifices.

17. In a machine of the character described, the combination with a depositing mechanism having a row of orifices, an endless carrier below said orifices, and means for moving one of said parts vertically to and from the other, of a feeding device on the feed side of said depositing mechanism and having a notched working edge arranged to move the cakes over the surface of said carrier and aline the same in rows beneath said orifices, a second traveling carrier for drying boards or the like arranged below the discharge end of said first mentioned carrier, the latter having a narrow discharge end arranged to engage and deliver the cakes directly onto the drying boards on said second carrier, said narrow discharge end being free to rise and fall as the drying boards are passed beneath it, and mechanism for intermittently advancing said carriers.

18. In a machine of the character described, the combination with a depositing device, of an endless traveling carrier band and a pivoted frame therefor arranged below said device, said pivoted frame having a narrow discharge end free to rise and fall around which said carrier band passes, a roller at the opposite end of said pivoted frame, means for raising and lowering said frame and the carrier band toward and from the depositing device, a

second traveling carrier for drying boards or the like arranged below the discharge end of said first mentioned carrier band, and mechanism for intermittently advancing said carrier bands.

19. A machine of the character described comprising a depositing device having a row of orifices, an endless traveling carrier band arranged below said depositing device, a supporting frame for said carrier band comprising two sections hinged together at their inner adjacent ends and pivotally supported at their outer ends, feed mechanism for moving cakes or the like over the surface of said carrier band and for alining the same beneath said row of orifices, means for raising and lowering the inner hinged ends of said frame sections to and from said row of orifices, a second traveling carrier for drying boards or the like arranged below the discharge end of said first mentioned carrier, the latter having a narrow discharge end free to rise and fall as the drying boards or the like are passed beneath it, and mechanism for intermittently advancing said carriers and for intermittently operating said depositing and feeding devices.

20. In a machine of the character described, the combination with a depositing device having a row of orifices, of a traveling carrier band below said depositing device, mechanism for intermittently and alternately operating said depositing device and said carrier band, a feeding device for advancing rows of cakes over the surface of said traveling carrier band in the direction of movement of the latter, said feeding device having a working edge provided with a series of pockets for receiving the cakes, mechanism for automatically moving said feeding device to a point adjacent the orifices of said depositing device when the latter and the said carrier band are inactive to thereby aline a row of cakes upon said band and beneath said orifices, mechanism for relatively shifting said carrier band and said depositing device in vertical direction, said carrier having a narrow, vertically movable, outer discharge end, and a second traveling carrier arranged beneath said outer discharge end.

21. In a machine of the character described, the combination with a depositing device having a row of orifices, of a traveling carrier and a supporting frame therefor below said orifices, a feeding device for moving rows of cakes upon the surface of said traveling carrier, said feeding device having a working edge provided with a series of pockets for receiving and spacing the cakes of each row and having a plate extending over the inner portions of said pockets, means for moving said feeding device to a point adjacent the orifices of the depositing device to aline a row of cakes beneath said orifices, and means for intermittently actuating said feeding device and depositing device and said carrier.

22. In a machine of the character described, the combination with a depositing device, of an endless traveling carrier band and a supporting frame therefor arranged below said depositing device, feed mechanism for positioning cakes or the like on said carrier band, a second carrier for drying boards or the like arranged below the outer discharge end of said first mentioned carrier, the latter having a narrow discharge end free to rise and fall as the drying boards are passed beneath it by said second carrier, means for counterbalancing the discharge end of said first mentioned carrier and mechanism for intermittently advancing said carriers.

23. In a machine of the character described, the combination with a depositing device, of an endless traveling carrier band and vertically movable supporting frame therefor arranged below said device and having a narrow, outer discharge end, a second traveling carrier for drying boards or the like arranged below the narrow discharge end of said first mentioned carrier, mechanism for automatically raising and lowering the inner portion of said carrier supporting frame to and from said depositing device, and means for manually raising and lowering the outer discharge end of said carrier frame to and from said second carrier.

24. In a machine of the character described, the combination with a depositing device, of an endless traveling carrier band, a supporting frame therefor arranged below said device and having a narrow, outer discharge end, a second traveling carrier for drying boards or the like arranged below the narrow discharge end of said first mentioned carrier, mechanism for automatically raising and lowering the inner portion of said first mentioned carrier and its supporting frame to and from said depositing device, and a manually shiftable support for its narrow discharge end having a pin-and-slot connection therewith, whereby said narrow discharge end is free to rise and fall as the drying boards are passed beneath it by said second carrier.

25. In a machine of the character described, the combination with a depositing device, of an endless traveling carrier band, a supporting frame therefor arranged below said device and having a narrow, outer discharge end, a second traveling carrier for drying boards or the like arranged below the narrow discharge end of said first mentioned carrier, mechanism for automatically raising and lowering the inner portion of said first mentioned carrier and its supporting frame to and from said depositing device, a swinging support for its narrow discharge end having a pin-and-slot connection therewith and a weight connected to said support for counterbalancing the discharge end of said first mentioned carrier.

26. In a machine for depositing marshmallow and like material on cakes, the combination with a depositing device having a row of nozzles and intermittently operating means for ejecting material from said nozzles, of an intermittently operating carrier band extending beneath said nozzles, means for feeding cakes in rows directly onto the upper horizontal reach of said band and for spacing the cakes of each row thereon comprising sets of alternately arranged relatively fixed and movable steps, certain of said steps having notched working edges for spacing the cakes, and mechanism for reciprocating said relatively movable steps.

27. In a machine for depositing marshmallow and like material on cakes, the combination with a depositing device having a row of nozzles and plunger mechanism for ejecting material from said nozzles, of an endless carrier band and a parallel supporting bed therefor extending beneath said depositing device, means for vertically shifting said supporting bed and said carrier band, means for alternately and intermittently operating said depositing device and said carrier band, and means for feeding and spacing cakes in rows upon the upper horizontal reach of said band above said supporting bed, said feeding means comprising relatively stationary and reciprocating steps certain of which are provided with notched working edges for spacing the cakes.

28. In a machine for depositing marshmallow and like material on cakes, the combination of a depositing device having a row of nozzles and plunger mechanism for ejecting the material from said nozzles, of an endless carrier band extending beneath said nozzles, means for intermittently and alternately operating said plunger mechanism and said carrier band, a cake feeder for moving cakes over and in contact with the upper horizontal surface of said carrier band, said feeder having its working edge notched to provide a series of adjacent pockets for receiving and spacing the cakes of each row upon said carrier band, and means for delivering the cakes in rows to said feeder comprising relatively stationary and reciprocating steps, the working edge of at least one of which is notched to provide a series of adjacent pockets for receiving and spacing the cakes of each row.

29. In a machine for depositing marshmallow and like material on cakes, the combination with a depositing device having a row of nozzles and plunger mechanism for ejecting material from said nozzles, of an endless carrier band extending beneath said nozzles, means for intermittently and alternately operating said depositing device and said carrier band, a cake feeder having a notched working edge arranged to move the cakes upon the upper horizontal surface of said carrier band and to space the same in rows thereon, and means for delivering cakes in rows to said feeder comprising a stationary step having a notched working edge, a subjacent reciprocating step arranged to draw the cakes against the notched edge of said stationary step on its back stroke and to advance the same on its forward stroke.

30. In a machine for depositing marshmallow and the like on cakes, the combination with a depositing device having a row of nozzles and plunger mechanism for ejecting material therefrom, of an endless carrier band and a parallel supporting bed therefor extending beneath said depositing device, a reciprocating feeder movably mounted on said supporting bed on the feed side of said depositing device and having a notched working edge arranged to move the cakes over the upper horizontal surface of said band and to space the same in rows thereon, an additional reciprocating feeder for delivering the cakes in rows to said first mentioned feeder, and actuating means for simultaneously reciprocating said feeders.

31. In a machine for depositing marshmallow and the like on cakes, the combination with a depositing device having a row of nozzles and plunger mechanism for ejecting material therefrom, of an endless carrier band and a parallel supporting bed therefor extending beneath said depositing device, a feeding device movably guided on said supporting bed and having a notched working edge for moving and spacing the cakes upon the upper horizontal surface of said band above said supporting bed, and means for moving said feeder to a point adjacent said nozzles when said depositing device and said carrier are inactive to thereby aline a row of cakes upon said carrier and below said nozzles.

32. In a machine for depositing marshmallow and like material on cakes, the combination with a depositing device having a row of nozzles and plunger mechanism for ejecting material from said nozzles, of an endless carrier band extending beneath said nozzles, means for intermittently and alternately operating said depositing device and said carrier band, a cake feeder on the feed side of said depositing device having a notched working edge for moving and spacing the cakes upon the upper horizontal surface of said carrier band, means for moving said feeder to a point adjacent the nozzles of said depositing device when the latter and said carrier band are inactive, to thereby aline a row of cakes upon said carrier band and beneath said orifices, an additional feeder for delivering cakes in rows to said first mentioned feeder and actuating means for reciprocating said feeders.

33. In a machine for depositing marshmallow and the like on cakes, the combination with a depositing device having a row of nozzles and plunger mechanism for ejecting material therefrom, of an endless carrier band and a parallel supporting bed therefor extending beneath said depositing device, means for raising and lowering said bed and carrier band, means for intermittently and alternately operating said depositing device and said carrier band, a reciprocating feeder movably mounted on said supporting bed on the feed side of said depositing device arranged to move the cakes upon the upper horizontal surface of said band above said supporting plate and to space the same in rows thereon, and an additional reciprocating feeder for delivering the cakes in rows to said first mentioned feeder.

34. In a machine for depositing marshmallow and the like on cakes, the combination with a depositing device having a row of nozzles and plunger mechanism for ejecting material therefrom, of an endless carrier band and a parallel, pivotally mounted supporting bed therefor extending beneath said depositing device, means for raising and lowering said pivoted bed and said carrier band, means for intermittently and alternately operating said depositing device and said carrier band, a feeding device movably guided on said pivoted supporting bed and having a notched working edge for moving and spacing the cakes upon the upper horizontal surface of said band above said supporting bed, means for moving said feeder to a point adjacent said nozzles when said depositing device and said carrier are inactive to thereby aline a row of cakes upon said carrier and beneath said depending nozzles.

35. In a machine for depositing marshmallow and the like on cakes, the combination with a depositing device having a row of nozzles and plunger mechanism for ejecting material therefrom, of a buckling carrier band, a flat, pivotally mounted, supporting bed therefor extending beneath said depositing device, means for raising and lowering said pivoted bed, a feeding device movably mounted on said pivoted supporting bed arranged to move the cakes over the upper horizontal surface of said band above said supporting bed and to space the same in rows thereon, a second carrier for drying boards extending beneath the said buckling carrier, the latter having a narrow discharge end arranged to deliver the cakes onto the drying boards on said second carrier.

36. In a machine for depositing marshmallow and the like on cakes, the combination with a depositing device having a row of nozzles and plunger mechanism for ejecting material therefrom, of a buckling carrier band, a flat supporting bed therefor extending beneath said depositing device, means for raising and lowering said bed and said carrier, a reciprocating feeder movably mounted on said supporting bed on the feed side of said depositing device and having a notched working edge arranged to move the cakes over the upper horizontal surface of said band above said bed and space the same in rows thereon, means for moving said feeder to a point adjacent said nozzles of said depositing device when the latter and said carrier are inactive to thereby aline a row of cakes upon said carrier and beneath said nozzles, a second carrier for drying boards, said buckling carrier having a narrow discharge end arranged to deliver the cakes onto said drying boards.

37. In a machine for depositing marshmallow and like material on cakes, the combination with a depositing device having a row of nozzles and plunger mechanism for ejecting material therefrom, of a buckling carrier band having a substantially horizontal upper reach, a flat supporting bed therefor pivotally mounted on the feed side of said depositing device and extending beneath the same, means for raising and lowering said bed and carrier to position the cakes adjacent but spaced from said nozzles, a reciprocated feeder movably guided on said bed for moving and alining the cakes in rows upon said carrier band, and a second carrier for drying boards upwardly inclined below the discharge end of said buckling carrier, the latter having a narrow discharge end arranged to deliver the cakes directly onto the drying boards on said second carrier.

38. In a machine for depositing marshmallow and like material on cakes, the combination with a depositing device having a row of nozzles and plunger mechanism for ejecting material from said nozzles, of an endless carrier band extending beneath said nozzles, means for intermittently and alternately operating said plunger mechanism and said carrier band, a cake feeder on the feed side of said depositing device having a notched working edge for moving the cakes in rows over and in contact with the upper horizontal surface of said carrier band and for spacing the cakes of each row thereon, additional feeding means for delivering the cakes in rows to said feeder comprising relatively stationary and reciprocating steps, and means for operating said feeder and said additional feeding means in timed relation.

39. In a machine for depositing marshmallow and the like on cakes, the combination with a depositing device having a row of nozzles and plunger mechanism for ejecting material therefrom, of a buckling carrier band extending beneath said depositing device and supported at its ends and having a narrow discharge end, a feeding device upon the feed side of said depositing device for moving the cakes in rows over and in contact with the upper surface of said carrier band, said feeding device having its working edge notched to provide a series of adjacent pockets for receiving and spacing the cakes of each row upon said carrier band, means for raising and lowering said buckling carrier band to position the rows of cakes thereon adjacent but out of contact with said nozzles, and a second carrier for drying boards or the like extending beneath the narrow discharge end of said buckling carrier band.

40. In a machine for depositing marshmallow and the like on cakes, the combination with a depositing device having a row of nozzles and plunger mechanism for eject-

ing material therefrom, of an endless buckling carrier band and a parallel supporting bed therefor extending beneath said depositing device, means for raising and lowering said bed and said carrier band to position the cakes thereon adjacent but out of contact with said nozzles, means for intermittently and alternately operating said plunger mechanism and said carrier band, a feeding device on the feed side of said depositing device and having a notched working edge for moving the cakes in rows over and in contact with the upper surface of said band and for spacing the cakes of each row thereon, an additional feeding means for delivering the cakes in rows to said first mentioned feeder, and means for operating the latter and said additional feeding means in timed relation.

41. In a machine for depositing marshmallow and like material on cakes, the combination with a depositing device having a row of nozzles and plunger mechanism for ejecting the material therefrom, of an endless carrier band and parallel supporting bed therefor extending beneath said depositing device, means for raising and lowering said bed and said carrier band to position the cakes thereon adjacent but out of contact with said nozzles, means for intermittently and alternately operating said plunger mechanism and advancing said carrier band, a reciprocating feeder on the feed side of said depositing device for moving the cakes in rows over and in contact with the upper horizontal surface of said carrier band, said feeder having its working edge notched to provide a series of adjacent pockets for receiving and spacing the cakes of each row, and means for advancing said feeder to thereby aline a row of cakes upon said carrier band when the latter is inactive.

42. In a machine for depositing marshmallow and the like on cakes, the combination with a depositing device having a row of nozzles and plunger mechanism for ejecting material therefrom, of a buckling carrier band supported at its ends and having a narrow discharge end, means for raising and lowering said buckling carrier band to position the cakes thereon adjacent but out of contact with said nozzles, means for intermittently and alternately operating said plunger mechanism and said carrier band, a reciprocating feeding device on the feed side of said depositing device for moving the cakes in rows over and in contact with the upper surface of said carrier band, said feeding device having its working edge notched to provide a series of adjacent pockets for receiving and spacing the cakes of each row upon said carrier band, means for advancing said feeding device to aline a row of cakes upon said band when the latter is inactive, additional feeding means operating in timed relation with said feeding device for delivering the cakes in rows thereto, and a second carrier band for drying boards and the like arranged beneath the discharge end of said first mentioned carrier.

DESIGNS.

47,980. CHARM, BADGE, OR SIMILAR ARTICLE. JOHN BAIN, Pittsburgh, Pa. Filed July 22, 1915. Serial No. 41,406. Term of patent 7 years.



The ornamental design for a charm, badge, or similar article, substantially as shown.

47,981. CHARM, BADGE, OR SIMILAR ARTICLE. JOHN BAIN, Pittsburgh, Pa. Filed July 22, 1915. Serial No. 41,407. Term of patent 7 years.



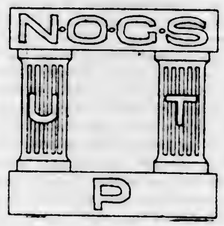
The ornamental design for a charm, badge, or similar article, substantially as shown.

47,982. ELECTRIC-LIGHT HANGING-LAMP FIXTURE. FREDERICK C. BAKER, Portland, Oreg. Filed Feb. 26, 1915. Serial No. 10,874. Term of patent 7 years.



The ornamental design for an electric light hanging lamp fixture, substantially as shown.

47,983. MEDALLION, BADGE, WATCH-FOB, WATCH-CHARM, RING, SCARF-PIN, BROOCH, BUTTON, OR SIMILAR ARTICLE OF JEWELRY. FRED A. BERRY, Los Angeles, Cal. Filed Aug. 10, 1915. Serial No. 44,845. Term of patent 3½ years.



The design for medallion, badge, watch-fob, watch-charm, ring, scarf-pin, brooch, button, or similar article of jewelry, as shown.

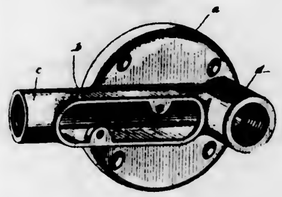
47,984. REVOLVER OR PISTOL HANDLE. FRED BIFFAR, Chicago, Ill. Filed Dec. 7, 1914. Serial No. 875,982. Term of patent 14 years.



The ornamental design for a revolver or pistol handle, as shown and described.

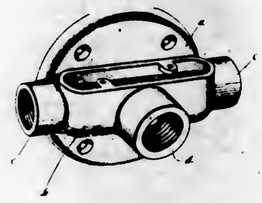
47,985. ELECTRICAL-CONDUIT OUTLET-BOX. CARL H. BISSELL, Syracuse, N. Y., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed July 19, 1915. Serial No. 40,779. Term of patent 14 years.

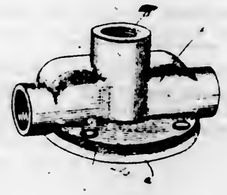




The ornamental design for an electrical conduit outlet box substantially as shown and described.

47,986. ELECTRICAL-CONDUIT OUTLET-BOX. CARL H. BISSELL, Syracuse, N. Y., assignor to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed July 19, 1915. Serial No. 40,780. Term of patent 14 years.





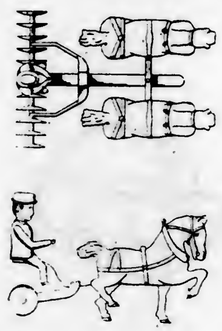
The ornamental design for an electrical conduit outlet box substantially as shown and described.

47,987. ELECTRICAL-CONDUIT OUTLET-BOX. CARL H. BISSELL, Syracuse, N. Y., and DANIEL C. GIDLEY, Boston, Mass., assignors to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed July 30, 1915. Serial No. 42,888. Term of patent 14 years.



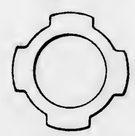
The ornamental design for an electrical conduit outlet box substantially as shown and described.

47,988. TOY. JOHN BOE, Bateman, Saskatchewan, Canada. Filed Mar. 30, 1915. Serial No. 18,204. Term of patent 7 years.



The ornamental design for a toy, as shown.

47,989. HOSE-WASHER. ERICH F. J. BREUER, Decatur, Ill., assignor to H. Mueller Mfg. Co., Decatur, Ill., a Corporation of Illinois. Filed Aug. 5, 1914. Serial No. 855,334. Term of patent 14 years.





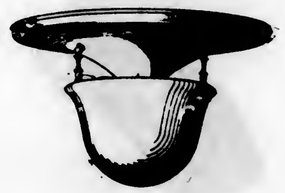
The ornamental design for a hose washer, as shown.

47,990. PIN OR BADGE. JOSEPH ALBERT BRIEGEL, Chicago, Ill. Filed Aug. 30, 1915. Serial No. 48,117. Term of patent 14 years.



The ornamental design for a pin or badge as shown.

47,991. LIGHTING-FIXTURE. JOSEPH CHASSAING, St. Louis, Mo., assignor to Luminous Unit Company, St. Louis, Mo., a Corporation of Missouri. Filed June 1, 1915. Serial No. 31,591. Term of patent 7 years.



The ornamental design for a lighting fixture, as shown.

47,992. THREAD-CUTTER. FRED D. CLARKE, Rochester, N. Y. Filed Apr. 3, 1915. Serial No. 19,079. Term of patent 14 years.



The ornamental design for a thread cutter, as shown.

47,993. BRACELET-LINK. MORGAN H. COX, Dallas, Tex., assignor to R. Holl Shuttles, Dallas, Tex. Filed June 18, 1915. Serial No. 34,943. Term of patent 7 years.



The ornamental design for a bracelet link, as shown.

47,994. TOY. LAURA F. DAVIDSON, Houston, Tex. Filed May 14, 1915. Serial No. 28,209. Term of patent 7 years.



The ornamental design for a toy, as shown.

47,995. WORK-BENCH. ROBERT L. GORDON, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass. Filed June 4, 1915. Serial No. 32,220. Term of patent 3½ years.



The ornamental design for a work bench, as shown.

47,996. HEAD ORNAMENT. KATE M. GUINIS and SPYROS D. VAMVAS, Jacksonville, Fla. Filed July 28, 1915. Serial No. 42,429. Term of patent 7 years.



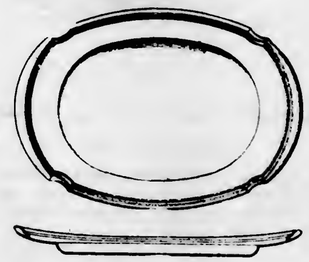
The ornamental design for a head ornament, as shown.

47,997. LIGHTING-FIXTURE. EDWIN F. GUTH and RAYMOND V. OWEN, St. Louis, Mo., assignors to Luminous Unit Company, St. Louis, Mo., a Corporation of Missouri. Filed May 6, 1915. Serial No. 26,431. Term of patent 14 years.



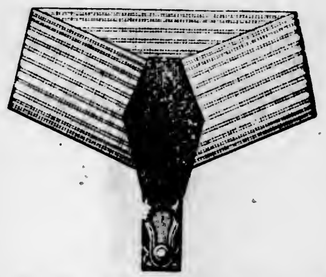
The ornamental design for a lighting fixture, as shown.

47,998. PLATTER, TRAY, OR SIMILAR ARTICLE. HAROLD H. HAMILTON, Bridgeport, Conn., assignor to Whiting Manufacturing Company, New York, N. Y., a Corporation of New York. Filed July 22, 1915. Serial No. 41,409. Term of patent 14 years.



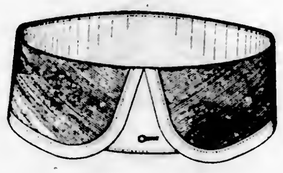
The ornamental design for a platter, tray or similar article, as shown.

47,999. GARTER. MYRON B. HAMMOND, Bridgeport, Conn., assignor to The Thos. P. Taylor Co., a Corporation of Connecticut. Filed July 31, 1915. Serial No. 43,005. Term of patent 7 years.



The ornamental design for a garter, as shown.

48,000. FOLD-COLLAR. HUBBARD F. HURD, Troy, N. Y., assignor to Cluett, Peabody & Co., Inc., Troy, N. Y., a Corporation of New York. Filed July 25, 1914. Serial No. 853,170. Term of patent 3½ years.



The ornamental design for a fold-collar, as shown and described.

48,001. BISCUIT. JOHN L. KELLOGG, Battle Creek, Mich. Filed Oct. 14, 1914. Serial No. 866,710. Term of patent 14 years.



The ornamental design for a biscuit, as shown.

48,002. CHARM, STICK-PIN, STATUETTE, LUCKY DOG, OR COMIC DOG. SHIRO KONDOW, Los Angeles, Cal. Filed June 21, 1915. Serial No. 35,457. Term of patent 3½ years.



The ornamental design for a charm, stick pin, statuette, lucky dog or comic dog, as shown.

48,003. TALKING-MACHINE CABINET. CLARENCE E. LIVENGOOD and CHARLES W. BALDWIN, Meyersdale, Pa. Filed May 28, 1915. Serial No. 31,070. Term of patent 7 years.



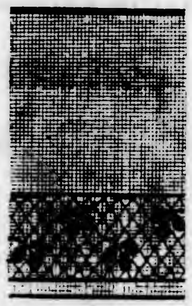
The ornamental design for a talking machine cabinet, as shown.

48,004. HOSE-WASHER. ROBERT MUELLER, Decatur, Ill., assignor to H. Mueller Mfg. Co., Decatur, Ill., a Corporation of Illinois. Filed Aug. 5, 1914. Serial No. 855,332. Term of patent 14 years.



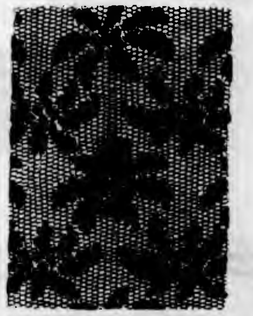
The ornamental design for a hose washer, as shown.

48,005. LACE FABRIC. ALBERT E. NEWTON, Pawtucket, R. I., assignor to Regina Lace Company, a Corporation of Massachusetts. Filed Aug. 2, 1915. Serial No. 43,334. Term of patent 3½ years.



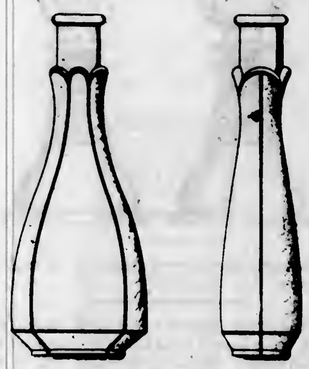
The ornamental design for a lace fabric, as shown.

48,006. LACE FABRIC. ALBERT E. NEWTON, Pawtucket, R. I., assignor to Regina Lace Company, a Corporation of Massachusetts. Filed Aug. 24, 1915. Serial No. 47,149. Term of patent 3½ years.



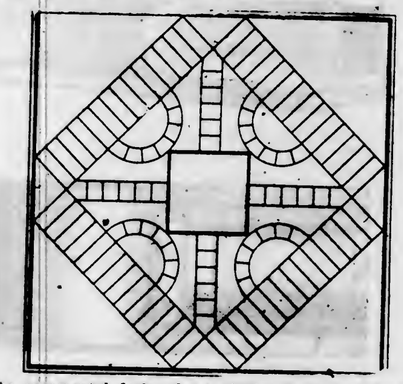
The ornamental design for a lace fabric, as shown.

48,007. BOTTLE. WILLIAM OREM, Baltimore, Md., assignor to Mme. Ise'bells' Toilet Manufacturing Co., Chicago, Ill. Filed Sept. 7, 1915. Serial No. 49,392. Term of patent 14 years.



The ornamental design for a bottle as shown.

48,008. PLAYING-TRACK OF A BOARD GAME. GEORGE S. PARKER, Salem, Mass. Filed July 22, 1915. Serial No. 41,411. Term of patent 14 years.



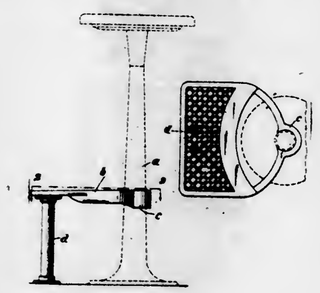
The ornamental design for a playing track of a board game, as shown.

48,009. ALTAR. GUSTAVE RATHNER, New York, N. Y., assignor to Edward R. Kleemichen, Stamford, Conn. Filed July 27, 1915. Serial No. 42,225. Term of patent 3½ years.



The ornamental design for an altar, as shown.

48,010. COUNTER-STOOL FOOT-REST. HENRY R. REISCHMANN, New York, N. Y. Filed June 21, 1915. Serial No. 35,466. Term of patent 3½ years.



The ornamental design for a counter stool foot rest, as shown and described.

48,011. POISON-BOTTLE. DANIEL SCALLIONE, Hazleton, Pa. Filed June 22, 1915. Serial No. 35,724. Term of patent 14 years.



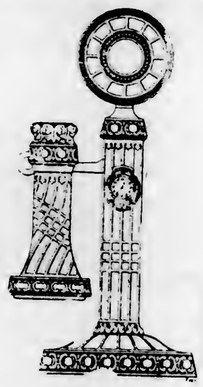
The ornamental design for a poison bottle, as shown.

48,012. TOY. GODFREY P. SCHMIDT, New York, N. Y. Filed June 19, 1914. Serial No. 846,212. Term of patent 7 years.



The ornamental design for a toy, as shown.

48,013. TELEPHONE-STAND. ARTHUR SCHRENKEISEN, New York, N. Y. Filed Aug. 7, 1915. Serial No. 44,333. Term of patent 3½ years.



The ornamental design for a telephone stand, as shown.

48,014. COMBINATION-TOOL. FRANK T. SKOGLAND, Minneapolis, Minn. Filed May 17, 1915. Serial No. 28,766. Term of patent 7 years.



The ornamental design for a combination tool, as shown.

48,015. HANDLE FOR BUTTON-HOOKS OR SIMILAR ARTICLES. JOHN L. SOMMER, Newark, N. J., assignor to J. L. Sommer Mfg. Co., a Corporation of New Jersey. Filed Apr. 11, 1912. Serial No. 690,173. Term of patent 14 years.



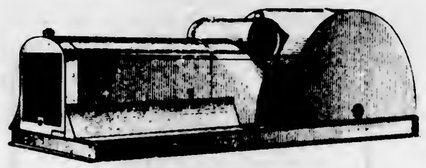
The ornamental design for a handle for button hook or similar article as shown.

48,016. FRAME FOR ENGINE-DRIVEN FANS. WILLIAM J. H. STRONG, Beloit, Wis. Filed May 22, 1915. Serial No. 29,921. Term of patent 14 years.



The ornamental design for a frame for an engine-driven fan, as shown.

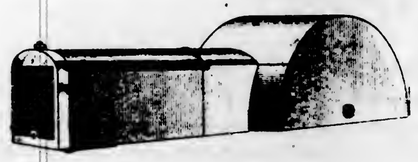
48,017. TRACTOR-BODY. LEWIS E. WATERMAN and HARRY R. TRAPHAGEN, Rockford, Ill., assignors to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed Apr. 23, 1915. Serial No. 23,536. Term of patent 14 years.

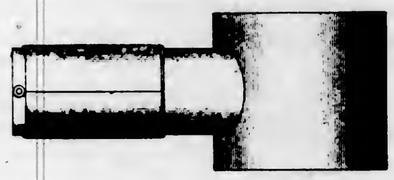




The ornamental design for a tractor body, as shown.

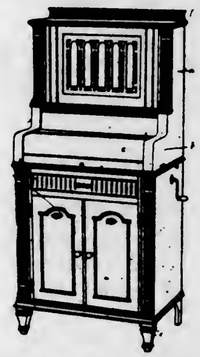
48,018. TRACTOR-BODY. LEWIS E. WATERMAN, Rockford, Ill., assignor to Emerson-Brantingham Company, Rockford, Ill., a Corporation of Illinois. Filed Apr. 23, 1915. Serial No. 23,538. Term of patent 14 years.





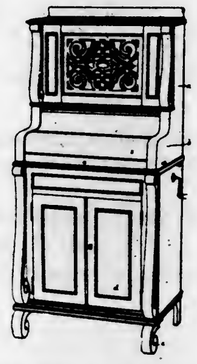
The ornamental design for a tractor body, as shown.

48,019. TALKING-MACHINE CABINET. GEORGE M. WILLSON, Montoursville, Pa. Filed Apr. 22, 1915. Serial No. 23,258. Term of patent 14 years.



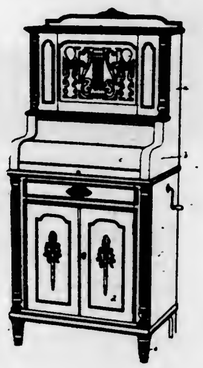
The ornamental design for a talking machine cabinet substantially as shown and described.

48,020. TALKING-MACHINE CABINET. GEORGE M. WILLSON, Montoursville, Pa. Filed Apr. 22, 1915. Serial No. 23,259. Term of patent 14 years.



The ornamental design for a talking machine cabinet substantially as shown and described.

48,021. TALKING-MACHINE CABINET. GEORGE M. WILLSON, Montoursville, Pa. Filed Apr. 22, 1915. Serial No. 23,260. Term of patent 14 years.



The ornamental design for a talking machine cabinet substantially as shown and described.

TRADE-MARKS

PUBLISHED OCTOBER 19, 1915.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 73,675. (CLASS 39. CLOTHING.) HEIMBACH RUBBER HEEL CO., Duluth, Minn. Filed Oct. 30, 1913.



Exclusive use to the showing of a rubber heel is hereby disclaimed.

Particular description of goods.—Rubber Heels for Shoes.

Claims use since about Oct. 1, 1911.

Ser. No. 78,767. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) DE LAVAL STEAM TURBINE CO., Trenton, N. J. Filed June 3, 1914.



Particular description of goods.—Steam-Turbines, Centrifugal Pumps, Centrifugal Blowers, Reduction-Gears, and Flexible Couplings.

Claims use since 1901.

Ser. No. 79,061. (CLASS 37. PAPER AND STATIONERY.) THE JOHN HOBERG COMPANY, Green Bay, Wis. Filed June 13, 1914.



No claim being made to the words "Trade Mark Registered."

Particular description of goods.—Toilet-Paper.

Claims use since Nov. 20, 1913.

Ser. No. 79,067. (CLASS 37. PAPER AND STATIONERY.) THE JOHN HOBERG COMPANY, Green Bay, Wis. Filed June 13, 1914.



Particular description of goods.—Toilet-Paper.

Claims use since Apr. 18, 1909.

Ser. No. 79,497. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATHAN MILLER, New York, N. Y. Filed July 1, 1914.



Particular description of goods.—Candy Goods.
Claims use since June 15, 1913.

Ser. No. 79,673. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) LINOTYPE AND MACHINERY LIMITED, London, England. Filed July 9, 1914.

RENAISSANCE

The trade-mark consists of the word "Renaissance."
Particular description of goods.—Printing-Presses, Plate-Printing Machines, and Devices for Inking and Wiping the Printing-Surfaces Thereof.
Claims use since Nov. 12, 1913.

Ser. No. 79,996. (CLASS 39. CLOTHING.) UNION LOCK STITCH CO., Boston, Mass. Filed July 22, 1914.



Particular description of goods.—Boots and Shoes Made of Leather, Canvas, and Rubber.
Claims use since Apr. 2, 1914.

Ser. No. 80,051. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) ALEXANDER BROTHERS, Philadelphia, Pa. Filed July 25, 1914.

"Fibre Knit"

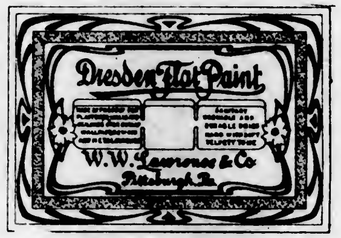
Particular description of goods.—Leather Belting.
Claims use since about Mar. 24, 1914.

Ser. No. 80,198. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) BIRMINGHAM METAL PRODUCTS CO., Birmingham, Ala. Filed July 31, 1914.



No claim being made to the words "Brand" and "Iron" apart from the mark shown on the drawing.
Particular description of goods.—Sheet Metal.
Claims use since June, 1913.

Ser. No. 80,663. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) W. W. LAWRENCE & COMPANY, Pittsburgh, Pa. Filed Aug. 18, 1914.



No claim is made to the word "Dresden" apart from the mark shown in the drawing. The words "Flat Paint," "Made Expressly for Plastered Walls and Ceilings Over Burlap Wall Papers Wood and Metal Surfaces," "Sanitary Washable and Durable Dries Hard with Soft Velvety Tone," "W. W. Lawrence & Co." and "Pittsburgh, Pa." are disclaimed.
Particular description of goods.—Flat Paint.
Claims use since Oct. 23, 1911.

Ser. No. 80,882. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CHARLES BROWN & SONS, San Francisco, Cal. Filed Aug. 31, 1914.



Particular description of goods.—Steel Knives—to wit, Penknives, Pocket-Knives, Clasp-Knives, Table, Kitchen, Bread, Carving, Cooks', and Butchers' Knives—Scissors, and Razors.
Claims use for more than one year last past.

Ser. No. 81,504. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) G. W. VAN DUSEN & Co., Minneapolis, Minn. Filed Sept. 26, 1914.

NORTHLAND·CHIEF

Particular description of goods.—Wheat-Flour.
Claims use since Apr. 25, 1914.

Ser. No. 81,677. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New Brunswick, N. J., and New York, N. Y. Filed Oct. 5, 1914.



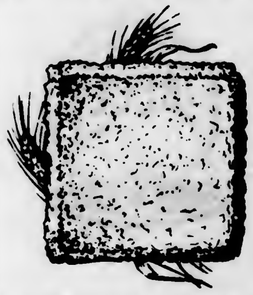
Particular description of goods.—Rubber Boots and Shoes.
Claims use since Sept. 22, 1914.

Ser. No. 81,883. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WHEAT MEAL COMPANY, Le Mars, Iowa. Filed Oct. 14, 1914.



Particular description of goods.—Flour and Breakfast Cereals Made from Wheat.
Claims use since about Mar. 18, 1914.

Ser. No. 82,184. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE FRANCIS NICHOLLS, Toronto, Ontario, Canada. Filed Oct. 26, 1914.



No claim is made to the representation of a biscuit *per se* apart from the mark as shown in the drawing.
Particular description of goods.—Biscuits.
Claims use since the 12th day of February, 1909.

Ser. No. 82,317. (CLASS 39. CLOTHING.) UNITED STATES RUBBER COMPANY, New Brunswick, N. J., and New York, N. Y. Filed Oct. 31, 1914.



Said trade-mark comprises the letters "Knu-Shu" on a dark diamond-shaped ground, the letters being successively increased in size toward the right and then successively reduced in size, the central letters "U-S" thereby being given the greatest prominence.
Particular description of goods.—Boots and Shoes Having Fabric Uppers and Rubber Soles.
Claims use since Sept. 28, 1914.

Ser. No. 82,485. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) LIZZIE HODGES, Oklahoma, Okla. Filed Nov. 9, 1914.

ISHINE

Particular description of goods.—Furniture and Automobile Polish.
Claims use since Apr. 1, 1914.

Ser. No. 82,906. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRONEWEG & SCHENTGEN CO., Council Bluffs, Iowa. Filed Nov. 25, 1914.

MOGUL

Particular description of goods.—Tomato Catsup, Flavoring Extracts for Foods, Pepper Sauce, Tea, Sliced Beef, Mustard, Canned Oysters, Pickles, Rice, Tapioca, Sage, Farina, Pearl-Barley, Spaghetti, Vermicelli, Macaroni, Canned Soups, a Self-Rising Compound of Cereal Flours, Vinegar, Dried Fruits, and Potato-Flour.
Claims use since Jan. 1, 1885.

Ser. No. 83,381. (CLASS 39. CLOTHING.) THE CHARLES WILLIAMS STORES, INC., Brooklyn, N. Y. Filed Dec. 18, 1914.



Particular description of goods.—Aprons, Men's, Women's, Mechanics'; Athletic Elastics—viz., Wristlets,

Knee-Stockings, Anklets, and Elbow-Pieces; Athletic Hosiery, Athletic Pants, Athletic Shirts, Athletic Shoes, Automobile-Coats; Automobile-Dusters—viz., Long Outer Garments Worn as Protection Against Dust; Automobile-Gloves, Automobile-Hoods Worn as Caps, Automobile-Robes; Babies' Barrows, Bonnets, Bootees, Coats, Dresses, Hoods, Hosiery, Leggings, Mittens, Moccasins, Rompers, Sacks, Shirts, Shoes, Sweaters, Underwear, Wrappers; Barbers' Coats, Bar-Coats; Base-Ball Suits for Boys—viz., Shirts, Padded Pants, and Caps; Bathing-Caps, Bath-Mitts, Bath-Robes, Bath-Robe Blankets, Bibs, Stamped Bibs Used to Protect Infants' Clothing, Bib-Aprons, Blouses, Bonnets, Boot-Socks, Women's Brassières, Caps, Boudoir-Caps; Stamped Boudoir-Caps—viz., Dressing-Caps; Cape-Caps, Driving-Caps Worn to Protect the Hair, Dust-Caps, Dancing-Caps, Fur Caps, Hockey-Caps, Rubber Caps, Hunting-Caps, Knit Caps, Fur Coats, Hunting-Coats, Motor-Cycle Coats, Rain-Coats, Collars, Feather Collars, Fur Collars, Rubber Collars; Corduroy Clothing—viz., Caps, Vests, Trousers, and Coats; Corsets, Corset-Covers; Corset-Protectors—viz., Underclothing Worn as a Protection for Diaphanous or Perishable Dress Materials; Corset-Waists, Maternity-Corsets, Nursing-Corsets, Reducing-Corsets, Cuffs, Riding-Cuffs, Drawers, Mackinaw Drawers, Dresses, House-Dresses, Maternity-Dresses; Duck Clothing—viz., Coats, Vests, Trousers, and Caps; Dusters; Children's Furs—viz., Articles of Outer Apparel Consisting Usually of Two Pieces, Scarf and Muff; Women's Furs—viz., Articles of Outer Apparel Consisting Usually of Two Pieces, Scarf and Muff; Gaiters, Gloves, Electricians' Gloves, Fur Gloves, Golf-Gloves, Kid Gloves, Linemen's Gloves, Rubber Gloves, Shooting-Gloves, Gowns; Gymnasium Clothing—viz., Bloomers, Blouses, Shoes, Shirts, Pants, and Hosiery; Hats, Felt Hats, Fishing-Hats, Hunting-Hats, Mourning-Hats, Rubber Hats, Slicker-Hats, Trimmed Hats, Rubber Heels, Hoods, Untrimmed Hats, Hosiery, Jackets, Cardigan Jackets, Foot-Ball Jackets, Smoking-Jackets, Jerseys, Jumpers, Leggings, Mackinaws, Mittens, Mufflers, Muffs, Nightgowns, Night-Shirts, Overalls, Overcoats, Fur Overcoats, Pajamas, Foot-Ball Pants, Hunting-Pants, Khaki Pants, Khaki Shirts, Knit Pants, Motor-Cycle Pants, Running-Pants, Petticoats, Rain-Capes, Reefers, Robes, Sacks, Dressing-Sacks, Shirts, Undershirts, Mackinaw Shirts, Rubber Shirts, Slicker-Shirts, Shirt-Waists, Skirts, Suits; Boys' Cowboy-Suits—viz., Play-Suits for Boys (or Girls;) Children's Sleeping-Suits, Combination-Suits; Stamped Combination-Suits—viz., Lingerie Underwear; Dress-Suits; Golf-Suits—viz., Trousers, Caps, and Coats; Khaki Suits; Men's Riding-Suits—viz., Heavy Outer Garments; Play-Suits, Women's Suits, Sweaters, Coat-Sweaters, Trousers, Ulsters, Underwear; Base-Ball Uniforms—viz., Shirts, Pants, Padded or Unpadded, Caps, Belts, and Hosiery; Chamois Vests, Hunting-Vests, Sweater-Vests, Waists, Garter-Waists, Wrappers, Wristbands, Knit Wristlets.

Claims use since August, 1913.

Ser. No. 83,789. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE WOOLSON SPICE COMPANY, Toledo, Ohio. Filed Jan. 11, 1915.

PIEDMONT

Particular description of goods.—Coffee.
Claims use since June 17, 1907.

Ser. No. 84,077. (CLASS 12. CONSTRUCTION MATERIALS.) MERLIN T. CALEF, Philadelphia, Pa. Filed Jan. 25, 1915.

SILMAC

Particular description of goods.—Material Used in Building Roads, Applied by Mixing or by Penetration.
Claims use since July 1, 1914.

Ser. No. 84,146. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) D. & J. ROVEGNO, New York, N. Y. Filed Jan. 27, 1915.

Two Star

Particular description of goods.—Candy.
Claims use since October, 1903.

Ser. No. 84,443. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) GEO. BORGFELDT & Co., New York, N. Y. Filed Feb. 11, 1915.

BELL

Particular description of goods.—Aluminum Hollow and Flat Ware.
Claims use since Jan. 19, 1915.

Ser. No. 84,772. (CLASS 38. PRINTS AND PUBLICATIONS.) THE REPUBLIC RUBBER COMPANY, Youngstown, Ohio. Filed Feb. 25, 1915.



Particular description of goods.—A Monthly Periodical Publication.
Claims use since June 1, 1913.

Ser. No. 85,054. (CLASS 15. OILS AND GREASES.) HARRY A. SPILLER, Dorchester, Mass. Filed Mar. 9, 1915.

THE SPRING LASTS
SPILLER'S SPRINGEZE
TRADE-MARK
ONCE USED NEVER WITHOUT

No claim is made to the words "The Spring Lasts," "Spiller's Springeze," "Once Used—Never Without," "Trade-Mark."
Particular description of goods.—Lubricants.
Claims use since Jan. 1, 1914.

Ser. No. 85,296. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHAMPION ANIMAL FOOD COMPANY, St. Paul, Minn. Filed Mar. 22, 1915.



No claim being made to the representation of a biscuit apart from the mark shown.
Particular description of goods.—Dog-Biscuits.
Claims use since Jan. 1, 1914.

Ser. No. 85,347. (CLASS 2. RECEPTACLES.) THE SELBERT PAPER CO., Cincinnati, Ohio, assignor to The Advance Bag Company, Middletown, Ohio. Filed Mar. 23, 1915.

The Bag
KRAFT
that delivers the goods

No claim being made to the words "The Bag That Delivers The Goods" apart from the mark as shown in the drawing.
Particular description of goods.—Paper Bags.
Claims use since Feb. 10, 1915.

Ser. No. 85,436. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JAMES P. GRIFFIN, Portland, Oreg. Filed Mar. 26, 1915.

CAT'N FIDDLE



Particular description of goods.—Candies.
Claims use since about Mar. 28, 1912.

Ser. No. 85,771. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) N. S. ACKERLY & SON COMPANY, Northport and Sayville, N. Y. Filed Apr. 8, 1915.



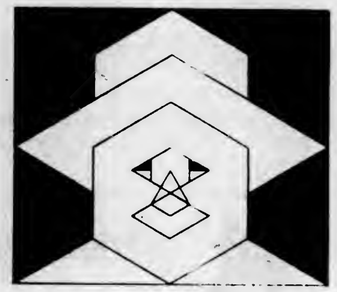
No claim being made to the word "Brand" except in connection with the other features of the mark.
Particular description of goods.—Blue Point Oysters.
Claims use since May 16, 1914.

Ser. No. 85,887. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) AMERICAN LIFE SAVING GARMENT COMPANY, Boston, Mass. Filed Apr. 12, 1915.

KAPO

Particular description of goods.—Buoyant Life-Saving Appliance to be Worn on the Human Body.
Claims use since on or about Apr. 3, 1915.

Ser. No. 85,983. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EMACITIN Co., New York, N. Y. Filed Apr. 16, 1915.



Particular description of goods.—A Salve Against Ulcers, Discharging Cuts, and Inflammation of the Glands of Ear and Throat, a Deodorizer for Bad-Smelling Perspiration in General and Perspiring Feet in Particular, a Salve Against Asthma and Bronchitis, a Salve Against Gout and Rheumatisms Articulorum, and a Preparation for the Treatment of Obesity.
Claims use since Mar. 17, 1915.

Ser. No. 85,984. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) GENERAL SPECIALTIES Co., Louisville, Ky. Filed Apr. 16, 1915.



Particular description of goods.—Scouring-Powder.
Claims use since Jan. 1, 1915.

Ser. No. 86,123. (CLASS 39. CLOTHING.) SHAFT-PIERCE SHOE Co., Faribault, Minn. Filed Apr. 22, 1915.


PAPOOSE

Particular description of goods.—Shoes of Canvas and Leather.
Claims use since prior to Feb. 1, 1915.

Ser. No. 86,158. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. SAUTTER & SONS, INC., Philadelphia, Pa. Filed Apr. 23, 1915.

Meltaways

Particular description of goods.—Candy.
Claims use since about Jan. 1, 1911.

Ser. No. 86,243. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) DUDLEY MANUFACTURING COMPANY, Boston, Mass. Filed Apr. 28, 1915.

UNCLE DUDLEY'S

Particular description of goods.—Soap, Brass-Polish, Silver-Polish, and Stove-Polish.
Claims use since Oct. 1, 1914.

Ser. No. 86,248. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) Gross & Co., INC., New York, N. Y. Filed Apr. 28, 1915.

THE Great President

"The Great President."
Particular description of goods.—Handkerchiefs.
Claims use since as early as May, 1908.

Ser. No. 86,263. (CLASS 15. OILS AND GREASES.) M. HARTLEY DODGE, New York, N. Y. Filed Apr. 29, 1915.



The background being red. No claim is made for the word "Remington."
Particular description of goods.—Lubricating-Oils and Rust-Preventives.
Claims use since Apr. 24, 1914.

Ser. No. 86,264. (CLASS 15. OILS AND GREASES.) M. HARTLEY DODGE, New York, N. Y. Filed Apr. 29, 1915.



The background being red, (no claim being made for the Words "Remington" or "Oil.")
Particular description of goods.—Lubricating-Oils and Rust-Preventives.
Claims use since June 10, 1914.

Ser. No. 86,393. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MRS. JACK'S HAM BISCUIT Co., Birmingham, Ala. Filed May 5, 1915.



No claim being made to the exclusive use of the words "Home-Made," "Ham," and "Biscuit." The picture shown is a portrait of Miss Kathryn Hutchison.
Particular description of goods.—Biscuit and Wafers.
Claims use since Apr. 7, 1915.

Ser. No. 86,643. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) GRASS & LINDBECK Co., Duluth, Minn. Filed May 15, 1915.

Essfill

Particular description of goods.—Port Closure or Cover for Pipe-Inlet.
Claims use since Mar. 1, 1915.

Ser. No. 86,697. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) ESSEX FOUNDRY, Newark, N. J. Filed May 18, 1915.

SX

Particular description of goods.—Cast-Iron Soil-Pipe and Fittings Therefor, Cast-Iron Drainage-Pipe Fittings, Cast-Iron Steam-Pipe Fittings, Cast-Iron Flanged-Pipe Fittings, Cast-Iron Pressure-Pipe Fittings, Cast-Iron Pipe-Flanges, Metal Sinks, Urinals and Parts Therefor, Cast-Iron Cesspools and Parts Therefor.
Claims use since 1902.

Ser. No. 86,763. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHAPIN & COMPANY, INCORPORATED, Hammond, Ind. Filed May 20, 1915.

TRICORN

Particular description of goods.—A Prepared Food for Horses, Cattle, Sheep, and Poultry.
Claims use since 1906.

Ser. No. 86,765. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHAPIN & COMPANY, INCORPORATED, Hammond, Ind. Filed May 20, 1915.

CORNOLA

Particular description of goods.—A Prepared Food for Horses, Cattle, Sheep, and Poultry.
Claims use since Feb. 3, 1908.

Ser. No. 86,942. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) SAWYER BELTING COMPANY, Cleveland, Ohio. Filed May 27, 1915.

SABECO

Particular description of goods.—Dressing for Machinery-Belts.
Claims use since May 1, 1915.

Ser. No. 86,943. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) SAWYER BELTING COMPANY, Cleveland, Ohio. Filed May 27, 1915.



Particular description of goods.—Dressing for Machinery-Belts.
Claims use since May 1, 1915.

Ser. No. 86,980. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ZUCKERRAFFINERIE TANGERMÜNDE FR. MEYERS SOHN, AKTIENGESELLSCHAFT, Tangermünde, Germany. Filed May 28, 1915.

Rock Brilliants Sugar

The exclusive use of the word "Sugar" not being claimed except in connection with the drawing, as shown.
Particular description of goods.—Refined Sugar.
Claims use since July 4, 1914.

Ser. No. 87,010. (CLASS 12. CONSTRUCTION MATERIALS.) ELK FIRE BRICK COMPANY, St. Marys, Pa. Filed June 1, 1915.

ELKCO

Particular description of goods.—Fire-Brick.
Claims use since Jan. 1, 1915.

Ser. No. 87,022. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOS. MIDDLEBY, JR. INC., Boston, Mass. Filed June 1, 1915.

University Club

Particular description of goods.—Berry and Fruit Preserves and Fruit and Berry Jelly.
Claims use since Apr. 13, 1914.

Ser. No. 87,116. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHARLES TIEDEMANN MILLING CO., O'Fallon, Ill. Filed June 4, 1915.

PRAIRIE BLOSSOM

Particular description of goods.—Wheat-Flour.
Claims use since about Aug. 2, 1888.

Ser. No. 87,141. (CLASS 39. CLOTHING.) FLORENCE ROBINSON MACDONALD, New York, N. Y., assignor to Bonwit, Teller & Co., New York, N. Y., a Corporation of New York. Filed June 5, 1915.

"Ortho"

Comprising the word "Ortho."
Particular description of goods.—Corsets.
Claims use since June 1, 1912.

Ser. No. 87,158. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMERICAN MANUFACTURING CO., Chattanooga, Tenn. Filed June 7, 1915.

AMERICAN MANUFACTURING Co
CHATTANOOGA, TENN., U.S.A.
SVEZ
TRADE MARK

No claim being made to the words "American Manufacturing Co. Chattanooga, Tenn. U. S. A. Sues, Trade Mark" apart from the mark shown in the drawing.
Particular description of goods.—Shovels.
Claims use since Mar. 15, 1915.

Ser. No. 87,159. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMERICAN MANUFACTURING CO., Chattanooga, Tenn. Filed June 7, 1915.

AMERICAN MANUFACTURING Co
CHATTANOOGA, TENN., U.S.A.
PANAMA
TRADE MARK

No claim being made to the words "American Manufacturing Co. Chattanooga, Tenn. U. S. A. Panama, Trade Mark" apart from the mark shown in the drawing.
Particular description of goods.—Shovels.
Claims use since Mar. 15, 1915.

Ser. No. 87,160. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AMERICAN MANUFACTURING CO., Chattanooga, Tenn. Filed June 7, 1915.

AMERICAN MANUFACTURING Co
CHATTANOOGA, TENN., U.S.A.
ERIE
TRADE MARK

No claim being made to the words "American Manufacturing Co. Chattanoooga, Tenn. U. S. A. Erie, Trade Mark" apart from the mark shown in the drawing.
Particular description of goods.—Shovels.
Claims use since Mar. 15, 1915.

Ser. No. 87,227. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RITTER-HENNINGS CO., Louisville, Ky. Filed June 10, 1915.

Shur-pleez

The color red forms a feature of the mark, the said color being displayed in the drawing in the horizontal

bar running across the center of the design and acting as a background for "Shur-Pleez" and in addition the remaining parts that form the inner circle of the design.
Particular description of goods.—Scratch Feed, Baby-Chick Feed, and a Mash Horse Feed.
Claims use since about December, 1912.

Ser. No. 87,272. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE GOODYEAR TIRE AND RUBBER COMPANY, Akron, Ohio. Filed June 12, 1915.

GOODYEAR SV AKRON FIRE

The inclosing band is red, no claim being made for the use of the word "Tire" in the mark.
Particular description of goods.—Elastic Vehicle-Tires.
Claims use since Apr. 1, 1915.

Ser. No. 87,449. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE J. WILSON, Rochester, N. Y. Filed June 19, 1915.

WILSON BROS. GLUTEN STANDARD ROCHESTER, N.Y.

No claim being made to the words "Wilson Bros.," "Gluten Flour," "Standard," and "Rochester, N. Y." apart from the mark shown in the drawing. The lining in the drawing is intended to indicate "shading" and not "color."
Particular description of goods.—Gluten-Flour.
Claims use since May, 1892.

Ser. No. 87,502½. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MAYFIELD COMPANY, Tyler, Tex. Filed June 22, 1915.



WHITE SLIPPER

Particular description of goods.—Canned Vegetables, Canned Fruits, Rolled Oats, Pepper Sauce, Tomato Catsup, Wheat-Flour, Coffee, Cheese, Canned Pimientos, Canned Salmon, Canned Soups, Canned Oysters, Canned Sweet Potatoes, and Pork and Beans.
Claims use since Jan. 1, 1915.

Ser. No. 87,509. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TAFACO SPECIALTY COMPANY, Boston, Mass. Filed June 22, 1915.

TAFACO

Particular description of goods.—Icing-Powder, Flavoring for Cakes and Pastries, a Milk Substitute.
Claims use since May 1, 1915.

Ser. No. 87,510. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THORNTON & CHESTER MILLING COMPANY, Buffalo, N. Y. Filed June 22, 1915.



Particular description of goods.—Wheat-Flour.
Claims use since June 7, 1915.

Ser. No. 87,516. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CENTADRINK FILTERS CO. INC., New York, N. Y. Filed June 23, 1915.

PURO

Particular description of goods.—Slot-Machines for Vending Plain or Aerated Water.
Claims use since the 1st day of July, 1913.

Ser. No. 87,521. (CLASS 39. CLOTHING.) DREZWELL CO., INC., New York, N. Y. Filed June 23, 1915.

THE GARDEN GATE

Comprising the words "The Garden Gate."
Particular description of goods.—An Outing-Costume—viz., Dress, Cape, Reticule, Hat, Parasol, Jacket, Belt, Hosiery, and Shoes.
Claims use since June 4, 1915.

Ser. No. 87,641. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) MORRIS, MANN & REILLY, Chicago, Ill. Filed June 28, 1915.

"HAVA HEART"

Particular description of goods.—Jewelry for Personal Adornment.
Claims use since June 18, 1915.

Ser. No. 87,681. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) BELLWILL COTTON MILLS, Wilmington, N. C. Filed July 1, 1915.

PINAFORE

Particular description of goods.—Cloth Manufactured from Cotton and Cotton Spun or Woven with other Materials.
Claims use since January, 1910.

Ser. No. 87,743. (CLASS 39. CLOTHING.) A. B. KIRSCHBAUM COMPANY, Philadelphia, Pa. Filed July 3, 1915.

Kirschella PURE WORSTED FLANNEL A. B. Kirschbaum Co. Philadelphia

No claim is being made to the terms "A. B. Kirschbaum Co., Philadelphia, New York" and "Pure Worsted Flannel."
Particular description of goods.—Men's and Young Men's Suits, Comprising Coats and Trousers.
Claims use since June 1, 1915.

Ser. No. 87,750. (CLASS 37. PAPER AND STATIONERY.) SMALLEY BOOK COVER CO., Yonkers, N. Y. Filed July 3, 1915.

Ideal

Particular description of goods.—Book-Covers.
Claims use since June, 1910.

Ser. No. 87,759. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE METALYTE COMPANY, INC., New York, N. Y. Filed July 3, 1915.

METALYTE

Particular description of goods.—Incandescent Electric Lamps, Pocket Flash-Lights, and Holders for Pocket Flash-Lights.
Claims use since Dec. 1, 1914.

Ser. No. 87,786. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NASIACOS IMPORTING CO., Chicago, Ill. Filed July 6, 1915.

ATHLETE

Particular description of goods.—Olive-Oil.
Claims use since June 1, 1905.

Ser. No. 87,799. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) MARTHA M. ARMSTRONG, Morristown, N. J. Filed July 7, 1915.

KNOX-SPOTZ

RELIABLE CLEANING FLUID

No claim being made to the words "Knox Spotz" or to the words "Reliable Cleaning Fluid."
Particular description of goods.—A Cleaning Fluid for Cleansing Clothes and Cloth Fabrics.
Claims use since May 15, 1915.

Ser. No. 87,837. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ACE ROTA STROP CO., Morris Park, N. Y. Filed July 9, 1915.

ACE

Particular description of goods.—Mechanical Razor-Stroppers.
Claims use since Jan. 1, 1915.

Ser. No. 87,913. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THE NEW HAVEN CLOCK CO., New Haven, Conn. Filed July 13, 1915.

SLUMBER STOPPER

Particular description of goods.—Clocks.
Claims use since June 16, 1915.

Ser. No. 87,919. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) AMALGAMATED PAINT COMPANY, Jersey City, N. J., and New York, N. Y. Filed July 14, 1915.

A-MAL-CO

Particular description of goods.—Paints, Dry and Ready Mixed or in Paste Form.
Claims use since June 1, 1915.

Ser. No. 87,920. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) AMALGAMATED PAINT COMPANY, Jersey City, N. J., and New York, N. Y. Filed July 14, 1915.

AMALGAMATED PAINT COMPANY TRADE MARK NEW YORK

The applicant hereby disclaims any right to the exclusive use of the words "New York" and "Trade Mark."
Particular description of goods.—Anticorrosive and Antifouling Paints for Ships' Bottoms.
Claims use since June 1, 1915.

Ser. No. 87,953. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ABRAHAM RIVERA, San Salvador, Salvador. Filed July 15, 1915.

FEBRIFUGO MEDICINA

It is to be understood that the word "Febrifugo" forms no part of the trade-mark.
Particular description of goods.—A Medicinal Remedy for Treatment of Fevers, Headache, Dysentery, Loss of Appetite, and as a Tonic in Correcting Disorders of the Liver and Physical System Generally.
Claims use since Apr. 22, 1885.

Ser. No. 87,963. (CLASS 37. PAPER AND STATIONERY.) WESTERN TABLET CO., St. Joseph, Mo. Filed July 15, 1915.

WESTAB

Particular description of goods.—Writing-Tablets and Note-Book Papers.
Claims use since on or about the 20th day of March, 1914.

Ser. No. 87,964. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE WONDER MIST CO., Boston, Mass. Filed July 15, 1915.

WONDER-MIST

Particular description of goods.—A Liquid Preparation for Cleansing and Polishing Furniture, Woodwork, and other Painted, Varnished, Enameled, and Similarly-Treated Surfaces.
Claims use since Sept. 10, 1913.

Ser. No. 88,000. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE AMERICAN HARDWARE CORPORATION, New Britain, Conn. Filed July 19, 1915.

RUSSWIN

Particular description of goods.—Door-Bells, Door-Knobs, Door-Knockers; Door Stops, Holders, and Closers; Door-Quadrants, Door and Sash Pivots, Door Checks and Springs, Door-Pulls, Door-Openers; Door, Window, and Transom Fittings; Door-Hooks, Push and Pull Plates, Kick-Plates, Finger-Plates, Name-Plates, Rose-Plates, Number-Plates, Letter-Box Plates, Sash-Lifts, Sash and Transom Centers, Sash-Cord Irons, Sash Rollers and Sheaves, Coat and Hat Hooks, Cabin-Door Hooks, Wardrobe-Hooks, Ceiling-Hooks, Screw-Hooks, Push-Bars, Espagnolette-Bars, Turnbuckles, Flush Rings, Locker-Rings; Drawer Pulls, Handles, and Knobs; Picture-Knobs, Hinges, Spring-Hinges, Chest Corners and Fittings, Chest-Handles, Screws, Screw-Eyes, Butts, Cleats, Escutcheons, Hasps, Hangers, Metal Washers, Staples, Tacks, Nails and Studs, Nuts, Metal Chain for General Use, Trunk-Handles, Window-Stops, Umbrella-Clips; Metal Letters, Figures, and Monograms; Transom and Skylight Lifters and Openers, Cupboard-Turns; Bell-Cranks, Levers, Pulls, and Turns; Casement and Shutter Adjusters, Shelf-Brackets, Push-Buttons, Sliding-Door Sheave and Rail, Mouthpieces for Speaking-Tubes, Press-Guards.
Claims use since Feb. 9, 1886.

Ser. No. 88,017. (CLASS 39. CLOTHING.) HOLEPROOF HOSIERY CO., Milwaukee, Wis. Filed July 19, 1915.

Luxite

Particular description of goods.—Hosiery.
Claims use since July 7, 1915.

Ser. No. 88,023. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) PULL-U-OUT SALES CO., St. Louis, Mo. Filed July 19, 1915.

Bullhead

Particular description of goods.—Certain Geared Block and Tackle.
Claims use since June 15, 1915.

Ser. No. 88,076. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EUGENE HARDESTY, Paulding, Ohio. Filed July 21, 1915.

PYNINE

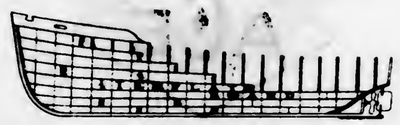
Particular description of goods.—Cough-Syrup.
Claims use since Mar. 1, 1915.

Ser. No. 88,097. (CLASS 37. PAPER AND STATIONERY.) THE WEST JERSEY PAPER MANUFACTURING COMPANY, Camden, N. J. Filed July 21, 1915.

No. 10 TEMPLATE BOARD

No claim being made to the words "Template Board" apart from the mark shown in the accompanying drawing.
Particular description of goods.—Paper-Board.
Claims use since Jan. 1, 1915.

Ser. No. 88,098. (CLASS 37. PAPER AND STATIONERY.) THE WEST JERSEY PAPER MANUFACTURING COMPANY, Camden, N. J. Filed July 21, 1915.



No claim being made to the words "Template Board" apart from the mark shown in the accompanying drawing.
Particular description of goods.—Paper-Board.
Claims use since Jan. 1, 1915.

Ser. No. 88,105. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GEO. S. COX & BRO. INC., Philadelphia, Pa. Filed July 22, 1915.

ABSOLUTE

Particular description of goods.—Haircloth.
Claims use since June 7, 1915.

Ser. No. 88,108. (CLASS 39. CLOTHING.) DAVIS SHOE COMPANY, Lynn, Mass. Filed July 22, 1915.

KLING FAST

Particular description of goods.—Leather Boots and Shoes.
Claims use since June 1, 1903.

Ser. No. 88,130. (CLASS 27. HOROLOGICAL INSTRUMENTS.) THE WILSON CHEMICAL CO., Tyrone, Pa. Filed July 22, 1915.

BUDDIE

Particular description of goods.—Clocks and Watches.
Claims use since Apr. 24, 1915.

Ser. No. 88,131. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) ZENITH FILMS INCORPORATED, New York, N. Y. Filed July 22, 1915.



We disclaim the use of the word "Films" on said trade-mark and do not seek to have that portion of it registered.
Particular description of goods.—Motion-Picture Photoplays.
Claims use since May 24, 1915.

Ser. No. 88,147. (CLASS 39. CLOTHING.) CHARLES E. SHEDAKER & SONS, Philadelphia, Pa. Filed July 23, 1915.

FOUR IN ONE

Particular description of goods.—Children's Union Underwear.
Claims use since the 15th day of June, 1915.

Ser. No. 88,212. (CLASS 37. PAPER AND STATIONERY.) SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y. Filed July 26, 1915.

ADMIRAL

Particular description of goods.—Toilet-Paper.
Claims use since Apr. 26, 1907.

Ser. No. 88,215. (CLASS 37. PAPER AND STATIONERY.) SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y. Filed July 26, 1915.



Particular description of goods.—Toilet-Paper.
Claims use since Feb. 18, 1915.

Ser. No. 88,216. (CLASS 37. PAPER AND STATIONERY.) SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y. Filed July 26, 1915.



Particular description of goods.—Toilet-Paper.
Claims use since Feb. 18, 1915.

Ser. No. 88,239. (CLASS 37. PAPER AND STATIONERY.) SAUQUOIT TOILET PAPER CO., INC., New Hartford, N. Y. Filed July 27, 1915.



Particular description of goods.—Toilet-Paper.
Claims use since Mar. 1, 1915.

Ser. No. 88,253. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THOS. KELLY & CO., Boston, Mass. Filed July 28, 1915.

RIPPLE

Particular description of goods.—Quilts.
Claims use since 1910.

Ser. No. 88,266. (CLASS 39. CLOTHING.) THE UNITED WOOLEN MILLS COMPANY, Parkersburg, W. Va. Filed July 28, 1915.

EAZON

Particular description of goods.—Men's Coats and Overcoats.
Claims use since July 1, 1915.

Ser. No. 88,272. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) ENGINEERING PRODUCTS CORPORATION, Newport News, Va. Filed July 29, 1915.

DURISTO

Particular description of goods.—Ready-Mixed Paint, Said Paint Being Used in Connection with Oil-Paints and Antifouling-Paints for Ships' Bottoms, as Well as for the Inside of Ships and for Ships' Holds.
Claims use since about Apr. 21, 1915.

Ser. No. 88,291. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SOUTH TEXAS GRAIN COMPANY, Houston, Tex. Filed July 29, 1915.

ST

Particular description of goods.—Mixed Food for Live Stock.
Claims use since the 18th day of January, 1912.

Ser. No. 88,302. (CLASS 39. CLOTHING.) I. B. KLEINERT RUBBER COMPANY, New York, N. Y. Filed July 30, 1915.

TUPAIR

Particular description of goods.—Brassières and Corset-Covers.
Claims use since July 23, 1915.

Ser. No. 88,313. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC COAST CANNING CO., Oakland, Cal. Filed July 30, 1915.

BUCKSKIN



Particular description of goods.—Canned Fruits.
Claims use since the year 1903.

Ser. No. 88,317. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE APLIN COMPANY, Ventura, Cal. Filed July 31, 1915.

Aplima

Particular description of goods.—Dried Beans.
Claims use since the 10th day of June, 1915.

Ser. No. 88,346. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DAVID TIERSTEIN, Malden, Mass. Filed July 31, 1915.

MOTHER RAY'S SALVE



Being a portrait of Rebecca Tierstein. The exclusive right to use the word "Salve" is disclaimed.
Particular description of goods.—Salve.
Claims use since on or about July 13, 1915.

Ser. No. 88,351. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE CABLE COMPANY, Chicago, Ill. Filed Aug. 2, 1915.

SOLO CAROLA

Particular description of goods.—Music-Sheets.
Claims use since July 12, 1915.

Ser. No. 88,359. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MAX FRANZLICH, Brooklyn, N. Y. Filed Aug. 2, 1915.

NU-BORN

Particular description of goods.—Pills as a Remedy for Indigestion, Liver Complaints, and Chronic Catarrh.
Claims use since July 1, 1915.

Ser. No. 88,369. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) JOSEPH W. SCHLOSS CO., New York, N. Y. Filed Aug. 2, 1915.

Lucille

Particular description of goods.—Collar-Supporters.
Claims use since July 1, 1915.

Ser. No. 88,383. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HARRY GRANT BURKE, New York, N. Y. Filed Aug. 3, 1915.

GARGOYLE



Particular description of goods.—Dentifrice and a Non-Poisonous Antiseptic for the Treatment of Inflamed, Tender, Bleeding, Receding, and Abscessed Gums or Any Irritation of the Oral Cavity.
Claims use since February, 1915.

Ser. No. 88,386. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ARCHIBALD AUSTIN KRIEG, Charleston, W. Va. Filed Aug. 3, 1915.

FAX-O-FEN

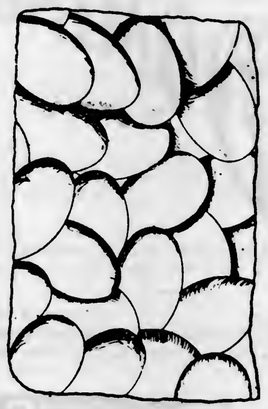
Particular description of goods.—A Laxative Chewing-Gum.
Claims use since June 3, 1915.

Ser. No. 88,442. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GUSTAVE A. REUTER, Chicago, Ill. Filed Aug. 5, 1915.

Almo-Nuts

No claim being made to the word "Nuts" apart from the mark as shown.
Particular description of goods.—Bakers' Granulated Nuts.
Claims use since July 12, 1915.

Ser. No. 88,449. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SOUTH TEXAS GRAIN COMPANY, Houston, Tex. Filed Aug. 5, 1915.



Particular description of goods.—Mixed Food for Poultry.
Claims use since the 13th of February, 1913.

Ser. No. 88,460. CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE DOVER FRUIT FARMS, INC., Dover, Del. Filed Aug. 6, 1915.

FLA-VO-RITE

Particular description of goods.—Fresh Fruits and Vegetables.
Claims use since about June 20, 1915.

Ser. No. 88,463. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE FREDERICK W. LIPPS COMPANY OF BALTIMORE CITY, Baltimore, Md. Filed Aug. 6, 1915.

"SOCIETY"

Particular description of goods.—Breakfast-Cocoa, Lozenges, and Chewing-Gum.
Claims use for breakfast-cocoa since July 1, 1914, and as applied to lozenges and chewing-gum since July 15, 1915.

Ser. No. 88,474. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) DOMINO MOTION PICTURE CORPORATION, New York, N. Y. Filed Aug. 7, 1915.

DOMINO

Particular description of goods.—Moving-Picture Films.
Claims use since Sept. 15, 1913.

Ser. No. 88,476. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HOWARD-HOLT COMPANY, Cedar Rapids, Iowa. Filed Aug. 7, 1915.

SIOMINE

Particular description of goods.—Therapeutic Iodin Compounds Having Alterative and Antiseptic Internal Usage and Antiseptic External Usage.
Claims use since July 6, 1915.

Ser. No. 88,478. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE KEYSTONE FILM CO., New York, N. Y. Filed Aug. 7, 1915.

KEYSTONE

Particular description of goods.—Moving-Picture Films.
Claims use Sept. 23, 1912.

Ser. No. 88,481. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE LUTZ COMPANY, Brooklyn, N. Y. Filed Aug. 7, 1915.

"WONDER"

Particular description of goods.—Antiseptic Deodorizing-Cream for Destroying and Preventing Body-Odors Due to Perspiration.
Claims use since Dec. 9, 1914.

Ser. No. 88,482. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) NEW YORK MOTION PICTURE CORPORATION, New York, N. Y. Filed Aug. 7, 1915.

KAY-BEE

Particular description of goods.—Moving-Picture Films.
Claims use since Aug. 20, 1912.

Ser. No. 88,513. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE WARREN FEATHERBONE COMPANY, Three Oaks, Mich. Filed Aug. 9, 1915.

STAR

Particular description of goods.—Collar-Supports.
Claims use since July 27, 1915.

Ser. No. 88,521. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HAWKEYE PEARL BUTTON CO., Muscatine, Iowa. Filed Aug. 10, 1915.

THE HAWKEYE BRAND

The word "Brand" alone being disclaimed.
Particular description of goods.—Crushed Shells or Pearl-Grit for Poultry.
Claims use since about 1st day of July, 1915.

Ser. No. 88,523. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) SHELDON AXLE AND SPRING COMPANY, Wilkes-Barre, Pa. Filed Aug. 10, 1915.

CARLOY

Particular description of goods.—Vehicle-Springs.
Claims use since June 20, 1915.

Ser. No. 88,528. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AKTIEBOLAGET VOLVO, Gothenburg, Sweden. Filed Aug. 11, 1915.

VOLVO

Particular description of goods.—Bearings, Ball-Bearings, Roller-Bearings, Rings, Retainers, Washers, Cages, Separators, Housings, Boxes, Supports, and Fastening Devices for Ball and Roller Bearings, Balls and Rollers for Bearings.
Claims use since May 1, 1915.

Ser. No. 88,538. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FISHER FLOURING MILLS COMPANY, Seattle, Wash. Filed Aug. 11, 1915.

EGGRAIN

Particular description of goods.—Poultry Food—to wit, a Mixture of Wheat, Corn, and Barley.
Claims use since May 15, 1915.

Ser. No. 88,541. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) HARLEY-DAVIDSON MOTOR CO., Milwaukee, Wis. Filed Aug. 11, 1915.

HD

Particular description of goods.—Motor-Cycles and Bicycles.
Claims use since July 25, 1912.

Ser. No. 88,560. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE C. L. COTTON PERFUME & EXTRACT CO., Earlville, N. Y. Filed Aug. 12, 1915.

PURITAN

Particular description of goods.—Perfumes, Perfumery Extracts, Toilet Water, Smelling-Salts, Toilet Powder, and Sachet-Powder.
Claims use since the year 1890.

Ser. No. 88,591. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ELECTRIC KNITTING CO., INC., Cohoes, N. Y. Filed Aug. 13, 1915.

VELTEX

Particular description of goods.—Knitted Cotton Washcloths.
Claims use since about Nov. 1, 1914.

Ser. No. 88,598. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) PORTABLE POWER MANUFACTURING CO., Chicago, Ill. Filed Aug. 13, 1915.

PORMO

Particular description of goods.—Gas-Engines.
Claims use since Feb. 1, 1915.

Ser. No. 88,623. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE LOWE MFG. CO., Huntsville, Ala. Filed Aug. 14, 1915.

TREFFAN

Comprising the word "Treffan."
Particular description of goods.—Cotton Piece Goods.
Claims use since July 24, 1915.

Ser. No. 88,657. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) UNITED STATES WIRE MAT COMPANY, Decatur, Ill. Filed Aug. 16, 1915.

PRINCESS

Particular description of goods.—Fly-Killers or Hand Devices for Killing Flies and other Insects.
Claims use since on about the 1st day of July, 1915.

Ser. No. 88,659. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE ALBODON COMPANY, INC., New York, N. Y. Filed Aug. 17, 1915.

ALBODON

Particular description of goods.—Dentifrices and Antiseptic Mouth-Washes.
Claims use since about Aug. 16, 1915.

Ser. No. 88,672. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ADELIA G. DORSEY, Lockport, La. Filed Aug. 18, 1915.

TRE-DORE

Particular description of goods.—Medicinal Tonic.
Claims use since June 1, 1915.

Ser. No. 88,673. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) FARBWERKE-HOECHST COMPANY, New York, N. Y. Filed Aug. 18, 1915.

N. S.

Particular description of goods.—Dissolving-Dishes.
Claims use since June 30, 1915.

Ser. No. 88,680½. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) L. & A. BAKING COMPANY, Sioux Falls, S. D. Filed Aug. 18, 1915.

SUM

Particular description of goods.—Bread.
Claims use since July 27, 1915.

Ser. No. 88,686. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOHN GOSNELL & COMPANY LIMITED, London, England. Filed Aug. 19, 1915. Under ten-year proviso.

CHERRY BLOSSOM

Particular description of goods.—Perfumed and other Kinds of Soap and Soap Powder Intended for the Toilet.
Claims use since the year 1885.

Ser. No. 88,688. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HIRAM R. MALLINSON, New York, N. Y. Filed Aug. 19, 1915.

Reflecta

Particular description of goods.—Broad Silk and Silk Ribbons.
Claims use since August, 1914.

Ser. No. 88,696. (CLASS 17. TOBACCO PRODUCTS.) SERV-US PURE FOOD CO., Chicago, Ill. Filed Aug. 19, 1915.

Serv-us

Particular description of goods.—Cigars.
Claims use since Mar. 13, 1915.

Ser. No. 88,732. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GAS ENGINE EFFICIENCY COMPANY, St. Louis, Mo. Filed Aug. 21, 1915.

SPEED-O-LINE



Particular description of goods.—Preparations for Treating Hydrocarbon Fuels for Internal-Combustion Engines.
Claims use since Feb. 10, 1913.

Ser. No. 88,737. (CLASS 15. OILS AND GREASES.) E. F. HOUGHTON & Co., Philadelphia, Pa. Filed Aug. 21, 1915.

CYL-TAL

Particular description of goods.—A Lubricant for Steam-Engine Cylinders.
Claims use since about Apr. 5, 1915.

Ser. No. 88,771. (CLASS 15. OILS AND GREASES.) UNION OIL COMPANY OF CALIFORNIA, San Francisco, Cal. Filed Aug. 23, 1915.

ENGINEZE

Particular description of goods.—Lubricating-Oils.
Claims use since July 26, 1915.

Ser. No. 88,778. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ELM GROVE MILLING CO., Elm Grove, W. Va. Filed Aug. 24, 1915.

A.&T.'S BEST

Particular description of goods.—Wheat-Flour.
Claims use since 1907.

Ser. No. 88,783. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DONALD E. HALLER, Chambersburg, Pa. Filed Aug. 24, 1915.

DIGESTI KAPS

Particular description of goods.—Medicine in the Form of Capsules for Flatulent or Fermentive Dyspepsia, Sour Stomach, Heartburn, and All Disorders of the Stomach.
Claims use since July 28, 1915.

Ser. No. 88,805. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) P. C. KNOWLTON CO., INC., SUCCESSORS TO BALDWIN, KNOWLTON & LAKE, Memphis, Tenn. Filed Aug. 25, 1915.



Particular description of goods.—Cake.
Claims use since the latter part of 1914.

Ser. No. 88,807. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE G. W. KENNEDY MILLING CO., Shelbyville, Ind. Filed Aug. 25, 1915.

HIMARK

Particular description of goods.—Wheat-Flour.
Claims use since Oct. 13, 1909.

Ser. No. 88,827. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) H. R. MALLINSON & Co., New York, N. Y. Filed Aug. 26, 1915.

WHIPPOORWILL

Particular description of goods.—Woven Silk in the Piece.
Claims use since December, 1914.

Ser. No. 88,852. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUIS F. CHRISTMAN, Jackson, Tenn. Filed Aug. 28, 1915.

NERVEZE

Particular description of goods.—Headache and Neuralgia.
Claims use since 1907.

Ser. No. 88,864. (CLASS 17. TOBACCO PRODUCTS.) VALENTINE J. SCHULTHEIS, New York, N. Y. Filed Aug. 28, 1915.

A. M. ☼ P. M.

Particular description of goods.—Cigars, Cigarettes, Cheroots, and Cut Tobacco.
Claims use since May 27, 1915.

Ser. No. 88,900. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed Aug. 30, 1915.

INDOOR SPORTS

Particular description of goods.—A Newspaper-Section.
Claims use since Nov. 7, 1913.

Ser. No. 88,903. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed Aug. 30, 1915.

SILK HAT HARRY'S DIVORCE SUIT

Particular description of goods.—A Newspaper-Section.
Claims use since May 11, 1911.

Ser. No. 88,907. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed Aug. 30, 1915.

THE MISERIES OF MUTTINA

Particular description of goods.—A Newspaper-Section.
Claims use since Aug. 15, 1915.

Ser. No. 88,908. (CLASS 38. PRINTS AND PUBLICATIONS.) STAR COMPANY, New York, N. Y. Filed Aug. 30, 1915.

KABIBBLE KABARET

Particular description of goods.—A Newspaper-Section.
Claims use since Feb. 8, 1915.

Ser. No. 88,939. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. BOURJOIS & Co. INC., New York, N. Y. Filed Sept. 1, 1915.

Ocrée

Particular description of goods.—Toilet Powder.
Claims use since Nov. 7, 1914.

Ser. No. 88,972. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SOLAKOL COMPANY, Boston, Mass. Filed Sept. 1, 1915.

SolaKol

Particular description of goods.—Solidified Alcohol.
Claims use since Apr. 21, 1915.

Ser. No. 88,974. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) WOODWARD, WIGHT & COMPANY, LIMITED, New Orleans, La. Filed Sept. 1, 1915.

GOLD SEAL

Particular description of goods.—Babbitt Metal.
Claims use since about Jan. 28, 1914.

Ser. No. 88,995. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) YORK MANUFACTURING CO., Saco, Me. Filed Sept. 2, 1915.

HIPO

Comprising the word "Hipo."
Particular description of goods.—Cotton Piece Goods.
Claims use since Feb. 8, 1915.

Ser. No. 88,999. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE DELSON CHEMICAL COMPANY, INC., New York, N. Y. Filed Sept. 3, 1915.

CREOFOS

Particular description of goods.—Preparation for Lung, Throat, and Intestinal Diseases.
Claims use since Apr. 26, 1915.

Ser. No. 89,063. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HARDSOCG MANUFACTURING CO., Ottumwa, Iowa. Filed Sept. 4, 1915.

PREMIER

Particular description of goods.—Shovels.
Claims use since July 28, 1915.

Ser. No. 89,045. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN F. JELKE COMPANY, Chicago, Ill. Filed Sept. 4, 1915. Under ten-year proviso.

FIRST PRIZE

Particular description of goods.—Oleomargarin.
Claims use since Apr. 1, 1893.

Ser. No. 89,059. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ENGELKE & FEINER MFG. CO., St. Louis, Mo. Filed Sept. 7, 1915. Under ten-year proviso.

ENGELKE & FEINER

Particular description of goods.—Cornmeal, Cream-Meal, Yellow Meal, Pearl-Grits, Pearl-Hominy, Flake-Hominy, Cracked Corn, and Hominy Feed.
Claims use since 1862.

Ser. No. 89,068. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JULIUS A. MIGEL, New York, N. Y. Filed Sept. 7, 1915.

Pierrette

Particular description of goods.—Broad Silks.
Claims use since May 15, 1915.

Ser. No. 89,110. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) BERG BROS., New York, N. Y. Filed Sept. 9, 1915.

BUSY BEE

Particular description of goods.—Snap-Fasteners.
Claims use since June 8, 1915.

Ser. No. 89,112. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) EXCELLO TALKING MACHINE CO., Philadelphia, Pa. Filed Sept. 9, 1915.

"EXCELLO"

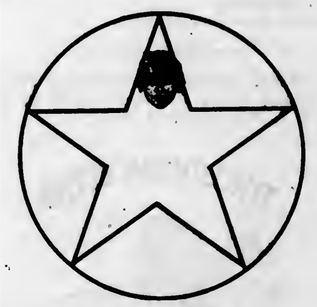
Particular description of goods.—Talking-Machines.
Claims use since January, 1915.

Ser. No. 89,126. (CLASS 39. CLOTHING.) DANIEL FORBES COMPANY, Chicago, Ill. Filed Sept. 10, 1915.

FORBEST

Particular description of goods.—Leather Parts for Shoes, Known as Taps, Top-Lifts, and Cut Soles.
Claims use since Jan. 15, 1910.

Ser. No. 89,144. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. A. COBB, Jackson, Miss. Filed Sept. 11, 1915.



Particular description of goods.—For Use in Promoting the Growth of Hair.
Claims use since October, 1914.

Ser. No. 89,147. (CLASS 17. TOBACCO PRODUCTS.) THE MENDELSOHN CO. INC., Cleveland, Ohio. Filed Sept. 11, 1915.

Decision

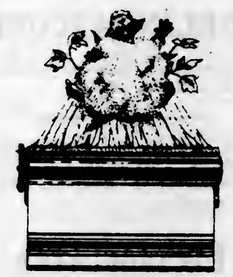
Particular description of goods.—Cigars.
Claims use since May 3, 1906.

Ser. No. 89,182. (CLASS 39. CLOTHING.) HOOD RUBBER COMPANY, Watertown, Mass. Filed Sept. 14, 1915.

DAYSHU

Particular description of goods.—Rubber Boots and Shoes, Rubber Overshoes, and Rubber-Soled Canvas Boots and Shoes.
Claims use since Sept. 1, 1915.

Ser. No. 89,185. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THOMAS KELLY & Co., Boston, Mass. Filed Sept. 14, 1915.



Applicant disclaims the right to the representation of a blanket except in combination with the picture of the Negro boy and the cotton-boll.
Particular description of goods.—Carriage-Robes, Blankets, and Steamer-Rugs.
Claims use since Aug. 15, 1915.

Ser. No. 89,189. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE E. L. PATCH CO., Boston, Mass. Filed Sept. 14, 1915.

FORMITOL

The word "Formitol."
Particular description of goods.—An Antiseptic Throat-Tablet.
Claims use since Aug. 16, 1915.

Ser. No. 89,211. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) W. N. MATTHEWS & BRO. INC., St. Louis, Mo. Filed Sept. 15, 1915.

SCRULIX

Particular description of goods.—Ground-Anchors.
Claims use since July 10, 1915.

Ser. No. 89,214. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) PATTERSON, GOTTFRIED & HUNTER, INC., New York, N. Y. Filed Sept. 15, 1915.

VICTOR

Particular description of goods.—Engine-Lathes, Precision-Lathes, Speed-Lathes, Saw-Tables, Arbor-Presses, Drill-Presses, and Milling-Machines.
Claims use since Feb. 26, 1913.

Ser. No. 89,224. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) SPENCER LENS COMPANY, Buffalo, N. Y. Filed Sept. 15, 1915.

DELINEASCOPE

Particular description of goods.—Projection Apparatus.
Claims use since March, 1912.

Ser. No. 89,233. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE BLACK & DECKER MANUFACTURING COMPANY, Baltimore, Md. Filed Sept. 16, 1915.

LECTROFLATER

Particular description of goods.—Electric Air-Compressors.
Claims use since the 18th day of March, 1915.

Ser. No. 89,238. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) IDEAL ART NEEDLEWORK COMPANY, Philadelphia, Pa. Filed Sept. 16, 1915.

PIERROT

Particular description of goods.—Embroidery-Patterns.
Claims use since about June 10, 1915.

Ser. No. 89,244. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Sept. 16, 1915.

SEE SAWS

Particular description of goods.—Biscuit.
Claims use since Sept. 4, 1915.

Ser. No. 89,245. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Sept. 16, 1915.

Sweethearts

Particular description of goods.—Biscuit.
Claims use since Dec. 15, 1884.

Ser. No. 89,246. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Sept. 16, 1915.

BO PEEPS

Particular description of goods.—Biscuit.
Claims use since Sept. 4, 1915.

Ser. No. 89,275. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) PULL-U-OUT SALES CO., St. Louis, Mo. Filed Sept. 17, 1915.

Particular description of goods.—Certain Metallic Stakes or Anchors.
Claims use since June 15, 1915.

Ser. No. 89,295. (CLASS 17. TOBACCO PRODUCTS.) THE LONDON BLEND CIGARETTE COMPANY, INC., New York, N. Y. Filed Sept. 18, 1915.

THE LONDON BLEND



CIGARETTE

The words "The London Blend Cigarette" are disclaimed as a specific part of the trade-mark.
Particular description of goods.—Cigarettes.
Claims use since Jan. 1, 1915.

Ser. No. 89,314. (CLASS 39. CLOTHING.) HOOD RUBBER COMPANY, Watertown, Mass. Filed Sept. 20, 1915.

LEISURE

Particular description of goods.—Rubber Boots and Shoes, Rubber Overshoes, and Rubber-Soled Canvas Boots and Shoes.
Claims use since Sept. 1, 1915.

TRADE-MARK REGISTRATIONS GRANTED

OCTOBER 19, 1915.

106,193. BRAKE-SHOES. AMERICAN BRAKE SHOE & FOUNDRY COMPANY, Mahwah, N. J., and New York, N. Y.
Filed January 13, 1915. Serial No. 83,809. PUBLISHED JUNE 8, 1915.

106,194. PERIODICAL ISSUED WEEKLY. THE AMERICAN BUYER, INC., New York, N. Y.
Filed March 29, 1915. Serial No. 85,504. PUBLISHED AUGUST 3, 1915.

106,195. CORKS, AND PARTICULARLY WOOD-TOP CORKS. ARMSTRONG CORK COMPANY, Pittsburgh, Pa.
Filed May 15, 1915. Serial No. 86,633. PUBLISHED AUGUST 3, 1915.

106,196. WRENCHES. AUTOMATIC WRENCH MANUFACTURING COMPANY, Boston, Mass.
Filed May 18, 1915. Serial No. 86,691. PUBLISHED AUGUST 3, 1915.

106,197. INSECTICIDE, DISINFECTANT, AND DEODORIZER. THE B. & C. SALES CO., Binghamton, N. Y.
Filed May 10, 1915. Serial No. 86,505. PUBLISHED AUGUST 3, 1915.

106,198. CIGARETTES. THE BARKMAHN COMPANY, INC., New York, N. Y.
Filed April 22, 1915. Serial No. 86,098. PUBLISHED AUGUST 3, 1915.

106,199. SEDATIVE. THE BAYER COMPANY, INC., New York, N. Y.
Filed April 9, 1915. Serial No. 85,803. PUBLISHED AUGUST 3, 1915.

106,200. ANTIRHEUMATIC. THE BAYER COMPANY, INC., New York, N. Y.
Filed April 9, 1915. Serial No. 85,804. PUBLISHED AUGUST 3, 1915.

106,201. PURGATIVE. THE BAYER COMPANY, INC., New York, N. Y.
Filed April 9, 1915. Serial No. 85,805. PUBLISHED AUGUST 3, 1915.

106,202. SEDATIVE AND HYPNOTIC. THE BAYER COMPANY, INC., New York, N. Y.
Filed April 9, 1915. Serial No. 85,806. PUBLISHED AUGUST 3, 1915.

106,203. VIBURNUM COMPOUND. JAMES C. BEACH, M. D., New York, N. Y.
Filed June 17, 1915. Serial No. 87,355. PUBLISHED AUGUST 3, 1915.

106,204. DYESTUFFS, COLORS, LAKES, DEVELOPERS, AND DYEING-ASSISTANTS. W. BECKERS ANILINE & CHEMICAL WORKS, INC., Brooklyn, N. Y.
Filed June 17, 1915. Serial No. 87,354. PUBLISHED AUGUST 3, 1915.

106,205. SEWING-MACHINES, VACUUM-CLEANERS, AND CARPET-SWEEPERS. THE BUCKLEY-NEWHALL COMPANY, New York, N. Y.
Filed April 5, 1915. Serial No. 85,690. PUBLISHED MAY 4, 1915.

106,206. SEWING-MACHINES, VACUUM-CLEANERS, AND CARPET-SWEEPERS. THE BUCKLEY-NEWHALL COMPANY, New York, N. Y.
Filed April 5, 1915. Serial No. 85,691. PUBLISHED MAY 4, 1915.

106,207. BABY-CARRIAGES AND GO-CARTS. THE BUCKLEY-NEWHALL COMPANY, New York and Brooklyn, N. Y.
Filed April 5, 1915. Serial No. 85,692. PUBLISHED MAY 18, 1915.

106,208. BABY-CARRIAGES AND GO-CARTS. THE BUCKLEY-NEWHALL COMPANY, New York and Brooklyn, N. Y.
Filed April 5, 1915. Serial No. 85,693. PUBLISHED MAY 25, 1915.

106,209. PHONOGRAPHS, TALKING-MACHINES, PIANOS, ORGANS, AND MUSIC-BOXES. THE BUCKLEY-NEWHALL COMPANY, New York and Brooklyn, N. Y.
Filed April 5, 1915. Serial No. 85,695. PUBLISHED MAY 18, 1915.

106,210. PHONOGRAPHS, TALKING-MACHINES, PIANOS, ORGANS, AND MUSIC-BOXES. THE BUCKLEY-NEWHALL COMPANY, New York and Brooklyn, N. Y.
Filed April 5, 1915. Serial No. 85,696. PUBLISHED MAY 18, 1915.

106,211. REFRIGERATORS. THE BUCKLEY-NEWHALL COMPANY, New York and Brooklyn, N. Y.
Filed, April 5, 1915. Serial No. 85,701. PUBLISHED JUNE 1, 1915.

106,212. REFRIGERATORS. THE BUCKLEY-NEWHALL COMPANY, New York and Brooklyn, N. Y.
Filed April 5, 1915. Serial No. 85,702. PUBLISHED JUNE 1, 1915.

106,213. REMEDIES FOR CERTAIN NAMED DISEASES. CHEMISCHE FABRIK REISHOLZ GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Dusseldorf-Reisholz, Germany.
Filed July 17, 1911. Serial No. 57,676. PUBLISHED AUGUST 3, 1915.

106,214. SALERATUS, BICARBONATE OF SODA, AND SAL-SODA. CHURCH & DWIGHT CO., New York, N. Y.
Filed June 5, 1915. Serial No. 87,127. PUBLISHED AUGUST 3, 1915.

106,215. SALERATUS, BICARBONATE OF SODA, AND SAL-SODA. CHURCH & DWIGHT CO., New York, N. Y.
Filed June 5, 1915. Serial No. 87,128. PUBLISHED AUGUST 3, 1915.

106,216. SALERATUS, BICARBONATE OF SODA, AND SAL-SODA. CHURCH & DWIGHT CO., New York, N. Y.
Filed June 5, 1915. Serial No. 87,129. PUBLISHED AUGUST 3, 1915.

106,217. MIXED PAINTS, DRY PAINTS, PAINT-COLORS, AND PAINT-PIGMENTS. CLINTON METALLIC PAINT CO., Franklin Springs, N. Y.
Filed April 18, 1914. Serial No. 77,556. PUBLISHED AUGUST 3, 1915.

106,218. COLD-CREAMS AND MASSAGE-CREAMS. COLGATE & CO., Jersey City, N. J., and New York, N. Y.
Filed May 12, 1915. Serial No. 86,562. PUBLISHED AUGUST 3, 1915.

106,219. DRESSINGS FOR LEATHER. COLONIAL WORKS, Brooklyn, N. Y.
Filed May 28, 1915. Serial No. 86,950. PUBLISHED AUGUST 3, 1915.

106,220. PURGATIVE PILLS. THE W. H. COMSTOCK COMPANY LIMITED, Morristown, N. Y.
Filed June 19, 1915. Serial No. 87,411. PUBLISHED AUGUST 3, 1915.

106,221. REMEDY FOR FEMALE AILMENTS. DAVIS & LAWRENCE COMPANY, New York, N. Y.
Filed May 15, 1915. Serial No. 86,638. PUBLISHED AUGUST 3, 1915.

106,222. CERTAIN NAMED PHARMACEUTICAL PREPARATIONS. THE DE PREE CHEMICAL COMPANY, Holland, Mich.
Filed March 8, 1913. Serial No. 68,918. PUBLISHED DECEMBER 22, 1914.

106,223. CHEMICAL PREPARATIONS FOR FERTILIZING AND TREATING VEGETATION. DEXTROGERMOFORM PROPAGATING CO., Plymouth, Mass.
Filed April 1, 1915. Serial No. 85,605. PUBLISHED AUGUST 3, 1915.

106,224. LIQUID PREPARATION FOR USE AS A TONIC AND REMEDY FOR STOMACH AND BLOOD TROUBLES. FRANK A. DILLINGHAM, Cincinnati, Ohio.
Filed March 25, 1915. Serial No. 85,396. PUBLISHED AUGUST 3, 1915.

106,225. WATERPROOF TEXTILE FABRICS. EASTERN FINISHING WORKS, INC., Kenyon, R. I.
Filed May 19, 1915. Serial No. 86,731. PUBLISHED AUGUST 3, 1915.

106,226. DAILY NEWSPAPER. ENOSSIS PUBLISHING COMPANY, New York, N. Y.
Filed May 19, 1915. Serial No. 86,732. PUBLISHED AUGUST 3, 1915.

106,227. MEANS FOR DESTROYING VERMIN AND NOXIOUS INSECTS. FRITZ SCHULZ JUN. AKTIENGESELLSCHAFT, Leipzig, Germany.
Filed February 24, 1915. Serial No. 84,745. PUBLISHED AUGUST 3, 1915.

106,228. DISINFECTANT. GEORGE W. GALLAWAY, New York, N. Y.
Filed May 22, 1915. Serial No. 86,819. PUBLISHED AUGUST 3, 1915.

106,229. ALKALINE ANTISEPTIC AND NON-TOXIC PROPHYLACTIC PREPARATION. W. G. GEETY, New York, N. Y.
Filed June 12, 1915. Serial No. 87,271. PUBLISHED AUGUST 3, 1915.

106,230. MUSCATEL WINE. HARRY NEWMAN GILBEY, London, England.
Filed April 7, 1915. Serial No. 85,747. PUBLISHED AUGUST 3, 1915.

106,231. CERTAIN NAMED TOILET AND PHARMACEUTICAL PREPARATIONS. RICHARD HUDNUT, New York, N. Y.
Filed June 1, 1915. Serial No. 87,017. PUBLISHED AUGUST 3, 1915.

106,232. CERTAIN NAMED TOILET AND PHARMACEUTICAL PREPARATIONS. RICHARD HUDNUT, New York, N. Y.
Filed June 1, 1915. Serial No. 87,018. PUBLISHED AUGUST 3, 1915.

106,233. ENAMELED-METAL DOOR-PLATES. INGRAM-RICHARDSON MANUFACTURING COMPANY, Beaver Falls, Pa.
Filed May 3, 1915. Serial No. 86,350. PUBLISHED AUGUST 3, 1915.

106,234. CERTAIN NAMED PARTS OF TELEPHONES, ALSO BASE-BLOCKS AND OTHER INSULATING PARTS IN ELECTRICAL APPARATUS. INTERNATIONALE GALALITH-GESELLSCHAFT HOFF & CO., Harburg-on-the-Elbe, Germany.
Filed September 19, 1912. Serial No. 65,862. PUBLISHED AUGUST 3, 1915.

106,235. HAND-GRIP TO BE ATTACHED TO THE STEERING-WHEEL OF AUTOMOBILES AND OTHER VEHICLES. INTERSTATE ELECTRIC CO., New Orleans, La.
Filed January 13, 1915. Serial No. 83,825. PUBLISHED AUGUST 3, 1915.

106,236. COACH AND CARRIAGE BODIES. KELLNER FRERES, Paris, France.
Filed May 8, 1913. Serial No. 70,461. PUBLISHED AUGUST 3, 1915.

106,237. WATCHES, WATCHCASES, WATCH-MOVEMENTS, AND PARTS THEREOF. THE KEYSTONE WATCH CASE COMPANY, Philadelphia, Pa.
Filed March 3, 1915. Serial No. 84,918. PUBLISHED AUGUST 3, 1915.

106,238. GOGGLES. JULIUS KING OPTICAL CO., New York, N. Y.
Filed June 5, 1915. Serial No. 87,189. PUBLISHED AUGUST 3, 1915.

106,239. SALVES, MEDICINAL TONICS, LAXATIVES, REMEDIES FOR COUGHS, EPILEPSY, PILES, AND FEVERS. LEBELLA REMEDIES COMPANY, Louisville, Ky.
Filed November 2, 1914. Serial No. 82,851. PUBLISHED AUGUST 3, 1915.

106,240. SALVE FOR EXTERNAL USE. WILLIAM J. LIND, Denver, Colo.
Filed May 20, 1915. Serial No. 86,784. PUBLISHED AUGUST 3, 1915.

106,241. SPONGES. MCKESSON & ROBBINS, New York, N. Y.
Filed April 2, 1915. Serial No. 85,645. PUBLISHED AUGUST 3, 1915.

106,242. POLISH TO BE USED FOR WOOD REQUIRING A GLOSSY FINISH. ELIZABETH I. MEADOWCROFT, New London, Conn.
Filed December 26, 1914. Serial No. 83,589. PUBLISHED AUGUST 3, 1915.

106,243. STOGIES. THE MILLER CIGAR CO., Wheeling, W. Va.
Filed December 31, 1914. Serial No. 83,605. PUBLISHED AUGUST 3, 1915.

106,244. WRITING AND TYPE-WRITING PAPER OTHER THAN CARBON-PAPERS OR COATED MANIFOLD-PAPERS. STEPHEN J. MITCHELL, New York, N. Y.
Filed April 10, 1915. Serial No. 85,857. PUBLISHED AUGUST 3, 1915.

106,245. WRITING AND TYPE-WRITING PAPER OTHER THAN CARBON-PAPERS OR COATED MANIFOLD-PAPERS. STEPHEN J. MITCHELL, New York, N. Y.
Filed April 10, 1915. Serial No. 85,858. PUBLISHED AUGUST 3, 1915.

106,246. PURGATIVE AND BLOOD-PURIFIER. FRANK MOCZIK, New York, N. Y.
Filed June 9, 1915. Serial No. 87,207. PUBLISHED AUGUST 3, 1915.

106,247. TOOTH CLEANSING AND PRESERVING PREPARATION. FRED L. MOSS, Chillicothe, Mo.
Filed June 10, 1915. Serial No. 87,221. PUBLISHED AUGUST 3, 1915.

106,248. ARTIFICIAL CORUNDUM. ERNST MOYAT, Offenbach-on-the-Main, Germany.
Filed February 14, 1914. Serial No. 75,899. PUBLISHED AUGUST 3, 1915.

106,249. STARCH FOR LAUNDRY AND MANUFACTURING PURPOSES. NATIONAL STARCH CO., New York, N. Y.
Filed June 19, 1915. Serial No. 87,438. PUBLISHED AUGUST 3, 1915.

106,250. CERTAIN NAMED ARTICLES OF JEWELRY. NOVAGEM JEWEL COMPANY, San Francisco, Cal.
Filed May 19, 1915. Serial No. 86,748. PUBLISHED AUGUST 3, 1915.

106,251. PREPARATION FOR THE TREATMENT OF AFFECTED EYES. JAMES T. NULTY, Philadelphia, Pa.
Filed June 19, 1915. Serial No. 87,436. PUBLISHED AUGUST 3, 1915.

106,252. LAXATIVE. THE OWL DRUG COMPANY, San Francisco, Cal.
Filed June 14, 1915. Serial No. 87,297. PUBLISHED AUGUST 3, 1915.

106,253. REMEDY FOR HEADACHE AND NEURALGIA. JOSEPH L. PAMERLEAU, Detroit, Mich.
Filed May 27, 1915. Serial No. 86,937. PUBLISHED AUGUST 3, 1915.

106,254. CARBON-PAPER AND TYPE-WRITER RIBBONS. PEERLESS CARBON & RIBBON MFG. CO., INC., New York, N. Y.
Filed March 30, 1915. Serial No. 85,546. PUBLISHED AUGUST 3, 1915.

106,255. COMPOSITION DISK BRASS VALVES. PENBERTHY INJECTOR CO. LIMITED, Windsor, Ontario, Canada.
Filed January 16, 1915. Serial No. 83,914. PUBLISHED AUGUST 3, 1915.

106,256. SHERRY-WINE. PIURY & CO., Puerto de Santa Maria, Spain.
Filed October 26, 1914. Serial No. 82,189. PUBLISHED AUGUST 3, 1915.

106,257. BOLSTER FOR RAILWAY-CAR TRUCKS. PRESSED STEEL CAR COMPANY, Pittsburgh, Pa., and Jersey City, N. J.
Filed April 9, 1914. Serial No. 77,354. PUBLISHED AUGUST 3, 1915.

106,258. WATCHES AND WATCH-MOVEMENTS. JULES RACINE & CO., New York, N. Y.
Filed March 24, 1915. Serial No. 85,380. PUBLISHED AUGUST 3, 1915.

106,259. ANTI-HOG-CHOLERA SERUM AND HOG-CHOLERA VIRUS. THE ROYAL SERUM COMPANY, Kansas City, Mo., and Kansas City, Kans.
Filed May 14, 1915. Serial No. 86,621. PUBLISHED AUGUST 3, 1915.

106,260. WHITE PORTLAND CEMENT. THE SANDUSKY PORTLAND CEMENT COMPANY, Baybridge and Sandusky, Ohio.
Filed April 19, 1915. Serial No. 86,055. PUBLISHED AUGUST 3, 1915.

106,261. JEWELRY FOR PERSONAL WEAR. SCHEIN BROTHERS, New York, N. Y.
Filed May 22, 1915. Serial No. 86,838. PUBLISHED AUGUST 3, 1915.

106,262. COLD-CREAM. THE EMIL SCHULZ TOILET ARTICLE COMPANY, INC., New York, N. Y.
Filed May 13, 1915. Serial No. 86,604. PUBLISHED AUGUST 3, 1915.

106,263. COMPOUND FOR TREATING ECZEMA. JAS. IZLAR SIMS, Orangeburg, S. C.
Filed June 16, 1915. Serial No. 87,352. PUBLISHED AUGUST 3, 1915.

106,264. VALVE-DISKS. GEO. R. STARRS, Paterson, N. J.
Filed November 24, 1914. Serial No. 82,888. PUBLISHED JUNE 1, 1915.

106,265. FERTILIZER. CARL TEBELING, Savannah, Ga.
Filed October 14, 1913. Serial No. 73,361. PUBLISHED DECEMBER 2, 1913.

106,266. CHARCOAL. THOMAS BROTHERS & KLEIN, INCORPORATED, Canton, Md.
Filed May 11, 1915. Serial No. 86,555. PUBLISHED AUGUST 3, 1915.

106,267. SALVE. TOMAHAWK MEDICINE CO., Bowling Green, Ky.
Filed April 23, 1915. Serial No. 86,163. PUBLISHED AUGUST 3, 1915.

106,268. CERTAIN NAMED RUBBER GOODS. UNITED & GLOBE RUBBER M'F'G COMPANIES, Trenton, N. J.
Filed December 22, 1914. Serial No. 83,467. PUBLISHED AUGUST 3, 1915.

106,269. CATARRH-SNUFF. MICHAEL REGINALD VALENZUELA, San Diego, Cal.
Filed June 17, 1915. Serial No. 87,376. PUBLISHED AUGUST 3, 1915.

106,270. TOOTH-PASTE. CHAUNCEY S. VAN ORDEN, New York, N. Y.
Filed May 28, 1915. Serial No. 86,978. PUBLISHED AUGUST 3, 1915.

106,271. REMEDIES FOR DISEASES OF DOGS. VERMILAX COMPANY, INCORPORATED, New York, N. Y.
Filed May 6, 1915. Serial No. 86,439. PUBLISHED AUGUST 3, 1915.

106,272. REMEDY FOR PILES. CHARLES HENRY WARREN, Philadelphia, Pa.
Filed April 19, 1915. Serial No. 86,059. PUBLISHED AUGUST 3, 1915.

106,273. READY ROOFING, ROOFING-FELT, AND ROOFING-CEMENT. WARREN-EHRET COMPANY, Philadelphia, Pa.
Filed February 8, 1915. Serial No. 84,392. PUBLISHED AUGUST 3, 1915.

106,274. VETERINARY REMEDIES FOR CERTAIN NAMED DISEASES. WELLS MEDICINE COMPANY, La Fayette, Ind.
Filed March 23, 1915. Serial No. 85,353. PUBLISHED AUGUST 3, 1915.

106,275. STORAGE BATTERIES. THE WILLARD STORAGE BATTERY COMPANY, Cleveland, Ohio.
Filed May 12, 1915. Serial No. 86,585. PUBLISHED AUGUST 3, 1915.

106,276. AUTOMOBILES. THE WOLSELEY TOOL AND MOTOR CAR COMPANY, LIMITED, now by change of name Wolseley Motors, Limited, Birmingham, England.
Filed March 24, 1913. Serial No. 69,302. PUBLISHED AUGUST 3, 1915.

106,277. RAZORS, SAFETY-RAZORS, RAZOR-BLADES, AND SAFETY-RAZOR BLADES. YORKSHIRE STEEL CO. LD., London, England.
Filed July 9, 1914. Serial No. 79,690. PUBLISHED AUGUST 3, 1915.

106,278. FERTILIZERS. ALEXANDRIA FERTILIZER & CHEMICAL CO., Alexandria, Va.,
Filed May 19, 1915. Serial No. 86,720. PUBLISHED AUGUST 3, 1915.

106,279. CERTAIN NAMED COOKING UTENSILS. ALUMINUM GOODS MFG. COMPANY, Manitowoc, Wis.
Filed April 29, 1915. Serial No. 86,257. PUBLISHED AUGUST 3, 1915.

106,280. BRAKE-SHOES. AMERICAN BRAKE SHOE & FOUNDRY COMPANY, Mahwah, N. J., and New York, N. Y.
Filed January 13, 1915. Serial No. 83,806. PUBLISHED AUGUST 3, 1915.

106,281. WRITING-PAPER. AMERICAN PAD & PAPER COMPANY, Holyoke, Mass.
Filed May 5, 1915. Serial No. 86,375. PUBLISHED AUGUST 3, 1915.

106,282. CERTAIN NAMED ELECTRICAL FITTINGS AND PARTS OF SAID FITTINGS WHEN THE LATTER ARE COMPOSITE. THE ARROW ELECTRIC COMPANY, Hartford, Conn.
Filed March 16, 1915. Serial No. 85,173. PUBLISHED AUGUST 3, 1915.

106,283. LEATHER AND CANVAS BOOTS AND SHOES. ASHUELOT SHOE COMPANY, Keene, N. H.
Filed October 26, 1914. Serial No. 82,160. PUBLISHED AUGUST 3, 1915.

106,284. PLOWS, HARROWS, SEED-SOWING MACHINES, CULTIVATORS, MOWERS, REAPERS, THRESHING-MACHINES, SEPARATORS, SKIMMING-MACHINES, AND MILKING-MACHINES. OSSIAN BARCKMAN, Brussels, Belgium.
Filed February 2, 1914. Serial No. 75,603. PUBLISHED AUGUST 3, 1915.

106,285. ANTIGONORRHEIC AND ASTRINGENT MEDICAL SUBSTANCE. THE BAYER COMPANY, INC., New York, N. Y.
Filed April 9, 1915. Serial No. 85,802. PUBLISHED AUGUST 3, 1915.

106,286. DEODORIZER AND DISINFECTANT. THE BELLEVILLE CHEMICAL CO., Belleville, Ill.
Filed May 10, 1915. Serial No. 86,504. PUBLISHED AUGUST 3, 1915.

106,287. SHEETS OR STRIPS OF GUTTA-PERCHA OF TISSUE-LIKE DIMENSION. BISHOP GUTTA-PERCHA COMPANY, New York, N. Y.
Filed April 26, 1915. Serial No. 86,199. PUBLISHED AUGUST 3, 1915.

106,288. RECLAIMED RUBBER. BLOOMINGDALE RUBBER COMPANY, Butler, N. J., and New York, N. Y.
Filed April 19, 1915. Serial No. 86,027. PUBLISHED AUGUST 3, 1915.

106,289. CIGARS. G. BLUTHARDT & CO. INC., Chicago, Ill.
Filed October 21, 1914. Serial No. 82,051. PUBLISHED AUGUST 3, 1915.

106,290. PREPARATION FOR INCREASING AND IMPROVING THE EFFICIENCY OF GASOLENE AND PREVENTING THE DEPOSIT OF CARBON. ERNEST E. BOSCA and JOSEPHH G. QUINN, Jr., New York, N. Y.
Filed June 9, 1915. Serial No. 87,200. PUBLISHED AUGUST 3, 1915.

106,291. NATURAL MINERAL WATER TAKEN FROM A SPRING UPON MY SAID PREMISES. ISABELLE DU BOUCHET, near Toledo, Ohio.
Filed May 12, 1915. Serial No. 86,568. PUBLISHED AUGUST 3, 1915.

106,292. CALIPERS AND DIVIDERS. BROWN & SHARPE MANUFACTURING COMPANY, Providence, R. I.
Filed June 22, 1915. Serial No. 87,492. PUBLISHED AUGUST 10, 1915.

106,293. SOLUTION TREATMENT OF ECZEMA AND OTHER DISEASES OF THE SKIN. GEORGE T. BURNHAM, Milan, Mo.
Filed March 15, 1915. Serial No. 85,155. PUBLISHED AUGUST 3, 1915.

106,294. SERIES OF BOOKS. A. L. BURT COMPANY, New York, N. Y.
Filed May 3, 1915. Serial No. 86,337. PUBLISHED AUGUST 3, 1915.

106,295. PREPARED INOCULATED HUMUS. JOSEPH T. CALDWELL, New York, N. Y.
Filed June 17, 1915. Serial No. 87,360. PUBLISHED AUGUST 10, 1915.

106,296. CERTAIN NAMED FANCY GOODS, FURNISHINGS, AND NOTIONS. CAMPBELL, METZGER & JACOBSON, New York, N. Y.
Filed June 21, 1915. Serial No. 87,458. PUBLISHED AUGUST 10, 1915.

106,297. ELECTRIC-CONDUIT PIPE. CENTRAL TUBE COMPANY, Pittsburgh, Pa.
Filed March 17, 1915. Serial No. 85,208. PUBLISHED AUGUST 3, 1915.

106,298. MEDICINAL PREPARATION ADAPTED FOR THE TREATMENT OF CHOLERA AND OTHER DISEASES OF HOGS. JULIUS CSIMA, Lebanon, Pa.
Filed April 17, 1915. Serial No. 86,012. PUBLISHED AUGUST 3, 1915.

106,299. CERTAIN NAMED TEXTILE MACHINERY. CURTIS & MARBLE MACHINE COMPANY, Worcester, Mass.
Filed June 5, 1915. Serial No. 87,126. PUBLISHED AUGUST 3, 1915.

106,300. TUBERCULAR TONIC. JEROME F. DALEY, Bangor, Me.
Filed June 15, 1915. Serial No. 87,303. PUBLISHED AUGUST 3, 1915.

106,301. TOILET PREPARATIONS CONSISTING OF A SEMILIQUID OR PASTE FOR THE COMPLEXION. HARRY ROY DAVIS, Kansas City, Mo.
Filed July 6, 1914. Serial No. 79,565. PUBLISHED AUGUST 3, 1915.

106,302. MOTOR TRUCKS, BODIES, CHASSIS, AND RUNNING-GEAR. DENBY MOTOR TRUCK CO., Detroit, Mich.
Filed October 15, 1914. Serial No. 81,894. PUBLISHED AUGUST 3, 1915.

106,303. CERTAIN NAMED PREPARATIONS FOR UNDERTAKERS' USE. THE EMBALMERS' SUPPLY CO., Westport, Conn.
Filed April 22, 1915. Serial No. 86,106. PUBLISHED AUGUST 3, 1915.

106,304. REFRACTORY MINERAL IN LUMP OR GROUND FORM CAPABLE OF RESISTING HIGH TEMPERATURES. ESTATE OF ALBERT E. FOOTE, by Warren M. Foote, trustee, Philadelphia, Pa.
Filed Apr. 13, 1915. Serial No. 85,921. PUBLISHED AUGUST 3, 1915.

106,305. MIXTURE OF REFRACTORY MINERALS IN GROUND FORM CAPABLE OF RESISTING HIGH TEMPERATURES. ESTATE OF ALBERT E. FOOTE, by Warren M. Foote, trustee, Philadelphia, Pa.
Filed April 13, 1915. Serial No. 85,924. PUBLISHED AUGUST 3, 1915.

106,306. MIXTURE OF REFRACTORY MINERALS IN GROUND FORM CAPABLE OF RESISTING HIGH TEMPERATURES. ESTATE OF ALBERT E. FOOTE, by Warren M. Foote, trustee, Philadelphia, Pa.
Filed April 13, 1915. Serial No. 85,925. PUBLISHED AUGUST 3, 1915.

106,307. CANNED SALMON. EVERETT PACKING CO., Everett, Wash.
Filed April 22, 1915. Serial No. 86,107. PUBLISHED AUGUST 3, 1915.

106,308. REMEDY AGAINST SYPHILIS, SLEEPING-SICKNESS, TRYPANOSOMIASIS, AND OTHER TROPICAL INFECTIOUS DISEASES. FARBWERKE VORM. MEISTER LUCIUS & BRÜNING, Höchst-on-the-Main, Germany.
Filed June 3, 1915. Serial No. 87,069. PUBLISHED AUGUST 3, 1915.

106,309. REMEDY FOR INDIGESTION, BILIOUSNESS, CONSTIPATION, FLATULENCE, AND HEADACHE. STEPHEN FARGO, Cleveland, Ohio.
Filed May 15, 1915. Serial No. 86,639. PUBLISHED AUGUST 3, 1915.

106,310. TOILET CREAM. STEPHEN FARGO, Cleveland, Ohio.
Filed May 15, 1915. Serial No. 86,641. PUBLISHED AUGUST 3, 1915.

106,311. LINIMENT. STEPHEN FARGO, Cleveland, Ohio.
Filed May 15, 1915. Serial No. 86,642. PUBLISHED AUGUST 3, 1915.

106,312. REMEDY FOR LAXATIVE PURPOSES AND FOR PURIFYING THE BLOOD. STEPHEN FARGO, Cleveland, Ohio.
Filed May 20, 1915. Serial No. 86,776. PUBLISHED AUGUST 3, 1915.

106,313. TOILET SOAPS. STEPHEN FARGO, Cleveland, Ohio.
Filed June 24, 1915. Serial No. 87,556. PUBLISHED AUGUST 10, 1915.

106,314. REMEDY FOR THE TREATMENT OF CONSTIPATION, HEPATIC TORPOR, AND BILIOUSNESS. STEPHEN FARGO, Cleveland, Ohio.
Filed June 24, 1915. Serial No. 87,557. PUBLISHED AUGUST 10, 1915.

106,315. REMEDY FOR THE TREATMENT OF CERTAIN NAMED DISEASES. STEPHEN FARGO, Cleveland, Ohio.
Filed June 24, 1915. Serial No. 87,558. PUBLISHED AUGUST 10, 1915.

106,316. REMEDY FOR THE TREATMENT OF CONSTIPATION, SOUR STOMACH, DIARRHEA, WORMS, CONVULSIONS, AND FEVERISHNESS. STEPHEN FARGO, Cleveland, Ohio.
Filed June 24, 1915. Serial No. 87,559. PUBLISHED AUGUST 10, 1915.

106,317. MONTHLY MAGAZINES. FARM ENGINEERING PUBLISHING COMPANY, Chicago, Ill.
Filed April 27, 1915. Serial No. 86,225. PUBLISHED AUGUST 3, 1915.

106,318. METAL CHAINS FOR PERSONAL WEAR. W. FORSTNER CO., Providence, R. I.
Filed June 5, 1915. Serial No. 87,133. PUBLISHED AUGUST 3, 1915.

106,319. MEDICINES FOR VENEREAL DISEASES. FORT WORTH CHEMICAL COMPANY, Fort Worth, Tex.
Filed May 10, 1915. Serial No. 86,514. PUBLISHED AUGUST 3, 1915.

106,320. RECEPTACLES—NAMELY, SILOS AND TANKS. THE C. C. FOUTS CO., Middletown, Ohio.
Filed February 18, 1915. Serial No. 84,610. PUBLISHED AUGUST 3, 1915.

106,321. CULVERTS AND FLUMES. THE C. C. FOUTS CO., Middletown, Ohio.
Filed May 20, 1915. Serial No. 86,774. PUBLISHED AUGUST 3, 1915.

106,322. SALVE OR OINTMENT. HENRY G. FROBASE, Toledo, Ohio.
Filed June 3 1915. Serial No. 87,070. PUBLISHED AUGUST 3, 1915.

106,323. CERTAIN NAMED KNITTED GARMENTS. FULD AND HATCH KNITTING COMPANY, Albany, N. Y.
Filed January 13, 1911. Serial No. 53,871. PUBLISHED AUGUST 3, 1915.

106,324. FERTILIZER. THOMAS I. FULKS, Gaithersburg, Md.
Filed June 10, 1915. Serial No. 87,216. PUBLISHED AUGUST 10, 1915.

106,325. CARBON-REMOVER. GRAHAMOLINE PRODUCTS COMPANY, Wilkes-Barre, Pa.
Filed May 22, 1915. Serial No. 86,820. PUBLISHED AUGUST 3, 1915.

106,326. CIGARS. GREENWOOD & COMPANY, Savannah, Ga.
Filed April 23, 1915. Serial No. 86,135. PUBLISHED AUGUST 3, 1915.

106,327. DENTAL FLOSS. M. HEMINWAY & SONS SILK CO., Watertown, Conn.
Filed March 11, 1915. Serial No. 85,080. PUBLISHED AUGUST 3, 1915.

106,328. SMOKELESS RIFLE-POWDER. HERCULES POWDER COMPANY, Wilmington, Del.
Filed April 7, 1914. Serial No. 77,285. PUBLISHED AUGUST 3, 1915.

106,329. DOLLS. THOMAS H. HINDLE, Jr., New York, N. Y.
Filed May 3, 1915. Serial No. 86,346. PUBLISHED AUGUST 3, 1915.

106,330. CERTAIN NAMED TOILET PREPARATIONS. HOLMAN SOAP CO., Chicago, Ill.
Filed February 20, 1915. Serial No. 84,659. PUBLISHED AUGUST 3, 1915.

106,331. RUBBER BOOTS AND SHOES, OVERSHOES, CANVAS BOOTS AND SHOES HAVING RUBBER SOLES VULCANIZED THERETO. HOOD RUBBER COMPANY, Watertown, Mass.
Filed January 25, 1915. Serial No. 84,084. PUBLISHED MAY 11, 1915.

106,332. VETERINARY REMEDY FOR CERTAIN NAMED AILMENTS. HUNTSMAN REMEDY COMPANY, St. Louis, Mo.
Filed June 14, 1915. Serial No. 87,290. PUBLISHED AUGUST 10, 1915.

106,333. TREE SAP OR GUM OF THE FICUS-VINE. MARK HYDES, Newark, N. J.
Filed March 30, 1915. Serial No. 85,540. PUBLISHED AUGUST 3, 1915.

106,334. INCANDESCENT ELECTRIC LAMPS. INDEPENDENT LAMP & WIRE COMPANY INC., Weehawken, N. J., and New York, N. Y.
Filed July 1, 1915. Serial No. 87,686. PUBLISHED AUGUST 10, 1915.

106,335. CERTAIN NAMED FANCY GOODS AND NOTIONS. INTERNATIONAL MANUFACTURERS AGENCY, INC., New York, N. Y.
Filed January 16, 1915. Serial No. 83,901. PUBLISHED AUGUST 3, 1915.

106,336. CERTAIN NAMED STATIONERS' SUPPLIES. WILLIAM R. JENKINS CO., New York, N. Y.
Filed January 2, 1914. Serial No. 74,936. PUBLISHED AUGUST 3, 1915.

106,337. FURNITURE-POLISH. ELLWOOD S. KILLE, Camden, N. J.
Filed March 29, 1915. Serial No. 85,512. PUBLISHED AUGUST 3, 1915.

106,338. MANUFACTURED LEATHER. FRED N. KIMBALL, Boston, Mass.
Filed April 30, 1915. Serial No. 86,293. PUBLISHED AUGUST 3, 1915.

106,339. LAUNDRY, BATH, AND TOILET SOAP. JAMES S. KIRK & COMPANY, Chicago, Ill.
Filed April 7, 1915. Serial No. 85,750. PUBLISHED AUGUST 3, 1915.

106,340. PLAYER-PIANOS. KOCH & DROGE PIANO CO., INC., Brooklyn, N. Y.
Filed May 18, 1915. Serial No. 86,707. PUBLISHED AUGUST 10, 1915.

106,341. JEWELRY FOR PERSONAL WEAR. THE ALOIS KOHN CHAIN CO., New York, N. Y.
Filed May 20, 1915. Serial No. 86,781. PUBLISHED AUGUST 10, 1915.

106,342. CANNED VEGETABLES AND CANNED FRUITS. LEROY M. LANGRALL, Baltimore, Md.
Filed May 18, 1915. Serial No. 86,708. PUBLISHED AUGUST 3, 1915.

106,343. PRINTED PERIODICAL PUBLICATIONS. THOMAS LEAVITT, Boston, Mass.
Filed February 25, 1914. Serial No. 76,143. PUBLISHED APRIL 20, 1915.

106,344. REMEDY FOR DISEASES OF THE SKIN AND SEMI-EXTERIOR MUCOUS MEMBRANES. GEO. H. LEE COMPANY, Omaha, Nebr.
Filed August 17, 1914. Serial No. 80,608. PUBLISHED AUGUST 3, 1915.

106,345. NON-POISONOUS GERMICIDES FOR MEDICAL AND SURGICAL USE, SPECIALLY PREPARED FOR INTERNAL ADMINISTRATION. THOMAS L. LEEMING, New York, N. Y.
Filed June 8, 1915. Serial No. 87,188. PUBLISHED AUGUST 3, 1915.

106,346. NON-INTOXICATING BEVERAGES PREPARED PARTLY FROM MALT. WILLIAM J. LEMP BREWING COMPANY, St. Louis, Mo.
Filed May 6, 1915. Serial No. 86,431. PUBLISHED AUGUST 3, 1915.

106,347. DRESS, NEGLIGÉE, WORK, AND FLANNEL SHIRTS. MEYER LEVIN & SON, New York, N. Y.
Filed May 25, 1915. Serial No. 86,887. PUBLISHED AUGUST 3, 1915.

106,348. MEDICINAL PREPARATION CONTAINING ALKALOIDS OF IPECAC FOR THE TREATMENT OF PYORRHEA AND KINDRED DISEASES. THE ELI LILLY AND COMPANY, Indianapolis, Ind.
Filed June 23, 1915. Serial No. 87,526. PUBLISHED AUGUST 3, 1915.

106,349. MEDICAL COMPOUND FOR USE IN TREATING COUGHS, COLDS HOARSENESS, ASTHMA, AND LUNG TROUBLES. FILOMENA MALINA, Chicago, Ill.
Filed May 1, 1915. Serial No. 86,329. PUBLISHED AUGUST 3, 1915.

106,350. PORTLAND CEMENT. MARQUETTE CEMENT MANUFACTURING CO., Chicago and Oglesby, Ill.
Filed April 18, 1914. Serial No. 77,561. PUBLISHED AUGUST 3, 1915.

106,351. BAKING-POWDER. MCKNIGHT-KRATON GROCERY CO., Cairo, Ill.
Filed June 21, 1915. Serial No. 87,477. PUBLISHED AUGUST 3, 1915.

106,352. RUBBER AND COMPOSITION PACKINGS. THE MECHANICAL RUBBER COMPANY, Jersey City, N. J.; New York, N. Y., and Cleveland, Ohio.
Filed May 10, 1915. Serial No. 86,520. PUBLISHED AUGUST 3, 1915.

106,353. FOLDING PAPER BOXES. MORRIS FIBRE BOARD COMPANY, Morris, Ill.
Filed April 5, 1915. Serial No. 85,717. PUBLISHED AUGUST 3, 1915.

106,354. ENZYMS. NATIONAL ENZYME CO. (INC.), New York, N. Y.
Filed May 5, 1915. Serial No. 86,398. PUBLISHED AUGUST 3, 1915.

106,355. ENZYMS. NATIONAL ENZYME CO. (INC.), New York, N. Y.
Filed May 5, 1915. Serial No. 86,399. PUBLISHED AUGUST 3, 1915.

106,356. ENZYMS. NATIONAL ENZYME CO. (INC.), New York, N. Y.
Filed May 5, 1915. Serial No. 86,400. PUBLISHED AUGUST 3, 1915.

106,357. MONTHLY PUBLICATION. THE NORTHWEST FARM PRESS CO., Seattle, Wash.
Filed April 27, 1915. Serial No. 86,231. PUBLISHED AUGUST 3, 1915.

106,358. CEMENT BURIAL-VAULTS. THE NORWALK VAULT COMPANY, Norwalk, Ohio.
Filed April 14, 1915. Serial No. 85,945. PUBLISHED AUGUST 3, 1915.

106,359. WATERPROOFING COMPOUND FOR LEATHER AND LEATHER BELTING. OLMSTED-FLINT COMPANY, Cambridge, Mass.
Filed May 15, 1915. Serial No. 86,650. PUBLISHED AUGUST 3, 1915.

106,360. CHINA TABLEWARE AND ORNAMENTAL CHINAWARE. ONONDAGA POTTERY COMPANY, Syracuse, N. Y.
Filed April 2, 1915. Serial No. 85,648. PUBLISHED AUGUST 3, 1915.

106,361. GINGER-SNAPS. PACIFIC COAST BISCUIT CO., Seattle, Wash.
Filed April 8, 1915. Serial No. 85,784. PUBLISHED JUNE 8, 1915.

106,362. BREAD. THE PARSONS-POWERS CO., Columbus, Ohio.
Filed May 15, 1915. Serial No. 86,654. PUBLISHED AUGUST 3, 1915.

106,363. PETROLEUM PRODUCTS—TO WIT, MOTOR-NAPHTHA, BENZIN, AND DISTILLATE. PETROLEUM PRODUCTS COMPANY, San Francisco, Cal.
Filed March 29, 1915. Serial No. 85,522. PUBLISHED AUGUST 3, 1915.

106,364. MAGAZINES PUBLISHED EACH CALENDAR MONTH. THE PHOTOGRAPHIC JOURNAL OF AMERICA, INCORPORATED, New York, N. Y.
Filed December 30, 1914. Serial No. 83,598. PUBLISHED AUGUST 3, 1915.

106,365. FACE-POWDER, RICE POWDER, AND ROUGE. THE J. A. POZZONI PHARMACAL CO., Chicago, Ill.
Filed May 15, 1915. Serial No. 86,653. PUBLISHED AUGUST 10, 1915.

106,366. SHOES. ROGERS PEET COMPANY, New York, N. Y.
Filed April 23, 1915. Serial No. 86,153. PUBLISHED AUGUST 3, 1915.

106,367. CEDAR CHESTS AND UTILITY-BOXES. THE ROOS MFG. CO., Chicago, Ill.
Filed March 30, 1915. Serial No. 85,549. PUBLISHED AUGUST 10, 1915.

106,368. WOODEN CURTAIN-POLES AND BRACKETS, TRIMMINGS, AND ORNAMENTS THEREFOR AND FOLDING DRAFT-SCREENS. THE ROOS MFG. CO., Chicago, Ill.
Filed March 30, 1915. Serial No. 85,550. PUBLISHED AUGUST 3, 1915.

106,369. BOND AND LEDGER PAPER. RUSSELL FALLS COMPANY, Boston and Russell, Mass.
Filed June 11, 1915. Serial No. 87,256. PUBLISHED AUGUST 10, 1915.

106,370. BOND AND LEDGER PAPER. RUSSELL FALLS COMPANY, Boston and Russell, Mass.
Filed June 11, 1915. Serial No. 87,257. PUBLISHED AUGUST 10, 1915.

106,371. WAGONS AND CARTS. THE SECHLER & COMPANY, Cincinnati, Ohio.
Filed June 4, 1915. Serial No. 87,115. PUBLISHED AUGUST 3, 1915.

106,372. HOROLOGICAL INDICATORS. SENTINEL CLOCK CO., Chicago, Ill.
Filed April 23, 1915. Serial No. 86,159. PUBLISHED AUGUST 3, 1915.

106,373. BEDBUG, ROACH, AND ANT KILLER. LEO SHAPIRO, Minneapolis, Minn.
Filed June 17, 1915. Serial No. 87,373. PUBLISHED AUGUST 3, 1915.

106,374. MAIL-BOXES. HARRY P. SICKELS, Rochester, N. Y.
Filed May 18, 1915. Serial No. 86,716. PUBLISHED AUGUST 3, 1915.

106,375. WHITE MINERAL OIL FOR THE TREATMENT OF INTESTINAL TORPIDITY AND CONSTIPATION. SHARP & DOHME, Baltimore, Md.
Filed June 15, 1915. Serial No. 87,219. PUBLISHED AUGUST 3, 1915.

106,376. ABSORBENT COTTON. SOUTHERN ASEPTIC LABORATORIES, Columbia, S. C.
Filed May 26, 1915. Serial No. 86,923. PUBLISHED AUGUST 3, 1915.

106,377. REMEDY FOR THE TREATMENT OF CERTAIN NAMED ANIMAL DISEASES. SPOHN MEDICAL COMPANY, Goshen, Ind.
Filed March 27, 1915. Serial No. 85,491. PUBLISHED AUGUST 3, 1915.

106,378. PHOTOGRAPHIC PORTRAITS. SPRAGUE-HATHAWAY CO., Somerville and Boston, Mass.
Filed May 5, 1915. Serial No. 86,411. PUBLISHED AUGUST 3, 1915.

106,379. SOAP. JOHN T. STANLEY CO. INC., New York, N. Y.
Filed May 10, 1915. Serial No. 86,530. PUBLISHED AUGUST 10, 1915.

106,380. COVER-PAPER. STRATHMORE PAPER COMPANY, West Springfield, Mc.
Filed May 5, 1915. Serial No. 86,415. PUBLISHED AUGUST 3, 1915.

106,381. PREPARATION FOR THE TREATMENT OF HOG-CHOLERA. CLARENCE E. TRETER, Huron, Kans.
Filed March 10, 1915. Serial No. 85,064. PUBLISHED AUGUST 3, 1915.

106,382. LADDERS. THE JOHN S. TILLEY LADDERS CO., Watervliet, N. Y.
Filed April 23, 1915. Serial No. 86,167. PUBLISHED AUGUST 3, 1915.

106,383. WHEAT-FLOUR. JOSEPH I. TRIPLETT, Woodstock, Va.
Filed June 22, 1914. Serial No. 79,283. PUBLISHED AUGUST 3, 1915.

106,384. DRESSED AND LIVE POULTRY, EGGS, STOCK, HATCHING-EGGS, AND CHICKS. TWIN OAK POULTRY AND EGG COMPANY, Williamstown, Mass.
Filed April 27, 1915. Serial No. 86,240. PUBLISHED AUGUST 3, 1915.

106,385. CLOCKS AND WATCHES. WESTERN CLOCK CO., Peru, Ill.
Filed March 4, 1915. Serial No. 84,939. PUBLISHED AUGUST 3, 1915.

106,386. AIR-BRAKE APPARATUS AND RAILWAY DRAFT-GEAR. THE WESTINGHOUSE AIR BRAKE COMPANY, Wilmerding, Pa.
Filed April 20, 1915. Serial No. 86,075. PUBLISHED AUGUST 3, 1915.

106,387. LEATHER-DRESSING FOR SUEDE AND BUCK LEATHER SHOES AND SLIPPERS. WHITTEMORE BROS. & CO., Cambridge, Mass.
Filed July 11, 1914. Serial No. 79,728. PUBLISHED AUGUST 3, 1915.

106,388. TOILET SOAP. THE J. B. WILLIAMS COMPANY, Glastonbury, Conn.
Filed September 11, 1914. Serial No. 81,209. PUBLISHED AUGUST 3, 1915.

106,389. CLEANSING AND MASSAGE CREAMS, ROUGE, ALMOND-BAR, COMPLEXION-POWDER, TOILET WATER, AND HAIR-REMOVER. WOOD & BARNARD, Detroit, Mich.
Filed June 4, 1915. Serial No. 87,117. PUBLISHED AUGUST 3, 1915.

106,390. PIECE GOODS OF CERTAIN NAMED MATERIALS. ADAIR & BRUYERE, New York, N. Y.
Filed July 6, 1914. Serial No. 79,556. PUBLISHED AUGUST 10, 1915.

106,391. MATCHES. AKTIESELSKABET H. E. GOSCH & CO.'S TÆNDSTIKFABRIKER OG AKTIETÆNDSTIKFABRIKEN GODTHAAB, Copenhagen, Denmark.
Filed June 10, 1914. Serial No. 78,939. PUBLISHED AUGUST 3, 1915.

106,392. MOPS. AMERICAN DISINFECTING CO., Sedalia, Mo.
Filed June 5, 1915. Serial No. 87,122. PUBLISHED AUGUST 3, 1915.

106,393. MEN'S AND WOMEN'S BOOTS AND SHOES MADE WHOLLY OR IN PART OF LEATHER AND CLOTH. AULT-WILLIAMSON SHOE CO., Ellsworth, Me.
Filed June 5, 1915. Serial No. 87,123. PUBLISHED AUGUST 3, 1915.

106,394. EYEGLASS-LENSES. BALTIMORE OPTICAL COMPANY, Baltimore, Md.
Filed May 18, 1915. Serial No. 86,693. PUBLISHED AUGUST 10, 1915.

106,395. NEGLIGÉES FOR WOMEN. A. BARSA & BRO., New York, N. Y.
Filed May 27, 1915. Serial No. 86,925. PUBLISHED AUGUST 3, 1915.

106,396. PRESERVED FISH, PICKLED FISH, CANNED SARDINES, CANNED ANCHOVIES, AND CANNED KIPPERED HERRING. CHRISTIAN L. BENSON, Chicago, Ill.
Filed December 29, 1913. Serial No. 74,870. PUBLISHED AUGUST 3, 1915.

106,397. LADIES' OUTER GARMENTS—VIZ., SUITS, CLOAKS, AND DRESSES. BLOGG & LITTAUER, New York, N. Y.
Filed June 21, 1915. Serial No. 87,454. PUBLISHED AUGUST 10, 1915.

106,398. GROCERIES—VIZ., TEAS, COFFEES, COCOA, AND SALAD-OIL PRESSED FROM COTTON-SEED. BLOOMINGDALE BROS., New York, N. Y.
Filed November 7, 1914. Serial No. 82,454. PUBLISHED AUGUST 3, 1915.

106,399. HOSIERY. BLOOMINGDALE BROS., New York, N. Y.
Filed June 11, 1915. Serial No. 87,241. PUBLISHED AUGUST 10, 1915.

106,400. WRENCHES. BONNEY VISE & TOOL WORKS, INC., Philadelphia and Allentown, Pa., and New York, N. Y.
Filed June 19, 1915. Serial No. 87,408. PUBLISHED AUGUST 10, 1915.

106,401. COTTON BAGS. BOOTT MILLS, Lowell, Mass.
Filed June 25, 1915. Serial No. 87,587. PUBLISHED AUGUST 10, 1915.

106,402. DRIED OR DESICCATED MILK. BORDEN'S CONDENSED MILK COMPANY, Jersey City, N. J., and New York, N. Y.
Filed April 17, 1915. Serial No. 86,011. PUBLISHED AUGUST 3, 1915.

106,403. MAGAZINE PUBLISHED MONTHLY. BOY SCOUTS OF AMERICA, Washington, D. C., and New York, N. Y.
Filed April 13, 1915. Serial No. 85,916. PUBLISHED AUGUST 10, 1915.

106,404. MASSAGE INSTRUMENTS. JOSEPH F. BRODIGAN, New York, N. Y.
Filed June 18, 1915. Serial No. 87,382. PUBLISHED AUGUST 10, 1915.

106,405. FERRUGINOUS CLAY. BROWN BROTHERS, Graenburg, Wis.
Filed June 5, 1915. Serial No. 87,125. PUBLISHED AUGUST 10, 1915.

106,406. MEDICINAL TONIC. BESSIE BURRUS, Nashville, Tenn.
Filed July 1, 1915. Serial No. 87,676. PUBLISHED AUGUST 10, 1915.

106,407. CERTAIN NAMED MANICURE IMPLEMENTS. HEINR. BÖKER & Co., Solingen, Germany.
Filed April 9, 1915. Serial No. 85,809. PUBLISHED AUGUST 3, 1915.

106,408. BOOTS, SHOES, AND SLIPPERS MADE WHOLLY OR IN PART OF LEATHER AND CLOTH. THE CLAY-GUNNELL CO., Catlettsburg, Ky.
Filed May 13, 1915. Serial No. 86,587. PUBLISHED AUGUST 3, 1915.

106,409. CLEANING, DRESSING, AND POLISHING LIQUIDS FOR ARTICLES MADE FROM LEATHER. WILLIAM COATES, New York, N. Y.
Filed January 23, 1915. Serial No. 84,051. PUBLISHED AUGUST 3, 1915.

106,410. WOOLEN PIECE GOODS. THE CLEVELAND WORSTED MILLS CO., Cleveland, Ohio.
Filed November 20, 1914. Serial No. 82,709. PUBLISHED AUGUST 3, 1915.

106,411. TOILET AND LAUNDRY SOAP. COLGATE & Co., Jersey City, N. J., and New York, N. Y.
Filed June 8, 1915. Serial No. 87,183. PUBLISHED AUGUST 10, 1915.

106,412. SHOCK-ABSORBERS. COMFORT SHOCK ABSORBER CO., Hempstead, N. Y.
Filed September 2, 1914. Serial No. 80,935. PUBLISHED AUGUST 3, 1915.

106,413. TOY PENNANTS. CRUVER MANUFACTURING COMPANY, Chicago, Ill.
Filed March 31, 1915. Serial No. 85,567. PUBLISHED AUGUST 3, 1915.

106,414. PAPER BAGS. CROWN WILLAMETTE PAPER CO., Portland, Me., and San Francisco, Cal.
Filed May 19, 1915. Serial No. 86,729. PUBLISHED AUGUST 10, 1915.

106,415. COFFEE. DENISON COFFEE CO., Chicago, Ill.
Filed April 16, 1915. Serial No. 85,980. PUBLISHED AUGUST 3, 1915.

106,416. COMPRESSION-BULBS. THE DE VILBISS MANUFACTURING COMPANY, Toledo, Ohio.
Filed February 9, 1914. Serial No. 75,785. PUBLISHED APRIL 20, 1915.

106,417. CERTAIN NAMED RUBBER GOODS AND SURGICAL APPLIANCES. DRUGGISTS' SUPPLY CORPORATION, New York, N. Y.
Filed May 4, 1915. Serial No. 86,365. PUBLISHED AUGUST 3, 1915.

106,418. CEMENTING AND VULCANIZING PATCHES ADAPTED TO BE APPLIED TO RUBBER GOODS. THE E. Z. PATCH COMPANY, Akron, Ohio.
Filed March 17, 1915. Serial No. 85,207. PUBLISHED AUGUST 3, 1915.

106,419. CERTAIN NAMED SPORTING GOODS. THE ENTERPRISE MANUFACTURING COMPANY, Akron, Ohio.
Filed February 12, 1915. Serial No. 84,480. PUBLISHED AUGUST 3, 1915.

106,420. CERTAIN NAMED SPORTING GOODS. THE ENTERPRISE MANUFACTURING COMPANY, Akron, Ohio.
Filed June 7, 1915. Serial No. 87,164. PUBLISHED AUGUST 3, 1915.

106,421. COTTON PIECE GOODS. FALL RIVER BLEACHERY, Fall River, Mass.
Filed May 12, 1915. Serial No. 86,571. PUBLISHED AUGUST 3, 1915.

106,422. LAXATIVE TABLETS. THE FELLOWS MEDICAL M'F'G CO., LIMITED, New York, N. Y.
Filed June 14, 1915. Serial No. 87,288. PUBLISHED AUGUST 10, 1915.

106,423. MATERIALS FOR PREVENTING THE FORMATION OF RUST OR SCALE IN WATER-CONTAINING DEVICES. FLINT, EATON & Co., Decatur, Ill.
Filed February 18, 1915. Serial No. 84,594. PUBLISHED APRIL 27, 1915.

106,424. EATING-CHOCOLATE AND CHOCOLATE CANDY. D. GHIRARDELLI Co., San Francisco, Cal.
Filed February 8, 1915. Serial No. 84,365. PUBLISHED AUGUST 3, 1915.

106,425. WEBBING, WOVEN STRAPS, FABRIC BELTING, AND FABRIC SHIMS AND PADDING. L. H. GILMER Co., Philadelphia, Pa.
Filed January 14, 1915. Serial No. 83,854. PUBLISHED AUGUST 3, 1915.

106,426. EAR-PHONES OR AUDIPHONES. GLOBE EAR-PHONE COMPANY, Boston, Mass.
Filed April 18, 1914. Serial No. 77,558. PUBLISHED AUGUST 3, 1915.

106,427. CERTAIN NAMED FOODS. GOLDBERG, BOWEN & Co., San Francisco, Cal.
Filed September 16, 1913. Serial No. 72,883. PUBLISHED AUGUST 3, 1915.

106,428. DRESS, NEGLIGÉE, AND WORK SHIRTS. MICHAEL GOLDMAN, New York, N. Y.
Filed March 13, 1915. Serial No. 85,134. PUBLISHED AUGUST 3, 1915.

106,429. DISINFECTANTS, WOOD-PRESERVATIVES, FUNGICIDES, AND INSECTICIDES. BRUNO GROSCHE & COMPANY, New York, N. Y.
Filed September 5, 1914. Serial No. 80,999. PUBLISHED AUGUST 3, 1915.

106,430. WATERPROOFING-PAINTS, PAINT-OILS, AND WOOD-STAIN. BRUNO GROSCHE & COMPANY, New York, N. Y.
Filed September 14, 1914. Serial No. 81,241. PUBLISHED AUGUST 3, 1915.

106,431. CERTAIN NAMED FOODS. HABICHT, BRAUN & Co., New York, N. Y.
Filed April 2, 1915. Serial No. 85,633. PUBLISHED AUGUST 3, 1915.

106,432. ALE, PORTER, AND LAGER-BEER. THE JAMES HANLEY BREWING COMPANY, Providence, R. I.
Filed May 18, 1915. Serial No. 86,702. PUBLISHED AUGUST 3, 1915.

106,433. ALE, PORTER, AND LAGER-BEER. THE JAMES HANLEY BREWING COMPANY, Providence, R. I.
Filed May 18, 1915. Serial No. 86,703. PUBLISHED AUGUST 3, 1915.

106,434. ALE, PORTER, AND LAGER-BEER. THE JAMES HANLEY BREWING COMPANY, Providence, R. I.
Filed May 18, 1915. Serial No. 86,704. PUBLISHED AUGUST 3, 1915.

106,435. ALE, PORTER, AND LAGER-BEER. THE JAMES HANLEY BREWING COMPANY, Providence, R. I.
Filed May 18, 1915. Serial No. 86,705. PUBLISHED AUGUST 3, 1915.

106,436. NURSES' AND MAIDS' UNIFORMS, HOUSE-DRESSES, WRAPPERS, AND LADIES' WAISTS. HAYS & GREEN, New York, N. Y.
Filed June 5, 1915. Serial No. 87,134. PUBLISHED AUGUST 3, 1915.

106,437. COFFEE. A. HELD, New York, N. Y.
Filed May 17, 1915. Serial No. 86,671. PUBLISHED AUGUST 3, 1915.

106,438. NEGLIGÉE AND WORK SHIRTS AND OVERALLS. SOL HELLER & SONS, Wilkes-Barre, Pa.
Filed May 27, 1915. Serial No. 86,932. PUBLISHED AUGUST 3, 1915.

106,439. TOILET-PAPER. THE JOHN HOBERG CO., Green Bay, Wis.
Filed June 15, 1915. Serial No. 87,304. PUBLISHED AUGUST 10, 1915.

106,440. CHOCOLATES. HENRY R. HOEFLER, Astoria, Oreg.
Filed March 27, 1915. Serial No. 85,480. PUBLISHED AUGUST 3, 1915.

106,441. HYDRAULIC MOTORS. WILLIAM HOPE, Springfield, Ohio.
Filed May 10, 1915. Serial No. 86,517. PUBLISHED AUGUST 3, 1915.

106,442. PRINTING, WRITING, AND COVER PAPERS. HUDSON VALLEY PAPER CO., Albany, N. Y.
Filed May 15, 1915. Serial No. 86,644. PUBLISHED AUGUST 10, 1915.

106,443. EFFERVESCENT SALTS. IMPERIAL LABORATORIES CO., Philadelphia, Pa.
Filed June 11, 1915. Serial No. 87,263. PUBLISHED AUGUST 10, 1915.

106,444. CERTAIN NAMED TOILET PREPARATIONS. THE IMPORTERS COMPANY, Denver, Colo.
Filed July 3, 1914. Serial No. 79,533. PUBLISHED AUGUST 3, 1915.

106,445. CERTAIN NAMED TOILET PREPARATIONS. THE IMPORTERS COMPANY, Denver, Colo.
Filed July 3, 1914. Serial No. 79,534. PUBLISHED AUGUST 3, 1915.

106,446. SEAMLESS TANKS. JANNEY-STEINMETZ & Co., Philadelphia, Pa.
Filed June 17, 1915. Serial No. 87,368. PUBLISHED AUGUST 10, 1915.

106,447. REMEDY FOR THE TREATMENT OF DISEASES OF WOMEN. WYLIE BRANTLEY JONES, Binghamton, N. Y.
Filed June 24, 1915. Serial No. 87,562. PUBLISHED AUGUST 10, 1915.

106,448. SPECIAL GRADE OF COTTON AND WOOLEN MIDSUMMER-SUITING. KAHN TAILORING COMPANY, Indianapolis, Ind.
Filed April 2, 1915. Serial No. 85,641. PUBLISHED AUGUST 3, 1915.

106,449. GLOVES. JULIUS KAYSER & Co., New York, N. Y.
Filed May 26, 1915. Serial No. 86,907. PUBLISHED AUGUST 3, 1915.

106,450. FERTILIZERS. GEORG KIRKEGAARD, Brooklyn, N. Y., assignor to Kirke Chemical Company, Inc., a Corporation of New York.
Filed March 18, 1915. Serial No. 85,238. PUBLISHED AUGUST 10, 1915.

106,451. CORSETS. KOPS BROS., New York, N. Y.
Filed June 9, 1915. Serial No. 87,205. PUBLISHED AUGUST 10, 1915.

106,452. FABRIC BELTING. CLARENCE P. LANDRETH, Philadelphia, Pa.
Filed April 28, 1915. Serial No. 86,251. PUBLISHED AUGUST 10, 1915.

106,453. DRAFTING INSTRUMENT. FREDERICK WALTER LANE, Chico, Cal.
Filed June 29, 1915. Serial No. 87,657. PUBLISHED AUGUST 10, 1915.

106,454. WASHING-POWDER. LOS ANGELES SOAP COMPANY, Los Angeles, Cal.
Filed August 12, 1914. Serial No. 80,503. PUBLISHED AUGUST 3, 1915.

106,455. CANDIES, BONBONS, FRUIT TABLETS, AND SUGAR-COATED POPCORN. F. S. LOVE MANUFACTURING Co., Johnstown, Pa.
Filed August 28, 1913. Serial No. 72,572. PUBLISHED AUGUST 3, 1915.

106,456. BLENDED SCOTCH WHISKY. MACDONALD & MUIR, Leith, Scotland.
Filed August 1, 1914. Serial No. 80,284. PUBLISHED AUGUST 10, 1915.

106,457. WATCHES. R. H. MACY & Co., New York, N. Y.
Filed May 21, 1915. Serial No. 86,809. PUBLISHED AUGUST 10, 1915.

106,458. CERTAIN NAMED VITREOUS CHINA BATHROOM TRIMMINGS AND FITTINGS. THOMAS MADDOCK'S SONS Co., Trenton, N. J.
Filed April 27, 1915. Serial No. 86,230. PUBLISHED AUGUST 3, 1915.

106,459. CANDY. FLORENCE CECELIA MANKIN, Washington, D. C.
Filed May 7, 1915. Serial No. 86,455. PUBLISHED AUGUST 3, 1915.

106,460. OLIVE-OIL. VINCENZO MARRONE, Utica, N. Y.
Filed December 28, 1912. Serial No. 67,617. PUBLISHED AUGUST 3, 1915.

106,461. WHEAT BREAKFAST FOOD. JOHN T. MASON, Kewanee, Ill.
Filed February 8, 1915. Serial No. 84,376. PUBLISHED AUGUST 3, 1915.

106,462. LEATHER WELTING. MCADOO & ALLEN, Philadelphia, Pa.
Filed April 7, 1915. Serial No. 85,752. PUBLISHED AUGUST 3, 1915.

106,463. LEATHER WELTING. MCADOO & ALLEN, Philadelphia, Pa.
Filed April 7, 1915. Serial No. 85,753. PUBLISHED AUGUST 3, 1915.

106,464. ABSORBENT AND ANTISEPTIC DUSTING-POWDER FOR USE IN CERTAIN NAMED DISEASES. GERHARD MENNEN CHEMICAL Co., Newark, N. J.
Filed June 19, 1915. Serial No. 87,433. PUBLISHED AUGUST 10, 1915.

106,465. CEREAL COFFEE SUBSTITUTE. MONROE DRUG Co., Quincy, Ill.
Filed February 26, 1915. Serial No. 84,781. PUBLISHED AUGUST 3, 1915.

106,466. COFFEE COMPOUND COMPOSED OF COFFEE, CHICORY, AND CEREAL. MUTUAL COFFEE Co., Montgomery, Ala.
Filed April 23, 1915. Serial No. 86,146. PUBLISHED AUGUST 3, 1915.

106,467. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed April 16, 1915. Serial No. 85,997. PUBLISHED AUGUST 3, 1915.

106,468. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed April 16, 1915. Serial No. 85,998. PUBLISHED AUGUST 3, 1915.

106,469. CANDY COMPOSED OF OR CONTAINING CHOCOLATE. NATIONAL CANDY COMPANY, Jersey City, N. J., and St. Louis, Mo.
Filed April 5, 1915. Serial No. 85,719. PUBLISHED AUGUST 3, 1915.

106,470. ESSENCE FOR COFFEE. NATIONAL ESSENCE FOR COFFEE COMPANY, Philadelphia, Pa.
Filed April 16, 1915. Serial No. 85,999. PUBLISHED AUGUST 3, 1915.

106,471. CORN-STARCH. NATIONAL STARCH Co., New York, N. Y.
Filed April 19, 1915. Serial No. 86,048. PUBLISHED AUGUST 3, 1915.

106,472. PREPARATION FOR TREATMENT OF DANDRUFF AND DISEASES OF THE SCALP AND SKIN. NELROW CHEMICAL COMPANY, New York, N. Y.
Filed June 15, 1915. Serial No. 87,310. PUBLISHED AUGUST 10, 1915.

106,473. CERTAIN NAMED PHOTOGRAPHIC APPARATUS AND SUPPLIES. NEUE PHOTOGRAPHISCHE GESELLSCHAFT AKTIENGESELLSCHAFT, Steglitz, near Berlin, Germany.
Filed July 18, 1914. Serial No. 79,917. PUBLISHED AUGUST 10, 1915.

106,474. DOLLS. THE NEW ERA NOVELTY Co., INC., New York, N. Y.
Filed May 5, 1915. Serial No. 86,403. PUBLISHED AUGUST 3, 1915.

106,475. PAINT OR VARNISH REMOVERS AND THE LIKE. NEW ERA REMOVER COMPANY, Newark, N. J.
Filed May 11, 1915. Serial No. 86,546. PUBLISHED AUGUST 10, 1915.

106,476. VACUUM MASSAGE-MACHINES. NEW LIFE MASSAGE Co., INC., Brooklyn, N. Y.
Filed June 3, 1915. Serial No. 87,080. PUBLISHED AUGUST 3, 1915.

106,477. HAIR-NETS. NEW YORK MERCHANDISE Co., New York, N. Y.
Filed May 20, 1915. Serial No. 86,787. PUBLISHED AUGUST 3, 1915.

106,478. ALTERATIVE MIXTURE, TONIC, AND LAXATIVE. NYAL COMPANY, Detroit, Mich.
Filed July 1, 1915. Serial No. 87,691. PUBLISHED AUGUST 10, 1915.

106,479. ABDOMINAL SUPPORTERS AND BANDAGES, TRUSSES, AND SUSPENSORIES. THE OHIO TRUSS Co., Cincinnati, Ohio.
Filed September 8, 1914. Serial No. 81,074. PUBLISHED AUGUST 3, 1915.

106,480. BUTTER. OLD DUTCH MARKET, Washington, D. C., and Alexandria, Va.
Filed April 13, 1915. Serial No. 85,930. PUBLISHED AUGUST 3, 1915.

106,481. BUTTER. OLD DUTCH MARKET, Washington, D. C., and Alexandria, Va.
Filed April 13, 1915. Serial No. 85,933. PUBLISHED AUGUST 3, 1915.

106,482. BUTTER. OLD DUTCH MARKET, Washington, D. C., and Alexandria, Va.
Filed May 10, 1915. Serial No. 86,522. PUBLISHED AUGUST 3, 1915.

106,483. BREAD. OLD DUTCH MARKET, Washington, D. C., and Alexandria, Va.
Filed May 10, 1915. Serial No. 86,523. PUBLISHED AUGUST 3, 1915.

106,484. EGGS. OLD DUTCH MARKET, Washington, D. C., and Alexandria, Va.
Filed May 10, 1915. Serial No. 86,526. PUBLISHED AUGUST 3, 1915.

106,485. NARROW TEXTILE FABRICS—VIZ., RIBBONS. WM. OPENHYM & SONS, New York, N. Y.
Filed April 30, 1915. Serial No. 86,297. PUBLISHED AUGUST 3, 1915.

106,486. UNDERSHIRTS, DRAWERS, UNION SUITS, NIGHT-ROBES, AND PAJAMAS. OPPENHEIM, OBERNDORF & CO., Baltimore, Md.
Filed May 18, 1915. Serial No. 86,710. PUBLISHED AUGUST 3, 1915.

106,487. CANDY. PACKAGE CONFECTIONERY CO., Boston, Mass.
Filed April 10, 1915. Serial No. 85,869. PUBLISHED AUGUST 3, 1915.

106,488. CORNMEAL. THE PARK & POLLARD COMPANY, Boston, Mass.
Filed April 19, 1915. Serial No. 86,051. PUBLISHED AUGUST 3, 1915.

106,489. CULTIVATORS. PARLIN & ORENDORFF CO., Canton, Ill.
Filed May 5, 1915. Serial No. 86,407. PUBLISHED AUGUST 10, 1915.

106,490. PLOWS. PARLIN & ORENDORFF COMPANY, Canton, Ill.
Filed June 28, 1915. Serial No. 87,647. PUBLISHED AUGUST 10, 1915.

106,491. MANUFACTURED GUIMPES, BOUDOIR-CAPS, VESTEES, COLLARS, AND CUFFS. PHILLIPS BOYD CO., INCOR., New York, N. Y.
Filed March 6, 1915. Serial No. 84,972. PUBLISHED AUGUST 3, 1915.

106,492. PREPARATION FOR COLORING GRAY OR FADED HAIR. PHILO HAY SPECIALTIES CO., Newark, N. J.
Filed May 17, 1915. Serial No. 86,667. PUBLISHED AUGUST 10, 1915.

106,493. CHEMICAL COMBINATION POSSESSING THE PROPERTIES OF ANTITOXIN, OPSONIN, AND GENERAL ANTISEPTIC. EDWARD W. PIERCE, Philadelphia, Pa.
Filed May 11, 1915. Serial No. 86,551. PUBLISHED AUGUST 3, 1915.

106,494. SHEETINGS AND DRILLINGS. PIEDMONT MANUFACTURING COMPANY, Piedmont, S. C.
Filed June 19, 1915. Serial No. 87,440. PUBLISHED AUGUST 10, 1915.

106,495. CERTAIN NAMED CUTLERY, MACHINERY, TOOLS, AND PARTS THEREOF. PITTSBURGH IRON AND STEEL FOUNDRIES COMPANY, Midland, Pa.
Filed May 14, 1915. Serial No. 86,620. PUBLISHED AUGUST 10, 1915.

106,496. BOOTS, SHOES, AND SLIPPERS OF LEATHER, RUBBER, FELT, SILK, AND CLOTH. THOMAS G. PLANT COMPANY, Boston, Mass.
Filed May 26, 1915. Serial No. 86,915. PUBLISHED AUGUST 3, 1915.

106,497. BOOTS, SHOES, AND SLIPPERS OF LEATHER, RUBBER, FELT, SILK, AND CLOTH. THOMAS G. PLANT COMPANY, Boston, Mass.
Filed May 26, 1915. Serial No. 86,916. PUBLISHED AUGUST 3, 1915.

106,498. STEEL PORTABLE BUILDINGS. THE C. D. PRUDEN COMPANY, Baltimore, Md.
Filed May 10, 1915. Serial No. 86,527. PUBLISHED AUGUST 10, 1915.

106,499. SHOCK-ABSORBERS. THE R. & R. MANUFACTURING CO., Chicago, Ill.
Filed June 1, 1915. Serial No. 87,035. PUBLISHED AUGUST 10, 1915.

106,500. ROPE, BINDER AND OTHER TWINES. RAFFLOER, ERBSLOH AND COMPANY, New York, N. Y.
Filed May 18, 1915. Serial No. 86,713. PUBLISHED AUGUST 3, 1915.

106,501. ROPE, BINDER AND OTHER TWINES. RAFFLOER, ERBSLOH AND COMPANY, New York, N. Y.
Filed May 18, 1915. Serial No. 86,714. PUBLISHED AUGUST 3, 1915.

106,502. WOMEN'S, MISSES', AND CHILDREN'S SHIRT-WAISTS AND DRESSES. RAND BROTHERS, Philadelphia, Pa.
Filed March 11, 1915. Serial No. 85,100. PUBLISHED AUGUST 3, 1915.

106,503. ELASTIC VEHICLE-TIRES. THE REPUBLIC RUBBER COMPANY, Youngstown, Ohio.
Filed May 14, 1915. Serial No. 86,622. PUBLISHED AUGUST 10, 1915.

106,504. CHOCOLATES AND BONBONS. GERALD RICKARD, Baltimore, Md.
Filed May 5, 1915. Serial No. 86,410. PUBLISHED AUGUST 3, 1915.

106,505. OVERALLS, JUMPERS, COATS, AND TROUSERS. ROSE-ROGERS CO., Dallas, Tex.
Filed May 11, 1915. Serial No. 86,552. PUBLISHED AUGUST 3, 1915.

106,506. OVERALLS, JUMPERS, COATS, AND TROUSERS. ROSE-ROGERS CO., Dallas, Tex.
Filed May 11, 1915. Serial No. 86,553. PUBLISHED AUGUST 3, 1915.

106,507. MEN'S AND YOUTHS' CLOTHING—VIZ., OUTER SUITS AND OVERCOATS. SAMUEL ROSENTHAL & BROS., New York, N. Y.
Filed February 17, 1915. Serial No. 84,587. PUBLISHED AUGUST 3, 1915.

106,508. HAIR-NETS. RUDOLPH SAENGER CO., New York, N. Y.
Filed March 2, 1915. Serial No. 84,892. PUBLISHED AUGUST 3, 1915.

106,509. HEAT-RESISTING CABINETS AND SAFES. THE SAFE-CABINET COMPANY, Marietta, Ohio.
Filed May 28, 1915. Serial No. 86,973. PUBLISHED AUGUST 3, 1915.

106,510. HEAT-RESISTING CABINETS AND SAFES. THE SAFE-CABINET COMPANY, Marietta, Ohio.
Filed May 28, 1915. Serial No. 86,974. PUBLISHED AUGUST 3, 1915.

106,511. VELVETS AND PLUSHES IN THE PIECE. THE SALT'S TEXTILE MANUFACTURING COMPANY, Bridgeport, Conn., and New York, N. Y.
Filed May 25, 1915. Serial No. 86,898. PUBLISHED AUGUST 3, 1915.

106,512. WEEKLY TRADE JOURNAL. FREDERICK E. SAWARD, New York, N. Y.
Filed April 30, 1915. Serial No. 86,303. PUBLISHED AUGUST 10, 1915.

106,513. WINDOW-SHADES. FREDERICK SCHOENHERR, Baltimore, Md.
Filed March 12, 1915. Serial No. 85,125. PUBLISHED APRIL 27, 1915.

106,514. CITRUS FRUITS. H. C. SCHRADER CO.; Jacksonville, Fla.
Filed May 8, 1915. Serial No. 86,495. PUBLISHED AUGUST 3, 1915.

106,515. LIQUID PREPARATION FOR USE IN SHAVING. SOCIETE ANONYME DE L'EMULSION DES INDES, Paris, France.
Filed March 28, 1914. Serial No. 77,034. PUBLISHED AUGUST 10, 1915.

106,516. ICE-CREAM. STALLKNECHT ICE CREAM CORPORATION, Baltimore, Md.
Filed May 5, 1915. Serial No. 86,414. PUBLISHED AUGUST 3, 1915.

106,517. WHITE MINERAL OIL FOR USE IN THE TREATMENT OF CONSTIPATION. STANDARD OIL COMPANY OF NEW YORK, New York, N. Y.
Filed June 29, 1915. Serial No. 87,661. PUBLISHED AUGUST 10, 1915.

106,518. GLOVES. STERN BROTHERS, New York, N. Y.
Filed February 17, 1915. Serial No. 84,589. PUBLISHED AUGUST 3, 1915.

106,519. MEDICINAL PREPARATION FOR COMPLAINTS AS RESULT FROM A DISORDERED STOMACH. ROBERT JAMES STONE, Memphis, Tenn.
Filed March 1, 1915. Serial No. 84,873. PUBLISHED AUGUST 3, 1915.

106,520. GAS-IRON. STRAUSE GAS IRON COMPANY, Philadelphia, Pa.
Filed April 22, 1915. Serial No. 86,121. PUBLISHED AUGUST 3, 1915.

106,521. PRESERVED AND CANNED FISH. STROHMEIER & ARPE COMPANY, New York, N. Y.
Filed March 29, 1915. Serial No. 85,525. PUBLISHED AUGUST 3, 1915.

106,522. DISINFECTING PAINT. TMCO MFG. CO., INC., New York, N. Y.
Filed May 7, 1915. Serial No. 86,460. PUBLISHED AUGUST 10, 1915.

106,523. KNITTED UNDERWEAR—VIZ., COMBINATIONS, TWO-PIECE SUITS, AND SEPARATE PIECES. UNION MILLS, INC., St. Johnsville and New York, N. Y.
Filed June 16, 1915. Serial No. 87,353. PUBLISHED AUGUST 3, 1915.

106,524. LEAD PIPE AND DRAIN-TRAPS. UNITED LEAD COMPANY, New York, N. Y.
Filed May 17, 1915. Serial No. 86,687. PUBLISHED AUGUST 3, 1915.

106,525. SHAMPOO PREPARATION. VAIL BROTHERS, Philadelphia, Pa.
Filed July 1, 1915. Serial No. 87,697. PUBLISHED AUGUST 10, 1915.

106,526. RAW AND PARTLY-PREPARED MARBLE. THE VICTORIA MARBLE COMPANY, Knoxville, Tenn.
Filed May 17, 1915. Serial No. 86,688. PUBLISHED AUGUST 10, 1915.

106,527. MACARONI, OLIVE-OIL, CHEESE, CANNED TOMATOES, BEANS, PEAS, CANNED ANCHOVIES, AND SARDINES. VOLA IMPORTING COMPANY, New York, N. Y.
Filed February 23, 1915. Serial No. 84,725. PUBLISHED AUGUST 3, 1915.

106,528. CERTAIN NAMED CLOTHING. WALDES & COMPANY, Prague-Wrschowitz, Austria-Hungary.
Filed October 9, 1914. Serial No. 81,778. PUBLISHED JUNE 22, 1915.

106,529. CERTAIN NAMED CLOTHING. WALDES & COMPANY, Prague-Wrschowitz, Austria-Hungary.
Filed October 15, 1914. Serial No. 81,922. PUBLISHED AUGUST 3, 1915.

106,530. CERTAIN NAMED CLOTHING. WALDES & COMPANY, Prague-Wrschowitz, Austria-Hungary.
Filed October 20, 1914. Serial No. 82,043. PUBLISHED AUGUST 3, 1915.

106,531. BATH-GARMENTS. WARD MEEHAN COMPANY, Philadelphia, Pa.
Filed March 11, 1915. Serial No. 85,105. PUBLISHED AUGUST 3, 1915.

106,532. SHOES MADE OF LEATHER AND OF LEATHER AND FABRICS. WATSON SHOE CO., Lynn, Mass.
Filed January 2, 1915. Serial No. 83,626. PUBLISHED AUGUST 3, 1915.

106,533. PREPARED FOOD FOR HORSES, CATTLE, SHEEP, HOGS, AND OTHER ANIMALS. THE WINDSOR STOCK FOOD COMPANY, Windsor, Conn.
Filed February 25, 1915. Serial No. 84,778. PUBLISHED AUGUST 3, 1915.

106,534. CANDY. WINDSOR CHOCOLATE COMPANY, Philadelphia, Pa.
Filed April 17, 1915. Serial No. 86,026. PUBLISHED AUGUST 3, 1915.

106,535. TRACING-CLOTH. THE WINTERBOTTOM BOOK CLOTH COMPANY, LIMITED, Manchester, England.
Filed June 3, 1915. Serial No. 87,087. PUBLISHED AUGUST 10, 1915.

106,536. CRAYONS. MAX ROSNER CO., New York, N. Y.
Filed April 30, 1915. Serial No. 86,300. PUBLISHED AUGUST 3, 1915.

TRADE-MARK REGISTRATIONS RENEWED.

12,760. MUSIC-BOXES. C. PAILLARD & CO., Ste. Croix, Switzerland.
Registered November 10, 1885. Renewed November 10, 1915.

12,934. CATALOGUES. BUTLER BROS., New York, N.Y.; Butler Brothers, assignee.
Registered January 12, 1886. Renewed January 12, 1916.

13,098. GILLING-THREAD. JOHN SUMMERILL & BRO., South Penn's Grove, N. J.
Registered March 9, 1886. Renewed March 9, 1916.

LABELS

REGISTERED OCTOBER 19, 1915.

18,803.—*Title:* "HOPSON'S MEXICAN STYLE PECAN CANDY." (For Candy.) THE A. B. C. CANDY CO., Sherman, Tex. Filed September 9, 1915.

18,804.—*Title:* "EU-CA-LYP-TINE." (For a Remedy.) PHILLIP S. FRICK, Oswego, Kans. Filed September 13, 1915.

18,805.—*Title:* "HORLICK'S BISCUIT." (For Biscuit.) ARNOLD A. HORLICK, Milwaukee, Wis. Filed September 17, 1915.

18,806.—*Title:* "LEADOIL." (For Mediums for Thinning Paste Pigments.) LEADOIL COMPANY INC., Brooklyn, N. Y. Filed July 29, 1915.

18,807.—*Title:* "JANET BRAND." (For Strawberries.) LOUISIANA STRAWBERRY DISTRIBUTING COMPANY, INC., New Orleans, La. Filed May 3, 1915.

PRINTS

REGISTERED OCTOBER 19, 1915.

4,086.—*Title:* "ALVIN SILVER." (For Alvin Silver.) ALVIN MANUFACTURING COMPANY, Sag Harbor, N. Y. Filed September 9, 1915.

4,087.—*Title:* "B. V. D. MEN'S V NECK TWO PIECE SUIT." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed September 21, 1915.

4,088.—*Title:* "B. V. D. MEN'S V NECK UNION SUIT." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed September 21, 1915.

4,089.—*Title:* "MEASUREMENTS REQUIRED WHEN ORDERING B. V. D. UNDERWEAR." (For Athletic Underwear.) THE B. V. D. COMPANY, New York, N. Y. Filed September 9, 1915.

4,090.—*Title:* "GOOD SHIP—SATISFIED CUSTOMER." (For Gentlemen's Furnishing Goods and Clothing.) D. M. BOYD, Kirkwood, Mo. Filed June 19, 1915.

4,091.—*Title:* "THE ORDEAL." (For a Gas Water-Heater.) CONSOLIDATED GAS, ELECTRIC LIGHT AND POWER COMPANY OF BALTIMORE, Baltimore, Md. Filed July 6, 1915.

4,092.—*Title:* "CLEANING THE OLD WAY." (For an Electrical Vacuum-Cleaner.) CONSOLIDATED GAS, ELECTRIC LIGHT & POWER COMPANY OF BALTIMORE, Baltimore, Md. Filed July 6, 1915.

4,093.—*Title:* "TAKING THE WORK OUT OF WASHING." (For Electric Washing-Machines.) CONSOLIDATED GAS, ELECTRIC LIGHT & POWER COMPANY OF BALTIMORE, Baltimore, Md. Filed July 6, 1915.

4,094.—*Title:* "DIRT, DISCOMFORT AND DISCOMFITURE." (For an Electric Iron.) CONSOLIDATED GAS, ELECTRIC LIGHT & POWER COMPANY OF BALTIMORE, Baltimore, Md. Filed July 6, 1915.

4,095.—*Title:* "SUPERIORA." (For Magnolia-Leaves.) DR. H. DUX & BROS., Jacksonville, Fla. Filed July 29, 1915.

4,096.—*Title:* "CHERRY SMASH" (For Cherry Smash.) JOHN E. FOWLER, Richmond, Va. Filed July 29, 1915.

4,097.—*Title:* "KRUMM'S." (For Noodles.) ALBERT C. KRUMM, SR., AND ALBERT C. KRUMM, JR., Philadelphia, Pa. Filed September 21, 1915.

4,098.—*Title:* "GERMAN EAGLE." (For Bread.) NICOLAUS LUDOWIG, San Bernardino, Cal. Filed January 11, 1915.

4,099.—*Title:* "BIG DAN." (For Nickel Alarm-Clocks.) EDGAR THOMAS SNOW, Kansas City, Mo. Filed August 7, 1915.

4,100.—*Title:* "EGADAY." (For Poultry Feed.) SOUTH TEXAS GRAIN COMPANY, Houston, Tex. Filed August 5, 1915.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

GREGORY, JACKSON, AND CONNET *v.* LEDOUX.

Decided February 19, 1915.

1. REISSUE—DELAY—INADVERTENCE, ACCIDENT, AND MISTAKE.

Where an applicant, attempting to reissue to include claims copied from a patent granted two and one-half years before his patent was granted and nearly three and one-half years before the reissue application was filed, made no showing of "inadvertence, accident, or mistake," except that he was not aware that the claims had been allowed to another and that the claims were not suggested to him by the Office when the cases were copending, *Held* that the circumstances do not justify the granting of a reissue patent.

2. INTERFERENCE—SUPERVISORY AUTHORITY.

Where four years of the term of the patent in interference had been consumed in a consideration of the adverse right of an opponent whose laches appeared to have unnecessarily prolonged the time, the exercise of the Commissioner's supervisory authority is justified to settle the matter in the shortest way.

3. SAME—SAME—RIGHT TO MAKE CLAIMS.

Under the special circumstances of the case the favorable decision of the Examiners-in-Chief on the right of one of the parties to make the claims reviewed under the Commissioner's supervisory authority and reversed.

ON PETITION.

MOTION to dismiss.

LIQUID-METER.

Mr. Howard E. Barlow and *Messrs. Hodges & Hodges* for Gregory, Jackson, and Connet.

Mr. Charles N. Butler for Ledoux.

EWING, *Commissioner:*

This case is before me on a petition by Gregory *et al.* for the exercise of my supervisory authority. Ledoux moves to dismiss the petition.

The issue of the interference as declared contained three counts. The Examiner granted the motion of Gregory *et al.* and dissolved the interference; but on appeal his decision was reversed by the Examiners-in-Chief, except as to his holding that Ledoux had no right to make a claim corresponding to count 3. As Ledoux did not appeal, the interference stands dissolved as to that count.

The two remaining counts read as follows:

1. In a device for supplying liquids or gases, a main supply pipe, an auxiliary supply vessel and means operated by the difference between the pressure at two points in the main pipe to control the flow from the said auxiliary supply so that the quantity drawn from the auxiliary supply will always be in a predetermined ratio to the quantity passing through said main pipe.

2. In a device for supplying liquid and gases, a main supply pipe, an auxiliary supply vessel, said pipe having a body portion and a contracted neck, the pressure of the flowing substance in said body portion being greater than that in the neck, and means operated by these two pressures to automatically control the flow of said auxiliary supply.

After the Gregory patent was granted Ledoux continued the prosecution of his application for two years and a half, during which time he amended his application three times and went through an interference proceeding with another party, besides once taking the application to the Commissioner on a petition involving the form of the claims. After Ledoux's patent was granted to him he waited almost eleven months before filing his application for reissue.

Thus he is chargeable with a delay of three years and a half in the presentation of the claims which he now seeks in his reissue application.

In his oath to the reissue application he alleges no inadvertence, accident, or mistake on his part, but merely that he—

was not aware that said claims had been made and allowed in an application filed by J. H. Gregory, W. W. Jackson, and F. N. Connet, on December 17, 1906, Serial No. 348,147, (Patent No. 868,776,) pending contemporaneously with deponent's application for his said Letters Patent.

He further alleges that these claims were not suggested to him from the interfering application by the Patent Office; but this was not an inadvertence, accident, or mistake on his part.

The mere allegation of ignorance of the fact that these claims were to be found in another patent does not seem to me to explain a delay of three years and a half and the acceptance of a patent after two years and a half of prosecution.

It plainly never occurred to Ledoux that his tank 17 is an auxiliary supply vessel until he ran across the Gregory patent. The Primary Examiner found against him on the ground that his tank is not an auxiliary supply vessel. The Examiners-in-Chief have twice come to a different conclusion.

Ordinarily the conclusion reached by the Examiners-in-Chief would be accepted, as no appeal lies from a favorable decision, and the exercise of supervisory authority is limited to those cases where it seems to be necessary for the correction of an obvious error.

In this case, however, the term of the Gregory patent is running, and four years of that term have been consumed with a consideration of the adverse

right of Ledoux. It therefore seems proper that the shortest course practicable be adopted for disposing of the matter.

The opinion of the Examiners-in-Chief notwithstanding, it seems to me that the vessel 17 of Ledoux is not an auxiliary supply vessel. In order to make my meaning clear, it is necessary to describe the two devices briefly.

In the Gregory patent (page 1, lines 21 *et seq.*) it is stated:

> This device is more particularly designed to operate in connection with a city water supply where the water possesses certain impurities that are to be precipitated by means of chemicals deposited in the water for that purpose, * * * in quantities proportioned to the amount of water used, and this supply is governed and controlled automatically by the velocity of the inflowing water.

To accomplish this purpose the chemical to be used, in solution, is delivered into a tank 37, which is filled to a definite height. From this tank 37 the solution is discharged into the city main 1 through pipes 38 39, in which a valve or gate 26 is interposed. The extent to which this valve or gate is opened determines the rate of discharge from the tank 37 and is itself determined by a pressure-gage 34, cam 25, lever-arms 29 28, and connecting-rod 27. Thus it will be seen that under a constant head and a controlled orifice a quantity of the desired chemical is forced into the main, and this supply is governed automatically by the velocity of the inflowing water.

Ledoux, on the other hand, supplies nothing from the tank 17. The contents of the tank 17 are drawn from the main 1 and are discharged into the spill-basin 47 from tank 29 through a nozzle 41. If it be maintained that the tank 17 supplies the tank 29, the tank 17 is the sole source of supply thereof, and is not an auxiliary supply vessel; but the better statement seems to be that the water delivered from the tank 17 is not supplied to anything. It is measured and runs to waste.

For the reasons above stated I have concluded that Ledoux is not entitled to his reissue and further that he cannot make claims in the language of counts 1 and 2. I refuse him these claims and dissolve the interference.

WELCH *v.* AUFIERO.

Decided May 5, 1915.

INTERFERENCE—SUBSTITUTION OF PARTIES—RES ADJUDICATA.

Where W. contends that the invention in issue between him and A. is not his own but that of McM., whose application is owned by the same party in interest as W.'s, *Held* that the question of *res adjudicata* may be controlling, and therefore A. is entitled to a judgment against W., but that the Examiner was right in declaring an interference between A.'s application and McM.'s, so that the question might be tried out.

ON PETITION.

ENGINE-ACTUATED ALARM.

Mr. Geo. Cooper Dean for Welch.

Messrs. Mauro, Cameron, Lewis & Massie for Auflero.

EWING, *Commissioner:*

Upon the opening of Welch's preliminary statement it was found that he had not overcome Auflero's filing date. He thereupon moved to dissolve with respect to all four of the counts, setting up numerous reasons for dissolution. Only count 4 and one reason for dissolving respecting this count are here involved. It is the eighth ground for dissolution set forth in Welch's motion to dissolve, namely:

> That count 4 is not patentable to the party Welch on the ground that the invention of the count was invented by a third party.

The Law Examiner, to whom the motion to dissolve was transmitted, said that this does not appear to be a proper ground to urge in support of a motion for dissolution and that obviously the Law Examiner could not determine on a bare allegation the question who is the inventor of the subject-matter of count 4, even if it were proper for him to consider the question on a motion for dissolution.

Upon the interference being returned to the Examiner of Interferences it was, at the request of the Primary Examiner, transmitted to him for the purpose of dissolving the interference as to count 4 and with a view to his declaring a new interference as to this count between Auflero and another party. This proceeding was taken under Rule 129, which, however, refers to suspension of interference and not to dissolution.

The other party (McMurtry) could not be made a party to this same interference because he did not have claims commensurate with the claims constituting the other three counts, and when the interference reached the Primary Examiner he entered an order as follows:

> The junior party Welch having, in response to an order to show cause, requested by his assignee, the Lowell-McConnell Manufacturing Co., that the interference be dissolved as to count 4, such request is granted and the interference is hereby dissolved as to count 4.
>
> The said count 4 will be made a count in a new interference between the senior party Auflero and the application of another party, owned and controlled by the aforesaid assignee.

From this action of the Primary Examiner Auflero petitions, asking that the action of the Examiner dissolving the interference be set aside, that the Examiner of Interferences be directed to enter an award of priority in favor of Auflero as to count 4, and that the Primary Examiner be instructed that no further interference be declared as to count 4 between Auflero's application and any other application owned and controlled by Welch's assignee.

Apparently the dissolution of the interference was treated by the Primary Examiner as a mere formal substitution of one party for another party, without change of interest. Under the doctrine of *res adjudicata*, however, the right of Auflero to a judgment against Welch may be controlling as to the ultimate disposition of the whole matter in controversy.

I think it clear that Auflero has a right to a judgment against Welch as to count 4, as well as the other counts. Therefore the interference should be reinstated.

On the other hand, Welch's assignee has derived no advantage from the declaration of the interference, Auflero's preliminary statement not having been opened, and, moreover, the effort to have the interference established between McMurtry and Auflero was commenced immediately on the matter being called to the attention of Welch's assignee. I think, therefore, that under the circumstances it is proper that an interference be declared between McMurtry and Auflero; but I do not wish to be understood as determining on this petition whether or not the doctrine of *res adjudicata* applies.

The petition is granted in part and denied in part, as indicated.

WELCH *v.* AUFIERO.

Decided September 24, 1915.

COMPANION INTERFERENCES—SUSPENDING JUDGMENT.

When the circumstances were such that the decision in one of two companion interferences could throw no light on the decision of the other and there was a possibility that the decision in one might render the whole subject-matter *res adjudicata*, *Held* that the postponement of the final hearing in the first, to prevent the possible application of the doctrine, was not justified.

ON PETITION.

ENGINE-ACTUATED ALARM.

Mr. Geo. Cooper Dean for Welch.

Messrs. Mauro, Cameron, Lewis & Massie for Auflero.

EWING, *Commissioner:*

It was stated at the hearing by counsel for the assignee of the applications of Welch and McMurtry that neither of these applicants was in the employ of the assignee, which bought the two applications after they had been filed. It is clear from this statement that the decision of the interference in which the Welch application is involved can shed no light on the decision of the interference in which the McMurtry application is involved. There is therefore no reason looking to the convenience of the Office for suspending the termination of the Welch-Auflero interference pending the termination of the Welch-McMurtry interference.

The Welch-Auflero interference has reached a stage where in regular course it would be set for final hearing. While ordinarily the courts will not interfere with the Office in such matters as the suspension or hastening of the prosecution of interferences, this is because ordinarily no substantial right is involved and the Office is left free to run its own business.

But in the present instance the Welch-Auflero interference had been suspended for the avowed purpose of preventing the application of the doctrine of *res adjudicata* in aid of the assignee of the Auflero application. This is clearly a matter of substantial right. If the entry of a judgment in favor of Auflero against Welch involves the ultimate entry of a judgment in favor of the assignee of Auflero against the assignee of McMurtry, it would not be a mere exercise of the discretion of the Office in administration of public business to suspend the entry of the judgment.

I do not express any opinion at this time as to whether or not the proceedings taken by the assignee of the McMurtry application render the doctrine of *res adjudicata* inapplicable in the McMurtry-Auflero interference.

The order of the Examiner of Interferences postponing the final hearing in the Welch-Auflero interference is vacated.

EX PARTE THE ILLINOIS SEED CO.

Decided January 9, 1915.

TRADE-MARKS—DISCLAIMERS.

Where the Examiner of Trade-Marks objected to a disclaimer of the word "Brand" used apart from applicant's mark, which consisted of the word "Trumpet" above the representation of a trumpet and the word "Brand" between them, *Held* that the disclaimer was sufficient.

ON PETITION.

TRADE-MARK FOR FIELD AND GRASS SEEDS AND SEED-GRAIN, TIMOTHY, CLOVER, ALFALFA, ETC.

Messrs. Cheever & Cox for the applicant.

NEWTON, *First Assistant Commissioner:*

This is a petition from the action of the Examiner of Trade-Marks objecting to the disclaimer of the word "Brand" used apart from applicant's mark, which consists of the word "Trumpet" above the representation of a trumpet and the word "Brand" between them, the disclaimer being in this form:

> No claim being made to the word "Brand" apart from the mark shown in the drawing.

The Examiner takes the ground that such language—

> means that when considered in connection with the remaining features of the mark the applicant does make a claim to its exclusive use.

Since there is no provision for disclaimers in the trade-mark statute, the propriety of their use at all is doubtful; but since the court of appeals in *Johnson* v. *Brandau* (139 O. G., 732; 32 App. D. C., 348) and other authorities seem to sanction them I am not prepared to say that they should not be required under some circumstances. In the present case since applicant has disclaimed the ownership of "Brand" apart from his illustrated mark it would seem to be going too far to make him disclaim it when used with the rest of his mark, since it is not hard to imagine cases that may hereafter arise involving the use of "Brand" in a similar setting that would be embarrassing to applicant if he has disclaimed it altogether.

It is held, therefore, that the disclaimer is sufficient as it appears, and the petition is granted.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Walker patent, No. 614,279, for a tilting bin, *Held* valid. *Liebe* v. *Walker Bin Co.*, 225 Fed. Rep., 45; *Bernard Gloekler Co.* v. *Walker Bin Co.*, *id.*, 46.

(U. S. D. C.) The Williams patent, No. 831,815, for a connector for electrical conductors, *Held* invalid. *Gear* v. *Fairmount Electric & Mfg. Co.*, 225 Fed. Rep., 61.

(U. S. D. C.) The Thorn patents, Nos. 835,717, 844,973, and 844,974, for concrete-filled iron columns, *Held* valid. *United States Column Co.* v. *Benham Column Co.*, 225 Fed. Rep., 55.

(U. S. C. C. A.) The Turner patent, No. 985,119, for an improvement in steel skeleton concrete construction, *Held* valid. *Turner* v. *Quincy Market Cold Storage & Warehouse Co.*, 225 Fed. Rep., 41.

(U. S. D. C.) The Stevens patent, No. 1,013,571, for a duplex contribution-envelop, *Held* void. *Duplex Envelop Co.* v. *A. S. Kratz Co.*, 225 Fed. Rep., 68.

(U. S. D. C.) The Hutchison patent, No. 1,120,057, for an automobile-horn, *Held* valid and infringed. *Lovell McConnell Mfg. Co.* v. *Oriental Rubber & Supply Co.*, 225 Fed. Rep., 74.

Payment of Fees in Germany.

[Copy.]

DEPARTMENT OF STATE.
Washington, October 1, 1915.

The Honorable the Secretary of the Interior.

SIR: I have the honor to inclose, for the information of the Commissioner of Patents, a copy of a despatch from the American Ambassador at Berlin, covering a translation of a note from the German Foreign Office relative to the protection of the patent rights of American citizens in Germany.

I have the honor to be, sir, your obedient servant.

(Signed) FRANK L. POLK,
Acting Secretary of State.

Inclosures: From Germany, No. 1481, of September 7, 1915, with inclosure.

800.542/35.

[Copy.]

[Inclosure in despatch No. ———. Translation.]

FOREIGN OFFICE.
Note Verbale.

No. II M 2030

123444

In supplement to its *Note Verbale* of December 14, 1914, No. II M 5095, the Foreign Office has the honor to communicate the following information to the Embassy of the United States of America:

By virtue of the Bundesrat decrees of September 10, 1914, (*Reichsgesetzblatt*, page 403), and of March 31, 1915, (*Reichsgesetzblatt*, page 212), the president of the Imperial patent office is in a position to permit deferment of payment in the cases provided, upon application therefor, of the annual dues chargeable according to section 8, paragraph 2, of the patent law for not more than nine months after the beginning of the current patent year, and to waive the additional charge (*ibid* section 8, paragraph 3). He may permit further deferment of payment of dues already in abeyance to date from the period of the first deferment. As long as these decrees are in force, the president will make use of this authority in favor of citizens of the United States of America upon their application, unless particularly important reasons stand in the way of so doing in individual cases.

The Imperial consulate-general at New York and the Imperial consulates at Atlanta, Chicago, Cincinnati, Denver, New Orleans, Philadelphia, San Francisco, Seattle, St. Louis and St. Paul will be informed in the above sense and instructed at the same time, when accepting payments of patent dues to take the application for deferred payment in all cases where it may be made.

Berlin, August 31, 1915.

To the American Embassy, Berlin.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 5, 1915.

Detroit Electric Soap Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Barclay & Co., 26 Beaver street, New York, N. Y., for registration of a trade-mark and trade-mark registered October 6, 1891, No. 20,188, to Detroit Electric Soap Company, Detroit, Mich., and a notice of such declaration sent by registered mail to said Detroit Electric Soap Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Detroit Electric Soap Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 1, 1915.

Patterson & Cross, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Gowan-Lenning-Brown Co., Nos. 227–261 South Fifth avenue west, Duluth, Minn., for registration of a trade-mark and a trade-mark registered March 29, 1904, No. 42,302, to Patterson & Cross, No. 53 River street, Chicago, Ill., and a notice of such declaration sent by registered mail to said Patterson & Cross at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Patterson & Cross, their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., September 25, 1915.

James Lunham Grant, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of McLeod & Ormsbee, 9 Liberty street, Utica, N. Y., for registration of a trade-mark and trade-mark registered July 9, 1895, No. 26,799, to James Lunham Grant, No. 5 Rainford Square, Liverpool, England, and a notice of such declaration sent by registered mail to said Grant at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said James Lunham Grant, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 219—No. 4. TUESDAY, OCTOBER 26, 1915. Price—$5 per year.

The OFFICIAL GAZETTE is mailed under the direction of the Superintendent of Documents, Government Printing Office, to whom all subscriptions should be made payable and all communications respecting the Gazette should be addressed. Issued weekly. Subscriptions, $5.00 per annum; single numbers, 10 cents each.

Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

CONTENTS

	Page.
ISSUE OF OCTOBER 26, 1915	933
ADVERSE DECISIONS IN INTERFERENCE	933
DATE OF PATENT	933
AMENDMENTS	933
APPLICATIONS UNDER EXAMINATION	934
PATENTS GRANTED	935
REISSUES	1202
DESIGNS	1206
TRADE-MARKS—REGISTRATION APPLIED FOR	1213
TRADE-MARK REGISTRATIONS GRANTED	1227
LABELS AND PRINTS	1236
DECISIONS OF THE U. S. COURTS—	
Ex parte Whitelaw	1237
Ex parte Nelson and Nelson	1238
Ex parte Klenk	1239
ADJUDICATED PATENTS	1240
INTERFERENCE NOTICES	1240

ISSUE OF OCTOBER 26, 1915.

Patents	760	No. 1,157,661 to No. 1,158,420,	inclusive.
Designs	31	No. 48,022 to No. 48,052,	inclusive.
Trade-Marks	285	No. 106,537 to No. 106,821,	inclusive.
Labels	7	No. 18,808 to No. 18,814,	inclusive.
Prints	7	No. 4,101 to No. 4,107,	inclusive.
Reissues	5	No. 14,000 to No. 14,004,	inclusive.
Total	1095		

TO RESIDENTS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	3	1	North Carolina	1	1
Arizona	2	.....	North Dakota	6	.....
Arkansas	.....	.....	Ohio	47	20
California	34	8	Oklahoma	3	.....
Colorado	4	.....	Oregon	5	.....
Connecticut	25	7	Pennsylvania	56	25
Delaware	1	8	Rhode Island	4	6
Florida	.....	2	South Carolina	2	.....
Georgia	5	.....	South Dakota	3	.....
Idaho	3	.....	Tennessee	4	2
Illinois	89	27	Texas	7	3
Indiana	18	8	Utah	3	.....
Iowa	12	4	Vermont	1	1
Kansas	1	1	Virginia	3	4
Kentucky	6	2	Washington	11	1
Louisiana	5	.....	West Virginia	3	2
Maine	3	1	Wisconsin	17	8
Maryland	8	17	Wyoming	.....	.....
Massachusetts	48	13			
Michigan	26	6	Alaska, District of	.....	.....
Minnesota	17	7	Canal Zone	.....	.....
Mississippi	2	.....	District of Columbia	6	1
Missouri	16	8	Hawaii Territory	.....	.....
Montana	4	.....	Philippine Islands	.....	.....
Nebraska	9	3	Porto Rico	1	.....
Nevada	2	.....	U. S. Army	.....	.....
New Hampshire	2	.....	U. S. Navy	1	.....
New Jersey	41	11			
New Mexico	1	.....	Total to residents of the United States	700	275
New York	125	72			

TO RESIDENTS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	1	1	Netherlands	1	2
Belgium	1	.....	New South Wales	2	.....
British India	.....	.....	Norfolk Island	1	.....
British West Indies	.....	.....	Norway	.....	.....
Canada	8	2	Portugal	.....	.....
Cape Colony	.....	.....	Queensland	.....	.....
Chile	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	.....	.....
Cuba	.....	.....	Scotland	1	.....
Denmark	2	.....	South Australia	.....	.....
England	24	6	Sweden	1	1
Finland	.....	.....	Switzerland	2	2
France	3	3	Transvaal, South Africa	.....	.....
Germany	32	3	Uruguay	1	.....
Guatemala	.....	.....	Victoria	2	.....
India	.....	.....	Western Australia	.....	.....
Ireland	.....	.....			
Italy	6	2	Total to residents of foreign countries	88	23
Japan	.....	1			
Mexico	.....	.....			

Adverse Decisions in Interference.

PATENT No. 940,037.

Referring to the notice published June 8, 1915, in regard to the patent to Harold Lockwood, the same was an error in so far as it related to claim 118.

Date of Patent.

RULE 207. The weekly issue closes on Thursday, and the patents of that issue bear date as of the *fourth* Tuesday thereafter. If the final fee in any application is not paid on or before Thursday, the patent will not go to issue until the following week.

Amendments.

RULE 73. In every amendment the exact word or words to be stricken out or inserted in the application must be specified and the precise point indicated where the erasure or insertion is to be made. All such amendments must be on sheets of paper separate from the papers previously filed, and written on but one side of the paper. Erasures, additions, insertions, or mutilations of the papers and records must not be made by the applicant.

Amendments and papers requiring the signature of the applicant must also, in case of assignment of an undivided part of the invention, be signed by the assignee. (Rules 6, 107.)

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business October 25, 1915.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended.	No. of applications awaiting action.
314	1. Fences; Fences, Gates; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Aug. 16	July 30	507
128	2. Bee Culture; Curtains, Shades, and Screens; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Medicines; Pneumatics; Presses; Tents, Canopies, Umbrellas, and Canes; Tobacco.	May 10	Aug. 16	585
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Plastic Metal Working.	Oct. 8	Oct. 7	89
232	4. Conveyers; Elevators; Excavating; Hoisting; Loading and Unloading; Pneumatic Despatch; Railway Mail Delivery; Traversing Hoists.	May 6	Sept. 27	590
167	5. Bookbinding; Harvesters; Jewelry; Music.	July 25	Aug. 27	349
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Liquid Coating Compositions; Plastic Compositions; Preserving; Sugar and Salt; Substance Preparation.	Mar. 23	Sept. 23	482
312	7. Educational Appliances; Clutches; Games and Toys; Motors; Optics; Velocipedes.	Aug. 7	Sept. 7	504
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	May 25	Sept. 11	1182
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Motors, Fluid; Motors, Fluid-Current; Pumps.	Mar. 17	Sept. 27	590
235	10. Carriages and Wagons	July 10	Sept. 10	809
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Sept. 16	Oct. 1	121
322	12. Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	July 19	Sept. 1	642
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Nut and Bolt Locks; Turning.	Aug. 7	Sept. 13	529
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	May 20	Sept. 10	266
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastics.	June 21	Sept. 1	536
109	16. Electric Signaling; Radiant Energy; Telegraphy; Telephony.	Apr. 19	Aug. 24	503
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Aug. 4	Sept. 7	186
327	18. Injectors and Ejectors; Liquid Heaters and Vaporizers; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Engines; Steam-Engine Valves.	Sept. 22	Sept. 17	269
236	19. Dampers, Automatic; Furnaces; Heating Systems; Stoves and Furnaces.	Aug. 3	Sept. 2	225
179	20. Artificial Limbs; Builders' Hardware; Cutlery; Dentistry; Locks and Latches; Sales; Undertaking.	Sept. 23	Sept. 23	230

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended.	No. of applications awaiting action.
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	July 15	Aug. 25	353
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Sept. 8	Sept. 4	202
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	June 3	July 12	503
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	June 19	Sept. 2	461
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Sept. 24	Sept. 23	124
106	26. Electricity, Generation; Motive Power.	Apr. 12	June 29	617
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Aug. 30	Sept. 4	326
65	28. Internal-Combustion Engines	July 26	Aug. 14	424
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Aug. 18	Sept. 15	358
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Aug. 20	Sept. 27	258
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	July 23	Sept. 2	289
278	32. Agitating; Carbonating Beverages; Dispensing Beverages; Dispensing; Domestic Cooking Vessels; Gas and Liquid Contact Apparatus; Heat Exchange; Ornamentation; Packaging Liquids; Refrigeration.	Apr. 12	Sept. 15	706
71	33. Bridges; Hydraulic Engineering; Masonry and Concrete Structures; Metallic Building Structures; Paving.	July 31	Aug. 31	419
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	July 26	Aug. 21	293
57	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	June 14	Sept. 27	748
264	36. Driers; Geometrical Instruments; Measuring Instruments; Photography.	July 6	Sept. 27	761
107	37. Electric Lamps; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Apr. 28	July 2	813
378	38. Animal Husbandry; Earth Boring; Fishing and Trapping; Stationery; Stone-Working; Wells.	July 15	Aug. 5	624
321	39. Water Distribution	July 9	Aug. 31	387
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Apr. 12	Aug. 16	967
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	June 30	Sept. 9	454
279	42. Railway Signaling; Signals; Electricity-Transmission to Vehicles.	June 10	June 17	856
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Aug. 13	July 28	273

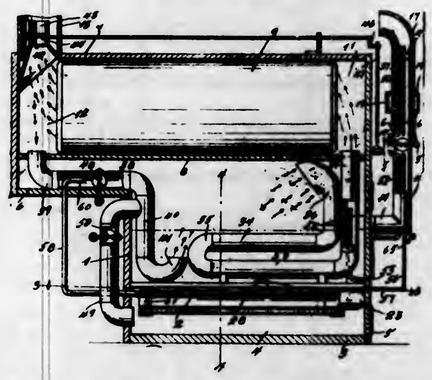
Oldest new case, Mar. 17; oldest amended, June 17.
Total number of applications awaiting action..... 20,700

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Aug. 21	Sept. 18	913
	Designs	June 9	Sept. 25	441
	Labels and Prints	Sept. 13	Sept. 8	80

PATENTS

GRANTED OCTOBER 26, 1915.

1,157,661. SMOKE-CONSUMER. CARL ERIK ANDERSSON, Duluth, Minn., assignor of forty-five one-hundredths to Marguerite Cusick, Duluth, Minn. Filed Jan. 5, 1915. Serial No. 707. (Cl. 110—49.)



1. In a smoke consumer the combination with a fire box and a boiler, smoke consuming pipes positioned within said fire box and communicating with said boiler, a drawer carried beneath said smoke consuming pipes, a plurality of air pipes carried within said drawer, a draft flue carried by said fire box and communicating with said drawer, said draft flue being adapted to convey a current of air into said drawer and into said air pipes whereby the air may be passed up into said fire box for causing the smoke to be passed through said smoke consuming pipes whereby the inflammable material of the smoke may be burnt at which time the burnt gases may pass through said boiler and be exhausted.

2. In a smoke consumer the combination with a fire box and a boiler, smoke consuming pipes carried within said fire box and communicating with said boiler, a plurality of air pipes positioned beneath said smoke consuming pipes, means for supporting said air pipes, a draft flue carried by said fire box and communicating with said air pipes, said draft flue having a revoluble funnel carried upon the upper end thereof, said funnel being adapted to convey wind into said draft flue and then to said air pipes whereby the air may be expelled into said fire box for causing the smoke within the fire box to pass through said smoke consuming pipes whereby the inflammable material of the smoke may be burnt at which time the burnt gases may pass through said boiler and be expelled.

3. In a smoke consumer the combination with a fire box and with a boiler, a primary smoke consuming pipe carried within said fire box and communicating with one end of said boiler, a secondary smoke consuming pipe carried at the opposite end of said fire box and communicating with the opposite end of said boiler, said auxiliary smoke consuming pipe provided with an upwardly bent end, means for supplying said fire box with a supply of air for driving the smoke within said fire box through said first mentioned smoke consuming pipe whereby the inflammable material of the smoke will be burnt and the burnt gases will pass through said boiler and then through said secondary smoke consuming pipe into said fire box, means connected with said secondary supply pipe for exhausting the burnt gases when necessary.

4. In a smoke consumer the combination with a fire box and a boiler, smoke consuming pipes carried within said fire box and communicating with said boiler, a draft flue carried by said fire box and a revoluble funnel carried by said flue, whereby air may be supplied to the lower portion of said fire box for causing a circulation of the smoke through said smoke consuming pipes, and means carried by said draft flue and communicating with said smoke consuming pipes for permitting a secondary supply of air for facilitating in directing the air current within the smoke consuming pipe.

5. In a smoke consumer the combination with a fire box and a boiler, smoke consuming pipes carried within said fire box and communicating with said boiler, a draft flue carried by said fire box, means carried by said draft flue and communicating with said smoke consuming pipes for forming a secondary air supply communicating with said fire box at a distance above the lower portion thereof, a revoluble funnel carried upon the upper portion of said draft flue, a fan casing formed upon said funnel, said funnel provided with an integral internal-hood, a fan carried within said fan casing, means for rotating said fan whereby a current of air may be directed by said hood into said draft flue and secondary air supply and then into said fire box for causing the smoke from said fire box to circulate freely whereby the inflammable elements which have been burnt and the burnt gases may be exhausted.

[Claims 6 and 7 not printed in the Gazette.]

1,157,662. PROCESS FOR THE MANUFACTURE OF FIREPROOF UTENSILS FROM REFRACTORY OXIDS. HANS ARNOLD, Charlottenburg, Germany, assignor to the Firm of Dr. O. Knöfler & Co., Plotzensee, near Berlin, Germany. Filed Oct. 5, 1914. Serial No. 865,197. (Cl. 18—47.5.)

1. The herein described process of manufacturing fireproof utensils from rare earth oxids, which process consists in treating a paste of such oxids with free acid and a colloidal hydroxid of at least one of the metals of which the oxid is present in said paste, forming said paste into the desired shape, and thereafter calcining the product.

2. The herein described process of manufacturing fireproof utensils from rare earth oxids, which process consists in treating a paste of such oxids with a small quantity of free mineral acid and a colloidal hydroxid of at least one of the metals of which the oxid is present in said paste, forming said paste into the desired shape and thereafter calcining the product.

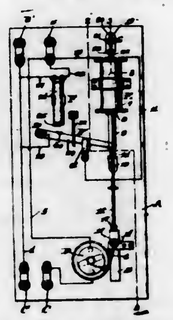
3. The herein described process of manufacturing fireproof utensils from rare earth oxids, which process consists in treating a paste of such oxids with free acid and a dilute colloidal solution of at least one of the metals of which the oxid is present in the paste, forming said paste into the desired shape, and thereafter calcining the product.

4. The herein described process of manufacturing fireproof utensils from rare earth oxids, which process consists in treating a paste of such oxids with a small quantity of free mineral acid and a dilute colloidal solution of at least one of the metals of which the oxid is present in the paste, forming said paste into the desired shape, and thereafter calcining the product.

1,157,663. AUTOMATIC CIRCUIT-CONTROL APPARATUS. MELVIL BARRON, Rogers, Tex. Filed Nov. 29, 1913. Serial No. 803,845. (Cl. 177—346.)

1. In automatic circuit control apparatus, the combination of a switch adapted to alternately make and break

the circuit of a load, electro-magnetic means for operating said switch upon each energizing of the coils, an electro-magnet, a second switch for the circuit of said electro-magnetic means, an armature for said electro-magnet operatively connected with said second switch to open the same when attracted by said electro-magnet, said armature moving out of the magnetic flux paths of said electro-magnet when released therefrom, and means for bringing said armature into the magnetic flux paths of said electro-magnet after each operation of said first mentioned switch.



2. In automatic circuit control apparatus, the combination of a switch adapted to alternately make and break the circuit of the load, a solenoid, a slidable armature therefor, means for controlling the amplitude of vibration of said armature, means operatively connecting said armature with said switch to operate the same upon each energization of said solenoid, and electro-magnetic means for breaking the circuit of said solenoid at each retraction of said armature, substantially as and for the purpose set forth.

3. In automatic circuit control apparatus, the combination of two conductors adapted for connection with the source of energy and the load, a switch adapted to alternately make and break the circuit through one of said conductors, an electro-magnet bridging said conductors, a solenoid, a reciprocable armature therefor, means operatively connecting said armature with said switch to operate the latter at each retraction of said armature by said solenoid, means conductively connecting one pole of said solenoid with one of said conductors, a second switch having one point in conductive communication with the other of said conductors and its other point in conducting communication with the other pole of said solenoid, said switch being normally closed, an armature for said electro-magnet and operatively connected with said switch but normally out of the magnetic flux paths of said electro-magnet, and means movable with said first mentioned armature to operate said second mentioned switch to bring said second mentioned armature within the magnetic flux paths of said electro-magnet after operation of said first mentioned switch.

4. In automatic circuit control apparatus, the combination of two conductors adapted for connection with the source of energy and the load, a switch adapted to alternately make and break the circuit through one of said conductors, an electro-magnet bridging said conductors, a solenoid, a reciprocable armature therefor, means operatively connecting said armature with said switch to operate the latter at each retraction of the armature by said solenoid, means conductively connecting one pole of said solenoid with one of said conductors, a knife switch having one point in conducting communication with the other of said conductors and the other point in conducting communication with the other pole of said solenoid, said switch being normally closed and having its blade extending transversely with respect to and laterally of the axis of reciprocation of said armature, an armature for said electro-magnet carried by the blade of said second mentioned switch, said second mentioned armature being normally out of the magnetic flux paths of said electro-magnet, and an adjustable arm movable with said first mentioned armature to engage the knife of said second mentioned switch to bring said second mentioned armature within the magnetic flux paths of said electro-magnet after each operation of said first mentioned switch.

1,157,664. METHOD OF ORNAMENTING AND IMPROVING PREPARED ROOFING. MATHIAS B. BECKER, Chicago, Ill. Filed Sept. 4, 1912. Serial No. 718,459. (Cl. 91—67.9.)



1. The herein-described method of treating prepared roofing which consists in applying a coagulable liquid upon a surface thereof to a depth sufficient to produce appreciable elevations thereon when dry, and to constitute a suitable design on said surface, said design occupying a prominent position set up from said surface, and applying to said surface and upon said liquid while fluent, a finely divided granular material in such manner as to cause the same to become embedded in and held by said liquid and to render the latter practically non-fluent, whereby said liquid is prevented from spreading beyond the areas upon which it is applied to preserve the sharp and clear outlines of said design.

2. The hereindescribed method of treating prepared roofing having a protective layer of grit of a substantially uniform color on one face thereof which consists in applying upon said grit coating a coagulable liquid in a predetermined pattern and to constitute a suitable design on said surface and in such quantity as to penetrate through said grit to the grit holding face of the roofing, applying upon said grit coated face while said pattern coagulable material is still soft and substantially fluent, grit particles of a color contrasting with the general color effect of the grit layer and in such manner as to cause said grit particles to become partially embedded in the said coagulable material to preserve the sharp and clear outlines of said design, and removing from the said grit coated face all unattached grit particles.

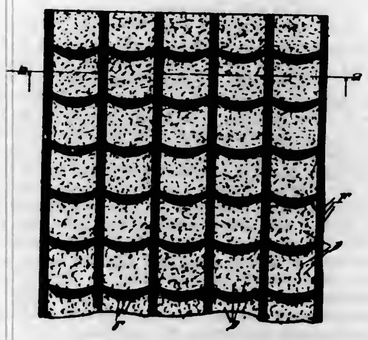
3. The method of ornamenting asphalt roofing material having a grit surface over which a liquid will spread or run from its place of deposit on said surface, including the demarcation of said surface by means of a waterproof fluid capable of coating the grit in predetermined outline and of amalgamating with the asphalt of said roofing material to permanently bind the elements together, and preserving the clear and distinct lines of said demarcations by immediately applying to said fluid a substance to prevent the spreading or running thereof into or over the normal untreated portions of the grit surface laterally of the lines or places of demarcation.

4. The method of ornamenting prepared roofing material having a grit surface over which a liquid will spread or run from its place of deposit on said surface, including the demarcation of said surface by means of a waterproof fluid capable of coating the grit in predetermined outline and of amalgamating with the body of said roofing material to permanently bind the elements together, and preserving the clear and distinct lines of said demarcations by immediately applying to said fluid a substance to prevent the spreading or running thereof into or over the normal untreated portions of the grit surface laterally of the lines or places of demarcation.

5. The method of ornameting prepared roofing material having a grit surface over which a liquid will spread or run from its place of deposit on said surface, including the demarcation of said surface by means of a waterproof fluid capable of coating the grit in predetermined outline and of amalgamating with the body of said roofing material to permanently bind the elements together, preserving the clear and distinct lines of said demarcations by immediately applying to said fluid a substance to prevent the spreading or running thereof into or over the normal untreated portions of the grit surface laterally of the lines or places of demarcation.

[Claims 6 to 16 not printed in the Gazette.]

1,157,665. PREPARED ROOFING. MATHIAS B. BECKER, Chicago, Ill. Filed May 3, 1913. Serial No. 765,309. (Cl. 154—51.)



1. A ready-to-lay roofing comprising a base of waterproof material, and an ornamental protecting face formed of exposed differently colored grits relatively disposed at different elevations to present a desired design and intimately united with the base to form a permanent part thereof.

2. A ready-to-lay roofing comprising a base of waterproofing material having a surface of relatively raised and depressed portions bearing a protecting face formed of exposed grits, the grit on the raised portions differing in appearance from the grit in the depressed portions to present a predetermined symmetrical design, ultimately, united with the base to form a permanent part thereof.

3. Prepared roofing comprising a web coated and impregnated with a weather resisting material, the coating on one face of the web being varied in thickness in various parts or fields, a coating of granular grit of a uniform color partially embedded in the fields of least thickness and extending through and completely embedded in the parts or fields of greater thickness, and a coating of granular grit of a color contrasting with the color of the first-named grit coating partially embedded in the parts or fields of greater thickness.

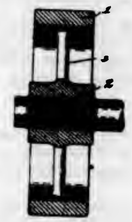
4. A roofing material comprising a base having on its face a layer of protecting grit, a superposed layer of similar protecting material, and a suitable binder interposed therebetween.

5. A roofing material comprising a base having relatively thick and thin portions, the thicker portions having protecting grit on its face and similar grit interposed between the upper and lower surfaces of the base and completely embedded therein.

[Claims 6 and 7 not printed in the Gazette.]

1,157,666. METHOD OF SECURING AN APERTURED MEMBER TO A CYLINDRICAL MEMBER. GEORGE M. BENNETT, Kenosha, Wis. Filed July 27, 1914. Serial No. 853,339. (Cl. 29—148.)

The method of securing an apertured member to a cylindrical member to interlock said members against independent rotation, which comprises displacing the surface of one of said members to provide projecting serrations thus maintaining substantially the same amount of material in the portion of the member operated upon, and interlocking the serrations thus formed with the adjacent



surface of the other member by forcing the cylindrical member into the apertured member.

1,157,667. SIPHONIC FLUSHING APPARATUS. CHARLES E. BLACKBURN, Brooklyn, N. Y. Filed Mar. 1, 1913. Serial No. 751,533. (Cl. 4—5.)



In a flush tank siphonic outlet valve mechanism, a fixed tubular outlet open at its upper and lower ends projecting into and a relatively considerable distance above the bottom of the tank and having outlet openings considerably above the bottom of the tank, a tube telescoping said fixed tube to have a fluid-tight fit therearound to open and close the outlet, and a sealing tube of enlarged diameter with respect to and fixed to said telescopic tube and having its lower margin substantially horizontally alined with that of the telescoping tube to initiate and gradually increase siphonic action during descent of the sealing and telescoping tubes subsequent to closure of the outlet in the fixed tube by said telescoping tube.

1,157,668. PRODUCING CHROMIUM SALTS. JOHANN HEINRICH BONER, Ludwigshafen-on-the-Rhine, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Jan. 12, 1914. Serial No. 811,648. (Cl. 23—13.)

1. The process of producing chromium salts from chromium ores by chlorinating the said ores in the presence of a reducing agent and volatilizing the iron chlorid away from the chlorid compound of chromium.

2. The process of producing chromium salts from chromium ores by heating the said chromium ores with a reducing agent in the presence of chlorin and volatilizing the iron chlorid away from the chlorid compound of chromium.

3. The process of producing chromium salts from chrome ironstone by heating the chrome ironstone with a

reducing agent in the presence of chlorin, and volatilizing the iron chlorid away from the chlorid compound of chromium.

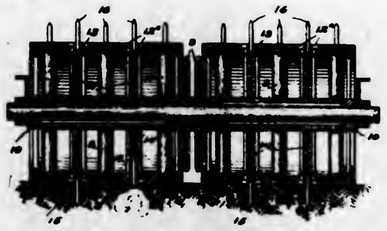
1,157,669. PROCESS OF PRODUCING HYDROGEN. CARL BOSCH and WILHELM WILD, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation of Baden. Filed Apr. 19, 1913. Serial No. 762,345. (Cl. 48—198.)

1. The process of producing hydrogen by causing carbon monoxid and steam to react under a pressure increased over that of the atmosphere in the presence of a hot catalytic agent.

2. The process of producing hydrogen by causing water gas and steam to react under a pressure increased over that of the atmosphere in the presence of a hot catalytic agent.

3. The process of producing hydrogen by removing the greater part of the carbon monoxid from a mixture containing hydrogen and carbon monoxid, and then passing the residual gases in admixture with steam and under a pressure increased over that of the atmosphere over a hot catalytic agent.

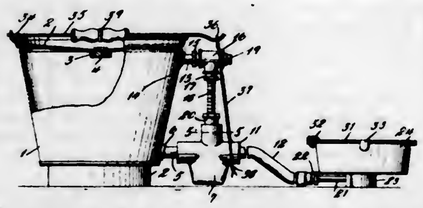
1,157,670. TRACTOR-PLOW. HENSON R. BOSWELL, Greenwood, Va. Filed Feb. 10, 1915. Serial No. 7,233. (Cl. 97—63.)



1. In a tractor plow, a drum having a plurality of openings in its periphery, spring pressed sockets carried in said drum registering with said openings, and projecting plow teeth removably secured in said sockets.

2. In a tractor plow, a drum having a plurality of openings in the periphery thereof, radial tubes registering at their outer ends with said openings, a tooth socket carried in each of said tubes, a spring in each tube for normally pressing said socket outwardly, and a plow tooth removably secured in each of said sockets adapted to normally project from the drum and to recede within the tubes upon encountering an impenetrable obstruction, substantially as described.

1,157,671. ORCHARD-HEATER. JOHN S. BRADLEY, Delaware, Ohio, assignor of one-half to William Watters, Delaware, Ohio. Filed May 13, 1915. Serial No. 27,916. (Cl. 158—40.)



1. In an orchard heater, the combination of a reservoir, a valve member connected with said reservoir, said valve member provided with an internal pocket, said valve member also provided with a passage communicating with the lower portion of said pocket and with the outer portions of said valve member, a feed pipe carried by said valve member and communicating with the outer portions of said passage, a T-joint supported by said reservoir adjacent its upper portions, an air pipe carried by said T-joint, a sleeve adjustably mounted upon said air pipe and extending into said pocket, said valve member and said sleeve being smaller than the inner portions of said pocket whereby the sleeve may be moved upon said air pipe so as to move within said pocket for increasing or diminishing the amount of air passing into said pocket, whereby the air passing through said air pipe and T-joint into said reservoir may be increased or diminished for regulating the flow of oil from said reservoir, and a burner connected to the outer end of said feed pipe.

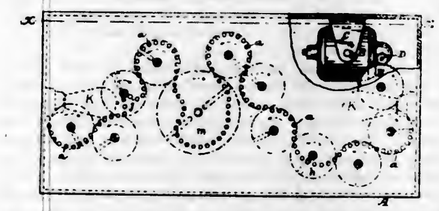
2. In an orchard heater, the combination of a reservoir, a valve member connected with said reservoir, said valve member provided with an internal pocket, said valve member also provided with a passage communicating with the lower portion of said pocket and with the outer portions of said valve member, a feed pipe carried by said valve member and communicating with the outer portions of said passage, an externally threaded air pipe connected to the upper portions of said reservoir and communicating with the interior thereof, an internally threaded sleeve movably mounted upon said air pipe and extending into said pocket, said valve member and said sleeve being smaller than the inner portions of said pocket whereby the sleeve may be moved upon said air pipe so as to move within said pocket for increasing or diminishing the amount of air passing into said pocket, whereby the air passing through said air pipe and into said reservoir may be increased or diminished for regulating the flow of oil from said reservoir, and a burner connected to the outer end of said feed pipe.

3. In an orchard heater, the combination of a reservoir, a valve member connected with said reservoir, said valve member provided with an internal pocket, said valve member also provided with a passage communicating with the lower portion of said pocket and with the outer portions of said valve member, a feed pipe carried by said valve member and communicating with the outer portions of said passage, an air pipe connected to the upper portions of said reservoir and communicating with the interior thereof, and means for regulating the passage of air through said air pipe and into said reservoir, whereby the flow of oil through said valve member may be regulated, and a burner connected to the outer end of said feed pipe.

4. In an orchard heater, the combination of a reservoir, a valve member connected with said reservoir, said valve member provided with an internal pocket, said valve member also provided with a passage communicating with the lower portion of said pocket and with the outer portions of said valve member, a feed pipe carried by said valve member and communicating with the outer portions of said passage, an air pipe connected to the upper portion of said reservoir and communicating with the interior thereof, said air pipe extending into said pocket, means carried by said air pipe and extending into said pocket for regulating the passage of air through said air pipe and into said reservoir, whereby the flow of oil through said valve may be regulated and a burner connected to the outer end of said feed pipe.

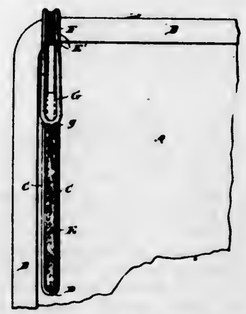
1,157,672. ILLUMINATED SIGN. ROBERT O. BRITTAIN, Boston, Mass. Filed Jan. 9, 1914. Serial No. 811,190. (Cl. 40—133.)

1. In an illuminated sign of the character described, the combination of a closed receptacle of opaque material whose front is pierced with a multiplicity of small holes for the passage of light, means for illuminating the interior of said receptacle, a multiplicity of toothed gears pivoted to the rear face of said front, meshing with each other in continuous train, said gears having radial slots extending from near the center to the periphery, means for rotating said gears, said holes being arranged in alinement with the paths described by said slots when said gears are rotated, whereby the light from said illuminating means is alternately permitted to pass through each hole and shut off therefrom, during the rotation of said gears.



2. In an illuminated sign of the character described, the combination of a closed receptacle of opaque material having in its front a series of holes placed closely together along a curved line, a multiplicity of opaque gears pivoted to the rear side of said front, engaging with each other in a continuous train, said gears having radial slots, means for rotating said gears, said holes being arranged in alinement with the paths described by said slots when said gears are rotated, whereby the light from said illuminating means is alternately permitted to pass through each hole and shut off therefrom, during the rotation of said gears.

1,157,673. CLEARING DEVICE FOR AUTOMOBILE WIND-SHIELDS. FREDERICK NORMAN BUNNELL, Barnegat, N. J. Filed Oct. 29, 1914. Serial No. 869,246. (Cl. 15—59.)



1. A cleaning attachment for wind shields of automobiles comprising a continuous supporting frame having a vertical portion and a loop portion adapted to slidably embrace the edge of the wind shield and be supported by such embracing action, and a strip of soft cleaning material carried thereby.

2. A cleaning attachment for wind shields of automobiles comprising a continuous supporting frame having a vertical portion, a strip of soft cleaning material carried thereby, and a loop portion adapted to slidably embrace the edge of a wind shield, in combination with a forwardly projecting part constituting a handle, said frame and handle being composed of wire adapted to embrace between vertical portions thereof the soft cleaning material.

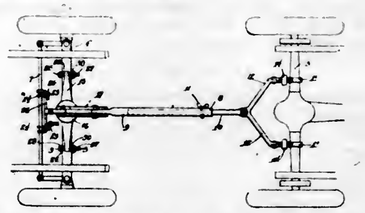
3. A cleaning attachment for automobile wind shields comprising a frame having a vertical portion, a soft cleaning member carried thereby, a loop portion adapted to embrace the edge of a wind shield and be supported by such embracing action, and a packing in said loop portion, substantially as and for the purpose described.

4. A cleaning attachment for automobile wind shields comprising a frame having a vertical portion, a soft cleaning member carried thereby, a loop portion adapted to embrace the edge of a wind shield, and a packing in said loop portion, said packing being grooved in its sides, and opposite portions of the loop being embedded therein.

5. A cleaning attachment for automobile wind shields comprising a frame having a vertical portion, a loop portion adapted to grip the edge of the wind shield, and a handle portion, the same being formed of a continuous metallic member, and a cleaning member carried by the vertical portion, substantially as described.

[Claim 6 not printed in the Gazette.]

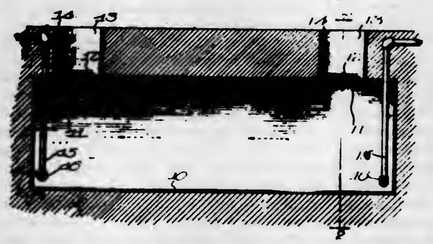
1,157,674. TOWING APPARATUS. CHRISTIAN D. C. BUUCK, Hoagland, Ind. Filed June 23, 1914. Serial No. 846,863. (Cl. 21—137.)



1. A towing apparatus including a reach, one end of which is adapted for engagement with the rear axle of a towing vehicle, mechanism associated with the opposite end of said reach for engagement with the front axle of an incapacitated vehicle, and means for holding said mechanism in engagement with said front axle, said means comprising bars associated with the mechanism and one side of the axle, plates adjustably connected to said bars, and means in connection with said plates for simultaneously actuating said bars and said plates to snugly engage the axle.

2. A towing apparatus including a reach adapted for engagement with the rear axle of a towing vehicle, a mechanism in connection with the opposite end for engagement with the front axle and the steering rod of an incapacitated vehicle, the steering rod engaging portion comprising a metal strap, the opposite ends of which are turned at right angles to the body and provided with recesses in their terminals adapted for the reception of the steering rod, and hooks mounted in said straps for preventing accidental displacement of said rod from said recesses.

1,157,675. TANK. EDGAR M. CASKEY, Chicago, Ill., assignor to S. F. Bowser & Co., Inc., Fort Wayne, Ind., a Corporation of Indiana. Filed Nov. 4, 1911. Serial No. 658,579. (Cl. 220—125.)



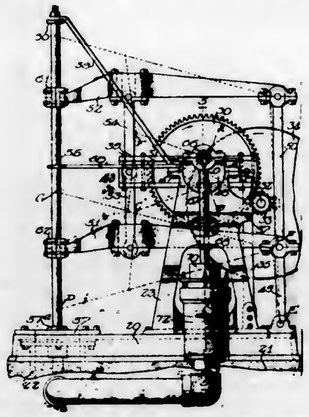
1. The combination of a tank for fluids adapted to be buried beneath the surface of the ground and having openings in the uppermost surface of the tank communicating with the outer air at the same level to induce a draft through the tank from one opening to the other when air is in motion over the tank openings, and an independently removable closure for each opening to shut off the circulation of air through the tank.

2. The combination with a closed tank for containing fluids adapted to be buried beneath the surface of the ground and having an opening in the uppermost side at

each end, a closure for each opening, and means forming a passage to the top of the ground with the top of the passages in the same plane so that a current of air passing over the ground and over the passages when the closures are removed will cause a circulation of air through the tank in a direction opposite to that in which the air is moving above the ground for freeing the tank from noxious vapors.

3. A closed horizontally disposed tank adapted to be buried beneath the surface of the ground, having a single opening in the uppermost side at each end with a passage communicating therewith extending to the surface of the ground, and normally closed covers for the tank openings removable therefrom to induce a draft through the tank when a current of air passes over the surface of the ground above the passages.

1,157,676. PUMPING MACHINERY. MATTHEW T. CHAPMAN, Aurora, Ill., assignor to The American Well Works, Aurora, Ill., a Corporation of Illinois. Filed Sept. 18, 1911. Serial No. 649,843. (Cl. 103—82.)



1. In a pump, the combination of a gear, means for driving said gear, two levers adapted to swing up and down beside said gear, means connecting said levers with said gear whereby upon the rotation of the gear said levers are reciprocated in opposite directions, two other levers adapted to swing up and down, connections between each of said first-named levers and one of said second-named levers for causing them to swing in unison, two plunger-rods, and connections between said plunger-rods and said second-named levers respectively.

2. In a pump, the combination of a gear, means for driving said gear, two levers adapted to swing up and down beside said gear, means connecting said levers with said gear whereby upon the rotation of the gear said levers are reciprocated in opposite directions, two arms adapted to swing back and forth, two other levers pivotally mounted on said arms and adapted to swing up and down and to move forward and back with said arms, connections between each of said first-named levers and one of said second-named levers for causing them to swing in unison, two plunger-rods, connections between said plunger-rods and the forward ends of said second-named levers, and means for maintaining the forward ends of said second-named levers in vertical alinement with the plunger-rods.

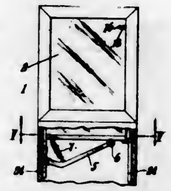
3. In a pump, the combination of a gear, wrists extending from the opposite faces of said gear on opposite sides of the axis of rotation of the gear, two levers adapted to swing up and down beside said gear, each of said levers being provided with a slide-box in which the wrist at that side of the gear works, two arms adapted to swing back and forth, two other levers pivotally mounted on said arms and adapted to swing up and down and to move forward and back with said arms, two vertically-extending links each of which pivotally connects one of said first-named levers with one of said second-named levers for causing said two connected levers to swing in unison, two plunger-rods, connections between said plunger-rods and the forward ends of said second-named levers respectively, and means for maintaining the forward end of each of said second-named levers in vertical alinement with the respective plunger-rod.

4. In a pump, the combination of a gear, a wrist extending from each face thereof, two links adapted to swing back and forth, two levers mounted on said links and converging laterally toward their forward ends into vertical alinement, two plunger-rods, connections between said levers and said plunger-rods, respectively, and connections between said levers and said wrists, respectively, whereby by the rotation of said gear said levers and said plunger-rods are reciprocated in opposite directions.

5. In a pump, the combination of a gear, a wrist extending from each face thereof, two levers converging laterally toward their forward ends into vertical alinement, said levers being capable of a slight movement longitudinally of themselves, two plunger-rods, connections between said levers and said wrists whereby by the rotation of said gear said levers are reciprocated, connections between said levers and said plunger-rods respectively and means for holding the forward ends of said levers directly in line with said plunger-rods.

[Claims 6 to 22 not printed in the Gazette.]

1,157,677. REGULATOR FOR DROP-WINDOWS FOR CLOSED AUTOMOBILES. FRANK B. CLEMENT, Merrimac, Mass. Filed Aug. 17, 1915. Serial No. 45,935. (Cl. 16—118.)



1. A regulator for a drop window comprising a glass, guiding means therefor, a guide and locking tube formed with a vertical slot, a supporting bar connected to the lower end of the glass and extending through said guide tube, a locking head connected to the upper end of said rod and extending outwardly through the vertical slot in the guide tube, a clamping rod connected to said locking head and to the upper edge of the glass, and means carried by the locking head to lock said head to the guide tube to hold the glass in its adjusted position.

2. A regulator for a drop window comprising a glass, guiding means therefor, a guide and locking tube formed with a vertical slot, a supporting bar connected to the lower end of the glass and extending through said guide tube, a locking head connected to the upper end of said rod and extending outwardly through the vertical slot in the guide tube, a clamping rod connected to said locking head and to the upper edge of the glass, and a spring-pressed locking pin carried by the locking head and adapted to lock the head to the guide tube to hold the glass in its adjusted positions.

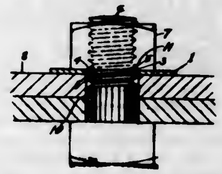
3. A regulator for a drop window comprising a glass, vertical guiding means therefor, a guide and locking tube formed with a vertical slot, a supporting bar connected to the lower end of the glass and extending through said guide tube, a locking head connected to the upper end of said rod and extending outwardly through the vertical slot in the guide tube, a clamping rod connected to said locking head and to the upper edge of the glass, and an outwardly pressed locking pin formed with a locking head at its inner end adapted to engage recesses in the guide tube said pin being adapted to be forced inwardly to release said head from said tube.

4. A regulator for a drop window comprising a glass, vertical guiding means therefor, a guide and locking tube formed with a vertical slot, a supporting bar connected to the lower end of the glass and extending through said guide tube, a locking head connected to the upper end of said rod and extending outwardly through the vertical slot in the guide tube, a clamping rod connected to said locking head and to the upper edge of the glass, an outwardly extending tubular operating arm carried by the locking head, and an outwardly pressed locking pin mounted in said arm and formed with a head at its inner end adapted to engage one of a series of recesses in the guide tube to lock the glass in its adjusted position.

5. A regulator for a drop window comprising a glass, vertical guides therefor, a counterbalance device operating on the lower edge of said glass, a vertical guide and locking tube formed with a vertical slot, a supporting rod connected to the lower end of the glass and extending upwardly into the guide tube, a locking head connected to the upper end of said rod and extending outwardly through the slot, a clamping rod connected to the head outside of the guide tube the upper end of said clamping rod engaging the upper edge of the glass, and means for locking the supporting rod to the guide tube to hold the glass in its adjusted position.

[Claims 6 to 9 not printed in the Gazette.]

1,157,678. NUT-LOCK. JAMES H. COTTON, Beaver, Pa. Filed Aug. 30, 1913. Serial No. 787,490. (Cl. 151—35.)



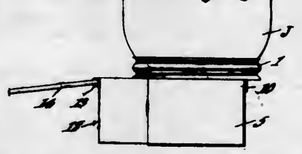
1. In a construction of the character described, the combination of a substructure, a bolt passing therethrough, a nut threaded on the end of said bolt, and a nut lock surrounding the bolt and lying between the nut and substructure, said nut lock comprising a washer having a circular opening for receiving the bolt and slitted at intervals around said opening on lines substantially tangential to the edge of said opening, thereby forming a plurality of teeth, said teeth being bent in the plane of said washer toward its center and being also bent out of the plane of the washer, alternate teeth being bent toward opposite sides thereof, the teeth on one side of the washer being engaged between the threads of the nut and bolt and thereby locking them to each other and the teeth on the other side of the washer engaging the bolt threads and the edges of the opening in the substructure and thereby locking the bolt to the substructure.

2. In a construction of the character described, the combination of a substructure, a bolt passing therethrough, a nut threaded on the end of said bolt, and a nut lock surrounding the bolt and lying between the nut and substructure, said nut lock comprising a washer having a circular opening for receiving the bolt and slitted at intervals around said opening on lines extending substantially tangential to the edge of said opening and toward opposite peripheral edges of said washer, thereby forming two sets of teeth pointing respectively in opposite directions circumferentially of the washer, said teeth being bent in the plane of said washer toward its center and being also bent out of the plane of said washer, one set in one direction and the other set in the other direction, one set of teeth being engaged between the threads of the nut and bolt and thereby locking them to each other and the other set of teeth engaging the bolt threads and the edges of the opening in the substructure and thereby locking the bolt to the substructure.

3. In a construction of the character described, the combination of a substructure, a bolt passing therethrough, a nut threaded on the end of said bolt, and a nut lock surrounding the bolt and lying between the nut and substructure, said nut lock comprising a washer having a circular opening for receiving the bolt and slitted at intervals around said opening on lines extending substantially tangential to the edge of said opening and toward opposite peripheral edges of said washer, thereby forming two sets of teeth pointing respectively in opposite directions circumferentially of the washer, said teeth being bent out of the plane of said washer, one set in one direction and the other set in the other direction, one set of teeth engaging the bolt threads and the edges of the opening in the substructure and thereby locking the bolt to the substructure and the other set of teeth engaging the nut and thereby preventing rotation thereof.

8. In a construction of the character described, the combination of a substructure, a bolt passing therethrough, a nut threaded on the end of said bolt, and a nut lock surrounding the bolt and lying between the nut and substructure, said nut lock comprising a washer having a circular opening for receiving the bolt and slitted at intervals around said opening on lines extending substantially tangential to the edge of said opening and toward opposite peripheral edges of said washer, thereby forming two sets of teeth pointing respectively in opposite directions circumferentially of the washer, said teeth being bent out of the plane of said washer, one set in one direction and the other set in the other direction, one set of teeth being engaged between the threads of the nut and bolt and thereby locking them to each other and the other set of teeth engaging the bolt threads and the edges of the opening in the substructure and thereby locking the bolt to the substructure.

1,157,679. DISPENSING CAP OR COVER. ALVIE C. CRIMMEL, Hartford City, Ind. Filed Feb. 25, 1915. Serial No. 10,554. (Cl. 221—104.)

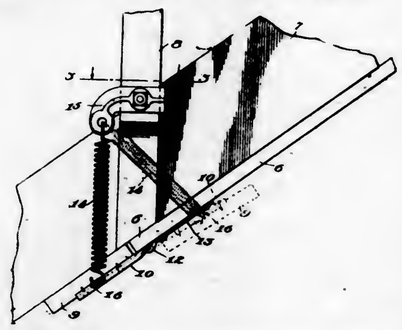


A dispensing cover having an outlet opening, an open-ended guide of U-shaped cross section having its sides secured to the cover below said opening, the sides of the guide having inturned flanges at one end, a bottomless dispensing receptacle slidable snugly between the guide and cover to register with said opening when the receptacle bears against said flanges, one wall of the receptacle having an angularly extending cut-off plate flush with the upper edge of the receptacle and sliding snugly between the cover and said flanges, the free end of the cut-off plate having an angularly extending lip to contact with said flanges before the receptacle is moved completely out of the remote end of the guide, the opposite wall of the receptacle having an outwardly curled portion forming a sleeve adjacent the upper edge of the receptacle, and a bail engaging said sleeve and projecting in a direction opposite to the direction in which said cut-off plate projects.

1,157,680. HAY-LOADER. JOSEPH DAIN, Ottumwa, Iowa, assignor to Dain Manufacturing Company of Iowa, Ottumwa, Iowa. Filed July 20, 1907. Serial No. 384,688. (Cl. 56—61.)

1. A hay-loader of the type described, comprising an inclined elevator frame provided with a bottom, a member mounted at the lower portion of said elevator frame and movable into substantial alinement with the bottom there-

of and adapted to be moved back out of operative position, and means for holding said member in operative position, whereby the elevator frame may be used by itself when said member is in inoperative position and may be extended when said member is in operative position.



2. A hay-loader of the type described, comprising an inclined elevator frame provided with a bottom, a member mounted at the lower portion of said elevator frame and movable into substantial alinement with the bottom thereof and adapted to be moved back out of operative position, and means for holding said member in inoperative position, whereby the elevator frame may be used by itself when said member is in inoperative position and may be extended when said member is in operative position.

3. A hay-loader of the type described, comprising an inclined elevator frame provided with a bottom, a member mounted at the lower portion of said elevator frame and movable into substantial alinement with the bottom thereof and adapted to be moved back out of operative position, and means for holding said member in either operative or inoperative position, whereby the elevator frame may be used by itself when said member is in inoperative position and may be extended when said member is in operative position.

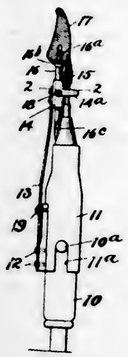
4. A hay-loader of the type described, comprising an inclined elevator frame provided with a bottom, a member pivotally mounted at the lower portion of said elevator frame and extending transversely thereof, said member being movable into substantial alinement with the bottom of said elevator frame and adapted to be moved back out of said operative position, and means for holding said member in operative position, whereby the elevator frame may be used by itself when said member is in inoperative position and may be extended when said member is in operative position.

5. A hay-loader of the type described, comprising an inclined elevator frame provided with a bottom, a member mounted at the lower portion of said elevator frame and movable into substantial alinement with the bottom thereof and adapted to be moved back out of operative position, and means for yieldingly holding said member in operative position, whereby the elevator frame may be used by itself when said member is in inoperative position and may be extended when said member is in operative position.

[Claim 6 not printed in the Gazette.]

1,157,681. ROOT-BEVELING DEVICE. WILLIAM C. DALBEY, Duquoin, Ill., assignor to The Cleveland Dental Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 18, 1913. Serial No. 742,809. (Cl. 32—10.)

1. The combination with the hand-piece of a dental engine having a cutting tool, of a root beveling attachment comprising a pivot adapted to be inserted in the canal of a root, said pivot extending alongside the cutting tool and being detachably connected to and yieldingly supported from the hand-piece.



2. The combination with a hand-piece of a dental engine having a cutting tool, of a root beveling attachment comprising a device detachably connected to the hand-piece, a pivot member adapted to be inserted in the canal of a root, and a spring carrying said pivot member and attached to said device.

3. A root beveling attachment for the hand piece of a dental engine comprising a device adapted to be attached to the hand piece, a pivot adapted to be inserted in the canal of a root and having a yieldable support connected to said device, said support having a laterally projecting member provided with a slot adapted to accommodate the shank of a beveling tool.

4. A root beveling attachment for the hand piece of a dental engine comprising a sleeve adapted to be placed on the hand piece, a leaf spring connected to said sleeve and extending alongside and beyond the same, said spring having at its outer free end a member carrying a pivot pin adapted to be inserted in the canal of a root, said member having a lateral projecting portion provided with an elongated slot adapted to receive the shank of a beveling tool.

5. A root beveling attachment for the hand piece of a dental engine comprising a device adapted to be attached to the hand piece, a yieldable support extending alongside said device and connected at one end thereto, a pivot pin carried at the opposite end of said support and adjustable relative thereto both circumferentially and longitudinally, said pin having at its outer end a portion adapted to be inserted in the canal of the root, and its inner end being beveled for the purpose set forth.

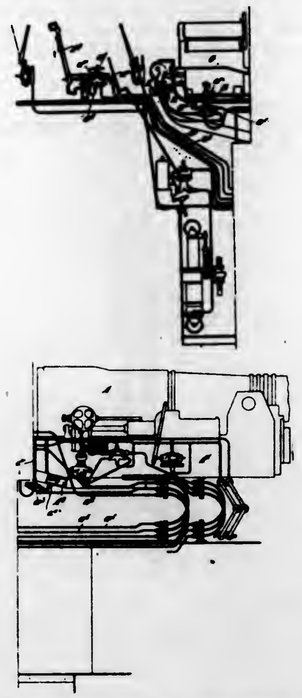
[Claim 6 not printed in the Gazette.]

1,157,682. LOADING APPARATUS OF HEAVY GUNS. ARTHUR TREVOR DAWSON, Westminster, London, and JAMES HORNE, Barrow-in-Furness, England, assignors to Vickers Limited, Westminster, England. Original application filed Sept. 30, 1911, Serial No. 652,192. Divided and this application filed Sept. 29, 1913. Serial No. 792,245. (Cl. 89—45.)

1. In gun loading apparatus the combination with the slide frame, the rammer actuating motor carried thereby, and the motor control hand lever mounted on a part of the mounting that does not move in elevation, of a control valve carried by the slide frame, and pressure fluid means for actuating said valve from the aforesaid hand lever.

2. In gun loading apparatus, the combination with the slide frame, the rammer actuating motor carried thereby and the motor control hand lever mounted on a part of the mounting that does not move in elevation, of a control valve carried by the slide frame, and hydraulic means for actuating said valve from the aforesaid hand lever.

3. In gun loading apparatus, the combination with the slide frame, the rammer actuating motor carried thereby, and the motor control hand lever mounted on a part of the mounting that does not move in elevation, of a control valve carried by the slide frame, a valve operated by said hand lever, and means for connecting said valve to the control hand valve on the slide frame.



4. In gun loading apparatus, the combination with the slide frame, the rammer actuating motor carried thereby, and the motor control hand lever mounted on a part of the mounting that does not move in elevation, of a control valve carried by the slide frame, a valve operated by said hand lever, and hydraulic means for connecting said valve to the control valve on the slide frame.

5. In gun loading apparatus, the combination with the slide frame, the rammer actuating motor carried thereby, and the motor control hand lever mounted on a part of the mounting that does not move in elevation, of a differential control valve carried by the slide frame, a pipe supplying constant pressure fluid to said differential valve, a valve operated by said hand lever and a pipe connecting said valve with the differential valve on the slide frame.

[Claim 6 not printed in the Gazette.]

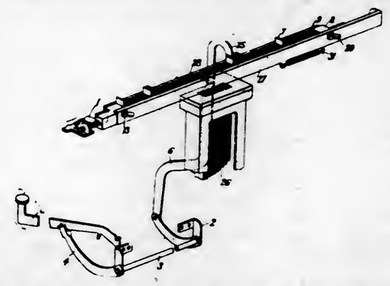
1,157,683. TYPE-WRITING MACHINE. JOHN C. DOANE, East Long Meadow, Mass., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Sept. 17, 1914. Serial No. 862,227. (Cl. 197—179.)

1. In a tabulating device, a rack bar composed of two longitudinal members with spaced engaging projections forming slideways for internal stops.

2. In a tabulating device, a rack bar composed of two longitudinal members with spaced interfitting projections forming slideways for internal stops.

3. In a tabulating device, the combination of a rack bar composed of two longitudinal members with spaced interengaging projections forming slideways and stops operable in said slideways.

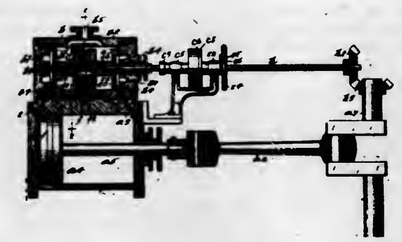
4. A rack bar for tabulators composed of two longitudinal members having opposed hook-like projections arranged to interlock and form continuous webs, the spaces between adjacent webs serving to contain movable stops.



5. In a tabulating device, the combination of a rack bar composed of two longitudinal members having opposed hook-like projections arranged to interlock and form continuous webs, said webs being spaced equi-distantly to form a row of guideways, and a series of stops slidably contained in said guideways.

[Claims 6 to 11 not printed in the Gazette.]

1,157,684. ROTARY VALVE. JOSÉ FERRER and ELIAS ALONSO, San Juan, Porto Rico. Filed Aug. 8, 1914. Serial No. 855,895. (Cl. 136—7.)



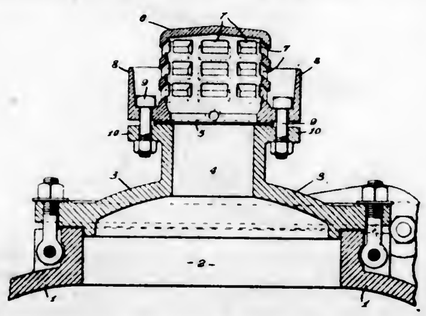
In an engine, a cylinder having a port at each end thereof, a piston therein, a steam-chest provided with a steam inlet and a steam outlet port, a rotary valve, comprising two similar, oppositely disposed, members having inclined adjacent ends, a wedge arranged between said inclined ends, means for forcing said wedge inwardly to move said members apart, and means for rotating said members, said valve being adapted to communicate said steam-chest ports with said cylinder ports, alternately.

1,157,685. SAFETY-SEAL FOR RECEPTACLES. GEORGE G. FRYER, Syracuse, N. Y. Filed Dec. 5, 1910. Serial No. 595,640½. (Cl. 220—120.)

1. A receptacle for volatile liquids having an exhaust passage, a safety seal extending across the exhaust passage, a cap for the exhaust passage having escape openings which are inclined downwardly and outwardly, the cap being formed with a deflector in the form of an upwardly facing gutter arranged in the path of the jets projected through said escape openings, and means for clamping the cap in position, substantially as and for the purpose described.

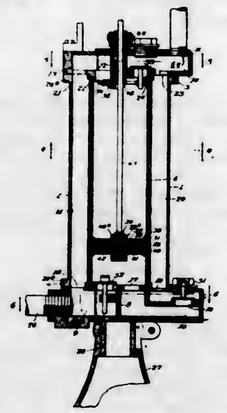
2. A receptacle for volatile liquids having an exhaust passage, a safety seal comprising a diaphragm extending across the exhaust passage and resting on the upper edge of the wall forming the exhaust passage, a cap mounted above the seal and resting on the margin of the seal, the cap having escape openings which are inclined downwardly and outwardly, and the cap being formed at its lower margin with a deflector in the form of an upwardly facing

gutter arranged in the path of jets projected through said escape openings, the cap being formed with a drain opening extending into the interior thereof and also opening through the bottom of the gutter flange, and means for clamping the cap in position without turning the same, substantially as and for the purpose described.



3. A receptacle for volatile liquids having an exhaust passage, a safety seal extending across the exhaust passage, a cap for the exhaust passage having escape openings which are inclined downwardly and outwardly, the cap being formed with a deflector in the form of an upwardly facing gutter arranged in the path of the jets projected through said escape openings, the exhaust passage having a laterally extending flange opposed to the lower side of the gutter, and fastening members extending through the bottom of the gutter and the flange, substantially as and for the purpose set forth.

1,157,686. PUMP. HERMAN C. FUHRMAN, Cedar Rapids, Iowa, assignor to The Tokheim Mfg. Co., Cedar Rapids, Iowa, a Corporation of Arizona. Filed June 18, 1912. Serial No. 704,874. (Cl. 103—76.)



1. In a self-measuring pump, the combination with a cylinder casting comprising top and bottom plates having integrally formed therewith a plurality of hollow side stems to form by-passes, of a cylinder arranged in said casting and between said standard, upper and lower chambered heads secured to said plates, and a piston operating in said cylinder.

2. In a self-measuring oil pump, the combination with a cylinder casting comprising top and bottom plates having a central aperture therein and a plurality of integrally formed hollow side standards, of a cylinder arranged in said casting and between said standards, upper and lower chambered heads secured to said plates, and a piston operating in said cylinder.

3. In a self-measuring oil pump, the combination with a cylinder casting comprising top and bottom plates having integrally formed therewith a plurality of hollow side standards, said standards having their inner sides arc-shaped, of a cylinder arranged in said casting and fitting between said arc-shaped sides, upper and lower chambered heads secured to said plates, and a piston operating in said cylinder.

1,157,687. BRANDING-IRON. JOSEPH C. GARNER and WILLIAM GUTMAN, Detroit, Mich. Filed May 20, 1915. Serial No. 29,342. (Cl. 219—30.)



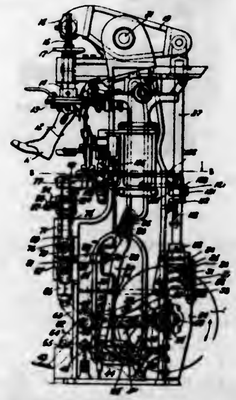
An electrical branding device, including a handled or manually actuated member, a cable housed within said handled member, a chambered casting, a septum or disk separating the latter into compartments, one compartment containing a heat-resisting insulation, a heating element within the other compartment of said casting, said heating element having connection, by means of conductors extending through said cable, with a source or medium of electricity, a branding die secured to the bottom edges of the open end of said casting, the securing means for said branding die comprising a bolt threaded into said septum and die, and a perforated guard-shell spaced from, and inclosing said casting, the upper end of said guard-shell being adapted to be connected to said handle or manually actuated member, said septum or disk having passages therethrough for said conductors for making connection with said heating element.

1,157,688. HEELING-MACHINE. LESTER L. GLIDDEN, Natick, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 2, 1910. Serial No. 590,271. (Cl. 1—32.)

1. A heel-attaching machine having, in combination, a nailing-die, a jack, automatic means for moving the jack toward the die, while the die is stationary, through a distance determined by the thickness of the work, and means operating, after said movement of the jack, to move the die toward the jack to compress the work, and thereafter to drive nails into the work.

2. A heel-attaching machine having, in combination, a nailing-die, a jack, automatic means for moving the jack toward the die, while the die is stationary, through a distance determined by the thickness of the work, and means operating, after said movement of the jack, to move the die toward the jack, through a predetermined distance, to compress the work, and thereafter to drive nails into the work.

3. A heel-attaching machine having, in combination, a nailing-die, a jack, automatic means for moving the jack toward the die until arrested by the engagement of the work, and means operating, after said movement of the jack, to move the die toward the jack to compress the work, and thereafter to drive nails into the work.

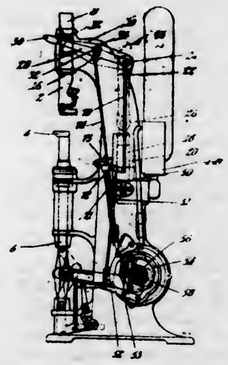


4. A heel-attaching machine having, in combination, coöperating members comprising a nailing-die and a jack, and automatic means for adjusting the distance between said members comprising a yielding device for moving one member toward the other, locking mechanism for holding the member so moved in adjusted position, and positive means for moving said member in the opposite direction.

5. A heel-attaching machine having, in combination, coöperating members comprising a nailing-die and a jack, and automatic means for adjusting the distance between said members in conformity with the thickness of the work comprising locking mechanism including a series of oppositely-disposed wedges, and means for moving the contiguous wedges simultaneously in opposite directions.

[Claims 6 to 42 not printed in the Gazette.]

1,157,689. HEELING-MACHINE. ARTHUR ERNEST JERRAM, JOSEPH GOULDBOURN, and ARTHUR BATES, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 9, 1910. Serial No. 581,171. (Cl. 1—32.)



1. A machine of the class described having, in combination, means for holding a heel under pressure, a gang of drivers and actuating means therefor constructed and arranged to impart to the gang of drivers a plurality of driving strokes terminating at the same point while the heel is held continuously under pressure and then automatically to bring the drivers to rest.

2. A machine of the class described having, in combination, means for holding a heel under pressure, nail drivers, actuating means therefor including a toggle constructed and arranged to be broken alternately on either side of the straightened position whereby two driving strokes may be imparted to the drivers while the heel is held continuously under pressure and mechanism for automatically rendering the toggle inoperative after it has twice operated the drivers.

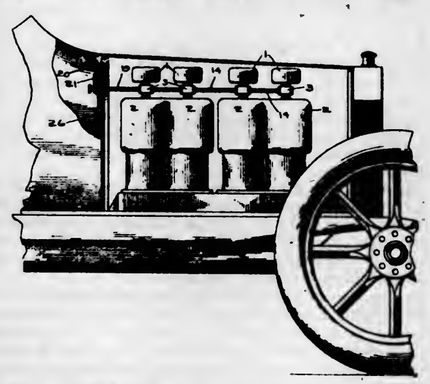
3. A machine of the class described having, in combination, means for pressing a heel against a shoe, nail drivers, and actuating means therefor including a toggle having a floating end, and movable means for anchoring said end to render the toggle effective.

4. A machine of the class described having, in combination, means for pressing a heel against the heel seat of a shoe, nail drivers, and actuating means therefor including a toggle, movable plungers connected therewith, and movable means for holding one plunger stationary to render the toggle effective.

5. A machine of the class described having, in combination, relatively movable heel pressing members, nail drivers and actuating mechanism for the drivers including a toggle normally inoperative to move the drivers, and a sliding bolt movable to render said toggle effective.

[Claims 6 to 37 not printed in the Gazette.]

1,157,690. STARTER FOR INTERNAL-COMBUSTION MOTORS. ALPHONSUS L. GOLDEN, Oakland, Cal. Filed Dec. 17, 1914. Serial No. 878,816. (Cl. 123—180.)



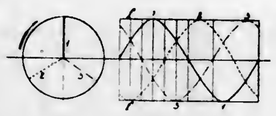
1. A starter for internal combustion motors comprising a series of chambers, each chamber being connected to one of the cylinders and arranged to contain a quantity of properly mixed explosive gas under pressure; a valve interposed between each cylinder and the chamber therefor, said valve having a channel arranged to permit the passage of gas from the cylinder to the chamber and a second channel arranged transversely to the first mentioned channel and having a valve therein arranged to normally permit the passage of gas in one direction only; and means connected to all of the first mentioned valves and adapted to temporarily disconnect the igniting circuit of the motor when either channel of the said valve is in connection with the chamber and cylinder.

2. A starter for internal combustion motors comprising a series of chambers, each chamber being connected to one of the cylinders and arranged to contain a quantity of properly mixed explosive gas under pressure; a valve interposed between each cylinder and the chamber therefor, said valve having a channel arranged to permit the passage of gas from the cylinder to the chamber and a second channel arranged transversely to the first mentioned channel and having a valve therein arranged to normally permit the passage of gas in one direction only; and means connected to all of the first mentioned valves and adapted to temporarily disconnect the igniting circuit of the

motor when either channel of the said valve is in connection with the chamber and cylinder and to connect the said circuit when neither channel is in connection with the said cylinders and chambers.

3. A starter for internal combustion motors comprising a series of chambers, each chamber being connected to one of the cylinders and arranged to contain a quantity of properly mixed explosive gas under pressure; a valve interposed between each cylinder and the chamber therefor, said valve having a channel arranged to permit the passage of gas from the cylinder to the chamber and a second channel arranged transversely to the first mentioned channel and having a valve therein arranged to normally permit the passage of gas in one direction only; a plate rigidly secured to a dash board; a series of stops representing the charging, starting and releasing positions of the valves secured to the plate; a rod operatively connected to all of the first mentioned valves and having one end thereof rotatably mounted within the plate; and a suitable arm rigidly secured to and insulated from the rod and adapted to disconnect the igniting circuit of the motor when either channel of the first mentioned valves are in connection with the chambers and cylinders, to connect the said circuit when neither channel is connected with the said cylinders and chambers and to indicate the position of the said first mentioned valves.

1,157,691. ELECTRIC FURNACE. SIGMUND GUGGENHEIM, Berlin-Wilmersdorf, Germany. Filed Feb. 18, 1914. Serial No. 819,341. (Cl. 204—64.)



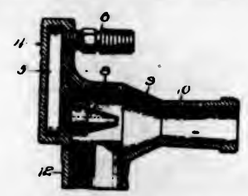
1. An electric furnace comprising, in combination, three electromagnets each provided with an air gap, a receptacle located so as to be in each of said gaps, and windings upon said magnets adapted to be so energized by the phase of a polyphase current that some of the magnetic phases will be unequally displaced.

2. An electric furnace comprising, in combination, three electromagnets each provided with an air gap, a receptacle located so as to be in each of said gaps and identical windings upon each of said magnets one of said windings being reversely arranged, however, as regards those of the other two magnets, said windings being adapted to be respectively, normally connected in the respective conductors of a three phase alternating network so that the magnetic phases are different from the electrical phases.

3. An electric furnace comprising, in combination, three electromagnets each provided with an air gap, a receptacle located so as to be in each of said gaps and windings upon said magnets, said windings having different characteristics so that when energized by a three phase alternating current network the magnetic phases will be unequally displaced.

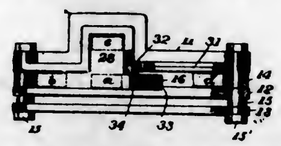
1,157,692. TANK-FILLER. RALPH W. E. HAYES, Galva, Ill., assignor of one-half to Hayes Pump & Planter Company, Galva, Ill., a Corporation of Illinois. Filed Mar. 5, 1915. Serial No. 12,436. (Cl. 162—1.)

In a device of the class described, the combination of a one-piece body portion formed with a base having a pressure chamber therein, a nipple outwardly extending from said base and communicating with said pressure chamber, a nozzle communicating with said pressure chamber, a tubular member outwardly extending from the base, the interior of said member forming a liquid chamber, and said nozzle extending into said liquid chamber, a liquid inlet communicating with said liquid chamber at a point adjacent said nozzle, a pressure conduit attached to said nipple, a liquid conduit attached to said tubular member and said conduits both extending directly outward from



the upper side of the body portion, substantially as described.

1,157,693. GEAR-CONTROLLING MECHANISM FOR MOTOR-VEHICLES. RUSSELL HUFF, Detroit, Mich., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed May 6, 1909. Serial No. 494,457. (Cl. 74—39.)



1. In a controlling mechanism for motor vehicles, the combination of a lever pivotally mounted for movement in two planes substantially at right angles to each other, and a guide comprising members arranged on opposite sides of said lever and providing a substantially straight slot in one of said planes, and one of said members having a recess therein communicating with said slot intermediate the ends of the latter and arranged in the other of said planes, said lever having more than two operating positions in said slot and an operating position in said recess, and each of said members having an abutment adapted to arrest said lever at one of its operating positions, one of said abutments arresting the lever when moving in one direction and the other arresting the movement in the opposite direction.

2. In a controlling mechanism for motor vehicles, the combination of a supporting frame, a pair of side members mounted on said frame, a speed controlling and reversing lever mounted for movement between said members, longitudinally to effect forward changes of speed, and transversely to effect reversing, one of said side members being provided with a deep recess into which the lever may be moved for reversing, and a shallow offset portion forming a shallow shoulder, the opposite side member being provided with a shallow offset portion forming a second shallow shoulder facing oppositely from the first shallow shoulder.

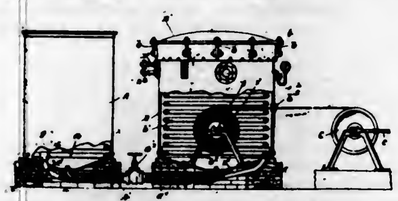
3. In controlling mechanism for motor vehicles, the combination of a guide, a hand lever mounted for movement along and transversely of said guide, and means on the guide for normally preventing transverse movement constructed to be automatically held in operative and inoperative positions.

4. In controlling mechanism for motor vehicles, the combination of a guide, a hand lever mounted for movement along and transversely of said guide, said guide being constructed to permit transverse movement at a predetermined point, means on the guide for preventing transverse movement, and means to hold said preventing means yieldingly in operative and inoperative positions.

5. A guide or sector comprising a side member provided with a recess, a gate adapted to bridge said recess and pivotally mounted rearwardly of said recess, a handle connected with the gate to move it to two positions about said pivot, and a spring connecting the handle and the sector arranged to retain the gate in both positions.

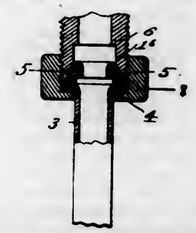
[Claims 6 to 8 not printed in the Gazette.]

1,157,694. PROCESS OF INSULATING WIRE. OLIVER T. HUNGERFORD, Belleville, N. J. Filed Aug. 17, 1907. Serial No. 389,069. (Cl. 173—244.)



The method of applying insulating compound to fabric covered wires which consists in depositing such wire in a chamber containing the insulating compound under pressure and drawing said wire through a die from said chamber and through said compound, substantially as set forth.

1,157,695. PIPE-UNION. HENRY J. KAST, Waterbury, Conn., assignor to American Pin Company, Waterbury, Conn., a Corporation of Connecticut. Filed July 25, 1914. Serial No. 853,143. (Cl. 137—28.)



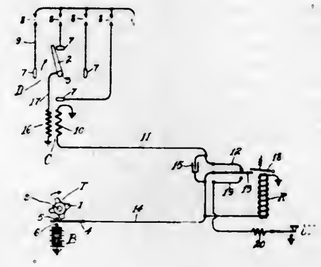
1. The combination with adjacently disposed pipe sections, one of said sections being provided with an interior recess and an external shoulder and the other of said sections being exteriorly threaded, a draw nut threaded to one of said sections and engaging the shoulder on the other, and a gasket having one portion expanded into said interior recess in one section and another portion clamped between said sections and between said sections and said draw nut.

2. A fitting having a rounded head and a shoulder for coöperation with the flange on a union nut, a relatively soft metal coating permanently attached to the rounded end of the fitting, one portion of the coating adapted to form a seat for a coöperating pipe to which the fixture is adapted to be attached, and another portion of the coating adapted to be forced into the threads of the union nut upon coupling of the fixture to the coöperating pipe.

1,157,696. IGNITION SYSTEM. LEROY D. KELLOGG, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 28, 1912. Serial No. 728,123. (Cl. 123—148.)

1. An ignition system comprising normally open timer contacts, a relay winding and source of current in circuit therewith, a primary circuit independent of the relay winding and including said source of current a primary induction coil winding and contacts of said relay, closed responsive to the closure of said timer contacts, said relay being energized responsive to said timer contacts to thereafter interrupt said primary circuit and hold it interrupted during closure of the timer contacts, and a manually controlled circuit including an alternate contact of the relay for rendering the holding circuit ineffective and to cause a vibratory operation of the relay during closure of the timer contacts.

2. An ignition system comprising timer contacts, a relay winding and source of current included in circuit therewith, and a primary circuit independent of the relay winding and including said source of current a primary winding and contacts of said relay, said relay being adapted to be held energized responsive to each closing operation of the timer contacts to permit but a momentary closure of said primary circuit, and a manually controlled circuit including an alternate contact of the relay for rendering the holding circuit ineffective and to cause a vibratory operation of the relay during each closing operation of the timer contacts.



3. An ignition system comprising timer contacts, a relay winding and source of current connected in circuit therewith whereby said relay is operated each time said timer contacts are operated, a primary circuit including a branch circuit extending from said timer contact and contacts of said relay a primary induction coil winding and said source of current, and a shunting circuit for said relay including an alternate contact thereof and a manually controlled switch.

4. An ignition system comprising timer contacts, a relay winding and source of current in permanent circuit therewith, a primary circuit independent of said relay winding and including contacts of said relay and said timer contacts, said timer contacts being adapted when operated to simultaneously close said primary and relay circuits, said relay being thereby operated to again interrupt said primary circuit and hold it interrupted during the operation of the timer contacts, and means including an alternate contact and a manually controlled switch for rendering said holding circuit ineffective and causing a vibratory operation of the relay during closure of the timer contacts.

5. An ignition system comprising normally open timer contacts, an interrupter relay, an induction coil and a manually operated switch, means for closing said timer contacts to thereby operate the said relay to cause a single impulse to be transmitted through the primary winding of the said induction coil, and means including said manual switch whereby the said interrupter relay may be operated to transmit a plurality of impulses through the said primary winding when the said timer contacts are closed.

[Claims 6 to 9 not printed in the Gazette.]

1,157,697. INGOT-MOLD STOOL. THOMAS H. KENVIN, Homestead, Pa. Filed Mar. 5, 1915. Serial No. 12,380. (Cl. 22—90.)



1. The combination in a mold with a supporting member having an opening therein, of a stool formed with a corresponding opening having flaring sides, and a plug formed with beveled sides in the flaring opening and a locking portion in the opening in the supporting member.

2. The combination in a mold with a supporting perforated member, of a stool formed with a corresponding but flaring opening, a plug fitted in the flaring opening and

having a portion projecting in the perforated member, and an open bottom mold with an interior cross area of less dimensions than the maximum or top area of the plug.

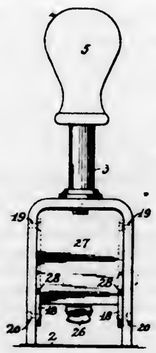
3. The combination with a carriage having an opening, a stool thereon having a corresponding but flaring opening, a mold and retaining flanges on the stool for the mold, and a plug forming the bottom of the mold fitted in the flaring opening and having a member projecting in the carriage opening to lock the carriage and stool together.

4. The combination with a stool having an opening therein with upwardly flaring sides, of a plug formed with beveled sides and seated in said opening, and locking means carried by said plug for locking the plug in the stool.

5. The combination with a stool having an opening with flaring walls, of a plug with beveled sides fitted therein and formed with a bottom loop, a latch bar passed through said loop, and retaining bosses on said stool at the edge of the opening for said latch bar.

[Claim 6 not printed in the Gazette.]

1,157,698. NUMBERING-MACHINE. MAXIMILIAN H. KERN, Brooklyn, N. Y., assignor to Roberts Numbering Machine Company, Brooklyn, N. Y., a Corporation of New York. Filed July 10, 1914. Serial No. 850,120. (Cl. 101—185.)



1. A numbering machine having a reciprocating numbering head comprising a plurality of numeral wheels each of which has also a movement of rotation, an actuating pawl adapted to rotate the numeral wheels, detent pawls therefor, and means associated with the actuating pawls coaxially mounted with the numeral wheels and carrying the actuating pawls into engagement with said detent pawls for locking the numeral wheels at one point in their bodily movement.

2. A numbering machine having a reciprocating numbering head comprising a plurality of numeral wheels each of which has also a movement of rotation, a swinging means for causing such rotation, an inclosure for the numbering head having an opening through which the numeral wheels are accessible at a point in the movement of the numbering head, detent pawls for said wheels, and means associated with said swinging means slidably engageable with said detent pawls for locking the wheels at one point in their bodily movement.

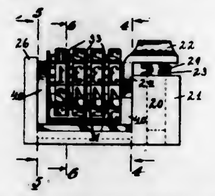
3. A numbering machine having a vertically movable numbering head including a plurality of rotatable numeral wheels, detents for said wheels, and actuating means comprising a pawl pivotally mounted on a movable frame, said frame being adapted to engage the detents to lock the numeral wheels against rotation.

4. A numbering machine comprising an inclosure having an opening, one wall of said inclosure being stationary, a movable numbering head including a plurality of rotatable numeral wheels, means for moving the numbering head coöperative to rotate the numeral wheels, said means presenting the numbering head at such opening, and a member adapted to swing into or out of position between said opening and the numbering head, the movement of said member being controlled by the movements of the numbering head.

5. A numbering machine having an inclosure provided with an opening, a reciprocating numbering head including a plurality of rotatable numeral wheels, means for advancing the wheels controlled by the reciprocation of the head, said head at one point of its movement being presented at said opening, and a member adapted to move into and out of position between the opening and the numbering head, the movements of said member being controlled by the reciprocation of the head, and said member being out of position when the head is presented at the opening, said member carrying an inking pad detachably connected thereto, the pad being removable therefrom when the member is swung out from between the head and the opening, and being held against removal in any other position.

[Claims 6 to 9 not printed in the Gazette.]

1,157,699. NUMBERING-MACHINE. MAXIMILIAN H. KERN, Ridgewood, N. Y., assignor to Roberts Numbering Machine Company, Brooklyn, N. Y., a Corporation of New York. Filed Mar. 13, 1915. Serial No. 14,093. (Cl. 101—184.)



1. A numbering machine comprising a series of numeral wheels, a series of detents one for each wheel, an actuating pawl therefor, means one for each detent normally holding the detent against its wheel, and spring actuated means for preventing a disengagement of any detent from its wheel except when a carrying operation is being performed.

2. A numbering machine comprising a series of numeral wheels, a series of detents one for each wheel, an actuating pawl therefor, individual means for holding each detent against its particular wheel, means for preventing a disengagement of any detent from its wheel, and reciprocating means for interrupting the function of the preventing means when a carrying operation is to be performed.

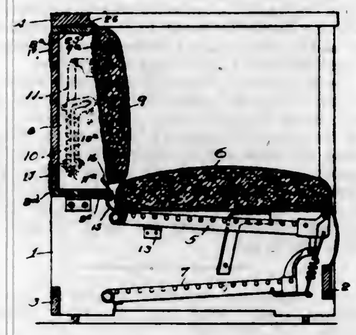
3. In a numbering machine, comprising a series of numeral wheels, an actuating pawl therefor, a series of detents one for each wheel and means for preventing a disengagement of any detent from its wheel except when a carrying operation is being performed, additional means common to all of the detents separately for preventing such disengagement adapted also to be disabled when a carrying operation is to be performed.

4. In a numbering machine comprising a series of numeral wheels, a series of detents one for each wheel and means one for each wheel for normally preventing a disengagement of any detent from its wheel, in combination with means common to all of the wheels for normally preventing a disengagement of any detent from its wheel, and automatic means for interrupting the function of both preventing means when a carrying operation is to be performed.

5. In a numbering machine comprising a series of numeral wheels, a series of detents one for each wheel, means for each wheel for normally preventing a disengagement of any detent from its wheel, including a disk on each wheel adapted to be engaged by its detent except at one position of the disk, in combination with means common to all of the wheels for normally preventing a disengagement of any detent from its wheel.

[Claims 6 to 27 not printed in the Gazette.]

1,157,700. FOLDING BED-LOUNGE. ADOLPH KNOSHER, Naperville, Ill., assignor, by mesne assignments, to Kodav Company, East Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 18, 1914. Serial No. 819,349. (Cl. 5—51.)



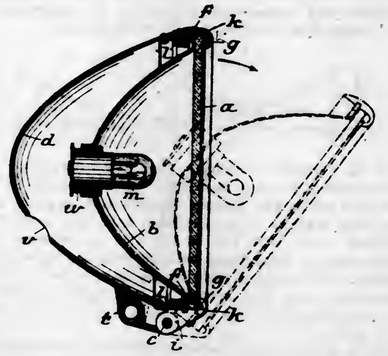
1. In a folding bed lounge, in combination with a lounge frame having a rigid back portion, a lounge back hinged at its upper edge to said rigid back portion for swinging upward from operative position; a bracket and a pivoted latch, one mounted upon the frame and the other mounted upon the upfolding back, the latch running on the bracket as the back swings, and said bracket and latch having coöperating features for engagement to hold the back at upraised position, and a device associated with said latch and bracket and operated by lifting the back beyond engaging position for preventing reëngagement upon downward movement of the back.

2. A folding bed lounge comprising a lounge frame, a folding bed frame of which one member constitutes a lounge seat support hinged at its forward edge to the lounge frame and adapted to swing upward from seat-supporting position, and forward and downward to bed-supporting position, the remainder of the folding bed frame being hinged for folding under said lounge-seat-supporting member at seat-supporting position of the latter, the lounge frame comprising in fixed position at the back and upper part a forwardly open box whose lower side is behind the rear edge of the lounge-seat at said seat-supporting position, said lounge seat and lower side of the box being provided with coöperating devices for latching the lounge-seat down at seat-supporting position.

3. In a folding bed lounge, in combination with a lounge frame having a rigid back portion, a lounge back hinged at its upper edge to said rigid back portion for swinging upward from operative position; a bracket mounted upon the frame and a latch hinged to the upfolding back, engaging and running on an edge of the bracket as the back swings the bracket having a notch at the upper part for engaging the latch to hold the back at upraised position; a trip plate pivoted to the bracket, having its edge beyond the notch provided with a notch adapted to be engaged by the latch upon swinging the back up beyond the position for engaging the first-mentioned notch on the bracket, the trip plate being adapted upon such engagement to swing down past the bracket notch and mask the same and release the latch.

4. In a folding bed lounge, in combination with a fixed lounge frame having in the back thereof a forwardly open box for bedding; a lounge back which forms the front cover for such box and which is hinged to the frame at its upper edge for folding upward to open the box; a device for supporting the lounge back at open position, comprising a bracket mounted in the box, and a latch hinged upon the back side of the lounge back engaging the bracket, the box having two vertical fore-and-aft partitions between which the bracket is mounted and the latch plays, said partitions constituting by their forward edges a stop and support for the lounge back at closed position.

1,157,701. REFLECTOR-LAMP. FRANZ KRATZ, Stuttgart, Germany, assignor to the Firm of Robert Bosch, Stuttgart, Germany. Filed Nov. 29, 1913. Serial No. 803,657. (Cl. 240—41.)



1. In a reflector lamp, a reflector having a rear opening, a cover on the front of the reflector, an incandescent lamp designed to pass through said opening, means holding the lamp in place in the space between the reflector and the cover, a lamp housing, and a hinge connection fastened to the reflector and housing and by which the rear of the reflector may be swung to exposed position for installing and removing the lamp through said opening.

2. In a reflector lamp, a reflector having a rear opening and being provided with a front cover, a lamp socket fixed to the reflector and registering with said opening, an incandescent lamp having a base engaging and supported by the socket, the lamp being designed to pass through the socket whereby it may be removed or placed in position from the rear end of the socket, a lamp housing normally inclosing the reflector and lamp socket, and a hinge connection between the housing and the reflector whereby the reflector may be swung out of the housing to afford convenient access to the lamp socket when the lamp is to be removed therefrom.

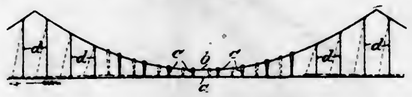
3. In a reflector lamp, a reflector, a split rim carried by the reflector and terminating in normally separated hinge arms, a housing having means coöperative with the hinge arms to form a hinge for swinging the reflector to expose the rear thereof, and means for drawing the hinge arms together to squeeze the rim tightly around the housing to thereby hold the parts fixed in normal position.

4. In a reflector lamp, a reflector having an opening at the rear thereof, a cover for the reflector, an incandescent lamp fastened to the reflector so as to project through said opening into the space between the reflector and the cover, a frame for the reflector and cover having a split rim terminating in normally separated hinge-arms, a housing having a rim and hinge-arms coöperative with the other hinge-arms so that the reflector and cover may be swung to expose the lamp for removing and inserting it through said opening, and means for drawing the hinge-arms of the frame together so as to squeeze the rim of the frame tightly around the rim of the housing and thereby hold the parts fixed in normal position; substantially as described.

1,157,702. CATENARY SUSPENSION OF THE TROLLEY-WIRE FOR ELECTRIC RAILWAYS. FRIEDRICH LAUTENBACHER, Munich, Germany. Filed Oct. 17, 1914. Serial No. 867,096. (Cl. 191—41.)

1. In a system of catenary suspension for trolley wires, the combination of a messenger cable supported at intervals, a trolley wire, swinging suspension means for the trolley wire adjacent the supports for the cable, and sliding suspension means for the trolley wire intermediate the supports for the cable.

2. In a system of catenary suspension for trolley wires, the combination of a supported messenger cable, a trolley wire, means secured both to the messenger cable and to the trolley wire, adjacent the cable supports for suspending the wire from the cable, and additional means intermediate said supports and slidable on the messenger cable for suspending the trolley wire from the latter.

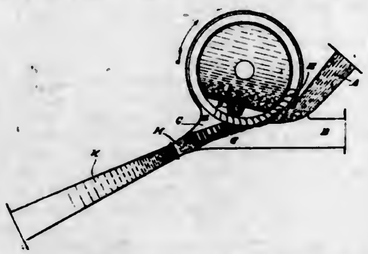


3. In a system of catenary suspension for trolley wires, the combination of a messenger cable supported at intermediate points and sagging between said supports, a trolley wire adapted to be suspended from said cable, means secured to the cable and to the wire in proximity to the supports, for suspending the wire from the cable at these points, and means slidable on the sagging portion of the messenger cable and secured to the trolley wire for suspending the latter from the cable at the sagging portion of the latter.

4. In a system of catenary suspension for trolley wires, the combination of a messenger cable suspended at intermediate points and sagging between such supports, a trolley wire adapted to be suspended from said cable, trolley wire suspension means attached to the trolley wire and slidable on the messenger cable at the sagging portion thereof, and inclined hangers attached both to the cable and to the trolley wire in proximity to the supports for the cable.

5. In a system of catenary suspension for trolley wires, the combination of a messenger cable supported at intervals and having sagging portions between the supports, a trolley wire, suspension means for the trolley wire attached to the latter and slidable on the sagging portion of the messenger cable, normally vertical trolley wire suspension means adjacent the supports for the cable attached both to the cable and to the trolley wire, and additional, inclined, suspension means secured both to the cable and to the trolley wire and arranged intermediate the sliding suspension means and the vertical suspension means.

1,157,703. WET VACUUM-PUMP OF THE ROTARY TYPE. MAURICE LEBLANC, Val-sur-Seine, Croisay, France, assignor to Société Anonyme pour l'Exploitation des Procédés Westinghouse-Leblanc, Paris, France. Filed Oct. 31, 1913. Serial No. 798,535. (Cl. 230—14.)



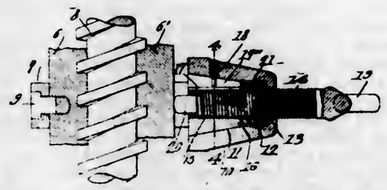
1. A vacuum pump comprising a casing having a liquid inlet port, an air inlet port, a liquid and air discharge port, a rotatable wheel located within said casing, a nozzle for delivering liquid to an annular row of blades mounted on the wheel and a passage communicating with the liquid inlet port for delivering liquid to the opposite sides of the blades from the nozzle.

2. A pump comprising a rotatable wheel, an annular row of blades mounted on the impeller, a nozzle located on one side of said blades for delivering ejecting liquid thereto, means for delivering additional liquid to the other side of said blades, and a casing inclosing said wheel and having a port through which the liquid delivered to said wheel is discharged.

3. A vacuum pump comprising a rotatable wheel, an annular row of laterally projecting blades mounted on said wheel, a liquid discharge nozzle located within the ring of blades for delivering liquid to the blades, a casing surrounding the wheel and provided with an air inlet port, a passage for delivering liquid to the outer edges of the blades, and an air and liquid discharge port, through which the liquid delivered to the blades is discharged.

4. A vacuum pump comprising a rotatable wheel, an annular row of laterally projecting blades mounted on said wheel, a liquid discharge nozzle located within the ring of blades for delivering liquid to the blades, a casing surrounding the wheel and provided with an air inlet port, a passage located ahead of the nozzles, with relation to the direction of motion of the blades, for delivering liquid to the outer edges of the blades, and an air and liquid discharge port, through which the liquid delivered to the blades is discharged.

1,157,704. TEMPER-SCREW. FRANK W. LEIDECKER, Marietta, Ohio. Filed Aug. 27, 1914. Serial No. 858,939. (Cl. 255—15.)



1. The combination with the reins and their jaws of a well drilling machine, of a temper screw, including a yoke attached to and carried by one jaw and surrounding both jaws, a screw mounted therein for movement to and from one jaw, a resilient locking member disposed for longitudinal movement and in coöperative relation to the yoke and the screw, and a spring exerting a tension upon the locking member for releasing the same when the screw is rotated to release position.

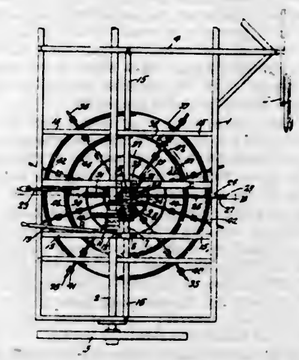
2. The combination with the reins and their jaws of a well drilling machine, of a temper screw, including a yoke attached to and carried by one jaw and surrounding both jaws, a screw mounted therein for movement to and from one jaw, a resilient locking member disposed for longitudinal movement and in coöperative relation to the yoke and the screw, a spring exerting a tension upon the locking member for releasing the same as the screw is rotated to release position, and means for permitting longitudinal movement and for preventing rotary movement of the locking member.

1,157,705. PRODUCTION OF FAST-COLORED PRINTS. HERBERT LEVINSTEIN, Blackley, Manchester, England, assignor to Company of Levinstein Limited, Manchester, England. Filed Feb. 7, 1914. Serial No. 817,165. (Cl. 8—5.)

1. The production of fast shades upon vegetable fabric by printing the fabric with a paste containing formaldehyde and a non-substantive dyestuff which will form an insoluble compound when heated with formaldehyde, and heating the applied paste upon the fabric to cause the formaldehyde to act upon the dyestuff and render it insoluble, substantially as set forth.

2. The production of fast shades upon vegetable fabric by printing the fabric with a paste containing a substance which will liberate formaldehyde when heated and a non-substantive dyestuff which will form an insoluble compound when heated with formaldehyde, and heating the applied paste upon the fabric to liberate formaldehyde and cause such liberated formaldehyde to act upon the dyestuff and render it insoluble substantially as set forth.

1,157,706. HARROW. JAMES WILLIAM LEWIS, Denton, Mont. Filed Apr. 17, 1915. Serial No. 22,152. (Cl. 55—20.)



1. In a harrow, a shaft, radial arms, concentric rings supported by the arms and constituting spacing means, soil engaging devices fixedly connected to the respective arms, said arms being disposed in series, arcuate connections between the arms of each series, and means revoluble with the shaft for operating the respective connections to rotate the arms of each series simultaneously, thereby to adjust the soil engaging devices angularly.

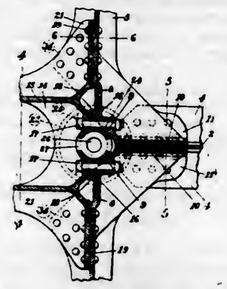
2. In a harrow, the combination with a wheel supported structure, a telescopic shaft depending therefrom, and means for transmitting motion to said shaft from one of the supporting wheels, of a harrow section revoluble with the shaft and including radial arms, concentric rings supported by the arms and constituting spacing means, soil engaging devices fixedly connected to the respective arms, said arms being disposed in series, connections between the arms of each series, and means for operating the respective connections for rotating the arms of each series simultaneously thereby to adjust the soil engaging devices angularly.

3. In a harrow, the combination with a wheel supported structure, a telescopic shaft depending therefrom, means for transmitting motion to the shaft from one of the supporting wheels, and means for adjusting the shaft longitudinally during its rotation, of a harrow section carried by the shaft and including a hub, revoluble arms radiating therefrom, concentric rings carried by the arms and constituting spacing means, soil engaging elements connected to and movable with the arms, said arms being arranged in series, connections between the arms of each series, and separate means for actuating the respective connections to adjust the soil engaging elements angularly.

4. In a harrow, a revoluble section including a hub, a flanged disk concentric therewith and secured thereto, radial arms journaled within the flanged disk and hub, means for engaging the arms for holding them against withdrawal from the hub and disk, concentric rings supported by the arms and constituting spacing means, soil engaging elements secured to and movable with the arms, said arms being arranged in series, connections between the arms of each series, and means for simultaneously rotating the arms of each series thereby to adjust the soil engaging elements angularly.

1,157,707. UNDERFRAME FOR RAILWAY-CARS. BURNS D. LOCKWOOD, Bellevue, Pa., assignor to Pressed Steel Car Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Dec. 7, 1911. Serial No. 664,321. (Cl. 105—76.)

1. An underframe for cars comprising a center sill, and a bolster having portions that lap past the end of said center sill and are secured thereto, a draft sill having ends that lap and are secured to said bolster, and a center bearing member integral with said draft sill.



2. An underframe for cars comprising a single center sill, and a bolster having end portions that lap past the end of said center sill and are secured thereto, a draft sill having ends that lap and are secured to said bolster, and a center bearing member integral with said draft sill.

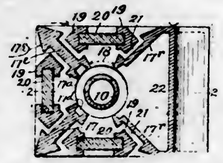
3. An underframe for cars comprising a center sill and bolsters having end portions that lap past the end of said center sill and are secured thereto, draft sill members having ends at substantially right angles to their longitudinal portions, and which lap and are secured to said bolsters, the said longitudinal draft sill members being connected together by members forming the upper portions of the center bearing members, and center bearing members integral with said draft sill members.

4. An underframe for cars comprising a single center sill and bolsters having end portions that lap past the ends of said center sill and are secured thereto, draft sill members having ends at substantially right angles to their longitudinal portions, and which lap and are secured to said bolsters, the said longitudinal draft sill members being connected together by members forming the upper portions of the center bearing members, and center bearing members integral with said draft sill members.

5. An underframe for cars comprising a center sill, bolsters having end portions that lap past the ends of the center sill and are secured thereto, between the upper and lower edges thereof, and draft sills having ends that lap and are secured to the bolster members between the upper and lower edges thereof, and center bearing members formed integral with said draft sills.

[Claims 6 to 18 not printed in the Gazette.]

1,157,708. SHIELD FOR GAGE-GLASSES. RALPH MCINTOSH, Cleveland, Ohio. Filed Mar. 20, 1913. Serial No. 755,574. (Cl. 73—54.)



1. A shield for a gage glass comprising a pair of guard members extending outwardly with respect to the axis of the shield, a transparent plate arranged between these guard members, there being vent spaces between the plate and said guard members.

2. A shield for a gage glass comprising a pair of upright guard members, a transparent strip between the guard members, a holder therefor, there being vent spaces between the holder and the sides of the said guard members.

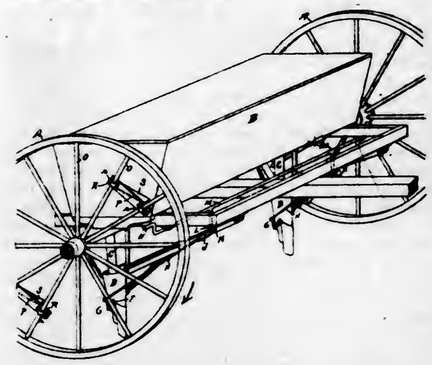
3. A shield for a gage glass comprising upright guard members, a transparent strip between said members, there being sinuous passageways between the edges of the strip and the guard members.

4. A shield for a gage glass comprising a pair of outwardly projecting guard members, a transparent strip between said guard members, glass holding members at the edges of the strip, said glass holding members and the said guard members having interfitting parts, and being spaced apart so that sinuous passageways are left between the same.

5. A shield for a gage glass comprising a pair of guard members having grooves in their sides, a transparent strip between said guard members and strip holding members which project into the grooves of said guard members, but are spaced therefrom, leaving between the same sinuous passageways.

[Claims 6 to 8 not printed in the Gazette.]

1,157,709. AGRICULTURAL IMPLEMENT. JAMES H. MAHER, Slingerlands, N. Y. Filed May 22, 1914. Serial No. 840,143. (Cl. 111—18.)



1. In a grain drill a valve operating means, comprising a rod attached to the valve provided at one end with an eye; means for threading said eye in connection with a rocker arm; a rocker arm attached to and extending across the drill; a crank on the end of said rocker arm; an obstruction attached to the wheel adapted to engage said crank, said obstruction comprising a block extending from one spoke of the wheel to an adjacent spoke; means for securing the block to the spokes; and a guide strip placed diagonally from one end of said block to the other and projecting from the block.

2. In a grain drill a valve operating means, comprising a rocker arm; a crank on said rocker arm; an obstruction on the wheel adapted to engage said crank, comprising a block extending from one spoke of the wheel to an adjacent spoke; means for securing the block to the spokes; and a guide strip placed diagonally from one end of said block to the other and projecting from the block.

1,157,710. PULLEY. PHILIP MARQUA, St. Louis, Mo. Filed Dec. 11, 1914. Serial No. 876,683. (Cl. 64—18.)



1. A wood pulley comprising a central hub composed of two sections adapted to jointly embrace a suitable supporting shaft, and an outer rim composed of two or more sections each in interlocked relation with two contiguous outer faces of a section of the hub, whereby the hub and rim are rotatable as a unit about a common axis.

2. A pulley comprising a hollow hub composed of two sections secured together, the outer bounding walls of the hub forming a polygon in cross-section, and a rim comprising a series of detachable sections each embracing the hub about the contiguous faces forming an angle of the polygon, whereby the rim sections are locked to the hub sections and rotate as a unit therewith.

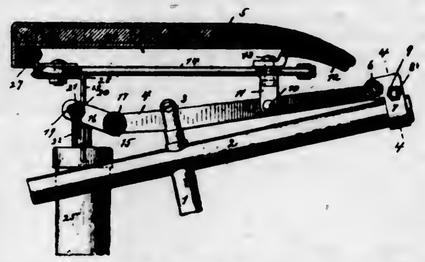
3. A pulley comprising a sectional hub polygonal in cross-section, and a sectional rim detachably secured to the hub, the inner walls of each section of the rim bearing against the outer faces of the hub at points contiguous to the vertices of the angles formed by said faces.

4. A wood pulley comprising a sectional hub having a central tubular bore and faces surrounding the tubular portion and meeting to impart an outer polygonal cross-section to the hub, an outer sectional rim encompassing the hub, each section of the rim being recessed to receive the corner formed by two meeting faces on the polygonal portion of the hub, whereby the hub and rim sections are interlocked and operate to rotate as a unit.

5. A pulley comprising a central hub substantially rectangular and oblong in cross-section, the grain of the wood running toward the ends of the longer face of the hub, and an outer wooden rim composed of sections recessed to receive the several corners of the hub, with the grain of the sections running transverse to the general direction of the grain of the hub as aforesaid.

[Claims 6 to 8 not printed in the Gazette.]

1,157,711. SADDLE FOR MOTOR-CYCLES. FREDERICK MESINGER, New York, N. Y. Filed June 17, 1915. Serial No. 34,638. (Cl. 208—15.)

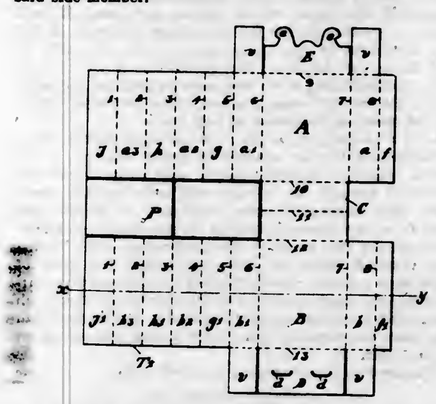


1. A saddle having a saddle top, a longitudinal bar extending beneath the same, means for pivotally connecting the bar to the front of the saddle top, a slotted member pivotally connected to the bar, a clutch intermediate said bar and member, a transverse bar having an eye, a bolt engaging said eye and passing movably through said slotted member, and members of a rear cushioning device secured to the transverse bar.

2. A saddle having a saddle top, a longitudinal bar extending beneath the same, means for pivotally connecting the bar to the front of the saddle top, a pair of slotted links pivoted to the bar, a clutch intermediate said bar and links, a transverse bar having an eye, a bolt engaging said eye and passing movably through the slotted links, and members of a rear cushioning system secured to the transverse bar.

1,157,712. CELL-CASE AND BLANK THEREFOR. JAMES B. MILLER, Rochester, N. Y., assignor to Rochester Carrier Company, Rochester, N. Y., a Corporation of New York. Filed Jan. 28, 1914. Serial No. 814,895. (Cl. 229—29.)

1. A blank for a cell-case comprising two rectangular side members, a foldable bottom member intermediate said side members and flexibly connected thereto, outer cover flaps flexibly connected to said side members opposite said bottom member, extension members flexibly connected to opposite sides of one of said side members and similar extension members flexibly connected to opposite sides of the other one of said side members, such extension members divided into flexibly connected parallel sections, and inner cover flaps flexibly connected to the outer ends of those sections of the extension members adjacent to said side member.



2. A blank for a cell-case comprising two rectangular side members, a foldable bottom member intermediate said side members and flexibly connected thereto, outer cover flaps flexibly connected to said side members opposite said bottom member, extension members flexibly connected to opposite sides of one of said side members and similar extension members flexibly connected to opposite sides of the other one of said side members, such extension members divided into flexibly connected parallel sections, and inner cover flaps flexibly connected to the outer ends of those sections of the extension members adjacent to and on each side of said side members.

3. A blank for a cell-case comprising two rectangular side members, a foldable bottom member intermediate said side members and flexibly connected thereto, outer cover flaps flexibly connected to said side members opposite said bottom member, extension members flexibly connected to opposite sides of each of said side members, such extension members divided into flexibly connected parallel sections, the outer most section of one of said extension members forming, when the blank is formed into a cell-case, a central partition member, and inner cover flaps flexibly connected to the outer ends of those sections adjacent to and on each side of said side members.

4. A collapsible cell-case comprising the following parts formed from a single blank, viz.—two similar and oppositely disposed first side members, a foldable bottom member flexibly connected to said side members, second side members flexibly connected to opposite sides of one of said first side members, attaching sections flexibly connected to said second side members adapted to be secured to the other one of said first side members, a series of flexibly connected sections flexibly connected to one of said attaching sections, such series comprising transverse partition sections and attaching sections, the section one one side of each transverse partition lying against and secured to one of said first side members and that on the other side thereof lying against and secured to the other first side member, inner cover flaps flexibly connected to the top edges of said second side members, and outer cover flaps flexibly connected to the top edges of said first side members.

5. A collapsible cell-case comprising the following parts formed from a single blank, viz.—two similar and oppositely disposed side members, a foldable bottom member flexibly connected to said side members, oppositely disposed side sections flexibly connected to each of said side members, a central partition member flexibly connected to one of said side sections, partition attaching sections flexibly connected to the remaining ones of said side sections, a series of flexibly connected parallel sections flexibly connected to one of said partition attaching sections on each side of said central partition, such series comprising transverse partition sections and attaching sections, the section on one side of each transverse partition lying against and secured to one of said side members and that on the other side thereof lying against and secured to said central partition, inner cover flaps flexibly connected to the top edges of said side sections, and outer cover flaps flexibly connected to the top edges of said side members.

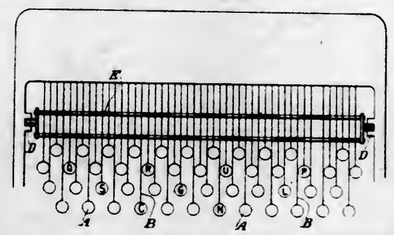
[Claims 6 to 12 not printed in the Gazette.]

1,157,713. HINGE. NORMAN H. MORROW, Bemidji, Minn. Filed Aug. 21, 1913. Serial No. 785,957. (Cl. 16—108.)



As an article of manufacture, a hinge leaf having portions thereof struck at right angles to the body, the inner edges of said portions being cut diagonally to the margin of the leaf to provide tapering tongues twisted throughout their lengths, certain of said tongues being disposed on margins of the leaf cut diagonally to the longitudinal axis thereof.

1,157,714. KEYBOARD FOR TELEGRAPH-TRANSMITTERS. CARL ERIC NELSON, Wilkinsburg, Pa. Filed Sept. 3, 1914. Serial No. 859,955. (Cl. 197—107.)



1. In a keyboard of the kind described, the combination with the key levers of a tilting or rocking element supported and extending under all of said levers, and adapted to be rocked or tilted in opposite directions by the depression of any two adjacent keys in the same horizontal row, whereby the depression of one key causes said member to lock the adjacent keys against depression.

2. In a keyboard of the kind described, the combination with the key levers, of a rocking or tilting frame supported and extending under all of said levers, and having depressed portions on its opposite sides alternating with elevated portions, whereby the frame will be tilted or turned in opposite directions by the depression of any two adjacent keys in the same horizontal row, whereby the depression of one key locks the adjacent keys against depression.

3. In a keyboard of the kind described, the combination with the key levers of a tilting or rocking frame pivoted under the same and having alternate cutaway and uncut portions along each edge so placed that the frame will be engaged and tilted in opposite directions by the depression of any two adjacent keys in the same row.

1,157,715. HOSE-SWIVEL. JOHN OSBORNE, Hotchkiss, Colo. Filed Dec. 4, 1912. Serial No. 734,881. (Cl. 137—34.)

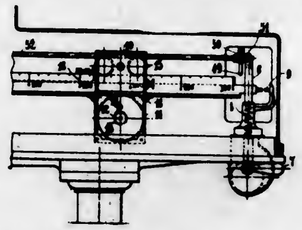
A swivel joint for hose pipe comprising two members respectively secured to the two sections of hose, the first member consisting of a relatively long hollow stem, while the second member consists of a screw-cap having a hollow stem extension, a sleeve having

an interiorly projecting collar midway its extremities and exteriorly threaded upon both sides of said collar, said sleeve surrounding the first member and threaded into the second member, the first member having a head at one extremity of the sleeve, a gland at the opposite extremity of the sleeve, the latter having an interiorly-projecting collar opposite the exterior collar forming pack-



ing chambers between the head of the first member and the gland, packing located in said chambers and a screw-cap surrounding the first member and threaded on the sleeve for securing the gland in place, the said screw-cap and second member being adjustable to vary the pressure upon the packing, while the first named member is freely rotatable within the sleeve, substantially as described.

1,157,716. WEIGHING APPARATUS. EDOUARD OUTRIBON, Béthune, France, assignor to Manufacture d'Horlogerie de Béthune, Béthune, France, a Corporation. Filed Sept. 25, 1912. Serial No. 722,236. (Cl. 73—100.)



1. In a weighing apparatus, the combination of a beam; a self-propelled poise adapted to travel thereon; normally-locked mechanism holding said poise against movement, but releasable to permit it to move; means controlled by said beam for gradually reducing the speed of said mechanism after having been released, when the poise approaches the point of equilibrium; means also controlled by said beam for arresting said mechanism when the poise reaches such point; and a flexible connection between said mechanism and said poise for operating the former from the latter.

2. In a weighing apparatus, the combination of a beam; a poise adapted to travel thereon and having propelling mechanism within its interior; normally-locked mechanism holding said poise against movement, but releasable to permit it to move; means controlled by said beam for gradually reducing the speed of said mechanism after having been released, when the poise approaches the point of equilibrium; means also controlled by said beam for arresting said mechanism when the poise reaches such point; and a flexible connection between the second-named mechanism and the poise for operating the former from the latter.

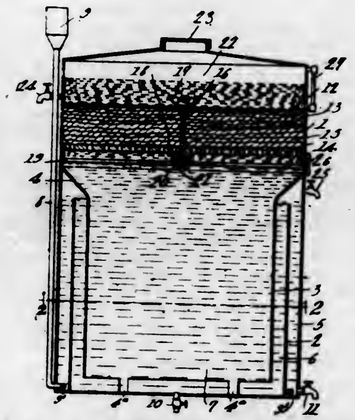
3. In a weighing apparatus, the combination of a beam; a poise adapted to travel thereon and having propelling mechanism within its interior; weight-indicating mechanism; normally-locked mechanism holding said poise against movement but releasable to permit it to move; means operated by said mechanism, when released, for actuating said indicating mechanism; means controlled by said beam for gradually reducing the speed of said mechanism, after having been released, when the poise approaches the point of equilibrium; means also controlled by said beam for arresting said mechanism when the poise reaches such point; and a flexible connection between said mechanism and said poise for operating the former from the latter.

4. In a weighing apparatus, the combination of a beam; a poise adapted to travel thereon and having interiorly-located means for effecting its propulsion; a device for regulating the speed of the initial movement of said poise; a separate device for regulating the speed of the final movement of said poise; and means controlled by said beam for bringing the second-named device into action automatically when said poise approaches the point of equilibrium, said second-named device gradually reducing the speed of movement of said poise.

5. In a weighing apparatus, the combination of a beam; a self-propelled poise adapted to travel thereon; a rotatable element; normally-locked mechanism associated with said element for holding said poise against movement, said mechanism being releasable to permit said poise to move; means controlled by said beam for gradually reducing the speed of said mechanism, after having been released, when the poise approaches the point of equilibrium; means also controlled by said beam for arresting said mechanism when the poise reaches such point; and a flexible connection between said element and said poise for rotating the former during the movement of the latter.

[Claims 6 to 14 not printed in the Gazette.]

1,157,717. OIL-FILTER. JOHN H. PACKER, Pocatello, Idaho. Filed Apr. 3, 1915. Serial No. 18,935. (Cl. 210—10.)



In a filter, an upright casing, an upwardly projecting sleeve therein providing a chamber having a lower inlet, a depending sleeve within the aforesaid sleeve and having its upper end outturned and secured to the walls of the casing, a filtering device within the casing above the sleeve and comprising apertured plates fitting within the casing and filtering material between said plates, and clamping means engaged through said plates, the casing having an outlet above the filtering device.

1,157,718. BLACKBOARD-ERASER. JOHN F. PALMER, Milwaukee, Wis. Filed Jan. 26, 1915. Serial No. 4,493. (Cl. 15—65.)

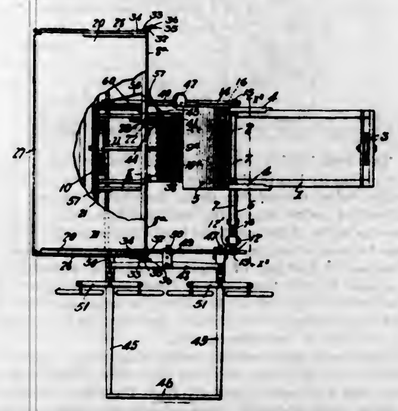


1. A blackboard eraser formed of outer strips of felt connected adjacent their ends and shaped to form a pair of pockets separated by a partition, filling strips of felt fitted within the pockets, and a backing attached to the outer strips and to the filling strips.

2. A blackboard eraser formed of outer strips of felt connected adjacent their ends and shaped to form a pair of pockets, filling strips of felt fitted within the pockets, and a stiffened felt backing attached to the strips.

3. A blackboard eraser comprising a strip of felt having a stiffening strip of other material inclosed therein.

1,157,719. BUNDLE-CARRYING ATTACHMENT FOR HARVESTERS AND THE LIKE. JACOB J. PAYNE, Adams, N. D. Filed Oct. 29, 1913. Serial No. 798,069. (Cl. 56—23.)



1. The combination with a self-binding harvester having a forwardly projecting stub pole, of an auxiliary truck located on the binder side of said harvester and provided with front and rear coupling bars, the said front coupling bar being adjustably connected to the front end of said stub pole and the said rear bar serving to adjustably connect the rear portions of the binder frame and auxiliary truck frame, a rack mounted on said auxiliary truck, and draft connections to said auxiliary truck.

2. The combination with a self-binding harvester having a stub pole, of an auxiliary truck connected thereto on the binder side thereof, a front coupling bar secured to the frame of said auxiliary truck, a rear coupling bar connecting the rear portion of the frame of said auxiliary truck to the rear portion of the harvester frame, a dumping rack carried by said auxiliary truck, and a vertically adjustable connection between the inner portion of said auxiliary truck and the intermediate portion of said rear coupling bar, whereby the level of said rack may be maintained in all vertical adjustments of the harvester frame.

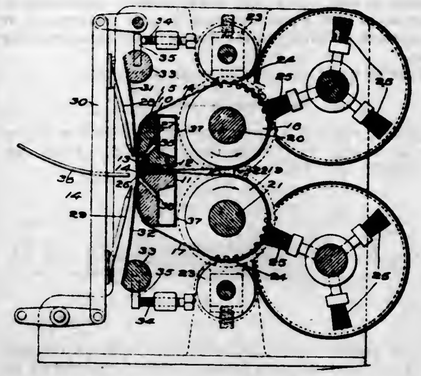
3. The combination with a self-binding harvester having a forwardly projecting stub pole, of an auxiliary truck having a rack and connected to said harvester on the binder side thereof, by means including a transverse front coupling bar adjustably attached to the stub pole of said harvester, and draft connections applied to the said front coupling bar and throwing the center of the line of draft between said harvester and auxiliary truck, the said draft connections being adjustable on said coupling bar transversely of the machine.

4. The combination with a self-binding harvester having a forwardly projecting stub pole, of an auxiliary truck having a rack connected to said harvester on the binder side thereof, by means including a transverse front coupling bar adjustably attached to the stub pole of said harvester, a pair of laterally spaced poles connected to said front coupling bar and laterally adjustable thereon, and an equalizing bar connected to said front coupling bar between the said poles and adjustable on said coupling bar transversely of the machine.

5. The combination with a harvester, of an auxiliary truck provided with a rack and with a main traction wheel, devices connecting said auxiliary truck to the harvester for traveling movements therewith, an equalising draft beam connected to the machine at a point between the harvester and auxiliary truck, and a connection to one end of said equalising beam, for pulling the same rearward, to thereby threw a strain on one side of said equalising beam to facilitate the turning of corners with the machine.

[Claims 6 to 16 not printed in the Gazette.]

1,157,720. COTTON-GIN. NORMAN PAIN PEARSE, London, England. Filed Nov. 14, 1911. Serial No. 660,220. (Cl. 13—7.)



1. A gin, comprising an endless belt formed with a ginning surface, an adjacently mounted member coöperative therewith to form a restricted cotton-receiving mouth, and resiliently yielding backing means for abruptly changing the direction of said belt at said mouth to furnish a yielding abutment to permit said belt to draw the fiber away from the seeds.

2. A gin, comprising an endless ginning belt presenting a cotton grabbing surface, a co-acting surface movable in timed relation with said belt, means for delivering cotton to be ginned by the aforesaid mechanism, a support for said belt having a substantially flat side facing said means terminating in a relatively sharp corner close to said co-acting surface for positioning in substantially the same plane those portions of said belt and the co-acting surface against which the cotton is delivered by said delivering means, and said corner bringing the cotton-grabbing portions of the belt and of said surface substantially against each other at a point substantially in line with said plane, and means coöperative with said belt and surface for completing the loosening and freeing of the seeds from the fiber.

3. A gin comprising an endless ginning belt presenting a cotton-grabbing surface, a co-acting surface movable in unison with said belt, means for delivering cotton to be ginned by the aforesaid mechanism, a support for said belt having a substantially flat side facing said means terminating in a relatively sharp corner close to said co-acting surface for positioning in substantially the same plane those portions of said belt and co-acting surface against which the cotton is delivered by said delivering means, and said corner bringing the cotton-grabbing portions of the belt and of said surface closely adjacent each other at a point substantially in line with said plane, and means movable approximately parallel to said plane and transversely of said corner for aiding in the loosening of the seeds from the fiber.

4. A gin, comprising an endless belt formed with a ginning surface, a support having a sharp corner and a plane

front face over which the belt is passed, a spring plate pressing the belt against said plane face, a member mounted for vibration over said plate adjacent said corner, and an opposed ginning surface mounted for movement in unison with said belt arranged to form therewith a restricted fiber receiving mouth.

5. A gin, comprising an endless belt formed with a ginning surface, a support formed with a sharp angle over which said belt is passed, a movable surface arranged to coöperate with said belt to form a restricted fiber-receiving mouth and consisting of a similar belt and similar support, the sharp angles being arranged close to and in substantial alinement with each other so as to bring the belts approximately into contact with each other at said mouth, said belts extending rearwardly in contact with each other from said mouth and extending in an opposite direction laterally in substantially one and the same plane outside of said mouth, and means movable approximately parallel to said plane and close to and transversely of said mouth for aiding in the freeing of the seeds from the fiber.

[Claims 6 to 11 not printed in the Gazette.]

1,157,721. SLACK-ADJUSTER. WILLIAM GUNN PRICE, New Castle, Pa. Filed Oct. 26, 1912. Serial No. 727,872. (Cl. 137—115.)

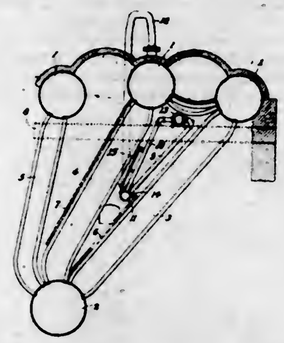


1. A packing device for telescoping members comprising an outer telescoping member having an annular recess within the end receiving the inner member, a packing ring of flexible material having a tubular portion carried in said recess and surrounding said inner telescoping member, a circular helical spring surrounding said tubular portion and normally compressing the same against said inner member throughout its circumference, said packing member having an annular expanded flange adapted to overlie said recess, said spring and the end of said outer member, a packing ring engaging said outer member, and adapted to clamp said flange between itself and the end of said outer member.

2. A packing device for telescoping members comprising an outer telescoping member having an annular recess within its end receiving the inner telescoping member, a packing ring of flexible material having a portion lying within said recess and closely embracing said inner member, a resilient member within said recess embracing said portion of said packing member, and normally compressing the same around said inner member, said packing member having an expanded portion overlying said recess and said resilient member, and means for clamping said expanded portion against the end of the said outer member, said clamping member having an annular chamber surrounding said inner member and having a discharge port for said chamber.

3. A packing device for telescoping members comprising an outer telescoping member having an annular recess in the end receiving the inner telescoping member, a packing ring of flexible material having a tubular portion extending into said recess and surrounding said inner member, a circular helical spring surrounding said tubular portion and normally compressing the same against said inner member throughout its circumference, said packing member having an annular expanded flange adapted to overlie said recess, said spring and the end of said outer member, a packing ring engaging said outer member, and adapted to clamp said flange between itself and the end of said outer member, said clamping ring having an annular chamber surrounding said inner member and having a discharge port for said chamber.

1,157,722. SUPERHEATER. JOHN PRIMROSE, Deegan Hills, N. Y. Filed Oct. 28, 1914. Serial No. 868,944. (Cl. 122—478.)



1. The combination of a boiler of the ordinary type, of a superheater located between the first and second banks of water tubes comprising upper and lower headers and superheating units connecting said headers, each of said units consisting of two portions bent at substantially right angles to each other to afford access to the superheater and to permit freedom of expansion of said superheater, and a baffle for the first bank of tubes therein stopped off at the level of the top of the lower or inlet superheater header and carried to the back of the same and continued up at the rear of the superheater.

2. The combination with a boiler of the usual type; of a baffle for the first bank of tubes offset at an intermediate portion and continued upwardly from the offset to deflect the gases from the first pass among the tubes of the second pass, and a superheater comprising upper and lower headers and superheating units connecting said header, each of said units consisting of two portions bent at substantially right angles to each other to afford access to the superheater and to permit freedom of expansion of said superheater, the lower or inlet header located in the second pass of the boiler, and the outlet header and superheating units located between the upwardly continued portion of the baffle and the first bank of water tubes.

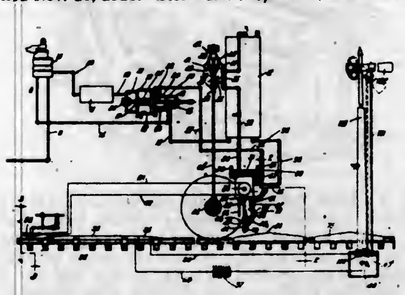
3. The combination with a boiler having a plurality of banks of tubes therein, of a superheater located between the first and second banks of tubes therein comprising two horizontal headers and superheating tubes connecting said headers, one of said headers being arranged above the superheating tubes and the other of which is arranged below the superheating tubes, one of said headers being an inlet to and the other an outlet from the superheater tubes, said superheating tubes consisting of two rows transversely arranged with respect to the flow of furnace gases through the boiler and provided with horizontal portions extending laterally from both sides of the upper header, whereby access between the two rows of superheating tubes is afforded and freedom from rigid resistance to expand by heat is permitted.

4. The combination with a boiler having a plurality of banks of water tubes therein, of a superheater located between the first and second banks of tubes comprising horizontally arranged inlet and outlet headers, and two vertical rows of superheating tubes transversely arranged in said boiler and connecting the lower header at the top and each row provided with horizontal portions connected to the upper header at the opposite sides thereof, whereby access is afforded between the two rows of tubes,—and freedom of expansion of said tubes is permitted.

5. The combination with a boiler having a plurality of banks of water tubes therein, of a superheater located between two of said banks comprising horizontally arranged inlet and outlet headers, and two rows of superheating elements transversely arranged in said boiler, each of said elements consisting of two portions arranged at substantially right angles to each other with the lower portion connected to the lower header and the upper portion connected to the upper header.

[Claims 6 and 7 not printed in the Gazette.]

1,157,723. APPARATUS FOR CONTROLLING RAILWAY-TRAINS. JOSEPH O. QUERY, Somerville, Mass. Filed Nov. 10, 1913. Serial No. 800,075. (Cl. 246—59.)



1. In a train controlling apparatus the combination of an air supply valve, an air discharge valve, a stationary obstacle, means carried by said train adapted to be moved by the traveling of said train at a predetermined speed into a position to be acted upon by said obstacle to close one and open the other of said valves, a signal, and means rendered operative by the setting of said signal at safety adapted to move said valve opening and closing means out of the path of said obstacle.

2. In a train controlling apparatus the combination of an air supply valve, an air discharge valve, an obstacle, a cylinder carried by said train, a piston adapted to be reciprocated in said cylinder, a governor carried by said train adapted to affect the reciprocations of said piston, a trip finger carried by said piston adapted to be moved thereby to engage said obstacle, means operated by the tripping of said finger adapted to close said supply valve and open said discharge valve, a second obstacle arranged adjacent said first named obstable, a supplementary trip finger adapted to be moved by the tripping of said first named finger into a position to engage said second named obstacle, and means rendered operative by the tripping of said supplementary trip finger adapted to effect the opening of said air supply valve and the closing of said discharge valve.

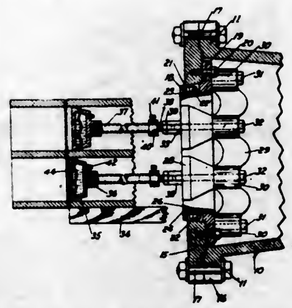
3. In a train controlling apparatus the combination of a train pipe, a cylinder pivotally mounted to rock transversely of said train, a piston adapted to be reciprocated in said cylinder, a pair of obstacles arranged along the path of said train, a trip finger carried by said piston adapted to be moved during the reciprocations of said piston into the path of one of said obstacles, a second trip finger carried by said first finger and adapted to be moved by the operation of said first named finger into the path of the other obstacle, instrumentalities rendered operative by the tripping of said finger adapted to affect the admittance of air to and the discharge of air from said train pipe, a signal, and means rendered operative by the setting of said signal at safety adapted to rock said cylinder transversely of said train to move said trip fingers out of the path of said obstacles.

4. In a train controlling apparatus the combination of a brake mechanism, a trip device carried by said train, an obstacle arranged in the path of said train, means rendered operative by the movement of said train at a predetermined speed adapted to move said trip device into a position to engage said obstacle to operate said brake mechanism and apply the brakes, a second obstacle, and means rendered operative by the engagement of said trip device with said second obstacle adapted to release said brakes.

5. In a train controlling apparatus the combination of a line of way along which said train is adapted to be moved, a brake mechanism for said train, a trip device for said brake mechanism pivotally arranged on said train to move transversely of said line of way into and out of its operative positions, electrical instrumentalities adapted to rock said trip device, a signal, a pair of electric circuit terminals connected in circuit with said electrical instrumentalities, and means operated by the movement of said signal from one position to another adapted to connect said electric circuit terminals.

[Claims 6 to 9 not printed in the Gazette.]

1,157,724. MACHINE FOR MAKING CLAY TILE, CONDUITS, OR BRICKS. WALTER D. RAWLINGS, Ensley, Ala. Filed Sept. 30, 1914. Serial No. 864,342. (Cl. 25—17.)



1. In a machine of the character described comprising a cylinder, a die head detachably connected to the cylinder and having a central opening therethrough, a die box seated in said opening in the head and having flanges which overlap the inner face of the head, and liners detachably mounted within the die box and interchangeable to vary the die, substantially as described.

2. In a machine of the character described comprising a cylinder, a die head detachably connected to the cylinder and having a die receiving opening therethrough, a die box seated in said opening in the head and having out-turned flanges which overlap an inner marginal edge of the opening in the head, liners detachably mounted within the die box and interchangeable to vary the die, a spider having its ends connected to the die box, and one or more cores detachably connected to the spider and disposed in the die box, substantially as described.

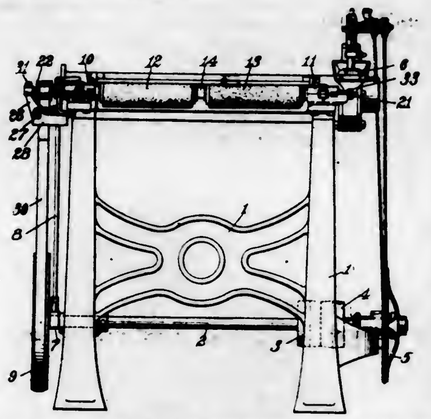
3. In a machine of the character described comprising a cylinder, a die head detachably connected to the cylinder and having an outwardly tapering opening therein, an outwardly tapering die seated in said opening with its tapering sides engaging the tapering walls of the die head opening and having an inner flange which overlaps and is connected to the inner face of said head, substantially as described.

4. In a machine of the character described comprising a cylinder, a die head detachably connected to the cylinder and having an opening therein, a die box seated in said opening and internally shouldered to interlock with the head when subjected to pressure from within the cylinder, said box having its inner walls converging toward their outer ends, and liners formed of tapering plates which fit against the box walls and abut along their side edges to form a sectional box-like liner which is held by its taper in said die box, and means to detachably connect said liner plates to the die box, substantially as described.

5. In a machine of the character described, a die head, a detachable die box connected to said head and having an internal outwardly converging opening therethrough, and a liner for said opening in the box, the liner being sectional and tapering toward its outer ends so as to fit snugly in said box opening, and detachable retaining means to connect the liner to the die box, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,157,725. BUFFING-MACHINE. WILLIAM A. REED, Revere, and JAMES FOLEY, Chelsea, Mass., assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 7, 1910. Serial No. 547,904. (Cl. 51—17.)



1. A machine for buffing boots and shoes having, in combination, a rotary and reciprocatory roll-shaft, a buffing roll fast thereon, there being a free and unobstructed space beneath said roll to permit manual presentation of a shoe, two balls between which said shaft is held, a yielding member in contact with one of said balls and adapted when permitted to hold said shaft to one limit of its reciprocatory movement, a bell crank lever having a hardened plug in contact with the other ball, and means for oscillating said lever and thereby moving said shaft in opposition to said yielding means.

2. A machine for buffing boots or shoes having, in combination, a shaft, a buffing roll mounted thereon, a lever pivoted to the frame and arranged when actuated to move said shaft in one direction, a ball mounted between said shaft and lever, a spring arranged to act in opposition to said lever, a support for said spring, a rigid abutment, a ball mounted between said support and abutment, and means for rotating said shaft and actuating said lever.

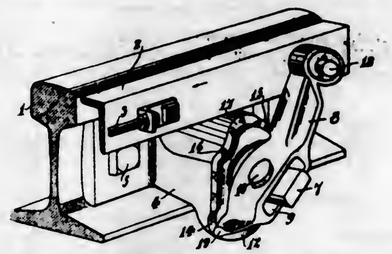
3. A machine for buffing boots and shoes having, in combination, a buffing roll, a rotary shaft upon which said roll is mounted, said shaft being provided with a cylindrical socket in one end thereof, a support slidable and rotatable in said socket, a spring located in said socket and acting to force said support outwardly, a ball seated in the outer end of said support, an abutment having a corresponding seat for said ball, and means for intermittently moving said shaft in opposition to the force of said spring.

1,157,726. DETECTOR-BAR. JAMES REID, Watervliet, N. Y., assignor to Federal Signal Company, a Corporation of New York Filed Apr. 27, 1912. Serial No. 693,754. (Cl. 246—57.)

1. A detector bar designed and adapted to move into two detecting positions, one detecting position being against the tread of a wheel and another detecting position being against the side face of a wheel; and means comprising swinging arms and cam faces for moving said bar into said detecting positions.

2. A detector bar designed and adapted to move into two detecting positions, one detecting position being against the tread of a wheel and another detecting position being against the side face of a wheel; and means comprising swinging arms and cam faces acting on said arms for moving the bar into said detecting positions.

3. A detector bar designed and adapted to move into two detecting positions, one detecting position being against the tread of a wheel and another detecting position being against the side face of a wheel; and means comprising swinging arms and cam faces for moving the bar into said detecting positions, the swinging arms exerting an upward thrust to carry the bar upward and the cam faces exerting a thrust to carry the bar inward.

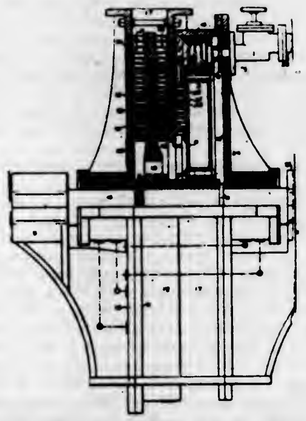


4. A detector bar designed and adapted to move into two detecting positions, one detecting position being against the tread of a wheel and another detecting position being against the side face of a wheel; and means comprising swinging arms and cam faces for moving said bar into its detecting positions, the swinging arms exerting an upward thrust to the bar and the cam faces arranged to bear upon said arms to exert an inward thrust to the bar.

5. A detector bar designed and adapted to move into two detecting positions, one detecting position being against the tread of a wheel and another detecting position being against the side face of a wheel; clips secured to the rail; swinging arms pivoted to said clips and to said bar to move the bar against the tread of a wheel; and means in addition to said arms to exert a thrust to bring the bar against the side face of a wheel.

[Claims 6 to 15 not printed in the Gazette.]

1,157,727. STEAM-TURBINE. SOREN C. ROCKMAN, Philadelphia, Pa. Filed Nov. 11, 1913. Serial No. 800,354. (Cl. 121—58.)



1. A steam turbine having a high pressure working wheel provided with a series of radial disposed blading, and having a low pressure working wheel with axially disposed blading, and a series of intermediate pressure blading carried by said high pressure working wheel, a casing for each of said wheels and blades in said casings coöperating with the blading in said wheels, an inlet and an outlet for the turbine.

2. A steam turbine having a high pressure working wheel provided with a series of radial extending blading and also provided with a series of axially extending blading and a low pressure working wheel having axially disposed blading, all as set forth.

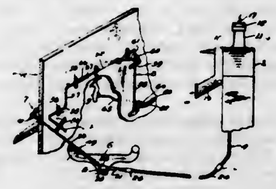
3. A steam turbine having a high pressure working wheel provided with a series of radial extending blading and also provided with a series of axially extending blading, and a low pressure working wheel having axially disposed blading and stationary blading fixed in the walls of the turbine co-acting with the said blading carried by the said working wheels.

4. A prime mover, provided with a primary wheel having impulse driving elements on its periphery and having reaction driving elements on its side, a casing for said wheel, means in said casing coöperating with the said driving elements on the wheel, a non-conducting element in said casing, a cover for said non-conducting element, and means for securing said element and the cover therefor to the casing.

5. A prime mover provided with a primary wheel having driving elements on its periphery and having driving elements on its side, a casing for said wheel, means in said casing coöperating with the said driving elements on the wheel, a secondary wheel having driving elements on each side thereof, a casing for said wheel, means in said casing coöperating with said driving element on the secondary wheel, an inlet to the primary wheel, an outlet from said primary wheel leading to the secondary wheel and an auxiliary inlet to said secondary wheel and an exhaust outlet.

[Claims 6 to 12 not printed in the Gazette.]

1,157,728. HYDROCARBON-ENGINE. THOMAS O. PATTIN, Los Angeles, Cal. Filed Mar. 22, 1915. Serial No. 16,052. (Cl. 123—175.)



1. In a hydro-carbon engine, the combination with engine cylinders, a water jacket and a radiator connected at the top and bottom to the water jacket, of an injector mounted in the hot water pipe and discharging toward the radiator and means for drawing air through the injector and through the intake manifold by the suction of the engine pistons.

2. In a hydro-carbon engine, engine cylinders, a water jacket around the engine cylinders, a radiator having a dome above the level of the water jacket, a hot water pipe connection between the top of the water jacket and the top of the radiator, a cold water connection between the bottom of the radiator and the bottom of the water jacket, an injector mounted in the hot water pipe and discharging in the direction of the radiator and having a fresh air inlet and a pipe connection between the dome of the radiator and the intake manifold.

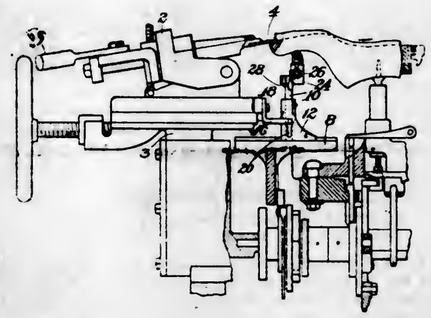
3. The combination with a hydro-carbon engine and radiator, of an injector mounted in the hot water pipe and discharging toward the radiator, a suction pipe connecting the dome of the radiator to the intake manifold of the engine above the carbureter, and a throttle valve in the suction pipe.

4. In a hydro-carbon engine, an injector mounted in the hot water pipe and discharging toward the radiator, a suction pipe connecting the dome of the radiator to the intake manifold of the engine at a point between the carbureter and the engine, a throttle valve in the suction pipe, and means whereby the throttle valve is opened when the engine is running to operate the automobile in the high speed.

5. In a hydro-carbon engine, an injector mounted in the hot water pipe and discharging toward the radiator, a suction pipe connecting the dome of the radiator to the intake manifold of the engine, a throttle valve in the suction pipe and a connection between the throttle valve and the mechanism for controlling the engine and automobile, whereby the throttle valve is open when the automobile is running in the high gear and closed at all other times.

[Claims 6 and 7 not printed in the Gazette.]

1,157,729. LASTING-MACHINE. JOHN W. RYBERG, Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 16, 1914. Serial No. 812,475. (Cl. 12—14.)



1. In a machine of the class described the combination of a toe post, a toe rest mounted on the toe post for adjustment to predetermined positions longitudinally of the shoe and for fine adjustment laterally of the shoe, and a toe pad mounted for automatic adjustment to the plane of the toe portion with which it contacts.

2. In a machine of the class described the combination of a toe post, a toe rest mounted on the post, and means for adjustment of the rest to predetermined positions longitudinally of the shoe, said means comprising a post part, a block part mounted for movement longitudinally of the shoe upon the post part, one of said parts being provided with a series of notches, and a button 28 mounted upon the other of said parts and arranged to engage one of the series of notches in the other part.

3. In a machine of the class described, the combination of a toe post and a toe rest having a lateral tipping movement relatively to the post, and means for effecting right line lateral adjustment of said parts relatively to each other comprising a screw 34 held from longitudinal movement in one of said relatively movable parts and engaging a nut formed in the other of said parts.

4. In a machine of the class described, the combination of a toe rest, and a toe pad hinged to one edge face of the rest and adapted to roll between the top face of the rest and the shoe as the shoe moves rearwardly in the unjacking operation.

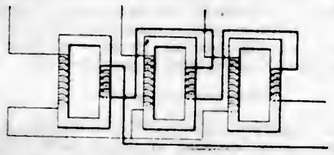
5. In a machine of the class described, the combination of a toe rest constructed and arranged to support a shoe, and a pad on said rest comprising a roll of material, the end of the roll being secured to the rear face of the rest whereby the roll may move with the shoe during its rearward movement in the unjacking operation.

[Claims 6 to 20 not printed in the Gazette.]

1,157,730. STATIC FREQUENCY-CHANGER. FRANCESCO SPINELLI, Milan, Italy. Filed Mar. 20, 1913. Serial No. 755,779. (Cl. 172—281.)

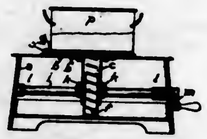
In a system for the static transformation of the three-phase alternating current into a mono-phase alternating current of the treble frequency, comprising a three-phase system, three monophase transformers having highly satu-

rated cores, and primary and secondary circuits, said secondary circuits being connected in series and said pri-



mary circuits being supplied by the three respective phases of the three-phase system, substantially as described.

1,157,731. ELECTRIC COOKING APPARATUS. RICHARD SPRENGER, Hennigsdorf, near Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Apr. 4, 1914. Serial No. 829,454. (Cl. 219—37.)



1. An electric heating device comprising a substantially flat top plate provided with an opening, an electrically heated plate yieldingly mounted therein, a cooking utensil, and means for securing said utensil upon said top plate and over said electrically heated plate.

2. An electric heating device comprising a top plate provided with an opening, an electrically heated plate yieldingly mounted therein, a cooking utensil, means for securing said utensil to said top plate over said electrically heated plate, and means for depressing the electrically heated plate.

3. An electric heating device comprising a top plate provided with an opening, an electrically heated plate adapted to pass through said opening, a sleeve secured to said plate, a second sleeve telescoping with the first and mounted on a stationary part of the device, and a spring mounted between the two sleeves whereby the electrically heated plate tends to move without the opening.

4. An electric heating device comprising a top plate provided with an opening, an electric heating plate yieldingly mounted therein, a cooking utensil, means for securing the cooking utensil to the top plate and against the heating plate, and means controlled by the movement of the heating plate for breaking the circuit to the heating device when the cooking utensil is removed.

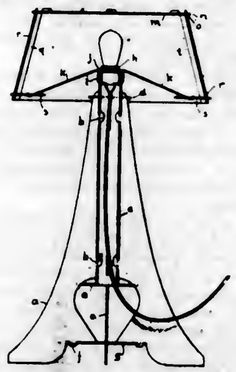
5. An electric heating device comprising a top plate provided with an opening, an electric heating plate yieldingly mounted therein, a cooking utensil, means for securing the cooking utensil to the top plate and against the heating plate, and means controlled by the heating plate for closing its own circuit when in position against the cooking utensil, and for breaking said circuit when it is substantially moved from said position.

[Claims 6 and 7 not printed in the Gazette.]

1,157,732. KNOCKDOWN LAMP STAND AND SHADE. WILLIAM P. STEPHENSON, Windsor, Ontario, Canada. Filed May 8, 1915. Serial No. 26,706. (Cl. 240—36.)

1. A knock-down lamp-stand, having in combination, a central member provided with slots, a plurality of stays having projections engaging in slots of the central member, and means for locking over the stays and central member to hold the projections and slots in engagement.

2. A knock-down lamp-stand, having in combination, a central tube provided with slots, a plurality of stays or wings having projections fitting into the slots of the central tube, a member engaging over the tops of the stays and the central tube to hold them together, and a member engaging the bottom of the stays for tying them together.



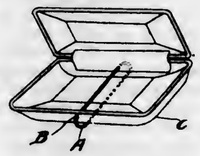
3. A knock-down lamp, having in combination, a central tube provided with slots, stays provided with projections for engaging in the slots in the tube and projections near the bottom of the stays, a ring fitting over the central tube and the tops of the stays to tie them together at the top, and a member provided with slots fitting over the projections near the bottom of the stays to tie them together.

4. A knock-down lamp-stand, having in combination, a central tube provided with slots, stays having projections fitting into the slots and projections near the bottom of the stays, a ring adapted to fit over the top of the tube and the tops of the stays, a middle ring fitting over the bottom of the tube and provided with slots for engaging the inside edges of the stays, and a member provided with slots adapted to fit over projections near the bottom of the stays.

5. A knock-down lamp-stand, having in combination, a central tube, stays locking into the central tube, a lamp socket, a cap carrying the lamp socket and adapted to fit over the upper end of the central tube.

[Claims 6 to 8 not printed in the Gazette.]

1,157,733. MEANS FOR FASTENING AND RETAINING ARTICLES OF JEWELRY AND THE LIKE IN POSTAL AND OTHER BOXES. ARTHUR WM. STEVENSON, Manchester, England. Filed July 3, 1913. Serial No. 777,151. (Cl. 229—46.)



1. In a box of the class described, having sides provided with perforations made in the sides of the box, means for fastening and retaining articles carried therein, said means comprising an elastic, or spring-like loop, or band, passed through said perforations so as to stretch across the inside of the box and under which articles to be carried are placed, said band or loop being made of suitable length and elasticity to permit of its being drawn over the lid of the box to fasten it substantially as herein shown and described.

2. In a box of the class described having sides provided with alined perforations made in the sides of the box, means for fastening and retaining articles carried therein, said means comprising an elastic, or spring-like loop, or band, passed through said perforations so as to stretch across the inside of the box and under which articles to be carried are placed, said band or loop being made of suitable length and elasticity to permit of its being drawn over the lid of the box to fasten it substantially as herein shown and described.

1,157,734. BUNSEN BURNER. LOUIS J. STRAUSE and OTTO SPAHR, Philadelphia, Pa., assignors to Strause Gas Iron Co., Philadelphia, Pa., a Corporation of Pennsylvania. Continuation in part of application Serial No. 811,314, filed Jan. 10, 1914. This application filed May 14, 1914. Serial No. 838,461. (Cl. 158—118.)



1. A Bunsen burner of the kind described comprising an air hood, a nipple having its inner end detachably secured in an end of said air hood, one of said elements being constructed of heat insulating material and a nozzle carried by the inner end of said nipple and located within said air hood.

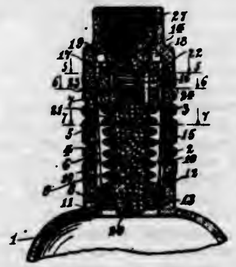
2. A Bunsen burner of the kind described comprising an air hood, a nipple of heat insulating material having its inner end screwed into an end of said air hood and a nozzle carried by the inner end of said nipple and located within said air hood.

3. A Bunsen burner of the kind described comprising an air hood of heat insulating material, a nipple having its inner end screwed into an end of said air hood and a nozzle carried by the inner end of said nipple and located within said air hood.

4. A Bunsen burner of the kind described comprising an air hood of heat insulating material, a nipple of heat insulating material having its inner end screwed into an end of the said air hood and a metallic nozzle detchably secured to the inner end of said nipple and located within said air hood.

5. A Bunsen burner of the kind described comprising an air-hood of heat insulating material, a metallic reinforcing sleeve surrounding said air hood, an internally screw-threaded metallic ring secured within an end of said air hood, a nipple having a reduced end adapted to screw into said metallic ring and a nozzle projecting from the reduced end of said nipple and located within said air hood.

1,157,735. NON-REFILLABLE BOTTLE. WILLIAM F. THOMPSON, deceased, New York, N. Y., by Viola A. S. Thompson, administratrix, Rochester, N. Y., assignor to Oscar A. Logan, New York, N. Y. Filed Nov. 26, 1913. Serial No. 803,136. (Cl. 215—61.)

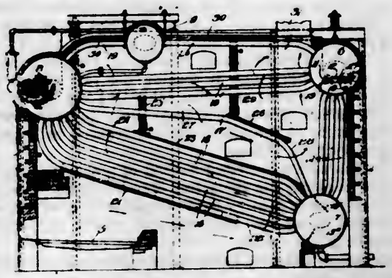


1. In a non-refillable bottle, the combination with the neck having contracted portions near its upper and lower ends; of a tubular valve case within and partially filling the neck, said valve case having an upper imperforate portion, an intermediate perforate portion and a lower imperforate portion and supported by the lower contracted portion of the neck; a conical valve seat in said lower portion of the valve case; a valve within the case, said valve having a conical head and an elongated stem of less diameter than the internal diameter of the intermediate and upper portions of the valve case to permit outflow of liquid above the valve head when the valve is in open position; a coiled spring within the valve case and above the valve to assist the latter to its seat, said spring and valve being so proportioned that the spring closes the valve when the bottle is in horizontal position and the valve by its own weight opens against the spring when the bottle is tilted slightly below horizontal position; a removable cap to close the upper end of the valve case and held in place by the upper contracted portion of the neck, said neck being made in two parts permanently united by an external sleeve to permit the insertion of the valve case and cap.

2. In a non-refillable bottle, the combination with the neck having contracted portions near its upper and lower ends; of a tubular valve case within and partially filling the neck, said valve case having an upper imperforate portion, an intermediate perforate portion and a lower imperforate portion and supported by the lower contracted portion of the neck; a conical valve seat in said lower portion of the valve case; a valve within the case, said valve having a conical head and an elongated stem of less diameter than the internal diameter of the intermediate and upper portions of the valve case to permit outflow of liquid above the valve head when the valve is in open position; a coiled spring within the valve case and above the valve to assist the latter to its seat, said spring and valve being so proportioned that the spring closes the valve when the bottle is in horizontal position and the valve by its own weight opens against the spring when the bottle is tilted slightly below horizontal position; a removable cap to close the upper end of the valve case and held in place by the upper contracted portion of the neck, said neck being made in two parts permanently united by an external sleeve to permit the insertion of the valve case and cap, said valve case and valve each being made of fictile material and cast in one piece.

3. In a non-refillable bottle, the combination of a tubular valve case of fictile material cast in one piece and comprising an upper imperforate portion, an intermediate perforate portion and a lower imperforate portion, said intermediate portion consisting of separated parallel rings united together and to the upper and lower portions of the valve case by ribs; a valve seat in the lower imperforate portion of the valve case; and a cap to close the upper end of the valve case having projections extending beyond the periphery of the valve case.

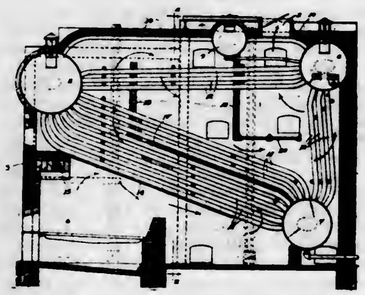
1,157,736. BOILER. SOREN THORSTENSEN, Louisville, Ky., assignor to Henry Vogt Machine Company, Louisville, Ky., a Corporation of Kentucky. Filed Aug. 5, 1913. Serial No. 782,074. (Cl. 122—297.)



In a boiler of the class described, the combination of a water drum, a mud drum, a lower steam drum and an

upper steam drum, a series of vertical tubes connecting the water and mud drums, a first set of tubes connecting the mud and lower steam drums, a second set of tubes connecting the water and lower steam drums, a third set of tubes connecting the lower and upper steam drums, a fourth set of tubes connecting the upper steam and water drums, a first baffle below the first set of tubes, said baffle extending from the front of the boiler to adjacent the mud drum, a second baffle extending from the mud drum to adjacent the front of the boiler and above the first set of tubes, a first vertical baffle extending from the second baffle to the second set of tubes, a second vertical baffle to the rear of the first vertical baffle and extending from the second to the fourth set of tubes, a third baffle extending rearwardly from the rear vertical baffle along the top and in contact with the uppermost of the second set of tubes to a point adjacent the vertical tubes, and a smoke stack at the top of the boiler above the third baffle, substantially as described.

1,157,737. WATER-TUBE BOILER. SOREN THURSTENSEN, Louisville, Ky., assignor to Henry Vogt Machine Co., Louisville, Ky., a Corporation of Kentucky. Filed July 25, 1914. Serial No. 853,069. (Cl. 122—297.)



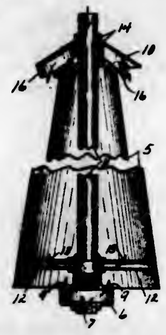
In a boiler the combination of a plurality of drums, an upper, lower, intermediate and rear set of tubes connecting said drums, a lower baffle extending along the bottom of the lower set of tubes to a point adjacent the rear of said tubes, an intermediate baffle lying medially of the lower set of tubes and extending from the rear of said tubes to adjacent the front thereof, a forward baffle extending from the front of the intermediate baffle to a point above the intermediate set of tubes, a rear baffle extending from above the intermediate tubes to a point below said intermediate tubes and extending above and away from the upper tubes of the lower set of tubes, an upper baffle extending from the lower portion of the rear baffle to adjacent the rear set of tubes, and a smoke stack above said upper baffle, substantially as described.

1,157,738. METHOD OF TREATING STARCH. CHARLES A. TYLER, Auburn, N. Y., assignor to National Chemical Company, Syracuse, N. Y., a Corporation of New York. Filed Aug. 22, 1914. Serial No. 858,063. (Cl. 127—23.)

1. The herein described method of preparing laundrying starch consisting in cooking the raw starch to the desired consistency and then subjecting the cooked starch to the action of a cooling agent under pressure until the temperature of the entire body is reduced to a predetermined uniform degree.

2. The herein described method of preparing laundrying starch consisting in subjecting the raw starch to the action of a current of heating fluid of sufficient velocity and temperature to agitate and cook the starch and afterward subjecting the cooked starch to the action of a cooling agent under pressure sufficient to further agitate the entire body of starch.

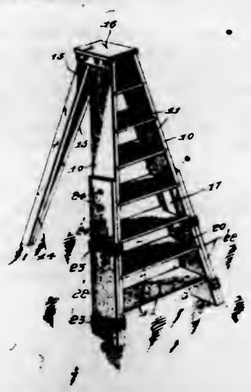
3. The herein described method of preparing laundrying starch consisting in passing a current of steam through a confined body of raw starch under sufficient pressure and temperature to agitate and cook the entire body and afterward subjecting the cooked starch to action of a current of relatively cool air under sufficient pressure to further agitate the entire body and cool the same to a lower predetermined temperature.



4. The herein described method of preparing laundrying starch consisting in subjecting a confined body of raw starch to the action of steam in such manner as to break such body into fine particles and to cook the same, supplying extra raw starch to such body during the agitating and cooking operation and finally introducing air under a relative low temperature into the cooked starch in such a manner as to further agitate and cool the same.

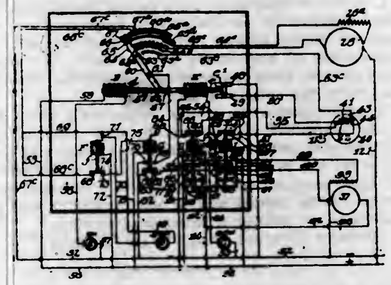
5. The herein described method of preparing cold starch, consisting in projecting steam through the starch to agitate and cook the same, then projecting a current of relatively cool air under pressure through the cooked starch to agitate and cool the same.

1,157,739. EXTENSION STEP-LADDER. WILLIAM AUGUSTUS TYLER, Daisy, Wash. Filed June 14, 1913, Serial No. 773,705. Renewed Mar. 18, 1915. Serial No. 15,387. (Cl. 228—19.)



A ladder comprising a pair of primary legs resilient strips on the inner faces of said legs having bolts at the lower ends thereof, steps between said legs one of said steps adjacent said strips provided with a cut out portion, to limit the outward movement of said strips and to prevent the lateral swing of said strips should the same be engaged with any foreign object, said primary legs having openings through which said bolts are adapted to pass and adjustable legs carried by said primary legs and having a plurality of openings adapted to register with said openings in said primary legs to lock said adjustable legs in a desired position.

1,157,740. CONTROLLING MECHANISM FOR PRINTING-PRESSES. JOSEPH J. WALSER and CHARLES A. DRESSER, Chicago, Ill., assignors to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 22, 1912. Serial No. 716,483. (Cl. 172—239.)



1. A speed controlling apparatus comprising a motor, a driven member, low speed means between the motor and said driven member for driving said driven member at low speed, high speed means for connecting the motor with said driven member, and an electrically operated switch for controlling the connection of said driven member with said motor through said high and low speed means.

2. A driving apparatus comprising a main motor, a driven member, slow speed gearing connecting said driven member with said motor, connecting means operating to permit said driven member to rotate at high speed independently of said slow-speed gearing, high speed gearing for driving said driven member from said motor independently of said slow speed gearing, a second motor, mechanism operated by the latter motor for connecting said driven member and the main motor through said high speed gearing, and means for successively starting the main motor and afterward actuating said second motor.

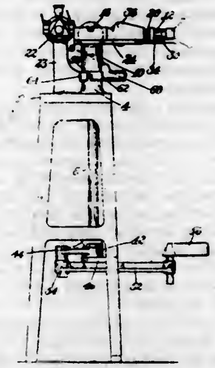
3. A driving apparatus comprising a main motor, a driven member, slow speed gearing connecting said driven member with said motor, connecting means operating to permit said driven member to rotate at high speed independently of said slow speed gearing, high speed gearing for driving said driven member from said motor independently of said slow speed gearing, a second motor, mechanism operated by the latter motor for connecting said driven member and the main motor through said high speed gearing, a switch, and means controlled by said switch for successively starting the main motor and afterward actuating said second motor.

4. A driving apparatus comprising a main motor, a driven member, slow speed gearing connecting said driven member with said motor, connecting means operating to permit said driven member to rotate at high speed independently of said slow speed gearing, high speed gearing for driving said driven member from said motor independently of said slow speed gearing, a second motor, mechanism operated by the latter motor for connecting said driven member and the main motor through said high speed gearing, a switch, and means controlled by said switch for causing said second motor to operate reversely, to render the high speed gearing inoperative.

5. A speed controlling apparatus comprising a motor, a driven member, low speed gearing between the motor and said driven member for driving said driven member at low speed, and comprising means for automatically disconnecting said gearing when the speed of the driven member exceeds that of said low speed gearing, high speed means for connecting the motor with said driven member comprising clutch mechanism, an auxiliary motor for actuating said clutch mechanism to connect or disconnect said driven member and the said first mentioned motor through said high speed means and means for controlling the actuation of said auxiliary motor.

[Claims 6 to 20 not printed in the Gazette.]

1,157,741. SHOE-SHAPING MACHINE. PEARL J. WENTWORTH, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 9, 1914. Serial No. 811,203. (Cl. 12—51.)



1. A machine of the class described having, in combination, shoe beating means and shoe ironing means movable alternatively into position to operate upon a shoe presented thereto at one side of the machine, and means whereby either of said means may be moved into said operative position.

2. A machine of the class described having, in combination, shoe beating means arranged to operate upon a shoe presented at one side of the machine and movable out of said operative position, and ironing means for operating upon a shoe presented thereto at the same side of the machine and movable into said operative position through said movement of the beating means out of operative position.

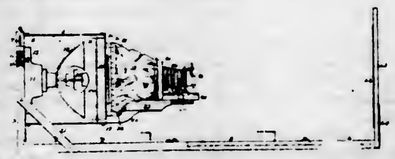
3. A machine of the class described having, in combination a tool carrying head, and a beating tool and an ironing tool both carried by the head, said head being movable to bring either of said tools into position to operate upon a shoe presented thereto at one side of the machine.

4. A machine of the class described having, in combination, a beating tool, a spindle carrying said tool, and an ironing tool arranged about said spindle, said spindle being movable to bring said tools alternatively in to position to operate upon a shoe presented thereto at one side of the machine.

5. A machine of the class described having, in combination, a rotatable tool carrying head, a beating tool and an ironing tool both carried by said head, and means whereby the head may be rotated to bring said tools alternatively into position to operate upon a shoe presented thereto at one side of the machine.

[Claims 6 to 16 not printed in the Gazette.]

1,157,742. PHOTOGRAPHIC-PICTURE-ENLARGING APPARATUS. CLARENCE W. WHITE, North Bennington, Vt. Filed Aug. 19. 1912. Serial No. 715,723. (Cl. 88—24.)



1. In a picture enlarging apparatus of the character described, the combination of a base consisting of sections extensibly connected, of which the terminal members carry at one end a source of illumination, and at the other end

a support for the copy to be produced, and between said terminals a longitudinally adjustable support for camera, substantially as specified.

2. The combination in a picture enlarging apparatus, of an extensible base; a vertically adjustable chamber and a source of illumination arranged therein, a longitudinally adjustable camera support attached to and vertically adjustable with said chamber, and means for supporting the paper or other material for the enlarged copy of the negative undergoing enlargement, mounted on said base, substantially as specified.

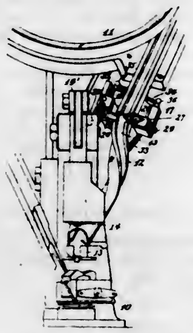
3. The combination in a picture enlarging apparatus, of a base, a lamp chamber mounted thereon and means connected therewith for vertically adjusting the height of the same in relation to the base, a camera support connected with said chamber and movable therewith, means for horizontally adjusting its position in the direction of the long axis of said base, an opaque hood for inclosing the space and excluding external light therefrom between the front of said lamp chamber and the camera and retaining all light generated within said interval, and means for supporting the picture enlargement during its production, substantially as specified.

4. The combination in a picture enlarging apparatus, of a base, a lamp chamber mounted thereon and means connected therewith for vertically adjusting the height of the same, a source of light within said chamber, a seat for a negative frame, a magnifying lens, and means for adjusting the same vertically, and means for excluding external light from the space between said chamber and said lens, and means for supporting the picture enlargement, substantially as specified.

5. In a picture enlarging apparatus of the character described, a base consisting of sections extensibly connected, of which the terminal members carry at one end a source of illumination and an attached camera, and at the other end a support for the copy to be produced, and means for vertically adjusting the light and camera, substantially as specified.

[Claims 6 to 12 not printed in the Gazette.]

1,157,743. ESCAPEMENT FOR BUTTON-ATTACHING MACHINES. FRANKLIN R. WHITE, Waterbury, Conn., assignor to The Patent Button Company, Waterbury, Conn., a Corporation of Connecticut. Filed June 4, 1915. Serial No. 32,197. (Cl. 218—12.)



1. An escapement for use in connection with a chute comprising spaced jaws mounted for movement with respect to said chute, and one of said jaws mounted for adjustment toward and away from the bottom of the chute runway.

2. An escapement for chutes comprising a frame mounted for movement with respect to said chute, and jaws carried by said frame and projecting above, and transversely of, the chute runway, one of said jaws mounted for adjustment toward and away from the bottom wall of said runway.

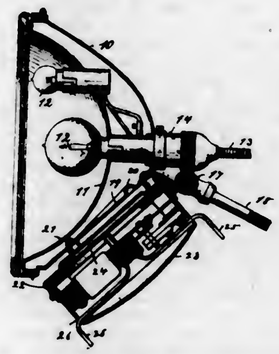
3. An escapement for a chute comprising a frame, means for mounting the same to oscillate with respect to said chute, means carried by said frame adapted to singly release the contents of said chute, said means adjustable in a direction perpendicular to the bottom wall of the runway of said chute, and means for holding the same in adjusted position.

4. A button escapement for a button chute comprising a frame mounted for movement with respect to said chute, and jaws carried by said frame and projecting above, and transversely of, the runway of said chute, the upper or foremost jaw being mounted for adjustment toward and away from the bottom of said runway.

5. An escapement for chutes comprising a frame mounted for movement with respect to said chute, admission and releasing members carried by said frame and projecting above the runway of said chute, the admission member being mounted for adjustment in a direction perpendicular to the bottom wall of the runway of said chute, and means for holding it in adjusted position.

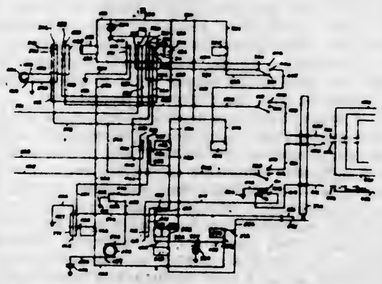
[Claims 6 to 15 not printed in the Gazette.]

1,157,744. COMBINED LAMP AND HORN. PERRIN B. WHITNEY, New York, N. Y., assignor to Messinger-Whitney Electric Company, Inc., New York, N. Y. Filed Apr. 8, 1915. Serial No. 20,069. (Cl. 116—1.)



A device of the character described comprising a shell, an inclosed light, a casing mounted upon the shell and spaced therefrom, and a sounder within the casing, the shell constituting a resonating chamber for the sounders.

1,157,745. AUTOMATIC TELEPHONE SYSTEM. RAY S. WILBUR, Jersey City, N. J., assignor, by mesne assignments, to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed July 11, 1910. Serial No. 571,844. (Cl. 179—18.)



1. In an automatic telephone system, the combination of automatic switching mechanisms, trunk voice current conductors, a side switch for controlling the connection of the actuating devices of the switching mechanism to such conductors, releasing devices for said switching mechanisms, independent releasing devices for said side switches, and a trunk conductor independent of the voice current conductors over which the releasing device of one side switch is controlled from the preceding side switch.

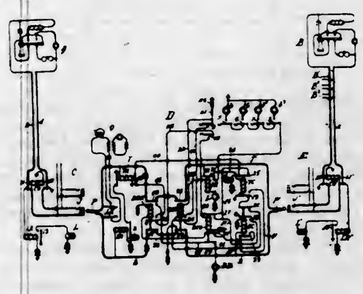
2. In an automatic telephone system, the combination with a plurality of switches in a built up circuit, of bridging magnets at two of said switches, of release relays at each of said switches, the release of the second switch depending upon the deënergization of its release relay, said relay being under the control of the bridging magnet at the first switch unless the bridging magnet at the second switch is actuated and the release of the first switch being independent of the bridging magnet of the second switch.

3. In an automatic telephone system, the combination with a pair of telephone lines connected for conversation, of a plurality of switches associated with said connected circuit, release relays at each of said switches, means to energize said release relays when the switches are taken for use, a pair of bridges across said circuit located at different switches, one or more intervening switches free from bridged electromagnets, the release of the switches depending upon the deënergization of their release relays, means whereby the bridge nearest the calling subscriber's station controls the release of all switches intervening between said switch and the switch containing the other bridge.

4. In an automatic telephone system, the combination with a built-up circuit, of a plurality of switches through the contacts of which said circuit is maintained, a releasing relay for each of said switches, means to energize said release relays when the switches are taken for use, the release of each switch depending upon the deënergization of its release relay, controlling magnets located at two of said switches, the controlling magnets of the switch nearest the calling subscriber's station controlling the release relays of succeeding switches with the exception of the other switch having controlling magnets.

5. In an automatic telephone system, a selector switch and a connector switch in a built up circuit, a release relay for the connector switch having its circuit closed in two branches, one branch controlled by the calling subscriber through said selector switch and the other branch controlled by the called subscriber through said connector switch, the release of said connector switch being effected by the deënergization of said release relay.

1,157,746. TELEPHONE SYSTEM. CHARLES S. WINSTON, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1913. Serial No. 739,656. (Cl. 179—58.)



1. A telephone system comprising telephone lines, a link circuit connected at one end to a calling line, means for connecting the other end of said link circuit to a called line, a response supervisory relay TC for said link circuit, said relay being adapted to be energized upon response from a called substation when connected to by said link circuit, means for energizing said relay upon connection made with the called line when busy, a busy signal, and means controlled by said response relay for connecting said busy signal to the calling line.

2. A telephone system comprising a calling telephone line, a link circuit connected at one end thereto, a called telephone line, means for connecting the other end of said link circuit to said called line, a response supervisory relay for said link circuit, means for energizing said relay by current over the called line when busy upon connection made therewith, and means responsive to such energization of said relay for transmitting a busy signal to the calling line.

3. A telephone system comprising a link circuit having a calling end, a called telephone line and means for connecting said calling end thereto, a response supervisory relay for said link circuit, means for energizing said relay by current over the called line when busy upon a connection made therewith, and means responsive to such energization of said relay for connecting a busy signal to the answering end of the link circuit.

4. A telephone system comprising a called telephone line, a two-conductor link circuit having a calling end for connecting thereto, a response supervisory relay connected to the tip strand of said link circuit, means for energizing said relay by current over the called line when busy upon connection made therewith, and means responsive to such energization of said relay for connecting a busy signal to the other end of the link circuit.

5. A telephone system comprising a link circuit having answering and calling ends, a called telephone line, a response supervisory relay for said link circuit, a busy signal, means effective upon connection made with the called line when busy for energizing said relay by current over the called line whereby said busy signal is connected to the answering end of the link circuit, means effective when connection is made with the called line if idle whereby said relay is not energized until the response from the called substation, and means to prevent such said second energization of the response relay from connecting said busy signal to the answering end of the link circuit.

[Claims 6 to 13 not printed in the Gazette.]

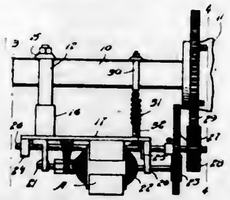
1,157,747. CLIP FOR METALLIC CLOTHES-LINES. NELSON B. WINTER, Frostburg, Md. Filed Nov. 22, 1913. Serial No. 802,559. (Cl. 24—139.)



1. A wire clothes line clip embodying a twisted portion having relatively long yieldable convolutions adapted to snugly embrace a wire strand of a clothes line to hold the clip in place upon the strand and enable the convolutions to receive the clothes thereunder, one end portion of the clip being curved transversely along an involute curve so as to extend away from and around the said strand out of contact therewith, and the said curved portion extending almost but not completely through an angle 360°.

2. A wire clothes line clip embodying a twisted portion having relatively long yieldable convolutions to snugly embrace the strand of a clothes line to hold the clip snugly in place and to receive the clothes thereunder, each end portion of the clip being curved transversely along an involute curve so as to extend away from and around the said strand out of contact therewith, the said curved end portions of the clip extending almost but not completely through an arc of 360°, and providing an entrance mouth for directing the clothes into the said convolutions.

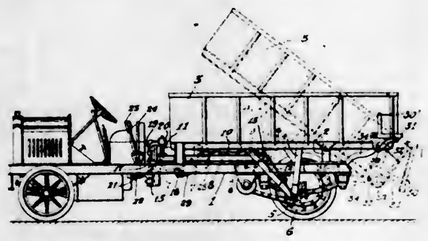
1,157,748. VEHICLE LIGHTING SYSTEM. HENRY L. WOHLERS, Oak Harbor, Ohio. Filed Mar. 30, 1914. Serial No. 828,324. (Cl. 105—238.)



1. In a device of the class described the combination of an axle, an element rotatable thereon, a clip secured to said axle, a bracket pivoted on the clip, a base plate secured to said bracket, a dynamo mounted upon the base plate, a shaft journaled on said base plate, connections between the shaft and dynamo, a gear fixed on said shaft, a gear fixed on said rotatable element meshing with the gear on the shaft, and means for yieldingly holding the gear on the shaft in mesh with the gear on the rotatable element.

2. In a device of the class described, the combination of an axle, an element rotatable thereon, a clip secured to said axle, a bracket pivoted on the clip, a base plate secured to said bracket, a dynamo mounted on the base plate, a shaft journaled on said base plate, connections between the shaft and dynamo, a gear fixed on said shaft, a gear fixed on said rotatable element, and a spring connection between the base plate and the axle for yieldingly holding the gear on the shaft in mesh with the gear on the rotatable element.

1,157,749. DUMPING-TRUCK. CARL J. YOUNG, Seattle, Wash. Filed July 7, 1914. Serial No. 849,415. (Cl. 21—20.)



1. In a device of the character described, a dumping body, a means for raising the body to dumping position by power, a trip actuated when the body has reached its dumping position to release the body raising means to thereby permit the body to drop, independent means acting to restore the action of said body raising-means upon the backward return of the body, and manually operable means for holding said restoring means out of action.

2. In a device of the character described, a tilting body, a fluid pressure operated mechanism for raising said body to a dumping position, means for automatically producing a continuing alternating action of said raising mechanism when the body reaches a desired elevation.

3. In a device of the character described, a tilting body, a fluid-operated mechanism for raising said body to a tilting position and for lowering the body to its normal position, and means for automatically operating said mechanism to produce a continuing vibratory movement in the tilting body.

4. In a device of the character described, a tiltable body, a fluid pump, a power cylinder and piston operated by said pump and connected to tilt said body, a by pass forming a connection between opposite ends of the cylinder, and between opposite sides of the pump containing a manually operable valve, and means automatically operable by the body-raising or tilting mechanism for successively reversing said valve to thereby produce a vibratory movement in the body.

5. In a truck tilting mechanism, in combination, a power raising mechanism containing a cut-out, and means for automatically operating the same by the raising of the body at a predetermined point, and a spring acting to reverse the cut out and reapply the power.

[Claims 6 to 9 not printed in the Gazette.]

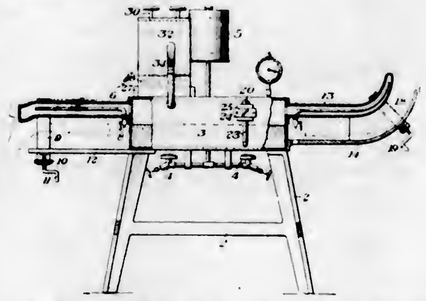
1,157,750. FIREARM. FRANKLIN K. YOUNG, Winthrop Highlands, Mass. Filed July 10, 1914. Serial No. 850,073. (Cl. 42—3.)



1. In a firearm, in combination, a barrel having a firing chamber, a locking sleeve moved toward and from said firing chamber, a cartridge-engaging bolt head having portions of different diameters fitting closely in corresponding portions in the forward end of the locking sleeve whereby an air chamber is formed to provide a shock absorbing air cushion therebetween.

2. In a firearm, in combination, a barrel having a firing chamber, a locking sleeve movable toward and from said firing chamber, the forward part of said sleeve being recessed, a cartridge-engaging member having portions of different cross-section fitting and telescoping within and corresponding respectively to the sleeve opening and recess whereby an air chamber is formed to provide a shock-absorbing air cushion between said sleeve and said member.

1,157,751. VULCANIZING APPARATUS. JAMES W. ARTHUR, Warren, Ohio. Filed Apr. 7, 1913. Serial No. 759,486. (Cl. 18—17.)



1. Vulcanizing apparatus of the character described, comprising a boiler for generating steam, a hollow work supporting member attached to said boiler and projecting therefrom and communicating with the steam space thereof, and a heat regulating device for said member comprising an escape pipe extending within the member and having a controlling valve exteriorly of the member; substantially as described.

2. Vulcanizing apparatus of the character described, comprising a boiler for generating steam, a hollow work supporting member attached to a steam chamber of said boiler and communicating with the steam space thereof, the outer end portion of the member being curved in a vertical direction and shaped to fit within a portion of a boot or shoe, means for clamping the work on the support, and means for controlling the heating of the member; substantially as described.

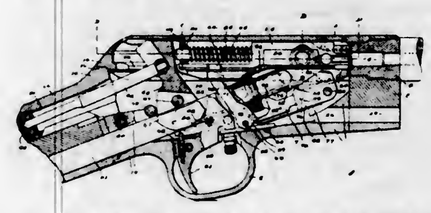
3. Vulcanizing apparatus of the character described, comprising a boiler for generating steam, a hollow work supporting member attached to a steam chamber of said boiler and projecting therefrom, said member being shaped to fit within and support a boot or shoe and means for localizing the heating of the member; substantially as described.

4. Vulcanizing apparatus comprising a boiler for generating steam, a plurality of hollow horns or supporting members attached to a steam chamber of the boiler and projecting therefrom, and communicating with the interior thereof, said horns or supporting members having differently curved end portions to adapt them to fit within different portions of a boot or shoe, the boiler having a flat upper surface, and a removable work holding and vulcanizing form adapted to be supported on said flat upper surface.

5. Vulcanizing apparatus of the character described, comprising a steam chamber, a hollow work supporting horn attached to said chamber and projecting therefrom and communicating therewith, said horn being adapted to fit within the article to be vulcanized, and a heat-regulating device for said member comprising an escape pipe leading to the forward end portion of the horn and having a control valve near the opposite end of the horn together with means for clamping the work on the horn; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,157,752. FRAME AND RECEIVER CONSTRUCTION FOR FIREARMS. CHARLES H. BARNES, Ilion, N. Y., assignor to Remington Arms & Ammunition Company, Ilion, N. Y., a Corporation of New York. Original application filed Sept. 27, 1912, Serial No. 722,608. Divided and this application filed Jan. 19, 1914. Serial No. 812,972. (Cl. 42—75.)



1. In a firearm, a frame and a receiver having alined holes, and a fastening screw extending through the alined holes and threading into the inner hole, the outer hole having conical walls and the contiguous portion of the inner hole also having conical walls, and the screw extending entirely through the outer hole and having an elongated conical head for fitting the conical walls of said holes and wedging outwardly in all radial directions on the same, substantially as and for the purpose described.

2. In a firearm, a frame and a receiver having interlocking means, and a single fastening screw for holding the frame and the receiver together with said means in interlocking engagement, the frame and the receiver having alined holes, a portion of the wall of the inner hole being threaded and the outer end portion of the inner hole and the contiguous portion of the outer hole having conical walls, and a fastening screw extending into the holes and entirely through the outer hole and having an elongated conical head engaging the conical walls of the holes and wedging radially in all directions on the walls of both holes, substantially as and for the purpose specified.

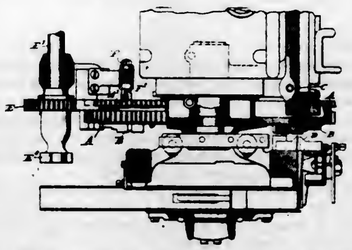
3. In a firearm, a receiver including a top and a side plate, a portion of the side of the receiver opposite said side plate being open, and a frame comprising a trigger plate and two side plates, one of the side plates closing the open side of the receiver, substantially as and for the purpose set forth.

4. In a firearm, a receiver including a top and a side plate, and a block at the front end thereof, the receiver having a portion of its side opposite said side plate, and a frame comprising a trigger plate and two side plates, and a block at the rear end of the frame, one of the side plates closing the open side of the receiver, the front end of the receiver and the frame being connected by a dowel pin near the lower sides of the receiver and frame and with an interlocking tongue and groove on the upper side and at the rear end of the receiver, and a screw extending into the receiver and frame and having an elongated conical head engaging conical walls of the screw holes of the receiver and frame, substantially as and for the purpose set forth.

5. In a firearm, a frame including side plates formed with bearings, the bearings extending through opposite sides of one of the side plates and partly into the other side plate, mechanism mounted between the side plates including pins mounted in said bearings and removable through the open bearings, and a receiver including a side plate arranged contiguous to the side plate of said element through which the bearings open, the side plate of the receiver holding the pins from removal, substantially as and for the purpose described.

[Claims 6 and 7 not printed in the Gazette.]

1,157,753. TYPOGRAPHICAL MACHINE. RICHARD M. BEDELL, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Aug. 14, 1912. Serial No. 714,952. (Cl. 199—13.)



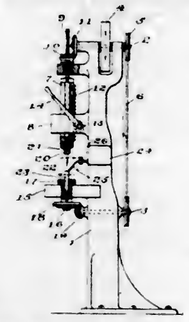
1. In a typographical casting machine, the combination of an ejector, a rotary mold wheel provided with a plurality of molds, the active one of which stands opposite the ejector and formed with a plurality of detent-engaging portions corresponding in number and each bearing a definite relation to one of the molds, driving mechanism for the mold wheel adapted to be disconnected therefrom at will, manually operable means for rotating the mold wheel when disconnected from its driving mechanism to locate a different mold opposite the ejector, and supplemental means coöperating with the mold wheel and including a mold position-indicating device engageable with one or another of said detent-engaging portions during the manual rotation of the wheel to indicate to the operator that a selected mold is in predetermined registration with the ejector.

2. In a typographical casting machine, the combination of an ejector, a rotary mold wheel provided with a plurality of molds, the active one of which stands opposite the ejector, and also formed with a plurality of recesses corresponding in number to the molds and each occupying a position in predetermined relation to one of said molds, driving mechanism for the mold wheel adapted to be disconnected therefrom at will, manual means for rotating the mold wheel when disconnected from its driving mechanism to bring a different mold opposite the ejector, and a yielding detent mounted upon a relatively fixed support and coöperating with the mold wheel during its manual rotation to engage in one of its recesses when its corresponding mold is brought opposite the ejector, whereby the proper registration of the mold and ejector is insured.

3. In a typographical casting machine, the combination of an ejector, a rotary mold wheel provided with a plurality of molds, the active one of which is positionable opposite the ejector, and also formed with a plurality of recesses corresponding in number with the molds and each recess occupying a predetermined relation to one of the molds, manual driving mechanism for the mold wheel,

and a feeler-member mounted to traverse a face of the wheel and adapted to retard movement of the same and serving, when in engagement with one of the recesses, to indicate to the operator by its retarding action that a selected mold is in registration with the ejector.

1,157,754. MACHINE FOR FORMING OPENINGS IN WOVEN FABRICS. BERT R. BENJAMIN, Oak Park, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed July 26, 1912. Serial No. 711,617. (Cl. 164—86.)



1. In a machine for puncturing woven fabric, a pointed puncturing member, and means for compressing the fabric around the edge of the puncture made thereby.

2. In a machine for puncturing woven fabric, a pointed puncturing member, and means engaging the opposite sides of the fabric for compressing the latter around the edges of the puncture made by said member.

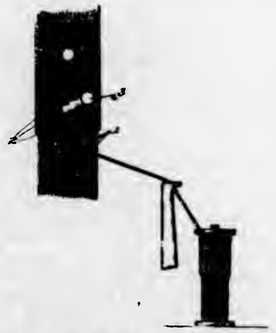
3. In a machine for puncturing woven fabric, a pointed puncturing member, means for compressing the fabric around the edges of the puncture made thereby, and means for supplying liquid thereto.

4. In a machine for puncturing woven fabric, a pointed puncturing member, rotating means for compressing the fabric around the edges of the puncture made thereby, and means for supplying liquid thereto.

5. In a machine for forming openings in woven fabrics, a pointed spreading member, a coöperating member adapted to receive and encircle the same, and means for imparting rotation to one of said members.

[Claims 6 to 20 not printed in the Gazette.]

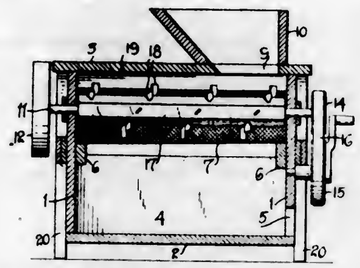
1,157,755. WOVEN FABRIC FOR BELTS. BERT R. BENJAMIN, Oak Park, Ill., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed July 26, 1912. Serial No. 711,618. (Cl. 139—9.)



1. The method of producing openings in a woven fabric consisting in inserting hole-forming members at intervals between the warp threads during the weaving process, and then weaving the weft threads in a manner to surround the hole-forming members.

2. The method of producing openings in a woven fabric consisting in inserting hole forming members at intervals between the warp threads during the weaving process, weaving the weft threads in a manner to surround the hole-forming members, and applying a viscous fluid to the fabric while the hole-forming members are positioned therein.

1,157,756. SEPARATOR. GILBERT W. CALDWELL, Gay, Ga. Filed June 12, 1915. Serial No. 33,783. (Cl. 130—15.)



A device of the class described comprising a trough, including end panels extending above the trough proper, one of said end panels having an opening therein to afford a communication within the trough, a screen element of semi-circular formation and bridging the space between the upper portions of the end panels, a lateral extension carried by the screen element and coacting with an end panel to afford a discharge chute, said screen element being disposed on an incline with the discharging spout thereof at its lower extremity, and agitating means coacting with the screen element.

1,157,757. SNAP-HOOK. ANDREW C. CAMPBELL, Waterbury, Conn., assignor to American Chain Company, Incorporated, Bridgeport, Conn., a Corporation of New York. Filed Apr. 28, 1915. Serial No. 24,400. (Cl. 24—236.)



1. The snap-hook comprising a hook member of half round wrought metal stock bent up to form a hook provided with inwardly projecting alining flanges on the hook end and formed with an integral shank and eye and with a securing tip provided with inwardly projecting securing flanges adjacent said shank, and a coöperating spring member having its snap end normally engaging said hook end between said alining flanges and having its shank normally held in alinement by said securing flanges and having an integral spring loop extending within and closely held by said eye and having an anchor end in engagement with the shank of the hook and with the spring shank adjacent said loop.

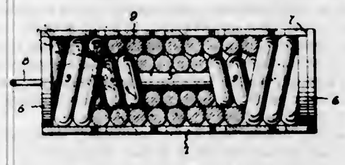
2. The snap-hook comprising a hook member formed with a hook and with an integral shank and eye and with a securing tip provided with projecting securing means, and a coöperating spring member having its snap end normally engaging said hook end and having its shank normally held in alinement by said securing means and having an integral spring loop extending within said eye and having an anchor end in engagement with the shank of the hook.

3. The snap-hook comprising a hook member of wrought metal stock bent up to form a hook and formed with a shank and eye, and a coöperating spring member having its snap end normally engaging said hook and having an integral spring loop extending within and closely held by said eye and having an anchor end in engagement with the hook member, there being securing means on said hook member coöperating with said spring member adjacent said spring loop to hold said spring member in substantial alinement with said hook.

4. The snap-hook comprising a hook member having a hook, shank and eye, and a coöperating spring member having its snap end normally engaging said hook and having an integral spring loop extending within said eye and having an anchor end in engagement with the hook member, there being alining means coöperating with said hook member and said spring member adjacent said spring loop to hold said spring member in substantial alinement with said hook.

5. The snap-hook comprising a hook member having a hook, shank and eye, and a coöperating spring member having its snap end normally engaging said hook and having a spring loop extending within said eye and having an anchor end in engagement with the hook member.

1,157,758. OIL-BURNER. JAMES R. CARR, Rotan, Tex. Filed Oct. 10, 1914. Serial No. 866,040. (Cl. 158—96.)



1. An oil burner comprising a perforated cylindrical casing, a spool removably inserted in said casing, the extremities of said spool fitting the casing extremities, and a wick permanently coiled upon the spool.

2. An oil burner comprising a cylindrical casing, formed with air inlets in its bottom portion and oil vapor outlets in its top portion, a spool removably inserted in said casing, closing the extremities of the same, and a wick permanently coiled upon said spool.

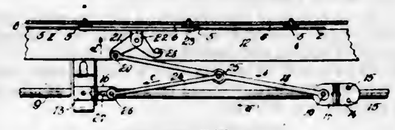
1,157,759. DENTAL VULCANIZER ATTACHMENT. THEODORE T. CATER, Columbus, Kans. Filed July 13, 1914. Serial No. 850,785. (Cl. 161—7.)



Time controlled flame extinguishing apparatus for oil burning heaters, including a wick tube, a plate hingedly connected thereto and having a snuffing portion extending therefrom and adapted to lap the end of the tube, a lip upon said plate, a spring catch pivotally connected to the tube and adapted to engage the lip to hold the snuffing portion away from the tube, a lever engaging the catch, and time controlled means for actuating the lever to disengage the catch from the lip and release the plate, said plate being movable, when released, to snuffing position, and a spring for shifting said plate to snuffing position, when released.

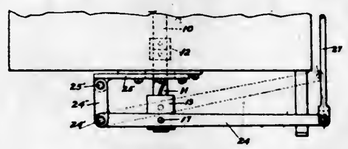
1,157,760. SELF-LOCKING WINDOW-OPERATING DEVICE. STEPHEN E. CIBULAS, Bridgeport, Conn. Filed Mar. 8, 1915. Serial No. 12,729. (Cl. 16—28.)

A window operating device comprising a pivoted locking lever carried by the window, means adapted to be engaged by the lever to lock the window, a longitudinally actuated operating rod, an operating lever pivoted at one end to the locking lever and at the other end to a pivotally supported member carried by the operating rod, a fulcrum lever pivoted at one end to the operating lever and at its other end to a movable pivot adapted to have a limited



travel in a support pivoted to a stationary part of the device while the operating lever is unlocking the locking lever.

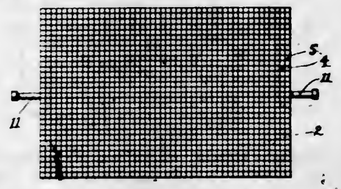
1,157,761. ENGINE-STARTER. JAMES H. CLARK, St. Maries, Idaho, assignor of one-half to J. M. Russell, Portland, Oreg. Filed July 6, 1915. Serial No. 38,318. (Cl. 74—40.)



1. An engine starting device of the character described, comprising a helically grooved spindle extension of the engine shaft, a sleeve movable longitudinally along the spindle, which is rotatably arranged within the sleeve, a toothed clutch rigidly secured within the forward end of the sleeve, a clutch-nut within the rear part of the sleeve having an interior thread adapted to engage the spindle groove, said clutch-nut being formed with teeth on its forward end in position to engage the clutch teeth, and said clutch-nut being arranged to rotate upon the spindle and within the sleeve when not in engagement with the clutch, means to retain the clutch-nut in such rotatable position when not in engagement with the clutch, substantially as described.

2. An engine starting device of the character described, comprising a helically grooved spindle extension of the engine shaft, a sleeve movable longitudinally along the spindle, which is rotatably arranged within the sleeve, a toothed clutch rigidly secured within the forward end of the sleeve, a clutch-nut within the rear part of the sleeve having an interior thread adapted to engage the spindle groove, said clutch-nut being formed with teeth on its forward end in position to engage the clutch teeth, and said clutch-nut being arranged to rotate upon the spindle and within the sleeve when not in engagement with the clutch, means to retain the clutch-nut in such rotatable position when not in engagement with the clutch, means to draw the clutch into engagement with the clutch-nut, substantially as described.

1,157,762. SURFACE-PLATE. WILLIAM C. COMMONS, Woonsocket, R. I., assignor to The Taft-Peirce Manufacturing Company, Woonsocket, R. I., a Corporation of Rhode Island. Filed Feb. 17, 1915. Serial No. 8,957. (Cl. 33—174.)



1. As an article of manufacture, a surface plate having the test surface thereof crossed by a plurality of grooves.

2. As an article of manufacture, a surface plate having the test surface thereof crossed by a plurality of intersecting grooves to divide said test surface into a plurality of individualized areas.

3. As an article of manufacture, a surface plate having a test surface provided with a plurality of depressions adapted to collect and receive grit and dirt.

4. As an article of manufacture, a surface plate having the test surface thereof crossed by a plurality of intersecting straight line grooves.

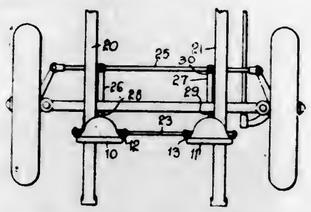
1,157,763. TIRE-TOOL. JOHN P. CUNNINGHAM, York, Nebr. Filed Sept. 23, 1914. Serial No. 863,198. (Cl. 157—6.)



1. In a tire tool, a bar adapted to have rotative engagement with the hub of a wheel, the outer end of the bar being laterally deflected and formed with a head adapted to be engaged with a tire and with a heel adapted to engage with the flange of a rim, and an auxiliary tire detaching implement detachably engaged with the bar inward of the deflected portion and, when so engaged, bearing against the deflected portion to therefore form an extension of the bar and a handle whereby the bar may be rotated.

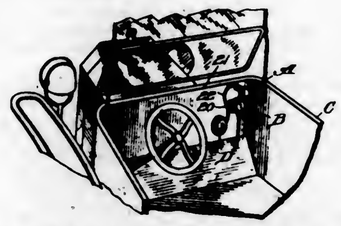
2. In a tire tool of the character described, a bar, means on the inner end of the bar for engaging with the hub of a wheel, the outer end of the bar being laterally deflected and formed with a tire engaging head having a rim-flange engaging heel, a detachable clip carried upon the bar just inwardly of the deflected portion thereof, an auxiliary tire detaching implement pivoted to said clip and detachable therewith, said implement when turned against the deflected portion forming an extension of the bar and handle, whereby the bar may be rotated.

1,157,764. DIRIGIBLE-HEADLIGHT CONTROL. HARVEY R. CURRIER, Danville, Ill. Filed June 30, 1915. Serial No. 37,278. (Cl. 240—62.)



In a headlight steering mechanism for vehicles, a lamp supporting spindle rotatably supported by the vehicle and having its lower extremity provided with an eye, an arm disposed through the eye of the spindle, a transverse rod, an arm relatively fixed upon the rod and having an extremity provided with a socket, the first named arm having an extremity provided with a ball mounted in the socket of the second named arm to afford a joint freely connecting the adjacent extremities of said first named and second named arms.

1,157,765. ELECTRIC-LIGHTING FIXTURE. WILLIAM W. DEAN, Chicago, Ill., assignor, by mesne assignments, to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed July 18, 1913. Serial No. 779,728. (Cl. 240—2.)



1. In a device of the character described, the combination with a dial indicating instrument, of an electric lamp adjacent to the face of said dial, a lamp socket, suitable electrical connections with said socket, clamping members embracing said instrument, and a holder for said socket pivotally and adjustably secured to said clamping members so that it may be tilted in a plane at substantially right angles to the face of said instrument.

2. A device of the character described, comprising an electric lamp, a lamp socket, a holder consisting of a collar embracing said socket and terminating in opposed flanges, a reflector for said lamp removably secured to one end of said holder, a pair of clamping bands, means for drawing said opposed flanges together and for securing the ends of said bands thereto with a frictional adjustment in the direction of the plane of said flanges, and means for drawing the other ends of said clamping bands toward each other.

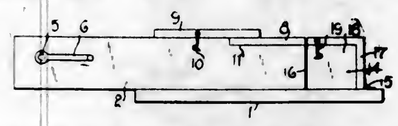
3. A device of the character described, comprising an electric lamp, a lamp socket, a tubular holder embracing said socket and having a flange at one end, a reflector more or less inclosing said lamp and terminating in a cooperating flange, embracing lugs on one of said flanges under which the other flange may be seated, and a setscrew threaded into one of said flanges through an opening in the other to securely hold the flanges together.

4. A device of the character described, comprising an electric lamp, a lamp socket, a holder for said socket and lamp having a flange at one end, overhanging lugs extending upward from the lower edge of said flange, a reflector more or less inclosing said lamp and terminating in a cooperating flange adapted to enter at its lower edge beneath said lugs and to rest thereon, and means for securing said flanges together at their upper edge.

5. A device of the class described, comprising an electric lamp, a lamp socket, a holder for said socket and lamp having a substantially vertical flange at one end, a reflector more or less inclosing said lamp and having a cooperating substantially vertical flange, lugs on one of said flanges for engaging the other to support said reflector on said holder, and means for removably securing a non-adjacent portion of the coöperating flanges together.

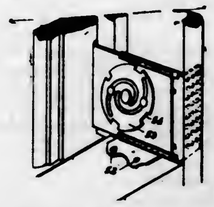
1,157,766. BUTTER-MOLD. FRED H. DELANEY, Valier, Mont. Filed May 10, 1915. Serial No. 27,207. (Cl. 31—65.)

A mold of the class described, comprising a base plate, parallel side plates carried thereby, a compression head mounted for movement upon the base plate and between the side plates, means for reciprocating said head, the space between the side plates at the inner ends thereof serving as a compression chamber, the height of the side plates comprised within the compression chamber being less than the height of the portions of the plates between which the compression head reciprocates, the space between the plates within the compression chamber being gradually restricted, a cover for the compression chamber,



and a cover for the space between the side plates in advance of the compression chamber, said second cover when in closed position overlying the cover of the compression chamber and serving to maintain the cover of the compression chamber in closed position.

1,157,767. WINDOW-LOCK. LEWIS ELMER DE NEERGAARD, Port Chester, N. Y., assignor, by mesne assignments, to Technology Sales Co., Inc., New York, N. Y. Filed Feb. 10, 1912. Serial No. 676,915. (Cl. 16—121.)



1. A window lock comprising a stationary bearing member, two clamping members mounted thereon and slidably connected thereto, and cam-slotted means for operating said clamping members; for the purposes as set forth.

2. A window lock comprising a stationary bearing member having means for securing the same to the inner window sash, two clamping members mounted thereon and slidably connected thereto, and cam-slotted means for operating said clamping members; for the purposes as set forth.

3. In a window lock the combination of a stationary bearing member having means for securing the same to the inner window sash, two clamping members mounted thereon and slidably connected thereto provided with serrated flanges, and cam-slotted means for operating said clamping members; for the purposes as set forth.

4. In a window lock the combination of a stationary bearing member, two clamping members mounted thereon and slidably connected thereto, and cam-slotted means mounted on said stationary bearing member for operating said clamping members.

5. In a window lock the combination of a stationary bearing member having means for securing the same to the inner window sash, two clamping members mounted thereon and slidably connected thereto provided with serrated flanges, and a cam-acting member pivotally mounted on said stationary bearing member operating said clamping members; for the purposes as set forth.

[Claims 6 to 15 not printed in the Gazette.]

1,157,768. COMPOSITION OF MATTER TO BE USED FOR BRONZE-POWDER VARNISH. MAX FEHRINGER, Worcester, Mass. Filed Nov. 2, 1914. Serial No. 869,917. (Cl. 134—26.)

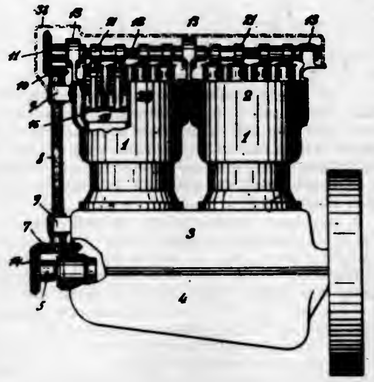
1. A bronze powder varnish containing cumaron resin dissolved in a solvent comprising benzin.

2. A bronze powder varnish containing cumaron resin dissolved in a solvent comprising benzin and gasolene.

3. A bronze powder varnish containing cumaron resin dissolved in a solvent comprising benzin, gasolene and benzol.

4. A bronze powder varnish containing cumaron resin dissolved in a solvent comprising benzin, gasolene, benzol and chlorethylene.

1,157,769. COMBUSTION-ENGINE. GUIDO FORNACA, Turin, Italy, assignor to F. I. A. T., a Corporation of New York. Filed Feb. 23, 1911. Serial No. 610,133. (Cl. 123—83.)



1. The combination with a circular cylinder head of predetermined area, of four puppet valves in said cylinder head having a combined area exceeding the maximum area of two puppet valves possible to be placed in said head area, and having a maximum movement less than that required to operate said two large valves, and means for operating said valves simultaneously in pairs, said four valves forming two sets, and means for simultaneously opening and closing like valves in timed relation to the strokes of the piston.

2. The combination with a cylinder head of predetermined area, of four puppet valves in said head having a total area exceeding the maximum total area of two puppet valves of larger respective diameters in said head, each of said four puppet valves having a full movement less than the full required movement of said two large puppet valves for equal opening, a shaft above said four puppet valves, means carried by said shaft for operating said valves, and means connecting said puppet valves in pairs.

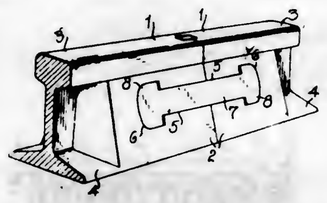
3. The combination with a cylinder head of predetermined area, of four valves in said head having a total area exceeding the maximum total area of two valves of larger respective diameters in said head, each of said four valves having a full movement less than the full required movement of said two valves for equal opening, an operating shaft, and actuating connections for operating said valves in pairs, a shaft above said valves, means carried by said shaft for operating said valves, and means connecting said valves in pairs.

4. The combination in a combustion engine, with a plurality of cylinders each having a cylindrical compression space at the upper end, of four valves in the head of each cylinder, transversely extending bars connecting said valves in pairs, a roller carried by each bar, a shaft journaled on said cylinders above said rollers, and cams on said shaft for operating said pairs of valves.

5. The combination in a combustion engine, with a plurality of cylinders each having a cylindrical compression space at the upper end, of four removable valve seats and valves in the head of each cylinder, transversely extending bars connecting said valves in pairs, a roller carried by each bar, a shaft journaled on said cylinders above said rollers, cams on said shaft for operating said pairs of valves, and means for independently adjusting each valve.

[Claims 6 and 7 not printed in the Gazette.]

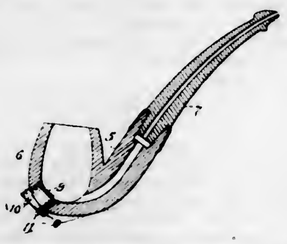
1,157,770. RAIL-JOINT. JULIUS W. FORSE, Bishop Hill, Ill. Filed July 31, 1915. Serial No. 42,974. (Cl. 239—13.)



1. A rail joint comprising the meeting ends of rails having open end slots produced in the opposed end faces thereof, the inner ends of said slots being enlarged, a block insertible within said slots when the rails are assembled, and a vertically disposed key directed through the meeting ends of the rails and the block for maintaining the block against displacement.

2. A rail joint comprising the meeting ends of rails having open end slots produced in the opposed end faces thereof, the inner ends of said slots being enlarged, a block insertible within said slots when the rails are assembled, the opposed faces of the meeting ends of the rails being provided with vertically disposed channels to form an opening, the block being provided with an opening to register with the opening afforded by the channels of the rails, and a key insertible through said openings for maintaining the block against displacement.

1,157,771. SMOKING-PIPE. WILLIAM H. FULTON, New York, N. Y. Filed May 23, 1914. Serial No. 840,465. (Cl. 131—12.)



1. A pipe, a tobacco-igniting electric conductor in the bowl of said pipe, and means for energizing said conductor.

2. A pipe, a tobacco-igniting electric conductor in the floor of the bowl of said pipe, and means for energizing said conductor.

3. A pipe, a removable plug in the bowl of said pipe, a tobacco-igniting electric conductor carried by the plug, and means for energizing said conductor.

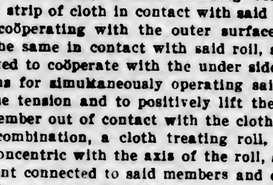
4. A pipe, a removable plug in the bottom of the bowl of said pipe, a tobacco-igniting electric conductor carried by the plug, and means for energizing said conductor.

5. A pipe, an electric tobacco-igniting filament in said pipe, a circuit, current translating means in said circuit, a circuit closer, and means in series with the current translating means for supplying current to the electric tobacco igniter.

[Claims 6 to 8 not printed in the Gazette.]

1,157,772. FISH-HOOK. VICTOR GEBHARDT, St. Louis, Mo. Filed Dec. 9, 1913. Serial No. 805,576. (Cl. 43—30.)

A fishing or game hook including an auxiliary hook whose shank is bowed or laterally curved and recurved, its point being contiguous and at right angles to the point of the aforesaid hook, said recurvature being deflected to extend under and transversely of and close to



the point of the primary hook, said recurvature also, being somewhat deflected from the shank of the primary hook.

1,157,773. SPOT-PROOFING MECHANISM. DAVID GESSNER, Worcester, Mass. Filed Dec. 30, 1910. Serial No. 600,057. (Cl. 26—7.)

1. In combination, a cloth-treating roll, a cloth-guiding member in advance of the cloth-treating roll and arranged to have the cloth pass over the same to the cloth-treating roll, and means for swinging the guiding member over and rearward of the treating roll to lift the cloth clear of the treating roll.

2. In combination, a cloth treating roll, a tank receiving the lower surface of said roll, means for tensioning and guiding a strip of cloth in contact with the upper surface of said roll, means for lifting the cloth out of engagement with the roll, and means for relieving said tensioning means, and simultaneously operating said lifting means.

3. In combination, a cloth treating roll, means for guiding a strip of cloth in contact with said roll, a tension member coöperating with the outer surface of the cloth to hold the same in contact with said roll, a lifting member adapted to coöperate with the under side of the cloth, and means for simultaneously operating said members to relieve the tension and to positively lift the cloth by the lifting member out of contact with the cloth treating roll.

4. In combination, a cloth treating roll, members fulcrumed concentric with the axis of the roll, a cloth engaging element connected to said members and extending longitudinally of said roll, a segmental rack connected to said members, an operating shaft, and a gear on said shaft meshing with the said segmental rack.

5. In combination, a cloth treating roll, gear members pivoted concentric with said roll, a supporting frame operated by the gear members and extending outside the circumference of the roll, a tension member and a lifting member supported by said frame, and between which the cloth passes to said cloth treating roll, said members being parallel to said roll, and gearing for swinging said gear members to operate said tension and lifting members.

[Claims 6 to 36 not printed in the Gazette.]

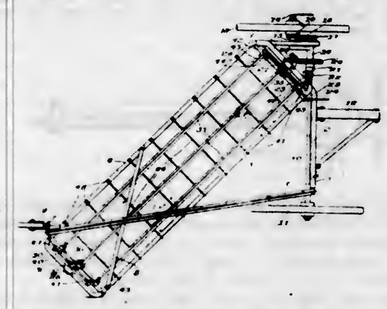
1,157,774. CATAMENIAL SACK. LOUISE MARGARET GOODNOU, New York, N. Y. Filed Oct. 15, 1914. Serial No. 866,780. (Cl. 128—5.)



1. A catamenial sack, comprising a support made of a flat strip of textile material overlaid by an impervious cloth, the ends of the strip being provided with means for detachably holding an absorbing means in position on the support, a belt to which the ends of the said support are detachably secured, protecting flaps of impervious cloth extending from the sides of the said support at the middle thereof, the ends of the flaps being detached from the support and the said flaps being adapted to fit the wearer's legs, and means for holding the said protecting flaps in position on the wearer's legs.

2. A catamenial sack, comprising a band like support for an absorbing means, a belt having depending tabs at the front and rear and to which the ends of the said support are detachably secured, protecting flaps extending from the sides of the middle portion of the said support and adapted to fit the legs of the wearer, the said flaps having their ends curved outward and detached from the sides of the support, and fastening straps attached to the ends of the said protecting flaps and adapted to pass around the wearer's legs to hold the said flaps in position on the legs.

1,157,775. SIDE-DELIVERY HAY-RAKE. ALBERT GRIEVES, Springfield, Ohio, assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Apr. 6, 1914. Serial No. 829,837. (Cl. 56—115.)



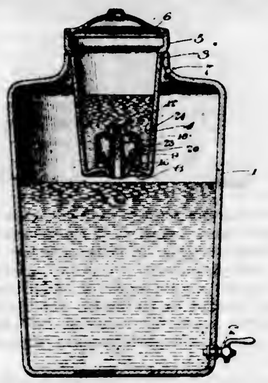
1. In a side delivery hay rake, a wheeled frame, a rotatable raking cylinder angularly disposed relative to the line of draft, a series of rockable tooth carrying bars on said cylinder, means carried by said frame at the delivery end of said cylinder and operative to control the rocking movement of said bars, arms secured to the opposite ends of said bars, and a cam-shaped track carried by said frame and engaging with said arms.

2. In a side delivery hay rake, a wheeled frame, a rotatable raking cylinder, a cylinder supporting frame disposed at an angle to the line of draft forming part of said wheeled frame and including front and rear parallel bars, rockable tooth bars on said cylinder carrying teeth in spaced relation, and a series of toothed strippers having one end provided with a hook member received by openings in one of said parallel frame bars and curved concentric with the axis of said rocking cylinder and partially encircling it and secured at its opposite end to the remaining parallel frame bar.

3. In a side delivery hay rake, a wheeled frame, a rotatable raking cylinder angularly disposed relative to the line of draft, said cylinder including an axle, a series of radially disposed arms secured to opposite ends of said axle, rockable tooth carrying bars journaled upon said arms, said bars having crank arms at their delivery ends, a rotatable member journaled upon the delivery end of said wheeled frame eccentric to the axis of said axle and provided with a series of radially disposed arms having said crank arms journaled therein, arms secured to the opposite ends of said tooth carrying bars, rollers journaled upon said arms, and a cam-shaped track carried by said wheeled frame and upon which said rollers travel.

4. In a side delivery rake, a cylinder frame having a plurality of longitudinally extending members, one of the same being of angle material and having a series of holes in each web thereof, and spaced strippers operatively connected at one end to one of said members and having hooked ends each extending through holes in both webs of said frame member.

1,157,776. FILTER. VIRGIL B. HAGG, Los Angeles, Cal. Filed July 20, 1914. Serial No. 851,857. (Cl. 210—12.)



1. In a filter, an outer receptacle, an inner receptacle supported therein, and a removable filter unit in the inner receptacle, said filter unit having a covering of fabric brought together and fastened at a point above the inner receptacle.

2. In a filter, an outer receptacle, an inner receptacle, a filter unit within the inner receptacle, comprising a base having a projection, the inner receptacle having a seat for receiving and fitting said projection, a filtering material supported on said base, and flexible permeable means secured to said base and completely inclosing said filtering material to hold the filtering material in place.

3. In a filter, an outer receptacle, an inner receptacle, a filter unit within the inner receptacle, comprising a base having a projection, the inner receptacle having a seat for receiving and fitting said projection, a filtering material supported on said base, flexible permeable means secured to said base and completely inclosing said filtering material to hold the filtering material in place, said base being formed with a hollow stem projecting up into the center of said filtering material, said stem being perforated to allow the passage of filtered water into the interior of the stem.

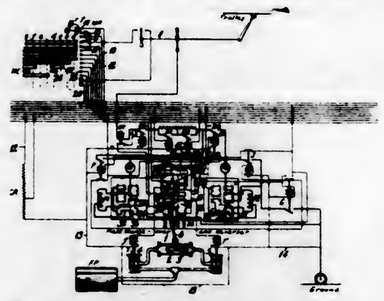
4. In a filter, an outer receptacle, an inner receptacle, a filter unit within the inner receptacle comprising a base having a projection, the inner receptacle having a seat for receiving and fitting said projection, a filtering material supported on said base, means secured to said base and completely inclosing said filtering material to hold the

filtering material in place, and a removable covering in the inner receptacle inclosing the filter unit, said cover being provided with water inlet means.

5. In a filter, an outer receptacle, an inner receptacle, a filter unit within the inner receptacle, comprising a base having a projection, the inner receptacle having a seat for receiving and fitting said projection, a filtering material supported on said base, a fabric secured to said base and completely inclosing said filtering material to hold the filtering material in place, the bottom of said inner receptacle having a flange at said seat with a conical bore, a gasket in said bore, said projection being conical and fitting said gasket forming a water-tight joint and permitting immediate removal of the filter unit.

[Claims 6 to 11 not printed in the Gazette.]

1,157,777. CONTROL SYSTEM. ARTHUR J. HALL, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 30, 1914. Serial No. 815,364. (Cl. 172—179.)



1. The combination with a rotatable control drum, of an actuating means comprising a movable piston, an operating cylinder therefor, an oscillating link member for connecting said piston and said drum, a supply of fluid pressure, normally open means for admitting fluid pressure to both ends of said cylinder, and electro-magnetically controlled means for releasing the pressure from either end to produce a predetermined step-by-step movement toward that end.

2. The combination with a movable member, of an actuating means comprising a piston operatively connected to said member, a supply of fluid pressure, a cylinder in which the piston operates, valves normally open to admit the fluid pressure to both ends of said cylinder, and means dependent upon the action of said movable member for temporarily excluding the pressure from either side to produce a predetermined movement toward that side.

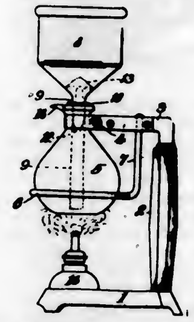
3. The combination with a movable member, of an actuating means comprising a piston operatively connected to said member, a supply of fluid pressure, a cylinder in which the piston operates, electromagnetically operated valves normally open to admit the fluid pressure to both ends of said cylinder, and electrical means operatively connected to the movable member for governing the closure of either valve to produce movement toward that valve.

4. The combination with a movable member adapted to assume a plurality of operative positions in each of a plurality of directions, of an actuating means comprising a pair of pistons operatively connected to said member, cylinders in which the pistons operate, means for normally admitting fluid pressure to both cylinders, and electrical means dependent upon the movable member for temporarily excluding the pressure from, and re-admitting the pressure to, either cylinder to produce a step-by-step movement in the corresponding direction.

5. A controller for electric motors comprising a multiposition switching device having main circuit contact members, a movable operating member attached to said device, a cylinder, a supply of fluid pressure, a piston operating within the cylinder, and electromagnetically actuated valves normally open to admit the fluid pressure to both ends of said cylinder, the valve-actuating magnets being governed by connections on said device.

[Claims 6 to 10 not printed in the Gazette.]

1,157,778. PERCOLATOR. GUSTAVE F. HEMMING and MAX L. BAKER, New Haven, Conn. Filed Mar. 8, 1915. Serial No. 12,762. (Cl. 53—3.)



The combination in a percolator having a base, a vertical handle portion projecting therefrom, a kettle to which heat is applied, an overhanging arm projecting from the handle, a spring clip carried by the arm adapted to partially and flexibly embrace the neck of the bottle, and a pivotally supported seat for the kettle on which the kettle is adapted to swing to and from the spring clip.

1,157,779. MEANS FOR SUPPRESSING THE RESISTANCE OF THE NEGATIVE-ELECTRODE FLAME IN VAPOR ELECTRIC APPARATUS. PETER COOPER HEWITT, Ringwood Manor, N. J., assignor, by mesne assignments to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Mar. 21, 1902, Serial No. 99,333. Divided and this application filed Mar. 11, 1910. Serial No. 548,671. (Cl. 176—42.)



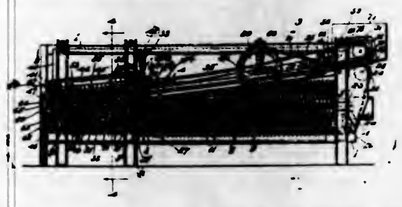
1. A vapor electric device comprising an exhausted container, a solid anode located in an approximately horizontal tubular extension thereof, a mercury cathode located in the main chamber, the said tubular extension having its axis parallel to the surface of the cathode.

2. A vapor electric device comprising an exhausted container, an anode located in an approximately horizontal tubular extension thereof, a cathode located in the main chamber, the said tubular extension having its axis parallel to the surface of the cathode.

1,157,780. MACHINE FOR DECORTICATING FIBROUS PLANTS. WALTER JOHN HOLLIES, St. Louis, Mo. Filed Sept. 23, 1912. Serial No. 721,942. (Cl. 13—2.)

1. In a machine for decorticating fibrous plants, a traveling member having decortiating pins and moving, as to its operative surface, in a substantially straight line, and means adapted to engage one end of the plant and feed the plant sidewise in a straight downwardly-inclined path over said member from one end to the other thereof and progressively toward and into contact therewith from the outer end of the plant inward.

2. In a machine for decorticating fibrous plants, a traveling member having decorticating pins and moving, as to its operative surface, in a substantially straight line, and means adapted to engage one end of the plant and feed the plant sidewise in a straight downwardly-inclined path over said member from one end to the other thereof in a direction at right angles to its line of travel, and progressively toward and into contact therewith from the outer end of the plant inward.



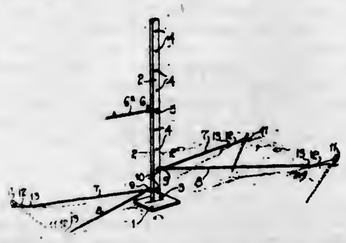
3. In a machine for decorticating fibrous plants, a pair of endless, traveling aprons arranged to travel in substantially horizontal planes and provided with projecting decorticating members, means for conveying a plant in a straight downwardly-inclined path past the first apron and progressively toward and into contact therewith from the outer end of the plant inward, means for conveying the partly-decorticated plant past the second apron and means for turning the butt end thereof into engagement with the decorticating members of said second apron.

4. In a machine for decorticating fibrous plants, a pair of endless aprons arranged to travel in substantially horizontal planes and provided with decorticating members and supported in endwise relation, means for conveying a plant in a straight, downwardly-inclined path past the first apron, means for causing the main portion of said plant to engage the decorticating members of said apron, conveying mechanism for carrying the partly-decorticated plant past the second apron, and means for turning the butt end of said plant into contact with the decorticating members of the last named apron.

5. In a machine for decorticating fibrous plants, a pair of endless aprons arranged to travel in substantially horizontal planes and provided with projecting pins and supported in endwise relation, means for conveying a plant past the first apron, means for causing the main portion of said plant to engage the pins of said apron progressively from the outer end of the plant inward, conveying mechanism for carrying the partly decorticated plant past the second apron, and means for turning the butt end of said plant into contact with the pins of the last named apron.

[Claims 6 to 9 not printed in the Gazette.]

1,157,781. ANCHORING DEVICE. ROWLAND G. HOWARD, Jackson, Tenn. Filed Feb. 1, 1915. Serial No. 5,503. (Cl. 189—90.)



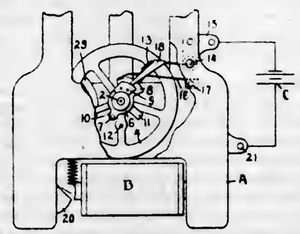
1. An anchoring device of the character described, comprising a base plate, a post hinged to said base plate for movement in a vertical plane, said post being formed with a vertical series of perforations, a straining connection adjustably and detachably engaged with the post, a clip engaged with the lower portion of the post and disposed on the hinged side thereof, divergent anchoring connections extending upon the said clip, ground engaging members attached to the ends of said anchoring connections, a clip attached to the post below the first-named clip and disposed oppositely to the hinge, outwardly divergent anchoring connections extending from the clip, and ground engaging members attached to the ends of said anchoring connections.

2. An anchoring device, comprising a base plate, a post hinged thereto for movement in a vertical plane, a strain applying member connected to the post, anchoring connections extending from the lower portion of the post and opposite to the hinged connection of the post to the base, anchoring connections attached to the post above the last-named anchoring connection and extending in an opposite direction to the first named anchoring connection, and ground engaging members connected to said anchoring connections, said ground engaging members comprising a pointed peg adapted to be driven into the ground and an arm extending from the peg at an obtuse angle thereto, said arm being formed at its extremity to engage with the corresponding anchoring connection.

3. An anchoring device of the character described comprising a base plate adapted to be placed upon the ground, a post mounted upon the base plate, a straining member detachably and adjustably connected to the post, a clip detachably connected to the post, anchoring connections extending from the clip, ground engaging members attached to the anchoring connections, a clip detachably connected to the post below the first-named clip and extending in an opposite direction thereto, anchoring connections extending from the last-named clip, and ground engaging members attached to the ends of said connections.

4. The combination with an anchoring post, of an anchoring connection extending in one direction from the lower end of the post and flexibly connected thereto and embodying divergent members, an anchoring connection flexibly connected to the post above the first-named connection and extending opposite to the first named connection and embodying divergent members, a strain applying member connected to the upper end of the post and extending in the direction of the first named anchoring connection, and anchors attached to the ends of the anchoring connection, each anchor comprising a pin and an arm extending from the pin at an obtuse angle thereto and acting to limit the penetration of the pin in the ground when strain is applied thereto.

1,157,782. WINDING-SWITCH FOR SELF-WINDING CLOCKS. ERNEST A. HUMMEL, St. Paul, Minn., assignor to Albert L. Haman, St. Paul, Minn. Filed June 30, 1914. Serial No. 848,157. (Cl. 58—41.)



1. In an electric self winding clock, the combination with the center arbor, of an electric winding circuit, a winding switch in said circuit comprising a pair of cooperating spring contacts normally out of contact with each other, and means controlled by the arbor for periodically lifting both of said contacts in such way as to keep them out of contact with each other and then suddenly releasing the outer contact, whereby to allow the same to spring back upon the inner contact and close the winding circuit through said switch.

2. In an electric self winding clock, the combination with the center arbor, of an electric winding circuit, a

winding switch in said circuit comprising a pair of spring contacts normally out of contact with each other, and a pair of arbor actuated cams periodically engaging and lifting said contacts respectively in such way as to keep them out of contact with each other, the cams being so constructed as to release the outer contact before releasing the inner contact, whereby to allow the outer contact to spring back upon the inner contact and close the winding circuit through said switch.

3. In an electric self winding clock, the combination with a center arbor and spring winding wheel, of an electric winding circuit, a winding switch in said circuit comprising a pair of coöperating spring contacts normally out of contact with each other, means controlled by the arbor for periodically lifting both of said contacts in such way as to keep them out of contact with each other and then suddenly releasing the outer contact, whereby to allow said contact to spring back upon the inner contact and close the circuit through said switch, and means controlled by the winding wheel for releasing the inner contact after the spring has been wound, whereby to allow the inner contact to spring back and open the switch.

4. In an electric self-winding clock, the combination with the center arbor and spring winding wheel, of an electric winding circuit, a winding switch in said circuit comprising a pair of spring contacts normally out of contact with each other, a pair of arbor actuated cams periodically engaging and lifting said contacts respectively in such way as to keep them out of contact with each other, the cams being so constructed as to release the outer contact before the inner contact is released, whereby to allow the outer contact to spring back upon the inner contact and close the winding circuit through said switch, and means controlled by the winding wheel for releasing the inner contact after the spring has been wound, whereby to allow the inner contact to spring back and open the switch.

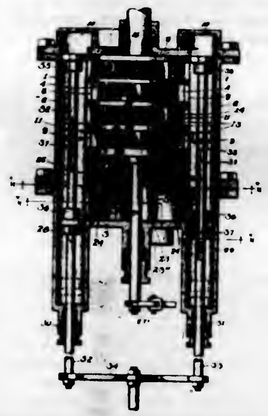
5. In an electric self-winding clock, the combination with the center arbor, of an electric winding circuit, a winding switch in said circuit comprising a pair of spring contacts standing in substantially the same vertical plane and normally out of contact with each other, a finger extending downwardly from the outer contact, and a pair of arbor actuated cams in position to engage respectively the inner contact and the finger of the outer contact, whereby to lift said contacts in substantial unison, the cams being so constructed as to release said finger before releasing the inner contact, whereby to allow the outer contact to spring back upon the inner contact and close the winding circuit through said switch.

[Claims 6 and 7 not printed in the Gazette.]

1,157,783. ROTARY PUMP. ARCHIBALD T. KEENE, Chicago, Ill., assignor, by direct and mesne assignments, to Keene Hydraulic Transmission Company, a Corporation of Arizona. Filed Apr. 8, 1914. Serial No. 830,392. (Cl. 103—44.)

1. A rotary pump, comprising an outer casing formed with a main piston chamber and with longitudinal outlet and return passages united at one end by a connecting passage, a series of partitions in the main piston chamber dividing the same into sub-chambers having individual port connections with the aforesaid passages, a series of rotary pistons in said sub-chambers, a pair of valve heads connected together in spaced relation and having sliding movement in the aforesaid outlet passage, the space between said valve heads exceeding in length that of the main piston chamber, and means for imparting sliding movement to said valve heads, substantially as set forth.

2. A rotary pump, comprising an outer casing formed with a main piston chamber and with longitudinal outlet and return passages united at one end by a connecting passage, a series of partitions in the main piston chamber dividing the same into sub-chambers having individual port connections with the aforesaid passages, a series of rotary pistons in said sub-chambers, valve heads sliding in the aforesaid outlet passages to control the port connections thereof, the space between said valve heads exceeding in length that of the main piston chamber, the valve heads having an associated passage extending from in front of one valve head to the rear of the companion valve head, and means for imparting sliding movement to said valve heads, substantially as set forth.



3. A rotary pump, comprising an outer casing formed with a main piston chamber and with a plurality of pairs of longitudinal outlet and return passages united at one end and in pairs by connecting passages, a series of partitions in the main piston chamber dividing the same into sub-chambers having individual port connections with the aforesaid passages, a series of rotary pistons in said sub-chambers, valve heads sliding in the aforesaid outlet passages to control the port connections thereof, and means for imparting simultaneous movement to said valve heads, substantially as set forth.

4. A rotary pump, comprising an outer casing formed with a main piston chamber, and with a plurality of pairs of longitudinal outlet and return passages united at one end and in pairs by connecting passages, a series of partitions in the main piston chamber dividing the same into sub-chambers having individual port connections with the aforesaid passages, a series of rotary pistons in said sub-chambers, valve heads sliding in the aforesaid outlet passages to control the port connections thereof, and each valve consisting of a port controlling head and a balancing head arranged in separated relation, and means for imparting simultaneous movement to said valve heads, substantially as set forth.

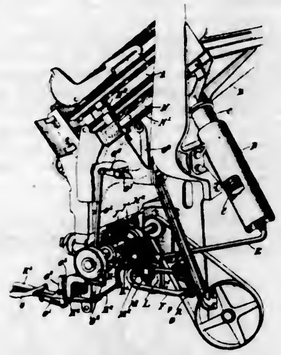
5. A rotary pump, comprising an outer casing formed with central and side chambers and with longitudinal outlet and return passages united at one end by a connecting passage, a series of partitions dividing the central chamber aforesaid into a series of sub-chambers having individual port connections with the aforesaid passages, a series of rotary pistons in said sub-chambers, a series of rotary abutments in the aforesaid side chambers, a pair of valve heads connected together in spaced relation and having sliding movement in the aforesaid outlet passage, the space between said valve heads exceeding in length that of the main piston chamber, and means for imparting sliding movement to said valve heads, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

1,157,784. TYPOGRAPHICAL MACHINE. DAVID S. KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Dec. 26, 1911. Serial No. 667,903. (Cl. 199—7.)

1. In a typographical machine, the combination of a magazine, pressure-fluid apparatus acting with a yielding pressure to shift it into and out of operative position, and means for controlling said apparatus.

2. In a typographical machine, the combination of a magazine, and pressure-fluid apparatus for shifting it into and out of operative position, the said apparatus including a relief chamber to relieve automatically the pressure in the event of undue resistance offered by the magazine.



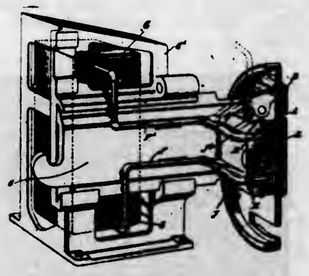
3. In a typographical machine, the combination of a magazine, pressure-fluid apparatus for shifting it into and out of operative position, and manually operated means for controlling the action of said apparatus, the said apparatus including a relief chamber to relieve the pressure automatically after each operation of said means.

4. In a typographical machine, the combination of a magazine, pressure-fluid apparatus comprising a force pump for shifting the magazine into and out of operative position, a constantly operated member of the machine, and means whereby the force pump may be connected to and disconnected from said member at will.

5. In a typographical machine, the combination of a magazine, pressure-fluid apparatus comprising a force pump for shifting the magazine into and out of operative position, operating means for the force pump, a constantly operated shaft, and means whereby the operating means may be connected to and disconnected from the shaft at will.

[Claims 6 to 16 not printed in the Gazette.]

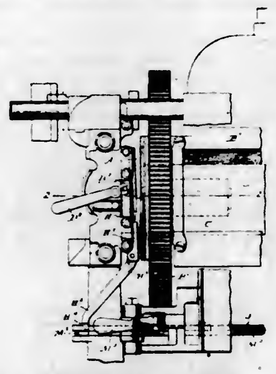
1,157,785. TYPOGRAPHICAL CASTING-MACHINE. DAVID S. KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed May 1, 1913. Serial No. 764,744. (Cl. 199—13.)



1. In a typographical casting machine, the combination of a mold adapted to contain molten metal, and means for cooling the mold and its contents to prevent overheating thereof due to the successive casting operations, said cooling means including a tank or reservoir to contain the cooling medium, a cooling chamber, and a pipe system connecting the cooling chamber and reservoir so that the cooling medium may circulate freely back and forth between the two, and the said cooling chamber being arranged in proximity to the mold and within the heating zone of the molten metal therein so that the heat thereof will effect and control the circulation of the cooling medium which, in turn, maintains the mold and its contents at a uniform temperature.

2. In a typographical casting machine, the combination of a mold mounted to reciprocate to and from casting position, a closed cooling chamber arranged in proximity to the mold and reciprocable therewith, a stationary closed tank or reservoir for the cooling medium, and a pipe system connecting the reservoir with the cooling chamber so that the cooling medium may flow back and forth therebetween under the influence of the heat from the mold, the said pipe system comprising sections which are flexibly connected to permit the reciprocating movement of the cooling chamber with the mold.

1,157,786. SLUG-CASTING MACHINE. DAVID S. KENNEDY, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed July 2, 1915. Serial No. 37,666. (Cl. 199—13.)



1. In a slug casting machine, the combination of an adjustable mold, adjustable trimming mechanism, and automatic means for arresting the operation of the machine when said parts are in improper adjustment with respect to each other.

2. In a slug casting machine, the combination of a slotted mold adjustable to vary the width of the slot, a pair of trimming knives, one adjustable laterally toward and from the other to vary the distance between them to correspond to the width of the mold slot, and automatic means for arresting the operation of the machine when the distance between the knives is less than the width of the mold slot.

3. In a slug casting machine, the combination of a slotted mold adjustable to vary the width of the slot, a pair of trimming knives, one adjustable laterally toward and from the other to vary the distance between them to correspond to the width of the mold slot, and means actuated by the mold for arresting the operation of the machine when the distance between the knives is less than the width of the mold slot.

4. In a slug casting machine, the combination of an adjustable mold, adjustable slug trimming mechanism, and means controlled by the mold for arresting the operation of the machine when said parts are in improper adjustment with respect to each other.

5. In a slug casting machine, the combination of a mold wherein the slug is cast, an ejector for removing the slug from the mold, adjustable trimming knives between which the slug is pushed by the ejector, and means to prevent the operation of the ejector when its thickness is greater than the distance between the knives.

[Claims 6 to 10 not printed in the Gazette.]

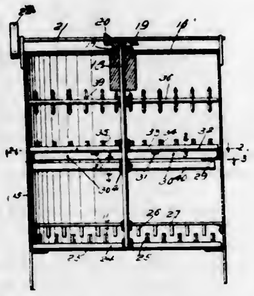
1,157,787. BRACKET. RICHARD KIESEL, Freiburg, Baden, Germany. Filed June 23, 1914. Serial No. 846,808. (Cl. 248—18.)



1. In a bracket of the character described the combination of a headed rail, a foot part integral with said rail and adapted to be permanently secured to a wall, a straight web connecting said foot to the semi-circular head of the rail, and of a display arm having a semi-circular foot, a radially disposed nose integral with said foot and gripping with its sharp edge behind the head of said rail for adjustably connecting said rail and display arm for suspending articles therefrom adapted to insure by their weight a firm engagement between said semi-circularly shaped head and the headed rail.

2. In a bracket of the character described, the combination of a headed rail, a foot part integral with said rail and adapted to be permanently secured to a wall, a straight web connecting said foot to the semi-circular head of the rail, and of a display arm having a semi-circular foot of a larger diameter than the head of said rail, a radially disposed nose integral with said foot and gripping with its sharp edge behind a head of said rail for adjustably connecting said rail and display arm, and a socket integral with said semi-circular foot, a rod secured to said socket for suspending articles therefrom adapted to insure by their weight a firm engagement between said semi-circularly shaped foot and the head of said rail, substantially as described.

1,157,788. MIXING APPARATUS. HOWARD G. LAKENAN, Opequon, Va. Filed Nov. 14, 1914. Serial No. 872,171. (Cl. 23—3.)



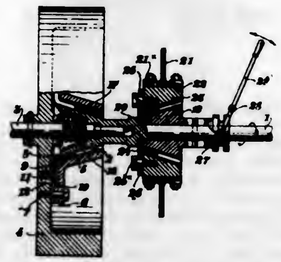
1. In an apparatus for mixing lime and sulfur with water, means for disintegrating sulfur and lime including a shaft, means for operating the disintegrating means, an apertured plate intermediate the height of the receptacle, a water forcing blade carried by the shaft below the apertured plate, a stirrer bar V-shaped in cross section secured to the shaft above the said apertured plate, and means for rotating the shaft.

2. In an apparatus for mixing lime and sulfur, with water, means for disintegrating sulfur and lime including a shaft, means for operating the disintegrating means, an apertured plate intermediate the height of the receptacle, a water forcing blade carried by the shaft below the apertured plate, a stirrer bar V shaped in cross section secured to the shaft above the said apertured plate, a froth agitator carried by the said shaft and means for rotating the shaft.

3. In an apparatus for mixing water with lime and sulfur, a receptacle, an apertured plate in the receptacle intermediate its height, a shaft rotatably mounted in the said receptacle, a liquid deflecting blade on the said shaft under the apertured plate, said deflecting means being effective to force liquid upwardly on one side of the said shaft and to force it downwardly on the other side of said shaft, whereby a suction is created for freeing the apertures of the plate, a stirrer carried by the said shaft above the said apertured plate and in contact therewith, and means for rotating the shaft.

4. In an apparatus for mixing water with lime and sulfur, a receptacle, an apertured plate, the apertures of which are tapered downwardly, in the receptacle, intermediate its height, a shaft rotatably mounted in the said receptacle, a liquid deflecting blade on the said shaft under the apertured plate, said deflecting means being effective to force liquid upwardly on one side of the said shaft and to force it downwardly on the other side of said shaft, whereby a suction is created for freeing the apertures of the plate, a stirrer carried by the said shaft above the said apertured plate and in contact therewith, and means for rotating the shaft.

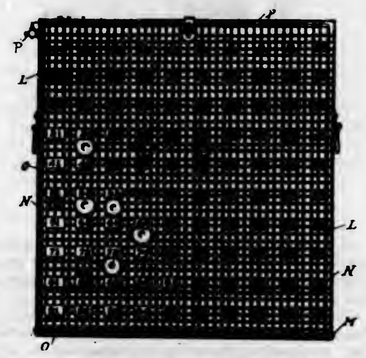
1,157,789. CLUTCH. ADOLF LANZDORF, Vienna, Austria-Hungary. Filed Apr. 6, 1914. Serial No. 829,975. (Cl. 192—8.)



1. In a cone clutch the combination of a conical male clutch member, a conical female clutch member, and a conical sleeve intermediate of said male and female members, said sleeve having two series of substantially parallel slits the slits of each series extending from opposite ends of the sleeve, and the two series overlapping each other on the sleeve.

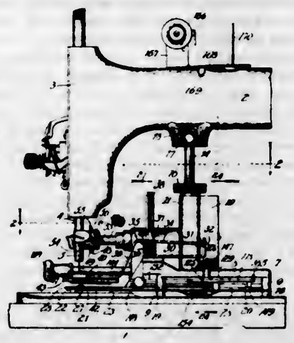
2. In a cone clutch the combination of a conical male clutch member, a conical female clutch member, and a means intermediate of said male and female members for frictionally coupling both clutch members and having two series of substantially parallel slits, segments formed by said slits, each series of said slits extending from opposite ends of said means, and both series overlapping each other, said segments being adapted to be pressed into said female member, substantially as described.

1,157,790. SEED-CORN CASE. ROBERT E. LOCKE, Lone Rock, Iowa. Filed Jan. 7, 1913. Serial No. 740,826. (Cl. 47—30.)



A corn case comprising a housing having ventilating means, individually removable tiers arranged in said housing, each tier comprising top wires, bottom wires and end wires, and a plurality of transverse wires extending through each tier whereby the same is divided into a plurality of stalls, said cross wires being movable with relation to each other to vary the relative sizes of the said stalls when desired.

1,157,791. BUTTONHOLE ATTACHMENT FOR SEWING-MACHINES. WALTER MAECHLER, Chicago, Ill., assignor, by mesne assignments, to Smallbone Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed May 16, 1913. Serial No. 768,076. (Cl. 112—4.)



1. In a button-hole attachment for sewing-machines, the combination with a rock-shaft adapted to be operatively connected with a needle-bar, a rocking-member upon said shaft for engaging an oscillatory-member to impart a step-by-step movement to feeding means, said oscillatory member having bearing surfaces formed to be successively engaged by said rocking-member during a single movement of the latter in one direction, one bearing-surface for causing a maximum lateral movement of said oscillatory-member as a result of a partial predetermined movement of said rocking-member and the other for permitting an indefinite continuation of the movement of said rocking-member while temporarily locking said oscillatory-member against reversal, feeding means actuated by said oscillatory-member, and a cloth-clamp in operative connection with said feeding means.

2. In a button-hole attachment for sewing-machines, the combination with a rock-shaft adapted to be operatively connected with a needle-bar, a rocking-member upon said shaft for engaging an oscillatory-member to impart a step-by step movement to feeding means, said member having bearing-surfaces formed to be successively engaged by said rocking-member during a single movement of the latter in one direction, one surface for causing a maximum lateral movement of said oscillatory-member as a result of a partial movement of said rocking-member, the other for permitting an indefinite continuation of the movement of said rocking member while temporarily locking said oscillatory member against reversal, means for positively limiting the lateral movement of said oscillatory member to a given maximum, cloth-clamp feeding means actuated by said oscillatory-member and a cloth-clamp in operative connection with said feeding-means.

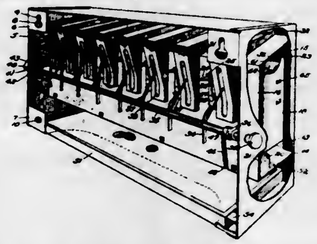
3. In a button-hole attachment for sewing-machines, the combination of a rock-shaft, means for connecting the same with a needle-bar, a rocking member upon said shaft, a pivoted oscillatory-member arranged to be actuated by said rocking-member for imparting a step-by-step movement to feeding means, said oscillatory-member having bearing surfaces to be successively engaged by said rocking-member, whereby the latter in a predetermined part of its movement in one direction may serve to move said oscillatory member to a maximum degree and to lock the same against return while continuing its movement indefinitely, feeding means actuated by said oscillatory-member and a cloth-clamp in operative connection with said feeding means.

4. In a button-hole attachment for sewing-machines, the combination with a cloth-clamp and feeding-means, of a rock-shaft and means for actuating the same, a rocking-cam mounted upon said shaft, a pivoted oscillatory-plate located in the path of said rocking-cam to be oscillated thereby, and intermediate means actuated by said plate and operatively connected with said feeding means.

5. In a button-hole attachment for sewing-machines, the combination with a cloth-clamp, feeding and guiding means for feeding and guiding said clamp in a path conformatory to the outline of a button-hole, a rock-shaft, a rocking-member mounted thereon, an oscillatory-member in the path of said rocking-member, said oscillatory member having two pairs of curved bearing surfaces, said pairs being disposed upon opposite sides of a central longitudinal line in the plane of its axis, said rocking-member when brought into contact with one surface serving to move said oscillatory-member laterally in a given arc to a predetermined extent and when continued in its movement into contact with said second surface to lock the same in a stationary position, and means for connecting said oscillatory member with said feeding means.

[Claims 6 to 21 not printed in the Gazette.]

1,157,792. VENDING-MACHINE. CHARLES A. MELCHERT, Kansas City, Mo., assignor to Automatic Machine Manufacturing Co., Kansas City, Mo., a Corporation of Missouri. Filed May 2, 1913. Serial No. 764,987. (Cl. 194—65.)



1. In a latching device for a movable member, a tooth on said movable member, a spring operated crank lever having one arm for engaging said tooth and another arm adapted to be engaged by a check, manually operable means having a push member, said means constructed to impart a limited movement to said push member for forcing the check against said second arm to move said lever, thereby releasing said movable member, and other means for imparting extended movement to said push member for releasing the check.

2. A latching device for a movable member, a tooth on said member, a spring actuated crank lever having one arm for engaging said tooth to lock said member and another arm adapted to be engaged by a check, a manually operable shaft having an arm for forcing the check against said second arm to release said tooth, and a secondary operating member secured to said shaft for moving said shaft and arm to release the check and thereby permit said lever to return to locking position.

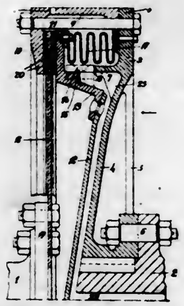
3. A latching device for a movable member, a tooth on said movable member, said latching device comprising a crank lever having one arm for engaging said tooth and another arm adapted to be engaged by a check and a manually operable revoluble shaft provided with a push member for forcing the check against said second arm to move said lever and thereby release said movable member, said shaft having a secondary movement for releasing the check to permit said lever to return to latching position.

4. A latching device for a movable member, a tooth on said member, said latching device comprising a lever having one arm for engaging said tooth to lock said mem-

ber and another arm adapted to be engaged by a check, a spring for holding said lever in engaging position, a manually operable shaft provided with an arm for forcing the check against said second arm to release said tooth, and a secondary operating member for imparting a secondary movement to said shaft and arm to release the check and thereby permit said lever to return to locking position.

5. A latching device for a movable member comprising a tooth on said member, a crank lever having one arm for engaging said tooth to lock said member and another arm adapted to be engaged by a check, a spring for holding said lever in engaging position, a manually operable shaft capable of an initial movement to release said tooth through the intermediary of the check and a secondary movement for releasing the check to permit the lever to return to locking position, a push member on the shaft for forcing the check against said second arm, a slotted hub on the shaft, a pin on the shaft projected into the hub slot, a handle on said hub for imparting initial movement to said shaft, means for limiting the movement of the handle and a second handle fixed directly to the shaft, whereby the shaft may be revolved following the engagement of said handle with said means for limiting its movement.

1,157,793. CLUTCH. JOHN F. METTEN, Philadelphia, Pa., assignor to The William Cramp & Sons Ship & Engine Building Company, a Corporation of Pennsylvania. Original applications filed Aug. 4, 1911, Serial No. 642,301, and June 18, 1912, Serial No. 704,876. Divided in part and this application filed Mar. 5, 1913. Serial No. 752,135. (Cl. 192—7.)



1. The combination with shafts to be connected, of a clutch for connecting the same comprising a gripping member secured to one of said shafts and a disk secured to the other of said shafts, said gripping member comprising relatively movable parts between which said disk extends, means for moving said parts to grip said disk and a longitudinally expansible and retractile one piece ring for separating the gripping parts.

2. The combination with two shafts to be connected, of a frame secured to one of said shafts, a gib ring secured to said frame, a disk secured to the other of said shafts and extending within said ring, a diaphragm ring adapted to grip said disk against said gib ring, a flexible diaphragm upon which said diaphragm ring is mounted and a longitudinally expansible and retractile one piece ring having one edge secured to said frame and the other edge to said diaphragm ring, said diaphragm, frame, diaphragm ring and expansible ring forming a liquid tight chamber having an opening for the admission of liquid.

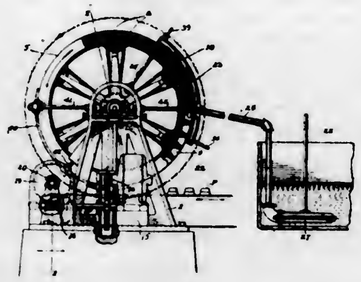
3. The combination with two shafts to be connected, of a frame secured to one of said shafts, a gib ring secured to said frame, a disk secured to the other of said shafts and extending within said ring, a diaphragm ring adapted to grip said disk against said gib ring having projections engaging in slots in a flange extending from said frame to guide said diaphragm ring in its movement, a flexible diaphragm upon which said diaphragm ring is mounted and a longitudinally expansible and retractile one piece ring having one edge secured to said frame and the other to said diaphragm ring, said diaphragm, frame, diaphragm ring and expansible ring forming a liquid tight chamber having an opening for the admission of liquid, said expansible ring being located between the said guiding flange upon the said frame and the gib ring.

4. The combination with a shaft carrying a flexible power transmitting disk, of a hollow shaft carrying an axially fixed member adjacent one side of said disk and a movable member adjacent the opposite side, a plate carrying said movable member, an extensible bellows connecting said plate and the hollow shaft, and means for applying fluid pressure through said hollow shaft to said movable member to frictionally engage and flex said disk between said movable and fixed members.

5. The combination with a shaft carrying a flexible power transmitting disk, of a second shaft carrying an axially fixed member adjacent one side of said disk and a movable member adjacent the opposite side, said movable member comprising a diaphragm, a second stationary member keyed thereto and to said second shaft, and an expansible fluid retaining wall between said diaphragm and said stationary member, and means for applying fluid pressure to move said diaphragm and expand said wall whereby to engage and flex said disk between said axially fixed member and said movable diaphragm member.

[Claims 6 to 16 not printed in the Gazette.]

1,157,794. MACHINE FOR CASTING LEAD PIGS. JOHN FORSYTH MILLER, Trail, British Columbia, Canada. Filed Jan. 29, 1913. Serial No. 744,883. (Cl. 22—61.)



1. In a machine for casting lead pigs, the combination of a vertical mold wheel having outwardly open molds in its periphery and having a water-jacket backing for said molds, an outer water-jacket snugly fitting the periphery of the mold-wheel on one side thereof and extending above the horizontal diameter of the wheel to close the molds as they pass, a pipe opening into the molds through the outer water-jacket to deliver molten lead to the molds, and a stationary shield fitting the periphery of the wheel on the side opposite the outer water-jacket to prevent premature discharge of the pigs, the said shield being spaced from the outer water-jacket at the top to permit radiation from the lead-filled molds directly into the air and at the bottom to permit emptying of the molds by gravity and permit radiation from the empty molds directly into the air.

2. In a machine for casting lead pigs, the combination of a mold-wheel having a series of outwardly open molds on its periphery and having a water-jacket backing for the molds, an outer water-jacket snugly fitting the periphery of the mold-wheel on one side thereof and extending above the horizontal diameter of the wheel to close the molds as they pass, and a supply pipe for molten lead extending through the outer water-jacket and opening into the molds to supply molten lead thereto, the pipe being hermetically fitted to the inner wall of the outer water-jacket and the latter being outwardly recessed to provide a space around the supply pipe, whereby to diminish the cooling of the adjacent portion of the pipe by the water-jacket.

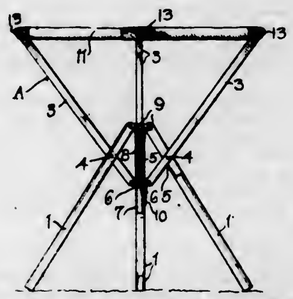
3. In a machine for casting lead pigs, the combination of a mold-wheel having a series of outwardly open molds on its periphery and having a water-jacket backing for the molds, an outer water-jacket snugly fitting the periphery of the mold-wheel on one side thereof and extending above the horizontal diameter of the wheel to close the molds as they pass, a supply-pipe for molten lead extending through the outer water-jacket and opening into the molds to deliver molten lead thereto, the pipe being hermetically fitted to the inner wall of the outer water-jacket and the latter being outwardly recessed to provide a space around the supply pipe whereby to diminish the cooling of the adjacent portion of the pipe by the water-jacket, and a centrifugal pump connected with the pipe to deliver a stream of molten lead thereto at substantially constant pressure.

4. In a machine for casting lead pigs, the combination of a mold-wheel having a rim composed of segmental rim-sections provided with outwardly open molds, each rim-section having a separate inner water-space behind its molds; radial inlet and outlet pipes connected at their outer ends to the respective water-spaces; means for supplying water to the inlet pipes at their inner ends; and means connected to the inner ends of the outlet pipes for carrying away the water discharged thereby.

5. In a machine for casting lead pigs, the combination of a mold wheel having on its periphery a series of outwardly open-pig-molds and a plurality of outwardly open-sample-molds each connected to one of the pig-molds; means for rotating the mold wheel; stationary means for closing the pig-molds and sample-molds while the same are passing a given portion of their path; and means for filling with molten lead pig-molds and sample-molds while the same are closed by said stationary means.

[Claims 6 to 9 not printed in the Gazette.]

1,157,795. POCKET-SEAT. PHILIP J. MIX, Boulder, Colo. Filed Apr. 5, 1915. Serial No. 19,230. (Cl. 155—32.)

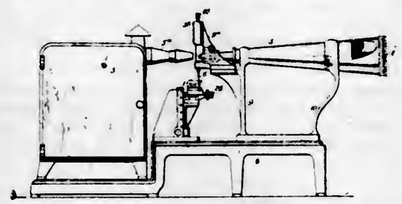


1. A device of the character described, comprising legs and seat supporting bars pivotally connected together intermediate of their ends, a post pivotally connected to the legs at one end of the latter, a standard slidable upon the post and pivotally connected to the bars at one end of the same, a latch arranged to hold the standard and post in fixed adjustment relative to each other, and a seat arranged to be supported upon said bars.

2. A device of the character described, comprising a plurality of channeled legs and a plurality of bars, the legs and bars being pivotally connected together intermediate of their ends and the bars being of a width to nest within the channels of the legs, the latter being formed at one end with slots for the purpose specified, a post pivotally connected to the slotted ends of the legs, a standard slidable upon the post and pivotally connected to the bars at one end of the latter, a latch carried by the standard and engageable with the post, and a seat adapted to be connected to the other ends of said bars.

3. A device of the character described, comprising a supporting frame embodying a plurality of legs and a plurality of seat supporting bars pivotally connected together intermediate of their ends, the legs being channeled and the bars being adapted to nest within the channels and the legs being further provided between the pivot points and one end with longitudinally extending slots, a post provided with outwardly extending arms to phich the slotted ends of the legs are pivotally connected, a standard slidable upon the post and provided at one end with outwardly extending arms to which the adjoining ends of the bars are pivotally connected, means for holding the standard and post in fixed adjustment relative to each other, and a seat proper adapted to be supported on the other ends of the bars.

1,157,796. TESTING MECHANISM. MELVIN W. MOREHOUSE, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed May 7, 1913. Serial No. 766,063. (Cl. 88—1.)



1. In a testing apparatus, the combination of a movable feeler adapted to contact with the surface to be tested and provided with an indicating mark movable with the feeler, a screen having an index mark thereon, and a projectoscope for projecting the image of said indicating mark, on the screen to enable a comparison to be made of the position of the image on the screen relative to said index mark.

2. In a testing apparatus, the combination of a movable feeler adapted to contact with the surface to be tested, a slide movable with the feeler and provided with an indicating mark, a screen, and means for projecting the image of said indicating mark, on the screen.

3. In a testing apparatus, the combination of means for holding the object to be tested, a feeler adapted to contact with the object, one of said parts being movable relatively to the other, and the movable part being provided with an indicating mark, a screen having an index mark thereon, and a projectoscope for projecting the image of said indicating mark, on the screen.

4. In a testing mechanism, the combination of means for fixedly holding the object to be tested, a movable feeler adapted to contact with said object, a slide movable with the feeler and provided with an indicating mark, a fixed screen provided with an index mark, and means for projecting the image of said indicating mark, on the screen.

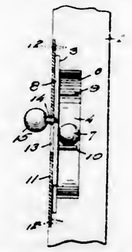
5. In a testing mechanism, the combination of means for holding the object to be tested, a movable feeler adapted to contact with the same, a projectoscope tube provided with a sight opening therein, a screen adapted to be viewed through said sight opening, and a slide movable with the feeler across the axis of the projectoscope tube, the said slide being provided with an indicating mark, the image of which is adapted to be projected on the screen.

[Claims 6 to 9 not printed in the Gazette.]

1,157,797. SASH-HOLDER. CLAUDE R. NOBLES, St. John, New Brunswick, Canada. Filed Nov. 27, 1914. Serial No. 874,283. (Cl. 16—54.)

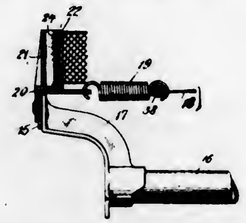
The combination of a window sash having a seat formed in one of the stiles thereof, that side of the seat adjacent the window frame being open, and the opposite side of the seat being inclined in opposite directions from its middle toward the ends of the seat, a wedging member in the seat and having a width exceeding the greatest width of the seat whereby the member is in constant engagement

with the seat and window frame, and a slide mounted upon the stile and provided with upper and lower projections lying at opposite sides of the wedging member for contact therewith to move said wedging member in



opposite directions into the widest portion of the seat, said projections being spaced to an extent greater than the diameter of the wedging member whereby to permit movement of the wedging member between the projections.

1,157,798. BED-BOTTOM. ROBERT C. ODELL, Newark, N. J., assignor to The Newark Spring Mattress Company, Newark, N. J., a Corporation of New Jersey. Filed May 26, 1910. Serial No. 563,497. (Cl. 5—64.)

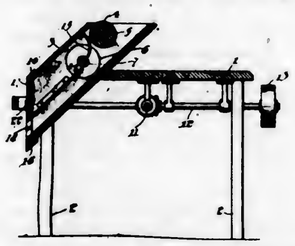


1. In a bed bottom, the combination with a frame including end rails and a horizontal metallic fabric element connected at its ends under tension to said rails, of vertical side guards located in proximity to the lateral edges of the said horizontal fabric element, each comprising an independent section of metallic fabric having a vertical portion and a portion bent over and turned downwardly therefrom to form a double thickness of material throughout the width thereof, and means for supporting the said side guards under tension upon the frame independently of the support for the horizontal member, whereby the tension under which the said horizontal and vertical elements are supported, will be entirely independent of each other, and may vary.

2. In a bed bottom, the combination with a frame and a horizontal mattress supporting element carried thereby, of open-ended tubular vertically extending pedestals supported at subetantially the four corners of the said frame, each provided with an open-ended longitudinally extending slot in the side wall thereof, and side guards each consisting of a strip of woven metallic fabric and elements at the extremities thereof adapted to be received within the pedestals respectively, the parts in proximity to the portions received within the pedestals passing through the said slots whereby the said side guards will be removably held in position under tension by the said pedestals.

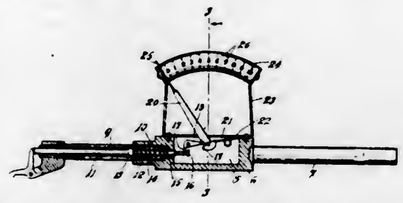
1,157,799. MACHINE FOR CUTTING FAT. MAX OEHLER, St. Louis, Mo. Filed Jan. 15, 1914. Serial No. 812,311. (Cl. 17—18.)

In a meat cutting machine of the type described, an inclined hopper having a gravity feeding action and having arranged therein a longitudinal fixed partition having the corresponding inclination of the hopper to provide a bottom compartment therein for the feeding of the longitudinally split pieces of meat under said partition, rotary cutters hung within said hopper, with their edges peripherally received in slots in the upper edge of said partition, and a reciprocating frame arranged at the



lower end of said hopper, said reciprocating frame being equipped with a cutter also positioned in the corresponding inclination of said hopper, and means for actuating said cutters.

1,157,800. UNIVERSAL TEST-INDICATOR. JOHN E. OSLUND, Hartford, Conn. Filed June 1, 1915. Serial No. 31,417. (Cl. 33—172.)



1. An indicator comprising a body, an indicating bar, means for supporting said bar on the body, indicating mechanism supported by the body and including an indicating needle, an indicating hand having an indicating end projecting on opposite sides of the bar, the latter having indicating characters on different sides thereof, and an operating connection between said hand and needle.

2. An indicator comprising a body, an indicating bar, means for supporting said bar on the body, indicating mechanism supported by the body and including an indicating needle, an indicating hand having a ring shaped indicating end surrounding said bar, the latter being provided with indicating characters upon different sides thereof, and an operating connection between said hand and needle.

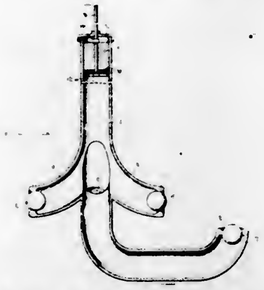
3. An indicator comprising a body, arms rising from the body, an indicating bar attached at its ends to the ends of said arms and having indicating characters, indicating mechanism supported by the body and including an indicating needle, an indicating hand having an indicating end to movably register with characters on the indicating bar, and an operating connection between said hand and needle.

4. An indicator comprising a body, arms rising from the body, an indicating bar attached at its ends to the ends of said arms and having indicating characters on different sides thereof, indicating mechanism supported by the body and including a needle, an indicating hand having an indicating ring at its end surrounding said bar, and an operating connection between said hand and needle.

5. An indicator comprising a body with a recess therein and with openings from said recess on the sides of the body located at right angles to each other, indicating mechanism including an indicating hand projecting through one of said openings, a frame rising from the side of the body containing this opening, said frame including an indicating bar having characters to register the movements of said indicating hand, an indicating needle projecting through the other of said openings in said body, and mechanism connecting said needle and hand.

[Claims 6 to 8 not printed in the Gazette.]

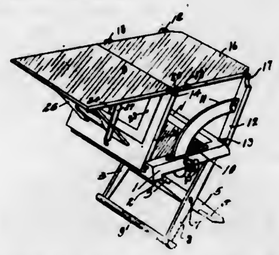
1,157,801. RUBBING-POST. GEORGE J. PAGE, Colony, Kans. Filed Apr. 16, 1913. Serial No. 761,440. (Cl. 119—157.)



1. A rubbing post comprising a duct, a ball projecting beyond one end of the duct, and pressure exerting means arranged in the other end of the duct and operated by downward pressure on a semifluid substance contained in the duct to hold the ball normally seated.

2. A rubbing post comprising a duct having a restricted opening at one end, a ball within the duct of the size to project partially through said restricted seat, and a piston in the opposite end of the duct operating by pressure upon a semifluid substance contained in the duct to hold the ball normally seated in the restricted opening.

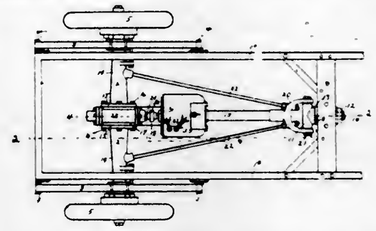
1,157,802. CONVERTIBLE CHAIR. LARS JOHAN PERSSON, Arbelunda, Sweden. Filed Dec. 18, 1913. Serial No. 807,534. (Cl. 155—6.)



1. In a convertible chair, a seat frame formed with a terminal lip, a cleat hinged to said lip, supporting legs for said seat frame and cleat, a back frame hinged to said seat frame, guide arms for said back frame operatively associated with said seat frame, a back pivoted in said back frame, a recessed seat releasably hinged to said back, a recessed auxiliary seat hinged to said seat and to said seat frame, folding wings carried by said seat and by said auxiliary seat for various angular adjustments with relation thereto and capable of being disposed in the recessed portions of said seat and auxiliary seat, and supports carried by said seat and auxiliary seat for their respective wings while in an adjusted position with relation to said seat and auxiliary seat.

2. In a convertible chair, a seat frame formed with a terminal lip, a cleat hinged to said lip, supporting legs for said seat frame and cleat, a back frame hinged to said seat frame, guide arms for said back frame operatively associated with said seat frame, a back pivoted in said back frame, a recessed seat releasably hinged to said back, a recessed auxiliary seat hinged to said seat and to said seat frame, folding wings carried by said seat and by said auxiliary seat capable of being disposed in the recessed portions of said seat and auxiliary seat and supports carried by said seat and auxiliary seat for their respective wings.

1,157,803. MOTOR-VEHICLE. LEROY S. PFOUTS, Canton, Ohio. Filed May 13, 1912. Serial No. 696,962. (Cl. 21—90.)



1. A motor vehicle comprising, in combination with a rear driving axle and housing therefor, a main frame and spring means connecting said frame to said housing; a single combined thrust and torque rod fixedly connected at one end to said housing intermediate the ends thereof extending in the vertical, longitudinal, median plane of the vehicle and having its other end non-longitudinally movably connected to said main frame, a motor mounted upon said rod, operative connection between said motor and said axle, and said rod adapted to overcome the reactive torque of said housing and constituting the sole means for the transmission of the driving thrust from said housing to said main frame.

2. A motor vehicle comprising, in combination, a main frame, a rear driving axle, two tubular housing portions arranged upon said axle, a differential gear case intermediate said tubular portions and connected thereto, said differential gear case comprising an upper portion and a lower portion, a single combined thrust, torque and motor carrying extension formed integrally with said lower portion, extending forwardly and pivotally and non-longitudinally movably connected at its forward end to said frame, a worm case formed integrally with said upper portion, a worm wheel and a differential gear in said differential gear case, said worm wheel connected by said differential gear to said driving axle, a worm operatively mounted in said worm case and meshing with said worm wheel, an electric motor mounted upon said extension and direct-connecting means between the armature shaft of said motor and said worm.

3. In a motor vehicle, the combination of a main frame, a rear axle, a differential gear connected thereto and provided with a worm wheel, a worm meshing with said worm wheel, a rear axle housing provided medially with a differential and worm case portion having a single lateral extension provided with a motor seat, an electric motor mounted on said seat and having its armature shaft direct-connected to said worm and said lateral extension connected to said main frame and constituting a combined torsion and thrust rod.

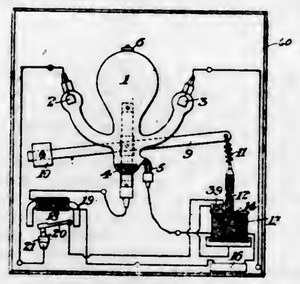
4. In a motor vehicle the combination of a main frame, a rear axle, a rear axle housing provided with a median lateral extension provided with a motor seat, an electric motor mounted on said seat, operative connection connecting the armature of said motor with said rear axle and medially disposed connecting means connecting said lateral extension to said main frame, and constituting a single combined torsion and thrust rod adapted to impart the driving thrust received from said housing medially through said lateral extension to said main frame.

5. In a motor vehicle, the combination of a main frame, a rear driving axle, a differential gear connected to said axle substantially midway between its ends, said differential gear provided with a worm wheel, a worm meshing with said worm wheel, a driving axle housing provided substantially midway between its ends with a differen-

tial and worm case portion inclosing said differential gear, worm wheel and worm, said housing provided with a lateral extension extending from said case portion and provided with a motor seat, an electric motor mounted on said seat and having its armature shaft direct-connected to said worm, and means connecting said lateral extension to said main frame, said means and lateral extension constituting a single, median torsion rod and transmitting the driving thrust of said rear axle housing to said main frame.

[Claim 6 not printed in the Gazette.]

1,157,804. STARTING DEVICE FOR MERCURY-VAPOR APPARATUS. JOSEPH C. POLE, New York, N. Y., assignor to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Nov. 14, 1912. Serial No. 731,234. (Cl. 176—48.)



1. In a vapor rectifier for automatic starting comprising an evacuated container with a plurality of positive electrodes, a mercury cathode and a starting electrode, a solenoid having a plurality of windings forming two groups, one end of the two groups being connected and the point of connection joined to one of the positive rectifier electrodes, the other end of one group being connected to the positive terminal of the rectifier, the two groups being wound in opposite directions.

2. In a vapor rectifier for automatic starting, the container having a plurality of positive electrodes a negative electrode and a starting electrode, the negative and starting electrodes being out of contact when the container is in its position of rest, a pivoted holder for the container capable of being tilted to permit contact between the negative and the starting electrode, a solenoid provided with a movable iron core linked to the holder of the container, a plurality of windings on said solenoid forming two groups and electrically connected whereby on applying alternating current voltage to the rectifier, first one group of the windings is magnetized, tilting the holder and closing contact between the negative and the starting electrode, and secondly the other winding group is energized, to magnetize the movable iron core and causing the container to drop back to its position of rest.

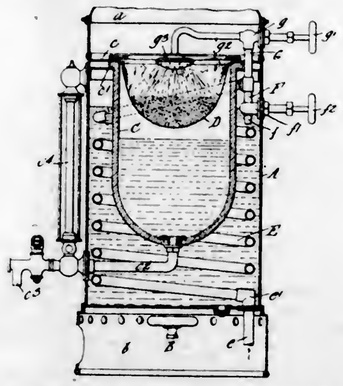
3. In a system of electrical distribution by means of vapor rectifiers, a rectifier of the said type in combination with means for tilting the said rectifier for starting purposes, such means including a solenoid having two coils wound in opposite directions and a plunger subject to the influence of said coils, a tilting lever connected to the rectifier and elastically joined to the said plunger.

4. In a system of electrical distribution, a vapor rectifier, tilting means connected therewith, a solenoid for operating the said tilting means, the said solenoid being provided with two coils wound in opposite directions, and a cut out in the solenoid circuit.

5. A mercury vapor rectifier for automatic starting consisting of an evacuated container with a plurality of positive electrodes, a mercury electrode serving as a cathode, and a starting electrode, a pivoted holder for said container, a laminated iron plunger linked to said holder, a solenoid having coils wound in the opposite direction for operating said plunger and serving for automatic starting, and an automatic cut out in the circuit of the solenoid.

[Claim 6 not printed in the Gazette.]

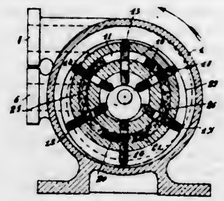
1,157,805. COFFEE-URN. GEORGE A. RAY, Buffalo, N. Y., assignor to George A. Ray Manufacturing Company, Buffalo, N. Y. Filed June 28, 1912. Serial No. 706,355. (Cl. 53—3.)



1. In an urn, the combination with a water boiler adapted to contain water, of a circular liquid receptacle arranged in said boiler and substantially concentric therewith, of an annular water container arranged substantially concentrically in said boiler around said receptacle and submerged in the water in the boiler, means for supplying water to said boiler, and means for supplying water to said container and said liquid receptacle, substantially as set forth.

2. In an urn, the combination with a boiler containing water, of a liquid receptacle located in the boiler and partially submerged in said water and having an outlet pipe leading to the outside of the boiler, a heating coil located in the boiler around the liquid receptacle and concentrically therewith and having passages branching from the upper end thereof to conduct a liquid into said liquid receptacle and said boiler, and independent valves whereby the supply of liquid to the liquid receptacle and the boiler can be regulated, substantially as set forth.

1,157,806. ROTARY PUMP WITH ROTATING ABUTMENT PROTRUDING INTO A CIRCULAR GROOVE. CARL JOHAN RIXEN, Berlin, Germany. Filed Aug. 6, 1914. Serial No. 855,526. (Cl. 103—44.)



1. A pump, including a rotor casing, a rotor, radially movable slides, mounted within the casing, means, carried by the rotor, adapted to bear against the inner edges of said slides to project them and means, comprising an annular band, adapted to engage their opposite edges for retracting them.

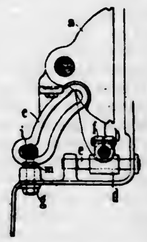
2. A pump, including a rotor casing, a rotor, radially movable slides, mounted within the casing, means, carried

by the rotor, adapted to bear against the inner edges of said slides to project them and an annular band disposed to incase the slides for retracting them.

3. A pump comprising a rotor casing, a rotor having an abutment pivotally mounted thereon, radially movable slides formed with openings through their body portions mounted within the casing, the abutment formed upon said rotor being movable through the openings in the slides.

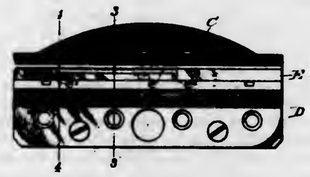
4. A pump, comprising a rotor casing, a rotor having an abutment pivotally mounted thereon, said abutment being suspended to one side of its center of gravity, radially movable slides formed with openings through their body portion, mounted within the casing, the abutment formed upon said rotor being movable through the openings in the slides.

1,157,807. PLATEN PRINTING-PRESS. MAX ROCKSTROH, Klein-Sedlitz, near Pirna, Germany. Filed Apr. 10, 1914. Serial No. 830,960. (Cl. 101—15.)



In a platen printing press, in combination, a platen, a rock shaft for said platen, two slides carrying said rock shaft and adapted to positively prevent any lateral movement of said platen, guides for said slides, adjustable bearings allowing a vertical adjustment of the platen, a pin journaled in said bearings, a slotted cam guided by said pin for steering the platen, and adjustable rings for securing said platen in its adjusted position.

1,157,808. MOLD FOR TYPOGRAPHICAL MACHINES. HERMAN J. RUDULPH, New York, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Oct. 26, 1912. Serial No. 727,852. (Cl. 199—13.)



1. A linotype mold having a longitudinally extending slot wherein the slug is cast, the side walls of said slot being plain or straight throughout so as to produce a solid or unrecessed slug, and one of said walls being formed at one end of the mold slot with a transverse groove projecting laterally therefrom and communicating therewith and into which the casting metal flows to produce on the slug an offset portion which projects beyond its effective side face and which is formed with a printing projection extending longitudinally along the body of the slug and bent at the end.

2. A linotype mold having a longitudinally extending slot wherein the slug is cast, the side walls of said slot being plain or straight throughout so as to produce a solid or unrecessed slug, and one of said walls being formed at the opposite ends of the mold slot with transverse grooves projecting laterally therefrom and communicating therewith and into which the casting metal flows to produce on the slug at its opposite ends offset portions projecting beyond its effective side face and which is formed with a printing projection extending longitudinally along the body of the slug and bent at the end.

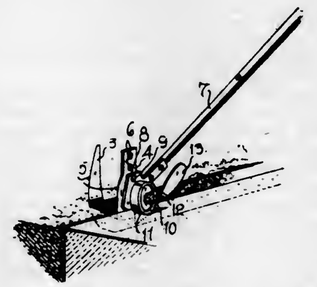
3. A mold element formed with a longitudinally extending slot or depression passing transversely through the element from one edge to the other and with a transverse groove located at one end of the slot and communicating therewith.

4. A mold element formed with a longitudinally extending slot or depression passing transversely through the element from one edge to the other and with a transverse grove located at each end of the slot and communicating therewith.

5. A linotype mold comprising, in combination, top and bottom parts, and an intermediate mold element formed in its side face with a longitudinally extending depression passing transversely through the element from one edge to the other constituting the mold slot proper, and further formed with a transverse groove located at one end of the slot and communicating therewith.

[Claim 6 not printed in the Gazette.]

1,157,809. TRENCH-CUTTER AND EDGE-TRIMMER. WILLIAM J. SCHMIDT, Garner, Iowa. Filed May 12, 1915. Serial No. 27,704. (Cl. 97—28.)

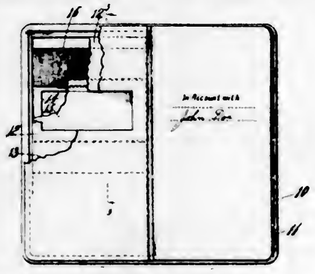


In an implement of the character described, a handle having a head at one end, said head being flat upon its inner face and having a stub axle projecting from its outer face, a wheel detachably mounted upon the stub axle and an approximately U-shaped blade adjustably mounted upon the head, the inner end of said blade extending vertically upward and being flat to bear against the flat face of the head and being formed with a plurality of perforations, bolts passing through the perforations and through the head and detachably engaging the blade with the head for vertical adjustment, the outer leg of said blade having an upwardly and a rearwardly extending cutting edge, the lower end of said outer leg being disposed rearward of the cutting edge on the other leg, the web connecting said legs having a rearwardly inclined cutting edge and an integral share extending rearward from the web connecting the legs and being deflected into a vertical plane and toward the plane of the outer leg of the cutting blade.

1,157,810. BOOK-COVER. GEORGE SEELMAN, Jr., Milwaukee, Wis. Filed Aug. 28, 1914. Serial No. 859,028. (Cl. 11—20.)

1. The combination, with a book cover having an opening therein, of a sheet of transparent material positioned over said opening, strips of fabric, means passing through said transparent material and fabric for securely connecting said fabric to said material, adhesive for securing one of the sides of said strips of fabric to the inner side of the cover, backing having an opening registering with the opening in the cover, and adhesive for binding said backing to the cover and to the other sides of the strips of fabric.

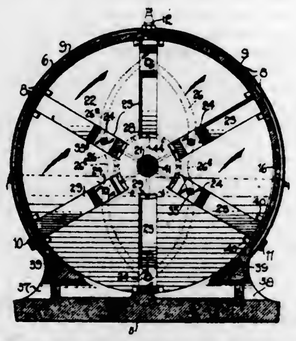
2. The combination, with a book cover having an opening therein, of a sheet of celluloid positioned over said opening in the cover, means for securing said sheet in position comprising strips of pervious material stitched to the edge of said sheet and adhesive for binding said strips to the inner side of said cover, a backing having an opening registering with the opening in the cover, and adhesive for binding said backing to the cover and said strips.



3. The combination, with a book cover having an opening therein, of a sheet of transparent material positioned over said opening, means for securing said sheet in position comprising strips of fabric having one of their edges formed of a plurality of thicknesses of material, stitching passing through said edges and said sheet and adhesive for binding said strips of fabric to said cover, a backing having an opening registering with the opening in said cover and adhesive for binding said backing to said cover and strips of fabric.

4. In a book, the combination with a book cover having an opening therein, of a sheet of celluloid positioned over said opening, means for securing said sheet to said cover comprising strips of fabric stitched to the edges of said sheet and adhesive for binding said strips to said cover, an intermediate sheet secured to said cover having an opening therein registering with the opening in said cover and a lose flap formed therein adjacent said opening, adhesive for binding said loose flap to said fabric and cover, an inner face sheet having an opening therein registering with the opening in said cover and adhesive for binding said inner face sheet to said intermediate sheet.

1,157,811. ROTARY ENGINE. LEON T. SHANNON, Reno, Nev., assignor of two-fifths to Arthur P. Lewis and one-fifth to James B. Jones, Reno, Nev. Filed Aug. 19, 1914, Serial No. 857,590. Renewed Sept. 1, 1915. Serial No. 48,576. (Cl. 123—44.)



1. In a rotary engine, an engine case, a rotor mounted within said case and provided with a plurality of slots, a piston mounted to reciprocate in each of the slots, each of the side walls of the engine being provided with a passage opening to the atmosphere, each of the case walls also having a plurality of openings therein affording communication between the inner ends of the respective slots in the rotor and said passage, whereby the air is exhausted from the inner ends of said slots in the inward movement of the respective pistons.

2. In a rotary engine, an engine case, a rotor mounted within said case and provided with a plurality of slots, a piston mounted to reciprocate in each of the slots, each of the side walls of the case being provided with an annular chamber and a passage leading from said chamber to the atmosphere, said case wall also having openings therein affording communication between the chamber and the respective slots in the rotor whereby the air is exhausted from the inner ends of said slots in the inward movement of the respective pistons.

3. In a rotary engine, a case, a rotor mounted within said case and provided with a plurality of radial slots opening upon the periphery thereof, pistons arranged in the respective slots, said case being provided with intake and exhaust ports, ignition means mounted in the case, a disk secured to each of the side walls of the case and provided with a cam-way, a pin carried by each of the pistons having its ends disposed in said cam-ways whereby the respective pistons are alternately moved inwardly and outwardly in each revolution of the rotor to draw a charge into the respective slots, then compress the same and subsequently expel the burned gases through the exhaust port, and means for exhausting the air from the inner ends of the slots in the inward movement of the pistons.

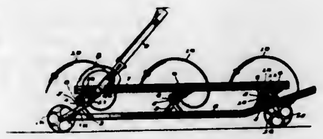
4. In a rotary engine, a case, a rotor mounted within said case and provided with a plurality of radial slots opening upon the periphery thereof, pistons arranged in the respective slots, said case being provided with intake and exhaust ports, ignition means mounted in the case, a disk secured to each of the side walls of the case and provided with a cam-way, a pin carried by each of the pistons having its ends disposed in said cam-ways whereby the respective pistons are alternately moved inwardly and and outwardly in each revolution of the rotor to draw a charge into the respective slots, then compress the same and subsequently expel the burned gases through the exhaust port, each of the side walls of the rotor case being provided with an air chamber and having passages affording communication between said air chamber and the inner ends of the slots in the rotor to receive and exhaust the air from the slots in the inward movement of the pistons.

5. In a rotary engine, a case, a rotor mounted within said case and provided with a plurality of radial slots opening upon the periphery thereof, pistons arranged in the respective slots, said case being provided with intake and exhaust ports, ignition means mounted in the case, a disk secured to each of the side walls of the case and provided with a cam-way, a pin carried by each of the pistons having its ends disposed in said cam-ways whereby the respective pistons are alternately moved inwardly and outwardly in each revolution of the rotor to draw a charge into the respective slots, then compress the same and subsequently expel the burned gases through the exhaust port, each of said disks being provided with an annular groove in communication with the inner ends of the slots in the rotor and a plurality of openings communicating with said groove, the side walls of the rotor case each having an air receiving chamber and passages connecting said chamber with the openings in the disk whereby the air from the respective slots in the rotor is expelled into said chambers during the inward movement of the piston.

1,157,812. HARROW. CHARLES S. SHARP, Auburn, N. Y., assignor to International Harvester Company of New Jersey, a Corporation of New Jersey. Filed Aug. 1, 1912. Serial No. 712,631. (Cl. 55—92.)

1. In a tillage implement, a frame, a bar journaled thereon, an implement carried on said bar, a lever for rotating said bar fixed thereto, a transport wheel, a forwardly protruding bracket rotatable with said bar, and a rigid draft connection for said transport wheel pivotally connected to said bracket at a point in front of said bar and extending rearwardly therefrom beneath the latter.

2. In a tillage implement, a frame, implements carried thereon, transport wheels carried thereon, manually operated means for moving one of said elements toward operative position as the other is moved toward inoperative position, and means operable independently of said first mentioned means and after a predetermined movement thereof whereby upon a forward movement of the frame the movement of one of said elements is automatically completed.



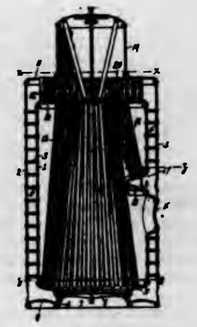
3. In a tillage implement, a frame, a rocking bar journaled thereon, an implement carried on said bar, a draft connection pivotally connected to said bar and disposed rearwardly beneath the same in supporting engagement therewith, a transport wheel rotatably mounted on said draft connection at a point in rear of said bar, and means for rotating said draft connection with said bar and thereby drawing said wheel forward beneath said bar to a position in front of the latter.

4. In a tillage implement, a frame, a rocking bar journaled thereon, an implement carried on said bar, a draft connection pivotally connected to said bar and disposed rearwardly beneath the same, a transport wheel rotatably mounted on said draft connection at a point in rear of said bar, a lever fixed to said bar, and operative connections between said lever and said draft connection whereby upon manipulation of said lever said transport wheel is drawn forward beneath said bar to a point in front of the latter.

5. In a tillage implement, a frame, a bar journaled thereon, a bracket carried on said bar and rotatable therewith having a plurality of parallel laterally extending arms, a transport wheel, draft links therefor pivoted to the arms of said bracket, and means comprising laterally retractible adjustable detent mechanism carried on said bracket for positioning said draft links in a predetermined position with respect to said bracket.

[Claims 6 to 10 not printed in the Gazette.]

1,157,813. BOILER. THOMAS J. SHEA, Portland, Oreg. Filed Feb. 13, 1914. Serial No. 818,460. (Cl. 122—178.)



1. In a boiler, inner and outer shells forming an interior fire chamber, an overhead water space, a water leg and an enlargement at the lower end of the water leg, a closed steam dome mounted on the top of the outer shell in communication at its bottom with said overhead water space, water tubes extending upward through the fire chamber and opening communication between said water leg enlargement and the overhead water space, said water tubes being arranged in a circular set and inwardly inclined from their lower ends upwardly, fire tubes extending upward through the overhead water space and opening communication between the fire chamber without the upper ends of the water tubes, and the atmosphere around said steam dome, substantially as described.

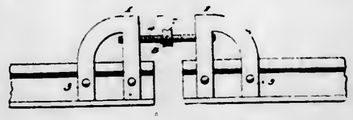
2. In a boiler, inner and outer shells forming side upper and lower water spaces, a fire chamber, a door opening in the side of said chamber and an inwardly extending water pocket above the door in communication with the side water space, a steam dome on the top of the outer shell being of smaller diameter than the outer shell, a set of fire tubes extending from the outer upper portion of the fire chamber through the upper water space to the atmosphere around said dome, a set of long water tubes extending upward on an inward incline from the lower portion of the side water space to the upper water space, and a set of short water tubes extending upward on an inward incline from said water pocket to the upper water space, said long and short tubes having their upper ends communicating with the upper water space at points located within the set of water tubes, substantially as described.

1,157,814. NUT-LOCK. JAMES E. SHINN, Conway Springs, Kans. Filed May 25, 1915. Serial No. 30,305. (Cl. 151—11.)



In a nut-lock, a cap to fit down over the nut, said cap having a central aperture to receive the end of the bolt, lugs perpendicular to the plane of said cap and having holes therein and a locking device provided in said lugs, one end of which engages the longitudinal groove in said bolt and means to engage the other end of said locking member whereby the first mentioned end is forced and held in said groove.

1,157,815. DEVICE FOR SPACING THE RAIL-SECTIONS OF A RAILWAY-TRACK. WILLIAM B. SKINNER, Castor, La. Filed Nov. 18, 1913. Serial No. 801,597. (Cl. 254—43.)



A device of the class described comprising bracket members bifurcated longitudinally and transversely whereby to provide a plurality of leg portions thereon, the upper portions of said brackets being convexedly curved, means extending through the leg portions to secure the same to rail sections, the opposed faces of said brackets being provided with oppositely threaded openings, a double screw threaded oppositely at its ends and engaged with the openings in said brackets and an engaging member formed centrally of the screw.

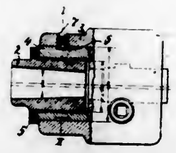
1,157,816. MANUFACTURE OF CLEANING-WASTE. SQUIRE D. STEAD, Liverpool, England. Filed Sept. 22, 1914. Serial No. 862,891. (Cl. 13—5.)



1. The improvement in the manufacture of cleaning waste, which consists in cutting paper into long narrow strips, carding ordinary cotton waste into thin sheets, and rolling the two together.

2. As a new article of manufacture, a waste consisting of ordinary cotton waste and thin threads or strips of paper mixed up together.

1,157,817. ADJUSTING DEVICE FOR TOOL-CHUCKS. MARTIN STEUDNER, Lusan, near Gera, Germany. Filed June 9, 1914. Serial No. 844,080. (Cl. 29—108.)



1. Adjusting device for tool chucks comprising in combination an inner shank turned eccentrically, an eccentrically turned intermediate member surrounding the said shank and a hollow cylindrical member surrounding the said intermediate member and adapted to be rigidly connected to the back of the tool chuck.

2. Adjusting device for tool chucks comprising in combination an inner hollow shank turned eccentrically, an intermediate eccentrically turned member surrounding the said shank adapted to be mounted in a tool chuck with the periphery of said intermediate member located concentrically with the axis of the tool axis.

3. Adjusting device for tool chucks comprising in combination a tool chuck formed as a ring at its rear part, an eccentric ring member arranged within the said ring, an inner fixing device for attachment to the spindle of a driving spindle said inner fixing device being eccentrically formed and rotatably mounted by a screw thread in the said eccentric ring member.

4. Adjusting device for tool chucks comprising in combination an inner shank turned eccentrically adapted to be adjustably rotated by a screw thread and locked in any desired position within a surrounding ring member also eccentrically turned, the said ring member being adapted to be adjustably rotated to and fixed in any desired position within a ring-shaped extension from the tool chuck.

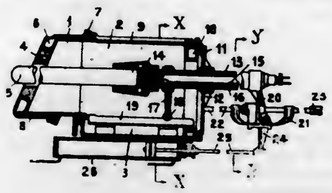
5. Adjusting device for tool chucks comprising in combination a central hollow member to be carried on the driving spindle, said member being turned eccentrically and screw threaded, on the exterior, an intermediate eccentric ring member adjustably rotatable on the screw thread of the said hollow shank, said ring-member being screw threaded on its outer periphery, an outer ring member screw threaded inside to receive the intermediate ring-member, said outer member being rigidly connected to the body of the chuck, and a tapered clamping screw arranged in a slot in the said intermediate ring member.

1,157,818. INTERCHANGEABLE COLLAR-BUTTON AND SKIRT-SUPPORTER. THERON S. STEWART, Toledo, Ohio. Filed May 8, 1914. Serial No. 837,103. (Cl. 24—101.)



In an interchangeable collar button and skirt support, the combination with an elongated base plate of a bifurcated tongue formed integral with the plate central of the length of the plate, and projecting from one of the long edges of the plate, one bifurcation of the tongue being in the plane of the plate and the other being offset at its connection with the plate by a shoulder into a plane parallel with the plane of the other bifurcation, and one of the bifurcations being formed of what was originally the longitudinal central portion of the other bifurcation.

1,157,819. ELECTRIC FURNACE. ERNESTO STASSANO, Turin, Italy. Filed Aug. 24, 1914. Serial No. 858,262. (Cl. 204—64.)



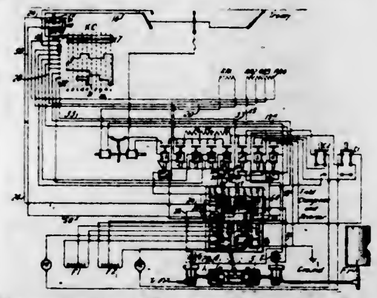
1. Arrangement for mounting the electrodes in electric furnaces comprising a casing adjacent to the smelting chamber, a front wall in said casing provided with a hole for the passage of the electrode, said wall being cooled by circulating water, a rod to which the electrode is connected, supports for the ends of said rod, members carried by said casing on which said supports may slide, and means for causing said rod to travel in order to control the position of the electrode.

2. Arrangement for mounting the electrodes in electric furnaces comprising a casing adapted to be secured to the smelting chamber, a front wall in said casing provided with a hole for the passage of the electrode, said wall being cooled by circulating water, a rod to which the electrode is connected, a support for the rear end of said rod, slides on which said support may run, an insulated stirrup on the front end of the rod, insulated wheels on said stirrup and insulated rails on the bottom of the casing on which said wheels may run, and means for causing said rod to travel in order to control the position of the electrode.

3. Arrangement for mounting the electrodes in electric furnaces, comprising a casing adapted to be secured to the smelting chamber, a front wall in said casing provided with a hole for the passage of the electrode, said wall being cooled by circulating water, a hollow rod to which the electrode is connected, means for establishing a circulation of water in said rod, a support for the rear end of said rod, slides on which said support may run, an insulated stirrup on the front end of the rod, insulated wheels on said stirrup and insulated rails on the bottom of the casing on which the said wheels may run, and means for causing said rod to travel in order to control the position of the electrode.

4. Arrangement for mounting the electrodes in electric furnaces, comprising a casing adapted to be secured to the smelting chamber, ribs on said casing for cooling purposes, a front wall in said casing provided with a hole for the passage of the electrode, said wall being cooled by circulating water, a hollow rod to which each electrode is connected, means for establishing a circulation of water in said rod, a support for the rear end of said rod, slides on which said support may run, an insulated stirrup on the front end of said rod, insulated wheels on said stirrup and insulated rails on the bottom of the casing on which the said wheels may run, and means for causing said rod to travel in order to control the position of the electrode.

1,157,820. SYSTEM OF CONTROL. NORMAN W. STORER, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Dec. 4, 1913. Serial No. 804,629. (Cl. 172—179.)



1. The combination with a movable member, of an actuating means comprising a pair of pistons operatively connected to said member, cylinders in which the pistons operate, plural means for independently controlling the fluid pressure in each of the cylinders to produce a movement of the pistons in either the one or the other direction, means for automatically biasing said pistons and movable member to a predetermined position upon the release of the corresponding pressure, and means operatively connected to said movable member for electromagnetically governing the controlling means.

2. The combination with a movable member, of an actuating means comprising a pair of pistons operatively connected to said member, cylinders in which the pistons operate, plural means respectively located near the outer ends of the cylinders for independently increasing the fluid pressure in each of the cylinders to produce a movement of the pistons in either the one or the other direction, automatic means dependent upon the actuated member for governing the pressure-changing means, and resilient means for automatically biasing said pistons and movable member to a predetermined position upon the resumption of normal pressure in the corresponding cylinder.

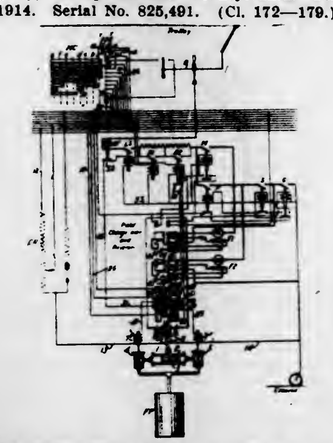
3. The combination with a movable member and an electric switching device having relatively movable contact members one of which is operatively connected to said member, of an actuator comprising a piston, a supply of fluid pressure, a pair of valves respectively located on opposite sides of the piston and controlled by the switching device for independently governing the admission of fluid pressure to the one or the other side of said piston, and spring means for automatically biasing said piston and said movable member to a predetermined position upon the resumption of normal pressure on the corresponding side of said piston.

4. The combination with a movable member adapted to assume a plurality of operative positions in each of a plurality of directions, of an actuating means comprising a piston operatively connected to said member, means for admitting fluid pressure to opposite sides of said piston, and means for biasing said piston and movable member to the first position from other positions upon the release of the corresponding pressure.

5. The combination with a movable member adapted to assume a plurality of operative positions in either a forward or a reverse direction, of an actuating means comprising a pair of pistons operatively connected to said member, cylinders in which the pistons operate, means for controlling the fluid pressure in each of the cylinders to produce a movement of the pistons in either the one or the other direction, electrical means operatively connected to said movable member for governing the controlling means, and resilient means for returning said pistons and movable member to the first position from subsequent positions upon the release of the corresponding pressure.

[Claims 6 to 18 not printed in the Gazette.]

1,157,821. SYSTEM OF CONTROL. NORMAN W. STORER, Pittsburgh, and ARTHUR J. HALL, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 18, 1914. Serial No. 825,491. (Cl. 172—179.)



1. The combination with an electric motor, of a controller therefor comprising a single switching device having main circuit connections for reversing the motor and for changing the field strength thereof, and electro-magnetic actuating means dependent for energization under predetermined conditions upon the position of said device.

2. The combination with a power-operated member, and electrical means for governing the movement thereof, of a switching device for electric motors operatively associated with said member and comprising means for reversing the motors upon occupation of predetermined positions of the device and for also changing the motor field strengths upon occupation of other positions, and electrical interlocking means for automatically biasing said device to certain of said positions under predetermined conditions of motive operation.

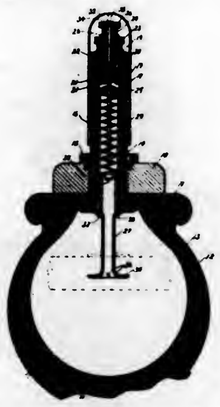
3. The combination with a plurality of motors adapted for series-parallel operation, a power-operated member, and electrical means for governing the movement thereof, of a switching device for said motors operatively associated with said member and having initial positions corresponding to forward and reverse running, respectively, and having corresponding subsequent positions that are also adapted for changing the motor field strengths, and electrical interlocking means for automatically returning said device to the corresponding initial position from either of said subsequent positions upon operation of the motors from series to parallel relation.

4. A controller for electric motors comprising a single switching device adapted to assume a plurality of positions in either a forward or a reverse direction, the initial positions corresponding to forward and reverse running, respectively, and the subsequent positions being also adapted to change the amounts of the motor field windings in circuit, and controllable electro-mechanical means for controlling said device.

5. A controller for electric motors comprising a single switching device having circuit connections for reversing the motors and for independently changing the field strengths thereof, and an actuating means for said device comprising a movable member attached thereto, a piston operatively connected to said member, means for admitting fluid pressure to opposite sides of said piston, and electrical means for controlling the pressure admission.

[Claims 6 to 16 not printed in the Gazette.]

1,157,822. VALVE FOR PNEUMATIC TIRES. BAYARD E. TAYLOR, Oak Park, Ill. Filed Jan. 27, 1915. Serial No. 4,718. (Cl. 116—1.)



1. A valve for pneumatic tires comprising, in combination, a chambered casing, an outwardly seating valve within the casing and having a hollow stem closed at its outer end, a thrust rod having one end within the valve stem and the other end projecting into the chamber of the casing, and a plunger reciprocable within the casing and engageable with the thrust rod, one end of the plunger projecting beyond the inner end of the casing.

2. A valve for pneumatic tires comprising, in combination, a chambered casing, an outwardly seating valve within the casing and having a hollow stem, the end of the stem being frangible, and means adapted to be actuated by the collapse of the tire to which the valve is applied for rupturing the valve stem end.

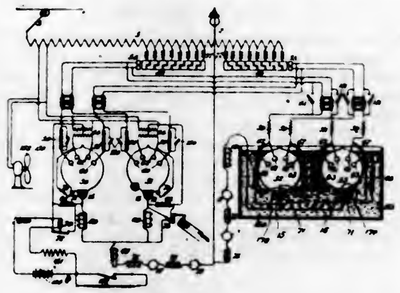
3. A valve for pneumatic tires comprising, in combination, a chambered casing, an outwardly seating valve within the casing and having a hollow stem, the end of the stem being frangible, means adapted to be actuated by the collapse of the tire to which the valve is applied for rupturing the valve stem end, and a cap covering the outer end of the valve stem and having an orifice in line therewith.

4. A valve for pneumatic tires comprising, in combination, a chambered casing, an annular valve seat secured within the outer end of the casing, a valve engageable with the seat and having a hollow stem projecting therethrough and having its outer end closed, a thrust rod located within the valve stem and projecting through and beyond the valve, a plunger reciprocable with the casing and extending beyond the inner end thereof and being engageable with the rod, the end of the plunger having an aperture in line with the rod, the aperture being of less diameter than the rod.

1,157,823. SYSTEM OF CAR OPERATION BY VAPOR-CONVERTERS. PERCY H. THOMAS, Montclair, N. J., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Filed Aug. 2, 1905. Serial No. 272,352. (Cl. 171—253.)

1. The combination with a vapor converter having an hermetically sealed and completely exhausted container, and a vaporizable electrode therein, a direct current circuit fed therefrom, connections for supplying alternating current to said converter and means for applying increasing voltages, step by step, to the converter, of an impedance for cushioning the steps of voltage.

2. The combination with a direct current circuit, a plurality of vapor converters each comprising an hermetically sealed and completely exhausted container and a vaporizable reconstructing cathode and connections for supplying alternating current to said converters, of means for applying to one converter a voltage higher than the voltage applied to another similarly operating converter, and means for subsequently connecting the other similarly operating converter to the higher voltage step, and means for dividing the current between the converters.



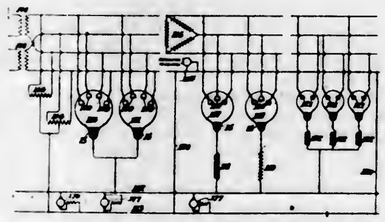
3. The combination with a direct current circuit, a plurality of vapor converters each comprising an hermetically sealed and completely exhausted container and a vaporizable reconstructing cathode and connections for supplying alternating current to said converters, of means for applying to one converter a voltage higher than the voltage applied to another similarly operating converter, and means for subsequently connecting the other similarly operating converter to the higher voltage step, and multiple coil inductances for dividing the current between the converters.

4. The combination with an alternating current supply, and a direct current receiving circuit, of a plurality of parallel connected vapor converters each comprising an hermetically sealed and completely exhausted container, and a vaporizable reconstructing cathode therein, and means for raising the voltage by steps through one of the parallel connected converters and alternately raising the voltage in the other.

5. The combination with an alternating supply circuit and a receiving circuit provided with several groups of translating devices, of separate vapor converters for the several groups, and means for simultaneously and equally raising the voltage applied to the several groups of vapor converters and translating devices.

[Claims 6 to 8 not printed in the Gazette.]

1,157,824. SYSTEM OF CAR OPERATION BY VAPOR-CONVERTERS. PERCY H. THOMAS, Upper Montclair, N. J., assignor to Cooper Hewitt Electric Company, Hoboken, N. J., a Corporation of New Jersey. Original application filed Aug. 2, 1905, Serial No. 272,352. Divided and this application filed Jan. 22, 1913. Serial No. 743,480. (Cl. 171—253.)



1. In a system of electrical distribution, the combination with a three phase supply, three single phase rectifiers supplied by separate phases thereof, a common work circuit for said mercury vapor rectifiers and a separate inductance for each of said rectifiers whereby current is maintained continuous in each and the currents in the three phase supply are regulated.

2. In a system of electrical distribution, the combination of a three phase source of supply, a plurality of single phase mercury vapor rectifiers fed from separate phases thereof, a common work circuit for said rectifiers and separate inductances for said rectifiers whereby the operation of each is rendered independent of the others.

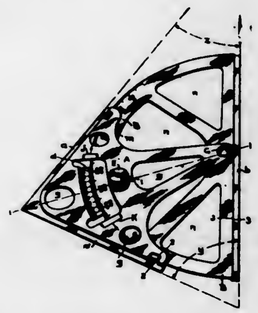
3. In a system of electrical distribution, the combination of a plurality of alternating sources of electricity, a direct current work circuit and a plurality of mercury vapor rectifiers connected between said sources and said work circuit, each rectifier having a plurality of main anodes, and means for causing the moments of maximum activity of similar anodes in the several rectifiers to occur at different instants of time whereby the uniformity of the rectified energy is increased.

4. In a system of electrical distribution, the combination with a plurality of sources of alternating current, a direct current work circuit and a plurality of mercury vapor rectifiers interposed between said sources and said work circuit, of means for causing the flow of energy in the several rectifiers occurring at different periods of time to overlap whereby a relatively steady rectified voltage is obtained.

5. In a system of electrical distribution, the combination with a plurality of nonsynchronous sources of electric supply, separate rectifiers for said sources and a common direct current work circuit, of means for rendering the current continuous in each rectifier.

[Claims 6 to 8 not printed in the Gazette.]

1,157,825. DRAFTSMAN'S PROTRACTOR. ROBERT N. VAN BUSKIRK, Detroit, Mich. Filed Nov. 25, 1912. Serial No. 733,250. (Cl. 33—93.)



1. In a protractor, the combination of a base, a sector lying under the base, said base having clips *c c'* bent downwardly and under said sector, said base having a portion bent downwardly so that its edge shall abut against the curved edge of said sector, said abutting edges being provided with coöperating scales.

2. In a protractor, the combination of a base having straight edges *a a'* bent downwardly, a sector lying below said base and being provided with lips *c c'* extending under said sector, and having their lower surfaces in the plane of the supporting portion of said base.

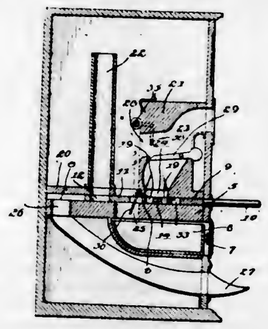
3. In a protractor, the combination of a base, a sector lying under said base, said base being provided with a notch *f*, a clamp upon said base adapted to engage under said sector and provided with a heel *i*, adapted to engage in said notch.

4. In a protractor, the combination of a base and a sector, a pivot bearing having a flattened edge portion joining said base and sector, said sector being provided with a shoulder *h*, against which said flat portion bears.

5. In a protractor, the combination of a base and a sector arranged under said base of a clamp having an upwardly extending heel with shoulders adjacent to the lower end thereof, said base being provided with an aperture *f*, said heel being adapted to engage in said aperture and said shoulder against the surface of said base.

[Claims 6 and 7 not printed in the Gazette.]

1,157,826. MONEY-CHANGING MACHINE. HARRY C. WALKER and ACREE L. BOATWRIGHT, Indianapolis, Ind. Filed Sept. 2, 1914. Serial No. 859,848. (Cl. 133—4.)



1. In a machine of the class described, a casing, a plurality of drawers slidably fitted within the casing, the said casing being provided with a guideway above the drawers and opening through the front thereof, slide plates arranged within the guideway and each having a circular opening of a size corresponding to a coin of predetermined denomination, plungers arranged for movement in the guideway, means for limiting the movements of the plungers, means for tensioning the plungers, delivery chutes communicating with the guideway, said guideway being in communication with the respective drawers, the said side plates and plungers at their ends adjacent to each other being cut away to accommodate a coin therein for the spacing of the plungers and slide plates relative to each other to bring the coin openings in the said slide plates in position to receive the coins of sizes corresponding thereto when the plungers are actuated, and containers within the casing for receiving the coins to be delivered to the openings in the slide plates.

2. In a machine of the class described, a casing, a plurality of drawers slidably fitted within the casing, the said casing being provided with a guideway above the drawers and opening through the front thereof, slide plates arranged within the guideway and each having a circular opening of a size corresponding to a coin of predetermined denomination, plungers arranged for movement in the guideway, means for limiting the movements of the plungers, means for tensioning the plungers, delivery chutes communicating with the guideway, said guideway being in communication with the respective drawers, the said slide plates and plungers at their ends adjacent to each other being cut away to accommodate a coin therein for the spacing of the plungers and slide plates relative to each other to bring the coin openings in the said slide plates in position to receive the coins of sizes corresponding thereto when the plungers are actuated, containers within the casing for receiving the coins to be delivered to the openings in the slide plates, and means for guiding coins between the plungers and the slide plates.

3. In a machine of the class described, a casing, a plurality of drawers slidably fitted within the casing, the said casing being provided with a guideway above the drawers and opening through the front thereof, slide plates arranged within the guideway and each having a circular opening of a size corresponding to a coin of predetermined denomination, plungers arranged for movement in the guideway, means for limiting the movements of the plungers, means for tensioning the plungers, delivery chutes communicating with the guideway, said guideway being in communication with the respective drawers, the said

slide plates and plungers at their ends adjacent to each other being cut away to accommodate a coin therein for the spacing of the plungers and slide plates relative to each other to bring the coin openings in the said slide plates in position to receive the coins of sizes corresponding thereto when the plungers are actuated, containers within the casing for receiving the coins to be delivered to the openings in the slide plates, means for guiding coins between the plungers and the slide plates, and means acting upon the coins deposited between the plungers and the slide plates to deliver the same to the drawers.

1,157,827. MULLION. HAROLD F. WARDWELL, Detroit, Mich., assignor to Detroit Steel Products Company, Detroit, Mich., a Corporation of Michigan. Filed June 11, 1914. Serial No. 844,448. (Cl. 189—77.)



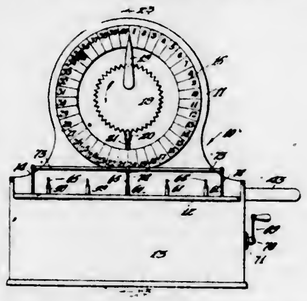
1. A mullion comprising spaced angle bars, a T-bar having its head portion overlapping the alined flanges of said angle bars and its web extending centrally therebetween, a clip passing through an aperture in said web and engaging the inner sides of said flanges, and means for clamping said clip to said T-bar.

2. A mullion, comprising spaced sash bars, a T-bar having its head portion overlapping alined flanges of said sash bars and its web portion extending intermediate said bars, a clip plate extending through an aperture in said web portion and engaging the said flanges of said sash bars, and a clamping bolt passing through the head of said T-bar and said clip.

3. A mullion, comprising a pair of spaced sash bars, an intermediate T-bar having its head portion overlapping the alined flanges of said sash bars and its web portion extending therebetween, a clip passing through an aperture in the web of said T-bar and engaging said alined flanges, and clamping bolts passing through said head upon opposite sides of said web and engaging said clip.

4. A mullion, comprising spaced sash bars, having alined flanges, a T-bar having its head portion overlapping the alined flanges of said sash bars and its web portion extending intermediate said bars, a clip plate engaging the web portion and a clamping member for forcing the clip plate into engagement with the flanges of said sash bars.

1,157,828. GAME APPARATUS. JOHN L. WEBB, Sawtelle, and SAMUEL F. STURDEVANT, Ocean Park, Cal. Filed Aug. 22, 1914. Serial No. 858,090. (Cl. 46—56.)



1 A game apparatus comprising a stationary dial, a detent wheel revolving about the axis of the dial, a pointer on said detent wheel extending over said dial, means for driving said detent wheel, a detent for locking said detent wheel, means by which the detent may be released, and means for throwing the detent into engagement with the detent wheel.

2. A game apparatus comprising a stationary dial, a detent wheel revolving about the axis of the dial, a pointer on said detent wheel extending over said dial, means for driving said detent wheel, a detent for locking said detent wheel, means by which the detent may be released, a plurality of pallets, and means by which each of these pallets causes the detent to be thrown into engagement with the detent wheel.

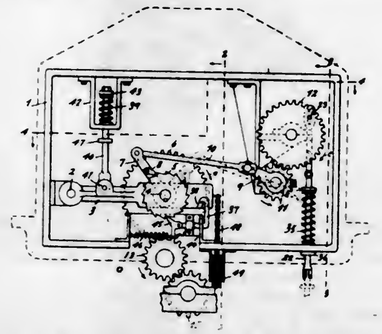
3. A game apparatus comprising a stationary dial, a main shaft, a detent wheel secured to said shaft, a pointer fixed to said shaft and extending out over said dial, means for driving said shaft, means for regulating the speed of said shaft, a detent normally engaging the detent wheel, means for throwing the detent out of engagement, latch means for holding the detent out of engagement, and stopping means whereby the player may release such latch means.

4. A game apparatus comprising a main shaft, a dial surrounding said shaft, a detent wheel secured to said shaft, a pointer fixed to said shaft and extending out over said dial, means for driving said shaft, means for regulating the speed of said shaft, a detent normally engaging the detent wheel, an operating lever, means by which said operating lever throws the detent out of engagement, latch means for holding the detent out of engagement, and stopping means whereby the player may release such latch means.

5. A game apparatus comprising a main shaft, a dial surrounding said shaft, a detent wheel secured to said shaft, a pointer fixed to said shaft and extending out over said dial, means for driving said shaft, means for regulating the speed of said shaft, means for rewinding said driving means without actuating said regulating means, a detent normally engaging the detent wheel, an operating lever for actuating the rewinding means, means by which said operating lever throws the detent out of engagement, latch means for holding the detent out of engagement, and pallets whereby the player may release such latch means.

[Claims 6 to 31 not printed in the Gazette.]

1,157,829. GAS-ENGINE STARTER. CLARENCE C. WEDGE, Chardon, Ohio. Filed Apr. 10, 1915. Serial No. 20,440. (Cl. 123—185.)



1. In a gas engine starter, in combination with the crank-shaft actuating gear; an idler gear adapted to be shifted into and out of mesh with said crank-shaft actuating gear; a gear mounted in a hinged arm in mesh with the idler gear; a ratchet wheel connected with the last named gear; a pawl for actuating said ratchet and gear; means for shifting the idler gear into mesh with the crank-shaft actuating gear; and means for operating the pawl, thereby imparting motion to the gears.

2. In a starter for gas engines, in combination with the crank-shaft actuating gear; an idler gear adapted to be shifted into and out of mesh with said crank-shaft actuating gear; a hinged member providing a support for a shaft; a stub shaft having its bearing in said support; a ratchet wheel and a gear attached to said shaft, said gear being in mesh with the idler gear; a lever mounted on the shaft; a pawl carried by said lever, said pawl engaging the teeth of the ratchet wheel; means for shifting the idler gear into mesh with the crank-shaft actuating gear; and means for actuating the lever, thereby driving the three gears.

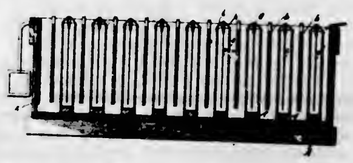
3. In a gas engine starter, in combination with the crank-shaft actuating gear; an idler gear adapted to be shifted into and out of mesh with said crank-shaft actuating gear; a hinged member providing a support for a shaft; a stub schaft having its bearing in said support; a ratchet wheel and a gear attached to said shaft, said gear being in mesh with the idler gear; a lever mounted on the shaft; a pawl carried by said lever, said pawl engaging the teeth of the ratchet wheel; means for shifting the idler gear into mesh with the crank-shaft actuating gear; a crank mounted in suitable bearings; a link member connecting the free end of the pawl carrying lever with said crank; and means for actuating said crank and through its connections driving the gears.

4. In a gas engine starter, in combination with the crank shaft actuating gear; an idler gear adapted to be shifted into and out of mesh with said crank-shaft actuating gear; a hinged member providing a support for a shaft; a stub shaft having its bearing in said support; a ratchet wheel and a gear attached to said shaft, said gear being in mesh with the idler gear; a lever mounted on the shaft; a pawl carried by said lever, said pawl engaging the teeth of the ratchet wheel; means for shifting the idler gear into mesh with the crank-shaft actuating gear; a crank mounted in suitable bearings; a link member connecting the free end of the pawl carrying lever with said crank; a pinion connected with said crank; a gear in mesh with said pinion; and means for actuating the last named gear.

5. In a gas engine starter, in combination with the crank-shaft actuating gear; an idler gear adapted to be shifted into and out of mesh with said crank-shaft actuating gear; a hinged member providing a support for a shaft; a stub shaft having its bearing in said support; a ratchet wheel and a gear attached to said shaft, said gear being in mesh with the idler gear; a lever mounted on the shaft; a pawl carried by said lever, said pawl engaging the teeth of the ratchet wheel; means for shifting the idler gear into mesh with the crank-shaft actuating gear; a crank mounted in suitable bearings; a link member connecting the free end of the pawl carrying lever with said crank; a pinion connected with said crank; a gear in mesh with said pinion; a pitman rod connected with said gear; and means for operating said pitman rod for imparting a partial revolution to the gears.

[Claims 6 to 9 not printed in the Gazette.]

1,157,830. ELECTROLYTIC REFINING OF TIN. ROBERT L. WHITEHEAD, Perth Amboy, N. J., assignor to American Smelting & Refining Company, Maurer, N. J., a Corporation of New Jersey. Filed May 4, 1915. Serial No. 25,671. (Cl. 204—17.)



1. In the electrolytic refining of impure tin containing lead, the method of producing an appropriate electrolyte for the refining operation, which consists in passing an electric current of suitable voltage and amperage from the impure tin as an anode to a cathode through an electrolyte which is a solvent of tin and lead, and protecting the electrolyte from contamination by lead, by incorporating with the electrolyte an agent which will combine with the lead to form an insoluble compound; substantially as described.

2. In the electrolytic refining of impure tin containing lead, the method of producing an appropriate electrolyte for the refining operation, which consists in passing an electrolytic current of suitable voltage and amperage from the impure tin as an anode to a cathode through a solution of hydrofluosilicic acid containing an agent which will combine with the lead to form an insoluble compound; substantially as described.

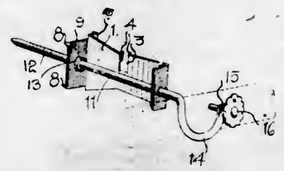
3. In the electrolytic refining of impure tin containing lead, the method of producing an appropriate electrolyte for the refining operation, which consists in passing an electrolytic current of suitable voltage and amperage from the impure tin as an anode to a cathode through a solution of hydrofluosilicic acid containing an amount of sulfuric acid sufficient to combine with the lead to form lead sulfate; substantially as described.

4. In the electrolytic refining of impure tin, the method of preventing contamination of the tin deposited from the impure tin anode upon the cathode, which consists in employing an electrolyte which is a solvent of tin and lead, and incorporating in the electrolyte a protective agent sufficient to convert the lead contained in the dissolving tin anode into a compound insoluble in the electrolyte; substantially as described.

5. In the electrolytic refining of impure tin, the method of preventing contamination of the tin deposited from the impure tin anode upon the cathode, which consists in employing as the electrolyte a solution of tin in hydrofluosilicic acid together with a protective agent sufficient to convert the lead contained in the dissolving tin anode into a compound insoluble in the electrolyte; substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,157,831. COMBINED SHADE-ROLLER AND CURTAIN-POLE FIXTURE. ELMER D. WILSON, Kittanning, Pa. Filed Jan. 27, 1915. Serial No. 4,687. (Cl. 156—24.)



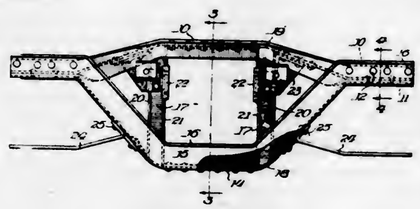
As an article of manufacture, a supporting bracket of the character described including a body plate, terminal portions extending at right angles to the body plate, there being alined openings formed in the terminal portions, the upper edge of said body plate being provided with yieldable shade roller retaining members, tongues bent outwardly at right angles at one end of one of the terminal portions, penetrating spurs formed on the tongue, a pole support comprising a rod mounted in the openings of the terminal portions and having its inner end threaded for engagement in the structure adjacent to which the shade roller is to be supported.

1,157,832. BUILT-UP SIDE FRAME. CARL EDWARD BAUER, Hammond, Ind., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed May 6, 1915. Serial No. 26,239. (Cl. 105—243.)

1. In a side frame, a compression member, tension member and struts, said compression member being of H-form in cross section, the flanges thereof being bent into horizontal position at a point midway of the length of the member, substantially as described.

2. In a side frame, the combination of a compression member, tension member and struts, said compression member being of original H-form in cross section and said tension member being of channel shape in cross section, substantially as described.

3. In a side frame, the combination of compression member, tension member and struts, said compression member being of H-form in cross section and said tension member being of channel form, a plurality of flanges of the compression member being bent in a horizontal position at a point midway of the length thereof, substantially as described.

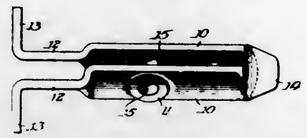


4. In a side frame, the combination of compression member, tension member and struts, said compression member being of H-shape in cross section, the member being positioned with its web in a horizontal position, a plurality of the flanges of said member being bent into horizontal position at a point midway of the length of the member, and certain flanges of said member at the ends thereof being inturned, substantially as described.

5. In a side frame, the combination of compression member, tension member and struts, said tension member being composed of a channel the edge portions of which are bent backward to form a deep channel having lateral flanges the ends of the compression member being seated in and rigidly secured to the web of said deep channel, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,157,833. METHOD OF FORGING FULCRUMS. CARL EDWARD BAUER, Hammond, Ind., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed May 10, 1915. Serial No. 26,937. (Cl. 29—164.)



1. The method of forging brake beam fulcrums, which consists in utilizing a bar of metal, welding reinforcing disks at points intermediate the length thereof, then twisting an intermediate portion of the bar, then bending the ends thereof at right angles to the original plane of the bar, then bending the bar into U-shape, then forging a saddle in one end thereof, then drilling a registering opening through the reinforcing disks and the bar, substantially as described.

2. The method of forging brake beam fulcrums, which consists in welding metal disks to a commercial bar, then twisting an intermediate portion of said bar to an angle of substantially 40° to the original plane of the bar, then bending the ends of the bar to form attaching lugs, then bending the bar into U-shape and forging a fulcrum in the closed end of the U, then drilling apertures for the brake lever pin through the disks and bar, substantially as described.

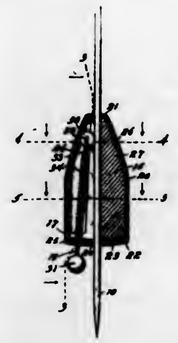
3. In a method of forging fulcrums, the steps consisting in displacing sidewise a portion of the bar from which said fulcrum is formed thus producing a depression in one side of the bar and a protuberance on the other side thereof, then locating a disk of metal in said recess after bringing said bar and disk to a welding temperature, then compressing said disk in the recess and welding the same therein.

1,157,834. WRENCH. GEORGE L. BAXTER, Salt Lake City, Utah. Filed Feb. 9, 1915. Serial No. 7,080. (Cl. 81—103.)



An adjustable wrench of the class described comprising a stationary jaw, an adjustable jaw slidably mounted thereon, a locking housing carried by said stationary jaw and passing around said adjustable jaw and adapted to hold said adjustable jaw in a set position, said adjustable jaw provided with a retaining link pivotally secured thereto and passing around said stationary jaw, said adjustable jaw provided with a socket near one end thereof, a coil spring fitting in said socket and engaging the rear face of said stationary jaw, the free end of said coil spring being bent inwardly to fit between the convolutions of said coil spring for facilitating the sliding of said coil spring longitudinally upon the rear face of said stationary jaw.

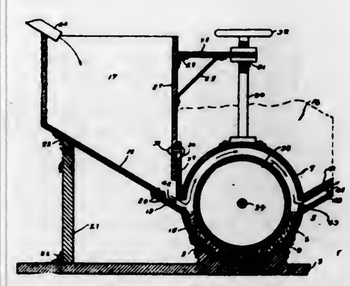
1,157,835. SCARF-PIN FASTENER. LOUIS BECKER and KARL HEINE, New York, N. Y. Filed May 18, 1914. Serial No. 839,311. (Cl. 24—155.)



A scarf pin fastener comprising a conical shell having a guide hole at its apex and an inward flange at its lower end, a closing plate supported on said flange provided with a central guide hole and an eccentric guide hole, a fixed block disposed in said shell and provided with a longitudinal groove registering with said apex guide hole and central guide hole with a longitudinal recess on one side communicating with said groove, a slide rod extending through said eccentric guide hole provided with a fork at its upper inner end playing in said recess and with a handle at its lower outer end, a rotary clamping roller carried by said fork and projecting into said groove, and a spring disposed on said rod between said fork and said plate and normally operative to lift said rod and hold said clamping roller in

gripping contact between the inner face of said cone and the pin shank passed through said apex guide hole and resting in said groove.

1,157,836. AMALGAMATOR. ERASTUS B. BENNETT, Denver, Colo. Filed Nov. 23, 1914. Serial No. 873,491. (Cl. 83—68.)



1. An amalgamator, consisting of two semi-circular members, arranged in conjunction with each other to form a circular chamber, said members being normally separated to form longitudinal openings the entire length of said chamber on opposite sides of the latter for the intake and discharge of the ore to be treated, an amalgamating roll journaled in said chamber, and one of said semi-circular members being adjustable to vary the size of said intake and discharge openings, a space being provided between said amalgamating roll and one of said semi-circular members for the passage of the ore through said chamber.

2. An amalgamating machine, consisting of two semi-circular members, relatively arranged to form an amalgamating chamber, said semi-circular members being separated from engagement with each other to form longitudinally arranged intake and discharge openings the entire length of said amalgamating chamber on opposite sides of the latter, an amalgamating roll journaled in said amalgamating chamber, one edge of one of said semi-circular members being provided with a lip inclined toward the intake opening, while both of said semi-circular members are provided with lips on their edges adjacent the discharge opening, the said lips last named being upwardly inclined and forming a discharge chute for the ore, and a space being provided between said amalgamating roll and one of said semi-circular members forming an ore passage with which said openings communicate.

3. An amalgamator, consisting of two semi-circular members relatively arranged to form a circular amalgamating chamber, the said semi-circular members being disposed in separated condition to form intake and discharge openings extending the entire length of the said circular chamber on opposite sides of the latter, an amalgamating roll journaled in said semi-circular member, one of said semi-circular members forming a mercury retaining chamber adapted to retain the mercury in contact with said amalgamating roll, the opposite edges of said last named semi-circular member having upwardly and outwardly inclined lips, one of said lips forming a guide for the ore into the intake opening, one edge of the other semi-circular member having a lip correspondingly upwardly and outwardly inclined and coöperating with the other lip of the last named semi-circular member to form an ore discharge chute communicating with the said ore discharge opening, and a space being provided between said amalgamating roll and one of said semi-circular members forming an ore passage through said circular chamber and over said amalgamating roll.

4. An amalgamator, consisting of a hollow cylindrical member, said member being composed of two parts longitudinally separated to form an intake opening and a discharge opening, the said amalgamator having an ore feeding chamber in communication with the intake opening, one of said parts being stationary, the other part having a member integrally formed thereon adjacent said intake opening and adjustably connected with the wall of said ore feeding chamber, an amalgamating roll journaled in the hollow of said cylindrical member, a space being provided between the said roll and the last named part of said cylindrical member for the passage of the ore through the hollow of said cylindrical member, and an operative connection between said last named part and said wall of the ore feeding chamber for vertically adjusting said last named part to vary said space.

5. An amalgamator, consisting of a hollow cylindrical member, said member being composed of two parts longitudinally separated to form intake and discharge openings on opposite sides of said cylindrical member, one of said parts being stationary, while the other part is adjustable in relation thereto, said last named part having a member vertically disposed, a member with which said vertically disposed member is connected in movable relation, an amalgamating roll journaled in the hollow of said cylindrical member, a space being provided between said amalgamating roll and said adjustable part, and means for vertically adjusting said adjustable part to vary said space.

1,157,837. KEYLESS LOCK. STEPHAN A. BLAŽEK, New York, N. Y. Filed July 25, 1914. Serial No. 853,238. (Cl. 70—53.)



1. In a device of the class described, the combination with a casing, a spring actuated bolt and a sliding plate combined therewith, said plate having elongated apertures, of a knob operative with said plate, tumblers in the mentioned apertures, knobs upon which said tumblers are fixed, a loose tumbler mounted on one of said knobs beyond said fixed tumblers and means for rotating said loose tumbler independently.

2. In a device of the class described, the combination with a casing, a sliding plate, a bolt having two engaging points operable closely against the interior walls of said casing, means for maintaining the bolt in a normally locking position, means combined with said plate for actuating said bolt, tumblers arranged in alinement at different points in the path of travel of said plate, means for rotating said tumblers and means for operating said plate, said plate operating means being intermediate of said tumbler operating means.

3. In a device of the class described, the combination with narrow elongated casing, a plate slidably mounted therewithin, said plate having elongated openings, projections integral with said plate extending into the mentioned openings, tumblers rotatably disposed in a straight line uniformly spaced and slotted to receive said projections, means for operating said tumblers, a bolt operable by said plate, said bolt being also independently movable and maintained normally in a locking position, and means intermediate of said tumbler operating means for actuating said bolt.

4. In a device of the class described, the combination with a casing and a hasp plate having members adapted to enter within the casing, of a bolt engageable with said members, a plate slidable in said casing having a part for disengaging said bolt from said members, a raised lug on said plate, tumblers engaging with said plate, a loose tumbler engaging with the raised lug on said plate, means for operating all of said tumblers independently and means for actuating said plate.

1,157,838. WHIP. JOSEPH E. BLOOMBERG, Milwaukee, Wis., assignor to The Wallace & Smith Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed May 7, 1915. Serial No. 26,481. (Cl. 231—2.)



1. In a drover's whip, the combination with a lash, of a stock comprising a rod having an enlarged upper end disposed within the butt end of the lash, rotatable means surrounding the rod beneath said enlarged end, and means for securing said lash to said rotatable means and to said rod below said rotatable means to permit rotary movement of the lash with respect to the stock.

2. In a drover's whip, the combination, with a lash having a shot filling, of a stock comprising a rod having its upper end bearing in said filling and a shouldered portion near said end, a member rotatably mounted on said rod beneath said shouldered portion and contacting therewith, and means for securing the lash to said rotatable member to permit rotary movement of the lash with respect to the stock.

3. In a drover's whip, the combination, with a lash having a shot filling, of a stock comprising a metal rod having its upper end bearing in said filling and a shouldered portion near said end, a ring mounted on said rod beneath said shouldered portion and contacting therewith, and means for securing the lash to said ring to permit rotary movement of the lash with respect to the stock.

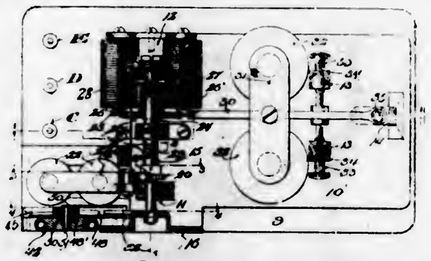
4. In a drover's whip, the combination, with a lash having a metal filling, of a stock comprising a metal rod having its upper end bearing in said filling, said rod having a shouldered portion near said end and an annular bearing adjacent said shouldered portion, a ring rotatably mounted in said annular bearing contacting with said shouldered portion and extending therebeyond, and means for securing said lash to said ring to permit rotary movement of the lash with respect to the stock.

5. In a drover's whip, the combination, with a lash, of a stock comprising a metal rod having a handle portion and an enlarged conical upper end extending into the lash and forming a shoulder with the handle portion of the rod and having an annular bearing adjacent said shoulder, rotatable means mounted within said lash and on said bearing beneath said enlarged end, and a portion of the lash surrounding said means and secured to said rod to permit rotary movement of said means and lash with respect to the stock.

[Claims 6 to 8 not printed in the Gazette.]

1,157,839. TELEGRAPHY. BORNETT L. BORROFF, Milwaukee, Wis., assignor to Universal Indicator Company, Milwaukee, Wis. Filed July 6, 1914. Serial No. 849,266. (Cl. 177—338.)

1. A directory-board provided with openings adjacent to a designation thereon, a telegraph apparatus comprising a dial having the words "In" and "Out" and the numerals 1 to 12 inclusive displayed thereon at regular intervals of a circle, the several indices being observable one at a time through one of the openings of said board, electro-mechanical means under control at a distant point for imparting step-by-step rotary movement to the dial, means by which the dial is held to indefinitely expose an arbitrarily selected index thereon, electro-mechanical means for release and return of the dial to normal position, an adjustable plate having the inscription "Out—In at" thereon, and means by which said plate is automatically adjusted in and out of register with another of the openings in the aforesaid board at predetermined times coincident with adjustments of the dial.



2. A directory-board provided with openings adjacent to a designation thereon, a casing distant from the board and having openings in its front, a pair of telegraph apparatuses, one back of the board and the other in the casing, and each comprising a dial having the words "In" and "Out" and the numerals 1 to 12 inclusive displayed thereon at regular intervals of a circle, the several indices of the dial being observable one at a time through an adjacent opening of said board or casing, electro-mechanical means for imparting step by step rotary movement to the dial, these means in both apparatuses being in a circuit under control in proximity to said casing, means by which the dial of each apparatus is held to indefinitely expose an arbitrarily selected index thereof, electro-mechanical means for release and return of the dials to normal position, these means in both apparatuses being in another circuit also under control in proximity to the aforesaid casing, adjustable plates each having the inscription "Out—In at" thereon; and means by which said plates are automatically adjusted in and out of register with adjacent openings of the aforesaid board and casing at predetermined times coincident with adjustments of the dials.

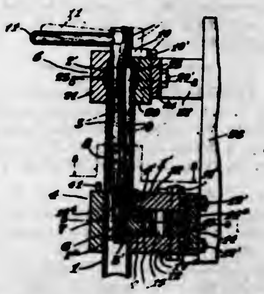
3. A telegraph apparatus comprising a spindle and its bearings, a ratchet-wheel fast on the spindle, an electromagnet provided with an armature having a detent-end engageable with the ratchet-wheel, a spring-controlled sliding rack-wheel in clutch-connection with the spindle, an electro-magnet by which to draw the rack-wheel out of clutch against spring resistance, a rack-lever engaging said rack-wheel, an electro-magnet having the armature thereof in connection with the lever, a dial fast on said spindle and provided with indices at regular intervals of a circle thereon, means under control at a distant point for energising the last named magnet separately and for simultaneously energising the other two of the magnets, means for effecting an automatic reverse movement of the spindle out of clutch with said rack-wheel, a spring-controlled movable indicator plate, a lever in connection with the plate for adjusting the same against spring-resistance, and a lever-actuating cam in connection with the aforesaid spindle.

4. A telegraph apparatus comprising a spindle and its bearings, a ratchet-wheel fast on the spindle, an electromagnet provided with an armature having a detent-end engageable with the ratchet-wheel, a spring-controlled sliding rack-wheel in clutch-connection with the spindle, an electro-magnet by which to draw the rack-wheel out of clutch against spring resistance, a rack-lever engaging said rack-wheel, an electro-magnet having the armature thereof in connection with the lever, a dial fast on said spindle and provided with indices at regular intervals of a circle thereon, a pin extending from the spindle, a stop in the path of the pin to thereby prevent overrunning of the dial, means under control at a distant point for energising the last named magnet separately and for simultaneously energising the other two of the magnets, and means for effecting an automatic reverse movement of the spindle out of clutch with said rack-wheel.

5. A pair of telegraph apparatuses each comprising a spindle and its bearings, a ratchet-wheel fast on the spindle, an electro-magnet provided with an armature having a detent-end engageable with the ratchet-wheel, a spring-controlled sliding rack-wheel in clutch connection with the spindle, an electro-magnet by which to draw the rack-wheel out of clutch against spring resistance, said electromagnets of both apparatuses being in the same circuit; a rack-lever engaging said rack-wheel, an electro-magnet having the armature thereof in connection with the lever, the lever actuating magnets of both apparatuses being in the same circuit distinct from the one aforesaid; a dial fast on said spindle and provided with indices at regular intervals of a circle thereon, means for effecting an automatic reverse movement of the spindle out of clutch with said rack-wheel, a spring-controlled movable indicator-plate, a lever in connection with the plate for adjusting the same against spring-resistance, and a lever-actuating cam in connection with the aforesaid spindle.

[Claim 6 not printed in the Gazette.]

1,157,840. CASTING APPARATUS. FREDERICK J. BRADLEY, Tacoma, Wash. Filed Dec. 10, 1914. Serial No. 876,507. (Cl. 22—116.)



1. In an apparatus of the class described, a bar having a surface at one side of its inner end conforming to the inner surface of the bed post and a surface of like conformation upon its opposite side located nearer its outer end, the inner of said surfaces having a lug-forming recess, the remaining surfaces of that part of the bar which enters the post being cut away to permit its being rocked to clear it of the retaining lug after it has been cast, and a member securable upon the end of the post and having a definitely fixing engagement with the outer end of the bar.

2. In an apparatus of the class described, a bar having a surface at one side of its inner end conforming to the inner surface of the bed post and a surface of like conformation upon its opposite side located nearer its outer end, the inner of said surfaces having a lug-forming recess, the remaining surfaces of that part of the bar which enters the post being cut away to permit its being rocked to clear it of the retaining lug after it has been cast, the outer end of said bar projecting from the post, a member and means for securing it in definite position in relation to the post, said member and the bar having registering parts which fix the position of the bar in the post.

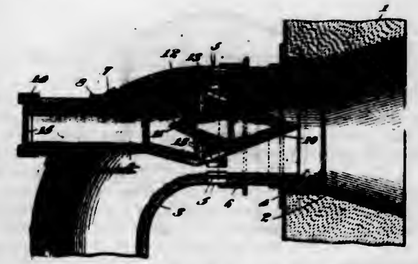
3. In an apparatus of the class described, a bar having a surface at one side of its inner end conforming to the inner surface of the bed post and a surface of like conformation upon its opposite side located nearer its outer end, the inner of said surfaces having a lug-forming recess, the remaining surfaces of that part of the bar which enters the post being cut away to permit its being rocked to clear it of the retaining lug after it has been cast, the outer end of said bar projecting from the post and having a laterally projecting finger, a member adapted to be secured in definite position upon the post and having a recess for the reception of said finger.

4. In an apparatus of the class described, a bar having a surface at one side of its inner end conforming to the inner surface of the bed post and a surface of like conformation upon its opposite side located nearer its outer end, the inner of said surfaces having a lug-forming recess, the remaining surfaces of that part of the bar which enters the post being cut away to permit its being rocked to clear it of the retaining lug after it has been cast, the outer end of said bar projecting from the post and having a laterally projecting finger, a two-part hinged clamp adapted to be secured to the foot end of the bed post, said clamp having a recess for the reception of said finger.

5. A casting apparatus for use in applying the cast footings and rail locking members to the posts of metal bedsteads, comprising a mold for exterior application to the post at the point where the rail locking member is desired and to include a hole formed in said post, means for introducing molten metal within said mold, a bar insertible within the post and having a recess therein adapted to register with said hole in the post, said bar being cut away upon opposite sides to permit rocking to clear its inner recessed end of the lug cast in said recess, a member adapted to be secured upon the outer end of the post in fixed relation with the lug-receiving hole in the post, said member and the outer end of the bar having interlocking and registering engagement fixing the position of the inner end of the bar.

[Claim 6 not printed in the Gazette.]

1,157,841. STOVE-BURNER. GRANT D. BRADSHAW, Westmont borough, Pa. Filed July 15, 1915. Serial No. 39,955. (Cl. 158—118.)

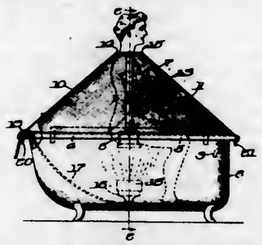


1. A gas burner comprising a burner tube, an inclined or flaring obstruction located near the exit end thereof, whereby the cross-sectional area is gradually reduced, said obstruction then tapering inwardly whereby the cross-section is gradually increased, air inlet openings near the reduced portion of said cross-section and means for regulating the size of said openings.

2. A gas burner comprising a burner tube, a plurality of openings near the exit end thereof, an air inlet tube projecting into said burner tube and increasing in diameter toward the exit end and then decreasing in size toward said exit end, whereby the area of said burner tube is first contracted and then expanded toward its exit opening; inlets in the air inlet tube, and means for controlling the size of the air inlets aforesaid.

3. A gas burner comprising a burner tube, provided with a series of openings near the exit end thereof, a slide ring damper adapted to control the size of said openings, an air inlet tube projecting into the gas burner tube aforesaid and provided on its outer end with air regulating means, said inlet tube increasing in diameter and then decreasing toward the exit end, and a plurality of air openings in the inlet tube connecting with the interior of said burner tube, whereby the mixture of gas and air is automatically controlled throughout a considerable range of pressure of entering gases.

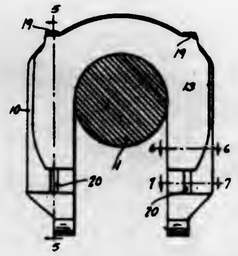
1,157,842. BATH-CABINET. JOSEPH N. BRANDELLE, Chicago, Ill. Filed Nov. 15, 1913. Serial No. 801,126. (Cl. 4—13.)



1. The combination with a bath tub of a frame in two hinged together sections adapted to overlie the edges of said tub, frame members each having a neck opening therein and hinged together, and a covering in two separate sections for said frame and frame members forming a hood or added chamber on and over said bath tub.

2. The combination with a bath tub, of the horisontal frame members 4 and 5 adapted to rest upon the edges of a bath tub, the vertical frame members 6 and 7 pivoted to said members 4 and 5, and the coverings 10 and 11 which together form the opening 12 when brought together, said members 4, 5, 6, 7 and coverings 10 and 11 folding together as specified.

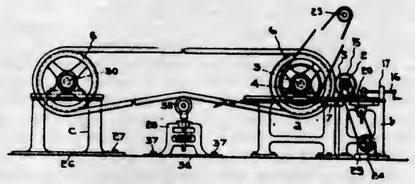
1,157,843. LOCOMOTIVE. JAMES L. CANTLON and DANIAL HURLEY, Hillyard, Wash. Filed Dec. 11, 1914. Serial No. 876,735. (Cl. 105—17.



1. In a locomotive, a removable hub-liner construction comprising a driver-box, a vertical wall on the driver box next to the hub of the locomotive, vertical grooves in said wall, a plate adapted to engage the axle of the locomotive and the said wall of the driver-box, tongues on said plate adapted to engage the grooves in said wall, means for holding said plate rigidly in relation to said driver-box wall, such means comprising set screws counter-sunk in a vertical position in the top wall of the driver-box with their heads overlapping said plate, and means whereby said plate may be removed from said wall.

2. In a locomotive, a removable hub-liner construction comprising a driver-box, grooves in the wall of the same, a plate having tongues adapted to engage the grooves in the wall of said driver-box, means for holding said plate in rigid relation with said driver-box, such means comprising set screws counter-sunk in a vertical position in the top wall of the driver-box with their heads overlapping said plate, and means whereby said plate may be driven loose from its connection with said driver-box, such means comprising openings in the lower portion of the vertical wall of the driver-box extending upwardly to the lower end of said plate whereby an instrument may be inserted to force said plate upwardly out of said grooves after said set screws have been removed.

1,157,844. STRAP-TRIMMING MACHINE. JAMES M. S. CARROLL, Westmount, Quebec, Canada. Filed Jan. 25, 1915. Serial No. 4,235. (Cl. 51—5.)

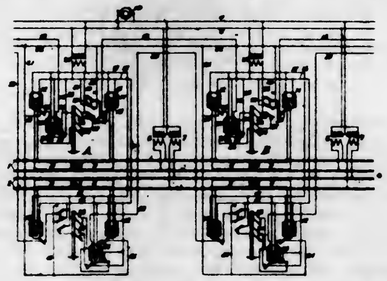


1. In a deckle strap trimming machine the combination with an emery wheel having a convex surface, of a pair of strap carrying wheels and adjustable means whereby the belt is guided, substantially as described.

2. In a deckle strap trimming machine the combination with a guide wheel and an independent frame, of an angle iron guide mounted adjustably upon the said independent frame in position to guide the strap operated upon, substantially as described.

3. In a deckle strap trimming machine the combination with a pair of guide wheels adapted to carry a strap, one being stationary and the other adjustable relatively thereto, and means for driving said stationary guide wheel, of an emery wheel having a convex surface and adjustable to and from said stationary guide wheel for the purpose of operating upon said strap, and vertically adjustable means located intermediate of said guide wheels adapted to bear upon said strap for the purpose of taking up any slack therein.

1,157,845. SIGNAL SYSTEM. CLARENCE W. COLEMAN, Westfield, N. J.; Katherine Coleman, administratrix of said Clarence W. Coleman, deceased, assignor to The Hall Switch & Signal Company, a Corporation of Maine. Filed Mar. 16, 1908. Serial No. 421,314. (Cl. 246—36.)



1. A block signal system comprising, in combination with a double track, a signal for each track, line circuits controlling said signals, and having one wire in common, means for energising the line circuits with a periodic current, and means for changing the phase of the current in either line circuit to effect the control of the corresponding signal.

2. A block signal system comprising, in combination with a double track, a signal for each track, normally-closed line circuits controlling said signals and having one wire in common, means for energising the line circuits with a periodic current, and means for changing the phase of the current in either line circuit to effect the control of the corresponding signal.

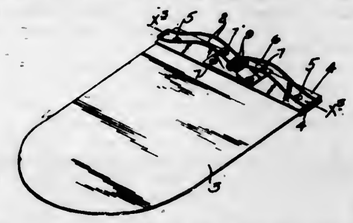
3. A block signal system comprising, in combination with a double track, a signal for each track normally at safety, normally-closed line circuits controlling said signals and having a wire in common, means for energising the line circuits with a periodic current, and means for changing the phase of the current in either line circuit to set the corresponding signal at danger.

4. A block signal system comprising home and distant signals normally clear, a normally-closed line circuit for controlling the signals, means for energising the line circuit with a periodic current, both signals being adapted to assume the danger indication when the line circuit is interrupted and the distant signal line being responsive to a change of phase of the current in the line circuit to assume the danger indication, and means for interrupting the line circuit to set both the home and distant signals in unison at danger and for changing the phase of the current in the line circuit to set the distant signal alone at danger.

5. A block signal system comprising home and distant signals, a line circuit, a line relay in the line circuit provided with a polarised circuit controller and an unpolarised circuit controller for selectively controlling the circuits of the distant and home signals respectively, means for energising the line circuit and the line relay with a periodic current, and means for interrupting the line circuit to set both the home and distant signals in unison at danger and for changing the phase of the current in the line circuit to set the distant signal alone at danger.

[Claims 6 to 31 not printed in the Gazette.]

1,157,846. HEEL-MAT FOR PIANOS. HENRY L. CRUTTENDEN and FREDERICK L. LAWRENCE, Northfield, Minn.



Filed Sept. 4, 1914. Serial No. 860,178. (Cl. 16—3.)

1. A heel mat, and yielding means insertible between an article of furniture and said mat, to frictionally hold the said mat in position, said yielding means being independent of the support for the article of furniture.

2. A heel mat having bowed springs at one edge adapted to be compressed under a portion of an article of furniture to frictionally hold the said mat in position.

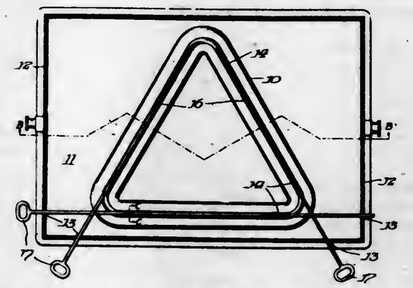
3. A heel mat provided at one edge with a bar to which it is secured, and provided on top of said bar with bowed springs secured thereto at their inner ends, and loosely engaging therewith at their outer ends, and adapted to be compressed under a portion of an article of furniture to frictionally hold said mat in position.

4. The combination with a heel mat, of upper and lower bars clamped onto one end thereof, a metallic clip secured on the intermediate portion of the upper bar, and anchoring springs made from spring steel wire bent upon itself and provided with inner ends anchored by the said clip and having outer ends resting loosely on the ends of said upper clamping bar.

1,157,847. METHOD OF AND APPARATUS FOR VENTING MOLDS. JAMES C. DAVIS, Hinsdale, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Apr. 22, 1915. Serial No. 23,038. (Cl. 22—197.)

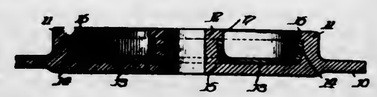
1. The method of molding which consists in placing a pattern in a flask, locating a venting tool in proximity to and in substantial parallelism with an edge of the pattern, ramming sand around said pattern and between said tool and pattern, removing said pattern and tool, said tool being withdrawn lengthwise to provide a vent opening alongside and substantially parallel with the pattern and out of communication with the casting space, substantially as described.

2. In apparatus for molding, the combination of a flask containing sand, a pattern in said flask, and a rod lying alongside and substantially parallel to an edge of said pattern, said rod upon removal being adapted to provide a vent opening substantially parallel with the edge of the casting to be formed, substantially as described.



3. In apparatus for molding, the combination of a flask containing sand, a pattern, a venting tool associated with and located substantially parallel to an edge of said pattern and maintained in proper relation thereby, said tool being adapted for removal separately from said pattern thereby leaving a venting space alongside said casting and out of communication with the casting space, substantially as described.

1,157,848. CENTER PLATE. JAMES C. DAVIS, Hinsdale, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed July 12, 1915. Serial No. 39,240. (Cl. 105—108.)



1. In a center plate construction, the combination of a cast bolster having an integral annular flange, and a hard metal washer cast interiorly of said flange, substantially as described.

2. In a center plate construction, the combination of a cast bolster, and a hard metal washer cast in the metal of the bolster and adapted to act as a bearing for a mating center plate, substantially as described.

3. In a bolster, the combination of an integral, annular flange, a hard metal disk located interiorly of said flange, the metal of the bolster being cast around the edges of said plate, substantially as described.

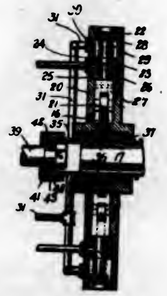
4. In a center plate construction, a bolster having an integral annular flange, and a central boss, and a hard metal bearing member interlocked with said bolster members, substantially as described.

5. In a center plate construction, the combination of a bolster wall having an integral, annular flange, and a hard metal center plate, the edges of which are bent at an angle and adapted to underlie a portion of said integral, annular flange, substantially as described.

1,157,849. STARTING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. GREGORY C. DAVISON and JOHN W. ANDERSON, New London, Conn., assignors to Electric Boat Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 2, 1915. Serial No. 5,604. (Cl. 123—181.)

1. The combination of an internal combustion engine having a plurality of cylinders, a source of supply of compressed air, a pneumatically actuated air-inlet valve on each cylinder controlling the passage of air from said source to the cylinder, a plurality of valves controlling the supply of compressed air to the inlet valves to actuate

the latter, a rotary member operatively connected to the engine shaft and adapted to actuate the controlling valves successively, and means for effecting an adjustment of the rotary member to vary the time of actuation of the air-inlet valves relative to the rotation of the engine shaft, said means maintaining the rotary member operatively connected to the engine shaft when in its adjusted position; substantially as described.



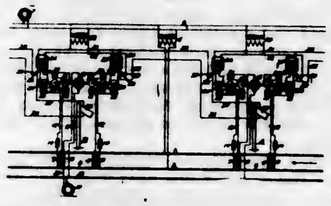
2. The combination of an internal combustion engine having a plurality of cylinders, a source of supply of compressed air, a pneumatically actuated air-inlet valve on each cylinder controlling the passage of air from said source to the cylinder, a shaft driven by the engine shaft, a cam driven thereby, an axially movable sleeve interposed between the cam and said shaft and connected to one of them by a spiral thread, and a plurality of valves arranged about the cam, adapted to be actuated successively thereby and controlling the supply of compressed air to said inlet valves to actuate them; substantially as described.

3. The combination of an internal combustion engine having a plurality of cylinders, a source of supply of compressed air, a pneumatically actuated air-inlet valve on each cylinder controlling the passage of air from said source to the cylinder, a cam driven by the engine shaft, a plurality of controlling valves arranged about said cam adapted to be actuated successively thereby and controlling the supply of compressed air to said inlet valves, means for holding the controlling valves normally out of coaction with the cam, and pneumatically operated means for moving the valves into coaction with the cam; substantially as described.

4. The combination of an internal combustion engine having a plurality of cylinders, a source of supply of compressed air, a pneumatically actuated air-inlet valve on each cylinder controlling the passage of air from said source to the cylinder, a cam driven by the engine shaft, a plurality of controlling valves arranged about said cam and controlling the supply of compressed air to said inlet valves, operating means for said controlling valves adapted to be actuated successively by said cam, means normally holding said operating means out of engagement with the cam, and pneumatically operated means for moving said operating means into engagement with the cam, substantially as described.

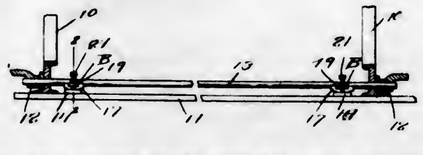
1,157,850. TRAFFIC-CONTROLLING SYSTEM FOR RAILWAYS. ALBERT V. T. DAY, New Rochelle, N. Y., assignor to The Hall Switch and Signal Company, a Corporation of Maine. Filed Oct. 29, 1908, Serial No. 460,128. Renewed Nov. 12, 1910. Serial No. 592,080. Cl. 246—36.)

1. An electric traffic-controlling system for railways comprising a traffic-controlling device, a controlling circuit, an electric translating device controlling the traffic-controlling device and amplifying apparatus connecting the translating device and the controlling circuit and consisting of a plurality of generators arranged with the field of the first energized by the controlling circuit, the armature of the last energizing the translating device, and the intermediate fields energized by the intermediate armatures whereby said translating device is governed by the controlling circuit.



2. An electric signal system for railways comprising a track signal, a relay controlling the signal, a track circuit controlling the relay, a source of alternating current for energizing the track circuit, and connections between the track circuit and the relay comprising a plurality of generators of which the first has its field energized from the track circuit, the last energizes the relay, and each generator except the first has its field energized by another of the generators.

1,157,851. ADJUSTABLE BEARING. MEDICUS F. DAY, Belton, S. C., assignor of one-half to Ellis R. Brock, Belton, S. C. Filed Aug. 27, 1913. Serial No. 786,998. (Cl. 64—52.)



1. An adjustable bearing comprising a base plate provided with means for attachment to a fixed part and having recesses in its upper side, a bearing block provided with a groove for receiving the lower portion of a shaft, and adjusting screws engaged through said bearing block on opposite sides of the groove and having their lower ends rotatably engaged in said recesses respectively whereby the rotation of said screws will raise and lower the bearing block relatively to the base plate.

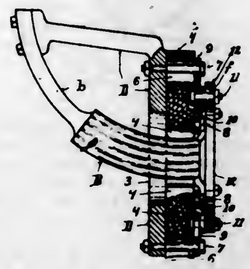
2. An adjustable bearing comprising a base plate, a block provided in its upper surface with a semi-cylindrical groove constituting a bearing for a shaft, means for supporting one side of said block from said base plate, and screw threaded means for adjustably supporting the other side of said block whereby said bearing groove may be raised and lowered.

3. In a loom, the combination with the rocker shaft, of fixed bearings surrounding and supporting said shaft, blocks provided with bearing grooves in their upper faces below and fitting against said shaft near and between said fixed bearings, and means for supporting and vertically adjusting said blocks, whereby they will support said shaft and prevent vibration.

1,157,852. METHOD OF PRODUCING SHEET-METAL ELBOWS. ADOLF DIECKMANN, Cincinnati, Ohio. Filed Oct. 18, 1911. Serial No. 655,278. (Cl. 153—70.)

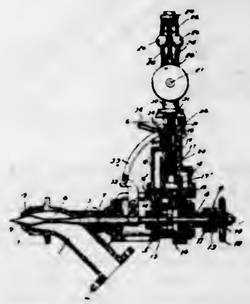
1. The method of producing sheet metal elbows of corrugated or similar cross sectional pattern, which comprises bending the periphery of a section of a plain elbow at symmetrically disposed points by opposed internal and external pressures, releasing said bending pressures, bending the periphery at different symmetrically disposed points by like pressures, and continuing the above recited operations in sequence the desired distance around and along the elbow.

2. The method of producing sheet metal elbows of cross sectional pattern other than circular, which comprises bending the periphery of a longitudinal section of an elbow of circular cross section at symmetrically disposed points by the internal pressure of a mandrel of substantially less diameter than the elbow and opposed external pressures, releasing said bending pressures, bending the periphery at different symmetrically disposed points by like pressures, and continuing the above recited operations in sequence the desired distance around and along the elbow.



3. The method of producing sheet metal elbows of corrugated or similar cross sectional pattern, which comprises bending the periphery of a section of a plain elbow at diametrically opposite points by opposed internal and external pressures, releasing said bending pressures, bending the periphery at different diametrically opposite points by like pressures, and continuing the above operations in sequence the desired distance around and along the elbow.

1,157,853. HYDRAULIC NOZZLE. WILLIAM A. DOBLE, San Francisco, Cal., assignor to The Pelton Water Wheel Company, San Francisco, Cal., a Corporation of California. Filed Apr. 10, 1913. Serial No. 760,106. (Cl. 253—24.)



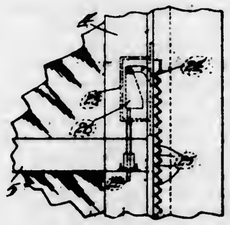
1. In a hydraulic nozzle, a body part having a connected nozzle part and a piston chamber, a valve for the nozzle outlet, a piston on the valve rod for actuating the same, a pilot valve cylinder positioned on the body part, having a fluid pressure inlet, and outlets communicating with the piston chamber at opposite sides of said piston, a pilot valve for regulating said outlets, a governor for actuating the pilot valve, a fluid pressure cut off positioned within the valve cylinder, a spring for normally holding the cut off in one position, and means connected to the valve stem acting in opposition to the spring for actuating the cut off in one direction.

2. In a hydraulic nozzle, a body part, a nozzle and a piston chamber, a valve for said nozzle, a piston on the valve rod for actuating the same, a pilot valve cylinder positioned on the body part of the nozzle, having a fluid pressure inlet, and outlets communicating with the piston chamber at opposite sides of said piston, a pilot valve for regulating said outlets, a governor for actuating the pilot valve, a fluid pressure cut off sleeve interposed between the pilot valve and its cylinder, a bracket on the piston rod, a link connected to said bracket, an auxiliary lever connected with the link and pivotally supported at its opposite end, said auxiliary lever having a movable connection with said sleeve, and a spring interposed between one end of the sleeve and a fixed part on the device.

3. In a device of the class described, the combination of a nozzle having a horizontal extension forming a piston chamber, a needle valve for regulating the orifice of the nozzle, a piston on the rod positioned within the piston chamber, an upright pilot valve casing positioned on said extension of the nozle, said casing having in the wall thereof channels communicating with the interior of the casing and with the interior of the piston chamber one at each side of the piston, a piston valve in the pilot valve chamber, having a valve rod projecting upwardly above the valve casing, a governor positioned on the valve casing and connected with said piston valve rod, a fluid pressure inlet port for the pilot valve cylinder, a sleeve cut off interposed between the pilot valve and the pilot valve casing, a spring sleeved upon the pilot valve rod interposed between the end of said cut off sleeve and governor support, and a movable connection between said sleeve and the nozzle valve rod, substantially as and for the purpose described.

4. In a hydraulic nozzle construction, the combination of a horizontally disposed body part, a nozzle secured thereto, a needle valve for the outlet of the nozzle, said valve having a horizontally disposed stem projecting through the body part, and said body part having a fluid pressure chamber, and an upright extension having vertically disposed passageways registering with ports in the wall of said body part whereby to establish communication with opposite ends of the fluid pressure chamber, a piston secured to said valve stem at a point within said fluid pressure chamber, a pilot valve in the upward extension of the body part, a cut off sleeve interposed between the pilot valve and the inner annular wall of the upright extension, said cut off sleeve having openings, and said annular wall of the upward extension having openings, a governor, and said sleeve having a part projecting above said upright extension, and a lever connection between said projecting part of the sleeve and the needle valve stem, substantially as and for the purpose described.

1,157,854. AUTOMATIC WINDOW-CATCH. FREDERICK W. DOERING, Jr., St. Louis, Mo. Filed Mar. 2, 1914. Serial No. 821,921. (Cl. 16—18.)

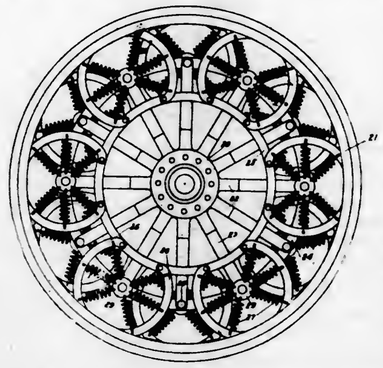


1. The combination of a window sash, and a window frame, with a window catch carried by said sash, a rack secured to said frame, said catch comprising a pivotally mounted lever, a pendulum pivotally secured to one end of said lever, a casing for said lever and pendulum, said pendulum adapted to hold one end of said lever against said rack, said pendulum, when elevated, adapted to disengage said lever from said rack, and a lifting member carried by said sash having one end extending into said casing adapted to elevate said pendulum.

2. The combination of a window sash and a window frame, with a window catch carried by said sash, and a

rack secured to said frame, said catch comprising a pivotally mounted lever, and a pendulum pivotally secured to one end of said lever, said pendulum adapted to hold one end of said lever against said rack, said pendulum, when elevated, adapted to disengage said lever from said rack, and a thumb lever carried by said sash for elevating said pendulum.

1,157,855. RESILIENT WHEEL. JOHN R. ELLIS, Memphis, Tenn. Filed Sept. 16, 1914. Serial No. 861,940. (Cl. 152—32.)



1. In a wheel, a rim, a wheel center smaller in diameter than the rim, and two series of groups of springs arranged between the wheel center and the rim, each of said groups comprising a plurality of radiating springs secured at their inner ends to the wheel center and anchored at their outer ends to the rim, the two series being spaced apart axially of the wheel.

2. In a wheel, a rim, a wheel center smaller in diameter than the rim, and two series of groups of springs arranged between the wheel center and the rim, each of said groups comprising a plurality of radiating springs secured at their inner ends to the wheel center and anchored at their outer ends to the rim, the two series being spaced apart in the direction parallel to the axis of the wheel, and the several groups of one series alternating with the groups of the other series in the circumferential direction.

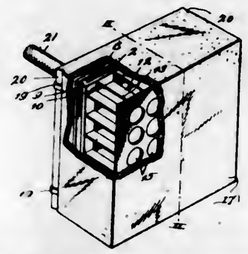
3. In a wheel, a rim, a wheel center smaller in diameter than the rim, two series of frame-like structures extending inwardly from the rim on opposite sides of the wheel center and overlapping the outer portion of the wheel center, and a series of radiating springs arranged within each of said frame-like structures and connected at their inner ends to the wheel center at a distance from the rim approximately equal to the length of one of the springs.

4. In a wheel, a rim, a hub, two rings lying between the hub and the rim and spaced apart from each other in the axial direction, members connecting each of said rings to the rim and forming therewith two series of frame-like structures, spokes extending from the hub between said rings, there being as many spokes as there are frame-like structures, and a plurality of springs connected to each of said spokes at about the middle of the corresponding frame-like structure and radiating to anchoring points on that structure.

5. In a wheel, a rim, a hub, two rings lying between the hub and the rim and spaced apart from each other in the axial direction, members connecting each of said rings to the rim and forming therewith two series of frame-like structures, spokes extending from the hub between said rings, there being as many spokes as there are frame-like structures, and a spring cushion in each of said frame-like structures connected to the corresponding spoke at about the center of that frame-like structure.

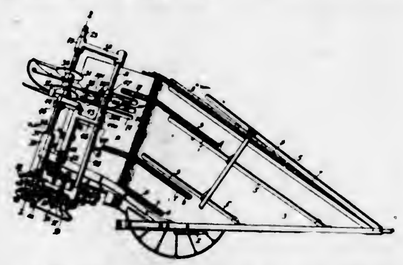
[Claims 6 and 7 not printed in the Gazette.]

1,157,856. LETTER-PLATE. JUDSON C. EURANK, Chicago, Ill. Filed Aug. 8, 1914. Serial No. 855,868. (Cl. 40—133.)



A device of the class described consisting of a plate having a plurality of threaded sockets formed therein, a plurality of intersecting strips abutting the plate to provide cells, lamps threaded in said sockets and extending into the cells, a front wall abutting the outer ends of the strips and having a plurality of openings therein which register with the cells, and a one-piece glass cover having a front wall and side walls inclosing the cells with the first mentioned front wall flush against the inner face of the front wall of the cover, while the side walls thereof engage the margins of the plate and of the first mentioned front wall.

1,157,857. CORN-HARVESTER. GEORGE A. FARRALL and CHRISTIAN MAUL, Batavia, N. Y., assignors to The Johnston Harvester Company, Batavia, N. Y., a Corporation of New York. Filed June 19, 1914. Serial No. 846,083. (Cl. 56—119.)



1. A harvester comprising a binder deck, means for feeding the stalks past said deck, a needle arranged on one side of the path of said stalks, and a knotter mechanism arranged on the opposite side of said path and comprising an upright knotter shaft, a bearing sleeve in which said knotter shaft can slide but is compelled to turn therewith, a bearing in which said bearing sleeve can turn but is incapable of sliding therein, and means for turning said bearing sleeve.

2. A harvester comprising a binder deck, means for feeding the stalks past said deck, a needle arranged on one side of the path of said stalks, a knotter mechanism arranged on the opposite side of said path and comprising an upright knotter shaft, a bearing sleeve in which said knotter shaft can slide but is compelled to turn therewith, a bearing in which said bearing sleeve can turn but is incapable of sliding therein, means for turning said bearing sleeve, and means for raising and lowering said knotter mechanism comprising a yoke connected with said knotter shaft and having a screw shaft engaging said screw nut, and a fixed bearing in which said screw shaft turns but is incapable of axial movement.

3. A harvester comprising a binder deck, means for feeding the stalks past said deck, a needle arranged on one side of the path of said stalks, a knotter mechanism arranged on the opposite side of said path and comprising

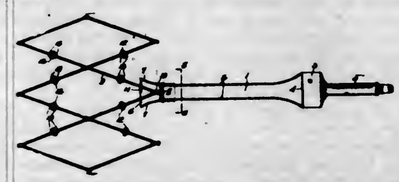
an upright knotter shaft, a bearing sleeve in which said knotter shaft can slide but is compelled to turn therewith, a bearing in which said bearing sleeve can turn but is incapable of sliding therein, means for turning said bearing sleeve, and means for raising and lowering said knotter mechanism comprising a yoke connected with said knotter shaft and having a threaded shank, a screw sleeve having an outer screw thread engaging with said threaded shank and also provided with an inner screw thread, a screw shaft having an external screw thread engaging with the inner thread of said screw sleeve, and a fixed bearing in which said screw shaft turns but is incapable of axial movement.

4. A harvester comprising a binder deck, means for feeding the stalks past said deck, a needle arranged on one side of the path of said stalks, a knotter mechanism arranged on the opposite side of said path and comprising an upright knotter shaft, a bearing sleeve in which said knotter shaft can slide but is compelled to turn therewith, a bearing in which said bearing sleeve can turn but is incapable of sliding therein, means for turning said bearing sleeve, and means for raising and lowering said knotter mechanism comprising a yoke connected with said knotter shaft and having a threaded shank, a screw sleeve having an outer screw thread engaging with said threaded shank and also provided with an inner screw thread, a screw shaft having an external screw thread engaging with the inner thread of said screw sleeve, a clamping nut arranged on said screw sleeve and engaging with said yoke, and a fixed bearing in which said screw shaft turns but is incapable of axial movement.

5. A harvester comprising a binder deck, means for feeding the stalks past said deck, a needle arranged on one side of the path of said stalks, a knotter mechanism arranged on the opposite side of said path and comprising an upright knotter shaft, a bearing sleeve in which said knotter shaft can slide but is compelled to turn therewith, a bearing in which said bearing sleeve can turn but is incapable of sliding therein, means for turning said bearing sleeve, and means for raising and lowering said knotter mechanism comprising a yoke connected with said knotter shaft and having a threaded shank, a screw sleeve having an outer screw thread engaging with said threaded shank and also provided with an inner screw thread, a screw shaft having an external screw thread engaging with the inner thread of said screw sleeve, and a fixed bearing in which said screw shaft turns but is incapable of axial movement, the screw connection between said sleeve and yoke and between said sleeve and shaft being of different pitches.

[Claims 6 to 13 not printed in the Gazette.]

1,157,858. CLOTHES-RACK. EDNA A. FOSTER, Boston, Mass. Filed Nov. 23, 1914. Serial No. 873,444. (Cl. 68—34.)



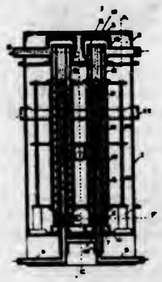
1. A rack comprising an arm made of a single piece of metal channeled throughout the greater part of its length, having an integral handle extending from its rear end, and a flattened part to form a rest between said handle and said channeled part, and one or more folding bars supported at the forward end of said arm.

2. A rack comprising an arm, a folding section hinged to the forward end of the arm and having forwardly diverging side walls, and an expansible frame consisting of a number of pairs of crossed bars, one pair of which is pivoted to said folding section between said side walls.

3. A rack comprising an arm of channel metal, a folding section of channel metal overlapping the end of said arm, the side walls of said folding section being pivoted to the side walls of said arm, and a number of folding bars pivoted to the bottom of said folding section and supported thereby.

4. A rack comprising an arm, a relatively broad, shallow rest at the rear end of said arm, a shoulder at the rear of said rest, and a handle extending rearwardly from said shoulder.

1,157,859. OZONE-GENERATOR. WILLIAM O. FREET, Hackensack, N. J., assignor to Steynis Ozone Company, a Corporation of New York. Filed Sept. 9, 1912. Serial No. 719,295. (Cl. 204—32.)



1. In an apparatus for the production of ozone, a discharge electrode having a spirally-grooved surface.

2. In an apparatus for the production of ozone, an airtight box inclosing the entire apparatus, a tube removably inserted in said box and having a portion of its walls cut away, and a substance adapted to absorb moisture in said tube.

3. In an apparatus for the production of ozone, an airtight box inclosing the entire apparatus, a stationary electrode and a removable electrode surrounding the stationary electrode.

4. In an apparatus for the production of ozone, an airtight box containing a stationary electrode having a spirally-grooved surface and a removable electrode surrounding the stationary electrode.

5. In an apparatus for the production of ozone, a dielectric tube and a cap closely surrounding said tube, said cap being provided with an orifice and a transparent cover.

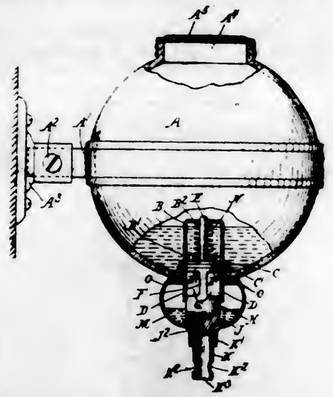
[Claims 6 to 9 not printed in the Gazette.]

1,157,860. SOAP-FOUNTAIN. HARRY H. GAGE, Chicago, Ill. Filed Nov. 26, 1913. Serial No. 803,104. (Cl. 221—104.)

1. A liquid measuring and discharge device comprising an apertured reservoir, an apertured valve bowl in register therewith, a measuring valve housing located between and partially within each of them, an aperture for communication with each of them, and having a rigid two-part valve mounted for reciprocation therein, the minimum distance between said apertures being greater than the distance between the adjacent sides of the valve parts, a discharge sleeve extending downwardly from the bowl, a hollow valve stem slidable therein and mounted upon the plunger and apertured adjacent thereto.

2. A liquid measuring and discharge device comprising an apertured reservoir, an apertured valve bowl in register therewith, a measuring valve housing located between and partially within, each of them, an aperture for communication with each of them, and having a rigid two-part valve mounted for reciprocation therein, the minimum distance between said apertures being greater than the distance between the adjacent sides of the valve parts, a discharge sleeve extending downwardly from the bowl, a hollow valve stem slidable therein and mounted upon the plunger and apertured adjacent thereto, a valve seat surrounding the upper edge of said sleeve

and yielding means for holding the end of the plunger seated upon said valve seat.



3. A liquid measuring and discharge device comprising an apertured reservoir, an apertured valve bowl in register therewith, a measuring valve housing located between and partially within each of them, an aperture for communication with each of them, and having a rigid two-part valve mounted for reciprocation therein, the minimum distance between said apertures being greater than the distance between the adjacent sides of the valve parts, a discharge sleeve extending downwardly from the bowl, a hollow valve stem slidable therein and mounted upon the plunger and apertured adjacent thereto, a valve seat surrounding the upper edge of said sleeve and yielding means for holding the end of the plunger seated upon said valve seat, the bowl being apertured adjacent the reservoir to permit air circulation therein.

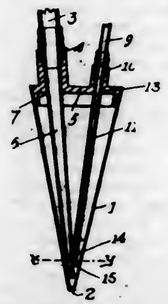
4. A soap fountain comprising a discharge apertured reservoir, an apertured valve bowl located beneath said discharge aperture, said bowl being open for ventilation, a combined measuring and valve plunger located between and partially within each of them, a valve housing partially in said reservoir and partially in said bowl, an apertured tubular valve mounted thereon to control the discharge from the valve bowl, said valve housing being apertured within the reservoir and within the bowl, the distance between said apertures being such that they are never open to permit free passage from the reservoir to the bowl, the valve being necked down to provide an annular measuring compartment and yielding means for holding said valves normally in the closed position.

5. A liquid measuring and discharge device, comprising a discharge apertured reservoir and apertured valve bowl in register therewith, a fixed valve housing located partially in said reservoir and partially in said bowl and apertured within each, a two-part valve mounted for reciprocation within said housing, the two parts being connected by a stem, the distance between the adjacent edges of the apertures being greater than the distance between the adjacent sides of said valve parts, a discharge sleeve downwardly extending from said receptacle and a hollow valve stem slidably mounted therein carried by said valve, said valve stem being apertured adjacent its end and adjacent the valve, yielding means for holding said valve and stem normally down in closed position, the relative positions of the apertures and valve parts being such that when in such closed position the upper portion of the valve is below the upper apertures in the housing.

[Claims 6 and 7 not printed in the Gazette.]

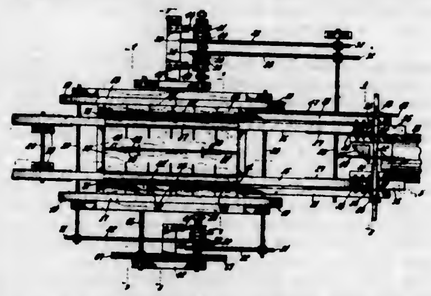
1,157,861. NOZZLE. MICHAEL JOSEPH GALVIN, North Bay, Ontario, Canada. Filed Nov. 6, 1914. Serial No. 870,601. (Cl. 137—80.)

A device of the class described comprising a primary nozzle, a secondary nozzle having a diagonally cutaway lower portion, said portion located adjacent the lower end of said primary nozzle, a casing for inclosing said



nozzles comprising a hollow conical body having an outlet opening at its apex, and closure means for the base of said conical body supporting said nozzles.

1,157,862. BRICK-MACHINE. HERMAN J. GERBSCH, Wausau, Wis. Filed May 26, 1915. Serial No. 30,525. (Cl. 25—112.)



1. In a brick machine, the combination with a clay kneading machine furnishing an uninterrupted flow of clay through a die opening, a conveyer for conducting the column of clay from the die opening of the clay kneading machine, a suitably operated cut-off means for cutting off a bar of clay of predetermined length from the end of the column, a table to which the cut off bar of clay is delivered by the conveyer, a series of stationary cutters on the table at one side of the conveyer, a series of plunger members on the table at the other side of the conveyer and adapted to move across the conveyer to force the bar of clay through the cutters, and means for driving the conveyer at an increased speed upon the operation of the cut-off means and until the bar of the clay is in position to be operated upon by the plungers.

2. In a brick machine, a table, a series of vertical cutters thereon, a series of reciprocating plungers adapted in their movements to receive the cutters between them, a clay kneading machine for producing a continuous flow of clay column through a die opening, a cut-off means for cutting off the end of the clay column, and a conveyer operating at a greater speed than the flow of clay from the clay kneading machine for conducting the bar of clay cut off from the column to the table between the plungers and the cutters.

3. A brick machine, comprising a table, a series of cutters thereon, a series of reciprocating plungers adapted in their movements to receive the cutters between them, a pair of shafts carrying pulleys, a conveyer belt passing around the pulleys and upon the table between the plungers and the cutters, a drive shaft, a cut-off means driven therefrom and positioned beyond the receiving end of the conveyer belt, a clay kneading machine for producing a

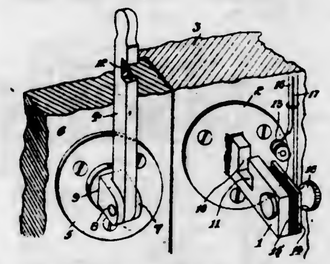
continuous flow of clay through a die opening across the path of travel of the cut-off means and toward the conveyer belt, a low speed driving connection and a high speed driving connection between the drive shaft and one of the shafts of the said pair of shafts, and cam operated clutches for alternately engaging the two driving connections for causing the conveyer belt to travel at a low speed while the column of clay rests thereon and for causing the conveyer belt to travel at a higher speed upon the operation of the cut-off means to rapidly deliver the cut off bar of clay to the space between the plungers and the cutters.

4. A brick machine, comprising a table, a delivery belt and a discharge belt traveling thereon, cutters mounted on the table between the said belts, a series of reciprocating plungers adapted to move across the delivery belt and to receive the cutters between them, a clay kneading machine for delivering a flow of clay through a die opening to the delivery belt, a cut-off means for cutting off a bar from the end of the clay column, a drive shaft, a slow speed driving connection and a high speed driving connection between the drive shaft and the delivery belt, cam operated clutches for said driving connections causing the delivery belt to move at a high speed following the operation of the cut-off means and until the clay bar is delivered to the table and for causing the delivery belt to travel at a slow speed at other times, a driving connection between the drive shaft and the discharge belt, a cam controlled clutch connection therefor causing the discharge belt to remain idle during the movements of the plungers toward the cutters to receive the bricks cut off thereby.

5. In a brick machine, a series of cutters, a series of reciprocating plungers adapted to operate upon a bar of clay placed between the plungers and the cutters and to receive the cutters between the plungers during their movements, and remolding partitions in alinement with the cutters for smoothing the surface of the bricks forced between the cutters by the plungers.

[Claims 6 to 10 not printed in the Gazette.]

1,157,863. COMBINED BURGLAR-ALARM AND LOCK. ALBAN HAMELIN, Montreal, Quebec, Canada, assignor of one-half to Hamlau's Patents Company, Montreal, Quebec, Canada. Filed June 29, 1914. Serial No. 848,078. (Cl. 177—314.)



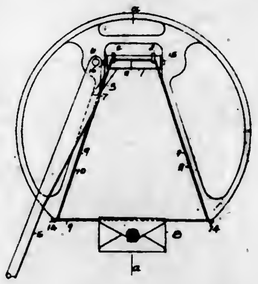
1. In a device of the class described, a bolt and a staple adapted to mutually engage and disengage, said bolt and staple being respectively secured to two relatively movable elements having means for interlocking, means between said bolt and staple permitting a slight relative movement and an electric alarm device adapted to be brought into operation by said relative movement.

2. In a device of the class described, a latch and a staple adapted to lock two relatively movable elements, the engagement of said latch and staple being such that a limited relative movement is permitted between said elements, electric alarm devices connected to said staple and adapted to come into operation to sound an alarm when the aforesaid limited movement takes place, and means for maintaining the alarm after returning said elements from the limited movement position.

3. In a device of the class described, the combination with two relatively movable elements, of a staple secured to one of said elements and a latch secured to the other element, said latch adapted to be swung into engagement with said staple to lock the two elements in a closed position, the means of engagement between said latch and staple permitting a limited relative movement of said elements, a contact carried by said staple and insulated therefrom, an electric terminal carried by said staple, an electric terminal on said plate, bell circuit wires connected to said terminals, and an electric bell in said circuit, said contact being touched by the latch to ring the alarm only when the aforesaid limited movement takes place, and a pivotal connection between the inner end of said latch and its support whereby the outer end of the latch remains in contacting position when the elements are reclosed after having reached the limited movement position.

4. In a device of the class described, the combination with two relatively movable elements, of a staple rigidly secured to one of said elements and having a slot in its upper edge with a right angular extension, a latch adapted to enter said staple notch, a supporting plate for said latch rigidly secured to the other of said elements, a knuckle swivelly connected to said supporting plate and a pivotal connection between said knuckle and the inner end of said latch, said staple and latch being adapted to lock said elements in a closed position allowing a slight relative movement by reason of said notch extension, a contact plate carried by said staple and insulated therefrom, an electric terminal carried by said staple, an electric terminal on said plate, bell circuit wires connected to said terminals and an electric bell in said circuit, said contact being touched by the latch to ring the alarm only when the aforesaid limited movement takes place.

1,157,864. TRAIN ORDER OR MESSAGE DELIVERING DEVICE. THOMAS HARTSOOK, Logansport, Ind. Filed May 8, 1915. Serial No. 25,499. (Cl. 258—3.)



1. In a device of the character described, a frame, a shaft revoluble therein, a slotted handle pivotally mounted on the frame and locking means on said shaft for coöperation with said handle, and means for holding a train order within the frame and allowing the ready release of the order only.

2. The combination of a slotted handle, a frame and a shaft, means for pivoting the handle to the shaft, means for pivoting the shaft to the frame, means provided on shaft for engaging the handle, means also on shaft for engaging a train order and readily releasing same only. Substantially as described.

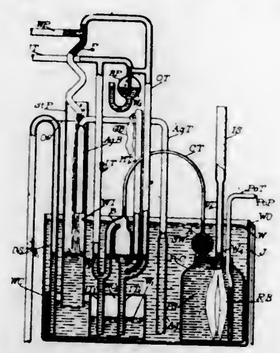
3. In a device of the character described, a frame, a shaft revolubly mounted therein, a slotted handle pivotally connected with said frame, means coöperating with said frame and handle to lock the shaft against rotation, and means on said frame connected with said shaft for holding a train order and releasable by the revolution of said shaft when unlocked.

1,157,865. APPARATUS FOR CONVEYING AND DISTRIBUTING PAPERS AND THE LIKE. WILLIAM M. HASBERG and AXEL W. SWANLUND, Chicago, Ill., assignors to Sears, Roebuck and Company, Chicago, Ill., a Corporation of New York. Filed Mar. 14, 1914. Serial No. 824,607. (Cl. 193—8.)



An apparatus for conveying papers and the like having, in combination, a plurality of upwardly opening passageways adapted to receive and guide papers or the like, said passageways terminating at different distances from the head of the apparatus to discharge the papers at different receiving stations, means beneath said passageways to receive the discharged papers, a lower return passageway beneath said receiving means, guide wheels at opposite ends of the apparatus, an endless sprocket chain passing around said guide wheels with its upper run above the upper passageways, and with its lower run above the lower passageway, the upper and lower runs of the chain being in approximately the same vertical plane, means for driving said chain, and a plurality of cross pins carried by said chain, the pins at the upper run of the chain being adapted to engage the papers in the upper passageways and move them toward the receiving stations while the pins in the lower run of the chain are adapted to engage the papers in the lower passageway and move the papers in the opposite directions to the head of the apparatus.

1,157,866. TEMPERATURE-CONTROLLING APPARATUS. JOSEPH W. HAYS and CHARLES W. HAYS, Chicago, Ill. Filed Sept. 14, 1914. Serial No. 861,737. (Cl. 23—3.)



1. A gas analyzer consisting of tube-connected gas measuring and absorber vessels, means for forcing the gas to be analyzed from the measuring to the absorber vessel and means for maintaining the gas at constant temperature during the measuring and absorbing operations.

2. A gas analyzer consisting of tube connected gas measuring and absorber vessels, means for maintaining both of said vessels at common temperature and for transferring gas from one of said vessels to the other.

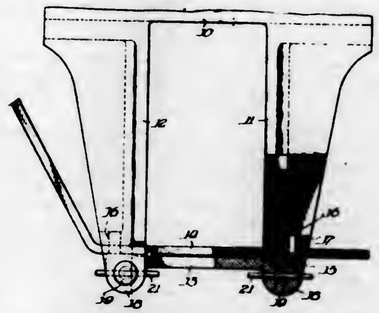
3. A gas analyzer consisting of connected gas measuring and gas absorber vessels, means for transferring gas from the one vessel to the other and means for preventing outside agencies from causing change of volume of the gas when in said vessels.

4. A gas analyzer consisting of tube connected gas measuring and absorber vessels, means for maintaining both of said vessels at common temperature and means for passing gas back and forth between said vessels.

5. A gas analyser consisting of gas measuring and absorber vessels and a common jacketing medium completely surrounding said vessels.

[Claims 6 to 8 not printed in the Gazette.]

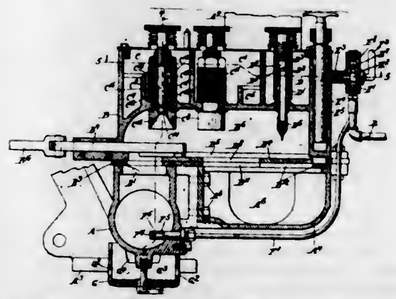
1,157,867. CAR-TRUCK PEDESTAL. WILLIAM C. HEDGCOCK, Chicago, Ill., assignor to American Steel Foundries, Chicago, Ill., a Corporation of New Jersey. Filed Mar. 3, 1915. Serial No. 11,665. (Cl. 105—113.)



1. In a car truck, the combination of a pedestal having jaws, a tie strap and a bar, said strap and bar serving to close the opening between said jaws, said bar, strap and jaws being interlocked whereby the lower ends of the jaws are securely tied together, substantially as described.

2. In a car truck pedestal including in combination, depending jaws, a tie strap and a bar, said bar having portions which serve to interlock the parts, and pins engaging said strap and said jaws and removably uniting the jaws, substantially as described.

1,157,868. CARBURETER. WILLIAM H. C. HIGGINS, Jr., Laporte, Ind., assignor to M. Rumely Company, Laporte, Ind., a Corporation of Indiana. Filed Mar. 8, 1913. Serial No. 752,906. (Cl. 123—180.)

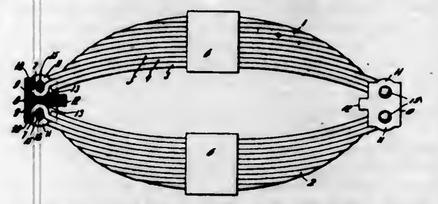


1. A carbureter comprising a carbureting chamber, liquid reservoirs discharging thereinto, a manifold through which the carbureter discharges, a pump and means for controlling it to inject liquid fuel in a finely divided condition into the manifold and carbureting chamber and means for controlling it to pump liquid into one of said liquid reservoirs.

2. A carbureter comprising a carbureting chamber, liquid reservoirs discharging thereinto, a manifold through which the carbureter discharges, a pump and means for controlling it to inject liquid fuel in a finely divided condition into the manifold and carbureting chamber, means for controlling it to pump liquid into one of said liquid reservoirs, and a housing containing said pump, reservoirs and carbureting chamber all in fixed relation each to the other.

1,157,869. SPRING. FRANK F. HOEFFLE, Louisville, Ky. Filed Apr. 1, 1915. Serial No. 18,432. (Cl. 105—121.)

1. A spring end support comprising a member having recessed and adjacent plane seat surfaces, adapted alternately to sustain an end of an elliptic spring section.



2. A spring end support for an elliptic spring of manifold plate section, comprising a member having recessed and adjacent plane seat surfaces at opposite sides of the spring major axis, each surface adapted to be engaged by an element of the spring sections.

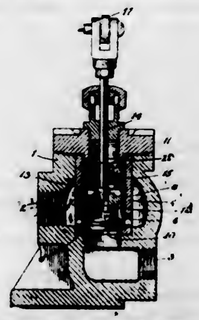
3. An elliptic spring composed of opposing manifold plate sections, each section having a main plate and a second plate longitudinally overlapping said main plate, and a bearing member intervening the adjacent ends of said sections, having a recessed and plane bearing surface progressively arranged on each of the opposite sides of said member, said recessed bearing surfaces adapted to relatively receive and confine the extremities of the second plate and provide a fulcrum therefor.

4. A spring end support comprising a member having upon each of its opposite sides adjacently arranged recessed and plane seat surfaces, adapted to independently respectively fulcrumly anchor and support relatively adjacent spring extremities.

5. A spring end support comprising a member having oppositely arranged sockets and plane seat surfaces to independently fulcrumly anchor and support respectively different members relatively to each section of adjacent elliptic spring extremities.

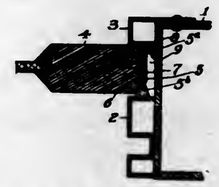
[Claims 6 to 14 not printed in the Gazette.]

1,157,870. PRESSURE-CONTROLLED VALVE. ARTHUR M. HOUSER, Chicago, Ill., assignor to Crane Company, Chicago, Ill., a Corporation of Illinois. Original application filed June 9, 1910, Serial No. 565,999. Divided and this application filed Jan. 6, 1911. Serial No. 601,118. (Cl. 137—4.)



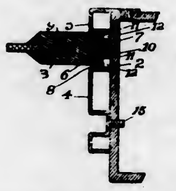
A pressure controlled valve comprising a casing having a diaphragm provided with an opening therethrough, a bushing in the casing and constructed to extend therein to said opening, a piston valve movable in said bushing to control the opening and composed of a piston and a valve disk of similar diameter united by an intermediate reduced stem portion formed with a restricted exhaust passage extending axially therethrough and of the disk, said bushing forming with the said reduced portion an intermediate annular pressure chamber and having its lower end portion ported to admit pressure to the said intermediate chamber which normally is in register therewith, there being a back pressure chamber above the piston which is adapted to receive a leakage of pressure from the intermediate chamber and past the piston, and an auxiliary valve seated at the upper terminal of said restricted passage, actuation of which permits the piston and disk to have guided upward movement in the bushing to a position where the disk restricts the admission of pressure to the intermediate pressure chamber to balance the valve.

1,157,871. WEATHER-STRIPPING. DANIEL HOYT, East Orange, N. J., assignor of one-half to The National Lock Washer Company, Newark, N. J., a Corporation of New Jersey. Filed June 20, 1914. Serial No. 846,269. (Cl. 20—69.)



The combination of a window frame having side posts carrying inside and outside sash stops forming guideways for a sash, a sash movable in the guideways, said sash narrower than the width of the guideways and of less width than the distance between the opposite posts, the side edges of said sash equipped with a felt weather strip so arranged that it will compensate between the size of the sash and the window frame, thereby the sash will be held resiliently against the outside stops and resiliently between the side posts, substantially as described.

1,157,872. WEATHER-STRIPPING. DANIEL HOYT, East Orange, N. J., assignor of one-half to The National Lock Washer Company, Newark, N. J., a Corporation of New Jersey. Filed Jan. 16, 1915. Serial No. 2,610. (Cl. 20—69.)

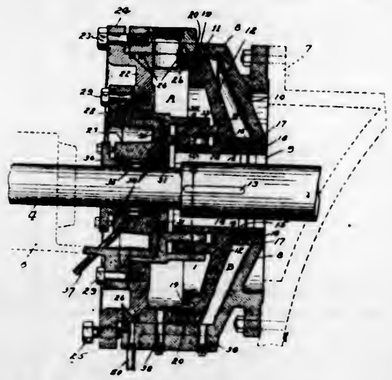


1. The combination of a window frame, said frame having side posts carrying inside and outside sash stops forming guide-ways for a sash, a sash of less thickness than the width of said guideways and adapted to move therein, a weather strip secured to each side edge of said sash comprising a strip of thick felt made wider than the guideways, said felt having a free edge at each side thereof, one edge adapted to bear against the inside stop and the other edge adapted to bear against the outside stop, the free edges of the felt being compressed between the stops, recesses formed at the sides of the free edges of the felt whereby the felt may have space to expand sidewise into the recesses when compressed edgewise by the stops and thereby prevent the felt from becoming interposed between the faces of the sash and the stops.

2. The combination of a window frame, said frame having side posts carrying inside and outside sash stops form-

ing guideways, a sash adapted to move in the guideways, and a weather strip secured to each side edge of the sash, said weather strip comprising a strip of thick felt wider than the guideways, one edge of the felt extending slightly beyond the outside face of the sash and the other edge of the felt extending a much greater distance beyond the inside face of the sash, the arrangement being such that when the felt is compressed between the stops the force will carry the sash laterally against the outside stops and leave a space between the sash and the inside stops.

1,157,873. HYDRAULIC THRUST-BEARING. OYSTEIN JACOBSEN, San Francisco, Cal., assignor to The Pelton Water Wheel Company, San Francisco, Cal., a Corporation of California. Filed Aug. 6, 1913. Serial No. 783,283. (Cl. 138—5.)



1. In a thrust bearing for hydraulic motors or similar structures and in combination with the rotary shaft thereof, the same comprising a fixed casing into which said shaft extends and said casing provided with interiorly arranged opposing annular bearing surfaces, a disk rotatably carried by said shaft and positioned between said bearing surfaces and dividing said casing into a plurality of pressure chambers, said disk being capable of movement with said shaft on the end thrust thereof toward the bearing surface in the direction of the thrust and provided with annular bearing surfaces arranged in coöperative relation with said first mentioned bearing surfaces, a normally open fluid supply opening leading to one of said chambers for admitting fluid thereto under pressure, and a normally open restricted fluid outlet from said chamber to permit a circulation of fluid through said chamber, said disk controlling the admittance of the fluid under pressure from said first mentioned chamber to the other of said chambers and the escape of the fluid from the latter chamber.

2. In a thrust bearing for hydraulic motors or similar structures and in combination with the rotary shaft thereof, the same comprising a fixed casing into which said shaft extends, a disk rotatably carried by said shaft in said casing and positioned in coöperative relation between opposing annular bearing surfaces formed in said casing and dividing said casing into a plurality of pressure chambers, said disk capable of movement with said shaft on the end thrust thereof toward the shoulder in the direction of the thrust, a normally open fluid supply opening leading to one of said chambers for admitting a fluid thereto under pressure, and a normally open restricted fluid outlet passage from said chamber to permit a circulation of fluid through said chamber, said disk controlling the admittance of the fluid under pressure from the first mentioned chamber to the other of said chambers and the escape of the fluid from the latter chamber.

3. In a thrust bearing for hydraulic motors or similar structures and in combination with the rotary shaft thereof, the same comprising a fixed casing into which said shaft extends, a disk rotatably carried by said shaft and positioned in said casing in coöperative relation between opposing bearing surfaces formed in said casing and dividing the same into a plurality of pressure chambers, one on each side of said disk and one having a greater surface of said disk exposed therein than the other, said disk capable of movement with said shaft on the end thrust thereof toward the bearing surface in the direction of the thrust, a normally open fluid supply opening leading into the chamber in which the smaller area of said disk is exposed for admitting a fluid thereinto under pressure, a normally open restricted fluid outlet passage from said chamber to permit circulation of fluid through said chamber, and said disk controlling the admittance of the fluid under pressure from the chamber in which the smaller area thereof is exposed into the other chamber, and the escape of the fluid from the latter chamber.

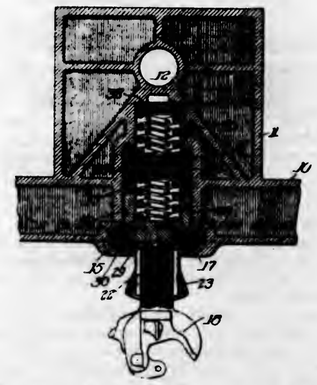
4. In a thrust bearing for hydraulic motors or like structures and in combination with the rotary shaft thereof, the same comprising a fixed shell open at its outer end and provided at its opposite end with an enlarged opening into which said shaft extends, an annular stationary bearing surface formed on the interior surface of said shell and surrounding said enlarged opening, a flanged closure fitted within the outer open end of said shell, the inner end of said flange providing a stationary annular bearing surface, a disk rotatably carried by said shaft and positioned in said shell between said stationary bearing surfaces and provided on its opposite faces with bearing surfaces adapted to coöperate with said stationary bearing surfaces, said disk dividing the interior of said shell into a plurality of pressure chambers arranged one on either side thereof and capable of movement with said shaft on the end thrust thereof toward the stationary bearing surface in the direction of the thrust, an outlet channel formed in the hub of said disk and communicating with said enlarged opening, a normally open fluid supply opening leading into one of said chambers for admitting a fluid thereinto under pressure, and a restricted fluid outlet leading from said chamber into said outlet channel, said disk controlling the admittance of the fluid under pressure from the fluid inlet chamber to the other of said chambers and the escape of the fluid from the latter chamber into the enlarged opening.

5. In a thrust bearing for hydraulic motors or like structures and in combination with the rotary shaft thereof, the same comprising a fixed shell open at its outer end and provided at its opposite end with an enlarged fluid outlet opening through which said shaft extends, an annular stationary bearing surface detachably secured to the interior of said shell and surrounding said enlarged opening, a flanged closure adjustably fitted within the outer open end of said shell, an annular stationary bearing surface detachably secured to said flange, a disk rotatably carried by said shaft and positioned in said shell between said stationary bearing surfaces, annular bearing surfaces detachably secured to the opposite faces of said disk in coöperative relation with said stationary bearing surfaces, said disk dividing the interior of said shell into a plurality of pressure chambers arranged one on either side thereof and capable of movement with said shaft on the end thrust thereof toward the stationary bearing surface in the direction of the thrust, an outlet channel formed in the hub of said disk and communicating with said enlarged opening, a fluid supply opening leading into one of said chambers for admitting a fluid thereto under pressure, and a contracted fluid outlet leading from said chamber into said outlet channel.

[Claims 6 to 9 not printed in the Gazette.]

1,157,874. DRAFT-RIGGING FOR PILOT-COUPLINGS. EDMUND P. KINNE, Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Dec. 6, 1912. Serial No. 735,226. (Cl. 213—42.)

1. A draft rigging for railway cars comprising, in combination, a yoke held against rearward movement, a coupler having a shank, a connection between said yoke and coupler whereby said coupler may move relatively to said yoke, a front follower within said yoke and coöperating with said coupler and provided with stop abutting shoulders, and a stop against which said shoulders abut, said stop acting as the sole means for retaining said draft rigging in place, substantially as described.



2. In a draft rigging, the combination of a yoke having an intermediate partition, a pair of followers integral longitudinally projecting side extensions the extension on one of said followers being adapted to embrace said intermediate partition, cushions carried by said yoke and coöperating with said followers, shoulders on said other follower, a key projecting into the path of said followers and adapted to abut the shoulders on said last-mentioned follower, and a coupler connected to said yoke and adapted for movement relative thereto, substantially as described.

3. In a device of the class described, the combination of a pilot beam having an open ended recess therein, a vertical flange projecting upwardly from said beam near the mouth of said recess, a draft rigging within said recess, and a U-shaped key adapted to maintain said draft rigging within said recess, the horisontal member of said key being seated behind said vertical flange, substantially as described.

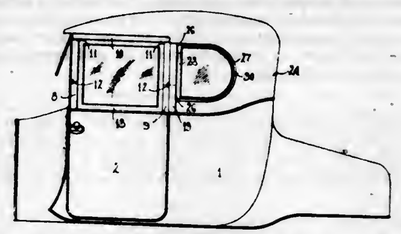
4. In a draft rigging for railway cars, the combination of a yoke having an intermediate partition, a coupler connected to said yoke, said connection permitting a relative sliding pivotal movement between said coupler and yoke, a pair of U-shaped followers within said yoke, the said followers abutting respectively the partition and coupler, one of said followers having stop abutting shoulders, and a stop adapted to coact with said shoulders to limit the movement of said follower in one direction, substantially as described.

5. In a draft rigging for railway cars, the combination of a yoke provided with an intermediate wall and having a sliding connection to a coupler shank, tandem arranged springs, a pair of U-shaped followers arranged transversely with respect to said yoke, the arms thereof abutting and the ends thereof in contact with said coupler and the said intermediate wall respectively, the said ends acting as followers for the said springs, and a stop member against which one of said followers abuts, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,157,875. COLLAPSIBLE WINDOW-FRAME FOR VEHICLE-BODIES. ANTHONY F. KOEBERL, Detroit, Mich. Filed Sept. 2, 1914. Serial No. 859,754. (Cl. 21—62.)

1. The combination with a vehicle body and a top having side openings, of collapsible window frames foldable into the side walls of said body, window sashes in the side walls of said body adapted to be raised into said window frames when extended, and hinged frames carried by some of said sashes and adapted to engage the marginal edges of the top side openings for connecting said top thereto.



2. The combination with a vehicle body having a top, of stiles in the side walls of said body, window sashes movable in said stiles, collapsible window frames connected to the upper ends of said stiles and adapted to be folded within the walls of said body and upon the upper edges of said sashes, and fasteners carried by some of said sashes for connecting said top thereto when said sashes are raised.

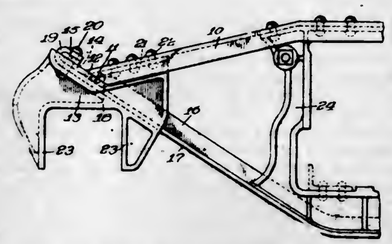
3. The combination with a vehicle body having side doors and a collapsible top, of window sashes movable in the walls of said body and said doors, collapsible window frames foldable within said body and the doors thereof and adapted to be extended to receive said sashes, and fasteners carried by the sashes of said body and adapted to hold said top in engagement therewith.

4. The combination with a vehicle body having a top with the rear portion thereof provided with sight openings, of window sashes housed thereby and adapted to be extended above said body, and hinged frames carried by said window sashes and adapted to engage said top around the sight openings thereof.

5. The combination with a vehicle body having a top, of sashes movable in said body, window frames foldable therein and adapted to be extended to receive said sashes, and fasteners carried by said sashes and adapted to retain said top in engagement with said window sashes.

[Claims 6 and 7 not printed in the Gazette.]

1,157,876. CAR-TRUCK SIDE FRAME. JOHN A. LAMONT, Granite City, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Apr. 22, 1915. Serial No. 23,031. (Cl. 105—243.)

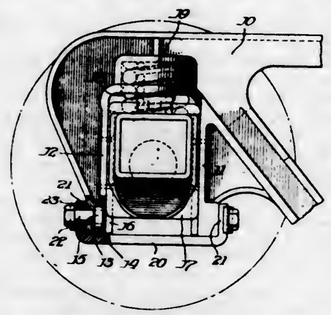


1. In a side frame, the combination of a compression member of channel shape and a tension member of T shape, the ends of said members being brought into engagement, the vertical web of the T being sheared off at the ends of the compression member, the web of the tension member being bent upward to form an abutment for the end of the compression member, and a pedestal casting with which said members coöperate at their ends, the tension member being fitted into an opening through said casting, substantially as described.

2. In a side frame, the combination of a channel-shaped compression member, and a T-shaped tension member, a pedestal casting uniting the members at their ends, said casting being provided with a diagonal aperture for the

accommodation of the tension member, the web of the tension member being sheared off at the end to permit the same to lie against the compression member, the extreme end of the tension member being bent up to form an abutment for the compression member, the web of the compression member being united to a web or said casting, substantially as described.

1,157,877. PEDESTAL CONSTRUCTION. JOHN A. LAMONT, Chicago, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed June 14, 1915. Serial No. 33,957. (Cl. 105—243.)



1. In a side frame, the combination of pedestal jaws, the lower portion of each of which is provided with a horizontal aperture which is enlarged and squared at one point, a tie bar spanning said jaws, and a horizontal bolt securing said tie bar to one of said jaws, an enlarged portion of said bolt occupying the enlarged and squared portion of said aperture, no portion of said bolt projecting into the space between the jaws, substantially as described.

2. In a side frame, the combination of pedestal jaws, the lower portion of each of which is provided with a horizontal aperture enlarged to accommodate a nut, a tie bar spanning said jaws, and a horizontal bolt securing said tie bar to one of said jaws and adapted to engage the nut held in said aperture, no portion of said bolt projecting into the space between the jaws, substantially as described.

3. In a side frame, the combination of pedestal jaws, the lower portion of which are recessed to accommodate a nut, a bolt, wear plates located on the inner faces of said jaws and adapted to close one of the open sides of said recesses within which said nuts are held, a tie bar, and horizontal bolts securing said tie bar in place and engaging said nuts, substantially as described.

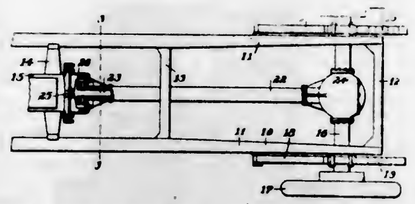
4. In a side frame, the combination of pedestal jaws, the lower portion of each of which is recessed, said recesses being enlarged and squared near the working face of said jaws, a nut held in each of said enlarged recesses, wear plates secured to the inner faces of said pedestal jaws, a tie bar having upturned ends, said ends lying outside of said jaws, and horizontal bolts securing said upturned ends to said jaws and adapted to engage the nuts held in said enlarged recesses, substantially as described.

1,157,878. MOTOR-VEHICLE. ALLEN LOOMIS, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 4, 1912. Serial No. 729,375. (Cl. 21—90.)

1. In a motor vehicle, the combination with, a driving shaft, a propeller shaft and a universal joint connecting said shafts, of a torque member pivotally supported inside of the pivots of said universal joint.

2. In a motor vehicle, the combination with, a driving shaft, a propeller shaft and a universal joint connecting said shafts, of a torque member pivotally supported with its pivots inside of, and substantially in line with, the pivots of said universal joint.

3. In a motor vehicle, the combination with, a driving shaft, a propeller shaft and a universal joint connecting said shafts, of a torque tube surrounding said propeller shaft and having its end extending into said universal joint, and a bracket also extending into said universal joint and trunnioned to said torque tube.

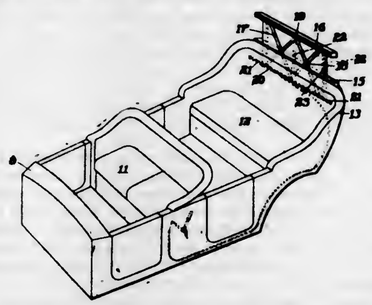


4. In a motor vehicle, the combination with, a driving shaft, a propeller shaft and a universal joint connecting said shaft, of a torque tube surrounding said propeller shaft and having its end supported on pivots inside of said universal joint.

5. In a motor vehicle, the combination with, a driving shaft, a propeller shaft and a universal joint connecting said shafts and having spaced trunnions, of a torque tube surrounding said propeller shaft, a casing for said universal joint having an inturned end, and a pivoted connection between said torque tube and the inturned end of said casing.

[Claims 6 to 13 not printed in the Gazette.]

1,157,879. MOTOR-VEHICLE. ALLEN LOOMIS, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 26, 1912. Serial No. 738,686. (Cl. 21—148.)



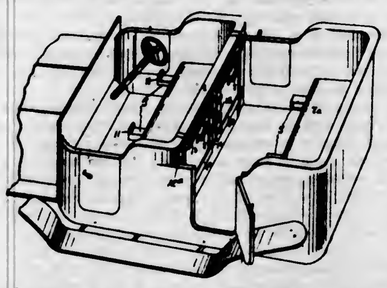
1. In a motor vehicle, the combination of the body having front and rear seats, the rear seat back having an upwardly opening pocket along the top thereof, a curtain support or bar adapted to cover the opening in said pocket, a curtain connected to said bar and to said seat back inside the pocket, a link mechanism adapted to raise and lower the bar to thereby raise and lower the curtain, and means for operating said mechanism from the front seat.

2. In a motor vehicle, the combination of the body, one of the seat backs of said body having a pocket with an opening, a curtain support or bar adapted to cover the opening in said pocket, a curtain connected to said bar and to said seat back inside the pocket, mechanism for raising and lowering the bar to thereby raise and lower the curtain, and means for manually operating the mechanism.

3. In a motor vehicle, the combination with the seat back, of a curtain connected thereto, a curtain support connected to said curtain and adapted to cover or conceal the curtain when in lowered position, and mechanism for supporting said curtain support on the seat back and raising and lowering it relatively thereto.

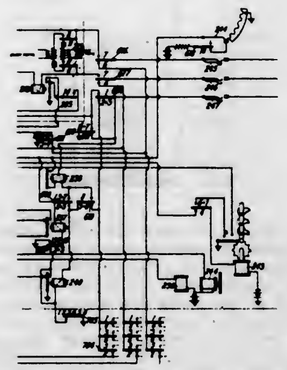
4. In a motor vehicle, the combination with the seat back having an elongated upwardly opening pocket therein, of a curtain support or bar adapted to cover said opening, a curtain connected to said bar and to said seat back, mechanism for projecting the bar vertically upward from its position over said opening to thereby raise the curtain, means for retracting the bar, and means for manually operating the mechanism.

1,157,880. VEHICLE SEAT CONSTRUCTION. JONATHAN E. LUSH, Cisco, Tex. Filed Aug. 3, 1914. Serial No. 854,617. (Cl. 21—43.)



In a vehicle seat construction comprising a front and rear seat each having a back, the back of the front seat being pivoted at the bottom to swing backward toward the rear seat, two U-shaped frames hinged to the sides of the front seat to swing at right angles away from said seat back said frames provided with means coöperating with the edges of the seat back to sustain said back in varying angles of adjustment and means carried by the frames coöperating with latches on the back of the seat and adapted to lock the back in normal vertical position.

1,157,881. MACHINE SWITCHING TELEPHONE SYSTEM. FRANK ROBERT MCBERTY, Antwerp, Belgium, assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Mar. 2, 1914, Serial No. 821,875. Renewed July 30, 1915. Serial No. 42,880. (Cl. 179—18.)



1. Telephone exchange system comprising an automatic selector switch, a register-controller for controlling said switch, a circuit controlling said register-controller to bring it into set position, and a circuit between said register-controller and said switch for producing the further movement of such register-controller in the same direction in the selection controlling operation thereof.

2. Telephone exchange system comprising a selector switch, a register-controller for controlling such switch, means for moving such register-controller into set position in accordance with a given digit, and means cooperating between said switch and said register-controller for moving said register-controller in the same direction to control selection in said switch in accordance with the complement of said digit.

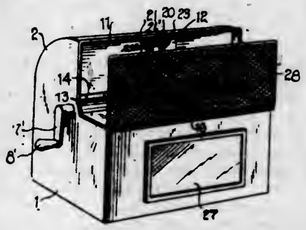
3. Telephone exchange system comprising a selector switch, a register-controller for controlling said switch, a constantly operating source of power for driving said register-controller, a magnetic clutch forming a part of said register-controller for coupling said source of power to a movable part thereof, means for energizing said magnetic clutch to move said register-controller into set position in accordance with a given digit, and means cooperating between said switch and said register-controller causing the energization of said magnet clutch to produce the operation of said register-controller in its selection controlling operation to control said switch in accordance with the complement of said digit.

4. Telephone exchange system comprising a selector switch, a register-controller for controlling said switch, a constantly operating source of power for driving said register-controller, a two winding differentially wound magnetic clutch forming a part of said register-controller for coupling said source of power to a movable part thereof, a local circuit including one of the windings of said clutch controlled by the register-controller itself, an externally controlled impulse circuit adapted to include the other winding of said clutch to produce a setting movement of the movable part of said register-controller in accordance with a given digit, and a selection controlling circuit between said switch and said register-controller adapted to subsequently include said second winding to produce the restoring movement of the movable part of said register-controller to control selection in said selector switch in accordance with the set position of said register-controller.

5. A registering and controlling equipment for machine telephone switching systems comprising a plurality of register-controllers adapted to be set in accordance with the numerical designation of the desired line, and to control selection in accordance with such set condition, a constantly operating source of power for driving such register-controllers in both their setting and selection controlling operations, each of such register-controllers being provided with a magnetic clutch comprising two windings differentially wound, and a circuit closed in the case of a premature disconnection including one of the windings of each of such register-controllers which is not in normal position to drive such register-controllers into their normal positions.

[Claims 6 and 7 not printed in the Gazette.]

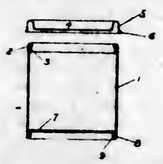
1,157,882. ANIMAL-TRAP. RAY MCCLURE, Van Wert, Ohio. Filed Feb. 14, 1914. Serial No. 818,756. (Cl. 43—24.)



A device of the character described including a rotatably supported tubular sleeve, blades carried by said sleeve and substantially radiating therefrom, the inner marginal portion of each of the blades being arcuate to conform to the periphery of the sleeve and terminating in a radial portion overlying the inner portion of an adjacent blade, means for securing a blade and an adjacent

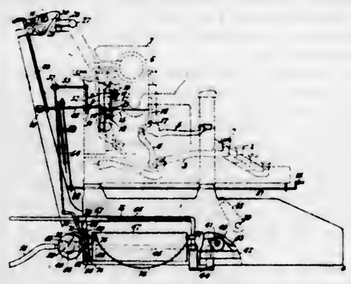
radial extension one to the other, and a spring member within the tubular sleeve for imparting movement to the sleeve in one direction.

1,157,883. SANITARY CONTAINER. ELMER ELLSWORTH MCFARLAND, Dayton, Ohio. Filed Apr. 3, 1915. Serial No. 18,869. (Cl. 229—12.)



A sanitary container comprising a tubular paper body portion, the upper end thereof being bent upon itself to form a firm annular rim, an annular reinforcing wire embraced between the turned-over portion and wall of the body portion of said container, and a disk-shaped metallic cover whose outer annular edge is bent in an inverted U shape to snugly fit the reinforced rim of the body portion of said container, substantially as described.

1,157,884. COMBINED TYPE-WRITING AND COMPUTING MACHINE. FRED F. MAIN, Chicago, Ill., assignor to John T. Underwood, Brooklyn, N. Y. Filed Dec. 20, 1910. Serial No. 598,278. (Cl. 235—62.)



1. In a typewriting and computing machine, the combination with a typewriter carriage, type-operating numeral keys, a letter-feeding mechanism for said carriage operable by said keys, computing devices associated with said carriage, means set by said keys for determining the extent of operation of the computing device, and an operator for moving the computing devices, of means connected to a source of power for actuating said operator, and automatic means dependent upon a movement of the typewriter carriage with relation to the units place for controlling the operation of said actuating means.

2. In a typewriting and computing machine, the combination with a typewriter carriage, type-operating numeral keys, a letter-feeding mechanism for said carriage operable by said keys, computing devices associated with said carriage, means set by said keys for determining the extent of operation of the computing devices, and an operator for moving the computing devices, of means connected to a source of power for actuating said operator, and means operable by any of said keys and dependent upon a movement of the typewriter carriage into position for writing in the units column, for controlling the operation of said actuating means.

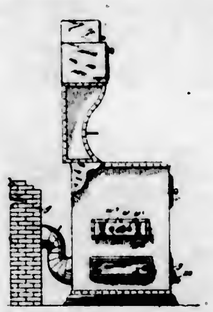
3. In a typewriting and computing machine, the combination with a typewriter carriage, type-operating numeral keys, a letter-feeding mechanism for said carriage operable by said keys, computing devices associated with said carriage, means set by said keys for determining the extent of operation of the computing devices, and an operator for moving the computing devices, of means connected to a source of power for actuating said operator, and connections for enabling said keys to control the operation of said actuating means; said connections including an interponent normally in inoperable position and movable by said carriage into operabe position.

4. In a typewriting and computing machine, the combination with a typewriter carriage, type-operating numeral keys, a letter-feeding mechanism for said carriage operable by said keys, computing devices associated with said carriage, means set by said keys for determining the extent of operation of the computing devices, and an operator for moving the computing devices, of means connected to a source of power for actuating said operator, and means for enabling said carriage to coöperate with any of said keys to control the operation of said actuating means.

5. In a typewriting and computing machine, the combination with a typewriter carriage, type-operating numeral keys, a letter-feeding mechanism for said carriage operable by said keys, computing devices associated with said carriage, means set by said keys for determining the extent of operation of the computing devices, and an operator for moving the computing devices, of means connected to a source of power actuating said operator, a device normally disconnecting said source of power from said operator, means for enabling said carriage to cooperate with any of said keys to move said disconnecting device to connect said source of power to said operator, and automatic means dependent upon the movement of a part of the machine for returning said disconnecting device to normal position.

[Claims 6 to 83 not printed in the Gazette.]

1,157,885. KITCHEN-RANGE AND COOKING-STOVE. MARY A. MALLOY, Portland, Oreg., assignor, by mesne assignments, to Grace Hudson. Filed Aug. 20, 1910. Serial No. 578,253. (Cl. 126—1.)



1. In a range, the combination of a casing provided with a combustion chamber and a draft chamber which communicates with the combustion chamber and a draft controlling chamber below the draft chamber, a grate in the bottom of the combustion chamber, the combustion chamber being sealed against the ingress of air above the grate, an oven in the casing, said oven being spaced from the walls of the casing to provide a main flue, one end of the main flue communicating with the combustion chamber above the bed of fuel therein and the opposite end of the said main flue communicating with the draft controlling chamber, means for introducing a constant minimum supply of air and a regulated maximum supply of air to the draft chamber, an exit flue communicating with the draft controlling chamber at one side of the entrance thereto of the main flue and a damper for introducing a regulated supply of air through the draft controlling chamber to control the combustion in the combustion chamber the volume of air passing through the draft controlling chamber choking the products of combustion in the main flue and thereby controlling the combustion in the combustion chamber.

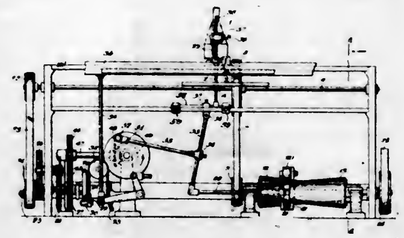
2. In a range the combination of a casing provided with a combustion chamber and a communicating draft chamber, and draft controlling chamber, a grate in the bottom of the combustion chamber, said combustion chamber being sealed against the ingress of air above the grate, an oven adjacent the combustion chamber and the draft chamber, a main flue surrounding the oven, one end of said main flue communicating with the combustion chamber above the bed of fuel therein and the opposite end of said main flue communicating with the draft controlling chamber below the draft chamber, a damper in the draft chamber for admitting a maximum supply of air to and through the body of fuel in the combustion chamber, there being openings in the draft chamber for introducing a constant minimum supply of air to and through the body of fuel, an exit flue communicating with the draft controlling chamber, the draft controlling chamber having an opening for the admission of air which is drawn through said chamber under the influence of the draft in the exit flue and which controls the draft in the main flue, a damper for regulating the air passing through said opening, and a damper for admitting an excess of air in said opening to entirely cut off the draft entering the draft chamber.

3. In a range, the combination of a casing provided with a combustion chamber and a communicating draft chamber and a draft controlling chamber, a grate in the bottom of the combustion chamber, said combustion chamber being sealed against the ingress of air above the grate, an oven supported in and spaced from the walls of said casing to provide a main flue which communicates with the combustion chamber above the level of the fuel therein and the draft controlling chamber, one wall of said oven being spaced from the combustion chamber and the draft chamber to form an auxiliary flue which communicates with the top and bottom of the main flue, a hinged damper at the top of the auxiliary flue to direct the products of combustion through the main flue or said auxiliary flue to the draft controlling chamber, means in the draft chamber for admitting thereto a regulated maximum supply of air which passes to and through the body of the fuel there being openings in the draft chamber for admitting a constant minimum supply of air thereto which passes to and through the body of fuel, an exit flue communicating with the draft controlling chamber, a damper for admitting a regulated supply of air to the draft controlling chamber said air being drawn through the said chamber under the influence of the draft in the flue whereby to control the draft in either the main or the auxiliary flues to hold the products of combustion in suspension in said flues and the combustion chamber.

4. In a range the combination of a combustion chamber, a grate in the bottom of the combustion chamber, the combustion chamber being sealed against the ingress of air above the grate, a draft chamber which communicates with the combustion chamber, a draft controlling chamber, an oven, a main flue formed around the oven and communicating with the combustion chamber above the level of the fuel and the draft controlling chamber, the draft chamber having an opening, a damper coöperating with said opening to admit a maximum supply of air to and through the body of fuel, said damper having openings for the admission of a constant minimum supply of air to and through the body of the fuel, an exit flue communicating with the draft controlling chamber at one side of the entrance thereto of the main flue, said draft controlling chamber having an opening opposite the exit flue, a damper for said latter opening, the size of the opening being proportioned to the size of the mouth of the exit flue and the opening in the draft chamber so that when the damper in the draft controlling chamber is wide open the draft in the main flue will be cut off.

5. In a range, the combination of a casing provided with a combustion chamber and a draft chamber which communicates with the combustion chamber and a draft controlling chamber, a flue formed in the casing, said flue communicating with the combustion chamber above the bed of fuel therein and the draft controlling chamber, a grate in the bottom of the combustion chamber, said combustion chamber being sealed against the ingress of air above the grate, means for introducing a constant minimum supply of air and a regulated maximum supply of air to the draft chamber, an exit flue communicating with the draft controlling chamber, and a damper for introducing a regulated supply of air through the draft controlling chamber to control the combustion in the combustion chamber, the volume of air passing through the draft controlling chamber holding the products of combustion back in the flue and the combustion chamber, the minimum and maximum supply of air serving to promote the combustion while same are being held back.

1,157,886. THREAD-WINDING MACHINE. WILLIAM MARLOW, New York, N. Y., assignor to Standard Knitting Mills Company, a Corporation of New York. Original application filed Nov. 5, 1912, Serial No. 729,592. Divided and this application filed Jan. 14, 1914. Serial No. 811,967. (Cl. 64—4.)



1. In a machine of the character described having a main frame, speed changing means connected by a belt, a lever pivoted to the main frame of the machine and adapted to move the belt to thereby change the speed of the machine, means for oscillating said lever, and means for changing the pivotal point of the lever to vary the average speed of the machine, the amount of speed change being maintained substantially constant.

2. In a machine of the character described having a main frame, speed changing means comprising a pair of cone pulleys connected by a belt, an oscillating lever pivoted to the main frame of the machine, means for oscillating said lever, a carriage connected to and moved positively in both directions by said lever whereby the belt is moved along the pulleys and the speed of the machine changed, the pivotal point of the lever being adjustable whereby the average speed of the machine may be varied.

3. In a machine of the character described having a main frame, speed changing means, a lever pivoted to the main frame of the machine and adapted to control the speed changing means, means for oscillating said lever, and means for changing the pivotal point of the lever to vary the average speed of the machine, the amount of speed change being maintained substantially constant.

4. In a machine of the character described having a main frame, speed changing means, a lever pivoted to the main frame of the machine and adapted to control the speed changing means, means for oscillating said lever, and means for adjusting said oscillating means to thereby vary the amount of speed change.

5. In a machine of the character described having a main frame, speed changing means, a lever pivoted to the main frame of the machine and adapted to control the speed changing means, means for oscillating said lever, means for adjusting said oscillating means to thereby vary the amount of speed change, and means for adjusting the pivotal point of the lever, to vary the average speed of the machine, the amount of speed change being maintained substantially constant.

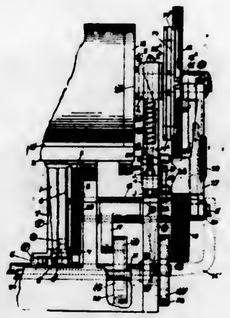
[Claim 6 not printed in the Gazette.]

1,157,887. TREATMENT OF VULCANIZABLE PLASTICS. ERWIN E. A. G. MEYER, Detroit, Mich., assignor to Morgan & Wright, a Corporation of Michigan. Filed Mar. 12, 1915. Serial No. 13,914. (Cl. 18—53.)

1. The method of producing vulcanized rubber articles comprising the following steps: first, subjecting the mold containing the material to mechanical pressure and to a substantially constant temperature below that necessary to produce vulcanization for a definite period of time, and then raising the temperature to produce the required vulcanization.

2. The method of producing vulcanized rubber articles comprising the following steps: first, subjecting the mold containing the material to mechanical pressure and to a substantially constant temperature below that necessary to produce vulcanization for a definite period of time, then releasing the pressure on the mold, and finally raising the temperature to produce the required vulcanisation.

1,157,888. DRIVING MECHANISM FOR PRINTING-PRESSES. ROBERT MIEHLE, Chicago, Ill., assignor to Continental & Commercial Trust & Savings Bank, trustee, Chicago, Ill. Filed Dec. 1, 1911. Serial No. 663,363. (Cl. 101—4.)



1. In a printing-press, the combination of a form-supporting member, means to actuate said member at a substantially uniform speed during the printing operation, a revoluble impression-cylinder, a cylinder-gear mounted at an end of said cylinder, a driving-gear meshing with said cylinder-gear, the distance between said gear axes being fixed, means for adjusting the impression position of said cylinder transversely to the axis of the cylinder-gear, and means connecting said cylinder-gear to said cylinder, including a member shiftable with respect to both said cylinder and said cylinder-gear, the peripheral speed of said cylinder being the same as the speed of said form-supporting member during the printing operation and remaining substantially unchanged with respect to that of the cylinder-gear even though the cylinder and gear are laterally shifted relatively to one another causing relative displacement of their axes, substantially as described.

2. In a printing-press, the combination of a form-supporting member, means to actuate said member at a substantially uniform speed during the printing operation, a revoluble impression-cylinder, a cylinder-gear mounted at an end of said cylinder, a driving-gear meshing with said cylinder-gear, the distance between said gear axes being fixed, means for adjusting the impression position of said cylinder transversely to the axis of the cylinder-gear, and means connecting said cylinder-gear to said cylinder, including a member slidably connected to the cylinder-gear and to the cylinder so as to be capable of radial movement with respect to said cylinder and gear, the peripheral speed of said cylinder being the same as the speed of said form-supporting member during the printing operation and remaining substantially unchanged with respect to that of the cylinder-gear even though the cylinder and gear are shifted relatively to one another causing a relative displacement of their axes, substantially as described.

3. In a printing-press, the combination of a form-supporting member, means to actuate said member at a substantially uniform speed during the printing operation, a revoluble impression-cylinder, a cylinder-gear mounted at an end of said cylinder, a driving-gear meshing with said cylinder-gear the distance between said gear axes being fixed, means for adjusting the impression position of said cylinder transversely to the axis of the cylinder-gear, a driving member rigidly connected to the impression-cylinder, and means connecting said driving-member to said cylinder-gear including a member slidably engaged with both the driving-member and the cylinder-gear so as to be capable of radial movement with respect to the cylinder-gear and the driving-member whereby motion is transmitted from the cylinder-gear to the cylinder irrespective of the relative axial positions of the gear and cylinder, the peripheral speed of said cylinder being the same as the speed of said form-supporting member during the printing operation and remaining substantially unchanged with respect to that of the cylinder-gear are shifted relatively to one another, causing relative displacement of their axes, substantially as described.

4. In a printing press, the combination of a bed, an impression cylinder, a shifting bed motion driving gear, a cylinder gear meshing with said driving gear, means for maintaining a predetermined distance between the centers of said gears irrespective of the shifting position of said driving gear, and a flexible connection between said cylinder gear and said impression cylinder for operating said cylinder irrespective of the position of said cylinder gear.

5. In a printing press, the combination of an impression cylinder, a bed motion mechanism including a shifting bed driving gear, means for shifting said gear, a cylinder gear meshing with said driving gear, means for maintaining a predetermined distance between the centers of said driving gear and said cylinder gear, and means including a member slidable radially with respect to said cylinder gear and said cylinder for transmitting motion from said cylinder gear to said cylinder.

[Claims 6 to 16 not printed in the Gazette.]

1,157,889. THERMOSTAT-MOTOR. COSBY D. MILLER, St. Joseph, Mo., assignor to Detroit Motor Appliance Company, Detroit, Mich., a Corporation of Michigan. Filed Mar. 9, 1915. Serial No. 13,235. (Cl. 60—2.)

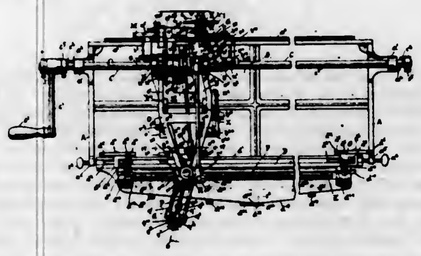


1. A pair of metal disks one disk being above the other; rigid marginal portions formed on the edges of said disks; liquid tight joining means whereby the edges of said marginal portions are joined for holding a volatile liquid between said disks, the latter being adapted to be outwardly arced by expansion of said liquid; a stop spring on the upper disk; a plurality of top spring members evenly spaced and extending radially from said top spring; a bottom spring beneath the bottom of the lower disk; a like plurality of similarly arranged bottom spring members for said bottom spring, the ends of all of said spring members being adapted to slide radially on said marginal portion of said disks; a plurality of U shaped clips for yoking the ends of said spring members in pairs; and clip securing means whereby the ends of said clips are secured to the ends of said spring members, and clips being adapted to be moved inward against said marginal portion for limiting inward movement of the ends of said spring members; the whole being adapted to limit expansive arcing of said diaphragms.

2. In a thermostat motor, a pair of thermostat diaphragms holding a liquid between them said liquid being adapted to be expanded by heat for expansively moving and thereby arcing said diaphragms; a rigid annular margin formed on the edges of said diaphragms; two flat spring units one of which is loosely applied to the outer surface of each of said diaphragms said spring units being adapted to be moved into the form of arcs by said diaphragms; and connecting means extending around said margin whereby the outer extremities of said spring units are connected, said connecting means being adapted to be moved inward by the arcing of said spring and to have their inward movement limited by contact with said rigid margin; the whole being adapted to limit the expansion of said diaphragms.

3. A diaphragm motor, comprising a seat post; securing means for rigidly securing said post on a fixed object; a flat bottom spring unit the central portion of which is rigidly secured on the upper end of said post; a pair of expansive diaphragms of disk form resting loosely upon said bottom spring unit said diaphragms having the edges thereof connected and holding a liquid between them that is expanded by heat; a rigid annular edge portion formed of the edges of said disk; a flat top spring unit resting loosely on the upper one of said diaphragms; a plurality of unit connecting means whereby the outer extremities of said units are connected said connecting means being extended around said rigid edge portion a slight distance therefrom; a stud having its lower end rigidly secured in the central portion of said top spring unit said stud having a channel formed in the annular surface thereof; the whole being adapted to thermostatically move said stud upward and downward and to limit the movements of said stud.

1,157,890. SAW-SHARPENING MACHINE. JOSEPH MIOTKE, Milwaukee, Wis. Filed Dec. 30, 1912. Serial No. 739,299. (Cl. 76—33.)



1. In a saw-sharpening machine, the combination of a base-frame, a clamping-device mounted thereon and adapted to secure a saw, a carriage mounted to travel on said frame in a direction parallel to the edge of said saw, a sharpening-device carried by said carriage, means for advancing said carriage intermittently through a distance equal to one or more times the pitch of the saw-teeth, mechanism operated by said carriage-advancing means for bringing said sharpening-device into position for sharpening a saw-tooth and advancing it through a given distance in each interval between the advance-movements of said carriage, and means for guiding the movement of said sharpening-device to follow a curve corresponding to the curve of the line of saw-teeth.

2. The combination of means for supporting a saw, a movable carriage moving in a parallel position to the saw, a continuously moving member, connections between said member and said carriage whereby the latter is alternately advanced and held stationary, the advance-movement being through a distance equal to twice the pitch of the saw-teeth, a saw-tooth-sharpening device mounted on said carriage and having two positions which make equal and symmetrical angles with the saw-blade, elements connecting said saw-sharpening device with said continuously moving member whereby said device is withdrawn from sharpening-position at the beginning of each advance-movement of the carriage and restored thereto at the end of each such movement, a reversing-device located in the path of the carriage-travel and adapted at a certain point thereof to reverse said first-named connections whereby the carriage is made to travel in the opposite direction and simultaneously reverse said sharpening-device as to its angular position; there being means for causing the carriage to lose one tooth in the first return-movement whereby said sharpening-device is applied on said last-named movement to the alternate teeth not sharpened on the advance-movement.

3. The combination of means for supporting a saw, a movable carriage moving in a parallel position to the saw, a continuously moving member, connections between said member and said carriage whereby the latter is alternately advanced and held stationary, the advance-movement being through a distance equal to twice the pitch of the saw-teeth, a saw-tooth-sharpening device mounted on said carriage and having two positions which make equal and symmetrical angles with the saw-blade, elements connecting said saw-sharpening device with said continuously moving member whereby said device is withdrawn from sharpening-position at the beginning of each advance-movement of the carriage and restored thereto at the end of each such movement, a reversing device located in the path of the carriage-travel and adapted at a certain point thereof to reverse said first-named connections whereby the carriage is made to travel in the opposite direction and simultaneously to reverse said sharpening-device to the angular position, a locking-device adapted to lock said sharpening-device in either of its angular positions, and means actuated by said reversing device for releasing the locking-device each time just before the reversing-movement; there being means for causing the carriage to lose one tooth in the first return movement whereby said sharpening-device is applied on said last-named movement to the alternate teeth not sharpened on the advance-movement.

4. The combination of means for supporting a saw, a movable carriage moving in a parallel position to the saw, a continuously moving member, connections between said member and said carriage whereby the latter is alternately advanced and held stationary, a saw-tooth-sharpening device mounted on said carriage and having two positions which make equal and symmetrical angles with the saw-blade, a movable element connected with said sharpening-device and adapted to reverse the angle thereof, and a connection between said movable element and the connections between said member and said carriage adapted to reverse such connections whereby the direction of advance of the carriage is reversed simultaneously with the angle of said sharpening-device.

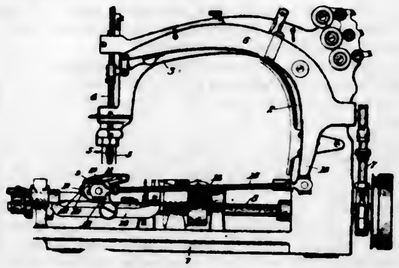
5. The combination of means for supporting a saw, a movable carriage moving in a parallel position to the saw, a continuously moving member, connections between said member and said carriage whereby the latter is alternately advanced and held stationary, a saw-tooth sharpening-device mounted on said carriage and having two positions which make equal and symmetrical angles with the saw-blade, a movable element connected with said sharpening-device and adapted to reverse the angle thereof, a connection between said movable element and the connections between said member and said carriage adapted to reverse such connections whereby the direction of advance of the carriage is reversed simultaneously with the angle of said sharpening-device, a locking-device adapted to lock said sharpening-device in either of its two angular positions, and a connection with said movable element adapted to release said locking-device each time just before said sharpening-device is shifted.

[Claims 6 to 35 not printed in the Gazette.]

1,157,891. SEWING-MACHINE. JAMES R. MOFFATT and RALPH S. KELSO, Chicago, Ill., assignors to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 4, 1911. Serial No. 658,564. (Cl. 112—29.)

1. A sewing machine including in combination a needle, a looper, a needle guard moving with the looper and having two spaced walls adapted to engage the needle, and means for moving said needle guard whereby one wall

engages the rear face of the needle on its downward movement, and the other wall engages the rear face of the needle on its upward movement.



2. A sewing machine including in combination, a needle, a looper movable into and out of the needle loop, and laterally to avoid the needle, a needle guard moving with the looper, and means for operating it to engage the needle on the rear face of the latter in both its movements.

3. A sewing machine including in combination, a needle, a needle guard therefor, and means for operating it to cause the needle in its downward movement to be guided on its rear face by one face of the guard and in its upward movement to be guided on said rear face by another face of the guard.

4. A sewing machine including in combination, a feeding mechanism, a needle, means for reciprocating the needle, a looper moving substantially at right angles to the line of feed, a needle guard, and means for causing said needle guard to engage the rear side of the needle on both the upward and downward strokes of the needle, said needle guard having a movement transverse to the line of feed.

5. A sewing machine including in combination, a feeding mechanism, a needle, means for reciprocating the needle, a looper moving substantially at right angles to the line of feed into and out of the needle loop, and moving laterally to avoid the needle, a needle guard, and means for causing said needle guard to engage the rear side of the needle on both the upward and the downward strokes of the needle, said needle guard being connected to and movable with the looper.

[Claims 6 to 16 not printed in the Gazette.]

1,157,892. NEEDLE-GUARD FOR SEWING-MACHINES. JAMES R. MOFFATT and RALPH S. KELSO, Chicago, Ill., assignors to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 9, 1911. Serial No. 659,371. (Cl. 112—29.)



1. A needle guard having a vertical opening for the passage of the needle, and laterally spaced guiding walls adapted to coöperate with the same face of the needle.

2. A needle guard having a pair of upwardly extending members forming a recess in which the needle is guided in its downward movement, the outer face of one of said members serving to guide the needle in its upward movement.

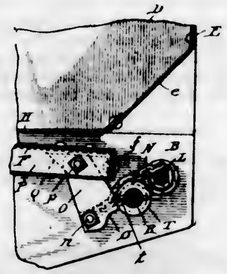
3. A needle guarding and guiding member for sewing machines including a plurality of vertical members arranged in pairs, each pair forming a recess in which the needle is guided in its downward movement, the outer face of one of the members of each pair serving to guide the needle in its upward movement.

4. A needle guarding and guiding member for sewing machines including a plurality of vertical members arranged in pairs, each pair forming a recess in which the needle is guided in its downward movement, the outer face of one of the members of each pair serving to guide the needle in its upward movement, said pairs being successively in advance of each other.

5. A needle guard having a vertical opening for the passage of the needle on its downward movement, the external face of the guard being adapted to guide the needle in its upward movement.

[Claims 6 and 7 not printed in the Gazette.]

1,157,893. DOOR-ACTUATING MECHANISM FOR GENERAL-SERVICE CARS. WILLIAM E. MOREY, Chicago, Ill., assignor to National Dump Car Company, Chicago, Ill., a Corporation of Maine. Filed May 5, 1913. Serial No. 765,603. (Cl. 105—14.)



1. In a freight car, the combination with a downwardly swinging door in the floor thereof, of a rotary shaft, chains connected to said shaft to be wound thereon, a dog member pivoted at one end to the door having its free end connected to said chain, and a supporting member independent of the shaft and located in the path of travel of said dog, said chain coacting with the dog to bring the latter into position supported by said member as the door reaches closed position, said member being arranged to exert a wedging action on said door in such closing movement through the medium of said dog.

2. In a freight car, the combination with a downwardly swinging door in the floor thereof, of a rotary shaft, chains connected to said shaft to be wound thereon, a dog member pivoted at one end to the door and having its free end connected to said chain, and a supporting member independent of the shaft and located in the path of travel of said dog, said chain coacting with the dog to bring the latter into position supported by said member as the door reaches closed position, and said supporting member being located adjacent the winding shaft, said member being arranged to exert a wedging action on said door in such closing movement through the medium of said dog.

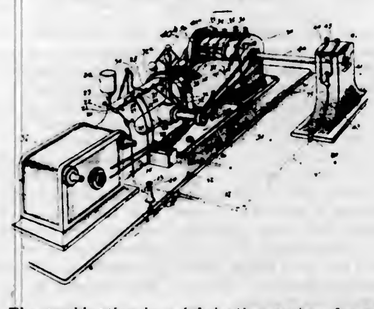
3. In a freight car, the combination with a downwardly swinging door in the floor thereof, of a rotary shaft, a chain connected to said shaft to be wound thereon, a dog pivoted at one end to said door and its other end connected to said chain, the free end of said dog having a recess formed therein, a roller supported in the path of movement of the free end of said dog during the final closing movement of said dog and with which the recess in the free end of said dog engages when the door is closed.

4. In a freight car, the combination with a downwardly swinging door in the floor thereof, of a rotary shaft, a chain connected to said shaft to be wound thereon, a dog pivoted at one end to said door and its other end connected to said chain, a second shaft extending parallel to and adjacent said rotary shaft below the plane of said door when said door is in closed position and with which the free end of said dog engages when the door is in closed position.

5. In a freight car, the combination with a downwardly swinging door in the floor thereof, of a rotary shaft, a chain connected to said shaft to be wound thereon, a dog pivoted at one end to said door and its other end connected to said chain, a shaft extending parallel to and adjacent said rotary shaft, a roller mounted upon said second shaft and over which said chain extends, said dog having a recess in its outer end which engages said roller when the door is closed in position.

[Claim 6 not printed in the Gazette.]

1,157,894. ENGINE OIL CONNECTION. WILLIAM L. MORRIS, Fort Wayne, Ind., assignor to S. F. Bowser & Company, Inc., Fort Wayne, Ind., a Corporation of Indiana. Filed Feb. 16, 1912. Serial No. 677,995. (Cl. 184—6.)



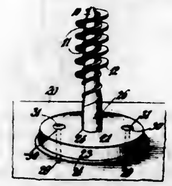
1. The combination in a lubricating system for supplying lubricant to a machine, of a pipe line or header adapted to furnish oil to the machine from a common source of supply, an angle valve casing adapted to be secured to the said pipe line or header adjacent an opening in the upper side in the said pipe line or header, the said angle valve casing being provided with a chamber and an opening leading from the chamber to the pipe line or header opening, means for controlling the chamber opening of the valve casing, and means for attaching thereto a branch feeder pipe adapted to lead to the part to be lubricated.

2. The combination in a lubricating system adapted to supply lubricant to a machine, of a pipe line or header for supplying lubricant from a source of supply, a valve for closing the pipe line or header to the source of supply, means for affording access to the interior of the pipe line or header for the purpose of cleaning same, and a portable detachable device for supplying the said pipe line or header with an auxiliary feed of lubricant, said device comprising a container, an outlet pipe or duct for said container, means for securing the outlet pipe or duct to the pipe line or header for admitting lubricant therefrom into the header, and a valve for controlling the passage in the said outlet pipe line or duct.

3. The combination with a supply main for conducting lubricating oil, of conveyer outlets leading therefrom to journals, said conveyer outlets being taken from said main at a point away from its bottom, the bottom of said main being continuous and unbroken past said conveyer outlets, a drip return system for delivering oil back to the lubricating oil supply main, and a blow-off at the end of the said main beyond the outlets to said journals, said blow-off discharging into said drip return system.

4. The combination with a supply main for conducting lubricating oil, conveyer outlets to journals being taken from said main at a point remote from its bottom, each of said conveyer outlets to journals having a valve at said supply main with a removable connection between the journals and supply main, the bottom of said main being continuous and unbroken past said conveyer outlets, a drip return system which delivers oil back to the said supply main, and a blow-off at the end of said main beyond the conveyer outlets to said journals, said blow-off discharging into said drip return system.

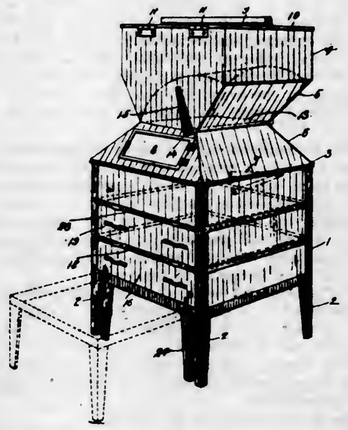
1,157,895. MEANS FOR FIXING ANCHORAGES IN CONCRETE WALLS. JAMES LEO MURPHY, New York, and JULIAN RICHMOND, Yonkers, N. Y. Filed May 13, 1914. Serial No. 838,320. (Cl. 72—105.)



1. An article of manufacture comprising a headed bolt, a spiral strip carried on the threads of said bolt and designed to be anchored as an insert in a concrete wall, and a holding plate provided with a guide hole through which the shank of said bolt is passed and with means for securing said bolt to the bottom or wall of a mold.

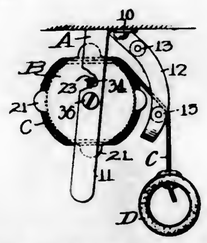
2. An article of manufacture comprising a headed bolt, a spiral strip carried on the threads of said bolt and designed to be anchored as an insert in a concrete wall, and a holding plate provided with a guide hole through which the shank of said bolt is passed and with means for securing said bolt to the bottom or wall of a mold, said holding plate having a recess adapted to inclose and permit the turning of the head of said bolt.

1,157,896. MEASURING AND FILLING APPARATUS. EDNA PELLS, Grand Island, Nebr. Filed Sept. 21, 1914. Serial No. 862,717. (Cl. 226—17.)



A measuring and filling apparatus comprising a housing, sliding drawers mounted in the housing in vertically spaced relation, the lower drawer being open at the top and the upper drawer being open at the top and bottom, a slide in the housing between the drawers, said slide covering the open top of the lower drawer and the open bottom of the upper drawer, a slide in the housing above the upper drawer, from which slide the material is discharged into said upper drawer, and removable and interchangeable measuring devices in the upper drawer discharging through the open bottom of said drawer.

1,157,897. WINDING-DRUM. LOUIS PELOQUIN, Southbridge, Mass. Filed Feb. 24, 1914. Serial No. 820,528. (Cl. 242—98.)



1. In a chalk holding drum, the combination of a shaft, means for holding said shaft in fixed position, a drum for receiving said shaft, said drum having a central perforation in each end fitting the ends of the shaft, a spring fixed to the shaft near one end and having a free end, the other end of said drum having means for engaging and holding the free end of the spring when the drum is rotated in one direction, and releasing it when rotated in the other direction, said means consisting of an inwardly extending tongue on the end of the drum.

2. In a chalk holding drum, the combination of a shaft, means for holding said shaft in fixed position, a drum for receiving said shaft, said drum having a central perforation in each end fitting the ends of the shaft, one end of the shaft having a reduced end provided with a shoulder, whereby said shaft can be disconnected from the drum by drawing its reduced end inwardly from the bearing of that end of the drum, a spring fixed to the shaft near said reduced end and having a free end, the other end of said drum having means for engaging and holding the free end of the spring.

3. In a chalk holding drum, the combination of a shaft, means for holding said shaft in fixed position, a drum for receiving said shaft, said drum having a central perforation in each end fitting the ends of the shaft, one end of the shaft having a reduced end provided with a shoulder, a spring fixed to the shaft near said reduced end and having a free end, the other end of said drum having means for engaging and detachably holding the free end of the spring, whereby said shaft can be disconnected from the drum by drawing its reduced end inwardly from the bearing on the drum, and said drum having a perforation through which the shaft and spring can be withdrawn.

4. The combination with a chalk holding drum, of a shaft on which it is rotated, said drum having a perforation for each end of the shaft, one perforation being smaller than the other and one end of the shaft being smaller than the other, a spring on the shaft connected with the drum, said drum having a second perforation through one end thereof, through which the shaft and spring can be withdrawn and replaced.

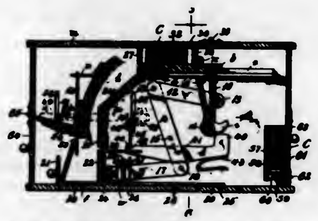
5. The combination with a chalk holding drum, of a shaft on which it is rotated, said drum having a perforation for each end of the shaft, a spring on the shaft having one end connected with the drum by a ratchet, said drum having a second perforation through one end thereof, through which the shaft and spring can be withdrawn and replaced.

[Claim 6 not printed in the Gazette.]

1,157,898. CARD-SHUFFLING MACHINE. GEORGE J. PEARET, New York, N. Y. Filed June 7, 1915. Serial No. 32,523. (Cl. 46—55.)

1. In a card-shuffling machine, the combination of a horizontal receptacle for the cards, a reciprocating slide arranged to separate a plurality of cards from the pack; a second receptacle for cards; an unobstructed, inclined connecting passage between said receptacles, means for transferring groups of two or more cards from one receptacle to the other during each complete slide movement, and a motor device for operating said movable parts.

2. In a card-shuffling machine, the combination of a horizontally disposed receptacle for the cards, a second receptacle, an unobstructed passage connecting said receptacles, means for retaining and then releasing a separated plurality of cards in transit from one receptacle to the other, and a motor device for imparting movement to said movable parts.

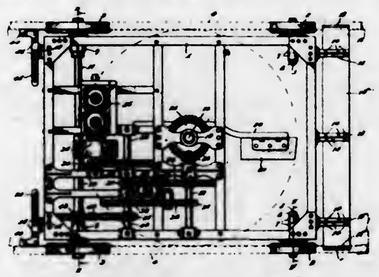


3. In a card shuffling machine, the combination of a receptacle for the cards, means for separating a plurality of cards from the pack; a second receptacle, means for transferring a separated portion from one receptacle to the other, means for retaining the divided portion of cards in a predetermined position until a subsequent portion is transferred, and means for combining successive divisions with the preceding divisions in successive relation.

4. In a card shuffling machine, the combination of a reciprocating slide for the pack of cards, a device arranged to separate a plurality of cards from the pack, a second receptacle for cards, means for retaining each division of cards as transferred, means for assembling the separate divisions in a pack having orderly arrangement, and means for reciprocating said slide and said retaining device in predetermned succession.

5. In a card shuffling machine, the combination of the reciprocating slide *b*, reciprocating receptacle 22, vertically reciprocating fingers and a manually operated motor device for reciprocating said parts in predetermined succession, substantially as described.

1,157,899. CEMENT LEVELING AND FINISHING MACHINE. SVEN OSCAR PETERSON, Rock Island, Ill. Filed June 17, 1914. Serial No. 845,562. (Cl. 94—6.)



1. A machine of the class described comprising a wheeled frame; a vertically disposed rotatable shaft; a horizontally disposed arm on said shaft connected therewith to permit of radial adjustment; a trowel on said arm; and means for rotating said shaft, substantially as described.

2. A machine of the class described comprising a frame; wheels supporting said frame and laterally adjustable relative thereto; a rotatable and radially adjustable trowel arranged below said frame substantially centrally thereof for movement in a horizontal plane; and means for rotating said trowel, substantially as described.

3. A machine of the class described comprising a wheeled frame; a leveler provided at the front end of said frame; a movably mounted trowel arranged below said frame adapted for movement in a horizontal plane passing substantially through the under edge of said leveler; and edge-rounding members arranged at the opposite sides of the rear end of said frame, substantially as described.

4. A machine of the class described comprising a frame; wheels supporting said frame and laterally adjustable relative thereto; a leveler provided at the front end of said frame; a rotatable and radially adjustable trowel arranged below said frame substantially centrally thereof for movement in a horizontal plane passing substantially through the under edge of said leveler; and laterally adjustable edge-rounding members arranged at opposite sides of the rear end of said frame, substantially as described.

5. A machine of the class described comprising a frame; wheels supporting said frame adapted to engage upon rails defining the longitudinal edges of the walk constructed in the operation of said machine; annular flanges on said wheels adapted to engage against the inner sides of said rails and form the adjacent longitudinal edges of the walk; and edge-finishing members secured to said frame rearwardly of said wheels, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,157,900. WINDOW-SASH CONSTRUCTION. FRANCIS J. PLYM, Niles, Mich., assignor to Kawneer Mfg. Co., Niles, Mich., a Corporation of Michigan. Filed May 3, 1900. Serial No. 493,542. (Cl. 189—78.)



1. In a setting for plate glass, a support, a pair of yielding clamping members mounted on said support, said clamping members being each free to move toward the glass, and means for drawing them together toward the glass.

2. In a setting for a plate glass, a support, a pair of clamping members mounted on said support, a glass supporting member mounted on said support, said clamping members being each free to move toward the glass and means for drawing them together toward the glass.

3. The combination of a support, inner and outer members mounted on the support and both free to move toward the glass for yieldingly engaging the opposite sides of a pane of glass, a gutter integral with the inner member and forming the glass engaging portion thereof, and means for drawing both of said members together and toward the glass.

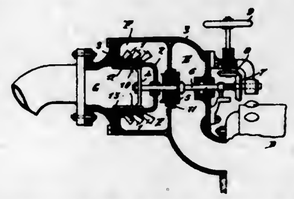
4. In a setting for plate glass, the combination with a support of an inner and an outer sheet metal member, the inner member having a gutter to form the glass engaging portion thereof, said inner and outer members being both free to move toward the glass, and means for drawing both of said members toward the glass and together whereby the glass is resiliently gripped between the two members.

5. In a setting for plate glass, the combination with a support of an inner and an outer sheet metal member, the inner member having a gutter to form the glass engaging portion thereof, said inner and outer members being both free to move toward the glass, a plurality of parts underlying and supporting the glass, and means for drawing both of said members toward the glass and together whereby the glass is resiliently gripped between the two members.

[Claims 6 to 11 not printed in the Gazette.]

1,157,901. STEAM DRYING AND SUPERHEATING SYSTEM. GIUSEPPE RESTUCCI, Naples, Italy. Filed June 30, 1914. Serial No. 848,149. (Cl. 122—459.)

1. The combination with a steam conduit, a set of nozzles having the shape of truncated cones mounted on said conduit with their axes lying in the path of the flowing steam, the nozzles with their wider base projecting from said conduit.



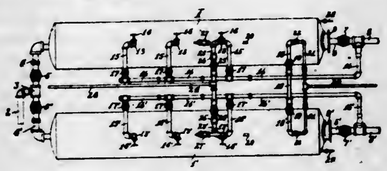
2. In combination with a steam conduit, a set of nozzles having the shape of truncated cones with their smaller base slightly flaring mounted on said conduit with their axes lying in the path of the flowing steam, the nozzles with their wider base projecting from said conduit.

3. In combination with a steam conduit, a plurality of rows of nozzles mounted on said conduit with their axes lying in the path of the flowing steam and having the shape of truncated cones with their wider portions projecting from said conduit, and means for successively exposing said rows of nozzles.

4. In combination with a steam conduit and a steam valve located therein and comprising an outer and an inner casing spaced apart from each other, a plurality of rows of nozzles mounted in said inner casing in the path of the flow of the steam and shaped like truncated cones with their wider base projecting from said inner casing into the space between the said two casings, and an apertured valve in said inner casing adapted to successively expose the various rows of nozzles.

5. In combination with a steam conduit and a steam valve located therein and comprising an outer and an inner casing spaced apart from each other, a plurality of rows of nozzles mounted on said inner casing in the path of the flow of the steam and shaped like truncated cones with their wider base projecting from said inner casing into the space between the said two casings, an apertured valve in said inner casing adapted to successively expose the various rows of nozzles, and a valve for controlling the admission of steam to the space between the said inner and outer casing, and means connecting said two valves to insure their simultaneous operation.

1,157,902. APPARATUS FOR PREVENTING THE EMULSIFICATION OF OIL FROM WELLS. JOHN E. REYNOLDS, Taft, Cal. Filed June 23, 1915. Serial No. 35,951. (Cl. 166—1.)



1. An apparatus for the described purpose, comprising a plurality of independent tight containers; a separately controllable tight inlet connection from the well line to each container; a separately controllable discharge connection for the non-gaseous contents of each container; and a controllable gas connection between the containers for establishing in each alternately a gas cushion against the flow of the well thereinto.

2. An apparatus for the described purpose, comprising a plurality of independent tight containers; a separately controllable tight inlet connection from the well line to each container; a separately controllable discharge connection for the non-gaseous contents of each container; a controllable gas connection between the containers for establishing in each alternately a gas cushion against the

flow of the well thereinto; and separately controllable gas vents from each container to control the pressure therein.

3. An apparatus for the described purpose, comprising a plurality of independent tight containers; a separately controllable tight inlet connection from the well line to each container; a separately controllable discharge connection for the liquid contents of each container; a separately controllable discharge connection for the fluent solids from each container; and a controllable gas connection between the containers for establishing in each alternately a gas cushion against the flow of the well thereinto.

4. An apparatus for the described purpose, comprising a plurality of independent tight containers; a separately controllable tight inlet connection from the well line to each container; a separately controllable discharge connection for the liquid contents of each container; a separately controllable discharge connection for the fluent solids from each container; a controllable gas connection between the containers for establishing in each alternately a gas cushion against the flow of the well thereinto; and separately controllable gas vents from each container to control the pressure therein.

5. An apparatus for the described purpose, comprising a plurality of independent elongated, recumbent, tight containers; a separately controllable tight inlet connection from the well line with one end of each container; a separately controllable discharge connection for the non-gaseous contents from the lower area of the other end of each container; and a controllable gas connection between the upper areas of the containers for establishing in each container alternately a gas cushion against the flow of the well thereinto.

[Claims 6 to 10 not printed in the Gazette.]

1,157,903. METHOD OF PREVENTING THE EMULSIFICATION OF OIL FROM WELLS. JOHN E. REYNOLDS, Taft, Cal. Filed June 23, 1915. Serial No. 33,952. (Cl. 166—21.)

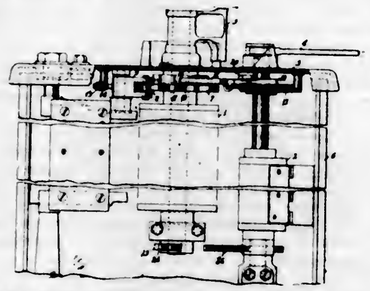


1. The method of operating a well to prevent the emulsification of the oil, which consists in directing its flow under pressure into a confined space against a previously established gas cushion therein; then cutting off said flow, and finally withdrawing the contents of said space.

2. The method of operating a well to prevent the emulsification of the oil, which consists in establishing in a confined space a cushion of gas from and under the pressure of the well; then directing the flow of the well under pressure into said confined space against the previously established gas cushion therein; then cutting off the flow of the well to said space, and finally withdrawing the contents of said space.

3. The method of operating a well to prevent the emulsification of the oil, which consists in directing its flow under pressure into a confined space; then establishing in a second confined space a gas cushion from and under the pressure of the contents of the first space; then cutting off the flow of the well from the first space and admitting said flow to the second space against the gas cushion previously established therein; then withdrawing the contents of the first space; then establishing in said first space a gas cushion from and under the pressure of the contents of the second space, then cutting off the flow of the well from the second space and admitting said flow to the first space against the gas cushion previously established therein; then withdrawing the contents of the second space, and so on.

1,157,904. CONTROLLER FOR ELECTRIC MOTORS. LYNN G. BILBY, Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Nov. 8, 1911, Serial No. 659,201. Renewed Dec. 24, 1914. Serial No. 878,941. (Cl. 172—179.)



1. An electric circuit controller comprising a resistance-controlling drum, a reversing drum adapted for field control, and interlocking means whereby a predetermined adjustment of the reversing drum is effected in moving the resistance-controlling drum into its last position.

2. An electric circuit controller comprising a voltage-controlling drum, a combined reversing and field-controlling drum, means for controlling a field winding through the last-mentioned drum, and means for interlocking said drums.

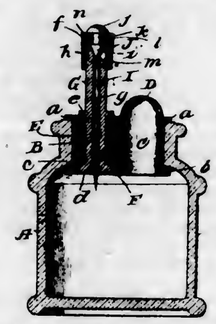
3. An electric circuit controller comprising a voltage-controlling switch, a reversing switch, means dependent upon the position of the voltage-controlling switch for actuating the reversing switch and means dependent upon the said actuation of the reversing switch for effecting a field control.

4. A control system comprising a plurality of electric motors, a series-multiple controlling switch therefor, a reversing switch adapted to weaken the motor fields, and means for effecting the necessary adjustment of the reversing switch to weaken the motor fields when the series-multiple switch is moved into its final position.

5. An electric circuit controller comprising a resistance-controlling switch, a reversing switch adapted for field control, and interlocking means whereby a predetermined adjustment of the reversing switch is effected in moving the resistance-controlling switch into its last position.

[Claims 6 to 8 not printed in the Gazette.]

1,157,905. STOPPER. WALTER G. RODIGER, Chicago, Ill. Filed Aug. 17, 1914. Serial No. 857,017. (Cl. 215—100.)



1. The combination, with a bottle A, of a soft rubber stopper or closure B seated in the mouth thereof and provided with parallel vertical passages C and E, one closed at its upper end by a compressible cap D and the other terminating at its lower end in an enlarged annular recess F, and a delivery spout G extending through the last-mentioned passage E and provided with lower and upper annular flanges *d* and *e*, the former seated in the recess F in the closure B and the latter seated upon its upper surface; substantially as described.

2. The combination, with a bottle A, of a soft rubber stopper or closure B seated in the mouth thereof and having two parallel passages C and B, one closed at its upper end by a compressible cap D, a delivery spout G seated in the other passage E and having its upper end beveled off to form a beak *f*, and a closure for the upper end of the spout G comprising the head H of a pin I, said head having a lower conical portion *i* engaging the mouth of the passage *g* through the spout G, and a rubber cap-piece J carried by the head H and engaging the outer surface of the spout G; substantially as described.

3. The combination, with a bottle A, of a soft rubber stopper or closure B seated in the mouth thereof and having two parallel passages C and E, one closed at its upper end by a compressible cap D, a spout G seated in the other passage E and having its upper end beveled off to form a beak *f* and provided with an engaging suface *h*, and a closure for the upper end of the spout G comprising a pin I having a head H formed of a conical portion *i*, a cap portion and an intermediate cylindrical portion *k*, and a rubber cap-piece J confined upon the head H between its conical portion *i* and cap portion *j* and having a depending cylindrical portion *m* surrounding and engaging the upper end of the spout G; substantially as described.

4. A delivery spout G for ink-bottles and the like, comprising a tubular portion having lower and upper annular flanges *d* and *e*, and having its upper end beveled off to form a beak *f* and provided with an engaging surface *h*; substantially as described.

5. The herein described closure for the delivery spouts of ink bottles and the like, comprising a pin I having a head H composed of a conical portion *i*, cap portion *j*, intermediate cylindrical portion *k*, and a rubber cap-piece J comprising a body or disk portion *l* seated around the portion *k* of the head between the portions *i* and *j*, and provided with a depending cylindrical portion *m*; substantially as described.

[Claim 6 not printed in the Gazette.]

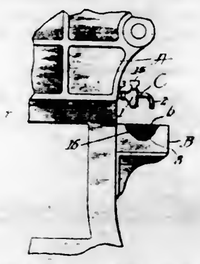
1,157,906. BUNG. BERNARD J. SCHMELZER, Joliet, Ill. Filed Nov. 11, 1913. Serial No. 800,327. (Cl. 217—110.)



1. A bung comprising a body portion having a non-circular socket on one side and a threaded stud on the other side, said body member being further provided with a portion of reduced diameter, a follower having a non-circular boss on one side and a socket threaded for engagement by said stud on the other side, said reduced portion of said body member being provided with lugs or the like, and a packing ring adapted to fit around said reduced portion of said body member and to be maintained in position thereon by said follower, said packing ring being constructed of resilient material and projecting beyond the adjacent surface of said body member and follower, said packing ring being provided with grooves or the like extending over said lugs of said body member whereby relative rotation of the latter with respect to said packing ring will be prevented.

2. A bung comprising a body member having a non-circular socket in one side and a threaded stud on the other side, said body member being further provided with a portion of reduced diameter, a follower having a non-circular boss on one side and a socket threaded for engagement by said stud on the other side, said follower being further provided with a recessed surface adjacent said socket, a peripheral flange surrounding said recess, and a packing ring adapted to fit on said reduced portion of said body member and to be maintained in position by said follower, said packing ring being of resilient material and projecting beyond the adjacent surface of said body portion and follower, said body member being provided with lugs, said packing ring being provided with sockets to fit over said lugs whereby rotation of said packing ring relative to said body portion will be prevented.

1,157,907. FILTER-PRESS SWITCH-COCK AND DOUBLE-GUTTER CONSTRUCTION. BARTON E. SPERRY, Batavia, Ill. Filed Mar. 1, 1915. Serial No. 11,247. (Cl. 137—26.)



1. A filter press switch cock and double gutter construction comprising a downwardly tapered rotary plug for the cock, a downturned stationary discharge nozzle for the cock, said plug being disposed over one channel of the gutter, said nozzle being disposed over the other channel of said gutter, whereby said nozzle and the vertical axis of said plug have fixed positions at opposite sides of a vertical plane extending between the two channels, means for holding said plug in position, said plug having a transverse passage for connecting the filter press with the nozzle, and said plug having a discharge bore and lateral inlet therefor below said passage, said bore having an outlet at the exposed lower end of the plug, said nozzle being arranged to preclude communication thereof with said bore.

2. A filter press switch cock and double gutter construction comprising a downwardly tapered rotary plug for the cock, a downturned stationary discharge nozzle for the cock, said plug being disposed over one channel of the gutter, said nozzle being disposed over the other channel of said gutter, whereby said nozzle and the vertical axis of said plug have fixed positions at opposite sides of a vertical plane extending between the two channels, means for holding said plug in position, said plug having a transverse passage for connecting the filter press with the nozzle, and said plug having a discharge bore and lateral inlet therefor below said passage, said bore having an outlet at the exposed lower end of the plug, said nozzle being arranged to preclude communication thereof with said bore, and said passage and inlet being disposed at right angles or forty-five degrees apart when viewed from above, the cock having a feed chamber common to said passage and inlet, said chamber being of a width to coöperate only separately with said passage and inlet.

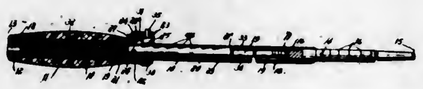
3. A filter press switch cock and double gutter construction comprising a downwardly tapered rotary plug for the cock, a downturned stationary discharge nozzle for the cock, said plug being disposed over one channel of the gutter, said nozzle being disposed over the other channel of said gutter, whereby said nozzle and the vertical axis of said plug have fixed positions at opposite sides of a vertical plane extending between the two channels, means for holding said plug in position, said plug having a transverse passage for connecting the filter press with the nozzle, and said plug having a discharge bore and lateral inlet therefor below said passage, said bore having an outlet at the exposed lower end of the plug, said nozzle

being arranged to preclude communication thereof with said bore, said means consisting of a collar on the lower end of said plug, the cock having a shoulder for engaging the top of said collar.

1,157,908. PROCESS OF ANILIN-BLACK DYEING. JAN STEYNIS, New York, N. Y., assignor to Steynis Ozone Company, a Corporation of New York. Filed Dec. 14, 1911. Serial No. 665,668. (Cl. 8—5.)

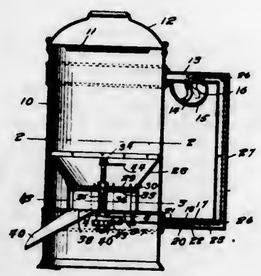
The improvement in the process of anilin black dyeing which consists in impregnating the fibers of the material with a solution comprising salt of anilin, sodium chlorate, and copper sulfate, obtaining a partial oxidation and thorough impregnation by drying the material, and periodically passing the goods over a wet lap roller and treating with a forced blast of dry ozonized air containing not more than five grams of ozone gas per cubic meter, said treatment being carried on at ordinary atmospheric temperature.

1,157,909. SPRING BILLIARD AND POOL CUE. JAMES J. TEAGUE, Holbrook, Ariz. Filed Sept. 2, 1914. Serial No. 859,892. (Cl. 46—9.)



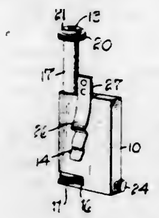
A billiard cue comprising a tubular stock, one end of which is closed, a plunger slidable in said stock, a cue rod engaging one end of said plunger and projecting outwardly from the stock, a sleeve fixed on said plunger and having teeth cut therein, said sleeve being formed with a flattened surface, an expansion spring seated within said stock between the closed end thereof and said sleeve, a second sleeve removably engaged on said stock, a spring-pressed latch carried by the last-named sleeve and engageable with said ratchet teeth, means for releasing said latch and means for securing said last-named sleeve to the stock, said means engaging the flattened surface of the first-named sleeve to secure same against rotation and secure the plunger within the stock.

1,157,910. SANITARY SUGAR-BOWL. VICTOR A. TOMSKY, New York, N. Y. Filed Apr. 10, 1914. Serial No. 831,075. (Cl. 221—108.)



In a dispensing apparatus of the class described, a main casing, a tubular handle having the free ends of its arms secured to the casing, a dispensing mechanism in the lower portion of the casing, and means for actuating said mechanism in successive steps comprising a trigger intermediately pivoted to the upper arm of the handle and extending therein, a rod slidable in the lower arm of the handle, and operatively connected to the actuating mechanism, and a flexible member disposed in said tubular handle connecting the trigger and the rod.

1,157,911. GAS-IGNITER. MARSHALL MANN TRUAX, Jerome, Pa. Filed Apr. 28, 1915. Serial No. 24,564. (Cl. 67—10.1.)



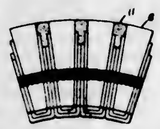
1. An igniter including a body plate provided with a transverse slot, a longitudinal bore leading into the side of the slot and a transverse bore leading from one edge of the plate into the end of the slot, a rod journaled in the longitudinal bore, a disk keyed upon the rod and disposed for rotation in the slot, a pyrophoric element mounted for movement in the transverse bore, a helical spring disposed in the transverse bore, to bear at its inner end against the pyrophoric element, for yieldably maintaining the same in engagement with an abrasive element, and an adjusting screw threaded into the outer end of the transverse bore, said screw being operable for adjusting the tension of the spring.

2. An igniter including a body plate provided with a transverse slot, and a longitudinal bore leading from one end of the plate into the side of the slot, a sleeve extending longitudinally from one end of the plate, and disposed to register with the bore, a rod journaled in the sleeve and bore, an abrasive disk keyed upon the rod and disposed for rotation in the slot, and a pyrophoric element engageable by the disk.

3. An igniter including a body plate, a rod rotatable therein, one end of the rod being threaded and provided with a transverse pin, a milled disk provided with a centrally disposed opening and diametrically opposed notches leading from the opening, said opening in the disk being adapted to receive the rod, said notches being adapted to receive the terminals of said pin, and a nut threaded upon the rod for holding the disk against disengagement with the pin, an abrasive disk keyed on the rod, and a pyrophoric element engageable by the disk.

4. An igniter including a body plate provided adjacent one terminal with a transversely extending slot, and a longitudinal bore opening into the side of said slot, a rod journaled in the bore and provided at one terminal with a non-circular head, said head passing across the slot and through the adjacent end of the plate, a screw threaded into the outer end of the non-circular head for holding the rod against withdrawal from the plate, an abrasive element keyed upon the non-circular head, and a pyrophoric element engageable by the disk.

1,157,912. COMMUTATOR. HARRY W. TURNER, Glenville, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 2, 1915. Serial No. 11,459. (Cl. 200—12.)



1. A commutator comprising a plurality of commutator bars, means for supporting the bars, and an insulation for the bars comprising sheets of non-hygroscopic material coated with an insulating enamel.

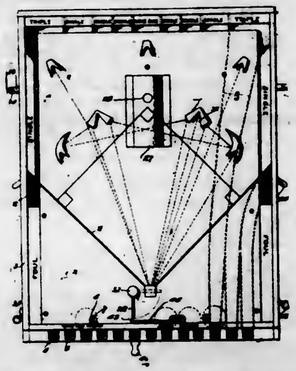
2. In a commutator, a pair of adjacent conductor bars and an insulation between them comprising sheets of non-hygroscopoc material coated with an insulating enamel.

3. In a commutator, a pair of adjacent conductor bars and an insulation between the bars comprising metal sheets coated with an insulating enamel.

4. In a commutator, a pair of adjacent conductor bars and a plurality of insulating members therefor comprising metal sheets coated with an insulating enamel and bent around the sides and the inner surfaces of the bars.

5. In a commutator, adjacent commutator bars, sheets of insulation consisting of sheets of metal coated with an insulating enamel bent around the two sides and the inner surfaces of the bars, the edges of the sheets not extending to the outer surfaces of the bars nor the edges of adjacent sheets extending in line with each other, and an insulation filling the grooves thus formed between the bars.

1,157,913. GAME APPARATUS. HARRY C. TWIBELL, Brooklyn, N. Y. Filed Jan. 16, 1915. Serial No. 2,646. (Cl. 46—61.)



1. A game apparatus comprising a board, a ball directing means movably mounted on the board, means for moving the ball directing means, means for impelling a ball along the directing means and a shield mounted upon the board and concealing the movement of the ball directing means.

2. A game apparatus comprising a board, means for impelling a ball over the board, and a concealed ball directing means movably mounted with relation to the ball impelling means.

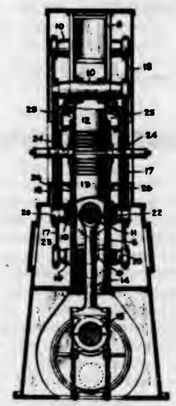
3. A game apparatus comprising a board, a block having a runway provided with an inclined bottom, a barrier disposed across the end of the runway and spaced from the lower end of the bottom thereof and means for striking the ball while in the runway to impel the same over the board.

1,157,914. INTERNAL-COMBUSTION ENGINE. WILLIAM EVERETT VER PLANCK and LEO V. STOELTZELEN, Erie, Pa., assignors to General Electric Company, a Corporation of New York. Filed June 6, 1914. Serial No. 843,557. (Cl. 121—41.)

1. In an engine of the character described, the combination of a pair of cylinders, oppositely moving pistons in each cylinder, a crank shaft, a connecting rod between each of the inner pistons and the shaft, a pair of diagonal rods that connects each of the outer pistons with the inner piston in an adjacent cylinder, and a universal coupling interposed between each pair of diagonal rods and the inner piston movable therewith.

2. In an engine of the character described, the combination of a pair of cylinders, oppositely moving pistons in each cylinder, a crank shaft, a connecting rod between each of the inner pistons and the shaft, a pair of diagonal rods that connects each of the outer pistons with the inner piston in an adjacent cylinder, and a universal coupling that is pivotally connected to each pair of diagonal rods and also pivotally connected to the inner piston and movable therewith.

3. In an engine of the character described, the combination of a pair of cylinders which are slotted at their inner ends, oppositely moving pistons mounted in each cylinder, a crank shaft, a connecting rod between each inner piston and the shaft, a wrist pin for each connecting rod and its piston which extends through the slots in the cylinder, a member which surrounds each cylinder and is connected to an inner piston by the extensions of said wrist pins, and a pair of diagonal rods for each outer piston that are pivotally connected to one of said members.

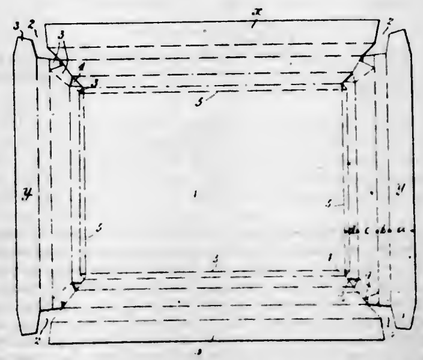


4. In an engine of the character described, the combination of a pair of cylinders which are slotted at their inner ends, oppositely moving trunk pistons mounted in each cylinder, a crank shaft, a connecting rod between each inner piston and the shaft, a wrist pin for each connecting rod and its piston which extends through the slots in the cylinder, and a gimbal that is connected to each pair of diagonal rods and also to a wrist pin.

5. In an engine of the character described, the combination of a pair of cylinders, oppositely moving pistons mounted in each cylinder, a crank shaft, a connecting rod between each inner piston and the shaft, annular members each of which is pivotally connected to one of the inner pistons, and a pair of diagonal rods for pivotally connecting each of the outer pistons to one of said members, the axes of the connections between each member and its diagonal rods and piston being at right angles.

[Claims 6 and 7 not printed in the Gazette.]

1,157,915. PICTURE-FRAME. HARRY WATTS, Fleet, England. Filed Aug. 25, 1913. Serial No. 786,478. (Cl. 40—155.)



A picture-frame composed of a single piece of stiff material comprising a central panel which is quadrilateral in

form and four side parts extending outward from the sides of said panel, two opposite side parts being provided at their ends with tongues, the proximate ends of the other side parts being inclined and without tongues or recesses, the four side parts being adapted to be set up in contact as a picture-frame ready for use and formed to represent a picture-frame molding, and the said tongues being adapted to be bent behind and secured to the proximate ends of the other sides.

1,157,916. INSULATED WIRE AND TERMINAL THEREFOR. ARTHUR M. WENTWORTH, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Aug. 24, 1914. Serial No. 858,168. (Cl. 219—63.)



1. The method of forming a sheathed wire from an ingot in which a conductor is embedded in insulating material surrounded by a metallic sheath which consists in reducing the entire sheath and conductor by consecutive passes through a reducing machine and partially relieving the pressure on a portion of the conductor during a stage of the reducing operation and thereby leave the conductor larger in section at said portion.

2. The method of forming a sheathed wire from an ingot in which a conductor is embedded in insulating material surrounded by a metallic sheath which consists in reducing the entire sheath and conductor by consecutive passes through a reducing machine, and treating a portion of the sheath at an intermediate stage of the reducing operation so that during the last stage of the reducing operation the conductor in that portion is reduced in section less than the main body of the conductor.

3. The method of forming sheathed wire with a conductor of variable cross-section from an ingot in which a conductor of substantially uniform cross-section is embedded in an insulating material and surrounded by a metallic sheath which consists in forming the metallic sheath with a variable external diameter and then reducing the sheathed wire.

4. The method of forming sheathed wire with a conductor having an enlarged terminal from an ingot in which a conductor is embedded in an insulating material surrounded by a metallic sheath which consists in removing an outer layer from the end of the sheath and then reducing the sheathed wire.

5. The method of making sheathed wire having an enlarged terminal from an ingot composed of a metallic core embedded in insulating material surrounded by a metallic sheath, which consists in removing an outer layer from the end of the sheath to form a taper and then reducing the sheathed wire.

[Claims 6 to 13 not printed in the Gazette.]

1,157,917. CONNECTOR FOR BEAD-CHAINS. OSCAR H. ALLEN, Brockton, Mass. Filed Nov. 22, 1912. Serial No. 732,828. (Cl. 24—116.)



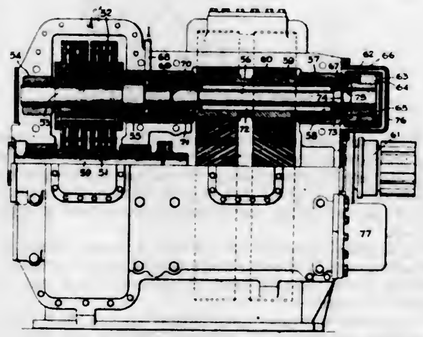
1. A splicing connector for bead chains formed of strip material bent to S-shape with a slot extending lengthwise and centrally thereof through its intermediate portion to near its ends, with an enlarged central aperture for receiving beads therethrough in either direction, said aperture being slightly smaller than the size of a bead to be received therethrough, whereby the bead may be pressed through the same by the yielding of the material, the extremities of the device being bent back on the central portion to form restricted passages between the ends and such central portion of a size slightly smaller than the beads whereby the beads may be frictionally held by spring pressure in the hook seats so formed.

2. A splicing connector for bead chains formed of strip material bent to S-shape with a slot extending lengthwise and centrally thereof through its intermediate portion to near its ends, with a central bead receiving aperture, the extremities of the device being formed as hook seats adapted to hold the beads with a spring pressure.

3. A splicing connector for bead chains formed of thin flat stock to S-shape with a slot extending lengthwise through the central portion thereof to near the ends of the S-hooks, there being an enlarged bead receiving aperture intermediate said slot through which the beads at the ends of the respective chain portions may be passed in opposite directions and then slid along said slot to find seats in the respective end hooks.

4. A splicing connector for bead chains formed of thin flat stock bent to S-shape with a slot extending through the intermediate portion thereof to near the end of he S-hooks, with an intermediate bead receiving aperture, the hook seats at the extremities of the device being adapted to hold securely the end beads of chain portions to be united, and the sides of the device being fashioned to present a scalloped configuration simulating a bead chain in appearance whereby it is rendered inconspicuous in use.

1,157,918. ELASTIC GEARING. KARL ALQUIST, Schenectady, N. Y. Filed May 5, 1915. Serial No. 26,148. (Cl. 74—29.)



1. The combination with elastic helical spur gearing, of means associated therewith for preventing or damping relative axial motion between the gear wheels in mesh.

2. The combination with elastic helical spur gearing, of a dash pot device associated therewith for preventing or damping relative axial motion between the gear wheels in mesh.

3. The combination with elastic helical gearing, comprising a driving element, a driven element, and intermediate elastic gear elements through which power is transmitted from the driving to the driven element, of dash pot devices of which the free ends of the shafts which carry the elastic gear elements form a part for preventing or damping axial vibrations among the respective gear elements.

4. The combination with elastic helical gearing, comprising a driving element, a driven element, and an intermediate elastic gear element through which power is transmitted from the driving to the driven element, of means associated with the shaft carrying the elastic element for preventing or damping axial vibratory motion.

5. The combination with helical gearing comprising an elastic gear, of a dash pot device associated with an end of the shaft of one of the gears, and of which such end forms a part for preventing or damping axial vibratory motion.

[Claims 6 to 13 not printed in the Gazette.]

1,157,919. ELECTRIC CUT-OUT. WILLIAM C. ARSEM, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 26, 1914. Serial No. 821,290. (Cl. 175—273.)



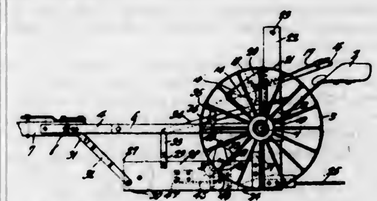
1. An electric fuse having its fuse conductor surrounded by loose, dry particles of hydrated silicic acid.

2. An electric fuse having its fuse conductor surrounded by loose particles of hydrated silicic acid in a light, voluminous form.

3. An electric fuse having its fuse conductor surrounded by loose particles of silicic acid hydrated in substantially the proportion of one molecule of water to two of acid, and in a light, voluminous form.

4. As a packing or filler for electric fuses, hydrated silicic acid in the form of loose, dry particles, light and highly voluminous.

1,157,920. BEET-HARVESTER. WILLIAM ATWOOD, Longmont, Colo. Filed Dec. 18, 1913. Serial No. 807,514. (Cl. 55—107.)

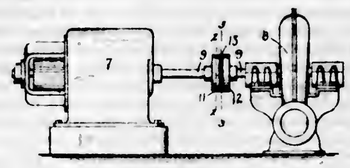


1. In a beet harvester, a vehicle comprising a main frame; a supplemental frame pivoted adjacent its forward end to the main frame; a cutting means permanently secured to the supplemental frame and disposed at an acute angle to the line of advance of the harvester; guides on the supplemental frame; a supporting structure vertically adjustable in the guides; a gage roller journaled on the supporting structure; and means engaging the supporting structure and the supplemental frame for holding the supporting structure in adjusted vertical positions in the guides.

2. In a device of the class described, a main frame; a supplemental frame suspended from the main frame, the supplemental frame embodying side members and a connection between the side members; colters carried by the side members adjacent the forward ends thereof; a corrugated gage wheel supported by the side members adjacent the rear ends thereof; and a cutting mechanism carried by the side members and located between the gage wheel and the colters, the colters and the gage wheel cooperating to prevent the lateral movement of the supplemental frame with respect to the main frame, due to the action of the cutting mechanism.

3. In a device of the class described, a main frame; a supplemental frame suspended from the main frame; means for raising and lowering the supplemental frame; a pair of converging knives carried by the supplemental frame, the cutting edge of one knife being extended to the rear of the cutting edge of the other knife, the inner ends of the knives being spaced apart to define a trash receiving throat; a colter carried by the supplemental frame and located in front of the knives; and a corrugated gage wheel supported by the supplemental frame and located to the rear of the knives; the colter and the gage wheel constituting ground-engaging elements preventing a lateral movement of the supplemental frame due to the action of the cutting edges of the knives and preventing a lateral shifting of the trash receiving throat, during the raising and lowering of the supplemental frame.

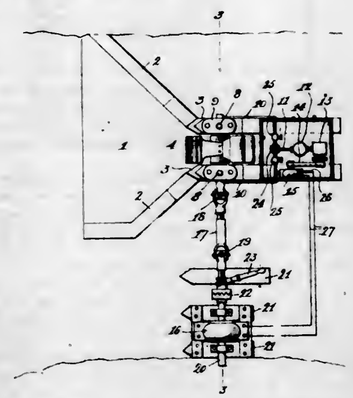
1,157,921. COUPLING. WILLIAM C. BANKS, New York, N. Y., assignor, by mesne assignments, to N-W. Equipment Co., Inc., New York, N. Y., a Corporation of New York. Filed Aug. 20, 1913. Serial No. 785,620. (Cl. 64—13.)



1. An insulating-coupling for connecting a pair of alined shafts, comprising a pair of metallic disks arranged opposite each other and having radial depressions and ridges on their opposed faces, and a disk of somewhat flexible insulating material between said faces, conforming to the shape thereof and secured thereto by adhesive material, said insulating disk thus secured constituting the connection between said metallic disks, substantially as set forth.

2. In an insulating coupling, the combination of a pair of alined shafts having metal disks on the adjacent ends thereof, said disks having depressions and projections on their opposed faces, and a rubber disk of substantial thickness between the opposed faces of said metal disks conforming to the shape thereof and secured thereto by adhesive material, said rubber disk thus secured constituting the connection between said metallic disks on said shafts, substantially as set forth.

1,157,922. WATER-POWER PLANT. ELMER BASSETT, Shelbyville, Ind. Filed Oct. 10, 1914. Serial No. 866,125. (Cl. 170—107.)



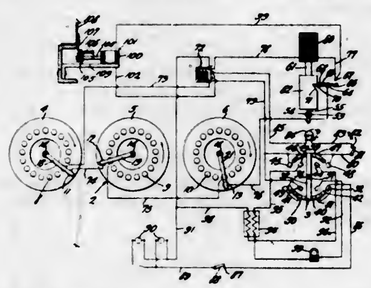
1. In a water power plant, the combination with a water wheel, of pneumatic pistons and cylinders for raising and lowering said wheel, a pump for supplying compressed air to said pistons, an electric motor for driving said pump and an electric generator for supplying current to said motor driven from said wheel.

2. In a water power plant, the combination with a water-wheel, of pneumatic pistons and cylinders for raising and lowering said wheel, compressed air conduits communicating with said cylinders, an air supply pipe, a three-way valve adapted to alternately connect the latter to the conduits and to vent said conduits to the atmosphere, an air compressor connected with said pipe, an electric motor for operating the compressor, and an electric generator driven by the wheel for supplying current to the motor.

3. In a water power plant, the combination with a water wheel, of pneumatic pistons and cylinders for raising and lowering said wheel, said pistons having guided extensions and notches therein, pawls arranged for engagement in said notches, a three-way valve to control a simultaneous admission of air to said cylinders, and valves to independently control the admission of air thereto.

4. In a water power plant, the combination with a water wheel, of pneumatic pistons and cylinders for raising and lowering said wheel, said pistons having guided extensions and notches therein, pawls arranged for engagement in said notches, a three-way valve to control a simultaneous admission of air to said cylinders, valves to independently control the admission of air thereto, a line shaft, a universal connection between the water wheel and said shaft, said connection capable of extension, a clutch in the line shaft, an electric generator driven by said line shaft, a pump for supplying compressed air to said pistons, and an electric motor for driving said pump, said motor supplied with currrent from said generator.

1,157,923. ELECTRIC PERMUTATION-SWITCH MECHANISM. OTHO D. BOWERS, Arcanum, Ohio. Filed May 20, 1915. Serial No. 29,397. (Cl. 175—282.)



1. In an appliance of the character described, a main switch, means operable for preventing said switch from being operated, and an electrical circuit including an electrically operated device for operating said means to render the switch operable, and a permutation switch for closing said circuit.

2. In an appliance of the character described, a controlling device, a shutter for preventing accesss being had thereto, and an electrical circuit including a source of electrical energy, an electrically operated device for operating said shutter to permit access to be had to the controlling device, and a permutation switch.

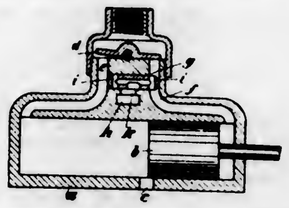
3. In an appliance of the character described, a switch having a hub, a rotatable sleeve for indicating the position of the switch, the switch and hub being spaced apart and in alinement, a key insertible through said sleeve and engageable with said hub for rotating the hub and sleeve, a shutter movable between the sleeve and hub to prevent the insertion of the key for rotating the hub, and an electrical circuit including a source of energy, a permutation switch, and an electrically operated device for retracting the shutter from betweein the said sleeve and hub.

4. In an appliance of the character described, a controlling device, a shutter projectable to a position for preventing access being had to the controlling device, an electrical circuit including a source of electrical energy, a permutation switch, and an electrically operated device for retracting the shutter, and manually operable means for holding the shutter in retracted position and including a switch for opening and closing said circuit.

5. In an appliance of the character described, a controlling device, a movable shutter adapted to be projected to a position for preventing access being had to the controlling device, and an electrical circuit including a source of electrical energy, a permutation switch, a manually operable switch, and an electrically operated device for retracting the shutter, said manually operable switch carrying a detent coöperable with said shutter for normally holding the shutter in retracted position and whereby the shutter may be released to be projected.

[Claim 6 not printed in the Gazette.]

1,157,924. PNEUMATIC TOOL. CHARLES CHRISTIANSEN, Gelsenkirchen, Germany. Filed July 21, 1915. Serial No. 41,199. (Cl. 121—11.)



1. A pneumatic tool comprising a cylinder, a piston therein, an air admission port and an exhaust port communicating with the cylinder at its ends by passages common to said ports, an air admission controlling member, and an exhaust controlling member operable by a difference in pressure on their opposite ends to alternately connect the admission port and exhaust port with opposite ends of the cylinder.

2. A pneumatic tool comprising a cylinder having an exhaust port therein, a piston in the cylinder, an air admission port and an auxiliary exhaust port communicating with the cylinder at its ends by passages common to said admission and auxiliary ports, a valve controlling the admission port, and a valve controlling the auxiliary exhaust port, both of said valves being operable by a difference of pressure on their opposite ends to alternately connect the admission port and auxiliary port with opposite ends of the cylinder.

3. A pneumatic tool comprising a cylinder having an exhaust port therein, a piston in the cylinder controlling said port, an air admission port and an auxiliary exhaust port communicating with the cylinder at its ends by passages common to said admission and auxiliary ports, separate valves controlling the admission port and auxiliary exhaust port operable by a reduction of pressure and by compression in the cylinder to alternately connect the admission port and auxiliary port with opposite ends of the cylinder.

4. A pneumatic tool comprising a cylinder having an exhaust port therein, a piston in the cylinder controlling said port, an air admission port, passages connecting the latter with opposite ends of the cylinder, a valve to alternately close the inlet ends of said passages, an auxiliary exhaust port arranged to communicate with the cylinder through said passages, and a valve to connect the auxiliary exhaust with said passages alternately, said valves operable by a reduction of pressure and by compression in the cylinder to connect the air admission port with one end of the cylinder and to connect the auxiliary exhaust with the opposite end of the cylinder.

1,157,925. VACUUM-TUBE ELECTRODE AND PROCESS OF OPERATING SAME. WILLIAM D. COOLIDGE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 7, 1912. Serial No. 719,218. (Cl. 250—35.)

1. A Röntgen ray target comprising a mass of metal of good heat conductivity, a tungsten body spaced apart from said mass near the working face of said tungsten body, and a heat conductive connection between said mass of metal and the tungsten body, said connection affording a slower transfer of heat than direct thermal contact between the mass of metal and the tungsten body.

2. An X-ray target comprising a body of refractory metal arranged to receive the cathode rays and a body for receiving and storing heat, said bodies being spaced apart at the discharge-receiving face of the refractory metal body but joined by a shank affording a path of lower heat conductivity than a direct thermal contact between the heat receiving layer of the refractory metal and the heat storing body, so that the tungsten body may be maintained at a high temperature during operation substantially uniform throughout.



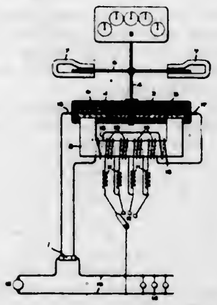
3. An X-ray electrode comprising a holder of copper, and a body of malleable tungsten, the copper and tungsten being spaced apart at a region adjoining the working face of the tungsten body, but connected through a shank affording transfer of heat at a rate materially less than a close thermal connection adjoining the heated sone, so that the temperature of the tungsten body may be maintained throughout materially above the temperature of the copper mass.

4. An X-ray target comprising a body of malleable tungsten, a body of copper and a stem of metal smaller in cross-section than said tungsten body connecting said bodies, the tungsten body and copper body being otherwise separated by a space.

5. The method of operating a Röntgen-ray target comprising a refractory metal body which is brittle below a predetermined temperature which consists in first gradually raising the temperature of said body by a small amount of current until it is heated to a temperature at which it is pliable and subsequently operating with a full energy input.

[Claims 6 and 7 not printed in the Gazette.]

1,157,926. ELECTRIC METER. ALBERT G. DAVIS, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 13, 1913. Serial No. 741,667. (Cl. 171—34.)



1. An electric meter comprising a receptacle containing mercury, a rotatable armature within said receptacle, a potential winding electrically connected to said armature, means for supplying to said armature a friction compensating current, and means for adjusting the amount of said compensating current by varying the current flowing in said potential winding and for maintaining the field strength due to said potential winding substantially constant as the current flowing therein is varied.

2. An electric meter comprising a rotatable armature, a potential winding electrically connected to said armature, a resistance electrically connected to the potential winding, and means for simultaneously cutting out a section of the potential winding and a section of the resistance.

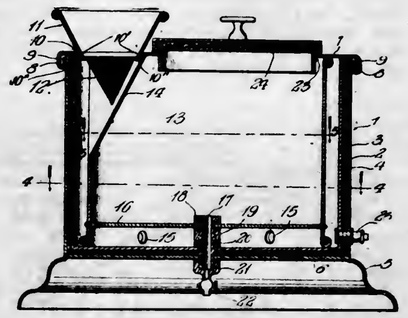
3. An electric meter comprising a rotatable armature, a potential winding in series with said armature, said potential winding having several sections, a resistance in series with each section of said winding, and means for varying the number of sections and associated resistances actively included in the potential winding.

4. An electric meter comprising a rotatable armature, a potential winding in series with said armature, said potential winding having a plurality of sections, a resistance in series with each section, the number of turns of winding in each section and the amount of resistance associated therewith being such that the ampere turns of the potential winding are substantially independent of the number of sections actively included in the winding, and means for varying the number of sections actively included in the potential winding.

5. An electric meter comprising a rotatable armature, a potential winding electrically connected thereto, a resistance electrically connected to said winding, said winding and said resistance being divided into operatively associated sections, the number of turns of winding and the amount of resistance included in each section being such that the ampere turns of the potential winding are substantially independent of the number of sections actively included in the winding, and means for varying the number of associated sections actively included in the potential winding.

[Claim 6 not printed in the Gazette.]

1,157,927. WATER-COOLER. WALTER L. DAVIS, Nashville, Tenn. Filed Sept. 24, 1914. Serial No. 863,410. (Cl. 62—143.)

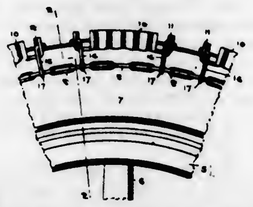


A water cooler comprising a cylindrical water tank provided with a water outlet, an ice receptacle resting on the bottom of said tank and having its top flush with the top of said tank, said receptacle having upright walls spaced from the walls of said tank and having one of them bulged inwardly to provide an inclined receiving plate, a drip discharge from the ice receptacle, a flat circular cover plate adapted to rest on the top of said tank and the top of said receptacle, said cover plate having an opening disposed above the open top of said receptacle and a circular opening near its outer edge disposed above said inclined receiving plate, the last named opening being provided with an inwardly extending flange having a shoulder, a funnel-shaped bottle guide fitted in said circular opening and having its lower end resting on said shoulder, an inverted cone-shaped strainer fitted to the lower end of said guide, and a lid adapted to close the first-named opening.

1,157,928. NON-SKID ATTACHMENT FOR TIRES. JOHN L. DUFF, Cambridge, Ohio. Filed Apr. 21, 1915. Serial No. 22,856. (Cl. 152—14.)

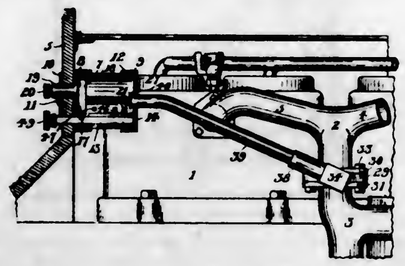
1. A non-skid attachment for tires, comprising base plates curved to fit the tread of the tire, upstanding flanges across the ends of the base plates, each flange having an opening adjacent each end, a fastening clip, lying flat against the outer face of each flange, the ends of each clip

being extended through said openings and extended parallel with the inner face of the flange, said ends being curved and extended a distance beyond the edges of the base plates and provided at their extremities with eyes, and chains surrounding the tire and connected with said eyes to hold the attachment to the tire.



2. The herein described non-skid attachment for tires comprising sections, each consisting of a base plate curved to fit the tread of the tire, end flange plates projecting outwardly therefrom, fastening clips comprising a main body embracing the end plates on their outer sides, right angular bends passing through openings in the end plates, and curved ends fitting transversely over the tire, said curved ends being provided with eyes at their extremities, and a chain surrounding the tire at a short distance on each side of the central peripheral line thereof and engaging the eyes of said clips.

1,157,929. MANIFOLD-VALVE LOCK FOR AUTOMOBILES. JOHN H. DUGAN and MILTON N. SMITH, Akron, Ohio, assignors to The Akron Motor Lock Co., Akron, Ohio, a Corporation. Filed Dec. 23, 1914. Serial No. 878,745. (Cl. 123—198.)



1. The combination with a manifold valve, of means operable from the front of an automobile for controlling the valve, locking mechanism co-acting with the valve-controlling means for holding the valve in closed position, and means for admitting atmospheric air to the manifold in the event of breakage of the valve-controlling means.

2. The combination with a manifold valve, and means for locking the same in closed position, of means for admitting atmospheric air beyond the point of mixture in the event of breakage of the locking mechanism.

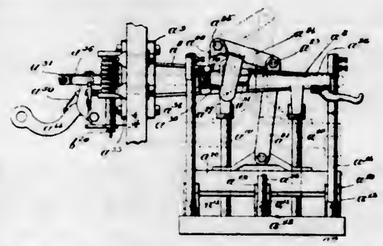
3. The combination with the dash-board of an automobile, of a casing closed at each end, a lock carried by one end of the casing and projecting through the dash-board, a spring-drawn bolt slidably mounted within the casing and arranged to be engaged by the lock, a plate interposed between the carbureter and manifold of the engine, a head carried by the plate, a pipe connecting with the head and with the casing, a second pipe housed within the first-named pipe, means for sealing the space between the two pipes at one end thereof, and a conduit connecting the space between the two pipes and the manifold.

4. The combination with the dash-board of an automobile, of a casing having its ends closed and secured to the dash-board, a bolt slidably-arranged within the casing and projecting beyond the dash-board, a permutation lock secured to one end of the casing and projecting beyond the dash-board and arranged to engage with the lock, a retracting spring connecting the bolt and the lock, a plate interposed between the carbureter and manifold of the engine, a valve arranged in the plate, pipes connecting the plate and the casing, and a flexible connection between the bolt and the valve.

5. The combination with the dash-board of an automobile, of a casing having its ends closed and secured to the dash-board, a bolt slidably-arranged within the casing and projecting beyond the dash-board, a permutation lock secured to one end of the casing and projecting beyond the dash-board and arranged to engage with the lock, a retracting spring connecting the bolt and the lock, a plate interposed between the carbureter and manifold of the engine, a valve arranged in the plate, pipes connecting the plate and the casing, a flexible connection between the bolt and the valve, and a spring co-acting with the valve and operating to close the valve when the bolt is moved to locked position.

[Claims 6 to 10 not printed in the Gazette.]

1,157,930. MECHANISM FOR THE CONTROL OF CIRCUIT-BREAKERS. LEONARD L. ELDEN, Dorchester, Mass., assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Original application filed June 20, 1901, Serial No. 65,241. Divided and this application filed Dec. 2, 1903. Serial No. 183,457. (Cl. 175—267.)



1. An electric switch, comprising separable contacts, means for closing them, electro-responsive opening means, and means independent of said electro responsive means to vary the sensitiveness with which said contacts respond to said opening means.

2. A switch, comprising separable contacts, closing mechanism therefor, and an operating member movable to actuate said closing mechanism and having provision for disconnection by a continuation of such movement.

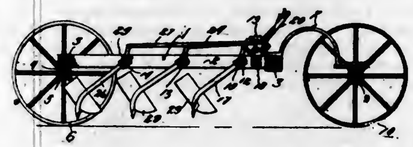
3. A switch, comprising separable contacts, closing mechanism therefor, and an operating member constructed to actuate said closing mechanism by a single movement and having provision for self-disconnection at the termination of such movement.

4. An electric switch, comprising separable coöperative contacts, closing means therefor including means normally maintaining said contacts closed when moved to closed position, an operating lever, and automatic means for cutting off control of said operating lever at a predetermined point in the movement of said closing means.

5. In an electric switch, the combination of separable coöperative contacts, means for causing their separation, means for normally restraining the separating means, means including an operating lever automatically disabled by movement into circuit closing position for preventing the maintenance of the separable coöperative contacts in circuit-closing position during the continuance of predetermined electrical conditions in the circuit, and automatic magnetic means for controlling the switch upon the occurrence of said predetermined electrical conditions in the circuit.

[Claims 6 to 30 not printed in the Gazette.]

1,157,931. MACHINE FOR DIGGING POTATOES. HENRY ESKETT, Mounds, Ill., assignor of one-half to Virginia Hynds, Mounds, Ill. Filed Feb. 28, 1914. Serial No. 821,656. (Cl. 55—9.)

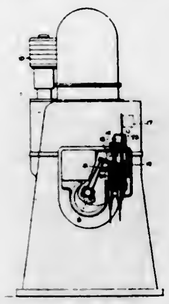


1. A machine of the class described comprising a frame, a plurality of shafts rotatably supported by the frame, one of said shafts having plow standards connected thereto, the other shafts having teeth carried thereby for digging and assorting potatoes, and means for rocking the shafts independently.

2. A machine of the class described comprising a frame, a plurality of shafts journaled transversely of the frame, plow standards connected to the forward shaft, teeth connected to the rear and intermediate shaft, the teeth carried by the rear shaft being greater in number than those carried by the intermediate shaft, and means for rocking the shafts to lift the standards and teeth.

3. A machine of the class described comprising a frame, shafts journaled transversely of the frame, plow standards fixed to the forward shaft, teeth fixed to the rear and intermediate shaft, the teeth of the rear shaft being greater in number than the teeth of the intermediate shaft, and standards of the forward shaft, arms depending from the shafts, fenders fixed to the lower ends of the arms, and means for independently rocking the shafts to lift the teeth and plow standards and fenders, as and for the purpose set forth.

1,157,932. INTERNAL-COMBUSTION ENGINE. KURT EVERS, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed July 28, 1914. Serial No. 853,584. (Cl. 123—97.



1. The combination with an internal-combustion engine of the high compression type in which fuel and scavenging air are separately admitted to the cylinder, of means for automatically increasing the charge of scavenging air as the load decreases, and vice versa, in order to maintain stable ignition conditions.

2. The combination with an internal combustion engine of the high compression type, in which the fuel and scavenging air are separately admitted to the cylinder, of a governor responsive to the load on the engine, means controlled by the governor for regulating the charge of fuel directly with the load on the engine, and means controlled by the governor for regulating the amount of scavenging air supplied to the cylinder in inverse ratio to the load on the engine.

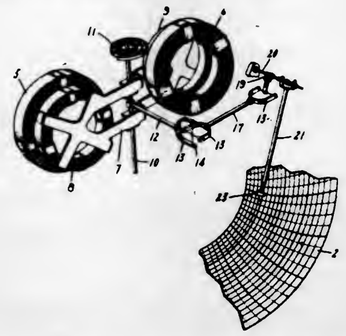
3. The combination with an internal-combustion engine having a scavenging pump, of means for automatically varying the amount of scavenging air delivered to the engine cylinders in inverse ratio to the load on the engine.

4. The combination with an internal-combustion engine having a scavenging pump, of a by-pass for said pump, and means for automatically controlling said by-pass in accordance with the load on the engine.

5. The combination with a two-cycle internal-combustion engine having a scavenging pump, of a by-pass for said pump, a throttle valve for the by-pass, and means for automatically opening and closing said valve as the load on the engine increases and decreases respectively.

[Claims 6 and 7 not printed in the Gazette.]

1,157,933. MECHANICAL MOVEMENT. ALEXANDER J. R. FIEGO, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Apr. 1, 1913. Serial No. 758,119. (Cl. 74—14.)



1. A mechanical movement comprising two movable members, an element having two arms resiliently spaced with respect to each other secured to each member, means flexibly connecting the two arms of each element, and means whereby said last mentioned means are operatively connected together.

2. A mechanical movement comprising two movable members, an element having two arms resiliently spaced with respect to each other, a cord tautly stretched between the two arms of each element, and means securing said cords together at substantially their middle portions.

3. A mechanical movement comprising two movable members one of which has a path of movement in the arc of a circle, an element having two arms resiliently spaced with respect to each other secured to one of said members, a cord tautly stretched between the two arms of said element, and means whereby the other movable member is operatively connected to substantially the middle portion of said cord.

4. A mechanical movement comprising two movable members, a U-shaped spring element secured to each member, means flexibly connecting the ends of each spring element, and means whereby said last mentioned means are operatively connected together.

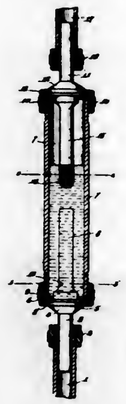
5. A mechanical movement comprising two movable members, a U-shaped spring element secured to each member, a cord flexibly connecting the ends of each element, and means operatively connecting said cords to each other.

[Claims 6 to 12 not printed in the Gazette.]

1,157,934. COMBINATION FILTER AND AIR-CHAMBER. EDWARD A. GEHRKE, Lincoln, Nebr. Filed June 13, 1913. Serial No. 773,548. (Cl. 210—15.)

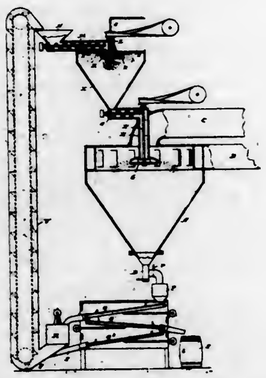
1. In a filter, a tubular vessel, an inlet pipe connected through the lower end of said tubular vessel in a water-tight seal and extended to have the inner end thereof terminate at a point adjacent the center of said vessel, an outlet pipe sealed through the upper end of said vessel to

extend into proximity to the inlet pipe to be spaced directly thereabove and beveled at the lower end to form an opening substantially elliptical when viewed in side elevation, and a strainer medium through which the water passes in the travel through the outlet.



2. In a filter, a vessel comprising a substantially tubular body, an inlet pipe extended through the bottom opening of said vessel to be sealed therein in a water-tight relation and to have the inner end at a point proximate to the center of said vessel, an outlet pipe extended through the upper end of said tubular vessel to have the intake end positioned directly above and cut at an angle to the vertical axis thereof, a screen arranged over said angularly cut end of the outlet pipe in a manner to strain the water passing therethrough and to discharge the impurities back into the vessel around the inwardly extended portion of said inlet pipe, and all of said parts so arranged that as water is permitted to flow through the inlet pipe, the air is driven from the vessel to a point that the water level is established at the highest open space of the angularly cut end of the outlet pipe and the remaining air is maintained as an air cushion.

1,157,935. METHOD OF AND APPARATUS FOR DESICCATING LIQUID SUBSTANCES. CHESTER EARL GRAY, Eureka, Cal. Filed June 14, 1915. Serial No. 34,041. (Cl. 99—5.)



1. The method of desiccating substances which consists in providing a comminuted nucleus mass, discharging the mass in sub-divided form into an atmosphere carrying the substance to be desiccated in sub-divided liquid form, whereby the nuclei become coated therewith, and in subsequently evaporating the moisture from the particles.

2. The method of desiccating substances which consists in providing a comminuted nucleus mass, subjecting the mass in sub-divided form to an atmosphere carrying the substance to be desiccated in sub-divided liquid form, whereby the nuclei become coated therewith, and in subsequently evaporating the moisture from the particles while the particles are free from mechanical support in the drying medium.

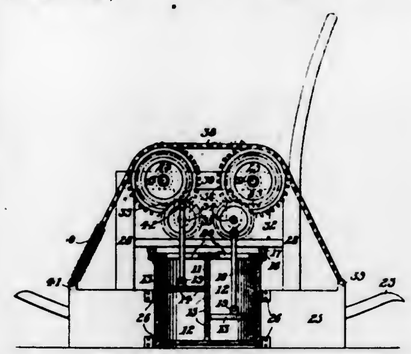
3. The method of desiccating substances which consists in providing a comminuted nucleus mass, then coating the nuclei with liquid containing the substance to be desiccated and in subjecting the coated nuclei to the action of a desiccating medium while freely suspended therein until the liquid content is evaporated sufficiently to prevent coalescence or adhesion between the particles.

4. The process of desiccating liquid substances in a continuous cycle using a nucleus mass to which the liquid substance is added, which consists in coating the nuclei with the liquid substance, evaporating the aqueous content, grading the dried material to separate out the finished product and utilizing the remainder of the dried material as the nucleus mass in the repetition of the cycle of operations.

5. The process of desiccating liquid substances in a continuous cycle using a nucleus mass to which the liquid substance is added, which consists in coating the nuclei with the liquid substance, evaporating the aqueous content, grading the dried material to separate out the finished product, pulverizing the larger particles of the remaining dried material and utilizing the pulverized material as the nucleus mass in the repetition of the cycle of operations.

[Claims 6 to 13 not printed in the Gazette.]

1,157,936. GEAR MECHANISM. STEPHEN HALCIN, Pisek, N. D. Filed May 13, 1915. Serial No. 27,808. (Cl. 185—26.)

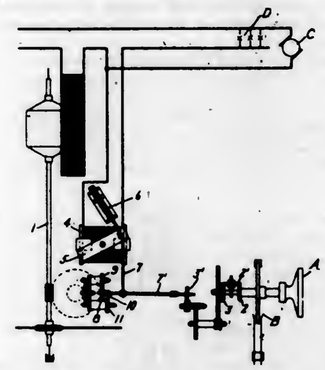


1. Driving mechanism including a base board, a spring-tensioned sprocket chain carried thereby, a movable member mounted on said board, meshing gearing mounted on the movable member in mesh with the sprocket chain, and rods connected to said gearing and reciprocated thereby.

2. Driving mechanism including a base board, a sprocket chain carried thereby, a spring connecting one of the chain ends to the base board, meshing gearing operated by said chain, rods connected to said gearing and reciprocated thereby, and means for bodily moving the gearing whereby the rods are reciprocated.

3. Driving mechanism including a base support, a member movable relative thereto, gearing carried by said member, a chain fixed at its ends to said support in mesh with the gearing, and rods connected to said gearing adapted to be reciprocated when the movable member is operated.

1,157,937. ELECTRIC METER. MAX HELM, Pankow, Germany, assignor to General Electric Company, a Corporation of New York. Filed May 24, 1912. Serial No. 699,481. (Cl. 171—268.)



1. The combination with an electric meter, of a plurality of load circuits, and means independent of the motive elements of the meter for changing the unit value of the meter with respect to the energy supplied to both of said circuits when the electrical condition of one of the circuits undergoes a predetermined change.

2. The combination with a plurality of load circuits, of an electric meter adapted to meter at the same unit value the total combined amount of energy simultaneously supplied to said circuits, and means independent of the motive elements of the meter for changing the unit value of the meter with respect to the energy supplied to both of said circuits when the electrical condition of one of said circuits undergoes a predetermined change.

3. The combination with an electric meter, of a power circuit and a lighting circuit, and means independent of the motive elements of the meter for changing the unit value of the meter with respect to the energy supplied to both of said circuits when the electrical condition of the lighting circuit undergoes a predetermined change.

4. The combination with a plurality of load circuits, of an electric meter adapted to meter at the same unit value the total combined amount of energy simultaneously supplied to said circuits, and a demand device operatively included in one of said circuits and adapted when the electrical condition of said circuit undergoes a predetermined change to alter the unit value of the meter with respect to the energy supplied to both of said circuits.

5. The combination with a power circuit and a lighting circuit, of an electric meter adapted to meter at the same unit value the total combined amount of energy simultaneously supplied to said circuits, and means independent of the motive elements of the meter for changing the unit value of the meter with respect to the energy supplied to both of said circuits when the current in the lighting circuit exceeds a predetermined value.

[Claims 6 to 11 not printed in the Gazette.]

1,157,938. WIRE-LINE WRENCH AND METHOD OF MAKING SAME. WILLIAM T. HERRICK, Tulsa, Okla. Filed Apr. 26, 1915. Serial No. 24,084. (Cl. 81—3.)



1. A wire-line or cable wrench provided with channeled jaws and soft metal liners anchored in the channels in the jaws and having gripping faces in the form of intaglio fac-similes of the surface of the wire cable to be gripped.

2. A wire-line or cable wrench composed of two jaws pivoted together with their meeting portions channeled and the channels provided with sockets, and soft metal liners lodged in the channels with anchoring lugs entering the sockets, said liners having gripping faces in the form of intaglio fac-similes of the surface of the wire cable to be gripped.

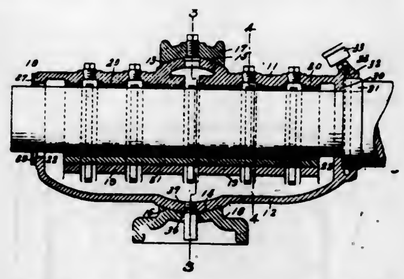
3. A wire-line or cable wrench having cable engaging jaws with their engaging faces each formed with associated spiral grooves and ridges constituting an intaglio fac-simile of the surface of the cable to be gripped by the jaw.

4. A wire-line or cable wrench having cable gripping jaws provided with cast soft-metal gripping inserts each having its gripping face in the form of a negative facsimile of so much of the surface conformation of the cable as corresponds to the area of the gripping surface of the insert.

5. A wire-line or cable wrench provided with jaws having gripping portions of soft metal cast in the jaws in anchoring relation thereto and in conformity with the surface of the cable to be gripped.

[Claims 6 and 7 not printed in the Gazette.]

1,157,939. BEARING. JOSEPH L. HILLER, Mattapoisett, Mass. Filed Jan. 25, 1911. Serial No. 604,621. (Cl. 64—24.)



1. A ball and socket bearing comprising a two-part journal box having spaced supporting surfaces in its lower part providing annular spaces therein, a semicircular liner seated on said supporting surfaces, solid oil rings in said annular spaces adapted to encircle a shaft rotatable in said liner, and oil ring spaces at the ends of the bearing, said liner being rotatable from its seat when the top of the journal box has been removed to permit the withdrawal of said liner and allow the oil rings to be moved into the spaces at the ends of the bearing.

2. A ball and socket bearing comprising a two-part journal box having spaced supporting surfaces in its lower part providing annular spaces therein, a semi-cylindrical liner seated on the semi-circular faces of said supporting surfaces, solid oil rings in said annular spaces adapted to encircle the liner, and a shaft rotatable in said liner and bearing upon said shaft, and oil ring spaces surrounding the shaft at each end of the box, the space at one end being larger than the corresponding space at the opposite end, said liner being rotatable from its seat when the top of the journal box has been removed to permit the withdrawal of said liner and allow the oil rings to be moved into the spaces at the ends of the bearing.

3. A ball and socket bearing comprising a two-part journal box having longitudinally spaced supporting surfaces in its lower part forming annular spaces therein, a semi-cylindrical liner seated on the semi-circular faces of said supporting surfaces, solid oil rings in said annular spaces adapted to encircle said liner, and a shaft rotatable in said liner and bearing upon said shaft, said journal box having an interior enlargement between the supporting surfaces and one end of the box adapted to receive the oil rings while the same are on the shaft, said liner being rotatable from its seat when the top of the journal box has

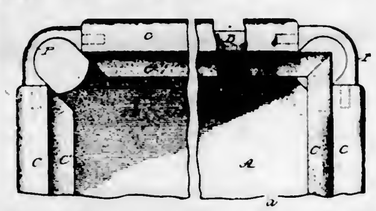
been removed to permit the withdrawal of said liner, and allow the oil rings to be moved longitudinally of the shaft into said enlargement.

4. A bearing comprising a journal box made in two parts, and having internal separated bearing surfaces providing annular spaces, and solid oil rings on a shaft arranged in the bearing and disposed in the spaces between the bearing surfaces, said surfaces being provided with an unbroken liner adapted to be rotated through substantially 180 degrees, the adjoining edges of the bearing surfaces and the liner being chamfered to permit the passage of the oil rings along the shaft between the liner and the surfaces after the liner has been rotated to the top of the bearing.

5. A bearing comprising a journal box made in two parts and provided with internal bearing surfaces longitudinally spaced apart to provide annular spaces, oil rings carried upon a shaft and disposed in the spaces, an unbroken liner supported by said surfaces within said rings beneath the shaft and adapted for rotation to a position above the shaft, the adjoining edges of the bearing surfaces and the liner being chamfered to permit the passage of the oil rings along the shaft between the liner and the surfaces after the liner has been rotated to the top of the shaft, the top part of the bearing being without a liner and having bearing surfaces engaging directly upon the shaft, the said liner being normally held in the bottom part of the bearing by engagement with the ends of the bearing surfaces of the top part.

[Claims 6 to 9 not printed in the Gazette.]

1,157,940. BILLIARD-TABLE. AXEL F. HJORT, Chicago, Ill., assignor to Brunswick-Balke-Collender Co., a Corporation of Delaware. Filed Aug. 31, 1914. Serial No. 859,398. (Cl. 46—12.)



1. A convertible carom and pocket table including a suitable slate bed and bed rails secured thereto, cushion rails having receiving means thereunder, members projecting perpendicularly through said bed rails, means on said members constructed to engage said receiving means, means constructed to oscillate said members, and means constructed to impart longitudinal movement to said members.

2. A convertible carom and pocket table including a suitable slate bed and bed rails secured thereto, cushion rails having receiving means thereunder, members projecting perpendicularly through said bed rails, means on said members constructed to engage said receiving means, and means for simultaneously oscillating and reciprocating said members.

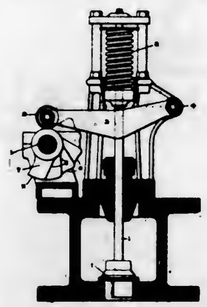
3. A convertible carom and pocket table including a suitable slate bed and bed rails secured thereto, cushion rails having receiving means thereunder, members projecting perpendicularly through said bed rails, means on said members constructed to engage said receiving means, means for imparting oscillating and reciprocating movement to said members, and means for varying the operative length of said members.

4. A convertible carom and pocket table including a suitable slate bed and bed rails secured thereto, cushion rails having receiving means thereunder, members projecting perpendicularly through said bed rails, means on said members constructed to engage said receiving means, means for simultaneously oscillating and reciprocating said members, and means for varying the operative length of said members.

5. A convertible carom and pocket table including a suitable slate bed and bed rails secured thereto, cushion rails having receiving means thereunder, members projecting perpendicularly through said bed rails, means on said members constructed to engage said receiving means, means for oscillating and reciprocating said members, and means on said members for varying the operative length thereof independently of the means for reciprocating said members.

[Claims 6 to 13 not printed in the Gazette.]

1,157,941. VALVE-OPERATING MECHANISM. OSCAR JUNGGREN, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 16, 1914. Serial No. 851,301. (Cl. 137—139.)



1. The combination with a valve, of a cam for moving it, said cam being provided with a surface of irregular contour to give slight vibrations to the valve.

2. The combination with a valve for regulating the flow of elastic fluid to a turbine, of a cam having a lifting face and a holding face for regulating the valve, said holding face having a surface of irregular contour to give slight vibrations to the valve.

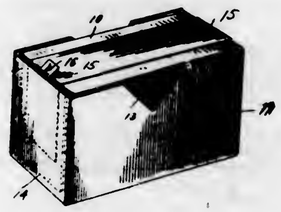
3. The combination with the valve mechanism of an elastic fluid turbine, comprising lifting levers for the valves, of cams adapted to impart slight vibrations to the levers of those valves which are open.

4. The combination with the valve mechanism of an elastic fluid turbine, comprising lifting levers for the valves, of cams for said levers having their holding faces irregular in order to give slight vibrations to the valve stems when said valves are open.

5. The combination with the valve mechanism of an elastic fluid turbine, comprising lifting levers for the valves, and cams for actuating said levers, of wavy holding faces for all but the last few of said cams.

[Claims 6 and 7 not printed in the Gazette.]

1,157,942. LOCKING DEVICE FOR BOXES AND CONTAINERS. ISAAC B. KELLER, Philadelphia, Pa., assignor of one-half to George C. Franklin, Philadelphia, Pa. Filed July 30, 1915. Serial No. 42,825. (Cl. 229—45.)



1. A box comprising container and closure members with overlapping walls, one of said members having an exposed wall extending from one of its overlapped walls to its opposite overlapped wall and having a locking device consisting of a member insertible between and removable from said overlapping walls free from both of said walls and a connection between said device and one of the box members that reaches from said locking member across said exposed wall of the box member.

2. A box comprising container and closure members with overlapping walls, one of said members having an exposed wall extending from one of its overlapping walls to its opposite overlapped wall and having a locking device consisting of a strip insertible between said overlapping walls and removable therefrom said strip being free from both of the walls between which it is insertible and a connection between said strip and a wall of the closure member opposite said overlapping walls between which said strip is insertible and removable and extending across said exposed wall.

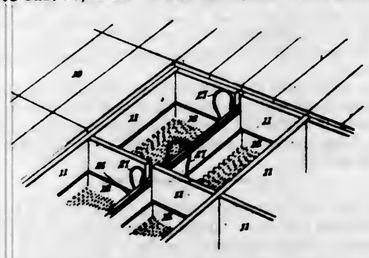
3. A box comprising container and closure members with overlapping walls, one of said members having an exposed wall extending from one of its overlapped walls to its opposite overlapped wall and having a locking device consisting of a strip insertible between said overlapping walls and removable therefrom said strip being free from both of the walls between which it is insertible and a connection between said strip and a wall of the closure member opposite said overlapping walls, between which said strip is insertible and removable and extending across said exposed wall and a tab attached to said locking member.

4. A box comprising container and closure members with overlapping walls, having a locking device consisting of a flexible strip insertible between said overlapping walls and removable therefrom said strip being free from both of the walls between which it is insertible and a connection between said flexible strip and a wall of the closure member opposite said overlapping walls, between which said strip is insertible and removable and extending across said exposed wall and a tab attached to said locking member.

5. A box comprising telescopic members one of which incloses the other except at one side, having a locking means consisting of a strip of flexible material insertible between contiguous walls of said members and removable therefrom and a band attached to said strip and extending over the exposed portion of the inner box member and attached to the wall of the outer box member opposite the place of insertion of said strip.

[Claim 6 not printed in the Gazette.]

1,157,943. ICE-CAN. JOHN H. LAMB, Piedmont, W. Va. Filed Jan. 29, 1915. Serial No. 5,105. (Cl. 62—159.)



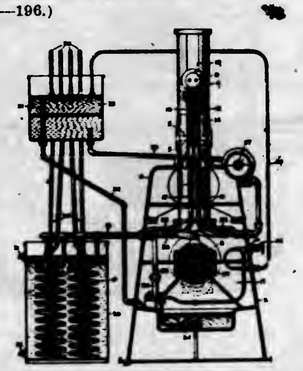
1. An ice can comprising an open topped receptacle having a groove in the bottom thereof extending from the center of the bottom to one corner thereof, and an angular air-admission pipe having the horizontal arm thereof seated in said groove and the vertical arm nested in one corner of the receptacle and extending upwardly to a point near the top of the receptacle, the receptacle bottom having a socket at the open outer end of the horizontal arm of the angular pipe to permit free egress of air from said pipe.

2. An ice can comprising an open topped receptacle having a diagonally arranged groove downwardly struck in the bottom thereof and terminating centrally of the said can, an air inlet pipe positioned within said can and extending outwardly engaging the corner thereof and provided with an inner angular extension seated within the said groove and terminating in an open mouth adjacent the end of said groove, and a strip overlying the said corner positioned pipe and secured to the adjacent sides and bottom of the said can.

3. A device of the class described, comprising in combination with a tank frame having an upper and a lower air line conduit positioned adjacent therto, an ice can slidably positioned within the said frame, an angular air pipe secured within the said can at a corner portion thereof and having an angular extension terminating in an open mouth centrally of the bottom of the said can, and removable hose connections for the said air pipe and carried by the said conduits.

4. A device of the class described, comprising in combination with a tank frame and an upper and lower compressed air supply conduit, hose-connecting means carried by each of the said conduits, metallic plug connectors at the free ends of the said means, an ice can removably positioned within the said frame and having a diagonally-arranged groove in the bottom thereof, an air pipe within said can and secured to a corner thereof and having a terminal angular extension seated within the said groove and terminating in an open mouth adjacent the inner end of the latter, the upper end of the said pipe being provided with a ground connector receiving seat.

1,157,944. PISTON COOLING AND LUBRICATING SYSTEM FOR ENGINES. HERMANN LEMP, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed May 15, 1914. Serial No. 838,648. (Cl. 123—196.)



1. In combination, an engine having a chamber through which cooling fluid is circulated and a supply chamber, a supply tank, a circulating pump receiving fluid from the tank and delivering it to the first named chamber, means for conveying the fluid therefrom back to the supply tank, said means including a cooling device, a pump receiving fluid from the second named chamber and conveying it to the supply tank, and a means for maintaining a constant fluid level in the tank and returning the excess to said second named chamber.

2. In combination, an engine having a fluid cooled piston, a supply tank, a circulating pump which receives fluid from the tank and delivers it to the piston, means for conveying the fluid from the piston to the tank, means other than said circulating pump for automatically supplying fluid to the tank, and means for maintaining a constant fluid level in the supply tank.

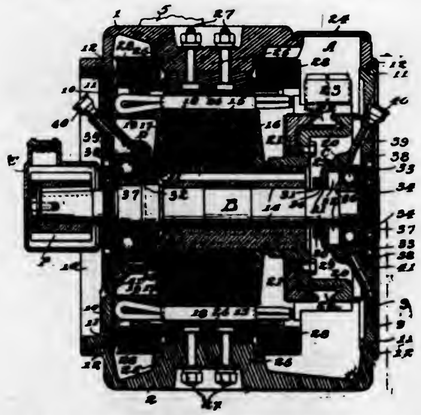
3. In combination, an engine having a fluid cooled piston, a supply tank, a circulating pump which receives fluid from a tank and delivers it to the piston, means for conveying the fluid from the piston to the tank, a pump which receives fluid from the crank casing of the engine and delivers it to the tank, and an overflow means for maintaining a constant fluid level in the tank and returning the excess to the crank-chamber.

4. In combination, an engine having a chamber through which cooling fluid is circulated, a supply tank, a circulating pump receiving fluid from the tank and delivering it to the chamber, means including a cooling device that receives fluid from the chamber and conveys it to the supply tank, means for cooling said device, a pump which receives fluid from the crank chamber of the engine and conveys it to the supply tank, and a means for maintaining a constant level of fluid in the tank and returning the excess to said crank chamber.

5. In combination, an engine having a fluid cooled piston, a supply tank, a circulating pump receiving fluid from the tank and delivering it to the piston, a cooling coil that receives fluid discharged from the piston and conveys it to the supply tank, a tank containing cooling liquid in which the coil is located, a pump that receives fluid from the crank chamber and delivers it to the supply tank, and an overflow for the supply tank that discharges into the crank chamber.

[Claims 6 to 10 not printed in the Gazette.]

1,157,945. ELECTRIC MOTOR. NILS DAVID LEVIN, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed Mar. 26, 1914. Serial No. 827,433. (Cl. 64—36.)



1. In an electric motor, the combination of the motor casing, the rotating armature shaft extending through the casing the bearing housings being external to the casing, the bearings for the shaft located respectively in the said housings, the pressure devices for forcing lubricant into the bearings, and the ducts connecting the interiors of the said housings with the external air, whereby the building up of pressure in the housings by the pressure devices is prevented.

2. In an electric motor, the combination with the motor casing, the rotating armature shaft and the two ball bearings for the shaft, of the supports 29 for the bearings each having the chamber 32, the ducts 39 communicating respectively with the bearings, the pressure cups 40 at the ends of the ducts respectively, and the ducts 41 connecting the chambers 32 respectively with the external atmosphere.

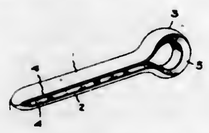
3. In an electric motor, the combination of the motor casing, the rotating armature shaft extending through the casing, the bearing housing external to the casing, the bearings for the shaft located respectively in the said housings, the pressure devices for forcing lubricant through the interstices of the bearings, and ducts connecting the interiors of said housings with the external air whereby the building up of pressure in the inner side of the housing by the pressure devices is prevented.

4. In an electric motor, the combination with the motor casing, of ball bearings supported by the casing, an armature shaft journaled in the ball bearings, chambers in the casing adjacent the outer sides of the ball bearings, pressure devices connected with the chambers by which lubricant may be forced into the chambers, other chambers in the casing adjacent the inner sides of the ball bearings, ducts connecting the last mentioned chambers with the outer air to carry away lubricant which passes through the ball bearings to prevent the building up of pressure in these chambers by the pressure devices as and for the purpose set forth.

5. In an electric motor, the combination with the motor casing, of ball bearings supported by the casing, an armature shaft journaled in the ball bearings, chambers in the casing adjacent one side of each of the ball bearings, pressure devices connected with the chambers by which lubricant may be forced into the chambers, other chambers adjacent the other sides of each of the ball bearings, ducts connecting the last mentioned chambers with the outer air to carry away lubricant passing through the ball bearings to prevent the building up of pressure in these chambers by the pressure devices as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

1,157,946. COTTER-PIN. HENRY G. MCCOMB, New York, N. Y., assignor to General Vehicle Company, Incorporated, a Corporation of New York. Filed Feb. 26, 1914. Serial No. 821,296. (Cl. 74—8.)



1. A split pin comprising two adjacent tangs, one of said tangs being beveled along a side adjacent the other tang, the bevel extending from substantially the head of the pin to substantially the end thereof to allow the ready insertion at the side of a blunt pointed instrument to spread the tangs.

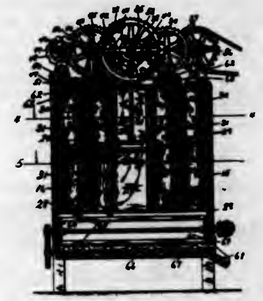
2. A split pin comprising two adjacent tangs, one of said tangs being beveled along a side adjacent to a second tang adapted to allow the ready insertion at the side of a blunt pointed instrument to spread the tangs.

3. A cotter pin comprising two adjacent tangs, one of said tangs being provided with a continuous bevel extending along a side from substantially the end thereof to the eye, around the eye, and along the adjacent edge of the second tang to substantially the end thereof adapted to direct the insertion of a blunt pointed instrument to spread the tangs.

4. A cotter pin provided with an eye and two parallel engaging tangs which present an unbroken end surface to facilitate insertion in place, the adjacent sides of both tangs being oppositely beveled to direct the insertion of a spreading tool.

1,157,947. COLLECTING APPARATUS FOR FINELY-DIVIDED SOLIDS. IRVING S. MERRELL, Syracuse, N. Y., assignor to Merrell-Soule Company, Syracuse, N. Y., a Corporation of New York. Original application filed Apr. 29, 1911, Serial No. 624,202. Divided and this application filed Aug. 27, 1913. Serial No. 786,870. (Cl. 83—47.)

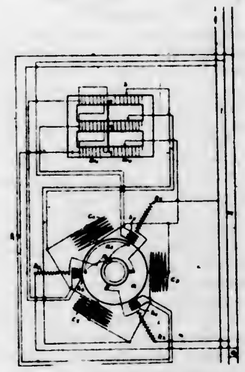
1. In a collecting device, a pair of bolting chambers, a bolting device associated with each chamber, an upper and a lower intermediate chamber, the lower intermediate chamber having a partition dividing the same into a pair of air chambers communicating respectively with the bolting chambers, separate means of communication between each of the air chambers and the upper intermediate chamber, separate valves controlling such respective means of communication, means for alternately opening and closing said valves, and means for agitating the bolting device of each chamber only when the communication of its respective chamber is cut off from the upper intermediate chamber.



2. In a collecting device, a pair of bolting chambers, a bolting device associated with each chamber, an upper and a lower intermediate chamber, the lower intermediate chamber having a partition dividing the same into a pair of air chambers communicating respectively with the bolting chambers, separate means of communication between each of the air chambers and the upper intermediate chamber, separate valves controlling such respective means of communication, means for alternately opening and closing said valves, and means for exhausting the air from the upper intermediate chamber.

3. In a collecting device, a pair of bolting chambers, a bolting device associated with each chamber, an upper and a lower intermediate chamber, the lower intermediate chamber having a partition, dividing the same into a pair of air chambers communicating respectively with the bolting chambers, separate means for communicating between each of the air chambers and the upper intermediate chamber, separate valves controlling such respective means of communication, means for alternately opening and closing said valves, and an air outlet from the upper intermediate chamber.

1,157,948. ALTERNATING-CURRENT COMMUTATOR MACHINERY. HEINRICH MEYER-DELIUS, Baden, Switzerland, assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed June 13, 1910. Serial No. 566,624. (Cl. 172—280.)



1. In combination, an alternating current commutator machine, a transformer, a shunt field winding on said machine excited from the secondary of said transformer, and an interpole winding on said machine excited with a current proportional to the current supplied to the primary winding of said transformer.

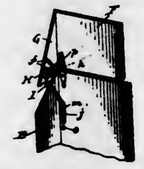
2. In combination, an alternating current commutator machine, a transformer, a shunt field winding on said machine excited from the secondary of said transformer, and an interpole winding on said machine connected in series with the mains leading to the primary of said transformer.

3. In combination, a dynamo electric machine having a commuted winding, a transformer, an exciting winding on said machine connected to the secondary of said transformer, a compensating winding on said machine in series with said commuted windings, and an interpole winding excited with a current proportional to the current supplied to the primary of said transformer.

4. In combination, a dynamo electric machine having a commuted winding, a transformer, a shunt field winding on said machine excited from the secondary of said transformer, an interpole winding on said machine connected in series with the mains leading to the primary of said transformer, and a compensating winding on said machine in series with said commuted winding.

5. In combination, a three-phase dynamo electric machine having a commuted winding, a three-phase transformer, the primary windings of which are connected in delta and the secondary windings of which are connected in star, a shunt exciting winding on said machine connected in delta to the secondary of said transformer, main compensating windings on said machine in series with the said commuted winding, and interpole windings on said machine connected in series with the mains leading to the primary of said transformer.

1,157,949. ELECTRIC-ALARM MAIL-BOX. BENJAMIN D. MILLER, Wooster, Ohio, assignor of fifty-five one-hundredths to E. S. Landes, W. B. Bryson, and Peter C. Given, and five one-hundredths to George H. Kepple. Filed Sept. 8, 1914. Serial No. 860,819. (Cl. 200—29.)



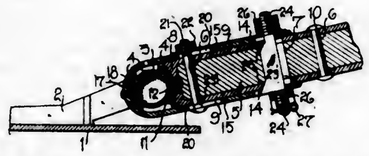
1. The combination with a mail box having a hinged lid, a marginal extension at one end of said lid, a metallic plate set on the inner surface of said marginal extension with its apex adjacent the place of hinging of said lid, a plurality of fingers extending flatwise radially from said plate in a direction away from said apex, adapted to pass vertically close to the outside of said box when said lid is moved up and down, and a resilient member secured to the inner surface of said box so that its free end will engage said fingers transversely, successively, by the movement of said lid, substantially as set forth.

2. In a device of the character described, the combination with a mail-box having a hinged lid, a marginal projection on the end of said lid, adapted to rock up and down over the outside of the box, a metallic plate secured detachably flatwise upon the inner surface of said marginal projection, a plurality of fingers radiating flatwise from said plate on said projection, and a resilient rod adapted to intermittently engage said fingers transversely on the outside of said box, substantially as set forth.

1,157,950. PITMAN-COUPLING. WALTER S. MINOR, Cunningham, Tenn. Filed July 17, 1915. Serial No. 40,446. (Cl. 74—17.)

1. A pitman coupling including a spherical male coupling element on the reciprocating part, two female coupling sections having longitudinally extending straps and adjustable upon each other, said female sections being provided with concaved bearing surfaces for engagement upon opposite sides of the spherical male coupling element, linings for said concaved bearing surfaces adapted for direct contact with the male coupling element, a fastening bolt extending through the pitman and the straps of the female coupling sections to secure the latter in their adjusted

positions to the pitman, and means for adjusting said fastening bolt longitudinally of the pitman.

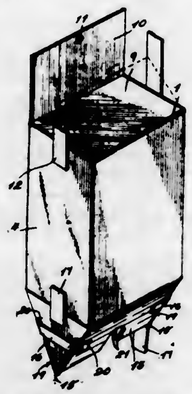


2. A pitman coupling including a spherical male coupling element on the reciprocating part, two female coupling sections having longitudinal extending straps adjustable upon each other, said female sections being provided with concaved bearing surfaces for engagement upon opposite sides of the spherical male coupling element, a fastening bolt extending through the pitman and the straps of the female coupling section to secure the latter in their adjusted positions to the pitman, and an endwise movable member disposed through the pitman and the straps for adjusting the straps of one of the sections of the female member longitudinally of the pitman.

3. A pitman coupling including a spherical male coupling element on the reciprocating part, two female coupling sections having longitudinally extending straps adjustable upon each other, said female sections being provided with concaved bearing surfaces for engagement upon opposite sides of the spherical male coupling element, a fastening bolt extending through the pitman and the straps of the female coupling section to secure the latter in their adjusted positions to the pitman, and an endwise movable member disposed through the pitman and the straps for adjusting the straps of one of the sections of the female member longitudinally of the pitman, said endwise movable member being provided with cam faces engageable with the straps of one of the sections of the female coupling.

4. A pitman coupling including a spherical male coupling element on the reciprocating part, two female coupling sections having longitudinally extending straps adjustable upon each other, said female sections being provided with concaved bearing surfaces for engagement upon opposite sides of the spherical male coupling element, and an endwise movable member disposed through the pitman and the straps for adjusting the straps of one of the sections of the female member longitudinally of the pitman.

1,157,951. MATCH-BOX. PAUL L. MONROE, Watsontown, Pa. Filed Oct. 29, 1914. Serial No. 869,294. (Cl. 206—28.)

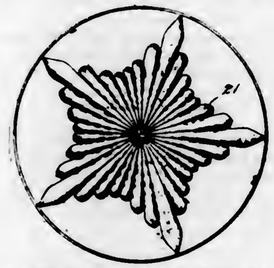


A match box of the class described, comprising a body, said body provided with integral hopper flaps extending therefrom, said hopper flaps converging toward their lower portions and provided with registering notches whereby matches carried within said hopper flaps may be easily gripped, converging tongues extending from said body and closing the open space between the end portions of said flaps, said tongues provided with alined notches upon their side edges and a sealing ribbon carried by each of said tongues, said sealing ribbon extending across the alined notches and engaging said hopper flaps whereby said flaps will be held in yieldable engagement with each other for allowing the matches to be abstracted therefrom as desired.

1,157,952. TANNING AND WATERPROOFING LEATHER. JOSZYP MOSZYNSKI, Philadelphia, Pa. Filed July 28, 1913. Serial No. 781,699. (Cl. 149—4.)

The process of tanning leather after the hides have been depilated, the hide is immersed in a bath consisting of water, cutch extract 10 pounds, chestnut extract 10 pounds said bath to test 25 degrees barkometer, to be then immersed in a bath of vitriol oil testing 30 degrees barkometer from which the leather is taken and placed in a bath composed of cutch extract, and chestnut extract and water to test 25 degrees barkometer, the said bath being increased in strength at determined times 10 degrees by the addition of the aforesaid extracts, then immersed in a soda ash bath testing 25 degrees at 126 degrees Fahrenheit for a determined period, when it is placed in vitriol oil of 30 degrees barkometer, from the said bath to cold water for the specified time, and then dried, after which it is ready to be made waterproof.

1,157,953. GLASS STRUCTURE. OTIS A. MYGATT, New York, N. Y., assignor to Holophane Glass Company, New York, N. Y., a Corporation of New Jersey. Filed July 22, 1907. Serial No. 384,954. (Cl. 240—106.)



1. Glass inclosures having a series of adjacent longitudinal ribs upon one side and upon the other side also a series of adjacent longitudinal ribs substantially parallel thereto, the ribs on the one side being offset with respect to those directly opposite them on the other side.

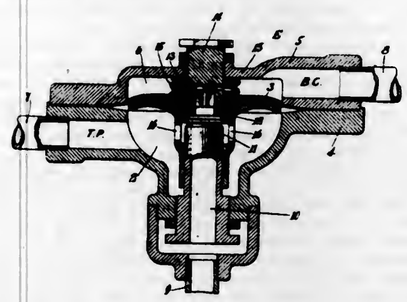
2. Glass inclosures having a series of adjacent longitudinal prisms upon one side and upon the other side a series of adjacent longitudinal ribs substantially parallel thereto, the prisms on the one side being offset with respect to the ribs on the opposite side.

3. Glass inclosures having a series of adjacent longitudinal double reflecting prisms on the one side and on the other side adjacent longitudinal ribs substantially parallel thereto, the prisms on the one side being offset with respect to the ribs on the opposite side.

4. Glass inclosures having a series of adjacent longitudinal prisms on the one side and on the other side also a series of adjacent longitudinal prisms substantially parallel thereto, the prisms on the one side being offset with respect to those on the opposite side.

1,157,954. AIR-RETAINING VALVE FOR AIR-BRAKE APPARATUS. SPENCER G. NEAL, Los Angeles, Cal., assignor to California Valve and Air Brake Company, Los Angeles, Cal., a Corporation of California. Filed June 10, 1915. Serial No. 33,232. (Cl. 188—1.)

1. An air brake apparatus comprising a triple valve, a train pipe, a brake cylinder, a train pipe augmenting reservoir, a retaining valve connecting said reservoir to the train pipe and to the brake cylinder, means in said retaining valve to seal the augmenting reservoir when the train pipe and brake cylinder pressures are equalized, and means operating to connect the said augmenting reservoir to the brake cylinder when the brake cylinder pressure is reduced below the augmenting reservoir pressure and the train pipe-pressure is below brake cylinder pressure.



2. An air brake apparatus comprising a triple valve, a brake cylinder, a train pipe, an augmenting reservoir, a retaining valve connecting said reservoir to the train pipe and to the brake cylinder, and consisting of a casing, a movable diaphragm or abutment therein forming two chambers, means connecting the chamber above said diaphragm to the brake cylinder, means connecting the chamber below said diaphragm to the train pipe, means forming a central chamber within said casing, means connecting said central chamber to the augmenting reservoir, a valve carried by the diaphragm and adapted to be opened by a superior pressure from the augmenting reservoir, a valve carried by said diaphragm and adapted to seal the augmenting reservoir from the train pipe upon an equalization of train pipe and brake cylinder pressures whereby when the brake cylinder pressure is reduced below augmenting reservoir pressure after an equalization of train pipe and brake cylinder pressures and the train pipe pressure is below brake cylinder pressure, said augmenting reservoir will be connected to the brake cylinder.

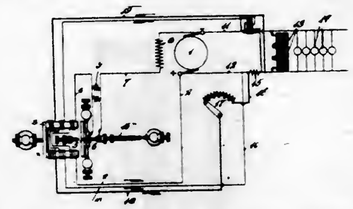
3. An air brake apparatus comprising a triple valve, a brake cylinder, a train pipe, an augmenting reservoir, means connecting the augmenting reservoir to the train pipe and to the brake cylinder, said means being operated by variations in pressure to seal the augmenting reservoir from the train pipe and to place it in communication with the brake cylinder.

4. A retaining valve for an air brake apparatus comprising a casing, a diaphragm within said casing and dividing it into two chmbers, means adapted to connect one of said chambers to a brake cylinder, means adapted to connect the other chamber to a train pipe, means adapted to connect this latter chamber with a train pipe augmenting reservoir, means carried by the diaphragm to control communication between the train pipe and the augmenting reservoir, and means for open communication between the augmenting reservoir and the brake cylinder when the brake cylinder pressure is below the pressure in the augmenting reservoir and the train pipe pressure is below brake cylinder pressure.

5. A retaining valve for an air brake apparatus comprising a casing, a diaphragm within said casing and dividing it into two chambers, means adapted to connect one of said chambers to a brake cylinder, means adapted to connect the other chamber to a train pipe, means adapted to connect this latter chamber with a train pipe augmenting reservoir, means carried by the diaphragm to control communication between the train pipe and the augmenting reservoir, and a valve opened by augmenting reservoir pressure and opening communication between the augmenting reservoir and the brake cylinder when the brake cylinder pressure is below the pressure in the augmenting reservoir and the train pipe pressure is below brake cylinder pressure.

[Claims 6 to 15 not printed in the Gazette.]

1,157,955. ELECTRIC REGULATOR. GEORGE SPENCER NEELEY, St. Louis, Mo., assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed Sept. 9, 1910. Serial No. 581,295. (Cl. 171—313.)



1. A system of electrical distribution, comprising a dynamo, storage batteries and current consuming devices connected across the mains of the dynamo, an electro-magnet having a plurality of windings, one being energized by the field current of the generator, a second by the voltage of the generator, a third energized in proportion to the total current output said winding acting accumulatively with the first two windings, and a means for varying the resistance in the field circuit of the generator and controlled by said electro-magnet.

2. A system of electrical distribution comprising a generator and mains extending therefrom, storage batteries and translating devices connected in multiple with the said mains, and an automatic regulator for regulating the field density of the generator, said regulator including an electromagnet having four independent windings, one of said windings being in circuit with the field winding of the generator, the second winding being connected in circuit across the brushes of the said generator, the third winding being adapted to receive a current in proportion to the total current furnished to the said storage batteries and translating devices, said three windings being arranged to act accumulatively, the fourth winding on said magnet being adapted to receive a current proportional to that furnished to the translating devices, said fourth winding being arranged to act oppositely with respect to the currents in the first three mentioned windings.

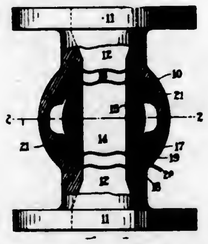
3. A system of electrical distribution comprising a dynamo, storage batteries and translating devices connected across the mains of the dynamo, an electro-magnet, a plurality of windings upon said magnet, one winding being energized by the field current of the dynamo, a second by the voltage of the dynamo, a third by a current proportional to the generator output, and a fourth by a current proportional to that supplied to the translating devices, said latter current flowing in a reverse direction to that in the first three windings, and a resistance adapted to be thrown in series with the field winding of the dynamo by said magnet.

4. A system of electrical distribution comprising a dynamo, storage batteries and translating devices connected across the mains of the dynamo, an electromagnet, a plurality of windings upon said magnet, one winding being energized by the field current of the dynamo, a second by the voltage of the dynamo, a third by a current proportional to the generator output, said first and third windings acting accumulatively, and a resistance adapted to be thrown in series with the field winding of the dynamo by said magnet.

5. A system of electrical distribution comprising a dynamo, storage batteries and translating devices connected across the mains thereof, an electro-magnet, a plurality of windings on said magnet, one being energized by the field current of the dynamo, a second by the voltage

of the dynamo, a resistance in series between the dynamo and the current consuming devices, and a third winding in series around the resistance, the currents in the said windings on the magnet being in the same direction to have accumulative effect, and a resistance adapted to be placed in series with the field winding of the dynamo by the electromagnet.

1,157,956. VALVE. JOHN L. OSBORNE, Rochester, N. Y., assignor to Judson Governor Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 13, 1913. Serial No. 794,946. (Cl. 137—7.)



In a plug-cock having a body and a rotatable plug with an annular space between their opposed surfaces, a packing having the general form of a segment of said space and comprising an annular strip of comparatively yielding plastic material having opposite faces curved to conform to the opposed surfaces of a valve-body and plug; inner and outer annular reinforcing members, of comparatively rigid material, engaging and supporting the lateral surfaces of the yielding material, but of slightly less thickness, so that the yielding material extends beyond the reinforcing-members at each of its opposite faces; and a series of narrow, separated connecting-members, of less thickness than the reinforcing-members, embedded in the yielding material between its faces and connecting the reinforcing members.

1,157,957. FLUID-PRESSURE REGULATOR. ARNOLD PFAU, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a Corporation of Delaware. Filed Dec. 23, 1912. Serial No. 738,396. (Cl. 103—89.)



1. In a fluid pressure regulator, means for supplying fluid under pressure, a storage reservoir, a conduit connecting the discharge of said supply means with said storage reservoir, a relief conduit connected to the discharge of said supply means, and a fluid pressure regulator for controlling the discharge of fluid from said supply means, said fluid pressure regulator comprising a main valve for controlling the passage of fluid through said relief conduit and having opposed pressure surfaces, means communicating with said storage reservoir for admitting fluid under pressure to the smaller of said opposed pressure surfaces, a second valve, a conduit controlled by said second valve for admitting pressure to the larger surface of said main valve, and means for positioning said second valve to control the pressure admitted to the larger pressure surface of said main valve.

2. In a fluid pressure regulator, means for supplying fluid under pressure, a storage reservoir, a conduit connecting the discharge of said supply means with said storage reservoir, a relief conduit connected to the discharge of said supply means, and a fluid pressure regulator for controlling the discharge of fluid from said supply means, said fluid pressure regulator comprising a main valve for controlling the passage of fluid through said relief conduit and having opposed pressure surfaces, means communicating with said storage reservoir for admitting fluid under pressure to the smaller of said opposed pressure surfaces, a second valve, a conduit controlled by said second valve for admitting pressure to the larger surface of said main valve, and adjustable means for positioning said second valve to control the pressure admitted to the larger pressure surface of said main valve.

3. In a fluid pressure regulator, means for supplying fluid under pressure, a storage reservoir, a conduit connecting the discharge of said supply means with said storage reservoir, a relief conduit connected to the discharge of said supply means, and a fluid pressure regulator for controlling the discharge of fluid from said supply means, said fluid pressure regulator comprising a main valve for controlling the passage of fluid through said relief conduit and having opposed pressure surfaces, means communicating with said storage reservoir for admitting fluid under pressure to the smaller of said opposed pressure surfaces, a second valve, a conduit controlled by said second valve for admitting pressure to the larger surface of said main valve, and means operable by the pressure in said storage reservoir for positioning said second valve to control the pressure admitted to the larger pressure surface of said main valve.

4. In a fluid pressure regulator, means for supplying fluid under pressure, a storage reservoir, a conduit connecting the discharge of said supply means with said storage reservoir, a relief conduit connected to the discharge of said supply means, and a fluid pressure regulator for controlling the discharge of fluid from said supply means, said fluid pressure regulator comprising a main valve for directly controlling the passage of fluid to said storage reservoir and through said relief conduit, said main valve having opposed pressure surfaces, means communicating with said storage reservoir for admitting fluid under pressure to the smaller of said opposed pressure surfaces, a second valve, a conduit controlled by said second valve for admitting pressure to the larger surface of said main valve, and means for positioning said second valve to control the pressure admitted to the larger pressure surface of said main valve.

5. In a fluid pressure regulator, means for supplying fluid under pressure, a storage reservoir, a conduit connecting the discharge of said supply means with said storage reservoir, a relief conduit connected to the discharge of said supply means, and a fluid pressure regulator for controlling the discharge of fluid from said supply means, said fluid pressure regulator comprising a main valve for controlling the passage of fluid through said relief conduit and having opposed pressure surfaces, means communicating with said storage reservoir for admitting fluid under pressure to the smaller of said opposed pressure surfaces, a second valve, a conduit controlled by said second valve for admitting pressure to the larger surface of said main valve, and pressure actuated means for opening said second valve to admit pressure to the larger surface of said main valve.

[Claims 6 and 7 not printed in the Gazette.]

1,157,958. RECORD-CLEANING ATTACHMENT FOR TALKING-MACHINES. JOSEPH W. PITCHER, Washington, D. C. Filed Feb. 12, 1915. Serial No. 7,844. (Cl. 181—15.)

1. An attachment of the character described comprising a ring, resilient clamping arms projecting from said ring to engage the periphery of the sound box for retaining the attachment thereon, lugs projecting from the ring to space the same away from the sound box, and a cleaning member attached to one of said arms and adapted to contact with the surface of a record.



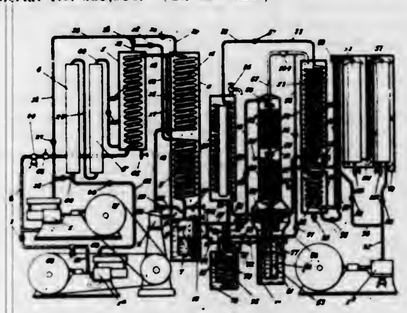
2. An attachment of the character described comprising a rigid part adjustably mounted on a sound box, a resilient clamping arm engaging a portion of the sound box for retaining the attachment in a desired position thereon, a resilient extension on the outer end of said arm, and a cleaning member on the end of said extension.

3. An attachment of the character described comprising a rigid part adjustably mounted on a sound box, a resilient clamping arm engaging a portion of the sound box for retaining the attachment in a desired position thereon, a resilient extension on the outer end of said arm arranged substantially in tangential relation to the sound box, and a cleaning member on the end of said extension.

4. An attachment of the character described comprising a part attached to a sound box, a cleaning member attached to said part, said cleaning member composed of layers of bristles and felt, the layer of bristles being arranged to engage the surface of a record in advance of the layer of felt, the latter serving to sweep out of the path of the needle small particles that might pass through said bristles.

5. An attachment of the character described comprising a ring, resilient clamping arms projecting from said ring to engage the periphery of the sound box for retaining the attachment thereon, lugs projecting from the ring to space the same away from the sound box and a cleaning member attached to the ring and adapted to contact with the surface of a record and composed of layers of bristles and felt, the layer of bristles being arranged to engage the surface of a record in advance of the layer of the felt, the latter serving to sweep out of the path of the needle small particles that might pass through said bristles.

1,157,959. ART OR PROCESS OF LIQUEFYING AIR AND SEPARATING THE SAME INTO OXYGEN AND NITROGEN. JAMES F. PLACE, Glen Ridge, N. J., assignor to American Air-Liquefying Company, New York, N. Y., a Corporation of New York. Filed Nov. 13, 1911. Serial No. 659,916. (Cl. 62—123.)



1. The process of liquefying atmospheric air, which consists in compressing the air, cooling the same, and liquefying a part of one portion thereof and expanding with production of recoverable external work the unliquefied gaseous residue of such portion along with the other portion; and finally partially releasing from pressure the liquid thus obtained and sub-cooling therewith the unreleased liquid.

2. The process of liquefying atmospheric air, which consists in compressing the air, cooling the same, and expanding a portion thereof with production of recoverable external work, and then liquefying under pressure a part of the other portion by the combined refrigerative effect of the cold expanded portion and the unliquefied gases of the other portion; and finally partially releasing from pressure portions of the liquid thus obtained and sub-cooling therewith the unreleased portions thereof.

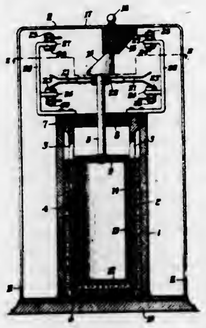
3. The process of liquefying atmospheric air, which consists in compressing the air, cooling the same, and liquefying a part of one portion thereof and expanding with production of recoverable external work the unliquefied gaseous residue of such portion along with the other portion; and finally partially releasing from pressure portions of the liquid thus obtained and sub-cooling therewith the unreleased portions thereof.

4. The process of liquefying atmospheric air which consists in compressing portions of air, cooling the same and liquefying a part of one of said portions and expanding the unliquefied gaseous residue of such portion along with the other of said portions and finally partially releasing from pressure the liquefied gases of the air thus obtained and utilizing the cold vapors from such as evaporate upon said release to cool the incoming supply of compressed air.

5. The process of liquefying atmospheric air which consists in compressing portions of air, cooling the same, and liquefying a part of one of said portions and expanding with production of recoverable external work the unliquefied gaseous residue of such portion along with the other of said portions and finally partially releasing from pressure the liquefied gases of the air thus obtained and utilizing the cold vapors from such as evaporate upon said release to cool the incoming supply of compressed air.

[Claim 6 not printed in the Gazette.]

1,157,960. TIME-CONTROLLER. HOWELL B. POST, Lansdowne, Pa., assignor of one-half to Walter P. Allen, Ardmore, Pa. Filed Nov. 11, 1914. Serial No. 871,474. (Cl. 161—25.)



1. In a device of the character stated, outer and inner fluid containers, the inner having two apertures of different sizes, the larger aperture being above the smaller aperture, fluid therein, a plunger of lighter specific gravity in its entirety than the fluid movable up and down within the inner container and means for forcing the plunger downwardly to pass fluid rapidly from the inner container to the outer container.

2. In a device of the character stated, an outer container, an inner container having apertures in its upper and lower parts for flow of fluid therethrough, the upper aperture being the larger, a plunger movable within the inner container and a fluid content in the containers

heavier for the same volume than the plunger, adapted normally to float the plunger and to flow out of the upper aperture during downward movement of the float.

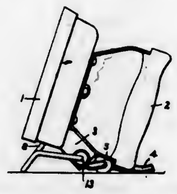
3. In a device of the character stated, an outer container, an inner container having apertures in its upper and lower parts, the upper aperture being the larger, a plunger within the inner container and movable therein, a fluid content heavier for the same volume than the plunger and adapted normally to float the plunger, a connection for the plunger and cam operating means engaging the connection to depress the plunger.

4. In a device of the character stated, an outer container, an inner container having apertures in its upper and lower parts, the upper aperture being the larger, a plunger within the inner container and movable therein, a fluid content heavier for the same volume than the plunger and adapted normally to float the plunger, a connection for the plunger and an electrical contact carried by the connection and closed when the plunger is at one extremity of its movement.

5. In a device of the character stated, a time element having a member movable up an down and a cam for forcing the movable member downwardly and retaining it in depressed position.

[Claims 6 to 15 not printed in the Gazette.]

1,157,961. FLAT-IRON SUPPORT. LUDWIG REICHOLD, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed July 30, 1913. Serial No. 781,977. (Cl. 68—27.)



1. The combination of a flat-iron and a support therefor said support comprising two arms each pivoted at one end to the rear end of the iron and having their other ends joined by a U-shaped member extending at an angle to the plane of of the arms, said U-shaped member engaging the end of the iron in one position of the support, and forming with the handle a base for supporting the iron on end.

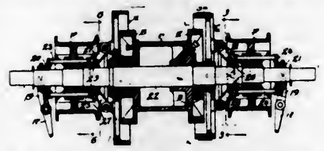
2. The combination of a flat-iron and a support therefor, said support comprising a single piece of material bent to form two arms and an intermediate U-shaped portion projecting at an angle to the plane of the arms, the free ends of said arms being pivoted to the rear end of the flat-iron and forming with the handle in one position a base for supporting the iron on end, and in another position a base for supporting the iron in an inverted position.

3. The combination of a flat-iron and a support therefor, said support comprising two arms, each pivoted at one end to the rear end of the iron, and having their other ends joined by a U-shaped member extending at an angle to the plane of the arms, said U-shaped member engaging the end of the iron in one position of the support, and the handle of the iron in another position of the support.

4. The combination of a flat-iron and a support pivoted at the rear end thereof, said support comprising a singe piece of material bent to form two diverging arms and an intermediate U-shaped portion, said arms being bent intermediate of their ends at an angle to said intermediate portion.

1,157,962. GRAB-BUCKET-OPERATING MECHANISM FOR CRANES. HARRY SAWYER, Muskegon, Mich. Filed Jan. 27, 1912. Serial No. 673,743. (Cl. 254—185.)

1. In a hoisting mechanism, the combination with a supporting shaft, of a plurality of drums mounted thereon in axial alinement with each other, means for driving one of said drums including a clutch mechanism, an automatic friction drive and an independent clutch device connection intermediate said driven drum and an adjacent drum, means for operating said clutch device, and grab bucket controlling and operating ropes actuated by said drums.



2. In a hoistiug mechanism, the combination with operating drums for grab bucket controlling ropes, arranged in axial alinement with each other of means arranged in axial alinement with said drums for driving one of them, said means including a clutch mechanism, and a manually operable clutch mechanism and also an independent automatic friction mechanism intermediate said driven drum and an adjacent drum.

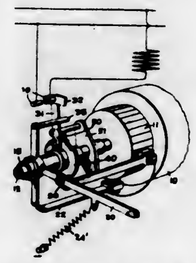
3. In a hoisting mechanism, the combination with operating drums for grab bucket controlling ropes, arranged in axial alinement with each other of means including a manually operable clutch for driving one of said drums, an independent manually operable clutch mechanism intermediate said driven drum and an adjacent drum, and an independent automatic friction drive connection also arranged intermediate said driven drum and said adjacent drum.

4. In a hoistin,· mechanism, the combination with a supporting shaft, of a series of drums mounted thereon in axial alinement with each other, means also mounted on said shaft, and including a clutch mechanism for driving one of said drums, means for operating said clutch mechanism, an independently controllable clutch mechanism mounted on said shaft intermediate said driven drum and an adjacent drum, and an automatic friction drive connection intermediate said driven drum and said adjacent drum.

5. In a hoisting mechanism, the combination with a supporting shaft, of drums for operating grab bucket controlling and actuating ropes, said drums being mounted on said shaft in line with each other, one of said drums being loose on said shaft, and another mounted to rotate with said shaft, means also mounted on said shaft and including a clutch mechanism for driving the loosely mounted drum, means for operating said clutch mechanism and independently controllable clutch mechanism intermediate said loosely mounted and said other drums.

[Claims 6 to 8 not printed in the Gazette.]

1,157,963. CONTROL MECHANISM. EDWARD T. SHAW, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Dec. 12, 1914. Serial No. 876,826. (Cl. 172—277.)



1. A controlling and stopping device comprising a movable member for controlling the speed of the motor in a forward direction and reversing its direction of rotation, and means whereby the motor circuit is automatically opened when the motor starts to rotate in the reverse direction upon the movement of the member to reverse position.

2. A controlling and stopping device comprising a movable member for controlling the speed of the motor in a forward direction and reversing its direction of rotation, biased to the reverse position, and means whereby the motor circuit is automatically opened when the motor starts to rotate in the reverse direction upon the movement of the member to reverse position in response to its bias.

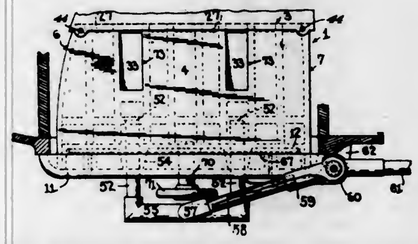
3. A control mechanism for an electric motor comprising movable means for controlling the speed and direction of rotation of the motor, automatic means biasing said movable means toward the position for rotation in one direction, a switch in the motor circuit, and normally inoperative means for opening said switch to stop the motor after said automatic means has become effective.

4. A control mechanism for an electric motor comprising movable means for controlling the speed and direction of rotation of the motor, automatic means biasing said movable means toward the position for rotation in one direction, a switch in the motor circuit, connections between said movable means and said switch for closing the same, and normally inoperative means for opening said switch to stop the motor after said automatic means has become effective.

5. A control mechanism for an electric motor comprising a switch in the motor circuit, a speed control member, connections between said member and switch whereby the switch may be closed to start the motor in one direction, and means operated by the motor to open the switch upon a reversal in the direction of rotation of said motor.

[Claims 6 to 16 not printed in the Gazette.]

1,157,964. AIR-SUPERHEATING DEVICE FOR FURNACES. WILLIAM E. SHORE, New York, N. Y., assignor to Combusto Devices Corporation, New York, N. Y., a Corporation of New York. Filed June 17, 1914. Serial No. 845,624. (Cl. 110—175.)



1. A superheater comprising a casing adapted for attachment to a furnace and to extend into the fire-pot thereof, provided with a plurality of intercommunicating chambers, there being an inlet opening communicating with said chambers, and an outlet opening leading from said chambers, through which the superheated air is discharged into the combustion chamber, and an auxiliary heating means for supplying heat to the superheater, independent of the heat supplied by the products of compustion in the furnace, for the purposes set forth.

2. A superheater adapted for attachment to a furnace and to extend into the fire-pot thereof, provided with a plurality of intercommunicating chambers, there being an inlet opening communicating with said chambers, and an outlet opening leading from said chambers, through which the superheated air is discharged into the combustion chamber, and a gas burner in said casing, and adapted to supply heat to heat the air in said chambers, as and for the purposes set forth.

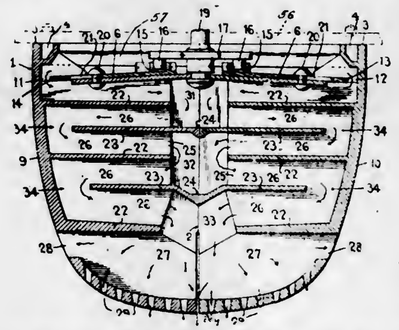
3. In combination with the fire door of a furnace, a superheater comprising a casing having horizontal partitions therein with passages therethrough dividing it into intercommunicating chambers, there being suitable inlet and outlet openings, an auxiliary heater extending into said casing, to supply heat independently of the heat from the products of combustion of the furnace.

4. The combination with the fire door of a furnace, a superheater comprising a casing secured to said door, and provided with a plurality of horizontal partitions provided with openings, whereby the spaces between said partitions are placed in intercommunication, and a series of vertical partitions between the horizontal partitions, forming conduits for the passage of the air which is heated by radiation from said horizontal and vertical partitions, there being suitable inlet and outlet openings through which the air to be superheated is admitted to the casing and discharged therefrom respectively, and an auxiliary heater adapted to supply heat independent of the heat from the products of combustion of the furnace.

5. In combination with the fire door of a furnace, a superheater comprising a casing adapted to be secured to said door, and provided with a plurality of intercommunicating chambers, there being an air inlet for admitting the air to said chambers, and an outlet opening for discharging the air therethrough, and a distributer casing secured to the rear end of the superheater casing, said distributer casing being provided with apertures for the discharge of the superheated air which has passed through the main body of the casing, in which distributer casing the air becomes further superheated before being discharged, and intermingles with the products of combustion of the furnace, and an auxiliary heater within the casing adapted to supply heat independent of that supplied by the fuel in the furnace.

[Claim 6 not printed in the Gazette.]

1,157,965. AIR-SUPERHEATING DEVICE FOR FURNACES. WILLIAM E. SHORE, New York, N. Y., assignor to Combusto Devices Corporation, New York, N. Y., a Corporation of New York. Filed Dec. 8, 1914. Serial No. 876,165. (Cl. 110—175.)



1. A superheater comprising a casing formed with inlet openings at its opposite sides and extending substantially from the top to the bottom of the casing, said casing being provided with vertical and horizontal partitions forming a series of intercommunicating horizontal chambers, and a central chamber extending substantially from the top to the bottom of the casing, and communicating with the spaces between the horizontal and vertical partitions, whereby the air is conducted to the center of the casing and mixed, the casing being also provided with suitable outlet openings communicating with the central chamber and with the horizontal chambers, between the partitions.

2. A superheater comprising a casing having inlet openings at opposite sides, and a plurality of vertical and horizontal partitions, with spaces between them, in intercommunication, and a series of vertical chambers extending substantially from the bottom to the top of the casing and communicating with the spaces between the partitions, wherein the laterally moving air is mixed and conducted forwardly, said casing being also provided with

suitable outlet openings in communication with said chambers and spaces between the partitions, whereby the superheated air is conducted into the furnace.

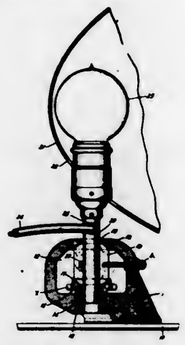
3. In an air superheater, the combination with the furnace door, of a casing provided with a front plate extending from the top to the bottom of said casing, and a flange adapted to abut against said door, there being a space between said door and said plate, thus forming a preheating chamber, inlet openings in opposite sides of said plate, and extending substantially from the top to the bottom of the casing, horizontal and vertical partitions within said casing and spaced apart from each other, extending from the top to the bottom thereof, a central chamber communicating with the spaces between said partitions, wherein the opposite streams of air are mixed, the casing being provided with suitable outlet openings communicating with said chamber, and spaces between the partitions whereby the air is conducted laterally through the casing, and ultimately discharged into the products of combustion of the furnace.

4. A superheater comprising a metallic casing having air inlet openings in the front and at opposite sides and extending substantially from the top to the bottom of the casing, a plurality of horizontal and vertical partitions with intercommunicating spaces, which also communicate with the air inlet openings and a plurality of central chambers extending from the top to the bottom of the casing, the casing being provided with suitable outlet openings communicating with the spaces between the partitions, and a damper within the casing, adapted to control the admission of air to the inlet openings.

5. A superheater comprising a casing formed with a front plate having air inlet openings therein, and a plurality of intercommunicating heating chambers within the casing in communication with the inlet openings, and having an outlet end provided with outlet openings, there being adjacent to the outlet openings, a series of horizontal webs spaced apart from each other, the spaces between said webs being in communication with the chambers within the casing and with the outlet openings.

[Claims 6 and 7 not printed in the Gazette.]

1,157,966. HEADLIGHT. REGINALD G. STANDERWICK, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 3, 1915. Serial No. 31,844. (Cl. 240—44.)



1. A lamp support for a headlight comprising a split clamping member, a lamp standard passing through said member, and a movable member provided with a recess for receiving the clamp, the recess being so formed as to close the clamp when the member in which it is located is moved longitudinally.

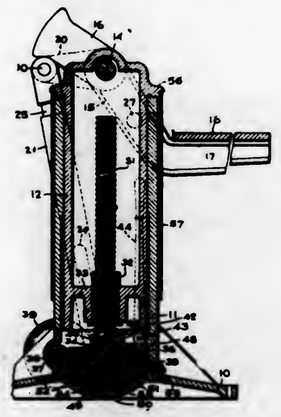
2. A lamp support for a headlight comprising a perforated base support, a screw-threaded member received in said support and forming therewith a ball socket, a split ball adapted to be received in said socket, and a lamp standard passing through and longitudinally movable in said ball.

3. In a headlight, a perforated base support, a screw-threaded member received in said support and forming therewith a ball socket, a split ball received in said socket, a parabolic reflector provided with a side opening, and a lamp standard passing through and longitudinally movable in said ball and extending through the opening of said reflector.

4. A lamp support for a headlight comprising a perforated base support, a screw-threaded member received in said support and forming therewith a ball socket, a split ball adapted to be received in said socket, a hollow lamp standard passing through and longitudinally movable in said ball and adapted to carry the conductors to the light on said standard, and means for preventing rotation of said ball with reference to said standard.

5. In a headlight, a casing, a base support mounted upon said casing, a screw-threaded member received in said support and forming therewith a ball socket, said member extending without the casing of the headlight, a split ball received in said socket, and a lamp standard passing through and longitudinally movable in said ball and extending through said member, whereby the light is adjustable without the casing of the headlight.

1,157,967. MOLDING-MACHINE. GEORGE E. STEVENS, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 25, 1912. Serial No. 722,258. (Cl. 22—33.)



1. In a rock-over molding machine, the combination of a hinged mold table, an elevator device arranged to vertically raise said table and hinge, power means for actuating said elevator, and manually operated means for controlling the engagement of the power means with said elevator device.

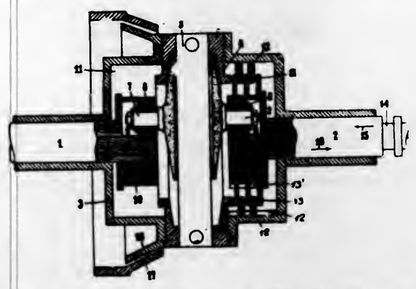
2. In a rock-over molding machine, the combination of a hinged mold table, an elevator device connected to the hinge of said table to raise the latter vertically, power means for actuating said elevator device, and a manually operated friction device for controlling the engagement of said power means with said elevator device.

3. In a rock-over molding machine, the combination of a hinged mold table, a vertically movable plunger connected to the hinge of said table, a screw rod in engagement with said plunger, a power shaft, and a manually controlled friction clutch between said shaft and said screw rod.

4. In a rock-over molding machine, the combination of a hinged mold table, a vertically movable plunger, a jack screw device of high pitch for moving said plunger, a power device, and a manually actuated friction device for transmitting motion from the power device to said jack screw device to elevate said plunger, and for braking the descent thereof.

5. In a rock-over molding machine, the combination of a vertical guide post, a plunger movable in said post, a rock-over mold table hinged to the upper end of said plunger, a jack screw device for moving said plunger, a power shaft, a friction clutch, a worm on said shaft, a worm gear in mesh therewith and connected to the second member of the clutch, said screw, clutch and gears being located within said post, and a cylindrical casing connected to the upper portion of said plunger and extending downward over the outer walls of said post.

1,157,968. REVERSIBLE COUPLING. SIMON HENRI STOFFEL and HENDRIK JAN JANSSEN, Delft, Netherlands. Filed July 22, 1913. Serial No. 780,434. (Cl. 74—14.)



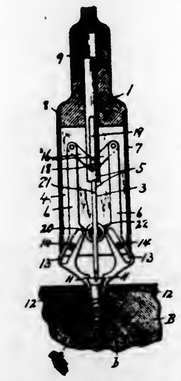
1. In a reversible coupling, a power shaft, a driven shaft, concentric heads on the opposing ends of said shafts, a housing surrounding said shaft heads and slidably mounted with relation to said shafts, a transverse shaft rotatably mounted in said housing, a sliding piece mounted upon said shaft, recesses having bearing faces formed in the opposing faces of the heads of said shaft, pins on said sliding piece adapted to enter the recesses on said shafts, said bearing faces being eccentric to the shafts, laminated coupling rings secured to the interior of said housing, laminated coupling rings secured to the head of one of said shafts, said coupling rings being adapted to co-act.

2. In a reversible coupling, a power shaft, a driven shaft, concentric heads on the opposing ends of said shaft, a housing surrounding said shaft heads and slidably mounted with relation to said shafts, a transverse shaft rotatably mounted in said housing, a sliding piece mounted upon said shaft, recesses having bearing faces formed in the opposing faces of the heads of said shafts, pins on said sliding piece adapted to enter the recesses on said shafts, spherical bodies mounted on said pins, crescent shaped pieces inserted in said recesses to engage said spherical bodies, said bearing faces being eccentric to the shafts, laminated coupling rings secured to the interior of said housing, laminated coupling rings secured to the head of one of said shafts, said coupling rings being adapted to co-act.

1,157,969. SCREW-DRIVER. JOSEPH H. TOBIN, Deruyter, N. Y., assignor to Messenger Screw Co., Inc., Lincklaen, N. Y., a Corporation. Filed Feb. 5, 1914. Serial No. 816,705. (Cl. 145—52.)

1. A screw driver comprising a head slotted lengthwise in planes at right angles to each other, a driving member movable lengthwise of the head and guided in one of said slots to rotate with the head, a pair of screw-gripping jaws movable lengthwise of the head and guided in the other slot to also turn with the head, said jaws and head being provided with coöperative devices including inclined ways, and members engaging therewith for forcing the jaws into gripping engagement with the screw as the head is moved toward the work relatively to the jaws.

2. A screw driver comprising a head, a pair of screw-gripping jaws movable lengthwise of and upon the head, said jaws and head being provided with coöperative devices including inclined ways and members engaged therewith for forcing the jaws into gripping engagement with the screw as the head is moved toward the work relatively to said jaws, a driving member movable lengthwise of and within the head and provided with a stop shoulder, and a locking bolt having a guide opening therethrough through which the driving member is slidable, said guide bolt being spring-pressed in one direction and provided with a locking shoulder for interlocking engagement with the locking shoulder on the driving member to hold the latter against inward movement when drawn outwardly to project its screw-engaging end a predetermined distance beyond the gripping portions of the jaws.



3. A screw driver comprising a head, a driving member adapted to engage a slot in a screw, said driving member being longitudinally movable in the head and guided therein to turn therewith, opposed jaws mounted on the head for engagng opposite sides of the head of the screw to hold said screw in operative engagement with the driving member, said jaws being provided with inclined slots converging upwardly, and pins on the head riding in said slots for forcing the jaws into engagement with the screw as the head is pressed toward the object in which the screw is inserted.

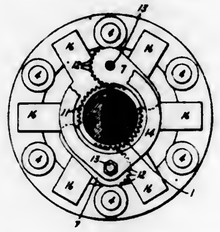
4. In a screw driver, the combination of a head having a central guide way, a screw-driving member movable in said guideway, levers movable lengthwise of and within the head and located at opposite sides of the driving member, said levers having fulcrum connection with the head and their outer ends provided with screw-gripping jaws, and connections between the inner ends of the lever and screw-driving member for rocking the levers upon their fulcrums to cause the jaws to grip the screw when the driving member is engaged with said screw and the head is moved toward the work relatively to the jaws.

1,157,970. DYNAMO-ELECTRIC MACHINE. JOHN B. WIARD, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 15, 1914. Serial No. 838,692. (Cl. 172—120.)

1. In combination, a shaft, a rotatable member of a dynamo electric machine mounted on said shaft, and a centrifugally operated switch controlling a circuit of said machine comprising a member surrounding said shaft and rotatable relative thereto, a spring opposing the movement of said member around the shaft, a gear mounted on said shaft, and centrifugally operated members pivotally mounted on said member surrounding the shaft, said centrifugally operated members having teeth meshing with the teeth of said gear and tending to turn said member around the shaft.

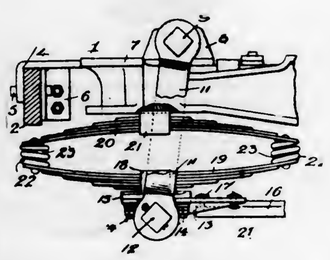
2. In combination, a shaft, a rotatable member of a dynamo electric machine mounted on said shaft, and a centrifugally operated switch controlling a circuit of said machine comprising a member surrounding said shaft and

rotatable relative thereto, a spring opposing the movement of said member around the shaft, said spring having one end fastened to the rotatable member of the dynamo electric machine and the other end fastened to the member



surrounding the shaft, a gear mounted on said shaft, and centrifugally operated members pivoted on said member surrounding the shaft, said centrifugally operated members having teeth meshing with the teeth on said gear and tending to turn said member around the shaft.

1,157,971. CAR-TRUCK. WALTER S. ADAMS, Philadelphia, Pa., assignor to The J. G. Brill Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 17, 1914. Serial No. 872,509. (Cl. 105—239.)



1. In a truck of the class described, a truck frame, a bolster mounted in said frame, leaf springs supporting said bolster, coil springs mounted between said leaf springs and cups for said coiled springs adapted to rest together when the coiled springs are sufficiently compressed.

2. In a truck of the class described, a truck frame, hangers supported by said truck frame, transversely disposed leaf-springs supported by said hangers, a bolster supported by said leaf springs, coil springs mounted between said leaf springs and cups for said coiled springs adapted to rest together when the coiled springs are sufficiently compressed.

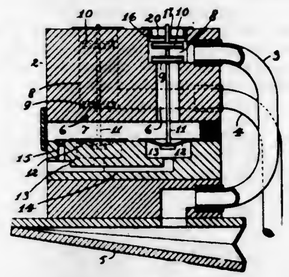
3. In a truck of the class described, a truck frame having hangers and means for supporting the same, a spring plank, carried by said hangers, leaf springs carried by said spring plank and supporting the bolster, coil springs mounted between said leaf springs and cups for said coiled springs adapted to rest together when the coiled springs are sufficiently compressed.

4. In a truck of the class described, a truck frame, a bolster mounted within said frame, leaf spring for supporting said bolster, coil springs mounted between the ends of said leaf springs and cups for said coiled springs adapted to rest together when the coiled springs are sufficiently compressed.

5. In a truck of the class described, a truck frame, a bolster mounted within said frame, leaf springs for supporting said bolster, coil springs interposed between the leaf springs and a block for limiting the compression of said coil springs.

[Claims 6 to 15 not printed in the Gazette.]

1,157,972. VALVE MECHANISM. HOLDEN P. BALLOU, Hartford, Conn., assignor to Walter S. Schutz, trustee, Hartford, Conn. Filed Jan. 28, 1915. Serial No. 4,921. (Cl. 84—156.)



1. A vacuum chest having a valve therein, a bushing fitted in said chest, a stem to which said valve is connected and a seat for the valve adjustably fitted in said bushing, the seat being perforated thereby providing a bearing to receive said stem and being also perforated to provide ports, the latter acting as means whereby the seat can be adjusted.

2. A vacuum chest having a valve therein, a bushing fitted in said chest, a stem to which the valve is connected, and a seat for the valve threaded in said bushing to permit adjustment of the seat, the latter being perforated thereby providing a bearing to receive the stem and being also perforated to provide ports and the latter acting as means whereby the seat can be adjusted.

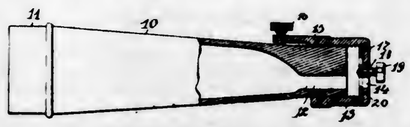
3. A vacuum chest having a valve therein, a bushing driven into said chest and having an annular flange overlying the chest, a stem to which said valve is connected, and a seat for the valve threaded in said bushing for adjustment and being perforated to provide ports and to provide means whereby the seat can be adjusted.

4. A vacuum chest having a valve therein, a bushing fitted in said chest, a stem to which the valve is connected, and a seat for the valve adjustably fitted in said bushing, the seat being perforated thereby providing a bearing to receive said stem and being also ported.

5. A vacuum chest having a valve therein, a bushing fitted in said chest, a stem to which said valve is connected, and a cup-like seat for the valve, adjustably fitted in said bushing, the body portion of the seat being perforated thereby providing a bearing to receive said stem and being also ported.

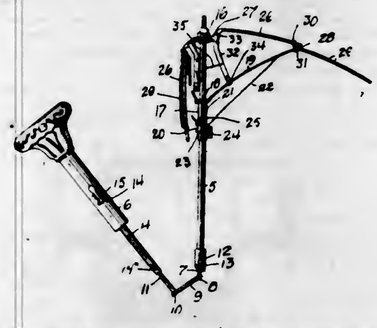
[Claim 6 not printed in the Gazette.]

1,157,973. NOZZLE. LOUIS J. BAUM, East Orange, N. J. Filed Jan. 21, 1914. Serial No. 813,418. (Cl. 137—17.)



A nozzle comprising a body portion having at one end an eccentrically arranged outlet, a cap rotating on the end of the nozzle with an opening in its end adapted to be turned in and out of register with the outlet opening of the nozzle, a plate on the inside of the end of the cap, the plate having a series of openings, a pin on which said plate is fixedly mounted with the series of openings concentrically arranged about said plate, a notched boss on said cap, a spring finger on the pin which is adapted to engage the notches in the boss, and a finger-piece on the pin to provide for its rotation to bring the openings of the plate successively into register with the openings of the cap.

1,157,974. FOLDING UMBRELLA. WILLIAM BEHLING, McDonald, Pa. Filed Feb. 18, 1914. Serial No. 819,559. (Cl. 135—26.)



1. An umbrella comprising a stick, a runner carried thereby, a collar slidably mounted on said runner, an inner rib section having its inner end pivotally connected to the stick, an outer rib section slidably connected to the inner rib section, a spreader pivotally connected to said runner and to said outer rib section, a brace pivotally attached at its upper end to the inner end of said inner rib section and slidably mounted at its lower end on said spreader, and a flexible member connected to said spreader and to said collar.

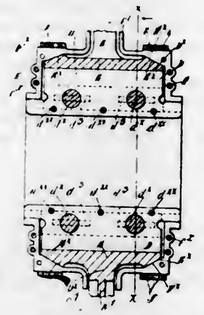
2. An umbrella comprising a stick, a runner carried thereby, an inner rib section having its inner end pivotally connected to the stick, an outer rib section slidably connected to the inner rib section, a spreader pivotally connected to said runner and to said outer rib section, a brace pivotally attached at its upper end to the inner end of said inner rib section and slidably mounted at its lower end on said spreader, a flexible member connected to said spreader, and a collar slidably mounted on said runner and connected to said flexible member for maintaining the flexible member taut when the rib is extended.

3. An umbrella comprising a stick, a series of ribs each including an inner and an outer section slidably connected together, the inner sections being pivotally connected to said stick, a collar slidably mounted on said runner, spreaders pivotally connected to said runner and to said outer rib sections, brace members pivotally connected at their upper ends to the inner rib sections near their inner ends and slidably connected at their lower ends to the spreaders, flexible members limiting the outward movement of said brace members, and flexible members connecting said spreaders to said collar.

4. An umbrella comprising a stick, a series of ribs each including an inner and an outer section slidably connected together, the inner sections being pivotally connected to said stick, spreaders pivotally connected to said runner and to said outer rib sections, brace members pivotally connected at their upper ends to the inner rib sections near their inner ends and slidably connected at their lower ends to the spreaders, flexible members limiting the outward movement of said brace members, flexible members connected to said spreaders, and a collar slidably mounted on said runner and connected to said flexible members for maintaining the flexible members taut when the ribs are extended.

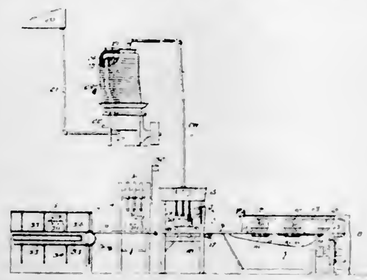
1,157,975. CRANK-PIN BEARING. GABRIEL BOURCIER, Erith, England, assignor to Vickers Limited, Westminster, England. Original application filed Apr. 18, 1913, Serial No. 762,226. Divided and this application filed Oct. 29, 1913. Serial No. 797,948. (Cl. 74—17.)

1. In an internal combustion engine, the combination with a plurality of connecting rods provided with segmental and tapered ends, of two members formed with a circumferential bearing surface for said segmental ends and with longitudinal holes and affording a crank pin opening, slotted coupling pins carried by one of said members, cotters disposed within certain of the longitudinal holes in the other of said members and engaging the slots in the coupling pins, adjustable caps made in halves mounted on said members and tapered to engage the tapered portions of the segmental ends of the connecting rods, and means for securing said halves together.



2. In an internal combustion engine, the combination with a plurality of connecting rods provided with segmental and tapered ends, of two members formed with a circumferential bearing surface for said segmental ends and with longitudinal holes and affording a crank pin opening, slotted coupling pins carried by one of said members, cotters disposed within certain of the longitudinal holes in the other of said members and engaging the slots in the coupling pins, adjustable caps made in halves mounted on said members and tapered to engage the tapered portions of the segmental ends of the connecting rods, and means including rings in engagement with the periphery of each of said caps for securing said halves together.

1,157,976. METHOD OF PRESERVING MILK AND MILK PRODUCTS. ALBERT J. DAVIS, New York, N. Y. Filed Dec. 18, 1911. Serial No. 666,535. (Cl. 99—11.)



1. The improved method of preserving milk and similar products consisting in pasteurizing the same, then while at its pasteurizing temperature and without intermediate treatment, introducing it into a clean heated receptacle and closing said receptacle while hot, and with the product at the pasteurizing temperature.

2. The improved method of preserving milk and similar products consisting in pasteurizing the same, then while at its pasteurizing temperature and without intermediate treatment, introducing it into a clean receptacle heated to pasteurizing temperature and closing said receptacle while hot.

3. The improved method of preserving milk and similar products consisting in pasteurizing the same, then while at its pasteurizing temperature and without intermediate treatment, introducing it into a clean heated receptacle,

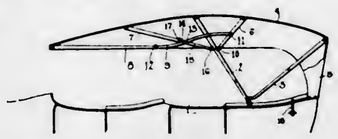
closing said receptacle while hot, and with the product at the pasteurizing temperature, and rapidly cooling the receptacle and inclosed product.

4. The improved method of preserving milk and similar products consisting in pasteurizing the same, then while at its pasteurizing temperature and without intermediate treatment, introducing it into a clean receptacle heated to pasteurizing temperature, then closing said receptacle, and cooling the receptacle and inclosed product.

5. The improved method of preserving milk and similar products consisting in pasteurizing the same, then while at its pasteurizing temperature and without intermediate treatment, introducing it into a clean receptacle heated to pasteurizing temperature, then closing said receptacle, then retaining the receptacle and inclosed product at substantially the same temperature for an appreciable time and then cooling the same.

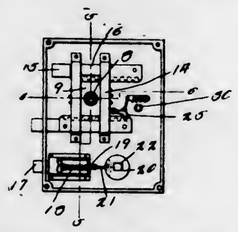
[Claim 6 not printed in the Gazette.]

1,157,977. VEHICLE-TOP. WALTER P. DORL, Detroit, Mich., assignor to Dorl-Wiley One Lady Auto Top Co., Detroit, Mich., a Corporation of Michigan. Filed June 1, 1914. Serial No. 842,030. (Cl. 21—62.)



In a vehicle top, a front bow, an intermediate bow pivotally supported thereby, a supplemental break down bow pivotally supported by said front bow, an outrigger bow, and means connecting said outrigger bow and said intermediate bow and having a sliding connection with said supplemental bow whereby said bows can be folded relative to said front bow.

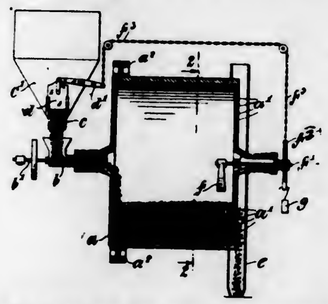
1,157,978. DOOR-LOCK. JOHN EZYKOWICH, Bliesville, N. Y. Filed Sept. 2, 1914. Serial No. 859,854. (Cl. 70—74.)



A lock comprising, a rectangular casing having a plurality of openings in one face thereof, a transversely extending shaft revolubly mounted in said casing, a gear wheel secured to said shaft, a plurality of bolts having racks thereon slidably mounted within the casing and engaging the said gear wheel, a frame for guiding said bolts, plates secured to the said bolts and adapted to engage the side of the gear to prevent the bolt from lateral movement, a pawl pivotally mounted within the casing and adapted to engage the rack on one of said bolts, and a rack bar slidably mounted in the said casing and having a link connection with the said pawl.

1,157,979. FEED-REGULATOR FOR GRINDING-MILLS. JOHAN S. FASTING, Frederiksberg, near Copenhagen, Denmark. Filed Nov. 13, 1914. Serial No. 871,851. (Cl. 83—44.)

1. In a grinding mill, the combination with the grinding bodies, of means disposed within the mill to govern automatically the supply of material to the mill or the speed of rotation thereof, said means being disposed within the mill and mounted out of the path of the material during the normal operation of the mill, but adapted to be struck by the material and grinding bodies and moved when the capacity of the mill is exceeded, such movement serving to effect the said governing action.

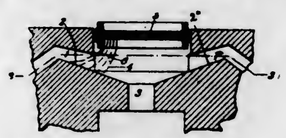


2. In a high speed grinding mill, the combination with the grinding bodies, of a valve to control the inflow of the material to be ground, and means disposed within the mill and connected operatively to said valve to govern the position of the valve, said means including an arm arranged out of the path of the material during the normal operation of the mill but adapted to be struck by the material and moved when the capacity of the mill is exceeded, such movement serving to move the valve to decrease the inflow of the material.

3. In a high speed grinding mill, the combination with the grinding bodies, of a valve to control the inflow of the material to be ground, means disposed within the mill and connected operatively to said valve to govern the position of the valve, said means including an arm arranged out of the path of the material during the normal operation of the mill but adapted to be struck by the material and moved when the capacity of the mill is exceeded, such movement serving to move the valve to decrease the inflow of the material, and means coöperating with the valve to restore it automatically to its normal position upon resumption of normal operation of the mill.

4. In a high speed grinding mill, a hopper for the material provided with a discharge opening and valve to control the flow of material through the discharge opening into the mill, a shaft passing through the discharge head of the mill and arranged axially of the mill, an arcuate arm carried on the inner end of the shaft and disposed radially of the mill, a sheave mounted on the outer end of the mill, an operative connection between the sheave and the valve, and a counterweight carried on the sheave to maintain the radial arm in normal position, the arm being arranged to be struck by the material and moved to close the valve when the capacity of the mill is exceeded, the counterweight serving to restore the valve to its normal position as soon as the mill again operates at its normal capacity.

1,157,980. FURNACE FOR DRAWING GLASS. VICTOR HERBERT GREGORY, Chiswick, England, assignor to Pilkington Brothers, Limited, St. Helens, England. Filed Mar. 14, 1911. Serial No. 614,410. (Cl. 49—53.)

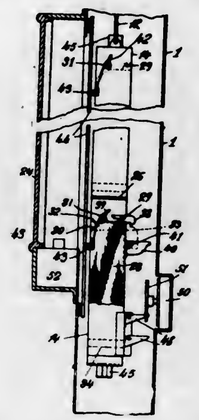


1. A furnace for heating reversible pots from which glass is drawn and from which glass only has egress through a central hole in the furnace floor which slopes toward the said central hole, the wall of said furnace having a passage by which the gases issue from the furnace, said passage having a floor sloping downward toward the sloping floor of the furnace.

2. A furnace for heating reversible pots from which glass is drawn and from which glass only has egress through a central hole in the furnace floor which slopes toward the said central hole, the wall of said furnace having a recess and a passage opening into that recess by which the gases issue from the furnace, said passage having a floor sloping downward toward the sloping floor of the furnace.

3. In a furnace for heating reversible pots from which glass is drawn, the wall of which has a passage by which the gases issue from the furnace, the combination of a floor sloping downward into the furnace for returning to the latter any glass descending from the pot, and an edge formed by the junction of the passage with the furnace below the level of the bottom edge of the pot, with which edge threads of glass from the pot contact before touching the sloping floor.

1,157,981. APPARATUS FOR DELIVERING MAIL. WILLIAM J. GRIFFITHS, Jr., Mount Vernon, N. Y., assignor to Electric Mail Carrier Company, New York, N. Y., a Corporation of New York. Filed Mar. 25, 1912. Serial No. 686,184. (Cl. 214—12.)



1. The combination of a shaft, individual carriers adapted to receive mail or similar matter, means for operating the carriers in said shaft and mechanism for operating only the loaded carriers into discharging positions at predetermined points in said shaft.

2. The combination of a shaft, carriers adapted to receive mail or similar matter, ejectors carried by said carriers, selective means in said shaft adapted to coöperate with the said ejectors at selected points in the shaft to discharge the said carriers and means on the latter for keeping the ejectors inactive on the carriers which do not contain any mail.

3. The combination of a shaft, a plurality of mail carriers within said shaft, means for operating said carriers stepwise to load the same and for operating said carriers continuously the length of said shaft to discharge the mail, said means comprising electric motive power including an electric circuit, a manually operated switch for closing the circuit to operate the carriers stepwise, means for automatically opening said circuit after the stepwise movement of the carriers has been completed and means controlled by said manually operated switch for causing said carriers to travel the length of the said shaft.

4. The combination of a shaft, a plurality of mail carriers within said shaft, means for operating said carriers stepwise to load the same and for operating said carriers continuously the length of said shaft to discharge the mail, said means comprising electric motive power including an electric circuit, a manually operated switch for closing the circuit to operate the carriers stepwise, means for automatically opening said circuit after the stepwise movement of the carriers has been completed, means controlled by said manually operated switch for causing said carriers to travel continuously the length of the said shaft, and a reversing switch for automatically reversing the current in said circuit to cause said carriers to return to starting position.

5. The combination of a shaft a portion of which forms a starting station, a plurality of individual interconnected carriers adapted to be loaded with mail at said starting station, an electric circuit and electrically operated means for operating said carriers lengthwise in the said shaft, a pair of fixed contact members in the latter at the said starting station and connected to the said electric circuit and means carried by each of said carriers and adapted to bridge the said contact members to short circuit, the said electric circuit, while any one of the said carriers is being loaded.

[Claim 6 not printed in the Gazette.]

1,157,982. SHOE-STRETCHER. WILLIAM H. HARBKE, Portland, Oreg. Filed Mar. 12, 1914. Serial No. 824,140. (Cl. 12—130.)



1. A shoe stretcher comprising a toe-piece adapted to fill the toe of a shoe and having a recess, a ball swivelly mounted in said recess for universal movement, a threaded shaft attached to and extending from the ball, a heel piece adapted to fit within and fill the heel of a shoe, threadedly mounted on said shaft and a handle for turning the screw so as to move the heel piece away from the toe-piece.

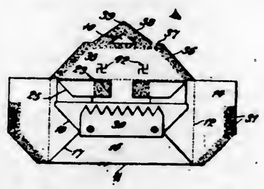
2. A shoe stretcher comprising a toe-piece adapted to fill the toe of a shoe, a heel-piece adapted to fit within and fill the heel of a shoe, and a threaded shaft having a universal joint connection at its forward end to said toe-piece and having a threaded connection with said heel-piece, whereby the turning of said threaded shaft will move said heel-piece away from the toe-piece.

1,157,983. SAFETY-ENVELOP. ERNEST HEITMANN, New York, N. Y. Filed Apr. 12, 1915. Serial No. 20,641. (Cl. 229—82.)

1. A safety-envelop having end and bottom flaps, a pervious tissue fabric strip engaged at its ends between said flaps in such manner as to have its major portion unconfined, parts being visible through openings in said flaps, and a cover flap having an opening through which said strip may be seen and provided with an adhesive binging said strip only where contact is made with it when the envelop is sealed.

2. A safety-envelop having perforate end flaps, a bottom flap engaged therewith, a pervious tissue strip arronged

longitudinally of the envelop below the perforations in said end flaps, normally secured at its ends only, serrations formed in one edge of strip, said serrations being unconfined and a cover flap adapted to adhere to said end and bottom flaps its adhesive penetrating and binding said strip.



3. A safety-envelop comprised of a single symmetrical blank having folded end and bottom flaps, a pervious and fragile element engaged at its ends between said end and bottom flaps at the center of said blank and a top flap having an adhesive capable of permeating said element and becoming adherent therethrough to said bottom flap.

4. A safety-envelop having perforated end flaps, a bottom flap engaged therewith, a pervious tissue strip arranged longitudinally of the envelop below the perforation in said end flaps, normally secured at its ends only, and serrations on the edge of said strip, the strip being of a different color from the body of the envelop.

5. A safety-envelop formed of a symmetrical blank having end and bottom flap portions adherent, a top flap adapted to fold thereover, tabs formed with said bottom flap extending above the end flaps in such manner as to fold thereover and having a portion provided with an adhesive, elements formed with but partially separated from said top flap adapted to adhere to said tabs, and a tissue fabric secured at its ends to the back of the envelop, said top flap partially overlying said fabric and having an adhesive coating uniting said fabric with the back of the envelop.

1,157,984. METHOD OF MELTING AND SPRAYING FUSIBLE SUBSTANCES. FRANZ HERKENRATH, Zurich, Switzerland, assignor, by mesne assignments, to Metals Coating Company of America, Boston, Mass., a Corporation of Massachusetts. Original application filed Mar. 31, 1914, Serial No. 826,137. Divided and this application filed July 6, 1914. Serial No. 849,211. (Cl. 83—91.)

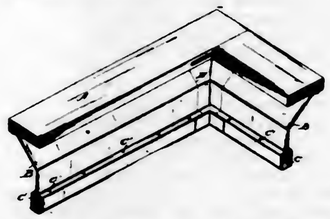


1. In the method of melting and spraying a fusible substance, the step which consists in simultaneously subjecting the substance to a blast of unignited gas heated to a temperature above the melting point of said substance and at a pressure sufficiently high to disintegrate and project said substance while melting, and directing a separate blast on the fused portion of said substance.

2. In the method of melting and spraying a fusible substance, the step which consists in subjecting the substance to a blast of chemically neutral unignited gas heated to a temperature above the melting point of said substance and at a pressure sufficiently high to disintegrate and project said substance while melting.

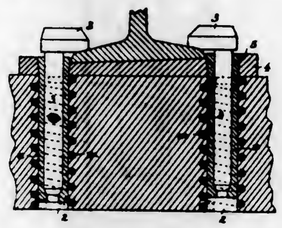
3. In the method of melting and spraying a fusible substance, the step which consists in subjecting the substance to a blast of chemically neutral unignited gas heated to a temperature above the melting point of said substance and at a pressure sufficiently high to disintegrate and project said substance while melting, and directing a separate blast on the fused portion of said substance.

1,157,985. METALLIC BASE FOR SHOW-CASES. HARMON J. HUNT, Detroit, Mich. Filed May 25, 1914. Serial No. 840,695. (Cl. 211—25.)



In an article of the class described, an upper wooden frame, a supporting wall of sheet metal secured to the frame having a downwardly and a rearwardly receding portion, its lower edge provided with an offset margin to receive a wooden guard rail, and a guard rail secured to the wall and lodged partially within the off-set portion of the wall.

1,157,986. MEANS FOR SECURING RAILWAY-RAILS TO CONCRETE SLEEPERS. PETER BURD JAGGER, London, England, assignor to Quebec Savings and Trust Company, Montreal, Canada. Filed Dec. 13, 1910. Serial No. 597,138. (Cl. 85—10.)



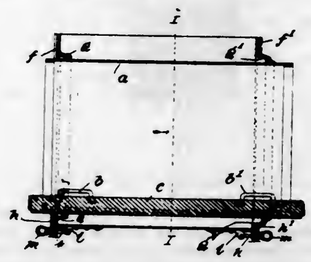
1. The herein described device for securing railway rails on concrete sleepers, consisting of spiral coils of metal embedded in the wall of a hole in the concrete sleeper, a thin walled wooden sleeve adapted to be driven into the hole of the said sleeper and when so driven to be strongly compressed from the outside inwardly and a bolt or spike requiring to be forced into the said wooden sleeve so that when forced therein the wooden sleeve becomes further compressed from the inside outwardly thereby realizing a strong frictional grip on the bolt or spike.

2. The herein described device for securing railway rails on concrete sleepers, consisting of spiral coils of metal embedded in the walls of holes in the concrete sleeper, thin walled wooden sleeves adapted to be driven, one to each said hole, into the holes of the said sleeper and when so driven to be strongly compressed from the outside inwardly and bolts or spikes requiring to be forced into the said wooden sleeves, one bolt or spike to each of said sleeves, so that when forced therein the wooden sleeves become further compressed from the inside outwardly thereby realizing a strong frictional grip on the bolts or spikes.

1,157,987. MOLD FOR FORMING CONCRETE PIPES. PETER BURD JAGGER, London, England, assignor to Quebec Savings and Trust Company, Montreal, Canada. Filed Mar. 4, 1911. Serial No. 612,393. (Cl. 25—127.)

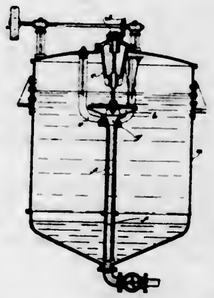
1. A pipe mold comprising a contractile core, an outer expansible horse-shoe shaped casing of sheet metal having longitudinal edges which form the inlet opening arranged in a horizontal plane and which when released springs outwardly and in opening acts through its sides acting as lifting supporting members to automatically bodily separate and free itself from the pipe and take the weight

of the casing off the back of the pipe, end plates to which said core and said expansible casing are removably secured, bearing surfaces on the facing sides of said plates, said bearing surfaces following the contour of the exterior of the pipe and being adapted to permit the expansible casing to so separate and free itself from the pipe when said casing is released, said end plates being each provided with a central opening within which the said core is adapted to be expanded, and means for holding said expansible casing in fixed relation to said core and in fluid tight relation to said end plates.



2. A pipe mold constituting a self-contained unit comprising a core; an outer expansible casing of sheet metal acting as one integral unit, and having longitudinal edges which form the inlet opening arranged in a horizontal plane and which when released springs outwardly to clear the pipe from the mold; end plates each provided with a central opening within which the contractile core is adapted to be expanded; bearing surfaces, following the contour of the exterior of the pipe, provided on the facing sides of said end plates; and fastening means comprising a series of screwed shanks pivotally connected to the casing and adapted to engage a corresponding series of slots provided around the outer portions of the end plates and to be held therein by bolts (*m*) whereby also the edges of the casing are drawn against the end plates with a pressure producing substantially a liquid tight joint and the parts of the mold are rigidly assembled.

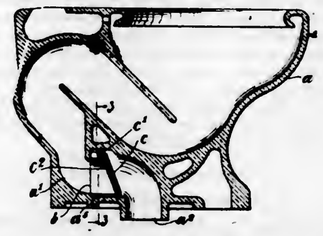
1,157,988. APPARATUS FOR PURIFYING BENZOL. HEINRICH KOPPERS. Essen-on-the-Ruhr, Germany, assignor to H. Koppers Company, Chicago, Ill., a Corporation. Filed Sept. 2, 1913. Serial No. 787,832. (Cl. 23—24.)



1. A mixing apparatus for purifying benzol by means of sulfuric acid, comprising a vessel, a mixing wheel contained therein and located at a substantial distance above the bottom of the vessel to be adapted to be clear of the acid settled at such bottom, and a stationary suction pipe, the mixing wheel and suction pipe being separated by a small space.

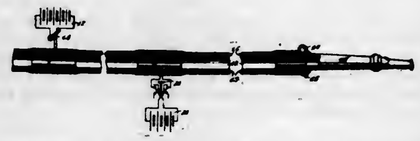
2. A mixing apparatus for purifying benzol by means of sulfuric acid comprising a vessel, a bracket and a bearing extending from the cover of said vessel into the interior thereof, a suction pipe depending from said bracket, and a mixing wheel journaled in the bearing, and located at a substantial distance above the bottom of the vessel, the suction pipe and mixing wheel being separated by a small space.

1,157,989. WATER-CLOSET. JAMES HARVEY LEONARD, East Orange, N. J., assignor to Jenkins Manufacturing Co., New York, N. Y., a Corporation of New York. Filed Feb. 15, 1915. Serial No. 8,191. (Cl. 4—17.)



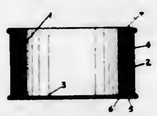
In a water closet, in combination with the bowl having a lower leg communicating with the discharge outlet, and having a recess formed in the side thereof across said lower leg, a valve housing of similar cross-sectional dimension and outlet to the passage in said lower leg and having a snug sliding fit with said recess, a flat valve pivoted on the housing and controlling the passage therethrough, securing devices for the valve housing, means carried by the bowl to receive said securing devices, a plate to close said recess in the bowl, a bolt passing through the plate and engaging the housing to maintain the plate in position, and packing coöperating with the plate and the bolt to insure a gas-tight closure of the recess, said housing and valve being removable bodily from the recess from the exterior of the bowl.

1,157,990. ELECTRIC SIGNAL. CLAUS H. LIGHT, Des Moines, Iowa, assignor of one-half to Edwin Rudnich, Manning, Iowa. Filed Mar. 17, 1913. Serial No. 755,027. (Cl. 177—315.)



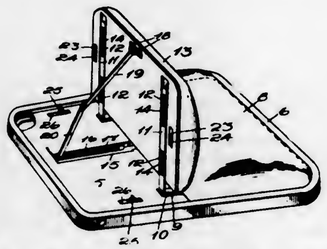
In a device of the class described, the combination of detachable hose sections, an electrically operated device mounted on said hose, conducting wires extending along said hose and connected at one end to said device, a sleeve mounted in each section adjacent to the end of the section, contact points slidably mounted in said sleeves, means for limiting the movement of said contact points, yielding devices tending to hold said contact points projecting slightly beyond the ends of the sections in which they are mounted, means for electrically connecting the contact point with the wires, a source of electric power, wires connected therewith, a switch operatively connected with one of said wires, means for connecting said last described wires with said contact points, said means comprising a pair of parallel arms adapted to have their ends inserted into the space between two adjacent sections with said ends fitted over said contact points, which contact points are held projected into said arms by said yielding means, insulator bars connecting said parallel arms, and means for connecting the upper ends of said wires connected with said battery.

1,157,991. COOKING UTENSIL. EDGERTON K. LINTON, Saginaw, Mich. Filed July 7, 1913. Serial No. 777,702. (Cl. 220—138.)



The combination with a containing vessel closed at the lower end and open at the upper end and having an outwardly projecting flange formed at the top edge thereof; of a cylindrical shell having its upper edge secured to the outer edge of said flange; an annular ring of low heat conductivity arranged below the bottom of said vessel and secured at its outer edge to the lower edge of said shell, the inner edge of said ring being formed with an upwardly projecting flange, which flange is secured to the lower edge of said vessel and an insulated double wall cover for closing the open end of said vessel.

1,157,992. BARBER'S CHAIR-BACK. GEORGE C. LUTZ, Philadelphia, Pa. Filed June 23, 1914. Serial No. 846,807. (Cl. 155—26.)



1. The combination with a chair back; of a supplemental seat hinged to said back and slidable to and from the hinge axis, stops carried on said back, means on the under side of the seat arranged to engage said stops when the seat is in folded position against the back, and collapsible means to hold the seat raised.

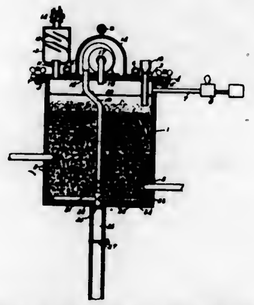
2. The combination with a chair back comprising a frame, and a back rest mounted on the upper part of the frame; of a supplemental seat hinged to said back and slidable to and from the hinge axis, a hinged strut for said seat, stops carried on the back frame, and means carried by the supplemental seat and engageable with said stops when the seat is folded against the back frame and engaged against the back rest.

1,157,993. HYDROGENATING PROCESS AND APPARATUS. KARL P. MCELROY, Washington, D. C. Filed Mar. 28, 1912. Serial No. 686,962. (Cl. 87—12.)

1. In the hydrogenation of oily substances, the process which comprises maintaining a liquid body of such a material in a closed container in the presence of a hydrogenating catalyst and under suitable heat and pressure, supplying a gas comprising hydrogen to said container and producing a cyclic circulation of such gas independent of each supply, directly from, to and through said liquid body to form bubbles therein.

2. In the hydrogenation of oily substances, the process which comprises maintaining a liquid body of such a material in a closed container in the presence of a hydrogenating catalyst and under suitable heat and pressure, supplying a gas comprising hydrogen to said container and producing a cyclic circulation of such gas independent of such supply, directly from, to and through said liquid body in the form of minute bubbles ascending in a non-vertical path.

3. In the hydrogenation of oily substances, the process which comprises maintaining a liquid body of such a substance in admixture with a hydrogenating catalyst as an emulsion of gas and liquid by a rapid cyclic circulation of gas comprising hydrogen directly from, to and through such body.



4. In the hydrogenation of oily substances, the process which comprises maintaining a liquid body of such a material in a closed container in the presence of freshly reduced nickel and under suitable heat and pressure, supplying a gas comprising hydrogen to said container and producing a cyclic circulation of such gas independent of such supply directly from, to and through said liquid body to form bubbles therein.

5. In the hydrogenation of oily substances, the process which comprises maintaining a liquid body of such a substance in admixture with freshly reduced nickel as an emulsion of gas and liquid by a rapid cyclic circulation of gas comprising hydrogen directly from, to and through such body to form bubbles therein.

[Claims 6 to 15 not printed in the Gazette.]

1,157,994. PENHOLDER. JOHN T. MCKITTRICK, Fort Madison, Iowa. Filed Nov. 16, 1912. Serial No. 731,869. (Cl. 120—101.)



A penholder comprising a handle having its inner end portion provided with a longitudinally extending slot, a sleeve slidably mounted upon said handle, means for limiting the sliding movement of said sleeve, and pen gripping means extending through said sleeve and having its inner end portion pivotally mounted in the longitudinally extending slot of said handle, the upper face of said pen gripping means extending parallel to said sleeve to a point adjacent said handle and being then inclined toward its pivot point, and the lower face of the pen gripping means being inclined from its outer end to the pivot point whereby the outer end portion only of the lower side of said pen gripping means will contact with said sleeve.

1,157,995. INCANDESCENT LAMP. GEORGE M. J. MACKAY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 11, 1914. Serial No. 861,279. (Cl. 176—40.)



1. An incandescent lamp comprising an incandescent filament part of which is surrounded by another part, said inclosed and inclosing parts being proportioned to operate at substantially the same temperature.

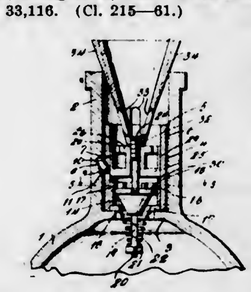
2. An incandescent electric lamp, comprising an envelop, and a coiled conductor of refractory material therein, comprising sections located one within the other, the inner section having a lesser resistance per unit length than the outer section.

3. An incandescent electric lamp comprising an envelop, a filling of inert gas at relatively considerable pressure therein, and a refractory metal filament located therein comprising helices located one within the other, the filament section constituting the inner helix having a greater cross-section than the outer.

4. A concentracted source incandescent lamp, comprising an envelop, a filling of inert gas therein ,and a tungsten filament mounted therein comprising at least two sections connected in series, one of said sections being surrounded at least in part by another section, the outermost section having a greater resistance per unit length than the inner section or sections.

5. An incandescent lamp comprising an envelop, a refractory metal filament mounted therein, said filament comprising a plurality of turns, one part of said filament turns inclosing another part, said filament being constructed to operate at a substantially uniform temperature.

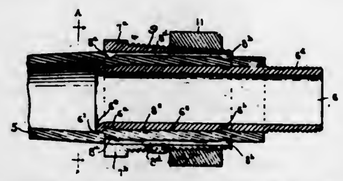
1,157,996. NON-REFILLABLE BOTTLE. NIKOLA MARTINOVICH, Youngstown, Ohio. Filed June 9, 1915. Serial No. 33,116. (Cl. 215—61.)



1. In a device of the class described, the combination of a neck having an integral annular flange, a casing carried upon said flange, guard disks fixedly carried within said casing and provided with a plurality of openings, an integral hollow neck connecting said guard disk, a valve seat positioned within said casing, a valve member positioned within said casing, means for normally urging said valve member into engagement with said valve seat, a stem extending upwardly through said neck, means for engaging the upper end of said stem for retaining said valve member from engagement with said valve seat when it is desired to originally fill the bottle through said neck, said means then being adapted to disengage said stem, whereby the valve member will be urged into engagement with said seat so as to draw the outer end of said stem below the outer portions of said guard disks, said valve member being adapted to move from engagement with said valve seat when the bottle is inverted so as to allow the liquid contents thereof to be emptied therefrom, said first-mentioned means being adapted to limit the movement of said valve member so as to prevent the stem from passing beyond the outer portions of said guard disks, whereby it will be impossible to engage said stem so as to hold the valve member from engagement with said valve seat for unauthorized filling of the bottle.

2. In a device of the class described, the combination of a neck having an integral annular flange, a valve casing carried within said neck upon said flange, guard disks positioned within said casing, an integral hollow neck connecting the inner portions of said valve disks, an integral drum connecting the outer portions of said disks, said disks provided with a plurality of openings, a valve seat carried within said casing, a valve member positioned within said casing and normally extending through said valve seat, means for normally urging said valve member into engagement with said valve seat, an upwardly extending stem extending through said hollow neck and terminating in an outer threaded end, a funnel member threaded into engagement with said threaded end for holding said valve from engagement with said valve seat, said funnel member being provided with slots whereby liquid contents may be poured into said funnel member so as to pass outwardly through said slots, said openings and said valve seat, so as to pass into the bottle, said funnel member then being adapted to be rotated so as to disengage said threaded end, means for retaining said valve member against rotation, at which time said first-mentioned means may urge the valve member into engagement with said valve seat, said valve member being adapted to draw said threaded end of said stem within the plane of the outer portions of said guard disks whereby, when the bottle is inverted, said seat may disengage said valve member so as to allow the liquid contents to be emptied from the bottle, said first-mentioned means being adapted to prevent said threaded end from passing beyond the plane of the outer portions of said guard disks, thereby preventing the engagement of said threaded end with a tool for unauthorizedly holding the valve member from engagement with the valve seat when it is desired to unauthorizedly fill the bottle.

1,157,997. HOSE-COUPLING. MANNING MEEKS, Cedar-Rapids, Iowa. Filed Feb. 13, 1914, Serial No. 818,603. Renewed Sept. 16, 1915. Serial No. 51,090. (Cl. 137—28.)

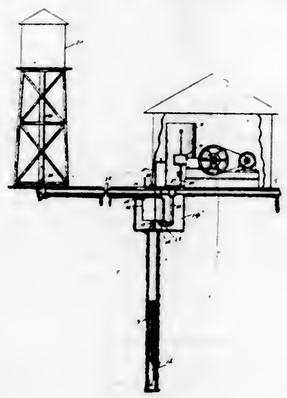


In combination, a nipple consisting of a pipe of substantially uniform diameter formed with circumscribing grooves cut therein, a part of said grooves being located near the end of said nipple to be inserted in the hose and a part being spaced therefrom to provide a cylindrical bearing surface, the end of the nipple for insertion in the hose being flared larger than the body of the nipple, a sleeve comprising two sections of equal size mountable on the hose over the nipple, each of said sleeve sections having diagonal longitudinally extending meeting faces and transverse internal ribs adapted to register with the grooves of the nipple and to force the material of the hose therein, each sleeve section having a medial longitudinally extending internal groove of substantially uniform depth from one end to the other and extending from one end of the nipple to the opposite end whereby the sleeve sections will yield concentrically around the hose to effect a uniform compression thereof, said sleeve having a tapered external thread, and a nut threaded on the sleeve, the sleeve sections being adapted to slide on each other to increase the force of compression and the flared end of the nipple serving to spread the material of the hose around the adjacent end of the sleeve to seal the joint therewith, the hose being interlocked with the nipple and sleeve by the internal ribs of the sleeve and the grooves of the nipple.

1,157,998. AIR-LIFT-PUMP BOOSTER. FRANK S. MILLER, Indianapolis, Ind., assignor to Harris Air Pump Company, Indianapolis, Ind., a Corporaton of Indiana. Filed Jan. 31, 1914. Serial No. 815,594. (Cl. 103—84.)

1. In combination, a closed chamber, a pipe leading from a well into such chamber and opening into said chamber above the liquid level therein, an air nozzle in such pipe below such chamber, a pipe leading from such chamber and opening into such chamber below the liquid level therein, a downwardly opening hood located in said chamber and having its open lower end below the liquid level therein,

said first named pipe discharging upwardly into said chamber and said last named pipe opening under said hood, and an automatic air valve controlling the outlet of air from and maintaining a pressure greater than atmosphere in said chamber.

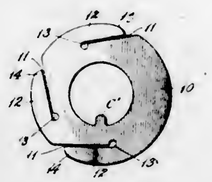


2. In combination, a closed chamber, a pipe leading from a well and discharging upwardly substantially vertically into such chamber, an air nozzle in such pipe below such chamber, a pipe leading from such chamber, a hood in such chamber over the end of said last named pipe, said hood having its lower end open below the liquid level in said chamber and having its upper end closed, a container which is connected to said last named pipe to receive the discharge therefrom, and an automatic air valve controlling the outlet of air from and maintaining a pressure greater than atmosphere in said chamber.

3. In combination, a closed chamber, a pipe leading from a well into such chamber, an air nozzle in such pipe below such chamber, a pipe leading from such chamber, a hood in said chamber over the end of said last named pipe, said hood having its lower end open below the liquid level in said chamber and having its upper end closed, and an automatic air valve controlling the outlet of air from and maintaining a pressure greater than atmosphere in said chamber.

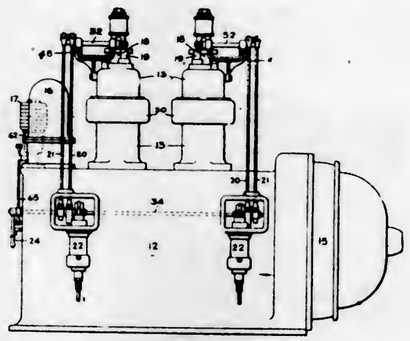
4. In combination, a closed chamber, a pipe leading from a well into such chamber, an air nozzle in such pipe below such chamber, a pipe leading from such chamber and opening into such chamber below the liquid level therein, a container which is connected to said last named pipe, said container being higher than said chamber, an automatic air valve controlling the outlet of air from such chamber, an air compressor for supplying air to said air nozzle, and an air nozzle in the connection between said chamber and said container, said air valve discharging both to the said last named nozzle and to the inlet side of said compressor.

1,157,999. NUT-LOCK. WINFIELD O. MILLIKIN, Detroit, Mich. Filed Nov. 29, 1912. Serial No. 734,046. (Cl. 151—52.)



The combination with a threaded bolt, of a polygonal nut engaging the bolt and a washer having a central aperture with means interlocking with the bolt, the washer being formed with slits extending inwardly from the periphery in lines that are chords of the circumference, the slits being enlarged at their inner ends within the area outlined by said slits, the ends of the resultant fingers being severally cut-away to lie well within this circumference and off-set from the face of the washer contiguous to the nut whereby the inner marginal portion of each finger may be brought into abutting relation with an adjacent facet of the nut.

1,158,000. CONTROLLING MECHANISM FOR INTERNAL-COMBUSTION ENGINES. ALFRED G. MORETON, Erie, Pa., assignor to General Electric Company, a Corporation of New York. Filed Mar. 12, 1914. Serial No. 824,288. (Cl. 123—179.)



1. In combination, an internal combustion engine, a fuel valve therefor, a pump supplying fuel to the valve, a starting means, a means for controlling the effective delivery of the pump, a fuel valve timing means which always opens the fuel valve at the same time and varies the time of closing, and a lever common to and controlling the starting means, pump controlling means and valve timing means.

2. In combination, an internal combustion engine, a fuel valve therefor, a pump supplying fuel to the valve, a starting means, a means for controlling the effective delivery of the pump, a means for changing the period of opening of the fuel valve, a compression reducing means, and a lever common to and controlling the starting means, pump controlling means, valve timing means and compression reducing means.

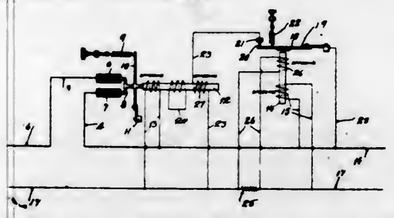
3. In combination, an internal combustion engine and its main shaft, a fuel valve therefor, a pump supplying fuel to the valve, a control shaft having eccentrics mounted thereon, a pump actuating lever pivotally supported on one of the eccentrics, an eccentric means on the main shaft for vibrating the pump lever, a lever for actuating the fuel valve that is mounted on an eccentric on the control shaft, a cam driven by the main shaft for moving the fuel lever, and a handle for turning the control shaft to change the angular positions of its eccentrics and thereby vary the action of the levers on their coöperating parts.

4. In combination, an internal combustion engine and its main shaft, a fuel valve therefor, a pump supplying fuel to the valve, a control shaft having eccentrics mounted thereon, a pump actuating lever pivotally supported on one of the eccentrics, an eccentric mounted on the main shaft, a strap and rod for the eccentric, said rod and lever being pivotally united, a fuel valve actuating lever mounted on an eccentric on the control shaft, and a cam carried by said strap for actuating the valve lever.

5. In combination, an internal combustion engine and its main shaft, a fuel valve therefor, a pump supplying fuel to the valve, a pivotally supported pump actuating lever, an eccentric on the main shaft, a strap for the eccentric which is connected to and actuates said lever, a fuel valve lever, and a cam carried by the eccentric strap for moving the fuel valve lever at predetermined times.

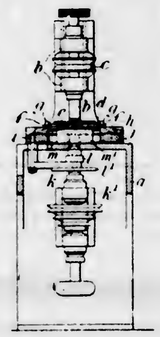
[Claims 6 to 23 not printed in the Gazette.]

1,158,001. AUTOMATIC VOLTAGE-REGULATOR. GEORGE SPENCER NEELEY, St. Louis, Mo., assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed July 1, 1912. Serial No. 707,021. (Cl. 171—229.)



In combination, a circuit to be regulated, a voltage regulator therefor comprising a resistance element in said circuit, means for varying the effect of said resistance, electromagnetic operating means for said resistance varying means, said electromagnetic means comprising opposing coils each responsive to the voltage of the circuit to be regulated and a short-circuited coil, and a relay controlling the energisation of one of said opposing coils, said relay being responsive to the voltage of the circuit to be regulated and the current flowing therein.

1,158,002. APPARATUS FOR MAKING BIFOCAL LENSES. HARRY NEWBOLD, St. Albans, England, assignor of one-half to Warner Reed Williams, London, England. Filed Feb. 26, 1913. Serial No. 750,841. (Cl. 51—3.)



1. A machine for grinding bi-focal lenses comprising means for holding the lens, a rotatable grinding tool for grinding the same, and means for imparting to one of said parts rocking and elliptical movement, whereby an elliptical concavity is formed in the lens.

2. A machine for grinding bi-focal lenses comprising a lens holder, a rotatable grinding tool, and means for imparting to said grinding tool, rocking and elliptical movement, whereby an elliptical concavity is formed in the lens.

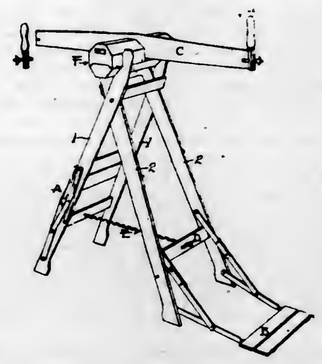
3. A machine for grinding bi-focal lenses comprising a stationary lens holder, a rotatable grinding tool suspended by a universal joint so that it can oscillate around the same, and means for imparting substantially elliptical motion to said tool.

4. A machine for grinding bi-focal lenses comprising a lens holder, a rotatable grinding tool, a universal joint in which the upper end of the grinding tool is rotatably mounted, and means provided near the lower end of said grinding tool for moving the lower end of said tool substantially elliptically.

5. A machine for grinding lenses comprising a frame, a universal joint adjustable vertically on said frame, a grinding tool rotatably mounted in said universal joint, a lens holder, and means for moving said grinding tool substantially elliptically upon said lens holder.

[Claims 6 to 8 not printed in the Gazette.]

1,158,003. EXERCISING-MACHINE. MARIE DE PALKOWSKA and ALFRED BULLARD, New York, N. Y. Filed July 2, 1915. Serial No. 37,740. (Cl. 46—69.)



1. In an exercising machine, a knock-down dummy sawhorse whose crossed arms are pivoted one to another, a dummy saw log pivoted with a transverse saw-receiving slot clamped between the upper ends of the arms of said horse, a dummy saw introduced in and capable of being drawn to and fro in said slot, and means for securing said arms when the said saw log is clamped between them.

2. In an exercising machine, a knock-down dummy sawhorse whose crossed arms are pivoted one to another, seats for a dummy saw log formed in the upper ends of the arms of said horse, and collapsible foot-rests secured to the lower ends of the arms of said horse, a dummy saw log provided with a saw-receiving slot capable of being seated between the arms of said sawhorse, and a dummy saw capable of being drawn to and fro in said slot.

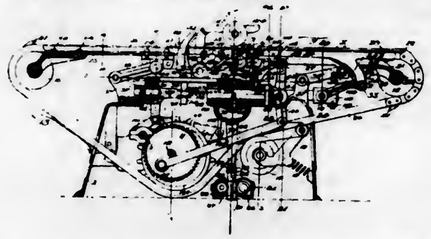
3. In an exercising machine the combination of a pair of friction plates, a blade introduced between said plates and capable of being drawn to and fro while engaged by said plates, and means for adjusting the said plates in the closeness of their engagement with said blade.

4. In an exercising machine the combination of an elongate body, a transverse slot in said body, a block movable within said body to and fro in the direction of the length of said slot, said block being provided with a slot which registers with the slot in the containing body and forms part thereof, a blade movable to and fro in the said slot formed in part in said enlongate body and in part in said block as aforesaid, a tally device, and means for operating said tally device in coördination with the to and fro movement of said block.

5. In an exercising machine, the combination of a dummy saw log provided with a transverse slot, a dummy saw movable to and fro in said slot, a space within said dummy log provided with an orifice, a feed device controlling the escape through said orifice of a quantity of dummy miniature log sections contained in the space within the said dummy log, and means for operating said feed device in coördination with the to and fro movement of said dummy saw in its slot.

[Claim 6 not printed in the Gazette.]

1,158,004. STAVE-JOINTING MACHINE. PHILIP S. REYMAN, Mount Carmel, Ill. Filed Jan. 12, 1912. Serial No. 670,800. (Cl. 147—28.)



1. A machine for jointing a stave which comprises a pair of rotating saws whose planes of rotation are inclined in opposite directions, means for passing the stave blank horizontally between said saws, means for lifting and lowering said stave during such passage, and means for maintaining said saws with their planes of revolution tangent to the longitudinal curvature of the edges of said stave and their cutting edges at a fixed distance apart at the points where the cutting is being effected.

2. A machine for jointing a stave which comprises a pair of rotating saws whose planes of rotation are inclined in opposite directions, means for passing the stave blank horizontally between said saws, means for lifting and lowering said stave during such passage, and means for swiveling said saws on vertical axes passing substantially through the points of cutting to keep their planes of revolution tangent to the longitudinal curvature of the edges of said stave at the points where the cutting is being effected.

3. A machine for jointing staves, comprising a pair of saws, means for swiveling them on axes passing through their cutting points, shoes adjacent to the cutting edges of said saws for supporting a stave blank close thereto, means for raising and lowering the stave blank as it passes between said saws, and means for raising and lowering said shoes on diverging lines to support the stave blank at its edges as it rises and falls.

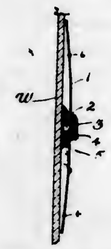
4. A machine for jointing staves, comprising a pair of saws, supports therefor mounted to swivel on vertical axes passing through the cutting points of said saws, shoes adjacent to the edges of said saws and supporting the edges of a stave blank close thereto and between said saws, means for raising and lowering the stave blank as it passes between said saws, means for raising and lowering said shoes on diverging lines supporting the stave blank at its edges as it rises and falls, levers pivoted on the swiveled saw supports, spring-actuated presser rolls on said levers making contact with the upper side of said stave blank over said shoes, and following the angular and swiveling movements of the saws.

5. A machine for jointing staves comprising an endless carrier for the stave blanks, a rigid support for said carrier, means for raising and lowering said support and carrier while the latter is in motion, rotating saws located on each side of said carrier, means for tilting said saws toward and away from said carrier, measured in a plane transverse to the travel of the carrier, and means for swiveling said saws on vertical axes coinciding substantially with the points of cutting.

[Claims 6 to 32 not printed in the Gazette.]

1,158,005. GLARE-SCREEN. JOHN J. RICHARDS, Jr., Brookline, Mass. Filed Oct. 12, 1914. Serial No. 866,220. (Cl. 21—148.)

1. A screen for automobile windshields comprising a light absorption member designed to occupy a position substantially parallel with and in close juxtaposition to one face of the windshield, and a device for engaging the windshield and having a connection to said member for supporting it in such position, said member having a flexible portion yielding away from the windshield to permit the insertion of the fingers between said member and the windshield for removing said member from the windshield without disturbing the connection between said device and member.



2. A screen for automobile windshields, comprising a light absorption member designed to occupy a position substantially parallel with and in close juxtaposition to one face of the windshield, said member having an opening therethrough, and a mount for said member having a compressible portion disposed through said opening, said member having a flexible margin yielding away from the windshield to permit the insertion of the fingers between the light absorption member and the windshield for removing said member without dislodging said mount from said opening.

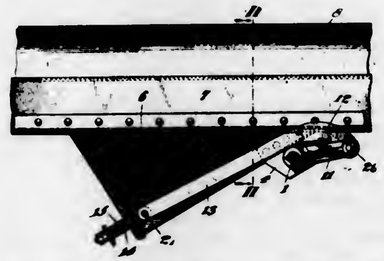
3. A screen for use with a transparent plate, comprising a substantially flat, flexible light absorption member, and a suction device secured to said member and designed to be attached to said plate for supporting said member in substantial parallelism therewith and in juxtaposition to one face thereof.

4. A fastening device for use with a member having an opening therethrough, consisting of a suction cup member having a relatively short neck thereon terminating in an integral head of greater diameter than the opening through said member to be supported, a relatively narrow channel being provided about said neck in which the wall of the opening in said member to be supported is located when said head is projected through said opening, opposite walls of the channel embracing the member.

5. A device of the class described comprising a laminated screen consisting of a plurality of light absorbing members and a vacuum member centrally of said screen and adapted to be set upon an automobile wind shield.

[Claim 6 not printed in the Gazette.]

1,158,006. DUMP-CAR CONSTRUCTION. RALPH V. SAGE, Westmont borough, Pa. Filed Dec. 31, 1912. Serial No. 739,445. (Cl. 105—185.)



1. In a hopper car, a pair of flat rolled metal plates disposed one on each side of the center sills with their upper edges attached to the inside hopper sheets and extending downwardly therefrom, an operating shaft having its bearings in the pair of flat rolled plates, a crank arm mounted upon the operating shaft spaced centrally thereon by means of loose sleeves between the pair of flat rolled metal plates and a connecting link having an enlarged upper end pivoted thereto, the other end of said link being pivoted to the car doors.

2. In a hopper car, a pair of flat rolled metal plates disposed one on each side of the center sills with their upper endges attached to the inside hopper sheets and extending downwardly therefrom longitudinally of the car, an operating shaft having its inner bearings in the pair of flat rolled metal plates, a crank arm mounted upon the operating shaft and spaced thereon by means of loose sleeves between the pair of flat plates, a connecting link having one end pivoted to the crank arm and its opposite end to the car doors, said connecting link having its upper end curved and enlarged, whereby the accidental opening of the doors is prevented.

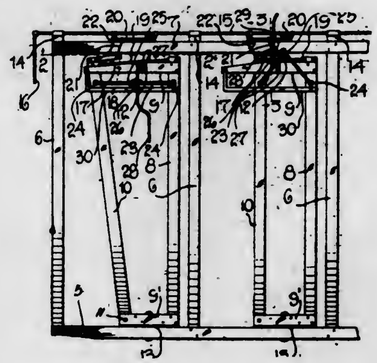
1,158,007. PUMP AND PRESSURE-RESERVOIR FOR BRAKES OR THE LIKE. CHRISTOPHER JOHN SPENCER and JOHN WILLIAM DAWSON, Bradford, England. Filed June 16, 1915. Serial No. 34,446. (Cl. 103—75.)



1. A device of the class described including a pump provided with a casing having a clearance space provided with an inlet and an outlet and having a lateral port, a plunger operating in the casing and having a passage affording communication between the port and space when in innermost position, the clearance space of the pump coupled with the space under the outlet being so proportioned that the pressure exerted by the plunger will not exceed the lowest working pressure in the reservoir to which the pump is connected and a reservoir connected with the outlet as and for the purposes described.

2. In combination with a pressure reservoir from and to which fluid is alternately withdrawn and returned, a pump adapted in returning the fluid to pass therewith an amount of air requisite to maintain the desired pressure in the reservoir, said pump having a valved inlet and a valved outlet, said inlet having connection with a suitable liquid chamber such as a sump, the space not occupied by the plunger of the pump when at the innermost end of its stroke being such that the pressure exerted by the plunger will not exceed the lowest working pressure of the reservoir whereby when there is no liquid in said sump, said outlet valve will be prevented from opening but whereby when liquid is available for supply through the inlet on the suction stroke of the pump, the same will be drawn into said space and forced through said valved outlet for supplying the same with the air compressed and absorbed thereby to the reservoir for use as desired, said plunger having a longitudinal passage therethrough leading from its head end an extending laterally intermediately of its end and the casing of the pump having a passage opening to the atmosphere and to aline with the lateral portion of said passage in the plunger whereby to place said space in communication with the atmosphere to permit the escape of air therethrough when air only is available, but to permit a portion of said liquid to escape therethrough for lubricating purposes when liquid is available and is forced into the reservoir as above specified.

1,158,008. CATTLE-STANCHION. EDDIE F. STANFIELD, Hoquiam, Wash. Filed Jan. 19, 1915. Serial No. 3,087. (Cl. 119—150.)



1. A cattle stanchion including stationary and movable stanchion bars, a spring connected to the movable bar and normally acting to move the same to its closed position, a jointed connection between the stationary and movable stanchion bars adapted to constitute a brace between the same and maintain the movable stanchion bar in its open position against the action of said spring, and animal actuated means for breaking the joint in said connection to permit of the movement of the movable stanchion bar to its closed position.

2. A cattle stanchion including stationary and movable bars, a spring normally acting to move the movable stanchion bar to its closed position, a jointed connection between said bars adapted in one position to hold the movable bar in its open position against the action of said spring, a movable trigger member adapted to be actuated by the head of the animal when inserted between the stanchion bars, and a connection between said member and the jointed connection between the stanchion bars whereby the joint thereof is broken and the movable bar released to permit the same to move to its closed position under the action of said spring.

3. A cattle stanchion including stationary and movable stanchion bars, a spring normally acting to move the movable bar to its closed position, rods pivotally mounted upon the respective stanchion bars for vertical swinging movement, a pivot joint connecting said rods to each other, means for limiting the relative movement of said rods in one direction whereby the same constitute a brace between the stanchion bars to hold the movable bar in its open position against the action of said spring, a pivotally mounted trigger member adapted to be engaged and actuated by the head of an animal when inserted between the stanchion bars, and a connection between said trigger member and one of said rods to break the joint between the rods and permit the movable stanchion bar to move to its closed position under the action of said spring.

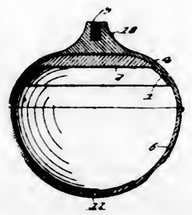
4. The sombination with a stanchion including a stanchion proper having a movable animal holding bar, a pivot bolt upon which said stanchion is mounted, a spring normally acting to move said movable bar to its closed position, a rotatable and longitudinally movable rod, a latch member carried by the movable stanchion bar to engage said pivot bolt and hold the bar in closed position, a flexible connection between the free end of said latch member and said rod whereby, upon a turning movement of the rod, the latch member is disengaged from the pivot member, and a second flexible connection between the movable stanchion bar and said rod whereby said bar is moved to its open position upon a longitudinal sliding movement of the rod in one direction.

5. A cattle stanchion including stationary and movable stanchion bars, means urging the movable bar to closed

position, means for holding the movable bar in open position and spaced from the stationary bar, and an animal actuated trigger member connected to the holding means to release the movable bar for movement to its closed position, said trigger member being elevated in such movement of the stanchion bar to a non-interfering position.

[Claims 6 and 7 not printed in the Gazette.]

1,158,009. METHOD OF MAKING RUBBER FLOAT-BALL VALVES. DAVID STEPHEN, Stratford, Conn., assignor to The H. O. Canfield Co., Bridgeport, Conn., a Corporation of Connecticut. Filed Oct. 24, 1913. Serial No. 797,095. (Cl. 18—55.)



1. A method of making rubber float ball valves, which consists in cementing to the outer face of a vulcanized back piece of rubber an unvulcanized rubber block, then in cementing an unvulcanized rubber disk which is to form the upper half of the ball over and upon said back piece and block and in kneading said disk about the block so as to provide a protuberance on said disk, then in cementing an unvulcanized rubber nub containing a metal thimble to the outer face of said protuberance, then kneading the periphery of said disk to the periphery of a second unvulcanized rubber disk which is to form the lower half of the ball, then inflating the structure thus formed, sealing same, and placing it in a heated mold for vulcanization, withdrawing the mold from the heat after vulcanization and cooling said mold, and releasing the gases formed by the heating in the mold.

2. The method of making float ball valves, which consists in cementing an unvulcanized rubber block to the outer face of a vulcanized back piece of rubber, cementing a disk of unvulcanized rubber to said vulcanized back piece and unvulcanized block so that the latter will form a protuberance in said disk, uniting the edge of said disk to the edge of a second disk of unvulcanized rubber, partially inflating the structure thus formed and vulcanizing the same.

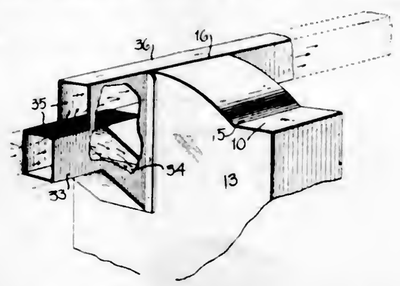
3. The method of making float ball valves, which consists in cementing an unvulcanized disk of rubber which is to form the upper half of the ball to a vulcanized reinforcing piece of rubber which is to stiffen the ball, forming a protuberance which extends outwardly from the central portion of said disk, then in joining the edge of an unvulcanized disk of rubber which is to form the lower half of the ball to the edge of the disk which is to form said upper half of the ball, and then in vulcanizing the unvulcanized pieces.

4. The method of making float ball valves, which consists in cementing the inner face of an unvulcanized disk of rubber which is to form the upper half of the ball to a vulcanized reinforcing piece of rubber, cementing an unvulcanized rubber nub containing a thimble to the central outer face of said unvulcanized disk of rubber, kneading the edge of said disk to the edge of a second unvulcanized rubber disk which latter is to form the lower half of the ball, and finally vulcanizing the structure thus formed.

5. The process of making bulbs for tank valves, comprising first forming a supporting or stiffening element for the upper portion of the bulb; applying to the part so formed the outer upper portion of the bulb, said upper portion being formed from vulcanizable rubber stock; attaching to said upper portion a lower valve-seating portion of rubber stock likewise susceptible of vulcanization; and then vulcanizing the whole.

[Claims 6 to 9 not printed in the Gazette.]

1,158,010. BOLL BREAKING OR CRUSHING MACHINE. JOHN T. SOUTH, Rice, Tex. Filed Mar. 13, 1915. Serial No. 14,202. (Cl. 13—19.)



1. In a cotton boll treating mechanism, a cotton feeding air trunk, a delivery air trunk, boll crushing mechanism, a housing entirely inclosing the boll crushing mechanism and separating the boll crushing mechanism from the delivery air trunk, said housing at its end having an opening discharging into the delivery air trunk, the feeding air trunk opening into the delivery air trunk and having a branch discharging into said housing.

2. In a ball crushing and cotton treating mechanism of the character described, a housing, boll crushing mechanism mounted therein, an air trunk having a downwardly extending branch entering said housing, means for deflecting cotton downward through said branch but permitting the air to pass along said trunk beyond the branch, one end of the housing having an opening into the air trunk beyond said deflecting means, said opening being located beyond the crushing mechanism.

3. In a boll crushing mechanism of the character described, a housing having an inlet opening on one side, a fixed crushing element and a rotatable crushing element mounted within said housing, a cotton feeding air inlet trunk having its terminal end extended downward and discharging into the opening in said housing, a discharge trunk extending parallel to the first-named trunk and transversely across the housing and into which the housing opens at one point, means operating in conjunction with the rotatable crushing element for discharging bolls from said housing into said second-named trunk, and means for directing the air from the first-named trunk into the second-named trunk to cause the discharge of cotton and crushed bolls through the second-named trunk.

4. In a boll crushing mechanism of the character described, a housing having side walls, one of said walls having an opening, a plurality of ribs formed upon said side wall, a bearing mounted upon said side wall, a rotatable crushing element mounted within the housing and comprising a disk having radiating ribs, a shaft upon which said disk is mounted having a bearing, one end of the shaft being supported in said bearing, a casing wall extending for a portion of its length approximately concentric to said shaft and spaced from the periphery of the disk, the outer portion of said casing wall extending eccentrically to the shaft and tangentially out through said housing to form a discharge passage, ejecting blades mounted upon said shaft and having a length equal to the radius of the concentric portion of said wall, an air and cotton inlet trunk discharging into said opening in the side wall of the housing, a discharge trunk having one end superposed upon the first-named trunk and extending across the discharge opening of the housing, there being an opening leading from the terminal end of the first-named trunk to the adjacent end of the second-named trunk, and a screen extending across said opening.

5. In a cotton treating machine, a housing, cotton boll crushing mechanism disposed within the housing, an air line, a branch extending from the air line into one end of the housing, means disposed adjacent said branch for deflecting cotton into the branch but permitting the air to pass continuously along the air line, the opposite end of the housing having an opening discharging into the air line beyond the said branch, and means disposed within the housing for ejecting cotton through said opening.

[Claims 6 to 8 not printed in the Gazette.]

1,158,011. PHOTOGRAPHIC DEVELOPER. CHARLES J. THATCHER, New York, N. Y. Filed Mar. 22, 1915. Serial No. 16,286. (Cl. 96—88.)

1. The process of rapidly developing the latent image of an exposed, sensitized photographic surface which consists in subjecting the exposed sensitized surface to the action of a solution containing hydroquinone and a relatively smaller proportion of paramidophenol sulfate; an alkali sulfite; an alkali carbonate, and a relatively small proportion of sodium hydrate.

2. The process of rapidly developing the latent image of an exposed sensitized photographic surface, which consists in subjecting the exposed sensitized surface to the action of a solution containing paramidophenol sulfate, an alkali sulfite, alkali carbonate, and an alkali hydrate in the proportion of 1/10 to 1/30 of the alkali carbonate.

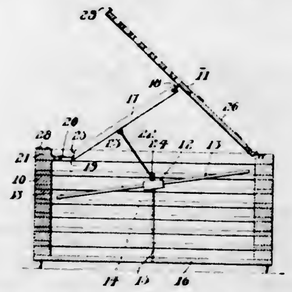
3. A rapid, substantially stable photographic developing solution, consisting of a solution in water of hydroquinone, paramidophenol sulfate, alkali sulfite, an alkali carbonate, and sodium hydrate in relatively small proportion to the alkali carbonate.

4. A rapid developing agent for sensitized photographic surfaces, containing paramidophenol sulfate, a preservative, an alkali carbonate, and sodium hydrate in relatively small proportion to the alkali carbonate.

5. A rapid developing agent for sensitized photographic surfaces, containing paramidophenol sulfate, an alkali carbonate, and an alkali hydrate in the proportion of 1/10 to 1/30 of the alkali carbonate.

[Claims 6 to 11 not printed in the Gazette.]

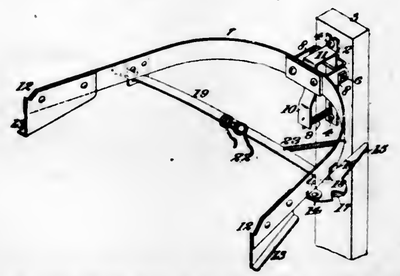
1,158,012. BIRD-TRAP. JOHAN TORONY, Borderland, W. Va. Filed Apr. 21, 1915. Serial No. 22,870. (Cl. 43—19.)



1. A cage comprising a crate member, a hinged closure lid at the top of said crate, a floating platform within said crate, guides for the platform, a trip rod hinged at one of the ends to the lower side of the said lid and engaging the crate member at the other end, and a connecting cord between the said rod and platform.

2. A bird trap comprising a crate, a hinged closure lid for the said crate, vertically arranged rods within said crate adjacent the opposite ends thereof, a floating platform provided with perforations at its opposite ends and threaded upon the said rods, a trip plate at the forward side of the crate, a trip rod hinged to the said lid and adapted for engagement with the said plate, and a supporting cord connecting between the said platform and trip rod, the said platform being in its elevated position, when the lid is in its open set position.

1,158,013. BAG-HOLDER. FREDERICK C. VONDERAHE, Portland, Oreg. Filed June 3, 1914. Serial No. 842,635. (Cl. 83—26.)



1. In combination with a pivoted bag holding means and a support therefor, a vertical member secured to said means and having its top end extending above the pivot and provided with a stop to engage the support and having its other end extending on the opposite side of the pivot, and a spring interposed between the last named end of the member and the front face of the support to normally hold the stop against the support, but to allow the holding means to move downwardly against the tension of the spring.

2. In combination with a support, and a bag holding means pivoted thereto, a vertical member rigidly connected to said means and having its upper end bent at right angles to form a stop which engages the support to limit upward pivotal movement of the means and having its opposite end extending below the pivot and spaced from the support, and a spring interposed between the last named end of the member and the support.

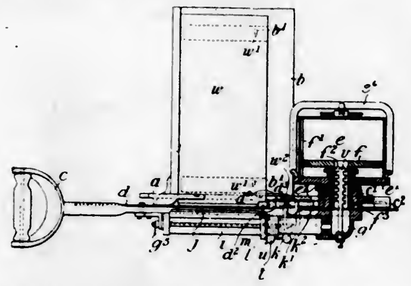
3. In combination with a U-shaped bag holder, a link extending across the arms of the holder and movably connected at one end to one of said arms, and a device pivoted to the other arm and to the other end of the link, and movable to a position to cause its pivotal connection with the link to be disposed on opposite sides of the pivotal connection of the device with said other arm and a spring connected to the link, whereby when the arms are locked together by said device and the arms are pressed by hand toward each other, the device will be first partially moved and then automatically moved to release the arms.

4. In combination with a bag holder having resilient arms, manually operable means to lock said arms in contracted position while a bag is being positioned thereon, and means whereby upon further compression of the arms by the hands of the operator moving the arms toward each other, said locking means will be first partially moved and then automatically released.

1,158,014. MACHINE FOR CUTTING OR SLICING BREAD AND SPREADING BUTTER OR THE LIKE THEREON. FERDINAND VON EULENFELD, Finsbury, London, England. Filed Apr. 14, 1914. Serial No. 831,871. (Cl. 91—18.)

1. In a machine for cutting or slicing bread and spreading butter or the like thereon of the kind hereinbefore referred to, the combination with a reciprocating handle and a butter container of a knife carried by said handle, a spreading device also carried by the handle and comprising an inner hollow member in connection with the discharge passage of the butter container and having a longitudinal orifice, an outer member of larger diameter

and inclosing the said inner member with an annular space between them and also having a longitudinal orifice displaced relatively to the orifice in the inner member, and a sleeve rotatably mounted upon the outer member and having a longitudinal orifice designed to be brought into register with the orifice in the outer member, substantially as hereinbefore described.



2. In a machine for cutting or slicing bread and spreading butter or the like thereon, the combination with a reciprocating handle and a butter container of a knife carried by said handle, a spreading device also carried by the handle and comprising an inner hollow member in connection with the discharge passage of the butter container and having a longitudinal orifice, an outer member of larger diameter and inclosing the said inner member with an annular space between them and also having a longitudinal orifice displaced relatively to the orifice in the inner member, and a sleeve rotatably mounted upon the outer member and having a longitudinal orifice designed to be brought into register with the orifice in the outer member, and of a pair of spreading lips carried by the outer movable sleeve, substantially as hereinbefore described.

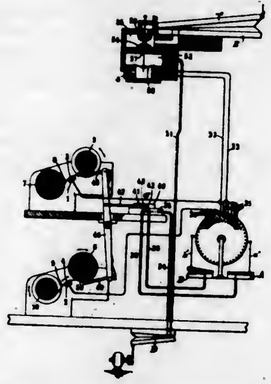
3. In a machine for cutting or slicing bread and spreading butter or the like thereon, the combination with a reciprocating handle and a butter container of a knife carried by said handle, a spreading device also carried by the handle and comprising an inner hollow member in connection with the discharge passage of the butter container and having a longitudinal orifice, an outer member of larger diameter and inclosing the said inner member with an annular space between them and also having a longitudinal orifice displaced relatively to the orifice in the inner member, and a sleeve rotatably mounted upon the outer member and having a longitudinal orifice designed to be brought into register with the orifice in the outer member, and of means for bringing the sleeve into the operative and inoperative positions at the beginning and end of the spreading stroke, substantially as hereinbefore described.

4. In a machine for cutting or slicing bread and spreading butter or the like thereon, the combination with a reciprocating handle and a butter container of a knife carried by said handle, a spreading device also carried by the handle and comprising an inner hollow member in connection with the discharge passage of the butter container and having a longitudinal orifice, an outer member of larged diameter and inclosing the said member with an annular space between them and also having a longitudinal orifice displaced relatively to the orifice in the inner member, and a sleeve rotatably mounted upon the outer member and having a longitudinal orifice designed to be brought into register with the orifice in the outer member, a pair of arms in connection with the sleeve; a rotary cam and clutch device adapted to be operated by the reciprocation of the handle, one of said arms being engaged by said cam and clutch device to bring the spreader into operative position, and a fixed stop which is adapted to be engaged by the other of said arms to effect the return movement of the spreading device.

5. In a machine for cutting or slicing bread and spreading butter or the like thereon the combination with a reciprocating handle and a butter container of a knife carried by said handle, a spreading device also carried by the handle and comprising an inner hollow member in connection with the discharge passage of the butter container and having a longitudinal orifice, an outer member of larger diameter and inclosing the said member with an annular space between them and also having a longitudinal orifice displaced relatively to the orifice in the inner member, and a sleeve rotatably mounted upon the outer member and having a longitudinal orifice designed to be brought into register with the orifice in the outer member, and of a pair of arms in connection with the sleeve; a rotary cam and clutch device adapted to be operated by the reciprocation of the handle, one of said arms being adapted to be acted upon by said cam and clutch device to bring the spreader into operative position, and a fixed stop which is arranged to be engaged by the other of said arms to effect the return movement of the spreading device, said cam and clutch device comprising a disk designed to be turned with the pinion which reciprocates the knife, the said disk having a peripheral tooth or projection, a ring arranged with one face in contact with the disk and having a notch and an adjacent tooth or projection which is normally held against the disk tooth, one of the aforesaid arms upon the sleeve being designed to bear against the back of the disk and to enter the notch and bear against the tooth thereof on the downward stroke of the handle, so as to hold the ring stationary until it is released by the contact of the other arm against the fixed stop, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,158,015. CONTROLLER DEVICE FOR TRACKER-BOARDS. CARL M. WELTE, New York, N. Y., assignor to M. Welte & Sons, Inc., New York, N. Y., a Corporation of New York. Filed Dec. 9, 1913. Serial No. 805,546. (Cl. 84—161.)



1. A controlling device for pneumatic tracker-boards comprising two relatively movable disk-like members each provided with concentric rows of perforations and pneumating connections, a portion of the perforations of one disk registering with those of the coöperating disk when the parts are in one operative position.

2. A controlling device for pneumatic tracker-boards comprising two relatively movable disk-like members each provided with perforations and pneumatic connections, the perforations of one disk being arranged to be brought into and out of registering position with the perforations of the coöperating disk at the disks are oscillated relatively to each other.

3. A controlling device for tracker-boards comprising two relatively movable disk-like members, one of said members having a series of concentrically arranged perforations arranged in radial lines about a common center, the other of said disks having a series or concentrically arranged perforations the alternate rows of which are arranged in radial lines about a common center.

4. A controller device for tracker-boards comprising a pair of disks, one of said disks being stationary and provided with concentric series of perforations arranged upon radial lines, the other of said disks having an oscillatory movement and being provided with concentric series of perforations, the alternate series being arranged upon radial lines and means for oscillating said disk.

5. In combination with a double set of tracker-board perforations and perforated music sheets, a stationary disk having a series of perforations connected with each set of ducts of the respective tracker-board perforations, a coöperating disk having perforations connected with the ducts of the player pneumatics and means for relatively oscillating said disks to bring the series of perforations corresponding to one tracker-board into and out of registering position with the series of perforations of the coöperating disk.

[Claims 6 to 12 not printed in the Gazette.]

1,158,016. DIE-STOCK. FREDERICK W. WHELPLEY, Greenfield, Mass. Filed June 26, 1915. Serial No. 36,459. (Cl. 10—122.)



1. In a die stock, a frame, a radially movable die carried thereby, a rotatable cam ring carried by the frame and coöperable with said die for moving the same and having a radially projecting arm, a lever of U-shaped cross cross section having one end pivoted to said arm, and a link pivoted at one end to the frame and having its other end pivoted within said lever between the ends thereof, said lever being adapted to rest against and cover said link when the link and lever are straightened out.

2. In a die stock, a frame, a radially movable die carried thereby, a rotatable cam ring carried by the frame and coöperable with said die for moving the same, said ring having an outstanding arm, a lever pivoted to said arm, screws pivoted to the lever and frame, and a turn buckle threaded upon said screws.

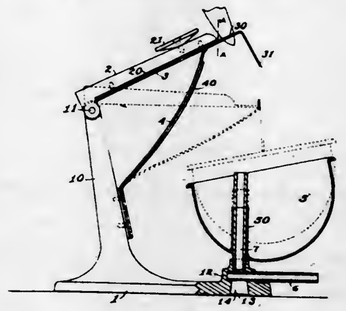
3. In a die stock, a frame, a radially movable die carried thereby, a rotatable cam ring carried by the frame and coöperable with the die for moving the same, the said ring having an outstanding arm, a lever of U-shaped cross section and having one end pivoted to said arm, a screw pivoted within the lever between the ends thereof, a second screw pivoted to the frame, and a turn buckle threadedly engaging said screws.

4. In a die stock, a frame, a radially movable die carried thereby, a rotatable cam ring carried thereby and cooperable with said die for moving the same, said ring being adapted to release said die when the ring is moved to a predetermined position, the ring having an outstanding arm, a lever, a removable pin pivoting the lever and said arm together, a link connecting the lever and frame, and a spring carried by the lever and normally holding the said pin in position and adapted to be moved for releasing said pin.

5. In a die stock, an annulus having an inturned flange at one edge, an annular member fitting within the annulus and having a plurality of radial channels extending to that side remote from said flange, an apertured disk between said member and flange, dies slidable in said channels and having notches, a ring secured to the annulus and holding the dies in said channels, the annulus having openings registering with said channels, said member having an annular channel in its opposite side, a cam ring rotatable in said annular channel and having spiral cam ribs projecting from one side and working in the notches of the dies, said member and annulus having registering slots and the cam ring having an arm projecting through said slots.

[Claim 6 not printed in the Gazette.]

1,158,017. COMBINED CIGAR CLIPPER AND LIGHTER. ROBERT E. ZELLERS, Tenino, Wash. Filed June 18, 1914. Serial No. 845,952. (Cl. 131—38.)



1. The combination with a cigar cutter, of means for continuously maintaining a sterilizing temperature upon the cutting elements.

2. The combination, in a cigar cutter, of movable cutting elements, means for maintaining a sterilizing temperature upon the cutting elements, and an actuating member having a heat-insulated connection with the cutting elements.

3. The combination, in a cigar cutter, of movable cutting elements, a burner positioned to normally maintain a sterilizing temperature upon the cutting elements, an actuating member having a heat-insulated connection with the cutting elements, and a tip-receiving cup surrounding the burner.

4. The combination, in a cigar cutter, of movable cutting elements, means for maintaining a sterilizing temperature upon the cutting elements, an actuating member having a heat-insulated connection with the cutting elements, and a tip-receiving cup surrounding the burner, and adjustable vertically with reference to the burner.

5. A combined cigar clipper and lighter comprising a clipping mechanism, a lighting burner beneath the clipping elements of the clipper and maintaining a sterilizing temperature upon said clipping elements when the parts are in normal position, and a bowl surrounding said burner and serving both as receptacle for the clippings and as a protective screen for the burner.

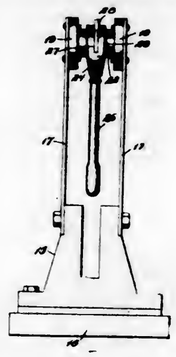
[Claims 6 to 12 not printed in the Gazette.]

1,158,018. WIRE-SPLICER. EDWIN SPEAR ACHESON, St. Louis, Mo. Filed Sept. 22, 1914. Serial No. 862,997. (Cl. 140—119.)

1. In a wire splicing device, a frame including side members having slots at their upper ends, bearing members secured on said side members, each bearing member comprising two halves combining to form a ring having an inlet slot, a head supported for rotation in the bearing members and having an enlarged portion provided with a transverse slot and with a threaded socket, a slotted twisting blade mounted in the transverse recess of the head, and a handle having threaded engagement with the socket.

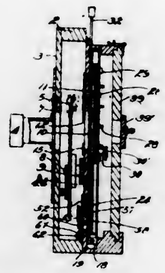
2. In a wire splicing machine, a frame having side members provided with slots at their upper ends, a head supported for rotation between the side members and having an enlarged portion provided with a transverse recess,

a twisting blade fitted in said recess, dowel pins extending through the blade and through the enlarged portion to



assemble the blade with the head, and means for rotating the head.

1,158,019. MULTIPLYING-CAMERA. JAMES W. ANDERSON, San Francisco, Cal. Filed Feb. 25, 1914. Serial No. 821,084. (Cl. 88—16.)



1. The combination in a photographic apparatus, of a case having a transverse wall with an aperture, horizontally adjustable light stops movable over the aperture, a vertically movable light stop to fix the height of the aperture, and means for reciprocating a sensitized medium in the rear of the aperture to form a series of vertically superposed rows of consecutive exposures, said means comprising a carriage, driving mechanism therefor, and a variable stroke feed device for actuating said mechanism.

2. A photographic device provided with a case into which actinic light rays may enter, a transverse wall in the case having an aperture, horizontally adjustable stops for varying the area of the aperture, a rotary shutter movable over the aperture to cut off the light intermittently, a transversely movable carrier, a plate-holder adjustable and vertically movable in the carrier, a device for lifting the plate-holder to initial position and then lowering its slide, a detachable rest on the carriage, means on the plate-holder coöperating with said rest to lower the plate-holder in successive steps vertically, and means for laterally reciprocating the carrier with intermittent steps.

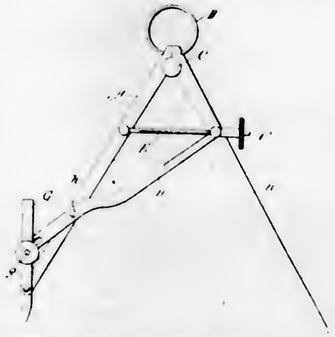
3. A photographic device provided with a case into which actinic light rays may enter, a transverse wall in the case having an aperture, horizontally adjustable stops for varying the area of the aperture, a rotary shutter movable over the aperture to cut off the light intermittently, a transversely movable carrier, a plate-holder adjustably and vertically movable in the carrier, a device for lifting the plate-holder to initial position and then lowering its slide, a reciprocating slide on the back of the carrier, an escapement member on the plate-holder engageable with the slide, and means for laterally reciprocating the carrier with intermittent steps and rotating the shutter.

4. The combination in a camera, of a carrier adapted to be shifted laterally, a vertically movable plate-holder therein, an escapement gate having a series of spaced projections on one face, means to removably secure said gate to the plate-holder, and a slide on the carrier for supporting the plate-holder while moving transversely with the carrier.

5. The combination in a camera having a transverse partition with a light aperture, of a carrier movably mounted behind said partition, a shutter for controlling the passage of light through the aperture, a plate-holder slidably mounted in the carrier, light stopping diaphragms adjustable over the aperture for varying the size thereof, and means for reciprocating the carrier in intermittent steps of a length substantially equal to the predetermined width of the light aperture, said means including an adjustable crank device for transmitting and translating the continuous movement into a reciprocating movement.

[Claims 6 to 18 not printed in the Gazette.]

1,158,020. DIVIDERS AND CENTER-PUNCH. CHARLES ANTROBUS, U. S. Navy. Filed June 12, 1915. Serial No. 33,754. (Cl. 33—151.)



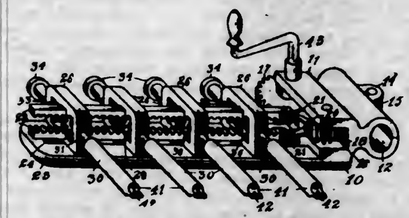
1. A combined divider and center punch comprising two pivotally connected legs, a spring tending to separate the legs, adjustable means controlling the separation of the legs under the action of the spring, a center punch pivotally mounted on one of the legs, and a lever fulcrumed on the same leg as the punch and having a pin and slot connection with the other leg, whereby the punch engaging lever will be rocked as the distance between the legs is varied substantially as and for the purpose described.

2. A combined tool comprising two pivotally connected legs, a center punch pivotally supported on one leg, a lever fulcrumed on the same leg as the punch and adapted to adjust the latter about its pivot as the lever is rocked, and means on the other leg for rocking the lever as the distance between the legs is varied, substantially as and for the purpose described.

3. A combined divider and center punch comprising two pivotally connected legs, a spring tending to separate the legs, a screw and nut adjustment controlling the separation of the legs under the action of the spring, a center punch pivotally mounted on one of the legs, and means controlled by said screw and nut for adjusting the punch about its pivot as the distance between the legs is varied, for the purpose described.

1,158,021. VALVE-GRINDER. ASA ASHWORTH, Salamanca, N. Y. Filed May 27, 1915. Serial No. 30,730. (Cl. 51—4.)

1. A valve grinder comprising a frame, brackets on said frame having openings in line with one another therein, a spindle rotatively mounted in each of said brackets, elements movably contacting one each side of said spindle in said brackets, and means for the alternate movement of said elements to continuously rotatively reciprocate said spindles.



2. A valve grinder comprising a frame, brackets adjustably attached to said frame having openings in line with one another therein, a spindle revolubly mounted in holes through each of said brackets, a pinion on each of said spindles within said opening in each of said brackets, toothed racks slidably supported in said openings in said bracket one each side of said pinions to mesh therewith, and means for the alternate movement of said racks to continuously rotatively reciprocate said spindles.

3. A valve grinder comprising a frame having a slot therein, brackets adjustably attached to said frame at spaced distances in said slot, said brackets having openings therein in line with one another, a spindle loosely mounted in each of said brackets to rotatively move the same, a pinion on each of said spindles within said opening in said bracket, toothed racks one each side of said pinion to loosely mesh therewith and slidably supported in the opposite walls of the openings in said brackets, pinions rotatively mounted on said frames, and cams one each side of one of said pinions to alternately reciprocally move said racks and rotatively reciprocate said spindles.

4. A valve grinder comprising a frame, brackets adjustably attached to said frame having openings therein, a spindle loosely and slidably mounted in holes through each of said brackets, a pinion on each of said spindles within said opening in said bracket, toothed racks slidably supported in said brackets on each side of said pinions to loosely mesh therewith, an adjusting nut threaded in the hole for said spindle in the upper side of said frame having a hole there-through to receive the upper end of said pinion, a coil tension spring between said adjusting nut and the top of said pinion on said spindle to thereby adjust the pressure of said spindle on the valve, said frame having said opening therein sufficiently large above said pinion to raise said pinion free of said racks for the sidewise adjustment of said bracket and spindle, and cams and gearing revolubly mounted in said frame to give an alternate continuous reciprocative motion to said racks and rotation to said spindles.

5. A valve grinder comprising a frame, spindles rotatively mounted on said frame, means to rotatively reciprocate said spindles, a flat bit end on each of said spindles to engage a groove in the valve top to rotate the same, a pin central of said bit end having a rounded point extending beyond said flat bit end to engage a similarly shaped opening central of said valve top in said groove, said flat bit end supported by said pin a spaced distance above the bottom of said crosswise groove in said valve top to permit the adaptive leaning of said spindles in any direction on said rounded point.

1,158,022. RAKE-CLEANER. WILLIAM H. BACKUS, Danielson, Conn. Filed Sept. 24, 1914. Serial No. 863,360. (Cl. 55—146.)

1. As an article of manufacture, a rake cleaner adapted to be attached to a rake and provided with means for changing its vertical distance from the back bar of the rake to accommodate teeth of different lengths, and means for adjusting it longitudinally to accommodate rakes of different lengths.

2. As an article of manufacture, a rake cleaner adapted to be attached to a rake and having means for guiding it up and down between two of the teeth of the rake, and provided with means for adjusting it longitudinally to accommodate rakes of different lengths.



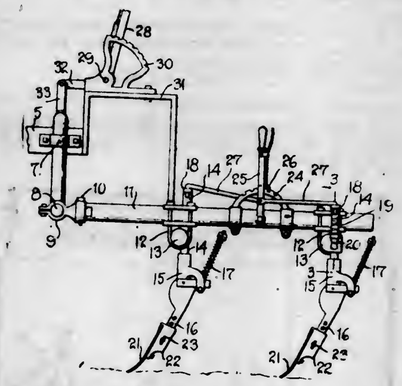
3. As an article of manufacture, a longitudinally adjustable rake cleaner freely movable along the teeth of a rake to which it is attached.

4. In a rake cleaner, the combination of two members having telescoping connections with each other to permit longitudinal adjustment, said members also having inwardly extending projections for engaging between two of the teeth of a rake to form vertical guides.

5. In a rake cleaner, the combination of two members having telescoping connections with each other to permit longitudinal adjustment, said members also having means for engaging between two of the teeth of a rake to form vertical guides, the ends of said members being bent upwardly to form loops for supporting the cleaner from the back bar of a rake.

[Claims 6 to 10 not printed in the Gazette.]

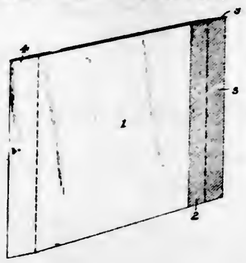
1,158,023. AGRICULTURAL MACHINE. FRANCIS MARION BEAVER, Cisco, Okla., assignor of one-half to William F. Bolin, Cisco, Okla. Filed Mar. 20, 1915. Serial No. 15,914. (Cl. 97—31.)



1. The combination with a supporting tongue, of an arched axle vertically adjustable upon said tongue, cultivator beams connected to the opposite ends of said axle, a forwardly projecting substantially U-shaped bar fixed to the end of the beam, obliquely disposed braces connected to one extremity of said bar and to the ends of the axle, and means mounted upon said bar for raising and lowering the axle.

2. The combination with a supporting tongue, of an arched axle vertically movable upon said tongue, cultivator beams connected to the ends of said axle, a forwardly projecting inverted U-shaped bar fixed to the end of the tongue at one of its ends, the other end of said bar having cylindrical extensions formed thereon, sleeves loosely engaged upon the ends of the arched axle, sleeve loosely engaged upon the cylindrical extensions of said bar, obliquely disposed brace bars pivotally connected to the corresponding sleeves on the bar and axle, and means mounted upon the intermediate portion of the inverted U-shaped bar and connected to the medial portion of said axle to raise or lower the axle.

1,158,024. PAPER TUBE AND METHOD OF MAKING THE SAME. CHARLES S. BIRD, Walpole, Mass. Filed July 11, 1913, Serial No. 778,582. Renewed Aug. 31, 1915. Serial No. 48,347. (Cl. 93—94.)



1. As a new article of manufacture, a paper tube the outer face whereof is filled with a waterproofing filler and burnished, said filler being characterised by the fact that it does not present a greasy feel or surface when subjected to heat.

2. As a new article of manufacture, a paper tube the outer face whereof only is filled with an inherently waterproofing colored filler.

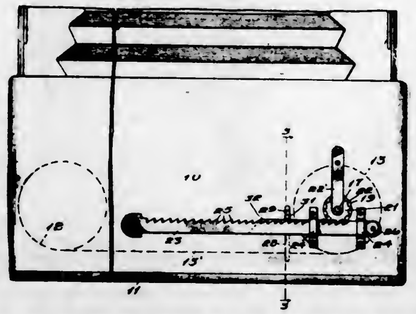
3. As a new article of manufacture, a paper tube the cutter surface whereof is filled with an inert waterproofing filler charged with a pigment, said filler being characterised by the fact that it does not, when subjected to heat, present a greasy surface.

4. As a new article of manufacture, a paper tube the outer surface of which is filled with blanc fixe, and burnished.

5. As a new article of manufacture, a paper tube the outer surface of which is filled with blanc fixe and a suitable pigment, and burnished.

[Claims 6 to 14 not printed in the Gazette.]

1,158,025. CAMERA ATTACHMENT. ROY BOWEN, Hoopeston, Ill. Filed Mar. 23, 1915. Serial No. 16,419. (Cl. 95—31.)



1. In a camera, a winding spool to hold a film having notches, a clutch element provided with ratchet teeth for turning the winding spool in one direction, a driving wheel provided with ratchet teeth for engaging the first named ratchet teeth and having pinion teeth, a bar provided with ratchet teeth arranged to engage the pinion teeth of the driving wheel, and a movable element arranged to engage with the film to enter the notches and adapted when within a selected notch to engage with a tooth of the bar to hold it against movement in one direction, and means to move the element toward the film.

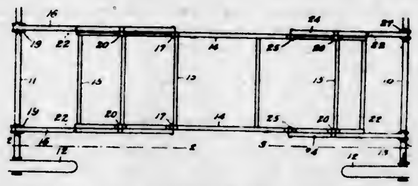
2. In a camera, a winding spool for a film having notches, a driving pinion, clutch mechanism connecting the driving mechanism and winding spool, a longitudinally movable bar having teeth engaging the pinion to rotate it, and a movable element arranged to engage the film to enter the notches and adapted when within a selected notch to engage with the bar for holding it against movement in one direction.

3. In a camera, a winding spool for a film provided upon its edges with notches, a driving pinion having connection with the spool to turn it, a longitudinally movable bar having teeth engaging the pinion to rotate it, and a pivoted control lever having one end thereof adapted to slidably engage with the edge of the film and enter the notch whereby its opposite end moves into engagement with a tooth of the rack-bar.

4. In a camera, a winding spool for a film provided upon its edge with notches, a driving pinion, clutch mechanism connecting the pinion with the spool and operative when rotated in one direction and inoperative when turned in an opposite direction, a longitudinally movable rack-bar having its teeth engaging the pinion, a pivoted control lever having one end thereof adapted to engage with the edge of the film and enter the notch and its opposite end adapted to engage with a tooth of the rack-bar, and means to swing the control lever in an opposite direction whereby it is moved out of the notch and disengages said tooth.

5. In a camera, a winding spool for a film provided upon its edges with notches, a driving pinion, clutch mechanism connecting the pinion to the spool and operative when rotating in one direction and inoperative when turned in an opposite direction, a longitudinally movable bar provided with ratchet teeth to engage the pinion, a pivoted control lever having one end adapted to engage with the edge of the film and its opposite end to engage with a ratchet tooth of the bar, a spring to swing the lever in the direction to cause its end to engage with said tooth, and a cam member carried by the bar and adapted to engage with the lever to swing it in an opposite direction to release the bar.

1,158,026. SPRING STRUCTURE. HERBERT H. BUFFUM, The Weirs, N. H. Filed June 10, 1914. Serial No. 844,204. (Cl. 21—101.)



1. In a vehicle, the combination with a frame and a wheel-axle, of a leaf spring having its inner portion anchored to the frame, and its outer portion attached to the axle, and an abutment on the frame bearing against the under side of the spring intermediate of its anchorage and its outer end, and serving to hold the inner section of the spring under a permanent initial deflection.

2. In a vehicle, the combination with a frame and a wheel-axle, of a leaf spring tapered at both ends, the outer end being attached to the axle and the inner end being attached to the frame, and the intermediate portion of the spring bearing upwardly against the frame, and an abutment on the frame, normally bearing against the under side of the spring between the said upward-bearing point and the axle and serving to hold the inner section of the spring under permanent initial deflection, while permitting the spring to yield as a whole to loads in excess of that represented by the initial deflection.

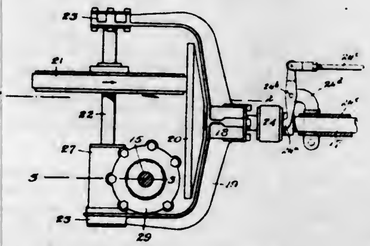
3. In a vehicle, the combination with a frame and axle, of two superimposed leaf springs anchored at their inner portions to the frame and attached to the axle at their outer ends, one of said springs being normally free to vibrate throughout its length, and an abutment on the frame bearing against the under side of the other spring intermediate of its anchorage and its outer end and serving to hold the inner section thereof under a permanent initial deflection.

4. In a vehicle, the combination with a frame and axle, of two superimposed leaf springs, the outer ends of said springs being attached to the axle, and the inner ends to the frame, and the intermediate portion bearing upwardly against the frame, and an abutment on the frame normally bearing against the under side of one of said springs between the said upward bearing point and the axle, and serving to hold the inner portion thereof under a permanent initial deflection.

5. In a vehicle, the combination with a frame and a wheel-axle, of two superimposed leaf springs, the outer ends of said springs being attached to the axle, and the inner ends to the frame, and means for subjecting the inner portion of one of said springs to a predetermined initial compression, said means being arranged to automatically release said action on said spring when said frame is subjected to loads or shocks in excess of said initial compression and to automatically establish and maintain said initial compression when said loads or shocks do not exceed said initial compression.

[Claim 6 not printed in the Gazette.]

1,158,027. DRIVE MECHANISM. HERBERT H. BUFFUM, The Weirs, N. H. Filed June 10, 1914. Serial No. 844,205. (Cl. 74—26.)



1. The combination with a wheel axle, of a journal structure journaled thereon, a transmission shaft journaled in said structure and arranged at right angles to said axle, transmission gearing connecting said shaft and axle, a movable structure supported by said transmission shaft and having two journals coacting with said transmission shaft and having a third journal at right angles to the axis of said two journals, a shaft arranged in said third journal, and transmission gearing connecting said shafts between said two journals.

2. The combination with a driving shaft and a driven shaft arranged to be capable of relative angular axial movement, of a transmission shaft, means arranged to keep the axis of said transmission shaft at right angles relative to said driving shaft, means arranged to keep the axis of said transmission shaft at one angle relative to said driven shaft, coactive gears arranged on said driving shaft and transmission shaft respectively, one of said gears being movable to and from coactive relation with the other, and means arranged to transmit rotation from said transmission shaft to said driven shaft.

3. The combination with two shafts arranged to be capable of relative angular axial movement, of a transmission shaft, means arranged to keep the axis of said transmission shaft at right angles relative to one of said two shafts, means arranged to keep the axis of said transmission shaft at one angle relative to the other one of said two shafts, means arranged to transmit rotation from one of said two shafts to said transmission shaft, and means arranged to transmit rotation from said transmission shaft to the other one of said two shafts, one of said transmitting means being adjustable to vary the speed ratio of its driving and driven elements.

4. Transmission mechanism comprising a shaft, a bearing structure having a bearing embracing said shaft, a second shaft journaled in said bearing structure, coactive friction members arranged respectively on said first and second shafts to transmit rotation from one to the other, a third shaft, means journaled on said second and third shafts for keeping them in one relative position, and coactive gears arranged respectively on said second and third shafts for transmitting rotation from one to the other.

5. The combination with a wheel axle and an angularly movable drive shaft, of universally jointed transmission means arranged to transmit rotation from said shaft to said axle, said transmission means being capable of angular movement in response to angular movement of said axle and shaft and being capable of adjustment to reverse the rotation of said axle relatively to that of said shaft.

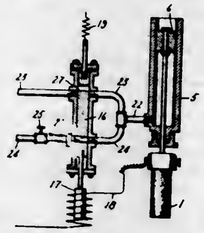
[Claims 6 and 7 not printed in the Gazette.]

1,158,028. GUARD FOR BOTTLE-CORKS. THERON W. CHAPMAN, Belvidere, Ill. Filed Sept. 14, 1914. Serial No. 861,644. (Cl. 215—113.)



The combination with a bottle having an annular flange at the outer end of the neck, of a guard for the cork within the neck comprising a band, a plurality of arms carried by the band and projecting at right angles therefrom, said arms being bent to engage the upper and lower face of the annular flange, said arms being substantially circular in form at their outer ends and comparatively wide with reference to the cork, to guard the approach of fingers to the cork and to induce the slipping of the fingers, substantially as hereinbefore set forth.

1,158,029. FLUID-PRESSURE DEVICE. CHRISTIAN DANTSIZEN, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 7, 1912. Serial No. 702,152. (Cl. 138—2.)



1. The combination of a cylinder, a piston therein arranged to be urged in a given direction, a conduit for delivering a fluid under pressure to a chamber of said cylinder to urge said piston in the opposite direction, a conduit for discharging said fluid, and means for varying at will the ratio of delivery of said fluid with respect to the discharge thereby varying the position of the piston in said cylinder.

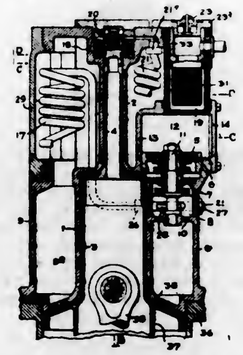
2. The combination of a cylinder, a piston movably mounted therein, a conduit for delivering a fluid under pressure to a chamber on one side of said piston, a conduit for discharging said fluid from said chamber, and means for varying the rate of delivery of said fluid while simultaneously varying the discharge of said fluid.

3. The combination of a cylinder, a piston movable therein, a conduit for supplying said cylinder with a fluid under pressure, a second conduit for discharging said fluid, a valve having a port communicating with said supply conduit, and another port communicating with said discharge conduit, said ports being so arranged with respect

to said conduits that a widening of one port correspondingly contracts with the other port, and means for operating said valve.

4. A fluid pressure device comprising the combination of a cylinder operable in a vertical position, a piston fitted therein, descending in said cylinder by gravity, a conduit communicating with said cylinder below said piston, supply and exhaust pipes communicating with said conduit, a slide valve having openings spaced to register with the openings through said pipes that a displacement of said valve in either direction widens the passage to one pipe and correspondingly closes the passage to the other pipe and means for moving said valve.

1,158,030. COMPRESSOR. HEINRICH DECHAMPS, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Feb. 20, 1914. Serial No. 819,038. (Cl. 230—6.)



1. In a multi-stage compressor, the combination of a plurality of cylinders, pistons therefor, and a casing surrounding said cylinders and suitably divided into a cooling chamber and fluid storage chambers, the walls for the storage chamber for the final stage of the compressor being formed separate from and of stronger material than the remainder of the casing.

2. In a multi-stage compressor, the combination of a plurality of cylinders, pistons therefor, suction and discharge valves associated with each cylinder, a casing surrounding said cylinders and suitably divided into a cooling chamber and fluid storage chambers, there being a fluid storage chamber for each stage, the walls for the storage chamber for the final stage being formed separate from and of stronger material than the remainder of the casing, and a strainer removably mounted in each storage chamber.

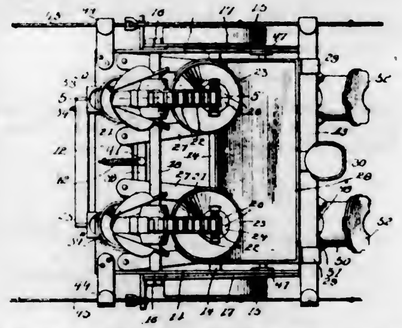
3. In a multi-stage compressor, the combination of a plurality of cylinders, pistons therefor, a casing surrounding said cylinders and suitably divided into a cooling chamber and fluid storage chambers, there being one fluid storage chamber for each stage, a delivery chamber for a lower stage of the compressor, a coiled pipe in the cooling chamber connecting the delivery chamber with its storage chamber, the outer wall of said cooling chamber having a lateral opening through which the coiled pipe may be removed, and a cover for said opening.

4. In a compressor having a suction side and a delivery side, the combination of a cooling chamber, a fluid containing chamber, a coiled pipe arranged in said cooling chamber and having an end extending entirely through and projecting from the casing of the fluid containing chamber, an abutment on said pipe which takes against the casing of the fluid containing chamber, means on the projecting end of the pipe between which and the abutment the casing of the fluid containing chamber is clamped, and means for closing the end of the pipe, said pipe having a lateral opening in the side communicating with the fluid containing chamber.

5. In a compressor, the combination of a cylinder, a piston, suction and discharge valves, a cooling chamber, a fluid containing chamber, a coiled pipe arranged in said cooling chamber and having a closed end, which end extends entirely through and projects from the casing of the fluid containing chamber, a shoulder on the pipe which abuts against the casing of the fluid containing chamber on one side, and means on the projecting end of the pipe for clamping the shoulder against the casing to form a tight joint therewith, said pipe having a lateral opening therein communicating with the fluid containing chamber.

[Claims 6 to 8 not printed in the Gazette.]

1,158,031. POTATO-PLANTER. MARY E. DORR, Becher, Minn. Filed Nov. 14, 1912. Serial No. 731,373. (Cl. 111—27.)



In a planter, a frame, spaced planter boots mounted on the frame, inverted frusto-conical hoppers mounted above and adjacent to said boots and provided with open bottoms, a squared rock-shaft journaled in and extending outwardly beyond the frame, pairs of crank arms upwardly attached to the upper squared face of the rockshaft adjacent to the base of said respective hoppers and the members of each pair spaced apart a distance greater than the opening in the bottom of said hopper, a valve comprising an oblong blank of sheet metal slidably mounted on the top face of the frame underneath the respective hoppers, said blank being imperforate at one and provided with a circular opening in the opposite end, a pair of pintles hingedly attached to the rear of said respective valves and at the opposite sides thereof, the opposite ends of said pintles being attached to the outer extremities of said crank arms, means for communicating a rocking motion to said rock-shaft to bring the open end of said valve alternately with the closed end thereof in registry with the open bottom of said hopper, and means for supplying seeds intermittently to said respective hoppers.

1,158,032. METAL HANDLE FOR TOOLS. DAVID EASTMAN, New York, N. Y., assignor to Eastman Manufacturing Company, New York, N. Y. Filed Apr. 4, 1912. Serial No. 688,521. (Cl. 145—61.)

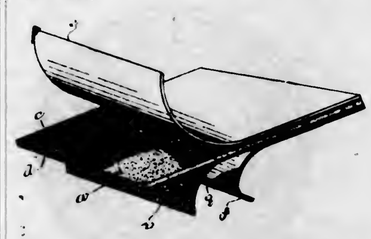


1. As an article of manufacture, a hollow metallic handle for percussion tools, the body portion of said handle having a cross section one dimension of which is greater than the other, a narrow opening extending substantially the entire length of said body portion and being located in substantially the middle of one edge of said handle,

said opening being of a width sufficient to prevent the sides thereof from touching, the said body portion of said handle being constructed resilient to permit said opening to be normally distorted when said handle is in use to absorb percussion shocks, and means provided on one end of said body portion to attach said handle to a percussion tool.

2. A metallic handle for percussion tools and the like, comprising a tubular body portion of a distorted oval cross section, said body portion being provided with a long narrow opening extending substantially the length of the handle and on the front edge thereof, said opening being of a width sufficient to prevent the sides thereof from normally touching, a neck formed upon one end of said handle to be attached to a percussion tool, and the other end of said handle having a continuous wall to maintain the edges of said opening a definite distance apart, the said handle being constructed to permit sufficient distortion of said opening to enable said handle to absorb shocks when in use.

1,158,033. PRINTING-BLANKET. FRANK E. ELLIS, Revere, Mass. Filed Mar. 25, 1915. Serial No. 17,007. (Cl. 101—113.)



1. A printing blanket comprising a body layer of cork composition, a rubber face layer in vulcanized union with one face of said body layer, and a sheet of textile fabric united to the opposite face of said body layer.

2. A printing blanket constructed of a face layer of vulcanized rubber, a body layer of a soft and pliable composition other than rubber, vulcanized to the face layer, and a backing layer of textile fabric united to said body layer.

3. A printing blanket consisting of a body composed of a textile fabric ply and a sheet of granular cork and oxidized oil, bonded together, a second fabric ply bonded to the first fabric ply by a coating of vulcanized rubber, a third fabric ply bonded to the face of the cork sheet by an interposed sheet of vulcanized rubber, and a surface of vulcanized rubber united by vulcanization to the outer side of said third ply.

4. A printing blanket particularly adapted for offset printing having a smooth printing face and being of uniform thickness, and constructed mainly of resilient material other than rubber.

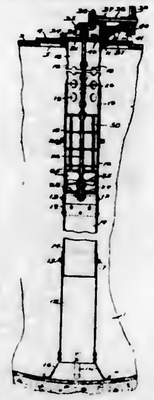
5. A printing blanket particularly adapted for offset printing comprising a body composed of a plurality of textile fabric plies and a sheet of cork composition, with a surface layer having a smooth outer face.

[Claims 6 to 14 not printed in the Gazette.]

1,158,034. CLARIFYING DEVICE. GERRY E. EMANUEL, Edgerton, Ohio. Filed June 28, 1915. Serial No. 36,833. (Cl. 210—3.)

1. The combination of a pipe having perforations at the upper end thereof, an adjustable shield for closing a part of the perforated portions of the pipe, the lower end of the pipe having a telescoping pipe, a propeller located within the pipe, and means for treating the fluid as it passes from the surface of the liquid through the pipe to the bottom of the container.

2. The combination of a pipe having at one end a perforated portion and an adjustable shield for covering more or less of the perforated portion, a telescoping pipe located at the lower end, a propeller located within the pipe, a filter located above the propeller, a removable plate for closing one end of the pipe, bevel gear wheels for driving the propeller, a hinged frame, one of the gear wheels rotatably mounted on the said hinged frame whereby the other gear wheel and plate may be removed.



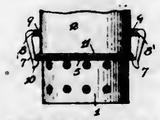
3. The combination of a pipe, a shaft supported in the pipe, a propeller secured to the shaft, a shiftable filter frame surrounding the shanft and movable along the shaft and the pipe.

4. The combination of a pipe, a shaft supported in the pipe, a propeller secured to the shaft, a shiftable filter frame surrounding the shaft and fitting the shaft and the interior of the pipe.

5. The combination of an adjustable telescoping pipe, a shaft supported in the pipe, and having bearings in one of the parts of the pipe, a propeller secured to the shaft, a shiftable filter frame surrounding the shaft.

[Claim 6 not printed in the Gazette.]

1,158,035. DRINKING-FOUNTAIN FOR POULTRY. FRANK ENOS, Jr., Norwich, Conn., assignor to The Norwich Automatic Feeder Company, Norwich, Conn., a Corporation of Connecticut. Original application filed Aug. 12, 1914, Serial No. 856,465. Divided and this application filed Jan. 4, 1915. Serial No. 440. (Cl. 126—350.)

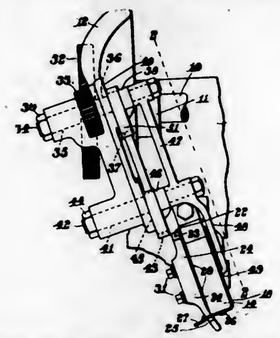


In combination with a water tank, a heater casing having a peripheral flange, said tank having a peripheral rib, a plurality of gravity operated latches having their upper ends pivotally connected to the tank above the rib so as to have their movement toward the tank restricted by engagement with the rib, the free ends of said latches being curved, said latches being adapted to swing by gravity into engagement with the rib and to disengage said rib upon engagement of the curved free ends thereof with the flange, whereby said latches successively and automatically disengage and engage the rib and flange, respectively when the tank is placed upon the heater.

1,158,036. SHUTTLE-OPERATING MECHANISM FOR SEWING-MACHINES. EDWARD ERICKSON, Lynn, Mass., assignor to Victor Shoe Machinery Co., Boston, Mass., a Corporation of Massachusetts. Filed July 20, 1914. Serial No. 852,103. (Cl. 112—20.)

1. In a sewing machine, the combination of a rotatably mounted shuttle; two parallel revoluble shafts; means for

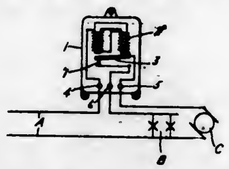
rotating one of said shafts; a frame having bearings for said shafts, each bearing having a boss projecting from said frame an eccentric on each shaft having a crank radiating from its outer face and its inner face abutting the end of one of said bosses, a connector between said eccentrics interposed between said bosses and cranks, and a shuttle operating bar pivotally connected to both cranks.



2. In a sewing machine, the combination of a rotatably mounted shuttle; two parallel revoluble shafts; means for rotating one of said shafts; an eccentric on the end of each shaft having a crank radiating from its outer face; a connector between said eccentrics to cause their rotation in unison; and a shuttle operating bar pivotally connected to both cranks.

3. In a sewing machine, the combination of a rotatably mounted shuttle having a recess; two parallel revoluble shafts; means for rotating one of said shafts; an eccentric on the end of each shaft having a crank radiating from its outer face; a connector between said eccentrics to cause their rotation in unison; and a shuttle operating bar pivotally connected to both cranks and having a lateral projection engaging said recess.

1,158,037. SYSTEM OF ELECTRICAL DISTRIBUTION. EVAN EVANS, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Nov. 12, 1912. Serial No. 730,872. (Cl. 171—97.)



1. A system of electrical distribution comprising a source of electric current, a plurality of sets of translating devices, and means responsive to the combined quantity of current flowing in all of said sets of tranlating devices for limiting the total quantity of current which can be jointly taken by said translating devices during the times that current flows in one particular set of translating devices.

2. A system of electrical distribution comprising a source of electric current, two sets of translating devices, and a current limiting device responsive to the combined flow of current in both sets of translating devices and adapted to interrupt the flow of current in one set of translating devices whenever the combined demand of both sets of translating devices upon said source exceeds a predetermined value.

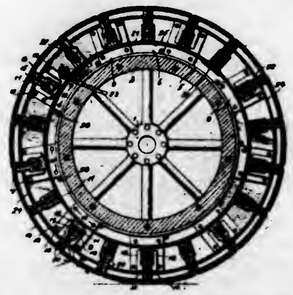
3. A system of electrical distribution comprising a source of electric current, a plurality of sets of translating devices, a current responsive device arranged to be influenced by the current flowing in all of the translating devices, and means coöperating with said current responsive device for interrupting the flow of current in one set of translating devices when the combined demand of all of said sets of translating devices exceeds a predetermined value.

4. A system of electrical distribution comprising a source of electric current, a lighting circuit and a power circuit, and means responsive to the combined current flowing in both of said circuits for limiting the total quantity of current which can be jointly taken by both circuits during the times that current flows in the lighting circuit.

5. A system of electrical distribution, comprising a source of electric current, a lighting circuit and a power circuit, and a device interposed in said system and responsive to the current flowing in both circuits for limiting the amount of current which can be supplied to the lighting circuit.

[Claim 6 not printed in the Gazette.]

1,158,038. STEEL TIRE. FRED FELDHAUS, Akron, Ohio. Filed Nov. 13, 1914. Serial No. 871,989. (Cl. 152—8.)

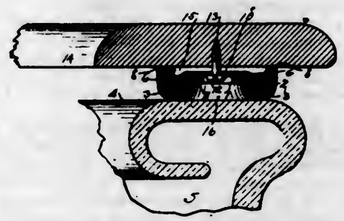


1. A wheel of the class described comprising a felly, felly plates carried thereby, said felly plates provided with outwardly extending flanges having apertures formed therein, a spring band, blocks carried by said spring band, a bar carried by each block and provided with projecting ends adapted to work in said apertures, a tread plate carried by each block, said blocks being spaced from each other, and said tread plates overlapping each other and spanning the distance between said blocks for constituting a tire for said wheel.

2. A wheel of the class described comprising a felly, felly plates carried thereby, said felly plates provided with flanges, said flanges provided with apertures formed therein, socket plates fitting over said apertures, each socket plate provided with a projecting collar fitting in said aperture in said felly plate, inwardly extending cleats carried by the inner face of said felly plate, said cleats provided with overhanging heads, blocks carried between said felly plates, a bar carried by each block and having its ends working in said collar, resilient means supporting said blocks, each block provided with projecting lips, each block provided with a shoulder formed adjacent each lip, said heads adapted to engage said shoulders for limiting the outward movement thereof, a tread plate carried by each block, each tread plate provided with a depending end fitting between said lips of said blocks, and the tread portion of said tread plates overlapping for constituting an efficient rim for said wheel.

1,158,039. PNEUMATIC CLOSET-SEAT BUFFER. TILGHMAN J. FLORBY, Washington, N. J., assignor to American Sanitary Works, New York, N. Y., a Corporation of New Jersey. Filed May 5, 1915. Serial No. 26,034. (Cl. 4—18.)

1. The combination with a closet bowl having a rim adapted to support a seat, and a seat overlying the said rim, of a buffer secured to the bottom-side of the seat and engaging the said rim, said buffer comprising an elastic ring having a rounding rib bearing directly upon the said rim, and having a flange surrounding the opening in the ring, a support for said ring having a circular raised portion tightly filling the said opening and having a trough-like margin engaging and adhering to the said flange, and a screw piercing said support and screwed into the seat for holding said ring in place.



2. In a buffer for closet seats, the combination with an elastic ring, one side of said ring having an annular bearing surface for engaging a closet seat the other side of said ring having a rounding rib for engaging the rim of a closet bowl, the central portion of said ring surrounding the opening thereof comprising an annular flange, of a supporting-plate having a circular raised portion which tightly fills the said opening and having an annular trough to receve the beaded portion of said flange, the said plate being movable with the said flange during the compressing and relaxing of said ring, and fastening means coöperating with said plate for securing said ring to the closet seat.

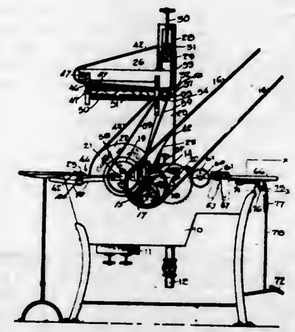
3. The combination with a closet bowl having a rim adapted to support a seat, and a seat disposed above said rim, of a buffer interposed between said seat and said rim, said buffer comprising an elastic rubber body having a central opening and having a depending annular rib which engages the rim of the bowl for forming an air space facing the bowl, and having an upwardly projecting annular bearing surface engaging the bottom-side of the seat for forming an air space facing the said seat, said air spaces being separated by a beaded flange which surrounds the central opening in the body, a washer filling the said opening and having a trough-like portion to receive said flange for closing the said opening and for supporting the body, and a screw piercing said washer and screwed into the seat for adjustably holding the body in place.

4. The combination with a water-closet bowl having a rim adapted to support a seat, and a seat suitably hinged for overlying said rim, of a buffer interposed between said seat and said rim, said buffer comprising an elastic body having a rib adapted to contact with the rim for forming an air cavity facing the rim, and having an annular bearing-surface adapted to engage the underside of the seat, said rib and said bearing-surface arranged adjacent the periphery of the body and surrounding an annular flange which skirts the open center of the body, a supporting disk tightly disposed in the central opening of the body having a trough-like margin to receive and adhere to the said flange for preventing the displacement of the air in said cavities, and a screw piercing the center of said disk and screwed into the seat for yieldingly securing said body to the seat.

5. A pneumatic bumper for closet seats, comprising an elastic part, having a continuous depending rib adapted to contact with the surface of the rim of a closet bowl, and having an upwardly projecting continuous bearing surface adapted to engage the underside of a closet seat, said rib and said bearing surface surrounding a clear opening in said part, a supporting-plate tightly filling the opening in said part having a flange of greater diameter than the said opening, said plate disposed in a plane substantially midway between the extreme top and bottom surfaces of said part for providing air spaces facing respectively the seat and the rim, and a fastening device piercing said plate and secured to the seat for holding the bumper in place.

[Claim 6 not printed in the Gazette.]

1,158,040. COLLAR AND CUFF STARCHER. OLOF FROBERG, Benton Harbor, Mich. Filed July 23, 1914. Serial No. 852,729. (Cl. 68—28.)



1. A starching machine of the class described, comprising a starch box, a conveyer for collars and cuffs having a path leading from one end of the box downwardly and then upwardly, thence outwardly toward said end of the box for discharge, and a transverse conveyer mounted to receive articles from the first conveyer extending laterally of the machine, and operative connections for the said conveyers.

2. A starching machine comprising a starch box, a feed table adjacent one side thereof, supports at two sides of the box spaced from said table and including extensions toward the table, a train of rollers mounted in the box and on the said supports including one at the outer end and two at the base of said extension, one below and forwardly of the other, an apron belt carried by said roller train to circulate at the outer sides of all of the rollers except the last named one, said belt being engaged inwardly of said last named roller, at least one roller located within the train in the box, and receiving said apron thereunder, endless tapes engaged threabout and around said last named roller on the supports, a transversely disposed horizontal conveyer carried by the said extensions having its inner side closely adjacent said last named roller on the supports, and operative connections for the conveyer and apron.

3. A starching machine comprising a starch box, a large transverse roller mounted revolubly therein, a small fixed roller closely adjacent and parallel to the first named roller, a pivoted frame in the box at each side, a plurality of rollers carried thereby below and rearwardly of the large roller, standards fixed over the box, upper and lower rollers carried by the standards the lower one having its rearmost periphery spaced forwardly of the like part of the upper roller, an extension on each of the standards projected forwardly intermediately of said rollers on the standards, a roller at the outer ends of the extensions, an endless apron engaged under said large roller and outwardly of the other rollers in the box, the upper roller on said standards and the roller at the outer ends of the extensions and inwardly of the lower roller on the standards, endless tapes engaged around said last named roller and the larger roller, a transverse horizontal conveyer carried beneath said extensions and having its inner edge closely adjacent said lower roller on the standards, means for adjusting said pivotal frame, separate means for tightening the endless apron member, means to operate certain of the rollers and operative connections between certain of the rollers and the transverse conveyer.

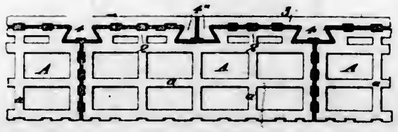
4. In a device of the class described, conveyer devices including a roller having a fixed axis and a fibrous apron

operative to convey fabrics between the roller and apron, guide devices arranged in a plane convergent to the periphery of said first named roller, a sliding bearing in each guide device, a roller journaled in the bearings and means to move the bearings in the guide devices said guide devices being so positioned that the last named roller is in engagement with the first named roller adjacent the inner limit of its movement.

5. In a machine of the class described, a conveyer belt, means to support the belt in a tortuous path including an ascending reach and a reach leading forwardly at an angle to the first named reach, a transverse delivery element beneath said last named reach, means to hold material upon the belt over a part of its path not including the last named reach, and operative connections for the mechanism.

[Claim 6 not printed in the Gazette.]

1,158,041. INTERLOCKING TILE. JAMES J. FUNSTEN, San Francisco, Cal. Filed Nov. 10, 1914. Serial No. 871,273. (Cl. 72—38.)



A wall structure comprising a plurality of blocks each having a plurality of dovetailed keys provided with series of dovetailed grooves and interposed by similarly shaped key ways and having end way portions adapted to be supplemented by those of the adjacent blocks to form sectional dovetailed key ways, the adjacent opposing faces of the adjacent blocks being spaced and provided with coincident dovetailed grooves, a tiling service composed of tiles each of which is provided with a dovetailed web received in a sectional key way of the block portion of the wall and having a dovetailed groove arranged in its outer face opposite the space between the opposing faces of the adjacent block members whereby a filler of cement will interlock in the groove of the tile web and also in the coincident grooves of the opposing faces of adjacent blocks to withsand movement tending to separate the tile from the blocks, each tile being further provided on its ends with a web section adapted to be supplemented by the end web section of the adjacent tile to form a complete dovetailed web, said sectional dovetailed web being received by a key way of a block member and of smaller cross sectional area than the way, the ways formed by and between the dovetailed web and the end web sections of each tile receiving the block keys and provided with dovetailed grooves opposing the grooves of the block keys, and a filling of cement interposed in the space between adjacent block members, adjacent tiles and the channels around the sectional webs and solid webs.

1,158,042. PAPER BAG. HOMER A. GENEST, Hartford, Conn., assignor to Arkell & Smiths, Canajoharie, N. Y., a Corporation of New York. Filed Sept. 16, 1914. Serial No. 862,094. (Cl. 229—59.)



1. A bag blank comprising a sheet of paper having a front section, a back section, and a lap section, the front section having two notches in its lower edge, each notch being located at a distance from the edge of the tube and the lap section having a coating of adhesive along its length.

2. A tubular paper bag blank having two notches cut in the lower edge of one of the plies, each notch being located at a distance from the edge of the tube.

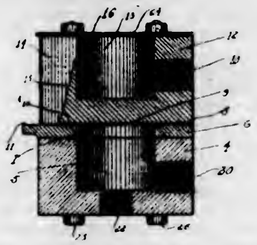
3. A tubular paper bag blank having two notches cut in the lower edge of one of the plies, each notch being located at a distance from the edge of the tube, and slits cut in both plies through said notches.

4. A paper bag having a folded and pasted bottom, said bottom consisting of side flaps formed by diamond folding the blank, an inner flap with its corners cut away and folded down upon the side flaps, and an outer flap folded over upon the side flaps and the edge of the inner flap.

5. A paper bag having a folded and pasted bottom, said bottom consisting of angular side flaps formed by diamond folding the blank, an inner flap folded upon the side flaps, said inner flap having its corners cut back of the middle line of the side flaps and having a central portion that extends beyond the middle line of the side flaps, and an outer flap folded upon the side flaps and having its edge extending upon the edge of the inner flap and covering the cut-away sections of the same.

[Claim 6 not printed in the Gazette.]

1,158,043. HYDROCARBON-BURNER. LOUIS J. GOUGUET and JEAN MONTIS, Chico, Cal. Filed Mar. 18, 1915. Serial No. 15,283. (Cl. 158—75.)



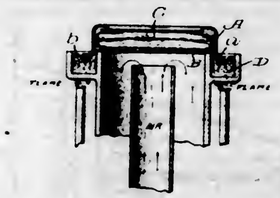
1. A burner comprising a lower and an upper member each provided with a recess and an opening communicating with said recess, an orificed disk mounted on said lower member and having a projecting fan-shaped lip, another disk mounted on said first named disk and being cut away adjacent said lip, said upper member having a discharge outlet from the recess therein, such outlet terminating on said lip, as described.

2. A burner comprising a lower and an upper member each provided with a recess and an opening communicating with said recess, two centrally orificed disks interposed between said lower member and said upper member, one of said disks being provided with a lip and the other provided with an opening adjacent said lip, the upper member being provided with an outlet from the recess therein terminating adjacent said lip, and bolts removably connecting all of said members, as described.

1,158,044. PROCESS OF INCLOSING FOOD PRODUCTS. CHARLES W. GRAHAM, New York, N. Y., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 22, 1911. Serial No. 645,461. (Cl. 113—112.)

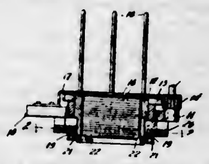
1. The process of canning food products which consists in inclosing the food product within a can, together with a soldering flux, and then immersing the seam of the can in a bath of molten solder and drawing the solder from said bath into the seam of the can by the aid of said flux within the seam, and at the same time subjecting the body of the can to a current of air.

2. The process of canning food products which consists in inclosing the food product within a can, together with a soldering flux, and then immersing the seam of the can



in a bath of molten solder and drawing the solder from said bath into the seam of the can by the aid of said flux within the seam, and at the same time applying a cooling medium to the body of the can.

1,158,045. DEVICE FOR FEEDING INDIVIDUAL PIECES. CHARLES W. GRAHAM, Huntington, N. Y., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 9, 1912. Serial No. 682,581. (Cl. 113—114.)



1. In a device of the class described, in combination, a rotatable carrier adapted to retain a stack of can heads or other articles, and mechanism for delivering can heads or articles from the bottom of the stack one at a time while the carrier is rotating.

2. In a device of the class described, in combination, a movable carrier adapted to retain a stack of can heads or other articles, and mechanism for delivering can heads or articles from the bottom of the stack one at a time, said mechanism being carried by said movable carrier.

3. In a device of the class described, in combination, a carrier adapted to retain a stack of can ends, the carrier being rotatable about the axis of the stack, and mechanism for delivering can heads from the stack one at a time, said mechanism being carried by said rotatable carrier.

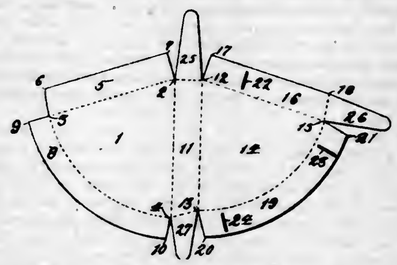
4. In a device of the class described, in combination, a rotary carrier adapted to retain a stack of can heads or other articles, and mechanism for delivering can heads or articles from the bottom of the stack one at a time, and stationary means for operating said mechanism.

5. In a device of the class described, in combination, a movable carrier adapted to retain a stack of can heads or other articles, devices, movable in a horizontal plane only for separating and discharging individual pieces from the stack, said devices being carried by the movable carrier, and stationary means for operating said devices.

[Claims 6 to 14 not printed in the Gazette.]

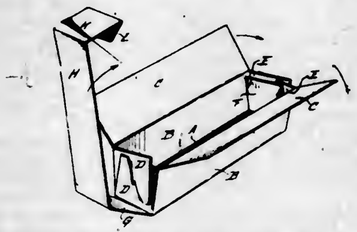
1,158,046. COLLAPSIBLE BOX. EDWARD J. HAINES, Akron, Ohio. Filed Feb. 12, 1915. Serial No. 7,712. (Cl. 229—22.)

1. A collapsible box formed from a unitary blank and comprising a body member the lower wall of which is in the form of a sector of a circle and provided with side walls radiating from a common center, an end wall in the arc of a circle, a cover comprising an upper wall in the form of a sector of a circle and integral with one of the side walls of the body member, said cover provided with a side wall arranged to telescope the free side wall of the body and provided with a transverse slit and further provided at one end with a projecting tongue, said cover provided with an end wall formed in the arc of a circle and arranged to elescope the end wall of said body, said wall provided with two transverse slits, integral tongues projecting from opposite ends of the side wall of the body to which the cover is connected, said tongues adapted to be inserted in said slits to hold the walls of the cover in position to telescope the walls of the body.



2. A collapsible box formed from a unitary blank and comprising a body and a cover, the lower wall of the body and the upper wall of the cover formed in the shape of sectors of a circle, said body provided with two side walls one of which is provided at opposite ends with projecting tongues and further provided with one end wall in the arc of a circle, said cover connected along one side to the side wall bearing said tongues, said cover provided with one side wall, said side wall provided with a transverse slit and a projecting tongue at one end, said cover further provided with one end wall, said lateral wall provided with two transverse slits, all of said slits adapted to receive said tongues for holding the walls of said cover in position to telescope the end and free side wall of the body.

1,158,047. MAILING-BOX. WILLIAM J. HALL, Cincinnati, Ohio, assignor, by direct and mesne assignments, to The Hall Mailing Box Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Oct. 23, 1914. Serial No. 868,328. (Cl. 229—36.)



1. A mailing box formed of a one-piece blank which comprises a bottom, side-walls contiguous thereto, end-flaps, one at each of the upright edges of the side-walls, means to secure opposite flaps at each end to each other to hold the side-walls in box-forming position, a top-forming flap contiguous to each side-wall, said flaps being adapted to over-lap each other to form the top, a flap contiguous to one end of the bottom and adapted to occupy a position between the contents of the box and the interlocked flaps at the adjacent end of the box and close against said flaps, a closing flap which extends from the other end of the bottom and is adapted to lap over the adjacent end of the box, thence over the top of the box and also over the other end, and a locking tongue on this closing flap adapted to occupy a position between the interlocked flaps at the end of the box last mentioned and the upstanding flap which is inside of these interlocked flaps and next to the contents of the box and whereby this locking tongue is closely confined in position.

2. A mailing box formed of a blank comprising a bottom, side-walls integral with the bottom, a pair of interlocking flaps at each end of the box respectively integral with the side-walls, an upstanding flap integral with one end of the bottom and adapted to occupy a position next to and in contact with the contents of the box, and an elongated flap at the other end of the bottom and constituting a closure for the box, said flap being extended upwardly contiguous with the correlated end, across the box top, and downwardly contiguous with the other end, the end of the flap being bent and upwardly inserted between the upstanding flap and the adjacent pair of interlocking flaps in which position it is held between the two and by the pressure of the contents against the upstanding flap.

3. A mailing box formed of a one-piece blank comprising a bottom, side-walls integral with the bottom, a pair of flaps respectively integral with the side-walls, overlapping above the contents of the box when the latter is closed, an upstanding flap integral with one end of the bottom and adapted to be maintained in upright position by the contents of the box, a pair of interlocking flaps respectively integral with the side-walls and exteriorly adjacent to the upstanding flaps, and a flap attached to the blank at the other end of the bottom and constituting a closure for the box, said flap extending upwardly adjacent to the correlated end passing across the top of the box and passing downwardly adjacent to the other end of the box, and finally having its extremity inserted between the upstanding flap and the adjacent interlocking flaps in which position it is held by the close contact between them.

1,158,048. SHARPENING DEVICE. MOSES L. HAWKS, New York, N. Y. Filed Dec. 15, 1914. Serial No. 877,401. (Cl. 76—88.)



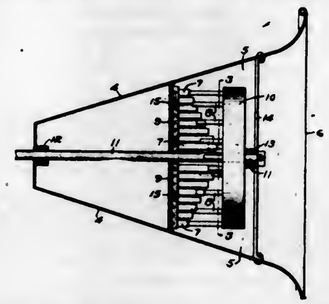
1. A sharpening device consisting of a centrally perforated member having radial cutting teeth on its sides, and two guide bearing members also centrally perforated and having short radial projections extending outward therefrom, said sharpening member and the guide bearing members being mounted on the shank portion, or tang of a hone, a steel or other similar implement having a handle provided with a longitudinal socket adapted to receive the said shank, or tang, the said sharpening device being adjusted and secured in place between the hone or steel and its handle, as shown and described.

2. A sharpening device consisting of a central perforated disk having radial cutting teeth on its sides, and two guide bearing members also centrally perforated and having a series of short radial projections bent outward from the sharpening member at different angles to form suitable guide bearings for the different instruments to be sharpened, said sharpening device being mounted on the shank portion or tang of a hone, a steel or other similar implement having a handle provided with a longitudinal socket adapted to receive the said shank or tang, and adjusted and secured in place between the hone or steel and its handle, as shown and described.

1,158,049. ACOUSTIC APPARATUS. ELLSWORTH A. HAWTHORNE, Bridgeport, Conn. Filed Feb. 5, 1913. Serial No. 746,260. (Cl. 116—1.)

1. An acoustic apparatus comprising an elastic vibratory diaphragm, a plurality of sounding elements secured to said diaphragm, means for sounding said elements in succession to cause said diaphragm to vibrate, and means for directing the sound so produced in a direction transverse to the plane of said diaphragm.

2. An acoustic apparatus comprising a vibratory diaphragm, a plurality of sounding elements secured to said diaphragm, means for sounding said elements in succession to cause said diaphragm to vibrate, and means for amplifying and directing the sound so produced in a direction transverse to the plane of said diaphragm.



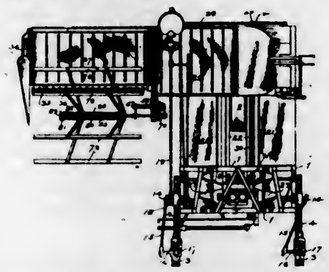
3. An acoustic apparatus comprising a sound chamber having an opening, a shaft disposed within said chamber and extending toward said opening, a plurality of sounding elements extending lengthwise of said shaft within said chamber, and means carried by said shaft for sounding said elements in succession.

4. An acoustic apparatus comprising a sound chamber having an opening, a shaft disposed within said chamber and extending toward said opening, a plurality of sounding elements extending lengthwise of said shaft within said chamber, a disk carried by said shaft, and means carried by said disk for sounding said elements in succession.

5. An acoustic apparatus comprising a sound chamber having an opening, a shaft disposed within said chamber and extending toward said opening, a plurality of sounding elements having different sound characteristics disposed longitudinally of said shaft within said chamber and extending toward ssid opening, a rotary body disposed within said chamber, and a plurality of striking members carried by said body lengthwise of said shaft and arranged for coöperation with said sounding members.

[Claims 6 to 8 not printed in the Gazette.]

1,158,050. HARVESTING-MACHINE. CHARLES B. HAZARD, near Xenia, Ohio. Filed July 10, 1912. Serial No. 708,703. (Cl. 56—124.)



1. In a harvesting machine, a carrying truck having a centrally disposed superstructure, a detachable binder mechanism embodying a saddle shaped frame detachably mounted on and secured to the superstructure of the truck, and a cutter bar and platform projecting laterally from said frame, and operatively connected to the binder mechanism, substantially as specified.

2. A harvesting machine comprising a main frame, an oscillatory platform pivotally connected to the main frame, a cutter bar mounted on the platform, means for operating the cutter bar, a reel, a pivoted supporting post for the reel capable of oscillatory movement in one direction in unison with the platform and in a transverse direction independent of the platform.

3. A harvester comprising a main frame, an oscillatory platform pivotally connected to the main frame, a cutter bar mounted on the platform, means for operating the cutter bar, a reel and a pivotally connected supporting post for the reel, said supporting post and platform being capable of independent oscillatory movement in the same direction and means for interengaging the post and platform whereby they will be caused to oscillate in unison.

4. A harvester comprising a main frame, an oscillatory platform pivotally connected to the main frame, a cutter bar mounted on the platform, means for operating the cutter bar, a reel and a pivotally supported supporting post for the reel, said supporting post being normally connected to and oscillating in unison with the platform and means whereby the platform will be permitted to oscillate independent of the reel post.

5. In a harvesting machine, a main frame embodying grain elevating, binding and discharge mechanism, a cutter bar and platform hinged to said main frame and capable of an independent oscillatory movement with respect thereto, a revoluble reel, a pivotally connected reel post supporting the reel, and means for interlocking the reel post and platform whereby the reel will be caused to oscillate with the platform but permitting the reel post to be disconnected therefrom whereby the platform may be adjusted independent of the reel post, substantially as specified.

[Claims 6 to 10 not printed in the Gazette.]

1,158,051. FLOOR-COVERING. ERNEST HOPKINSON, East Orange, N. J. Filed Sept. 23, 1911. Serial No. 650,909. (Cl. 72—23.)

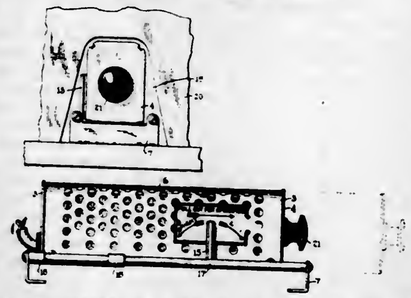


1. A floor covering comprising a backing of comparatively thick material formed in sections, a coating of water-proofing material covering the upper surface of the sections, and a comparatively thin covering superimposed upon and secured to each of said backing sections composed of interlocking sections and provided with projections and recesses extending respectively beyond and within the edges of the backing section, the said backing section serving as bottom walls for the recesses, the extensions and recesses upon the respective edges of said backing section being adapted to engage complementary recesses and extensions of an adjacent section to maintain the two sections against lateral displacement and to aid in securing a flush upper surface along the contacting edges of the sections.

2. A floor covering comprising a backing of comparatively thick material formed in sections, a coating of water-proofing material covering the upper surface of the sections, and a comparatively thin covering superimposed upon and secured to each of said backing sections composed of interlocking sections and provided with dovetailed projections and recesses extending respectively beyond and within the edges of the backing section, the said backing section serving as bottom walls for the recesses, the extensions and recesses upon the respective edges of each backing section being adapted to engage complementary recesses and extensions of an adjacent section to maintain the two sections against lateral displacement and spreading and to aid in securing a flush upper surface along the contacting edges of the sections.

3. A floor covering comprising a backing of comparatively thick, inelastic, rigid, fibrous material, formed in sections, a coating of water-proofing material covering the upper surface of the sections, and a comparatively thin rubber covering superimposed upon and secured to each of said backing sections composed of interlocking sections and provided with projections and recesses extending respectively beyond and within the edges of the backing section, the said backing section serving as bottom walls for the recesses, the extensions and recesses upon the respective edges of each backing section being adapted to engage complementary recesses and extensions of an adjacent section to maintain the two sections against lateral displacement and to aid in securing a flush upper surface along the contacting edges of the sections.

1,158,052. RHEOSTAT. ALBERT J. HORTON, White Plains, N. Y., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 20, 1915. Serial No. 9,545. (Cl. 219—53.)



1. In a rheostat, an elongated frame, an insulating base mounted thereon, a resistance on said base, a cover for said base secured to said frame, and a controlling member pivoted to said frame and movable over said resistance, said member having an operating part without said cover and adjacent one end of said frame, and said resistance having terminal connections adjacent the other end of said frame.

2. In a rheostat, a metallic supporting frame, a pair of insulating bases mounted thereon in spaced parallel relation, resistances on said bases, a controlling member pivoted to said frame and movable over a limited portion of said resistances, and a metallic cover for said bases secured to said frame.

3. In a rheostat, an elongated insulating base, a continuous resistance element coiled thereon, an insulating element adhering to said base and embedding a fixed portion of said resistance and exposing another portion thereof, and a controlling member movable over said exposed portion.

4. In a rheostat, an insulating support, a resistor wound thereon to provide a fixed resistance and a regulating resistance, and an insulating element entirely covering said fixed resistance and covering all but a limited area of said regulating resistance.

5. In combination, a rheostat, an inclosing member to support the same, and a standard fixed within said inclosing member and slidably supporting said rheostat to render the latter adjustable in position.

[Claims 6 and 7 not printed in the Gazette.]

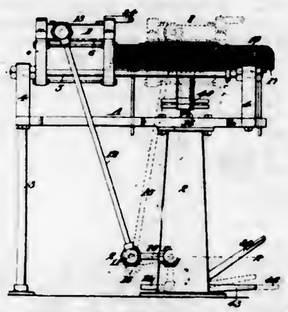
1,158,053. HEEL. ORVILLE T. HUTCHISON, Wagon Mound, N. Mex. Filed Mar. 25, 1912. Serial No. 686,021. (Cl. 36—35.)



A rubber heel insert provided in its top with a recess extended but part way through the insert to form an air chamber, the insert being provided at its rear with a depending lug which projects downwardly below the lower, ground engaging face of the insert, the forward edge of

the lug being located intermediate the front and rear walls of the recess to define a relatively thin portion in the insert between the forward edge of the lug and the front wall of the recess and adapted to yield when the lug is under pressure, thereby to effect a compression of the air in the chamber.

1,158,054. SHIRT-BOSOM-IRONING MACHINE. JOSEPH F. JOUBERT, San Francisco, Cal. Filed Apr. 13, 1915. Serial No. 21,013. (Cl. 68—9.)

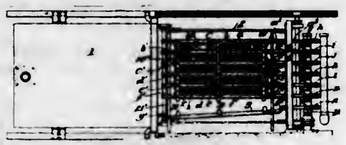


1. In combination, an ironing means, a work support, a pad for the support, a bail pivoted to the support for engaging over the edge portion of the pad, resilient supporting means for the bail to permit of the latter yielding during ironing, a vertical member pivoted to the support for movement toward the bail to clamp the work against the latter, and means for swinging the vertical member to clamp the work whereby the bail may yield during the ironing.

2. In an ironing machine, in combination with ironing means, and a work support coöperating therewith, a platform carrying said support and located closely adjacent to the latter, means to clamp the work on the support composed of a vertical locking member pivoted at its base to the platform and having its upper end movable toward and away from an end of the support, a slidable member on the platform and beneath the support, a link beneath the support pivoted to said members to connect same, a crank journaled on the other end of the support and having a vertical hand engaging part projecting above the support, and a link connecting the crank and sliding member and disposed beneath the support.

3. In combination with ironing means, and a work support, a pad on the support, a pair of bails pivoted to the support and engageable over the ends and sides of the pad, and springs underlying one of the bails to resiliently support same to allow yielding thereof during ironing.

1,158,055. FILTERING PROCESS. DAVID J. KELLY, Salt Lake City, Utah, assignor to Kelly Filter Press Company, Salt Lake City, Utah, a Corporation of Utah. Filed Oct. 22, 1913. Serial No. 796,661. (Cl. 75—18.)



1. The process substantially as herein described of washing cakes built solid in the spaces between adjacent filtering elements of the open-leaf type, said process consisting in surrounding the filtering elements and their attached cakes with a fluid under pressure and while the cakes are thus subjected to pressure conveying a washing fluid to the interior of alternating filtering elements and at the same time drawing off the displaced liquid from the cakes through filtering elements which are intermediate of the first-named elements.

2. The process substantially as herein described of discharging solid cakes from filters of the vertical open-leaf type, said process consisting in laterally shifting the filtering elements to a sufficient degree to provide a space between adjacent filtering elements wider than the thickness of the formed cakes.

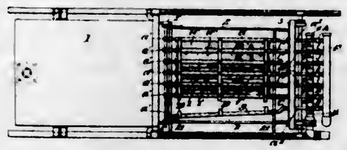
3. The process substantially as herein described of discharging solid cakes from filters of the vertical open-leaf type, said process consisting in providing a cake-forming space between adjacent filtering elements which is wider at the bottom than at the top and applying fluid pressure to the interior of filtering elements to break the contact of the solid cake with the outer sides of the filtering medium.

4. The process substantially as herein described of holding solid cakes in place between adjacent filtering elements in filters of the open-leaf type, said process consisting in contracting the space between the lower portions of adjacent filtering elements to prevent the cakes from dropping when pressure is released.

5. The process substantially as herein described of uniformly washing solid cakes in filters having a series of filtering elements arranged side by side and spaced apart to permit of solid cakes forming therebetween, said process consisting in building cakes on alternating filtering elements so that the outer faces of the cakes contact with adjacent filtering elements which alternate with the first-named elements; conveying a washing liquid under pressure to the interior of the filtering elements not in operation during the cake building, and thence through the solid cake in the same direction as the flow of the filtrate during the cake building operation; and conveying the liquid displaced from the cakes from the interior of the filtering elements on which the cakes were built.

[Claims 6 to 8 not printed in the Gazette.]

1,158,056. FILTERING APPARATUS. DAVID J. KELLY, Salt Lake City, Utah, assignor to Kelly Filter Press Company, Salt Lake City, Utah, a Corporation of Utah. Filed Oct. 22, 1913. Serial No. 796,662. (Cl. 75—86.)



1. A filtering apparatus of the open-leaf type having in combination a pressure tank, a carrier removably contained therein and adapted to be surrounded by the contents thereof, said carrier being provided with a plurality of filtering elements arranged in spaced relation and between the opposed surfaces of which a solid cake of deposited material is adapted to be built, each of said filtering elements being subjected to the common pressure of said tank, and means for admitting a wash solution to the interior of alternate of said filtering elements, whereby values retained in the cakes are displaced and conducted by the wash solution into the interior of the intermediate filtering elements.

2. A filtering apparatus of the open-leaf type having in combination a pressure tank, a carrier removably contained therein and adapted to be surrounded by the contents thereof, said carrier being provided with a plurality of filtering elements submerged in the contents of the tank and arranged in spaced relation and between the opposed surfaces of which a solid cake of deposited material is adapted to be built, each of said filtering elements being subjected to the common pressure of said tank, and means for admitting a wash solution to the interior of alternate of said filtering elements, whereby values retained in the cakes are displaced and conducted by the wash solution into the interior of the intermediate filtering elements, said intermediate filtering elements having outlets leading from their interiors to a point outside of the tank.

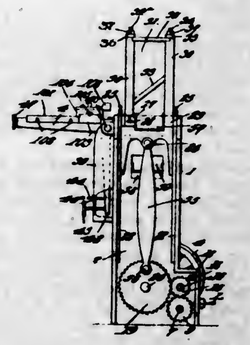
3. A filtering apparatus comprising a fluid-containing pressure tank, a plurality of filtering elements arranged in spaced relation therein and between the opposed surfaces of which a solid cake of deposited material is adapted to be built, each of said filtering elements being subjected to the common pressure of said tank, and means for admitting a wash solution under pressure to the interior of alternate of said elements, whereby the solution is caused to pass through the cakes to wash the same and convey the values displaced from the cakes to the interior of the intermediate filtering elements.

4. A filtering apparatus comprising a fluid-containing pressure tank, a plurality of filtering elements arranged in spaced relation therein and between the opposed surfaces of which a solid cake of deposited material is adapted to be built, each of said filtering elements being subjected to the common pressure of said tank, means for admitting a wash solution under pressure to the interior of alternate of said elements, whereby the solution is caused to pass through the cakes to wash the same and convey the values displaced from the cakes to the interior of the intermediate filtering elements, and means for conducting the wash solutions and their values from the interior of the intermediate filtering elements to a point outside of the tank.

5. A filtering apparatus comprising a pressure tank into which the material to be filtered is delivered, a series of spaced filtering elements in said tank and between the opposed surfaces of which a solid cake of deposited material is adapted to be built, each of said filtering elements being subjected to the common pressure of said tank, said filtering elements having outlets for the filtered liquid, a receiver into which the outlets deliver liquid, means connecting with said outlets for admitting a cake cleansing solution to the interior of alternate filtering elements, valves for cutting off the intermediate elements from the cleansing solution supply, and other valves in the outlets for opening communication between said intermediate filtering elements and said receiver whereby the wash solution and the values displaced from the cakes are conducted to the receiver from the intermediate filtering elements.

[Claims 6 to 15 not printed in the Gazette.]

1,158,057. SPOKE-MITERING MACHINE. ORLANDO C. KETRING and EDGAR D. POPE, Portland, Ind. Filed Sept. 18, 1914. Serial No. 862,399. (Cl. 144—202.)

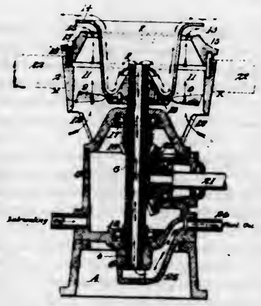


1. In a device of the class described, a frame; a table pivoted to the frame and provided with a depending arm; an adjustable connection between the arm and the frame whereby the table may be tilted vertically; a pair of carriages mounted to move with respect to the table transversely thereof; means for moving the carriages toward and away from each other; coöperating jaws pivoted to the carriages for limited automatic adjustment parallel to the plane of the table; a pair of cutters coöperating with the jaws; and frame supported means for actuating the cutters.

2. In a device of the class described, a frame; a cross head mounted to reciprocate on the frame; a pair of knife holders pivoted to the cross head and having bearings; uprights longitudinally adjustable in the bearings, the uprights having ends which engage the cross head slidably to permit the holders to be swung toward and away from each other, and engage the cross head in clamping relation when the uprights are moved longitudinally; a longitudinally adjustable connection uniting the uprights; and clamping devices on the uprights, the clamping devices constituting at once a means for retaining the connection and a means for moving the uprights longitudinally to cause the ends thereof to bind on the cross head.

3. In a device of the class described, a frame; a table mounted to move upon the frame; means for holding the table in adjusted positions; a work supporting base plate on the table; an end stop mounted to move on the table independently of the base plate; means for holding the stop in adjusted positions; carriages mounted to move on the base plate transversely of the base plate; pivotally supported automatically adjustable jaws mounted on the carriages; means for moving the carriages toward and away from each other; cutters upheld by the frame and mounted to move adjacent the jaws; and means for operating the cutters.

1,158,058. CENTRIFUGAL BURNER. JOSEPH H. KING, Oakland, Cal., assignor, by mesne assignments, to American Standard Oil Burner Co., Oakland, Cal., a Corporation of California. Filed Mar. 23, 1914. Serial No. 826,678. (Cl. 158—77.)



1. In a centrifugal burner, the combination of a casing open at its upper end, an open enlarged cup shaped centrifugal atomiser journaled in the casing, said atomiser having its open end projecting through the upper end of the casing, and means for introducing oil into the lower end of the atomiser.

2. In a centrifugal burner, the combination of a casing open at its upper end, an open outwardly flaring enlarged cup shaped centrifugal atomiser journaled in the casing, said atomiser having its open end projecting through the upper end of the casing and spaced from same, means for introducing oil through the lower end of the atomiser, and means for inducing an air current through the casing between the atomizer and casing.

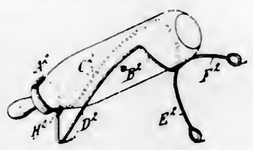
3. In a centrifugal burner, the combination of a casing open at its upper end, an open cup centrifugal atomiser journaled in the casing, said atomiser having its open end projecting through the upper end of the casing and spaced from same, means for introducing oil through the lower end of the atomizer, means for inducing an air current through the casing between the atomizer and the casing, and means for controlling the volume and velocity of the air.

4. In a centrifugal burner, the combination of a casing open at its upper end, an open cup centrifugal atomiser journaled in the casing, said atomiser having its open end projecting through the upper end of the casing and spaced from same, means for introducing oil through the lower end of the atomizer, means for inducing an air current through the casing between the atomiser and the casing, means for controlling the volume and velocity of the air, and a collar on the upper end of the casing adapted to be raised or lowered with relation to the atomiser.

5. In a centrifugal burner, the combination of a casing open at its upper end, an oil-delivering hollow standard, centrally disposed and secured within the casing, a sleeve revolubly mounted on said standard, an open cup centrifugal atomiser secured to the sleeve and projecting through the upper end of the casing, said atomiser and casing inclosing an air conduit, means for forcing an air current through the conduit, a collar mounted on the upper end of the casing, said collar in conjunction with the atomiser forming an annular discharge for the air conduit, and means for adjusting the position of the collar to increase or decrease the area of the annular discharge opening.

[Claims 6 to 10 not printed in the Gazette.]

1,158,059. NURSING-BOTTLE HOLDER. CHARLES KLAUBERG, New York, N. Y. Filed Nov. 25, 1914. Serial No. 873,975. (Cl. 248—20.)



1. A bottle holder, formed of wire and comprising a pair of connected curved supports, one of said supports adapted to receive the bottle neck, and the other the bottle body, the bottle neck support being formed as a ring with wires crossing each other near the ring, whereby the said support is substantially inexpansible, the body support being spring-pressed and adapted to open to receive the bottle and to press against the bottle when inserted and clamp the same, and a supporting portion extending substantially laterally from near the body support, and adapted to support the bottle in operative or inoperative position.

2. A bottle holder formed of a single piece of wire bent to annular form to support the bottle neck, the wires being secured to each other near said support whereby the said support is substantially inexpansible, and the wires then bent in a rearward direction and each end bent to curved form to form one side of the curved support for the bottle body and having portions projecting from each side of said latter support substantially laterally to form a support for the bottle, whereby the bottle may be held with its mouth lowered to operative position or raised to inoperative position, the ends of the wires forming the sides of the body support being free, and having a spring tendency, whereby said support may be opened to insert the bottle and will firmly clamp the bottle when inserted.

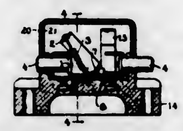
3. A bottle holder formed of a single piece of wire bent to annular form to provide a bottle-neck support, the ends thereof passed around each other and extending rearwardly and being then bent downwardly and curved toward each other to provide a body support, and said ends then extending outward to provide a support whereby the bottle may be held with its mouth lowered to operative position or raised to inoperative position, the ends of the wires forming the sides of the body support being free, and having a spring tendency, whereby said support may be opened to insert the bottle and will firmly clamp the bottle when inserted.

4. A bottle holder formed of a single piece of wire bent to annular form to provide a bottle neck support, the ends thereof passed around each other and extending rearwardly and being then bent downwardly and curved toward each other to provide a body support, and said ends then crossing each other and extending outwardly from the bottle in diverging lines to provide a support, whereby the bottle may be held with its mouth lowered to operative position or raised to inoperative position, the ends of the wires forming the sides of the body support being free and having a spring tendency, whereby said support may be opened to insert the bottle and will firmly clamp the bottle when inserted, and each of said free ends bent to produce an enlarged base.

5. A bottle holder formed of a single piece of wire bent to form a pair of connected curved bottle supports, the forward support adapted to receive the bottle neck, and the rear support the bottle body, the said wires being secured together before being bent to form the rear support a short distance from said support and having free ends and a spring tendency, whereby the said wires may be sprung apart at the rear support to insert the bottle therein, and will spring against and firmly clamp the same, and the wires forming said bottle holder being extended laterally at or near said rear support forming a base adapted to support said bottle in operative position with its mouth lowered or in inoperative position with its mouth raised.

[Claims 6 and 7 not printed in the Gazette.]

1,158,060. ELECTRIC SWITCH. CHARLES J. KLEIN, Milwaukee, Wis., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 13, 1914. Serial No. 818,452. (Cl. 175—287.)



1. In an electric switch, in combination, a support, reciprocating operating member movable across the same and having an open bearing and a longitudinal slot adjacent said bearing, an oscillating contact member having a pivotal portion at one end journaled in said bearing, and resilient means, including a coil spring, extending through said slot and connecting the free end of said contact member to said support for maintaining said contact member in pivotal connection with said operating member and for imparting a snap movement to the former upon reciprocation of the latter.

2. In an electric switch, in combination, a rectilinearly movable operating member, an oscillatory contact member having its pivotal bearing on said operating member, said operating member upon movement thereby shifting said bearing and moving said contact member bodily, and resilient means associated with said contact member to oscillate the same with a snap action after a predetermined bodily movement thereof.

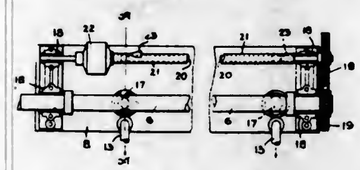
3. In an electric switch, in combination, a reciprocable operating member having an open bearing, an oscillating contact member having a portion journaled in said bearing, and resilient means acting on said contact member to hold the same in pivotal connection with said operating member and to impart a snap movement to said contact member upon reciprocation of said operating member.

4. In an electric switch, in combination, a reciprocating operating member, an oscillating contact member pivotally connected thereto and bodily movable thereby, and resilient means associated with said members to bias the same to extreme positions and to impart a snap movement to said contact member after a predetermined initial movement of said operating member.

5. In an electric switch, in combination, a reciprocatory operating member, an oscillatory contact member having its supporting and pivotal bearing on said operating member to move therewith, said contact member thereby being bodily movable, and resilient means acting directly on said contact member to oscillate the same with a snap action and acting through said contact member to bias said operating member to an extreme position.

[Claims 6 to 11 not printed in the Gazette.]

1,158,061. FUEL-PUMP FOR INTERNAL-COMBUSTION ENGINES. BERNHARD KRÄMER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Oct. 30, 1912. Serial No. 728,665. (Cl. 123—140.)



1. In a pump, the combination of a cylinder, a plunger therefor, suction and discharge valves for the cylinder, a pair of shafts, gearing between the shafts, a cam on one shaft for actuating the plunger, a cam on the second shaft for controlling the suction valve, said last named cam having an inclined face and being axially movable on the shaft to vary the periods of opening and closing of the suction valve, and a governor for moving such cam.

2. In a pump, the combination of a cylinder, a plunger therefor, suction and discharge valves for the cylinder, a pair of shafts, gearing between the shafts causing them to revolve at the same speed, a cam on one shaft for actuating the plunger, a cam on the second shaft for controlling the suction valve, said cams occupying the same angular position on their respective shafts and said last named cam having an inclined face and being movable axially on the shaft, and a speed governor mounted on the shaft which carries the axially movable cam for moving it longitudinally thereon.

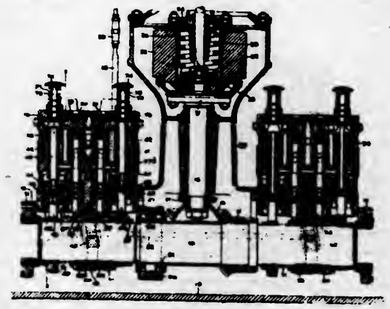
3. In a pump, the combination of a cylinder, a plunger therefor, suction and discharge valves for the cylinder, a shaft for actuating the plunger, a second shaft geared to the first, a cam carrying sleeve on the second shaft, and a governor driven by one of the shafts for moving the cam sleeve longitudinally to vary the action of the suction valve.

4. In a pump, the combination of cylinders arranged in a row in the same plane, plungers therefor, suction valves arranged in a second and parallel plane, parallel cam shafts, means on one of said shafts for actuating the plungers, a member movable axially of the other shaft, cams carried by said member for actuating the suction valves, the action of said cams on the suction valves being varied according to their axial position thereon, a governor for moving said member axially on its shaft, and means for operating the shafts.

1,158,062. PUMP MECHANISM FOR INTERNAL-COMBUSTION ENGINES. BERNHARD KRÄMER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Feb. 10, 1913. Serial No. 747,402. (Cl. 123—140.)

1. In a pump, the combination of a driving shaft, pump casings extending perpendicularly to the shaft and separated by a space, a speed governor located in the space between the casing and driven by the shaft, plungers in the casings that are moved by the shaft, suction and discharge valves coöperating with the plungers, adjustable cams on the shaft for moving the suction valves, means connecting the cams for simultaneous movement, and a device operated by the governor for moving the cams axially on the shaft.

2. In a pump, the combination of a driving shaft, a housing therefor, pump casings extending perpendicularly to the shaft and supported by the shaft housing, a speed governor located between the pump casings, a housing for the governor suppofted by the shaft housing, plungers for the casings, suction and discharge valves for the plungers, a set of cams fixed on the shaft for moving the plungers, a second set of cams mounted on the shaft and adjustable axially thereon to regulate the period of closing of the suction valves, and a connection between the speed governor and the second set of cams to move them axially on the shaft.



3. In a pump, the combination of a driving shaft, a pair of casings spaced from each other and each containing a plurality of parallel cylindrical bores, suction and discharge valves, plungers located in certain of said bores, suction valve actuators located in the remaining bores, anti-friction rollers coöperating with the plungers and actuators, cams driven by the shaft and engaging the rollers, and means located in the space between said casings for moving the cams that actuate the suction valves to control their period of closing.

4. In a pump, the combination of a driving shaft, a casing containing a plurality of cylindrical bores, suction and discharge valves, plungers located in the outside bores, suction valve actuators located in the adjacent inside bores, cams for moving the actuators, a holder slidably mounted on and rotated by the shaft which carries said cams, other cams fixed on the shaft and located at the ends of said holder, and means for moving the holder on the shaft.

5. In a pump, the combination of a driving shaft, a casing containing a plurality of cylindrical and parallel bores, suction and discharge valves, plungers located in some of the bores, suction valve actuators located in the other bores, a chamber that supplies liquid to the suction valves, a passage that communicates with the bores of the plungers to receive leakage, means driven by the shaft for moving the plungers and actuators, and means for varying the effective action of the actuators on the suction valves.

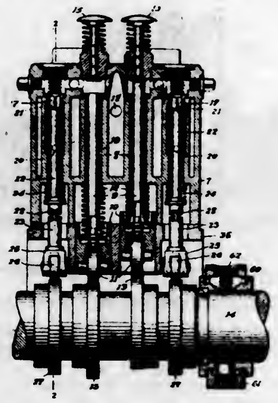
[Claims 6 to 11 not printed in the Gazette.]

1,158,063. CONTROLLING MECHANISM FOR FUEL-PUMPS. BERNHARD KRÄMER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Sept. 30, 1913. Serial No. 792,621. (Cl. 123—139.)

1. In a pump of the character described, the combination of a cylinder, a plunger therefor, a discharge valve, a suction valve, a divided lifter for one of the valves, a means for imparting movements to the plunger and lifter, means for changing the length of the lifter to change the time of closing of its coöperating valve with relation to the working stroke of the plunger, and means for moving the lifter to open said coöperating valve and to hold the lifter out of operative relation to the movement imparting means.

2. In a pump of the character described, the combination of a cylinder, a plunger therefor, a discharge valve, a suction valve, a divided lifter for one of the valves that extends parallel with the plunger, cams that move simul-

taneously and actuate the plunger and lifter, a means located between the adjacent ends of the parts of the lifter by means of which the total length of the lifter can be changed to vary the time of closing of its coöperating valve with relation to the working stroke of the plunger, and means for moving the lifter to open said coöperating valve and to hold the lifter out of the path of movement of its actuating cam.



3. In a pump, the combination of a cylinder, a plunger, suction and discharge valves for the cylinder, a lifter for the suction valve, means for reciprocating the plunger and lifter in the normal operation of the pump, an oscillatory member for moving the lifter to open the suction valve and move the lifter out of operative relation to said means, automatic means for oscillating said oscillatory member, and manual controlled means and speed controlled means for setting said automatic means into operation.

4. In a pump, the combination of a cylinder, suction and discharge valves therefor, a plunger, a lifter for the suction valve, a device that is vibrated by the lifter, a rotary means for imparting reciprocating movements to both the plunger and lifter, means for changing the phase relation of the plunger and lifter to permit the suction valve to close earlier or later, and an actuator that engages and moves said device to positively raise the lifter out of the path of said rotary means, and open the suction valve.

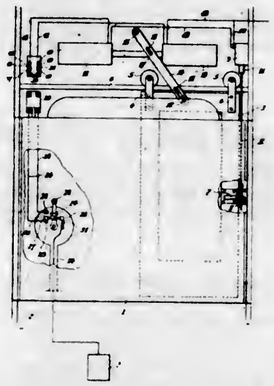
5. In a pump, the combination of a cylinder, suction and discharge valves therefor, a plunger, a lifter for the suction valve, means for imparting movements to the plunger and lifter, a mechanism for regulating said means to vary the time of closing of the suction valve, and a means for positively holding the suction valve open to stop the pumping action comprising a pivotally supported member that engages the lifter, and an actuator for turning said member in a manner to positively raise the lifter out of the path of the means which normally moves it.

[Claims 6 to 15 not printed in the Gazette.]

1,158,064. ELECTRIC ELEVATOR-DOOR-OPERATING DEVICE. CLYDE D. LAWRENCE, Youngstown, Ohio. Filed Sept. 9, 1914. Serial No. 860,923. (Cl. 187—54.)

1. In apparatus of the class described, electrically actuated door operating means, circuit closers for said operating means, car carried means to actuate said circuit closers, a car carried controlling lever, a cam on said lever and switch devices actuated by said cam and included in the circuits with said door operating means and said circuit closers.

2. In apparatus of the class described a door operating lever bar, solenoids arranged with a common core, the latter being connected to said lever bar, circuits including the windings of the solenoids and also including circuit closers and each of said circuit closers having a push button, and a car carried cam to actuate said push buttons and cause the same to close the circuit closers and a car carried lever and switch devices actuated by said lever and included in the circuits with the said door operating means and said circuit closers.



3. In apparatus of the class described electrically actuated door opening and closing means, electrically operated latch operating means for the door, an electric circuit including the latch operated means and the door opening means, an electric circuit including the door closing means, circuit closers for said electric circuits, car carried means to close said circuit closers, switch devices for said circuits and means to actuate said switch devices.

1,158,065. PROCESS OF RAISING PRINTING. SAMUEL LIPSIUS, New York, N. Y. Original application filed Nov. 25, 1914, Serial No. 873,946. Divided and this application filed Apr. 10, 1915. Serial No. 20,390. (Cl. 101—182.)

1. A process of the nature disclosed for producing raised printing, which comprehends printing a flat character by means of an ink containing boiled linseed oil; and then fusing a gum of animal origin on said character.

2. A process of the nature disclosed for producing raised printing, which comprehends printing a flat character by means of an ink containing rosin and an oily agent, and then fusing a gum of animal origin on said character.

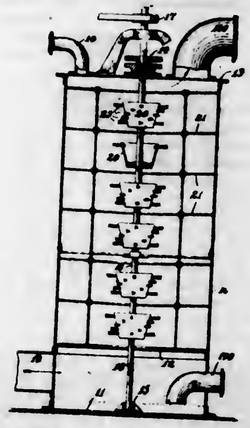
3. A article of manufacture consisting of a sheet of hard bond paper provided with printed characters raised in simulation of engraving and consisting of a fused compound composed of a shellac-like gum homogeneously blended into a water-free ink containing pigment but devoid of material amounts of quick-setting varnish elements; said characters adhering so tenaciously to the paper and being so flexible that said paper may be creased across said characters without appreciably flaking and peeling said characters.

4. A process of producing raised flexible printing which comprehends imprinting on paper flat characters by means of a water-free ink containing oily material insoluble in water and pigment, but devoid of material amounts of quick-setting varnish elements, and then fusing onto said flat characters a powdered compound containing shellac.

1,158,066. GAS-SCRUBBER. ROBERT MACLAURIN, Stirling, Scotland. Filed July 3, 1915. Serial No. 37,804. (Cl. 48—133.)

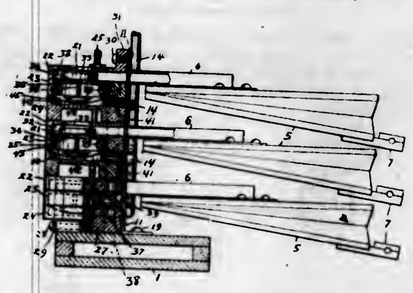
A gas scrubber comprising a vertical casing, with dividing partitions, a series of small vessels disposed in vertical succession therein, and adapted to be rapidly horisontally rotated in unison, each vessel being provided with brushes

having short flaring bristles communicating with the interior of the vessels, and means for supplying a scrubbing



liquid at the top of the casing, and gas to be scrubbed at the bottom of the casing.

1,158,067. PNEUMATIC ACTION FOR PIANO-PLAYERS. NELS MAGNUSON, Fort Wayne, Ind. Filed Apr. 12, 1915. Serial No. 20,683. (Cl. 84—178.)



1. In a pneumatic action for piano-players, a universal air chamber; a series of pneumatic members arranged in groups; a supporting plate for each group of pneumatic members; an air-duct having supporting and communicating relation with each pneumatic member and being attached to the said plate and having communication therethrough; a pack or valve case containing a series of valves, one for each of the pneumatic members, said valves having communication through suitable passage-ways made in said pack with said air-chamber; and means for securing said pack in connection with said supporting plate, there being communication with each of said valves through said plate with the corresponding air-ducts.

2. In a pneumatic action for piano players, a multiplicity of pneumatic members arranged in groups; an independent supporting plate for each of said groups; a detachable casing secured to each of said plates, there being communicating means through each of said plates, from the members to the corresponding casings; corresponding groups of valves for the pneumatic members contained within said casings; means communicating respectively with said valves through the supporting plate and leading to the tracker-bar of the instrument for controlling the valves; and an air-chamber having communication with said valves through suitable passage-ways for the movement of air to actuate said valves.

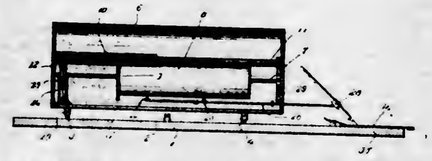
3. In a pneumatic action for piano-players, a detachable plate having openings made therein; a group of pneumatic members attached upon one side of the plate and having respectively communication through the corresponding openings in the plate; a removable valve-casing attached to the opposite side of the plate and have chambers therein that communicate correspondingly through said plate with the pneumatic members; a valve contained in each of said chambers; and pneumatic means for actuating the valves.

4. In a pneumatic action for piano-players, a series of independent supporting plates; a group of pneumatic members supported by said plate upon one side thereof; valve mechanism detachably mounted on the opposite side of the supporting plate and having communications therethrough severally with said pneumatic members; and pneumatic means for actuating said valve mechanism.

5. In a pneumatic action for piano-players, a detachable pack made up of sections arranged in groups and secured together, the two uppermost sections of each group having alined valve openings; a valve in the chamber of each of the uppermost sections; a diaphragm between the two lowermost sections of each group adapted to actuate the corresponding valves, said pack having passage-ways for air communication with the chamber of the middle section of each group; air communicating means adapted for connection with the tracker-bar of the instrument and having communication severally with the chamber of the lowermost section of each group; and a series of pneumatic members having communication respectively with the chamber of the uppermost section of each group.

[Claim 6 not printed in the Gazette.]

1,158,068. SIGNATURE-MACHINE. CURTIS F. MILLMAN, Woodside, Del., assignor to Ferdinand Schorno, Passaic, N. J. Filed July 18, 1913. Serial No. 779,852. (Cl. 33—18.)



1. An automatic signature machine including a platform, an inscribed control roller operative thereon, means for moving the control roller longitudinally of the platform, fingers following the inscription on the roller and an inscribing implement holding arm operated by said fingers.

2. An automatic signature machine including a platform, an inscribed control roller operative thereon, means for moving the control roller longitudinally of the platform, fingers following the inscription on the roller, an inscribed implement holding arm operated by said fingers, means controlling said arm to vary the pressure of the inscribing implement upon the surface being written on.

3. An automatic signature machine including a platform, an inscribed control roller operative thereon, means for moving the control roller longitudinally of the platform, fingers following the inscription on the roller, an inscribing implement holding arm operated by said fingers, means controlling said arm to vary the pressure of the inscribing implement upon the surface being written on, last named means being formed to elevate said arm to hold the scribing implement out of contact with said surface.

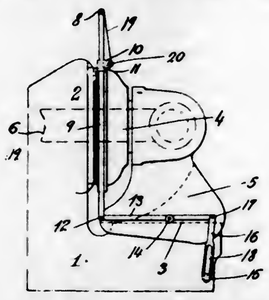
4. A signature machine including a base, a platform mounted thereon to move transversely thereof, an inscribed control roller, means for moving said roller longitudinally of the platform, simultaneously with the movement of the platform transverse the base, fingers operated by the inscription on the platform, an implement holding arm mounted on the platform and connected to the fingers, and means for varying the pressure of said arm with respect to the surface being operated upon.

5. A machine as characterized, comprising a marking pen, a paper holder disposed in juxtaposed relation to said

pen, a plurality of cam-shaped members individualised in contour; and means operatively connecting said cam-shaped members and said pen to produce a composite effect on said pen of tracing a character with variable pressure.

[Claim 6 not printed in the Gazette.]

1,158,069. SAFETY-GUARD FOR PRINTING-MACHINES. LEWIS E. MORRISON, Newark, N. J., assignor to Humana Company, a Corporation of New Jersey. Filed Dec. 18, 1914. Serial No. 877,849. (Cl. 101—15.)



1. In a printing press or similar machine the combination with a platen, of a hand lifting guard pivoted on the latter, guard operating means pivoted on the platen and to the said guard; a fixed stop secured to the frame of the machine, a movable stop lever connected to said operating means and provided with a slot adapted to coöperate with said fixed stop for controlling the movements of said operating means.

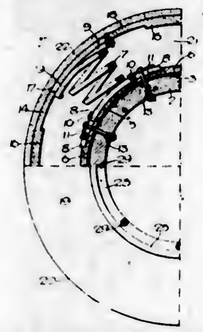
2. In a printing press or similar machine the combination with a platen, of a hand lifting guard comprising a cross bar and two side bars, guides pivoted on said platen for the said side bars, operating levers pivoted to the latter and to the said platen and controlling mechanism for said operating levers comprising fixed stops on the frame of the machine and stop levers slidably mounted on said fixed stops and connected to said operating levers.

3. In a printing press or similar machine the combination with a platen, of a hand lifting guard comprising a cross bar and two side bars, guides pivoted to said platen for the said side bars, a rod connecting the said guides, a flexible guarding member connected to the said rod and the said cross bar, operating levers for said side bars pivoted on the said platen and controlling mechanism for said operating levers comprising fixed stops on the frame of the machine and stop levers slidably mounted on said fixed stops and connected to said operating levers.

1,158,070. SPRING-TIRE. ARTHUR JOSEPH MORSE, Newport, Melbourne, Victoria, Australia. Filed July 1, 1914. Serial No. 848,332. (Cl. 152—8.)

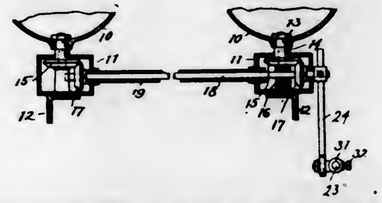
1. In a tire, the combination of inner and outer substantially concentric rings, protuberances arranged on the opposing faces of said rings, the said protuberances being arranged in pairs and elongated circumferentially of the tire, the end walls of each pair of said protuberances being arranged in a line substantially radially of the wheel and tire, and helical springs interposed between said rings and having their terminal convolutions of greater diameters than the intermediate convolutions and snugly embracing the walls of the opposing protuberances.

2. In a tire, the combination of inner and outer substantially concentric flexible rings, protuberances formed integrally within said rings upon the opposing faces thereof, the said protuberances being arranged in pairs and elongated circumferentially of the tire, the end walls of each pair of said protuberances being arranged in a line substantially radially of the wheel and tire, and helical springs interposed between said rings and having their terminal convolutions of greater diameters than the intermediate convolutions and snugly embracing the walls of the opposing protuberances.



3. In a tire, the combination of inner and outer flexible and substantially concentric rings having radially alined protuberances upon their opposing faces and helical springs interposed between said rings and embracing said protuberances with their end convolutions; retention plates each provided at its opposite ends with angular disposed lips for engagement with the inner face of the said end convolutions, each plate extending from one spring to the adjacent end of the next radially disposed spring, and bolts passing through said plates and the said inner ring to secure the tire to the rim of the wheel.

1,158,071. HEADLIGHT-TURNING MECHANISM FOR VEHICLES. JAMES W. MOTT, Cresco, Iowa, assignor of one-third to Albert Christen and Clarence Christen, Decorah, Iowa. Filed May 24, 1915. Serial No. 29,969. (Cl. 140—62.)



1. In combination with a vehicle having a steering mechanism, a movable headlight, a housing supported on the front part of the vehicle and provided with an upwardly projecting fixed stud, a bevel gear having a socket receiving said stud and connected to said headlight so as to turn the same, a shaft supported by said housing and having a bevel gear meshing with the first named bevel gear, and mechanism connecting said shaft to the steering mechanism so that the headlight will be turned with the steering mechanism.

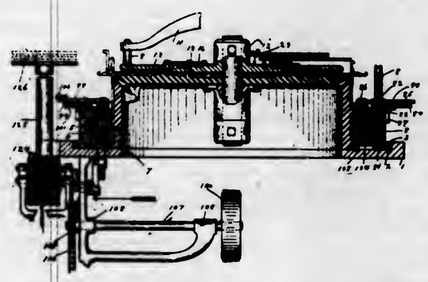
2. In combination with a vehicle having a steering gear and a movable headlight, a housing supported on the front part of the vehicle provided with an upwardly projecting fixed stud, a bevel gear having a socket receiving said stud and an extension projecting upwardly through the top of the housing and connected to the lamp, a horisontal shaft journaled in said housing and having a second bevel gear meshing with the first named bevel gear, and means connecting said shaft to said steering mechanism for causing said shaft and headlight to turn with the steering mechanism.

3. In combination with a vehicle having a steering mechanism and a pair of movable headlights, a pair of housings supported on the front part of the vehicle, each housing having a fixed upwardly projecting stud, bevel gears mounted on said studs and having extensions projecting upwardly through the top of the housings and connected to the two headlights, a shaft extending through and journaled in one of the housings beneath the said stud therein and extending into and journaled in the other housing, bevel gears secured to said shaft and meshing with the first named bevel gears, and mechanism connecting said shaft to the steering mechanism so that the headlights will be turned with the steering mechanism.

4. In combination in a vehicle having a chassis, a steering gear and a movable headlight, a vertical rotary support for the headlight, and mechanism for connecting said lamp support to the steering gear, said mechanism comprising a horizontally disposed shaft, gearing connecting the shaft to the rotary lamp support, a crank fixed to said shaft, a rod secured to said crank, a second rod attached to said first named rod, a lever attached to said second named rod and connected to the steering gear.

5. In combination with a vehicle having a chassis, a steering gear, a pair of movable headlights, a pair of housings mounted on the front part of the chassis, vertical members extending upwardly through said housings and supporting the headlights, a shaft extending through one of the housings across the front of the vehicle and into the other housing, gears attached to said lamp supports and located in the two housings, coöperating gears attached to said shaft for rotating the first named gears, and means connecting said shaft to the steering gear whereby said lamps will be turned with the steering gear.

1,158,072. RIB-KNITTING MACHINE. HENRY W. NIERMEYER, Utica, N. Y. Filed Apr. 3, 1914. Serial No. 829,400. (Cl. 66—22.)



1. In a knitting machine adapted to make rib fabric of different types at predetermined intervals, comprising a needle cylinder and dial, needles in said cylinder and dial, recurrent needles thereof being longer than the others, actuating cams for the needles of the cylinder and dial, said cams being arranged to form separate cam paths for the long and short needles and including shiftable tuck cams and shiftable cast-off cams for the long needles, actuating rings for the dial cams; intermediate connections between the rings and the shiftable cams; a series of superposed rings for actuating the cylinder cams so as to effect the action of the cylinder needles to correspond with the action of the dial needles; intermediate connections between the rings and the cams; a trip device for actuating the rings and a patern mechanism for actuating the trip device; and an independent trip device coacting with the rings for shifting the dial needle cams to effect the dial needles simultaneously with the change effected on the cylinder needles.

2. In a knitting machine adapted to make fabrics of different types, a dial and a cylinder, each having needles, the shanks of recurrent dial and cylinder needles shaped so as to be controlled by movable cams adjacent the dial and cylinder whereby the knitting of said needles may be changed independent of the other dial and cylinder needles, and trip mechanisms operated by an adjustable pattern device or devices, arranged to change knitting from one and one to two and two fabric and vice versa.

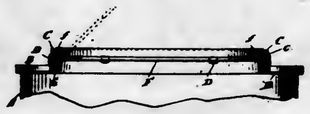
3. The combination in a knitting machine adapted to make rib fabric of different types at predetermined intervals a cylinder and dial carrying needles; recurrent needles thereof being longer than the others, needle cams and cam actuated mechanism including rings and levers and intermediate connections for changing the action of the recurrent cylinder and dial needles and trip mechanism co-acting with said levers to effect the different types of knitting.

4. The combination in a knitting machine with a cylinder of two sets of needles therefor; a dial carrying two sets of needles, each third needle of the dial and cylinder being longer than the others so as to travel in a different path; a series of movable cams for the long needles of the dial and cylinder; link connections for the cams respectively; rings adjacent the cylinder and dial for actuating the links and cams; trip levers connected to the rings carrying stepped contacts to co-act with the trip mechanism to move the needle cams of the dial and cylinder step by step to effect a gradual change in the knitting from one and one to two and two ribbed fabric; a pattern mechanism controlled by the fabric to actuate the trip mechanism to effect a change in the action of the dial and cylinder needles simultaneously.

5. The combination in a knitting machine for making different types of rib fabric, with the dial and cylinder, two series of needles carried by the dial and cylinder recurrent needles thereof being operated by separate cams of the dial and cylinder, certain of said cams being movable independent of the other cams, means connecting with and operating said movable cams of the dial and cylinder to put the recurrent needles into and out of knitting action at intervals to change the type of fabric being knitted.

[Claims 6 to 9 not printed in the Gazette.]

1,158,073. SEALED PACKAGE. FRANK PAYNE, St. Louis, Mo., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 10, 1913. Serial No. 747,272. (Cl. 220—77.)



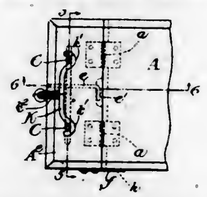
In a sheet metal sealed container, in combination: a can body; a top permanently secured thereto, the top being formed with an upwardly extending neck consisting of an outer wall having means for engaging the inclosing flange of a cover, an inwardly extending annular top and a short inner wall depending from the inner edge of said annular top, the lower edge of said depending wall forming a shoulder; a cup-shaped sealing plate of thin ductile metal fitted tightly within said depending wall, having a top flange extending over said annular top of the neck and having its vertical wall swaged outward against said depending wall and the lower portion of its vertical wall under the said shoulder of the depending wall; and a removable and replaceable cover having a securing flange which incloses said neck and engages the outer wall of the same.

1,158,074. FILING DEVICE. JAMES H. RAND and JAMES H. RAND, Jr., North Tonawanda, N. Y. Filed Apr. 29, 1914. Serial No. 835,087. (Cl. 129—6.)

1. A filing device comprising a base having a pair of holes opening through its top surface, and a U-shaped rod, the legs of which constitute a pair of filing spindles extending upward through said holes, said base also having a slot extending between said holes, in which the cross part which connects the legs of said U-shaped rod is housed.

2. A filing device comprising a base divided into a main section and a hinged section, said hinged section having

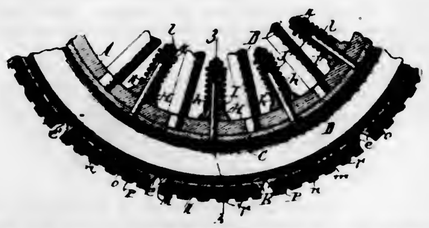
a pair of holes therethrough and a slot connecting said holes on the under side, a U-shaped rod, the legs of which constitute a pair of filing spindles extending upward through said holes, and the cross part of which is housed in said slot, and a pin extending from the inside or abutting surface of said hinged section across said slot to hold the cross part of said U-shaped rod in position.



3. A filing device comprising a base having a pair of holes therethrough and a slot connecting said holes on the under side, a U-shaped rod, the legs of which constitute a pair of filing spindles extending upward through said holes, and the cross part of which is housed in said slot, and a pin extending across said slot to hold the cross part of said U-shaped rod in position.

4. A filing device comprising a base, filing spindles extending upward from the base, a sheet holder consisting of a yoke extending between the spindles, the ends of the yoke removably engaging the spindles at one side only, and a spring connecting said base and yoke yieldingly pressing the latter against the spindles and down upon the sheets.

1,158,075. TIRE-PROTECTOR. JASON RICHARDSON, Buffalo, N. Y. Filed May 17, 1910. Serial No. 561,912. (Cl. 152—16.)

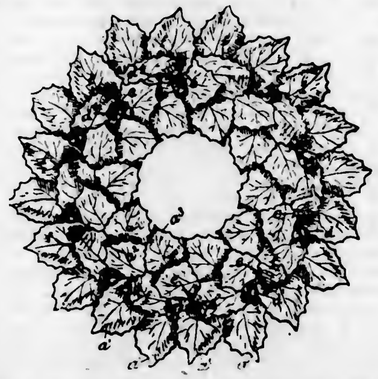


A tire protector comprising a rectangular shoe adapted to be applied to the tread of a tire and provided on its outerside with an outwardly opening pocket having transverse and longitudinal walls which flare outwardly and a plurality of anchoring hooks arranged on the bottom of said pocket and terminating short of the outerside of said shoe, an inner permanent rubber layer arranged in said pocket and having its outer face terminating short of the outer side of said shoe and interlocked with said hooks, and an outer renewable rubber layer secured detachably to the inner permanent layer, said shoe being cast on said anchors for connecting the same.

1,158,076. WREATH, VINE, OR SPRAY OF ARTIFICIAL LEAVES. ARMOND G. ROSSIG, Weehawken, and THOMAS S. CRANE, East Orange, N. J.; said Crane assignor to said Rossig. Filed Mar. 6, 1915. Serial No. 12,504. (Cl. 41—12.)

1. The combination, with a base-wire, of a series of composite leaves each having a perforation contiguous to the line of the base-wire, and a locking wire secured to the base wire and extended through such perforation, and bent laterally over the outer side of the leaf, and locking the leaf positively in a fixed relation to the base-wire.

2. The combination, with a base-wire, of a series of leaves each having a perforation contiguous to the line of the base-wire, and a locking wire secured to the base-wire and carrying an enlargement, as a berry, adapted to pass through such perforation, and bent laterally over the outer side of the leaf, and thus locking it positively to the base-wire.

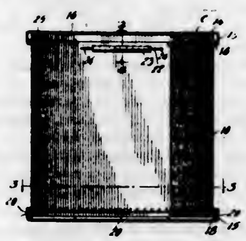


3. The combination, with a base-wire, of a series of leaves each having a perforation with flexible flap at the side of the same, a locking wire secured to the base-wire and carrying an enlargement, as a blossom or berry, adapted to pass through the said perforation by flexing the said flap.

4. The combination, with a base-wire, of a series of leaves each having a perforation with flexible flap at the side of the same, a plurality of locking wires secured to the base-wire each carrying a berry adapted to pass through the said perforation by flexing the said flap.

5. The combination, with the base-wire, of a series of composite leaves attached thereto and each embossed to imitate toothed leaves like holly with junction lines between them and a perforation near the tip of the composite leaf, and each leaf overlapping the shank of the succeeding leaf in the series, a locking-wire attached to the shank of each leaf, and passed through the perforation of the overlapping leaf, and bent laterally thereon, and the shank of each leaf having joined therewith the shank of a separate loose leaf, similarly toothed, and arranged to overlap the junction lines on the composite leaf, and producing therewith, by its identity of character, the semblance of a group of wholly loose leaves.

1,158,077. SHEET-METAL CONTAINING AND DISPENSING CAN. FRANK RUDOLPHI, Montclair, N. J., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 8, 1912. Serial No. 669,929. (Cl. 220—5.)



1. In a sheet metal container, in combination: a polygonal body portion; a top and a bottom of the same size and polygonal contour externally and at the marginal portions of their tops, and each formed at its lower edge with an inturned curl, the said curl of the top inclosing the upper ends of the sides of the body and the said curl of the bottom forming a finish beyond the lower edges of the bottom, the said bottom being formed with a surrounding elevated upward, inward and downward bend and with a depressed panel forming the bottom, proper, and the lower edges of the sides of the body being seated on said panel within said elevated bend.

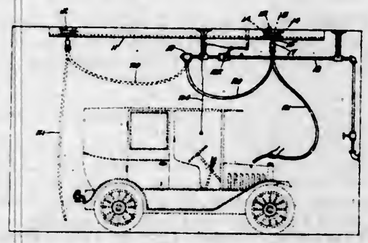
2. An article of the class described comprising a body member having an angular cross section, and having a bottom member secured thereto by means of tongues and slots, the tongues being formed integral with the body portion, a cover hinged to said body portion, the cover and bottom members each having the same cross sectional area and contour, the bottom member having furthermore a depressed panel portion in which the bottom of the body is adapted to be seated.

1,158,078. LAMP-BRACKET. HENRY J. SAUER, Fairfield, Conn. Filed June 8, 1915. Serial No. 32,812. (Cl. 240—57.)



In a headlight bracket, a pair of clamping jaws, a head carried by one of said jaws having a passage therethrough, a rotatable member supported at the outer end of said head, a hollow bolt uniting said parts friction-tight but permitting the rotating member to be rotated on the head to different positions of adjustment, a saddle pivotally connected on said rotating member to rock, with means for holding said saddle friction-tight in different positions of adjustment relatively to said rotating member.

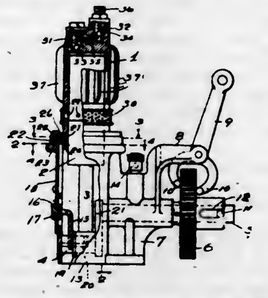
1,158,079. APPARATUS FOR WASHING AUTOMOBILES AND OTHER VEHICLES. WILLIAM F. SAUNDERS, Boston, Mass. Filed Sept. 22, 1914. Serial No. 863,018. (Cl. 137—14.)



1. An apparatus for washing automobiles and other vehicles, consisting of an overhead water supply pipe, an overhead track, a carriage movable on said track, a short water pipe section suspended rigidly from the said carriage and extending in a line transversely of the line of direction of the said track, a flexible hose one end of which has a connection with said water supply pipe intermediate the two terminal points of travel of the carriage, the other end of said hose having connection with one end of said transverse pipe and a second flexible hose one end of which is connected with the other end of said transverse pipe, the other end of said second flexible hose being freely movable, the said carriage and suspended transverse pipe each having a range of travel in a straight line for equal distances on the two opposite sides of the said point of connection of said first flexible hose with the supply pipe, the said transverse pipe traveling with the carriage and maintaining the said two flexible hose pipes on opposite sides of the path of travel of the carriage during the travel.

2. An apparatus for washing automobiles and other vehicles consisting of an overhead water supply pipe, an overhead horizontal track parallel with the said pipe, a carriage movable on said track, a horizontal short water pipe rigidly suspended from the said carriage and extending transversely of the line of direction of said track, a flexible hose of a length equal to substantially one half of the desired length of travel of the carriage, one end of said hose having a connection with said water supply pipe intermediate the two terminal points of the travel of the carriage, the other end of said hose having connection with one end of said transverse pipe and a second flexible hose one end of which is connected with the other end of said transverse pipe of such length that when hanging free it will clear the floor, so that the said carriage and said suspended transverse pipe each have a range of travel in a straight line for equal distance on the two opposite sides of said point of connection of the said flexible hose with the supply pipe, the said transverse pipe maintaining the two flexible pipes at all times on opposite sides of the path of travel of the carriage during the travel.

1,158,080. AIR-PUMP. JOHN K. STEWART, Chicago, Ill., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill., a Corporation of Virginia. Filed Mar. 18, 1914. Serial No. 825,462. (Cl. 184—18.)



1. In a pump piston and a cylinder in which the piston is mounted to reciprocate, the cylinder wall having at a plane transverse to the piston movement and intermediate the ends of the piston path, an aperture leading through said wall and opening into the piston path, and an absorbent oil wick extending from the exterior of the cylinder through said aperture for wiping contact with the piston.

2. In combination with a cylinder and a piston reciprocating therein, the cylinder having at a plane transverse to the path of reciprocation of the piston intermediate the ends of said path a series of apertures leading from the outside of said cylinder to the path of the piston therein, an annular oil wick of absorbent material encompassing the cylinder and having projections extending into said apertures for wiping contact with the piston, and means for retaining said annular wick in its position about the cylinder.

3. In combination with a vertically reciprocating piston and a cylinder in which it is mounted to reciprocate, said cylinder having a series of lateral apertures in its wall, an annular oil wick encircling said cylinder and having projections extending through said apertures for wiping contact with the piston.

4. In an air compressor a piston and an apertured cylinder in which it is mounted to reciprocate, an annular oil wick of absorbent non-combustible material encircling said cylinder and having a projection extending through the aperture thereof for wiping contact with the piston in its travel.

5. In combination with a vertically reciprocating piston, a cylinder in which it is mounted to reciprocate, said cylinder having a plurality of lateral apertures in its wall encircling said cylinder and a wick having projections extending through said apertures for wiping contact with the piston in its travel, and an annular retaining wall encircling said wick.

1,158,081. ELECTRIC POCKET-LAMP. JOHN STOCK, Dunton, N. Y., assignor to Interstate Electric Novelty Company, New York, N. Y., a Corporation of New York. Filed Apr. 2, 1915. Serial No. 18,685. (Cl. 240—8.5.)



1. A pocket-lamp, consisting of a casing, a lamp located at one end thereof, a battery within said casing but insulated therefrom and having one of its ends in contact with said lamp, the other side of the circuit for said lamp being through said casing, a bushing of insulating material located in the opposite end of said casing, a spring within said bushing bearing against the adjacent end of said battery, a longitudinally slidable circuit-closer located between said bushing and said casing and one end of which extends exteriorly of the latter, and means to conduct current from said spring to a point adjacent said circuit-closer.

2. A pocket-lamp, consisting of a casing, a lamp located at one end thereof, a battery within said casing but insulated therefrom and having one of its ends in contact with said lamp, the other side of the circuit for said lamp being through said casing, a bushing of insulating material located in the opposite end of said casing, a spring within said bushing bearing against the adjacent end of said battery, a longitudinally slidable circuit-closer located between said bushing and said casing and one end of which extends exteriorly of the latter, a conductor carried by said bushing having one of its ends located adjacent said circuit-closer and arranged to contact therewith, the opposite end of said conductor being in contact with said spring.

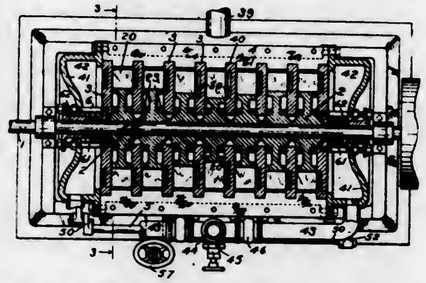
3. A pocket-lamp, consisting of a casing, a lamp located at one end thereof, a battery within said casing but insulated therefrom and having one of its ends in contact with said lamp, the other side of the circuit for said lamp being through said casing, a bushing of insulating material located in the opposite end of said casing, said bushing being provided with a pocket, and a counterbore in communication therewith to receive the inner end of said battery, a spring, located in said pocket, bearing against the end of the battery within said counterbore, a conductor carried by said bushing and projecting into said pocket and contacting with the spring therein, the other end of said conductor passing through the wall of said bushing, and a circuit-closer operable exteriorly of the casing to close the circuit between said casing and said conductor.

4. A pocket-lamp, consisting of a casing, a lamp located at one end thereof, a battery within said casing but insulated therefrom and having one of its ends in contact with said lamp, the other side of the circuit for said lamp being through said casing, a bushing of insulating material located in the opposite end of said casing, said bushing being provided with a pocket and a counterbore in communication therewith to receive the inner end of said battery, a spring, located in said pocket, bearing against the end of the battery within said counterbore, a conductor carried by said bushing and projecting into said pocket and contacting with the spring therein, the other end of said conductor passing through the wall of said bushing, and a longitudinally movable circuit closer located between said casing and said bushing, to close the circuit between said casing and said conductor.

5. A pocket-lamp, consisting of a casing, a lamp located at one end thereof, a battery within said casing but insulated therefrom and having one of its ends in contact with said lamp, the other side of the circuit for said lamp being through said casing, a bushing of insulating material located in the opposite end of said casing, said bushing being provided with a pocket, and a counterbore in communication therewith to receive the inner end of said battery, a spring, located in said pocket, bearing against the end of the battery within said counterbore, a conductor carried by said bushing and projecting into said pocket and contacting with the spring therein, the other end of said conductor passing through the wall of said bushing and projecting into a recess in said wall, the outer end of said conductor being turned upwardly to form a contact, and a longitudinally movable circuit-closer located between said bushing and said casing, the inner end of said circuit-closer being turned downwardly to form a contact to impinge upon the contact of said conductor, the outer end of said circuit-closer passing through an opening in said casing.

[Claims 6 and 7 not printed in the Gazette.]

1,158,082. TURBINE. OLIVER W. STONE, Seattle, Wash. Filed Apr. 26, 1915. Serial No. 23,952. (Cl. 121—57.)



1. A steam turbine having a plurality of rotors provided with impact blades and stators alternating with said rotors and provided with fluid directing passages complemental to the impact blades, the area of said blades and the passages in the rotors increasing from each end of the series toward the center, and fluid supply and discharge connections at the ends of the series.

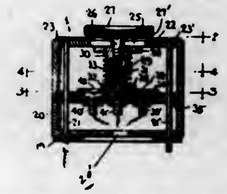
2. A steam turbine having a plurality of rotors provided with impact blades and stators alternating with said rotors and provided with fluid directing passages complemental to the impact blades, the area of said blades and the passages in the rotors increasing from each end of the series toward the center, and means for passing the fluid through the series in either direction.

3. A steam turbine having a series of rotor disks mounted upon a common shaft and having vanes lying in substantially axial planes, stators alternating with the rotors and having ports passing diagonally therethrough, said vanes and ports being spaced to register a plurality of ports with each space between vanes.

4. In a steam turbine in combination, a shaft, a plurality of rotors secured thereon, a casing inclosing said rotors, stators alternating with the rotors and supported by the casing, a hood closing each end of the casing to form steam supply and exhaust chests, a steam supply pipe and an exhaust pipe, each having branches connected with each of said chests and a controlling valve in each of said branches, a shaft extending lengthwise the casing and having four cranks thereon, links connecting each crank with tis respective valve, and means for turning said shaft.

5. In a steam turbine, a shaft, a series of rotors secured thereon, and having hubs provided with coned peripheral surfaces, stators extending inward to said coned surfaces, and a split spring packing ring mounted on said coned surfaces.

1,158,083. DIRECTION-INDICATOR. HAROLD E. STOUT, Toledo, Ohio. Filed Feb. 25, 1914. Serial No. 820,962. (Cl. 175—282.)



1. A selective switch comprising a case having an interiorly-arranged plate provided with a plurality of electrical contacts; a contact plate mounted upon the exterior of said case; an operating element mounted for vertical and lateral movement in said case and having a head which is disposed exteriorly of the case for engagement with the second-named plate when said element is depressed; and a movable electrical contact carried by said element for interchangeable engagement with the first-named contacts during the lateral movements of said element.

2. A selective switch comprising a case having a slot of cruci-form in its top, a plate within the case having a central contact at the center of the cruci-form slot and having a contact for each arm of the slot, a pair of telescopic sleeves between the plate and the top of the case having heads on their outer ends, an operating member on the exterior of the case having a connection with one of the sleeves which connection extends through the slot, a coil spring surrounding the outer sleeve and engaged at its ends with the heads of the sleeve, a ball in the inner sleeve engageable with the contacts, and a coil spring on the interior of the inner sleeve bearing against the ball.

3. A selective switch comprising a case having a slot of cruci-form in its top, a plate within the case having a central contact at the center of the cruci-form slot and having a contact for each arm of the slot, an operating member exterior of the case, a pair of spring pressed telescopic members between the plate and the top of the case, a spring pressed contact borne by one of said telescopic members, and a connection between said operating member and said telescopic members extending through said cruci-form slot.

1,158,084. SWING-BRIDGE. JOSEPH B. STRAUSS, Chicago, Ill. Filed Apr. 3, 1914. Serial No. 829,163. (Cl. 14—56.)



1. A swing bridge, comprising three truss sections, a central truss section and two relatively light end truss sections, a central support upon which the central truss section is carried, said central truss section having both ends cantalivered a substantial distance beyond the central support, said end truss sections having a limited pivotal connection with the cantalivered ends of said central truss section, a plurality of trucks, said trucks pivotally connected with said central truss section at intervals on the circumference of a circle thereon, each truck having a plurality of wheels, a track on said central support upon which said wheels are supported, whereby when the bridge is open, the weight of the bridge is evenly transmitted through the central truss section to the points where the trucks are connected thereto, and then spread out from each of said points and equally distributed to a plurality of points on said track and central support.

2. A swing bridge, comprising three truss sections, a central truss section and two relatively light end truss sections, a central support upon which said central truss section is carried, said central truss section having both ends cantalivered a substantial distance beyond the central support, said end truss sections having a limited pivotal connection with the cantalivered ends of said central truss section, whereby the central truss section acts to support and distribute the loads from the end truss sections and transmit the balancing effect from one end truss section to the other when the bridge is open.

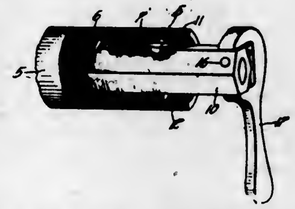
3. A swing bridge, comprising a bridge span, a support therefor upon which said span is rotatably mounted, a plurality of trucks connected at intervals to said bridge span on the circumference of a circle, each truck having a plurality of wheels, a track upon which said wheels have a rolling contact, said wheels carrying the weight of the bridge span when the bridge is open, and a movable part between said support and each truck for carrying a portion of the weight when in its operative position and when the bridge is closed, operating mechanism at a distant point for moving said movable parts into and out of their operative positions so as to relieve the pressure on said wheels when the live load comes on the bridge span.

4. A swing bridge, comprising a bridge span made up of three sections, a central section and two end sections, said end sections pivotally connected with said central section, operating mechanism for moving said end sections about their pivotal connections to lift and lower their outer ends, a central support under the central section, a rotatable connection between said central section and said support through which the dead load stresses are transmitted to said support, a plurality of movable parts which when in their operative positions directly connect the central section with said support so as to transmit a portion of the load when the bridge is closed, to said support to relieve said rotatable connection, and an actuating connection between said operating mechanism and said movable parts, whereby when said operating mechanism is operated to lift and lower the ends of said end sections, said movable parts are moved out of and into their operative positions.

5. A swing bridge, comprising a bridge span, a support therefor upon which said span is carried, a rotatable connection between said bridge span and said support through which the dead load stresses are transmitted to said support, a plurality of movable parts which when in their operative position directly connect the bridge span with said support so as to transmit a portion of the load when the bridge is closed to said support to relieve said rotatable connection, operating mechanism for lifting the ends of said span when it is desired to rotate the span, and an actuating connection between said operating mechanism and said movable parts for moving said movable parts into and out of their operative positions.

[Claim 6 not printed in the Gazette.]

1,158,085. SPANNER-WRENCH. HERBERT S. TENNYSON, Los Angeles, Cal. Filed Feb. 25, 1915. Serial No. 13,808. (Cl. 81—71.)



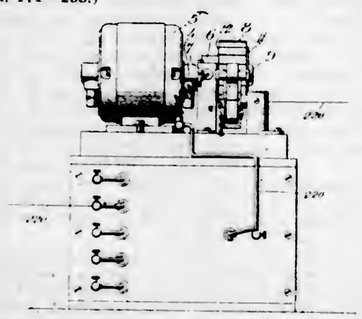
1. A spanner-wrench for operating externally threaded tubular nuts comprising a tubular stock, a pair of diametrically opposed longitudinally extending lugs formed integral with the stock and positioned substantially midway of the length thereof, said lugs being tapered toward either end and adapted to engage slots in the end of the nut to be operated, said stock being formed with transverse bores adjacent its ends for the reception of a tool whereby the stock may be rotated.

2. A spanner-wrench for operating externally threaded tubular nuts having diametrically opposed end slots, comprising a stock, a plurality of longitudinally extending lugs formed integral with the stock, said lugs being positioned substantially midway of the ends of said stock on diametrically opposite sides thereof and adapted to engage the slots in the nut to be operated, said stock being provided with tool-engaging means on each end thereof.

3. A spanner-wrench for operating externally threaded tubular nuts, comprising a stock, a pair of lugs intermediate its ends and arranged on diametrically opposed sides thereof, said stock being of angular cross-section at its ends and provided with transverse bores for the reception of a tool, whereby the stock may be rotated.

4. A spanner-wrench for operating externally threaded tubular nuts comprising a stock, a pair of lugs intermediate its ends and arranged on diametrically opposed sides thereof, said stock being of angular cross section at its ends adapted for the reception of a tool, whereby the stock may be rotated.

1,158,086. CIRCUIT-INTERRUPTER. JAMES A. VAHEY, Boston, Mass. Filed Jan. 15, 1912. Serial No. 671,373. (Cl. 171—253.)

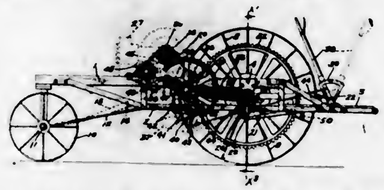


1. In a device of the class described, the combination with a current-carrying circuit, of a rotary collector ring connected to one side thereof, a plurality of insulated sections associated with the collector ring, but insulated therefrom, a clamping ring to clamp said sections to the collector ring in electrical connection with the collector ring, means to electrically connect anyone of said sections to said clamping ring, and thereby to said collector ring, and a brush or contact engaging said sections successively and connected to the other side of said circuit.

2. In a device of the class described, the combination with a shaft, of a collector ring mounted thereon but insulated therefrom, a clamping ring also mounted on said shaft but in electrical connection with the collector ring, a plurality of separate sections clamped between said collector ring and clamping ring, but insulated from both and from each other, said clamping ring having an aperture opposite each section and each section having a recess opposite the corresponding aperture, removable plugs adapted to be inserted through said apertures and into said recesses to connect electrically anyone of said sections to said clamping ring, and a current-carrying circuit having one side connected to said collector ring, and a brush connected to the other side of said circuit and engaging said sections successively as the shaft is rotated.

1,158,087. TRANSMISSION MECHANISM FOR TRACTORS. JOHN J. VISTE, Ada, Minn. Filed Oct. 30, 1914. Serial No. 869,410. (Cl. 74—58.)

1. In a tractor, the combination with an engine driven gear and a traction wheel gear, of relatively small and large intermediate gears, the former meshing with said traction wheel gear, means for moving said intermediate gears concentric to the axis of said traction wheel gear to carry said large intermediate gear into and out of mesh with said engine driven gear, a normally inoperative reversing gear and means for moving said reversing gear into mesh with said engine driven gear and large intermediate gear, when said two gears are separated.



2. In a tractor, the combination with an engine driven gear and a traction wheel gear, of relatively small and large intermediate gears, the former meshing with said traction wheel gear, means for moving said intermediate gears concentric to the axis of said traction wheel gear to carry said large intermediate gear into and out of mesh with said engine driven gear, a rock shaft, a normally inoperative reversing gear carried by said rock shaft, eccentric to the axis thereof, and means for oscillating said rock shaft to carry said reversing gear into mesh with said engine driven gear and large intermediate gear, when said two gears are separated.

3. In a tractor, the combination with an engine driven gear and a traction wheel gear, of a pair of levers pivotally mounted at the axis of said traction wheel gear, a counter shaft journaled in said levers, relatively small and large intermediate gears on said counter shaft, said small intermediate gear being in mesh with said traction wheel gear, means for vertically moving said levers to carry said large intermediate gear into and out of mesh with said engine driven gear, a rock shaft, a normally inoperative reversing gear carried by said rock shaft eccentric to the axis thereof, and connections from said levers to said rock shaft for oscillating the same to move said reversing gear into mesh with said engine driven gear and large intermediate gear, when said two gears are separated.

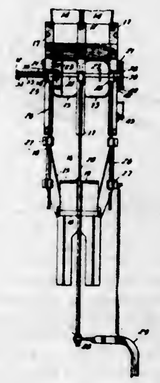
4. In a tractor, the combination with an engine driven gear and a traction wheel gear, of a pair of levers pivotally mounted at the axis of said traction wheel gear, a counter shaft journaled in said levers, relatively small and large intermediate gears on said counter shaft, said small intermediate gear being in mesh with said traction wheel gear, means for vertically moving said levers to carry said large intermediate gears into and out of mesh with said engine driven gear, a bell crank, and a normally inoperative reversing gear journaled on one of the arms of said bell crank, the other arm of said bell crank being connected to said levers, whereby said reversing gear is moved into mesh with said engine driven gear and large intermediate gear, when said two gears are separated.

5. In a tractor, the combination with an engine driven gear and a traction wheel gear, of a pair of levers pivotally mounted at the axis of said traction wheel gear, a counter shaft journaled in said levers, relatively small and large intermediate gears on said counter shaft, said small intermediate gear being in mesh with said traction wheel gear, means for vertically moving said levers to carry said large intermediate gears into and out of mesh with said engine driven gear, a rock shaft, a bell crank on said rock shaft, a normally inoperative reversing gear journaled on one of the arms of said bell crank, and a link connecting the other arm of said bell crank to said levers, whereby said reversing gear is moved into mesh with said engine driven gear and large intermediate gear, when said two gears are separated.

[Claims 6 to 9 not printed in the Gazette.]

1,158,088. ALTERNATING FEEDING MECHANISM. THOMAS WARD, Lubec, Me., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 2, 1912. Serial No. 734,430. (Cl. 113—115.)

1. A feeding apparatus of the character described comprising, in combination: a plurality of chutes arranged side by side and all leading to a common chute; means for feeding articles successively from each one of the plurality of chutes to the common chute, said means including feed fingers for each of said chutes, all of said fingers being connected and moving longitudinally of the chute together and being differently arranged for the different chutes, so that when those adapted to propel articles in one of said plurality of chutes are in operative position, those adapted to propel articles in the other of the plurality of chutes are in inoperative position; whereby the accurate alternate feeding of articles is effected.



2. A feeding apparatus of the character described comprising, in combination: a plurality of chutes all leading to a common chute; and reciprocating means for feeding articles successively, and in rotation from each of said plurality of chutes to the common chute, said means including a rotatable shaft having feed fingers thereon, some of which are adapted to propel articles in one chute and the others of which are adapted to propel articles in other of said plurality of chutes, said feed fingers being angularly offset from each other and the fingers of one chute being connected with the fingers of the other chute by said shaft.

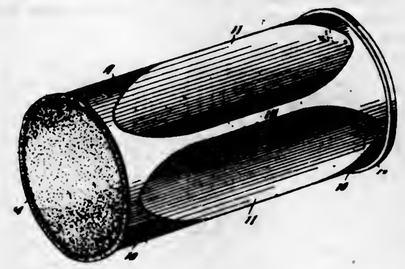
3. A feeding apparatus of the character described comprising, in combination: a pair of chutes arranged side by side down which articles are adapted to feed by gravity, said chutes leading to a common third chute; yieldable detents, in the first named chutes, adapted to temporarily arrest articles as the same pass therethrough; and means for feeding articles with accurate alternation and in a direction parallel with the pair of chutes, from the latter to the third chute, substantially as specified.

4. A feeding apparatus of the character described comprising, in combination: a pair of chutes arranged side by side down which articles are adapted to feed by gravity, said chutes merging into a common third chute; detents in said first named chutes adapted to arrest articles as the same pass therethrough; and combined reciprocating and rotary means for feeding articles in a direction parallel to the pair of chutes from the latter to the common third chute, substantially as specified.

5. A feeding apparatus of the character described comprising, in combination: a pair of chutes arranged side by side; a common third chute to which the pair of chutes deliver; and means for feeding articles alternately from said pair of chutes to the third chute, said means including a plurality of feed fingers connected and arranged so that the positioning of the fingers of one chute is accompanied by a different positioning of the connected fingers of the other chute, and when those adapted to propel articles in one of the pair of chutes are in operative position, those adapted to propel articles in the other of the pair of chutes are in inoperative position, substantially as specified.

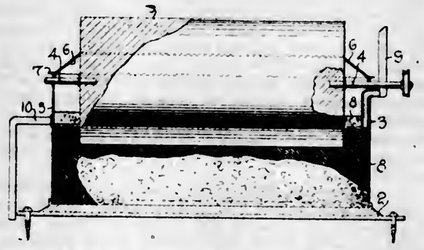
[Claims 6 to 11 not printed in the Gazette.]

1,158,089. ASPARAGUS-CAN. GEORGE W. WEBBE, St. Paul, Minn., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 31, 1913. Serial No. 757,845. (Cl. 220—92.)



A sheet metal container for hermetically inclosing and gripping food products such as asparagus, the sides of said container having cylindrical end portions of substantially the same diameter, and the container having its sides between said end portions formed with panels and normally, before the can is filled, polygonal in cross section, which polygonal middle portion is normally of less cross sectional area than is either of the cylindrical end portions and adapted to become of still less area by the collapsing of the middle parts of the said panels so as to grip and hold asparagus at the middle of the stalks and prevent the same from movement within the container, the said panels having narrowed ends and being curved inwardly from end to end and also from side to side; substantially as specified.

1,158,090. MOISTENING DEVICE. ALEXANDER A. WILEY, Bannock, Ohio. Filed Aug. 18, 1915. Serial No. 46,171. (Cl. 120—76.)



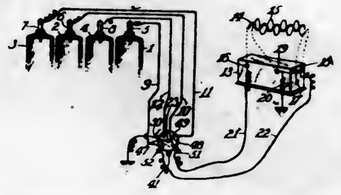
1. A moistener including a water container, a roller rotatably mounted in said container, and means for causing a constant circulation of water through the container.

2. A moistening device comprising a container having a base, a roller having a shaft rotatably mounted at the upper end of the walls of the container, a cap having a slot through which the roller projects, said cap detachably resting upon the container, motor operated means for rotating the roller, and means for causing a constant circulation of water within the container, said means including an outlet pipe and an inlet pipe.

1,158,091. ELECTRICAL TRANSFORMER-CONTROLLER AND DISTRIBUTER. FRED L. WILTSHIRE, Martinsville, Ind., assignor, by direct and mesne assignments, to Martinsville Ignition Company, Martinsville, Ind., a Corporation of Indiana. Filed Dec. 12, 1914. Serial No. 876,779. (Cl. 123—168.)

1. An electrical transformer controller including an electrical conducting casing, a non-conducting hollow frame fixedly secured to the casing, a primary circuit contact point supported in the frame, a conducting circuit-breaking lever pivotally supported on the interior of the

casing and having a contact point thereon, a spring connected to the lever and the casing and normally holding the lever to complete the primary circuit at the contact points, and a hub rotatable in the casing and having a cam thereon to repeatedly engage and move the lever in opposition to the spring for periodically breaking the primary circuit at the contact points.



2. An electrical transformer controller including an electrical conducting casing, a hollow non-conducting frame, comprising a main member fixedly secured to the casing and a cap part removably connected to the main member, a primary circuit conducting device secured in the main member of the hollow frame and having a contact point thereon and supported thereby in the casing, a conducting circuit-breaking lever pivotally supported on the interior of the casing and having a contact point thereon, a spring connected to the lever and the casing and normally holding the lever to complete the primary circuit at the contact points, and a hub rotatable in the casing and having a cam thereon to repeatedly engage and move the lever in opposition to the spring for periodically breaking the primary circuit at the contact points.

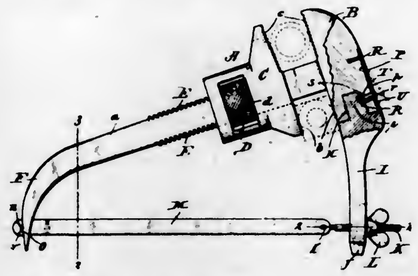
3. An electrical transformer controller and distributer including an electrical conducting casing, a hollow housing frame comprising a non-conducting main member fixedly secured to the casing and a cap part keyed to the main member, a device engaging the cap part and removably securing the cap part to the main member, a primary circuit conducting device secured to and extending through the wall of the main member and extending into the casing free from contact with the casing, the conducting device having a contact point on its inner end and a binding screw on its outer portion, movable means in the casing coöperating with the contact point for making a primary electrical circuit, means in the casing to act on the movable means for periodically breaking the primary circuit, and means in the hollow frame for distributing a secondary current.

4. An electrical transformer controller and distributer including an electrical conducting casing, a hollow frame fixedly secured to the casing, a primary circuit contact point supported in the hollow frame, a hub rotatable in the casing and having a plurality of cams and also a non-conducting wheel fixed thereon, a curved conducting circuit-breaking lever pivotally supported between its ends on the interior of the casing and having a contact point thereon opposite to the primary circuit contact point, the lever extending partially about the hub, and having a projection to be engaged by the cams to break the circuit at the contact points, a spring connected to the lever and the casing for yieldingly holding the lever to complete the primary circuit at the contact points, an electrical connector extending transversely through the wheel and carried thereby, and means on opposite sides of the wheel coöperating with the electrical connector for successively connecting a secondary conducting wire with ignition wires supported by the hollow frame synchronously with the breaking of the primary circuit.

5. An electrical transformer controller and distributer including a non-conducting hollow frame, a binding post inserted in the frame and having an electrical conductor connected thereto, a distributing ring in the hollow frame and in constant contact with the conductor, a plurality of binding posts on the front of the frame and having each an electrical connector that is positioned on the interior of the frame, and a rotary non-conducting wheel between the distributing ring and the electrical connectors; and having an electrical conductor extending transversely therethrough from the distributing ring to be carried successively to the electrical connectors of the binding posts.

[Claims 6 to 11 not printed in the Gazette.]

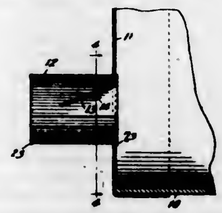
1,158,092. COMBINATION-TOOL. ARCHIE C. WITTER, Tonawanda, N. Y., assignor of one-fourth to Charles T. Hicks and one-fourth to Harry Hicks, Tonawanda, N. Y. Filed Feb. 23, 1912. Serial No. 679,355. (Cl. 7—1.)



1. In combination tools, the means of securing a saw blade to the tool comprising a rearwardly curved shank with a terminal longitudinally-directed slot, an arm adapted to be used as a saw handle detachably attached to the rear end of the tool and having an aperture near its outer end, a tension screw within said aperture, and a saw blade having one end secured to said tension screw and its other end secured in said slot.

2. In a combination tool, the means for securing a saw blade to the tool comprising a rearwardly curved shank with a terminal longitudinally-directed slot adapted to be used for a tack puller, an arm adapted to be used as a saw handle detachably attached to the rear end of the tool, extending rearwardly therefrom, and having an aperture near its outer end, a tension screw threaded into said aperture, and a saw blade having one end secured to said tension screw and its other end secured within said slot.

1,158,093. DISPENSING-PACKAGE. FREDERICK P. WOOD, Detroit, Mich., assignor to American Can Com-Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 1, 1913. Serial No. 803,905. (Cl. 221—27.)



1. A dispensing package of the character described comprising a can having a trough-shaped sheet metal pouring spout slidably mounted directly in one wall thereof and having a portion of the wall arranged within the spout between the sides thereof and extending entirely across the spout so as to be a closure therefor when the spout is retracted.

2. A package one wall of which is formed with an opening, a pouring spout fitted in said opening and adapted to be moved outward therein to pouring position and to be moved inward therein to a retracted position, and a closing flap separate from the spout and connected with the wall of the package, and adapted to close the pouring space within the spout and the opening in the wall of the package when the spout is retracted and adapted to be moved to open position when the spout is projected.

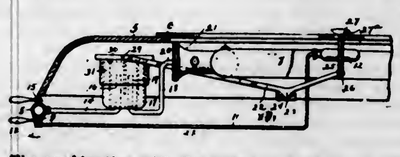
3. A package one wall of which is formed with an opening, a pouring spout fitted in said opening and adapted to be moved outward therein to pouring position and to be moved inward therein to a retracted position, and a closing flap separate from the spout and connected with the wall of the package, and adapted to close the pouring space within the spout and the opening in the wall of the package when the spout is retracted and adapted to be moved to open position when the spout is projected, the said spout having means for moving the said flap.

4. A dispensing package of the character described comprising a paper walled vessel having a sheet metal pouring spout slidably mounted in one wall thereof, said wall being slitted to correspond to the size and shape of said spout, part of said wall bounded by the slit forming a pivoted flap to close the pouring opening, substantially as specified.

5. A dispensing package of the character described including a paper walled can having a sheet metal trough-shaped pouring spout slidably mounted in one wall thereof, said wall being slitted to correspond to the size and shape of said spout and thereby forming a pivoted flap to close the pouring opening in said wall, and means for automatically swinging said flap outwardly when said spout is moved outwardly, substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

1,158,094. FUEL-CONTROLLING DEVICE. HARRY D. YATES, Washington, D. C. Filed Mar. 23, 1915. Serial No. 16,508. (Cl. 126—52.)



1. The combination with the main burner of a gas stove, of a gas supply pipe leading to said main burner, a valve for controlling the passage of gas through said pipe comprising a fixed cup carrying a liquid seal into which cup separate branches of said pipe extend, a movable canopy comprising an extension depending into said cup and a partition shorter than said extension which partition divides said extension into two chambers and in which chambers the branches of said pipe terminate, and means controlled by the placing of a cooking utensil upon the stove for imparting upward movement to said canopy.

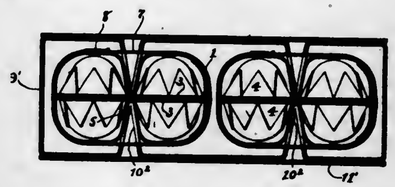
2. The combination with the main burner of a gas stove, of a gas supply pipe leading to said main burner, a valve for controlling the passage of gas through said pipe comprising a fixed cup carrying a liquid seal into which cup separate branches of said pipe extend, a movable canopy comprising an extension depending into said cup and a partition shorter than said extension which partition divides said extension into two chambers and in which chambers the branches of said pipe terminate, and means controlled by the placing of a cooking utensil upon the stove for imparting movement to said canopy, said means comprising a pivoted lever, one end of which is directly connected to said canopy, the relative weight of the parts being such that the canopy is held in such a lowered position by gravity that its lower edge and the lower edge of the partition projects into the liquid seal.

3. In a gas stove the combination with a main burner and a pilot burner, of means for supplying a constant flow of gas to said pilot burner, a lever pivoted intermediate its ends for rocking movement, means arranged to be engaged by a cooking utensil when placed in position above the main burner, said means being directly connected to one end of said lever, a gas supply line for the main burner and a controlling valve located in said gas supply line and comprising a movable member which is directly engaged by the opposite end of said lever, the latter end of said lever being normally maintained by gravity in a lowered and valve closing position.

4. In a device of the character described the combination with a main burner, a gas supply line therefrom, a fixed cup, said gas supply line comprising a pair of upturned terminal ends which enter said cup, a vertically movable head, an extension carried by said head and depending into said cup, said extension being divided by a partition into two chambers into which the said terminal ends of the gas supply line extend, said partition terminating short of the bottom of said extension, a lever mounted for rocking movement intermediate its ends, one end of which is pivotedly connected to said head and means engaging the other end of said lever and arranged to be engaged by a cooking utensil when the latter is placed on the stove, the relative weight of the parts being such that the canopy is held in such a lowered position by gravity that its lower edge and the lower edge of the partition projects into the liquid seal.

5. In a device of the character described the combination with a main gas supply pipe of an auxiliary gas supply pipe, a pilot burner, a pipe leading from the auxiliary gas supply pipe to the pilot burner, a stopcock for controlling the passage of said gas through the last named pipe, a main burner, a gas discharge nozzle for said main burner, a pipe by which said nozzle is carried, said pipe terminating in a vertical extension, a second pipe leading from the main gas supply line, a cock for controlling the flow of gas from the main gas supply line to the last named pipe, said pipe being likewise provided with a vertical extension, a fixed cup within which said vertical extensions terminate and which cup contains a quantity of mercury constituting a liquid seal, a vertically movable canopy comprising a head, an extension depending from said head, a partition dividing said extension into two chambers in which said vertical extensions terminate, an apron extending downwardly from said head on the outside of said cup, a rocking lever to one end of which said head is pivotedly connected and means pivotedly connected to the opposite end of said lever arranged to be engaged by a cooking utensil when the latter is placed upon the stove.

1,158,095. EGG-CARTON CARRIER. EDWARD F. YULKE, New York, N. Y., assignor to Continental Paper Bag Company, New York, N. Y., a Corporation of Maine. Filed Nov. 18, 1914. Serial No. 872,675. (Cl. 229—14.)



1. The combination of an inner carton and an outer casing, the inner carton containing means for elastically suspending and separating a plurality of articles and being elastically suspended within the outer casing, the outer casing engaging the inner carton inwardly of the side walls thereof.

2. The combination of a carton having creases in its sides and a casing surrounding the same, and having ridges seated in such creases for suspending the carton.

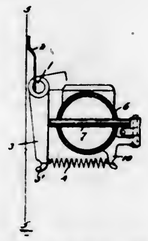
3. The combination of a carton having creases in its sides, a binding cord surrounding the carton and crossing the creases, and a casing surrounding the same and having ridges seated in such creases, said ridges having notches receiving the said binding cord.

4. The combination of a carton having creases in its sides, and a casing surrounding the same and having ridges seated in and engaging the side walls of such creases for suspending the carton.

5. A device of the character specified comprising a card board folded blank having creases in its opposite sides forming ridges adapted for entering suitable creases in a carton and suspending the same.

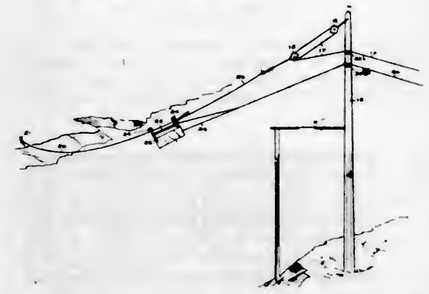
[Claims 6 and 7 not printed in the Gazette.]

1,158,096. PRESSER-FINGER-OPERATING MECHANISM FOR EMBROIDERING-MACHINES. ROBERT ZAHN, deceased, by Alfred Rietzsch, administrator, Plauen, Germany. Filed Feb. 9, 1914. Serial No. 817,499. (Cl. 112—7.)



In an embroidering machine, the combination with presser feet and a common operating shaft therefor, of a plurality of levers fixed at short intervals to said shaft, a spring for each lever adapted to normally press the presser feet into working position, horisontally movable push members, one for each of said arms, a plurality of rocking members, one for and in the range of each push member and a common operating means for said rocking members, the latter being adapted to, in each cycle of the machine, act against the corresponding push member to move the presser feet out of working position.

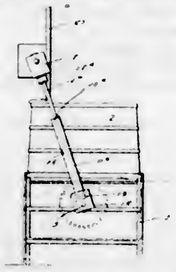
1,158,097. SCRAPER AND HOIST APPARATUS. JESSE L. ALLEY, Indianapolis, Ind. Filed Jan. 17, 1913. Serial No. 742,593. (Cl. 37—19.)



1. In an excavating apparatus, the combination, with a track line, of a movable carrier thereon, a bucket pivoted at one end to the end of said carrier, an arm pivoted to the end of the carrier opposite that supporting the bucket and provided with a hook, a catch block on the track line for engaging said hook for holding the bucket when discharging its contents, a sheave carried by said arm for contacting said catch block to disengage said arm, a draw line for controlling the movement of said bucket along said track line, and a cable connected to and operated by said draw line for controlling the movement of the bucket on its pivot.

2. In an excavating apparatus, the combination, with a track line, of a movable carrier thereon, a draw line for controlling the movement of said carrier along said track line, a bucket pivoted at one end to the end of the carrier, an arm pivoted at the forward end of said carrier and provided with a hook, a catch block on said track line for engaging said hook and holding the carrier while the bucket is discharging its contents, means carried by said arm for disengaging said hook from the catch block when the draw line is tightened, and a cable secured at one end to the draw line and its other end passing over the arm to the free end of the bucket and extending back and attaching to the carrier, for controlling the movement of the bucket on its pivot.

1,158,098. DRIVING MECHANISM. ALPHEUS W. ALTORFER, Roanoke, Ill., assignor to Altorfer Bros. Co., Roanoke, Ill., a Copartnership consisting of Henry Altorfer, Silas H. Altorfer, and Alpheus W. Altorfer. Filed Aug. 29, 1913. Serial No. 787,304. (Cl. 74—7.)



1. In a driving mechanism, a machine, a driving shaft, an operating means for said machine, said operating means being so supported that it may be raised from an operative position to an inoperative position, a driving mechanism between said driving shaft and said operating means, including clutch parts; the connection and disconnection of said clutch parts being controlled by the raising and lowering of said operating means.

2. In a driving mechanism, a machine support, a machine mounted on said support, a driving shaft, an operating means for said machine movably mounted thereon, and including a shaft and a driving member, a driving mechanism between said driving shaft and said driving member, including clutch parts; the connection and disconnection of said clutch parts being controlled by moving said operating means.

3. In a driving mechanism, a machine having a hinged member, a driving part mounted on said hinged member, and movable therewith, a driving shaft, a driving mechanism between said shaft and said driving part, including clutch parts, said clutch parts being in operative relation when said hinged member is in one position, and adapted to be disconnected when said hinged member is moved into another position.

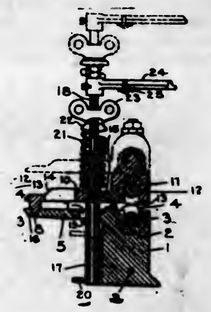
4. In a driving mechanism, a machine, operating means mounted on said machine, a driving shaft, driving mechanism between said shaft and said operating means, including clutch parts, one of said clutch parts and the operating means for said machine being adapted to be moved together, said clutch parts being normally in operative relation, the movement of said operating means serving to break the operative relation between the clutch parts.

5. In a driving mechanism, a machine having a hingd member, a driving part mounted on said hinged member, and movable therewith, a driving shaft, clutch controlled gearing interposed between said shaft and said driving part for imparting movement from said shaft to said driving part, said clutch being controlled by the movement of said hinged member, and said gearing and clutch being oscillated by the movement of said hinged member.

[Claims 6 to 10 not printed in the Gazette.]

1,158,099. CLOTHES-WRINGER. ALPHEUS W. ALTORFER, Roanoke, Ill., assignor to Power Washing Machine Co., Peoria, Ill., a Corporation of Illinois. Filed Feb. 16, 1914. Serial No. 818,889. (Cl. 68—32.)

1. In combination, a pair of compressing rolls, a pair of rods, springs encircling said rods, and means for compressing said springs and holding said rolls in impinging relation, and connections between said rods, including an operator's lever for quickly turning said rods to relieve the compression on said rolls.



2. In combination, a mounting, a pair of compression rolls journaled in said mounting, means for yieldingly holding one of said rolls in impinging relation with the other roll, including a pair of rods passing up through openings in said mounting, each rod having a radially disposed pin normally engaging the underside of the mounting and adapted to pass up through a slot in said mounting, compression springs on said rods, thumb-nuts for compressing said springs, and connections between said rods, including an operator's lever, whereby said rods may be quickly turned for bringing the pins on the rods opposite the slots in the mounting so as to relieve the compression on said rolls.

3. In combination, a mounting, said mounting having bearings for wringer rolls and also provided with rod openings and slots in connection with said openings, a pair of rolls journaled in said mounting, rods passing through said openings in the mounting, each rod having a radially disposed pin normally bearing against the underside of said mounting, springs encircling each rod, thumb-nuts screwed on said rods for compressing said springs, and means for quickly releasing the compression of said springs, comprising a lever attached to each rod and a connecting member between said levers; the operation of one of said levers rotating said rods to bring their pins opposite the slots in the mounting, when said springs will act to lift the rods causing the pins to pass through the slots and relieve the compression on said rolls.

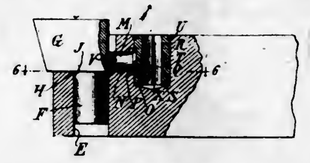
4. In combination, a mounting, a pair of compression rolls journaled in said mounting, compression means for said rolls, comprising revoluble and vertically movable rods, and springs and securing means for holding said rods and springs in compressing position; and connections between said rods, including an operator's lever for turning the rods to a position for said springs to raise said rods and relieve the compression on said rolls.

5. In combination, a mounting, a pair of compression rolls journaled in said mounting, compression means for said rolls, comprising revoluble and vertically movable rods, and springs and securing means for holding said rods and springs in compression position; a reach between said rods; a lever connected to each rod, one being longer than the other, and a bar connected at its ends to said levers, whereby when one of said levers is operated the other will be operated.

[Claim 6 not printed in the Gazette.]

1,158,100. TOOL-HOLDER. GEORGE AMBORN, Chapinville, Conn., assignor to J. H. Williams & Co., Brooklyn, N. Y., a Corporation of New York. Filed Jan. 6, 1913. Serial No. 740,317. (Cl. 29—96.)

1. A tool holder having a transverse opening adapted to receive the shank of a tool and a longitudinal opening with an enlargement at its rear end, a longitudinal movable pin in said opening having an enlarged head fitting loosely in said enlargement, said holder having a rear opening, communicating with said longitudinal opening and of sufficient size to permit the passage of said pin into its place, and means in said rear opening serving to retain said pin in place and to force said pin against such a tool to clamp the latter in place.



2. A tool holder having a pin adapted to be forced against a tool to clamp the latter in place and having an opening to receive said pin, said opening having an enlargement at its rear end and said pin having an enlarged head fitting loosely in said enlargement, said holder having a second opening communicating with the rear end of the first-mentioned opening and large enough to permit the passage of said pin into its place, and means in said second opening for retaining said pin in its place.

3. A tool holder having a pin adapted to be forced against a tool to clamp the latter in place and having an opening to receive said pin, said pin having an enlargement adapted to prevent its passage forward through said opening, said holder having a second opening communicating with the rear end of the first-mentioned opening and large enough to permit the passage of said pin into its place, and a rotary cam in said second opening bearing against the rear end of said pin to retain it in place and to force it against the tool.

4. A tool holder having a transverse opening adapted to receive the shank of a tool, a longitudinal opening for receiving a clamping pin and a vertical opening adapted to receive a cam rotatable about a vertical axis, said vertical opening communicating with said longitudinal opening and being of sufficient size to permit the passage of such a clamping pin through said vertical opening and into said longitudinal opening, a clamping pin adapted to enter said longitudinal opening and having an enlarged head to prevent its passage forward through said longitudinal opening, and a cam adapted to enter said vertical opening and bear against the head of said pin to hold said pin in place and to force the same against the tool.

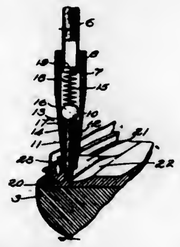
5. A tool holder having a projecting portion formed with a shank-receiving vertical opening adapted to receive the shank of a tool and with a face adapted to support the head of such tool, said holder having a longitudinal opening, a clamping pin in said longitudinal opening adapted to engage with its outer end a side face of the head of such tool when the shank of the tool is in said vertical opening so as to clamp such tool in place, said clamping pin being held against forward passage through its longitudinal opening when the tool is removed, said holder having a cam-receiving transverse opening in the rear of said pin, and a rotatable cam in said cam-receiving transverse opening bearing against the rear end of said pin and adapted by its rotation to force the pin against the tool.

[Claims 6 to 8 not printed in the Gazette.]

1,158,101. SHOE-SOLE-TEMPERING DEVICE. NICHOLAS C. BOHR, Boston, Mass.; Henry Barras Bohr administrator of said Nicholas C. Bohr, deceased. Filed Dec. 13, 1911. Serial No. 665,550. (Cl. 12—1.)

1. In a shoe sole tempering device, the combination of a suitable source of liquid supply, a nozzle having a tubular connection with said supply and a passageway for liquid, a ball valve contained within said nozzle to normally prevent the passage of liquid therethrough, a stem extending longitudinally through the nozzle for controlling said valve and having a channel lip turning portion projecting beyond the end of the nozzle, and means to insure the maintenance of the lip turning portion of the

stem projecting beyond the end of the nozzle during the tempering operation.



2. A combined channel opener and moistener comprising an elongated casing having a tapered portion at one end provided with an end wall, said casing being provided with a liquid retaining chamber, a small outlet port for said chamber being formed in said end wall, an internal valve normally closing said port and provided with a pin projecting through said port and permanently beyond said end wall, and means for yieldingly holding said valve in closed position.

3. A combined channel opener and moistener comprising an elongated casing having a tapered portion at one end provided with an end wall, said casing being provided with a liquid retaining chamber, a small outlet port for said chamber being formed in said end wall, an internal valve normally closing said port and provided with a pin projecting through said port and permanently beyond said end wall, and a spring within said chamber normally holding said valve in closed position.

4. A shoe sole tempering device, comprising a liquid conduit having a nozzle for the passage of a liquid, a valve for controlling the flow of liquid through said nozzle, a stem extending longitudinally through the nozzle for controlling said valve and having a channel lip turning portion projecting beyond the end of the nozzle, and means for insuring the maintenance of the lip turning portion of the stem in lip turning position as the nozzle is moved along the channel of the shoe.

5. In a shoe sole tempering device, the combination of a source of liquid supply, a nozzle, a tubular connection between the liquid supply and said nozzle, a stem extending longitudinally of and beyond the end of the nozzle, a valve controlling the flow of liquid through the nozzle and movable by said stem when said stem is moved longitudinally to permit the flow of liquid through the nozzle, said stem having a lip turning portion, and means for insuring the maintenance of the lip turning portion in lip turning position as the implement is moved over the shoe sole.

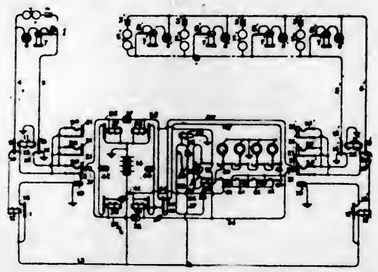
[Claims 6 to 8 not printed in the Gazette.]

1,158,102. TRIFOCAL LENS. HENRY BOLDE, New York, N. Y., assignor to General Optical Company, Inc., a Corporation of New York. Filed Jan. 25, 1915. Serial No. 4,111. (Cl. 88—54.)



The process of making trifocal lenses which consists in forming a countersink in a major lens blank, then securing a minor lens blank in said countersink, then grinding the exposed surface of the minor blank to a definite curvature and area, and at the same time grinding a portion of the major blank to the same curvature, then superposing a second minor lens blank upon the first minor blank and a part of the major blank and finally grinding away the exposed surface of the second minor blank and the surface of the major blank only, until a definite area and curvature of the second minor blank with respect to the previously fixed area and curvature of the first minor blank, is obtained.

1,158,103. PARTY-LINE RINGING SYSTEM. CLIFFORD C. BRADBURY, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed July 6, 1908. Serial No. 441,986. (Cl. 179—58.)



1. In a telephone system, the combination with a connecting circuit having answering and calling connecting plugs, of a ringing key having contacts connected with contacts of the calling plug, a supervisory relay permanently connected to one of the connecting plugs of the connecting circuit, and means to interrupt the circuit between the answering and calling plugs at the contacts of said supervisory relay whenever the ringing key is actuated, substantially as described.

2. In a telephone system, the combination with a cord circuit, of a supervisory relay therefor having contacts maintaining a normal break in the tip strand of the cord circuit, a ringing key connected with said strand on one side of said break, said break preventing the flow of ringing current to the answering end of the cord circuit, said relay being adapted to be actuated after ringing to complete the tip strand of the cord circuit for talking purposes, substantially as described.

3. In a telephone system, the combination with a cord circuit having tip and sleeve conductors, of a supervisory relay for the cord circuit actuated over one of said conductors and having contacts serially included in the other conductor, the portion of said latter conductor from the relay contacts to the calling plug being free from series contacts, a ringing key adapted by its actuation to impress ringing current upon the calling end of the interrupted conductor and to place said supervisory relay in condition for interrupting the strand to which the ringing current is connected, substantially as described.

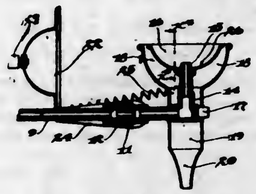
4. In a telephone system, the combination with a cord circuit, of a ringing key therefor, a sleeve supervisory relay responsive to a connection to a called line, said ringing key being connected with a strand of the cord circuit through normal contacts of said supervisory relay, substantially as described.

5. In a telephone system, the combination with a cord circuit, of a supervisory relay for the cord circuit having contacts serially included in the tip strand of said cord circuit, said strand from the contacts of said relay to the calling plug; comprising a permanently continuous conductor, means for connecting ringing current with said conductor, said contacts being adapted to be open during the application of said ringing current, whereby the current will not pass to the answering end of the cord circuit, substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

1,158,104. BUBBLING FOUNTAIN. LINDLEY N. BRYAN, Anoka, Minn. Filed Oct. 17, 1913. Serial No. 795,645. (Cl. 137—109.)

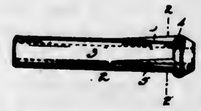
1. A bubbling fountain comprising a cup, a water supply conduit terminating in a nipple opening upward through the bottom of said cup, an oscillatory valve in said water conduit, a catch basin surrounding said cup and provided with a discharge pipe, a cover for said cup secured to said valve in such position that it will be closed when said valve is closed, and a spring acting on said cover and valve to normally hold both in closed positions but adapted to yield and permit both to be simultaneously moved into open position.



2. A bubbling fountain comprising a cup, a water supply conduit terminating in a nipple opening upward through the bottom of said cup, an oscillatory valve in said water conduit, a catch basin surrounding said cup and provided with a discharge pipe, a cover common to said cup and basin, secured to said valve and normally seated on said basin, and a spring normally holding said cover and valve in closed positions but yielding to permit said valve to be opened and said cover to be moved into an open position entirely at one side of said cup and basin.

3. The combination with a water conduit having a normally closed valve therein, of a bubbling fountain connected to said conduit and comprising a drinking cup and a surrounding catch basin, and a yieldingly closed cover secured to said valve and normally covering and closing both the said cup and basin.

1,158,105. INSULATING-TUBE. EDWIN F. CALLENDER, Galesburg, Ill., assignor of one-half to L. Belle Callender, Galesburg, Ill. Filed Feb. 9, 1914. Serial No. 817,555. (Cl. 173—311.)



1. A tube made of frangible insulating material and having a triangular fin on its outer surface, said fin terminating approximately midlength of the body of the tube and being tapered throughout its entire length.

2. A tube made of frangible insulating material having a bead near one of its ends and having a triangular fin tapered toward the end of the tube most remote from said bead, said fin terminating approximately midlength of the body of the tube and the taper being continuous and regular throughout its entire length.

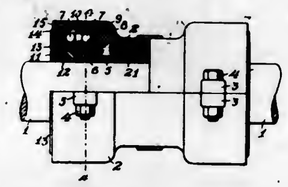
3. An article of the class described made of frangible insulating material and comprising a tubular body having a peripheral head which also is tubular, and having a plurality of fins extending each from said head to substantially the midlength of the body, the rear end of each fin being equal in height to the periphery of said head, each fin being tapered continuously and regularly throughout its length.

4. An article of the class described made of frangible insulating material and comprising a tubular body having a peripheral head which also is tubular, and having a plurality of fins extending each from said head to substantially the midlength of the body, a circle circumscribing the rear ends of said fins being of the same circumference as is the circumference of the head.

5. An article of the class described made of frangible insulating material and comprising a tubular body having an annular head which also is tubular, and having a plurality of continuously and regularly tapered fins the rear ends of which are in contact with said head, a circle circumscribing the rear ends of the fins being of the same circumference as is the said head.

[Claim 6 not printed in the Gazette.]

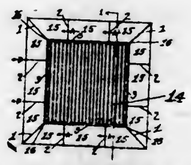
1,158,106. BALL-BEARING. MERRILL E. CLARK, Bradford, Pa. Filed Mar. 16, 1909. Serial No. 483,741. (Cl. 64—57.)



1. The combination, with a rotatable shaft, of a bushing surrounding said shaft, a two part sleeve, having a peripheral ball track at each end, surrounding and rotatable upon said bushing, an outer shell having interior ball tracks corresponding to the tracks of said sleeve, a series of antifriction balls carried within the races formed by said tracks and means for retaining said balls within said races, said retaining means permitting endwise movement of the sleeve within said outer shell.

2. The combination, with a rotatable shaft, of a bushing surrounding said shaft, a two part sleeve, having an enlarged section at each end to form a peripheral ball track, rotatable upon said bushing, an outer shell provided with enlarged recessed end portions to coöperate with the ball tracks of said sleeve to form ball races, a plurality of anti-friction balls carried within each of said ball races and means for retaining said balls within said races, said retaining means permitting endwise movement of the sleeve within said outer shell.

1,158,107. COOLING-TOWER. BARTON H. COFFEY, Elizabeth, N. J., assignor, by mesne assignments, to The Cooling Tower Co., Inc., New York, N. Y., a Corporation of New York. Filed June 8, 1914. Serial No. 843,706. (Cl. 189—12.)



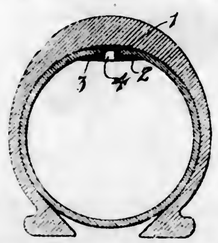
1. In a cooling tower, side posts in the form of vertical latticed girders provided with inclined panel supporting members, in structural combination with a louver system consisting of horizontal inclined plane members possessing considerable tensile compression and girder strength, and rigid fastenings connecting the inclined members with the louver system, thereby making the combination an integral whole; substantially as and for the purpose described.

2. In a cooling tower a completely braced frame or skeleton, vertical latticed girders, and a louver system consisting of plane members possessing considerable tensile compression and girder strength rigidly joining the girders with the frame at and between panel points; whereby a structure is created braced both locally and as a whole substantially as and for the purpose described.

1,158,108. PNEUMATIC PLUG. GEORGE F. CONLEY, Chicago, Ill. Filed Dec. 23, 1914. Serial No. 878,731. (Cl. 152—26.)

1. A pneumatic plug consisting of disks and a hollow neck integral with and connecting said disks, one of said

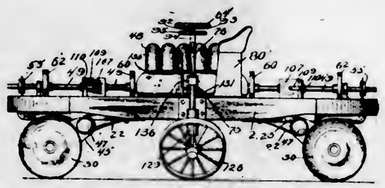
disks provided with an aperture communicating with the interior of said neck, said plug being made of material impervious to air and the wall of said neck being made of yielding material adapted to expand by fluid pressure in said interior and an air containing tube of elastic material impervious to air and having a puncture through the wall thereof, said plug adapted to be joined to said tube, with said neck in said puncture and said aperture in communication with the interior of said tube.



2. A pneumatic plug consisting of disks and a hollow neck integral with and connecting said disks, one of said disks provided with an aperture the wall thereof is a continuation of the wall of the interior of said hollow neck, said plug being made of material impervious to air and of yielding material, whereby said neck is adapted to yield on fluid pressure being applied thereto and said apertured disk is adapted to be forced toward the remaining disk on fluid pressure being applied on the outer face thereof and an air containing tube, of elastic material, having a puncture in the wall thereof, said plug adapted to be applied to said tube to close said puncture, with the aperture in said plug opening inward to said tube.

3. A pneumatic plug consisting of disks and a hollow neck integral with and connecting said disks, one of said disks provided with an aperture the wall whereof is a continuation of the wall of the interior of said hollow neck, in combination with an air containing tube, said plug and tube joined with said aperture in communication with the interior of said tube, and said plug and tube made of material impervious to air and adapted to yield on fluid pressure being applied thereto within said tube.

1,158,109. AUTOMOBILE PLOW. ALBERT E. COOK and THOMAS VANTUYL, Odebolt, Iowa; said Vantuyl assignor to said Cook. Filed June 19, 1909. Serial No. 503,262. (Cl. 97—71.)



1. A plow comprising sets of interfitting frames, the inner frame of each set rotatable, gangs of plow disks connected with the inner frames, one gang adapted to follow the other or all the gangs of disks adapted to operate abreast and power operated means for independently adjusting each gang of disks.

2. In a device of the class described a frame, a plurality of circular tracks rigidly secured thereon, rotatable members secured on said tracks, gangs of disks and springs connecting the gangs of disksk to said rotatable members at a position other than in line with a diameter of said members.

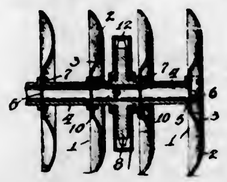
3. In a plow a frame, a shaft, plowing disks secured to the shaft, spring suspensions provided with bearing blocks on the lower ends to receive the ends of the shaft and pivoted at their upper ends to the frame.

4. In a plow a frame, circular tracks thereon, rotatable channel members supported by the tracks, gangs of plows secured to said rotatable members and spring suspensions secured to the rotatable members at one end and to the gangs of plows at the opposite end.

5. In a device of the class described a frame, rotatable frames, gangs of rotatable disk plows secured to the rotatable frames and spring suspensions secured to the gangs and pivoted to the rotatable frame to support the frame from the disks.

[Claims 6 to 26 not printed in the Gazette.]

1,158,110. PLOW-DISK ASSEMBLY. ALBERT E. COOK, Kankakee, Ill. Original application filed Oct. 23, 1908, Serial No. 459,139. Divided and this application filed May 28, 1914. Serial No. 841,415. (Cl. 97—78.)



1. In a device of the class described a plurality of plow disks rigidly connected one to another, each of said disks curved convexly and concavely on the surfaces thereof, and driving means forming a connection between certain of said disks.

2. In a device of the class described a plurality of plow disks, sections between each thereof rigidly connected thereto to hold the same in position and cause said disks to move as a unit, driving mechanism integral with one of said sections and means permitting detachment of one or more of the disks.

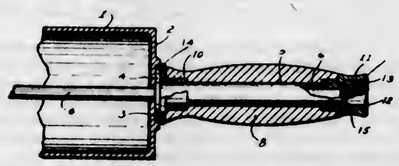
3. In a machine of the class described plowing gangs, each embracing a plurality of rotatable disks concave between the periphery and the center on one side, and the other side concave at the center to afford a reverse bend in the disks to turn a furrow, shaft sections flanged at the ends to bear against the centers of the disks, a driving gear integral with one of said sections and means connecting the flanges of the disks.

4. In a device of the class described a plurality of plow disks, each of said disks bent concavely on one side and convexly on the other, flanged members rigidly connecting each of said disks together, and a driving gear provided with an extended flanged hub integral therewith for connecting certain of the disks to one another.

5. In a device of the class described a plurality of plow disks rigidly connected one to another, each of said disks curved convexly and concavely on the surfaces thereof, driving means forming a connection between certain of said disks, and housing members for inclosing said driving means.

[Claim 6 not printed in the Gazette.]

1,158,111. ROLLING-PIN. EDWARD C. AHLHEIM, Mansfield, Ohio. Filed Oct. 7, 1914. Serial No. 865,422. (Cl. 107—50.)



1. In a rolling pin, a body, a bolt passed through the body and having its ends projecting beyond the ends of the body, the ends of the body having countersunk portions, a flanged sleeve on each end of the bolt having the flange thereof received in said counter-sunk portion, a flanged bushing on the inner end of the sleeve the flange of which abuts the flange of the sleeve, a handle surrounding the sleeve and having a counterbored part to receive the bushing, the inner end of the handle abutting the flange of the bushing, the outer end of the handle having a counterbored portion, a bushing received in the last named counterbored portion and having a nut cavity which forms a shoulder, and a nut on the bolt abutting the shoulder and the outer end of the sleeve.

2. In a rolling pin, a body having counter-bored ends, a bolt passed through the body, a sleeve on the bolt having a flange which engages in said counterbored portion, a handle on the sleeve, a bushing on the inner end of the handle having a flange which abuts the flange of the sleeve and covers same, a bushing on the outer end of the handle having a nut cavity forming a shoulder, and a nut on the bolt engaging the outer end of the sleeve and the shoulder.

3. In a rolling pin, a body having closed ends, a bolt passed through the body, a flanged sleeve on each end of the bolt abutting the body at the inner ends of the sleeves, handles carried by said sleeves a bushing on each end of the sleeve connected to the respective ends of the handle, one of the bushings abutting the flange of the sleeve, said bushings being freely rotatable on the sleeve, and a nut on the bolt abutting the outer end of the sleeve and the outer end of the outer bushing.

4. A tubular rolling pin made of aluminum metal having closed ends, a throughgoing bolt fitted to suitable apertures formed in the closed ends, flanged sleeves provided with bushings loosely fitted to the projecting ends of the bolt, handles secured to the sleeves and bushings, and means to securely fasten the bolt to the rolling pin and to prevent lateral movement of the handles without affecting the rotation of the ends of the bolt within the inner periphery of the handles.

1,158,112. DETECTOR FOR OSCILLATING CURRENTS. WILLIAM E. BEAKES, Brant Rock, Mass., assignor, by mesne assignments, to Samuel M. Kintner, Pittsburgh, Pa., and Halsey M. Barrett, Bloomfield, N. J., receivers. Filed May 9, 1911. Serial No. 626,073. (Cl. 250—31.)

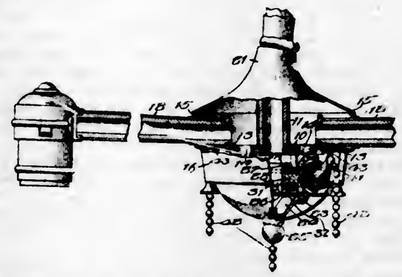


1. A detector for wireless telegraphy comprising a good contact joint between two electrodes of which one is antimony and the other ferro-silicon.

2. A detector for wireless telegraphy consisting essentially of ferro-silicon and antimony, and means for holding them in contact with adjustable pressure, substantially as described.

1,158,113. ELECTROLIER. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Mfg. Company, Chicago, Ill., a Corporation of Illinois. Original application filed Dec. 27, 1909, Serial No. 535,162. Divided and this application filed Mar. 10, 1911. Serial No. 613,571. (Cl. 240—122.)

1. In an electrolier, the combination with a central supporting plate arranged to be secured to the end of a conduit, of a plurality of lamp socket carrying arms secured upon said plate and extending radially therefrom, an insulating base mounted on the under side of said plate, and a plurality of pull switches, one for each of said lamp socket carrying arms mounted on said base and adapted to control the circuit of the lamp sockets carried on said arms, the pull means for these switches being located around the axis of the center support in positions corresponding to the positions of the various lamps whereby the operator may know which light will be lit when a certain pull is operated.



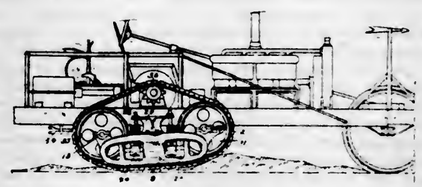
2. An electrolier comprising, in combination, a central supporting plate arranged to be secured upon the end of a conduit, a plurality of lamp socket supporting arms carried thereby and radially extending from said conduit, an insulating base secured on the under side of said supporting plate, and a plurality of pull switches mounted on said base, one for each of the sockets carried on said arms, and an inclosing cover for the base, the pull means for these switches being located around the axis of the center support in positions corresponding to the positions of the various lamps whereby the operator may know which light will be lit when a certain pull is operated.

3. The combination with a central support, of means for supporting a plurality of electric lamps thereon around the axis of said central support, and a plurality of pull switches, one for each of said lamps, all supported independently of the lamps by said central support, the pull means for these switches being located around the axis of the said central support in various positions corresponding to the positions of the various lamps, whereby the operator may know which light will be lit when a certain pull is operated.

4. A plural lamp fixture comprising means for supporting a plurality of lamps, a conducting member having a terminal connection for one of the main feed wires, and a plurality of terminal connections, one for each of the lamps, a second conducting member having a terminal connection for the other main feed wire, and a plurality of terminal connections, one for each of the lamps, and a plurality of switches, one located in each individual lamp circuit.

5. A plural lamp fixture comprising means for supporting a plurality of lamps, an annular conducting member having a terminal connection for one of the main feed wires, and a plurality of terminal connections, one for each of the lamps, a second annular conducting member having a terminal connection for the other main feed wire, and a plurality of terminal connections, one for each of the lamps, and a plurality of switches, one located in each individual lamp circuit.

1,158,114. AUTOTRACTOR. CLARENCE L. BEST, San Leandro, Cal. Filed June 4, 1912. Serial No. 701,664. (Cl. 21—114.)



1. A traction mechanism comprising a truck composed of spaced apart rigidly connected side frames each having a ball race therein, a flexible belt encircling said truck, balls in said races upon which said belt bears, and roll-

ers supported by said side frames and mounted between the latter, said rollers engaging the belt to prevent the lateral displacement of the latter.

2. A traction mechanism comprising a truck having a supporting frame, brackets attached thereto, guide rods mounted to reciprocate in said brackets, a longitudinal beam attached to the lower ends of said guide rods, stirrups attached to said frame and passed transversely around said beam to guide the same, springs for cushioning the upward movement of said beam, and a traction belt encircling said truck.

3. A traction mechanism comprising a truck with a longitudinal beam; stirrup guides fixed on the tractor frame and engaging said beam; guide rods fixed on said truck and engaging said stirrup guides; buffer springs interposed between the stirrup guides and said longitudinal beam; a traction belt encircling said truck.

4. A traction mechanism comprising a truck composed of spaced apart rigidly connected side frames each having a ball race therein, a flexible belt encircling said truck and provided with spaced apart longitudinal flanges, balls in said races and upon which said belt bears, and rollers supported by said side frames and engaging the longitudinal flanges of the belt.

5. A traction mechanism comprising a traction belt, having teeth thereon, and encircling a truck; flanged end rollers in said truck engaging said belt; free rollers interposed between said belt and the truck, stirrup guides engaging said truck; buffer springs interposed between said guides and the truck; and a driving pinion adapted to engage said traction belt.

[Claims 6 and 7 not printed in the Gazette.]

1,158,115. PERCUSSIVE TOOL FOR SCALING TUBES. HARRY SAMUEL BICKERTON BRINDLEY, London, England. Filed May 28, 1914. Serial No. 841,428. (Cl. 83—64.)



1. In a percussive tube scaling tool operated by pneumatic or other fluid pressure, a sleeve, a series of cutters provided at the fore end of the sleeve and having forward and outward motion, a reciprocating hammer piston controlling the motion of said cutters, a cylinder, a central pressure admitting member to which said cylinder is fixed, said sleeve being slidably mounted on the cylinder and means for returning and cushioning the sleeve and cutters after each forward stroke, substantially as set forth.

2. In a percussive tube scaling tool operated by pneumatic or other fluid pressure, a sleeve, a series of cutters at the forward end of the sleeve and mounted for forward and outward motion, a reciprocating hammer piston operating said sleeve and cutters, a cylinder, a central pressure admitting member positioned between said sleeve and hammer and to which said cylinder is fixed, the sleeve being slidably mounted on the cylinder and means between the sleeve and cylinder to form a cushion for the sleeve and cutters.

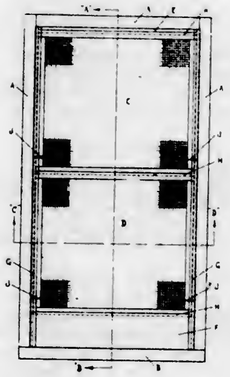
3. In a percussive tube scaling tool operated by pneumatic or other fluid pressure, a sleeve, a series of cutters at the forward end of the sleeve and mounted for forward and outward motion, a reciprocating hammer piston operating said sleeve and cutters, a cylinder, and a central pressure admitting member positioned between said sleeve and hammer and to which said cylinder is fixed, said sleeve being slidably mounted on the cylinder, there being an annular recess between said sleeve and cylinder communicating with the central pressure admitting member, substantially as set forth.

4. A percussive tube scaling tool operated by pneumatic or other fluid pressure, comprising a central supporting member, said member including a tubular part, a cylinder fixed to said member near its rear end, a reciprocating hammer piston slidably mounted between said central member and the cylinder and inclosed by the latter, a cylindrical sleeve surrounding said cylinder and adapted to have limited longitudinal movement thereon, the sleeve having an internal annular recess near its forward end, cutters mounted within said sleeve and in the recess thereof for pivotal outward and forward movement, said central supporting member having at its forward end a stem engaging with the cutters to retain the same from displacement while permitting movement thereof as specified, there being ports through the tubular portion of the central supporting member and piston whereby the introduction of fluid under pressure therethrough will cause the reciprocation of said piston, and means for cushioning the movement of the sleeve on the cylinder, thereby absorbing shocks on the cutters when struck by the hammer piston to minimize the breaking of the cutters by the repeated blows of the piston.

5. A percussive tube scaling tool operated by pneumatic or other fluid pressure, comprising a central supporting member, a cylinder fixed to said member, a reciprocating hammer piston slidably mounted between said central member and the cylinder, a cylindrical sleeve surrounding said cylinder, cutters mounted at the fore end of said sleeve, said central supporting member having at its fore end a stem engaging within the cutters, means for introducing fluid under pressure through the central supporting member to the hammer piston, cylinder and sleeve, there being an annular recess between the cylinder and the sleeve connected with the fluid operating means, and cushioning springs disposed within said annular recess, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

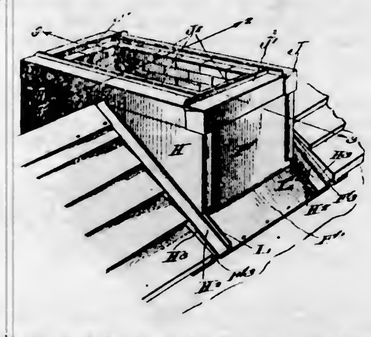
1,158,116. WINDOW-SCREEN. CHARLES C. BURGWALD, New York, N. Y. Filed Nov. 24, 1914. Serial No. 873,688. (Cl. 156—14.)



1. The combination in a window frame, the side members of the blindstop-casing with stopbeading, the top member of the blindstop-casing with head rail, and the window sill with extension rail, a screen composed of two equal sections, each less in height than one half the space between window sill and blindstop-casing in height, but capable in conjunction with the head and extension rails to cover the entire window in height.

2. The combination in a window frame, the side members of the blindstop-casing with stopbeading, the top member of the blindstop-casing with head rail, and the window sill with extension rail, a screen composed of two equal sections, less in width than the space between the blindstop-casing in width, but of a size that in conjunction with the dimension of the stopbeading will cover the entire window in width.

1,158,117. WATER AND FIRE SHIELD FOR CHIMNEYS. WALTER J. CARRIER, Lansing, Mich. Filed June 9, 1915. Serial No. 33,137. (Cl. 108—26.)



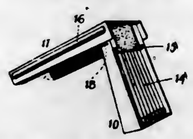
1. A water and fire shield for chimneys, comprising a frame with an opening for the reception of a chimney and having an upwardly extending flange about its marginal edge, end fire shield sections having laterally extending and parallel flanges at the ends thereof and adapted to rest upon said frame, inclined flanges at the upper ends thereof, side fire shields having laterally extending flanges at the ends engaging underneath said downwardly inclined flanges and resting upon the frame, each side shield provided with outwardly inclined flanges, water shields comprising flanged end sections engaging said inclined flanges of the fire shield and having laterally extending wings which are transversely beaded, sectional side water shields with flanges provided with beadings adapted to fit over said beadings upon the extension of the end sections, and a cap fitted over the water shields.

2. A water and fire shield for chimneys, comprising a frame with an opening for the reception of a chimney and having an upwardly extending flange about its marginal edge, end fire shield sections having laterally extending and parallel flanges at the ends thereof and adapted to rest upon said frame, inclined flanges at the upper ends thereof, said fire shields having laterally extending flanges at the ends engaging underneath said downwardly inclined flanges and resting upon the frame, each side shield provided with outwardly inclined flanges, water shields comprising flanged end sections engaging said inclined flanges of the fire shield and having laterally extending wings which are transversely beaded, sectional side water shields with flanges provided with beadings adapted, to fit over said beadings upon the extension of the end sections, said sectional shields having vertical flanges with their upper ends bent to form hooks to engage over the upright portions of the end water shields, and a cap fitted over the upper ends of the water shields.

3. A water and fire shield for chimneys, comprising a frame with an opening for the reception of a chimney and having an upwardly extending flange about its marginal edge, end fire shield sections having laterally extending and parallel flanges at the ends thereof and adapted to rest upon said frame, inclined flanges at the upper ends thereof, said fire shields having laterally extending flanges at the ends engaging underneath said downwardly inclined flanges and resting upon the frame, each side shield provided with outwardly inclined flanges, water shields comprising flanged end sections engaging said inclined flanges of the fire shield and having laterally extending wings which are transversely beaded, sectional side water shields with flanges provided with beadings adapted to fit over said beadings upon the extension of the end sections, said sectional shields having vertical flanges with their upper ends bent to form hooks to engage over the upright portions of the end water shields, and a sectional cap fitted over the water shield and provided with an upwardly extended flange adapted to be engaged by the masonary work of the chimney.

4. A water and fire shield for chimneys, comprising a frame with an opening for the reception of a chimney and having an upwardly extending flange about its marginal edge, end fire shield sections having laterally extending and parallel flanges at the ends thereof and adapted to rest upon said frame, inclined flanges at the upper ends thereof, said fire shields having laterally extending flanges at the ends engaging underneath said downwardly inclined flanges and resting upon the frame, each side shield provided with outwardly inclined flanges, water shields comprising flanged end sections engaging said inclined flanges of the fire shield and having laterally extending wings which are transversely beaded, sectional side water shields, each having a laterally extending side flange with a beading formed therein and an inwardly extending vertically disposed flange terminating in a hook at its upper end, an upwardly turned flange along the inner edge of the inclined flange thereof, the upper ends of the inclined flanges adapted to overlap, and a cap fitted over the upper ends of the water shield.

1,158,118. MATCH-BOX. BENJAMIN S. COE, Bridgeport, Conn., assignor to The Coe-Stapley Manufacturing Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Oct. 8, 1914. Serial No. 865,658. (Cl. 206—33.)



1. A box of the character described comprising a cover member having a top, and sides provided with longitudinal grooves, and inturned flanges the ends of which are cut away leaving shoulders, and a box member having bumps adapted to engage the grooves and slide therein, said box member being adapted when extended to be turned at an angle to the cover member with the back thereof abutting against the shoulders.

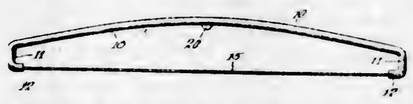
2. A box of the character described comprising a cover member having inclined sides provided with longitudinal grooves, and inturned flanges the ends of which are cut away leaving shoulders, and a box member having inclined sides adapted to engage the flanges in the closed position and bumps adapted to engage the grooves and slide therein, said box member being adapted when extended to be turned at an angle to the cover member with the back thereof abutting against the shoulders.

3. A box of the character described comprising a cover member having a top, and sides provided with longitudinal grooves and inturned flanges and a sliding box member having bumps adapted to engage the grooves, the sides of said members inclining from end to end and the edges of the sides of the box member engaging the flanges on the cover member to frictionally hold said members in the closed position.

1,158,119. GUARD AND HOLDER FOR FLY-PAPER. JAMES J. CONNELL, Chicago, Ill. Filed May 3, 1915. Serial No. 25,365. (Cl. 43—22.)

1. A guard and holder for fly paper consisting of a flexible and apertured sheet having a downwardly extended

portion at each of its ends, and means to fasten a sheet of paper at or near its ends to said portions.



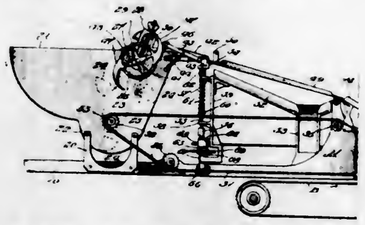
2. A guard and holder for fly paper consisting of a flexible and apertured body having a downwardly extended portion at each of its ends, a weight on said body between its ends, and means to fasten a sheet of paper at or near its ends to said portions.

3. A guard and holder for fly paper consisting of a flexible body having a series of openings each provided with a depending flange, said sheet having at each of its ends a downwardly extended portion provided with an inwardly extended foot, each of said feet having fastening means for the fly paper.

4. A guard and holder for fly paper consisting of a flexible body having a series of openings, each provided with a depending flange, a weight on said body between its ends, said body having at each of its ends a downwardly extended portion provided with an inwardly extended foot, each of said feet having integral therewith means for fastening a sheet of paper thereto.

5. A guard and holder for fly paper consisting of a body made of flexible sheet metal and having a series of openings therein, each of said openings having a flange surrounding the same and depending from the body, a transversely disposed weight located on said body between its ends, said body having at each of its ends a downwardly extended portion provided with an inwardly extended foot, each of said feet having integrally therewith means for fastening a sheet of paper thereto.

1,158,120. FEEDER FOR NUT DIPPING AND COATING MACHINES. JAMES CONTE, Chicago, Ill. Filed July 30, 1914. Serial No. 854,049. (Cl. 91—2.)



1. In a device of the character described comprising in combination, a plurality of consecutively arranged frames, each frame composed of parallelly disposed slats suitably spaced and the slats of said frames being in alinement with one another, means for delivering nut kernels upon the first of said frames, means for imparting a vertically reciprocable vibratory movement to said first frame, means for horizontally reciprocating the remaining frames simultaneously with and in opposite directions to one another, and means traveling adjacent said remaining frames adapted to carry said kernels therethrough.

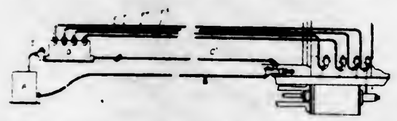
2. In a device of the character described comprising in combination, a plurality of consecutively arranged frames, each frame composed of parallelly disposed slats suitably spaced and the slats of said frames being in alinement with one another, means for delivering nut kernels upon the first of said frames, means for vibrating said first frame, means for reciprocating the remaining frames in opposite directions to one another, and means traveling adjacent said remaining frames adapted to carry said kernels therethrough.

3. In a device of the character described comprising in combination, a plurality of consecutively arranged frames composed of parallelly disposed slats, means for delivering nut kernels upon the first of said frames, means for vibrating said first frame, means for reciprocating the remaining frames, and means traveling adjacent said remaining frames adapted to carry said kernels therethrough.

4. In a device of the character described comprising in combination, a longitudinally disposed plurality of frames arranged end to end and consisting of parallelly disposed slats, means for delivering nut kernels upon the first of said frames, means for vibrating said first frame, means for reciprocating the remaining frames in opposite directions, and a device to carry said kernels therethrough.

5. In a device of the character described comprising in combination, a plurality of consecutively arranged frames composed of parallelly disposed slats suitably spaced in alinement with one another, means for delivering nut kernels upon the first of said frames, means for horizontally reciprocating the remaining frames in directions opposite to one another, and means traveling adjacent said remaining frames adapted to carry said kernels therethrough.

1,158,121. ENGINE-LUBRICATOR. ARTHUR GEORGE COOPER, Sydney, New South Wales, Australia. Filed Mar. 27, 1914. Serial No. 827,575. (Cl. 184—36.)



1. In an engine lubricating system, a lubricator service pipe, a variable spring controlled balanced valve interposed in the lubricator service pipe close to the point of application of lubrication, said valve opening automatically against said spring by overplus of oil pressure in the service pipe against operating pressure and passing a quantity of oil determined by such pressure overplus independent of the operating pressure.

2. An engine lubricating system comprising an oil reservoir, an oil pump, a manifold having connection with the reservoir and pump, service pipes between the manifold and parts to be lubricated, and a variable spring loaded balanced valve located near the distant end of each oil service pipe and manifold, said valve being held closed against the maximum working pressure of the engine part, but adapted to be opened by the said pressure of the oil to admit oil to the engine parts.

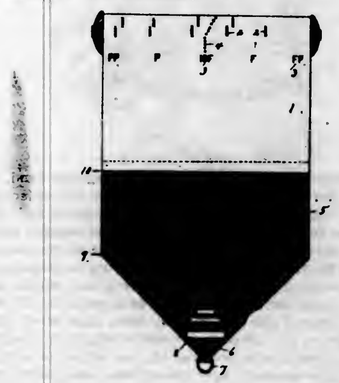
3. An engine lubricating system comprising an oil reservoir, an oil pump, a sight feed manifold, a cut-off therefor, a connection between the reservoir and manifold, a relief valve in said connection to discharge overplus of oil to said reservoir, service pipes leading from said manifold and a variable spring loaded balanced valve held under the pressure of the engine and located near the distant end of each service pipe, said valve being normally closed but opened by superplus of oil pressure above the loading spring pressure, whereby said spring will be compressed to permit the discharge of oil from the respective service pipes into the parts to be lubricated.

4. An engine lubricating system comprising an oil reservoir, an oil pump, a sight feed manifold having an overflow pipe leading to the reservoir, a cut-off therefor, a variable relief valve in said overflow pipe to said reservoir, service pipes leading from said manifold and a variable spring loaded balanced valve held under the pressure of the engine and located near the distant end of each service pipe, said valve being normally closed but opened by superplus of oil pressure above the loading spring pressure, said loading being adjusted in excess of the working pressure in the parts served through said valve.

5. An engine lubricating system, comprising oil supply means, means for forcing said oil under pressure, a part to be lubricated, said latter part being under high steam pressure, connections between the supply means and the part to be lubricated through which the oil is forced for discharging the same into said parts to be lubricated, and means associated with said connections adjacent to the parts to be lubricated and normally retained against the pressure of the oil in a position to prevent the supply of oil thereto, said last mentioned means being at a pressure intermediate the steam pressure and oil pressure adapted to be opened by excessive oil pressure to supply oil into the part to be lubricated.

[Claim 6 not printed in the Gazette.]

1,158,122. MUSIC-ROLL. GEORGE HOWLETT DAVIS, West Orange, N. J. Filed Sept. 12, 1910. Serial No. 581,693. (Cl. 84—162.)



1. A perforated paper music roll, having an antiseptic textile fabric leader secured to its forward end, said leader being of a length to completely envelop the paper body of the roll when rolled up.

2. A perforated paper music roll, having a black textile fabric leader secured to its forward end, said leader being of a length sufficient to completely envelop the paper body of the roll when rolled up.

3. A perforated paper music roll, having a water proof textile leader secured to its forward end, said leader having a length sufficient to completely envelop the paper body when rolled up.

4. A perforated paper music roll having a leader secured to its forward unperforated end, said leader being made of linen fabric of a length sufficient to completely envelop the body of the roll when rolled up, and being impregnated with an antiseptic water proof composition.

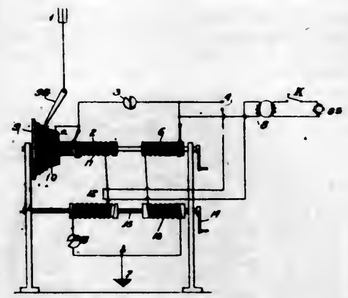
1,158,123. APPARATUS FOR GENERATING AND RECEIVING ELECTROMAGNETIC WAVES. REGINALD A. FESSENDEN, Washington, D. C., assignor, by mesne assignments, to Samuel M. Kintner, Pittsburgh, Pa., and Halsey M. Barrett, Bloomfield, N. J., receivers. Filed Aug. 26, 1904. Serial No. 222,298. (Cl. 250—17.)

1. Wireless telegraph apparatus comprising the combination with a tuned radiating circuit, of another tuned oscillating circuit with an adjustable tuning element arranged to equally and simultaneously vary the period of both said circuits.

2. In wireless telegraph apparatus, the combination with an open or antenna circuit, and an associated closed oscillating circuit with the same periodicity, of a tuning element common to the open and closed circuits, and arranged to simultaneously and equally vary the periodicity of both circuits by moving one tuning element.

3. Apparatus for wireless telegraphy comprising a radiating antenna circuit, means to prolong and render uniform the wave trains radiated thereby, including a multiple spark gap and several condensers shunting parts of said spark gap.

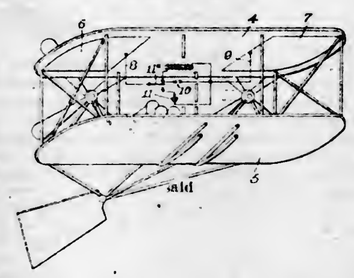
4. Wireless telegraph apparatus comprising a radiating antenna circuit, a local circuit adapted to prolong the radiation including a multiple spark gap, and a separate condenser circuit shunting a part of said gap, substantially as described.



5. The combination with several adjustable oscillation circuits, of a tuning device connecting the several circuits and having an adjustable tuning element arranged to equally and simultaneously vary the electrical periods of the several circuits, substantially as described.

[Claim 6 not printed in the Gazette.]

1,158,124. SIGNALING APPARATUS FOR AERIAL NAVIGATION. REGINALD A. FESSENDEN, Brant Rock, Mass., assignor, by mesne assignments, to Samuel M. Kintner, Pittsburgh, Pa., and Halsey M. Barrett, Bloomfield, N. J., receivers. Filed Feb. 11, 1909. Serial No. 477,283. (Cl. 250—33.)



1. A free aerial vessel having a plurality of capacity areas adapted to receive and radiate electromagnetic waves, in combination with devices on the vessel to generate electromagnetic waves and signal receiving apparatus, substantially as described.

2. Apparatus for communicating by electromagnetic waves to and from free aerial vessels, comprising a radiating and receiving device in the form of several connected conducting surfaces mounted on the vessel in planes lying in the direction of motion thereof so as to form coöperatively a capacity thereon, substantially as described.

3. Apparatus for communication by electromagnetic waves from aerial vessels comprising two conducting surfaces, arranged in a substantially horizontal plane and attached to non-conducting surfaces forming a part of the vessel, for the purposes described.

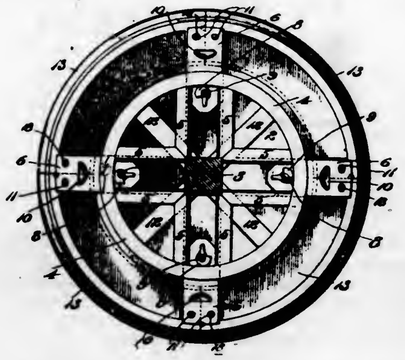
4. Apparatus for communicating by wireless telegraphy from flying machines of the aeroplane type, comprising two separate conducting surfaces attached on the planes of the machine to form a radiator or receiver of waves.

5. Apparatus for wireless telegraphy, comprising the

combination with an aeroplane, of several conducting surfaces arranged on the planes of the machine to form a radiator.

[Claims 6 to 12 not printed in the Gazette.]

1,158,125. EXTENSIBLE TABLE. WILLIAM T. FINK, Carlyle, Ill., assignor of one-half to William Johnston, Carlyle, Ill. Filed Feb. 25, 1915. Serial No. 10,393. (Cl. 45—9.)



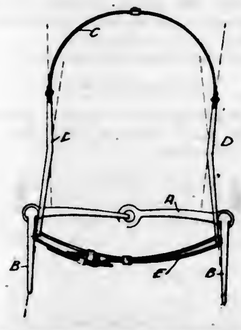
1. An extension table having a permanent top, a plurality of removable extension leaves constructed to fit about the edge of said top, slidable supports mounted to move radially with relation to the permanent top, interengaging means carried by each of said slidable supports and the abutting ends of each pair of said leaves, and manually-operable means for imparting a drawing action to the slidable supports with relation to the permanent top for drawing said supports inwardly and binding said leaves, against each other and against the periphery of the permanent top.

2. An extension table having a permanent top, a plurality of removable extension leaves constructed to fit about the edges of said top, slidable supports mounted for radial movement with relation to the permanent top and arranged to be drawn outwardly beyond said permanent top, a downwardly-extending member carried by said permanent top and through which said slidable supports extend, cams mounted upon said slidable supports and acting upon said downwardly-extending member for imparting inward movement to said slidable supports when said cams are manipulated, and interengaging means between each of said supports and each of the leaves supported thereby constructed to cause said leaves to move inwardly with said slidable supports under the action of said cams.

3. An extension table comprising a permanent top, a plurality of leaves shaped to fit therearound, a plurality of radially-moving slidable supports carried by said permanent top, downwardly-extending dowel-pins carried by each of said leaves adjacent the ends thereof, each of said slidable supports being provided with elongated openings constructed to receive the dowel-pins of an abutting pair of said leaves, whereby inward movement of the slidable supports will draw said leaves toward the permanent top and toward each other.

4. An extension table comprising a permanent top, a plurality of leaves shaped to fit therearound, a plurality of radially-moving slidable supports carried by said permanent top, downwardly-extending dowel-pins carried by each of said leaves adjacent the ends thereof, each of said slidable supports being provided with openings constructed to receive the dowel-pins of an abutting pair of said leaves, and manually-operable means carried by said slidable supports for imparting movement to said slidable supports inwardly of the permanent top and constructed to lock said slidable supports against outward movement after they have been moved to a predetermined degree.

1,158,126. CURBER FOR BRIDLE-BITS. JONATHAN O. FOWLER and GEORGE W. LE COMPTE, New York, N. Y.; said Le Compte assignor to said Fowler. Continuation of application Serial No. 353,446, filed Jan. 22, 1907. This application filed June 18, 1914. Serial No. 845,803. (Cl. 54—7.)



1. In a device of the class described, a spring band, a plurality of jaw-pieces, and means to secure the adjacent ends thereof together, the said band being bowed and expanded so as to extend outwardly from the central part thereof and then bent inwardly at the ends of the same, as of horizontal C-shape, the said ends being in alinement with the adjacent extremities of the jaw-pieces which approach each other for a distance and at approximately the central part thereof are turned away from each other, the axis of the outer end of each jaw-piece being at an angle to the axis of each adjacent end of the spring, whereby the noseband is normally held away from, and prevented from exerting pressure against, the nose and cheeks of the animal.

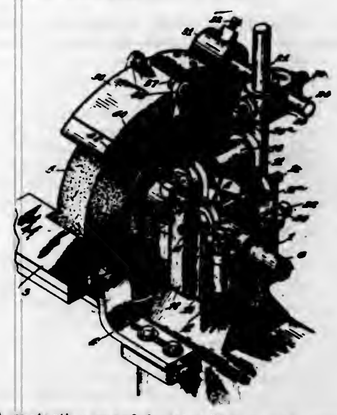
2. In a device of the class described, a spring band, a plurality of cast jaw-pieces, and means to secure the adjacent ends thereof together, the said band being bowed and expanded so as to extend outwardly from the central part thereof and then bent inwardly at the ends of the same, as of horizontal C-shape, the said ends being in alinement with the adjacent extremities of the jaw-pieces, the longitudinal axis of the entire body of each of the same lying at an angle to the longitudinal axis of the end of the noseband, whereby the noseband is normally held away from, and prevented from exerting pressure against, the nose and cheeks of the animal.

1,158,127. EMERY-WHEEL GUARD AND SUPPORTING-BRACKET THEREFOR. FREDERICK GEIGER, Cleveland, Ohio. Filed June 11, 1915. Serial No. 33,456. (Cl. 51—7.)

1. A protective guard for abrading wheels comprising an inwardly opening channel member that embraces a portion of the circumference of the wheel and having its inner surface spaced from the periphery thereof, a gate slidable within one end of the channel member and arranged to be projected across the exposed portion of the periphery of the wheel, said gate having fragment engaging portions, and connections between the gate and the aforesaid member.

2. A protective guard for abrading wheels comprising an inwardly opening channel member that embraces a portion of the circumference of the wheel and having its inner surface spaced from the periphery thereof, a gate slidable within one end of the channel member and arranged to be projected across the exposed portion of the periphery of the wheel, said gate having projections which are located between the inner surface and the periphery of the wheel, connections between the gate and the aforesaid member, and stops for limiting the movement of the gate in both directions.

3. A protective guard for abrading wheels comprising a curved, inwardly opening channel member, the inner surface whereof is concentric to and spaced from the periphery of the wheel, a gate slidably supported adjacent one end of said channel member, and having fragment engaging portions, and stops for limiting the movement of the gate in both directions.

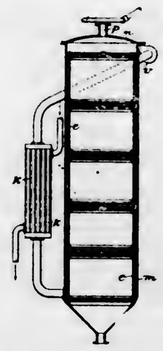


4. A protective guard for abrading wheels comprising a curved, inwardly opening channel member, the inner surface whereof is concentric to and spaced from the periphery of the wheel, a gate slidable within one end of said channel member and having fragment engaging portions and extensions which project up along each side of the channel member, devices carried by said extension which overlie the outer surface of the channel member, and stops for limiting the movement of the gate in both directions.

5. A device of the character described comprising an inwardly opening channel member which embraces a part of the circumference of an abrading wheel, said channel member having a tubular extension that is located beneath the abrading wheel and arranged to have connection with a suction device.

[Claims 6 to 12 not printed in the Gazette.]

1,158,128. DETINNING TIN-SCRAP. KARL GOLDSCHMIDT and JOSEF WEBER, Essen-on-the-Ruhr, Germany, assignors, by mesne assignments, to Goldschmidt Detinning Company, Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 1, 1906. Serial No. 328,793. (Cl. 75—55.)



1. The process of detinning tin-scrap which consists in introducing chlorin into a closed apparatus containing the scrap and imparting to the body of gases confined in the apparatus an energetic stirring motion, whereby the temperature is substantially equalized throughout the scrap.

2. The process of detinning tin-scrap which consists in introducing chlorin into a closed apparatus containing the scrap and imparting to the body of gases confined in the apparatus a stirring motion sufficient to substantially equalize the temperature throughout the scarp, the temperature being maintained at a point below that at which iron is attacked.

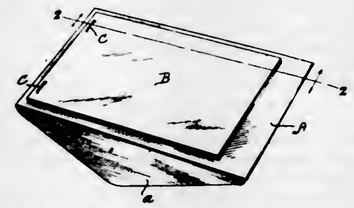
3. The process of detinning tin-scrap which consists in introducing chlorin into a closed apparatus containing the scrap, imparting to the body of gases within the apparatus a stirring motion sufficient to substantially equalize the temperature throughout the scrap, and circulating the gases in contact with a heat-absorbing surface, whereby the temperature of the contents of the tank is maintained at the desired degree.

4. The process of detinning compressed tin-scrap which consists in introducing chlorin into a closed apparauts containing the compressed scrap and imparting to the body of gases confined in the apparatus an energetic stirring motion, whereby the temperature is substantially equalized throughout the scrap.

5. The process of detinning compressed tin-scrap which consists in introducing chlorin into a closed apparatus containing the compressed scrap and imparting to the body of gases confined in the apparatus a stirring motion sufficient to substantially equalize the temperature throughout the scrap, the temperature being maintained at a point below that at which iron is attacked.

[Claims 6 to 16 not printed in the Gazette.]

1,158,129. FILING DEVICE. ROBERT S. GRAHAM, New York, N. Y. Filed Feb. 17, 1915. Serial No. 8,753. (Cl. 11—11.)



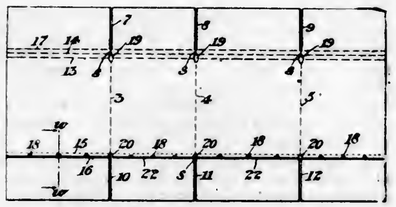
1. As a new article of manufacture, a pocket filing device comprising an envelop provided on the back thereof with a flap, and a pad of memorandum leaves positioned on the front of the envelop, said pad and envelop being attached rigidly together near one end portion thereof so as to leave the flap on the back free and unconfined by the fastening means.

2. As a new article of manufacture, a pocket filing device comprising an envelop closed on all sides except at the back and provided with a flap, a pad of memorandum leaves positioned on the front of the envelop, and means for fastening an end portion of the pad to a corresponding end portion of the envelop, said attaching means being free from engagement with the flap and said memorandum leaves being of a length less than the distance between the fastening means and the opposite end portion of the envelop, whereby the flap may be opened or closed at will and the memorandum leaves may be torn off the pad and filed in the envelop without folding said leaves and without hindrance from the attaching means.

1,158,130. REINFORCED PAPER-BOARD BOX. EDGAR M. HAWKINS, Rochester, N. Y., assignor to M. D. Knowlton Company, Rochester, N. Y., a Corporation of New York. Filed June 1, 1914. Serial No. 842,229. (Cl. 229—49.)

1. A paperboard box, comprising a main sheet and an integral reinforcing strip forming a plurality of plies presenting an unbroken external surface, at least one of said members being cut out in a bending line of the box to reduce the number of plies at that point.

2. A paperboard box, comprising a main sheet and an integral external reinforcing strip forming a plurality of plies presenting an unbroken external surface, at least one of said members being cut out in a bending line of the box to reduce the number of plies at that point.



3. A paperboard box, comprising a main sheet and an integral external reinforcing strip forming a plurality of plies presenting an unbroken external surface, at least one of said members being cut out in a bending line of the box to leave but a single ply of material in said line.

4. A paperboard box, comprising a main sheet and an integral external reinforcing strip forming a plurality of plies and extending peripherally around the box and crossing a plurality of corners thereof and presenting an unbroken external surface, at least one of said members being cut out in the bending line of each of said corners to reduce the number of plies in said line.

5. A paperboard box, comprising a main sheet and an integral external two-ply reinforcing strip extending peripherally around the box and crossing a plurality of corners thereof and presenting an unbroken external surface, both of said members being cut out in the bending line of each of said corners to reduce the material to a single ply in said lines.

[Claims 6 to 11 not printed in the Gazette.]

1,158,131. INK AND PROCESS OF MAKING SAME. ROBERT HOCHSTETTER, Cincinnati, Ohio. Filed Sept. 28, 1912. Serial No. 722,830. (Cl. 134—28.)

1. The process of producing an ink for oscillating or rotary mimeographs, and the like, consisting in grinding in a varnish a pigment made on a base that will hold but a minimum amount of varnish, and adding an oil or oil mixture which is adapted to cause the mixture to penetrate the paper without undue spreading.

2. The process of producing an ink for oscillating or rotary mimeographs, and the like, which consists in grinding a pigment made on a base which will hold but a minimum amount of varnish or oil, in a vegetable oil bodied by heating and mixing therewith a mixture of a mineral oil and of a vegetable oil to make the ink penetrate and to prevent undue spreading of the ink in the paper.

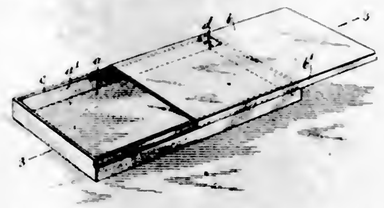
3. The process of producing an ink for oscillating or rotary mimeographs, and the like, which consists in grinding in a varnish a pigment made on a base which when ground in an oil or varnish will hold but a minimum amount of varnish, mixing therewith an oil which will cause the mixture to penetrate paper without undue spreading, and adding thereto a small amount of Turkey red or other sulfonated oil.

4. The process of producing an ink for oscillating or rotary mimeographs, and the like, which consists in grinding in a varnish a pigment made on a base which when ground in an oil or varnish will hold but a minimum amount of varnish, mixing therewith an oil which will cause the mixture to penetrate paper without undue spreading, and adding thereto a small amount of magnesium carbonate, or like fluffy substance which holds large quantities of varnish, and a small amount of Turkey red oil or other sulfonated oil.

5. The process of producing an ink for oscillating or rotary mimeographs, and the like, which consists in grinding a pigment in an oil or oil mixture, the pigment and oil when combined having the required cohesion and tack, and the oil or oil mixture being capable of causing the mixture to penetrate paper without undue spreading.

[Claims 6 to 9 not printed in the Gazette.]

1,158,132. CIGARETTE-BOX. NICHOLAS JACOVATOS, New York, N. Y. Filed June 12, 1914. Serial No. 844,621. (Cl. 229—44.)

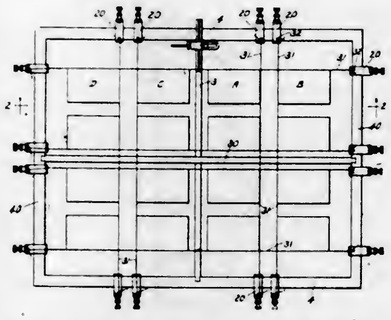


1. A cigarette box consisting of two loose parts, a box and a separate shiftable cover, means on the front side of the box and cover for holding the cover in position and for guiding it when shifted, and a slide hinge on the rear of the box composed of a wire extending along its inner top portion, and a sheet metal loop secured centrally on the lower rear surface of the cover and adapted to slide on the wire in either direction.

2. A cigarette box consisting of two loose parts, a box having a reduced front side, a separate cover having a downward front edge meeting the reduced front side of the box, and sliding means, located partly on the inner top portion of the rear wall of the box and partly under the lower surface of the cover so that the cover is adapted to slide in either direction, and may be raised.

3. A cigarette box consisting of two loose parts, a box having a reduced front side, a separate cover having a downward front edge meeting the reduced front side of the box, and a slide hinge composed of a wire secured in the box and extending along the inner top portion of its rear wall, and a sheet metal loop secured centrally under the lower rear surface of the cover and adapted to slide on the wire in either direction permitting of opening the box by raising the cover and by shifting it sidewise in either direction.

1,158,133. FORM REGISTERING AND LINE-UP MEANS. REYNOLD H. KIEBLER, Chicago, Ill. Filed Mar. 20, 1915. Serial No. 15,084. (Cl. 101—166.)



1. In combination, a chase, a series of detachable line-holding devices adapted to be secured directly upon the chase, and a starting-point marking device adapted to be detachably mounted on the chase to afford a starting point from which to space said line-holding devices.

2. In combination, a chase, a series of holders detachably secured directly upon said chase, and page-locating lines stretched across the chase between said holders.

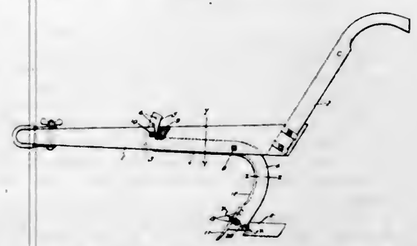
3. The combination with a chase, of a starting-point marking device comprising a member adapted to be secured to one piece of the chase and extend across the top of an adjacent outer piece of the chase with an edge in the plane of one of the side faces of the first-mentioned piece.

4. The combination with a chase, of an abutment, and means for attaching said abutment to one member of the chase with a portion of the abutment overlying the top of an adjacent outer chase member and having an edge of said portion lying in the plane of one side of the first-mentioned member.

5. A line-holder comprising a clamp adapted to be secured on and overlie one of the outer members of a chase, the clamp having a seat for a line at one end, and a line fastening device at the other end of the clamp.

[Claims 6 to 16 not printed in the Gazette.]

1,158,134. PLOW. WILLIAM A. KIMBELL, Birmingham, Ala. Filed Jan. 23, 1915. Serial No. 3,959. (Cl. 97—26.)



1. In combination, a plow standard formed of a metal bar of single thickness, a clip adapted to embrace the standard, a blade, and a retaining bolt which passes through the blade and through both ends of the clip and is projected to one side of the standard to mount the several parts thereon, substantially as described.

2. In combination, a plow standard formed of a metal bar of single thickness, a clip adapted to embrace the standard, a blade, a rearward sweep, and a retaining bolt which passes through both ends of the clip and through the blade and rearward sweep and is projected to one side of the standard, as and for the purposes described.

3. In a plow, a standard formed of a bar having a notch, a clip having a side and top and bottom members, said latter members having inturned lips at their outer ends, said lips being spaced to pass only when the clip is cocked over a notched part of the bar and being adapted when the clip is righted to engage a side of the bar, a bolt adapted to be passed between the bar and side of the clip to hold the latter interlocked with the bar, and one or more tools adapted to be attached to the standard by said bolt and to bear against the clip and the standard, substantially as described.

4. In a plow, a beam, a standard connected to the beam and formed of a bent metal bar of single thickness which is notched near its lower edge, a clip adapted to be interlocked with the standard opposite a notch therein and having a portion standing flush with the forward unnotched edge of the standard and a portion which engages in said notch, a plow point bearing on the clip and the standard, and a bolt for attaching the point adapted to be passed through the ends of the clip and between it and the standard to lock the parts in assembled position.

5. The combination with a plow standard having a notch in its lower forward edges, of a bent metal clip comprising a side member and top and bottom members set at right angles thereto, said top member having its outer end bent inwardly approximately the depth of the notch in the standard, the outer end of the top and bottom members being inturned and adapted to clasp the standard between them when the top member is seated in a notch, there being openings in the top and bottom members to receive a bolt which, in passing between the side member and the standard, is adapted to lock the clip and standard rigidly together.

[Claim 6 not printed in the Gazette.]

1,158,135. HYGIENIC HOT-PLATE. GOLLADAY LAKE, New York, N. Y. Filed May 11, 1914. Serial No. 837,628. (Cl. 126—215.)



1. A heating device comprising a substantially flat upper and a lower plate spaced apart, an edge wall connecting said plates, a supporting wall projecting beneath the lower plate adapted to form a baffle, depressed radial grooves in the upper plate having openings through the plate at the bottom of the grooves, and an annular row of openings through the bottom plate adjacent the supporting wall, said openings being out of vertical alinement with the first mentioned openings.

2. A heat distributing device comprising an upper plate and a lower plate spaced therefrom, an edge wall formed on the upper plate and extending downwardly beneath the lower plate and having an inturned bead to hold the lower plate, an annular row of openings adjacent the edge of the lower plate, depressed radial grooves formed in the upper plate and extending to the outer edge thereof, and openings through the upper plate in these grooves materially within the zone of the annular row of openings.

3. A heat distributing device comprising sheet metal upper and lower plates spaced apart, an edge wall formed integral with the upper plate and extending downwardly beneath the lower plate forming an annular baffle and having an inturned bead to hold the lower plate, a flange formed on the lower plate engaging said wall, an annular row of openings adjacent the edge of the lower plate, depressed radial grooves formed in the upper plate and extending to the outer edge thereof, and openings through the upper plate in these grooves.

4. In a heating device comprising upper and lower plates spaced apart, an edge wall connecting said plates and an annular baffle formed around the outside edge of the lower plate, an annular row of openings through the lower plate adjacent this baffle, outwardly extending grooves in the upper plate, and openings through the upper plate in said grooves arranged in a central zone, whereby heated gases are deflected by said baffle and caused to pass through said annular row of openings and then toward the center of the plates between the same, then upwardly through the openings in the upper plate and outwardly along said grooves.

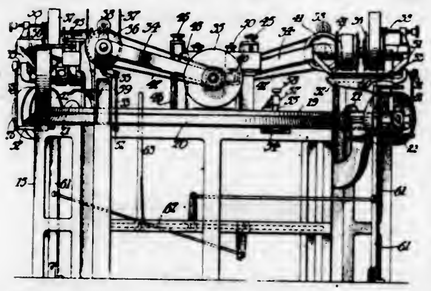
5. In a heating device, the combination of upper and lower plates spaced apart, an edge wall connecting said plates, an annular baffle formed around the space below the lower plate, an annular row of openings through the lower plate adjacent to this baffle, the intermediate portion of the lower plate being impervious, radial depressions in the upper plate, and openings through the upper plate in such depressions.

1,158,136. GRINDING, POLISHING, OR BUFFING MACHINE. CARL B. LARSON, Irvington, N. J. Filed Jan. 8, 1915. Serial No. 1,073. (Cl. 51—12.)

1. A support, a horizontal work-table mounted thereon so as to be free to be rotated and to be moved in a horizontal plane, means to rotate said table, and guides bearing against an edge of said table and arranged to guide it as it rotates.

2. A support, a horizontal annular work-table mounted thereon so as to be free to be rotated and to be moved in a horizontal plane, means to rotate said table and

guides bearing against the inner edge of said table and arranged to guide it as it rotates.



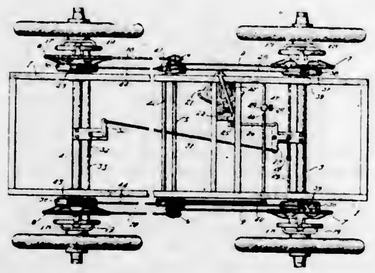
3. A support, a horizontal annular work-table mounted thereon so as to be free to be rotated and to be moved in a horizontal plane, means to rotate said table, a tool arranged to operate on work placed on said table, and guides bearing against the edge of said table and arranged to maintain said table in fixed relation to said tool as said table rotates.

4. A support, a horizontal work-table mounted thereon so as to be free to be rotated and to be moved in a horizontal plane, guides bearing against an edge of said table, friction rollers on opposite sides of the center of said table and arranged to bear against an edge thereof to rotate it, and means to drive said rollers, said rollers being constructed and arranged so that the horizontal pressures therefrom are balanced.

5. A support, a horizontal work-table mounted thereon so as to be free to be rotated and to be moved in a horizontal plane, means to rotate said table, and guides arranged to bear on an edge and on the top of said table to guide it and hold it down on said support.

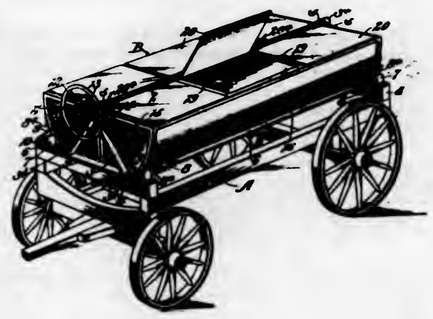
[Claims 6 to 15 not printed in the Gazette.]

1,158,137. VEHICLE. JESSE F. LIVINGOOD, New Virginia, Iowa. Filed Nov. 11, 1912. Serial No. 730,616. (Cl. 21—90.)



In a steering mechanism, the combination of a pair of axles, wheels, universal joints connecting one of the wheels with each end of the axles, an arm connected with each of the wheels for shifting them laterally, an operating shaft intermediate the axles, a worm wheel connected with the shaft, a second shaft, a worm connected with the last said shaft and meshing with the worm wheel, a pivoted sector, a gear connected with the said second shaft and meshing with the sector, an operating handle for swinging the sector about its pivot, a rod connecting each of the respective pairs of arms, a rocker arm adjacent each of the rods, a link connecting the rods with the respective rocker arms, a link connecting the rocker arms, an arm on the first recited shaft, and a link connecting the last said arm with one of the said rocker arms.

1,158,138. DUMPING-WAGON. HENRY LUEDINGHAUS, Jr., St. Louis, Mo. Filed Mar. 1, 1915. Serial No. 11,191. (Cl. 21—20.)



1. A dumping wagon provided with a body of substantially semi-cylindrical shape in cross section composed of two longitudinally divided portions which are so arranged that they can be swung upwardly about a common horizontal axis so as to discharge the load, a horizontally disposed shaft that sustains said sections, winding shafts operatively connected to said sections so as to raise and lower same, and means for transmitting movement from said horizontally disposed sustaining shaft to said winding shafts.

2. A dumping wagon provided with a body of substantially semi-cylindrical shape in cross section composed of two longitudinally divided portions which are so arranged that they can be swung upwardly about a common horizontal axis so as to discharge the load, a horizontally-disposed shaft that sustains said sections, winding shafts operatively connected to said sections so as to raise and lower same, alining sprocket wheels mounted on said horizontally disposed sustaining shaft and on said winding shafts, and a sprocket chain that engages all of said sprocket wheels.

3. A dumping wagon provided with a body of substantially semi-cylindrical shape in cross section composed of two longitudinally divided portions which are so arranged that they can be swung upwardly about a common horizontal axis so as to discharge the load, a horizontally-disposed shaft that sustains said sections, winding shafts operatively connected to said sections so as to raise and lower same, means for transmitting movement from said horizontally-disposed sustaining shaft to said winding shafts, and means on said sustaining shaft for locking the same against rotation in one direction.

4. In a dumping wagon, a frame provided with a pair of transverse end sills, uprights arranged intermediate the ends of said end sills and provided with bearings at their upper ends, a supporting shaft journaled in said bearings, bearings arranged adjacent the ends of said end sills, a pair of winding shafts extending from sill to sill and journaled in said last mentioned bearings, a body comprising a pair of longitudinally-extending, curved sections that are pivotally mounted on said supporting shaft, connecting means between said body sections and said winding shafts, connecting means between said winding shafts and said supporting shaft, means for rotating said supporting shaft so as to separate said body sections, and means for locking said supporting shaft against rotation in one direction.

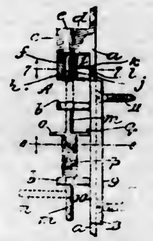
1,158,139. PAD FOR A HERNIAL TRUSS. RICHARD P. MCCOLLUM, Philadelphia, Pa. Filed Jan. 5, 1915. Serial No. 562. (Cl. 128—26.)

A truss pad composed of a hollow, inflatable body of the form of an annulus, a thimble adapted to enter the opening of said body, a head on said thimble adapted to be seated on said body around the wall of said opening, and



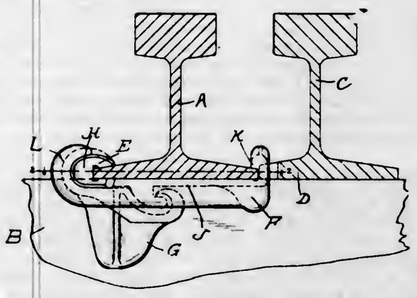
a screw which is adapted to enter said thimble and be engaged with a portion of a belt employed for the truss.

1,158,140. BURGLAR-ALARM. CLYDE W. MANNING and ALBERT C. M. GOULD, New York, N. Y., assignors of five-sixteenths to William H. Malcolm and one-fourth to James Riley Gordon, New York, N. Y. Filed Oct. 20, 1909. Serial No. 523,693. (Cl. 116—42.)



In a burglar alarm, the combination of a plunger, means for placing the plunger under tension, a pivoted breech block, a firing pin separate from the plunger, and mounted in the breech block in alinement with the plunger and operable thereby, a locking member retaining the firing pin against inadvertent displacement while allowing of longitudinal movement thereof, said locking member further serving to lock the breech block in its operative position, a support provided with a chamber for containing a cartridge in alinement with the firing pin, means for retaining the plunger under tension, said means being operable upon the rotation of the plunger to release said plunger and allow it to shoot forward, under the impelling action of the tension means into contact with the firing pin, whereby the cartridge is exploded and the alarm sounded.

1,158,141. RAIL-STAY. PHILIP W. MOORE, Evanston, Ill., assignor to The P & M Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 30, 1914. Serial No. 879,710. (Cl. 238—4.)



1. A rail stay comprising a stationary and a movable element which together embrace the base of the rail and are formed so as to provide two pairs of coöperating wedging members, one pair of which is located below the level of the under surface of the base flange of the rail.

2. A rail stay comprising a stationary and a movable element which together embrace the base of the rail and are formed so as to provide two pairs of coöperating wedging members, one pair of which is located below the level of the under surface of the base flange of the rail, and the other at one end of the device.

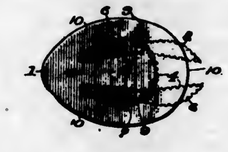
3. A rail stay comprising a stationary and a movable element which together embrace the base of the rail and are formed so as to provide two pairs of coöperating wedging members, one pair of which is located under the base flange of the rail approximately in the middle of the same.

4. A rail stay comprising a stationary and a movable element which together embrace the base of the rail and are formed so as to provide two pairs of coöperating wedging members, one pair of which is located under the base flange of the rail approximately in the middle of the same and the other at one end of the device.

5. A rail stay comprising a stationary and a movable element which together embrace the base flange of the rail and are formed with a pair of jaws, the jaw of one member extending around that of the other, and with a pair of co-engaging wedging tongues.

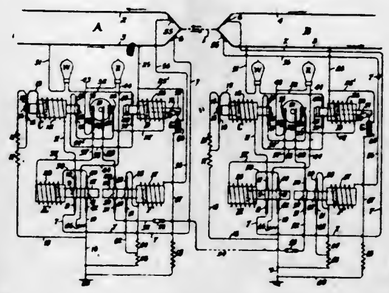
[Claims 6 to 28 not printed in the Gazette.]

1,158,142. SANITARY GUARD FOR WATER-CLOSET SEATS. HENRY MCLLER, Philadelphia, Pa., assignor of one-half to Jacob Bernhard, Philadelphia, Pa. Filed Feb. 26, 1915. Serial No. 10,672. (Cl. 4—18.)



In a sanitary guard for a water closet seat, a piece of pliable material having an opening therein, a main tongue extending from the wall of said opening, and supplemental tongues integral with opposite sides of the extremity of said main tongue to extend, in use, beyond the extremity of the latter.

1,158,143. ELECTRIC SIGNALING SYSTEM. CARL P. NACHOD, Philadelphia, Pa., assignor to Nachod Signal Company, Inc., a Corporation of New York. Filed Oct. 13, 1908. Serial No. 457,520. (Cl. 246—36.)



1. In a signaling system, the combination with a switch contact, of electro-magnetic means controlled by said contact, a step by step mechanism actuated by said electro-magnetic means, a semaphore, and a semaphore controlling magnet having a movable member, said movable member being actuated by said electro-magnetic means when said step by step mechanism is actuated.

2. The combination with a switch contact, of electro-magnetic means controlled thereby, step by step mecha-

nism actuated by said electro-magnetic means, a semaphore, and a semaphore controlling magnet having a movable member, said movable member being actuated by said electro-magnetic means when said step by step mechanism is actuated, said step by step mechanism when actuated closing the circuit of the winding of said semaphore controlling magnet, whereby its movable member is retained in position after actuation by said electro-magnetic means.

3. The combination with a switch contact, of a vehicle for bringing said contact momentarily into circuit, electro-magnetic means controlled by said contact, a semaphore, a semaphore controlling magnet having a movable member, said electro-magnetic means actuating said movable member, and means for energizing said magnet after the movable member has been actuated.

4. The combination with a switch contact, of electro-magnetic means controlled thereby, a semaphore, a semaphore controlling magnet having a movable member actuated by said electro-magnetic means, means causing the energization of the winding of said semaphore controlling magnet after such actuation, and an electric light signal to be displayed simultaneously with the semaphore controlled by said magnet, the circuit of said light being interrupted at one point upon the energization of said electro-magnetic means and closed at another point by the operation of the movable member of said semaphore controlling magnet, and finally closed at the first point by the return of said electro-magnetic means to normal position.

5. The combination with a switch contact, of electro-magnetic means controlled thereby upon the passage of each car or train past said switch contact, a step by step mechanism operated one step for each energization of said electro-magnetic means, a semaphore, a semaphore magnet the circuit of whose winding is closed by the first step movement of said step by step mechanism, a switch contact at a distant station controlling said semaphore magnet at the home station, and means controlled by said semaphore magnet for actuating said step by step mechanism in reverse direction one step for each car or train passing said distant switch contact, the last car or train causing the return of said step by step mechanism and said semaphore magnet to normal.

[Claims 6 to 43 not printed in the Gazette.]

1,158,144. BUILT-UP STRUCTURE OF GLASS OR THE LIKE. HENRY B. OBERHACKE, Los Angeles, Cal. Filed Sept. 3, 1912. Serial No. 718,327. (Cl. 189—77.)



1. As an improved article of manufacture, a built-up structure comprising a plurality of separate sections of glass or the like, soft and flexible cames fitted between the adjacent edges thereof and permitting the sections to be relatively adjusted or fitted together prior to final assemblage due to the flexibility of the cames, and strips of hard laterally inflexible material applied to and connected with the cames and extending materially beyond the adjacent edges of abutting sections in both directions and in superficial contact with the sections over the edges thereof at both sides of the cames and whereby the sections are held rigidly against movement; said strips being of a definitely varied width or conformation as predetermined whereby decorative design is produced.

2. As an improved article of manufacture, a built-up structure comprising a plurality of separate sections of glass or the like, soft and flexible cames fitted between the adjacent edges thereof and permitting the sections to be relatively adjusted or fitted together prior to final assemblage due to the flexibility of the cames, and strips of hard laterally inflexible material applied to and connected with the cames and extending materially beyond the adjacent edges of abutting sections in both directions and in superficial contact with the sections over the edges thereof at both sides of the cames and whereby the sections are held rigidly against movement; said strips being of definitely varied width or conformation as predetermined whereby decorative design is produced; and whereby the sections connected by the cames are rigidly held together in an unyielding frame preventing buckling or distortion.

3. As an improved article of manufacture, a built-up structure comprising a plurality of separate sections of glass or the like, flexible cames fitted between the adjacent edges thereof and permitting the sections to be relatively adjusted or fitted together prior to final assemblage due to the flexibility of the cames, and strips of hard laterally inflexible material applied to and connected with the cames and extending materially beyond the adjacent edges of abutting sections in both directions and in superficial contact with the sections over the edges thereof at both sides of the cames and whereby the sections are held rigidly against movement.

4. A built up glass structure including a series of glass sections, cames interposed between adjacent edges of the glass sections and formed of soft pliable metal, said cames being provided at one edge with a thin lateral flange for temporarily holding the glass sections, flat faced reinforcing strips of harder metal floated upon the thinly flanged edges of the webs of the cames so as to project laterally over and be in facial contact with the edge portions of the glass sections and hold the same rigidly in position, and disk members of the harder metal floated upon the intersections of the cames and connecting adjacent ends of the reinforcing strips.

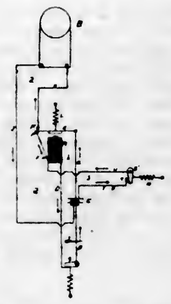
1,158,145. ELECTRICAL FUSE-PLUG. NORMAN W. NUTT, Trenton, N. J., assignor to Trenton Electric and Conduit Company, Trenton, N. J., a Corporation of New Jersey. Filed Jan. 24, 1914. Serial No. 814,044. (Cl. 175—277.)



A fuse plug composed of two members joined together to form a chamber therein, one of said members having a transverse slot and the other member having a post projected into said slot to prevent rotary movement of said members on each other, a sleeve threaded on said members to prevent longitudinal separation thereof, a contact disk at the bottom of said plug, and a fuse joining said disk and said sleeve, said post and said slotted member having registering grooves jointly forming a passage for said fuse to reach said sleeve.

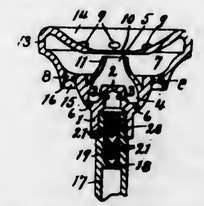
1,158,146. ELECTRIC BURGLAR, FIRE, AND GENERAL ALARM. HARRY W. OLNEY, Spokane, Wash. Filed May 21, 1913. Serial No. 769,118. (Cl. 177—314.)

A signaling system, comprising in combination, a current source, and a relay, said current source, and relay and the armature of said relay being included in a primary circuit, a series of normally closed circuit breakers at danger points in said primary circuit, a contact also in said primary circuit and in normal engagement with said armature, a spring for withdrawing said armature when the primary circuit is broken, a secondary circuit excluding said relay consisting of said armature, the current source and an alarm, a second contact also in said secondary circuit to engage said armature when this primary circuit is broken, and a third circuit also including said



current source and said relay and also containing a normally open circuit closer for resetting the primary circuit.

1,158,147. DRINKING-FOUNTAIN NOZZLE. GEORGE M. PAGE, Haydenville, Mass., assignor to The Haydenville Company, Haydenville, Mass., a Corporation of New Jersey. Continuation of application Serial No. 790,687, filed Sept. 19, 1913. This application filed Nov. 28, 1914. Serial No. 874,417. (Cl. 137—110.)



1. A drinking fountain nozzle comprising a shell having an inner chamber and an outer chamber therein, the former extending into the latter and having an opening through the top and another opening below such top, and said outer chamber having a concave top and one or more air openings in the bottom and a central discharge opening in said top above the top inner-chamber opening, and a dome extending into said inner chamber and opening laterally through the sides thereof into said last-mentioned chamber, said dome communicating with the inlet end of the nozzle.

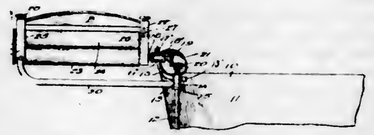
2. A drinking fountain nozzle comprising a shell having an inner chamber and an outer chamber therein, the former extending into the latter and having an opening through the top and another opening below such top, and said outer chamber having top and bottom openings and a central opening above the top inner-chamber opening, the top of said outer chamber being concave, and a dome extending into said inner chamber and opening laterally through the sides thereof into said last-mentioned chamber, said dome communicating with the inlet end of the nozzle.

3. A drinking fountain nozzle comprising a tubular stem terminating at the top, inside, in a dome which is perforated laterally, a chamber surrounding the upper part of said dome, said chamber having walls which are constricted above said dome, are open at the top, and are perforated below such top, and a head surrounding and overhanging said walls, said head having a concave top and a chamber into which said walls extend, and opening through the bottom and through said top above the opening at the top of said walls.

4. A drinking fountain nozzle comprising a tubular stem terminating at the top, inside, in a dome which is laterally perforated, walls surrounding the upper part of said dome and constricted above said dome to form a throat piece, said walls being perforated, and a hollow head surrounding said walls and throat piece and provided with an exteriorly concave top which opens above said throat piece and at one or more points outside the opening above the throat piece, said head also opening at the bottom outside of the nozzle.

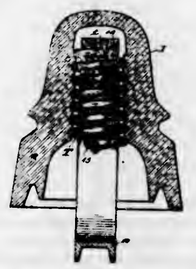
5. A drinking fountain nozzle comprising a tubular stem terminating at the top, inside, in a dome which is perforated laterally, walls surrounding the upper part of said dome and constricted above the latter to form a throat piece, said walls being perforated, and a hollow head surrounding said walls and throat piece, provided with an exteriorly concave top which opens above said throat-piece and at one or more points outside of the opening above the throat piece, and overhanging the parts of the nozzle below, the overhanging part of such head having an annular groove in its underside, and the chamber in said head opening through the bottom into such groove.

1,158,148. WRINGER. MATHEAS PALUSKA, Roanoke, Ill., assignor, by mesne assignments, to Getz Power Washer Co., Morton, Ill., a Corporation of Illinois. Filed Nov. 23, 1912. Serial No. 733,145. (Cl. 68—32.)



In a wringer, the combination of a vertically disposed driving shaft; a bracket revolubly carried on the upper end of said shaft, said bracket including a sleeve, a curved bracket arm having a journal bearing sleeve disposed in a horizontal plane and a lower brace arm; a wringer, including a pair of shafts and rollers thereon, one of said wringer shafts being extended and having a bearing in said journal bearing sleeve of said curved bracket arm; said wringer being supported at its outer end by said brace arm; gearing between said driving shaft and said extended wringer shaft; a housing for said gearing, and a securing rod for holding said wringer in a certain position.

1,158,149. INSULATOR-SUPPORT. CHARLES L. PEIRCE, Jr., Pittsburgh, Pa. Filed May 4, 1914. Serial No. 836,112. (Cl. 173—321.)



1. An insulator support comprising a stem, an insulator receiving thimble in the form of a wire helix encircling said stem, said stem having an upper opening and a lower opening, the lower end of the helix wire extending into the lower opening to anchor the lower end of the helix, the upper end of the helix wire extending into the upper opening and such upper opening being wider than the diameter of the wire whereby the helix turns above the anchored lower end may yield in helical direction.

2. An insulator support comprising a stem, an insulator receiving thimble in the form of a wire helix en-

circling the stem, means for anchoring the lower end of the helix to the stem, an opening adjacent the upper end of the helix and the upper end of the helix wire hooking into said opening, said opening being of sufficient width to allow helical movement of the turns of the helix above the anchored lower end thereof.

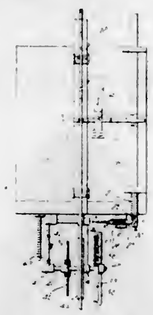
3. An insulator support comprising a stem, an insulator receiving thimble in the form of a wire helix encircling the stem, said stem having an opening and one end of the helix wire hooking through said opening, said stem having another opening and the other end of the helix wire hooking therethrough, one of said openings being of sufficient width to allow radial expansion, contraction and spiral movement of the helix turns.

4. An insulator support comprising a stem, an insulator receiving thimble in the form of a wire helix encircling said stem, said stem having an upper opening through which the upper end of the helix wire hooks to anchor the upper end of the helix when an insulator is applied tereto, said stem having a lower opening through which the lower end of the helix wire hooks to anchor the helix when an insulator is unscrewed therefrom, one of said openings being elongated transversely to permit helical movement of the turns of the helix above the other opening.

5. An insulator support comprising a stem, an insulator receiving thimble in the form of a wire helix encircling said stem, said stem having an upper opening through which the upper end of the helix wire hooks to anchor the upper end of the helix when an insulator is applied thereto, said stem having a lower opening through which the lower end of the helix wire hooks to anchor the helix when an insulator is unscrewed therefrom, the upper opening being elongated laterally to permit radial expansion and contraction and spiral movement of the turns above the lower opening when the insulator is unscrewed.

[Claims 6 to 10 not printed in the Gazette.]

1,158,150. SAFETY-STOP FOR ELEVATORS. ALBERT PETIT, Los Angeles, Cal. Filed Mar. 27, 1915. Serial No. 17,379. (Cl. 187—90.)



1. In combination wi h a vertical way and an elevator cage movable thereon, a way gripping means on the cage embodying a way gripping bar holding a notch adapted to loosely engage around the way when the bar is in substantially horizontal position, a horizontally movable pivot on the cage on which pivot the bar is mounted, means including a pawl for holding the arm normally in substantially horizontal position, spring means for throwing the arm to an inclined position, an arm connected with said pawl so that movement of the arm causes movement of the pawl to release the way gripping arm, and means to move said pawl arm including a wheel mounted on the cage and in peripheral frictional contact with the way, spring means for holding said wheel in contact with the way, another wheel geared to said first mentioned wheel, outwardly movable weights on said last mentioned wheel, and springs opposing the outward movement of the weights, the weights being thrown outwardly by centrifugal action to strike the pawl arm, substantially as described.

2. In combination with a vertical way and an elevator cage movable thereon, a way gripping means, means for normally holding said way gripping means out of action, a frame pivotally mounted upon the car, a way engaging wheel mounted upon said frame, a spring exerting pressure upon said frame to press the wheel into peripheral contact with the way, another wheel mounted upon said pivoted frame in fixed relation to said first mentioned wheel, gearing connection between the two wheels, outwardly movable weights on the second mentioned wheel, springs opposing the outward movement of said weights, and a member connected to said grip holding means and positioned so as to be struck and moved by said outwardly movable weights on said second mentioned wheel.

1,158,151. WALL-RADIATOR BRACKET. JAMES P. ADAMSON, St. Paul, Minn. Filed Feb. 9, 1915. Serial No. 7,164. (Cl. 248—30.)

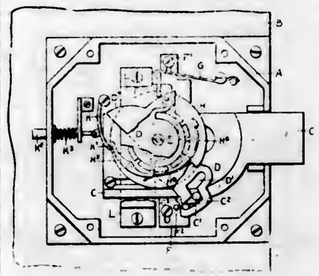


1. The combination, with a wall radiator, of a bracket having a middle portion provided with a surface adapted to be seated against the wall of the room on which the radiator is suspended, the lower end of said bracket having a stirrup in which the radiator is seated, the upper end of the bracket having means for securing it to the radiator sections, said middle portion having vertical slots therein and said bracket having roughened surfaces around said slots and bolts and having washers provided with roughened surfaces to engage the corresponding surfaces around said slots, said bolts, when loosened, allowing vertical adjustment of the bracket thereon.

2. A wall radiator bracket having a middle portion adapted to be seated against the wall above the base board and provided with a stirrup at its lower end in which the lower end of the radiator is seated, and an outwardly projecting upper end having means for securing it to the top of the radiator, said middle portion having longitudinal slots therein and bolts fitting within said slots for securing said bracket to said wall, said bolts, when loosened, allowing vertical adjustment of said bracket to raise or lower the radiator to vary its distance from the floor line, for the purpose specified.

3. A wall radiator bracket having a middle portion adapted to be seated against the wall above the base board and provided with a stirrup at its lower end in which the lower end of the radiator is seated, said bracket having means for securing the upper portion of the radiator thereto, said middle portion having longitudinal slots therein and bolts fitting within said slots for securing said bracket to the wall, said bolts, when loosened, allowing vertical adjustment of said bracket to raise or lower the radiator to increase or decrease the distance from the floor line, for the purpose specified.

1,158,152. PERMUTATION-LOCK. GAETANO ALBANESE, New York, N. Y. Filed Jan. 19, 1915. Serial No. 3,065. (Cl. 70—53.)



1. A permutation lock, comprising a spindle provided at its outer end with a knob for turning the spindle, a cam arm fixed on the inner end of the spindle and provided at one end with a slot and at the other end with a cam, a slidable bolt provided with a pin engaging the said slot, a series of tumblers provided at their peripheral faces with notches adapted to register with each other, and a vertically movable sliding yoke having a cross bar extending across the peripheral faces of the said tumblers and adapted to drop into the said notches at the time the notches are in transverse alinement, the said bar being controlled by the said cam.

2. A permutation lock, comprising a spindle provided at its outer end with a knob for turning the spindle, a cam arm fixed on the inner end of the spindle and provided at one end with a slot and at the other end with a cam, a slidable bolt provided with a pin engaging the said slot, a series of tumblers provided at their peripheral faces with notches adapted to register with each other, a sliding yoke having a cross bar extending across the peripheral face of the said tumblers and adapted to drop into the said notches at the time the notches are in transverse alinement, the said bar being controlled by the said cam, a shoulder on the said bolt, and a pin on the said yoke adapted to engage the said shoulder on lifting the yoke at the time the bolt is shot out.

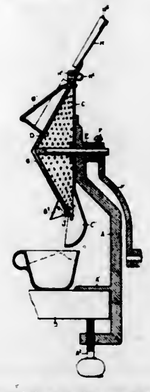
3. A permutation lock provided with tumbler disks each having a notch at the peripheral face, a resetting disk for each tumbler disk and provided with a hub on which the corresponding tumbler disk is mounted to turn loosely, each resetting disk having a plurality of notches on its peripheral face, a dog fulcrumed on each tumbler disk and engaging one of the notches on the resetting disk, springs for normally holding the dogs in engagement with the said notches, a swing arm provided at its free end with spaced prongs adapted to engage the free ends of said dogs, a push button pivotally connected with the swing arm for imparting a swinging motion to the said swing arm, and a spring pressing on the push button to normally hold the swing arm out of the path of the said dogs.

4. A permutation lock, comprising a spindle having a knob at its outer end, a cam arm fixed on the inner end of the said spindle and provided at one end with a Z-shaped slot and at its other end with a cam, a slidable bolt having a pin projecting into the said slot, the bolt having a shoulder, a series of tumblers arranged centrally on the said spindle and each having a notch at its peripheral face, means for turning the said tumblers, and a yoke mounted to slide and having a bar extending transversely across the peripheral face of the said tumblers to engage the said notches when the latter are in alinement, the said bar being adapted to be engaged by the said cam, the said yoke having a pin adapted to engage the said bolt shoulder.

5. A permutation lock comprising a spindle provided at its outer end with a knob for turning the spindle, a cam arm fixed on the inner end of the spindle and provided at one end with a slot and at the other end with a cam, a slidable bolt having an elongated opening through which the spindle passes, the said bolt being provided with a pin engaging the said slot in the cam arm, a series of tumblers provided at their peripheral faces with notches adapted to register with each other, a sliding yoke having vertical guided movement in the casing, the said yoke having a transverse bar extending across the peripheral face of the tumblers, a spring pressing on said bar, the said bar being adapted to engage the said notches in the tumblers when the notches are in transverse alinement, a shoulder on the said bolt, a pin on the said yoke adapted to engage the said shoulder when the yoke is in raised position to hold the bolt in locked position, the cam on said cam arm engaging the said bar to lift the yoke against the tension of the said spring.

[Claim 6 not printed in the Gazette.]

1,158,153. GRATER FOR CULINARY USE. GAETANO ALBANESE, New York, N. Y. Filed Feb. 19, 1915. Serial No. 9,291. (Cl. 146—9.)



1. A grater comprising a frame having a back plate, a grating cone having its base engaging the back plate and provided with a shaft secured to its inner face at the apex and extending through the back plate and frame, a crank handle removably secured to the projecting end of the shaft in engagement with the frame, and a conical cover removably secured to the back plate over the grating with its edge in engagement with the back plate, said cover having a hopper in one side above the apex and a discharge chute in its lower portion.

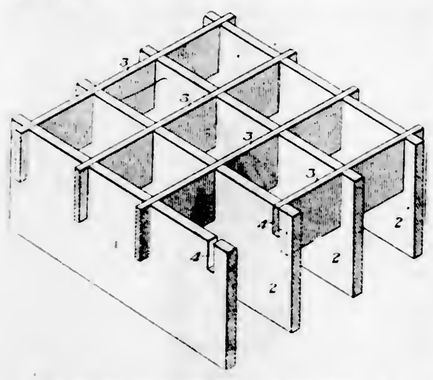
2. A grater, comprising a frame, a vertically disposed back plate secured to the said frame, a conical cover removably mounted on the face of the said back plate and forming with the latter a casing, the said cover being provided in its side with a hopper for holding the material to be ground and with a discharge chute, a revoluble grating cone in the said casing and having its base next to the back plate and its grating surface in close proximity to the inner surface of the said cover and exposed in the said hopper, and a follower hinged to the said back plate and adapted to pass into the said hopper to press the material against the conical grating surface of the said cone.

3. A grater, comprising a bracket adapted to be clamped to a support, a vertically disposed circular back plate secured to the said bracket and provided at the top with spaced lugs and at the bottom with a depending chute, a transverse shaft journaled in the said back plate and provided at its rear end with a crank arm for turning the shaft, a grating cone attached to the said shaft and disposed in front of the said back plate, a conical cover extending over the said grating cone and provided on top with eyes detachably engaging the said lugs, the cover having a hopper in its side above the apex for the reception of the material to be ground, and the locking catch on the lower end of the cover and adapted to engage the back plate to removably lock the cover in place on the back plate.

4. On a grater, the combination of a back plate having lugs at the top, a grating cone having its shaft mounted in the back plate, a cover for the cone, said cover having eyes engaging the lugs of the back plate and provided with a hopper, and a catch for locking the cover in position.

5. In a grater, the combination of a back plate having a chute at its bottom, a grating cone mounted on the back plate, a cover for the cone removably hinged to the back plate, said cover having a hopper in its upper portion and a discharge chute in its lower portion opposite the chute of the back plate, and means for securing the free end of the cover to the back plate.

1,158,154. GRATING. CHESTER B. ALBREE, Pittsburgh, Pa. Filed Feb. 13, 1914. Serial No. 818,490. (Cl. 29—160.)



1. The method of making gratings, consisting in inserting within the slots of parallel girder bars a series of cross bars of such depth that the cross bars project above the girder bars when placed in position, and then applying pressure to the bars, thus causing a lateral flow of the metal of the cross bars at the joints to fill the slots in the girder bars and lock said bars together; substantially as described.

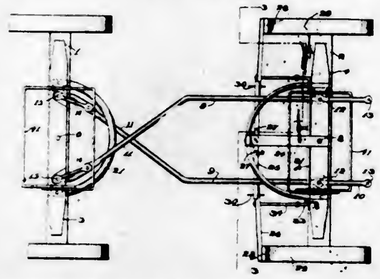
2. A reticulated grating composed of a number of parallel spaced apart girder bars, each having spaced registering slots extending inwardly from one edge thereof, and a plurality of spaced apart cross bars having slots extending in from one side registering with the slots in the girder bars, the girder bars being forced into the cross bars by compression, and the metal of the cross bars being spread and locked within the girder bar slots, substantially as described.

3. A reticulated grating composed of a number of parallel spaced apart girder bars, each having spaced registering slots extending inwardly from one edge thereof, and a plurality of spaced apart cross bars resting within the slots of the girder bars, the girder bars being forced into the cross bars by compression, and the metal of the cross bars being spread and locked within the girder bar slots; substantially as described.

4. A reticulated grating composed of a number of parallel spaced apart girder bars, each having spaced registering undercut slots extending inwardly from one edge thereof, and a plurality of spaced apart cross bars resting within the undercut slots of the girder bars, the girder bars being forced into the cross bars by compression, and the metal of the cross bars being spread and locked within the undercut girder bar slots; substantially as described.

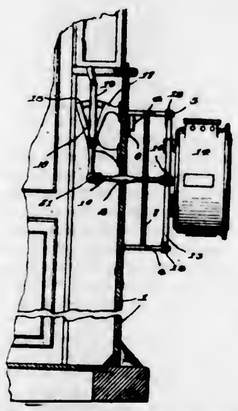
1,158,155. WAGON RUNNING-GEAR. DAVID F. ALESHIRE, Minden Mines, Mo. Filed Apr. 28, 1915. Serial No. 24,509. (Cl. 21—144.)

1. In a vehicle running gear, front and rear axles, and a pair of crossed reaches pivotally connected at their front and rear ends to the axles at points spaced from the centers of the axles, a rearwardly extending front hound on the front axle arranged between the crossed portions of the reaches and upper and lower forwardly extending hounds on the rear axle arranged respectively above and below the rear portions of the reaches.



2. In a vehicle running gear, front and rear axles, and a pair of crossed reaches pivotally connected at their front and rear ends to the axles at points spaced from the centers of the axles, a rearwardly extending front hound on the front axle arranged between the crossed portions of the reaches and upper and lower forwardly extending hounds on the rear axle arranged respectively above and below the rear portion of the reaches, a U-shaped brace arm extending forwardly from the rear axle and connected to the rear hounds.

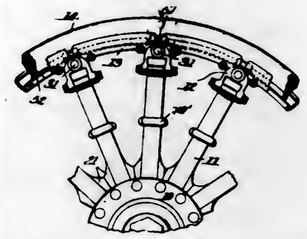
1,158,156. HEADLIGHT. LINCOLN E. ALLEN, Kokomo, Ind. Filed Dec. 19, 1914. Serial No. 878,155. (Cl. 240—61.)



1. In a dirigible head light for railway cars, a frame carried by the front wall of the car and comprising horizontally disposed arcuate shaped bars spaced apart in parallelism and having the central portions thereof bowed outwardly of the front wall of the car and formed with vertically alining openings, a base plate, trunnions on the top and bottom respectively of said plate journaled in the openings in said bars whereby the plate may be swung about a vertical axis, a lamp carried by said plate, and means for swinging said plate.

2. In a dirigible head light for railway cars, a frame carried by the front wall of the car and comprising horizontally-disposed arcuate shaped bars spaced apart in parallelism and having the central portions thereof bowed outwardly of the front wall of the car and formed with vertically alining openings, a base plate, trunnions on the top and bottom respectively of said plate journaled in the openings in said bars whereby the plate may be swung about a vertical axis, a lamp carried by said plate, means for swinging said plate, and a detachable connection between one of said bars and the front wall of the car.

1,158,157. SPRING-WHEEL. ARTHUR J. ANDERSON, Chicago Heights, Ill. Filed May 29, 1914. Serial No. 841,904. (Cl. 152—30.)



1. A vehicle wheel including a hub, a plurality of spokes, a rim consisting of a plurality of channel-shaped sections, hinge leaves formed at the terminals of each rim section, coupling members for connecting the rim sections, each of said coupling members including a channel-shaped bridge member and a substantially U-shaped yoke carried by each terminal thereof, each of said yokes having a bolt receiving bearing, a bolt extending through the bearings of the yokes and through the hinge leaves of the rim sections, a channel-shaped leaf spring seated in the bridge member, a sheet of packing material interposed between the hinge leaves and the leaf spring, and bolts pivotally connecting the terminals of the spokes to the arms of the coupling yokes.

2. A vehicle wheel including a hub, a plurality of spokes radiating from the hub, each of said spokes including yieldable elements connected intermediate their ends and having their respective extremities diverging with the inner extremities of said elements connected to the hub, blocks filling the space between the inner extremities of the elements of the spokes, coupling yokes pivotally connected to the outer extremities of the elements of the spokes, and a rim carried by said yokes.

3. A vehicle wheel including a hub, a plurality of spokes radiating from the hub, a coupling member swingingly connected to the outer extremity of each of said spokes and including a bridge piece, a sectional rim having hinge leaves swingingly connected to said members, and a guard carried by each of said bridge pieces and arranged therebetween and the adjacent hinge leaves of the rim.

4. A vehicle wheel including a hub, a plurality of spokes radiating therefrom, a coupling member carried by the outer extremity of each of said spokes and including a bridge piece, a sectional rim having hinge leaves swingingly connected to said members, and a channel shaped spring carried by each of said bridge pieces and interposed therebetween and the adjacent hinge leaves of the rim.

5. A vehicle wheel including a hub, a plurality of spokes radiating from the hub, coupling members carried by the outer extremities of said spokes and each including a bridge piece, a sectional rim having hinge leaves swingingly connected to said members, a yieldable element carried by each of said bridge pieces, and a packing interposed between each of said yieldable elements and the adjacent hinge leaves of the rim.

[Claims 6 to 9 not printed in the Gazette.]

1,158,158. FRUIT-PICKER. PETER A. ANGESKI, Lilly, Pa. Filed Jan. 21, 1915. Serial No. 3,648. (Cl. 56—99.)

1. In a device of the character described, a handle member having a laterally and upwardly opening recess and forming a stop shoulder, a stem severing device comprising co-acting members each including a transverse cutting member and spaced sides hingedly united, means for connecting one of said co-acting members to the handle within the recess thereof and leaving the other co-acting member movable upon its hinged connection and limited in its movement in one direction by the stop shoulder, a flexible tubular conductor connected to said co-acting members, and means for actuating the movable co-acting member.



2. In a device of the character described, a handle member having a laterally and upwardly opening recess which forms a stop shoulder, a stem severing device comprising a stationary member and a movable member, said members having co-acting cutting edges and the movable member operating at one side within the recess and limited in its movement in one direction by the stop shoulder portion of the recess, a flexible tubular conductor connected to said co-acting members, and means for actuating the movable co-acting member.

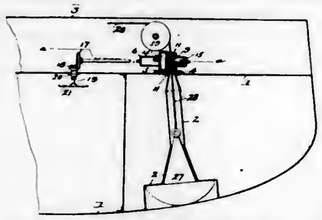
3. In a device of the character described, a handle formed of a plurality of tubular sections telescopically disposed and provided with lateral ribs, said ribs having apertures spaced apart, a stem severing device carried by one of said handle members, a tubular conductor connected to said severing device, and spring catches carried by said tubular handle sections and operating through said apertures.

1,158,159. CORD AND TWINE CUTTER. SILAS BALL, West Orange, N. J. Filed Feb. 25, 1914. Serial No. 820,952. (Cl. 30—14.)



A cord cutter comprising a sheet metal base plate, a cutting blade secured to said base plate disposed longitudinally of the latter and in a vertical plane and having a pointed end directed toward said base plate to define a concaved lower cutting edge, and a flat guard member struck out from said sheet metal base plate under the pointed end of said cutting blade curved to define a convex top surface, a concave lower surface and having the free end directed toward and spaced from the pointed end of said cutting blade.

1,158,160. ANCHOR-CABLE-CUTTING APPARATUS FOR SUBMARINE BOATS. JOSEPH BARRAJA-FRAUENFELDER, Bridgeport, Conn., assignor to The Lake Torpedo Boat Company of Maine, Bridgeport, Conn., a Corporation of Maine. Filed Mar. 8, 1915. Serial No. 12,832. (Cl. 114—16.4.)



1. In an anchor-cable cutting apparatus for vessels, a pair of co-acting anchor-cable cutting blades arranged exteriorly of the vessel, means operable from within the interior of the vessel for actuating one of said cutting blades, and a protecting casing or housing for said cutting blades.

2. In combination with a submarine boat, provided with an anchor weight and an anchor-cable connected to said weight, of apparatus arranged exteriorly of the hull of the boat for cutting said cable, and a protecting casing or housing for said cutting apparatus.

3. In combination with a submarine boat, provided with a superstructure and having an anchor well in the main hull thereof; an anchor weight normally housed within said well, and an anchor-cable connected to said weight and extending from said superstructure, of an apparatus for cutting said cable, said apparatus comprising a fixed and a movable cutting blade, means operable from within the boat for actuating said movable blade, and a protecting casing or housing for said cutting blades.

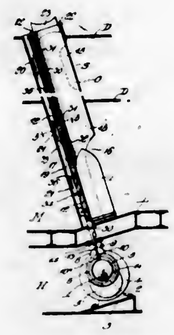
4. In combination with a submarine boat, provided with a superstructure and having an anchor well in the main hull thereof; an anchor weight normally housed within said well, and an anchor-cable connected to said weight and extending from said superstructure, of an apparatus for cutting said cable, said apparatus comprising a fixed and a movable cutting blade, means operable from within the boat for actuating said movable blade, and a protecting casing or housing for said cutting blades, said cable passing through said casing or housing.

5. In combination with a submarine boat, provided with a superstructure and having an anchor well in the main hull thereof; an anchor weight normally housed within said well, and an anchor-cable connected to said weight and extending from said superstructure, of an apparatus arranged within the superstructure for cutting said cable, said apparatus comprising a fixed and a movable cutting blade, means operable from within the boat for actuating said movable cutting blade, a protecting casing or housing for said cutting blades having an opening through which said cable passes, and a sleeve of soft metal surrounding said cable and connected water-tight to said casing or housing.

[Claims 6 to 8 not printed in the Gazette.]

1,158,161. AMMUNITION-HOIST. ANDREW W. BEAN, Mount Rainier, Md., and JOSEPH A. KILLINGER, Washington, D. C. Filed Aug. 16, 1913. Serial No. 785,180. (Cl. 193—11.)

1. In an ammunition hoist, the combination with an upright shaft having a housing communicating with its rear side and inlet and outlet openings in its front side and top, an upright partition in the housing, and pins across said housing at intervals and passing through the partition; of upright rack bars movably mounted in the housing on opposite sides of said partition and having fins projecting to the rear and provided with slots loosely embracing said pins, each bar having a plurality of recesses, a spring-pressed dog slidably mounted in each recess, and means for raising and lowering said rack bars alternately.



2. In an ammunition hoist, the combination with an upright shaft having a housing communicating with its rear side and inlet and outlet openings in its front side and top, and pins across said housing at intervals; of upright rack bars movably mounted side by side in the housing and having fins projecting to the rear and provided with slots loosely embracing said pins, each bar having in its front side a plurality of recesses spaced an equal distance apart, and a spring-pressed dog mounted in each recess; and means beneath the shaft for raising and lowering said rack bars alternately.

3. In an ammunition hoist, the combination with an upright shaft having a housing communicating with its rear side and inlet and outlet openings in its front side and top, and pins across said housing at intervals; of upright rack bars movably mounted side by side in the housing and having fins projecting to the rear and provided with slots loosely embracing said pins, each bar having in its front side a plurality of recesses spaced an equal distance apart, a dog slidably mounted in each recess and having its upper active face flat and its lower face beveled, a bolt projecting rearwardly from said dog across the recess and through the bar and having a nut on its rear end, and an expansive spring mounted on said bolt between the rear wall of the recess and the rear end of the dog; and means beneath the shaft for raising and lowering said rack bars alternately.

4. In an ammunition hoist the combination of two bars each carrying a plurality of spring projected dogs, said bars being disposed side by side, and means for simultaneously reciprocating said bars in opposite directions to move a projectile step by step.

5. In a device of the character described a pair of bars each provided with a series of spring projected means for engaging a projectile, and means for reciprocating said bars simultaneously in opposite directions and alternately in the same direction.

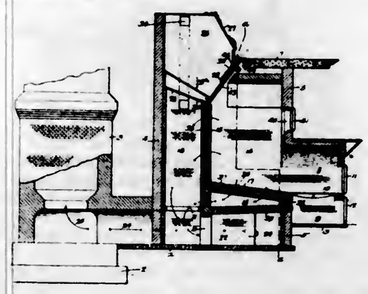
[Claims 6 to 13 not printed in the Gazette.]

1,158,162. INCINERATING PLANT. THOMAS F. BENNETT, Philadelphia, Pa. Filed June 6, 1914. Serial No. 843,431. (Cl. 110—12.)

1. The combination in an incinerating plant of a furnace; and a receiving casing mounted above said furnace in position to discharge thereinto, there being a conduit extending vertically through a side wall of the furnace so as to be heated by the products of combustion and connected to receive liquid flowing from the receiving casing.

2. The combination in an incinerating plant of a furnace having a vertical wall including conduits extending longitudinally therethrough; a hearth having conduits therein connected to the passages of the wall; with a receiving casing mounted to discharge solid material into the furnace and having a liquid outlet connected to deliver to the passages in the wall.

3. The combination in an incinerating plant of a furnace having a hearth and a wall provided with connecting passages; an evaporating hearth having passages connected with the passages of said first hearth; with a receiving casing mounted to deliver into the furnace and provided with a liquid outlet discharging into the passages in the furnace wall.

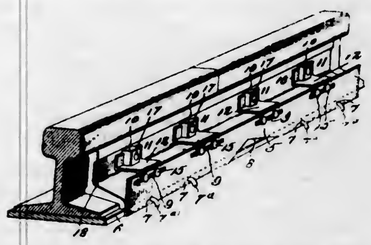


4. The combination in an incinerating plant of an inclosing structure; a furnace therein; a wall for the furnace coöperating with said structure to form a vertically extending flue immediately adjacent said furnace and having passages therein; said wall being provided with openings connecting the flue and the furnace; a receiving casing having an inclined bottom over the flue and provided with a liquid outlet at its lower end draining into the passages in the wall; and a grate for controlling the passage of the material from the casing into the furnace.

5. The combination in an incinerating plant of a base and walls forming a setting; a partition dividing the chamber formed by said setting into a furnace and a flue and provided with openings and liquid receiving conduits; a stack connected to said flue; a receiving casing having an inclined bottom over the flue and arranged to deliver liquid into the conduits of the partition; with an inclined door for the casing slidably mounted in the setting and co-acting with the lower edge of said bottom when in its closed position.

[Claim 6 not printed in the Gazette.]

1,158,163. NUT-LOCK. CHARLES BESSER, Minonk, Ill. Filed May 7, 1915. Serial No. 26,591. (Cl. 151—59.)



1. A nut lock including an attaching plate having a plurality of spaced longitudinal slots adjacent one edge thereof, a plurality of angular nut-engaging and locking members, and means rigidly secured to said angular nut-engaging and locking members slidably received within said slots.

2. A nut lock including an attaching plate having a plurality of spaced longitudinal slots adjacent one edge thereof, a plurality of angular locking members, and a pair of rivets rigidly secured to each angular nut-engaging and locking member slidably received within each slot.

3. A nut lock including a base plate, a plurality of hooks secured to one longitudinal edge of said base plate, an attaching plate having a plurality of apertures receiving said hooks, and a plurality of nut-engaging and locking members carried by said attaching plate.

4. A nut lock including a base plate, a plurality of hooks secured to one longitudinal edge of said base plate, an attaching plate having a plurality of apertures receiving said hooks and having a plurality of spaced longitudinal slots engaging the upper edge thereof, a plurality of angular nut-engaging and locking members, and means rigidly secured to said angular nut-engaging and locking members slidably received within said slots.

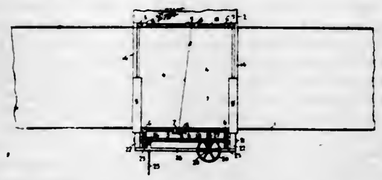
1,158,164. WRENCH. WILLIAM LOUIS BESSOLO, San Diego, Cal. Filed Oct. 23, 1913, Serial No. 796,910. Renewed July 7, 1915. Serial No. 38,510. (Cl. 81—126.)



1. The improved wrench comprising a fixed jaw and shank, a handle pivoted to said shank, the two being constructed with a rule-joint which permits them to be adjusted at a slight angle to each other on one side, but prevents such adjustment in the opposite direction, a movable jaw, a ratchet bar which is pivoted to the movable jaw and slidable in the slot provided in the pivoted handle, a stop on the handle adapted to engage the ratchet, a spring pressing the ratchet bar into normal engagement with the stop, the outer end of the ratchet bar being accessible on the outside of the handle, as described.

2. The improved nut wrench, comprising a fixed jaw and shank, a handle hinged to the shank by means of a rule-joint which permits them to be adjusted at different opposite angles, a ratchet bar pivoted to the movable jaw and extending rearward, its ratchet teeth being on the outer side, the handle provided with a slotted projection in which the ratchet bar is adapted to slide, a cross-pin passing through such projection and a spring pressing upon the inner side of the ratchet bar and holding it normally locked therewith, the rear end or shank of the ratchet projecting from the slot so that pressure may be applied for freeing the ratchet from the stop, substantially as described.

1,158,165. FLUME-GATE. ARCHIBALD J. BLAKELY, Chandler, Ariz. Filed Apr. 2, 1913. Serial No. 758,321. (Cl. 61—46.)



1. The combination of a main flume, semi-circular in cross-section, branch flumes communicating therewith, a gate comprising a pair of trapezoidal sections of the same curvature as the main flume, guideways secured to the convex side of the main flume on either side of the gate, guides secured to the gate sections on the convex side thereof to engage the guideways, and means for actuating said gate sections to control communication with the branch flumes.

2. The combination of a main flume semi-circular in cross-section, a branch flume communicating therewith, a gate comprising a pair of curved sections located in the main flume adjacent the branch flume, said sections having their adjacent edges slanting with respect to the

length of the flume, guideways secured to the main flume on the convex side thereof on either side of the gate, guides secured to the opposite ends of the gate on the convex side thereof to engage said guideways, a guide secured to the convex side of one section along the slanting edge thereof, a guideway secured to the convex side of the other section along the slanting edge thereof, said guideway having an extension to be engaged by the end of the associated guide, means for transmitting motion to the section having the guide, and means for subsequently transmitting motion to both of said sections together, whereby the gate can first be loosened and then opened.

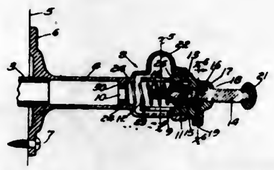
3. The combination of a main flume, a side flume communicating therewith, the main flume being semi-circular in cross-section, a gate comprising a pair of sections inserted into the length of the main flume, the adjacent edges of said sections being slanting with respect to the length of the flume, one of said sections being provided on its convex face with a guide along said slanting edge and the other of said sections being provided on its convex face with a guideway to receive said guide along its adjacent edge, means connected with one of said sections to engage the other section when the same has been moved a short distance to permit the gate to be loosened, guideways secured to the convex side of the main flume on either side of the gate extending above the main flume, guides secured at the ends of the gate on the convex side thereof to engage said guideways on the flume, racks carried by said gate sections, a shaft having a pinion to engage one of said racks, means for operating said shaft, a pinion for engaging the other rack, and a clutch for connecting said shaft to said other pinion to rotate with the shaft, whereby the shaft can be turned to move one of said sections to loosen the gate, and then turned to move both of said sections to open the same.

4. The combination of a main flume semi-circular in cross-section, opposite branch flumes communicating therewith, a gate comprising a pair of curved sections located in the main flume adjacent the branch flumes, said sections having their adjacent edges slanting with respect to the length of the flume, circular guideways secured to the main flume on the convex side thereof on either side of the gate, semi-circular guides secured to the opposite ends of the gate on the convex side thereof engaging the said circular guideways, a semi-circular guide secured to the convex side of one section of the gate along the slanting edge thereof, a semi-circular guideway secured to the convex side of the other section along the slanting edge thereof, said semi-circular guideway having an extension to be engaged by the end of the associated semi-circular guide, means for transmitting motion to the section for the guide, and means for subsequently transmitting motion to both of said sections together, whereby the gate is first loosened and then opened.

5. The combination of a main flume, opposite side flumes communicating therewith, the main flume being semi-circular in cross-section, a gate comprising a pair of sections inserted in the length of the main flume, the adjacent edges of said sections being slanting with respect to the length of the flume, one of said sections being provided on its convex face with a semi-circular guide along said slanting edge and the other of said sections being provided on its convex face with a semi-circular guideway to receive said guide along its adjacent edge, means connected with one of said sections of the gate for engaging the other section when the first-named section has been moved a short distance to permit the gate to be loosened, circular guideways secured to the convex side of the main flume on either side of the gate, the semi-circular guides secured at the ends of the gate on the convex side thereof engaging said guideways on the flume, racks carried on said gate sections, a shaft having a pinion engaging one of said racks, means for operating said shaft, a pinion engaging the other rack, and a clutch for connecting said shaft to said other pinion to rotate with the shaft, whereby the shaft can be turned to move one of said sections to loosen the gate, and then turned to move both of said sections to open the same.

[Claims 6 to 13 not printed in the Gazette.]

1,158,166. LIQUID-SOAP DISPENSER. GABRIEL A. BOBRICK, Los Angeles, Cal. Filed Mar. 2, 1912. Serial No. 681,269. (Cl. 221—102.)



1. A liquid dispenser having in combination a valve body provided with a charge chamber and with a valve stem bore, an outlet, a piston in said charge chamber that is adapted to normally close communication between said charge chamber and said outlet, and a normally open valve connected with the piston and sliding in said bore for closing the outlet, the construction being such that the space in front of the piston is lessened as the piston advances, and the outlet being separate from the bore and free and unobstructed when the valve is open.

2. A liquid dispenser having in combination a reservoir, a valve body having a charge chamber and a valve stem bore and an outlet leading from the wall of said bore, a piston in said charge chamber that is adapted to normally close communication between said chamber and said outlet, and a normally open valve connected with the piston for closing the outlet, the construction being such that the space in front of the piston is lessened as the piston advances.

3. In a liquid dispenser the combination of a reservoir, a valve body having a charge chamber and a valve stem bore and a passage leading from the wall of said bore, means for supplying liquid from the reservoir to the charge chamber, a valve stem fitting said bore, and a piston on said stem adapted to cut off the supply of liquid to the charge chamber when communication between the charge chamber and the passage from the bore is established, said piston also serving as means for normally closing communication between the charge chamber and the bore; said valve stem being provided with a channel adjacent said piston and communicating with said outlet, the construction being such that the space in front of the piston is lessened as the piston advances, and a spring yieldingly holding such piston in normal position.

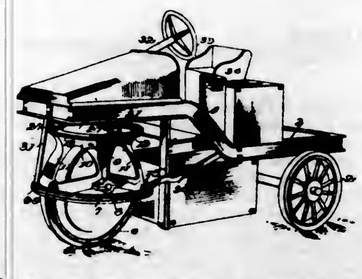
1,158,167. PRODUCTION OF AMMONIA. CARL BOSCH and ALWIN MITTASCH, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Nov. 18, 1911. Serial No. 661,013. (Cl. 23—21.)

1. The process of producing ammonia catalytically by passing a mixture of nitrogen and hydrogen over pure iron prepared from a compound thereof at a temperature not exceeding about 600° C.

2. The process of producing ammonia catalytically by passing a mixture of nitrogen and hydrogen over pure oxid of iron at a temperature not exceeding about 600° C., and then continuing passing the nitrogen and hydrogen also at a temperature not exceeding about 600° C. after the iron has been reduced to the metallic state.

1,158,168. FRONT-END CONSTRUCTION FOR VEHICLES. ROBERT L. BOYD, Meridian, La. Filed May 14, 1914. Serial No. 838,534. (Cl. 21—114.)

1. In a vehicle, the combination of a body frame, a wheel frame mounted to turn about a vertical axis and to move vertically, a circular track having rigid connection with the wheel frame, a plurality of anti-friction devices carried by the body frame and disposed about the vertical axis of the wheel frame and engaging the circular track and yieldable vertically, an annular track rigidly connected with the body frame, and anti-friction devices carried by the wheel frame and movable both circularly and vertically on the said annular track.



2. In a front end construction for vehicles, a body frame, a wheel, a wheel frame including an annulus disposed in a horizontal plane, a member disposed above the wheel frame and approximately parallel thereto, anti-friction rollers carried by said member and bearing against said annulus, and springs operatively mounted upon the body frame and bearing against said member to urge it downward, the wheel frame having a vertical axial member extending up through the center of said first named member and rotatable with relation thereto.

3. In a front end construction for vehicles, a body frame, a wheel, a wheel frame supporting the wheel and including a central, vertical, axial post and a concentric annulus horizontally disposed, a plate supported above and in spaced relation to the wheel frame and through which said central post passes, brackets depending from the plate, antifriction rollers mounted upon said brackets and bearing against said annulus, and springs operatively supported upon the body frame and bearing down against said plate.

4. In a front end construction for vehicles, a body frame, a wheel, a wheel frame, said wheel frame having an axial, vertically extending post and a concentric annulus, a plate disposed above the wheel frame and in spaced relation thereto and through which said post passes, brackets extending downward from the plate at spaced intervals, antifriction members carried by the lower ends of said brackets and bearing against the annulus, springs operatively supported between the body frame and said plate and disposed at spaced intervals, a circular track, and coacting antifriction rollers, one carried upon the body frame on a plane with the horizontal axis of the wheel and the other carried upon said wheel frame.

5. In a front end construction for vehicles, a body frame, a wheel, a wheel frame including a wheel housing, the upper portion of said housing carrying an annulus and a centrally disposed axial vertically extending post, a plate disposed above the upper end of the wheel frame and through which said post passes, brackets depending from the plate, antifriction rollers carried by the brackets and engaging said annulus, projecting members mounted upon the body frame, pins carried by said projecting members and passing loosely through said plate, and springs supported between said members and the plate and urging the plate downward.

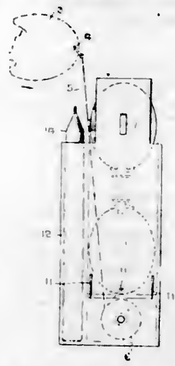
[Claims 6 to 10 not printed in the Gazette.]

1,158,169. EYEGLASS-CASE. JOHN M. BRADLEY and CHARLES F. PIKE, Philadelphia, Pa. Filed Sept. 26, 1913. Serial No. 791,999. (Cl. 206—5.)

1. An eyeglass case adapted to receive the eyeglasses and provided with a cord and with a spring reel located in the case to draw the cord and glasses entirely within the case and hold them yieldingly therein.

2. An eye glass case provided with a spring reel in the bottom thereof for the attachment and winding of an eye glass cord or chain into the case when the eye glass is contained entirely within the case.

3. An eyeglass case provided with a reel located in its inner end, and an inner stop upon which the inner lens rests when inserted and contained within the case.



4. An eyeglass case provided with a reel located therein and a stop to prevent the lens of a glass from contacting with the reel when the glass is drawn within the case.

5. An eye glass case provided with means whereby it may be secured to a garment in a position inclined to the perpendicular, and a reel located in the inner end of the case whereby the cord or chain may be withdrawn in a direction to avoid friction with the case, without the necessity of raising the hand to a position vertically above the case.

[Claim 6 not printed in the Gazette.]

1,158,170. EYEGLASS-CASE. JOHN M. BRADLEY and CHARLES F. PIKE, Philadelphia, Pa. Filed July 25, 1913, Serial No. 781,223. Renewed May 18, 1915. Serial No. 29,016. (Cl. 206—5.)

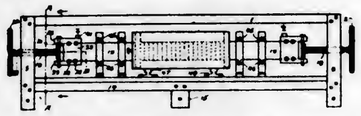


1. An eyeglass case provided at its top with tongues arranged to extend above the edge of the upper lens of a pair of contained glasses and being of less width than the lens and of a length to expose the edges of the lens beyond the sides of said tongues for more than half the length of the lens whereby to permit the lens to be grasped without contact with the intermediate surface thereof, thus to prevent smudging.

2. An eyeglass case provided at its bottom portion with means for clamping the lower lens of a pair of contained glasses to retain them within the case when the latter is inverted, and having its top provided with tongues arranged to extend above the edge of the upper lens of a pair of contained glasses and being of less width than the lens whereby to permit the latter to be grasped without contact with the intermediate surface thereof, thus to prevent smudging.

3. An eyeglass case provided at its lower portion with means for clamping the lower lens of a pair of contained glasses to retain them within the case when the latter is inverted, said clamping means being centrally provided with grooves for the reception of projections on the lower lens or on the eyeglass frame.

1,158,171. METHOD OF CEMENTING CARBON ARTICLES. JOHN W. BROWN, Lakewood, Ohio, assignor to National Carbon Company, Cleveland, Ohio, a Corporation of New Jersey. Filed June 6, 1912. Serial No. 702,120. (Cl. 204—64.)



1. The method of compacting a baked carbon article with carbonaceous binder which consists in impregnating it with a cementing material, placing it under pressure and passing an electric current therethrough, whereby the particles flow and are cemented together.

2. The method of compacting a baked carbon article with carbonaceous binder which consists in impregnating it with tar, placing it under pressure and passing an electric current therethrough, whereby the particles flow and are cemented together.

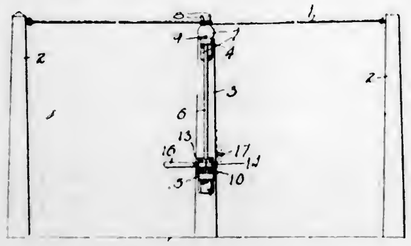
3. The method of compacting a baked carbon article with carbonaceous binder which consists in impregnating it with a cementing material, heating the carbon and submitting it to pressure to cause the particles to flow and cement together.

4. The method of compacting a baked carbon article with carbonaceous binder which consists in impregnating it with tarry material, heating the carbon and submitting it to pressure to cause the particles to flow and cement together.

5. The method of eliminating seams and laminations in a carbon article which consists in impregnating it with a tarry material, passing an electric current through it until the carbon becomes plastic and submitting it to pressure whereby the surfaces are cemented together.

[Claims 6 to 8 not printed in the Gazette.]

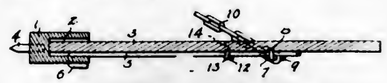
1,158,172. CLOTHES-LINE STRETCHER. SAMUEL N. BUNNELL, Toms River, N. J. Filed Aug. 10, 1915. Serial No. 44,713. (Cl. 68—12.)



1. A clothes line tightener including a vertical shaft, supporting bearings for the shaft, a head at the upper end of the shaft, a pair of prongs projecting upwardly from the head and adapted to receive the clothes line between the same, means for rotating the shaft to wind the clothes line around the prongs and take up the slack therein, and means for locking the shaft against backward rotation.

2. A clothes line tightener including a vertical shaft, supporting bearings for the shaft, a spherical head applied to the upper end of the shaft, a pair of spaced prongs projecting upwardly from the top of the spherical head and adapted to receive the clothes line between the same, means for rotating the shaft to wind the clothes line about the prongs, the portion of the line wound around the prongs resting upon the spherical head, and means for locking the vertical shaft against backward rotation.

1,158,173. SPRING-BOARD. ERNEST F. CARPENTIER, Garden Valley, Idaho. Filed Mar. 31, 1915. Serial No. 18,360. (Cl. 20—84.)



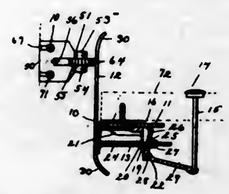
1. A spring board device of the character described, including a head formed with a rearwardly opening recess, prongs projecting from the front of the head and adapted to be driven into a tree trunk, a U-shaped supporting frame projecting rearwardly from the head and rigid therewith, a board resting loosely upon the U-shaped supporting frame and having the end thereof received within the recess of the head, a cross bar connecting opposite sides of the U-shaped supporting frame, the ends of the cross bar being coiled around dthe side bars of the frame and dterminating in eyes, and flexible suspending cables connected to the said eyes and adapted to be wrapped around the tree trunk at a point above the head.

2. A spring board device of the character described, including a head formed with a rearwardly opening recess, prongs projecting from the front of the head and adapted to be driven into a tree trunk, a U-shaped supporting frame projecting rearwardly from the head and rigid therewith, a board resting loosely upon the said supporting frame and having its forward end received within the recess of the head, a cross bar connecting opposite sides of the looped supporting frame, the ends thereof being coiled around the side bars of the frame and the extremities being extended upwardly to provide positioning fingers which engage opposite sides of the board, a second cross bar having a spaced and parallel relation to the first cross bar, the ends of the second cross bar being also coiled around the sides of the U-shaped frame and terminating in laterally projecting eyes, and flexible suspending cables connected to the said eyes and adapted to be wrapped around the tree trunk at a point above the head.

3. A spring board device of the character described, including a head formed with a rearwardly extending recess, prongs projecting from the front of the head and adapted to be driven into a tree trunk, a U-shaped supporting frame projecting rearwardly from the head and rigid therewith, a board resting loosely upon the said supporting frame and having the forward end thereof received loosely within the recess of the head, and a pair of cross bars connecting the sides of the U-shaped supporting frame, the extremities of one of the cross bars being extended upwardly to provide positioning fingers which engage the opposite sides of the board to hold the same against lateral displacement, while the extremities of the opposite cross bar terminate in laterally projecting eyes, and flexible supporting cables connected to the eyes and adapted to be wrapped around the tree trunk at a point above the head.

1,158,174. ELEVATOR-DOOR-RELEASING DEVICE. FREDERICK J. CHARLAND, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Mar. 24, 1915. Serial No. 16,751. (Cl. 187—57.)

1. In an elevator door control, means for automatically holding the elevator door open adapted to be released by the operator, to permit closing of the door, comprising a yielding catch carried by the door, a supporting bracket secured beneath the floor of the car, a retractable keeper mounted on the supporting bracket and having a vertically extending holding face projecting past the edge of the car floor into position to be engaged by the yielding catch on the door, a spring normally projecting the keeper out into the plane of engagement with the catch on the door, adjustable means on the bracket for determining the extent of outward movement of the keeper, a retracting lever pivoted on the supporting bracket and connected with the keeper for retracting the same and an operating pedal for retracting the keeper connected with said retracting lever and projecting up through the floor of the car.



2. In an elevator door control, means for automatically holding the elevator door open adapted to be released by the operator to permit closing of the door, comprising a yielding catch carried by the door, a supporting bracket secured beneath the floor of the car, a retractable keeper mounted on the supporting bracket and having a vertically extending holding face projecting past the edge of the car floor into position to be engaged by the yielding catch on the door, a spring normally projecting the keeper out into the plane of engagement with the catch on the door, means for limiting the outward movement of the keeper, a retracting lever pivoted on the supporting bracket and connected with the keeper for retracting the same and an operating pedal for retracting the keeper connected with said retracting lever and projecting up through the floor of the car.

3. An elevator door releasing device comprising a frame for being supported on the lower side of the floor of an elevator car, having a horizontal slot serving as a way, a keeper supporting device comprising a guide and supporting arm operatively engaged with the said way, and having a downwardly directed flange at the outer end thereof, a spring engaged with said flange and tending to push the supporting device outwardly, a treadle operated device connected to said flange and operative to pull the same inwardly and in opposition to said spring, and a keeper supported by the flange.

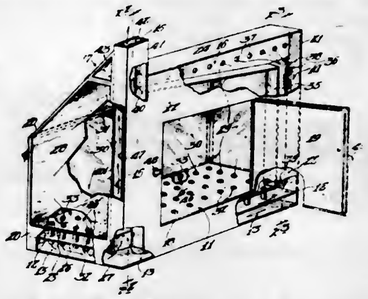
4. An elevator door releasing device comprising a frame for being supported by the car, having a longitudinal way, an apron on the rear side below the said way, provided with a perforation, and having pivot supporting arms on each side of the said apron, a keeper supporting device operatively housed in said way and having a dependent flange on the front end, a keeper supported by said flange, a rod connected by one end to said flange and having the other end portion extending through the perforation in the apron, a spring mounted on said rod, a bell crank supported by the pivot supporting arms, having one of its arms connected to said rod, and a treadle operatively connected to the other arm of the bell crank.

1,158,175. SOLAR COOKER. HARRY A. CHERRIER, Redlands, Cal. Filed Feb. 15, 1915. Serial No. 8,335. (Cl. 126—270.)

1. A solar cooker comprising a cooking chamber formed of partially transparent walls through which the sun's rays can enter and an opaque back and floor, an inlet flue having openings at its upper end through which fresh air may be delivered to the top of said cooking chamber, an outlet flue for withdrawing air from the bottom of said cooking chamber, and an accelerator for heating the air in said outlet flue to increase the draft in said outlet flue.

2. A solar cooker comprising a cooking chamber formed of partially transparent walls through which the sun's rays can enter and an opaque back and floor, an inlet flue, a distributer connected to the top of said inlet flue and having openings therein through which fresh air is delivered to the top of said cooking chamber, an outlet flue for withdrawing air from the bottom of said cooking chamber, and an accelerator for heating the air in said outlet flue to increase the draft in said outlet flue.

3. A solar cooker comprising a cooking chamber formed of partially transparent walls through which the sun's rays can enter and an opaque back and floor, an inlet flue having openings at its upper end through which fresh air may be delivered to the top of said cooking chamber, an outlet flue for withdrawing air from the bottom of said cooking chamber, means by which the air from the bottom of said cooking chamber heats the air entering said inlet flue, and an accelerator for heating the air in said outlet flue to increase the draft in said outlet flue.

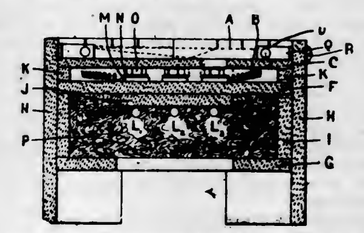


4. A solar cooker comprising inclosing walls, back, and bottom, a portion of the walls being transparent to admit the sun's rays to a cooking chamber, a floor for the cooking chamber placed parallel to and above the bottom of the cooker, a partition dividing the space between said floor and said bottom into an upper preheating chamber and a lower cooling chamber, means for connecting the cooling chamber with the cooking chamber, means for introducing fresh air into the preheating chamber, means for connecting the preheating chamber with the cooling chamber, and means for withdrawing air from the cooling chamber.

5. A solar cooker comprising inclosing walls, back, and bottom, a portion of the walls being transparent to admit the sun's rays to a cooking chamber, a floor for the cooking chamber placed parallel to and above the bottom of the cooker, a partition dividing the space between said floor and said bottom into an upper preheating chamber and a lower cooling chamber, a series of tubes secured in said floor and said partition and connecting said cooking and cooling chambers, means for introducing fresh air into the preheating chamber, means for connecting the preheating chamber with the cooking chamber, and means for withdrawing air from the cooling chamber.

[Claims 6 to 15 not printed in the Gazette.]

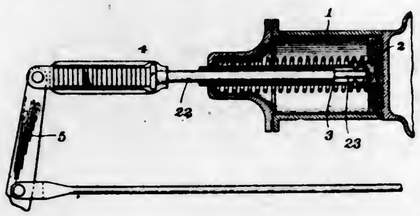
1,158,176. ELECTRIC COOKING-STOVE. ARTHUR O. CHRISTENSEN, Franklin, N. J.. Filed Mar. 9, 1915. Serial No. 13,127. (Cl. 219—19.)



1. An electric stove comprising a body, having a bottom and a partition horizontal within said body, means for supporting said bottom and partition, heating wires supported by said partition and contact pegs secured to the ends of said wires, the space between the above mentioned horizontal bottom and partition being filled with a poor heat-conducting material.

2. An electric stove designed for cooking, having a heating coil exposed on the upper side of the stove and a second coil embedded a little below this first named one in a refractory material, such second coil being designed for use only in series with the first coil, thus serving as a resistance to the flow of electricity in the first coil.

1,158,177. SLACK TAKE-UP FOR FLUID-PRESSURE-BRAKE SYSTEMS. GEORGE CHRISTENSON, Jamaica, N. Y., assignor to H. W. Johns-Manville Company, a Corporation of New York. Filed Jan. 9, 1915. Serial No. 1,399. (Cl. 188—49.)



1. In a take-up apparatus for fluid pressure brake systems, a telescoping push rod composed of a plurality of relatively movable parts adapted for coöperation with the piston, in combination with an adjusting lever adapted for manual operation pivoted on one of said parts and operatively connected to another.

2. In a take-up apparatus for fluid pressure brake systems, a telescoping member inserted in the line of brake rigging connections, composed of a plurality of relatively movable parts in combination with an adjusting lever adapted for manual operation pivoted on one of said parts and having a pawl and ratchet connection with another part.

3. In a take-up apparatus for fluid pressure brake systems, a telescoping member, inserted in the line of brake rigging connections, composed of a frame, a series of transversely movable, perforated shims mounted in said frame, a longitudinally movable rod mounted in said frame and adapted to pass through the perforations in the shims when said perforations are in line therewith, and manually operated means for forcing said rod away from said shims.

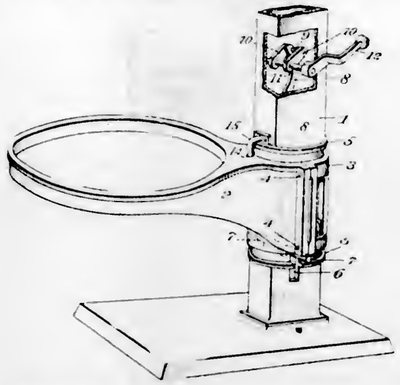
4. In a take-up apparatus for fluid pressure brake systems, a telescoping member, inserted in the line of brake rigging connections, composed of a frame, a series of transversely movable, perforated shims mounted in said frame, a longitudinally movable rod mounted on said frame and adapted to pass through the perforations in the shims when said perforations are in line therewith, and manually operated means for forcing said rod away from said shims by a step-by-step movement.

5. In a take-up apparatus for fluid pressure brake systems, a telescoping member, inserted in the line of brake rigging connections, composed of a frame, a series of transversely movable, perforated shims mounted in said frame, a longitudinally movable rod mounted in said frame and adapted to pass through the perforations in the shims when said perforations are in line therewith, and manually operated means for forcing said rod away from said shims by a step-by-step movement, comprising a lever pivoted on the frame, a pawl connected to the lever, and notches formed in the rod adapted to coöperate with said pawl.

[Claims 6 to 18 not printed in the Gazette.]

1,158,178. MIXING-MACHINE. ELMER A. CLARK, Joliet, Ill. Filed Sept. 24, 1913. Serial No. 791,527. (Cl. 248—30.)

1. In a mixing machine, a bowl support member, a member for revolubly supporting said bowl support member, means to raise and lower said bowl support member, and means to prevent said bowl support member from revolving when in raised position comprising a projection on one of said members adapted to enter a recess provided on the other of said members when said bowl support member is in raised position.



2. In a mixing machine, a bowl support member, a member for revolubly supporting said bowl support member, means to raise and lower such bowl support member, and means to prevent said bowl support member from revolving when in raised position comprising a roller on one of said members adapted to engage with a cam surface and enter a recess provided on the other of said members upon raising said bowl support member.

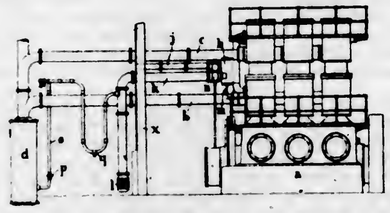
3. In a mixing machine, a column having a cylindrical bearing surface and provided with a longitudinal slot, a bowl support fitting around said bearing surface and adapted to revolve thereon, and means to raise and lower said bowl support comprising a bar extending through said slot.

4. In a mixing machine, a bowl support, means for revolubly supporting said bowl support, means to raise and lower said bowl support comprising a crank adapted to be supported beyond dead center when the bowl support is in raised position, and means so to support said crank.

5. In a mixing machine, a bowl support, and means for raising and lowering said bowl support comprising means to engage with said bowl support, a connecting rod engaging said last-named means, a crank connected with said connecting rod, and a handle connected with said crank.

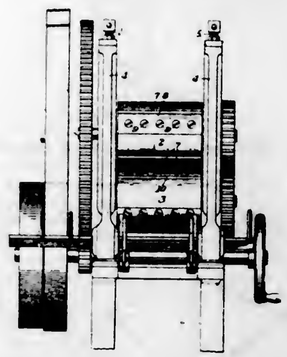
[Claims 6 and 7 not printed in the Gazette.]

1,158,179. , INTERNAL-COMBUSTION ENGINE WORKING WITH COKE-OVEN AND OTHER GASES. DUGALD CLERK, London, England, assignor to The National Gas Engine Company Limited, Ashton-under-Lyne, England. Filed Jan. 31, 1913. Serial No. 745,488. (Cl. 123—1.)



A method of working internal combustion engines, which consists in trapping a portion of the engine exhaust gases, passing these gases through a cooling device, drawing these cooled gases into the engine cylinder, together with air and combustible gas, compressing the mixture and igniting the charge, as and for the purpose described.

1,158,180. MACHINE FOR CUTTING MANTLE-BLANKS. SAMUEL COHN, New York, N. Y., assignor to Mantle Machinery & Patents Company, New York, N. Y., a Corporation of New York. Original application filed Mar. 22, 1912, Serial No. 685,558. Divided and this application filed Jan. 17, 1914. Serial No. 812,720. (Cl. 164—28.)



1. In cutting apparatus of the character set forth, the combination with coacting rolls, one of the rolls having a recess, a cutting member in the recess having an interlocking engagement with one wall thereof, and a holding device in the recess, said cutting member also having an interlocking engagement with the holding device between the outer and inner sides of the latter.

2. In cutting apparatus of the character set forth, the combination with coacting rolls, one of the rolls having a recess, one wall of which is provided with an angular socket arranged above the bottom of the recess, an angular cutting member in the recess having a corner engaged in the socket, and a holding device in the recess having an angular socket between its outer and inner sides that receives the opposite corner of the cutting member.

3. In cutting apparatus of the character set forth, the combination with coacting rolls, each having longitudinally disposed recesses in its periphery, of holding devices detachably secured in said recesses and having portions spaced apart from certain of the side walls thereof, said portions and said walls having oppositely extending angular undercut portions, forming sockets that are substantially quadrangular in cross section, and cutting elements substantially quadrangular in cross section located in said sockets and having their corners fitted into the undercut portions.

4. In cutting apparatus of the character set forth, the combination with a pair of coacting rolls having coacting cutting elements, of means for yieldingly urging the rolls toward each other, said rolls being held in spaced relation during their entire rotation.

1,158,181. PROCESS OF CONCENTRATING DILUTE NITRIC ACID. EMIL COLLETT, Christiania, Norway, assignor to Norsk-Hydroelektrisk Kvaelstofaktieselkab, Christiania, Norway. Original application filed Mar. 27, 1913, Serial No. 757,252. Divided and this application filed June 15, 1915. Serial No. 34,308. (Cl. 23—1.)

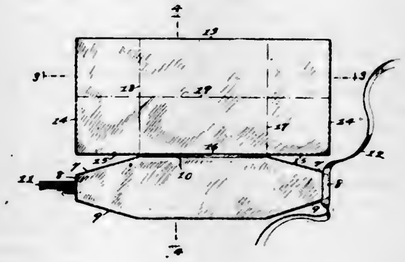
1. In the process of concentrating nitric acid vapors by absorbing moisture therefrom in an apparatus employing sulfuric acid as a drying agent, the improvement which comprises introducing concentrated nitric acid into said apparatus between the point where the vapors enter the latter and the point where the vapors escape.

2. In the process of concentrating nitric acid vapors by absorbing moisture therefrom in an apparatus employing sulfuric acid as a drying agent, the improvement which comprises introducing cold concentrated nitric acid into said apparatus between the point where the vapors enter the latter and the point where the vapors escape.

3. In the process of concentrating acid vapors by absorbing moisture therefrom in an apparatus employing a suitable drying agent, the improvement which comprises introducing, at a point below the top of the tower, into the current of the acid vapors to be dried, a vaporizable liquid that does not affect the concentration of the acid vapors.

4. In the process of concentrating acid vapors by absorbing moisture therefrom in an apparatus employing a suitable drying agent, the improvement which comprises introducing, at the zone of maximum temperature a vaporizable liquid that does not affect the concentration of the acid vapors.

1,158,182. NAPKIN. ELFREDA JOSEPHINE CORBIN, Minneapolis, Minn., assignor of one-half to Jennie Bohmbach, Minneapolis, Minn. Filed Aug. 7, 1914. Serial No. 855,633. (Cl. 128—5.)

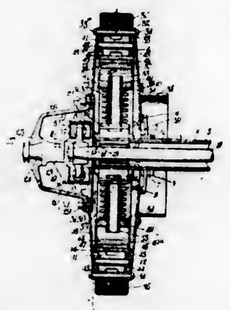


A device of the class described, consisting of a strip of absorbent material having V-shaped cuts formed in opposite edges for approximately one-fourth the width of and adjacent one end of said strip, the part on each side of said cuts being doubled and stitched along the free edges to form a pocketed member on each side of said cuts, one of which is double the size of the other, the larger of said members being adapted to receive an absorbent pad and the openings of both pockets being in close relationship, the sides of the larger member being turned inwardly on lines at the inner ends of said cuts, and then folded along a central line at right angles to the lines of said turned sections, and the larger member, when folded, being tucked into the pocket of the smaller member.

1,158,183. VEHICLE-WHEEL. NOAH CORNFIELD, New York, N. Y. Filed Aug. 10, 1911. Serial No. 648,331. (Cl. 21—187.)

1. A wheel having a solid tire; a rim for supporting said tire; a full-sided inclosing casing; a non-rotative bearing frame for said rim, said bearing frame having a track member spaced apart from the inner surface of said rim; a plurality of rotary members engaging the track member on said bearing frame and the inner surface of said above-mentioned rim; a hub block mounted in said frame and guided to move therein vertically and horizontally; a plurality of springs interposed between said hub member and said non-rotative frame to normally maintain the hub

block concentric in said frame under load conditions; in combination with a rotary axle having a bearing in said hub block; and means rotatively connecting said casing and said axle, said means comprising laterally disposed arms, a spider frame having sockets for said arms, said frame being pivotally mounted upon said casing and in line with the center thereof.



2. In combination with a wheel having a hollow body and a full-sided inclosing casing therefor; a rotary axle extending within said casing; a connection between said casing and said axle, comprising a member fixedly mounted in the end of said axle and having laterally disposed arms; and a spider connection pivotally mounted in said casing exterior to the said axle and in line with the axis thereof, said spider having elongated recesses to hold said laterally disposed arms to permit lengthwise movement thereof.

3. In combination with a wheel having a hollow body and a full-sided inclosing casing therefor; a rotary axle extending within said casing; a connection between said casing and said axle, comprising a member fixedly mounted in the end of said axle and having laterally disposed arms; a spider connection pivotally mounted in said casing exterior to the said axle and in line with the axle thereof, said spider having elongated recesses to hold said laterally disposed arms to permit lengthwise movement thereof; and a resilient connecting frame for said wheel and said axle, embodying a hub block, a track frame and a plurality of interposed spring members arranged to normally maintain said hub block and axle when mounted therein, concentric with said wheel and frame.

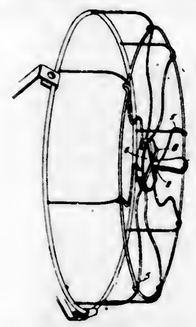
1,158,184. ELECTRIC-FAN-GUARD ATTACHMENT. THOMAS G. DABNEY, Clarksdale, Miss. Filed Dec. 15, 1914. Serial No. 877,340. (Cl. 230—1.)

1. An attachment adapted to be secured to a fan guard, said attachment comprising a handle having a reduced end, a sleeve adapted to be secured on said reduced handle end, a plurality of pliable flat arms connected at their inner ends to said sleeve and in diametrically opposed relation to each other, said arms adapted to be bent upon the central ring or disk of a fan guard for securing said handle to said guard and in alinement with the axis thereof, substantially as described.

2. A fan guard attachment comprising a handle having a reduced end, a sleeve secured on the reduced handle end, and a plurality of pliable arms connected at their inner ends to said sleeve, said arms adapted to be bent upon the central ring or disk of a fan guard for securing said handle thereto and in alinement with the axis thereof.

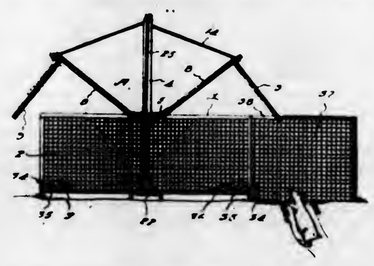
3. An attachment of the class described comprising a handle, and a plurality of pliable arms connected therewith and adapted to be bent upon the central ring or disk of a fan guard for securing the handle thereto.

4. In a device of the class described, the combination of a fan guard having a central disk, a handle, and means carried by the handle for engaging the central disk whereby to removably and detachably connect the handle with



the disk at right angles thereto and in the axis of the guard.

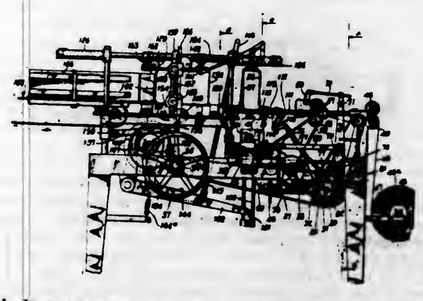
1,158,185. TRAP. CECIL E. DANIELSON, Langford, S. D. Filed May 14, 1915. Serial No. 28,111. (Cl. 43—19.)



1. A trap comprising, a housing, an upright carried by the housing, a lever pivotally mounted on the upper end of the upright and tapering throughout its length, trapping members associated with the housing, operating means located within the housing, means for connecting the operating means to the smaller end of the lever, a flexible element associated with the trapping members and adapted to detachably engage over the lever for holding the trapping members in operative position, the said flexible element being adapted to be positioned at various points on the lever so as to regulate the sensitiveness of the trapping members.

2. A trap comprising, a rectangular housing, an upright carried by the housing, vertically swinging trap doors for closing the opposite ends of the housing, means connecting the trap doors to each other, means carried by the upright and adapted to engage the means connecting the doors so as to hold the latter in operative position, operating means located within the housing and having connection with the means on the upright for operating the latter so as to effect release of the trap doors so as to permit the latter to move to a closed position, each of the said doors having its vertically disposed edges provided with laterally projecting studs, latch bars rotatably mounted on the sides of the housing adjacent the opposite ends thereof and each having one of its ends formed to provide a finger adapted when the adjacent door is raised to operative position to lie within the path of one of the operating studs carried by the door, so as to be engaged thereby to effect a rotation of the latch bar when the door is moving to closed position, the opposite end of the latch bar being provided with a notch adapted to engage over the adjacent stud when the door is closed, so as to hold the door in a closed position.

1,158,186. PACKAGE-WRAPPING MACHINE. JOHN W. DEARBORN, Springfield, Mass. Filed May 29, 1914. Serial No. 841,747. (Cl. 93—2.)



1. In a wrapping machine, in combination, an elevator adapted to receive the package to be wrapped and defining the first station thereof, a downwardly open gripper above the elevator and defining the second station of the package, paper-feeding mechanism to insert a sheet of wrapping paper between the package on the elevator and the gripper, means to raise the elevator and carry the package and paper into the gripper with the bottom portions of the paper depending below the gripper, a folder movable under the package in the gripper to fold one depending portion of the paper under the package, means for shifting the gripper horizontally to a third station, and later retract the gripper, a device in the path of the package between the second and third stations to fold the remaining depending portion of the paper under the package, mechanism to open the gripper and release the package after arrival thereof at the third station, means for advancing the package beyond the third station, and mechanism for forming the end-folds of the wrapper.

2. In a wrapping machine, in combination, an elevator adapted to receive the package to be wrapped and defining the first station thereof, a horizontally movable downwardly open gripper above the elevator and defining a second station, paper-feeding devices for inserting a sheet of paper between the gripper and the package on the elevator, means to raise the elevator and carry the package and paper into the gripper, whereby the paper is folded down over the front and rear of the package and its bottom portions left depending below the package, a folder movable under the package to fold one of said depending portions, means to advance the gripper to a third station and retract the same to the second station, means to fold the remaining depending portion of the paper, mechanism to open the gripper and release the package while at the third station and to close the gripper after its retraction to the second station, a pusher connected with the gripper in advance thereof to move horizontally in unison therewith, and movable into and out of the path of the package, means enabling the gripper opening and closing mechanism to move the pusher out of the path of the package as the gripper opens and into the path as the gripper closes whereby on the succeeding advance of the gripper the pusher will advance the package from the third station, and means to produce the end-folds of the paper.

3. In a wrapping machine, in combination, a package-gripper having an open side to receive a package to be wrapped, a package-carrier adjacent to the gripper and movable from an initial position toward the open side of the gripper to move the package into the latter, means to feed a sheet of paper across the open side of the gripper while the carrier is in its initial position, a pusher in advance of the gripper, means to advance and retract the gripper and the pusher in unison, and mechanism to withdraw the pusher from the path of the package and release the gripper from the package while the pusher and gripper are advanced and to restore the gripper and pusher to initial position when the two are retracted.

4. In a wrapping machine, in combination, a package-advancing gripper comprising a member to engage the rear of the package and a pivoted member to engage the front of the package, a pivoted package-pusher in front of the gripper, means to advance and retract the gripper and pusher, and mechanism to swing pivoted member and the pusher out of the path of the package before retraction and into the path of the package after retraction of the pusher and gripper.

5. In a wrapping machine, in combination, a package-advancing gripper having a pivoted member to engage the front of the package and adapted to swing out of the path of advance of the packages, a plurality of package-pushers one in front of the others in advance of the gripper and each consisting of a pivoted member adapted to swing out of and into the path of advance of the packages, means to advance and retract the gripper and the pushers, and mechanism to swing all said pivoted members out of the path of the packages before retraction and into the said path after retraction of the gripper and pushers.

[Claims 6 to 29 not printed in the Gazette.]

1,158,187. OPHTHALMOLOGICAL INSTRUMENT. HENRY L. DE ZENG, Maple Shade, N. J. Original application filed Jan. 11, 1915, Serial No. 1,562. Divided and this application filed Feb. 23, 1915. Serial No. 9,903. (Cl. 88—22.)



1. In an ophthalmological instrument, an objective lens, a reflector coöperating therewith, an eye lens, a reflector coöperating therewith, a third reflector coöperating with the first and second mentioned reflectors, means for increasing or decreasing the distance which the light will travel in passing from the objective lens to the eye lens, and means for indicating the increase or decrease of light travel in ophthalmic lens values.

2. In an ophthalmological instrument, an objective lens, a reflector suitably positioned with respect thereto, an ocular lens of substantially the same focal power as said objective lens, a reflector suitably positioned with respect thereto, and a third reflector suitably positioned to reflect the light from the first-mentioned reflector to the second-mentioned reflector and movably mounted to increase or decrease the distance the light will travel in passing from the objective to the ocular lens, and means for indicating the increase or decrease of light travel in ophthalmic lens values.

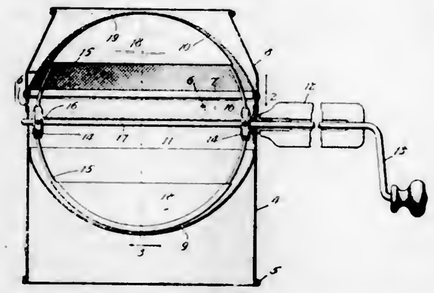
3. In an ophthalmological instrument, the combination of an objective lens and an eye piece of substantially the same focal power as said objective lens, whereby the object when viewed through the said lens and eye-piece will appear of substantially normal size, with reflecting means for erecting the image and for increasing and decreasing the distance which the light will travel in passing from the objective lens to the eye-piece, and an indicating means coöperating with a dioptric scale for indicating the nature of the light rays emanating from the eye-piece.

4. In an ophthalmological instrument, the combination with an objective lens having a positive focal point, and an eye-piece also having a positive focal point substantially the same as said objective lens, of reflecting means for erecting the image and for varying the distance of the light travel between said objective and said eye-piece, and means for determining the amount of said variations in said distances in ophthalmic lens equivalents.

5. In an ophthalmological instrument, a support, a reflecting device carried thereby for directing light to the object, an objective lens suitably supported with relation to said reflecting device, a reflector for said objective lens, a sight opening, a reflector for said sight opening, means for directing the light from one reflector to the other reflector, said means being adjustable with respect thereto, an ophthalmic lens-scale for determining the amount of adjustment of the light directing means, and a series of lenses suitably mounted to be brought into alinement with said sight opening.

[Claims 6 to 9 not printed in the Gazette.]

1,158,188. SIFTER. HELEN DOYLE, Chicago, Ill. Filed Apr. 16, 1915. Serial No. 21,644. (Cl. 83—60.)



1. A flour-sifter comprising a shell having an imperforate mixing pan in fixed position in one end and a screen in fixed position in its other end, and a rotatable handle-equipped beater axially supported to be operated in the shell between and against the pan and screen.

2. A flour-sifter comprising a shell containing a globular chamber formed of an imperforate mixing pan and a screen respectively covering the opposite ends of the shell and in fixed position therein, and a rotatable handle-equipper ring-formed beater axially supported to be operated in said chamber.

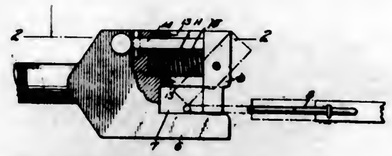
3. A flour-sifter comprising a shell having a concave imperforate mixing pan in fixed position in one end and a concave screen in fixed position in its other end, said pan and screen forming a globular chamber, a handle secured on the shell, a shaft rotatably journaled in the shell to extend through the handle and terminating in a crank, and a beater supported on the shaft to operate in said chamber.

4. A flour-sifter comprising a shell having a concave imperforate pan in one end and a concave screen in its other end, said pan and screen forming a globular chamber, a handle secured on the shell, a shaft rotatably journaled in the shell to extend through the handle, and a beater formed of rings secured on the shaft to extend in angular relation to each other in said chamber and be operated against the pan and screen, one of said rings being screen-covered, and the other provided with blades.

5. A flour-sifter comprising a shell formed of a cylindrical section having an outwardly tapering section separably connected therewith, an imperforate concave pan in the cylindrical section and a concave screen in the tapering section, said pan and screen forming a globular chamber, and a rotatable handle-equipped beater supported to be operated in said chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,158,189. CAR-COUPLING. JOHN DRISCOLL, Gypsum, Kans., assignor of one-half to David E. Bennett, Gypsum, Kans. Filed Apr. 24, 1915. Serial No. 23,589. (Cl. 213—45.)



In a car coupling, the combination of a draw head having an end slot, a draw-bar having an opening adapted to engage said slot, a coupling bar pivotally mounted between its ends within said head and having one end thereof engaging the slot in the head, a compression spring resisting the movement of said coupling bar on its pivot whereby the end of the coupling bar is maintained within the slot, a pivotally-mounted latch within the head, a compression spring for forcing said latch into engagement with the end of the coupling bar not engaged in the end slot of the head whereby the coupling bar is normally prevented from movement on its pivot when a pull is exerted on the coupling bar, and a push-button associated with the latch whereby the same can be forced to disengage the coupling bar, substantially as and for the purpose set forth.

1,158,190. SAFETY DRILL AND TOOL HOLDER. PHILIP E. EDELMAN, Minneapolis, Minn. Filed Aug. 19, 1912. Serial No. 715,848. (Cl. 29—141.)



1. In a tool of the class described, a tool holder, a shaft entering it, friction members operatively engaging between the tool holder and shaft, and a knob threaded on said shaft to adjust the operative friction between the said tool holder and shaft.

2. In a tool of the class described, a tool holder, a shaft entering it, friction members operatively engaging between the tool holder and shaft, and a calibrated knob threaded on said shaft to adjust the operative friction between the said tool holder and shaft.

3. In a tool of the class described, a tool holder, a shaft entering and engaging it, and a knob threaded on said shaft and frictionally connecting said shaft and tool holder.

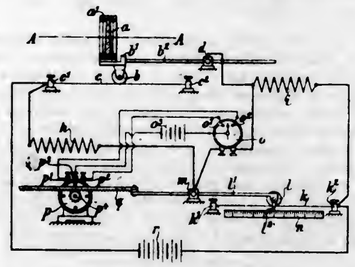
4. In a tool of the class described, a tool holder, a shaft entering and engaging it, and a calibrated knob threaded on said shaft and frictionally connecting said shaft and tool holder.

5. In a tool of the class described, a tool holder, a shaft entering and engaging it, and an external knob threaded on said shaft and frictionally connecting said shaft and tool holder.

[Claim 6 not printed in the Gazette.]

1,158,191. INDICATING DEVICE FOR TELEMETERS. OTTO EPPENSTEIN, Jena, Germany, assignor to the Firm of Carl Zeiss, Jena, Germany. Filed Apr. 8, 1915. Serial No. 20,071. (Cl. 88—2.7.)

1. The combination with a telemeter adapted to present to an observer two images of an object, the distance of which is to be measured, of a measuring device movably fitted within the said telemeter and adapted to effect a mutual displacement of the said two images, the movement necessary for bringing the said measuring from its infinite-position to the position pertaining to the distance of the said object being essentially proportional to the quantity of the angle of triangulation at the said object, a current source, an indicating instrument and a variable electric resistance, the said current-source, the said indicating instrument and the said resistance being connected together by a Wheatstone bridge, a branch of which is formed by the variable resistance, while the branches adjacent to the said branch have constant resistance and the branch opposite to the said branch is adjustable, the said measuring device being coupled with the said resistance in such a manner that the resistance alters in proportion to the movement of the measuring device.



2. The combination with a telemeter adapted to present to an observer two images of an object, the distance of which is to be measured, of a measuring device movably fitted within the said telemeter and adapted to effect a mutual displacement of the said two images, the movement necessary for bringing the said measuring from its infinite-position to the position pertaining to the distance of the said object being essentially proportional to the quantity of the angle of triangulation at the said object, a current-source, an indicating instrument and a variable electric resistance, the said current-source, the said indicating instrument and the said resistance being connected together by a Wheatstone bridge, a branch of which is formed by the variable resistance, while the branches adjacent to the said branch have constant resistance and the branch opposite to the said branch is adjustable, the zero line of the bridge containing a relay adapted to actuate a device increasing or diminishing the resistance of the said opposite branch, the said measuring device being coupled with the said resistance in such a manner that the resistance alters in proportion to the movement of the measuring device.

1,158,192. VEHICLE-JACK. CHARLES G. ETTE, St. Louis, Mo., assignor to St. Louis Malleable Casting Company, St. Louis, Mo., a Corporation of Missouri. Filed Mar. 1, 1915. Serial No. 11,322. (Cl. 254—116.)

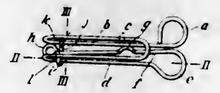
1. A vehicle jack, comprising a standard having a vertically-disposed web provided intermediate its front and rear edges with laterally projecting flanges, a vertically adjustable load-supporting member slidably mounted on said standard and provided with portions that embrace the flanges thereon, an operating lever, an angularly-disposed portion on the inner end of said lever which is pivotally connected to a rearwardly projecting ear on said load-supporting member, and a link of substantially channel shape in cross section whose upper end is pivotally connected to the angularly-disposed portion of said lever and whose lower end is pivotally connected to said standard, said link being adapted to straddle one of the flanges on said standard.

2. A vehicle jack, comprising a standard, a vertically adjustable load-supporting member slidably mounted on said standard, and an operating mechanism for said member comprising a toggle joint, one of whose members is pivotally connected to said standard by means of a movable pin having two portions of different diameters, the larger one of which is normally positioned in a horizontally-disposed slot in the edge of said standard, said slot having a narrow mouth through which the smaller portion of said pin can pass laterally after the pin has been moved into a certain position.



3. A vehicle jack, comprising a standard, a vertically adjustable load-supporting member slidably mounted on said standard, an operating mechanism for said member comprising a toggle joint, one of whose members is pivotally connected to said load-supporting member, a spring-pressed pin passing transversely through the other toggle member and through an opening formed in the edge of said standard, said pin having a reduced portion and said notch having a narrow mouth, and an operating lever formed integral with one of said toggle members.

1,158,193. GARMENT-HOOK. HENRY E. FANSHAWE, New York, N. Y., assignor, by mesne assignments, to Wire Products Company, a Corporation of Delaware. Filed Oct. 16, 1912. Serial No. 726,043. (Cl. 24—228.)



1. A garment fastener formed of one piece of wire and including three spaced apart substantially parallel bars, one end of the middle bar being rounded into one of the outside bars to form a rear sewing loop, the other end of said middle bar being rounded back upon itself to form a front sewing loop located between the outside bars and having its free end attached to both of the outside bars to form a transverse tie bar bracing both of the outside bars.

2. A garment hook fastener comprising a hook having one of its sides formed of bars, a tie bar wrapped around the said bars of the hook, a front loop disposed between said side bars for sewing thread having one end integrally formed with one end of the tie bar, a loop at the rear end of the fastener for sewing thread, and a bar integrally formed at one of its ends with an end of the rear loop and integrally formed at its other end with the other end of the front loop.

3. A garment fastener comprising a hook having its lower side formed of bars terminating in loops at the rear for sewing thread, a bar extending frontward from one of the loops intermediate the said bars of the hook, a loop for sewing thread between the bars of the hook one end being formed integral with the front end of the intermediate bar, and a tie bar having its ends turned over the said bars of the hook and having one of its ends integrally formed with the lower end of the front loop, said intermediate bar being raised opposite the tie bar in a plane with the turned over ends thereof to serve as a guide to and from the front of the hook.

4. A garment fastener formed of one piece of wire and including three spaced apart substantially parallel bars, one end of the middle bar being rounded into one of the outside bars to form a rear sewing loop, the other end of said middle bar being rounded back upon itself to form a front sewing loop located between the outside bars and having its free end looped, first about one of the outside bars and then looped about the other outside bar to form a transverse tie bar bracing both of the outside bars.

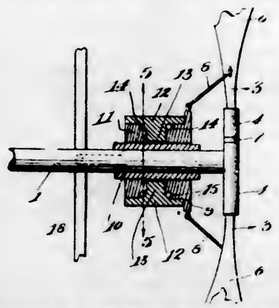
1,158,194. BEAD FOR PNEUMATIC OR OTHER TIRES. MARC WILMOT FINK, Middle Brighton, and ADOLF MARTIN KOBIOLKE, Kew, Victoria, Australia. Filed Feb. 19, 1914. Serial No. 819,766. (Cl. 152—13.)



1. A molded and vulcanized tire bead made up of a rubber body, a reinforcing leather strip embedded in the body and extending longitudinally throughout the same, and a leather cover for the body.

2. A molded and vulcanized tire bead comprising a rubber body of substantially triangular cross-section, a leather reinforcing strip embedded in the body and extending longitudinally throughout the same, and a leather cover for the body, said cover including two longitudinal strips, one of the strips being substantially V-shaped in cross-section.

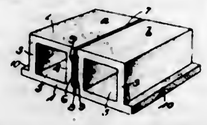
1,158,195. PROPELLER-FEATHERING MEANS. DAVID FORD, Eldorado, Okla. Filed Sept. 8, 1914. Serial No. 860,712. (Cl. 170—163.)



1. A device of the class described comprising the combination with a propeller shaft, blade carrying means mounted upon the outer end of said propeller shaft, and propeller blades mounted in said propeller blade carrying means, a sleeve slidable and keyed on said shaft, a non-rotating member mounted upon said sleeve, said non-rotating member provided with inwardly directed flanges, ball bearings carried by the inwardly directed flanges of the non-rotating sleeve, bearing members mounted upon said sleeve and positioned on opposite sides of the non-rotating sleeve, connecting means between one of said bearing members and the propeller blades and means for moving the sleeve longitudinally of the shaft to turn the blades and vary the inclination of the same.

2. A device of the class described comprising the combination with a propeller shaft, blade carrying means mounted upon said propeller shaft, said blade carrying means provided with oppositely disposed sockets, propeller blades mounted in said sockets, a sleeve slidably mounted and keyed upon said shaft, bearing members rotatably mounted upon said sleeve, a non-rotatable member provided with inwardly directed flanges mounted between said bearing members, said non-rotating member provided with ball bearings to engage the inner faces of the bearing members, connecting links between one of said bearing members and the propeller blades for bearing the inclination of the same upon movement of the sleeve.

1,158,196. FLOOR STRUCTURE. WILLIAM PINCKNEY FRANCIS, Atlanta, Ga. Filed Nov. 3, 1914. Serial No. 870,015. (Cl. 72—66.)



1. A tile structure made of two symmetrical halves, each formed of four walls providing a chamber open at the ends, the inner walls of the two halves being separated by a narrow chamber of double dove-tailed cross-section, there being grooves forming lines of cleavage disposed centrally of the said last-mentioned chamber, whereby the tile can be separated into two similar parts, each half of the tile having an outwardly-extending flange flush with the bottom face.

2. As a new article of manufacture, a slab composed of spaced lines of hollow bodies, and concrete between the lines for bonding the lines of bodies together and for holding the bodies of each line together, said bodies composing halves of tiles each formed of four walls providing a chamber open at the ends, the inner walls of the two halves being separated by a narrow chamber of double dove-tailed cross-section, there being grooves forming lines of cleavage disposed centrally of the said last-mentioned chamber, whereby the tile can be separated into two similar parts, each half of the tile having an outwardly extending flange flush with the bottom face.

1,158,197. REINFORCED MASONRY BEAM. WILLIAM PINCKNEY FRANCIS, Atlanta, Ga. Filed Dec. 23, 1914. Serial No. 878,729. (Cl. 72—59.)



1. A reinforcing structure of masonry beams, comprising a pair of parallel spaced bars each having a horizontal and a vertical flange, the vertical flanges having lugs extending outwardly therefrom and overlying the horizontal flanges, and inverted looped elements extending obliquely across the space between the bars and secured to the latter.

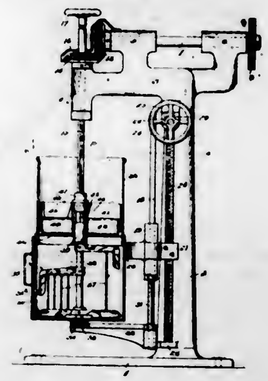
2. A reinforcing structure for masonry beams comprising a pair of spaced parallel bars having vertical and horizontal flanges, spaced vertically disposed U-shaped elements arranged obliquely to the bars, and means for connecting the elements to the vertical flanges of the bars.

3. The combination of a pair of spaced angle-bars having vertical and horizontal flanges, tiles fastened to the bottom of the bars and closing the space between the latter, lines of mortar-embedded bricks lying on the horizontal flanges of the bars and on the tile between the bars, laterally-extending lugs on the vertical flanges extending into the joints between the bricks, and obliquely disposed U-shaped elements fastened to the bars and composed of vertical members and a horizontal member embedded in the layers of brick supported on the bars and tiles.

4. A metallic reinforce for masonry beams, comprising a bar of angular form and having a horizontal brick-supporting web and a vertical web adapted to lie between rows of brick, members extending laterally from the vertical web and over the horizontal web, said members being spaced apart at such a distance as to be adapted to enter the joints between the bricks on the horizontal web, and vertical loops extending upwardly from the vertical web of the bar.

5. A metallic reinforce for masonry beams, comprising a bar of angular form and having a horizontal brick-supporting web and a vertical web adapted to lie between rows of brick, members extending laterally from the vertical web and over the horizontal web, said members being spaced apart at such a distance as to be adapted to enter the joints between the bricks on the horizontal web, and vertical loops extending upwardly from the vertical web of the bar, each loop being of such length longitudinally of the bar as to extend over a plurality of said laterally extending members.

1,158,198. VEGETABLE-MASHING MACHINE. EDWIN FRANKE, Chicago, Ill. Filed Aug. 25, 1913. Serial No. 786,534. (Cl. 146—9.)



1. In a machine of the class described, a machine-frame having a base and a vertical standard extending therefrom, a vessel support adjustably mounted on said standard, a food containing vessel removably supported from said vessel support, a rotary food comminuting device removably located within the vessel and having a central sleeve, and a rotary shaft having its lower extremity engaging in the sleeve of the food comminuting device; said shaft being vertically adjustable to permit dismemberment or assembling of the vessel and its comminuting device.

2. In a machine of the class described, a machine frame having a base and a vertical standard extending therefrom, a vessel support adjustably mounted on said standard, a food containing vessel removably supported from said vessel-support, a rotary food comminuting device removably located within the vessel, and a vertically arranged rotary shaft constructed to have operative connection with the rotary food comminuting device; said food comminuting device comprising a central sleeve, oppositely extending blades and rollers journaled beneath and in parallel longitudinal arrangement with said blades.

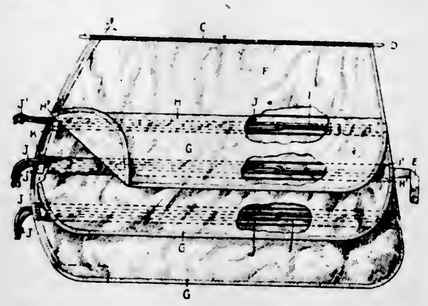
3. In a machine of the class described, a machine frame having a base and a vertical standard extending therefrom, a vessel support adjustably mounted on said standard, a food containing vessel removably supported from said vessel-support, a rotary food comminuting device removably located within the vessel, and a vertically arranged rotary shaft constructed to have operative connection with the rotary food comminuting device; said food comminuting device comprising a central sleeve, oppositely extending obliquely disposed blades and rollers journaled beneath and in parallel longitudinal arrangement with said blades.

4. In a machine of the class described, a machine-frame having a base and a vertical standard extending therefrom, a vessel-support, a lower food containing vessel removably supported from said support, an upper food containing vessel removably mounted upon said lower food containing vessel, a rotary food comminuting device in the lower vessel, a second rotary food comminuting device in the upper vessel; said food comminuting devices having interlocking central sleeves and a rotary vertical shaft, having its lower extremity projecting into and engaging said sleeves, said shaft being vertically adjustable to permit dismemberment or assembling of the vessels and their comminuting devices.

5. In a machine of the class described, a machine frame having a base and a vertical standard extending therefrom, a vessel-support, a lower food containing vessel removably supported from said support, an upper food containing vessel removably mounted upon said lower food containing vessel, a rotary food comminuting device in the lower vessel, a second rotary food comminuting device in the upper vessel; said food comminuting devices having central sleeves and one of said sleeves having a projection which fits within the other sleeves and locks said sleeves against independent rotation, and a rotary vertical shaft having its lower extremity removably fitting in one of said sleeves to lock said shaft to said sleeve against independent rotation; said shaft being also vertically adjustable to permit dismounting the machine.

[Claim 6 not printed in the Gazette.]

1,158,199. DRESS-FORM. LINUS TERRY FURNAS, Lima, Ohio. Filed Mar. 10, 1915. Serial No. 13,407. (Cl. 2—87.)



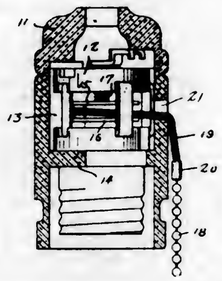
1. A dress provided with a flounce having a hem, a loop string within the said hem and doubled up to form a loop, the ends of the loop string being secured to one end of the flounce, and a draw string extending within the said hem and doubled up, the draw string passing through the loop of the loop string and having its ends extending through the other end of the hem, the draw string ends passing through separate passages at the last-mentioned end of the hem.

2. A dress form provided with a flounce having a hem, a loop string within the said hem and doubled up to form a loop, the ends of the loop string being secured to one end of the flounce, a draw string extending within the said hem and doubled up, the draw string passing through the loop of the loop string and having its ends extending through the other end of the hem, and a tape attached at its ends to the flounces and extending across the last-mentioned end of the hem to form separable passages for the ends of the draw string.

1,158,200. PULL-SOCKET. JAMES G. GIRLING, Hartford, Conn., assignor to The Arrow Electric Company, Hartford, Conn., a Corporation of Connecticut. Filed May 19, 1915. Serial No. 29,178. (Cl. 173—354.)

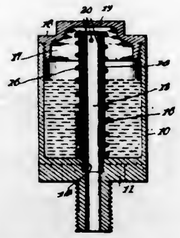
An electric lamp socket comprising a porcelain casing having a guide hole in its side wall, a switch mechanism of the pull-actuated type within the casing and a pull element therefor having at one end a flexible, smooth cord of insulating material passing in through said hole in the casing and attached to the switch actuating mechanism, and extending outside the guide hole in all positions of the switch mechanism whereby friction of the pull ele-

ment at the guide hole is minimized, a smooth, quiet actuation of the switch mechanism is assured, and the pull



end of the chain is insulated from the switch mechanism, substantially as described.

1,158,201. LUBRICATING-CUP. EDWARD F. GLASS, Altoona, Pa. Filed Mar. 13, 1913. Serial No. 754,026. (Cl. 184—64.)



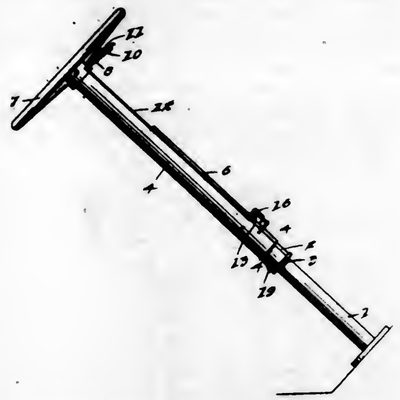
1. In a lubricating cup, the combination with an oil container having a passage formed therein to provide communication with a suction element, a conducting pipe continuing said passage above the normal oil level in said container, and a wick supported by said pipe and similarly extending above said normal oil level for the elevation of oil under the influence of said suction element.

2. In a lubricating cup, the combination with an oil container having a passage formed therein for communication with a suction element, of a conducting pipe continuing said passage through the body of oil and to a point above the normal level thereof, distributing apertures formed at the upper extremity of said pipe, and a wick supported throughout the length of said pipe for the elevation of oil to said apertures under the influence of said suction element.

3. In a lubricating cup, the combination with an oil container having a passage formed therein for communication with a suction element, a conducting pipe continuing said passage to a point above the normal oil level, distributing apertures being formed at the upper extremity of said pipe, and a wick enveloping said pipe and adapted to be supported thereby throughout the entire length thereof, to elevate oil to said distributing apertures under the influence of said suction element through said apertures.

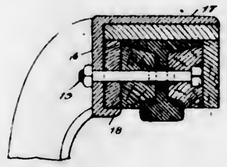
4. In a lubricating cup, the combination with an oil container formed with a thickened bottom, of a stem projecting from said bottom, a passage formed in said stem for communication with a suction element, a conducting pipe removably continuing said passage through the body of said container, suction openings formed in the upper extremity of said pipe, and an enveloping wick adapted to be supported by said pipe to extend from the bottom of said container to a point above the normal oil level therein in covering said openings, for the elevation of oil to the latter and distribution through said pipe under influence of said suction element.

1,158,202. ADJUSTABLE STEERING-COLUMN FOR AUTOMOBILES AND THE LIKE. CHAMBERS E. GLENN, Terra Alta, W. Va. Filed Apr. 1, 1914. Serial No. 828,853. (Cl. 74—39.)



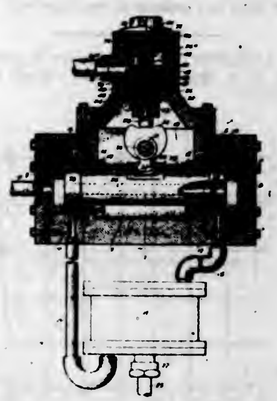
An adjustable steering column comprising a lower hollow stem having a plurality of openings arranged longitudinally therein, said stem having a longitudinal extending rib thereon, an upper stem section slidably mounted upon the lower stem, said upper stem section being provided with a grooved longitudinal offset portion adapted to slidably engage the rib of the lower stem section, a bell crank lever, a locking pin pivoted to said bell crank lever and extending through said upper stem section, supporting means for said bell crank lever, said locking pin normally engaging one of the said openings of the lower hollow stem, a releasing rod connected with said bell crank, a releasing lever connected with said releasing rod, means for resiliently retaining said releasing lever in an inoperative position.

1,158,203. UNDER-CONTACT RAIL AND SUPPORT. ANATOL GOLLOS, Chicago, Ill., assignor to Gollos Railway Signal Company of America, a Corporation of Maine. Filed Sept. 30, 1912. Serial No. 723,202. (Cl. 191—32.)



The combination of a support for holding a contact rail in raised position, said support having a longitudinal plate with a flange along the lower side thereof, an insulating member having a flat surface, engaging with said plate and resting on said flange, a contact rail engaging with said insulating member, a second insulating member on the opposite side of the contact rail, an insulating sleeve extending through a hole provided for the same, in the web of said rail, and extending into recesses in the adjacent surfaces of the contact members, a bolt passing through said plate, contact members, and sleeve, for holding said parts together, and a trough or cover over said rail, comprising side pieces which extend down over the joints between the rail and the insulating members, and a top piece which extends out to the outer faces of the side pieces, whereby the rail and connections are fully protected, and water is prevented from running down into the connections.

1,158,204. HYDRAULIC VALVE. ALBERT L. GRANDSTAFF, Steubenville, Ohio. Filed May 6, 1914. Serial No. 836,684. (Cl. 138—16.)



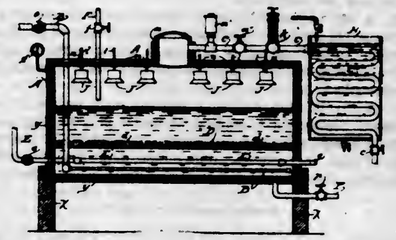
1. A hydraulic valve comprising a valve chest, a valve member mounted within said valve chest for controlling the distribution of a liquid flowing therethrough, an inlet chest connected with said valve chest and provided with an annular partition, a sleeve extending through said annular partition and provided with an annular flange resting upon said annular partition, said sleeve being further provided with an annular portion provided with corrugations, an inlet valve with a portion encircling said valve seat, and a gasket carried by said inlet valve and adapted to fit upon said valve seat.

2. A hydraulic valve comprising a valve chest, a valve member mounted within said valve chest for controlling the distribution of a liquid flowing through said valve chest, an inlet chest connected with said valve chest and provided with an annular partition, a sleeve supported by said annular partition and provided with openings for admitting a liquid into said valve chest, a rod extending through said sleeve, a shoe carried by said rod, means for actuating said shoe and said rod, an inlet valve member connected with said rod and controllable by movements thereof for admitting a liquid into said sleeve, and means for admitting a liquid into said inlet chest at a point adjacent said inlet valve member.

3. In a hydraulic valve the combination of a valve chest, a valve member mounted within said valve chest for controlling the distribution of a liquid flowing through said valve chest, an inlet chest connected with said valve chest, a valve seat located within said inlet chest, a valve located within said inlet chest and movable relatively to said seat, said inlet valve member being free to turn relatively to said seat and being provided with a stem having a spirally disposed passage, and a chamber communicating with the inlet chest and into which the stem of the valve projects, whereby the liquid in the chamber will be forced through the spiral passage of the valve stem and the valve turned relatively to its seat.

4. A hydraulic valve comprising a valve chest, a valve member slidably mounted within said valve chest for controlling the distribution of a liquid flowing therethrough, a rocking shaft extending into said valve chest, a heart cam mounted rigidly upon said rocking shaft and provided with a portion engaging said valve member in order to actuate said valve member, an inlet chest connected with said valve chest, an inlet valve movably mounted within said inlet chest, mechanism connected with said inlet valve and controllable by movements of said heart cam for controlling the admission of a liquid from said inlet chest into said valve chest, and means controllable at the will of the operator for actuating said rocking shaft.

1,158,205. PROCESS OF TREATING HYDROCARBON-OILS. THOMAS T. GRAY, Elizabeth, N. J. Filed Dec. 3, 1913. Serial No. 804,467. (Cl. 196—26.)



1. The process of deblooming hydrocarbons and converting them into fatty acids and esters, which consists in subjecting them to an oxidising agent in the presence of ultra violet or active rays.

2. The process of treating hydrocarbons for deblooming and forming fatty acids and esters, which consists in subjecting them to an oxidizing agent in a heated condition and in the presence of ultra violet or active rays.

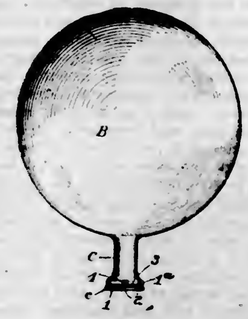
3. The process of treating hydrocarbons for deblooming and forming fatty acids and esters, which consists in subjecting them to an oxidizing agent in the presence of ultra violet or active rays and in the presence of a catalytic or contact agent.

4. The process of treating hydrocarbons for deblooming and forming fatty acids and esters, which consists in subjecting them to an oxidizing agent in a heated condition in the presence of ultra violet or active rays, and of a catalytic or contact agent such as finely divided or reduced metals, their salts or bases, porous, granular or absorbent material, or such materials carrying finely divided or reduced metals, their bases or salts.

5. The process of treating hydrocarbons for deblooming and forming fatty acids and esters, which consists in subjecting them to pressure and an oxidizing agent in the presence of ultra violet or active rays.

[Claims 6 to 11 not printed in the Gazette.]

1,158,206. TOY BALLOON. RICHARD GRIFFITH, Akron, Ohio, assignor to Miller Rubber Co., Akron, Ohio, a Corporation of Ohio. Filed Mar 10, 1915. Serial No. 13,403. (Cl. 46—37.)



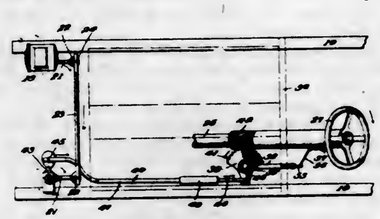
1. A toy balloon having a tubular neck or mouth-piece integral therewith, a disk member adapted to be removably inserted and retained in said neck and a self-closing valve carried by said member, substantially as described.

2. A toy balloon having a tubular neck or mouth-piece integral therewith, a metal disk member adapted to be removably inserted and retained in said neck and a flexible self-closing valve carried by said disk member, substantially as described.

3. A toy balloon having a tubular neck or mouth-piece integral therewith, a perforated disk formed of aluminum adapted to be inserted in said neck and a self-closing flap valve carried on the inner side of said disk, substantially as described.

4. A toy balloon having a tubular neck or mouth-piece integral therewith, a perforated metal disk having an inturned flange, said disk adapted to be inserted in the outer end of said neck, and a rubber disk flap valve secured to the inner side of said disk, substantially as described.

1,158,207. DIRIGIBLE HEADLIGHT. THOMAS R. HANSON, Tuscaloosa, Ala. Filed Jan. 4, 1915. Serial No. 459. (Cl. 240—62.)



1. A headlight operating mechanism adapted to be operatively connected to the steering mechanism of a vehicle and including a freely mounted lamp receiving post, means operatively engaging the steering post, and a lever connecting the said means with said lamp receiving post, said lever being formed in sections, and a sleeve carried by one of said sections and slidably receiving the adjacent terminal of the other section.

2. A headlight operating mechanism adapted to be operatively connected to the steering mechanism of a vehicle and including a freely mounted lamp receiving post, means operatively engaging the steering post, and a lever operatively connecting the said means with said lamp receiving post, said lever being formed in sections, a sleeve supported terminally of one of said sections and slidably receiving the adjacent terminal of the other section, said sleeve having an internal shoulder formed thereon, and a head formed on the adjacent terminal of said last mentioned section and disposed to selectively engage the adjacent terminal of the other section and said shoulder.

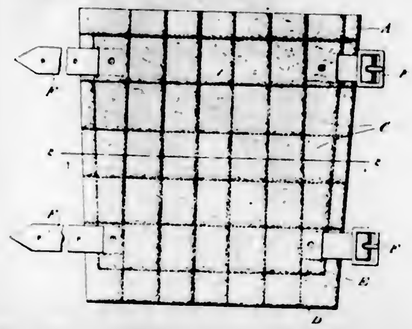
3. A headlight operating mechanism adapted to be operatively connected to the steering mechanism of a vehicle and including a rotatably mounted lamp receiving post, means operatively engaging the steering post, and a lever operatively connecting the said means with said lamp receiving post, said lever being formed in sections, and a sleeve carried by one of said sections disposed for engagement with the other section, said last mentioned section being freely connected with the sleeve.

4. A headlight operating mechanism adapted to be operatively connected to the steering mechanism of a vehicle and including a freely mounted lamp receiving post, means mounted adjacent the steering post and shiftable to operatively engage said post, means connecting the said first mentioned means with the lamp receiving post, and means for shifting said first mentioned means to engage the steering post.

5. A headlight operating mechanism adapted to be operatively connected with the steering mechanism of a vehicle and including a freely mounted lamp receiving post, means mounted eccentric to the steering post and shiftable to operatively engage the said steering post, means operatively connecting said means and the clamp receiving post, and means for shifting said first mentioned means.

[Claims 6 to 21 not printed in the Gazette.]

1,158,208. ATHLETIC GUARD. HENRY RIDGEWAY HART, Montclair, N. J. Filed July 3, 1915. Serial No. 37,989. (Cl. 2—197.)



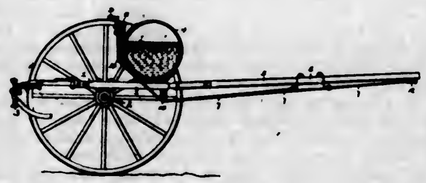
1. An athletic guard or protector comprising a pad of flexible material having incorporated therein a plurality of rigid sections spaced apart vertically and horizontally, substantially as described.

2. An athletic guard or protector comprising a pad of a plurality of layers of a flexible material, and a plurality of rectangular rigid sections fastened between them so as to permit flexibility of the pad in two directions, substantially as described.

3. An athletic guard or protector comprising a pad of a plurality of layers of a flexible material, a plurality of rigid sections fastened between them independently of each other and in alinement one with the other in a vertical and horizontal plane, so as to give flexibility in two directions, substantially as described.

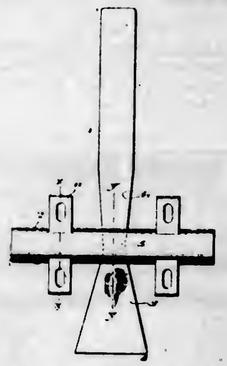
4. An athletic guard or protector comprising a pad of a plurality of layers of a flexible material, a plurality of rigid members fastened between them and in alinement one with the other in a vertical and horizontal plane and having vertical and horizontal securing means between them.

1,158,209. PLANT-SPRAYING MACHINE. LEWIS ALBERT HART, Binghamton, N. Y., assignor to Bateman Manufacturing Company, Grenloch, N. J., a Corporation of New Jersey. Filed Aug. 8, 1914. Serial No. 855,770. (Cl. 21—56.)



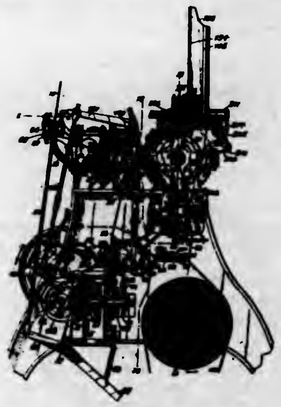
The combination of the frame of a plant spraying machine with the draft pole and a weight adjustable fore and aft along the same, a windlass and a rope wound thereon and having one end extending from one side of the windlass to the rear of the weight and the other end extending from the opposite side of the windlass around a sheave at the forward end of the pole and thence to the front of the weight.

1,158,210. SHOCK-ABSORBER. HARRY F. HARVEY, Austin, Tex. Filed July 28, 1914. Serial No. 853,651. (Cl. 21—105.)



In combination a member having an inclined face, a ball arranged to ride upon such inclined face, a cup, a plurality of balls interposed between the cup and first mentioned ball and a spring arranged to exert a pressure against the said cup.

1,158,211. MACHINE FOR MAKING BOXES. CARLOS HOLLY, Lockport, N. Y., assignor, by mesne assignments, to F. N. Burt Company, Limited, Toronto, Ontario, Canada, a Corporation of Ontario. Filed Apr. 24, 1909. Serial No. 492,029. (Cl. 93—39.)



1. A machine for making boxes having a head, a flange around the head and a binder connecting the head and flange comprising means for supplying a flange web, means for supplying a binder web and assembling the same with said flange web, means for successively severing strips from said flange web to form flanges for the boxes, means for successively severing strips from said binder web to form the binders for the boxes, and means adapted to cause movement of the severed strips so as to provide space for the reception of succeeding strips.

2. A machine for making boxes having a head, a flange around the head and a binder connecting the head and flange, comprising means for supplying a flange web, means for supplying a binder web and assembling the same with said flange web, means for successively severing strips from said flange web to form flanges for the boxes, means for successively severing strips from said binder web to form the binders for the boxes, and means for supplying the heads and assembling the same with said flanges and binders.

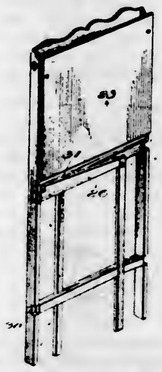
3. A machine for making boxes having a head, a flange around the head, and a binder adhesively connected with said head and flange, comprising means for supplying a flange web, means for supplying a binder web and adhesively assembling the same with said flange web, means for successively severing strips from said flange web to form the flanges for the boxes, means for successively severing strips from said binder web to form the binders for the boxes, and means adapted to cause movement of the severed strips so as to provide space for the reception of succeeding strips.

4. A machine for making boxes having a head, a flange around the head, and a binder adhesively connected with said head and flange, comprising means for supplying a flange web, means for supplying a binder web and adhesively assembling the same with said flange web, means for successively severing strips from said flange web to form the flanges for the boxes, means for successively severing strips from said binder web to form the binders for the boxes, and means for successively supplying the heads and assembling the same with said flanges and binders.

5. A machine for making boxes having a head, a flange around the head, and a binder adhesively connected with said head and flange, comprising means for supplying a flange web, means for supplying a binder web and adhesively assembling the same with said flange web, means for severing strips from the flange web after the latter has been assembled with said binder web to form a flange for a box, means for shifting the severed flange and the binder web attached thereto so that the flange is separated from the flange web and the binder web trails in rear of the flange, means for severing strips from the binder web at a distance in rear of the flange, and means adapted to cause further movement of the severed strips so as to provide space for the reception of succeeding strips.

[Claims 6 to 282 not printed in the Gazette.]

1,158,212. EDUCATIONAL-CHART DRAWING-BOARD AND WRITING-DESK. GEORGE A. HENDERSON, Fort Worth, Tex. Filed July 28, 1914. Serial No. 853,729. (Cl. 45—69.)



1. An article of furniture including a member to be supported including spaced uprights, a bar connecting the said uprights, the uprights being provided in their forward edges with notches located adjacent the ends of the said bar and in a horizontal plane with the bar, and foldable supporting legs for the said member each including a leg proper and an arm extending therefrom and pivoted to one of the uprights within the notch thereof, the said legs being foldable to lie against the said bar and in overlapped relation and the arms, when the legs are in supporting position, being adapted to have their pivoted ends engaged in the said notches in the uprights whereby to be engaged at their upper and lower edges at their said ends by the upper and lower walls of the notches.

2. In a device of the class described, a body portion having spaced vertical legs provided with notches, a lap-

board hinged to the body member, a pair of leg members for supporting the lap-board when the latter is in lowered position, each of the said leg members including a leg proper and an arm extending therefrom and pivoted to one of the first mentioned legs within the notch thereof, and a bar connecting the first mentioned legs substantially in a plane with the notches, the leg members being foldable to lie against the said bar and in overlapped relation and the arms when the leg members are in supporting position being adapted to have their pivoted ends engaged in the said notches.

1,158,213. HAT-FASTENER. AUGUST A. HERRING, Toledo, Ohio. Filed June 13, 1913. Serial No. 773,510. (Cl. 132—25.)



1. A securing device of the character described comprising an attaching member, a housing carried by said attaching member, a pin passing through said housing and attaching member and being rotatably mounted, an offset carried by said pin in said housing, a leaf spring mounted in said housing and engaging said offset to releasably hold said pin in an adjusted position.

2. A securing device of the character described comprising an attaching means and a housing, an engaging member passing through said housing and being rotatably mounted, an offset carried by said engaging member, and resilient means engaging said offset for yieldably holding said engaging member in an adjusted position.

3. A securing device of the character described including an attaching member, a housing carried by said attaching member, a pin passing through said housing and said attaching member and rotatably mounted therein, a head at one extremity of said pin, the opposite extremity of said pin being curved, an intermediate offset formed on said pin within said housing, and means within said housing to ormally engage said offset in yieldably maintaining said pin in either one of two adjusted positions.

1,158,214. COMBINED COTTON-HOLDER AND MASSAGE DEVICE. KERTY W. HESTER, Munfordville, Ky. Filed June 12, 1915. Serial No. 33,686. (Cl. 128—28.)



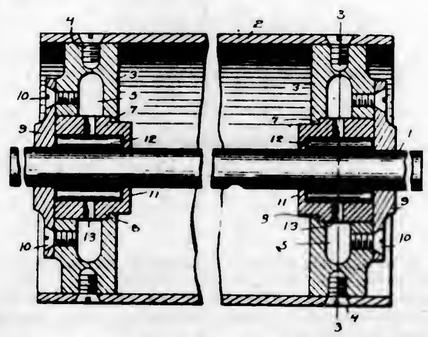
1. A holder for absorbent cotton, comprising a hollow frustum shaped finger cot open clear through, having an annular reinforcing bead at its inner or larger end and an outwardly projecting tab at its outer end.

2. A holder for absorbent cotton, comprising a hollow frustum shaped finger cot open clear through and provided with a massage portion projecting from its inner end.

3. A holder for absorbent cotton, comprising a hollow frustum shaped finger cot or thimble open at opposite ends and provided with a massage portion projecting from its inner end which is provided with a roughened or toothed surface on its outer side, has an open inner side, and is provided with straps connecting its opposite side edges.

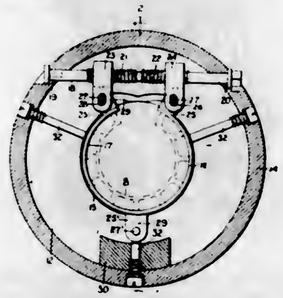
4. A holder for absorbent cotton, comprising a hollow frustum shaped finger cot or thimble open at opposite ends and which is provided with a massage device projecting from its inner end which is semi-circular in cross-section, tapers from its inner end outwardly, and is provided with flexible straps connecting its opposite side edges near its outer end with a longitudinal strap connected to the outer end of the device.

1,158,215. ROLLER-BEARING CURRENT-COLLECTOR. RUDOLPH E. HEWITT, Alameda, and WILLIS W. WHITMORE, Oakland, Cal. Filed Dec. 23, 1913. Serial No. 808,515. (Cl. 64—39.)



A current collector comprising a cylindrical shell, castings secured within the ends of said shell, said castings each having an annular oil pocket, bushings secured within said castings and provided with oil holes communicating with said oil pockets, a shaft extending through said bushings, rollers mounted within the bushings centrally in alinement with the oil holes, and bearing on said shafts, and end cap holding the rollers in place, said end castings each provided with an oil inlet opening and a closure therefor.

1,158,216. BAND-CHUCK. MOSES D. HEYMAN, New York, N. Y. Filed Mar. 18, 1915. Serial No. 15,284. (Cl. 29—144.)



1. In a device of the character set forth, the combination of a casing comprising a rear wall, a peripheral flange and a face plate parallel to the rear wall and secured to the flange, said face plate having an opening concentric with the casing, said face plate and rear wall having a pair of parallel grooves formed in their opposed inner faces, a flexible band constituting a gripping member adjacent said face plate opening and surrounding the axis of the casing, and means guided along said grooves to cause the ends of the band to approach or recede from each other.

2. In a device of the character set forth, the combination of a hollow casing, a flexible gripping band mounted within and concentric with the casing, said band being split and having lugs extending from the adjacent ends thereof, and means coöperating with the casing and acting upon said lugs to cause the band to expand or contract,

said means acting also to maintain the band in its concentric relation to the casing.

3. In a device of the character set forth, the combination of a circular casing, a split band arranged concentric coaxially with the casing, a bolt journaled in one side of the casing and having right and left threads thereon, a pair of blocks connected to the ends of the band and mounted upon the threaded portions of the bolt whereby upon rotation of the bolt the band will be contracted or expanded, and means coöperating with said band ends to maintain the band concentric with the casing irrespective of its circumferential adjustment.

4. In a device of the character set forth, the combination of a casing, a split band of flexible material constituting a gripping member arranged concentrically of the casing, a bolt journaled in the casing at one side of its center and in a direction transverse to its axis, said bolt having right and left threaded portions, a pair of blocks mounted upon said threaded portions of the bolt and movable thereby toward or from each other upon rotation of the bolt in the casing, said blocks having slots formed in their inner ends with the longer axes of the slots perpendicular to the direction of movement of the blocks, a pair of lugs connected to the ends of the band, pins extending through the lugs and through the block slots, and means acting positively upon the pins to cause the band to remain in its concentric relation to the casing irrespective of the changes in diameter of the band.

5. In a device of the character set forth, the combination of a hollow cylindrical casing, a flexible split gripping band arranged concentrically therein, means arranged within one side of the casing to increase or decrease the circumference of the band and maintain it in its concentric relation, and a counterbalance secured in the other side of the casing to counterpoise the weight of said adjusting means.

[Claim 6 not printed in the Gazette.]

1,158,217. MANUFACTURE OF ORGANIC SOLVENTS. HAROLD HIBBERT, Pittsburgh, Pa., assignor to Gulf Refining Company, Pittsburgh, Pa., a Corporation of Texas. Filed Dec. 5, 1914. Serial No. 875,723. (Cl. 23—24.)

1. In the manufacture of solvents, the process which comprises treating acetone oil with hydrogen in the presence of a catalyst to an extent sufficient to convert ketones into alcohols.

2. In the manufacture of solvents, the process which comprises treating acetone oil with hydrogen in the presence of a nickel-containing catalyst to an extent sufficient to convert ketones into alcohols.

3. In the manufacture of solvents, the process which comprises treating acetone oil with hydrogen in the presence of nickel oxid to an extent sufficient to convert ketones into alcohols.

4. In the manufacture of solvents, the process which comprises reducing ketones of acetone oil with hydrogen in the presence of a catalyst to an extent sufficient to produce alcohols, and thereafter acetylating the alcohols produced.

5. As a new composition of matter, a solvent liquid consisting mainly of a mixture of acetic esters, of secondary alcohols corresponding to the ketones of acetone oil, having an initial boiling point of about 100° C. and giving about 50 to 60 per cent. of distillate between 90 and 160° C., said liquid having a fruity, pleasant odor.

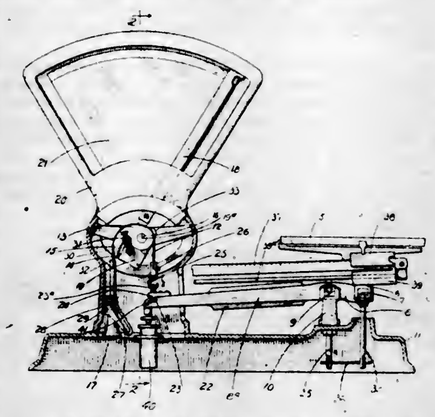
1,158,218. APPARATUS FOR PREVENTING AND REMOVING DEPOSIT OF MOISTURE ON WINDOWS, &c. CARL HOLZ, Fulham, England. Filed Oct. 29, 1912. Serial No. 728,513. (Cl. 137—80.)

1. In an apparatus for the purpose described herein, in which compressed air is used, a distributing nozzle having a straight shank and a flaring mouth portion comprising opposing walls, having curved edges spaced apart to provide an arcuate slot extending laterally from the axis of the shank to equal extents in both directions, the said edges being arranged parallel medially of said slot and diverging adjacent to the ends thereof.



2. In an apparatus for the purpose described herein, in which compressed fluid is used, a distributing nozzle having a straight shank and a laterally flaring mouth portion comprising longitudinally converging opposing walls having semi-elliptical edges spaced apart to provide an arcuate slot extending laterally from the axis of the shank to equal extents in both directions, the said edges diverging toward the ends of said slot.

1,158,219. COMPUTING-SCALE. JOSEPH HOPKINSON, Dayton, Ohio, assignor to The Computing Scale Company, Dayton, Ohio, a Corporation of Ohio. Filed Oct. 18, 1913. Serial No. 796,021. (Cl. 73—29.)



1. In a device of the class described, a main lever, a commodity supporting element supported on said lever at one side of its fulcrum, an equalizing lever having a curved surface, a weight, a guide for said weight, said guide not contacting with said weight when hanging vertically, a flexible member supporting said weight, said flexible member being attached to said equalizing lever and adapted to roll upon the curved surface thereof, a second flexible member connecting the opposite end of said equalizing lever with the end of said main lever opposite to said commodity supporting element, said main lever being weighted on the end opposite said supporting element, weight and value indicating means operated by said equalizing lever, and means for adjusting and holding said weight and value indicating means in different indicating relations to said commodity supporting element.

2. In a device of the class described, a main lever, a commodity supporting element supported on said lever at one side of its fulcrum, an equalizing lever having a curved surface, a weight, a flexible member supporting said weight, said flexible member being attached to said equalizing lever and adapted to roll upon the curved surface thereof, a second flexible member connecting the opposite end of said equalizing lever with the end of said main lever opposite to said commodity supporting element, both said flexible members pulling down on said equalizing lever, said main lever being weighted on the end opposite said supporting element, a base for said mechanism, a downwardly projecting arm rigid with said commodity support, and a link pivotally attached to said arm and to said base.

3. In a device of the class described, a main lever, a commodity supporting element supported on said lever at

one side of its fulcrum, an equalizing lever having a curved surface, a weight, a flexible member supporting said weight, said flexible member being attached to said equalizing lever and adapted to roll upon the curved surface thereof, a second flexible member connecting the opposite end of said equalizing lever with the end of said main lever opposite to said commodity supporting element, both said flexible members pulling down on said equalizing lever, said main lever being weighted on the end opposite said supporting element, weight and value indicating means operated by said equalizing lever, and a counterbalance for said indicating means.

4. In a device of the class described, a main lever, a commodity supporting element supported on said lever at one side of its fulcrum, an equalizing lever having a curved surface, a weight, a flexible member supporting said weight, said flexible member being attached to said equalizing lever and adapted to roll upon the curved surface thereof, a second flexible member connecting the opposite end of said equalizing lever with the end of said main lever opposite to said commodity supporting element, said main lever being weighted on the end opposite said supporting element, and weight and value indicating means operated by said equalizing lever and adjustable to different indicating relations to said commodity supporting element.

5. In combination, a main lever with an intermediate fulcrum, a commodity receiver on one end and a weight on the opposite end, a curved lever, a tape fastened thereto and wrapped on the curved portion thereof, a weight hung by said tape, and a connection from the weighted end of the main lever to the curved lever, said tape and said connection both pulling down on said curved lever, and both lying in the same plane perpendicular to the turning axis of the curved lever.

[Claims 6 and 7 not printed in the Gazette.]

1,158,220. TOP-ROLL SADDLE MECHANISM. LEWIS T. HOUGHTON, Worcester, Mass. Filed June 21, 1912. Serial No. 704,989. (Cl. 118—22.)



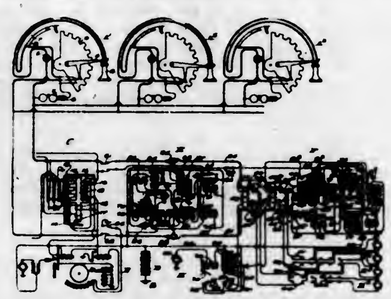
1. In a top roll saddle mechanism, the combination with a top roll, of a weighted lever hung therefrom, and a lever screw on which said lever is fulcrumed, said lever screw being formed of wire bent to present a lever-receiving eye having at its upper end a straight wear-resisting fulcrum portion of greater density and hardness than the body of the eye member and on which the lever fulcrums.

2. In the top roll saddle mechanism, the combination with a top roll saddle, of a weighted lever hung therefrom, a lever screw on which said lever is fulcrumed, said lever screw comprising a thimble screw-threaded into the roller beam, and an eye member having a shank swiveled in the thimble and provided with a head at its lower end, said head and the lower end of the thimble having inclined surfaces which engage each other whereby the thimble is frictionally held from being turned in the roller beam due to jar or vibration of the machine.

3. As an article of manufacture a lever screw for top roll saddle mechanism comprising an exteriorly screw-threaded thimble and an eye member constituting a fulcrum for the weighted lever, said eye member having a shank swiveled in said thimble and provided with a head at its lower end, said head and the lower end of the thimble having coöperating beveled surfaces.

4. In a top roll saddle mechanism, the combination with a top roll saddle, of a weighted lever therefor, a lever screw on which the weighted lever is fulcrumed, said lever screw comprising an exteriorly screw-threaded thimble sustained by the roller beam and an eye member having a shank extending axially through and swiveled in the thimble, and means operative when the lever is weighted to provide sufficient frictional engagement between the shank and thimble to prevent the thimble from becoming loosened in the roller beam due to jar or vibration of the machine when in use while permitting the shank to turn freely when the weight is removed from the lever.

1,158,221. PARTY-LINE TELEPHONE SYSTEM. HENRY HOVLAND, Lincoln, Nebr., assignor to Automatic Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 31, 1912. Serial No. 728,811. Serial No. 728,811. (Cl. 179—17.)



1. In a telephone system, a party-line, a ring-back apparatus for enabling one party to call another on the same line, means for connecting said line with said apparatus, a plurality of sources of ringing current of different characters, and means controlled by said ring-back apparatus for selecting two of said sources to operate the signals at the calling and called substations.

2. In a telephone system, a party-line, a ring-back apparatus for enabling one party to call another on the same line, means for connecting said line with said apparatus, a plurality of ringing generators for supplying ringing current of different characters, means controlled by the calling subscriber for operating said apparatus to select any two of said generators, and means for then alternately transmitting the current from said two selected generators over said line.

3. In a telephone system, a party-line, a plurality of ringing generators for supplying ringing current of different characters, a step-by-step apparatus for selecting any two of said generators, and means for alternately supplying current from said selected generators to said line.

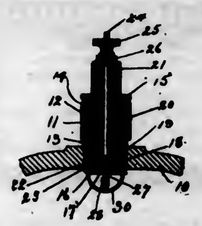
4. In a telephone system, a party-line, a plurality of ringing generators for supplying ringing current of different characters, a step-by-step ring-back apparatus, means for connecting said line with said apparatus, means controlled by the calling subscriber for operating said ring-back apparatus to select any two of said ringing generators, and means for then alternately connecting said selected ringing generators with the line.

5. In a telephone system, a party-line, a ring-back apparatus for enabling one party to call another on the same line, and means controlled by said ring-back apparatus for transmitting two kinds of ringing current back over said line to operate the calling signal at both the calling and called substations on said line.

[Claims 6 to 32 not printed in the Gazette.]

1,158,222. SPARK-PLUG. HAROLD M. HOWARD and JAMES A. MCHARDY, Providence, R. I. Filed Jan. 13, 1913. Serial No. 741,644. (Cl. 123—169.)

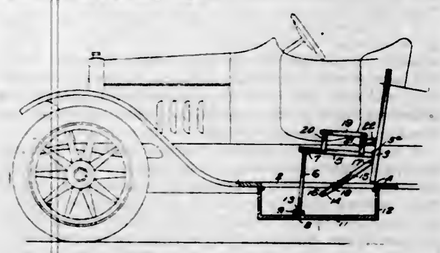
1. A spark plug comprising an outer shell having an inturned lip adjacent its inner end, insulating material in said shell formed of a relatively short inner member and a relatively long outer member, the inner member resting at its inner end against said lip and comprising a block completely filling the corresponding portion of the shell, the outer end of the inner member being concaved and the inner end of the outer member being correspondingly convexed, a member engaging said shell and clamping the outer insulating member against the inner member, and electrodes projecting from the inner end of the plug to form a spark gap.



2. A spark plug having a body portion closed at its inner end, an electrode projecting beyond the closed end, a grounded electrode formed of a looped wire and spaced from the end of the projecting electrode to form a spark gap, said projecting electrode being provided with a thimble adjustable toward and from said looped wire to regulate the spark gap, and means for locking said thimble in any adjusted position.

1,158,223. RUNNING-BOARD SEAT FOR AUTOMOBILES. WILLIAM F. HUSCHLE, Jr., New York, N. Y. Filed July 3, 1915. Serial No. 37,923. (Cl. 21—43.)

1. The combination of an automobile running board, with a collapsible auxiliary seat, the back of which forms a part of the running board.



2. The combination with an automobile running board provided with an opening, with an auxiliary seat foldable into and out of the opening and including a back normally closing the opening.

3. The combination with an automobile running board provided with an opening, with an auxiliary seat foldable into and out of the opening and including a back normally closing the opening, and a box carried by the under side of the running board and forming a housing for the auxiliary seat.

4. The combination of an automobile running board, with an auxiliary seat having a back normally forming part of the tread of the running board, and a seat bottom attached to the normal under side of the back.

5. The combination of an automobile running board, with an auxiliary saet having a back normally forming part of the tread of the running board, a seat bottom attached to the normal under side of the back, and a prop for the seat bottom.

[Claims 6 to 11 not printed in the Gazette.]

1,158,224. TAMPING ATTACHMENT. JOHN JACOBSON, Roberts, Mont. Filed Apr. 22, 1915. Serial No. 23,190. (Cl. 55—115.)

1. A tamping attachment comprising a body formed to receive an operating handle and arranged to extend on one side thereof, a detachable plate adapted to be disposed on the opposite side of the handle, and a clamping member surrounding the body and the plate and having interlocking connection with the latter whereby to hold said body on the handle.



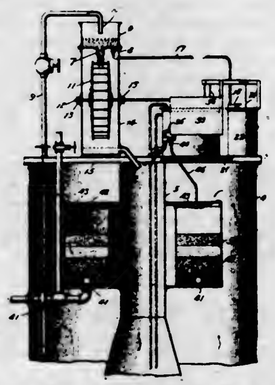
2. A tamping attachment comprising a body adapted to be disposed on a handle extremity and having an extension arranged at one side of the handle, a wedge plate disposed on the opposite side of the handle to the extension aforesaid, and clamping means carried by said plate and movable over the extension for clamping the attachment in position on the handle.

3. A tamping attachment comprising a body adapted to be disposed on a handle extremity and having a tapering extension arranged at one side of the handle, a coöperating member arranged at the other side of said handle, clamping means connected to the coöperating member, and retaining means for said clamping means.

4. A tamping attachment comprising a body adapted to be disposed on a handle extremity and to engage the same at one side, and clamping means for said body comprising a wedge plate engaging the handle at the other side and a ring movably carried by the plate and adapted to engage with the body for clamping the handle between the plate and the body.

5. As a new article of manufacture, a tamping attachment adapted to be secured to a handle and comprising a body member formed with a handle receiving socket and an extension of wedge-shape construction, and clamping means adapted to coact with said body and extension and consisting of a plate for coöperation with the handle at the opposite side to the body extension aforesaid, and a ring interlocked with said plate and movable over the extension, said plate having a lateral keeper for retaining the ring in position on the plate.

1,158,225. ART OF WATER FILTRATION. WILLIAM M. JEWELL, Chicago, Ill., assignor to Jewell Engineering Company, Chicago, Ill. Filed Nov. 6, 1912. Serial No. 729,744. (Cl. 210—1.)



1. The method of water-purification, which consists in mixing with the hard-water to be treated, chemicals to precipitate soluble impurities which produce cementitious precipitates, settling the water so treated in a settling chamber, passing the water from the settling chamber into a filter, and introducing into the water after the settling operation and before it enters the bed of the filter, a co-

agulant for neutralizing the attractive tendency of the more or less finely divided particles forming the filtering bed, to the cementitious precipitates in the water to thereby maintain in normally operative condition the said particles forming the filter bed against impairment by cementation.

2. The method of water-purification, which consists in mixing with the hard-water to be treated, chemicals to precipitate soluble impurities which produce cementitious precipitates, settling the water so treated in a settling chamber, passing the water from the settling chamber into a filter, and introducing into the water after the settling operation and before it enters the bed of the filter, material of such character as to produce a coating upon the cementitious precipitates and neutralize the attractive tendency of the more or less finely divided particles forming the filtering bed and the cementitious precipitates, one to the other, to thereby maintain in normally operative condition the more or less finely divided particles forming the filtering bed against impairment by cementation.

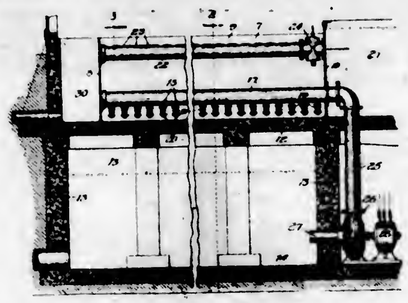
3. The method of water-purification, which consists in mixing with the hard-water to be treated, chemicals to precipitate soluble impurities which produce cementitious precipitates, settling the water so treated in a settling chamber, introducing into the water before the settling operation a coagulant for augmenting the settling of said precipitates, thereupon passing the water from the settling chamber into a filter, and introducing into the water after the settling operation and before it enters the bed of the filter, a coagulant for neutralizing the attractive tendency of the more or less finely divided particles forming the filtering bed, to the cementitious precipitates in the water, to thereby maintain in normally operative condition the said particles forming the filtering bed against impairment by cementation.

4. The method of water-purification, which consists in mixing with the hard-water to be treated, chemicals to precipitate soluble impurities which produce cementitious precipitates, settling the water so treated in a settling chamber, passing the water from the settling chamber into a filter, and introducing into the water, after the settling operation and before it enters the bed of the filter, a substance capable of chemically combining with the cementitious precipitates in the water and producing a coagulated precipitate having no affinity for the more or less finely divided particles forming the filter bed, to thereby maintain in normally operative condition the said particles forming the filtering bed against the impairment by cementation.

5. The method of water-purification, which consists in mixing with the hard-water to be treated, chemicals to precipitate soluble impurities which produce cementitious precipitates, settling the water so treated in a settling chamber, passing the water from the settling chamber into a filter, and introducing into the water after the settling operation and before it enters the bed of the filter and while the water to be filtered continues to flow into the filter, material of such character as to produce a coating upon the cementitious precipitates and neutralize the attractive tendency of the more or less finely divided particles forming the filtering bed, and the cementitious precipitates, one to the other, to thereby maintain in normal operative condition the said particles forming the filtering bed against impairment by cementation.

1,158,226. FILTER. WILLIAM M. JEWELL, Chicago, Ill., assignor to Jewell Engineering Company, Chicago, Ill., a Corporation of Illinois. Filed May 15, 1913. Serial No. 767,807. (Cl. 210—8.)

1. In a filtering apparatus the combination of a chamber containing a filtering-bed, means for supplying water to be filtered to said chamber, means for conducting the filtered water away from said bed, means for causing wash-water to pass through said bed in a direction opposite to the flow of water therethrough in the filtering operation through the same conducting means and overflow from said chamber, and means for preventing the incoming water to be filtered from rising in said chamber to the point of overflow of the wash-water therefrom.



2. In a filtering apparatus the combination of a chamber containing a filtering-bed, means for supplying water to be filtered to said chamber, means for conducting the filtered water away from said bed, means for causing wash-water to pass through said bed in a direction opposite to the flow of water therethrough in the filtering operation through the same conducting means and overflow from said chamber, and means operating automatically to close said chamber to the supply of incoming water to be filtered when the water in said chamber reaches a predetermined level below the point of overflow of the wash-water therefrom.

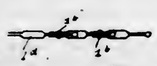
3. In a filtering apparatus, the combination of a chamber containing a filtering-bed, a conduit communicating with said chamber for conducting the filtered water therefrom, and fluid-forcing means in said conduit, for the purpose set forth permitting a free flow of water therethrough when idle.

4. In a filtering apparatus, the combination of a chamber containing a filtering-bed, a filtered-water receiving reservoir, a conduit leading from said filtering chamber into said filtered water reservoir for conducting the filtered water to the latter, and fluid-forcing means in said conduit, for the purpose set forth permitting a free flow of water therethrough when idle.

5. In a filtering apparatus, the combination of a chamber containing a filtering-bed, a conduit communicating with said chamber for conducting the filtered water therefrom, and fluid-forcing means in said conduit constructed and arranged to permit the filtered water to flow therethrough in one direction when said means are idle and to force filtered water through said conduit in the contrary direction when said means are operating.

[Claims 6 to 9 not printed in the Gazette.]

1,158,227. PNEUMATIC TIRE. HENRY O. JOHNSON, Virginia, Minn. Filed Nov. 27, 1914. Serial No. 874,118. (Cl. 152—18.)

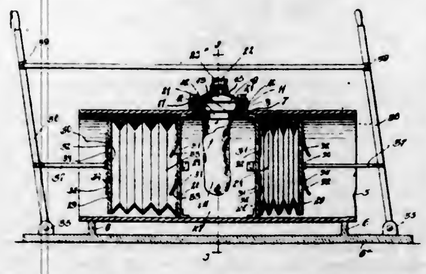


1. In a pneumatic tire, the combination of an interior air tube, an exterior body portion, a chain of looped metallic links, the open end of each loop extending above and below the closed end of the following link, said links being adapted to play longitudinally for a limited distance with respect to each other, and a casing inclosing said chain, said chain and casing being positioned between said air chamber and the outer face of said body portion and being adapted to encircle said air chamber longitudinally.

2. A pneumatic tire, having an air chamber therein extending longitudinally thereof, said tire embodying a chain of looped metallic links positioned therein between said air chamber and the outer face of said tire, each of said looped links having a closed end and an open end, said chain being adapted to encircle said chamber longitudinally, said links being adapted to play longitudinally for a limited distance with respect to each other, the branches of each of said links extending respectively above and below the closed end of the next following link in said chain.

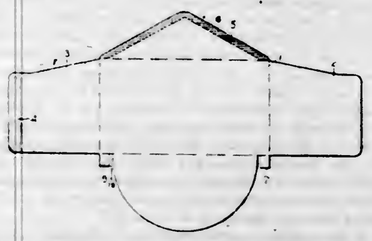
3. A pneumatic tire containing an air chamber extending longitudinally thereof, said tire embodying a series of looped metallic-tape bodies, said series being adapted to encircle said air chamber longitudinally thereof, each of said looped bodies being expanded slightly intermediate of its closed and open end, the branches of each of said bodies extending respectively above and below the closed end of the next following of said bodies, one of the branches of each of said bodies having a longitudinally directed slot formed therein, one branch of each of said bodies having an aperture formed therein, each of said bodies being connected with an adjoining one of said bodies by means extending through said aperture in one of them and through said slot in such adjoining one.

1,158,228. PUMPING MECHANISM. LAWRENCE S. KASKIE, Rock Valley, Iowa. Filed Feb. 14, 1911. Serial No. 608,543. (Cl. 230—2.)



In a vacuum cleaner, the combination with a tubular cylindrical member having a cylindrical opening in the wall thereof, of spaced partitions within the casing on opposite sides of said openings respectively, said partitions having formed therein, outwardly opening valves controlling the openings in the partitions, air exhausting bellows secured to the outer faces of the partitions respectively, a lever pivotally mounted adjacent each end of the casing, a link connecting each lever with the adjacent bellows, and a link mutually connecting said levers whereby the movement of one will produce a corresponding movement of the other.

1,158,229. ENVELOP. OSCAR KATZENBERGER, Chicago, Ill. Filed Apr. 27, 1915. Serial No. 24,215. (Cl. 229—76.)



In an envelop of the character described, a body, a pair of end flaps extending from said body adapted to be folded over on the body, adhesive on one of said end flaps for connecting the last mentioned end flap with the other end flap, a side flap having adhesive arranged thereon so that the same may be secured to said end flaps when closed, a locking tab adjacent each end of said body and extending therefrom, said locking tabs being arranged on the opposite side of the body to said side flap, a layer of adhesive arranged on each of said locking tabs on the face contacting with said end flaps whereby the locking tabs may be secured to said end flaps and provide a support for the contents of the envelop in order to prevent an accidental removal thereof, and an inspection flap arranged between said locking tabs, said inspection flap being spaced from said locking tabs in order to permit of an easy inspection and removal when inspecting the contents of the envelop.

1,158,230. LETTERING-PEN. EDWARD S. KEENE, Agricultural College, N. D. Filed Oct. 30, 1914. Serial No. 869,436. (Cl. 120—43.)



1. In a lettering pen, the combination with a reservoir pen holder, of a nib rotatably connected thereto, which has an angularly disposed point, and a valve-seat, and a valve carried by the pen-holder coöperating with the seat to regulate the feed regardless of the position of said point.

2. In a lettering pen, the combination with a reservoir pen-holder, of a nib rotatably connected thereto which has an angularly disposed point, and a concaved valve-seat, and a conical valve carried by the pen-holder fitting said seat to regulate the feed regardless of the position of said point.

3. In a lettering pen, the combination with a reservoir pen-holder, of a detachable nib having an angularly disposed point and a valve-seat, means on the pen-holder for securing the nib to the pen-holder with its point in any desired position in relation thereto, and a valve on the pen-holder coöperating with the valve-seat to regulate the feed regardless of the position of said point.

4. In a lettering pen, the combination with a reservoir pen-holder, of a nib rotatably connected thereto which has an angularly disposed point and a valve-seat, a spring-actuated bodily movable valve coöperating with said seat to regulate the feed regardless of the position of said point, and means disposed on the pen-holder in position to be operated by the fingers of the user when writing or lettering for controlling said valve.

5. In a lettering pen, the combination with a reservoir pen-holder, of a nib rotatably connected thereto which has an angularly disposed point and a valve-seat, a spring-actuated bodily movable valve coöperating with said seat to regulate the feed regardless of the position of said point, and means disposed on the pen-holder in position to be operated by the fingers of the user when writing or lettering adapted for controlling said valve, said means embodying an adjusting device for initially regulating the position of the valve.

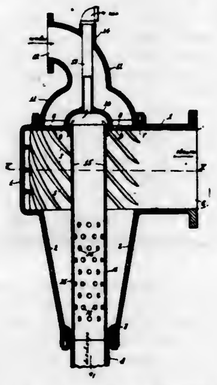
1,158,231. CONDENSER. CHARLES VOLNEY KERR, Wellsville, N. Y. Filed Oct. 9, 1913. Serial No. 794,267. (Cl. 261—2.)

1. A jet condenser comprising a volute casing having an upper water inlet and a lower water outlet, and a lateral exhaust steam inlet interposed between said inlet and outlet and communicating with and adapted to produce a cyclonic action within the casing, and a series of upwardly inclined spiral ribs on the inner surface of the casing corresponding to the steam inlet.

2. A jet condenser comprising a volute casing having an upper water inlet and a lateral exhaust steam inlet below said water inlet and communicating with and adapted to produce a cyclonic action within the casing, a water collecting chamber below and connected with said casing and provided with a discharge opening at its lower end.

3. A jet condenser comprising a volute casing having an upper water inlet and a lateral exhaust steam inlet below said water inlet and communicating with and adapted to produce a cyclonic action within the casing, a series of

upwardly inclined spiral ribs on the inner surface of the casing, a water collecting chamber below and connected with said casing and provided with a discharge opening at its lower end.



4. A jet condenser comprising a volute casing having an upper water inlet and a lateral exhaust steam inlet below said water inlet and communicating with and adapted to produce a cyclonic action within the casing, a water collecting chamber below and connecting with said casing and provided with a discharge opening at its lower end, and a vertical stand pipe within said casing and collecting chamber having its upper end communicating with the interior of the casing and its lower end connected with the discharge opening, and provided with means at its lower section to simultaneously drain the water from the collecting chamber and entrain the air in the stand pipe and convey the same to the discharge opening.

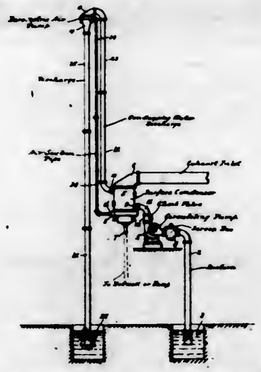
5. A jet condenser comprising a volute casing having an upper water inlet and a lateral exhaust steam inlet below said water inlet and communicating with and adapted to produce a cyclonic action within the casing, a series of upwardly inclined spiral ribs on the inner surface of the casing, a water collecting chamber below and connected with said casing and provided with a discharge opening at its lower end, and a vertical stand pipe within said casing and collecting chamber having its upper end communicating with the interior of the casing and its lower end connected with the discharge opening and provided with a series of openings at its lower section to simultaneously drain the water from the collecting chamber and entrain the air in the stand pipe and convey the same to the discharge opening.

[Claims 6 to 9 not printed in the Gazette.]

1,158,232. CONDENSING APPARATUS. CHARLES VOLNEY KERR, Wellsville, N. Y. Filed Oct. 29, 1913. Serial No. 797,960. (Cl. 257—28.)

1. A condensing apparatus comprising a surface condenser having a water inlet, a water outlet, an exhaust steam inlet, a condensed steam outlet and an air collecting chamber, an air ejecting pump casing having a water inlet connected above the barometric height with the water outlet of the condenser, a water outlet connected with a tail race, and an air exhausting chamber connected with the air collecting chamber of the condenser, a series of tubes within the air pump casing, said tubes being so arranged as to have their upper ends in communication with the water inlet of the pump casing and their lower ends discharging into the water outlet of the pump casing and in communication with the air exhausting chamber of the pump casing, and a circulating pump having its inlet connected with a cooling water supply and its discharge connected with the inlet of the surface condenser.

2. A condensing apparatus comprising a surface condenser having a water inlet, a water outlet, an exhaust steam inlet, a condensed steam outlet and an air collecting chamber, an air ejecting pump casing disposed at a higher level than the condenser having a water inlet connected above the barometric height with the water outlet of the condenser, a water outlet connected with a tail race, and an air exhausting chamber connected with the air collecting chamber of the condenser, a series of separated vertical tubes within the air pump casing, said tubes being so arranged as to have their upper ends in communication with the water inlet of the pump casing and their lower ends discharging into the water outlet of the pump casing and in communication with the air exhausting chamber of the pump casing, and a circulating pump having its inlet connected with a cooling water supply and its discharge connected with the inlet of the surface condenser.

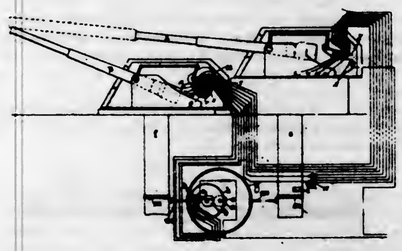


3. A condensing apparatus comprising a surface condenser having a lower water inlet and an upper water outlet, an upper steam inlet, a lower condensed steam outlet and a lower air collecting chamber, an air ejecting pump casing having a water inlet connected above the barometric height with the water outlet of the condenser, a water outlet connected with a tail race, and an air exhausting chamber connected with the air collecting chamber of the condenser, a series of separated vertical tubes of different lengths within the air pump casing, said tubes having their upper ends in a common plane and in communication with the water inlet of the pump casing and their lower ends terminating in different planes and arranged to form a substantial conical configuration and discharge into the water outlet of the pump casing and in communication with the air exhausting chamber of the pump casing, and a circulating pump having its inlet connected with a cooling water supply and its discharge connected with the inlet of the surface condenser.

4. A condensing system comprising a surface condenser having an air collecting chamber, a circulating pump connected with the condenser, an air ejector pump consisting of a hollow conical casing having an upper water inlet at the larger end of the casing connected with the condenser, and a water outlet at the smaller end, an annular air exhausting chamber at the larger end of the casing having an inlet opening connected with the air collecting chamber of the condenser, and a series of separated tubes within the conical casing and projecting through the air chamber, said tubes having their upper ends communicating with the upper water inlet and their lower ends discharging into the outlet of the casing.

5. A condensing system comprising a surface condenser having an air collecting chamber, a circulating pump connected with the condenser, an air ejector pump situated above the condenser and consisting of a hollow conical casing having an upper water inlet or opening at the larger end of the casing connected with the condenser, and a water outlet at the smaller end, an annular air exhausting chamber at the larger end of the casing having an inlet opening connected with the air collecting chamber of the condenser, a perforated plate interposed in the water inlet or opening of the pump, and a series of separated tubes within the conical casing and projecting through the air chamber, said tubes having their upper ends secured in the perforated plate and communicating with the upper water inlet and their lower ends discharging into the outlet of the casing.

1,158,233. AUTOMATIC POSITION-INDICATOR FOR GUNS. WILLIE DICKSON KILROY, Chiswick, England. Filed May 26, 1910. Serial No. 563,643. (Cl. 177—337.)



1. A system of danger and like indication including in combination a plurality of guns one capable of endangering another, representations to a reduced scale of the endangering area of the first gun and of the area of the part of the second gun capable of endangerment by the first gun, said representations comprising electrical contacts, an electric circuit including a signal, said contacts forming a switch in said circuit, said representations adapted to copy the training motion of said guns respectively and two independent switches included in said circuit, each of said switches adapted to be operated by the elevating motion of one of the guns, substantially as described.

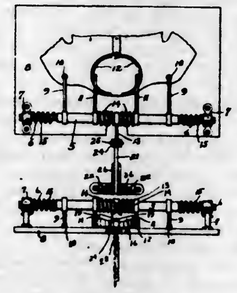
2. A system of danger or like indication including in combination a plurality of guns one capable of endangering another, model equivalents adapted to copy one motion of the said guns, an electric circuit in which said models operate as a switch, said circuit including danger indicating means and separately operated switches adapted to be moved by the other motion of said guns.

3. A system of danger and like indication including two guns, one capable of endangering the other, models of the respective guns arranged in proximity to each other, one of said models being provided with a contact strip representing the endangered area of the second gun and the other being provided with a similar contact strip representing the endangering area of the first gun, means adapted to move said models to copy the training motion of the respective guns, an electric circuit including said models, a danger indicating signal and movable contacts operated by the elevating motion of said guns, all included in said circuit, substantially as described.

1,158,234. SHIRT-FINISHING DEVICE FOR LAUNDRIES. CLAUDIUS C. KING, CHARLES B. LAMBERT, and JOSEPH H. GIBBLE, Sioux City, Iowa. Filed July 22, 1915. Serial No. 41,373. (Cl. 68—1.)

1. A device for holding shirts upon an ironing board comprising, a contractible element adapted to engage the interior of the neck-band of a shirt and movable toward and from the ironing-board, members movable toward and from the ironing-board and adapted to impinge the upper portions of the shirt, and means for moving said element and members and contracting said element.

2. A device for holding shirts upon an ironing board comprising a contractible element adapted to engage the interior of the neck-band of a shirt and held in yieldable engagement with the ironing-board, members adapted to impinge the upper portions of the shirt and held in yieldable engagement with the ironing-board, and means for raising said element and members and contracting said element.



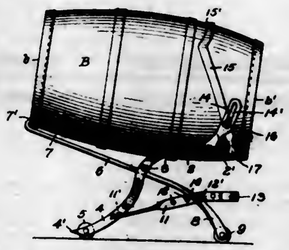
3. A device for holding shirts upon an ironing-board comprising a rock-shaft mounted upon the ironing-board, an expansible and contractible band carried thereby and adapted to engage the interior of the neck-band of a shirt, arms carried by the rock-shaft to impinge the shoulder portions of the shirt, means for actuating the rock-shaft to raise and lower the band and said members, and mechanism controlled by said means for expanding and contracting said band.

4. A device for holding shirts upon an ironing-board comprising a rock-shaft mounted upon the ironing-board, an expansible and contractible band carried thereby and adapted to engage the interior of the neck-band of a shirt, arms carried by the rock-shaft to impinge the shoulder portions of the shirt, and adjustable toward and from each other, means for actuating the rock-shaft to raise and lower the band and said members, and mechanism controlled by said means for expanding and contracting said band.

5. A device for holding shirts upon an ironing-board comprising a suitable support, a horizontal shaft mounted rotatably thereon, companion arms slidably carried by the shaft and yieldable toward each other, an open band adapted to be inclosed by the neck-band of a shirt, said arms being secured to opposite sides of the band, arms carried by said shaft to engage the upper portions of the shirt, means for holding the band and said latter arms in yieldable engagement with the ironing-board, means for raising the band and said latter arms from the ironing-board, and mechanism controlled by said latter means for moving said first arms toward each other.

[Claim 6 not printed in the Gazette.]

1,158,235. BARREL-JACK. ROBERT M. KINNARD, Kittanning, Pa., assignor of one-third to James Y. Bowser and John S. Frederick, Kittanning, Pa. Filed Mar. 4, 1915. Serial No. 11,993. (Cl. 248—17.)



1. A barrel jack comprising a frame having a pair of supporting legs extending toward one end of the supported barrel and other floor-engaging supporting means extending toward the opposite end of the barrel, means for

securing the frame to a barrel when the latter is resting on its side and with one of the legs of said pair adapted to engage the floor and coöperate with the barrel chine for turning the barrel into inclined upright position with said pair of legs resting on the floor and coöperating with the barrel chine in supporting the barrel in inclined position, said pair of legs constituting a fulcrum upon which the frame is adapted to be turned into full upright barrel-supporting position.

2. A barrel jack comprising a frame having upwardly extending cradle-forming arms and a pair of depending legs rigid with said arms, other floor-engaging means secured to the cradle-forming arms and adapted to cooperate with said legs in forming a support for sustaining a barrel with its axis substantially horizontal, the frame having a support adapted to engage one end of the barrel, and means for holding the barrel against longitudinal movement in the cradle-forming arms.

3. A barrel jack comprising a frame having upwardly extending cradle-forming arms and a pair of depending legs rigid with said arms, other floor-engaging means secured to the cradle-forming arms and adapted to cooperate with said legs in forming a support for sustaining a barrel with its axis substantially horizontal, a device extending from the cradle-forming arms to one end of the barrel and adapted to engage the latter for holding the barrel against longitudinal movement in one direction, and means for securing the cradle-forming arms to the barrel for holding the latter against longitudinal movement in the opposite direction.

4. A barrel jack comprising a frame having upwardly extending cradle-forming arms and a pair of depending legs rigid with said arms, other floor-engaging means secured to the cradle-forming arms and adapted to cooperate with said legs in forming a support for sustaining a barrel with its axis substantially horizontal, a device extending from the cradle-forming arms and adapted to engage one end of the barrel, and a band extending across the upper portion of the barrel with the opposite ends of the band adjustably secured to the cradle-forming arms.

5. A barrel jack comprising a frame having upwardly extending cradle-forming arms and a pair of depending legs rigid with said arms, other floor-engaging means secured to the cradle-forming arms and adapted to cooperate with said legs in forming a support for sustaining a barrel with its axis substantially horizontal, a support extending from the cradle-forming arms and adapted to engage one end of the barrel, a barrel embracing band, and means securing the opposite ends of said band to the opposite cradle-forming arms with said means operating to increase the hold of the band on the barrel upon movement of the barrel in direction away from its end support.

[Claims 6 to 8 not printed in the Gazette.]

1,158,236. CONCRETE-MIXER. JOHN F. KLANN, Los Angeles, Cal. Filed Nov. 11, 1913. Serial No. 800,242. (Cl. 83—73.)

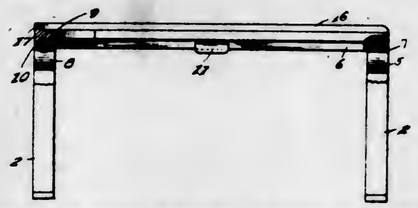


1. In combination, a mixing receptacle provided with an open end, a pair of annular flanges located intermediate the ends of the receptacle and surrounding said receptacle, a pair of grooved tracks along which said flanges are adapted to roll, means for rotating said receptacle to cause the receptacle to travel along said tracks and to mix its contents, one of said flanges being adapted to turn in its track to enable the receptacle to be tilted to dump its contents through its open end.

2. In combination, a mixing receptacle provided with an open end, a pair of annular flanges located intermediate the ends of the receptacle and surrounding the receptacle, a pair of tracks along which said flanges are adapted to roll, a sprocket on said receptacle, a chain engaging said sprocket, means for driving said chain to enable the chain and sprocket to rotate said receptacle to cause the receptacle to travel along said tracks, and to mix its contents, one of said flanges adapted to turn in its track to enable the receptacle to be tilted to dump its contents through its open end.

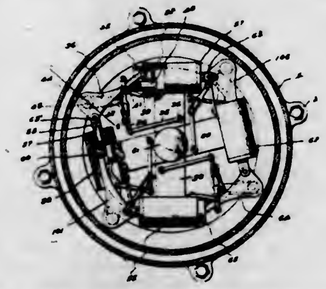
3. In combination, a track, sprockets at the ends of said track, an endless sprocket chain extending along the track and rove around said sprockets, a mixing receptacle tiltably mounted to roll on the track and having means engaging the sprocket chain, and means to turn one of the sprockets to thereby roll said receptacle along the track.

1,158,237. STAND FOR GAS-IRONS, &c. WILLIAM KLENNER, Baltimore, Md. Filed Apr. 28, 1915. Serial No. 24,515. (Cl. 68—27.)



A sad iron stand comprising a perforated top provided with an upper extending marginal flange upon one side and end, supporting legs projecting from each corner, said legs being provided at their inner faces with inwardly projecting alined supporting lugs having horizontal upper faces forming a support for a sheet of asbestos or similar material, the space formed by said lugs or one set of legs being open to enable the sheet of asbestos to be introduced between the flange and the table top, and the space on the other set being closed to form a stop, L-shaped flanges extending downwardly and inwardly from the side of the table top, and means to secure the sheet of material to the under side of the table top.

1,158,238. ROTARY ENGINE. IRVIN C. KNOWLES, Baltimore, Md. Filed Jan. 19, 1915. Serial No. 3,092. (Cl. 121—64.)



1. In a rotary engine, a rotor embodying a rim having a facial annular channel, a connecting rod, a pair of cylinders carried by said connecting rod and disposed in opposed relation to each other, pistons slidably mounted within said cylinders, means for connecting said pistons to said rim upon outward movement of said pistons within said cylinders, said means automatically releasing the connection between said pistons and said rim upon the inward movement of said pistons within said cylinders.

2. In a rotary engine, a rotor, a plurality of cylinders, pistons slidably mounted within said cylinders, said pistons mounted for outward movement within said cylinders upon the inlet of fuel within the cylinders, said cylinders mounted for movement over the pistons after the outward movement of said pistons.

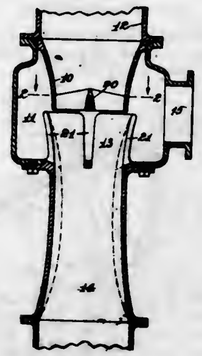
3. In a rotary engine, a rotor, a plurality of cylinders, pistons slidably mounted within said cylinders, said pistons mounted for outward movement within said cylinders upon the inlet of fuel within the cylinders, said cylinders mounted for movement over the pistons after the outward movement of said pistons, and means for preventing reverse movement of the cylinders upon the inlet of fuel therein.

4. In a rotary engine, a cylinder, a piston slidably mounted within said cylinder, a second piston slidably carried by said first named piston, valves for controlling the inlet and exhaust of fuel into and out of said cylinders, and means connected to said second named piston for automatically operating said valve.

5. In a rotary engine, a central shaft, a connecting rod carried by said shaft for synchronous movement therewith, a pair of cylinders carried by the outer ends of said connecting rod and being disposed in opposite relation to each other, pistons carried by said cylinders, valves carried by said connecting rod for controlling the inlet and exhaust of fuel into and out of said cylinders, said connecting rods being provided with channels extending therethrough and communicating with said valves, said shaft being provided with longitudinally extending bores, said bores communicating with said openings for permitting of the inlet and exhaust of fuel through said valves and into said cylinders.

[Claims 6 to 20 not printed in the Gazette.]

1,158,239. JET APPARATUS. ERNST KOERTING, Pegli, near Genoa, Italy, assignor to Schutte & Koerting Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 15, 1912. Serial No. 683,949. (Cl. 230—13.)



1. A high pressure liquid-jet apparatus, comprising in combination a combining tube and a pressure cone leading therefrom, and a nozzle formed to discharge a high-velocity impelling jet of liquid into the combining tube, said nozzle having jet openers to form gas-receiving fissures in the jet opening inward from the outer surface of the jet and being a sufficient distance apart to avoid destroying the solidity of the intervening portions of the jet, and the combining tube and pressure cone being formed to permit unimpeded passage of the fissured jet.

2. A high pressure liquid-jet apparatus, comprising in combination a combining tube and a pressure cone leading therefrom, and a nozzle formed to discharge a high-velocity impelling jet of liquid into the combining tube, said nozzle having jet openers to form gas-receiving fissures in the jet opening inward from the outer surface of the jet and being a sufficient distance apart to avoid destroying the solidity of the intervening portions of the jet, and means for directing the gas into such fissures, the combining tube and pressure cone being formed to permit unimpeded passage of the fissured jet.

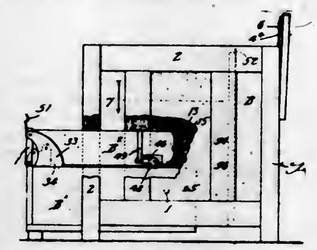
3. A high pressure liquid-jet apparatus, comprising in combination a combining tube and a pressure cone leading therefrom, and a nozzle formed to discharge a high-velocity impelling jet of liquid into the combining tube, said nozzle having jet openers to form gas-receiving fissures in the jet opening inward from the outer surface of the jet and being a sufficient distance apart to avoid destroying the solidity of the intervening portions of the jet, and means for admitting the gas to said fissures beyond the entrance end of the combining tube, the combining tube and pressure cone being formed to permit unimpeded passage of the fissured jet.

4. A high pressure liquid-jet apparatus comprising in combination a jet nozzle, a combining tube, a pressure cone, and means for opening the jet to form gas-receiving fissures therein opening inward from the outer surface of the jet, said parts being formed and arranged to cause the fissured jet to flow through the combining tube without substantial loss of forward velocity and propelling energy, and the combining tube being formed with openings for admitting the gas to the fissures in the jet.

5. A high pressure liquid-jet apparatus comprising in combination a combining tube, a pressure cone, and a jet nozzle provided with jet openers of inwardly tapering form and ending short of the axial line of the nozzle for forming gas-receiving fissures in the jet, said parts being formed and arranged to cause the fissured jet to flow through the combining tube without substantial loss of forward velocity and propelling energy.

[Claims 6 and 7 not printed in the Gazette.]

1,158,240. TABLE-BED, &c. PETER E. KROEHLER, Naperville, Ill. Filed Oct. 18, 1913. Serial No. 795,875. (Cl. 5—17.)



1. The combination with a table having a movable top, of a bed-housing disposed beneath said top and having a downwardly swinging section, and a folding bed carried by said swinging section and comprising a plurality of foldably related bed-sections.

2. The combination with a table having a movable top, of a bed-housing disposed beneath said top and having a swinging section connected at its lower portion to the ends of the table frame, and a folding bed carried by said swinging section and comprising a plurality of foldably related bed-sections.

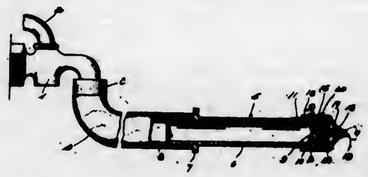
3. The combination with a table having a movable top, of a bed-housing disposed beneath said top and having a swinging section connected at its lower portion to the ends of the table frame, and a folding bed carried by said swinging section and comprising a plurality of main sections and spacing sections uniting them, said sections being united by pivots extending longitudinally with relation to the table.

4. The combination with a table having a movable top, of a bed-housing disposed beneath said top, comprising a fixed vertical section and a downwardly swinging section, and a folding bed carried by said swinging section and comprising a plurality of foldably related bed-sections.

5. The combination with a table, of a bed-housing disposed beneath the table-top, comprising a vertical fixed rear panel, and a downwardly swinging box-form housing-section whose bottom affords a front panel, and a folding bed carried by said swinging section and comprising a plurality of foldably related bed-sections.

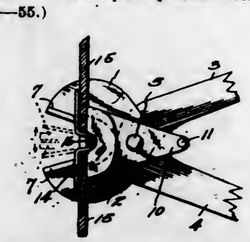
[Claims 6 to 15 not printed in the Gazette.]

1,158,241. CLOTHES-SPRAY. CHARLES KRUSOFF, Detroit, Mich. Filed Oct. 28, 1914. Serial No. 869,103. (Cl. 137—82.)



A clothes spray comprising a hollow cylindrical body, a flange formed around said body adjacent one end, the opposite end being screwthreaded, a closure plate formed at the screwthreaded end of said body, said closure plate being provided with arcuate apertures therein, and a stem formed centrally and disposed between the apertures and extending outwardly from the front face of said plate, a cap interiorly screw-threaded and having its front end tapered to conform to the end of the stem and movably secured to the screwthreaded end of the body, the tapered portion being provided with a central aperture arranged to coöperate with and receive the end of the stem to control the flow of liquid through the body.

1,158,242. WIRE-FENCE TOOL. WILLIAM KYLLONEN, Oakes, N. D. Filed Apr. 24, 1915. Serial No. 23,667. (Cl. 140—55.)



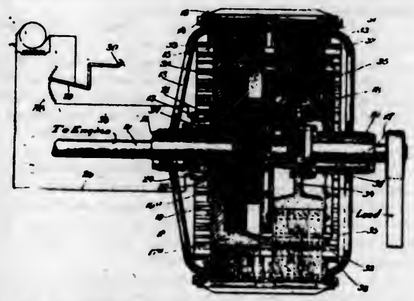
1. A tool comprising crossed handles pivoted together and each formed with a jaw, integral heads on the jaws, and an anvil having a wide operating face and pivoted on the pivot of the handles, and said heads adapted to co-act with and swing out over said face.

2. A tool comprising crossed handles pivoted together and each formed with a jaw, integral heads on the jaws turned at right angles thereto, and an anvil pivoted on the pivot of the handles formed with a curved face to co-act with said heads.

1,158,243. TRANSMISSION APPARATUS. ARTHUR B. LAMB, South Bethlehem, and EDWARD E. ROSS, Philadelphia, Pa. Filed May 20, 1909, Serial No. 497,238. Renewed June 15, 1915. Serial No. 34,316. (Cl. 172—239.)

1. In a transmission apparatus the combination of a driving shaft, an alternating current rotor mounted thereon, a driven shaft, a squirrel cage armature mounted thereon, and stators for said parts having armature conductors, each of which passes through the cores of both stators.

2. In a transmission apparatus, the combination of a driving shaft, an alternating current generator connected therewith, a driven shaft, and an induction motor connected with said driven shaft, the armature conductors of the generator being continuous with the primary conductors of the motor.



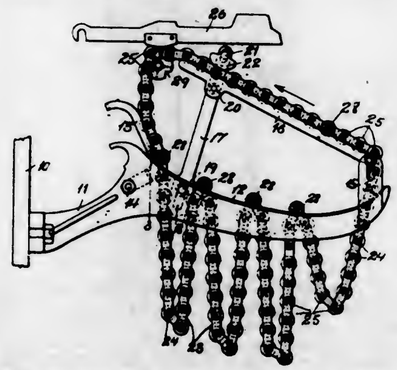
3. In a transmission apparatus, the combination of a driving shaft, an alternating current generator connected therewith, a driven shaft, an induction motor connected with said driven shaft, the armature conductors of the generator being continuous with the primary conductors of the motor, and means for increasing the impedance of the rotor windings of the motor when required.

4. In a transmission apparatus, the combination of a prime mover, a load to be driven, and electro-magnetic connecting mechanism consisting of a generator and a motor having separate stator cores, the stator windings of the two being continuous with each other.

5. In a transmission apparatus, the combination of a prime mover, a part to be driven, and a pair of electro-magnetic means, respectively connected to said prime mover and part, the stator windings of which means constitute a single series of short-circuited conductors or squirrel cages.

[Claims 6 to 11 not printed in the Gazette.]

1,158,244. PATTERN-CHAIN RACK. LOUIS H. LANDRY, Uxbridge, Mass. Filed Aug. 24, 1912. Serial No. 716,836. (Cl. 139—42.)



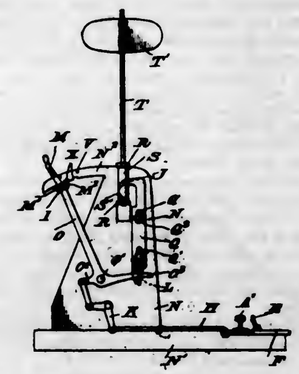
1. A loom having a pattern chain, a pattern chain cylinder, means located above said cylinder and operable by said pattern chain, and a supporting rack for said chain comprising upper and lower tracks, the lower tracks being separated by a space greater than the space between the upper tracks, the upper tracks extending into close proximity to said cylinder in position to deliver the chain onto the cylinder.

2. A loom having a pattern chain, a pattern chain cylinder, means located above said cylinder and operable by said pattern chain, and a supporting rack for said chain comprising upper and lower tracks, the lower tracks being rigidly connected with the frame of the loom and being separated by a space greater than the space between the upper tracks, the upper tracks being adjustable relatively to the lower tracks and extending into close proximity to the cylinder in position to deliver the chain onto the cylinder.

1,158,245. PROCESS OF TREATING FLAX-STRAW. JAMES E. LAPPEN, Winona, Minn., assignor to Union Fibre Company, Winona, Minn., a Corporation. Filed June 30, 1910. Serial No. 569,787. (Cl. 92—4.)

The process of treating flax straw for the manufacture of felted heat insulating sheets which consists in immersing the whole flax straw, previously untreated, in a degumming solution, circulating the straw freely in the solution and subjecting the same while immersed repeatedly to a beating and hackling action, whereby the breakage of the fiber is prevented and the degumming facilitated, the shives, fiber, and incrustive matter being separated and the fiber and a portion of the shives being commingled in one operation.

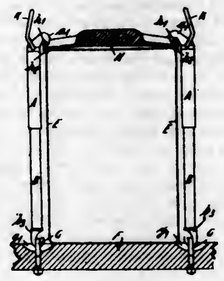
1,158,246. LEVER MECHANISM FOR SWITCHES. JOHN GLEATON LAVENDER and GRIFFIN NICKELS, Columbia, S. C. Filed June 20, 1914. Serial No. 846,341. (Cl. 74—39.)



A lever and standard upon which the same is pivotally mounted, said standard having a laterally extending arm notched upon its under edge, the upper end of the lever terminating below and adapted to move adjacent to the notched edge of the arm, a handle pivoted to the upper end of the lever and having an anchor-shaped end forming pawls and adapted to engage one or the other of said notches to hold the lever in an adjusted position, the shank portion of the handle having an offset and a pin passing through an aperture in said arm and adapted to hold the handle and lever in an adjusted position when the handle is at an angle to the arm of the lever to which it is pivoted.

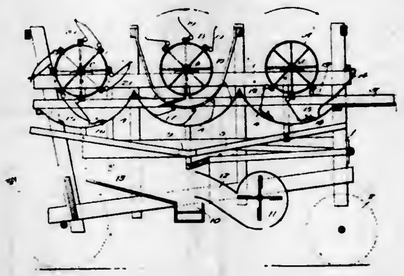
1,158,247. DEVICE FOR SECURING PETROL-CANS AND THE LIKE TO MOTOR-CARS. HJALMAR LINDBLOM, Liverpool, England. Filed Nov. 14, 1911. Serial No. 660,246. (Cl. 224—29.)

In a device for securing petrol cans in position on a platform, in combination; a plurality of gripping means, each comprising two tubular members, one telescoping within the other, the short member being provided with a hook projecting laterally and the other member being provided with a hook adapted to be fixed to the platform, a stem attached to the outer tube, a spiral spring housed within the inner tube and threaded on said stem and initially compressed between the end of the inner tube and a head on the said stem; and a bridge piece adapted to fit



over the can top and provided with ledges to take the laterally projecting hooks of the several gripping means.

1,158,248. PEANUT-THRESHING MACHINE. CARL R. LIVERMON, Roxobel, N. C. Filed Mar. 17, 1914. Serial No. 825,268. (Cl. 130—30.)



1. In a peanut threshing device, a frame, a rotary drum mounted on said frame, a series of spring arms carried by said drum, certain of said spring arms intermeshing with other of said arms and the ends of the intermeshing arms being bent in opposite directions, a screen disposed underneath the drum and concentric therewith, and a series of spring teeth disposed above said screen and having upwardly extending ends.

2. In a peanut threshing device, a frame, a rotary drum mounted on said frame, a series of spring arms carried by said drum, the ends of said spring arms being bent in the direction of rotation of the drum and a second series of spring arms, the arms of the second series alternating with the arms of the first series, and the ends of the arms of the second series being bent in an opposite direction to that of the first series.

3. In a peanut threshing device, a frame, a rotary drum mounted on said frame, a series of spring arms carried by said drum, the ends of said spring arms being bent in the direction of rotation of the drum, and a second series of spring arms, the arms of the second series alternating with the arms of the first series and the ends of the arms of the second series being bent in an opposite direction to that of the first series, and being arranged to intermesh with the ends of the arms of the first series.

4. In a peanut threshing device, a frame, a rotary drum mounted on said frame, a series of spring arms carried by said drum, the ends of said spring arms being bent in the direction of rotation of the drum, and a second series of spring arms, the arms of the second series alternating with the arms of the first series and the ends of the arms of the second series being bent in an opposite direction to that of the first series and being arranged to intermesh with the ends of the arms of the first series, a screen disposed underneath the drum and concentric therewith, and a se-

ries of spring teeth disposed above said screen and having upwardly extending ends adapted to pass between the teeth of the intermeshing spring arms.

5. In a peanut threshing device, a frame, a rotary drum mounted on said frame, a series of spring arms carried by said drum, the ends of said spring arms being bent in the direction of rotation of the drum, and a second series of spring arms, the arms of the second series alternating with the arms of the first series and the ends of the arms of the second series being bent in an opposite direction to that of the first series and being arranged to intermesh with the ends of the arms of the first series, a screen disposed underneath the drum and concentric therewith, a series of spring teeth disposed above said screen and having upwardly extending ends adapted to pass between the teeth of the intermeshing spring arms, certain of the upwardly extending ends of the spring teeth being disposed in advance of other of the upwardly extending ends.

1,158,249. CLUSTER INCANDESCENT LAMP. HOWARD LYON, Gloucester City, N. J., assignor to Welsbach Light Company, Gloucester City, N. J., a Corporation of New Jersey. Filed May 6, 1914. Serial No. 836,665. (Cl. 67—94.)



1. A vertical cluster burner for inverted incandescent lamps, having a body portion and a plurality of laterally and downwardly extending burner arms, said burner arms each having a gas and air passage extending therethrough, means for securing a mantle to the lower end of each burner arm, and a skirt surrounding the body portion between the burner arms having an annular flange below the burner arms; substantially as described.

2. A cluster burner for inverted incandescent lamps, comprising a manifold having a plurality of arms extending laterally and downwardly, a burner tip connected to the lower end of each arm, each of said arms having a tapering gas and air passage extending therethrough and decreasing in diameter from the manifold to the upper ends of the burner tips, and a downwardly extending mixing chamber connected to the center of the manifold; substantially as described.

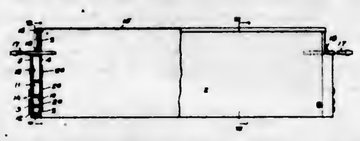
3. A cluster burner for inverted incandescent lamps, comprising a manifold having a plurality of arms extending laterally and downwardly, a burner tip connected to the lower end of each arm, each of said arms having a tapering gas and air passage extending therethrough and decreasing in diameter from the manifold to the upper ends of the burner tips, and a downwardly extending mixing chamber connected to the center of the manifold, said mixing chamber gradually decreasing in size and then gradually increasing from the manifold toward the lower end thereof; substantially as described.

4. A cluster burner for inverted incandescent lamps, comprising a central manifold having a plurality of arms extending outwardly and downwardly, each of said arms containing a passage for the mixture of gradually decreasing area toward the burner tip, and a downwardly extending mixing chamber connected to the manifold between the burner arms, substantially as described.

5. A cluster burner for inverted incandescent lamps, comprising a manifold having a plurality of separate outwardly and downwardly extending curved burner arms connected laterally into the sides of the mixing chamber, each of said arms having a tapeing passage for the mixture which decreases gradually from the manifold toward the burner tip, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,158,250. GAME APPARATUS. EDWARD W. MCCARROLL, Pittsburgh, Pa. Filed Mar. 9, 1915. Serial No. 13,143. (Cl. 46—59.)



1. A shooting apparatus, comprising a box having side and end walls, each end wall being provided with a plurality of holes of one size and with a plurality of holes of another size, a plurality of downwardly-extending passageways secured to the outside of each end portion, each of said passageways communicating with the holes of one size through one end, and an outlet for each passageway.

2. A shooting apparatus, comprising a box having oppositely disposed side and end walls, hinged at their vertical edges, a removable screen cover having an inset rim adapted to receive the upper edges of the box walls and to reinforce such walls, each end portion being provided with a plurality of holes of different sizes, and receptacles at the rear of the ends adapted to receive objects projected through the holes therein.

3. A shooting apparatus, comprising a box having oppositely disposed side and end walls and a cover, the upper part of each end portion being made of transparent material and the lower part being provided with a plurality of holes of different sizes, a shooting device projecting through each end portion, and receptacles at the rear of the ends adapted to receive objects projected through the holes therein.

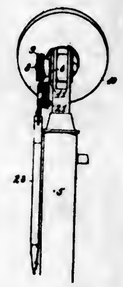
4. A shooting apparatus, comprising a box having oppositely disposed side and end walls hinged at their vertical edges, a removable screen cover having an inset rim adapted to receive the upper edges of the box walls and to thereby reinforce such walls, the upper part of each end portion being made of transparent material and the lower part being provided with a plurality of holes of one size and with a plurality of holes of another size, a plurality of downwardly-extending passageways secured to the outside of each end portion, each of said passageways communicating with the holes of one size through one end, and an outlet for each passageway.

1,158,251. PENCIL-HOLDER. WALTER MCDOUGALL, New York, N. Y. Filed Dec. 5, 1913. Serial No. 804,877. (Cl. 24—201.)

1. The combination with a plate detachably secured to a support, said plate being formed with an offset portion provided with openings, of an automatic holder the casing of which is provided with lugs extending through said openings in said plate, and with a pin for detachably securing said holder to said plate, and means provided on said plate and bearing against said pin for exerting a tension on the latter, substantially as described.

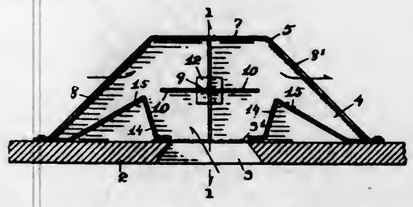
2. A device of the class described comprising an apertured plate, an automatic holder including a casing, lugs carried by said casing projecting through said plate apertures, a pin engaging said lugs, and means provided on said plate and bearing against said pin for exerting a tension on the latter.

3. A device of the character described comprising a plate provided with spaced apertures, an automatic holder provided with spaced lugs adapted to register with and project through said plate, and a pin movably secured to one of said lugs and adapted to engage the protruding end of the remote lug, said pin adapted to detachably secure said automatic holder to said plate.



4. In combination, an apertured plate, a member including a casing, a safety pin carried by said casing and including spaced outstanding lugs with a pin pivotally secured to one of said lugs and adapted to engage the remote lug, said lugs adapted to register and fit within said plate apertures, said pin adapted to rotate into alinement with its supporting lug for the detachment of said casing from said plate, said pin adapted to bear against said plate and lock said casing thereto.

1,158,252. WINDOW-VENTILATOR. MORTIMER MCKINZIE, Brooklyn, N. Y., assignor to Wilfrid Northcroft, New York, N. Y. Filed Nov. 7, 1914. Serial No. 870,870. (Cl. 98—22.)

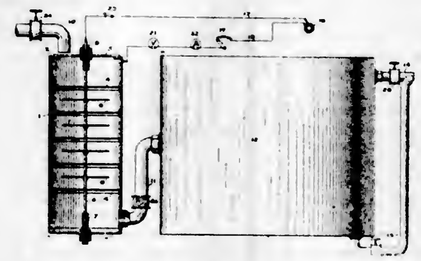


1. In a window ventilator, a vertical support having a central opening, a hollow casing attached to the outside of said support and having outwardly converging perforated lateral walls, and angular deflector strips having outwardly converging portions located adjacent to said perforated lateral walls of the casing and opposite inwardly converging portions, both portions of each deflector being attached at their inner ends to said support.

2. In a window ventilator, a vertical support having a central opening, a hollow casing attached to the outside of said support and having outwardly converging perforated lateral walls, and a vertical front wall parallel to said support, and angular deflector strips having outwardly converging portions located adjacent to said perforated lateral walls of the casing and opposite inwardly converging portions, both portions of each deflector being attached at their inner ends to said support.

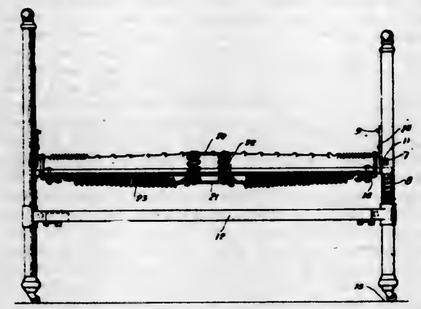
1,158,253. PROCESS OF DEHYDRATING OIL. FRED W. MCNEAR, Menlo Park, and PHILIP E. BOWLES, Jr., Reward, Cal. Filed June 26, 1915. Serial No. 36,514. (Cl. 204—24.)

1. The process of separating oil and water from an emulsion of the same which consists in passing in the same path therethrough an alternating current of sufficiently high potential and for a sufficient length of time to completely short circuit the electrodes by means of water globules and generate steam by the heat produced by said short circuiting.



2. The process of separating oil and water from an emulsion of the same which consists in passing through the body of the emulsion an alternating electric current of sufficient duration and sufficiently high potential to first form a chain of water globules across said emulsion, then completely short circuit the electrodes by means of said chain, then generate steam and thereby prevent the passage of the alternating current across said emulsion in the path formed by said chain, and thereby increase the amount of current across said emulsion at other paths therein to form and break complete chains at said other paths in succession in like manner.

1,158,254. BED-BOTTOM. ANDY MAGYAR, Hutchinson, Kans. Filed June 24, 1914. Serial No. 847,072. (Cl. 5—4.)

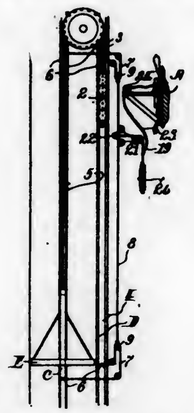


The combination with the foot and head posts of a bed, each of said posts being hollow and having its inner face provided with an inverted L-shaped slot, and resilient supporting members within said posts, of a resilient bed bottom comprising a frame having the side rails provided with reduced end portions, said portions extending through the vertical legs of said slots and seated upon said resilient supports whereby said bed bottom is resiliently supported, and retaining members carried by said posts and provided with lugs extending in the short horizontal legs of said L-shaped slots for maintaining the extended portions of said frame in said posts.

1,158,255. AUTOMATIC STOP FOR ELEVATORS. PETER L. MANLET, St. Paul, Minn. Filed Sept. 27, 1911. Serial No. 651,628. (Cl. 187—35.)

1. In a device of the class set forth, an elevator car operable in a fixed path, an electric motor adapted to operate said car, a brake for said motor, means for operating said brake, resilient means arranged to urge the operating means into position to cause the setting of said brake, and frangible means holding said resilient means under stress and the operating means inactive and posi-

tioned in a path to be broken by said car and to release the resilient means when the car moves beyond its normal travel.



2. In a device of the class set forth, an elevator car operable in a predetermined path of travel, a frangible stop positioned in the path of said car, a motor adapted to operate said car, a switch adapted to control said motor, means for connecting said stop and switch to operate the latter when said stop is broken by said car moving beyond its normal travel, and an electric brake connected with said switch and adapted to be automatically operated by the opening of said switch.

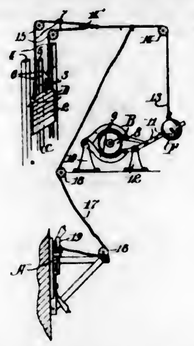
3. In a device of the class set forth, a guideway, an elevator car operating in said guideway, an electric motor adapted to operate said car, frangible means positioned in said guideway in the path of said car adjacent the limit of its normal travel, a brake for said car, means for setting said brake, electric means for holding said brake out of operation, a source of power connected with said electric means, means for disconnecting said electric means from said source of power, and a connection between said frangible means and said means for disconnecting said power, whereby upon the breaking of said frangible means by said car said brake is adapted to stop said car.

4. In a device of the class set forth, an elevator car movable through a normal path of travel, means for operating said car, a friction brake on said operating means, a solenoid mounted in connection with said brake adapted when energized to hold said brake out of operation, an electrical switch connected with said solenoid, and a frangible stop in connection with said car adapted to be broken when said car passes a limit of its normal travel and cause the opening of said switch and setting of said brake.

1,158,256. AUTOMATIC STOP FOR ELEVATORS. PETER L. MANLET, St. Paul, Minn. Original application filed May 9, 1911, Serial No. 625,948. Divided and this application filed Sept. 27, 1911. Serial No. 651,629. (Cl. 187—36.)

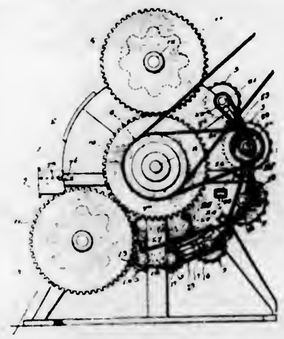
1. A device of the class set forth, comprising, in combination, elevator parts consisting of a car and a counterweight connected therewith, guides for said parts, actuating mechanism for said car, a brake for said car adapted when set to stop its motion, a weight arranged on said brake to set it by lowering, a frangible device in the path of one of said elevator parts to be broken when one of said parts moves beyond a fixed limit of travel, and a connection between said frangible device and weight holding said weight in raised position until said frangible device is broken.

2. A device of the class set forth, comprising, in combination, elevator parts consisting of a car and a counter weight connected therewith, guides for said parts, actuating mechanism for said car, a friction brake in connection with said actuating mechanism to stop the movement of said car, operating means for setting said brake, a frangible device arranged in the path of one of said



elevator parts to be broken when one of said elevator parts moves beyond a fixed limit of travel, and a connection between said frangible device and operating means to assist in holding the operating means with the brake in released position until said frangible device is broken.

1,158,257. FULLING-MACHINE. FREDERICK J. MANSFIELD, Pasadena, Cal. Filed May 31, 1913. Serial No. 771,070. (Cl. 38—11.)



1. In a fulling machine, a stationary drum, a corrugated roller extending centrally through the drum, a plurality of corrugated rollers spaced from said first mentioned roller and having their axes parallel thereto, and in an arc concentric with the drum, said rollers projecting into the drum through openings formed in the wall thereof.

2. In a fulling machine, a stationary drum, a corrugated roller extending longitudinally through the center of said drum, the wall of the drum being formed with a plurality of openings, and a plurality of corrugated rollers of different diameters revoluble in said openings and projecting into the drum, the axes of said second mentioned rollers being parallel to the axis of the first mentioned roller.

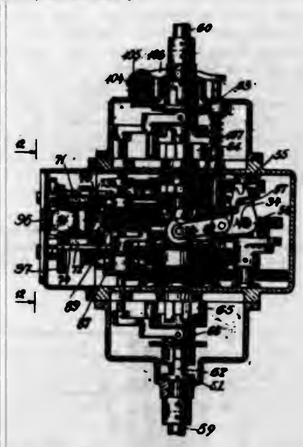
3. In a fulling machine, a stationary drum provided with a plurality of offset housings communicating with the interior thereof, a corrugated roller extending longitudinally through the center of the drum, a corrugated roller revoluble within each of said housings and projecting into the drum, the wall of the casing being formed with a plurality of openings, and a plurality of corrugated rollers arranged to revolve within said openings and to project into the drum, all of said rollers having their axes parallel to each other.

4. In a fulling machine, a stationary drum provided with a plurality of offset housings communicating with the interior thereof, a corrugated roller extending longitudinally through the drum at the center thereof, and an expansive corrugated roller arranged to revolve within each of said housings and to project into the drum to coact with said first mentioned roller.

5. In a fulling machine of the character described, a stationary drum formed with an offset housing communicating with the interior thereof, a corrugated roller extending centrally through said drum, an expansive corrugated roller revoluble within said housing and projecting into said drum to coact with said first mentioned roller, and a plurality of smaller corrugated rollers arranged in an arc concentric with said first mentioned roller and projecting into the drum to coact with the latter.

[Claims 6 to 10 not printed in the Gazette.]

1,158,258. DISPLAY-MACHINE. JOSEPH G. C. MANTLE, New York, N. Y. Filed July 13, 1909. Serial No. 507,348. (Cl. 40—31.)



1. A display device having a display web and mechanism for imparting intermittent movements to the web to display successive sections thereof, said mechanism including a primary driving element, mechanism for imparting to the said element intermittent movements, secondary driving mechanism for the web, a disengageable connection between the primary driving element and the secondary driving mechanism, and mechanism actuated by the web for disengaging said connection during an intermittent movement of the primary driving element, whereby the transmission of the intermittent movements to the web is curtailed by the web to correspond with the length of the particular section thereof to be displayed.

2. A display device having a display web and mechanism for imparting intermittent movements to the web to display successive sections thereof, said mechanism including a primary driving element, mechanism for imparting to the said element successive intermittent movements of equal extent, secondary driving mechanism for the web, a disengageable connection between the primary driving element and the secondary driving mechanism, and mechanism actuated by the web for disengaging said connection during an intermittent movement of the primary driving element whereby the transmission of the intermittent movements to the web is curtailed by the web to correspond with the length of the particular section thereof to be displayed.

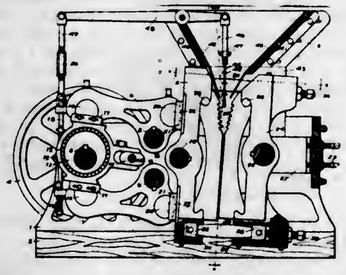
3. A display device having a display web and mechanism for imparting intermittent movements to the web to display successive sections thereof, said mechanism including a primary driving element, mechanism for imparting to the said element successive gradually accelerated intermittent movements, secondary driving mechanism for the web, a disengageable connection between the primary driving element and the secondary driving mechanism, mechanism actuated by the web for disengaging said connection during an intermittent movement of the primary driving element whereby the transmission of the intermittent movements to the web is curtailed by the web to correspond with the length of the particular direction thereof to be displayed.

4. A display device having a display web and mechanism for imparting intermittent movements to the web to display successive sections thereof, said mechanism including a primary driving element, mechanism for imparting to the said element intermittent movements, secondary driving mechanism for the web, a disengageable connection between the primary driving element and the secondary driving mechanism, and mechanism actuated by the web for disengaging said connection during an intermittent movement of the primary driving element whereby the transmission of the intermittent movements to the web is curtailed by the web to to correspond with the length of the particular section thereof to be displayed, and mechanism for reëngaging the connection during a period of rest of the primary driving element.

5. A display device having a display web and mechanism for imparting intermittent movements to the web to display successive sections thereof, said mechanism including a primary driving element, mechanism for imparting to the said element intermittent movements, secondary driving mechanism for the web, a disengageable connection with the primary driving element and the secondary driving mechanism, and mechanism actuated by the web for disengaging said connection during an intermittent movement of the primary driving element whereby the transmission of the intermittent movement to the web is curtailed by the web to correspond with the length of the particular section thereof to be displayed, and mechanism actuated by the driving mechanism for the primary driving element for reëngaging the connection during a period of rest of the primary driving element.

[Claims 6 to 35 not printed in the Gazette.]

1,158,259. ORE-GRINDING MACHINE. CHARLES O. MICHAELSEN, Omaha, Nebr. Filed Sept. 3, 1912. Serial No. 718,413. (Cl. 83—53.)



1. In a machine of the class described, a pair of horizontal parallel shafts mounted to oscillate about fixed axes, a pair of beams mounted on said shafts so that the central body-portions of the beams lie between the shafts, means pivotally connecting the adjacent upper and lower portions of the beams to each other, and actuating means engaging each end of one of the beams to oscillate the same about the axis of the respective shaft upon which it is mounted.

2. In a machine of the class described, a pair of beams arranged substantially vertically and parallel to each other, means for pivotally supporting each beam on a fixed axis passing through the central part thereof, means pivotally connecting the adjacent upper and lower ends of the beams to each other, grinding-plates secured on the adjacent faces of the beams, said grinding-plates

having adjacent plane-surfaced portions diverging slightly from each other, and actuating means for simultaneously oscillating the beams about their fixed axis in like directions and in equal amounts.

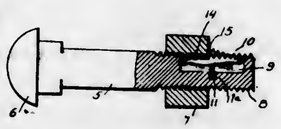
3. In a machine of the class described, a pair of beams arranged parallel to each other and in substantially vertical position, links pivotally connecting the adjacent ends of the beams to each other, means forming fixed axes passing through the central portions of the beams, grinding-plates secured on the adjacent faces of the beams, and actuating means for oscillating the beams about their axes.

4. In a machine of the class described, a pair of beams and connecting links forming a parallelogrammatic coupler, the beams extending approximately vertically, means forming fixed axes passing through the central parts of the beams, grinding-plates secured on the adjacent sides of the beams, the grinding-plates having diverging adjacent faces, and means for oscillating the beams upon said fixed axes, whereby the adjacent faces of the grinding-plates are moved toward and away from each other and also move longitudinally in opposite and alternating directions.

5. In a machine of the class described, a pair of vertically extending beams pivoted on horizontal parallel fixed axes passing through the central parts of the respective beams, means for oscillating one of the beams upon its axis, and means pivotally connecting each end of said beam with the adjacent ends of the other beam, whereby said adjacent ends of the beams will oscillate simultaneously in like directions and the adjacent sides of the beams approach each other as the beams move from a vertical to an inclined position.

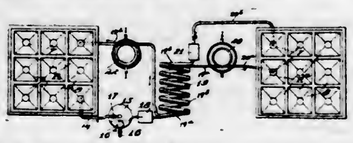
[Claim 6 not printed in the Gazette.]

1,158,260. NUT-LOCK. HERMAN MOEBBE, Giddings, Tex. Filed May 5, 1915. Serial No. 26,029. (Cl. 151—27.)



A nut lock including a bolt having a longitudinal groove adjacent one end thereof, a locking element pivotally secured in said groove at its outer end, said locking element having a reduced inner end defining a nut-engaging shoulder, said reduced end being adapted to engage the inner surface of the bore of a nut to limit the outward movement thereof, a lip formed upon the inner wall of said groove adapted to be engaged by the reduced end of said locking element to limit outward movement of the latter when the nut is removed from the bolt, and means normally retaining said locking element in outwardly extended position.

1,158,261. PROCESS OF CLARIFYING AND CONCENTRATING FRUIT-JUICES. EUDO MONTI, Turin, Italy. Original application filed Apr. 20, 1909, Serial No. 491,408. Divided and this application filed Sept. 15, 1911. Serial No. 640,420. (Cl. 99—11.)

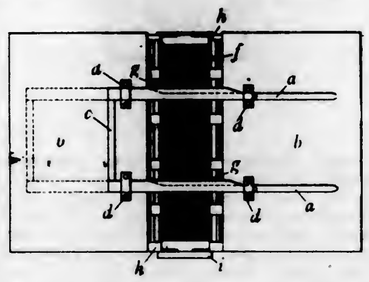


1. The process of clarifying and concentrating fruit juices, which have been obtained by the pressing of berries or other fruit, said process consisting in first cooling the fruit juice in suitable tanks at a temperature slightly above its freezing point while saturating the juice with air; in thereupon drawing off the thus clarified juice from the dregs and slowly passing the clarified juice through a counter current of sterilized air at a still very low temperature; in the filtering the clarified juice and gradually warming it to somewhat below curdling point; lastly in storing the filtered juice at this high temperature.

2. The process of clarifying and concentrating fruit juices, which have been obtained by the pressing of berries or other fruit, said process consisting in first cooling the fruit juice approximately to the point of congealing in suitable tanks while saturating the juice with air; in thereupon drawing off the thus clarified juice from the dregs; then slowly passing all the clarified juice through a counter current of sterilized air at about the same temperature, and preferably in the presence of wood-shavings; in then filtering the clarified juice and gradually warming it to not over 50° C.; in then storing the filtered juice at this high temperature and in lastly retreating the filtered and stored juice by repeating this process.

3. The process of clarifying and concentrating fruit juices, which have been obtained by the pressing of berries or other fruit, said process consisting in first cooling the fruit juice approximately to the point of congealing in suitable tanks while saturating the juice with air; in thereupon drawing off the thus clarified juice from the dregs and letting it set for a certain time; in then slowly passing the clarified juice through a counter current of sterilized air at about the same temperature, and preferably in the presence of wood-shavings; in then filtering the clarified juice and gradually warming it to not over 50° C.; in then storing the filtered juice at this high temperature and in lastly retreating the filtered and stored juice by repeating this process.

1,158,262. LOOSE-LEAF BOOK. JOHN WILLIAM MYATT, Tipton, England, assignor to Ledgers Limited, Tipton, England. Filed Feb. 12, 1915. Serial No. 7,663. (Cl. 129—13.)

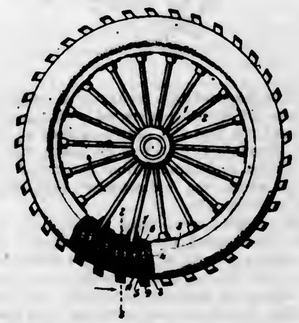


1. The combination with the covers of a loose leaf book and leaves contained therein provided at their rear edges with notches which are narrower at the outer parts than the inner parts, of a flexible retaining member adapted to pass through the broader parts of the leaf notches and formed with a reduced portion over which the narrow parts of the leaf notches can pass, and means for attaching the said member to the covers, which means permit a sliding movement of the member in the direction of its length and enable the reduced portion of the member to be moved opposite or away from the narrow parts of the leaf notches, substantially as described.

2. The combination with the covers of a loose leaf book and leaves contained therein provided at their rear edges with notches which are narrower at the outer parts than the inner parts, of a plurality of flexible retaining members connected to each other at one end and each formed with a reduced portion over which the narrower parts of the leaf notches can pass, the broader portions of the members being adapted to pass through the broad parts of the notches, and guides secured to the insides of the covers, which guides serve to attach the members to the covers and permit a sliding movement to be imparted to the said members in the direction of their length for enabling the narrow portions of the members to be moved opposite or away from the narrow parts of the leaf notches, substantially as described.

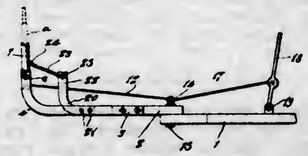
3. The combination with the covers of a loose leaf book and leaves contained therein provided at their rear edges with L-shaped notches, of a pair of flexible retaining members secured together at one end and formed at the other end with reduced parts over which the narrow parts of the leaf notches can pass, the remainder of the members being adapted to pass through the broad parts of the notches, and guides attached to the covers and adapted to retain the members in position while permitting a sliding movement of the members in the direction of their length whereby their reduced portions can be moved opposite or away from the narrow parts of the leaf notches, substantially as described.

1,158,263. RESILIENT WHEEL. JOHN F. NETTLE, Butte, Mont. Filed Nov. 7, 1913. Serial No. 799,681. (Cl. 152—8.)



In a resilient wheel of the class described, a solid felly formed comparatively thin but of an appreciable depth radially, said felly being formed with a plurality of bores, each of said bores extending in a direction inclined to a radius, whereby sockets are formed, a spring arranged in each of said sockets, a plunger arranged to project into each of said sockets, each of said plungers being provided with a road-engaging face and a shouldered bearing portion adapted to reciprocate in said sockets, said shouldered bearing portion engaging said spring and resiliently supported thereby, and means connected with said felly overlapping said shouldered portion for limiting the outward movement of said plungers.

1,158,264. HORSE-WHIPPING DEVICE. CHARLES A. NOAKES, Rock Lake, N. D. Filed Apr. 16, 1915. Serial No. 21,717. (Cl. 21—129.)



A whipping-device for draft-animals comprising a frame connected to the front end of the tongue of a gang implement, said frame comprising parallel bars having vertical members, whip sockets pivoted to the vertical members, two of said whip sockets being arranged to diverge from the upper ends of the members, said whip sockets being connected together at their lower ends, a connecting rod attached to one of said whip sockets, a lever mounted on the tongue at the rear thereof to which said connecting rod is pivoted, an operating rod connected to the lever, and an operating lever for applying the whips to the leading horses, and springs for returning the whips to a vertical position.

1,158,265. PROCESS FOR MAKING IMITATION GOLD OR COLORED LEAF. KARL E. OLSON, Irvington, N. J. Filed Mar. 2, 1915. Serial No. 11,635. (Cl. 18—57.)

1. The process of preparing a thin film or leaf which comprises spraying a film support with a solution of wax in a volatile solvent, driving off the volatile solvent, spraying a film-forming material onto said support, and stripping the resultant film from the support.

2. The process of preparing a thin film or leaf which comprises spraying a film support with a solution of wax in a volatile solvent, driving off the volatile solvent, spraying a film-forming material onto said support, coating the resultant film with a remover layer comprising a solution of wax in a volatile solvent, the solution being more dilute than the first mentioned solution, and stripping the film from the support.

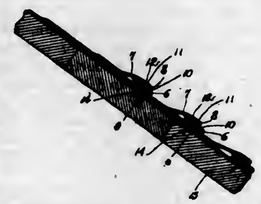
3. The process of preparing a thin film or leaf which comprises spraying a hard transparent support with a film-forming material and stripping the resultant film from the support.

4. The process of preparing a thin film or leaf which comprises spraying a sheet of glass with a protective coating, spraying a film-forming substance thereon, and stripping the resultant film therefrom.

5. The process of preparing a thin film or leaf which comprises the following steps: spraying a sheet of glass with a protective coating containing a volatile solvent, driving off the volatile solvent, spraying a film-forming material upon the glass so treated, treating the resultant film with a second coating containing a volatile solvent, and stripping the film from the glass.

[Claims 6 to 13 not printed in the Gazette.]

1,158,266. WEATHERPROOF COVERING. FREDERICK C. OVERBURY, New York, N. Y., and HOWARD CARLETON PLATTS, Rutherford, N. J., assignors to Flintkote Manufacturing Company, Rutherford, N. J., a Corporation of New Jersey. Filed Apr. 7, 1914. Serial No. 830,207. (Cl. 108—7.)



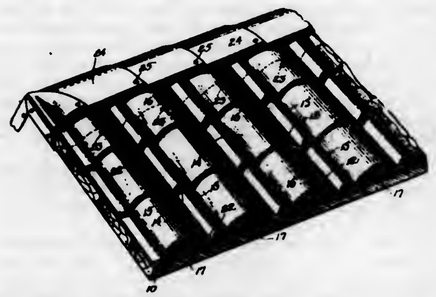
1. A blank for forming roof or side coverings, consisting of a flexible fibrous strip impregnated with waterproof material and coated with weatherproof material, said strip having along one edge narrow marginal portions folded back and forth, the narrow folds lying one upon the other to present two closely adjacent folded edges.

2. A blank consisting of a flexible covering impregnated with waterproof material and coated with weatherproof pitch or bitumen, and comprising a body portion, and a bent under marginal portion folded back and forth under only the margin of the body portion to produce not less than three overlapping layers.

3. A blank consisting of a flexible covering impregnated with waterproof material and coated with weatherproof pitch or bitumen, and comprising a body portion, and a marginal portion folded back and forth to expose not less than two closely adjacent folded edges, one below the other, said folded portions lying only under the margin of the blank.

4. A blank consisting of a flexible covering impregnated with waterproof material and coated on both sides with weatherproof pitch or bitumen of contrasting colors, and comprising a body portion and a marginal portion folded back and forth under the margin of the body portion to expose not less than two closely adjacent folded edges, the extreme marginal portion being folded inwardly over its adjacent layer, whereby the exposed edges expose coatings of different color.

1,158,267. FLEXIBLE CONVEX TILE ROOFING. FREDERICK C. OVERBURY, New York, N. Y., and HOWARD CARLETON PLATTS, Rutherford, N. J., assignors to Flintkote Manufacturing Company, Rutherford, N. J., a Corporation of New Jersey. Filed Apr. 7, 1914. Serial No. 830,209. (Cl. 108—7.)



1. A laterally extensible roofing tile formed of non-metallic flexible material coated with a waterproof compound, said tile having a folded-under lower edge portion, side portions bent to form upstanding ribs, and an intermediate upstanding convexly curved rib, said ribs being substantially parallel and extending transversely to the folded-under lower edge.

2. A roof comprising a plurality of parallel spaced supports, and a plurality of non-metallic flexible tiles each having a coating of waterproofing compound, said tiles being laid in horisontal rows with one row overlapping the preceding row, and with the tiles of each row laterally lapping each other, said tiles having convex curved ribs bridging said supports.

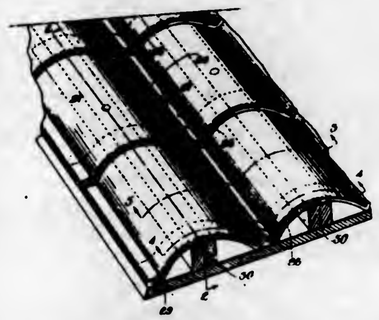
3. A roof comprising a plurality of non-metallic flexible fibrous tiles each having a coating of waterproofing compound, said tiles being laid in horizontal rows with one row overlapping the preceding row, each tile having lapped side portions bent to form flexibly connected upstanding ribs, and having an intermediate convexly curved upstanding rib, the several ribs of the tiles in one row overlapping and forming continuations of the ribs of the tiles of the preceding row or rows.

4. A roof comprising a plurality of non-metallic flexible tiles each having a coating of waterproofing compound, said tiles being laid in horisontal rows with one row overlapping the preceding row, each tile having lapped side portions bent to form upstanding ribs, and having an intermediate convexly curved upstanding rib, the several ribs of the tiles in one row overlapping and forming continuations of the ribs of the tiles of the preceding row or rows, and parallel supports beneath the curved ribs and concealed thereby.

5. A roof comprising a plurality of non-metallic flexible tiles each having a coating of waterproofing compound, said tiles being laid in horizontal rows with one overlapping the preceding row, each tile having lapped side portions bent to form upstanding ribs, and having an intermediate convexly curved upstanding rib, the several ribs of the tiles in one row overlapping and forming continuations of the ribs of the tiles of the preceding row or rows, and parallel supports of flexible material bent to form ribs which support and are concealed by said curved ribs.

[Claim 6 not printed in the Gazette.]

1,158,268. TILE ROOFING. FREDERICK C. OVERBURY, New York, N. Y., and HOWARD CARLETON PLATTS, Rutherford, N. J., assignors to Flintkote Manufacturing Company, Rutherford, N. J., a Corporation of New Jersey. Filed Apr. 7, 1914. Serial No. 830,211. (Cl. 108—7.)



1. A flexible non-metallic roofing tile consisting of a fibrous waterproof foundation coated with a weatherproof substance, said tile having a central arched or convex rib longitudinal thereof, a folded-under lower edge portion, and a side portion projecting beyond the end of said folded portion to be within the folded-under lower edge portion of the next adjacent tile.

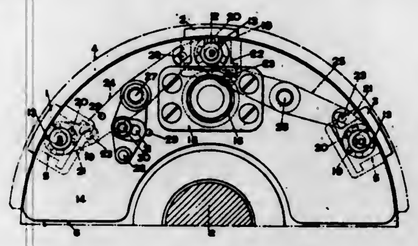
2. A roof covering comprising a plurality of flexible non-metallic tiles coated with a weatherproof substance, said tiles being arranged in vertically overlapping transverse rows, each tile being conversely curved and having a flexibly connected folded-under lower edge portion, a lateral portion to overlap and interlock with said folded-under lower edge portion of the next adjacent tile in the same horizontal row, and fasteners passed through said folded-under portions and covered by the body portions of said tiles.

3. A flexible non-metallic roofing tile consisting of a fibrous waterproof foundation coated with a weatherproof substance, said tile having a flexibly connected folded-under lower edge portion and a side portion projecting laterally beyond the lower edge portion, said blank having a central arched portion, and angularly bent side portions to form ribs, and being adapted to be expanded and contracted laterally to vary the angularity of said ribs and the curvature of said central portion.

4. A roof comprising a supporting structure, a plurality of parallel bars thereon, and a plurality of flexible non-metallic tiles each consisting of a flexible waterproof foundation having a coating of weatherproof substance, said tiles being arranged in vertically overlapping horizontal rows, each tile bridging one of said supports, and laterally overlapping an adjacent tile, said tiles being folded under at their lower edge portions, and fasteners covered by the body portions of said tiles for securing them to said bars and to the supporting structures between said bars to produce a sinuous surface.

1,158,269. DEVICE FOR CLAMPING PRINTING-PLATES TO THE CYLINDERS OF PRINTING-PRESSES. THOMAS ROBERT GILLETT PARKER and WALTER LEE, Broadheath, England, assignors to Linotype and Machinery Limited, London, England. Filed Aug. 18, 1915. Serial No. 46,212. (Cl. 101—169.)

1. In a device for clamping printing plates to a cylinder of a printing press, the combination with a rod movable relatively to the cylinder parallel with the axis thereof, and a dog adapted to be moved by that movement of the rod into and out of engagement with the printing plates and to be moved independently of the rod into and out of engagement with abutments on the rod, of grooves in the dog, an abutment on the rod adapted to operate the dog for clamping plates of one columnar width, ribs on the rod constituting an abutment adapted to operate the dog for clamping plates of another columnar width, and means adapted to bring the grooves and ribs into and out of alinement to permit or prevent the independent movement of the dog.



2. In a device for clamping printing plates to a cylinder of a printing press, the combination with a rod movable relatively to the cylinder parallel with the axis thereof, and a dog adapted to be moved by that movement of the rod into and out of engagement with the printing plates and to be moved independently of the rod into and out of engagement with abutments on the rod, of grooves in the dog, an abutment on the rod adapted to operate the dog for clamping plates of one columnar width, ribs on the rod constituting an abutment adapted to operate the dog for clamping plates of another columnar width, and means adapted to move the rod angularly about its axis to bring the ribs into and out of alinement with the grooves.

3. In a device for clamping printing plates to a cylinder of a printing press, the combination with a rod movable relatively to the cylinder parallel with the axis thereof, and a dog adapted to be moved by that movement of the rod into and out of engagement with the printing plates and to be moved independently of the rod into and out of engagement with abutments on the rod, of grooves in the dog, a plurality of sets of ribs on the rod constituting abutments adapted to operate the dog for clamping plates of respectively different columnar widths, and means adapted to move the rod angularly about its axis to bring the ribs into and out of alinement with the grooves.

4. In a device for clamping printing plates to a cylinder of a printing press, the combination with a plurality of rods movable relatively to the cylinder parallel with the axis thereof, and a corresponding plurality of dogs adapted to be moved by such movement of the rods into and out of engagement with the printing plates and to be moved independently of the rods into and out of engagement with abutments on the rods, of grooves in each dog, an abutment on each rod adapted to operate the respective dog for clamping plates of one columnar width, ribs on each rod constituting an abutment adapted to operate the respective dog for clamping plates of another columnar width, and means adapted to simultaneously move all the rods angularly about their respective axes to bring the ribs into and out of alinement with the grooves.

5. In a device for clamping printing plates to a cylinder of a printing press, the combination with a plurality of rods movable relatively to the cylinder parallel with the axis thereof, and a corresponding plurality of dogs adapted to be moved by such movement of the rods into and out of engagement with the printing plates and to be moved independently of the rods into and out of engagement with abutments on the rods, of grooves in each dog, a plurality of sets of ribs on each rod constituting abutments adapted to operate the respective dog for clamping plates of respectively different columnar widths, and means adapted to simultaneously move all the rods angularly about their respective axes to bring the ribs into and out of alinement with the grooves.

[Claims 6 to 10 not printed in the Gazette.]

1,158,270. POWER-OPERATED HAMMER. WALTER S. PAYNE, University Place, Nebr. Filed Mar. 23, 1915. Serial No. 16,389. (Cl. 255—39.)



1. In a hammer of the character described; forward and rear casing sections arranged in end to end relation; a coupling-plug arranged within the adjacent ends of the casing sections and serving to secure them together; a reciprocatory plunger-hammer mounted within the forward casing section in advance of the coupling-plug; a compressible coil spring arranged between the forward end of the coupling-plug and the plunger-hammer; a driving rotatable shaft mounted within the rear casing section and held therein against longitudinal movement; a reciprocatory cam slidably mounted upon the driving shaft and connected with the plunger-hammer; and a rotatable cam secured to the driving shaft to rotate therewith and engaging the first named cam.

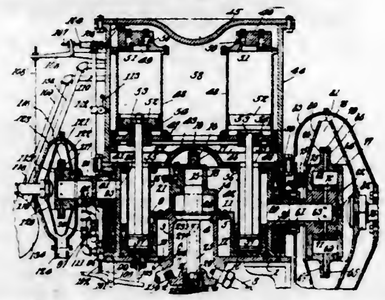
2. In a hammer of the character described; forward and rear casing sections arranged in end to end relation; a coupling-plug arranged within the adjacent ends of the casing sections for securing them together and provided with longitudinal openings; a reciprocatory plunger-hammer mounted within the forward casing section in advance of the coupling-plug and carrying rearwardly extending arms mounted to reciprocate in said openings; a compressible coil spring arranged between the coupling-plug and plunger-hammer; a driving shaft rotatably mounted within the rear casing section; a reciprocatory cam slidably mounted upon the driving shaft and connected with the arms; and a rotatable cam secured to the driving shaft to turn therewith and engaging the reciprocatory cam.

3. In a hammer of the character described; an exteriorly screw-threaded coupling-plug having longitudinal openings formed therethrough; a forward casing section provided at its rear end with interior screw-threads to engage with the coupling-plug and provided at its forward end with a tool receiving member; a rear casing section provided at its forward end with interior screw-threads for engaging the coupling-plug; a plunger-hammer mounted to reciprocate within the forward casing section and provided with arms extending through the longitudinal openings; a compressible coil spring arranged between the coupling-plug and plunger-hammer; a driving shaft rotatably mounted within the rear casing section; a reciprocatory cam mounted to slide upon the driving shaft and rigidly attached to the rear ends of said arms; and a rotatable cam rigidly mounted upon the driving shaft and arranged in advance of the reciprocatory cam to operate it.

4. In a hammer of the character described; a rear casing section; a coupling-plug secured within the forward end thereof and projecting outwardly beyond the same for a substantial distance and having longitudinal openings and a substantially centrally arranged journal recess; a cap detachably connected with the rear end of the rear casing section and provided with a journal opening; a rotatable driving shaft arranged within the journal openings; a thrust element rigidly secured to the driving shaft and engaging with the cap; a reciprocatory cam slidably mounted upon the driving shaft; a rotatable cam rigidly mounted upon the driving shaft and arranged in advance of the reciprocatory cam; a plunger-hammer disposed in advance of the cams and having arms passing through the openings of the coupling-plug and secured to the reciprocatory cam; a compressible coil spring ar-

ranged between the plunger-hammer and coupling-plug; and a forward casing receiving the plunger-hammer and engaging with the coupling-plug.

1,158,271. ROTARY COMBUSTION-ENGINE. LOUIS WILLIAM PENZER, Richmond, Va., assignor of one-half to Charles G. Holland, Richmond, Va. Filed Nov. 6, 1914. Serial No. 870,685. (Cl. 60—37.)



1. In an internal combustion engine, a pressure chamber, an air chamber, means operated by the expansion of gases within the pressure chamber, for increasing the compression of air within the air chamber and means for feeding fuel to the engine when the pressure in the engine is below a predetermined degree and for cutting off the feed when the said pressure is above a predetermined degree.

2. In an internal combustion engine, a pressure chamber for the reception of expanded gases, an air chamber, means for maintaining the contents of the two chambers under substantially the same compression and means for automatically feeding fuel to the engine when the pressure in the engine is below a predetermined degree and for cutting off the feed when said pressure is above a predetermined degree.

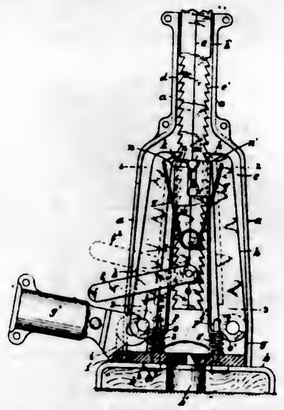
3. In an internal combustion engine, a pressure chamber for the reception of expanded gases, an air chamber, means for maintaining the contents of the two chambers under substantially the same compression, a rotor operated by pressure from the pressure chamber, fuel feeding means coupled thereto, and means operated by the expansion of gases within the pressure chamber for uncoupling said feeding means from the rotor.

4. An internal combustion engine including a pressure chamber, an air chamber, means operated by the expansion of gases within the pressure chamber for increasing the compression of the contents of the air chamber, a rotor, fuel feeding means coupled thereto, means for directing air from the air chamber to initially propel the rotor, means for directing gas and fluid under pressure from the pressure chamber to the rotor subsequent to the initial starting of the rotor, means operated by the expansion of gases within the pressure chamber for uncoupling the rotor from the fuel feeding means, and means operating upon the reduction of pressure within the pressure chamber to a predetermined degree, for coupling the rotor to the fuel feeding means.

5. In an internal combustion engine, a pressure chamber, an air chamber, means operated by the expansion of gases within the pressure chamber for increasing the pressure of air within the air chamber, a rotor, means for directing compressed air into the rotor to impart an initial movement thereto, fuel feeding means coupled to the rotor, means for directing gases under compression from the pressure chamber to the rotor subsequent to the initial movement of the rotor, and means controlled by the pressure in the engine for automatically uncoupling the rotor from the fuel feeding means when the pressure is above a predetermined degree and for automatically coupling said feeding means to the rotor when the pressure is below a predetermined degree.

[Claims 6 to 9 not printed in the Gazette.]

1,158,272. AUTOMOBILE-JACK. ADOLPH PETELER, Yonkers, N. Y. Filed Feb. 18, 1915. Serial No. 8,974. (Cl. 254—111.)



1. In a lifting-jack, the combination, with a toothed lifter-bar, of a lifting-pawl lying near the side of the rack, with a lever connection at its lower end and a sloping surface beneath its jaw, and a dog mounted to slide between the pawl and the rack-teeth, and having a spring under its foot to press it upward, and operating normally upon the sloping surface of the jaw upon the pawl to retract it from the rack.

2. In a lifting jack, the combination, with a toothed lifter-bar, of a detent engaged with the bar, a sliding dog having a spring-support and operating longitudinally to retract the detent from the bar, a lifting-pawl and means for reciprocating the same, a sliding dog having a spring-support and operating normally to retract the pawl from the bar, an engagement between the two dogs and means for locking the dog of the pawl in an inoperative position, and thereby holding both dogs inoperative.

3. In a lifting jack, the combination, with a lifter-bar having racks upon opposite sides, of a detent engaged with one of the racks, a sliding-dog having a spring-support for normally retracting the detent, a lifting-pawl engaged with the opposite rack, means for pressing the detent and pawl into the respective racks, a lever-connection for reciprocating the pawl, a dog having a spring-support and operating normally to retract the pawl from the rack, an engagement between the two dogs, and a latch for locking one of the dogs when required, and thus holding both in an inoperative position.

4. In a lifting jack, the combination, with a lifter-bar having racks upon opposite sides, of a detent engaged with one of the racks, a dog having a spring-support for normally retracting the detent, a lifting-pawl engaged with the opposite rack, means for pressing the detent and pawl into the respective racks, a lever-connection for reciprocating the pawl, a pawl-retracting dog having a spring-support with limited movement equal to one rack-tooth, an engagement between the two dogs permitting a movement equal to one rack-tooth, whereby the pawl-dog is in an inoperative position when at the upward limit of its spring-movement, and then permits the dog of the detent to move upward the additional space of one rack-tooth.

5. In a lifting jack, the combination, with a lifter-bar having racks upon opposite sides, of a detent mounted adjacent to one of the racks and having a sloping surface next the same, means for pressing the detent normally into the rack, a lifting-pawl mounted adjacent to the opposite rack, a lever for reciprocating the lifting-pawl, and a sliding dog movable between the lifter-bar and the detent, and having a spring adapted to force the dog longitudinally against the sloping surface of said detent to retract the same from the rack when the bar is lifted.

[Claims 6 and 7 not printed in the Gazette.]

1,158,273. TELESCOPING SHOCK-ABSORBER. FELIX HENRI PETITMAIRE, Philadelphia, Pa. Filed Sept. 19, 1914. Serial No. 862,532. (Cl. 21—50.)



1. In a shock absorber for an automobile having a car body, an axle, a body supporting spring, and a mud guard support carried by said body, the combination of a bracket provided with means for attachment to said axle and having an extended bearing; an inner casing surrounding said bearing and seated on said bracket; an outer casing telescoping over said inner casing and adapted to reciprocate in proximity to said mud guard support; said bracket also provided with a portion below said extended bearing over which said outer casing is adapted to telescope; a connection between said outer casing and said body spring passing through said extended bearing; and a cushioned connection between said outer and inner casings, substantially as described.

2. In a shock absorber for an automobile comprising a car body, an axle, a body supporting spring, and a mud guard having a support carried by said body, the combination of a casing located in proximity to said mud guard support and having an outer and an inner telescoping member; an absorber spring associated with said telescoping members; a connection between said body spring and the outer telescoping member located in the axis of said casing; and a connection between the axle and the inner telescoping member, comprising a bracket having an extended bearing for said first named connection and a reduced portion below said bearing over which said outer telescoping member reciprocates whereby said outer telescoping member is steadied when caused to move up and down and contact is avoided with said mud guard support, substantially as described.

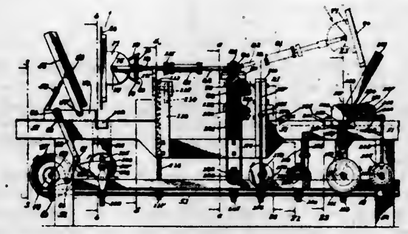
3. In a shock absorber the combination of a bracket provided with means for attachment to the axle of an automobile and with an extended bearing; an inner casing associated with said bracket; a cushioning spring located in said inner casing; an outer casing telescoping over and adapted to extend beyond said inner casing; a slidable rod passing through said extended bearing on said bracket and adapted to be connected with a vehicle supporting spring; and a connection between said rod and said outer telescoping casing, whereby said outer casing may assist in steadying the up and down motions of said rod in said extended bearing, substantially as described.

4. In a shock absorber the combination of a bracket provided with means for attachment to the axle of an automobile and with an extended bearing having a lining; an inner casing provided with a flange associated with said bracket; a cushioning spring located in said inner casing and resting on said flange; an outer casing telescoping over and adapted to extend beyond said inner casing; a slidable rod passing through said extended bearing on said bracket and adapted to be connected with a vehicle supporting spring; and an adjustable rigid connection between said rod and said outer telescoping casing, whereby said outer casing may assist in steadying the up and down motions of said rod in said extended bearing, substantially as described.

5. In a shock absorber the combination of a bracket provided with an extended sleeve having a lining to constitute an extended bearing, with a shoulder, and with a reduced lower portion having means for attachment to the axle of a vehicle; an inner casing provided with an inwardly extending flange adapted to rest on said shoulder; a cushioning spring adapted to rest on said flange; an outer casing adapted to telescope over and to extend beyond said inner casing; a rod adapted to connect with a vehicle spring slidable through said extended bearing; and a rigid connection between said rod and said outer casing, substantially as described.

[Claim 6 not printed in the Gazette.]

1,158,274. MACHINE FOR UNITING METAL ROOFING-SHEETS. WILLIAM E. PHILIPP, Baltimore, Md. Filed Oct. 21, 1914. Serial No. 867,764. (Cl. 113—54.)



1. In a machine for uniting flat metal plates the combination with means for applying solder to the edges of the plates where the seam is to be formed, of means for lock seaming the previously solder coated edges together and means for fusing the solder in the locked-together seam.

2. In a machine for uniting flat metal plates the combination with means for applying solder to the edges of the plates where the seam is to be formed, of means for making the sheets of uniform length; means for lock seaming the solder coated edges of adjoining sheets and means for fusing the solder in the seams after the edges have been locked together.

3. In a machine for uniting flat metal plates the combination with means for applying a solder coating to one edge of a metal plate, of means for reversing the plate and applying a solder coating to the opposite edge; means for lock seaming the solder-coated edges of adjacent sheets and means for fusing the solder in the locked seam.

4. In a machine for uniting flat metal plates the combination with means for coating the opposite edges of the metal plates, of means for trimming the end edge of a plate at a right angle with respect to the side edge; means for lock seaming the two solder coated edges of adjacent plates together and means for fusing the solder in the lock seam joint.

5. In a machine for uniting flat metal plates the combination with means for coating one edge of a plate with solder, of means for coating the opposite edge of the same plate with solder; means for trimming the plates into uniform lengths; means for lock seaming the adjacent solder coated edges of two plates; means for gaging the plates from their longitudinal sides and means for fusing the solder on the locked-together edges.

[Claims 6 to 14 not printed in the Gazette.]

1,158,275. MILK-TESTER. PAUL M. PHILLIPS, Westboro, Mass. Filed Jan. 14, 1914. Serial No. 812,095. (Cl. 73—51.)

1. In a device of the class described, an open ended tubular member arranged for application to the tube of a milk tester in a manner to provide for sliding movement of the member upon the said tube, said member having

scales thereon respectively arranged in ascending and descending order.



2. In a device of the class described, a split sleeve open at both ends and arranged for application to the tube of a milk tester in a manner to provide for sliding movement of the sleeve upon the said tube, the sleeve having scales marked thereon respectively in ascending and descending order.

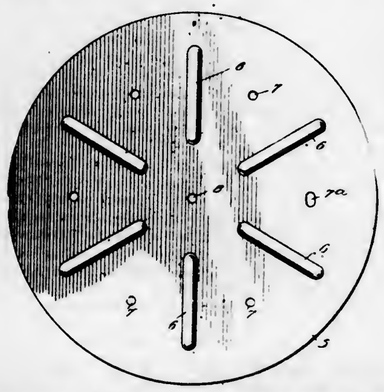
3. In a device of the class described, a split sleeve of transparent material designed for application to the tube of a milk tester in a manner to provide for sliding movement of the sleeve upon the said tube, the said sleeve having scales marked thereon and respectively arranged in ascending and descending order.

4. The combination with the tube of a milk tester, said tube being provided with a projection, of a sleeve fitted upon the tube and slit to receive the projection, the said sleeve being provided with a scale.

5. The combination with the tube of a milk tester, of a split sleeve of transparent material fitted thereon, the said tube being provided with a projection engaging in the slit in the sleeve, and the said sleeve being provided with a scale.

[Claim 6 not printed in the Gazette.]

1,158,276. CHEESE-FOLLOWER. LOUIS H. PIEPER, Plymouth, Wis. Filed Oct. 26, 1914. Serial No. 868,636. (Cl. 31—21.)

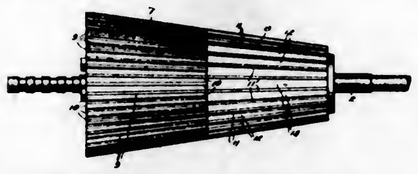


1. A cheese follower comprising a single flat metal plate having a plurality of stamped ridges extending from one surface thereof, whereby the entire surface of the plate, exclusive of the ridges, may be utilized as a whey drainage, said plate having its flat portion only perforated.

2. A cheese follower comprising a single flat metal plate provided with a plurality of imperforate ribs and provided with a plurality of perforations arranged between the ribs.

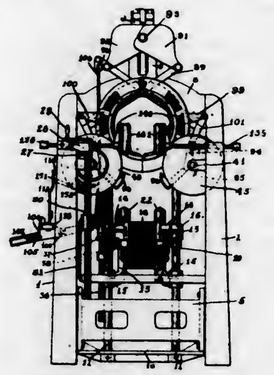
3. In a cheese press, the combination with a hoop having an inwardly projecting flange, and a bottom adapted to rest against said flange, of a follower comprising a disk having projections pressed from one face thereof, said projections being of a depth greater than the thickness of said flange.

1,158,277. JORDAN SHAFT FOR PAPER-STOCK-REFINING ENGINES. ALVA C. PIERCE and GEORGE C. KAUFMAN, La Fayette, Ind. Filed Nov. 17, 1914. Serial No. 872,612. (Cl. 92—27.)



A Jordan shaft having a core knife jackets on the core and keys detachably securing the knife jackets to the core, the jackets being provided at their opposing ends with means to detachably secure them together.

1,158,278. WRAPPING-MACHINE. WILLIAM B. PIERCE and FRANK M. PIERCE, Chicago, Ill., assignors to Pierce Wrapping Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 7, 1911. Serial No. 642,685. (Cl. 242—6.)



1. A wrapping machine embracing supporting means for the object to be wrapped, a rotatable annular shuttle through which the body to be wrapped is passed, driving connections for the shuttle, a power shifting mechanism therefor, adjusting means for the shuttle, and mutually interlocking mechanisms whereby the adjusting means for the shuttle are held inoperative during operation of the shuttle and whereby the power shifting mechanism is held inoperative during adjustment of the shuttle.

2. A wrapping machine embracing supporting means for the object to be wrapped, a rotatable annular shuttle, means moving the body to be wrapped therethrough, driving connections for the shuttle, a power shifting mechanism therefor, adjusting means for the shuttle, and mutually interlocking mechanisms whereby the adjusting means for the shuttle are held inoperative during operation of the shuttle and whereby the power shifting mechanism is held inoperative during adjustment of the shuttle.

3. In a device of the class described an adjustable support for the article to be wrapped, a shuttle having wrapping material therein, revoluble about the object to be wrapped, means operated by rotation of the shuttle for drawing the wrapping material therefrom, driving mechanism for the shuttle, controlling means therefor, adjusting members for the shuttle, said means and members each acting in one position to lock the other out of action.

4. In a device of the class described an adjustable support for the article to be wrapped, a shuttle having wrapping material therein and revoluble about the object to be wrapped, means operated by rotation of the shuttle for folding the wrapping material as drawn from the shuttle, driving mechanism for the shuttle, a controlling member therefor, adjusting means for the shuttle, said member and latter means each acting in one position to lock the other out of action.

5. A wrapping machine embracing a rotatable annular shuttle having folded wrapping material therein adapted to be drawn therefrom by the rotation of the shuttle, mechanism for rotating the shuttle at high speed, a brake for the shuttle, a clutch controlling the application of power to the shuttle, and a shifting lever for the clutch acting to simultaneously release the clutch and apply said brake.

[Claims 6 to 24 not printed in the Gazette.]

1,158,279. IRONING-BOARD. ROMAN F. POLSKI, St. Paul, Minn. Filed Mar. 6, 1915. Serial No. 12,513. (Cl. 68—1.)



1. An ironing board, comprising, in combination, a back, a flexible cover over said back and a filling of wood saw-dust held by said cover over said back.

2. An ironing board, comprising, in combination, a back, a flexible permanent cover over said back, said back being formed with a shoulder on its edge below its surface and said cover having a band in its edge engaged below said shoulder, fasteners securing the edge of said cover to the edge of said back, a removable cover stretched over the surface of said permanent cover and detachably secured to said fasteners and a filling of disintegrated readily absorbent cushioning material interposed between the surface of said back and said permanent cover.

1,158,280. CONVERTIBLE CHAIR. WILLARD H. POOL, Atlanta, Ga. Filed Apr. 29, 1914. Serial No. 835,098. (Cl. 155—6.)



1. A convertible chair comprising chair sides, each provided with an inwardly extending pin and a groove to the rear of the pin curved on an arc concentric with the axis of the pins, and a frame adapted to rest on the pins and having pins arranged to be movable in the grooves.

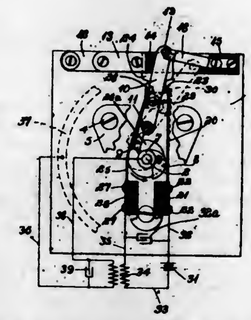
2. A convertible chair comprising chair sides, each provided with an inwardly extending pin and a curved groove to the rear of the pin and a frame adapted to rest on the pins and having pins to be movable in the grooves, said frame comprising a head section and a foot section each provided at adjacent ends with upturned portions pivoted together.

3. A convertible chair comprising chair sides, each provided with an inwardly extending pin and a curved groove to the rear of the pin and a frame adapted to rest on the pins and having pins to be movable in the grooves, said frame comprising a head section and a foot section each provided at adjacent ends with upturned portions pivoted together, and a mattress carried by the frame formed in sections having thickness corresponding to the length of the upturned portions on the frame sections.

4. A convertible chair comprising chair sides, each provided with an inwardly extending pin, a frame pivotally connected with the chair sides and adapted to rest on the pins, and removable arm rests provided with plates adapted to rest on the upper edges of the chair sides and having side plates provided with flanges adapted to engage the pins.

5. A convertible chair comprising chair sides each provided with an inwardly extending pin and having its upper edge provided with an outwardly extending flange, a frame pivotally connected with the chair sides and arranged to engage the pins, and removable arm rests each provided with a plate adapted to rest on the upper edge of the chair side, an outer plate provided with a flange adapted to engage the flange of the chair side and an inner plate provided with a flange adapted to engage the pin.

1,158,281. SPEEDOMETER. ARTHUR F. POOLE, Chicago, Ill. Filed Aug. 28, 1909. Serial No. 515,016. (Cl. 116—65.)



1. In a speedometer, the combination of a member rotating at a speed proportional to the speed of the shaft to be measured, means for rotating said rotating member, means for determining a constant lapse of time beginning when said member reaches a predetermined position, measuring means definitely associated with said rotating member, and means operable with said timing means for causing the emission of light from said rotating member at the end of said lapse of time, the position of said light on said measuring means indicating the speed at which the shaft is rotated.

2. In a speedometer, the combination of a member rotating at a speed proportional to the speed of the shaft to be measured, means for rotating said rotating member, means for determining a constant lapse of time beginning when said member reaches a predetermined position, measuring means definitely associated with said rotating member and to form a spark gap, an electrical circuit in which said rotating member is included, said circuit being broken by the operation of said timing means at the end of said lapse of time thereby generating a spark between said rotating member and measuring means, the position of said spark relative to said measuring means indicating the speed at which said shaft is rotated.

3. In a speedometer, the combination of an electrically conductive rotating pointer, means for rotating said pointer at a speed proportional to the speed of the shaft to be measured, a member of electrically conductive material associated with said pointer to form a spark gap, means for determining a constant lapse of time, means for ad-

justing said time determining means and restraining it from action until said pointer is in a predetermined position, an electric circuit in which said pointer and its associated member are included, means for closing said circuit, and means associated with said means for determining a constant lapse of time and adapted for opening said circuit at the end of said constant lapse of time thereby generating a spark between said pointer and its associated member, the position of the spark indicating the speed at which said shaft is rotated.

4. In a speedometer, the combination of an electrically conductive rotating pointer, means for rotating said pointer at a speed proportional to the speed of the shaft to be measured, a member of electrically conductive material associated with said pointer to form a spark gap, means for determining a constant lapse of time, means associated with said rotating means and adapted for adjusting said time determining means and restraining it from action until said pointer is in a predetermined position, an electric circuit, a transformer included in said circuit, means connecting the secondary of said transformer with said pointer and its associated member, means for closing said circuit, and means associated with said means for determining a constant lapse of time and adapted for opening said circuit at the end of said constant lapse of time thereby causing a spark to be generated between said pointer and its associated member, the position of the spark indicating the speed at which the shaft is rotated.

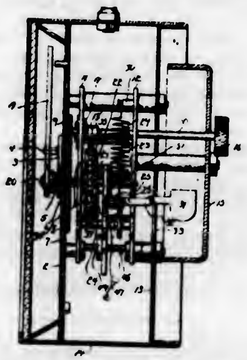
5. In a speedometer, the combination of an electrically conductive rotating pointer, means for rotating said pointer at a speed proportional to the speed of the shaft to be measured, a member of electrically conductive material associated with said pointer to form a spark gap, means for determining a constant lapse of time, means associated with said rotating means and adapted for adjusting said time determining means and restraining it from action until said pointer is in a predetermined position, an electric circuit, a transformer included in said circuit, means connecting the secondary of said transformer with said pointer and its associated member, means for closing said circuit, and means associated with said means for determining a constant lapse of time and adapted for opening said circuit at the end of said constant lapse of time thereby causing a spark to be generated between said pointer and its associated member, and a capacity associated with the circuit connected with the secondary of said transformer, said capacity adapted to render said spark more luminous, the position of the spark indicating the speed at which the shaft is rotated.

[Claims 6 to 25 not printed in the Gazette.]

1,158,282. INTERVAL-TIMER. WILSON E. PORTER, New Haven, Conn., assignor to New Haven Clock Co., New Haven, Conn., a Corporation. Filed Feb. 4, 1915. Serial No. 6,161. (Cl. 58—16.)

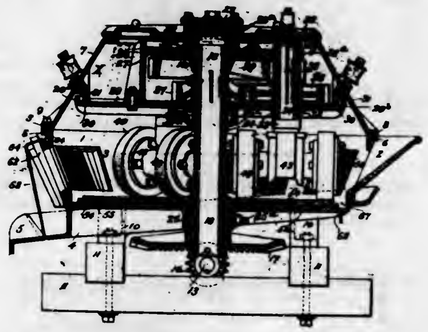
1. In an interval timer, the combination with a dial, of a concentrically pivoted setting-pointer arranged in front of the said dial, manually operable means for setting the said pointer from the back of the timer, a stop-pointer arranged in front of the dial concentric with the said setting-pointer, an escapement-train connected with the stop-pointer, and a manually operable spring-actuated rack co-acting with a member of the escapement-train for driving the same for an interval predetermined by the distance to which the rack is moved in energizing its spring, the said distance being determined by the engagement of the said stop-pointer with the said setting-pointer.

2. In an interval timer, the combination with a dial, of a concentrically pivoted setting-pointer arranged in front of the said dial, manually operable means for setting the said pointer from the back of the timer, a stop-pointer arranged in front of the said dial concentric with the said setting-pointer, an escapement-train connected with the stop-pointer, a manually operable spring-actuated rack co-acting with a member of the escapement-train for driving the said train for an interval predetermined by the distance to which the rack is moved in energizing its spring, the said distance being determined by the engagement of the said stop-pointer with the said setting-pointer; and means carried by the rack for sounding an alarm after the rack has been disengaged from the member of the escapement-train with which it co-acts in driving the same.



3. In an interval timer, the combination with a dial, of a manually operable setting-pointer arranged in front of the said dial and constituting a stop, a stop-pointer also arranged in front of the said dial and movable concentric with said pointer which stops it, an escapement-train connected with the stop-pointer, and a manually operable spring-actuated rack engaging with a pinion of the escapement-train and having an alarm-sounding space at the upper end of its teeth to permit it to be swung for striking an alarm and provided at the upper end of the said space with a stop member engaging with the said pinion for limiting the movement of the said rack.

1,158,283. PULVERIZING-MILL. HENRY URSON PRINDLE, Oakland, Cal. Filed Nov. 25, 1914. Serial No. 873,937. (Cl. 83—45.)



1. In a pulverizing mill of the character described, a pan having a receiving hopper at one side and an annular collecting trough that surrounds the bottom of the pan and discharges at the other side thereof, the said pan having at least one screened outlet in its side wall, a splash plate over the said outlet for directing the "splashings" into the collecting trough, said splash plate including an upper bent end to hook over the respective screen and means for holding said plate against lateral displacement, a shaft vertically mounted in the center of the pan, and pulverizing mechanism within the said pan, operative from the said shaft.

2. In a pulverizing mill of the character described, the combination with a pan, a hollow post that rises centrally from the bottom of the pan; of a power shaft journaled in the center post, an inverted dished shaped cover mounted over the pan, a revolving head carried by the power shaft, and the said head forming the bottom of a chamber in the upper part of the cover, a gear fixedly held on the cover, in axial alinement with the power shaft, a pulverizing element carried on the revolving head, said element including crushing members pendent from the revolving head that engage the bottom of the pan, a shaft that extends up into the chamber in the cover, a traveler gear on the shaft that meshes with the fixedly held gear, another gear on the said last mentioned shaft, and a driver gear on the central shaft that engages the said other gear, the several gears being located within the chamber in the cover, and means for actuating the power shaft.

3. In a pulverizing mill; a pan, and a inverted dish shaped cover mounted thereon, a central hollow post in the pan, the cover having an internal annular bearing flange, a power driven shaft mounted in the hollow post, a rotary head plate carried by the shaft, said plate having a peripheral bearing portion for engaging the internal bearing on the cover, said rotary head plate dividing the space within the cover and pan into an upper and a lower chamber, a vertical spider frame mounted in the revolving head to move therewith, a pulverizing element, which includes crushing members held and operable within the lower or pan chamber, and an actuating shaft that carries the pulverizing elements journaled in the revolving head and the spider frame, a gear fixedly held on the under side of the cover in axial alinement with the power driven shaft, a driving gear on the upper end of the said shaft, a traveler gear on the pulverizing element carrying shaft that meshes with the fixedly held gear, a second gear on the last mentioned shaft that meshes with the driver gear on the power driven shaft, the several power transmission gears being located within the upper or cover chamber.

4. In a pulverizing mill of the character stated; a pan having outlets in its side wall, a feed hopper at one side, a collecting trough externally of the base of the pan that surrounds the pan and inclines downwardly to a discharging outlet, screen frames removably held over the openings in the side of the pan, splash plates pendently and removably hooked over the screen frames, means for removably securing the screen frames and holding the splash plates against lateral displacement and pulverizing mechanism mounted within the pan and including crushing members that travel over the bottom of the pan and means mounted on the pan for imparting movement to the said crushing members.

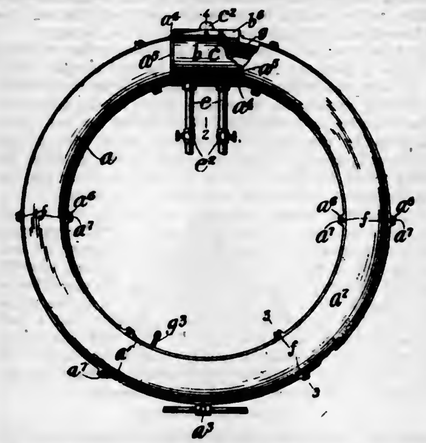
5. In a pulverizing mill, a working element which comprises in combination with the rotatable gear shaft, a driving yoke, a roller head, said roller head and said driving yoke including interprojecting portions, connections between said roller head and said driving yoke, roller spindles carried by said head, crushing rollers mounted on said spindles, said crushing rollers including roller elements proper, roller bearings between said roller elements proper and said spindles, ball thrust bearings for said rollers, and means for incasing said bearings to prevent access of the materials being crushed.

[Claims 6 to 10 not printed in the Gazette.]

1,158,284. MEANS FOR SPLICING THE INNER TUBES OF PNEUMATIC TIRES. HARRY RAFLOVICH, New York, N. Y. Filed Nov. 17, 1914. Serial No. 872,518. (Cl. 18—38.)

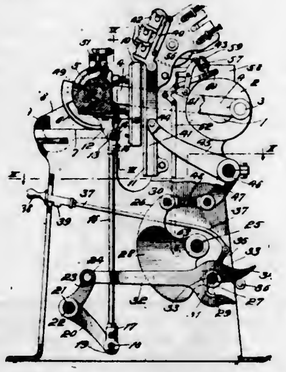
1. In an apparatus of the class described, a tubular circular casing composed of similar parts hinged together at one side, said casing being open at one side, and a vulcanizing member comprising a tubular block adapted to be inserted into said opening and having a central bore which corresponds with the bore of said casing and around which is a steam chamber, said block being also provided on one side thereof with a longitudinal slot or opening which communicates with the central bore thereof, and means for closing said slot or opening.

2. In an apparatus of the class described, a circular, tubular casing composed of separate parts, said casing being open at one side, and a vulcanising device adapted



to be inserted into said opening and provided with a central bore which corresponds with the bore of said casing and around which is a steam chamber.

1,158,285. PRINTING-PRESS. WILLIAM J. RAMSAIER, New York, N. Y. Filed Jan. 20, 1915. Serial No. 3,202. (Cl. 101—16.)



1. A printing press comprising a printing bed, an inking roller carriage, an impression platen, a bridge carrying said platen, rockers on said bridge, ways for said rockers, means for rocking the bridge on the ways for moving the platen to and away from the printing bed, and operating means for connecting the bridge to the inking roller carriage whereby the rocking of the bridge will move the inking roller carriage.

2. A printing press comprising a printing bed, an inking roller carriage, an impression platen, a bridge carrying said platen, rockers on said bridge, ways for said rockers, means for rocking the bridge on the ways for moving the platen to and away from the printing bed, an operating rod connected to the bridge and adapted to be moved vertically as the bridge is rocked, and operating means connecting the said rod to the inking roller carriage whereby the rocking of the bridge will move said carriage.

3. In a printing press the combination of an impression platen, a bridge carrying same, means for rocking said bridge to raise the inner face of said bridge and lower the

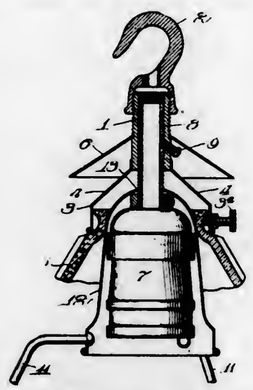
outer face thereof, an inking roller carriage, and operative means connecting said carriage to the bridge whereby the rocking motion of the bridge will move the inking roller carriage, and means for disconnecting the bridge from the inking roller carriage whereby the said carriage may be held stationary during the operation of the bridge.

4. A printing press comprising an inking roller carriage, a bridge, a printing platen carried by said bridge, means for rocking the bridge for the printing operation, means operatively connecting the bridge to the inking roller carriage whereby said carriage will be moved for the inking operation by the vertical movement of a part of the bridge, and means for disconnecting the bridge from the inking roller carriage whereby the said carriage may be held stationary during the operation of the bridge.

5. A printing press comprising a printing bed, an inking roller carriage, a printing platen, a bridge carrying said platen, means for rocking said bridge, means for connecting the bridge to the inking roller carriage, whereby the said carriage will be moved through the operation of the bridge, a throw-off mechanism connected to the bridge for rendering the printing platen inoperative, and a compensating means operated by said throw-off mechanism and automatically maintaining the proper operative relation between the bridge and the carriage operating means.

[Claims 6 to 21 not printed in the Gazette.]

1,158,286. ELECTRIC-LIGHTING FIXTURE. JOHN D. RAYMOND, Chicago, Ill. Filed June 12, 1915. Serial No. 33,638. (Cl. 240—78.)

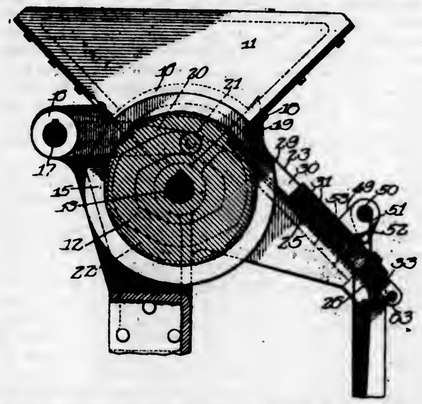


1. In an electric lighting fixture, the combination of a shade-holder having means for detachably connecting a shade thereto, an internally and externally screw-threaded suspending nipple, to the lower end of which the shade-holder is attached, an externally threaded nipple in rotatable engagement with the internal threads of the first nipple, and a lamp socket connected to the lower end of the second nipple.

2. In an electric lighting fixture, the combination of a shade-holder, a shade detachably connected to the shade holder, an internally and externally screw-threaded suspending nipple, to the lower end of which the shade-holder is attached, an externally threaded nipple in engagement with the internal threads of the first nipple, a lamp socket connected to the lower end of the second nipple, a bell supported by the second nipple and surrounding the socket, a bowl and hangers connecting the bowl to the bell.

1,158,287. FEEDING MECHANISM. FRANK B. REDINGTON and MICHAEL J. MILMOE, Chicago, Ill., assignors to F. B. Redington Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 22, 1913. Serial No. 756,088. (Cl. 107—45.)

1. The combination with a hopper, of a grooved rotary drum coöperating therewith adapted to receive sections of material from said hopper in edgewise relation, a delivery plate coöperating with said drum to receive said sections in edgewise relation from said drum and arrange the same in a given order, and a feeding chute coöperatively arranged in connection with said delivery plate for receiving said sections of material in arranged position.



2. The combination with a hopper, of a drum coöperating therewith and having a plurality of peripheral grooves, a delivery plate having a plurality of guiding grooves alined with said drum grooves, and a feeding chute cooperatively arranged in connection with said delivery plate.

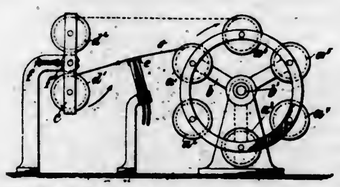
3. The combination with a hopper adapted to contain rectangular sections of material, means for agitating said sections of material in the hopper, a grooved rotary drum for arranging the same on edge, and means for receiving said sections of material from said drum and stacking the same.

4. The combination with a hopper adapted to contain rectangular blocks of material, of vertically reciprocating means within said hopper for agitating the contents thereof gradually arranging said blocks upon edge.

5. The combination with a hopper adapted to contain blocks of material, of an agitator directly engaging the blocks within said hopper for arranging the contents thereof successively upon edge, and a drum for receiving the blocks after being operated upon by the agitator and removing the same from the hopper aforesaid.

[Claims 6 to 35 not printed in the Gazette.]

1,158,288. NOTE-SHEET-CHANGING DEVICE FOR PNEUMATIC MUSICAL INSTRUMENTS. WALTER REICHEL and GUSTAV KARL HANNIG, Böhlitz-Ehrenberg, near Leipsig, Germany, assignors to Ludwig Hupfeld Aktiengesellschaft, Böhlitz-Ehrenberg, near Leipsig, Germany. Filed May 4, 1914. Serial No. 836,214. (Cl. 84—161.)



1. A note sheet changing device for pneumatic musical instruments comprising a carrier, a plurality of rolls of note sheets mounted thereon, a plurality of winding rolls independent of the carrier, and means located between the latter and said winding rolls for controlling the playing of the musical instrument when the note sheet to be played passes over it.

2. A note sheet changing device for pneumatic musical instruments, comprising a rotatable carrier for a plurality of note sheet rolls, an independent movable carrier for a plurality of winding rolls, and a tracker bar located between said carriers for controlling the playing of the musical instrument when a note sheet to be played passes over it.

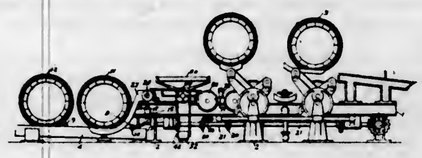
3. A note sheet changing device for pneumatic musical instruments, comprising a rotatable carrier for a plurality of note sheet rolls, a separate rotatable carrier for a plurality of winding up rolls, and a tracker bar located between said carriers for controlling the playing of the musical instrument when a note sheet to be played passes over it.

4. A note sheet changing device for pneumatic musical instruments, comprising a rotatable carrier for a plurality of note sheet rolls, a separate movable carrier for a plurality of winding up rolls, means for locking the latter carrier in operative positions at any time, and a tracker bar located between said carriers for controlling the playing of the musical instrument when a note sheet to be played passes over it.

5. In a note sheet changing device for pneumatically actuated musical instruments, a movable carrier for holding a plurality of note sheet rolls, winding rolls separate therefrom, a tracker bar between the carrier and winding rolls, different note sheet rolls coöperating with different winding rolls.

[Claims 6 to 8 not printed in the Gazette.]

1,158,289. BARREL FEEDING AND ARRESTING DEVICE. HENRY REININGER, New Orleans, La. Filed July 3, 1913. Serial No. 777,228. (Cl. 141—6.)



1. In a device of the character described, a frame, a laterally movable skid, and a pair of guiding members arranged on opposite sides of said laterally movable skid for guiding the barrel arranged on said skid so as to center said barrel.

2. In a device of the character described, a frame, a stationary skid arranged on said frame, a movable skid arranged on said stationary skid, said movable skid being adapted to move transversely of said frame, and means arranged on each side of said frame for engaging a barrel on said movable skid for moving the barrel and skid transversely of the frame so as to center the barrel previous to its discharge from said skid.

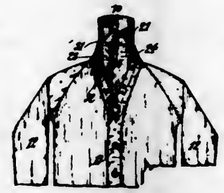
3. In a device of the character described, a frame, a transversely movable skid arranged on said frame, a pivotally mounted lever having one end loosely engaging said skid, a weight arranged on the opposite end of said lever whereby said lever is normally held in a vertical position whereby when said skid is moved from a central position the same will automatically move back to said central position when released, and means acting against the ends of barrels on said skid for causing the barrels to move transversely of said frame in order to be centered previous to their discharge from the skid.

4. In a device of the character described, a frame, a stationary skid arranged on said frame, said stationary skid being formed with a pair of transversely extending tracks, rollers arranged on said transversely arranged tracks, a movable skid supported by said rollers, an automatically actuated centering device for said movable skid, said stationary skid and said movable skid being inclined, and means acting on said barrels for moving the same transversely of said frame while on said movable skid, said movable skid permitting a free transverse movement of the barrels so that the same may be properly centered.

5. In a device of the character described, a frame, a laterally movable skid arranged on said frame, means acting on barrels arranged on said skid for centering the same, said skid permitting a free movement of the barrels, said centering means including a pair of contacting members, pivotally mounted frames supporting said contact members, and means for adjusting said frame transversely of said first mentioned frame.

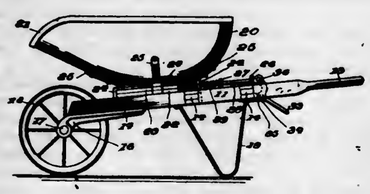
[Claims 6 and 7 not printed in the Gazette.]

1,158,290. SWEATER. DANIEL RHEINAUER, New York, N. Y. Filed July 2, 1914. Serial No. 848,557. (Cl. 2—62.)



A knit garment comprising a body having a V-shaped neck opening, a knit band along said opening, said band being provided on its inner face adjacent to said opening with a tape carrying a series of fastener members, a detachable endwise reversible collar having a concave inner edge and provided along said concave inner edge with a tape carrying a series of complementary fastener members adapted to engage said fastener members of the body in either endwise position of said collar; said detachable collar being adapted when disposed so that its fastener members are along its upper edge to form an inner cape inclosed within said body, the garment then having the appearance of a coat sweater or when reversed endwise and disposed with its fastener members along its lower edge as a standing or turnover collar, and fastening devices for the ends of the collar adapting it to serve as a choker in standing position comprising buttons disposed centrally of one end member on the outer face thereof and loops at the edge of the other end member adapted to engage said buttons.

1,158,291. WHEELBARROW. MERRILL O. RICKARDS, Falls City, Nebr. Filed Dec. 3, 1914. Serial No. 875,278. (Cl. 21—68.)



1. A vehicle of the character described comprising a support, a base member mounted upon said support and having a recess in one edge, a member mounted for rotation upon said base member and having a plurality of marginal recesses registering one at a time with the recess of the base, a plurality of guide clips carried by said base member and engaging said rotative member, one of said clips having a guideway, a load receiving tray connected to said rotative member, and a spring pressed bolt operating through the guideway of said clip and engaging the registering recess of the base and the rotating member.

2. A vehicle of the character described comprising a support, an annular base member, an annular member mount-

ed for rotation upon said annular base member, a plurality of guide clips carried by said annular base member and engaging said annular rotative member, a load receiving tray connected to said rotative annular member, and means for locking said rotative member to said base member.

1,158,292. COMBINATION SAND-PUMP AND BAILER. CLARK F. RIGBY, Butler, Pa. Filed Apr. 17, 1914. Serial No. 832,480. (Cl. 166—19.)



1. In a sand pump, the combination of telescoping cylinders adapted to removably enter a well, the lowermost cylinder having a fluid inlet, a valve for the inlet, the lower end of the upper cylinder constituting a piston for the lower cylinder, an upwardly opening valve controlling the passage of fluid into the upper cylinder, and an operative connection between the upper cylinder section and the valve for the lower cylinder inlet for closing said valve when the upper cylinder is in elevated position.

2. The combination of telescoping pump-cylinder forming sections, the lower section having an inlet and the upper section constituting a piston, a valve for the inlet, valve actuating means, the lower end of the piston-forming section having a fluid inlet and a valve for said inlet.

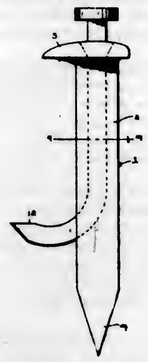
3. The combination of telescoping pump-cylinder forming sections, the lower section having an inlet and the upper section constituting a piston, a valve for the inlet, valve actuating means, a ported head closing the lower end of the upper section, an upwardly opening valve closing the ported head and having a stem depending through the head with a stop on the stem for limiting the opening movement of the valve.

4. The combination of telescoping pump-cylinder forming sections, the lower section having an inlet, an upwardly closing valve for the inlet, a headed rod extending upwardly from the valve, a ported piston head carried by the upper cylinder section with said rod extending upwardly through the piston head and with the latter adapted to engage the rod head and seat the valve when the sectional cylinder is expanded, and an upwardly opening valve for the piston head.

5. The combination of telescoping pump-cylinder forming sections, the lower section having an inlet, an upwardly closing valve for the inlet, a headed rod extending upwardly from the valve, a ported piston head carried by the upper cylinder section, an upwardly opening check valve for said head, a tubular stem depending from the check valve through the head with the headed rod extending upwardly through the valve stem and with the stem adapted to be engaged by the said upwardly seating valve for opening the check valve, the valved piston head adapted to engage the rod head and seat the upwardly closing valve when the sectional cylinder is expanded.

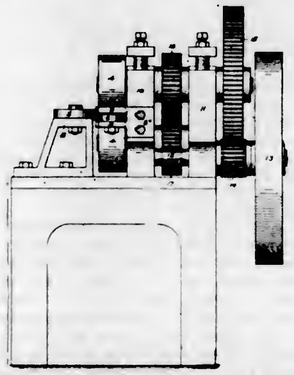
[Claims 6 and 7 not printed in the Gazette.]

1,158,293. RAILROAD-SPIKE. MARVIN C. ROBERTS and HUBERT J. CULLUM, Franklin, Ill. Filed Jan. 25, 1915. Serial No. 4,301. (Cl. 85—23.)



A locking spike including a spike body having a central axial passage formed therein, the upper end of the passage being enlarged to form a countersink, the body being provided with an arcuate passage and an aperture, said arcuate passage connecting the aperture with the axial passage, a lock arranged to be driven into the axial and arcuate passages and out through the aperture, a frusto pyramidical head formed on the lock arranged to engage the inclined faces of the upper end of the passage to form a water tight joint between the lock and the spike and prevent the lock from rusting in the spike, a shank formed on the frusto pyramidical head and a head on the shank.

1,158,294. SHEET-METAL-HOOP-FORMING MACHINE. EDWARD W. ROBINSON, Savannah, Ga., assignor to International Barrel Company, Savannah, Ga., a Corporation of Georgia. Filed Jan. 7, 1915. Serial No. 946. (Cl. 153—2.)



1. In a machine for producing a hoop blank from a straight strip of angular cross section, the combination of a pair of press rolls acting upon one of the flanges of the strip and approaching one another more closely at the free edge of the flange than at the other portion of the same, and a bearing roller contacting with that member of the strip which is at an angle to the flange first mentioned.

2. In a machine for producing a hoop blank from a straight strip of angular cross section, the combination of a pair of press rolls acting upon one of the flanges of the strip and approaching one another more closely at the free edge of said flange than at the other portion of the same, and a guide and support roller located in advance of the press rolls and occupying the angle between the flange first mentioned and the member of the strip which is at an angle thereto.

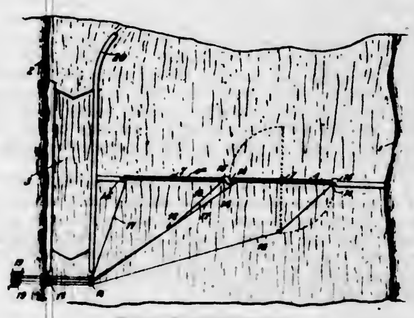
3. In a machine for producing a hoop blank from a straight strip of angular cross section, the combination of a pair of press-rolls acting upon one of the flanges of the strip and approaching one another more closely at the free edge of said flange than at the other portion of the same, and a guide and support roller located in the rear of the press rolls and occupying the angle between the flange first mentioned and the member of the strip which is at an angle thereto.

4. In a machine for producing a hoop blank from a straight strip of angular cross section, the combination of a pair of press rolls acting upon one of the flanges of the strip and approaching one another more closely at the free edge of said flange than at the other portion of the same, and a guide and support roller located in the rear of the press rolls and occupying the angle between the flange first mentioned and the member of the strip which is at an angle thereto, said roller being adjustable laterally to compensate for difference in the degree of curvature imparted to the strip.

5. In a machine for producing a hoop blank from a straight strip of angular cross section, the combination of a pair of press rolls acting upon one of the flanges of the strip and approaching one another more closely at the free edge of said flange than at the other portion of the same, and guide and support rollers one located in advance of the press rolls and the other in the rear of the same, said rollers occupying the angle between the flange first mentioned and the member which is at an angle thereto.

[Claims 6 to 9 not printed in the Gazette.]

1,158,295. CONSTANT-LEVEL-CONTROLLING DAM FOR CANAL-LOCKS. FRANCISCO ALEJANDRO RODRIGUEZ, Montevideo, Uruguay. Filed Feb. 26, 1914, Serial No. 821,155. Renewed Sept. 15, 1915. Serial No. 50,903. (Cl. 61—4.)

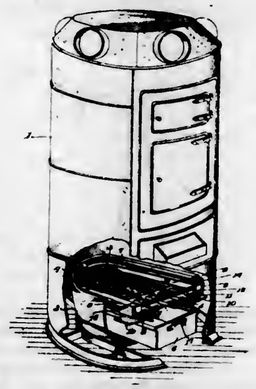


1. In a level controlling dam for a river, the combination of abutments spaced apart to permit boats to pass, a stationary vertical shaft disposed between the abutments and between which and either abutment boats can pass, and a gate mounted on the shaft and having its ends engaged with the abutments when the gate is in closed position, whereby the pressure on the closed gate is withstood by the shaft and one of the abutments, and means connected with the gate for moving the same to and from open position.

2. In a level controlling dam for a river, the combination of abutments spaced apart to permit boats to pass, a stationary vertical shaft disposed between the abutments and between which either abutment boats can pass, a gate mounted on the shaft and having its ends engaged with the abutments when the gate is in closed position, whereby the pressure on the closed gate is withstood by the shaft and one of the abutments, a cable connected with the bottom of the gate at one side of the turning axis for closing the gate, a cable connected with the bottom of the gate and at the opposite side of the axis for opening the gate, and means connected with the cables for drawing in one cable while paying out the other.

3. In a level controlling dam for a river, the combination of a plurality of abutments spaced transversely of the river and the river being open for navigation between the abutments, a stationary shaft located between each pair of adjacent abutments, a gate pivoted on each shaft to swing in a horizontal plane, the gates when closed being engaged with the abutments, a pair of cables connected with each gate respectively at opposite sides of its turning axis, whereby one cable effects the opening and the other the closing of the gate, and mechanism for simultaneously drawing in on one set of cables and paying out the other set, whereby the gates are simultaneously opened or closed.

1,158,296. ASH-PAN AND APRON FOR FURNACES. HENRY I. ROGERS, Fort Fairfield, Me. Filed July 20, 1915. Serial No. 40,959. (Cl. 126—242.)



1. An ash-pit provided with a grate rest, longitudinally disposed aprons at the sides of the ash-pit inclining inwardly and downwardly toward their lower edges, and mountings secured to the aprons and having portions extending over the grate rest and other portions projecting outwardly to engage the side walls of the pit and space the aprons therefrom.

2. In an ash-pit, oppositely disposed longitudinal aprons inclining inwardly and downwardly toward their lower edges, and mountings attached to the upper portions of the aprons and having upper and lower outwardly directed portions engaging the side walls of the pit to properly support and space the said aprons therefrom.

3. An ash-pit having an inwardly extending ledge, a grate rest disposed with the inner portion of the ledge extending thereover, oppositely disposed aprons having their lower portions extending inwardly and downwardly and mountings for such aprons attached thereto and comprising upper and lower outwardly extending portions to properly support and space the aprons and embodying inwardly extending portions to overlap the grate rest.

4. In combination, an ash-pit, a grate rest disposed within the upper portion of the ash pit, oppositely disposed aprons comprising lower portions inclining inwardly and downwardly and upper portions embodying vertical and lateral parts, the vertical parts of the apron extending along the outer edges of the grate rest and the lateral parts extending outwardly and engaging the side walls of the ash-pit, and mountings for the aprons, each comprising an inclined portion, a vertical portion, upper and lower outwardly extending portions and an inner extension to overlap the grate rest.

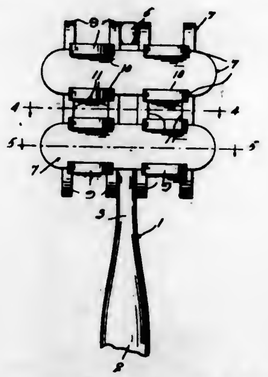
1,158,297. FOOD COMPOUND. HUBER H. ROOT, Medina, Ohio. Filed Jan. 2, 1914. Serial No. 810,017. (Cl. 99—11.)

1. A food compound in the form of an article of manufacture consisting of a mixture of ground peanuts and honey.

2. A food compound in the form of an article of manufacture consisting of a mixture of ground peanuts and honey, the honey and peanuts proportioned substantially as described.

3. A food compound in the form of an article of manufacture, consisting of a mixture of ground peanuts and honey, the elements being in the proportion of two parts of the peanut element to one of the honey element.

1,158,298. RATTLE. JOHN A. RYAN, Hot Springs, S. D., assignor of one-half to James W. Aldridge, Hot Springs, S. D. Filed July 16, 1915. Serial No. 40,294. (Cl. 46—46.)



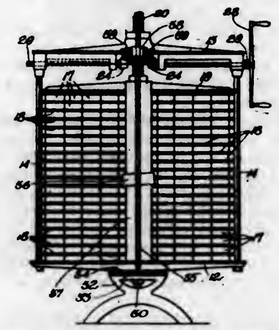
1. A rattle comprising a head formed of a plurality of interlocking strips, said strips providing, when in their interlocked position a plurality of chambers, balls within the chambers and a handle secured to the head and provided with a tongue engaging between two of the strips and thereby being held against movement with relation to the head.

2. A rattle of the character described comprising a head formed of a plurality of interlocking strips, the whole forming a cube in general apeparance and chambers formed at each corner of the cube, the walls of the chambers forming sounding boards and means within the chambers to be impinged against the walls when the rattle is shaken to cause a sound.

1,158,299. HEEL-PRESS. CHARLES O. RYBERG, Brockton, Mass., assignor to Campello Nailless Heel Company, a Copartnership comprising Oscar T. Benson, Salem R. Johnson, and Charles O. Ryberg. Filed Sept. 17, 1914. Serial No. 862,196. (Cl. 100—57.)

1. A press comprising a frame composed of two horizontal bed members, two horizontal top members located above the bed members, upright standards connecting said bed and top members, and a vertical partition subdividing the frame into two oppositely facing storage spaces, the bottoms of which are formed by the bed members, the opposite faces of said partition forming guides to aline edge portions of the articles stacked in said spaces, press platens movable in said spaces and devices carried by said platens and top members for operating the platens.

2. A press comprising a frame composed of two horizontal bed members, two horizontal top members located above the bed members, upright standards connecting said bed and top members, and a vertical partition subdividing the frame into two oppositely facing storage spaces, the bottoms of which are formed by the bed members, the opposite faces of said partition forming guides to aline edge portions of the articles stacked in said spaces, nuts journaled in the top members and located at opposite sides of said partition, means carried by the top members for rotating said nuts, and press platens movable in said spaces and provided with threaded stems engaging said nuts.



3. A press comprising a frame composed of two horizontal bed members, two horizontal top members located above the bed members, upright standards connecting said bed and top members, and a vertical partition subdividing the frame into two oppositely facing storage spaces, the bottoms of which are formed by the bed members, the opposite faces of said partition forming guides to aline edge portions of the articles stacked in said spaces, nuts journaled in the top members and located at opposite sides of said partition, said nuts being provided with gears, and shafts journaled in the top members and having gears meshing with the gears on the nuts.

4. A press comprising a frame composed of two horizontal bed members, two horizontal top members located above the bed members, upright standards connecting said bed and top members, and a vertical partition subdividing the frame into two oppositely facing storage spaces, the bottoms of which are formed by the bed members, the opposite faces of said partition forming guides to aline edge portions of the articles stacked in said spaces, press platens movable in said spaces, devices carried by said platens and top members for operating the platens, and upright abutment rods secured to and extending between the central portions of the said bed and top members, and located at the outer sides of said spaces, each rod being adapted to coöperate with removable devices for securing a stack of heels in the corresponding storage space.

5. A press having a single continuous vertical partition the opposite faces of which form guiding surfaces against which articles may be stacked with edge portions in alinement, means for holding stacked articles under pressure with rear edge portions against said partition, and movable abutments to bear against front edge portions of articles while under pressure.

1,158,300. CONTINUOUS BRAKING SYSTEM APPLICABLE TO LONG FREIGHT-TRAINS WITH LOOSE COUPLINGS. CHARLES HYACINTHE VICTOR SABOURET, Paris, France. Filed Sept. 6, 1911. Serial No. 647,880. (Cl. 188—14.)



1. A system of continuous braking for long freight trains, comprising an inlet casing for the motive fluid coupled in the main brake pipe and dividing the train into two sections; a check valve arranged in said casing and opening toward the rear thereof; an exhaust casing for the motive fluid structurally separate from the inlet casing and disposed at one side thereof, said inlet and exhaust casings being in communication with each other; and a differential valve arranged in said exhaust casing.

2. A system of continuous braking for long freight trains comprising a valve casing coupled in the main brake pipe and dividing the train into two sections, a check valve movable in said casing and opening toward the rear part of said pipe, a cylindrical casing communicating with the first-named casing in front of and behind said check valve, and a differential valve movable in said cylindrical casing and consisting of a pair of connected disks having different surface areas, the said cylindrical casing having an outlet opening which communicates directly with the atmosphere and which is capable of communicating with the first-named casing at the rear of the check valve.

3. A system of continuous braking for long freight trains comprising a valve casing coupled in the main brake pipe and dividing the train into two sections, a check valve movable in said casing and opening toward the rear part of said pipe, a cylindrical casing having a relatively large internal chamber communicating by a narrow passage with the first-named chamber in front of said check valve and an outlet opening which communicates directly with the atmosphere and which is capable of communication with said first-named chamber at the rear of said check valve, and a differential valve movable in the second-named casing between said passage and said outlet and consisting of a pair of connected disks having different surface areas.

4. A system of continuous braking for long freight trains comprising a valve casing coupled in the main brake pipe and dividing the train into two sections, a check valve movable in said casing, a casing communicating with the first-named casing, and a differential valve movable in the second-named casing.

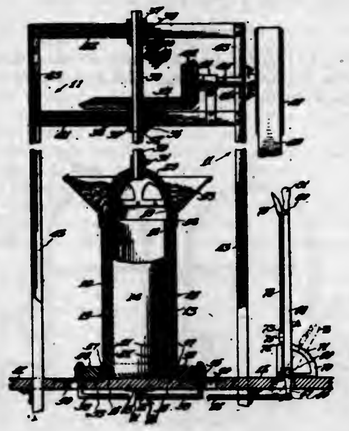
5. A system of continuous braking for long freight trains, comprising an inlet casing for the motive fluid coupled in the main brake pipe and dividing the train into two sections; a check valve arranged in said casing and opening toward the rear thereof; an exhaust casing for the motive fluid structurally separate from the inlet casing and disposed at one side thereof; and a differential valve arranged in said exhaust casing and embodying spaced front and rear members and a connection between them, said inlet and exhaust casings being in communication with each other both in advance of both said check valve and of the front member of said differential valve, and also in rear of said check valve and between the members of said differential valve.

1,158,301. CONCRETE-PIPE MACHINE. ALBERT H. SANDERS and OLLIE HOOD, Glendora, Cal. Filed Dec. 7, 1914. Serial No. 875,980. (Cl. 25—36.)

1. A machine for forming concrete pipe comprising an inner form, an outer form, a series of rollers between said forms, an intermediate cylinder between said forms, shoes having a feeding plane on the forward end thereof, means for pivoting each of said rollers in one of said shoes, means for feeding concrete into the space between said forms, and means for rotating said cylinder.

2. A machine for forming concrete pipe comprising an inner form, an outer form, a series of rollers between said forms, an intermediate cylinder between said forms, shoes having a feeding plane on the forward end thereof, means for pivoting each of said rollers in one of said shoes, a feeding hopper so placed that it can feed concrete into the space between said forms, and means for rotating said cylinder.

3. A machine for forming concrete pipe comprising an inner form, an outer form, a series of rollers between said forms, an intermediate cylinder between said forms, shoes having a feeding plane on the forward end thereof, means for pivoting each of said rollers in one of said shoes, means for feeding concrete into the space between said forms, a stem secured axially to the top of said cylinder, and means for rotating said stem.

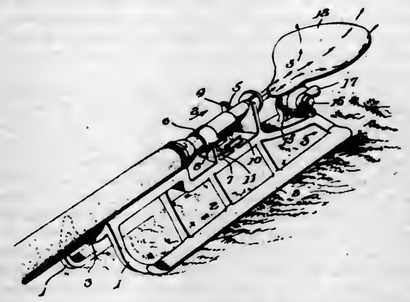


4. A machine for forming concrete pipe comprising an inner form, an outer form, a series of rollers between said forms, an intermediate cylinder between said forms, shoes having a feeding plane on the forward end thereof, means for pivoting each of said rollers in one of said shoes, a feeding hopper so placed that it can feed concrete into the space between said forms, a stem secured axially to the top of said cylinder, and means for rotating said stem.

5. A machine for forming concrete pipe comprising an inner form, an outer form, a series of rollers between said forms, an intermediate cylinder between said forms, shoes having a feeding plane on the forward end thereof, means for pivoting each of said rollers in one of said shoes, means for feeding concrete into the space between said forms, a square stem secured axially to the top of said cylinder, a nut through which said square stem can slide axially, and means for rotating said nut.

[Claims 6 to 9 not printed in the Gazette.]

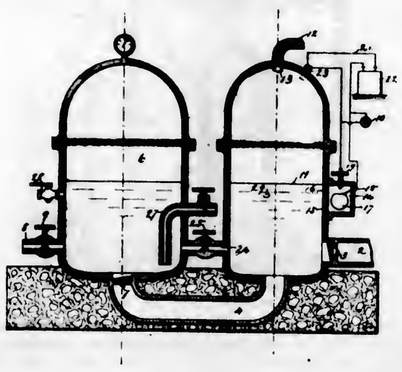
1,158,302. SPRAYING ATTACHMENT FOR HOSE-NOZZLES. ALONZO J. SARGENT, Jackson, Mich. Filed Jan. 13, 1915. Serial No. 2,028. (Cl. 137—57.)



A spraying attachment for hose nozzles, the same comprising an arch-shaped body formed with longitudinal runners and having its forward portion depressed and having front and rear longitudinally spaced raised portions depressed in their upper sides to form nozzle receiving seats, and having an upstanding ear intermediate the raised portions and to one side of a medial line, a body pivoted to the said ear and adapted to extend over the

nozzle, a spring exerting a pressure upon the body to cause it to clamp the nozzle and a spreader pivoted to the forward depressed portion of the body and adjustable to any angle within a given range of movement.

1,158,303. INTERNAL-COMBUSTION PUMP. WILLIAM SCHAFER, San Francisco, Cal. Filed Feb. 12, 1914. Serial No. 818,260. (Cl. 160—1.)



1. An explosion pump having explosion and pressure chambers, a main conduit from the explosion to the pressure chamber, a non-return valve therein, a restricted return conduit therebetween and means for igniting each new charge, means, dependent on the pressure in the explosion chamber, for rendering said igniting means operative, the discharge opening from the pressure chamber being less than the opening thereinto of the main conduit.

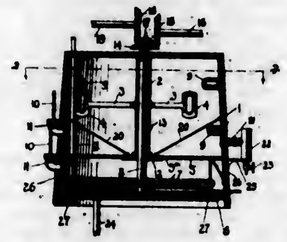
2. An explosion pump having explosion and pressure chambers, a main conduit from the explosion to the pressure chamber, a non-return valve therein, a restricted return conduit therebetween, means for igniting each new charge, means, dependent on the pressure in the explosion chamber, for rendering said igniting means operative, and means for variably restricting the size of the discharge opening from the pressure chamber.

3. An explosion pump having explosion and pressure chambers, a main conduit from the explosion to the pressure chamber, a non-return valve therein, a continuously open restricted return conduit therebetween, means for igniting each new charge, and means, dependent on the pressure in the explosion chamber, for rendering said igniting means operative, the discharge opening from the pressure chamber being less than the opening thereinto of the main conduit.

4. An explosion pump having explosion and pressure chambers, a main conduit from the explosion to the pressure chamber, a non-return valve therein, a restricted return conduit therebetween, means for varying the capacity of said conduit, means for igniting each new charge, and means, dependent on the pressure in the explosion chamber, for rendering said igniting means operative, the discharge opening from the pressure chamber being less than the opening thereinto of the main conduit.

5. In an apparatus of the character described, the combination of a chamber, a partition dividing said chamber, an upwardly closing non-return valve in said partition, a water jacket surrounding said upper portion, an ignition device in the upper portion thereof, a conduit for conducting a combustible mixture into the upper portion thereof, a liquid inlet conduit entering the lower portion thereof, a non-return valve in said water conduit, a pressure equalizing chamber, a discharge outlet therefrom, a conduit connecting the lower portion of the first-named chamber with said pressure equalizing chamber, a conduit having a contracted passage therethrough and connecting the two chambers through said water jacket, and means actuated by the rise of the liquid in said first-named chamber for actuating said igniting device.

1,158,304. APPARATUS FOR DISSOLVING AND TREATING VEGETABLE TANNING EXTRACTS. EMIL SCHAUB, Weehawken, N. J., assignor to Paul Volges, New York, N. Y. Filed Mar. 2, 1914, Serial No. 822,106. Renewed Feb. 26, 1915. Serial No. 10,818. (Cl. 167—4.)

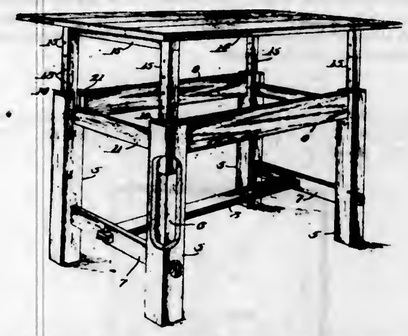


1. Apparatus for treating extracts for tanning purposes of the character described comprising a casing, a vertical, rotary, central axle within said casing rotating in one direction, a sleeve surrounding said axle and rotating in the opposite direction, means supported in said casing and surrounding the lower end of said sleeve and adapted to support the extracts to be treated, agitators above said extract supporting means secured to said sleeve, agitators below said extract supporting means secured to said axle, means for heating the contents of said casing, means for assisting in the agitation, means for rotating said axle and said sleeve in opposite directions, and means for sampling said solution.

2. Apparatus for treating extracts for tanning purposes of the character described comprising a cylindrical casing, a vertical, rotary, central axle within said casing rotating in one direction, a sleeve surrounding said axle and rotating in the opposite direction, a perforated plate supported in said casing and loosely surrounding with a cylindrical bushing the lower end of said sleeve and adapted to support the extracts to be treated, agitators secured to said sleeve above said plate comprising agitating arms with perforated agitating wings at their outer ends, agitators secured to said axle below said plate, means for heating the contents of said casing, perforated wings at the inner walls of said casing for assisting the agitation, bevel gears upon the outer ends of said sleeve and said axle operating for rotating the same in opposite directions, and means for sampling the solution,

3. Apparatus for treating extracts for tanning purposes of the character described comprising a conical casing, a vertical, rotary, central axle within said casing, rotating in one direction, a sleeve surrounding said axle and rotating in the opposite direction, a perforated plate supported in said casing by standards and brackets and loosely surrounding with a cylindrical bushing below the lower end of said sleeve and adapted to support the extracts to be treated, agitators secured to said sleeve above said plate, consisting of agitating arms carrying perforated agitating wings at their extreme outer ends, agitators secured to said axle below said plate, a heating serpentine coil for heating the contents of said casing and supported above the bottom of the same, perforated wings at the inner walls of said casing for assisting the agitation, bevel gears upon the upper ends of said sleeve and said axle adapted to be operated by bevel gears upon driving shafts for rotating the sleeve and the axle in opposite directions, thermometers at the outside of the casing in pipe stems extending through the wall of said casing above and below said plate, a valve controlled sampler on one side of said casing for permitting a sampling of the solution, and means for removing the residue.

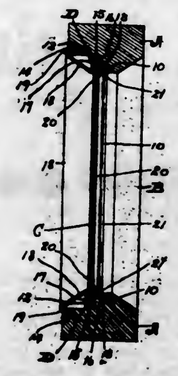
1,158,305. LABORATORY-TABLE. EMIL W. SCHMELING, Rockford, Ill. Filed Jan. 29, 1915. Serial No. 5,040. (Cl. 45—111.)



1. A table comprising a top, legs, rails having dovetailed connection at their ends with the upper ends of the legs, certain of said rails being formed of separable upper and lower sections, the upper rail sections being fixedly connected to the underside of the table-top, vertically disposed slide-members fixedly connected to each upper rail section and being arranged to slidingly coöperate with the legs whereby the table-top is adjustably mounted vertically on the legs, and means for holding the slide-members in adjusted position.

2. A table comprising a top, legs, side rails having dovetailed connection at their ends with the upper ends of the legs, and rails formed of separable upper and lower sections having dovetailed connection with the legs, but removable vertically with respect thereto, and said upper sections being fixedly connected to the under side of the table-top and at their ends loosely fitting in slots in the upper ends of the legs, so as to be freely movable vertically with respect to the legs vertically disposed slide-members connected rigidly to the said upper sections whereby the slide-members are rigidly connected to the table-top, the legs being constructed to slidingly receive said slide-members whereby the table-top is adjustably mounted vertically on said legs, and means for holding the slide-members in adjusted position.

1,158,306. PANE-FASTENING MEANS FOR WINDOW-SASHES. FRANK H. SCHMID, Rocky River, Ohio. Filed Apr. 12, 1915. Serial No. 20,691. (Cl. 20—56.4.)



1. In a window-sash, the combination, with a sash-frame comprising top and bottom members and side members, each frame-member being provided at the inner edge of the sash with a groove extending longitudinally of said frame-member, said frame-member being also provided at said edge of the sash and between said groove and the outer face of the sash with a laterally and outwardly facing shoulder, and a pane of glass arranged internally of the sash-frame between the outer face of the sash and the shoulders of the members of said frame, of pane-fastening strips arranged at and extending longitudinally of the edges of said pane, each strip comprising a body-portion which is U-shaped in cross-section and has its central member arranged opposite and extending longitudinally of the adjacent edge of the pane and has opposite side members thereof overlapping the inner side and the outer side respectively of the pane, the outer side member of the body-portion of each strip being provided with a flange which terminates at the outer face of the sash in a lip projecting into the sash-frame, and the inner side member of said body-portion terminating in a lip which projects into the aforesaid groove in the adjacent member of the sash-frame.

2. In a window-sash, the combination, with a sash-frame comprising top and bottom members and side members, each frame-member being provided at the inner edge of the sash with a laterally and outwardly facing shoulder, and a pane of glass arranged internally of the sash-frame between the outer face of the sash and the shoulders of the members of said frame, of pane-fastening strips arranged at and extending longitudinally of the edges of said pane, each strip comprising a body-portion which is U-shaped in cross-section and has its central member arranged opposite and extending longitudinally of the adjacent edge of the pane and has opposite side members thereof overlapping the inner side and the outer side respectively of the pane, the outer side member of the body-portion of each strip being provided with a flange which terminates in a lip projecting into the sash-frame, and the inner side member of said body-portion terminating in a lip which projects into the sash-frame toward the outer edge of the sash and in the direction of the inner face of the sash.

3. In a window-sash, the combination, with a sash-frame comprising top and bottom members and side members, each frame-member being provided at the inner edge of the sash with a groove arranged centrally between the inner face and outer face of the sash and extending longitudinally of said frame-member, said frame-member being also provided at the inner edge of the sash and between said groove and the outer face of the sash with a laterally and outwardly facing shoulder and having a guiding surface between said shoulder and said groove, said shoulder and said surface extending longitudinally of said frame-member, and a pane of glass arranged internally of the sash-frame between the outer face of the sash and the shoulders of the members of said frame, the shoulder of each frame-member being parallel with the pane and the aforesaid guiding surface of said frame-member being arranged at an angle to but facing the pane and sloping from said shoulder toward the aforesaid groove in said frame-member, of sheet-metal pane-fastening strips arranged at and extending longitudinally of the edges of said pane, each strip comprising a body-portion which is U-shaped in cross-section and has its central member arranged opposite and extending longitudinally of the adjacent edge of the pane and has opposite side members thereof overlapping the inner side and the outer side respectively of the pane, the outer side member of the body-portion of each strip being provided with a flange which terminates in a lip projecting into the sash-frame, and the inner side member of said body-portion extending across the aforesaid guiding surface of the adjacent member of the sash-frame and terminating in a lip which projects into the aforesaid groove in said frame-member.

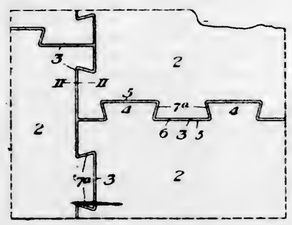
4. In a window-sash, the combination, with a sash-frame comprising top and bottom members and side members, each frame-member being provided at the inner edge of the sash with a laterally and outwardly facing shoulder, and a pane of glass arranged internally of the sash-frame between the outer face of the sash and the shoulders of the members of said frame, of sheet-metal pane-fastening strips arranged at and extending longitudinally of the edges of said pane, each strip comprising a body-portion which is U-shaped in cross-section and has its central member ar-

ranged opposite and extending longitudinally of the adjacent edge of the pane and has opposite side members thereof overlapping the inner side and the outer side respectively of the pane, the outer side member of the body-portion of each strip being provided with a flange which extends longitudinally of said strip and terminates at the outer face of the sash in a lip which projects into the sash-frame toward the outer edge of the sash and in the direction of the inner face of the sash, and the inner side member of said body-portion terminating in a lip which projects into the sash-frame toward the outer edge of the sash and in the direction of the inner face of the sash.

5. In a window-sash, the combination, with a sash-frame comprising horizontal top and bottom members and vertically arranged side members, each frame-member being provided at the inner edge of the sash with a laterally and outwardly facing shoulder, and a pane of glass arranged internally of the sash-frame between the outer face of the sash and the shoulders of the members of said frame, of sheet-metal pane-fastening strips arranged at and extending longitudinally of the edges of said pane, each strip comprising a body-portion which is U-shaped in cross-section and has its central member arranged opposite and extending longitudinally of the adjacent edge of the pane and has opposite side members thereof overlapping the inner side and the outer side respectively of the pane, the inner side member of the body-portion of each strip terminating in a lip which projects into the sash-frame, and the central members of the body-portions of the pane-fastening strips which extend along the side edges of the pane extending between the side members of the body-portions of the pane-fastening strips which extend along the top and bottom edges of the pane.

[Claims 6 and 7 not printed in the Gazette.]

1,158,307. WELDED JOINT. LAWRENCE S. SCHMIDT, Coraopolis, Pa., assignor of one-half to Roscoe T. McCormick, Irwin, Pa. Filed Dec. 15, 1914. Serial No. 877,372. (Cl. 29—187.)



1. A welded joint in which the parts united by the weld have interfitting portions extending across the general line of the joint, and an interposed filling material between and welded to the adjacent edges of said portions, substantially as described.

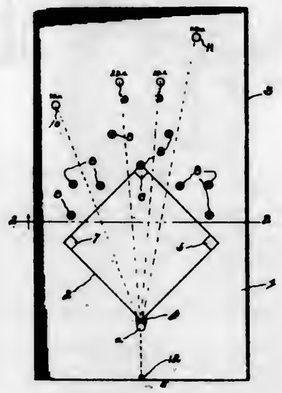
2. A welded joint in which the parts united by the weld have interfitting portions extending across the general line of the joint, and an interposed filling material extending continuously between and welded to the adjacent edges of said portions, substantially as described.

3. A welded joint in which the parts united by the weld have interfitting portions extending across the general line of the joint, and an interposed filling material between and welded to the adjacent edges of said portions, said interfitting portions having complementary dovetailed or undercut edges, substanitally as described.

4. A welded joint in which the parts united by the weld have interfitting portions extending across the general line of the joint, and an interposed filling material between and welded to the adjacent edges of said portions, the edges of said interfitting portions being scarfed to form trough-like cavities for the reception of said filling material, substantially as described.

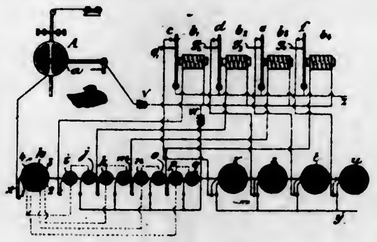
5. A butt-welded joint in which the united edges of the parts have interfitting portions extending across the general line of the joint, said portions being initially separated from each other and united by a filling material which fills the space between and is welded to said edges, said interfitting recesses and projections being dovetailed, substantially as described.

1,158,308. GAME-BOARD. WILLIAM F. SCHNELLHARDT, Seattle, Wash. Filed Jan. 9, 1915. Serial No. 1,426. (Cl. 46—61.)



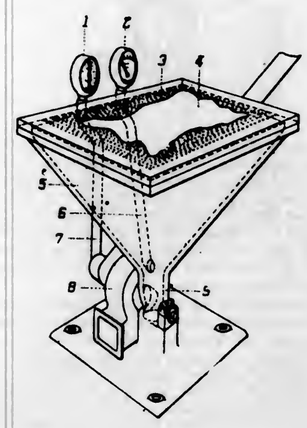
The herein described game board having a marginal wall secured to both sides and back thereof and an open front, a diamond represented upon said board, a number of spots outside the diamond produced in red, red checkers to cover said spots, a series of white spots in the outer field of said board having indicating marks of certain features of the play to be covered by white checkers, and an operating checker to be flipped by the finger of the player to contact with a checker representing the baseball to be driven out into the field for counting.

1,158,309. TRANSMITTER FOR WIRELESS TELEGRAPHY. CARL SCHOU, Holte, Denmark. Filed Jan. 12, 1914. Serial No. 811,726. (Cl. 177—380.)



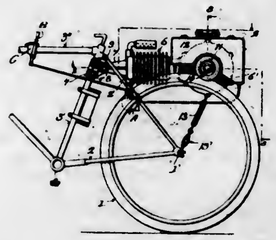
In an apparatus for transmission of telegraphic signals a plurality of relays each having a spring actuated armature adapted to be retained by residual magnetism and to be released by relatively weak currents, a source of electricity, a number of contact making elements adapted to connect the said relays with the said source of electricity, a transmitter mechanically connected to the said contact making elements, and a distributing device mechanically connected to the said transmitter and adapted to distribute signal currents from the said transmitter over the said relays.

1,158,310. APPARATUS FOR MEASURING THE AREA OF HIDES. WILHELM HEINRICH SCHULZE, Frankfort-on-the-Main, Germany. Filed Nov. 13, 1914. Serial No. 872,014. (Cl. 33—121.)



Apparatus for measuring the area of hides, comprising in combination, a funnel-shaped frame having a lower cylindrical extension, a finely perforated top plate fixed on said frame, a fan in communication with said cylindrical extension adapted to suck air through said perforated top plate, a tachometer in communication with the axle of said fan, and a vacuum gage in communication with the lower end of said funnel, substantially as and for the purpose set forth.

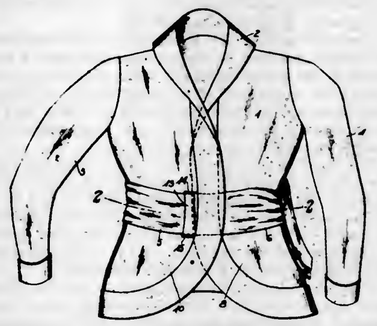
1,158,311. MOTOR ATTACHMENT FOR BICYCLES. GEORGE S. SCHUNK, West Allis, Wis. Filed Feb. 18, 1915. Serial No. 9,011. (Cl. 21—90.)



1. In a bicycle having a rear drive-wheel and a frame; the combination of a motor having its cylinder end in pivotal union with the frame, the crank-shaft end of said motor being adapted to float, a crank-shaft extending through the motor-casing, a driving wheel carried by the crank-shaft adapted to engage the tread of the vehicle wheel and a spring-tension connection between the floating end of the motor casing and bicycle frame.

2. In a bicycle having a rear drive-wheel and a frame; the combination of a motor having its cylinder end in pivotal union with the bicycle frame, the crank-shaft end of said motor being adapted to float, a crank-shaft extending through the motor casing having a wheel mounted thereon engageable with the tread of the drive-wheel, a spring tension connection between the floating end of the motor casing and bicycle frame, and means for adjusting the tension of said spring.

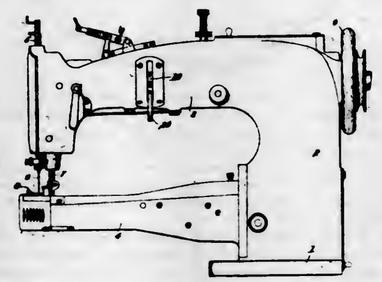
1,158,312. GARMENT. ISIDORE SCHWARTZ, New York, N. Y. Filed Oct. 30, 1914. Serial No. 869,378. (Cl. 2—41.)



1. In a garment of the class described, a body provided with a pair of fronts which may be overlapped, one of said fronts having an opening adjacent the edge, a sash secured to said last mentioned front and extending to a position so that the end will overlap said opening and forming a flap therefor, and a sash secured to the other front adapted to be threaded through said opening whereby said fronts may be pulled in opposite directions for causing any desired overlapping, said sashes being designed to be passed around the body and tied or otherwise connected together.

2. In a garment of the class described, a body provided with a pair of fronts, each of said fronts having a front trimming hem, one of said fronts having an opening at the inner edge of the trimming hem, a belt secured to said last mentioned front and arranged so that the end will act as a flap for said opening, said belt passing beneath the hem on said last mentioned front, and a second belt secured to the other front and adapted to pass through said opening, said belts being adapted to be tied or otherwise connected together after having been passed around the body.

1,158,313. MECHANISM FOR RAISING THE NEEDLE-BAR. DUDLEY S. SEYMOUR, Oak Park, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 5, 1910. Serial No. 590,918. (Cl. 112—29.)



1. The combination of an overhanging arm, a work support, a presser foot, means for raising the presser foot, a stitch-forming mechanism including a needle, a lever normally stationary during the operation of the machine, and devices independent of the presser foot-lifting means located within the overhanging arm and operated by said lever for raising the needle above the work support after the stitch-forming mechanism has stopped.

2. The combination of a work support, an overhanging arm, a shaft mounted in said overhanging arm, a needle

mounted in the overhanging arm and reciprocated by said shaft, and means normally stationary during the operation of the machine and operating directly upon said shaft for raising the needle above the work support after the stitch forming mechanism has stopped.

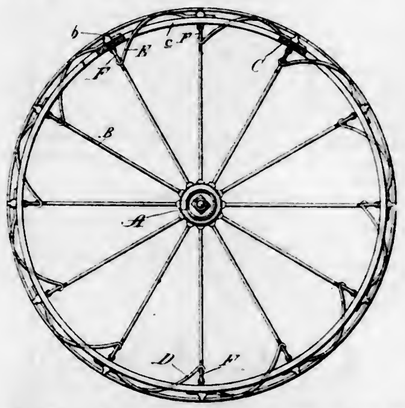
3. The combination of a work support, an overhanging arm, a shaft mounted in said overhanging arm, a needle mounted in the overhanging arm and reciprocated by said shaft, a lever normally stationary during the operation of the machine, and means intermediate said lever and said shaft for raising the needle above the work support after the stitch forming mechanism is stopped.

4. The combination of a work support, an overhanging arm, a shaft mounted in said overhanging arm, a needle mounted in the overhanging arm and reciprocated by said shaft, a sleeve fixed on said shaft, a normally stationary clutch lever adapted to engage said sleeve and oscillate said shaft for raising the needle above the work support after the stitch forming mechanism is stopped.

5. The combination of a work support, an overhanging arm, a shaft mounted in said overhanging arm, a needle mounted in the overhanging arm and reciprocated by said shaft, a sleeve fixed on said shaft, supporting rings freely mounted on said sleeve, a clutch member carried by said rings, and normally holding said rings from rotating with the shaft, a clutch face formed on said lever and engaging said sleeve when said lever is raised for oscillating the shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,158,314. VEHICLE-WHEEL. CHARLES J. SHACKLEFORD, Nelson, Mo. Filed Feb. 18, 1915. Serial No. 9,064. (Cl. 152—8.)



1. A vehicle wheel provided with a slotted rim and arched springs each secured at one end to the outside of the rim and extending through a slot therein.

2. A vehicle wheel provided with a slotted rim, arched leaf springs each secured at one end to the outside of the rim and having its opposite end extended through a slot and means for flexibly connecting the inner end of each spring to the rim.

3. A vehicle wheel having a rim formed with a plurality of circular series of slots, the ends of which are out of line with each other and a plurality of series of arched leaf springs each secured to the outside of the rim at one end of the slot and each extending through a slot moving freely therein and having its inner portion free to move back and forth in the slot.

4. A vehicle wheel, comprising a hub, a rim, spokes connecting the hub with the rim and having projections on the outside of the rim, a series of arched springs extending through slots in the rim and free to move therein, means for securing one end of each spring to the outside of the rim and a swinging link connecting the inner end of each spring to the inside of the rim.

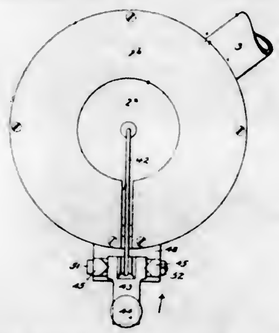
1,158,315. VULCANIZER. CLARENCE A. SHALER, Waupun, Wis. Filed Sept. 30, 1910. Serial No. 584,588. (Cl. 18—18.)



1. The combination with a tubular casing, provided with supporting standards, means for supplying heat to the interior of the casing, a stationary bar supported underneath the casing with the space between it and the casing open and unobstructed, a flexible band adapted to be wound about the casing and bar and to bind a tire upon the casing, and compression members for pressing said band inwardly along lines below a tire on the casing and between the casing and bar.

2. The combination of a heating casing, a stationary member substantially parallel to the casing, brackets rigidly connecting the stationary member with the casing, cross bars rigidly connected with the stationary member, a flexible binding member adapted to encircle the casing and the stationary member, and a set of clamping devices provided with clamping bars adapted to be supported by said cross bars in a position substantially parallel to and above the stationary member, said clamping devices being adapted to press said bars inwardly against the flexible binding member.

1,158,316. SOUND-BOX FOR TALKING-MACHINES. HORACE SHEBLE, Philadelphia, Pa. Filed Mar. 5, 1915. Serial No. 12,245. (Cl. 181—11.)



1. A talking machine sound box having a needle carrying lever with a frictional spring contact fulcrum which exercises torsional control of the lever.

2. A talking machine sound box having a needle carrying lever, with a frictional spring contact fulcrum comprising elastic fulcrum members having pointed ends which are caused to engage the sides of the needle carrying lever.

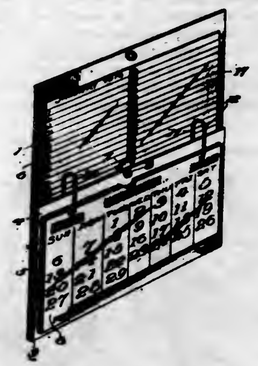
3. A talking machine sound box having a needle carrying lever with a pointed frictional spring contact fulcrum which exercises torsional control of the lever.

4. A talking machine sound box having a needle carrying lever, with a spring contact fulcrum comprising elastic fulcrum members having pointed ends which are caused to engage the sides of the needle carrying lever, and means for varying the pressure of said pointed ends against the lever.

5. A talking machine sound box having a needle carrying lever, and an elastic yoke having inturned arms which engage said lever and serve as a fulcrum therefor which exercises torsional control of the lever.

[Claims 6 to 8 not printed in the Gazette.]

1,158,317. CALENDAR. HUGH E. SHEDD, Minneapolis, Minn. Filed Mar. 10, 1915. Serial No. 13,482. (Cl. 40—119.)



1. A calendar comprising a base, a flap hinged to the base and forming with the latter a pocket, means for fastening the free end of the flap to the base, hooks on the flap, and a series of leaves supported on the hooks, said leaves having data on both sides relating to a calendar month.

2. A calendar comprising a base, a flap, a strip of canvas secured to the flap and the base to form a hinge, a clasp to fasten the free end of the flap against the base, hooks on the flap and extending beyond the free edge of same, and a series of leaves mounted on the hooks, said leaves having data on both sides relating to a calendar month.

3. A calendar comprising a base and a hinged flap, means for fastening the free end of the flap to the base, a rod hinged to the flap and formed at its ends with hooks which extend beyond the free edge of the flap, the hooks having their major portions in front of the flap, a series of leaves supported on the hooks in front of the flap, each leaf having data on the front and rear relating to a calendar month.

4. A calendar comprising a base and a hinged flap, a rod hinged on the rear of the flap, the ends of the rod being upwardly and then downwardly and inwardly bent to form hooks on the front of the flap, said flap having openings through which the ends of the hooks extend, and a series of leaves supported on the hooks, each leaf having data on the front and rear relating to a calendar month.

5. A calendar comprising a base, a flap hinged to the base and with the latter forming a pocket, means for securing the free end of the flap to the base, hooks on the flap, said hooks extending beyond the free edge of the flap, a series of leaves supported on the hooks, each leaf having the day, date, and month printed on its front surface, said leaf having a series of horizontal lines on its rear surface and members adjacent the lines corresponding to the dates on the front surface, the hooks permitting the leaves to be thrown up above the flap to be supported on the base to make notes on the horisontal lines.

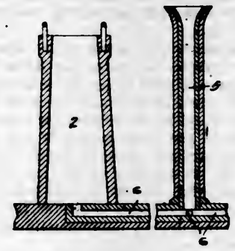
[Claims 6 to 10 not printed in the Gazette.]

1,158,318. INGOT-MOLD. HARRY E. SHELDON, Pittsburgh, Pa. Filed Mar. 30, 1912. Serial No. 687,366. (Cl. 22—139.)

1. An ingot mold for casting steel composed of cast steel having approximately the same carbon content as that of the steel to be cast therein.

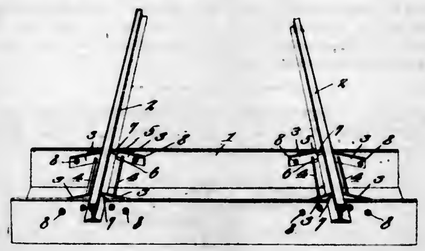
2. An integral ingot mold for casting steel composed of steel containing a carbon content of not over two per cent.

3. A steel ingot mold for casting steel, composed of iron alloyed with carbon, manganese, sulfur and phosphorus, the content of one of the main alloying elements of the mold being not more than two per cent. above the content



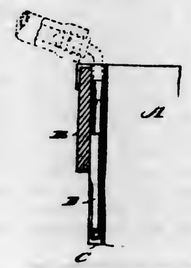
of the same element of the steel to be poured into the mold.

1,158,319. RAIL TIE AND FASTENER. ALBERT N. SHEPLER, Peru, Ind. Filed July 8, 1915. Serial No. 38,704. (Cl. 238—4.)



In combination, a channel-shaped tie, a pair of rods engaged through the flanges thereof adjacent the upper edges thereof, two pairs of plates pivoted upon said rods adjacent the flanges and having short and long arms, the short arms having recesses to accommodate the base flange of a rail and providing oblique edges adapted to swing above said tie flanges when the long arms are swung downwardly and also adapted to engage the edges of the base flange of the rail when the long arms are swung upwardly, said recess also providing fingers to bear upon the base flanges and means for individually securing said long arms to the tie flanges when the long arms are swung upwardly.

1,158,320. MACHINERY FOR THE MANUFACTURE OF ICE. THOMAS SHIPLEY, York, Pa. Filed Apr. 19, 1915. Serial No. 22,354. (Cl. 62—159.)



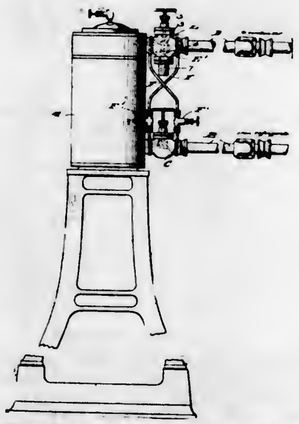
1. A freezing can having in one of its sides an external groove extending from its top part-way to its bottom, in combination with an air tube seated in said external groove with its lower portion extending on the prolongation of the upper portion straight down through the end

wall of said groove into the interior of the can and making a water tight joint with the can at that point, and means for holding the air tube in said groove against displacement, substantially as and for the purposes hereinbefore set forth.

2. A freezing can having in one of its sides an external groove extending from its top to near its bottom, in combination with an air tube seated in said groove so that its exposed side shall be substantially flush with the adjoining external portions of the can, the lower end of said tube projecting on the prolongation of the external portion of the tube straight down through the said wall of said groove into the interior of the can and making a water tight joint with the can at that point, and a strip or band at the top of the can to confine the upper end of the air tube in the groove, substantially as and for the purposes hereinbefore set forth.

3. A freezing can having in one of its sides an external groove extending from its top to near its bottom, in combination with an air tube seated in said groove, said tube having a cylindrical upper end and, below that point, being flattened on its exposed side to be substantially flush with the exterior of the can, the lower end of the tube projecting on the prolongation of the external portion of the tube straight down through the end wall of said groove into the interior of the can and making a tight joint with the can at that point, and means to confine the tube in place in the groove, substantially as and for the purposes hereinbefore set forth.

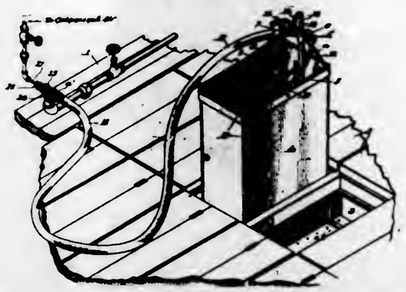
1,158,321. REFRIGERATING OR ICE-MAKING APPARATUS. THOMAS SHIPLEY, York, Pa. Filed Apr. 27, 1915. Serial No. 24,260. (Cl. 62—115.)



In a refrigerating apparatus, the combination with the ammonia compressor, the discharge line leading from the compressor to the high pressure or condenser side of the apparatus and the hand operated shut-off valve at the discharge end of the compressor controlling communication between the said compressor and discharge line, of a normally closed, automatically-valve-controlled by-pass, between said compressor and discharge line, around the said shut-off valve, adapted to open communication between said compressor and discharge line to relieve undue pressure in the compressor in case the latter should be at any time in operation while shut-off valve is closed, substantially as and for the purposes hereinbefore set forth.

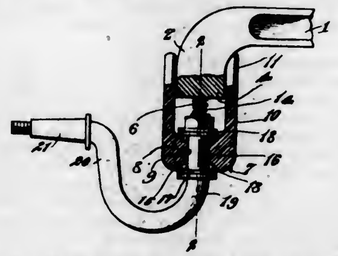
1,158,322. CAN-FILLER FOR ICE-MACHINES. THOMAS SHIPLEY, York, Pa. Filed May 13, 1915. Serial No. 27,889. (Cl. 62—159.)

1. In a can filler of the kind specified, the combination with the filler head having a duct adapted to be connected to a source of water supply, and a valve-controlled discharge nozzle from which water received through said duct is discharged into the can to be filled, of a separate and independent duct also carried by the filler head, adapted to be connected to a source of compressed air supply, an air discharge nozzle connected to said air duct and adapted to be temporarily connected to the air tube of the can to be filled, and a valve or cock for controlling the discharge of air from said air nozzle, substantially as and for the purposes hereinbefore set forth.



2. In a can filler of the kind specified, the combination with the tubular filler head adapted at its inlet end to receive and connect with hose leading from a source of water supply, and the valve-controlled water discharge nozzle at the outlet end of said head, of a diverging tubular branch carried by and communicating with the interior of said filler head, a tube extending through and concentrically with the said diverging branch and the portion of the tubular filler head leading to the same, making a tight joint with said branch, and adapted to connect at its rear end with hose leading from a source of compressed air supply and extending concentrically within the relatively larger water hose which incloses it, an air discharge nozzle connected to the front end of said tube, and a valve or cork to control the discharge of air from said nozzle, substantially as and for the purpose hereinbefore set forth.

1,158,323. KNUCKLE-JOINT FOR MOTOR-VEHICLES. CHARLES M. SMITH, Neodesha, Kans. Filed Oct. 15, 1914. Serial No. 866,858. (Cl. 21—141.)

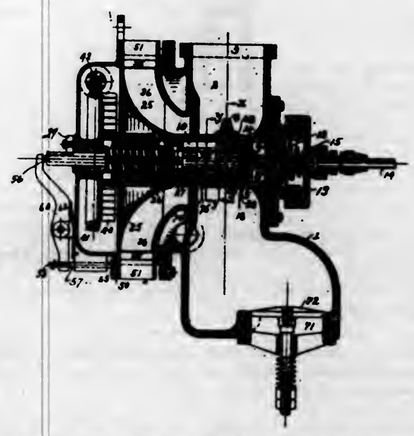


1. A knuckle joint including a relatively stationary axle, a down-turned head on each end of the axle, a shoe arranged to fit the head, means to yieldingly hold the head and shoe in spaced relation, and a stub axle pivoted to the shoe.

2. A knuckle joint including a relatively stationary axle, a head formed at each end of the axle, said head being down turned, a shoe arranged to receive the head, springs holding the head and shoe in spaced relation, bolts limiting the outward movement of the head and shoe, and a stub axle pivoted to the shoe.

3. A knuckle joint including a relatively stationary axle, an arcuate down-turned head formed at each end of the axle, an arcuate shoe arranged to receive the head, said shoe being apertured intermediate its ends, springs holding the head and shoe in spaced relation, bolts limiting the outward movement of the shoe and head, a cylindrical extension journaled in the shoe, and an arcuate projection on the extension, said arcuate projection terminating in a bearing.

1,158,324. CARBURETER. IVAN M. SMITH, South Milwaukee, Wis., assignor of one-half to Mitchell L. Fykse, South Milwaukee, Wis. Filed Aug. 19, 1912. Serial No. 715,711. (Cl. 48—154.1.)



1. The combination with a carbureting chamber provided with an air inlet and a mixture outlet, of a tubular member crossing said chamber and projecting into the air inlet, said member constituting a fuel inlet, a nozzle communicating with said member and projecting laterally from the member in the direction of the outlet, a rotary impact motor located in the air inlet, a valve controlling the delivery of liquid fuel from said tubular passage into the nozzle and connections between said impact motor and valve.

2. The combination with a carbureting chamber provided with an air inlet and a mixture outlet, of a tubular member crossing said chamber and projecting into the air inlet, said member constituting a fuel inlet, a nozzle communicating with said member and projecting laterally from the member in the direction of the outlet, a rotary impact motor located in the air inlet, a valve controlling the delivery of liquid fuel from said tubular passage into the nozzle and connections between said impact motor and valve, said impact motor and chamber wall constituting an air inlet passage and said passage being provided with a manually adjustable throttle valve.

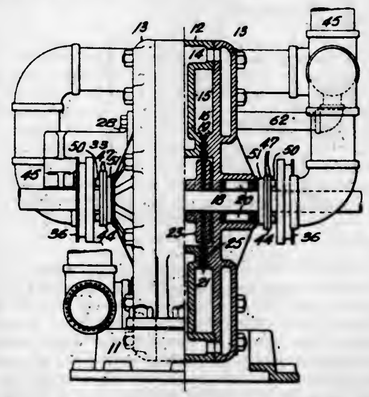
3. The combination with a carbureting chamber having air and fuel inlets and a mixture outlet, of a tubular non-rotatable slide valve controlling the fuel inlet, a screw threaded valve stem, and a rotary member in the path of the air from the air inlet, adapted to be actuated by the air and carrying the feed nut in threaded connection with said valve stem.

4. The combination with a carbureting chamber having air and fuel inlets and a mixture outlet, of a slide valve controlling delivery through the fuel inlet, a valve stem, an air driven turbine located in the air inlet in feed screw connection with the stem, and means for automatically moving the valve toward closing position during the intervals between periods of air delivery, said turbine being operatively connected to open the valve during air delivery.

5. The combination with a carbureting chamber having air and fuel inlets and a mixture outlet, of a non-rotatable valve controlling delivery through the fuel inlet, an air-actuated rotary member in the path of air entering through the air inlet, said rotary member being held against longitudinal movement, a feed screw connection between the rotary member and valve adapted to open the valve in direct proportion to the air delivery past the rotary member, a spring adapted to retractively rotate the rotary member, and means for manually regulating the delivery of air to said chamber.

[Claims 6 to 9 not printed in the Gazette.]

1,158,325. ROTARY ENGINE. RICHARD SMITH, Sherbrooke, Quebec, Canada, assignor of one-fifth to Charles Walter Cate, Sherbrooke, Quebec, Canada. Filed Jan. 4, 1915. Serial No. 419. (Cl. 121—69.)



1. In a device of the character described, a casing, forming an annular chamber, a rotor in said casing having a non-radial arm, and a piston mounted on the arm, said arm being disposed tangentially to a circle smaller than the rotary to counteract centrifugal force acting on the piston.

2. In a device of the character described, a casing having a pair of annular chambers therein, gates traversing said chambers arranged on opposite sides of the casing and on opposite sides of the casing axis, a shaft passing through the casing, rotors thereon, pistons carried by the rotors, cams on the shaft, and cam operated rocker mechanism arranged to open and close said gates for the passage of the pistons.

3. In a device of the character described, a casing having a central chamber and a surrounding annular chamber, a reduced annular passage connecting the central and surrounding chambers, a rotor including a thin blade occupying the passage and a piston loosely mounted on the blade occupying the annular chamber, and packing of reverse curve form in the walls of said passage engaging the rotor.

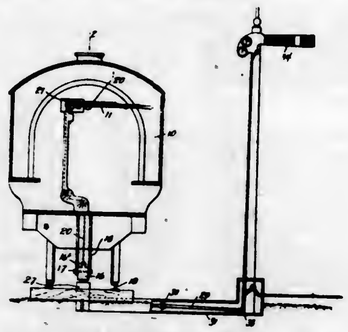
4. In a device of the character described, a casing, a shaft passing axially therethrough, a pair of annular chambers in said casing, a central wall separating said chambers, an inlet and exhaust passage for each chamber arranged in close proximity, a gate traversing each chamber between said exhaust and inlet, the passages and gate of one chamber being on opposite sides of the casing and opposite sides of the axis from those of the other chamber, a rotor in the casing having a pair of pistons each occupying a chamber, means operating said gates, an inlet valve on each inlet passage, and adjustable means operating said valves subsequent to the operation of the adjacent gate.

5. A device of the character described, comprising the combination with a casing having an annular chamber therein, of a shaft, a rotor on said shaft, a piston on the rotor occupying said chamber, a gate traversing the chamber, a lever pivotally mounted intermediate its ends, a sliding connection between said lever and the gate, and

cam operated means connected to the lever at its pivotal point arranged to open and close the gate for the passage of said piston.

[Claims 6 and 7 not printed in the Gazette.]

1,158,326. AUTOMATIC STOP FOR RAILWAYS. JOHN G. SPARKS, New York, N. Y. Filed Mar. 24, 1913. Serial No. 756,382. (Cl. 246—59.)

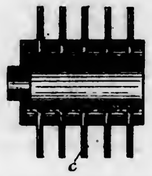


1. In an automatic train stop, a danger signal, a detent arranged adjacent the track rails, a connection between the signal and detent whereby the latter will be moved into operative position when the signal is set to danger, a pivoted trap carried by and arranged below the locomotive and adapted to be engaged by the detent, a spring pressed throttle lever, manually controlled means for locking the lever in any desired position, and a flexible connection between the trip and the said locking means.

2. In an automatic train stop, a detent arranged adjacent the track rails, a pivoted trip carried by and arranged below the locomotive and adapted to be engaged by the detent, a spring pressed throttle lever, means for locking the lever in position including a pivoted and manually controlled dog carried by the lever, and a flexible member having one end secured to the dog and the other end to the trip.

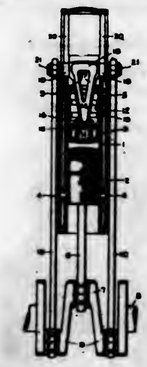
3. In an automatic train stop, the combination with a throttle lever and a spring operated dog to normally lock the lever in position, of means connected with the lever tending to close the throttle, a flexible connection connected at one end to the dog, means to draw upon the flexible coinnection when the train passes a danger point, and a tension device coöperating with said flexible connection serving to prevent reverse movement of the flexible connection due to the spring acting normally upon the dog, substantially as and for the purposes set forth.

1,158,327. ABRADING AND POLISHING APPARATUS. THEODOR STIEGELMEYER, Hanover-Wülfel, Germany. Filed Oct. 8, 1914. Serial No. 865,686. (Cl. 78—34.)



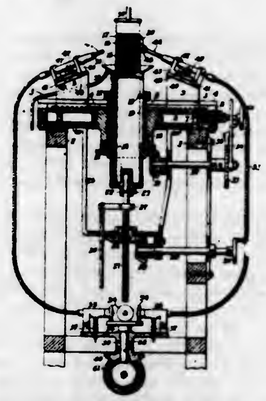
In a polishing and abrading apparatus, the combination of a rotatable hub having a plurality of apertures in its periphery, a plurality of tools retained in said apertures and adapted to move radially by centrifugal force, each such tool being formed tubular for the purpose set forth.

1,158,328. CROSS-HEAD. KARL STEINBECKER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Aug. 7, 1912. Serial No. 713,747. (Cl. 121—106.)



A cross-head for a piston comprising a foot secured to the head of the piston, diverging arms extending therefrom, a bridge piece connecting them, bearings formed on said bridge piece adjacent said arms, and trunnions projecting beyond the bearings.

1,158,329. MACHINE FOR ORNAMENTING GLASS. JAMES STOTT, Philadelphia, Pa. Filed Jan. 19, 1915. Serial No. 3,116. (Cl. 51—11.)



1. In a machine of the character stated, the combination of a head, a plurality of blocks adjustable in a substantially radial direction upon said head, means for simultaneously adjusting the plurality of blocks radially to and from each other, a central support for an article to be cut, means to impart a rotary adjustment to the support for the article, a plurality of spindles journaled respectively upon the plurality of blocks, means for rotating the spindles, and grinding wheels carried upon the ends of the spindles adjacent to the work supporting means.

2. In a machine of the character stated, the combination of a head, a plurality of blocks adjustable in a substantially radial direction upon said head, means for simultaneously adjusting the plurality of blocks radially to and from each other, a central support for an article to be cut, means to impart a rotary adjustment to the support for the article, a plurality of spindles journaled respectively upon the plurality of blocks and arranged in a direction oblique to the axis of the support for the article both longitudinally and circumferentially, means for rotating the spindles, grinding wheels carried upon the ends of the spindles adjacent to the work supporting means, and means for changing the angle of the spindles upon their respective blocks to change the angle of the cuts made by the wheels upon the article.

3. In a machine of the character stated, the combination of a head, a plurality of blocks adjustable in a substantially radial direction upon said head, means for simultaneously adjusting the plurality of blocks radially to and from each other, a central support for an article to be cut, means to impart a rotary adjustment to the support for the article, a plurality of spindles journaled respectively upon the plurality of blocks, means for rotating the spindles, grinding wheels carried upon the ends of the spindles adjacent to the work supporting means, and means to adjust the central supporting means vertically in respect to the grinding wheels.

4. In a machine of the character stated, the combination of a head, a plurality of blocks adjustable in a substantially radial direction upon said head, means for simultaneously adjusting the plurality of blocks radially to and from each other, a central support for an article to be cut, means to impart a rotary adjustment to the support for the article, a plurality of spindles journaled respectively upon the plurality of blocks, means for rotating the spindles, grinding wheels carried upon the ends of the spindles adjacent to the work supporting means, means for delivering water simultaneously to the plurality of grinding wheels, and a trough below the grinding wheels having a drainage tube leading therefrom for conveying the collected water to a distant place.

5. In a machine of the character described, a head combined with central work supporting means, separate mechanism for adjusting the work supporting means in a vertical direction and also about a vertical axis, a plurality of grinding wheels arranged about the work supporting means, a plurality of spindles for rotating the respective grinding wheels, means for rotating the spindles, and adjusting means for adjusting the spindles and their grinding wheels in a radial direction to or from the work holder.

[Claims 6 to 9 not printed in the Gazette.]

1,158,330. TURN-BUTTON. FRED J. STULP, Muskegon, Mich. Filed May 12, 1915. Serial No. 27,525. (Cl. 16—30.)



1. A turn-button, comprising end bearing portions, lateral converging inclined arms, a depressed middle portion having a perforation for a securing screw, and shorter converging arms and outer spring bends connecting said middle portion with said lateral arms.

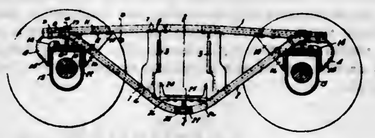
2. A turn-button, comprising end bearing portions, lateral converging inclined arms, a depressed middle portion perforated for a securing screw, and shorter converging arms and outer spring bends connecting said middle portion with said lateral arms, the lateral arms and the shorter arms being comparatively narrow in width and of proper length to afford a good finger-hold.

3. A turn-button of wire, comprising looped end bearing portions, lateral converging inclined arms, a depressed coiled middle portion forming a spring seat for a securing screw, and shorter converging arms and outer spring bends connecting said middle portion with said lateral arms.

1,158,331. RAILWAY-CAR TRUCK. EDGAR W. SUMMERS, Pittsburgh, Pa. Filed Mar. 2, 1915. Serial No. 11,535. (Cl. 105—243.)

1. A car truck side frame of the arch bar type, comprising a compression member and a tension member, each formed of an I-beam section placed with the web horizontal and the flanges vertical.

2. A car truck side frame of the arch bar type, comprising a compression member and a tension member, each formed of an I-beam section placed with the web horizontal and the flanges vertical, said members being riveted together at their ends, and column posts connecting said members and rivets thereto.



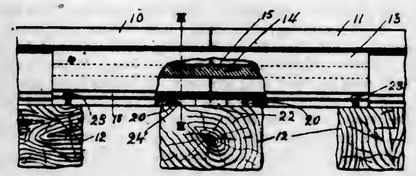
3. A truck side frame of the arch bar type, comprising a compression member and a tension member, each formed of an I-beam section placed with the web horizontal and the flanges vertical, said members having their end portions parallel and secured together.

4. A truck side frame of the arch bar type, comprising a compression member and a tension member, each formed of an I-beam section placed with the web horizontal and the flanges vertical, said members having their end portions parallel and formed to bring the webs into contact and being riveted together through said webs.

5. A truck side frame of the arch bar type, comprising a compression member and a tension member, each formed of an I-beam section placed with the web horizontal and the flanges vertical, said members having their end portions parallel and having their adjacent flanges at said end portions cut off to bring the webs into contact and being riveted together through said webs.

[Claims 6 to 19 not printed in the Gazette.]

1,158,332. RAIL-JOINT. JOSEPH SUTKAY, Laurents, La., assignor of one-third to Rose Le Doux, Laurents, La. Filed July 30, 1915. Serial No. 42,816. (Cl. 238—13.)



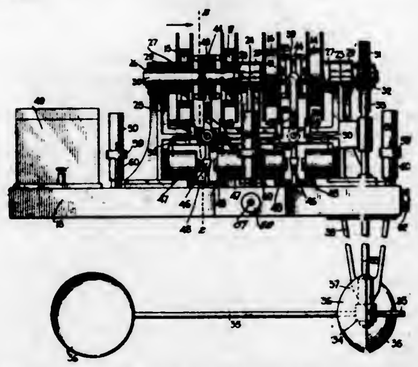
A device of the class described comprising cross ties, rails positioned in alinement and mounted upon the said ties and having horizontal alining slots in their adjacent ends, a double fish plate slidingly positioned within the said slots in flat engagement with the webs of the rails and inclosing the base flanges thereof, retaining means between the said fish plate and ties, the under faces of the adjacent rails being provided with substantially T-shaped recesses in alinement with each other and a lock block having substantially semi-circular opposite heads of less diameter than the said recesses and engagingly seated therein and flatly positioned upon one of the said supporting ties closingly arranged beneath the said recesses

1,158,333. STABILIZER FOR AEROPLANES. ALEXANDER BLAIR THAW, Pittsburgh, Pa. Filed Jan. 24, 1913. Serial No. 743,960. (Cl. 244—29.)

1. In combination with an aeroplane having a plurality of righting members, a stabiliser, comprising a shaft; a wind motor for continuously driving said shaft; a plurality of winding devices, each operatively connected with one of said righting members; a plurality of electro-mechanically-actuated connectors for operatively connecting said shaft and said winding devices successively; and a plurality of self-leveling circuit-closers, each adapted to close the circuit of one of said connectors.

2. In combination with an aeroplane having a plurality of righting members, a stabilizer, comprising a plurality

of winding members; a motor adapted to be operated by the pressure of air through which the aeroplane travels; means for temporarily connecting said motor and winding devices successively; electro-mechanically-operated clutches for connecting said motor and winding devices; and circuit-closers for actuating the mechanism controlling said clutches, said closers having columns of mercury and containers therefor, wherein the mercury relatively rises as the side of the aeroplane supporting the same is lowered.



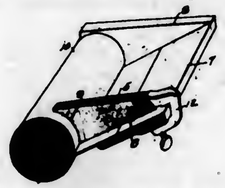
3. A stabilizer having a continuously-operating shaft; a plurality of winding drums mounted on said shaft; a plurality of electro-magnets for connecting said shaft and said drums; a plurality of electric circuits, each incorporating one of said magnets and an electric source; a plurality of bent mercury-containing tubes, each having a portion disposed perpendicular to the horizontal of the aeroplane, each of said tubes being incorporated in one of said circuits; a plurality of contact members, one movably mounted in each of said tubes, above the mercury therein; a plurality of mechanisms, each adapted to lift said contact member in said tube to vary the separation of said member and said mercury, in the normal position of said aeroplane; and means operatively connecting said mechanisms with the controlling gear of said aeroplane.

4. In a stabilizer such as described; a plurality of electro-actuated operating mechanisms, embodying normally open circuits; a plurality of bent mercury-containing tubes, said tubes being arranged in pairs and spaced apart, said pairs being disposed in perpendicular vertical planes; a plurality of inverted tubes, each telescopically arranged to cover one of said bent tubes; a contact needle mounted on each inverted tube to extend within said bent tube for immersion in the mercury therein; a plurality of rotary members mounted within said inverted tubes; means operatively connecting said inverted tubes and rotary members to reciprocate said tubes when said members are rotated; means connecting said rotary tubes in pairs to move in unison; and means operatively connecting each of said pairs with the controlling mechanism of the aeroplane to move in predetermined relation therewith.

1,158,334. FOUNTAIN-DIVIDER. JAMES THOMPSON, New York, N. Y. Filed Apr. 15, 1915. Serial No. 21,561. (Cl. 101—74.)

1. The combination with a printing-ink fountain, embodying a fountain roller, of a fountain divider having a flexible non-metallic member of compressible nature adapted to engage the bottom of the fountain and the roller, a core for said flexible member having an arm whereby the same can be secured to the fountain, substantially as and for the purpose set forth.

2. The combination of a printing-ink fountain embodying a fountain roller, of a fountain divider comprising a flexible, non-metallic member adapted to contact with the bottom of the fountain and the roller, and an interior reinforcing member for said flexible member, said reinforcing member having means for attaching the divider to the fountain.

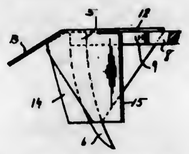


3. The combination with a printing-ink fountain, embodying a roller, of a fountain divider comprising a flexible member adapted to contact with the bottom of the fountain and the roller, and a core for said flexible member having an arm, including means for securing the same to the fountain, said flexible member being molded about said core, said core having a central opening for better anchoring the flexible member to the core.

4. The combination of a printing-ink fountain, embodying a roller, of a divider comprising a flexible member of rubber or rubber composition adapted to contact with the bottom of the fountain and with the roller, a core within said flexible member reinforcing the same; and an arm extending from said core whereby the same can be secured to the bottom of the fountain, substantially as and for the purpose set forth.

5. The combination of a printing-ink fountain, embodying a roller, of a fountain divider comprising a flexible and compressible member adapted to contact with the bottom of the fountain and with the roller, and a core within said member including means projecting out of said member for securing said member to the fountain.

1,158,335. GARDEN-TOOL. ALBERT W. UPTON, Los Angeles, Cal. Filed Sept. 2, 1914. Serial No. 859,772. (Cl. 55—39.)



1. The combination of a rake with a top plate secured to the head of the rake, said top plate having its ends bent in the direction of the rake teeth and formed into hoe blades.

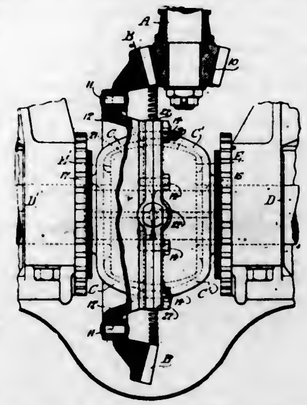
2. The combination of a rake, with a top plate secured to the head of the rake, said top plate having a toothed edge projecting away from the handle and its ends bent in the direction of the rake teeth and formed into hoe blades.

1,158,336. POWER-TRANSMISSION MECHANISM. JOHN VALENTINE, Chicago, Ill. Filed Jan. 6, 1913, Serial No. 740,321. Renewed Mar. 19, 1915. Serial No. 15,579. (Cl. 74—7.)

1. A power transmission mechanism comprising in combination, a driving member, a driven member, a cam connected to said driving member, rollers interposed between said cam and said driven member, a carrier for said rollers, and a stop movable with respect to said carrier and connected to said driving member for determining the movement of said rollers.

2. A power transmission mechanism comprising in combination, a driving member, a driven member, a cam connected to said driving member, rollers interposed between said carrier and said driven member, a carrier for said rollers, and a stop movable with respect to said carrier, said stop being shiftably connected to said driving member, for determining the movement of said rollers.

3. A power transmission mechanism comprising in combination, a driving member, two driven members, two cams connected to the driving member, rollers interposed between said cams and said driven members, carriers for said rollers, the carrier for the rollers engaged by one cam being movable independently of the carrier for the rollers engaged by the other cam, and stops connected to said driving member for determining the movement of said rollers.

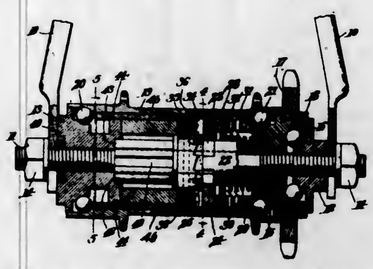


4. A power transmission mechanism comprising in combination, a driving member, two driven members, two cams connected to the driving member, groups of rollers interposed between said cams and said driven members, carriers for the groups of rollers, the carrier for the rollers engaged by one cam being movable independently of the carrier for the rollers engaged by the other cam, and stops connected to said driving member by lost motion connection for determining the movement of said rollers.

5. A power transmission mechanism comprising in combination, a driving member, two driven members, cams located upon opposite sides of the driving member, rollers interposed between said cams and said driven members, suitable carriers for said rollers, the carrier for the rollers engaged by one cam being movable independently of the carrier for the rollers engaged by the other cam, and stops movable independently of the carriers, said stops being connected to the driving member.

[Claims 6 to 10 not printed in the Gazette.]

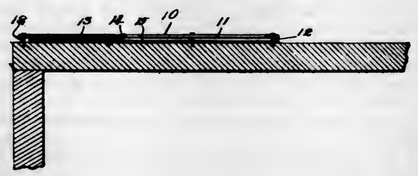
1,158,337. COASTER-BRAKE. GEORGE W. VAN DEREN, Elmira, N. Y. Filed May 5, 1915. Serial No. 25,993. (Cl. 208—57.)



1. In a coaster brake, the combination of an axle, a brake held against rotation about the axle, a driver, a cam disk secured on said driver, a cam ring coöperating with said disk and arranged to rotate and move axially on said driver, said ring having clutch teeth on opposite sides thereof, a hub having interior clutch teeth arranged to coöperate with the teeth on one side of said ring, a rotatable actuating member for said brake arranged to coöperate with the teeth on the opposite side of said ring, and a frictional retarder coacting with said ring and said actuating member.

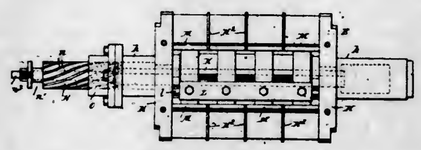
2. In a coaster brake, the combination of an axle, a brake held against rotation about the axle, a driver, a cam disk secured on said driver, a cam ring coöperating with said disk and arranged to rotate and move axially on said driver, said ring having clutch teeth on opposite sides thereof, a hub having interior clutch teeth arranged to coöperate with the teeth on one side of said ring, a rotatable actuating member for said brake arranged to cooperate with the teeth on the opposite side of said ring, a spring coacting with said driver and said ring and cooperating with said cam disk to move the ring axially on the driver in either direction, and a frictional retarder coacting with said ring and said actuating member.

1,158,338. SHIPPING-RECEIPT HOLDER. JESSE D. VAN FLEET, Minot, N. D. Filed Sept. 3, 1912. Serial No. 718,320. (Cl. 40—17.)



In a device of the character described, the combination with a supporting body, of a plate overlying and spaced from the body and provided with an opening adjacent one end thereof, a plurality of spaced fastening devices extending through the margin of the plate and connecting the plate with the body, a sheet arranged beneath the plate and visible through said opening, certain of said fastening devices serving as retaining means for said sheet, the body of the plate being provided with an aperture disposed between said opening and the other end of the plate, a second sheet removably supported upon the supporting body beneath the body of the plate and removable through said opening, the fastening devices in the margins of the body of the plate serving as limiting stops for said second mentioned sheet, and a fastening device extending through said aperture and said second mentioned sheet and detachably engaging the body for positively connecting the said second mentioned sheet with the plate.

1,158,339. DOUGH-DIVIDING MACHINE. FRANK H. VAN HOUTEN, Fishkill-on-Hudson, N. Y. Filed June 13, 1911. Serial No. 632,853. (Cl. 107—15.)



1. In a dough divider, the combination with dough feeding mechanism and a rotary cylinder, having measuring pockets therein, and a tubular journal, of plungers in said pockets, adjustable means for limiting the inward movement of the plungers to vary the capacity of the pockets and means periodically operating axially through the tubular journal of the cylinder for positively moving the plungers to discharge the dough from the pockets.

2. In a dough divider, the combination with dough feeding mechanism and a rotary cylinder having measuring pockets therein, of plungers in the pockets, a plunger operating mechanism for positively advancing the plungers to discharge the dough extending out through one end of the cylinder, intermittently moving driving mechanism for the plunger operating mechanism operating independent of the cylinder movement and means for varying the range of inward movement of the plungers to vary the capacity of the pockets.

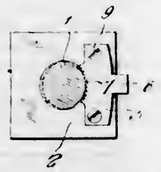
3. In a dough divider, the combination with dough feeding mechanism and a rotary cylinder having measuring pockets therein, of plungers in the pockets, a shaft mounted in to rotate with and movable independently of the cylinder, connections intermediate the shaft and plungers for positively advancing the same when the shaft is moved with relation to the cylinder, driving mechanism moving independent of the cylinder movement for moving the shaft and adjustable means for limiting the inward movement of the plungers to vary the capacity of the pockets.

4. In a dough divider, the combination with dough feeding mechanism, a rotary cylinder having measuring pockets therein and plungers in the pockets, of a shaft mounted in and extending out at one end of the cylinder, said shaft being adapted to rotate with and to move independently of the cylinder, connections intermediate the shaft and plungers whereby the plungers are moved to discharge the dough, axially movable driving connections for the shaft at one end and independent of the cylinder movement and an adjustable stop for limiting the inward movement of the plungers to vary the capacity of the pockets.

5. In a dough divider, the combination with dough feeding mechanism, a rotary cylinder having measuring pockets therein and plungers in the pockets, of mechanism for advancing the plungers to positively discharge the dough comprising an element movable longitudinally of the axis of the cylinder and adjustable means for limiting the inward movement of the plungers to vary the capacity of the pockets.

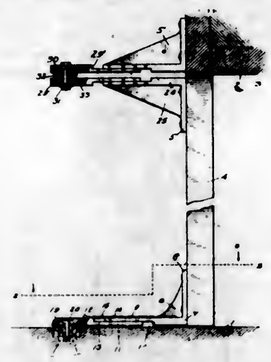
[Claims 6 to 15 not printed in the Gazette.]

1,158,340. NUT-LOCK. JOHN W. VAN ZILE, Hohokus, N. J. Filed Dec. 29, 1914. Serial No. 879,519. (Cl. 151—24.)



In combination with a bolt, a nut threaded thereon, said nut having a recess formed therein, said recess being spaced from the outer edges of said nut and communicating with the upper face and the interior bore thereof, a plate seated in said recess, said plate provided with an extension on its edge adjacent the interior bore of said nut, said extension provided with an arcuate cut-out portion, teeth formed in said cut-out portion and normally out of engagement with the threads of said bolt, said nut provided with an opening, communicating with the outer side of said nut, an operating extension formed on said plate opposite to said first mentioned extension and projecting through said opening, said nut provided with spaced apart openings, communicating with said recess, said plate provided with spaced apart openings, said openings in said plate being normally out of registry with the last mentioned openings in said nut, whereby when said plate is operated to force said teeth into engagement with the threads of said bolt, the openings in said plate and the last mentioned openings in said nut will coincide to receive a fastening means substantially as described.

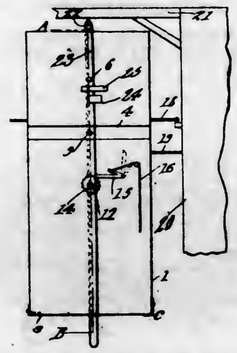
1,158,341. EXTENSION BRACKET-HINGE. JOHN PHILIP VOELKER, New York, N. Y. Filed Mar. 30, 1915. Serial No. 18,117. (Cl. 20—16.)



1. In a hinge support for a door, a pair of brackets, one of said brackets adapted to be secured to the door and the other of said brackets being adapted to be secured to a wall above said door and in the same vertical plane as the first mentioned bracket, and means connected with said brackets and interlocking for providing a pivotal point, the bracket on the door being spaced from the edge thereof a distance at least equal to the distance of the pivotal point of the bracket from the door added to the thickness of the door.

2. In a hinge support for a door, a lower bracket secured to said door and extending normally thereto, said bracket being spaced from the edge of the door an amount equal to the distance of the pivotal point of the bracket from the door plus at least the thickness of the door, an upper bracket secured to said door in vertical alinement with the lower bracket, said upper bracket having a bearing extending therefrom, a wall bracket arranged in vertical alinement with said first mentioned brackets, said last mentioned bracket having a hollow portion for fitting said bearing, and a journal extending through said bearing in said hollow portion for connecting the parts together.

1,158,342. MAIL-DELIVERING DEVICE. MILTON K. WALKER, Richmond, Ky. Filed Aug. 13, 1915. Serial No. 45,434. (Cl. 104—146.)



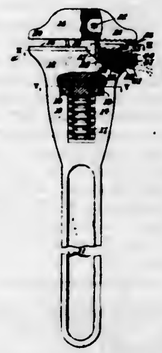
1. A carrier for mail and the like, including a casing having a cable receiving slot in each side, a grooved wheel projecting into each slot, a spring motor within the casing for rotating both wheels constantly in the same direction, a compartment within the casing for receiving articles to be transported, means for winding the motor, and means for holding said motor inactive, said casing being reversible to position either grooved wheel upon a supporting cable.

2. A carrier for mail and the like, including a casing having a cable receiving slot, a grooved wheel adapted to engage a cable within the slot and support the casing, a spring motor within the casing for rotating the wheel, a compartment within the casing for receiving articles to be transported, means for winding the motor, pawl and ratchet mechanism for holding the motor inactive, means for releasing the pawl from the ratchet, said pawl being held by gravity in disengaged position, and means adjacent one end of the path of movement of said casing for engaging the disengaged pawl to shift it into engagement with the ratchet.

3. A carrier for mail and the like, including a casing having slots in the sides thereof, grooved wheels mounted for rotation in the casing for engaging cables extending into the respective slots, a spring motor in the casing for actuating the wheels in one direction, an article receiving compartment in the casing, means for holding the motor inactive, said means including a ratchet wheel and a pawl, means for shifting the pawl to inactive position, said pawl being maintained in inactive position by gravity.

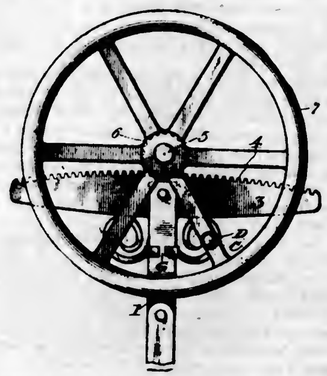
4. A carrier for mail and the like, including a casing having slots in the sides thereof, grooved wheels mounted for rotation in the casing for engaging cables extending into the respective slots, a spring motor in the casing for actuating the wheels in one direction, an article receiving compartment in the casing, means for holding the motor inactive, said means including a ratchet wheel and a pawl, means for shifting the pawl to inactive position, said pawl being maintained in inactive position by gravity, and means in the path of the pawl for shifting said pawl into engagement with the ratchet wheel upon the completion of the movement of the casing in one direction upon its supporting cable.

1,158,343. WRENCH. JAKOB CASPAR WALIGURSKY, Palatka, Mich. Filed June 22, 1915. Serial No. 35,542. (Cl. 81—97.)



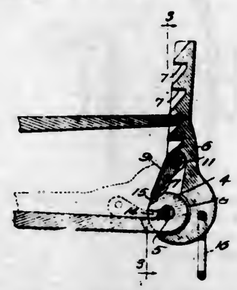
A wrench comprising a body portion having a fixed jaw at one side thereof, a movable jaw coöperating with said fixed jaw, said fixed jaw having a stepped recess therein formed with curved and plain bottom portions and confronting the said movable jaw, a substantially wedge-shaped lug centrally positioned upon the plain side of said body portion forwardly of said recess, the said lug projecting above said plain bottom portion of the recess and having a curved outer face and a transverse perforation therethrough, a jaw plate substantially conforming in shape to the said recess and pivoted to the said lug and having a bottom socket in register therewith when the jaw plate is positioned within the said recess, the said jaw plate adapted to be swung on its pivot completely out of said recess, spaced leaf springs secured within said recess and resiliently engaging beneath the jaw plate when the latter is in gripping position in the recess and shifting means for the said movable jaw.

1,158,344. CONTROL FOR ELEVATOR MECHANISM AND THE LIKE. JOSEPH RICHARD WATSON, Los Angeles, Cal. Filed Aug. 26, 1912. Serial No. 717,221. (Cl. 74—39.)



The combination with a lever having a slot, of a rack fixed to the lever, an axle, a pinion mounted on the axle and meshing with the rack, a wheel mounted to turn the axle, and a handle to turn the wheel, said handle having a latch bolt designed to engage the slot to hold the wheel and lever against relative movement.

1,158,345. TOOL-HANDLE FASTENER. EDGAR JACOB WEAVER, Westerville, Ohio. Filed June 18, 1915. Serial No. 34,886. (Cl. 81—45.)



1. A tool comprising clamping members provided with pivoted handles, one of the handles having a back turned portion on one end thereof, the said back turned portion having a cut away portion adjacent to the handle, and a notch above the said cut away portion, a locking bar pivoted to the said handle and having notches adapted to engage the other handle, a spring pressed pawl pivoted to the locking bar to engage the above mentioned cut away portion when the device is in inoperative position, and to engage the above mentioned notch when the device is in operative position, and a link pivoted to the inner end of the locking bar.

2. The combination in a tool provided with pivoted handles, one of the said handles having a back turned portion on the end thereof, forming a bearing, a locking bar comprising back and side members, the inner end of the said back member being curved to bear against the above mentioned back turned portion, and the side members extending over the sides of the said back turned

portion, a bolt passing through the inner end of the locking bar and the above mentioned bearing, and means for engaging the other handle and the locking bar.

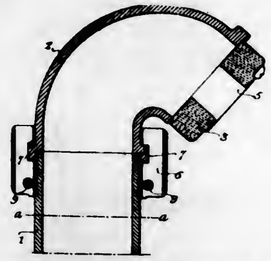
3. The combination in a tool having pivoted handles, one of the handles having a bearing at one end, the said bearing having a cut away portion adjacent to the handle and a notch above the said cut away portion, a locking bar pivoted to the said handle, a spring pressed pawl pivoted to the locking bar to engage the above mentioned cut away portion when the device is in inoperative position and to engage the notch when the device is in operative position, and means for engaging the locking bar and the other handle.

4. A fastening device for a tool having pivoted handles, comprising a locking bar pivoted to one of the handles, and having means for engaging the other handle, a bolt passing through the locking bar, a pawl having a bearing notch engaging the said bolt, springs coiled around the bolt and bearing against the locking bar at one end and against either side of the pawl at the other end, the first mentioned handle having notches adapted to be engaged by the said pawl.

5. A fastening device for a tool having pivoted handles, comprising a locking bar pivoted to one of the handles and having notches on the outer end thereof adapted to be engaged by the other handle, and means comprising a spring pressed pawl pivoted to the locking bar and adapted to engage the first mentioned handle for yieldably holding the locking bar against the second mentioned handle.

[Claims 6 to 9 not printed in the Gazette.]

1,158,346. OUTLET-HOOD FOR CONDUITS. WILMER M. WEBB, Philadelphia, Pa., assignor to H. T. Paiste Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 24, 1911. Serial No. 616,554. (Cl. 247—12.)

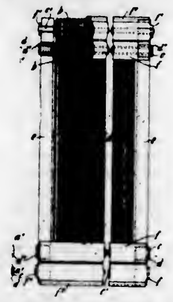


1. An outlet hood for a conduit consisting of a tubular bend having a bell-mouthed end formed to receive a conduit; with a coupling nut inclosing said bell-mouthed end and freely rotatable thereon, said nut being flanged over the bell mouthed end to prevent relative longitudinal movement of the bend and nut and being threaded for the reception of a threaded end of the conduit.

2. An outlet hood for a conduit, said hood consisting of a tubular bend having a bell mouth end formed to receive a conduit, and a two-part coupling nut and means for connecting the parts of the nut, said nut having an annular recess adapted to receive and embrace the bell mouth end of the bend and permitting the rotation of the nut while preventing relative longitudinal movement of the bend and nut, said nut being internally threaded from said recess to one end so as to be capable of being secured upon a threaded end of a conduit.

1,158,347. REED FOR LOOMS. EMIL WEIERSHAUS, Barmen-Rittershausen, Germany. Filed July 21, 1915. Serial No. 41,066. (Cl. 139—87.)

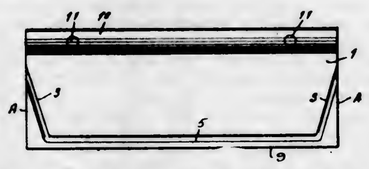
1. In a reed for looms, a pair of spaced bars, said bars having a pair of oppositely disposed recesses at each end and in the edge portions thereof, coils between the ends of said bars, reed dents positioned between the bars with the extremities thereof fastened between the convolutions of the coils, said reed dents having oppositely disposed recesses in their edges corresponding to the recesses of the bars, and connecting members for the bars and reed dents and passing through the coils, said connecting members engaging the recesses.



2. In a reed for looms, a pair of spaced bars, said bars having a pair of oppositely disposed recesses at each end and in the edge portions thereof, coils between the ends of said bars, said coils having opposite windings, reed dents positioned between the bars with the extremities thereof fastened between the convolutions of the coils, said reed dents having oppositely disposed recesses in their edges corresponding to the recesses of the bars, connecting members for the bars and reed dents and passing through the coils, said connecting members engaging the recesses, and removable casing parts inclosing the coils and connecting members at the ends of the bars and reed dents, and adapted upon limited displacement of the connecting members to be removed and also to permit removal of any one or ones of said reed dents.

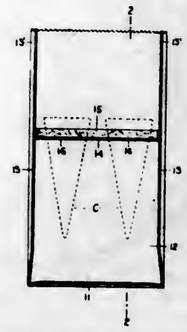
3. In a reed for looms, a plurality of vertical frout bars having recesses in opposite edges thereof located on different horizontal planes, there being two of said recesses near each end of each bar, a pair of oppositely wound coils between the corresponding ends of the bars, reed dents having their ends provided with corresponding pairs of recesses and engaged through alined convolutions of the coils, and guard strips at opposite edges of the reed surrounding the coils and each having flaps at the end thereof provided with apertures, and rods extending through the coils engaging the respective recesses of the bars and reed dents, said rods being adapted to be displaced longitudinally with respect thereto so as to disengage the end portions of the guard members to permit removal of the latter, further displacement of the rods past any of the respective reed dents, permitting removal of the latter from the top or bottom of the reed by disengagement from the respective coils.

1,158,348. PAINTER'S GUARD. ALBERT D'W. WELTY, Sr., Reno, Nev. Filed Aug. 12, 1914. Serial No. 856,469. (Cl. 91—65.)



A painter's guard comprising a flat blade having a smooth surface upon one side and provided with a bevel at its lower edge, the opposite side of the blade being provided with grooves extending from the outer edges of the blade in an inclined direction, and a longitudinal groove disposed near the edge of the blade and terminating in the inclined grooves, said longitudinal groove comprising an inclined wall, and an inwardly and rearwardly inclined bottom, said blade being provided with a handle.

1,158,349. ICE-CREAM-CONE BAG. CARL W. WHALEN, Millinocket, Me. Filed Aug. 3, 1915. Serial No. 43,378. (Cl. 229—6.)

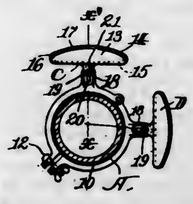


1. The herein described paper receptacle having a horizontal shelf rigidly secured to the inner walls thereof intermediate its top and bottom and parallel to the bottom, said shelf having a seat formed therein to support an ice cream cone.

2. The herein described ice cream cone bag, the same being constructed of collapsible material and having a horizontal shelf secured therein substantially midway between the bottom and the mouth of the bag said shelf having a flange surrounding its perimeter and secured permanently to the inner wall of the bag, said shelf being provided with one or more holes to receive as many ice cream cones, substantially as set forth.

3. The herein described receptacle for the transport and protection of ice cream cones, comprising a bag of collapsible material and approximately rectangular in cross section, a rectangular diaphragm having a vertical flange projecting upwardly at each edge, said flange permanently secured to the inner walls of the bag, at approximately the vertical center thereof, the said diaphragm having one or more holes to receive a corresponding number of ice cream cones.

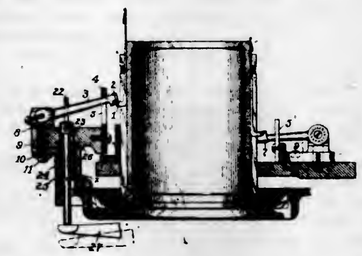
1,158,350. BUFFER. ANNA RUTH WHITE, La Crosse, Wis. Filed June 16, 1913. Serial No. 773,940. (Cl. 155—33.)



1. A buffer of the type described comprising pivoted sections for securing it to a support, one of said sections having an integral offset portion provided with an aperture, a guard arm having an elongated slot adjacent one end and terminating in an enlarged portion at its other end, a set-screw extending through the slot in said arm and the aperture in said offset for adjustably securing said arm with respect to said sections, and a resilient band secured about said enlarged portion as and for the purposes specified.

2. A buffer of the type described comprising pivoted sections for securing it to a support, one of said sections having an integral recessed offset portion provided with an aperture, an outwardly projecting guard arm adapted to slide within the recess of said offset portion, said arm having an elongated slot adjacent one end, a set-screw extending through the slot in said arm and the aperture in said offset for adjustably securing said arm with respect to said sections and support, and a resilient bumper carried by and extending beyond the free end of said arm.

1,158,351. PICK MECHANISM FOR KNITTING-MACHINES. FRANK WILCOMB, Norristown, Pa., assignor to Hemphill Manufacturing Company, Central Falls, R. I., a Corporation of Rhode Island. Filed Jan. 17, 1914. Serial No. 812,734. (Cl. 66—24.)



1. A pick for widening or narrowing having a butt-stop with a lip on each side thereof for picking short butt needles, and a guard at each side of the butt-stop to be impinged upon by the long butts for deflecting the pick to avoid picking.

2. A pick having the butt-stop and lips for engaging the short butt needles, and guards in rear of and below said lips to prevent the long butt needles from being engaged by said stop and lips.

3. In combination, a single pick arm, a horizontal pivot pin for said arm, a vertically extending swiveled post carrying said horizontal pivot, a spiral spring about said horizontal pivot connected to the swiveled post at one end and to the horizontal pivot pin at its other end, said spring moving with the post and applying its force to move the pick arm vertically and with uniform tension in all positions of the swiveled post, and a pick cam to give the pick vertical movement as it swings laterally, substantially as described.

4. A pick for knitting machines having a butt-stop and a lip adjacent for picking short butt needles, and a guard for impact of long butt needles, said guard located in rear of the lip and in line with the butt-stop, and a cam for directing the pick, under said impact, out of the plane of movement of the needle butt, substantially as described.

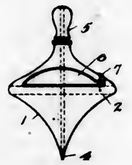
5. In combination, a single pick arm, a horizontal pivot pin for said arm, a vertically extending swiveled post carrying said horizontal pivot, a spiral spring about said horizontal pivot connected to the swiveled post at one end and to the horizontal pivot pin at its other end, said spring moving with the post and applying its force to move the pick arm vertically and with uniform tension in all positions of the swiveled post, a pick cam to give the pick vertical movement at its swings laterally and a controller engaging the pick arm between its pivot and its free end, with connections for moving said controller and pick downwardly to inoperative position and in opposition to the lifting force of the spring, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,158,352. SPINNING-TOP. PETER K. WILLIAMS, Columbus, Ohio. Filed Aug. 11, 1915. Serial No. 44,931. (Cl. 46—32.)

1. The combination with a spinning top fashioned with a tapered upper portion having recesses in its outer face,

of a plurality of freely swinging pivoted wings conforming to the contour of said upper portion, and adapted, when at rest, to seat in said recesses.



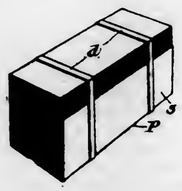
2. The combination with a hollow spinning top provided with a weighted stabilizing ring at its point of greatest diameter, of a plurality of freely swinging lifting wings pivoted in the top and adapted to be extended by centrifugal force.

3. The combination with a top of a plurality of lifting wings pivoted thereto and adapted to be extended by centrifugal force, a supporting frame, and means on said frame to cause the spinning top to travel forwardly.

4. The combination with a top, of a plurality of lifting wings pivoted on the top and adapted to freely swing therefrom by centrifugal force, a frame and planes supported thereby for causing the top to travel forwardly, and means for governing the direction of travel.

5. The combination with a spinning top and means for lifting said top, of a frame, planes supported in said frame for causing forward travel of the top, and a rudder for governing the direction of travel, said planes and rudder being flexible.

1,158,353. PAPER-PACKAGE. CHARLES C. WILLIS, Framingham, Mass., assignor to Dennison Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Feb. 20, 1915. Serial No. 9,487. (Cl. 206—57.)

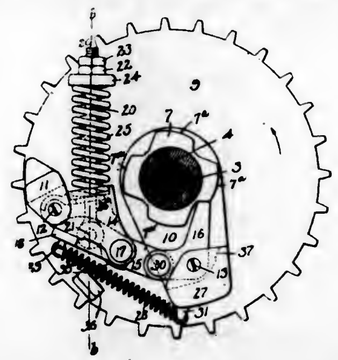


1. A package of paper composed of a plurality of superposed sheets, a portion of the bottom sheet extending upward along the side of the package, and a band detachably to secure said sheets as a whole with said upwardly extending sheet against said side.

2. A package of paper composed of a plurality of interlocked sheets, each sheet being folded to form three sections, namely, a middle section and two end sections, one at each side of the middle section, one end section being folded over upon the middle section in one direction and the other in the opposite direction and each end section extending between the opposite end section and the middle section of the next adjacent sheet or sheets, a portion of the bottom sheet extending upward along the side of the package and a band detachably to secure said sheets as a whole with said upwardly extending sheet against said side.

3. In combination, a cabinet having a movable front, a slot in its bottom adjacent to said movable front, and a package of paper in said cabinet composed of a plurality of superposed sheets, a portion of the bottom sheet extending upward along the front side of the package, and a band detachably to secure said sheets as a whole with said upwardly extending sheet against said side.

1,158,354. SELF-RELEASING POSITIVE CLUTCH. LELAND WILLIS, Grenloch, N. J., assignor to Bateman Manufacturing Company, Grenloch, N. J., a Corporation of New Jersey. Filed Feb. 11, 1915. Serial No. 7,549. (Cl. 192—6.)



1. The combination of the driving and driven members of a power transmission device, a third member free to move independently of both of them, a clutch comprising positively engaging members, one carried by one of said first two members and the other by the third member, a toggle connection between the other of said first two members and that member of the clutch which is carried by the third member, and yielding means whereby said toggle mechanism is caused to retain the clutch members in engaging position.

2. The combination of the driving and driven members of a power transmission device, a pawl and ratchet clutch interposed between them and having its ratchet connected to one of said members, a toggle connection between the other member and the clutch pawl and yielding means whereby said toggle mechanism is caused to retain the pawl in engagement with said ratchet.

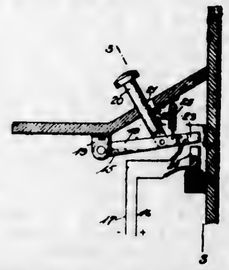
3. The combination of the driving and driven members of a power transmission device, a third member movable independently of both of them, a pawl and ratchet clutch having the ratchet connected to one of the first two of said members and the pawl mounted upon the third member, toggle mechanism whereby said pawl is connected to that one of the first two members other than the one which carries the ratchet and yielding means whereby said toggle mechanism is caused to retain the pawl in engagement with said ratchet.

4. The combination of the driving and driven members of a power transmission device, a third member free to move independently of both of them, a ratchet connected to one of the first two of said members, toggle mechanism connecting the other of said first two members to said third member, one of the elements of said toggle mechanism being a lever pivoted to the third member and carrying the pawl for engaging said ratchet and yielding means whereby said toggle mechanism is caused to retain the pawl in engagement with said ratchet.

5. The combination of the driving and driven members of a power transmission device, a third member movable independently of both of them, a ratchet connected to one of the first of said two members, a toggle connection between the other of said first two members and the third member, said toggle connection comprising a link pivoted to said other of the first two members, a lever pivoted to said link, a second lever pivoted to the first lever and also to said third member, said second lever having a pawl for engaging the ratchet, and a spring acting upon said first lever and tending to hold the toggle members in such relation to each other as to cause said toggle to transmit power to the third member.

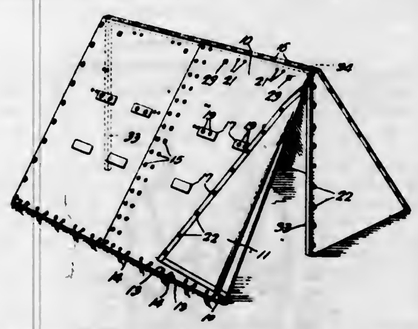
[Claims 6 to 10 not printed in the Gazette.]

1,158,355. PEDAL-SWITCH. WILLIAM STEPHEN WILLIS, New York, N. Y. Filed Oct. 12, 1914. Serial No. 866,282. (Cl. 175—282.)



In a switch mechanism for an automobile signal device, a socket, a knife pivotally mounted at a point spaced from said socket, said knife being adapted to have one end forced into said socket, an insulating member dividing said knife into parts so that the part engaging said socket will be insulated from the pivotal support of the knife, a spring for normally holding said knife out of engagement with said socket, a pedal pivotally connected with said socket between the insulation and the pivotal point of the knife, said pedal extending substantially at right angles to the knife, said pedal being formed with a notch, and a stationary catch arranged adjacent the pedal, said pedal being adapted to be moved pivotally toward said catch, whereby said catch will project into said notch when said knife is engaging said socket for locking the knife against movement.

1,158,356. CAMP EQUIPMENT. THEODORE F. WILSON, Washington, D. C. Filed Feb. 25, 1915. Serial No. 10,526. (Cl. 135—1.)



An accoutrement unit comprising a rectangular strip of fabric having a row of attaching devices along one of its longer edges, and means on the opposite longer edge adapted to engage with coöperating means on a second similar unit, one of the shorter edges of the unit being provided with a row of attaching devices and having means on the opposite shorter edge adapted to engage coöperating means on a third, and triangular flap having one edge secured to the first mentioned longer edge of the strip and spaced inwardly from the edge beyond the attaching devices.

1,158,357. VARIABLE-SPEED-TRANSMISSION MECHANISM. CHARLES R. WOOD, Spokane, Wash., assignor of one-half to Charles W. Miller, Portland, Oreg., and Joseph D. Alexander, Spokane, Wash. Filed Apr. 16, 1912. Serial No. 691,168. (Cl. 74—34.)

1. In a motorcycle, the combination with a motor shaft, of a revoluble frame with pinions rotatably mounted internally of the rim thereof, and means located externally of said rim for transmitting power therefrom, a drive gear mechanism revolubly mounted internally of said frame and comprising a shaft operatively connected with said motor shaft, two gear wheels, one fixedly and one loosely mounted on said shaft and meshing with said pinions, and having recesses and clutch jaws protruding outwardly from the recesses in each of said gear wheels, a clutch mechanism for placing said gear wheels into and out of locked relation with each other, and comprising a clutch dog resiliently supported in the recess in said fixedly mounted gear wheel and engaged on said clutch jaws therein and adapted to move outwardly from said recess and engage the clutch jaws on said loosely mounted gear wheel, a clutch follower mounted in the recess of said loosely mounted gear wheel and pressing against said clutch dog and having pintles passing through holes in said gear wheel; and a controlling means coming in operative contact with said pintles whereby said clutch is operated.



2. In a motorcycle, the combination with a motor shaft, of a gear mechanism, including a hollow shaft operatively connected with said motor shaft, two drive gear wheels, one fixedly and one loosely mounted on said hollow shaft, a rigid I-beam ring, incasing said gear mechanism and mounted for revoluble motion around said gear wheels, and having means located externally of said I-beam ring for transmitting power therefrom, pinions rotatably mounted internally of said I-beam ring and meshing with said gear wheels, a clutch mechanism for placing said gear wheels into and out of locked relation with each other and comprising a clutch dog resiliently supported in the recess in said fixedly mounted gear wheel and engaged on said clutch jaws therein and adapted to move outwardly from said recess and engage clutch jaws on said loosely mounted gear wheel, a clutch follower mounted in the recess of said loosely mounted gear wheel and pressing against said clutch dog and having pintles passing through holes in said gear wheel; and a controlling means coming in operative contact with said pintles whereby said clutch is operated.

3. In a variable speed transmission mechanism the combination of a revoluble frame with pinions rotatably mounted internally of the rim thereof, and means located externally of said rim for transmitting power therefrom with means for rotating said frame including a drive gear mechanism revolubly mounted internally of said frame, and comprising a shaft, two gear wheels, one fixedly and one loosely mounted on said shaft and meshing with said pinions and having recesses and clutch jaws protruding ouwardly from said recesses, a clutch mechanism for placing said gear wheels into and out of locked relation with each other, and comprising a clutch dog resiliently supported in the recess in said fixedly mounted gear wheel and engaged on said clutch jaws therein and adapted to move outwardly from said recess and engage clutch jaws on said loosely mounted gear wheel, a clutch follower mounted in the recess of said loosely mounted gear wheel and pressing against said clutch dog and having pintles passing through holes in said gear wheel; and a controlling means coming in operative contact with said pintles whereby said clutch is operated.

4. In a variable speed transmission mechanism the combination of a revoluble power-transmission frame with pinions rotatably mounted internally of the rim thereof; with a drive gear mechanism revolubly mounted internally of said frame, and comprising a shaft, two gear wheels, one fixedly and one loosely mounted on said shaft, and meshing with said pinions; a clutch mechanism for placing said gear wheels into and out of locked relation with each other; a fixed support adjacent to the device; a controlling mechanism operatively connected with said clutch mechanism and comprising a supporting arm anchored at one end to said fixed support and having its other end fitted loosely over said shaft said end having a projecting hub, a collar loosely mounted on said hub and adapted to move inwardly and outwardly thereon, said collar having a smooth outer rim coming in operative contact with said clutch mechanism, and having a toothed inner surface, a shift lever revolubly mounted on said hub and having a toothed outer surface adapted to fit into and operatively engage the toothed surface of said collar, means for moving said lever rotatively on said hub whereby said collar is pressed inwardly to operate said clutch mechanism and thereby placing said gear wheels out of locked relation with each other; and frictional means for controlling said loosely mounted gear wheel.

5. In a variable speed transmission mechanism the combination with a revoluble frame comprising a rigid member with pinions rotatably mounted internally of the rim thereof and means located externally of said rim for transmitting power therefrom; of a drive gear mechanism revolubly mounted internally of said frame and comprising a shaft, two gear wheels, one fixedly and one loosely mounted on said shaft, and meshing with said pinions, said loosely mounted gear wheel having a flange protruding from its outer face; a clutch mechanism for throwing said gear wheels into and out of locked relation with each other; a shifting mechanism operatively connected with said clutch mechanism; a fixed support adjacent to the device; a supporting arm anchored at one end of said fixed support and having its other end fitted loosely over said shaft, said end having a projecting hub; and a controlling mechanism comprising a lever rotatively mounted on the hub of said supporting arm, a resilient member having one end detachably anchored to said supporting arm and passing around the periphery of said flange on said loosely mounted gear and having the other end turned flatwise to said supporting arm and adapted to pass loosely between the anchored end of said resilient member and said supporting arm, said resilient member being operatively connected with said lever and adapted to operation in conjunction with said clutch mechanism for the purpose of controlling said loosely mounted gear wheel.

[Claim 6 not printed in the Gazette.]

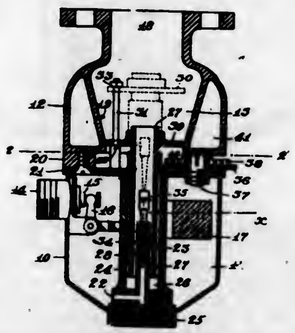
1,158,358. SHIRT-WAIST FORM. GEORGE WORDINGHAM, Milwaukee, Wis. Filed June 5, 1914. Serial No. 843,266. (Cl. 211—13.)



1. In a garment form, a relatively flat body portion formed from a blank substantially rectangular in outline and provided with an incision extending downwardly from its upper edge and with branch incisions extending laterally in opposite directions and thence downwardly from the lower end of the first mentioned incision, the portion of the blank lying between the branch incisions constituting a suspension tab, the blank being provided at each side of the first mentioned incision with spaced incisions extending downwardly from its upper edge, the portions of the blank between the spaced incisions constituting tabs, the portions of the blank between the first and second mentioned incisions and the lateral edges of the blank being adapted to be rolled upon themselves whereby to form shoulder portions, the blank adjacent the lower ends of the branch incisions being formed with spaced slits in which the second mentioned tabs are to be inserted when the said portions of the blank are rolled upon themselves, the portions of the blank at the opposite sides of the first mentioned incision and immediately adjacent thereto being adapted to overlap at a point adjacent the lower end of the suspension tab when the first mentioned portions of the blank are rolled whereby to permit the said overlapped portions being secured together to assist in retaining the first mentioned portions in rolled condition.

2. In a garment form, a relatively flat body portion formed from a blank substantially rectangular in outline and provided with an incision extending downwardly from its upper edge and with branch incisions extending laterally in opposite directions from the lower end of the first-mentioned incision and thence downwardly, the portions of the blank between the first and second mentioned incisions ad the lateral edges of the blank being rolled each upon itself to form a shoulder form portion, each of the said portions being formed with a tab lying within the upper edge of the said portion, and the body of the blank below that portion thereof which is located between the branch incisions, being provided with spaced sets of incisions, each of the said tabs being inserted in an upward direction through the lower incision of the respective set and thence through the upper incision of the respective set with the terminal of the tab projecting within the interior of the said shoulder form portion.

1,158,359. CARBURETER. ROLLIN ABELL, Boston, Mass. Filed Nov. 9, 1911. Serial No. 659,393. (Cl. 48—154.1.)



1. A carbureter comprising a mixing chamber for air and fuel, said chamber having an air inlet and an outlet for the charges, means for conducting fuel into said chamber, and thermostatic means outside said chamber for decreasing the supply of fuel as the temperature rises, and for increasing the supply as the temperature falls.

2. A carbureter comprising a mixing chamber for air and fuel, said chamber having an air inlet and an outlet for the charges, a valve for controlling the admission of air through said inlet, means for conducting fuel to said chamber, a valve for controlling the supply of fuel, adjustable connections between said valves whereby opening and closing movement is transmitted from one to the other, and thermostatic means for regulating said connections to vary the relation of said valves.

3. A carbureter comprising a mixing chamber having an air inlet and an outlet for charges, a valve disposed in said inlet and adapted to be opened inwardly by a vacuum in said chamber and adapted to be closed by gravity, means for conducting fuel into said chamber, a valve for controlling the supply of fuel, means connecting the air valve and fuel valve for opening and closing the fuel valve when the air valve is opened and closed, said means being adjustable for varying the position of the fuel valve, and thermostatic means upon the exterior of the carbureter for regulating said connecting means to vary the relation of said valves.

4. A carbureter comprising a casing having a mixing chamber, said chamber having an air inlet and an outlet, a freely movable valve in said inlet adapted to open inwardly and to be closed by gravity, a fuel well open at the top, a fuel delivery nozzle arranged to discharge into said well, a sleeve loosely threaded through said air valve and extending into said well beyond and outside the mouth of said fuel nozzle, the exterior of said sleeve having gear teeth, a valve carried by said sleeve for coöperating with said fuel nozzle, a gear mounted to engage the teeth on said sleeve, and thermostatic means acting on said gear to turn it.

5. In a carbureter of the described class the combination of an air controlling valve and liquid controlling valve, and means for communicating motion from said air controlling valve to said liquid controlling valve including the thermostat adapted to automatically regulate the movement of said liquid controlling valve, whereby the supply of combustible fluid used may be varied to correspond with the variation of temperature.

[Claims 6 to 8 not printed in the Gazette.]

1,158,360. STEERING-GEAR FOR AUTOMOBILES. WARREN W. ANNABLE, Grand Rapids, Mich. Filed Sept. 8, 1914. Serial No. 860,657. (Cl. 21—200.)

1. In combination with steering gear for a car having a longitudinally and laterally movable rod to control the steering wheels of the car, two opposing springs connected to the respective ends of the rod at their outer ends, a collar oppositely engaged by the springs at their inner ends and slidable on the rod, and means for holding the collar from moving with the longitudinal movement of the rod and permitting the collar to move with the lateral movement of the rod.

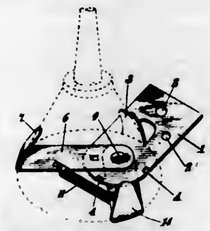
2. In combination with steering gear for a car having a rod connected at its respective ends to arms projecting rigidly from pivoted stub-axles, opposing compressible coiled springs slidable on the rod and connected to the respective ends of the sams at their outer ends, a collar slidable on the middle of the rod and oppositely engaged by the inner ends of the springs, an arm extending substantially parallel with the rod, said arm being pivoted at one end and connected to the collar at the other end.

3. Steering gear for a car comprising pivoted stub-axles for the steering wheels, arms projecting rigidly from said axles, a rod connecting the ends of the arms, opposing coiled springs surrounding the rod and slidable thereon, the outer ends of the springs being connected to the respective ends of the rod, a collar slidable on the rod near the middle thereof and oppositely engaged by the springs, an arm arranged substantially parallel with the rod connected with the collar at one end, and an adjustable arm to which the first named arm is pivoted at the other end.

4. Steering gear for a car comprising an axle provided with a pivoted stub-axle at each end, rigid arms extending from the stub-axles, a rod connecting the ends of said arms, opposing coiled springs surrounding the rod and slidable thereon, said springs engaging yokes on the respective ends of the rod at their outer ends, a collar slidable on the middle of the rod and oppositely engaged by the springs, an arm connected to the collar at one end and extending substantially parallel with the rod, a rigid arm adjustably mounted on the axle and pivotally supporting the arm which is connected to the collar.

5. Steering gear for a car comprising pivoted stub-axles each having a rigid arm, a longitudinally movable rod connecting said arms, a collar slidable on the rod, springs on the rod oppositely engaging the collar, means for holding the collar from moving with the longitudinal movement of the rod, and to permit the collar to move with the lateral movement of the rod and a brake in the collar frictionally engaging the rod to prevent longitudinal vibration of the same.

1,158,361. OIL-CAN HOLDER. CHARLES W. BECK, Detroit, Mich. Filed Sept. 17, 1914. Serial No. 862,126. (Cl. 248—20.)



1. An oil can holder comprising a main supporting plate having an upwardly extending integral can-holding lug, and two depending integral stop lugs near its forward end, a pivoted can-holding arm secured to the under side of the main plate and arranged to swing between the two stop lugs, the outer end of said arm being turned upwardly to form a can-holding lug, a rigid can-holding arm secured to the top of said plate and formed with a lug extending downwardly through an aperture in the main plate, the outer end of said rigid arm being turned upwardly to form a can-holding lug and a spring connected to adjoining edges of the can-holding arms and normally holding the pivoted arm against one of the stop lugs.

2. An oil can holder comprising a main supporting plate formed with an integral upwardly extending can-holding lug and two downwardly extending integral stop lugs, a pivoted can-holding arm secured to the under side of said main plate and adapted to swing between the two stop lugs, the outer portion of said arm being bent upwardly and lying in a plane parallel with the plane of the upper surface of the supporting plate, a rigid can holding arm secured to the top of the main plate and formed with an integral downwardly extending lug, said lug passing through the main plate and holding the said arm against pivotal movement, the outer ends of said arms extending upwardly and inwardly to form can-holding lugs and a coil spring connected to the can-holding arms and yieldingly holding the pivotal arm against one of the stops.

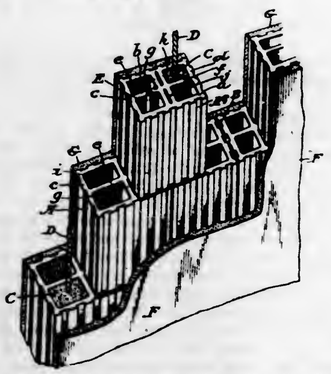
3. An oil can holder comprising a main supporting plate provided with an upwardly extending can-holding lug and two downwardly extending stop lugs, a pivoted can-holding arm secured to the under side of said main plate and adapted to swing between the two stop lugs, the outer portion of said arm being bent upwardly and lying in a plane parallel with the plane of the upper surface of the supporting plate, a rigid can-holding arm secured to the top of the main plate and provided with downwardly extending means, said means engaging the main plate and holding the said arm against pivotal movement, the outer ends of said arms extending upwardly and inwardly to form can-holding lugs and a coil spring

connected to the can-holding arms and yieldingly holding the pivotal arm against one of the stops.

4. An oil can holder comprising a main supporting plate having an upwardly extending can holding lug and two stop lugs near its forward edge, a rigid can holding arm carried by said main supporting plate the outer end of said rigid arm being turned upwardly to form a can holding lug, a pivoted can holding arm secured to the main plate and arranged to swing between the two stop lugs, the outer end of said arm being turned upwardly to form a can holding lug and the upper surface of said pivoted arm being in substantially the same horizontal plane as the supporting surface of the rigid can holding arm, and a spring connected to the pivoted arm and to the rigid arm and normally holding the pivoted arm against one of the stop lugs.

5. An oil can holder comprising a main supporting plate having an upwardly extending can-holding lug and two stop lugs near its forward edge, two can-holding and supporting arms extending forwardly and outwardly from the forward edge of the main plate, the outer ends of said arms being turned upwardly to form can-holding lugs and the can-engaging and supporting surfaces of said arms being in substantially the same horizontal plane, a pivot for one of said arms near the forward edge of the main plate said pivoted arm swinging between the two stop lugs, and a spring connected to said pivoted arm and to a rigid part whereby said spring holds the arm against one of the stop lugs.

1,158,362. HOLLOW-TILE WALL. PHILIP H. BEVIER, New York, N. Y. Filed May 22, 1911. Serial No. 628,661. (Cl. 72—29.)



1. A hollow-tile wall block the exterior surfaces of which are provided with grooves and the end faces of said block being at right angles to the surfaces of the walls composing said block, said block being provided internally thereof with a thickened web connecting the inner an douter walls of said block, the thickness of said web exceeding that of the walls and said block being provided, also, with cross webs extending from the end walls and intersecting with said thickened web so as to form therewith individual cells extending lengthwise through the block, said thickened web being provided in the material composing it with narrow longitudinal openings, the latter being sufficiently wide to include a masonry bond adapted to unite the end walls of adjacent blocks.

2. A hollow-tile wall block the ends of which are at right angles to the surfaces of the walls composing said block, said block being provided internally thereof with a thickened web and with a continuous cross web, said thickened web connecting the inner and outer walls of the block and the cross web extending inwardly from the end walls and joined with the thickened web intermediate said inner and outer walls, the thickness of said first named web exceeding that of the separate walls of the block and said thickened web being provided in the material composing it with openings the transverse width of which is less than that of the individual cells.

3. A wall comprising hollow tile blocks bonded together in rows for the blocks of one row to break joints with the blocks of adjacent rows, each hollow block being provided internally thereof with a thickened web and with a cross web positioned relatively to each other to produce cells extending lengthwise of the block, said thickened web connecting the inner and outer walls of the block and being provided in the material composing it with openings the width of which is equal substantially to the thickness of the bonding material uniting two adjacent blocks on the opposing end walls thereof, the end faces of said hollow block being at right angles to the surfaces of the walls composing said block and said blocks being vertically positioned for the walls and webs of each block to aline vertically with some of the walls and webs of two blocks below it.

4. A wall comprising hollow tile blocks each provided on the outer surfaces of the walls composing it with grooves and provided internally thereof with a thickened web and with a cross web which latter web connects with the end walls and with the thickened web intermediate the inner and outer walls, the thickness of said thickened web exceeding that of the separate walls of the block and said thickened web being provided in the material composing it with longitudinal openings the width of which is equal substantially to the thickness of the bonding material which unites two adjacent blocks on the opposing grooved surfaces of the end walls thereof, said hollow blocks being assembled in rows and superposed for the thickened web of each block to aline vertically with the opposing end walls respectively of two blocks above and below it and with the openings in said thickened web in vertical register with the bonding material uniting said end walls of the blocks, said walls and cross webs of each block being in vertical register with corresponding walls and cross webs of blocks in the rows above and below the same.

5. A wall comprising hollow tile blocks each provided internally thereof with a thickened web and with a cross web positioned relatively to each other to produce cells extending lengthwise of the block, said thickened web connecting the inner and outer walls of the block and said web being provided in the material composing it with openings separate from said cells, said blocks being bonded together in rows to break joints and said blocks being superposed one upon the other for the walls and webs of one block to aline vertically with the walls and webs of blocks above and below it, the cells of said superposed blocks being in vertical register, and reinforced concrete material filling said registering cells of the superposed blocks and bonded to the walls thereof.

1,158,363. COHERING MASS AND PROCESS OF FORMING THE SAME. DANDRIDGE H. BIBB, New York, N. Y., assignor to Continental Process Corporation, Briarcliff Village, N. Y., a Corporation of New York. Filed Apr. 1, 1914. Serial No. 828,892. (Cl. 75—73.)

1. In the process of producing cohering masses, the improvement which comprises mixing divided material with a binder consisting of pyroligneous tar and subjecting the mixture to pressure so as to form cohering masses.

2. In the process of producing cohering masses, the improvement which comprises mixing divided material with a binder consisting of pyroligneous tar, subjecting the mixture to pressure so as to form cohering masses and heating the same when thus formed.

3. In the process of producing cohering masses, the improvement which comprises mixing divided material with a binder consisting of pyroligneous tar and subjecting the mixture to pressure so as to form cohering masses and subjecting the same when thus formed to artificial heat so as to substantially drive off the disagreeable fumes.

4. In the process of producing cohering masses, the improvement which comprises mixing fine dust with a binder consisting of pyroligneous tar and subjecting the mixture to pressure so as to form a cohering mass.

5. A new and improved cohering mass consisting of divided material bound together throughout by a binder consisting of pyroligneous tar from which the fumes have been substantially driven off.

1,158,364. PROCESS OF MAKING COHERING MASSES. DANDRIDGE H. BIBB, New York, N. Y., assignor to Continental Process Corporation, Briarcliff Village, N. Y., a Corporation of New York. Filed May 9, 1914, Serial No. 837,558. Renewed Mar. 10, 1915. Serial No. 13,402. (Cl. 75—73.)

1. In the process of producing a cohering mass, the improvement which consists in mixing granular material with sulfite process waste liquor subjecting the mixture to pressure so as to form a cohering mass and converting the sulfite process waste liquor into a non-coked water resistant substance by the application of heat.

2. In the process of producing a cohering mass, the improvement which consists in mixing granular material with sulfite process waste liquor evaporated to a viscosity of about thirty degrees (30°) Baumé, subjecting the mixture to pressure so as to form a cohering mass and converting the sulfite process waste liquor into a non-coked water resistant substance by the application of heat.

3. In the process of producing a cohering mass, the improvement which consists in mixing granular material with sulfite process waste liquor subjecting the mixture to pressure so as to form a cohering mass and converting the sulfite process waste liquor into a non-coked water resistant substance by the application of heat about six hundred degrees (600°) Fahrenheit.

4. In the process of producing a cohering mass, the improvement which consists in mixing granular material with sulfite process waste liquor, subjecting the mixture to pressure so as to form a cohering mass and artificially heating the mass thus formed by a heat of about six hundred degrees (600°) Fahrenheit, and sustaining said heat for about twenty (20) minutes.

5. In the process of producing a cohering mass, the improvement which consists in mixing granular material with sulfite process waste liquor having a viscosity of about thirty degrees (30°) Baumé, subjecting the mixture to pressure so as to form a cohering mass and artificially heating the mass thus formed by a heat of about six hundred degrees (600°) Fahrenheit and sustaining said heat for a period of about twenty (20) minutes.

1,158,365. BRIQUETS AND OTHER PRODUCT COMPOSED OF BONDED DIVIDED MATERIAL. DANDRIDGE H. BIBB, New York, N. Y., assignor to Continental Process Corporation, Briarcliff Village, N. Y., a Corporation of New York. Filed Sept. 24, 1914. Serial No. 863,280. (Cl. 75—73.)

1. A cohering mass of compacted divided material held together by a binder consisting of a non-coked water-resistant residue of waste sulfite liquor.

2. A coherent mass of granular inorganic material held together by a binder consisting of a non-coked water-resistant residue of waste sulfite liquor.

3. A briquet comprising fine dust held together by a binder consisting of a non-coked water-resistant residue of waste sulfite liquor.

1,158,366. PROCESS OF MAKING COHERING MASSES. DANDRIDGE H. BIBB, New York, N. Y., assignor to Continental Process Corporation, New York, N. Y., a Corporation of New York. Filed Apr. 1, 1915. Serial No. 18,614. (Cl. 75—73.)

1. The process of producing a co-hering mass which consists in evaporating waste sulfite liquor so as to obtain a residue of soluble pitch, pulverizing said pitch, forming a moist mixture comprising said pulverized pitch, granular material and a solvent, forming said mixture into briquets and then converting said residue into a non-coked water resistant substance by the application of heat.

2. The process of producing a co-hering mass which consists in evaporating waste sulfite liquor so as to obtain a residue of soluble pitch, pulverizing said pitch, mixing it with other subdivided material, subjecting it to the action of a solvent so as to moisten the mass, forming the same into briquets and then converting said residue into a non-coked water resistant substance by the application of heat.

3. The process of producing a co-hering mass, which consists in evaporating waste sulfite liquor so as to obtain a residue of soluble pitch, pulverizing said pitch, forming a moist mixture comprising said soluble pulverized pitch, granular material and water, forming said mixture into briquets and then converting said residue into a non-coked water resistant substance by the application of heat.

4. The process of producing a co-hering mass which consists in evaporating waste sulfite liquor so as to obtain a residue of soluble pitch, pulverizing said pitch, mixing it with other subdivided material subjecting it to the action of water so as to moisten the mass, forming the same into briquets and then converting said residue into a non-coked water resistant substance by the application of heat.

5. The process of producing a co-hering mass which consists in evaporating waste sulfite liquor so as to obtain a residue of soluble pitch, pulverizing said pitch, mixing said soluble pulverized pitch with other subdivided material subjecting it to the action of water in vapor form so as to moisten the mass, forming the same into briquets and then converting said residue into a non-coked water resistant substance by the application of heat.

[Claim 6 not printed in the Gazette.]

1,158,367. FUEL FOR KINETIC ENGINES AND METHOD OF MAKING THE SAME. GUSTAV BLIEBERGER, New York, N. Y. Filed May 8, 1914. Serial No. 837,294. (Cl. 44—8.)

1. The process of producing fuel for kinetic engines consisting in mixing methylic alcohol, acetone, lead carbonate, and a resinous acid, distilling the mixture, collecting the distillate, mixing a small quantity of the distillate with relatively high grade products of crude oil distillation, agitating the mixture and finally separating the insoluble sediment therefrom.

2. The process of producing fuel for kinetic engines consisting in mixing methylic alcohol, acetone, lead carbonate and a resinous acid, distilling the mixture, collecting the distillate up to about 110° C., mixing a small quantity of the distillate with relatively high grade products of crude oil distillation, agitating the mixture and finally separating the insoluble sediment therefrom.

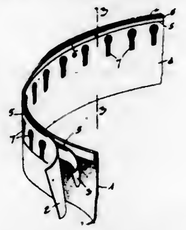
3. The process of producing fuel for kinetic engines consisting in mixing methylic alcohol, acetone, lead carbonate and a resinous acid, distilling the mixture, collecting the distillate up to about 100° C., mixing a small quantity of the distillate with relatively high grade products of crude oil distillation, and some gasolene, agitating the mixture and finally separating the insoluble sediment therefrom.

4. The process of producing fuel for kinetic engines, consisting in mixed methylic alcohol, acetone, lead carbonate and a resinous acid, distilling the mixture, collecting the distillate up to about 110° C., mixing a small quantity of the distillate with the product of crude oil distillation passing over between 150° C. to 300° C. and some gasolene, agitating the mixture and allowing it to settle, and finally separating the insoluble sediment therefrom.

5. The process of producing fuel for kinetic engines consisting in mixing methylic alcohol, acetone, lead-carbonate and a resinous acid, distilling the mixture, collecting the distillate up to about 110° C., mixing a small quantity of the distillate with kerosene and some gasolene, agitating the mixture and allowing it to settle, and finally separating the insoluble sediment therefrom.

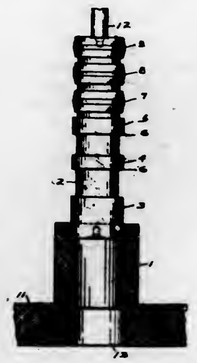
[Claims 6 to 10 not printed in the Gazette.]

1,158,368. BUTTONHOLE-FLY FOR SHOES. HOWARD F. BUBIER, Lynn, Mass., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Mar. 7, 1913. Serial No. 752,547. (Cl. 36—52.)



As an article of manufacture a buttonhole fly for shoes comprising a front piece having one edge turned under upon itself to form a bead, a reinforcing tape overlying the turned under edge and secured to said front piece by a line of stitches, and a back piece overlying the tape and secured to the front piece by a line of stitches beyond the outer edge of the tape.

1,158,369. BEARING. WILLIAM H. BUNTING, Toledo, Ohio, assignor to Bunting Brass & Bronze Company, Toledo, Ohio, a Corporation of Ohio. Filed Feb. 15, 1915. Serial No. 8,240. (Cl. 64—10.)



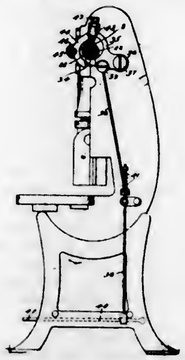
1. A bearing having a cylindrical bearing surface, the skin of the surface compacted and supported by a non-compacted integral body portion and formed of a non-ferrous material.

2. A bronze bearing having a cylindrical bearing surface, the skin of the surface being compacted and supported by a non-compacted portion of the bronze bearing.

3. A cast metal bearing having compacted skins forming inner and outer bearing surfaces, and supported by the non-compacted body portion of the cast metal bearing.

1,158,370. OPERATING DEVICE FOR PUNCH-PRESS CLUTCHES. LEON J. CAMPBELL, Chicago, Ill. Filed Nov. 29, 1912. Serial No. 734,110. (Cl. 192—1.)

1. A punch press clutch mechanism, comprising a driving shaft, a key having a limited movement lengthwise in guiding means on said shaft and a tilting movement about its axis, resilient means operating against the outer end of said key for urging said key in said guiding means toward said punch press; wedging means articulated to the frame of said punch press and controlled by the operator, acting against the inner end of said key to move it outward along said guiding means, a locking rib on said key, a driving pulley having an axial bore normally riding idle on said shaft and around said key, a plurality of key-seats in the walls of said axial bore, means on said shaft for revolubly supporting said driving pulley with said walls of said bore clear of said shaft, means on said key coacting with a stop on said shaft, for so tilting said key when moved lengthwise against said stop as to protrude said locking rib into the path of said key-seats and cause it to be engaged by one of them, means on said key coacting with a second stop on said shaft, for tilting said key when moved in the direction opposite to said first movement, against said second stop, said second tilting being in the angular direction opposite the said first tilting and bringing said key out of engagement with said key-seat.

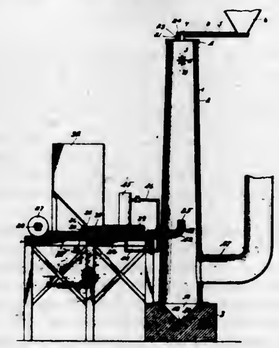


2. A punch press clutch mechanism, comprising a driving shaft, a key having a limited movement lengthwise in guiding means on said shaft and a tilting movement about its axis, resilient means operating against the outer end of said key for urging said key in said guiding means toward said punch press; wedging means articulated to the frame of said punch press and controlled by the operator, acting against the inner end of said key to move it outward along said guiding means, a locking rib on said key, a driving pulley having an axial bore normally riding idle on said shaft and around said key, a plurality of key-seats in the walls of said axial bore, means on said shaft for revolubly supporting said driving pulley with said walls of said bore clear of said shaft, a plurality of intermediate surfaces separating each pair of adjacent key-seats, said key-seats and said intermediate surfaces completely filling the periphery of said axial bore, and there being as many of said key-seats as the size of said lock rib and the diameter of said bore will permit, means on said key coacting with a stop on said shaft, for so tilting said key when moved lengthwise against said stop as to protrude said locking rib into the path of said key-seats and cause it to be engaged by one of them, means on said key coacting with a second stop on said shaft, for tilting said key when moved in the direction opposite to said first movement, against said second stop, said second tilting being in the angular direction opposite to said first tilting and bringing said key out of engagement with said key-seat.

3. A punch press clutch mechanism comprising a driving shaft, a key having a limited movement parallel to the axis of said shaft in guiding means on said shaft and a tilting movement about its axis, a locking rib on said key, a driving pulley having an axial bore, means on said shaft for revolubly supporting said driving pulley with the walls of said axial bore clear of said shaft, means on said key coacting with one of said supporting means, for so tilting said key when moved lengthwise against said supporting means as to protrude said locking rib into the path of said key-seats and cause it to be engaged by one of them, means on said key coacting with said supporting means for tilting said key when moved in the direction opposite to said first movement, said second tilting being in the angular direction opposite to said first tilting and bringing said key out of engagement with said key-seat.

4. A punch press clutch mechanism comprising a driving shaft, a key having a limited movement parallel to the axis of said shaft in guiding means on said shaft and a tilting movement about its axis, a locking rib on said key, a driving pulley having an axial bore, means on said shaft for revolubly supporting said driving pulley with the walls of said axial bore clear of said shaft, means on said key coacting with one of said supporting means, for so tilting said key when moved lengthwise against said supporting means as to protrude said locking rib into the path of said key-seats and cause it to be engaged by one of them, means on said key coacting with said supporting means for tilting said key when moved in the direction opposite to said first movement, said second tilting being in the angular direction opposite to said first tilting and bringing said key out of engagement with said key-seat, a face on the inner end of said key, having a principal inclination from the top down, and a second slope from right to left, means pivoted to the side of the frame of said punch press, adapted, when engaged by said inclined face, to push said key outward as it continues to be swung around by the revolving shaft, means controllable by the operator of said punch press, for moving said key-pushing means out of contact with and clear of the path of longitudinal movement of said key, means directly connected and integral with said key-pushing means, and actuated by the revolution of said key about the axis of said shaft to automatically swing said key pushing means into its operative position opposite the inner end of said key, after it has been pulled out of said position, means for adjusting said automatic means so as to be inoperative, thereby allowing said punch press to work continuously, an inclination on said key-pushing means from the front to the rear, and a second inclination on said key pushing means from the bottom outward toward the top, said second inclination being adapted to coact with said second slope on said face on the inner end of said key to lock said two inclined faces together after they have entered into mutual engagement, elastic means bearing against the outer end of said key, adapted to be compressed by said outward movement of said key, and to urge said key inward, a safety device pivoted to said frame of said punch press, and engaging a member integral with said key-pushing means, actuated by the swinging of said key by its rotating shaft, to automatically insure the correct operation of said automatic means for swinging said key-pushing means in case the latter have been pulled out of the operative position by inadvertence, and means for positively holding said key down in its said groove when in the locking and when in the disengaged position, said means operating to continue the lengthwise movement of said key after it has been fully tilted to one or the other of said two positions, thereby inserting said key between said shaft and one or the other of said supporting means on said shaft.

1,158,371. PROCESS OF CALCINING AND CLINKERING. ALEXANDER CARNIE, Independence, Mo. Filed Mar. 6, 1911. Serial No. 612,531. (Cl. 222—7.)



1. The method of burning cement consisting in diffusing in a gaseous fluid in a vertical kiln, raw non-calcined mixed powdered cement-making materials, and heating the diffused materials sufficiently to fuse them while they are diffused, the materials being permitted to float slowly downwardly until clinkerized.

2. The method of burning cement consisting in diffusing in a gaseous fluid in a vertical kiln, raw non-calcined mixed powdered cement-making materials, and subjecting the diffused mixed materials to contact with a flame having heat sufficient to fuse them while they are diffused, the materials being permitted to float slowly downwardly until clinkerized.

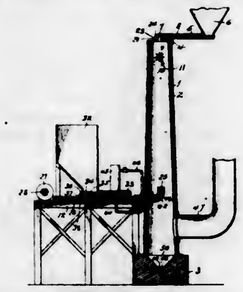
3. The method of burning cement consisting in diffusing in a gaseous fluid in a vertical kiln, raw non-calcined mixed powdered cement forming materials and permitting the diffused mixed materials to fall, and heating said materials sufficiently to fuse them while falling, the materials being permitted to float slowly downwardly until clinkerized.

4. The method of burning cement consisting in diffusing in a gaseous fluid in a vertical kiln, raw non-calcined mixed powdered cement forming materials and permitting the diffused materials to fall, and projecting a flame upwardly through the falling materials, the flame having heat sufficient to fuse the materials while they are falling, the materials being permitted to float slowly downwardly until clinkerized.

5. In the manufacture of cement, the herein described method which consists in burning fuel within a vertical kiln, and introducing pulverized raw cement materials to the burning fuel, said materials being held in suspension and calcined by the burning fuel and permitted to float slowly downwardly until completely clinkerized and the clinker thereafter descending to the bottom of the kiln.

[Claim 6 not printed in the Gazette.]

1,158,372. CALCINING-FURNACE. ALEXANDER CARNIE, North Branch, Mich. Substitute for application Serial No. 612,532, filed Mar. 6, 1911. This application filed Feb. 13, 1915. Serial No. 7,964. (Cl. 222—3.)



1. A calcining and clinkering furnace having a calcining and clinkering chamber comprising a vertical stack having no outlet near the top and having near the bottom an outlet for smoke and gas, means for discharging into the upper part of the chamber in powdered form the material to be calcined and clinkered, the chamber being adapted to permit the material to fall freely toward the bottom of the chamber, and a burner in said chamber between the outlet and the place of introduction of the material.

2. A calcining and clinkering chamber having no outlet near the top and having near the bottom an outlet for smoke and gas, a conductor discharging into the upper part of said chamber, means for forcing the material to be calcined and clinkered in powdered form through said conductor into said chamber, means in said chamber for diffusing the said material, the chamber being adapted to permit the diffused material to fall freely toward the bottom of the chamber, and a burner in said chamber for calcining and clinkering the material while it is falling.

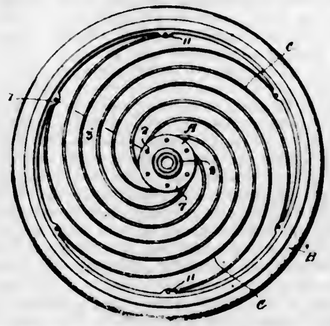
3. A calcining and clinkering chamber comprising a vertical stack having no outlet near the top and having a smoke outlet near the bottom, means for discharging into the chamber at the upper end thereof material in powdered form to be calcined and clinkered, means in said chamber for diffusing in the upper part of the chamber said material, the chamber being adapted to permit the diffused material to fall freely toward the bottom of the chamber, a burner in said chamber for heating the material while it is falling, and means for discharging the calcined and clinkered material from the chamber.

4. A calcining and clinkering chamber comprising a stack having no outlet near the top and having a smoke outlet near the bottom, means for carrying into the chamber material to be calcined and clinkered in powdered form and discharging said material near the top of said chamber, means in said chamber for diffusing the said material, the chamber being adapted to permit the diffused material to fall freely toward the bottom of the chamber after diffusion, a burner for calcining and clinkering the material while it is falling, the burner being located so as to discharge its flame above the outlet and toward the diffusing means, and means for carying from the chamber the calcined and clinkered material.

5. A calcining and clinkering chamber comprising a vertical stack having no outlet near the top and having near the bottom a smoke outlet, means for feeding into said stack in the upper part thereof material in powdered form to be calcined and clinkered, the chamber being adapted to permit the diffused material to fall freely toward the bottom of the chamber, and means for discharging upwardly in said chamber a flame in contact with the material while the material is falling.

[Claims 6 to 8 not printed in the Gazette.]

1,158,373. SPRING-WHEEL. DANIEL CAVE, Lincoln, Nebr., assignor of one-third to Harold M. George and one-third to Henry Bowman, Lincoln, Nebr. Filed Apr. 25, 1914. Serial No. 834,423. (Cl. 152—50.)

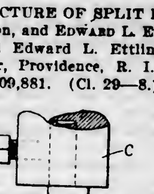


A spring wheel comprising a hub, a felly, and a circular series of involute springs of uniform width terminally attached thereto and forming spokes between said hub and felly, each of said springs extending entirely around the hub and being inclined laterally with respect to a line passing centrally through the hub and felly, knuckles at the outer extremities of said springs, knuckles of greater length at the inner extremities of said springs, the last named knuckles having a greater projection at one side of their springs than at the other side thereof, and the springs being arranged to incline alternately in opposite directions, and a single annular series of bolts all arranged in the same vertical plane and connecting the inner knuckles to the hub.

1,158,374. CALCULATING-MACHINE. HUGO CORDT, Nordenham, Germany. Filed Dec. 30, 1912. Serial No. 739,245. (Cl. 235—79.)

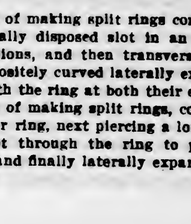
1. In a calculating machine the combination with number disks mounted on horisontal shafts below the bottom plate of the calculating mechanism have reversing sleeves and toothed stepped transfer cylinders situated under said reversing sleeves and arranged in two superposed rows the cylinders of the upper row standing opposite the intervals between two adjacent cylinders of the lower row, substantially as described and shown and for the purpose set forth.

2. In a calculating machine the stepped toothed transfer cylinders having short steps and being arranged in two superposed rows so that the cylinders of the upper row stand opposite the intervals between two cylinders of the lower row whereby the size of the machine is considerably



reduced, substantially as described and shown and for the purpose set forth.

1,158,375. SUBMARINE TELEGRAPHY. KENWRICK C. COX, Norfolk Island. Filed Mar. 23, 1915. Serial No. 16,516. (Cl. 178—88.)

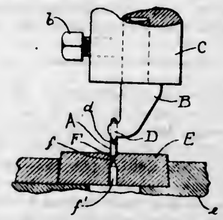


1. In telegraphy, a selenium relay comprising associated selenium cells arranged to form two arms of a Wheatstone bridge with suitable resistances in the other arms to balance the bridge, a source of current connected across one diagonal of the bridge, and a receiving instrument and an inductive resistance in shunt one to the other connected across the other diagonal of the bridge.

2. In telegraphy, a selenium relay having an inductive shunt around the receiving instrument adjusted to compensate for the inertia of the selenium.

3. In telegraphy, a recording instrument and battery, selenium elements in series with said battery, and means associated with the selenium elements, recording instrument and battery to normally oppose the flow of current from the battery through the instrument.

1,158,376. MANUFACTURE OF SPLIT RINGS. JOSEPH ETTLINGER, Cranston, and EDWARD L. ETTLINGER, Providence, R. I.; said Edward L. Ettlinger assignor to Frederick Ettlinger, Providence, R. I. Filed Jan. 2, 1914. Serial No. 809,881. (Cl. 29—8.)



1. The process of making split rings consisting in forming a longitudinally disposed slot in an endless ring to form spaced sections, and then transversely bending the sections into oppositely curved laterally extending arcuate arms integral with the ring at both their ends.

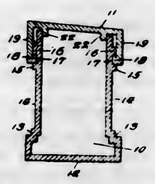
2. The process of making split rings, consisting in first forming a circular ring, next piercing a longitudinally disposed oblong slot through the ring to produce parallel spaced sections, and finally laterally expanding the spaced sections.

1,158,377. PHONOGRAPHIC RECORD. THOMAS EYNON, Chicago, Ill., assignor, by direct and mesne assignments, to Ribbon Record Company, a Corporation of Illinois. Filed Nov. 11, 1911. Serial No. 659,745. (Cl. 18—48.3.)

1. The process of reproducing flexible phonographic records which consists in forming a matrix record from an initial plastic record having a phonographic impression made thereon, separating said matrix and plastic record, placing a record blank upon said matrix record in the form of a spirally wound strip disposed substantially asymmetrically over the phonographic impression along its length, the width of said strip being substantially equal to the distance between the convolutions of the phonographic impression, and applying fluid pressure to said record blank.

2. The process of producing a flexible phonographic record having multiple impressions thereon, which consists in separately recording in a group of parallel spirals upon the same cylindrical record blank, a plurality of individual vocal or instrumental parts rendered in concert, making a matrix of said record, separating said matrix and record, placing a thin flexible record strip of long narrow shape against said matrix in symmetrical alinement over said group of parallel spirals, applying pressure to cause the multiple spiral impressions on said matrix to be embossed symmetrically upon said record strip, and then separating said record strip and said matrix, thus providing a continuous integral strip having all of said individual records embossed thereon in parallel lines extending lengthwise of said strip.

1,158,378. METALLIC FRAMING. CLARENCE A. FULLERTON and LEROY A. RUSHWORTH, New York, N. Y., and WILLIAM H. PAETH, Providence, R. I., assignors to Gorham Co., New York, N. Y., a Corporation of New York. Filed Jan. 14, 1914. Serial No. 812,105. (Cl. 189—38.)



1. In a construction of the class described, interlocked channel structures having complemental flanges, the flanges of one section extending between the flanges of other section, said flanges being in parallel planes, beads formed on the adjacent faces of said flanges, some of said flanges having parallel beads forming undercut slots, and others of said flanges having undercut beads to engage in said undercut slots, and projections formed in one of said channel structures to engage extending ends of the flanges of the other channel structure.

2. In a construction of the class described, interlocking channel structures having complemental flanges, the flanges of one section extending between the flanges of the other section, some of said flanges having spaced beads being undercut to present a dovetail slot between said beads, and the other of said flanges being provided with inwardly directed beads, said last mentioned beads being undercut to conform with the slot of the first mentioned beads, said last mentioned beads being slidable between the first mentioned beads and projections formed in one of said channel members to engage the ends of the inserted flanges to reinforce the same.

3. In a construction of the class described, channel structures having complemental flanges therein, the flanges of one member extending between those of the other member, said flanges being of different widths to cause the flanges of one section to terminate at points within the width of the other flanges, one of said channel structures

having projections formed on the base thereof, to engage the ends of the wider flanges, spaced beads formed on said wider flanges, said beads comprising an undercut slot, and inwardly directed undercut beads formed on the inner faces of the smaller flanges to engage in said undercut slot of the larger flanges, said arrangement comprising a structure in which the flanges are reinforced in having the larger flanges supporting on the opposite edges thereof.

1,158,379. MANUFACTURE OF CHROMIUM OXID. ALBERT EDWARD GESSLER, Clifton, N. Y. Filed Feb. 13, 1913. Serial No. 748,153. (Cl. 23—13.)

1. The process of producing green oxid of chromium which comprises making a mixture of an alkali-metal chromate, a reducing agent capable of reducing the chromate to chromium oxid, and an oxidizing agent capable of sustaining combustion, igniting the mixture within a receptacle, allowing the combustion to proceed to the formation of chromium oxid, and lixiviating the resultant product.

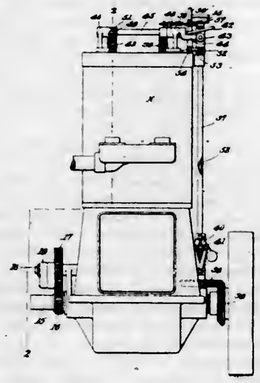
2. The process of producing green oxid of chromium which comprises making a mixture of an alkali-metal bichromate, a reducing agent capable of reducing the bichromate to chromium oxid, and an oxidizing agent capable of sustaining combustion, igniting the mixture within a receptacle, allowing the combustion to proceed to the formation of chromium oxid, and lixiviating the resultant product.

3. The process of producing green oxid of chromium which comprises making a mixture of an alkali-metal bichromate, sulfur, and an oxidizing agent capable of sustaining combustion, igniting the mixture within a receptacle, allowing the combustion to proceed to the formation of chromium oxid, and lixiviating the resultant product.

4. The process of producing green oxid of chromium which comprises the ignition and self combustion of a mixture of an alkali metal bichromate, sulfur and an alkali metal chlorate.

5. The process of producing green oxid of chromium which comprises mixing sodium bichromate, sulfur and sodium chlorate, igniting the mixture, allowing the completion of the combustion, and lixiviating.

1,158,380. TWO-CYCLE GAS-ENGINE. MILAN W. HALL, Baltimore, Md., assignor to Hall-Seeley Motor Corporation, Baltimore, Md., a Corporation of Delaware. Filed Nov. 22, 1912, Serial No. 732,849. Renewed Jan. 25, 1915. Serial No. 4,406. (Cl. 123—105.)



1. A gas engine comprising a cylinder having a combustion chamber, a piston in said chamber, a fuel supply chamber, a communicating channel between said chambers, a valve for controlling said channel, and mechanism for actuating said valve whereby a portion of the mixed charge in the combustion chamber may be returned to the supply chamber, said mechanism including devices whereby the time of closing of said valve may be varied, a sparking device and mechanism connected to the valve actuating mechanism, and shiftable therewith for causing a spark subsequent to the closing of said valve.

2. A two-cycle gas engine comprising a cylinder having a combustion chamber, a piston in said cylinder, a primary compression chamber, a communicating channel between said chambers, a valve for controlling said channel mechanism for actuating said valve whereby a portion of the mixed charge in the combustion chamber may be returned to the compression chamber, said mechanism including devices whereby the time of closing said valve may be varied, a sparking device and mechanism connected to the valve actuating mechanism and shiftable therewith for causing a spark subsequent to the closing of said valve.

3. A two-cycle gas engine comprising a cylinder having a combustion chamber, a piston in said cylinder, a primary compression chamber, a communicating channel between said chambers, a valve for controlling said channel, mechanism for actuating said valve whereby a portion of the mixed charge in the combustion chamber may be returned to the compression chamber, said mechanism including devices whereby the time of closing said valve may be automatically varied by the speed of the engine shaft, a sparking device and mechanism connected to the valve actuating mechanism and shiftable therewith for causing a spark subsequent to the closing of said valve.

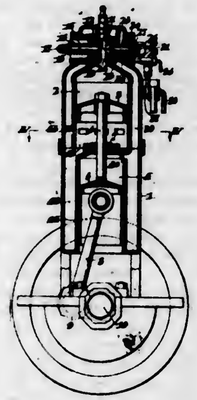
4. A two-cycle gas engine comprising a cylinder having a combustion chamber, a piston in said cylinder, a primary compression chamber, a communicating channel between said chambers, a valve for controlling said channel, mechanism for actuating said valve whereby a portion of the mixed charge in the combustion chamber may be returned to the compression chamber, said mechanism including devices whereby the time of closing said valve may be automatically varied by the speed of the engine shaft, a sparking device and mechanism connected to the valve actuating mechanism and shiftable therewith for causing a spark subsequent to the closing of said valve, and manually controlled means for shifting the valve actuating mechanism for manually varying the time of closing said valve.

5. A gas engine comprising a cylinder having a combustion chamber, a piston in said chamber, a fuel supply port, a valve for controlling said port, and mechanism for actuating said valve whereby a portion of the mixed charge in the combustion chamber is allowed to escape from the combustion chamber, said mechanism including devices whereby the time of closing of said valve may be varied in order to vary the speed or power of the engine, a sparking device and mechanism connected to the valve actuating mechanism and shiftable therewith for causing the spark subsequent to the closing of the valve for the intake port.

1,158,381. TWO-CYCLE GAS-ENGINE. MILAN W. HALL, Baltimore, Md., assignor to Hall-Seeley Motor Corporation, Baltimore, Md., a Corporation of Delaware. Filed July 9, 1913, Serial No. 778,042. Renewed Jan. 25, 1915. Serial No. 4,407. (Cl. 123—69.)

1. A two-cycle gas engine including in combination a cylinder, a piston, said cylinder having a valve-controlled exhaust port in the outer end thereof, and an air intake port adjacent the inner end of the stroke of the piston, means whereby air may be compressed by the piston, and delivered to said air intake port, a valve controlled fuel intake port adjacent the outer end of the cylinder, adjustable means for positively opening the valve for the intake port, and separate means for compressing air and delivering the same to said fuel intake port, whereby the fuel as it enters the cylinder is atomized.

2. A two-cycle gas engine including in combination a cylinder, a piston, said cylinder having a valve-controlled exhaust port in the outer end thereof, and an air intake port adjacent the inner end of the stroke of the piston, means whereby air may be compressed by the piston, and delivered to said air intake port, a valve controlled fuel intake port adjacent the outer end of the cylinder, adjustable means for positively opening the valve for the intake port, and separate means for compressing air and delivering the same to said fuel intake port, whereby the fuel as it enters the cylinder is atomized, said fuel intake port being so disposed relative to said exhaust valve that the fuel, as it enters the cylinder is directed against said hot exhaust valve.



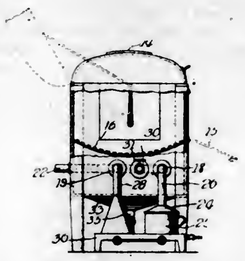
3. A two-cycle gas engine including in combination a cylinder, a piston, said cylinder having a valve-controlled exhaust port in the outer end thereof, and an air intake port adjacent the inner end of the stroke of the piston, means whereby air may be compressed by the piston, and delivered to said air intake port, a valve controlled fuel intake port, means for compressing air and delivering the same to said fuel intake port, whereby the fuel as it enters the cylinder is atomized, and devices for simultaneously retarding or advancing the closing of the exhaust valve and the opening of the intake valve.

4. A two-cycle gas engine including in combination a cylinder, a piston, said cylinder having a valve-controlled exhaust port in the outer end thereof, and an air intake port adjacent the inner end of the stroke of the piston, means whereby air may be compressed by the piston, and delivered to said air intake port, a valve controlled fuel intake port, means for compressing air and delivering the same to said fuel intake port, whereby the fuel as it enters the cylinder is atomized, and devices whereby the valve for the exhaust port and the valve for the intake port may be simultaneously retarded or advanced with the retarding or advancing of the spark respectively.

5. A two-cycle gas engine including in combination a cylinder having a combustion chamber, a piston, said cylinder having a valve-controlled exhaust port in the outer end thereof, and an air intake port adjacent the inner end of the stroke of the piston, a compression chamber having communication with the cylinder beneath the piston, whereby air is compressed in said compression chamber and delivered through said air intake ports to the cylinder, a second cylinder, a piston therefor connected to said first named piston, and moving in unison therewith, a valve controlled intake port adjacent the outer end of the cylinder for supplying fuel to the combustion chamber, adjustable means for positively opening said valve for the intake port, a channel connecting said second cylinder with the valve controlled intake port for the combustion chamber, whereby air may be compressed and utilized in atomising the oil and delivering the same to the combustion chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,158,382. THERAPEUTIC CABINET. BONNAFORD LESLIE, Chicago, Ill., assignor of one-half to S. D. Zaphyriades, Chicago, Ill. Filed Mar. 1, 1915. Serial No. 11,411. (Cl. 4—13.)



1. A therapeutic cabinet comprising an elongated inclosure, a foraminated support stretched across the same, non-communicating heated medium and vapor pipes arranged side by side within the inclosure beneath said support and extending from end to end thereof and perforated throughout their lengths at their lower sides in a manner to intermingle the material escaping from the pipes in a plane below the pipes, said pipes extending through one wall of the inclosure, with separate means exterior to said wall to supply heated medium and heated vapor to the respective pipes, and the pipes being arranged to provide free and unhampered passageways for the material therethrough whereby the heated medium and vapor are distributed uniformly to the inclosure throughout the length of the inclosure and intermixes and rises upwardly through the foraminated support, and separate exhausts for said pipes extending outside the casing.

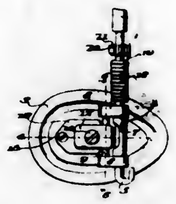
2. A therapeutic cabinet comprising an elongated inclosure, a foraminated support suspended thereacross, a U-shaped heated medium pipe within the inclosure below said support with its induction and extending through one wall of the inclosure, means to supply a heated medium to said pipe, a separate U-shaped vapor pipe within the inclosure with its limbs lying between the limbs of the heated medium pipe and the side walls of the inclosure, and with its induction end extending through the wall of the inclosure, and means to supply a heated vapor to the induction end of the vapor pipe, said pipes being perforated throughout their lengths in a manner to intermingle the heated media discharged therefrom in a plane below the pipes whereby the mixed heated medium and vapor rise upwardly through the foraminated support.

3. A therapeutic cabinet comprising an elongated inclosure, a formaninated support suspended thereacross, a U-shaped heated medium pipe within the inclosure below the said support with its induction end extending through one wall of the inclosure and with the eduction end extending outside the inclosure, means to supply a heated medium to said pipe, a U-shaped vapor pipe within the inclosure with its limbs lying between the limbs of the heated medium pipe and the side walls of the inclosure, and with its induction and eduction ends extending to the exterior of the inclosure, means to supply a heated vapor to the induction end of the said vapor pipe, said pipes being perforated throughout their lengths, whereby the heated medium and vapor escaping therefrom intermingle within the inclosure and rise upwardly through the forsminated support, the induction end of the said heated medium pipe being located closely adjacent to the eduction end of the vapor pipe, and vice versa.

4. A therapeutic cabinet comprising an elongated inclosure, an elongated support therein for the patient, noncommunicating pipes within the inclosure below the said support and arranged side by side throughout the length of the inclosure and provided with separate outlets and separate means to supply material to the induction ends of the said pipes, said pipes being provided within the

inclosure with escape openings to direct the different material downwardly and toward each other whereby the materials are intimately intermingle before they rise to said support.

1,158,383. HERNIAL TRUSS. GEORGE A. MCMILLEN, Alton, Ill. Filed June 30, 1914. Serial No. 848,289. (Cl. 128—26.)

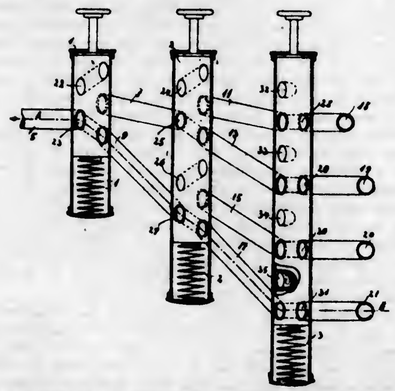


1. A truss including a supporting spring having a circular stem or end portion provided with a back-turned or hook shaped extremity, a stop adjustably mounted upon said stem in spaced relation to said hooked extremity, a bracket slidably and pivotally mounted upon the stem between said top and hooked extremity, a pad carried by the bracket, and a coiled spring surrounding the stem and terminally engaging said bracket and stop and adapted to be tensioned by the latter, said springs serving to control both the pivotal and sliding motions of said bracket.

2. A truss including a supporting spring having a circular stem or end portion, a bracket cimprising a sleeve slidably and pivotally engaging said stem, said bracket having laterally extending parallel arms at one end thereof and a stem connecting said arms and provided with a spherical head, stop members upon the stem between which the bracket is slidably movable, a spring terminally engaged with the bracket and one of said stops, and adjustable by the latter to regulate the tension, and a pad pivotally supported upon the stem of the bracket.

3. A hernial truss including a supporting spring, a supporting bracket thereon provided with a spherical head, a truss pad, a jaw secured to the pad, and a second jaw secured to the pad and first-named jaw and provided with a spacing lug maintaining the spaced relationship of said jaws, said jaws forming a socket engaging said spherical head.

1,158,384. BRASS WIND INSTRUMENT. MAX BERNHARDT MARTIN, Markneukirchen, Germany. Filed Apr. 6, 1915. Serial No. 19,520. (Cl. 84—8.)

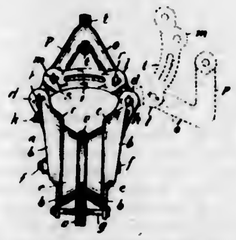


1. A brass wind instrument, comprising a plurality of valve-casings of different lengths, pistons therein, a plurality of oblique channels in each of said pistons; a plurality of pairs of pipes connecting said casings with each other, pipes connecting the first casing with the mouth piece and the bell, and return pipes commencing at the last casing and terminating also at the same, said channels being adapted to connect the mouth piece, return pipe and the bell pipe of the first casing with any one of the return pipes of the last casing, in conformity with the positions of the pistons.

2. A brass wind instrument comprising three valve casings, pistons therein, two pairs of channels in the piston of the first casing, four pairs of channels in the piston of the second casing, and four pairs and four single channels in the piston of the third casing; two pipes connecting the first casing with the mouth piece and the bell, two pairs of pipes connecting the first and the second casing, four pairs of pipes connecting the second and the third casing, and four bent return pipes commencing and terminating at the third casing, said pistons and channels being adapted to connect the mouth piece pipe and the bell pipe of the first casing with any one of the return pipes of the last casing, in conformity with the positions of the pistons.

3. A brass wind instrument comprising three valve casings, pistons therein, two pairs of oblique channels in the piston of the first casing, four pairs of oblique channels in the piston of the second casing, four pairs of horizontal channels, four single horizontal channels, in the pistons of the third casing, two pipes connecting the first casing with the mouth piece and the bell, two pairs of pipes, connecting the first and the second casing, four pairs of pipes connecting the second and third casing, and four bent return pipes commencing and terminating at the third casing, said pistons and channels being adapted to connect the mouth piece pipe and the bell pipe of the first casing with any one of the return pipes of the last casing, in conformity with the positions of the pistons.

1,158,385. SHACKLE FOR PULLEY-BLOCKS. ARTHUR M. MEARS, Portland, Oreg. Filed Nov. 25, 1913. Serial No. 803,064. (Cl. 254—194.)



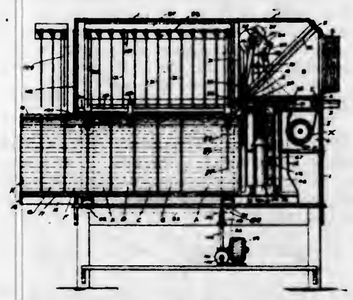
1. In a pulley-block, the combination with the sides, of a latch bar, fastened at its ends to the upper ends of the sides by means permitting it to be opened, and a draft element having ends secured to said latch bar only by means permitting it to be opened.

2. In a pulley-block, the combination with the sides, the latter provided with ears at their upper extremities, of a latch bar pinned at its ends to said ears of the sides, a draft element pinned at its ends to said latch bar, but not to said ears of the sides.

3. In a pulley-block, the combination with the sides, of a latch bar pinned at its ends to the upper ends of the sides, said latch bar provided with perforated ears adjacent its ends for receiving a link, a link having perforated extremities inserted in said ears of the latch bar, and pins inserted through the perforated extremities of said link and said ears of the latch-bar.

4. In a pulley-block, the combination with the sides, provided with ears at their upper extremities, a latch bar having perforations registering with those of said ears, pins inserted through said ears of the sides and the latch-bar, the latter being provided with other ears adjacent its ends for receiving a link, a V-shaped link having perforated extremities inserted in said other ears of the latch bar, and pins inserted through the perforated extremities of the link and the related ears of the latch-bar.

1,158,386. CAMERA PROVIDED WITH AUTOMATIC FLUID-TREATING MECHANISM. FRANK E. OILER, Omaha, Nebr., assignor to Positive Print Machine and Paper Co., a Corporation of Nebraska. Filed Dec. 6, 1910. Serial No. 595,957. (Cl. 95—13.)



1. In a machine of the class described, the combination with means for exposing portions of a strip of sensitized material, of clamping devices, means for feeding the strip of material from the exposing means between the clamping devices, means for moving the clamping devices to clamp the strip, means for severing the clamped portion from the strip, a carrier having clips adapted to grip the edge of a sheet, means for engaging the carrier clips with the edge of the sheet held by the clamping devices, a series of fluid receptacles, and means for conveying the carrier so as to immerse the sheet successively in said receptacles while the sheet is held by the carrier.

2. In a machine of the class described, means for manipulating a sheet of sensitized material, including a carrier having clips adapted to grip the edge of the sheet, means for engaging the carrier clips with the sheet, a series of fluid receptacles, and conveying devices moving adjacent to the said receptacles, the conveying devices being adapted to successively lift, transport, and deposit the carrier in a series of positions such that the sheet held thereby will be successively dipped into the receptacles at corresponding positions.

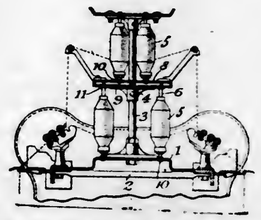
3. In a machine of the class described, means for manipulating a sheet of sensitized material, including a carrier having clips adapted to grip the edge of the sheet, means for engaging the carrier clips with the sheet, a series of fluid receptacles, and conveying devices moving adjacent to the receptacles in endless paths having vertical and horizontal components, the conveying devices being adapted to raise and lower the carrier during the vertical movements thereof, to transport the carrier during the horizontal movements thereof in one direction, and to disengage from the carrier during the horizontal movement in the other direction, whereby the carrier will be moved so that the sheet held thereby will be successively dipped into the receptacles at a series of positions.

4. In a machine of the class described, the combination with means for exposing sections of a strip of sensitized material, of carriers each having clips adapted to hold the edge of a sheet, a magazine for said carriers, means for cutting from the strip sheets of the sensitized material, means for conveying the edges of said sheets into proximity to the magazine, and means for feeding the carriers out of the magazine and engaging the clips with the edges of the sheets.

5. In a machine of the class described, the combination with means for exposing sections of a strip of sensitized material, of carriers each having clips adapted to hold the edge of a sheet, a magazine for holding said carriers, means for cutting from the strip sheets of sensitized material, and means for removing the carriers from the magazine and engaging the clips with the edges of the sheets.

[Claims 6 to 22 not printed in the Gazette.]

1,158,387. ROVING-CREEL FOR SPINNING AND DOUBLING FRAMES. OSCAR L. OWEN and LEVI RASCO, Whitinsville, Mass., assignors to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Feb. 14, 1914. Serial No. 818,640. (Cl. 242—131.)



1. In a roving creel, a hollow creel-board formed of sheet-metal with perforations in the upper and lower plates thereof, and having skewer steps and top holders respectively contained in perforations in said plates and projecting into the space between the same.

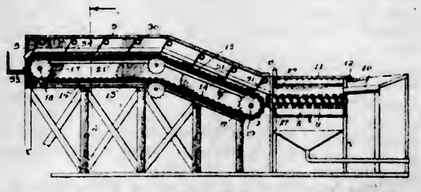
2. In a roving creel, a middle creel-board formed of upper and lower sheet-metal plates vertically spaced apart in parallel relation and united along their margins and center line, in combination with skewer steps seated in perforations in said upper plates and top holder thimbles concentrically disposed with respect to perforations in the lower plate.

3. In a roving creel, a middle creel-board comprised of folded sheet-metal blanks of hollow rectangular cross-section and having parallel upper and lower plates, in combination with flanged skewer steps seated in perforations in the top plate and top holders concentrically disposed with respect to perforations in the said lower plates.

4. In a creel, a middle creel-board comprised of upper and lower sheet-metal plates spaced apart in parallelism and united along longitudinal lines, in combination with skewer steps supported on said upper plate and flanged thimbles supported on said lower plate and forming top holders for the skewers.

5. In a creel, a middle creel-board comprised of upper and lower sheet-metal plates co-extensive with the length of the creel, and spaced apart in parallelism, said members being united along their adjacent edges, in combination with flanged thimbles secured to said lower plate with the barrels thereof projecting into the space between said plates.

1,158,388. APPARATUS FOR DRYING FRUIT. GEORGE D. PARKER, Riverside, Cal. Filed June 1, 1912. Serial No. 700,914. (Cl. 34—1.)



1. In an apparatus for drying washed fruit, the combination with an endless traveling conveyer composed of a series of transversely disposed rollers for receiving the washed fruit to be dried, of means for imparting travel to said endless conveyer, and devices for projecting jets

of air directly above the fruit contained on the said conveyer and for the full length of the rollers for the drying of the fruit as conveyed to its place of deposit.

2. In an apparatus for drying washed fruit, the combination with an endless traveling conveyer composed of a series of transversely disposed rollers for receiving the washed fruit to be dried, of means for imparting travel to said endless conveyer, means for rotating said rollers during their travel, and devices for projecting jets of air directly above the fruit contained on the said conveyer for the drying of the same as conveyed to its place of deposit.

3. An apparatus for drying washed fruits, the same comprising a conveyer for receiving the washed fruit to be dried, said conveyer comprising a pair of endless chains and means for operating the same, a plurality of pipes for projecting jets of air onto the fruit contained on the conveyer for the drying of the same, and means associated with said conveyer chains for supporting and rotating the fruit while the same is being subjected to the air blasts.

4. In a drying apparatus for washed fruit, the combination with a conveyer for receiving the washed fruit to be dried, a housing for the conveyer, said conveyer comprising a pair of endless chains and means for operating the same, means associated with and carried by said conveyer chains for supporting and rotating the fruit as it is conveyed to a place of deposit, and a plurality of pipes extending within said housing for directing an air blast downwardly onto the fruit contained on said conveyer for the dryig of the same.

5. In an apparatus for drying washed fruit, the combination with a conveyer for receiving the washed fruit to be dried, said conveyer comprising a pair of endless chains and means for operating the same, a plurality of spaced conveying rolls having their ends journaled in said chains, rollers at the ends of said rolls, trackways for supporting said rollers, and a plurality of pipes for projecting jets of air downwardly onto the fruit contained on the conveyer for the drying of the same.

[Claims 6 to 22 not printed in the Gazette.]

1,158,389. ART OF MANUFACTURING RUBBER FOOTWEAR. WALTER E. PIPER, Melrose, Mass., assignor to Boston Rubber Shoe Company, a Corporation of Massachusetts. Filed Mar. 19, 1913. Serial No. 755,416. (Cl. 12—42.)



1. The improvement in the art of manufacturing rubber shoes which consists in assembling to lightly adhere to each other upon a last the several layers that comprise a completed shoe ready for vulcanization, and then applying compacting pressure simultaneously to the entire exposed outer surface of the completed shoe upon the last.

2. The improvement in the art of manufacturing rubber shoes which consists in assembling to lightly adhere to each other upon a last the several layers that comprise a completed shoe ready for vulcanization, and then applying compacting pressure simultaneously and substantially of uniform amount to the entire exposed outer surface of the completed shoe upon the last.

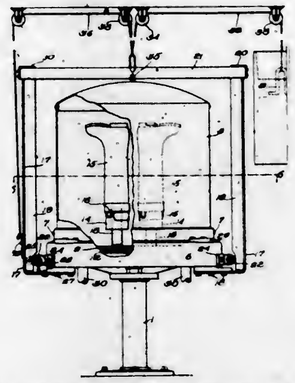
3. The improvement in the art of manufacturing rubber shoes which consists in assembling to lightly adhere to each other upon a last the several layers that comprise a completed shoe ready for vulcanization, and then applying compacting pressure to the entire exposed outer surface of the completed shoe upon the last by means of a flexible medium arranged to conform automatically to the contour of said completed shoe.

4. The improvement in the art of manufacturing rubber shoes which consists in assembling to lightly adhere to each other upon a last the several layers that comprise a completed shoe ready for vulcanization, and then applying compacting pressure to the entire exposed outer surface of the completed shoe upon the last by means of a yielding medium of predetermined varying flexibility.

5. The improvement in the art of manufacturing rubber shoes which consists in assembling to lightly adhere to each other upon a last the several layers that comprise a completed shoe ready for vulcanization, then applying compacting pressure simultaneously to the entire exposed outer surface of the completed shoe upon the last, and simultaneously permitting the entrapped air contained within said completed shoe to escape.

[Claim 6 not printed in the Gazette.]

1,158,390. PRESSURE-APPLYING APPARATUS FOR RUBBER FOOTWEAR. CHESTER J. RANDALL, Waltham, Mass., assignor to Boston Rubber Shoe Company, a Corporation of Massachusetts. Filed Aug. 23, 1913. Serial No. 786,318. (Cl. 12—1.)



1. In an apparatus of the class described, a base member, a receptacle coöperating with said base member, means supported by said base member to hold a plurality of lasted boots, and means to supply pressure within said receptacle simultaneously to the outer surfaces of the sole and upper of each boot.

2. In an apparatus of the class described, a base member, a receptacle coöperating with said base member, means supported by said base member to hold a plurality of lasted boots, and means to supply uniform pressure within said receptacle simultaneously to the outer surfaces of the sole and upper of each boot.

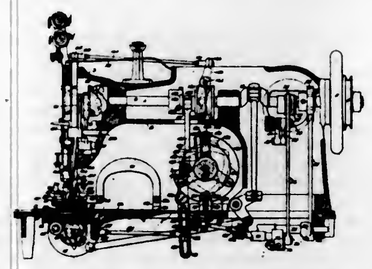
3. In an apparatus of the class described, means to hold a plurality of lasted boots, and means to supply pressure to the outer surfaces of the sole and upper of each boot, in combination with means permitting the air within each lasted boot to escape simultaneously with the application of said pressure.

4. An apparatus of the kind described, comprising a movable bell and a base coöperating therewith, means to lock said bell and base together in a substantially air-tight manner, a support for a lasted boot within said bell having an opening from the interior of the boot to the outer air, and means to supply pressure to the outer surface of said boot.

5. An apparatus of the kind described, comprising a movable bell and a base coöperating therewith, means to lock said bell and base together, a plurality of supports for a plurality of lasted boots, and means to exert differential pressure on the outer and inner surfaces of the boot to compress same against its last.

[Claims 6 to 10 not printed in the Gazette.]

1,158,391. SCALLOP-STITCHING MACHINE. JOHN C. RINGE, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed May 19, 1913. Serial No. 768,440. (Cl. 112—7.)



1. In a sewing machine, the combination with a throat-plate, stitch-forming mechanism, and feeding mechanism including a feed-dog and means for imparting thereto longitudinal work-advancing movements and sidewise step-by-step movements, of a presser-bar movable toward and from the throat-plate, a presser-foot mounted upon said presser-bar and comprising a member movable transversely of and maintained in fixed angular relation with the presser-bar, and means connected with said transversely movable member for imparting to the presser-foot sidewise movements corresponding with those of the feed-dog.

2. In a sewing machine, the combination with a throat-plate, stitch-forming mechanism, and feeding mechanism including a feed-dog and means for imparting thereto longitudinal work-advancing movements and sidewise step-by-step movements, of a passer-bar movable toward and from the throat-plate, a presser-foot mounted upon said presser-bar and comprising a member movable transversely of and maintained in fixed angular relation with the presser-bar and carrying laterally spaced and positively connected compensating pressure members, and means connected with said transversely movable member for imparting to the presser-foot sidewise movements corresponding with those of the feed-dog.

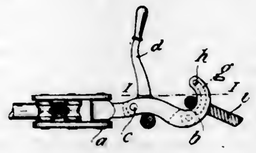
3. In a sewing machine, the combination with a throat-plate, stitch-forming mechanism, and feeding mechanism including a feed-dog and means for imparting thereto longitudinal work-advancing movements and sidewise step-by-step movements, of a presser-bar movable toward and from the throat-plate, a presser-foot mounted upon said presser-bar and comprising a member movable transversely of and maintained in fixed angular relation with the presser-bar and carrying laterally spaced and positively connected compensating pressure members and an intermediate independently yielding member, and means connected with said transversely movable member for imparting to the presser-foot sidewise movements corresponding with those of the feed-dog.

4. In a sewing machine, the combination with stitch-forming mechanism and feeding mechanism including a feed-dog and means for imparting thereto longitudinal work-advancing movements and sidewise movements, of a spring-pressed presser-bar mounted in fixed bearings and provided with a transverse slideway, a slide-block fitter to said slideway, a presser-foot sustained by said block, and a link pivotally connected with said block for imparting to said presser-foot sidewise movements.

5. In a sewing machine, the combination with stitch-forming mechanism and feeding mechanism including a feed-dog and means for imparting thereto work-advancing and sidewise movements, of a presser-foot composed of a plurality of independent sections arranged crosswise of the direction of feed, a compensating connection between the outermost sections, and means for yieldingly sustaining an intermediate section.

[Claims 6 to 20 not printed in the Gazette.]

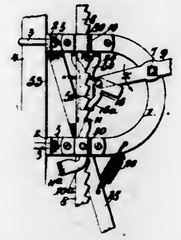
1,158,392. SLIP-SHACKLE. BERNHARD SCHÜTTE, Hasbergen, Germany. Filed Dec. 22, 1913, Serial No. 808,209. Renewed Mar. 30, 1915. Serial No. 18,181. (Cl. 57—128.)



1. An improved slip shackle comprising in combination with the shackle hook proper, a cross bolt in the shaft of said hook, an angle lever pivotally mounted on said cross bolt, a curved lever corresponding in shape with the shape of the hook hingedly connected with one end of the angle lever and having a curved slot, a cross bolt fixed in the end of the hook for guiding said curved lever, substantially as described and shown and for the purpose set forth.

2. An improved slip shackle comprising in combination a fork-shaped slip hook, a cross bolt in the shaft of said hook, an angle lever pivotally mounted on said cross bolt and situated between the arms of the fork-shaped hook, a cross bolt in the front end of the hook, a curved lever having a slot hingedly connected with the free end of said angle lever and guided on said front cross bolt, substantially as described and shown and for the purpose set forth.

1,158,393. WINDMILL-REGULATOR. GOTLIEB SIPPERT, Bowdle, S. D. Filed Dec. 4, 1914. Serial No. 875,499. (Cl. 103—104.)



1. A regulating mechanism for wind mills that comprises a reciprocably mounted rack bar adapted to be suspended from the mill to move upwardly as the mill opens into the wind, an oscillating lever connected with and actuated by the movement of the wind mill pump rod, a pawl on the lever for engaging the rack bar to intermittently move it downwardly to effect the moving of the mill out of the wind, a pivoted dog for holding the said rack bar from upward movement, means for simultaneously moving the pawl on the oscillating lever and the pivoted dog out of engagement with the rack bar, said means connecting with and actuated by the float in the wind mill tank, the said means including a single oscillating lever that engages the two pawls and spring held to its pawl disengaging position.

2. A regulating mechanism for wind mills comprising a supporting member adapted for being attached to the wind mill derrick, a rack bar vertically slidable on the said supporting member, connections for joining the upper end of the said bar to the wind wheel, a detent for holding the rack bar from said upward movement, a float controlled tripper for moving the detent to release the rack bar, connections for joining the tripper with the wind mill tank, a means mounted on the supporting member that engages with the rack bar for moving the said bar step-by-step in a downward direction and in-

cluding connections that join with the wind mill pump, the aforesaid means also including a pivoted dog normally held for engaging the rack bar, a device on the supporting frame that normally projects in the plane of movement of the said pivoted dog to hold it out of engagement with the rack bar, and a connection between the said device and the float controlled detent tripper for holding the said device out of operative position when the rack bar is released.

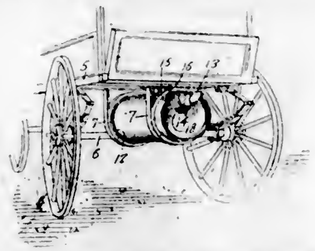
3. In a wind mill regulating mechanism, the combination with the mill, the pump and the tank float; of means mounted on the mill derrick for regulating the mill, said means including a reciprocable rack bar, connections that join the bar with the mill that slide the bar upwardly as the mill opens into the wind, a detent for holding the bar from such movement, a lever device normally under tension to swing in one direction, connections that join the said lever and the tank float for swinging the said lever in the opposite direction to release the detent as the float drops, an oscillating lever, connections that join the lever with the pump rod for actuating the lever when the pump is operated, a pawl on the lever for engaging the rack bar to intermittently move the said bar in a direction to gradually move the wind mill into the wind, a member for holding said pawl out of the operative position at times, and means for operatively connecting said member and said lever device to render said member non-operative when the lever device is in its normal position.

4. In a wind mill regulating mechanism, the combination with the mill, the pump and the tank float; of a supporting member on the mill derrick, a rack bar slidably mounted on the said member, an oscillating lever pivotally mounted on the supporting member and connected to the pump rod, a gravity moved pawl on the end of the lever adapted for engaging the teeth of the rack bar to move the bar in the downward direction, a gravity held pawl mounted on the supporting member that normally swings to engage the rack bar to hold it from upward movement, a lever pivoted on the said supporting member normally spring held at an operative position, and a connection that joins the said lever with the float tank, and adapted when the float drops to swing the said lever to engage the two pawls that engage the rack bar and hold them free from the said bar.

5. In a wind mill regulating mechanism, a reciprocably mounted rack bar adapted to be suspended from the mill to move upwardly as the mill opens into the wind, an oscillating lever connected with and actuated by the movement of the wind mill pump rod, a pawl carried by said lever to engage said rack bar, and move it downwardly to effect the moving of the mill out of the wind, a pivoted dog for holding said rack bar against upward movement, a device tending to swing into the path of movement of said pawl and hold it out of engagement with said rack bar, and a float controlled means for throwing both said dog and said pawl out of engagement with said rack bar and for controlling the action of said device.

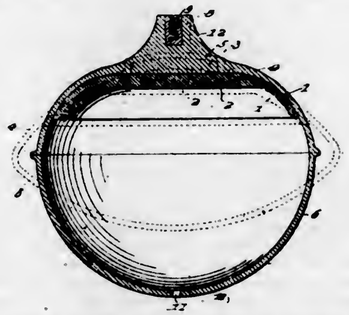
1,158,394. OIL-DELIVERY TANK. TREVIS WILLIAM SKELTON, Lansing, Mich. Filed May 17, 1915. Serial No. 28,589. (Cl. 224—29.)

1. The combination with a wagon, of a pair of brackets suspended in spaced relation to each other from the body thereof, said brackets being provided with circular openings, anti-friction bearings carried by the brackets around the openings, a cylindrical tank extending at its ends through the openings in the brackets and resting against said anti-friction bearings whereby the tank may be rotated relatively to the brackets, bands carried by the tank and engaging the brackets on the inner faces of the latter whereby to prevent longitudinal movement of the tank relatively to the brackets, a faucet of relatively large cross sectional area carried by the tank at one end thereof and being provided with a controlling valve, and a retaining element connected with the wagon and adapted to maintain the tank in adjusted position rotatably with respect to the brackets.



2. The combination with a wagon, of a pair of brackets suspended in spaced relation to each other from the wagon body, and being provided each with a plurality of anti-friction bearings, a tank supported adjacent its ends by the brackets and engaging against the anti-friction bearings whereby the tank may be rotated relatively to the brackets, means carried by the tank for preventing longitudinal movement thereof relatively to the brackets, a faucet carried at one end of the tank adjacent the periphery thereof whereby the tank may be filled and emptied, and means connected with the wagon for maintaining the tank in adjusted position rotatably with respect to the brackets.

1,158,395. RUBBER FLOAT BALL-VALVE. DAVID STEPHEN, Stratford, Conn., assignor to The H. O. Canfield Co., Bridgeport, Conn., a Corporation of Connecticut. Filed Oct. 24, 1913. Serial No. 797,096. (Cl. 4—5.)



1. A hollow rubber float ball valve, of comparatively flexible material having an upper portion to which a stem for the valve may be attached, and a rubber reinforcing element of less flexible material than the hollow rubber upper portion, said element being shaped to fit within the upper portion and permanently secured thereto throughout its entire upper surface whereby the upper portion of the valve is reinforced to prevent distortion of the same.

2. A hollow rubber float valve, of comparatively flexible material having an upper portion to which a stem for the valve may be attached, and a rubber reinforcing element of less flexible material than the hollow rubber upper portion, said element being shaped to fit within the upper portion and permanently secured thereto throughout the entire upper surface of the reinforcing element, whereby the upper portion of the valve is reinforced to prevent distortion of the same.

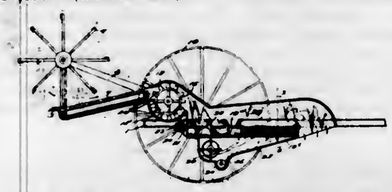
3. A hollow valve, the main body and seating portion whereof are formed of flexible rubber, and a non-metallic stiffening member, possessing a less degree of flexibility than the body portion, located within, surrounded by, and permanently united to the inner face of the upper portion of the valve, the valve being characterized by having a yielding and adaptable seat, and an upper portion protected against collapse under external pressure.

4. A bulb for tank valves, having a continuous outer surface of soft vulcanized rubber and an upper inner portion forming a rigid support, the lower hemispherical portion being entirely of soft vulcanized rubber and all of said parts being vulcanized to each other.

5. A hollow rubber float ball valve having an upper portion to which a stem for a valve may be attached and comprising comparatively flexible material, and a rubber reinforcing element of less flexible material than the hollow upper portion, said element being shaped to fit within the upper portion, and permanently secured thereto throughout its entire upper surface, whereby the upper portion of the valve is reinforced to prevent distortion of the same.

[Claim 6 not printed in the Gazette.]

1,158,396. GRAIN-SEPARATOR. JACOB S. WALCH, Walla Walla, Wash. Filed Aug. 17, 1914. Serial No. 857,198. (Cl. 130—22.)



1. In a threshing machine the combination with the threshing cylinder, of a grain separator comprising a member having a plurality of concave portions adapted to receive and divide the mixture of threshed grain, straw and chaff from the threshing cylinder into separate portions, each concave portion having imperforate and perforated or sieve portions, the imperforate portions being adjacent the threshing cylinder, worm conveyers operating in said imperforate portions to convey the grain and chaff to the sieve portions, stirring devices operating in said sieve portions, and a blower adapted to force currents of air upwardly against the separator and through the sieve portions to separate the chaff and to project it outwardly therefrom.

2. A grain separator, comprising a plurality of juxtaposed concave members having imperforate and perforated or sieve portions, the imperforate portions being adjacent the threshing cylinder, mechanism operable within the imperforate portions to agitate and convey mixtures of grain and straw therethrough, and stirring devices operable within the sieve portions to agitate the mixture and thereby facilitate the separation of the grain from the straw, and a blower to force currents of air upwardly against said concave members, the imperforate portions protecting the mixture from the air currents while it is being conveyed therethrough.

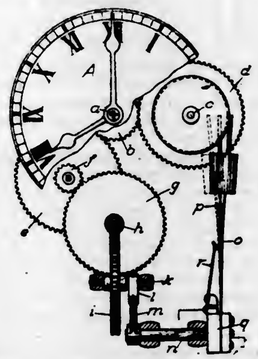
3. In a threshing machine, the combination with a threshing cylinder, of a grain separator adjacent the cylinder and having a plurality of juxtaposed concave portions, each having perforated or sieve portions, adapted to receive and divide the mixture of threshed grain, straw and chaff from the threshing cylinder into separate parts, stirring devices operable within the sieve portions to agitate the mixture and thereby facilitate the separation of the grain from the straw and chaff and interconnected driving mechanism for maintaining the relation of the stirrers during operation.

4. In a threshing machine, the combination with the threshing cylinder, of a grain separator having a sieve provided with a plurality of juxtaposed concave portions and located adjacent the threshing cylinder to receive and divide the mixture of threshed grain, straw and chaff from said cylinder into separate portions, stirring devices operating in said concave portions, and a blower to force air currents upwardly through said sieve to separate the grain from the straw and force the latter outwardly from the sieve.

5. In a threshing machine, the combination with the threshing cylinder, of a grain separator comprising a concave member having imperforate and sieve portions, the imperforate portion being adjacent the threshing cylinder and receiving the mixture of grain and chaff therefrom, conveying mechanism and a stirring device revoluble respectively within the imperforate and sieve portions of said member, and a blower to force air currents upwardly against said member, the imperforate portion acting to shield the mixture while it is being conveyed to the sieve portion.

[Claim 6 not printed in the Gazette.]

1,158,397. AUTOMATIC TIME LIGHTING MECHANISM. HENRY E. WARREN, Ashland, Mass., assignor to The Lombard Governor Company, Ashland, Mass., a Corporation of New Jersey. Filed Mar. 7, 1913. Serial No. 752,653. (Cl. 161—27.)



1. In an apparatus for automatic operation at predetermined time intervals, a cam formed in three dimensions, a follower, adapted to move to-and-fro by its contact with an elementary section of the cam, a clock, and means actuated by the clock to move the follower across the several elementary sections of the cam.

2. In an apparatus for automatic operation at predetermined time intervals, a clock, three dimensional cam surfaces which receive complete daily rotation therefrom, and a follower for the various surfaces, each of which is moved by the clock in the direction of one dimension of its operating cam.

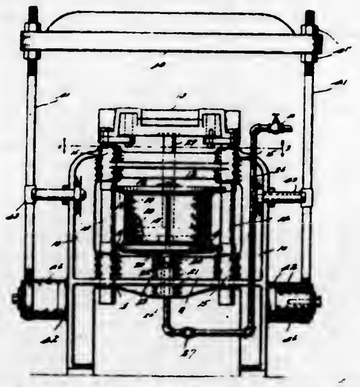
3. In an apparatus for automatically operating electric actuators at predetermined time intervals, a clock, a vibratory contact maker normally in open circuit position, means actuated by the clock to impart potential energy to the vibratory contact without closing the electric circuit and to suddenly release said contact maker and cause it to vibrate and make periodic contacts during the interval of dissipation of its imparted energy.

4. In an apparatus for automatic operation at predetermined time intervals, a clock, cam surfaces rotated thereby, a follower for each cam which is moved in one direction thereby to impart energy thereto and then suddenly released, and means to utilize the energy of the followers when released, to close and open an electric circuit.

5. In an apparatus for automatically operating electric actuators, at predetermined time intervals, a clock, cam surfaces rotated thereby, a follower for the cam surfaces, which is thereby slowly moved in one direction to impart potential energy thereto and suddenly released, means to utilize the energy thus imparted to the followers when released, to close and open an electric circuit successively for a limited period.

[Claims 6 to 9 not printed in the Gazette.]

1,158,398. POWER MOLDING-MACHINE. ALLAN S. BIXBY, Indianapolis, Ind., assignor to The B. & B. Mfg. Co., Indianapolis, Ind., a Corporation of Indiana. Filed Sept. 4, 1914. Serial No. 860,145. (Cl. 22—44.)



1. A power molding machine, comprising a frame, a power device removably mounted in said frame, and a mold table operated by said power device, said mold table being removable from the frame and when in place locking the power device in place in the frame.

2. A power molding machine, comprising a frame having a lower cross bar and an upper cross bar, a fluid-pressure cylinder mounted between said cross bar, a piston mounted within said cylinder, a piston rod extending from said piston above said upper cross bar, said upper cross bar being bent so that the piston rod passes on one side of it, and a mold table mounted in said frame and resting on the upper end of said piston rod, said mold table having guide rods which extend downward through suitable openings in the frame and interlock with said cylinder to hold the latter in place.

3. A power molding machine, comprising a frame having a lower cross bar and an upper cross bar, a fluid-pressure cylinder mounted between said crosa bars, a piston mounted within said cylinder, a piston rod extending from said piston above said upper cross bar, and a mold table mounted in said frame and resting on the upper end of said piston rod, said mold table having guide rods which extend downward through suitable openings in the frame and interlock with said cylinder to hold the latter in place.

4. A power molding machine, comprising a frame having a lower cross bar and upper cross bar, a fluid-pressure cylinder removably mounted between said cross bars, a piston mounted within said cylinder, a piston rod extending from said piston above said upper cross bar, said upper cross bar being bent so that the piston rod passes on one side of it, and a mold table mounted in said frame and resting on the upper end of said piston rod.

5. A power molding machine, comprising a frame having a lower cross bar and an upper cross bar, a fluid-pressure cylinder removably mounted between said cross bars, a piston mounted within said cylinder, a piston rod extending from said piston above said upper cross bar, said cylinder and piston and piston rod being removable from the frame while the cross bars of the latter are in working position, and a mold table mounted in said frame and detachably resting on the upper end of said piston rod.

[Claims 6 to 10 not printed in the Gazette.]

1,158,399. BURIAL-VAULT. DAVID C. BOYD, Galion, Ohio, assignor to Security Metallic Grave Vault Co., Orrville, Ohio, a Corporation of Ohio. Filed Sept. 4, 1915. Serial No. 49,021. (Cl. 27—7.)

1. In a burial vault, a shell or body portion formed at its end with a returned flange, an end provided with marginal inner and outer flanges embracing the flanged end of the shell between them, and a sealing medium filling the space between said marginal flanges and the flanged end of the shell, said flanges extending one toward the other in the direction of their free edges.



2. In a burial vault, a shell formed at its end with a returned flange which is spaced from the remaining portion of the shell, and an end formed with inner and outer marginal flanges extending one toward the other in the direction of their free edges and receiving the flanged end of the shell between them, and a sealing medium filling the space between said marginal flanges and around the flanged end of the shell and between the flange of the shell and the adjoining portions thereof.

1,158,400. CASING FOR SAUSAGES. WALLACE PATTEN COHOE, Toronto, Ontario, Canada, assignor of one-third to The William Davies Company, Limited, Toronto, Canada, a Corporation of Canada, and one-third to Edward Carey Fox, Toronto, Canada. Filed Dec. 31, 1913. Serial No. 809,731. (Cl. 99—8.)

1. A thin-walled tube of dried cellulose hydrate associated with a water-proofing ingredient.

2. A thin-walled tube of dried cellulose hydrate containing an ingredient which imparts to it additional elasticity and additional water-proof qualities.

3. A thin-walled tube of dried cellulose hydrate associated with an ingredient insoluble in water.

4. A thin-walled tube of dried cellulose hydrate associated with an edible ingredient insoluble in water.

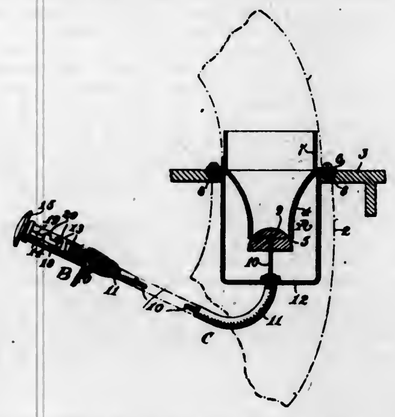
1,158,401. TALKING-MACHINE. FREDERICK JAMES EMPSON, Sydney, New South Wales, Australia, assignor to The Aeolian Company. Original application filed Dec. 31, 1912, Serial No. 739,521. Divided and this application filed Oct. 31, 1914. Serial No. 869,694. (Cl. 181—27.)

1. The combination in an automatic musical instrument having a sound conduit, of valve means therefor, and freely swayable operating means for said valve means comprising a manually operable portion and a connection between it and the valve means whereby said valve means may be adjusted independently of and be unmodified by the swaying of said manual portion relatively to the valve means.

2. The combination in an automatic musical instrument having a sound conduit, of valve means therefor, and freely swayable mechanical operating means for said valve means comprising a manually operable portion and a connection between it and the valve means whereby said valve means may be adjusted independently of and be unmodified by the swaying of said manual portion relatively to the valve means.

3. The combination in an automatic musical instrument of expression valve means, and freely swayable elongated, mechanical control means for said expression valve means adapted to be swayed sympathetically with the music without affecting the expression valve means.

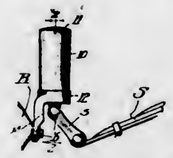
4. The combination in an automatic musical instrument having a sound conduit, of valve means therefor, and freely swayable mechanical operating means for said valve means comprising a manually operable portion and a connection between it and the valve means whereby said valve means may be adjusted independently of and be unmodified by the swaying of the manual portion relatively to the valve means, and means on the aforesaid manual portion for releasably holding the valve means in different positions of adjustment.



5. The combination in an automatic musical instrument having a sound conduit, of a throat mounted within said conduit so that the sound must pass therethrough, and a plug valve coöperating axially with the throat opening, and freely swayable operating means for said valve means comprising a manually operable portion and a connection between it and the valve means whereby said valve means may be adjusted independently of and be unmodified by the swaying of the manual portion relatively to the valve means.

[Claims 6 to 10 not printed in the Gazette.]

1,158,402. AUTOMOBILE SHOCK-ABSORBER. SAMUEL FURMIDGE, Chicago, Ill., assignor, by direct and mesne assignments, to Auto Device Manufacturing Company, a Corporation of Wisconsin. Filed Jan. 22, 1915. Serial No. 3,671. (Cl. 21—50.)



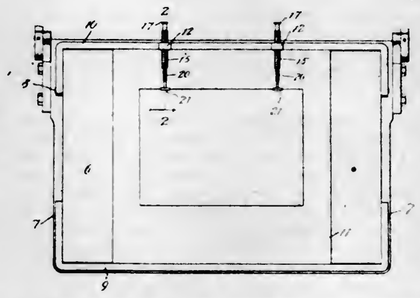
1. A shock absorber comprising an apertured head having means for attachment to an automobile part, a slide working through said head, having means for attachment to another automobile part, and resilient means interposed between said slide and head, the said slide having corrugated surfaces, and said head having a guide opening shaped to interfit with the corrugations.

2. A shock absorber comprising an apertured head having means for attachment to an automobile part, a slide working through said head, having means for attachment to another automobile part, and resilient means interposed between said slide and head, said slide being relatively broad and thin, having its broad surfaces corrugated, and said head having a guide opening constructed to interfit therewith.

3. A shock absorber comprising an apertured head having means for attachment to an automobile part, a slide working through said head, having means for attachment to another automobile part, and resilient means interposed between said slide and head, said slide having a rounded central portion terminating at its lower end in a threaded portion and having, above said threaded portion, corrugated wings flanking the central portion, and said head having an opening therein of shape to interfit with a cross-section of the slide member.

4. In a shock absorber, the combination of a casing providing a head having an elongated bearing extension provided with an opening surrounded on all sides by the material of said extension, a slide member extending through said opening into the casing, a bearing member carried by the end portion of said slide member and a spring interposed for bearing between a casing-positioned part and said bearing member, said slide having its side faces composed of a plurality of longitudinal surfaces alternately disposed at opposite angles to the plane of the slide, and the sides of said opening in the head conforming to said surfaces, thereby effecting extensive bearing between the head and slide and preventing displacement of the slide in any save in longitudinal direction.

1,158,403. GAGE DEVICE. JOSEPH F. GEARY, Chicago, Ill., assignor of one-half to Olive H. Crandall, Chicago, Ill., and one-half to Annie E. Sharpley, Melrose Park, Ill. Filed July 28, 1915. Serial No. 42,329. (Cl. 101—22.)



1. A gage device for the purpose set forth, comprising a bearing-member, a member having threaded connection with said bearing-member, and a third, oppositely threaded, member having threaded connection with said second-named member and provided with a stop surface for work fed to the press, said third member being adapted to be held against rotation when applied to position on a platen.

2. A gage device for the purpose set forth, comprising a bearing-member, a member having threaded connection with said bearing-member, and a third, oppositely threaded, member having threaded connection with said second-named member and provided with a stop surface for work fed to the press, adapted to prevent rotation of said third member when said device is applied to position on a platen.

3. A gage device for the purpose set forth, comprising telescoping members having threaded connection with each other, and a bearing-member, one of said telescoping members having threaded connection with said bearing-member by threads oppositely inclined to those connecting said telescoping members together, and the other of said telescoping members being provided with a surface against which the work is fed when the device is applied to a platen.

4. A gage device for the purpose set forth, comprising telescoping members having threaded connection with each other, a bearing-member, one of said telescoping members having threaded connection with said bearing-member by threads inclined opposite to those connecting said telescoping members together, and a foot carried by the other of said telescoping members, against which the work is fed

when the device is applied to the platen and operating to prevent rotation of the one of said telescoping members carrying it.

5. A gage device for the purpose set forth, comprising a bearing-member, an internally and externally threaded member with its threads oppositely inclined, said last-named member having threaded connection at one of its threads with said bearing-member, and a threaded rod telescoping with said second-named member and engaging the internal threads thereof, said rod having a stop surface against which the work is fed when the device is applied to a platen.

[Claims 6 to 10 not printed in the Gazette.]

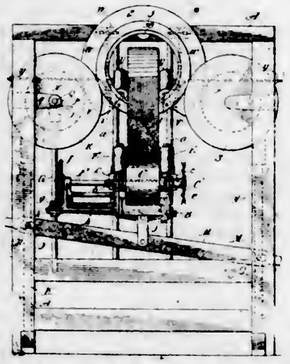
1,158,404. PROCESS OF PRESERVING AND IMPROVING LUMBER. JOHN WARREN ILLINGWORTH, Wilkes-Barre, Pa.; Helen E. Hartzell administratrix of said Illingworth, deceased. Filed May 28, 1913. Serial No. 770,334. (Cl. 99—12.)

1. The process of treating wood having a sap containing gums and acids consisting in removing a portion of the bark from the green wood and immersing the same, while still green and before any substantial loss of the gums and resins in a bath of lime slush.

2. The process of treating wood freshly cut from the stump consisting in scarifying the surface thereof while the wood is still green to an extent such as to expose the fiber of the wood and then immersing the wood thus treated while still green and before any substantial loss of the gums and resins in a bath of lime slush for a length of time sufficient to cause considerable absorption of the lime by the pores in the wood to act chemically upon the gums and resins in the sap and fix the same, and also a portion of the lime remaining in its natural uncombined state and serving as a physical barrier against penetration of animal life.

3. The process of treating wood having a sap containing gums and acids consisting in removing a portion of the bark from the green wood and immersing the same, while still green and before any substantial amount of gums and resins have been lost in a bath of lime slush, the lime acting chemically upon the gums and acids to fix the same and prevent the oozing of the sap and preventing fermentation of the same and allowing the wood to remain in the lime slush until it is entirely saturated with lime.

1,158,405. MACHINE FOR WRAPPING COMMERCIAL COILS OF WIRE. FRANK M. PIERCE and WILLIAM BURGESS PIERCE, Chicago, Ill., assignors to Pierce Wrapping Machine Company, Chicago, Ill., a Corporation of Illinois. Filed May 21, 1909. Serial No. 497,528. (Cl. 242—6.)



1. In a wrapping machine of the class described, a frame, revoluble channels supporting wheels mounted thereon, a shuttle revoluble with said wheels and seated in the channels thereof, rollers at the upper end of the frame engaging a portion of said shuttle partially to support the same, and adjustable means for supporting and rotating an article to be wrapped.

2. In a wrapping machine of the class described, a frame, a carriage adjustable vertically therein, driving and supporting means on said carriage for an article to be wrapped, a lever pivoted on said frame and connected to said carriage to adjust and maintain the same in various adjusted positions, a shuttle adapted to apply wrapping material to a body being wrapped, and means supporting said shuttle and adapted to drive the same.

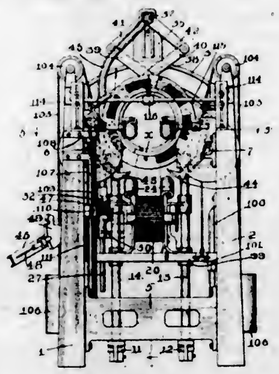
3. In a wrapping machine of the class described, a frame, a carriage movable vertically therein, driving means mounted on said carriage adapted to support and rotate an article to be wrapped, a lever having a movable fulcrum point adapted to adjust said carriage in said frame, a shuttle revoluble through the eye of a body being wrapped to apply wrapping material thereon, and revoluble supporting wheels having channels therein in which said shuttle is seated, and to one of which said shuttle is geared for rotation thereby.

4. In a wrapping machine of the class described, a frame, channeled rollers mounted thereon, gear teeth formed on said rollers within said channels, a revoluble annular shuttle supported on said rollers and engaging in the channels thereof, a geared rim on said shuttle meshing with the teeth of said rollers, a drive for one of said rollers to drive said shuttle, a pair of rollers mounted at the upper end of the machine engaging a portion of the shuttle to assist in supporting the same, and vertically adjustable driving and supporting means for an article to be wrapped.

5. In a device of the class described, a frame, channeled rollers mounted on each side thereof at the upper end thereof, a revoluble annular shuttle supported in and engaging in the channels of said rollers, a geared rim on said shuttle, rollers mounted on said frame at the upper end thereof engaging above and beneath said rim on said shuttle to support the same, a carriage vertically adjustable in the frame, and means thereon to support and rotate an article to be wrapped.

[Claims 6 and 7 not printed in the Gazette.]

1,158,406. WRAPPING-MACHINE. FRANK M. PIERCE and WILLIAM BURGESS PIERCE, Chicago, Ill., assignors to Pierce Wrapping Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 11, 1910. Serial No. 576,758. (Cl. 242—6.)



1. In a wrapping machine means acting to advance the article to be wrapped, a shuttle rotatable about the same having wrapping material laid in folds therein and adapted to be wound about the article to be wrapped as the shuttle is rotated.

2. In a wrapping machine means acting to advance the article to be wrapped, a rotatable shuttle adapted to receive wrapping material in folds and to dispose it about an object from the inner most of said folds.

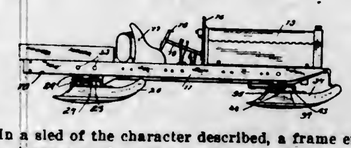
3. In a device of the class described means for advancing the article to be wrapped, a rotatable shuttle adapted to contain wrapping material laid in folds, means directing the wrapping material spirally around the article, and manually operated mechanism for releasing the article when the wrapping is completed.

4. In a wrapping machine of the class described a frame, vertical guides thereon, a carriage movable on said guides, supporting and driving means for an article to be wrapped mounted on said carriage, a rotatable hinged shuttle adapted to be opened to permit insertion and removal of articles to and from the machine, and means for opening said shuttle and holding the same away from the article.

5. In a wrapping machine of the class described a frame, adjustable supporting means for articles to be wrapped, mechanisms associated therewith for driving said articles at different speeds, a rotatable shuttle hingedly constructed so as to be opened, and means forming a part of said machine for opening said shuttle and holding the same away from the article.

[Claims 6 to 28 not printed in the Gazette.]

1,158,407. POWER-DRIVEN SLED. DANIEL PINKEL, Richmond, Mich., assignor to David Carl, Richmond, Mich. Filed Nov. 27, 1914. Serial No. 874,328. (Cl. 21—47.)



1. In a sled of the character described, a frame embodying a transverse bar, runners supporting the frame, brackets rigidly mounted upon the transverse bar with the bar having transverse openings beneath and adjacent the brackets, vertically swinging securing arms having their forward ends provided with approximately vertical apertures, means pivotally connecting the securing arms with the brackets at points disposed near and spaced from the forward ends of the securing arms, substantially horizontal bolts arranged within the transverse openings of said bar, vertically swinging bolts pivoted to the forward ends of the substantially horizontal bolts and arranged within the apertures of the securing arms, compressible coil springs surrounding the vertically swinging bolts and engaging the apertured ends of the securing arms to oppose their movement in opposite directions, a rotatable transverse shaft carried by the rear ends of the securing arms, a spur gear carried by the transverse shaft, and means to rotate the transverse shaft.

2. In a sled of the character described, a frame embodying a transverse bar, runners supporting the frame, brackets rigidly mounted upon the transverse bar with the bar having transverse openings beneath and adjacent the brackets, vertically swinging heads pivotally mounted upon the brackets with their rear ends provided with axially extending openings and their forward ends having approximately vertical apertures, substantially horizontal bolts arranged within the transverse openings of said bar and having forward forked heads, vertically swinging bolts pivotally mounted in the forward forked heads of the substantially horizontal bolts and extending into the apertures of the heads, compressible coil springs surrounding the vertically swinging bolts and engaging the apertured ends of the heads to oppose their movement in opposite directions, securing arms having their forward ends extending into the axial openings of the heads, a spur gear pivotally connected with the rear ends of the securing arms, and means to drive the spur gear.

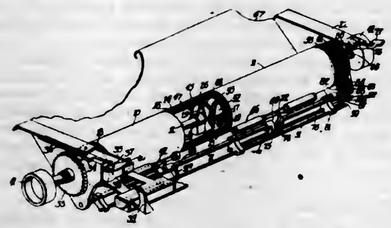
3. In a sled, a frame, runners supporting the same, securing arms provided near their rear ends with annular grooves, a rotatable transverse shaft, two-part T-bearings receiving the transverse shaft and the rear ends of the securing arms and provided with interior annular flanges to enter the annular grooves, means to rotate the transverse shaft, spur gears carried by the transverse shaft, means to pivotally connect the securing arms with the frame to swing in a vertical plane with relation thereto, and yielding means to oppose the swinging movement of the securing arms.

4. In a sled, a frame, a runner arranged below the frame, an inverted approximately U-shaped apertured bracket arranged upon and rigidly secured to the upper side of the runner, a connecting bolt having its lower end engaging the runner and passing through the aperture of the bracket, a frame bracket attached to the frame and mounted to reciprocate upon the connecting bolt, and a suitably stiff coil spring surrounding the bolt between the frame and runner brackets.

5. In a sled, a frame, a runner arranged below the frame, an inverted approximately U-shaped bracket arranged upon and rigidly secured to the upper side of the runner, a substantially vertical connecting bolt having its lower end engaging the runner and passing through the aperture of the bracket, an apertured securing plate receiving the connecting bolt and arranged within the bracket and attached to the runner, an apertured bracket secured to the frame and mounted to reciprocate upon the connecting bolt, and a coil spring surrounding the connecting bolt between the brackets.

[Claims 6 to 8 not printed in the Gazette.]

1,158,408. TYPE-WRITING MACHINE. BURNHAM C. STICKNEY, Elizabeth, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed July 31, 1915. Serial No. 42,868. (Cl. 197—129.)



1. The combination with a divided platen, of a line-space mechanism, and means for separately connecting either one of the divisions of the platen to said line-space mechanism for movement thereof relative to the other of said divisions.

2. The combination with a divided platen, of a line-space mechanism, means for connecting either one of the divisions of the platen to said line-space mechanism for movement thereof relative to the other of said divisions, and means for connecting both of said platen divisions to said line-space mechanism for movement of both together.

3. The combination with a divided platen, of a line-space mechanism, means for connecting either one of the divisions of the platen to said line-space mechanism for movement thereof relative to the other of said divisions, and means for attaching the platen division, so connected, to the other of the platen divisions for movement of both together.

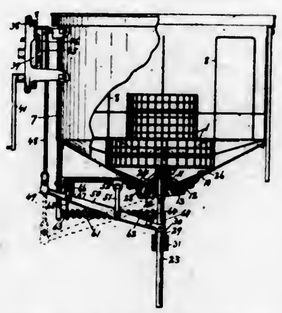
4. The combination with a divided platen, of a line-space mechanism, means for connecting either one of the divisions of the platen to said line-space mechanism for movement thereof relative to the other of said divisions, and means for connecting both of said platen divisions to said line-space mechanism for movement of both as a unit.

5. The combination with a divided platen, of means for moving the platen in line-space and reverse directions, and means for separately connecting either one of the

divisions of the platen to said platen-actuating means for movement thereof in either direction relative to the other of said divisions.

[Claims 6 to 39 not printed in the Gazette.]

1,158,409. MECHANICAL MOTOR FOR DISH-WASHING MACHINES. WILLARD R. WALKER, Syracuse, N. Y. Original application filed May 31, 1911, Serial No. 630,280. Divided and this application filed Feb. 18, 1913. Serial No. 749,133. (Cl. 74—14.)



1. A mechanical motor for the purpose described comprising a pair of coil springs, a lever of the first kind extending along the springs, connections between opposite ends of the lever and corresponding ends of the springs for tensioning said springs simultaneously from both ends as the lever is rocked in one direction, and means including a self-releasing clutch for operating the lever to tension the springs, said lever being actuated by the tension springs as soon as the clutch is released.

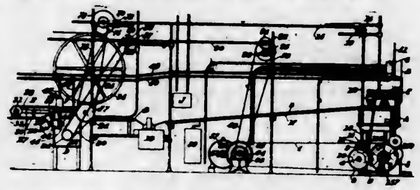
2. In a mechanical motor for the purpose described, the combination of a plunger, a coil spring, means including a lever for reciprocating the plunger, connections between said lever and opposite ends of the spring for tensioning said spring from both ends at the same time as the lever is rocked in one direction, and means including a self-releasing clutch for operating the lever in such direction, said lever being actuated by the tension spring in the opposite direction when the clutch is released.

3. In a mechanical motor for the purpose described, in combination with a plunger, a lever for operating the plunger, a coil spring running lengthwise of the lever to opposite sides of its fulcrum, connections between said lever and opposite ends of the spring for tensioning said spring from both ends simultaneously as the lever is rocked in one direction, and means including a self-releasing clutch for operating the lever in said direction, said lever being operated in the opposite direction by the tension spring when the clutch is released.

4. In a mechanical motor for the purpose described, the combination with a plunger and an operating lever therefor, coiled motor springs running lengthwise of the lever at opposite sides thereof, connections between the opposite ends of the lever and corresponding ends of the springs for tensioning said springs from both ends simultaneously, and means including a self-releasing clutch for operating the lever in one direction and releasing it to permit said springs to operate the lever in the opposite direction.

1,158,410. DRIVE FOR MATCH-MACHINES. ALVIN D. WELKER, Wadsworth, Ohio, assignor to The Ohio Match Company, Wadsworth, Ohio, a Corporation of Ohio. Filed Jan. 18, 1915. Serial No. 2,975. (Cl. 144—52.)

1. In a match machine, an endless chain in which the splints are stuck or set, means to move said chain through the machine, a composition-applying mechanism, a frame over which the chain passes mounted over the composition mechanism, means to raise and lower said frame so as respectively to move the matches out of and into operative relation with respect to the composition mechanism, means rendered operative by the raising of the frame to effect the continued motion of the composition mechanism, and a central control apparatus for these several parts.



2. In a match machine, an endless chain in which the splints are stuck or set, means to move said chain through the machine, a composition-applying mechanism, a frame over which the chain passes mounted over the composition mechanism, an air-lift for raising and lowering the frame relatively to the composition mechanism, a primary and a secondary drive for the composition mechanism, said secondary drive rendered operative by the raising of the frame, and a central control apparatus for the chain moving means and the air-lift.

3. In a match machine, an endless chain in which the splints are stuck or set, means to move said chain through the machine, a composition-applying mechanism, a frame pivotally mounted over the composition applying mechanism and upon which frame the chain is movably supported, a lifting mechanism for raising and lowering the frame relatively to the composition mechanism, a main drive and a secondary drive for the composition mechanism, and a central control apparatus for simultaneously arresting the travel of the match chain and rendering the lifting mechanism operative to raise the frame and energizing the secondary drive.

4. In a match machine, an endless chain in which the splints are stuck or set, means to move said chain through the machine, a composition-applying mechanism, a frame movably mounted over the composition-applying mechanism and upon which frame the chain is supported, a lifting mechanism for raising and lowering the frame relatively to the composition mechanism so as respectively to lift the splints out of and lower them into position to receive the composition from the composition mechanism, a central control apparatus for simultaneously arresting the travel of the match chain and rendering the lifting mechanism operative to raise the frame, and means interposed between the lifting mechanism and the frame and rendered active by the lifting of the frame to continue the operation of the composition-applying mechanism so as to keep the composition agitated.

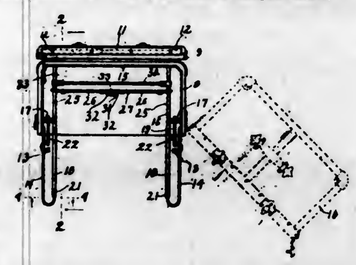
5. In a match machine, an endless chain in which the splints are stuck or set, means to move said chain through the machine, a composition-applying mechanism, a frame movably mounted over the composition-applying mechanism and upon which frame the chain is supported, an air-lift for raising and lowering the frame relatively to the composition mechanism respectively to move the match splints out of composition-applying relation to the composition mechanism and present them to such mechanism for application of the composition, a combined air and electric switch and electric and air connections between said switch and said chain, composition-applying mechanism and frame by means of which the relative movements of these several parts may be controlled.

[Claims 6 to 14 not printed in the Gazette.]

1,158,411. WARDROBE-TRUNK. GEORGE HENRY WHEARY, Racine, Wis. Filed Oct. 27, 1913. Serial No. 797,504. (Cl. 190—13.)

1. A trunk comprising a compartment provided with a hinged cover, and independently movable arms pivoted to the compartment walls to swing downwardly and provided with hook members adapted to engage different portions of the hinged cover and clampingly and independently draw the engaged portions to closed positions.

2. A trunk, comprising a compartment provided with a hinged cover, extensible hanger tracks independently mounted within the compartment, independent supporting members pivoted to the compartment walls and connected to the extensible portions of the tracks and movable therewith, hooks pivoted to the supporting members and adapted to engage different portions of the cover and clampingly and independently draw the engaged portions to closed positions, and means for holding the supporting members in one of their positions of adjustment.



3. A trunk, comprising a compartment provided with a hinged cover, fixed tracks mounted within and on opposite sides of the compartment, extensible tracks hinged to the outer ends of the fixed tracks and adapted to swing upwardly into horizontal alinement with the fixed tracks, independently movable supporting members connected at their outer ends to the free ends of the extensible tracks and having their inner ends pivoted to the walls of the compartment, hooks pivoted to the supporting members for engaging portions of the cover to clampingly and independently draw the engaged portions to closed positions, and brace members for independently holding the supporting members in their upper positions.

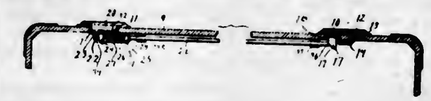
4. A trunk, comprising a compartment provided with a hinged cover, fixed tracks mounted within and on opposite sides of the compartment, extensible tracks hinged to the outer ends of the fixed tracks and adapted to swing upwardly into horizontal alinement therewith, supporting members pivoted to the opposite sides of the compartment and having their outer end portions connected to the outer ends of the extensible tracks and projecting outwardly beyond said track ends, the outer portions of the supporting members being of less thickness horizontally than the tracks, means for holding the supporting members in their upper positions, and a retainer bar slidably mounted on the tracks and removable therefrom only when in its outer position and above the outer portions of the support.

5. A trunk, comprising a compartment provided with a hinged door, extensible tracks mounted within and on opposite sides of the compartment, supporting members connected to the outer ends of the tracks and pivotally connected to the compartment walls, the outer end portions of the supporting members being of less thickness than the tracks, a retainer bar provided with openings through which the tracks extend and with communicating slots to permit the bar to be removed from and mounted on the tracks at the junction of the supporting members with the tracks, means for locking the retainer bar in different positions of adjustment on the tracks, and means for holding the extensible portions of the tracks in positions of adjustment.

[Claims 6 to 16 not printed in the Gazette.]

1,158,412. TRUNK-LOCKING MEANS. GEORGE HENRY WHEARY, Racine, Wis. Filed June 29, 1914. Serial No. 847,808. (Cl. 70—115.)

1. The combination of a trunk, of an automatic locking means therefor, consisting of a plurality of locking members for locking the cover to the body portion, one of said locking members being controlled by a key and the remaining member being yieldingly controlled by a movement of the keyed lock toward open position, said remaining locking member adapted to be lockingly engaged while held in locked position by the keyed locking member.



2. The combination of a trunk, of an automatic locking means therefor, comprising a plurality of locking members for locking the cover to the body portion, one of said locking members being controlled by a key and the remaining member being yieldingly controlled by a slidable rod which holds the remaining locking member yieldingly in locking position until the rod is disengaged by the keyed lock.

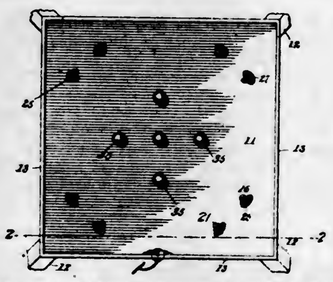
3. An automatic locking means, comprising a keyless hasp member, a bolt member positioned to engage the hasp member, means for yieldingly holding the bolt member in unlocked position, means for yieldingly holding the bolt member in locked position, a keyed hasp member spaced from the keyless hasp member, an escutcheon plate engaged by the keyed hasp member, and a member engaged by the keyed hasp member when in locked position for yieldingly holding the bolt in locking position.

4. An automatic locking means, comprising a keyed hasp member, a bolt member positioned to engage the hasp member, an actuating member having a slidable connection with the bolt, a coiled spring engaging the bolt and the actuating member and exerting a tendency to move the bolt to unlocking position, means of less tendency for moving the bolt to locking position, and a keyed hasp member having means for moving the actuating member to compress the coiled spring.

5. An automatic locking means comprising a hasp member, a bolt member positioned to engage the hasp member, an actuating member having a slidable connection with the bolt and an angled end portion, a coiled spring engaging the actuating member and the bolt and exerting a tendency to move the bolt to unlocking position, means of less tendency for moving the bolt to locking position, and a keyed hasp member having a projection with an angled portion which engages the angled end of the actuating rod and moves said rod to compress the coiled spring.

[Claim 6 not printed in the Gazette.]

1,158,413. GAME APPARATUS. WILLIAM ZEPP, New York, N. Y. Filed Apr. 3, 1915. Serial No. 18,921. (Cl. 46—61.)



1. A game apparatus comprising a base, a plurality of objects to be struck loosely disposed thereon, rotatable buffers mounted upon said base in fixed relation to each other, and a striker adapted to engage said buffers and partially rotate the same, and to contact with said objects to upset the same, substantially as specified.

2. A game apparatus comprising a base, a plurality of objects to be struck loosely disposed thereon, buffers mounted upon said base in fixed relation to each other, and arranged in a plurality of sets disposed at right angles to each other, and a movable striker adapted to engage said buffers, and to contact with said objects to upset the same, substantially as specified.

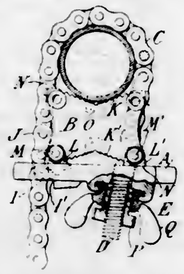
3. A game apparatus comprising a base, a plurality of objects loosely disposed thereon, buffers arranged in fixed relation upon said base; said buffers each comprising a fixed support and a member loosely mounted thereon, and a movable striker adapted to engage said buffers to be deflected thereby, and to contact with said objects to upset the same, substantially as specified.

4. A game apparatus comprising a base, a plurality of objects loosely disposed thereon, buffers arranged in fixed relation upon said base; said buffers each comprising a fixed support, a member mounted to rotate thereon, and means for limiting the extent of rotation of the member mounted upon said support, and a rotating striker adapted to engage with the rotating member on said support, and to contact with said objects, substantially as specified.

5. A game apparatus comprising a base, a plurality of objects to be struck loosely disposed thereon, buffers arranged in fixed relation upon said base; said buffers each comprising a fixed support, a tubular member mounted to rotate thereon, a plate extending outwardly from said revoluble member and provided with a segmental slot, a stop extending through said slot and into said base for limiting the extent of rotation of said revoluble member, and a striker adapted to be projected across said base into engagement with the revoluble members on said buffers, and to contact with said objects, substantially as specified.

[Claim 6 not printed in the Gazette.]

1,158,414. CHAIN PIPE-VISE. GEORGE AMBORN, Chapinville, Conn., assignor to J. H. Williams & Co., Brooklyn, N. Y., a Corporation of New York. Filed Dec. 27, 1911. Serial No. 668,057. (Cl. 81—19.)



1. In a pipe vise or the like, the combination with a base member, of a plurality of upstanding spaced apart jaw members, each consisting of a polygonal plate having side edges with work engaging seats therein and each having substantially equal spaced means whereby different edge portions of the upstanding jaw members can be fixedly secured to the base, with means on the base coöperating interchangeably with said other securing means and common to the different edges having the work engaging seats therein, a chain attaching part, and a chain adapted to pass between the upstanding members.

2. In a pipe vise or the like, the combination with the base of a plurality of upstanding reversible jaw members, each consisting of a rectangular plate having substantially equal sides with work holding seats therein, and means for interchangeably securing each of the different sides of the upstanding jaws to the base and maintaining them in spaced relation to admit of the passage of a chain therebetween.

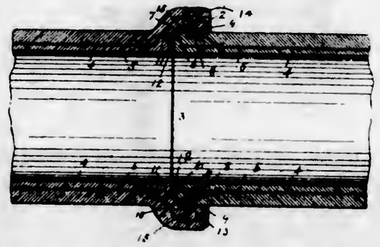
3. A chain pipe vise including in combination a jaw having a plurality of working faces and having a series of holes, a base plate, and means passing through said holes for fastening said jaw to said base plate in different positions so as to bring different working faces into operative position.

4. A chain pipe vise including in combination a base plate having a pair of lugs, a jaw having a plurality of working faces, said jaw having a plurality of holes arranged in identical pairs, one pair opposite each working face, and bolts adapted to pass through said lugs and said holes for holding said jaw in its several working positions.

5. A vise including in combination a plurality of jaws, each formed with a working face, clamping means bearing on the pipe in a plane between said working faces of the jaws, and a lug on each jaw, said lugs adapted to extend between the jaws and adapted to form an extended support for a pipe in contact with said jaws.

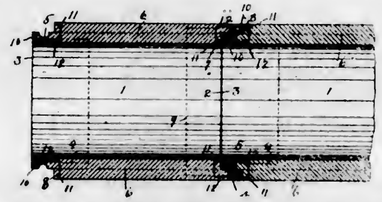
[Claims 6 and 7 not printed in the Gazette.]

1,158,415. SEWER-PIPE. ALBERT J. BOYLE, Baltimore, Md. Filed Feb. 7, 1914. Serial No. 817,091. (Cl. 72—53.)



A pipe having a bell end provided with an annular groove in its inner surface and a hole leading into said groove from the outer surface, a spigot end provided with an annular groove in its outer surface adapted to coincide with the groove in the bell end when the two pipes are fitted together, a number of reinforcing rods extending longitudinally of the pipe and each having one end projecting out to near the outer edge of the spigot end and its other end projecting down on an incline into the bell end, then running longitudinally of said end and having its extremity bent inwardly at right angles beyond the annular groove of the bell end, a number of metal loops formed of separate wires each having its ends projecting through the reinforcing material, said loops being entirely within the annular groove of the bell end, and a number of metal loops formed of separate wires each having its ends projecting through the reinforcing material, said last-mentioned loops being entirely within the annular groove of the spigot end, whereby when the spigot end of one section is forced into the bell end of the adjoining section the said loops will not come in contact with the impinging surfaces of the adjoining sections.

1,158,416. SEWER-PIPE. ALBERT J. BOYLE, Baltimore, Md. Filed May 12, 1915. Serial No. 27,680. (Cl. 72—53.)



1. In a device of the class described having a spigot end and a bell end each forming a shoulder with the main body of the pipe, an annular rod embedded in said shoulders, an annular rod embedded in the extremity of the spigot end and the bell end, and short length wires bent into L shape positively connecting the rod in the shoulder with the rod in the adjacent end.

2. In a device of the class described, having a spigot end and a bell end each forming a shoulder with the main body of the pipe and the spigot end of one pipe adapted to fit into the bell end of another, and be locked therein, an annular rod embedded in said shoulders, an annular rod embedded in the extremity of the spigot end and the bell end, and short length wires bent into L shape positively connecting the rods in the shoulders with the rod in the adjacent ends whereby the wires in the bell end are inverted and coöperate with the wires in the spigot end to inclose and protect the locked adjacent ends of two pipes.

1,158,417. PROCESS FOR GLAZING AND HARDENING BRICK, TERRA-COTTA, AND OTHER OBJECTS. LEONIDAS R. DENNISON, South San Francisco, Cal. Filed Jan. 9, 1915. Serial No. 1,421. (Cl. 91—72.)

1. The process of treating fictile and like articles which consists in applying an oxygen-acetylene flame to the surface thereof so as to fuse the surface material and integrate said material with the body material of the article.

2. The process of treating fictile and like articles which consists in applying a glazing preparation to the surface of such articles and applying a flame of great intensity to the exposed surface so as to fuse said preparation with the surface material and to integrate them with the body material of the article.

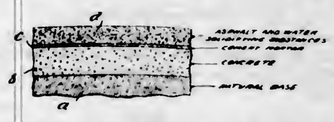
3. The process of treating fictile and like articles which consists in applying a coloring preparation to the surface of such articles and applying a flame of great heat intensity to the exposed surface so as to fuse said preparation with the surface material and to integrate them with the body material of the article.

4. The process of treating fictile and like articles which consists in mixing a hardening element in the plastic material of said articles before molding and applying a flame of great heat intensity to the exposed surface of said articles after molding so as to fuse the surface material and integrate said material with the body material of the article.

5. The process of treating fictile and like articles which consists in mixing a coloring material in the plastic material of said articles before molding and applying a flame of great heat intensity to the exposed surface of said articles after molding so as to fuse the surface material and integrate said material with the body material of the article.

[Claims 6 to 11 not printed in the Gazette.]

1,158,418. ROAD AND PROCESS OF MAKING THE SAME. THOMAS M. HART, New York, N. Y., assignor to Perez M. Stewart, trustee, New York, N. Y. Filed Jan. 14, 1910. Serial No. 538,043. (Cl. 94—1.)



1. A road or pathway comprising a composite composition bonded together by a bituminous material associated with a substance capable of converting contained water into solid water of combination.

2. A road or pathway comprising a composite composition bonded together by a bituminous material associated with a substance capable of converting water of emulsification into solid water of crystallisation.

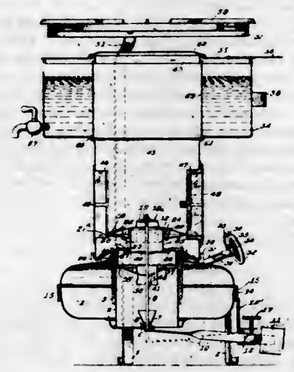
3. A road or pathway comprising a composite composition bonded together by a bituminous material associated with a metal sulfate capable of converting water of emulsification into solid water of crystallisation.

4. A road or pathway comprising a composite composition bonded together by a bituminous material containing aluminium sulfate capable of converting water of emulsification into solid water of crystallisation.

5. A road or pathway comprising a composite composition bonded together by a bituminous material containing alum capable of converting water of emulsification into solid water of crystallization.

[Claims 6 to 10 not printed in the Gazette.]

1,158,419. LAMP. PHILIP MALCAMP, New Orleans, La. Filed Dec. 12, 1914. Serial No. 876,829. (Cl. 158—94.)



1. A lamp, comprising a tank or reservoir having a central draft tube and supporting legs, a wick encircling the draft tube, the reservoir having a wick tube at the top of the draft tube encircling the wick, means for raising and lowering the wick, a rod arranged at the axis of the wick tube, a lever pivoted intermediate its ends to the reservoir and having its inner end in position to engage the lower end of the rod, a counterbalance weight on the outer end of the lever, means engaging the outer end of the lever for raising or lowering the same, said means comprising a set screw, an abutment on the reservoir through which the set screw is threaded to engage the lever outside of its pivotal connection, a damper connected to the upper end of the rod, said damper being concavo-convex and arranged with its concave face downward, a fixed sleeve within the upper end of the draft tube, said sleeve having an inwardly extending flange at its upper end, a cylindrical damper supported by the rod and having an outwardly extending flange at its lower end, a screen within the fixed sleeve, and guides for the rod.

2. A lamp, comprising a tank or reservoir having a central draft tube and supporting legs, a wick encircling the draft tube, the reservoir having a wick tube at the top of the draft tube encircling the wick, means for raising and lowering the wick, a rod arranged at the axis of the wick tube, a lever pivoted intermediate its ends to the reservoir and having its inner end in position to engage the lower end of the rod, a counterbalance weight on the outer end of the lever, means engaging the onter end of the lever for raising or lowering the same, a damper connected to the upper end of the rod, said damper being concavo-convex and arranged with its concave face downward.

3. A lamp, comprising a tank or reservoir having a central draft tube and supporting legs, a wick encircling the draft tube, the reservoir having a wick tube at the top of the draft tube encircling the wick, means for raising and lowering the wick, a rod arranged at the axis of the wick tube, a lever pivoted intermediate its ends to the reservoir and having its inner end in position to engage the lower end of the rod, a counter-balance weight on the outer end of the lever, means engaging the outer end of the lever for raising or lowering the same, and a damper connected to the upper end of the rod.

4. A lamp, comprising a tank or reservoir having a central draft tube and supporting legs, a wick encircling the draft tube, the reservoir having a wick tube at the top of

the draft tube encircling the wick, means for raising and lowering the wick, a rod arranged at the axis of the wick tube, a lever pivoted intermediate its ends to the reservoir and having its inner end in position to engage the lower end of the rod, a damper connected to the upper end of the rod and extending at its outer edge above the wick, means in connection with the rod and draft tube for controlling the draft through the draft tube and operated by the movement of the rod, and means engaging the outer end of the lever for raising the inner end and for holding it in adjusted position.

5. A lamp, comprising a tank or reservoir having a central draft tube and supporting legs, a wick encircling the draft tube, the reservoir having a wick tube at the top of the draft tube encircling the wick, means for raising and lowering the wick, a rod arranged at the axis of the wick tube, a damper connected to the upper end of the rod and extending at its outer edge above the wick, means in connection with the lower end of the rod for raising the rod and for holding it in adjusted position, said damper having a radial opening at its edge, and a plate for closing the opening and movable into and out of position over the opening.

[Claim 6 not printed in the Gazette.]

1,158,420. PILLOW-VALVE. MAXIMILIAN CHARLES SCHWEINERT, West Hoboken, N. J., and HENRY P. KRAFT, New York, N. Y. Filed July 11, 1908, Serial No. 443,037. Renewed Mar. 20, 1915. Serial No. 15,903. (Cl. 152—12.)



1. In a pillow valve or the like, a valve proper, having a recess at its inner end, a slot leading from its top to a point near said recess, a packing in said recess, and a stud for holding said packing therein, said stud having its head below said packing and being riveted at the bottom of said slot.

2. In a pillow valve or the like, a valve cap, and a valve proper therein, said valve proper having a shoulder and a tubular extension above such shoulder, and said cap having a part engaging said shoulder and a face engaging said tubular extension.

3. In a pillow valve or the like, the combination of a valve tube and a cap, one screwing over the other, the inner of said parts having a groove, and a screw-threaded portion, and the outer of said parts having a screw-threaded bore engaging said screw-threaded portion, and means near one end of said bore for engaging said groove, said means engaging said groove between such end of said outer portion and the points of engagement of said screw-threaded portion and bore.

4. In a pillow valve or the like, a valve tube, and a valve cap, said tube having a screw-threaded end, and inwardly of said end a groove, and said cap having a screw-threaded bore, and having means for engaging said groove to prevent complete separation of said tube and cap.

5. In a pillow valve or the like, a valve tube, and a valve cap, said tube having a screw-threaded end, and inwardly of said end a groove and said cap having a screw-threaded bore, and having a screw for engaging said groove to prevent complete separation of said tube and cap.

[Claims 6 and 7 not printed in the Gazette.]

REISSUES.

14,000. LABEL. LOUIS M. COLE, Los Angeles, Cal. Filed Dec. 26, 1914. Serial No. 879,221. Original No. 1,054,826, dated Mar. 4, 1913, Serial No. 643,055. (Cl. 40—2.)



1. As a new article of manufacture, a label adapted to be detachably fastened around a can, provided on its upper and lower edges with retaining flanges by fastening the ends of the label together, said label having printed display matter on the outer surfaces and a printed coupon and other useful printed matter on the inner surface thereof, said label also being provided with a transversely disposed cutting line thereon out of registry with said printed coupon and other printed matter, whereby when the label is cut on said line it can be removed from the can so that the printed matter can be read on the concealed side of the label and the coupon detached therefrom in an unmutilated condition.

2. As a new article of manufacture, a label adapted to be detachably secured around a container, said label for said container having display matter relating to the contents of the container on its outer face, the inner face of said label bearing useful printed matter, said label being provided on its outer face with a line disposed transversely thereto and out of registry with said useful printed matter indicating where said label should be severed to remove the entire label from the container without mutilating the matter on its inner side.

3. As a new article of manufacture, a label adapted to be detachably secured around a package, said label having display matter relating to the contents of the package on its outer face, the inner face of said label bearing useful printed matter, said label being provided on the outer face thereof with a line out of registry with said useful printed matter indicating where the label may be severed to remove the entire label without mutilating the printed matter on its inner face.

14,001. CLASP. WILLIAM CONWAY, South Boston, Mass. Filed July 6, 1915. Serial No. 38,365. Original No. 1,080,539, dated Dec. 9, 1913, Serial No. 720,823. (Cl. 24—80.)



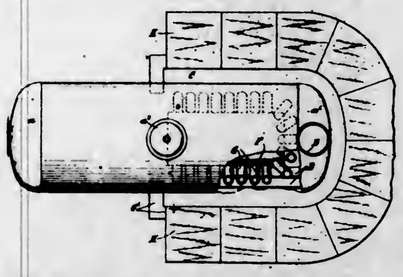
1. A device of the character described comprising a base having a stud button secured thereto, a clamping jaw hinged on said base, and a member embracing said base and jaw and slidably mounted on said base, said member having a spring tongue bearing against said jaw to positively close and open it when said member is moved.

2. A device of the character described comprising a base having a stud secured thereto, a clamping jaw hinged on said base, and a movable member comprising a plate having a slot through which said stud projects, and a spring tongue bent upward from said slotted plate and bearing against said clamping jaw to positively close and open it when said member is moved.

3. A device of the character described comprising a base having a stud secured thereto, a clamping jaw hinged on said base, said jaw having an extension below the hinge, and a member embracing said base and jaw and slidably mounted on said base, said member having a spring tongue bearing against said jaw to positively close and open it when said member is moved.

4. A device of the character described comprising a base having a stud secured thereto, a clamping jaw hinged on said base, and a member embracing said base and jaw and slidably mounted on said base, said member having a spring tongue bearing against said jaw to positively close and open it when said member is moved.

14,002. BOILER FURNACE AND FEED-WATER HEATER. JOHN RALPH SUBBELL, New York, N. Y. Filed July 14, 1915. Serial No. 39,932. Original No. 1,067,494, dated July 15, 1913, Serial No. 662,349. Division A. (Cl. 122—373.)



1. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, embodying therein a furnace, a water drum within said furnace below said boiler, a plurality of water tubes or legs, the opposite ends of which open directly into the water space within said boiler, and into said water drum, respectively whereby a fuel combustion chamber is formed between the boiler and said legs, and the side wall of said furnace, and a gas and air combustion chamber in communication with said fuel combustion chamber intermediate said water tubes or legs and the water areas of the boiler is formed between said water tubes or legs, the boiler and said water drum, a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created, and means for controlling the admission of air at the top of said fuel combustion chamber.

2. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, embodying therein a furnace, a water drum within said furnace below said boiler, a plurality of water tubes or legs the opposite ends of which open directly into the water space within said boiler, and into said water drum respectively, whereby a fuel combustion chamber is formed between the boiler and said legs, and the side wall of said furnace, and a gas and air combustion chamber in communication with said fuel combustion chamber intermediate said water tubes or legs and the water areas of the boiler is formed between said water tubes or legs, the boiler and said water drum, a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created, means for controlling the admission of air at the top of said fuel combustion chamber, and a jet nozzle having a discharge within sad gas and air combustion chamber whereby the effective suction operative to induce the down draft to said combustion chamber may be increased.

3. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, embodying thereing a furnace, a fire grate adjacent the bottom of said furnace forming an ash pit therebelow, a water drum within said furnace below said boiler, and in close juxtaposition to said fire grate whereby fuel is excluded from beneath said drum, a plurality of water tubes or legs the opposite ends of which open directly into the water space within said boiler and into said water drum respectively, whereby a fuel combustion chamber is formed between the boiler and said legs and the side wall of said furnace and a gas and air combustion chamber in communication with said fuel combustion chamber intermediate said water tubes or legs and the water areas of the boiler is formed between said water tubes or legs, the boiler and said water drum, a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created, and means for controlling the admission of air at the top of said fuel combustion chamber.

4. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, embodying therein a furnace, a fire grate adjacent the bottom of said furnace forming an ash pit therebelow, a water drum within said furnace below said boiler and in close juxtaposition to said fire grate whereby fuel is excluded from beneath said drum, a plurality of water tubes or legs the opposite ends of which open directly into the water space within said boiler, and into said water drum, respectively, whereby a fuel combustion chamber is formed between the boiler and said legs, and the side wall of said furnace, and a gas and air combustion chamber in communication with said fuel combustion chamber intermediate said water tubes or legs and the water areas of the boiler is formed between said water tubes or legs, the boiler and said water drum, a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created, means for controlling the admission of air at the top of said fuel combustion chamber, and a jet nozzle having a discharge within said gas and air combustion chamber whereby the effective suction operative to induce the down draft to said combustion chamber may be increased.

5. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, embodying therein a furnace, a water drum within said furnace below said boiler, a plurality of water tubes or legs the opposite ends of which open directly into the water space within said boiler, and into said water drum, respectively, said water tubes or legs projecting downwardly and away from the side walls of said furnace whereby a fuel combustion chamber of gradually increased capacity toward the bottom thereof is formed between the boiler and said legs, and the side wall of said furnace, and a gas and air combustion chamber of gradually increased capacity toward the top thereof in communication with said fuel combustion chamber intermediate said water tubes or legs and the water areas of the boiler is formed between said water tubes or legs, the boiler and said water drum, a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created, and means for controlling the admission of air at the top of said fuel combustion chamber.

6. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, embodying therein a furnace, a water drum within said furnace below said boiler, a plurality of water tubes or legs the opposite ends of which open directly into the water space within said boiler, and into said water drum, respectively, said water tubes or legs projecting downwardly and away from the side wall of said furnace whereby a fuel combustion chamber of gradually increased capacity toward the bottom thereof is formed between the boiler and said legs,

and the side wall of said furnace, and a gas and air combustion chamber of gradually increased capacity toward the top thereof in communication with said fuel combustion chamber intermediate said water tubes or legs and the water areas of the boiler is formed between said water tubes or legs, the boiler and said water drum, a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created, means for controlling the admission of air at the top of said fuel combustion chamber, and a jet nozzle having a discharge within said gas and air combustion chamber whereby the effective suction operative to induce the down draft to said combustion chamber may be increased.

7. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, embodying therein a furnace, a fire grate adjacent the bottom of said furnace forming an ash pit therebelow, a water drum within said furnace below said boiler and in close juxtaposition to said fire grate whereby fuel is excluded from beneath said drum, a plurality of water tubes or legs the opposite ends of which open directly into the water space within said boiler, and into said water drum respectively, said water tubes or legs projecting downwardly and away from the side wall of said furnace whereby a fuel combustion chamber of gradually increased capacity toward the bottom thereof is formed between the boiler and said legs, and the side wall of said furnace, and a gas and air combustion chamber of gradually increased capacity toward the top thereof in communication with said fuel combustion chamber intermediate said water tubes or legs and the water areas of the boiler is formed between said water tubes or legs, the boiler and said water drum, a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created, and means for controlling the admission of air at the top of said fuel combustion chamber.

8. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, embodying therein a furnace, a fire grate adjacent the bottom of said furnace forming an ash pit therebelow, a water drum within said furnace below said boiler and in close juxtaposition to said fire grate whereby fuel is excluded from beneath said drum, a plurality of water tubes or legs the opposite ends of which open directly into the water space within said boiler, and into said water drum respectively, said water tubes or legs projecting downwardly and away from the side wall of said furnace whereby a fuel combustion chamber of gradually increased capacity toward the bottom thereof is formed between the boiler and said legs, and the side wall of said furnace, and a gas and air combustion chamber of gradually increased capacity toward the top thereof in communication with said fuel combustion chamber intermediate said water tubes or legs and the water areas of the boiler is formed between said water tubes or legs, the boiler and said water drum, a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created, said combustion chamber being constricted adjacent the discharge of said hopper whereby the extension of the fire into said hopper is prevented and means for controlling the admission of air at the top of said fuel combustion chamber and a jet nozzle having a discharge within said gas and air combustion chamber whereby the effective suction operative to induce the down draft to said combustion chamber may be increased.

9. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, embodying therein a furnace, a water drum within said furnace below said boiler, a plurality of water tubes or legs, the opposite ends of which open directly into the water space within said boiler, and into said water drum, respectively whereby a fuel combustion chamber is formed between the boiler and said legs, and the side wall of said furnace, and a gas and air combustion chamber in communication with said fuel combustion chamber intermediate said water tubes or legs and the water areas of the boiler is formed between said water tubes or legs, the boiler and said water drum, a water jacket for said furnace about said fuel combustion chamber, connections between said water jacket and said boiler, a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created, and means for controlling the admission of air at the top of said fuel combustion chamber.

10. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, embodying therein a furnace, a water drum within said furnace below said boiler, a plurality of water tubes or legs, the opposite ends of which open directly into the water space within said boiler, and into said water drum, respectively whereby a fuel combustion chamber is formed between the boiler and said legs, and the side wall of said furnace, and a gas and air combustion chamber in communication with said fuel combustion chamber intermediate said water tubes or legs and the water areas of the boiler is formed between said water tubes or legs, the boiler and said water drum a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created, said combustion chamber being constricted adjacent the discharge of said hopper whereby the extension of the fire into said hopper is prevented and means for controlling the admission of air at the top of said fuel combustion chamber.

11. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, embodying therein a furnace, a water drum within said furnace below said boiler, a plurality of water tubes or legs, the opposite ends of which open directly into the water space within said boiler, and into said water drum, respectively whereby a fuel combustion chamber is formed between the boiler and said legs, and the side wall of said furnace, and a gas and air combustion chamber in communication with said fuel combustion chamber intermediate said water tubes or legs and the water areas of the boiler is formed between said water tubes or legs, the boiler and said water drum, a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created and a plurality of independently operative means for controlling the admission of air at the top of said fuel combustion chamber whereby the heat temperature areas within said furnace may be increased or diminished.

12. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, embodying therein a furnace, a water drum within said furnace below said boiler, a plurality of water tubes or legs, the opposite ends of which open directly into the water space within said boiler, and into said water drum, respectively whereby a fuel combustion chamber is formed between the boiler and said legs, and the side wall of said furnace, and a gas and air combustion chamber in communication with said fuel combustion chamber intermediate said water tubes or legs and the water areas of the boiler formed between said water tubes or legs, the boiler and said water drum, a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created, said combustion chamber being constricted adjacent the discharge of said hopper whereby the extension of the fire into said hopper is prevented and a plurality of independently operative means for controlling the admission of air at the top of said fuel combustion chamber whereby the heat temperature areas within said furnace may be increased or diminished.

13. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, embodying therein a furnace, a water drum within said furnace below said boiler, a plurality of water tubes or legs the opposite ends of which open directly into the water space within said boiler, and into said water drum respectively, said water tubes or legs projecting downwardly and away from the side wall of said furnace whereby a fuel combustion chamber of gradually increased capacity toward the bottom thereof is formed between the boiler and said legs, and the side wall of said furnace, and a gas and air combustion chamber of gradually increased capacity toward the top thereof in communication with said fuel combustion chamber intermediate said water tubes or legs and the water areas of the boiler is formed between said water tubes or legs, the boiler and said water drum, a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created, said combustion chamber being constricted adjacent the discharge of said hopper whereby the extension of the fire into said hopper is prevented and means for controlling the admission of air at the top of said fuel combustion chamber.

14. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, embodying therein a furnace, a fire grate adjacent the bottom of said furnace forming an ash pit therebelow, a water drum within said furnace below said boiler and in close juxtaposition to said fire grate whereby fuel is excluded from beneath said drum, a plurality of water tubes or legs the opposite ends of which open directly into the water space within said boiler, and into said water drum respectively, said water tubes or legs projecting downwardly and away from the side wall of said furnace whereby a fuel combustion chamber of gradually increased capacity toward the bottom thereof is formed between the boiler and said legs, and the side wall of said furnace, and a gas and air combustion chamber of gradually increased capacity toward the top thereof in communication with said fuel combustion chamber intermediate said water tubes or legs and the water areas of the boiler is formed between said water tubes or legs, the boiler and said water drum, a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created, said combustion chamber being constricted adjacent the discharge of said hopper whereby the extension of the fire into said hopper is prevented and means for controlling the admission of air at the top of said fuel combustion chamber.

15. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, embodying therein a furnace, a fire grate adjacent the bottom of said furnace forming an ash pit therebelow, a water drum within said furnace below said boiler and in close juxtaposition to said fire grate whereby fuel is excluded from beneath said drum, a plurality of water tubes or legs the opposite ends of which open directly into the water space within said boiler, and into said water drum respectively, said water tubes or legs projecting downwardly and away from the side wall of said furnace whereby a fuel combustion chamber of gradually increased capacity toward the bottom thereof is formed between the boiler and said legs, and the side wall of said furnace, and a gas and air combustion chamber of gradually increased capacity toward the top thereof in communication with said fuel combustion chamber intermediate said water tubes or legs and the water areas of the boiler is formed between said water tubes or legs, the boiler and said water drum, a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created, said combustion chamber being constricted adjacent the discharge of said hopper whereby the extension of the fire into said hopper is prevented and a plurality of independently operative means for controlling the admission of air at the top of said fuel combustion chamber whereby the heat temperature areas within said furnace may be increased or diminished.

16. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, embodying therein a furnace, a fire grate adjacent the bottom of said furnace forming an ash pit therebelow, a water drum within said furnace below said boiler and in close juxtaposition to said fire grate whereby fuel is excluded from beneath said drum, a plurality of water tubes or legs the opposite ends of which open directly into the water space within said boiler, and into said water drum respectively, said water tubes or legs projecting downwardly and away from the side wall of said furnace whereby a fuel combustion chamber of gradually increased capacity toward the bottom thereof is formed between the boiler and said legs, and the side wall of said furnace, and a gas and air combustion chamber of gradually increased capacity toward the top thereof in communication with said fuel combustion chamber intermediate said water tubes or legs and the water areas of the boiler is formed between said water tubes or legs, the boiler and said water drum, adjacent water tubes or legs being provided with divergent surfaces within the air and gas combustion chamber, a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created, and means for controlling the admission of air at the top of said fuel combustion chamber.

17. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, embodying therein a furnace, a water drum within said furnace below said boiler, a plurality of water tubes or legs, the opposite ends of which open directly into the water space within said boiler, and into said water drum, respectively whereby a fuel combustion chamber is formed between the boiler and said legs, and the side wall of said furnace, and a gas and air combustion chamber in communication with said fuel combustion chamber intermediate said water tubes or legs and the water areas of the boiler is formed between said water tubes or legs, the boiler and said water drum, adjacent water tubes or legs being provided with divergently turned surfaces within the air and gas combustion chamber, a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created, and means for controlling the admission of air at the top of said fuel combustion chamber.

18. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, embodying therein a furnace, a fire grate adjacent the bottom of said furnace forming an ash pit therebelow, a water drum within said furnace below said boiler and in close juxtaposition to said fire grate whereby fuel is excluded from beneath said drum, a plurality of water tubes or legs the opposite ends of which open directly into the water space within said boiler, and into said water drum respectively, said water tubes or legs projecting downwardly and away from the side wall of said furnace whereby a fuel combustion chamber of gradually increased capacity toward the bottom thereof is formed between the boiler and said legs, and the side wall of said furnace, and a gas and air combustion chamber of gradually increased capacity toward the top thereof in communication with said fuel combustion chamber intermediate said water tubes or legs and the water areas of the boiler is formed between said water tubes or legs, the boiler and said water drum, a water jacket for said furnace about said fuel combustion chamber, connections between said water jacket and said boiler, a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created, said combustion chamber being constricted adjacent the discharge of said hopper whereby the extension of the fire into said hopper is prevented and a plurality of independently operative means for controlling the admission of air at the top of said fuel combustion chamber whereby the heat temperature areas within said furnace may be increased or diminished.

19. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, embodying therein a furnace, a water drum within said furnace below said boiler, a plurality of water tubes or legs, the opposite ends of which open directly into the water space within said boiler, and into said water drum, respectively whereby a fuel combustion chamber is formed between the boiler and said legs, and the side wall of said furnace, and a gas and air combustion chamber in communication with said fuel combustion chamber intermediate said water tubes or legs and the water areas of the boiler is

formed between said water tubes or legs, the boiler and said water drum, a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created and a plurality of movable closures for said hopper whereby air may be admitted to said fuel combustion chamber through the whole or different portions of said hopper.

20. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, said boiler furnace and feed water heater comprising a fuel combustion chamber fed from the top having a grate and an ash pit, a water drum located within the fuel combustion chamber with the fuel therein in contact therewith, means for supplying water to the water drum, a set of piping mounted in said fuel combustion chamber with the fuel therein in contact with the exterior of said set of piping the pipes thereof connecting the water drum and the water chamber of the steam boiler for delivering the heated water directly thereto, said set of piping forming a chamber for air and gases within it, means for communication between said chamber for air and gases and the heat areas of the steam boiler whereby a suction draft is provided through the chamber for air and gases and a downward draft is provided through the fuel combustion chamber when the fuel combustion chamber is open at its top, said fuel combustion chamber comprising in cross-section the space between the interior of the sides of the boiler furnace and feed water heater and the exterior of said set of piping and the exterior of the sides of the water drum, and said ash-pit being air-tight; substantially as set forth.

21. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, said boiler furnace and feed water heater comprising a fuel combustion chamber fed from the top having a grate and an ash-pit, a water drum located within the fuel combustion chamber with the fuel therein in contact therewith, means for supplying water to the water drum, a set of piping mounted in said fuel combustion chamber with the fuel therein in contact with the exterior of said set of piping the pipes thereof connecting the water drum and the water chamber of the steam boiler for delivering the heated water directly thereto, said set of piping forming a chamber for air and gases within it, means for communication between said chamber for air and gases and the heat areas of the steam boiler whereby a suction draft is provided through the chamber for air and gases and a downward draft is provided through the fuel combustion chamber when the fuel combustion chamber is open at its top said fuel combustion chamber being of form in cross-section and said set of piping arranged therein to provide downwardly increasing space for the disposition of fuel between the exterior of the set of piping and the interior of the sides of said chamber, and said ash-pit being air-tight; substantially as set forth.

22. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, said boiler furnace and feed water heater comprising a fuel combustion chamber fed from the top having a grate and an ash-pit, a water drum located within the fuel combustion chamber longitudinally thereof with the fuel therein in contact therewith, means for supplying water to the water drum, a set of piping mounted in said fuel combustion chamber with the fuel therein in contact with the exterior of said set of piping and the pipes thereof directly connecting the water drum and the water chamber of the steam boiler, said set of piping forming a chamber for air and gases within it, means for communication between said chamber for air and gases and the heat areas of the steam boiler whereby a suction draft is provided through the chamber for air and gases and a downward draft is provided through the fuel combustion chamber when the fuel combustion chamber is open at its top, said fuel combustion chamber comprising a cross-section the space between the sides of the boiler furnace and feed water heater and the exterior of said set of piping and the exterior of the sides of the water drum, said grate being located on or above the plane of the bottom of the water drum and below the lower ends of said set of piping, and said ash-pit being air tight; substantially as set forth.

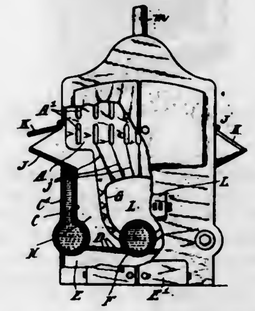
23. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, said boiler furnace and feed water heater comprising a fuel combustion chamber fed from the top having a grate and an ash-pit, a water drum located within the fuel combustion chamber longitudinally thereof with the fuel therein in contact therewith, means for supplying water to the water drum, a set of piping mounted in said fuel combustion chamber with the fuel therein in contact with the exterior of said set of piping and the pipes thereof directly connecting the water drum and the water chamber of the steam boiler, said set of piping forming a chamber for air and gases within it, means for communication between said chamber for air and gases and the heat areas of the steam boiler whereby a suction draft is provided through the chamber for air and gases and a downward draft is provided through the fuel combustion chamber when the fuel combustion chamber is open at its top, means for introducing external air or steam into said chamber for air and gases from the front toward the rear thereof to provide additional suction draft through said chamber, said fuel combustion chamber comprising in cross-section the space between the interior of the sides of the boiler furnace and the feed water heater and the exterior of said set of piping and the exterior of the sides of the water drum, said grate being located on or above the plane of the bottom of the water drum, and below the lower ends of said set of piping, and said ash-pit being air-tight; substantially as set forth.

24. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, said boiler furnace and feed water heater comprising a fuel combustion chamber fed from the top having a grate and an ash-pit, a water drum located within the fuel combustion chamber longitudinally thereof with the fuel therein in contact therewith, means for supplying water to the water drum, a set of piping mounted in said fuel combustion chamber with the fuel therein in contact with the exterior of said set of piping and the pipes thereof directly connecting the water drum and the water chamber of the steam boiler, said set of piping forming a chamber for air and gases within it, means for communication between said chamber for air and gases and the heat areas of the steam boiler whereby a suction draft is provided through the chamber for air and gases and a downward draft is provided through the fuel combustion chamber when the fuel combustion chamber is open at its top, means for introducing external air or steam into said chamber for air and gases from the front toward the rear thereof to provide additional suction draft through said chamber and means for controlling the passage of said external air or steam through the same, said fuel combustion chamber comprising in cross-section the space between the interior of the sides of the boiler furnace and feed water heater and the exterior of said set of piping and the exterior of the sides of the water drum, said grate being located on or above the plane of the bottom of the water drum, and below the lower ends of said set of piping, and said ash-pit being air-tight; substantially as set forth.

25. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, said boiler furnace and feed water heater comprising a fuel combustion chamber fed from the top having a grate and an ash-pit, a water drum located within the fuel combustion chamber longitudinally thereof with the fuel therein in contact therewith, means for supplying water to the water drum, a set of piping mounted in said fuel combustion chamber with the fuel therein in contact with the exterior of said set of piping and the pipes thereof directly connecting the water drum and the water chamber of the steam boiler, said set of piping forming a chamber for air and gases within it, means for communication between said chamber for air and gases and the heat areas of the steam boiler whereby a suction draft is provided through the chamber for air and gases and a downward draft is provided through the fuel combustion chamber when the fuel combustion chamber is open at its top, doors in the front of the boiler furnace and feed water heater communicating with the chamber for air and gases having dampers, said fuel combustion chamber comprising in cross-section the space between the interior of the sides of the boiler furnace and feed water heater and the exterior of said set of piping and the exterior of the sides of the water drum, said grate being located on or above the plane of the water drum and below the lower ends of said set of piping, and said ash-pit being air-tight; substantially as set forth.

26. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, embodying therein a furnace, a water drum within said furnace below said boiler, a plurality of water tubes or legs, the opposite ends of which open directly into the water space within said boiler, and into said water drum, respectively whereby a fuel combustion chamber is formed between the boiler and said legs, and the side wall of said furnace, and a gas and air combustion chamber in communication with said fuel combustion chamber intermediate said water tubes or legs and the water areas of the boiler is formed between said water tubes or legs, the boiler and said water drum, a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created, means for controlling the admission of air at the top of said fuel combustion chamber, said furnace having an opening therethrough communicating with said gas and air combustion chamber, and closure means therefor whereby air may be excluded from or admitted to said gas and air combustion chamber.

14,003. BOILER FURNACE AND FEED-WATER HEATER. JOHN RALPH SURRELL, New York, N. Y. Filed July 14, 1915, Serial No. 39,932. Divided and this application filed Sept. 15, 1915. Serial No. 50,913. Original application filed Nov. 25, 1911, Serial No. 662,349. Original No. 1,067,494, dated July 15, 1913. Division B. (Cl. 122—225.)



1. A boiler furnace and feed water heater for steam boilers having a water chamber and heat areas, said boiler furnace and feed water heater comprising a fuel combustion chamber fed from the top having a grate and an ash-pit, a water drum located within the fuel combustion chamber longitudinally thereof with the fuel therein in contact therewith, means for supplying water to the water drum, a set of piping mounted in said fuel combustion chamber with the fuel therein in contact with the exterior of said set of piping and the pipes thereof directly connecting the water drum and the water chamber of the steam boiler, said set of piping forming a chamber for air and gases within it, means for communication between said chamber for air and gases and the heat areas of the steam boiler whereby a suction draft is provided through the chamber for air and gases and a downward draft is provided through the fuel combustion chamber when the fuel combustion chamber is open at its top, doors in the front of the boiler furnace and feed water heater communicating with the chamber for air and gases having dampers, said fuel combustion chamber comprising in cross section the space between the interior of the sides of the boiler furnace and feed water heater and the exterior of said set of piping and the exterior of the sides of the water drum, said grate being located on or above the plane of the water drum and below the lower ends of said set of piping, and said ash-pit being air-tight, the boiler furnace and feed water heater being of sectional construction with means for connecting the sections, each section comprising a portion of the case or side of the boiler furnace and feed water heater, two or more of the pipes of the set of piping a portion of the water drum and an upward extending corrugation on each side of a section forming when the sections are joined together heat flue connections to the heat areas of the steam boiler; substantially as set forth.

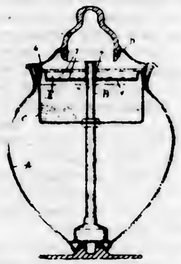
2. A boiler furnace and feed water heater for steam boilers formed of a plurality of independent sections, each section comprising a portion of a boiler having a water chamber and heat areas, a portion of a furnace, a portion of a water drum within said furnace portion below said boiler portion, a plurality of water tubes or legs, the opposite ends of which open into the water space within said boiler portion and said drum portion respectively whereby when said sections are assembled, a fuel combustion chamber is formed between the boiler and said legs and the side wall of said furnace, and a gas and air combustion chamber in communication with said fuel combustion chamber intermediate said water tubes or legs, is formed between said water tubes or legs, the boiler and said water drum, means upon the opposite face of each of said sections whereby flues extending from said gas and air combustion chamber to the heat areas of said boiler intermediate adjacent sections are formed, a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created and means connecting the boiler portion and the drum portion of each section with the boiler portion and the drum portion of the adjoining section respectively.

3. A boiler furnace and feed water heater for steam boilers formed of a plurality of independent sections, each section comprising a portion of a boiler having a water chamber and heat areas, a portion of a furnace, a portion of a water jacket therefor, a portion of a water drum within said furnace portion below said boiler portion, a plurality of water tubes or legs, the opposite ends of which open into the water space within said boiler portion and said drum portion respectively whereby when said sections are assembled a fuel combustion chamber is formed between the boiler and said legs and the side wall of said furnace, and a gas and air combustion chamber in communication with said fuel combustion chamber intermediate said water tubes or legs, is formed between said water tubes or legs, the boiler and said water drum, means upon the opposite face of each of said sections whereby flues extending from said gas and air combustion chamber to the heat areas of said boiler intermediate adjacent sections, are formed, a fuel hopper surmounting and discharging into said fuel combustion chamber, said furnace being closed at the bottom whereby a down draft through said fuel combustion chamber is created and means connecting the boiler portion, the water jacket portion and the drum portion of each section with the boiler portion the water jacket portion and the drum portion of the adjoining section respectively.

14,004. PERCOLATOR. ALONZO A. WARNER, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a Corporation. Filed Mar. 25, 1914. Serial No. 827,240. Original No. 860,273, dated July 16, 1907, Serial No. 366,285. (Cl. 53—8.)

In a percolator, the combination of a drip cup and fountain tube, with a retainer having a spreader plate in the upper part of the drip cup, the said spreader plate being formed of sheet metal with a series of upwardly

projecting struck up hollow cones, perforated for the admission of liquid thereto, and a depending annular rim



around the base of the said hollow cones on the underside of the said spreader plate.

DESIGNS.

48,022. LIQUID-DISPENSER. HENRY G. CORDLEY, Glen Ridge, N. J. Filed June 23, 1915. Serial No. 35,979. Term of patent 7 years.



The ornamental design for a liquid dispenser as shown.

48,023. CHAIN-LINK. ABRAHAM COOPER, New York, N. Y. Filed Aug. 7, 1915. Serial No. 44,334. Term of patent 3½ years.



The ornamental design for a chain-link, as shown.

48,024. CHAIN-LINK. ABRAHAM COOPER, New York, N. Y. Filed Aug. 9, 1915. Serial No. 44,664. Term of patent 3½ years.



The ornamental design for a chain-link, as shown.

48,025. CHAIN-LINK. ABRAHAM COOPER, New York, N. Y. Filed Aug. 10, 1915. Serial No. 44,834. Term of patent 3½ years.



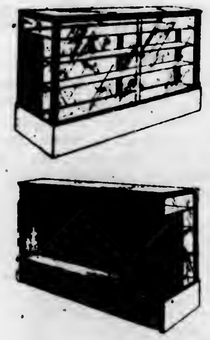
The ornamental design for a chain-link, as shown.

48,026. COUPLING FOR THE AIR-TUBE AND HEEL-PIECE OF AN ATOMIZER. THOMAS A. DE VILBISS, Toledo, Ohio, assignor to The De Vilbiss Manufacturing Company, Toledo, Ohio, a Corporation of Ohio. Filed Dec. 28, 1914. Serial No. 879,407. Term of patent 14 years.



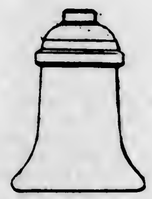
The ornamental design for a coupling for the air tube and heel piece of an atomizer, substantially as shown.

48,027. SHOW-CASE. JAMES GRAHAM FRENCH, Philadelphia, Pa. Filed Feb. 6, 1915. Serial No. 6,604. Term of patent 14 years.



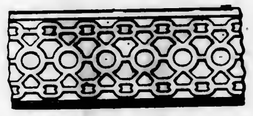
The ornamental design for a show case as shown and described.

48,028. ELECTRIC-LAMP SOCKET. FREDERIC P. GATES, Hartford, Conn., assignor to The Arrow Electric Company, Hartford, Conn., a Corporation of Connecticut. Filed July 15, 1915. Serial No. 40,130. Term of patent 14 years.



The ornamental design for an electric lamp socket, as shown.

48,029. TIRE-TREAD. DE LANCEY P. HARRIS, New York, N. Y. Filed June 4, 1915. Serial No. 32,221. Term of patent 14 years.



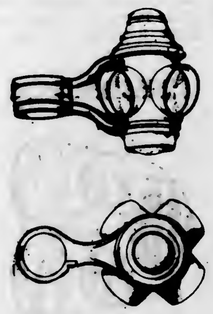
The ornamental design for a tire tread.

48,030. BENT-STOCK CHAIR. FREDERICK H. HERHOLD, Chicago, Ill., assignor to Herhold Chair Co., Chicago, Ill., a Corporation of Illinois. Filed July 15, 1914. Serial No. 851,160. Term of patent 14 years.



The ornamental design for a bent stock chair, substantially as shown.

48,031. LANTERN. OWEN E. HILL, New York, N. Y., assignor to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed May 10, 1915. Serial No. 27,275. Term of patent 14 years.



The ornamental design for a lantern, as shown.

48,032. ARM FOR CHANDELIERS AND BRACKETS. CHARLES E. JONES, Chicago, Ill., assignor to Metal Arts & Crafts Co., Chicago, Ill., a Corporation of Illinois. Filed Apr. 19, 1915. Serial No. 22,516. Term of patent 7 years.



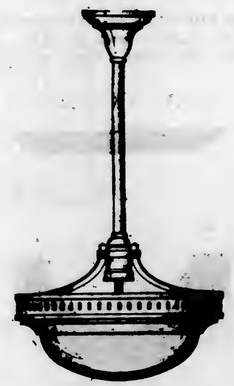
The ornamental design for an arm for chandeliers and brackets, as shown.

48,033. CROWN CORK OR SEAL FOR CAPPING BOTTLES. SAMUEL KAYE, Columbus, Miss. Filed Aug. 18, 1914. Serial No. 857,416. Term of patent 14 years.



The ornamental design for a crown cork or seal for capping a bottle, as shown.

48,034. ILLUMINATING-CHANDELIER. EARLE C. MCKINNIE, Chicago, Ill. Filed May 7, 1915. Serial No. 26,662. Term of patent 7 years.



The ornamental design for an illuminating chandelier as shown and described.

42,035. RING FOR ELECTRIC-LIGHTING FIXTURES. FREDERICK K. MAERZ, Cleveland, Ohio. Filed June 7, 1915. Serial No. 32,742. Term of patent 3½ years.



The ornamental design for a ring for electric lighting fixtures as shown.

48,036. CANOPY AND SOCKET COVER FOR ELECTRIC-LIGHTING FIXTURES. FREDERICK K. MAERZ, Cleveland, Ohio. Filed June 7, 1915. Serial No. 32,743. Term of patent 3½ years.



The ornamental design for a canopy and socket cover for electric lighting fixtures as shown.

48,037. RING FOR ELECTRIC-LIGHTING FIXTURES. FREDERICK K. MAERZ, Cleveland, Ohio. Filed June 7, 1915. Serial No. 32,744. Term of patent 3½ years.



The ornamental design for a ring for electric lighting fixtures as shown.

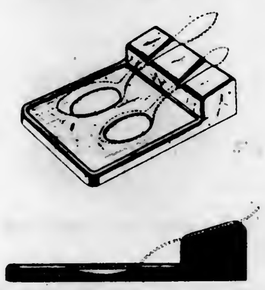
48,038. NECK FOR BED-TRIMMINGS. JOHN J. NASH, Waterbury, Conn., assignor to The American Pin Company, Waterbury, Conn., a Corporation of Connecticut. Filed Apr. 24, 1915. Serial No. 23,759. Term of patent 7 years.





The ornamental design for a neck for bed trimmings, substantially as shown.

48,039. MEDICINE-SPOON SUPPORTER. LOUIS S. NIPER, New York, N. Y. Filed July 10, 1915. Serial No. 39,204. Term of patent 14 years.



The ornamental design for a medicine spoon supporter, as shown.

48,040. INDIA-RUBBER SOLE-PAD FOR BOOTS AND SHOES. WALTER WILLIAM PHILLIPS, London, England, assignor to Phillips' Patents Limited, London, England. Filed Apr. 13, 1915. Serial No. 21,139. Term of patent 14 years.



The ornamental design for an india rubber sole pad for boots and shoes, as shown.

48,041. INDIA-RUBBER SOLE-PAD FOR BOOTS AND SHOES. WALTER WILLIAM PHILLIPS, London, England, assignor to Phillips' Patents Limited, London, England. Filed Apr. 13, 1915. Serial No. 21,140. Term of patent 14 years.



The ornamental design for an india rubber sole pad for boots and shoes, as shown.

48,042. RUBBER HEEL-PAD FOR FOOTWEAR. WALTER WILLIAM PHILLIPS, London, England, assignor to Phillips' Patents Limited, London, England. Filed Apr. 13, 1915. Serial No. 21,141. Term of patent 14 years.



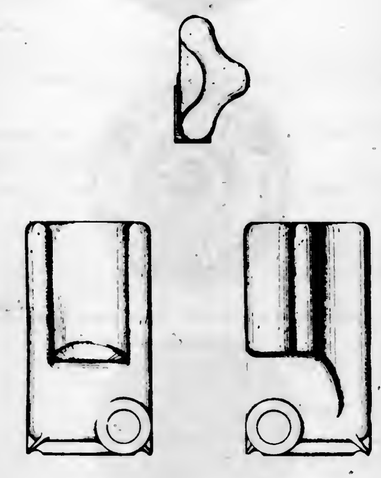
The ornamental design for a rubber heel pad for footwear, as shown.

48,043. POST FOR CHILDREN'S TOYS, FURNITURE, AND FENCES. GRACE MARY QUACKENBUSH, New York, N. Y. Filed Apr. 7, 1915. Serial No. 19,813. Term of patent 14 years.



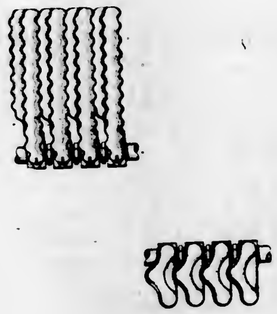
The ornamental design for a post for children's toys, furniture, and fences, as shown.

48,044. RADIATOR-SECTION. WILLIAM B. REED, Westfield, Mass., assignor to The H. B. Smith Company, Westfield, Mass., a Corporation of Massachusetts. Filed July 9, 1915. Serial No. 39,006. Term of patent 14 years.



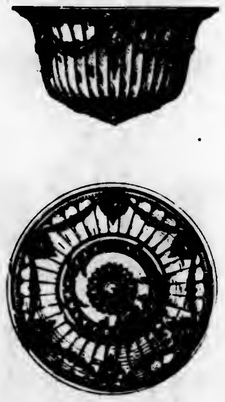
The ornamental design for a radiator section as shown.

48,045. RADIATOR. WILLIAM B. REED, Westfield, Mass., assignor to The H. B. Smith Company, Westfield, Mass., a Corporation of Massachusetts. Filed July 9, 1915. Serial No. 39,008. Term of patent 14 years.



The ornamental design for a radiator as shown.

48,046. GLASS BOWL. MAX SCHAFFER, New York, N. Y. Filed Apr. 21, 1915. Serial No. 22,956. Term of patent 3½ years.



The ornamental design for a glass bowl, as shown.

48,047. [WITHDRAWN.]

48,048. [WITHDRAWN.]

48,049. [WITHDRAWN.]

48,050. HANDLE FOR SHAVING-BRUSHES. CHARLES E. THOMPSON, Troy, N. Y., assignor to Heldtite Brush Co., Inc., Troy, N. Y., a Corporation. Filed Apr. 23, 1915. Serial No. 23,535. Term of patent 3½ years.



The ornamental design for a handle for shaving brushes, as shown.

48,051. SCALE-CABINET. JOHN B. WATLING, Chicago, Ill. Filed Sept. 26, 1914. Serial No. 863,775. Term of patent 7 years.



The ornamental design for a scale cabinet, as shown.

48,052. KITCHEN-INDICATOR. ANDREW WILSON, Berkeley, Cal. Filed Apr. 20, 1914. Serial No. 833,326. Term of patent 7 years.



The ornamental design for a kitchen-indicator, as shown.

TRADE-MARKS

PUBLISHED OCTOBER 26, 1915.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 65,847. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) OLIN FINNEY, Columbus, Ohio. Filed Sept. 18, 1912.

FINNEY

Particular description of goods.—Corks.
Claims use since July 20, 1912.

Ser. No. 74,144. (CLASS 39. CLOTHING.) SAMUEL NEUFELD, Philadelphia, Pa. Filed Nov. 22, 1913.



No claim being made for the use of the word "Stratford" apart from the mark shown in the drawing.
Particular description of goods.—Hats and Caps.
Claims use since Jan. 1, 1905.

Ser. No. 77,247. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) FANNY L. MAYER, Spokane, Wash. Filed Apr. 6, 1914.



Particular description of goods.—Dress-Patterns.
Claims use since July 1, 1906.

Ser. No. 77,642. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AMERICAN HEYL CO. INC., New York, N. Y. Filed Apr. 22, 1914.

AMERICAN HEYL COLORS QUALITY HEYL COMPANY

No claim is made to the word "Colors" as a part of the mark.
Particular description of goods.—Colors for Artists' Use, Printing-Inks, Rubber, Leather, Soap, Borate of Manganese, and Siccative and other Chemical Products for Use in Connection with Colors.
Claims use since the 1st day of March, 1914.

Ser. No. 79,519. (CLASS 25. LOCKS AND SAFES.) ARNOLD OTTO MEYER, Hamburg, Germany. Filed July 2, 1914.



Which is a picture of Jose Rizal, the dead Filipino patriot.

Particular description of goods.—Padlocks, Door-Locks, Tumbler-Locks, Flush Locks, and Seal-Locks.

Claims use since the year 1906.

Ser. No. 79,848. (CLASS 38. PRINTS AND PUBLICATIONS.) THE LINCOLN HIGHWAY ASSOCIATION, Detroit, Mich. Filed July 16, 1914.

THE LINCOLN HIGHWAY

Particular description of goods.—Newspapers Published Weekly.

Claims use since July 10, 1914.

Ser. No. 80,537. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) GENERAL FIRE EXTINGUISHER COMPANY, New York, N. Y., and Providence, R. I. Filed Aug. 13, 1914.

CORROPROOF

Particular description of goods.—A Coating for Automatic Sprinklers in the Nature of a Paint.

Claims use since July 1, 1902.

Ser. No. 81,389. (CLASS 15. OILS AND GREASES.) THE TEXAS COMPANY, Houston and Port Arthur, Tex., and New York, N. Y. Filed Sept. 21, 1914.

FAMILYLITE

Particular description of goods.—Kerosene-Oil.

Claims use since Apr. 20, 1909.

Ser. No. 81,471. (CLASS 39. CLOTHING.) NATIONAL INDIA RUBBER CO., Bristol, R. I. Filed Sept. 25, 1914.



Particular description of goods.—Rubber and Canvas Boots and Shoes.

Claims use since July, 1913.

Ser. No. 81,472. (CLASS 39. CLOTHING.) NATIONAL INDIA RUBBER CO., Bristol, R. I. Filed Sept. 25, 1914.

CAMPFIRE

Particular description of goods.—Rubber and Canvas Boots and Shoes.

Claims use since July, 1913.

Ser. No. 83,364. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) RICHARD E. BERTHOLD, Richmond Hill, N. Y. Filed Dec. 18, 1914.

SIMPLEX

Particular description of goods.—Gas-Lighter and Cigar-Lighter of a Purely Mechanical Nature.

Claims use since Mar. 1, 1914.

Ser. No. 84,165. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) CALIFORNIA COTTON MILLS COMPANY, Oakland, Cal. Filed Jan. 28, 1915.

Imperi

Comprising the word "Imperi."

Particular description of goods.—Cotton and Wool Batting.

Claims use since the 20th day of November, 1914.

Ser. No. 85,609. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SAM GORDON, New York, N. Y. Filed Apr. 1, 1912.



The words "New York" and "Kosher" are not claimed as part of the mark.

Particular description of goods.—Dried and Cured Beef and Bologna-Style Sausage.

Claims use since Mar. 1, 1908.

Ser. No. 85,883. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) JOHN HOWARD THOMASSON, Minneapolis, Minn. Filed Apr. 10, 1915.



No claim being made to the exclusive use of the word "Sanitary."

Particular description of goods.—Furniture-Polish.

Claims use since Dec. 12, 1912.

Ser. No. 86,124. (CLASS 39. CLOTHING.) SHAFT-PIERCE SHOE CO., Faribault, Minn. Filed Apr. 22, 1915.



Particular description of goods.—Shoes of Canvas and Leather.

Claims use since prior to Feb. 1, 1915.

Ser. No. 86,166. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THE JOHN S. TILLEY LADDERS CO., Watervliet, N. Y. Filed Apr. 23, 1915. Under ten-year proviso.

TILLEY

Particular description of goods.—Ladders, Ladder-Brackets, Mason-Horses, Extension-Planks, Telescoping Extension-Planks, Ladder-Bumpers, Trestles, Platforms, and Parts of All the Above.

Claims use since 1890.

Ser. No. 86,408. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE REPUBLIC RUBBER COMPANY, Youngstown, Ohio. Filed May 5, 1915.



No claim being made to the words "The Republic Rubber Co.," "Youngstown, O.," "Oil," or "Well" apart from the mark shown in the drawing.

Particular description of goods.—Belting Made of Cotton and Rubber.

Claims use since Jan. 16, 1915.

Ser. No. 86,658. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE CLEVELAND BRASS MANUFACTURING CO., Cleveland, Ohio. Filed May 17, 1915.

CLEBRA

Particular description of goods.—Ground Key Stop-Cocks for Iron Pipe, Lead Pipe, and Lead and Iron Pipe Connections, Cap Pattern and Without Cap, Solid T-Handle and Lever-Handles, Round Way and Flat Way, Inverted and Regular; Ground Key Stop and Waste Cocks for Iron Pipe and Lead Pipe and Lead and Iron Pipe Connections, Cap Pattern and Without Cap, Solid T and Lever Handles, Round Way and Flat Way, Inverted and Regular; Ground Key Corporation-Cocks for Iron Pipe, Lead Pipe, and Lead and Iron Pipe, Wood Main Connections, with Screw-Plug, Hexagon Plug, or Tapped Hexagon Plug, Flat Way and Round Way, also with Lead Flange-Coupling; Ground Key Corporation-Cocks with Union-Couplings, Straight, One-Eighth Bend, and One-Fourth Bend, for Lead Pipe Connections and Iron Pipe Connections; Ground Key Hydrant-Cocks, Socket-Head and with Cap, Round Way and Flat Way; Ground Key-Bibs, Ground Key-Bibs with Ball-Lever, Ground Key Lock-Cocks for Oil-Wagons, Ground Key Rain and Well Water Cocks, Ground Key Gas Service, Meter, and Stove Cocks, Straight Way, Oval Way, and Round Way; Ground Key Lock Meter-Cocks, Ground Key High-Pressure-Gas-Main Cocks, Ground Key High-Pressure-Gas-Service Cocks, Ground Key Air-Vent Cocks, Compression Stop and Waste Cocks for Iron Pipe,

Lead Pipe, and Iron and Lead Pipe Connections, Wheel-Handle and T-Handles; Compression-Stops for Iron and Lead Pipe Connections and Iron Pipe and Lead Pipe Connections, Wheel-Handle and T-Handles; Compression-Bibs for Iron and Lead Pipe Connections, Male and Female, also with Flanges; Compression Washtray-Bibs for Iron and Lead Pipe Connections, Compression Bath-Bibs with Stuffing-Box, Quick-Opening Compression-Bibs, Compression Urinal-Cocks, Compression Hopper-Cocks, Compression Sill-Cocks, Compression Garden-Hose Valves, Compression Boiler Drain-Cocks, Compression Ball-Cocks, Compression Basin-Cocks, Compression Pantry-Cocks, Compression Double Basin-Cocks, Compression Bracket Shampoo-Cocks, Compression Slop-Sink Cocks, Compression Bath-Cocks, Compression Tank-Wagon Faucets, Quick-Opening and other Types Self-Closing Stops; Self-Closing Bibs, Self-Closing Urinal-Cocks, Self-Closing Hopper-Cocks, Self-Closing Basin-Cocks, Ball and Roller Bearing Closing Bibs, Brass and Iron Valves in Globe, Angle, and Check Types with Wheel-Handle or Lock-Shield, Tank-Valves, Acid-Valves, Acid-Cocks, Steam-Cocks, Air-Cocks, Valve-Boxes, Flange Union-Couplings for Lead Pipe and Lead and Iron Pipe Connections, Tailpieces with One-Eighth Bend for Corporation-Cocks, Tailpieces with One-Fourth Bend for Corporation-Cocks, Straight Tailpieces for Corporation-Cocks, Solder Nipples, Soldering-Unions, Nuts of All Kinds, Boiler-Couplings, Water-Back Union-Couplings, Water-Meter Union-Couplings, Supply-Pipe Connections, Lead-Pipe Inlets, Water Connections, Brass Plugs for Water-Mains, Two-to-Eight Branch for Lead Pipe and with Union-Couplings, One-to-Eight Branch, Wipe-Joint Gooseknecks, Sweat-Joint Gas-Meter Connections, Cup-Joint Gas-Meter Connections, Wipe-Joint Gas-Meter Connections, Gas-Meter Fittings, Ferrules, Flush-Valves, Closet-Bends, Closet-Bowls, Closet Flush-Tanks, Closet-Seats, Service-Boxes for Water and Gas, Basin Supply-Pipes, Standing Waste Connections, Shower Connections, Traps, Drawn Brass, Lead, Brass; Hose-Couplings, Hose-Nozzles, Hose-Clamps, Hose-Sprinklers, Hose-Sprayers, Gas-Valves, Stop-Cocks.

Claims use since on or about the 20th day of March, 1915.

Ser. No. 87,301. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THEODORE T. WOOLLENS, Chicago, Ill. Filed June 14, 1915.

EXCEL

Particular description of goods.—Broaches; Burs; Plates; Bridges; Teeth; Dental Tools.
Claims use since June 4, 1915.

Ser. No. 87,898. (CLASS 27. HOROLOGICAL INSTRUMENTS.) NORTH AMERICAN WATCH CO., INC., Mansfield, Ohio. Filed July 12, 1915.

Endurance

Particular description of goods.—Watches, Watchcases, and Watch-Movements.
Claims use since May 4, 1915.

Ser. No. 87,908. (CLASS 39. CLOTHING.) BERNARD BURNSIDE, Seattle, Wash. Filed July 12, 1915.



Particular description of goods.—Hats and Caps.
Claims use since Mar. 1, 1915.

Ser. No. 87,930. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE MEASUREGRAPH COMPANY, St. Louis, Mo. Filed July 14, 1915.

METERGRAPH

Particular description of goods.—Cloth and Fabric Measuring Machines and Parts Thereof.
Claims use since July 15, 1913.

Ser. No. 87,986. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) E. AND T. FAIRBANKS AND COMPANY, St. Johnsbury, Vt. Filed July 17, 1915.



No claim being made to the words "Scales," "New York," "Atlantic Ocean," "South Pacific Ocean" apart from the mark shown in the drawing.
Particular description of goods.—Weighing-Machines and Parts Thereof.
Claims use since about the year 1878.

Ser. No. 88,060. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE ATHA TOOL COMPANY, Newark, N. J. Filed July 21, 1915.



Particular description of goods.—Hammers, Sledges, Mauls, Coopers' Drivers, Bull-Sets, Boiler and Mill Picks, Wedges, Stone and Quarry Picks, Railroad-Track Tongs, Blacksmiths' Tongs, Rail-Forks, Claw and Timber Bars, Tamping-Bars, Lining-Bars, Swages, Fullers, Flatters, and Hardies for Blacksmiths' Use, Punches, Adzes, Cleavers, Choppers, Bush-Hooks, Trowels, Drift-Pins, Rivet-Sets, Dollies, Sows, Spreaders, Pavers' Reels, Chisels, Wrenches, Anvil-Tools, Casing-Rippers, Flue-Beaders, Ladles, and Bridge-Builders' Gouges.
Claims use since the year 1888.

Ser. No. 88,165. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. HOWARD MERCIAN, New York, N. Y. Filed July 24, 1915.

PRIMOPACK

Particular description of goods.—Canned Fish and Canned Vegetables.
Claims use since May, 1915.

Ser. No. 88,221. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WESTERN ROCK SALT COMPANY, St. Louis, Mo. Filed July 26, 1915.

ROX-SALT-BLOX

No claim being made for the words "Rox-Salt" apart from the mark shown in the drawing.
Particular description of goods.—Rock-Salt.
Claims use since Jan. 1, 1915.

Ser. No. 88,270. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE BUCKLEY-NEWHALL COMPANY, New York and Brooklyn, N. Y. Filed July 29, 1915.



Particular description of goods.—Clothes-Wringers and Washing-Machines.
Claims use since Aug. 10, 1910.

Ser. No. 88,280. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) THE MILLER RUBBER COMPANY, Akron, Ohio. Filed July 29, 1915.



The exclusive use of the words "Miller" and "Tires" is disclaimed except in the connection shown.
Particular description of goods.—Rubber Tires.
Claims use since January, 1912.

Ser. No. 88,297. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) BROOKLYN BOTTLE STOPPER CO., Brooklyn, N. Y. Filed July 30, 1915.

KORKADISK

No claim being made to the representation of the closure apart from the mark shown in the drawing.
Particular description of goods.—Bottle, Can, and Jar Closures.
Claims use since December, 1914.

Ser. No. 88,381. (CLASS 39. CLOTHING.) BROWN SHOE COMPANY, INC., St. Louis, Mo. Filed Aug. 3, 1915.

PRIDE OF
Wabash

Particular description of goods.—Men's Leather Shoes.
Claims use since May 3, 1915.

Ser. No. 88,454. (CLASS 39. CLOTHING.) BLOOM & MILLMAN, New York, N. Y. Filed Aug. 6, 1915.

EVERWASH

Particular description of goods.—Middy Blouses for Women and Girls.
Claims use since Oct. 1, 1906.

Ser. No. 88,458. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE CAPEWELL HORSE NAIL COMPANY, Hartford, Conn. Filed Aug. 6, 1915.

BAR HEAD

Particular description of goods.—Horse-Nails.
Claims use since the year 1892.

Ser. No. 88,493. (CLASS 39. CLOTHING.) BIRDSEY-SOMERS COMPANY, New York, N. Y. Filed Aug. 9, 1915.

MARTHA WASHINGTON

Particular description of goods.—Ladies' and Misses' Corset-Waists.
Claims use since 1896.

Ser. No. 88,517. (CLASS 38. PRINTS AND PUBLICATIONS.) AMERICAN FEDERATION OF MUSICIANS, St. Louis, Mo. Filed Aug. 10, 1915.

AMERICAN FEDERATION OF MUSICIANS

Particular description of goods.—Books, Pamphlets, and Circulars.
Claims use since May 11, 1913.

Ser. No. 88,542. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HOOTON COCOA COMPANY, Newark, N. J. Filed Aug. 11, 1915.

DANDY

Particular description of goods.—Cocoa, Sweet and Bitter Chocolate.
Claims use since October, 1897.

Ser. No. 88,577. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PARKER & Co., Minneapolis, Minn. Filed Aug. 12, 1915.

KRYD-O-SILL

Particular description of goods.—Spiced Herring.
Claims use since July 29, 1915.

Ser. No. 88,581. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) TEXAS FIG CO., Houston and La Porte, Tex. Filed Aug. 12, 1915.

CARTEX

Particular description of goods.—Preserved Figs.
Claims use since Aug. 20, 1913.

Ser. No. 88,597. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) MOVING ADVERTISEMENT CO., New York, N. Y. Filed Aug. 13, 1915.

"MOVIETTE"

Particular description of goods.—Moving-Picture and Picture-Projection Machines and Apparatus and Picture-Slides or Transparencies Therefor.
Claims use since July 30, 1915.

Ser. No. 88,607. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BRONX CANDY CO., New York, N. Y. Filed Aug. 14, 1915.

JACK ROSE

Particular description of goods.—Candy.
Claims use since July 30, 1915.

Ser. No. 88,609. (CLASS 12. CONSTRUCTION MATERIALS.) BARRETT MANUFACTURING COMPANY, New York, N. Y. Filed Aug. 14, 1915.

BLUE JAY

Particular description of goods.—Papers, Felts, and Composite Fabrics for Roofing, Sheathing, and Waterproofing.
Claims use since on or about Aug. 1, 1915.

Ser. No. 88,610. (CLASS 12. CONSTRUCTION MATERIALS.) BARRETT MANUFACTURING COMPANY, New York, N. Y. Filed Aug. 14, 1915.

QUAKER

Particular description of goods.—Papers, Felts, and Composite Fabrics for Roofing, Sheathing, and Waterproofing.
Claims use since on or about Aug. 1, 1915.

Ser. No. 88,630. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) CHARLES A. PIPENHAGEN, Chicago, Ill. Filed Aug. 14, 1915.

PINES FLY TRAP



No claim is made to the words "Pines Fly Trap" apart from the mark shown in the drawing.
Particular description of goods.—Fly-Traps.
Claims use since July 15, 1915.

Ser. No. 88,641. (CLASS 39. CLOTHING.) CLUETT, PEABODY & Co., INC., Troy, N. Y. Filed Aug. 16, 1915.

ARROW

Particular description of goods.—Shirts, Collars, and Cuffs.
Claims use since 1885.

Ser. No. 88,646. (CLASS 15. OILS AND GREASES.) GULF REFINING COMPANY, Port Arthur, Tex., and Pittsburgh, Pa. Filed Aug. 16, 1915.

GULF REFINING COMPANY
GULFLIGHT
KEROSENE

No claim being made to the word "Kerosene."
Particular description of goods.—Kerosene.
Claims use since July 24, 1915.

Ser. No. 88,647. (CLASS 15. OILS AND GREASES.) GULF REFINING COMPANY, Port Arthur, Tex., and Pittsburgh, Pa. Filed Aug. 16, 1915.

GULFWAX

Particular description of goods.—A Pure Refined Paraffin-Wax.
Claims use since July 23, 1915.

Ser. No. 88,667. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PUNTA GORDA PINEAPPLE CORPORATION, Punta Gorda, Fla., and Chicago, Ill. Filed Aug. 17, 1915.

SHADE-KIST

Particular description of goods.—Fresh and Canned Fruits.
Claims use since February, 1915.

Ser. No. 88,675. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE K-C LUMBER COMPANY, Lucedale, Miss. Filed Aug. 18, 1915.

PICKANINNY

The word "Pickaninny."
Particular description of goods.—Canned Vegetables.
Claims use since October, 1912.

Ser. No. 88,676. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE K-C LUMBER COMPANY, Lucedale, Miss. Filed Aug. 18, 1915.

AUNT DINAH

Consisting of the words "Aunt Dinah."
Particular description of goods.—Canned Vegetables.
Claims use since October, 1912.

Ser. No. 88,700. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE WELCH COMPANY, Chicago, Ill. Filed Aug. 19, 1915.

KORNETTES

Particular description of goods.—Popcorn Confection.
Claims use since May 17, 1915.

Ser. No. 88,701. (CLASS 12. CONSTRUCTION MATERIALS.) ASPHALT READY ROOFING CO., New York, N. Y. Filed Aug. 20, 1915.



The portrait shown being that of Henrik Hudson, deceased.

Particular description of goods.—Ready Roofing in Roll or Shingle Form.

Claims use since Apr. 14, 1915.

Ser. No. 88,719. (CLASS 39. CLOTHING.) SAMUEL STERNBERGER COMPANY, Philadelphia, Pa. Filed Aug. 20, 1915.

KOOLNEG

Particular description of goods.—Dress and Negligée Shirts.

Claims use since about July 29, 1915.

Ser. No. 88,725. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) MARY ELIZABETH BUTCHER, Cambridge, Mass. Filed Aug. 21, 1915.

FLEXABACK

Particular description of goods.—Portable Hangers Adapted to Have Suspended Thereon Various Comparatively Small Articles, Such as Wearing-Apparel, Household Utensils, Books and Pamphlets, Canes and Umbrellas, Bags, and other Articles of the General Character Used in the Household and by Travelers.

Claims use since June 1, 1914.

Ser. No. 88,729. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) L. DOELMAN COMPANY, Buffalo, N. Y. Filed Aug. 21, 1915.



Particular description of goods.—Coffee.

Claims use since January, 1910.

Ser. No. 88,753. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DIRNBERGER POP CORN CO., Buffalo, N. Y. Filed Aug. 23, 1915.

GOOD SCOUT

Particular description of goods.—Popcorn, Peanuts, Candied Popcorn, and Candied Peanuts.

Claims use since June 25, 1915.

Ser. No. 88,777. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE DENMARK CONDENSED MILK COMPANY, Denmark, Wis. Filed Aug. 24, 1915.



Particular description of goods.—Condensed Milk.

Claims use since July 1, 1915.

Ser. No. 88,799. (CLASS 39. CLOTHING.) LEWIS A. CROSSETT, INC., North Abington, Mass. Filed Aug. 25, 1915.

AUGUSTAN

MAKES WALKING EASY

Exclusive right to the use of the words "Makes Walking Easy" is disclaimed.

Particular description of goods.—Boots and Shoes of Leather or Skin.

Claims use since the 1st day of April, 1915.

Ser. No. 88,813. (CLASS 12. CONSTRUCTION MATERIALS.) STANDARD OIL COMPANY, Richmond, Cal. Filed Aug. 25, 1915.



Particular description of goods.—Asphaltum.

Claims use since July 20, 1915.

Ser. No. 88,815. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEO. BORGFELDT & Co., New York, N. Y. Filed Aug. 26, 1915.

VANITUBE

Particular description of goods.—Dry Perfume Sold in the Form of Sticks or in Tubes.

Claims use since July 15, 1915.

Ser. No. 88,823. (CLASS 39. CLOTHING.) S. H. KRESS & COMPANY, New York, N. Y. Filed Aug. 26, 1915.

Beau Brummel

Particular description of goods.—Hosiery.

Claims use since Aug. 14, 1915.

Ser. No. 88,826. (CLASS 39. CLOTHING.) MADAME IRÈNE, New York, N. Y. Filed Aug. 26, 1915.

La Fillette

Particular description of goods.—Corsets.

Claims use since July 1, 1915.

Ser. No. 88,836. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GOODALL WORSTED CO., Sanford, Me., and New York, N. Y. Filed Aug. 27, 1915.

Palm Beach

Particular description of goods.—Woolen Piece Goods, Mohair Piece Goods, and Piece Goods of Combinations of Cotton, Wool, Mohair, Alpaca, Camel-Hair, Silk, and Artificial Silk.

Claims use since Jan. 1, 1909.

Ser. No. 88,843. (CLASS 39. CLOTHING.) E. ROSENFELD & COMPANY, Baltimore, Md. Filed Aug. 27, 1915.

CLOVER

Particular description of goods.—Night Shirts and Pajamas.

Claims use since Aug. 20, 1915.

Ser. No. 88,854. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CRESCENT CANDY COMPANY, INC., Bridgeport, Conn. Filed Aug. 28, 1915.

FATUMS

Particular description of goods.—Candy.

Claims use since Apr. 11, 1913.

Ser. No. 88,857. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HANS E. FICHTENBERG, INC., Milwaukee, Wis. Filed Aug. 28, 1915.

SKITCH

Particular description of goods.—A Washing Compound.

Claims use since Jan. 1, 1914.

Ser. No. 88,861. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PENICK & FORD, LTD., New Orleans, La. Filed Aug. 28, 1915.

STEAMBOAT

Particular description of goods.—Table-Syrups.

Claims use since Aug. 2, 1915.

Ser. No. 88,875. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DWINELL-WRIGHT CO., Boston, Mass. Filed Aug. 30, 1915.

"FIFTY-FIFTY"

Particular description of goods.—Coffee.

Claims use since Aug. 23, 1915.

Ser. No. 88,883. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE MCCLINTOCK-TRUNKEY CO., Spokane, Wash. Filed Aug. 30, 1915.

RIVERSIDE

Particular description of goods.—Canned Fruits and Vegetables.

Claims use since November, 1906.

Ser. No. 88,884. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NORTH AMERICAN TUNA CANNING CO., Los Angeles, Cal. Filed Aug. 30, 1915.

REGENT

Particular description of goods.—Canned Fish.

Claims use since July 8, 1915.

Ser. No. 88,887. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACKAGE CONFECTIONERY CO., Boston, Mass. Filed Aug. 30, 1915.

ATLASTA

Particular description of goods.—Candy.
Claims use since April, 1912.

Ser. No. 88,888. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACKAGE CONFECTIONERY CO., Boston, Mass. Filed Aug. 30, 1915.

BUCKEYES

Particular description of goods.—Candy.
Claims use since Apr. 22, 1915.

Ser. No. 88,889. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACKAGE CONFECTIONERY CO., Boston, Mass. Filed Aug. 30, 1915.

PURETA

Particular description of goods.—Candy.
Claims use since Apr. 24, 1915.

Ser. No. 88,891. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACKAGE CONFECTIONERY CO., Boston, Mass. Filed Aug. 30, 1915.

FOUR IN HAND

Particular description of goods.—Candy.
Claims use since December, 1887.

Ser. No. 88,894. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACKAGE CONFECTIONERY CO., Boston, Mass. Filed Aug. 30, 1915.

BANG UP

Particular description of goods.—Candy.
Claims use since December, 1903.

Ser. No. 88,896. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACKAGE CONFECTIONERY CO., Boston, Mass. Filed Aug. 30, 1915.

MARQUETTE CLUB

Particular description of goods.—Candy.
Claims use since December, 1900.

Ser. No. 88,897. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACKAGE CONFECTIONERY CO., Boston, Mass. Filed Aug. 30, 1915.

GUN CLUB

Particular description of goods.—Candy.
Claims use since April, 1913.

Ser. No. 88,899. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACKAGE CONFECTIONERY CO., Boston, Mass. Filed Aug. 30, 1915.

DRURY LANE

Particular description of goods.—Candy.
Claims use since December, 1900.

Ser. No. 88,949. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. BOURJOIS & CO., INC., New York, N. Y. Filed Sept. 1, 1915.

MADELEINE

Particular description of goods.—Toilet Powder.
Claims use since Nov. 28, 1913.

Ser. No. 88,951. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. BOURJOIS & CO., INC., New York, N. Y. Filed Sept. 1, 1915.

PRECEDA

Particular description of goods.—Toilet Powder.
Claims use since Nov. 28, 1913.

Ser. No. 89,002. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GRAMATAN CO., New York, N. Y. Filed Sept. 3, 1915.

GRAMATAN

Comprising the word "Gramatan."
Particular description of goods.—A Treatment for Dandruff.
Claims use since about Aug. 27, 1911.

Ser. No. 89,035. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE OHIO BUTTERINE CO., Cincinnati, Ohio. Filed Sept. 4, 1915.

CURNGOLD

Particular description of goods.—Oleomargarin.
Claims use since Aug. 11, 1915.

Ser. No. 89,037. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MORRIS ROSENFELD, New York, N. Y. Filed Sept. 4, 1915.

ROSOVE

Particular description of goods.—Rye-Flour.
Claims use since the year 1909.

Ser. No. 89,041. (CLASS 39. CLOTHING.) NICHOLAS A. TUNNER, South Bethlehem, Pa. Filed Sept. 4, 1915.



Particular description of goods.—Hosiery.
Claims use since Aug. 1, 1915.

Ser. No. 89,052. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE BERG & BEARD MFG. CO. INC., Brooklyn, N. Y. Filed Sept. 7, 1915.



Particular description of goods.—Insect-Exterminator.
Claims use since Mar. 20, 1915.

Ser. No. 89,079. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SAUQUOIT SILK MFG. CO., Philadelphia, Pa. Filed Sept. 7, 1915.

SAUQUOIT



Particular description of goods.—Broad-Silk Piece Goods.
Claims use since prior to 1890.

Ser No. 89,082. (CLASS 39. CLOTHING.) M. E. SMITH & CO. INC., Omaha, Nebr. Filed Sept. 7, 1915.



Particular description of goods.—Ladies' Coats, Suits, Skirts, and Dresses.
Claims use since June 21, 1915.

Ser. No. 89,086. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ROWLAND COMPANY, Athens, Ga. Filed Sept. 7, 1915.



Particular description of goods.—Wheat-Flour.
Claims use since Aug. 4, 1914.

Ser. No. 89,130. (CLASS 17. TOBACCO PRODUCTS.) ABRAHAM L. KLEIN, Washington, D. C. Filed Sept. 10, 1915.

Klino

Particular description of goods.—Cigars.
Claims use since about Apr. 1, 1915.

Ser. No. 89,136. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE STANKIEWICZ, Chicago, Ill. Filed Sept. 10, 1915.



Being a portrait of myself.
Particular description of goods.—A Remedy for Cuts, Sprains, Scalds, and Running Sores.
Claims use since July 1, 1915.

Ser. No. 89,176. (CLASS 39. CLOTHING.) BIBB MANUFACTURING COMPANY, Macon, Ga. Filed Sept. 14, 1915.

TORPEDO

Particular description of goods.—Hosiery.
Claims use since June 1, 1915.

Ser. No. 89,177. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) A. BOURJOIS & Co., INC., New York, N. Y. Filed Sept. 14, 1915.

DORA

Particular description of goods.—Toilet Powder.
Claims use since Dec. 10, 1913.

Ser. No. 89,193. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SMITH & HEMENWAY COMPANY, INC., New York, N. Y. Filed Sept. 14, 1915.



Particular description of goods.—Glass-Cutters.
Claims use since on or about Aug. 1, 1915.

Ser. No. 89,194. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SMITH & HEMENWAY COMPANY, INC., New York, N. Y. Filed Sept. 14, 1915.

INDIAN

Particular description of goods.—Glass-Cutters.
Claims use since on or about Aug. 1, 1915.

Ser. No. 89,195. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SMITH & HEMENWAY COMPANY, INC., New York, N. Y. Filed Sept. 14, 1915.

RED MAN

Particular description of goods.—Glass-Cutters.
Claims use since on or about Aug. 1, 1915.

Ser. No. 89,196. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SMITH & HEMENWAY COMPANY, INC., New York, N. Y. Filed Sept. 14, 1915.

UNIVERSAL

Particular description of goods.—Glass-Cutters.
Claims use since on or about Aug. 1, 1915.

Ser. No. 89,204. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) THE BRADFORD DYERS' ASSOCIATION, LIMITED, Bradford, England. Filed Sept. 15, 1915.

Kurletta

Particular description of goods.—Cloths and Stuffs of Wool, Worsted, or Hair.
Claims use since May 16, 1913.

Ser. No. 89,234. (CLASS 39. CLOTHING.) THE BRISTOL MANUFACTURING COMPANY, Bristol, Conn. Filed Sept. 16, 1915.

SANDMAN

Particular description of goods.—Sleeping-Garments.
Claims use since about Aug. 10, 1915.

Ser. No. 89,239. (CLASS 39. CLOTHING.) KOPS BROS., New York, N. Y. Filed Sept. 16, 1915.

EGO

Particular description of goods.—Corsets, Corset-Covers, and Corset-Pads.
Claims use since Sept. 1, 1915.

Ser. No. 89,280. (CLASS 12. CONSTRUCTION MATERIALS.) FISKE & COMPANY, INCORPORATED, Boston, Mass., and New York, N. Y. Filed Sept. 18, 1915.

GRID

Particular description of goods.—Brick and Tile Used for Construction Purposes.
Claims use since July 23, 1915.

Ser. No. 89,305. (CLASS 39. CLOTHING.) STONE & WARREN, New York, N. Y. Filed Sept. 18, 1915.

Stonware

The lettering being woven in red or blue.
Particular description of goods.—Men's, Women's, and Children's Knit Underwear.
Claims use since March, 1914.

Ser. No. 89,488. (CLASS 20. LINOLEUM AND OILED CLOTH.) THOMAS POTTER SONS & COMPANY, INC., Philadelphia, Pa. Filed Sept. 27, 1915.

FLOORTEX

Particular description of goods.—Floor-Cloths.
Claims use since about the 12th day of September, 1915.

TRADE-MARK REGISTRATIONS GRANTED

OCTOBER 26, 1915.

106,537. SELF-RISING WHEAT-FLOUR. AKIN-ERSKINE MILLING COMPANY, Evansville, Ind.
Filed May 19, 1915. Serial No. 86,719. PUBLISHED AUGUST 3, 1915.

106,538. ALUMINUM TOILET-COMBS. ALUMINUM GOODS MFG. COMPANY, Manitowoc, Wis.
Filed April 29, 1915. Serial No. 86,258. PUBLISHED AUGUST 3, 1915.

106,539. GARTERS, SUSPENDERS, BELTS FOR PERSONAL WEAR. AMERICAN BELT CORPORATION, New York, N. Y.
Filed May 21, 1915. Serial No. 86,792. PUBLISHED AUGUST 3, 1915.

106,540. INSECTICIDES. AMERICAN INDUSTRIAL LABORATORY, Chicago, Ill.
Filed July 1, 1915. Serial No. 87,675. PUBLISHED AUGUST 10, 1915.

106,541. WOOD, COAL, GAS, AND VAPOR STOVES AND HEATERS. AMERICAN STOVE COMPANY, St. Louis, Mo.
Filed January 12, 1915. Serial No. 83,790. PUBLISHED AUGUST 3, 1915.

106,542. SELF-RISING WHEAT-FLOUR. AUNT JEMIMA MILLS COMPANY, St. Joseph, Mo.
Filed June 4, 1915. Serial No. 87,089. PUBLISHED AUGUST 3, 1915.

106,543. MIXTURE OF WHEAT AND CORN FLOUR. AUNT JEMIMA MILLS COMPANY, St. Joseph, Mo.
Filed June 4, 1915. Serial No. 87,090. PUBLISHED AUGUST 3, 1915.

106,544. ARTS AND CRAFTS WOODEN FIGURES AND TRAYS, &c. FRED HAYES BABCOCK, Chicago, Ill.
Filed July 30, 1914. Serial No. 80,175. PUBLISHED FEBRUARY 23, 1915.

106,545. COTTON, LINEN, SILK, AND WOOLEN PIECE GOODS. BENJAMIN F. BAILEY, New York, N. Y.
Filed April 16, 1915. Serial No. 85,973. PUBLISHED AUGUST 3, 1915.

106,546. CANNED SWEET CORN AND CANNED PEAS. BARRON COUNTY CANNING CO., Chetek, Wis.
Filed May 19, 1915. Serial No. 86,722. PUBLISHED AUGUST 3, 1915.

106,547. FUNGICIDE FOR CEREALS. THE BAYER COMPANY, INC., New York, N. Y.
Filed July 3, 1915. Serial No. 87,730. PUBLISHED AUGUST 10, 1915.

106,548. CERTAIN NAMED FURNITURE. BERKEY AND GAY FURNITURE COMPANY, Grand Rapids, Mich.
Filed November 9, 1914. Serial No. 82,479. PUBLISHED AUGUST 3, 1915.

106,549. PIECE GOODS OF SILK, WOOL, LINEN, AND COTTON. BIANCHINI, FERIER, Lyon, France.
Filed February 17, 1915. Serial No. 84,570. PUBLISHED AUGUST 10, 1915.

106,550. PIECE GOODS OF SILK, WOOL, LINEN, AND COTTON. BIANCHINI, FERIER, Lyon, France.
Filed February 17, 1915. Serial No. 84,571. PUBLISHED AUGUST 10, 1915.

106,551. PIECE GOODS OF SILK, WOOL, LINEN, AND COTTON. BIANCHINI, FERIER, Lyon, France.
Filed March 24, 1915. Serial No. 85,367. PUBLISHED AUGUST 10, 1915.

106,552. OINTMENTS. BIZ-NES DRUG COMPANY, Sullivan, Ill.
Filed May 18, 1915. Serial No. 86,692. PUBLISHED AUGUST 3, 1915.

106,553. COFFEE. BLACK HAWK COFFEE & SPICE COMPANY, Waterloo, Iowa.
Filed April 19, 1915. Serial No. 86,028. PUBLISHED AUGUST 3, 1915.

106,554. SUITS OF OUTER GARMENTS FOR MEN—NAMELY, COATS, VESTS, AND TROUSERS. M. BORN & COMPANY, Chicago, Ill.
Filed March 11, 1915. Serial No. 85,081. PUBLISHED AUGUST 3, 1915.

106,555. UNIONS. BRIDGMAN BROS. CO., Philadelphia, Pa.
Filed July 1, 1915. Serial No. 87,682. PUBLISHED AUGUST 10, 1915.

106,556. BILLIARD-CLOTH. THE BRUNSWICK-BALKE-COLLENDER CO., Chicago, Ill.
Filed November 2, 1914. Serial No. 82,324. PUBLISHED AUGUST 3, 1915.

106,557. BILLIARD-CLOTH. THE BRUNSWICK-BALKE-COLLENDER CO., Chicago, Ill.
Filed November 2, 1914. Serial No. 82,331. PUBLISHED AUGUST 3, 1915.

106,558. BILLIARD-CLOTH. THE BRUNSWICK-BALKE-COLLENDER CO., Chicago, Ill.
Filed November 2, 1914. Serial No. 82,332. PUBLISHED AUGUST 3, 1915.

106,559. BILLIARD-CLOTH. THE BRUNSWICK-BALKE-COLLENDER CO., Chicago, Ill.
Filed November 2, 1914. Serial No. 82,335. PUBLISHED AUGUST 3, 1915.

106,560. CERTAIN NAMED MUSICAL INSTRUMENTS AND SUPPLIES. BUESCHER BAND INSTRUMENT CO., Elkhart, Ind.
Filed July 31, 1914. Serial No. 80,195. PUBLISHED AUGUST 3, 1915.

106,561. CANDY. BUOLER & GOEBEL COMPANY, Chicago, Ill.
Filed March 27, 1915. Serial No. 85,469. PUBLISHED AUGUST 3, 1915.

106,562. CANDY. BUNTE BROTHERS, Chicago, Ill.
Filed May 8, 1915. Serial No. 86,474. PUBLISHED AUGUST 3, 1915.

106,563. GINGER-ALE, BEING A CARBONATED WATER WITH GINGER AND A FLAVOR AND BEING NON-ALCOHOLIC. CALIFORNIA FRUIT BEVERAGE COMPANY, Los Angeles, Cal.
Filed February 16, 1915. Serial No. 84,546. PUBLISHED AUGUST 3, 1915.

106,564. LIVER LIQUID REMEDY. LOUIS F. CHRISTMAN, Jackson, Tenn.
Filed June 12, 1915. Serial No. 87,267. PUBLISHED AUGUST 10, 1915.

106,565. SEWING-COTTON OR COTTON THREAD. THE CLARK THREAD CO., Newark, N. J.
Filed May 20, 1915. Serial No. 86,772. PUBLISHED AUGUST 3, 1915.

106,566. WORSTED PIECE GOODS. ROBERT CLOUGH, Keighley, England.
Filed April 26, 1915. Serial No. 86,202. PUBLISHED AUGUST 3, 1915.

106,567. RUBBER BOOTS AND SHOES. COLCHESTER RUBBER COMPANY, Colchester, Conn., assignor to United States Rubber Company, New Brunswick, N. J., a Corporation of New Jersey.
Filed June 25, 1914. Serial No. 79,355. PUBLISHED AUGUST 10, 1915.

106,568. CERTAIN NAMED METAL-FOUNDRY DEVICES. THE COLEMAN FOUNDRY EQUIPMENT COMPANY, Cleveland, Ohio.
Filed May 3, 1915. Serial No. 86,339. PUBLISHED AUGUST 3, 1915.

106,569. HOSIERY. CONCORDIA SILK HOSIERY COMPANY, INC., Philadelphia, Pa.
Filed May 15, 1915. Serial No. 86,636. PUBLISHED AUGUST 3, 1915.

106,570. UNDERSHIRTS, DRAWERS, AND UNION SUITS. THE COOPER M'F'G CO., Bennington, Vt.
Filed May 5, 1915. Serial No. 86,381. PUBLISHED AUGUST 3, 1915.

106,571. CASINGS FOR SAUSAGES. THE WILLIAM DAVIES COMPANY, LIMITED, Toronto, Ontario, Canada.
Filed March 24, 1914. Serial No. 76,896. PUBLISHED AUGUST 3, 1915.

106,572. DRY AND READY-MIXED PAINTS, WALL-PAINTS, LACS, STAINS, ENAMELS, VARNISHES, AND FILLERS. DAVIES & MEACHAM, Cleveland, Ohio, assignors to The Patterson-Sargent Company, Cleveland, Ohio, a Corporation of Ohio.
Filed June 16, 1915. Serial No. 87,331. PUBLISHED AUGUST 10, 1915.

106,573. DRY AND READY-MIXED PAINTS, WALL-PAINTS, LACS, STAINS, ENAMELS, VARNISHES, AND FILLERS. DAVIES & MEACHAM, Cleveland, Ohio, assignors to The Patterson-Sargent Company, Cleveland, Ohio, a Corporation of Ohio.
Filed June 16, 1915. Serial No. 87,332. PUBLISHED AUGUST 10, 1915.

106,574. DRY AND READY-MIXED PAINTS, WALL-PAINTS, LACS, STAINS, ENAMELS, VARNISHES, AND FILLERS. DAVIES & MEACHAM, Cleveland, Ohio, assignors to The Patterson-Sargent Company, Cleveland, Ohio, a Corporation of Ohio.
Filed June 16, 1915. Serial No. 87,333. PUBLISHED AUGUST 10, 1915.

106,575. DRY AND READY-MIXED PAINTS, WALL-PAINTS, LACS, STAINS, ENAMELS, VARNISHES, AND FILLERS. DAVIES & MEACHAM, Cleveland, Ohio, assignors to The Patterson-Sargent Company, Cleveland, Ohio, a Corporation of Ohio.
Filed June 16, 1915. Serial No. 87,334. PUBLISHED AUGUST 10, 1915.

106,576. DRY AND READY-MIXED PAINTS, WALL-PAINTS, LACS, STAINS, ENAMELS, VARNISHES, AND FILLERS. DAVIES & MEACHAM, Cleveland, Ohio, assignors to The Patterson-Sargent Company, Cleveland, Ohio, a Corporation of Ohio.
Filed June 16, 1915. Serial No. 87,335. PUBLISHED AUGUST 10, 1915.

106,577. HAMMOCKS. WILLIAM H. DAVIS, Crozet, Va.
Filed March 19, 1915. Serial No. 85,255. PUBLISHED AUGUST 3, 1915.

106,578. MAGAZINES PUBLISHED MONTHLY. THE DEAN-HICKS COMPANY, Grand Rapids, Mich.
Filed February 15, 1915. Serial No. 84,525. PUBLISHED APRIL 27, 1915.

106,579. SHOES AND OTHER FOOTWEAR MADE OF CERTAIN NAMED MATERIALS. DE COU BROTHERS COMPANY, Philadelphia, Pa.
Filed May 14, 1915. Serial No. 86,608. PUBLISHED AUGUST 3, 1915.

106,580. CAKE, PIES, AND DOUGHNUTS. THE DIETZ BAKING COMPANY, Holyoke and Springfield, Mass.
Filed April 17, 1915. Serial No. 86,014. PUBLISHED AUGUST 3, 1915.

106,581. RIBBONS. WILLIAM E. DODD, New York, N. Y.
Filed May 12, 1915. Serial No. 86,569. PUBLISHED AUGUST 3, 1915.

106,582. BOOTS AND SHOES MADE OF LEATHER, SKINS, TEXTILE MATERIALS, AND RUBBER. NATHAN D. DODGE SHOE CO., Newburyport, Mass.
Filed November 7, 1912. Serial No. 66,745. PUBLISHED AUGUST 3, 1915.

106,583. CERTAIN NAMED TOILET PREPARATIONS. MADAM DUVAL COMPANY, Berkeley, Cal.
Filed March 9, 1915. Serial No. 85,033. PUBLISHED AUGUST 3, 1915.

106,584. PEAT. EDUARD DICKERHOFF, Neustadt, near Rübenberge, Hanover, Germany.
File May 5, 1914. Serial No. 78,012. PUBLISHED AUGUST 3, 1915.

106,585. TENNIS-COATS AND WOMEN'S COATS. S. EINHORN & SON, New York, N. Y.
Filed May 10, 1915. Serial No. 86,511. PUBLISHED AUGUST 3, 1915.

106,586. TENNIS-COATS AND WOMEN'S COATS. S. EINHORN & SON, New York, N. Y.
Filed May 10, 1915. Serial No. 86,513. PUBLISHED AUGUST 3, 1915.

106,587. CERTAIN NAMED JEWELRY MADE OF OR PLATED WITH PRECIOUS METAL. EISENSTADT MANUFACTURING COMPANY, St. Louis, Mo.
Filed May 1, 1915. Serial No. 86,315. PUBLISHED AUGUST 10, 1915.

106,588. REMEDY FOR CORNS. STEPHEN FARGO, Cleveland, Ohio.
Filed May 20, 1915. Serial No. 86,775. PUBLISHED AUGUST 3, 1915.

106,589. PLAIN AND MECHANICAL TOYS. MARSHALL FIELD & COMPANY, Chicago, Ill.
Filed April 28, 1914. Serial No. 77,838. PUBLISHED AUGUST 3, 1915.

106,590. CITRUS FRUITS. FLORIDA CITRUS EXCHANGE, Tampa, Fla.
Filed May 24, 1915. Serial No. 86,853. PUBLISHED AUGUST 3, 1915.

106,591. INSTRUCTION-BOARDS HAVING SHIFTABLE CHARACTERS. THE FOX NOVELTY COMPANY, Berea, Ohio.
Filed April 10, 1915. Serial No. 85,844. PUBLISHED AUGUST 10, 1915.

106,592. FISHING-TACKLE COMPRISING FISH RODS, LINES, REELS, HOOKS, NETS, BAITS, SINKERS, AND FLOATS. WM. FRANKFURTH HARDWARE CO., Milwaukee, Wis.
Filed April 22, 1915. Serial No. 86,110. PUBLISHED AUGUST 3, 1915.

106,593. COTTON, COTTON AND WOOL, AND WOOLEN PIECE GOODS. FRENCH & WARD, New York, N. Y.
Filed May 25, 1915. Serial No. 86,882. PUBLISHED AUGUST 3, 1915.

106,594. BOYS' CLOTHING, BOYS' BLOUSES AND KNICKERBOCKERS. GLASER & ROSENBAUM, New York, N. Y.
Filed June 18, 1915. Serial No. 87,387. PUBLISHED AUGUST 10, 1915.

106,595. CANDY. THE MAX GLICK COMPANY, Cleveland, Ohio.
Filed May 19, 1915. Serial No. 86,733. PUBLISHED AUGUST 3, 1915.

106,596. TEAS. GOLDEN SEAL TEA CO., Beaver Falls, Pa.
Filed April 29, 1915. Serial No. 86,269. PUBLISHED AUGUST 3, 1915.

106,597. PARAFFIN-WAX. W. R. GRACE & CO., New York, N. Y.
Filed June 7, 1915. Serial No. 87,167. PUBLISHED AUGUST 10, 1915.

106,598. EGGS. A. GROSSENBACH CO., Milwaukee, Wis.
Filed November 28, 1913. Serial No. 74,233. PUBLISHED AUGUST 3, 1915.

106,599. EGGS. A. GROSSENBACH CO., Milwaukee, Wis.
Filed November 28, 1913. Serial No. 74,234. PUBLISHED AUGUST 3, 1915.

106,600. WASHABLE CAPS AND SLIPPERS. ARTHUR HALE, New York, N. Y.
Filed June 18, 1915. Serial No. 87,389. PUBLISHED AUGUST 10, 1915.

106,601. CANDY. WALTER T. HALL & CO., Ottumwa, Iowa.
Filed May 19, 1915. Serial No. 86,736. PUBLISHED AUGUST 3, 1915.

106,602. WHEAT-FLOUR. THE HAYS CITY MILLING AND ELEVATOR COMPANY, Hays, Kans.
Filed December 16, 1914. Serial No. 83,324. PUBLISHED AUGUST 3, 1915.

106,603. CHEWING-GUM CONFECTION. THE HELMET COMPANY, Cincinnati, Ohio.
Filed April 23, 1915. Serial No. 86,137. PUBLISHED AUGUST 3, 1915.

106,604. SHOES MADE OF LEATHER FOR PERSONAL WEAR. WM. HENNE & CO. INC., Brooklyn, N. Y.
Filed June 26, 1915. Serial No. 87,607. PUBLISHED AUGUST 10, 1915.

106,605. CHEWING-GUM. HERSHEY CHOCOLATE COMPANY, Hershey, Pa.
Filed June 25, 1915. Serial No. 87,590. PUBLISHED AUGUST 10, 1915.

106,606. WHEAT-FLOUR. HIGHLAND MILLING COMPANY, Highland, Ill.
Filed June 1, 1915. Serial No. 87,016. PUBLISHED AUGUST 3, 1915.

106,607. SMOKERS' ARTICLES AND SMOKERS' APPLIANCES NOT OF PRECIOUS METAL. WILLIAM F. HIRSCHMANN, New York, N. Y.
Filed January 21, 1915. Serial No. 84,004. PUBLISHED AUGUST 3, 1915.

106,608. CERTAIN NAMED GAMES, TOYS, AND SPORTING GOODS. WILLIAM F. HIRSCHMANN, New York, N. Y.
Filed January 21, 1915. Serial No. 84,005. PUBLISHED AUGUST 3, 1915.

106,609. TOILET-PAPER. THE JOHN HOBERG COMPANY, Green Bay, Wis.
Filed June 13, 1914. Serial No. 79,065. PUBLISHED AUGUST 10, 1915.

106,610. HOSIERY. HOLEPROOF HOSIERY CO., Milwaukee, Wis.
Filed June 17, 1915. Serial No. 87,362. PUBLISHED AUGUST 10, 1915.

106,611. BUTLERS' CABINETS, KITCHEN-CABINETS, CUPBOARDS, AND TABLES. HOOSIER MANUFACTURING COMPANY, Newcastle, Ind.
Filed April 30, 1914. Serial No. 77,881. PUBLISHED AUGUST 3, 1915.

106,612. MACARONI. THE HOTALING-WARNER COMPANY, Syracuse, N. Y.
Filed April 24, 1915. Serial No. 86,179. PUBLISHED AUGUST 3, 1915.

106,613. WHISKY. H. HUBER & CO., Louisville, Ky.
Filed May 12, 1915. Serial No. 86,570. PUBLISHED AUGUST 3, 1915.

106,614. CALF-MEAL. INTERNATIONAL STOCK FOOD CO., Minneapolis, Minn.
Filed May 1, 1915. Serial No. 86,319. PUBLISHED AUGUST 3, 1915.

106,615. TRACTORS. THE JOLIET OIL TRACTOR CO., Joliet, Ill.
Filed October 28, 1914. Serial No. 82,229. PUBLISHED AUGUST 10, 1915.

106,616. LACING-TIPS. JOSLIN MFG. CO., Providence, R. I.
Filed January 23, 1915. Serial No. 84,058. PUBLISHED AUGUST 3, 1915.

106,617. SHOE AND CORSET LACING TIPS. JOSLIN MFG. CO., Providence, R. I.
Filed January 23, 1915. Serial No. 84,059. PUBLISHED AUGUST 3, 1915.

106,618. LACING-TIPS. JOSLIN MFG. CO., Providence, R. I.
Filed January 30, 1915. Serial No. 84,221. PUBLISHED AUGUST 3, 1915.

106,619. LACING-TIPS. JOSLIN MFG. CO., Providence, R. I.
Filed February 3, 1915. Serial No. 84,286. PUBLISHED AUGUST 10, 1915.

106,620. LACING-TIPS. JOSLIN MFG. CO., Providence, R. I.
Filed February 6, 1915. Serial No. 84,340. PUBLISHED AUGUST 10, 1915.

106,621. INDIVIDUAL ELECTRIC-LIGHTING PLANTS. K. AND W. ENGINEERING COMPANY, St. Paul, Minn.
Filed June 8, 1915. Serial No. 87,187. PUBLISHED AUGUST 10, 1915.

106,622. HOSE-SUPPORTERS. KABO CORSET COMPANY, Chicago, Ill.
Filed October 28, 1914. Serial No. 82,230. PUBLISHED AUGUST 3, 1915.

106,623. BREAKFAST CEREAL. KELLOGG TOASTED CORN FLAKE COMPANY, Battle Creek, Mich.
Filed April 2, 1915. Serial No. 85,642. PUBLISHED AUGUST 3, 1915.

106,624. COFFEE. C. D. KENNY Co., Baltimore, Md.
Filed August 25, 1914. Serial No. 80,794. PUBLISHED NOVEMBER 17, 1914.

106,625. RAZORS, POCKET-KNIVES, SCISSORS, SHEARS, CARVING-KNIVES, AND TABLE-KNIVES OF BASE METAL. MAX KLAAS, New York, N. Y.
Filed June 27, 1914. Serial No. 79,414. PUBLISHED AUGUST 10, 1915.

106,626. RAZORS, POCKET-KNIVES, SCISSORS, SHEARS, CARVING-KNIVES, AND TABLE-KNIVES OF BASE METAL. MAX KLAAS, New York, N. Y.
Filed June 27, 1914. Serial No. 79,415. PUBLISHED AUGUST 10, 1915.

106,627. STAYING-MACHINES. M. D. KNOWLTON COMPANY, Rochester, N. Y.
Filed June 25, 1915. Serial No. 87,601. PUBLISHED AUGUST 10, 1915.

106,628. HATS. KNOX HAT COMPANY, INC., New York, N. Y.
Filed June 15, 1915. Serial No. 87,307. PUBLISHED AUGUST 3, 1915.

106,629. WOOLEN PIECE GOODS. ARTHUR KOENIG COMPANY, Milwaukee, Wis.
Filed June 13, 1914. Serial No. 79,076. PUBLISHED AUGUST 3, 1915.

106,630. WHEAT-FLOUR. KOENIGSMARK MILL COMPANY, Waterloo, Ill.
Filed December 5, 1914. Serial No. 83,091. PUBLISHED AUGUST 3, 1915.

106,631. HOSIERY. S. H. KRESS & COMPANY, New York, N. Y.
Filed June 14, 1915. Serial No. 87,291. PUBLISHED AUGUST 3, 1915.

106,632. MARCHPANE AND MARCHPANE SURROGATES. KRUCHEN & HAAS, Hamburg, Germany.
Filed February 16, 1914. Serial No. 75,937. PUBLISHED AUGUST 10, 1915.

106,633. FASTENER FOR MACHINERY-BELTING. WILLIAM S. LANGFORD, Baltimore, Md.
Filed June 17, 1915. Serial No. 87,365. PUBLISHED AUGUST 10, 1915.

106,634. GLOVES. THE LASALLE & KOCH CO., Toledo, Ohio.
Filed May 1, 1915. Serial No. 86,323. PUBLISHED AUGUST 3, 1915.

106,635. MEDICINES FOR CERTAIN NAMED DISORDERS. JOHN W. R. LAXTON, Lynn, Mass.
Filed November 13, 1914. Serial No. 82,563. PUBLISHED AUGUST 3, 1915.

106,636. COFFEE. LEKAS AND DRIVAS, New York, N. Y.
Filed June 4, 1915. Serial No. 87,101. PUBLISHED AUGUST 3, 1915.

106,637. HONEY. LEKAS AND DRIVAS, New York, N. Y.
Filed June 4, 1915. Serial No. 87,102. PUBLISHED AUGUST 3, 1915.

106,638. COUPLING-NUTS. THE LESLIE COMPANY, Lyndhurst, N. J.
Filed June 24, 1915. Serial No. 87,565. PUBLISHED AUGUST 10, 1915.

106,639. RESUSCITATING APPLIANCES. LIFE SAVING DEVICES CO., Chicago, Ill.
Filed July 3, 1914. Serial No. 79,536. PUBLISHED AUGUST 3, 1915.

106,640. PISTON-RINGS. THE V. A. LONGAKER COMPANY, Indianapolis, Ind.
Filed April 26, 1915. Serial No. 86,211. PUBLISHED AUGUST 10, 1915.

106,641. APRONS. R. H. MACY & COMPANY, New York, N. Y.
Filed May 19, 1915. Serial No. 86,742. PUBLISHED AUGUST 3, 1915.

106,642. BROAD SILKS. H. R. MALLINSON & CO., New York, N. Y.
Filed May 19, 1915. Serial No. 86,743. PUBLISHED AUGUST 3, 1915.

106,643. BROAD SATINS. H. R. MALLINSON & CO., New York, N. Y.
Filed May 19, 1915. Serial No. 86,745. PUBLISHED AUGUST 3, 1915.

106,644. SHIRTS, DRAWERS, AND UNION SUITS MADE OF TEXTILE MATERIAL. THE MANHATTAN SHIRT COMPANY, New York, N. Y.
Filed June 21, 1915. Serial No. 87,478. PUBLISHED AUGUST 10, 1915.

106,645. CERTAIN NAMED STATIONERS' SUPPLIES. WILLIAM MANN COMPANY, Philadelphia, Pa.
Filed March 20, 1915. Serial No. 85,280. PUBLISHED AUGUST 3, 1915.

106,646. CERTAIN NAMED STATIONERS' SUPPLIES. WILLIAM MANN COMPANY, Philadelphia, Pa.
Filed March 20, 1915. Serial No. 85,281. PUBLISHED AUGUST 3, 1915.

106,647. WHISKY. A. MARGULIS, Philadelphia, Pa.
Filed July 3, 1915. Serial No. 87,748. PUBLISHED AUGUST 10, 1915.

106,648. WHEAT-FLOUR. MARSHALL MILLING CO., Marshall, Minn.
Filed April 17, 1915. Serial No. 86,021. PUBLISHED AUGUST 3, 1915.

106,649. SCALP AND HAIR TONICS. F. DE MARTINO, Altoona, Pa.
Filed June 30, 1915. Serial No. 87,665. PUBLISHED AUGUST 10, 1915.

106,650. ELECTRICAL TESTING AND INSPECTING INSTRUMENTS. W. N. MATTHEWS & BRO., INC., St. Louis, Mo.
Filed May 19, 1915. Serial No. 86,746. PUBLISHED AUGUST 10, 1915.

106,651. MEDICINAL PREPARATIONS FOR USE FOR THE INTESTINAL TRACT. JAMES T. MCFADDEN, Pittsburgh, Pa.
Filed June 8, 1915. Serial No. 87,189. PUBLISHED AUGUST 10, 1915.

106,652. CERTAIN NAMED FOODS. JOS. MIDDLEBY, JR., INC., Boston, Mass.
Filed June 1, 1915. Serial No. 87,021. PUBLISHED AUGUST 3, 1915.

106,653. BAKING AND COOKING COMPOUND TO BE USED AS A SUBSTITUTE FOR EGGS. CLIFFORD B. MILLER, Buffalo, N. Y.
Filed February 10, 1915. Serial No. 84,432. PUBLISHED MAY 18, 1915.

106,654. FOOTWEAR MADE OF CERTAIN MATERIALS AND COMBINATIONS THEREOF. MISHAWAKA WOOLEN MANUFACTURING COMPANY, Mishawaka, Ind.
Filed May 26, 1915. Serial No. 86,910. PUBLISHED AUGUST 3, 1915.

106,655. UMBRELLAS. JOHN MURPHY UMBRELLA CO. INC., Maspeth and New York, N. Y.
Filed May 13, 1915. Serial No. 86,597. PUBLISHED AUGUST 3, 1915.

106,656. VELVETS, WOOLENS, WORSTEDS, DRESS-LINENS, CHEVIOTS, AND LACES IN THE PIECE, ALSO BLANKETS AND BEDSPREADS. THE JOHN S. NAYLOR COMPANY, Wheeling, W. Va.
Filed April 10, 1911. Serial No. 55,643. PUBLISHED AUGUST 3, 1915.

106,657. FLUSH SWITCHES, FLUSH RECEPTACLES, DOOR-SWITCHES, MOMENTARY-CONTACT SWITCHES, PENDANT SWITCHES. NEWTON MANUFACTURING COMPANY, INC., Lynbrook, N. Y.
Filed June 28, 1915. Serial No. 87,643. PUBLISHED AUGUST 10, 1915.

106,658. CROCHET-COTTON. NONOTUCK SILK COMPANY, Northampton, Mass.
Filed November 3, 1914. Serial No. 82,380. PUBLISHED AUGUST 3, 1915.

106,659. BALL-BEARINGS. NORDISKA KULLAGER AKTIEBOLAGET, Göteborg, Sweden.
Filed March 31, 1915. Serial No. 85,585. PUBLISHED AUGUST 10, 1915.

106,660. OLIVE-OIL. O. L. E. A. OLIVICOLTORI LIGURI ED ESPORTATORI ASSOCIATI, Oneglia, Italy.
Filed May 28, 1915. Serial No. 86,970. PUBLISHED AUGUST 3, 1915.

106,661. CIGARS, CHEROOTS, STOGIES, CIGARETTES, PLUG-TOBACCO, AND SMOKING-TOBACCO. O'BRIEN AND EDMONDS, Philadelphia, Pa.
Filed January 13, 1915. Serial No. 83,835. PUBLISHED AUGUST 10, 1915.

106,662. MATCHES. THE OHIO MATCH COMPANY, Wadsworth, Ohio.
Filed May 26, 1915. Serial No. 86,914. PUBLISHED AUGUST 10, 1915.

106,663. DRESS-SHIELDS. THE OMO MANUFACTURING COMPANY, Middletown, Conn.
Filed May 5, 1915. Serial No. 86,404. PUBLISHED AUGUST 3, 1915.

106,664. GINGHAMS. OSTRANDER & COMPANY, INC., New York, N. Y.
Filed July 1, 1915. Serial No. 87,692. PUBLISHED AUGUST 10, 1915.

106,665. VALVE-CUPS CONSTRUCTED OF BOW-SPRING METAL, GRAPHITE, AND CANVAS WITH OR WITHOUT SELVAGE. PARKER CUP & SPECIALTY WORKS, (INC.,) Parkers Landing, Pa.
Filed April 3, 1915. Serial No. 85,676. PUBLISHED AUGUST 3, 1915.

106,666. MISSES' HOSIERY. PARKER HOSIERY MILL & DYE WORKS, INC., near Portsmouth, Va.
Filed May 19, 1915. Serial No. 86,749. PUBLISHED AUGUST 3, 1915.

106,667. MISSES' HOSIERY. PARKER HOSIERY MILL & DYE WORKS, INC., near Portsmouth, Va.
Filed May 19, 1915. Serial No. 86,750. PUBLISHED AUGUST 3, 1915.

106,668. DRY AND READY-MIXED PAINTS, DRIERS, ENAMELS, STAINS, WALL-PAINTS, LACS, FILLERS, AND VARNISHES. THE PATTERSON-SARGENT COMPANY, Cleveland, Ohio.
Filed May 27, 1915. Serial No. 86,935. PUBLISHED AUGUST 10, 1915.

106,669. LOTION TO BE APPLIED EXTERNALLY TO MAN OR BEAST. JOHN T. PAXTON, Rushville, Ind.
Filed November 14, 1914. Serial No. 82,602. PUBLISHED AUGUST 3, 1915.

106,670. PREPARATION FOR THE TREATMENT OF KIDNEYS, WORMS, CHICKEN AND HOG CHOLERA. G. W. PEELER, Silsbee, Tex.
Filed October 23, 1914. Serial No. 82,104. PUBLISHED AUGUST 10, 1915.

106,671. BUILDING-BLOCKS. PEG LOCK BLOCK COMPANY, INC., New York, N. Y.
Filed April 15, 1915. Serial No. 85,967. PUBLISHED AUGUST 3, 1915.

106,672. ELECTRICAL SWITCHES. THE PERKINS ELECTRIC SWITCH MFG. COMPANY, Bridgeport, Conn.
Filed July 1, 1915. Serial No. 87,694. PUBLISHED AUGUST 10, 1915.

106,673. GARTERS. PIONEER SUSPENDER COMPANY, Philadelphia, Pa.
Filed June 3, 1915. Serial No. 87,088. PUBLISHED AUGUST 3, 1915.

106,674. SHAWLS. QUEEN CITY KNITTING MILLS, INC., Poughkeepsie, N. Y.
Filed May 6, 1915. Serial No. 86,434. PUBLISHED AUGUST 3, 1915.

106,675. SHAWLS. QUEEN CITY KNITTING MILLS, INC., Poughkeepsie, N. Y.
Filed June 8, 1915. Serial No. 87,194. PUBLISHED AUGUST 3, 1915.

106,676. OIL DEODORIZER AND DISINFECTANT. WILLIAM E. QUINN, New York, N. Y., assignor to Magic Mist, Inc., New York, N. Y., a Corporation of New York.
Filed February 25, 1913. Serial No. 68,729. PUBLISHED AUGUST 10, 1915.

106,677. HAM, BACON, SHOULDERS, PICNICS, SAUSAGE, WHETHER FRESH, SMOKED, OR COOKED, FRESH, SALT, OR PICKLED PORK, VEAL, LARD, MINCED HAM, SPICED HAM. PAUL O. REYMANN CO., Wheeling, W. Va.
Filed February 6, 1915. Serial No. 84,344. PUBLISHED AUGUST 3, 1915.

106,678. LINIMENT FOR VARICOSE VEINS, RHEUMATISM, SPRAINS. CESAR RIBORDY, New York, N. Y.
Filed February 9, 1915. Serial No. 84,413. PUBLISHED AUGUST 3, 1915.

106,679. COMPOUND OF CARAMEL TO BE ADDED TO COFFEE. RICE BROS., Philadelphia, Pa.
Filed April 20, 1915. Serial No. 86,071. PUBLISHED AUGUST 3, 1915.

106,680. DRILLS. RIVERSIDE & DAN RIVER COTTON MILLS, INC., Danville, Va., and New York, N. Y.
Filed April 6, 1915. Serial No. 85,735. PUBLISHED AUGUST 3, 1915.

106,681. COTTON PIECE GOODS. ROGERS & THOMPSON, INC., New York, N. Y.
Filed June 23, 1915. Serial No. 87,537. PUBLISHED AUGUST 3, 1915.

106,682. PILE GOODS IN THE PIECE, MADE OF COTTON AND SILK OR WOOL PLUSH, VELOURS, AND VELVETS. WILLIAM H. ROLLINSON, New York, N. Y.
Filed April 14, 1915. Serial No. 85,946. PUBLISHED AUGUST 3, 1915.

106,683. SEEDED RAISINS. ROSENBERG BROS. & CO., San Francisco, Cal.
Filed June 1, 1915. Serial No. 87,034. PUBLISHED AUGUST 3, 1915.

106,684. COCOA. RUNKEL BROTHERS, INC., New York, N. Y.
Filed June 26, 1915. Serial No. 87,614. PUBLISHED AUGUST 10, 1915.

106,685. FLOWERS OF SULFUR. SAN FRANCISCO SULPHUR CO., San Francisco, Cal.
Filed May 28, 1915. Serial No. 86,976. PUBLISHED AUGUST 3, 1915.

106,686. PREPARATION USED FOR A WEED-KILLER. EVERETT A. SCHOFIELD, Philadelphia, Pa.
Filed March 29, 1915. Serial No. 85,528. PUBLISHED AUGUST 10, 1915.

106,687. FLUID INKS. SCRIBBLERS INK & PASTE MANUFACTURING COMPANY, Seattle, Wash.
Filed December 1, 1913. Serial No. 74,298. PUBLISHED AUGUST 10, 1915.

106,688. ALL KINDS OF SEWING-THREADS. THE SINGER MANUFACTURING COMPANY, Elizabeth, N. J.
Filed May 1, 1915. Serial No. 86,335. PUBLISHED AUGUST 10, 1915.

106,689. MACARONI, SPAGHETTI, AND VERMICELLI IN THEIR VARIOUS FORMS, INCLUDNG ALPHABETOS, SOUP-RINGS, NOODLES, &c. SKINNER MANUFACTURING COMPANY, Omaha, Nebr.
Filed May 26, 1915. Serial No. 86,922. PUBLISHED AUGUST 3, 1915.

106,690. PAPER TOWELS, PAPER TABLE-COVERS, PAPER DIAPERS, AND TOILET-PAPER. SCOTT PAPER COMPANY, Philadelphia, Pa.
Filed October 16, 1913. Serial No. 73,427. PUBLISHED AUGUST 10, 1915.

106,691. WHEAT-FLOUR. SPARKS MILLING COMPANY, Alton, Ill., and Terre Haute, Ind.
Filed April 10, 1915. Serial No. 85,880. PUBLISHED AUGUST 3, 1915.

106,692. VIOLIN, VIOLA, VIOLONCELLO, AND DOUBLE-BASS-VIOL STRINGS. VICTOR C. SQUIER, Battle Creek, Mich.
Filed April 3, 1915. Serial No. 85,677. PUBLISHED AUGUST 10, 1915.

106,693. TABLE-WATERS. ST. LOUIS AGENCY OF NATIONAL PURE WATER COMPANY, St. Louis, Mo.
Filed June 21, 1915. Serial No. 87,487. PUBLISHED AUGUST 3, 1915.

106,694. RICE. STANDARD MILLING CO., Houston, Tex.
Filed May 12, 1915. Serial No. 86,581. PUBLISHED AUGUST 10, 1915.

106,695. SHAFT-HANGERS. STANDARD PRESSED STEEL CO., Philadelphia, Pa.
Filed November 12, 1912. Serial No. 66,818. PUBLISHED AUGUST 3, 1915.

106,696. CONDENSED MILK. STEINHARDTER & NORDLINGER, New York, N. Y.
Filed July 2, 1914. Serial No. 79,523. PUBLISHED AUGUST 3, 1915.

106,697. REFINED LIQUID PARAFFIN TO BE USED AS AN INTESTINAL LUBRICANT AND LAXATIVE. THE STERN SONNEBORN OIL CO., LIMITED, London, England.
Filed June 26, 1915. Serial No. 87,615. PUBLISHED AUGUST 10, 1915.

106,698. SHIP AND DOCK PILE TIMBERS. SWIFT & COVINGTON, Oakland, Cal.
Filed December 18, 1914. Serial No. 88,383. PUBLISHED AUGUST 3, 1915.

106,699. CITRUS FRUITS. TAMPA CITRUS GROWERS ASSOCIATION, Tampa, Fla.
Filed May 4, 1915. Serial No. 86,371. PUBLISHED AUGUST 3, 1915.

106,700. CERTAIN NAMED FOODS. THE S. THALMANN & SCHWAB M. B. H., Frankfort-on-the-Main, Germany.
Filed December 4, 1914. Serial No. 83,078. PUBLISHED AUGUST 3, 1915.

106,701. POCKET-KNIVES, PENKNIVES, CLASP-KNIVES, AND PRUNING-KNIVES. THE THOMAS MANUFACTURING COMPANY, Dayton, Ohio.
Filed May 24, 1915. Serial No. 86,871. PUBLISHED AUGUST 10, 1915.

106,702. CANDY. TRI-STATE CANDY CO. INC., Connellsville, Pa.
Filed February 27, 1915. Serial No. 84,827. PUBLISHED AUGUST 3, 1915.

106,703. PAPER BAGS. THE UNION BAG & PAPER COMPANY, New York, N. Y.
Filed June 26, 1915. Serial No. 87,617. PUBLISHED AUGUST 10, 1915.

106,704. PAPER BAGS. THE UNION BAG & PAPER COMPANY, New York, N. Y.
Filed June 26, 1915. Serial No. 87,618. PUBLISHED AUGUST 10, 1915.

106,705. PAPER BAGS. THE UNION BAG & PAPER COMPANY, New York, N. Y.
Filed June 26, 1915. Serial No. 87,619. PUBLISHED AUGUST 10, 1915.

106,706. GUMMED PRINTED LABELS, ADHESIVE STAMPS, CALENDARS, MONTHLY PERIODICALS, AND ALMANACS. UNITED DRUG COMPANY, Boston, Mass.
Filed February 23, 1915. Serial No. 84,719. PUBLISHED AUGUST 10, 1915.

106,707. MEASURING-RULES, MEASURING-TAPE, THERMOMETERS, AND LANTERN-SLIDES. UNITED DRUG COMPANY, Boston, Mass.
Filed February 23, 1915. Serial No. 84,723. PUBLISHED AUGUST 10, 1915.

106,708. RUBBER-SOLED BOOTS AND SHOES WITH CANVAS TOPS. UNITED STATES RUBBER COMPANY, New Brunswick, N. J., and New York, N. Y.
Filed May 14, 1915. Serial No. 86,627. PUBLISHED AUGUST 3, 1915.

106,709. INSECTICIDE, GERMICIDE, ANTISEPTIC, AND DISINFECTANT. VAN ANTWERP'S DRUG CORPORATION, Mobile, Ala.
Filed June 14, 1915. Serial No. 87,298. PUBLISHED AUGUST 3, 1915.

106,710. CERTAIN NAMED PIECE GOODS. VOSS & STERN, New York, N. Y.
Filed September 19, 1913. Serial No. 72,961. PUBLISHED AUGUST 3, 1915.

106,711. CHOCOLATES. WADSWORTH CHOCOLATE CO., Newark, N. J.
Filed October 12, 1914. Serial No. 81,840. PUBLISHED AUGUST 3, 1915.

106,712. SNAP-BUTTONS USED AS GARMENT-FASTENERS. WALDES & CO., Prague-Wrschowitz, Austria-Hungary.
Filed July 21, 1914. Serial No. 79,976. PUBLISHED AUGUST 3, 1915.

106,713. PREPARATION FOR POOR CIRCULATION, PARALYSIS, RHEUMATISM, AND NEURALGIA. ELISABETH WALTNER, Duquesne, Pa.
Filed February 13, 1915. Serial No. 84,516. PUBLISHED AUGUST 3, 1915.

106,714. GLASS AQUARIA. NICHOLAS WAPLER, New York, N. Y.
Filed March 31, 1915. Serial No. 85,594. PUBLISHED AUGUST 10, 1915.

106,715. FRESH, SALTED, AND ROASTED PEANUTS. WERDEN & Co., Washington, D. C.
Filed April 16, 1915. Serial No. 86,007. PUBLISHED AUGUST 3, 1915.

106,716. CIGARS, LITTLE CIGARS, CIGARETTES, SMOKING AND CHEWING TOBACCO, AND SNUFF. FERDINAND WESTHEIMER & SONS, St. Joseph, Mo., and Cincinnati, Ohio.
Filed April 24, 1915. Serial No. 86,195. PUBLISHED AUGUST 3, 1915.

106,717. PREPARATION FOR THE TREATMENT OF OLD SORES, CARBUNCLES, AND CANCERS. WHITAKER & KINCAID, Gail, Tex.
Filed May 14, 1915. Serial No. 86,628. PUBLISHED AUGUST 10, 1915.

106,718. COTTON, WORSTED, AND MERINO YARN. WILLIAM WHITMAN COMPANY, INC., Boston, Mass.
Filed June 28, 1915. Serial No. 87,651. PUBLISHED AUGUST 10, 1915.

106,719. SHOES MADE OF LEATHER. WICHERT & GARDINER, New York, N. Y.
Filed May 15, 1915. Serial No. 86,655. PUBLISHED AUGUST 3, 1915.

106,720. MEN'S TROUSERS. JOHN S. WOJTALEWICS, Chicago, Ill.
Filed August 8, 1914. Serial No. 80,417. PUBLISHED AUGUST 3, 1915.

106,721. FERTILIZERS. THE ROBERT A. WOOLDRIDGE CO., Baltimore, Md.
Filed June 23, 1915. Serial No. 87,545. PUBLISHED AUGUST 10, 1915.

106,722. IRONING-WAX AND FIRE-EXTINGUISHING COMPOUND. WIZARD PRODUCTS CO., Chicago, Ill.
Filed May 7, 1915. Serial No. 86,464. PUBLISHED AUGUST 10, 1915.

106,723. PHONOGRAPHS AND PHONOGRAPHIC SUPPLIES. THE AEOLIAN COMPANY, Meriden, Conn., and New York, N. Y.
Filed February 6, 1915. Serial No. 84,332. PUBLISHED AUGUST 3, 1915.

106,724. CANNED FRUITS, CANNED VEGETABLES, CANNED SAUER-KRAUT. ALL-PACKAGE GROCERY STORES CO., Brooklyn, N. Y.
Filed May 24, 1915. Serial No. 86,847. PUBLISHED AUGUST 10, 1915.

106,725. LOCK-NUTS. AMERICAN LOCK-NUT COMPANY, Chicago, Ill.
Filed May 20, 1915. Serial No. 86,754. PUBLISHED AUGUST 10, 1915.

106,726. BALL-MILL LINERS, CASTINGS, AND FORGINGS MADE OF CARBON STEEL, MANGANESE STEEL, AND IRON. AMERICAN MANGANESE STEEL COMPANY, Augusta, Me., and Chicago, Ill.
Filed July 1, 1915. Serial No. 87,674. PUBLISHED AUGUST 10, 1915.

106,727. GINS AND LIQUEURS. AMSTERDAMSCHE LIKEURSTOKERIJ "'T LOOTSJE" DER ERVEN LUCAS BOLS, Amsterdam, Netherlands.
Filed April 15, 1915. Serial No. 85,953. PUBLISHED AUGUST 17, 1915.

106,728. GINS AND LIQUEURS. AMSTERDAMSCHE LIKEURSTOKERIJ "'T LOOTSJE" DER ERVEN LUCAS BOLS, Amsterdam, Netherlands.
Filed April 15, 1915. Serial No. 85,954. PUBLISHED JUNE 1, 1915.

106,729. TACKS, RIVETS, BURS, NAILS, STAPLES, LACING-HOOKS, EYELETS, AND GLAZIERS' POINTS. ATLAS TACK COMPANY, Fairhaven, Mass.
Filed June 25, 1915. Serial No. 87,582. PUBLISHED AUGUST 10, 1915.

106,730. SUITS, COATS, SKIRTS, SHIRTS, SWEATERS, HATS, AND RIDING-HABITS. GERTRUDE S. BASSETT, Philadelphia, Pa.
Filed March 29, 1915. Serial No. 85,506. PUBLISHED JUNE 8, 1915.

106,731. STEEL BARS. THE BETZ-PIERCE COMPANY, Cleveland, Ohio.
Filed June 23, 1915. Serial No. 87,514. PUBLISHED AUGUST 10, 1915.

106,732. CANDY. CESARE BIANCHI, New York, N. Y.
Filed June 21, 1915. Serial No. 87,457. PUBLISHED AUGUST 10, 1915.

106,733. TEA AND ROASTED COFFEE. JOHN BLAUL'S SONS CO., Burlington, Iowa.
Filed May 19, 1915. Serial No. 86,725. PUBLISHED AUGUST 3, 1915.

106,734. REFRIGERATORS. BORDEN STOVE CO., Philadelphia, Pa.
Filed March 6, 1915. Serial No. 84,973. PUBLISHED AUGUST 3, 1915.

106,735. RUBBER BOOTS AND SHOES. BOSTON RUBBER SHOE COMPANY, Malden and Boston, Mass.
Filed October 3, 1914. Serial No. 81,626. PUBLISHED AUGUST 17, 1915.

106,736. WOVEN AND KNITTED FABRICS OF WOOL, COTTON, AND SILK OR MIXTURE OF THESE MATERIALS. BOTANY WORSTED MILLS, Passaic, N. J.
Filed May 7, 1915. Serial No. 86,443. PUBLISHED AUGUST 3, 1915.

106,737. DRY SUBSTANCE COMPOSED OF CERTAIN INGREDIENTS FOR PRODUCING A NON-ALCOHOLIC FOOD BEVERAGE. WILLIAM F. BOTTERMAN, Chicago, Ill.
Filed February 15, 1915. Serial No. 84,521. PUBLISHED AUGUST 3, 1915.

106,738. WHISTLE-CALLS. CORNELIUS L. BUTTS, St. Louis, Mo.
Filed May 13, 1915. Serial No. 86,596. PUBLISHED AUGUST 10, 1915.

106,739. MOVING-PICTURE FILMS. CALIFORNIA MOTION PICTURE CORPORATION, San Francisco, Cal.
Filed March 8, 1915. Serial No. 85,024. PUBLISHED AUGUST 17, 1915.

106,740. NON-ALCOHOLIC FRUIT DRINKS. CANANDAIGUA BREWERY, INC., Canandaigua, N. Y.
Filed July 17, 1915. Serial No. 87,984. PUBLISHED AUGUST 17, 1915.

106,741. BELT-HOOKS, BELT-FASTENERS, AND BELT-PINS. CLIPPER BELT LACER CO., Grand Rapids, Mich.
Filed April 26, 1915. Serial No. 86,200. PUBLISHED AUGUST 24, 1915.

106,742. PRINTS OF PROCESS OR RENOVATED BUTTER. THE R. E. COBB CO., St. Paul, Minn.
Filed March 25, 1915. Serial No. 85,393. PUBLISHED AUGUST 3, 1915.

106,743. TOILET AND LAUNDRY SOAP. COLGATE & CO., Jersey City, N. J., and New York, N. Y.
Filed June 8, 1915. Serial No. 87,182. PUBLISHED AUGUST 10, 1915.

106,744. CERTAIN NAMED CLOTHING. N. COHAN & SONS, Leicester, England.
Filed February 4, 1915. Serial No. 84,294. PUBLISHED AUGUST 17, 1915.

106,745. [WITHDRAWN.]

106,746. TOILET PREPARATION. CUPID BLUSH COMPANY, Baltimore, Md.
Filed May 21, 1915. Serial No. 86,799. PUBLISHED AUGUST 3, 1915.

106,747. TABLE-SALT, MEDIUM COMMON SALT, AND GRANULATED FINE SALT. D. G. CUTLER COMPANY, Duluth, Minn.
Filed August 24, 1914. Serial No. 80,755. PUBLISHED MARCH 16, 1915.

106,748. DRY AND READY-MIXED PAINTS, WALL-PAINTS, LACS, STAINS, ENAMELS, VARNISHES, AND FILLERS. DAVIES & MEACHAM, Cleveland, Ohio, assignors to The Patterson-Sargent Company, Cleveland, Ohio, a Corporation of Ohio.
Filed June 16, 1915. Serial No. 87,336. PUBLISHED AUGUST 10, 1915.

106,749. DRY AND READY-MIXED PAINTS, WALL-PAINTS, LACS, STAINS, ENAMELS, VARNISHES, AND FILLERS. DAVIES & MEACHAM, Cleveland, Ohio, assignors to The Patterson-Sargent Company, Cleveland, Ohio, a Corporation of Ohio.
Filed June 16, 1915. Serial No. 87,337. PUBLISHED AUGUST 10, 1915.

106,750. DRY AND READY-MIXED PAINTS, WALL-PAINTS, LACS, STAINS, ENAMELS, VARNISHES, AND FILLERS. DAVIES & MEACHAM, Cleveland, Ohio, assignors to The Patterson-Sargent Company, Cleveland, Ohio, a Corporation of Ohio.
Filed June 16, 1915. Serial No. 87,340. PUBLISHED AUGUST 10, 1915.

106,751. LEATHER BOOTS AND SHOES. DAVIS SHOE COMPANY, Lynn, Mass.
Filed July 22, 1915. Serial No. 88,107. PUBLISHED AUGUST 17, 1915.

106,752. HOT AND COLD BLAST TUBULAR LANTERNS. R. E. DIETZ COMPANY, New York, N. Y.
Filed May 13, 1913. Serial No. 70,401. PUBLISHED AUGUST 3, 1915.

106,753. CERTAIN NAMED GOODS. DRISCOL, CHURCH & HALL, New Bedford, Mass.
Filed March 1, 1915. Serial No. 84,838. PUBLISHED AUGUST 3, 1915.

106,754. SPICES AND MUSTARD. E. R. DURKEE & CO., New York, N. Y.
Filed May 26, 1915. Serial No. 86,900. PUBLISHED AUGUST 10, 1915.

106,755. ANESTHETICS. GORDON WILLIAM EDWARDS, London, England.
Filed March 27, 1915. Serial No. 85,477. PUBLISHED AUGUST 10, 1915.

106,756. PREPARED COMPOUND (DERIVED FROM A REFRACTORY MINERAL SUBSTANCE) CAPABLE OF RESISTING HIGH TEMPERATURES. ESTATE OF ALBERT E. FOOTE, by Warren M. Foote, trustee, Philadelphia, Pa.
Filed April 13, 1915. Serial No. 85,922. PUBLISHED AUGUST 17, 1915.

106,757. PREPARED COMPOUND (DERIVED FROM A REFRACTORY MINERAL SUBSTANCE) CAPABLE OF RESISTING HIGH TEMPERATURES. ESTATE OF ALBERT E. FOOTE, by Warren M. Foote, trustee, Philadelphia, Pa.
Filed April 13, 1915. Serial No. 85,923. PUBLISHED AUGUST 17, 1915.

106,758. MAGAZINE PUBLISHED WEEKLY. EVERY WEEK CORPORATION, New York, N. Y.
Filed May 8, 1915. Serial No. 86,477. PUBLISHED AUGUST 17, 1915.

106,759. TOILET-PAPER. LEWIS R. FISHER, Baltimore, Md.
Filed July 6, 1915. Serial No. 87,772. PUBLISHED AUGUST 10, 1915.

106,760. CERTAIN NAMED DRAFTSMAN SUPPLIES. MILES C. FULLER, Peoria, Ill.
Filed March 23, 1914. Serial No. 76,849. PUBLISHED AUGUST 3, 1915.

106,761. GLASS GLOBES AND BOWLS EMPLOYED IN ELECTRICAL WORK. THE GENERAL ELECTRIC CO., LTD., London, England.
Filed January 12, 1915. Serial No. 83,797. PUBLISHED AUGUST 17, 1915.

106,762. SOLES AND HEELS FOR BOOTS AND SHOES MADE FROM A COMPOSITION OF LEATHER, FIBER AND RUBBER. THE GOODYEAR TIRE AND RUBBER COMPANY, Akron, Ohio.
Filed June 21, 1915. Serial No. 87,463. PUBLISHED AUGUST 17, 1915.

106,763. LAGER-BEER. THE GOTTLIEB BAUERNSCHMIDT STRAUS BREWING COMPANY, Baltimore, Md.
Filed July 2, 1915. Serial No. 87,704. PUBLISHED AUGUST 17, 1915.

106,764. ELECTRIC VAPORIZER. C. CARROLL GOULD, New York, N. Y.
Filed February 8, 1915. Serial No. 84,364. PUBLISHED AUGUST 3, 1915.

106,765. CLEANING COMPOUNDS. HARRAH & STEWART MFG. CO., Des Moines, Iowa.
Filed June 21, 1915. Serial No. 87,470. PUBLISHED AUGUST 10, 1915.

106,766. PAPER BOXES. ARLANDO T. HARRELL, Chicago, Ill.
Filed January 25, 1915. Serial No. 84,082. PUBLISHED AUGUST 3, 1915.

106,767. STEAM WATER-HEATERS. JACOB J. HIBBERT, Mountain Lake, Minn.
Filed March 16, 1915. Serial No. 85,185. PUBLISHED AUGUST 3, 1915.

106,768. DATES. THE HILLS BROTHERS COMPANY, New York, N. Y.
Filed June 28, 1915. Serial No. 87,632. PUBLISHED AUGUST 10, 1915.

106,769. SALVE FOR EXTERNAL APPLICATION. HOWARD WALKER HOWSER, Baltimore, Md.
Filed July 9, 1915. Serial No. 87,844. PUBLISHED AUGUST 17, 1915.

106,770. MAYONNAISE. HUNKELE BROS., Union, N. J.
Filed March 12, 1915. Serial No. 85,113. PUBLISHED AUGUST 3, 1915.

106,771. TOOTH-PASTE, TOOTH-POWDER, PEROXID FACE-CREAM, FACE-POWDER, AND TALCUM POWDER. HYDROX CHEMICAL COMPANY, New York, N. Y.
Filed May 28, 1913. Serial No. 70,718. PUBLISHED AUGUST 10, 1915.

106,772. METAL EYELETS. IDEAL SPECIALTIES M'F'G CORP., New York, N. Y.
Filed June 26, 1915. Serial No. 87,610. PUBLISHED AUGUST 10, 1915.

106,773. BOOTS AND SHOES OF KID AND LEATHER. F. P. KIRKENDALL & Co., Omaha, Nebr.
Filed June 10, 1915. Serial No. 87,219. PUBLISHED AUGUST 10, 1915.

106,774. HOSIERY. S. H. KRESS & COMPANY, New York, N. Y.
Filed July 10, 1915. Serial No. 87,868. PUBLISHED AUGUST 17, 1915.

106,775. HOSIERY. S. H. KRESS & COMPANY, New York, N. Y.
Filed July 10, 1915. Serial No. 87,869. PUBLISHED AUGUST 17, 1915.

106,776. HOSIERY. S. H. KRESS & COMPANY, New York, N. Y.
Filed July 10, 1915. Serial No. 87,870. PUBLISHED AUGUST 17, 1915.

106,777. HOSIERY. S. H. KRESS & COMPANY, New York, N. Y.
Filed July 10, 1915. Serial No. 87,871. PUBLISHED AUGUST 17, 1915.

106,778. HOSIERY. S. H. KRESS & COMPANY, New York, N. Y.
Filed July 10, 1915. Serial No. 87,872. PUBLISHED AUGUST 17, 1915.

106,779. HOSIERY. S. H. KRESS & COMPANY, New York, N. Y.
Filed July 10, 1915. Serial No. 87,873. PUBLISHED AUGUST 17, 1915.

106,780. HOSIERY. S. H. KRESS & COMPANY, New York, N. Y.
Filed July 10, 1915. Serial No. 87,874. PUBLISHED AUGUST 17, 1915.

106,781. HOSIERY. S. H. KRESS & COMPANY, New York, N. Y.
Filed July 10, 1915. Serial No. 87,875. PUBLISHED AUGUST 17, 1915.

106,782. SPICES, FLAVORING EXTRACTS FOR FOODS—VIZ., LEMON, VANILLA, GINGER, PEPPERMINT, AND ORANGE. THE KUSAC COMPANY, Dayton, Ohio.
Filed April 2, 1915. Serial No. 85,643. PUBLISHED AUGUST 3, 1915.

106,783. COPPER AND GALVANIZED-IRON SHEET-METAL PIPE AND ELBOWS. LAMB & RITCHIE CO., Cambridge, Mass.
Filed June 5, 1915. Serial No. 87,140. PUBLISHED AUGUST 10, 1915.

106,784. VACUUM-BOTTLES, ALCOHOL-FLAGONS, AND TEA-CADDIES. LANDERS, FRARY & CLARK, New Britain, Conn.
Filed March 24, 1915. Serial No. 85,873. PUBLISHED AUGUST 3, 1915.

106,785. WORK-SHIRTS. LEWIS BROTHERS COMPANY, New York, N. Y.
Filed June 14, 1915. Serial No. 87,294. PUBLISHED AUGUST 17, 1915.

106,786. GRAPE-JUICE. LUYTIES BROTHERS, New York, N. Y.
Filed July 19, 1915. Serial No. 88,022. PUBLISHED AUGUST 17, 1915.

106,787. PULVERIZED VEGETABLES AND KITCHEN HERBS. G. B. MARTINO & FIGLIO, Genoa, Italy.
Filed July 8, 1914. Serial No. 79,641. PUBLISHED AUGUST 10, 1915.

106,788. KNITTED SWEATERS, MUFFLERS, CAPS, AND TOQUES. THE MONARCH KNITTING COMPANY, LTD., Dunnville, Canada, and Buffalo, N. Y.
Filed October 22, 1914. Serial No. 82,077. PUBLISHED JUNE 1, 1915.

106,789. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed June 26, 1915. Serial No. 87,613. PUBLISHED AUGUST 10, 1915.

106,790. POPCORN AND POPCORN CONFECTIONS. NATIONAL CANDY COMPANY, Jersey City, N. J., and St. Louis, Mo.
Filed June 25, 1915. Serial No. 87,594. PUBLISHED AUGUST 10, 1915.

106,791. OVERALLS. NEUSTADTER BROS., San Francisco, Cal.
Filed July 10, 1915. Serial No. 87,879. PUBLISHED AUGUST 17, 1915.

106,792. ENAMELED AND ALUMINUM WARE. THE NEW ENGLAND ENAMELING COMPANY, Middletown, Conn.
Filed June 18, 1915. Serial No. 87,393. PUBLISHED AUGUST 10, 1915.

106,793. LUBRICATING-GREASES AND LUBRICATING-OILS FOR MACHINERY, ENGINES, MOTORS, AND DYNAMOS. NEW YORK LUBRICATING OIL COMPANY, New York, N. Y.
Filed June 9, 1915. Serial No. 87,209. PUBLISHED AUGUST 10, 1915.

106,794. BRAIDED HATS. NIHON NATSUBO KABUSHIKI KAISHA, Yokohama, Japan.
Filed November 14, 1914. Serial No. 82,598. PUBLISHED AUGUST 3, 1915.

106,795. AUTOMOBILES. PILOT MOTOR CAR CO., Richmond, Ind.
Filed April 28, 1915. Serial No. 86,253. PUBLISHED JUNE 8, 1915.

106,796. CERTAIN NAMED NON-ALCOHOLIC BEVERAGES. H. M. PORTER, North Platte, Nebr.
Filed July 26, 1915. Serial No. 88,197. PUBLISHED AUGUST 17, 1915.

106,797. IMITATION COFFEE. ESSIE PROKESCH, Hackensack, N. J.
Filed April 24, 1915. Serial No. 86,187. PUBLISHED AUGUST 3, 1915.

106,798. SHOE-LACES. PROVIDENCE BRAID COMPANY, Pawtucket, R. I.
Filed June 9, 1914. Serial No. 78,932. PUBLISHED AUGUST 3, 1915.

106,799. HAIRCLOTH INTERLINING. EICHER & CO., New York, N. Y.
Filed April 13, 1915. Serial No. 85,934. PUBLISHED AUGUST 3, 1915.

106,800. PILE FABRICS—NAMELY, VELVETS, VELVETEENS, AND CORDUROYS. ROSEN, PLECHNER & LIPSCHUTS, New York, N. Y.
Filed May 28, 1915. Serial No. 86,971. PUBLISHED AUGUST 3, 1915.

106,801. WRITING-PAPER. HARRIET A. SABLE, New York, N. Y., assignor to John F. Sarle Company, Inc., a Corporation of New York.
Filed February 6, 1915. Serial No. 84,349. PUBLISHED AUGUST 3, 1915.

106,802. MEDICINAL TONICS. EMIL SCHELLER & Co., A. G., Zurich, Switzerland.
Filed November 24, 1914. Serial No. 82,891. PUBLISHED AUGUST 10, 1915.

106,803. ALIMENTARY PREPARATIONS USED IN MEDICINE. EMIL SCHELLER & Co., A. G., Zurich, Switzerland.
Filed November 24, 1914. Serial No. 82,893. PUBLISHED AUGUST 10, 1915.

106,804. BROOMS, WHISK-BROOMS, AND BRUSHES. FRANK D. SCHLEICHER, Mifflintown, Pa.
Filed April 29, 1915. Serial No. 86,278. PUBLISHED AUGUST 10, 1915.

106,805. CERTAIN NAMED FOODS. SEARS, ROEBUCK AND Co., Chicago, Ill.
Filed April 10, 1915. Serial No. 85,877. PUBLISHED AUGUST 3, 1915.

106,806. SILK, COTTON, AND WOOL PIECE GOODS AND COMBINATIONS THEREOF IN THE PIECE. SELSOS DRESS FABRIC CO., INC., New York, N. Y.
Filed May 25, 1915. Serial No. 86,891. PUBLISHED AUGUST 3, 1915.

106,807. CERTAIN NAMED WEARING-APPAREL FOR MEN, WOMEN, AND CHILDREN. FRANKLIN SIMON, New York, N. Y.
Filed March 17, 1915. Serial No. 85,223. PUBLISHED AUGUST 3, 1915.

106,808. COFFEE, TEA, AND COCOA. C. FRANK SMITH, Detroit, Mich.
Filed May 27, 1915. Serial No. 86,939. PUBLISHED AUGUST 10, 1915.

106,809. HATS. JULIUS SMOLIN, New York, N. Y.
Filed June 23, 1915. Serial No. 87,543. PUBLISHED AUGUST 10, 1915.

106,810. MEASURING-RULES. THE STANLEY RULE & LEVEL COMPANY, New Britain, Conn.
Filed May 17, 1915. Serial No. 86,686. PUBLISHED AUGUST 10, 1915.

106,811. TABLETS USED AS A SUBSTITUTE FOR CASTOR-OIL. STOTHERTS LIMITED, Atherton, England.
Filed May 26, 1915. Serial No. 86,919. PUBLISHED AUGUST 10, 1915.

106,812. HAIR-DRESSING. TAGALOG & TAGALOG, Charlotte, N. C.
Filed May 29, 1915. Serial No. 87,002. PUBLISHED AUGUST 10, 1915.

106,813. MINERAL WATER. JAMES THOMAS, Nashville, Tenn.
Filed April 26, 1915. Serial No. 86,217. PUBLISHED AUGUST 3, 1915.

106,814. REMEDY FOR LA GRIPPE, AGUE, INFLUENZA, AND MALARIA. THOMPSON REMEDY CO., East Chicago, Ind.
Filed March 24, 1913. Serial No. 69,302. PUBLISHED AUGUST 3, 1915.

106,815. LIQUEUR STOMACH-BITTERS. D. VANDEWART & SON, New York, N. Y.
Filed July 1, 1915. Serial No. 87,698. PUBLISHED AUGUST 10, 1915.

106,816. DRESSED POULTRY. WEINBERG BROTHERS AND COMPANY, Chicago, Ill.
Filed May 21, 1915. Serial No. 86,815. PUBLISHED AUGUST 3, 1915.

106,817. CERTAIN NAMED MEDICINES AND PHARMACEUTICAL PREPARATIONS. WELD & COMPANY, INC., Auburn, N. Y.
Filed March 19, 1914. Serial No. 76,783. PUBLISHED AUGUST 10, 1915.

106,818. SUNBONNETS, SUN-HATS, DUST-CAPS, BABY-BONNETS, AND CAPS. THE WINGET MANUFACTURING CO., INC., Minneapolis, Minn.
Filed July 10, 1915. Serial No. 87,885. PUBLISHED AUGUST 17, 1915.

106,819. BUTTONS. THE WINWAL COMPANY, Rockford, Ill.
Filed June 21, 1915. Serial No. 87,491. PUBLISHED AUGUST 3, 1915.

106,820. FURNITURE-POLISH. WIZARD PRODUCTS CO., Chicago, Ill.
Filed May 7, 1915. Serial No. 86,465. PUBLISHED AUGUST 10, 1915.

106,821. EXPLOSIVES—NAMELY, BLACK SPORTING-POWDER. E. I. DU PONT DE NEMOURS POWDER COMPANY, Wilmington, Del.
Filed January 22, 1913. Serial No. 68,054. PUBLISHED AUGUST 10, 1915.

LABELS

REGISTERED OCTOBER 26, 1915.

18,808.—*Title:* "HUFF'S HOARHOUND AND HONEY DROPS." (For a Confection.) THE H. L. HUFF MFG. CO., Louisville, Ky. Filed August 2, 1915.

18,809.—*Title:* "KARA." (For a Depilatory.) MURRAY & RIDGEWAY, Los Angeles, Cal. Filed September 7, 1915.

18,810.—*Title:* "ULMAN'S ROSE GIN." (For Gin.) I. ULMAN & SONS, Baltimore, Md. Filed September 22, 1915.

18,811.—*Title:* "WICOMICO CLUB WHISKEY." (For Whisky.) I. ULMAN & SONS, Baltimore, Md. Filed September 22, 1915.

18,812.—*Title:* "ULSO WHISKEY." (For Whisky.) I. ULMAN & SONS, Baltimore, Md. Filed September 22, 1915.

18,813.—*Title:* "ULMAN'S OLD LOG CABIN WHISKEY." (For Whisky.) I. ULMAN & SONS, Baltimore, Md. Filed September 22, 1915.

18,814.—*Title:* "PERUGIA OINTMENT." (For Ointment.) LUISA LAURENZI, Old Forge, Pa. Filed October 4, 1915.

PRINTS

REGISTERED OCTOBER 26, 1915.

4,101.—*Title:* "WHY BE A DISH WASHER?" (For an Electric Dish-Washing Machine.) CONSOLIDATED GAS, ELECTRIC LIGHT & POWER COMPANY OF BALTIMORE, Baltimore, Md. Filed September 30, 1915.

4,102.—*Title:* "LIBERATED." (For an Electric Dish-Washing Machine.) CONSOLIDATED GAS, ELECTRIC LIGHT & POWER COMPANY OF BALTIMORE, Baltimore, Md. Filed September 30, 1915.

4,103.—*Title:* "AS THE MODERN HOUSE-WIFE DOES IT." (For a Mechanical Bread-Mixer.) CONSOLIDATED GAS, ELECTRIC LIGHT & POWER COMPANY OF BALTIMORE, Baltimore, Md., Filed October 8, 1915.

4,104.—*Title:* "NEEDA HELPER?" (For a Mechanical Bread-Mixer.) CONSOLIDATED GAS, ELECTRIC LIGHT & POWER COMPANY OF BALTIMORE, Baltimore, Md. Filed October 8, 1915.

4,105.—*Title:* "TWO MAGICIANS." (For an Electric Iron.) CONSOLIDATED GAS, ELECTRIC LIGHT & POWER COMPANY OF BALTIMORE, Baltimore, Md. Filed October 8, 1915.

4,106.—*Title:* "DON'T COURT DISASTER." (For an Electric Iron.) CONSOLIDATED GAS, ELECTRIC LIGHT & POWER COMPANY OF BALTIMORE, Baltimore, Md. Filed October 8, 1915.

4,107.—*Title:* "BALLISTITE." (For Smokeless Shotgun-Powder.) E. I. DU PONT DE NEMOURS POWDER CO., Wilmington, Del. Filed September 7, 1915.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE WHITELAW.

Decided April 6, 1914.

1. PATENTABILITY—REORGANIZATION—INVENTION.

Claims covering structures involving changes in a patented device which are broadly suggested by another patent, *Held* patentable because the reorganization necessary to embody such changes required invention.

2. SAME—MULTIPLYING CLAIMS—NO NEW COMBINATION.

Claims to the real invention having been allowed, an applicant cannot be permitted to multiply his claims by presenting alleged combinations which distinguish from the real invention only by including elements which are old in the art and perform no new function.

[Note.—This application has resulted in Patent No. 1,143,568.]

APPEAL from Examiners-in-Chief.

ENGINE.

Messrs. Rector & Hibben and *Messrs. Pennie & Goldsborough* for the applicant.

EWING, *Commissioner:*

This is an appeal from the rejection of claims 26, 27, and 49 to 56, inclusive, by the Board of Examiners-in-Chief.

The appealed claims are as follows:

26. In a machine of the character described, the combination of a casing, a double crank shaft journaled in the sides of said casing, a pair of oscillating engines mounted side by side in said casing to oscillate in parallel planes and upon an axis parallel with the crank shaft, said engines having their piston rods connected to the cranks of said shaft, and a tool shaft mounted parallel with and out of alinement with said crank shaft, and gearing connecting the crank shaft and the tool shaft.

27. In a machine of the character described, the combination of a casing, a shaft journaled in the sides of said casing and provided with a plurality of cranks, a pair of oscillating engines mounted side by side in said casing to oscillate in parallel planes and upon an axis parallel with the crank shaft, said engines having their piston rods connected to the cranks of said shaft, a tool shaft mounted parallel with and out of alinement with said crank shaft, a pinion on the outer end of said tool shaft, a gear mounted upon a stub shaft at the side of said pinion and adapted to mesh therewith, a second pinion secured to said gear and a gear mounted upon the crank shaft and adapted to mesh with said last mentioned pinion.

49. In a machine of the character described, the combination, with a driven shaft, of an engine operatively connected therewith, a hollow handle for supplying the motive fluid connected with the engine for moving and steadying the engine, and a hollow reversing yoke connected with said hollow handle coöperating with the engine ports and under the control of said handle; substantially as described.

50. In a machine of the character described, the combination, with a driven shaft, of an engine operatively connected therewith, a hollow grasping handle for supplying the motive fluid connected with the engine for moving and steadying the engine, a hollow reversing yoke connected with said hollow handle coöperating with the engine ports, and means for limiting the degree of rotation of said member; substantially as described.

51. In a machine of the character described, the combination, with a driven shaft, of an engine operatively connected therewith, a hollow grasping handle for supplying motive fluid connected with the engine for moving and steadying the engine, a hollow reversing yoke connected with said hollow handle coöperating with the engine ports, and a rotatable member carried by said handle and operatively connected with said yoke for adjusting the relative position thereof to reverse the direction of rotation of the engine; substantially as described.

52. In a machine of the character described, the combination, with a driven shaft, of an engine operatively connected therewith, a hollow grasping handle for supplying the motive fluid connected with the engine for moving and steadying the engine, a hollow reversing yoke connected with said hollow handle coöperating with the engine ports, a rotatable member carried by said handle and operatively connected with said yoke for adjusting the relative position thereof to reverse the direction of rotation of the engine, and means for limiting the degree of rotation of said member; substantially as described.

53. In a machine of the character described, the combination, with a casing, of a driven shaft therein, an engine operatively connected with the shaft and located within the casing, a hollow grasping handle for supplying the motive fluid connected with the casing for moving and steadying the engine, a hollow reversing yoke connected with said hollow handle coöperating with the engine ports, and means carried by the handle for controlling the reversing yoke; substantially as described.

54. In a machine of the character described, the combination, with a casing, of a driven shaft therein, an engine operatively connected with the shaft and located within the casing, a hollow grasping handle for supplying the motive fluid connected with the casing for moving and steadying the engine, a hollow reversing yoke connected with said hollow handle arranged within the casing coöperating with the engine ports, and a rotatable member carried by the handle and operatively connected with the reversing yoke for operating the latter; substantially as described.

55. In a machine of the character described, the combination, with a casing, a driven shaft therein, of an engine operatively connected with the shaft and located within the casing, a hollow grasping handle arranged to supply the motive fluid, a motive fluid yoke-shaped conduit communicating with said handle and with the engine ports, and means for adjusting the position of said conduit to reverse the engine; substantially as described.

56. In a machine of the character described, the combination, with a casing, a driven shaft therein, of an engine operatively connected with the shaft and located within the casing, a hollow grasping handle arranged to supply the motive fluid, a motive fluid yoke-shaped conduit communicating with said handle and with the engine ports, and means carried by said handle and coöperating with the reversing mechanism for adjusting the position of the latter to reverse the engine, substantially as described.

The references relied upon are: Ryder, 169,375, November 2, 1875; Comstock, 590,656, September 28, 1897; Comstock, 590,657, September 28, 1897; Kimman, 639,738, December 26, 1899; Boyer, 669,069, March 5, 1901.

The patent to Ryder discloses a pair of engines, which oscillate about a single axis, a double crank-shaft connected to the engines and mounted parallel

to the axis of oscillation, and a tool-shaft mounted at right angles to the crank-shaft. In addition to the disclosure in the Ryder patent the claim sets forth that the engines are mounted in a casing, that the crank-shaft is journaled in the sides of the casing, and the tool-shaft is mounted parallel with and out of alinement with the crank-shaft. While these changes are broadly suggested in the patent to Kimman, it would involve invention to reorganize the structure shown in Ryder in order to incorporate the same therein, and for this reason claim 26 is allowed. Claim 27 differs from claim 26 only by including a specific arrangement of gearing between the crank-shaft and the tool-shaft, the full equivalent of which is shown in each of the patents to Comstock. This claim is therefore rejected, as it does not define anything patentable over claim 26.

Claim 49 is directed to a general combination and includes as one of the elements thereof a hollow reversing-yoke connected with a hollow handle coöperating with the engine-ports and under the control of the handle for reversing the engine. The patent to Comstock, No. 590,657, shows a hollow handle connected to an engine, which serves to convey motive fluid to the engine and may also serve to move and steady the engine; but it contains no reversing means. To insert reversing means of the character shown in either Kimman or Boyer in the structure shown in Comstock and place the same in connection with the hollow handle would involve a reorganization not suggested by the references cited, and this claim is allowed.

Claims 50 and 51 more specifically define the structure of the means for controlling the reversing mechanism, and these are also allowable.

Claim 52 includes, in addition to the structure set forth in claim 51, means for limiting the degree of rotation of the rotatable member carried by the handle. This limitation is regarded as being insufficient to render this claim patentable over claim 51, for the reason that no invention is involved in employing a stop to limit the rotation of such an element.

Claim 54 is not patentable over claim 51 and claims 53, 55, and 56 are not patentable over claim 50 in view of Comstock, No. 590,657, which shows that it is old to employ an engine-casing in tools of this character. The claims held patentable are considered as fully covering applicant's invention, and applicant cannot be permitted to multiply his claims by presenting alleged combinations which distinguish from the real invention only by including elements which are old in the art and perform no new function.

Applicant's contention relative to the patents to Boyer and Kimman not being proper references in this application, will not be considered, as claims 26, 49, 50, and 51 have been allowed and the reason why claims 27, 52, 53, 54, 55, and 56 are held unpatentable does not depend on these patents.

The decision of the Examiners-in-Chief is reversed as to claims 26, 49, 50, and 51 and affirmed as to claims 27, 52, 53, 54, 55, and 56.

EX PARTE NELSON AND NELSON.

Decided July 17, 1914.

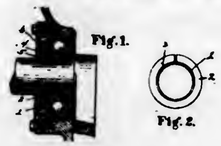
PATENTABILITY—METALLIC PACKING.

Applicants' device compared with the prior art and found to embody patentable novelty.

APPEAL from Examiners-in-Chief.

METALLIC PACKING.

The subject-matter of the claims is shown in Figures 1 and 2 of Nelson's patent, No. 1,120,400:

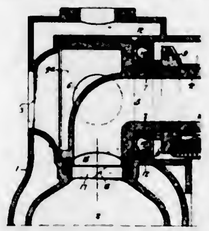


The references relied upon are:

Hall *et al.*, 115,463, May 30, 1871, which shows:



Miller, 985,618, February 28, 1911, which shows:



Mr. Charles E. Wisner for the applicants.

NEWTON, *Assistant Commissioner*, (*now First Assistant Commissioner:*)

This is an appeal from the decision of the Examiners-in-Chief affirming the decision of the Primary Examiner rejecting claims 1 to 14, inclusive, of which the following serve as examples:

1. A metallic packing comprising a split ring of spring metal having a tapered outer surface and a seat therefor having a like tapered surface whose diameter is less than the normal outer diameter of the ring.

6. A metallic packing comprising a pair of split concentric rings of spring material, one surface of the assembled rings being uniformly tapered, and a seat for the rings formed with a corresponding taper, the diameter of which is less than the normal diameter of the tapered surface of the rings.

14. A metallic packing for rods, shafts, etc., comprising a split ring of spring metal having a tapered outer surface, a seat therefor having a like tapered surface of less diameter than the tapered surface of the ring, and means for holding the ring on the seat, the inner diameter of the ring when seated being greater than the diameter of the rod about which it is positioned.

The references relied upon by the Examiners-in-Chief are: Hall *et al.*, 115,463, May 30, 1871; Miller, 985,618, February 28, 1911.

The patent to Hall discloses a rod-packing which is constructed of a plurality of packing-rings D, back of which is placed a malleable ring E. The end portions of the rings are beveled to coöperate with corresponding bevel-surfaces on the retaining

members, so that when the retaining members are forced together the packing-rings will clamp the rod, and thus form a rod-packing. The rings are shown as being made of separable parts, and there is no disclosure that any of them are constructed of spring metal. It does not appear that there is any tendency on the part of the element E to expand to its original position when the retainer B is withdrawn other than the pressure on the rod C. This structure cannot be regarded as disclosing a split ring of spring metal having a seat of less diameter than the normal diameter of the ring.

In the Miller patent there is a loose connection formed between the rotary element 4 and the interior of the casing 1. A packing composed of the elements 16 and 17 is inserted between the rotary member and the casing, which operates to close the space between the two during the period of high pressure within the casing by expanding the ring 17, which then wedges the ring 16 against the head 4. When the pressure is released, the ring 17 springs back to its normal position and the connection between 1 and 4ª is again loose. In applicants' device the spring-ring is in packing relation at all times and does not necessitate the high pressure of the explosion to bring it into operation. The problem in the Miller construction and in applicants' device, as disclosed in Fig. 1, may be broadly the same—that is, to pack a joint between a hollow fixed and a hollow revoluble member from the interior—but the means whereby this result is accomplished is not the same. In Miller the action is intermittent and produced by the explosion, while in applicants' device the action is continuous and is produced by the ring itself. The references cannot be regarded as disclosing a split ring of spring metal provided with a seat of less diameter than the normal diameter of the ring, and, furthermore, the mode of producing the result is different in applicants' device from that in either of the references.

This difference in construction is embraced in each of the claims, and they are all held to be allowable.

The decision of the Examiners-in-Chief is reversed.

EX PARTE KLENK.

Decided December 26, 1914.

1. PATENTABILITY—BOTTLE-CRATE.

Claims differing from prior patents only in specifying a latch and the spring therefor as separate elements *Held* unpatentable, because it is common in the arts generally to so construct spring-latches.

2. SAME—SAME.

Changes in crate structure consisting only in duplicating the latch or in a different support for the retaining-plates *Held* unpatentable.

3. SAME—SAME.

A variation from the art cited by which the spring for the latch also serves as a stop *Held* patentable.

Note.—This application has resulted in Patent No. 1,139,535.

APPEAL from Examiners-in-Chief.

BOTTLE-CRATE.

Mr. Henry H. Bliss for the applicant.

WHITEHEAD, *Assistant Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief affirming the action of the Primary Examiner finally rejecting claims 1–5, inclusive, and 9–12, inclusive, of which claims 2, 10, and 11 are illustrative. These claims are as follows:

2. The combination of a bottle crate, a bottle retainer adapted to be placed within the crate, a movable latch mounted on the crate in position to engage the retainer and hold it in position, and a spring mounted on the crate in position to hold the latch in operative position, the spring acting upon the latch in a direction substantially normal to the direction of movement of the retainer and being without positive connection with the latch along lines parallel to the direction of the movement of the retainer, whereby the spring is entirely relieved of stresses transmitted from the retainer.

10. The combination in a rectangular bottle crate of four lateral walls, four brackets mounted all in the same horizontal plane between the top and bottom of the crate, one being in each corner of the crate and rigidly secured to the two walls meeting at the corner, a cellular structure mounted below the brackets, a bottle retaining plate adapted to rest upon the brackets and be supported thereby, and means for detachably securing the plate against upward movement while supported upon the said brackets.

11. The combination of a crate, a cellular structure mounted therein, a bottle retaining plate having openings vertically alining with the cells of the said cellular structure, a vertical support for the plate secured to the crate, a latch secured to the crate and movable horizontally about its point of securement into and out of position for preventing upward movement of the retaining plate, and a spring mounted on the crate in position to hold the latch in locking position and provided with a stop for limiting the movement of the latch in the direction of unlocking.

The references are: Klenk, reissue, No. 12,775, April 7, 1908; Houghton, No. 629,506, July 25, 1899; Leidich, No. 630,903, August 15, 1899; Kruse, No. 905,193, December 1, 1908; Heulings, No. 928,197, July 13, 1909; Kruse, No. 942,966, December 14, 1909; Hardinge, No. 943,825, December 21, 1909; Kruse, No. 975,962, November 15, 1910.

Claims 1 to 4, inclusive, relate to the latch 22, which is held in place by the spring 21. These claims were rejected by the Examiner in view of the patents to Kruse, No. 975,962 and No. 942,966.

It is stated in the brief that it is difficult or impossible to obtain the required stiffness and strength and the proper spring action in the same piece of metal and that for this reason applicant has used a stiff latch held in place by a separate spring. The Examiners-in-Chief held that it is so common in the arts generally to separate the latch action and the spring action that it cannot be regarded as invention to apply such a latch to a bottle-case. Examples of such latches are shown in the patents to Robinson and Downard, No. 620,055, and Vickery and Harding, No. 803,201. The rejection of these claims is believed to have been proper.

Claim 5 was also properly rejected as involving a mere duplication of the latch.

Claims 9 and 10 were properly rejected. It cannot be held that there was any invention in supporting the bottle-retaining plates on brackets, such as are shown in the reissue patent to Klenk, No. 12,775.

Claims 11 and 12 specify that the springs by which the latch is held in place are so arranged that they provide a stop for limiting the movement of the latch in an unlocking direction. This construction is not suggested by any of the references, and the claims are deemed allowable.

Applicant presents with his brief an amendment asking to be allowed to substitute for claims 1 and 2 two new claims, to amend claims 11 and 12, and to present an additional claim 13. New claim 1 is regarded as unpatentable for the reasons given with respect to claims 1 to 4. Claim 2 is also regarded as unpatentable, as merely to provide two plate-engaging lugs on the latch is not invention. The amendments to claim 3 do not render that claim patentable. Claims 11 and 12 have been held patentable; but the Examiner is authorized to permit the amendment of these claims in the manner indicated if such amendment is filed within ten days from the date hereof, as the language of the claims appears to be improved thereby and one or two unnecessary limitations removed. Claim 13 is not seen to be patentably different from claims 11 and 12.

The decision of the Examiners-in-Chief is reversed as to claims 11 and 12 and is affirmed as to the remaining claims.

ADJUDICATED PATENTS.

(U. S. D. C.) The McCreery and McCreery patent, No. 623,809, for expansion-bolt, *Held* valid. *United States Expansion Bolt Co.* v. *H. G. Kroncke Hardware Co.*, 225 Fed. Rep., 383.

(U. S. D. C.) The Cook patent, No. 685,820, for a lead anchor for expansion-bolts, *Held* valid. *United States Expansion Bolt Co.* v. *H. G. Kroncke Hardware Co.*, 225 Fed. Rep., 383.

(U. S. D. C.) The Ottofy patent, No. 795,059, for a street-flushing machine, *Held* valid. *Sanitary Street Flushing Mach. Co.* v. *City of Amsterdam*, 225 Fed. Rep., 389.

(U. S. D. C.) The Pleister patent, No. 978,559, for a shield for expansion-bolts, *Held* valid. *United States Expansion Bolt Co.* v. *H. G. Kroncke Hardware Co.*, 225 Fed. Rep., 383.

(U. S. C. C. A.) The Kennedy patent, No. 1,054,424, for a tile flooring, *Held* void for prior public use. *David E. Kennedy* v. *United Cork Co.*, 225 Fed. Rep., 371.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 5, 1915.

Detroit Electric Soap Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Barclay & Co., 26 Beaver street, New York, N. Y., for registration of a trade-mark and trade-mark registered October 6, 1891, No. 20,188, to Detroit Electric Soap Company, Detroit, Mich., and a notice of such declaration sent by registered mail to said Detroit Electric Soap Company at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Detroit Electric Soap Company, its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 1, 1915.

Patterson & Cross, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Gowan-Lenning-Brown Co., Nos. 227–261 South Fifth avenue west, Duluth, Minn., for registration of a trade-mark and a trade-mark registered March 29, 1904, No. 42,302, to Patterson & Cross, No. 53 River street, Chicago, Ill., and a notice of such declaration sent by registered mail to said Patterson & Cross at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Patterson & Cross, their assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

J. T. NEWTON, *First Assistant Commissioner.*

[Vol. 219. No. 4.]

INDEX

TO THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

OCTOBER, 1915.

[Decisions of the United States District Courts are indicated by the letter (ᵇ) and of the United States Circuit Court of Appeals by the letter (ᵈ).]

TABLE OF CASES.

	Page.
Gregory, Jackson, and Connet *v.* Ledoux	929
Illinois Seed Co., The. *Ex parte*	931
Klenk. *Ex parte*	1239
Nelson and Nelson. *Ex parte*	1238
ᵈ Standard Typewriter Co. *v.* Standard Folding Typewriter Sales Co. *et al*	269
ᵇ Vacuum Cleaner Company, The, *v.* American Rotary Valve Company	587
Welch *v.* Auflero (two cases)	930, 931
Whitelaw. *Ex parte*	1237

SUBJECT-MATTER INDEX.

	Page.
Claims, multiplicity of not to be permitted where the elements are old and perform no new function, *ex parte* Whitelaw	1237
Construction of, patentable novelty, *ex parte* Klenk	1239
Ex parte Nelson and Nelson	1238
ᵇ Commercial utility, doubt as to validity resolved in favor of patent because of, The Vacuum Cleaner Company *v.* American Rotary Valve Company	587
Companion interferences; suspension of judgment to prevent application of doctrine of *res adjudicata* not justifiable, Welch *v.* Auflero	930, 931
Interference, *res adjudicata*, Welch *v.* Auflero	930, 931
Substitution of parties, Welch *v.* Auflero	930
Where unnecessarily prolonged by laches of one party, supervisory authority of Commissioner justifiably exercised to settle matter shortest way, Gregory, Jackson, and Connet *v.* Ledoux	929
ᵇ Particular patents, Kenney, No. 847,947, valid and infringed as to claims 1, 3, and 4 and void as to claim 2, as well as Kenney, No. 847,948, for lack of patentable novelty, The Vacuum Cleaner Company *v.* American Rotary Valve Company	587
ᵈ Particular patents, Rose, No. 754,242, void because of anticipation by Carmona patent, No. 661,849, Standard Typewriter Co. *v.* Standard Folding Typewriter Sales Co. *et al*	269
Patentability, reorganization necessary to embody certain changes in patented device may require patentable invention, *ex parte* Whitelaw	1237
Reissue application, claims copied from patent granted long time prior to both reissue application and original patent, no showing of inadvertence, accident, or mistake, granting reissue patent not justifiable, Gregory, Jackson, and Connet *v.* Ledoux	929
Supervisory authority of Commissioner, favorable decision of the Examiners-in-Chief as to right of one party to make claims, reviewed and reversed, Gregory, Jackson, and Connet *v.* Ledoux	929
Trade-marks, disclaimer sufficient, *ex parte* The Illinois Seed Co	931

DIGEST

OF THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

OCTOBER, 1915.

[Decisions of the United States District Courts are indicated by the letter (b) and of the United States Circuit Court of Appeals by the letter (d).]

ANTICIPATION.

See Particular Patents, 2.

CLAIMS.

See Construction of Claims; Invention; Reissues; Right to Make Claims.

COMBINATION.

See Invention, 2.

COMMERCIAL SUCCESS.

VALIDITY AND INFRINGEMENT.

Large commercial utility *Held* to resolve in favor of the patent any doubt as to its validity.

[b The Vacuum Cleaner Company v. American Rotary Valve Company, 587.

COMPANION INTERFERENCE.

See Interference, 2, 3.

CONSTRUCTION OF CLAIMS.

1. PATENTABILITY—METALLIC PACKING.

Applicants' device compared with the prior art and found to embody patentable novelty.

[*Ex parte* Nelson and Nelson, 1238.

2. SAME—BOTTLE-CRATE.

Claims differing from prior patents only in specifying a latch and the spring therefor as separate elements *Held* unpatentable, because it is common in the arts generally to so construct spring-latches. [*Ex parte* Klenk, 1239.

3. SAME—SAME.

Changes in crate structure consisting only in duplicating the latch or in a different support for the retaining-plates *Held* unpatentable. [Id.

4. SAME—SAME.

A variation from the art cited by which the spring for the latch also serves as a stop *Held* patentable. [Id.

CONSTRUCTION OF SPECIFICATIONS AND PATENTS.

See Particular Patents.

COPENDING APPLICATIONS.

See Reissues.

DECISIONS OF THE EXAMINERS-IN-CHIEF.

See Right to Make Claims.

DELAY IN APPLICATION FOR REISSUE.

See Reissues.

DISCLAIMERS IN TRADE-MARKS.

SUFFICIENCY—"BRAND."

Where the Examiner of Trade-Marks objected to a disclaimer of the word "Brand" used apart from applicant's mark, which consisted of the word "Trumpet" above the representation of a trumpet and the word "Brand" between them, *Held* that the disclaimer was sufficient. [*Ex parte* The Illinois Seed Co., 931.

ELEMENTS.

See Construction of Claims, 2, 3, 4.

FINAL HEARING.

See Interference, 2, 3.

FUNCTION.

See Invention, 2.

INFRINGEMENT.

See Commercial Success; Particular Patents, 1.

INTERFERENCE.

See Right to Make Claims.

1. SUPERVISORY AUTHORITY.

Where four years of the term of the patent in interference had been consumed in a consideration of the adverse right of an opponent whose laches appeared to have unnecessarily prolonged the time, the exercise of the Commissioner's supervisory authority is justified to settle the matter in the shortest way.

[Gregory, Jackson, and Connet v. Ledoux, 929.

2. SUBSTITUTION OF PARTIES—RES ADJUDICATA.

Where W. contends that the invention in issue between him and A. is not his own but that of McM., whose application is owned by the same party in interest as W.'s, *Held* that the question of *res adjudicata* may be controlling, and therefore A. is entitled to a judgment against W., but that the Examiner was right in declaring an interference between A.'s application and McM.'s, so that the question might be tried out.

[Welch v. Aufiero, 930.

3. COMPANION INTERFERENCES—SUSPENDING JUDGMENT.

When the circumstances were such that the decision in one of two companion interferences could throw no light on the decision of the other and there was a possibility that the decision in one might render the whole subject-matter *res adjudicata*, *Held* that the postponement of the final hearing in the first, to prevent the possible application of the doctrine, was not justified.

[Welch v. Aufiero, 931.

INVENTION.

See Interference, 1.

1. PATENTABILITY—REORGANIZATION.

Claims covering structures involving changes in a patented device which are broadly suggested by another patent *Held* patentable because the reorganization necessary to embody such changes required invention. [*Ex parte* Whitelaw, 1237.

2. SAME—MULTIPLYING CLAIMS—NO NEW COMBINATION.
Claims to the real invention having been allowed, an applicant cannot be permitted to multiply his claims by presenting alleged combinations which distinguish from the real invention only by including elements which are old in the art and perform no new function.
[Note.—This application has resulted in Patent No. 1,143,563.] [Id.

LACHES.

See Interference, 1.

MULTIPLICITY OF CLAIMS.

See Invention, 2.

OLD ELEMENTS.

See Invention, 2.

PARTICULAR PATENTS.

1. KENNEY—NOS. 847,947 AND 847,948—VACUUM-CLEANER—VALIDITY AND INFRINGEMENT.
The Kenney patent, No. 847,947, for vacuum cleaning apparatus, *Held* valid and infringed as to claims 1, 3, and 4. Claim 2 and the single claim of Kenney Patent No. 847,948 *Held* void for lack of patentable novelty.
[b The Vacuum Cleaner Company v. American Rotary Valve Company, 587.

2. ROSE—NO. 754,242—TYPE-WRITERS—ANTICIPATION.
The Rose patent, No. 754,242, for a type-writer, claims 1 and 5, the distinguishing feature of which is the provision of means whereby the platen and its carriage may be folded into compact relation to the banks of keys, giving the machine a compact form for purposes of transportation, *Held* void for anticipation by the device of the Carmona patent, No. 661,849.
[d Standard Typewriter Co. *v.* Standard Folding Typewriter Sales Co. *et al.*, 269.

PATENTABILITY.

See Construction of Claims; Invention, 1.

PRIOR PATENTS.

See Construction of Claims, 2, 3, 4.

REISSUES.

DELAY—INADVERTENCE, ACCIDENT, AND MISTAKE.
Where an applicant attempting to reissue to include claims copied from a patent granted two and one-half years before his patent was granted and nearly three and one-half years before the reissue application was filed made no showing of "inadvertence, accident, or mistake" except that he was not aware that the claims had been allowed to another and that the claims were not suggested to him by the Office when the cases were copending, *Held* that the circumstances do not justify the granting of a reissue patent.
[Gregory, Jackson, and Connet v. Ledoux, 929.

REORGANIZATION.

See Invention, 1.

RES ADJUDICATA.

See Interference, 2, 3.

RIGHT TO MAKE CLAIMS.

INTERFERENCE—SUPERVISORY AUTHORITY OF THE COMMISSIONER.
Under the special circumstances of the case the favorable decision of the Examiners-in-Chief on the right of one of the parties to make the claims reviewed under the Commissioner's supervisory authority and reversed.
[Gregory, Jackson, and Connet v. Ledoux, 929.

STATE OF THE ART.

See Construction of Claims.

SUBSTITUTION OF PARTIES.

See Interference, 2, 3.

SUPERVISORY AUTHORITY OF THE COMMISSIONER OF PATENTS.

See Interference, 1; Right to Make Claims.

SUSPENSION OF JUDGMENT.

See Interference, 3.

TRADE-MARKS.

See Disclaimers in Trade-Marks.

VALID PATENTS.

See Particular Patents, 1.

VALIDITY OF PATENT.

See Commercial Success.

VOID PATENTS.

See Particular Patents

O

BAKER PUBLIC LIBRARY JAN 15 1916

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF OCTOBER, 1915.

[Abbreviations: "Gaz."—Official Gazette.]

A. Kimball Company. (See Anthony, Marcus O., assignor.)
A. C. Clark & Company. (See Clark, Albert C., assignor.)
A. D. Kneuper Specialty Company. (See Kneuper, Alexander D., assignor.)
A. F. Meisselbach & Brother. (See Cntucci, Pilny, assignor.)
A. J. Lindemann & Hoverson Co. (See Lindemann and Camp, assignors.)
Aasen, Niels W. (See Hansen-Ellehammer, Jacob C., assignor.)
Abbott, Edgar C., *et al.* (See Connor, Patrick F., assignor.)
Abbott, John M., Nebo, Ill. Boiler-feeder. No. 1,157,357; Oct. 19; Gaz. vol. 219; p. 766.
Abbott, William C., Baltimore, Md. Car-fender. No. 1,156,737; Oct. 12; Gaz. vol. 219; p. 517.
Abbott, William G., Jr., Milford, N. H., assignor to General Electric Company. Drawn electrode. No. 1,157,280; Oct. 19; Gaz. vol. 219; p. 740.
Abel, Percy, Alton, Ill. Knife. No. 1,155,331; Oct. 5; Gaz. vol. 219; p. 8.
Abell, Rollin, Boston, Mass. Carbureter. No. 1,158,359; Oct. 26; Gaz. vol. 219; p. 1178.
Abraham, Henri, assignor to Henri Abraham et Jules Carpentier, Paris, France. Apparatus for producing directive forces by induction in alternating-current circuits. No. 1,157,281; Oct. 19; Gaz. vol. 219; p. 740.
Abt, Alfred, assignor to The Warner Brothers Company, Bridgeport, Conn. Corset. No. 1,155,864; Oct. 5; Gaz. vol. 219; p. 188.
Ach, Lorenz, Mannheim, and A. Rothmann, Heidelberg, assignors to Farbwerke vorm. Meister Lucius & Bruening, Höchst-on-the-Main, Germany. Preparing amino-arsenobenzenes. No. 1,156,044; Oct. 12; Gaz. vol. 219; p. 277.
Ach, Lorenz, Mannheim-Waldhof, A. Rothmann, Heidelberg, and H. Dieterich, Mannheim, assignors to Farbwerke vorm. Meister Lucius & Bruening, Höchst-on-the-Main, Germany. Preparing 2-chloro-4-aminobenzene-1-arsinic acids. No. 1,156,045; Oct. 12; Gaz. vol. 219; p. 277.
Acheson, Edwin S., St. Louis, Mo. Wire-splicer. No. 1,158,018; Oct. 26; Gaz. vol. 219; p. 1059.
Ackerman, Frederick, North Bergen, N. J. Pipe-fitter's vise-bench. No. 1,156,965; Oct. 19; Gaz. vol. 219; p. 627.
Acme Supply Company, The. (See Schroyer, Harry H., assignor.)
Acme White Lead and Color Works. (See Holley, Clifford D., assignor.)
Adams, Walter S., assignor to The J. G. Brill Co., Philadelphia, Pa. Car-truck. No. 1,157,971; Oct. 26; Gaz. vol. 219; p. 1044.
Adams & Westlake Company, The. (See Willits, Ward W., assignor.)
Adamson, Charles E., Buffalo, N. Y., assignor to Knapp Husker Company, Baltimore, Md. Duplicating or printing machine. No. 1,155,696; Oct. 5; Gaz. vol. 219; p. 129.
Adamson, James P., St. Paul, Minn. Wall-radiator bracket. No. 1,158,151; Oct. 26; Gaz. vol. 219; p. 1106.
Adamson, Oliver E., Grimes, Iowa. Resilient wheel. No. 1,155,832; Oct. 5; Gaz. vol. 219; p. 8.
Adderson, James G., Renton, assignor to Denny-Renton Clay & Coal Co., Seattle, Wash. Forming paving-brick. No. 1,156,574; Oct. 12; Gaz. vol. 219; p. 461.
Addograph Company. (See Crawley, Mansfield C., assignor.)
Addometer Corporation. (See Lotterhand, Jason C., assignor.) (Reissue.)
Advance Mfg. Co. (See Barnes, Edward M., assignor.)
Aeolian Company, The. (See Empson, Frederick J., assignor.)
Aermotor Company. (See Scholes, Daniel R., assignor.)
Ahlborn, Mattie E., Dayton, Ohio. Head and back rest. No. 1,156,125; Oct. 12; Gaz. vol. 219; p. 304.
Ahlheim, Edward C., Mansfield, Ohio. Rolling-pin. No. 1,158,111; Oct. 26; Gaz. vol. 219; p. 1092.
Aiazzi, Pietro, Winnemucca, Nev. Spike-extractor. No. 1,156,870; Oct. 19; Gaz. vol. 219; p. 593.
Aiken, Thomas M., Pittsburgh, Pa. Fruit and vegetable slicer. No. 1,156,652; Oct. 12; Gaz. vol. 219; p. 488.
Aikman, Burton S., assignor to National Brake & Electric Company, Milwaukee, Wis. Brake-valve device. No. 1,156,871; Oct. 19; Gaz. vol. 219; p. 593.
Almond, Emile, Paris, France. Elastic wheel. No. 1,155,865; Oct. 5; Gaz. vol. 219; p. 189.
Akans, George, Atlanta, Ga., assignor to said George Akans, trustee. Fluid-actuated motor. No. 1,156,855; Oct. 12; Gaz. vol. 219; p. 559.
Akin, Willis H., assignor of one-fourth to C. F. Moyer and one-fourth to A. J. Bateman, Falconer, N. Y. Film-rewinding mechanism. No. 1,156,025; Oct. 5; Gaz. vol. 219; p. 243.
Akron Motor Lock Co., The. (See Dugan and Smith, assignors.)
Aktiebolaget Baltic. (See Johansson and Risberg, assignors.)
Aktiebolaget Lux. (See Lindblom, Carl G., assignor.)
Aktiebolaget Lux. (See Rustige, Frans J. H., assignor.)
Aktiebolaget Svenska Kullagerfabriken. (See Sörensen, Carl A. T., assignor.)
Aktien-Gesellschaft für Kohlendestillation. (See Collin, Francis J., assignor.)
Aktieselskabet Dansk Svovlsyre- & Superphosphatfabrik. (See Warming, Kai, assignor.)
Albanese, Gaetano, New York, N. Y. Permutation-lock. No. 1,158,152; Oct. 26; Gaz. vol. 219; p. 1108.
Albanese, Gaetano, New York, N. Y. Grater for culinary use. No. 1,158,153; Oct. 26; Gaz. vol. 219; p. 1107.
Albert and J. M. Anderson Manufacturing Company. (See Andersen, Johan M., assignor.)
Albree, Chester B., Pittsburgh, Pa. Grating. No. 1,158,154; Oct. 26; Gaz. vol. 219; p. 1108.
Aldridge, Harry G., Rochester, N. Y. Closure for milk bottles or jars. No. 1,157,282; Oct. 19; Gaz. vol. 219; p. 740.
Albridge, James W. (See Ryan, John A., assignor.)
Aldrich, William O., assignor to The Whitin Machine Works, Whitinsville, Mass. Roving-creel. No. 1,156,451; Oct. 12; Gaz. vol. 219; p. 417.
Aleshire, David F., Minden Mines, Mo. Wagon running-gear. No. 1,158,155; Oct. 26; Gaz. vol. 219; p. 1106.
Alexander, Alexander M., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Lubricating friction-surfaces. No. 1,157,358; Oct. 19; Gaz. vol. 219; p. 766.
Alexander, Alexander M., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Lubricating apparatus. No. 1,157,359; Oct. 19; Gaz. vol. 219; p. 767.
Alexander, Alexander M., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Lubricating apparatus. No. 1,157,360; Oct. 19; Gaz. vol. 219; p. 767.
Alexander, Joseph D., *et al.* (See Wood, Charles R., assignor.)
Alexander, W. B. D. (See Johnson, Wilfred G., assignor.)
Allen, Bona, Jr., Buford, Ga. Tanning-drum. No. 1,155,866; Oct. 5; Gaz. vol. 219; p. 189.
Allen, Frances B. (See Thornton and Settle, assignors.)
Allen, James. (See Mason and Allen.)
Allen, Lincoln E., Kokomo, Ind. Headlight. No. 1,158,156; Oct. 26; Gaz. vol. 219; p. 1108.
Allen, Neal, *et al.* (See Lamar, Alexis L., assignor.)
Allen, Oscar H., Brockton, Mass. Connector for bead-chains. No. 1,157,917; Oct. 26; Gaz. vol. 219; p. 1024.
Allen, W. P., *et al.* (See Lamar, Alexis L., assignor.)
Allen, Walter P. (See Post, Howell B., assignor.)
Alley, Frederick L., Sydney, New South Wales, Australia, assignor to United Shoe Machinery Company, Paterson, N. J. Inseam-shoe-sewing machine. No. 1,157,200; Oct. 19; Gaz. vol. 219; p. 710.
Alley, Jesse L., Indianapolis, Ind. Scraper and hoist apparatus. No. 1,158,097; Oct. 26; Gaz. vol. 219; p. 1083.
Allgier, Andrew, Grand Rapids, Mich., assignor to R. O. Rudolph, Bellevue, Ohio. Combined spring hinge and check. No. 1,155,867; Oct. 5; Gaz. vol. 219; p. 189.
Allis-Chalmers Manufacturing Company. (See Knight, Earle R., assignor.)

Allis-Chalmers Manufacturing Company. (See Pfau, Arnold, assignor.)
Allis-Chalmers Manufacturing Company. (See Steen, Halfdan A., assignor.)
Allis-Chalmers Manufacturing Company. (See Williamson, Robert B., assignor.)
Allison, William E., *et al.* (See Smith, Frank W., assignor.)
Allyn, Rufus B., Colorado Springs, Colo. Drafting instrument. No. 1,156,512; Oct. 12; Gaz. vol. 219; p. 439.
Alonso, Elias. (See Ferrer and Alonso.)
Alquist, Karl, Schenectady, N. Y. Elastic gearing. No. 1,157,918; Oct. 26; Gaz. vol. 219; p. 1024.
Alsop, Bertha S., New York, N. Y. Bottle. No. 1,155,333; Oct. 5; Gaz. vol. 219; p. 3.
Altendorf, Julian A. (See Metzger, Altendorf, and Verrill.)
Altorfer, Alpheus W., assignor to Altorfer Bros. Co., Roanoke, Ill. Driving mechanism. No. 1,158,098; Oct. 26; Gaz. vol. 219; p. 1088.
Altorfer, Alpheus W., Roanoke, assignor to Power Washing Machine Co., Peoria, Ill. Clothes-wringer. No. 1,158,099; Oct. 26; Gaz. vol. 219; p. 1088.
Altorfer Bros. Co. (See Altorfer, Alpheus W., assignor.)
Alvey, Benjamin H., Elizabethtown, Ky. Ship loader or unloader. No. 1,156,653; Oct. 12; Gaz. vol. 219; p. 480.
Amaranth Machinery and Supply Works. (See Wittemann, Jacob F. and R. W., assignors.)
Amborn, George, Chapinville, Conn., assignor to J. H. Williams & Co., Brooklyn, N. Y. Tool-holder. No. 1,158,100; Oct. 26; Gaz. vol. 219; p. 1089.
Amborn, George, Chapinville, Conn., assignor to J. H. Williams & Co., Brooklyn, N. Y. Chain pipe-vise. No. 1,158,414; Oct. 26; Gaz. vol. 219; p. 1200.
American Abrasive Metals Company. (See Jacobs, Charles B., assignor.)
American Air-Liquefying Company. (See Place, James F., assignor.)
American Automatic Water Heater Co. (See Cochran, Harry A., assignor.)
American Bank Note Company. (See Reinhardt, James H., assignor.)
American Bankers Dust Proof Time Lock Company. (See Spivey, Thomas S., assignor.)
American Brake Shoe & Foundry Company. (See Jones, Harry, assignor.)
American Brake Shoe & Foundry Company. (See Sargent, Fitz William, assignor.)
American Can Company. (See Graham, Charles W., assignor.)
American Can Company. (See Payne, Frank, assignor.)
American Can Company. (See Rudolphi, Frank, assignor.)
American Can Company. (See Ward, Thomas, assignor.)
American Can Company. (See Weber, George W., assignor.)
American Can Company. (See Wood, Frederick P., assignor.)
American Cash Register Manufacturing Company, The. (See Wells, Byron B., assignor.)
American Chain Company. (See Campbell, Andrew C., assignor.)
American Cyanamid Company. (See Cooper, Kenneth F., assignor.)
American Engineering Company. (See Riley, Robert S., assignor.)
American Hardware Corporation, The. (See Charland, Frederick J., assignor.)
American Optical Company. (See Bugbee, Lucian W., assignor.)
American Pin Company. (See Kast, Henry J., assignor.)
American Sales Book Company. (See Bottle, Edward K., assignor.)
American Sales Book Company. (See Hageman, Louis F., Jr., assignor.)
American Sanitary Works. (See Florey, Tilghman J., assignor.)
American Smelting & Refining Company. (See Whitehead, Robert L., assignor.)
American Standard Oil Burner Co. (See King, Joseph H., assignor.)
American Steel Foundries. (See Bauer, Carl E., assignor.)
American Steel Foundries. (See Davis, James C., assignor.)
American Steel Foundries. (See Hedgcock, William C., assignor.)
American Steel Foundries. (See Kinne, Edmund P., assignor.)
American Steel Foundries. (See Lamont, John A., assignor.)
American Steel & Wire Company, The. (See Viall, Charles P., assignor.
American Telegraphone Company. (See Washburn, Howard L., assignor.)
American Voting Machine Company. (See Butler, James A., assignor.)
American Water Supply Company of New England. (See Bohlman, George J., assignor.)
American Well Works, The. (See Bodinson, Lars W., assignor.)
American Well Works, The. (See Chapman, Matthew T. assignor.)
Ames, Joseph A., assignor to T. W. McGovern, Columbus, Ohio. Insole. No. 1,156,026; Oct. 5; Gaz. vol. 219; p. 243.
Anderegg, Edward W., Algoma, assignor to Gem Hammock & Fly Net Co., Milwaukee, Wis. Fly-net. No. 1,156,654; Oct. 12; Gaz. vol. 219; p. 489.
Andersen, Johan M., assignor to Albert and J. M. Anderson Manufacturing Company, Boston, Mass. Time-switch. No. 1,156,126; Oct. 12; Gaz. vol. 219; p. 305.
Anderson, Andrew J., Parsons, Pa. Draft-regulator. No. 1,157,490; Oct. 19; Gaz. vol. 219; p. 813.
Anderson, Arthur J., Chicago Heights, Ill. Spring-wheel. No. 1,158,157; Oct. 26; Gaz. vol. 219; p. 1109.
Anderson, Charles L., Denver, Col. Disappearing top for automobile-bodies. No. 1,156,738; Oct. 12; Gaz. vol. 219; p. 518.
Anderson, Edward L., assignor to R. and G. Company, Attleboro, Mass. Combined match-case and cigar-cutter. No. 1,156,513; Oct. 12; Gaz. vol. 219; p. 439.
Anderson, Frank J., Box Elder, Mont. Fly-killing apparatus. No. 1,155,697; Oct. 5; Gaz. vol. 219; p. 129.
Anderson, Hiram C., Westchester, N. Y., and J. Gaffney, Roselle, N. J. Music-sheet turner. No. 1,156,199; Oct. 12; Gaz. vol. 219; p. 328.
Anderson, James W., San Francisco, Cal. Multiplying-camera. No. 1,158,019; Oct. 26; Gaz. vol. 219; p. 1060.
Anderson, John W. (See Davison and Anderson.)
Anderson, Louis, Chicago, Ill. Harvesting-machine. No. 1,156,575; Oct. 12; Gaz. vol. 219; p. 461.
Anderson, Nils H., Hartford, assignor, by mesne assignments, to The Noiseless Typewriter Company, Middletown, Conn. Type-writing machine. No. 1,155,634; Oct. 5; Gaz. vol. 219; p. 107.
Anderson, Nils H., Hartford, assignor, by mesne assignments, to The Noiseless Typewriter Company, Middletown, Conn. Platen-shifting mechanism for type-writing machines. No. 1,155,635; Oct. 5; Gaz. vol. 219; p. 107.
Anderson, Nils H., Hartford, assignor, by mesne assignments, to The Noiseless Typewriter Company, Middletown, Conn. Type-writing machine. No. 1,155,636; Oct. 5; Gaz. vol. 219; p. 108.
Anderson, Torval J., Rockdale, Wis. Foot-lever. No. 1,157,140; Oct. 19; Gaz. vol. 219; p. 688.
Anderson, William B., assignor to Haggard and Marcuson Company, Chicago, Ill. Metallic fabric. No. 1,156,127; Oct. 12; Gaz. vol. 219; p. 305.
Anderson, William P., New York, N. Y. Automatic ejector-valve for sumps. No. 1,157,491; Oct. 19; Gaz. vol. 219; p. 813.
Andersson, Carl E., assignor of forty-five one-hundredths to M. Cusick, Duluth, Minn. Smoke-consumer. No. 1,157,661; Oct. 26; Gaz. vol. 219; p. 935.
Andren, Fritz L., assignor to S. Karpen & Bros., Chicago, Ill. Folding couch. No. 1,155,779; Oct. 5; Gaz. vol. 219; p. 157.
Andrew, William K. (See Waterman, Bradley, and Andrew.)
Angeski, Peter A., Lilly, Pa. Fruit-picker. No. 1,158,158; Oct. 26; Gaz. vol. 219; p. 1109.
Anglo-American Patent Bottle Company, The. (See Prall, Claude C., assignor.)
Annable, Warren W., Grand Rapids, Mich. Steering-gear for automobiles. No. 1,158,360; Oct. 26; Gaz. vol. 219; p. 1179.
Ansco Company. (See Nasief and Dorsey, assignors.)
Anstice, Josiah. (See Smith, Edward F., assignor.)
Anthony, Marcus O., Englewood, N. J., assignor to A. Kimball Company, New York, N. Y. Printing-machine. No. 1,156,966; Oct. 19; Gaz. vol. 219; p. 627.
Antrobus, Charles, U. S. Navy. Dividers and center-punch. No. 1,158,020; Oct. 26; Gaz. vol. 219; p. 1060.
Apple Electric Company, The. (See Apple, Vincent G., assignor.)
Apple, Vincent G., assignor to The Apple Electric Company, Dayton, Ohio. Clutch mechanism. No. 1,156,576; Oct. 12; Gaz. vol. 219; p. 461.
Appleyard, Arthur E., Ashland, Wis. Electric incandescent lamp. No. 1,156,967; Oct. 19; Gaz. vol. 219; p. 628.
Aranar Company, The. (See Roberts, Fred T., assignor.)
Arbetter Felling Machine Company. (See Arbetter, Wolf, assignor.)
Arbetter, Wolf, Chelsea, assignor to Arbetter Felling Machine Company, Boston, Mass. Two-needle blindstitch sewing-machine. No. 1,156,128; Oct. 12; Gaz. vol. 219; p. 306.
Arial, Charles W., Colerain, Mass. Trolley. No. 1,157,608; Oct. 19; Gaz. vol. 219; p. 850.
Arkell & Smiths. (See Genest, Homer A., assignor.)
Arledge, Thomas J., Winchester, Ky. Combined rail-brace and anchor tie-plate. No. 1,155,868; Oct. 5; Gaz. vol. 219; p. 190.
Armstrong Cork Company. (See Frenkel, Gustav, assignor.)
Armstrong, Henry A., Brooklyn, assignor to International Typesetting Machine Company, New York, N. Y. Elevator-lift for machines of the linotype class. No. 1,156,027; Oct. 5; Gaz. vol. 219; p. 243.
Armstrong, John. (See Bennett and Armstrong.)
Armstrong, Walter J., assignor to The Jeffrey Manufacturing Company, Columbus, Ohio. Belt-idler. No. 1,156,386; Oct. 12; Gaz. vol. 219; p. 395.
Arnold, Hans, Charlottenburg, assignor to Dr. O. Kaßler & Co., Plotzensee, near Berlin, Germany. Manufacture of fireproof utensils from refractory oxids. No. 1,157,662; Oct. 26; Gaz. vol. 219; p. 935.

Arrow Electric Company, The. (See Gauthier, George A., assignor.)
Arrow Electric Company, The. (See Girling, James G., assignor.)
Arsem, William C., Schenectady, N. Y., assignor to General Electric Company. Electric cut-out. No. 1,157,919; Oct. 26; Gaz. vol. 219; p. 1025.
Arthur, James W., Warren, Ohio. Vulcanising apparatus. No. 1,157,751; Oct. 26; Gaz. vol. 219; p. 966.
Arthur, Russell, assignor of one-third to E. P. Cummings, Erwin, W. Va. Poling device for railway-cars. No. 1,157,492; Oct. 19; Gaz. vol. 219; p. 814.
Aseptic Service Company. (See Rees, Warren C., assignor.)
Ashley, Douglas V. (See Greene, Beatrice H., assignor.)
Ashworth, Albert P. (See Ashworth, Dannie G. and A. P.)
Ashworth, Asa, Salamanca, N. Y. Valve-grinder. No. 1,158,021; Oct. 26; Gaz. vol. 219; p. 1060.
Ashworth, Dannie G. and A. P., West Brookville, N. Y. Hammock and hammock attachment. No. 1,156,200; Oct. 12; Gaz. vol. 219; p. 328.
Associated Manufacturers Company. (See Menges, Theodore C., assignor.)
Atlas Powder Company. (See Fletcher, William E., assignor.)
Atlas Press Co. (See White, Henry P., assignor.)
Atuesta, Mark A., Schenectady, N. Y., assignor to General Electric Company. Black finish. No. 1,157,283; Oct. 19; Gaz. vol. 219; p. 741.
Atwood, James T., Rockford, Ill. Suction relief-valve. No. 1,156,872; Oct. 19; Gaz. vol. 219; p. 593.
Atwood, John B., Pittsburgh, Pa. Rail-fastener. No. 1,155,698; Oct. 5; Gaz. vol. 219; p. 130.
Atwood, William, Longmont, Colo. Beet-harvester. No. 1,157,920; Oct. 26; Gaz. vol. 219; p. 1025.
Audiffren, Marcel, Golbey, near Epinal, and H. A. Singrün, Epinal, France, assignors to Audiffren Refrigerating Machine Company. Refrigerating apparatus. No. 1,156,780; Oct. 5; Gaz. vol. 219; p. 158.
Audiffren Refrigerating Machine Company. (See Audiffren and Singrün, assignors.)
Aufuldish, John B., Dayton, Ohio. Starter for explosive engines. No. 1,155,781; Oct. 5; Gaz. vol. 219; p. 159.
Augustine, Charles, Hermann, Mo. Work-feeding attachment for sewing-machines. No. 1,156,339; Oct. 12; Gaz. vol. 219; p. 376.
Austin, Frederick C. (See Jacobs, Charles C., assignor.)
Austin, Henry K., Reading, Mass. Heating apparatus. No. 1,155,782; Oct. 5; Gaz. vol. 219; p. 159.
Austin, Walter M., Swissvale, and J. N. Mahoney, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company. Circuit-interrupting device. No. 1,156,655; Oct. 12; Gaz. vol. 219; p. 490.
Auto Device Manufacturing Company. (See Furmidge, Samuel, assignor.)
Auto Strop Company. (See Gaisman, Henry J., assignor.)
Automatic Electric Company. (See Hovland, Henry, assignor.)
Automatic Electric Company. (See Hulit, John A., assignor.)
Automatic Electric Company. (See Martin, Talbot G., assignor.)
Automatic Electric Company. (See Willis, Bernard D., assignor.)
Automatic Machine Manufacturing Co. (See Melchert, Charles A., assignor.)
Automatic Recording Safe Company, The. (See Fisher, Charles, assignor.)
Automatic Retrieving Trolley Corporation. (See McFarland, Samuel E., assignor.)
Automatic Weighing Machine Company. (See Webber, John D., assignor.)
Autopress Company, The. (See Freeman, Rufus A., assignor.)
Autosales Gum and Chocolate Company. (See Webster, John A., assignor.)
Avery, Charles E., Trenton, N. J., assignor to The Manhattan Electrical Supply Company, New York, N. Y. Gong. No. 1,155,869; Oct. 5; Gaz. vol. 219; p. 190.
Avery Company. (See Bartholomew, John B., assignor.)
Avram, Mois H., New York, N. Y., assignor to Standard Silica Brick Machinery Company, Wilmington, Del. Apparatus for hydrating lime. No. 1,157,284; Oct. 19; Gaz. vol. 219; p. 741.
Ayers, Augustine R., assignor of one-half to J. J. Bernet, Chicago, Ill. Locomotive-stoker. No. 1,156,263; Oct. 12; Gaz. vol. 219; p. 350.
Ayers, Augustine R., assignor of one-half to J. J. Bernet, Chicago, Ill. Stoker for locomotives. No. 1,156,264; Oct. 12; Gaz. vol. 219; p. 350.
B. & B. Mfg. Co., The. (See Bixby, Allan S., assignor.)
Baash, Lawrence F., Fillmore, Cal. Pipe or casing dent remover. No. 1,157,073; Oct. 19; Gaz. vol. 219; p. 665.
Babcock & Wilcox Company, The. (See Harter, Isaac, assignor.)
Bachman, Hugo J., Denver, Colo. Internal-combustion engine. No. 1,155,699; Oct. 5; Gaz. vol. 219; p. 130.
Bachmann, Siegmund, Chicago, Ill. Box. No. 1,157,285; Oct. 19; Gaz. vol. 219; p. 741.
Backstrand, Clarence F., and C. M. Hoag, Riverside, Cal. Calculator. No. 1,157,609; Oct. 19; Gaz. vol. 219; p. 851.
Backus, John C., Smethport, Pa. Locking-clamp. No. 1,156,739; Oct. 12; Gaz. vol. 219; p. 518.
Backus, William H., Danielson, Conn. Rake-cleaner. No. 1,158,022; Oct. 26; Gaz. vol. 219; p. 1061.
Badeau, Louis C., New York, N. Y. Steering apparatus for airships. No. 1,156,514; Oct. 12; Gaz. vol. 219; p. 440.
Badische Anilin & Soda Fabrik. (See Bohn, René, assignor.)
Badische Anilin & Soda Fabrik. (See Boner, Johann H., assignor.)
Badische Anilin & Soda Fabrik. (See Bosch and Mittasch, assignors.)
Badische Anilin & Soda Fabrik. (See Bosch and Wild, assignors.)
Baekeland, Leo H., Yonkers, assignor to General Bakelite Company, New York, N. Y. Insulating composition. No. 1,156,452; Oct. 12; Gaz. vol. 219; p. 417.
Bailey, Auburn, Oakland, Cal. Shock-absorber. No. 1,155,700; Oct. 5; Gaz. vol. 219; p. 131.
Bailey, James G., Delavan, Ill. Hay-rack. No. 1,155,783; Oct. 5; Gaz. vol. 219; p. 159.
Bailey, Joshua, West Bromwich, England. Ruling-machine. No. 1,157,361; Oct. 19; Gaz. vol. 219; p. 767.
Bailey, Paris L., Indianapolis, Ind. Safety system for electric railways. No. 1,156,046; Oct. 12; Gaz. vol. 219; p. 277.
Baker, Erle K. (See Hawley and Baker.)
Baker, Erle K., assignor to Universal Rim Company, Chicago, Ill. Pneumatic-tire mounting. No. 1,155,394; Oct. 5; Gaz. vol. 219; p. 24.
Baker, Erle K., assignor to Universal Rim Company, Chicago, Ill. Vehicle-wheel. No. 1,155,395; Oct. 5; Gaz. vol. 219; p. 25.
Baker, Erle K., assignor to Universal Rim Company, Chicago, Ill. Mounting for tires. No. 1,155,396; Oct. 5; Gaz. vol. 219; p. 25.
Baker, Erle K., assignor to Universal Rim Company, Chicago, Ill. Vehicle-wheel. No. 1,155,397; Oct. 5; Gaz. vol. 219; p. 25.
Baker, Erle K., assignor to Universal Rim Company, Chicago, Ill. Demountable rim for automobile-wheels. No. 1,155,398; Oct. 5; Gaz. vol. 219; p. 26.
Baker, Max L. (See Hemming and Baker.)
Baker, Reuben C., Coalinga, Cal. Calf and bull wheel bearing. No. 1,155,539; Oct. 5; Gaz. vol. 219; p. 76.
Baldwin, Ferdinand, near North Hampton, assignor of one-half to H. L. Heistand, Clark county, Ohio. Soil-pulverizer. No. 1,156,873; Oct. 19; Gaz. vol. 219; p. 593.
Bales, William S., Kopperl, Tex. Self-dumping drag-harrow. No. 1,156,968; Oct. 19; Gaz. vol. 219; p. 628.
Ball, Bert C., and L. E. Younie, Portland, Oreg. Demountable tire-rim. No. 1,157,141; Oct. 19; Gaz. vol. 219; p. 689.
Ball, Joseph E. (See Vogel, Lobdell, and Ball.)
Ball, Silas, West Orange, N. J. Cord and twine cutter. No. 1,158,159; Oct. 26; Gaz. vol. 219; p. 1109.
Ballantine, Noten D., Chicago, Ill. Interchange-car-report blank. No. 1,155,540; Oct. 5; Gaz. vol. 219; p. 76.
Ballou, Holden P., assignor to W. S. Schutz, trustee, Hartford, Conn. Valve mechanism. No. 1,157,972; Oct. 26; Gaz. vol. 219; p. 1044.
Bamberger, Alfred H. (See Hansen, Charles A., assignor.)
Bamberger Leroi & Company. (See Stern, Guido, assignor.)
Bancroft, Frederick J., Pawtucket, R. I. Tennis-racket. No. 1,156,340; Oct. 12; Gaz. vol. 219; p. 376.
Banes, Edward T., Ogontz, Pa. Signaling system for automobiles or the like. No. 1,156,453; Oct. 12; Gaz. vol. 219; p. 418.
Banks, William C., assignor, by mesne assignments, to N-W. Equipment Co. Inc., New York, N. Y. Coupling. No. 1,157,921; Oct. 26; Gaz. vol. 219; p. 1025.
Bannon, Martin J. (See Gray, William B., assignor.)
Barba, Charles E., Altoona, Pa. Fish-car. No. 1,156,515; Oct. 12; Gaz. vol. 219; p. 440.
Barber, Ralph R., Harrison, Ark. Manifolding sales-book. No. 1,157,142; Oct. 19; Gaz. vol. 219; p. 689.
Barbour, Charles, assignor to Standard Underground Cable Company, Pittsburgh, Pa. Armor for flexible articles. No. 1,155,460; Oct. 5; Gaz. vol. 219; p. 47.
Barbour, Robert P., Waterbury, Conn., assignor to The Hoge Manufacturing Company, New York, N. Y. Clip. No. 1,155,637; Oct. 5; Gaz. vol. 219; p. 108.
Bardin, James B., Chadbourn, N. C. Adjustable operator's seat for dental chairs. No. 1,155,541; Oct. 5; Gaz. vol. 219; p. 76.
Bardsley, Walter R., Philadelphia, Pa. Making die-plates. No. 1,157,493; Oct. 19; Gaz. vol. 219; p. 814.
Barker, Spencer A., assignor of one-half to W. R. Magill, Deport, Tex. Plow. No. 1,156,831; Oct. 12; Gaz. vol. 219; p. 549.
Barker, Wendell A., assignor to Thomas Elevator Company, Chicago, Ill. Hoisting-machine. No. 1,155,784; Oct. 5; Gaz. vol. 219; p. 160.
Barlow, Frank, London, England. Locking mechanism for elevator-gates. No. 1,155,870; Oct. 5; Gaz. vol. 219; p. 191.
Barnes, Charles H., assignor to Remington Arms & Ammunition Company, Ilion, N. Y. Frame and receiver construction for firearms. No. 1,157,752; Oct. 26; Gaz. vol. 219; p. 967.
Barnes, Edward M., assignor to Advance Mfg. Co., Hastings, Mich. Suction-cleaner. No. 1,156,874; Oct. 19; Gaz. vol. 219; p. 594.

Barnhardt, Edwin B., Orangeville, Ontario, Canada, and W. N. Barnhardt, Central Islip, N. Y. Roller-bearing. No. 1,156,516; Oct. 12; Gaz. vol. 219; p. 440.

Barnhardt, William N. (See Barnhardt, Edwin B. and W. N.)

Barnum, Thomas E., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric switch or contactor. No. 1,156,201; Oct. 12; Gaz. vol. 219; p. 329.

Baron, Joseph V. (See Farr, Ira E., assignor.)

Barr, Frederic, Woodhaven, N. Y. Shade-support. No. 1,157,201; Oct. 19; Gaz. vol. 219; p. 711.

Barraja-Frauenfelder, Joseph, assignor to The Lake Torpedo Boat Company of Maine, Bridgeport, Conn. Anchor-cable-cutting apparatus for submarine boats. No. 1,158,160; Oct. 26; Gaz. vol. 219; p. 1110.

Barrett, Alex C., Montgomery, Ala. Breast-shield. No. 1,156,202; Oct. 12; Gaz. vol. 219; p. 329.

Barrett, Halsey M., *et al.*, receivers. (See Beakes, William E., assignor.)

Barrett, Halsey M., *et al.*, receivers. (See Fessenden, Reginald A., assignor.)

Barron, Melvil, Rogers, Tex. Automatic circuit-control apparatus. No. 1,157,663; Oct. 26; Gaz. vol. 219; p. 935.

Barry, Arthur B., administrator. (See Cloos, Jacob.)

Barsony, Emery, Castleton-on-Hudson, N. Y. Lock for sliding doors. No. 1,156,341; Oct. 12; Gaz. vol. 219; p. 376.

Bartels, Carl. (See Mosler and Bartels.)

Bartholomew, Ellis, Toledo, assignor to The National Peat Refining Company, Cleveland, Ohio. Apparatus for obtaining peat. No. 1,156,387; Oct. 12; Gaz. vol. 219; p. 395.

Bartholomew, John B., Peoria, Ill., assignor, by mesne assignments, to Avery Company. Traction-engine. No. 1,156,203; Oct. 12; Gaz. vol. 219; p. 329.

Bartlett, Reginald C., Toronto, Ontario, Canada. Vehicle construction. No. 1,156,875; Oct. 19; Gaz. vol. 219; p. 594.

Barton, Ella L. (See Stevens, William X., assignor.)

Barton, Francis M., Chicago, Ill. Reinforced-concrete building construction. No. 1,155,461; Oct. 5; Gaz. vol. 219; p. 48.

Barton, Louis E., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Composite titanic-oxid pigment and producing same. No. 1,155,462; Oct. 5; Gaz. vol. 219; p. 48.

Barton, Thomas E., Washington, D. C. Child's carriage. No. 1,157,610; Oct. 19; Gaz. vol. 219; p. 851.

Baskin, Edwin T., Independence, Mo. Glove. No. 1,156,517; Oct. 12; Gaz. vol. 219; p. 440.

Baskin, Edwin T., Independence, Mo. Waist-closure. No. 1,156,518; Oct. 12; Gaz. vol. 219; p. 441.

Bassett, Elmer, Shelbyville, Ind. Water-power plant. No. 1,157,922; Oct. 26; Gaz. vol. 219; p. 1025.

Bateman, Adolphus J., *et al.* (See Akin, Willis H., assignor.)

Bateman Manufacturing Company. (See Hart, Lewis A., assignor.)

Bateman Manufacturing Company. (See Willis, Leland, assignor.)

Bates, Adelmer M., assignor to Bates Valve Bag Company, Chicago, Ill. Bag-tie. No. 1,156,265; Oct. 12; Gaz. vol. 219; p. 351.

Bates, Arthur. (See Gouldbourn, Bates, and Jerram.)

Bates, Arthur. (See Jerram, Gouldbourn, and Bates.)

Bates, Charles T. (See Rexroat, George P., assignor.)

Bates, George M., Lebanon, Mo. Farm-gate. No 1,155,463; Oct. 5; Gaz. vol. 219; p. 48.

Bates, Uri C., and J. McLeland, Seattle, Wash. Surgical apparatus. No. 1,157,202; Oct. 19; Gaz. vol. 219; p. 711.

Bates Valve Bag Company. (See Bates, Adelmer M., assignor.)

Bauer, Carl, Wolfe, W. Va. Toilet-stand. No. 1,156,519; Oct. 12; Gaz. vol. 219; p. 441.

Bauer, Carl E., Hammond, Ind., assignor to American Steel Foundries, New York, N. Y. Built-up side frame. No. 1,157,832; Oct. 26; Gaz. vol. 219; p. 993.

Bauer, Carl E., Hammond, Ind., assignor to American Steel Foundries, New York, N. Y. Forging fulcrums. No. 1,157,833; Oct. 26; Gaz. vol. 219; p. 994.

Bauer, Edward H., Washington, D. C. Primer for gas-engines. No. 1,155,871; Oct. 5; Gaz. vol. 219; p. 191.

Baughman, George H., and F. J. Semradek, Chicago, Ill. Clamp for sales-book pads. No. 1,156,876; Oct. 19; Gaz. vol. 219; p. 595.

Baum, Louis J., East Orange, N. J. Nozzle. No. 1,157,973; Oct. 26; Gaz. vol. 219; p. 1044.

Baxter, George L., Salt Lake City, Utah. Wrench. No. 1,157,834; Oct. 26; Gaz. vol. 219; p. 994.

Baxter, Leonidas, assignor to The Thomas Manufacturing Company, Dayton, Ohio. Hydrocarbon-lantern. No. 1,155,464; Oct. 5; Gaz. vol. 219; p. 49.

Bayle, Burdette S., Ambridge, Pa. Paper-holder. No. 1,157,286; Oct. 19; Gaz. vol. 219; p. 742.

Bayley, George W., New York, assignor to Bayley & Sons, Inc., Brooklyn, N. Y. Electric-lighting fixture. No. 1,156,454; Oct. 12; Gaz. vol. 219; p. 418.

Bayley & Sons. (See Bayley, George W., assignor.)

Beach, Charles M., Martel, Ohio. Draft-tongue coupling. No. 1,156,342; Oct. 12; Gaz. vol. 219; p. 377.

Beach, Howard L., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Motor-control system. No. 1,156,656; Oct. 12; Gaz. vol. 219; p. 490.

Beach, Howard L., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Control system for electric motors. No. 1,157,203; Oct. 19; Gaz. vol. 219; p. 711.

Beacon Falls Rubber Shoe Company, The. (See Crowley, John T., assignor.)

Beadle, George W. (See Beatty, Wallace A., assignor.)

Beakes, William E., Brant Rock, Mass., assignor, by mesne assignments, to S. M. Kintner, Pittsburgh, Pa., and H. M. Barrett, Bloomfield, N. J., receivers. Detector for oscillating currents. No. 1,158,112; Oct. 26; Gaz. vol. 219; p. 1093.

Beal, Frederick C., Toronto, Ontario, Canada. Saddle. No. 1,155,465; Oct. 5; Gaz. vol. 219; p. 49.

Beam, Howard F., Harmony, Pa. Swab-unloader. No. 1,156,657; Oct. 12; Gaz. vol. 219; p. 491.

Beam, Mathew, Old Forge, Pa. Overboist automatic cut-off. No. 1,156,877; Oct. 19; Gaz. vol. 219; p. 595.

Bean, Andrew W., Mount Rainier, Md., and J. A. Killinger, Washington, D. C. Ammunition-hoist. No. 1,158,161; Oct. 26; Gaz. vol. 219; p. 1110.

Bean, William L., Chicago, Ill. Mud-ring. No. 1,156,455; Oct. 12; Gaz. vol. 219; p. 419.

Beard, James, Two Rivers, Cal. Tractor-wheel. No. 1,155,872; Oct. 5; Gaz. vol. 219; p. 191.

Beatty, Wallace A., assignor to G. W. Beadle, New York, N. Y. Artificial filament and other product. No. 1,156,969; Oct. 19; Gaz. vol. 219; p. 628.

Beaty, Arthur, San Fernando, Cal. Aeroplane-propeller. No. 1,156,577; Oct. 12; Gaz. vol. 219; p. 462.

Beaver, Francis M., assignor of one-half to W. F. Bolin, Cisco, Okla. Agricultural machine. No. 1,158,023; Oct. 26; Gaz. vol. 219; p. 1061.

Bechtold, William S., Newark, N. J. Barrette. No. 1,155,399; Oct. 5; Gaz. vol. 219; p. 26.

Beck, August, Cranford, assignor of one-half to P. D. Campbell, Newark, N. J. Dispensing-receptacle. No. 1,156,456; Oct. 12; Gaz. vol. 219; p. 419.

Beck, Charles W., Detroit, Mich. Oil-can holder. No. 1,158,361; Oct. 26; Gaz. vol. 219; p. 1179.

Beck Company, Charles. (See Henry, Ferdinand G., assignor.)

Becker, Louis, and K. Heine, New York, N. Y. Scarf-pin fastener. No. 1,157,835; Oct. 26; Gaz. vol. 219; p. 994.

Becker, Mathias B., Chicago, Ill. Ornamenting and improving prepared roofing. No. 1,157,664; Oct. 26; Gaz. vol. 219; p. 936.

Becker, Mathias B., Chicago, Ill. Prepared roofing. No. 1,157,665; Oct. 26; Gaz. vol. 219; p. 937.

Beckett, John R., Boston, Mass. Universal angle-plate. No. 1,155,987; Oct. 5; Gaz. vol. 219; p. 229.

Beckwith, Joseph, Broken Bow, Nebr. Oil-burner. No. 1,155,873; Oct. 5; Gaz. vol. 219; p. 192.

Bedell, Richard M., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,157,753; Oct. 26; Gaz. vol. 219; p. 967.

Beeler, Samuel J., Waynesboro, Pa. Motor-driven lawn-mower. No. 1,156,520; Oct. 12; Gaz. vol. 219; p. 441.

Behling, William, McDonald, Pa. Folding umbrella. No. 1,157,974; Oct. 26; Gaz. vol. 219; p. 1045.

Behrend, Helene, assignor to H. Bierbaum, Berlin, Germany. Ball-game device. No. 1,156,047; Oct. 12; Gaz. vol. 219; p. 277.

Beidler, George C., Rochester, N. Y. Photographing apparatus. No. 1,155,785; Oct. 5; Gaz. vol. 219; p. 160.

Beidler, George C., Rochester, N. Y. Photographing and developing apparatus. No. 1,157,611; Oct. 19; Gaz. vol. 219; p. 851.

Belkó, Kólmán, Palouse, Wash. Autosled. No. 1,155,786; Oct. 5; Gaz. vol. 219; p. 161.

Bell, Alfred. (See Wallace and Bell.)

Bell, Thomas A., Kew, Melbourne, Victoria, Australia. Shock-absorber for vehicles. No. 1,157,494; Oct. 19; Gaz. vol. 219; p. 814.

Bellem, Louis H. L., and G. J. Brégéras, Neuilly-sur-Seine, France. Internal-combustion engine. No. 1,157,287; Oct. 19; Gaz. vol. 219; p. 742.

Benecke, Louis A., St. Louis, Mo. Light-obstructer. No. 1,156,578; Oct. 12; Gaz. vol. 219; p. 462.

Benham, William T., Rising Sun, Ind. Dial for combination-locks. No. 1,156,658; Oct. 12; Gaz. vol. 219; p. 491.

Benham, William T., Norwood, Ohio. Dial for combination-locks. No. 1,156,659; Oct. 12; Gaz. vol. 219; p. 491.

Benjamin, Bert R., Oak Park, Ill., assignor to International Harvester Company of New Jersey. Machine for forming openings in woven fabrics. No. 1,157,754; Oct. 26; Gaz. vol. 219; p. 968.

Benjamin, Bert R., Oak Park, Ill., assignor to International Harvester Company of New Jersey. Woven fabric for belts. No. 1,157,755; Oct. 26; Gaz. vol. 219; p. 968.

Benjamin Electric Mfg. Company. (See Benjamin, Reuben B., assignor.)

Benjamin Electric Manufacturing Company. (See Dean, William W., assignor.)

Benjamin, George H., New York, N. Y. Bobbin. No. 1,156,579; Oct. 12; Gaz. vol. 219; p. 462.

Benjamin, Reuben B., assignor to Benjamin Electric Mfg. Company, Chicago, Ill. Electrolier. No. 1,158,113; Oct. 26; Gaz. vol. 219; p. 1093.

Benjamin, William T., assignor to Shoe Manufacturers' Supply Company, Newark, N. J. Machine for marking buttonholes. No. 1,156,580; Oct. 12; Gaz. vol. 219; p. 463.

Bennner, James H., Akron, Ohio. Combined rail tie and fastener. No. 1,156,581; Oct. 12; Gaz. vol. 219; p. 463.

Bennett, Cornelius V., assignor to The Locke Insulator Manufacturing Company, Victor, N. Y. Die for insulators. No. 1,157,612; Oct. 19; Gaz. vol. 219; p. 852.

Bennett, David E. (See Driscoll, John, assignor.)

Bennett, Edward B., and J. Armstrong, Kansas City, Kans. Combined gage and compass. No. 1,155,542; Oct. 5; Gaz. vol. 219; p. 77.

Bennett, Erastus B., Denver, Colo. Amalgamator. No. 1,157,836; Oct. 26; Gaz. vol. 219; p. 995.

Bennett, George M., Kenosha, Wis. Securing an apertured member to a cylindrical member. No. 1,157,666; Oct. 26; Gaz. vol. 219; p. 937.

Bennett, Joseph C., assignor to Otis-Fensom Elevator Company, Limited, Toronto, Ontario, Canada. Elevator-gate. No. 1,156,204; Oct. 12; Gaz. vol. 219; p. 330.

Bennett, Thomas E., Philadelphia, Pa. Incinerating plant. No. 1,158,162; Oct. 26; Gaz. vol. 219; p. 1110.

Bens, Samuel J., Berkeley, and A. B. Hubbard, Oakland, Cal. Toilet-paper holder. No. 1,156,266; Oct. 12; Gaz. vol. 219; p. 351.

Berdan, Charles M., Maywood, N. J. Blanket-holder. No. 1,156,740; Oct. 12; Gaz. vol. 219; p. 519.

Berenstein, Frank, Chelsea, assignor of one-half to W. Bernstein, Boston, Mass. Friction and metal plug for rubber heels and other tread-surfaces. No. 1,155,874; Oct. 5; Gaz. vol. 219; p. 192.

Berg, Ernst J., Schenectady, N. Y., assignor to General Electric Company. Method and apparatus for measuring the flow of fluids. No. 1,156,660; Oct. 12; Gaz. vol. 219; p. 492.

Berger, Bruno A., Richmond, Va. Bracket. No. 1,156,129; Oct. 12; Gaz. vol. 219; p. 306.

Bergh, Frederick P. (See Taylor and Bergh.)

Bernard, Jacob. (See Miller, Henry, assignor.)

Bernet, John J. (See Ayers, Augustine E., assignor.)

Bernstein, William. (See Berenstein, Frank, assignor.)

Bertrand, Louis, Seattle, Wash. Mowing-machine. No. 1,155,988; Oct. 5; Gaz. vol. 219; p. 229.

Besharov, Naum S., Paterson, N. J. Tumbler for combination-locks. No. 1,156,741; Oct. 12; Gaz. vol. 219; p. 519.

Besser, Charles, Minonk, Ill. Nut-lock. No. 1,158,163; Oct. 26; Gaz. vol. 219; p. 1111.

Bessolo, William L., San Diego, Cal. Nut-wrench. No. 1,157,495; Oct. 19; Gaz. vol. 219; p. 815.

Bessolo, William L., San Diego, Cal. Wrench. No. 1,158,164; Oct. 26; Gaz. vol. 219; p. 1111.

Best, Clarence L., San Leandro, Cal. Autotractor. No. 1,158,114; Oct. 26; Gaz. vol. 219; p. 1093.

Best, John H., Guthrie, Okla. Baling-press. No. 1,155,543; Oct. 5; Gaz. vol. 219; p. 77.

Bethke, Fredrick F., Schenectady, N. Y. Window shade and curtain holder. No. 1,156,343; Oct. 12; Gaz. vol. 219; p. 377.

Bethlehem Steel Company. (See Meigs and Jakobsson, assignors.)

Bethlehem Steel Company. (See Von Philp, Casimir, assignor.)

Betts, Benjamin B., St. Louis, Mo. Tie-plate. No. 1,155,989; Oct. 5; Gaz. vol. 219; p. 229.

Betts, Benjamin B., St. Louis, Mo. Tie-plate. No. 1,155,990; Oct. 5; Gaz. vol. 219; p. 230.

Betts, Benjamin B., St. Louis, Mo. Tie-plate. No. 1,155,991; Oct. 5; Gaz. vol. 219; p. 230.

Betts, Benjamin B., St. Louis, Mo. Guard-rail mounting. No. 1,155,992; Oct. 5; Gaz. vol. 219; p. 230.

Betts, Benjamin B., St. Louis, Mo. Guard-rail mounting. No. 1,155,993; Oct. 5; Gaz. vol. 219; p. 231.

Betts, Benjamin B., St. Louis, Mo. Guard-rail. No. 1,155,994; Oct. 5; Gaz. vol. 219; p. 231.

Beutel, Werner, assignor of one-third to R. D. Hillebrant, Bridgeport, Conn. Automatic train-stopping mechanism. No. 1,157,144; Oct. 19; Gaz. vol. 219; p. 690.

Bevier, Philip H., New York, N. Y. Hollow-tile wall. No. 1,158,362; Oct. 26; Gaz. vol. 219; p. 1180.

Bibb, Dandridge H., New York, assignor to Continental Process Corporation, Briarcliff Village, N. Y. Cohering mass and forming the same. No. 1,158,363; Oct. 26; Gaz. vol. 219; p. 1180.

Bibb, Dandridge H., New York, assignor to Continental Process Corporation, Briarcliff Village, N. Y. Making cohering masses. No. 1,158,364; Oct. 26; Gaz. vol. 219; p. 1181.

Bibb, Dandridge H., New York, assignor to Continental Process Corporation, Briarcliff Village, N. Y. Briquets and other product composed of bonded divided material. No. 1,158,365; Oct. 26; Gaz. vol. 219; p. 1181.

Bibb, Dandridge H., assignor to Continental Process Corporation, New York, N. Y. Making cohering masses. No. 1,158,366; Oct. 26; Gaz. vol. 219; p. 1181.

Bickley, Everett H., assignor to Motograph Company of America, Detroit, Mich. Electric-display switching mechanism. No. 1,155,466; Oct. 5; Gaz. vol. 219; p. 49.

Bierbaum, H. (See Behrend, Helene, assignor.)

Biggar, Leroy A., Oneida, N. Y. Bushing. No. 1,156,582; Oct. 12; Gaz. vol. 219; p. 463.

Biggs, Robert, administrator. (See Gross, Henry P.)

Bigley, William J. (See Ward, John C., assignor.)

Bingham, Daniel, *et al.* (See Jobke, August F., assignor.)

Bingham, George W., New Britain Conn. Moving-picture machine. No. 1,156,457; Oct. 12; Gaz. vol. 219; p. 419.

Bird, Charles S., Walpole, Mass. Paper tube and making the same. No. 1,158,024; Oct. 26; Gaz. vol. 219; p. 1062.

Birdsey, Somers Company. (See Birse, William, assignor.)

Birse, William, assignor to Birdsey, Somers Company, Bridgeport, Conn. Extensible corset clasp or stay. No. 1,156,205; Oct. 12; Gaz. vol. 219; p. 330.

Bissell, Carl H., and F. Smith, assignors to Crouse-Hinds Company, Syracuse, N. Y. Electric-conduit fitting. No. 1,156,583; Oct. 12; Gaz. vol. 219; p. 463.

Bixby, Allan S., assignor to The B. & B. Mfg. Co., Indianapolis, Ind. Power molding-machine. No. 1,158,398; Oct. 26; Gaz. vol. 219; p. 1194.

Black, James H. (See Whale and Black.)

Black, Lee J., Beaumont, Tex. Wrench. No. 1,157,362; Oct. 19; Gaz. vol. 219; p. 768.

Blackard, Lucian, Hayti, Mo. Broom. No. 1,157,074; Oct. 19; Gaz. vol. 219; p. 666.

Blackburn, Charles D., Lime, Colo. Electric-lamp socket. No. 1,157,075; Oct. 19; Gaz. vol. 219; p. 666.

Blackburn, Charles E., Brooklyn, N. Y. Siphonic flushing apparatus. No. 1,157,667; Oct. 26; Gaz. vol. 219; p. 937.

Blackman, Malcom L., Ozark, Ala. Car-coupling. No. 1,157,496; Oct. 19; Gaz. vol. 219; p. 815.

Blain, George A., Long Lake, Minn. Peck-carrier. No. 1,156,878; Oct. 19; Gaz. vol. 219; p. 595.

Blaine, Joseph R., Taunton, Mass. Indicating device. No. 1,155,788; Oct. 5; Gaz. vol. 219; p. 162.

Blakely, Archibald J., Chandler, Ariz. Flume-gate. No. 1,158,165; Oct. 26; Gaz. vol. 219; p. 1111.

Blanchard, George L., Montgomery, Ala. Machine for manufacturing strip-saws. No. 1,156,458; Oct. 12; Gaz. vol. 219; p. 420.

Blank, Henry, Glen Ridge, N. J., assignor to Whiteside & Blank. Necklace-clasp. No. 1,156,267; Oct. 12; Gaz. vol. 219; p. 351.

Blank, Herman, Jr., Madison, Nebr. Ice-cutting machine. No. 1,155,400; Oct. 5; Gaz. vol. 219; p. 26.

Blankner, William, Cleveland, Ohio, assignor of one-half to C. G. Urshel, Trenton, N. J. Ice-machine. No. 1,156,832; Oct. 12; Gaz. vol. 219; p. 550.

Blardone, George, C. W. Nichols, and F. Bruguiere, New Orleans, La. Substitute for lampblack. No. 1,156,742; Oct. 12; Gaz. vol. 219; p. 519.

Blass, Edwin J., Portage, Wis. Ash-sifter. No. 1,155,875; Oct. 5; Gaz. vol. 219; p. 192.

Blau, Fritz, Charlottenburg, Germany, assignor to General Electric Company. Manufacture of fine refractory-metal wires. No. 1,157,288; Oct. 19; Gaz. vol. 219; p. 742.

Blauvelt, Archie J., Erin, N. Y. Motor-plow. No. 1,157,289; Oct. 19; Gaz. vol. 219; p. 743.

Blaw Steel Construction Company. (See Rawley, Wayne, assignor.)

Blalek, Stephan A., New York, N. Y. Keyless lock. No. 1,157,837; Oct. 26; Gaz. vol. 219; p. 995.

Bileberger, Gustav, New York, N. Y. Fuel for kinetic engines and making the same. No. 1,158,367; Oct. 26; Gaz. vol. 219; p. 1181.

Bliss, Amos R., Chicago, Ill. Humidifying device. No. 1,155,701; Oct. 5; Gaz. vol. 219; p. 131.

Bliss, Edward C., Waverly, Ohio. Shaft-releasing and brake-applying device for vehicles. No. 1,156,661; Oct. 12; Gaz. vol. 219; p. 492.

Bliss, William L., assignor, by mesne assignments, to The U. S. Light and Heat Corporation, Niagara Falls, N. Y. Hand-hole cover for generators. No. 1,157,497; Oct. 19; Gaz. vol. 219; p. 816.

Bliss, William L., assignor, by mesne assignments, to The U. S. Light and Heat Corporation, Niagara Falls, N. Y. Oil-well closure. No. 1,157,498; Oct. 19; Gaz. vol. 219; p. 816.

Bliss, William L., assignor, by mesne assignments, to The U. S. Light and Heat Corporation, Niagara Falls, N. Y. Belt and belt-fastener. No. 1,157,499; Oct. 19; Gaz. vol. 219; p. 816.

Bloch, Moses L. (See Hyde, Frederick, assignor.)

Blodgett, Charles L., Alameda, Cal. Clothes-line pulley. No. 1,157,143; Oct. 19; Gaz. vol. 219; p. 690.

Blomquist, John O., Dorchester, Mass., assignor to Maxin Manufacturing Company. Carbureter. No. 1,157,368; Oct. 19; Gaz. vol. 219; p. 768.

Blood, Maurice E., Kalamazoo, Mich. Driving-gear. No. 1,155,467; Oct. 5; Gaz. vol. 219; p. 49.

Bloom, Moses E., New York, N. Y. Poison-tablet. No. 1,156,584; Oct. 12; Gaz. vol. 219; p. 464.

Bloomberg, Joseph E., assignor to The Wallace & Smith Co., Milwaukee, Wis. Whip. No. 1,157,838; Oct. 26; Gaz. vol. 219; p. 996.

Blumenstein, Louis. (See Fischer, William, assignor.)

Boatwright, Acree L. (See Walker and Boatwright.)

Bobrick, Gabriel A., Los Angeles, Cal. Liquid-soap dispenser. No. 1,158,166; Oct. 26; Gaz. vol. 219; p. 1112.

Bobroff, Bornett L., assignor to Universal Indicator Company, Milwaukee, Wis. Telegraphy. No. 1,157,839; Oct. 26; Gaz. vol. 219; p. 996.

Bodinson, Lars W., assignor to The American Well Works, Aurora, Ill. Centrifugal pump. No. 1,155,401; Oct. 5; Gaz. vol. 219; p. 27.

Boerner, Rudolf. (See Santos and Boerner.)

Bohan, William J., St. Paul, Minn. Electric-light fixture. No. 1,156,585; Oct. 12; Gaz. vol. 219; p. 464.

Bohan, William J., St. Paul, Minn. Electrical switch-actuating mechanism. No. 1,157,076; Oct. 19; Gaz. vol. 219; p. 666.

Bohlman, George J., Medford, assignor to American Water Supply Company of New England, Boston, Mass. Apparatus for making paper cups with rolled edges. No. 1,155,787; Oct. 5; Gaz. vol. 219; p. 161.

Bohmbach, Jennie. (See Corbin, Elfreda J., assignor.)

Bohn, René, Mannheim, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Bucking vegetable material. No. 1,156,048; Oct. 12; Gaz. vol. 219; p. 278.

Bohr, Henry B., administrator. (See Bohr, Nicholas C.)

Bohr, Nicholas C., deceased, Boston, Mass.; H. B. Bohr, administrator. Shoe-sole-tempering device. No. 1,158,101; Oct. 26; Gaz. vol. 219; p. 1089.

Boles, Frank S., *et al.* (See Neller, Albert H., assignor.)

Boirault, Louis, Paris, France. Pipe-coupling device for railway and tram cars. No. 1,155,876; Oct. 5; Gaz. vol. 219; p. 192.

Boland, Gustave, San Jose, Cal. Spring-hinge. No. 1,155,702; Oct. 5; Gaz. vol. 219; p. 132.

Bolde, Henry, New York, N. Y., assignor to General Optical Company, Inc. Trifocal lens. No. 1,158,102; Oct. 26; Gaz. vol. 219; p. 1090.

Bolin, William F. (See Beaver, Francis M., assignor.)

Bollinger, Irvin L., deceased, Chicago, Ill.; B. K. Page, sole heir. Cattle-guard. No. 1,156,856; Oct. 12; Gaz. vol. 219; p. 560.

Bollinger, James, Whitefish, Mont. Dirigible lamp for automobiles. No. 1,155,877; Oct. 5; Gaz. vol. 219; p. 193.

Bonard, Marcel J. L. P., Montreal, Quebec, Canada. Safety apparatus for submarines. No. 1,156,970; Oct. 19; Gaz. vol. 219; p. 628.

Bond, George T., Huntington, W. Va. Flexible shaft. No. 1,157,149; Oct. 19; Gaz. vol. 219; p. 692.

Boner, Johann H., assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Producing chromium salts. No. 1,157,668; Oct. 26; Gaz. vol. 219; p. 937.

Bonham, Tom B. (See Edey, Charles E. C., assignor.)

Bonhard, Alfred M., Cleveland, Ohio. Bed. No. 1,156,833; Oct. 12; Gaz. vol. 219; p. 550.

Bonime, Albert, assignor to M. and L. Mandel, Chicago, Ill. Bag-lock. No. 1,157,364; Oct. 19; Gaz. vol. 219; p. 769.

Bonoff, Charles A., New York, N. Y. Gown. No. 1,155,544; Oct. 5; Gaz. vol. 219; p. 78.

Booth, Alba C., Burlington, Vt. Tooth-brush. No. 1,155,878; Oct. 5; Gaz. vol. 219; p. 193.

Booth, Lionel B., Cambridge, England. Objective for photographic and like purposes. No. 1,156,743; Oct. 12; Gaz. vol. 219; p. 519.

Bopp, Gustave P., Kirkwood, Mo. Valve. No. 1,156,049; Oct. 12; Gaz. vol. 219; p. 278.

Borders, Bert. (See Maschek, Henry, assignor.)

Borland, Bruce, assignor to The Borland-Grannis Company, Chicago, Ill. Seat. No. 1,156,834; Oct. 12; Gaz. vol. 219; p. 550.

Borland-Grannis Company, The. (See Borland, Bruce, assignor.)

Bornmann, Ernst, assignor to J. A. Topf & Soehne, Erfurt, Germany. Apparatus for drying granular material. No. 1,155,402; Oct. 5; Gaz. vol. 219; p. 27.

Borsodi, Morris, New York, N. Y. Ink-supplying device. No. 1,157,613; Oct. 19; Gaz. vol. 219; p. 852.

Borstelman, Henry L., Small, Idaho. Sack-holder. No. 1,156,744; Oct. 12; Gaz. vol. 219; p. 520.

Bosch, Carl, and W. Wild, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Producing hydrogen. No. 1,157,669; Oct. 26; Gaz. vol. 219; p. 938.

Bosch, Carl, and A. Mittasch, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Production of ammonia. No. 1,158,167; Oct. 26; Gaz. vol. 219; p. 1112.

Bosch, Firm of Robert. (See Kratz, Franz, assignor.)

Boston Rubber Shoe Company. (See Piper, Walter E., assignor.)

Boston Rubber Shoe Company. (See Randall, Chester J., assignor.)

Boswell, Henson R., Greenwood, Va. Tractor-plow. No. 1,157,670; Oct. 26; Gaz. vol. 219; p. 938.

Both, Tonjes A. C., Fairhaven, assignor, by mesne assignments, to The Zee Socket and Mfg. Co., Boston, Mass. Mechanical movement and electric-light socket. (Reissue.) No. 13,990; Oct. 5; Gaz. vol. 219; p. 250.

Botscheller, Alexander P. (See Schmidt, Frederick, assignor.)

Bottle, Edward K., Elmira, N. Y., assignor to American Sales Book Company, Limited, Toronto, Canada. Manifolding sales-book. No. 1,157,290; Oct. 19; Gaz. vol. 219; p. 743.

Bourcier, Gabriel, Erith, assignor to Vickers Limited, Westminster, England. Crank-pin bearing. No. 1,157,975; Oct. 26; Gaz. vol. 219; p. 1045.

Bovaird & Seyfang Manufacturing Company. (See Wright, William, assignor.)

Bowen, Aaron L., assignor to H. B. Hardt, Seattle, Wash. Table-service apparatus. No. 1,155,638; Oct. 5; Gaz. vol. 219; p. 109.

Bowen, Roy, Hoopeston, Ill. Camera attachment. No. 1,158,025; Oct. 26; Gaz. vol. 219; p. 1062.

Bowers, Otho D., Arcanum, Ohio. Electric permutation-switch mechanism. No. 1,157,923; Oct. 26; Gaz. vol. 219; p. 1026.

Bowles, Philip E., Jr. (See McNear and Bowles.)

Bowman, Henry, *et al.* (See Cave, Daniel, assignor.)

Bowman, Hiram V., Toledo, Ill. Gas-engine valve. No. 1,157,077; Oct. 19; Gaz. vol. 219; p. 667.

Bowman, Newton K., North Lawrence, Ohio. Manually-operated mine-door. No. 1,155,703; Oct. 5; Gaz. vol. 219; p. 132.

Bowser, James Y., *et al.* (See Kinnard, Robert M., assignor.)

Box Company of America. (See Ticknor, William D., assignor.)

Boyd, David C., Galion, assignor to Security Metallic Grave Vault Co., Orrville, Ohio. Burial-vault. No. 1,158,399; Oct. 26; Gaz. vol. 219; p. 1194.

Boyd, Robert L., Meridian, La. Front-end construction for vehicles. No. 1,158,168; Oct. 26; Gaz. vol. 219; p. 1112.

Boyden, Llewellyn W. (See Root and Boyden.)

Boyle, Albert J., Baltimore, Md. Sewer-pipe. No. 1,158,415; Oct. 26; Gaz. vol. 219; p. 1200.

Boyle, Albert J., Baltimore, Md. Sewer-pipe. No. 1,158,416; Oct. 26; Gaz. vol. 219; p. 1200.

Brucht, James T., Memphis, Tenn. Artificial limb. No. 1,155,545; Oct. 5; Gaz. vol. 219; p. 78.

Brückerbohm, Franz, Wilhelmsruh, near Reinickendorf-Berlin, Germany. Apparatus for making cables. No. 1,157,500; Oct. 19; Gaz. vol. 219; p. 817.

Bradburn, Joseph A., Syracuse, N. Y. Obtaining potassium chlorid. No. 1,156,388; Oct. 12; Gaz. vol. 219; p. 395.

Bradburn, Joseph A., Syracuse, N. Y. Obtaining magnesia. No. 1,156,662; Oct. 12; Gaz. vol. 219; p. 492.

Bradbury, Clifford C., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Party-line ringing system. No. 1,158,103; Oct. 26; Gaz. vol. 219; p. 1090.

Braddock, Edward I., Winchester, Mass., assignor to Lamb & Nash Company, Kittery, Me. Wire-bound article. No. 1,156,131; Oct. 12; Gaz. vol. 219; p. 807.

Bradley, Frederick J., Tacoma, Wash. Casting apparatus. No. 1,157,840; Oct. 26; Gaz. vol. 219; p. 997.

Bradley, John M., and C. F. Pike, Philadelphia, Pa. Eye glass-case. No. 1,158,169; Oct. 26; Gaz. vol. 219; p. 1113.

Bradley, John M., and C. F. Pike, Philadelphia, Pa. Eye glass-case. No. 1,158,170; Oct. 26; Gaz. vol. 219; p. 1113.

Bradley, John S., assignor of one-half to W. Watters, Delaware, Ohio. Orchard-heater. No. 1,157,671; Oct. 26; Gaz. vol. 219; p. 938.

Bradley, Lyford C. (See Waterman, Bradley, and Andrew.)

Bradshaw, Grant D., Westmont borough, Pa. Stove-burner. No. 1,157,841; Oct. 26; Gaz. vol. 219; p. 997.

Bradsher, Ollie W., Harrisburg, Ark. Self-loading vehicle. No. 1,157,291; Oct. 19; Gaz. vol. 219; p. 743.

Brady, Joseph D., Pineville, La. Tool for splitting nuts. No. 1,156,745; Oct. 12; Gaz. vol. 219; p. 520.

Braine, Bancroft G., assignor to The Rail Joint Company, New York, N. Y. Means for insulating rail-joints. (Reissue.) No. 13,994; Oct. 19; Gaz. vol. 219; p. 870.

Brainerd, Charles B. (See Wilkins, Frederick M., assignor.)

Brandelle, Joseph N., Chicago, Ill. Bath-cabinet. No. 1,157,842; Oct. 26; Gaz. vol. 219; p. 998.

Brandenstein, Daniel. (See Fischer and Brandenstein.)

Brandenstein, Daniel. (See Fischer, Jacob, assignor.)

Brandon, James S., Albin, Wyo. Line-splice. No. 1,155,334; Oct. 5; Gaz. vol. 219; p. 4.

Bratt, Fred A., *et al.* (See Chapman, Frank M., assignor.)

Braun, Jacob G., Chicago, Ill. Fireproof building construction. No. 1,157,078; Oct. 19; Gaz. vol. 219; p. 667.

Brasell, Charles H., St. Louis, Mo. Coin-controlled dispensing apparatus. No. 1,156,746; Oct. 12; Gaz. vol. 219; p. 520.

Brégéras, Gaston J. (See Bellem and Brégéras.)

Brent, Charles, Kenora, Ontario, Canada. Fire-extinguishing apparatus. No. 1,157,614; Oct. 19; Gaz. vol. 219; p. 852.

Breslove, Abel H., and A. Wetzig, assignors to S. O. Powell, Chicago, Ill. Bottle-closure. No. 1,155,639; Oct. 5; Gaz. vol. 219; p. 109.

Bretz, Homer A., Jackson, Mich., assignor to Mineralac Electric Company, Chicago, Ill. Automobile-horn. No. 1,157,292; Oct. 19; Gaz. vol. 219; p. 744.

Bricken, John, Maywood, Ill., assignor of two-thirds to R. Marks, Des Moines, Iowa. Electrocalculograph. No. 1,157,079; Oct. 19; Gaz. vol. 219; p. 667.

Bricknell, Algernon J, G. (See Bricknell, Augustus L., A. J. G., and J. L.)

Bricknell, Augustus L., A. J. G., and J. L., Carshalton, England. Internal-combustion engine. No. 1,155,885; Oct. 5; Gaz. vol. 219; p. 4.

Bricknell, John L. (See Bricknell, Augustus L., A. J. G., and J. L.)

Bridges, Joseph A., San Francisco, Cal. Disappearing window-screen. No. 1,155,546; Oct. 5; Gaz. vol. 219; p. 78.

Brierley, Henry J., Brooklyn, N. Y. Agitator for barrels. No. 1,156,050; Oct. 12; Gaz. vol. 219; p. 278.

Brigance, Jane H. (See Cooper and Brigance.)

Brindley, Harry S. B., London, England. Percussive tool for sealing tubes. No. 1,158,115; Oct. 26; Gaz. vol. 219; p. 1094.

Brinning, Thomas. (See Spillane and Brinning.)

Briscoe, Cole. (See Briscoe, Ina M. and C.)

Briscoe, Ina M. and C., Castle Rock, Colo. Adjustable crutch. No. 1,156,747; Oct. 12; Gaz. vol. 219; p. 521.

Briscoe Manufacturing Company. (See Groehn, Otto J., assignor.)

Brittain, Robert O., Boston, Mass. Illuminated sign. No. 1,157,672; Oct. 26; Gaz. vol. 219; p. 938.

Britten, Edwin F., Jr., Jersey City, N. J., assignor to L. E. Waterman Company, New York, N. Y. Spring and presser-bar for fountain-pens. No. 1,156,748; Oct. 12; Gaz. vol. 219; p. 521.

Brobst, Charles, Pasco, Wash. Grease-cup. No. 1,155,879; Oct. 5; Gaz. vol. 219; p. 193.

Brock, Ellis R. (See Day, Medicus F., assignor.)

Brockbank, Clarence J., Niagara Falls, Ontario, Canada, assignor to The Carborundum Company, Niagara Falls, N. Y. Apparatus for the manufacture of chemical compounds. No. 1,157,293; Oct. 19; Gaz. vol. 219; p. 744.

Brogden, Fay A., Syracuse, assignor to Pass & Seymour, Inc., Solvay, N. Y. Pull pendent switch. No. 1,156,344; Oct. 12; Gaz. vol. 219; p. 377.

Bromberg, Oscar F. R., San Diego, Cal. Combined tire-valve and pressure-gage. No. 1,156,268; Oct. 12; Gaz. vol. 219; p. 351.

Bronn, Jegor I., assignor of one-half to Rombacher Hüttenwerke, Rombach, Germany. Manufacture of steel. No. 1,156,051; Oct. 12; Gaz. vol. 219; p. 279.

Brooks, Frank M., New York, N. Y. Lighting-fixture. No. 1,155,780; Oct. 5; Gaz. vol. 219; p. 162.

Brooks, Morris, and H. B. Freeman, New York, N. Y. Hand-bag lock. No. 1,155,880; Oct. 5; Gaz. vol. 219; p. 194.

Brower, Josie M., Bartlesville, Okla. Mop. No. 1,156,750; Oct. 12; Gaz. vol. 219; p. 522.

Brown, Alfred G., assignor to Union Fibre Company, Winona, Minn. Car insulation. No. 1,156,206; Oct. 12; Gaz. vol. 219; p. 331.

Brown, Carl A., Fostoria, Ohio, assignor to General Electric Company. Electric-lighting fixture. No. 1,157,294; Oct. 19; Gaz. vol. 219; p. 744.

Brown, Elmer H. (See Williams and Brown.)

Brown, Gregory, Brooklyn, assignor to Western Electric Company, New York, N. Y. Impulse-transmitter for selective systems. No. 1,155,640; Oct. 5; Gaz. vol. 219; p. 109.

Brown, Henry J., New York, N. Y. Soldier's shield. No. 1,156,879; Oct. 19; Gaz. vol. 219; p. 596.

Brown, Howard, Springfield, Mass. Apparatus for controlling the thickness of paper. No. 1,157,204; Oct. 19; Gaz. vol. 219; p. 712.

Brown, James, Liverpool, England. Life-saving belt or buoy. No. 1,156,749; Oct. 12; Gaz. vol. 219; p. 521.

Brown, John T. S., Jr., Prospect, Ky. Pump. No. 1,156,052; Oct. 12; Gaz. vol. 219; p. 279.

Brown, John T. S., Jr., Prospect, Ky. Pump. No. 1,156,882; Oct. 19; Gaz. vol. 219; p. 597.

Brown, John W., Lakewood, assignor to National Carbon Company, Cleveland, Ohio. Cementing carbon articles. No. 1,158,171; Oct. 26; Gaz. vol. 219; p. 1114.

Brown, Mark A. (See Renner and Brown.)

Brown Perfection Tube Company. (See Voorhees, John J., assignor.)

Brown, Perry, Coraopolis, Pa. Lid for journal-boxes. No. 1,156,880; Oct. 19; Gaz. vol. 219; p. 596.

Brown, Perry, Coraopolis, Pa. Draft-rigging. No. 1,156,881; Oct. 19; Gaz. vol. 219; p. 596.

Brown, Samuel W., Klingerstown, Pa. Rail-joint. No. 1,157,145; Oct. 19; Gaz. vol. 219; p. 690.

Brown, Stewart, Chicago, Ill. Collapsible sheet-metal wall. No. 1,156,053; Oct. 12; Gaz. vol. 219; p. 279.

Brown, William M., Cambridge, Mass. Hot-water bottle. No. 1,156,054; Oct. 12; Gaz. vol. 219; p. 279.

Brown, William M., Newark, N. J. Egg-grip. No. 1,156,459; Oct. 12; Gaz. vol. 219; p. 420.

Browne, Harry P. C., Brooklyn, N. Y. Odometer. No. 1,157,365; Oct. 19; Gaz. vol. 219; p. 769.

Browning, Woodson, Oklahoma, Okla. Corn-planter. No. 1,157,501; Oct. 19; Gaz. vol. 219; p. 817.

Brownlee, Dalmar T., assignor to The F. W. Spacke Machine Company, Indianapolis, Ind. Geared-up starter. No. 1,156,863; Oct. 12; Gaz. vol. 219; p. 562.

Brozorich, Nicholas, Albia, Iowa. Rail-joint. No. 1,157,205; Oct. 19; Gaz. vol. 219; p. 712.

Bruguiere, Faurie. (See Blardone, Nichols, and Bruguiere.)

Bruggess, Frank, Portland, Pa. Water-power. No. 1,155,881; Oct. 5; Gaz. vol. 219; p. 194.

Brunswick-Balke-Collender Co. (See Hjort, Axel F., assignor.)

Bryan, Lindley N., Anoka, Minn. Bubbling fountain. No. 1,158,104; Oct. 26; Gaz. vol. 219; p. 1090.

Bryant Electric Company, The. (See Wagner, Charles, assignor.)

Bryce, William D., Saltillo, Tex. Pliers. No. 1,155,882; Oct. 5; Gaz. vol. 219; p. 194.

Bryson, W. B., *et al.* (See Miller, Benjamin D., assignor.)

Bubb, Elmer F., Chicago, Ill. Transmission-cone-gearing apparatus. No. 1,156,883; Oct. 19; Gaz. vol. 219; p. 597.

Bubier, Howard E., Lynn, Mass., assignor to The Singer Manufacturing Company. Buttonhole-fly for shoes. No. 1,158,368; Oct. 26; Gaz. vol. 219; p. 1182.

Bucci, Antonio. (See Santarsiero, Antonio V., assignor.)

Buch, Adam J., Portsmouth, Ohio, assignor, by mesne assignments, to Savoday Rack Company, St. Louis, Mo. Device for forming box-toes on shoes. No. 1,157,481; Oct. 19; Gaz. vol. 219; p. 810.

Buchwald, Henry C., Baltimore, Md. Tender coal-loading apparatus. No. 1,157,366; Oct. 19; Gaz. vol. 219; p. 770.

Bucknam, Fredrick A., Auburn, N. Y., assignor to International Harvester Company of New Jersey. Disk gang for use in harrows and similar tillage implements. No. 1,157,080; Oct. 19; Gaz. vol. 219; p. 668.

Buckwalter, Tracy V., Altoona, Pa. Warehouse-truck. No. 1,155,336; Oct. 5; Gaz. vol. 219; p. 4.

Budaji, Frank S., New York, N. Y. Clothes-line support. No. 1,157,502; Oct. 19; Gaz. vol. 219; p. 817.

Buddle, George T., Chicago, Ill. Combined table lock and opener. No. 1,156,460; Oct. 12; Gaz. vol. 219; p. 421.

Buddle, George T., Chicago, Ill. Combined table lock and opener. No. 1,156,461; Oct. 12; Gaz. vol. 219; p. 421.

Buell, William H., New Haven, assignor, by mesne assignments, to Union Metallic Cartridge Company, Bridgeport, Conn. Ammunition. No. 1,156,857; Oct. 12; Gaz. vol. 219; p. 560.

Buffum, Herbert H., The Weirs, N. H. Spring structure. No. 1,158,026; Oct. 26; Gaz. vol. 219; p. 1062.

Buffum, Herbert H., The Weirs, N. H. Drive mechanism. No. 1,158,027; Oct. 26; Gaz. vol. 219; p. 1063.

Bugbee, Lucian W., assignor to American Optical Company, Southbridge, Mass. Goggles. No. 1,156,389; Oct. 12; Gaz. vol. 219; p. 396.

Bull, Anders H., Brooklyn, N. Y. Electric signaling system. No. 1,155,547; Oct. 5; Gaz. vol. 219; p. 78.

Bull, Robert W., assignor of one-half to W. B. Fraser and one-tenth to W. B. Fraser, trustee, Los Angeles, Cal. Stop-cock. No. 1,156,269; Oct. 12; Gaz. vol. 219; p. 352.

Bullard, Alfred. (See De Palkowska and Bullard.)

Bullock, Henry E., assignor to H. E. & J. E. Bullock, Chicago, Ill. Gearing. No. 1,156,055; Oct. 12; Gaz. vol. 219; p. 280.

Bullock, H. E. & J. E. (See Bullock, Henry E., assignor.)

Bullock Tractor Co. (See Walker, Frank H., assignor.)

Bunker, James H. (See Warlick and Bunker.)

Bunnell, Frederick N., Barnegat, N. J. Clearing device for automobile wind-shields. No. 1,157,673; Oct. 26; Gaz. vol. 219; p. 939.

Bunnell, Samuel N., Toms River, N. J. Clothes-line stretcher. No. 1,158,172; Oct. 26; Gaz. vol. 219; p. 1114.

Bunting Brass & Bronze Company. (See Bunting, William H., assignor.)

Bunting, William H., assignor to Bunting Brass & Bronze Company, Toledo, Ohio. Bearing. No. 1,158,369; Oct. 26; Gaz. vol. 219; p. 1182.

Burgess, Willard N., *et al.* (See Templeton, William G., assignor.)

Burgwald, Charles C., New York, N. Y. Window-screen. No. 1,158,116; Oct. 26; Gaz. vol. 219; p. 1094.

Burhans, Van Dyke, New York, N. Y. Adjustable window-scaffold. No. 1,157,503; Oct. 19; Gaz. vol. 219; p. 818.

Burkman, Arthur, Traverse City, Mich. Artificial bait. No. 1,155,883; Oct. 5; Gaz. vol. 219; p. 195.

Burnap, Charles E., Chicago, Ill. Key-tag. No. 1,156,345; Oct. 12; Gaz. vol. 219; p. 378.

Burnett, Richard W., Montreal, Canada, assignor to Camel Company, Chicago, Ill. Track structure for freight-car doors. No. 1,156,884; Oct. 19; Gaz. vol. 219; p. 598.

Burns, Francis B., North River, N. Y. Pipe-holding device. No. 1,155,337; Oct. 5; Gaz. vol. 219; p. 4.

Burns, John G., *et al.* (See Jobke, August F., assignor.)

Burrill, Peter, Balmain, near Sydney, New South Wales, Australia. Axle-lubricator. No. 1,155,790; Oct. 5; Gaz. vol. 219; p. 163.

Burroughs Adding Machine Company. (See Horton, Allen A., assignor.)

Burroughs Adding Machine Company. (See Vincent, Jesse G., assignor.)

Burrows, William R., Newark, N. J. Machine for the manufacture of vacuum-receptacles. No. 1,156,971; Oct. 19; Gaz. vol. 219; p. 629.

Burton Company, The. (See Burton, George D., assignor.)

Burton, George D., assignor to The Burton Company, Boston, Mass. Softening and strengthening degummed vegetable fibers. No. 1,156,462; Oct. 12; Gaz. vol. 219; p. 421.

Busbee, Ander J. (See Busbee, Thomas C., assignor.)

Busbee, Thomas C., assignor of one-half to A. J. Busbee, Andalusia, Ala. Subsoiler. No. 1,157,295; Oct. 19; Gaz. vol. 219; p. 745.

Buskard, Samuel G., assignor of one-sixth to L. Lyons, one-sixth to F. G. Mummery, and one-sixth to H. Carpenter, Hamilton, Ontario, Canada. Trolley-wheel. No. 1,156,270; Oct. 12; Gaz. vol. 219; p. 352.

Butenschon, John, Anniston, Ala. Illuminated sign. No. 1,157,504; Oct. 19; Gaz. vol. 219; p. 818.
Butler, Alfred G., Valley Ford, Wash. Device for checking horses. No. 1,155,403; Oct. 5; Gaz. vol. 219; p. 28.
Butler, Frank D., Burlington, Iowa. Valve mechanism. No. 1,157,081; Oct. 19; Gaz. vol. 219; p. 668.
Butler, James A., Winthrop, assignor to American Voting Machine Company, Boston, Mass. Controlling device for voting-machines and the like. No. 1,156,028; Oct. 5; Gaz. vol. 219; p. 244.
Butterfield, Edward J., Chamberlain, S. D. Shipping-receptacle. No. 1,157,206; Oct. 19; Gaz. vol. 219; p. 712.
Butts, Daniel G., assignor to The Ivory Garter Company, New Orleans, La. Garment-supporter. No. 1,156,835; Oct. 12; Gaz. vol. 219; p. 551.
Buuck, Christian D. C., Hoagland, Ind. Towing apparatus. No. 1,157,674; Oct. 26; Gaz. vol. 219; p. 939.
Byars, Leonidas P. (See Strahle, Arthur L., assignor.)
Byers, Jacob J., Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio. Car-door bracket. No. 1,156,587; Oct. 12; Gaz. vol. 219; p. 464.
Byrd, Thomas M., Raleigh, N. C. Folding ironing-board. No. 1,155,884; Oct. 5; Gaz. vol. 219; p. 195.
C. C. Fouts Company, The. (See Fouts, Calvin C., assignor.)
Cabell, John L., Savannah, Ga. Special receptacle. No. 1,155,791; Oct. 5; Gaz. vol. 219; p. 163.
Cable Company, The. (See Hagey, James C., assignor.)
Cahn, Louis D., New York, N. Y. Handle for culinary vessels. No. 1,155,792; Oct. 5; Gaz. vol. 219; p. 163.
Caine, James C., assignor of one-half to The New England Electric Company, Denver, Colo. Outlet-box bracket. No. 1,156,885; Oct. 19; Gaz. vol. 219; p. 598.
Caldwell, Gilbert W., Gay, Ga. Separator. No. 1,157,756; Oct. 26; Gaz. vol. 219; p. 968.
California Macvan Co. (See Vandercook, Albert E., assignor.)
California Valve and Air Brake Company. (See Neal, Spencer G., assignor.)
Calkins, Fred D., and A. C. Johnson, Sunnyvale, Cal. Internal-combustion engine. No. 1,156,663; Oct. 12; Gaz. vol. 219; p. 493.
Callender, Edwin F., assignor of one-half to L. B. Callender, Galesburg, Ill. Insulating-tube. No. 1,156,105; Oct. 26; Gaz. vol. 219; p. 1091.
Callender, L. Belle. (See Callender, Edwin F., assignor.)
Callender, Ward G., Mansfield, Ohio. Shoe-cleaner. No. 1,156,751; Oct. 12; Gaz. vol. 219; p. 522.
Camel Company. (See Burnett, Richard W., assignor.)
Cameron, Neil S., Weed, Cal. Take-up device for electric-lamp cords and the like. No. 1,157,505; Oct. 19; Gaz. vol. 219; p. 818.
Camp, Key D. (See Lindemann and Camp.)
Campbell, Andrew C., Waterbury, assignor to American Chain Company, Incorporated, Bridgeport, Conn. Snap-hook. No. 1,157,757; Oct. 26; Gaz. vol. 219; p. 968.
Campbell, Donald J., Muskegon Heights, Mich. Piston-ring pliers. No. 1,157,082; Oct. 19; Gaz. vol. 219; p. 669.
Campbell, John P. (See Morrell, Lon, assignor.)
Campbell, Leon J., Chicago, Ill. Operating device for punch-press clutches. No. 1,158,370; Oct. 26; Gaz. vol. 219; p. 1182.
Campbell, Philip D. (See Beck, August, assignor.)
Campbell, Socrates A., Mound Valley, Kans. Folding car-step. No. 1,156,752; Oct. 12; Gaz. vol. 219; p. 522.
Campbell, Sterling H., assignor to Railway Devices Company, St. Louis, Mo. Combined angle-cock and train-pipe clamp. No. 1,156,463; Oct. 12; Gaz. vol. 219; p. 421.
Campbell, William V. (See Welch, Thomas, assignor.)
Campello Nailless Heel Company. (See Ryberg, Charles O., assignor.)
Campfield, Thomas, Unity, Ill. Portable elevator. No. 1,157,367; Oct. 19; Gaz. vol. 219; p. 770.
Canedy, Earl, Chicago Heights, assignor to Kewanee Water Supply Company, Kewanee, Ill. Internal-combustion engine. No. 1,156,886; Oct. 19; Gaz. vol. 219; p. 598.
Cannon, Francis P. (See Wilbur, Merritt D., assignor.)
Cantlon, James L., and D. Hurley, Hillyard, Wash. Locomotive. No. 1,157,843; Oct. 26; Gaz. vol. 219; p. 998.
Carborundum Company, The. (See Brockbank, Clarence J., assignor.)
Carey, Patrick J., New York, N. Y. Wall-board. No. 1,156,753; Oct. 12; Gaz. vol. 219; p. 522.
Carius, Emil, Taucha, near Leipzig, Germany. Toy brick-press. No. 1,156,521; Oct. 12; Gaz. vol. 219; p. 442.
Carl, David. (See Pinkel, Daniel, assignor.)
Carlin, Samuel E., Chicago, Ill., assignor, by mesne assignments, to Underwood Computing Machine Company, New York, N. Y. Type-writing machine. No. 1,156,464; Oct. 12; Gaz. vol. 219; p. 422.
Carlson, Arthur G., North Easton, Mass. Detectometer. No. 1,155,338; Oct. 5; Gaz. vol. 219; p. 5.
Carlson, Hjalmar G., Worcester, Mass., assignor to Rockwood Sprinkler Company of Massachusetts. Apparatus for forming hollow articles by dies. No. 1,156,972; Oct. 19; Gaz. vol. 219; p. 630.
Carlson, Hjalmar G., assignor to Rockwood Sprinkler Company of Massachusetts, Worcester, Mass. Making nuts and the like. No. 1,156,973; Oct. 19; Gaz. vol. 219; p. 630.
Carlson, Hjalmar G., assignor to Rockwood Sprinkler Company of Massachusetts, Worcester, Mass. Nut. No. 1,157,615; Oct. 19; Gaz. vol. 219; p. 853.
Carney, E. B. (See Heylmun, William R., assignor.)
Carney, Jesse T., Rio de Janeiro, Brazil. Chair or socket for the rails of railways and the like. No. 1,156,754; Oct. 12; Gaz. vol. 219; p. 523.
Carnie, Alexander, Independence, Mo. Calcining and clinkering. No. 1,158,371; Oct. 26; Gaz. vol. 219; p. 1183.
Carnie, Alexander, North Branch, Mich. Calcining-furnace. No. 1,158,372; Oct. 26; Gaz. vol. 219; p. 1184.
Carpenter, Daniel A., New York, assignor, by mesne assignments, to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,156,588; Oct. 12; Gaz. vol. 219; p. 464.
Carpenter, Henry, *et al.* (See Buskard, Samuel G., assignor.)
Carpenter, Henry A., and A. W. Warner, Sewickley, assignors to Riter-Conley Manufacturing Company, Pittsburgh, Pa. Computing weighing apparatus. No. 1,156,864; Oct. 12; Gaz. vol. 219; p. 562.
Carpentier, Ernest F., Garden Valley, Idaho. Spring-board. No. 1,158,173; Oct. 26; Gaz. vol. 219; p. 1114.
Carr, James R., Rotan, Tex. Oil-burner. No. 1,157,758; Oct. 26; Gaz. vol. 219; p. 969.
Carrel, Claude M., assignor to himself and L. N. Maurier, Paris, France. Pressure-carbureter. No. 1,157,146; Oct. 19; Gaz. vol. 219; p. 691.
Carrier, Walter J., Lansing, Mich. Water and fire shield for chimneys. No. 1,158,117; Oct. 26; Gaz. vol. 219; p. 1095.
Carroll, James M. S., Westmount, Quebec, Canada. Strap-trimming machine. No. 1,157,844; Oct. 26; Gaz. vol. 219; p. 998.
Carroll, Thomas, Dayton, Ohio. Motion translation and transmission mechanism. No. 1,156,271; Oct. 12; Gaz. vol. 219; p. 352.
Carson, Wilfred P., Winston-Salem, N. C. Grinding-mill-feeding mechanism. No. 1,157,506; Oct. 19; Gaz. vol. 219; p. 819.
Carter, Edward C., Evanston, Ill. Angle-bar. No. 1,155,793; Oct. 5; Gaz. vol. 219; p. 163.
Cartsdafner, Roy E., assignor to The Kilbourne and Jacobs Manufacturing Company, Columbus, Ohio. Dump-car. No. 1,157,147; Oct. 19; Gaz. vol. 219; p. 692.
Casey, Mark J., New Richmond, Wis. Extension-shelves. No. 1,156,755; Oct. 12; Gaz. vol. 219; p. 523.
Caskey, Edgar M., Chicago, Ill., assignor to S. F. Bowser & Co., Inc., Fort Wayne, Ind. Tank. No. 1,157,675; Oct. 26; Gaz. vol. 219; p. 939.
Casper, Albert, Vallejo, Cal. Vehicle-chock. No. 1,155,549; Oct. 5; Gaz. vol. 219; p. 79.
Cass, Harry S., Chicago, Ill., assignor to Lever-Lock Company. Detachable gear-shifting lever. No. 1,156,272; Oct. 12; Gaz. vol. 219; p. 353.
Cassidy, Frederick W., Philadelphia, Pa. Non-refillable bottle. No. 1,156,346; Oct. 12; Gaz. vol. 219; p. 378.
Catchings, Bob, Birmingham, Ala. Water-closet bowl. No. 1,155,885; Oct. 5; Gaz. vol. 219; p. 195.
Cate, Charles W. (See Smith, Richard, assignor.)
Cater, Theodore T., Columbus, Kans. Dental vulcanizer attachment. No. 1,157,759; Oct. 26; Gaz. vol. 219; p. 969.
Catucci, Pliny, Newark, N. J., assignor to A. F. Meisselbach & Brother. Adapter for talking-machines. No. 1,156,130; Oct. 12; Gaz. vol. 219; p. 306.
Cave, Daniel, assignor of one-third to H. M. George and one-third to H. Bowman, Lincoln, Nebr. Spring-wheel. No. 1,158,373; Oct. 26; Gaz. vol. 219; p. 1184.
Caven, Alva H., Youngwood, Pa. Electric signal device. No. 1,157,296; Oct. 19; Gaz. vol. 219; p. 745.
Cayford, Benjamin F., Skowhegan, Me. Overdraw-bridle. No. 1,157,207; Oct. 19; Gaz. vol. 219; p. 712.
Centerfreze Ice Process Company, The. (See Gainer, Edward E., assignor.)
Central Oil and Gas Stove Co. (See White, Fred E., assignor.)
Century Electric Company. (See Pillsbury, Edwin S., assignor.)
Černý, Alois, Shiner, Tex. Carbureter. No. 1,157,507; Oct. 19; Gaz. vol. 219; p. 819.
Chalfant, Walter B. (See Davis and Chalfant.)
Chamberlin, Benjamin D., Corning, N. Y., assignor to Empire Machine Company, Portland, Me. Mold mechanism for glass-blowing machines. No. 1,156,056; Oct. 12; Gaz. vol. 219; p. 280.
Chamberlin, Benjamin D., Corning, N. Y., assignor to Empire Machine Company, Portland, Me. Mold for glass-blowing machines. No. 1,156,057; Oct. 12; Gaz. vol. 219; p. 280.
Chamberlin, Benjamin D., Corning, N. Y., assignor to Empire Machine Company, Portland, Me. Mold for glass-blowing machines. No. 1,156,058; Oct. 12; Gaz. vol. 219; p. 281.
Chamberlin, Benjamin D., Corning, N. Y., assignor to Empire Machine Company, Portland, Me. Glass-blowing mold. No. 1,156,756; Oct. 12; Gaz. vol. 219; p. 523.
Chamberlin, Benjamin D., Corning, N. Y., assignor to Empire Machine Company, Portland, Me. Take-off mechanism for glass-blowing pipes. No. 1,156,858; Oct. 12; Gaz. vol. 219; p. 561.
Chambon, Louis, Paris, France. Apparatus for distributing and filling cigarettes into cases. No. 1,156,465; Oct. 12; Gaz. vol. 219; p. 422.
Champion Ignition Company. (See Schmidt, Albert, assignor.)

Chapman, Frank M., assignor of three-eighths to F. A. Bratt and three-eighths to R. McWhorter, Fort Edward, N. Y. Reversible-speed pulley. No. 1,156,132; Oct. 12; Gaz. vol. 219; p. 307.
Chapman, George F., Natick, Mass. Self-feeding disinfecting and deodorizing device. No. 1,156,974; Oct. 19; Gaz. vol. 219; p. 630.
Chapman, Matthew T., assignor to The American Well Works, Aurora, Ill. Pumping machinery. No. 1,157,676; Oct. 26; Gaz. vol. 219; p. 940.
Chapman, Theron W., Belvidere, Ill. Guard for bottle-corks. No. 1,158,028; Oct. 26; Gaz. vol. 219; p. 1063.
Charland, Frederick J., assignor to The American Hardware Corporation, New Britain, Conn. Elevator-door-releasing device. No. 1,158,174; Oct. 26; Gaz. vol. 219; p. 1114.
Charland, Joseph, and R. A. O'Connor, Copper Cliff, Ontario, Canada. Signal-bell. No. 1,157,508; Oct. 19; Gaz. vol. 219; p. 819.
Charpier, Edward, Chicago, Ill. Electric switch, fuse, and protector therefor. No. 1,156,887; Oct. 19; Gaz. vol. 219; p. 599.
Chemische Fabrik Griesheim-Elektron. (See Specketer and Münch, assignors.)
Cherrier, Harry A., Redlands, Cal. Solar cooker. No. 1,158,175; Oct. 26; Gaz. vol. 219; p. 1115.
Cherry, Charles C., Hidalgo, Ill. Post. No. 1,156,207; Oct. 12; Gaz. vol. 219; p. 331.
Chicago Electric Meter Company. (See Hall, Chester I., assignor.)
Chicago Lubricator Company, The. (See Edwards, Frank W., assignor.)
Chicago Paper Company. (See Price, Joseph H., assignor.)
Chicago Pneumatic Tool Company. (See Sherwood, Mather W., assignor.)
Chicago Signal Company. (See Levison, Maurice, assignor.)
Chism, Howard F., Olive Branch, Ill. Self-reserving tablet. No. 1,155,886; Oct. 5; Gaz. vol. 219; p. 195.
Cholin, Tony, Chinook, Mont. Gearing-lubricator. No. 1,156,664; Oct. 12; Gaz. vol. 219; p. 493.
Choralcelo Manufacturing Company. (See Scuterud, Mikarl A., assignors.)
Choralcelo Company. (See Severy and Sinclair, assignors.)
Choralcelo Company. (See Thomas, Edward G., assignor.)
Christen, Albert, *et al.* (See Mott, James W., assignor.)
Christen, Clarence, *et al.* (See Mott, James W., assignor.)
Christensen, Arthur O., Franklin, N. J. Electric cooking-stove. No. 1,158,176; Oct. 26; Gaz. vol. 219; p. 1115.
Christenson, George, Jamaica, N. Y., assignor to H. W. Johns-Manville Company. Slack take-up for fluid-pressure-brake systems. No. 1,158,177; Oct. 26; Gaz. vol. 219; p. 1116.
Christiansen, Charles, Gelsenkirchen, Germany. Pneumatic tool. No. 1,157,924; Oct. 26; Gaz. vol. 219; p. 1026.
Christianson, Andrew, Butler, Pa. Shock-absorber. No. 1,156,665; Oct. 12; Gaz. vol. 219; p. 493.
Christopher, John R., Maben, Miss. Machine for removing boll-weevil. No. 1,156,208; Oct. 12; Gaz. vol. 219; p. 331.
Christopherson, Mansell, New Effington, S. D. Clevis. No. 1,155,887; Oct. 5; Gaz. vol. 219; p. 196.
Chubb, Lewis W., Edgewood Park, Pa., assignor to Westinghouse Electric and Manufacturing Company. Electrolytic rectifier. No. 1,156,666; Oct. 12; Gaz. vol. 219; p. 493.
Church, James E., Cambridge, Mass. Game apparatus. No. 1,156,667; Oct. 12; Gaz. vol. 219; p. 494.
Churchill, Bert, Toulon, Ill. Corner putty-knife. No. 1,156,209; Oct. 12; Gaz. vol. 219; p. 332.
Cibulas, Stephen E., Bridgeport, Conn. Self-locking window-operating device. No. 1,157,760; Oct. 26; Gaz. vol. 219; p. 969.
Cipollioni, Joseph, Franklin, Ky. Washboard. No. 1,155,888; Oct. 5; Gaz. vol. 219; p. 196.
Clapp, Charles R., Evanston, Ill. Aeroplane. No. 1,157,616; Oct. 19; Gaz. vol. 219; p. 853.
Clark, Albert C., assignor to A. C. Clark & Company, Chicago, Ill. Device for mixing gases. No. 1,156,975; Oct. 19; Gaz. vol. 219; p. 631.
Clark, Charles A., Auburn, N. Y. Silvering-machine. No. 1,156,210; Oct. 12; Gaz. vol. 219; p. 332.
Clark, Charles J., assignor of one-half to J. B. Dibelka, Chicago, Ill. Rotary gas-engine. No. 1,155,794; Oct. 5; Gaz. vol. 219; p. 164.
Clark, Chas. H., *et al.* (See Saint, Lee G., assignor.)
Clark, Elmer A., Joliet, Ill. Mixing-machine. No. 1,158,178; Oct. 26; Gaz. vol. 219; p. 1116.
Clark, Gordon H., Waterbury, Conn., assignor to The Hoge Manufacturing Company, New York, N. Y. Clip for pens, pencils, &c. No. 1,155,641; Oct. 5; Gaz. vol. 219; p. 110.
Clark, Horace F. (See Rittenhouse, Irvin, assignor.)
Clark, James H., St. Maries, Idaho, assignor of one-half to J. M. Russell, Portland, Oreg. Engine-starter. No. 1,157,761; Oct. 26; Gaz. vol. 219; p. 969.
Clark, Lawrence A. (See Harris, Moses A., assignor.)
Clark, Merrill E., Bradford, Pa. Ball-bearing. No. 1,158,106; Oct. 26; Gaz. vol. 219; p. 1091.
Clarke, Anna C., Scranton, Pa. Sewage system for railway-cars and the like. No. 1,155,550; Oct. 5; Gaz. vol. 219; p. 79.
Clarke, James F., Los Angeles, Cal. Step-tread. No. 1,157,083; Oct. 19; Gaz. vol. 219; p. 669.
Clarke, John Q., Crawfordsville, Ind. Corn-drier. No. 1,155,889; Oct. 5; Gaz. vol. 219; p. 196.
Claus, Emil A., New York, N. Y. Receptacle-closure. No. 1,155,890; Oct. 5; Gaz. vol. 219; p. 197.
Claus, Ida, executrix. (See Claus, Richard.)
Claus, Richard, deceased, East Orange; I. Claus, executrix, Montague township, Suffolk county, N. J. Treating fullers' earth. No. 1,156,466; Oct. 12; Gaz. vol. 219; p. 423.
Clay, Harry C., Columbus, Ind., assignor to Emerson-Brantingham Company, Rockford, Ill. Scarifier. No. 1,155,795; Oct. 5; Gaz. vol. 219; p. 164.
Clay, Odin G., Washington, D. C. Window-cleaner. No. 1,156,522; Oct. 12; Gaz. vol. 219; p. 442.
Clemens, John A., assignor to Davol Rubber Company, Providence, R. I. Invalid-cushion. No. 1,156,523; Oct. 12; Gaz. vol. 219; p. 442.
Clement, Edward E., Washington, D. C. Apparatus for recording and reproducing sounds or signals. No. 1,156,976; Oct. 19; Gaz. vol. 219; p. 631.
Clement, Frank B., Merrimac, Mass. Regulator for drop-windows for closed automobiles. No. 1,157,677; Oct. 26; Gaz. vol. 219; p. 940.
Clerk, Dugald, London, assignor to The National Gas Engine Company Limited, Ashton-under-Lyne, England. Internal-combustion engine working with coke-oven and other gases. No. 1,158,179; Oct. 26; Gaz. vol. 219; p. 1116.
Cleveland Dental Manufacturing Company, The. (See Dalbey, William C., assignor.)
Cleveland, Edgar W., assignor to National Automatic Tool Company, Richmond, Ind. Self-alining tap-holder. No. 1,155,796; Oct. 5; Gaz. vol. 219; p. 165.
Cloos, Jacob, deceased, Milwaukee, Wis.; A. R. Barry, administrator. Valve. No. 1,156,977; Oct. 19; Gaz. vol. 219; p. 631.
Coates, Frederick, assignor to Standard Automatic Machine Company, Rochester, N. Y. Labeling-machine. No. 1,157,660; Oct. 19; Gaz. vol. 219; p. 869.
Cobb, Geo. W. (See Wegner, Fred, assignor.)
Cochran, Harry A., Houston, Tex., assignor to American Automatic Water Heater Co. Gas-valve. No. 1,156,347; Oct. 12; Gaz. vol. 219; p. 379.
Coe, Benjamin S., assignor to The Coe-Stapley Manufacturing Company, Bridgeport, Conn. Match-box. No. 1,158,118; Oct. 26; Gaz. vol. 219; p. 1095.
Coe-Stapley Manufacturing Company, The. (See Coe, Benjamin S., assignor.)
Coffey, Barton H., Elizabeth, N. J., assignor, by mesne assignments, to The Cooling Tower Co. Inc., New York, N. Y. Cooling-tower. No. 1,158,107; Oct. 26; Gaz. vol. 219; p. 1091.
Coffin, Walter E., assignor to The National Malleable Castings Company, Cleveland, Ohio. Coupling shank and yoke connection. No. 1,157,084; Oct. 19; Gaz. vol. 219; p. 669.
Cohen, Isaac, Gloucester, Mass. Garment-fitter. No. 1,157,085; Oct. 19; Gaz. vol. 219; p. 670.
Cohn, Samuel, assignor to Mantle Machinery & Patents Company, New York, N. Y. Machine for cutting mantle-blanks. No. 1,158,180; Oct. 26; Gaz. vol. 219; p. 1117.
Coboe, Wallace P., assignor of one-third to The William Davies Company, Limited, and one-third to E. C. Fox, Toronto, Ontario, Canada. Casing for sausages. No. 1,158,400; Oct. 26; Gaz. vol. 219; p. 1194.
Colburn, E. A., Jr. (See Goeglein, William J., assignor.)
Colburn, Irving W., Franklin, Pa., assignor, by mesne assignments, to Toledo Glass Company, Toledo, Ohio. Means for drawing sheet-glass. No. 1,156,273; Oct. 12; Gaz. vol. 219; p. 353.
Colby, George A., Calgary, Alberta, Canada. Shipping-crate. No. 1,157,509; Oct. 19; Gaz. vol. 219; p. 820.
Cole, Louis M., Los Angeles, Cal. Label. (Reissue.) No. 14,000; Oct. 26; Gaz. vol. 219; p. 1202.
Coleman, Abraham, *et al.* (See Walsh, John B., assignor.)
Coleman, C. P., *et al.*, receivers. (See Meyer, Robert, assignor.) (Reissue.)
Coleman, Clarence W., deceased, Westfield, N. J.; K. Coleman, administratrix, assignor to The Hall Switch & Signal Company. Signal system. No. 1,157,845; Oct. 26; Gaz. vol. 219; p. 998.
Coleman, Katherine, administratrix. (See Coleman, Clarence W.)
Coleman, Solomon, *et al.* (See Walsh, John B., assignor.)
Collett, Emil, assignor to Norsk-Hydroelektrisk Kvaelstof-aktieselskab, Christiania, Norway. Concentrating dilute nitric acid. No. 1,158,181; Oct. 26; Gaz. vol. 219; p. 1117.
Collett, Laura I., Nevada, Mo. Undergarment. No. 1,156,757; Oct. 12; Gaz. vol. 219; p. 524.
Collin, Francis J., Dortmund, assignor to Aktien-Gesellschaft für Kohlendestillation, Dusseldorf, Germany. Coke-oven. No. 1,157,368; Oct. 19; Gaz. vol. 219; p. 771.
Collins, Charles W., Seattle, Wash. Clothes-drying machine. No. 1,155,468; Oct. 5; Gaz. vol. 219; p. 50.

Collins, Edgar F., Schenectady, N. Y., assignor to General Electric Company. Electric furnace. No. 1,156,668; Oct. 12; Gaz. vol. 219; p. 494.
Colvin, Rubin. (See Le Compte and Colvin.)
Combusto Devices Corporation. (See Shore, William E., assignor.)
Comee, George W., Waterloo, Iowa. Corner-fastening for bedsteads. No. 1,156,059; Oct. 12; Gaz. vol. 219; p. 281.
Commons, William C., assignor to The Taft-Peirce Manufacturing Company, Woonsocket, R. I. Surface-plate. No. 1,157,742; Oct. 26; Gaz. vol. 219; p. 969.
Computing Scale Company. (See Dunn, Frank P., assignor. (Reissue.)
Computing Scale Company, The. (See Hopkinson, Joseph, assignor.)
Comstock, Corry B., New York, N. Y. Insulating means for bake-ovens. No. 1,156,390; Oct. 12; Gaz. vol. 219; p. 396.
Conard, James A., Atlanta, Ga. Sanitary cap for drinking-glasses. No. 1,156,391; Oct. 12; Gaz. vol. 219; p. 396.
Conger, Henry M., Washington, D. C. Apparatus for making sheet material. No. 1,157,149; Oct. 19; Gaz. vol. 219; p. 692.
Conley, George F., Chicago, Ill. Pneumatic plug. No. 1,158,108; Oct. 26; Gaz. vol. 219; p. 1091.
Connell, James J., Chicago, Ill. Guard and holder for fly-paper. No. 1,158,119; Oct. 26; Gaz. vol. 219; p. 1095.
Connelly, James J., Buffalo, N. Y. Moving-picture apparatus. No. 1,156,211; Oct. 12; Gaz. vol. 219; p. 332.
Connor, Patrick F., assignor of one-fourth to O. W. Ward, one-eighth to A. Schull-Gramm, New York, N. Y., and one-eighth to E. C. Abbott, Boston, Mass. Drill-press. No. 1,155,891; Oct. 5; Gaz. vol. 219; p. 197.
Conrad, Elwood H., Trevorton, Pa. Means for attaching and detaching light-globes. No. 1,157,617; Oct. 19; Gaz. vol. 219; p. 853.
Conrad, Joseph L., assignor of one-third to T. D. Wright and one-third to A. S. Halstrom, Durham, N. C. Electric cable. No. 1,157,208; Oct. 19; Gaz. vol. 219; p. 713.
Conrader, Rudolph, Erie, Pa. Regulator. No. 1,156,392; Oct. 12; Gaz. vol. 219; p. 397.
Conran, William F., Jr., Brooklyn, N. Y. Stand-pipe and sprinkler system. No. 1,156,978; Oct. 19; Gaz. vol. 219; p. 632.
Consolidated Car-Heating Company. (See McElroy, James F., assignor.)
Conte, James, Chicago, Ill. Feeder for nut dipping and coating machines. No. 1,158,120; Oct. 26; Gaz. vol. 219; p. 1096.
Conti, Dominique J. E., Roanne, France. Weed-cutter or cultivator. No. 1,157,150; Oct. 19; Gaz. vol. 219; p. 693.
Continental & Commercial Trust & Savings Bank, trustee. (See Miehle, Robert, assignor.)
Continental Paper Bag Company. (See Yulke, Edward F., assignor.)
Continental Process Corporation. (See Bibb, Dandridge H., assignor.)
Converse, Francis B., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Line-casting machine. No. 1,155,892; Oct. 5; Gaz. vol. 219; p. 197.
Converse, Pearl D., Columbus, Ohio. Excavating-machine. No. 1,157,209; Oct. 19; Gaz. vol. 219; p. 713.
Conway, William, South Boston, Mass. Clasp. (Reissue.) No. 14,001; Oct. 26; Gaz. vol. 219; p. 1202.
Cook, Albert E., Kankakee, Ill. Plow-disk assembly. No. 1,158,110; Oct. 26; Gaz. vol. 219; p. 1092.
Cook, Albert E., Odebolt, Iowa, and T. Van Tuyl, Kankakee, Ill.; said Van Tuyl assignor to said Cook. Self-clearing tractor-wheel. No. 1,156,212; Oct. 12; Gaz. vol. 219; p. 333.
Cook, Albert E., and T. Vantuyl, Odebolt, Iowa; said Vantuyl assignor to said Cook. Automobile plow. No. 1,158,109; Oct. 26; Gaz. vol. 219; p. 1092.
Cook, Emanuel M., Indianapolis, Ind. Element for automatic fire-extinguishers. No. 1,155,339; Oct. 5; Gaz. vol. 219; p. 5.
Cook Railway Signal Company, The. (See Fallek, Nathan, assignor.)
Coolbroth, Augusta P., Cambridge, Mass. Garter. No. 1,156,393; Oct. 12; Gaz. vol. 219; p. 397.
Coolidge, William D., Schenectady, N. Y., assignor to General Electric Company. Vacuum-tube electrode and operating same. No. 1,157,925; Oct. 26; Gaz. vol. 219; p. 1026.
Cooling Tower Co. Inc., The. (See Coffey, Barton H., assignor.)
Coombs, Frank E., Natick, Mass. Process and apparatus for depurating. No. 1,156,060; Oct. 12; Gaz. vol. 219; p. 282.
Cooney, John T., Denver, Colo. Shoe-lace knotter. No. 1,156,758; Oct. 12; Gaz. vol. 219; p. 524.
Cooper, Arthur G., Sydney, New South Wales, Australia. Engine-lubricator. No. 1,158,121; Oct. 26; Gaz. vol. 219; p. 1096.
Cooper, George D., St. Johns, Mich. Rupture appliance. No. 1,156,979; Oct. 19; Gaz. vol. 219; p. 632.
Cooper Hewitt Electric Company. (See Hewitt, Peter C., assignor.)
Cooper Hewitt Electric Company. (See Pole, Joseph C., assignor.)
Cooper Hewitt Electric Company. (See Thomas, Percy H., assignor.)
Cooper, Kenneth F., Buffalo, N. Y., assignor to American Cyanamid Company, Nashville, Tenn. Hydrating commercial calcium cyanamid. No. 1,155,797; Oct. 5; Gaz. vol. 219; p. 165.
Cooper, Simon, New York, N. Y., assignor to Gorton-Pew Fisheries Company, Gloucester, Mass. Compressor. No. 1,155,798; Oct. 5; Gaz. vol. 219; p. 166.
Cooper, Thomas K., St. Louis, Mo. Cushioning device for foot-levers. No. 1,156,586; Oct. 12; Gaz. vol. 219; p. 464.
Cooper, Truesdell, and J. H. Brigance, Denver, Colo. Maternity-gown. No. 1,155,551; Oct. 5; Gaz. vol. 219; p. 80.
Copeland, Robert J. (See Holden and Copeland.)
Coppers, William S., Belleville, Kans. Cap. No. 1,156,980; Oct. 19; Gaz. vol. 219; p. 632.
Coppridge, Joel A., Richmond, Va. Cooking-stove. No. 1,155,799; Oct. 5; Gaz. vol. 219; p. 166.
Corbet, Archer H., Barnes, London, England. Tent. No. 1,155,800; Oct. 5; Gaz. vol. 219; p. 167.
Corbin, Elfreda J., assignor of one-half to J. Bohmbach, Minneapolis, Minn. Napkin. No. 1,158,182; Oct. 26; Gaz. vol. 219; p. 1117.
Cordell, Frank N., St. Louis county, Mo. Attachment for trap-nests. No. 1,156,589; Oct. 12; Gaz. vol. 219; p. 465.
Cordt, Hugo, Nordenham, Germany. Calculating-machine. No. 1,158,374; Oct. 26; Gaz. vol. 219; p. 1184.
Cork Insert Company, The. (See Whitcomb, Lawrence, assignor.)
Cormeny, Jeremiah, York, Pa. Strainer for faucets. No. 1,156,274; Oct. 12; Gaz. vol. 219; p. 353.
Cornetto, Fred, Washington, Pa. Rail-joint. No. 1,157,510; Oct. 19; Gaz. vol. 219; p. 820.
Cornfield, Noah, New York, N. Y. Vehicle-wheel. No. 1,158,183; Oct. 26; Gaz. vol. 219; p. 1117.
Cornwall, Frederick R., St. Louis, Mo. Adding attachment for type-writing machines. No. 1,155,642; Oct. 5; Gaz. vol. 219; p. 110.
Cornwell, Frank S. (See Porter and Cornwell.)
Corrugated Veneer Packing Products Company. (See Flipse, Louis F., assignor.)
Costello, Richard A., Chicago Heights, Ill. Blackboard-eraser. No. 1,157,369; Oct. 19; Gaz. vol. 219; p. 771.
Costmeter Company, The. (See Quigley, John T., assignor.)
Cottingham, Lewis, Delta, Ohio. Coupling for brake and transmission rods. No. 1,157,618; Oct. 19; Gaz. vol. 219; p. 854.
Cotton, James H., Beaver, Pa. Nut-lock. No. 1,157,678; Oct. 26; Gaz. vol. 219; p. 941.
Cottrell, Charles P., Westerly, R. I., assignor, by mesne assignments, to Cottrell & Sons Company, New York, N. Y. Antismut-web for printed sheets. No. 1,156,609; Oct. 12; Gaz. vol. 219; p. 495.
Cottrell & Sons Company. (See Cottrell, Charles P., assignor.)
Coulter, William W., Garrison, N. D. Traction-wheel. No. 1,155,704; Oct. 5; Gaz. vol. 219; p. 182.
Coup, Merle, Cleveland, Ohio. Manifold outlet. No. 1,156,888; Oct. 19; Gaz. vol. 219; p. 590.
Courson, John F., Pitcairn, Pa. Draft-gear. No. 1,156,670; Oct. 12; Gaz. vol. 219; p. 495.
Cowell, Charles B. (See Cowell, Don F. and C. B.)
Cowell, Don F. and C. B., Denver, Colo. Rain and snow shield for vehicles. No. 1,155,705; Oct. 5; Gaz. vol. 219; p. 183.
Cowell, William B., Catford, England. Apparatus for use when paving roads and the like. No. 1,157,297; Oct. 19; Gaz. vol. 219; p. 745.
Cox, Albert D., Winterville, N. C. Fertilizer-distributer. No. 1,157,370; Oct. 19; Gaz. vol. 219; p. 771.
Cox, Charles W., Winchester, Ind. Gate. No. 1,156,275; Oct. 12; Gaz. vol. 219; p. 353.
Cox, Kenwrick C., Norfolk Island. Selenium cell especially adapted for use in connection with telegraphy. No. 1,156,524; Oct. 12; Gaz. vol. 219; p. 443.
Cox, Kenwrick C., Norfolk Island. Submarine telegraphy. No. 1,158,375; Oct. 26; Gaz. vol. 219; p. 1185.
Cox, Thomas E., Birmingham, Ala., assignor of one-fourth to W. C. Muckleroy, one-fifth to C. M. Wall, one-sixth to B. P. Williams, and two-fifteenths to W. R. Stafford, Tampa, Fla. Car-coupling. No. 1,156,029; Oct. 5; Gaz. vol. 219; p. 244.
Cox, Walter, and A. Shuman, assignors to Pennsylvania Wire Glass Manufacturing Company, Philadelphia, Pa. Making corrugated wire-glass. No. 1,156,213; Oct. 12; Gaz. vol. 219; p. 333.
Cox, Walter, and A. Shuman, assignors to Pennsylvania Wire Glass Manufacturing Company, Philadelphia, Pa. Corrugated wire-glass. No. 1,156,214; Oct. 12; Gaz. vol. 219; p. 333.
Crabtree, Thomas B., Hanford, Cal. Traction-wheel. No. 1,157,151; Oct. 19; Gaz. vol. 219; p. 693.
Cracraft, Leich Electric Company. (See Leich, Oscar M., assignor.)
Craft, Edward B., Hackensack, N. J., assignor to Western Electric Company, New York, N. Y. Electromagnetic relay. No. 1,156,671; Oct. 12; Gaz. vol. 219; p. 495.
Craig, Edward, assignor to Saranac Machine Co., St. Joseph, Mich. Laundry-tag machine. No. 1,155,469; Oct. 5; Gaz. vol. 219; p. 51.

Craig, John, Alta Vista, Kans. Tool. No. 1,156,759; Oct. 12; Gaz. vol. 219; p. 524.
Craig, Thomas J. I. (See Spence and Craig.)
Crampton Automatic Pressure Fastener Company. (See Crampton, Basil R., assignor.)
Crampton, Basil R., assignor to Crampton Automatic Pressure Fastener Company, Detroit, Mich. Latch-spring fastener. No. 1,157,086; Oct. 19; Gaz. vol. 219; p. 670.
Crandall, Olive H., *et al.* (See Geary, Joseph F., assignor.)
Crane Company. (See Houser, Arthur M., assignor.)
Crane, Thomas S. (See Rossig and Crane.)
Crawford, Marvin R. (See Mitchell, Thomas T., assignor.)
Crawley, Mansfield C., assignor to Addograph Company, Los Angeles, Cal. Electric type-writer. No. 1,156,061; Oct. 12; Gaz. vol. 219; p. 282.
Creapo, Charles A., St. Paul, Minn. Ladder. No. 1,155,995; Oct. 5; Gaz. vol. 219; p. 231.
Crellin, Edward W., Crafton, Pa., assignor to Des Moines Bridge & Iron Works, Des Moines, Iowa. Metal-bending machine. No. 1,156,062; Oct. 12; Gaz. vol. 219; p. 282.
Creveling, John L., New York, N. Y., assignor to Safety Car Heating and Lighting Company. Electric regulation. No. 1,155,643; Oct. 5; Gaz. vol. 219; p. 110.
Crimmel, Alvie C., Hartford City, Ind. Dispensing cap or cover. No. 1,157,679; Oct. 26; Gaz. vol. 219; p. 941.
Crippen, Roy D., San Diego, Cal. Spring-seat. No. 1,155,893; Oct. 5; Gaz. vol. 219; p. 198.
Crist, Lauren A., Marion, Kans. Dirt, sand, and manure loader. No. 1,156,889; Oct. 19; Gaz. vol. 219; p. 599.
Crittenden, Richard F., assignor to Krit-Seal Company, Los Angeles, Cal. Moistening and sealing device. No. 1,157,619; Oct. 19; Gaz. vol. 219; p. 854.
Crocker, William W., Somerville, Mass. Glazing-strip. No. 1,156,981; Oct. 19; Gaz. vol. 219; p. 633.
Crockett, Charles H., assignor to Detroit Lubricator Company, Detroit, Mich. Lubricator. No. 1,156,133; Oct. 12; Gaz. vol. 219; p. 307.
Cross, Joseph G., assignor of one-half to R. W. Fenn, Seattle, Wash. Apparatus for drying granular materials. No. 1,157,087; Oct. 19; Gaz. vol. 219; p. 671.
Crossman, Martin R., Boston, Mass. Soap-bubbler. No. 1,155,470; Oct. 5; Gaz. vol. 219; p. 51.
Crouse-Hinds Company. (See Bissell and Smith, assignors.)
Crouse-Hinds Company. (See Smith and Mantel, assignors.)
Crouse, Ray M., Great Bend, Kans. Folding crate. No. 1,155,404; Oct. 5; Gaz. vol. 219; p. 28.
Crow, William H., San Ysidro, Cal. Pipe-patching device. No. 1,156,890; Oct. 19; Gaz. vol. 219; p. 600.
Crowe, George W., Santa Cruz, Cal. Ore disintegrating and screening machine. No. 1,156,394; Oct. 12; Gaz. vol. 219; p. 398.
Crowley, John T., assignor to The Beacon Falls Rubber Shoe Company, Beacon Falls, Conn. Miner's shoe. No. 1,155,644; Oct. 5; Gaz. vol. 219; p. 111.
Crown, Eugene H., Sacramento, Cal., assignor to Flory Carry Iron Company, St. Louis, Mo. Draw-bar carry-iron. No. 1,157,088; Oct. 19; Gaz. vol. 219; p. 671.
Crumay, Katherine, *et al.* (See Jobke, August F., assignor.)
Crumpton, William J., Evanston, Ill., assignor, by mesne assignments, to W. R. Heath, Buffalo, N. Y. Register-actuating mechanism. No. 1,157,620; Oct. 19; Gaz. vol. 219; p. 854.
Cruttenden, Henry L., and F. L. Lawrence, Northfield, Minn. Heel-mat for pianos. No. 1,157,846; Oct. 26; Gaz. vol. 219; p. 999.
Cuenot, Paul A., and L. G. Fischer, Steelton, assignors to Pennsylvania Steel Company, Philadelphia, Pa. Punching-machine. No. 1,155,552; Oct. 5; Gaz. vol. 219; p. 80.
Cullum, Hubert J. (See Roberts and Cullum.)
Culver, Edward W. (See Owen, Thomas M., assignor.)
Cummings, Elijah P. (See Arthur, Russell, assignor.)
Cuneo, Frank. (See Diaferia, Joseph, assignor.)
Cunningham, John P., York, Nebr. Tire-tool. No. 1,157,763; Oct. 26; Gaz. vol. 219; p. 970.
Currie, William J. (See Robinson and Currie.)
Currier, Harvey B., Danville, Ill. Dirigible-headlight control. No. 1,157,764; Oct. 26; Gaz. vol. 219; p. 970.
Curry, Claud D., Memphis, Tenn. Paper-associating machine. No. 1,155,894; Oct. 5; Gaz. vol. 219; p. 198.
Curry, Joseph J., New York, N. Y. Automatic control for automobiles. No. 1,156,760; Oct. 12; Gaz. vol. 219; p. 525.
Curtiss, Glenn H., Hammondsport, N. Y. Heavier-than-air flying-machine. No. 1,156,215; Oct. 12; Gaz. vol. 219; p. 333.
Cusick, Marguerittc. (See Andersson, Carl E., assignor.)
Cutler-Hammer Mfg. Co., The. (See Barnum, Thomas E., assignor.)
Cutler-Hammer Mfg. Co., The. (See Henderson, Clark T., assignor.)
Cutler-Hammer Mfg. Co., The. (See Horton, Albert J., assignor.)
Cutler-Hammer Mfg. Co., The. (See Klein, Charles J., assignor.)
Cutler-Hammer Mfg. Co., The. (See Yerger, Charles W., assignor.)
D'Angelo, Pasquale, Newark, N. J. Lock. No. 1,155,405; Oct. 5; Gaz. vol. 219; p. 28.
D'Arcy, Frank P., Kalamazoo, Mich. Spring-cushion structure. No. 1,155,645; Oct. 5; Gaz. vol. 219; p. 111.
D'Arcy, Frank P., Kalamazoo, Mich. Hose-clamp. No. 1,155,646; Oct. 5; Gaz. vol. 219; p. 111.
Dabney, Thomas G., Clarksdale, Miss. Electric-fan-guard attachment. No. 1,158,184; Oct. 26; Gaz. vol. 219; p. 1118.
Dague, Morton H., Newport, Ark. Paper box. No. 1,157,298; Oct. 19; Gaz. vol. 219; p. 745.
Dahl, Ole M. (See Uchtmann, Weet R., assignor.)
Dain, Joseph, assignor to Deere & Company, Moline, Ill. Tongue-truck for harvesters. No. 1,156,216; Oct. 12; Gaz. vol. 219; p. 334.
Dain, Joseph, assignor to Dain Manufacturing Company of Iowa, Ottumwa, Iowa. Hay-loader. No. 1,157,680; Oct. 26; Gaz. vol. 219; p. 941.
Dain Manufacturing Company of Iowa. (See Dain, Joseph, assignor.)
Dalbey, William C., Du Quoin, Ill., assignor to The Cleveland Dental Manufacturing Company, Cleveland, Ohio. Root-beveling device. No. 1,157,681; Oct. 26; Gaz. vol. 219; p. 942.
Dalton-Ingersoll Manufacturing Company. (See Kenney, Thomas H., assignor.)
Daniel, John T., Columbia, Tenn. Lever-actuated power-transmission gearing. No. 1,156,982; Oct. 19; Gaz. vol. 219; p. 633.
Daniel, Paul, Jamaica, N. Y. Centrifugal pump. No. 1,156,063; Oct. 12; Gaz. vol. 219; p. 283.
Danielson, Cecil E., Langford, S. D. Trap. No. 1,158,185; Oct. 26; Gaz. vol. 219; p. 1118.
Dantsizen, Christian, Schenectady, N. Y., assignor to General Electric Company. Fluid-pressure device. No. 1,158,029; Oct. 26; Gaz. vol. 219; p. 1063.
Darling, Edmund R., Woonsocket, R. I. Work-holder. No. 1,155,706; Oct. 5; Gaz. vol. 219; p. 133.
Darling, Samuel M., Chicago, Ill. Making gas. No. 1,157,089; Oct. 19; Gaz. vol. 219; p. 671.
Darrow, Will H. (See Stokes, Robert L., assignor.)
Darrow, Wilton E., Sutter Creek, Cal. Slime-thickener for dewatering mine-tailings. No. 1,156,276; Oct. 12; Gaz. vol. 219; p. 353.
Davies, John, Miskin, Mountain Ash, and J. Davies, Penrhiwceiber, Wales. Hauling apparatus. No. 1,157,299; Oct. 19; Gaz. vol. 219; p. 746.
Davis, Albert G., Schenectady, N. Y., assignor to General Electric Company. Electric meter. No. 1,157,926; Oct. 26; Gaz. vol. 219; p. 1027.
Davis, Albert J., New York, N. Y. Preserving milk and milk products. No. 1,157,976; Oct. 26; Gaz. vol. 219; p. 1045.
Davis, Bemiss N., New Orleans, La. Endless carrier for conveyers. No. 1,155,340; Oct. 5; Gaz. vol. 219; p. 6.
Davis, David, New York, N. Y. Attachment for a burner. No. 1,157,511; Oct. 19; Gaz. vol. 219; p. 820.
Davis, George H., West Orange, N. J. Music-roll. No. 1,156,891; Oct. 19; Gaz. vol. 219; p. 600.
Davis, George H., West Orange, N. J. Music-roll. No. 1,158,122; Oct. 26; Gaz. vol. 219; p. 1097.
Davis, Harry G., assignor to The H. G. Davis Manufacturing Company, Philadelphia, Pa. Pin-ticket machine. No. 1,156,672; Oct. 12; Gaz. vol. 219; p. 495.
Davis, Horace W., Sharon, Pa. Type-writing machine. No. 1,155,707; Oct. 5; Gaz. vol. 219; p. 133.
Davis, Isaac H., Newtonville, Mass., assignor of one-half to H. H. Westinghouse, Now York, N. Y., and one-half to M. C. Davis, Boston, Mass. Shock-operated speed-controlling apparatus for self-propelled vehicles. No. 1,155,471; Oct. 5; Gaz. vol. 219; p. 51.
Davis, James C., Hinsdale, Ill., assignor to American Steel Foundries, New York, N. Y. Method of and apparatus for venting molds. No. 1,157,847; Oct. 26; Gaz. vol. 219; p. 999.
Davis, James C., Hinsdale, Ill., assignor to American Steel Foundries, New York, N. Y. Center plate. No. 1,157,848; Oct. 26; Gaz. vol. 219; p. 999.
Davis, John B., Springfield, assignor to Gilbert & Barker Manufacturing Company, West Springfield, Mass. Filtering apparatus. No. 1,156,592; Oct. 12; Gaz. vol. 219; p. 466.
Davis, Mary C., *et al.* (See Davis, Isaac H., assignor.)
Davis, Milton E., Canastota, N. Y. Mop-wringer. No. 1,157,152; Oct. 19; Gaz. vol. 219; p. 693.
Davis, Ray W., assignor of one-half to W. B. Chalfant, Brownsville, Pa. Portable breastwork. No. 1,155,895; Oct. 5; Gaz. vol. 219; p. 198.
Davis, Robert J., assignor to E. V. Methven, Chicago, Ill. Binder. No. 1,156,467; Oct. 12; Gaz. vol. 219; p. 423.
Davis, Walter L., Nashville, Tenn. Water-cooler. No. 1,157,927; Oct. 26; Gaz. vol. 219; p. 1027.
Davis, William R., Toledo, Ohio. Lathe-dog. No. 1,155,553; Oct. 5; Gaz. vol. 219; p. 80.
Davison, Gregory C., and J. W. Anderson, New London, Conn., assignors to Electric Boat Company, New York, N. Y. Starting mechanism for internal-combustion engines. No. 1,157,849; Oct. 26; Gaz. vol. 219; p. 999.
Davol, George K., San Francisco, Cal. Piston for internal-combustion engines. No. 1,156,590; Oct. 12; Gaz. vol. 219; p. 465.
Davol Rubber Company. (See Clemens, John A., assignor.)
Dawson, Arthur T., Westminster, London, and J. Horne, Barrow-in-Furness, assignors to Vickers Limited, Westminster, England. Loading apparatus of heavy guns. No. 1,157,682; Oct. 26; Gaz. vol. 219; p. 942.

Dawson, John W. (See Spencer and Dawson.)
Day, Albert V. T., New Rochelle, N. Y., assignor to The Hall Switch and Signal Company. Traffic-controlling system for railways. No. 1,157,850; Oct. 26; Gaz. vol. 219; p. 1000.
Day, Medicus F., assignor of one-half to E. R. Brock, Belton, S. C. Adjustable bearing. No. 1,157,851; Oct. 26; Gaz. vol. 219; p. 1000.
De Bechi, Guy, London, England. Industrial separation of lead and zinc contained in the state of sulfids in ores. No. 1,157,153; Oct. 19; Gaz. vol. 219; p. 693.
De Cew, Judson A., Montreal, Quebec, Canada. Toxic product and making same. No. 1,155,708; Oct. 5; Gaz. vol. 219; p. 134.
De Falco, Joseph, Vineland, N. J. Observation apparatus. No. 1,157,154; Oct. 19; Gaz. vol. 219; p. 694.
De Frees, William, Hawthorne, Cal. Spring-tire. No. 1,156,348; Oct. 12; Gaz. vol. 219; p. 379.
De Gaston, Albert H., and F. McLean, assignors to Globe Iron Works, Sacramento, Cal. Internal-combustion engine. No. 1,155,709; Oct. 5; Gaz. vol. 219; p. 134.
De Gordy, Francis. (See Shearman and De Gordy.)
De Laval Separator Company, The. (See Hall, Selden H., assignor.)
De Ley, Frederic A., Aurora, Ill. Stop-watch. No. 1,156,893; Oct. 19; Gaz. vol. 219; p. 601.
De Leseo, Michael, Pittsburgh, Pa. Sanitary device for massage implements. No. 1,155,341; Oct. 5; Gaz. vol. 219; p. 6.
De Lisle, Thomas C. (See Phillips and De Lisle.)
De Neergaard, Lewis E., Port Chester, assignor, by mesne assignments, to Technology Sales Co., Inc., New York, N. Y. Window-lock. No. 1,157,767; Oct. 26; Gaz. vol. 219; p. 971.
De Palkowska, Marie, and A. Bullard, New York, N. Y. Exercising-machine. No. 1,158,003; Oct. 26; Gaz. vol. 219; p. 1053.
De Temple, Charles A., St. Louis, Mo. Hanger-box oiler. No. 1,155,472; Oct. 5; Gaz. vol. 219; p. 52.
De Voe, Albert H., Westfield, N. J., assignor to The Singer Manufacturing Company. Button-fastening machine. No. 1,157,621; Oct. 19; Gaz. vol. 219; p. 854.
De Witt, William P., Somerville, Mass. Mouthpiece for saliva-ejecting apparatus. No. 1,155,342; Oct. 5; Gaz. vol. 219; p. 6.
De Wolf, Charles E. (See Fry, Henry E, assignor.)
De Zeng, Henry L., Maple Shade, N. J. Opthalmological instrument. No. 1,158,187; Oct. 26; Gaz. vol. 219; p. 1119.
Dean, James, New York, N. Y. Internal-combustion engine. No. 1,155,647; Oct. 5; Gaz. vol. 219; p. 112.
Dean, William E., Superior, Wis. Tunneling-machine. No. 1,156,277; Oct. 12; Gaz. vol. 219; p. 354.
Dean, William W., assignor, by mesne assignments, to Benjamin Electric Manufacturing Company, Chicago, Ill. Electric-lighting fixture. No. 1,157,765; Oct. 26; Gaz. vol. 219; p. 970.
Dearborn, John W., Springfield, Mass. Package-wrapping machine. No. 1,158,186; Oct. 26; Gaz. vol. 219; p. 1119.
Dearing, David M., Jackson, Mich. Running-gear for motor-vehicles. No. 1,155,801; Oct. 5; Gaz. vol. 219; p. 167.
Dechamps, Heinrich, Charlottenburg, Germany, assignor to General Electric Company. Compressor. No. 1,158,030; Oct. 26; Gaz. vol. 219; p. 1064.
Decker, Herman, Hanover, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Producing derivatives of N-homologues of the norhydrohydrastinin. No. 1,156,134; Oct. 12; Gaz. vol. 219; p. 308.
Deem, Miller M., assignor to The Reading Saddle & Manufacturing Company, Reading, Pa. Cycle-saddle. No. 1,157,512; Oct. 19; Gaz. vol. 219; p. 821.
Deere & Company. (See Dain, Joseph, assignor.)
Deere & Mansur Co. (See White, Charles E., assignor.)
Degener, Heinrich, Berlin, Germany, assignor to Mergenthaler Linotype Company. Linotype-machine. No. 1,155,996; Oct. 5; Gaz. vol. 219; p. 232.
Deitrich, John M., Battle Creek, Mich. Aeroplane. No. 1,157,371; Oct. 19; Gaz. vol. 219; p. 772.
Delaney, Fred H., Valier, Mont. Butter-mold. No. 1,157,766; Oct. 26; Gaz. vol. 219; p. 970.
Delaney, William P., assignor of one-half to W. W. Dickson, Amsterdam, N. Y. Ink-fountain for printing-presses. No. 1,155,710; Oct. 5; Gaz. vol. 219; p. 134.
Delles, William J. (See Erben and Delles.)
Dempsey, Charles F., Vancouver, Wash. Threshing-machine. No. 1,156,395; Oct. 12; Gaz. vol. 219; p. 398.
Dempster, John T., Schenectady, N. Y., assignor to General Electric Company. Electric timing device. No. 1,157,300; Oct. 19; Gaz. vol. 219; p. 746.
Denio, Gerald H., Eaton, Colo. Ticket or card exhibitor. No. 1,156,396; Oct. 12; Gaz. vol. 219; p. 398.
Denivelle, Otto E., Mount Vernon, N. Y. Sleeping-eyes for dolls. No. 1,156,761; Oct. 12; Gaz. vol. 219; p. 525.
Denman, Hugh E., Slayden, Tex. Connector for electrical conductors. No. 1,156,349; Oct. 12; Gaz. vol. 219; p. 379.
Dennis, Charles E., *et al.* (See Wise, Alvia F., assignor.)
Dennis, George M., Van Houten, N. Mex. Combination condiment-holder and cutlery utensil. No. 1,155,802; Oct. 5; Gaz. vol. 219; p. 167.
Dennison, Leonidas R., South San Francisco, Cal. Glazing and hardening brick, terra-cotta, and other objects. No. 1,158,417; Oct. 26; Gaz. vol. 219; p. 1201.
Dennison Manufacturing Company. (See Willis, Charles C., assignor.)
Denny-Renton Clay & Coal Co. (See Adderson, James G., assignor.)
Denver Rock Drill Manufacturing Company, The. (See Waugh, Daniel S., assignor.)
Deppen, John L. (See Selleck, Theodore G., assignor.)
Des Moines Bridge & Iron Works. (See Crellin, Edward W., assignor.)
Descamps, Emmanuel A. J., assignor to Société Leduc, Heitz et Cie., Raiseux, France. Treating textiles used in aeronautics and aviation and the aeroplane-framework produced thereby. No. 1,156,894; Oct. 19; Gaz. vol. 219; p. 601.
Deschere, Harvey, New York, N. Y. Electric illumination. No. 1,158,064; Oct. 12; Gaz. vol. 219; p. 283.
Desjardins, John, Marinette, Wis. Radiator attachment. No. 1,155,997; Oct. 5; Gaz. vol. 219; p. 232.
Detroit Lubricator Company. (See Crockett, Charles H., assignor.)
Detroit Motor Appliance Company. (See Miller, Cosby D., assignor.)
Detroit Steel Products Company. (See Wardwell, Harold F., assignor.)
Deutscher, Walter A., Murtoa, Victoria, Australia. Harrow for attachment to seed-drills. No. 1,157,155; Oct. 19; Gaz. vol. 219; p. 694.
Devereaux, James H., *et al.* (See Golly, Louis, assignor.)
Diaferia, Joseph, assignor to F. Cuneo, Chicago, Ill. Banana-crate. No. 1,155,406; Oct. 5; Gaz. vol. 219; p. 28.
Diamant-Brikett-Werke G. m. b. H. (See Hein, Paul, assignor.)
Diamond Power Specialty Company. (See Magee, John, assignor.)
Diamond Whip Company. (See Schmidt, August J., assignor.)
Dibelka, James B. (See Clark, Charles J., assignor.)
Dick, Ralph W., assignor to Louis Rastetter & Son, Fort Wayne, Ind. Vehicle wheel-rim. No. 1,157,156; Oct. 19; Gaz. vol. 219; p. 695.
Dickinson, Fairleigh S., Rutherford, N. J. Case. No. 1,156,762; Oct. 12; Gaz. vol. 219; p. 526.
Dickson, William W. (See Delaney, William P., assignor.)
Dieckmann, Adolf, Cincinnati, Ohio. Producing sheet-metal elbows. No. 1,157,852; Oct. 26; Gaz. vol. 219; p. 1000.
Dieckmann, Gustav, San Francisco, Cal. Folding box. No. 1,156,673; Oct. 12; Gaz. vol. 219; p. 490.
Diehl, Albert C., Camden, N. J., assignor to Victor Talking Machine Company. Sound-box. No. 1,156,217; Oct. 12; Gaz. vol. 219; p. 334.
Diehl Manufacturing Company. (See Zabriskie, Henry L., assignor.)
Diehl, Walter R., Pittsburgh, Pa. Draft-rigging for railway rolling-stock. No. 1,155,896; Oct. 5; Gaz. vol. 219; p. 199.
Diener, Charles H., Philadelphia, Pa. Carbureter. No. 1,156,836; Oct. 12; Gaz. vol. 219; p. 551.
Dierdorff, Henry B., Columbus, Ohio, assignor to The Jeffrey Manufacturing Company. Safety device for power transmission. No. 1,156,397; Oct. 12; Gaz. vol. 219; p. 399.
Diescher, Samuel E., Pittsburgh, Pa. Machine for cleaning and polishing tin sheets. No. 1,155,711; Oct. 5; Gaz. vol. 219; p. 134.
Diesser, Gottfried, Zurich, Switzerland. Making silk feltable. No. 1,156,983; Oct. 19; Gaz. vol. 219; p. 634.
Dieterich, Hermann. (See Ach, Rothmann, and Dieterich.)
Dillon, W. F. (See Thomasson, Henry A. W., assignor.)
Dimentberg, David, Chicago, Ill. Photographic apparatus. No. 1,156,984; Oct. 19; Gaz. vol. 219; p. 634.
Dixon, George L., Driscoll, N. D. Wind-wheel pump-rod connection. No. 1,156,065; Oct. 12; Gaz. vol. 219; p. 283.
Doan, Harry C. (See Doan, Walter J. and H. C.)
Doan, Walter J. and H. C., Richmond, Ind. Automatic gravity-valve. No. 1,156,837; Oct. 12; Gaz. vol. 219; p. 552.
Doane, John C., East Long Meadow, Mass., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,157,683; Oct. 26; Gaz. vol. 219; p. 943.
Doble, William A., assignor to The Pelton Water Wheel Company, San Francisco, Cal. Hydraulic nossle. No. 1,157,853; Oct. 26; Gaz. vol. 219; p. 1001.
Dochnal, Frank, St. Louis, Mo. Brick chimney structure. No. 1,156,468; Oct. 12; Gaz. vol. 219; p. 423.
Dodd, Frank W., Weymouth, England. Gyroscopic steering mechanism for automobile torpedoes. No. 1,156,350; Oct. 12; Gaz. vol. 219; p. 380.
Dodd, West, Des Moines, Iowa. Means for protecting contents of oil-containing tanks against ignition by electrical discharge. No. 1,155,648; Oct. 5; Gaz. vol. 219; p. 112.
Dodge, Austin R., Schenectady, N. Y., assignor to General Electric Company. Flow-meter. No. 1,157,301; Oct. 19; Gaz. vol. 219; p. 747.
Dodge, Henry L., Stockton, Cal. Safety device for tanks. No. 1,156,469; Oct. 12; Gaz. vol. 219; p. 424.

Dodge Manufacturing Company. (See Kenyon, Bertram C., assignor.)
Doehler Die Casting Company. (See Pack, Charles, assignor.)
Doehler Die Casting Company. (See Sandage, Oliver G., assignor.)
Doering, Frederick W., Jr., St. Louis, Mo. Automatic window-catch. No. 1,157,854; Oct. 26; Gaz. vol. 219; p. 1001.
Domizi, David F., Franklin, Pa. Motor. No. 1,155,998; Oct. 5; Gaz. vol. 219; p. 232.
Dompier, James A., Detroit, Mich. Taper drill-chuck. No. 1,157,513; Oct. 19; Gaz. vol. 219; p. 821.
Donnelly, John R., assignor to Wayne Process Company, Fort Wayne, Ind. Hydrocarbon-burner. No. 1,156,470; Oct. 12; Gaz. vol. 219; p. 424.
Doran, James A., Providence, R. I. Pin-joint. No. 1,156,763; Oct. 12; Gaz. vol. 219; p. 526.
Doran, John P., Jefferson, Wis. Driving mechanism. No. 1,156,135; Oct. 12; Gaz. vol. 219; p. 308.
Dore, Mary E., Becker, Minn. Potato-planter. No. 1,158,031; Oct. 26; Gaz. vol. 219; p. 1064.
Dorl, Walter P., assignor to Dorl-Wiley One Lady Auto Top Co., Detroit, Mich. Vehicle-top. No. 1,157,977; Oct. 26; Gaz. vol. 219; p. 1046.
Dorl-Wiley One Lady Auto Top Co. (See Dorl, Walter P., assignor.)
Dorman, Samuel G. (See Van Sant, Thomas G., assignor.)
Dorr Cyanide Machinery Company, The. (See Nevill, David J., assignor.)
Dorsey, Farnum F. (See Nasief and Dorsey.)
Dorsey, Vernon M., Laurel Grove, Md., assignor to Empire Machine Company, Portland, Me. Glass-blowing machine. No. 1,156,868; Oct. 12; Gaz. vol. 219; p. 564.
Doubrava, Harry W., Hackensack, N. J., and J. Heineman, New York, N. Y., assignors to Wagner Electric Manufacturing Company, St. Louis, Mo. Operating polyphase motors. No. 1,156,136; Oct. 12; Gaz. vol. 219; p. 308.
Dougan, John L., Plankinton, S. D. Carbureter. No. 1,155,407; Oct. 5; Gaz. vol. 219; p. 29.
Doughty, Howard W., Amherst, Mass. Fire-extinguisher. No. 1,157,090; Oct. 19; Gaz. vol. 219; p. 671.
Douglas, Henderson B. (See Hansson and Moeller, assignors.)
Douglass, Arthur R., Charlton, Iowa. Mop-wringer. No. 1,157,091; Oct. 19; Gaz. vol. 219; p. 672.
Douglass, Samuel E., Mount Gilead, N. C. Rake-cleaner. No. 1,155,897; Oct. 5; Gaz. vol. 219; p. 199.
Dove, James M., assignor to C. P. Dryden, Chicago, Ill. Vacuum-horseshoe. No. 1,156,278; Oct. 12; Gaz. vol 219; p. 354.
Dove-Smith, Joseph, Niagara Falls, N. Y. Variable-speed gearing. No. 1,155,898; Oct. 5; Gaz. vol. 219; p. 199.
Downing, James Y., Jackson, Miss. Wheel. No. 1,157,802; Oct. 19; Gaz. vol. 219; p. 747.
Doyle, Helen, Chicago, Ill. Sifter. No. 1,158,188; Oct. 26; Gaz. vol. 219; p. 1120.
Dramis, Gennaro, Brooklyn, N. Y. Folding box. No. 1,155,899; Oct. 5; Gaz. vol. 219; p. 200.
Drapalik, Alfred J. (See Stephenson and Drapalik.)
Dresser, Charles A. (See Walser and Dresser.)
Driscoll, John, assignor of one-half to D. E. Bennett, Gypsum, Kans. Car-coupling. No. 1,158,189; Oct. 26; Gaz. vol. 219; p. 1120.
Druck, Charles, Wasco, Cal. Wrench. No. 1,156,764; Oct. 12; Gaz. vol. 219; p. 526.
Dryden, Charles P. (See Dove, James M., assignor.)
Du Rell, Charles T., Los Angeles, Cal. Mixer and disintegrator. No. 1,157,092; Oct. 19; Gaz. vol. 219; p. 672.
Duerr, Philip F., Alvo, Nebr. Grain-gathering device. No. 1,156,985; Oct. 19; Gaz. vol. 219; p. 634.
Dufay, Louis, Chantilly, France. Selecting-screen for color photography. No. 1,155,900; Oct. 5; Gaz. vol. 219; p. 200.
Duff, John L., Cambridge, Ohio. Non-skid attachment for tires. No. 1,157,928; Oct. 26; Gaz. vol. 219; p. 1027.
Duffy, Thomas I., Chicago, Ill., assignor, by mesne assignments, to The Weatherproof Construction Company. Supporting and glazing construction for skylights and like structures. No. 1,156,351; Oct. 12; Gaz. vol. 219; p. 380.
Dugan, John H., and M. N. Smith, assignors to The Akron Motor Lock Co., Akron, Ohio. Manifold-valve lock for automobiles. No. 1,157,929; Oct. 26; Gaz. vol. 219; p. 1028.
Duggan, William H. (See McQuillin, Howard, assignor.)
Duke, George H., Hotchkiss, Colo. Nut-lock. No. 1,156,279; Oct. 12; Gaz. vol. 219; p. 354.
Dull, Raymond W., Chicago, Ill. Separator. No. 1,155,473; Oct. 5; Gaz. vol. 219; p. 52.
Dunbar, Francis W. (See Stanton, Le Roy W., assignor.)
Duncan, John B., Wolf, Wyo. Mushroom-bullet. No. 1,155,901; Oct. 5; Gaz. vol. 219; p. 201.
Dunn, Edward L., assignor, by mesne assignments, to Standard Plunger Elevator Company, Worcester, Mass. Automatic elevator control. No. 1,156,987; Oct. 19; Gaz. vol. 219; p. 634.
Dunn, Frank P., Anderson, Ind., assignor, by mesne assignments, to Computing Scale Company, Dayton, Ohio. Scale. (Reissue.) No. 13,995; Oct. 19; Gaz. vol. 219; p. 870.
Dunn, William A., Duluth, Minn. Rolling-mill. No. 1,156,986; Oct. 19; Gaz. vol. 219; p. 634.
Dunning, Harry C., *et al.* (See Wise, Alvia F., assignor.)
Duplex Metallic Company. (See Monnot, John F., assignor.)
Dupuy, John W., Pittsburgh, Pa. Stove. No. 1,156,066; Oct. 12; Gaz. vol. 219; p. 284.
Duryea, Charles E., Saginaw, Mich. Cooling system for motors. No. 1,156,067; Oct. 12; Gaz. vol. 219; p. 284.
E. W. Bliss Company. (See Page, Frank C. B., assignor.)
Eales, Irving L., *et al.* (See Neller, Albert H., assignor.)
Earl, John L., Morgan City, La. Combination-tool for carpenters' use. No. 1,157,514; Oct. 19; Gaz. vol. 219; p. 821.
Early, John M. (See Early, William J., assignor.)
Early, Joseph N., New York, N. Y. Street-sign. No. 1,157,515; Oct. 19; Gaz. vol. 219; p. 822.
Early, William J., assignor of one-half to J. M. Early, Catawissa, Mo. Grave-mound frame. No. 1,157,516; Oct. 19; Gaz. vol. 219; p. 823.
Easlick, William A., Milan, Mich. Fishing-float. No. 1,157,517; Oct. 19; Gaz. vol. 219; p. 823.
Eastman, David, assignor to Eastman Manufacturing Company, New York, N. Y. Metal handle for tools. No. 1,158,032; Oct. 26; Gaz. vol. 219; p. 1064.
Eastman Manufacturing Company. (See Eastman, David, assignor.)
Eastwick, James, Fyning Wood, England. Magazine for small-arms. No. 1,157,654; Oct. 19; Gaz. vol. 219; p. 867.
Eberhard, Otto von, Bredeney, near Essen-on-the-Ruhr, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Sighting device. No. 1,157,468; Oct. 19; Gaz. vol. 219; p. 805.
Eckart, William F. (See Hard, Merrill W., assignor.)
Eckas, Henry A., Seattle, Wash. Rug-fastening device. No. 1,155,554; Oct. 5; Gaz. vol. 219; p. 80.
Economy Feed Water Heater Company. (See Wallace, Charlie V., assignor.)
Ecothermal Company, The. (See Thomas, Stephen S., assignor.)
Edelman, Philip E., Minneapolis, Minn. Safety drill and tool holder. No. 1,158,190; Oct. 26; Gaz. vol. 219; p. 1120.
Eder, George J. (See White, Thomas H., assignor.)
Edey, Charles E. C., assignor of one-half to T. B. Bonham, Tacoma, Wash. Automobile-lock. No. 1,155,902; Oct. 5; Gaz. vol. 219; p. 201.
Edgar Allen American Manganese Steel Company. (See Vanderhoef, Ellison E., assignor.)
Edick, George, Albuquerque, N. Mex. Rail-joint. No. 1,155,903; Oct. 5; Gaz. vol. 219; p. 201.
Edson, William, New York, N. Y. Nut-lock. No. 1,155,408; Oct. 5; Gaz. vol. 219; p. 29.
Edwards, August O., Lindsay, Cal. Pickling cantaloups. No. 1,155,555; Oct. 5; Gaz. vol. 219; p. 81.
Edwards, Frank W., assignor to The Chicago Lubricator Company, Chicago, Ill. Locomotive-cab squirt. No. 1,155,474; Oct. 5; Gaz. vol. 219; p. 53.
Edwards, Robert C., Cannelton, assignor of one-half to O. Kniesche, Tell City, Ind. Hydroaeroplane. No. 1,156,218; Oct. 12; Gaz. vol. 219; p. 335.
Edwards, Thomas J., Melrose, and W. P. Osgood, Malden, Mass.; said Osgood assignor to said Edwards. Embossing and printing machine. No. 1,155,999; Oct. 5; Gaz. vol. 219; p. 233.
Egeland, Chris, assignor to Stoughton Wagon Company, Stoughton, Wis. Bob-sled. No. 1,156,591; Oct. 12; Gaz. vol. 219; p. 466.
Eggleston, James W., Minneapolis, Minn. Egg-filler. No. 1,156,219; Oct. 12; Gaz. vol. 219; p. 335.
Eirich, Gustav, Hardheim, Germany. Mixing and kneading machine for earthy and mineral materials. No. 1,155,712; Oct. 5; Gaz. vol. 219; p. 135.
Ekman, Albert H., and P. J. Gallagher, Spokane, Wash. Disinfectant-container. No. 1,155,843; Oct. 5; Gaz. vol. 219; p. 7.
Elden, Leonard L., Dorchester, Mass., assignor, by mesne assignments, to General Electric Company. Mechanism for the control of circuit-breakers. No. 1,157,930; Oct. 26; Gaz. vol. 219; p. 1028.
Eldridge, William E., Boston, Mass. Tractor for wagons and the like. No. 1,155,713; Oct. 5; Gaz. vol. 219; p. 135.
Electric Boat Company. (See Davison and Anderson, assignors.)
Electric Controller and Manufacturing Company, The. (See Hall, Jay H., assignor.)
Electric Mail Carrier Company. (See Griffiths, William J., Jr., assignor.)
Elgin American Manufacturing Co. (See Hathaway, Thomas F., assignor.)
Ellendt, John G., Rochester, N. Y. Apparatus for cleaning bags. No. 1,156,280; Oct. 12; Gaz. vol. 219; p. 355.
Ellinger, Julian O., New York, N. Y. Barrel. No. 1,155,344; Oct. 5; Gaz. vol. 219; p. 7.
Elliott, George F., Washington, D. C. Stopper for bottles. No. 1,157,518; Oct. 19; Gaz. vol. 219; p. 823.
Elliott, George W., De Smet, S. D. Traction-wheel. No. 1,156,471; Oct. 12; Gaz. vol. 219; p. 424.
Ellis, Carleton, Montclair, N. J. Catalyzer and making same. No. 1,156,068; Oct. 12; Gaz. vol. 219; p. 285.
Ellis, Carleton, Montclair, N. J. Making catalysers. No. 1,156,674; Oct. 12; Gaz. vol. 219; p. 496.
Ellis, Frank E., Revere, Mass. Printing-blanket. No. 1,158,033; Oct. 26; Gaz. vol. 219; p. 1065.

Ellis, John R., Memphis, Tenn. Resilient wheel. No. 1,157,855; Oct. 26; Gaz. vol. 219; p. 1002.

Elmer, James P., St. Paul, Minn., assignor to Moore Patent Car Company. Heater-car. No. 1,156,988; Oct. 19; Gaz. vol. 219; p. 635.

Elster, Johannes. (See Ziegenberg, Rudolf, assignor.)

Ely, Clement A., Wolverhampton, England. Ball-bearing hinge. No. 1,156,765; Oct. 12; Gaz. vol. 219; p. 527.

Ely, Walter C., Terre Haute, Ind. Producing blooms from scrap metal. No. 1,155,409; Oct. 5; Gaz. vol. 219; p. 29.

Ely, Walter C., Terre Haute, Ind. Metal-working furnace. No. 1,155,410; Oct. 5; Gaz. vol. 219; p. 30.

Emanuel, Gerry E., Edgerton, Ohio. Clarifying device. No. 1,158,034; Oct. 26; Gaz. vol. 219; p. 1065.

Embser, Peter, assignor of one-half to J. A. Mansell, New York, N. Y. Printer's miter-gage. No. 1,157,372; Oct. 19; Gaz. vol. 219; p. 772.

Emerson-Brantingham Company. (See Clay, Harry C., assignor.)

Empire Machine Company. (See Chamberlin, Benjamin D., assignor.

Empire Machine Company. (See Dorsey, Vernon M., assignor.)

Empire Machine Company. (See Woods, William J., assignor.)

Empson, Frederick J., Sydney, New South Wales, Australia, assignor to The Aeolian Company. Talking-machine. No. 1,158,401; Oct. 26; Gaz. vol. 219; p. 1194.

Englander, Max. (See Plunkett, Charles L., assignor.)

Englander Spring Bed Company. (See Quincy, Henry J., assignor.)

Engle, John F., Cleveland, Ohio. Selective system and apparatus. No. 1,156,352; Oct. 12; Gaz. vol. 219; p. 380.

English, Ferdinand E., St. Louis, Mo. Bandeau for hats and the like. No. 1,157,093; Oct. 19; Gaz. vol. 219; p. 672.

Englund, Olof, Chicago, Ill. Carpet-cleaner. No. 1,155,556; Oct. 5; Gaz. vol. 219; p. 81.

Engstrom, Ivan, assignor, by mesne assignments, to C. M. and H. R. Hedman, Chicago, Ill. Check-protector. No. 1,156,000; Oct. 5; Gaz. vol. 219; p. 233.

Ennisson, Walter J., Brooklyn, N. Y. Game-board. No. 1,155,714; Oct. 5; Gaz. vol. 219; p. 136.

Enos, Frank, Jr., assignor to The Norwich Automatic Feeder Company, Norwich, Conn. Drinking-fountain for poultry. No. 1,158,035; Oct. 26; Gaz. vol. 219; p. 1065.

Eppenstein, Otto, assignor to Firm of C. Zeiss, Jena, Germany. Indicating device for telemeters. No. 1,158,191; Oct. 26; Gaz. vol. 219; p. 1120.

Erben, Hermann F. T., and W. J. Delles, Schenectady, N. Y., assignors to General Electric Company. Dynamo-electric machine. No. 1,156,675; Oct. 12; Gaz. vol. 219; p. 497.

Erickson, Benjamin, Mapleton, Mich. Automobile sleigh. No. 1,156,069; Oct. 12; Gaz. vol. 219; p. 285.

Erickson, Daniel E., Berkeley, assignor to R. S. Moore, San Francisco, Cal. Retarder for boiler-tubes. No. 1,156,281; Oct. 12; Gaz. vol. 219; p. 355.

Erickson, Edward, Lynn, assignor to Victor Shoe Machinery Co., Boston, Mass. Shuttle-operating mechanism for sewing-machines. No. 1,158,036; Oct. 26; Gaz. vol. 219; p. 1065.

Erickson, Peter E., Port Chester, N. Y. Lubricator for leaf-springs. No. 1,156,070; Oct. 12; Gaz. vol. 219; p. 285.

Eskett, Henry, assignor of one-half to V. Hynds, Mounds, Ill. Machine for digging potatoes. No. 1,157,931; Oct. 26; Gaz. vol. 219; p. 1029.

Essenkay Products Company, The. (See Mills, Clarence M., assignor.)

Estate Stove Company, The. (See Kahn, Bertrand B., assignor.)

Ette, Charles G., assignor to St. Louis Malleable Castings Company, St. Louis, Mo. Vehicle-jack. No. 1,158,192; Oct. 26; Gaz. vol. 219; p. 1121.

Ettlinger, Edward L. (See Ettlinger, Joseph and E. L.)

Ettlinger, Frederick. (See Ettlinger, Joseph and E. L., assignors.)

Ettlinger, Joseph, Cranston, and E. L. Ettlinger, Providence, R. I.; said E. L. Ettlinger assignor to F. Ettlinger. Manufacture of split rings. No. 1,158,376; Oct. 26; Gaz. vol. 219; p. 1185.

Eubank, Judson C., Chicago, Ill. Letter-plate. No. 1,157,856; Oct. 26; Gaz. vol. 219; p. 1002.

Eulenfeld, Ferdinand von, Finsbury, London, England. Machine for cutting or slicing bread and spreading butter or the like thereon. No. 1,158,014; Oct. 26; Gaz. vol. 219; p. 1057.

Evans, Evan, Berlin, Germany, assignor to General Electric Company. System of electrical distribution. No. 1,158,037; Oct. 26; Gaz. vol. 219; p. 1066.

Evans, William J., Pilot Mound, Iowa. Motor-vehicle driving mechanism. No. 1,156,766; Oct. 12; Gaz. vol. 219; p. 527.

Evers, Kurt, Charlottenburg, Germany, assignor to General Electric Company. Internal-combustion engine. No. 1,157,982; Oct. 26; Gaz. vol. 219; p. 1029.

Excelsior Steel Furnace Company, The. (See Scherer, Albert G., assignor.)

Eyerman, Oscar A., and M. W. Himmler, Cumberland, Md. Car wheel and axle. No. 1,155,557; Oct. 5; Gaz. vol. 219; p. 81.

Eynon, Thomas, Chicago, Ill., assignor to Ribbon Record Company. Phonographic record. No. 1,158,377; Oct. 26; Gaz. vol. 219; p. 1185.

Ezykowich, John, Blissville, N. Y. Door-lock. No. 1,157,978; Oct. 26; Gaz. vol. 219; p. 1046.

F. A. Neider Company, The. (See Laible, Frank, assignor.)

F. B. Redington Company. (See Redington and Milmoe, assignors.)

F. I. A. T. (See Fornaca, Guido, assignor.)

F. N. Burt Company. (See Holly, Carlos, assignor.)

F. W. Spacke Machine Company, The. (See Brownlee, Dalmar T., assignor.)

Faber, Julius, Stuttgart, Germany. Spectacle-temple of spiral wire. No. 1,157,373; Oct. 19; Gaz. vol. 219; p. 772.

Fachman, Oswald, Lindsey, Ohio. Knife-grinding machine. No. 1,155,803; Oct. 5; Gaz. vol. 219; p. 168.

Fagan, Oliver B., Georgetown, Ohio. Adjustable electric-lamp and mirror fixture. No. 1,157,519; Oct. 19; Gaz. vol. 219; p. 823.

Fairbanks, Morse & Company. (See Macneill, Martin B., assignor.)

Falick, Nathan, assignor to The Cook Railway Signal Company, Denver, Colo. Rectifier compound. No. 1,155,649; Oct. 5; Gaz. vol. 219; p. 113.

Fanshawe, Henry E., New York, N. Y., assignor, by mesne assignments, to Wire Products Company. Garment-hook. No. 1,158,193; Oct. 26; Gaz. vol. 219; p. 1121.

Farbenfabriken vorm. Friedr. Bayer & Co. (See Decker, Herman, assignor.)

Farbwerke vorm. Meister Lucius & Bruening. (See Ach and Rothmann, assignors.)

Farbwerke vorm. Meister Lucius & Bruening. (See Ach, Rothmann, and Dieterich, assignors.)

Farbwerke vorm. Meister Lucius & Brüning. (See Staehlin, Otto, assignor.)

Farmer, William H., assignor of one-third to H. I. Phinney, Boothbay Harbor, Me. Electric switch. No. 1,156,282; Oct. 12; Gaz. vol. 219; p. 355.

Farr, Ira E., Sandusky, Ohio, assignor of one-half to J. V. Baron, Watertown, N. Y. Self-lubricating shaft-bearing. No. 1,156,071; Oct. 12; Gaz. vol. 219; p. 286.

Farrall, George A., and C. Maul, assignors to The Johnston Harvester Company, Batavia, N. Y. Corn-harvester. No. 1,157,857; Oct. 26; Gaz. vol. 219; p. 1002.

Farrar, Horace J., Seattle, Wash., assignor to Universal High Power Telephone Company, King county, Wash. Sound and light amplifier. No. 1,156,865; Oct. 12; Gaz. vol. 219; p. 563.

Farrar, John J., Rapid City, S. D. Container. No. 1,156,767; Oct. 12; Gaz. vol. 219; p. 527.

Farup, Peder, Trondhjem, Norway. Producing titanium-oxygen compounds from ilmenite or titaniferous iron ores and other materials. No. 1,156,220; Oct. 12; Gaz. vol. 219; p. 335.

Fassett, Daniel F., assignor of one-half to J. A. Shipps, Fairmount, Ill. Nut-lock. No. 1,156,593; Oct. 12; Gaz. vol. 219; p. 466.

Fassett, George R., Lakewood, Ohio. Thermostatic control. No. 1,155,650; Oct. 5; Gaz. vol. 219; p. 113.

Fasting, Johan S., Frederiksberg, near Copenhagen, Denmark. Feed-regulator for grinding-mills. No. 1,157,979; Oct. 26; Gaz. vol. 219; p. 1046.

Faultless Rubber Company, The. (See Miller, Thomas W., assignor.)

Faust, Albert A., Detroit, Mich. Gage. No. 1,155,715; Oct. 5; Gaz. vol. 219; p. 136.

Fay, Thomas F., Chicago, Ill., assignor to T. J. Fay, Elkhart, Ind. Collapsible-frame parcel-sack. No. 1,155,475; Oct. 5; Gaz. vol. 219; p. 53.

Fay, Thomas J. (See Fay, Thomas F., assignor.)

Fay, Thomas J., New York, N. Y. Valve mechanism for internal-combustion engines. No. 1,157,374; Oct. 19; Gaz. vol. 219; p. 772.

Federal Signal Company. (See Reid, James, assignor.)

Febringer, Max, Worcester, Mass. Composition of matter to be used for bronze-powder varnish. No. 1,157,768; Oct. 26; Gaz. vol. 219; p. 971.

Feinaigle, Karl K., Cherokee, Iowa. Rotary drill. No. 1,156,001; Oct. 5; Gaz. vol. 219; p. 234.

Feldhaus, Fred, Akron, Ohio. Steel tire. No. 1,158,038; Oct. 26; Gaz. vol. 219; p. 1066.

Fell, Charles, Elyria, Ohio, assignor to National Tube Company, Pittsburgh, Pa. Galvanising-furnace. No. 1,156,353; Oct. 12; Gaz. vol. 219; p. 381.

Fellman, Edward J., Milwaukee, Wis. Screen-hanger. No. 1,155,412; Oct. 5; Gaz. vol. 219; p. 31.

Fenn, Raymond W. (See Cross, Joseph G., assignor.)

Ferrari, Pasquino, Fall River, Mass. Cover for milk-bottles. No. 1,156,989; Oct. 19; Gaz. vol. 219; p. 636.

Ferrer, José, and E. Alonso, San Juan, Porto Rico. Rotary valve. No. 1,157,684; Oct. 26; Gaz. vol. 219; p. 943.

Ferretto, Andrea, Milan, Italy. Type-writer. No. 1,155,651; Oct. 5; Gaz. vol. 219; p. 113.

Ferris, Henry L., assignor to Hunt, Helm, Ferris & Company, Harvard, Ill. Overhead track-joint and supporting means therefor. No. 1,156,472; Oct. 12; Gaz. vol. 219; p. 424.

Ferriss, Edward, assignor to W. Schwab, Minneapolis, Minn. Wheel. No. 1,156,676; Oct. 12; Gaz. vol. 219; p. 497.

Fessenden, Reginald A., Washington, D. C., assignor, by mesne assignments, to S. M. Kintner, Pittsburgh, Pa., and H. M. Barrett, Bloomfield, N. J., receivers. Apparatus for the transmission of energy by electric oscillations. No. 1,156,677; Oct. 12; Gaz. vol. 219; p. 497.

Fessenden, Reginald A., Washington, D. C., assignor, by mesne assignments, to S. M. Kintner, Pittsburgh, Pa., and H. M. Barrett, Bloomfield, N. J., receivers. Transmitting and receiving signals. No. 1,157,094; Oct. 19; Gaz. vol. 219; p. 673.

Fessenden, Reginald A., Washington, D. C., assignor, by mesne assignments, to S. M. Kintner, Pittsburgh, Pa., and H. M. Barrett, Bloomfield, N. J., receivers. Apparatus for generating and receiving electromagnetic waves. No. 1,158,123; Oct. 26; Gaz. vol. 219; p. 1097.

Fessenden, Reginald A., Brant Rock, Mass., assignor, by mesne assignments, to S. M. Kintner, Pittsburgh, Pa., and H. M. Barrett, Bloomfield, N. J., receivers. Signaling apparatus for aerial navigation. No. 1,158,124; Oct. 26; Gaz. vol. 219; p. 1097.

Fest, Albert F., Audubon, Iowa. Wire-support. No. 1,155,716; Oct. 5; Gaz. vol. 219; p. 136.

Feustel, Robert M. (See Little and Feustel.)

Fewell, Everett B., Madison, Ind. Artificial tooth. No. 1,155,904; Oct. 5; Gaz. vol. 219; p. 202.

Fiechter, Frederick, assignor of one-half to O. H. Lucker, Philadelphia, Pa. Lubricator. No. 1,156,768; Oct. 12; Gaz. vol. 219; p. 528.

Fiego, Alexander J. R., Lynn, Mass., assignor to General Electric Company. Mechanical movement. No. 1,157,933; Oct. 26; Gaz. vol. 219; p. 1029.

Finckbein, Adolf, Charlottenburg, Germany, assignor to Siemens-Schuckertwerke G. m. b. H. Means for smoothing and ironing the insulating-wrapping of electric conductors. No. 1,155,845; Oct. 5; Gaz. vol. 219; p. 7.

Fingland, John J., Kaslo, British Columbia, Canada. Manufacture of spelter from ferruginous and admixed zinc-blend ores. No. 1,157,375; Oct. 19; Gaz. vol. 219; p. 773.

Fink, Marc W., Middle Brighton, and A. M. Kobiolke, Kew, Victoria, Australia. Bead for pneumatic or other tires. No. 1,158,194; Oct. 26; Gaz. vol. 219; p. 1122.

Fink, William T., assignor of one-half to W. Johnston, Carlyle, Ill. Extensible table. No. 1,158,125; Oct. 26; Gaz. vol. 219; p. 1098.

Fischer, Adalbert K., assignor to Schutte & Koerting Company, Philadelphia, Pa. Crematory. No. 1,156,398; Oct. 12; Gaz. vol. 219; p. 399.

Fischer, Hermann, New York, N. Y. Feeding mechanism for slicing-machines. No. 1,157,520; Oct. 19; Gaz. vol. 219; p. 824.

Fischer, Jacob, Roseville, N. J., and D. Brandenstein, New York, N. Y. Sewing-machine power-transmitter. No. 1,156,137; Oct. 12; Gaz. vol. 219; p. 309.

Fischer, Jacob, Roseville, N. J., assignor of one-half to D. Brandenstein, New York, N. Y. Sewing-machine power-transmitter. No. 1,156,554; Oct. 12; Gaz. vol. 219; p. 381.

Fischer, Lewis G. (See Cuenot and Fischer.)

Fischer, Theodore J., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill. Tachometer-magnet and mount for the same. No. 1,155,846; Oct. 5; Gaz. vol. 219; p. 8.

Fischer, William, assignor of one-half to L. Blumenstein, New Richmond, Ohio. Cleaning mechanism for circular-knitting machines. No. 1,156,838; Oct. 12; Gaz. vol. 219; p. 552.

Fiscus, William S., Steubenville, Ohio. Electric-generator-operating device. No. 1,156,594; Oct. 12; Gaz. vol. 219; p. 467.

Fish, Squire J., Jackson, Mich. Egg-testing machine. No. 1,155,905; Oct. 5; Gaz. vol. 219; p. 202.

Fisher, Charles, assignor to The Automatic Recording Safe Company, Chicago, Ill. Savings-bank. No. 1,157,303; Oct. 19; Gaz. vol. 219; p. 747.

Fisher, Emanuel, Providence, R. I. Valve. No. 1,157,641; Oct. 19; Gaz. vol. 219; p. 861.

Fisher, Emanuel, assignor to N. Fisher, Providence, R. I. Valve. No. 1,157,642; Oct. 19; Gaz. vol. 219; p. 862.

Fisher, Ernest S., Portland, Oreg. Trousers-stretching device. No. 1,157,521; Oct. 19; Gaz. vol. 219; p. 824.

Fisher, Henry L., assignor to Landis Machine Company, Waynesboro, Pa. Die-head. No. 1,157,210; Oct. 19; Gaz. vol. 219; p. 714.

Fisher, Herbert E., San Francisco, Cal. Wave-motor. No. 1,156,355; Oct. 12; Gaz. vol. 219; p. 382.

Fisher, Nellie. (See Fisher, Emanuel, assignor.)

Fisher, Zebulon D., et al. (See Saint, Lee G., assignor.)

Flannery, William C., Washington, D. C. Fastener for concrete sewer constructions. No. 1,155,411; Oct. 5; Gaz. vol. 219; p. 30.

Fletcher, William E., Tamaqua, Pa., assignor to Atlas Powder Company, Wilmington, Del. Retort-furnace. No. 1,156,595; Oct. 12; Gaz. vol. 219; p. 467.

Flick, Henry E., Jackson, and L. W. Long, Detroit, Mich. Artillery-wheel. No. 1,155,906; Oct. 5; Gaz. vol. 219; p. 202.

Flicker, Louis, San Francisco, Cal. Hat-blocking apparatus. No. 1,156,356; Oct. 12; Gaz. vol. 219; p. 382.

Flintkote Manufacturing Company. (See Overbury and Platts, assignors.)

Flipse, Louis F., Sheboygan, Wis., assignor, by mesne assignments, to Corrugated Veneer Packing Products Company. Veneer pad. No. 1,156,895; Oct. 19; Gaz. vol. 219; p. 602.

Florey, Tilghman J., Washington, N. J., assignor to American Sanitary Works, New York, N. Y. Pneumatic closet-seat buffer. No. 1,158,039; Oct. 26; Gaz. vol. 219; p. 1066.

Flory Carry Iron Company. (See Crown, Eugene H., assignor.)

Flory Carry Iron Company. (See Westlake and Shallenberger, assignors.)

Focks, Fred A., Crane, Mo. Collapsible crate. No. 1,156,221; Oct. 12; Gaz. vol. 219; p. 335.

Folden, Frank H., assignor to Northwestern Manufacturing Company, Sioux City, Iowa. Multimolding concrete-block machine. No. 1,157,522; Oct. 19; Gaz. vol. 219; p. 824.

Foley, James. (See Reed and Foley.)

Foljambe, Eugene S., Philadelphia, Pa. Pedal-locking mechanism. No. 1,156,990; Oct. 19; Gaz. vol. 219; p. 636.

Folsom, Lenpha A., Boonville, Ind. Display-rack. No. 1,155,558; Oct. 5; Gaz. vol. 219; p. 81.

Fontenot, Thomas, Ged, La. Oil-well rig. No. 1,156,678; Oct. 12; Gaz. vol. 219; p. 497.

Ford, Bruce, Philadelphia, Pa. Changing the composition of iron and steel. No. 1,156,679; Oct. 12; Gaz. vol. 219; p. 498.

Ford, David, Eldorado, Okla. Propeller-feathering means. No. 1,158,195; Oct. 26; Gaz. vol. 219; p. 1122.

Ford, Eugene A., Uxbridge, Mass. Self-starter for engines. No. 1,157,211; Oct. 19; Gaz. vol. 219; p. 714.

Ford, Silas M., St. Paul, Minn. Lath-board. No. 1,156,866; Oct. 12; Gaz. vol. 219; p. 563.

Fornaca, Guido, Turin, Italy, assignor to F. I. A. T. Combustion-engine. No. 1,157,769; Oct. 26; Gaz. vol. 219; p. 971.

Forse, Julius W., Bishop Hill, Ill. Rail-joint. No. 1,157,770; Oct. 26; Gaz. vol. 219; p. 972.

Forsyth Brothers Company. (See Krebs, Charles E., assignor.)

Forsyth, William D., Youngstown, Ohio, assignor to Railway Products Corporation, Buffalo, N. Y. Forging-dies. No. 1,157,212; Oct. 19; Gaz. vol. 219; p. 714.

Forsyth, William D., Youngstown, Ohio, assignor to Railway Products Corporation, Buffalo, N. Y. Forging-dies. No. 1,157,213; Oct. 19; Gaz. vol. 219; p. 715.

Forteseue, Charles L., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Temperature-indicator. No. 1,156,680; Oct. 12; Gaz. vol. 219; p. 498.

Fortin, Charles W., Brockton, Mass. Detachable shoe-heel. No. 1,156,769; Oct. 12; Gaz. vol. 219; p. 528.

Foss, Benjamin Q. P., Chicago, Ill. Portable gas-producer for locomotives. No. 1,156,399; Oct. 12; Gaz. vol. 219; p. 399.

Foster, Edna A., Boston, Mass. Clothes-rack. No. 1,157,858; Oct. 26; Gaz. vol. 219; p. 1003.

Fouquet-Ward Bale Tying Company, The. (See Ward, Isaac E., assignor.)

Fouts, Calvin C., assignor to The C. C. Fouts Company, Middletown, Ohio. Joint for metallic sheets. No. 1,155,717; Oct. 5; Gaz. vol. 219; p. 136.

Fowler Car Company, The. (See Fowler, William E., Sr., assignor.)

Fowler Car Company, The. (See Murray, Charles F., assignor.)

Fowler, Frank T. (See Mayer and Fowler.)

Fowler, Jonathan O., and G. W. Le Compte, New York, N. Y.; said Le Compte assignor to said Fowler. Curber for bridle-bits. No. 1,158,126; Oct. 26; Gaz. vol. 219; p. 1098.

Fowler, William E., Sr., assignor to The Fowler Car Company, Chicago, Ill. Railway-car. No. 1,157,304; Oct. 19; Gaz. vol. 219; p. 748.

Fowler, William J., Philadelphia, Pa. Safety locking device. No. 1,157,523; Oct. 19; Gaz. vol. 219; p. 825.

Fox, Edward C., et al. (See Cohoe, Wallace P., assignor.)

Fox, Thomas H. (See King and Fox.)

Foy, Albert, et al. (See Grove, Martin L., assignor.)

Frame, John, Searsport, Me. Mixer. No. 1,155,907; Oct. 5; Gaz. vol. 219; p. 203.

Francis, William P., Atlanta, Ga. Floor structure. No. 1,158,196; Oct. 26; Gaz. vol. 219; p. 1122.

Francis, William P., Atlanta, Ga. Reinforced masonry beam. No. 1,158,197; Oct. 26; Gaz. vol. 219; p. 1122.

Franckaerts, Emile, San Francisco, Cal. Door-holder. No. 1,157,376; Oct. 19; Gaz. vol. 219; p. 773.

Frank, Edward H., assignor of thirty-three one-hundredths to J. W. Frank, Centralia, Ill. Railway-car-braking means for gravity-yards and the like. No. 1,157,622; Oct. 19; Gaz. vol. 219; p. 855.

Frank, John W. (See Frank, Edward H., assignor.)

Franke, Edwin, Chicago, Ill. Vegetable-mashing machine. No. 1,158,198; Oct. 26; Gaz. vol. 219; p. 1123.

Franklin, Benjamin, San Diego, Cal. Tile. No. 1,155,559; Oct. 5; Gaz. vol. 219; p. 81.

Franklin, George C. (See Keller, Isaac B., assignor.)

Frazee, Jackson F., assignor of one-half to H. C. Nellsen, San Francisco, Cal. Indicator for vehicles. No. 1,157,157; Oct. 19; Gaz. vol. 219; p. 695.

Fraser, William B., trustee. (See Bull, Robert W., assignor.)

Frederick, John S., *et al.* (See Kinnard, Robert M., assignor.)
Freeble, Thomas M., Rochester, Pa. Safety apparatus for railways. No. 1,155,476; Oct. 5; Gaz. vol. 219; p. 53.
Freeble, Thomas M., Rochester, Pa. Safety apparatus for railway-trains. No. 1,155,478; Oct. 5; Gaz. vol. 219; p. 54.
Freeble, Thomas M., Rochester, assignor of one-half to R. M. Kaufmann, Pittsburgh, Pa. Manual actuator for railway-signals. No. 1,155,477; Oct. 5; Gaz. vol. 219; p. 54.
Freeman, Frank B. (See Miller and Freeman.)
Freeman, Harry B. (See Brooks and Freeman.)
Freeman, Rufus A., Flushing, N. Y., assignor to The Autopress Company. Sheet-feeding machine. No. 1,156,357; Oct. 12; Gaz. vol. 219; p. 383.
Freet, William O., Hackensack, N. J., assignor to Steynis Ozone Company. Ozone-generator. No. 1,157,859; Oct. 26; Gaz. vol. 219; p. 1003.
Fréminville, Charles A. C. de, Paris, France. Machining metals and other very hard and highly-resilient materials. No. 1,156,892; Oct. 19; Gaz. vol. 219; p. 601.
French, Henry G., Schenectady, N. Y., assignor to General Electric Company. Electric switch. No. 1,156,681; Oct. 12; Gaz. vol. 219; p. 498.
Frenkel, Gustav, San Francisco, Cal., assignor to Armstrong Cork Company, Pittsburgh, Pa. Machine for manufacturing linoleum-mosaic. No. 1,155,718; Oct. 5; Gaz. vol. 219; p. 137.
Frey, Clarence N., Cincinnati, Ohio. Self-locking receptacle. No. 1,155,719; Oct. 5; Gaz. vol. 219; p. 137.
Frick, Orlando C., assignor to Smalley Manufacturing Co., Manitowoc, Wis. Comminuting attachment for feed-cutters. No. 1,157,095; Oct. 19; Gaz. vol. 219; p. 673.
Fried. Krupp Aktiengesellschaft. (See Eberhard, Otto von, assignor.)
Fried. Krupp Aktiengesellschaft. (See Koch, Norbert, assignor.)
Fried. Krupp Aktiengesellschaft. (See Strunk, Otto, assignor.)
Fritz, George M., Indianapolis, Ind. Calculator. No. 1,156,770; Oct. 12; Gaz. vol. 219; p. 528.
Froberg, Olof, Benton Harbor, Mich. Collar and cuff starcher. No. 1,158,040; Oct. 26; Gaz. vol. 219; p. 1067.
Frost, William H., Erie, Pa., assignor to General Electric Company. Pulverizer for oil-engines. No. 1,157,305; Oct. 19; Gaz. vol. 219; p. 748.
Fry, Henry E., Dorchester, assignor to C. E. De Wolf, London, England. Treatment of seed-grain. No. 1,155,560; Oct. 5; Gaz. vol. 219; p. 82.
Fryer, George G., Syracuae, N. Y. Safety-seal for receptacles. No. 1,157,685; Oct. 26; Gaz. vol. 219; p. 943.
Fuehrer, Henry, Hazleton, Pa. Concrete-mixer. No. 1,157,096; Oct. 19; Gaz. vol. 219; p. 673.
Fuerhammer, Adolph, *et al.* (See Garrette, John E., assignor.)
Fuhrman, Herman C., assignor to The Tokheim Mfg. Co., Cedar Rapids, Iowa. Pump. No. 1,157,686; Oct. 26; Gaz. vol. 219; p. 944.
Fulford, Marcus F., Fort Worth, Tex. Power-transmitting mechanism for pumps. No. 1,156,002; Oct. 5; Gaz. vol. 219; p. 234.
Fuller, Franz A., assignor to The J. E. Mergott Company, Newark, N. J. Bag-fastener. No. 1,156,003; Oct. 5; Gaz. vol. 219; p. 234.
Fuller, Franz A., assignor to The J. E. Mergott Company, Newark, N. J. Bag-fastener. No. 1,156,004; Oct. 5; Gaz. vol. 219; p. 235.
Fullerton, Clarence A., L. A. Rushworth, New York, N. Y., and W. H. Paeth, Providence, R. I., assignors to Gorham Co., New York, N. Y. Metallic framing. No. 1,158,378; Oct. 26; Gaz. vol. 219; p. 1185.
Fullman, James M. G. (See Gilson and Fullman.)
Fulton Iron Works. (See Lara, Francisco, assignor.)
Fulton, William H., New York, N. Y. Smoking-pipe. No. 1,157,771; Oct. 26; Gaz. vol. 219; p. 972.
Funsten, James J., San Francisco, Cal. Interlocking tile. No. 1,158,041; Oct. 26; Gaz. vol. 219; p. 1068.
Furmidge, Samuel, Chicago, Ill., assignor to Auto Device Manufacturing Company. Automobile shock-absorber. No. 1,158,402; Oct. 26; Gaz. vol. 219; p. 1195.
Furnas, Linus T., Lima, Ohio. Dress-form. No. 1,158,199; Oct. 26; Gaz. vol. 219; p. 1123.
Furness, William H., National Park, N. J., assignor to H. K. Mulford Company, Philadelphia, Pa. Intradermic syringe. No. 1,157,524; Oct. 19; Gaz. vol. 219; p. 825.
Fykse, Mitchell L. (See Smith, Ivan M., assignor.)
Gaffney, James. (See Anderson and Gaffney.)
Gage, Harry H., Chicago, Ill. Soap-fountain. No. 1,157,860; Oct. 26; Gaz. vol. 219; p. 1003.
Gainer, Edward E., assignor to The Centerfreze Ice Process Company, New York, N. Y. Ice-making apparatus. No. 1,157,623; Oct. 19; Gaz. vol. 219; p. 855.
Gaisman, Henry J., assignor to Auto Strop Company, New York, N. Y. Safety-razor. No. 1,155,347; Oct. 5; Gaz. vol. 219; p. 8.
Gallagher, Frederick S., Chicago, Ill., assignor, by mesne assignments, to Waugh Draft Gear Company. Draw bar-centering mechanism. No. 1,156,283; Oct. 12; Gaz. vol. 219; p. 355.
Gallagher, Patrick J. (See Ekman and Gallagher.)
Galvin, Michael J., North Bay, Ontario, Canada. Nozzle. No. 1,157,861; Oct. 26; Gaz. vol. 219; p. 1004.
Gannett, Melvin C., Brooklyn, N. Y. Non-skidding device. No. 1,155,413; Oct. 5; Gaz. vol. 219; p. 31.
Gardella, Lawrence. (See Hill and Gardella.)
Gardner, Alice M., executrix. (See Gardner, Frederick N. and F. E.)
Gardner, Frederic E. (See Gardner, Frederick N. and F. E.)
Gardner, Frederick N., deceased, (A. M. Gardner, executrix,) and F. E. Gardner, assignors of one-third to L. W. Thompson, Beloit, Wis. Disk grinder. No. 1,155,414; Oct. 5; Gaz. vol. 219; p. 32.
Garner, Joseph C., and W. Gutman, Detroit, Mich. Branding-iron. No. 1,157,687; Oct. 26; Gaz. vol. 219; p. 944.
Garrette, John E., Cincinnati, Ohio, assignor of one-third to J. M. Wagner and one-third to A. Fuerhammer, Chicago, Ill. Method of and apparatus for producing and exhibiting composite pictures. No. 1,156,896; Oct. 19; Gaz. vol. 219; p. 602.
Garrison, William J., Sheffield, Pa. Vault-light. No. 1,155,348; Oct. 5; Gaz. vol. 219; p. 9.
Gaskill, Zeb. (See Warner, Mahlon, assignor.)
Gass, John. (See Maxwell, William T., assignor.)
Gates, Harry C., Proctor, Vt. Lifter. No. 1,156,138; Oct. 12; Gaz. vol. 219; p. 309.
Gauch, Orlando S., assignor to The Shelby Printing Company, Shelby, Ohio. Thumb-piece for manifold sales or order books. No. 1,157,377; Oct. 19; Gaz. vol. 219; p. 778.
Gauthier, George A., assignor to The Arrow Electric Company, Hartford, Conn. Shade-holder. No. 1,156,473; Oct. 12; Gaz. vol. 219; p. 425.
Gay, Cassius M., Los Angeles, Cal. Refrigerating apparatus. No. 1,156,525; Oct. 12; Gaz. vol. 219; p. 443.
Gaynor, John J., assignor to Progress Machine Company, Indianapolis, Ind. Bottle-capping machine. No. 1,155,908; Oct. 5; Gaz. vol. 219; p. 203.
Gazsam, H. P., *et al.* (See Jobke, August F., assignor.)
Gear Grinding Machine Company. (See Ward, Frederick A., assignor.)
Geary, Joseph F., assignor of one-half to O. H. Crandall, Chicago, and one-half to A. E. Sharpley, Melrose Park, Ill. Gage device. No. 1,158,403; Oct. 26; Gaz. vol. 219; p. 1195.
Gebhardt, Victor, St. Louis, Mo. Fish-hook. No. 1,157,772; Oct. 26; Gaz. vol. 219; p. 972.
Geer, Harry R., Johnstown, Pa. Metal-rolling apparatus. No. 1,157,378; Oct. 19; Gaz. vol. 219; p. 774.
Gehrke, Edward A., Lincoln, Nebr. Combination filter and air-chamber. No. 1,157,934; Oct. 26; Gaz. vol. 219; p. 1029.
Geiger, Frederick, Cleveland, Ohio. Emery-wheel guard and supporting-bracket therefor. No. 1,158,127; Oct. 26; Gaz. vol. 219; p. 1098.
Geisler, Philip H., Oxford, Ohio. Disk-jointer for plows. No. 1,155,349; Oct. 5; Gaz. vol. 219; p. 9.
Gem Hammock & Fly Net Co. (See Anderegg, Edward W., assignor.)
General Bakelite Company. (See Bakeland, Leo H., assignor.)
General Electric Company. (See Abbott, William G., Jr., assignor.)
General Electric Company. (See Arsem, William C., assignor.)
General Electric Company. (See Atuesta, Mark A., assignor.)
General Electric Company. (See Berg, Ernst J., assignor.)
General Electric Company. (See Blau, Fritz, assignor.)
General Electric Company. (See Brown, Carl A., assignor.)
General Electric Company. (See Collins, Edgar F., assignor.)
General Electric Company. (See Coolidge, William D., assignor.)
General Electric Company. (See Dantsizen, Christian, assignor.)
General Electric Company. (See Davis, Albert G., assignor.)
General Electric Company. (See Dechamps, Heinrich, assignor.)
General Electric Company. (See Dempster, John T., assignor.)
General Electric Company. (See Dodge, Austin R., assignor.)
General Electric Company. (See Elden, Leonard L., assignor.)
General Electric Company. (See Erben and Delles, assignor.)
General Electric Company. (See Evans, Evan, assignor.)
General Electric Company. (See Evers, Kurt, assignor.)
General Electric Company. (See Fiego, Alexander J. R., assignor.)
General Electric Company. (See French, Henry G., assignor.)
General Electric Company. (See Frost, William H., assignor.)
General Electric Company. (See Guay, Emile J., assignor.)
General Electric Company. (See Hartman, Noble W., assignor.)
General Electric Company. (See Helm, Max, assignor.)
General Electric Company. (See Hewlett, Edward M., assignor.)

General Electric Company. (See Hillner, Rudolph, assignor.)
General Electric Company. (See Junggren, Oscar, assignor.)
General Electric Company. (See Kieser, Walter, assignor.)
General Electric Company. (See Krämer, Bernhard, assignor.)
General Electric Company. (See Krueger, Carl R., assignor.)
General Electric Company. (See Latour, Marius C. A., assignor.)
General Electric Company. (See Lemp, Hermann, assignor.)
General Electric Company. (See Lewis, Benjamin, assignor.)
General Electric Company. (See Lumley, Wilfrid, assignor.)
General Electric Company. (See Mackay, George M. J., assignor.)
General Electric Company. (See Merriam, Ezra B., assignor.)
General Electric Company. (See Meyer-Delius, Heinrich, assignor.)
General Electric Company. (See Moreton, Alfred G., assignor.)
General Electric Company. (See Moss, Sanford A., assignor.)
General Electric Company. (See Neeley, George S., assignor.)
General Electric Company. (See Osnos, Mendel, assignor.)
General Electric Company. (See Pape, Wilhelm, assignor.)
General Electric Company. (See Perry, Edward C., Jr., assignor.)
General Electric Company. (See Peter, Alfred, assignor.)
General Electric Company. (See Price, David R., assignor.)
General Electric Company. (See Reichold, Ludwig, assignor.)
General Electric Company. (See Remané, Hermann C. G., assignor.)
General Electric Company. (See Rice, Richard H., assignor.)
General Electric Company. (See Ruder, William E., assignor.)
General Electric Company. (See Savage, Marion A., assignor.)
General Electric Company. (See Schroeder, Josef, assignor.)
General Electric Company. (See Seede, John A., assignor.)
General Electric Company. (See Shaw, Edward T., assignor.)
General Electric Company. (See Sheldon, Lucian A., assignor.)
General Electric Company. (See Sheperdson, John W., assignor.)
General Electric Company. (See Simmons, Lawrence A., assignor.)
General Electric Company. (See Sprenger, Richard, assignor.)
General Electric Company. (See Standerwick, Reginald G., assignor.)
General Electric Company. (See Steinbecker, Karl, assignor.)
General Electric Company. (See Steinmetz, Charles P., assignor.)
General Electric Company. (See Stevens, George E., assignor.)
General Electric Company. (See Stumpf, Paul, assignor.)
General Electric Company. (See Thomson, Elihu, assignor.)
General Electric Company. (See Turner, Harry W., assignor.)
General Electric Company. (See Tuttle, James N., assignor.)
General Electric Company. (See Urtel, Rudolph, assignor.)
General Electric Company. (See Van Aller, Tycho, assignor.)
General Electric Company. (See Ver Planck and Stoeltzlen, assignors.)
General Electric Company. (See Ver Planck, William E., assignor.)
General Electric Company. (See Vivell, Joseph, assignor.)
General Electric Company. (See Weintraub, George, assignor.)
General Electric Company. (See Weintraub and Miller, assignors.)
General Electric Company. (See Wentworth, Arthur M., assignor.)
General Electric Company. (See Wiard, John B., assignor.)
General Electric Company. (See Windeler, George E., assignor.)
General Electric Company. (See Wood, James J., assignor.)
General Electric Company. (See Wright, Gilbert, assignor.)
General Manifold and Printing Company, The. (See Lewis, Edward Z., assignor.)
General Optical Company. (See Bolde, Henry, assignor.)
General Railway Signal Company. (See Larry, Edwin C., assignor.)
General Transmission Company. (See Seibt, Georg, assignor.)
General Vehicle Company. (See McComb, Henry G., assignor.)
Geneat, Homer A., Hartford, Conn., assignor to Arkell & Smiths, Canajoharie, N. Y. Paper bag. No. 1,158,042; Oct. 26; Gaz. vol. 219; p. 1068.
Genin, Leon, Chicago, Ill. Insulation-cutter. No. 1,157,214; Oct. 19; Gaz. vol. 219; p. 715.
Gensecke, Wilhelm. (See Josse and Gensecke.)
Geoghegan, Walter F., Huntington, assignor to Gillis & Geoghegan, New York, N. Y. Hoisting apparatus. (Reissue.) No. 13,996; Oct. 19; Gaz. vol. 219; p. 872.
George A. Ray Manufacturing Company. (See Ray, George A., assignor.)
George E. Lee Company, The. (See Lee, George E., assignor.)
George E. Lee Company, The. (See Lowden, Joseph E., assignor.)
George, Harold M., *et al.* (See Cave, Daniel, assignor.)
Gerbsch, Herman J., Wausau, Wis. Brick-machine. No. 1,157,862; Oct. 26; Gaz. vol. 219; p. 1004.
Gesellschaft für Elektro-Osmose m. b. H. (See Schwerin, Botho, assignor.)
Gessler, Albert E., New York, N. Y. Manufacture of color-lakes. No. 1,157,525; Oct. 19; Gaz. vol. 219; p. 826.
Gessler, Albert E., Clifton, N. Y. Manufacture of chromium oxid. No. 1,158,379; Oct. 26; Gaz. vol. 219; p. 1186.
Gessner, David, Worcester, Mass. Spot-proofing mechanism. No. 1,157,773; Oct. 26; Gaz. vol. 219; p. 972.
Getz Power Washer Co. (See Paluska, Matheas, assignor.)
Gibble, Joseph H. (See King, Lambert, and Gibble.)
Gibbs, William F., New York, N. Y. Internal-combustion engine. No. 1,157,379; Oct. 19; Gaz. vol. 219; p. 774.
Gibson, Frank L., Pender, Nebr. Vulcanizer. No. 1,155,909; Oct. 5; Gaz. vol. 219; p. 203.
Giddings, George H., Ilion, N. Y. Breech-loading firearm. No. 1,156,222; Oct. 12; Gaz. vol. 219; p. 336.
Giesenhaus, Fred, Muscatine, Iowa. Salt-shaker. No. 1,157,624; Oct. 19; Gaz. vol. 219; p. 856.
Gifford, Bert L., Barker, N. Y. Sprinkling or spraying device. No. 1,156,474; Oct. 12; Gaz. vol. 219; p. 425.
Gilbert & Barker Manufacturing Company. (See Davis, John B., assignor.)
Gilbert, John P., Rochester, N. Y. Screen for the reception of images. No. 1,155,561; Oct. 5; Gaz. vol. 219; p. 82.
Gilchrist Company, The. (See Gilchrist, Raymond B., assignor.)
Gilchrist, Raymond B., assignor to The Gilchrist Company, Newark, N. J. Article-holder. No. 1,155,562; Oct. 5; Gaz. vol. 219; p. 82.
Gill, Edwin R., Yonkers, N. Y., assignor to T. McCampbell. Method and apparatus for utilizing Hertzian waves. No. 1,155,653; Oct. 5; Gaz. vol. 219; p. 114.
Gille, Hugo, Huckingen-on-the-Rhine, Germany. Valve for hydraulic machines. No. 1,157,215; Oct. 19; Gaz. vol. 219; p. 716.
Gillis & Geoghegan. (See Geoghegan, Walter F., assignor.) (Reissue.)
Gilman, George H., and H. M. Robertson, St. Paul, Minn. Car-roof. No. 1,155,563; Oct. 5; Gaz. vol. 219; p. 83.
Gilmore, Charles B., Chicago, Ill. Dust-mop. No. 1,155,564; Oct. 5; Gaz. vol. 219; p. 83.
Gilmore, William R., Richmond, Cal. Spring-wheel. No. 1,156,771; Oct. 12; Gaz. vol. 219; p. 529.
Gilson, Clair A., Niles, Mich. Slide-rule. No. 1,157,526; Oct. 19; Gaz. vol. 219; p. 826.
Gilson, Henry R., Baden, and J. M. G. Fullman, Sewickley, assignors to National Metal Molding Company, Pittsburgh, Pa. Attachment of electrical fixtures to outlet-boxes. No. 1,155,350; Oct. 5; Gaz. vol. 219; p. 9.
Girling, James G., assignor to The Arrow Electric Company, Hartford, Conn. Pull-socket. No. 1,158,200; Oct. 26; Gaz. vol. 219; p. 1123.
Given, Peter C., *et al.* (See Miller, Benjamin D., assignor.)
Glass, Edward F., Altoona, Pa. Lubricating-cup. No. 1,158,201; Oct. 26; Gaz. vol. 219; p. 1124.
Gleiche, Carl, assignor to Stock Motorpflug Gesellschaft Mit Beschränkter Haftung, Berlin, Germany. Steering device for agricultural machines. No. 1,155,351; Oct. 5; Gaz. vol. 219; p. 9.
Glenn, Chambers E., Terra Alta, W. Va. Adjustable steering-column for automobiles and the like. No. 1,158,202; Oct. 26; Gaz. vol. 219; p. 1124.
Glenn, Miles C., Greensboro, N. C. Sanding device for locomotives. No. 1,155,910; Oct. 5; Gaz. vol. 219; p. 204.
Glidden, Lester L., Natick, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Heeling-machine. No. 1,157,688; Oct. 26; Gaz. vol. 219; p. 944.
Globe Iron Works. (See De Gaston and McLean, assignors.)
Globe Manufacturing Company. (See Snow, Frederick, assignor.)
Glover, E. R., *et al.* (See Holsey, Walter R., assignor.)

Goeglein, William J., Goldfield, assignor of one-half to E. A. Colburn, Jr., Victor, Colo. Forming metal sprouts. No. 1,155,652; Oct. 5; Gaz. vol. 219; p. 114.
Golden, Alphonsus L., Oakland, Cal. Starter for internal-combustion motors. No. 1,157,690; Oct. 26; Gaz. vol. 219; p. 945.
Goldsbrough, Harold A. (See Schidrowitz and Goldsbrough.)
Goldschmidt Detinning Company. (See Goldschmidt and Weber, assignors.)
Goldschmidt, Karl, and J. Weber, Essen-on-the-Ruhr, Germany, assignors, by mesne assignments, to Goldschmidt Detinning Company, Jersey City, N. J. Detinning tin-scrap. No. 1,158,128; Oct. 26; Gaz. vol. 219; p. 1099.
Gollos, Anatol, Chicago, Ill., assignor to Gollos Railway Signal Company of America. Under-contact rail and support. No. 1,158,203; Oct. 26; Gaz. vol. 219; p. 1124.
Gollos Railway Signal Company of America. (See Gollos, Anatol, assignor.)
Golly, Louis, assignor to Mechanics' Specialties Co., Inc., Brooklyn, N. Y. Key removing or pulling tool. No. 1,155,720; Oct. 5; Gaz. vol. 219; p. 137.
Golly, Louis, Brooklyn, assignor of one-half to J. H. Devereux, Sagaponack, and one-half to L. McKee, New York, N. Y. Key extracting or removing tool. No. 1,155,721; Oct. 5; Gaz. vol. 219; p. 138.
Good, John, Brooklyn, N. Y. Valve mechanism. No. 1,156,991; Oct. 19; Gaz. vol. 219; p. 636.
Goodell, Homer R., Memphis, Tenn. Name-plate for eye-glass-cases and the like. No. 1,156,772; Oct. 12; Gaz. vol. 219; p. 529.
Goodell-Pratt Company. (See Hapgood, Oscar D., assignor.)
Goodnou, Louise M., New York, N. Y. Catamenial sack. No. 1,157,774; Oct. 26; Gaz. vol. 219; p. 973.
Goodrum, Charles L., Rochester, assignor to Western Electric Company, New York, N. Y. Automatic telephone-exchange system. No. 1,156,475; Oct. 12; Gaz. vol. 219; p. 425.
Gordon, James R., *et al.* (See Manning and Gould, assignors.)
Gordon, Joseph G., Birmingham, Ala. Barbecue-furnace. No. 1,156,773; Oct. 12; Gaz. vol. 219; p. 529.
Gore, Herbert C., Takoma Park, Md., and C. O. Townsend, Washington, D. C. Making syrup from sugar-beets. No. 1,155,806; Oct. 5; Gaz. vol. 219; p. 168.
Gorham Co. (See Fullerton, Rushworth, and Paeth, assignors.)
Gorman, Thomas J., Lampman, Saskatchewan, Canada. Mail-bag catching and delivering apparatus. No. 1,155,911; Oct. 5; Gaz. vol. 219; p. 204.
Gorton-Pew Fisheries Company. (See Cooper, Simon, assignor.)
Goss Printing Press Company, The. (See Terrey, Arthur, assignor.)
Goss Printing Press Company, The. (See Walser and Dresser, assignors.)
Gottschalk, Felix, Stirling, N. J. Fire-alarm system. No. 1,155,722; Oct. 5; Gaz. vol. 219; p. 138.
Goudy, George W., Highland, N. Y. Combined egg-tester and mailing-tube. No. 1,156,476; Oct. 12; Gaz. vol. 219; p. 426.
Gouguet, Louis J., and J. Montis, Chico, Cal. Hydrocarbon-burner. No. 1,158,043; Oct. 26; Gaz. vol. 219; p. 1068.
Gould, Albert C. M. (See Manning and Gould.)
Gouldbourn, Joseph. (See Jerram, Gouldbourn, and Bates.)
Gouldbourn, Joseph, A. Bates, and A. E. Jerram, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J. Machine for shaping the materials of the rear portion of a boot or shoe upper. No. 1,156,897; Oct. 19; Gaz. vol. 219; p. 603.
Gowen, Thomas, Seattle, Wash. Fish-canning machine. No. 1,157,527; Oct. 19; Gaz. vol. 219; p. 826.
Grabowsky, John F., Brokaw, Wis. Folding miter-box. No. 1,155,912; Oct. 5; Gaz. vol. 219; p. 205.
Graham, Charles W., assignor to American Can Company, New York, N. Y. Inclosing food products. No. 1,158,044; Oct. 26; Gaz. vol. 219; p. 1068.
Graham, Charles W., Huntington, assignor to American Can Company, New York, N. Y. Device for feeding individual pieces. No. 1,158,045; Oct. 26; Gaz. vol. 219; p. 1069.
Graham, Frank B., Kansas City, Mo. Impregnator. No. 1,155,804; Oct. 5; Gaz. vol. 219; p. 168.
Graham, Robert S., New York, N. Y. Filing device. No. 1,158,129; Oct. 26; Gaz. vol. 219; p. 1099.
Graham, William E., Grant Junction, Colo. Combined wheel-guard and sleigh-runner. No. 1,156,284; Oct. 12; Gaz. vol. 219; p. 356.
Granadena Mining Company. (See Truax, Sewall, assignor.)
Grand Rapids Show Case Company. (See Vanderveld, Anthony, assignor.)
Grandstaff, Albert L., Steubenville, Ohio. Hydraulic valve. No. 1,158,204; Oct. 26; Gaz. vol. 219; p. 1125.
Grass, Jacob, Fulham, London, England. Lithographic plate for offset and direct printing. No. 1,155,352; Oct. 5; Gaz. vol. 219; p. 10.
Gravell, James H., assignor to Hale and Kilburn Company, Philadelphia, Pa. Making sheet-metal doors, partitions, and the like. No. 1,156,898; Oct. 19; Gaz. vol. 219; p. 603.
Gray, Charles B., Knoxville, Tenn. Machine for cutting sheet metal. No. 1,155,479; Oct. 5; Gaz. vol. 219; p. 55.
Gray, Charles F., Sierra Madre, Cal., assignor to The Singer Manufacturing Company. Sewing-machine. No. 1,156,839; Oct. 12; Gaz. vol. 219; p. 552.
Gray, Chester E., Eureka, Cal. Method of and apparatus for desiccating liquid substances. No. 1,157,935; Oct. 26; Gaz. vol. 219; p. 1030.
Gray National Telautograph Company. (See Tiffany, George S., assignor.)
Gray, Thomas T., Elizabeth, N. J. Treating hydrocarbon-oils. No. 1,158,205; Oct. 26; Gaz. vol. 219; p. 1125.
Gray, Wallace W., and F. P. Witzsche, Lott, Tex. Stalk and straw chopper. No. 1,156,992; Oct. 19; Gaz. vol. 219; p. 636.
Gray, William B., assignor to M. J. Bannon, Louisville, Ky. Device for marking earthenware. No. 1,157,380; Oct. 19; Gaz. vol. 219; p. 775.
Green, Daniel, New York, N. Y. Suitcase-handle. No. 1,156,993; Oct. 19; Gaz. vol. 219; p. 637.
Green, Herbert P., Kansas City, Mo. Reinforced concrete construction. No. 1,157,381; Oct. 19; Gaz. vol. 219; p. 775.
Green, James C. (See Klink and Green.)
Greene, Beatrice H., assignor to D. V. Ashley, Binghamton, N. Y. Motion-picture-film renovator. No. 1,156,994; Oct. 19; Gaz. vol. 219; p. 637.
Greene, Eli R., Des Moines, Iowa. Draft-controlling mechanism for smoke-consuming furnaces. No. 1,157,097; Oct. 19; Gaz. vol. 219; p. 674.
Greene, Harry S., assignor to Woonsocket Napping Machinery Company, Woonsocket, R. I. Transmission device. No. 1,157,098; Oct. 19; Gaz. vol. 219; p. 674.
Greene, John T., assignor to The National Electric Specialty Company, Toledo, Ohio. Lightning-arrester. No. 1,155,415; Oct. 5; Gaz. vol. 219; p. 32.
Gregg Company, The. (See Gregg, Otis T., assignor.)
Gregg, Otis T., assignor to The Gregg Company, Limited, Hackensack, N. J. Car-coupling. No. 1,156,072; Oct. 12; Gaz. vol. 219; p. 286.
Gregg, Otis T., assignor to The Gregg Company, Limited, Hackensack, N. J. Car-coupling. No. 1,156,073; Oct. 12; Gaz. vol. 219; p. 287.
Gregory, Victor H., Chiswick, assignor to Pilkington Brothers, Limited, St. Helens, England. Furnace for drawing glass. No. 1,157,980; Oct. 26; Gaz. vol. 219; p. 1046.
Greif, Bruno, Tacoma, Wash. Ship-propeller. No. 1,155,654; Oct. 5; Gaz. vol. 219; p. 114.
Griesser, Wilhelm, St. Louis, Mo. Beer-faucet. No. 1,156,774; Oct. 12; Gaz. vol. 219; p. 530.
Grieves, Albert, Springfield, Ohio, assignor to International Harvester Company of New Jersey. Side-delivery hay-rake. No. 1,157,775; Oct. 26; Gaz. vol. 219; p. 974.
Griffeth, Arthur V. (See Magri and Griffeth.)
Griffing, Asa C., Baskin, La. Trap. No. 1,157,382; Oct. 19; Gaz. vol. 219; p. 776.
Griffith, Joshua H., Ellis, Kans. Gas-generating burner. No. 1,156,139; Oct. 12; Gaz. vol. 219; p. 310.
Griffith, Richard, assignor to Miller Rubber Co., Akron, Ohio. Toy balloon. No. 1,158,206; Oct. 26; Gaz. vol. 219; p. 1125.
Griffith, William S., Homer City, Pa. Trolley-wheel. No. 1,155,913; Oct. 5; Gaz. vol. 219; p. 205.
Griffiths, William J., Jr., Mount Vernon, assignor to Electric Mail Carrier Company, New York, N. Y. Apparatus for delivering mail. No. 1,157,981; Oct. 26; Gaz. vol. 219; p. 1047.
Grine, Harry A., assignor of one-half to F. C. Nelles, Los Angeles, Cal. Atomizer. No. 1,156,840; Oct. 12; Gaz. vol. 219; p. 553.
Groehn, Otto J., assignor to Briscoe Manufacturing Company, Detroit, Mich. Machine for bending metal. No. 1,156,899; Oct. 19; Gaz. vol. 219; p. 603.
Gross, Henry P., deceased, Baltimore, Md.; R. Biggs, administrator. Basket. No. 1,157,528; Oct. 19; Gaz. vol. 219; p. 827.
Grosvenor, William M., Grantwood, N. J. Lighting apparatus. No. 1,156,477; Oct. 12; Gaz. vol. 219; p. 426.
Grove, Martin L., assignor of one-half to W. A. Wray and one-sixth to A. Foy, Tylersburg, Pa. Gasolene-strainer. No. 1,155,914; Oct. 5; Gaz. vol. 219; p. 205.
Grove, Martin L., assignor of one-half to W. A. Wray and one-sixth to A. Foy, Tylersburg, Pa. Automatic fluid-pressure cut-off. No. 1,155,915; Oct. 5; Gaz. vol. 219; p. 206.
Grover, George B., assignor to W. J. Young Machinery Company, Lynn, Mass. Trimmer for dieing-machines. No. 1,155,655; Oct. 5; Gaz. vol. 219; p. 114.
Grout, Barton F., Derby, Vt. Extension-arm. No. 1,155,916; Oct. 5; Gaz. vol. 219; p. 206.
Grubb, Robert, Powers Lake, N. D. Plow. No. 1,155,917; Oct. 5; Gaz. vol. 219; p. 206.
Grunsky, Carl E., San Francisco, Cal. Automatic air-exhaust for centrifugal pumps. No. 1,157,216; Oct. 19; Gaz. vol. 219; p. 716.
Guadagnino, Salvatore, New York, N. Y. Vending-machine. No. 1,155,918; Oct. 5; Gaz. vol. 219; p. 207.
Guay, Emile J., Swampscott, Mass., assignor to General Electric Company. Testing cut-out for arc-lamps. No. 1,156,526; Oct. 12; Gaz. vol. 219; p. 443.
Gucker, George A., *et al.* (See Thayer, Charles H., assignor.)

Guggenheim, Sigmund, Berlin-Wilmersdorf, Germany. Electric furnace. No. 1,157,691; Oct. 26; Gaz. vol. 219; p. 946.
Guggenheimer, Rebecca L., New York, N. Y. Apron. No. 1,156,900; Oct. 19; Gaz. vol. 219; p. 604.
Gulf Refining Company. (See Hibbert, Harold, assignor.)
Gunderson, Gilbert S., Colfax, Wis. Foot-accelerator for Ford automobile-engines. No. 1,157,099; Oct. 19; Gaz. vol. 219; p. 675.
Gunnell, William C., Cadiz, Ohio. Tire-deflating tool. No. 1,155,919; Oct. 5; Gaz. vol. 219; p. 207.
Guth, Edwin F., assignor to Luminous Unit Company, St. Louis, Mo. Lighting-fixture. No. 1,155,805; Oct. 5; Gaz. vol. 219; p. 168.
Gutman, William. (See Garner and Gutman.)
H. Koppers Company. (See Koppers, Heinrich, assignor.)
H. Mueller Manufacturing Company. (See Herron, Harry P., assignor.)
H. Mueller Manufacturing Company. (See Mueller, Robert, assignor.)
H. Mueller Mfg. Co. (See Mueller, Philip, assignor.)
H. Ward Leonard, Incorporated. (See Leonard, Harry W., assignor.)
H. G. Davis Manufacturing Company, The. (See Davis, Harry G., assignor.)
H. K. Mulford Company. (See Furness, William H., assignor.)
H. O. Canfield Co., The. (See Stephen, David, assignor.)
H. T. Paiste Company. (See Webb, Wilmer M., assignor.)
H. W. Johns-Manville Company. (See Christenson, George, assignor.)
Haas, Herbert, San Francisco, Cal. Extracting iron from its ores. No. 1,156,775; Oct. 12; Gaz. vol. 219; p. 530.
Haase, Leo G., Pasadena, Cal. Molding-machine. No. 1,156,358; Oct. 12; Gaz. vol. 219; p. 383.
Hackett, Paul J., Seattle, assignor to Universal High Power Telephone Company, King county, Wash. Universal sound-transmitting means. No. 1,156,867; Oct. 12; Gaz. vol. 219; p. 563.
Hadaway, William S., Jr., New Rochelle, N. Y. Range. No. 1,155,480; Oct. 5; Gaz. vol. 219; p. 55.
Hadaway, William S., Jr., New Rochelle, N. Y. Regulator for laundry-rolls. No. 1,155,481; Oct. 5; Gaz. vol. 219; p. 55.
Hadaway, William S., Jr., New Rochelle, N. Y. Heat-regulating system. No. 1,155,482; Oct. 5; Gaz. vol. 219; p. 56.
Hadaway, William S., Jr., New Rochelle, N. Y. Electric heater. No. 1,155,483; Oct. 5; Gaz. vol. 219; p. 56.
Hadaway, William S., Jr., New Rochelle, N. Y.. Electric laundry-roll. No. 1,156,223; Oct. 12; Gaz. vol. 219; p. 336.
Hadaway, William S., Jr., New York, N. Y. Electric heating device. No. 1,157,100; Oct. 19; Gaz. vol. 219; p. 675.
Hadden Automatic Sprinkler Company. (See Hadden and Johnson, assignors.)
Hadden, John S., Huntington Park, and F. H. Johnson, South Pasadena, assignors to Hadden Automatic Sprinkler Company, Los Angeles, Cal. System and means of control. No. 1,156,841; Oct. 12; Gaz. vol. 219; p. 553.
Hageman, Louis F., Jr., Niagara Falls, N. Y., assignor to American Sales Book Company, Limited, Toronto, Canada. Sales-check holder. No. 1,157,217; Oct. 19; Gaz. vol. 219; p. 716.
Hager, William A., Texhoma, Okla. Animal-poke. No. 1,157,529; Oct. 19; Gaz. vol. 219; p. 827.
Hagey, James C., assignor to The Cable Company, Chicago, Ill. Tracker-board and music-sheet. No. 1,155,565; Oct. 5; Gaz. vol. 219; p. 83.
Hagg, Virgil B., Los Angeles, Cal. Filter. No. 1,157,776; Oct. 26; Gaz. vol. 219; p. 973.
Haggard and Marcusson Company. (See Anderson, William B., assignor.)
Hahn, John N., Cleveland, Ohio. Packing-case for fragile articles. No. 1,156,074; Oct. 12; Gaz. vol. 219; p. 287.
Haines, Edward J., Akron, Ohio. Collapsible box. No. 1,158,046; Oct. 26; Gaz. vol, 219; p. 1069.
Hair, Benjamin M., Chicago, Ill. Vending device. No. 1,156,140; Oct. 12; Gaz. vol. 219; p. 310.
Hakey, Eli, Swanton, Vt. Clamp attachment for wrenches. No. 1,157,383; Oct. 19; Gaz. vol. 219; p. 776.
Halbert, P. E., *et al.* (See Holsey, Walter R., assignor.)
Halcin, Stephen, Pisek, N. D. Gear mechanism. No. 1,157,936; Oct. 26; Gaz. vol. 219; p. 1030.
Haldeman, James C., assignor to The Silver Manufacturing Company, Salem, Ohio. Feed-cutter. No. 1,155,353; Oct. 5; Gaz. vol. 219; p. 10.
Hale and Kilburn Company. (See Gravell, James H., assignor.)
Hale and Kilburn Company. (See Wallace and Bell, assignors.)
Hall, Arthur J. (See Storer and Hall.)
Hall, Arthur J., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Control system. No. 1,157,777; Oct. 26; Gaz. vol. 219; p. 974.
Hall, Charles E. (See Petit, Joseph C., assignor.)
Hall, Chester I., assignor, by mesne assignments, to Chicago Electric Meter Company, Chicago, Ill. Clock-driven controller. No. 1,156,400; Oct. 12; Gaz. vol. 219; p. 399.
Hall, Chester I., Chicago, Ill., assignor to Chicago Electric Meter Company. Fan-motor. No. 1,156,901; Oct. 19; Gaz. vol. 219; p. 604.
Hall, Clara E., Cincinnati, Ohio. Strip-guide. No. 1,155,920; Oct. 5; Gaz. vol. 219; p. 207.
Hall, Jay H., assignor to The Electric Controller and Manufacturing Company, Cleveland, Ohio. Motor-control system. No. 1,155,484; Oct. 5; Gaz. vol. 219; p. 56.
Hall Mailing Box Company, The. (See Hall, William J., assignor.)
Hall, Milan W., assignor to Hall-Seeley Motor Corporation, Baltimore, Md. Two-cycle gas-engine. No. 1,158,380; Oct. 26; Gaz. vol. 219; p. 1186.
Hall, Milan W., assignor to Hall-Seeley Motor Corporation, Baltimore, Md. Two-cycle gas-engine. No. 1,158,381; Oct. 26; Gaz. vol. 219; p. 1186.
Hall Printing Press Company. (See White, Joseph, assignor.)
Hall-Seeley Motor Corporation. (See Hall, Milan W., assignor.)
Hall, Selden H., Poughkeepsie, assignor to The De Laval Separator Company, New York, N. Y. Centrifugal machine. No. 1,156,285; Oct. 12; Gaz. vol. 219; p. 356.
Hall Switch & Signal Company, The. (See Coleman, Clarence W., assignor.)
Hall Switch and Signal Company, The. (See Day, Albert V. T., assignor.)
Hall, Tomas P., Vancouver, British Columbia, Canada. Moving-picture machine. No. 1,156,596; Oct. 12; Gaz. vol. 219; p. 467.
Hall, William J., assignor to The Hall Mailing Box Company, Cincinnati, Ohio. Mailing-box. No. 1,158,047; Oct. 26; Gaz. vol. 219; p. 1069.
Halliday, Thomas E., Bishopstoke, England. Vaporizer for use with internal-combustion engines. No. 1,157,101; Oct. 19; Gaz. vol. 219; p. 675.
Hallock, Daniel Y., York, Pa. Tongue for shoes. No. 1,155,354; Oct. 5; Gaz. vol. 219; p. 11.
Halstrom, Arvid S., *et al.* (See Conrad, Joseph L., assignor.)
Halvardson, Gustaf L., Stockholm, Sweden. Reversible brush-holder. No. 1,155,921; Oct. 5; Gaz. vol. 219; p. 208.
Haman, Albert L. (See Hummel, Ernest A., assignor.)
Hamel, Richard H., Fall River, Mass. Sled. No. 1,156,527; Oct. 12; Gaz. vol. 219; p. 444.
Hamelin, Alban, assignor of one-half to Hamlau's Patents Company, Montreal, Quebec, Canada. Combined burglar-alarm and lock. No. 1,157,863; Oct. 26; Gaz. vol. 219; p. 1005.
Hamilton, John R., assignor of one-half to A. H. Likely, St. John, New Brunswick, Canada. Spring. No. 1,156,859; Oct. 12; Gaz. vol. 219; p. 561.
Hamlau's Patents Company. (See Hamelin, Alban, assignor.)
Hammond Typewriter Company, The. (See Lopez, Arthur, assignor.)
Hammond, William P., Passaic, N. J. Tire-chain. No. 1,155,723; Oct. 5; Gaz. vol. 219; p. 139.
Handifolio Company. (See Lewis, Lawrence F., assignor.)
Hanff, Edward A., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Motor-control system. No. 1,156,682; Oct. 12; Gaz. vol. 219; p. 498.
Hanitz, Hans T. R. (See Swebilius and Hanitz.)
Hankins, Sylvester, Zearing, Iowa. Husking device. No. 1,156,478; Oct. 12; Gaz. vol. 219; p. 427.
Hanlon-Gregory Galvanizing Company. (See Hanlon, John A., assignor.)
Hanlon, John A., assignor to Hanlon-Gregory Galvanizing Company, Pittsburgh, Pa. Coating metal. No. 1,156,995; Oct. 19; Gaz. vol. 219; p. 637.
Hannaz, Walter L., Hondo, Tex. Wrench. No. 1,156,902; Oct. 19; Gaz. vol. 219; p. 604.
Hansen, Charles A., Elizabeth, N. J., assignor to A. H. Bamberger, New York, N. Y. Sewing-machine attachment. No. 1,157,384; Oct. 19; Gaz. vol. 219; p. 776.
Hansen-Ellehammer, Jacob C., and N. W. Aasen, Copenhagen, Denmark. Aerial machine. No. 1,155,485; Oct. 5; Gaz. vol. 219; p. 57.
Hanson, Anders C., Red Oak, Iowa. Wire-stretcher. No. 1,156,597; Oct. 12; Gaz. vol. 219; p. 467.
Hanson, Otto, Bruno, Minn. Chair attachment. No. 1,156,776; Oct. 12; Gaz. vol. 219; p. 530.
Hanson, Thomas R., Tuscaloosa, Ala. Dirigible headlight. No. 1,158,207; Oct. 26; Gaz. vol. 219; p. 1126.
Hansson, Soren, and I. Moeller, assignors of one-third to H. B. Douglas, New Glasgow, Nova Scotia, Canada. Car-roof. No. 1,155,807; Oct. 5; Gaz. vol. 219; p. 169.
Hansson, Soren, and I. Moeller, assignors of one-third to H. B. Douglas, New Glasgow, Nova Scotia, Canada. Draft-gear. No. 1,155,808; Oct. 5; Gaz. vol. 219; p. 169.
Hapgood, Oscar D., Orange, assignor to Goodell-Pratt Company, Greenfield, Mass. Breast-drill. No. 1,157,218; Oct. 19; Gaz. vol. 219; p. 717.
Harbers, Theodor, Leipsig, Germany. Photographic-printing apparatus. No. 1,156,528; Oct. 12; Gaz. vol. 219; p. 444.
Harbin, Joseph T., St. Johns, Oreg. Clothes-reel. No. 1,156,286; Oct. 12; Gaz. vol. 219; p. 357.
Harbke, William H., Portland, Oreg. Shoe-stretcher. No. 1,157,982; Oct. 26; Gaz. vol. 219; p. 1047.
Hard, Merrill W., Dayton, assignor to W. F. Eckart, Cleveland, Ohio. Terrestrial globe. No. 1,157,219; Oct. 19; Gaz. vol. 219; p. 717.

Hardt, Henry B. (See Bowen, Aaron L., assignor.)
Harnly, David H., Austin, Ill. Screw-setting instrument. No. 1,155,724; Oct. 5; Gaz. vol. 219; p. 139.
Harper, Frederick D., Everett, Mass. Producing manganese dioxid. No. 1,157,530; Oct. 19; Gaz. vol. 219; p. 827.
Harper, Frederick D., Everett, Mass. Manufacture of dry batteries for flash-lights and other purposes. No. 1,157,531; Oct. 19; Gaz. vol. 219; p. 828.
Harper, Sylvester Q., Fayetteville, Ga. Two-row attachment for fertilizer-distributers. No. 1,157,532; Oct. 19; Gaz. vol. 219; p. 828.
Harrigan, Archibald, Grand Rapids, Mich. Drilling and blasting gage. No. 1,155,355; Oct. 5; Gaz. vol. 219; p. 11.
Harrington, Clinton O., Edgewood borough, assignor to The Union Switch & Signal Company, Swissvale, Pa. Signal. No. 1,157,102; Oct. 19; Gaz. vol. 219; p. 675.
Harris Air Pump Company. (See Miller, Frank S., assignor.)
Harris, Leonard L. (See Honnold, Frank, assignor.)
Harris, Moses A., assignor of one-third to L. A. Clark, Westfield, N. J. Starter for engines. No. 1,157,533; Oct. 19; Gaz. vol. 219; p. 828.
Harris, William E., Scottsboro, Ala., assignor of one-half to C. L. Jarrett, Springfield, Mo. Car-door-operating mechanism. No. 1,155,922; Oct. 5; Gaz. vol. 219; p. 208.
Harris, William F., San Francisco, Cal. Caster. No. 1,156,287; Oct. 12; Gaz. vol. 219; p. 357.
Harris, William W., New York, N. Y., assignor to Van Gleckland Co., Inc. Acetylene-generator. No. 1,157,385; Oct. 19; Gaz. vol. 219; p. 776.
Harris, William W., New York, N. Y., assignor to Van Gleckland Co., Inc. Acetylene-generator. No. 1,157,386; Oct. 19; Gaz. vol. 219; p. 777.
Harrison, Clark W., New York, N. Y. Device for controlling the supply of gas to burners. No. 1,155,416; Oct. 5; Gaz. vol. 219; p. 32.
Harrison, Simon H., Easton, Pa. Air-feed for pulverized fuel. No. 1,155,725; Oct. 5; Gaz. vol. 219; p. 140.
Harroun, Ray W., Indianapolis, Ind., assignor, by mesne assignments, to Invincible Manufacturing Company. Carbureter. No. 1,155,726; Oct. 5; Gaz. vol. 219; p. 140.
Harry, Owen K., Dallas, Tex. Sheet-metal tank. No. 1,157,158; Oct. 19; Gaz. vol. 219; p. 695.
Hart, Fred E., San Francisco, Cal. Artificial-tooth facing with backing adjustment. No. 1,157,534; Oct. 19; Gaz. vol. 219; p. 829.
Hart, Henry R., Montclair, N. J. Athletic guard. No. 1,158,208; Oct. 26; Gaz. vol. 219; p. 1126.
Hart, Lewis A., Binghamton, N. Y., assignor to Bateman Manufacturing Company, Grenloch, N. J. Plant-spraying machine. No. 1,158,209; Oct. 26; Gaz. vol. 219; p. 1126.
Hart, Salem R., assignor of one-half to J. L. Primm, Cleveland, Okla. Rod-coupling. No. 1,157,103; Oct. 19; Gaz. vol. 219; p. 676.
Hart, Thomas I., St. Louis, Mo. Shipping-tag. No. 1,155,566; Oct. 5; Gaz. vol. 219; p. 84.
Hart, Thomas M., assignor to P. M. Stewart, trustee, New York, N. Y. Road and making the same. No. 1,158,418; Oct. 26; Gaz. vol. 219; p. 1201.
Harter, Isaac, New York, N. Y., assignor to The Babcock & Wilcox Company, Bayonne, N. J. Air-cooled tank for electrical apparatus. No. 1,155,656; Oct. 5; Gaz. vol. 219; p. 115.
Hartman, Noble W., Toledo, Ohio, assignor, by mesne assignments, to General Electric Company. Glass-blowing machine. No. 1,155,809; Oct. 5; Gaz. vol. 219; p. 169.
Hartranft, Harry E., Groton, S. D. Tatting-shuttle. No. 1,157,535; Oct. 19; Gaz. vol. 219; p. 829.
Hartsook, Thomas, Logansport, Ind. Train order or message delivering device. No. 1,157,864; Oct. 26; Gaz. vol. 219; p. 1005.
Hartung, Carl A., Berlin, Germany. Steam-engine. No. 1,155,810; Oct. 5; Gaz. vol. 219; p. 170.
Hartung, Carl A., Berlin, Germany. Means for withdrawing steam from steam-engines. No. 1,155,811; Oct. 5; Gaz. vol. 219; p. 170.
Hartzell, Helen E., administratrix. (See Illingworth, John W.)
Harvey, Harry F., Austin, Tex. Shock-absorber. No. 1,158,210; Oct. 26; Gaz. vol. 219; p. 1127.
Harwood, Leon M., Springfield, Mass. Machine for cutting, packaging, and unwinding metallic leaf. No. 1,155,727; Oct. 5; Gaz. vol. 219; p. 140.
Harwood, Leon M., Springfield, Mass. Device for cutting gold-leaf. No. 1,156,224; Oct. 12; Gaz. vol. 219; p. 336.
Hasberg, William M., and A. W. Swanlund, assignors to Sears, Roebuck and Company, Chicago, Ill. Apparatus for conveying and distributing papers and the like. No. 1,157,865; Oct. 26; Gaz. vol. 219; p. 1006.
Hastings, William H. (See Matthews, Joseph, assignor.)
Hathaway, Thomas F., assignor to Elgin American Manufacturing Co., Elgin, Ill. Cigarette-case. No. 1,156,598; Oct. 12; Gaz. vol. 219; p. 468.
Haupt, Rudolph, Fresno, Cal. Vehicle-spring. No. 1,156,996; Oct. 19; Gaz. vol. 219; p. 638.
Haury, George W., Chicago, Ill. Internal-combustion engine. No. 1,157,387; Oct. 19; Gaz. vol. 219; p. 778.
Hausberg, Ernest, Des Moines, Iowa. Electric type-writer. No. 1,156,288; Oct. 12; Gaz. vol. 219; p. 357.
Havener, Arthur R., Waltham, Mass., assignor to Judson L. Thomson M'f'g. Co. Hopper for feeding rivet-caps. No. 1,157,306; Oct. 19; Gaz. vol. 219; p. 748.
Haverhill Shoe Machinery Company. (See Pettengill, George M., assignor.)
Havlicek, John, and J. B. Scullane, Springfield, Mass. Gun-cleaner. No. 1,156,683; Oct. 12; Gaz. vol. 219; p. 490.
Hawkeye Pearl Button Company. (See Vetter, Frederick C., assignor.)
Hawkins, Edgar M., assignor to M. D. Knowlton Company, Rochester, N. Y. Tube-making machine. No. 1,157,220; Oct. 19; Gaz. vol. 219; p. 718.
Hawkins, Edgar M., assignor to M. D. Knowlton Company, Rochester, N. Y. Reinforced paper-board box. No. 1,158,130; Oct. 26; Gaz. vol. 219; p. 1099.
Hawkins, Laurence A., Schenectady, N. Y., assignor, by mesne assignments, to The Union Switch and Signal Company. Block-signal system. No. 1,157,104; Oct. 19; Gaz. vol. 219; p. 676.
Hawks, Moses L., New York, N. Y. Sharpening device. No. 1,158,048; Oct. 26; Gaz. vol. 219; p. 1070.
Hawley, Charles G., and E. K. Baker, assignors to Universal Rim Company, Chicago, Ill. Pneumatic-tire mounting. No. 1,155,417; Oct. 5; Gaz. vol. 219; p. 33.
Hawley, William D., assignor to Monitor Time Clock Co., Syracuse, N. Y. Card-rack. No. 1,156,401; Oct. 12; Gaz. vol. 219; p. 400.
Hawthorne, Ellsworth A., Bridgeport, Conn. Acoustic apparatus. No. 1,158,049; Oct. 26; Gaz. vol. 219; p. 1070.
Hayden, David H., New York, N. Y. Reinforcement for the composition covering of structural members. No. 1,156,030; Oct. 5; Gaz. vol. 219; p. 145.
Haydenville Company, The. (See Page, George M., assignor.)
Hayes Pump & Planter Company. (See Hayes, Ralph W. E., assignor.)
Hayes, Ralph W. E., assignor of one-half to Hayes Pump & Planter Company, Galva, Ill. Tank-filler. No. 1,157,692; Oct. 26; Gaz. vol. 219; p. 946.
Hayes, Stanley W., Geneva, N. Y. Connection adjustment. No. 1,156,997; Oct. 19; Gaz. vol. 219; p. 638.
Hays, Charles W. (See Hays, Joseph W. and C. W.)
Hays, Joseph W. and C. W., Chicago, Ill. Temperature-controlling apparatus. No. 1,157,866; Oct. 26; Gaz. vol. 219; p. 1006.
Hazard, Charles B., near Xenia, Ohio. Harvesting-machine. No. 1,158,050; Oct. 26; Gaz. vol. 219; p. 1070.
Head, Reuben M., Pittsburgh, Pa. Internal-combustion engine. No. 1,156,075; Oct. 12; Gaz. vol. 219; p. 287.
Head, Robert, assignor to J. T. Outerson, New York, N. Y. Lighting system for motor-vehicles. No. 1,157,105; Oct. 19; Gaz. vol. 219; p. 676.
Healy, Peter, county Sligo, Ireland. Device for sealing or closing letters and like packages. No. 1,155,567; Oct. 5; Gaz. vol. 219; p. 84.
Heany, John A., New York, N. Y. Electric insulation. No. 1,155,812; Oct. 5; Gaz. vol. 219; p. 171.
Heany, John A., New York, N. Y. Electric insulation. No. 1,155,813; Oct. 5; Gaz. vol. 219; p. 171.
Heath, William R. (See Crumpton, William J., assignor.)
Heath, William R. (See Heuser, Frederick O., assignor.)
Heberling, John, Rochester, N. Y. Measuring instrument. No. 1,156,998; Oct. 19; Gaz. vol. 219; p. 638.
Hedgcock, William C., assignor to American Steel Foundries, Chicago, Ill. Car-truck pedestal. No. 1,157,867; Oct. 26; Gaz. vol. 219; p. 1006.
Hedman, Carl M., *et al.* (See Engstrom, Ivan, assignor.)
Hedman, Herbert R., *et al.* (See Engstrom, Ivan, assignor.)
Heidbreder, George E., Quincy, Ill. Combined coal and gas range. No. 1,156,999; Oct. 19; Gaz. vol. 219; p. 639.
Heim, Adam, Connersville, Ind. Hose-reel. No. 1,156,402; Oct. 12; Gaz. vol. 219; p. 400.
Hein, Paul, Essen-Rüttenscheid, assignor to Diamant-Brikett-Werke G. m. b. H., Berlin, Germany. Apparatus for coking coal briquets. No. 1,155,486; Oct. 5; Gaz. vol. 219; p. 57.
Heine, Karl. (See Becker and Heine.)
Heineman, Joseph. (See Doubrava and Heineman.)
Heinrich, John G., Jr., New Rochelle, N. Y. Fishing-pole. No. 1,157,106; Oct. 19; Gaz. vol. 219; p. 677.
Heistand, Horace L. (See Baldwin, Ferdinand, assignor.)
Heitmann, Ernest, New York, N. Y. Safety-envelop. No. 1,157,983; Oct. 26; Gaz. vol. 219; p. 1047.
Helin, Wilber E., State Center, Iowa. Attachment for disks. No. 1,155,657; Oct. 5; Gaz. vol. 219; p. 115.
Heller, Benjamin, Chicago, Ill. Can-closure. No. 1,156,777; Oct. 12; Gaz. vol. 219; p. 531.
Helm, Max, Pankow, Germany, assignor to General Electric Company. Electric meter. No. 1,157,937; Oct. 26; Gaz. vol. 219; p. 1031.
Helmbold, Paul A., and J. Weinbrenner, Alsace, Germany. Driving mechanism for the drawing-off or detaching rollers of combing-machines. No. 1,156,225; Oct. 12; Gaz. vol. 219; p. 337.
Hembree, Charles O., Asher, Okla. Plow. No. 1,155,418; Oct. 5; Gaz. vol. 219; p. 33.

Hemming, Gustave F., and M. L. Baker, New Haven, Conn. Percolator. No. 1,157,778; Oct. 26; Gaz. vol. 219; p. 974.
Hemp, Joseph L., St. Louis, Mo. Device for closing sheet-metal seams. No. 1,156,599; Oct. 12; Gaz. vol. 219; p. 468.
Hemphill Manufacturing Company. (See Wilcomb, Frank, assignor.)
Henderson, Carl, Oak Park, assignor to Miehle Printing Press & Manufacturing Company, Chicago, Ill. Delivery mechanism for printing-presses. No. 1,156,903; Oct. 19; Gaz. vol. 219; p. 605.
Henderson, Charles W., Strathmore, Cal. Fishing-tool. No. 1,156,289; Oct. 12; Gaz. vol. 219; p. 358.
Henderson, Clark T., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Driving mechanism. No. 1,157,307; Oct. 19; Gaz. vol. 219; p. 749.
Henderson, George A., Fort Worth, Tex. Educational-chart drawing-board and writing-desk. No. 1,158,212; Oct. 26; Gaz. vol. 219; p. 1127.
Henderson, Joseph E., Monroe, N. C. Weighing and bagging machine. No. 1,155,487; Oct. 5; Gaz. vol. 219; p. 57.
Hendrick, John H., Denver, Colo. Adjustable bed. No. 1,156,359; Oct. 12; Gaz. vol. 219; p. 383.
Hennebutte, Henri, assignor to Société Anonyme des Combustibles Industriels, Paris, France. Manufacture of pure carbon. No. 1,155,419; Oct. 5; Gaz. vol. 219; p. 33.
Hennig, Gustav K. (See Reichel and Hennig.)
Henri Abraham et Jules Carpentier. (See Abraham, Henri, assignor.)
Henry, Ferdinand G., assignor to C. Beck Company, Philadelphia, Pa. Machine for applying paper to the tops of boxes and other articles. No. 1,156,005; Oct. 5; Gaz. vol. 219; p. 235.
Henry, James N., Providence, R. I. Bracket for curtain-rods. No. 1,156,076; Oct. 12; Gaz. vol. 219; p. 288.
Henry Vogt Machine Company. (See Thurstensen, Soren, assignor.)
Henzel, John G., Chicago, Ill. Bait-hook. No. 1,155,923; Oct. 5; Gaz. vol. 219; p. 208.
Herkenrath, Frans, Zurich, Switzerland, assignor, by mesne assignments, to Metals Coating Company of America, Boston, Mass. Melting and spraying fusible substances. No. 1,157,984; Oct. 26; Gaz. vol. 219; p. 1048.
Herman, Reinhold, Pittsburgh, Pa. Shock-absorbing device. No. 1,155,568; Oct. 5; Gaz. vol. 219; p. 84.
Hermann Bauermeister Maschinenfabrik u. Mühlenbauanstalt G. m. b. H. (See Kettner, Friedrich W., assignor.)
Hernhuter, Emma, New York, N. Y. Bag. No. 1,157,388; Oct. 19; Gaz. vol. 219; p. 778.
Herrick, William T., Tulsa, Okla. Wire-line wrench and making same. No. 1,157,988; Oct. 26; Gaz. vol. 219; p. 1031.
Herring, August A., Toledo, Ohio. Hat-fastener. No. 1,158,213; Oct. 26; Gaz. vol. 219; p. 1128.
Herrmann, Samuel G., New York, N. Y. Binding and suspending device. No. 1,157,107; Oct. 19; Gaz. vol. 219; p. 677.
Herron, Harry P., Los Angeles, Cal., assignor to H. Mueller Manufacturing Company, Decatur, Ill. Hose-washer. No. 1,157,536; Oct. 19; Gaz. vol. 219; p. 829.
Herz, Alfred, Chicago, Ill. Recording electric meter. No. 1,156,226; Oct. 12; Gaz. vol. 219; p. 337.
Hess, Aaron, New York, N. Y. Sifter-top. No. 1,157,537; Oct. 19; Gaz. vol. 219; p. 829.
Hess, Christian F., assignor to A. Nelson, Chicago, Ill. Tire-holder. No. 1,155,488; Oct. 5; Gaz. vol. 219; p. 58.
Hess, Christian F., assignor to A. Nelson, Chicago, Ill. Valve-grinder. No. 1,155,489; Oct. 5; Gaz. vol. 219; p. 58.
Hess, Edward B., and L. C. Myers, Brooklyn, assignors, by mesne assignments, to Royal Typewriter Company, Inc. New York, N. Y. Ribbon-spool for type-writing machines. No. 1,156,141; Oct. 12; Gaz. vol. 219; p. 310.
Hess, Henry, Philadelphia, Pa. Gage. No. 1,157,389; Oct. 19; Gaz. vol. 219; p. 778.
Hester, Kerty W., Mumfordville, Ky. Combined cotton-holder and massage device. No. 1,158,214; Oct. 26; Gaz. vol. 219; p. 1128.
Hesterly, William L., Morgan City, La. Machine for catching insects. No. 1,156,778; Oct. 12; Gaz. vol. 219; p. 531.
Heuser, Frederick O., Chicago, Ill., assignor, by mesne assignments, to W. R. Heath, Buffalo, N. Y. Accounting system. No. 1,157,625; Oct. 19; Gaz. vol. 219; p. 856.
Hewitt, Edward R., Midvale, N. J., and A. F. Masury, assignors to International Motor Company, New York, N. Y. Oiling system for internal-combustion engines. No. 1,157,390; Oct. 19; Gaz. vol. 219; p. 779.
Hewitt, Peter C., New York, N. Y., assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Low-resistance vapor electric device. No. 1,156,227; Oct. 12; Gaz. vol. 219; p. 337.
Hewitt, Peter C., Ringwood Manor, assignor to Cooper Hewitt Electric Company, Hoboken, N. J. Controlling means for vapor apparatus. No. 1,156,228; Oct. 12; Gaz. vol. 219; p. 338.
Hewitt, Peter C., Ringwood Manor, assignor, by mesne assignments, to Cooper Hewitt Electric Company, Hoboken, N. J. Means for suppressing the resistance of the negative-electrode flame in vapor electric apparatus. No. 1,157,779; Oct. 26; Gaz. vol. 219; p. 974.
Hewitt, Rudolph E., Alameda, and W. W. Whitmore, Oakland, Cal. Roller-bearing current-collector. No. 1,158,215; Oct. 26; Gaz. vol. 219; p. 1128.
Hewlett, Edward M., Schenectady, N. Y., assignor to General Electric Company. Electric switch. No. 1,155,814; Oct. 5; Gaz. vol. 219; p. 171.
Heylman, Edward M., assignor to Oliver Chilled Plow Works, South Bend, Ind. Cultivator. No. 1,155,569; Oct. 5; Gaz. vol. 219; p. 85.
Heylmun, William R., Iola, Kans., assignor of one-half to E. B. Carney, Wheeling, W. Va. Magazine-pencil. No. 1,156,860; Oct. 12; Gaz. vol. 219; p. 561.
Heyman, Moses D., New York, N. Y. Band-chuck. No. 1,158,216; Oct. 26; Gaz. vol. 219; p. 1128.
Hibbard, Edward R., Chicago, Ill. Lantern. No. 1,156,229; Oct. 12; Gaz. vol. 219; p. 338.
Hibbert, Harold, assignor to Gulf Refining Company, Pittsburgh, Pa. Manufacture of organic solvents. No. 1,158,217; Oct. 26; Gaz. vol. 219; p. 1129.
Hick, Harry J., assignor, by mesne assignments, to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,157,159; Oct. 19; Gaz. vol. 219; p. 695.
Hick, Harry J., and A. F. Staples, assignors, by mesne assignments, to The McCaskey Register Company, Alliance, Ohio. Filing appliance. No. 1,157,160; Oct. 19; Gaz. vol. 219; p. 696.
Hicks, Charles T., *et al.* (See Witter, Archie C., assignor.)
Hicks, Harry, *et al.* (See Witter, Archie C., assignor.)
Hieronymus, George L., Winchester, Ill. Nut-lock. No. 1,155,356; Oct. 5; Gaz. vol. 219; p. 11.
Higbee, Roy E., Windsor, Mo. Device for use in wiping pipe-joints. No. 1,157,391; Oct. 19; Gaz. vol. 219; p. 779.
Higel, Otto, Toronto, Ontario, Canada. Operating device for player-pianos. No. 1,155,570; Oct. 5; Gaz. vol. 219; p. 85.
Higel, Otto, Toronto, Ontario, Canada. Pneumatic action for player-pianos. No. 1,155,571; Oct. 5; Gaz. vol. 219; p. 85.
Higgins, Albert G., assignor to The Trusswall Manufacturing Company, Kansas City, Mo. Apparatus for constructing plastic columns. No. 1,156,077; Oct. 12; Gaz. vol. 219; p. 288.
Higgins, Arthur H., assignor to Minerals Separation American Syndicate (1913) Limited, London, England. Apparatus for ore concentration. No. 1,155,816; Oct. 5; Gaz. vol. 219; p. 172.
Higgins, Arthur H., and W. W. Stenning, assignors to Minerals Separation Limited, London, England. Apparatus for ore concentration. No. 1,155,815; Oct. 5; Gaz. vol. 219; p. 171.
Higgins, John M., Youngstown, Ohio. Steam-trap. No. 1,156,684; Oct. 12; Gaz. vol. 219; p. 499.
Higgins, Thomas, *et al.* (See Jobke, August F., assignor.)
Higgins, William H. C., Jr., assignor to M. Rumely Company, Laporte, Ind. Carbureter. No. 1,157,868; Oct. 26; Gaz. vol. 219; p. 1006.
Hildreth, Daniel W., Jr., *et al.* (See Stevenson, Abraham C., assignor.)
Hill, Harrison B., East Providence, R. I. Game apparatus. No. 1,156,006; Oct. 5; Gaz. vol. 219; p. 235.
Hill, William, and L. Gardella, Oroville, Cal. Smoking-pipe. No. 1,157,161; Oct. 19; Gaz. vol. 219; p. 696.
Hillebrant, Randall D. (See Beutel, Werner, assignor.)
Hiller, Joseph L., Mattapoisett, Mass. Bearing. No. 1,157,939; Oct. 26; Gaz. vol. 219; p. 1031.
Hillner, Rudolph, Schenectady, N. Y., assignor to General Electric Company. Turbine bucket-wheel. No. 1,156,529; Oct. 12; Gaz. vol. 219; p. 445.
Hilton, Harry R. (See Small and Hilton.)
Himmler, Martin W. (See Eyerman and Himmler.)
Hinkley, James, Hagaman, N. Y., assignor to Union Special Machine Company, Chicago, Ill. Trimming mechanism for sewing-machines. No. 1,157,000; Oct. 19; Gaz. vol. 219; p. 639.
Hitchcock, Delbert, St. Paul, Minn. Reamer attachment for die-stocks. No. 1,156,290; Oct. 12; Gaz. vol. 219; p. 358.
Hjort, Axel F., Chicago, Ill., assignor to Brunswick-Balke-Collender Co. Billiard-table. No. 1,157,940; Oct. 26; Gaz. vol. 219; p. 1032.
Hoag, Chance M. (See Backstrand and Hoag.)
Hoagland, Frank O., assignor to Union Metallic Cartridge Company, Bridgeport, Conn. Cartridge. No. 1,157,221; Oct. 19; Gaz. vol. 219; p. 718.
Hobart Manufacturing Company, The. (See Johnston, Herbert L., assignor.)
Hochstetter, Robert, Cincinnati, Ohio. Ink and making same. No. 1,158,131; Oct. 26; Gaz. vol. 219; p. 1100.
Hodkinson, George F., Philadelphia, Pa. Reservoir. No. 1,155,490; Oct. 5; Gaz. vol. 219; p. 59.
Hoeffle, Frank F., Louisville, Ky. Spring. No. 1,157,869; Oct. 26; Gaz. vol. 219; p. 1007.
Hoerr, Louis A., St. Louis, Mo. Brake mechanism. No. 1,156,479; Oct. 12; Gaz. vol. 219; p. 427.

Hoerr, Louis A., St. Louis, Mo. Brake mechanism. No. 1,156,480; Oct. 12; Gaz. vol. 219; p. 427.
Hoffman, Henry H. (See Hoffman, Jeremiah M., assignor.)
Hoffman, Jeremiah M., assignor of one-half to H. H. Hoffman, Reading, Pa. Washing-machine agitator. No. 1,157,222; Oct. 19; Gaz. vol. 219; p. 718.
Hoffman, John V., Bellwood, Nebr. Lubricating device. No. 1,156,779; Oct. 12; Gaz. vol. 219; p. 531.
Hogan, John J., West Haven, assignor to J. E. Hubinger, New Haven, Conn. Lubrication of internal-combustion engines. No. 1,157,308; Oct. 19; Gaz. vol. 219; p. 749.
Hoge Manufacturing Company, The. (See Barbour, Robert P., assignor.)
Hoge Manufacturing Company, The. (See Clark, Gordon H., assignor.)
Hogin, Oscar. (See Rumsey, James W., assignor.) (Reissue.)
Holbrook, Herbert H., Arcadia, Okla. Hat-box. No. 1,157,538; Oct. 19; Gaz. vol. 219; p. 830.
Holbrook, John, Byesville, Ohio. Crate. No. 1,156,230; Oct. 12; Gaz. vol. 219; p. 338.
Holcomb, Lewis H., Columbus, Ohio. Valve-lifter. No. 1,157,223; Oct. 19; Gaz. vol. 219; p. 719.
Holden, Arthur P., and R. J. Copeland, Toronto, Ontario, Canada. Air-vending machine. No. 1,156,078; Oct. 12; Gaz. vol. 219; p. 288.
Holden, Newton, New York, N. Y., assignor to Holden One Man Top Company, Inc. Folding top for vehicles. No. 1,155,728; Oct. 5; Gaz. vol. 219; p. 141.
Holden One Man Top Company. (See Holden, Newton, assignor.)
Holder, William H., Scranton, Pa. Glass or mirror fastener. No. 1,155,924; Oct. 5; Gaz. vol. 219; p. 208.
Holdred, Frank R., assignor to The Warren Featherbone Co., Three Oaks, Mich. Wire-working machine. No. 1,155,729; Oct. 5; Gaz. vol. 219; p. 141.
Holland, Charles G. (See Penzer and Holland.)
Holland, Maurice, Providence, R. I. License-tag bracket. No. 1,156,685; Oct. 12; Gaz. vol. 219; p. 499.
Holland, Newman H., assignor to New Jersey Patent Company, West Orange, N. J. Phonograph. No. 1,155,572, Oct. 5; Gaz. vol. 219; p. 86.
Holley, Clifford D., assignor to Acme White Lead and Color Works, Detroit, Mich. Process of and apparatus for comminuting lead. No. 1,156,079; Oct. 12; Gaz. vol. 219; p. 289.
Hollier, Walter J., St. Louis, Mo. Machine for decorticating fibrous plants. No. 1,155,730; Oct. 5; Gaz. vol. 219; p. 141.
Hollier, Walter J., St. Louis, Mo. Machine for decorticating fibrous plants. No. 1,157,780; Oct. 26; Gaz. vol. 219; p. 974.
Hollingsworth & Vose Co., The. (See Sheehan, Owen, assignor.)
Hollingworth, Edward, Dobeross, England. Pick-finder mechanism employed in looms for weaving. No. 1,156,007; Oct. 5; Gaz. vol. 219; p. 236.
Holly, Carlos, Lockport, N. Y., assignor, by mesne assignments, to F. N. Burt Company, Limited, Toronto, Ontario, Canada. Machine for making boxes. No. 1,158,211; Oct. 26; Gaz. vol. 219; p. 1127.
Holophane Glass Company. (See Mygatt, Otis A., assignor.)
Holsey, L. L., *et al.* (See Holsey, Walter R., assignor.)
Holsey, Walter R., assignor of one-half to P. F. Halbert, E. R. Glover, W. R. Kenner, J. T. Montfort, L. L. Holsey, Corsicana, and S. W. Johnson, Dallas, Tex. Knee-pad. No. 1,155,491; Oct. 5; Gaz. vol. 219; p. 59.
Holter, Alfred, Rjukan, Norway. Button-fixture. No. 1,156,231; Oct. 12; Gaz. vol. 219; p. 339.
Holtz, Gustav, Gouldsboro, Pa. Artificial-tooth facing and backing therefor. No. 1,157,309; Oct. 19; Gaz. vol. 219; p. 750.
Holt, Carl, Fulham, England. Apparatus for preventing and removing deposit of moisture on windows, &c. No. 1,158,218; Oct. 26; Gaz. vol. 219; p. 1129.
Homans, Thomas S., Hempstead, assignor to International Typesetting Machine Company, New York, N. Y. Typographical machine. No. 1,156,031; Oct. 5; Gaz. vol. 219; p. 245.
Homrighausen, Louis H., Osawatomie, Kans. Vehicle wheel-tread. No. 1,155,925; Oct. 5; Gaz. vol. 219; p. 208.
Honhorst, William C., Newport, Ky. Jacketed tank. No. 1,155,731; Oct. 5; Gaz. vol. 219; p. 142.
Honnold, Frank, Luton, Iowa, assignor of one-fourth to L. L. Harris, Hubbard, Nebr. Combined fuel and cooling system for vehicle-engines. No. 1,156,780; Oct. 12; Gaz. vol. 219; p. 531.
Hood, Ollie. (See Sanders and Hood.)
Hood Rubber Co. (See Tousley and Roper, assignors.) (Reissue.)
Hooley, Thomas, Stockport, England. Press for blocking in gold and other metallic leaf. No. 1,155,573; Oct. 5; Gaz. vol. 219; p. 86.
Hooley, Thomas, Stockport, England. Blocking in gold and other metallic leaf. No. 1,155,574; Oct. 5; Gaz. vol. 219; p. 87.
Hoopes, William, and T. Varney, Pittsburgh, Pa. Trolley-conductor. No. 1,157,392; Oct. 19; Gaz. vol. 219; p. 779.
Hoopes, William, and T. Varney, Pittsburgh, Pa. Trolley-conductor. No. 1,157,393; Oct. 19; Gaz. vol. 219; p. 780.
Hoopes, William, and T. Varney, Pittsburgh, Pa. Trolley-conductor. No. 1,157,394; Oct. 19; Gaz. vol. 219; p. 780.
Hopkinson, Ernest, East Orange, N. J. Wrapper for articles of merchandise. No. 1,156,080; Oct. 12; Gaz. vol. 219; p. 289.
Hopkinson, Ernest, East Orange, N. J. Floor-covering. No. 1,158,051; Oct. 26; Gaz. vol. 219; p. 1071.
Hopkinson, Joseph, assignor to The Computing Scale Company, Dayton, Ohio. Computing-scale. No. 1,158,219; Oct. 26; Gaz. vol. 219; p. 1129.
Hopp, George, New York, N. Y. Safety-tread and producing the same. No. 1,156,081; Oct. 12; Gaz. vol. 219; p. 290.
Horne, James. (See Dawson and Horne.)
Horton, Albert J., White Plains, N. Y., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Rheostat. No. 1,158,052; Oct. 26; Gaz. vol. 219; p. 1071.
Horton, Allen A., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding and calculating machine. No. 1,156,600; Oct. 12; Gaz. vol. 219; p. 468.
Hoskins, William, La Grange, Ill. Resilient body. No. 1,155,575; Oct. 5; Gaz. vol. 219; p. 87.
Houghton, Lewis T., Worcester, Mass. Top-roll saddle mechanism. No. 1,158,220; Oct. 26; Gaz. vol. 219; p. 1130.
Houser, Arthur M., assignor to Crane Company, Chicago, Ill. Pressure-controlled valve. No. 1,157,870; Oct. 26; Gaz. vol. 219; p. 1007.
Houston Manufacturing Company. (See Sutton, William S., assignor.)
Houston, Robert A., Fort Dodge, Kans. Broom. No. 1,157,108; Oct. 19; Gaz. vol. 219; p. 677.
Hovland, Henry, Lincoln, Nebr., assignor to Automatic Electric Company, Chicago, Ill. Party-line telephone system. No. 1,158,221; Oct. 26; Gaz. vol. 219; p. 1130.
How, Elisha L., St. Paul, Minn. Insert for holding carrails. No. 1,155,658; Oct. 5; Gaz. vol. 219; p. 116.
Howard, Charles L., Capay, Cal. Speed-changing transmission-gearing. No. 1,157,001; Oct. 19; Gaz. vol. 219; p. 639.
Howard, George M., Philadelphia, Pa. Negative-pole plate for secondary or storage batteries. No. 1,156,686; Oct. 12; Gaz. vol. 219; p. 500.
Howard, Harold M., and J. A. McHardy, Providence, R. I. Spark-plug. No. 1,158,222; Oct. 26; Gaz. vol. 219; p. 1130.
Howard, Henry W., Shenandoah, Iowa. Animal-oiler. No. 1,156,403; Oct. 12; Gaz. vol. 219; p. 400.
Howard, Hermon W., Washington, D. C. Strip-moistening machine. No. 1,156,687; Oct. 12; Gaz. vol. 219; p. 500.
Howard, Howland G., Jackson, Tenn. Anchoring device. No. 1,157,781; Oct. 26; Gaz. vol. 219; p. 975.
Howe, Andrew F., Granite City, Ill. Jointer-guard. No. 1,157,109; Oct. 19; Gaz. vol. 219; p. 678.
Howell, Harry H., Hope, Ark. Meter-box. No. 1,156,530; Oct. 12; Gaz. vol. 219; p. 445.
Howell, John B., Leavenworth, Kans. Electric railway-signal. No. 1,156,688; Oct. 12; Gaz. vol. 219; p. 500.
Howland, Lucien B. (See McGill and Howland.)
Hoyt, Daniel, East Orange, assignor of one-half to The National Lock Washer Company, Newark, N. J. Weather-stripping. No. 1,157,871; Oct. 26; Gaz. vol. 219; p. 1007.
Hoyt, Daniel, East Orange, assignor of one-half to The National Lock Washer Company, Newark, N. J. Weather-stripping. No. 1,157,872; Oct. 26; Gaz. vol. 219; p. 1007.
Hrehocsik, Joseph. (See Luha, Joseph, assignor.)
Hubbard, Albert B. (See Bens and Hubbard.)
Hubbard & Co. (See Peirce, Charles L., Jr., assignor.)
Hubbard, Eber J., Berwyn, Ill. Forming sheet-metal spools. No. 1,155,357; Oct. 5; Gaz. vol. 219; p. 11.
Hubert, Conrad, Chatham borough, N. J. Portable electric light. No. 1,157,395; Oct. 19; Gaz. vol. 219; p. 780.
Hubinger, Joseph E. (See Hogan, John J., assignor.)
Hübner & Mayer. (See Roschanek, Otto, assignor.)
Hudson, Alexander A., Cincinnati, Ohio. Heel-building machine. No. 1,156,842; Oct. 12; Gaz. vol. 219; p. 554.
Hudson, Grace. (See Malloy, Mary A., assignor.)
Hudson, Wash E., *et al.* (See Smith, Frank W., assignor.)
Huff, Russell, assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich. Gear-controlling mechanism for motor-vehicles. No. 1,157,693; Oct. 26; Gaz. vol. 219; p. 946.
Hughes, Herbert H., St. Louis, Mo. Dolly-bar. No. 1,156,142; Oct. 12; Gaz. vol. 219; p. 311.
Huhn, George P., Minneapolis, Minn. Sewing-cabinet. No. 1,157,539; Oct. 19; Gaz. vol. 219; p. 830.
Hulbert, Prescott M., Detroit, Mich. Manufacturing articles out of highly-refractory material. No. 1,155,358; Oct. 5; Gaz. vol. 219; p. 12.
Hulit, John A., assignor to Automatic Electric Company, Chicago, Ill. Selective signaling system. No. 1,157,396; Oct. 19; Gaz. vol. 219; p. 780.
Hulsman, Robert E. (See Tomaso, Salvatore D., assignor.)
Humana Company. (See Morrison, Lewis E., assignor.)

Hummel, Ernest A., assignor to A. L. Haman, St. Paul, Minn. Winding-switch for self-winding clocks. No. 1,157,732; Oct. 26; Gaz. vol. 219; p. 975.
Humphrey, Ernest N., assignor to The Traut & Hine Manufacturing Company, New Britain, Conn. Separable fastener. No. 1,156,008; Oct. 5; Gaz. vol. 219; p. 236.
Humphrey, Henry A., assignor to Safety Elevator Lock and Signal Company, Kansas City, Mo. Car-indicator. No. 1,155,817; Oct. 5; Gaz. vol. 219; p. 172.
Humphris, Frank, Kingston-on-Thames, England. Wrench. No. 1,157,540; Oct. 19; Gaz. vol. 219; p. 830.
Hungerford, Oliver T., Belleville, N. J. Insulating wire. No. 1,157,694; Oct. 26; Gaz. vol. 219; p. 947.
Hunt, Amos M. (See Woerner and Hunt.)
Hunt, Harmon J., Detroit, Mich. Metallic base for showcases. No. 1,157,985; Oct. 26; Gaz. vol. 219; p. 1048.
Hunt, Helm, Ferris & Company. (See Ferris, Henry L., assignor.)
Huntley, George M., Everett, Mass. Supporting structure for desks, chairs, &c. No. 1,156,232; Oct. 12; Gaz. vol. 219; p. 339.
Hurley, Daniel. (See Cantion and Hurley.)
Hurley, David J. (See McLaughlin, Milton P., assignor.)
Huschle, William F., Jr., New York, N. Y. Running-board seat for automobiles. No. 1,158,223; Oct. 26; Gaz. vol. 219; p. 1131.
Huskisson, Percy W., Poole, England. Carbureter. No. 1,157,541; Oct. 19; Gaz. vol. 219; p. 830.
Hutchins Car Roofing Company. (See Thompson and Otis, assignors.)
Hutchison, Orville T., Wagon Mound, N. Mex. Heel. No. 1,158,053; Oct. 26; Gaz. vol. 219; p. 1071.
Hyatt, Charles E. (See Hyatt, John W. and C. E.)
Hyatt, John W., East Orange, N. J. Bowling-ball with inwardly-opening door. No. 1,156,143; Oct. 12; Gaz. vol. 219; p. 311.
Hyatt, John W. and C. E., East Orange, N. J. Game-ball with composition coating. No. 1,156,144; Oct. 12; Gaz. vol. 219; p. 311.
Hyde, Frederick, assignor to M. L. Bloch, Philadelphia, Pa. Go-cart. No. 1,157,224; Oct. 19; Gaz. vol. 219; p. 719.
Hydro-Kinetic Transmission Company, The. (See Rich, Charles C., assignor.)
Hynds, Virginia. (See Eskett, Henry, assignor.)
Ihlder, John D., New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Electrical controlling apparatus. No. 1,156,481; Oct. 12; Gaz. vol. 219; p. 428.
Illingworth, John W., deceased, Wilkes-Barre, Pa.; H. E. Hartzell, administratrix. Preserving and improving lumber. No. 1,158,404; Oct. 26; Gaz. vol. 219; p. 1196.
Imbach, August, Arlen-Rielasingen, Baden, Germany. Weft-severing device for automatic looms. No. 1,157,397; Oct. 19; Gaz. vol. 219; p. 781.
Imhof, Joseph A., assignor to Kaufmann & Strauss Co., New York, N. Y. Display-stand. No. 1,157,542; Oct. 19; Gaz. vol. 219; p. 831.
Import Sales Company. (See Rosenfeld, Francis M., assignor.)
Imus, James H., Dayton, Ohio. Disk harrow. No. 1,156,843; Oct. 12; Gaz. vol. 219; p. 554.
Independent Lamp and Wire Company. (See Liebmann and Megrath, assignors.)
International Barrel Company. (See Robinson, Edward W., assignor.)
International Comfort Chair Co. (See Myers, Alexander, assignor.)
International Harvester Company of New Jersey. (See Benjamin, Bert R., assignor.)
International Harvester Company of New Jersey. (See Bucknam, Fredrick A., assignor.)
International Harvester Company of New Jersey. (See Grieves, Albert, assignor.)
International Harvester Company of New Jersey. (See Phelps, George L., assignor.)
International Harvester Company of New Jersey. (See Sharp, Charles S., assignor.)
International Harvester Company of New Jersey. (See Stone, John A., assignor.)
International Harvester Company of New Jersey. (See Witte, Gustav W., assignor.)
International Harvester Corporation. (See Waterman, Bradley, and Andrew, assignors.)
International Motor Co. (See Whiting, John H., assignor.)
International Motor Company. (See Hewitt and Masury, assignors.)
International Typesetting Machine Company. (See Armstrong, Henry A., assignor.)
International Typesetting Machine Company. (See Homans, Thomas S., assignor.)
International Typesetting Machine Company. (See Orpen, William H., Jr., assignor.)
International Typesetting Machine Company. (See Sperry and Orpen, assignors.)
Interstate Electric Novelty Company. (See Stock, John, assignor.)
Invincible Manufacturing Company. (See Harroun, Ray W., assignor.)
Iocca, Louis, New York, N. Y. Undergarment. No. 1,156,732; Oct. 5; Gaz. vol. 219; p. 142.
Isherwood, Alfred, New Bedford, Mass. Loom-shuttle. No. 1,156,404; Oct. 12; Gaz. vol. 219; p. 401.
Isley, Gilbert W., Toronto, Ontario, Canada. Valve. No. 1,155,576; Oct. 5; Gaz. vol. 219; p. 87.
Israel, Lon H., Fairfield, Iowa. Blow-out patch. No. 1,155,577; Oct. 5; Gaz. vol. 219; p. 87.
Ivory Garter Company, The. (See Butts, Daniel G., assignor.)
J. Hungerford Smith Company. (See Smith, James H., assignor.)
J. E. Mergott Company, The. (See Fuller, Franz A., assignor.)
J. G. Brill Co., The. (See Adams, Walter S., assignor.)
J. G. Brill Company, The. (See McAllister, Wallace B., assignor.)
J. H. Williams & Co. (See Amborn, George, assignor.)
J. I. Case Plow Works. (See Michael, Clement W., assignor.)
J. J. Sommer and Co. (See Stone, Samuel N., assignor.)
J. P. Karns Tunneling Machine Co. (See Karns, John P., assignor.)
Jack, Lewis T., assignor to O. E. and R. McNamar, Mount Sterling, Iowa. Spark-arrester. No. 1,155,733; Oct. 5; Gaz. vol. 219; p. 143.
Jack, William Y., New York, N. Y. Well-casing spear. No. 1,155,926; Oct. 5; Gaz. vol. 219; p. 209.
Jackson, Claibourne F., Las Minas, Cuba. Non-refillable bottle. No. 1,156,360; Oct. 12; Gaz. vol. 219; p. 384.
Jackson, Claibourne F., Las Minas, Cuba. Mail-catcher. No. 1,156,844; Oct. 12; Gaz. vol. 219; p. 554.
Jackson, James N., Millersville, Ill. Domestic utensil. No. 1,156,781; Oct. 12; Gaz. vol. 219; p. 532.
Jacobs, Charles B., Port Chester, assignor to American Abrasive Metals Company, New York, N. Y. Vault-light. No. 1,157,002; Oct. 19; Gaz. vol. 219; p. 640.
Jacobs, Charles C., Amboy, assignor to F. C. Austin, Chicago, Ill. Disintegrator attachment for elevator-buckets. No. 1,156,291; Oct. 12; Gaz. vol. 219; p. 359.
Jacobs, William J., assignor of one-half to J. Simpson, Vanceboro, N. C. Saw-set. No. 1,155,927; Oct. 5; Gaz. vol. 219; p. 209.
Jacobsen, Carl J., De Pere, Wis. Child's cart. No. 1,155,928; Oct. 5; Gaz. vol. 219; p. 209.
Jacobsen, Oystein, assignor to The Pelton Water Wheel Company, San Francisco, Cal. Hydraulic thrust-bearing. No. 1,157,873; Oct. 26; Gaz. vol. 219; p. 1008.
Jacobsen, Peter, Perth Amboy, N. J. Sealing apparatus for wrappers. No. 1,155,929; Oct. 5; Gaz. vol. 219; p. 210.
Jacobson, John, Roberts, Mont. Tamping attachment. No. 1,158,224; Oct. 26; Gaz. vol. 219; p. 1131.
Jacobson, Peter G., Chicago, Ill. Handle structure. No. 1,156,601; Oct. 12; Gaz. vol. 219; p. 469.
Jacovatos, Nicholas, New York, N. Y. Cigarette-box. No. 1,158,132; Oct. 26; Gaz. vol. 219; p. 1100.
Jagger, Peter B., London, England, assignor to Quebec Savings and Trust Company, Montreal, Canada. Means for securing railway-rails to concrete sleepers. No. 1,157,986; Oct. 26; Gaz. vol. 219; p. 1048.
Jagger, Peter B., London, England, assignor to Quebec Savings and Trust Company, Montreal, Canada. Mold for forming concrete pipes. No. 1,157,987; Oct. 26; Gaz. vol. 219; p. 1048.
Jakobsson, Herman G. (See Meigs and Jakobsson.)
James, Richard R., Brooklyn, N. Y. Burner. No. 1,156,845; Oct. 12; Gaz. vol. 219; p. 555.
Janik, John, Plymouth, Pa. False-alarm-preventing device. No. 1,155,578; Oct. 5; Gaz. vol. 219; p. 88.
Janisch, Maximillian P., assignor to U. S. Fibre Bottle Mchy. Co., Milwaukee, Wis. Spinning and sealing. No. 1,155,734; Oct. 5; Gaz. vol. 219; p. 143.
Janssen, Hendrik J. (See Stoffel and Janssen.)
Jaquith, Adelbert S., Boston, assignor to G. C. Mitchell, Medfield, Mass. Swivel clencher-arm. No. 1,155,818; Oct. 5; Gaz. vol. 219; p. 173.
Jarrett, C. L. (See Harris, William E., assignor.)
Jaworsky, John. (See Ogrissek and Jaworsky.)
Jeffares, William, Malin, Ireland. Two-stroke internal-combustion engine. No. 1,157,626; Oct. 19; Gaz. vol. 219; p. 857.
Jeffrey Manufacturing Company, The. (See Armstrong, Walter J., assignor.)
Jeffrey Manufacturing Company, The. (See Dierdorff, Henry B., assignor.)
Jeffrey Manufacturing Company, The. (See Levin, Nils D., assignor.)
Jeffrey Manufacturing Co., The. (See Willson, Freeman R., Jr., assignor.)
Jenkins, Allen R., Durant, Miss. Pipe-coupling. No. 1,156,145; Oct. 12; Gaz. vol. 219; p. 312.
Jenkins, Charles F., Washington, D. C. Device for underwater exploration. No. 1,156,782; Oct. 12; Gaz. vol. 219; p. 532.
Jenkins Manufacturing Co. (See Leonard, James H., assignor.)
Jenkins, Winslow L. (See McDougall, George F. A., assignor.)
Jensen, Aage, San Francisco, Cal. Apparatus for treating liquids. No. 1,156,861; Oct. 12; Gaz. vol. 219; p. 384.
Jensen, Alexander V., Devils Slide, Utah. Sack-stretching machine. No. 1,156,482; Oct. 12; Gaz. vol. 219; p. 428.
Jerram, Arthur E. (See Gouldbourn, Bates, and Jerram.)

Jerram, Arthur E., J. Gouldbourn, and A. Bates, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J. Heeling-machine. No. 1,157,689; Oct. 26; Gaz. vol. 219; p. 945.

Jewell Engineering Company. (See Jewell, William M., assignor.)

Jewell, William M., assignor to Jewell Engineering Company, Chicago, Ill. Water filtration. No. 1,158,225; Oct. 26; Gaz. vol. 219; p. 1131.

Jewell, William M., assignor to Jewell Engineering Company, Chicago, Ill. Filter. No. 1,158,226; Oct. 26; Gaz. vol. 219; p. 1132.

Jobke, August F., Wilkinsburg, assignor of one-half to J. G. Burns, D. Bingham, K. Crumay, T. Higgins, and H. P. Gazzam, Pittsburgh, Pa. Magnetic ore-separator. No. 1,157,543; Oct. 19; Gaz. vol. 219; p. 831.

Johanson, Engelbright A., Seattle, Wash. Dish-washing machine. No. 1,155,930; Oct. 5; Gaz. vol. 219; p. 210.

Johansson, Gustav W., and J. V. M. Hisberg, assignors to Aktiebolaget Baltic, Södertelje, Sweden. Gearing for centrifugal machines. No. 1,156,233; Oct. 12; Gaz. vol. 219; p. 339.

Johnson, Abraham C., Omaha, Nebr. Tumbling-barrel. No. 1,155,579; Oct. 5; Gaz. vol. 219; p. 88.

Johnson, Alfred C. (See Calkins and Johnson.)

Johnson, Andrew P., Detroit, Mich. Wire-tightener. No. 1,157,110; Oct. 19; Gaz. vol. 219; p. 678.

Johnson, Arvid, North Bend, Oreg. Fountain glue-spreader. No. 1,155,420; Oct. 5; Gaz. vol. 219; p. 34.

Johnson, Charles J., Chicago, Ill. Pneumatic action. No. 1,157,398; Oct. 19; Gaz. vol. 219; p. 781.

Johnson, Curtis, Prescott, Iowa. Harness attachment. No. 1,157,544; Oct. 19; Gaz. vol. 219; p. 831.

Johnson, Edward, Cincinnati, Ohio. Catamenial belt. No. 1,155,659; Oct. 5; Gaz. vol. 219; p. 116.

Johnson, Frank, Detroit, Mich. Gear-shifting mechanism. No. 1,156,405; Oct. 12; Gaz. vol. 219; p. 401.

Johnson, Frederick H. (See Hadden and Johnson.)

Johnson, Henry O., Virginia, Minn. Pneumatic tire. No. 1,158,227; Oct. 26; Gaz. vol. 219; p. 1132.

Johnson, Henry W., Ocala, Fla. Camera. No. 1,156,362; Oct. 12; Gaz. vol. 219; p. 385.

Johnson, Lee Roy G., Miakka, Fla. Hammer-head. No. 1,157,545; Oct. 19; Gaz. vol. 219; p. 832.

Johnson, Louis E., and S. Strom, Los Angeles, Cal. Grinding-machine. No. 1,156,292; Oct. 12; Gaz. vol. 219; p. 359.

Johnson, Nelson B., Webster, Mass. Steam-furnace-regulating system. No. 1,157,003; Oct. 19; Gaz. vol. 219; p. 640.

Johnson, Olof, Seattle, Wash. Internal-combustion engine. No. 1,156,846; Oct. 12; Gaz. vol. 219; p. 555.

Johnson, S. W., *et al.* (See Holsey, Walter R., assignor.)

Johnson, Walter, Los Angeles, Cal. Superheater. No. 1,157,546; Oct. 19; Gaz. vol. 219; p. 832.

Johnson, Wilfred G., Elyria, assignor to W. B. D. Alexander, Cleveland, Ohio. Motor-cycle. No. 1,157,547; Oct. 19; Gaz. vol. 219; p. 832.

Johnson, William A., Yonkers, N. Y. Racket-press. No. 1,156,363; Oct. 12; Gaz. vol. 219; p. 385.

Johnston Harvester Company, The. (See Farrall and Maul, assignors.)

Johnston, Herbert L., assignor to The Hobart Manufacturing Company, Troy, Ohio. Clutch mechanism for grinders and choppers. No. 1,156,904; Oct. 19; Gaz. vol. 219; p. 605.

Johnston, William. (See Fink, William T., assignor.)

Jones, David G., Emerson, Iowa. Stalk-cutter. No. 1,156,234; Oct. 12; Gaz. vol. 219; p. 340.

Jones, Edward C. and L. B., San Francisco, Cal. Manufacturing illuminating-gas from liquid hydrocarbons. No. 1,157,225; Oct. 19; Gaz. vol. 219; p. 719.

Jones, Erastus T., Wayland, assignor of one-half to C. H. Stanton, Waco, Tex. Churn-actuating mechanism. No. 1,156,146; Oct. 12; Gaz. vol. 219; p. 312.

Jones, Harry, Suffern, N. Y., assignor to American Brake Shoe & Foundry Company, Mahwah, N. J. Composition-body brake-shoe. No. 1,156,689; Oct. 12; Gaz. vol. 219; p. 501.

Jones, James B., *et al.* (See Shannon, Leon T., assignor.)

Jones, Leon B. (See Jones, Edward C. and L. B.)

Jones, Martin A., McGregor, Tex. Safety appliance. No. 1,156,082; Oct. 12; Gaz. vol. 219; p. 290.

Jones, Mary F., Washington, D. C. Tether-stake. No. 1,155,421; Oct. 5; Gaz. vol. 219; p. 34.

Jones, Whitfield E., Jr., Etna, assignor to Pittsburgh Can Company, Pittsburgh, Pa. Stacking cans. No. 1,156,690; Oct. 12; Gaz. vol. 219; p. 501.

Jones, Willis, *et al.* (See Saint, Lee G., assignor.)

Jorgenson, Walter R., Chicago, Ill. Recoil-pad for guns. No. 1,156,293; Oct. 12; Gaz. vol. 219; p. 360.

Josse, Emil, and W. Gensecke, Charlottenburg, Germany. Nozzle. No. 1,155,735; Oct. 5; Gaz. vol. 219; p. 143.

Joubert, Joseph F., San Francisco, Cal. Shirt-bosom-ironing machine. No. 1,158,054; Oct. 26; Gaz. vol. 219; p. 1072.

Joyce, Robert, Philadelphia, Pa. Gas-heated iron. No. 1,155,580; Oct. 5; Gaz. vol. 219; p. 88.

Judson Governor Company. (See Osborne, John L., assignor.)

Judson L. Thomson M'f'g. Co. (See Havener, Arthur R., assignor.)

Jung, Alfred J., West Kensington, London, England. Workman's time-recorder and similar apparatus. No. 1,155,660; Oct. 5; Gaz. vol. 219; p. 116.

Junggren, Oscar, Schenectady, N. Y., assignor to General Electric Company. Valve-operating mechanism. No. 1,157,941; Oct. 26; Gaz. vol. 219; p. 1032.

Kadel, Byers W., Roanoke county, Va. Brake arrangement for six-wheel car-trucks. No. 1,156,483; Oct. 12; Gaz. vol. 219; p. 429.

Kadow, August, assignor to The Westlake Machine Company, Toledo, Ohio. Glass-molding mechanism. No. 1,156,009; Oct. 5; Gaz. vol. 219; p. 237.

Kahn, Bertrand B., Cincinnati, assignor to The Estate Stove Company, Hamilton, Ohio. Incinerator. No. 1,156,691; Oct. 12; Gaz. vol. 219; p. 501.

Kaiser, Joseph M., Chicago, Ill. Article-holder. No. 1,155,581; Oct. 5; Gaz. vol. 219; p. 89.

Kaiser, Paul G., and B. E. Reuter, Chicago, Ill. Apparatus for treating fats and oils. No. 1,156,005; Oct. 19; Gaz. vol. 219; p. 606.

Kalle and Company, Aktiengesellschaft. (See Wray, Edward, assignor.)

Kane, James H., Jersey City, N. J. Combination paper-hanging tool. No. 1,156,783; Oct. 12; Gaz. vol. 219; p. 532.

Karges, Julius J., Maywood, Mo. Display-stand. No. 1,156,083; Oct. 12; Gaz. vol. 219; p. 290.

Karl, Joseph, West Pullman, Ill. Acetylene-gas generator. No. 1,155,422; Oct. 5; Gaz. vol. 219; p. 34.

Karns, John P., assignor to J. P. Karns Tunneling Machine Co., Boulder, Colo. Rock-reamer for drill-heads. No. 1,156,147; Oct. 12; Gaz. vol. 219; p. 312.

Karp, Henry, San Francisco, Cal. Bin. No. 1,156,294; Oct. 12; Gaz. vol. 219; p. 360.

Kaskie, Lawrence S., Rock valley, Iowa. Pumping mechanism. No. 1,158,228; Oct. 26; Gaz. vol. 219; p. 1133.

Kasser, Joseph B. (See Kasser, Morris and J. B.)

Kasser, Morris and J. B., San Francisco, Cal. Compartment-lighter for ships. No. 1,156,602; Oct. 12; Gaz. vol. 219; p. 469.

Kast, Henry J., assignor to American Pin Company, Waterbury, Conn. Pipe-union. No. 1,157,695; Oct. 26; Gaz. vol. 219; p. 947.

Kate, John H., assignor of one-half to E. J. Raymond, Des Moines, Iowa. Water-tray for incubators. No. 1,155,819; Oct. 5; Gaz. vol. 219; p. 173.

Katzenberger, Oscar, Chicago, Ill. Aiming-plate for floor-hinges. No. 1,157,548; Oct. 19; Gaz. vol. 219; p. 832.

Katzenberger, Oscar, Chicago, Ill. Envelop. No. 1,158,229; Oct. 26; Gaz. vol. 219; p. 1133.

Kaufman, George C. (See Pierce and Kaufman.)

Kaufmann, Jacob, assignor to Steel Heddle Manufacturing Company, Philadelphia, Pa. Heddle-frame. No. 1,155,736; Oct. 5; Gaz. vol. 219; p. 143.

Kaufmann, Raymond M. (See Freeble, Thomas M., assignor.)

Kaufmann & Strauss Co. (See Imhof, Joseph A., assignor.)

Kawneer Mfg. Co. (See Plym, Francis J., assignor.)

Kaye, Frank, and R. W. Rogers, Meridian, Miss. Box. No. 1,156,531; Oct. 12; Gaz. vol. 219; p. 445.

Keebaugh, Clinton, Canton, Wis. Fruit and vegetable cutter. No. 1,155,931; Oct. 5; Gaz. vol. 219; p. 211.

Keefer, Mae A., administratrix. (See Keefer, Samuel H.)

Keefer, Samuel H., deceased; M. A. Keefer, Plainfield, administratrix, assignor to Niles-Bement-Pond Company, Jersey City, N. J. System of motor control. No. 1,156,484; Oct. 12; Gaz. vol. 219; p. 429.

Keene, Archibald T., Chicago, Ill., assignor to Keene Hydraulic Transmission Company. Rotary pump. No. 1,157,783; Oct. 26; Gaz. vol. 219; p. 976.

Keene, Edward S., Agricultural College, N. D. Lettering-pen. No. 1,158,230; Oct. 26; Gaz. vol. 219; p. 1133.

Keene Hydraulic Transmission Company. (See Keene, Archibald T., assignor.)

Keep, William J., assignor to The Michigan Stove Company, Detroit, Mich. Electric flat-iron. No. 1,155,423; Oct. 5; Gaz. vol. 219; p. 35.

Keep, William J., assignor to The Michigan Stove Company, Detroit, Mich. Electric cooking-range. No. 1,157,111; Oct. 19; Gaz. vol. 219; p. 678.

Kehoe, Thomas J., Toledo, Ohio. Catch for automobile-hoods. No. 1,157,004; Oct. 19; Gaz. vol. 219; p. 641.

Kehoe, Thomas J., Toledo, Ohio. Exhaust-muffler. No. 1,157,005; Oct. 19; Gaz. vol. 219; p. 641.

Kehoe, Thomas J., Toledo, Ohio. Hinge. No. 1,157,006; Oct. 19; Gaz. vol. 219; p. 641.

Keller, Isaac B., assignor of one-half to G. C. Franklin, Philadelphia, Pa. Locking device for boxes and containers. No. 1,157,942; Oct. 26; Gaz. vol. 219; p. 1032.

Kellermann, Frederick W., New York, N. Y. Oil-burner torch. No. 1,157,549; Oct. 19; Gaz. vol. 219; p. 833.

Kelley, Roy W., Davenport, Iowa, assignor to Western Pattern & Manufacturing Company, Moline, Ill. Sad-iron. No. 1,155,424; Oct. 5; Gaz. vol. 219; p. 35.

Kellington, George H. (See Worley and Kellington.)

Kellogg, Leroy D., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Ignition system. No. 1,157,696; Oct. 26; Gaz. vol. 219; p. 947.

Kellogg Switchboard and Supply Company. (See Bradbury, Clifford C., assignor.)

Kellogg Switchboard and Supply Company. (See Kellogg, Leroy D., assignor.)

Kellogg Switchboard and Supply Company. (See Winston, Charles S., assignor.)

Kelly, David J., assignor to Kelly Filter Press Company, Salt Lake City, Utah. Filtering process. No. 1,158,055; Oct. 26; Gaz. vol. 219; p. 1072.

Kelly, David J., assignor to Kelly Filter Press Company, Salt Lake City, Utah. Filtering apparatus. No. 1,159,056; Oct. 26; Gaz. vol. 219; p. 1072.

Kelly, Edwin W., Philadelphia, Pa. Radiation-shield. No. 1,156,906; Oct. 19; Gaz. vol. 219; p. 606.

Kelly Filter Press Company. (See Kelly, David J., assignor.)

Kelly, John F., assignor to Thomas Maddock's Sons Company, Trenton, N. J. Water-closet. No. 1,155,661; Oct. 5; Gaz. vol. 219; p. 117.

Kelly, Michael P., Chicago, Ill. Vehicle-wheel. No. 1,155,582; Oct. 5; Gaz. vol. 219; p. 89.

Kelso, Ralph S. (See Moffatt and Kelso.)

Kennedy, David S., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Typographical machine. No. 1,157,784; Oct. 26; Gaz. vol. 219; p. 976.

Kennedy, David S., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Typographical casting-machine. No. 1,157,785; Oct. 26; Gaz. vol. 219; p. 977.

Kennedy, David S., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Slug-casting machine. No. 1,157,786; Oct. 26; Gaz. vol. 219; p. 977.

Kennedy, Edward, New York, N. Y. Plumbing device. No. 1,155,820; Oct. 5; Gaz. vol. 219; p. 173.

Kennedy, Edward, New York, N. Y. Testing device for water systems. No. 1,155,821; Oct. 5; Gaz. vol. 219; p. 174.

Kenner, W. R., *et al.* (See Holsey, Walter R., assignor.)

Kenney, Thomas H., Boston, Mass. Self-closing faucet. No. 1,156,010; Oct. 5; Gaz. vol. 219; p. 237.

Kenney, Thomas H., Boston, Mass., assignor to Dalton-Ingersoll Manufacturing Company. Drinking-fountain. No. 1,156,011; Oct. 5; Gaz. vol. 219; p. 237.

Kenny, John W., New York, N. Y. Concrete-casing. No. 1,157,226; Oct. 19; Gaz. vol. 219; p. 720.

Kentucky Tobacco Product Company, The. (See Mewborne, Robert G., assignor.)

Kenvin, Thomas H., Homestead, Pa. Ingot-mold stool. No. 1,157,697; Oct. 26; Gaz. vol. 219; p. 947.

Kenyon, Bertram C., assignor of one-half to Dodge Manufacturing Company, Mishawaka, Ind. Combined packing-ring and valve. No. 1,157,162; Oct. 19; Gaz. vol. 219; p. 697.

Keplinger, Livingston B., New Orleans, La., and W. E. Keplinger, Cincinnati, Ohio. Cartridge-shell. No. 1,156,406; Oct. 12; Gaz. vol. 219; p. 402.

Keplinger, Warren E. (See Keplinger, Livingston B. and W. E.)

Kepple, George H., *et al.* (See Miller, Benjamin D., assignor.)

Kern, Maximilian H., assignor to Roberts Numbering Machine Company, Brooklyn, N. Y. Numbering-machine. No. 1,157,698; Oct. 26; Gaz. vol. 219; p. 948.

Kern, Maximilian H., Ridgewood, assignor to Roberts Numbering Machine Company, Brooklyn, N. Y. Numbering-machine. No. 1,157,699; Oct. 26; Gaz. vol. 219; p. 948.

Kerr, Charles V., Wellsville, N. Y. Condenser. No. 1,158,231; Oct. 26; Gaz. vol. 219; p. 1133.

Kerr, Charles V., Wellsville, N. Y. Condensing apparatus. No. 1,158,232; Oct. 26; Gaz. vol. 219; p. 1134.

Kessler, Alphonso D., Dunkirk, N. Y. Cooling device for car-journals and the like. No. 1,155,932; Oct. 5; Gaz. vol. 219; p. 211.

Ketring, Orlando C., and E. D. Pope, Portland, Ind. Spoke-mitering machine. No. 1,158,057; Oct. 26; Gaz. vol. 219; p. 1073.

Kettner, Friedrich W., Altona, assignor to Hermann Bauermeister Maschinenfabrik u. Mühlenbauanstalt G. m. b. H., Altona-Ottensen, Germany. Apparatus for dividing more or less thick liquid or pasty materials—for instance, chocolate and the like. No. 1,156,407; Oct. 12; Gaz. vol. 219; p. 402.

Kewaunee Water Supply Company. (See Canedy, Earl, assignor.)

Kiebler, Reynold H., Chicago, Ill. Form registering and line-up means. No. 1,158,133; Oct. 26; Gaz. vol. 219; p. 1100.

Kiefer, Frederic, Chicago, Ill. Display device. No. 1,156,603; Oct. 12; Gaz. vol. 219; p. 470.

Kiehler, Frederick, Detroit, Mich. Collapsible vehicle-seat. No. 1,156,408; Oct. 12; Gaz. vol. 219; p. 402.

Kiensle, Herbert, New York, N. Y. Mechanical lathe control. No. 1,157,227; Oct. 19; Gaz. vol. 219; p. 720.

Kiesel, Richard, Freiburg, Baden, Germany. Bracket. No. 1,157,787; Oct. 26; Gaz. vol. 219; p. 978.

Kieser, Walter, Berlin, Germany, assignor to General Electric Company. Preventing water-hammer in pipes. No. 1,156,532; Oct. 12; Gaz. vol. 219; p. 445.

Kilbourne and Jacobs Manufacturing Company, The. (See Cartzdafner, Roy E., assignor.)

Killinger, Joseph A. (See Bean and Killinger.)

Killpartrick, John W., Lowell, Mass. Shuttle-release mechanism. No. 1,156,148; Oct. 12; Gaz. vol. 219; p. 312.

Kilroy, Willie D., Chiswick, England. Automatic position-indicator for guns. No. 1,158,233; Oct. 26; Gaz. vol. 219; p. 1135.

Kimball, James L., Salem, assignor to Walter G. Ruggles Co., Boston, Mass. Damper-regulator mechanism for steam-pressure apparatus. No. 1,155,822; Oct. 5; Gaz. vol. 219; p. 174.

Kimbell, William A., Birmingham, Ala. Plow. No. 1,157,399; Oct. 19; Gaz. vol. 219; p. 782.

Kimbell, William A., Birmingham, Ala. Plow. No. 1,159,134; Oct. 26; Gaz. vol. 219; p. 1101.

Kimmell, Herbert L., Los Angeles, Cal., assignor, by mesne assignments, to W. F. B. Tompkins, New York, N. Y. Carbureter. No. 1,156,084; Oct. 12; Gaz. vol. 219; p. 290.

Kindland, Erick N., Jamestown, N. Y. Toy bank. No. 1,155,583; Oct. 5; Gaz. vol. 219; p. 89.

King, Claudius C., C. B. Lambert, and J. H. Gibble, Sioux City, Iowa. Shirt-finishing device for laundries. No. 1,158,234; Oct. 26; Gaz. vol. 219; p. 1135.

King, Edward, Washington, D. C. Valve. No. 1,157,163; Oct. 19; Gaz. vol. 219; p. 697.

King, Fred B., assignor to National Spring and Wire Company, Albion, Mich. Spring construction. No. 1,155,425; Oct. 5; Gaz. vol. 219; p. 35.

King, James L. O. (See King and Fox.)

King, Joseph H., assignor, by mesne assignments, to American Standard Oil Burner Co., Oakland, Cal. Centrifugal burner. No. 1,158,058; Oct. 26; Gaz. vol. 219; p. 1073.

King, Joseph V., Jr., and G. E. Ruffey, Glenfield, Pa. Curtain-support. No. 1,155,823; Oct. 5; Gaz. vol. 219; p. 175.

King, Nathan H., Solvay, N. Y. Sewer-trap. No. 1,156,907; Oct. 19; Gaz. vol. 219; p. 606.

King, O'Dell and J. L. O., and T. H. Fox, Sandy Springs, S. C. Vehicle-hub. No. 1,157,550; Oct. 19; Gaz. vol. 219; p. 833.

King, William L., Houston, Mo. Molasses and syrup pitcher. No. 1,156,784; Oct. 12; Gaz. vol. 219; p. 532.

Kingcade, William J., Freeman, Mo. Wire-stretching appliance. No. 1,157,551; Oct. 19; Gaz. vol. 219; p. 833.

Kingston, Frank L., Cleveland, Ohio. Carbureter. No. 1,156,149; Oct. 12; Gaz. vol. 219; p. 313.

Kinnard, Robert M., assignor of one-third to J. Y. Bowser and J. S. Frederick, Kittanning, Pa. Barrel-jack. No. 1,158,235; Oct. 26; Gaz. vol. 219; p. 1135.

Kinne, Edmund P., Alliance, Ohio, assignor to American Steel Foundries, New York, N. Y. Draft-rigging for pilot-couplings. No. 1,157,874; Oct. 26; Gaz. vol. 219; p. 1008.

Kinney, Joseph W., Goldcreek, Mont. Water-motor. No. 1,156,092; Oct. 12; Gaz. vol. 219; p. 502.

Kintner, Samuel M., *et al.*, receivers. (See Beakes, William E., assignor.)

Kintner, Samuel M., *et al.*, receivers. (See Feasenden, Reginald A., assignor.)

Kinzie, John H., Charleston, S. C. Ticket-container. No. 1,155,737; Oct. 5; Gaz. vol. 219; p. 144.

Kipp, Albert C. (See Neel, James L., assignor.)

Kirby, James B., Cleveland, Ohio. Handhold vacuum-cleaner. No. 1,156,235; Oct. 12; Gaz. vol. 219; p. 340.

Kirk, Charles J., New Castle, Pa. Apparatus for forming articles of plastic material. No. 1,156,085; Oct. 12; Gaz. vol. 219; p. 291.

Kirk-Latty Manufacturing Company, The. (See Sieffel, William J., assignor.)

Kish, Joseph, Cobalt, Ontario, Canada. Fire-escape. No. 1,156,908; Oct. 19; Gaz. vol. 219; p. 607.

Kispert, George H., assignor to Winchester Manufacturing Company, Baltimore, Md. Hypodermic syringe. No. 1,157,552; Oct. 19; Gaz. vol. 219; p. 833.

Kissel, John M., East St. Louis, Ill. Automobile-fender. No. 1,155,933; Oct. 5; Gaz. vol. 219; p. 211.

Klann, John F., Los Angeles, Cal. Concrete-mixer. No. 1,158,236; Oct. 26; Gaz. vol. 219; p. 1136.

Klauberg, Charles, New York, N. Y. Nursing-bottle holder. No. 1,158,059; Oct. 26; Gaz. vol. 219; p. 1074.

Klein, Charles J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric switch. No. 1,157,310; Oct. 19; Gaz. vol. 219; p. 750.

Klein, Charles J., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electric switch. No. 1,158,060; Oct. 26; Gaz. vol. 219; p. 1074.

Klein, Fred J., New York, N. Y. Paper perforating and filing device. No. 1,157,228; Oct. 19; Gaz. vol. 219; p. 721.

Klein, Fred J., New York, N. Y. Paper filing and binding device. No. 1,157,229; Oct. 19; Gaz. vol. 219; p. 721.

Klein, Julius, Cambridge, Mass. Apparatus for mixing mash. No. 1,156,409; Oct. 12; Gaz. vol. 219; p. 403.

Kleinertz, Julius, Braunsfeld, near Cologne, Germany, Chuck. No. 1,156,295; Oct. 12; Gaz. vol. 219; p. 360.

Kleinow, Walter, Breslau, Germany. Flexible coupling. No. 1,157,553; Oct. 19; Gaz. vol. 219; p. 834.

Kleinsteuber, William J., Milwaukee, Wis. Clamping device. No. 1,155,662; Oct. 5; Gaz. vol. 219; p. 115.

Klemp, Theodore, Muskegon, Mich. Automobile-signal. No. 1,155,934; Oct. 5; Gaz. vol. 219; p. 211.

Klemt, Arthur W., New York, N. Y. Liquid-strainer. No. 1,156,785; Oct. 12; Gaz. vol. 219; p. 533.

Klenck, John H., Warren, Pa. Camera-support. No. 1,156,296; Oct. 12; Gaz. vol. 219; p. 360.

Klenner, William, Baltimore, Md. Stand for gas-irons, &c. No. 1,158,237; Oct. 26; Gaz. vol. 219; p. 1136.

Klettke, Warner, Escanaba, Mich. Nut-lock. No. 1,157,230; Oct. 19; Gaz. vol. 219; p. 721.

Klink, William H., and J. C. Green, Towanda, Pa. Nut-lock. No. 1,155,935; Oct. 5; Gaz. vol. 219; p. 212.

Klipfel Manufacturing Co. (See Swan, John H., assignor.)

Knapp Husker Company. (See Adamson, Charles E., assignor.)

Knecht, Benno. (See Reiss and Knecht.)
Kneuper, Alexander D., Cranford, assignor to A. D. Kneuper Specialty Company, Newark, N. J. Smoking-pipe. No. 1,156,150; Oct. 12; Gaz. vol. 219; p. 313.
Knische, Otto. (See Edwards, Robert C., assignor.)
Knight, Earle R., Norwood, Ohio, assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Assembling cores of electrical apparatus. No. 1,156,297; Oct. 12; Gaz. vol. 219; p. 361.
Knight, Isaac J., and J. M. Smith, Plainview, Ark. Rail-joint. No. 1,157,554; Oct. 19; Gaz. vol. 219; p. 834.
Knitle, Joseph, Minneapolis, Minn. Level. No. 1,155,824; Oct. 5; Gaz. vol. 219; p. 175.
Knoedler, Elmer L., assignor to Welsbach Light Company, Gloucester City, N. J. Apparatus for the manufacture of incandescent mantles. No. 1,157,555; Oct. 19; Gaz. vol. 219; p. 834.
Knöfler & Co., Dr. O. (See Arnold, Hans, assignor.)
Knosher, Adolph, Naperville, Ill., assignor, by mesne assignments, to Kodav Company, East Cleveland, Ohio. Folding bed-lounge. No. 1,157,700; Oct. 26; Gaz. vol. 219; p. 949.
Knowles, Irvin C., Baltimore, Md. Rotary engine. No. 1,158,238; Oct. 26; Gaz. vol. 219; p. 1136.
Kobliolke, Adolf M. (See Fink and Kobliolke.)
Koch, Norbert, Essen-Rellinghausen, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Recoil-gun on wheeled gun-carriage. No. 1,156,533; Oct. 12; Gaz. vol. 219; p. 446.
Kodav Company. (See Knosher, Adolph, assignor.)
Koeb, Emil, New York, N. Y., and R. P. Thompson, Leipsic, Ohio. Vehicle-spring. No. 1,156,909; Oct. 19; Gaz. vol. 219; p. 607.
Koerber, Anthony F., Detroit, Mich. Collapsible window-frame for vehicle-bodies. No. 1,157,875; Oct. 26; Gaz. vol. 219; p. 1009.
Koerting, Ernst, Pegli, near Genoa, Italy, assignor to Schutte & Koerting Company, Philadelphia, Pa. Jet apparatus. No. 1,158,239; Oct. 26; Gaz. vol. 219; p. 1137.
Koger, Marvin V., Rogersville, Tenn. Combination van-wagon. No. 1,156,693; Oct. 12; Gaz. vol. 219; p. 502.
Kohl, Clinton T., *et al.* (See Teamer, James M., assignor.)
Kohler, Robert L., assignor to The Sea Swing Company, Cleveland, Ohio. Roundabout for aquatic use. No. 1,156,151; Oct. 12; Gaz. vol. 219; p. 314.
Kohorn, Oscar, Chemnitz, Germany. Manufacture of figured pile fabrics. No. 1,156,485; Oct. 12; Gaz. vol. 219; p. 430.
Kopf, Charles, Newark, N. J. Handle for satchels and the like. No. 1,157,400; Oct. 19; Gaz. vol. 219; p. 782.
Kopinski, Thomas, Rochester, N. Y. Gear-teeth calipers. No. 1,156,694; Oct. 12; Gaz. vol. 219; p. 502.
Koppers, Heinrich, Essen-on-the-Ruhr, Germany, assignor to H. Koppers Company, Chicago, Ill. Apparatus for purifying benzol. No. 1,157,988; Oct. 26; Gaz. vol. 219; p. 1049.
Kowalski, Thomas M. (See Spencer, Frederick W., assignor.)
Koyen, Albert, and F. B. Snyder, Fremont, Nebr. Decoy. No. 1,157,627; Oct. 19; Gaz. vol. 219; p. 857.
Kozub, Louis J., Pittsburgh, Pa. Bearing. No. 1,156,695; Oct. 12; Gaz. vol. 219; p. 503.
Kraft, Henry F. (See Schweinert and Kraft.)
Krämer, Bernhard, Charlottenburg, Germany, assignor to General Electric Company. Fuel-pump for internal-combustion engines. No. 1,158,061; Oct. 26; Gaz. vol. 219; p. 1075.
Krämer, Bernhard, Charlottenburg, Germany, assignor to General Electric Company. Pump mechanism for internal-combustion engines. No. 1,158,062; Oct. 26; Gaz. vol. 219; p. 1075.
Krämer, Bernhard, Charlottenburg, Germany, assignor to General Electric Company. Controlling mechanism for fuel-pumps. No. 1,158,063; Oct. 26; Gaz. vol. 219; p. 1075.
Kratz, Franz, assignor to Firm of R. Bosch, Stuttgart, Germany. Reflector-lamp. No. 1,157,701; Oct. 26; Gaz. vol. 219; p. 949.
Krebs, Charles E., assignor to Forsyth Brothers Company, Chicago, Ill. Vehicle-wheel. No. 1,156,486; Oct. 12; Gaz. vol. 219; p. 430.
Kreider, Enos H., Lancaster, Pa. Shock absorber. No. 1,155,738; Oct. 5; Gaz. vol. 219; p. 144.
Kremer, Harry D., Bozeman, Mont. Sweat-band for hats. No. 1,155,936; Oct. 5; Gaz. vol. 219; p. 212.
Krenrick, Charles A., Akron, Ohio. Fish-hook. No. 1,156,152; Oct. 12; Gaz. vol. 219; p. 314.
Krentz, John and M., Westfield, Wis. Potato-sorter. No. 1,156,786; Oct. 12; Gaz. vol. 219; p. 533.
Krentz, Martin. (See Krentz, John and M.)
Krenz, Rinhold W., Toledo, Ohio. Garbage-incinerator. No. 1,155,492; Oct. 5; Gaz. vol. 219; p. 59.
Krit-Seal Company. (See Crittenden, Richard F., assignor.)
Kroehler, Peter E., Naperville, Ill. Table-bed, &c. No. 1,158,240; Oct. 26; Gaz. vol. 219; p. 1137.
Krohn, Gustave A., Coarsegold, Cal. Internal-combustion engine. No. 1,156,298; Oct. 12; Gaz. vol. 219; p. 361.
Kronenberg, Rudolf, Ohligs, Germany. Vehicle-wheel. No. 1,156,153; Oct. 12; Gaz. vol. 219; p. 314.
Krueger, Carl R., Schenectady, N. Y., assignor to General Electric Company. Electrode. No. 1,156,696; Oct. 12; Gaz. vol. 219; p. 503.
Krusoff, Charles, Detroit, Mich. Clothes-spray. No. 1,158,241; Oct. 26; Gaz. vol. 219; p. 1138.
Kryptok Company. (See Morine, Edwin C., assignor.)
Kryptok Company. (See Vornholt, Edward A., assignor.)
Kuderer, Charles, Pittsburgh, Pa. Guard for lubricating devices. No. 1,157,311; Oct. 19; Gaz. vol. 219; p. 750.
Kuhles, Friedrich, Maywood, N. J. Non-refillable bottle. No. 1,157,164; Oct. 19; Gaz. vol. 219; p. 697.
Kuhn, Robert B., Canton, Ohio. Tank. No. 1,157,643; Oct. 19; Gaz. vol. 219; p. 862.
Kuhns, John H., Germantown, Ohio. Wheel-tread fender. No. 1,156,604; Oct. 12; Gaz. vol. 219; p. 470.
Kunik, Michael, Chicago, Ill. Fender for ships. No. 1,156,086; Oct. 12; Gaz. vol. 219; p. 291.
Kunkel, Frederick J., Baltimore, Md. Dumping-wagon. No. 1,155,739; Oct. 5; Gaz. vol. 219; p. 144.
Kunstadter, Samuel, Chicago, Ill. Hat or cap. No. 1,156,487; Oct. 12; Gaz. vol. 219; p. 430.
Kupfer, Elma P., Leonia, N. J. Flame-shield for gas-stoves. No. 1,156,057; Oct. 12; Gaz. vol. 219; p. 292.
Kurtz, Charles F. and J., Bethlehem, Pa. Inclosure for automobiles. No. 1,156,154; Oct. 12; Gaz. vol. 219; p. 314.
Kurtz, Daniel P., Elkhart, Ind. Hot-air furnace. No. 1,155,825; Oct. 5; Gaz. vol. 219; p. 175.
Kurtz, John. (See Kurtz, C. F. and J.)
Kuzdzial, Szczepan, Holyoke, Mass. Steering-gear. No. 1,157,231; Oct. 19; Gaz. vol. 219; p. 722.
Kyllonen, William, Oakes, N. D. Wire-fence tool. No. 1,158,242; Oct. 26; Gaz. vol. 219; p. 1138.
L. E. Waterman Company. (See Britten, Edwin F., Jr., assignor.)
La Grange, Frederick C., Cedar Rapids, Iowa. Medicine-dropper. No. 1,155,584; Oct. 5; Gaz. vol. 219; p. 90.
La Gree, Paul F., Chicago, Ill. Coupling. No. 1,157,401; Oct. 19; Gaz. vol. 219; p. 782.
Lacroix, François X. J., and J. E. Roy, Montreal, Quebec, Canada. Envelop. No. 1,155,740; Oct. 5; Gaz. vol. 219; p. 144.
Lacroix, Novalis, Belle Center, Ohio. Hoisting apparatus. No. 1,157,557; Oct. 19; Gaz. vol. 219; p. 835.
Laible, Frank, assignor to The F. A. Neider Company, Augusta, Ky. Vehicle curtain-fastener. No. 1,157,312; Oct. 19; Gaz. vol. 219; p. 751.
Lake, Golladay, New York, N. Y. Hygienic hot-plate. No. 1,158,135; Oct. 26; Gaz. vol. 219; p. 1101.
Lake Torpedo Boat Company of Maine, The. (See Barraja-Frauenfelder, Joseph, assignor.)
Lakenan, Howard G., Opequon, Va. Mixing apparatus. No. 1,157,788; Oct. 26; Gaz. vol. 219; p. 978.
Lakey, Arthur B., South Bethlehem, and E. E. Ross, Philadelphia, Pa. Transmission apparatus. No. 1,158,243; Oct. 26; Gaz. vol. 219; p. 1138.
Lalkaka, Sorabji R., London, England. Wheel-hub. No. 1,155,493; Oct. 5; Gaz. vol. 219; p. 59.
Lamar, Alexis L., Pittsburg, Kans., assignor of one-half to G. A. Morning, one-eighth to W. P. Allen, and one-eighth to N. Allen. Rotary engine. No. 1,156,697; Oct. 12; Gaz. vol. 219; p. 503.
Lamb, John H., Piedmont, W. Va. Ice-can. No. 1,157,943; Oct. 26; Gaz. vol. 219; p. 1033.
Lamb, Joseph F., assignor to Landers, Frary & Clark, New Britain, Conn. Toaster. No. 1,155,494; Oct. 5; Gaz. vol. 219; p. 60.
Lamb, Joseph F., assignor to Landers, Frary & Clark, New Britain, Conn. Ice-shaver. No. 1,155,663; Oct. 5; Gaz. vol. 219; p. 118.
Lamb & Nash Company. (See Braddock, Edward I., assignor.)
Lambert, Asher, Newark, N. J. Integral nut and bearing for friction-clutches. No. 1,157,232; Oct. 19; Gaz. vol. 219; p. 722.
Lambert, Charles B. (See King, Lambert, and Gibble.)
Lambert, Frank, New York, N. Y. Joint. No. 1,155,664; Oct. 5; Gaz. vol. 219; p. 118.
Lambert, Frank, New York, N. Y. Meter. No. 1,155,665; Oct. 5; Gaz. vol. 219; p. 118.
Lambert, Frank, New York, N. Y. Meter. No. 1,155,666; Oct. 5; Gaz. vol. 219; p. 119.
Lambert, Frank, New York, N. Y. Fluid-meter. No. 1,155,667; Oct. 5; Gaz. vol. 219; p. 119.
Lamont, John A., Granite City, Ill., assignor to American Steel Foundries, New York, N. Y. Car-truck side frame. No. 1,157,876; Oct. 26; Gaz. vol. 219; p. 1009.
Lamont, John A., Chicago, Ill., assignor to American Steel Foundries, New York, N. Y. Pedestal construction. No. 1,157,877; Oct. 26; Gaz. vol. 219; p. 1010.
Lamson Company, The. (See Taisey, Fred R., assignor.)
Landau, Max, Berlin, Germany. Manufacture of pure lactic acid. No. 1,157,402; Oct. 19; Gaz. vol. 219; p. 783.
Landers, Frary & Clark. (See Lamb, Joseph F., assignor.)
Landers, Frary & Clark. (See Warner, Alonzo A., assignor.) (Reissue.)
Landes, E. S., *et al.* (See Miller, Benjamin D., assignor.)
Landis Machine Company. (See Fisher, Henry L., assignor.)
Laudis, Norman R., Portland, Oreg. Vehicle-tire. No. 1,156,155; Oct. 12; Gaz. vol. 219; p. 315.
Landis Tool Company. (See Shearer, Harry T., assignor.)
Landis Tool Company. (See Steiner, Ulrich, assignor.)
Landry, Louis H., Uxbridge, Mass. Pattern-chain rack. No. 1,158,244; Oct. 26; Gaz. vol. 219; p. 1138.

Landua, Henry, Kiel, Wis. Nut-lock. No. 1,157,007; Oct. 19; Gaz. vol. 219; p. 642.
Lane, Charles H., Dallas, Oreg. Cuspidor. No. 1,156,605; Oct. 12; Gaz. vol. 219; p. 470.
Lang, Anthony E., Buffalo, N. Y. Sanitary garbage-receiver. No. 1,157,008; Oct. 19; Gaz. vol. 219; p. 642.
Lang, Archibald M., Liverpool, England. Sugar-cane and like mill returner-bar. No. 1,156,012; Oct. 5; Gaz. vol. 219; p. 238.
Lange, Carl, Friedland, Germany. Artificial sausage-skin. No. 1,157,556; Oct. 19; Gaz. vol. 219; p. 835.
Lanning, James K. (See Packer, Richard, assignor.)
Lanzdorf, Adolf, Vienna, Austria-Hungary. Clutch. No. 1,157,789; Oct. 26; Gaz. vol. 219; p. 978.
Lappen, James E., assignor to Union Fibre Company, Winona, Minn. Treating flax-straw. No. 1,158,245; Oct. 26; Gaz. vol. 219; p. 1139.
Lara, Francisco, Trinidad, Cuba, assignor to Fulton Iron Works, St. Louis, Mo. Self-rotating screen. No. 1,157,009; Oct. 19; Gaz. vol. 219; p. 642.
Larry, Edwin C., Rochester, assignor to General Railway Signal Company, Gates, N. Y. Adjustable resistance. No. 1,155,826; Oct. 5; Gaz. vol. 219; p. 176.
Larsen, Andru, Chicago, Ill. Riveting-machine. No. 1,156,013; Oct. 5; Gaz. vol. 219; p. 238.
Larson, Carl B., Irvington, N. J. Grinding, polishing, or buffing machine. No. 1,158,136; Oct. 26; Gaz. vol. 219; p. 1101.
Larson, Louis A., Minneapolis, Minn. Thermo-electric heat-regulating system. No. 1,157,112; Oct. 19; Gaz. vol. 219; p. 679.
Larson, Martin B., Molson, Wash. Seal. No. 1,155,585; Oct. 5; Gaz. vol. 219; p. 90.
Lashmet, Luther C., Jacksonville, Ill. Water-purifying device. No. 1,157,233; Oct. 19; Gaz. vol. 219; p. 722.
Latady, Francis B., Birmingham, Ala. Heat-engine. No. 1,156,534; Oct. 12; Gaz. vol. 219; p. 446.
Latour, Marius C. A., Paris, France, assignor to General Electric Company. Electric-motor control. No. 1,157,313; Oct. 19; Gaz. vol. 219; p. 751.
Laury, Titus H., Red Bank, N. J. Saw-sharpening machine. No. 1,157,558; Oct. 19; Gaz. vol. 219; p. 835.
Lautenbacher, Friedrich, Munich, Germany. Catenary suspension of the trolley-wire for electric railways. No. 1,157,702; Oct. 26; Gaz. vol. 219; p. 949.
Lavender, John G., and G. Nickels, Columbia, S. C. Lever mechanism for switches. No. 1,158,246; Oct. 26; Gaz. vol. 219; p. 1139.
Lavie, René P. M. (See Richard and Lavie.)
Law, James P., Nocona, Tex. Steering mechanism for automobiles. No. 1,157,628; Oct. 19; Gaz. vol. 219; p. 857.
Lawrence, Clyde D., Youngstown, Ohio. Electric elevator-door-operating device. No. 1,158,064; Oct. 26; Gaz. vol. 219; p. 1076.
Lawrence, Frederick L. (See Cruttenden and Lawrence.)
Lawrence, William C., Portland, Oreg. Saddle-rigging. No. 1,156,698; Oct. 12; Gaz. vol. 219; p. 504.
Lawrie, James W., Aurora, Ill. Treating aluminum screenings, dross, slags, or analogous aluminous materials. No. 1,156,606; Oct. 12; Gaz. vol. 219; p. 471.
Lawson, Harry C., McGregor, Tex. Drill-holder. No. 1,156,088; Oct. 12; Gaz. vol. 219; p. 292.
Le Compte, Edward P., and R. Colvin, Park City, Utah. Crutch. No. 1,157,314; Oct. 19; Gaz. vol. 219; p. 751.
Le Compte, George W. (See Fowler and Le Compte.)
Le Doux, Rose. (See Sutkay, Joseph, assignor.)
Le Fever, Earle A., Buffalo, N. Y. Meter-protection device. No. 1,155,742; Oct. 5; Gaz. vol. 219; p. 145.
Leahan, James C., Philadelphia, Pa. Shock-absorber for automobiles. No. 1,157,105; Oct. 19; Gaz. vol. 219; p. 698.
Leake, John S., Louisville, Ky. Making lubricated joints. No. 1,155,495; Oct. 5; Gaz. vol. 219; p. 60.
Leary, Arthur E., Shrewsbury, Mass. Adjustable shade-roller device. No. 1,156,410; Oct. 12; Gaz. vol. 219; p. 403.
Leblanc, Maurice, Val-sur-Seine, Croissy, assignor to Société Anonyme pour l'Exploitation des Procedes Westinghouse-Leblanc, Paris, France. Wet vacuum-pump of the rotary type. No. 1,157,703; Oct. 26; Gaz. vol. 219; p. 950.
Lederman, John E., Chicago, Ill., assignor, by mesne assignments, to Multipost Company, Rochester, N. Y. Envelop sealing and stamping machine. No. 1,157,113; Oct. 19; Gaz. vol. 219; p. 679.
Ledgers Limited. (See Myatt, John W., assignor.)
Lee, Albert P., Chicago, Ill. Movable loading-hopper. No. 1,157,010; Oct. 19; Gaz. vol. 219; p. 643.
Lee, Charles A., Oneida, N. Y. Extensible foot-rest for chairs. No. 1,156,156; Oct. 12; Gaz. vol. 219; p. 315.
Lee, George E., assignor to The George E. Lee Company, Cleveland, Ohio. Melting-cup. No. 1,156,236; Oct. 12; Gaz. vol. 219; p. 340.
Lee, Tennant, Dedham, assignor to United Fruit Company, Boston, Mass. Treating sugar-cane. No. 1,155,741; Oct. 5; Gaz. vol. 219; p. 144.
Lee, Walter. (See Parker and Lee.)
Lees-Bradner Company, The. (See Lees, Ernest J., assignor.)
Lees, Ernest J., assignor to The Lees-Bradner Company, Cleveland, Ohio. Thread-milling machine. No. 1,156,237; Oct. 12; Gaz. vol. 219; p. 341.
Lehman, Ben, Dayton, Ohio. Toilet-seat for children. No. 1,156,014; Oct. 5; Gaz. vol. 219; p. 239.
Lehmann, Firm of I. M. (See Schneider, Adolf A., assignor.)
Lehritter, George P., Freehold, N. J. Condensed molluscous food preparation and making same. No. 1,155,743; Oct. 5; Gaz. vol. 219; p. 145.
Leich, Oscar M., assignor to Cracraft, Leich Electric Company, Genoa, Ill. Receiver. No. 1,156,157; Oct. 12; Gaz. vol. 219; p. 315.
Leidecker, Frank W., Marietta, Ohio. Temper-screw. No. 1,157,704; Oct. 26; Gaz. vol. 219; p. 950.
Leidel, Henry, New York, N. Y. Cigar-cutter. No. 1,156,158; Oct. 12; Gaz. vol. 219; p. 316.
Leighton, Alexander, and H. N. Ruttan, Winnipeg, Manitoba, Canada. Incinerator. No. 1,155,586; Oct. 5; Gaz. vol. 219; p. 90.
Lemp, Hermann, Erie, Pa., assignor to General Electric Company. Fuel-injector. No. 1,157,315; Oct. 19; Gaz. vol. 219; p. 751.
Lemp, Hermann, Erie, Pa., assignor to General Electric Company. Piston cooling and lubricating system for engines. No. 1,157,944; Oct. 26; Gaz. vol. 219; p. 1033.
Lentz, Hugo, Berlin-Halensee, Germany. Fluid change and reversing gear. No. 1,156,015; Oct. 5; Gaz. vol. 219; p. 239.
Lentz, Hugo, Berlin-Halensee, Germany. Fluid-operated power-transmission apparatus. No. 1,156,787; Oct. 12; Gaz. vol. 219; p. 533.
Leonard, Carolyn G., administratrix. (See Leonard, Harry W.)
Leonard, Harry W., deceased, Bronxville, N. Y.; C. G. Leonard, administratrix, assignor to H. Ward Leonard, Incorporated. Electric apparatus for motor-vehicles. No. 1,157,011; Oct. 19; Gaz. vol. 219; p. 643.
Leonard, James H., East Orange, N. J., assignor to Jenkins Manufacturing Co., New York, N. Y. Water-closet. No. 1,157,989; Oct. 26; Gaz. vol. 219; p. 1049.
Leonard, Michael J., Scranton, Pa. Shingle and slate gage. No. 1,156,159; Oct. 12; Gaz. vol. 219; p. 316.
Lerfald, Julius, Belfield, N. D. Wrench. No. 1,155,937; Oct. 5; Gaz. vol. 219; p. 212.
Leschziner, Siegfried, Newark, N. J. Nut-lock and washer. No. 1,156,016; Oct. 5; Gaz. vol. 219; p. 240.
Leslie, Bonnaford, assignor of one-half to S. D. Zaphyriades, Chicago, Ill. Therapeutic cabinet. No. 1,158,382; Oct. 26; Gaz. vol. 219; p. 1187.
Lester, Alfred F., Detroit, Mich. Flexible hydraulic waterproof compound. No. 1,157,284; Oct. 19; Gaz. vol. 219; p. 728.
Lever-Lock Company. (See Cass, Harry S., assignor.)
Levi, Benjamin, New York, N. Y. Safety device for presses. No. 1,155,745; Oct. 5; Gaz. vol. 219; p. 145.
Levi, Benjamin, New York, N. Y. Safety device for presses. No. 1,155,746; Oct. 5; Gaz. vol. 219; p. 146.
Levin, Nils D., assignor to The Jeffrey Manufacturing Company, Columbus, Ohio. Electric motor. No. 1,157,945; Oct. 26; Gaz. vol. 219; p. 1034.
Levinstein, Herbert, Blackley, Manchester, assignor to Company of Levinstein Limited, Manchester, England. Production of fast-colored prints. No. 1,157,705; Oct. 26; Gaz. vol. 219; p. 950.
Levinstein Limited, Company of. (See Levinstein, Herbert, assignor.)
Levison, Maurice, assignor to Chicago Signal Company, Chicago, Ill. Circuit-controlling device. No. 1,157,012; Oct. 19; Gaz. vol. 219; p. 644.
Lewellen, John W., Bidal, Pa. Wheel. No. 1,157,559; Oct. 19; Gaz. vol. 219; p. 836.
Lewis, Arthur D., *et al.* (See Shannon, Leon T., assignor.)
Lewis, Benjamin, Schenectady, N. Y., assignor to General Electric Company. Valve. No. 1,156,535; Oct. 12; Gaz. vol. 219; p. 446.
Lewis Change Meter Company, The. (See Lewis, John B., assignor.)
Lewis, Edward Z., Chicago, Ill., assignor to The General Manifold and Printing Company, Franklin, Pa. Manifolding-book. No. 1,156,411; Oct. 12; Gaz. vol. 219; p. 403.
Lewis, Elias, Terre Haute, Ind. Vegetable-slicer. No. 1,157,013; Oct. 19; Gaz. vol. 219; p. 644.
Lewis, George W. (See Upton and Lewis.)
Lewis, James W., Denton, Mont. Harrow. No. 1,157,706; Oct. 26; Gaz. vol. 219; p. 951.
Lewis, John B., Kit Carson, assignor to The Lewis Change Meter Company, Denver, Colo. Change-making machine. No. 1,155,359; Oct. 5; Gaz. vol. 219; p. 12.
Lewis, John G., St. Louis, Mo. Hem or seam for sewed articles. No. 1,155,360; Oct. 5; Gaz. vol. 219; p. 13.
Lewis, John G., St. Louis, Mo. Sewing-machine. No. 1,156,607; Oct. 12; Gaz. vol. 219; p. 471.
Lewis, Lawrence F., New York, N. Y., assignor to Handifolio Company. Temporary binder. No. 1,156,160; Oct. 12; Gaz. vol. 219; p. 316.
Lewis, Wilfred, Philadelphia, Pa. Molding-machine. No. 1,157,403; Oct. 19; Gaz. vol. 219; p. 783.
Lewis, Wilfred, Philadelphia, Pa. Jar-molding machine. No. 1,157,404; Oct. 19; Gaz. vol. 219; p. 783.
Lewis, Wilfred, Haverford, Pa. Molding-machine valve mechanism. No. 1,157,406; Oct. 19; Gaz. vol. 219; p. 784.
Lewis, Wilfred, Haverford, assignor to The Tabor Manufacturing Company, Philadelphia, Pa. Molding-machine. No. 1,157,405; Oct. 19; Gaz. vol. 219; p. 784.

Libano, Ferdinand, Trieste, Austria-Hungary. Insulator for overhead conductors of electric lines. No. 1,156,089; Oct. 12; Gaz. vol. 219; p. 292.

Liebl, Joseph, Clayton, S. D. Corn-harvester. No. 1,155,827; Oct. 5; Gaz. vol. 219; p. 176.

Liebmann, Alfred J., and W. A. Megrath, assignors to Independent Lamp and Wire Company, Inc., New York, N. Y. Making contact bodies of tungsten. No. 1,155,426; Oct. 5; Gaz. vol. 219; p. 36.

Liebmann, Alfred J., and W. A. Megrath, assignors to Independent Lamp and Wire Company, Inc., New York, N. Y. Contact bodies of tungsten. No. 1,155,427; Oct. 5; Gaz. vol. 219; p. 36.

Lien, Hannah, Minneapolis, Minn. Lock. No. 1,157,407; Oct. 19; Gaz. vol. 219; p. 785.

Life Saving Devices Company. (See Mayer and Fowler.) assignors.)

Light, Claus H., Des Moines, assignor of one-half to E. Rudnich, Manning, Iowa. Electric signal. No. 1,157,990; Oct. 26; Gaz. vol. 219; p. 1049.

Lightburne, Alvan W., Liberty, Mo. Gate-operator. No. 1,156,161; Oct. 12; Gaz. vol. 219; p. 317.

Likely, Arthur H. (See Hamilton, John R., assignor.)

Lilliston, Thomas M., Suffolk, Va. Bearing for peanut-pickers. No. 1,156,910; Oct. 19; Gaz. vol. 219; p. 608.

Lilljquist, Andrew, Syracuse, N. Y. Wire-finishing machine. No. 1,156,299; Oct. 12; Gaz. vol. 219; p. 362.

Linaker, Frederick W., assignor to The Vulcan Soot Cleaner Co., of Pittsburg, Pa., Dubois, Pa. Boiler-tube cleaner. No. 1,157,114; Oct. 19; Gaz. vol. 219; p. 680.

Lincoln, Paul M., Pittsburgh, Pa. Electric wattmeter. No. 1,156,412; Oct. 12; Gaz. vol. 219; p. 404.

Lincoln, Paul M., Pittsburgh, Pa. Volt-ampere meter. No. 1,156,413; Oct. 12; Gaz. vol. 219; p. 404.

Lincoln, Paul M., Pittsburgh, Pa. Electric indicator. No. 1,156,414; Oct. 12; Gaz. vol. 219; p. 405.

Lindblom, Carl G., assignor to Aktiebolaget Lux, Stockholm, Sweden. Automatic control device for illuminating apparatus. No. 1,155,496; Oct. 5; Gaz. vol. 219; p. 61.

Lindblom, Hjalmar, Liverpool, England. Device for securing petrol-cans or the like to motor-cars. No. 1,158,247; Oct. 26; Gaz. vol. 219; p. 1139.

Lindemann, Walter C., and K. D. Camp, assignors to A. J. Lindemann & Hoverson Co., Milwaukee, Wis. Electric welding-machine. No. 1,155,497; Oct. 5; Gaz. vol. 219; p. 61.

Lindenberg, Theodore, Grandview Heights, Ohio. Lubricating device for springs. No. 1,156,162; Oct. 12; Gaz. vol. 219; p. 317.

Lindley, Lowell F. (See Spiegel and Lindley.)

Lindquist, David L., Yonkers, assignor to Otis Elevator Company, New York, N. Y. Electrical controlling apparatus. No. 1,156,415; Oct. 12; Gaz. vol. 219; p. 405.

Lindström, Charles A., Pittsburgh, Pa. Car-door gear. No. 1,155,938; Oct. 5; Gaz. vol. 219; p. 212.

Linotype and Machinery Limited. (See Parker and Lee, assignors.)

Linton, Edgerton K., Saginaw, Mich. Cooking utensil. No. 1,157,991; Oct. 26; Gaz. vol. 219; p. 1050.

Lippelt, Hans, New York, N. Y. Dynamo-electric machine. No. 1,157,014; Oct. 19; Gaz. vol. 219; p. 645.

Lipsius, Samuel, New York, N. Y. Raising printing. No. 1,158,065; Oct. 26; Gaz. vol. 219; p. 1076.

Liss, Selman, *et al.* (See Sherman, Moses, assignor.)

List, William E., Addiscombe, England. Appliance for cleaning toothed articles. No. 1,155,747; Oct. 5; Gaz. vol. 219; p. 146.

Litchfield, Isaac W., Newton, Mass. Bathing-cap. No. 1,156,238; Oct. 12; Gaz. vol. 219; p. 341.

Little, Archibald S. B., Springfield, Ill., and R. M. Feustel, Madison, Wis. Street-indicator. No. 1,155,587; Oct. 5; Gaz. vol. 219; p. 90.

Littlefield, Frank A., assignor to Nashua Machine Company, Nashua, N. H. Steam-trap and valve therefor. No. 1,156,032; Oct. 5; Gaz. vol. 219; p. 245.

Livermon, Carl R., Roxobel, N. C. Peanut-threshing machine. No. 1,158,248; Oct. 26; Gaz. vol. 219; p. 1139.

Livingood, Jesse E., New Virginia, Iowa. Vehicle. No. 1,158,137; Oct. 26; Gaz. vol. 219; p. 1102.

Livingston, D McRa, New York, N. Y. Combination-hood for automobiles. No. 1,156,017; Oct. 5; Gaz. vol. 219; p. 240.

Lloyd, Edward W. (See Nickolai, Carl L., assignor.)

Lloyd, William H., assignor to Pyramid Manufacturing Company, Chicago, Ill. Water-closet. No. 1,155,498; Oct. 5; Gaz. vol. 219; p. 62.

Lobdell, Britton D. (See Vogel, Lobdell, and Ball.)

Locke, Fred M., Victor, N. Y. Manufacture of insulators for high-potential electric conductors. No. 1,156,163; Oct. 12; Gaz. vol. 219; p. 317.

Locke Insulator Manufacturing Company, The. (See Bennett, Cornelius V., assignor.)

Locke, Robert E., Lone Rock, Iowa. Seed-corn case. No. 1,157,790; Oct. 26; Gaz. vol. 219; p. 978.

Locke Steel Chain Company. (See Osswald, Herman, assignor.)

Lockwood, Burns D., Bellevue, assignor to Pressed Steel Car Company, Pittsburgh, Pa. Underframe for railway-cars. No. 1,157,707; Oct. 26; Gaz. vol. 219; p. 951.

"Locomobile" Company of America, The. (See Riker, Andrew L., assignor.)

Loehr, Miles E., Claypool, Ind. Acetylene-generator. No. 1,156,788; Oct. 12; Gaz. vol. 219; p. 534.

Löfquist, Hjalmer, Stockholm, Sweden. Device for drying washed goods. No. 1,155,668; Oct. 5; Gaz. vol. 219; p. 119.

Logan, Oscar A. (See Thompson, William F., assignor.)

Lombard Governor Company, The. (See Warren, Henry E., assignor.)

London, William J. A., assignor to The Terry Steam Turbine Company, Hartford, Conn. Vertical bearing. No. 1,157,644; Oct. 19; Gaz. vol. 219; p. 862.

Long, Laurence W. (See Flick and Long.)

Long, Russell L., Morgantown, W. Va. Hat-pin guard. No. 1,156,300; Oct. 12; Gaz. vol. 219; p. 362.

Loomis, Allen, assignor to Packard Motor Car Company, Detroit, Mich. Transmission mechanism for motor-vehicles. No. 1,157,015; Oct. 19; Gaz. vol. 219; p. 645.

Loomis, Allen, assignor to Packard Motor Car Company, Detroit, Mich. Motor-vehicle. No. 1,157,878; Oct. 26; Gaz. vol. 219; p. 1010.

Loomis, Allen, assignor to Packard Motor Car Company, Detroit, Mich. Motor-vehicle. No. 1,157,879; Oct. 26; Gaz. vol. 219; p. 1010.

Lopez, Arthur, assignor to The Hammond Typewriter Company, New York, N. Y. Type-writing machine. No. 1,155,828; Oct. 5; Gaz. vol. 219; p. 176.

Lotterhand, Jason C., assignor to Addometer Corporation, New York, N. Y. Carrying means for adding-machines. (Reissue.) No. 13,997; Oct. 19; Gaz. vol. 219; p. 873.

Lotz, Frederick W., Philadelphia, Pa. Preparing foods. No. 1,157,016; Oct. 19; Gaz. vol. 219; p. 646.

Lough, David C., assignor of one-half to C. E. Reed, Greenland, W. Va. Adjustable brake-rod. No. 1,156,789; Oct. 12; Gaz. vol. 219; p. 534.

Louisiana Nut & Produce Company. (See Williams, Dick B., assignor.)

Lovell, Frederick W., assignor to The McMyler Interstate Company, Cleveland, Ohio. Car-haulage plant. No. 1,155,748; Oct. 5; Gaz. vol. 219; p. 147.

Lovering, Edward G., Detroit, Mich. Soap-dispenser. No. 1,156,164; Oct. 12; Gaz. vol. 219; p. 317.

Lowden, Joseph H., Cincinnati, Ohio, assignor to The George E. Lee Company. Regulator for melting-pots. No. 1,156,239; Oct. 12; Gaz. vol. 219; p. 342.

Lowe, Harry W., Florence, Nebr. Sterilising-machine. No. 1,157,017; Oct. 19; Gaz. vol. 219; p. 646.

Lowry, Frank, assignor to The Ohio Grease Company, Loudonville, Ohio. Drop-feed lubricator. No. 1,156,488; Oct. 12; Gaz. vol. 219; p. 430.

Lucas, Nannie P., Washington, D. C. Food-grinder. No. 1,155,749; Oct. 5; Gaz. vol. 219; p. 147.

Lucker, Oscar H. (See Flechter, Frederick, assignor.)

Luckett, Philip A., Salisbury, Md. Union undergarment. No. 1,156,301; Oct. 12; Gaz. vol. 219; p. 362.

Ludwig Hupfeld Aktiengesellschaft. (See Reichel and Hennig, assignors.)

Luedinghaus, Henry, Jr., St. Louis, Mo. Dumping-wagon. No. 1,158,138; Oct. 26; Gaz. vol. 219; p. 1102.

Luethjohn, Paul E., Cleveland, Ohio. Floor scraper or cleaner. No. 1,156,790; Oct. 12; Gaz. vol. 219; p. 534.

Luha, Joseph, assignor of one-half to J. Hrehocsik, Flemington, N. J. Invalid-chair. No. 1,155,588; Oct. 5; Gaz. vol. 219; p. 91.

Lukstat, Roman, Philadelphia, Pa. Toy. No. 1,157,166; Oct. 19; Gaz. vol. 219; p. 698.

Luminous Unit Company. (See Guth, Edwin F., assignor.)

Lumley, Wilfrid, Conneaut, Ohio, assignor to General Electric Company. Illuminating apparatus. No. 1,156,536; Oct. 12; Gaz. vol. 219; p. 447.

Lumley, Wilfrid, Conneaut, Ohio, assignor to General Electric Co. Illuminating apparatus. No. 1,156,537; Oct. 12; Gaz. vol. 219; p. 447.

Lusc, Jonathan E., Cisco, Tex. Vehicle seat construction. No. 1,157,880; Oct. 26; Gaz. vol. 219; p. 1011.

Luthmers, William J., Olney, Ill. Piano-action flange. No. 1,157,629; Oct. 19; Gaz. vol. 219; p. 857.

Lutz, George C. Philadelphia Pa. Barber's chair-back. No. 1,157,092; Oct. 26; Gaz. vol. 219; p. 1050.

Lux, Anthony M., *et al.* (See Thompson, William I., assignor.)

Lux, Walter J., *et al.* (See Thompson, William I., assignor.)

Lynch, Charles, Hammond, Ind. Dumping motor-truck. No. 1,157,560; Oct. 19; Gaz. vol. 219; p. 836.

Lynch, Daniel E., Wichita, Kans. Punch. No. 1,155,361; Oct. 5; Gaz. vol. 219; p. 13.

Lynch, Robert L., Campbellsburg, Ky. Package-tie. No. 1,156,791; Oct. 12; Gaz. vol. 219; p. 535.

Lynch, William T. J., assignor of one-half to V. J. Schulthels, Brooklyn, N. Y. Feather-fastener. No. 1,155,428; Oct. 5; Gaz. vol. 219; p. 36.

Lyon, Howard, assignor to Welsbach Light Company, Gloucester City, N. J. Cluster incandescent lamp. No. 1,158,140; Oct. 26; Gaz. vol. 219; p. 1140.

Lyons-Atlas Company. (See McCarty, Norman, assignor.)

Lyons, Joseph A. (See Manzel and Lyons.)

Lyons, Levi, *et al.* (See Buskard, Samuel G., assignor.)

Lyster, Benton R. and M. J., Whitefield, N. H. Destructive distillation of wood. No. 1,157,816; Oct. 19; Gaz. vol. 219; p. 752.

Lyster, Morton J. (See Lyster, Benton R. and M. J.)

M. Rumely Company. (See Higgins, William H. C., Jr., assignor.)

M. Welte & Sons, Inc. (See Welte, Carl M., assignor.)

M. D. Knowlton Company. (See Hawkins, Edgar M., assignor.)

M. D. Knowlton Company. (See Hawkins, Edgar M., assignor.)

Maas, George H., Milwaukee, Wis. Cover-wrench for fruit-jars. No. 1,157,632; Oct. 19; Gaz. vol. 219; p. 858.

MacDonald, William W., Somerville, Mass. Former for self-closing pouches. No. 1,156,847; Oct. 12; Gaz. vol. 219; p. 556.

MacKenzie, John, Middlesborough, England. Manufacture of sulfate of ammonia and in the purification of coal-gas. No. 1,155,753; Oct. 5; Gaz. vol. 219; p. 148.

MacLean, John P., Hamilton, New South Wales, Australia. Shock-absorber for the handle-bars of motor-cycles. No. 1,156,420; Oct. 12; Gaz. vol. 219; p. 407.

Macintosh, William R., Buffalo, N. Y. Tag-fastener. No. 1,156,489; Oct. 12; Gaz. vol. 219; p. 431.

Mackay, George M. J., Schenectady, N. Y., assignor to General Electric Company. Incandescent lamp. No. 1,157,995; Oct. 26; Gaz. vol. 219; p. 1050.

Maclaurin, Robert, Stirling, Scotland. Gas-scrubber. No. 1,158,066; Oct. 26; Gaz. vol. 219; p. 1076.

Macneill, Martin B., Beloit, Wis., assignor to Fairbanks, Morse & Company, Chicago, Ill. Balanced centrifugal pump. No. 1,157,240; Oct. 19; Gaz. vol. 219; p. 725.

Macy, Nelson. (See Strong and Macy.)

Madden, Edward J., Bridgeport, Conn. Letter-stamping machine. No. 1,155,591; Oct. 5; Gaz. vol. 219; p. 92.

Madsen, Mads H., Kimballton, Iowa. Corn-planter. No. 1,155,592; Oct. 5; Gaz. vol. 219; p. 92.

Maechler, Walter, assignor, by mesne assignments, to Smallbone Manufacturing Company, Chicago, Ill. Buttonhole attachment for sewing-machines. No. 1,157,791; Oct. 26; Gaz. vol. 219; p. 979.

Magee, John, assignor to Diamond Power Specialty Company, Detroit, Mich. Blower unit for boilers. No. 1,155,499; Oct. 5; Gaz. vol. 219; p. 62.

Magill, William R. (See Barker, Spencer A., assignor.)

Magnuson, Nels, Fort Wayne, Ind. Pneumatic action for piano-players. No. 1,158,067; Oct. 26; Gaz. vol. 219; p. 1077.

Magri, Abel, and A. V. Griffeth, Port Washington, N. Y. Vulcanizer. No. 1,156,793; Oct. 12; Gaz. vol. 219; p. 535.

Magyar, Andy, Hutchinson, Kans. Bed-bottom. No. 1,158,254; Oct. 26; Gaz. vol. 219; p. 1141.

Mahana, Charles G., assignor to Sheffield Car Company, Three Rivers, Mich. Engine-mounting. No. 1,157,168; Oct. 19; Gaz. vol. 219; p. 699.

Maher, James H., Slingerlands, N. Y. Agricultural implement. No. 1,157,709; Oct. 26; Gaz. vol. 219; p. 952.

Mahoney, Joseph N. (See Austin and Mahoney.)

Main, Fred F., Chicago, Ill., assignor to J. T. Underwood, Brooklyn, N. Y. Combined type-writing and computing machine. No. 1,157,884; Oct. 26; Gaz. vol. 219; p. 1012.

Maino, Charles A., and P. Pellegrini, assignors to United States Carburetor Company, Los Angeles, Cal. Carbureter. No. 1,157,116; Oct. 19; Gaz. vol. 219; p. 680.

Malcamp, Philip, New Orleans, La. Lamp. No. 1,158,419; Oct. 26; Gaz. vol. 219; p. 1201.

Malcolm, William H., *et al.* (See Manning and Gould, assignors.)

Mallard, Charles C., deceased, Globe, Ariz.; C. L. Rawlins, administrator. Ballast plow or spreader. No. 1,155,429; Oct. 5; Gaz. vol. 219; p. 37.

Malloy, Mary A., Portland, Oreg., assignor, by mesne assignments, to G. Hudson. Kitchen-range and cooking-stove. No. 1,157,885; Oct. 26; Gaz. vol. 219; p. 1012.

Manchee, Wilfrid A., assignor to Newark Spring Mattress Company, Newark, N. J. Hammock-stand. No. 1,156,421; Oct. 12; Gaz. vol. 219; p. 407.

Mandel, L., *et al.* (See Bonime, Albert, assignor.)

Mandel, M., *et al.* (See Bonime, Albert, assignor.)

Manhattan Electrical Supply Company, The. (See Avery, Charles E., assignor.)

Maniscalco, Anthony S., Houston, Tex. Differential mechanism for automobiles. No. 1,157,319; Oct. 19; Gaz. vol. 219; p. 753.

Manlet, Peter L., St. Paul, Minn. Automatic stop for elevators. No. 1,158,255; Oct. 26; Gaz. vol. 219; p. 1141.

Manlet, Peter L., St. Paul, Minn. Automatic stop for elevators. No. 1,158,256; Oct. 26; Gaz. vol. 219; p. 1142.

Mann, Colin, Southport, Me. Fruit-picker. No. 1,157,025; Oct. 19; Gaz. vol. 219; p. 649.

Manning, Clyde W., and A. C. M. Gould, assignors of five-sixteenths to W. H. Malcolm and one-fourth to J. R. Gordon, New York, N. Y. Burglar-alarm. No. 1,158,140; Oct. 26; Gaz. vol. 219; p. 1103.

Mansbridge, Arnold W., Winnipeg, Manitoba, Canada. Electrical heater. No. 1,155,593; Oct. 5; Gaz. vol. 219; p. 93.

Mansell, John A. (See Embser, Peter, assignor.)

Mansfield, Frederick J., Pasadena, Cal. Fulling-machine. No. 1,158,257; Oct. 26; Gaz. vol. 219; p. 1142.

Mantel, Florian J. (See Smith and Mantel.)

Mantle, Joseph G. C., New York, N. Y. Display-machine. No. 1,158,258; Oct. 26; Gaz. vol. 219; p. 1143.

Mantle Machinery & Patents Company. (See Cohn, Samuel, assignor.)

Manufacture d'Horlogerie de Béthune. (See Outrebon, Edouard, assignor.)

Manzel, John E., and J. A. Lyons, Middletown, N. Y. Automobile-body. No. 1,155,941; Oct. 5; Gaz. vol. 219; p. 213.

Marcroft, George, Providence, R. I., assignor to Universal Winding Company, Portland, Me. Compensator device for controlling the unwinding of yarn, thread, or similar materials. No. 1,156,913; Oct. 19; Gaz. vol. 219; p. 608.

Mariotti, Attilio, Florence, Italy. Compressed-air hydraulic pump. No. 1,155,594; Oct. 5; Gaz. vol. 219; p. 93.

Markham, L. H., *et al.* (See Simon, Carl G., assignor.)

Markowics, Jacob, Arnold City, Pa. Chair attachment for tables. No. 1,156,538; Oct. 12; Gaz. vol. 219; p. 447.

Marks, Albert, Brooklyn, N. Y. Printing-stamp. No. 1,155,595; Oct. 5; Gaz. vol. 219; p. 94.

Marks, Reuben. (See Bricken, John, assignor.)

Marlin Firearms Company, The. (See Swebilius and Hanitz, assignors.)

Marlow, William, New York, N. Y., assignor to Standard Knitting Mills Company. Thread-winding machine. No. 1,157,886; Oct. 26; Gaz. vol. 219; p. 1013.

Marmon, Howard C., Indianapolis, Ind. Means for oiling explosion-motors. No. 1,156,608; Oct. 12; Gaz. vol. 219; p. 471.

Marqua, Philip, St. Louis, Mo. Pulley. No. 1,157,710; Oct. 26; Gaz. vol. 219; p. 952.

Marquis, James B., Norwich, N. Y. Baggage-carrier for automobiles. No. 1,156,539; Oct. 12; Gaz. vol. 219; p. 447.

Marquis, James B., Norwich, N. Y. Baggage-carrier for automobiles. No. 1,156,540; Oct. 12; Gaz. vol. 219; p. 448.

Marsden, John E., Philadelphia, Pa. Window-regulator. No. 1,155,754; Oct. 5; Gaz. vol. 219; p. 148.

Marsh Capron Manufacturing Company. (See Mosby, Alfred D., assignor.)

Martin, Carl, New York, N. Y. Collision-prevention device. No. 1,156,366; Oct. 12; Gaz. vol. 219; p. 387.

Martin, Frederick W., New York, assignor to J. L. Mohun, Brooklyn, N. Y. Metal roof for cars. No. 1,155,596; Oct. 5; Gaz. vol. 219; p. 94.

Martin, Harry C., Philadelphia, Pa. Lubricating system. No. 1,157,241; Oct. 19; Gaz. vol. 219; p. 726.

Martin, Max B., Markneukirchen, Germany. Brass wind instrument. No. 1,158,384; Oct. 26; Gaz. vol. 219; p. 1188.

Martin, Talbot G., assignor to Automatic Electric Company, Chicago, Ill. Telephone-exchange system. No. 1,155,672; Oct. 5; Gaz. vol. 219; p. 121.

Martindale, Frank L., Bay City, Mich. Calculating-machine. No. 1,157,320; Oct. 19; Gaz. vol. 219; p. 753.

Martineau, William C., Albany, N. Y. Letter-box. No. 1,156,914; Oct. 19; Gaz. vol. 219; p. 609.

Martinovich, Nikola, Youngstown, Ohio. Non-refillable bottle. No. 1,157,996; Oct. 26; Gaz. vol. 219; p. 1051.

Martinson, Edward, Superior, Wis. Oil-tank car. No. 1,156,794; Oct. 12; Gaz. vol. 219; p. 535.

Martinsville Ignition Company. (See Wiltshire, Fred L., assignor.)

Maschek, Henry, assignor of one-half to B. Borders, Beaumont, Tex. Variable-speed-transmission gearing. No. 1,155,597; Oct. 5; Gaz. vol. 219; p. 94.

Mashek, George J., Newark, N. J. Drying and baking oven. No. 1,157,658; Oct. 19; Gaz. vol. 219; p. 868.

Maslanik, Josef. (See Neznalski and Maslanik.)

Masler, Abraham, New York, N. Y. Combined machine-cover and chair. No. 1,156,367; Oct. 12; Gaz. vol. 219; p. 387.

Mason, Fred H., and J. Allen, Scranton, Pa. Coal-chute. No. 1,155,942; Oct. 5; Gaz. vol. 219; p. 214.

Mason, Hosea A., assignor of one-fourth to S. G. O'Neil and one-fourth to W. E. Quigley, Taunton, Mass. Dust-cap for tire-valves. No. 1,157,564; Oct. 19; Gaz. vol. 219; p. 837.

Mason, Rhenier S., Eddyville, Ky. Horse-collar. No. 1,155,943; Oct. 5; Gaz. vol. 219; p. 214.

Master, Albert, Park Ridge, Ill. Friction-clutch. No. 1,157,408; Oct. 19; Gaz. vol. 219; p. 785.

Masury, Alfred F. (See Hewitt and Masury.)

Matchette, Frank J., Milwaukee, Wis., assignor, by mesne assignments, to Richmond Radiator Company, New York, N. Y. Dust-collector. No. 1,157,242; Oct. 19; Gaz. vol. 219; p. 727.

Matheson, Robert P., Ottawa, Ontario, Canada. Match lighter and extinguisher. No. 1,155,755; Oct. 5; Gaz. vol. 219; p. 149.

Matthes, Samuel S., Mansfield, Ohio, assignor to National Chemical Company, Syracuse, N. Y. Collar shaping and edging machine. No. 1,157,321; Oct. 19; Gaz. vol. 219; p. 754.

Matthews, Joseph, Newburyport, assignor of one-half to W. H. Hastings, Malden, Mass. Grease-cup. No. 1,156,302; Oct. 12; Gaz. vol. 219; p. 363.

Mau, Clayton C., Fredonia, N. Y. Fish-hook. No. 1,156,795; Oct. 12; Gaz. vol. 219; p. 536.

Maul, Christian. (See Farrall and Maul.)

Maurier, Leon N. (See Carrel, Claude M., assignor.)

Maxin Manufacturing Company. (See Blomquist, John O., assignor.)

Maxwell, William T., assignor of one-half to J. Gass, Pittsburgh, Pa. Clothes-rack. No. 1,156,699; Oct. 12; Gaz. vol. 219; p. 504.

May, Gerald D., Washington, D. C. Cooling and lubricating device for vacuum-pumps. No. 1,156,700; Oct. 12; Gaz. vol. 219; p. 504.

Mayer, George M., and F. T. Fowler, Chicago, Ill., assignors to Life Saving Devices Company. Resuscitating appliance. No. 1,157,655; Oct. 19; Gaz. vol. 219; p. 867.

Mayer, James E., Bluefield, W. Va. Combined dental prop and mirror. No. 1,157,565; Oct. 19; Gaz. vol. 219; p. 837.

Mayerhoff, Hugh C., Basic, Miss. Insect-collecting attachment for cultivators. No. 1,156,303; Oct. 12; Gaz. vol. 219; p. 363.

Mayers, Wilbur S., Fairmont, W. Va. Loading-machine. No. 1,155,598; Oct. 5; Gaz. vol. 219; p. 95.

Mazoyer, Leon J., West Hoboken, N. J. Non-removable bottle-stopper. No. 1,156,915; Oct. 19; Gaz. vol. 219; p. 609.

McAdam, Linus J., Barker, N. Y. Carbureter. No. 1,155,829; Oct. 5; Gaz. vol. 219; p. 177.

McAllister, Wallace B., Camden, N. J., assignor to The J. G. Brill Company, Philadelphia, Pa. Sash-retainer. No. 1,155,830; Oct. 5; Gaz. vol. 219; p. 177.

McAvoy, Arthur R., Collie, Western Australia, Australia. Pneumatic control of inflowing water in damaged ships. No. 1,156,792; Oct. 12; Gaz. vol. 219; p. 535.

McBerty, Frank R., Antwerp, Belgium, assignor to Western Electric Company, New York, N. Y. Telephone-exchange system. No. 1,156,416; Oct. 12; Gaz. vol. 219; p. 405.

McBerty, Frank R., Antwerp, Belgium, assignor to Western Electric Company, New York, N. Y. Machine switching telephone system. No. 1,157,881; Oct. 26; Gaz. vol. 219; p. 1011.

McBerty, Frank R., New Rochelle, assignor to Western Electric Company, New York, N. Y. Telephone-exchange system. No. 1,157,018; Oct. 19; Gaz. vol. 219; p. 646.

McCabe, William L., Portland, Oreg. Chute. No. 1,157,019; Oct. 19; Gaz. vol. 219; p. 647.

McCampbell, Theron. (See Gill, Edwin R., assignor.)

McCarroll, Edward W., Pittsburgh, Pa. Game apparatus. No. 1,158,250; Oct. 26; Gaz. vol. 219; p. 1140.

McCarthy, Daniel J., Wilkinsburg, assignor to The Union Switch & Signal Company, Swissvale, Pa. Means for and process of adjusting incandescent lamps. No. 1,157,020; Oct. 19; Gaz. vol. 219; p. 647.

McCarty, Eugene J., assignor to T. J. McNamara, Clinton, Mass. Tube-blower. No. 1,155,750; Oct. 5; Gaz. vol. 219; p. 147.

McCarty, James J., Boston, Mass. Method and apparatus for cleaning pipes. No. 1,156,417; Oct. 12; Gaz. vol. 219; p. 406.

McCarty, Norman, assignor to Lyons-Atlas Company, Indianapolis, Ind. Internal-combustion engine. No. 1,157,021; Oct. 19; Gaz. vol. 219; p. 647.

McCaskey Register Company, The. (See Hick, Harry J., assignor.)

McCaskey Register Company, The. (See Hick and Staples, assignors.)

McClure, Ray, Van Wert, Ohio. Animal-trap. No. 1,157,882; Oct. 26; Gaz. vol. 219; p. 1011.

McCollum, Burton, Washington, D. C. Induction-motor. No. 1,156,364; Oct. 12; Gaz. vol. 219; p. 386.

McCollum, Richard P., Philadelphia, Pa. Pad for a hernial truss. No. 1,158,139; Oct. 26; Gaz. vol. 219; p. 1102.

McComb, Henry G., New York, N. Y., assignor to General Vehicle Company, Incorporated. Cotter-pin. No. 1,157,946; Oct. 26; Gaz. vol. 219; p. 1034.

McCormick, Roscoe T. (See Schmidt, Lawrence S., assignor.)

McCue, William T., assignor to P. Wall, Pittsburgh, Pa. Ice-can. No. 1,155,751; Oct. 5; Gaz. vol. 219; p. 147.

McCullough, Maud M., St. Louis, Mo. Ironing-board. No. 1,157,317; Oct. 19; Gaz. vol. 219; p. 752.

McDonald, Martin. (See Restorff, William G., assignor.)

McDonnld, Samuel, Louisville, Ky. Staff-holder. No. 1,155,589; Oct. 5; Gaz. vol. 219; p. 91.

McDougall, Alexander, Duluth, Minn. Vessel. No. 1,157,022; Oct. 19; Gaz. vol. 219; p. 648.

McDougall, George F. A., Boston, assignor of one-half to W. L. Jenkins, West Somerville, Mass. Automobile-signal. No. 1,157,561; Oct. 19; Gaz. vol. 219; p. 836.

McDougall, Walter, New York, N. Y. Pencil-holder. No. 1,158,251; Oct. 26; Gaz. vol. 219; p. 1140.

McElroy, James F., Albany, N. Y., assignor to Consolidated Car-Heating Company. Steam-heating system. No. 1,157,237; Oct. 19; Gaz. vol. 219; p. 724.

McElroy, James F., deceased, Albany, N. Y.; S. H. McElroy, executrix, assignor to Consolidated Car-Heating Company. Valve. No. 1,157,235; Oct. 19; Gaz. vol. 219; p. 723.

McElroy, James F., Albany, N. Y.; S. H. McElroy, executrix, assignor to Consolidated Car-Heating Company. Train-pipe end valve. No. 1,157,236; Oct. 19; Gaz. vol. 219; p. 723.

McElroy, Karl P. (See Spencer and McElroy.)

McElroy, Karl P., Washington, D. C. Hydrogenating process and apparatus. No. 1,157,993; Oct. 26; Gaz. vol. 219; p. 1050.

McElroy, Susie H., executrix. (See McElroy, James F.)

McFarland, Edward. (See Shannon, Robert L., assignor.)

McFarland, Elmer E., Dayton, Ohio. Sanitary container. No. 1,157,883; Oct. 26; Gaz. vol. 219; p. 1012.

McFarland, Samuel E., assignor to Automatic Retrieving Trolley Corporation, Long Beach, Cal. Automatic retrieving-trolley. No. 1,157,630; Oct. 19; Gaz. vol. 219; p. 858.

McFee, Edison, Hamilton, Mo. Steam-engine. No. 1,155,939; Oct. 5; Gaz. vol. 219; p. 213.

McGill, Andrew M., and L. B. Howland, Toronto, Ontario, Canada. Power attachment for motor-cars. No. 1,156,418; Oct. 12; Gaz. vol. 219; p. 406.

McGovern, Thomas W. (See Ames, Joseph A., assignor.)

McGowan, Owen J., New York, assignor to W. Wilson, Brooklyn, N. Y. Marine-engine-throttling apparatus. No. 1,155,609; Oct. 5; Gaz. vol. 219; p. 120.

McGregor, Alexander G., Globe, Ariz. Sampling apparatus. No. 1,155,670; Oct. 5; Gaz. vol. 219; p. 120.

McGuire, Frank A., Iola, Kans. Journal-box. No. 1,155,831; Oct. 5; Gaz. vol. 219; p. 177.

McHardy, James A. (See Howard and McHardy.)

McIntosh, Ralph, Cleveland, Ohio. Shield for gage-glasses. No. 1,157,708; Oct. 26; Gaz. vol. 219; p. 951.

McIntyre, Michael M., assignor to The Perfection Spring Company, Cleveland, Ohio. Vehicle-spring. No. 1,155,752; Oct. 5; Gaz. vol. 219; p. 148.

McIntyre, Walter L., Memphis, Tenn. Automobile-cover. No. 1,157,115; Oct. 19; Gaz. vol. 219; p. 680.

McKay, George L., Evanston, Ill. Liquid-sampling device. No. 1,156,240; Oct. 12; Gaz. vol. 219; p. 342.

McKean, Thomas A., Hagerstown, Md. Driving-box and hub-liner for locomotives. No. 1,156,911; Oct. 19; Gaz. vol. 219; p. 608.

McKean, William L., Martins Ferry, Ohio. Machine for cleaning and polishing tin sheets. No. 1,155,671; Oct. 5; Gaz. vol. 219; p. 120.

McKechnie, Archibald E. (See Shephard and McKechnie.)

McKee, Lanier, *et al.* (See Golly, Louis, assignor.)

McKenzie, Fayette A. (See Sherer, Harvey C., assignor.)

McKinley, Clyde S., East St. Louis, Ill. Pipe-hanger. No. 1,156,241; Oct. 12; Gaz. vol. 219; p. 342.

McKinzie, Mortimer, Brooklyn, assignor to W. Northcroft, New York, N. Y. Window-ventilator. No. 1,158,252; Oct. 26; Gaz. vol. 219; p. 1141.

McKittrick, John T., Fort Madison, Iowa. Penholder. No. 1,157,994; Oct. 26; Gaz. vol. 219; p. 1050.

McKnight, Isaiah, Louisville, Ky. Harness-trimming. No. 1,157,562; Oct. 19; Gaz. vol. 219; p. 836.

McLane, Milton A., Middletown, Ohio. Punch. No. 1,155,590; Oct. 5; Gaz. vol. 219; p. 91.

McLaren, Chester, Oakland, Cal. Multiple-disk power transmission. No. 1,157,238; Oct. 19; Gaz. vol. 219; p. 724.

McLaren, Kate C., Oakland, Cal. Skirt-marker. No. 1,156,365; Oct. 12; Gaz. vol. 219; p. 386.

McLaughlin, Milton P., Wakefield, assignor of one-half to D. J. Hurley, Boston, Mass. Mat for running-boards. No. 1,157,631; Oct. 19; Gaz. vol. 219; p. 858.

McLaughlin, William, Scranton, Pa. Lubricating device. No. 1,157,023; Oct. 19; Gaz. vol. 219; p. 648.

McLean, Frederic. (See De Gaston and McLean.)

McLean, Joseph W., Tucson, Ariz. Sash-holder. No. 1,157,318; Oct. 19; Gaz. vol. 219; p. 752.

McLeland, Jerome. (See Bates and McLeland.)

McMahon, Frank B., New York, N. Y. Stationary non-brush device for wool-combers. No. 1,156,912; Oct. 19; Gaz. vol. 219; p. 608.

McManamy, John, Grand Rapids, and A. Reid, Saginaw, Mich. Pump-governor. No. 1,156,165; Oct. 12; Gaz. vol. 219; p. 318.

McMillen, George A., Alton, Ill. Hernial truss. No. 1,158,383; Oct. 26; Gaz. vol. 219; p. 1188.

McMullan, Robert, Fremantle, Western Australia, Australia. Windmill. No. 1,157,563; Oct. 19; Gaz. vol. 219; p. 837.

McMyler Interstate Company, The. (See Lovell, Frederick W., assignor.)

McNab, Alexander, assignor to The McNab Company, Bridgeport, Conn. Boiler-circulator. No. 1,155,832; Oct. 5; Gaz. vol. 219; p. 178.

McNab Company, The. (See McNab, Alexander, assignor.)

McNamar, Oliver E., *et al.* (See Jack, Lewis T., assignor.)

McNamar, Raymond, *et al.* (See Jack, Lewis T., assignor.)

McNamara, Thomas J. (See McCarty, Eugene J., assignor.)

McNear, Fred W., Menlo Park, and P. E. Bowles, Jr., Reward, Cal. Dehydrating oil. No. 1,158,253; Oct. 26; Gaz. vol. 219; p. 1141.

McNeel, William P., San Antonio, Tex. Case for motion-picture films. No. 1,155,940; Oct. 5; Gaz. vol. 219; p. 213.

McNeil, Henry W., Sinton, Tex. Gearing. No. 1,157,167; Oct. 19; Gaz. vol. 219; p. 699.

McPherson, Alexander, New Glasgow, Nova Scotia, Canada. Door-hanger. No. 1,156,419; Oct. 12; Gaz. vol. 219; p. 406.

McQuillin, Howard, assignor of one-half to W. H. Duggan, Chicago, Ill. Dynamo-electric machine. No. 1,157,024; Oct. 19; Gaz. vol. 219; p. 648.

McWhorter, Robert, *et al.* (See Chapman, Frank M., assignor.)

McWilliams, Arthur C., South Bend, Ind. Cut-out pulley. No. 1,157,239; Oct 19; Gaz. vol. 219; p. 725.

Meahl, Philip J., Summit, N. J. Machine for making master-sheets. No. 1,156,701; Oct. 12; Gaz. vol. 219; p. 505.

Meaker, John W., Detroit, Mich. Spark-plug. No. 1,156,796; Oct. 12; Gaz. vol. 219; p. 536.

Meaker, John W., Detroit, Mich. Spark-plug. No. 1,156,797; Oct. 12; Gaz. vol. 219; p. 536.

Meaker, John W., Detroit, Mich. Nut. No. 1,156,798; Oct. 12; Gaz. vol. 219; p. 537.

Meaker, John W., Detroit, Mich., Spark-plug. No. 1,156,799; Oct. 12; Gaz. vol. 219; p. 537.

Mears, Arthur M., Portland, Oreg. Shackle for pulley-blocks. No. 1,158,385; Oct. 26; Gaz. vol. 219; p. 1188.

Mechanics' Specialties Co. (See Golly, Louis, assignor.)

Meeks, Manning, Cedar Rapids, Iowa. Hose-coupling. No. 1,157,997; Oct. 26; Gaz. vol. 219; p. 1051.

Megrath, William A. (See Liebmann and Megrath.)

Meigs, John F., and H. G. Jakobsson, assignors to Bethlehem Steel Company, South Bethlehem, Pa. Training and elevating mechanism for guns. No. 1,156,541; Oct. 12; Gaz. vol. 219; p. 448.

Meistreil, Joseph U., Brooklyn, N. Y. Type-bar-machine attachment. No. 1,157,243; Oct. 19; Gaz. vol. 219; p. 727.

Melcher, Charles H. (See Vatcher and Melcher.)

Melchert, Charles A., assignor to Automatic Machine Manufacturing Co., Kansas City, Mo. Vending-machine. No. 1,157,792; Oct. 26; Gaz. vol. 219; p. 979.

Melton, Edwin, Clovis, N. Mex. Cultivator. No. 1,155,833; Oct. 5; Gaz. vol. 219; p. 178.

Menges, Theodore C., assignor to Associated Manufacturers Company, Waterloo, Iowa. Coördinating actuating means for magnetos and igniters of internal-combustion engines. No. 1,155,500; Oct. 5; Gaz. vol. 219; p. 62.

Mercer, William T., Wilmington, N. C. Mail-catcher. No. 1,157,244; Oct. 19; Gaz. vol. 219; p. 727.

Mergenthaler Linotype Company. (See Bedell, Richard M., assignor.)

Mergenthaler Linotype Company. (See Converse, Francis B., assignor.)

Mergenthaler Linotype Company. (See Degener, Heinrich, assignor.)

Mergenthaler Linotype Company. (See Kennedy, David S., assignor.)

Mergenthaler Linotype Company. (See Morehouse, Melvin W., assignor.)

Mergenthaler Linotype Company. (See Rudulph, Herman J., assignor.)

Merrell, Irving S., assignor to Merrell-Soule Company, Syracuse, N. Y. Collecting apparatus for finely-divided solids. No. 1,157,947; Oct. 26; Gaz. vol. 219; p. 1034.

Merrell, John F., Marquette, Kans. Clearing attachment for rakes. No. 1,157,506; Oct. 19; Gaz. vol. 219; p. 838.

Merrell-Soule Company. (See Merrell, Irving S., assignor.)

Merriam, Ezra B., Schenectady, N. Y., assignor to General Electric Company. Electric switch. No. 1,156,542; Oct. 12; Gaz. vol. 219; p. 448.

Merrill, Floyd J. (See Prince and Merrill.)

Merritt, Arthur A., Worcester, Mass., assignor to Willcox & Gibbs Sewing Machine Co., New York, N. Y. Speed-governed stopping mechanism. No. 1,156,916; Oct. 19; Gaz. vol. 219; p. 609.

Merritt, James G., and F. W. Watkins, Newburgh, N. Y. Rotary swing. No. 1,155,944; Oct. 5; Gaz. vol. 219; p. 215.

Mertsheimer, Frederick, Kansas City, Mo. Steam-exhaust nozzle. No. 1,155,362; Oct. 5; Gaz. vol. 219; p. 13.

Meschenmoser, William F., New Dorp, N. Y. Plug-switch. No. 1,157,026; Oct. 19; Gaz. vol. 219; p. 649.

Mesinger, Frederick, New York, N. Y. Saddle for motorcycles. No. 1,157,711; Oct. 26; Gaz. vol. 219; p. 952.

Mesinger-Whitney Electric Company. (See Whitney, Perrin B., assignor.)

Messenger Screw Co. (See Tobin, Joseph H., assignor.)

Messer, Amos H., Mankato, Minn. Railway and highway signaling device. No. 1,155,834; Oct. 5; Gaz. vol. 219; p. 178.

Messmore, Ernest O., Tipton, Ind. Odorless garbage-receptacle. No. 1,156,304; Oct. 12; Gaz. vol. 219; p. 363.

Metallurgical Engineering & Process Corporation. (See Robinson, Cyrus, assignor.)

Metallurgical Engineering & Process Corporation. (See Towne and Robinson, assignors.)

Metals Coating Company of America. (See Herkenrath, Frans, assignor.)

Metcalf, George P., St. Paul, Minn. Electric heater for use in connection with water-cooled gasolene-automobiles. No. 1,155,599; Oct. 5; Gaz. vol. 219; p. 95.

Methven, Emily V. (See Davis, Robert J., assignor.)

Metropolitan Sewing Machine Company. (See Weis, John P., assignor.)

Metten, John F., Philadelphia, Pa., assignor to The William Cramp & Sons Ship & Engine Building Company. Clutch. No. 1,157,793; Oct. 26; Gaz. vol. 219; p. 980.

Mettler, Charles, assignor to J. R. Geigy S. A., Basel, Switzerland. Mordant-dyeing azo dye. No. 1,157,169; Oct. 19; Gaz. vol. 219; p. 699.

Metzger, William W., J. A. Altendorf, and C. M. Verrill, Los Angeles, Cal. Non-glare headlight. No. 1,155,600; Oct. 5; Gaz. vol. 219; p. 96.

Mewborne, Robert G., Louisville, Ky., assignor to The Kentucky Tobacco Product Company. Method and apparatus for extracting nicotin from tobacco materials. No. 1,156,609; Oct. 12; Gaz. vol. 219; p. 472.

Meyer-Dellus, Heinrich, Baden, Germany, assignor, by mesne assignments, to General Electric Company. Alternating-current commutator machinery. No. 1,157,948; Oct. 26; Gaz. vol. 219; p. 1035.

Meyer, Erwin E. A. G., Detroit, Mich., assignor to Morgan & Wright. Treatment of vulcanizable plastics. No. 1,157,887; Oct. 26; Gaz. vol. 219; p. 1014.

Meyer, Robert, Mülheim-Ruhr, Germany, assignor, by mesne assignments, to C. P. Coleman and G. M. P. Murphy, receivers. Automatic plate-valve. (Reissue.) No. 13,991; Oct. 12; Gaz. vol. 219; p. 565.

Meyers, George W., Chicago, Ill. Elevator-despatcher. No. 1,156,610; Oct. 12; Gaz. vol. 219; p. 472.

Meyers, Willard F., Long Island City, N. Y. Stone-saw. No. 1,156,166; Oct. 12; Gaz. vol. 219; p. 318.

Michael, Clement W., assignor to J. I. Case Plow Works, Racine, Wis. Harrow. No. 1,156,611; Oct. 12; Gaz. vol. 219; p. 473.

Michaelsen, Charles O., Omaha, Nebr. Ore-grinding machine. No. 1,158,259; Oct. 26; Gaz. vol. 219; p. 1143.

Michel, Benjamin A., New Orleans, La. Refrigerating apparatus. No. 1,155,363; Oct. 5; Gaz. vol. 219; p. 13.

Michigan Stove Company, The. (See Keep, William J., assignor.)

Michod, Charles L., Chicago, Ill. Metal pole. No. 1,156,422; Oct. 12; Gaz. vol. 219; p. 407.

Middleton, George, Providence, R. I. Water-closet gage. No. 1,157,567; Oct. 19; Gaz. vol. 219; p. 838.

Midgley, Thomas, Sr., and T., Jr., Worthington, Ohio. Collapsible core. No. 1,157,117; Oct. 19; Gaz. vol. 219; p. 681.

Midgley, Thomas, Sr., and T., Jr., Worthington, Ohio. Constructing collapsible cores. No. 1,157,118; Oct. 19; Gaz. vol. 219; p. 682.

Miehle Printing Press & Manufacturing Company. (See Henderson, Carl, assignor.)

Miehle Printing Press & Manufacturing Company, The. (See Stevens, Burt D., assignor.)

Miehle, Robert, assignor to Continental & Commercial Trust & Savings Bank, trustee, Chicago, Ill. Driving mechanism for printing-presses. No. 1,157,888; Oct. 26; Gaz. vol. 219; p. 1014.

Mikkelsen, Edward M., Chicago, Ill. Towel-cabinet. No. 1,156,917; Oct. 19; Gaz. vol. 219; p. 610.

Miles, Charles A., Baxter Springs, Kans. Transmission-gearing. No. 1,155,601; Oct. 5; Gaz. vol. 219; p. 96.

Miles, Don D., Jr., San Francisco, Cal. Valve. No. 1,155,602; Oct. 5; Gaz. vol. 219; p. 96.

Miley, Luke A. (See Taylor and Miley.)

Millard, William, New York, N. Y. Dispensing apparatus. No. 1,157,645; Oct. 19; Gaz. vol. 219; p. 803.

Miller, Benjamin D., Wooster, Ohio., assignor of fifty-five one-hundredths to E. S. Landes, W. B. Bryson, and P. C. Given and five one-hundredths to G. H. Kepple. Electric-alarm mail-box. No. 1,157,949; Oct. 26; Gaz. vol. 219; p. 1035.

Miller Cabinet Company. (See Miller and Raab, assignors.)

Miller, Charles L., Norwood, and F. B. Freeman, Cincinnati, Ohio, assignors to United Shoe Machinery Company, Paterson, N. J. Bobbin case and tension. No. 1,157,245; Oct. 19; Gaz. vol. 219; p. 727.

Miller, Charles T., Menard, Ill. Cushion-wheel. No. 1,156,242; Oct. 12; Gaz. vol. 219; p. 342.

Miller, Charles W., *et al.* (See Wood, Charles R., assignor.)

Miller, Cosby D., St. Joseph, Mo., assignor to Detroit Motor Appliance Company, Detroit, Mich. Thermostat-motor. No. 1,157,889; Oct. 26; Gaz. vol. 219; p. 1014.

Miller, Frank E., New York, N. Y. Change-speed driving mechanism. No. 1,156,848; Oct. 12; Gaz. vol. 219; p. 556.

Miller, Frank S., assignor to Harris Air Pump Company, Indianapolis, Ind. Air-lift-pump booster. No. 1,157,998; Oct. 26; Gaz. vol. 219; p. 1051.

Miller, George E., Madison, Me. Reclaiming apparatus for use in connection with pulp-mills. No. 1,156,800; Oct. 12; Gaz. vol. 219; p. 537.

Miller, Henry C., Waterford, N. Y. Cushion for a sound-box. No. 1,155,945; Oct. 5; Gaz. vol. 219; p. 215.

Miller, Jack E., Cleburne, Tex. Shock-former attachment for binders. No. 1,155,603; Oct. 5; Gaz. vol. 219; p. 97.

Miller, James B., assignor to Rochester Carrier Company, Rochester, N. Y. Cell-case and blank therefor. No. 1,157,712; Oct. 26; Gaz. vol. 219; p. 952.

Miller, John F., Trail, British Columbia, Canada. Machine for casting lead pigs. No. 1,157,794; Oct. 26; Gaz. vol. 219; p. 980.

Miller, John H., and L. Raab, assignors to Miller Cabinet Company, Rochester, N. Y. Combined table and writing-desk. No. 1,157,633; Oct. 19; Gaz. vol. 219; p. 859.

Miller, John H., and L. Raab, assignors to Miller Cabinet Company, Rochester, N. Y. Combination table and desk. No. 1,157,634; Oct. 19; Gaz. vol. 219; p. 859.

Miller, Levi B. (See Weintraub and Miller.)

Miller Pasteurizing Machine Company, The. (See Pfouts, Leroy S., assignor.)

Miller Rubber Co. (See Griffith, Richard, assignor.)
Miller, Shrewsbury B., Fairmont, W. Va. Combined vacuum washing and wringing machine. No. 1,155,946; Oct. 5; Gaz. vol. 219; p. 215.
Miller, Thomas W., assignor to The Faultless Rubber Company, Ashland, Ohio. Seamless rubber glove. No. 1,157,646; Oct. 19; Gaz. vol. 219; p. 863.
Millikin, Winfield O., Detroit, Mich. Nut-lock. No. 1,156,243; Oct. 12; Gaz. vol. 219; p. 343.
Millikin, Winfield O., Detroit, Mich. Nut-lock. No. 1,157,999; Oct. 26; Gaz. vol. 219; p. 1052.
Millman, Curtis F., Woodside, Del., assignor to F. Schorno, Passaic, N. J. Signature-machine. No. 1,158,068; Oct. 26; Gaz. vol. 219; p. 1077.
Mills, Andrew J., Weir, Miss. Paper extract-holding cup. No. 1,157,568; Oct. 19; Gaz. vol. 219; p. 838.
Mills, Clarence M., Phillipsburg, Kans., assignor to The Essenkay Products Company, Chicago, Ill. Tire-tool. No. 1,156,167; Oct. 12; Gaz. vol. 219; p. 319.
Mills, Lloyd M., Appleton, Wis. Lock for bottles and jars. No. 1,155,947; Oct. 5; Gaz. vol. 219; p. 216.
Millsap, Leander W., Jr., Woodland, Cal. Wrench. No. 1,155,948; Oct. 5; Gaz. vol. 219; p. 216.
Milmoe, Michael J. (See Redington and Milmoe.)
Miner, William G., Cincinnati, Ohio. Engine for utilizing powdered fuel. No. 1,156,702; Oct. 12; Gaz. vol. 219; p. 505.
Miner, William H. (See O'Connor, John F., assignor.)
Miner, William H. (See Patch, Calvin B., assignor.)
Minerallac Electric Company. (See Bretz, Homer A., assignor.)
Minerals Separation American Syndicate (1913) Limited. (See Higgins, Arthur H., assignor.)
Minerals Separation Limited. (See Higgins and Stenning, assignors.)
Minerals Separation American Syndicate (1913) Limited. (See Owen, Thomas M., assignor.)
Minerals Separation American Syndicate (1913) Limited. (See Wood, Louis A., assignor.)
Minnich, Martin, Covington, Ohio. Broom and tool holder. No. 1,156,168; Oct. 12; Gaz. vol. 219; p. 319.
Minor, Walter S., Cunningham, Tenn. Pitman-coupling. No. 1,156,918; Oct. 19; Gaz. vol. 219; p. 610.
Minor, Walter S., Cunningham, Tenn. Pitman-coupling. No. 1,157,950; Oct. 26; Gaz. vol. 219; p. 1035.
Miotke, Joseph, Milwaukee, Wis. Saw-sharpening machine. No. 1,157,890; Oct. 26; Gaz. vol. 219; p. 1015.
Mischansky, Stephen A., and M. Pawlowski, Syracuse, N. Y.; said Mischansky assignor to said Pawlowski. Liquid-measuring apparatus. No. 1,156,244; Oct. 12; Gaz. vol. 219; p. 343.
Mitchell, Granville C. (See Jaquith, Adelbert, assignor.)
Mitchell, John E., and D. Parks, St. Louis, Mo. Combined lift-cutting and heel-blank-building machine. No. 1,157,409; Oct. 19; Gaz. vol. 219; p. 785.
Mitchell, Thomas T., assignor of one-half to M. R. Crawford, Joaquin, Tex. Lock-nut. No. 1,155,949; Oct. 5; Gaz. vol. 219; p. 217.
Mittasch, Alwin. (See Bosch and Mittasch.)
Mix, Philip J., Boulder, Colo. Pocket-seat. No. 1,157,795; Oct. 26; Gaz. vol. 219; p. 981.
Miyasaki, Yuske, McKees Rocks, Pa. Cast truck-bolster. No. 1,156,305; Oct. 12; Gaz. vol. 219; p. 363.
Moberg, Robert O., Richardson, Wis. Means for securing cutting sections or knives to sickle or cutter bars. No. 1,156,703; Oct. 12; Gaz. vol. 219; p. 506.
Moeller, Isak. (See Hansson and Moeller.)
Moench, Frederick, Rushville, Ill. Plating or decorating chinaware or glassware. No. 1,157,569; Oct. 19; Gaz. vol. 219; p. 838.
Moench, Frederick, Rushville, Ill. Cartridge-stop for magazine-shotguns. No. 1,157,571; Oct. 19; Gaz. vol. 219; p. 839.
Moench, Frederick, Rushville, Ill. Vulcanizing and attaching rubber. No. 1,157,572; Oct. 19; Gaz. vol. 219; p. 839.
Moerbe, Herman, Giddings, Tex. Nut-lock. No. 1,158,260; Oct. 26; Gaz. vol. 219; p. 1144.
Moeschl-Edwards Corrugating Company, The. (See Probert, Edwin R., assignor.)
Moffatt, James R., assignor to Union Special Machine Company, Chicago, Ill. Controlling device for operating implements in sewing-machines. No. 1,157,170; Oct. 19; Gaz. vol. 219; p. 699.
Moffatt, James R., and R. S. Kelso, assignors to Union Special Machine Company, Chicago, Ill. Sewing-machine. No. 1,157,891; Oct. 26; Gaz. vol. 219; p. 1015.
Moffatt, James R., and R. S. Kelso, assignors to Union Special Machine Company, Chicago, Ill. Needle-guard for sewing-machines. No. 1,157,892; Oct. 26; Gaz. vol. 219; p. 1016.
Mogyoros, George S., Dayton, Ohio. Elevator safety device. No. 1,157,322; Oct. 19; Gaz. vol. 219; p. 754.
Mohun, John L. (See Martin, Frederick W., assignor.)
Mohun, John L., Brooklyn, N. Y. Car-roof. No. 1,155,604; Oct. 5; Gaz. vol. 219; p. 97.
Monitor Time Clock Co. (See Hawley, William D., assignor.)
Monnot, John F., Paris, France. Electric switch. No. 1,155,364; Oct. 5; Gaz. vol. 219; p. 14.
Monnot, John F., New York, N. Y., assignor, by mesne assignments, to Duplex Metallic Company. Alloy-surfaced metal. No. 1,156,169; Oct. 12; Gaz. vol. 219; p. 319.
Monro, William L., assignor to Window Glass Machine Company, Pittsburgh, Pa. Regenerative glass-drawing furnace. No. 1,157,246; Oct. 19; Gaz. vol. 219; p. 728.
Monroe, Paul L., Watsontown, Pa. Match-box. No. 1,157,951; Oct. 26; Gaz. vol. 219; p. 1036.
Montbarbon, Philippe, assignor to Societe Anonyme Montbarbon, Neuilly-sur-Seine, France. Cooling system for internal-combustion engines. No. 1,155,950; Oct. 5; Gaz. vol. 219; p. 217.
Monteleone, Ernest, Jersey City, N. J. Cash-box. No. 1,156,919; Oct. 19; Gaz. vol. 219; p. 610.
Montfort, J. T., *et al.* (See Holsey, Walter R., assignor.)
Monti, Eudo, Turin, Italy. Clarifying and concentrating fruit-juices. No. 1,158,261; Oct. 26; Gaz. vol. 219; p. 1144.
Montis, Jean. (See Gouguet and Montis.)
Moore, Byron E., Slater, Mo. Wrench. No. 1,155,673; Oct. 5; Gaz. vol. 219; p. 121.
Moore, Charles C., Washington, D. C., assignor of one-half to F. C. Stevens. Manufacture of starch. No. 1,156,801; Oct. 12; Gaz. vol. 219; p. 538.
Moore, Charles R., La Fayette, Ind. Recording instrument. No. 1,155,501; Oct. 5; Gaz. vol. 219; p. 63.
Moore, Charles R., La Fayette, Ind. Electromagnet. No. 1,155,502; Oct. 5; Gaz. vol. 219; p. 63.
Moore, Frank V., assignor to Woman's World Magazine Company Incorporated, Chicago, Ill. Feed mechanism for mailing or other machines. No. 1,155,503; Oct. 5; Gaz. vol. 219; p. 63.
Moore, Hugh K., Berlin, N. H. Making calcium hypochlorite. No. 1,155,605; Oct. 5; Gaz. vol. 219; p. 98.
Moore, Jacob L., and F. L. Musser; said Musser assignor to Pittsburgh-Hickson Company, Butler, Pa., and said Moore assignor to Moore Manufacturing Company, Muncie, Ind. Folding couch. No. 1,156,704; Oct. 12; Gaz. vol. 219; p. 506.
Moore, John C., and E. L. Winston, Rushville, Nebr. Coupler for pianos and player-pianos. No. 1,157,573; Oct. 19; Gaz. vol. 219; p. 839.
Moore, John L., New York, assignor to F. Strauss, Yonkers, N. Y. Toy vehicle. No. 1,157,171; Oct. 19; Gaz. vol. 219; p. 700.
Moore Manufacturing Company *et al.* (See Moore and Musser, assignors.)
Moore Patent Car Company. (See Elmer, James P., assignor.)
Moore, Philip W., Evanston, assignor to The P & M Company, Chicago, Ill. Rail-stay. No. 1,158,141; Oct. 26; Gaz. vol. 219; p. 1103.
Moore, Robert S. (See Erickson, Daniel E., assignor.)
Morehouse, Melvin W., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Testing mechanism. No. 1,157,796; Oct. 26; Gaz. vol. 219; p. 981.
Moreton, Alfred G., Erie, Pa., assignor to General Electric Company. Controlling mechanism for internal-combustion engines. No. 1,158,000; Oct. 26; Gaz. vol. 219; p. 1052.
Morey, William E., assignor to National Dump Car Company, Chicago, Ill. Door-actuating mechanism for general-service cars. No. 1,155,430; Oct. 5; Gaz. vol. 219; p. 37.
Morey, William E., assignor to National Dump Car Company, Chicago, Ill. Door-actuating mechanism for general-service cars. No. 1,157,893; Oct. 26; Gaz. vol. 219; p. 1016.
Morgan, Abraham, Independence, Mo. Spring-wheel. No. 1,156,306; Oct. 12; Gaz. vol. 219; p. 364.
Morgan & Wright. (See Meyer, Erwin E. A. G., assignor.)
Morganfield, August, Junction City, Kans. Collar-recreaser. No. 1,156,307; Oct. 12; Gaz. vol. 219; p. 364.
Mori, Susan T., Meadow Valley, Cal. Doll-eye adjuster. No. 1,157,119; Oct. 19; Gaz. vol. 219; p. 682.
Morine, Edwin C., assignor, by mesne assignments, to Kryptok Company, New York, N. Y. Making bifocal lenses. No. 1,157,410; Oct. 19; Gaz. vol. 219; p. 786.
Morine, Edwin C., Toledo, Ohio, assignor to Kryptok Company, New York, N. Y. Lens manufacturing. No. 1,157,411; Oct. 19; Gaz. vol. 219; p. 786.
Morison, Donald B., Hartlepool, England. Apparatus for withdrawing aerated vapor and condensate from steam-condensers. No. 1,155,951; Oct. 5; Gaz. vol. 219; p. 217.
Morning, George A., *et al.* (See Lamar, Alexis L., assignor.)
Morrell, Lon, assignor to J. P. Campbell, Jacksonville, Fla. Sprinkler for irrigating systems. No. 1,156,612; Oct. 12; Gaz. vol. 219; p. 473.
Morris, Fulton R., assignor to Morris Grain Drier Co., Milwaukee, Wis. Grain drier and cooler. No. 1,157,172; Oct. 19; Gaz. vol. 219; p. 700.
Morris Grain Drier Co. (See Morris, Fulton R., assignor.)
Morris, William L., assignor to S. F. Bowser & Company, Inc., Fort Wayne, Ind. Engine oil connection. No. 1,157,894; Oct. 26; Gaz. vol. 219; p. 1017.
Morrison, John S., Great Bend, Kans. Carpet-beater. No. 1,155,952; Oct. 5; Gaz. vol. 219; p. 218.
Morrison, Lewis E., Newark, N. J., assignor to Humana Company. Safety-guard for printing-presses. No. 1,155,756; Oct. 5; Gaz. vol. 219; p. 149.
Morrison, Lewis E., Newark, N. J., assignor to Humana Company. Safety-guard for printing-machines. No. 1,156,423; Oct. 12; Gaz. vol. 219; p. 408.

Morrison, Lewis E., Newark, N. J., assignor to Humana Company. Safety-guard for printing-presses. No. 1,157,247; Oct. 19; Gaz. vol. 219; p. 728.
Morrison, Lewis E., Newark, N. J., assignor to Humana Company. Safety-guard for printing-machines. No. 1,158,069; Oct. 26; Gaz. vol. 219; p. 1078.
Morrow, Norman H., Bemidji, Minn. Hinge. No. 1,157,713; Oct. 26; Gaz. vol. 219; p. 953.
Morrow, William B., Shippensburg, Pa. Screen-door fastener. No. 1,155,953; Oct. 5; Gaz. vol. 219; p. 219.
Morse, Arthur J., Newport, Melbourne, Victoria, Australia. Spring-tire. No. 1,158,070; Oct. 26; Gaz. vol. 219; p. 1078.
Morse, Frank L., Ithaca, N. Y. Valve mechanism. No. 1,156,920; Oct. 19; Gaz. vol. 219; p. 611.
Morse, Frank L., Ithaca, N. Y. Valve-operating mechanism. No. 1,156,921; Oct. 19; Gaz. vol. 219; p. 611.
Morse, Rodolph F., Providence, R. I. Grate-bar. No. 1,155,674; Oct. 5; Gaz. vol. 219; p. 121.
Mosby, Alfred D., assignor to Marsh Capron Manufacturing Company, Chicago, Ill. Loading apparatus. No. 1,156,245; Oct. 12; Gaz. vol. 219; p. 344.
Moschcowitz, Herman, New York, N. Y. Form for preserving and displaying waists and other garments. No. 1,156,246; Oct. 12; Gaz. vol. 219; p. 344.
Mosler, Moses, Cincinnati, and C. Bartels, Hamilton, Ohio, assignors to The Mosler Safe Company, New York, N. Y. Safe construction. No. 1,157,027; Oct. 19; Gaz. vol. 219; p. 649.
Mosler, Moses, Cincinnati, and C. Bartels, Hamilton, Ohio, assignors to The Mosler Safe Company, New York, N. Y. Safe. No. 1,157,412; Oct. 19; Gaz. vol. 219; p. 786.
Mosler Safe Company, The. (See Mosler and Bartels, assignors.)
Moss, Sanford A., Lynn, Mass., assignor to General Electric Company. Centrifugal compressor. No. 1,156,613; Oct. 12; Gaz. vol. 219; p. 473.
Moszynski, Joszyp, Philadelphia, Pa. Tanning and waterproofing leather. No. 1,157,952; Oct. 26; Gaz. vol. 219; p. 1036.
Motograph Company of America. (See Bickley, Everett H., assignor.)
Mott, James W., Cresco, Iowa, assignor of one-third to A. C. and C. Christen, Decorah, Iowa. Headlight-turning mechanism for vehicles. No. 1,158,071; Oct. 26; Gaz. vol. 219; p. 1078.
Moyer, Charles F., *et al.* (See Akin, Willis H., assignor.)
Moynihan, Jeremiah A., assignor of one-half to T. E. Sands, Minneapolis, Minn. Car-replacer. No. 1,155,431; Oct. 5; Gaz. vol. 219; p. 37.
Mössdsiers, Aloys, Shelton, Conn. Fire-alarm box. No. 1,156,705; Oct. 12; Gaz. vol. 219; p. 506.
Muckleroy, William C., *et al.* (See Cox, Thomas E., assignor.)
Mueller, Louis, Cincinnati, Ohio. Socket-wrench. No. 1,155,675; Oct. 5; Gaz. vol. 219; p. 122.
Mueller, Philip, assignor to H. Mueller Mfg. Co., Decatur, Ill. Sanitary drinking-fountain. No. 1,157,173; Oct. 19; Gaz. vol. 219; p. 701.
Mueller, Robert, assignor to H. Mueller Manufacturing Company, Decatur, Ill. Self-retaining coupling-washer. No. 1,157,574; Oct. 19; Gaz. vol. 219; p. 840.
Müller, Friederich, assignor to Pratt & Whitney Company, Hartford, Conn. Tap-making machine. No. 1,155,432; Oct. 5; Gaz. vol. 219; p. 38.
Müller, Henry, assignor of one-half to J. Bernhard, Philadelphia, Pa. Sanitary guard for water-closet seats. No. 1,158,142; Oct. 26; Gaz. vol. 219; p. 1103.
Mullowney, Timothy, Milwaukee, Wis. Blower-pipe-assembling derrick. No. 1,157,248; Oct. 19; Gaz. vol. 219; p. 729.
Mulock, William R., Winnipeg, Manitoba, Canada. Platen for type-writing machines. No. 1,156,614; Oct. 12; Gaz. vol. 219; p. 474.
Multiplex Company. (See Lederman, John E., assignor.)
Mulvey, Frank, Waupun, Wis. Railway-brake-setting mechanism. No. 1,155,504; Oct. 5; Gaz. vol. 219; p. 64.
Mumm, Edward F., Milwaukee, Wis. Duplicating attachment for calculating-machines. No. 1,157,635; Oct. 19; Gaz. vol. 219; p. 859.
Mummery, Frederick G., *et al.* (See Buskard, Samuel G., assignor.)
Münch, Gustav. (See Specketer and Münch.)
Muney, Peter, St. Louis, Mo. Soldering-iron. No. 1,155,433; Oct. 5; Gaz. vol. 219; p. 38.
Murphey, James A., Philadelphia, Pa., and F. S. Thompson, Atlantic City, N. J. Automobile-lock. No. 1,156,615; Oct. 12; Gaz. vol. 219; p. 474.
Murphy, G. M. P., *et al.*, receivers. (See Meyer, Robert, assignor.) (Reissue.)
Murphy, George H., Balls Ferry, Cal. Electrical scroll-saw. No. 1,155,835; Oct. 5; Gaz. vol. 219; p. 179.
Murphy, James L., New York, and J. Richmond, Yonkers, N. Y. Means for fixing anchorages in concrete walls. No. 1,157,895; Oct. 26; Gaz. vol. 219; p. 1017.
Murphy, Walter P., Chicago, Ill. Metal car-roof. No. 1,156,616; Oct. 12; Gaz. vol. 219; p. 475.
Murphy, Walter P., Chicago, Ill. Car-roof. No. 1,156,617; Oct. 12; Gaz. vol. 219; p. 476.
Murray, Charles F., Evanston, assignor to The Fowler Car Company, Chicago, Ill. Carline. No. 1,155,365; Oct. 5; Gaz. vol. 219; p. 14.
Murray, Thomas E., New York, N. Y. Machine for washing dishes. No. 1,156,424; Oct. 12; Gaz. vol. 219; p. 408.
Murray, Thomas E., New York, N. Y. Lining for tanks. No. 1,156,425; Oct. 12; Gaz. vol. 219; p. 408.
Murray, Thomas E., New York, N. Y. Apparatus for electric welding. No. 1,156,426; Oct. 12; Gaz. vol. 219; p. 409.
Murray, Thomas E., New York, N. Y. Vehicle-wheel. No. 1,156,427; Oct. 12; Gaz. vol. 219; p. 409.
Murrey, Ed, University Place, assignor to N. White and F. L. Turner, Lincoln, Nebr. Grab-fork. No. 1,156,247; Oct. 12; Gaz. vol. 219; p. 344.
Murrey, Jasper P., Cleveland, Ohio. Resilient tread for vehicle-wheels. No. 1,156,620; Oct. 12; Gaz. vol. 219; p. 476.
Musser, Fory L. (See Moore and Musser.)
Myatt, John W., assignor to Ledgers Limited, Tipton, England. Loose-leaf book. No. 1,158,262; Oct. 26; Gaz. vol. 219; p. 1144.
Myers, Alexander, Revere, assignor to International Comfort Chair Co., Boston Mass. Chair-awning. No. 1,155,366; Oct. 5; Gaz. vol. 219; p. 15.
Myers, John F., Millersburg, Ohio. Swine-feeder. No. 1,156,428; Oct. 12; Gaz. vol. 219; p. 409.
Myers, Lewis C. (See Hess and Myers.)
Myers, Samuel A., Boston, Mass. Collar for garments. No. 1,156,090; Oct. 12; Gaz. vol. 219; p. 293.
Mygatt, Otis A., assignor to Holophane Glass Company, New York, N. Y. Glass structure. No. 1,157,953; Oct. 26; Gaz. vol. 219; p. 1036.
Myhre, Arthur H., Tacoma, Wash. Engraver's ring-clamp. No. 1,157,120; Oct. 19; Gaz. vol. 219; p. 682.
N-W. Equipment Co. Inc. (See Banks, William C., assignor.)
Nachod, Carl P., Philadelphia, Pa., assignor to Nachod Signal Company, Inc. Electric signaling system. No. 1,158,143; Oct. 26; Gaz. vol. 219; p. 1103.
Nachod Signal Company. (See Nachod, Carl P., assignor.)
Nash, Charles J., assignor to Universal Draft Gear Attachment Co., Chicago, Ill. Yoke for draft-gears. No. 1,156,618; Oct. 12; Gaz. vol. 219; p. 476.
Nashua Machine Company. (See Littlefield, Frank A., assignor.)
Nasief, Benjamin J., and F. F. Dorsey, Rochester, assignors to Ansco Company, Binghamton, N. Y. Roll-film-developing apparatus. No. 1,156,922; Oct. 19; Gaz. vol. 219; p. 612.
National-Acme Manufacturing Company, The. (See Smith and Rindfleisch, assignors.)
National Automatic Tool Company. (See Cleveland, Edgar W., assignor.)
National Blank Book Company. (See Schade, John, Jr., assignor.)
National Brake & Electric Company. (See Aikman, Burton S., assignor.)
National Brass Manufacturing Company. (See Wray, Charles F., assignor.)
National Carbon Company. (See Brown, John W., assignor.)
National Cash Register Company, The. (See Nelson, Carl L., assignor.)
National Cash Register Company, The. (See Von Pein, Edward J., assignor.)
National Chemical Company. (See Matthes, Samuel S., assignor.)
National Chemical Company. (See Seltenreich, John J., assignor.)
National Chemical Company. (See Tyler, Charles A., assignor.)
National Dump Car Company. (See Morey, William E., assignor.)
National Electric Specialty Company, The. (See Greene, John T., assignor.)
National Gas Engine Company Limited, The. (See Clerk, Dugald, assignor.)
National Lock Washer Company, The. (See Hoyt, Daniel, assignor.)
National Malleable Castings Company, The. (See Byers, Jacob J., assignor.)
National Malleable Castings Company, The. (See Coffin, Walter E., assignor.)
National Molding Company. (See Gilson and Fullman, assignors.)
National Peat Refining Company, The. (See Bartholomew, Ellis, assignor.)
National Spring and Wire Company. (See King, Fred B., assignor.)
National Tube Company. (See Fell, Charles, assignor.)
National Tube Company. (See Patterson, Thomas, assignor.)
Neal, Finess E., Anderson, Ind. Liner for pneumatic tires. No. 1,155,367; Oct. 5; Gaz. vol. 219; p. 15.
Neal, Spencer G., assignor to California Valve and Air Brake Company, Los Angeles, Cal. Air-retaining valve for air-brake apparatus. No. 1,157,954; Oct. 26; Gaz. vol. 219; p. 1036.
Neel, James L., assignor of one-half to A. C. Kipp, Cedar Rapids, Iowa. Can-making machine. No. 1,156,619; Oct. 12; Gaz. vol. 219; p. 476.
Neeley, George S., St. Louis, Mo., assignor, by mesne assignments, to General Electric Company. Electric regulator. No. 1,157,955; Oct. 26; Gaz. vol. 219; p. 1037.

Neeley, George S., St. Louis, Mo., assignor, by mesne assignments, to General Electric Company. Automatic voltage-regulator. No. 1,158,001; Oct. 26; Gaz. vol. 219; p. 1053.
Nellsen, Hans C. (See Frazee, Jackson F., assignor.)
Neller, Albert H., assignor of one-third to I. L. Eales and one-third to F. S. Boles, Fairfield, Iowa. Caster-mounting. No. 1,155,606; Oct. 5; Gaz. vol. 219; p. 98.
Neller, Albert H., assignor of one-third to I. L. Eales and one-third to F. S. Boles, Fairfield, Iowa. Caster-mounting. No. 1,155,607; Oct. 5; Gaz. vol. 219; p. 98.
Nelles, Fred C. (See Grine, Harry A., assignor.)
Nelson, Alexander. (See Hess, Christian F., assignor.)
Nelson, Alfred, Camden, N. J. Cushion-tire. No. 1,156,802; Oct. 12; Gaz. vol. 219; p. 538.
Nelson, Carl E., Wilkinsburg, Pa. Keyboard for telegraph-transmitters. No. 1,157,714; Oct. 26; Gaz. vol. 219; p. 953.
Nelson, Carl L., Seattle, Wash., assignor to The National Cash Register Company, Dayton, Ohio. Cash-register indicator. No. 1,156,091; Oct. 12; Gaz. vol. 219; p. 293.
Nelson, Peter R., Mambajao, Philippine Islands. Fiber-cleaning machine. No. 1,157,575; Oct. 19; Gaz. vol. 219; p. 840.
Nelson, William P., Columbia Falls, Mont. Bread-mixer. No. 1,157,576; Oct. 19; Gaz. vol. 219; p. 841.
Nesper, John B., Narberth, Pa. Tooth-cleaner. No. 1,157,413; Oct. 19; Gaz. vol. 219; p. 787.
Nethercott, William J., Kerrobert, Saskatchewan, Canada. Ash-sifter. No. 1,156,923; Oct. 19; Gaz. vol. 219; p. 612.
Nettle, John F., Butte, Mont. Resilient wheel. No. 1,158,263; Oct. 26; Gaz. vol. 219; p. 1145.
Neubecker, C. A. (See Strohl, Friedrich, assignor.)
Neuland, Alfons H., Bergenfield, N. J. Dynamo-electric machine. No. 1,157,414; Oct. 19; Gaz. vol. 219; p. 787.
Nevill, David J., assignor to The Dorr Cyanide Machinery Company, Denver, Colo. Ore-classifier. No. 1,156,543; Oct. 12; Gaz. vol. 219; p. 449.
Nevill, David J., Denver, Colo., assignor to The Dorr Cyanide Machinery Company, Ore-classifier. No. 1,156,544; Oct. 12; Gaz. vol. 219; p. 449.
New England Electric Company, The. (See Caine, James C., assignor.)
New Haven Clock Co. (See Porter, Wilson E., assignor.)
New Haven Clock Co. (See Porter and Cornwell, assignors.)
New Jersey Patent Company. (See Holland, Newman H., assignor.)
New Jersey Patent Company. (See Saltsman, Auguste L., assignor.)
New Jersey Zinc Company, The. (See Stone, George C., assignor.)
New York Coil Company. (See Rhoades, Lewis T., assignor.)
Newark Spring Mattress Company. (See Manchee, Wilfrid A., assignor.)
Newark Spring Mattress Company, The. (See Odell, Robert C., assignor.)
Newberry, Spencer B., Bayhridge, assignor to Sandusky Portland Cement Company, Cleveland, Ohio. Basic lining for kilns. No. 1,156,018; Oct. 5; Gaz. vol. 219; p. 240.
Newbold, Harry, St. Albans, assignor of one-half to W. R. Williams, London, England. Apparatus for making bifocal lenses. No. 1,158,002; Oct. 26; Gaz. vol. 219; p. 1053.
Newhall, Henry B. (See Pleister, Henry W., assignor.)
Newman, Charles M. (See Stephenson and Drapalik, assignors.)
Neznalski, Josef, and J. Maslanik, McKees Rocks, Pa. Motor-vehicle. No. 1,157,174; Oct. 19; Gaz. vol. 219; p. 701.
Nichol, Robert S., Brooking, Saskatchewan, Canada. Traction-wheel scraper. No. 1,156,248; Oct. 12; Gaz. vol. 219; p. 345.
Nichols, Charles W. (See Biardone, Nichols, and Bruguiere.)
Nichols, John S. (See Nichols, Theodore J., assignor.)
Nichols, Theodore J., assignor of one-half to J. S. Nichols, Bellevue, Tex. Carbureter. No. 1,156,924; Oct. 19; Gaz. vol. 219; p. 612.
Nicholson, John H., Pittsburgh, Pa. Spinning apparatus. No. 1,157,323; Oct. 19; Gaz. vol. 219; p. 754.
Nickels, Griffin. (See Lavender and Nickels.)
Nickolai, Carl L., De Beque, assignor of forty one-hundredths to E. W. Lloyd, Pueblo, Colo. Double-undereamer setter. No. 1,157,577; Oct. 19; Gaz. vol. 219; p. 841.
Nienstadt, August E., assignor to M. Wolfer, New York, N. Y. Color-cartridge. No. 1,155,676; Oct. 5; Gaz. vol. 219; p. 122.
Niermeyer, Henry W., Utica, N. Y. Rib-knitting machine. No. 1,158,072; Oct. 26; Gaz. vol. 219; p. 1079.
Nieschang, Charles C. F., Fort Wayne, Ind. Inhaler. No. 1,155,608; Oct. 5; Gaz. vol. 219; p. 98.
Niles-Bement-Pond Company. (See Keefer, Samuel H., assignor.)
Niles, Irving F., Plainfield, N. J., assignor to R. Hoe and Co., New York, N. Y. Printing-machine. No. 1,155,505; Oct. 5; Gaz. vol. 219; p. 64.
Niles, Seymour M., Saugus, Mass. Hollow shoe-form. No. 1,156,429; Oct. 12; Gaz. vol. 219; p. 409.
Nivois, Victor, Brooklyn, N. Y. Container. No. 1,156,019; Oct. 5; Gaz. vol. 219; p. 240.
Noakes, Charles A., Rock Lake, N. D. Horse-whipping device. No. 1,158,264; Oct. 26; Gaz. vol. 219; p. 1145.
Noble, E. L. (See Noble, James A., assignor.)
Noble, James A., New York, assignor to E. L. Noble, Brooklyn, N. Y. Hand-operated car-brake. No. 1,156,849; Oct. 12; Gaz. vol. 219; p. 556.
Noble, Warren, Orchard Lake, Mich., assignor to Sangamo Electric Company, Springfield, Ill. Mechanism for regulating the charging rate of storage batteries. No. 1,157,028; Oct. 19; Gaz. vol. 219; p. 650.
Nobles, Claude R., St. John, New Brunswick, Canada. Sash-holder. No. 1,157,797; Oct. 26; Gaz. vol. 219; p. 981.
Noiseless Typewriter Company, The. (See Anderson, Nils H., assignor.)
Nordberg, Bruno V., Milwaukee, Wis. Engine. No. 1,157,029; Oct. 19; Gaz. vol. 219; p. 650.
Nordberg, Bruno V., Milwaukee, Wis. Compression-controlling mechanism for engines. No. 1,157,030; Oct. 19; Gaz. vol. 219; p. 651.
Nordyke & Marmon Company. (See Ziegler, Leslie I., assignor.)
Norris, George L., Pittsburgh, assignor to Tinius Olsen Testing Machine Company, Philadelphia, Pa. Abrasion-testing machine. No. 1,156,803; Oct. 12; Gaz. vol. 219; p. 538.
Norsk Hydro-Elektrisk Kvaelstofaktieselskab. (See Troye, Einar, assignor.)
Norsk-Hydroelektrisk Kvaelstofaktieselkab. (See Collett, Emil, assignor.)
Northcroft, Wilfrid. (See McKinzie, Mortimer, assignor.)
Northwestern Manufacturing Company. (See Folden, Frank H., assignor.)
Norton, Horatio N., Mount Vernon, N. Y. Fluid-power-transmitting apparatus for vehicles. No. 1,157,415; Oct. 19; Gaz. vol. 219; p. 788.
Norvell, Peyton. (See Russell, George H., assignor.)
Norwich Automatic Feeder Company, The. (See Enos, Frank, Jr., assignor.)
Norwood, John E. (See Schroeder and Norwood.)
Nuhring, Charles, Cincinnati, Ohio. Hose-rack. No. 1,156,706; Oct. 12; Gaz. vol. 219; p. 507.
Nutt, Norman W., assignor to Trenton Electric and Conduit Company, Trenton, N. J. Electrical fuse-plug. No. 1,158,145; Oct. 26; Gaz. vol. 219; p. 1104.
O'Brien, Joseph F., New York, N. Y. Window construction. No. 1,157,031; Oct. 19; Gaz. vol. 219; p. 651.
O'Connor, John F., assignor to W. H. Miner, Chicago, Ill. Friction draft-gear for railway-cars. No. 1,156,092; Oct. 12; Gaz. vol. 219; p. 293.
O'Connor, Richard A. (See Charland and O'Connor.)
O'Dwyer, Joseph, assignor to L. O'Dwyer, New York, N. Y. Foot-corset. No. 1,156,621; Oct. 12; Gaz. vol. 219; p. 477.
O'Dwyer, Launcelot. (See O'Dwyer, Joseph, assignor.)
O'Neil, Stephen G., *et al.* (See Mason, Hosea A., assignor.)
O'Reilly, William E., London, England. Safety-razor. No. 1,157,249; Oct. 19; Gaz. vol. 219; p. 729.
Oberhacke, Henry B., Los Angeles, Cal. Built-up structure of glass or the like. No. 1,158,144; Oct. 26; Gaz. vol. 219; p. 1104.
Odabashian, Serop, Worcester, Mass. Machine for cleaning metal strips. No. 1,155,609; Oct. 5; Gaz. vol. 219; p. 99.
Odell, Robert C., assignor to The Newark Spring Mattress Company, Newark, N. J. Bed-bottom. No. 1,157,798; Oct. 26; Gaz. vol. 219; p. 982.
Oehler, Max, St. Louis, Mo. Machine for cutting fat. No. 1,157,799; Oct. 26; Gaz. vol. 219; p. 982.
Ogrissek, George A., and J. Jaworsky, Los Angeles, Cal. Aircraft. No. 1,157,636; Oct. 19; Gaz. vol. 219; p. 859.
Ohio Grease Company, The. (See Lowry, Frank, assignor.)
Ohio Match Company, The. (See Welker, Alvin D., assignor.)
Ohnstrand, Enoch, assignor to U. S. Steel Furniture Company, Syracuse, N. Y. Drawer-locking mechanism. No. 1,157,032; Oct. 19; Gaz. vol. 219; p. 652.
Oller, Frank E., Omaha, Nebr., assignor to Positive Print Machine and Paper Co. Camera provided with automatic fluid-treating mechanism. No. 1,158,386; Oct. 26; Gaz. vol. 219; p. 1189.
Olandt, Robert H., Long Island City, N. Y. Internal-combustion engine. No. 1,155,434; Oct. 5; Gaz. vol. 219; p. 38.
Oldham, Frank, Dallas, Tex. Spraying attachment for cultivators. No. 1,156,622; Oct. 12; Gaz. vol. 219; p. 477.
Olive, Oliver H., Indianola, Iowa. Water-motor. No. 1,157,416; Oct. 19; Gaz. vol. 219; p. 788.
Oliver Chilled Plow Works. (See Heylman, Edward M., assignor.)
Olney, Harry W., Spokane, Wash. Electric burglar, fire, and general alarm. No. 1,158,146; Oct. 26; Gaz. vol. 219; p. 1104.
Olsen, Nels, Menominee, Mich. Accounts-delivery cabinet. No. 1,155,954; Oct. 5; Gaz. vol. 219; p. 219.
Olson, George, administrator. (See Simon, Carl G.)
Olson, John, Belgrade, Mo. Wire-fence stretcher. No. 1,157,324; Oct. 19; Gaz. vol. 219; p. 755.

Olson, Karl E., Irvington, N. J. Making imitation gold or colored leaf. No. 1,158,265; Oct. 26; Gaz. vol. 219; p. 1145.
Oman, Reuben B., Willmar, Minn. Reversible variable-speed drive. No. 1,155,368; Oct. 5; Gaz. vol. 219; p. 15.
Onderdonk, Lansing, New York, N. Y., assignor to Union Special Machine Company, Chicago, Ill. Sewing-machine feeding and ruffling mechanism. No. 1,156,545; Oct. 12; Gaz. vol. 219; p. 450.
Oppen, Ole K., Chicago, Ill. Cylinder for washing-machines. No. 1,157,121; Oct. 19; Gaz. vol. 219; p. 682.
Organ, Thomas O., Philadelphia, Pa. Grease-cup. No. 1,156,804; Oct. 12; Gaz. vol. 219; p. 539.
Orpen, William H., Jr. (See Sperry and Orpen.)
Orpen, William H., Jr., Brooklyn, assignor to International Typesetting Machine Company, New York, N. Y. Magazine for typographical machines. No. 1,156,033; Oct. 5; Gaz. vol. 219; p. 246.
Orrock, John W., assignor of one-half to H. H. Vaughan, Montreal, Quebec, Canada. Underground conduit. No. 1,155,610; Oct. 5; Gaz. vol. 219; p. 99.
Osaki, Mihisuka, San Quentin, Cal. Shoe-supporter. No. 1,155,506; Oct. 5; Gaz. vol. 219; p. 65.
Osborne, John, Hotchkiss, Colo. Hose-swivel. No. 1,157,715; Oct. 26; Gaz. vol. 219; p. 953.
Osborne, John L., assignor to Judson Governor Company, Rochester, N. Y. Valve. No. 1,157,956; Oct. 26; Gaz. vol. 219; p. 1038.
Osgood, John L., Buffalo, N. Y. Closure for oiling-ducts. No. 1,157,250; Oct. 19; Gaz. vol. 219; p. 729.
Osgood, Walter P. (See Edwards and Osgood.)
Oslund, John E., Hartford, Conn. Universal test-indicator. No. 1,157,800; Oct. 26; Gaz. vol. 219; p. 982.
Osnos, Mendel, Berlin, Germany, assignor to General Electric Company. Dynamo-electric machine. No. 1,157,325; Oct. 19; Gaz. vol. 219; p. 755.
Osswald, Herman, Greenlawn, assignor, by mesne assignments, to Locke Steel Chain Company, Great River, N. Y. Chain-link and making and assembling same. No. 1,157,175; Oct. 19; Gaz. vol. 219; p. 701.
Otis Elevator Company. (See Ihlder, John D., assignor.)
Otis Elevator Company. (See Lindquist, David L., assignor.)
Otis Elevator Company. (See Pratt, Charles R., assignor.)
Otis-Fensom Elevator Company. (See Bennett, Joseph C., assignor.)
Otis, Spencer. (See Thompson and Otis.)
Outerson, James T. (See Head, Robert, assignor.)
Outrebon, Edouard, assignor to Manufacture d'Horlogerie de Béthune, Béthune, France. Weighing apparatus. No. 1,157,716; Oct. 26; Gaz. vol. 219; p. 954.
Overbury, Frederick C., New York, N. Y., and H. C. Platts, assignors to Flintkote Manufacturing Company, Rutherford, N. J. Weatherproof covering. No. 1,158,266; Oct. 26; Gaz. vol. 219; p. 1145.
Overbury, Frederick C., New York, N. Y., and H. C. Platts, assignors to Flintkote Manufacturing Company, Rutherford, N. J. Flexible convex tile roofing. No. 1,158,267; Oct. 26; Gaz. vol. 219; p. 1146.
Overbury, Frederick C., New York, N. Y., and H. C. Platts, assignors to Flintkote Manufacturing Company, Rutherford, N. J. Tile roofing. No. 1,158,268; Oct. 26; Gaz. vol. 219; p. 1146.
Owen, Henry A., assignor to The Whitin Machine Works, Whitinsville, Mass. Nipper-motion drive for cotton-combers. No. 1,157,033; Oct. 19; Gaz. vol. 219; p. 652.
Owen, Oscar L., and L. Rasco, assignors to The Whitin Machine Works, Whitinsville, Mass. Roving-creel for spinning and doubling frames. No. 1,158,387; Oct. 26; Gaz. vol. 219; p. 1189.
Owen, Thomas M., Broken Hill, New South Wales, Australia, assignor to Minerals Separation American Syndicate (1913) Limited, London, England. Apparatus for the concentration of ores. No. 1,155,836; Oct. 5; Gaz. vol. 219; p. 179.
Owen, Thomas M., assignor to E. W. Culver, Sydney, New South Wales, Australia. Separation of metallic sulfids from ores. No. 1,157,176; Oct. 19; Gaz. vol. 219; p. 702.
P & M Company, The. (See Moore, Philip W., assignor.)
Pacelli, John, New York, N. Y. Shutter-fastener. No. 1,156,707; Oct. 12; Gaz. vol. 219; p. 507.
Pacius, Julius P. C. (See Schoenherr, Frank C., assignor.)
Pack, Charles, New York, N. Y., assignor to Doehler Die Casting Company. White-metal casting and making same. No. 1,156,093; Oct. 12; Gaz. vol. 219; p. 294.
Packard Motor Car Company. (See Huff, Russell, assignor.)
Packard Motor Car Company. (See Loomis, Allen, assignor.)
Packard Motor Car Company. (See Vincent, Jesse G., assignor.)
Packer, John H., Pocatello, Idaho. Oil-filter. No. 1,157,717; Oct. 26; Gaz. vol. 219; p. 954.
Packer, Richard, assignor to J. K. Lanning, Fall River, Mass. Hand-threading shuttle. No. 1,156,034; Oct. 5; Gaz. vol. 219; p. 246.
Paddock, Ormond H., Toledo, Ohio. Headlight-turning means for vehicles. No. 1,156,623; Oct. 12; Gaz. vol. 219; p. 478.
Paeth, William H. (See Fullerton, Rushworth, and Paeth.)
Page, Frank C. B., assignor to E. W. Bliss Company, Brooklyn, N. Y. Driving mechanism for torpedoes. No. 1,155,435; Oct. 5; Gaz. vol. 219; p. 39.
Page, George J., Colony, Kans. Rubbing-post. No. 1,157,801; Oct. 26; Gaz. vol. 219; p. 983.
Page, George M., assignor to The Haydenville Company, Haydenville, Mass. Drinking-fountain nozzle. No. 1,158,147; Oct. 26; Gaz. vol. 219; p. 1105.
Page, John C., Brawley, Cal. Wheelbarrow. No. 1,157,034; Oct. 19; Gaz. vol. 219; p. 652.
Page, Ruth K., sole heir. (See Bolinger, Irvin L.)
Page, William M., Philadelphia, Pa. Alloy-surfaced wire and producing the same. No. 1,156,170; Oct. 12; Gaz. vol. 219; p. 319.
Pagin, James R., Valparaiso, Ind. Duplex lighting system. No. 1,156,624; Oct. 12; Gaz. vol. 219; p. 478.
Paine, Edwin N., Provincetown, Mass. Floating fish-trap. No. 1,157,417; Oct. 19; Gaz. vol. 219; p. 789.
Palmer, Frederick J., Denver, Colo. Vehicle-spring. No. 1,156,546; Oct. 12; Gaz. vol. 219; p. 450.
Palmer, John F., Milwaukee, Wis. Blackboard-eraser. No. 1,157,718; Oct. 26; Gaz. vol. 219; p. 954.
Palmer, Lionel G. H., Roslindale, assignor to Stampafix Company, Inc., Boston, Mass. Theft-proof stamp-affixing machine. No. 1,156,308; Oct. 12; Gaz. vol. 219; p. 364.
Palmer, Ray B., Norwich, N. Y. Ironing-board. No. 1,156,805; Oct. 12; Gaz. vol. 219; p. 539.
Paluska, Matheas, Roanoke, assignor, by mesne assignments, to Getz Power Washer Co., Morton, Ill. Wringer. No. 1,158,148; Oct. 26; Gaz. vol. 219; p. 1105.
Pape, Wilhelm, Charlottenburg, Germany, assignor to General Electric Company. Elastic-fluid turbine. No. 1,156,547; Oct. 12; Gaz. vol. 219; p. 450.
Parish, Le Grand, New York, N. Y. Locomotive-fire-box construction. No. 1,156,368; Oct. 12; Gaz. vol. 219; p. 387.
Parker, George D., Riverside, Cal. Apparatus for drying fruit. No. 1,158,388; Oct. 26; Gaz. vol. 219; p. 1189.
Parker, Thomas R. G., and W. Lee, Broadheath, assignors to Linotype and Machinery Limited, London, England. Device for clamping printing-plates to the cylinders of printing-presses. No. 1,158,269; Oct. 26; Gaz. vol. 219; p. 1146.
Parks, Dennis. (See Mitchell and Parks.)
Parks, Dennis. (See Wolfe and Parks.)
Parmenter, George A., Boston, Mass. Pipe and nut wrench. No. 1,155,955; Oct. 5; Gaz. vol. 219; p. 219.
Pass & Sermour. (See Brogden, Fay A., assignor.)
Patch, Calvin B., Glenellyn, Ill., assignor to W. H. Miner, Chazy, N. Y. Side bearing. No. 1,155,436; Oct. 5; Gaz. vol. 219; p. 39.
Patch, Calvin B., Glenellyn, Ill., assignor to W. H. Miner, Chazy, N. Y. Roller side bearing. No. 1,156,094; Oct. 12; Gaz. vol. 219; p. 294.
Patent Button Company, The. (See White, Franklin E., assignor.)
Patterson, Peter, deceased, Pittsburgh, Pa.; Safe Deposit and Trust Company of Pittsburgh, executor. Apparatus for the manufacture of tubing. No. 1,155,677; Oct. 5; Gaz. vol. 219; p. 122.
Patterson, Thomas, Elyria, Ohio, assignor to National Tube Company, Pittsburgh, Pa. Apparatus for forging couplings. No. 1,157,637; Oct. 19; Gaz. vol. 219; p. 860.
Pattin, Thomas O., Los Angeles, Cal. Hydrocarbon-engine. No. 1,157,728; Oct. 26; Gaz. vol. 219; p. 959.
Paul, Wesley A., Moline, Ill. Carbonizing pipe-bowls. No. 1,156,171; Oct. 12; Gaz. vol. 219; p. 320.
Paulson, Arthur R., Clarkfield, Minn. Machine for applying postage-stamps to letters. No. 1,155,956; Oct. 5; Gaz. vol. 219; p. 219.
Paulson, Helmer R. (See Polson and Paulson.)
Pauly, Peter J., Jr., and G. Tanner, St. Louis, Mo. Flush-valve. No. 1,157,035; Oct. 19; Gaz. vol. 219; p. 653.
Pava, Abraham, Springfield, Mass. Cycle-stand. No. 1,156,369; Oct. 12; Gaz. vol. 219; p. 388.
Pawlowski, Michael. (See Mischansky and Pawlowski.)
Payer, Jacob J., Adams, N. D. Bundle-carrying attachment for harvesters and the like. No. 1,157,719; Oct. 26; Gaz. vol. 219; p. 955.
Payne, Frank, St. Louis, Mo., assignor to American Can Company, New York, N. Y. Sealed package. No. 1,158,073; Oct. 26; Gaz. vol. 219; p. 1079.
Payne, Oscar V., Takoma Park, Md. Locking device. No. 1,156,861; Oct. 12; Gaz. vol. 219; p. 561.
Payne, Walter S., University Place, Nebr. Power-operated hammer. No. 1,158,270; Oct. 26; Gaz. vol. 219; p. 1147.
Peachey, Stanley J., Heaton Chapel, Stockport, England. Accelerating the vulcanization of natural or artificial caoutchouc or caoutchouc-like substances. No. 1,157,177; Oct. 19; Gaz. vol. 219; p. 702.
Pearse, Norman P., London, England. Cotton-gin. No. 1,157,720; Oct. 26; Gaz. vol. 219; p. 955.
Pearson, Charles O., New York, N. Y. Controller for internal-combustion engines. No. 1,156,430; Oct. 12; Gaz. vol. 219; p. 410.
Pease, Roger S., assignor to The Pittsburgh Plate Glass Company, Pittsburgh, Pa. Drawing-ring. No. 1,155,507; Oct. 5; Gaz. vol. 219; p. 65.
Peavey, William S., assignor to Standard Oil Company, Chicago, Ill. Lubricating engines. No. 1,156,431; Oct. 12; Gaz. vol. 219; p. 410.

Peavey, William S., assignor to Standard Oil Company, Chicago, Ill. Means for lubricating steam-engines. No. 1,156,432; Oct. 12; Gaz. vol. 219; p. 410.
Peirce, Charles L., Jr., Pittsburgh, Pa. Insulator-support. No. 1,158,149; Oct. 26; Gaz. vol. 219; p. 1105.
Peirce, Charles L., Jr., assignor of one-half to Hubbard & Co., Pittsburgh, Pa. Insulator-supporting fixture. No. 1,157,036; Oct. 19; Gaz. vol. 219; p. 653.
Peirce, Charles L., Jr., assignor of one-half to Hubbard & Co., Pittsburgh, Pa. Insulator-supporting structure. No. 1,157,037; Oct. 19; Gaz. vol. 219; p. 653.
Pellegrini, Phillip. (See Maino and Pellegrini.)
Pells, Edna, Grand Island, Nebr. Measuring and filling apparatus. No. 1,157,896; Oct. 26; Gaz. vol. 219; p. 1017.
Peloquin, Louis, Southbridge, Mass. Winding-drum. No. 1,157,897; Oct. 26; Gaz. vol. 219; p. 1018.
Pelton Water Wheel Company, The. (See Doble, William A., assignor.)
Pelton Water Wheel Company, The. (See Jacobsen, Oystein, assignor.)
Pelzer, John, Orange, N. J. Device for opening and closing transoms or windows. No. 1,156,020; Oct. 5; Gaz. vol. 219; p. 241.
Pennsylvania Steel Company. (See Cuenot and Fischer, assignors.)
Pennsylvania Wire Glass Manufacturing Company. (See Cox and Shuman, assignors.)
Pennsylvania Wire Glass Company. (See Shuman, Arno, assignor.)
Penzer, Louis W., assignor of one-half to C. G. Holland, Richmond, Va. Rotary combustion-engine. No. 1,158,271; Oct. 26; Gaz. vol. 219; p. 1148.
Pepple, John W., San Antonio, Tex. Window-shade. No. 1,156,807; Oct. 12; Gaz. vol. 219; p. 539.
Perez, Waldo F., assignor to The Standard Fender Company, Inc., Chicago, Ill. Automobile-fender. No. 1,157,251; Oct. 19; Gaz. vol. 219; p. 730.
Perfection Spring Company, The. (See McIntyre, Michael M., assignor.)
Perich, John, Logan, W. Va. Combined door latch and lock. No. 1,156,548; Oct. 12; Gaz. vol. 219; p. 451.
Perillat, Marie, assignor to Ye Lady's Outfitterie, New York, N. Y. Bust-reducer brassière. No. 1,156,808; Oct. 12; Gaz. vol. 219; p. 540.
Perkins, William M., North Manchester, Ind. Safety cement railway-tie. No. 1,156,095; Oct. 12; Gaz. vol. 219; p. 294.
Perret, George J., New York, N. Y. Card-shuffling machine. No. 1,157,898; Oct. 26; Gaz. vol. 219; p. 1018.
Perrin, Frederic S., New York, N. Y., assignor to Splitdorf Electrical Co., Newark, N. J. Electrical transformer system. No. 1,156,035; Oct. 5; Gaz. vol. 219; p. 247.
Perry, Edward C., Jr., West Lynn, Mass., assignor to General Electric Company. Elastic-fluid turbine. No. 1,156,549; Oct. 12; Gaz. vol. 219; p. 451.
Persson, Lars J., Arbelunda, Sweden. Convertible chair. No. 1,157,802; Oct. 26; Gaz. vol. 219; p. 983.
Peteler, Adolph, Yonkers, N. Y. Automobile-jack. No. 1,158,272; Oct. 26; Gaz. vol. 219; p. 1148.
Peter, Alfred, Berlin, Germany, assignor to General Electric Company. Centrifugal throwing-pump. No. 1,156,550; Oct. 12; Gaz. vol. 219; p. 451.
Peterson, Sven O., Rock Island, Ill. Cement leveling and finishing machine. No. 1,157,899; Oct. 26; Gaz. vol. 219; p. 1018.
Peterson, Victor E., Omaha, Nebr. Trailing apparatus. No. 1,155,487; Oct. 5; Gaz. vol. 219; p. 39.
Petit, Albert, Los Angeles, Cal. Safety-stop for elevators. No. 1,158,150; Oct. 26; Gaz. vol. 219; p. 1106.
Petit, Joseph C., assignor of one-half to C. E. Hall, Los Angeles, Cal. Washing-machine. No. 1,157,178; Oct. 19; Gaz. vol. 219; p. 702.
Petitmaire, Felix H., Philadelphia, Pa. Telescoping shock-absorber. No. 1,158,273; Oct. 26; Gaz. vol. 219; p. 1149.
Petre, Daisy D., Omaha, Nebr. Knife-rack. No. 1,157,578; Oct. 19; Gaz. vol. 219; p. 841.
Pettengill, George M., Haverhill, Mass., assignor to Haverhill Shoe Machinery Company. Top-lift-cementing means for heel-nailing machines. No. 1,156,850; Oct. 12; Gaz. vol. 219; p. 557.
Pfau, Arnold, Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Fluid-pressure regulator. No. 1,157,957; Oct. 26; Gaz. vol. 219; p. 1038.
Pfouts, Leroy S., Canton, Ohio. Motor-vehicle. No. 1,157,803; Oct. 26; Gaz. vol 219; p. 983.
Pfouts, Leroy S., assignor to The Miller Pasteurizing Machine Company, Canton, Ohio. Heating or cooling apparatus. No. 1,156,851; Oct. 12; Gaz. vol. 219; p. 557.
Phelps, Edwin S., Elizabeth, N. J. Time-recording lock. No. 1,155,678; Oct. 5; Gaz. vol. 219; p. 123.
Phelps, Edwin S., Elizabeth, N. J. Time-recording lock. No. 1,155,679; Oct. 5; Gaz. vol. 219; p. 123.
Phelps, George L., Chicago, Ill., assignor to International Harvester Company of New Jersey. Corn-husking machine. No. 1,157,038; Oct. 19; Gaz. vol. 219; p. 654.
Phifer, Washington I., Collinsville, Ill. Valve of internal-combustion engines. No. 1,156,309; Oct. 12; Gaz. vol. 219; p. 365.
Philipp, William E., Baltimore, Md. Machine for uniting metal roofing-sheets. No. 1,158,274; Oct. 26; Gaz. vol. 219; p. 1149.
Phillips, Emry E., West Frankfort, Ill. Freezer. No. 1,155,680; Oct. 5; Gaz. vol. 219; p. 124.
Phillips, Paul M., Westboro, Mass. Milk-tester. No. 1,158,275; Oct. 26; Gaz. vol. 219; p. 1149.
Phillips, William T., and T. C. De Lisle, Los Angeles, Cal. Display device. No. 1,157,252; Oct. 19; Gaz. vol. 219; p. 730.
Phinney, Henry I. (See Farmer, William H., assignor.)
Pickard, Greenleaf W., Amesbury, Mass., assignor to Wireless Specialty Apparatus Company, New York, N. Y. Wireless receiving improvement. No. 1,156,625; Oct. 12; Gaz. vol. 219; p. 478.
Pidgeon, Thomas L., St. Barnabe, Quebec, Canada. Burglar-alarm bolt. No. 1,156,809; Oct. 12; Gaz. vol. 219; p. 540.
Pieper, Louis H., Plymouth, Wis. Cheese-follower. No. 1,158,276; Oct. 26; Gaz. vol. 219; p. 1150.
Pier, Mathias, Berlin, Germany. Manufacture of ammonia from its elements. No. 1,157,253; Oct. 19; Gaz. vol. 219; p. 731.
Pierce, Alva C., and G. C. Kaufman, La Fayette, Ind. Jordan shaft for paper-stock-refining engines. No. 1,158,277; Oct. 26; Gaz. vol. 219; p. 1150.
Pierce, Frank M. (See Pierce, William B. and F. M.)
Pierce, Frank M. and W. B., assignors to Pierce Wrapping Machine Company, Chicago, Ill. Machine for wrapping commercial coils of wire. No. 1,158,405; Oct. 26; Gaz. vol. 219; p. 1196.
Pierce, Frank M. and W. B., assignors to Pierce Wrapping Machine Company, Chicago, Ill. Wrapping-machine. No. 1,158,406; Oct. 26; Gaz. vol. 219; p. 1196.
Pierce, Harry W., Waverley, Mass. Fountain-pen. No. 1,155,611; Oct. 5; Gaz. vol. 219; p. 99.
Pierce, James E., assignor to The Union Steel Screen Company, Albion, Mich. Fastening device. No. 1,157,039; Oct. 19; Gaz. vol. 219; p. 654.
Pierce, William B. (See Pierce, Frank M. and W. B.)
Pierce, William B. and F. M., assignors to Pierce Wrapping Machine Company, Chicago, Ill. Wrapping-machine. No. 1,158,278; Oct. 26; Gaz. vol. 219; p. 1150.
Pierce Wrapping Machine Company. (See Pierce, Frank M. and W. B., assignors.)
Pierce Wrapping Machine Company. (See Pierce, William B. and F. M., assignors.)
Piersen, Edwin H., assignor to The Piersen Telegraph Transmitter Company, Topeka, Kans. Telegraph-transmitter. No. 1,157,040; Oct. 19; Gaz. vol. 219; p. 654.
Piersen Telegraph Transmitter Company, The. (See Piersen, Edwin H., assignor.)
Pike, Charles F. (See Bradley and Pike.)
Pilcher, John A., Roanoke, Va. Brake arrangement for six-wheel car-trucks. No. 1,156,490; Oct. 12; Gaz. vol. 219; p. 431.
Pilkington Brothers. (See Gregory, Victor H., assignor.)
Pillsbury, Edwin S., assignor to Century Electric Company, St. Louis, Mo. Centrifugal circuit-changing device for electric motors. No. 1,157,179; Oct. 19; Gaz. vol. 219; p. 703.
Pinkel, Daniel, assignor to D. Carl, Richmond, Mich. Power-driven sled. No. 1,158,407; Oct. 26; Gaz. vol. 219; p. 1197.
Pinkerton, Ervin W., Rochester, N. Y. Cover and spout for packages. No. 1,155,681; Oct. 5; Gaz. vol. 219; p. 124.
Piper, Walter E., Melrose, Mass., assignor to Boston Rubber Shoe Company. Manufacturing rubber footwear. No. 1,158,389; Oct. 26; Gaz. vol. 219; p. 1190.
Pitcher, Joseph W., Washington, D. C. Record-cleaning attachment for talking-machines. No. 1,157,958; Oct. 26; Gaz. vol. 219; p. 1038.
Pitts, Harry O., Carthage, Ind. Ironing-board. No. 1,155,612; Oct. 5; Gaz. vol. 219; p. 99.
Pittsburgh Can Company. (See Jones, Whitfield E., Jr., assignor.)
Pittsburgh-Hickson Company *et al.* (See Moore and Musser, assignors.)
Pittsburgh Plate Glass Company, The. (See Pease, Roger S., assignor.)
Place, James F., Glen Ridge, N. J., assignor to American Air-Liquefying Company, New York, N. Y. Liquefying air and separating the same into oxygen and nitrogen. No. 1,157,959; Oct. 26; Gaz. vol. 219; p. 1039.
Platts, Howard C. (See Overbury and Platts.)
Pleister, Henry W., Westfield, N. J., assignor to H. B. Newhall. Bolt-anchor. No. 1,155,613; Oct. 5; Gaz. vol. 219; p. 100.
Pleister, Henry W., Westfield, N. J., assignor to H. B. Newhall. Bolt-anchor. No. 1,155,614; Oct. 5; Gaz. vol. 219; p. 100.
Pleister, Henry W., Westfield, N. J., assignor to H. B. Newhall. Bolt-anchor. No. 1,155,615; Oct. 5; Gaz. vol. 219; p. 100.
Plunkett, Charles L., Brooklyn, assignor of one-half to M. Englander, New York, N. Y. Antifriction device for angle-iron legs. No. 1,157,657; Oct. 19; Gaz. vol. 219; p. 868.
Plym, Francis J., assignor to Kawneer Mfg. Co., Niles, Mich. Window-sash construction. No. 1,157,900; Oct. 26; Gaz. vol. 219; p. 1019.
Plympton, Frederic K., Wellesley, assignor to Plympton Manufacturing Company, Boston, Mass. Tag. No. 1,156,036; Oct. 5; Gaz. vol. 219; p. 247.
Plympton Manufacturing Company. (See Plympton, Frederic K., assignor.)

Podhola, Peter D. (See Smith, William J., assignor.)
Poehland, Bernhard, Brooklyn, N. Y. Shoulder-rest for violins and other musical instruments. No. 1,156,925; Oct. 19; Gaz. vol. 219; p. 612.
Pogue, Robert H., New Westminster, British Columbia, Canada. Street-car fender. No. 1,155,682; Oct. 5; Gaz. vol. 219; p. 124.
Pohle, Frederick, Jr., Honesdale, Pa. Hasp-lock. No. 1,156,810; Oct. 12; Gaz. vol. 219; p. 365.
Poindexter, Isabella, Prineville, Oreg. Bed-pan. No. 1,156,172; Oct. 12; Gaz. vol. 219; p. 320.
Pointon, John E., Peterborough, England. Dough-molding machinery. No. 1,157,579; Oct. 19; Gaz. vol. 219; p. 842.
Pole, Joseph C., New York, N. Y., assignor to Cooper Hewitt Electric Company, Hoboken, N. J. Starting device for mercury-vapor apparatus. No. 1,157,804; Oct. 26; Gaz. vol. 219; p. 984.
Pollanz, Jacob C., Oregon City, Oreg. Waste-sulfite-liquor save-all. No. 1,156,551; Oct. 12; Gaz. vol. 219; p. 452.
Polski, Roman F., St. Paul, Minn. Ironing-board. No. 1,158,279; Oct. 26; Gaz. vol. 219; p. 1151.
Polson, Nels E., and H. R. Paulson, La Grange, Ill. Electric-iron cord take-up. No. 1,157,418; Oct. 19; Gaz. vol. 219; p. 789.
Pomeroy, Edward S. (See Wesson and Pomeroy.)
Pomeroy, Maggie, McKenzie, N. D. Holder attachment. No. 1,156,370; Oct. 12; Gaz. vol. 219; p. 388.
Pool, Willard H., Atlanta, Ga. Convertible chair. No. 1,158,280; Oct. 26; Gaz. vol. 219; p. 1151.
Poole, Arthur F., Chicago, Ill. Speedometer. No. 1,158,281; Oct. 26; Gaz. vol. 219; p. 1151.
Pope, Edgar D. (See Ketring and Pope.)
Porter, Wilson E., assignor to New Haven Clock Co., New Haven, Conn. Eight-day alarm-clock. No. 1,156,552; Oct. 12; Gaz. vol. 219; p. 452.
Porter, Wilson E., assignor to New Haven Clock Co., New Haven, Conn. Rim-winding clock. No. 1,156,553; Oct. 12; Gaz. vol. 219; p. 453.
Porter, Wilson E., assignor to New Haven Clock Co., New Haven, Conn. Interval-timer. No. 1,158,282; Oct. 26; Gaz. vol. 219; p. 1152.
Porter, Wilson E., New Haven, and F. S. Cornwell, Woodmont, assignors to New Haven Clock Co., New Haven, Conn. Alarm-clock. No. 1,156,554; Oct. 12; Gaz. vol. 219; p. 453.
Porthelm, Emil von, Prague-Smichow, Austria-Hungary. Producing oxalic acid. No. 1,157,348; Oct. 19; Gaz. vol. 219; p. 763.
Positive Print Machine and Paper Co. (See Oller, Frank E., assignor.)
Post, Howell B., Lansdowne, assignor of one-half to W. P. Allen, Ardmore, Pa. Time-controller. No. 1,157,960; Oct. 26; Gaz. vol. 219; p. 1039.
Postal Card Vending Machine Company. (See Turnquist and Rich, assignors.)
Povlotzky, Philip, Chicago, Ill. Starting device for internal-combustion engines. No. 1,156,173; Oct. 12; Gaz. vol. 219; p. 320.
Powell, John R., New York, N. Y. Carpet-cleaning machine. No. 1,155,957; Oct. 5; Gaz. vol. 219; p. 220.
Powell, Sallie O. (See Breslove and Wetzig, assignors.)
Power Washing Machine Co. (See Altorfer, Alpheus W., assignor.)
Praetorius, Richard L., Smithville, Tex. Switch-stand. No. 1,157,638; Oct. 19; Gaz. vol. 219; p. 860.
Prall, Claude C., Trenton, N. J., assignor, by mesne assignments, to The Anglo-American Patent Bottle Company Limited, London, England. Non-refillable bottle. No. 1,155,616; Oct. 5; Gaz. vol. 219; p. 100.
Pratt, Charles R., Montclair, assignor to Otis Elevator Company, Jersey City, N. J. Hydraulic elevator. No. 1,156,433; Oct. 12; Gaz. vol. 219; p. 411.
Pratt & Whitney Company. (See Müller, Friederich, assignor.)
Pressed Steel Car Company. (See Lockwood, Burns D., assignor.)
Price, David R., Lynn, Mass., assignor to General Electric Company. Frequency-indicator. No. 1,156,491; Oct. 12; Gaz. vol. 219; p. 432.
Price, Joseph H., Lombard, assignor of one-half to Chicago Paper Company, Chicago, Ill. Typographical numbering-machine. No. 1,155,369; Oct. 5; Gaz. vol. 219; p. 16.
Price, Raymond B., New York, N. Y., assignor to Rubber Regenerating Company. Apparatus for treating plastic material. No. 1,156,096; Oct. 12; Gaz. vol. 219; p. 295.
Price, Thomas M., and J. W. Tillman, Cooper, Tex. Wire clothes-pin. No. 1,156,810; Oct. 12; Gaz. vol. 219; p. 541.
Price, William G., New Castle, Pa. Slack-adjuster. No. 1,157,721; Oct. 26; Gaz. vol. 219; p. 956.
Primm, John L. (See Hart, Salem R., assignor.)
Primrose, John, Dongan Hills, N. Y. Superheater. No. 1,157,722; Oct. 26; Gaz. vol. 219; p. 956.
Prince, Edward E., Ottawa, Ontario, Canada. Fishway. No. 1,157,639; Oct. 19; Gaz. vol. 219; p. 861.
Prince, Llewellyn E., West Warren, and F. J. Merrill, Windham, Pa. Spike. No. 1,156,811; Oct. 12; Gaz. vol. 219; p. 541.
Prindle, Henry U., Oakland, Cal. Pulverizing-mill. No. 1,158,283; Oct. 26; Gaz. vol. 219; p. 1152.
Probert, Edwin R., assignor to The Moeschl-Edwards Corrugating Company, Covington, Ky. Reference device for desks and the like. No. 1,156,812; Oct. 12; Gaz. vol. 219; p. 541.
Progress Machine Company. (See Gaynor, John J., assignor.)
Prows, David A., Castlegate, Utah. Pencil-holder. No. 1,157,580; Oct. 19; Gaz. vol. 219; p. 842.
Psarski Dyeing Machine Company, The. (See Psarski, John T., assignor.)
Psarski, John T., assignor to The Psarski Dyeing Machine Company, Cleveland, Ohio. Dyeing-machine. No. 1,155,438; Oct. 5; Gaz. vol. 219; p. 40.
Pusateri, Michael, McDonald, Pa. Rail-joint. No. 1,156,926; Oct. 19; Gaz. vol. 219; p. 813.
Putnam, George H., South Boston, Mass. Car-coupling. No. 1,155,683; Oct. 5; Gaz. vol. 219; p. 125.
Pyramid Manufacturing Company. (See Lloyd, William H., assignor.)
Quass, Ralph L., assignor to Western Electric Company, New York, N. Y. Telephone system. No. 1,156,626; Oct. 12; Gaz. vol. 219; p. 479.
Quebec Savings and Trust Company. (See Jagger, Peter B., assignor.)
Queen City Knitting Mills. (See Tallerday, George S., assignor.)
Query, Joseph O., Somerville, Mass. Apparatus for controlling railway-trains. No. 1,157,723; Oct. 26; Gaz. vol. 219; p. 957.
Quigley, John T., assignor to The Costmeter Company, Boston, Mass. Feeding device. No. 1,156,037; Oct. 5; Gaz. vol. 219; p. 247.
Quinby, William E., *et al.* (See Mason, Hosea A., assignor.)
Quincy, Henry J., assignor to Englander Spring Bed Company, Brooklyn, N. Y. Locking means for folding cots or couch-beds. No. 1,157,254; Oct. 19; Gaz. vol. 219; p. 731.
Quinn, John L., Los Angeles, assignor to Standard Oil Company of California, San Francisco, Cal. Thermostatic heater. No. 1,157,255; Oct. 19; Gaz. vol. 219; p. 731.
R. Hoe and Co. (See Niles, Irving F., assignor.)
R. Hoe and Co. (See Roesen, Oscar, assignor.)
R. Hoe and Co. (See Spalckhaver, William, assignor.)
R and G Company. (See Anderson, Edward L., assignor.)
R. U. V. Company, The. (See Recklinghausen, Max von, assignor.)
Raab, Louis. (See Miller and Raab.)
Rabb, Asa L., Kansas City, Kans. Swing. No. 1,155,439; Oct. 5; Gaz. vol. 219; p. 40.
Rabey, Edward K., Deanes, Va. Spring-tire. No. 1,156,311; Oct. 12; Gaz. vol. 219; p. 365.
Radovich, Harry, New York, N. Y. Means for splicing the inner tubes of pneumatic tires. No. 1,158,284; Oct. 26; Gaz. vol. 219; p. 1153.
Rail Joint Company, The. (See Braine, Bancroft G., assignor.) (Reissue.)
Railway Devices Company. (See Campbell, Sterling H., assignor.)
Railway Products Corporation. (See Forsyth, William D., assignor.)
Raideano, August F., Poughkeepsie, N. Y. Fortune-telling device. No. 1,157,581; Oct. 19; Gaz. vol. 219; p. 842.
Rail, Myron W., Gardiner, Mont. Snow-shoe. No. 1,156,174; Oct. 12; Gaz. vol. 219; p. 321.
Ralston, Alfred L., Weeping Water, Nebr. Stock-watering apparatus. No. 1,157,122; Oct. 19; Gaz. vol. 219; p. 688.
Ralston, Robert P., New Concord, Ohio. Popper, toaster, and baker combined. No. 1,157,326; Oct. 19; Gaz. vol. 219; p. 755.
Ralston Steel Car Company, The. (See Sage and Tatum, assignors.)
Ramsdier, William J., New York, N. Y. Printing-press. No. 1,158,285; Oct. 26; Gaz. vol. 219; p. 1153.
Rand, Festus S., Providence, and G. N. Taylor, East Providence, R. I., assignors to Universal Winding Company, Portland, Me. Tension device. No. 1,156,927; Oct. 19; Gaz. vol. 219; p. 613.
Rand, James H., and J. H., Jr., North Tonawanda, N. Y. Filing device. No. 1,158,074; Oct. 26; Gaz. vol. 219; p. 1079.
Randall, Chester J., Waltham, Mass., assignor to Boston Rubber Shoe Company. Pressure-applying apparatus for rubber footwear. No. 1,158,390; Oct. 26; Gaz. vol. 219; p. 1190.
Randles, James H., Poplar Bluff, Mo. Pump. No. 1,155,370; Oct. 5; Gaz. vol. 219; p. 16.
Randolph, Coleman L., Boonville, Mo. Disinfectant or fumigating attachment for nests. No. 1,156,021; Oct. 5; Gaz. vol. 219; p. 241.
Ransom, George P., *et al.* (See Thayer, Charles H., assignor.)
Rapp, Nathaniel, Toledo, Ohio. Muffler. No. 1,155,757; Oct. 5; Gaz. vol. 219; p. 149.
Raptias, Nick, Birmingham, Ala. Washer-holder rivet-set. No. 1,156,434; Oct. 12; Gaz. vol. 219; p. 411.
Rasch, Gustave C., Burlington, Wis. Adjustable breast-fastening for blankets. No. 1,155,371; Oct. 5; Gaz. vol. 219; p. 16.
Rasco, Levi. (See Owen and Rasco.)

Rasmussen, Peter W., Crawford township, Antelope county, Nebr. Sash and door holder. No. 1,156,813; Oct. 12; Gaz. vol. 219; p. 541.

Rastetter & Son, Louis. (See Dick, Ralph W., assignor.)

Rawley, Wayne, Pittsburgh, Pa., assignor to Blaw Steel Construction Company, Hoboken, N. J. Punching. No. 1,156,928; Oct. 19; Gaz. vol. 219; p. 614.

Rawlings, Walter D., Ensley, Ala. Machine for making clay tile, conduits, or bricks. No. 1,157,724; Oct. 26; Gaz. vol. 219; p. 957.

Rawlins, Charles L., administrator. (See Mallard, Charles C.)

Ray, George A., assignor to George A. Ray Manufacturing Company, Buffalo, N. Y. Coffee-urn. No. 1,157,805; Oct. 26; Gaz. vol. 219; p. 984.

Raymond Concrete Pile Company. (See Wainwright and Smith, assignors.)

Raymond, Ed. J. (See Kate, John H., assignor.)

Raymond, John D., Chicago, Ill. Electric-lighting fixture. No. 1,158,286; Oct. 26; Gaz. vol. 219; p. 1154.

Read, Fred A., Lynn, assignor to The Reece Button Hole Machine Company, Boston, Mass. Sewing-machine. No. 1,156,249; Oct. 12; Gaz. vol. 219; p. 345.

Reading Saddle & Manufacturing Company, The. (See Deem, Miller M., assignor.)

Rearick, Charles B., New London, Conn. Elastic-fluid turbine. No. 1,156,371; Oct. 12; Gaz. vol. 219; p. 388.

Rebelski, Harry A., Brooklyn, N. Y. Micrometer-caliper. No. 1,155,440; Oct. 5; Gaz. vol. 219; p. 40.

Rece, Ashby S., Huntington, W. Va. Locomotive-torch. No. 1,156,097; Oct. 12; Gaz. vol. 219; p. 295.

Recklinghausen, Max von, New York, N. Y. Sterilizing apparatus. No. 1,156,948; Oct. 19; Gaz. vol. 219; p. 620.

Recklinghausen, Max von, assignor to The R. U. V. Company, Inc., New York, N. Y. Apparatus for sterilization of fluids by ultra-violet rays. No. 1,156,947; Oct. 19; Gaz. vol. 219; p. 620.

Redington, Frank B., and M. J. Milmoe, assignors to F. B. Redington Company, Chicago, Ill. Feeding mechanism. No. 1,158,287; Oct. 26; Gaz. vol. 219; p. 1154.

Redman, William H., *et al.* (See Wilkins, Harry, assignor.)

Reece Button Hole Machine Company, The. (See Read, Fred A., assignor.)

Reed, Charles E., Bartow, Fla. Water-heater. No. 1,156,814; Oct. 12; Gaz. vol. 219; p. 542.

Reed, Clarence E. (See Lough, David C., assignor.)

Reed, Colvin M. (See Walsh and Reed.)

Reed, Emerson G., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Transformer-casing. No. 1,156,708; Oct. 12; Gaz. vol. 219; p. 507.

Reed, William A., Revere, and J. Foley, Chelsea, Mass., assignors to United Shoe Machinery Company, Paterson, N. J. Buffing-machine. No. 1,157,725; Oct. 26; Gaz. vol. 219; p. 958.

Rees, Warren C., Somerville, assignor to Aseptic Service Company, Boston, Mass. Aseptic water-closet. No. 1,156,175; Oct. 12; Gaz. vol. 219; p. 321.

Reeves, Samuel V., Haddonfield, N. J. Hot-water stove. No. 1,156,929; Oct. 19; Gaz. vol. 219; p. 614.

Reeves, Samuel V., Haddonfield, N. J. Automatic dust-damper for stoves. No. 1,156,930; Oct. 19; Gaz. vol. 219; p. 614.

Regenbogen, Conrad, and P. A. Ritter, Kiel, Germany. Cylinder for internal-combustion engines. No. 1,156,312; Oct. 12; Gaz. vol. 219; p. 366.

Reichard, Mary A. (See Reichard, Wilbur M., assignor.)

Reichard, Wilbur M., assignor of one-half to M. A. Reichard, New York, N. Y. Window-sash lock. No. 1,155,617; Oct. 5; Gaz. vol. 219; p. 101.

Reiche, Max O., Milwaukee, Wis. Apparatus for determining the percentage of lime in materials. No. 1,156,176; Oct. 12; Gaz. vol. 219; p. 322.

Reichel, Walter, and G. K. Hennig, assignors to Ludwig Hupfeld Aktiengesellschaft, Böhlitz-Ehrenberg, near Leipzig, Germany. Note-sheet-changing device for pneumatic musical instruments. No. 1,158,288; Oct. 26; Gaz. vol. 219; p. 1154.

Reichold, Ludwig, Pittsfield, Mass., assignor to General Electric Company. Flat-iron support. No. 1,157,961; Oct. 26; Gaz. vol. 219; p. 1040.

Reid, Andrew. (See McManamy and Reid.)

Reid, James, Watervliet, N. Y., assignor to Federal Signal Company. Detector-bar. No. 1,157,726; Oct. 26; Gaz. vol. 219; p. 958.

Reinhardt, James H., East Orange, N. J., assignor to American Bank Note Company. Numbering-head. No. 1,157,647; Oct. 19; Gaz. vol. 219; p. 863.

Reininger, Henry, New Orleans, La. Barrel feeding and arresting device. No. 1,158,289; Oct. 26; Gaz. vol. 219; p. 1155.

Reiss, Paul, assignor to B. Knecht, Berlin, Germany. Calculating-machine. No. 1,156,313; Oct. 12; Gaz. vol. 219; p. 366.

Remané, Hermann C. G., Berlin, Germany, assignor to General Electric Company. Drawing refractory materials for incandescent lamps. No. 1,156,492; Oct. 12; Gaz. vol. 219; p. 432.

Remington Arms & Ammunition Company. (See Barnes, Charles H., assignor.)

Remington Typewriter Company. (See Carpenter, Daniel A., assignor.)

Remington Typewriter Company. (See Sheldon, William G., assignor.)

Remington Typewriter Company. (See Yaw, Clio B., assignor.)

Renner, Willie L., and M. A. Brown, Dublin, Tex. Car-door. No. 1,158,098; Oct. 12; Gaz. vol. 219; p. 295.

Repp, Clinton B., Plainfield, N. J. Phonograph. No. 1,156,931; Oct. 19; Gaz. vol. 219; p. 615.

Restorff, William G., assignor of one-half to M. McDonald, Washington, D. C. Combined vanity-box and program. No. 1,156,815; Oct. 12; Gaz. vol. 219; p. 542.

Restucci, Giuseppe, Naples, Italy. Steam drying and superheating system. No. 1,157,901; Oct. 26; Gaz. vol. 219; p. 1019.

Reuter, Balthasar E. (See Kaiser and Reuter.)

Rexroat, George P., assignor of one-fourth to C. T. Bates, Woodhouse, Ill. Feeding apparatus. No. 1,155,684; Oct. 5; Gaz. vol. 219; p. 125.

Reyman, Philip S., Mount Carmel, Ill. Stave-jointing machine. No. 1,158,004; Oct. 26; Gaz. vol. 219; p. 1054.

Reynolds, Frank W., Mansfield, Ohio. Stove-door. No. 1,157,041; Oct. 19; Gaz. vol. 219; p. 655.

Reynolds, John E., Taft, Cal. Apparatus for preventing the emulsification of oil from wells. No. 1,157,902; Oct. 26; Gaz. vol. 219; p. 1019.

Reynolds, John E., Taft, Cal. Preventing the emulsification of oil from wells. No. 1,157,903; Oct. 26; Gaz. vol. 219; p. 1020.

Reynolds, Morley P., assignor to W. S. Tyler Company, Cleveland, Ohio. Brake-shoe. No. 1,155,685; Oct. 5; Gaz. vol. 219; p. 126.

Rheinauer, Daniel, New York, N. Y. Sweater. No. 1,158,290; Oct. 26; Gaz. vol. 219; p. 1155.

Rheinberger, Alfonso E., St. Paul, Minn. Connector for ground-terminals. No. 1,156,314; Oct. 12; Gaz. vol. 219; p. 366.

Rhoades, Lewis T., Mont Clare, Pa., assignor to New York Coil Company, Incorporated, New York, N. Y. Ignition device for internal-combustion engines. No. 1,155,372; Oct. 5; Gaz. vol. 219; p. 17.

Rhoads, Samuel W., Farmington, Ill. Friction-clutch. No. 1,156,555; Oct. 12; Gaz. vol. 219; p. 454.

Rhodes, Alfred T., New York, N. Y. Paper box or carton. No. 1,155,686; Oct. 5; Gaz. vol. 219; p. 126.

Ribbon Record Company. (See Eynon, Thomas, assignor.)

Rice, Richard H., Lynn, Mass., assignor to General Electric Company. Shaft-coupling. No. 1,156,493; Oct. 12; Gaz. vol. 219; p. 432.

Rice, Richard H., Lynn, Mass., assignor to General Electric Company. Elastic-fluid turbine. No. 1,156,627; Oct. 12; Gaz. vol. 219; p. 479.

Rich, Charles C., assignor to The Hydro-Kinetic Transmission Company, Mount Vernon, N. Y. Hydraulic transmission mechanism. No. 1,156,816; Oct. 12; Gaz. vol. 219; p. 543.

Rich, Charles C., assignor to The Hydro-Kinetic Transmission Company, Mount Vernon, N. Y. Hydraulic transmission mechanism. No. 1,156,817; Oct. 12; Gaz. vol. 219; p. 543.

Rich, Charles C., assignor to The Hydro-Kinetic Transmission Company, Mount Vernon, N. Y. Hydraulic transmission mechanism. No. 1,156,818; Oct. 12; Gaz. vol. 219; p. 544.

Rich, Charles C., assignor to The Hydro-Kinetic Transmission Company, Mount Vernon, N. Y. Clutch. No. 1,156,819; Oct. 12; Gaz. vol. 219; p. 544.

Rich, Harland E. (See Turnquist and Rich.)

Rich Tool Company. (See Wegland, Samuel A., assignor.)

Richard, Jules, and R. P. M. Lavie, Paris, France. Photographic-roll holder. No. 1,155,508; Oct. 5; Gaz. vol. 219; p. 65.

Richards, John J., Jr., Brookline, Mass. Glare-screen. No. 1,158,005; Oct. 26; Gaz. vol. 219; p. 1054.

Richardson, Jairus S., Sheboygan Falls, Wis. Clamp-brace. No. 1,157,827; Oct. 19; Gaz. vol. 219; p. 756.

Richardson, Jason, Buffalo, N. Y. Tire-protector. No. 1,158,075; Oct. 26; Gaz. vol. 219; p. 1080.

Richmond, Carl A., Chicago, Ill. Metronome. No. 1,157,042; Oct. 19; Gaz. vol. 219; p. 655.

Richmond, Carl A., Tyngsboro, Mass. Device for computing valuations of investment securities. No. 1,157,043; Oct. 19; Gaz. vol. 219; p. 655.

Richmond, Henry E., Westwood, assignor to Underwood and Underwood, Arlington, N. J. Stereoscope. No. 1,157,419; Oct. 19; Gaz. vol. 219; p. 789.

Richmond, Julian. (See Murphy and Richmond.)

Richmond Radiator Company. (See Matchette, Frank J., assignor.)

Rickard, Warren P., Plymouth, Mass. Fire-fighting apparatus. No. 1,155,958; Oct. 5; Gaz. vol. 219; p. 220.

Rickards, Merrill O., Falls City, Nebr. Wheelbarrow. No. 1,158,291; Oct. 26; Gaz. vol. 219; p. 1155.

Rieger, August R., Chicago, Ill. Safety-razor. No. 1,157,044; Oct. 19; Gaz. vol. 219; p. 656.

Rietzsch, Alfred, administrator. (See Zahn, Robert.)

Rigby, Clark F., Butler, Pa. Driving-gearing for well-drilling apparatus. No. 1,157,582; Oct. 19; Gaz. vol. 219; p. 842.

Rigby, Clark F., Butler, Pa. Combination sand-pump and bailer. No. 1,158,292; Oct. 26; Gaz. vol. 219; p. 1156.

Riggs, Edwin E., McKeesport, assignor of one-half to F. A. B. Riggs, East McKeesport, Pa. Washing-machine. No. 1,156,177; Oct. 12; Gaz. vol. 219; p. 322.

Riggs, Fannie A. B. (See Riggs, Edwin E., assignor.)

Riggs, George B. (See Schaefer, Ferdinand A., assignor.)

Rila, Marius P. P., Seattle, Wash. Purifying gas. No. 1,156,022; Oct. 5; Gaz. vol. 219; p. 241.

Riker, Andrew L., Bridgeport, Conn., assignor to The "Locomobile" Company of America, New York, N. Y. Internal-combustion engine. No. 1,156,088; Oct. 5; Gaz. vol. 219; p. 248.

Riley, Lynn G., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Controller for electric motors. No. 1,157,904; Oct. 26; Gaz. vol. 219; p. 1020.

Riley, Robert S., Providence, R. I., assignor to American Engineering Company, Philadelphia, Pa. Furnace. No. 1,156,628; Oct. 12; Gaz. vol. 219; p. 479.

Rindfleisch, Benjamin F. (See Smith and Rindfleisch.)

Rinebold, Arthur W., Risingsun, Ohio. Deep-well-drilling machinery. No. 1,156,178; Oct. 12; Gaz. vol. 219; p. 322.

Ringe, John C., Bridgeport, Conn., assignor to The Singer Manufacturing Company. Overedge sewing-machine. No. 1,156,820; Oct. 12; Gaz. vol. 219; p. 545.

Ringe, John C., Bridgeport, Conn., assignor to The Singer Manufacturing Company. Scallop-stitching machine. No. 1,158,391; Oct. 26; Gaz. vol. 219; p. 1101.

Risberg, Johannes V. M. (See Johansson and Risberg.)

Risher, Ellis A., O'Neill, Nebr. Metallic basket. No. 1,157,045; Oct. 19; Gaz. vol. 219; p. 656.

Risk, Loren, Waterloo, Iowa. Vehicle-wheel. No. 1,156,099; Oct. 12; Gaz. vol. 219; p. 296.

Riter-Conley Manufacturing Company. (See Carpenter and Warner, assignors.)

Rittenhouse, Irvin, assignor to H. F. Clark, Washington, D. C. Paper-fastener. No. 1,156,179; Oct. 12; Gaz. vol. 219; p. 322.

Ritter, Paul A. (See Regenbogen and Ritter.)

Rivera, Abraham, Sonsonate, Salvador. Collapsible and portable toilet-seat cover. No. 1,156,629; Oct. 12; Gaz. vol. 219; p. 480.

Rivkin, Bert, *et al.* (See Sherman, Moses, assignor.)

Rixen, Carl J., Berlin, Germany. Rotary pump with rotating abutment protruding into a circular groove. No. 1,157,806; Oct. 26; Gaz. vol. 219; p. 984.

Robbins, Henry W., Medina, N. Y. Hinge-joint for wind-shields. No. 1,155,441; Oct. 5; Gaz. vol. 219; p. 41.

Robbins, Meyer L., New York, N. Y. Making cuff-buttons. No. 1,155,837; Oct. 5; Gaz. vol. 219; p. 180.

Robbins, William A., Glen Ridge, N. J. Tire-mold. No. 1,156,180; Oct. 12; Gaz. vol. 219; p. 323.

Roberts, Fred T., Trenton, N. J., assignor to The Aranar Company, Cleveland, Ohio. Apparatus for making hollow rubber articles. No. 1,157,420; Oct. 19; Gaz. vol. 219; p. 790.

Roberts, Howard W., Philadelphia, Pa. Rubber-stamp cabinet. No. 1,155,509; Oct. 5; Gaz. vol. 219; p. 65.

Roberts, Marvin C., and H. J. Cullum, Franklin, Ill. Railway-spike. No. 1,158,293; Oct. 26; Gaz. vol. 219; p. 1156.

Roberts Numbering Machine Company. (See Kern, Maximilian H., assignor.)

Robertson, Henry M. (See Gilman and Robertson.)

Robinson, Charles G., Pittsburgh, Pa. Core-barrel for ingot-molds. No. 1,157,648; Oct. 19; Gaz. vol. 219; p. 864.

Robinson, Cyrus. (See Towne and Robinson.)

Robinson, Cyrus, Mount Vernon, N. Y., assignor to Metallurgical Engineering & Process Corporation. Agitator for ore treatment. No. 1,156,872; Oct. 12; Gaz. vol. 219; p. 389.

Robinson, Edward W., assignor to International Barrel Company, Savannah, Ga. Sheet-metal-hoop-forming machine. No. 1,158,294; Oct. 26; Gaz. vol. 219; p. 1156.

Robinson, George E., Eugene, Oreg. Adjustable bow-socket and rest-clamp. No. 1,156,494; Oct. 12; Gaz. vol. 219; p. 433.

Robinson, John E., and W. J. Currie, Lauder, Manitoba, Canada. Grain-pickler. No. 1,155,618; Oct. 5; Gaz. vol. 219; p. 101.

Robinson, Mary C., Asheville, N. C. Play-book. No. 1,155,959; Oct. 5; Gaz. vol. 219; p. 221.

Rochester Carrier Company. (See Miller, James B., assignor.)

Rockman, Soren C., Philadelphia, Pa. Combined coal and gas range. No. 1,155,758; Oct. 5; Gaz. vol. 219; p. 149.

Rockman, Soren C., Philadelphia, Pa. Steam-turbine. No. 1,157,727; Oct. 26; Gaz. vol. 219; p. 958.

Rockstroh, Max, Klein-Sedlitz, near Pirna, Germany. Platen printing-press. No. 1,157,807; Oct. 26; Gaz. vol. 219; p. 985.

Rockwood, Fred G., Mendota, Wis. Quick-acting wrench. No. 1,156,932; Oct. 19; Gaz. vol. 219; p. 615.

Rockwood Sprinkler Company of Massachusetts. (See Carlson, Hjalmar G., assignor.)

Rodebaugh, Ernest M., Long Bottom, Ohio. Acetylene-gas generator. No. 1,156,495; Oct. 12; Gaz. vol. 219; p. 433.

Rodgers, Edward H., El Paso, Tex. Process and machine for making bricks. No. 1,157,421; Oct. 19; Gaz. vol. 219; p. 790.

Rodgers, William F., St. Louis, Mo. Automatic stair-door. No. 1,156,556; Oct. 12; Gaz. vol. 219; p. 454.

Rodiger, Walter G., Chicago, Ill. Stopper. No. 1,157,905; Oct. 26; Gaz. vol. 219; p. 1020.

Rodrigues, Francisco A., Montevideo, Uruguay. Constant-level-controlling dam for canal-locks. No. 1,158,295; Oct. 26; Gaz. vol. 219; p. 1157.

Roesen, Oscar, assignor to R. Hoe and Co., New York, N. Y. Web-printing machine. No. 1,155,619; Oct. 5; Gaz. vol. 219; p. 101.

Roessler & Hasslacher Chemical Co., The. (See Zwingenberger, Otto K., assignor.)

Rogers, Henry I., Fort Fairfield, Me. Ash-pan and apron for furnaces. No. 1,158,296; Oct. 26; Gaz. vol. 219; p. 1157.

Rogers, Robert W. (See Kaye and Rogers.)

Rojekoff, Alexander, Blejitza, Russia. Mold for composite steel castings. No. 1,155,510; Oct. 5; Gaz. vol. 219; p. 66.

Rombacher Hüttenwerke. (See Bronn, Jegor I., assignor.)

Romig, John S., Altoona, Pa. Track instrument. No. 1,155,373; Oct. 5; Gaz. vol. 219; p. 17.

Rontke, Albert, Bridgeport, Conn., assignor to The Singer Manufacturing Company. Thread-cutting mechanism for sewing-machines. No. 1,156,821; Oct. 12; Gaz. vol. 219; p. 545.

Root, Huber H., Medina, Ohio. Food compound. No. 1,158,297; Oct. 26; Gaz. vol. 219; p. 1158.

Root, Huber H., and L. W. Boyden, Medina, Ohio. Food and confectionery compound. No. 1,156,181; Oct. 12; Gaz. vol. 219; p. 323.

Roper, Charles H. (See Tousley and Roper.) (Reissue.)

Roschanek, Otto, assignor to Hübner & Mayer, Vienna, Austria-Hungary. Multiplier of efficiency for float apparatus. No. 1,157,583; Oct. 19; Gaz. vol. 219; p. 843.

Rose, David. (See Rose, James, assignor.)

Rose, David, Lancaster, Pa. Toaster. No. 1,155,838; Oct. 5; Gaz. vol. 219; p. 180.

Rose, James, assignor of one-half to D. Rose, Lancaster, Pa. Umbrella and parasol frame. No. 1,156,709; Oct. 12; Gaz. vol. 219; p. 508.

Rose, James, assignor of one-half to D. Rose, Lancaster, Pa. Lamp standard and shade holder. No. 1,157,180; Oct. 19; Gaz. vol. 219; p. 703.

Rose, Willett E., Phillipstown, N. Y. Folding bolster-stake. No. 1,157,584; Oct. 19; Gaz. vol. 219; p. 843.

Rose, William, Gainsborough, England. Folding apparatus for wrapping-machines. No. 1,157,585; Oct. 19; Gaz. vol. 219; p. 843.

Rosen, Carl, Chicago, Ill. Shoe-polishing device. No. 1,156,435; Oct. 12; Gaz. vol. 219; p. 412.

Rosen, Jean, Paris, France. Manufacture of a plastic and elastic material for tarring roads or for other purposes. No. 1,155,442; Oct. 5; Gaz. vol. 219; p. 41.

Rosen, Jean, assignor to Société Anonyme des Combustibles Industriels, Paris, France. Manufacture of impregnated material. No. 1,155,443; Oct. 5; Gaz. vol. 219; p. 41.

Rosenbloom, Abe N., Philadelphia, Pa. Garment pressing and steaming device. No. 1,157,586; Oct. 19; Gaz. vol. 219; p. 844.

Rosenfeld, Francis M., New York, N. Y., assignor to Import Sales Company. Electric socket. No. 1,157,181; Oct. 19; Gaz. vol. 219; p. 704.

Ross, David E., assignor to Ross Gear and Tool Company, La Fayette, Ind. Steering-gear. No. 1,157,123; Oct. 19; Gaz. vol. 219; p. 683.

Ross, Edward E. (See Lakey and Ross.)

Ross Gear and Tool Company. (See Ross, David E., assignor.)

Rossig, Armond G., Weehawken, and T. S. Crane, East Orange, N. J.; said Crane assignor to said Rossig. Wreath, vine, or spray of artificial leaves. No. 1,158,076; Oct. 26; Gaz. vol. 219; p. 1080.

Roth, Charles, assignor of one-half to J. Yaggi, New Philadelphia, Ohio. Callpers. No. 1,156,100; Oct. 12; Gaz. vol. 219; p. 296.

Rothenberger, Daniel M., assignor of one-third to F. F. Seidel, Reading, Pa. Mausoleum. No. 1,156,039; Oct. 5; Gaz. vol. 219; p. 248.

Rothmann, Albert. (See Ach and Rothmann.)

Rothmann, Albert. (See Ach, Rothmann, and Dieterich.)

Rousso, Jacques, Chicago, Ill. Towel-cabinet. No. 1,157,046; Oct. 19; Gaz. vol. 219; p. 656.

Rowe, Bertrand P., Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company. Making terminal devices. No. 1,156,710; Oct. 12; Gaz. vol. 219; p. 508.

Rowe, William N., Hibbing, Minn. Safety water-gage cock. No. 1,156,933; Oct. 19; Gaz. vol. 219; p. 615.

Rowland, Frank C., Hagerman, N. Mex. Carpenter's tool. No. 1,157,587; Oct. 19; Gaz. vol. 219; p. 844.

Rowley, Willson H., University, Mo. Electrode. No. 1,156,315; Oct. 12; Gaz. vol. 219; p. 367.

Rowley, Willson H., St. Louis, Mo. Making electrodes. No. 1,156,316; Oct. 12; Gaz. vol. 219; p. 367.

Rowntree, Harold, Kenilworth, Ill. Detachable keyboard for pianos. No. 1,157,047; Oct. 19; Gaz. vol. 219; p. 657.

Roy, Joseph E. (See Lacroix and Roy.)

Royal Typewriter Company. (See Hess and Myers, assignors.)

Rubber Regenerating Company. (See Price, Raymond B., assignor.)

Rubesky, William J., Minneapolis, Minn. Carbureter. No. 1,157,588; Oct. 19; Gaz. vol. 219; p. 844.

Ruble, Martin A., and C. M. Stevens, Esmond, N. D. Grain-car door. No. 1,157,124; Oct. 19; Gaz. vol. 219; p. 684.

Ruder, William E., Schenectady, N. Y., assignor to General Electric Company. Annealing magnetic material. No. 1,156,496; Oct. 12; Gaz. vol. 219; p. 434.

Rudnick, Edwin. (See Light, Claus H., assignor.)
Rudolph, Ralph O. (See Allgier, Andrew, assignor.)
Rudolph Wurlitzer Manufacturing Company, The. (See Schwarz, Julius, assignor.)
Rudolphi, Frank, Montclair, N. J., assignor to American Can Company, New York, N. Y. Sheet-metal containing and dispensing can. No. 1,158,077; Oct. 26; Gaz. vol. 219; p. 1080.
Rudulph, Herman J., New York, N. Y., assignor to Mergenthaler Linotype Company. Mold for typographical machines. No. 1,157,808; Oct. 26; Gaz. vol. 219; p. 985.
Ruffley, George E. (See King and Ruffley.)
Rumsey, James W., Chicago, Ill., assignor of one-half to O. Hogin, Califa, Cal. Car-door. (Reissue.) No. 13,992; Oct. 12; Gaz. vol. 219; p. 565.
Rundle-Spence Manufacturing Company. (See Schwibinger, George, assignor.)
Rushworth, Leroy A. (See Fullerton, Rushworth, and Paeth.)
Russell, Emerson C., Chicago, Ill. Starting device for motor-vehicles. No. 1,155,511; Oct. 5; Gaz. vol. 219; p. 66.
Russell, George H., assignor of one-half to P. Norvell, Florence, Ala. Rail-joint. No. 1,157,640; Oct. 19; Gaz. vol. 219; p. 861.
Russell, J. M. (See Clark, James H., assignor.)
Russum, Thomas H., Baltimore, Md. Metal vestibule-diaphragm. No. 1,157,162; Oct. 19; Gaz. vol. 219; p. 704.
Rustige, Frans J. H., assignor to Aktiebolaget Lux, Stockholm Sweden. Intermittently-operated gas-valve. No. 1,157,422; Oct. 19; Gaz. vol. 219; p. 790.
Ruth, Andrew E., Baltimore, Md. Ratchet compound spud-wrench. No. 1,155,960; Oct. 5; Gaz. vol. 219; p. 221.
Ruttan, Henry N. (See Leighton and Ruttan.)
Ryan, John A., assignor of one-half to J. W. Aldridge, Hot Springs, S. D. Rattle. No. 1,158,298; Oct. 26; Gaz. vol. 219; p. 1158.
Ryan, John J., Cincinnati, Ohio, and C. C. Smith, assignors to Smith-Ryan Boat and Engine Co., Algonac, Mich. Boat. No. 1,157,423; Oct. 19; Gaz. vol. 219; p. 791.
Ryan, Mark J., Cincinnati, Ohio. Burglar and fire alarm. No. 1,156,497; Oct. 12; Gaz. vol. 219; p. 434.
Ryan, Thomas, Churdan, Iowa. Wagon end-gate. No. 1,156,182; Oct. 12; Gaz. vol. 219; p. 323.
Ryberg, Charles O., Brockton, Mass., assignor to Campello Nailless Heel Company. Heel-press. No. 1,158,299; Oct. 26; Gaz. vol. 219; p. 1158.
Ryberg, John W., Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Lasting-machine. No. 1,157,729; Oct. 26; Gaz. vol. 219; p. 959.
Ryther, George D., assignor to Ryther & Pringle Co., Carthage, N. Y. Machine for shredding paper-stock. No. 1,156,373; Oct. 12; Gaz. vol. 219; p. 390.
Ryther & Pringle Co. (See Ryther, George D., assignor.)
S. Karpen & Bros. (See Andren, Fritz L., assignor.)
S. F. Bowser & Co. (See Caskey, Edgar M., assignor.)
S. F. Bowser & Company. (See Morris, William L., assignor.)
Sabouret, Charles H. V., Paris, France. Continuous braking system applicable to long freight-trains with loose couplings. No. 1,158,300; Oct. 26; Gaz. vol. 219; p. 1158.
Safe Deposit and Trust Company of Pittsburgh, executor. (See Patterson, Peter.)
Safety Car Heating and Lighting Company. (See Creveling, John L., assignor.)
Safety Elevator Lock and Signal Company. (See Humphrey, Henry A., assignor.)
Sage, Ralph V., Westmont borough, Pa. Dump-car construction. No. 1,158,006; Oct. 26; Gaz. vol. 219; p. 1054.
Sage, Ralph V., Columbus, Ohio, and J. J. Tatum, Baltimore, Md.; said Sage assignor to The Ralston Steel Car Company, Columbus, Ohio. Dumping-car. No. 1,155,759; Oct. 5; Gaz. vol. 219; p. 150.
Saint, Lee G., assignor of one-fifth to A. S. Thomas, one-fifth to W. Jones, one-fifth to C. H. Clark, and one-fifth to Z. D. Fisher, Mount Sterling, Ohio. Railway-switch No. 1,156,183; Oct. 12; Gaz. vol. 219; p. 323.
Sakai, Yasudiro, East Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Armature-winding. No. 1,156,711; Oct. 12; Gaz. vol. 219; p. 506.
Saltzman, Auguste L., East Orange, assignor, by mesne assignments, to New Jersey Patent Company, West Orange, N. J. Primary battery. No. 1,155,512; Oct. 5; Gaz. vol. 219; p. 66.
Sandage, Oliver G., New York, N. Y., assignor of two-thirds to Doehler Die Casting Company. Art or method of and apparatus for casting fluid metals. No. 1,156,557; Oct. 12; Gaz. vol. 219; p. 454.
Sanders, Albert H., and O. Hood, Glendora, Cal. Concrete-pipe machine. No. 1,158,301; Oct. 26; Gaz. vol. 219; p. 1159.
Sanders, Joseph, Washington, D. C. Spring-wheel. No. 1,155,444; Oct. 5; Gaz. vol. 219; p. 41.
Sanders, Miles A., Iuka, Ill. Package-tie. No. 1,155,961; Oct. 5; Gaz. vol. 219; p. 221.
Sands, Thomas E. (See Moynihan, Jeremiah A., assignor.)
Sandusky Portland Cement Company. (See Newberry, Spencer B., assignor.)
Sangamo Electric Company. (See Noble, Warren, assignor.)
Santarsiero, Antonio V., assignor to A. Bucci, Port Chester, N. Y. Ammunition-hoist. No. 1,157,048; Oct. 19; Gaz. vol. 219; p. 657.
Santos, Carlos, Lisabon, Portugal, and R. Boerner, Berlin, assignors to Siemens & Halske A. G., Siemensstadt, near Berlin, Germany. Electromedical apparatus. No. 1,156,317; Oct. 12; Gaz. vol. 219; p. 367.
Saranac Machine Co. (See Craig, Edward, assignor.)
Sargent, Alonzo J., Jackson, Mich. Spraying attachment for hose-nozzles. No. 1,158,302; Oct. 26; Gaz. vol. 219; p. 1159.
Sargent & Company. (See Sutliff, Archibald E., assignor.)
Sargent, Evlan, Moline, Ill. Type-writer. No. 1,155,445; Oct. 5; Gaz. vol. 219; p. 42.
Sargent, Fitz William, assignor to American Brake Shoe & Foundry Company, Mahwah, N. J. Back for brake-shoes. No. 1,157,183; Oct. 19; Gas. vol. 219; p. 704.
Sasgen Derrick Company. (See Sasgen, Michael J., assignor.)
Sasgen, Michael J., assignor to Sasgen Derrick Company, Chicago, Ill. Derrick. No. 1,156,558; Oct. 12; Gaz. vol. 219; p. 454.
Sattley, Frederick L., Indianapolis, Ind. Currency-handling machine. No. 1,156,101; Oct. 12; Gaz. vol. 219; p. 296.
Sauer, Henry J., Fairfield, Conn. Lamp-bracket. No. 1,158,078; Oct. 26; Gaz. vol. 219; p. 1081.
Saul, John, Jersey City, N. J. Antirattler for windows. No. 1,155,446; Oct. 5; Gaz. vol. 219; p. 42.
Saunders, Benjamin P., Iatan, Mo. Shipping-can. No. 1,155,447; Oct. 5; Gaz. vol. 219; p. 43.
Saunders, Randall N., Hudson, N. Y. Collar-button. No. 1,155,962; Oct. 5; Gaz. vol. 219; p. 221.
Saunders, William F., Boston, Mass. Apparatus for washing automobiles and other vehicles. No. 1,158,079; Oct. 26; Gaz. vol. 219; p. 1081.
Sauvage Ward Brake Company. (See Ward, Frank D., assignor.)
Sauvola, Gustaf, Astoria, Oreg. Elevated railway. No. 1,155,760; Oct. 5; Gaz. vol. 219; p. 150.
Savage, Ernest T., Bath, Me. Tool. No. 1,157,589; Oct. 19; Gaz. vol. 219; p. 844.
Savage, Marion A., Schenectady, N. Y., assignor to General Electric Company. Method of and means for measuring the flow of fluids. No. 1,156,630; Oct. 12; Gaz. vol. 219; p. 480.
Savoday Rack Company. (See Buch, Adam J., assignor.)
Savoday Rack Company. (See Whelan, Thomas F., assignor.)
Sawyer, Harry, Muskegon, Mich. Grab-bucket-operating mechanism for cranes. No. 1,157,962; Oct. 26; Gaz. vol. 219; p. 1040.
Sayer, George J., Chicago, Ill. Rind-cutting machine. No. 1,156,822; Oct. 12; Gaz. vol. 219; p. 546.
Sayer, Robert C., Redland, Bristol, England. Vehicle propeller-actuating mechanism. No. 1,156,712; Oct. 12; Gaz. vol. 219; p. 508.
Schade, John, Jr., Brooklyn, N. Y., assignor to National Blank Book Company, Holyoke, Mass. Loose-leaf binder. No. 1,157,184; Oct. 19; Gaz. vol. 219; p. 705.
Schaefer, Ferdinand A., Raspeburg, Md., assignor of one-half to G. R. Riggs, Washington, D. C. Vehicle-wheel. No. 1,156,318; Oct. 12; Gaz. vol. 219; p. 367.
Schafer, William, San Francisco, Cal. Internal-combustion pump. No. 1,158,303; Oct. 26; Gaz. vol. 219; p. 1160.
Schaick, Theodore F., Long Beach, Cal. Automobile-bed. No. 1,156,631; Oct. 12; Gaz. vol. 219; p. 480.
Schaller, Otto, Südende, near Berlin, Germany. Electric lamp. No. 1,155,963; Oct. 5; Gaz. vol. 219; p. 222.
Schandoney, Frederick W., Sprague, Wash. Device for upsetting the links of chains. No. 1,155,513; Oct. 5; Gaz. vol. 219; p. 67.
Scharf, John A., Richwood, Ohio. Automobile trailer-coupling. No. 1,157,590; Oct. 19; Gaz. vol. 219; p. 845.
Schaub, Emil, Weehawken, N. J., assignor to P. Voiges, New York, N. Y. Apparatus for dissolving and treating vegetable tanning extracts. No. 1,158,304; Oct. 26; Gaz. vol. 219; p. 1160.
Schaub, Jacob, Logan, Utah. Communion-service. No. 1,156,319; Oct. 12; Gaz. vol. 219; p. 368.
Schebler, George M., assignor to F. H. Wheeler, Indianapolis, Ind. Carbureter. No. 1,156,823; Oct. 12; Gaz. vol. 219; p. 546.
Scheick, Wenzel, Waterbury, Conn. Air injector. No. 1,155,620; Oct. 5; Gaz. vol. 219; p. 102.
Schenck, Henry L., Decatur, Ill. Changeable-speed gear mechanism. No. 1,156,102; Oct. 12; Gaz. vol. 219; p. 297.
Schepman, Frederick W., *et al.* (See Teamer, James M., assignor.)
Scherer, Albert G., assignor to The Excelsior Steel Furnace Company, Chicago, Ill. Stack head or boot for hot-air stacks. No. 1,155,761; Oct. 5; Gaz. vol. 219; p. 151.
Schidrowitz, Philip, and H. A. Goldsborough, London, England. Rubber substance and making same. No. 1,156,184; Oct. 12; Gaz. vol. 219; p. 324.
Schmeling, Emil W., Rockford, Ill. Laboratory-table. No. 1,158,305; Oct. 26; Gaz. vol. 219; p. 1161.
Schmelser, Bernard J., Joliet, Ill. Bung. No. 1,157,906; Oct. 26; Gaz. vol. 219; p. 1021.

Schmid, Frank H., Rocky River, Ohio. Pane-fastening means for window-sashes. No. 1,158,306; Oct. 26; Gaz. vol. 219; p. 1161.
Schmidt, Albert, assignor to Champion Ignition Company, Flint, Mich. Spark-plug. No. 1,155,514; Oct. 5; Gaz. vol. 219; p. 67.
Schmidt, Albert, assignor to Champion Ignition Company, Flint, Mich. Spark-plug. No. 1,155,515; Oct. 5; Gaz. vol. 219; p. 67.
Schmidt, August J., assignor to Diamond Whip Company, Chicago, Ill. Whip. No. 1,157,424; Oct. 19; Gaz. vol. 219; p. 791.
Schmidt, Frederick, assignor of one-half to A. P. Botschelier, Dalton, Pa. Horseshoe-calk. No. 1,156,713; Oct. 12; Gaz. vol. 219; p. 509.
Schmidt, Henry F., Pittsburgh, Pa., assignor to The Westinghouse Machine Company. Marine turbine. No. 1,155,516; Oct. 5; Gaz. vol. 219; p. 68.
Schmidt, Lawrence S., Corsopolis, assignor of one-half to R. T. McCormick, Irwin, Pa. Welded joint. No. 1,158,307; Oct. 26; Gaz. vol. 219; p. 1162.
Schmidt, William J., Garner, Iowa. Trench-cutter and edge-trimmer. No. 1,157,809; Oct. 26; Gaz. vol. 219; p. 985.
Schmitt, Edmund, Bridgeport, Conn. Muffler. No. 1,157,256; Oct. 19; Gaz. vol. 219; p. 732.
Schneider, Adolf A., assignor to L. M. Lehmann, Dresden, Germany. Chocolate-molding apparatus. No. 1,155,839; Oct. 5; Gaz. vol. 219; p. 180.
Schneider, Eberhard, New York, N. Y. Registering device for a moving-picture machine. No. 1,156,934; Oct. 19; Gaz. vol. 219; p. 616.
Schneider, Eugène, Le Creusot, France. Sighting apparatus or ordnance. No. 1,155,517; Oct. 5; Gaz. vol. 219; p. 68.
Schnellhardt, William F., Seattle, Wash. Game-board. No. 1,158,308; Oct. 26; Gaz. vol. 219; p. 1162.
Schock, Thomas, Montello, Nev. Horse-collar. No. 1,157,425; Oct. 19; Gaz. vol. 219; p. 792.
Schoenheit, August W., Pittsburgh, Pa. Closure for receptacles. No. 1,157,591; Oct. 19; Gaz. vol. 219; p. 845.
Schoenherr, Frank C., assignor of one-half to J. P. C. Pacius, Milwaukee, Wis. Window-sash lock. No. 1,156,632; Oct. 12; Gaz. vol. 219; p. 481.
Scholes, Daniel R., assignor to Aermotor Company, Chicago, Ill. Windmill. No. 1,155,518; Oct. 5; Gaz. vol. 219; p. 69.
Schorno, Ferdinand. (See Millman, Curtis F., assignor.)
Schou, Carl, Holte, Denmark. Transmitter for wireless telegraphy. No. 1,158,309; Oct. 26; Gaz. vol. 219; p. 1162.
Schreiber, John A., Bridgeport, Conn. Bread-molding machine. No. 1,158,185; Oct. 12; Gaz. vol. 219; p. 324.
Schrock, Rufus J., Loganton, Pa. Trace-hook. No. 1,157,185; Oct. 19; Gaz. vol. 219; p. 705.
Schroeder, Josef, Tegel, Germany, assignor to General Electric Company. Brake for flying-machines. No. 1,156,633; Oct. 12; Gaz. vol. 219; p. 481.
Schroeder, Samuel M., and J. E. Norwood, Baltimore, Md. Combined hoe and weeder. No. 1,156,714; Oct. 12; Gaz. vol. 219; p. 509.
Schroyer, Harry E., Chicago, Ill., assignor to The Acme Supply Company. Weather-strip. No. 1,157,125; Oct. 19; Gaz. vol. 219; p. 684.
Schull-Gramm, Agnes, *et al.* (See Connor, Patrick F., assignor.)
Schulte, William H., Trenton, N. J. Drinking-fountain. No. 1,155,621; Oct. 5; Gaz. vol. 219; p. 102.
Schultheis, Val J. (See Lynch, William T. J., assignor.)
Schultz, Karl, Berwyn, Ill. Skate. No. 1,157,049; Oct. 19; Gaz. vol. 219; p. 657.
Schulze, Leon F. and R., Cleveland, Ohio. Metal-working machine. No. 1,157,050; Oct. 19; Gaz. vol. 219; p. 658.
Schulze, Robert. (See Schulze, Leon F. and R.)
Schulze, Wilhelm H., Frankfort-on-the-Main, Germany. Apparatus for measuring the area of hides. No. 1,158,310; Oct. 26; Gaz. vol. 219; p. 1163.
Schunk, George S., West Allis, Wis. Motor attachment for bicycles. No. 1,158,311; Oct. 26; Gaz. vol. 219; p. 1163.
Schurmann, William A., Philadelphia, Pa. Egg-box. No. 1,156,436; Oct. 12; Gaz. vol. 219; p. 412.
Schütte, Bernhard, Hasbergen, Germany. Slip-shackle. No. 1,158,392; Oct. 26; Gaz. vol. 219; p. 1191.
Schutts & Koerting Company. (See Fischer, Adalbert K., assignor.)
Schutte & Koerting Company. (See Koerting, Ernst, assignor.)
Schutz, Walter S., trustee. (See Ballou, Holden P., assignor.)
Schwab, William. (See Ferriss, Edward, assignor.)
Schwartz, Isidore, New York, N. Y. Garment. No. 1,158,312; Oct. 26; Gaz. vol. 219; p. 1163.
Schwarz, Julius, assignor to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y. Automatic musical instrument. No. 1,156,499; Oct. 12; Gaz. vol. 219; p. 434.
Schweinert, Maximilian C., West Hoboken, N. J., and H. P. Kraft, New York, N. Y. Pillow-valve. No. 1,158,420; Oct. 26; Gaz. vol. 219; p. 1202.
Schweitzer, Edmund O., Chicago, Ill. Device for protecting induction-motors and the like. No. 1,157,051; Oct. 19; Gaz. vol. 219; p. 658.
Schwerin, Botho, assignor to Gesellschaft für Elektro-Osmose m. b. H., Frankfort-on-the-Main, Germany. Electro-osmotical filter-press. No. 1,156,715; Oct. 12; Gaz. vol. 219; p. 509.
Schwibinger, George, assignor to Rundle-Spence Manufacturing Company, Milwaukee, Wis. Automatic flushing mechanism for closets. No. 1,157,186; Oct. 19; Gaz. vol. 219; p. 705.
Schwibinger, George, assignor to Rundle-Spence Manufacturing Company, Milwaukee, Wis. Automatic flushing mechanism for closets. No. 1,157,187; Oct. 19; Gaz. vol. 219; p. 705.
Schwimmer, Oscar, Los Angeles, Cal. Motion-picture machine. No. 1,156,824; Oct. 12; Gaz. vol. 219; p. 547.
Schwoch, Theodore H. F., Greenwood, Wis. Automobile-sleigh. No. 1,157,126; Oct. 19; Gaz. vol. 219; p. 684.
Schwoyer, Levi, Pottstown, Pa. Horseshoe. No. 1,158,935; Oct. 19; Gaz. vol. 219; p. 616.
Scott, Blanche, executrix. (See Scott, Charles H.)
Scott, Charles H., deceased, Minneapolis, Minn.; B. Scott, executrix. Scale. No. 1,156,500; Oct. 12; Gaz. vol. 219; p. 435.
Scott, Earl R., Joliet, Ill. Guard-rail. No. 1,157,426; Oct. 19; Gaz. vol. 219; p. 792.
Scott, Henry D., Sheridan, Wyo. Mine-car brake. No. 1,155,964; Oct. 5; Gaz. vol. 219; p. 222.
Scott, James A., Worcester, Mass. Folding box and cover. No. 1,156,250; Oct. 12; Gaz. vol. 219; p. 345.
Scott, Zachary T., Austin, Tex. Steam-condenser. No. 1,156,501; Oct. 12; Gaz. vol. 219; p. 435.
Scowden, Edward W., Frewsburg, N. Y. Method and apparatus for concreting piles. No. 1,157,328; Oct. 19; Gaz. vol. 219; p. 750.
Scullane, James B. (See Havlicek and Scullane.)
Scuterud, Mikarl A., Arlington Heights, assignor to Choralcelo Manufacturing Company, Boston, Mass. Ball-bearing. No. 1,156,320; Oct. 12; Gaz. ol. 219; p. 368.
Sea Swing Company, The. (See Kohler, Robert L., assignor.)
Seals, Wade H., Rossville, Ill. End-gate. No. 1,156,498; Oct. 12; Gaz. vol. 219; p. 434.
Sears, Roebuck and Company. (See Hasberg and Swanlund, assignors.)
Security Metallic Grave Vault Co. (See Boyd, David C., assignor.)
Seede, John A., Schenectady, N. Y., assignor to General Electric Company. Arc-welding. No. 1,156,502; Oct. 12; Gaz. vol. 219; p. 435.
Seeley, James E., Los Angeles, Cal. Electrical machine. No. 1,157,592; Oct. 19; Gaz. vol. 219; p. 845.
Seelman, George, Jr., Milwaukee, Wis. Book-cover. No. 1,157,810; Oct. 26; Gaz. vol. 219; p. 985.
Segerc, Joseph, New York, N. Y. Vegetable-cutter. No. 1,155,762; Oct. 5; Gaz. vol. 219; p. 151.
Seibt, Georg, Schöneberg, near Berlin, Germany, assignor to General Transmission Company, New York, N. Y. Electric plate-condenser. No. 1,155,448; Oct. 5; Gaz. vol. 219; p. 43.
Seidel, Francis P. (See Rothenberger, Daniel M., assignor.)
Seitz, Edward, Peoria, Ill. Pressure-tank for vapor-lamp systems. No. 1,155,622; Oct. 5; Gaz. vol. 219; p. 102.
Seivert, Michael V., Elkton, S. D. Wrench. No. 1,157,427; Oct. 19; Gaz. vol. 219; p. 793.
Seidomridge, Charles B., *et al.* (See Templeton, William G., assignor.)
Seidomridge, Harry H., *et al.* (See Templeton, William G., assignor.)
Selleck, Theodore G., assignor of one-half to J. L. Deppen, Chicago, Ill. Tool-handle fastening. No. 1,157,593; Oct. 19; Gaz. vol. 219; p. 846.
Selleck, Theodore G., assignor of one-half to J. L. Deppen, Chicago, Ill. Bench-plane. No. 1,157,594; Oct. 19; Gaz. vol. 219; p. 846.
Seltenreich, John J., Chicago, Ill., assignor to National Chemical Company, Syracuse, N. Y. Collar-forming machine. No. 1,157,329; Oct. 19; Gaz. vol. 219; p. 756.
Semradek, Frank J. (See Baughman and Semradek.)
Serpek, Ottokar, assignor to Société Générale des Nitrurés, Paris, France. Fixing nitrogen. No. 1,155,840; Oct. 5; Gaz. vol. 219; p. 181.
Settle, Walter A. (See Thornton and Settle.)
Severs, Joseph, Battle Creek, Nebr. Mechanical starting mechanism for internal-combustion engines. No. 1,155,687; Oct. 5; Gaz. vol. 219; p. 126.
Sevsey, Melvin L., Arlington Heights, and G. B. Sinclair, Winthrop, assignors to Choralcelo Company, Boston, Mass. Expression device for musical instruments. No. 1,156,321; Oct. 12; Gaz. vol. 219; p. 368.
Sewalt, Matthew E., Lovington, N. Mex. Wire-stretcher. No. 1,156,322; Oct. 12; Gaz. vol. 219; p. 369.
Seybert, Andrew J., East Brady, Pa. Wrench. No. 1,155,841; Oct. 5; Gaz. vol. 219; p. 181.
Seymour, Dudley S., Oak Park, assignor to Union Special Machine Company, Chicago, Ill. Mechanism for raising the needle-bar. No. 1,158,313; Oct. 26; Gaz. vol. 219; p. 1163.
Shackelford, Orie, Fairmont, W. Va. Artificial incubation. No. 1,156,374; Oct. 12; Gaz. vol 219; p. 390.
Shackleford, Charles J., Nelson, Mo. Vehicle-wheel. No. 1,158,314; Oct. 26; Gaz. vol. 219; p. 1164.
Shadbolt, William O., New York, N. Y. Fifth-wheel for vehicles. No. 1,155,628; Oct. 5; Gaz. vol. 219; p. 103.

Shadley, Jay B., Danville, Ill. Trap. No. 1,155,842; Oct. 5; Gaz. vol. 219; p. 181.
Shaler, Clarence A., Waupun, Wis. Vulcanizer. No. 1,158,315; Oct. 26; Gaz. vol. 219; p. 1164.
Shallenberger, Charles S. (See Westlake and Shallenberger.)
Shannon, James F., Farmville, Va. Grain-bag. No. 1,155,375; Oct. 5; Gaz. vol. 219; p. 17.
Shannon, Leon T., assignor of two-fifths to A. P. Lewis and one-fifth to J. B. Jones, Reno, Nev. Rotary engine. No. 1,157,811; Oct. 26; Gaz. vol. 219; p. 986.
Shannon, Robert L., assignor of one-half to E. McFarland, McKees Rocks, Pa. Guard for turning-machines. No. 1,156,559; Oct. 12; Gaz. vol. 219; p. 455.
Shapland, George F., Salina, Kans. Cooking attachment for stoves. No. 1,155,519; Oct. 5; Gaz. vol. 219; p. 69.
Sharp, Charles S., Auburn, N. Y., assignor to International Harvester Company of New Jersey. Harrow. No. 1,157,812; Oct. 26; Gaz. vol. 219; p. 986.
Sharp, Clark E., Columbus, Ohio. Automatic trap-nest coop. No. 1,157,595; Oct. 19; Gaz. vol. 219; p. 846.
Sharp, Columbus A., Chicago, Ill. Boot and shoe. No. 1,157,330; Oct. 19; Gaz. vol. 219; p. 757.
Sharpley, Annie E., *et al.* (See Geary, Joseph F., assignor.)
Shaw, Edward T., Pittsfield, Mass., assignor to General Electric Company. Control mechanism. No. 1,157,963; Oct. 26; Gaz. vol. 219; p. 1040.
Shaw, Harold E., Maywood, Ill. Rotary can-tipping machine. No. 1,156,684; Oct. 12; Gaz. vol. 219; p. 482.
Shea, Thomas J., Portland, Oreg. Boiler. No. 1,157,813; Oct. 26; Gaz. vol. 219; p. 987.
Shearer, Harry T., assignor to Landis Tool Company, Waynesboro, Pa. Cam-grinder attachment for grinding-machines. No. 1,156,323; Oct. 12; Gaz. vol. 219; p. 389.
Shearman, James A., Conimicut, and F. De Gordy, Providence, R. I. Cigarette box or container. No. 1,155,688; Oct. 5; Gaz. vol. 219; p. 127.
Sheble, Horace, Philadelphia, Pa. Sound-box for talking-machines. No. 1,158,316; Oct. 26; Gaz. vol. 219; p. 1164.
Shedd, Hugh E., Minneapolis, Minn. Calendar. No. 1,158,317; Oct. 26; Gaz. vol. 219; p. 1165.
Sheehan, Owen, New Bedford, assignor to The Hollingsworth & Vose Co., Boston, Mass. Machine for decorticating fiber. No. 1,156,103; Oct. 12; Gaz. vol. 219; p. 297.
Sheffield Car Company. (See Mahana, Charles G., assignor.)
Sheffield Car Company. (See Stebbins, Charles B., assignor.)
Shelby Printing Company, The. (See Gauch, Orlando S., assignor.)
Sheldon, Harry E., Pittsburgh, Pa. Ingot-mold. No. 1,158,318; Oct. 26; Gaz. vol. 219; p. 1165.
Sheldon, Lucian A., Schenectady, N. Y., assignor to General Electric Company. Steam-flow meter. No. 1,156,503; Oct. 12; Gaz. vol. 219; p. 436.
Sheldon, Lucian A., Schenectady, N. Y., assignor to General Electric Company. Bearing for flow-meters. No. 1,157,331; Oct. 19; Gaz. vol. 219; p. 757.
Sheldon, William G., London, England, assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,156,437; Oct. 12; Gaz. vol. 219; p. 412.
Sheperdson, John W., Johnstown, Pa., assignor to General Electric Company. Flow-meter. No. 1,156,635; Oct. 12; Gaz. vol. 219; p. 482.
Shephard, William H., and A. E. McKechnie, Bayswater, London, England. Telegraph system. No. 1,156,043; Oct. 5; Gaz. vol. 219; p. 249.
Shepherd, Thomas, Dingmans Ferry, Pa. Horseshoe and calk. No. 1,157,052; Oct. 19; Gaz. vol. 219; p. 658.
Shepler, Albert N., Peru, Ind. Rail tie and fastener. No. 1,158,319; Oct. 26; Gaz. vol. 219; p. 1165.
Sheppard, Osborne H., Chicago, Ill. Stethoscope. No. 1,157,428; Oct. 19; Gaz. vol. 219; p. 793.
Sheppard, Osborne H., Chicago, Ill. Hypodermic syringe. No. 1,157,429; Oct. 19; Gaz. vol. 219; p. 793.
Sherer, Harvey C., assignor to F. A. McKenzie, Columbus, Ohio. Furniture-anchor. No. 1,155,376; Oct. 5; Gaz. vol. 219; p. 18.
Sherman, Moses, assignor of one-third to S. Liss and one-third to B. Rivkin, New York, N. Y. Lock-nut. No. 1,157,596; Oct. 19; Gaz. vol. 219; p. 846.
Sherwood, Mather W., Franklin, Pa., assignor to Chicago Pneumatic Tool Company, Chicago, Ill. Pneumatic tool. No. 1,157,430; Oct. 19; Gaz. vol. 219; p. 794.
Shimmin, George F., Maryport, England. Rear framing of motor-cycles and the like. No. 1,157,431; Oct. 19; Gaz. vol. 219; p. 794.
Shinn, James E., Conway Springs, Kans. Nut-lock. No. 1,157,814; Oct. 26; Gaz. vol. 219; p. 987.
Shipley, Thomas, York, Pa. Machinery for the manufacture of ice. No. 1,158,320; Oct. 26; Gaz. vol. 219; p. 1165.
Shipley, Thomas, York, Pa. Refrigerating or ice-making apparatus. No. 1,158,321; Oct. 26; Gaz. vol. 219; p. 1166.
Shipley, Thomas, York, Pa. Can-filler for ice-machines. No. 1,158,322; Oct. 26; Gaz. vol. 219; p. 1166.
Shipps, Joseph A. (See Fassett, Daniel F., assignor.)
Shirley, John C., Hubbard Woods, Ill. Distributing device. No. 1,155,763; Oct. 5; Gaz. vol. 219; p. 151.
Shoe Manufacturers' Supply Company. (See Benjamin, William T., assignor.)
Shoos, Joseph, Roseton, N. Y. Chain-stretcher. No. 1,155,520; Oct. 5; Gaz. vol. 219; p. 69.
Shore, William E., assignor to Combusto Devices Corporation, New York, N. Y. Air-superheating device for furnaces. No. 1,157,964; Oct. 26; Gaz. vol. 219; p. 1041.
Shore, William E., assignor to Combusto Devices Corporation, New York, N. Y. Air-superheating device for furnaces. No. 1,157,965; Oct. 26; Gaz. vol. 219; p. 1041.
Shores, William P., Antonito, Colo. Carbureter. No. 1,156,716; Oct. 12; Gaz. vol. 219; p. 510.
Shreeve, Herbert E., Short Hills, N. J., assignor to Western Electric Company, New York, N. Y. Telephone-repeater. No. 1,156,636; Oct. 12; Gaz. vol. 219; p. 483.
Shults, Rex M., Ignacio, Colo. Heated automobile steering-wheel. No. 1,156,637; Oct. 12; Gaz. vol. 219; p. 483.
Shuman, Arno. (See Cox and Shuman.)
Shuman, Arno, assignor to Pennsylvania Wire Glass Company, Philadelphia, Pa. Skylight. No. 1,156,251; Oct. 12; Gaz. vol. 219; p. 345.
Shuman, Frank, Philadelphia, Pa. Making composite piles. No. 1,156,186; Oct. 12; Gaz. vol. 219; p. 324.
Sibley, Richard C., Boston, Mass. Pneumatic-tire gage. No. 1,156,862; Oct. 12; Gaz. vol. 219; p. 562.
Siedentopf, Henry, assignor to Firm of C. Zeiss, Jena, Germany. Microscope-condenser. No. 1,157,257; Oct. 19; Gaz. vol. 219; p. 732.
Siemens & Halske A. G. (See Santos and Boerner, assignors.)
Siemens-Schuckertwerke G. m. b. H. (See Finckbein, Adolf, assignor.)
Siemens-Schuckertwerke G. m. b. H. (See Tolle, Heinrich, assignor.)
Silberstein, Carl, Berkeley, Cal. Coin-wrapper. No. 1,155,624; Oct. 5; Gaz. vol. 219; p. 103.
Silver Manufacturing Company, The. (See Haldeman, James C., assignor.)
Simmons, Lawrence A., Schenectady, N. Y., assignor to General Electric Company. Flow-meter. No. 1,156,638; Oct. 12; Gaz. vol. 219; p. 483.
Simmons, Ralph C., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Eyeleting-machine. No. 1,156,936; Oct. 19; Gaz. vol. 219; p. 616.
Simms, Frederick R., Kilburn, England, assignor to The Simms Magneto Company, Bloomfield, N. J. Magneto-electric machine. No. 1,155,521; Oct. 5; Gaz. vol. 219; p. 70.
Simms Magneto Company, The. (See Simms, Frederick R., assignor.)
Simon, Carl G., deceased, Seattle; G. Olson, administrator, assignor to L. H. Markham and C. E. Taylor, King county, Wash. Refrigerator. No. 1,156,252; Oct. 12; Gaz. vol. 219; p. 346.
Simon, Steven, Muskegon Heights, Mich. Combined cutter and chopper. No. 1,155,843; Oct. 5; Gaz. vol. 219; p. 182.
Simplex Concrete Piling Company, The. (See Stewart, John, assignor.)
Simpson, John. (See Jacobs, William J., assignor.)
Simpson, Joseph F., Vineland, N. J. Game. No. 1,156,438; Oct. 12; Gaz. vol. 219; p. 413.
Simpson, Ray R., and J. S. Wilmoth, Dallas, Tex. Combined envelop, shipping-tag, and index-card. No. 1,157,432; Oct. 19; Gaz. vol. 219; p. 794.
Sinclair, George B. (See Severy and Sinclair.)
Singer Manufacturing Company, The. (See Bubier, Howard F., assignor.)
Singer Manufacturing Company, The. (See De Voe, Albert H., assignor.)
Singer Manufacturing Company, The. (See Gray, Charles F., assignor.)
Singer Manufacturing Company, The. (See Ringe, John C., assignor.)
Singer Manufacturing Company, The. (See Rontke, Albert, assignor.)
Singer Manufacturing Company, The. (See Woehrle, Henriette B., assignor.)
Singrün, Henri A. (See Audiffren and Singrün.)
Sinnott, James, Chatham, Ill. Garden implement. No. 1,156,937; Oct. 19; Gaz. vol. 219; p. 616.
Sippert, Gotlieb, Bowdle, S. D. Windmill-regulator. No. 1,158,393; Oct. 26; Gaz. vol. 219; p. 1191.
Sjauken, John, Hoboken, N. J. Bottled-liquid-mixing machine. No. 1,156,375; Oct. 12; Gaz. vol. 219; p. 390.
Sjobring, Nels P., Chicago, Ill. Metal-rolling machine. No. 1,155,522; Oct. 5; Gaz. vol. 219; p. 70.
Skelton, Trevis W., Lansing, Mich. Oil-delivery tank. No. 1,158,394; Oct. 26; Gaz. vol. 219; p. 1192.
Skinner, Ella M., Chicago, Ill. Rest for sad-irons. No. 1,156,104; Oct. 12; Gaz. vol. 219; p. 298.
Skinner Engine Company. (See Stevens, Robert C., assignor.)
Skinner, William B., Castor, La. Device for spacing the rail-sections of a railway-track. No. 1,157,815; Oct. 26; Gaz. vol. 219; p. 987.
Sleeper, Otis H., Exeter, N. H. Nut-lock. No. 1,156,105; Oct. 12; Gaz. vol. 219; p. 298.
Sleffel, William J., assignor to The Kirk-Latty Manufacturing Company, Cleveland, Ohio. Combined front gear and steering connection for children's vehicles. No. 1,156,023; Oct. 5; Gaz. vol. 219; p. 242.

Small, Alfred B. and C. C., Lake City, Fla. Transmission-gearing. No. 1,156,988; Oct. 19; Gaz. vol. 219; p. 617.
Small, Carleton C. (See Small, Alfred B. and C. C.)
Small, Walter E., and H. E. Hilton, Los Angeles, Cal. Safety-grip for plungers of elevators. No. 1,156,324; Oct. 12; Gaz. vol. 219; p. 370.
Smallbone Manufacturing Company. (See Maechler, Walter, assignor.)
Smalley Manufacturing Co. (See Frick, Orlando C., assignor.)
Smart, Russel S., Ottawa, Ontario, Canada. Tooth-paste-dispensing device. No. 1,156,106; Oct. 12; Gaz. vol. 219; p. 298.
Smedberg, Edmund M., New York, N. Y. Garment-supporter. No. 1,156,187; Oct. 12; Gaz. vol. 219; p. 325.
Smith, Albert E., Dunkirk, N. Y. Nut-lock. No. 1,155,844; Oct. 5; Gaz. vol. 219; p. 182.
Smith, Charles M., Neodesha, Kans. Knuckle-joint for motor-vehicles. No. 1,158,323; Oct. 26; Gaz. vol. 219; p. 1166.
Smith, Christopher C. (See Ryan and Smith.)
Smith, Christopher J., St. Louis, Mo. Device for identifying criminals and other persons through combination-picture. No. 1,155,523; Oct. 5; Gaz. vol. 219; p. 71.
Smith, Cullen R., Perris, Cal. Machine for cutting stalks. No. 1,156,439; Oct. 12; Gaz. vol. 219; p. 418.
Smith, Edward F., assignor to J. Anstice, Rochester, N. Y. Slicing-machine. No. 1,155,965; Oct. 5; Gaz. vol. 219; p. 222.
Smith, Elda G., and F. J. Mantel, assignors to Crouse-Hinds Company, Syracuse, N. Y. Incandescent-electric-lamp fixture. No. 1,156,560; Oct. 12; Gaz. vol. 219; p. 455.
Smith, Floyd. (See Bissell and Smith.)
Smith, Frank P., Ferguson, Mo. Non-refillable bottle. No. 1,157,127; Oct. 19; Gaz. vol. 219; p. 684.
Smith, Frank W., assignor of one-fourth to W. E. Allison and one-fourth to W. E. Hudson, Tulsa, Okla. Oil-burner. No. 1,157,332; Oct. 19; Gaz. vol. 219; p. 758.
Smith, Harold T., Coeymans, N. Y. Shock-absorber. No. 1,156,376; Oct. 12; Gaz. vol. 219; p. 391.
Smith, Henry T., Providence, R. I. Radiator. No. 1,157,188; Oct. 19; Gaz. vol. 219; p. 706.
Smith, Herman R. (See Wainwright and Smith.)
Smith, Ivan M., assignor of one-half to M. L. Fykse, South Milwaukee, Wis. Carbureter. No. 1,158,324; Oct. 26; Gaz. vol. 219; p. 1167.
Smith, James B., Manchester, N. H. Automatic fire-alarm. No. 1,156,717; Oct. 12; Gaz. vol. 219; p. 510.
Smith, James H., assignor to J. Hungerford Smith Company, Rochester, N. Y. Cherry-pitting machine. No. 1,155,449; Oct. 5; Gaz. vol. 219; p. 45.
Smith, James M. (See Knight and Smith.)
Smith, John A., San Gabriel, Cal. Combined triangle ball rack and carrier. No. 1,157,053; Oct. 19; Gaz. vol. 219; p. 659.
Smith, John S., Burlington, Wis. Cultivator. No. 1,157,433; Oct. 19; Gaz. vol. 219; p. 795.
Smith, John X., Watertown, N. Y. Fracture-clamp. No. 1,156,440; Oct. 12; Gaz. vol. 219; p. 413.
Smith, Mark, South Reddish, near Stockport, assignor to Taylor, Garnett, Evans & Company Limited, Manchester, England. Bronsing-machine. No. 1,157,434; Oct. 19; Gaz. vol. 219; p. 795.
Smith, Milton N. (See Dugan and Smith.)
Smith, Ona E., San Jose, Cal. Paper fruit-container. No. 1,155,524; Oct. 5; Gaz. vol. 219; p. 71.
Smith, Oscar A., and B. F. Rindfleisch, assignors to The National-Acme Manufacturing Company, Cleveland, Ohio. Machine for castellating nuts. No. 1,157,258; Oct. 19; Gaz. vol. 219; p. 732.
Smith, Oscar A., and B. F. Rindfleisch, assignors to The National-Acme Manufacturing Company, Cleveland, Ohio. Die. No. 1,157,259; Oct. 19; Gaz. vol. 219; p. 733.
Smith, Oscar A., and B. F. Rindfleisch, assignors to The National-Acme Manufacturing Company, Cleveland, Ohio. Punch. No. 1,157,260; Oct. 19; Gaz. vol. 219; p. 733.
Smith, Richard, assignor of one-fifth to C. W. Cate, Sherbrooke, Quebec, Canada. Rotary engine. No. 1,158,325; Oct. 26; Gaz. vol. 219; p. 1167.
Smith-Ryan Boat and Engine Co. (See Ryan and Smith, assignors.)
Smith, Samuel T., Blue Island, Ill. Rubber-preservative composition. No. 1,156,561; Oct. 12; Gaz. vol. 219; p. 456.
Smith, Walter, Gilman, Ill. Grain-saver attachment for reapers. No. 1,157,485; Oct. 19; Gaz. vol. 219; p. 795.
Smith & Wesson. (See Wesson and Pomeroy, assignors.)
Smith, William J., assignor of one-half to P. D. Podhola, Max, N. D. Seat cushion and cover. No. 1,156,989; Oct. 19; Gaz. vol. 219; p. 617.
Smith, William M., *et al.* (See Wilkins, Harry, assignor.)
Snell, Elmer A., La Fargeville, N. Y. Pail-holder. No. 1,157,333; Oct. 19; Gaz. vol. 219; p. 758.
Snow, Frederick, Perry, Iowa, assignor to Globe Manufacturing Company. Gearing. No. 1,156,877; Oct. 12; Gaz. vol. 219; p. 391.
Snyder, Frank B. (See Koyen and Snyder.)
Snyder, John O., Dayton, Ohio. Air-heater for gasolene-engines. No. 1,157,189; Oct. 19; Gaz. vol. 219; p. 706.
Société Anonyme des Combustibles Industriels. (See Hennebutte, Henri, assignor.)
Société Anonyme des Combustibles Industriels. (See Rosen, Jean, assignor.)
Societe Anonyme Montbarbon. (See Montbarbon, Philippe, assignor.)
Société Anonyme pour l'Exploitation des Procedes Westinghouse-Leblanc. (See Leblanc, Maurice, assignor.)
Société Générale des Nitrurés. (See Serpek, Ottokar, assignor.)
Société Leduc, Heits et Cie. (See Descamps, Emmanuel A. J., assignor.)
Sodt, William G., Dubuque, Iowa. Door-operating mechanism for automobiles. No. 1,157,128; Oct. 19; Gaz. vol. 219; p. 685.
Sommer, William H., Peoria, Ill. Wire gate. No. 1,157,054; Oct. 19; Gaz. vol. 219; p. 659.
Sommer, William H., Peoria, Ill. Gate. No. 1,157,055; Oct. 19; Gaz. vol. 219; p. 659.
Soudack, Abraham, New York, N. Y. Bedpost-bracket. No. 1,155,764; Oct. 5; Gaz. vol. 219; p. 152.
Sörensen, Carl A. T., assignor to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden. Journaling device for shafts and other parts. No. 1,156,188; Oct. 12; Gaz. vol. 219; p. 325.
South, John T., Rice, Tex. Boll breaking or crushing machine. No. 1,158,010; Oct. 26; Gaz. vol. 219; p. 1056.
Spahr, Otto. (See Strause and Spahr.)
Spahr, Otto, Philadelphia, Pa. Bottle-closure. No. 1,156,562; Oct. 12; Gaz. vol. 219; p. 456.
Spalckhaver, William, Brooklyn, assignor, by mesne assignments, to R. Hoe and Co., New York, N. Y. Printing-machine. No. 1,156,378; Oct. 12; Gaz. vol. 219; p. 391.
Spalding, James F., Kansas City, Mo. Collapsible duplex flash-light belt. No. 1,155,377; Oct. 5; Gaz. vol. 219; p. 18.
Sparks, John G., New York, N. Y. Automatic stop for railways. No. 1,158,326; Oct. 26; Gaz. vol. 219; p. 1168.
Specketer, Heinrich, and G. Münch, Griesheim, assignors to Chemische Fabrik Griesheim-Elektron, Frankfort-on-the-Main, Germany. Production of anhydrous hydrosulfites from aqueous hydrosulfite solutions. No. 1,156,107; Oct. 12; Gaz. vol. 219; p. 298.
Spence, Howard, and T. J. I. Craig, assignors to Company of Peter Spence & Sons Limited, Manchester, England. Solution of sodium aluminate. No. 1,157,436; Oct. 19; Gaz. vol. 219; p. 796.
Spence & Sons Limited, Company of Peter. (See Spence and Craig, assignors.)
Spencer, Arthur C., Washington, D. C. Recovering potash. No. 1,157,437; Oct. 19; Gaz. vol. 219; p. 796.
Spencer, Arthur C., and K. P. McElroy, Washington, D. C. Making cyanids. No. 1,156,108; Oct. 12; Gaz. vol. 219; p. 299.
Spencer, Christopher J., and J. W. Dawson, Bradford, England. Pump and pressure-reservoir for brakes or the like. No. 1,158,007; Oct. 26; Gaz. vol. 219; p. 1055.
Spencer, Frederick W., assignor of one-fourth to T. M. Kowalski, Ionia, Mich. Automobile-radiator. No. 1,157,325; Oct. 12; Gaz. vol. 219; p. 370.
Spencer, Ira H., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn. Regulator to control the flow of fluid. No. 1,155,525; Oct. 5; Gaz. vol. 219; p. 71.
Spencer Turbine Cleaner Company, The. (See Spencer, Ira H., assignor.)
Sperry, Barton E., Batavia, Ill. Filter-press switch-cock and double-gutter construction. No. 1,157,907; Oct. 26; Gaz. vol. 219; p. 1021.
Sperry, Samuel E., Woodhaven, and W. H. Orpen, Jr., Brooklyn, assignors to International Typesetting Machine Company, New York, N. Y. Line-casting machine. No. 1,156,040; Oct. 5; Gaz. vol. 219; p. 248.
Spiegel, Alexander S., and L. F. Lindley, Chicago, Ill. Roofing material. No. 1,157,438; Oct. 19; Gaz. vol. 219; p. 796.
Spillane, Thomas, New Bethlehem, Pa., and T. Brinning, Mount Vernon, Ohio. Apparatus for removing glass. No. 1,156,379; Oct. 12; Gaz. vol. 219; p. 392.
Spinnaae, Arthur E., Mount Vernon, Ohio. Cleaning pots. No. 1,157,597; Oct. 19; Gaz. vol. 219; p. 847.
Spinelli, Francesco, Milan, Italy. Static frequency-changer. No. 1,157,730; Oct. 26; Gaz. vol. 219; p. 959.
Spivey, Thomas S., Cincinnati, Ohio, assignor to American Bankers Dust Proof Time Lock Company, New York, N. Y. Door and lock for safe-deposit boxes and the like. No. 1,155,625; Oct. 5; Gaz. vol. 219; p. 103.
Splitdorf Electrical Co. (See Perrin, Frederic S., assignor.)
Sprenger, Richard, Hennigsdorf, near Berlin, Germany, assignor to General Electric Company. Electric cooking apparatus. No. 1,157,731; Oct. 26; Gaz. vol. 219; p. 960.
St. Louis Malleable Castings Company. (See Ette, Charles G., assignor.)
Staats, Harry T., Townsend, Del. Ventilating shade-roller. No. 1,157,261; Oct. 19; Gaz. vol. 219; p. 733.
Stabler, Reuben A., Muncy, Pa. Engine-starter. No. 1,156,718; Oct. 12; Gaz. vol. 219; p. 510.
Stacy, Frederick A. (See Stocker and Stacy.)
Staeblin, Otto, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Mordant azo dyestuffs. No. 1,155,765; Oct. 5; Gaz. vol. 219; p. 152.
Stafford, William R., *et al.* (See Cox, Thomas E., assignor.)

Stalec, Paul J., Seattle, Wash. Hydraulic irrigating-machine. No. 1,156,024; Oct. 5; Gaz. vol. 219; p. 242.

Stanopafix Company. (See Palmer, Lionel G. H., assignor.)

Standard Automatic Machine Company. (See Coates, Frederick, assignor.)

Standard Fender Company, The. (See Perez, Waldo F., assignor.)

Standard Knitting Mills Company. (See Marlow, William, assignor.)

Standard Oil Company. (See Peavey, William S., assignor.)

Standard Oil Company of California. (See Quinn, John L., assignor.)

Standard Plunger Elevator Company. (See Dunn, Edward L., assignor.)

Standard Silica Brick Machinery Company. (See Avram, Mois H., assignor.)

Standard Underground Cable Company. (See Barbour, Charles, assignor.)

Standerwick, Reginald G., Lynn, Mass., assignor to General Electric Company. Headlight. No. 1,157,966; Oct. 26; Gaz. vol. 219; p. 1042.

Stanfield, Eddie F., Hoquiam, Wash. Cattle-stanchion. No. 1,158,008; Oct. 26; Gaz. vol. 219; p. 1055.

Stankus, John, Portage, Pa. Armored motor-car. No. 1,155,450; Oct. 5; Gaz. vol. 219; p. 43.

Stanton, Charles H. (See Jones, Erastus T., assignor.)

Stanton, Le Roy W., Cleveland, Ohio, assignor of one-half to F. W. Dunbar, Chicago, Ill. Telephone system. No. 1,156,253; Oct. 12; Gaz. vol. 219; p. 346.

Staples, Albert F. (See Hick and Staples.)

Starker, Charles W., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Dynamo-electric machine. No. 1,156,639; Oct. 12; Gaz. vol. 219; p. 484.

Starr, Jacob M., Newnan, Ga. Plow-fender. No. 1,157,129; Oct. 19; Gaz. vol. 219; p. 685.

Starr, Marion E., Mason City, Iowa. Combined hot-water bottle and syringe. No. 1,157,439; Oct. 19; Gaz. vol. 219; p. 796.

Stassano, Ernesto, Turin, Italy. Electric furnace. No. 1,157,819; Oct. 26; Gaz. vol. 219; p. 988.

Stead, Squire D., Liverpool, England. Manufacture of cleaning-waste. No. 1,157,816; Oct. 26; Gaz. vol. 219; p. 988.

Stearns, William S., Cambridge, Mass. Device for waterproofing cameras. No. 1,156,441; Oct. 12; Gaz. vol. 219; p. 413.

Stebbins, Charles B., assignor to Sheffield Car Company, Three Rivers, Mich. Piston. No. 1,157,130; Oct. 19; Gaz. vol. 219; p. 685.

Steedman, Edwin H., St. Louis, Mo. Needle-holder. No. 1,155,378; Oct. 5; Gaz. vol. 219; p. 18.

Steel Heddle Manufacturing Company. (See Kaufmann, Jacob, assignor.)

Steele, Gabriel, Sioux City, Iowa. Furnace-door handle. No. 1,155,689; Oct. 5; Gaz. vol. 219; p. 127.

Steen, Halfdan A., Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Switch. No. 1,155,626; Oct. 5; Gaz. vol. 219; p. 104.

Steffens, William H., New York, N. Y. Feed-bag. No. 1,155,845; Oct. 5; Gaz. vol. 219; p. 182.

Steinbecker, Karl, Charlottenburg, Germany, assignor to General Electric Company. Divided cylinder for engines. No. 1,157,334; Oct. 19; Gaz. vol. 219; p. 758.

Steinbecker, Karl, Charlottenburg, Germany, assignor to General Electric Company. Cylinder construction for multiple-piston engines. No. 1,157,335; Oct. 19; Gaz. vol. 219; p. 758.

Steinbecker, Karl, Charlottenburg, Germany, assignor to General Electric Company. Cross-head. No. 1,158,328; Oct. 26; Gaz. vol. 219; p. 1168.

Steinberger, Louis, Brooklyn, N. Y. Insulator. No. 1,156,442; Oct. 12; Gaz. vol. 219; p. 414.

Steiner, Frederick W., Chicago, Ill. Machine for washing printers' furniture. No. 1,156,563; Oct. 12; Gaz. vol. 219; p. 456.

Steiner, Ulrich, assignor to Landis Tool Company, Waynesboro, Pa. Grinding-machine. No. 1,156,254; Oct. 12; Gaz. vol. 219; p. 346.

Steinmetz, Charles P., Schenectady, N. Y., assignor to General Electric Company. High-potential switching system. No. 1,157,336; Oct. 19; Gaz. vol. 219; p. 759.

Stenning, William W. (See Higgins and Stenning.)

Stephen, David, Stratford, assignor to The H. O. Canfield Co., Bridgeport, Conn. Making rubber float-ball valves. No. 1,158,009; Oct. 26; Gaz. vol. 219; p. 1056.

Stephen, David, Stratford, assignor to The H. O. Canfield Co., Bridgeport, Conn. Rubber float-ball valve. No. 1,158,395; Oct. 26; Gaz. vol. 219; p. 1192.

Stephenson, William C., and A. J. Drapalik, assignors of one-half to C. M. Newman, Rocky Mount, N. C. Grinding-machine. No. 1,156,504; Oct. 12; Gaz. vol. 219; p. 436.

Stephenson, William P., Windsor, Ontario, Canada. Knockdown lamp stand and shade. No. 1,157,732; Oct. 26; Gaz. vol. 219; p. 960.

Stern, Guido, assignor to Bamberger Lerol & Company, Frankfort-on-the-Main, Germany. Apparatus for automatically regulating the temperature of a supply of liquid. No. 1,156,505; Oct. 12; Gaz. vol. 219; p. 437.

Stern, Nathan S., New Orleans, La. Screen for rice-cleaning machines. No. 1,156,640; Oct. 12; Gaz. vol. 219; p. 484.

Stendner, Martin, Lusan, near Gera, Germany. Adjusting device for tool-chucks. No. 1,157,817; Oct. 26; Gaz. vol. 219; p. 988.

Stevens, Burt D., Riverside, assignor to The Miehle Printing Press & Manufacturing Company, Chicago, Ill. Delivery mechanism for printing-presses. No. 1,156,940; Oct. 19; Gaz. vol. 219; p. 617.

Stevens, Carl M. (See Ruble and Stevens.)

Stevens, Frank B., Whitesboro, N. Y. Desk. No. 1,156,443; Oct. 12; Gaz. vol. 219; p. 414.

Stevens, Frederick C. (See Moore, Charles C., assignor.)

Stevens, George E., Lynn, Mass., assignor to General Electric Company. Molding-machine. No. 1,157,967; Oct. 26; Gaz. vol. 219; p. 1042.

Stevens Regulator Co. (See Stevens, Willie J., assignor.)

Stevens, Robert C., assignor to Skinner Engine Company, Erie, Pa. Steam-engine. No. 1,157,440; Oct. 19; Gaz. vol. 219; p. 796.

Stevens, Walter L., New York, N. Y. Folding paper box. No. 1,156,444; Oct. 12; Gaz. vol. 219; p. 414.

Stevens, William X., Washington, D. C., assignor to E. L. Barton, Jacksonville, Fla. Nailing mechanism for box-machines. No. 1,156,100; Oct. 12; Gaz. vol. 219; p. 290.

Stevens, Willie J., assignor to Stevens Regulator Co., Portland, Me. Boiler feed-water regulator. No. 1,156,941; Oct. 19; Gaz. vol. 219; p. 618.

Stevenson, Abraham C., assignor of one-half to E. R. Stevenson and one-half to D. W. Hildreth, Jr., Philadelphia, Pa. Hospital appliance. No. 1,157,441; Oct. 19; Gaz. vol. 219; p. 797.

Stevenson, Arthur W., Manchester, England. Means for fastening and retaining articles of jewelry and the like in postal and other boxes. No. 1,157,733; Oct. 26; Gaz. vol. 219; p. 960.

Stevenson, Eleanor R., *et al.* (See Stevenson, Abraham C., assignor.)

Stewart, John, assignor to The Simplex Concrete Piling Company, Washington, D. C. Making piles. No. 1,157,442; Oct. 19; Gaz. vol. 219; p. 797.

Stewart, John, assignor to The Simplex Concrete Piling Company, Washington, D. C. Tapered-pile form. No. 1,157,443; Oct. 19; Gaz. vol. 219; p. 797.

Stewart, John, Norwood, Ohio, assignor to The Simplex Concrete Piling Company, Washington, D. C. Placing and driving concrete piles. No. 1,157,444; Oct. 19; Gaz. vol. 219; p. 798.

Stewart, John K., assignor to Stewart-Warner Speedometer Corporation, Chicago, Ill. Air-pump. No. 1,158,080; Oct. 26; Gaz. vol. 219; p. 1081.

Stewart, Peres M., trustee. (See Hart, Thomas M., assignor.)

Stewart, Thereon S., Toledo, Ohio. Interchangeable collar-button and skirt-supporter. No. 1,157,818; Oct. 26; Gaz. vol. 219; p. 988.

Stewart, Thomas, Philadelphia, Pa. Locomotive-tender. No. 1,157,445; Oct. 19; Gaz. vol. 219; p. 798.

Stewart-Warner Speedometer Corporation. (See Fischer, Theodore J., assignor.)

Stewart-Warner Speedometer Corporation. (See Stewart, John K., assignor.)

Steynis, Jan, New York, N. Y., assignor to Steynis Ozone Company. Anilin-black dyeing. No. 1,157,908; Oct. 26; Gaz. vol. 219; p. 1022.

Steynis Ozone Company. (See Freet, William O., assignor.)

Steynis Ozone Company. (See Steynis, Jan, assignor.)

Stickel, Harry C., Star Junction, Pa. Journal-box for railway-cars. No. 1,157,446; Oct. 19; Gaz. vol. 219; p. 798.

Stickney, Burnham C., Elizabeth, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,158,408; Oct. 26; Gaz. vol. 219; p. 1197.

Stiegelmeyer, Theodor, Hanover-Wülfel, Germany. Abrading and polishing apparatus. No. 1,158,327; Oct. 26; Gaz. vol. 219; p. 1168.

Stiers, Frank A., assignor of one-half to P. R. Walsh, St. Louis, Mo. Valve for street-sprinklers. No. 1,156,326; Oct. 12; Gaz. vol. 219; p. 370.

Stiers, Frank A., assignor of one-half to P. R. Walsh, St. Louis, Mo. Street-sprinkler. No. 1,156,327; Oct. 12; Gaz. vol. 219; p. 371.

Stoble, John W., Madison, Me. Motor-driven sleigh. No. 1,156,110; Oct. 12; Gaz. vol. 219; p. 299.

Stock, John, Dunton, assignor to Interstate Electric Novelty Company, New York, N. Y. Electric pocket-lamp. No. 1,158,081; Oct. 26; Gaz. vol. 219; p. 1082.

Stock Motorpflug Gesellschaft Mit Beschrinkter Haftung. (See Gleiche, Carl, assignor.)

Stocker, Elbert S., and F. A. Stacy, Danbury, Conn. Hat-sizing machine. No. 1,156,942; Oct. 19; Gaz. vol. 219; p. 618.

Stoddard, Maud W., Minneapolis, Minn. Hair-curler. No. 1,157,447; Oct. 19; Gaz. vol. 219; p. 799.

Stoeltzlen, Leo V. (See Ver Planck and Stoeltzlen.)

Stoffel, Simon H., and H. J. Janssen, Delft, Netherlands. Reversible coupling. No. 1,157,968; Oct. 26; Gaz. vol. 219; p. 1043.

Stohler, Virgil, Conneaut, Ohio. Swing. No. 1,156,189; Oct. 12; Gaz. vol. 219; p. 325.

Stokes, Robert L., assignor to W. H. Darrow, Cincinnati, Ohio. Float-valve mechanism. No. 1,156,719; Oct. 12; Gaz. vol. 219; p. 511.

Stoltenberg, Adolph, New York, N. Y. Vegetable-cutter. No. 1,157,448; Oct. 19; Gaz. vol. 219; p. 799.

Stone, George C., assignor to The New Jersey Zinc Company, New York, N. Y. Apparatus for concentrating minerals by flotation. No. 1,156,041; Oct. 5; Gaz. vol. 219; p. 249.

Stone, John A., Chicago, Ill., assignor to International Harvester Company of New Jersey. Motor attachment for harvesters. No. 1,157,056; Oct. 19; Gaz. vol. 219; p. 659.

Stone, Norman H., Garyville, La. Saw-rim adjuster. No. 1,155,966; Oct. 5; Gaz. vol. 219; p. 222.

Stone, Oliver W., Seattle, Wash. Turbine. No. 1,158,082; Oct. 26; Gaz. vol. 219; p. 1082.

Stone, Samuel N., Attleboro, assignor to J. J. Sommer and Co., North Attleboro, Mass. Forming settings for precious stones, &c. No. 1,157,598; Oct. 19; Gaz. vol. 219; p. 847.

Storer, Norman W., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. System of control. (Reissue.) No. 13,998; Oct. 19; Gaz. vol. 219; p. 877.

Storer, Norman W., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. System of control. No. 1,157,820; Oct. 26; Gaz. vol. 219; p. 989.

Storer, Norman W., Pittsburgh, and A. J. Hall, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company. System of control. No. 1,157,821; Oct. 26; Gaz. vol. 219; p. 989.

Stott, James, Philadelphia, Pa. Machine for ornamenting glass. No. 1,158,329; Oct. 26; Gaz. vol. 219; p. 1168.

Stoughton Wagon Company. (See Egeland, Chris, assignor.)

Stout, Harold E., Toledo, Ohio. Direction-indicator. No. 1,158,083; Oct. 26; Gaz. vol. 219; p. 1083.

Stoutenburgh, Robert V. D., Hollis, N. Y. Clothes-rack. No. 1,156,967; Oct. 5; Gaz. vol. 219; p. 223.

Strahle, Arthur L., assignor of one-half to L. P. Byars, Benson, Nebr. Combined timer and distributer. No. 1,156,255; Oct. 12; Gaz. vol. 219; p. 347.

Strauch, Albert T., New York, N. Y. Pianissimo device for grand-piano actions. No. 1,157,262; Oct. 19; Gaz. vol. 219; p. 734.

Strauss Gas Iron Co. (See Strauss and Spahr, assignors.)

Strauss, Louis J., and O. Spahr, assignors to Strauss Gas Iron Co., Philadelphia, Pa. Bunsen burner. No 1,157,734; Oct. 26; Gaz. vol. 219; p. 961.

Strauss, Ferdinand. (See Moore, John L., assignor.)

Strauss, Joseph B., Chicago, Ill. Bridge. No. 1,157,449; Oct. 19; Gaz. vol. 219; p. 799.

Strauss, Joseph B., Chicago, Ill. Bridge. No. 1,157,450; Oct. 19; Gaz. vol. 219; p. 799.

Strauss, Joseph B., Chicago, Ill. Swing-bridge. No. 1,158,084; Oct. 26; Gaz. vol. 219; p. 1083.

Strehler, Emil, Stein, Switzerland. Metal cap for electric incandescent lamps. No. 1,157,057; Oct. 19; Gaz. vol. 219; p. 660.

Stringer, James A., Clare, La. Churn. No. 1,155,766; Oct. 5; Gaz. vol. 219; p. 153.

Strobl, Fredrich, Rumpenheim-on-the-Main, assignor to C. A. Neubecker, Offenbach-on-the-Main, Germany. Cask-hooping machine. No. 1,155,767; Oct. 5; Gaz. vol. 219; p. 153.

Strom, Samuel. (See Johnson and Strom.)

Stromeyer, Walter H., New York, N. Y. Tobacco-pouch. No. 1,156,720; Oct. 12; Gaz. vol. 219; p. 511.

Strong, John J., Birmingham, Ala. Counterbalancing device. No. 1,155,846; Oct. 5; Gaz. vol. 219; p. 183.

Strong, William E. S., Falmouth township, Barnstable county, Mass., and N. Macy, Greenwich, Conn. Bookbinder. No. 1,156,641; Oct. 12; Gaz. vol. 219; p. 484.

Strothmann, Theodor, Milwaukee, Wis. Receptacle for original containers. No. 1,156,506; Oct. 12; Gaz. vol. 219; p. 437.

Strunk, Otto, Friemersheim, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Conveyer. No. 1,156,721; Oct. 12; Gaz. vol. 219; p. 512.

Stuch, Otto W., and R. E. Sturgis, Allegan, Mich. Package-tie. No. 1,157,451; Oct. 19; Gaz. vol. 219; p. 800.

Studebaker, John W., Des Moines, Iowa. Practice exercise-card in mathematics. No. 1,157,599; Oct. 19; Gaz. vol. 219; p. 847.

Stull, Jacob H., Fremont, Ohio. Friction-clutch. No. 1,156,445; Oct. 12; Gaz. vol. 219; p. 415.

Stulp, Fred J., Muskegon, Mich. Turn-button. No. 1,158,330; Oct. 26; Gaz. vol. 219; p. 1169.

Stumpf, Johann, Berlin, Germany. Distributing-valve for steam-engines. No. 1,155,451; Oct. 5; Gaz. vol. 219; p. 44.

Stumpf, Paul, Henningsdorf, Germany, assignor to General Electric Company. Flying-machine. No. 1,157,337; Oct. 19; Gaz. vol. 219; p. 759.

Sturdevant, Samuel F. (See Webb and Sturdevant.)

Sturgis, Richard E. (See Stuch and Sturgis.)

Stutsman, Ira G., Tomah, Wis. Locking device for lanterns. No. 1,155,379; Oct. 5; Gaz. vol. 219; p. 19.

Sullivan, Charles W., Los Angeles, Cal. Safety attachment for boilers. No. 1,157,058; Oct. 19; Gaz. vol. 219; p. 660.

Sullivan, Mortimer L., *et al.* (See Thayer, Charles H., assignor.)

Summers, Edgar W., Pittsburgh, Pa. Railway-car truck. No. 1,158,331; Oct. 26; Gaz. vol. 219; p. 1169.

Summers, Leland L., Chicago, Ill. Coke-oven. No. 1,155,526; Oct. 5; Gaz. vol. 219; p. 71.

Sundh, August, Hastings-upon-Hudson, N. Y. Hinge mechanism. No. 1,155,452; Oct. 5; Gaz. vol. 219; p. 44.

Sundh, August, Hastings-upon-Hudson, N. Y. Gate-hinge. No. 1,158,943; Oct. 19; Gaz. vol. 219; p. 618.

Surrell, John R., New York, N. Y. Boiler-furnace and feed-water heater. (Reissue.) No. 14,002; Oct. 26; Gaz. vol. 219; p. 1203.

Surrell, John R., New York, N. Y. Boiler-furnace and feed-water heater. (Reissue.) No. 14,003; Oct. 26; Gaz. vol. 219; p. 1207.

Sutkay, Joseph, assignor of one third to R. Le Doux, Laurents, La. Rail-joint. No. 1,158,332; Oct. 26; Gaz. vol. 219; p. 1169.

Sutliff, Archibald E., Syracuse, N. Y., assignor to Sargent & Company, New Haven, Conn. Key-cutting machine. No. 1,156,642; Oct. 12; Gaz. vol. 219; p. 484.

Sutter, Edward, Burke, S. D. Collapsible ironing-board. No. 1,156,643; Oct. 12; Gaz. vol. 219; p. 485.

Sutton, William S., Rockford, Ill., assignor to Houston Manufacturing Company. Cleaning screens of vacuum-cleaning apparatus. No. 1,157,181; Oct. 19; Gaz. vol. 219; p. 686.

Swan, John H., assignor to Klipfel Manufacturing Co., Chicago, Ill. Valve-operating mechanism. No. 1,157,059; Oct. 19; Gaz. vol. 219; p. 661.

Swank, Arthur H., Fremont, Ohio. Manicuring instrument. No. 1,155,380; Oct. 5; Gaz. vol. 219; p. 19.

Swanlund, Axel W. (See Hasberg and Swanlund.)

Swanson, Carl W., Chicago, Ill. Gearing. No. 1,156,564; Oct. 12; Gaz. vol. 219; p. 457.

Swanson, Oscar. (See Swanson, Sven and O.)

Swanson, Sven and O., Chicago, Ill. Combined rail joint and chair. No. 1,157,452; Oct. 19; Gaz. vol. 219; p. 800.

Swebilius, Carl G., and H. T. R. Hanitz, assignors to The Marlin Firearms Company, New Haven, Conn. Fire-arm. No. 1,157,056; Oct. 19; Gaz. vol. 219; p. 868.

Sweeney, John T., Chillicothe, Mo. Smoke-stack attachment. No. 1,157,060; Oct. 19; Gaz. vol. 219; p. 661.

Sweeney, Walter C., Topeka, Kans. Poison-indicator. No. 1,157,338; Oct. 19; Gaz. vol. 219; p. 760.

Sweet, Calvin A., Yankton, S. D. Hanger. No. 1,156,380; Oct. 12; Gaz. vol. 219; p. 392.

Sweet, George E., Toronto, Ontario, Canada. Drinking-fountain and faucet. No. 1,156,190; Oct. 12; Gaz. vol. 219; p. 325.

Sweet, Martin M., Chicago, Ill. Medical appliance. No. 1,155,527; Oct. 5; Gaz. vol. 219; p. 71.

Symons, Wilson E., Chicago, Ill. Steel roof for freight-cars. No. 1,157,339; Oct. 19; Gaz. vol. 219; p. 760.

Sziklai, Géza, Budapest, Austria-Hungary. Rowing-craft intended for an amusement device. No. 1,155,381; Oct. 5; Gaz. vol. 219; p. 19.

Szinak, Martin, Cincinnati, Ohio. Folding bed. No. 1,157,453; Oct. 19; Gaz. vol. 219; p. 800.

Taarud, Charles, Minneapolis, Minn. Vulcanizer. No. 1,157,340; Oct. 19; Gaz. vol. 219; p. 760.

Tabor, Edward P., Worcester, Mass. Track-sander. No. 1,156,111; Oct. 12; Gaz. vol. 219; p. 300.

Tabor Manufacturing Company, The. (See, Lewis, Wilfred, assignor.)

Taft-Peirce Manufacturing Company, The. (See Commons, William C., assignor.)

Taisey, Fred R., Lowell, assignor to The Lamson Company, Boston, Mass. Cable-carrier system. No. 1,157,190; Oct. 19; Gaz. vol. 219; p. 706.

Taisey, Fred R., Lowell, assignor to The Lamson Company, Boston, Mass. Cable-carrier system. No. 1,157,191; Oct. 19; Gaz. vol. 219; p. 707.

Taisey, Fred R., Lowell, assignor to The Lamson Company, Boston, Mass. Cable-carrier system. No. 1,157,192; Oct. 19; Gaz. vol. 219; p. 707.

Taisey, Fred R., Lowell, assignor to The Lamson Company, Boston, Mass. Cable-carrier apparatus. No. 1,157,193; Oct. 19; Gaz. vol. 219; p. 708.

Tallerday, George S., assignor to Queen City Knitting Mills, Inc., Poughkeepsie, N. Y. Shawl. No. 1,157,341; Oct. 19; Gaz. vol. 219; p. 760.

Tannar, Earle E., Akron, Ohio. Tire-core. No. 1,157,263; Oct. 19; Gaz. vol. 219; p. 734.

Tanner, Guy. (See Pauly and Tanner.)

Tapp, Lacy L., Elkton, Ky. Cattle-guard. No. 1,155,968; Oct. 5; Gaz. vol. 219; p. 223.

Tappan, George J., Tulalip, Wash. Sawing-machine. No. 1,156,722; Oct. 12; Gaz. vol. 219; p. 512.

Tatlow, Samuel, St. Cloud, Fla. Vehicle-axle and wheel-mounting. No. 1,157,061; Oct. 19; Gaz. vol. 219; p. 662.

Tatum, John J. (See Sage and Tatum.)

Taylor, Anna S., New York, N. Y. Clothes-stick. No. 1,156,112; Oct. 12; Gaz. vol. 219; p. 300.

Taylor, Arthur, Centralia, Ill. Railway-skate. No. 1,157,264; Oct. 19; Gaz. vol. 219; p. 735.

Taylor, Bayard E., Oak Park, Ill. Valve for pneumatic tires. No. 1,157,822; Oct. 26; Gaz. vol. 219; p. 990.

Taylor, C. E., *et al.* (See Simon, Carl G., assignor.)

Taylor, Charles H., Newburgh, N. Y. Bottle-drainer. No. 1,157,454; Oct. 19; Gaz. vol. 219; p. 801.

Taylor, Edwin, New York, and F. P. Bergh, Yonkers, N. Y. Making sulfuric acid. No. 1,157,455; Oct. 19; Gaz. vol. 219; p. 801.

Taylor, Frank J., Houston, Tex. Torch. No. 1,156,256; Oct. 12; Gaz. vol. 219; p. 347.

Taylor, Garnett, Evans & Company Limited. (See Smith, Mark, assignor.)

Taylor, George N. (See Rand and Taylor.)

Taylor, James H., Toledo, Ohio. Vacuum-cleaner. No. 1,157,456; Oct. 19; Gaz. vol. 219; p. 801.

Taylor, Mary C., Perth Amboy, assignor of one-half to S. Taylor, Jersey City, N. J. Skirt-measuring device. No. 1,155,690; Oct. 5; Gaz. vol. 219; p. 127.

Taylor, Roger, and L. A. Miley, Selby, Cal. Casting-machine. No. 1,156,446; Oct. 12; Gaz. vol. 219; p. 415.

Taylor, Samuel. (See Taylor, Mary C., assignor.)

Taylor, William P., Buffalo, N. Y. Cover-fastening for stop-cock boxes. No. 1,157,062; Oct. 19; Gaz. vol. 219; p. 662.

Taylor, William W., Montclair, N. J. Metallic building. No. 1,155,969; Oct. 5; Gaz. vol. 219; p. 223.

Teague, James J., Holbrook, Ariz. Spring billiard and pool cue. No. 1,157,909; Oct. 26; Gaz. vol. 219; p. 1022.

Teamer, James M., assignor of one-third to F. W. Schepman and one-third to C. T. Kohl, Evansville, Ind. Bill-file. No. 1,155,382; Oct. 5; Gaz. vol. 219; p. 19.

Technology Sales Co. (See De Neergaard, Lewis E., assignor.)

Templeton, William G., assignor of one-fourth to H. H. Seldomridge, one-fourth to C. B. Seldomridge, and one-fourth to W. N. Burgess, Colorado Springs, Colo. Machine for vending stamps, tickets, coupons, &c. No. 1,157,649; Oct. 19; Gaz. vol. 219; p. 864.

Tennille, Walter R., Dothan, Ala. Vehicle body-mounting. No. 1,155,528; Oct. 5; Gaz. vol. 219; p. 72.

Tennyson, Herbert S., Los Angeles, Cal. Spanner-wrench. No. 1,158,085; Oct. 26; Gaz. vol. 219; p. 1088.

Terrey, Arthur, Hayes, England, assignor to The Goss Printing Press Company, Chicago, Ill. Paper-reel brake. No. 1,157,457; Oct. 19; Gaz. vol. 219; p. 802.

Terry, Lester E., Southampton, N. Y. Cesspool. No. 1,155,970; Oct. 5; Gaz. vol. 219; p. 224.

Terry Steam Turbine Company, The. (See London, William J. A., assignor.)

Thatcher, Charles J., New York, N. Y. Photographic developer. No. 1,158,011; Oct. 26; Gaz. vol. 219; p. 1057.

Thaw, Alexander B., Pittsburgh, Pa. Stabilizer for aeroplanes. No. 1,158,333; Oct. 26; Gaz. vol. 219; p. 1169.

Thayer, Charles H., assignor of one-fourth to G. P. Ransom, one-fourth to G. A. Gucker, and one-fourth to M. L. Sullivan, Elmira, N. Y. Pressure-regulating device for tire-valves. No. 1,156,328; Oct. 12; Gaz. vol. 219; p. 371.

Thayer, James W., Greenburg, N. Y. Holding arrangement for children's beds. No. 1,156,381; Oct. 12; Gaz. vol. 219; p. 392.

Thiem, Joseph, Newport, Ky. Train-pipe coupling. No. 1,156,191; Oct. 12; Gaz. vol. 219; p. 326.

Thomas, A. Seymour, *et al.* (See Saint, Lee G., assignor.)

Thomas, Edward G., Brookline, assignor, by mesne assignments, to Choralcelo Company, Boston, Mass. Instrument for the production of musical tones forming a tempered scale. No. 1,156,329; Oct. 12; Gaz. vol. 219; p. 372.

Thomas Elevator Company. (See Barker, Wendell A., assignor.)

Thomas, Etta L., Corning, Iowa. Steam-baker. No. 1,156,723; Oct. 12; Gaz. vol. 219; p. 513.

Thomas Maddock's Sons Company. (See Kelly, John F., assignor.)

Thomas Manufacturing Company, The. (See Baxter, Leonidas, assignor.)

Thomas, Percy H., Upper Montclair, assignor to Cooper Hewitt Electric Company, Hoboken, N. J. Gas or vapor electric apparatus. No. 1,156,257; Oct. 12; Gaz. vol. 219; p. 348.

Thomas, Percy H., Upper Montclair, assignor to Cooper Hewitt Electric Co., Hoboken, N. J. Gas or vapor electric apparatus. No. 1,156,825; Oct. 12; Gaz. vol. 219; p. 547.

Thomas, Percy H., Montclair, assignor, by mesne assignments, to Cooper-Hewitt Electric Company, Hoboken, N. J. System of car operation by vapor-converters. No. 1,157,823; Oct. 26; Gaz. vol. 219; p. 990.

Thomas, Percy H., Upper Montclair, assignor to Cooper-Hewitt Electric Company, Hoboken, N. J. System of car operation by vapor-converters. No. 1,157,824; Oct. 26; Gaz. vol. 219; p. 990.

Thomas, Stephen S., assignor to The Ecothermal Company, Warren, Ohio. Stove. No. 1,156,330; Oct. 12; Gaz. vol. 219; p. 372.

Thomasson, Henry A. W., assignor of one-half to W. F. Dillon, Bellingham, Wash. Rail-fastening device. No. 1,157,600; Oct. 19; Gaz. vol. 219; p. 848.

Thompson, Elmer B., Des Moines, Iowa. Pump mechanism. No. 1,156,724; Oct. 12; Gaz. vol. 219; p. 518.

Thompson, Frank S. (See Murphey and Thompson.)

Thompson, James, New York, N. Y. Fountain-divider. No. 1,158,334; Oct. 26; Gaz. vol. 219; p. 1170.

Thompson, James E., Troy, Ala. Porch furniture. No. 1,157,458; Oct. 19; Gaz. vol. 219; p. 802.

Thompson, Louis W. (See Gardner, Frederick N. and F. E., assignors.)

Thompson, Ralph P. (See Koeb and Thompson.)

Thompson, Viola A. S., administratrix. (See Thompson, William F.)

Thompson, William D., Detroit, Mich., and S. Otis, Chicago, Ill., assignors to Hutchins Car Roofing Company, Detroit, Mich. Car-roof. No. 1,156,944; Oct. 19; Gaz. vol. 219; p. 619.

Thompson, William F., deceased, New York; V. A. S. Thompson, administratrix, Rochester, assignor to O. A. Logan, New York, N. Y. Non-refillable bottle. No. 1,157,735; Oct. 26; Gaz. vol. 219; p. 961.

Thompson, William I., Stoneham, assignor of one-third to A. M. Lux and one-third to W. J. Lux, Woburn, Mass. Target placing and shifting apparatus. No. 1,157,342; Oct. 19; Gaz. vol. 219; p. 761.

Thompson, William I., Stoneham, assignor of one-third to A. M. Lux and one-third to W. J. Lux, Woburn, Mass. Electrically-heated tool. No. 1,157,343; Oct. 19; Gaz. vol. 219; p. 761.

Thomson, Elihu, Swampscott, Mass., assignor to General Electric Company. Means for preventing corona loss. No. 1,157,344; Oct. 19; Gaz. vol. 219; p. 762.

Thornton, John A., and W. A. Settle, assignors of one-third to F. B. Allen, Walla Walla, Wash. Camp-table. No. 1,155,971; Oct. 5; Gaz. vol. 219; p. 224.

Threewits, Alvin M., Centerville, Ind. Railway-tie and rail-lock. No. 1,157,459; Oct. 19; Gaz. vol. 219; p. 802.

Throckmorton, Ray, Philadelphia, Pa. Automobile-fender. No. 1,157,460; Oct. 19; Gaz. vol. 219; p. 803.

Thurstensen, Soren, assignor to Henry Vogt Machine Company, Louisville, Ky. Boiler. No. 1,157,736; Oct. 26; Gaz. vol. 219; p. 961.

Thurstensen, Soren, assignor to Henry Vogt Machine Co., Louisville, Ky. Water-tube boiler. No. 1,157,737; Oct. 26; Gaz. vol. 219; p. 962.

Ticknor, William D., Canton, Mass., assignor to Box Company of America, New York, N. Y. Egg-carrier. No. 1,155,972; Oct. 5; Gaz. vol. 219; p. 225.

Tiffany, George S., Summit, N. J., assignor to Gray National Telautograph Company, New York, N. Y. Azimuth and other indicator. No. 1,156,113; Oct. 12; Gaz. vol. 219; p. 300.

Tillman, John W. (See Price and Tillman.)

Timm, Henry A., Caledonia, Mich. Automobile-jack. No. 1,156,945; Oct. 19; Gaz. vol. 219; p. 619.

Timmerman, William T., New York, N. Y. Fastening device for packages. No. 1,156,565; Oct. 12; Gaz. vol. 219; p. 457.

Tinius Olsen Testing Machine Company. (See Norris, George L., assignor.)

Tinius Olsen Testing Machine Company. (See Upton and Lewis, assignors.)

Tischer, Alexander, Chicago, Ill. Adjustable support. No. 1,155,383; Oct. 5; Gaz. vol. 219; p. 20.

Titanium Alloy Manufacturing Company, The. (See Barton, Louis E., assignor.)

Titterence, Harold L., Chester, Pa. Undergarment. No. 1,157,063; Oct. 19; Gaz. vol. 219; p. 662.

Tobin, John J., assignor to Tobin Manufacturing Company, Chicago, Ill. Coaster-brake. No. 1,157,064; Oct. 19; Gaz. vol. 219; p. 665.

Tobin, Joseph H., De Ruyter, assignor to Messenger Screw Co., Inc., Linclaen, N. Y. Screw-driver. No. 1,157,969; Oct. 26; Gaz. vol. 219; p. 1043.

Tobin Manufacturing Company. (See Tobin, John J., assignor.)

Todd, Harold B., Philadelphia, Pa. Duplex continuous hinge. No. 1,157,065; Oct. 19; Gaz. vol. 219; p. 663.

Tokheim Mfg. Co., The. (See Fuhrman, Herman C., assignor.)

Toledo Glass Company. (See Colburn, Irving W., assignor.)

Tolle, Heinrich, assignor to Siemens-Schuckertwerke G. m. b. H., Berlin, Germany. Electrical meter. No. 1,155,384; Oct. 5; Gaz. vol. 219; p. 20.

Tomaso, Salvatore D., assignor of one-half to R. E. Hulsman, Chicago, Ill. Burglar-alarm system. No. 1,157,601; Oct. 19; Gaz. vol. 219; p. 848.

Tompkins, W. F. Bianchi. (See Kimmell, Herbert L., assignor.)

Tomsky, Victor A., New York, N. Y. Sanitary sugar-bowl. No. 1,157,910; Oct. 26; Gaz. vol. 219; p. 1022.

Topf & Soehne, J. A. (See Bornmann, Ernst, assignor.)

Torchio, Philip, New York, N. Y. Reactor. No. 1,157,066; Oct. 19; Gaz. vol. 219; p. 663.

Torony, Johan, Borderland, W. Va. Bird-trap. No. 1,158,012; Oct. 26; Gaz. vol. 219; p. 1057.

Toth, John B., Chicago, Ill. Combined pattern-drafting device. No. 1,157,345; Oct. 19; Gaz. vol. 219; p. 762.

Tousley, Nelson E., Watertown, and C. H. Roper, Belmont, Mass., assignors to Hood Rubber Co. Tennis-shoe. (Reissue.) No. 13,998; Oct. 12; Gaz. vol. 219; p. 566.

Towler, Mary E., Hubbard, Tex. Pin-fastener. No. 1,155,691; Oct. 5; Gaz. vol. 219; p. 128.

Towne, Robert S., New York, and C. Robinson, Mount Vernon, N. Y., assignors to Metallurgical Engineering & Process Corporation. Extracting metals from ores. No. 1,156,382; Oct. 12; Gaz. vol. 219; p. 392.

Towne, Robert S., New York, and C. Robinson, Mount Vernon, N. Y., assignors to Metallurgical Engineering & Process Corporation. Precipitating and separating metals from solution. No. 1,156,383; Oct. 12; Gaz. vol. 219; p. 393.

Townsend, Charles O. (See Gore, Herbert C., assignor.)

Townsend, Harry P., Waterbury, Conn. Gearing. No. 1,155,847; Oct. 5; Gaz. vol. 219; p. 183.

Travers, Charles J., Oak Park, Ill. Revolving chair. No. 1,155,627; Oct. 5; Gaz. vol. 219; p. 104.

Traut & Hine Manufacturing Company, The. (See Humphrey, Ernest N., assignor.)

Tremblay, Francis V., Rumford, Me. Shoe-fastener. No. 1,155,973; Oct. 5; Gaz. vol. 219; p. 225.

Trenton Electric and Conduit Company. (See Nutt, Norman W., assignor.)

Trimyer, Hervy L., Portsmouth, Va. Ladder. No. 1,157,602; Oct. 19; Gaz. vol. 219; p. 848.

Troth, Dana S., Stockton, Cal. Gang-plow frame. No. 1,157,067; Oct. 19; Gaz. vol. 219; p. 663.

Troye, Einar, assignor to Norsk Hydro-Elektrisk Kvaelstofaktieselskab, Christiania, Norway. Apparatus for improving the stability of furnaces with magnetically-extended electric arcs. No. 1,156,192; Oct. 12; Gaz. vol. 219; p. 326.

Truax, Marshall M., Jerome, Pa. Gas-igniter. No. 1,157,911; Oct. 26; Gaz. vol. 219; p. 1022.

Truax, Sewall, Canon City, Colo., assignor to Granadena Mining Company. Treatment of zinc ore or zinc-bearing material. No. 1,155,628; Oct. 5; Gaz. vol. 219; p. 105.

Truscott, Harry A., Washington, D. C. Parcel-post envelop. No. 1,156,507; Oct. 12; Gaz. vol. 219; p. 438.

Trumwall Manufacturing Company, The. (See Higgins, Albert G., assignor.)

Tryens, Marion A., West Chester, Pa. Music-holder. No. 1,157,194; Oct. 19; Gaz. vol. 219; p. 708.

Tschudy, Frederick, Fairfield, Ala. Producing ammonium sulfate. No. 1,155,385; Oct. 5; Gaz. vol. 219; p. 21.

Tschudy, Frederick, Fairfield, Ala. Saturating apparatus. No. 1,155,386; Oct. 5; Gaz. vol. 219; p. 21.

Tschudy, Frederick, Fairfield, Ala. Tar-extractor. No. 1,155,387; Oct. 5; Gaz. vol. 219; p. 22.

Tucker, James W., Argenta, Ark. Jack. No. 1,157,461; Oct. 19; Gaz. vol. 219; p. 803.

Turner, Frank L., *et al.* (See Murrey, Ed, assignor.)

Turner, Harry W., Glenville, N. Y., assignor to General Electric Company. Commutator. No. 1,157,912; Oct. 26; Gaz. vol. 219; p. 1022.

Turner, Henry H., Northfield, Minn. Chair. No. 1,156,725; Oct. 12; Gaz. vol. 219; p. 513.

Turnquist, Carl E., and H. E. Rich, Moline, Ill., assignors to The Postal Card Vending Machine Company. Vending-machine. No. 1,157,650; Oct. 19; Gaz. vol. 219; p. 865.

Turon, Peter, Los Angeles, Cal. Universal shaft-coupling. No. 1,155,629; Oct. 5; Gaz. vol. 219; p. 105.

Tutelman, William, Philadelphia, Pa. Adjustable sleeve. No. 1,157,265; Oct. 19; Gaz. vol. 219; p. 785.

Tuttle, James N., Harwichport, Mass., assignor to General Electric Company. Electrolytic meter. No. 1,156,826; Oct. 12; Gaz. vol. 219; p. 547.

Twaits, Daniel H., Chicago, Ill. Self-closing oil-cup. No. 1,156,114; Oct. 12; Gaz. vol. 219; p. 301.

Twibell, Harry C., Brooklyn, N. Y. Game apparatus. No. 1,157,918; Oct. 26; Gaz. vol. 219; p. 1023.

Twombly Motors Company. (See Twombly, Willard I., assignor.)

Twombly, Willard I., assignor to Twombly Motors Company, New York, N. Y. Convertible vehicle-body. No. 1,157,266; Oct. 19; Gaz. vol. 219; p. 736.

Tyden, Emil, Evanston, Ill. Seal-locking device. No. 1,155,768; Oct. 5; Gaz. vol. 219; p. 153.

Tyden, Emil, Evanston, Ill. Seal-locking device. No. 1,155,769; Oct. 5; Gaz. vol. 219; p. 154.

Tyden, Emil, Evanston, Ill. Seal-locking device. No. 1,155,770; Oct. 5; Gaz. vol. 219; p. 154.

Tyden, Emil, Evanston, Ill. Seal-locking device. No. 1,155,771; Oct. 5; Gaz. vol. 219; p. 155.

Tyden, Emil, Evanston, Ill. Seal-locking device. No. 1,155,772; Oct. 5; Gaz. vol. 219; p. 155.

Tyler, Charles A., Auburn, assignor to National Chemical Company, Syracuse, N. Y. Treating starch. No. 1,157,738; Oct. 26; Gaz. vol. 219; p. 962.

Tyler, William A., Daisy, Wash. Extension step-ladder. No. 1,157,739; Oct. 26; Gaz. vol. 219; p. 962.

Tyrrell, Charles A., New York, N. Y. Rectal syringe. No. 1,155,848; Oct. 5; Gaz. vol. 219; p. 183.

U. S. Fibre Bottle Mchy. Co. (See Janisch, Maximillian P., assignor.)

U. S. Light and Heat Corporation. (See Bliss, William L., assignor.)

U. S. Steel Furniture Company. (See Ohnstrand, Enoch, assignor.)

Uchtmann, Weet R., assignor of one-half to O. M. Dahl, Boston, Mass. Bottle-seal. No. 1,155,773; Oct. 5; Gaz. vol. 219; p. 155.

Ulrich, Charles B., Houghton, Mich. Index-tag. No. 1,157,195; Oct. 19; Gaz. vol. 219; p. 708.

Underwood Computing Machine Company. (See Carlin, Samuel E., assignor.)

Underwood, John M., Paris, Ark. Exhaust for internal-combustion engines. No. 1,156,447; Oct. 12; Gaz. vol. 219; p. 416.

Underwood, John T. (See Main, Fred F., assignor.)

Underwood Typewriter Company. (See Doane, John C., assignor.)

Underwood Typewriter Company. (See Stickney, Burnham C., assignor.)

Underwood Typewriter Company. (See Ursbruck, Frank C., assignor.)

Underwood and Underwood. (See Richmond, Henry E., assignor.)

Union Fibre Company. (See Brown, Alfred G., assignor.)

Union Fibre Company. (See Lappen, James E., assignor.)

Union Metallic Cartridge Company. (See Buell, William H., assignor.)

Union Metallic Cartridge Company. (See Hoagland, Frank O., assignor.)

Union Special Machine Company. (See Hinkley, James, assignor.)

Union Special Machine Company. (See Moffatt, James R., assignor.)

Union Special Machine Company. (See Moffatt and Kelso, assignors.)

Union Special Machine Company. (See Onderdonk, Lansing, assignor.)

Union Special Machine Company. (See Seymour, Dudley S., assignor.)

Union Steel Screen Company, The. (See Pierce, James E., assignor.)

Union Switch & Signal Company, The. (See Harrington, Clinton O., assignor.)

Union Switch and Signal Company, The. (See Hawkins, Laurence A., assignor.)

Union Switch & Signal Company, The. (See McCarthy, Daniel J., assignor.)

United Fruit Company. (See Lee, Tennant, assignor.)

United Shoe Machinery Company. (See Alexander, Alexander M., assignor.)

United Shoe Machinery Company. (See Alley, Frederick L., assignor.)

United Shoe Machinery Company. (See Glidden, Lester L., assignor.)

United Shoe Machinery Company. (See Gouldbourn, Bates, and Jerram, assignors.)

United Shoe Machinery Company. (See Jerram, Gouldbourn, and Bates, assignors.)

United Shoe Machinery Company. (See Miller and Freeman, assignors.)

United Shoe Machinery Company. (See Reed and Foley, assignors.)

United Shoe Machinery Company. (See Ryberg, John W., assignor.)

United Shoe Machinery Company. (See Simmons, Ralph C., assignor.)

United Shoe Machinery Company. (See Wentworth, Pearl J., assignor.)

United States Carburetor Company. (See Maino and Pellegrini, assignors.)

Universal Draft Gear Attachment Co. (See Nash, Charles J., assignor.)

Universal Draft Gear Attachment Company. (See Wrigley, Henry I., assignor.)

Universal High Power Telephone Company. (See Farrar, Horace J., assignor.)

Universal High Power Telephone Company. (See Hackett, Paul J., assignor.)

Universal Indicator Company. (See Bobroff, Bornett L., assignor.)

Universal Rim Company. (See Baker, Erle K., assignor.)

Universal Rim Company. (See Hawley and Baker, assignors.)

Universal Winding Company. (See Marcroft, George, assignor.)

Universal Winding Company. (See Rand and Taylor, assignors.)

Upton, Albert W., Los Angeles, Cal. Garden-tool. No. 1,158,335; Oct. 26; Gaz. vol. 219; p. 1170.

Upton, George B., Ithaca, N. Y., and G. W. Lewis, Swarthmore, assignors to Tinius Olsen Testing Machine Company, Philadelphia, Pa. Fatigue-testing machine. No. 1,156,726; Oct. 12; Gaz. vol. 219; p. 514.

Ursbruck, Frank C., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,156,331; Oct. 12; Gaz. vol. 219; p. 373.

Urshel, Charles G. (See Blankner, William, assignor.)

Urtel, Rudolph, Niederschoneweide, Germany, assignor to General Electric Company. Valve-operating mechanism for internal-combustion engines. No. 1,156,508; Oct. 12; Gaz. vol. 219; p. 438.

Vahey, James A., Boston, Mass. Circuit-interrupter. No. 1,158,086; Oct. 26; Gaz. vol. 219; p. 1084.

Vaill, Charles P., Worcester, Mass., assignor to The American Steel & Wire Company of New Jersey, Hoboken, N. J. Rail-bond. No. 1,157,603; Oct. 19; Gaz. vol. 219; p. 849.

Vaillancourt, Joseph F., Fall River, Mass. Picker-stick check. No. 1,155,529; Oct. 5; Gaz. vol. 219; p. 72.

Valentine, John, Chicago, Ill. Power-transmission mechanism. No. 1,158,336; Oct. 26; Gaz. vol. 219; p. 1170.

Van Aller, Tycho, Schenectady, N. Y., assignor to General Electric Company. Treatment of metal. No. 1,155,974; Oct. 5; Gaz. vol. 219; p. 225.

Van Antwerp, Charles, assignor to L. Van Antwerp, Miami, Fla. Walking ditcher. No. 1,155,975; Oct. 5; Gaz. vol. 219; p. 225.

Van Antwerp, Lillie. (See Van Antwerp, Charles, assignor.)

Van Buskirk, Robert N., Detroit, Mich. Draftsman's protractor. No. 1,157,825; Oct. 26; Gaz. vol. 219; p. 991.

Van Deren, George W., Elmira, N. Y. Coaster-brake. No. 1,158,337; Oct. 26; Gaz. vol. 219; p. 1171.
Van Dyke, Carl C., St. Paul, Minn. Rope-tying device. No. 1,155,976; Oct. 5; Gaz. vol. 219; p. 226.
Van Fleet, Jesse D., Minot, N. D. Shipping-receipt holder. No. 1,158,338; Oct. 26; Gaz. vol. 219; p. 1171.
Van Gleckland Co. (See Harris, William W., assignor.)
Van Houten, Frank H., Fishkill-on-Hudson, N. Y. Dough-dividing machine. No. 1,158,339; Oct. 26; Gaz. vol. 219; p. 1171.
Van Sant, Thomas G., assignor of one-half to S. G. Dorman, Poplar Bluff, Mo. Power-transmission mechanism. No. 1,156,852; Oct. 12; Gaz. vol. 219; p. 558.
Van Sant, Thomas G., assignor of one-half to S. G. Dorman, Poplar Bluff, Mo. Motor-vehicle. No. 1,156,853; Oct. 12; Gaz. vol. 219; p. 558.
Van Tuyl, Thomas. (See Cook and Van Tuyl.)
Van Wormer and Co., J. R. (See Van Wormer, John R., assignor.)
Van Wormer, John R., assignor to J. R. Van Wormer and Co., Toledo, Ohio. Folded-blank box. No. 1,157,462; Oct. 19; Gaz. vol. 219; p. 803.
Van Zile, John W., Hohokus, N. J. Nut-lock. No. 1,158,340; Oct. 26; Gaz. vol. 219; p. 1172.
Vance, Retta H., San Francisco, Cal. Sanitary wardrobe. No. 1,157,346; Oct. 19; Gaz. vol. 219; p. 762.
Vandercook, Albert E., Alameda, assignor, by mesne assignments, to California Macvan Co., San Francisco, Cal. Agitator. No. 1,156,946; Oct. 19; Gaz. vol. 219; p. 619.
Vanderhoef, Ellison E., Ruth, Nev., assignor to Edgar Allen American Manganese Steel Company, Augusta, Me. Reversible saddle-plate. No. 1,156,115; Oct. 12; Gaz. vol. 219; p. 301.
Vanderveld, Anthony, assignor to Grand Rapids Show Case Company, Grand Rapids, Mich. Display device. No. 1,157,651; Oct. 19; Gaz. vol. 219; p. 866.
Vandonk, Cornelius H., Wells, Mich. Freight-car stake-pocket. No. 1,156,566; Oct. 12; Gaz. vol. 219; p. 458.
Vantuyl, Thomas. (See Cook and Vantuyl.)
Varney, Theodore. (See Hoopes and Varney.)
Varney, Theodore, Pittsburgh, Pa. Catenary structure. No. 1,157,463; Oct. 19; Gaz. vol. 219; p. 804.
Vatcher, William H., Los Angeles, Cal., and C. H. Melcher, Douglas, Ariz.; said Melcher assignor to said Vatcher. Cap. No. 1,155,774; Oct. 5; Gaz. vol. 219; p. 155.
Vaughan, Henry H. (See Orrock, John W., assignor.)
Vaughn, Bert C., Brooklyn, N. Y. Paper keg. No. 1,156,332; Oct. 12; Gaz. vol. 219; p. 373.
Ver Planck, William E., Erie, Pa., assignor to General Electric Company. Piston-cooling means. No. 1,157,347; Oct. 19; Gaz. vol. 219; p. 763.
Ver Planck, William E., and L. V. Stoeltzlen, Erie, Pa., assignors to General Electric Company. Internal-combustion engine. No. 1,157,914; Oct. 26; Gaz. vol. 219; p. 1023.
Vermeer, Herbert, Los Angeles, Cal. Stand for motorcycles. No. 1,156,567; Oct. 12; Gaz. vol. 219; p. 458.
Vermeer, Herbert, Los Angeles, Cal. Stand for motorcycles. No. 1,156,568; Oct. 12; Gaz. vol. 219; p. 458.
Vernet, Charles, Dinan, France. Walking-stick transformable into a seat. No. 1,157,604; Oct. 19; Gaz. vol. 219; p. 849.
Vernon, Thomas T., Chester, England. Treating flour and product thereof. No. 1,155,977; Oct. 5; Gaz. vol. 219; p. 226.
Verrill, Calvin M. (See Metzger, Altendorf, and Verrill.)
Vetter, Clarence A., Pittsburgh, Pa. Incandescent electric lamp. No. 1,157,464; Oct. 19; Gaz. vol. 219; p. 804.
Vetter, Frederick C., assignor to Hawkeye Pearl Button Company, Muscatine, Iowa. Button-container. No. 1,156,644; Oct. 12; Gaz. vol. 219; p. 485.
Vickers Limited. (See Bourcier, Gabriel, assignor.)
Vickers Limited. (See Dawson and Horne, assignors.)
Victor Shoe Machinery Co. (See Erickson, Edward, assignor.)
Victor Talking Machine Company. (See Diehl, Albert C., assignor.)
Vie-Theer, Blanch, Marshfield, Oreg. Tumbling figure toy. No. 1,155,692; Oct. 5; Gaz. vol. 219; p. 128.
Vincent, Jesse G., assignor to Packard Motor Car Company, Detroit, Mich. Motor-vehicle. No. 1,157,068; Oct. 19; Gaz. vol. 219; p. 664.
Vincent, Jesse G., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding and listing machine. No. 1,157,465; Oct. 19; Gaz. vol. 219; p. 804.
Viste, John J., Ada, Minn. Transmission mechanism for tractors. No. 1,158,087; Oct. 26; Gaz. vol. 219; p. 1084.
Vivell, Joseph, Berlin, Germany, assignor to General Electric Company. Electric meter. No. 1,156,827; Oct. 12; Gaz. vol. 219; p. 548.
Vjecha, Victor, Cleveland, Ohio. Conveying and discharging apparatus. No. 1,157,466; Oct. 19; Gaz. vol. 219; p. 805.
Voelker, John P., New York, N. Y. Extension bracket-hinge. No. 1,158,341; Oct. 26; Gaz. vol. 219; p. 1172.
Vogel, George H., B. D. Lobdell, and J. E. Ball, Syracuse, N. Y.; said Lobdell assignor to said Vogel and said Ball. Sectional spring-tire. No. 1,156,333; Oct. 12; Gaz. vol. 219; p. 373.
Vogelsang, Max, assignor to Voigt & Haeffner Actien Gesellschaft. Frankfort-on-the-Main, Germany. Drum-switch with maximum cut-out. No. 1,155,978; Oct. 5; Gaz. vol. 219; p. 226.
Volges, Paul. (See Schaub, Emil, assignor.)
Volght, George F., San Francisco, Cal. Door-hanger. No. 1,157,467; Oct. 19; Gaz. vol. 219; p. 805.
Voigt & Haeffner Actien Gesellschaft. (See Vogelsang, Max, assignor.)
Von Pein, Edward J., assignor to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,156,258; Oct. 12; Gaz. vol. 219; p. 348.
Von Philp, Casimir, assignor to Bethlehem Steel Company, South Bethlehem, Pa. Valve. No. 1,157,196; Oct. 19; Gaz. vol. 219; p. 709.
Von Philp, Hjalmar C., Bethlehem, Pa. Safe or vault joint. No. 1,157,469; Oct. 19; Gaz. vol. 219; p. 806.
Vonderahe, Frederick C., Portland, Oreg. Bag-holder. No. 1,158,013; Oct. 26; Gaz. vol. 219; p. 1057.
Voorhees, John J., Jersey City, N. J., assignor to Brown Perfection Tube Company, New York, N. Y. Inner tube for pneumatic tires. No. 1,155,775; Oct. 5; Gaz. vol. 219; p. 156.
Vornholt, Edward A., Toledo, Ohio, assignor, by mesne assignments, to Kryptok Company, New York, N. Y. Lens-blank manufacture. No. 1,157,470; Oct. 19; Gaz. vol. 219; p. 807.
Voss, William H., Davenport, Iowa. Washing-machine gearing. No. 1,156,116; Oct. 12; Gaz. vol. 219; p. 301.
Vulcan Soot Cleaner Co., of Pittsburg, Pa., The. (See Linaker, Frederick W., assignor.)
W. J. Young Machinery Company. (See Grover, George B., assignor.)
W. S. Tyler Company. (See Reynolds, Morley P., assignor.)
Waddell, George W., Wilkes-Barre, Pa. Feed-bag. No. 1,157,471; Oct. 19; Gaz. vol. 219; p. 807.
Wadsworth, Frank L. O., Sewickley, Pa. Water-heater construction. No. 1,156,949; Oct. 19; Gaz. vol. 219; p. 620.
Waggener, Paul H., Columbia, Ky. Envelop. No. 1,155,388; Oct. 5; Gaz. vol. 219; p. 22.
Wagner, Charles, Brooklyn, N. Y., assignor to The Bryant Electric Company, Bridgeport, Conn. Electric fitting. No. 1,156,727; Oct. 12; Gaz. vol. 219; p. 514.
Wagner Electric Manufacturing Company. (See Doubrava and Heineman, assignors.)
Wagner, James M., *et al.* (See Garrette, John E., assignor.)
Wahl, Arnold S., Chicago, Ill. Finishing bread and the like. No. 1,155,530; Oct. 5; Gaz. vol. 219; p. 72.
Wahl, Robert, Chicago, Ill. Manufacture of Burton salts. No. 1,156,448; Oct. 12; Gaz. vol. 219; p. 416.
Wainwright, William J., Brainerd, Ill., and H. R. Smith, assignors to Raymond Concrete Pile Company, New York, N. Y. Machine for manufacturing spirally-reinforced pile-shells. No. 1,155,389; Oct. 5; Gaz. vol. 219; p. 22.
Walch, Jacob S., Walla Walla, Wash. Grain-separator. No. 1,158,396; Oct. 26; Gaz. vol. 219; p. 1193.
Wales, Nathaniel B., Saginaw, Mich. Internal-combustion engine. No. 1,156,728; Oct. 12; Gaz. vol. 219; p. 514.
Waligursky, Jakob C., Palatka, Mich. Wrench. No. 1,158,343; Oct. 26; Gaz. vol. 219; p. 1173.
Walker, Alexander B., Wallsend, England. Burner for gas and similar radiators, stoves, and the like. No. 1,155,680; Oct. 5; Gaz. vol. 219; p. 105.
Walker, Frank H., Lacon, assignor to Bullock Tractor Co., Chicago, Ill. Gearing. No. 1,156,869; Oct. 12; Gaz. vol. 219; p. 564.
Walker, Harry C., and A. L. Boatwright, Indianapolis, Ind. Money-changing machine. No. 1,157,826; Oct. 26; Gaz. vol. 219; p. 991.
Walker, John B., Birmingham, Ala. Molding apparatus. No. 1,156,449; Oct. 12; Gaz. vol. 219; p. 416.
Walker, Miles, Hale, England, assignor to Westinghouse Electric and Manufacturing Company. Dynamo-electric machine. No. 1,156,645; Oct. 12; Gaz. vol. 219; p. 486.
Walker, Milton K., Richmond, Ky. Mail-delivering device. No. 1,158,342; Oct. 26; Gaz. vol. 219; p. 1172.
Walker, Raymond R., Follansbee, W. Va. Shock-absorber. No. 1,156,646; Oct. 12; Gaz. vol. 219; p. 486.
Walker, Thomas B., Austin, Tex. Stock food. No. 1,155,531; Oct. 5; Gaz. vol. 219; p. 73.
Walker, Willard R., Syracuse, N. Y. Mechanical motor for dish-washing machines. No. 1,158,409; Oct. 26; Gaz. vol. 219; p. 1198.
Walker, William R., New York, N. Y. Manufacture of steel. No. 1,155,849; Oct. 5; Gaz. vol. 219; p. 184.
Wall, Charles M., *et al.* (See Cox, Thomas E., assignor.)
Wall, Patrick. (See McCue, William T., assignor.)
Wall, Patrick, Pittsburgh, Pa. Can or receptacle. No. 1,157,269; Oct. 19; Gaz. vol. 219; p. 736.
Wallace, Charlie V., assignor, by mesne assignments, to Economy Feed Water Heater Company, Tulsa, Okla. Feed-water heater. No. 1,157,472; Oct. 19; Gaz. vol. 219; p. 807.
Wallace, John G., and A. Bell, assignors to Hale and Kilburn Company, Philadelphia, Pa. Door. No. 1,156,950; Oct. 19; Gaz. vol. 219; p. 621.
Wallace & Smith Co., The. (See Bloomberg, Joseph E., assignor.)
Walser, Joseph J., and C. A. Dresser, assignors to The Goss Printing Press Company, Chicago, Ill. Controlling mechanism for printing-presses. No. 1,157,740; Oct. 26; Gaz. vol. 219; p. 963.

Walsh, Fletcher V., and C. M. Reed, San Francisco, Cal. Printing-plate for colored photo-engraving and producing the same. No. 1,157,197; Oct. 19; Gaz. vol. 219; p. 709.
Walsh, John B., Brooklyn, assignor of one-fourth to A. Coleman and one-fourth to S. Coleman, New York, N. Y. Type-mold box. No. 1,157,473; Oct. 19; Gaz. vol. 219; p. 808.
Walsh, Philip R. (See Stiers, Frank A., assignor.)
Walter G. Ruggles Co. (See Kimball, James L., assignor.)
Walters, John W., Nevada, Mo. Wrench. No. 1,155,979; Oct. 5; Gaz. vol. 219; p. 226.
Wamelink, Eugene C., Cleveland, Ohio. Pneumatic piano-player. No. 1,156,951; Oct. 19; Gaz. vol. 219; p. 621.
Ward, Charles W., Lakewood, Ohio. Electrical signaling system and apparatus. No. 1,156,334; Oct. 12; Gaz. vol. 219; p. 374.
Ward, Frank D., New York, N. Y., assignor to Sauvage Ward Brake Company, Inc. Light and load brake. No. 1,156,952; Oct. 19; Gaz. vol. 219; p. 622.
Ward, Frederick A., assignor to Gear Grinding Machine Company, Detroit, Mich. Trimming mechanism for grinder-wheels of shaft-grinding machines. No. 1,155,532; Oct. 5; Gaz. vol. 219; p. 73.
Ward, Isaac E., assignor to The Fouquet-Ward Bale Tying Company, Andale, Kans. Hay-baler. No. 1,156,828; Oct. 12; Gaz. vol. 219; p. 548.
Ward, John C., Quincy, assignor of one-half to W. J. Bigley, Somerville, Mass. Hollow body of fibrous material. No. 1,156,193; Oct. 12; Gaz. vol. 219; p. 326.
Ward, Orin W., *et al.* (See Connor, Patrick F., assignor.)
Ward, Thomas, Lubec, Me., assignor to American Can Company, New York, N. Y. Alternating feeding mechanism. No. 1,158,088; Oct. 26; Gaz. vol. 219; p. 1084.
Warden, Harry E., Detroit, Mich. Paving-block. No. 1,156,117; Oct. 12; Gaz. vol. 219; p. 302.
Wardwell, Harold F., assignor to Detroit Steel Products Company, Detroit, Mich. Mullion. No. 1,157,827; Oct. 26; Gaz. vol. 219; p. 992.
Ware, Joseph L., St. Paul, Minn. Traction-wheel steering-drive. No. 1,155,850; Oct. 5; Gaz. vol. 219; p. 184.
Warg, Robert, Milwaukee, Wis. Centrifugal fan. No. 1,158,118; Oct. 12; Gaz. vol. 219; p. 302.
Warlick, Sam J., and J. H. Bunker, Kiowa, Kans. Device for truing spherical bodies. No. 1,156,953; Oct. 19; Gaz. vol. 219; p. 623.
Warming, Kai, assignor to Aktieselskabet Dansk Svovlsyre- & Superphosphatfabrik, Copenhagen, Denmark. Auxiliary bottom. No. 1,157,132; Oct. 19; Gaz. vol. 219; p. 686.
Warner, Alonzo A., assignor to Landers, Frary & Clark, New Britain, Conn. Percolator. (Reissue.) No. 14,004; Oct. 26; Gaz. vol. 219; p. 1207.
Warner, Arthur W. (See Carpenter and Warner.)
Warner Brothers Company, The. (See Abt, Alfred, assignor.)
Warner, Mahlon, assignor of one-half to E. Gaskill, Millville, N. J. Fender. No. 1,157,198; Oct. 19; Gaz. vol. 219; p. 710.
Warnhoff, Charles W., St. Louis, Mo. Wire screen. No. 1,157,349; Oct. 19; Gaz. vol. 219; p. 763.
Warnock, Robert L., Warnock, Ohio. Fountain-pen. No. 1,155,693; Oct. 5; Gaz. vol. 219; p. 128.
Warren Featherbone Co., The. (See Holdred, Frank R., assignor.)
Warren, Henry E., assignor to The Lombard Governor Company, Ashland, Mass. Mechanism for measuring and integrating the amount of flow of water through turbine-gates. No. 1,156,042; Oct. 5; Gaz. vol. 219; p. 249.
Warren, Henry E., assignor to The Lombard Governor Company, Ashland, Mass. Automatic time lighting mechanism. No. 1,158,397; Oct. 26; Gaz. vol. 219; p. 1193.
Washburn, Howard L., assignor to American Telegraphone Company, Springfield, Mass. Telegraphone. No. 1,156,776; Oct. 5; Gaz. vol. 219; p. 156.
Washburne, James V., Fulton, N. Y. Office-desk utensil. No. 1,156,194; Oct. 12; Gaz. vol. 219; p. 327.
Waterbury Farrel Foundry and Machine Company, The. (See Wilcox, Richard L., assignor.)
Waterman, Henry A., L. C. Bradley, and W. K. Andrew, Milwaukee, Wis., assignors, by mesne assignments, to International Harvester Corporation. Power-transmission gearing. No. 1,157,133; Oct. 19; Gaz. vol. 219; p. 686.
Watkins and Fisher. (See Watkins, Orla H., assignor.)
Watkins, Fred W. (See Merritt and Watkins.)
Watkins, Milton W., De Kalb, Ill. Wire-reel. No. 1,156,569; Oct. 12; Gaz. vol. 219; p. 459.
Watkins, Orla H., Clinton, Iowa, assignor to Watkins and Fisher, Kenosha, Wis. Gearing for washing-machines. No. 1,157,474; Oct. 19; Gaz. vol. 219; p. 808.
Watson, Firdia, Cass, Ark. Wagon-brake. No. 1,155,453; Oct. 5; Gaz. vol. 219; p. 45.
Watson, Joseph B., Los Angeles, Cal. Control for elevator mechanism and the like. No. 1,158,344; Oct. 26; Gaz. vol. 219; p. 1173.
Watson, Robert E., Alva, Fla. Insecticide. No. 1,156,954; Oct. 19; Gaz. vol. 219; p. 623.
Watson, William, Benton, Ill. Bake-cleaner. No. 1,156,729; Oct. 12; Gaz. vol. 219; p. 515.
Watters, William. (See Bradley, John S., assignor.)
Watts, Harry, Fleet, England. Picture-frame. No. 1,157,915; Oct. 26; Gaz. vol. 219; p. 1023.
Waugh, Daniel S., assignor to The Denver Rock Drill Manufacturing Company, Denver, Colo. Motor. No. 1,157,605; Oct. 19; Gaz. vol. 219; p. 849.
Waugh Draft Gear Company. (See Gallagher, Frederick S., assignor.)
Waugh, William P., Montclair, N. J. Glazing construction. No. 1,156,335; Oct. 12; Gaz. vol. 219; p. 574.
Wayne Process Company. (See Donnelly, John R., assignor.)
Weatherproof Construction Company, The. (See Duffy, Thomas I., assignor.)
Weaver, Edgar J., Westerville, Ohio. Tool-handle fastener. No. 1,158,345; Oct. 26; Gaz. vol. 219; p. 1173.
Webb, John L., Sawtelle, and S. F. Sturdevant, Ocean Park, Cal. Game apparatus. No. 1,157,828; Oct. 26; Gaz. vol. 219; p. 992.
Webb, Wilmer M., assignor to H. T. Paiste Company, Philadelphia, Pa. Outlet-hood for conduits. No. 1,158,346; Oct. 26; Gaz. vol. 219; p. 1174.
Webber, John D., Bayonne, assignor to Automatic Weighing Machine Company, Newark, N. J. Weighing apparatus. No. 1,157,350; Oct. 19; Gaz. vol. 219; p. 764.
Weber, George W., St. Paul, Minn., assignor to American Can Company, New York, N. Y. Asparagus-can. No. 1,158,089; Oct. 26; Gaz. vol. 219; p. 1085.
Weber, Henry E., Canton, Ohio. Dental chair. No. 1,157,351; Oct. 19; Gaz. vol. 219; p. 764.
Weber, Josef. (See Goldschmidt and Weber.)
Weber, Wilhelm, Hayingen, Germany. Blasting-cartridge. No. 1,157,270; Oct. 19; Gaz. vol. 219; p. 736.
Webster, Arthur C., Peckville, Pa. Paint-pot. No. 1,157,475; Oct. 19; Gaz. vol. 219; p. 808.
Webster, John A., Rutherford, N. J., assignor to Autosales Gum and Chocolate Company, New York, N. Y. Coin-operated vending-machine. No. 1,157,099; Oct. 19; Gaz. vol. 219; p. 664.
Wedge, Clarence C., Chardon, Ohio. Gas-engine starter. No. 1,157,829; Oct. 26; Gaz. vol. 219; p. 992.
Wegland, Samuel A., assignor to Rich Tool Company, Chicago, Ill. Cutting-tool. No. 1,156,336; Oct. 12; Gaz. vol. 219; p. 375.
Wegner, Fred, Fairport, assignor to G. W. Cobb, New York, N. Y. Bean-snipper. No. 1,155,454; Oct. 5; Gaz. vol. 219; p. 45.
Wegner, Fred, Fairport, assignor to G. W. Cobb, New York, N. Y. Bean-snipper. No. 1,155,455; Oct. 5; Gaz. vol. 219; p. 45.
Weiershaus, Emil, Barmen-Rittershausen, Germany. Reed for looms. No. 1,158,347; Oct. 26; Gaz. vol. 219; p. 1174.
Weinbrenner, Julius. (See Heimbold and Weinbrenner.)
Weintraub, Ezechiel, and L. B. Miller, Lynn, Mass., assignors to General Electric Company. Microphone. No. 1,156,509; Oct. 12; Gaz. vol. 219; p. 438.
Weintraub, George, Lynn, Mass., assignor to General Electric Company. Stable boron nitrid and making the same. No. 1,157,271; Oct. 19; Gaz. vol. 219; p. 787.
Weis, John P., Brooklyn, N. Y., assignor, by mesne assignments, to Metropolitan Sewing Machine Company. Trimming mechanism for sewing-machines. No. 1,155,533; Oct. 5; Gaz. vol. 219; p. 73.
Weis, John P., Nyack, N. Y., assignor, by mesne assignments, to Metropolitan Sewing Machine Company. Trimming-machine. No. 1,155,534; Oct. 5; Gaz. vol. 219; p. 74.
Weiss, David, New York, N. Y. Detachable heel. No. 1,157,476; Oct. 19; Gaz. vol. 219; p. 808.
Weiss, Heinrich, Vienna, Austria-Hungary. Cooling device for electrical machines mounted on vessels. No. 1,156,829; Oct. 12; Gaz. vol. 219; p. 549.
Weissinger, Jacob, New York, N. Y. Linotype-machine. No. 1,156,730; Oct. 12; Gaz. vol. 219; p. 515.
Welch, Jeanne, Parsons, Kans. Game. No. 1,155,851; Oct. 5; Gaz. vol. 219; p. 184.
Welch, Thomas, assignor of one-half to W. V. Campbell, Bridgeport, Ohio. Truss. No. 1,157,353; Oct. 19; Gaz. vol. 219; p. 764.
Welge, Didrik, South Porcupine, Ontario, Canada. Liquid rheostat. No. 1,157,134; Oct. 19; Gaz. vol. 219; p. 687.
Welker, Alvin D., assignor to The Ohio Match Company, Wadsworth, Ohio. Drive for match-machines. No. 1,158,410; Oct. 26; Gaz. vol. 219; p. 1198.
Wells, Byron B., Columbus, Ohio, assignor, by mesne assignments, to The American Cash Register Manufacturing Company. Check-printer and cash-register. No. 1,156,955; Oct. 19; Gaz. vol. 219; p. 623.
Welsbach Light Company. (See Knoedler, Elmer L., assignor.)
Welsbach Light Company. (See Lyon, Howard, assignor.)
Welte, Carl M., assignor to M. Welte & Sons, Inc., New York, N. Y. Controller device for tracker-boards. No. 1,158,015; Oct. 26; Gaz. vol. 219; p. 1058.
Welton, Katherine B. (See Welton, Park E., assignor.)
Welton, Park E., assignor to K. B. Welton, Akron, Ohio. Core for manufacture of pneumatic-tire casings. No. 1,156,570; Oct. 12; Gaz. vol. 219; p. 459.
Welty, Albert D., Sr., Reno, Nev. Painter's guard. No. 1,158,348; Oct. 26; Gaz. vol. 219; p. 1174.
Welz, Edwin F., Denver, Colo. Meat-holder. No. 1,156,510; Oct. 12; Gaz. vol. 219; p. 438.

Wentworth, Arthur M., Pittsfield, Mass., assignor to General Electric Company. Insulated wire and terminal therefor. No. 1,157,916; Oct. 26; Gaz. vol. 219; p. 1024.
Wentworth, Pearl J., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-shaping machine. No. 1,157,741; Oct. 26; Gaz. vol. 219; p. 963.
Weser, John A., New York, N. Y. Automatic player-piano. No. 1,156,956; Oct. 19; Gaz. vol. 219; p. 623.
Wesson, Joseph H., and E. S. Pomeroy, assignors to Smith & Wesson, Springfield, Mass. Handcuff. No. 1,157,135; Oct. 19; Gaz. vol. 219; p. 687.
West, Clyde M., Ploche, Nebr. Resilient wheel. No. 1,155,456; Oct. 5; Gaz. vol. 219; p. 46.
Wester, Swan J., Boone, Iowa. Bed-support. No. 1,156,731; Oct. 12; Gaz. vol. 219; p. 515.
Westergren, Julius S., Chicopee, Mass. Strainer for drain-pipes. No. 1,155,852; Oct. 5; Gaz. vol. 219; p. 185.
Westerman, Frederick, Chicago, Ill. Depositing-machine. (Reissue.) No. 13,999; Oct. 19; Gaz. vol. 219; p. 882.
Western Electric Company. (See Brown, Gregory, assignor.)
Western Electric Company. (See Craft, Edward B., assignor.)
Western Electric Company. (See Goodrum, Charles L., assignor.)
Western Electric Company. (See McBerty, Frank R., assignor.)
Western Electric Company. (See Quass, Ralph L., assignor.)
Western Electric Company. (See Shreeve, Herbert E., assignor.)
Western Electric Company. (See Wilbur, Ray S., assignor.)
Western Pattern & Manufacturing Company. (See Kelley, Roy W., assignor.)
Westinghouse Electric and Manufacturing Company. (See Austin and Mahoney, assignors.)
Westinghouse Electric and Manufacturing Company. (See Beach, Howard L., assignor.)
Westinghouse Electric and Manufacturing Company. (See Chubb, Lewis W., assignor.)
Westinghouse Electric and Manufacturing Company. (See Fortescue, Charles L., assignor.)
Westinghouse Electric and Manufacturing Company. (See Hall, Arthur J., assignor.)
Westinghouse Electric and Manufacturing Company. (See Hanff, Edward A., assignor.)
Westinghouse Electric and Manufacturing Company. (See Reed, Emerson G., assignor.)
Westinghouse Electric and Manufacturing Company. (See Riley, Lynn G., assignor.)
Westinghouse Electric and Manufacturing Company. (See Rowe, Bertrand P., assignor.)
Westinghouse Electric and Manufacturing Company. (See Sakai, Yasudiro, assignor.)
Westinghouse Electric and Manufacturing Company. (See Starker, Charles W., assignor.)
Westinghouse Electric and Manufacturing Company. (See Storer, Norman W., assignor.) (Reissue.)
Westinghouse Electric and Manufacturing Company. (See Storer and Hall, assignors.)
Westinghouse Electric and Manufacturing Company. (See Walker, Miles, assignor.)
Westinghouse, Henry H., *et al.* (See Davis, Isaac H., assignor.)
Westinghouse Machine Company, The. (See Schmidt, Henry F., assignor.)
Westlake, Charles T., and C. S. Shallenberger, assignors to Flory Carry Iron Company, St. Louis, Mo. Drawbar carry-iron. No. 1,157,070; Oct. 19; Gaz. vol. 219; p. 664.
Westlake Machine Company, The. (See Kadow, August, assignor.)
Weston, Arthur H., Baltimore, Md. Underframe-reinforcement. No. 1,156,259; Oct. 12; Gaz. vol. 219; p. 348.
Weston, Philip, Dalton, Mass. Apparatus for producing thin sections in paper. No. 1,155,853; Oct. 5; Gaz. vol. 219; p. 185.
Wetterhahn, Edward, Granada Park, Cal. Carbureter. No. 1,155,457; Oct. 5; Gaz. vol. 219; p. 46.
Wetzig, Alfred. (See Breslove and Wetzig.)
Whale, Charles A., and J. H. Black, Portland, Oreg. Resilient wheel. No. 1,157,272; Oct. 19; Gaz. vol. 219; p. 737.
Whalen, Carl W., Millinocket, Me. Ice-cream-cone bag. No. 1,158,349; Oct. 26; Gaz. vol. 219; p. 1175.
Wheary, George H., Racine, Wis. Wardrobe-trunk. No. 1,157,652; Oct. 19; Gaz. vol. 219; p. 866.
Wheary, George H., Racine, Wis. Wardrobe-trunk. No. 1,158,411; Oct. 26; Gaz. vol. 219; p. 1198.
Wheary, George H., Racine, Wis. Trunk-locking means. No. 1,158,412; Oct. 26; Gaz. vol. 219; p. 1199.
Wheeler, Frank H. (See Schebler, George M., assignor.)
Whelan, Thomas F., assignor to Savoday Rack Company, St. Louis, Mo. Shoe heating and vulcanizing apparatus. No. 1,157,477; Oct. 19; Gaz. vol. 219; p. 809.
Whelan, Thomas F., assignor to Savoday Rack Company, St. Louis, Mo. Drying shoes. No. 1,157,478; Oct. 19; Gaz. vol. 219; p. 809.
Whelan, Thomas F., assignor to Savoday Rack Company, St. Louis, Mo. Apparatus for treating unfinished shoes. No. 1,157,479; Oct. 19; Gaz. vol. 219; p. 809.
Whelan, Thomas F., East Orange, N. J., assignor to Savoday Rack Company, St. Louis, Mo. Treating shoes. No. 1,157,480; Oct. 19; Gaz. vol. 219; p. 810.
Whelan, Thomas F., Kirkwood, assignor to Savoday Rack Company, St. Louis, Mo. Device for treating shoes. No. 1,157,482; Oct. 19; Gaz. vol. 219; p. 811.
Whelan, Thomas F., Newark, N. J., assignor to Savoday Rack Company, St. Louis, Mo. Apparatus for treating shoes. No. 1,157,483; Oct. 19; Gaz. vol. 219; p. 811.
Whelpley, Frederick W., Greenfield, Mass. Die-stock. No. 1,158,016; Oct. 26; Gaz. vol. 219; p. 1059.
Whigelt, George, New York, N. Y. Non-inflammable solvent for paints and the like. No. 1,156,119; Oct. 12; Gaz. vol. 219; p. 302.
Whitcomb, Daniel F., Los Angeles, Cal. Billiard-cue. No. 1,155,980; Oct. 5; Gaz. vol. 219; p. 227.
Whitcomb, Lee, Elwood, Ill. Pipe-wrench. No. 1,156,260; Oct. 12; Gaz. vol. 219; p. 349.
Whitcomb, Lawrence, Brookline, assignor to The Cork Insert Company, Boston, Mass. Pulley. No. 1,156,120; Oct. 12; Gaz. vol. 219; p. 302.
White, Anna R., La Crosse, Wis. Buffer. No. 1,158,350; Oct. 26; Gaz. vol. 219; p. 1175.
White, Charles E., San Francisco, Cal. Internal-combustion pump. No. 1,157,071; Oct. 19; Gaz. vol. 219; p. 665.
White, Charles E., Moline, Ill., assignor to Deere & Mansur Co. Tool-shifting mechanism for agricultural implements. No. 1,156,384; Oct. 12; Gaz. vol. 219; p. 394.
White, Clarence W., North Bennington, Vt. Photographic-picture-enlarging apparatus. No. 1,157,742; Oct. 26; Gaz. vol. 219; p. 963.
White, Franklin R., assignor to The Patent Button Company, Waterbury, Conn. Escapement for button-attaching machines. No. 1,157,743; Oct. 26; Gaz. vol. 219; p. 964.
White, Fred E., assignor to Central Oil and Gas Stove Co., Gardner, Mass. Pipe-line for oil-stoves and other purposes. No. 1,157,484; Oct. 19; Gaz. vol. 219; p. 811.
White, Henry P., assignor to Atlas Press Co., Kalamazoo, Mich. Mandrel-press. No. 1,156,261; Oct. 12; Gaz. vol. 219; p. 349.
White, Joseph, Piscataway township, assignor to Hall Printing Press Company, Dunellen, N. J. Sheet-delivery mechanism. No. 1,156,957; Oct. 19; Gaz. vol. 219; p. 624.
White, Noah, *et al.* (See Murrey, Ed, assignor.)
White, Thomas H., assignor of one-third to G. J. Eder, Baltimore, Md. Combined cigarette and match box. No. 1,156,732; Oct. 12; Gaz. vol. 219; p. 516.
White, Walter A., Covington, La. Moldboard for plows. No. 1,155,854; Oct. 5; Gaz. vol. 219; p. 185.
White, William M., Milwaukee, Wis. Hydraulic nozzle. No. 1,155,631; Oct. 5; Gaz. vol. 219; p. 106.
Whitehead, Robert L., Perth Amboy, assignor to American Smelting & Refining Company, Maurer, N. J. Electrolytic refining of tin. No. 1,157,830; Oct. 26; Gaz. vol. 219; p. 993.
Whiteside & Blank. (See Blank, Henry, assignor.)
Whitin, George M., assignor to The Whitin Machine Works, Whitinsville, Mass. Ring-polishing machine. No. 1,156,958; Oct. 19; Gaz. vol. 219; p. 624.
Whitin Machine Works, The. (See Aldrich, William O., assignor.)
Whitin Machine Works, The. (See Owen, Henry A., assignor.)
Whitin Machine Works, The. (See Owen and Rasco, assignors.)
Whitin Machine Works, The. (See Whitin, George M., assignor.)
Whiting, John H., assignor to International Motor Co., Punxsutawney, Pa. Headlight for locomotives. No. 1,156,262; Oct. 12; Gaz. vol. 219; p. 349.
Whiting, Saville, St. Kilda, Victoria, Australia. Spring front fork for motor-cycles and like machines. No. 1,155,458; Oct. 5; Gaz. vol. 219; p. 46.
Whitmore, Willis W. (See Hewitt and Whitmore.)
Whitney, Perrin B., assignor to Mesinger-Whitney Electric Company, Inc., New York, N. Y. Combined lamp and horn. No. 1,157,744; Oct. 26; Gaz. vol. 219; p. 964.
Whritner, Harry C., New York, N. Y. Mechanism for producing artificial silk. No. 1,155,777; Oct. 5; Gaz. vol. 219; p. 157.
Wiard, John B., Lynn, Mass., assignor to General Electric Company. Dynamo-electric machine. No. 1,157,970; Oct. 26; Gaz. vol. 219; p. 1043.
Wieser, Egidius, Passaic, N. J. Attachment for oil-cloth machines. No. 1,156,195; Oct. 12; Gaz. vol. 219; p. 327.
Wilbur, Merritt D., Rochester, assignor of one-half to F. P. Cannon, Syracuse, N. Y. Carbonizing or pack-hardening box. No. 1,156,647; Oct. 12; Gaz. vol. 219; p. 487.
Wilbur, Ray S., Jersey City, N. J., assignor, by mesne assignments, to Western Electric Company, Chicago, Ill. Automatic telephone system. No. 1,157,745; Oct. 26; Gaz. vol. 219; p. 964.
Wilcomb, Frank, Norristown, Pa., assignor to Hemphill Manufacturing Company, Central Falls, R. I. Pick mechanism for knitting-machines. No. 1,158,351; Oct. 26; Gaz. vol. 219; p. 1175.
Wilcox, Richard L., assignor to The Waterbury Farrel Foundry and Machine Company, Waterbury, Conn. Connection. No. 1,157,072; Oct. 19; Gaz. vol. 219; p. 665.
Wild, Wilhelm. (See Bosch and Wild.)

Wiley, Alexander A., Bannock, Ohio. Moistening device. No. 1,158,090; Oct. 26; Gaz. vol. 219; p. 1085.
Wilkins, Frederick M., Dorchester, assignor of one-half to C. R. Brainerd, Cambridge, Mass. Supporter. No. 1,155,856; Oct. 5; Gaz. vol. 219; p. 186.
Wilkins, Harry, Evansville, assignor of one-fourth to W. H. Redman, one-fourth to W. M. Smith, and one-half to J. P. Wilson, Vanderburg county, Ind. Train-controlled electric recording crossing-signal. No. 1,155,535; Oct. 5; Gaz. vol. 219; p. 74.
Willard, Donald E., Danville, Ill. Door-hanger. No. 1,155,890; Oct. 5; Gaz. vol. 219; p. 23.
Willard, Orson H., Cottage Grove, Oreg. Emergency-windlass for automobiles. No. 1,156,648; Oct. 12; Gaz. vol. 219; p. 487.
Willcox & Gibbs Sewing Machine Co. (See Merritt, Arthur A., assignor.)
William Cramp & Sons Ship & Engine Building Company, The. (See Metten, John F., assignor.)
William Davies Company, The, *et al.* (See Coboe, Wallace P., assignor.)
Williams, Benjamin P., *et al.* (See Cox, Thomas E., assignor.)
Williams, David P., Whitney, N. C. Indicator for hoisting and conveying apparatus. No. 1,156,733; Oct. 12; Gaz. vol. 219; p. 516.
Williams, Dick B., assignor to Louisiana Nut & Produce Company, New Orleans, La. Nut sheller and separator. No. 1,157,199; Oct. 19; Gaz. vol. 219; p. 710.
Williams, Edward G., and E. H. Brown, Washington, D. C. Method of and apparatus for tunnel-work. No. 1,156,830; Oct. 12; Gaz. vol. 219; p. 549.
Williams, Frank S., Kendaia, N. Y. Gang-plow. No. 1,157,136; Oct. 19; Gaz. vol. 219; p. 687.
Williams, Joseph H., Wallace, Idaho. Rotary engine. No. 1,155,536; Oct. 5; Gaz. vol. 219; p. 74.
Williams, Lacey Y., Toledo, Ohio. Dust-guard. No. 1,156,959; Oct. 19; Gaz. vol. 219; p. 625.
Williams, Peter K., Columbus, Ohio. Spinning-top. No. 1,158,352; Oct. 26; Gaz. vol. 219; p. 1175.
Williams, Warner R. (See Newbold, Harry, assignor.)
Williamson, Elias S., Philadelphia, Pa. Overshoe for horses. No. 1,156,571; Oct. 12; Gaz. vol. 219; p. 460.
Williamson, Robert B., Milwaukee, Wis., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company. Dynamo-electric machine. No. 1,157,187; Oct. 19; Gaz. vol. 219; p. 688.
Willis, Bernard D., assignor to Automatic Electric Company, Chicago, Ill. Cord-circuit for telephone systems. No. 1,156,450; Oct. 12; Gaz. vol. 219; p. 417.
Willis, Charles C., Framingham, assignor to Dennison Manufacturing Company, Boston, Mass. Paper-package. No. 1,158,353; Oct. 26; Gaz. vol. 219; p. 1176.
Willis, Henry W., Lansford, N. D. Hay or shock loader. No. 1,156,734; Oct. 12; Gaz. vol. 219; p. 516.
Willis, Leland, assignor to Bateman Manufacturing Company, Grenloch, N. J. Self-releasing positive clutch. No. 1,158,354; Oct. 26; Gaz. vol. 219; p. 1176.
Willis, Silas, Noble, Okla. Pneumatic seed and dust conveyer for cotton-gins. No. 1,156,196; Oct. 12; Gaz. vol. 219; p. 327.
Willis, William S., New York, N. Y. Pedal-switch. No. 1,158,355; Oct. 26; Gaz. vol. 219; p. 1177.
Willits, Ward W., Highland Park, Ill., assignor to The Adams & Westlake Company. Guard-frame for lanterns. No. 1,156,572; Oct. 12; Gaz. vol. 219; p. 460.
Willson, Freeman R., Worthington, Ohio. Spring vehicle-wheel. No. 1,156,960; Oct. 19; Gaz. vol. 219; p. 625.
Willson, Freeman R., Jr., Columbus, Ohio, assignor to The Jeffrey Manufacturing Co. Conveyer. No. 1,156,385; Oct. 12; Gaz. vol. 219; p. 394.
Wilmoth, Joseph S. (See Simpson and Wilmoth.)
Wilson, Cowan D., Big Stone Gap, Va. Wrench. No. 1,155,857; Oct. 5; Gaz. vol. 219; p. 186.
Wilson, Elmer D., Kittanning, Pa. Combined shade-roller and curtain-pole fixture. No. 1,157,831; Oct. 26; Gaz. vol. 219; p. 993.
Wilson, James, Watertown, S. D. Internal grinder. No. 1,156,962; Oct. 19; Gaz. vol. 219; p. 626.
Wilson, James P., *et al.* (See Wilkins, Harry, assignor.)
Wilson, Theodore F., Washington, D. C. Camp equipment. No. 1,158,356; Oct. 26; Gaz. vol. 219; p. 1177.
Wilson, Walter A., Armley, Leeds, England. Gas-fire. No. 1,156,735; Oct. 12; Gaz. vol. 219; p. 517.
Wilson, Winifred. (See McGowan, Owen J., assignor.)
Wiltshire, Fred L., assignor, by mesne assignments, to Martinsville Ignition Company, Martinsville, Ind. Electrical transformer-controller and distributer. No. 1,158,091; Oct. 26; Gaz. vol. 219; p. 1085.
Winchester, Fred E., Manderson, Wyo. Wheel-lock. No. 1,156,197; Oct. 12; Gaz. vol. 219; p. 327.
Winchester Manufacturing Company. (See Kinspert, George H., assignor.)
Windeler, George E., Stockport, England, assignor to General Electric Company. Fuel-injector. No. 1,157,273; Oct. 19; Gaz. vol. 219; p. 737.
Window Glass Machine Company. (See Monro, William L., assignor.)
Wines, Joseph H., Detroit, Mich. Nut-lock. No. 1,155,858; Oct. 5; Gaz. vol. 219; p. 187.
Winston, Charles S., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Telephone system. No. 1,157,746; Oct. 26; Gaz. vol. 219; p. 965.
Winston, Edward L. (See Moore and Winston.)
Winter, Nelson B., Frostburg, Md. Clip for metallic clothes-lines. No. 1,157,747; Oct. 26; Gaz. vol. 219; p. 965.
Wire Products Company. (See Fanshawe, Henry E., assignor.)
Wireless Specialty Apparatus Company. (See Pickard, Greenleaf W., assignor.)
Wirsing, Thomas R., Roanoke, Va. Shaving-brush. No. 1,155,859; Oct. 5; Gaz. vol. 219; p. 187.
Wise, Alvia F., assignor of one-half to H. C. Dunning and one-half to C. E. Dennis, Columbus, Ohio. Combination-switch. No. 1,156,121; Oct. 12; Gaz. vol. 219; p. 303.
Wiseley, Don C., Spokane, Wash. Automatic mechanism for operating camera bulb or contact-release. No. 1,155,981; Oct. 5; Gaz. vol. 219; p. 227.
Wissinger, Theodore G., Lewisburg, Ohio. Gasolene-tank heater. No. 1,156,198; Oct. 12; Gaz. vol. 219; p. 328.
Witherbee, Benjamin H., Red Cloud, Nebr. Lever. No. 1,156,961; Oct. 19; Gaz. vol. 219; p. 626.
Withrow, Samuel P., Cincinnati, Ohio. Baby-chair and perambulator. No. 1,155,855; Oct. 5; Gaz. vol. 219; p. 186.
Withycombe, Robert M., Sydney, New South Wales, Australia. Attachable outer sole for boots and shoes. No. 1,155,982; Oct. 5; Gaz. vol. 219; p. 227.
Witte, Gustav W., Chicago, Ill., assignor to International Harvester Company of New Jersey. Cord-knotter for grain-binders. No. 1,155,860; Oct. 5; Gaz. vol. 219; p. 187.
Wittemann, Jacob F. and R. W., assignors to Amaranth Machinery and Supply Works, Inc., New York, N. Y. Apparatus for charging liquids with gas. No. 1,155,983; Oct. 5; Gaz. vol. 219; p. 227.
Wittemann, Rudolph W. (See Wittemann, Jacob F. and R. W.)
Witter, Archie C., assignor of one-fourth to C. T. Hicks and one-fourth to H. Hicks, Tonawanda, N. Y. Combination-tool. No. 1,158,092; Oct. 26; Gaz. vol. 219; p. 1086.
Witzsche, Frank P. (See Gray and Witzsche.)
Woehrle, Henriette B., Newark, N. J., assignor to The Singer Manufacturing Company. Piping attachment for sewing-machines. No. 1,157,606; Oct. 19; Gaz. vol. 219; p. 850.
Woelffer, Herman, West Duluth, Minn. Saw-guide. No. 1,157,607; Oct. 19; Gaz. vol. 219; p. 850.
Woerner, Charles J., Hammond, and A. M. Hunt, Gibson, Ind. Automatic oil-cup. No. 1,157,354; Oct. 19; Gaz. vol. 219; p. 764.
Wohlers, Henry L., Oak Harbor, Ohio. Vehicle lighting system. No. 1,157,748; Oct. 26; Gaz. vol. 219; p. 966.
Wolf, Eugene P., Chicago, Ill. Safety delivery-receptacle. No. 1,155,778; Oct. 5; Gaz. vol. 219; p. 157.
Wolfe, William and D. Parks, St. Louis, Mo. Building heel-blanks. No. 1,157,355; Oct. 19; Gaz. vol. 219; p. 765.
Wolfe, William W., East Highland, Cal. Door-spring. No. 1,157,274; Oct. 19; Gaz. vol. 219; p. 738.
Wolfer, Maurice. (See Nienstadt, August E., assignor.)
Wolski, Jan, Chicago, Ill. Automatic station-indicator for cars. No. 1,155,694; Oct. 5; Gaz. vol. 219; p. 129.
Woman's World Magazine Company Incorporated. (See Moore, Frank V., assignor.)
Wood, Alexander H., Petros, Tenn. Buffer for railways. No. 1,156,649; Oct. 12; Gaz. vol. 219; p. 487.
Wood, Charles R., Spokane, Wash., assignor of one-half to C. W. Miller, Portland, Oreg., and J. D. Alexander, Spokane, Wash. Variable-speed-transmission mechanism. No. 1,158,357; Oct. 26; Gaz. vol. 219; p. 1177.
Wood, Frederick P., Detroit, Mich., assignor to American Can Company, New York, N. Y. Dispensing-package. No. 1,158,093; Oct. 26; Gaz. vol. 219; p. 1086.
Wood, James J., Fort Wayne, Ind., assignor to General Electric Company. Cooling-liquid economizer. No. 1,156,511; Oct. 12; Gaz. vol. 219; p. 439.
Wood, Louis A., assignor to Minerals Separation American Syndicate (1913) Limited, London, England. Ore concentration. No. 1,155,861; Oct. 5; Gaz. vol. 219; p. 187.
Wood, Theodore S., New York, N. Y. Tile measuring, marking, and sorting machine. No. 1,156,337; Oct. 12; Gaz. vol. 219; p. 375.
Woodhead, Frank, Glen Riddle, Pa. Pliers. No. 1,155,632; Oct. 5; Gaz. vol. 219; p. 106.
Woodley, James C., Evanston, Ill. Fibrous composition and manufacture. No. 1,156,122; Oct. 12; Gaz. vol. 219; p. 303.
Woods, Norman E., Richmond, Va. Valve. No. 1,156,963; Oct. 19; Gaz. vol. 219; p. 626.
Woods, William J., Corning, N. Y., assignor to Empire Machine Company. Apparatus for working glass. No. 1,157,653; Oct. 19; Gaz. vol. 219; p. 866.
Woodward, Joseph, Dayton, Ohio. Feed-regulator. No. 1,155,459; Oct. 5; Gaz. vol. 219; p. 47.
Wooley, John E., Findlay, N. Y. Outlet-valve for oil-tanks. No. 1,155,537; Oct. 5; Gaz. vol. 219; p. 75.
Woolley, Edward W., Jersey City, N. J. Clutch and regulating mechanism. No. 1,157,275; Oct. 19; Gaz. vol. 219; p. 738.
Woonsocket Napping Machinery Company. (See Greene, Harry S., assignor.)
Wordingham, George, Milwaukee, Wis. Shirt-waist form. No. 1,158,358; Oct. 26; Gaz. vol. 219; p. 1178.

Worley, Beattie R., and G. H. Kellington, Decatur, Ill. Draft-arm for soda-fountains. No. 1,156,736; Oct. 12; Gaz. vol. 219; p. 517.

Worrest, Alfred H., Lancaster, Pa. Wheel-mounting. No. 1,155,538; Oct. 5; Gaz. vol. 219; p. 75.

Wray, Charles F., assignor to National Brass Manufacturing Company, Rochester, N. Y. Faucet. No. 1,155,964; Oct. 5; Gaz. vol. 219; p. 228.

Wray, Edward, assignor to Kalle and Company, Aktiengesellschaft, Biebrich, Germany. Manufacture of black vat dyestuffs. No. 1,157,485; Oct. 19; Gaz. vol. 219; p. 811.

Wray, William A., *et al.* (See Grove, Martin L., assignor.)

Wright, Gilbert, Schenectady, N. Y., assignor to General Electric Company. Basing incandescent lamps. No. 1,156,650; Oct. 12; Gaz. vol. 219; p. 488.

Wright, Thomas, Jersey City, N. J. Dump-wagon. No. 1,157,486; Oct. 19; Gaz. vol. 219; p. 812.

Wright, Thomas, Jersey City, N. J. Body-elevating mechanism for vehicles. No. 1,157,487; Oct. 19; Gaz. vol. 219; p. 812.

Wright, Thomas D., *et al.* (See Conrad, Joseph L., assignor.)

Wright, William, Bradford, Pa., assignor to Bovaird & Seyfang Manufacturing Company. Lubricator. No. 1,157,488; Oct. 19; Gaz. vol. 219; p. 813.

Wrigley, Henry I., assignor to Universal Draft Gear Attachment Company, Chicago, Ill. Draft-plate for railway-cars. No. 1,156,573; Oct. 12; Gaz. vol. 219; p. 460.

Wunder, George J., Howard, S. D. Bag-holder. No. 1,157,138; Oct. 19; Gaz. vol. 219; p. 688.

Wygodsky Engine Company. (See Wygodsky, Leon, assignor.)

Wygodsky, Leon, assignor to Wygodsky Engine Company, New York, N. Y. Valve and valve-gear of internal-combustion engines. No. 1,156,123; Oct. 12; Gaz. vol. 219; p. 304.

Yaggi, Joseph. (See Roth, Charles, assignor.)

Yates, Harry D., Washington, D. C. Fuel-controlling device. No. 1,158,094; Oct. 26; Gaz. vol. 219; p. 1087.

Yaw, Clio B., Arlington, N. J., assignor to Remington Typewriter Company, Ilion, N. Y. Type-writing machine. No. 1,157,276; Oct. 19; Gaz. vol. 219; p. 738.

Ye Lady's Outfitterie. (See Perillat, Marie, assignor.)

Yeager, Philip, Oran, Iowa. Road-grader. No. 1,155,862; Oct. 5; Gaz. vol. 219; p. 188.

Yelinek, Emil E., Clutier, Iowa. Show-case. No. 1,155,863; Oct. 5; Gaz. vol. 219; p. 188.

Yerger, Charles W., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controller. No. 1,157,277; Oct. 19; Gaz. vol. 219; p. 739.

Yerke, Horace M., Freeport, Me. Letter-opener. No. 1,157,489; Oct. 19; Gaz. vol. 219; p. 813.

Young, Carl J., Seattle, Wash. Dumping-truck. No. 1,157,749; Oct. 26; Gaz. vol. 219; p. 966.

Young, Charles D., Pittsburgh, Pa. Automatic stoker mechanism. No. 1,156,854; Oct. 12; Gaz. vol. 219; p. 559.

Young, Frank W., Providence, R. I. Cuff-link. No. 1,156,651; Oct. 12; Gaz. vol. 219; p. 488.

Young, Franklin K., Winthrop Highlands, Mass. Firearm. No. 1,157,750; Oct. 26; Gaz. vol. 219; p. 966.

Young, John M., San Francisco, Cal. Can-body. No. 1,157,278; Oct. 19; Gaz. vol. 219; p. 739.

Young, John M., San Francisco, Cal. Grader. No. 1,157,279; Oct. 19; Gaz. vol. 219; p. 739.

Young, Leonard A., Detroit, Mich. Spring-frame construction. No. 1,155,391; Oct. 5; Gaz. vol. 219; p. 23.

Young, Leonard A., Detroit, Mich. Spring structure. No. 1,155,392; Oct. 5; Gaz. vol. 219; p. 24.

Young, Leonard A., Highland Park, Mich. Wheel. No. 1,156,124; Oct. 12; Gaz. vol. 219; p. 304.

Younie, Lewis E. (See Ball and Younie.)

Yulke, Edward F., assignor to Continental Paper Bag Company, New York, N. Y. Egg-carton carrier. No. 1,158,095; Oct. 26; Gaz. vol. 219; p. 1087.

Zabriskie, Henry L., Westfield, assignor to Diehl Manufacturing Company, Elizabeth, N. J. Centrifugal switch. No. 1,155,985; Oct. 5; Gaz. vol. 219; p. 228.

Zahn, Robert, deceased; A. Rietzsch, administrator, Plauen, Germany. Presser-finger-operating mechanism for embroidering-machines. No. 1,158,096; Oct. 26; Gaz. vol. 219; p. 1088.

Zanolli, Joseph, Pittsburgh, Pa. Trolley-guard. No. 1,155,695; Oct. 5; Gaz. vol. 219; p. 129.

Zaphyriades, S. D. (See Leslie, Bonnaford, assignor.)

Zee Socket and Mfg. Co., The. (See Both, Tonjes A. C., assignor.) (Reissue.)

Zeiss, Firm of Carl. (See Eppenstein, Otto, assignor.)

Zeiss, Firm of Carl. (See Siedentopf, Henry, assignor.)

Zellers, Robert E., Tenino, Wash. Combined cigar clipper and lighter. No. 1,158,017; Oct. 26; Gaz. vol. 219; p. 1059.

Zemlo, John C., Beaver Dam, Wis. Paper box. No. 1,155,986; Oct. 5; Gaz. vol. 219; p. 229.

Zepp, William, New York, N. Y. Game apparatus. No. 1,158,413; Oct. 26; Gaz. vol. 219; p. 1199.

Ziebolz, Julius, Valdosta, Ga. Turpentine-still kettle. No. 1,157,139; Oct. 19; Gaz. vol. 219; p. 688.

Ziegenberg, Rudolf, Berlin-Schoeneberg, assignor to J. Elster, Berlin, Germany. Electricity-meter. No. 1,156,964; Oct. 19; Gaz. vol. 219; p. 626.

Ziegler, Leslie I., assignor to Nordyke & Marmon Company, Indianapolis, Ind. Sifter-drive. No. 1,155,633; Oct. 5; Gaz. vol. 219; p. 106.

Zima, Frank, Humphrey, Nebr. Hoe. No. 1,157,356; Oct. 19; Gaz. vol. 219; p. 765.

Ziprick, Herman C., Spokane, Wash. Apparatus for cleaning sausage-skins. No. 1,155,393; Oct. 5; Gaz. vol. 219; p. 24.

Zwingenberger, Otto K., Perth Amboy, N. J., assignor to The Roessler & Hasslacher Chemical Co., New York, N. Y. Apparatus for heating and evaporating liquids. No. 1,156,238; Oct. 12; Gaz. vol. 219; p. 375.

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

Abert, Hamilton, Passaic, N. J. Golf-tee. No. 47,942; Oct. 12; Gaz. vol. 219; p. 566.

Albright, Andrew, Jr., New York, N. Y. Harness ornament. No. 47,943; Oct. 12; Gaz. vol. 219; p. 566.

American Optical Company. (See Gordon, Robert L., assignor.)

American Pin Company, The. (See Nash, John J., assignor.)

Arcade Manufacturing Company. (See Morgan, Charles, assignor.)

Arnold, Harry C., Malden, Mass. Tire. No. 47,944; Oct. 12; Gaz. vol. 219; p. 567.

Arrow Electric Company, The. (See Gates, Frederic P., assignor.)

Bain, John, Pittsburgh, Pa. Charm, badge, or similar article. Nos. 47,980–1; Oct. 19; Gaz. vol. 219; p. 896.

Baker, Frederick C., Portland, Oreg. Electric-light hanging-lamp fixture. No. 47,982; Oct. 19; Gaz. vol. 219; p. 886.

Baldwin, Charles W. (See Livengood and Baldwin.)

Berkander, George F. (See Fenno, Harry E., assignor.)

Berkey and Gay Furniture Company. (See Stirrup, Stanley H., assignor.)

Berry, Fred A., Los Angeles, Cal. Medallion, badge, watch-fob, watch-charm, ring, scarf-pin, brooch, button, or similar article of jewelry. No. 47,983; Oct. 19; Gaz. vol. 219; p. 886.

Biffar, Fred, Chicago, Ill. Revolver or pistol handle. No. 47,984; Oct. 19; Gaz. vol. 219; p. 887.

Bissell, Carl H., assignor to Crouse-Hinds Company, Syracuse, N. Y. Electrical-conduit outlet-box. Nos. 47,985–6; Oct. 19; Gaz. vol. 219; p. 887.

Bissell, Carl H., Syracuse, N. Y., and Daniel C. Gidley, Boston, Mass., assignors to Crouse-Hinds Company, Syracuse, N. Y. Electrical-conduit outlet-box. No. 47,987; Oct. 19; Gaz. vol. 219; p. 887.

Boe, John, Bateman, Saskatchewan, Canada. Toy. No. 47,988; Oct. 19; Gaz. vol. 219; p. 888.

Booth, Kraft, assignor to Gillinder & Sons, Inc., Philadelphia, Pa. Glass light-shade. No. 47,907; Oct. 5; Gaz. vol. 219; p. 252.

Bowie, Harold D., Mahwah, N. J., assignor to E. I. Horsman Co. Toy. No. 47,908; Oct. 5; Gaz. vol. 219; p. 252.

Bradford, Granville C., assignor to Granville Manufacturing Co., Washington, D. C. Toilet-powder container. No. 47,909; Oct. 5; Gaz. vol. 219; p. 252.

Bratton, Willard G. (See Bratton, William L., assignor.)

Bratton, William L., Brooklyn, N. Y., assignor to W. G. Bratton, Pittsburgh, Pa. Casing for coin-actuated machines. No. 47,945; Oct. 12; Gaz. vol. 219; p. 567.

Breuer, Erich F. J., assignor to H. Mueller Mfg. Co., Decatur, Ill. Hose-washer. No. 47,989; Oct. 19; Gaz. vol. 219; p. 888.

Briegel, Joseph A., Chicago, Ill. Pin or badge. No. 47,990; Oct. 19; Gaz. vol. 219; p. 888.

Bryant Electric Company, The. (See Goodridge, Gilbert W., assignor.)

Bush & Lane Piano Co. (See Lane, Walter, assignor.)

Campbell, Walter G., Marysville, Ohio. Clock. No. 47,946; Oct. 12; Gaz. vol. 219; p. 567.

Channing, Joseph, assignor to Luminous Unit Company, St. Louis, Mo. Lighting-fixture. No. 47,991; Oct. 19; Gaz. vol. 219; p. 888.

Chicago Title & Trust Co., trustee. (See Hansen, Augie L., assignor.)

Christian, James H., Detroit, Mich. Tire-casing. No. 47,947; Oct. 12; Gaz. vol. 219; p. 567.

Clarke, Fred D., Rochester, N. Y. Thread-cutter. No. 47,992; Oct. 19; Gaz. vol. 219; p. 888.

Cluett, Peabody & Co. (See Hurd, Hubbard F., assignor.)

Cooper, Abraham, New York, N. Y. Chain-link. Nos. 48,023–5; Oct. 26; Gaz. vol. 219; p. 1208.

Cordley, Henry G., Glen Ridge, N. J. Liquid-dispenser. No. 48,022; Oct. 26; Gaz. vol. 219; p. 1208.

Courtney, Robert A., Baltimore, Md. Dispensing device. No. 47,948; Oct. 12; Gaz. vol. 219; p. 568.

Cox, Morgan H., assignor to R. Holl Shuttles, Dallas, Tex. Bracelet-link. No. 47,993; Oct. 19; Gaz. vol. 219; p. 888.

Crouse-Hinds Company. (See Bissell, Carl H., assignor.)

Crouse-Hinds Company. (See Bissell and Gidley, assignors.)

Davidson, Laura F., Houston, Tex. Toy. No. 47,994; Oct. 19; Gaz. vol. 219; p. 889.

De Vilbiss Manufacturing Company, The. (See De Vilbiss, Thomas A., assignor.)

De Vilbiss, Thomas A., assignor to The De Vilbiss Manufacturing Company, Toledo, Ohio. Coupling for the air-tube and heelpiece of an atomizer. No. 48,026; Oct. 26; Gaz. vol. 219; p. 1208.

Duffy, Peter, New York, N. Y. Talking-machine cabinet. Nos. 47,910–14; Oct. 5; Gaz. vol. 219; pp. 252–3.

E. I. Horsman Co. (See Bowie, Harold D., assignor.)

Eaton, Harry A., Illmo, Mo. Car-replacer. No. 47,949; Oct. 12; Gaz. vol. 219; p. 568.

Elkins, David H., Amesbury, assignor to Gray & Davis, Inc., Boston, Mass. Automobile-lamp. No. 47,915; Oct. 5; Gaz. vol. 219; p. 253.

Emerson-Brantingham Company. (See Waterman, Lewis E., assignor.)

Emerson-Brantingham Company. (See Waterman and Traphagen, assignors.)

Fenno, Harry E., assignor to G. F. Berkander, Providence, R. I. Pair of goggles. No. 47,916; Oct. 5; Gaz. vol. 219; p. 253.

French, James G., Philadelphia, Pa. Show-case. No. 48,027; Oct. 26; Gaz. vol. 219; p. 1208.

Friedley-Voshardt Co. (See Voshardt, Herman F., assignor.)

Gates, Frederic P., assignor to The Arrow Electric Company, Hartford, Conn. Electric-lamp socket. No. 48,028; Oct. 26; Gaz. vol. 219; p. 1208.

Gidley, Daniel C. (See Bissell and Gidley.)

Gillinder & Sons. (See Booth, Kraft, assignor.)

Gleeson, George A., Chicago, Ill. Hair-fastener. No. 47,950; Oct. 12; Gaz. vol. 219; p. 568.

Goodridge, Gilbert W., assignor to The Bryant Electric Company, Bridgeport, Conn. Insulated chain connector. No. 47,917; Oct. 5; Gaz. vol. 219; p. 254.

Goodyear Rubber Company. (See Payne, Fred E., assignor.)

Gordon, Robert L., assignor to American Optical Company, Southbridge, Mass. Work-bench. No. 47,995; Oct. 19; Gaz. vol. 219; p. 889.

Granville Manufacturing Co. (See Bradford, Granville C., assignor.)

Gray & Davis. (See Elkins, David H., assignor.)

Guinis, Kate M., and S. D. Vamvas, Jacksonville, Fla. Head ornament. No. 47,996; Oct. 19; Gaz. vol. 219; p. 889.

Guth, Edwin F., St. Louis, Mo. Lamp-shade. No. 47,918; Oct. 5; Gaz. vol. 219; p. 254.

Guth, Edwin F., and Raymond V. Owen, assignor to Luminous Unit Company, St. Louis, Mo. Lighting-fixture. No. 47,997; Oct. 19; Gaz. vol. 219; p. 889.

H. Mueller Mfg. Co. (See Breuer, Erich F. J., assignor.)

H. Mueller Mfg. Co. (See Mueller, Robert, assignor.)

H. B. Smith Company, The. (See Reed, William B., assignor.)

Hamilton, Harold H., Bridgeport, Conn., assignor to Whiting Manufacturing Company, New York, N. Y. Platter, tray, or similar article. No. 47,998; Oct. 19; Gaz. vol. 219; p. 889.

Hammond, Myron B., Bridgeport, Conn., assignor to The Thos. P. Taylor Co. Garter. No. 47,999; Oct. 19; Gaz. vol. 219; p. 889.

Haney, Emma J., Seneca Falls, N. Y. Cat statuette. No. 47,951; Oct. 12; Gaz. vol. 219; p. 568.

Hansen, Augie L., Evanston, Ill., assignor to Chicago Title & Trust Co., trustee. Body for a massage device. No. 47,952; Oct. 12; Gaz. vol. 219; p. 568.

Harris, De Lancey P., New York, N. Y. Tire-tread. No. 48,029; Oct. 26; Gaz. vol. 219; p. 1209.

Heldritte Brush Co. (See Thompson, Charles E., assignor.)

Herbold Chair Co. (See Herbold, Frederick H., assignor.)

Herbold, Frederick H., assignor to Herbold Chair Co., Chicago, Ill. Bent-stock chair. No. 48,030; Oct. 26; Gaz. vol. 219; p. 1209.

Hill, Owen E., assignor to Western Electric Company, New York, N. Y. Lantern. No. 48,031; Oct. 26; Gaz. vol. 219; p. 1209.

Hubbell, Harvey, Bridgeport, Conn. Attachment-plug receptacle. No. 47,953; Oct. 12; Gaz. vol. 219; p. 568.

Hurd, Hubbard F., assignor to Cluett, Peabody & Co., Inc., Troy, N. Y. Fold-collar. No. 48,000; Oct. 19; Gaz. vol. 219; p. 890.

J. H. White Mfg. Co. (See White, Edwin L., assignor.)

J. L. Sommer Mfg. Co. (See Sommer, John L., assignor.)

Johnson, Henry E., Lansdowne, Pa. Combined stand and clock-casing. No. 47,919; Oct. 5; Gaz. vol. 219; p. 254.

Jones, Charles E., assignor to Metal Arts & Crafts Co., Chicago, Ill. Arm for chandeliers and brackets. No. 47,920; Oct. 5; Gaz. vol. 219; p. 254.

Jones, Charles E., assignor to Metal Arts & Crafts Co., Chicago, Ill. Hanger for light-reflecting bowls. Nos. 47,921–3; Oct. 5; Gaz. vol. 219; pp. 254–5.

Jones, Charles E., assignor to Metal Arts & Crafts Co., Chicago, Ill. Electric-candle-base hickey. No. 47,924; Oct. 5; Gaz. vol. 219; p. 255.

Jones, Charles E., assignor to Metal Arts & Crafts Co., Chicago, Ill. Arm for chandeliers and brackets. No. 48,032; Oct. 26; Gaz. vol. 219; p. 1209.

Karpeles, Maurice J., Providence, R. I. Display-cabinet. Nos. 47,954–7; Oct. 12; Gaz. vol. 219; p. 569.

Kaye, Samuel, Columbus, Miss. Crown cork or seal for capping bottles. No. 48,033; Oct. 26; Gaz. vol. 219; p. 1209.

Kelch, Gustav A., New York, N. Y. Article of manufacture. No. 47,958; Oct. 12; Gaz. vol. 219; p. 569.

Kellogg, John L., Battle Creek, Mich. Biscuit. No. 48,001; Oct. 19; Gaz. vol. 219; p. 890.

King, Dwight D., Warren, Pa. Lamp. No. 47,925; Oct. 5; Gaz. vol. 219; p. 255.

Kleemichen, Edward R. (See Rathner, Gustave, assignor.)

Kondow, Shiro, Los Angeles, Cal. Charm, stick-pin, statuette, lucky dog, or comic dog. No. 48,002; Oct. 19; Gaz. vol. 219; p. 890.

Kull, Sally C., Far Hills, N. J. Badge. No. 47,926; Oct. 5; Gaz. vol. 219; p. 255.

Lane, Walter, Holland, Mich., assignor to Bush & Lane Piano Co., Chicago, Ill. Player-piano case. No. 47,959; Oct. 12; Gaz. vol. 219; p. 570.

Leonhardt, John S., Detroit, Mich. Broom or mop holder. No. 47,927; Oct. 5; Gaz. vol. 219; p. 255.

Livengood, Clarence E., and C. W. Baldwin, Meyersdale, Pa. Talking-machine cabinet. No. 48,003; Oct. 19; Gaz. vol. 219; p. 890.

Long, Herbert J., assignor to The Long-Landreth-Schneider Company, New Brunswick, N. J. Water-heater. No. 47,960; Oct. 12; Gaz. vol. 219; p. 570.

Loug-Landreth-Schneider Company, The. (See Long, Herbert J., assignor.)

Luminous Unit Company. (See Chassaing, Joseph, assignor.)

Luminous Unit Company. (See Guth and Owen, assignors.)

Luten, Daniel B., Indianapolis, Ind. Concrete bridge. No. 47,928; Oct. 5; Gaz. vol. 219; p. 255.

Maerz, Frederick K., Cleveland, Ohio. Ring for electric-lighting fixtures. No. 48,035; Oct. 26; Gaz. vol. 219; p. 1210.

Maerz, Frederick K., Cleveland, Ohio. Canopy and socket cover for electric-lighting fixtures. No. 48,036; Oct. 26; Gaz. vol. 219; p. 1210.

Maerz, Frederick K., Cleveland, Ohio. Ring for electric-lighting fixtures. No. 48,037; Oct. 26; Gaz. vol. 219; p. 1210.

Manovill, Bernard, St. Louis, Mo. Savings-bank. No. 47,929; Oct. 5; Gaz. vol. 219; p. 256.

McDonough, William H., Deming, N. Mex. Pan-lifter. No. 47,961; Oct. 12; Gaz. vol. 219; p. 570.

McKinnie, Earle C., Chicago, Ill. Illuminating-chandelier. No. 48,034; Oct. 26; Gaz. vol. 219; p. 1209.

Meier, Edward C., Phoenixville, Pa. Furnace-tile. No. 47,930; Oct. 5; Gaz. vol. 219; p. 256.

Meier, Edward C., Phoenixville, Pa. Hand-hole plate. No. 47,931; Oct. 5; Gaz. vol. 219; p. 256.

Mersfelder, William L., Kennedy Heights, Ohio, assignor to The Star Foundry Company, Covington, Ky. Stove. No. 47,962; Oct. 12; Gaz. vol. 219; p. 570.

Metal Arts & Crafts Co. (See Jones, Charles E., assignor.)

Meyercord Company, The. (See Westerlind, Aksel, assignor.)

Mme. Ise'belis' Toilet Manufacturing Co. (See Orem, William, assignor.)

Mooney, Frank. (See Mooney, Norman J. and F.)

Mooney, Norman J. and F., San Francisco, Cal. Rubber-tire tread. No. 47,963; Oct. 12; Gaz. vol. 219; p. 570.

Morgan, Charles, assignor to Arcade Manufacturing Company, Freeport, Ill. Frame for lemon-squeezers. No. No. 47,932; Oct. 5; Gaz. vol. 219; p. 256.

Mueller, Robert, assignor to H. Mueller Mfg. Co., Decatur, Ill. Hose-washer. No. 48,004; Oct. 19; Gaz. vol. 219; p. 890.

Nash, John J., assignor to The American Pin Company, Waterbury, Conn. Neck for bed-trimmings. No. 48,038; Oct. 26; Gaz. vol. 219; p. 1210.

National Metal Spinning & Stamping Company. (See Tepfer, George M., assignor.)

Newton, Albert E., Pawtucket, R. I., assignor to Regina Lace Company. Lace fabric. Nos. 48,005–6; Oct. 19; Gaz. vol. 219; pp. 890–1.

Niper, Louis S., New York, N. Y. Medicine-spoon supporter. No. 48,039; Oct. 26; Gaz. vol. 219; p. 1210.

Norden, Joseph. (See Norden, Mortimer, assignor.)

Norden, Mortimer, assignor to J. Norden, New York, N. Y. Electric sign. No. 47,964; Oct. 12; Gaz. vol. 219; p. 571.

Orem, William, Baltimore, Md., assignor to Mme. Ise'belis' Toilet Manufacturing Co., Chicago, Ill. Bottle. No. 48,007; Oct. 19; Gaz. vol. 219; p. 891.

Owen, Raymond V. (See Guth and Owen.)

Parker, George S., Salem, Mass. Playing-track of a board game. No. 48,008; Oct. 19; Gaz. vol. 219; p. 891.

Payne, Fred E., assignor to Goodyear Rubber Company, Middletown, Conn. Rubber shoe. No. 47,933; Oct. 5; Gaz. vol. 219; p. 256.

Phillips' Patents Limited. (See Phillips, Walter W., assignor.)

Phillips, Walter W., assignor to Phillips' Patents Limited, London, England. India-rubber sole-pad for boots and shoes. Nos. 48,040–1; Oct. 26; Gaz. vol. 219; pp. 1210–11.

Phillips, Walter W., assignor to Phillips' Patents Limited, London, England. Rubber heel-pad for footwear. No. 48,042; Oct. 26; Gaz. vol. 219; p. 1211.

Phoenix Glass Company, The. (See Pickhardt, Harry, assignor.)

Pickhardt, Harry, New York, N. Y., assignor to The Phoenix Glass Company, Pittsburgh, Pa. Lighting-fixture. No. 47,934; Oct. 5; Gaz. vol. 219; p. 257.

Quackenbush, Grace M., New York, N. Y. Post for children's toys, furniture, and fences. No. 48,043; Oct. 26; Gaz. vol. 219; p. 1211.

Quinn, John L., Los Angeles, assignor to Standard Oil Company, Richmond, Cal. Sign. No. 47,965; Oct. 12; Gaz. vol. 219; p. 571.

Rathner, Gustave, New York, N. Y., assignor to E. R. Kleemichen, Stamford, Conn. Altar. No. 48,009; Oct. 19; Gaz. vol. 219; p. 891.

Reed, William B., assignor to The H. B. Smith Company, Westfield, Mass. Radiator-section. No. 48,044; Oct. 26; Gaz. vol. 219; p. 1211.

Reed, William B., assignor to The H. B. Smith Company, Westfield, Mass. Radiator. No. 48,045; Oct. 26; Gaz. vol. 219; p. 1211.

Regina Lace Company. (See Newton, Albert E., assignor.)

Reischmann, Henry R., New York, N. Y. Counter-stool. No. 47,966; Oct. 12; Gaz. vol. 219; p. 571.

Reischmann, Henry R., New York, N. Y. Counter-stool foot-rest. No. 48,010; Oct. 19; Gaz. vol. 219; p. 891.

Rottger, William H., Farmington, Mo. Attaching-plate for hames. No. 47,967; Oct. 12; Gaz. vol. 219; p. 571.

Samstag, Louis A., New York, N. Y. Hand-bag. No. 47,968; Oct. 12; Gaz. vol. 219; p. 571.

Scallione, Daniel, Hazleton, Pa. Poison-bottle. No. 48,011; Oct. 19; Gaz. vol. 219; p. 891.

Schaffer, Max, New York, N. Y. Glass bowl. No. 48,046; Oct. 26; Gaz. vol. 219; p. 1212.

Schmidt, Godfrey P., New York, N. Y. Toy. No. 48,012; Oct. 19; Gaz. vol. 219; p. 892.

Schrenkeisen, Arthur, New York, N. Y. Telephone-stand. No. 48,013; Oct. 19; Gaz. vol. 219; p. 892.

Shuttles, R. Holl. (See Cox, Morgan H., assignor.)

Skogland, Frank T., Minneapolis, Minn. Combination-tool. No. 48,014; Oct. 19; Gaz. vol. 219; p. 892.

Sommer, John L., Newark, N. J., assignor to J. L. Sommer Mfg. Co. Handle for button-hooks or similar articles. No. 48,015; Oct. 19; Gaz. vol. 219; p. 892.

Spence, David, Norwalk, Conn. Tire-tread. No. 47,969; Oct. 12; Gaz. vol. 219; p. 571.

Standard Oil Company. (See Quinn, John L., assignor.)

Star Foundry Company, The. (See Mersfelder, William L., assignor.)

Stirrup, Stanley H., Grand Rapids, Mich., assignor to Berkey and Gay Furniture Company. Casing for sound-producing instruments. Nos. 47,935–6; Oct. 5; Gaz. vol. 219; p. 257.

Stocking, James F., East Orange, N. J. Filter. No. 47,970; Oct. 12; Gaz. vol. 219; p. 572.

Stone, Melvin C., Reading, Mass. Hair-pin. No. 47,971; Oct. 12; Gaz. vol. 219; p. 572.

Strong, William J. H., Beloit, Wis. Frame for engine-driven fans. No. 48,016; Oct. 19; Gaz. vol. 219; p. 892.

Taussig, Maurice, Chicago, Ill. Leg for store furniture. No. 47,937; Oct. 5; Gaz. vol. 219; p. 257.

Teall, Russell F., Toledo, Ohio, assignor to The Toledo Ford-Tire Company. Tire-tread. No. 47,972; Oct. 12; Gaz. vol. 219; p. 572.

Tepfer, George M., assignor to National Metal Spinning & Stamping Company, New York, N. Y. Socket-cover for lighting-fixtures. No. 47,973; Oct. 12; Gaz. vol. 219; p. 572.

Thompson, Charles E., assignor to Heidtite Brush Co., Inc., Troy, N. Y. Handle for shaving-brushes. No. 48,050; Oct. 26; Gaz. vol. 219; p. 1212.

Thos. P. Taylor Co., The. (See Hammond, Myron B., assignor.)

Toledo Ford-Tire Company, The. (See Teall, Russell F., assignor.)

Traphagen, Harry B. (See Waterman and Traphagen.)

Vamvas, Spyros D. (See Guinis and Vamvas.)

Victor, Alexander F., assignor to Victor Animatograph Company, Davenport, Iowa. Slide for stereopticons. No. 47,938; Oct. 5; Gaz. vol. 219; p. 258.

Victor Animatograph Company. (See Victor, Alexander F., assignor.)

Voshardt, Herman F., assignor to Friedley-Voshardt Co., Chicago, Ill. Back plate for lighting-fixtures. No. 47,939; Oct. 5; Gaz. vol. 219; p. 258.

Waterman, Lewis E., and H. R. Traphagen, assignors to Emerson-Brantingham Company, Rockford, Ill. Tractor-body. No. 48,017; Oct. 19; Gaz. vol. 219; p. 892.

Waterman, Lewis E., assignor to Emerson-Brantingham Company, Rockford, Ill. Tractor-body. No. 48,018; Oct. 19; Gaz. vol. 219; p. 893.

Watling, John B., Chicago, Ill. Scale-cabinet. No. 48,051; Oct. 26; Gaz. vol. 219; p. 1212.

Weber, Nickolas J., Chicago, Ill. Grocery-bin. No. 47,974; Oct. 12; Gaz. vol. 219; p. 572.

Westerlind, Aksel, assignor to The Meyercord Company, Chicago, Ill. Plate. No. 47,975; Oct. 12; Gaz. vol. 219; p. 572.

Westerlind, Aksel, assignor to The Meyercord Company, Chicago, Ill. Plate. No. 47,976; Oct. 12; Gaz. vol. 219; p. 573.

Western Electric Company. (See Hill, Owen E., assignor.)

White, Edwin L., New York, N. Y., assignor to J. H. White Mfg. Co., Brooklyn, N. Y. Metallic band or border. No. 47,940; Oct. 5; Gaz. vol. 219; p. 258.

White, George W., Kansas City, Kans. Wrench. No. 47,977; Oct. 12; Gaz. vol. 219; p. 573.

Whiting Manufacturing Company. (See Hamilton, Harold H., assignor.)

Willard Storage Battery Company, The. (See Willard, Theodore A., assignor.)

Willard, Theodore A., assignor to The Willard Storage Battery Company, Cleveland, Ohio. Storage-battery handle. No. 47,978; Oct. 12; Gaz. vol. 219; p. 573.

Willson, George M., Montoursville, Pa. Talking-machine cabinet. Nos. 48,019–21; Oct. 19; Gaz. vol. 219; p. 893.

Wilson, Andrew, Berkeley, Cal. Kitchen-indicator. No. 48,052; Oct. 26; Gaz. vol. 219; p. 1212.

Witter, William S., Toledo, Iowa. Spark-plug. No. 47,941; Oct. 5; Gaz. vol. 219; p. 258.

Wojcik, John, Chicago, Ill. Picture. No. 47,979; Oct. 12; Gaz. vol. 219; p. 573.

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. Grossenbach Co., Milwaukee, Wis. Eggs. Nos. 106,598–9; Oct. 26; Gaz. vol. 219; pp. 1228–9.

A. L. Burt Company, New York, N. Y. Book series. No. 106,294; Oct. 19; Gaz. vol. 219; p. 920.

A. P. Babcock Co., New York, N. Y. Talcum, face, and sachet powders, toilet waters, and perfumes. No. 106,071; Oct. 5; Gaz. vol. 219; p. 267.

Adair & Bruyere, New York, N. Y. Piece goods of certain named materials. No. 106,390; Oct. 19; Gaz. vol. 219; p. 923.

Aeolian Company, The, Meriden, Conn., and New York, N. Y. Phonographs and phonographic supplies. No. 106,723; Oct. 26; Gaz. vol. 219; p. 1232.

Agra Company, Detroit, Mich. Perfumes. No. 106,084; Oct. 12; Gaz. vol. 219; p. 581.

Akin-Erskine Milling Company, Evansville, Ind. Self-rising wheat-flour. No. 106,537; Oct. 26; Gaz. vol. 219; p. 1227.

Akron Tire Co. Inc., New York, N. Y. Rubber vehicle-tires. No. 106,085; Oct. 12; Gaz. vol. 219; p. 581.

Aktiebolaget Eskilstuna Separator, Eskilstuna, Sweden. Separators and parts thereof. No. 106,133; Oct. 12; Gaz. vol. 219; p. 582.

Aktiengesellschaft Johannes Jeserich, Charlottenburg-Berlin, Germany. Paints and varnishes for protection against atmospheric influences. No. 106,086; Oct. 12; Gaz. vol. 219; p. 581.

Aktieselskabet H. E. Gosch & Co.'s Tændstikfabriker Og Aktietændstikfabrikes Godthaab, Copenhagen, Denmark. Matches. No. 106,391; Oct. 19; Gaz. vol. 219; p. 923.

Albany Perforated Wrapping Paper Co., Albany, N. Y. Toilet-paper. No. 106,134; Oct. 12; Gaz. vol. 219; p. 582.

Alexandria Fertilizer & Chemical Co., Alexandria, Va. Fertilizers. No. 106,278; Oct. 19; Gaz. vol. 219; p. 919.

All-Package Grocery Stores Co., Brooklyn, N. Y. Canned fruits, vegetables, and sauer-kraut. No. 106,724; Oct. 26; Gaz. vol. 219; p. 1232.

Alois Kohn Chain Co., The, New York, N. Y. Jewelry. No. 106,341; Oct. 19; Gaz. vol. 219; p. 921.

Aluminum Cooking Utensil Co., The, Pittsburgh, Pa. Cooking utensils made of aluminum or alloys of same. No. 106,135; Oct. 12; Gaz. vol. 219; p. 582.

Aluminum Goods Mfg. Company, Manitowoc, Wis. Certain named cooking utensils. No. 106,279; Oct. 19; Gaz. vol. 219; p. 919.

Aluminum Goods Mfg. Company, Manitowoc, Wis. Aluminum toilet-combs. No. 106,538; Oct. 26; Gaz. vol. 219; p. 1227.

American Belt Corporation, New York, N. Y. Garters, suspenders, belts. No. 106,539; Oct. 26; Gaz. vol. 219; p. 1227.

American Brake Shoe & Foundry Company, Mahwah, N. J., and New York, N. Y. Brake-shoes. No. 106,193; Oct. 19; Gaz. vol. 219; p. 917.

American Brake Shoe & Foundry Company, Mahwah, N. J., and New York, N. Y. Brake-shoes. No. 106,280; Oct. 19; Gaz. vol. 219; p. 919.

American Brass Company, The, Ansonia, Conn. Rivets and burs. No. 106,136; Oct. 12; Gaz. vol. 219; p. 582.

American Buyer, Inc., The, New York, N. Y. Weekly periodical. No. 106,194; Oct. 19; Gaz. vol. 219; p. 917.

American Disinfecting Co., Sedalia, Mo. Mops. No. 106,392; Oct. 19; Gaz. vol. 219; p. 923.

American Industrial Laboratory, Chicago, Ill. Insecticides. No. 106,540; Oct. 26; Gaz. vol. 219; p. 1227.

American Lock-Nut Company, Chicago, Ill. Lock-nuts. No. 106,725; Oct. 26; Gaz. vol. 219; p. 1232.

American Manganese Steel Company, Augusta, Me., and Chicago, Ill. Ball-mill liners, castings, and forgings. No. 106,726; Oct. 26; Gaz. vol. 219; p. 1232.

American Oil Processes, Limited, Denver and Loomis, Colo. Gasolene. No. 106,087; Oct. 12; Gaz. vol. 219; p. 581.

American Pad & Paper Company, Holyoke, Mass. Writing-paper. No. 106,281; Oct. 19; Gaz. vol. 219; p. 919.

American Stove Company, St. Louis, Mo. Wood, coal, gas, and vapor stoves and heaters. No. 106,541; Oct. 26; Gaz. vol. 219; p. 1227.

Ammidon & Co., Baltimore, Md. Metal dish-pans. No. 106,137; Oct. 12; Gaz. vol. 219; p. 582.

Amsterdamsche Likeurstokerij, "'T Lootsje" der Erven Lucas Bols, Amsterdam, Netherlands. Gins and liqueurs. Nos. 106,727–8; Oct. 26; Gaz. vol. 219; p. 1232.

Annin & Co., New York, N. Y. Manufactured flags. No. 106,088; Oct. 12; Gaz. vol. 219; p. 581.

Arisona Gypsum Plaster Co., Douglas, Ariz. Ground and calcined gypsum plaster. No. 106,138; Oct. 12; Gaz. vol. 219; p. 582.

Armstrong Cork Company, Pittsburgh, Pa. Corks, and particularly wood-top corks. No. 106,195; Oct. 19; Gaz. vol. 219; p. 917.

Arrow Electric Company, Hartford, Conn. Certain named electrical fittings. No. 106,282; Oct. 19; Gaz. vol. 219; p. 919.

Arthur Koenig Company, Milwaukee, Wis. Woolen piece goods. No. 106,629; Oct. 26; Gaz. vol. 219; p. 1229.

Ashuelot Shoe Company, Keene, N. H. Leather and canvas boots and shoes. No. 106,283; Oct. 19; Gaz. vol. 219; p. 919.

Atlas Tack Company, Fairhaven, Mass. Tacks, rivets, burs, nails, &c. No. 106,729; Oct. 26; Gaz. vol. 219; p. 1232.

Auburn Ignition Mfg. Co., The, Auburn, N. Y. Spark-plugs and valve-lifters. No. 106,089; Oct. 12; Gaz. vol. 219; p. 581.

Ault-Williamson Shoe Co., Ellsworth, Me. Men's and women's boots and shoes. No. 106,393; Oct. 19; Gaz. vol. 219; p. 923.

Aunt Jemima Mills Company, St. Joseph, Mo. Self-rising wheat-flour. No. 106,542; Oct. 26; Gaz. vol. 219; p. 1227.

Aunt Jemima Mills Company, St. Joseph, Mo. Mixture of wheat and corn flour. No. 106,543; Oct. 26; Gaz. vol. 219; p. 1227.

Automatic Wrench Manufacturing Company, Boston, Mass. Wrenches. No. 106,196; Oct. 19; Gaz. vol. 219; p. 917.

B. & C. Sales Co., The, Binghamton, N. Y. Insecticide, disinfectant, and deodorizer. No. 106,197; Oct. 19; Gaz. vol. 219; p. 917.

Babcock, Fred H., Chicago, Ill. Arts and crafts wooden figures to be used as candlesticks, flower-vases, &c. No. 106,544; Oct. 26; Gaz. vol. 219; p. 1227.

Backert, John C., Brooklyn, N. Y. Cutting and milling machines. No. 106,139; Oct. 12; Gaz. vol. 219; p. 582.

Baeckman, Ossian, Brussels, Belgium. Plows, harrows, seed-sowing machines, cultivators, &c. No. 106,284; Oct. 19; Gaz. vol. 219; p. 920.

Bailey, Benjamin F., New York, N. Y. Cotton, linen, silk, and woolen piece goods. No. 106,545; Oct. 26; Gaz. vol. 219; p. 1227.

Baltimore Optical Company, Baltimore, Md. Eyeglass-lenses. No. 106,394; Oct. 19; Gaz. vol. 219; p. 923.

Barkmahn Company, Inc., The, New York, N. Y. Cigarettes. No. 106,198; Oct. 19; Gaz. vol. 219; p. 917.

Barron County Canning Co., Chetek, Wis. Canned sweet corn and peas. No. 106,546; Oct. 26; Gaz. vol. 219; p. 1227.

Barsa & Bro., A., New York, N. Y. Negligées for women. No. 106,395; Oct. 19; Gaz. vol. 219; p. 923.

Basler Machinery Company, The, Lynn, Mass. Leather flexing, breaking, and tempering machines and parts. No. 106,140; Oct. 12; Gaz. vol. 219; p. 582.

Bassett, Gertrude S., Philadelphia, Pa. Suits, coats, skirts, shirts, &c. No. 106,730; Oct. 26; Gaz. vol. 219; p. 1232.

Bayer Company, Inc., The, New York, N. Y. Sedative. No. 106,199; Oct. 19; Gaz. vol. 219; p. 917.

Bayer Company, Inc., The, New York, N. Y. Antirheumatic. No. 106,200; Oct. 19; Gaz. vol. 219; p. 917.

Bayer Company, Inc., The, New York, N. Y. Purgative. No. 106,201; Oct. 19; Gaz. vol. 219; p. 917.

Bayer Company, Inc., The, New York, N. Y. Sedative and hypnotic. No. 106,202; Oct. 19; Gaz. vol. 219; p. 917.

Bayer Company, Inc., The, New York, N. Y. Antigonorrheic and astringent medical substance. No. 106,285; Oct. 19; Gaz. vol. 219; p. 920.

Bayer Company, Inc., The, New York, N. Y. Fungicide for cereals. No. 106,547; Oct. 26; Gaz. vol. 219; p. 1227.

Beach, James C., M. D., New York, N. Y. Viburnum compound. No. 106,203; Oct. 19; Gaz. vol. 219; p. 917.

Belleville Chemical Co., The, Belleville, Ill. Deodorizer and disinfectant. No. 106,286; Oct. 19; Gaz. vol. 219; p. 920.

Benson, Christian L., Chicago, Ill. Preserved and pickled fish, canned sardines, anchovies, and kippered herring. No. 106,396; Oct. 19; Gaz. vol. 219; p. 923.

Bergman, Louis. (See Mendel, Julius L., assignor.)

Berkey and Gay Furniture Company, Grand Rapids, Mich. Certain named furniture. No. 106,548; Oct. 26; Gaz. vol. 219; p. 1227.

Berry Brothers, Detroit, Mich. Polishes for restoring the finish on varnished-surface work. No. 106,141; Oct. 12; Gaz. vol. 219; p. 582.

Bets-Pierce Company, The, Cleveland, Ohio. Steel bars. No. 106,731; Oct. 26; Gaz. vol. 219; p. 1232.

Bianchi, Cesare, New York, N. Y. Candy. No. 106,732; Oct. 26; Gaz. vol. 219; p. 1232.

Bianchini, Férier, Lyon, France. Piece goods of silk, wool, linen, and cotton. Nos. 106,549–51; Oct. 26; Gaz. vol. 219; p. 1227.

Bishop Gutta-Percha Company, New York, N. Y. Sheets or strips of gutta-percha of tissue-like dimension. No. 106,287; Oct. 19; Gaz. vol. 219; p. 920.

Biz-Nes Drug Company, Sullivan, Ill. Ointments. No. 106,552; Oct. 26; Gaz. vol. 219; p. 1227.

Black Hawk Coffee & Spice Company, Waterloo, Iowa. Coffee. No. 106,553; Oct. 26; Gaz. vol. 219; p. 1227.

Blaize, John W., Robstown, Tex. Liniment for animals and poultry. No. 106,142; Oct. 12; Gaz. vol. 219; p. 582.

Blogg & Littauer, New York, N. Y. Ladies' outer garments. No. 106,397; Oct. 19; Gaz. vol. 219; p. 923.

Bloomingdale Bros., New York, N. Y. Teas, coffees, cocoa, and salad-oil. No. 106,398; Oct. 19; Gaz. vol. 219; p. 923.

Bloomingdale Bros., New York, N. Y. Hosiery. No. 106,399; Oct. 19; Gaz. vol. 219; p. 923.

Bloomingdale Rubber Company, Butler, N. J., and New York, N. Y. Reclaimed rubber. No. 106,288; Oct. 19; Gaz. vol. 219; p. 920.

Böker & Co., Heinr., Solingen, Germany. Certain named manicure implements. No. 106,407; Oct. 19; Gaz. vol. 219; p. 923.

Bonney Vise & Tool Works, Inc., Philadelphia and Allentown, Pa., and New York, N. Y. Wrenches. No. 106,400; Oct. 19; Gaz. vol. 219; p. 923.

Boott Mills, Lowell, Mass. Cotton bags. No. 106,401; Oct. 19; Gaz. vol. 219; p. 923.

Borden Stove Co., Philadelphia, Pa. Refrigerators. No. 106,734; Oct. 26; Gaz. vol. 219; p. 1232.

Borden's Condensed Milk Company, Jersey City, N. J., and New York, N. Y. Dried or desiccated milk. No. 106,402; Oct. 19; Gaz. vol. 219; p. 923.

Bosca, and Joseph G. Quinn, Jr., Ernest E., New York, N. Y. Preparation for increasing the efficiency of gasolene and preventing the deposit of carbon. No. 106,290; Oct. 19; Gaz. vol. 219; p. 920.

Boston Rubber Shoe Company, Malden and Boston, Mass. Rubber boots and shoes. No. 106,735; Oct. 26; Gaz. vol. 219; p. 1233.

Botany Worsted Mills, Passaic, N. J. Woven and knitted fabrics of wool, cotton, and silk or mixture of same. No. 106,736; Oct. 26; Gaz. vol. 219; p. 1233.

Boy Scouts of America, Washington, D. C., and New York, N. Y. Monthly magazine. No. 106,403; Oct. 19; Gaz. vol. 219; p. 923.

Bridgman Bros. Co., Philadelphia, Pa. Unions. No. 106,555; Oct. 26; Gaz. vol. 219; p. 1227.

Brodigan, Joseph F., New York, N. Y. Massage instruments. No. 106,404; Oct. 19; Gaz. vol. 219; p. 923.

Brown Brothers, Grantsburg, Wis. Ferruginous clay. No. 106,405; Oct. 19; Gaz. vol. 219; p. 923.

Brown & Sharpe Manufacturing Company, Providence, R. I. Calipers and dividers. No. 106,292; Oct. 19; Gaz. vol. 219; p. 920.

Bruno Grosche & Co., New York, N. Y. Disinfectants, wood-preservatives, fungicides, and insecticides. No. 106,429; Oct. 19; Gaz. vol. 219; p. 924.

Bruno Grosche & Company, New York, N. Y. Waterproofing paints, paint-oils, and wood-stain. No. 106,430; Oct. 19; Gaz. vol. 219; p. 924.

Brunswick-Balke-Collender Co., Chicago, Ill. Billiard-cloth. Nos. 106,556–9; Oct. 26; Gaz. vol. 219; p. 1227.

Buckley-Newhall Company, The, New York, N. Y. Sewing-machines, vacuum-cleaners, and carpet-sweepers. Nos. 106,205–6; Oct. 19; Gaz. vol. 219; p. 917.

Buckley-Newhall Company, The, New York and Brooklyn, N. Y. Baby-carriages and go-carts. Nos. 106,207–8; Oct. 19; Gaz. vol. 219; p. 917.

Buckley-Newhall Company, The, New York and Brooklyn, N. Y. Phonographs, talking-machines, pianos, organs, and music-boxes. Nos. 106,209–10; Oct. 19; Gaz. vol. 219; p. 917.

Buckley-Newhall Company, The, New York and Brooklyn, N. Y. Refrigerators. Nos. 106,211–12; Oct. 19; Gaz. vol. 219; p. 917.

Buescher Band Instrument Co., Elkhart, Ind. Certain named musical instruments and supplies. No. 106,560; Oct. 26; Gaz. vol. 219; p. 1227.

Bugler & Goebel Company, Chicago, Ill. Candy. No. 106,561; Oct. 26; Gaz. vol. 219; p. 1227.

Bunte Brothers, Chicago, Ill. Candy. No. 106,562; Oct. 26; Gaz. vol. 219; p. 1227.

Burnham, George T., Milan, Mo. Solution treatment for eczema and other skin diseases. No. 106,293; Oct. 19; Gaz. vol. 219; p. 920.

Burrus, Bessie, Nashville, Tenn. Medicinal tonic. No. 106,406; Oct. 19; Gaz. vol. 219; p. 923.

Butterman, William F., Chicago, Ill. Dry substance composed of certain ingredients for a non-alcoholic food beverage. No. 106,737; Oct. 26; Gaz. vol. 219; p. 1233.

Butts, Cornelius L., St. Louis, Mo. Whistle-calls. No. 106,738; Oct. 26; Gaz. vol. 219; p. 1233.

C. B. Woodworth Sons Co., The, Rochester, N. Y. Perfumes, toilet waters, creams, rouges, and powders. No. 106,129; Oct. 12; Gaz. vol. 219; p. 582.

C. C. Fouts Co., The, Middletown, Ohio. Silos and tanks. No. 106,320; Oct. 19; Gaz. vol. 219; p. 921.

C. C. Fouts Co., The, Middletown, Ohio. Culverts and flumes. No. 106,321; Oct. 19; Gaz. vol. 219; p. 921.

C. D. Kenny Co., Baltimore, Md. Coffee. No. 106,624; Oct. 26; Gaz. vol. 219; p. 1229.

C. D. Pruden Company, The, Baltimore, Md. Steel portable buildings. No. 106,498; Oct. 19; Gaz. vol. 219; p. 926.

Caldwell, Joseph T., New York, N. Y. Prepared inoculated humus. No. 106,295; Oct. 19; Gaz. vol. 219; p. 920.

California Fruit Beverage Company, Los Angeles, Cal. Ginger-ale. No. 106,563; Oct. 26; Gaz. vol. 219; p. 1227.

California Motion Picture Corporation, San Francisco, Cal. Moving-picture films. No. 106,739; Oct. 26; Gaz. vol. 219; p. 1233.

Calman, Henry L., New York, N. Y. Varnishes. No. 106,143; Oct. 12; Gaz. vol. 219; p. 582.

Campbell, Metzger & Jacobson, New York, N. Y. Certain named fancy goods, furnishings, and notions. No. 106,296; Oct. 19; Gaz. vol. 219; p. 920.

Canandaigua Brewery, Inc., Canandaigua, N. Y. Non-alcoholic fruit drinks. No. 106,740; Oct. 26; Gaz. vol. 219; p. 1233.

Central Tube Company, Pittsburgh, Pa. Electric conduit-pipe. No. 106,297; Oct. 19; Gaz. vol. 219; p. 920.

Chemische Fabrik Reisholz Gesellschaft mit beschränkter Haftung, Dusseldorf-Reisholz, Germany. Remedies for certain named diseases. No. 106,213; Oct. 19; Gaz. vol. 219; p. 917.

Christman, Louis F., Jackson, Tenn. Liquid liver remedy. No. 106,564; Oct. 26; Gaz. vol. 219; p. 1227.

Church & Dwight Co., New York, N. Y. Saleratus, bicarbonate of soda, and sal-soda. Nos. 106,214–16; Oct. 19; Gaz. vol. 219; p. 917.

Clark Thread Co., The, Newark, N. J. Sewing-cotton or cotton thread. No. 106,565; Oct. 26; Gaz. vol. 219; p. 1227.

Clay-Gunnell Co., The, Catlettsburg, Ky. Boots, shoes, and slippers. No. 106,408; Oct. 19; Gaz. vol. 219; p. 923.

Cleveland Worsted Mills Co., The, Cleveland, Ohio. Woolen piece goods. No. 106,410; Oct. 19; Gaz. vol. 219; p. 923.

Clicquot Club Company, Providence, R. I., and Millis, Mass. Ginger-ale, sarsaparilla, birch and root beers, &c. No. 106,144; Oct. 12; Gaz. vol. 219; p. 582.

Clinton Metallic Paint Co., Franklin Springs, N. Y. Paints and paint colors and pigments. No. 106,217; Oct. 19; Gaz. vol. 219; p. 917.

Clipper Belt Lacer Co., Grand Rapids, Mich. Belt hooks, fasteners, and pins. No. 106,741; Oct. 26; Gaz. vol. 219; p. 1233.

Clough, Firm of Robert, Keighley, England. Worsted piece goods. No. 106,566; Oct. 26; Gaz. vol. 219; p. 1227.

Coates, William, New York, N. Y. Cleaning, dressing, and polishing liquids for footwear, belts, harness, &c. No. 106,409; Oct. 19; Gaz. vol. 219; p. 923.

Colchester Rubber Company, Colchester, Conn., assignor to United States Rubber Company, New Brunswick, N. J. Rubber boots and shoes. No. 106,567; Oct. 26; Gaz. vol. 219; p. 1228.

Coleman Foundry Equipment Company, The, Cleveland, Ohio. Certain named metal-foundry devices. No. 106,568; Oct. 26; Gaz. vol. 219; p. 1228.

Colgate & Co., Jersey City, N. J., and New York, N. Y. Cold and massage creams. No. 106,218; Oct. 19; Gaz. vol. 219; p. 917.

Colgate & Co., Jersey City, N. J., and New York, N. Y. Toilet and laundry soap. No. 106,411; Oct. 19; Gaz. vol. 219; p. 924.

Colgate & Co., Jersey City, N. J., and New York, N. Y. Toilet and laundry soap. No. 106,743; Oct. 26; Gaz. vol. 219; p. 1233.

Colonial Works, Brooklyn, N. Y. Leather-dressings. No. 106,219; Oct. 19; Gaz. vol. 219; p. 918.

Comfort Shock Absorber Co., Hempstead, N. Y. Shock-absorbers. No. 106,412; Oct. 19; Gaz. vol. 219; p. 924.

Concordia Silk Hosiery Company, Inc., Philadelphia, Pa. Hosiery. No. 106,569; Oct. 26; Gaz. vol. 219; p. 1228.

Cooper M'f'g Co., The, Bennington, Vt. Undershirts, drawers, and union suits. No. 106,570; Oct. 26; Gaz. vol. 219; p. 1228.

Corah & Sons, N., Leicester, England. Certain named clothing. No. 106,744; Oct. 26; Gaz. vol. 219; p. 1233.

Corno Mills Company, The, East St. Louis, Ill. Rolled oats. No. 106,072; Oct. 5; Gaz. vol. 219; p. 267.

Couto & Co., Rio de Janeiro, Brazil. Salt. No. 106,145; Oct. 12; Gaz. vol. 219; p. 582.

Crane & Co., Dalton, Mass. Tracing-paper. No. 106,090; Oct. 12; Gaz. vol. 219; p. 581.

Croll & Son, Jesse G., Philadelphia, Pa. Polish for furniture, floors, vehicle-bodies, &c., of wood. No. 106,146; Oct. 12; Gaz. vol. 219; p. 582.

Crown Willamette Paper Co., Portland, Me., and San Francisco, Cal. Paper bags. No. 106,414; Oct. 19; Gaz. vol. 219; p. 924.

Cruver Manufacturing Company, Chicago, Ill. Toy pennants. No. 106,413; Oct. 19; Gaz. vol. 219; p. 924.

Csima, Julius, Lebanon, Pa. Medicinal preparation for cholera and other diseases of hogs. No. 106,298; Oct. 19; Gaz. vol. 219; p. 920.

Cupid Blush Company, Baltimore, Md. Toilet preparation. No. 106,746; Oct. 26; Gaz. vol. 219; p. 1233.

Curtis & Marble Machine Company, Worcester, Mass. Certain named textile machinery. No. 106,299; Oct. 19; Gaz. vol. 219; p. 920.

D. Ghirardelli Co., San Francisco, Cal. Eating-chocolate and chocolate candy. No. 106,424; Oct. 19; Gaz. vol. 219; p. 924.

D. G. Cutler Company, Duluth, Minn. Table, medium common, and granulated salt. No. 106,747; Oct. 26; Gaz. vol. 219; p. 1233.

Daley, Jerome F., Bangor, Me. Tubercular tonic. No. 106,300; Oct. 19; Gaz. vol. 219; p. 920.

Davies & Meacham, assignors to Patterson-Sargent Company, Cleveland, Ohio. Paints, lacs, stains, enamels, &c. Nos. 106,572–6; Oct. 26; Gaz. vol. 219; pp. 1228.

Davies & Meacham, assignors to Patterson-Sargent Company, Cleveland, Ohio. Paints, lacs, stains, enamels, &c. Nos. 106,748–50; Oct. 26; Gaz. vol. 219; p. 1233.

Davis, Harry R., Kansas City, Mo. Semiliquid or paste for the complexion. No. 106,301; Oct. 19; Gaz. vol. 219; p. 920.

Davis & Lawrence Company, New York, N. Y. Remedy for female ailments. No. 106,221; Oct. 19; Gaz. vol. 219; p. 918.

Davis Shoe Company, Lynn, Mass. Leather boots and shoes. No. 106,751; Oct. 26; Gaz. vol. 219; p. 1233.

Davis, William H., Croset, Va. Hammocks. No. 106,577; Oct. 26; Gaz. vol. 219; p. 1228.

De Cou Brothers Company, Philadelphia, Pa. Shoes and other footwear. No. 106,579; Oct. 26; Gaz. vol. 219; p. 1228.

De Martino, F., Altoona, Pa. Scalp and hair tonics. No. 106,649; Oct. 26; Gaz. vol. 219; p. 1230.

De Pree Chemical Company, The, Holland, Mich. Certain named pharmaceutical preparations. No. 106,222; Oct. 19; Gaz. vol. 219; p. 918.

De Vilbiss Manufacturing Company, The, Toledo, Ohio. Compression-bulbs. No. 106,416; Oct. 19; Gaz. vol. 219; p. 924.

Dean-Hicks Company, The, Grand Rapids, Mich. Magazines published monthly. No. 106,578; Oct. 26; Gaz. vol. 219; p. 1228.

Denby Motor Truck Company, Detroit, Mich. Motor trucks, bodies, chassis, and running-gear. No. 106,302; Oct. 19; Gaz. vol. 219; p. 920.

Denison Coffee Co., Chicago, Ill. Coffee. No. 106,415; Oct. 19; Gaz. vol. 219; p. 924.

Dextrogermoform Propagating Co., Plymouth, Mass. Chemical preparations for fertilizing and treating vegetation. No. 106,223; Oct. 19; Gaz. vol. 219; p. 918.

Diamond Carbureter Company, Inc., Jersey City, N. J. Carbureter. No. 106,091; Oct. 12; Gaz. vol. 219; p. 581.

Diets Baking Company, The, Holyoke and Springfield, Mass. Cake, pies, and doughnuts. No. 106,580; Oct. 26; Gaz. vol. 219; p. 1228.

Dillingham, Frank A., Cincinnati, Ohio. Liquid preparation for use as a tonic and remedy for stomach and blood troubles. No. 106,224; Oct. 19; Gaz. vol 219; p. 918.

Dodd, William E., New York, N. Y. Ribbons. No. 106,581; Oct. 26; Gaz. vol. 219; p. 1228.

Driscol, Church & Hall, New Bedford, Mass. Certain named foods. No. 106,753; Oct. 26; Gaz. vol. 219; p. 1233.

Druggists' Supply Corporation, New York, N. Y. Certain named rubber goods and surgical appliances. No. 106,417; Oct. 19; Gaz. vol. 219; p. 924.

Du Bouchet, Isabelle, near Toledo, Ohio. Natural mineral water. No. 106,291; Oct. 19; Gaz. vol. 219; p. 920.

Durkee & Co., E. R., New York, N. Y. Spices and mustard. No. 106,754; Oct. 26; Gaz. vol. 219; p. 1233.

Duval Company, Madam, Berkeley, Cal. Certain named toilet preparations. No. 106,583; Oct. 26; Gaz. vol. 219; p. 1228.

Dyckerhoff, Eduard, Neustadt, near Rübenberge, Hanover, Germany. Peat. No. 106,584; Oct. 26; Gaz. vol. 219; p. 1228.

E. I. du Pont de Nemours Powder Company, Wilmington, Del. Black sporting-powder. No. 106,821; Oct. 26; Gaz. vol. 219; p. 1235.

E. Z. Patch Company, The, Akron, Ohio. Cementing and vulcanizing patches for rubber goods. No. 106,418; Oct. 19; Gaz. vol. 219; p. 924.

Eagle Pencil Company, New York, N. Y. Fountain-pens. Nos. 106,092–3; Oct. 12; Gaz. vol. 219; p. 581.

Eastern Finishing Works, Inc., Kenyon, R. I. Waterproof textile fabrics. No. 106,225; Oct. 19; Gaz. vol. 219; p. 918.

Eastman Kodak Co., Rochester, N. Y. Sensitized photographic paper. No. 106,147; Oct. 12; Gaz. vol. 219; p. 582.

Edwards, Gordon W., London, England. Anesthetics. No. 106,755; Oct. 26; Gaz. vol. 219; p. 1233.

Eichler, Armin, Brooklyn, N. Y. Paint-oils, lacquers, enamels, and paints. No. 106,148; Oct. 12; Gaz. vol. 219; p. 583.

Einhorn & Son, S., New York, N. Y. Tennis and women's coats. Nos. 106,585–6; Oct. 26; Gaz. vol. 219; p. 1228.

Eisenstadt Manufacturing Company, St. Louis, Mo. Certain named jewelry. No. 106,587; Oct. 26; Gaz. vol. 219; p. 1228.

Electro Chemical Company, The, Dayton, Ohio. Disinfectant, deodorizer, and bleaching agent. No. 106,149; Oct. 12; Gaz. vol. 219; p. 583.

Eli Lilly and Company, The, Indianapolis, Ind. Medicinal preparation for pyorrhea and kindred diseases. No. 106,348; Oct. 19; Gaz. vol. 219; p. 922.

Embalmers' Supply Co., The, Westport, Conn. Certain named preparations for undertakers' use. No. 106,303; Oct. 19; Gaz. vol. 219; p. 920.

Emil Scheller & Co., A. G., Zurich, Switzerland. Medicinal tonics. No. 106,802; Oct. 26; Gaz. vol. 219; p. 1235.

Emil Scheller & Co., A. G., Zurich, Switzerland. Alimentary preparations used in medicine. No. 106,803; Oct. 26; Gaz. vol. 219; p. 1235.

Emil Schult Toilet Article Company, Inc., The, New York, N. Y. Cold-cream. No. 106,262; Oct. 19; Gaz. vol. 219; p. 919.

Enossis Publishing Company, New York, N. Y. Daily newspaper. No. 106,226; Oct. 19; Gaz. vol. 219; p. 918.

Enterprise Manufacturing Company, The, Akron, Ohio. Certain named sporting goods. Nos. 106,419–20; Oct. 19; Gaz. vol. 219; p. 924.

Everett Packing Co., Everett, Wash. Canned salmon. No. 106,307; Oct. 19; Gaz. vol. 219; p. 920.

Every Week Corporation, New York, N. Y. Weekly magazine. No. 106,758; Oct. 26; Gaz. vol. 219; p. 1233.

F. P. Kirkendall & Co., Omaha, Nebr. Kid and leather boots and shoes. No. 106,773; Oct. 26; Gaz. vol. 219; p. 1234.

F. S. Love Manufacturing Co., Johnstown, Pa. Candies, bonbons, fruit tablets, and sugar-coated popcorn. No. 106,455; Oct. 19; Gaz. vol. 219; p. 925.

Fall River Bleachery, Fall River, Mass. Cotton piece goods. No. 106,421; Oct. 19; Gaz. vol. 219; p. 924.

Farbwerke vorm. Meister Lucius & Brüning, Hochst-on-the-Main, Germany. Remedy against syphilis, sleeping-sickness, &c. No. 106,308; Oct. 19; Gaz. vol. 219; p. 920.

Fargo, Stephen, Cleveland, Ohio. Remedy for indigestion, biliousness, &c. No. 106,309; Oct. 19; Gaz. vol. 219; p. 920.

Fargo, Stephen, Cleveland, Ohio. Toilet cream. No. 106,310; Oct. 19; Gaz. vol. 219; p. 920.

Fargo, Stephen, Cleveland, Ohio. Liniment. No. 106,311; Oct. 19; Gaz. vol. 219; p. 920.

Fargo, Stephen, Cleveland, Ohio. Remedy for laxative purposes and for purifying the blood. No. 106,312; Oct. 19; Gaz. vol. 219; p. 920.

Fargo, Stephen, Cleveland, Ohio. Toilet soaps. No. 106,313; Oct. 19; Gaz. vol. 219; p. 920.

Fargo, Stephen, Cleveland, Ohio. Remedy for constipation, hepatic torpor, and biliousness. No. 106,314; Oct. 19; Gaz. vol. 219; p. 921.

Fargo, Stephen, Cleveland, Ohio. Remedy for the treatment of certain named diseases. No. 106,315; Oct. 19; Gaz. vol. 219; p. 921.

Fargo, Stephen, Cleveland, Ohio. Remedy for constipation, sour stomach, diarrhea, &c. No. 106,316; Oct. 19; Gaz. vol. 219; p. 921.

Fargo, Stephen, Cleveland, Ohio. Remedy for corns. No. 106,588; Oct. 26; Gaz. vol. 219; p. 1228.

Farm Engineering Publishing Company, Chicago, Ill. Monthly magazines. No. 106,317; Oct. 19; Gaz. vol. 219; p. 921.

Fellows Medical M'f'g Co., Limited, The, New York, N. Y. Laxative tablets. No. 106,422; Oct. 19; Gaz. vol. 219; p. 924.

Ferguson, Harvey C., Cornelia, Ga. Non-alcoholic carbonated beverage and syrup for making same. No. 106,073; Oct. 5; Gaz. vol. 219; p. 267.

Firth-Sterling Steel Company, McKeesport, Pa. Tool-steel. No. 106,094; Oct. 12; Gaz. vol. 219; p. 581.

Fisher, Lewis R., Baltimore, Md. Toilet-paper. No. 106,759; Oct. 26; Gaz. vol. 219; p. 1233.

Fiske Brothers Refining Co., New York, N. Y. Lubricating oils and greases. No. 106,095; Oct. 12; Gaz. vol. 219; p. 581.

Flint, Eaton & Co., Decatur, Ill. Materials for preventing the formation of rust or scale in water-containing devices. No. 106,423; Oct. 19; Gaz. vol. 219; p. 924.

Florida Citrus Exchange, Tampa, Fla. Citrus fruits. No. 106,590; Oct. 26; Gaz. vol. 219; p. 1228.

Foote, Albert E., Estate of; W. M. Foote, trustee, Philadelphia, Pa. Mixture of refractory minerals capable of resisting high temperatures. Nos. 106,304–6; Oct. 19; Gaz. vol. 219; p. 920.

Foote, Albert E., Estate of; W. M. Foote, trustee, Philadelphia, Pa. Prepared compound capable of resisting high temperatures. Nos. 106,756–7; Oct. 26; Gaz. vol. 219; p. 1233.

Foote, Warren M., trustee. (See Foote, Estate of A. E.)

Forbes Varnish Company, The, Cleveland, Ohio. Varnish. No. 106,150; Oct. 12; Gaz. vol. 219; p. 583.

Forstner Co., W., Providence, R. I. Metal chains for personal wear. No. 106,318; Oct. 19; Gaz. vol. 219; p. 921.

Fort Worth Chemical Company, Fort Worth, Tex. Medicines for veneral diseases. No. 106,319; Oct. 19; Gaz. vol. 219; p. 921.

Fox Novelty Company, The, Berea, Ohio. Instruction-boards having shiftable characters. No. 106,591; Oct. 26; Gaz. vol. 219; p. 1228.

French & Ward, New York, N. Y. Cotton, cotton and wool, and woolen piece goods. No. 106,593; Oct. 26; Gaz. vol. 219; p. 1228.

Fritz Schulz jun. Aktiengesellschaft, Leipsig, Germany. Means for destroying vermin and noxious insects. No. 106,227; Oct. 19; Gaz. vol. 219; p. 918.

Frobase, Henry G., Toledo, Ohio. Salve or ointment. No. 106,322; Oct. 19; Gaz. vol. 219; p. 921.

Fuld and Hatch Knitting Company, Albany, N. Y. Certain named knitted garments. No. 106,328; Oct. 19; Gaz. vol. 219; p. 921.

Fulks, Thomas I., Gaithersburg, Md. Fertiliser. No. 106,324; Oct. 19; Gaz. vol. 219; p. 921.

Fuller, Miles C., Peoria, Ill. Certain named draftsman supplies. No. 106,760; Oct. 26; Gaz. vol. 219; p. 1233.

G. Bluthardt & Co. Inc., Chicago, Ill. Cigars. No. 106,289; Oct. 19; Gaz. vol. 219; p. 920.

Gallaway, George W., New York, N. Y. Disinfectant. No. 106,228; Oct. 19; Gaz. vol. 219; p. 918.

Gamolo, Frank H., Chicago, Ill. Shampoo-powder. No. 106,151; Oct. 12; Gaz. vol. 219; p. 583.

Geety, W. G., New York, N. Y. Alkaline antiseptic and a non-toxic prophylactic preparation. No. 106,229; Oct. 19; Gaz. vol. 219; p. 918.

General Electric Co., The, London, England. Glass globes and bowls. No. 106,761; Oct. 26; Gaz. vol. 219; p. 1233.

Gennarelli, Macarlo, South Chicago, Ill. Toothache remedy. No. 106,152; Oct. 12; Gaz. vol. 219; p. 583.

Geo. H. Lee Company, Omaha, Nebr. Remedy for diseases of the skin and semi-exterior mucous membranes. No. 106,344; Oct. 19; Gaz. vol. 219; p. 921.

Gerhard Mennen Chemical Co., Newark, N. J. Absorbent and antiseptic dusting-powder. No. 106,464; Oct. 19; Gaz. vol. 219; p. 925.

Gilbey, Harry N., London, England. Muscatel wine. No. 106,230; Oct. 19; Gaz. vol. 219; p. 918.

Glaser & Rosenbaum, New York, N. Y. Boys' clothing, blouses, and knickerbockers. No. 106,594; Oct. 26; Gaz. vol. 219; p. 1228.

Globe Ear-Phone Company, Boston, Mass. Ear-phones or andiphones. No. 106,426; Oct. 19; Gaz. vol. 219; p. 924.

Goldberg, Bowen & Co., San Francisco, Cal. Certain named foods. No. 106,427; Oct. 19; Gaz. vol. 219; p. 924.

Golden Seal Tea Co., Beaver Falls, Pa. Teas. No. 106,596; Oct. 26; Gaz. vol. 219; p. 1228.

Goldman, Michael, New York, N. Y. Dress, negligée, and work shirts. No. 106,428; Oct. 19; Gaz. vol. 219; p. 924.

Goodyear Tire and Rubber Company, The, Akron, Ohio. Soles and heels for boots and shoes. No. 106,762; Oct. 26; Gaz. vol. 219; p. 1233.

Gottlieb Bauernschmidt Straus Brewing Company, The, Baltimore, Md. Lager-beer. No. 106,763; Oct. 26; Gaz. vol. 219; p. 1233.

Gould, C. Carroll, New York, N. Y. Electric vaporiser. No. 106,764; Oct. 26; Gaz. vol. 219; p. 1233.

Grabamoline Products Company, Wilkes-Barre, Pa. Carbon-remover. No. 106,325; Oct. 19; Gaz. vol. 219; p. 921.

Greenwood & Company, Savannah, Ga. Cigars. No 106,326; Oct. 19; Gaz. vol. 219; p. 921.

Grocers' Biscuit Company, The, Louisville, Ky. Cakes and crackers. No. 106,097; Oct. 12; Gaz. vol. 219; p. 581.

H. C. Schrader Co., Jacksonville, Fla. Citrus fruits. No. 106,514; Oct. 19; Gaz. vol. 219; p. 927.

Habicht, Braun & Co., New York, N. Y. Certain named foods. No. 106,431; Oct. 19; Gaz. vol. 219; p. 924.

Hale, Arthur, New York, N. Y. Washable caps and slippers. No. 106,600; Oct. 26; Gaz. vol. 219; p. 1229.

Hall & Co., Walter T., Ottumwa, Iowa. Candy. No. 106,601; Oct. 26; Gaz. vol. 219; p. 1229.

Halla Dagger Medicine Company, Great Falls, Mont. Liniment. No. 106,153; Oct. 12; Gaz. vol. 219; p. 583.

Harrah & Stewart Mfg. Co., Des Moines, Iowa. Cleaning compounds. No. 106,765; Oct. 26; Gaz. vol. 219; p. 1233.

Harrell, Arlando T., Chicago, Ill. Paper boxes. No. 106,766; Oct. 26; Gaz. vol. 219; p. 1233.

Hawkeye Oil Company, The, Waterloo, Iowa. Lubricating-oils and gasolene. No. 106,154; Oct. 12; Gaz. vol. 219; p. 583.

Hays City Milling and Elevator Company, The, Hays, Kans. Wheat-flour. No. 106,602; Oct. 26; Gaz. vol. 219; p. 1229.

Hays & Green, New York, N. Y. Nurses' and maids' uniforms, house-dresses, &c. No. 106,436; Oct. 19; Gaz. vol. 219; p. 924.

Heintzelman, Joseph A., Philadelphia, Pa. Treatment for dyspepsia, kidney and liver complaints. No. 106,155; Oct. 12; Gaz. vol. 219; p. 583.

Held, Firm of A., New York, N. Y. Coffee. No. 106,437; Oct. 19; Gaz. vol. 219; p. 924.

Heller & Sons, Sol, Wilkes-Barre, Pa. Negligée and work shirts and overalls. No. 106,438; Oct. 19; Gaz. vol. 219; p. 924.

Helmet Company, The, Cincinnati, Ohio. Chewing-gum confection. No. 106,603; Oct. 26; Gaz. vol. 219; p. 1229.

Hercules Powder Company, Wilmington, Del. Smokeless rifle-powder. No. 106,328; Oct. 19; Gaz. vol. 219; p. 921.

Hershey Chocolate Company, Hershey, Pa. Chewing-gum. No. 106,605; Oct. 26; Gaz. vol. 219; p. 1229.

Hiebert, Jacob J., Mountain Lake, Minn. Steam water-heater. No. 106,767; Oct. 26; Gaz. vol. 219; p. 1234.

Highland Milling Company, Highland, Ill. Wheat-flour. No. 106,606; Oct. 26; Gaz. vol. 219; p. 1229.

Hills Brothers Company, The, New York, N. Y. Dates. No. 106,768; Oct. 26; Gaz. vol. 219; p. 1234.

Hindle, Thomas H., Jr., New York, N. Y. Dolls. No. 106,329; Oct. 19; Gaz. vol. 219; p. 921.

Hinks, Wells & Co., Birmingham, England. Steel pens. Nos. 106,098–100; Oct. 12; Gaz. vol. 219; p. 581.

Hinks, Wells & Co., Birmingham, England. Steel pens and penholders. No. 106,101; Oct. 12; Gaz. vol. 219; p. 581.

Hirschmann, William F., New York, N. Y. Smokers' articles and smokers' appliances not of precious metal. No. 106,607; Oct. 26; Gaz. vol. 219; p. 1229.

Hirschmann, William F., New York, N. Y. Games, toys, and sporting goods. No. 106,608; Oct. 26; Gaz. vol. 219; p. 1229.

Hoefer Manufacturing Company, Freeport, Ill. Non-electric marine motors. No. 106,102; Oct. 12; Gaz. vol. 219; p. 581.

Hoefler, Henry R., Astoria, Oreg. Chocolates. No. 106,440; Oct. 19; Gaz. vol. 219; p. 924.

Holeproof Hosiery Co., Milwaukee, Wis. Hosiery. No. 106,610; Oct. 26; Gaz. vol. 219; p. 1229.

Holman Soap Co., Chicago, Ill. Certain named toilet preparations. No. 106,330; Oct. 19; Gaz. vol. 219; p. 921.

Hood, Calvin T., Chicago, Ill. Disinfectant. No. 106,103; Oct. 12; Gaz. vol. 219; p. 581.

Hood Rubber Company, Watertown, Mass. Rubber boots, shoes, and overshoes and canvas boots and shoes having rubber soles vulcanised thereto. No. 106,331; Oct. 19; Gaz. vol. 219; p. 921.

Hoosier Manufacturing Company, Newcastle, Ind. Butlers' and kitchen cabinets, cupboards, and tables. No. 106,611; Oct. 26; Gaz. vol. 219; p. 1229.

Hope, William, Springfield, Ohio. Hydraulic motors. No. 106,441; Oct. 19; Gaz. vol. 219; p. 924.

Hotaling-Warner Company, The, Syracuse, N. Y. Macaroni. No. 106,612; Oct. 26; Gaz. vol. 219; p. 1229.

Howser, Howard W., Baltimore, Md. Salve. No. 106,769; Oct. 26; Gaz. vol. 219; p. 1234.

Huber & Co., H., Louisville, Ky. Whisky. No. 106,613; Oct. 26; Gaz. vol. 219; p. 1229.

Hudson Valley Paper Co., Albany, N. Y. Printing, writing, and cover papers. No. 106,442; Oct. 19; Gaz. vol. 219; p. 924.

Hunkele Bros., Union, N. J. Mayonnaise. No. 106,770; Oct. 26; Gaz. vol. 219; p. 1234.

Huntsman Remedy Company, St. Louis, Mo. Veterinary remedy for certain named ailments. No. 106,332; Oct. 19; Gaz. vol. 219; p. 921.

Hydes, Mark, Newark, N. J. Tree sap or gum of the Bous-wine. No. 106,333; Oct. 19; Gaz. vol. 219; p. 921.

Hydrox Chemical Company, New York, N. Y. Tooth-paste, tooth, face, and talcum powders, &c. No. 106,771; Oct. 26; Gaz. vol. 219; p. 1234.

Ideal Specialties Mfg. Corp., New York, N. Y. Eyeleting-machines. No. 106,156; Oct. 12; Gaz. vol. 219; p. 583.

Ideal Specialties M'f'g Corp., New York, N. Y. Metal eyelets. No. 106,772; Oct. 26; Gaz. vol. 219; p. 1234.

Imperial Laboratories Co., Philadelphia, Pa. Effervescent salts. No. 106,443; Oct. 19; Gaz. vol. 219; p. 924.

Imperial Wall Paper Company, Glens Falls, N. Y. Wall-papers. No. 106,157; Oct. 12; Gaz. vol. 219; p. 583.

Importers Company, Denver, Colo. Certain named toilet preparations. Nos. 106,444–5; Oct. 19; Gaz. vol. 219; p. 924.

Independent Brewing Company of Pittsburgh, Pittsburgh, Pa. Beer. Nos. 106,104–7; Oct. 12; Gaz. vol. 219; p. 581.

Independent Lamp & Wire Company Inc., Weehawken, N. J., and New York, N. Y. Incandescent electric lamps No. 106,334; Oct. 19; Gaz. vol. 219; p. 921.

Ingram-Richardson Manufacturing Company, Beaver Falls, Pa. Enameled-metal door-plates. No. 106,233; Oct 19; Gaz. vol. 219; p. 918.

International Galalith-Gesellschaft Hoff & Co., Harburg-on-the-Elbe, Germany. Certain named telephone parts and base-blocks, &c., in electrical apparatus. No 106,234; Oct. 19; Gaz. vol. 219; p. 918.

International Manufacturers Agency, Inc., New York, N. Y. Certain named fancy goods and notions. No. 106,335; Oct. 19; Gaz. vol. 219; p. 921.

International Stock Food Co., Minneapolis, Minn. Calf-meal. No. 106,614; Oct. 26; Gaz. vol. 219; p. 1229.

Interstate Electric Co., New Orleans, La. Hand-grip for steering-wheel of automobiles, &c. No. 106,235; Oct 19; Gaz. vol. 219; p. 918.

J. Marx & Company, London, England. Paper-making machinery. No. 106,114; Oct. 12; Gaz. vol. 219; p 581.

J. A. Pozzoni Pharmacal Co., The, Chicago, Ill. Face and rice powders and rouge. No. 106,365; Oct. 19; Gaz vol. 219; p. 922.

J. B. Williams Company, The, Glastonbury, Conn. Toilet soap. No. 106,388; Oct. 19; Gaz. vol. 219; p. 923.

J. N. Murdoch Company, Parkersburg, W. Va. Remedy for the treatment of certain named diseases. No. 106,178; Oct. 12; Gaz. vol. 219; p. 583.

James Hanley Brewing Company, The, Providence, R. I. Ale, porter, and lager-beer. Nos. 106,432–5; Oct. 19; Gaz. vol. 219; p. 924.

James S. Kirk & Company, Chicago, Ill. Laundry, bath, and toilet soap. No. 106,339; Oct. 19; Gaz. vol. 219; p. 921.

Janney-Steinmetz & Co., Philadelphia, Pa. Seamless tanks. No. 106,446; Oct. 19; Gaz. vol. 219; p. 925.

John Blaul's Sons Co., Burlington, Iowa. Tea and roasted coffee. No. 106,733; Oct. 26; Gaz. vol. 219; p. 1232.

John F. Sarle Company. (See Sarle, Harriet A., assignor.)

John Hoberg Co., The, Green Bay, Wis. Toilet-paper. No. 106,489; Oct. 19; Gaz. vol. 219; p. 924.

John Hoberg Company, The, Green Bay, Wis. Toilet-paper. No. 106,609; Oct. 26; Gaz. vol. 219; p. 1229.

John Murphy Umbrella Co. Inc., Maspeth and New York, N. Y. Umbrellas. No. 106,655; Oct. 26; Gaz. vol. 219; p. 1230.

John S. Naylor Company, The, Wheeling, W. Va. Velvets, woolens, worsteds, dress-linens, &c. No. 106,656; Oct. 26; Gaz. vol. 219; p. 1230.

John S. Tilley Ladders Co., The, Watervliet, N. Y. Ladders. No. 106,382; Oct. 19; Gaz. vol. 219; p. 923.

John T. Stanley Co. Inc., New York, N. Y. Soap. No. 106,379; Oct. 19; Gaz. vol. 219; p. 923.

Johnson & Son, S. C., Racine, Wis. Powdered and prepared waxes, wood-dye, paste wood-filler, &c. No. 106,108; Oct. 12; Gaz. vol. 219; p. 581.

Joliet Oil Tractor Co., The, Joliet, Ill. Tractors. No. 106,615; Oct. 26; Gaz. vol. 219; p. 1229.

Jones, Wylie B., Binghamton, N. Y. Remedy for diseases of women. No. 106,447; Oct. 19; Gaz. vol. 219; p. 925.

Jos. Middleby, Jr., Inc., Boston, Mass. Certain named foods. No. 106,652; Oct. 26; Gaz. vol. 219; p. 1230.

Joslin Mfg. Co., Providence, R. I. Lacing-tips. No. 106,616; Oct. 26; Gaz. vol. 219; p. 1229.

Joslin Mfg. Co., Providence, R. I. Shoe and corset lacing tips. No. 106,617; Oct. 26; Gaz. vol. 219; p. 1229.

Joslin Mfg. Co., Providence, R. I. Lacing-tips. Nos. 106,618–20; Oct. 26; Gaz. vol. 219; p. 1229.

Juelg, Harry H., New York, N. Y. Furniture, piano, automobile, carriage, &c., polishes. No. 106,109; Oct. 12; Gaz. vol. 219; p. 581.

Julius Kayser & Co., New York, N. Y. Gloves. No. 106,449; Oct. 19; Gaz. vol. 219; p. 925.

Julius King Optical Co., New York, N. Y. Goggles. No. 106,238; Oct. 19; Gaz. vol. 219; p. 918.

K. and W. Engineering Company, St. Paul, Minn. Individual electric-lighting plants. No. 106,621; Oct. 26; Gaz. vol. 219; p. 1229.

Kabo Corset Company, Chicago, Ill. Hose-supporters. No. 106,622; Oct. 26; Gaz. vol. 219; p. 1229.

Kahn Tailoring Company, Indianapolis, Ind. Special grade of cotton and woolen midsummer-suiting. No. 106,448; Oct. 19; Gaz. vol. 219; p. 925.

Kellner freres, Paris, France. Coach and carriage bodies. No. 106,236; Oct. 19; Gaz. vol. 219; p. 918.

Kellogg Toasted Corn Flake Company, Battle Creek, Mich. Breakfast cereal. No. 106,623; Oct. 26; Gaz. vol. 219; p. 1229.

Kenyon, Clarence E., Great Falls, Mont. Insecticide. No. 106,110; Oct. 12; Gaz. vol. 219; p. 581.

Keystone Watch Case Company, The, Philadelphia, Pa. Watches, watchcases, watch-movements, and parts thereof. No. 106,237; Oct. 19; Gaz. vol. 219; p. 918.

Kieselguhr Company of America, Los Angeles, Cal. Catalytic agent for causing the precipitation of sugar impurities. No. 106,159; Oct. 12; Gaz. vol. 219; p. 583.

Kille, Ellwood S., Camden, N. J. Furniture-polish. No. 106,337; Oct. 19; Gaz. vol. 219; p. 921.

Kimball, Fred N., Boston, Mass. Manufactured leather. No. 106,338; Oct. 19; Gaz. vol. 219; p. 921.

Kirke Chemical Company. (See Kirkegaard, George, assignor.)

Kirkegaard, George, Brooklyn, N. Y., assignor to Kirke Chemical Company Inc. Fertilizers. No. 106,450; Oct. 19; Gaz. vol. 219; p. 925.

Klaas, Max, New York, N. Y. Razors, knives, scissors, shears. Nos. 106,625–6; Oct. 26; Gaz. vol. 219; p. 1229.

Knox Hat Company, Inc., New York, N. Y. Hats. No. 106,628; Oct. 26; Gaz. vol. 219; p. 1229.

Koch & Droge Piano Co., Inc., Brooklyn, N. Y. Player-pianos. No. 106,340; Oct. 19; Gaz. vol. 219; p. 921.

Koenigsmark Mill Company, Waterloo, Ill. Wheat-flour. No. 106,630; Oct. 26; Gaz. vol. 219; p. 1229.

Kops Bros., New York, N. Y. Corsets. No. 106,451; Oct. 19; Gaz. vol. 219; p. 925.

Kruchen & Haas, Hamburg, Germany. Marchpane and marchpane surrogates. No. 106,632; Oct. 26; Gaz. vol. 219; p. 1229.

Kusac Company, The, Dayton, Ohio. Spices, flavoring extracts for foods. No. 106,782; Oct. 26; Gaz. vol. 219; p. 1234.

L. H. Gilmer Co., Philadelphia, Pa. Webbing, woven straps, fabric belting, &c. No. 106,425; Oct. 19; Gaz. vol. 219; p. 924.

Lalance & Grosjean Mfg. Co., New York, N. Y. Enamel, steel, and tin ware. No. 106,111; Oct. 12; Gaz. vol. 219; p. 581.

Lamb & Ritchie Co., Cambridge, Mass. Copper and galvanized-iron sheet-metal pipe and elbows. No. 106,783; Oct. 26; Gaz. vol. 219; p. 1234.

Landers, Frary & Clark, New Britain, Conn. Corn grinders and mills and coffee-mills. No. 106,112; Oct. 12; Gaz. vol. 219; p. 581.

Landers, Frary & Clark, New Britain, Conn. Vacuum-bottles, alcohol-flagons, and tea-caddies. No. 106,784; Oct. 26; Gaz. vol. 219; p. 1234.

Landreth, Clarence P., Philadelphia, Pa. Fabric belting. No. 106,452; Oct. 19; Gaz. vol. 219; p. 925.

Lane, Frederick W., Chico, Cal. Drafting instrument. No. 106,453; Oct. 19; Gaz. vol. 219; p. 925.

Langan, John, Yonkers, N. Y. Liquid and salve for skin diseases. No. 106,160; Oct. 12; Gaz. vol. 219; p. 583.

Langford, William S., Baltimore, Md. Fastener for machinery-belting. No. 106,633; Oct. 26; Gaz. vol. 219; p. 1229.

Langrall, Leroy M., Baltimore, Md. Canned vegetables and fruits. No. 106,342; Oct. 19; Gaz. vol. 219; p. 921.

Lasalle & Koch Co., The, Toledo, Ohio. Gloves. No. 106,634; Oct. 26; Gaz. vol. 219; p. 1229.

Laxton, John W. S., Lynn, Mass. Medicines for certain named disorders. No. 106,635; Oct. 26; Gaz. vol. 219; p. 1230.

Leavitt, Thomas, Boston, Mass. Printed periodical publications. No. 106,343; Oct. 19; Gaz. vol. 219; p. 921.

Leeming, Thomas L., New York, N. Y. Non-poisonous germicides for internal administration. No. 106,345; Oct. 19; Gaz. vol. 219; p. 921.

Lekas and Drivas, New York, N. Y. Coffee. No. 106,636; Oct. 26; Gaz. vol. 219; p. 1230.

Lekas and Drivas, New York, N. Y. Honey. No. 106,637; Oct. 26; Gaz. vol. 219; p. 1230.

Leselia Remedies Company, Louisville, Ky. Salves, medicinal tonics, laxatives, &c. No. 106,239; Oct. 19; Gaz. vol. 219; p. 918.

Leslie Company, The, Lyndhurst, N. J. Coupling-nuts. No. 106,638; Oct. 26; Gaz. vol. 219; p. 1230.

Levin & Son, Meyer, New York, N. Y. Dress, negligée, work, and flannel shirts. No. 106,347; Oct. 19; Gaz. vol. 219; p. 922.

Lewis Brothers Company, New York, N. Y. Work-shirts. No. 106,785; Oct. 26; Gaz. vol. 219; p. 1234.

Life Saving Devices Co., Chicago, Ill. Resuscitating appliances. No. 106,639; Oct. 26; Gaz. vol. 219; p. 1230.

Lind, William J., Denver, Colo. Salve. No. 106,240; Oct. 19; Gaz. vol. 219; p. 918.

Loheide Manufacturing Company, St. Louis, Mo. Humidifiers used in cigar show-cases. No. 106,161; Oct. 12; Gaz. vol. 219; p. 583.

Los Angeles Soap Company, Los Angeles, Cal. Washing-powder. No. 106,454; Oct. 19; Gaz. vol. 219; p. 925.

Luckett, Alfred M., Fort Worth, Tex. Non-alcoholic fruit punch in concentrated syrup form. Nos. 106,162–3; Oct. 12; Gaz. vol. 219; p. 583.

Luminous Unit Company, St. Louis, Mo. Fixtures for electric lights. No. 106,074; Oct. 5; Gaz. vol. 219; p. 267.

Luttenberger, Jacob, Easton, Pa. Remedy for the eyes. No. 106,164; Oct. 12; Gaz. vol. 219; p. 583.

Luyties Brothers, New York, N. Y. Grape-juice. No. 106,786; Oct. 26; Gaz. vol 219; p. 1234.

M. Born & Company, Chicago, Ill. Coats, vests, and trousers. No. 106,554; Oct. 26; Gaz. vol. 219; p. 1227.

M. Heminway & Sons Silk Co., Watertown, Conn. Dental floss. No. 106,827; Oct. 19; Gaz. vol. 219; p. 921.

M. D. Knowlton Company, Rochester, N. Y. Staying-machines. No. 106,627; Oct. 26; Gaz. vol. 219; p. 1229.

Macbeth-Evans Glass Company, Pittsburgh, Pa. Lamp glasses and globes. Nos. 106,165–6; Oct. 12; Gaz. vol. 219; p. 583.

Macdonald & Muir, Leith, Scotland. Blended Scotch whisky. No. 106,456; Oct. 19; Gaz. vol. 219; p. 925.

Maclin-Zimmer-McGill Tobacco Co., Incorporated, Petersburg, Va. Plug, twist, cut-plug, smoking, and leaf tobaccos. No. 106,075; Oct. 5; Gaz. vol. 219; p. 267.

Macy & Company, R. H., New York, N. Y. Aprons. No. 106,641; Oct. 26; Gaz. vol. 219; p. 1230.

Magic Mist, Inc. (See Quin, William E., assignor.)

Malina, Filomena, Chicago, Ill. Medical compound for coughs, colds, hoarseness, asthma, &c. No. 106,349; Oct. 19; Gaz. vol. 219; p. 922.

Mallinson & Co., H. R., New York, N. Y. Broad silks. No. 106,642; Oct. 26; Gaz. vol. 219; p. 1230.

Mallinson & Co., H. R., New York, N. Y. Broad satins. No. 106,643; Oct. 26; Gaz. vol. 219; p. 1230.

Manhattan Shirt Company, The, New York, N. Y. Textile shirts, drawers, and union suits. No. 106,644; Oct. 26; Gaz. vol. 219; p. 1230.

Mankin, Florence C., Washington, D. C. Candy. No. 106,459; Oct. 19; Gaz. vol. 219; p. 925.

Mares, Matt, Racine, Wis. Plowshares. No. 106,113; Oct. 12; Gaz. vol. 219; p. 581.

Mares, Matthew, Racine, Wis. Plowshares. No. 106,076; Oct. 5; Gaz. vol. 219; p. 267.

Margulis, A., Philadelphia, Pa. Whisky. No. 106,647; Oct. 26; Gaz. vol. 219; p. 1230.

Marquette Cement Manufacturing Co., Chicago and Oglesby, Ill. Portland cement. No. 106,350; Oct. 19; Gaz. vol. 219; p. 922.

Marrone, Vincenzo, Utica, N. Y. Olive-oil. No. 106,460; Oct. 19; Gaz. vol. 219; p. 925.

Marshall Field & Company, Chicago, Ill. Plain and mechanical toys. No. 106,589; Oct. 26; Gaz. vol. 219; p. 1228.

Marshall Milling Company, Marshall, Minn. Wheat-flour. No. 106,648; Oct. 26; Gaz. vol. 219; p. 1230.

Martino & Figlio, G. B., Genoa, Italy. Pulverised vegetables and kitchen herbs. No. 106,787; Oct. 26; Gaz. vol. 219; p. 1234.

Mason, John T., Kewanee, Ill. Wheat breakfast food. No. 106,461; Oct. 19; Gaz. vol. 219; p. 925.

Max Glick Company, The, Cleveland, Ohio. Candy. No. 106,595; Oct. 26; Gaz. vol. 219; p. 228.
Max Rosner Co., New York, N. Y. Crayons. No. 106,536; Oct. 19; Gaz. vol. 219; p. 927.
Maynard Coal Company, The, Columbus, Ohio. Coal. No. 106,168; Oct. 12; Gaz. vol. 219; p. 583.
McAdoo & Allen, Philadelphia, Pa. Leather welting. Nos. 106,462–3; Oct. 19; Gaz. vol. 219; p. 925.
McFadden, James T., Pittsburgh, Pa. Medicinal preparations for the intestinal tract. No. 106,651; Oct. 26; Gaz. vol. 219; p. 1230.
McKesson & Robbins, New York, N. Y. Sponges. No. 106,241; Oct. 19; Gaz. vol. 219; p. 918.
McKnight-Keaton Grocery Co., Cairo, Ill. Baking-powder. No. 106,351; Oct. 19; Gaz. vol. 219; p. 922.
Meadowcroft, Elizabeth I., New London, Conn. Polish. No. 106,242; Oct. 19; Gaz. vol. 219; p. 918.
Mechanical Rubber Company, The, Jersey City, N. J.; New York, N. Y., and Cleveland, Ohio. Rubber and composition packings. No. 106,352; Oct. 19; Gaz. vol. 219; p. 922.
Melies Mfg. Co., New York, N. Y. Moving-picture films. No. 106,115; Oct. 12; Gaz. vol. 219; p. 582.
Mendel, Julius L., assignor of one-half to L. Bergman, New York, N. Y. Dentifrice-dispensers. No. 106,169; Oct. 12; Gaz. vol. 219; p. 583.
Mercian, Joseph H., New York, N. Y. Canned fish and vegetables. No. 106,077; Oct. 5; Gaz. vol. 219; p. 267.
Michigan Stove Company, The, Detroit, Mich. Electric stoves, ranges, heaters, irons, &c. No. 106,170; Oct. 12; Gaz. vol. 219; p. 583.
Miller Cigar Co., The, Wheeling, W. Va. Stogies. No. 106,243; Oct. 19; Gaz. vol. 219; p. 918.
Miller, Clifford B., Buffalo, N. Y. Baking and cooking compound used as a substitute for eggs. No. 106,653; Oct. 26; Gaz. vol. 219; p. 1230.
Miller, Edward R., Dayton, Ohio. Cough-syrup. No. 106,116; Oct. 12; Gaz. vol. 219; p. 582.
Mishawaka Woolen Manufacturing Company, Mishawaka, Ind. Footwear. No. 106,654; Oct. 26; Gaz. vol. 219; p. 1230.
Mitchell, Stephen J., New York, N. Y. Writing and typewriting paper other than carbon or coated manifold papers. Nos. 106,244–5; Oct. 19; Gaz. vol. 219; p. 918.
Mocsik, Frank, New York, N. Y. Purgative and blood-purifier. No. 106,246; Oct. 19; Gaz. vol. 219; p. 918.
Monarch Knitting Company, Limited, The, Dunnville, Canada, and Buffalo, N. Y. Knitted sweaters, mufflers, caps, and toques. No. 106,788; Oct. 26; Gaz. vol. 219; p. 1234.
Monroe Drug Co., Quincy, Ill. Cereal coffee substitute. No. 106,465; Oct. 19; Gaz. vol. 219; p. 925.
Morris Fiber Board Company, Morris, Ill. Folding paper boxes. No. 106,353; Oct. 19; Gaz. vol. 219; p. 922.
Moss, Fred. L., Chillicothe, Mo. Tooth cleansing and preserving preparation. No. 106,247; Oct. 19; Gaz. vol. 219; p. 918.
Moyat, Ernst, Offenbach-on-the-Main, Germany. Artificial corundum. No. 106,248; Oct. 19; Gaz. vol. 219; p. 918.
Mulcahy, Thomas J., Winthrop, Mass. Chewing-gum. No. 106,078; Oct. 5; Gaz. vol. 219; p. 267.
Mutual Coffee Co., Montgomery, Ala. Coffee compound composed of coffee, chicory, and cereal. Nos. 106,466–7; Oct. 19; Gaz. vol. 219; p. 925.
N. Y. International Chemical Co. Inc., New York, N. Y. Tonic laxitives. No. 106,172; Oct. 12; Gaz. vol. 219; p. 583.
Nathan D. Dodge Shoe Co., Newburyport, Mass. Boots and shoes of leather, rubber, &c. No. 106,582; Oct. 26; Gaz. vol. 219; p. 1228.
National Biscuit Company, Jersey City, N. J., and New York, N. Y. Biscuit. No. 106,468; Oct. 19; Gaz. vol. 219; p. 925.
National Biscuit Company, Jersey City, N. J., and New York, N. Y. Biscuit. No. 106,789; Oct. 26; Gaz. vol. 219; p. 1234.
National Candy Company, Jersey City, N. J., and St. Louis, Mo. Chocolate candy. No. 106,469; Oct. 19; Gaz. vol. 219; p. 925.
National Candy Company, Jersey City, N. J., and St. Louis, Mo. Popcorn and popcorn confections. No. 106,790; Oct. 26; Gaz. vol. 219; p. 1234.
National Enzyme Co. (Inc.), New York, N. Y. Enzyms. Nos. 106,354–6; Oct. 19; Gaz. vol. 219; p. 922.
National Essence For Coffee Company, Philadelphia, Pa. Essence for coffee. No. 106,470; Oct. 19; Gaz. vol. 219; p. 925.
National Grocery Company, Jersey City, N. J. Certain named foods. No. 106,117; Oct. 12; Gaz. vol. 219; p. 582.
National Starch Co., New York, N. Y. Starch. No. 106,249; Oct. 19; Gaz. vol. 219; p. 918.
National Starch Co., New York, N. Y. Corn-starch. No. 106,471; Oct. 19; Gaz. vol. 219; p. 925.
National Tire Company, The, Trenton, N. J. Rubber tires and tubes. No. 106,079; Oct. 5; Gaz. vol. 219; p. 267.
National Tube Company, Pittsburgh, Pa. Pipes and tubes. No. 106,118; Oct. 12; Gaz. vol. 219; p. 582.
Nelrow Chemical Company, New York, N. Y. Treatment of dandruff and diseases of the scalp and skin. No. 106,472; Oct. 19; Gaz. vol. 219; p. 925.
Neue Photographische Gesellschaft Aktiengesellschaft, Steglitz, near Berlin, Germany. Certain named photographic apparatus and supplies. No. 106,473; Oct. 19; Gaz. vol. 219; p. 925.
Neustadter Bros., San Francisco, Cal. Overalls. No. 106,791; Oct. 26; Gaz. vol. 219; p. 1234.
New England Enameling Company, The, Middletown, Conn. Enameled and aluminum ware. No. 106,792; Oct. 26; Gaz. vol. 219; p. 1234.
New Era Novelty Co., Inc., The, New York, N. Y. Dolls. No. 106,474; Oct. 19; Gaz. vol. 219; p. 925.
New Era Remover Company, Newark, N. J. Paint or varnish removers and the like. No. 106,475; Oct. 19; Gaz. vol. 219; p. 925.
New Life Massage Co. Inc., Brooklyn, N. Y. Vacuum massage-machines. No. 106,476; Oct. 19; Gaz. vol. 219; p. 925.
New Wooster Preserving Co., The, Wooster, Ohio. Certain named foods. No. 106,119; Oct. 12; Gaz. vol. 219; p. 582.
New York Lubricating Oil Company, New York, N. Y. Lubricating greases and oils for machinery, motors, &c. No. 106,793; Oct. 26; Gaz. vol. 219; p. 1234.
New York Merchandise Co., New York, N. Y. Hair-nets. No. 106,477; Oct. 19; Gaz. vol. 219; p. 925.
Newton Manufacturing Company, Inc., Lynbrook, N. Y. Flush switches and receptacles, door, &c., switches. No. 106,657; Oct. 26; Gaz. vol. 219; p. 1230.
Nihon Natsubo Kabushiki Kaisha, Yokohama, Japan. Braided hats. No. 106,794; Oct. 26; Gaz. vol. 219; p. 1234.
Nonotuck Silk Company, Northampton, Mass. Crochet-cotton. No. 106,658; Oct. 26; Gaz. vol. 219; p. 1230.
Nordiska Kullager Aktiebolaget, Göteborg, Sweden. Ball-bearings. No. 106,659; Oct. 26; Gaz. vol. 219; p. 1230.
Northwest Farm Press Co., The, Seattle, Wash. Monthly publication. No. 106,357; Oct. 19; Gaz. vol. 219; p. 922.
Norwalk Vault Company, The, Norwalk, Ohio. Cement burial-vaults. No. 106,358; Oct. 19; Gaz. vol. 219; p. 922.
Novagem Jewel Company, San Francisco, Cal. Certain named articles of jewelry. No. 106,250; Oct. 19; Gaz. vol. 219; p. 918.
Novaro, Agostino, Oneglia, Italy. Pure olive-oils. No. 106,080; Oct. 5; Gaz. vol. 219; p. 267.
Nulty, James T., Philadelphia, Pa. Preparation for the treatment of affected eyes. No. 106,251; Oct. 19; Gaz. vol. 219; p. 919.
Nyal Company, Detroit, Mich. Alterative mixture, tonic, and laxative. No. 106,478; Oct. 19; Gaz. val 219; p. 925.
Nybakker, Dirk, New York, N. Y. Medicated plaster. No. 106,171; Oct. 12; Gaz. vol. 219; p. 583.
O. F. Jordan Company, The, East Chicago, Ind. Railway spreaders, snow-plows, and flangers. No. 106,158; Oct. 12; Gaz. vol. 219; p. 583.
O. L. E. A. Olivicoltori Liguri ed Esportatori Associati, Oneglia, Italy. Olive-oil. No. 106,660; Oct. 26; Gaz. vol. 219; p. 1230.
O'Brien and Edmonds, Philadelphia, Pa. Cigars, cheroots, stogies, cigarettes, tobacco. No. 106,661; Oct. 26; Gaz. vol. 219; p. 1230.
Ohio Match Company, The, Wadsworth, Ohio. Matches. No. 106,662; Oct. 26; Gaz. vol. 219; p. 1230.
Ohio Truss Co., The, Cincinnati, Ohio. Abdominal supporters and bandages, trusses, and suspensories. No. 106,479; Oct. 19; Gaz. vol. 219; p. 925.
Old Buck Guano Co., Inc., Richmond, Va. Fertilizers. No. 106,174; Oct. 12; Gaz. vol. 219; p. 583.
Old Dutch Market, Washington, D. C., and Alexandria, Va. Butter. Nos. 106,480–2; Oct. 19; Gaz. vol. 219; p. 926.
Old Dutch Market, Washington, D. C., and Alexandria, Va. Bread. No. 106,483; Oct. 19; Gaz. vol. 219; p. 926.
Old Dutch Market, Washington, D. C., and Alexandria, Va. Eggs. No. 106,484; Oct. 19; Gaz. vol. 219; p. 926.
Olmsted-Flint Company, Cambridge, Mass. Waterproofing compound for leather and leather belting. No. 106,359; Oct. 19; Gaz. vol. 219; p. 922.
Omo Manufacturing Company, The, Middletown, Conn. Dress-shields. No. 106,663; Oct. 26; Gaz. vol. 219; p. 1230.
Onondaga Pottery Company, Syracuse, N. Y. China tableware and ornamental chinaware. No. 106,360; Oct. 19; Gaz. vol. 219; p. 922.
Openhym & Sons, Wm., New York, N. Y. Ribbons. No. 106,485; Oct. 19; Gaz. vol. 219; p. 926.
Oppenheim, Oberndorf & Co., Baltimore, Md. Undershirts, drawers, union suits, &c. No. 106,486; Oct. 19; Gaz. vol. 219; p. 926.
Ostrander & Company, Inc., New York, N. Y. Ginghams. No. 106,664; Oct. 26; Gaz. vol. 219; p. 1230.
Owl Drug Company, The, San Francisco, Cal. Laxative. No. 106,252; Oct. 19; Gaz. vol. 219; p. 919.
Pacific Coast Biscuit Co., Seattle, Wash. Ginger-snaps. No. 106,361; Oct. 19; Gaz. vol. 219; p. 922.
Package Confectionery Co., Boston, Mass. Candy. No. 106,487; Oct. 19; Gaz. vol. 219; p. 926.
Pamerleau, Joseph L., Detroit, Mich. Remedy for headache and neuralgia. No. 106,253; Oct. 19; Gaz vol. 219; p. 919.
Park & Pollard Company, The, Boston, Mass. Cornmeal. No. 106,488; Oct. 19; Gaz. vol. 219; p. 926.

Parke Davis & Co., Detroit, Mich. Viruses, serums, toxins, and antitoxins. No. 106,175; Oct. 12; Gaz. vol. 219; p. 583.
Parker Cup & Specialty Works, Incorporated, Parkers Landing, Pa. Valve-cups constructed of bow-spring metal, graphite, and canvas. No. 106,665; Oct. 26; Gaz. vol. 219; p. 1230.
Parker Hosiery Mill & Dye Works, Inc., near Portsmouth, Va. Misses' hosiery. Nos. 106,666–7; Oct. 26; Gaz. vol. 219; p. 1230.
Parlin & Orendorff Co., Canton, Ill. Cultivators. No. 106,489; Oct. 19; Gaz vol. 219; p. 926.
Parlin & Orendorff Company, Canton, Ill. Plows. No. 106,490; Oct. 19; Gaz. vol. 219; p. 926.
Parsons-Powers Co., The, Columbus, Ohio. Bread. No. 106,362; Oct. 19; Gaz. vol. 219; p. 922.
Patterson, Ravenel S., Columbia, S. C. Non-alcoholic carbonated beverage. No. 106,176; Oct. 12; Gaz. vol. 219; p. 583.
Patterson-Sargent Company. (See Davies & Meacham, assignors.)
Patterson-Sargent Company, The, Cleveland, Ohio. Paints, driers, enamels, &c. No. 106,668; Oct. 26; Gaz. vol. 219; p. 1230.
Paul O. Reymann Co., Wheeling, W. Va. Ham, bacon, shoulders, picnics, &c. No. 106,677; Oct. 26; Gaz. vol. 219; p. 1231.
Pavell, August, Tempe, Ariz. Salve compound for cuts, sores, and bruises. No. 106,120; Oct. 12; Gaz. vol. 219; p. 582.
Paxton, John T., Rushville, Ind. Lotion for man or beast. No. 106,669; Oct. 26; Gaz. vol. 219; p. 1231.
Peeler, G. W., Silsbee, Tex. Preparation for treatment of kidneys, worms, chicken and hog cholera. No. 106,670; Oct. 26; Gaz. vol. 219; p. 1231.
Peerless Carbon & Ribbon Mfg. Co., Inc., New York, N. Y. Carbon-paper and type-writer ribbons. No. 106,254; Oct. 19; Gaz. vol. 219; p. 919.
Peet Bros. Mfg. Co., Kansas City, Kans. Soap. No. 106,177; Oct. 12; Gaz. vol. 219; p. 583.
Peg Lock Block Company, Inc., New York, N. Y. Building-blocks. No. 106,671; Oct. 26; Gaz. vol. 219; p. 1231.
Penberthy Injector Co. Limited, Windsor, Ontario, Canada. Composition disk brass valves. No. 106,255; Oct. 19; Gaz. vol. 219; p. 919.
Perkins Electric Switch Mfg. Company, The, Bridgeport, Conn. Electrical switches. No. 106,672; Oct. 26; Gaz. vol. 219; p. 1231.
Petroleum Products Company, San Francisco, Cal. Motor-naphtha, benzin, and distillate. No. 106,363; Oct. 19; Gaz. vol. 219; p. 922.
Phillips Boyd Co., Incor., New York, N. Y. Manufactured guimpes, boudoir-caps, vestees, collars, and cuffs. No. 106,491; Oct. 19; Gaz. vol. 219; p. 926.
Philo Hay Specialties Co., Newark, N. J. Preparation for coloring gray or faded hair. No. 106,492; Oct. 19; Gaz. vol. 219; p. 926.
Photographic Journal of America, Incorporated, The, New York, N. Y. Monthly magazines. No. 106,364; Oct. 19; Gaz. vol. 219; p. 922.
Piedmont Manufacturing Company, Piedmont, S. C. Sheetings and drillings. No. 106,494; Oct. 19; Gaz. vol. 219; p. 926.
Pierce, Edward W., Philadelphia, Pa. Antitoxin, opsonin, and general antiseptic. No. 106,493; Oct. 19; Gaz. vol. 219; p. 926.
Pilot Motor Car Co., Richmond, Ind. Automobiles. No. 106,795; Oct. 26; Gaz. vol. 219; p. 1234.
Pintsch Compressing Company, New York, N. Y. Combustible gas for fuel. No. 106,178; Oct. 12; Gaz. vol. 219; p. 583.
Pioneer Suspender Company, Philadelphia, Pa. Garters. No. 106,673; Oct. 26; Gaz. vol. 219; p. 1231.
Pittsburgh Iron and Steel Foundries Company, Midland, Pa. Certain named cutlery, machinery, tools, and parts thereof. No. 106,495; Oct. 19; Gaz. vol. 219; p. 926.
Piury & Co., Puerto de Santa Maria, Spain. Sherry-wine. No. 106,256; Oct. 19; Gaz. vol. 219; p. 919.
Pompeian Mfg. Co., The, Cleveland, Ohio. Cold-cream. No. 106,121; Oct. 12; Gaz. vol. 219; p. 582.
Porter, H. M., North Platte, Nebr. Certain named non-alcoholic beverages. No. 106,796; Oct. 26; Gaz. vol. 219; p. 1234.
Powells, New York, N. Y. Candy. No. 106,081; Oct. 5; Gaz. vol. 219; p. 267.
Pressed Steel Car Company, Pittsburgh, Pa., and Jersey City, N. J. Bolster for railway-car trucks. No. 106,257; Oct. 19; Gaz. vol. 219; p. 919.
Prokesch, Essie, Hackensack, N. J. Imitation coffee. No. 106,797; Oct. 26; Gaz. vol. 219; p. 1234.
Providence Braid Company, Pawtucket, R. I. Shoe-laces. No. 106,798; Oct. 26; Gaz. vol. 219; p. 1234.
Queen City Knitting Mills, Inc., Poughkeepsie, N. Y. Shawls. Nos. 106,674–5; Oct. 26; Gaz. vol. 219; p. 1231.
Quinn, William H., assignor to Magic Mist, Inc., New York, N. Y. Oil deodorizer and disinfectant. No. 106,676; Oct. 26; Gaz. vol. 219; p. 1231.
R. E. Cobb Co., The, St. Paul, Minn. Prints of process or renovated butter. No. 106,742; Oct. 26; Gaz. vol. 219; p. 1233.
R. E. Dietz Company, New York, N. Y. Hot and cold blast tubular lanterns. No. 106,752; Oct. 26; Gaz. vol. 219; p. 1233.
R. H. Macy & Co., New York, N. Y. Watches. No. 106,457; Oct. 19; Gaz. vol. 219; p. 925.
R. M. Rose Company, Chattanooga, Tenn. Blend of straight whiskies. No. 106,122; Oct. 12; Gaz. vol. 219; p. 582.
R. & R. Manufacturing Co., The, Chicago, Ill. Shock-absorbers. No. 106,496; Oct. 19; Gaz. vol. 219; p. 926.
Racine & Co., Jules, New York, N. Y. Watches and watch-movements. No. 106,258; Oct. 19; Gaz. vol. 219; p. 919.
Raffloer, Erbsloh and Company, New York, N. Y. Rope, binder and other twines. Nos. 106,500–1; Oct. 19; Gaz. vol. 219; p. 926.
Rand Brothers, Philadelphia, Pa. Women's, misses', and children's shirt-waists and dresses. No. 106,502; Oct. 19; Gaz. vol. 219; p. 926.
Recher & Co., New York, N. Y. Haircloth interlining. No. 106,799; Oct. 26; Gaz. vol. 219; p. 1234.
Republic Rubber Company, The, Youngstown, Ohio. Elastic vehicle-tires. No. 106,503; Oct. 19; Gaz. vol. 219; p. 926.
Ribordy, Ceasar, New York, N. Y. Liniment for varicose veins, rheumatism, sprains. No. 106,678; Oct. 26; Gaz. vol. 219; p. 1231.
Rice Bros., Philadelphia, Pa. Compound of caramel to be added to coffee. No. 106,679; Oct. 26; Gaz. vol. 219; p. 1231.
Richard Hudnut, New York, N. Y. Certain named toilet and pharmaceutical preparations. Nos. 106,231–2; Oct. 19; Gaz. vol. 219; p. 918.
Rickard, Gerald, Baltimore, Md. Chocolates and bonbons. No. 106,504; Oct. 19; Gaz. vol. 219; p. 926.
Riddle, Harry M., Asbury, N. J. East India silver-lead, Ceylon plumbago, and flake graphite. No. 106,180; Oct. 12; Gaz. vol. 219; p. 583.
Ridgely, Walter B., Baltimore, Md. Ointment. No. 106,181; Oct. 12; Gaz. vol. 219; p. 584.
Riverside & Dan River Cotton Mills, Inc., Danville, Va., and New York, N. Y. Drills. No. 106,680; Oct. 26; Gaz. vol. 219; p. 1231.
Robert A. Wooldridge Co., Baltimore, Md. Fertilizers. No. 106,721; Oct. 26; Gaz. vol. 219; p. 1232.
Rogers, Edwin A., Boston, Mass. Adhesive. No. 106,182; Oct. 12; Gaz. vol. 219; p. 584.
Rogers Peet Company, New York, N. Y. Shoes. No. 106,366; Oct. 19; Gaz. vol. 219; p. 922.
Rogers & Thompson, Inc., New York, N. Y. Cotton piece goods. No. 106,681; Oct. 26; Gaz. vol. 219; p. 1231.
Rollinson, William H., New York, N. Y. Pile goods in the piece, made of cotton and silk or wool plush, velours, and velvets. No. 106,682; Oct. 26; Gaz. vol. 219; p. 1231.
Roos Mfg. Co., The, Chicago, Ill. Cedar chests and utility-boxes. No. 106,367; Oct. 19; Gaz. vol. 219; p. 922.
Roos Mfg. Co., The, Chicago, Ill. Wooden curtain-poles and brackets and trimmings, folding draft-screens. No. 106,368; Oct. 19; Gaz. vol. 219; p. 922.
Rose-Rogers Co., Dallas, Tex. Overalls, jumpers, coats, and trousers. Nos. 106,505–6; Oct. 19; Gaz. vol. 219; p. 926.
Rosen, Plechner & Lipschutz, New York, N. Y. Velvets, velveteens, and corduroys. No. 106,800; Oct. 26; Gaz. vol. 219; p. 1234.
Rosenberg Bros. & Co., San Francisco, Cal. Seeded raisins. No. 106,683; Oct. 26; Gaz. vol. 219; p. 1231.
Rosenthal & Bros., Samuel, New York, N. Y. Men's and youths' outer suits and overcoats. No. 106,507; Oct. 19; Gaz. vol. 219; p. 926.
Royal Serum Company, The, Kansas City, Mo., and Kansas City, Kans. Anti-hog-cholera serum and hog-cholera virus. No. 106,259; Oct. 19; Gaz. vol. 219; p. 919.
Rudolph Saenger Co., New York, N. Y. Hair-nets. No. 106,508; Oct. 19; Gaz. vol. 219; p. 926.
Rullman, Walter A., Red Bank, N. J. Medicated cereal for chronic constipation. No. 106,183; Oct. 12; Gaz. vol. 219; p. 584.
Runkel Brothers, Inc., New York, N. Y. Cocoa. No. 106,684; Oct. 26; Gaz. vol. 219; p. 1231.
Russell Falls Company, Boston and Russell, Mass. Bond and ledger paper. Nos. 106,369–70; Oct. 19; Gaz. vol. 219; p. 922.
S. Thalmann & Schwab m. b. H., The, Frankfort-on-the-Main, Germany. Foods. No. 106,700; Oct. 26; Gaz. vol. 219; p. 1231.
S. H. Kress & Company, New York, N. Y. Hosiery. No. 106,631; Oct. 26; Gaz. vol. 219; p. 1229.
S. H. Kress & Company, New York, N. Y. Hosiery. Nos. 106,774–81; Oct. 26; Gaz. vol. 219; p. 1234.
Safe-Cabinet Company, The, Marietta, Ohio. Heat-resisting cabinets and safes. Nos. 106,509–10; Oct. 19; Gaz. vol. 219; p. 926.
Salt's Textile Manufacturing Company, The, Bridgeport, Conn., and New York, N. Y. Velvets and plushes in the piece. No. 106,511; Oct. 19; Gaz. vol. 219; p. 926.
San Francisco Sulphur Co., San Francisco, Cal. Flowers of sulfur. No. 106,685; Oct. 26; Gaz. vol. 219; p. 1231.
Sander Mfg. Co., Newark, N. J. Meat-choppers and parts thereof. No. 106,123; Oct. 12; Gaz. vol. 219; p. 582.
Sandusky Portland Cement Company, The, Baybridge and Sandusky, Ohio. White Portland cement. No. 106,260; Oct. 19; Gaz. vol. 219; p. 919.

Sarle, Harriet A., New York, N. Y., assignor to John F. Sarle Company. Writing-paper. No. 106,601; Oct. 26; Gaz. vol. 219; p. 1235.
Saward, Frederick E., New York, N. Y. Weekly trade journal. No. 106,512; Oct. 19; Gaz. vol. 219; p. 926.
Schein Brothers, New York, N. Y. Jewelry. No. 106,261; Oct. 19; Gaz. vol. 219; p. 919.
Schleicher, Frank D., Mifflintown, Pa. Brooms, whiskbrooms, and brushes. No. 106,804; Oct. 26; Gaz. vol. 219; p. 1235.
Schoenherr, Frederick, Baltimore, Md. Window-shades. No. 106,513; Oct. 19; Gaz. vol. 219; p. 927.
Schofield, Everett A., Philadelphia, Pa. Weed-killer preparation. No. 106,686; Oct. 26; Gaz. vol. 219; p. 1231.
Scribblers Ink & Paste Manufacturing Company, Seattle, Wash. Fluid inks. No. 106,687; Oct. 26; Gaz. vol. 219; p. 1231.
Scott Paper Company, Philadelphia, Pa. Paper towels, table-covers, diapers, and toilet-paper. No. 106,690; Oct. 26; Gaz. vol. 219; p. 1231.
Sears, Roebuck and Co., Chicago, Ill. Certain named foods. No. 106,805; Oct. 26; Gaz. vol. 219; p. 1235.
Seattle Brewing and Malting Co., Seattle, Wash. Beer. No. 106,124; Oct. 12; Gaz. vol. 219; p. 582.
Sechler & Company, The, Cincinnati, Ohio. Wagons and carts. No. 106,371; Oct. 19; Gaz. vol. 219; p. 922.
Selros Dress Fabric Co., Inc., New York, N. Y. Silk, cotton, and wool and combinations thereof piece goods. No. 106,806; Oct. 26; Gaz. vol. 219; p. 1235.
Sentinel Clock Co., Chicago, Ill. Horological indicators. No. 106,372; Oct. 19; Gaz. vol. 219; p. 922.
Service Motor Supply Company, Chicago, Ill. Tire fillers and patches for cementing. No. 106,125; Oct. 12; Gaz. vol. 219; p. 582.
Shapiro, Leo, Minneapolis, Minn. Bedbug, roach, and ant killer. No. 106,373; Oct. 19; Gaz. vol. 219; p. 922.
Sharp & Dohme, Baltimore, Md. Sterilized solution of iodin. No. 106,185; Oct. 12; Gaz. vol. 219; p. 584.
Sharp & Dohme, Baltimore, Md. White mineral oil for intestinal torpidity and constipation. No. 106,375; Oct. 19; Gaz. vol. 219; p. 922.
Sickels, Harry P., Rochester, N. Y. Mail-boxes. No. 106,374; Oct. 19; Gaz. vol. 219; p. 922.
Simon, Franklin, New York, N. Y. Certain named wearing-apparel for men, women, and children. No. 106,807; Oct. 26; Gaz. vol. 219; p. 1235.
Sims, Jas. L., Orangeburg, S. C. Compound for treating eczema. No. 106,263; Oct. 19; Gaz. vol. 219; p. 919.
Singer Manufacturing Company, The, Elizabeth, N. J. Sewing-threads. No. 106,688; Oct. 26; Gaz. vol. 219; p. 1231.
Skinner Manufacturing Company, Omaha, Nebr. Macaroni, spaghetti, and vermicelli. No. 106,689; Oct. 26; Gaz. vol. 219; p. 1231.
Smith, C. Frank, Detroit, Mich. Coffee, tea, and cocoa. No. 106,808; Oct. 26; Gaz. vol. 219; p. 1235.
Smolin, Julius, New York, N. Y. Hats. No. 106,809; Oct. 26; Gaz. vol. 219; p. 1235.
Societe Anonyme de l'Emulsior des Indes, Paris, France. Liquid preparation for use in shaving. No. 106,515; Oct. 19; Gaz. vol. 219; p. 927.
Southern Aseptic Laboratories, Columbia, S. C. Absorbent cotton. No. 106,376; Oct. 19; Gaz. vol. 219; p. 922.
Sparks Milling Company, Alton, Ill., and Terre Haute, Ind. Wheat-flour. No. 106,691; Oct. 26; Gaz. vol. 219; p. 1231.
Spd. Accessories Co., New York, N. Y. Carbon-eradicator. No. 106,184; Oct. 12; Gaz. vol. 219; p. 584.
Spohn Medical Company, Goshen, Ind. Remedy for treatment of certain named animal diseases. No. 106,377; Oct. 19; Gaz. vol. 219; p. 922.
Sprague-Hathaway Co., Somerville and Boston, Mass. Photographic portraits. No. 106,378; Oct. 19; Gaz. vol. 219; p. 922.
Spratts Patent (America) Limited, London, England, and Newark, N. J. Incubators. No. 106,082; Oct. 5; Gaz. vol. 219; p. 267.
Squier, Victor C., Battle Creek, Mich. Violin, viola, &c., strings. No. 106,692; Oct. 26; Gaz. vol. 219; p. 1231.
St. Louis Agency of National Pure Water Company, St. Louis, Mo. Table-waters. No. 106,693; Oct. 26; Gaz. vol. 219; p. 1231.
Stallknecht Ice Cream Corporation, Baltimore, Md. Ice-cream. No. 106,516; Oct. 19; Gaz. vol. 219; p. 927.
Stamford Foundry Company, The, Stamford, Conn. Cooking ranges and stoves and heating-stoves. No. 106,186; Oct. 12; Gaz. vol. 219; p. 584.
Standard Milling Co., Houston, Tex. Rice. No. 106,694; Oct. 26; Gaz. vol. 219; p. 1231.
Standard Oil Company of New York, New York, N. Y. White mineral oil for constipation. No. 106,517; Oct. 19; Gaz. vol. 219; p. 927.
Standard Pressed Steel Co., Philadelphia, Pa. Shaft-hangers. No. 106,695; Oct. 26; Gaz. vol. 219; p. 1231.
Stanley, John T., New York, N. Y. Soap. Nos. 106,126–7; Oct. 12; Gaz. vol. 219; p. 582.
Stanley Rule & Level Company, The, New Britain, Conn. Measuring-rules. No. 106,810; Oct. 26; Gaz. vol. 219; p. 1235.
Starrs, Geo. R., Paterson, N. J. Valve-disks. No. 106,264; Oct. 19; Gaz. vol. 219; p. 919.
Steinhardter & Nordlinger, New York, N. Y. Condensed milk. No. 106,696; Oct. 26; Gaz. vol. 219; p. 1231.
Stern Brothers, New York, N. Y. Gloves. No. 106,518; Oct. 19; Gaz. vol. 219; p. 927.
Stern Sonneborn Oil Co., The, Limited, London, England. Refined liquid paraffin for an intestinal lubricant and laxative. No. 106,697; Oct. 26; Gaz. vol. 219; p. 1231.
Stone, Robert J., Memphis, Tenn. Medicinal preparation for indigestion, dyspepsia, gout, &c. No. 106,519; Oct. 19; Gaz. vol. 219; p. 927.
Stotherts Limited, Atherton, England. Tablets used as castor-oil substitute. No. 106,811; Oct. 26; Gaz. vol. 219; p. 1235.
Strathmore Paper Company, West Springfield, Me. Cover-paper. No. 106,380; Oct. 19; Gaz. vol. 219; p. 923.
Strauss Gas Iron Company, Philadelphia, Pa. Gas-iron. No. 106,520; Oct. 19; Gaz. vol. 219; p. 927.
Strohmeyer & Arpe Company, New York, N. Y. Preserved and canned fish. No. 106,521; Oct. 19; Gaz. vol. 219; p. 927.
Sullivan, Frank B., Boston, Mass. Certain named foods. No. 106,083; Oct. 5; Gaz. vol. 219; p. 267.
Swift & Covington, Oakland, Cal. Ship and dock pile timbers. No. 106,698; Oct. 26; Gaz. vol. 219; p. 1231.
Tagalog & Tagalog, Charlotte, N. C. Hair-dressing. No. 106,812; Oct. 26; Gaz. vol. 219; p. 1235.
Talking Doll & Novelty Co., Inc., New York, N. Y. Phonographs. No. 106,187; Oct. 12; Gaz. vol. 219; p. 584.
Tampa Citrus Growers Association, Tampa, Fla. Citrus fruits. No. 106,699; Oct. 26; Gaz. vol. 219; p. 1231.
Tausig, Emil, New York, N. Y. Hair-color restorers and hair-removers. No. 106,188; Oct. 12; Gaz. vol. 219; p. 584.
Taux-Wei Talking Machine Company, Gloucester, N. J. Talking-machines. No. 106,189; Oct. 12; Gaz. vol. 219; p. 584.
Teerling, Carl, Savannah, Ga. Fertiliser. No. 106,265; Oct. 19; Gaz. vol. 219; p. 919.
Teeter, Clarence E., Huron, Kans. Preparation for hog-cholera. No. 106,381; Oct. 19; Gaz. vol. 219; p. 923.
Thomas Brothers & Klein, Incorporated, Canton, Md. Charcoal. No. 106,266; Oct. 19; Gaz. vol. 219; p. 919.
Thomas G. Plant Company, Boston, Mass. Boots, shoes, and slippers. Nos. 106,496–7; Oct. 19; Gaz. vol. 219; p. 926.
Thomas, James, Nashville, Tenn. Mineral water. No. 106,813; Oct. 26; Gaz. vol. 219; p. 1235.
Thomas Maddock's Sons Co., Trenton, N. J. Tanks for water-closets. No. 106,167; Oct. 12; Gaz. vol. 219; p. 583.
Thomas Maddock's Sons Company, Trenton, N. J. Certain named vitreous china bath-room trimmings and fittings. No. 106,458; Oct. 19; Gaz. vol. 219; p. 925.
Thomas Manufacturing Company, The, Dayton, Ohio. Pocket, pen, clasp, and pruning knives. No. 106,701; Oct. 26; Gaz. vol. 219; p. 1231.
Thompson Remedy Co., East Chicago, Ind. Remedy for la grippe, ague, influenza, and malaria. No. 106,814; Oct. 26; Gaz. vol. 219; p. 1235.
Tmco Mfg. Co., Inc., New York, N. Y. Disinfecting-paint. No. 106,522; Oct. 19; Gaz. vol. 219; p. 927.
Tomahawk Medicine Co., Bowling Green, Ky. Salve. No. 106,267; Oct. 19; Gaz. vol. 219; p. 919.
Tri-State Candy Co. Inc., Connellsville, Pa. Candy. No. 106,702; Oct. 26; Gaz. vol. 219; p. 1232.
Triplett, Joseph I., Woodstock, Va. Wheat-flour. No. 106,383; Oct. 19; Gaz. vol. 219; p. 923.
Twin Oak Poultry and Egg Company, Williamstown, Mass. Dressed and live poultry, eggs, stock, hatching-eggs, and chicks. No. 106,384; Oct. 19; Gaz. vol. 219; p. 923.
Union Bag & Paper Company, New York, N. Y. Paper bags. Nos. 106,703–5; Oct. 26; Gaz. vol. 219; p. 1232.
Union Mills, Inc., St. Johnsville and New York, N. Y. Knitted underwear. No. 106,523; Oct. 19; Gaz. vol. 219; p. 927.
United Drug Company, Boston, Mass. Gummed printed labels, adhesive stamps, calendars, &c. No. 106,706; Oct. 26; Gaz. vol. 219; p. 1232.
United Drug Company, Boston, Mass. Measuring rules and tape, thermometers, and lantern-slides. No. 106,707; Oct. 26; Gaz. vol. 219; p. 1232.
United & Globe Rubber M'f'g Companies, Trenton, N. J. Certain named rubber goods. No. 106,268; Oct. 19; Gaz. vol. 219; p. 919.
United Lead Company, New York, N. Y. Lead pipe and drain-traps. No. 106,524; Oct. 19; Gaz. vol. 219; p. 927.
United States Rubber Company. (See Colchester Rubber Company, assignor.)
United States Rubber Company, New Brunswick, N. J., and New York, N. Y. Rubber-soled boots and shoes with canvas tops. No. 106,708; Oct. 26; Gaz. vol. 219; p. 1232.
V. A. Longaker Company, The, Indianapolis, Ind. Piston-rings. No. 106,640; Oct. 26; Gaz. vol. 219; p. 1230.
Vail Brothers, Philadelphia, Pa. Shampoo preparation. No. 106,525; Oct. 19; Gaz. vol. 219; p. 927.
Valenzuela, Michael R., San Diego, Cal. Catarrh-snuff. No. 106,269; Oct. 19; Gaz. vol. 219; p. 919.
Van Antwerp's Drug Corporation, Mobile, Ala. Insecticide, germicide, antiseptic, and disinfectant. No. 106,709; Oct. 26; Gaz. vol. 219; p. 1232.

Van Orden, Chauncey S., New York, N. Y. Tooth-paste. No. 106,270; Oct. 19; Gaz. vol. 219; p. 919.
Vandewart & Son, D., New York, N. Y. Liqueur stomach-bitters. No. 106,815; Oct. 26; Gaz. vol. 219; p. 1235.
Vermilax Company, Incorporated, New York, N. Y. Remedies for diseases of dogs. No. 106,271; Oct. 19; Gaz. vol. 219; p. 919.
Victoria Marble Company, The, Knoxville, Tenn. Raw and partly-prepared marble. No. 106,526; Oct. 19; Gaz. vol. 219; p. 927.
Virdone, Antonino, New York, N. Y. Medicinal tonic and digestive powder. No. 106,190; Oct. 12; Gaz. vol. 219; p. 584.
Vola Importing Company, New York, N. Y. Macaroni, olive-oil, cheese, &c. No. 106,527; Oct. 19; Gaz. vol. 219; p. 927.
Voss & Stern, New York, N. Y. Certain named piece goods. No. 106,710; Oct. 26; Gaz. vol. 219; p. 1232.
W. Beckers Aniline & Chemical Works, Inc., Brooklyn, N. Y. Dyestuffs, colors, lakes, developers, and dyeing-assistants. No. 106,204; Oct. 19; Gaz. vol. 219; p. 917.
W. H. Comstock Company Limited, The, Morristown, N. Y. Purgative pills. No. 106,220; Oct. 19; Gaz. vol. 219; p. 918.
W. N. Matthews & Bro., Inc., St. Louis, Mo. Electrical testing and inspecting instruments. No. 106,650; Oct. 26; Gaz. vol. 219; p. 1230.
W. R. Grace & Co., New York, N. Y. Linseed-oil. No. 106,096; Oct. 12; Gaz. vol. 219; p. 581.
W. R. Grace & Co., New York, N. Y. Paraffin-wax. No. 106,597; Oct. 26; Gaz. vol. 219; p. 1228.
Wadsworth Chocolate Co., Newark, N. J. Chocolates. No. 106,711; Oct. 26; Gaz. vol. 219; p. 1232.
Wagner Piano Company, New York, N. Y. Pianos. No. 106,191; Oct. 12; Gaz. vol. 219; p. 584.
Waldes & Co., Prague-Wrschowitz, Bohemia, Austria-Hungary. Snap-buttons used as garment-fasteners. No. 106,712; Oct. 26; Gaz. vol. 219; p. 1232.
Waldes & Company, Prague-Wrschowitz, Austria-Hungary. Certain named clothing. Nos. 106,528–30; Oct. 19; Gaz. vol. 219; p. 927.
Waltner, Elizabeth, Duquesne, Pa. Preparation for poor circulation of the hands and feet, paralysis, &c. No. 106,713; Oct. 26; Gaz. vol. 219; p. 1232.
Wapler, Nicholas, New York, N. Y. Glass aquaria. No. 106,714; Oct. 26; Gaz. vol. 219; p. 1232.
Ward Meehan Company, Philadelphia, Pa. Bath-garments. No. 106,531; Oct. 19; Gaz. vol. 219; p. 927.
Warren, Charles H., Philadelphia, Pa. Remedy for piles. No. 106,272; Oct. 19; Gaz. vol. 219; p. 919.
Warren-Ehret Company, Philadelphia, Pa. Ready roofing, roofing felt and cement. No. 106,273; Oct. 19; Gaz. vol. 219; p. 919.
Watson Shoe Co., Lynn, Mass. Shoes. No. 106,532; Oct. 19; Gaz. vol. 219; p. 927.
Weinberg Brothers and Company, Chicago, Ill. Dressed poultry. No. 106,816; Oct. 26; Gaz. vol. 219; p. 1235.
Weld & Company, Inc., Auburn, N. Y. Certain named medicines and pharmaceutical preparations. No. 106,817; Oct. 26; Gaz. vol. 219; p. 1235.
Wells Medicine Company, La Fayette, Ind. Veterinary remedies for certain named diseases. No. 106,274; Oct. 19; Gaz. vol. 219; p. 919.
Werden & Co., Washington, D. C. Fresh, salted, and roasted peanuts. No. 106,715; Oct. 26; Gaz. vol. 219; p. 1232.
Western Clock Co., Peru, Ill. Clocks and watches. No. 106,385; Oct. 19; Gaz. vol. 219; p. 923.
Westheimer & Sons, Ferdinand, St. Joseph, Mo., and Cincinnati, Ohio. Cigars, little cigars, cigarettes, tobacco, and snuff. No. 106,716; Oct. 26; Gaz. vol. 219; p. 1232.
Westinghouse Air Brake Company, The, Wilmerding, Pa. Air-brake apparatus and railway draft-gear. No. 106,386; Oct. 19; Gaz. vol. 219; p. 923.
Whitaker & Kincaid, Gail, Tex. Preparation for treatment of old sores, carbuncles, and cancers. No. 106,717; Oct. 26; Gaz. vol. 219; p. 1232.
Whitney Blake Company, The, New Haven, Conn. Insulated wire and cables. No. 106,128; Oct. 12; Gaz. vol. 219; p. 582.
Whittemore Bros. & Co., Cambridge, Mass. Leather-dressing for shoes and slippers. No. 106,387; Oct. 19; Gaz. vol. 219; p. 923.
Wichert & Gardiner, New York, N. Y. Leather shoes. No. 106,719; Oct. 26; Gaz. vol. 219; p. 1232.
Wichita Falls Motor Co., Wichita Falls, Tex. Commercial motor-vehicles. No. 106,192; Oct. 12; Gaz. vol. 219; p. 584.
Willard Storage Battery Company, The, Cleveland, Ohio. Storage batteries. No. 106,275; Oct. 19; Gaz. vol. 219; p. 919.
William Davies Company, Limited, The, Toronto, Ontario, Canada. Casings for sausages. No. 106,571; Oct. 26; Gaz. vol. 219; p. 1228.
William J. Lemp Brewing Company, St. Louis, Mo. Non intoxicating beverages prepared partly from malt. No. 106,346; Oct. 19; Gaz. vol. 219; p. 921.
William Mann Company, Philadelphia, Pa. Certain named stationers' supplies. Nos. 106,645–6; Oct. 26; Gaz. vol. 219; p. 1230.
William R. Jenkins Co., New York, N. Y. Certain named stationers' supplies. No. 106,336; Oct. 19; Gaz. vol. 219; p. 921.
William Whitman Company, Inc., Boston, Mass. Cotton, worsted, and merino yarn. No. 106,718; Oct. 26; Gaz. vol. 219; p. 1232.
Windsor Stock Food Company, The, Windsor, Conn. Prepared food for horses, cattle, sheep, &c. No. 106,533; Oct. 19; Gaz. vol. 219; p. 927.
Windsor Chocolate Company, Philadelphia, Pa. Candy. No. 106,534; Oct. 19; Gaz. vol. 219; p. 927.
Winget Manufacturing Co., Inc., The, Minneapolis, Minn. Sunbonnets, sun-hats, baby-bonnets, &c. No. 106,818; Oct. 26; Gaz. vol. 219; p. 1235.
Winterbottom Book Cloth Company, Limited, The, Manchester, England. Tracing-cloth. No. 106,535; Oct. 19; Gaz. vol. 219; p. 927.
Winwal Company, The, Rockford, Ill. Buttons. No. 106,819; Oct. 26; Gaz. vol. 219; p. 1235.
Wizard Products Co., Chicago, Ill. Ironing-wax and fire-extinguishing compound. No. 106,722; Oct. 26; Gaz. vol. 219; p. 1232.
Wizard Products Co., Chicago, Ill. Furniture-polish. No. 106,820; Oct. 26; Gaz. vol. 219; p. 1235.
Wm. Frankfurth Hardware Co., Milwaukee, Wis. Fishing-tackle. No. 106,592; Oct. 26; Gaz. vol. 219; p. 1228.
Wm. Herme & Co. Inc., Brooklyn, N. Y. Leather shoes. No. 106,604; Oct. 26; Gaz. vol. 219; p. 1229.
Wm. Powell Co., The, Cincinnati, Ohio. Metallic valves for general use. No. 106,179; Oct. 12; Gaz. vol. 219; p. 583.
Wojtalewicz, John S., Chicago, Ill. Men's trousers. No. 106,720; Oct. 26; Gaz. vol. 219; p. 1232.
Wolseley Tool and Motor Car Company, Limited, The, now by change of name Wolseley Motors, Limited, Birmingham, England. Automobiles. No. 106,276; Oct. 19; Gaz. vol. 219; p. 919.
Wood & Barnard, Detroit, Mich. Cleansing and massage creams, rouge, &c. No. 106,389; Oct. 19; Gaz. vol. 219; p. 923.
York, Frank C., Salina, Kans. Composition for use in preparing a soft drink. No. 106,130; Oct. 12; Gaz. vol. 219; p. 582.
Yorkshire Steel Co. Ld., London, England. Razors and safety-razors and safety-razor blades. No. 106,277; Oct. 19; Gaz. vol. 219; p. 919.
Zeiss, Firm of Carl, Jena, Germany. Certain named measuring and scientific appliances and parts thereof. Nos. 106,131–2; Oct. 12; Gaz. vol. 219; p. 582.

ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

A. B. C. Candy Co., The, Sherman, Tex. "Hopson's Mexican Style Pecan Candy." (For Candy.) No. 18,803; Oct. 19; Gaz. vol. 219; p. 928.

Auto City Brewing Co., Detroit, Mich. "Auto City." (For Beer.) No. 18,783; Oct. 5; Gaz. vol. 219; p. 268.

Baughman, Oliver H., Logansport, Ind. "Cash Premium Coffee, Money in Every Package." (For Coffee.) No. 18,796; Oct. 12; Gaz. vol. 219; p. 585.

Burns, Winnifred, Duluth, Minn. "Trophy Won February 25th 1915 At The American Art League." (For Gowns and Suits.) No. 18,784; Oct. 5; Gaz. vol. 219; p. 268.

Columbia Graphophone Co., Washington, D. C. "Personal Record." (For Sound-Records for Talking-Machines.) No. 18,785; Oct. 5; Gaz. vol. 219; p. 268.

Dale, James J., Trenton, N. J. "Pottery." (For Earthenware Pottery.) No. 18,786; Oct. 5; Gaz. vol. 219; p. 268.

Dirnberger Pop Corn Co., Buffalo, N. Y. "Good Scout." (For a Confection.) No. 18,787; Oct. 5; Gaz. vol. 219; p. 268.

Franklin MacVeagh & Company, Chicago, Ill. "Karina." (For Cigars.) No. 18,790; Oct. 5; Gaz. vol. 219; p. 268.

Frick, Phillip S., Oswego, Kans. "Eu-ca-lyp-tine." (For a Remedy.) No. 18,804; Oct. 19; Gaz. vol. 219; p. 928.

Graves, Ernest M. (See Hutchens and Graves.)

Hamp, Florentine J., Duluth, Minn. "Albifine." (For a Cosmetic.) No. 18,797; Oct. 12; Gaz. vol. 219; p. 585.

Henschel & Co., A. C., Chicago, Ill. "New Five." (For Cigars.) No. 18,798; Oct. 12; Gaz. vol. 219; p. 585.

Horlick, Arnold A., Milwaukee, Wis. "Horlick's Biscuit." (For Biscuit.) No. 18,805; Oct. 19; Gaz. vol. 219; p. 928.

Huff Mfg. Co., The H. L., Louisville, Ky. "Huff's Hoarhound and Honey Drops." (For a Confection.) No. 18,808; Oct. 26; Gaz. vol. 219; p. 1236.

Hutchens, H. B., and Ernest M. Graves, Wabash, Ind. "Home Dry Cleaner." (For a Cleaning Compound.) No. 18,788; Oct. 5; Gaz. vol. 219; p. 268.

Kirchuebel, Mary E., Camden, N. J. "Kir-Mer." (For a Cleaner.) No. 18,789; Oct. 5; Gaz. vol. 219; p. 268.

Kohl & Herman, Marshfield, Wis. "La Casera." (For Cigars.) No. 18,799; Oct. 12; Gaz. vol. 219; p. 585.

Laurenzi, Luisa, Old Forge, Pa. "Perugia Ointment." (For Ointment.) No. 18,814; Oct. 26; Gaz. vol. 219; p. 1236.

Leadoil Company Inc., Brooklyn, N. Y. "Leadoil." (For Mediums for Thinning Paste Pigments.) No. 18,806; Oct. 19; Gaz. vol. 219; p. 928.

Lime-Kola Co., Culpeper, Va. "A Healthful Drink." (For a Beverage.) No. 18,795; Oct. 5; Gaz. vol. 219; p. 268.

Louisiana Strawberry Distributing Company, Inc., New Orleans, La. "Janet Brand." (For Strawberries.) No. 18,807; Oct. 19; Gaz. vol. 219; p. 928.

McMahon Bros., Pittsfield, Mass. "McMahon's Diamalt Health Bread." (For Bread.) No. 18,800; Oct. 12; Gaz. vol. 219; p. 585.

Murrey & Ridgeway, Los Angeles, Cal. "Kara." (For a Depilatory.) No. 18,809; Oct. 26; Gaz. vol. 219; p. 1236.

Naftziger, Ralph L., Kansas City, Mo. "Butter-Cream Bread." (For Bread.) No. 18,801; Oct. 12; Gaz. vol. 219; p. 585.

National Hog Cholera Remedy Company, The, Wildwood, N. J. "The National Cholera Remedy." (For a Remedy for Hog-Cholera.) No. 18,802; Oct. 12; Gaz. vol. 219; p. 585.

Norton Company, Worcester, Mass. "Crystolon." (For Grinding-Wheels.) No. 18,791; Oct. 5; Gaz. vol. 219; p. 268.

Norton Company, Worcester, Mass. "Alundum." (For Grinding-Wheels.) No. 18,792; Oct. 5; Gaz. vol. 219; p. 268.

Randall Brothers Company, Tacoma, Wash., and Alhambra, Cal. "Randall Bros. Liniment." (For a Liniment.) No. 18,793; Oct. 5; Gaz. vol. 219; p. 268.

Tiedtke Bros. Co., The, Toledo, Ohio. "Parkwood Brand." (For Canned Peaches.) No. 18,794; Oct. 5; Gaz. vol. 219; p. 268.

Ulman & Sons, I., Baltimore, Md. "Ulman's Rose Gin." (For Gin.) No. 18,810; Oct. 26; Gaz. vol. 219; p. 1236.

Ulman & Sons, I., Baltimore, Md. "Wicomico Club Whiskey." (For Whisky.) No. 18,811; Oct. 26; Gaz. vol. 219; p. 1236.

Ulman & Sons, I., Baltimore, Md. "Ulso Whiskey." (For Whisky.) No. 18,812; Oct. 26; Gaz. vol. 219; p. 1236.

Ulman & Sons, I., Baltimore, Md. "Ulman's Old Log Cabin Whiskey." (For Whisky.) No. 18,813; Oct. 26; Gaz. vol. 219; p. 1236.

PRINTS.

Alvin Manufacturing Company, Sag Harbor, N. Y. "Alvin Silver Plate." (For Alvin Silver.) No. 4,080; Oct. 12; Gaz. vol. 219; p. 585.

Alvin Manufacturing Company, Sag Harbor, N. Y. "Alvin Silver." (For Alvin Silver.) No. 4,086; Oct. 19; Gaz. vol. 219; p. 928.

B. V. D. Company, The, New York, N. Y. "B. V. D. Men's V Neck Two Piece Suit." (For Athletic Underwear.) No. 4,087; Oct. 19; Gaz. vol. 219; p. 928.

B. V. D. Company, The, New York, N. Y. "B. V. D. Men's Neck Union Suit." (For Athletic Underwear.) No. 4,088; Oct. 19; Gaz. vol. 219; p. 928.

B. V. D. Company, The, New York, N. Y. Measurements Required When Ordering B. V. D. Underwear." (For Athletic Underwear.) No. 4,089; Oct. 19; Gaz. vol. 219; p. 928.

Beeson, John H., Crawfordsville, Ind. "Marker for Public Roads." (For Markers for Public Roads.) No. 4,071; Oct. 5; Gaz. vol. 219; p. 268.

Boyd, D. M., Kirkwood, Mo. "Good Ship—Satisfied Customer." (For Gentlemen's Furnishing Goods and Clothing.) No. 4,090; Oct. 19; Gaz. vol. 219; p. 928.

Consolidated Gas, Electric Light & Power Company of Baltimore, Baltimore, Md. "The Magic of Efficiency." (For an Electric Iron.) No. 4,072; Oct. 5; Gaz. vol. 219; p. 268.

Consolidated Gas, Electric Light & Power Company of Baltimore, Baltimore, Md. "Cleaning—The New Way." (For an Electrical Vacuum-Cleaner.) No. 4,073; Oct. 5; Gaz. vol. 219; p. 268.

Consolidated Gas, Electric Light & Power Company of Baltimore, Baltimore, Md. "The Oriole Heater." (For a Gas Water-Heater.) No. 4,074; Oct. 5; Gaz. vol. 219; p. 268

Consolidated Gas, Electric Light & Power Company of Baltimore, Baltimore, Md. "Cooking In Comfort." (For a Gas-Range.) No. 4,075; Oct. 5; Gaz. vol. 219; p. 268.

Consolidated Gas, Electric Light & Power Company of Baltimore, Baltimore, Md. "Burn Your Refuse Before it Becomes Filth." (For a Garbage-Incinerator.) No. 4,076; Oct. 5; Gaz. vol. 219; p. 268.

Consolidated Gas, Electric Light & Power Company of Baltimore, Baltimore, Md. "Cook in Comfort." (For a Gas-Range.) No. 4,077; Oct. 5; Gaz. vol. 219; p. 268.

Consolidated Gas, Electric Light & Power Company of Baltimore, Baltimore, Md. "Independent Of The Garbage Man." (For a Garbage-Incinerator.) No. 4,078; Oct. 5; Gaz. vol. 219; p. 268.

Consolidated Gas, Electric Light & Power Company of Baltimore, Baltimore, Md. "Blue Monday." (For an Electric Washing-Machine.) No. 4,079; Oct. 5; Gaz. vol. 219; p. 268.

Consolidated Gas, Electric Light and Power Company of Baltimore, Baltimore, Md. "The Ordeal." (For a Gas Water-Heater.) No. 4,091; Oct. 19; Gaz. vol. 219; p. 928.

Consolidated Gas, Electric Light & Power Company of Baltimore, Baltimore, Md. "Cleaning the Old Way." (For an Electrical Vacuum-Cleaner.) No. 4,092; Oct. 19; Gaz. vol. 219; p. 928.

Consolidated Gas, Electric Light & Power Company of Baltimore, Baltimore, Md. "Taking The Work Out of Washing." (For Electric Washing-Machines.) No. 4,093; Oct. 19; Gaz. vol. 219; p. 928.

Consolidated Gas, Electric Light & Power Company of Baltimore, Baltimore, Md. "Dirt, Discomfort and Discomfiture." (For an Electric Iron.) No. 4,094; Oct. 19; Gaz. vol. 219; p. 928.

Consolidated Gas, Electric Light & Power Company of Baltimore, Baltimore, Md. "Why be a Dish Washer?" (For an Electric Dish-Washing Machine.) No. 4,101; Oct. 26; Gaz. vol. 219; p. 1236.

Consolidated Gas, Electric Light & Power Company of Baltimore, Baltimore, Md. "Liberated." (For an Electric Dish-Washing Machine.) No. 4,102; Oct. 26; Gaz. vol. 219; p. 1236.

Consolidated Gas, Electric Light & Power Company of Baltimore, Baltimore, Md. "As The Modern Housewife Does It." (For a Mechanical Bread-Mixer.) No. 4,103; Oct. 26; Gaz. vol. 219; p. 1236.

Consolidated Gas, Electric Light & Power Company of Baltimore, Baltimore, Md. "Needn Helper?" (For a Mechanical Bread-Mixer.) No. 4,104; Oct. 26; Gaz. vol. 219; p. 1236.

Consolidated Gas, Electric Light & Power Company of Baltimore, Baltimore, Md. "Two Magicians." (For an Electric Iron.) No. 4,105; Oct. 26; Gaz. vol. 219; p. 1236.

Consolidated Gas, Electric Light & Power Company of Baltimore, Baltimore, Md. "Don't Court Disaster." (For an Electric Iron.) No. 4,106; Oct. 26; Gaz. vol. 219; p. 1236.

Dux & Bros., Dr. H., Jacksonville, Fla. "Superiora." (For Magnolia-Leaves.) No. 4,095; Oct. 19; Gaz. vol. 219; p. 928.

E. I. du Pont de Nemours Powder Co., Wilmington, Del. "Ballistite." (For Smokeless Shotgun-Powder.) No. 4,107; Oct. 26; Gaz. vol. 219; p. 1236.

Fowler, John E., Richmond, Va. "Cherry Smash." (For Cherry Smash.) No. 4,096; Oct. 19; Gaz. vol. 219; p. 928.

Krumm, A. C., Sr., and A. C., Jr., Philadelphia, Pa. "Krumm's." (For Noodles.) No. 4,097; Oct. 19; Gaz. vol. 219; p. 928.

Ludwig, Nicolaus, San Bernardino, Cal. "German Eagle." (For Bread.) No. 4,098; Oct. 19; Gaz. vol. 219; p. 928.

Max Wocher & Son Co., The, Cincinnati, Ohio. "Cincinnati Automatic Pedestal Operating Table." (For Operating-Tables.) No. 4,081; Oct. 12; Gaz. vol. 219; p. 585.

Reilly, Edward J., Baltimore, Md. "Economy In The Home." (For Black Dye.) No. 4,082; Oct. 12; Gaz. vol. 219; p. 585.

Snow, Edgar H., Kansas City, Mo. "Big Dan." (For Nickel Alarm-Clocks.) No. 4,099; Oct. 19; Gaz. vol. 219; p. 928.

South Texas Grain Company, Houston, Tex. "Egaday." (For Poultry Feed.) No. 4,100; Oct. 19; Gaz. vol. 219; p. 928.

Vacuum Oil Company, New York, N. Y. "Oils that Lubricate Most." (For Oils.) Nos. 4,083–5; Oct. 12; Gaz. vol. 219; p. 585.

DISCLAIMERS.

Bryant, Courtney S., Greene, N. Y., disclaimer filed by assignee, Willis A. Schleitt. Heating system for incubators. (Reissue.) No. 13,515; disclaimer filed Sept. 28, 1915; Gaz. vol. 219; p. 274.

Katzenberger, Oscar, Chicago, Ill.; disclaimer filed by patentee. Alining-plate for floor-hinges. No. 1,037,149; disclaimer filed Oct. 6, 1915; Gaz. vol. 219; p. 591.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF OCTOBER, 1915.

[Abbreviations: "Gaz."—Official Gazette.]

Abrading and polishing apparatus. T. Stiegelmeyer. No. 1,158,327; Oct. 26; Gaz. vol. 219; p. 1168.

Abrasion-testing machine. G. L. Norris. No. 1,156,803; Oct. 12; Gaz. vol. 219; p. 538.

Accounting system. F. O. Heuser. No. 1,157,625; Oct. 19; Gaz. vol. 219; p. 856.

Acetylene-generator. W. W. Harris. No. 1,157,385; Oct. 19; Gaz. vol. 219; p. 776.

Acetylene-generator. W. W. Harris. No. 1,157,386; Oct. 19; Gaz. vol. 219; p. 777.

Acetylene-generator. M. E. Loehr. No. 1,156,788; Oct. 12; Gaz. vol. 219; p. 534.

Acid, Concentrating dilute nitric. E. Collett. No. 1,158,181; Oct. 26; Gaz. vol. 219; p. 1117.

Acid, Making sulfuric. E. Taylor and F. P. Bergh. No. 1,157,455; Oct. 19; Gaz. vol. 219; p. 801.

Acid, Manufacture of pure lactic. M. Landau. No. 1,157,402; Oct. 19; Gaz. vol. 219; p. 783.

Acid, Producing oxalic. E. von Portheim. No. 1,157,348; Oct. 19; Gaz. vol. 219; p. 763.

Acids, Preparing 2-chloro-4-aminobenzene-1-arsinic. L. Ach, A. Rothmann, and H. Dieterich. No. 1,156,045; Oct. 12; Gaz. vol. 219; p. 277.

Acoustic apparatus. E. A. Hawthorne. No. 1,158,049; Oct. 26; Gaz. vol. 219; p. 1070.

Adding and calculating machine. A. A. Horton. No. 1,156,600; Oct. 12; Gaz. vol. 219; p. 468.

Adding and listing machine. J. G. Vincent. No. 1,157,465; Oct. 19; Gaz. vol. 219; p. 804.

Adding-machines, Carrying means for. J. C. Lotterhand. (Reissue.) No. 13,907; Oct. 19; Gaz. vol. 219; p. 873.

Aerial machine. J. C. Hansen-Ellehammer and N. W. Aasen. No. 1,155,485; Oct. 5; Gaz. vol. 219; p. 57.

Aerial navigation, Signaling apparatus for. R. A. Fessenden. No. 1,158,124; Oct. 26; Gaz. vol. 219; p. 1097.

Aeroplane. C. R. Clapp. No. 1,157,616; Oct. 19; Gaz. vol. 219; p. 853.

Aeroplane. J. M. Deitrich. No. 1,157,371; Oct. 19; Gaz. vol. 219; p. 772.

Aeroplane-propeller. A. Beaty. No. 1,156,577; Oct. 12; Gaz. vol. 219; p. 462.

Aeroplane-stabilizer. A. B. Thaw. No. 1,158,333; Oct. 26; Gaz. vol. 219; p. 1169.

Agitator. A. E. Vandercook. No. 1,156,946; Oct. 19; Gaz. vol. 219; p. 619.

Agricultural implement. J. H. Maher. No. 1,157,709; Oct. 26; Gaz. vol. 219; p. 952.

Agricultural implements, Tool-shifting mechanism for. C. E. White. No. 1,156,384; Oct. 12; Gaz. vol. 219; p. 394.

Agricultural machine. F. M. Beaver. No. 1,158,023; Oct. 26; Gaz. vol. 219; p. 1061.

Agricultural machines, Steering device for. C. Gleiche. No. 1,155,351; Oct. 5; Gaz. vol. 219; p. 9.

Air and separating the same into oxygen and nitrogen, Liquefying. J. F. Place. No. 1,157,959; Oct. 26; Gaz. vol. 219; p. 1039.

Air-brake apparatus, Air-retaining valve for. S. G. Neal. No. 1,157,954; Oct. 26; Gaz. vol. 219; p. 1036.

Aircraft. G. A. Ogrissek and J. Jaworsky. No. 1,157,636; Oct. 19; Gaz. vol. 219; p. 859.

Air-injector. W. Scheick. No. 1,155,620; Oct. 5; Gaz. vol. 219; p. 102.

Airship steering apparatus. L. C. Badeau. No. 1,156,514; Oct. 12; Gaz. vol. 219; p. 440.

Alarm; *See*—
Burglar-alarm. Fire-alarm.
Burglar and fire alarm.
Burglar, fire, and general alarm.

Alarm-preventing device, False-. J. Janik. No. 1,155,578; Oct. 5; Gaz. vol. 219; p. 88.

Aluminum screenings, dross, slags, or analogous aluminous materials, Treating. J. W. Lawrie. No. 1,156,606; Oct. 12; Gaz. vol. 219; p. 471.

Amalgamator. E. B. Bennett. No. 1,157,836; Oct. 26; Gaz. vol. 219; p. 995.

Amino-arsenobenzenes, Preparing. L. Ach and A. Rothmann. No. 1,156,044; Oct. 12; Gaz. vol. 219; p. 277.

Ammonia from its elements, Manufacture of. M. Pier. No. 1,157,253; Oct. 19; Gaz. vol. 219; p. 731.

Ammonia, Production of. C. Bosch and A. Mittasch. No. 1,158,167; Oct. 26; Gaz. vol. 219; p. 1112.

Ammonium sulfate, Producing. F. Tschudy. No. 1,155,385; Oct. 5; Gaz. vol. 219; p. 21.

Ammunition. W. H. Buell. No. 1,156,857; Oct. 12; Gaz. vol. 219; p. 560.

Ammunition-hoist. A. W. Bean and J. A. Killinger. No. 1,158,161; Oct. 26; Gaz. vol. 219; p. 1110.

Ammunition-hoist. A. V. Santarsiero. No. 1,157,048; Oct. 19; Gaz. vol. 219; p. 657.

Anchor-cable-cutting apparatus for submarine boats. J. Barraja-Frauenfelder. No. 1,158,160; Oct. 26; Gaz. vol. 219; p. 1110.

Anchoring device. R. G. Howard. No. 1,157,781; Oct. 26; Gaz. vol. 219; p. 975.

Angle-bar. E. C. Carter. No. 1,155,793; Oct. 5; Gaz. vol. 219; p. 163.

Angle-iron legs, Antifriction device for. C. L. Plunkett. No. 1,157,657; Oct. 19; Gaz. vol. 219; p. 868.

Angle-plate, Universal. J. R. Beckett. No. 1,155,987; Oct. 5; Gaz. vol. 219; p. 229.

Anhydrous hydrosulfites from aqueous hydrosulfite, Production of. H. Specketer and G. Münch. No. 1,156,107; Oct. 12; Gaz. vol. 219; p. 298.

Animal-trap. R. McClure. No. 1,157,882; Oct. 26; Gaz. vol. 219; p. 1011.

Annealing magnetic material. W. E. Ruder. No. 1,156,496; Oct. 12; Gaz. vol. 219; p. 434.

Apron. R. L. Guggenheimer. No. 1,156,900; Oct. 19; Gaz. vol. 219; p. 804.

Arm, Extension-. B. F. Grout. No. 1,155,916; Oct. 5; Gaz. vol. 219; p. 206.

Armature-winding. Y. Sakai. No. 1,156,711; Oct. 12; Gaz. vol. 219; p. 508.

Armor for flexible articles. C. Barbour. No. 1,155,460; Oct. 5; Gaz. vol. 219; p. 47.

Article-holder. R. B. Gilchrist. No. 1,155,562; Oct. 5; Gaz. vol. 219; p. 82.

Article-holder. J. M. Kaiser. No. 1,155,581; Oct. 5; Gaz. vol. 219; p. 89.

Artillery-wheel. H. E. Flick and L. W. Long. No. 1,155,906; Oct. 5; Gaz. vol. 219; p. 202.

Ash-pan and apron for furnaces. H. I. Rogers. No. 1,158,296; Oct. 26; Gaz. vol. 219; p. 1157.

Asparagus-can. G. W. Weber. No. 1,158,089; Oct. 26; Gaz. vol. 219; p. 1085.

Athletic guard. H. R. Hart. No. 1,158,208; Oct. 26; Gaz. vol. 219; p. 1126.

Atomizer. H. A. Griue. No. 1,156,840; Oct. 12; Gaz. vol. 219; p. 553.

Automobile automatic control. J. J. Curry. No. 1,156,760; Oct. 12; Gaz. vol. 219; p. 525.

Automobile baggage-carrier. J. B. Marquis. No. 1,156,539; Oct. 12; Gaz. vol. 219; p. 447.

Automobile baggage-carrier. J. B. Marquis. No. 1,156,540; Oct. 12; Gaz. vol. 219; p. 448.

Automobile-bed. T. F. Schaick. No. 1,156,631; Oct. 12; Gaz. vol. 219; p. 480.

Automobile-bodies, Disappearing top for. C. L. Anderson. No. 1,156,738; Oct. 12; Gaz. vol. 219; p. 518.

Automobile-body. J. E. Manzel and J. A. Lyons. No. 1,155,941; Oct. 5; Gaz. vol. 219; p. 213.

Automobile combination-hood. D. M. Livingston. No. 1,156,017; Oct. 5; Gaz. vol. 219; p. 240.

Automobile-cover. W. L. McIntyre. No. 1,157,115; Oct. 19; Gaz. vol. 219; p. 680.

Automobile door-operating mechanism. W. G. Sodt. No. 1,157,128; Oct. 19; Gaz. vol. 219; p. 685.

Automobile-fender. J. M. Kissel. No. 1,155,933; Oct. 5; Gaz. vol. 219; p. 211.

Automobile-fender. W. F. Perez. No. 1,157,251; Oct. 19; Gaz. vol. 219; p. 730.

Automobile-fender. R. Throckmorton. No. 1,157,460; Oct. 19; Gaz. vol. 219; p. 803.

Automobile hood-catch. T. J. Kehoe. No. 1,157,004; Oct. 19; Gaz. vol. 219; p. 641.

Automobile-jack. A. Peteler. No. 1,158,272; Oct. 26; Gaz. vol. 219; p. 1148.

Automobile-jack. H. A. Timm. No. 1,156,945; Oct. 19; Gaz. vol. 219; p. 619.

Automobile-lock. C. E. C. Edey. No. 1,155,902; Oct. 5; Gaz. vol. 219; p. 201.

Automobile-lock. J. A. Murphey and F. S. Thompson. No. 1,156,615; Oct. 12; Gaz. vol. 219; p. 474.

Automobile running-board seat. W. F. Huschle, Jr. No. 1,158,223; Oct. 26; Gaz. vol. 219; p. 1131.
Automobile-signal. T. Klemp. No. 1,155,934; Oct. 5; Gaz. vol. 219; p. 211.
Automobile-signal. G. F. A. McDougall. No. 1,157,561; Oct. 19; Gaz. vol. 219; p. 836.
Automobile steering-gear. W. W. Annable. No. 1,158,360; Oct. 26; Gaz. vol. 219; p. 1179.
Automobile steering mechanism. J. P. Law. No. 1,157,628; Oct. 19; Gaz. vol. 219; p. 857.
Automobile steering-wheel, Heated. R. M. Shultz. No. 1,156,637; Oct. 12; Gaz. vol. 219; p. 483.
Automobile trailer-coupling. J. A. Scharf. No. 1,157,590; Oct. 19; Gaz. vol. 219; p. 845.
Automobile wind-shields, Clearing device for. F. N. Bunnell. No. 1,157,673; Oct. 26; Gaz. vol. 219; p. 939.
Automobiles and other vehicles, Apparatus for washing. W. F. Saunders. No. 1,158,079; Oct. 26; Gaz. vol. 219; p. 1081.
Automobiles and the like, Adjustable steering-column for. C. E. Glenn. No. 1,158,202; Oct. 26; Gaz. vol. 219; p. 1124.
Automobiles, Differential mechanism for. A. S. Maniscalco. No. 1,157,319; Oct. 19; Gaz. vol. 219; p. 753.
Automobiles, Electric heater for use in connection with water-cooled gasolene-. G. P. Metcalf. No. 1,155,599; Oct. 5; Gaz. vol. 219; p. 95.
Automobiles, Emergency-windlass for. O. H. Willard. No. 1,156,648; Oct. 12; Gaz. vol. 219; p. 487.
Automobiles, Inclosure for. C. F. and J. Kurtz. No. 1,156,154; Oct. 12; Gaz. vol. 219; p. 314.
Automobiles, Manifold-valve lock for. J. H. Dugan and M. N. Smith. No. 1,157,929; Oct. 26; Gaz. vol. 219; p. 1026.
Automobiles, Regulator for drop-windows for closed. F. B. Clement. No. 1,157,677; Oct. 26; Gaz. vol. 219; p. 940.
Autosled. K. Belk6. No. 1,155,786; Oct. 5; Gaz. vol. 219; p. 161.
Autotractor. C. L. Best. No. 1,158,114; Oct. 26; Gaz. vol. 219; p. 1093.
Awning, Chair-. A. Myers. No. 1,155,366; Oct. 5; Gaz. vol. 219; p. 15.
Axle and wheel-mounting, Vehicle. S. Tatlow. No. 1,157,061; Oct. 19; Gaz. vol. 219; p. 662.
Axle-lubricator. P. Burrill. No. 1,155,790; Oct. 5; Gaz. vol. 219; p. 163.
Azimuth and other indicator. G. S. Tiffany. No. 1,156,113; Oct. 12; Gaz. vol. 219; p. 300.
Baby-chair and perambulator. S. F. Withrow. No. 1,155,855; Oct. 5; Gaz. vol. 219; p. 186.
Bag: *See*—
Feed-bag. Ice-cream-cone bag.
Grain-bag. Paper bag.
Bag. E. Hernhuter. No. 1,157,388; Oct. 19; Gaz. vol. 219; p. 778.
Bag-cleaning apparatus. J. G. Ellendt. No. 1,156,280; Oct. 12; Gaz. vol. 219; p. 355.
Bag-fastener. F. A. Fuller. No. 1,156,003; Oct. 5; Gaz. vol. 219; p. 234.
Bag-fastener. F. A. Fuller. No. 1,156,004; Oct. 5; Gaz. vol. 219; p. 235.
Bag-holder. F. C. Vonderahe. No. 1,157,013; Oct. 26; Gaz. vol. 219; p. 1057.
Bag-holder. G. J. Wunder. No. 1,157,138; Oct. 19; Gaz. vol. 219; p. 688.
Bag-lock. A. Bonime. No. 1,157,364; Oct. 19; Gaz. vol. 219; p. 769.
Bag lock, Hand-. M. Brooks and H. B. Freeman. No. 1,155,880; Oct. 5; Gaz. vol. 219; p. 194.
Bag-tie. A. M. Bates. No. 1,156,265; Oct. 12; Gaz. vol. 219; p. 351.
Bait, Artificial. A. Burkman. No. 1,155,883; Oct. 5; Gaz. vol. 219; p. 195.
Bait-hook. J. G. Henzel. No. 1,155,923; Oct. 5; Gaz. vol. 219; p. 208.
Baker, Steam-. E. L. Thomas. No. 1,156,723; Oct. 12; Gaz. vol. 219; p. 513.
Baler, Hay-. I. E. Ward. No. 1,156,828; Oct. 12; Gaz. vol. 219; p. 548.
Baling-press. J. H. Best. No. 1,155,543; Oct. 5; Gaz. vol. 219; p. 77.
Ball: *See*—
Bowling-ball. Game-ball.
Ball rack and carrier, Combined triangle. J. A. Smith. No. 1,157,053; Oct. 19; Gaz. vol. 219; p. 659.
Bandeau for hats and the like. F. E. English. No. 1,157,093; Oct. 19; Gaz. vol. 219; p. 672.
Bank, Savings-. C. Fisher. No. 1,157,303; Oct. 19; Gaz. vol. 219; p. 748.
Bar: *See*—
Angle-bar. Dolly-bar.
Detector-bar. Grate-bar.
Barbecue-furnace. J. G. Gordon. No. 1,156,773; Oct. 12; Gaz. vol. 219; p. 529.
Barrel. J. O. Ellinger. No. 1,155,344; Oct. 5; Gaz. vol. 219; p. 7.
Barrel-agitator. H. J. Brierley. No. 1,156,050; Oct. 12; Gaz. vol. 219; p. 278.
Barrel feeding and arresting device. H. Reininger. No. 1,158,289; Oct. 26; Gaz. vol. 219; p. 1155.
Barrel-jack. R. M. Kinnard. No. 1,158,235; Oct. 26; Gaz. vol. 219; p. 1135.
Barrette. W. S. Bechtold. No. 1,155,399; Oct. 5; Gaz. vol. 219; p. 26.
Basket. H. P. Gross. No. 1,157,528; Oct. 19; Gaz. vol. 219; p. 827.
Basket, Metallic. E. A. Risher. No. 1,157,045; Oct. 19; Gaz. vol. 219; p. 656.
Bath-cabinet. J. N. Brandelle. No. 1,157,842; Oct. 26; Gaz. vol. 219; p. 998.
Batteries for flash-lights and other purposes, Manufacture of dry. F. D. Harper. No. 1,157,531; Oct. 19; Gaz. vol. 219; p. 828.
Batteries, Mechanism for regulating the charging-rate of storage. W. Noble. No. 1,157,028; Oct. 19; Gaz. vol. 219; p. 650.
Batteries, Negative-pole plate for secondary or storage. G. M. Howard. No. 1,156,680; Oct. 12; Gaz. vol. 219; p. 500.
Battery: *See*—
Primary battery.
Bean-snipper. F. Wegner. No. 1,155,454; Oct. 5; Gaz. vol. 219; p. 45.
Bean-snipper. F. Wegner. No. 1,155,455; Oct. 5; Gaz. vol. 219; p. 45.
Bearing. W. H. Bunting. No. 1,158,369; Oct. 26; Gaz. vol. 219; p. 1182.
Bearing. J. L. Hiller. No. 1,157,939; Oct. 26; Gaz. vol. 219; p. 1031.
Bearing. L. J. Kozub. No. 1,156,695; Oct. 12; Gaz. vol. 219; p. 503.
Bearing, Adjustable. M. F. Day. No. 1,157,851; Oct. 26; Gaz. vol. 219; p. 1000.
Bearing, Ball-. M. E. Clark. No. 1,158,106; Oct. 26; Gaz. vol. 219; p. 1091.
Bearing, Ball-. M. A. Scuterud. No. 1,156,320; Oct. 12; Gaz. vol. 219; p. 368.
Bearing, Calf and bull wheel. R. C. Baker. No. 1,155,539; Oct. 5; Gaz. vol. 219; p. 76.
Bearing, Crank-pin. G. Bourcier. No. 1,157,975; Oct. 26; Gaz. vol. 219; p. 1045.
Bearing for flow-meters. L. A. Sheldon. No. 1,157,331; Oct. 19; Gaz. vol. 219; p. 757.
Bearing for peanut-pickers. T. M. Lilliston. No. 1,156,910; Oct. 19; Gaz. vol. 219; p. 608.
Bearing, Hydraulic thrust-. O. Jacobsen. No. 1,157,875; Oct. 26; Gaz. vol. 219; p. 1008.
Bearing, Roller-. E. B. and W. N. Barnhardt. No. 1,156,516; Oct. 12; Gaz. vol. 219; p. 440.
Bearing, Roller side. C. B. Patch. No. 1,156,094; Oct. 12; Gaz. vol. 219; p. 294.
Bearing, Self-lubricating shaft-. I. E. Farr. No. 1,156,071; Oct. 12; Gaz. vol. 219; p. 286.
Bearing, Side. C. B. Patch. No. 1,155,436; Oct. 5; Gaz. vol. 219; p. 39.
Bearing, Vertical. W. J. A. London. No. 1,157,644; Oct. 19; Gaz. vol. 219; p. 862.
Bed. A. M. Bonhard. No. 1,156,833; Oct. 12; Gaz. vol. 219; p. 550.
Bed, Adjustable. J. H. Hendrick. No. 1,156,359; Oct. 12; Gaz. vol. 219; p. 383.
Bed-bottom. A. Magyar. No. 1,158,254; Oct. 26; Gaz. vol. 219; p. 1141.
Bed-bottom. R. C. Odell. No. 1,157,798; Oct. 26; Gaz. vol. 219; p. 982.
Bed, Folding. M. Szinak. No. 1,157,453; Oct. 19; Gaz. vol. 219; p. 800.
Bed-lounge, Folding. A. Knosher. No. 1,157,700; Oct. 26; Gaz. vol. 219; p. 949.
Bed-pan. I. Poindexter. No. 1,156,172; Oct. 12; Gaz. vol. 219; p. 320.
Bedpost-bracket. A. Sondack. No. 1,155,764; Oct. 5; Gaz. vol. 219; p. 152.
Bed-support. S. J. Wester. No. 1,156,731; Oct. 12; Gaz. vol. 219; p. 515.
Beds, Holding arrangement for children's. J. W. Thayer. No. 1,156,381; Oct. 12; Gaz. vol. 219; p. 392.
Bedstead corner-fastening. G. W. Comee. No. 1,156,059; Oct. 12; Gaz. vol. 219; p. 281.
Bell, Signal-. J. Charland and R. A. O'Connor. No. 1,157,508; Oct. 19; Gaz. vol. 219; p. 819.
Belt and belt-fastener. W. L. Bliss. No. 1,157,499; Oct. 19; Gaz. vol. 219; p. 816.
Belt, Catamenial. E. Johnson. No. 1,155,659; Oct. 5; Gaz. vol. 219; p. 116.
Belt-idler. W. J. Armstrong. No. 1,156,386; Oct. 12; Gaz. vol. 219; p. 395.
Bench: *See*—
Vise-bench.
Benzol-purifying apparatus. H. Koppers. No. 1,157,988; Oct. 26; Gaz. vol. 219; p. 1049.
Bicycles, Motor attachment for. G. S. Schunk. No. 1,158,311; Oct. 26; Gaz. vol. 219; p. 1163.
Billiard and pool cue, Spring. J. J. Teague. No. 1,157,909; Oct. 26; Gaz. vol. 219; p. 1022.
Billiard-cue. D. F. Whitcomb. No. 1,155,980; Oct. 5; Gaz. vol. 219; p. 227.
Billiard-table. A. F. Hjort. No. 1,157,940; Oct. 26; Gaz. vol. 219; p. 1032.
Bin. H. Karp. No. 1,156,294; Oct. 12; Gaz. vol. 219; p. 360.
Binder. R. J. Davis. No. 1,156,467; Oct. 12; Gaz. vol. 219; p. 425.
Binder, Loose-leaf. J. Schade, Jr. No. 1,157,184; Oct. 19; Gaz. vol. 219; p. 705.

Binder, Temporary. L. F. Lewis. No. 1,156,160; Oct. 12; Gaz. vol. 219; p. 316.
Binders, Shock-former attachment for. J. E. Miller. No. 1,155,603; Oct. 5; Gaz. vol. 219; p. 97.
Binding and suspending device. S. G. Herrmann. No. 1,157,107; Oct. 19; Gaz. vol. 219; p. 677.
Bird-trap. J. Torony. No. 1,158,012; Oct. 26; Gaz. vol. 219; p. 1057.
Black finish. M. A. Atuesta. No. 1,157,283; Oct. 19; Gaz. vol. 219; p. 741.
Blanket-holder. C. M. Berdan. No. 1,156,740; Oct. 12; Gaz. vol. 219; p. 519.
Blankets, Adjustable breast-fastening for. G. C. Rasch. No. 1,155,371; Oct. 5; Gaz. vol. 219; p. 16.
Block: *See*—
Paving-block.
Block-signal system. L. A. Hawkins. No. 1,157,104; Oct. 19; Gaz. vol. 219; p. 676.
Blocking in gold and other metallic leaf. T. Hooley. No. 1,155,574; Oct. 5; Gaz. vol. 219; p. 87.
Blocking in gold and other metallic leaf, Press for. T. Hooley. No. 1,155,573; Oct. 5; Gaz. vol. 219; p. 86.
Blow-out patch. L. H. Israel. No. 1,155,577; Oct. 5; Gaz. vol. 219; p. 87.
Blower unit for boilers. J. Magee. No. 1,155,499; Oct. 5; Gaz. vol. 219; p. 62.
Board: *See*—
Drawing-board. Spring-board.
Game-board. Tracker-board.
Ironing-board. Wall-board.
Lath-board. Washboard.
Boat. J. J. Ryan and C. C. Smith. No. 1,157,423; Oct. 19; Gaz. vol. 219; p. 791.
Bobbin. G. H. Benjamin. No. 1,156,579; Oct. 12; Gaz. vol. 219; p. 462.
Bobbin-case and tension. C. L. Miller and F. B. Freeman. No. 1,157,245; Oct. 19; Gaz. vol. 219; p. 727.
Boiler: *See*—
Water-tube boiler.
Boiler. T. J. Shea. No. 1,157,813; Oct. 26; Gaz. vol. 219; p. 987.
Boiler. S. Thurstensen. No. 1,157,736; Oct. 26; Gaz. vol. 219; p. 961.
Boiler-circulator. A. McNab. No. 1,155,832; Oct. 5; Gaz. vol. 219; p. 178.
Boiler feed-water regulator. W. J. Stevens. No. 1,156,941; Oct. 19; Gaz. vol. 219; p. 618.
Boiler-feeder. J. M. Abbott. No. 1,157,357; Oct. 19; Gaz. vol. 219; p. 766.
Boiler furnace and feed-water heater. J. R. Surrell. (Reissue.) No. 14,002; Oct. 26; Gaz. vol. 219; p. 1203.
Boiler furnace and feed-water heater. J. R. Surrell. (Reissue.) No. 14,003; Oct. 26; Gaz. vol. 219; p. 1207.
Boiler safety attachment. C. W. Sullivan. No. 1,157,058; Oct. 19; Gaz. vol. 219; p. 660.
Boiler-tube cleaner. F. W. Linaker. No. 1,157,114; Oct. 19; Gaz. vol. 219; p. 680.
Boiler-tube retarder. D. E. Erickson. No. 1,156,281; Oct. 12; Gaz. vol. 219; p. 355.
Boll breaking or crushing machine. J. T. South. No. 1,157,010; Oct. 26; Gaz. vol. 219; p. 1056.
Boll-weevil-removing machine. J. R. Christopher. No. 1,156,208; Oct. 12; Gaz. vol. 219; p. 331.
Bolster-stake, Folding. W. E. Rose. No. 1,157,584; Oct. 19; Gaz. vol. 219; p. 843.
Bolt: *See*—
Burglar-alarm bolt.
Bolt-anchor. H. W. Pleister. No. 1,155,613; Oct. 5; Gaz. vol. 219; p. 100.
Bolt-anchor. H. W. Pleister. No. 1,155,614; Oct. 5; Gaz. vol. 219; p. 100.
Bolt-anchor. H. W. Pleister. No. 1,155,615; Oct. 5; Gaz. vol. 219; p. 100.
Book-cover. G. Seelman, Jr. No. 1,157,810; Oct. 26; Gaz. vol. 219; p. 985.
Book-lock. W. E. S. Strong and N. Macy. No. 1,156,641; Oct. 12; Gaz. vol. 219; p. 484.
Book, Loose-leaf. J. W. Myatt. No. 1,158,262; Oct. 26; Gaz. vol. 219; p. 1144.
Book, Manifolding-. E. Z. Lewis. No. 1,156,411; Oct. 12; Gaz. vol. 219; p. 403.
Book, Manifolding sales-. R. R. Barber. No. 1,157,142; Oct. 19; Gaz. vol. 219; p. 689.
Book, Manifolding sales-. E. K. Bottle. No. 1,157,290; Oct. 19; Gaz. vol. 219; p. 743.
Book-pad clamp, Sales-. G. H. Baughman and F. J. Semradek. No. 1,156,876; Oct. 19; Gaz. vol. 219; p. 595.
Book, Play-. M. C. Robinson. No. 1,155,959; Oct. 5; Gaz. vol. 219; p. 221.
Books, Thumb-piece for manifold sales or order. O. S. Gauch. No. 1,157,377; Oct. 19; Gaz. vol. 219; p. 773.
Boot and shoe. C. A. Sharp. No. 1,157,330; Oct. 19; Gaz. vol. 219; p. 757.
Boot or shoe upper, Machine for shaping the materials of the rear portion of a. J. Gouldbourn, A. Bates, and A. E. Jerram. No. 1,156,897; Oct. 19; Gaz. vol. 219; p. 603.
Bottle. B. S. Alsop. No. 1,155,833; Oct. 5; Gaz. vol. 219; p. 3.
Bottle and jar lock. L. M. Mills. No. 1,155,947; Oct. 5; Gaz. vol. 219; p. 216.
Bottle and syringe, Combined hot-water. M. E. Starr. No. 1,157,439; Oct. 19; Gaz. vol. 219; p. 796.
Bottle-capping machine. J. J. Gaynor. No. 1,155,908; Oct. 5; Gaz. vol. 219; p. 203.
Bottle-closure. A. H. Breslove and A. Wetzig. No. 1,155,639; Oct. 5; Gaz. vol. 219; p. 109.
Bottle-closure. O. Spahr. No. 1,156,562; Oct. 12; Gaz. vol. 219; p. 456.
Bottle cover, Milk-. P. Ferrari. No. 1,156,989; Oct. 19; Gaz. vol. 219; p. 636.
Bottle-drainer. C. H. Taylor. No. 1,157,454; Oct. 19; Gaz. vol. 219; p. 801.
Bottle holder, Nursing-. C. Klauberg. No. 1,158,059; Oct. 26; Gaz. vol. 219; p. 1074.
Bottle, Hot-water. W. M. Brown. No. 1,156,054; Oct. 12; Gaz. vol. 219; p. 279.
Bottle, Non-refillable. F. W. Cassidy. No. 1,156,346; Oct. 12; Gaz. vol. 219; p. 378.
Bottle, Non-refillable. C. F. Jackson. No. 1,156,360; Oct. 12; Gaz. vol. 219; p. 384.
Bottle, Non-refillable. F. Kuhles. No. 1,157,164; Oct. 19; Gaz. vol. 219; p. 697.
Bottle, Non-refillable. N. Martinovich. No. 1,157,996; Oct. 26; Gaz. vol. 219; p. 1051.
Bottle, Non-refillable. C. C. Prall. No. 1,155,616; Oct. 5; Gaz. vol. 219; p. 100.
Bottle, Non-refillable. F. P. Smith. No. 1,157,127; Oct. 19; Gaz. vol. 219; p. 684.
Bottle, Non-refillable. W. F. Thompson. No. 1,157,735; Oct. 26; Gaz. vol. 219; p. 961.
Bottle or jar closure, Milk. H. G. Aldridge. No. 1,157,282; Oct. 19; Gaz. vol. 219; p. 740.
Bottle-stopper. G. F. Elliott. No. 1,157,518; Oct. 19; Gaz. vol. 219; p. 823.
Bottle-stopper, Non-removable. L. J. Mazoyer. No. 1,156,915; Oct. 19; Gaz. vol. 219; p. 609.
Bottom, Auxiliary. K. Warming. No. 1,157,132; Oct. 19; Gaz. vol. 219; p. 686.
Bow-socket and rest-clamp, Adjustable. G. E. Robinson. No. 1,156,494; Oct. 12; Gaz. vol. 219; p. 433.
Bowling-ball with inwardly-opening door. J. W. Hyatt. No. 1,156,143; Oct. 12; Gaz. vol. 219; p. 311.
Box: *See*—
Car journal-box. Mail-box.
Cash-box. Mailing-box.
Cigarette-box. Match-box.
Cigarette and match box. Meter-box.
Collapsible box. Miter-box.
Egg-box. Paper box.
Fire-alarm box. Paper-board box.
Folded-blank box. Sound-box.
Folding box. Talking-machine sound-box.
Hat-box. Type-mold box.
Journal-box. Vanity-box.
Letter-box.
Box. S. Bachmann. No. 1,157,285; Oct. 19; Gaz. vol. 219; p. 741.
Box. F. Kaye and R. W. Rogers. No. 1,156,531; Oct. 12; Gaz. vol. 219; p. 445.
Box-machines, Nailing mechanism for. W. X. Stevens. No. 1,156,109; Oct. 12; Gaz. vol. 219; p. 299.
Box-making machine. C. Holly. No. 1,158,211; Oct. 26; Gaz. vol. 219; p. 1127.
Boxes and containers, Locking device for. I. B. Keller. No. 1,157,942; Oct. 26; Gaz. vol. 219; p. 1032.
Brace: *See*—
Clamp-brace. Rail-brace.
Bracket: *See*—
Bedpost-bracket. Outlet-box bracket.
Car-door bracket. Radiator-bracket.
Curtain-bracket. Tag-bracket.
Lamp-bracket.
Bracket. B. A. Berger. No. 1,156,129; Oct. 12; Gaz. vol. 219; p. 306.
Bracket. R. Kiesel. No. 1,157,787; Oct. 26; Gaz. vol. 219; p. 978.
Brake: *See*—
Car-brake. Light and load brake.
Coaster-brake. Reel-brake.
Flying-machine brake. Wagon-brake.
Brake and transmission rods, Coupling for. L. Cottingham. No. 1,157,618; Oct. 19; Gaz. vol. 219; p. 854.
Brake mechanism. L. A. Hoerr. No. 1,156,479; Oct. 12; Gaz. vol. 219; p. 427.
Brake mechanism. L. A. Hoerr. No. 1,156,480; Oct. 12; Gaz. vol. 219; p. 427.
Brake-rod, Adjustable. D. C. Lough. No. 1,156,789; Oct. 12; Gaz. vol. 219; p. 534.
Brake-shoe. M. P. Reynolds. No. 1,155,685; Oct. 5; Gaz. vol. 219; p. 126.
Brake-shoe back. F. W. Sargent. No. 1,157,183; Oct. 19; Gaz. vol. 219; p. 704.
Brake-shoe, Composition-body. H. Jones. No. 1,156,689; Oct. 12; Gaz. vol. 219; p. 501.
Brake systems, Slack take-up for fluid-pressure-. G. Christenson. No. 1,158,177; Oct. 26; Gaz. vol. 219; p. 1116.
Brake-valve device. B. S. Aikman. No. 1,156,871; Oct. 19; Gaz. vol. 219; p. 593.
Brakes or the like, Pump and pressure-reservoir for. C. J. Spencer and J. W. Dawson. No. 1,158,007; Oct. 26; Gaz. vol. 219; p. 1055.
Braking system applicable to long freight-trains with loose couplings, Continuous. C. H. V. Sabouret. No. 1,158,300; Oct. 26; Gaz. vol. 219; p. 1158.

Branding-iron. J. C. Garner and W. Gutman. No. 1,157,687; Oct. 26; Gaz. vol. 219; p. 944.
Brassière, Bust-reducer. M. Perillat. No. 1,156,808; Oct. 12; Gaz. vol. 219; p. 540.
Bread and spreading butter or the like thereon, Machine for cutting or slicing. F. von Eulenfeld. No. 1,158,014; Oct. 26; Gaz. vol. 219; p. 1057.
Bread and the like, Finishing. A. S. Wahl. No. 1,155,530; Oct. 5; Gaz. vol. 219; p. 72.
Bread-mixer. W. P. Nelson. No. 1,157,576; Oct. 19; Gaz. vol. 219; p. 841.
Bread-molding machine. J. A. Schreiber. No. 1,156,185; Oct. 12; Gaz. vol. 219; p. 324.
Breast-drill. O. D. Hapgood. No. 1,157,218; Oct. 19; Gaz. vol. 219; p. 717.
Breast-shield. A. C. Barrett. No. 1,156,202; Oct. 12; Gaz. vol. 219; p. 329.
Breastwork, Portable. R. W. Davis. No. 1,155,895; Oct. 5; Gaz. vol. 219; p. 198.
Brick, Forming paving-. J. G. Adderson. No. 1,156,574; Oct. 12; Gaz. vol. 219; p. 461.
Brick-machine. H. J. Gerbsch. No. 1,157,862; Oct. 26; Gaz. vol. 219; p. 1004.
Brickmaking process and machine. E. H. Rodgers. No. 1,157,421; Oct. 19; Gaz. vol. 219; p. 790.
Bridge. J. B. Strauss. No. 1,157,449; Oct. 19; Gaz. vol. 219; p. 799.
Bridge. J. B. Strauss. No. 1,157,450; Oct. 19; Gaz. vol. 219; p. 799.
Bridge, Swing-. J. B. Strauss. No. 1,158,084; Oct. 26; Gaz. vol. 219; p. 1083.
Bridle-bit curber. J. O. Fowler and G. W. Le Compte. No. 1,158,126; Oct. 26; Gaz. vol. 219; p. 1098.
Bridle, Overdrive-. B. F. Cayford. No. 1,157,207; Oct. 19; Gaz. vol. 219; p. 712.
Briquets and other product composed of bonded divided material. D. H. Bibb. No. 1,158,365; Oct. 26; Gaz. vol. 219; p. 1181.
Bronzing-machine. M. Smith. No. 1,157,434; Oct. 19; Gaz. vol. 219; p. 795.
Broom. L. Blackard. No. 1,157,074; Oct. 19; Gaz. vol. 219; p. 666.
Broom. R. A. Houston. No. 1,157,108; Oct. 19; Gaz. vol. 219; p. 677.
Broom and tool holder. M. Minnich. No. 1,156,168; Oct. 12; Gaz. vol. 219; p. 319.
Brush-holder, Reversible. G. L. Halvardson. No. 1,155,921; Oct. 5; Gaz. vol. 219; p. 208.
Brush, Shaving-. T. R. Wirsing. No. 1,155,859; Oct. 5; Gaz. vol. 219; p. 187.
Brush, Tooth-. A. C. Booth. No. 1,155,878; Oct. 5; Gaz. vol. 219; p. 193.
Bubbling fountain. L. N. Bryan. No. 1,158,104; Oct. 26; Gaz. vol. 219; p. 1090.
Buffer. A. R. White. No. 1,158,350; Oct. 26; Gaz. vol. 219; p. 1175.
Buffing-machine. W. A. Reed and J. Foley. No. 1,157,725; Oct. 26; Gaz. vol. 219; p. 958.
Building, Metallic. W. W. Taylor. No. 1,155,969; Oct. 5; Gaz. vol. 219; p. 223.
Bullet, Mushroom-. J. B. Duncan. No. 1,155,901; Oct. 5; Gaz. vol. 219; p. 201.
Bung. B. J. Schmelzer. No. 1,157,906; Oct. 26; Gaz. vol. 219; p. 1021.
Bunsen burner. L. J. Strause and O. Spahr. No. 1,157,734; Oct. 26; Gaz. vol. 219; p. 961.
Burglar-alarm. C. W. Manning and A. C. M. Gould. No. 1,158,140; Oct. 26; Gaz. vol. 219; p. 1103.
Burglar-alarm and lock, Combined. A. Hamelin. No. 1,157,863; Oct. 26; Gaz. vol. 219; p. 1005.
Burglar-alarm bolt. T. L. Pidgeon. No. 1,156,809; Oct. 12; Gaz. vol. 219; p. 540.
Burglar-alarm system. S. D. Tomaso. No. 1,157,601; Oct. 19; Gaz. vol. 219; p. 848.
Burglar and fire alarm. M. J. Ryan. No. 1,156,497; Oct. 12; Gaz. vol. 219; p. 434.
Burglar, fire, and general alarm, Electric. H. W. Olney. No. 1,158,146; Oct. 26; Gaz. vol. 219; p. 1104.
Burner: *See*—
Bunsen burner. Hydrocarbon-burner.
Centrifugal burner. Oil-burner.
Gas-generating burner. Stove-burner.
Burner. R. R. James. No. 1,156,845; Oct. 12; Gaz. vol. 219; p. 555.
Burner attachment. D. Davis. No. 1,157,511; Oct. 19; Gaz. vol. 219; p. 820.
Burner for gas and similar radiators, stoves, and the like. A. B. Walker. No. 1,155,630; Oct. 5; Gaz. vol. 219; p. 105.
Bushing. L. A. Biggar. No. 1,156,582; Oct. 12; Gaz. vol. 219; p. 463.
Butter-mold. F. H. Delaney. No. 1,157,766; Oct. 26; Gaz. vol. 219; p. 970.
Button and skirt-supporter, Interchangeable collar-. T. S. Stewart. No. 1,157,818; Oct. 26; Gaz. vol. 219; p. 988.
Button-attaching-machine escapement. F. R. White. No. 1,157,743; Oct. 26; Gaz. vol. 219; p. 964.
Button, Collar-. R. N. Saunders. No. 1,155,962; Oct. 5; Gaz. vol. 219; p. 221.
Button-container. F. C. Vetter. No. 1,156,644; Oct. 12; Gaz. vol. 219; p. 485.
Button-fastening machine. A. H. De Voe. No. 1,157,621; Oct. 19; Gaz. vol. 219; p. 854.
Button-fixture. A. Holter. No. 1,156,231; Oct. 12; Gaz. vol. 219; p. 339.
Buttons, Making cuff-. M. L. Robbins. No. 1,155,837; Oct. 5; Gaz. vol. 219; p. 180.
Buttonhole-marking machine. W. T. Benjamin. No. 1,156,580; Oct. 12; Gaz. vol. 219; p. 463.
Cabinet, Accounts-delivery. N. Olsen. No. 1,155,954; Oct. 5; Gaz. vol. 219; p. 219.
Cabinet, Rubber-stamp. H. W. Roberts. No. 1,155,509; Oct. 5; Gaz. vol. 219; p. 65.
Cabinet, Therapeutic. B. Leslie. No. 1,158,382; Oct. 26; Gaz. vol. 219; p. 1187.
Cabinet, Towel-. E. M. Mikkelsen. No. 1,156,917; Oct. 19; Gaz. vol. 219; p. 610.
Cabinet, Towel-. J. Rousso. No. 1,157,046; Oct. 19; Gaz. vol. 219; p. 656.
Cable-carrier apparatus. F. R. Taisey. No. 1,157,193; Oct. 19; Gaz. vol. 219; p. 708.
Cable-carrier system. F. R. Taisey. No. 1,157,190; Oct. 19; Gaz. vol. 219; p. 706.
Cable-carrier system. F. R. Taisey. No. 1,157,191; Oct. 19; Gaz. vol. 219; p. 707.
Cable-carrier system. F. R. Taisey. No. 1,157,192; Oct. 19; Gaz. vol. 219; p. 707.
Cable-making apparatus. F. Brückerbohm. No. 1,157,500; Oct. 19; Gaz. vol. 219; p. 817.
Calcining and clinkering. A. Carnie. No. 1,158,371; Oct. 26; Gaz. vol. 219; p. 1183.
Calcining-furnace. A. Carnie. No. 1,158,372; Oct. 26; Gaz. vol. 219; p. 1184.
Calcium cyanamid, Hydrating commercial. K. F. Cooper. No. 1,155,797; Oct. 5; Gaz. vol. 219; p. 165.
Calcium hypochlorite, Making. H. K. Moore. No. 1,155,605; Oct. 5; Gaz. vol. 219; p. 98.
Calculating-machine. H. Cordt. No. 1,158,374; Oct. 26; Gaz. vol. 219; p. 1184.
Calculating-machine. F. L. Martindale. No. 1,157,320; Oct. 19; Gaz. vol. 219; p. 753.
Calculating-machine. P. Reiss. No. 1,156,313; Oct. 12; Gaz. vol. 219; p. 366.
Calculating-machines, Duplicating attachment for. E. F. Mumm. No. 1,157,635; Oct. 19; Gaz. vol. 219; p. 859.
Calculator. C. F. Backstrand and C. M. Hoag. No. 1,157,609; Oct. 19; Gaz. vol. 219; p. 851.
Calculator. G. M. Fritz. No. 1,156,770; Oct. 12; Gaz. vol. 219; p. 528.
Calendar. H. E. Shedd. No. 1,158,317; Oct. 26; Gaz. vol. 219; p. 1165.
Caliper, Micrometer-. H. A. Rebelski. No. 1,155,440; Oct. 5; Gaz. vol. 219; p. 40.
Calipers. C. Roth. No. 1,156,100; Oct. 12; Gaz. vol. 219; p. 296.
Calipers, Gear-teeth. T. Kopinski. No. 1,156,694; Oct. 12; Gaz. vol. 219; p. 502.
Camera. H. W. Johnson. No. 1,156,362; Oct. 12; Gaz. vol. 219; p. 385.
Camera attachment. R. Bowen. No. 1,158,025; Oct. 26; Gaz. vol. 219; p. 1062.
Camera bulb or contact-release, Automatic mechanism for operating. D. C. Wiseley. No. 1,155,981; Oct. 5; Gaz. vol. 219; p. 227.
Camera, Multiplying-. J. W. Anderson. No. 1,158,019; Oct. 26; Gaz. vol. 219; p. 1060.
Camera provided with automatic fluid-treating mechanism. F. E. Oller. No. 1,158,386; Oct. 26; Gaz. vol. 219; p. 1189.
Camera-support. J. H. Klenck. No. 1,156,296; Oct. 12; Gaz. vol. 219; p. 360.
Cameras, Device for waterproofing. W. S. Stearns. No. 1,156,441; Oct. 12; Gaz. vol. 219; p. 413.
Camp equipment. T. F. Wilson. No. 1,158,356; Oct. 26; Gaz. vol. 219; p. 1177.
Camp-table. J. A. Thornton and W. A. Settle. No. 1,155,971; Oct. 5; Gaz. vol. 219; p. 224.
Can: *See*—
Asparagus-can. Shipping-can.
Containing and dispensing can.
Ice-can.
Can-body. J. M. Young. No. 1,157,278; Oct. 19; Gaz. vol. 219; p. 739.
Can-closure. B. Heller. No. 1,156,777; Oct. 12; Gaz. vol. 219; p. 531.
Can holder, Oil-. C. W. Beck. No. 1,158,361; Oct. 26; Gaz. vol. 219; p. 1179.
Can-making machine. J. L. Neel. No. 1,156,619; Oct. 12; Gaz. vol. 219; p. 476.
Can or receptacle. P. Wall. No. 1,157,269; Oct. 19; Gaz. vol. 219; p. 736.
Can-tipping machine, Rotary. H. E. Shaw. No. 1,156,634; Oct. 12; Gaz. vol. 219; p. 482.
Cans, Stacking. W. E. Jones, Jr. No. 1,156,690; Oct. 12; Gaz. vol. 219; p. 501.
Canning machine, Fish. T. Gowen. No. 1,157,527; Oct. 19; Gaz. vol. 219; p. 826.
Cane and like mill returner-bar, Sugar-. A. M. Lang. No. 1,156,012; Oct. 5; Gaz. vol. 219; p. 238.
Cane, Treating sugar-. T. Lee. No. 1,155,741; Oct. 5; Gaz. vol. 219; p. 144.
Caoutchouc or caoutchouc-like substances, Accelerating the vulcanization of natural or artificial. S. J. Peachey. No. 1,157,177; Oct. 19; Gaz. vol. 219; p. 702.
Cap. W. S. Coppers. No. 1,156,980; Oct. 19; Gaz. vol. 219; p. 632.

Cap. W. H. Vatcher and C. H. Melcher. No. 1,155,774; Oct. 5; Gaz. vol. 219; p. 155.
Cap, Bathing-. I. W. Litchfield. No. 1,156,238; Oct. 12; Gaz. vol. 219; p. 341.
Car, Armored motor-. J. Stankus. No. 1,155,450; Oct. 5; Gaz. vol. 219; p. 43.
Car-brake, Hand-operated. J. A. Noble. No. 1,156,849; Oct. 12; Gaz. vol. 219; p. 556.
Car brake, Mine-. H. D. Scott. No. 1,155,964; Oct. 5; Gaz. vol. 219; p. 222.
Car-braking means for gravity-yards and the like, Railway-. E. H. Frank. No. 1,157,622; Oct. 19; Gaz. vol. 219; p. 855.
Car construction, Dump-. R. V. Sage. No. 1,158,006; Oct. 26; Gaz. vol. 219; p. 1054.
Car-coupling. M. L. Blackman. No. 1,157,496; Oct. 19; Gaz. vol. 219; p. 815.
Car-coupling. T. E. Cox. No. 1,156,029; Oct. 5; Gaz. vol. 219; p. 244.
Car-coupling. J. Driscoll. No. 1,158,189; Oct. 26; Gaz. vol. 219; p. 1120.
Car-coupling. O. T. Gregg. No. 1,156,072; Oct. 12; Gaz. vol. 219; p. 286.
Car-coupling. O. T. Gregg. No. 1,156,073; Oct. 12; Gaz. vol. 219; p. 287.
Car-coupling. G. H. Putnam. No. 1,155,883; Oct. 5; Gaz. vol. 219; p. 125.
Car-door. W. L. Renner and M. A. Brown. No. 1,156,098; Oct. 12; Gaz. vol. 219; p. 295.
Car-door. J. W. Rumsey. (Reissue.) No. 13,992; Oct. 12; Gaz. vol. 219; p. 565.
Car door-actuating mechanism, General-service-. W. E. Morey. No. 1,155,430; Oct. 5; Gaz. vol. 219; p. 37.
Car door-actuating mechanism, General-service-. W. E. Morey. No. 1,157,803; Oct. 26; Gaz. vol. 219; p. 1016.
Car-door bracket. J. J. Byers. No. 1,156,587; Oct. 12; Gaz. vol. 219; p. 464.
Car-door gear. C. A. Lindström. No. 1,155,938; Oct. 5; Gaz. vol. 219; p. 212.
Car door, Grain-. M. A. Ruble and C. M. Stevens. No. 1,157,124; Oct. 19; Gaz. vol. 219; p. 684.
Car-door-operating mechanism. W. E. Harris. No. 1,155,922; Oct. 5; Gaz. vol. 219; p. 208.
Car-door track structure, Freight-. R. W. Burnett. No. 1,156,884; Oct. 19; Gaz. vol. 219; p. 598.
Car draft-plate, Railway-. H. J. Wrigley. No. 1,156,573; Oct. 12; Gaz. vol. 219; p. 460.
Car, Dump-. R. E. Cartzdafner. No. 1,157,147; Oct. 19; Gaz. vol. 219; p. 692.
Car, Dumping-. R. V. Sage and J. J. Tatum. No. 1,155,759; Oct. 5; Gaz. vol. 219; p. 150.
Car-fender. W. C. Abbott. No. 1,156,737; Oct. 12; Gaz. vol. 219; p. 517.
Car fender, Street-. R. H. Pogue. No. 1,155,682; Oct. 5; Gaz. vol. 219; p. 124.
Car, Fish-. C. E. Barba. No. 1,156,515; Oct. 12; Gaz. vol. 219; p. 440.
Car friction draft-gear, Railway-. J. F. O'Connor. No. 1,156,092; Oct. 12; Gaz. vol. 219; p. 293.
Car-haulage plant. F. W. Lovell. No. 1,155,748; Oct. 5; Gaz. vol. 219; p. 147.
Car, Heater-. J. P. Elmer. No. 1,156,988; Oct. 19; Gaz. vol. 219; p. 635.
Car-indicator. H. A. Humphrey. No. 1,155,817; Oct. 5; Gaz. vol. 219; p. 172.
Car insulation. A. G. Brown. No. 1,156,206; Oct. 12; Gaz. vol. 219; p. 331.
Car journal-box, Railway-. H. C. Stickel. No. 1,157,446; Oct. 19; Gaz. vol. 219; p. 798.
Car-journals and the like, Cooling device for. A. D. Kessler. No. 1,155,932; Oct. 5; Gaz. vol. 219; p. 211.
Car, Oil-tank. E. Martinson. No. 1,156,794; Oct. 12; Gaz. vol. 219; p. 535.
Car operation by vapor-converters, System of. P. H. Thomas. No. 1,157,823; Oct. 26; Gaz. vol. 219; p. 990.
Car operation by vapor-converters, System of. P. H. Thomas. No. 1,157,824; Oct. 26; Gaz. vol. 219; p. 990.
Car poling device, Railway-. R. Arthur. No. 1,157,492; Oct. 19; Gaz. vol. 219; p. 814.
Car-rails, Insert for holding. E. L. How. No. 1,155,058; Oct. 5; Gaz. vol. 219; p. 116.
Car, Railway-. W. E. Fowler, Sr. No. 1,157,304; Oct. 19; Gaz. vol. 219; p. 748.
Car-replacer. J. A. Moynihan. No. 1,155,431; Oct. 5; Gaz. vol. 219; p. 37.
Car-report blank, Interchange-. N. D. Ballantine. No. 1,155,540; Oct. 5; Gaz. vol. 219; p. 76.
Car-roof. G. H. Gilman and H. M. Robertson. No. 1,155,563; Oct. 5; Gaz. vol. 219; p. 83.
Car-roof. S. Hansson and I. Moeller. No. 1,155,807; Oct. 5; Gaz. vol. 219; p. 169.
Car-roof. J. L. Mohun. No. 1,155,604; Oct. 5; Gaz. vol. 219; p. 97.
Car-roof. W. P. Murphy. No. 1,156,617; Oct. 12; Gaz. vol. 219; p. 476.
Car-roof. W. D. Thompson and S. Otis. No. 1,156,944; Oct. 19; Gaz. vol. 219; p. 619.
Car-roof, Metal. F. W. Martin. No. 1,155,596; Oct. 5; Gaz. vol. 219; p. 94.
Car-roof, Metal. W. P. Murphy. No. 1,156,616; Oct. 12; Gaz. vol. 219; p. 475.
Car stake-pocket, Freight-. C. H. Vandonk. No. 1,156,566; Oct. 12; Gaz. vol. 219; p. 458.
Car-step, Folding. S. A. Campbell. No. 1,156,752; Oct. 12; Gaz. vol. 219; p. 522.
Car underframe, Railway-. B. D. Lockwood. No. 1,157,707; Oct. 26; Gaz. vol. 219; p. 951.
Car wheel and axle. O. A. Eyerman and M. W. Himmler. No. 1,155,557; Oct. 5; Gaz. vol. 219; p. 81.
Cars and the like, Sewage system for railway-. A. C. Clarke. No. 1,155,550; Oct. 5; Gaz. vol. 219; p. 79.
Cars, Device for securing petrol-cans or the like to motor-. H. Lindblom. No. 1,158,247; Oct. 26; Gaz. vol. 219; p. 1139.
Cars, Power attachment for motor-. A. M. McGill and L. B. Howland. No. 1,156,418; Oct. 12; Gaz. vol. 219; p. 406.
Cars, Steel roof for freight-. W. E. Symons. No. 1,157,339; Oct. 19; Gaz. vol. 219; p. 760.
Carbon articles, Cementing. J. W. Brown. No. 1,158,171; Oct. 26; Gaz. vol. 219; p. 1114.
Carbon, Manufacture of pure. H. Hennebutte. No. 1,155,419; Oct. 5; Gaz. vol. 219; p. 33.
Carbonizing or pack-hardening box. M. D. Wilbur. No. 1,156,647; Oct. 12; Gaz. vol. 219; p. 487.
Carbureter. R. Abell. No. 1,158,359; Oct. 26; Gaz. vol. 219; p. 1178.
Carbureter. J. O. Blomquist. No. 1,157,363; Oct. 19; Gaz. vol. 219; p. 768.
Carbureter. A. Černý. No. 1,157,507; Oct. 19; Gaz. vol. 219; p. 819.
Carbureter. C. H. Diener. No. 1,156,836; Oct. 12; Gaz. vol. 219; p. 551.
Carbureter. J. L. Dougan. No. 1,155,407; Oct. 5; Gaz. vol. 219; p. 29.
Carbureter. R. W. Harroun. No. 1,155,726; Oct. 5; Gaz. vol. 219; p. 140.
Carbureter. W. H. C. Higgins, Jr. No. 1,157,868; Oct. 26; Gaz. vol. 219; p. 1006.
Carbureter. P. W. Huskisson. No. 1,157,541; Oct. 19; Gaz. vol. 219; p. 830.
Carbureter. H. L. Kimmell. No. 1,156,084; Oct. 12; Gaz. vol. 219; p. 290.
Carbureter. P. L. Kingston. No. 1,156,149; Oct. 12; Gaz. vol. 219; p. 313.
Carbureter. C. A. Maino and P. Pellegrini. No. 1,157,116; Oct. 19; Gaz. vol. 219; p. 680.
Carbureter. L. J. McAdam. No. 1,155,829; Oct. 5; Gaz. vol. 219; p. 177.
Carbureter. T. J. Nichols. No. 1,156,924; Oct. 19; Gaz. vol. 219; p. 612.
Carbureter. W. J. Rubesky. No. 1,157,588; Oct. 19; Gaz. vol. 219; p. 844.
Carbureter. G. M. Schebler. No. 1,156,823; Oct. 12; Gaz. vol. 219; p. 546.
Carbureter. W. P. Shores. No. 1,156,716; Oct. 12; Gaz. vol. 219; p. 510.
Carbureter. I. M. Smith. No. 1,158,324; Oct. 26; Gaz. vol. 219; p. 1167.
Carbureter. E. Wetterhahn. No. 1,155,457; Oct. 5; Gaz. vol. 219; p. 40.
Carbureter, Pressure-. C. M. Carrel. No. 1,157,146; Oct. 19; Gaz. vol. 219; p. 691.
Card-rack. W. D. Hawley. No. 1,156,401; Oct. 12; Gaz. vol. 219; p. 400.
Card-shuffling machine. G. J. Perret. No. 1,157,898; Oct. 26; Gaz. vol. 219; p. 1018.
Carline. C. F. Murray. No. 1,155,365; Oct. 5; Gaz. vol. 219; p. 14.
Carpenter's combination-tool. J. L. Earl. No. 1,157,514; Oct. 19; Gaz. vol. 219; p. 821.
Carpenter's tool. F. C. Rowland. No. 1,157,587; Oct. 19; Gaz. vol. 219; p. 844.
Carpet-beater. J. S. Morrison. No. 1,155,952; Oct. 5; Gaz. vol. 219; p. 218.
Carpet-cleaner. O. Englund. No. 1,155,556; Oct. 5; Gaz. vol. 219; p. 81.
Carpet-cleaning machine. J. R. Powell. No. 1,155,957; Oct. 5; Gaz. vol. 219; p. 220.
Carriage, Child's. T. E. Barton. No. 1,157,610; Oct. 19; Gaz. vol. 219; p. 851.
Carrier: *See*—
Automobile baggage-carrier. Egg-carrier.
Egg-carton carrier.
Conveyer-carrier. Pack-carrier.
Carry-iron, Draw-bar. E. H. Crown. No. 1,157,088; Oct. 19; Gaz. vol. 219; p. 671.
Carry-iron, Draw-bar. C. T. Westlake and C. S. Shallenberger. No. 1,157,070; Oct. 19; Gaz. vol. 219; p. 664.
Cart, Child's. C. J. Jacobsen. No. 1,155,928; Oct. 5; Gaz. vol. 219; p. 209.
Cartridge. F. O. Hoagland. No. 1,157,221; Oct. 19; Gaz. vol. 219; p. 718.
Cartridge, Blasting-. W. Weber. No. 1,157,270; Oct. 19; Gaz. vol. 219; p. 736.
Cartridge-shell. L. B. and W. E. Keplinger. No. 1,156,406; Oct. 12; Gaz. vol. 219; p. 402.
Case: *See*—
Bobbin-case. Match-case.
Cell-case. Packing-case.
Cigarette-case. Picture-film case.
Corn-case. Show-case.
Eyeglass-case.
Case. F. S. Dickinson. No. 1,156,762; Oct. 12; Gaz. vol. 219; p. 526.
Cash-box. E. Monteleone. No. 1,156,919; Oct. 19; Gaz. vol. 219; p. 610.

Cash-register. E. J. Von Pein. No. 1,156,258; Oct. 12; Gaz. vol. 219; p. 348.
Cash-register indicator. C. L. Nelson. No. 1,156,091; Oct. 12; Gaz. vol. 219; p. 293.
Caster. W. F. Harris. No. 1,156,287; Oct. 12; Gaz. vol. 219; p. 357.
Caster-mounting. A. H. Neller. No. 1,155,606; Oct. 5; Gaz. vol. 219; p. 98.
Caster-mounting. A. H. Neller. No. 1,155,607; Oct. 5; Gaz. vol. 219; p. 98.
Casting and making the same, White-metal. C. Pack. No. 1,156,093; Oct. 12; Gaz. vol. 219; p. 294.
Casting apparatus. F. J. Bradley. No. 1,157,840; Oct. 26; Gaz. vol. 219; p. 997.
Casting fluid metals, Art or method of and apparatus for. O. G. Sandage. No. 1,156,557; Oct. 12; Gaz. vol. 219; p. 454.
Casting lead pigs, Machine for. J. F. Miller. No. 1,157,794; Oct. 26; Gaz. vol. 219; p. 980.
Casting-machine. R. Taylor and L. A. Miley. No. 1,156,446; Oct. 12; Gaz. vol. 219; p. 415.
Castings, Mold for composite steel. A. Rojekoff. No. 1,155,510; Oct. 5; Gaz. vol. 219; p. 66.
Catalyzer and making same. C. Ellis. No. 1,156,068; Oct. 12; Gaz. vol. 219; p. 285.
Catalyzers, Making. C. Ellis. No. 1,156,674; Oct. 12; Gaz. vol. 219; p. 496.
Catamenial sack. L. M. Goodnou. No. 1,157,774; Oct. 26; Gaz. vol. 219; p. 973.
Catenary structure. T. Varney. No. 1,157,463; Oct. 19; Gaz. vol. 219; p. 804.
Cattle-guard. I. L. Bolinger. No. 1,156,856; Oct. 12; Gaz. vol. 219; p. 560.
Cattle-guard. L. L. Tapp. No. 1,155,968; Oct. 5; Gaz. vol. 219; p. 223.
Cell-case and blank therefor. J. B. Miller. No. 1,157,712; Oct. 26; Gaz. vol. 219; p. 952.
Cement leveling and finishing machine. S. O. Peterson. No. 1,157,899; Oct. 26; Gaz. vol. 219; p. 1018.
Center plate. J. C. Davis. No. 1,157,848; Oct. 26; Gaz. vol. 219; p. 999.
Centrifugal burner. J. H. King. No. 1,158,058; Oct. 26; Gaz. vol. 219; p. 1073.
Centrifugal machine. S. H. Hall. No. 1,156,285; Oct. 12; Gaz. vol. 219; p. 356.
Centrifugal switch. H. L. Zabriskie. No. 1,155,985; Oct. 5; Gaz. vol. 219; p. 228.
Cesspool. L. E. Terry. No. 1,155,970; Oct. 5; Gaz. vol. 219; p. 224.
Chain connector, Bead-. O. H. Allen. No. 1,157,917; Oct. 26; Gaz. vol. 219; p. 1024.
Chain-link and making and assembling same. H. Osswald. No. 1,157,175; Oct. 19; Gaz. vol. 219; p. 701.
Chain-link-upsetting device. F. W. Schandoney. No. 1,155,513; Oct. 5; Gaz. vol. 219; p. 67.
Chain rack, Pattern-. L. H. Landry. No. 1,158,244; Oct. 26; Gaz. vol. 219; p. 1138.
Chain-stretcher. J. Shoos. No. 1,155,520; Oct. 5; Gaz. vol. 219; p. 60.
Chair: *See*—
Baby-chair. Invalid-chair.
Convertible chair. Revolving chair.
Dental chair.
Chair. H. H. Turner. No. 1,156,725; Oct. 12; Gaz. vol. 219; p. 513.
Chair attachment. O. Hanson. No. 1,156,776; Oct. 12; Gaz. vol. 219; p. 530.
Chair-back, Barber's. G. C. Lutz. No. 1,157,092; Oct. 26; Gaz. vol. 219; p. 1050.
Chairs, Extensible foot-rest for. C. A. Lee. No. 1,156,156; Oct. 12; Gaz. vol. 219; p. 315.
Change-making machine. J. B. Lewis. No. 1,155,359; Oct. 5; Gaz. vol. 219; p. 12.
Check holder, Sales-. L. F. Hageman, Jr. No. 1,157,217; Oct. 19; Gaz. vol. 219; p. 716.
Check-protector. I. Engstrom. No. 1,156,000; Oct. 5; Gaz. vol. 219; p. 233.
Cheese-follower. L. H. Pieper. No. 1,158,276; Oct. 26; Gaz. vol. 219; p. 1150.
Chemical compounds, Apparatus for the manufacture of. C. J. Brockbank. No. 1,157,293; Oct. 19; Gaz. vol. 219; p. 744.
Cherry-pitting machine. J. H. Smith. No. 1,155,449; Oct. 5; Gaz. vol. 219; p. 43.
Chimney structure, Brick. F. Dochnal. No. 1,156,468; Oct. 12; Gaz. vol. 219; p. 425.
Chimneys, Water and fire shield for. W. J. Carrier. No. 1,158,117; Oct. 26; Gaz. vol. 219; p. 1095.
Chock, Vehicle-. A. Casper. No. 1,155,540; Oct. 5; Gaz. vol. 219; p. 79.
Chocolate-molding apparatus. A. A. Schneider. No. 1,155,839; Oct. 5; Gaz. vol. 219; p. 180.
Chromium oxid, Manufacture of. A. E. Gessler. No. 1,158,379; Oct. 26; Gaz. vol. 219; p. 1186.
Chromium salts, Producing. J. H. Boner. No. 1,157,668; Oct. 26; Gaz. vol. 219; p. 937.
Chuck. J. Kleinertz. No. 1,156,295; Oct. 12; Gaz. vol. 219; p. 360.
Chuck-adjusting device, Tool-. M. Steudner. No. 1,157,817; Oct. 26; Gaz. vol. 219; p. 988.
Chuck, Band-. M. D. Heyman. No. 1,158,216; Oct. 26; Gaz. vol. 219; p. 1128.
Churn. J. A. Stringer. No. 1,155,766; Oct. 5; Gaz. vol. 219; p. 153.
Churn-actuating mechanism. E. T. Jones. No. 1,156,146; Oct. 12; Gaz. vol. 219; p. 312.
Chute. W. L. McCabe. No. 1,157,019; Oct. 19; Gaz. vol. 219; p. 647.
Chute, Coal-. F. H. Mason and J. Allen. No. 1,155,942; Oct. 5; Gaz. vol. 219; p. 214.
Cigar clipper and lighter, Combined. R. E. Zellers. No. 1,158,017; Oct. 26; Gaz. vol. 219; p. 1059.
Cigar-cutter. H. Leidel. No. 1,156,158; Oct. 12; Gaz. vol. 219; p. 316.
Cigarette and match box, Combined. T. H. White. No. 1,156,732; Oct. 12; Gaz. vol. 219; p. 516.
Cigarette-box. N. Jacovatos. No. 1,158,132; Oct. 26; Gaz. vol. 219; p. 1100.
Cigarette box or container. J. A. Shearman and F. De Gordy. No. 1,155,688; Oct. 5; Gaz. vol. 219; p. 127.
Cigarette-case. T. F. Hathaway. No. 1,156,598; Oct. 12; Gaz. vol. 219; p. 468.
Cigarettes into cases, Apparatus for distributing and filling. L. Chambon. No. 1,156,465; Oct. 12; Gaz. vol. 219; p. 422.
Circuit-breakers, Mechanism for the control of. L. L. Elden. No. 1,157,930; Oct. 26; Gaz. vol. 219; p. 1028.
Circuit-control apparatus, Automatic. M. Barron. No. 1,157,663; Oct. 26; Gaz. vol. 219; p. 935.
Circuit-controlling device. M. Levison. No. 1,157,012; Oct. 19; Gaz. vol. 219; p. 644.
Circuit-interrupter. J. A. Vahey. No. 1,158,086; Oct. 26; Gaz. vol. 219; p. 1084.
Circuit-interrupting device. W. M. Austin and J. N. Mahoney. No. 1,156,655; Oct. 12; Gaz. vol. 219; p. 490.
Clamp: *See*—
Book-pad clamp. Locking-clamp.
Fracture-clamp. Ring-clamp.
Hose-clamp.
Clamp-brace. J. S. Richardson. No. 1,157,327; Oct. 19; Gaz. vol. 219; p. 756.
Clamping device. W. J. Kleinsteuber. No. 1,155,662; Oct. 5; Gaz. vol. 219; p. 117.
Clarifying device. G. E. Emanuel. No. 1,158,034; Oct. 26; Gaz. vol. 219; p. 1065.
Clasp: *See*—
Corset-clasp. Necklace-clasp.
Clasp. W. Conway. (Reissue.) No. 14,001; Oct. 26; Gaz. vol. 219; p. 1202.
Cleaner: *See*—
Boiler-tube cleaner. Suction-cleaner.
Carpet-cleaner. Tooth-cleaner.
Gun-cleaner. Vacuum-cleaner.
Rake-cleaner. Window-cleaner.
Shoe-cleaner.
Cleaning footned articles, Appliance for. W. E. List. No. 1,155,747; Oct. 5; Gaz. vol. 219; p. 146.
Cleaning-waste, Manufacture of. S. D. Stead. No. 1,157,816; Oct. 26; Gaz. vol. 219; p. 988.
Clevis. M. Christopherson. No. 1,155,887; Oct. 5; Gaz. vol. 219; p. 196.
Clip: *See*—
Clothes-line clip.
Clip. R. F. Barbour. No. 1,155,637; Oct. 5; Gaz. vol. 219; p. 108.
Clock, Alarm-. W. E. Porter and F. S. Cornwell. No. 1,156,554; Oct. 12; Gaz. vol. 219; p. 453.
Clock, Eight-day alarm-. W. E. Porter. No. 1,156,552; Oct. 12; Gaz. vol. 219; p. 452.
Clock, Rim-winding. W. E. Porter. No. 1,156,553; Aug. 12; Gaz. vol. 219; p. 453.
Clocks, Winding-switch for self-winding. E. A. Hummel. No. 1,157,782; Oct. 26; Gaz. vol. 219; p. 975.
Closet: *See*—
Water-closet.
Closet-seat buffer, Pneumatic. T. J. Florey. No. 1,158,039; Oct. 26; Gaz. vol. 219; p. 1066.
Clothes-line clip, Metallic. N. B. Winter. No. 1,157,747; Oct. 26; Gaz. vol. 219; p. 965.
Clothes-line pulley. C. L. Blodgett. No. 1,157,143; Oct. 19; Gaz. vol. 219; p. 690.
Clothes-line stretcher. S. N. Bunnell. No. 1,158,172; Oct. 26; Gaz. vol. 219; p. 1114.
Clothes-line support. F. S. Budaji. No. 1,157,502; Oct. 19; Gaz. vol. 219; p. 817.
Clothes-pin, Wire. T. M. Price and J. W. Tillman. No. 1,156,810; Oct. 12; Gaz. vol. 219; p. 541.
Clothes-rack. E. A. Foster. No. 1,157,858; Oct. 26; Gaz. vol. 219; p. 1003.
Clothes-rack. W. T. Maxwell. No. 1,156,699; Oct. 12; Gaz. vol. 219; p. 504.
Clothes-rack. R. V. D. Stoutenburgh. No. 1,155,967; Oct. 5; Gaz. vol. 219; p. 223.
Clothes-reel. J. T. Harbin. No. 1,156,286; Oct. 12; Gaz. vol. 219; p. 357.
Clothes-stick. A. S. Taylor. No. 1,156,112; Oct. 12; Gaz. vol. 219; p. 300.
Clothes-wringer. A. W. Altorfer. No. 1,158,099; Oct. 26; Gaz. vol. 219; p. 1088.
Clutch. A. Lanzdorf. No. 1,157,789; Oct. 26; Gaz. vol. 219; p. 978.
Clutch. J. F. Metten. No. 1,157,793; Oct. 26; Gaz. vol. 219; p. 980.
Clutch. C. C. Rich. No. 1,156,819; Oct. 12; Gaz. vol. 219; p. 544.
Clutch and regulating mechanism. E. W. Woolley. No. 1,157,275; Oct. 19; Gaz. vol. 219; p. 738.

Clutch, Friction-. A. Master. No. 1,157,408; Oct. 19; Gaz. vol. 219; p. 785.
Clutch, Friction-. S. W. Rhoads. No. 1,156,555; Oct. 12; Gaz. vol. 219; p. 454.
Clutch, Friction-. J. H. Stull. No. 1,156,445; Oct. 12; Gaz. vol. 219; p. 415.
Clutch mechanism. V. G. Apple. No. 1,156,576; Oct. 12; Gaz. vol. 219; p. 461.
Clutch mechanism for grinders and choppers. H. L. Johnston. No. 1,156,904; Oct. 19; Gaz. vol. 219; p. 605.
Clutch, Self-releasing positive. L. Willis. No. 1,158,354; Oct. 26; Gaz. vol. 219; p. 1176.
Clutches, Integral nut and bearing for friction-. A. Lambert. Ni. 1,157,232; Oct. 19; Gaz. vol. 219; p. 722.
Clutches, Operating device for punch-press. L. J. Campbell. No. 1,158,370; Oct. 26; Gaz. vol. 219; p. 1182.
Coal-briquets, Apparatus for coking. P. Hein. No. 1,155,486; Oct. 5; Gaz. vol. 219; p. 57.
Coal-loading apparatus, Tender. H. C. Buchwald. No. 1,157,366; Oct. 19; Gaz. vol. 219; p. 770.
Coaster-brake. J. J. Tobin. No. 1,157,064; Oct. 19; Gaz. vol. 219; p. 663.
Coaster-brake. G. W. Van Deren. No. 1,158,337; Oct. 26; Gaz. vol. 219; p. 1171.
Coating metal. J. A. Hanlon. No. 1,156,995; Oct. 19; Gaz. vol. 219; p. 637.
Cock and train-pipe clamp, Combined angle-. S. H. Campbell. No. 1,156,463; Oct. 12; Gaz. vol. 219; p. 421.
Cock boxes, Cover-fastening for stop-. W. P. Taylor. No. 1,157,062; Oct. 19; Gaz. vol. 219; p. 662.
Cock, Safety water-gage. W. N. Rowe. No. 1,156,933; Oct. 19; Gaz. vol. 219; p. 615.
Cock, Stop-. R. W. Bull. No. 1,156,269; Oct. 12; Gaz. vol. 219; p. 352.
Cohering mass and forming the same. D. H. Bibb. No. 1,158,363; Oct. 26; Gaz. vol. 219; p. 1180.
Cohering masses, Making. D. H. Bibb. No. 1,158,364; Oct. 26; Gaz. vol. 219; p. 1181.
Cohering masses, Making. D. H. Bibb. No. 1,158,366; Oct. 26; Gaz. vol. 219; p. 1181.
Coin-wrapper. C. Silberstein. No. 1,155,624; Oct. 5; Gaz. vol. 219; p. 103.
Coke-oven. F. J. Collin. No. 1,157,368; Oct. 19; Gaz. vol. 219; p. 771.
Coke-oven. L. L. Summers. No. 1,155,526; Oct. 5; Gaz. vol. 219; p. 71.
Collapsible box. E. J. Haines. No. 1,158,046; Oct. 26; Gaz. vol. 219; p. 1069.
Collar for garments. S. A. Myers. No. 1,156,090; Oct. 12; Gaz. vol. 219; p. 293.
Collar-forming machine. J. J. Seltenreich. No. 1,157,329; Oct. 19; Gaz. vol. 219; p. 756.
Collar, Horse-. R. S. Mason. No. 1,155,943; Oct. 5; Gaz. vol. 219; p. 214.
Collar, Horse- T. Schock. No. 1,157,425; Oct. 19; Gaz. vol. 219; p. 792.
Collar-recreaser. A. Morganfield. No. 1,156,807; Oct. 12; Gaz. vol. 219; p. 364.
Collar shaping and edging machine. S. S. Matthes. No. 1,157,321; Oct. 19; Gaz. vol. 219; p. 754.
Collision-prevention device. C. Martin. No. 1,156,366; Oct. 12; Gaz. vol. 219; p. 387.
Color-cartridge. A. E. Nienstadt. No. 1,155,676; Oct. 5; Gaz. vol. 219; p. 122.
Color-lakes, Manufacture of. A. E. Gessler. No. 1,157,525; Oct. 19; Gaz. vol. 219; p. 826.
Columns, Apparatus for constructing plastic. A. G. Higgins. No. 1,156,077; Oct. 12; Gaz. vol. 219; p. 288.
Combination-switch. A. F. Wise. No. 1,156,121; Oct. 12; Gaz. vol. 219; p. 308.
Combing-machines, Driving mechanism for the drawing-off or detaching rollers of. P. A. Heimbold and J. Weinbrenner. No. 1,156,225; Oct. 12; Gaz. vol. 219; p. 337.
Combustion-engine. G. Fornaca. No. 1,157,769; Oct. 26; Gaz. vol. 219; p. 971.
Communion-service. J. Schaub. No. 1,156,319; Oct. 12; Gaz. vol. 219; p. 368.
Commutator. H. W. Turner. No. 1,157,912; Oct. 26; Gaz. vol. 219; p. 1022.
Compressor. S. Cooper. No. 1,155,798; Oct. 5; Gaz. vol. 219; p. 166.
Compressor. H. Dechamps. No. 1,158,030; Oct. 26; Gaz. vol. 219; p. 1064.
Compressor, Centrifugal. S. A. Moss. No. 1,156,616; Oct. 12; Gaz. vol. 219; p. 473.
Computing valuations of investment securities, Device for. C. A. Richmond. No. 1,157,043; Oct. 19; Gaz. vol. 219; p. 655.
Concrete-block machine, Multimolding. F. H. Folden. No. 1,157,522; Oct. 19; Gaz. vol. 219; p. 824.
Concrete building construction, Reinforced-. F. M. Barton. No. 1,155,461; Oct. 5; Gaz. vol. 219; p. 48.
Concrete-casing. J. W. Kenny. No. 1,157,226; Oct. 19; Gaz. vol. 219; p. 720.
Concrete construction, Reinforced. H. P. Green. No. 1,157,381; Oct. 19; Gaz. vol. 219; p. 775.
Concrete-mixer. H. F. Feuhrer. No. 1,157,096; Oct. 19; Gaz. vol. 219; p. 673.
Concrete-mixer. J. F. Klann. No. 1,158,236; Oct. 26; Gaz. vol. 219; p. 1136.
Concrete-pipe-forming mold. P. B. Jagger. No. 1,157,987; Oct. 26; Gaz. vol. 219; p. 1048.
Concrete-pipe machine. A. H. Sanders and O. Hood. No. 1,158,301; Oct. 26; Gaz. vol. 219; p. 1159.
Concrete sewer constructions, Fastener for. W. C. Flannery. No. 1,155,411; Oct. 5; Gaz. vol. 219; p. 30.
Concrete walls, Means for fixing anchorages in. J. L. Murphy and J. Richmond. No. 1,157,895; Oct. 26; Gaz. vol. 219; p. 1017.
Concreting piles, Method and apparatus for. E. W. Scowden. No. 1,157,328; Oct. 19; Gaz. vol. 219; p. 756.
Condenser. C. V. Kerr. No. 1,158,231; Oct. 26; Gaz. vol. 219; p. 1133.
Condenser, Microscope-. H. Siedentopf. No. 1,157,257; Oct. 19; Gaz. vol. 219; p. 732.
Condenser, Steam-. Z. T. Scott. No. 1,156,501; Oct. 12; Gaz. vol. 219; p. 435.
Condensers, Apparatus for withdrawing aerated vapor and condensate from steam-. D. B. Morison. No. 1,155,951; Oct. 5; Gaz. vol. 219; p. 217.
Condensing apparatus. C. V. Kerr. No. 1,158,232; Oct. 26; Gaz. vol. 219; p. 1134.
Condiment-holder and cutlery utensil, Combination. G. M. Dennis. No. 1,155,802; Oct. 5; Gaz. vol. 219; p. 167.
Conduits, Outlet-hood for. W. M. Webb. No. 1,158,346; Oct. 26; Gaz. vol. 219; p. 1174.
Conduit, Underground. J. W. Orrock. No. 1,155,610; Oct. 5; Gaz. vol. 219; p. 99.
Connection. R. L. Wilcox. No. 1,157,072; Oct. 19; Gaz. vol. 219; p. 665.
Connection adjustment. S. W. Hayes. No. 1,156,997; Oct. 19; Gaz. vol. 219; p. 638.
Container. J. J. Farrar. No. 1,156,767; Oct. 12; Gaz. vol. 219; p. 527.
Container. V. Nivois. No. 1,156,019; Oct. 5; Gaz. vol. 219; p. 240.
Container, Sanitary. E. E. McFarland. No. 1,157,883; Oct. 26; Gaz. vol. 219; p. 1012.
Containers, Receptacle for original. T. Strothmann. No. 1,156,506; Oct. 12; Gaz. vol. 219; p. 437.
Containing and dispensing can, Sheet-metal. F. Rudolphi. No. 1,158,077; Oct. 26; Gaz. vol. 219; p. 1080.
Control mechanism. E. T. Shaw. No. 1,157,963; Oct. 26; Gaz. vol. 219; p. 1040.
Control system. A. J. Hall. No. 1,157,777; Oct. 26; Gaz. vol. 219; p. 974.
Control system. N. W. Storer. (Reissue.) No. 13,998; Oct. 19; Gaz. vol. 219; p. 877.
Control system. N. W. Storer. No. 1,157,820; Oct. 26; Gaz. vol. 219; p. 989.
Control system. N. W. Storer and A. J. Hall. No. 1,157,821; Oct. 26; Gaz. vol. 219; p. 989.
Control, System and means of. J. S. Hadden and F. H. Johnson. No. 1,156,841; Oct. 12; Gaz. vol. 219; p. 553.
Controller, Clock-driven. C. I. Hall. No. 1,156,400; Oct. 12; Gaz. vol. 219; p. 399.
Convertible chair. L. J. Persson. No. 1,157,802; Oct. 26; Gaz. vol. 219; p. 983.
Convertible chair. W. H. Pool. No. 1,158,280; Oct. 26; Gaz. vol. 219; p. 1151.
Conveyer. O. Strunk. No. 1,156,721; Oct. 12; Gaz. vol. 219; p. 512.
Conveyer. F. R. Willson, Jr. No. 1,156,385; Oct. 12; Gaz. vol. 219; p. 394.
Conveyer-carrier, Endless. B. N. Davis. No. 1,155,340; Oct. 5; Gaz. vol. 219; p. 6.
Conveying and discharging apparatus. V. Vjecha. No. 1,157,466; Oct. 19; Gaz. vol. 219; p. 805.
Cooker, Solar. H. A. Cherrier. No. 1,158,175; Oct. 26; Gaz. vol. 219; p. 1115.
Cooking apparatus, Electric. R. Sprenger. No. 1,157,731; Oct. 26; Gaz. vol. 219; p. 960.
Cooking utensil. E. K. Linton. No. 1,157,991; Oct. 26; Gaz. vol. 219; p. 1050.
Cooler: *See*—
Water-cooler.
Cooling-tower. B. H. Coffey. No. 1,158,107; Oct. 26; Gaz. vol. 219; p. 1091.
Coop, Automatic trap-nest. C. E. Sharp. No. 1,157,595; Oct. 19; Gaz. vol. 219; p. 846.
Cord and twine cutter. S. Ball. No. 1,158,159; Oct. 26; Gaz. vol. 219; p. 1109.
Core, Collapsible. T., Sr., and T. Midgley, Jr. No. 1,157,117; Oct. 19; Gaz. vol. 219; p. 681.
Cores, Constructing collapsible. T., Sr., and T. Midgley, Jr. No. 1,157,118; Oct. 19; Gaz. vol. 219; p. 682.
Corks, Guard for bottle-. T. W. Chapman. No. 1,158,028; Oct. 26; Gaz. vol. 219; p. 1063.
Corn case, Seed-. R. E. Locke. No. 1,157,790; Oct. 26; Gaz. vol. 219; p. 978.
Corn-drier. J. Q. Clarke. No. 1,155,889; Oct. 5; Gaz. vol. 219; p. 196.
Corn-husking machine. G. L. Phelps. No. 1,157,038; Oct. 19; Gaz. vol. 219; p. 654.
Corona loss, Means for preventing. E. Thomson. No. 1,157,344; Oct. 19; Gaz. vol. 219; p. 762.
Corset. A. Abt. No. 1,155,864; Oct. 5; Gaz. vol. 219; p. 188.
Corset clasp or stay, Extensible. W. Birse. No. 1,156,205; Oct. 12; Gaz. vol. 219; p. 330.
Cots or couch-beds, Locking means for folding. H. J. Quincy. No. 1,157,254; Oct. 19; Gaz. vol. 219; p. 731.
Cotter-pin. H. G. McComb. No. 1,157,946; Oct. 26; Gaz. vol. 219; p. 1034.
Cotton-combers, Nipper-motion drive for. H. A. Owen. No. 1,157,033; Oct. 19; Gaz. vol. 219; p. 652.

Cotton-gin. N. P. Pearse. No. 1,157,720; Oct. 26; Gaz. vol. 219; p. 955.
Cotton-gins, Pneumatic seed and dust conveyer for. S. Willis. No. 1,156,196; Oct. 12; Gaz. vol. 219; p. 327.
Cotton-holder and massage device, Combined. K. W. Hester. No. 1,158,214; Oct. 26; Gaz. vol. 219; p. 1128.
Couch, Folding. F. L. Andreu. No. 1,155,779; Oct. 5; Gaz. vol. 219; p. 157.
Couch, Folding. J. L. Moore and F. L. Musser. No. 1,156,704; Oct. 12; Gaz. vol. 219; p. 506.
Counterbalancing device. J. J. Strong. No. 1,155,846; Oct. 5; Gaz. vol. 219; p. 183.
Coupling: *See*—
- Automobile trailer-coupling.
- Car-coupling.
- Flexible coupling.
- Hose-coupling.
- Pipe-coupling.
- Pitman-coupling.
- Reversible coupling.
- Rod-coupling.
- Shaft-coupling.
- Tongue-coupling.

Coupling. W. C. Banks. No. 1,157,921; Oct. 26; Gaz. vol. 219; p. 1025.
Coupling. P. F. La Gree. No. 1,157,401; Oct. 19; Gaz. vol. 219; p. 782.
Coupling shank and yoke connection. W. E. Coffin. No. 1,157,084; Oct. 19; Gaz. vol. 219; p. 669.
Coupling-washer, Self-retaining. R. Mueller. No. 1,157,574; Oct. 19; Gaz. vol. 219; p. 840.
Couplings, Draft-rigging for pilot-. E. P. Kinne. No. 1,157,874; Oct. 26; Gaz. vol. 219; p. 1008.
Cranes, Grab-bucket-operating mechanism for. H. Sawyer. No. 1,157,962; Oct. 26; Gaz. vol. 219; p. 1040.
Crate. J. Holbrook. No. 1,156,230; Oct. 12; Gaz. vol. 219; p. 338.
Crate, Bannua-. J. Dlaferia. No. 1,155,406; Oct. 5; Gaz. vol. 219; p. 28.
Crate, Collapsible. F. A. Focks. No. 1,156,221; Oct. 12; Gaz. vol. 219; p. 335.
Crate, Folding. R. M. Crouse. No. 1,155,404; Oct. 5; Gaz. vol. 219; p. 28.
Crate, Shipping-. G. A. Colby. No. 1,157,509; Oct. 19; Gaz. vol. 219; p. 820.
Crematory. A. K. Fischer. No. 1,156,398; Oct. 12; Gaz. vol. 219; p. 399.
Cross-head. K. Steinbecker. No. 1,158,328; Oct. 26; Gaz. vol. 219; p. 1168.
Crossing-signal, Train controlled electric recording. H. Wilkins. No. 1,155,535; Oct. 5; Gaz. vol. 219; p. 74.
Crutch. E. P. Le Compte and R. Colvin. No. 1,157,314; Oct. 19; Gaz. vol. 219; p. 751.
Crutch, Adjustable. I. M. and C. Briscoe. No. 1,156,747; Oct. 12; Gaz. vol. 219; p. 521.
Culinary-vessel handle. L. D. Cahn. No. 1,155,792; Oct. 5; Gaz. vol. 219; p. 163.
Cultivator. E. M. Heylman. No. 1,155,569; Oct. 5; Gaz. vol. 219; p. 85.
Cultivator. E. Melton. No. 1,155,833; Oct. 5; Gaz. vol. 219; p. 178.
Cultivator. J. S. Smith. No. 1,157,433; Oct. 19; Gaz. vol. 219; p. 795.
Cultivators, Insect-collecting attachment for. H. C. Mayerhoff. No. 1,156,303; Oct. 12; Gaz. vol. 219; p. 363.
Cultivators, Spraying attachment for. F. Oldham. No. 1,156,622; Oct. 12; Gaz. vol. 219; p. 477.
Cup: *See*—
- Grease-cup.
- Lubricating-cup.
- Melting-cup.
- Oil-cup.

Currency-handling machine. F. L. Sattley. No. 1,156,101; Oct. 12; Gaz. vol. 219; p. 296.
Current circuits, Apparatus for producing directive forces by induction in alternating-. H. Abraham. No. 1,157,281; Oct. 19; Gaz. vol. 219; p. 740.
Current-collector, Roller-bearing. R. E. Hewitt and W. W. Whitmore. No. 1,158,215; Oct. 26; Gaz. vol. 219; p. 1128.
Current commutator machinery, Alternating-. H. Meyer-Delius. No. 1,157,948; Oct. 26; Gaz. vol. 219; p. 1035.
Currents, Detector for oscillating. W. E. Beakes. No. 1,158,112; Oct. 26; Gaz. vol. 219; p. 1093.
Curtain-rod bracket. J. N. Henry. No. 1,156,076; Oct. 12; Gaz. vol. 219; p. 288.
Curtain-support. J. V. King, Jr., and G. E. Ruffley. No. 1,155,823; Oct. 5; Gaz. vol. 219; p. 175.
Cushion: *See*—
- Invalid-cushion.
- Seat-cushion.
- Sound-box cushion.

Cushion-wheel. C. T. Miller. No. 1,156,242; Oct. 12; Gaz. vol. 219; p. 342.
Cuspidor. C. H. Lane. No. 1,156,605; Oct. 12; Gaz. vol. 219; p. 470.
Cutter: *See*—
- Cigar-cutter.
- Cord and twine cutter.
- Food-cutter.
- Fruit and vegetable cutter.
- Insulation-cutter.
- Stalk-cutter.
- Trench-cutter.
- Vegetable-cutter.
- Weed-cutter.

Cutter and chopper, Combined. S. Simon. No. 1,155,843; Oct. 5; Gaz. vol. 219; p. 182.
Cutting-tool. S. A. Wegland. No. 1,156,336; Oct. 12; Gaz. vol. 219; p. 575.
Cyanids, Making. A. C. Spencer and K. P. McElroy. No. 1,156,108; Oct. 12; Gaz. vol. 219; p. 299.
Cycle, Motor-. W. G. Johnson. No. 1,157,547; Oct. 19; Gaz. vol. 219; p. 832.
Cycle-saddle. M. M. Deem. No. 1,157,512; Oct. 19; Gaz. vol. 219; p. 821.
Cycle saddle, Motor-. F. Mesinger. No. 1,157,711; Oct. 26; Gaz. vol. 219; p. 952.
Cycle-stand. A. Pava. No. 1,156,369; Oct. 12; Gaz. vol. 219; p. 388.
Cycle stand, Motor-. H. Vermeer. No. 1,156,567; Oct. 12; Gaz. vol. 219; p. 458.
Cycle stand, Motor-. H. Vermeer. No. 1,156,568; Oct. 12; Gaz. vol. 219; p. 458.
Cycles and like machines, Spring front fork for motor-. S. Whiting. No. 1,155,458; Oct. 5; Gaz. vol. 219; p. 46.
Cycles and the like, Rear framing of motor-. G. F. Shimmin. No. 1,157,431; Oct. 19; Gaz. vol. 219; p. 794.
Dam for canal-locks, Constant-level-controlling. F. A. Rodriguez. No. 1,158,295; Oct. 26; Gaz. vol. 219; p. 1157.
Damper for stoves, Automatic dust-. S. V. Reeves. No. 1,156,930; Oct. 19; Gaz. vol. 219; p. 614.
Damper-regulator mechanism for steam-pressure apparatus. J. L. Kimball. No. 1,155,822; Oct. 5; Gaz. vol. 219; p. 174.
Decorticating fibrous plants, Machine for. W. J. Hollier. No. 1,155,730; Oct. 5; Gaz. vol. 219; p. 141.
Decorticating fibrous plants, Machine for. W. J. Hollier. No. 1,157,780; Oct. 26; Gaz. vol. 219; p. 974.
Decorticating machine, Fiber-. O. Sheehan. No. 1,156,103; Oct. 12; Gaz. vol. 219; p. 297.
Decoy. A. Koyen and F. B. Snyder. No. 1,157,627; Oct. 19; Gaz. vol. 219; p. 857.
Delivery-receptacle, Safety. E. P. Wolf. No. 1,155,778; Oct. 5; Gaz. vol. 219; p. 157.
Dental chair. H. E. Weber. No. 1,157,351; Oct. 19; Gaz. vol. 219; p. 764.
Dental chairs, Adjustable operator's seat for. J. B. Bardin. No. 1,155,541; Oct. 5; Gaz. vol. 219; p. 76.
Dental prop and mirror, Combined. J. E. Mayer. No. 1,157,565; Oct. 19; Gaz. vol. 219; p. 837.
Dental vulcanizer attachment. T. T. Cater. No. 1,157,759; Oct. 26; Gaz. vol. 219; p. 969.
Depositing-machine. F. Westerman. (Reissue.) No. 13,999; Oct. 19; Gaz. vol. 219; p. 882.
Depurating process and apparatus. F. E. Coombs. No. 1,156,060; Oct. 12; Gaz. vol. 219; p. 282.
Derrick. M. J. Sasgen. No. 1,156,558; Oct. 12; Gaz. vol. 219; p. 454.
Derrick, Blower-pipe-assembling. T. Mullowney. No. 1,157,248; Oct. 19; Gaz. vol. 219; p. 729.
Desiccating liquid substances, Method of and apparatus for. C. E. Gray. No. 1,157,935; Oct. 26; Gaz. vol. 219; p. 1030.
Desk. F. B. Stevens. No. 1,156,443; Oct. 12; Gaz. vol. 219; p. 414.
Desk utensil, Office-. J. V. Washburne. No. 1,156,194; Oct. 12; Gaz. vol. 219; p. 327.
Desks and the like, Reference device for. E. R. Probert. No. 1,156,812; Oct. 12; Gaz. vol. 219; p. 541.
Desks, chairs, &c., Supporting structure for. G. M. Huntley. No. 1,156,232; Oct. 12; Gaz. vol. 219; p. 339.
Detectometer. A. G. Carlson. No. 1,155,338; Oct. 5; Gaz. vol. 219; p. 5.
Detector-bar. J. Reid. No. 1,157,726; Oct. 26; Gaz. vol. 219; p. 958.
Die: *See*—
- Insulator-die.

Die. O. A. Smith and B. F. Rindfleisch. No. 1,157,259; Oct. 19; Gaz. vol. 219; p. 733.
Die-head. H. L. Fisher. No. 1,157,210; Oct. 19; Gaz. vol. 219; p. 714.
Die-plates, Making. W. R. Bardsley. No. 1,157,493; Oct. 19; Gaz. vol. 219; p. 814.
Die-stock. F. W. Whelpley. No. 1,158,016; Oct. 26; Gaz. vol. 219; p. 1059.
Dieing-machine trimmer. G. B. Grover. No. 1,155,655; Oct. 5; Gaz. vol. 219; p. 114.
Direction-indicator. H. E. Stout. No. 1,158,083; Oct. 26; Gaz. vol. 219; p. 1083.
Dirt, sand, and manure loader. L. A. Crist. No. 1,156,880; Oct. 19; Gaz. vol. 219; p. 599.
Dish-washing machine. E. A. Johanson. No. 1,155,930; Oct. 5; Gaz. vol. 219; p. 210.
Dish-washing machine. T. E. Murray. No. 1,156,424; Oct. 12; Gaz. vol. 219; p. 408.
Dish-washing machines, Mechanical motor for. W. R. Walker. No. 1,158,409; Oct. 26; Gaz. vol. 219; p. 1198.
Disinfectant-container. A. H. Ekman and P. J. Gallagher. No. 1,155,343; Oct. 5; Gaz. vol. 219; p. 7.
Disinfecting and deodorizing device, Self-feeding. G. F. Chapman. No. 1,156,974; Oct. 19; Gaz. vol. 219; p. 630.
Disk attachment. W. E. Helin. No. 1,155,657; Oct. 5; Gaz. vol. 219; p. 115.
Dispensing apparatus. W. Millard. No. 1,157,645; Oct. 19; Gaz. vol. 219; p. 863.
Dispensing apparatus, Coin-controlled. C. H. Brazell. No. 1,156,746; Oct. 12; Gaz. vol. 219; p. 520.
Dispensing cap or cover. A. C. Crimmel. No. 1,157,679; Oct. 26; Gaz. vol. 219; p. 941.
Dispensing-package. F. P. Wood. No. 1,158,093; Oct. 26; Gaz. vol. 219; p. 1086.

Dispensing-receptacle. A. Beck. No. 1,156,456; Oct. 12; Gaz. vol. 219; p. 419.
Display device. F. Kiefer. No. 1,156,603; Oct. 12; Gaz. vol. 219; p. 476.
Display device. W. T. Phillips and T. C. De Lisle. No. 1,157,252; Oct. 19; Gaz. vol. 219; p. 730.
Display device. A. Vanderveld. No. 1,157,651; Oct. 19; Gaz. vol. 219; p. 865.
Display-machine. J. G. C. Mantle. No. 1,158,258; Oct. 26; Gaz. vol. 219; p. 1143.
Display-rack. L. A. Folsom. No. 1,155,558; Oct. 5; Gaz. vol. 215; p. 81.
Display-stand. J. A. Imhof. No. 1,157,542; Oct. 19; Gaz. vol. 219; p. 831.
Display-stand. J. J. Karges. No. 1,156,083; Oct. 12; Gaz. vol. 219; p. 290.
Display switching mechanism, Electric-. E. H. Bickley. No. 1,155,466; Oct. 5; Gaz. vol. 219; p. 49.
Distillation of wood, Destructive. B. R. and M. J. Lyster. No. 1,157,316; Oct. 19; Gaz. vol. 219; p. 752.
Distributing device. J. C. Shirley. No. 1,155,763; Oct. 5; Gaz. vol. 219; p. 151.
Ditcher, Walking. C. Van Antwerp. No. 1,155,975; Oct. 5; Gaz. vol. 219; p. 225.
Dividers and center-punch. C. Antrobus. No. 1,157,020; Oct. 26; Gaz. vol. 219; p. 1060.
Doll-eye adjuster. S. T. Mori. No. 1,157,119; Oct. 19; Gaz. vol. 219; p. 682.
Dolls, Sleeping-eyes for. O. E. Denivelle. No. 1,156,761; Oct. 12; Gaz. vol. 219; p. 525.
Dolly-bar. H. H. Hughes. No. 1,156,142; Oct. 12; Gaz. vol. 219; p. 311.
Door. J. G. Wallace and A. Bell. No. 1,156,950; Oct. 19; Gaz. vol. 219; p. 621.
Door and lock for safe-deposit boxes and the like. T. S. Spivey. No. 1,155,625; Oct. 5; Gaz. vol. 219; p. 103.
Door, Automatic stair-. W. F. Rodgers. No. 1,156,556; Oct. 12; Gaz. vol. 219; p. 454.
Door fastener, Screen-. W. B. Morrow. No. 1,155,953; Oct. 5; Gaz. vol. 219; p. 219.
Door-hanger. A. McPherson. No. 1,156,419; Oct. 12; Gaz. vol. 219; p. 406.
Door-hanger. G. F. Voight. No. 1,157,467; Oct. 19; Gaz. vol. 219; p. 805.
Door-hanger. D. E. Willard. No. 1,155,390; Oct. 5; Gaz. vol. 219; p. 23.
Door-holder. E. Franckaerts. No. 1,157,376; Oct. 19; Gaz. vol. 219; p. 773.
Door-lock. J. Ezykowich. No. 1,157,978; Oct. 26; Gaz. vol. 219; p. 1048.
Door lock, Sliding-. E. Barsony. No. 1,156,341; Oct. 12; Gaz. vol. 219; p. 376.
Door-spring. W. W. Wolfe. No. 1,157,274; Oct. 19; Gaz. Vol. 219; p. 738.
Doors, partitions, and the like, Making sheet-metal. J. H. Gravell. No. 1,156,898; Oct. 19; Gaz. vol. 219; p. 603.
Dough-dividing machine. F. H. Van Houten. No. 1,158,339; Oct. 26; Gaz. vol. 219; p. 1171.
Dough-molding machinery. J. E. Pointon. No. 1,157,579; Oct. 19; Gaz. vol. 219; p. 842.
Draft-gear. J. F. Courson. No. 1,156,670; Oct. 12; Gaz. vol. 219; p. 495.
Draft-gear. S. Hansson and I. Moeller. No. 1,155,808; Oct. 5; Gaz. vol. 219; p. 169.
Draft-regulator. A. J. Anderson. No. 1,157,490; Oct. 19; Gaz. vol. 219; p. 813.
Draft-rigging. P. Brown. No. 1,156,881; Oct. 19; Gaz. vol. 219; p. 596.
Drafting instrument. R. B. Allyn. No. 1,156,512; Oct. 12; Gaz. vol. 219; p. 439.
Draw-bar-centering mechanism. F. S. Gallagher. No. 1,156,283; Oct. 12; Gaz. vol. 219; p. 355.
Drawer-locking mechanism. E. Ohnstrand. No. 1,157,032; Oct. 19; Gaz. vol. 219; p. 652.
Drawing-board and writing-desk, Educational-chart. G. A. Henderson. No. 1,158,212; Oct. 26; Gaz. vol. 219; p. 1127.
Drawing-ring. R. S. Pease. No. 1,155,507; Oct. 5; Gaz. vol. 219; p. 65.
Drier: *See*—
- Grain-drier.

Drying and superheating system, Steam. G. Restucci. No. 1,157,901; Oct. 26; Gaz. vol. 219; p. 1019.
Drying granular material, Apparatus for. E. Bornmann. No. 1,155,402; Oct. 5; Gaz. vol. 219; p. 27.
Drying granular materials, Apparatus for. J. G. Cross. No. 1,157,087; Oct. 19; Gaz. vol. 219; p. 671.
Drying machine, Clothes-. C. W. Collins. No. 1,155,468; Oct. 5; Gaz. vol. 219; p. 50.
Drying washed goods, Device for. H. Löfquist. No. 1,155,668; Oct. 5; Gaz. vol. 219; p. 119.
Drill: *See*—
- Breast-drill.
- Rotary drill.

Drill and tool holder, Safety. P. E. Edelman. No. 1,158,190; Oct. 26; Gaz. vol. 219; p. 1120.
Drill-chuck. J. A. Dompier. No. 1,157,513; Oct. 19; Gaz. vol. 219; p. 821.
Drill-heads, Rock-reamer for. J. P. Karns. No. 1,156,147; Oct. 12; Gaz. vol. 219; p. 312.
Drill-holder. H. C. Lawson. No. 1,156,088; Oct. 12; Gaz. vol. 219; p. 292.
Drill-press. P. F. Connor. No. 1,155,891; Oct. 5; Gaz. vol. 219; p. 197.
Drilling and blasting gage. A. Harrigan. No. 1,155,355; Oct. 5; Gaz. vol. 219; p. 11.
Drinking-fountain. T. H. Kenney. No. 1,156,011; Oct. 5; Gaz. vol. 219; p. 237.
Drinking-fountain. W. H. Schulte. No. 1,155,621; Oct. 5; Gaz. vol. 219; p. 102.
Drinking-fountain and faucet. G. E. Sweet. No. 1,156,190; Oct. 12; Gaz. vol. 219; p. 325.
Drinking-fountain for poultry. F. Enos, Jr. No. 1,158,035; Oct. 26; Gaz. vol. 219; p. 1065.
Drinking-fountain, Sanitary. P. Mueller. No. 1,157,173; Oct. 19; Gaz. vol. 219; p. 701.
Drinking-glasses, Sanitary cap for. J. A. Conard. No. 1,156,391; Oct. 12; Gaz. vol. 219; p. 396.
Drive mechanism. H. H. Buffum. No. 1,158,027; Oct. 26; Gaz. vol. 219; p. 1063.
Drive, Reversible variable-speed. R. B. Oman. No. 1,155,368; Oct. 5; Gaz. vol. 219; p. 15.
Driving-gear. M. E. Blood. No. 1,155,467; Oct. 5; Gaz. vol. 219; p. 49.
Driving mechanism. A. W. Altorfer. No. 1,158,098; Oct. 26; Gaz. vol. 219; p. 1088.
Driving mechanism. J. P. Doran. No. 1,156,135; Oct. 12; Gaz. vol. 219; p. 308.
Driving mechanism. C. T. Henderson. No. 1,157,307; Oct. 19; Gaz. vol. 219; p. 749.
Driving mechanism, Change-speed. F. E. Miller. No. 1,156,848; Oct. 12; Gaz. vol. 219; p. 556.
Drop-feed lubricator. F. Lowry. No. 1,156,488; Oct. 12; Gaz. vol. 219; p. 430.
Dropper: *See*—
- Medicine-dropper.

Drum-switch with maximum cut-out. M. Vogelsang. No. 1,155,978; Oct. 5; Gaz. vol. 219; p. 226.
Duplicating or printing machine. C. E. Adamson. No. 1,155,696; Oct. 5; Gaz. vol. 219; p. 129.
Dust-collector. F. J. Matchette. No. 1,157,242; Oct. 19; Gaz. vol. 219; p. 727.
Dust-guard. L. Y. Williams. No. 1,156,959; Oct. 19; Gaz. vol. 219; p. 625.
Dye, Mordant-dyeing azo. C. Mettler. No. 1,157,169; Oct. 19; Gaz. vol. 219; p. 699.
Dyeing, Anilin-black. J. Steynis. No. 1,157,908; Oct. 26; Gaz. vol. 219; p. 1022.
Dyeing-machine. J. T. Psarski. No. 1,155,438; Oct. 5; Gaz. vol. 219; p. 40.
Dyestuffs, Manufacture of black vat. E. Wray. No. 1,157,485; Oct. 19; Gaz. vol. 219; p. 811.
Dyestuffs, Mordant azo. O. Staeblin. No. 1,155,765; Oct. 5; Gaz. vol. 219; p. 152.
Earthenware-marking device. W. B. Gray. No. 1,157,380; Oct. 19; Gaz. vol. 219; p. 775.
Egg-box. W. A. Schurmann. No. 1,156,436; Oct. 12; Gaz. vol. 219; p. 412.
Egg-carrier. W. D. Ticknor. No. 1,155,972; Oct. 5; Gaz. vol. 219; p. 225.
Egg-carton carrier. E. F. Yulke. No. 1,158,095; Oct. 26; Gaz. vol. 219; p. 1087.
Egg-filler. J. W. Eggleston. No. 1,156,219; Oct. 12; Gaz. vol. 219; p. 335.
Egg-grip. W. M. Brown. No. 1,156,459; Oct. 12; Gaz. vol. 219; p. 420.
Egg-tester and mailing-tube, Combined. G. W. Goudy. No. 1,156,476; Oct. 12; Gaz. vol. 219; p. 426.
Egg-testing machine. S. J. Fish. No. 1,155,905; Oct. 5; Gaz. vol. 219; p. 202.
Elastic wheel. E. Almond. No. 1,155,865; Oct. 5; Gaz. vol. 219; p. 189.
Electric apparatus, Gas or vapor. P. H. Thomas. No. 1,156,257; Oct. 12; Gaz. vol. 219; p. 348.
Electric apparatus, Gas or vapor. P. H. Thomas. No. 1,156,825; Oct. 12; Gaz. vol. 219; p. 547.
Electric apparatus, Means for suppressing the resistance of the negative-electrode flame in vapor. P. C. Hewitt. No. 1,157,779; Oct. 26; Gaz. vol. 219; p. 974.
Electric cable. J. L. Conrad. No. 1,157,208; Oct. 19; Gaz. vol. 219; p. 713.
Electric conductors, Means for smoothing and ironing the insulating-wrapping of. A. Finckbeln. No. 1,155,345; Oct. 5; Gaz. vol. 219; p. 7.
Electric-conduit fitting. C. H. Bissell and F. Smith. No. 1,156,583; Oct. 12; Gaz. vol. 219; p. 463.
Electric cut-out. W. C. Arsem. No. 1,157,919; Oct. 26; Gaz. vol. 219; p. 1025.
Electric device, Low-resistance vapor. P. C. Hewitt. No. 1,156,227; Oct. 12; Gaz. vol. 219; p. 337.
Electric fitting. C. Wagner. No. 1,156,727; Oct. 12; Gaz. vol. 219; p. 514.
Electric furnace. E. F. Collins. No. 1,156,668; Oct. 12; Gaz. vol. 219; p. 494.
Electric furnace. S. Guggenheim. No. 1,157,691; Oct. 26; Gaz. vol. 219; p. 946.
Electric furnace. E. Stassano. No. 1,157,819; Oct. 26; Gaz. vol. 219; p. 988.
Electric-generator-operating device. W. S. Fiscus. No. 1,156,594; Oct. 12; Gaz. vol. 219; p. 467.
Electric heater. W. S. Lindaway, Jr. No. 1,155,483; Oct. 5; Gaz. vol. 219; p. 56.
Electric illumination. H. Deschere. No. 1,156,064; Oct. 12; Gaz. vol. 219; p. 283.
Electric indicator. P. M. Lincoln. No. 1,156,414; Oct. 12; Gaz. vol. 219; p. 405.
Electric insulation. J. A. Heany. No. 1,155,812; Oct. 5; Gaz. vol. 219; p. 171.

Electric insulation. J. A. Heany. No. 1,155,813; Oct. 5; Gaz. vol. 219; p. 171.
Electric-light fixture. W. J. Bohan. No. 1,156,585; Oct. 12; Gaz. vol. 219; p. 464.
Electric light, Portable. C. Hubert. No. 1,157,395; Oct. 19; Gaz. vol. 219; p. 780.
Electric-lighting fixture. G. W. Bayley. No. 1,156,454; Oct. 12; Gaz. vol. 219; p. 418.
Electric-lighting fixture. C. A. Brown. No. 1,157,294; Oct. 19; Gaz. vol. 219; p. 744.
Electric-lighting fixture. W. W. Dean. No. 1,157,765; Oct. 26; Gaz. vol. 219; p. 970.
Electric-lighting fixture. J. D. Raymond. No. 1,158,286; Oct. 26; Gaz. vol. 219; p. 1154.
Electric machine, Dynamo-. H. F. T. Erben and W. J. Delles. No. 1,156,675; Oct. 12; Gaz. vol. 219; p. 497.
Electric machine, Dynamo-. H. Lippelt. No. 1,157,014; Oct. 19; Gaz. vol. 219; p. 645.
Electric machine, Dynamo-. H. McQuillin. No. 1,157,024; Oct. 19; Gaz. vol. 219; p. 648.
Electric machine, Dynamo-. A. H. Neuland. No. 1,157,414; Oct. 19; Gaz. vol. 219; p. 787.
Electric machine, Dynamo-. M. Osnos. No. 1,157,325; Oct. 19; Gaz. vol. 219; p. 755.
Electric machine, Dynamo-. C. W. Starker. No. 1,156,639; Oct. 12; Gaz. vol. 219; p. 484.
Electric machine, Dynamo-. M. Walker. No. 1,156,645; Oct. 12; Gaz. vol. 219; p. 486.
Electric machine, Dynamo-. J. B. Wiard. No. 1,157,970; Oct. 26; Gaz. vol. 219; p. 1043.
Electric machine, Dynamo-. R. B. Williamson. No. 1,157,137; Oct. 19; Gaz. vol. 219; p. 688.
Electric machine, Magneto-. F. R. Simms. No. 1,155,521; Oct. 5; Gaz. vol. 219; p. 70.
Electric meter. A. G. Davis. No. 1,157,926; Oct. 26; Gaz. vol. 219; p. 1027.
Electric meter. M. Helm. No. 1,157,937; Oct. 26; Gaz. vol. 219; p. 1031.
Electric meter. J. Vivell. No. 1,156,827; Oct. 12; Gaz. vol. 219; p. 548.
Electric meter, Recording. A. Herz. No. 1,156,226; Oct. 12; Gaz. vol. 219; p. 337.
Electric motor. N. D. Levin. No. 1,157,945; Oct. 26; Gaz. vol. 219; p. 1034.
Electric oscillations, Apparatus for the transmission of energy by. R. A. Fessenden. No. 1,156,677; Oct. 12; Gaz. vol. 219; p. 497.
Electric permutation-switch mechanism. O. D. Bowers. No. 1,157,923; Oct. 26; Gaz. vol. 219; p. 1026.
Electric plate-condenser. G. Seibt. No. 1,155,448; Oct. 5; Gaz. vol. 219; p. 43.
Electric regulation. J. L. Creveling. No. 1,155,643; Oct. 5; Gaz. vol. 219; p. 110.
Electric regulator. G. S. Neeley. No. 1,157,955; Oct. 26; Gaz. vol. 219; p. 1037.
Electric signal. C. H. Light. No. 1,157,990; Oct. 26; Gaz. vol. 219; p. 1049.
Electric socket. F. M. Rosenfeld. No. 1,157,181; Oct. 19; Gaz. vol. 219; p. 704.
Electric switch. W. H. Farmer. No. 1,156,282; Oct. 12; Gaz. vol. 219; p. 355.
Electric switch. H. G. French. No. 1,156,681; Oct. 12; Gaz. vol. 219; p. 498.
Electric switch. E. M. Hewlett. No. 1,155,814; Oct. 5; Gaz. vol. 219; p. 171.
Electric switch. C. J. Klein. No. 1,157,310; Oct. 19; Gaz. vol. 219; p. 750.
Electric switch. C. J. Klein. No. 1,158,060; Oct. 26; Gaz. vol. 219; p. 1074.
Electric switch. E. B. Merriam. No. 1,156,542; Oct. 12; Gaz. vol. 219; p. 448.
Electric switch. J. F. Monnot. No. 1,155,364; Oct. 5; Gaz. vol. 219; p. 14.
Electric switch, fuse, and protector therefor. E. Charpier. No. 1,156,887; Oct. 19; Gaz. vol. 219; p. 599.
Electric switch or contactor. T. E. Barnum. No. 1,156,201; Oct. 12; Gaz. vol. 219; p. 329.
Electric timing device. J. T. Dempster. No. 1,157,300; Oct. 19; Gaz. vol. 219; p. 746.
Electrical apparatus, Air-cooled tank for. I. Harter. No. 1,155,656; Oct. 5; Gaz. vol. 219; p. 115.
Electrical apparatus, Assembling cores of. E. R. Knight. No. 1,156,297; Oct. 12; Gaz. vol. 219; p. 361.
Electrical conductors, Connector for. H. E. Denman. No. 1,156,349; Oct. 12; Gaz. vol. 219; p. 379.
Electrical controlling apparatus. J. D. Ihlder. No. 1,156,481; Oct. 12; Gaz. vol. 219; p. 428.
Electrical controlling apparatus. D. L. Lindquist. No. 1,156,415; Oct. 12; Gaz. vol. 219; p. 405.
Electrical distribution system. E. Evans. No. 1,158,037; Oct. 26; Gaz. vol. 219; p. 1066.
Electrical fixtures to outlet-boxes, Attachment of. H. R. Gilson and J. M. G. Fullman. No. 1,155,350; Oct. 5; Gaz. vol. 219; p. 9.
Electrical heater. A. W. Mansbridge. No. 1,155,593; Oct. 5; Gaz. vol. 219; p. 93.
Electrical machine. J. E. Seeley. No 1,157,592; Oct. 19; Gaz. vol. 219; p. 845.
Electrical machines mounted on vessels, Cooling device for. H. Weiss. No. 1,156,829; Oct. 12; Gaz. vol. 219; p. 549.
Electrical meter. H. Tolle. No. 1,155,884; Oct. 5; Gaz. vol. 219; p. 20.
Electricity-meter. R. Ziegenberg. No. 1,156,964; Oct. 19; Gaz. vol. 219; p. 626.
Electrocalculograph. J. Bricken. No. 1,157,079; Oct. 19; Gaz. vol. 219; p. 667.
Electrode. C. R. Krueger. No. 1,156,696; Oct. 12; Gaz. vol. 219; p. 503.
Electrode. W. H. Rowley. No. 1,156,315; Oct. 12; Gaz. vol. 219; p. 367.
Electrode and operating same, Vacuum-tube. W. D. Coolidge. No. 1,157,925; Oct. 26; Gaz. vol. 219; p. 1026.
Electrode, Drawn. W. G. Abbott, Jr. No. 1,157,280; Oct. 19; Gaz. vol. 219; p. 740.
Electrodes, Making. W. H. Rowley. No. 1,156,316; Oct. 12; Gaz. vol. 219; p. 367.
Electrolier. R. B. Benjamin. No. 1,158,113; Oct. 26; Gaz. vol. 219; p. 1093.
Electrolytic meter. J. N. Tuttle. No. 1,156,826; Oct. 12; Gaz. vol. 219; p. 547.
Electrolytic rectifier. L. W. Chubb. No. 1,156,666; Oct. 12; Gaz. vol. 219; p. 493.
Electromagnet. C. R. Moore. No. 1,155,502; Oct. 5; Gaz. vol. 219; p. 63.
Electromagnetic waves, Apparatus for generating and receiving. R. A. Fessenden. No. 1,158,123; Oct. 26; Gaz. vol. 219; p. 1097.
Electromedical apparatus. C. Santos and R. Boerner. No. 1,156,317; Oct. 12; Gaz. vol. 219; p. 367.
Elevator: *See*—
Hydraulic elevator. Portable elevator.
Elevator automatic stop. P. L. Manlet. No. 1,158,255; Oct. 26; Gaz. vol. 219; p. 1141.
Elevator automatic stop. P. L. Manlet. No. 1,158,256; Oct. 26; Gaz. vol. 219; p. 1142.
Elevator-buckets, Disintegrator attachment for. C. C. Jacobs. No. 1,156,291; Oct. 12; Gaz. vol. 219; p. 359.
Elevator control, Automatic. E. L. Dunn. No. 1,156,987; Oct. 19; Gaz. vol. 219; p. 634.
Elevator-despatcher. G. W. Meyers. No. 1,156,610; Oct. 12; Gaz. vol. 219; p. 472.
Elevator-door-operating device, Electric. C. D. Lawrence. No. 1,158,064; Oct. 26; Gaz. vol. 219; p. 1076.
Elevator-door-releasing device. F. J. Charland. No. 1,158,174; Oct. 26; Gaz. vol. 219; p. 1114.
Elevator-gate. J. C. Bennett. No. 1,156,204; Oct. 12; Gaz. vol. 219; p. 336.
Elevator-gate-locking mechanism. F. Barlow. No. 1,155,870; Oct. 5; Gaz. vol. 219; p. 191.
Elevator mechanism and the like, Control for. J. R. Watson. No. 1,158,344; Oct. 26; Gaz. vol. 219; p. 1173.
Elevator-plungers, Safety-grip for. W. E. Small and H. R. Hilton. No. 1,156,324; Oct. 12; Gaz. vol. 219; p. 370.
Elevator safety device. G. S. Mogyorós. No. 1,157,322; Oct. 19; Gaz. vol. 219; p. 754.
Elevator safety-stop. A. Petit. No. 1,158,150; Oct. 26; Gaz. vol. 219; p. 1106.
Embossing and printing machine. T. J. Edwards and W. P. Osgood. No. 1,155,999; Oct. 5; Gaz. vol. 219; p. 233.
Embroidering-machines, Presser-finger-operating mechanism for. R. Zahn. No. 1,158,096; Oct. 26; Gaz. vol. 219; p. 1088.
Emery-wheel guard and supporting-bracket therefor. F. Geiger. No. 1,158,127; Oct. 26; Gaz. vol. 219; p. 1098.
End-gate. W. H. Seals. No. 1,156,498; Oct. 12; Gaz. vol. 219; p. 434.
End-gate, Wagon. T. Ryan. No. 1,156,182; Oct. 12; Gaz. vol. 219; p. 323.
Engine: *See*—
Combustion-engine. Rotary engine.
Gas-engine. Rotary combustion-engine.
Heat-engine. Rotary gas-engine.
Hydrocarbon-engine. Steam-engine.
Internal-combustion engine. Traction-engine.
Engine. B. V. Nordberg. No. 1,157,029; Oct. 19; Gaz. vol. 219; p. 650.
Engine controller, Internal-combustion-. C. O. Pearson. No. 1,156,430; Oct. 12; Gaz. vol. 219; p. 410.
Engine-controlling mechanism, Internal-combustion-. A. G. Moreton. No. 1,158,000; Oct. 26; Gaz. vol. 219; p. 1052.
Engine-cooling system, Internal-combustion-. P. Montbarbon. No. 1,155,950; Oct. 5; Gaz. vol. 219; p. 217.
Engine-cylinder, Divided. K. Steinbecker. No. 1,157,834; Oct. 19; Gaz. vol. 219; p. 758.
Engine cylinder, Internal-combustion-. C. Regenbogen and P. A. Ritter. No. 1,156,312; Oct. 12; Gaz. vol. 219; p. 366.
Engine for utilising powdered fuel. W. G. Miner. No. 1,156,702; Oct. 12; Gaz. vol. 219; p. 505.
Engine ignition device, Internal-combustion-. L. T. Rhoades. No. 1,155,372; Oct. 5; Gaz. vol. 219; p. 17.
Engine-lubricating means, Steam-. W. S. Peavey. No. 1,156,432; Oct. 12; Gaz. vol. 219; p. 410.
Engine-lubricator. A. G. Cooper. No. 1,158,121; Oct. 26; Gaz. vol. 219; p. 1096.
Engine-mounting. C. G. Mahana. No 1,157,168; Oct. 19; Gaz. vol. 219; p. 699.
Engine primer, Gas-. E. H. Bauer. No. 1,155,871; Oct. 5; Gaz. vol. 219; p. 191.
Engine self-starter. E. A. Ford. No. 1,157,211; Oct. 19; Gaz. vol. 219; p. 714.
Engine-starter. J. H. Clark. No. 1,157,761; Oct. 26; Gaz. vol. 219; p. 969.
Engine-starter. M. A. Harris. No. 1,157,533; Oct. 19; Gaz. vol. 219; p. 828.

Engine-starter. R. A. Stabler. No. 1,156,718; Oct. 12; Gaz. vol. 219; p. 510.
Engine starter, Explosive-. J. B. Aufuldish. No. 1,155,781; Oct. 5; Gaz. vol. 219; p. 159.
Engine starter, Gas-. C. C. Wedge. No. 1,157,829; Oct. 26; Gaz. vol. 219; p. 992.
Engine-starting device, Internal-combustion-. P. Povlotzky. No. 1,156,173; Oct. 12; Gaz. vol. 219; p. 320.
Engine-starting mechanism, Internal-combustion-. G. C. Davison and J. W. Anderson. No. 1,157,849; Oct. 26; Gaz. vol. 219; p. 999.
Engine-throttling apparatus, Marine-. O. J. McGowan. No. 1,155,669; Oct. 5; Gaz. vol. 219; p. 120.
Engines, Air-heater for gasolene-. J. O. Snyder. No. 1,157,189; Oct. 19; Gaz. vol. 219; p. 706.
Engines, Combined fuel and cooling system for vehicle-. F. Honnold. No. 1,156,780; Oct. 12; Gaz. vol. 219; p. 531.
Engines, Compression-controlling mechanism for. B. V. Nordberg. No. 1,157,030; Oct. 19; Gaz. vol. 219; p. 651.
Engines, Coördinating actuating means for magnetos and igniters of internal-combustion. T. C. Menges. No. 1,155,500; Oct. 5; Gaz. vol. 219; p. 62.
Engines, Cylinder construction for multiple-piston. K. Steinbecker. No. 1,157,335; Oct. 19; Gaz. vol. 219; p. 758.
Engines, Exhaust for internal-combustion. J. M. Underwood. No. 1,156,447; Oct. 12; Gaz. vol. 219; p. 416.
Engines, Foot-accelerator for Ford automobile-. G. S. Gunderson. No. 1,157,099; Oct. 19; Gaz. vol. 219; p. 675.
Engines, Jordan shaft for paper-stock-refining. A. C. Pierce and G. C. Kaufman. No. 1,158,277; Oct. 26; Gaz. vol. 219; p. 1150.
Engines, Lubricating. W. S. Peavey. No. 1,156,431; Oct. 12; Gaz. vol. 219; p. 410.
Engines, Lubrication of internal-combustion. J. J. Hogan. No. 1,157,308; Oct. 19; Gaz. vol. 219; p. 749.
Engines, Means for withdrawing steam from steam-. C. A. Hartung. No. 1,155,811; Oct. 5; Gaz. vol. 219; p. 170.
Engines, Mechanical starting mechanism for internal-combustion. J. Severa. No. 1,155,687; Oct. 5; Gaz. vol. 219; p. 126.
Engines, Pulverizer for oil-. W. H. Frost. No. 1,157,305; Oct. 19; Gaz. vol. 219; p. 748.
Engines, Vaporizer for use with internal-combustion. T. E. Halliday. No. 1,157,101; Oct. 19; Gaz. vol. 219; p. 675.
Envelop. O. Katzenberger. No. 1,158,229; Oct. 26; Gaz. vol. 219; p. 1133.
Envelop. F. X. J. Lacroix and J. E. Roy. No. 1,155,740; Oct. 5; Gaz. vol. 219; p. 144.
Envelop. P. H. Waggener. No. 1,155,388; Oct. 5; Gaz. vol. 219; p. 22.
Envelop, Parcel-post. H. A. Truscott. No. 1,156,507; Oct. 12; Gaz. vol. 219; p. 438.
Envelop, Safety-. E. Heitmann. No. 1,157,983; Oct. 26; Gaz. vol. 219; p. 1047.
Envelop, shipping-tag, and index-card, Combined. R. R. Simpson and J. S. Wilmoth. No. 1,157,432; Oct. 19; Gaz. vol. 219; p. 794.
Eraser, Blackboard-. R. A. Costello. No. 1,157,369; Oct. 19; Gaz. vol. 219; p. 771.
Eraser, Blackboard-. J. F. Palmer. No. 1,157,718; Oct. 21; Gaz. vol. 219; p. 954.
Excavating-machine. P. D. Converse. No. 1,157,209; Oct. 19; Gaz. vol. 219; p. 713.
Exercising-machine. M. De Palkowska and A. Bullard. No. 1,157,003; Oct. 26; Gaz. vol. 219; p. 1053.
Extensible table. W. T. Fink. No. 1,158,125; Oct. 26; Gaz. vol. 219; p. 1098.
Extractor: *See*—
Spike-extractor. Tar-extractor.
Eyeglass-case. J. M. Bradley and C. F. Pike. No. 1,158,169; Oct. 26; Gaz. vol. 219; p. 1113.
Eyeglass-case. J. M. Bradley and C. F. Pike. No. 1,158,170; Oct. 26; Gaz. vol. 219; p. 1113.
Eyeglass-cases and the like, Name-plate for. H. R. Goodell. No. 1,156,772; Oct. 12; Gaz. vol. 219; p. 529.
Eyeleting-machine. R. C. Simmons. No. 1,156,936; Oct. 19; Gaz. vol. 219; p. 616.
Fabric: *See*—
Metallic fabric. Woven fabric.
Fabrics, Machine for forming openings in woven. B. R. Benjamin. No. 1,157,754; Oct. 26; Gaz. vol. 219; p. 988.
Fan, Centrifugal. R. Warg. No. 1,156,118; Oct. 12; Gaz. vol. 219; p. 302.
Fan-guard attachment, Electric-. T. G. Dabney. No. 1,158,184; Oct. 26; Gaz. vol. 219; p. 1118.
Fan-motor. C. I. Hall. No. 1,156,901; Oct. 19; Gaz. vol. 219; p. 604.
Farm-gate. G. M. Bates. No. 1,155,463; Oct. 5; Gaz. vol. 219; p. 48.
Fastener, Separable. E. N. Humphrey. No. 1,156,008; Oct. 5; Gaz. vol. 219; p. 236.
Fastening device. J. E. Pierce. No. 1,157,039; Oct. 19; Gaz. vol. 219; p. 654.
Fat-cutting machine. M. Oehler. No. 1,157,799; Oct. 26; Gaz. vol. 219; p. 982.
Fats and oils, Apparatus for treating. P. G. Kaiser and B. E. Reuter. No. 1,156,905; Oct. 19; Gaz. vol. 219; p. 606.
Fatigue-testing machine. G. B. Upton and G. W. Lewis. No. 1,156,726; Oct. 12; Gaz. vol. 219; p. 514.
Faucet. C. F. Wray. No. 1,155,984; Oct. 5; Gaz. vol. 219; p. 228.
Faucet, Beer-. W. Griesser. No. 1,156,774; Oct. 12; Gaz. vol. 219; p. 530.
Faucet, Self-closing. T. H. Kenney. No. 1,156,010; Oct. 5; Gaz. vol. 219; p. 237.
Feather-fastener. W. T. J. Lynch. No. 1,155,428; Oct. 5; Gaz. vol. 219; p. 36.
Feed-bag. W. H. Steffens. No. 1,155,845; Oct. 5; Gaz. vol. 219; p. 182.
Feed-bag. G. W. Waddell. No. 1,157,471; Oct. 19; Gaz. vol. 219; p. 807.
Feed-cutter. J. C. Haldeman. No. 1,155,353; Oct. 5; Gaz. vol. 219; p. 10.
Feed-cutters, Comminuting attachment for. O. C. Frick. No. 1,157,095; Oct. 19; Gaz. vol. 219; p. 673.
Feed-regulator. J. Woodward. No. 1,155,459; Oct. 5; Gaz. vol. 219; p. 47.
Feed-water heater. C. V. Wallace. No. 1,157,472; Oct. 19; Gaz. vol. 219; p. 807.
Feeder, Swine-. J. F. Myers. No. 1,156,428; Oct. 12; Gaz. vol. 219; p. 409.
Feeding apparatus. G. P. Rexroat. No. 1,155,684; Oct. 5; Gaz. vol. 219; p. 125.
Feeding device. J. T. Quigley. No. 1,156,037; Oct. 5; Gaz. vol. 219; p. 247.
Feeding individual pieces, Device for. C. W. Graham. No. 1,158,045; Oct. 26; Gaz. vol. 219; p. 1069.
Feeding mechanism. F. B. Redington and M. J. Milmoe. No. 1,158,287; Oct. 26; Gaz. vol. 219; p. 1154.
Feeding mechanism, Alternating. T. Ward. No. 1,158,088; Oct. 26; Gaz. vol. 219; p. 1084.
Fence stretcher, Wire-. J. Olson. No. 1,157,324; Oct. 19; Gaz. vol. 219; p. 755.
Fence tool, Wire-. W. Kyllonen. No. 1,158,242; Oct. 26; Gaz. vol. 219; p. 1138.
Fender: *See*—
Automobile-fender. Ship-fender.
Car-fender. Wheel-tread fender.
Plow-fender.
Fender. M. Warner. No. 1,157,198; Oct. 19; Gaz. vol. 219; p. 710.
Fertilizer-distributer. A. D. Cox. No. 1,157,370; Oct. 19; Gaz. vol. 219; p. 771.
Fertilizer-distributers, Two-row attachment for. S. Q. Harper. No. 1,157,532; Oct. 19; Gaz. vol. 219; p. 828.
Fiber-cleaning machine. P. R. Nelson. No. 1,157,575; Oct. 19; Gaz. vol. 219; p. 840.
Fibers, Softening and strengthening degummed vegetable. G. D. Burton. No. 1,156,462; Oct. 12; Gaz. vol. 219; p. 421.
Fibrous composition and manufacture. J. C. Woodley. No. 1,156,122; Oct. 12; Gaz. vol. 219; p. 303.
Fifth-wheel for vehicles. W. O. Shadbolt. No. 1,155,623; Oct. 5; Gaz. vol. 219; p. 103.
Filament and other product, Artificial. W. A. Beatty. No. 1,156,969; Oct. 19; Gaz. vol. 219; p. 628.
File, Bill-. J. M. Teamer. No. 1,155,382; Oct. 5; Gaz. vol. 219; p. 19.
Filing appliance. H. J. Hick. No. 1,157,159; Oct. 19; Gaz. vol. 219; p. 695.
Filing appliance. H. J. Hick and A. F. Staples. No. 1,157,160; Oct. 19; Gaz. vol. 219; p. 696.
Filing device. R. S. Graham. No. 1,158,129; Oct. 26; Gaz. vol. 219; p. 1099.
Filing device. J. H. and J. H. Rand, Jr. No. 1,158,074; Oct. 26; Gaz. vol. 219; p. 1079.
Film-developing apparatus, Roll-. B. J. Naslef and F. F. Dorsey. No. 1,156,922; Oct. 19; Gaz. vol. 219; p. 612.
Film-rewinding mechanism. W. H. Akin. No. 1,156,025; Oct. 5; Gaz. vol. 219; p. 243.
Filter. V. B. Hugg. No. 1,157,776; Oct. 26; Gaz. vol. 219; p. 973.
Filter. W. M. Jewell. No. 1,158,226; Oct. 26; Gaz. vol. 219; p. 1132.
Filter and air-chamber, Combination. E. A. Gehrke. No. 1,157,934; Oct. 26; Gaz. vol. 219; p. 1029.
Filter, Oil-. J. H. Packer. No. 1,157,717; Oct. 26; Gaz. vol. 219; p. 954.
Filter-press, Electro-osmotical. B. Schwerin. No. 1,156,715; Oct. 12; Gaz. vol. 219; p. 509.
Filter-press switch-cock and double-gutter construction. B. E. Sperry. No. 1,157,907; Oct. 26; Gaz. vol. 219; p. 1021.
Filtering apparatus. J. B. Davis. No. 1,156,592; Oct. 12; Gaz. vol. 219; p. 466.
Filtering apparatus. D. J. Kelly. No. 1,158,056; Oct. 26; Gaz. vol. 219; p. 1072.
Filtering process. D. J. Kelly. No. 1,158,055; Oct. 26; Gaz. vol. 219; p. 1072.
Filtration, Water. W. M. Jewell. No. 1,158,225; Oct. 26; Gaz. vol. 219; p. 1131.
Finely-divided solids, Collecting apparatus for. I. S. Merrell. No. 1,157,947; Oct. 26; Gaz. vol. 219; p. 1034.
Fire-alarm, Automatic. J. B. Smith. No. 1,156,717; Oct. 12; Gaz. vol. 219; p. 510.
Fire-alarm box. A. Mösdiers. No. 1,156,705; Oct. 12; Gaz. vol. 219; p. 506.
Fire-alarm system. F. Gottschalk. No. 1,155,722; Oct. 5; Gaz. vol. 219; p. 188.
Firearm. C. G. Swebilius and H. T. R. Hanitz. No. 1,157,656; Oct. 19; Gaz. vol. 219; p. 868.

Firearm. F. K. Young. No. 1,157,750; Oct. 26; Gaz. vol. 219; p. 966.

Firearm, Breech-loading. G. H. Giddings. No. 1,156,222; Oct. 12; Gaz. vol. 219; p. 336.

Firearms, Frame and receiver construction for. C. H. Barnes. No. 1,157,752; Oct. 26; Gaz. vol. 219; p. 967.

Fire-box construction, Locomotive-. L. Parish. No. 1,156,368; Oct. 12; Gaz. vol. 219; p. 387.

Fire-escape. J. Kish. No. 1,156,908; Oct. 19; Gaz. vol. 219; p. 607.

Fire-extinguisher. H. W. Doughty. No. 1,157,090; Oct. 19; Gaz. vol. 219; p. 671.

Fire-extinguishers, Element for automatic. E. M. Cook. No. 1,155,339; Oct. 5; Gaz. vol. 219; p. 5.

Fire-extinguishing apparatus. C. Brent. No. 1,157,614; Oct. 19; Gaz. vol. 219; p. 852.

Fire-fighting apparatus. W. P. Rickard. No. 1,155,958; Oct. 5; Gaz. vol. 219; p. 220.

Fireproof building construction. J. G. Braun. No. 1,157,078; Oct. 19; Gaz. vol. 219; p. 667.

Fireproof utensils from refractory oxids, Manufacture of. H. Arnold. No. 1,157,662; Oct. 26; Gaz. vol. 219; p. 935.

Fish-hook. V. Gebhardt. No. 1,157,772; Oct. 26; Gaz. vol. 219; p. 972.

Fish-hook. C. A. Krenrick. No. 1,156,152; Oct. 12; Gaz. vol. 219; p. 314.

Fish-hook. C. C. Mau. No. 1,156,795; Oct. 12; Gaz. vol. 219; p. 536.

Fish-trap, Floating. E. N. Paine. No. 1,157,417; Oct. 19; Gaz. vol. 219; p. 789.

Fishing-float. W. A. Easlick. No. 1,157,517; Oct. 19; Gaz. vol. 219; p. 823.

Fishing-pole. J. G. Heinrich, Jr. No. 1,157,106; Oct. 19; Gaz. vol. 219; p. 677.

Fishing-tool. C. W. Henderson. No. 1,156,289; Oct. 12; Gaz. vol. 219; p. 358.

Fishway. E. E. Prince. No. 1,157,639; Oct. 19; Gaz. vol. 219; p. 861.

Flash-light belt, Collapsible duplex. J. F. Spalding. No. 1,155,377; Oct. 5; Gaz. vol. 219; p. 18.

Flat-iron, Electric. W. J. Keep. No. 1,155,423; Oct. 5; Gaz. vol. 219; p. 35.

Flexible coupling. W. Kleinow. No. 1,157,553; Oct. 19; Gaz. vol. 219; p. 834.

Float apparatus, Multiplier of efficiency for. O. Roschanek. No. 1,157,583; Oct. 19; Gaz. vol. 219; p. 843.

Floor-covering. E. Hopkinson. No. 1,158,051; Oct. 26; Gaz. vol. 219; p. 1071.

Floor scraper or cleaner. P. E. Luethjohn. No. 1,156,790; Oct. 12; Gaz. vol. 219; p. 534.

Floor structure. W. P. Francis. No. 1,158,196; Oct. 26; Gaz. vol. 219; p. 1122.

Flour and product thereof, Treating. T. T. Vernon. No. 1,155,977; Oct. 5; Gaz. vol. 219; p. 226.

Flow-meter. A. R. Dodge. No. 1,157,301; Oct. 19; Gaz. vol. 219; p. 747.

Flow-meter. J. W. Sheperdson. No. 1,156,635; Oct. 12; Gaz. vol. 219; p. 482.

Flow-meter. L. A. Simmons. No. 1,156,638; Oct. 12; Gaz. vol. 219; p. 483.

Flow meter, Steam-. L. A. Sheldon. No. 1,156,503; Oct. 12; Gaz. vol. 219; p. 436.

Flow of fluid, Regulator to control the. I. H. Spencer. No. 1,155,525; Oct. 5; Gaz. vol. 219; p. 71.

Flow of fluids, Method and apparatus for measuring the. E. J. Berg. No. 1,156,660; Oct. 12; Gaz. vol. 219; p. 492.

Flow of fluids, Method of and means for measuring the. M. A. Savage. No. 1,156,630; Oct. 12; Gaz. vol. 219; p. 480.

Flow of water through turbine-gates, Mechanism for measuring and integrating the amount of. H. E. Warren. No. 1,156,042; Oct. 5; Gaz. vol. 219; p. 249.

Fluid-actuated motor. G. Akans. No. 1,156,855; Oct. 12; Gaz. vol. 219; p. 559.

Fluid-meter. F. Lambert. No. 1,155,667; Oct. 5; Gaz. vol. 219; p. 119.

Fluid-pressure cut-off, Automatic. M. L. Grove. No. 1,155,915; Oct. 5; Gaz. vol. 219; p. 206.

Fluid-pressure device. C. Dantsizen. No. 1,158,029; Oct. 26; Gaz. vol. 219; p. 1063.

Fluid-pressure regulator. A. Pfau. No. 1,157,957; Oct. 26; Gaz. vol. 219; p. 1038.

Flume-gate. A. J. Blakely. No. 1,158,165; Oct. 26; Gaz. vol. 219; p. 1111.

Flushing apparatus, Siphonic. C. E. Blackburn. No. 1,157,667; Oct. 26; Gaz. vol. 219; p. 937.

Flushing mechanism for closets, Automatic. G. Schwibinger. No. 1,157,186; Oct. 19; Gaz. vol. 219; p. 705.

Flushing mechanism for closets, Automatic. G. Schwibinger. No. 1,157,187; Oct. 19; Gaz. vol. 219; p. 705.

Fly-killing apparatus. F. J. Anderson. No. 1,155,697; Oct. 5; Gaz. vol. 219; p. 129.

Fly-paper guard and holder. J. J. Connell. No. 1,158,119; Oct. 26; Gaz. vol. 219; p. 1095.

Flying-machine. P. Stumpf. No. 1,157,337; Oct. 19; Gaz. vol. 219; p. 759.

Flying-machine brake. J. Schroeder. No. 1,156,633; Oct. 12; Gaz. vol. 219; p. 481.

Flying-machine, Heavier-than-air. G. H. Curtiss. No. 1,156,215; Oct. 12; Gaz. vol. 219; p. 333.

Folded-blank box. J. R. Van Wormer. No. 1,157,462; Oct. 19; Gaz. vol. 219; p. 803.

Folding box. G. Dieckmann. No. 1,156,673; Oct. 12; Gaz. vol. 219; p. 496.

Folding box. G. Dramis. No. 1,155,890; Oct. 5; Gaz. vol. 219; p. 200.

Folding box and cover. J. A. Scott. No. 1,156,250; Oct. 12; Gaz. vol. 219; p. 345.

Food and confectionery compounds. H. H. Root and L. W. Boyden. No. 1,156,181; Oct. 12; Gaz. vol. 219; p. 323.

Food compound. H. H. Root. No. 1,158,297; Oct. 26; Gaz. vol. 219; p. 1158.

Food preparation and making same, Condensed molluscous. G. P. Lehritter. No. 1,155,743; Oct. 5; Gaz. vol. 219; p. 145.

Food products, Inclosing. C. W. Graham. No. 1,158,044; Oct. 26; Gaz. vol. 219; p. 1068.

Food, Stock. T. B. Walker. No. 1,155,531; Oct. 5; Gaz. vol. 219; p. 73.

Foods, Preparing. F. W. Lotz. No. 1,157,016; Oct. 19; Gaz. vol. 219; p. 646.

Foot-corset. J. O'Dwyer. No. 1,156,621; Oct. 12; Gaz. vol. 219; p. 477.

Forging couplings, Apparatus for. T. Patterson. No. 1,157,637; Oct. 19; Gaz. vol. 219; p. 860.

Forging-dies. W. D. Forsyth. No. 1,157,212; Oct. 19; Gaz. vol. 219; p. 714.

Forging-dies. W. D. Forsyth. No. 1,157,213; Oct. 19; Gaz. vol. 219; p. 715.

Forging fulcrums. C. E. Bauer. No. 1,157,833; Oct. 26; Gaz. vol. 219; p. 994.

Fork: *See*—
Grab-fork.

Form, Dress-. L. T. Furnas. No. 1,158,199; Oct. 26; Gaz. vol. 219; p. 1123.

Form for preserving and displaying waists and other garments. H. Moschcowitz. No. 1,156,246; Oct. 12; Gaz. vol. 219; p. 344.

Form registering and line-up means. R. H. Kiebler. No. 1,158,133; Oct. 26; Gaz. vol. 219; p. 1100.

Form, Shirt-waist. G. Wordingham. No. 1,158,358; Oct. 26; Gaz. vol. 219; p. 1178.

Fortune-telling device. A. F. Raldeano. No. 1,157,581; Oct. 19; Gaz. vol. 219; p. 842.

Fountain: *See*—
Bubbling fountain. Soap-fountain.
Drinking-fountain.
Printing-press ink-fountain.

Fountain-divider. J. Thompson. No. 1,158,334; Oct. 26; Gaz. vol. 219; p. 1170.

Fracture-clamp. J. X. Smith. No. 1,156,440; Oct. 12; Gaz. vol. 219; p. 413.

Frame: *See*—
Heddle-frame. Plow-frame.
Grave-mound frame. Side frame.
Lantern guard-frame. Truck side frame.
Picture-frame. Umbrella and parasol frame.

Framing, Metallic. C. A. Fullerton, L. A. Rushworth, and W. H. Paeth. No. 1,158,378; Oct. 26; Gaz. vol. 219; p. 1185.

Freezer. E. E. Phillips. No. 1,155,680; Oct. 5; Gaz. vol. 219; p. 124.

Frequency-indicator. D. R. Price. No. 1,156,491; Oct. 12; Gaz. vol. 219; p. 432.

Fruit and vegetable cutter. C. Keebaugh. No. 1,155,931; Oct. 5; Gaz. vol. 219; p. 211.

Fruit-drying apparatus. G. D. Parker. No. 1,158,388; Oct. 26; Gaz. vol. 219; p. 1189.

Fruit-juices, Clarifying and concentrating. E. Monti. No. 1,158,261; Oct. 26; Gaz. vol. 219; p. 1144.

Fruit-picker. P. A. Angeski. No. 1,158,158; Oct. 26; Gaz. vol. 219; p. 1109.

Fruit-picker. C. Mann. No. 1,157,025; Oct. 19; Gaz. vol. 219; p. 649.

Fuel, Air-feed for pulverized. S. H. Harrison. No. 1,155,725; Oct. 5; Gaz. vol. 219; p. 140.

Fuel-controlling device. H. D. Yates. No. 1,158,094; Oct. 26; Gaz. vol. 219; p. 1087.

Fuel for kinetic engines and making the same. G. Bileberger. No. 1,158,367; Oct. 26; Gaz. vol. 219; p. 1181.

Fuel-injector. H. Lemp. No. 1,157,315; Oct. 19; Gaz. vol. 219; p. 751.

Fuel-injector. G. E. Windeler. No. 1,157,273; Oct. 19; Gaz. vol. 219; p. 737.

Fullers' earth, Treating. R. Claus. No. 1,156,466; Oct. 12; Gaz. vol. 219; p. 425.

Fulling-machine. F. J. Mansfield. No. 1,158,257; Oct. 26; Gaz. vol. 219; p. 1142.

Furnace: *See*—
Barbecue-furnace. Glass-drawing furnace.
Calcining-furnace. Hot-air furnace.
Electric furnace. Metal-working furnace.
Galvanizing-furnace. Retort-furnace.

Furnace, R. S. Riley. No. 1,156,628; Oct. 12; Gaz. vol. 219; p. 479.

Furnace-door handle. G. Steele. No. 1,155,689; Oct. 5; Gaz. vol. 219; p. 127.

Furnace-regulating system, Steam-. N. R. Johnson. No. 1,157,003; Oct. 19; Gaz. vol. 219; p. 640.

Furnaces, Air-superheating device for. W. E. Shore. No. 1,157,964; Oct. 29; Gaz. vol. 219; p. 1041.

Furnaces, Air-superheating device for. W. E. Shore. No. 1,157,965; Oct. 26; Gaz. vol. 219; p. 1041.

Furnaces, Draft-controlling mechanism for smoke-consuming. E. R. Greene. No. 1,157,097; Oct. 19; Gaz. vol. 219; p. 674.

Furnaces with magnetically-extended electric arcs, Apparatus for improving the stability of. F. Troye. No. 1,156,192; Oct. 12; Gaz. vol. 219; p. 326.

Furniture-anchor. H. C. Sherer. No. 1,155,376; Oct. 5; Gaz. vol. 219; p. 18.

Furniture, Porch. J. E. Thompson. No. 1,157,458; Oct. 19; Gaz. vol. 219; p. 802.

Fuse-plug, Electrical. N. W. Nutt. No. 1,158,145; Oct. 26; Gaz. vol. 219; p. 1104.

Gage: *See*—
Drilling and blasting gage. Tire-gage.
Printer's miter-gage. Water-closet gage.
Shingle and slate gage.

Gage. A. A. Faust. No. 1,155,715; Oct. 5; Gaz. vol. 219; p. 136.

Gage. H. Hess. No. 1,157,389; Oct. 19; Gaz. vol. 219; p. 778.

Gage and compass, Combined. E. B. Bennett and J. Armstrong. No. 1,155,542; Oct. 5; Gaz. vol. 219; p. 77.

Gage device. J. F. Geary. No. 1,158,403; Oct. 26; Gaz. vol. 219; p. 1195.

Gage-glass shield. R. McIntosh. No. 1,157,708; Oct. 26; Gaz. vol. 219; p. 951.

Galvanizing-furnace. C. Fell. No. 1,156,353; Oct. 12; Gaz. vol. 219; p. 381.

Game. J. F. Simpson. No. 1,156,438; Oct. 12; Gaz. vol. 219; p. 413.

Game. J. Welch. No. 1,155,851; Oct. 5; Gaz. vol. 219; p. 184.

Game apparatus. J. E. Church. No. 1,156,667; Oct. 12; Gaz. vol. 219; p. 494.

Game apparatus. H. B. Hill. No. 1,156,006; Oct. 5; Gaz. vol. 219; p. 235.

Game apparatus. E. W. McCarroll. No. 1,158,250; Oct. 26; Gaz. vol. 219; p. 1140.

Game apparatus. H. C. Twibell. No. 1,157,913; Oct. 26; Gaz. vol. 219; p. 1023.

Game apparatus. J. L. Webb and S. F. Sturdevant. No. 1,157,828; Oct. 26; Gaz. vol. 219; p. 992.

Game apparatus. W. Zepp. No. 1,158,413; Oct. 26; Gaz. vol. 219; p. 1199.

Game-ball with composition coating. J. W. and C. E. Hyatt. No. 1,156,144; Oct. 12; Gaz. vol. 219; p. 311.

Game-board. W. J. Ennisson. No. 1,155,714; Oct. 5; Gaz. vol. 219; p. 136.

Game-board. W. F. Schnellhardt. No. 1,158,308; Oct. 26; Gaz. vol. 219; p. 1162.

Game device, Ball-. H. Behrend. No. 1,156,047; Oct. 12; Gaz. vol. 219; p. 277.

Garbage-incinerator. R. W. Krenz. No. 1,155,492; Oct. 5; Gaz. vol. 219; p. 59.

Garbage-receiver, Sanitary. A. E. Lang. No. 1,157,008; Oct. 19; Gaz. vol. 219; p. 642.

Garbage-receptacle, Odorless. E. O. Messmore. No. 1,156,304; Oct. 12; Gaz. vol. 219; p. 363.

Garden implement. J. Sinnott. No. 1,156,937; Oct. 19; Gaz. vol. 219; p. 616.

Garden-tool. A. W. Upton. No. 1,158,335; Oct. 26; Gaz. vol. 219; p. 1170.

Garment. I. Schwartz. No. 1,158,312; Oct. 26; Gaz. vol. 219; p. 1163.

Garment-fitter. I. Cohen. No. 1,157,085; Oct. 19; Gaz. vol. 219; p. 670.

Garment-hook. H. E. Fanshawe. No. 1,158,193; Oct. 26; Gaz. vol. 219; p. 1121.

Garment-supporter. D. G. Butts. No. 1,156,835; Oct. 12; Gaz. vol. 219; p. 551.

Garment-supporter. E. M. Smedberg. No. 1,156,187; Oct. 12; Gaz. vol. 219; p. 325.

Garter. A. P. Coolbroth. No. 1,156,393; Oct. 12; Gaz. vol. 219; p. 397.

Gas-engine, Two-cycle. M. W. Hall. No. 1,158,380; Oct. 26; Gaz. vol. 219; p. 1186.

Gas-engine, Two-cycle. M. W. Hall. No. 1,158,381; Oct. 26; Gaz. vol. 219; p. 1186.

Gas-fire. W. A. Wilson. No. 1,156,735; Oct. 12; Gaz. vol. 219; p. 517.

Gas from liquid hydrocarbons, Manufacturing illuminating-. F. C. and L. B. Jones. No. 1,157,225; Oct. 19; Gaz. vol. 219; p. 719.

Gas-generating burner. J. H. Griffith. No. 1,156,139; Oct. 12; Gaz. vol. 219; p. 310.

Gas generator, Acetylene-. J. Karl. No. 1,155,422; Oct. 5; Gaz. vol. 219; p. 34.

Gas generator, Acetylene-. E. M. Rodebaugh. No. 1,156,495; Oct. 12; Gaz. vol. 219; p. 433.

Gas-heated iron. R. Joyce. No. 1,155,580; Oct. 5; Gaz. vol. 219; p. 88.

Gas-igniter. M. M. Truax. No. 1,157,911; Oct. 26; Gaz. vol. 219; p. 1022.

Gas, Making. S. M. Darling. No. 1,157,089; Oct. 19; Gaz. vol. 219; p. 671.

Gas-mixing device. A. C. Clark. No. 1,156,975; Oct. 19; Gaz. vol. 219; p. 631.

Gas, Purifying. M. P. P. Rils. No. 1,156,022; Oct. 5; Gaz. vol. 219; p. 241.

Gas-scrubber. R. Maclaurin. No. 1,158,066; Oct. 26; Gaz. vol. 219; p. 1076.

Gas to burners, Device for controlling the supply of. C. W. Harrison. No. 1,155,416; Oct. 5; Gaz. vol. 219; p. 52.

Gas-valve, Intermittently-operated. F. J. H. Rustige. No. 1,157,422; Oct. 19; Gaz. vol. 219; p. 790.

Gasolene-tank heater. T. G. Wissinger. No. 1,156,198; Oct. 12; Gaz. vol. 219; p. 328.

Gate: *See*—
Elevator-gate. Flume-gate.
End-gate. Wire gate.
Farm-gate.

Gate. C. W. Cox. No. 1,156,275; Oct. 12; Gaz. vol. 219; p. 353.

Gate. W. H. Sommer. No. 1,157,055; Oct. 19; Gaz. vol. 219; p. 659.

Gate-operator. A. W. Lightburne. No. 1,156,161; Oct. 12; Gaz. vol. 219; p. 317.

Gear, Fluid change and reversing. H. Lentz. No. 1,156,015; Oct. 5; Gaz. vol. 219; p. 239.

Gear mechanism. S. Halcin. No. 1,157,936; Oct. 26; Gaz. vol. 219; p. 1030.

Gear mechanism, Changeable-speed-. H. L. Schenck. No. 1,156,102; Oct. 12; Gaz. vol. 219; p. 297.

Gear-shifting lever, Detachable. H. S. Cass. No. 1,156,272; Oct. 12; Gaz. vol. 219; p. 353.

Gear-shifting mechanism. F. Johnson. No. 1,156,405; Oct. 12; Gaz. vol. 219; p. 401.

Gearing. H. E. Bullock. No. 1,156,055; Oct. 12; Gaz. vol. 219; p. 280.

Gearing. H. W. McNeil. No. 1,157,167; Oct. 19; Gaz. vol. 219; p. 699.

Gearing. F. Snow. No. 1,156,377; Oct. 12; Gaz. vol. 219; p. 391.

Gearing. C. W. Swanson. No. 1,156,564; Oct. 12; Gaz. vol. 219; p. 457.

Gearing. H. P. Townsend. No. 1,155,847; Oct. 5; Gaz. vol. 219; p. 183.

Gearing. F. H. Walker. No. 1,156,863; Oct. 12; Gaz. vol. 219; p. 564.

Gearing apparatus, Transmission-cone-. E. F. Bubb. No. 1,156,883; Oct. 19; Gaz. vol. 219; p. 597.

Gearing, Elastic. K. Alquist. No. 1,157,918; Oct. 26; Gaz. vol. 219; p. 1024.

Gearing for centrifugal machine. G. W. Johansson and J. V. M. Risberg. No. 1,156,233; Oct. 12; Gaz. vol. 219; p. 339.

Gearing, Lever-actuated power-transmission. J. T. Daniel. No. 1,156,982; Oct. 19; Gaz. vol. 219; p. 633.

Gearing-lubricator. T. Cholin. No. 1,156,064; Oct. 12; Gaz. vol. 219; p. 403.

Gearing, Power-transmission. H. A. Waterman, L. C. Bradley, and W. K. Andrew. No. 1,157,133; Oct. 19; Gaz. vol. 219; p. 686.

Gearing, Speed-changing transmission-. C. L. Howard. No. 1,157,001; Oct. 19; Gaz. vol. 219; p. 639.

Gearing, Transmission-. C. A. Miles. No. 1,155,601; Oct. 5; Gaz. vol. 219; p. 96.

Gearing, Transmission-. A. B. and C. C. Small. No. 1,156,938; Oct. 19; Gaz. vol. 219; p. 617.

Gearing, Variable-speed. J. Dove-Smith. No. 1,155,898; Oct. 5; Gaz. vol. 219; p. 199.

Gearing, Variable-speed-transmission. H. Maschek. No. 1,155,597; Oct. 5; Gaz. vol. 219; p. 94.

Generator: *See*—
Acetylene-generator. Ozone-generator.
Gas-generator.

Generators, Hand-hole cover for. W. L. Bliss. No. 1,157,497; Oct. 19; Gaz. vol. 219; p. 816.

Glare-screen. J. J. Richards, Jr. No. 1,158,005; Oct. 26; Gaz. vol. 219; p. 1054.

Glass-blowing machine. V. M. Dorsey. No. 1,156,868; Oct. 12; Gaz. vol. 219; p. 564.

Glass-blowing machine. N. W. Hartman. No. 1,155,809; Oct. 5; Gaz. vol. 219; p. 169.

Glass-blowing-machine mold. B. D. Chamberlin. No. 1,156,057; Oct. 12; Gaz. vol. 219; p. 280.

Glass-blowing-machine mold. B. D. Chamberlin. No. 1,156,058; Oct. 12; Gaz. vol. 219; p. 281.

Glass-blowing machines, Mold mechanism for. B. D. Chamberlin. No. 1,156,056; Oct. 12; Gaz. vol. 219; p. 280.

Glass-blowing mold. B. D. Chamberlin. No. 1,156,756; Oct. 12; Gaz. vol. 219; p. 523.

Glass-blowing pipes, Take-off mechanism for. B. D. Chamberlin. No. 1,156,858; Oct. 12; Gaz. vol. 219; p. 561.

Glass, Corrugated wire-. W. Cox and A. Shuman. No. 1,156,214; Oct. 12; Gaz. vol. 219; p. 333.

Glass-drawing furnace. V. H. Gregory. No. 1,157,980; Oct. 26; Gaz. vol. 219; p. 1046.

Glass-drawing furnace, Regenerative. W. L. Monro. No. 1,157,246; Oct. 19; Gaz. vol. 219; p. 728.

Glass, Making corrugated wire. W. Cox and A. Shuman. No. 1,156,213; Oct. 12; Gaz. vol. 219; p. 333.

Glass, Means for drawing sheet-. I. W. Colburn. No. 1,156,273; Oct. 12; Gaz. vol. 219; p. 353.

Glass-molding mechanism. A. Kadow. No. 1,156,009; Oct. 5; Gaz. vol. 219; p. 237.

Glass or mirror fastener. W. H. Holder. No. 1,155,924; Oct. 5; Gaz. vol. 219; p. 208.

Glass or the like, Built-up structure of. H. B. Oberhacke. No. 1,158,144; Oct. 26; Gaz. vol. 219; p. 1104.

Glass-ornamenting machine. J. Stott. No. 1,158,329; Oct. 26; Gaz. vol. 219; p. 1168.

Glass-removing apparatus. T. Spillane and T. Brinning. No. 1,156,379; Oct. 12; Gaz. vol. 219; p. 392.

Glass structure. O. A. Mygatt. No. 1,157,953; Oct. 26; Gaz. vol. 219; p. 1036.

Glass-working apparatus. W. J. Woods. No. 1,157,653; Oct. 19; Gaz. vol. 219; p. 866.
Glazing and hardening brick, terra-cotta, and other objects. L. R. Dennison. No. 1,158,417; Oct. 26; Gaz. vol. 219; p. 1201.
Glazing construction. W. P. Waugh. No. 1,156,335; Oct. 12; Gaz. vol. 219; p. 374.
Glazing-strip. W. W. Crocker. No. 1,156,981; Oct. 19; Gaz. vol. 219; p. 633.
Globe, Terrestrial. M. W. Hard. No. 1,157,219; Oct. 19; Gaz. vol. 219; p. 717.
Glove. E. T. Baskin. No. 1,156,517; Oct. 12; Gaz. vol. 219; p. 440.
Glove, Seamless rubber. T. W. Miller. No. 1,157,646; Oct. 19; Gaz. vol. 219; p. 863.
Glue-spreader, Fountain. A. Johnson. No. 1,155,420; Oct. 5; Gaz. vol. 219; p. 34.
Go-cart. F. Hyde. No. 1,157,224; Oct. 19; Gaz. vol. 219; p. 719.
Goggles. L. W. Bugbee. No. 1,156,389; Oct. 12; Gaz. vol. 219; p. 396.
Gold-leaf-cutting device. L. M. Harwood. No. 1,156,224; Oct. 12; Gaz. vol. 219; p. 336.
Gold or colored leaf, Making imitation. K. E. Olson. No. 1,158,265; Oct. 26; Gaz. vol. 219; p. 1145.
Gong. C. E. Avery. No. 1,155,869; Oct. 5; Gaz. vol. 219; p. 190.
Gown. C. A. Bonoff. No. 1,155,544; Oct. 5; Gaz. vol. 219; p. 78.
Gown, Maternity-. T. Cooper and J. H. Brigance. No. 1,155,551; Oct. 5; Gaz. vol. 219; p. 80.
Grab-fork. E. Murrey. No. 1,156,247; Oct. 12; Gaz. vol. 219; p. 344.
Grader. J. M. Young. No. 1,157,279; Oct. 19; Gaz. vol. 219; p. 739.
Grader, Road-. P. Yeager. No. 1,155,862; Oct. 5; Gaz. vol. 219; p. 188.
Grain-bag. J. F. Shannon. No. 1,155,375; Oct. 5; Gaz. vol. 219; p. 17.
Grain-binder cord-knotter. G. W. Witte. No. 1,155,860; Oct. 5; Gaz. vol. 219; p. 187.
Grain drier and cooler. F. R. Morris. No. 1,157,172; Oct. 19; Gaz. vol. 219; p. 700.
Grain-gathering device. P. F. Duerr. No. 1,156,985; Oct. 19; Gaz. vol. 219; p. 634.
Grain-pickler. J. E. Robinson and W. J. Currie. No. 1,155,618; Oct. 5; Gaz. vol. 219; p. 101.
Grain-separator. J. S. Walch. No. 1,158,396; Oct. 26; Gaz. vol. 219; p. 1193.
Grain, Treatment of seed-. H. E. Fry. No. 1,155,560; Oct. 5; Gaz. vol. 219; p. 82.
Grate-bar. R. F. Morse. No. 1,155,674; Oct. 5; Gaz. vol. 219; p. 121.
Grater for culinary use. G. Albanese. No. 1,158,153; Oct. 26; Gaz. vol. 219; p. 1107.
Grating. C. B. Albree. No. 1,158,154; Oct. 26; Gaz. vol. 219; p. 1108.
Grave-mound frame. W. J. Early. No. 1,157,516; Oct. 19; Gaz. vol. 219; p. 823.
Grease-cup. C. Brobst. No. 1,155,879; Oct. 5; Gaz. vol. 219; p. 193.
Grease-cup. J. Matthews. No. 1,156,302; Oct. 12; Gaz. vol. 219; p. 363.
Grease-cup. T. O. Organ. No. 1,156,804; Oct. 12; Gaz. vol. 219; p. 539.
Grinder, Disk. F. N. and F. E. Gardner. No. 1,155,414; Oct. 5; Gaz. vol. 219; p. 32.
Grinder, Food-. N. P. Lucas. No. 1,155,749; Oct. 5; Gaz. vol. 219; p. 147.
Grinder, Internal. J. Wilson. No. 1,156,962; Oct. 19; Gaz. vol. 219; p. 626.
Grinding-machine. L. E. Johnson and S. Strom. No. 1,156,292; Oct. 12; Gaz. vol. 219; p. 359.
Grinding-machine. U. Steiner. No. 1,156,254; Oct. 12; Gaz. vol. 219; p. 346.
Grinding-machine. W. C. Stephenson and A. J. Drapalik. No. 1,156,504; Oct. 12; Gaz. vol. 219; p. 436.
Grinding machine, Knife-. O. Fachman. No. 1,155,803; Oct. 5; Gaz. vol. 219; p. 168.
Grinding-machines. Cam-grinder attachment for. H. T. Shearer. No. 1,156,323; Oct. 12; Gaz. vol. 219; p. 369.
Grinding machines, Trimming mechanism for grinder-wheels of shaft-. F. A. Ward. No. 1,155,532; Oct. 5; Gaz. vol. 219; p. 73.
Grinding-mill feed-regulator. J. S. Fasting. No. 1,157,979; Oct. 26; Gaz. vol. 219; p. 1046.
Grinding-mill-feeding mechanism. W. P. Carson. No. 1,157,506; Oct. 19; Gaz. vol. 219; p. 819.
Grinding, polishing, or buffing machine. C. B. Larson. No. 1,158,136; Oct. 26; Gaz. vol. 219; p. 1101.
Gun-cleaner. J. Havlicek and J. B. Soullane. No. 1,156,683; Oct. 12; Gaz. vol. 219; p. 499.
Gun-loading apparatus, Heavy-. A. T. Dawson and J. Horne. No. 1,157,682; Oct. 26; Gaz. vol. 219; p. 942.
Gun on wheeled gun-carriage, Recoil-. H. Koch. No. 1,156,533; Oct. 12; Gaz. vol. 219; p. 446.
Gun training and elevating mechanism. J. F. Meigs and H. G. Jakobsson. No. 1,156,541; Oct. 12; Gaz. vol. 219; p. 448.
Guns, Automatic position-indicator for. W. Kilroy. No. 1,158,233; Oct. 26; Gaz. vol. 219; p. 1135.
Guns, Recoil-pad for. W. R. Jorgenson. No. 1,156,293; Oct. 12; Gaz. vol. 219; p. 360.
Hair-curler. M. W. Stoddard. No. 1,157,447; Oct. 19; Gaz. vol. 219; p. 799.
Hammer-head. L. G. Johnson. No. 1,157,545; Oct. 19; Gaz. vol. 219; p. 832.
Hammer, Power-operated. W. S. Payne. No. 1,158,270; Oct. 26; Gaz. vol. 219; p. 1147.
Hammock and hammock attachment. D. G. and A. P. Ashworth. No. 1,156,200; Oct. 12; Gaz. vol. 219; p. 328.
Hammock-stand. W. A. Manchee. No. 1,156,421; Oct. 12; Gaz. vol. 219; p. 407.
Handcuff. J. H. Wesson and E. S. Pomeroy. No. 1,157,135; Oct. 19; Gaz. vol. 219; p. 687.
Handle: *See*—
Culinary-vessel handle. Suitcase-handle.
Furnace-door handle. Tool-handle.
Satchel and the like handle.
Handle structure. P. G. Jacobson. No. 1,156,601; Oct. 12; Gaz. vol. 219; p. 469.
Hanger: *See*—
Door-hanger. Screen-hanger.
Pipe-hanger.
Hanger. C. A. Sweet. No. 1,156,380; Oct. 12; Gaz. vol. 219; p. 392.
Harness attachment. C. Johnson. No. 1,157,544; Oct. 19; Gaz. vol. 219; p. 831.
Harness-trimming. I. McKnight. No. 1,157,562; Oct. 19; Gaz. vol. 219; p. 836.
Harrow. J. W. Lewis. No. 1,157,706; Oct. 26; Gaz. vol. 219; p. 951.
Harrow. C. W. Michael. No. 1,156,611; Oct. 12; Gaz. vol. 219; p. 473.
Harrow. C. S. Sharp. No. 1,157,812; Oct. 26; Gaz. vol. 219; p. 986.
Harrow, Disk. J. H. Imus. No. 1,156,843; Oct. 12; Gaz. vol. 219; p. 554.
Harrow for attachment to seed-drills. W. A. Deutscher. No. 1,157,155; Oct. 19; Gaz. vol. 219; p. 694.
Harrow, Self-dumping drag-. W. S. Bales. No. 1,156,968; Oct. 19; Gaz. vol. 219; p. 628.
Harrows and similar tillage implements, Disk gang for use in. F. A. Bucknam. No. 1,157,080; Oct. 19; Gaz. vol. 219; p. 668.
Harvester, Beet-. W. Atwood. No. 1,157,920; Oct. 26; Gaz. vol. 219; p. 1025.
Harvester, Corn-. G. A. Farrall and C. Maul. No. 1,157,857; Oct. 26; Gaz. vol. 219; p. 1002.
Harvester, Corn-. J. Liebl. No. 1,155,827; Oct. 5; Gaz. vol. 219; p. 176.
Harvesters and the like, Bundle-carrying attachment for. J. J. Payer. No. 1,157,719; Oct. 26; Gaz. vol. 219; p. 955.
Harvesters, Motor attachment for. J. A. Stone. No. 1,157,056; Oct. 19; Gaz. vol. 219; p. 659.
Harvesting-machine. L. Anderson. No. 1,156,575; Oct. 12; Gaz. vol. 219; p. 461.
Harvesting-machine. C. B. Hazard. No. 1,158,050; Oct. 26; Gaz. vol. 219; p. 1070.
Hasp-lock. F. Pohle, Jr. No. 1,156,310; Oct. 12; Gaz. vol. 219; p. 365.
Hat-blocking apparatus. L. Flicker. No. 1,156,356; Oct. 12; Gaz. vol. 219; p. 382.
Hat-box. H. H. Holbrook. No. 1,157,538; Oct. 19; Gaz. vol. 219; p. 830.
Hat-fastener. A. A. Herring. No. 1,158,213; Oct. 26; Gaz. vol. 219; p. 1128.
Hat or cap. S. Kunstadter. No. 1,156,487; Oct. 12; Gaz. vol. 219; p. 430.
Hat-pin guard. R. L. Long. No. 1,156,300; Oct. 12; Gaz. vol. 219; p. 362.
Hat-sizing machine. E. S. Stocker and F. A. Stacy. No. 1,156,942; Oct. 19; Gaz. vol. 219; p. 618.
Hat sweat-band. H. D. Kremer. No. 1,155,936; Oct. 5; Gaz. vol. 219; p. 212.
Hauling apparatus. J. and J. Davies. No. 1,157,299; Oct. 19; Gaz. vol. 219; p. 746.
Hay-loader. J. Dain. No. 1,157,680; Oct. 26; Gaz. vol. 219; p. 941.
Hay or shock loader. H. W. Willis. No. 1,156,734; Oct. 12; Gaz. vol. 219; p. 516.
Hay-rack. J. G. Bailey. No. 1,155,783; Oct. 5; Gaz. vol. 219; p. 159.
Hay-rake, Side-delivery. A. Grieves. No. 1,157,775; Oct. 26; Gaz. vol. 219; p. 973.
Head and back rest. M. E. Ahlborn. No. 1,156,125; Oct. 12; Gaz. vol. 219; p. 304.
Headlight. L. E. Allen. No. 1,158,156; Oct. 26; Gaz. vol. 219; p. 1108.
Headlight. R. G. Standerwick. No. 1,157,966; Oct. 26; Gaz. vol. 219; p. 1042.
Headlight control, Dirigible-. H. R. Currier. No. 1,157,764; Oct. 26; Gaz. vol. 219; p. 970.
Headlight, Dirigible. T. R. Hanson. No. 1,158,207; Oct. 26; Gaz. vol. 219; p. 1126.
Headlight for locomotives. J. H. Whiting. No. 1,156,262; Oct. 12; Gaz. vol. 219; p. 349.
Headlight, Non-glare. W. W. Metzger, J. A. Altendorf, and C. M. Verrill. No. 1,155,600; Oct. 5; Gaz. vol. 219; p. 96.
Headlight-turning means for vehicles. O. H. Paddock. No. 1,156,623; Oct. 12; Gaz. vol. 219; p. 478.
Headlight-turning mechanism for vehicles. J. W. Mott. No. 1,158,071; Oct. 26; Gaz. vol. 219; p. 1078.

Heat-engine. F. B. Latady. No. 1,156,534; Oct. 12; Gaz. vol. 219; p. 446.
Heat-regulating system. W. S. Hadaway, Jr. No. 1,155,482; Oct. 5; Gaz. vol. 219; p. 56.
Heat-regulating system, Thermo-electric. L. A. Larson. No. 1,157,112; Oct. 19; Gaz. vol. 219; p. 679.
Heater: *See*—
Electric heater. Orchard-heater.
Electrical heater. Thermostatic heater.
Feed-water heater. Water-heater.
Gasolene-tank heater.
Heating apparatus. H. K. Austin. No. 1,155,782; Oct. 5; Gaz. vol. 219; p. 159.
Heating device, Electric. W. S. Hadaway, Jr. No. 1,157,100; Oct. 19; Gaz. vol. 219; p. 675.
Heating or cooling apparatus. L. S. Pfouts. No. 1,156,851; Oct. 12; Gaz. vol. 219; p. 557.
Heating system, Steam-. J. F. McElroy. No. 1,157,287; Oct. 19; Gaz. vol. 219; p. 724.
Heddle-frame. J. Kaufmann. No. 1,155,736; Oct. 5; Gaz. vol. 219; p. 143.
Heel. O. T. Hutchison. No. 1,158,053; Oct. 26; Gaz. vol. 219; p. 1071.
Heel-blanks, Building. W. Wolfe and D. Parks. No. 1,157,355; Oct. 19; Gaz. vol. 219; p. 765.
Heel-building machine. A. A. Hudson. No. 1,156,842; Oct. 12; Gaz. vol. 219; p. 554.
Heel, Detachable. D. Weiss. No. 1,157,476; Oct. 19; Gaz. vol. 219; p. 808.
Heel, Detachable shoe-. C. W. Fortin. No. 1,156,769; Oct. 12; Gaz. vol. 219; p. 528.
Heel-nailing machines, Top-lift-cementing means for. G. M. Pettengill. No. 1,156,850; Oct. 12; Gaz. vol. 219; p. 557.
Heel-press. C. O. Ryberg. No. 1,158,299; Oct. 26; Gaz. vol. 219; p. 1158.
Heels and other tread-surfaces, Friction and metal plug for rubber. F. Berenstein. No. 1,155,874; Oct. 5; Gaz. vol. 219; p. 192.
Heeling-machine. L. L. Glidden. No. 1,157,688; Oct. 26; Gaz. vol. 219; p. 944.
Heeling-machine. A. E. Jerram, J. Gouldbourn, and A. Bates. No. 1,157,689; Oct. 26; Gaz. vol. 219; p. 945.
Hinge. T. J. Kehoe. No. 1,157,006; Oct. 19; Gaz. vol. 219; p. 641.
Hinge. N. H. Morrow. No. 1,157,713; Oct. 26; Gaz. vol. 219; p. 953.
Hinge and check, Combined spring. A. Allgier. No. 1,155,867; Oct. 5; Gaz. vol. 219; p. 189.
Hinge, Ball-bearing. C. A. Ely. No. 1,156,765; Oct. 12; Gaz. vol. 219; p. 527.
Hinge, Duplex continuous. H. B. Todd. No. 1,157,065; Oct. 19; Gaz. vol. 219; p. 663.
Hinge, Extension bracket-. J. P. Voelker. No. 1,158,341; Oct. 26; Gaz. vol. 219; p. 1172.
Hinge, Gate-. A. Sundh. No. 1,156,943; Oct. 19; Gaz. vol. 219; p. 618.
Hinge mechanism. A. Sundh. No. 1,155,452; Oct. 5; Gaz. vol. 219; p. 44.
Hinge, Spring-. G. Boland. No. 1,155,702; Oct. 5; Gaz. vol. 219; p. 132.
Hinges, Alining-plate for floor-. O. Katzenberger. No. 1,157,548; Oct. 19; Gaz. vol. 219; p. 832.
Hoe. F. Zima. No. 1,157,356; Oct. 19; Gaz. vol. 219; p. 765.
Hoe and weeder, Combined. S. M. Schroeder and J. E. Norwood. No. 1,156,714; Oct. 12; Gaz. vol. 219; p. 509.
Hoisting and conveying apparatus indicator. D. P. Williams. No. 1,156,733; Oct. 12; Gaz. vol. 219; p. 516.
Hoisting apparatus. W. F. Geoghegan. (Reissue.) No. 13,996; Oct. 19; Gaz. vol. 219; p. 872.
Hoisting apparatus. N. Lacroix. No. 1,157,557; Oct. 19; Gaz. vol. 219; p. 835.
Hoisting-machine. W. A. Barker. No. 1,155,784; Oct. 5; Gaz. vol. 219; p. 160.
Holder attachment. M. Pomeroy. No. 1,156,370; Oct. 12; Gaz. vol. 219; p. 388.
Hollow articles by dies, Apparatus for forming. H. G. Carlson. No. 1,156,972; Oct. 19; Gaz. vol. 219; p. 630.
Hollow body of fibrous material. J. C. Ward. No. 1,156,193; Oct. 12; Gaz. vol. 219; p. 326.
Hook: *See*—
Bait-hook. Snap-hook.
Fish-hook. Trace-hook.
Garment-hook.
Hoop-forming machine, Sheet-metal-. E. W. Robinson. No. 1,158,294; Oct. 26; Gaz. vol. 219; p. 1156.
Hooping machine, Cask-. F. Strohl. No. 1,155,767; Oct. 5; Gaz. vol. 219; p. 153.
Hopper for feeding rivet-caps. A. R. Havener. No. 1,157,306; Oct. 19; Gaz. vol. 219; p. 748.
Hopper, Movable loading-. A. P. Lee. No. 1,157,010; Oct. 19; Gaz. vol. 219; p. 643.
Horn, Automobile-. H. A. Bretz. No. 1,157,292; Oct. 19; Gaz. vol. 219; p. 744.
Horse-checking device. A. G. Butler. No. 1,155,403; Oct. 5; Gaz. vol. 219; p. 28.
Horse-overshoe. E. S. Williamson. No. 1,156,571; Oct. 12; Gaz. vol. 219; p. 460.
Horse-whipping device. C. A. Noakes. No. 1,158,264; Oct. 26; Gaz. vol. 219; p. 1145.
Horseshoe. L. Schwoyer. No. 1,156,935; Oct. 19; Gaz. vol. 219; p. 616.
Horseshoe and calk. T. Shepherd. No. 1,157,052; Oct. 19; Gaz. vol. 219; p. 658.
Horseshoe-calk. F. Schmidt. No. 1,156,713; Oct. 12; Gaz. vol. 219; p. 509.
Horseshoe, Vacuum-. J. M. Dove. No. 1,156,278; Oct. 12; Gaz. vol. 219; p. 354.
Hose-clamp. F. P. D'Arcy. No. 1,155,646; Oct. 5; Gaz. vol. 219; p. 111.
Hose-coupling. M. Meeks. No. 1,157,997; Oct. 26; Gaz. vol. 219; p. 1051.
Hose-rack. C. Nuhring. No. 1,156,706; Oct. 12; Gaz. vol. 219; p. 507.
Hose-reel. A. Helm. No. 1,156,402; Oct. 12; Gaz. vol. 219; p. 400.
Hose-swivel. J. Osborne. No. 1,157,715; Oct. 26; Gaz. vol. 219; p. 953.
Hose-washer. H. P. Herron. No. 1,157,536; Oct. 19; Gaz. vol. 219; p. 829.
Hospital appliance. A. C. Stevenson. No. 1,157,441; Oct. 19; Gaz. vol. 219; p. 797.
Hot-air furnace. D. P. Kurtz. No. 1,155,825; Oct. 5; Gaz. vol. 219; p. 175.
Hot-air stacks, Stack head or boot for. A. G. Scherer. No. 1,155,761; Oct. 5; Gaz. vol. 219; p. 151.
Hot-plate, Hygienic. G. Lake. No. 1,158,135; Oct. 26; Gaz. vol. 219; p. 1101.
Hub, Vehicle-. O. and J. L. O. King and T. H. Fox. No. 1,157,550; Oct. 19; Gaz. vol. 219; p. 833.
Hub, Wheel-. S. R. Lalikâd. No. 1,155,493; Oct. 5; Gaz. vol. 219; p. 59.
Humidifying device. A. R. Bliss. No. 1,155,701; Oct. 5; Gaz. vol. 219; p. 131.
Husking device. S. Hankins. No. 1,156,478; Oct. 12; Gaz. vol. 219; p. 427.
Hydraulic elevator. C. R. Pratt. No. 1,156,433; Oct. 12; Gaz. vol. 219; p. 411.
Hydraulic transmission mechanism. C. C. Rich. No. 1,156,816; Oct. 12; Gaz. vol. 219; p. 543.
Hydraulic transmission mechanism. C. C. Rich. No. 1,156,817; Oct. 12; Gaz. vol. 219; p. 543.
Hydraulic transmission mechanism. C. C. Rich. No. 1,156,818; Oct. 12; Gaz. vol. 219; p. 544.
Hydroaeroplane. R. C. Edwards. No. 1,156,218; Oct. 12; Gaz. vol. 219; p. 335.
Hydrocarbon-burner. J. R. Donnelly. No. 1,156,470; Oct. 12; Gaz. vol. 219; p. 424.
Hydrocarbon-burner. L. J. Gouguet and J. Montis. No. 1,158,043; Oct. 26; Gaz. vol. 219; p. 1068.
Hydrocarbon-engine. T. O. Pattin. No. 1,157,728; Oct. 26; Gaz. vol. 219; p. 959.
Hydrogen, Producing. C. Bosch and W. Wild. No. 1,157,669; Oct. 26; Gaz. vol. 219; p. 938.
Hydrogenating process and apparatus. K. P. McElroy. No. 1,157,993; Oct. 26; Gaz. vol. 219; p. 1050.
Ice-can. J. H. Lamb. No. 1,157,943; Oct. 26; Gaz. vol. 219; p. 1033.
Ice-can. W. T. McCue. No. 1,155,751; Oct. 5; Gaz. vol. 219; p. 147.
Ice-cream-cone bag. C. W. Whalen. No. 1,158,349; Oct. 26; Gaz. vol. 219; p. 1175.
Ice-cutting machine. H. Blank, Jr. No. 1,155,400; Oct. 5; Gaz. vol. 219; p. 26.
Ice-machine. W. Blankner. No. 1,156,832; Oct. 12; Gaz. vol. 219; p. 550.
Ice-machine can-filler. T. Shipley. No. 1,158,322; Oct. 26; Gaz. vol. 219; p. 1166.
Ice, Machinery for the manufacture of. T. Shipley. No. 1,158,320; Oct. 26; Gaz. vol. 219; p. 1165.
Ice-making apparatus. E. E. Gainer. No. 1,157,623; Oct. 19; Gaz. vol. 219; p. 855.
Ice-shaver. J. F. Lamb. No. 1,155,663; Oct. 5; Gaz. vol. 219; p. 118.
Identifying criminals and other persons through combination-picture, Device for. C. J. Smith. No. 1,155,523; Oct. 5; Gaz. vol. 219; p. 71.
Ignition system. L. D. Kellogg. No. 1,157,696; Oct. 26; Gaz. vol. 219; p. 947.
Illuminating apparatus. W. Lumley. No. 1,156,536; Oct. 12; Gaz. vol. 219; p. 447.
Illuminating apparatus. W. Lumley. No. 1,156,537; Oct. 12; Gaz. vol. 219; p. 447.
Illuminating apparatus, Automatic control device for. C. G. Lindblom. No. 1,155,496; Oct. 5; Gaz. vol. 219; p. 61.
Impregnated material, Manufacture of. J. Rosen. No. 1,155,443; Oct. 5; Gaz. vol. 219; p. 41.
Impregnator. F. B. Graham. No. 1,155,804; Oct. 5; Gaz. vol. 219; p. 168.
Incandescent mantles, Apparatus for manufacture of. E. L. Knoedler. No. 1,157,555; Oct. 19; Gaz. vol. 219; p. 834.
Incinerating plant. T. F. Bennett. No. 1,158,162; Oct. 26; Gaz. vol. 219; p. 1110.
Incinerator. B. B. Kahn. No. 1,156,691; Oct. 12; Gaz. vol. 219; p. 502.
Incinerator. A. Leighton and H. N. Ruttan. No. 1,155,586; Oct. 5; Gaz. vol. 219; p. 90.
Incubation, Artificial. O. Shackelford. No. 1,156,374; Oct. 12; Gaz. vol. 219; p. 390.
Incubators, Water-tray for. J. H. Kate. No. 1,155,819; Oct. 5; Gaz. vol. 219; p. 178.
Indicating device. J. R. Blaine. No. 1,155,788; Oct. 5; Gaz. vol. 219; p. 162.

Indicator: *See*—
Azimuth and other indicator.
Car-indicator.
Cash-register indicator.
Direction-indicator.
Electric indicator.
Frequency-indicator.
Hoisting and conveying indicator.
Poison-indicator.
Station-indicator.
Street-indicator.
Temperature-indicator.
Test-indicator.
Vehicle-indicator.

Induction-motor. B. McCollum. No. 1,156,364; Oct. 12; Gaz. vol. 219; p. 386.

Ingot-mold. H. E. Sheldon. No. 1,158,318; Oct. 26; Gaz. vol. 219; p. 1165.

Ingot-molds, Core-barrel for. C. G. Robinson. No. 1,157,648; Oct. 19; Gaz. vol. 219; p. 864.

Inhaler. C. C. F. Nieschang. No. 1,155,608; Oct. 5; Gaz. vol. 219; p. 98.

Ink and making same. R. Hochstetter. No. 1,158,131; Oct. 26; Gaz. vol. 219; p. 1100.

Ink-supplying device. M. Borsodi. No. 1,157,613; Oct. 19; Gaz. vol. 219; p. 852.

Insect-catching machine. W. L. Hesterly. No. 1,156,778; Oct. 12; Gaz. vol. 219; p. 531.

Insecticide. E. E. Watson. No. 1,156,954; Oct. 19; Gaz. vol. 219; p. 623.

Insole. J. A. Ames. No. 1,156,026; Oct. 5; Gaz. vol. 219; p. 243.

Insulating composition. L. H. Baekeland. No. 1,156,452; Oct. 12; Gaz. vol. 219; p. 417.

Insulating rail-joints, Means for. R. G. Braine. (Reissue.) No. 13,004; Oct. 19; Gaz. vol. 219; p. 870.

Insulating-tube. E. F. Callender. No. 1,158,105; Oct. 26; Gaz. vol. 219; p. 1091.

Insulating wire. O. T. Hungerford. No. 1,157,694; Oct. 26; Gaz. vol. 219; p. 947.

Insulation-cutter. L. Genin. No. 1,157,214; Oct. 19; Gaz. vol. 219; p. 715.

Insulator. L. Steinberger. No. 1,156,442; Oct. 12; Gaz. vol. 219; p. 414.

Insulator-die. C. V. Bennett. No. 1,157,612; Oct. 19; Gaz. vol. 219; p. 852.

Insulator for overhead conductors of electric lines. F. Libano. No. 1,156,089; Oct. 12; Gaz. vol. 219; p. 292.

Insulator-support. C. L. Peirce, Jr. No. 1,158,149; Oct. 26; Gaz. vol. 219; p. 1105.

Insulator-supporting fixture. C. L. Peirce, Jr. No. 1,157,036; Oct. 19; Gaz. vol. 219; p. 653.

Insulator-supporting structure. C. L. Peirce, Jr. No. 1,157,037; Oct. 19; Gaz. vol. 219; p. 653.

Insulators for high-potential electric conductors, Manufacture of. F. M. Locke. No. 1,156,163; Oct. 12; Gaz. vol. 219; p. 317.

Internal-combustion engine. H. J. Bachman. No. 1,156,609; Oct. 5; Gaz. vol. 219; p. 130.

Internal-combustion engine. L. H. L. Bellem and G. J. Brégéras. No. 1,157,287; Oct. 19; Gaz. vol. 219; p. 742.

Internal-combustion engine. A. L., A. J. G., and J. L. Bricknell. No. 1,155,335; Oct. 5; Gaz. vol. 219; p. 4.

Internal-combustion engine. F. D. Calkins and A. C. Johnson. No. 1,156,663; Oct. 12; Gaz. vol. 219; p. 493.

Internal-combustion engine. E. Canedy. No. 1,156,886; Oct. 19; Gaz. vol. 219; p. 598.

Internal-combustion engine. A. H. De Gaston and F. McLean. No. 1,155,709; Oct. 5; Gaz. vol. 219; p. 134.

Internal-combustion engine. J. Dean. No. 1,155,647; Oct. 5; Gaz. vol. 219; p. 112.

Internal-combustion engine. K. Evers. No. 1,157,932; Oct. 26; Gaz. vol. 219; p. 1029.

Internal-combustion engine. W. F. Gibbs. No. 1,157,379; Oct. 19; Gaz. vol. 219; p. 774.

Internal-combustion engine. G. W. Haury. No. 1,157,387; Oct. 19; Gaz. vol. 219; p. 778.

Internal-combustion engine. R. M. Head. No. 1,156,075; Oct. 12; Gaz. vol. 219; p. 257.

Internal-combustion engine. O. Johnson. No. 1,156,846; Oct. 12; Gaz. vol. 219; p. 555.

Internal-combustion engine. G. A. Krohn. No. 1,156,298; Oct. 12; Gaz. vol. 219; p. 361.

Internal-combustion engine. N. McCarty. No. 1,157,021; Oct. 19; Gaz. vol. 219; p. 647.

Internal-combustion engine. R. H. Olandt. No. 1,155,434; Oct. 5; Gaz. vol. 219; p. 39.

Internal-combustion engine. A. L. Riker. No. 1,156,038; Oct. 5; Gaz. vol. 219; p. 248.

Internal-combustion engine. W. E. Ver Planck and L. V. Stoeltzlen. No. 1,157,914; Oct. 26; Gaz. vol. 219; p. 1023.

Internal-combustion engine. N. B. Wales. No. 1,156,728; Oct. 12; Gaz. vol. 219; p. 514.

Internal-combustion engine, Two-stroke. W. Jeffares. No. 1,157,626; Oct. 19; Gaz. vol. 219; p. 857.

Internal-combustion engine working with coke-oven and other gases. D. Clerk. No. 1,158,179; Oct. 26; Gaz. vol. 219; p. 1116.

Invalid-chair. J. Luba. No. 1,155,588; Oct. 5; Gaz. vol. 219; p. 91.

Invalid-cushion. J. A. Clemens. No. 1,156,523; Oct. 12; Gaz. vol. 219; p. 442.

Iron: *See*—
Branding-iron.
Carry-iron.
Flat-iron.
Gas-heated iron.
Sad-iron.
Soldering-iron.

Iron and steel, Changing the composition of. B. Ford. No. 1,156,679; Oct. 12; Gaz. vol. 219; p. 498.

Iron-cord take-up, Electric-. N. E. Polson and H. R. Paulson. No. 1,157,418; Oct. 19; Gaz. vol. 219; p. 789.

Iron from its ores, Extracting. H. Haas. No. 1,156,775; Oct. 12; Gaz. vol. 219; p. 530.

Iron rest, Sad-. E. M. Skinner. No. 1,156,104; Oct. 12; Gaz. vol. 219; p. 298.

Iron support, Flat-. L. Reichold. No. 1,157,961; Oct. 26; Gaz. vol. 219; p. 1040.

Irons, &c., Stand for gas-. W. Klenner. No. 1,158,237; Oct. 26; Gaz. vol. 219; p. 1136.

Ironing-board. M. M. McCullough. No. 1,157,317; Oct. 19; Gaz. vol. 219; p. 752.

Ironing-board. R. B. Palmer. No. 1,156,805; Oct. 12; Gaz. vol. 219; p. 539.

Ironing-board. H. O. Pitts. No. 1,155,612; Oct. 5; Gaz. vol. 219; p. 99.

Ironing-board. R. F. Polski. No. 1,158,279; Oct. 26; Gaz. vol. 219; p. 1151.

Ironing-board, Collapsible. E. Sutter. No. 1,156,643; Oct. 12; Gaz. vol. 219; p. 485.

Ironing-board, Folding. T. M. Byrd. No. 1,155,884; Oct. 5; Gaz. vol. 219; p. 195.

Ironing machine, Shirt-bosom-. J. F. Joubert. No. 1,158,054; Oct. 26; Gaz. vol. 219; p. 1072.

Irrigating-machine, Hydraulic. P. J. Stalec. No. 1,156,024; Oct. 5; Gaz. vol. 219; p. 242.

Jack: *See*—
Automobile-jack.
Barrel-jack.
Vehicle-jack.

Jack. J. W. Tucker. No. 1,157,461; Oct. 19; Gaz. vol. 219; p. 803.

Jacketed tank. W. C. Honhorst. No. 1,155,731; Oct. 5; Gaz. vol. 219; p. 142.

Jar-cover wrench, Fruit-. G. H. Maas. No. 1,157,632; Oct. 19; Gaz. vol. 219; p. 858.

Jar-molding machine. W. Lewis. No. 1,157,404; Oct. 19; Gaz. vol. 219; p. 783.

Jet apparatus. E. Koerting. No. 1,158,239; Oct. 26; Gaz. vol. 219; p. 1137.

Jewelry and the like in postal and other boxes, Means for fastening and retaining articles of. A. W. Stevenson. No. 1,157,733; Oct. 26; Gaz. vol. 219; p. 960.

Joint: *See*—
Metallic-sheet joint.
Pin-joint.
Rail-joint.
Safe or vault joint.
Track-joint.
Welded joint.

Joint. F. Lambert. No. 1,155,664; Oct. 5; Gaz. vol. 219; p. 118.

Joints, Making lubricated. J. S. Leake. No. 1,155,496; Oct. 5; Gaz. vol. 219; p. 60.

Jointer-guard. A. F. Howe. No. 1,157,109; Oct. 19; Gaz. vol. 219; p. 678.

Journal-box. F. A. McGuire. No. 1,155,831; Oct. 5; Gaz. vol. 219; p. 177.

Journal-box lid. P. Brown. No. 1,156,880; Oct. 19; Gaz. vol. 219; p. 596.

Key-cutting machine. A. E. Sutliff. No. 1,156,642; Oct. 12; Gaz. vol. 219; p. 484.

Key extracting or removing tool. L. Golly. No. 1,155,721; Oct. 5; Gaz. vol. 219; p. 138.

Key removing or pulling tool. L. Golly. No. 1,155,720; Oct. 5; Gaz. vol. 219; p. 137.

Keyless lock. S. A. Blažek. No. 1,157,837; Oct. 26; Gaz. vol. 219; p. 995.

Kilns, Basic lining for. S. B. Newberry. No. 1,156,018; Oct. 5; Gaz. vol. 219; p. 240.

Knee-pad. W. R. Holsey. No. 1,155,491; Oct. 5; Gaz. vol. 219; p. 59.

Knife: *See*—
Putty-knife.

Knife. P. Abel. No. 1,155,331; Oct. 5; Gaz. vol. 219; p. 3.

Knife-rack. D. D. Petre. No. 1,157,578; Oct. 19; Gaz. vol. 219; p. 841.

Knitting-machine-cleaning mechanism, Circular-. W. Fischer. No. 1,156,838; Oct. 12; Gaz. vol. 219; p. 552.

Knitting-machine pick mechanism. F. Wilcomb. No. 1,158,351; Oct. 26; Gaz. vol. 219; p. 1175.

Knitting machine, Rib-. H. W. Niermeyer. No. 1,158,072; Oct. 26; Gaz. vol. 219; p. 1079.

Label. L. M. Cole. (Reissue.) No. 14,000; Oct. 26; Gaz. vol. 219; p. 1202.

Labeling-machine. F. Coates. No. 1,157,660; Oct. 19; Gaz. vol. 219; p. 869.

Laboratory-table. E. W. Schmeling. No. 1,158,305; Oct. 26; Gaz. vol. 219; p. 1161.

Lace knotter, Shoe-. J. T. Cooney. No. 1,156,758; Oct. 12; Gaz. vol. 219; p. 524.

Ladder. C. A. Crespo. No. 1,155,995; Oct. 5; Gaz. vol. 219; p. 231.

Ladder. H. L. Trimyer. No. 1,157,602; Oct. 19; Gaz. vol. 219; p. 848.

Ladder, Extension step-. W. A. Tyler. No. 1,157,739; Oct. 26; Gaz. vol. 219; p. 962.

Lamp. P. Malcamp. No. 1,158,419; Oct. 26; Gaz. vol. 219; p. 1201.

Lamp and horn, Combined. P. B. Whitney. No. 1,157,744; Oct. 26; Gaz. vol. 219; p. 964.

Lamp and mirror fixture, Adjustable electric-. O. B. Fagan. No. 1,157,519; Oct. 19; Gaz. vol. 219; p. 823.

Lamp-bracket. H. J. Sauer. No. 1,158,078; Oct. 26; Gaz. vol. 219; p. 1081.

Lamp, Cluster incandescent. H. Lyon. No. 1,158,249; Oct. 26; Gaz. vol. 219; p. 1140.

Lamp cords and the like, Take-up device for electric-. N. S. Cameron. No. 1,157,505; Oct. 19; Gaz. vol. 219; p. 818.

Lamp, Electric. O. Schaller. No. 1,155,963; Oct. 5; Gaz. vol. 219; p. 222.

Lamp, Electric incandescent. A. E. Appleyard. No. 1,156,967; Oct. 19; Gaz. vol. 219; p. 628.

Lamp, Electric pocket-. J. Stock. No. 1,158,081; Oct. 26; Gaz. vol. 219; p. 1082.

Lamp fixture, Incandescent-electric-. E. G. Smith and F. J. Mantel. No. 1,156,560; Oct. 12; Gaz. vol. 219; p. 455.

Lamp for automobiles, Dirigible. J. Bollinger. No. 1,155,877; Oct. 5; Gaz. vol. 219; p. 193.

Lamp, Incandescent. G. M. J. Mackay. No. 1,157,995; Oct. 26; Gaz. vol. 219; p. 1050.

Lamp, Incandescent electric. C. A. Vetter. No. 1,157,464; Oct. 19; Gaz. vol. 219; p. 804.

Lamp, Reflector-. F. Kratz. No. 1,157,701; Oct. 26; Gaz. vol. 219; p. 949.

Lamp socket, Electric-. C. D. Blackburn. No. 1,157,075; Oct. 19; Gaz. vol. 219; p. 666.

Lamp stand and shade, Knockdown. W. P. Stephenson. No. 1,157,732; Oct. 26; Gaz. vol. 219; p. 960.

Lamp standard and shade holder. J. Rose. No. 1,157,180; Oct. 19; Gaz. vol. 219; p. 703.

Lamp systems, Pressure-tank for vapor-. E. Seitz. No. 1,155,622; Oct. 5; Gaz. vol. 219; p. 102.

Lamps, Basing incandescent. G. Wright. No. 1,156,650; Oct. 12; Gaz. vol. 219; p. 488.

Lamps, Drawing refractory materials for incandescent. H. C. G. Remané. No. 1,156,492; Oct. 12; Gaz. vol. 219; p. 432.

Lamps, Means for and process of adjusting incandescent. D. J. McCarthy. No. 1,157,020; Oct. 19; Gaz. vol. 219; p. 647.

Lamps, Metal cap for electric incandescent. E. Strehler. No. 1,157,057; Oct. 19; Gaz. vol. 219; p. 660.

Lamps, Testing cut-out for arc-. E. J. Guay. No. 1,158,526; Oct. 12; Gaz. vol. 219; p. 445.

Lampblack substitute. G. Blardone, C. W. Nichols, and F. Bruguiere. No. 1,156,742; Oct. 12; Gaz. vol. 219; p. 519.

Lantern. E. R. Hibbard. No. 1,156,229; Oct. 12; Gaz. vol. 219; p. 338.

Lantern guard-frame. W. W. Willits. No. 1,156,572; Oct. 12; Gaz. vol. 219; p. 460.

Lantern, Hydrocarbon-. L. Baxter. No. 1,155,464; Oct. 5; Gaz. vol. 219; p. 49.

Lantern-locking device. I. G. Stutsman. No. 1,155,879; Oct. 5; Gaz. vol. 219; p. 19.

Lasting-machine. J. W. Ryberg. No. 1,157,729; Oct. 26; Gaz. vol. 219; p. 950.

Latch and lock, Combined door. J. Perich. No. 1,156,548; Oct. 12; Gaz. vol. 219; p. 451.

Latch-spring fastener. B. R. Crampton. No. 1,157,086; Oct. 19; Gaz. vol. 219; p. 670.

Lath-board. S. M. Ford. No. 1,156,866; Oct. 12; Gaz. vol. 219; p. 563.

Lathe control, Mechanical. H. Kienzle. No. 1,157,227; Oct. 19; Gaz. vol. 219; p. 720.

Lathe-dog. W. R. Davis. No. 1,155,553; Oct. 5; Gaz. vol. 219; p. 80.

Laundries, Shirt-finishing device for. C. C. King, C. B. Lambert, and J. H. Gibbie. No. 1,158,234; Oct. 26; Gaz. vol. 219; p. 1135.

Laundry-roll, Electric. W. S. Hadaway, Jr. No. 1,156,223; Oct. 12; Gaz. vol. 219; p. 336.

Laundry-roll regulator. W. S. Hadaway, Jr. No. 1,155,481; Oct. 5; Gaz. vol. 219; p. 55.

Lead and zinc contained in the state of sulfids in ores, Industrial separation of. G. De Bechi. No. 1,157,153; Oct. 19; Gaz. vol. 219; p. 693.

Lead, Process of and apparatus for comminuting. C. D. Holley. No. 1,156,979; Oct. 12; Gaz. vol. 219; p. 280.

Leather, Tanning and waterproofing. J. Moszynski. No. 1,157,952; Oct. 26; Gaz. vol. 219; p. 1036.

Lens-blank manufacture. E. A. Vornholt. No. 1,157,470; Oct. 19; Gaz. vol. 219; p. 807.

Lens manufacturing. E. C. Morine. No. 1,157,411; Oct. 19; Gaz. vol. 219; p. 786.

Lens, Trifocal. H. Bolde. No. 1,158,102; Oct. 26; Gaz. vol. 219; p. 1090.

Lenses, Apparatus for making bifocal. H. Newbold. No. 1,158,002; Oct. 26; Gaz. vol. 219; p. 1053.

Lenses, Making bifocal. E. C. Morine. No. 1,157,410; Oct. 19; Gaz. vol. 219; p. 786.

Letter-box. W. C. Martineau. No. 1,156,914; Oct. 19; Gaz. vol. 219; p. 609.

Letter-opener. H. M. Yorke. No. 1,157,489; Oct. 19; Gaz. vol. 219; p. 813.

Letter-plate. J. C. Eubank. No. 1,157,856; Oct. 26; Gaz. vol. 219; p. 1002.

Level. J. Knitle. No. 1,155,824; Oct. 5; Gaz. vol. 219; p. 175.

Lever. B. H. Witherbee. No. 1,156,961; Oct. 19; Gaz. vol. 219; p. 626.

Lever, Foot-. T. J. Anderson. No. 1,157,140; Oct. 19; Gaz. vol. 219; p. 688.

Levers, Cushioning device for foot-. T. K. Cooper. No. 1,156,586; Oct. 12; Gaz. vol. 219; p. 464.

Life-saving belt or buoy. J. Brown. No. 1,156,749; Oct. 12; Gaz. vol. 219; p. 521.

Lift-cutting and heel-blank-building machine, Combined. J. E. Mitchell and D. Parks. No. 1,157,409; Oct. 19; Gaz. vol. 219; p. 785.

Lifter: *See*—
Valve-lifter.

Lifter. H. C. Gates. No. 1,156,138; Oct. 12; Gaz. vol. 219; p. 309.

Light: *See*—
Electric light.
Vault-light.

Light and load brake. F. D. Ward. No. 1,156,952; Oct. 19; Gaz. vol. 219; p. 622.

Light-globes, Means for attaching and detaching. E. H. Conrad. No. 1,157,617; Oct. 19; Gaz. vol. 219; p. 853.

Light-obstructer. L. A. Benecke. No. 1,156,578; Oct. 12; Gaz. vol. 219; p. 462.

Lighting apparatus. W. M. Grosvenor. No. 1,156,477; Oct. 12; Gaz. vol. 219; p. 426.

Lighting-fixture. F. M. Brooks. No. 1,155,789; Oct. 5; Gaz. vol. 219; p. 162.

Lighting-fixture. E. F. Guth. No. 1,155,805; Oct. 5; Gaz. vol. 219; p. 168.

Lighting mechanism, Automatic time. H. E. Warren. No. 1,158,397; Oct. 26; Gaz. vol. 219; p. 1193.

Lighting system, Duplex. J. R. Pagin. No. 1,156,624; Oct. 12; Gaz. vol. 219; p. 478.

Lightning-arrester. J. T. Greene. No. 1,155,415; Oct. 5; Gaz. vol. 219; p. 32.

Limb, Artificial. J. T. Bracht. No. 1,155,545; Oct. 5; Gaz. vol. 219; p. 78.

Lime, Apparatus for hydrating. M. H. Avram. No. 1,157,284; Oct. 19; Gaz. vol. 219; p. 741.

Lime in materials, Apparatus for determining the percentage of. M. O. Reiche. No. 1,156,176; Oct. 12; Gaz. vol. 219; p. 322.

Line-casting machine. F. B. Converse. No. 1,155,892; Oct. 5; Gaz. vol. 219; p. 197.

Line-casting machine. S. E. Sperry and W. H. Orpen, Jr. No. 1,156,040; Oct. 5; Gaz. vol. 219; p. 248.

Line-splice. J. S. Brandon. No. 1,155,334; Oct. 5; Gaz. vol. 219; p. 4.

Link, Cuff-. F. W. Young. No. 1,156,651; Oct. 12; Gaz. vol. 219; p. 488.

Linoleum-mosaic, Machine for manufacturing. G. Frenkel. No. 1,155,718; Oct. 5; Gaz. vol. 219; p. 137.

Linotype class, Elevator-lift for machines of the. H. A. Armstrong. No. 1,156,027; Oct. 5; Gaz. vol. 219; p. 243.

Linotype-machine. H. Degener. No. 1,155,996; Oct. 5; Gaz. vol. 219; p. 232.

Linotype-machine. J. Weissinger. No. 1,156,730; Oct. 12; Gaz. vol. 219; p. 515.

Liquid, Apparatus for automatically regulating the temperature of a supply of. G. Stern. No. 1,156,505; Oct. 12; Gaz. vol. 219; p. 437.

Liquid economizer, Cooling-. J. J. Wood. No. 1,156,511; Oct. 12; Gaz. vol. 219; p. 439.

Liquid heating and evaporating apparatus. O. K. Zwingenberger. No. 1,156,338; Oct. 12; Gaz. vol. 219; p. 375.

Liquid-mixing machine, Bottled-. J. Sjauken. No. 1,156,375; Oct. 12; Gaz. vol. 219; p. 390.

Liquid or pasty materials—for instance, chocolate and the like, Apparatus for dividing more or less thick. F. W. Kettner. No. 1,156,407; Oct. 12; Gaz. vol. 219; p. 402.

Liquid-sampling device. G. L. McKay. No. 1,156,240; Oct. 12; Gaz. vol. 219; p. 342.

Liquid-treating apparatus. A. Jensen. No. 1,156,861; Oct. 12; Gaz. vol. 219; p. 584.

Liquids with gas, Apparatus for charging. J. F. and R. W. Wittemann. No. 1,155,983; Oct. 5; Gaz. vol. 219; p. 227.

Loading apparatus. A. D. Mosby. No. 1,156,245; Oct. 12; Gaz. vol. 219; p. 344.

Loading-machine. W. S. Mayers. No. 1,155,598; Oct. 5; Gaz. vol. 219; p. 95.

Lock: *See*—
Automobile-lock.
Bag-lock.
Book-lock.
Bottle and jar lock.
Door-lock.
Hasp-lock.
Keyless lock.
Nut-lock.
Permutation-lock.
Sash-lock.
Table-lock.
Time-recording lock.
Wheel-lock.
Window-lock.

Lock. P. D. Angelo. No. 1,155,405; Oct. 5; Gaz. vol. 219; p. 28.

Lock. H. Lien. No. 1,157,407; Oct. 19; Gaz. vol. 219; p. 785.

Lock dial, Combination-. W. T. Benham. No. 1,156,658; Oct. 12; Gaz. vol. 219; p. 491.

Lock dial, Combination-. W. T. Benham. No. 1,156,659; Oct. 12; Gaz. vol. 219; p. 491.

Locks, Tumbler for combination-. N. S.-S. Besharov. No. 1,156,741; Oct. 12; Gaz. vol. 219; p. 519.

Locking-clamp. J. C. Backus. No. 1,156,739; Oct. 12; Gaz. vol. 219; p. 518.

Locking device. O. V. Payne. No. 1,156,861; Oct. 12; Gaz. vol. 219; p. 561.

Locking device, Safety. W. J. Fowler. No. 1,157,523; Oct. 19; Gaz. vol. 219; p. 825.

Locomotive. J. L. Cantion and D. Hurley. No. 1,157,843; Oct. 26; Gaz. vol. 219; p. 998.

Locomotive-cab squirt. F. W. Edwards. No. 1,155,474; Oct. 5; Gaz. vol. 219; p. 53.

Locomotive driving-box and hub-liner. T. A. McKean. No. 1,156,911; Oct. 19; Gaz. vol. 219; p. 608.

Locomotive sanding device. M. C. Glenn. No. 1,155,910; Oct. 5; Gaz. vol. 219; p. 204.
Locomotive-tender. T. Stewart. No. 1,157,445; Oct. 19; Gaz. vol. 219; p. 798.
Locomotive-torch. A. S. Rece. No. 1,156,097; Oct. 12; Gaz. vol. 219; p. 295.
Locomotives, Portable gas-producer for. B. Q. P. Foss. No. 1,156,399; Oct. 12; Gaz. vol. 219; p. 399.
Loom-shuttle. A. Isherwood. No. 1,156,404; Oct. 12; Gaz. vol. 219; p. 401.
Loom-reed. E. Weiershaus. No. 1,158,347; Oct. 26; Gaz. vol. 219; p. 1174.
Loom weft-severing device, Automatic-. A. Imbach. No. 1,157,397; Oct. 19; Gaz. vol. 219; p. 781.
Looms for weaving, Pick-finder mechanism employed in. E. Hollingworth. No. 1,156,007; Oct. 5; Gaz. vol. 219; p. 286.
Lubricating apparatus. A. M. Alexander. No. 1,157,359; Oct. 19; Gaz. vol. 219; p. 767.
Lubricating apparatus. A. M. Alexander. No. 1,157,360; Oct. 19; Gaz. vol. 219; p. 767.
Lubricating-cup. E. F. Glass. No. 1,158,201; Oct. 26; Gaz. vol. 219; p. 1124.
Lubricating device. J. V. Hoffman. No. 1,156,779; Oct. 12; Gaz. vol. 219; p. 581.
Lubricating device. W. McLaughlin. No. 1,157,023; Oct. 19; Gaz. vol. 219; p. 648.
Lubricating-device guard. C. Kuderer. No. 1,157,311; Oct. 19; Gaz. vol. 219; p. 750.
Lubricating friction-surfaces. A. M. Alexander. No. 1,157,358; Oct. 19; Gaz. vol. 219; p. 766.
Lubricating system. H. C. Martin. No. 1,157,241; Oct. 19; Gaz. vol. 219; p. 726.
Lubricator: *See*—
Axle-lubricator.
Drop-feed lubricator.
Engine-lubricator.
Gearing-lubricator.
Spring-lubricator.
Lubricator. C. H. Crockett. No. 1,156,133; Oct. 12; Gaz. vol. 219; p. 307.
Lubricator. F. Flechter. No. 1,156,768; Oct. 12; Gaz. vol. 219; p. 528.
Lubricator. W. Wright. No. 1,157,488; Oct. 19; Gaz. vol. 219; p. 813.
Lumber, Preserving and improving. J. W. Illingworth. No. 1,158,404; Oct. 26; Gaz. vol. 219; p. 1196.
Machine-cover and chair, Combined. A. Masler. No. 1,156,367; Oct. 12; Gaz. vol. 219; p. 387.
Magnesia, Obtaining. J. A. Bradburn. No. 1,156,662; Oct. 12; Gaz. vol. 219; p. 492.
Magnet and mount for the same, Tachometer-. T. J. Fischer. No. 1,155,346; Oct. 5; Gaz. vol. 219; p. 8.
Mail-bag catching and delivering apparatus. T. J. Gorman. No. 1,155,911; Oct. 5; Gaz. vol. 219; p. 204.
Mail-box, Electric-alarm. B. D. Miller. No. 1,157,949; Oct. 26; Gaz. vol. 219; p. 1035.
Mail-catcher. C. F. Jackson. No. 1,156,844; Oct. 12; Gaz. vol. 219; p. 554.
Mail-catcher. W. T. Mercer. No. 1,157,244; Oct. 19; Gaz. vol. 219; p. 727.
Mail-delivering apparatus. W. J. Griffiths, Jr. No. 1,157,981; Oct. 26; Gaz. vol. 219; p. 1047.
Mail-delivering device. M. K. Walker. No. 1,158,342; Oct. 26; Gaz. vol. 219; p. 1172.
Mailing-box. W. J. Hall. No. 1,158,047; Oct. 26; Gaz. vol. 219; p. 1069.
Mailing or other machines, Feed mechanism for. F. V. Moore. No. 1,155,503; Oct. 5; Gaz. vol. 219; p. 63.
Mandrel-press. H. P. White. No. 1,156,261; Oct. 12; Gaz. vol. 219; p. 349.
Manganese dioxid, Producing. F. D. Harper. No 1,157,530; Oct. 19; Gaz. vol. 219; p. 827.
Manicuring instrument. A. H. Swank. No. 1,155,380; Oct. 5; Gaz. vol. 219; p. 19.
Manifold outlet. M. Coup. No. 1,156,888; Oct. 19; Gaz. vol. 219; p. 599.
Mantle-blank-cutting machine. S. Cohn. No. 1,158,180; Oct. 26; Gaz. vol. 219; p. 1117.
Mash-mixing apparatus. J. Klein. No. 1,156,409; Oct. 12; Gaz. vol. 219; p. 403.
Masonry beam, Reinforced. W. P. Francis. No. 1,158,197; Oct. 26; Gaz. vol. 219; p. 1122.
Massage implements, Sanitary device for. M. De Leseo. No. 1,155,341; Oct. 5; Gaz. vol. 219; p. 6.
Mat: *See*—
Running-board mat.
Match-box. B. S. Coe. No. 1,158,118; Oct. 26; Gaz. vol. 219; p. 1095.
Match-box. P. L. Monroe. No. 1,157,951; Oct. 26; Gaz. vol. 219; p. 1036.
Match-case and cigar-cutter, Combined. E. L. Anderson. No. 1,156,513; Oct. 12; Gaz. vol. 219; p. 439.
Match lighter and extinguisher. R. F. Matheson. No. 1,155,755; Oct. 5; Gaz. vol. 219; p. 149.
Match-machine drive. A. D. Welker. No. 1,158,410; Oct. 26; Gaz. vol. 219; p. 1198.
Mathematics, Practice exercise-card in. J. W. Studebaker. No. 1,157,599; Oct. 19; Gaz. vol. 219; p. 847.
Mausoleum. D. M. Rothenberger. No. 1,156,039; Oct. 5; Gaz. vol. 219; p. 248.
Measuring and filling apparatus. E. Pells. No. 1,157,896; Oct. 26; Gaz. vol. 219; p. 1017.
Measuring apparatus, Liquid-. S. A. Mischansky and M. Pavolowski. No. 1,156,244; Oct. 12; Gaz. vol. 219; p. 343.
Measuring instrument. J. Heberling. No. 1,156,998; Oct. 19; Gaz. vol. 219; p. 638.
Measuring the area of hides, Apparatus for. W. H. Schulze. No. 1,158,310; Oct. 26; Gaz. vol. 219; p. 1163.
Meat-holder. E. F. Welz. No. 1,156,510; Oct. 12; Gaz. vol. 219; p. 438.
Mechanical movement. A. J. R. Flego. No. 1,157,933; Oct. 26; Gaz. vol. 219; p. 1029.
Mechanical movement and electric-light socket. T. A. C. Both. (Reissue.) No. 13,990; Oct. 5; Gaz. vol. 219; p. 250.
Medical appliance. M. M. Sweet. No. 1,155,527; Oct. 5; Gaz. vol. 219; p. 71.
Medicine-dropper. F. C. La Grange. No. 1,155,584; Oct. 5; Gaz. vol. 219; p. 90.
Melting and spraying fusible substances. F. Herkenrath. No. 1,157,984; Oct. 26; Gaz. vol. 219; p. 1048.
Melting-cup. G. E. Lee. No. 1,156,236; Oct. 12; Gaz. vol. 219; p. 340.
Melting-pot regulator. J. E. Lowden. No. 1,156,239; Oct. 12; Gaz. vol. 219; p. 342.
Mercury-vapor apparatus, Starting device for. J. C. Pole. No. 1,157,804; Oct. 26; Gaz. vol. 219; p. 984.
Metal, Alloy-surfaced. J. F. Monnot. No. 1,156,169; Oct. 12; Gaz. vol. 219; p. 319.
Metal-bending machine. E. W. Crellin. No. 1,156,062; Oct. 12; Gaz. vol. 219; p. 282.
Metal-bending machine. O. J. Groehn. No. 1,156,809; Oct. 19; Gaz. vol. 219; p. 603.
Metal, Producing blooms from scrap. W. C. Ely. No. 1,155,409; Oct. 5; Gaz. vol. 219; p. 29.
Metal sprouts, Forming. W. J. Geoglein. No. 1,155,652; Oct. 5; Gaz. vol. 219; p. 114.
Metal-strip-cleaning machine. S. Odabashian. No. 1,155,609; Oct. 5; Gaz. vol. 219; p. 90.
Metal, Treatment of. T. Van Aller. No. 1,155,974; Oct. 5; Gaz. vol. 219; p. 225.
Metal-working furnace. W. C. Ely. No. 1,155,410; Oct. 5; Gaz. vol. 219; p. 30.
Metal-working machine. L. F. and R. Schulze. No. 1,157,050; Oct. 19; Gaz. vol. 219; p. 658.
Metals and other very hard and highly-resilient materials, Machining. C. A. C. D. de Fréminville. No. 1,156,892; Oct. 19; Gaz. vol. 219; p. 601.
Metals from ores, Extracting. R. S. Towne and C. Robinson. No. 1,156,382; Oct. 12; Gaz. vol. 219; p. 392.
Metals from solution, Precipitating and separating. R. S. Towne and C. Robinson. No. 1,156,383; Oct. 12; Gaz. vol. 219; p. 393.
Metallic fabric. W. B. Anderson. No. 1,156,127; Oct. 12; Gaz. vol. 219; p. 305.
Metallic leaf, Machine for cutting, packaging, and unwinding. L. M. Harwood. No. 1,155,727; Oct. 5; Gaz. vol. 219; p. 140.
Metallic-sheet joint. C. C. Fouts. No. 1,155,717; Oct. 5; Gaz. vol. 219; p. 136.
Meter: *See*—
Electric meter.
Electrical meter.
Electricity-meter.
Electrolytic meter.
Flow-meter.
Fluid-meter.
Volt-ampere meter.
Meter. F. Lambert. No. 1,155,665; Oct. 5; Gaz. vol. 219; p. 118.
Meter. F. Lambert. No. 1,155,666; Oct. 5; Gaz. vol. 219; p. 119.
Meter-box. H. H. Howell. No. 1,156,530; Oct. 12; Gaz. vol. 219; p. 445.
Meter-protection device. E. A. Le Fever. No. 1,155,742; Oct. 5; Gaz. vol. 219; p. 145.
Metronome. C. A. Richmond. No. 1,157,042; Oct. 19; Gaz. vol. 219; p. 653.
Microphone. E. Weintraub and L. B. Miller. No. 1,156,509; Oct. 12; Gaz. vol. 219; p. 438.
Milk and milk products, Preserving. A. J. Davis. No. 1,157,976; Oct. 26; Gaz. vol. 219; p. 1045.
Milk-tester. P. M. Phillips. No. 1,158,275; Oct. 26; Gaz. vol. 219; p. 1149.
Mill: *See*—
Pulverizing-mill.
Rolling-mill.
Windmill.
Mine-door, Manually-operated. N. K. Bowman. No. 1,155,703; Oct. 5; Gaz. vol. 219; p. 132.
Mine-tailings, Slime-thickener for dewatering. W. E. Darrow. No. 1,156,276; Oct. 12; Gaz. vol. 219; p. 353.
Minerals by flotation, Apparatus for concentrating. G. C. Stone. No. 1,156,041; Oct. 5; Gaz. vol. 219; p. 249.
Miter-box, Folding. J. F. Grabowsky. No. 1,155,912; Oct. 5; Gaz. vol. 219; p. 205.
Mixer: *See*—
Bread-mixer.
Concrete-mixer.
Mixer. J. Frame. No. 1,155,907; Oct. 5; Gaz. vol. 219; p. 203.
Mixer and disintegrator. C. T. Du Rell. No. 1,157,092; Oct. 19; Gaz. vol. 219; p. 672.
Mixing and kneading machine for earthy and mineral materials. G. Eirich. No. 1,155,712; Oct. 5; Gaz. vol. 219; p. 135.
Mixing apparatus. H. G. Lakenan. No. 1,157,788; Oct. 26; Gaz. vol. 219; p. 978.
Mixing-machine. E. A. Clark. No. 1,158,178; Oct. 26; Gaz. vol. 219; p. 1116.
Moistening and sealing device. R. F. Crittenden. No. 1,157,619; Oct. 19; Gaz. vol. 219; p. 854.

Moistening device. A. A. Wiley. No. 1,158,090; Oct. 26; Gaz. vol. 219; p. 1085.
Moistening machine, Strip-. H. W. Howard. No. 1,156,697; Oct. 12; Gaz. vol. 219; p. 500.
Mold: *See*—
Butter-mold.
Concrete-pipe-forming mold.
Glass-blowing mold.
Ingot-mold.
Tire-mold.
Typographical-machine mold.
Molds, Method of and apparatus for venting. J. C. Davis. No. 1,157,847; Oct. 26; Gaz. vol. 219; p. 999.
Molding apparatus. J. B. Walker. No. 1,156,449; Oct. 12; Gaz. vol. 219; p. 416.
Molding-machine. L. G. Haase. No. 1,156,358; Oct. 12; Gaz. vol. 219; p. 383.
Molding-machine. W. Lewis. No. 1,157,403; Oct. 19; Gaz. vol. 219; p. 783.
Molding-machine. W. Lewis. No. 1,157,405; Oct. 19; Gaz. vol. 219; p. 784.
Molding-machine. G. E. Stevens. No. 1,157,967; Oct. 26; Gaz. vol. 219; p. 1042.
Money-changing machine. H. C. Walker and A. L. Boatwright. No. 1,157,826; Oct. 26; Gaz. vol. 219; p. 991.
Mop. J. M. Brower. No. 1,156,750; Oct. 12; Gaz. vol. 219; p. 522.
Mop, Dust-. C. B. Gilmore. No. 1,155,564; Oct. 5; Gaz. vol. 219; p. 83.
Mop-wringer. M. E. Davis. No. 1,157,152; Oct. 19; Gaz vol. 219; p. 693.
Mop-wringer. A. R. Douglass. No. 1,157,091; Oct. 19; Gaz. vol. 219; p. 672.
Motion translation and transmission mechanism. T. Carroll. No. 1,156,271; Oct. 12; Gaz. vol. 219; p. 352.
Motor: *See*—
Air-cooled motor.
Electric motor.
Fan-motor.
Fluid-actuated motor.
Induction-motor.
Thermostat-motor.
Water-motor.
Wave-motor.
Motor. D. F. Domizi. No. 1,155,998; Oct. 5; Gaz. vol. 219; p. 232.
Motor. D. S. Waugh. No. 1,157,605; Oct. 19; Gaz. vol. 219; p. 849.
Motor control, Electric-. M. C. A. Latour. No. 1,157,313; Oct. 19; Gaz. vol. 219; p. 751.
Motor-control system. H. L. Beach. No. 1,156,656; Oct. 12; Gaz. vol. 219; p. 490.
Motor-control system. J. H. Hall. No. 1,155,484; Oct. 5; Gaz. vol. 219; p. 56.
Motor-control system. E. A. Hanff. No. 1,156,682; Oct. 12; Gaz. vol. 219; p. 498.
Motor-control system. S. H. Keefer. No. 1,156,484; Oct. 12; Gaz. vol. 219; p. 429.
Motor control system, Electric-. H. L. Beach. No. 1,157,203; Oct. 19; Gaz. vol. 219; p. 711.
Motor-controller. C. W. Yerger. No. 1,157,277; Oct. 19; Gaz. vol. 219; p. 739.
Motor controller, Electric-. L. G. Riley. No. 1,157,904; Oct. 26; Gaz. vol. 219; p. 1020.
Motor-cooling system. C. E. Duryea. No. 1,156,067; Oct. 12; Gaz. vol. 219; p. 284.
Motor starter, Internal-combustion-. A. L. Golden. No. 1,157,690; Oct. 26; Gaz. vol. 219; p. 945.
Motors and the like, Device for protecting induction-. E. C. Schweitzer. No. 1,157,051; Oct. 19; Gaz. vol. 219; p. 658.
Motors, Centrifugal circuit-changing device for electric. E. S. Pillsbury. No. 1,157,179; Oct. 19; Gaz. vol. 219; p. 703.
Motors, Operating polyphase. H. W. Doubrava and J. Heineman. No. 1,156,136; Oct. 12; Gaz. vol. 219; p. 308.
Mower, Motor-driven lawn-. S. E. Beeler. No. 1,156,520; Oct. 12; Gaz. vol. 219; p. 441.
Mowing-machine. L. Bertrand. No. 1,155,988; Oct. 5; Gaz. vol. 219; p. 229.
Mud-ring. W. L. Bean. No. 1,156,455; Oct. 12; Gaz. vol. 219; p. 419.
Muffler. N. Rapp. No. 1,155,757; Oct. 5; Gaz. vol. 219; p. 149.
Muffler. E. Schmitt. No. 1,157,256; Oct. 19; Gaz. vol. 219; p. 732.
Muffler, Exhaust-. T. J. Kehoe. No. 1,157,005; Oct. 19; Gaz. vol. 219; p. 641.
Mullion. H. F. Wardwell. No. 1,157,827; Oct. 26; Gaz. vol. 219; p. 992.
Music-holder. M. A. Tryens. No. 1,157,194; Oct. 19; Gaz. vol. 219; p. 708.
Music-roll. G. H. Davis. No. 1,156,891; Oct. 19; Gaz. vol. 219; p. 600.
Music-roll. G. H. Davis. No. 1,158,122; Oct. 26; Gaz. vol. 219; p. 1097.
Music-sheet turner. H. C. Anderson and J. Gaffney. No. 1,156,199; Oct. 12; Gaz. vol. 219; p. 326.
Musical instrument, Automatic. J. Schwarz. No. 1,156,499; Oct. 12; Gaz. vol. 219; p. 434.
Musical instruments, Expression device for. M. L. Severy and G. B. Sinclair. No. 1,156,321; Oct. 12; Gaz. vol. 219; p. 368.
Musical instruments, Note-sheet-changing device for pneumatic. W. Reichel and G. K. Hennig. No. 1,158,288; Oct. 26; Gaz. vol. 219; p. 1154.
Musical tones forming a tempered scale, Instrument for the production of. E. G. Thomas. No. 1,156,329; Oct. 12; Gaz. vol. 219; p. 372.
N-homologues of the norhydrohydrastinin, Producing derivatives of. H. Decker. No. 1,156,134; Oct. 12; Gaz. vol. 219; p. 308.
Napkin. E. J. Corbin. No. 1,158,182; Oct. 26; Gaz. vol. 219; p. 1117.
Necklace-clasp. H. Blank. No. 1,156,267; Oct. 12; Gaz. vol. 219; p. 351.
Needle-bar-raising mechanism. D. S. Seymour. No. 1,158,313; Oct. 26; Gaz. vol. 219; p. 1163.
Needle-holder. E. H. Steedman. No. 1,155,378; Oct. 5; Gaz. vol. 219; p. 18.
Neat attachment, Trap-. F. N. Cordell. No. 1,156,589; Oct. 12; Gaz. vol. 219; p. 465.
Nests, Disinfectant or fumigating attachment for. C. L. Randolph. No. 1,156,021; Oct. 5; Gaz. vol. 219; p. 241.
Net, Fly-. E. W. Anderegg. No. 1,156,654; Oct. 12; Gaz. vol. 219; p. 489.
Nitrid and making the same, Stable boron. G. Weintraub. No. 1,157,271; Oct. 19; Gaz. vol. 219; p. 737.
Nitrogen, Fixing. O. Serpek. No. 1,155,840; Oct. 5; Gaz. vol. 219; p. 181.
Non-skidding device. M. C. Gannett. No. 1,155,413; Oct. 5; Gaz. vol. 219; p. 31.
Nozzle. L. J. Baum. No. 1,157,973; Oct. 26; Gaz. vol. 219; p. 1044.
Nozzle. M. J. Galvin. No. 1,157,861; Oct. 26; Gaz. vol. 219; p. 1004.
Nozzle. E. Josse and W. Gensecke. No. 1,155,735; Oct. 5; Gaz. vol. 219; p. 143.
Nozzle, Drinking-fountain. G. M. Page. No. 1,158,147; Oct. 26; Gaz. vol. 219; p. 1105.
Nozzle, Hydraulic. W. A. Doble. No. 1,157,853; Oct. 26; Gaz. vol. 219; p. 1001.
Nozzle, Hydraulic. W. M. White. No. 1,155,631; Oct. 5; Gaz. vol. 219; p. 106.
Nozzle, Steam-exhaust. F. Mertshelmer. No. 1,155,362; Oct. 5; Gaz. vol. 219; p. 13.
Nozzles, Spraying attachment for hose-. A. J. Sargent. No. 1,158,302; Oct. 26; Gaz. vol. 219; p. 1159.
Numbering-head. J. H. Reinhardt. No. 1,157,647; Oct. 19; Gaz. vol. 219; p. 863.
Numbering-machine. M. H. Kern. No. 1,157,698; Oct. 26; Gaz. vol. 219; p. 948.
Numbering-machine. M. H. Kern. No. 1,157,699; Oct. 26; Gaz. vol. 219; p. 948.
Nut. H. G. Carlson. No. 1,157,615; Oct. 19; Gaz. vol. 219; p. 853.
Nut. J. W. Meaker. No. 1,156,798; Oct. 12; Gaz. vol. 219; p. 537.
Nut-castellating machine. O. A. Smith and B. F. Rindfleisch. No. 1,157,258; Oct. 19; Gaz. vol. 219; p. 732.
Nut dipping and coating machines, Feeder for. J. Conte. No. 1,158,120; Oct. 26; Gaz. vol. 219; p. 1096.
Nut, Lock-. T. T. Mitchell. No. 1,155,949; Oct. 5; Gaz. vol 219; p. 217.
Nut, Lock-. M. Sherman. No. 1,157,596; Oct. 19; Gaz. vol. 219; p. 846.
Nut-lock. C. Besser. No. 1,158,163; Oct. 26; Gaz. vol. 219; p. 1111.
Nut-lock. J. H. Cotton. No. 1,157,678; Oct. 26; Gaz. vol. 219; p. 941.
Nut-lock. G. H. Duke. No. 1,156,279; Oct. 12; Gaz. vol. 219; p. 354.
Nut-lock. W. Edson. No. 1,155,408; Oct. 5; Gaz. vol. 219; p. 29.
Nut-lock. D. F. Fassett. No. 1,156,593; Oct. 12; Gaz. vol. 219; p. 466.
Nut-lock. G. L. Hieronymus. No. 1,155,356; Oct. 5; Gaz. vol. 219; p. 11.
Nut-lock. W. Klettke. No. 1,157,230; Oct. 19; Gaz. vol. 219; p. 721.
Nut-lock. W. H. Klink and J. C. Green. No. 1,155,935; Oct. 5; Gaz. vol. 219; p. 212.
Nut-lock. H. Landua. No. 1,157,007; Oct. 19; Gaz. vol. 219; p. 642.
Nut-lock. W. O. Millikin. No. 1,156,243; Oct. 12; Gaz. vol. 219; p. 343.
Nut-lock. W. O. Millikin. No. 1,157,999; Oct. 26; Gaz. vol. 219; p. 1052.
Nut-lock. H. Moerbe. No. 1,158,260; Oct. 26; Gaz. vol. 219; p. 1144.
Nut-lock. J. E. Shinn. No. 1,157,814; Oct. 26; Gaz. vol. 219; p. 987.
Nut-lock. O. H. Sleeper. No. 1,156,105; Oct. 12; Gaz. vol. 219; p. 298.
Nut-lock. A. E. Smith. No. 1,155,844; Oct. 5; Gaz. vol. 219; p. 182.
Nut-lock. J. W. Van Zile. No. 1,158,340; Oct. 26; Gaz. vol. 219; p. 1172.
Nut-lock. J. H. Wines. No. 1,155,858; Oct. 5; Gaz. vol. 219; p. 187.
Nut-lock and washer. S. Leschziner. No. 1,156,016; Oct. 5; Gaz. vol. 219; p. 240.
Nut sheller and separator. D. B. Williams. No. 1,157,199; Oct. 19; Gaz. vol. 219; p. 710.
Nut-splitting tool. J. D. Brady. No. 1,156,745; Oct. 12; Gaz. vol. 219; p. 520.
Nut-wrench. W. L. Bessolo. No. 1,157,495; Oct. 19; Gaz. vol. 219; p. 815.
Nuts and the like, Making. H. G. Carlson. No. 1,156,973; Oct. 19; Gaz. vol. 219; p. 630.
Observation apparatus. J. De Faico. No. 1,157,154; Oct. 19; Gaz. vol. 219; p. 694.

Odometer. H. P. C. Browne. No. 1,157,365; Oct. 19; Gaz. vol. 219; p. 769.
Oil-burner. J. Beckwith. No. 1,155,873; Oct. 5; Gaz. vol. 219; p. 192.
Oil-burner. J. R. Carr. No. 1,157,758; Oct. 26; Gaz. vol. 219; p. 969.
Oil-burner. F. W. Smith. No 1,157,332; Oct. 19; Gaz. vol. 219; p. 758.
Oil-burner torch. F. W. Kellermann. No. 1,157,549; Oct. 19; Gaz. vol. 219; p. 833.
Oil-cloth-machine attachment. E. Wieser. No. 1,156,195; Oct. 12; Gaz. vol. 219; p. 327.
Oil connection, Engine. W. L. Morris. No. 1,157,894; Oct. 26; Gaz. vol. 219; p. 1017.
Oil-containing tanks against ignition by electrical discharge, Means for protecting contents of. W. Dodd. No. 1,155,648; Oct. 5; Gaz. vol. 219; p. 112.
Oil-cup, automatic. C. J. Woerner and A. M. Hunt. No. 1,157,354; Oct. 19; Gaz. vol. 219; p. 764.
Oil-cup, Self-closing. D. H. Twaits. No. 1,156,114; Oct. 12; Gaz. vol. 219; p. 301.
Oil-delivery tank. T. W. Skelton. No. 1,158,394; Oct. 26; Gaz. vol. 219; p. 1192.
Oil from wells, Apparatus for preventing the emulsification of. J. E. Reynolds. No. 1,157,902; Oct. 26; Gaz. vol. 219; p. 1019.
Oil from wells, Preventing the emulsification of. J. E. Reynolds. No. 1,157,903; Oct. 26; Gaz. vol. 219; p. 1020.
Oil, Hydrating. F. W. McNear and P. E. Bowles, Jr. No. 1,158,263; Oct. 26; Gaz. vol. 219; p. 1141.
Oils, Treating hydrocarbon. T. . Gray. No. 1,158,205; Oct. 26; Gaz. vol. 219; p. 1125.
Oiler, Animal-. H. W. Howard. No. 1,156,403; Oct. 12; Gaz. vol. 219; p. 400.
Oiler, Hanger-box. C. A. De Temple. No. 1,155,472; Oct. 5; Gaz. vol. 219; p. 52.
Oiling-duct closure. J. L. Osgood. No. 1,157,250; Oct. 19; Gaz. vol. 219; p. 729.
Oiling explosion-motors, Means for. H. C. Marmon. No. 1,156,608; Oct. 12; Gaz. vol. 219; p. 471.
Oiling system for internal-combustion engines. E. R. Hewitt and A. F. Masury. No. 1,157,390; Oct. 19; Gaz. vol. 219; p. 779.
Ophthalmological instrument. H. L. De Zeng. No. 1,158,187; Oct. 26; Gaz. vol. 219; p. 1119.
Orchard-heater. J. S. Bradley. No. 1,157,671; Oct. 26; Gaz. vol. 219; p. 938.
Ordnance sighting apparatus. E. Schneider. No. 1,155,517; Oct. 5; Gaz. vol. 219; p. 63.
Ore-classifier. D. J. Nevill. No. 1,156,543; Oct. 12; Gaz. vol. 219; p. 449.
Ore-classifier. D. J. Nevill. No. 1,156,544; Oct. 12; Gaz. vol. 219; p. 449.
Ore concentration. L. A. Wood. No. 1,155,861; Oct. 5; Gaz. vol. 219; p. 187.
Ore concentration, Apparatus for. A. H. Higgins. No. 1,155,816; Oct. 5; Gaz. vol. 219; p. 172.
Ore concentration, Apparatus for. A. H. Higgins and W. W. Stenning. No. 1,155,815; Oct. 5; Gaz. vol. 219; p. 171.
Ore disintegrating and screening machine. G. W. Crowe. No. 1,156,394; Oct. 12; Gaz. vol. 219; p. 398.
Ore-grinding machine. C. O. Michaelsen. No. 1,158,259; Oct. 26; Gaz. vol. 219; p. 1143.
Ore-separator, Magnetic. A. F. Jobke. No. 1,157,543; Oct. 19; Gaz. vol. 219; p. 831.
Ore treatment, Agitator for. C. Robinson. No. 1,156,372; Oct. 12; Gaz. vol. 219; p. 389.
Ores, Apparatus for the concentration of. T. M. Owen. No. 1,155,836; Oct. 5; Gaz. vol. 219; p. 179.
Outlet-box bracket. J. C. Caine. No. 1,156,385; Oct. 19; Gaz. vol. 219; p. 598.
Oven, Drying and baking. G. J. Mashek. No. 1,157,658; Oct. 19; Gaz. vol. 219; p. 868.
Oven-insulating means, Bake-. C. B. Comstock. No. 1,156,390; Oct. 12; Gaz. vol. 219; p. 396.
Overhoist automatic cut-off. M. Beam. No. 1,156,877; Oct. 19; Gaz. vol. 219; p. 595.
Ozone-generator. W. O. Freet. No. 1,157,859; Oct. 26; Gaz. vol. 219; p. 1003.
Pack-carrier. G. A. Blain. No. 1,156,878; Oct. 19; Gaz. vol. 219; p. 595.
Package-cover and spout. E. W. Pinkerton. No. 1,155,681; Oct. 5; Gaz. vol. 219; p. 124.
Package-fastening device. W. T. Timmerman. No. 1,156,565; Oct. 12; Gaz. vol. 219; p. 457.
Package, Sealed. F. Payne. No. 1,158,073; Oct. 26; Gaz. vol. 219; p. 1079.
Package-tie. R. L. Lynch. No. 1,156,791; Oct. 12; Gaz. vol. 219; p. 535.
Package-tie. M. A. Sanders. No. 1,155,961; Oct. 5; Gaz. vol. 219; p. 221.
Package-tie. O. W. Stuch and R. E. Sturgis. No. 1,157,451; Oct. 19; Gaz. vol. 219; p. 800.
Packing-case for fragile articles. J. N. Hahn. No. 1,156,074; Oct. 12; Gaz. vol. 219; p. 287.
Packing ring and valve, Combined. B. C. Kenyon. No. 1,157,162; Oct. 19; Gaz. vol. 219; p. 697.
Pad: *See*—
Knee-pad. Veneer pad.
Truss-pad.
Pail-holder. E. A. Snell. No. 1,157,333; Oct. 19; Gaz. vol. 219; p. 758.
Paint-pot. A. C. Webster. No. 1,157,475; Oct 19; Gaz. vol. 219; p. 808.
Paints and the like, Non-inflammable solvent for. G. Whigelt. No. 1,156,119; Oct. 12; Gaz. vol. 219; p. 302.
Painter's guard. A. D. Welty, Sr. No. 1,158,348; Oct. 26; Gaz. vol. 219; p. 1174.
Pan: *See*—
Ash-pan. Bed-pan.
Paper, Apparatus for controlling the thickness of. H. Brown. No. 1,157,204; Oct. 19; Gaz. vol. 219; p. 712.
Paper, Apparatus for producing thin sections in. P. Weston. No. 1,155,853; Oct. 5; Gaz. vol. 219; p. 185.
Paper-associating machine. C. D. Curry. No. 1,155,894; Oct. 5; Gaz. vol. 219; p. 198.
Paper bag. H. A. Genest. No. 1,158,042; Oct. 26; Gaz. vol. 219; p. 1068.
Paper-board box, Reinforced. E. M. Hawkins. No. 1,158,130; Oct. 26; Gaz. vol. 219; p. 1099.
Paper box. M. H. Dague. No. 1,157,298; Oct. 19; Gaz. vol. 219; p. 745.
Paper box. J. C. Zemlo. No. 1,155,986; Oct. 5; Gaz. vol. 219; p. 229.
Paper box, Folding. W. L. Stevens. No. 1,156,444; Oct. 12; Gaz. vol. 219; p. 414.
Paper box or carton. A. T. Rhodes. No. 1,155,686; Oct. 5; Gaz. vol. 219; p. 126.
Paper cups with rolled edges, Apparatus for making. G. J. Bohlman. No. 1,155,787; Oct. 5; Gaz. vol. 219; p. 161.
Paper extract-holding cup. A. J. Mills. No. 1,157,568; Oct. 19; Gaz. vol. 219; p. 838.
Paper-fastener. I. Rittenhouse. No. 1,156,179; Oct. 12; Gaz. vol. 219; p. 322.
Paper filing and binding device. F. J. Klein. No. 1,157,229; Oct. 19; Gaz. vol. 219; p. 721.
Paper fruit-container. O. E. Smith. No. 1,155,524; Oct. 5; Gaz. vol. 219; p. 71.
Paper-hanging tool, Combination. J. H. Kane. No. 1,156,783; Oct. 12; Gaz. vol. 219; p. 532.
Paper-holder. B. S. Bayle. No. 1,157,286; Oct. 19; Gaz. vol. 219; p. 742.
Paper holder, Toilet-. S. J. Bens and A. B. Hubbard. No. 1,156,266; Oct. 12; Gaz. vol. 219; p. 351.
Paper-keg. B. C. Vaughn. No. 1,156,332; Oct. 12; Gaz. vol. 219; p. 373.
Paper-package. C. C. Willis. No. 1,158,353; Oct. 26; Gaz. vol. 219; p. 1176.
Paper perforating and filing device. F. J. Klein. No. 1,157,228; Oct. 19; Gaz. vol. 219; p. 721.
Paper-stock-shredding machine. G. D. Ryther. No. 1,156,373; Oct. 12; Gaz. vol. 219; p. 390.
Paper to the tops of boxes and other articles, Machine for applying. F. G. Henry. No. 1,156,005; Oct. 5; Gaz. vol. 219; p. 235.
Paper tube and making same. C. S. Bird. No. 1,158,024; Oct. 26; Gaz. vol. 219; p. 1062.
Papers and the like, Apparatus for conveying and distributing. W. M. Hasberg and A. W. Swanlund. No. 1,157,865; Oct. 26; Gaz. vol. 219; p. 1006.
Pattern-drafting device, Combined. J. B. Toth. No. 1,157,345; Oct. 19; Gaz. vol. 219; p. 762.
Paving-block. H. E. Warden. No. 1,156,117; Oct. 12; Gaz. vol. 219; p. 302.
Paving roads and the like, Apparatus for use when. W. B. Cowell. No. 1,157,297; Oct. 19; Gaz. vol. 219; p. 745.
Peat, Apparatus for obtaining. E. Bartholomew. No. 1,156,387; Oct. 12; Gaz. vol. 219; p. 395.
Pedal-locking mechanism. E. S. Foljambe. No. 1,156,990; Oct. 19; Gaz. vol. 219; p. 636.
Pedal-switch. W. S. Willis. No. 1,158,355; Oct. 26; Gaz. vol. 219; p. 1177.
Pedestal construction. J. A. Lamont. No. 1,157,677; Oct. 26; Gaz. vol. 219; p. 1010.
Pen, Fountain-. H. W. Pierce. No. 1,155,611; Oct. 5; Gaz. vol. 219; p. 99.
Pen, Fountain-. R. L. Warnock. No. 1,155,693; Oct. 5; Gaz. vol. 219; p. 128.
Pen, Lettering-. E. S. Keene. No. 1,158,230; Oct. 26; Gaz. vol. 219; p. 1133.
Pens, pencils, &c., Clip for. G. H. Clark. No. 1,155,641; Oct. 5; Gaz. vol. 219; p. 110.
Pens, Spring and presser-bar for fountain-. E. F. Britten, Jr. No. 1,156,748; Oct. 12; Gaz. vol. 219; p. 521.
Penholder. J. T. McKittrick. No. 1,157,994; Oct. 26; Gaz. vol. 219; p. 1050.
Pencil-holder. D. A. Prows. No. 1,157,580; Oct. 19; Gaz. vol. 219; p. 842.
Pencil-holder. W. McDougall. No. 1,158,251; Oct. 26; Gaz. vol. 219; p. 1140.
Pencil, Magazine-. W. R. Heylmun. No. 1,156,860; Oct. 12; Gaz. vol. 219; p. 561.
Percolator. G. F. Hemming and M. L. Baker. No. 1,157,778; Oct. 26; Gaz. vol. 219; p. 974.
Percolator. A. A. Warner. (Reissue.) No. 14,004; Oct. 26; Gaz. vol. 219; p. 1207.
Permutation-lock. G. Albanese. No. 1,158,152; Oct. 26; Gaz. vol. 219; p. 1107.
Phonograph. N. H. Holland. No. 1,155,572; Oct. 5; Gaz. vol. 219; p. 86.
Phonograph. C. B. Repp. No. 1,156,931; Oct. 19; Gaz. vol. 219; p. 615.
Phonographic record. T. Eynon. No. 1,158,377; Oct. 26; Gaz. vol. 219; p. 1185.

Photographic and like purposes, Objective for. L. B. Booth. No. 1,156,743; Oct. 12; Gaz. vol. 219; p. 519.
Photographic apparatus. D. Dimentberg. No. 1,156,984; Oct. 19; Gaz. vol. 219; p. 634.
Photographic developer. C. J. Thatcher. No. 1,158,011; Oct. 26; Gaz. vol. 219; p. 1057.
Photographic-picture-enlarging apparatus. C. W. White. No. 1,157,742; Oct. 26; Gaz. vol. 219; p. 963.
Photographic-printing apparatus. T. Harbers. No. 1,156,528; Oct. 12; Gaz. vol. 219; p. 444.
Photographic-roll holder. J. Richard and R. P. M. Lavie. No. 1,155,508; Oct. 5; Gaz. vol. 219; p. 65.
Photographing and developing apparatus. G. C. Beidler. No. 1,157,611; Oct. 19; Gaz. vol. 219; p. 851.
Photographing apparatus. G. C. Beidler. No. 1,155,785; Oct. 5; Gaz. vol. 219; p. 160.
Photography, Selecting-screen for color. L. Dufay. No. 1,155,900; Oct. 5; Gaz. vol. 219; p. 200.
Piano-action flange. W. J. Luthmers. No. 1,157,629; Oct. 19; Gaz. vol. 219; p. 857.
Piano actions, Pianissimo device for grand-. A. T. Strauch. No. 1,157,262; Oct. 19; Gaz. vol. 219; p. 734.
Piano, Automatic player-. J. A. Weser. No. 1,156,956; Oct. 19; Gaz. vol. 219; p. 623.
Piano-keyboard, Detachable. H. Rowntree. No. 1,157,047; Oct. 19; Gaz. vol. 219; p. 657.
Piano-operating device, Player-. O. Higel. No. 1,155,570; Oct. 5; Gaz. vol. 219; p. 85.
Piano-player, Pneumatic. E. C. Wamelink. No. 1,156,951; Oct. 19; Gaz. vol. 219; p. 621.
Piano-players, Pneumatic action for. N. Magnuson. No. 1,158,087; Oct. 26; Gaz. vol. 219; p. 1077.
Pianos and player pianos, Coupler for. J. C. Moore and E. L. Winston. No. 1,157,573; Oct. 19; Gaz. vol. 219; p. 839.
Pianos, Heel-mat for. H. L. Cruttenden and F. L. Lawrence. No. 1,157,846; Oct. 26; Gaz. vol. 219; p. 999.
Pianos, Pneumatic action for player-. O. Higel. No. 1,155,571; Oct. 5; Gaz. vol. 219; p. 85.
Picker: *See*—
Fruit-picker.
Picker-stick check. J. F. Vaillancourt. No. 1,155,529; Oct. 5; Gaz. vol. 219; p. 72.
Pickling cantaloups. A. O. Edwards. No. 1,155,555; Oct. 5; Gaz. vol. 219; p. 81.
Picture apparatus, Moving-. J. J. Connelly. No. 1,156,211; Oct. 12; Gaz. vol. 219; p. 332.
Picture-film case, Motion-. W. P. McNeel. No. 1,155,940; Oct. 5; Gaz. vol. 219; p. 213.
Picture-film renovator, Motion-. B. H. Greene. No. 1,156,994; Oct. 19; Gaz. vol. 219; p. 637.
Picture-frame. H. Watts. No. 1,157,915; Oct. 26; Gaz. vol. 219; p. 1023.
Picture machine, Motion-. O. Schwimmer. No. 1,156,824; Oct. 12; Gaz. vol. 219; p. 547.
Picture machine, Moving-. G. W. Bingham. No. 1,156,457; Oct. 12; Gaz. vol. 219; p. 419.
Picture machine, Moving-. T. P. Hall. No. 1,156,596; Oct. 12; Gaz. vol. 219; p. 467.
Picture machine, Registering device for a moving-. E. Schneider. No. 1,156,934; Oct. 19; Gaz. vol. 219; p. 616.
Pictures, Method of and apparatus for producing and exhibiting composite. J. E. Garrette. No. 1,156,896; Oct. 19; Gaz. vol. 219; p. 602.
Pigment and producing same, Composite titanic-oxid. L. E. Barton. No. 1,155,462; Oct. 5; Gaz. vol. 219; p. 48.
Pile fabrics, Manufacture of figured. O. Kohorn. No. 1,156,485; Oct. 12; Gaz. vol. 219; p. 430.
Pile form, Tapered-. J. Stewart. No. 1,157,443; Oct. 19; Gaz. vol. 219; p. 797.
Pile-shells, Machine for manufacturing spirally-reinforced. W. J. Wainwright and H. R. Smith. No. 1,155,389; Oct. 5; Gaz. vol. 219; p. 22.
Piles, Making. J. Stewart. No. 1,157,442; Oct. 19; Gaz. vol. 219; p. 797.
Piles, Making composite. F. Shuman. No. 1,156,186; Oct. 12; Gaz. vol. 219; p. 324.
Piles, Placing and driving concrete. J. Stewart. No. 1,157,444; Oct. 19; Gaz. vol. 219; p. 798.
Pin: *See*—
Clothes-pin. Rolling-pin.
Cotter-pin.
Pin-fastener. M. E. Towler. No. 1,155,691; Oct. 5; Gaz. vol. 219; p. 128.
Pin-joint. J. A. Doran. No. 1,156,763; Oct. 12; Gaz. vol. 219; p. 526.
Pipe: *See*—
Sewer-pipe. Stand-pipe.
Smoking-pipe.
Pipe and nut wrench. G. A. Parmenter. No. 1,155,955; Oct. 5; Gaz. vol. 219; p. 219.
Pipe-bowls, Carbonizing. W. A. Paul. No. 1,156,171; Oct. 12; Gaz. vol. 219; p. 320.
Pipe-cleaning method and apparatus. J. J. McCarty. No. 1,156,417; Oct. 12; Gaz. vol. 219; p. 406.
Pipe-coupling. A. R. Jenkins. No. 1,156,145; Oct. 12; Gaz. vol. 219; p. 312.
Pipe-coupling device for railway and tram cars. L. Boirault. No. 1,155,876; Oct. 5; Gaz. vol. 219; p. 102.
Pipe coupling, Train-. J. Thiem. No. 1,156,101; Oct. 12; Gaz. vol. 219; p. 326.
Pipe-hanger. C. S. McKinley. No. 1,156,241; Oct. 12; Gaz. vol. 219; p. 342.
Pipe-holding device. F. B. Burns. No. 1,155,337; Oct. 5; Gaz. vol. 219; p. 4.
Pipe-joint-wiping device. R. E. Higbee. No. 1,157,391; Oct. 19; Gaz. vol. 219; p. 779.
Pipe-line for oil-stoves and other purposes. F. E. White. No. 1,157,484; Oct. 19; Gaz. vol. 219; p. 811.
Pipe or casing dent remover. L. F. Baash. No. 1,157,073; Oct. 19; Gaz. vol. 219; p. 665.
Pipe-patching device. W. H. Crow. No. 1,156,890; Oct. 19; Gaz. vol. 219; p. 600.
Pipe-union. H. J. Kast. No. 1,157,695; Oct. 26; Gaz. vol. 219; p. 947.
Pipe-wrench. L. Whitcomb. No. 1,156,260; Oct. 12; Gaz. vol. 219; p. 349.
Pipes, Preventing water-hammer in. W. Kieser. No. 1,156,532; Oct. 12; Gaz. vol. 219; p. 445.
Piston. C. B. Stebbins. No. 1,157,130; Oct. 19; Gaz. vol. 219; p. 685.
Piston cooling and lubricating system, Engine-. H. Lemp. No. 1,157,944; Oct. 26; Gaz. vol. 219; p. 1033.
Piston-cooling means. W. E. Ver Planck. No. 1,157,347; Oct. 19; Gaz. vol. 219; p. 763.
Piston, Internal-combustion-engine. G. K. Davol. No. 1,156,590; Oct. 12; Gaz. vol. 219; p. 465.
Pitcher, Molasses and syrup. W. L. King. No. 1,156,784; Oct. 12; Gaz. vol. 219; p. 532.
Pitman-coupling. W. S. Minor. No. 1,156,918; Oct. 19; Gaz. vol. 219; p. 610.
Pitman-coupling. W. S. Minor. No. 1,157,950; Oct. 26; Gaz. vol. 219; p. 1035.
Plane, Bench-. T. G. Selleck. No. 1,157,594; Oct. 19; Gaz. vol. 219; p. 846.
Planter, Corn-. W. Browning. No. 1,157,501; Oct. 19; Gaz. vol. 219; p. 817.
Planter, Corn-. M. H. Madsen. No. 1,155,592; Oct. 5; Gaz. vol. 219; p. 92.
Planter, Potato-. M. E. Dore. No. 1,158,031; Oct. 26; Gaz. vol. 219; p. 1064.
Plastic and elastic material for tarring roads or for other purposes, Manufacture of a. J. Rosen. No. 1,155,442; Oct. 5; Gaz. vol. 219; p. 41.
Plastic material, Apparatus for forming articles of. C. J. Kirk. No. 1,156,085; Oct. 12; Gaz. vol. 219; p. 291.
Plastic material, Apparatus for treating. R. B. Price. No. 1,156,696; Oct. 12; Gaz. vol. 219; p. 295.
Plastics, Treatment of vulcanizable. E. E. A. G. Meyer. No. 1,157,887; Oct. 26; Gaz. vol. 219; p. 1014.
Plating or decorating chinaware or glassware. F. Moench. No. 1,157,569; Oct. 19; Gaz. vol. 219; p. 838.
Pliers. W. D. Bryce. No. 1,155,882; Oct. 5; Gaz. vol. 219; p. 194.
Pliers. F. Woodhead. No. 1,155,632; Oct. 5; Gaz. vol. 219; p. 106.
Pliers, Piston-ring. D. J. Campbell. No. 1,157,082; Oct. 19; Gaz. vol. 219; p. 669.
Plow. S. A. Barker. No. 1,156,831; Oct. 12; Gaz. vol. 219; p. 549.
Plow. R. Grubb. No. 1,155,917; Oct. 5; Gaz. vol. 219; p. 206.
Plow. C. O. Hembree. No. 1,155,418; Oct. 5; Gaz. vol. 219; p. 33.
Plow. W. A. Kimbell. No. 1,157,399; Oct. 19; Gaz. vol. 219; p. 782.
Plow. W. A. Kimbell. No. 1,158,134; Oct. 26; Gaz. vol. 219; p. 1101.
Plow, Automobile. A. E. Cook and T. Vantuyl. No. 1,158,109; Oct. 26; Gaz. vol. 219; p. 1092.
Plow-disk assembly. A. E. Cook. No. 1,158,110; Oct. 26; Gaz. vol. 219; p. 1092.
Plow-fender. J. M. Starr. No. 1,157,129; Oct. 19; Gaz. vol. 219; p. 685.
Plow frame, Gang-. D. S. Troth. No. 1,157,067; Oct. 19; Gaz. vol. 219; p. 663.
Plow, Gang-. F. S. Williams. No. 1,157,136; Oct. 19; Gaz. vol. 219; p. 687.
Plow-moldboard. W. A. White. No. 1,155,854; Oct. 5; Gaz. vol. 219; p. 185.
Plow, Motor-. A. J. Blauvelt. No. 1,157,289; Oct. 19; Gaz. vol. 219; p. 743.
Plow or sprender, Ballast. C. C. Mallard. No. 1,155,429; Oct. 5; Gaz. vol. 219; p. 37.
Plow, Tractor-. H. R. Boswell. No. 1,157,670; Oct. 26; Gaz. vol. 219; p. 938.
Plows, Disk-jointer for. P. H. Geisler. No. 1,155,349; Oct. 5; Gaz. vol. 219; p. 9.
Plug, Pneumatic. G. F. Conley. No. 1,158,108; Oct. 26; Gaz. vol. 219; p. 1091.
Plug-switch. W. F. Meschenmoser. No. 1,157,026; Oct. 19; Gaz. vol. 219; p. 649.
Plumbing device. E. Kennedy. No. 1,155,820; Oct. 5; Gaz. vol. 219; p. 173.
Pneumatic action. C. J. Johnson. No. 1,157,398; Oct. 19; Gaz. vol. 219; p. 781.
Pocket-seat. P. J. Milz. No. 1,157,795; Oct. 26; Gaz. vol. 219; p. 981.
Poison-indicator. W. C. Sweeney. No. 1,157,338; Oct. 19; Gaz. vol. 219; p. 760.
Poke, Animal-. W. A. Hager. No. 1,157,329; Oct. 19; Gaz. vol. 219; p. 827.
Pole, Metal. C. L. Michod. No. 1,156,422; Oct. 12; Gaz. vol. 219; p. 407.
Popper, toaster, and baker combined. R. P. Ralston. No. 1,157,326; Oct. 19; Gaz. vol. 219; p. 755.

Portable elevator. T. Campfield. No. 1,157,367; Oct. 19; Gaz. vol. 219; p. 770.
Post: *See*—
Rubbing-post.
Post. C. C. Cherry. No. 1,156,207; Oct. 12; Gaz. vol. 219; p. 331.
Pot: *See*—
Paint-pot.
Pots, Cleaning. A. E. Spinasse. No. 1,157,597; Oct. 19; Gaz. vol. 219; p. 847.
Potash, Recovering. A. C. Spencer. No. 1,157,437; Oct. 19; Gaz. vol. 219; p. 796.
Potassium chlorid, Obtaining. J. A. Bradburn. No. 1,156,388; Oct. 12; Gaz. vol. 219; p. 395.
Potato-digging machine. H. Eskett. No. 1,157,931; Oct. 26; Gaz. vol. 219; p. 1029.
Potato-sorter. J. and M. Krentz. No. 1,156,786; Oct. 12; Gaz. vol. 219; p. 533.
Pouches, Former for self-closing. W. W. MacDonald. No. 1,156,847; Oct. 12; Gaz. vol. 219; p. 556.
Power molding-machine. A. S. Bixby. No. 1,158,398; Oct. 26; Gaz. vol. 219; p. 1194.
Power-transmission apparatus, Fluid-operated. H. Lentz. No. 1,156,787; Oct. 12; Gaz. vol. 219; p. 533.
Power-transmission mechanism. J. Valentine. No. 1,158,336; Oct. 26; Gaz. vol. 219; p. 1170.
Power-transmission mechanism. T. G. Van Sant. No. 1,156,852; Oct. 12; Gaz. vol. 219; p. 558.
Power transmission, Multiple-disk. C. McLaren. No. 1,157,238; Oct. 19; Gaz. vol. 219; p. 724.
Power-transmission safety device. H. B. Dierdorff. No. 1,156,397; Oct. 12; Gaz. vol. 219; p. 399.
Power-transmitting apparatus for vehicles, Fluid- H. N. Norton. No. 1,157,415; Oct. 19; Gaz. vol. 219; p. 788.
Precious stones, &c., Forming settings for. S. N. Stone. No. 1,157,598; Oct. 19; Gaz. vol. 219; p. 847.
Press: *See*—
Baling-press.
Drill-press.
Filter-press.
Heel-press.
Mandrel-press.
Printing-press.
Racket-press.
Toy brick-press.
Presses, Safety device for. B. Levi. No. 1,155,745; Oct. 5; Gaz. vol. 219; p. 145.
Presses, Safety device for. B. Levi. No. 1,155,746; Oct. 5; Gaz. vol. 219; p. 146.
Pressing and steaming device, Garment. A. N. Rosenbloom. No. 1,157,586; Oct. 19; Gaz. vol. 219; p. 844.
Primary battery. A. L. Saltzman. No. 1,155,512; Oct. 5; Gaz. vol. 219; p. 66.
Printed sheets, Antismut web for. C. P. Cottrell. No. 1,156,669; Oct. 12; Gaz. vol. 219; p. 495.
Printer and cash-register, Check-. B. B. Wells. No. 1,156,955; Oct. 19; Gaz. vol. 219; p. 623.
Printers' furniture, Machine for washing. F. W. Steiner. No. 1,156,563; Oct. 12; Gaz. vol. 219; p. 456.
Printer's miter-gage. P. Embser. No. 1,157,372; Oct. 19; Gaz. vol. 219; p. 772.
Printing-blanket. F. E. Ellis. No. 1,158,033; Oct. 26; Gaz. vol. 219; p. 1065.
Printing, Lithographic plate for offset and direct. J. Grass. No. 1,155,352; Oct. 5; Gaz. vol. 219; p. 10.
Printing-machine. M. O. Anthony. No. 1,156,966; Oct. 19; Gaz. vol. 219; p. 627.
Printing-machine. I. F. Niles. No. 1,155,505; Oct. 5; Gaz. vol. 219; p. 64.
Printing-machine. W. Spalckhaver. No. 1,156,378; Oct. 12; Gaz. vol. 219; p. 391.
Printing-machine safety-guard. L. E. Morrison. No. 1,156,423; Oct. 12; Gaz. vol. 219; p. 408.
Printing-machine safety-guard. L. E. Morrison. No. 1,158,069; Oct. 26; Gaz. vol. 219; p. 1078.
Printing machine, Web-. O. Roesen. No. 1,155,619; Oct. 5; Gaz. vol. 219; p. 101.
Printing-plate for colored photo-engraving and producing the same. F. V. Walsh and C. M. Reed. No. 1,157,197; Oct. 19; Gaz. vol. 219; p. 709.
Printing-plates to the cylinders of printing-presses, Device for clamping. T. R. G. Parker and W. Lee. No. 1,158,269; Oct. 26; Gaz. vol. 219; p. 1146.
Printing-press. W. J. Ramsaier. No. 1,158,285; Oct. 26; Gaz. vol. 219; p. 1153.
Printing-press-controlling mechanism. J. J. Walser and C. A. Dresser. No. 1,157,740; Oct. 26; Gaz. vol. 219; p. 963.
Printing-press-delivery mechanism. C. Henderson. No. 1,156,903; Oct. 19; Gaz. vol. 219; p. 605.
Printing-press-delivery mechanism. B. D. Stevens. No. 1,156,940; Oct. 19; Gaz. vol. 219; p. 617.
Printing-press-driving mechanism. R. Miehle. No. 1,157,888; Oct. 26; Gaz. vol. 219; p. 1014.
Printing-press ink-fountain. W. P. Delaney. No. 1,155,719; Oct. 5; Gaz. vol. 219; p. 134.
Printing-press, Platen. M. Rockstroh. No. 1,157,807; Oct. 26; Gaz. vol. 219; p. 985.
Printing-press safety-guard. L. E. Morrison. No. 1,155,756; Oct. 5; Gaz. vol. 219; p. 149.
Printing-press safety-guard. L. E. Morrison. No. 1,157,247; Oct. 19; Gaz. vol. 219; p. 728.
Printing, Raising. S. Lipsius. No. 1,158,065; Oct. 26; Gaz. vol. 219; p. 1076.
Prints, Production of fast-colored. H. Levinstein. No. 1,157,705; Oct. 26; Gaz. vol. 219; p. 950.
Propeller-feathering means. D. Ford. No. 1,158,195; Oct. 26; Gaz. vol. 219; p. 1122.
Propeller, Ship-. B. Greif. No. 1,155,654; Oct. 5; Gaz. vol. 219; p. 114.
Protractor, Draftsman's. E. N. Van Buskirk. No. 1,157,825; Oct. 26; Gaz. vol. 219; p. 991.
Pull pendent switch. F. A. Brogden. No. 1,156,344; Oct. 12; Gaz. vol. 219; p. 377.
Pull-socket. J. G. Girling. No. 1,158,200; Oct. 26; Gaz. vol. 219; p. 1123.
Pulley. P. Marqua. No. 1,157,710; Oct. 26; Gaz. vol. 219; p. 952.
Pulley. L. Whitcomb. No. 1,156,120; Oct. 12; Gaz. vol. 219; p. 302.
Pulley-block shackle. A. M. Mears. No. 1,158,385; Oct. 26; Gaz. vol. 219; p. 1188.
Pulley, Cut-out. A. C. McWilliams. No. 1,157,239; Oct. 19; Gaz. vol. 219; p. 725.
Pulley, Reversible-speed. F. M. Chapman. No. 1,156,132; Oct. 12; Gaz. vol. 219; p. 307.
Pulp-mills, Reclaiming apparatus for use in connection with. G. E. Miller. No. 1,156,800; Oct. 12; Gaz. vol. 219; p. 537.
Pulverizer, Soil-. F. Baldwin. No. 1,156,873; Oct. 19; Gaz. vol. 219; p. 593.
Pulverizing-mill. H. U. Prindle. No. 1,158,283; Oct. 26; Gaz. vol. 219; p. 1152.
Pump. J. T. S. Brown, Jr. No. 1,156,052; Oct. 12; Gaz. vol. 219; p. 279.
Pump. J. T. S. Brown, Jr. No. 1,156,882; Oct. 19; Gaz. vol. 219; p. 597.
Pump. H. C. Fuhrman. No. 1,157,686; Oct. 26; Gaz. vol. 219; p. 944.
Pump. J. H. Randles. No. 1,155,370; Oct. 5; Gaz. vol. 219; p. 16.
Pump, Air-. J. K. Stewart. No. 1,158,080; Oct. 26; Gaz. vol. 219; p. 1081.
Pump and bailer, Combination sand-. C. F. Rigby. No. 1,158,292; Oct. 26; Gaz. vol. 219; p. 1156.
Pump, Balanced centrifugal. M. B. Macneill. No. 1,157,240; Oct. 19; Gaz. vol. 219; p. 725.
Pump booster, Air-lift-. F. S. Miller. No. 1,157,998; Oct. 26; Gaz. vol. 219; p. 1051.
Pump, Centrifugal. L. W. Bodinson. No. 1,155,401; Oct. 5; Gaz. vol. 219; p. 27.
Pump, Centrifugal. P. Daniel. No. 1,156,063; Oct. 12; Gaz. vol. 219; p. 283.
Pump, Centrifugal throwing-. A. Peter. No. 1,156,550; Oct. 12; Gaz. vol. 219; p. 451.
Pump, Compressed-air hydraulic. A. Mariotti. No. 1,155,594; Oct. 5; Gaz. vol. 219; p. 93.
Pump-controlling mechanism, Fuel-. B. Krämer. No. 1,158,063; Oct. 26; Gaz. vol. 219; p. 1075.
Pump for internal-combustion engines, Fuel-. B. Krämer. No. 1,158,061; Oct. 26; Gaz. vol. 219; p. 1075.
Pump-governor. J. McManamy and A. Reid. No. 1,156,165; Oct. 12; Gaz. vol. 219; p. 318.
Pump, Internal-combustion. W. Schafer. No. 1,158,303; Oct. 26; Gaz. vol. 219; p. 1160.
Pump, Internal-combustion. C. E. White. No. 1,157,071; Oct. 19; Gaz. vol. 219; p. 665.
Pump mechanism. E. B. Thompson. No. 1,156,724; Oct. 12; Gaz. vol. 219; p. 513.
Pump mechanism for internal-combustion engines. B. Krämer. No. 1,158,062; Oct. 26; Gaz. vol. 219; p. 1075.
Pump of the rotary type, Wet vacuum-. M. Leblanc. No. 1,157,703; Oct. 26; Gaz. vol. 219; p. 950.
Pump-rod connection, Wind-wheel. G. L. Dixon. No. 1,156,065; Oct. 12; Gaz. vol. 219; p. 283.
Pump, Rotary. A. T. Keene. No. 1,157,783; Oct. 26; Gaz. vol. 219; p. 976.
Pump with rotating abutment protruding into a circular groove, Rotary. C. J. Rixen. No. 1,157,806; Oct. 26; Gaz. vol. 219; p. 984.
Pumps, Automatic air-exhaust for centrifugal. C. E. Grunsky. No. 1,157,216; Oct. 19; Gaz. vol. 219; p. 716.
Pumps, Cooling and lubricating device for vacuum-. G. D. May. No. 1,156,700; Oct. 12; Gaz. vol. 219; p. 504.
Pumps, Power-transmitting mechanism for. M. F. Fulford. No. 1,156,002; Oct. 5; Gaz. vol. 219; p. 234.
Pumping machinery. M. T. Chapman. No. 1,157,676; Oct. 26; Gaz. vol. 219; p. 940.
Pumping mechanism. L. S. Kaskie. No. 1,158,228; Oct. 26; Gaz. vol. 219; p. 1133.
Punch. D. E. Lynch. No. 1,155,361; Oct. 5; Gaz. vol. 219; p. 13.
Punch. M. A. McLane. No. 1,155,590; Oct. 5; Gaz. vol. 219; p. 91.
Punch. O. A. Smith and B. F. Rindfleisch. No. 1,157,260; Oct. 19; Gaz. vol. 219; p. 733.
Punching. W. Rawley. No. 1,156,928; Oct. 19; Gaz. vol. 219; p. 614.
Punching-machine. P. A. Cuenot and L. G. Fischer. No. 1,155,552; Oct. 5; Gaz. vol. 219; p. 80.
Putty-knife, Corner. B. Churchill. No. 1,156,209; Oct. 12; Gaz. vol. 219; p. 332.
Quick-acting wrench. F. G. Rockwood. No. 1,156,932; Oct. 19; Gaz. vol. 219; p. 615.
Rack: *See*—
Bail-rack.
Card-rack.
Chain-rack.
Clothes-rack.
Display-rack.
Hay-rack.
Hose-rack.
Knife-rack.
Racket-press. W. A. Johnson. No. 1,156,363; Oct. 12; Gaz. vol. 219; p. 385.

Radiation-shield. E. W. Kelly. No. 1,156,906; Oct. 19; Gaz. vol. 219; p. 606.
Radiator. H. T. Smith. No. 1,157,188; Oct. 19; Gaz. vol. 219; p. 706.
Radiator attachment. J. Desjardins. No. 1,155,997; Oct. 5; Gaz. vol. 219; p. 232.
Radiator, Automobile-. F. W. Spencer. No. 1,156,325; Oct. 12; Gaz. vol. 219; p. 370.
Radiator bracket, Wall-. J. P. Adamson. No. 1,158,151; Oct. 26; Gaz. vol. 219; p. 1106.
Rail and support, Under-contact. A. Gollos. No. 1,158,203; Oct. 26; Gaz. vol. 219; p. 1124.
Rail-bond. C. P. Vaill. No. 1,157,603; Oct. 19; Gaz. vol. 219; p. 849.
Rail-brace and anchor tie-plate, Combined. T. J. Arledge. No. 1,155,868; Oct. 5; Gaz. vol. 219; p. 190.
Rail-fastener. J. B. Atwood. No. 1,155,698; Oct. 5; Gaz. vol. 219; p. 130.
Rail-fastening device. H. A. W. Thomasson. No. 1,157,600; Oct. 19; Gaz. vol. 219; p. 848.
Rail, Guard-. B. B. Betts. No. 1,155,994; Oct. 5; Gaz. vol. 219; p. 231.
Rail, Guard-. E. B. Scott. No. 1,157,426; Oct. 19; Gaz. vol. 219; p. 792.
Rail-joint. S. W. Brown. No. 1,157,145; Oct. 19; Gaz. vol. 219; p. 690.
Rail-joint. N. Brozorich. No. 1,157,205; Oct. 19; Gaz. vol. 219; p. 712.
Rail-joint. F. Cornetto. No. 1,157,510; Oct. 19; Gaz. vol. 219; p. 820.
Rail-joint. G. Edick. No. 1,155,903; Oct. 5; Gaz. vol. 219; p. 201.
Rail-joint. J. W. Forse. No. 1,157,770; Oct. 26; Gaz. vol. 219; p. 972.
Rail-joint. I. J. Knight and J. M. Smith. No. 1,157,554; Oct. 19; Gaz. vol. 219; p. 834.
Rail-joint. M. Pusateri. No. 1,156,926; Oct. 19; Gaz. vol. 219; p. 613.
Rail-joint. G. H. Russell. No. 1,157,640; Oct. 19; Gaz. vol. 219; p. 861.
Rail-joint. J. Sutkay. No. 1,158,332; Oct. 26; Gaz. vol. 219; p. 1169.
Rail joint and chair, Combined. S. and O. Swanson. No. 1,157,452; Oct. 19; Gaz. vol. 219; p. 800.
Rail mounting, Guard-. B. B. Betts. No. 1,155,992; Oct. 5; Gaz. vol. 219; p. 230.
Rail mounting, Guard-. B. B. Betts. No. 1,155,993; Oct. 5; Gaz. vol. 219; p. 231.
Rail-stay. P. W. Moore. No. 1,158,141; Oct. 26; Gaz. vol. 219; p. 1103.
Rail tie and fastener. A. N. Shepler. No. 1,158,319; Oct. 26; Gaz. vol. 219; p. 1165.
Rail tie and fastener, Combined. J. H. Benner. No. 1,156,581; Oct. 12; Gaz. vol. 219; p. 463.
Railway and highway signaling device. A. H. Messer. No. 1,155,834; Oct. 5; Gaz. vol. 219; p. 178.
Railway-brake-setting mechanism. F. Mulvey. No. 1,155,504; Oct. 5; Gaz. vol. 219; p. 64.
Railway-buffer. A. H. Wood. No. 1,156,649; Oct. 12; Gaz. vol. 219; p. 487.
Railway, Elevated. G. Sauvola. No. 1,155,760; Oct. 5; Gaz. vol. 219; p. 150.
Railway-rails and the like, Chair or socket for. J. T. Carney. No. 1,156,754; Oct. 12; Gaz. vol. 219; p. 523.
Railway-rails to concrete sleepers, Means for securing. F. B. Jagger. No. 1,157,986; Oct. 26; Gaz. vol. 219; p. 1048.
Railway rolling-stock, Draft-rigging for. W. R. Diehl. No. 1,155,896; Oct. 5; Gaz. vol. 219; p. 199.
Railway safety apparatus. T. M. Freeble. No. 1,155,476; Oct. 5; Gaz. vol. 219; p. 53.
Railway safety system, Electric-. P. L. Bailey. No. 1,156,046; Oct. 12; Gaz. vol. 219; p. 277.
Railway-signal, Electric. J. B. Howell. No. 1,156,688; Oct. 12; Gaz. vol. 219; p. 500.
Railway-signals, Manual actuator for. T. M. Freeble. No. 1,155,477; Oct. 5; Gaz. vol. 219; p. 54.
Railway-skate. A. Taylor. No. 1,157,264; Oct. 19; Gaz. vol. 219; p. 735.
Railway-spike. M. C. Roberts and H. J. Cullum. No. 1,158,293; Oct. 26; Gaz. vol. 219; p. 1156.
Railway-switch. L. G. Saint. No. 1,156,183; Oct. 12; Gaz. vol. 219; p. 323.
Railway-tie and rail-lock. A. M. Threewits. No. 1,157,459; Oct. 19; Gaz. vol. 219; p. 802.
Railway-tie, Safety cement. W. M. Perkins. No. 1,156,095; Oct. 12; Gaz. vol. 219; p. 294.
Railway-track, Device for spacing the rail-sections of a. W. B. Skinner. No. 1,157,815; Oct. 26; Gaz. vol. 219; p. 987.
Railway-traffic-controlling system. A. V. T. Day. No. 1,157,850; Oct. 26; Gaz. vol. 219; p. 1000.
Railway-train safety apparatus. T. M. Freeble. No. 1,155,478; Oct. 5; Gaz. vol. 219; p. 54.
Railway-trains, Apparatus for controlling. J. O. Query. No. 1,157,723; Oct. 26; Gaz. vol. 219; p. 957.
Railways, Automatic stop for. J. G. Sparks. No. 1,158,326; Oct. 26; Gaz. vol. 219; p. 1168.
Railways, Catenary suspension of the trolley-wire for electric. F. Lautenbacher. No. 1,157,702; Oct. 26; Gaz. vol. 219; p. 949.
Rake: *See*—
Hay-rake.
Rake-cleaner. W. H. Backus. No. 1,158,022; Oct. 26; Gaz. vol. 219; p. 1061.
Rake-cleaner. S. E. Douglass. No. 1,155,897; Oct. 5; Gaz. vol. 219; p. 199.
Rake-cleaner. W. Watson. No. 1,156,729; Oct. 12; Gaz. vol. 219; p. 515.
Rake-clearing attachment. J. F. Merrell. No. 1,157,566; Oct. 19; Gaz. vol. 219; p. 838.
Range. W. S. Hadaway, Jr. No. 1,155,480; Oct. 5; Gaz. vol. 219; p. 55.
Range and cooking-stove, Combined. M. A. Malloy. No. 1,157,885; Oct. 26; Gaz. vol. 219; p. 1012.
Range, Combined coal and gas. G. E. Heidbreder. No. 1,156,999; Oct. 19; Gaz. vol. 219; p. 639.
Range, Combined coal and gas. S. C. Rockman. No. 1,155,758; Oct. 5; Gaz. vol. 219; p. 149.
Range, Electric cooking-. W. J. Keep. No. 1,157,111; Oct. 19; Gaz. vol. 219; p. 678.
Ratchet compound speed-wrench. A. E. Ruth. No. 1,155,960; Oct. 5; Gaz. vol. 219; p. 221.
Rattle. J. A. Ryan. No. 1,158,298; Oct. 26; Gaz. vol. 219; p. 1158.
Razor, Safety-. H. J. Galsman. No. 1,155,347; Oct. 5; Gaz. vol. 219; p. 8.
Razor, Safety-. W. E. O'Reilly. No. 1,157,249; Oct. 19; Gaz. vol. 219; p. 729.
Razor, Safety-. A. R. Rieger. No. 1,157,044; Oct. 19; Gaz. vol. 219; p. 656.
Reactor. P. Torchio. No. 1,157,066; Oct. 19; Gaz. vol. 219; p. 663.
Reamer attachment for die-stocks. D. Hitchcock. No. 1,156,290; Oct. 12; Gaz. vol. 219; p. 358.
Reapers, Grain-saver attachment for. W. Smith. No. 1,157,435; Oct. 19; Gaz. vol. 219; p. 795.
Receiver. O. M. Leich. No. 1,156,157; Oct. 12; Gaz. vol. 219; p. 315.
Receptacle-closure. E. A. Claus. No. 1,155,890; Oct. 5; Gaz. vol. 219; p. 197.
Receptacle-closure. A. W. Schoenheit. No. 1,157,591; Oct. 19; Gaz. vol. 219; p. 845.
Receptacle, Special. J. L. Cabell. No. 1,155,791; Oct. 5; Gaz. vol. 219; p. 163.
Recorder: *See*—
Time-recorder.
Recording instrument. C. R. Moore. No. 1,155,501; Oct. 5; Gaz. vol. 219; p. 63.
Rectifier compound. N. Fallek. No. 1,155,649; Oct. 5; Gaz. vol. 219; p. 113.
Reel: *See*—
Clothes-reel.
Hose-reel.
Wire-reel.
Reel brake, Paper-. A. Terrey. No. 1,157,457; Oct. 19; Gaz. vol. 219; p. 802.
Refractory material, Manufacturing articles out of highly-. P. M. Hulbert. No. 1,155,358; Oct. 5; Gaz. vol. 219; p. 12.
Refrigerating apparatus. M. Audiffren and H. A. Singrün. No. 1,155,780; Oct. 5; Gaz. vol. 219; p. 158.
Refrigerating apparatus. C. M. Gay. No. 1,156,525; Oct. 12; Gaz. vol. 219; p. 443.
Refrigerating apparatus. B. A. Michel. No. 1,155,363; Oct. 5; Gaz. vol. 219; p. 13.
Refrigerating or ice-making apparatus. T. Shipley. No. 1,158,321; Oct. 26; Gaz. vol. 219; p. 1166.
Refrigerator. C. G. Simon. No. 1,156,252; Oct. 12; Gaz. vol. 219; p. 346.
Register: *See*—
Cash-register.
Register-actuating mechanism. W. J. Crumpton. No. 1,157,620; Oct. 19; Gaz. vol. 219; p. 854.
Regulator: *See*—
Boiler feed-water regulator.
Draft-regulator.
Electric regulator.
Feed-regulator.
Fluid-pressure regulator.
Grinding-mill feed-regulator.
Laundry-roll regulator.
Melting-pot regulator.
Voltage-regulator.
Windmill-regulator.
Window-regulator.
Regulator. R. Conrader. No. 1,156,392; Oct. 12; Gaz. vol. 219; p. 397.
Reinforcement for the composition covering of structural members. D. H. Hayden. No. 1,156,030; Oct. 5; Gaz. vol. 219; p. 245.
Relay, Electromagnetic. E. B. Craft. No. 1,156,671; Oct. 12; Gaz. vol. 219; p. 495.
Reservoir. G. F. Hodkinson. No. 1,155,490; Oct. 5; Gaz. vol. 219; p. 59.
Resilient body. W. Hoskins. No. 1,155,575; Oct. 5; Gaz. vol. 219; p. 87.
Resilient wheel. O. E. Adamson. No. 1,155,332; Oct. 5; Gaz. vol. 219; p. 3.
Resilient wheel. J. R. Ellis. No. 1,157,855; Oct. 26; Gaz. vol. 219; p. 1002.
Resilient wheel. J. F. Nettle. No. 1,158,263; Oct. 26; Gaz. vol. 219; p. 1145.
Resilient wheel. C. M. West. No. 1,155,456; Oct. 5; Gaz. vol. 219; p. 46.
Resilient wheel. C. A. Whale and J. H. Black. No. 1,157,272; Oct. 19; Gaz. vol. 219; p. 737.
Resistance, Adjustable. E. C. Larry. No. 1,155,826; Oct. 5; Gaz. vol. 219; p. 176.
Resuscitating appliance. G. M. Mayer and F. T. Fowler. No. 1,157,655; Oct. 19; Gaz. vol. 219; p. 867.
Retort-furnace. W. E. Fletcher. No. 1,156,595; Oct. 12; Gaz. vol. 219; p. 467.

Reversible coupling. S. H. Stoffel and H. J. Janssen. No. 1,157,968; Oct. 26; Gaz. vol. 219; p. 1043.
Revolving chair. C. J. Travers. No. 1,155,627; Oct. 5; Gaz. vol. 219; p. 104.
Rheostat. A. J. Horton. No. 1,158,052; Oct. 26; Gaz. vol. 219; p. 1071.
Rheostat, Liquid. D. Welge. No. 1,157,134; Oct. 19; Gaz. vol. 219; p. 687.
Rice-cleaning-machine screen. N. S. Stern. No. 1,156,640; Oct. 12; Gaz. vol. 219; p. 484.
Rind-cutting machine. G. J. Sayer. No. 1,156,822; Oct. 12; Gaz. vol. 219; p. 546.
Ring: *See*—
Drawing-ring. Packing-ring.
Mud-ring.
Ring-clamp, Engraver's. A. H. Myhre. No. 1,157,120; Oct. 19; Gaz. vol. 219; p. 682.
Ring-polishing machine. G. M. Whitin. No. 1,156,958; Oct. 19; Gaz. vol. 219; p. 624.
Rings, Manufacture of split. J. and E. L. Ettlinger. No. 1,158,376; Oct. 26; Gaz. vol. 219; p. 1185.
Ringing system, Party-line. C. C. Bradbury. No. 1,158,103; Oct. 26; Gaz. vol. 219; p. 1090.
Riveting-machine. A. Larsen. No. 1,156,013; Oct. 5; Gaz. vol. 219; p. 238.
Road and making the same. T. M. Hart. No. 1,158,418; Oct. 26; Gaz. vol. 219; p. 1201.
Rod: *See*—
Brake-rod.
Rod-coupling. S. R. Hart. No. 1,157,103; Oct. 19; Gaz. vol. 219; p. 676.
Roller: *See*—
Shade-roller.
Rolling apparatus, Metal-. H. R. Geer. No. 1,157,378; Oct. 19; Gaz. vol. 219; p. 774.
Rolling machine, Metal-. N. P. Sjobring. No. 1,155,522; Oct. 5; Gaz. vol. 219; p. 70.
Rolling-mill. W. A. Dunn. No. 1,156,986; Oct. 19; Gaz. vol. 219; p. 634.
Rolling-pin. E. C. Ahlheim. No. 1,158,111; Oct. 26; Gaz. vol. 219; p. 1092.
Roofing, Flexible convex tile. F. C. Overbury and H. C. Platts. No. 1,158,267; Oct. 26; Gaz. vol. 219; p. 1146.
Roofing material. A. S. Spiegel and L. F. Lindley. No. 1,157,438; Oct. 19; Gaz. vol. 219; p. 796.
Roofing, Ornamenting and improving prepared. M. B. Becker. No. 1,157,664; Oct. 26; Gaz. vol. 219; p. 936.
Roofing, Prepared. M. B. Becker. No. 1,157,665; Oct. 26; Gaz. vol. 219; p. 937.
Roofing sheets, Machine for uniting metal. W. E. Philipp. No. 1,158,274; Oct. 26; Gaz. vol. 219; p. 1149.
Roofing, Tile. F. C. Overbury and H. C. Platts. No. 1,158,268; Oct. 26; Gaz. vol. 219; p. 1146.
Root-beveling device. W. C. Dalbey. No. 1,157,681; Oct. 26; Gaz. vol. 219; p. 942.
Rope-tying device. C. C. Van Dyke. No. 1,155,976; Oct. 5; Gaz. vol. 219; p. 226.
Rotary combustion-engine. L. W. Penzer. No. 1,158,271; Oct. 26; Gaz. vol. 219; p. 1148.
Rotary drill. K. K. Feinaigle. No. 1,156,001; Oct. 5; Gaz. vol. 219; p. 234.
Rotary engine. I. C. Knowles. No. 1,158,238; Oct. 26; Gaz. vol. 219; p. 1136.
Rotary engine. A. L. Lamar. No. 1,156,697; Oct. 12; Gaz. vol. 219; p. 503.
Rotary engine. L. T. Shannon. No. 1,157,811; Oct. 26; Gaz. vol. 219; p. 986.
Rotary engine. R. Smith. No. 1,158,325; Oct. 26; Gaz. vol. 219; p. 1167.
Rotary engine. J. H. Williams. No. 1,155,536; Oct. 5; Gaz. vol. 219; p. 74.
Rotary gas-engine. C. J. Clark. No. 1,155,794; Oct. 5; Gaz. vol. 219; p. 164.
Roundabout for aquatic use. R. L. Kohler. No. 1,156,151; Oct. 12; Gaz. vol. 219; p. 314.
Roving-creel. W. O. Aldrich. No. 1,156,451; Oct. 12; Gaz. vol. 219; p. 417.
Rowing-craft intended for an amusement device. G. Sziklai. No. 1,155,381; Oct. 5; Gaz. vol. 219; p. 19.
Rubber articles, Apparatus for making hollow. F. T. Roberts. No. 1,157,420; Oct. 19; Gaz. vol. 219; p. 790.
Rubber footwear, Manufacturing. W. E. Piper. No. 1,158,389; Oct. 26; Gaz. vol. 219; p. 1190.
Rubber footwear, Pressure-applying apparatus for. C. J. Randall. No. 1,158,390; Oct. 26; Gaz. vol. 219; p. 1190.
Rubber-preservative composition. S. T. Smith. No. 1,156,561; Oct. 12; Gaz. vol. 219; p. 456.
Rubber substance and making same. P. Schidrowitz and H. A. Goldsborough. No. 1,156,184; Oct. 12; Gaz. vol. 219; p. 324.
Rubber, Vulcanizing and attaching. F. Moench. No. 1,157,572; Oct. 19; Gaz. vol. 219; p. 839.
Rubbing-post. G. J. Page. No. 1,157,801; Oct. 26; Gaz. vol. 219; p. 983.
Rug-fastening device. H. A. Eckas. No. 1,155,554; Oct. 5; Gaz. vol. 219; p. 80.
Rule, Slide-. C. A. Gilson. No. 1,157,526; Oct. 19; Gaz. vol. 219; p. 826.
Ruling-machine. J. Bailey. No. 1,157,361; Oct. 19; Gaz. vol. 219; p. 767.
Running-board mat. M. P. McLaughlin. No. 1,157,631; Oct. 19; Gaz. vol. 219; p. 858.
Rupture appliance. G. D. Cooper. No. 1,156,979; Oct. 19; Gaz. vol. 219; p. 632.
Sack, Collapsible-frame parcel-. T. F. Fay. No. 1,155,475; Oct. 5; Gaz. vol. 219; p. 53.
Sack-holder. H. L. Borsteiman. No. 1,156,744; Oct. 12; Gaz. vol. 219; p. 520.
Sack-stretching machine. A. V. Jensen. No. 1,156,482; Oct. 12; Gaz. vol. 219; p. 428.
Sad-iron. R. W. Kelley. No. 1,155,424; Oct. 5; Gaz. vol. 219; p. 35.
Saddle. F. C. Beal. No. 1,155,465; Oct. 5; Gaz. vol. 219; p. 49.
Saddle-plate. Reversible. E. E. Vanderhoef. No. 1,156,115; Oct. 12; Gaz. vol. 219; p. 301.
Saddle-rigging. W. C. Lawrence. No. 1,156,698; Oct. 12; Gaz. vol. 219; p. 504.
Safe. M. Mosler and C. Bartels. No. 1,157,412; Oct. 19; Gaz. vol. 219; p. 786.
Safe construction. M. Mosler and C. Bartels. No. 1,157,027; Oct. 19; Gaz. vol. 219; p. 649.
Safe or vault joint. H. C. von Philp. No. 1,157,469; Oct. 19; Gaz. vol. 219; p. 806.
Safety appliance. M. A. Jones. No. 1,156,082; Oct. 12; Gaz. vol. 219; p. 290.
Saliva-ejecting apparatus, Mouthpiece for. W. P. De Witt. No. 1,155,342; Oct. 5; Gaz. vol. 219; p. 6.
Salt-shaker. F. Glesenhaus. No. 1,157,624; Oct. 19; Gaz. vol. 219; p. 856.
Salts, Manufacture of Burton. R. Wahl. No. 1,156,448; Oct. 12; Gaz. vol. 219; p. 416.
Sampling apparatus. A. G. McGregor. No. 1,155,670; Oct. 5; Gaz. vol. 219; p. 120.
Sash and door holder. P. W. Rasmussen. No. 1,156,813; Oct. 12; Gaz. vol. 219; p. 541.
Sash construction, Window-. F. J. Plym. No. 1,157,900; Oct. 26; Gaz. vol. 219; p. 1019.
Sash-holder. J. W. McLean. No. 1,157,318; Oct. 19; Gaz. vol. 219; p. 752.
Sash-holder. C. R. Nobles. No. 1,157,797; Oct. 26; Gaz. vol. 219; p. 981.
Sash lock, Window-. W. M. Reichard. No. 1,155,617; Oct. 5; Gaz. vol. 219; p. 101.
Sash lock, Window-. F. C. Schoenherr. No. 1,156,632; Oct. 12; Gaz. vol. 219; p. 481.
Sash-retainer. W. B. McAllister. No. 1,155,830; Oct. 5; Gaz. vol. 219; p. 177.
Sashes, Pane-fastening means for window-. F. H. Schmid. No. 1,158,306; Oct. 26; Gaz. vol. 219; p. 1161.
Satchel and the like handle. C. Kopf. No. 1,157,400; Oct. 19; Gaz. vol. 219; p. 782.
Saturating apparatus. F. Tschudy. No. 1,155,386; Oct. 5; Gaz. vol. 219; p. 21.
Sausage-casing. W. P. Cohoe. No. 1,158,400; Oct. 26; Gaz. vol. 219; p. 1194.
Sausage-skin, Artificial. C. Lange. No. 1,157,556; Oct. 19; Gaz. vol. 219; p. 835.
Sausage-skin-cleaning apparatus. H. C. Ziprick. No. 1,155,393; Oct. 5; Gaz. vol. 219; p. 24.
Saw, Electrical scroll-. G. H. Murphy. No. 1,155,835; Oct. 5; Gaz. vol. 219; p. 179.
Saw-guide. H. Woelffer. No. 1,157,607; Oct. 19; Gaz. vol. 219; p. 850.
Saw-rim adjuster. N. H. Stone. No. 1,155,966; Oct. 5; Gaz. vol. 219; p. 222.
Saw-set. W. J. Jacobs. No. 1,155,927; Oct. 5; Gaz. vol. 219; p. 209.
Saws, Machine for manufacturing strip-. G. L. Blanchard. No. 1,156,458; Oct. 12; Gaz. vol. 219; p. 420.
Sawing-machine. G. J. Tappan. No. 1,156,722; Oct. 12; Gaz. vol. 219; p. 512.
Scaffold, Adjustable window-. V. Burhans. No. 1,157,503; Oct. 19; Gaz. vol. 219; p. 818.
Scale. F. P. Dunn. (Reissue.) No. 13,995; Oct. 19; Gaz. vol. 219; p. 870.
Scale. C. H. Scott. No. 1,156,500; Oct. 12; Gaz. vol. 219; p. 435.
Scale, Computing-. J. Hopkinson. No. 1,158,219; Oct. 26; Gaz. vol. 219; p. 1129.
Scarf-pin fastener. L. Becker and K. Heine. No. 1,157,835; Oct. 26; Gaz. vol. 219; p. 994.
Scarifier. H. C. Clay. No. 1,155,795; Oct. 5; Gaz. vol. 219; p. 164.
Scraper and hoist apparatus. J. L. Alley. No. 1,158,097; Oct. 26; Gaz. vol. 219; p. 1088.
Screen: *See*—
Glare-screen. Window-screen.
Rice-cleaning-machine screen.
Self-rotating screen.
Screen for the reception of images. J. P. Gilbert. No. 1,155,561; Oct. 5; Gaz. vol. 219; p. 82.
Screen-hanger. E. J. Fellman. No. 1,155,412; Oct. 5; Gaz. vol. 219; p. 31.
Screw-driver. J. H. Tobin. No. 1,157,969; Oct. 26; Gaz. vol. 219; p. 1043.
Screw-setting instrument. D. H. Harnly. No. 1,155,724; Oct. 5; Gaz. vol. 219; p. 139.
Screw, Temper-. F. W. Leidecker. No. 1,157,704; Oct. 26; Gaz. vol. 219; p. 950.
Seal. M. B. Larson. No. 1,155,585; Oct. 5; Gaz. vol. 219; p. 90.
Seal, Bottle-. W. R. Uchtmann. No. 1,155,773; Oct. 5; Gaz. vol. 219; p. 155.
Seal for receptacles, Safety-. G. G. Fryer. No. 1,157,685; Oct. 26; Gaz. vol. 219; p. 943.
Seal-locking device. E. Tyden. No. 1,155,768; Oct. 5; Gaz. vol. 219; p. 153.

Seal-locking device. E. Tyden. No. 1,155,769; Oct. 5; Gaz. vol. 219; p. 154.
Seal-locking device. E. Tyden. No. 1,155,770; Oct. 5; Gaz. vol. 219; p. 154.
Seal-locking device. E. Tyden. No. 1,155,771; Oct. 5; Gaz. vol. 219; p. 155.
Seal-locking device. E. Tyden. No. 1,155,772; Oct. 5; Gaz. vol. 219; p. 155.
Sealing and stamping machine, Envelop. J. E. Lederman. No. 1,157,113; Oct. 19; Gaz. vol. 219; p. 679.
Sealing apparatus for wrappers. P. Jacobsen. No. 1,155,929; Oct. 5; Gaz. vol. 219; p. 210.
Sealing or closing letters and like packages, Device for. P. Healy. No. 1,155,567; Oct. 5; Gaz. vol. 219; p. 84.
Seat: *See*—
Automobile running-board seat. Spring-seat.
Vehicle-seat.
Pocket-seat.
Seat. B. Borland. No. 1,156,834; Oct. 12; Gaz. vol. 219; p. 550.
Seat cushion and cover. W. J. Smith. No. 1,156,939; Oct. 19; Gaz. vol. 219; p. 617.
Securing an apertured member to a cylindrical member. G. M. Bennett. No. 1,157,666; Oct. 26; Gaz. vol. 219; p. 937.
Selective system and apparatus. J. F. Engle. No. 1,156,352; Oct. 12; Gaz. vol. 219; p. 380.
Selective systems, Impulse-transmitter for. G. Brown. No. 1,155,640; Oct. 5; Gaz. vol. 219; p. 109.
Self-locking receptacle. C. N. Frey. No. 1,155,719; Oct. 5; Gaz. vol. 219; p. 137.
Self-rotating screen. F. Lara. No. 1,157,009; Oct. 19; Gaz. vol. 219; p. 642.
Separator: *See*—
Grain-separator. Ore-separator.
Separator. G. W. Caldwell. No. 1,157,756; Oct. 26; Gaz. vol. 219; p. 968.
Separator. R. W. Dull. No. 1,155,473; Oct. 5; Gaz. vol. 219; p. 52.
Sewer-pipe. A. J. Boyle. No. 1,158,415; Oct. 26; Gaz. vol. 219; p. 1200.
Sewer-pipe. A. J. Boyle. No. 1,158,416; Oct. 26; Gaz. vol. 219; p. 1200.
Sewer-trap. N. H. King. No. 1,156,907; Oct. 19; Gaz. vol. 219; p. 606.
Sewed articles, Hem or seam for. J. G. Lewis. No. 1,155,360; Oct. 5; Gaz. vol. 219; p. 13.
Sewing-cabinet. G. P. Hubn. No. 1,157,539; Oct. 19; Gaz. vol. 219; p. 830.
Sewing-machine. C. F. Gray. No. 1,156,839; Oct. 12; Gaz. vol. 219; p. 552.
Sewing-machine. J. G. Lewis. No. 1,156,607; Oct. 12; Gaz. vol. 219; p. 471.
Sewing-machine. J. R. Moffatt and R. S. Kelso. No. 1,157,891; Oct. 26; Gaz. vol. 219; p. 1015.
Sewing-machine. F. A. Read. No. 1,156,249; Oct. 12; Gaz. vol. 219; p. 345.
Sewing-machine attachment. C. A. Hansen. No. 1,157,884; Oct. 19; Gaz. vol. 219; p. 776.
Sewing-machine buttonhole attachment. W. Maechler. No. 1,157,791; Oct. 26; Gaz. vol. 219; p. 979.
Sewing-machine feeding and ruffling mechanism. L. Onderdonk. No. 1,156,545; Oct. 12; Gaz. vol. 219; p. 450.
Sewing machine, Inseam shoe-. F. L. Alley. No. 1,157,200; Oct. 19; Gaz. vol. 219; p. 710.
Sewing-machine needle-guard. J. R. Moffatt and R. S. Kelso. No. 1,157,892; Oct. 26; Gaz. vol. 219; p. 1016.
Sewing-machine, Overedge. J. C. Ringe. No. 1,156,820; Oct. 12; Gaz. vol. 219; p. 545.
Sewing-machine piping attachment. H. B. Woehrle. No. 1,157,606; Oct. 19; Gaz. vol. 219; p. 850.
Sewing-machine power-transmitter. J. Fischer. No. 1,156,354; Oct. 12; Gaz. vol. 219; p. 381.
Sewing-machine power-transmitter. J. Fischer and D. Brandenstein. No. 1,156,137; Oct. 12; Gaz. vol. 219; p. 309.
Sewing-machine shuttle-operating mechanism. E. Erickson. No. 1,158,036; Oct. 26; Gaz. vol. 219; p. 1065.
Sewing-machine thread-cutting mechanism. A. Rontke. No. 1,156,821; Oct. 12; Gaz. vol. 219; p. 545.
Sewing-machine trimming mechanism. J. Hinkley. No. 1,157,000; Oct. 19; Gaz. vol. 219; p. 639.
Sewing-machine trimming mechanism. J. P. Weis. No. 1,155,533; Oct. 5; Gaz. vol. 219; p. 73.
Sewing-machine, Two-needle blindstitch. W. Arbetter. No. 1,156,128; Oct. 12; Gaz. vol. 219; p. 306.
Sewing-machine work-feeding attachment. C. Augustine. No. 1,156,339; Oct. 12; Gaz. vol. 219; p. 376.
Sewing-machines, Controlling device for operating implements in. J. R. Moffatt. No. 1,157,170; Oct. 19; Gaz. vol. 219; p. 699.
Shackle, Slip-. B. Schütte. No. 1,158,392; Oct. 26; Gaz. vol. 219; p. 1191.
Shade and curtain holder, Window. F. F. Bethka. No. 1,156,343; Oct. 12; Gaz. vol. 219; p. 377.
Shade-holder. G. A. Gauthier. No. 1,156,473; Oct. 12; Gaz. vol. 219; p. 425.
Shade-roller and curtain-pole fixture, Combined. E. D. Wilson. No. 1,157,831; Oct. 26; Gaz. vol. 219; p. 993.
Shade-roller device, Adjustable. A. E. Leary. No. 1,156,410; Oct. 12; Gaz. vol. 219; p. 403.
Shade-roller, Ventilating. H. T. Staats. No. 1,157,261; Oct. 19; Gaz. vol. 219; p. 733.
Shade-support. F. Barr. No. 1,157,201; Oct. 19; Gaz. vol. 219; p. 711.
Shade, Window-. J. W. Pepple. No. 1,156,807; Oct. 12; Gaz. vol. 219; p. 539.
Shaft-coupling. R. H. Rice. No. 1,156,493; Oct. 12; Gaz. vol. 219; p. 432.
Shaft-coupling, Universal. P. Turon. No. 1,155,629; Oct. 5; Gaz. vol. 219; p. 105.
Shaft, Flexible. G. T. Bond. No. 1,157,148; Oct. 19; Gaz. vol. 219; p. 692.
Shaft-releasing and brake-applying device for vehicles. E. C. Bliss. No. 1,156,661; Oct. 12; Gaz. vol. 219; p. 492.
Shafts and other parts, Journaling device for. C. A. T. Sörensen. No. 1,156,188; Oct. 12; Gaz. vol. 219; p. 325.
Sharpening device. M. L. Hawks. No. 1,158,048; Oct. 26; Gaz. vol. 219; p. 1070.
Sharpening machine, Saw-. T. H. Laury. No. 1,157,558; Oct. 19; Gaz. vol. 219; p. 835.
Sharpening machine, Saw-. J. Miotke. No. 1,157,890; Oct. 26; Gaz. vol. 219; p. 1015.
Shawl. G. S. Tallerday. No. 1,157,341; Oct. 19; Gaz. vol. 219; p. 760.
Sheet-delivery mechanism. J. White. No. 1,156,957; Oct. 19; Gaz. vol. 219; p. 624.
Sheet-feeding machine. R. Freeman. No. 1,156,357; Oct. 12; Gaz. vol. 219; p. 383.
Sheet material, Apparatus for making. H. M. Conger. No. 1,157,149; Oct. 19; Gaz. vol. 219; p. 692.
Sheet-metal-cutting machine. C. B. Gray. No. 1,155,479; Oct. 5; Gaz. vol. 219; p. 55.
Sheet-metal elbows, Producing. A. Dieckmann. No. 1,157,852; Oct. 26; Gaz. vol. 219; p. 1000.
Sheet-metal seams, Device for closing. J. L. Hemp. No. 1,156,599; Oct. 12; Gaz. vol. 219; p. 468.
Sheet-metal spools, Forming. E. J. Hubbard. No. 1,155,357; Oct. 5; Gaz. vol. 219; p. 11.
Sheet-metal tank. O. K. Harry. No. 1,157,158; Oct. 19; Gaz. vol. 219; p. 695.
Sheets, Machine for making master-. P. J. Meahl. No. 1,156,701; Oct. 12; Gaz. vol. 219; p. 505.
Sheller: *See*—
Nut-sheller.
Shelves, Extension-. M. J. Casey. No. 1,156,755; Oct. 12; Gaz. vol. 219; p. 523.
Shingle and slate gage. M. J. Leonard. No. 1,156,159; Oct. 12; Gaz. vol. 219; p. 316.
Ship-fender. M. Kunik. No. 1,156,086; Oct. 12; Gaz. vol. 219; p. 291.
Ship loader or unloader. B. H. Alvey. No. 1,156,653; Oct. 12; Gaz. vol. 219; p. 489.
Ships, Compartment-inflater for. M. and J. B. Kasser. No. 1,156,602; Oct. 12; Gaz. vol. 219; p. 469.
Ships, Pneumatic control of inflowing water in damaged. A. R. McAvoy. No. 1,156,792; Oct. 12; Gaz. vol. 219; p. 535.
Shipping-can. B. P. Saunders. No. 1,156,447; Oct. 5; Gaz. vol. 219; p. 43.
Shipping-receipt holder. J. D. Van Fleet. No. 1,158,338; Oct. 26; Gaz. vol. 219; p. 1171.
Shipping-receptacle. E. J. Butterfield. No. 1,157,206; Oct. 19; Gaz. vol. 219; p. 712.
Shock-absorber. A. Bailey. No. 1,155,700; Oct. 5; Gaz. vol. 219; p. 131.
Shock-absorber. A. Christianson. No. 1,156,665; Oct. 12; Gaz. vol. 219; p. 493.
Shock-absorber. H. F. Harvey. No. 1,158,210; Oct. 26; Gaz. vol. 219; p. 1127.
Shock-absorber. E. H. Kreider. No. 1,155,738; Oct. 5; Gaz. vol. 219; p. 144.
Shock-absorber. H. T. Smith. No. 1,156,376; Oct. 12; Gaz. vol. 219; p. 391.
Shock-absorber. R. R. Walker. No. 1,156,646; Oct. 12; Gaz. vol. 219; p. 486.
Shock-absorber, Automobile. S. Furmidge. No. 1,158,402; Oct. 26; Gaz. vol. 219; p. 1195.
Shock-absorber for automobiles. J. C. Leahan. No. 1,157,165; Oct. 19; Gaz. vol. 219; p. 698.
Shock-absorber for the handle-bars of motor-cycles. J. P. MacLean. No. 1,156,420; Oct. 12; Gaz. vol. 219; p. 407.
Shock-absorber for vehicles. T. A. Bell. No. 1,157,494; Oct. 19; Gaz. vol. 219; p. 814.
Shock-absorber. Telescoping. F. H. Petitmaire. No. 1,158,273; Oct. 26; Gaz. vol. 219; p. 1149.
Shock-absorbing device. R. Herman. No. 1,155,568; Oct. 5; Gaz. vol. 219; p. 84.
Shoe-cleaner. W. G. Callender. No. 1,156,751; Oct. 12; Gaz. vol. 219; p. 522.
Shoe-fastener. F. V. Tremblay. No. 1,155,973; Oct. 5; Gaz. vol. 219; p. 225.
Shoe-form, Hollow. S. M. Niles. No. 1,156,429; Oct. 12; Gaz. vol. 219; p. 409.
Shoe heating and vulcanizing apparatus. T. F. Whelan. No. 1,157,477; Oct. 19; Gaz. vol. 219; p. 809.
Shoe, Miner's. J. T. Crowley. No. 1,155,644; Oct. 5; Gaz. vol. 219; p. 111.
Shoe-polishing device. C. Rosen. No. 1,156,435; Oct. 12; Gaz. vol. 219; p. 412.
Shoe-shaping machine. P. J. Wentworth. No. 1,157,741; Oct. 26; Gaz. vol. 219; p. 963.
Shoe-stretcher. W. H. Harbke. No. 1,157,982; Oct. 26; Gaz. vol. 219; p. 1047.

Shoe-supporter. M. Osaki. No. 1,155,506; Oct. 5; Gaz. vol. 219; p. 65.
Shoe, Tennis-. N. E. Tousley and C. H. Roper. (Reissue.) No. 13,993; Oct. 12; Gaz. vol. 219; p. 566.
Shoe-tongue. D. Y. Hallock. No. 1,155,354; Oct. 5; Gaz. vol. 219; p. 11.
Shoes, Apparatus for treating. T. F. Whelan. No. 1,157,483; Oct. 19; Gaz. vol. 219; p. 811.
Shoes, Apparatus for treating unfinished. T. F. Whelan. No. 1,157,479; Oct. 19; Gaz. vol. 219; p. 809.
Shoes, Buttonhole-fly for. H. F. Bubier. No. 1,158,368; Oct. 26; Gaz. vol. 219; p. 1182.
Shoes, Device for forming box-toes on. A. J. Buch. No. 1,157,481; Oct. 19; Gaz. vol. 219; p. 810.
Shoes, Device for treating. T. F. Whelan. No. 1,157,482; Oct. 19; Gaz. vol. 219; p. 811.
Shoes, Drying. T. F. Whelan. No. 1,157,478; Oct. 19; Gaz. vol. 219; p. 809.
Shoes, Treating. T. F. Whelan. No. 1,157,480; Oct. 19; Gaz. vol. 219; p. 810.
Shotguns, Cartridge-stop for magazine-. F. Moench. No. 1,157,571; Oct. 19; Gaz. vol. 219; p. 839.
Show-case. E. E. Yelinek. No. 1,155,863; Oct. 5; Gaz. vol. 219; p. 188.
Show-case base, Metallic. H. J. Hunt. No. 1,157,985; Oct. 26; Gaz. vol. 219; p. 1048.
Shutter-fastener. J. Pacelli. No. 1,156,707; Oct. 12; Gaz. vol. 219; p. 507.
Shuttle, Hand-threading. R. Packer. No. 1,156,034; Oct. 5; Gaz. vol. 219; p. 246.
Shuttle-release mechanism. J. W. Killpartrick. No. 1,156,148; Oct. 12; Gaz. vol. 219; p. 312.
Sickle or cutter bars, Means for securing cutting sections or knives to. R. O. Moberg. No. 1,156,703; Oct. 12; Gaz. vol. 219; p. 506.
Side frame, Built-up. C. E. Bauer. No. 1,157,832; Oct. 26; Gaz. vol. 219; p. 993.
Sifter. H. Doyle. No. 1,158,188; Oct. 26; Gaz. vol. 219; p. 1120.
Sifter, Ash-. E. J. Blass. No. 1,155,875; Oct. 5; Gaz. vol. 219; p. 192.
Sifter, Ash-. W. J. Nethercott. No. 1,156,923; Oct. 19; Gaz. vol. 219; p. 612.
Sifter-drive. L. I. Ziegler. No. 1,155,633; Oct. 5; Gaz. vol. 219; p. 106.
Sifter-top. A. Hess. No. 1,157,537; Oct. 19; Gaz. vol. 219; p. 829.
Sighting device. O. von Eberhard. No. 1,157,468; Oct. 19; Gaz. vol. 219; p. 805.
Sign, Illuminated. R. O. Brittain. No. 1,157,672; Oct. 26; Gaz. vol. 219; p. 938.
Sign, Illuminated. J. Butenschon. No. 1,157,504; Oct. 19; Gaz. vol. 219; p. 818.
Sign, Street-. J. N. Early. No. 1,157,515; Oct. 19; Gaz. vol. 219; p. 822.
Signal: *See*—
Automobile-signal. Railway-signal.
Electric signal.
Signal. C. O. Harrington. No. 1,157,102; Oct. 19; Gaz. vol. 219; p. 675.
Signal device, Electric. A. H. Caven. No. 1,157,296; Oct. 19; Gaz. vol. 219; p. 745.
Signal system. C. W. Coleman. No. 1,157,845; Oct. 26; Gaz. vol. 219; p. 998.
Signals, Transmitting and receiving. R. A. Fessenden. No. 1,157,094; Oct. 19; Gaz. vol. 219; p. 673.
Signaling system and apparatus, Electrical. C. W. Ward. No. 1,156,334; Oct. 12; Gaz. vol. 219; p. 374.
Signaling system, Electric. A. H. Bull. No. 1,155,547; Oct. 5; Gaz. vol. 219; p. 78.
Signaling system, Electric. C. P. Nachod. No. 1,158,143; Oct. 26; Gaz. vol. 219; p. 1103.
Signaling system for automobiles or the like. E. T. Banes. No. 1,156,453; Oct. 12; Gaz. vol. 219; p. 418.
Signaling system, Selective. J. A. Hulit. No. 1,157,396; Oct. 19; Gaz. vol. 219; p. 780.
Signature-machine. C. F. Millman. No. 1,158,068; Oct. 26; Gaz. vol. 219; p. 1077.
Silk feltable. Making. G. Diesser. No. 1,156,983; Oct. 19; Gaz. vol. 219; p. 634.
Silk, Mechanism for producing artificial. H. C. Whritner. No. 1,155,777; Oct. 5; Gaz. vol. 219; p. 157.
Skate. K. Schultz. No. 1,157,049; Oct. 19; Gaz. vol. 219; p. 657.
Skirt-marker. K. C. McLaren. No. 1,156,365; Oct. 12; Gaz. vol. 219; p. 386.
Skirt-measuring device. M. C. Taylor. No. 1,155,690; Oct. 5; Gaz. vol. 219; p. 127.
Skylight. A. Shuman. No. 1,156,251; Oct. 12; Gaz. vol. 219; p. 345.
Skylights and like structures, Supporting and glazing construction for. T. I. Duffy. No. 1,156,351; Oct. 12; Gaz. vol. 219; p. 380.
Slack-adjuster. W. G. Price. No. 1,157,721; Oct. 26; Gaz. vol. 219; p. 956.
Sled. R. H. Hamel. No. 1,156,527; Oct. 12; Gaz. vol. 219; p. 444.
Sled, Bob-. C. Egeland. No. 1,156,591; Oct. 12; Gaz. vol. 219; p. 466.
Sled, Power-driven. D. Pinkel. No. 1,158,407; Oct. 26; Gaz. vol. 219; p. 1197.
Sleeve, Adjustable. W. Tutelman. No. 1,157,265; Oct. 19; Gaz. vol. 219; p. 735.
Sleigh, Automobile. B. Erickson. No. 1,156,069; Oct. 12; Gaz. vol. 219; p. 285.
Sleigh, Automobile. T. H. F. Schwoch. No. 1,157,126; Oct. 19; Gaz. vol. 219; p. 684.
Sleigh, Motor-driven. J. W. Stobie. No. 1,156,110; Oct. 12; Gaz. vol. 219; p. 299.
Slicer, Fruit and vegetable. T. M. Aiken. No. 1,156,652; Oct. 12; Gaz. vol. 219; p. 488.
Slicer, Vegetable-. E. Lewis. No. 1,157,013; Oct. 19; Gaz. vol. 219; p. 644.
Slicing-machine. E. F. Smith. No. 1,155,965; Oct. 5; Gaz. vol. 219; p. 222.
Slicing-machine-feeding mechanism. H. Fischer. No. 1,157,520; Oct. 19; Gaz. vol. 219; p. 824.
Silvering-machine. C. A. Clark. No. 1,156,210; Oct. 12; Gaz. vol. 219; p. 332.
Slug-casting machine. D. S. Kennedy. No. 1,157,786; Oct. 26; Gaz. vol. 219; p. 977.
Small-arms, Magazine for. J. Eastwick. No. 1,157,654; Oct. 19; Gaz. vol. 219; p. 867.
Smoke-consumer. C. E. Andersson. No. 1,157,661; Oct. 26; Gaz. vol. 219; p. 935.
Smoke-stack attachment. J. T. Sweeney. No. 1,157,060; Oct. 19; Gaz. vol. 219; p. 661.
Smoking-pipe. W. H. Fulton. No. 1,157,771; Oct. 26; Gaz. vol. 219; p. 972.
Smoking-pipe. W. Hill and L. Gardella. No. 1,157,161; Oct. 19; Gaz. vol. 219; p. 696.
Smoking-pipe. A. D. Kneuper. No. 1,156,150; Oct. 12; Gaz. vol. 219; p. 313.
Snap-hook. A. C. Campbell. No. 1,157,757; Oct. 26; Gaz. vol. 219; p. 968.
Snow-shoe. M. W. Rall. No. 1,156,174; Oct. 12; Gaz. vol. 219; p. 321.
Soap-bubbler. M. R. Crossman. No. 1,155,470; Oct. 5; Gaz. vol. 219; p. 51.
Soap-dispenser. E. G. Lovering. No. 1,156,164; Oct. 12; Gaz. vol. 219; p. 317.
Soap dispenser, Liquid-. G. A. Bobrick. No. 1,158,166; Oct. 26; Gaz. vol. 219; p. 1112.
Soap-fountain. H. H. Gage. No. 1,157,860; Oct. 26; Gaz. vol. 219; p. 1003.
Socket-wrench. L. Mueller. No. 1,155,675; Oct. 5; Gaz. vol. 219; p. 122.
Soda-fountains, Draft-arm for. B. R. Worley and G. H. Kellington. No. 1,156,736; Oct. 12; Gaz. vol. 219; p. 517.
Sodium aluminate, Solution of. H. Spence and T. J. I. Craig. No. 1,157,436; Oct. 19; Gaz. vol. 219; p. 706.
Soldering-iron. P. Muney. No. 1,155,433; Oct. 5; Gaz. vol. 219; p. 38.
Soldier's shield. H. J. Brown. No. 1,156,879; Oct. 19; Gaz. vol. 219; p. 596.
Sole for boots and shoes, Attachable outer. R. M. Withycombe. No. 1,155,982; Oct. 5; Gaz. vol. 219; p. 227.
Sole-tempering device, Shoe-. N. C. Bohr. No. 1,158,101; Oct. 26; Gaz. vol. 219; p. 1089.
Solvents, Manufacture of organic. H. Hibbert. No. 1,158,217; Oct. 26; Gaz. vol. 219; p. 1129.
Sound and light amplifier. H. J. Farrar. No. 1,156,865; Oct. 12; Gaz. vol. 219; p. 563.
Sound-box. A. C. Diehl. No. 1,156,217; Oct. 12; Gaz. vol. 219; p. 334.
Sound-box cushion. H. C. Miller. No. 1,155,945; Oct. 5; Gaz. vol. 219; p. 215.
Sound-transmitting means, Universal. P. J. Hackett. No. 1,156,867; Oct. 12; Gaz. vol. 219; p. 563.
Sounds or signals, Apparatus for recording and reproducing. E. E. Clement. No. 1,156,976; Oct. 19; Gaz. vol. 219; p. 631.
Spanner-wrench. H. S. Tennyson. No. 1,158,085; Oct. 26; Gaz. vol. 219; p. 1083.
Spark-arrester. L. T. Jack. No. 1,155,733; Oct. 5; Gaz. vol. 219; p. 143.
Spark-plug. H. M. Howard and J. A. McHardy. No. 1,158,222; Oct. 26; Gaz. vol. 219; p. 1130.
Spark-plug. J. W. Meaker. No. 1,156,796; Oct. 12; Gaz. vol. 219; p. 536.
Spark-plug. J. W. Meaker. No. 1,156,797; Oct. 12; Gaz. vol. 219; p. 536.
Spark-plug. J. W. Meaker. No. 1,156,799; Oct. 12; Gaz. vol. 219; p. 537.
Spark-plug. A. Schmidt. No. 1,155,514; Oct. 5; Gaz. vol. 219; p. 67.
Spark-plug. A. Schmidt. No. 1,155,515; Oct. 5; Gaz. vol. 219; p. 67.
Spectacle-temple of spiral wire. J. Faber. No. 1,157,373; Oct. 19; Gaz. vol. 219; p. 772.
Speed-controlling apparatus for self-propelled vehicles, Shock-operated. I. H. Davis. No. 1,155,471; Oct. 5; Gaz. vol. 219; p. 51.
Speed-transmission mechanism, Variable-. C. R. Wood. No. 1,158,357; Oct. 26; Gaz. vol. 219; p. 1177.
Speedometer. A. F. Poole. No. 1,158,281; Oct. 26; Gaz. vol. 219; p. 1151.
Spelter from ferruginous and admixed zinc-blend ores, Manufacture of. J. J. Fingland. No. 1,157,375; Oct. 19; Gaz. vol. 219; p. 773.
Spherical bodies, Device for truing. S. J. Warlick and J. H. Bunker. No. 1,156,953; Oct. 19; Gaz. vol. 219; p. 623.
Spike. L. E. Prince and F. J. Merrill. No. 1,156,811; Oct. 12; Gaz. vol. 219; p. 541.

Spike-extractor. P. Alassi. No. 1,156,870; Oct. 19; Gaz. vol. 219; p. 593.
Spinning and doubling frames, Roving-creel for. O. L. Owen and L. Rasco. No. 1,158,887; Oct. 26; Gaz. vol. 219; p. 1189.
Spinning and sealing. M. P. Janisch. No. 1,155,734; Oct. 5; Gaz. vol. 219; p. 143.
Spinning apparatus. J. H. Nicholson. No. 1,157,323; Oct. 19; Gaz. vol. 219; p. 754.
Spoke-mitering machine. O. C. Ketring and E. D. Pope. No. 1,158,057; Oct. 26; Gaz. vol. 219; p. 1073.
Spot-proofing mechanism. D. Gessner. No. 1,157,773; Oct. 26; Gaz. vol. 219; p. 972.
Spray, Clothes-. C. Krusoff. No. 1,158,241; Oct. 26; Gaz. vol. 219; p. 1138.
Spraying machine, Plant-. L. A. Hart. No. 1,158,209; Oct. 26; Gaz. vol. 219; p. 1126.
Spring: *See*—
Door-spring. Vehicle-spring.
Spring. J. R. Hamilton. No. 1,156,859; Oct. 12; Gaz. vol. 219; p. 561.
Spring. F. F. Hoeffle. No. 1,157,869; Oct. 26; Gaz. vol. 219; p. 1007.
Spring-board. E. F. Carpentier. No. 1,158,173; Oct. 26; Gaz. vol. 219; p. 1114.
Spring construction. F. B. King. No. 1,155,425; Oct. 5; Gaz. vol. 219; p. 35.
Spring-cushion structure. F. P. D'Arcy. No. 1,155,645; Oct. 5; Gaz. vol. 219; p. 111.
Spring-frame construction. L. A. Young. No. 1,155,391; Oct. 5; Gaz. vol. 219; p. 23.
Spring-lubricating device. T. Lindenberg. No. 1,156,162; Oct. 12; Gaz. vol. 219; p. 317.
Spring lubricator, Leaf-. P. E. Erickson. No. 1,156,070; Oct. 12; Gaz. vol. 219; p. 285.
Spring-seat. R. D. Crippin. No. 1,155,893; Oct. 5; Gaz. vol. 219; p. 198.
Spring structure. H. H. Buffum. No. 1,158,026; Oct. 26; Gaz. vol. 219; p. 1062.
Spring structure. L. A. Young. No. 1,155,392; Oct. 5; Gaz. vol. 219; p. 24.
Spring-wheel. A. J. Anderson. No. 1,158,157; Oct. 26; Gaz. vol. 219; p. 1109.
Spring-wheel. D. Cave. No. 1,158,373; Oct. 26; Gaz. vol. 219; p. 1184.
Spring-wheel. W. R. Gilmore. No. 1,156,771; Oct. 12; Gaz. vol. 219; p. 529.
Spring-wheel. A. Morgan. No. 1,156,306; Oct. 12; Gaz. vol. 219; p. 364.
Spring-wheel. J. Sanders. No. 1,155,444; Oct. 5; Gaz. vol. 219; p. 41.
Sprinkler: *See*—
Street-sprinkler.
Sprinkler for irrigating systems. L. Morrell and J. P. Campbell. No. 1,156,612; Oct. 12; Gaz. vol. 219; p. 473.
Sprinkler valve, Street-. F. A. Stiers. No. 1,156,326; Oct. 12; Gaz. vol. 219; p. 370.
Sprinkling or spraying device. B. L. Gifford. No. 1,156,474; Oct. 12; Gaz. vol. 219; p. 425.
Staff-holder. S. McDonald. No. 1,155,589; Oct. 5; Gaz. vol. 219; p. 91.
Stalk and straw chopper. W. W. Gray and F. P. Witzsche. No. 1,156,992; Oct. 19; Gaz. vol. 219; p. 636.
Stalk-cutter. D. G. Jones. No. 1,156,234; Oct. 12; Gaz. vol. 219; p. 340.
Stalk-cutting machine. C. R. Smith. No. 1,156,439; Oct. 12; Gaz. vol. 219; p. 413.
Stamp-affixing machine, Theft-proof. L. G. H. Palmer. No. 1,156,308; Oct. 12; Gaz. vol. 219; p. 364.
Stamp, Printing-. A. Marks. No. 1,155,595; Oct. 5; Gaz. vol. 219; p. 94.
Stamps to letters, Machine for applying postage-. A. R. Paulson. No. 1,155,956; Oct. 5; Gaz. vol. 219; p. 219.
Stamping machine, Letter-. E. J. Madden. No. 1,155,591; Oct. 5; Gaz. vol. 219; p. 92.
Stanchion, Cattle-. E. F. Stanfield. No. 1,158,008; Oct. 26; Gaz. vol. 219; p. 1055.
Stand: *See*—
Cycle-stand. Lamp-stand.
Display-stand. Switch-stand.
Hammock-stand. Toilet-stand.
Stand-pipe and sprinkler system. W. F. Conran. No. 1,156,978. Oct. 19; Gaz. vol. 219; p. 632.
Starch, Manufacture of. C. C. Moore. No. 1,156,801; Oct. 12; Gaz. vol. 219; p. 538.
Starch, Treating. C. A. Tyler. No. 1,157,738; Oct. 26; Gaz. vol. 219; p. 962.
Starcher, Collar and cuff. O. Froberg. No. 1,158,040; Oct. 26; Gaz. vol. 219; p. 1067.
Starter, Geared-up. D. T. Brownlee. No. 1,156,863; Oct. 12; Gaz. vol. 219; p. 562.
Static frequency-changer. F. Spinelli. No. 1,157,730; Oct. 26; Gaz. vol. 219; p. 959.
Station-indicator for cars, Automatic. J. Wolski. No. 1,155,694; Oct. 5; Gaz. vol. 219; p. 129.
Stave-jointing machine. P. S. Reyman. No. 1,158,004; Oct. 26; Gaz. vol. 219; p. 1054.
Steam-engine. C. A. Hartung. No. 1,155,810; Oct. 5; Gaz. vol. 219; p. 170.
Steam-engine. E. McFee. No. 1,155,939; Oct. 5; Gaz. vol. 219; p. 213.
Steam-engine. R. C. Stevens. No. 1,157,440; Oct. 19; Gaz. vol. 219; p. 796.
Steam-trap. J. M. Higgins. No. 1,156,684; Oct. 12; Gaz. vol. 219; p. 499.
Steam-trap and valve therefor. F. A. Littlefield. No. 1,156,032; Oct. 5; Gaz. vol. 219; p. 245.
Steel, Manufacture of. J. I. Brown. No. 1,156,051; Oct. 12; Gaz. vol. 219; p. 279.
Steel, Manufacture of. W. R. Walker. No. 1,155,849; Oct. 5; Gaz. vol. 219; p. 184.
Steering-drive, Traction-wheel. J. L. Ware. No. 1,155,850; Oct. 5; Gaz. vol. 219; p. 184.
Steering-gear. S. Kuzdzal. No. 1,157,231; Oct. 19; Gaz. vol. 219; p. 722.
Steering-gear. D. E. Ross. No. 1,157,123; Oct. 19; Gaz. vol. 219; p. 683.
Step-tread. J. F. Clarke. No. 1,157,083; Oct. 19; Gaz. vol. 219; p. 669.
Stereoscope. H. E. Richmond. No. 1,157,419; Oct. 19; Gaz. vol. 219; p. 789.
Sterilization of flushing by ultra-violet rays, Apparatus for. M. von Recklinghausen. No. 1,156,947; Oct. 19; Gaz. vol. 219; p. 620.
Sterilizing apparatus. M. von Recklinghausen. No. 1,156,948; Oct. 19; Gaz. vol. 219; p. 620.
Sterilizing-machine. H. W. Lowe. No. 1,157,017; Oct. 19; Gaz. vol. 219; p. 646.
Stethoscope. O. H. Sheppard. No. 1,157,428; Oct. 19; Gaz. vol. 219; p. 793.
Still kettle, Turpentine-. J. Zieboiz. No. 1,157,130; Oct. 19; Gaz. vol. 219; p. 688.
Stitching machine, Scallop-. J. C. Ringe. No. 1,158,391; Oct. 26; Gaz. vol. 219; p. 1191.
Stoker for locomotives. A. R. Ayers. No. 1,156,264; Oct. 12; Gaz. vol. 219; p. 350.
Stoker, Locomotive-. A. R. Ayers. No. 1,156,263; Oct. 12; Gaz. vol. 219; p. 350.
Stoker mechanism, Automatic. C. D. Young. No. 1,156,854; Oct. 12; Gaz. vol. 219; p. 559.
Stone-saw. W. F. Meyers. No. 1,156,166; Oct. 12; Gaz. vol. 219; p. 318.
Stool, Ingot-mold. T. H. Kenvin. No. 1,157,697; Oct. 26; Gaz. vol. 219; p. 947.
Stopper: *See*—
Bottle-stopper.
Stopper. W. G. Rodiger. No. 1,157,905; Oct. 26; Gaz. vol. 219; p. 1020.
Stopping mechanism, Speed-governed. A. A. Merritt. No. 1,156,916; Oct. 19; Gaz. vol. 219; p. 609.
Stove. J. W. Dupuy. No. 1,156,066; Oct. 12; Gaz. vol. 219; p. 284.
Stove. S. S. Thomas. No. 1,156,330; Oct. 12; Gaz. vol. 219; p. 372.
Stove-burner. G. D. Bradshaw. No. 1,157,841; Oct. 26; Gaz. vol. 219; p. 997.
Stove, Cooking-. J. A. Coppridge. No. 1,155,799; Oct. 5; Gaz. vol. 219; p. 106.
Stove-door. F. W. Reynolds. No. 1,157,041; Oct. 19; Gaz. vol. 219; p. 655.
Stove, Electric cooking-. A. O. Christensen. No. 1,158,176; Oct. 26; Gaz. vol. 219; p. 1115.
Stove, Hot-water. S. V. Reeves. No. 1,156,929; Oct. 19; Gaz. vol. 219; p. 614.
Stoves, Cooking attachment for. G. F. Shapland. No. 1,155,519; Oct. 5; Gaz. vol. 219; p. 69.
Stoves, Flame-shield for gas-. E. P. Kupfer. No. 1,156,087; Oct. 12; Gaz. vol. 219; p. 292.
Strainer for drain-pipes. J. S. Westergren. No. 1,155,852; Oct. 5; Gaz. vol. 219; p. 185.
Strainer for faucets. J. Cormeny. No. 1,156,274; Oct. 12; Gaz. vol. 219; p. 353.
Strainer, Gasolene-. M. L. Grove. No. 1,155,914; Oct. 5; Gaz. vol. 219; p. 205.
Strainer, Liquid-. A. W. Klemt. No. 1,156,785; Oct. 12; Gaz. vol. 219; p. 533.
Strap-trimming machine. J. M. S. Carroll. No. 1,157,844; Oct. 26; Gaz. vol. 219; p. 998.
Straw, Treating flax-. J. E. Lappen. No. 1,158,245; Oct. 26; Gaz. vol. 219; p. 1139.
Street-indicator. A. S. B. Little and R. M. Feustel. No. 1,155,587; Oct. 5; Gaz. vol. 219; p. 90.
Street-sprinkler. F. A. Stiers. No. 1,156,327; Oct. 12; Gaz. vol. 219; p. 371.
Strip-guide. C. E. Hall. No. 1,155,920; Oct. 5; Gaz. vol. 219; p. 207.
Submarines, Safety apparatus for. M. J. L. P. Bonard. No. 1,156,970; Oct. 19; Gaz. vol. 219; p. 628.
Subsoiler. T. C. Busbee. No. 1,157,295; Oct. 19; Gaz. vol. 219; p. 745.
Suction-cleaner. E. M. Barnes. No. 1,156,874; Oct. 19; Gaz. vol. 219; p. 594.
Sugar-bowl, Sanitary. V. A. Tomsky. No. 1,157,910; Oct. 26; Gaz. vol. 219; p. 1022.
Suitcase-handle. D. Green. No. 1,156,903; Oct. 19; Gaz. vol. 219; p. 637.
Sulfate of ammonia and in the purification of coal-gas, Manufacture of. J. MacKenzie. No. 1,155,753; Oct. 5; Gaz. vol. 219; p. 148.
Sulfids from ores, Separation of metallic. T. M. Owen. No. 1,157,176; Oct. 19; Gaz. vol. 219; p. 702.
Sulfite-liquor save-all, Waste-. J. C. Pollans. No. 1,156,551; Oct. 12; Gaz. vol. 219; p. 452.
Superheater. W. Johnson. No. 1,157,546; Oct. 19; Gaz. vol. 219; p. 832.
Superheater. J. Primrose. No. 1,157,722; Oct. 26; Gaz. vol. 219; p. 956.

Support, Adjustable. A. Tischer. No. 1,155,383; Oct. 5; Gaz. vol. 219; p. 20.
Supporter. F. M. Wilkins. No. 1,155,856; Oct. 5; Gaz. vol. 219; p. 186.
Surface-plate. W. C. Commons. No. 1,157,762; Oct. 26; Gaz. vol. 219; p. 969.
Surgical apparatus. U. C. Bates and J. McLeland. No. 1,157,202; Oct. 19; Gaz. vol. 219; p. 711.
Swab-unloader. H. F. Beam. No. 1,156,657; Oct. 12; Gaz. vol. 219; p. 491.
Sweater. D. Rheinauer. No. 1,158,290; Oct. 26; Gaz. vol. 219; p. 1155.
Swing. A. I. Rabb. No. 1,155,439; Oct. 5; Gaz. vol. 219; p. 40.
Swing. V. Stohler. No. 1,156,189; Oct. 12; Gaz. vol. 219; p. 325.
Swing, Rotary. J. G. Merritt and F. W. Watkins. No. 1,155,944; Oct. 5; Gaz. vol. 219; p. 215.
Switch: *See*—
Centrifugal switch.
Combination-switch.
Drum-switch.
Electric switch.
Pedal-switch.
Plug-switch.
Pull pendent switch.
Railway-switch.
Time-switch.
Switch. H. A. Steen. No. 1,155,626; Oct. 5; Gaz. vol. 219; p. 104.
Switch-actuating mechanism, Electrical. W. J. Bohan. No. 1,157,076; Oct. 19; Gaz. vol. 219; p. 666.
Switch-stand. R. L. Praetorius. No. 1,157,638; Oct. 19; Gaz. vol. 219; p. 860.
Switches, Lever mechanism for. J. G. Lavender and G. Nickels. No. 1,158,246; Oct. 26; Gaz. vol. 219; p. 1139.
Switching system, High-potential. C. P. Steinmetz. No. 1,157,336; Oct. 19; Gaz. vol. 219; p. 759.
Swivel clencher-bar. A. S. Jaquith. No. 1,155,818; Oct. 5; Gaz. vol. 219; p. 173.
Syringe, Hypodermic. G. H. Kispert. No. 1,157,552; Oct. 19; Gaz. vol. 219; p. 833.
Syringe, Hypodermic. O. H. Sheppard. No. 1,157,429; Oct. 19; Gaz. vol. 219; p. 793.
Syringe, Intradermic. W. H. Furness. No. 1,157,524; Oct. 19; Gaz. vol. 219; p. 825.
Syringe, Rectal. C. A. Tyrrell. No. 1,155,848; Oct. 5; Gaz. vol. 219; p. 183.
Syrup from sugar-beets, Making. H. C. Gore and C. O. Townsend. No. 1,155,806; Oct. 5; Gaz. vol. 219; p. 168.
Table: *See*—
Billiard-table.
Camp-table.
Extensible table.
Laboratory-table.
Table and desk, Combination. J. H. Miller and L. Raab. No. 1,157,634; Oct. 19; Gaz. vol. 219; p. 859.
Table and writing-desk, Combined. J. H. Miller and L. Raab. No. 1,157,633; Oct. 19; Gaz. vol. 219; p. 859.
Table-bed, &c. P. E. Kroehler. No. 1,158,240; Oct. 26; Gaz. vol. 219; p. 1137.
Table lock and opener, Combined. G. T. Buddle. No. 1,156,460; Oct. 12; Gaz. vol. 219; p. 421.
Table lock and opener, Combined. G. T. Buddle. No. 1,156,461; Oct. 12; Gaz. vol. 219; p. 421.
Table-service apparatus. A. L. Bowen. No. 1,155,638; Oct. 5; Gaz. vol. 219; p. 109.
Tables, Chair attachment for. J. Markowicz. No. 1,156,538; Oct. 12; Gaz. vol. 219; p. 447.
Tablet, Poison-. M. E. Bloom. No. 1,156,584; Oct. 12; Gaz. vol. 219; p. 464.
Tablet, Self-reserving. H. F. Chism. No. 1,155,886; Oct. 5; Gaz. vol. 219; p. 195.
Tag. F. K. Plympton. No. 1,156,036; Oct. 5; Gaz. vol. 219; p. 247.
Tag bracket, License-. M. Holland. No. 1,156,685; Oct. 12; Gaz. vol. 219; p. 499.
Tag-fastener. W. R. Macintosh. No. 1,156,489; Oct. 12; Gaz. vol. 219; p. 431.
Tag, Index-. C. B. Ulrich. No. 1,157,195; Oct. 19; Gaz. vol. 219; p. 708.
Tag, Key-. C. E. Burnap. No. 1,156,345; Oct. 12; Gaz. vol. 219; p. 378.
Tag machine, Laundry-. E. Craig. No. 1,155,469; Oct. 5; Gaz. vol. 219; p. 51.
Tag, Shipping-. T. I. Hart. No. 1,155,566; Oct. 5; Gaz. vol. 219; p. 84.
Talking-machine. F. J. Empson. No. 1,158,401; Oct. 26; Gaz. vol. 219; p. 1194.
Talking-machine adapter. P. Catucci. No. 1,156,120; Oct. 12; Gaz. vol. 219; p. 306.
Talking-machine record-cleaning attachment. J. W. Pitcher. No. 1,157,858; Oct. 26; Gaz. vol. 219; p. 1038.
Talking-machine sound-box. H. Sheble. No. 1,158,316; Oct. 26; Gaz. vol. 219; p. 1164.
Tamping attachment. J. Jacobson. No. 1,158,224; Oct. 26; Gaz. vol. 219; p. 1131.
Tank: *See*—
Jacketed tank.
Oil-delivery tank.
Sheet-metal tank.
Tank. E. M. Caskey. No. 1,157,675; Oct. 26; Gaz. vol. 219; p. 930.
Tank. R. B. Kuhn. No. 1,157,643; Oct. 19; Gaz. vol. 219; p. 862.
Tank-filler. R. W. E. Hayes. No. 1,157,692; Oct. 26; Gaz. vol. 219; p. 946.
Tank-lining. T. E. Murray. No. 1,156,425; Oct. 12; Gaz. vol. 219; p. 408.
Tank safety device. H. L. Dodge. No. 1,156,469; Oct. 12; Gaz. vol. 219; p. 424.
Tanning-drum. B. Allen, Jr. No. 1,155,866; Oct. 5; Gaz. vol. 219; p. 189.
Tanning extracts, Apparatus for dissolving and treating vegetable. E. Schaub. No. 1,158,304; Oct. 26; Gaz. vol. 219; p. 1160.
Tap-holder, Self-aligning. E. W. Cleveland. No. 1,155,796; Oct. 5; Gaz. vol. 219; p. 165.
Tap-making machine. F. Müller. No. 1,155,432; Oct. 5; Gaz. vol. 219; p. 38.
Tar-extractor. F. Tschudy. No. 1,155,387; Oct. 5; Gaz. vol. 219; p. 22.
Target placing and shifting apparatus. W. I. Thompson. No. 1,157,342; Oct. 19; Gaz. vol. 219; p. 761.
Tatting-shuttle. H. E. Hartranft. No. 1,157,535; Oct. 19; Gaz. vol. 219; p. 829.
Telegraph system. W. H. Shephard and A. E. McKechnie. No. 1,156,043; Oct. 5; Gaz. vol. 219; p. 249.
Telegraph-transmitter. E. H. Piersen. No. 1,157,040; Oct. 19; Gaz. vol. 219; p. 654.
Telegraph-transmitters, Keyboard for. C. E. Nelson. No. 1,157,714; Oct. 26; Gaz. vol. 219; p. 953.
Telegraphone. H. L. Washburn. No. 1,155,776; Oct. 5; Gaz. vol. 219; p. 150.
Telegraphy. B. L. Bobroff. No. 1,157,839; Oct. 26; Gaz. vol. 219; p. 996.
Telegraphy, Selenium cell especially adapted for use in connection with. K. C. Cox. No. 1,156,524; Oct. 12; Gaz. vol. 219; p. 443.
Telegraphy, Submarine. K. C. Cox. No. 1,158,375; Oct. 26; Gaz. vol. 219; p. 1185.
Telegraphy, Transmitter for wireless. C. Schou. No. 1,158,309; Oct. 26; Gaz. vol. 219; p. 1162.
Telemeter indicating device. O. Eppenstein. No. 1,158,191; Oct. 26; Gaz. vol. 219; p. 1120.
Telephone-exchange system. T. G. Martin. No. 1,155,672; Oct. 5; Gaz. vol. 219; p. 121.
Telephone-exchange system. F. R. McBerty. No. 1,156,416; Oct. 12; Gaz. vol. 219; p. 405.
Telephone-exchange system. F. R. McBerty. No. 1,157,018; Oct. 19; Gaz. vol. 219; p. 646.
Telephone-exchange system, Automatic. C. L. Goodrum. No. 1,156,475; Oct. 12; Gaz. vol. 219; p. 425.
Telephone-repeater. H. E. Shreeve. No. 1,156,636; Oct. 12; Gaz. vol. 219; p. 483.
Telephone system. R. L. Quass. No. 1,156,626; Oct. 12; Gaz. vol. 219; p. 479.
Telephone system. L. W. Stanton. No. 1,156,253; Oct. 12; Gaz. vol. 219; p. 346.
Telephone system. C. S. Winston. No. 1,157,746; Oct. 26; Gaz. vol. 219; p. 965.
Telephone system, Automatic. R. S. Wilbur. No. 1,157,745; Oct. 26; Gaz. vol. 219; p. 964.
Telephone system, Machine switching. F. R. McBerty. No. 1,157,881; Oct. 26; Gaz. vol. 219; p. 1011.
Telephone system, Party-line. H. Hovland. No. 1,158,221; Oct. 26; Gaz. vol. 219; p. 1130.
Telephone systems, Cord-circuit for. B. D. Willis. No. 1,156,450; Oct. 12; Gaz. vol. 219; p. 417.
Temperature-controlling apparatus. J. W. and C. W. Hays. No. 1,157,866; Oct. 26; Gaz. vol. 219; p. 1006.
Temperature-indicator. C. L. Fortescue. No. 1,156,680; Oct. 12; Gaz. vol. 219; p. 498.
Tennis-racket. F. J. Bancroft. No. 1,156,340; Oct. 12; Gaz. vol. 219; p. 376.
Tension device. F. S. Rand and G. N. Taylor. No. 1,156,927; Oct. 19; Gaz. vol. 219; p. 613.
Tent. A. H. Corbet. No. 1,155,800; Oct. 5; Gaz. vol. 219; p. 167.
Terminal devices, Making. B. P. Rowe. No. 1,156,710; Oct. 12; Gaz. vol. 219; p. 508.
Terminals, Connector for ground-. A. R. Rheinberger. No. 1,156,314; Oct. 12; Gaz. vol. 219; p. 366.
Test-indicator, Universal. J. E. Oslund. No. 1,157,800; Oct. 26; Gaz. vol. 219; p. 982.
Testing mechanism. M. W. Morehouse. No. 1,157,796; Oct. 26; Gaz. vol. 219; p. 981.
Tether-stake. M. F. Jones. No. 1,155,421; Oct. 5; Gaz. vol. 219; p. 34.
Textiles used in aeronautics and aviation, and the aeroplane-framework produced thereby, Treating. E. A. J. Descamps. No. 1,156,894; Oct. 19; Gaz. vol. 219; p. 601.
Thermostat-motor. C. D. Miller. No. 1,157,889; Oct. 26; Gaz. vol. 219; p. 1014.
Thermostatic control. G. R. Fassett. No. 1,155,650; Oct. 5; Gaz. vol. 219; p. 113.
Thermostatic heater. J. L. Quinn. No. 1,157,255; Oct. 19; Gaz. vol. 219; p. 731.
Thread-milling machine. E. J. Lees. No. 1,156,237; Oct. 12; Gaz. vol. 219; p. 341.
Thread-winding machine. W. Marlow. No. 1,157,886; Oct. 26; Gaz. vol. 219; p. 1013.
Threshing-machine. C. F. Dempsey. No. 1,156,305; Oct. 12; Gaz. vol. 219; p. 398.
Threshing machine, Peanut-. C. R. Livermon. No. 1,158,248; Oct. 26; Gaz. vol. 219; p. 1139.
Ticket-container. J. H. Kinzie. No. 1,155,737; Oct. 5; Gaz. vol. 219; p. 144.
Ticket machine, Pin-. H. G. Davis. No. 1,156,672; Oct. 12; Gaz. vol. 219; p. 495.
Ticket or card exhibitor. G. H. Denio. No. 1,156,396; Oct. 12; Gaz. vol. 219; p. 398.

Tie: *See*—
Bag-tie.
Package-tie.
Rail-tie.
Railway-tie.
Tie-plate. B. B. Betts. No. 1,155,989; Oct. 5; Gaz. vol. 219; p. 229.
Tie-plate. B. B. Betts. No. 1,155,990; Oct. 5; Gaz. vol. 219; p. 230.
Tie-plate. B. B. Betts. No. 1,155,991; Oct. 5; Gaz. vol. 219; p. 230.
Tile. B. Franklin. No. 1,155,559; Oct. 5; Gaz. vol. 219; p. 81.
Tile, conduits, or bricks, Machine for making clay. W. D. Rawlings. No. 1,157,724; Oct. 26; Gaz. vol. 219; p. 957.
Tile, Interlocking. J. J. Funsten. No. 1,158,041; Oct. 26; Gaz. vol. 219; p. 1068.
Tile measuring, marking, and sorting machine. T. S. Wood. No. 1,156,337; Oct. 12; Gaz. vol. 219; p. 375.
Time-controller. H. B. Post. No. 1,157,960; Oct. 26; Gaz. vol. 219; p. 1039.
Time-recorder and similar apparatus, Workman's. A. J. Jung. No. 1,155,660; Oct. 5; Gaz. vol. 219; p. 116.
Time-recording lock. E. S. Phelps. No. 1,155,678; Oct. 5; Gaz. vol. 219; p. 123.
Time-recording lock. E. S. Phelps. No. 1,155,679; Oct. 5; Gaz. vol. 219; p. 123.
Time-switch. J. M. Andersen. No. 1,156,126; Oct. 12; Gaz. vol. 219; p. 305.
Timer and distributer, Combined. A. L. Strahle. No. 1,156,255; Oct. 12; Gaz. vol. 219; p. 347.
Timer, Interval-. W. E. Porter. No. 1,158,282; Oct. 26; Gaz. vol. 219; p. 1152.
Tin, Electrolytic refining of. R. L. Whitehead. No. 1,157,830; Oct. 26; Gaz. vol. 219; p. 993.
Tin-scrap, Detinning. K. Goldschmidt and J. Weber. No. 1,158,128; Oct. 26; Gaz. vol. 219; p. 1099.
Tin-sheet cleaning and polishing machine. S. E. Diescher. No. 1,155,711; Oct. 5; Gaz. vol. 219; p. 134.
Tin-sheet cleaning and polishing machine. W. L. McKean. No. 1,155,671; Oct. 5; Gaz. vol. 219; p. 120.
Tire casings, Core for manufacture of pneumatic-. P. E. Welton. No. 1,156,570; Oct. 12; Gaz. vol. 219; p. 459.
Tire-chain. W. P. Hammond. No. 1,155,723; Oct. 5; Gaz. vol. 219; p. 139.
Tire-core. E. E. Tannar. No. 1,157,263; Oct. 19; Gaz. vol. 219; p. 734.
Tire, Cushion-. A. Nelson. No. 1,156,802; Oct. 12; Gaz. vol. 219; p. 538.
Tire-deflating tool. W. C. Gunnell. No. 1,155,919; Oct. 5; Gaz. vol. 219; p. 207.
Tire gage, Pneumatic-. R. C. Sibley. No. 1,156,862; Oct. 12; Gaz. vol. 219; p. 562.
Tire-holder. C. F. Hess. No. 1,155,488; Oct. 5; Gaz. vol. 219; p. 58.
Tire inner tube, Pneumatic-. J. J. Voorhees. No. 1,155,775; Oct. 5; Gaz. vol. 219; p. 156.
Tire-mold. W. A. Robbins. No. 1,156,180; Oct. 12; Gaz. vol. 219; p. 323.
Tire-mounting. E. K. Baker. No. 1,155,396; Oct. 5; Gaz. vol. 219; p. 25.
Tire mounting, Pneumatic-. E. K. Baker. No. 1,155,394; Oct. 5; Gaz. vol. 219; p. 24.
Tire mounting, Pneumatic-. C. G. Hawley and E. K. Baker. No. 1,155,417; Oct. 5; Gaz. vol. 219; p. 33.
Tire, Pneumatic. H. O. Johnson. No. 1,158,227; Oct. 26; Gaz. vol. 219; p. 1132.
Tire-protector. J. Richardson. No. 1,158,075; Oct. 26; Gaz. vol. 219; p. 1080.
Tire-rim, Demountable. B. C. Ball and L. E. Younie. No. 1,157,141; Oct. 19; Gaz. vol. 219; p. 689.
Tire, Sectional spring-. G. H. Vogel, B. D. Lobdell, and J. E. Ball. No. 1,156,333; Oct. 12; Gaz. vol. 219; p. 373.
Tire, Spring-. W. De Frees. No. 1,156,348; Oct. 12; Gaz. vol. 219; p. 379.
Tire, Spring-. A. J. Morse. No. 1,158,070; Oct. 26; Gaz. vol. 219; p. 1078.
Tire, Spring-. E. K. Rabey. No. 1,156,311; Oct. 12; Gaz. vol. 219; p. 365.
Tire, Steel. F. Feldhaus. No. 1,158,038; Oct. 26; Gaz. vol. 219; p. 1066.
Tire-tool. J. P. Cunningham. No. 1,157,763; Oct. 26; Gaz. vol. 219; p. 970.
Tire-tool. C. M. Mills. No. 1,156,167; Oct. 12; Gaz. vol. 219; p. 319.
Tire-valve and pressure-gage, Combined. O. F. R. Bromberg. No. 1,156,268; Oct. 12; Gaz. vol. 219; p. 351.
Tire valve, Pneumatic-. B. E. Taylor. No. 1,157,822; Oct. 26; Gaz. vol. 219; p. 990.
Tire-valves, Dust-cap for. H. A. Mason. No. 1,157,564; Oct. 19; Gaz. vol. 219; p. 837.
Tire-valves, Pressure-regulating device for. C. H. Thayer. No. 1,156,328; Oct. 12; Gaz. vol. 219; p. 371.
Tire, Vehicle-. N. R. Landis. No. 1,156,155; Oct. 12; Gaz. vol. 219; p. 315.
Tires, Bead for pneumatic or other. M. W. Fink and A. M. Kobiolke. No. 1,158,194; Oct. 26; Gaz. vol. 219; p. 1122.
Tires, Liner for pneumatic. F. E. Neal. No. 1,155,367; Oct. 5; Gaz. vol. 219; p. 15.
Tires, Means for splicing the inner tubes of pneumatic. H. Rafovich. No. 1,158,284; Oct. 26; Gaz. vol. 219; p. 1153.
Tires, Non-skid attachment for. J. L. Duff. No. 1,157,928; Oct. 26; Gaz. vol. 219; p. 1027.
Titanium-oxygen compounds from ilmenite or titaniferous iron ores and other materials, Producing. P. Farup. No. 1,156,220; Oct. 12; Gaz. vol. 219; p. 335.
Toaster. J. F. Lamb. No. 1,155,494; Oct. 5; Gaz. vol. 219; p. 60.
Toaster. D. Rose. No. 1,155,838; Oct. 5; Gaz. vol. 219; p. 180.
Tobacco material, Method and apparatus for extracting nicotin from. R. G. Mewborne. No. 1,156,600; Oct. 12; Gaz. vol. 219; p. 472.
Tobacco-pouch. W. H. Stromeyer. No. 1,156,720; Oct. 12; Gaz. vol. 219; p. 511.
Toilet-seat for children. B. Lehman. No. 1,156,014; Oct. 5; Gaz. vol. 219; p. 239.
Toilet-stand. C. Bauer. No. 1,156,519; Oct. 12; Gaz. vol. 219; p. 441.
Tongue coupling, Draft-. C. M. Beach. No. 1,156,342; Oct. 12; Gaz. vol. 219; p. 377.
Tool. J. Craig. No. 1,156,750; Oct. 12; Gaz. vol. 219; p. 524.
Tool. E. T. Savage. No. 1,157,589; Oct. 19; Gaz. vol. 219; p. 844.
Tool, Combination-. A. C. Witter. No. 1,158,092; Oct. 26; Gaz. vol. 219; p. 1086.
Tool, Electrically-heated. W. I. Thompson. No. 1,157,343; Oct. 19; Gaz. vol. 219; p. 761.
Tool-handle fastener. E. J. Weaver. No. 1,158,345; Oct. 26; Gaz. vol. 219; p. 1173.
Tool-handle fastening. T. G. Selleck. No. 1,157,593; Oct. 19; Gaz. vol. 219; p. 846.
Tool-handle, Metal. D. Eastman. No. 1,158,032; Oct. 26; Gaz. vol. 219; p. 1064.
Tool-holder. G. Amborn. No. 1,158,100; Oct. 26; Gaz. vol. 219; p. 1089.
Tool, Pneumatic. C. Christiansen. No. 1,157,924; Oct. 26; Gaz. vol. 219; p. 1026.
Tool, Pneumatic. M. W. Sherwood. No. 1,157,430; Oct. 19; Gaz. vol. 219; p. 704.
Tooth, Artificial. E. R. Fewell. No. 1,155,004; Oct. 5; Gaz. vol. 219; p. 202.
Tooth-cleaner. J. B. Nesper. No. 1,157,413; Oct. 19; Gaz. vol. 219; p. 787.
Tooth facing and backing therefor, Artificial-. G. Holtz. No. 1,157,309; Oct. 19; Gaz. vol. 219; p. 750.
Tooth facing with backing adjustment, Artificial-. F. E. Hart. No. 1,157,534; Oct. 19; Gaz. vol. 219; p. 829.
Tooth-paste-dispensing device. R. S. Smart. No. 1,156,106; Oct. 12; Gaz. vol. 219; p. 298.
Top-roll-saddle mechanism. L. T. Houghton. No. 1,158,220; Oct. 26; Gaz. vol. 219; p. 1130.
Top, Spinning-. P. K. Williams. No. 1,158,352; Oct. 26; Gaz. vol. 219; p. 1175.
Torch. F. J. Taylor. No. 1,156,256; Oct. 12; Gaz. vol. 219; p. 347.
Torpedo-driving mechanism. F. C. B. Page. No. 1,155,435; Oct. 5; Gaz. vol. 219; p. 39.
Torpedoes, Gyroscopic steering mechanism for automobile. F. W. Dodd. No. 1,156,350; Oct. 12; Gaz. vol. 219; p. 380.
Towing apparatus. C. D. C. Buuck. No. 1,157,674; Oct. 26; Gaz. vol. 219; p. 939.
Toxic product and making same. J. A. De Cew. No. 1,155,708; Oct. 5; Gaz. vol. 219; p. 134.
Toy. R. Lukstat. No. 1,157,166; Oct. 19; Gaz. vol. 219; p. 698.
Toy balloon. R. Griffith. No. 1,158,206; Oct. 26; Gaz. vol. 219; p. 1125.
Toy bank. E. N. Kindland. No. 1,155,583; Oct. 5; Gaz. vol. 219; p. 89.
Toy brick-press. E. Carius. No. 1,156,521; Oct. 12; Gaz. vol. 219; p. 442.
Toy, Tumbling-figure. B. Vle-Theer. No. 1,155,692; Oct. 5; Gaz. vol. 219; p. 128.
Toy vehicle. J. L. Moore. No. 1,157,171; Oct. 19; Gaz. vol. 219; p. 700.
Trace-hook. R. J. Schrock. No. 1,157,185; Oct. 19; Gaz. vol. 219; p. 705.
Track instrument. J. S. Romig. No. 1,155,373; Oct. 5; Gaz. vol. 219; p. 17.
Track-joint and supporting means therefor, Overhead. H. L. Ferris. No. 1,156,472; Oct. 12; Gaz. vol. 219; p. 424.
Track-sander. E. P. Tabor. No. 1,156,111; Oct. 12; Gaz. vol. 219; p. 300.
Tracker-board and music-sheet. J. C. Hagey. No. 1,155,565; Oct. 5; Gaz. vol. 219; p. 83.
Tracker-board-controller device. C. M. Welte. No. 1,158,015; Oct. 26; Gaz. vol. 219; p. 1058.
Traction-engine. J. B. Bartholomew. No. 1,156,203; Oct. 12; Gaz. vol. 219; p. 329.
Traction-wheel. W. W. Coulter. No. 1,155,704; Oct. 5; Gaz. vol. 219; p. 132.
Traction-wheel. T. B. Crabtree. No. 1,157,151; Oct. 19; Gaz. vol. 219; p. 693.
Traction-wheel. G. W. Elliott. No. 1,156,471; Oct. 12; Gaz. vol. 219; p. 424.
Tractor for wagons and the like. W. E. Eldridge. No. 1,155,713; Oct. 5; Gaz. vol. 219; p. 135.
Tractor transmission mechanism. J. J. Viste. No. 1,158,087; Oct. 26; Gaz. vol. 219; p. 1084.
Tractor-wheel. J. Beard. No. 1,155,872; Oct. 5; Gaz. vol. 219; p. 191.

Tractor-wheel, Self-clearing. A. E. Cook and T. Van Tuyl. No. 1,156,212; Oct. 12; Gaz. vol. 219; p. 333.
Trailing apparatus. V. E. Peterson. No. 1,155,437; Oct. 5; Gaz. vol. 219; p. 30.
Train order or message delivering device. T. Hartsook. No. 1,157,864; Oct. 26; Gaz. vol. 219; p. 1005.
Train-stopping mechanism, Automatic. W. Bentel. No. 1,157,144; Oct. 19; Gaz. vol. 219; p. 690.
Transformer-casing. E. G. Reed. No. 1,156,708; Oct. 12; Gaz. vol. 219; p. 507.
Transformer-controller and distributer, Electrical. F. L. Wiltshire. No. 1,158,091; Oct. 26; Gaz. vol. 219; p. 1085.
Transformer system, Electrical. F. S. Perrin. No. 1,156,035; Oct. 5; Gaz. vol. 219; p. 247.
Transmission apparatus. A. B. Lakey and E. E. Ross. No. 1,158,243; Oct. 26; Gaz. vol. 219; p. 1138.
Transmission device. H. S. Greene. No. 1,157,098; Oct. 19; Gaz. vol. 219; p. 674.
Transoms or windows, Device for opening and closing. J. Pelzer. No. 1,156,020; Oct. 5; Gaz. vol. 219; p. 241.
Trap: *See*—
Animal-trap.
Bird-trap.
Fish-trap.
Sewer-trap.
Steam-trap.
Trap. C. E. Danielson. No. 1,158,185; Oct. 26; Gaz. vol. 219; p. 1118.
Trap. A. C. Griffing. No. 1,157,382; Oct. 19; Gaz. vol. 219; p. 776.
Trap. J. B. Shadley. No. 1,155,842; Oct. 5; Gaz. vol. 219; p. 181.
Tread and producing the same, Safety-. G. Hopp. No. 1,156,081; Oct. 12; Gaz. vol. 219; p. 290.
Trench-cutter and edge-trimmer. W. J. Schmidt. No. 1,157,809; Oct. 26; Gaz. vol. 219; p. 985.
Trimming-machine. J. P. Weis. No. 1,155,534; Oct. 5; Gaz. vol. 219; p. 74.
Trolley. C. W. Arial. No. 1,157,608; Oct. 19; Gaz. vol. 219; p. 850.
Trolley, Automatic retrieving-. S. E. McFarland. No. 1,157,630; Oct. 19; Gaz. vol. 219; p. 858.
Trolley-conductor. W. Hoopes and T. Varney. No. 1,157,392; Oct. 19; Gaz. vol. 219; p. 779.
Trolley-conductor. W. Hoopes and T. Varney. No. 1,157,393; Oct. 19; Gaz. vol. 219; p. 780.
Trolley-conductor. W. Hoopes and T. Varney. No. 1,157,394; Oct. 19; Gaz. vol. 219; p. 780.
Trolley-guard. J. Zanolli. No. 1,155,695; Oct. 5; Gaz. vol. 219; p. 129.
Trolley-wheel. S. G. Buskard. No. 1,156,270; Oct. 12; Gaz. vol. 219; p. 352.
Trolley-wheel. W. S. Griffith. No. 1,155,913; Oct. 5; Gaz. vol. 219; p. 205.
Trousers-stretching device. E. S. Fisher. No. 1,157,521; Oct. 19; Gaz. vol. 219; p. 824.
Truck-bolster, Cast. Y. Miyasaki. No. 1,156,305; Oct. 12; Gaz. vol. 219; p. 363.
Truck, Car-. W. S. Adams. No. 1,157,971; Oct. 26; Gaz. vol. 219; p. 1044.
Truck, Dumping-. C. J. Young. No. 1,157,749; Oct. 26; Gaz. vol. 219; p. 966.
Truck, Dumping motor-. C. Lynch. No. 1,157,560; Oct. 19; Gaz. vol. 219; p. 836.
Truck for harvesters, Tongue-. J. Dain. No. 1,156,216; Oct. 12; Gaz. vol. 219; p. 334.
Truck pedestal, Car-. W. C. Hedgcock. No. 1,157,867; Oct. 26; Gaz. vol. 219; p. 1006.
Truck, Railway-car. E. W. Summers. No. 1,158,331; Oct. 26; Gaz. vol. 219; p. 1169.
Truck side frame, Car-. J. A. Lamont. No. 1,157,876; Oct. 26; Gaz. vol. 219; p. 1009.
Truck, Warehouse-. T. V. Buckwalter. No. 1,155,336; Oct. 5; Gaz. vol. 219; p. 4.
Trucks, Brake arrangement for six-wheel car-. B. W. Kadel. No. 1,156,483; Oct. 12; Gaz. vol. 219; p. 429.
Trucks, Brake arrangement for six-wheel car-. J. A. Pilcher. No. 1,156,490; Oct. 12; Gaz. vol. 219; p. 431.
Trunk-locking means. G. H. Wheary. No. 1,158,412; Oct. 26; Gaz. vol. 219; p. 1199.
Trunk, Wardrobe-. G. H. Wheary. No. 1,157,652; Oct. 19; Gaz. vol. 219; p. 866.
Trunk, Wardrobe-. G. H. Wheary. No. 1,158,411; Oct. 26; Gaz. vol. 219; p. 1198.
Truss. T. Welch. No. 1,157,353; Oct. 19; Gaz. vol. 219; p. 764.
Truss, Hernial. G. A. McMillen. No. 1,158,383; Oct. 26; Gaz. vol. 219; p. 1188.
Truss pad, Hernial-. R. P. McCollum. No. 1,158,139; Oct. 26; Gaz. vol. 219; p. 1102.
Tube: *See*—
Insulating-tube.
Paper tube.
Tire inner tube.
Tube-blower. E. J. McCarty. No. 1,155,750; Oct. 5; Gaz. vol. 219; p. 147.
Tube-making machine. E. M. Hawkins. No. 1,157,220; Oct. 19; Gaz. vol. 219; p. 718.
Tubes, Percussive tool for scaling. H. S. B. Brindley. No. 1,158,115; Oct. 26; Gaz. vol. 219; p. 1094.
Tubing, Apparatus for the manufacture of. P. Patterson. No. 1,155,677; Oct. 5; Gaz. vol. 219; p. 122.
Tumbling-barrel. A. C. Johnson. No. 1,155,579; Oct. 5; Gaz. vol. 219; p. 88.
Tungsten, Contact bodies of. A. J. Liebmann and W. A. Megrath. No. 1,155,427; Oct. 5; Gaz. vol. 219; p. 36.
Tungsten, Making contact bodies of. A. J. Liebmann and W. A. Megrath. No. 1,155,426; Oct. 5; Gaz. vol. 219; p. 36.
Tunnel-work, Method of and apparatus for. E. G. Williams and E. H. Brown. No. 1,156,830; Oct. 12; Gaz. vol. 219; p. 549.
Tunneling-machine. W. E. Dean. No. 1,156,277; Oct. 12; Gaz. vol. 219; p. 354.
Turbine. O. W. Stone. No. 1,158,082; Oct. 26; Gaz. vol. 219; p. 1082.
Turbine bucket-wheel. R. Hilliner. No. 1,156,529; Oct. 12; Gaz. vol. 219; p. 445.
Turbine, Elastic-fluid. W. Pape. No. 1,156,547; Oct. 12; Gaz. vol. 219; p. 450.
Turbine, Elastic-fluid. E. C. Perry, Jr. No. 1,156,549; Oct. 12; Gaz. vol. 219; p. 451.
Turbine, Elastic-fluid. C. B. Rearick. No. 1,156,371; Oct. 12; Gaz. vol. 219; p. 388.
Turbine, Elastic-fluid. R. H. Rice. No. 1,156,627; Oct. 12; Gaz. vol. 219; p. 479.
Turbine, Marine. H. F. Schmidt. No. 1,155,516; Oct. 5; Gaz. vol. 219; p. 68.
Turbine, Steam-. S. C. Rockman. No. 1,157,727; Oct. 26; Gaz. vol. 219; p. 958.
Turn-button. F. J. Stulp. No. 1,158,330; Oct. 26; Gaz. vol. 219; p. 1169.
Turning-machine guard. R. L. Shannon. No. 1,156,559; Oct. 12; Gaz. vol. 219; p. 455.
Type-bar-machine attachment. J. U. Meistrell. No. 1,157,243; Oct. 19; Gaz. vol. 219; p. 727.
Type-mold box. J. B. Walsh. No. 1,157,473; Oct. 19; Gaz. vol. 219; p. 808.
Type-writer. A. Ferretto. No. 1,155,651; Oct. 5; Gaz. vol. 219; p. 113.
Type-writer. E. Sargent. No. 1,155,445; Oct. 5; Gaz. vol. 219; p. 42.
Type-writer, Electric. M. C. Crawley. No. 1,156,061; Oct. 12; Gaz. vol. 219; p. 282.
Type-writer, Electric. E. Hausberg. No. 1,156,288; Oct. 12; Gaz. vol. 219; p. 357.
Type-writing and computing machine, Combined. F. F. Main. No. 1,157,884; Oct. 26; Gaz. vol. 219; p. 1012.
Type-writing machine. N. H. Anderson. No. 1,155,634; Oct. 5; Gaz. vol. 219; p. 107.
Type-writing machine. N. H. Anderson. No. 1,155,636; Oct. 5; Gaz. vol. 219; p. 108.
Type-writing machine. S. E. Carlin. No. 1,156,464; Oct. 12; Gaz. vol. 219; p. 422.
Type-writing machine. D. A. Carpenter. No. 1,156,588; Oct. 12; Gaz. vol. 219; p. 464.
Type-writing machine. H. W. Davis. No. 1,155,707; Oct. 5; Gaz. vol. 219; p. 133.
Type-writing machine. J. C. Doane. No. 1,157,683; Oct. 26; Gaz. vol. 219; p. 943.
Type-writing machine. A. Lopez. No. 1,155,828; Oct. 5; Gaz. vol. 219; p. 176.
Type-writing machine. W. G. Sheldon. No. 1,156,437; Oct. 12; Gaz. vol. 219; p. 412.
Type-writing machine. B. C. Stickney. No. 1,158,408; Oct. 26; Gaz. vol. 219; p. 1197.
Type-writing machine. F. C. Ursbruck. No. 1,156,331; Oct. 12; Gaz. vol. 219; p. 373.
Type-writing machine. C. B. Yaw. No. 1,157,276; Oct. 19; Gaz. vol. 219; p. 738.
Type-writing-machine adding attachment. F. R. Cornwall. No. 1,155,642; Oct. 5; Gaz. vol. 219; p. 110.
Type-writing-machine platen. W. B. Mulock. No. 1,156,614; Oct. 12; Gaz. vol. 219; p. 474.
Type-writing-machine platen-shifting mechanism. N. H. Anderson. No. 1,155,635; Oct. 5; Gaz. vol. 219; p. 107.
Type-writing-machine ribbon-spool. E. B. Hess and L. C. Myers. No. 1,156,141; Oct. 12; Gaz. vol. 219; p. 310.
Typographical casting-machine. D. S. Kennedy. No. 1,157,785; Oct. 26; Gaz. vol. 219; p. 977.
Typographical machine. R. M. Bedell. No. 1,157,753; Oct. 26; Gaz. vol. 219; p. 967.
Typographical machine. T. S. Homans. No. 1,156,031; Oct. 5; Gaz. vol. 219; p. 245.
Typographical machine. D. S. Kennedy. No. 1,157,784; Oct. 26; Gaz. vol. 219; p. 976.
Typographical-machine mold. H. J. Rudulph. No. 1,157,808; Oct. 26; Gaz. vol. 219; p. 985.
Typographical machines, Magazine for. W. H. Orpen, Jr. No. 1,156,033; Oct. 5; Gaz. vol. 219; p. 246.
Typographical numbering-machine. J. H. Price. No. 1,155,869; Oct. 5; Gaz. vol. 219; p. 16.
Umbrella and parasol frame. J. Rose. No. 1,156,709; Oct. 12; Gaz. vol. 219; p. 508.
Umbrella, Folding. W. Behling. No. 1,157,974; Oct. 26; Gaz. vol. 219; p. 1045.
Underframe-reinforcement. A. H. Weston. No. 1,156,259; Oct. 12; Gaz. vol. 219; p. 848.
Undergarment. L. I. Collett. No. 1,156,757; Oct. 12; Gaz. vol. 219; p. 524.
Undergarment. L. Iocca. No. 1,155,732; Oct. 5; Gaz. vol. 219; p. 142.
Undergarment. H. L. Titterence. No. 1,157,063; Oct. 19; Gaz. vol. 219; p. 662.
Undergarment, Union. P. A. Luckett. No. 1,156,801; Oct. 12; Gaz. vol. 219; p. 362.
Underreamer setter, Double-. C. L. Nickolai. No. 1,157,577; Oct. 19; Gaz. vol. 219; p. 841.
Under-water exploration, Device for. C. F. Jenkins. No. 1,156,782; Oct. 12; Gaz. vol. 219; p. 532.

Urn, Coffee-. G. A. Ray. No. 1,157,805; Oct. 26; Gaz. vol. 219; p. 984.
Utensil, Domestic. J. N. Jackson. No. 1,156,781; Oct. 12; Gaz. vol. 219; p. 532.
Vacuum-cleaner. J. H. Taylor. No. 1,157,456; Oct. 19; Gaz. vol. 219; p. 801.
Vacuum-cleaner, Handhold. J. B. Kirby. No. 1,156,235; Oct. 12; Gaz. vol. 219; p. 340.
Vacuum cleaning apparatus, Cleaning screens of. W. S. Sutton. No. 1,157,131; Oct. 19; Gaz. vol. 219; p. 686.
Vacuum-receptacles, Machine for the manufacture of. W. R. Burrows. No. 1,156,971; Oct. 19; Gaz. vol. 219; p. 629.
Valve. G. P. Bopp. No. 1,156,049; Oct. 12; Gaz. vol. 219; p. 278.
Valve. J. Cloos. No. 1,156,977; Oct. 19; Gaz. vol. 219; p. 631.
Valve. E. Fisher. No. 1,157,641; Oct. 19; Gaz. vol. 219; p. 861.
Valve. E. Fisher. No. 1,157,642; Oct. 19; Gaz. vol. 219; p. 862.
Valve. G. W. Isley. No. 1,155,576; Oct. 5; Gaz. vol. 219; p. 87.
Valve. E. King. No. 1,157,163; Oct. 19; Gaz. vol. 219; p. 697.
Valve. B. Lewis. No. 1,156,535; Oct. 12; Gaz. vol. 219; p. 446.
Valve. J. F. McElroy. No. 1,157,235; Oct. 19; Gaz. vol. 219; p. 723.
Valve. D. D. Miles, Jr. No. 1,155,602; Oct. 5; Gaz. vol. 219; p. 96.
Valve. J. L. Osborne. No. 1,157,956; Oct. 26; Gaz. vol. 219; p. 1038.
Valve. C. von Philp. No. 1,157,196; Oct. 19; Gaz. vol. 219; p. 709.
Valve. N. E. Woods. No. 1,156,963; Oct. 19; Gaz. vol. 219; p. 626.
Valve and valve-gear of internal-combustion engines. L. Wygodsky. No. 1,156,123; Oct. 12; Gaz. vol. 219; p. 304.
Valve, Automatic gravity-. W. J. and H. C. Doan. No. 1,156,837; Oct. 12; Gaz. vol. 219; p. 552.
Valve, Automatic plate-. R. Meyer. (Reissue.) No. 13,991; Oct. 12; Gaz. vol. 219; p. 565.
Valve, Flush-. P. J. Pauly, Jr. and G. Tanner. No. 1,157,035; Oct. 19; Gaz. vol. 219; p. 653.
Valve for hydraulic machines. H. Gille. No. 1,157,215; Oct. 19; Gaz. vol. 219; p. 716.
Valve for oil-tanks, Outlet-. J. E. Wooley. No. 1,155,537; Oct. 5; Gaz. vol. 219; p. 75.
Valve for steam-engines, Distributing-. J. Stumpf. No. 1,155,451; Oct. 5; Gaz. vol. 219; p. 44.
Valve for sumps, Automatic ejector-. W. P. Anderson. No. 1,157,491; Oct. 19; Gaz. vol. 219; p. 813.
Valve, Gas-. H. A. Cochran. No. 1,156,347; Oct. 12; Gaz. vol. 219; p. 379.
Valve, Gas-engine. H. V. Bowman. No. 1,157,077; Oct. 19; Gaz. vol. 219; p. 667.
Valve-grinder. A. Ashworth. No. 1,158,021; Oct. 26; Gaz. vol. 219; p. 1060.
Valve-grinder. C. F. Hess. No. 1,155,489; Oct. 5; Gaz. vol. 219; p. 58.
Valve, Hydraulic. A. L. Grandstaff. No. 1,158,204; Oct. 26; Gaz. vol. 219; p. 1125.
Valve-lifter. L. H. Holcomb. No. 1,157,223; Oct. 19; Gaz. vol. 219; p. 719.
Valve mechanism. H. P. Ballou. No. 1,157,972; Oct. 26; Gaz. vol. 219; p. 1044.
Valve mechanism. F. D. Butler. No. 1,157,081; Oct. 19; Gaz. vol. 219; p. 668.
Valve mechanism. J. Good. No. 1,156,991; Oct. 19; Gaz. vol. 219; p. 636.
Valve mechanism. F. L. Morse. No. 1,156,920; Oct. 19; Gaz. vol. 219; p. 611.
Valve mechanism, Float-. R. L. Stokes. No. 1,156,719; Oct. 12; Gaz. vol. 219; p. 511.
Valve mechanism for internal-combustion engines. T. J. Fay. No. 1,157,374; Oct. 19; Gaz. vol. 219; p. 772.
Valve mechanism, Molding-machine. W. Lewis. No. 1,157,406; Oct. 19; Gaz. vol. 219; p. 784.
Valve of internal-combustion engines. W. I. Phifer. No. 1,156,309; Oct. 12; Gaz. vol. 219; p. 365.
Valve-operating mechanism. O. Junggren. No. 1,157,941; Oct. 26; Gaz. vol. 219; p. 1032.
Valve-operating mechanism. F. L. Morse. No. 1,156,921; Oct. 19; Gaz. vol. 219; p. 611.
Valve-operating mechanism. J. H. Swan. No. 1,157,059; Oct. 19; Gaz. vol. 219; p. 661.
Valve-operating mechanism for internal-combustion engines. R. Urtel. No. 1,156,508; Oct. 12; Gaz. vol. 219; p. 438.
Valve, Pillow-. M. C. Schweinert and H. P. Kraft. No. 1,158,420; Oct. 26; Gaz. vol. 219; p. 1202.
Valve, Pressure-controlled. A. M. Houser. No. 1,157,870; Oct. 26; Gaz. vol. 219; p. 1007.
Valve, Rotary. J. Ferrer and E. Alonso. No. 1,157,684; Oct. 26; Gaz. vol. 219; p. 943.
Valve, Rubber float ball-. D. Stephen. No. 1,158,395; Oct. 26; Gaz. vol. 219; p. 1192.
Valve, Suction relief-. J. T. Atwood. No. 1,156,872; Oct. 19; Gaz. vol. 219; p. 593.
Valve, Train-pipe end. J. F. McElroy. No. 1,157,236; Oct. 19; Gaz. vol. 219; p. 723.
Valves, Making rubber float ball-. D. Stephen. No. 1,158,009; Oct. 26; Gaz. vol. 219; p. 1056.
Vanity-box and program, Combined. W. G. Restorff. No. 1,156,815; Oct. 12; Gaz. vol. 219; p. 542.
Vapor-apparatus-controlling means. P. C. Hewitt. No. 1,156,228; Oct. 12; Gaz. vol. 219; p. 338.
Varnish, Composition of matter to be used for bronze-powder. M. Fehringer. No. 1,157,768; Oct. 26; Gaz. vol. 219; p. 971.
Vault, Burial-. D. C. Boyd. No. 1,158,399; Oct. 26; Gaz. vol. 219; p. 1194.
Vault-light. W. J. Garrison. No. 1,155,348; Oct. 5; Gaz. vol. 219; p. 9.
Vault-light. C. B. Jacobs. No. 1,157,002; Oct. 19; Gaz. vol. 219; p. 640.
Vegetable-cutter. J. Segerc. No. 1,155,762; Oct. 5; Gaz. vol. 219; p. 151.
Vegetable-cutter. A. Stoltenberg. No. 1,157,448; Oct. 19; Gaz. vol. 219; p. 799.
Vegetable-mashing machine. E. Franke. No. 1,158,198; Oct. 26; Gaz. vol. 219; p. 1123.
Vegetable material, Bucking. R. Bohn. No. 1,156,048; Oct. 12; Gaz. vol. 219; p. 278.
Vehicle. J. F. Livingood. No. 1,158,137; Oct. 26; Gaz. vol. 219; p. 1102.
Vehicle-bodies, Collapsible window-frame for. A. F. Koerber. No. 1,157,875; Oct. 26; Gaz. vol. 219; p. 1009.
Vehicle-body, Convertible. W. I. Twombly. No. 1,157,266; Oct. 19; Gaz. vol. 219; p. 736.
Vehicle body-elevating mechanism. T. Wright. No. 1,157,487; Oct. 19; Gaz. vol. 219; p. 812.
Vehicle body-mounting. W. R. Tennille. No. 1,155,528; Oct. 5; Gaz. vol. 219; p. 72.
Vehicle construction. R. C. Bartlett. No. 1,156,875; Oct. 19; Gaz. vol. 219; p. 594.
Vehicle curtain-fastener. F. Laible. No. 1,157,312; Oct. 19; Gaz. vol. 219; p. 751.
Vehicle driving mechanism, Motor-. W. J. Evans. No. 1,156,766; Oct. 12; Gaz. vol. 219; p. 527.
Vehicle folding top. N. Holden. No. 1,155,728; Oct. 5; Gaz. vol. 219; p. 141.
Vehicle front-end construction. R. L. Boyd. No. 1,158,168; Oct. 26; Gaz. vol. 219; p. 1112.
Vehicle-indicator. J. F. Frazer. No. 1,157,157; Oct. 19; Gaz. vol. 219; p. 695.
Vehicle-jack. C. G. Ette. No. 1,158,192; Oct. 26; Gaz. vol. 219; p. 1121.
Vehicle lighting system. H. L. Wohlers. No. 1,157,748; Oct. 26; Gaz. vol. 219; p. 966.
Vehicle, Motor-. A. Loomis. No. 1,157,878; Oct. 26; Gaz. vol. 219; p. 1010.
Vehicle, Motor-. A. Loomis. No. 1,157,879; Oct. 26; Gaz. vol. 219; p. 1010.
Vehicle, Motor-. J. Neznalski and J. Maslanik. No. 1,157,174; Oct. 19; Gaz. vol. 219; p. 701.
Vehicle, Motor-. L. S. Pfouts. No. 1,157,803; Oct. 26; Gaz. vol. 219; p. 983.
Vehicle, Motor-. T. G. Van Sant. No. 1,156,853; Oct. 12; Gaz. vol. 219; p. 558.
Vehicle, Motor-. J. G. Vincent. No. 1,157,068; Oct. 19; Gaz. vol. 219; p. 664.
Vehicle propeller-actuating mechanism. R. C. Sayer. No. 1,156,712; Oct. 12; Gaz. vol. 219; p. 508.
Vehicle rain and snow shield. D. F. and C. B. Cowell. No. 1,155,705; Oct. 5; Gaz. vol. 219; p. 133.
Vehicle running-gear, Motor-. D. M. Dearing. No. 1,155,801; Oct. 5; Gaz. vol. 219; p. 167.
Vehicle-seat, Collapsible. F. Kiehler. No. 1,156,408; Oct. 12; Gaz. vol. 219; p. 402.
Vehicle seat construction. J. E. Luse. No. 1,157,880; Oct. 26; Gaz. vol. 219; p. 1011.
Vehicle, Self-loading. O. W. Bradsher. No. 1,157,291; Oct. 19; Gaz. vol. 219; p. 743.
Vehicle-spring. R. Haupt. No. 1,156,996; Oct. 19; Gaz. vol. 219; p. 638.
Vehicle-spring. E. Koeb and R. P. Thompson. No. 1,156,909; Oct. 19; Gaz. vol. 219; p. 607.
Vehicle-spring. M. M. McIntyre. No. 1,155,752; Oct. 5; Gaz. vol. 219; p. 148.
Vehicle-spring. F. J. Palmer. No. 1,156,546; Oct. 12; Gaz. vol. 219; p. 450.
Vehicle starting device, Motor-. E. C. Russell. No. 1,155,511; Oct. 5; Gaz. vol. 219; p. 66.
Vehicle-top. W. P. Dorl. No. 1,157,977; Oct. 26; Gaz. vol. 219; p. 1046.
Vehicle-wheel. E. K. Baker. No. 1,155,395; Oct. 5; Gaz. vol. 219; p. 25.
Vehicle-wheel. E. K. Baker. No. 1,155,897; Oct. 5; Gaz. vol. 219; p. 25.
Vehicle-wheel. N. Cornfield. No. 1,158,183; Oct. 26; Gaz. vol. 219; p. 1117.
Vehicle-wheel. M. P. Kelly. No. 1,155,582; Oct. 5; Gaz. vol. 219; p. 89.
Vehicle-wheel. C. E. Krebs. No. 1,156,486; Oct. 12; Gaz. vol. 219; p. 430.
Vehicle-wheel. R. Kronenberg. No. 1,156,153; Oct. 12; Gaz. vol. 219; p. 314.
Vehicle-wheel. T. E. Murray. No. 1,156,427; Oct. 12; Gaz. vol. 219; p. 409.
Vehicle-wheel. L. Risk. No. 1,156,099; Oct. 12; Gaz. vol. 219; p. 296.
Vehicle-wheel. F. A. Schaefer. No. 1,156,318; Oct. 12; Gaz. vol. 219; p. 367.

Vehicle-wheel. C. J. Shackleford. No. 1,158,314; Oct. 26; Gaz. vol. 219; p. 1164.
Vehicle-wheel, Spring. F. R. Willson. No. 1,156,960; Oct. 19; Gaz. vol. 219; p. 625.
Vehicles, Combined front gear and steering connection for children's. W. J. Sieffel. No. 1,156,023; Oct. 5; Gaz. vol. 219; p. 242.
Vehicles, Electric apparatus for motor-. H. W. Leonard. No. 1,157,011; Oct. 19; Gaz. vol. 219; p. 643.
Vehicles, Gear-controlling mechanism for motor-. R. Huff. No. 1,157,093; Oct. 26; Gaz. vol. 219; p. 946.
Vehicles, Knuckle-joint for motor-. C. M. Smith. No. 1,158,323; Oct. 26; Gaz. vol. 219; p. 1166.
Vehicles, Lighting system for motor-. R. Head. No. 1,157,105; Oct. 19; Gaz. vol. 219; p. 676.
Vehicles, Transmission mechanism for motor-. A. Loomis. No. 1,157,015; Oct. 19; Gaz. vol. 219; p. 645.
Vending device. B. M. Hair. No. 1,156,140; Oct. 12; Gaz. vol. 219; p. 310.
Vending-machine. S. Guadagnino. No. 1,155,918; Oct. 5; Gaz. vol. 219; p. 207.
Vending-machine. C. A. Melchert. No. 1,157,792; Oct. 26; Gaz. vol. 219; p. 979.
Vending-machine. C. E. Turnquist and H. E. Rich. No. 1,157,650; Oct. 19; Gaz. vol. 219; p. 865.
Vending machine, Air-. A. P. Holden and R. J. Copeland. No. 1,156,078; Oct. 12; Gaz. vol. 219; p. 288.
Vending-machine, Coin-operated. J. A. Webster. No. 1,157,069; Oct. 19; Gaz. vol. 219; p. 664.
Vending stamps, tickets, coupons, &c., Machine for. W. G. Templeton. No. 1,157,649; Oct. 19; Gaz. vol. 219; p. 864.
Veneer pad. L. F. Flipse. No. 1,156,895; Oct. 19; Gaz. vol. 219; p. 602.
Ventilator: *See*—
Window-ventilator.
Vessel. A. McDougall. No. 1,157,022; Oct. 19; Gaz. vol. 219; p. 648.
Vestibule-diaphragm, Metal. T. H. Russum. No. 1,157,182; Oct. 19; Gaz. vol. 219; p. 704.
Violins and other musical instruments, Shoulder-rest for. B. Poehland. No. 1,156,925; Oct. 19; Gaz. vol. 219; p. 612.
Vise-bench, Pipe-fitter's. F. Ackerman. No. 1,156,965; Oct. 19; Gaz. vol. 219; p. 627.
Vise, Chain pipe-. G. Amborn. No. 1,158,414; Oct. 26; Gaz. vol. 219; p. 1200.
Volt-ampere meter. P. M. Lincoln. No. 1,156,413; Oct. 12; Gaz. vol. 219; p. 404.
Voltage-regulator, Automatic. G. S. Neeley. No. 1,158,001; Oct. 26; Gaz. vol. 219; p. 1053.
Voting-machines and the like, Controlling device for. J. A. Butler. No. 1,156,028; Oct. 5; Gaz. vol. 219; p. 244.
Vulcanizer. F. L. Gibson. No. 1,155,909; Oct. 5; Gaz. vol. 219; p. 203.
Vulcanizer. A. Magri and A. V. Griffeth. No. 1,156,793; Oct. 12; Gaz. vol. 219; p. 535.
Vulcanizer. C. A. Shaler. No. 1,158,315; Oct. 26; Gaz. vol. 219; p. 1164.
Vulcanizer. C. Taarud. No. 1,157,340; Oct. 19; Gaz. vol. 219; p. 760.
Vulcanizing apparatus. J. W. Arthur. No. 1,157,751; Oct. 26; Gaz. vol. 219; p. 966.
Wagon-brake. F. Watson. No. 1,155,453; Oct. 5; Gaz. vol. 219; p. 45.
Wagon, Combination van-. M. V. Koger. No. 1,156,693; Oct. 12; Gaz. vol. 219; p. 502.
Wagon, Dump-. T. Wright. No. 1,157,486; Oct. 19; Gaz. vol. 219; p. 812.
Wagon, Dumping-. F. J. Kunkel. No. 1,155,739; Oct. 5; Gaz. vol. 219; p. 144.
Wagon, Dumping-. H. Luedinghaus, Jr. No. 1,158,138; Oct. 26; Gaz. vol. 219; p. 1102.
Wagon running-gear. D. F. Aleshire. No. 1,158,155; Oct. 26; Gaz. vol. 219; p. 1108.
Waist-closure. E. T. Baskin. No. 1,156,518; Oct. 12; Gaz. vol. 219; p. 441.
Walking-stick transformable into a seat. C. Vernet. No. 1,157,604; Oct. 19; Gaz. vol. 219; p. 849.
Wall-board. P. J. Carey. No. 1,156,753; Oct. 12; Gaz. vol. 219; p. 522.
Wall, Collapsible sheet-metal. S. Brown. No. 1,156,053; Oct. 12; Gaz. vol. 219; p. 279.
Wall, Hollow-tile. P. H. Bevier. No. 1,158,362; Oct. 26; Gaz. vol. 219; p. 1180.
Wardrobe, Sanitary. R. H. Vance. No. 1,157,346; Oct. 19; Gaz. vol. 219; p. 762.
Washboard. J. Cipolloni. No. 1,155,888; Oct. 5; Gaz. vol. 219; p. 196.
Washer: *See*—
Coupling-washer.
Hose-washer.
Washer-holder rivet-set. N. Raptias. No. 1,156,434; Oct. 12; Gaz. vol. 219; p. 411.
Washing and wringing machine, Combined vacuum. S. B. Miller. No. 1,155,946; Oct. 5; Gaz. vol. 219; p. 215.
Washing-machine. J. C. Petit. No. 1,157,178; Oct. 19; Gaz. vol. 219; p. 702.
Washing-machine. E. E. Riggs. No. 1,156,177; Oct. 12; Gaz. vol. 219; p. 322.
Washing-machine agitator. J. M. Hoffman. No. 1,157,222; Oct. 19; Gaz. vol. 219; p. 718.
Washing-machine cylinder. O. K. Oppen. No. 1,157,121; Oct. 19; Gaz. vol. 219; p. 682.
Washing-machine gearing. W. H. Voss. No. 1,156,116; Oct. 12; Gaz. vol. 219; p. 301.
Washing-machine gearing. O. H. Watkins. No. 1,157,474; Oct. 19; Gaz. vol. 219; p. 808.
Watch, Stop-. F. A. De Lay. No. 1,156,893; Oct. 19; Gaz. vol. 219; p. 601.
Water-closet. J. F. Kelly. No. 1,155,661; Oct. 5; Gaz. vol. 219; p. 117.
Water-closet. J. H. Leonard. No. 1,157,989; Oct. 26; Gaz. vol. 219; p. 1049.
Water-closet. W. H. Lloyd. No. 1,155,498; Oct. 5; Gaz. vol. 219; p. 62.
Water-closet, Aseptic. W. C. Rees. No. 1,156,175; Oct. 12; Gaz. vol. 219; p. 321.
Water-closet bowl. B. Catchings. No. 1,155,885; Oct. 5; Gaz. vol. 219; p. 195.
Water-closet gage. G. Middleton. No. 1,157,567; Oct. 19; Gaz. vol. 219; p. 838.
Water-closet seats, Sanitary guard for. H. Müller. No. 1,158,142; Oct. 26; Gaz. vol. 219; p. 1103.
Water-cooler. W. L. Davis. No. 1,157,927; Oct. 26; Gaz. vol. 219; p. 1027.
Water-heater. C. E. Reed. No. 1,156,814; Oct. 12; Gaz. vol. 219; p. 542.
Water-heater construction. F. L. O. Wadsworth. No. 1,156,949; Oct. 19; Gaz. vol. 219; p. 620.
Water-motor. J. W. Kinney. No. 1,156,692; Oct. 12; Gaz. vol. 219; p. 502.
Water-motor. O. H. Olive. No. 1,157,416; Oct. 19; Gaz. vol. 219; p. 788.
Water-power. F. Brungess. No. 1,155,881; Oct. 5; Gaz. vol. 219; p. 194.
Water-power plant. E. Bassett. No. 1,157,922; Oct. 26; Gaz. vol. 219; p. 1025.
Water-purifying device. L. C. Lashmet. No. 1,157,233; Oct. 19; Gaz. vol. 219; p. 722.
Water-system-testing device. E. Kennedy. No. 1,155,821; Oct. 5; Gaz. vol. 219; p. 174.
Water-tube boiler. S. Thurstensen. No. 1,157,737; Oct. 26; Gaz. vol. 219; p. 962.
Watering apparatus, Stock-. A. I. Ralston. No. 1,157,122; Oct. 19; Gaz. vol. 219; p. 683.
Waterproof compound, Flexible hydraulic. A. F. Lester. No. 1,157,234; Oct. 19; Gaz. vol. 219; p. 723.
Wattmeter, Electric. P. M. Lincoln. No. 1,156,412; Oct. 12; Gaz. vol. 219; p. 404.
Wave-motor. H. E. Fisher. No. 1,156,355; Oct. 12; Gaz. vol. 219; p. 382.
Waves, Method and apparatus for utilizing Hertzian. E. R. Gill. No. 1,155,653; Oct. 5; Gaz. vol. 219; p. 114.
Weather-strip. H. H. Schroyer. No. 1,157,125; Oct. 19; Gaz. vol. 219; p. 684.
Weather-stripping. D. Hoyt. No. 1,157,871; Oct. 26; Gaz. vol. 219; p. 1007.
Weather-stripping. D. Hoyt. No. 1,157,872; Oct. 26; Gaz. vol. 219; p. 1007.
Weatherproof covering. F. C. Overbury and H. C. Platts. No. 1,158,266; Oct. 26; Gaz. vol. 219; p. 1145.
Weed-cutter or cultivator. D. J. E. Contl. No. 1,157,150; Oct. 19; Gaz. vol. 219; p. 693.
Weighing and bagging machine. J. E. Henderson. No. 1,155,487; Oct. 5; Gaz. vol. 219; p. 57.
Weighing apparatus. E. Outrebon. No. 1,157,716; Oct. 26; Gaz. vol. 219; p. 954.
Weighing apparatus. J. D. Webber. No. 1,157,350; Oct. 19; Gaz. vol. 219; p. 764.
Weighing apparatus, Computing. H. A. Carpenter and A. W. Warner. No. 1,156,864; Oct. 12; Gaz. vol. 219; p. 562.
Welded joint. L. S. Schmidt. No. 1,158,307; Oct. 26; Gaz. vol. 219; p. 1162.
Welding apparatus, Electric. T. E. Murray. No. 1,156,426; Oct. 12; Gaz. vol. 219; p. 409.
Welding, Arc-. J. A. Seede. No. 1,156,502; Oct. 12; Gaz. vol. 219; p. 435.
Welding-machine, Electric. W. C. Lindemann and K. D. Camp. No. 1,155,497; Oct. 5; Gaz. vol. 219; p. 61.
Well-casing spear. W. Y. Jack. No. 1,155,926; Oct. 5; Gaz. vol. 219; p. 209.
Well closure, Oil-. W. L. Bliss. No. 1,157,498; Oct. 19; Gaz. vol. 219; p. 816.
Well-drilling apparatus, Driving-gearing for. C. F. Rigby. No. 1,157,582; Oct. 19; Gaz. vol. 219; p. 842.
Well-drilling machinery, Deep-. A. W. Rinebold. No. 1,156,178; Oct. 12; Gaz. vol. 219; p. 322.
Well rig, Oil-. T. Fontenot. No. 1,156,678; Oct. 12; Gaz. vol. 219; p. 497.
Wheel: *See*—
Artillery-wheel.
Automobile steering-wheel.
Car-wheel.
Cushion-wheel.
Elastic wheel.
Fifth-wheel.
Resilient wheel.
Spring-wheel.
Traction-wheel.
Tractor-wheel.
Trolley-wheel.
Turbine bucket-wheel.
Vehicle-wheel.
Wheel. J. Y. Downing. No. 1,157,302; Oct. 19; Gaz. vol. 219; p. 747.
Wheel. E. Ferriss. No. 1,156,676; Oct. 12; Gaz. vol. 219; p. 497.
Wheel. J. W. Lewellen. No. 1,157,559; Oct. 19; Gaz. vol. 219; p. 836.
Wheel. L. A. Young. No. 1,156,124; Oct. 12; Gaz. vol. 219; p. 304.

Wheel-guard and sleigh-runner, Combined. W. E. Graham. No. 1,156,284; Oct. 12; Gaz. vol. 219; p. 356.
Wheel-lock. F. E. Winchester. No. 1,156,197; Oct. 12; Gaz. vol. 219; p. 327.
Wheel-mounting. A. H. Worrest. No. 1,155,538; Oct. 5; Gaz. vol. 219; p. 75.
Wheel-rim, Vehicle. R. W. Dick. No. 1,157,156; Oct. 19; Gaz. vol. 219; p. 695.
Wheel scraper, Traction-. R. S. Nichol. No. 1,156,248; Oct. 12; Gaz. vol. 219; p. 345.
Wheel-tread fender. J. H. Kuhns. No. 1,156,604; Oct. 12; Gaz. vol. 219; p. 470.
Wheel-tread, Vehicle. L. H. Homrighausen. No. 1,155,925; Oct. 5; Gaz. vol. 219; p. 208.
Wheels, Demountable rim for automobile-. E. K. Baker. No. 1,155,398; Oct. 5; Gaz. vol. 219; p. 26.
Wheels, Resilient tread for vehicle-. J. P. Murrey. No. 1,156,620; Oct. 12; Gaz. vol. 219; p. 476.
Wheelbarrow. J. C. Page. No. 1,157,034; Oct. 19; Gaz. vol. 219; p. 652.
Wheelbarrow. M. O. Rickards. No. 1,158,291; Oct. 26; Gaz. vol. 219; p. 1155.
Whip. J. E. Bloomberg. No. 1,157,838; Oct. 26; Gaz. vol. 219; p. 996.
Whip. A. J. Schmidt. No. 1,157,424; Oct. 19; Gaz. vol. 219; p. 791.
Wind instrument, Brass. M. B. Martin. No. 1,158,384; Oct. 26; Gaz. vol. 219; p. 1188.
Wind-shields, Hinge-joint for. H. W. Bobbins. No. 1,155,441; Oct. 5; Gaz. vol. 219; p. 41.
Winding-drum. L. Peloquin. No. 1,157,897; Oct. 26; Gaz. vol. 219; p. 1018.
Windmill. R. McMullan. No. 1,157,563; Oct. 19; Gaz. vol. 219; p. 837.
Windmill. D. R. Scholes. No. 1,155,518; Oct. 5; Gaz. vol. 219; p. 69.
Windmill-regulator. G. Sippert. No. 1,158,393; Oct. 26; Gaz. vol. 219; p. 1191.
Window-catch, Automatic. F. W. Doering, Jr. No. 1,157,854; Oct. 26; Gaz. vol. 219; p. 1001.
Window-cleaner. O. G. Clay. No. 1,156,522; Oct. 12; Gaz. vol. 219; p. 442.
Window construction. J. F. O'Brien. No. 1,157,031; Oct. 19; Gaz. vol. 219; p. 651.
Window-lock. L. E. De Neergaard. No. 1,157,767; Oct. 26; Gaz. vol. 219; p. 971.
Window-operating device, Self-locking. S. E. Cibulas. No. 1,157,760; Oct. 26; Gaz. vol. 219; p. 969.
Window-regulator. J. E. Marsden. No. 1,155,754; Oct. 5; Gaz. vol. 219; p. 148.
Window-screen. C. C. Burgwald. No. 1,158,116; Oct. 26; Gaz. vol. 219; p. 1094.
Window-screen, Disappearing. J. A. Bridges. No. 1,155,546; Oct. 5; Gaz. vol. 219; p. 78.
Window-ventilator. M. McKinzie. No. 1,158,252; Oct. 26; Gaz. vol. 219; p. 1141.
Windows, Antirattler for. J. Saul. No. 1,155,446; Oct. 5; Gaz. vol. 219; p. 42.
Windows, &c., Apparatus for preventing and removing deposit of moisture on. C. Holz. No. 1,158,218; Oct. 26; Gaz. vol. 219; p. 1129.
Wire and producing the same, Alloy-surfaced. W. M. Page. No. 1,156,170; Oct. 12; Gaz. vol. 219; p. 319.
Wire and terminal therefor, Insulated. A. M. Wentworth. No. 1,157,916; Oct. 26; Gaz. vol. 219; p. 1024.
Wire-bound article. E. I. Braddock. No. 1,156,131; Oct. 12; Gaz. vol. 219; p. 307.
Wire-finishing machine. A. Lilljquist. No. 1,156,299; Oct. 12; Gaz. vol. 219; p. 362.
Wire gate. W. H. Sommer. No. 1,157,054; Oct. 19; Gaz. vol. 219; p. 650.
Wire-line wrench and making same. W. T. Herrick. No. 1,157,938; Oct. 26; Gaz. vol. 219; p. 1031.
Wire-reel. M. W. Watkins. No. 1,156,569; Oct. 12; Gaz. vol. 219; p. 459.
Wire screen. C. W. Warnhoff. No. 1,157,349; Oct. 19; Gaz. vol. 219; p. 763.
Wire-splicer. E. S. Acheson. No. 1,158,018; Oct. 26; Gaz. vol. 219; p. 1059.
Wire-stretcher. A. C. Hanson. No. 1,156,597; Oct. 12; Gaz. vol. 219; p. 467.
Wire-stretcher. M. E. Sewalt. No. 1,156,322; Oct. 12; Gaz. vol. 219; p. 369.
Wire-stretching appliance. W. J. Kingcade. No. 1,157,551; Oct. 19; Gaz. vol. 219; p. 833.
Wire-support. A. F. Fest. No. 1,155,716; Oct. 5; Gaz. vol. 219; p. 136.
Wire-tightener. A. P. Johnson. No. 1,157,110; Oct. 19; Gaz. vol. 219; p. 678.
Wire-working machine. F. R. Holdred. No. 1,155,729; Oct. 5; Gaz. vol. 219; p. 141.
Wires, Manufacture of fine refractory-metal. F. Blau. No. 1,157,288; Oct. 19; Gaz. vol. 219; p. 742.
Wireless receiving improvement. G. W. Pickard. No. 1,156,625; Oct. 12; Gaz. vol. 219; p. 478.
Wool-combers, Stationary non-brush device for. F. B. McMahon. No. 1,156,912; Oct. 19; Gaz. vol. 219; p. 608.
Work-holder. E. R. Darling. No. 1,155,706; Oct. 5; Gaz. vol. 219; p. 133.
Woven fabric for belts. B. R. Benjamin. No. 1,157,755; Oct. 26; Gaz. vol. 219; p. 968.
Wrapper for articles of merchandise. E. Hopkinson. No. 1,156,080; Oct. 12; Gaz. vol. 219; p. 289.
Wrapping commercial coils of wire, Machine for. F. M. and W. B. Pierce. No. 1,158,405; Oct. 26; Gaz. vol. 219; p. 1196.
Wrapping-machine. W. B. and F. M. Pierce. No. 1,158,278; Oct. 26; Gaz. vol. 219; p. 1150.
Wrapping-machine. F. M. and W. B. Pierce. No. 1,158,406; Oct. 26; Gaz. vol. 219; p. 1196.
Wrapping machine, Package-. J. W. Dearborn. No. 1,158,186; Oct. 26; Gaz. vol. 219; p. 1119.
Wrapping-machines, Folding apparatus for. W. Rose. No. 1,157,585; Oct. 19; Gaz. vol. 219; p. 843.
Wreath, vine, or spray of artificial leaves. A. G. Rossig and T. S. Crane. No. 1,158,076; Oct. 26; Gaz. vol. 219; p. 1080.
Wrench: *See*—
Jar-cover wrench.
Nut-wrench.
Pipe-wrench.
Pipe and nut wrench.
Quick-acting wrench.
Socket-wrench.
Spanner-wrench.
Wire-line wrench.
Wrench. G. L. Baxter. No. 1,157,834; Oct. 26; Gaz. vol. 219; p. 994.
Wrench. W. L. Bessolo. No. 1,158,164; Oct. 26; Gaz. vol. 219; p. 1111.
Wrench. L. J. Black. No. 1,157,362; Oct. 19; Gaz. vol. 219; p. 768.
Wrench. C. Druck. 1,156,764; Oct. 12; Gaz. vol. 219; p. 526.
Wrench. W. L. Hannsz. No. 1,156,902; Oct. 19; Gaz. vol. 219; p. 604.
Wrench. F. Humphris. No. 1,157,540; Oct. 19; Gaz. vol. 219; p. 830.
Wrench. J. Lerfald. No. 1,155,937; Oct. 5; Gaz. vol. 219; p. 212.
Wrench. L. W. Millsap, Jr. No. 1,155,948; Oct. 5; Gaz. vol. 219; p. 216.
Wrench. B. E. Moore. No. 1,155,673; Oct. 5; Gaz. vol. 219; p. 121.
Wrench. M. V. Seivert. No. 1,157,427; Oct. 19; Gaz. vol. 219; p. 793.
Wrench. A. J. Seybert. No. 1,155,841; Oct. 5; Gaz. vol. 219; p. 181.
Wrench. J. C. Wallgursky. No. 1,158,343; Oct. 26; Gaz. vol. 219; p. 1173.
Wrench. J. W. Walters. No. 1,155,979; Oct. 5; Gaz. vol. 219; p. 226.
Wrench. C. D. Wilson. No. 1,155,857; Oct. 5; Gaz. vol. 219; p. 186.
Wrenches, Clamp attachment for. E. Hakey. No. 1,157,383; Oct. 19; Gaz. vol. 219; p. 776.
Wringer: *See*—
Clothes-wringer.
Mop-wringer.
Wringer. M. Paluska. No. 1,158,148; Oct. 26; Gaz. vol. 219; p. 1105.
Yarn, thread, or similar materials, Compensator device for controlling the unwinding of. G. Marcroft. No. 1,156,913; Oct. 19; Gaz. vol. 219; p. 608.
Yoke for draft-gears. C. J. Nash. No. 1,156,618; Oct. 12; Gaz. vol. 219; p. 476.
Zinc ore or zinc-bearing material, Treatment of. S. Truax. No. 1,155,628; Oct. 5; Gaz. vol. 219; p. 105.

ALPHABETICAL LIST OF DESIGNS.

Altar. G. Rathner. No. 48,009; Oct. 19; Gaz. vol. 219; p. 891.
Article of manufacture. G. A. Kelch. No. 47,958; Oct. 12; Gaz. vol. 219; p. 569.
Atomizer, Coupling for the air-tube and heelpiece of an. T. A. De Vilbiss. No. 48,026; Oct. 26; Gaz. vol. 219; p. 1208.
Badge. S. C. Kull. No. 47,926; Oct. 5; Gaz. vol. 219; p. 255.
Bank, Savings-. B. Manovill. No. 47,929; Oct. 5; Gaz. vol. 219; p. 256.
Battery handle, Storage-. T. A. Willard. No. 47,978; Oct. 12; Gaz. vol. 219; p. 573.
Bed-trimmings, Neck for. J. J. Nash. No. 48,038; Oct. 26; Gaz. vol. 219; p. 1210.
Biscuit. J. L. Kellogg. No. 48,001; Oct. 19; Gaz. vol. 219; p. 890.
Bottle. W. Orem. No. 48,007; Oct. 19; Gaz. vol. 219; p. 891.
Bottle, Poison-. D. Scallione. No. 48,011; Oct. 19; Gaz. vol. 219; p. 891.
Bracelet-link. M. H. Cox. No. 47,993; Oct. 19; Gaz. vol. 219; p. 888.
Broom or mop holder. J. S. Leonhardt. No. 47,927; Oct. 5; Gaz. vol. 219; p. 255.
Brush handle, Shaving-. C. E. Thompson. No. 48,050; Oct. 26; Gaz. vol. 219; p. 1212.
Button-hooks or similar articles, Handle for. J. L. Sommer. No. 48,015; Oct. 19; Gaz. vol. 219; p. 892.
Cabinet, Scale-. J. B. Watling. No. 48,051; Oct. 26; Gaz. vol. 219; p. 1212.
Car-replacer. H. A. Eaton. No. 47,949; Oct. 12; Gaz. vol. 219; p. 568.
Chain connector, Insulated. G. W. Goodridge. No. 47,917; Oct. 5; Gaz. vol. 219; p. 254.
Chain-link. A. Cooper. Nos. 48,023–5; Oct. 26; Gaz. vol. 219; p. 1208.
Chair, Bent-stock. F. H. Herhold. No. 48,030; Oct. 26; Gaz. vol. 219; p. 1209.
Chandelier, Illuminating-. E. C. McKinnie. No. 48,034; Oct. 26; Gaz. vol. 219; p. 1209.
Chandeliers and brackets, Arm for. C. E. Jones. No. 47,920; Oct. 5; Gaz. vol. 219; p. 254.
Chandeliers and brackets, Arm for. C. E. Jones. No. 48,032; Oct. 26; Gaz. vol. 219; p. 1209.
Charm, badge, or similar article. J. Bain. Nos. 47,980–81; Oct. 19; Gaz. vol. 219; p. 886.
Charm, stick-pin, statuette, lucky dog, or comic dog. S. Kondow. No. 48,002; Oct. 19; Gaz. vol. 219; p. 890.
Clock. W. G. Campbell. No. 47,946; Oct. 12; Gaz. vol. 219; p. 567.
Coin-actuating-machine casing. W. L. Bratton. No. 47,945; Oct. 12; Gaz. vol. 219; p. 567.
Collar, Fold-. H. F. Hurd. No. 48,000; Oct. 19; Gaz. vol. 219; p. 890.
Concrete bridge. D. B. Luten. No. 47,928; Oct. 5; Gaz. vol. 219; p. 255.
Cork or seal for capping bottles, Crown. S. Kaye. No. 48,033; Oct. 26; Gaz. vol. 219; p. 1209.
Dispensing device. R. A. Courtney. No. 47,948; Oct. 12; Gaz. vol. 219; p. 568.
Display-cabinet. M. J. Karpeles. Nos. 47,954–7; Oct. 12; Gaz. vol. 219; p. 569.
Electric-candle-base hickey. C. E. Jones. No. 47,924; Oct. 5; Gaz. vol. 219; p. 255.
Electric-lighting-fixture canopy and socket cover. F. K. Maers. No. 48,036; Oct. 26; Gaz. vol. 219; p. 1210.
Electric-lighting fixtures, Ring for. F. K. Maers. No. 48,035; Oct. 26; Gaz. vol. 219; p. 1210.
Electric-lighting fixtures, Ring for. F. K. Maers. No. 48,037; Oct. 26; Gaz. vol. 219; p. 1210.
Electrical-conduit outlet-box. C. H. Bissell. Nos. 47,985–6; Oct. 19; Gaz. vol. 219; p. 887.
Electrical-conduit outlet-box. C. H. Bissell and D. C. Gidley. No. 47,987; Oct. 19; Gaz. vol. 219; p. 887.
Fabric lace. A. E. Newton. Nos. 48,005–6; Oct. 19; Gaz. vol. 219; pp. 890–1.
Fan-frame, Engine-driven. W. J. H. Strong. No. 48,016; Oct. 19; Gaz. vol. 219; p. 892.
Filter. J. F. Stocking. No. 47,970; Oct. 12; Gaz. vol. 219; p. 572.
Furniture leg, Store-. M. Taussig. No 47,937; Oct. 5; Gaz. vol. 219; p. 257.
Game, Playing-track of a board-. G. S. Parker. No. 48,008; Oct. 19; Gaz. vol. 219; p. 891.
Garter. M. B. Hammond. No. 47,999; Oct. 19; Gaz. vol. 219; p. 889.
Glass bowl. M. Schaffer. No. 48,046; Oct. 26; Gaz. vol. 219; p. 1212.
Glass light-shade. K. Booth. No. 47,907; Oct. 5; Gaz. vol. 219; p. 252.
Goggles, Pair of. H. E. Fenno. No. 47,916; Oct. 5; Gaz. vol. 219; p. 253.
Golf-tee. H. Abert. No. 47,942; Oct. 12; Gaz. vol. 219; p. 566.
Grocery-bin. N. J. Weber. No. 47,974; Oct. 12; Gaz. vol. 219; p. 572.
Hair-fastener. G. A. Gleeson. No. 47,950; Oct. 12; Gaz. vol. 219; p. 568.
Hair-pin. M. C. Stone. No. 47,971; Oct. 12; Gaz. vol. 219; p. 572.
Hames, Attaching-plate for. W. H. Rottger. No. 47,907; Oct. 12; Gaz. vol. 219; p. 571.
Hand-bag. L. A. Samstag. No. 47,968; Oct. 12; Gaz. vol. 219; p. 571.
Hand-hole plate. E. C. Meier. No. 47,931; Oct. 5; Gaz. vol. 219; p. 256.
Harness ornament. A. Albright, Jr. No. 47,943; Oct. 12; Gaz. vol. 219; p. 566.
Heel-pad for footwear, Rubber. W. W. Phillips. No. 48,042; Oct. 26; Gaz. vol. 219; p. 1211.
Hose-washer. E. F. J. Breuer. No. 47,989; Oct. 19; Gaz. vol. 219; p. 888.
Hose-washer. R. Mueller. No. 48,004; Oct. 19; Gaz. vol. 219; p. 890.
Kitchen-indicator. A. Wilson. No. 48,052; Oct. 26; Gaz. vol. 219; p. 1212.
Lamp. D. D. King. No. 47,925; Oct. 5; Gaz. vol. 219; p. 255.
Lamp, Automobile-. D. H. Elkins. No. 47,915; Oct. 5; Gaz. vol. 219; p. 253.
Lamp fixture, Electric-light hanging-. F. C. Baker. No. 47,982; Oct. 19; Gaz. vol. 219; p. 886.
Lamp-shade. E. F. Guth. No. 47,918; Oct. 5; Gaz. vol. 219; p. 254.
Lamp socket, Electric-. F. P. Gates. No. 48,028; Oct. 26; Gaz. vol. 219; p. 1208.
Lantern. O. E. Hill. No. 48,031; Oct. 26; Gaz. vol. 219; p. 1209.
Lemon-squeezer frame. C. Morgan. No. 47,932; Oct. 5; Gaz. vol. 219; p. 256.
Light-reflecting bowls, Hanger for. C. E. Jones. Nos. 47,921–3; Oct. 5; Gaz. vol. 219; pp. 254–5.
Lighting-fixture. J. Chassaing. No. 47,991; Oct. 19; Gaz. vol. 219; p. 888.
Lighting-fixture. E. F. Guth and R. V. Owen. No. 47,997; Oct. 19; Gaz. vol. 219; p. 889.
Lighting-fixture. H. Pickhardt. No. 47,934; Oct. 5; Gaz. vol. 219; p. 257.
Lighting-fixture back plate. H. F. Voshardt. No. 47,939; Oct. 5; Gaz. vol. 219; p. 258.
Lighting-fixtures, Socket-cover for. G. M. Tepfer. No. 47,973; Oct. 12; Gaz. vol. 219; p. 572.
Liquid-dispenser. H. G. Cordley. No. 48,022; Oct. 26; Gaz. vol. 219; p. 1208.
Massage-device body. A. L. Hansen. No. 47,952; Oct. 12; Gaz. vol. 219; p. 568.
Medallion, badge, watch-fob, watch-charm, ring, scarf-pin, brooch, button, or similar article of jewelry. F. A. Berry. No. 47,983; Oct. 19; Gaz. vol. 219; p. 886.
Metallic band or border. E. L. White. No. 47,940; Oct. 5; Gaz. vol. 219; p. 258.
Ornament, Head-. K. M. Guinis and S. D. Vamvas. No. 47,996; Oct. 19; Gaz. vol. 219; p. 889.
Pan-lifter. W. H. McDonough. No. 47,961; Oct. 12; Gaz. vol. 219; p. 570.
Piano case, Player-. W. Lane. No. 47,959; Oct. 12; Gaz. vol. 219; p. 570.
Picture. J. Wojcik. No. 47,979; Oct. 12; Gaz. vol. 219; p. 573.
Pin or badge. J. A. Briegel. No. 47,990; Oct. 19; Gaz. vol. 219; p. 888.
Plate. A. Westerlind. Nos. 47,975–6; Oct. 12; Gaz. vol. 219; pp. 572–3.
Platter, tray, or similar article. H. H. Hamilton. No. 47,998; Oct. 19; Gaz. vol. 219; p. 889.
Plug receptacle, Attachment-. H. Hubbell. No. 47,953; Oct. 12; Gaz. vol. 219; p. 568.
Powder container, Toilet-. G. C. Bradford. No. 47,909; Oct. 5; Gaz. vol. 219; p. 252.
Radiator. W. B. Reed. No. 48,045; Oct. 26; Gaz. vol. 219; p. 1211.
Radiator-section. W. B. Reed. No. 48,044; Oct. 26; Gaz. vol. 219; p. 1211.
Revolver or pistol handle. F. Biffar. No. 47,984; Oct. 19; Gaz. vol. 219; p. 887.
Shoe, Rubber. F. E. Payne. No. 47,933; Oct. 5; Gaz. vol. 219; p. 256.
Show-case. J. G. French. No. 48,027; Oct. 26; Gaz. vol. 219; p. 1208.
Sign. J. L. Quinn. No. 47,965; Oct. 12; Gaz. vol. 219; p. 571.

Sign, Electric. M. Norden. No. 47,064; Oct. 12; Gaz. vol. 219; p. 571.
Sole-pad for boots and shoes, India-rubber. W. W. Phillips. Nos. 48,040–1; Oct. 26; Gaz. vol. 219; pp. 1210–11.
Sound-producing instruments, Casing for. S. H. Stirrup. No. 47,935; Oct. 5; Gaz. vol. 219; p. 257.
Spark-plug. W. S. Witter. No. 47,941; Oct. 5; Gaz. vol. 219; p. 258.
Spoon supporter, Medicine-. L. S. Niper. No. 48,039; Oct. 26; Gaz. vol. 219; p. 1210.
Stand and clock-casing, Combined. H. E. Johnson. No. 47,919; Oct. 5; Gaz. vol. 219; p. 254.
Statuette, Cat. E. J. Haney. No. 47,951; Oct. 12; Gaz. vol. 219; p. 568.
Stereopticon-slide. A. F. Victor. No. 47,938; Oct. 5; Gaz. vol. 219; p. 258.
Stool, Counter-. H. R. Reischmann. No. 47,966; Oct. 12; Gaz. vol. 219; p. 571.
Stool foot-rest, Counter-. H. R. Reischmann. No. 48,010; Oct. 19; Gaz. vol. 219; p. 891.
Stove. W. L. Mersfelder. No. 47,962; Oct. 12; Gaz. vol. 219; p. 570.
Talking-machine cabinet. P. Duffy. Nos. 47,910–14; Oct. 5; Gaz. vol. 219; pp. 252–3.
Talking-machine cabinet. C. E. Livengood and C. W. Baldwin. No. 48,003; Oct. 19; Gaz. vol. 219; p. 890.
Talking-machine cabinet. G. M. Willson. Nos. 48,019–21; Oct. 19; Gaz. vol. 219; p. 893.
Telephone-stand. A. Schrenkeisen. No. 48,013; Oct. 19; Gaz. vol. 219; p. 892.
Thread-cutter. F. D. Clarke. No. 47,992; Oct. 19; Gaz. vol. 219; p. 888.
Tile, Furnace-. E. C. Meier. No. 47,930; Oct. 5; Gaz. vol. 219; p. 256.
Tire. H. C. Arnold. No. 47,044; Oct. 12; Gaz. vol. 219; p. 567.
Tire-casing. J. H. Christian. No. 47,047; Oct. 12; Gaz. vol. 219; p. 567.
Tire-tread. D. P. Harris. No. 48,029; Oct. 26; Gaz. vol. 219; p. 1209.
Tire-tread. D. Spence. No. 47,969; Oct. 12; Gaz. vol. 219; p. 571.
Tire-tread. R. F. Teall. No. 47,972; Oct. 12; Gaz. vol. 219; p. 572.
Tire tread, Rubber-. N. J. and F. Mooney. No. 47,963; Oct. 12; Gaz. vol. 219; p. 570.
Tool, Combination-. F. T. Skogland. No. 48,014; Oct. 19; Gaz. vol. 219; p. 892.
Toy. J. Hoe. No. 47,988; Oct. 19; Gaz. vol. 219; p. 888.
Toy. H. D. Bowie. No. 47,908; Oct. 5; Gaz. vol. 219; p. 252.
Toy. L. F. Davidson. No. 47,904; Oct. 19; Gaz. vol. 219; p. 889.
Toy. G. P. Schmidt. No. 48,012; Oct. 19; Gaz. vol. 219; p. 892.
Toys, furniture, and fences, Post for children's. G. M. Quackenbush. No. 48,043; Oct. 26; Gaz. vol. 219; p. 1211.
Tractor-body. L. E. Waterman. No. 48,018; Oct. 19; Gaz. vol. 219; p. 893.
Tractor-body. L. E. Waterman and H. B. Traphagen. No. 48,017; Oct. 19; Gaz. vol. 219; p. 892.
Water-heater. H. J. Long. No. 47,960; Oct. 12; Gaz. vol. 219; p. 570.
Work-bench. R. L. Gordon. No. 47,995; Oct. 19; Gaz. vol. 219; p. 889.
Wrench. G. W. White. No. 47,977; Oct. 12; Gaz. vol. 219; p. 573.

ALPHABETICAL LIST OF TRADE-MARKS.

Abdominal supporters and bandages, trusses, and suspensories. The Ohio Truss Co. No. 106,479; Oct. 19; Gaz. vol. 219; p. 925.
Adhesive. E. A. Rogers. No. 106,182; Oct. 12; Gaz. vol. 219; p. 584.
Ale, porter, and lager-beer. The James Hanley Brewing Company. Nos. 106,432–5; Oct. 19; Gaz. vol. 219; p. 924.
Alimentary preparations used in medicine. Emil Scheller & Co., A. G. No. 106,803; Oct. 26; Gaz. vol. 219; p. 1235.
Alkaline antiseptic and a non-toxic prophylactic preparation. W. G. Geety. No. 106,229; Oct. 19; Gaz. vol. 219; p. 918.
Alterative mixture, tonic, and laxative. Nyal Company. No. 106,478; Oct. 19; Gaz. vol. 219; p. 925.
Anesthetics. G. W. Edwards. No. 106,755; Oct. 26; Gaz. vol. 219; p. 1233.
Antirheumatic. The Bayer Company. No. 106,200; Oct. 19; Gaz. vol. 219; p. 917.
Antitoxin, opsonin, and general antiseptic. E. W. Pierce. No. 106,493; Oct. 19; Gaz. vol. 219; p. 926.
Apparel, Certain named wearing-. F. Simon. No. 106,807; Oct. 26; Gaz. vol. 219; p. 1235.
Aprons. R. H. Macy & Company. No. 106,641; Oct. 26; Gaz. vol. 219; p. 1230.
Aquaria, Glass. N. Wapler. No. 106,714; Oct. 26; Gaz. vol. 219; p. 1232.
Automobile, &c., steering-wheel, Hand-grip for. Interstate Electric Co. No. 106,235; Oct. 19; Gaz. vol. 219; p. 918.
Automobiles. Pilot Motor Car Co. No. 106,795; Oct. 26; Gaz. vol. 219; p. 1234.
Automobiles. The Wolseley Tool and Motor Car Company. No. 106,276; Oct. 19; Gaz. vol. 219; p. 919.
Bags, Cotton. Boott Mills. No. 106,401; Oct. 19; Gaz. vol. 219; p. 923.
Baking-powder. McKnight-Keaton Grocery Co. No. 106,351; Oct. 19; Gaz. vol. 219; p. 922.
Bath-garments. Ward Meehan Company. No. 106,581; Oct. 19; Gaz. vol. 219; p. 927.
Bath-room trimmings and fittings, Vitreous china. Thomas Maddock's Sons Company. No. 106,458; Oct. 19; Gaz. vol. 219; p. 925.
Batteries, Storage. The Willard Storage Battery Co. No. 106,275; Oct. 19; Gaz. vol. 219; p. 919.
Bearings, Ball-. Nordiska Kullager Aktiebolaget. No. 106,659; Oct. 26; Gaz. vol. 219; p. 1230.
Bedbug, roach, and ant killer. L. Shapiro. No. 106,373; Oct. 19; Gaz. vol. 219; p. 922.
Beer. Independent Brewing Company of Pittsburgh. Nos. 106,104–7; Oct. 12; Gaz. vol. 219; p. 581.
Beer. Seattle Brewing and Malting Co. No. 106,124; Oct. 12; Gaz. vol. 219; p. 582.
Beer, Lager-. The Gottlieb Bauernschmidt Straus Brewing Company. No. 106,763; Oct. 26; Gaz. vol. 219; p. 1233.
Belt hooks, fasteners, and pins. Clipper Belt Lacer Co. No. 106,741; Oct. 26; Gaz. vol. 219; p. 1233.
Belting, Fabric. C. P. Landreth. No. 106,452; Oct. 19; Gaz. vol. 219; p. 925.
Belting fastener, Machinery-. W. S. Langford. No. 106,633; Oct. 26; Gaz. vol. 219; p. 1229.
Beverage and syrup for making same. H. C. Ferguson. No. 106,073; Oct. 5; Gaz. vol. 219; p. 267.
Beverage, Non-alcoholic carbonated. R. S. Patterson. No. 106,176; Oct. 12; Gaz. vol. 219; p. 583.
Beverage, Powdered substance to produce a non-alcoholic food. W. F. Butterman. No. 106,737; Oct. 26; Gaz. vol. 219; p. 1233.
Beverages, Certain named non-alcoholic. H. M. Porter. No. 106,796; Oct. 26; Gaz. vol. 219; p. 1234.
Beverages, Non-intoxicating malt. William J. Lemp Brewing Company. No. 106,346; Oct. 19; Gaz. vol. 219; p. 921.
Billiard-cloth. The Brunswick-Balke-Collender Co. Nos. 106,556–9; Oct. 26; Gaz. vol. 219; p. 1227.
Biscuit. National Biscuit Company. Nos. 106,467–8; Oct. 19; Gaz. vol. 219; p. 925.
Biscuit. National Biscuit Company. No. 106,789; Oct. 26; Gaz. vol. 219; p. 1234.
Bitters, Liqueur stomach-. D. Vandewart & Sons. No. 106,815; Oct. 26; Gaz. vol. 219; p. 1235.
Book series. A. L. Burt Company. No. 106,294; Oct. 19; Gaz. vol. 219; p. 920.
Boot and shoe soles and heels. The Goodyear Tire and Rubber Company. No. 106,762; Oct. 26; Gaz. vol. 219; p. 1233.
Boots and shoes. Ashuelot Shoe Company. No. 106,283; Oct. 19; Gaz. vol. 219; p. 919.
Boots and shoes. F. P. Kirkendall & Co. No. 106,778; Oct. 26; Gaz. vol. 219; p. 1234.
Boots and shoes. Nathan D. Dodge Shoe Co. No. 106,582; Oct. 26; Gaz. vol. 219; p. 1228.
Boots and shoes, Leather. Davis Shoe Company. No. 106,751; Oct. 26; Gaz. vol. 219; p. 1233.
Boots and shoes, Men's and women's. Ault-Williamson Shoe Co. No. 106,393; Oct. 19; Gaz. vol. 219; p. 923.
Boots, shoes, and slippers. The Clay-Gunnell Co. No. 106,408; Oct. 19; Gaz. vol. 219; p. 923.
Boots, shoes, and slippers. Thomas G. Plant Company. Nos. 106,496–7; Oct. 19; Gaz. vol. 219; p. 926.
Bottles, alcohol-flagons, and tea-caddies, Vacuum-. Landers, Frary & Clark. No. 106,784; Oct. 26; Gaz. vol. 219; p. 1234.
Bracelets and parts thereof, belt-buckles, &c. Eisenstadt Manufacturing Company. No. 106,587; Oct. 26; Gaz. vol. 219; p. 1228.
Brake apparatus and railway draft-gear, Air-. The Westinghouse Air Brake Company. No. 106,386; Oct. 19; Gaz. vol. 219; p. 923.
Brake-shoes. American Brake Shoe & Foundry Company. No. 106,193; Oct. 19; Gaz. vol. 219; p. 917.
Brake-shoes. American Brake Shoe & Foundry Company. No. 106,280; Oct. 19; Gaz. vol. 219; p. 919.
Bread. Old Dutch Market. No. 106,483; Oct. 19; Gaz. vol. 219; p. 926.
Bread. The Parsons-Powers Co. No. 106,362; Oct. 19; Gaz. vol. 219; p. 922.
Brooms, whisk-brooms, and brushes. F. D. Schleicher. No. 106,804; Oct. 26; Gaz. vol. 219; p. 1235.
Building-blocks. Peg Lock Block Company. No. 106,671; Oct. 26; Gaz. vol. 219; p. 1231.
Buildings, Steel portable. The C. D. Pruden Company. No. 106,498; Oct. 19; Gaz. vol. 219; p. 926.
Bulbs, Compression-. The De Vilbiss Mfg. Company. No. 106,416; Oct. 19; Gaz. vol. 219; p. 924.
Butter. Old Dutch Market. Nos. 106,480–2; Oct. 19; Gaz. vol. 219; p. 926.
Butter, Prints of process or renovated. The R. E. Cobb Co. No. 106,742; Oct. 26; Gaz. vol. 219; p. 1233.
Buttons. The Winwal Company. No. 106,819; Oct. 26; Gaz. vol. 219; p. 1235.
Buttons, Snap-. Waldes & Co. No. 106,712; Oct. 26; Gaz. vol. 219; p. 1232.
Cabinets and safes, Heat-resisting. The Safe-Cabinet Company. Nos. 106,509–10; Oct. 19; Gaz. vol. 219; p. 926.
Cabinets, cupboards, and tables, Butlers' and kitchen. Hoosier Manufacturing Company. No. 106,611; Oct. 26; Gaz. vol. 219; p. 1229.
Cake, pies, and doughnuts. The Dietz Baking Company. No. 106,580; Oct. 26; Gaz. vol. 219; p. 1228.
Cakes and crackers. The Grocers' Biscuit Company. No. 106,097; Oct. 12; Gaz. vol. 219; p. 581.
Calipers and dividers. Brown & Sharpe Manufacturing Company. No. 106,292; Oct. 19; Gaz. vol. 219; p. 920.
Candies, bonbons, fruit tablets, and sugar-coated popcorn. F. S. Love Manufacturing Co. No. 106,455; Oct. 19; Gaz. vol. 219; p. 925.
Candy. C. Bianchi. No. 106,732; Oct. 26; Gaz. vol. 219; p. 1232.
Candy. Bugler & Goebel Company. No. 106,561; Oct. 26; Gaz. vol. 219; p. 1227.
Candy. Bunte Brothers. No. 106,562; Oct. 26; Gaz. vol. 219; p. 1227.
Candy. W. T. Hall & Co. No. 106,601; Oct. 26; Gaz. vol. 219; p. 1229.
Candy. F. C. Mankin. No. 106,459; Oct. 19; Gaz. vol. 219; p. 925.
Candy. The Max Glick Company. No. 106,505; Oct. 26; Gaz. vol. 219; p. 1228.
Candy. Package Confectionery Co. No. 106,487; Oct. 19; Gaz. vol. 219; p. 926.
Candy. Powells. No. 106,081; Oct. 5; Gaz. vol. 219; p. 267.
Candy. Tri-State Candy Co. No. 106,702; Oct. 26; Gaz. vol. 219; p. 1232.
Candy. Windsor Chocolate Company. No. 106,534; Oct. 19; Gaz. vol. 219; p. 927.
Candy, Chocolate. National Candy Company. No. 106,469; Oct. 19; Gaz. vol. 219; p. 925.
Canned fish and vegetables. J. H. Mercian. No. 106,077; Oct. 5; Gaz. vol. 219; p. 267.
Canned fruits, vegetables, and sauer-kraut. All-Package Grocery Stores Co. No. 106,724; Oct. 26; Gaz. vol. 219; p. 1232.
Canned salmon. Everett Packing Co. No. 106,307; Oct. 19; Gaz. vol. 219; p. 920.
Canned sweet corn and peas. Barron County Canning Co. No. 106,546; Oct. 26; Gaz. vol. 219; p. 1227.

Canned vegetables and fruits. L. M. Langrall. No. 106,342; Oct. 19; Gaz. vol. 219; p. 921.
Caps and slippers, Washable. A. Hale. No. 106,600; Oct. 26; Gaz. vol. 219; p. 1229.
Caramel compound to be added to coffee. Rice Bros. No. 106,679; Oct. 26; Gaz. vol. 219; p. 1231.
Carbon-eradicator. Spd. Accessories Co. No. 106,184; Oct. 12; Gaz. vol. 219; p. 584.
Carbon-remover. Grahamoline Products Company. No. 106,325; Oct. 19; Gaz. vol. 219; p. 921.
Carbureter. Diamond Carburetor Company. No. 106,091; Oct. 12; Gaz. vol. 219; p. 581.
Carriages and go-carts, Baby-. The Buckley-Newhall Company. Nos. 106,207–8; Oct. 19; Gaz. vol. 219; p. 917.
Cement, Portland. Marquette Cement Manufacturing Co. No. 106,350; Oct. 19; Gaz. vol. 219; p. 922.
Cement, White Portland. The Sandusky Portland Cement Company. No. 106,260; Oct. 19; Gaz. vol. 219; p. 919.
Cereal, Breakfast. Kellogg Toasted Corn Flake Co. No. 106,623; Oct. 26; Gaz. vol. 219; p. 1229.
Cereal for chronic constipation, Medicated. W. A. Rullman. No. 106,183; Oct. 12; Gaz. vol. 219; p. 584.
Chains for personal wear, Metal. W. Forstner Co. No. 106,318; Oct. 19; Gaz. vol. 219; p. 921.
Charcoal. Thomas Brothers & Klein. No. 106,266; Oct. 19; Gaz. vol. 219; p. 919.
Chests and utility-boxes, Cedar. The Roos Mfg. Co. No. 106,367; Oct. 19; Gaz. vol. 219; p. 922.
Chocolates. H. R. Hoefler. No. 106,440; Oct. 19; Gaz. vol. 219; p. 924.
Chocolates. Wadsworth Chocolate Co. No. 106,711; Oct. 26; Gaz. vol. 219; p. 1232.
Chocolates and bonbons. G. Rickard. No. 106,504; Oct. 19; Gaz. vol. 219; p. 926.
Chocolate and chocolate candy, Eating-. D. Ghirardelli Co. No. 106,424; Oct. 19; Gaz. vol. 219; p. 924.
Cigarettes. The Barkmahn Company. No. 106,198; Oct. 19; Gaz. vol. 219; p. 917.
Cigars. G. Bluthardt & Co. No. 106,289; Oct. 19; Gaz. vol. 219; p. 920.
Cigars. Greenwood & Company. No. 106,326; Oct. 19; Gaz. vol. 219; p. 921.
Cigars, cheroots, stogies, cigarettes, tobacco. O'Brien and Edmonds. No. 106,661; Oct. 26; Gaz. vol. 219; p. 1230.
Cigars, little cigars, cigarettes, tobacco, and snuff. F. Westheimer & Sons. No. 106,716; Oct. 26; Gaz. vol. 219; p. 1232.
Clay, Ferruginous. Brown Brothers. No. 106,405; Oct. 19; Gaz. vol. 219; p. 923.
Cleaning compounds. Harrah & Stewart Mfg. Co. No. 106,765; Oct. 26; Gaz. vol. 219; p. 1233.
Cleaning, dressing, and polishing liquid, Leather. W. Coates. No. 106,409; Oct. 19; Gaz. vol. 219; p. 923.
Clocks and watches. Western Clock Co. No. 106,385; Oct. 19; Gaz. vol. 219; p. 923.
Clothing, Boys'. Glaser & Rosenbaum. No. 106,594; Oct. 26; Gaz. vol. 219; p. 1228.
Clothing, Certain named. N. Corah & Sons. No. 106,744; Oct. 26; Gaz. vol. 219; p. 1233.
Clothing, Certain named. Waldes & Company. Nos. 106,528–30; Oct. 19; Gaz. vol. 219; p. 927.
Coach and carriage bodies. Kellner frères. No. 106,236; Oct. 19; Gaz. vol. 219; p. 918.
Coal. The Maynard Coal Company. No. 106,168; Oct. 12; Gaz. vol. 219; p. 583.
Coats, Tennis and women's. S. Einhorn & Son. Nos. 106,585–6; Oct. 26; Gaz. vol. 219; p. 1228.
Coats, vests, and trousers. M. Born & Company. No. 106,554; Oct. 26; Gaz. vol. 219; p. 1227.
Cocoa. Runkel Brothers. No. 106,684; Oct. 26; Gaz. vol. 219; p. 1231.
Coffee. Black Hawk Coffee & Spice Company. No. 106,553; Oct. 26; Gaz. vol. 219; p. 1227.
Coffee. Denison Coffee Co. No. 106,415; Oct. 19; Gaz. vol. 219; p. 924.
Coffee. Firm of A. Held. No. 106,437; Oct. 19; Gaz. vol. 219; p. 924.
Coffee. C. D. Kenny Co. No. 106,624; Oct. 26; Gaz. vol. 219; p. 1229.
Coffee. Lekas and Drivas. No. 106,636; Oct. 26; Gaz. vol. 219; p. 1230.
Coffee compound. Mutual Coffee Co. No. 106,466; Oct. 19; Gaz. vol. 219; p. 925.
Coffee essence. National Essence For Coffee Company. No. 106,470; Oct. 19; Gaz. vol. 219; p. 925.
Coffee, Imitation. E. Prokesch. No. 106,797; Oct. 26; Gaz. vol. 219; p. 1234.
Coffee substitute, Cereal. Monroe Drug Co. No. 106,465; Oct. 19; Gaz. vol. 219; p. 925.
Coffee, tea, and cocoa. C. F. Smith. No. 106,808; Oct. 26; Gaz. vol. 219; p. 1235.
Combs, Aluminum toilet-. Aluminum Goods Mfg. Company. No. 106,538; Oct. 26; Gaz. vol. 219; p. 1227.
Compound capable of resisting high temperatures. Estate of A. E. Foote. Nos. 106,756–7; Oct. 26; Gaz. vol. 219; p. 1233.
Compound for treating eczema. J. I. Sims. No. 106,263; Oct. 19; Gaz. vol. 219; p. 919.
Cooking utensils, Certain named. Aluminum Goods Mfg. Company. No. 106,279; Oct. 19; Gaz. vol. 219; p. 919.
Cooking utensils made of aluminum or alloys of same. The Aluminum Cooking Utensil Co. No. 106,135; Oct. 12; Gaz. vol. 219; p. 582.
Corks, and particularly wood-top corks. Armstrong Cork Company. No. 106,195; Oct. 19; Gaz. vol. 219; p. 917.
Corn-starch. National Starch Co. No. 106,471; Oct. 19; Gaz. vol. 219; p. 925.
Cornmeal. The Park & Pollard Company. No. 106,488; Oct. 19; Gaz. vol. 219; p. 926.
Corsets. Kops Bros. No. 106,451; Oct. 19; Gaz. vol. 219; p. 925.
Corundum, Artificial. E. Moyat. No. 106,248; Oct. 19; Gaz. vol. 219; p. 918.
Cotton, Absorbent. Southern Aseptic Laboratories. No. 106,376; Oct. 19; Gaz. vol. 219; p. 922.
Cotton and silk or wool plush, velours, and velvet piece goods, Pile. W. H. Rollinson. No. 106,682; Oct. 26; Gaz. vol. 219; p. 1231.
Cotton and woolen midsummer-suiting. Kahn Tailoring Company. No. 106,448; Oct. 19; Gaz. vol. 219; p. 925.
Cotton, cotton and wool, and woolen piece goods. French & Ward. No. 106,593; Oct. 26; Gaz. vol. 219; p. 1228.
Cotton, Crochet-. Nonotuck Silk Company. No. 106,658; Oct. 26; Gaz. vol. 219; p. 1230.
Cotton, linen, silk, and woolen piece goods. B. F. Bailey. No. 106,545; Oct. 26; Gaz. vol. 219; p. 1227.
Cotton piece goods. Fall River Bleachery. No. 106,421; Oct. 19; Gaz. vol. 219; p. 924.
Cotton piece goods. Rogers & Thompson. No. 106,681; Oct. 26; Gaz. vol. 219; p. 1231.
Cough-syrup. E. R. Miller. No. 106,116; Oct. 12; Gaz. vol. 219; p. 582.
Crayons. Max Rosner Co. No. 106,536; Oct. 19; Gaz. vol. 219; p. 927.
Cream, Cold-. The Emil Schult Toilet Article Company. No. 106,262; Oct. 19; Gaz. vol. 219; p. 919.
Cream, Cold-. The Pompeian Mfg. Co. No. 106,121; Oct. 12; Gaz. vol. 219; p. 582.
Cream, Toilet. S. Fargo. No. 106,310; Oct. 19; Gaz. vol. 219; p. 920.
Creams, Cold and massage. Colgate & Co. No. 106,218; Oct. 19; Gaz. vol. 219; p. 917.
Creams, rouge, &c., Cleansing and massaging. Wood & Barnard. No. 106,389; Oct. 19; Gaz. vol. 219; p. 923.
Cultivators. Parlin & Orendorff Co. No. 106,489; Oct. 19; Gaz. vol. 219; p. 926.
Culverts and flumes. C. C. Fouts Co. No. 106,321; Oct. 19; Gaz. vol. 219; p. 921.
Curtain-poles and brackets and trimmings, folding draft-screens. The Roos Mfg. Co. No. 106,368; Oct. 19; Gaz. vol. 219; p. 922.
Cutlery, machinery, &c., Certain named. Pittsburgh Iron and Steel Foundries Company. No. 106,495; Oct. 19; Gaz. vol. 219; p. 926.
Cutting and milling machines. J. C. Backert. No. 106,139; Oct. 12; Gaz. vol. 219; p. 582.
Dates. The Hills Brothers Company. No. 106,768; Oct. 26; Gaz. vol. 219; p. 1234.
Dental floss. M. Hemlinway & Sons Silk Co. No. 106,327; Oct. 19; Gaz. vol. 219; p. 921.
Dentifrice-dispensers. J. L. Mendel. No. 106,169; Oct. 12; Gaz. vol. 219; p. 583.
Deodorizer and disinfectant. The Belleville Chemical Co. No. 106,286; Oct. 19; Gaz. vol. 219; p. 920.
Dish-pans, Metal. Ammidon & Co. No. 106,137; Oct. 12; Gaz. vol. 219; p. 582.
Disinfectant. G. W. Gallaway. No. 106,228; Oct. 19; Gaz. vol. 219; p. 918.
Disinfectant. C. T. Hood. No. 106,103; Oct. 12; Gaz. vol. 219; p. 581.
Disinfectant, deodoriser, and bleaching agent. The Electro Chemical Company. No. 106,149; Oct. 12; Gaz. vol. 219; p. 583.
Disinfectants, wood-preservatives, fungicides, and insecticides. Bruno Grosche & Company. No. 106,429; Oct. 19; Gaz. vol. 219; p. 924.
Dolls. T. H. Hindle, Jr. No. 106,329; Oct. 19; Gaz. vol. 219; p. 921.
Dolls. The New Era Novelty Co. No. 106,474; Oct. 19; Gaz. vol. 219; p. 925.
Door-plates, Enameled-metal. Ingram-Richardson Manufacturing Company. No. 106,233; Oct. 19; Gaz. vol. 219; p. 918.
Drafting instrument. F. W. Lane. No. 106,453; Oct. 19; Gaz. vol. 219; p. 925.
Draftsman supplies, Certain named. M. C. Fuller. No. 106,760; Oct. 26; Gaz. vol. 219; p. 1233.
Dress-shields. The Omo Manufacturing Company. No. 106,663; Oct. 26; Gaz. vol. 219; p. 1230.
Drills. Riverside & Dan River Cotton Mills. No. 106,680; Oct. 26; Gaz. vol. 219; p. 1231.
Drink, Composition for preparing a soft. F. C. York. No. 106,130; Oct. 12; Gaz. vol. 219; p. 582.
Drinks, Non-alcoholic fruit. Canandaigua Brewery. No. 106,740; Oct. 26; Gaz. vol. 219; p. 1233.
Dyestuffs, colors, lakes, &c. W. Beckers Aniline & Chemical Works. No. 106,204; Oct. 19; Gaz. vol. 219; p. 917.
Ear-phones or audiphones. Globe Ear-Phone Company. No. 106,426; Oct. 19; Gaz. vol. 219; p. 924.
Egg substitute. C. B. Miller. No. 106,653; Oct. 26; Gaz. vol. 219; p. 1230.
Eggs. A. Grossenbach Co. Nos. 106,598–9; Oct. 26; Gaz. vol. 219; pp. 1228–9.
Eggs. Old Dutch Market. No. 106,484; Oct. 19; Gaz. vol. 219; p. 926.
Electric-conduit pipe. Central Tube Company. No. 106,297; Oct. 19; Gaz. vol. 219; p. 920.

Electric-light fixtures. Luminous Unit Company. No. 106,074; Oct. 5; Gaz. vol. 219; p. 267.
Electric-lighting plants, Individual. K. and W. Engineering Company. No. 106,621; Oct. 26; Gaz. vol. 219; p. 1229.
Electric vaporizer. C. C. Gould. No. 106,764; Oct. 26; Gaz. vol. 219; p. 1233
Electrical fittings and parts thereof, Certain named. The Arrow Electric Company. No. 106,282; Oct. 19; Gaz. vol. 219; p. 919.
Electrical switches. The Perkins Electric Switch Mfg. Company. No. 106,672; Oct. 26; Gaz. vol. 219; p. 1231.
Electrical testing and inspecting instruments. W. N. Matthews & Bro. No. 106,650; Oct. 26; Gaz. vol. 219; p. 1230.
Electrical work, Glass globes and bowls employed in. The General Electric Co. No. 106,761; Oct. 26; Gaz. vol. 219; p. 1233.
Enamel, steel, and tin ware. Lalance & Grosjean Mfg. Co. No. 106,111; Oct. 12; Gaz. vol. 219; p. 581.
Enameled and aluminum ware. The New England Enameling Company. No. 106,792; Oct. 26; Gaz. vol. 219; p. 1234.
Enzyms. National Enzyme Co. Nos. 106,354–6; Oct. 19; Gaz. vol. 219; p. 922.
Eyelets, Metal. Ideal Specialties M'f'g Corp. No. 106,772; Oct. 26; Gaz. vol. 219; p. 1234.
Eyeleting-machines. Ideal Specialties Mfg. Corp. No. 106,156; Oct. 12; Gaz. vol. 219; p. 583.
Fancy goods and notions, Certain named. International Mfg. Agency. No. 106,335; Oct. 19; Gaz. vol. 219; p. 923.
Fancy goods, furnishings, and notions, Certain named. Campbell, Metzger & Jacobson. No. 106,296; Oct. 19; Gaz. vol. 219; p. 920.
Fertilizer. T. I. Fulks. No. 106,324; Oct. 19; Gaz. vol. 219; p. 921.
Fertilizer. C. Teerling. No. 106,265; Oct. 19; Gaz. vol. 219; p. 919.
Fertilizers. Alexandria Fertilizer & Chemical Co. No. 106,278; Oct. 19; Gaz. vol. 219; p. 919.
Fertilizers. G. Kirkegaard. No. 106,450; Oct. 19; Gaz. vol. 219; p. 925.
Fertilizers. Old Buck Guano Co. No. 106,174; Oct. 12; Gaz. vol. 219; p. 583.
Fertilizers. The Robert A. Wooldridge Co. No. 106,721; Oct. 26; Gaz. vol. 219; p. 1232.
Figures, trays, &c., Arts and crafts wooden. F. H. Babcock. No. 106,544; Oct. 26; Gaz. vol. 219; p. 1227.
Fish, canned sardines, anchovies, and kippered herring, Preserved and pickled. C. L. Benson. No. 106,396; Oct. 19; Gaz. vol. 219; p. 923.
Fish, Preserved and canned. Strohmeyer & Arpe Company. No. 106,521; Oct. 19; Gaz. vol. 219; p. 927.
Fishing-tackle. Wm. Frankfurth Hardware Co. No. 106,592; Oct. 26; Gaz. vol. 219; p. 1228.
Flags, Manufactured. Annin & Co. No. 106,088; Oct. 12; Gaz. vol. 219; p. 581.
Flour, Self-rising wheat-. Akin-Erskine Milling Company. No. 106,537; Oct. 26; Gaz. vol. 219; p. 1227.
Flour, Self-rising wheat-. Aunt Jemima Mills Company. No. 106,542; Oct. 26; Gaz. vol. 219; p. 1227.
Flour, Wheat-. The Hays City Milling and Elevator Company. No. 106,602; Oct. 26; Gaz. vol. 219; p. 1229.
Flour, Wheat-. Highland Milling Company. No. 106,606; Oct. 26; Gaz. vol. 219; p. 1229.
Flour, Wheat-. Koenigsmark Mill Company. No. 106,630; Oct. 26; Gaz. vol. 219; p. 1229.
Flour, Wheat-. Marshall Milling Co. No. 106,648; Oct. 26; Gaz. vol. 219; p. 1230.
Flour, Wheat-. Sparks Milling Company. No. 106,691; Oct. 29; Gaz. vol. 219; p. 1231.
Flour, Wheat-. J. I. Triplett. No. 106,383; Oct. 19; Gaz. vol. 219; p. 923.
Flour, Wheat and corn mixture. Aunt Jemima Mills Company. No. 106,543; Oct. 26; Gaz. vol. 219; p. 1227.
Food for horses, cattle, sheep, &c., Prepared. The Windsor Stock Food Company. No. 106,533; Oct. 19; Gaz. vol. 219; p. 927.
Food, Wheat breakfast. J. T. Mason. No. 106,461; Oct. 19; Gaz. vol. 219; p. 925.
Foods, Certain named. Driscol, Church & Hall. No. 106,753; Oct. 26; Gaz. vol. 219; p. 1233.
Foods, Certain named. Goldberg, Bowen & Co. No. 106,427; Oct. 19; Gaz. vol. 219; p. 924.
Foods, Certain named. Habicht, Braun & Co. No. 106,431; Oct. 19; Gaz. vol. 219; p. 924.
Foods, Certain named. J. Middleby, Jr. No. 106,652; Oct. 26; Gaz. vol. 219; p. 1230.
Foods, Certain named. National Grocery Company. No. 106,117; Oct. 12; Gaz. vol. 219; p. 582.
Foods, Certain named. The New Wooster Preserving Co. No. 106,119; Oct. 12; Gaz. vol. 219; p. 582.
Foods, Certain named. Sears, Roebuck and Co. No. 106,805; Oct. 26; Gaz. vol. 219; p. 1235.
Foods, Certain named. F. B. Sullivan. No. 106,083; Oct. 5; Gaz. vol. 219; p. 267.
Foods, Certain named. The S. Thalmann & Schwab M. B. H. No. 106,700; Oct. 26; Gaz. vol. 219; p. 1231.
Footwear. Mishawaka Woolen Manufacturing Company. No. 106,654; Oct. 26; Gaz. vol. 219; p. 1230.
Fruits, Citrus. Florida Citrus Exchange. No. 106,590; Oct. 26; Gaz. vol. 219; p. 1228.
Fruits, Citrus. H. C. Schrader Co. No. 106,514; Oct. 19; Gaz. vol. 219; p. 927.
Fruits, Citrus. Tampa Citrus Growers Association. No. 106,699; Oct. 26; Gaz. vol. 219; p. 1231.
Fungicide for cereals. The Bayer Company. No. 106,547; Oct. 26; Gaz. vol. 219; p. 1227.
Furniture, Certain named. Berkey and Gay Furniture Company. No. 106,548; Oct. 26; Gaz. vol. 219; p. 1227.
Furniture, floor, vehicle-body, &c., polish. J. G. Croll & Son. No. 106,146; Oct. 12; Gaz. vol. 219; p. 582.
Furniture, piano, automobile, carriage, &c., polishes. H. H. Juelg. No. 106,109; Oct. 12; Gaz. vol. 219; p. 581.
Furniture-polish. E. S. Kille. No. 106,337; Oct. 19; Gaz. vol. 219; p. 921.
Furniture-polish. Wizard Products Co. No. 106,820; Oct. 26; Gaz. vol. 219; p. 1235.
Games, toys, and sporting goods. W. F. Hirschmann. No. 106,608; Oct. 26; Gaz. vol. 219; p. 1229.
Garters. Pioneer Suspender Company. No. 106,678; Oct. 26; Gaz. vol. 219; p. 1231.
Garters, suspenders, belts. American Belt Corporation. No. 106,539; Oct. 26; Gaz. vol. 219; p. 1227.
Gas for fuel, Combustible. Pintsch Compressing Company. No. 106,178; Oct. 12; Gaz. vol. 219; p. 583.
Gasolene. American Oil Processes. No. 106,087; Oct. 12; Gaz. vol. 219; p. 581.
Gasolene and preventing the deposit of carbon, Preparation for increasing the efficiency of. E. E. Bosca and J. G. Quinn, Jr. No. 106,290; Oct. 19; Gaz. vol. 219; p. 920.
Germicides, Non-poisonous. T. L. Leeming. No. 106,345; Oct. 19; Gaz. vol. 219; p. 921.
Ginger-ale. California Fruit Beverage Company. No. 106,563; Oct. 26; Gaz. vol. 219; p. 1227.
Ginger-ale, sarsaparilla, birch and root beers, &c. Clicquot Club Company. No. 106,144; Oct. 12; Gaz. vol. 219; p. 582.
Ginger-snaps. Pacific Coast Biscuit Co. No. 106,361; Oct. 19; Gaz. vol. 219; p. 922.
Ginghams. Ostrander & Company. No. 106,664; Oct. 26; Gaz. vol. 219; p. 1230.
Gins and liqueurs. Amsterdamsche Likeurstokerij "'T Lootsje" der Erven Lucas Bols. Nos. 106,727–8; Oct. 26; Gaz. vol. 219; p. 1232.
Gloves. Julius Kayser & Co. No. 106,449; Oct. 19; Gaz. vol. 219; p. 925.
Gloves. The Lasalle & Koch Co. No. 106,634; Oct. 26; Gaz. vol. 219; p. 1229.
Gloves. Stern Brothers. No. 106,518; Oct. 19; Gaz. vol. 219; p. 927.
Goggles. Julius King Optical Co. No. 106,238; Oct. 19; Gaz. vol. 219; p. 918.
Grape-juice. Luyties Brothers. No. 106,786; Oct. 26; Gaz. vol. 219; p. 1234.
Greases and oils, Lubricating. New York Lubricating Oil Company. No. 106,793; Oct. 26; Gaz. vol. 219; p. 1234.
Grinders and mills and coffee-mills, Corn. Landers, Frary & Clark. No. 106,112; Oct. 12; Gaz. vol. 219; p. 581.
Guimpes, boudoir-caps, vestees, collars, and cuffs, Manufactured. Phillips Boyd Co. No. 106,491; Oct. 19; Gaz. vol. 219; p. 926.
Gum, Chewing-. Hershey Chocolate Company. No. 106,605; Oct. 26; Gaz. vol. 219; p. 1229.
Gum, Chewing-. T. J. Mulcahy. No. 106,078; Oct. 5; Gaz. vol. 219; p. 267.
Gum confection, Chewing-. The Helmet Company. No. 106,603; Oct. 26; Gaz. vol. 219; p. 1229.
Gutta-percha sheets or strips of tissue-like dimension. Bishop Gutta-Percha Company. No. 106,287; Oct. 19; Gaz. vol. 219; p. 920.
Gypsum plaster, Ground and calcined. Arizona Gypsum Plaster Co. No. 106,138; Oct. 12; Gaz. vol. 219; p. 582.
Hair-color restorers and hair-removers. E. Tausig. No. 106,188; Oct. 12; Gaz. vol. 219; p. 584.
Hair-coloring preparation. Philo Hay Specialties Co. No. 106,492; Oct. 19; Gaz. vol. 219; p. 926.
Hair-dressing. Tagalog & Tagalog. No. 106,812; Oct. 26; Gaz. vol. 219; p. 1235.
Hair-nets. New York Merchandise Co. No. 106,477; Oct. 19; Gaz. vol. 219; p. 925.
Hair-nets. Rudolph Saenger Co. No. 103,508; Oct. 19; Gaz. vol. 219; p. 926.
Ham, bacon, shoulders, picnics, &c. Paul O. Reymann Co. No. 106,677; Oct. 26; Gaz. vol. 219; p. 1231.
Hammocks. W. H. Davis. No. 106,577; Oct. 26; Gaz. vol. 219; p. 1226.
Hats. Knox Hat Company. No. 106,628; Oct. 26; Gaz. vol. 219; p. 1229.
Hats. J. Smolin. No. 106,809; Oct. 26; Gaz. vol. 219; p. 1235
Hats, Braided. Nihon Natsubo Kabushiki Kaisha. No. 106,794; Oct. 26; Gaz. vol. 219; p. 1234.
Heaters, Steam water-. J. J. Hiebert. No. 106,767; Oct. 26; Gaz. vol. 219; p. 1234.
Hog-cholera, Preparation for. C. E. Teeter. No. 106,381; Oct. 19; Gaz. vol. 219; p. 923.
Hog-cholera serum and virus, Anti-. The Royal Serum Company. No. 106,259; Oct. 19; Gaz. vol. 219; p. 919.
Honey. Lekas and Drivas. No. 106,637; Oct. 26; Gaz. vol. 219; p. 1230.
Horological indicators. Sentinel Clock Co. No. 106,372; Oct. 19; Gaz. vol. 219; p. 922.
Hose-supporters. Kabo Corset Company. No. 106,622; Oct. 26; Gaz. vol. 219; p. 1229.

Hosiery. Bloomingdale Bros. No. 106,390; Oct. 19; Gaz. vol. 219; p. 923.
Hosiery. Concordia Silk Hosiery Company. No. 106,569; Oct. 26; Gaz. vol. 219; p. 1228.
Hosiery. Holeproof Hosiery Co. No. 106,610; Oct. 26; Gaz. vol. 219; p. 1229.
Hosiery. S. H. Kress & Company. No. 106,631; Oct. 26; Gaz. vol. 219; p. 1229.
Hosiery. S. H. Kress & Company. Nos. 106,774–81; Oct. 26; Gaz. vol. 219; p. 1234.
Hosiery, Mixed'. Parker Hosiery Mill & Dye Works. Nos. 106,666–7; Oct. 26; Gaz. vol. 219; p. 1230.
Humidifiers, Cigar-show-case. Lobelde Manufacturing Company. No. 106,161; Oct. 12; Gaz. vol. 219; p. 583.
Humus, Prepared inoculated. J. T. Caldwell. No. 106,295; Oct. 19; Gaz. vol. 219; p. 920.
Ice-cream. Stallknecht Ice Cream Corporation. No. 106,516; Oct. 19; Gaz. vol. 219; p. 927.
Incubators. Spratts Patent (America). No. 106,082; Oct. 5; Gaz. vol. 219; p. 267.
Inks, Fluid. Scribblers Ink & Paste Manufacturing Company. No. 106,687; Oct. 26; Gaz. vol. 219; p. 1231.
Insecticide. C. E. Kenyon. No. 106,110; Oct. 12; Gaz. vol. 219; p. 581.
Insecticide, disinfectant, and deoderizer. The B. & C. Sales Co. No. 106,197; Oct. 19; Gaz. vol. 219; p. 917.
Insecticide, germicide, antiseptic, and disinfectant. Van Antwerp's Drug Corporation. No. 106,709; Oct. 26; Gaz. vol. 219; p. 1232.
Insecticides. American Industrial Laboratory. No. 106,540; Oct. 26; Gaz. vol. 219; p. 1227.
Instruction-boards having shiftable characters. The Fox Novelty Company. No. 106,591; Oct. 26; Gaz. vol. 219; p. 1228.
Insulated wire and cables. The Whitney Blake Company. No. 106,128; Oct. 12; Gaz. vol. 219; p. 582.
Interlining, Haircloth. Recher & Co. No. 106,799; Oct. 26; Gaz. vol. 219; p. 1234.
Iodin, Sterilized solution of. Sharp & Dohme. No. 106,185; Oct. 12; Gaz. vol. 219; p. 584.
Iron, Gas-. Strause Gas Iron Company. No. 106,520; Oct. 19; Gaz. vol. 219; p. 927.
Jewelry. The Alois Kohn Chain Co. No. 106,341; Oct. 19; Gaz. vol. 219; p. 921.
Jewelry. Schein Brothers. No. 106,261; Oct. 19; Gaz. vol. 219; p. 919.
Jewelry, Certain named articles of. Novagem Jewel Company. No. 106,250; Oct. 19; Gaz. vol. 219; p. 918.
Journal, Weekly trade. F. E. Seward. No. 106,512; Oct. 19; Gaz. vol. 219; p. 926.
Knitted garments. Fuld and Hatch Knitting Company. No. 106,323; Oct. 19; Gaz. vol. 219; p. 921.
Knitted sweaters, mufflers, caps, and toques. The Monarch Knitting Company. No. 106,788; Oct. 26; Gaz. vol. 219; p. 1234.
Knitted underwear. Union Mills. No. 106,523; Oct. 19; Gaz. vol. 219; p. 927.
Knives. The Thomas Manufacturing Company. No. 106,701; Oct. 26; Gaz. vol. 219; p. 1231.
Labels, adhesive stamps, calendars, &c. United Drug Company. No. 106,706; Oct. 26; Gaz. vol. 219; p. 1232.
Laces, Shoe-. Providence Braid Company. No. 106,798; Oct. 26; Gaz. vol. 219; p. 1234.
Lacing-tips. Joslin Mfg. Co. No. 106,616; Oct. 26; Gaz. vol. 219; p. 1229.
Lacing-tips. Joslin Mfg. Co. Nos. 106,618–20; Oct. 26; Gaz. vol. 219; p. 1229.
Lacing tips, Shoe and corset. Joslin Mfg. Co. No. 106,617; Oct. 26; Gaz. vol. 219; p. 1229.
Ladders. The John S. Tilley Ladders Co. No. 106,382; Oct. 19; Gaz. vol. 219; p. 923.
Lamp glasses and globes. Macbeth Evans Glass Company. Nos. 106,165–6; Oct. 12; Gaz. vol. 219; p. 583.
Lamps, Incandescent electric. Independent Lamp & Wire Company. No. 106,334; Oct. 19; Gaz. vol. 219; p. 921.
Lanterns, Hot and cold blast tubular. R. E. Dietz Company. No. 106,752; Oct. 26; Gaz. vol. 219; p. 1233.
Laxative. The Owl Drug Company. No. 106,252; Oct. 19; Gaz. vol. 219; p. 919.
Laxatives, Tonic. N. Y. International chemical Co. No. 106,172; Oct. 12; Gaz. vol. 219; p. 583.
Leather-dressing for shoes and slippers. Whittemore Bros. & Co. No. 106,387; Oct. 19; Gaz. vol. 219; p. 923.
Leather-dressings. Colonial Works. No. 106,219; Oct. 19; Gaz. vol. 219; p. 918.
Leather flexing, breaking, and tempering machines and parts. The Basler Machinery Company. No. 106,140; Oct. 12; Gaz. vol. 219; p. 582.
Leather, Manufactured. F. N. Kimball. No. 106,338; Oct. 19; Gaz. vol. 219; p. 921.
Leather welting. McAdoo & Allen. Nos. 106,462–3; Oct. 19; Gaz. vol. 219; p. 925.
Lenses, Eyeglass-. Baltimore Optical Company. No. 106,394; Oct. 19; Gaz. vol. 219; p. 923.
Liners, castings, and forgings, Ball-mill. American Manganese Steel Company. No. 106,726; Oct. 26; Gaz. vol. 219; p. 1232.
Liniment. S. Fargo. No. 106,311; Oct. 19; Gaz. vol. 219; p. 920.
Liniment. Halls Dagger Medicine Company. No. 106,153; Oct. 12; Gaz. vol. 219; p. 583.
Liniment, Animal and poultry. J. W. Blaise. No. 106,142; Oct. 12; Gaz. vol. 219; p. 582.
Liniment for varicose veins, rheumatism, sprains. C. Ribordy. No. 106,678; Oct. 26; Gaz. vol. 219; p. 1231.
Liquid and salve for skin diseases. J. Langan. No. 106,160; Oct. 12; Gaz. vol. 219; p. 583.
Lotion to be applied externally to man or beast. J. T. Paxton. No. 106,669; Oct. 26; Gaz. vol. 219; p. 1231.
Macaroni. The Hotaling-Warner Company. No. 106,612; Oct. 26; Gaz. vol. 219; p. 1229.
Macaroni, olive-oil, cheese, &c. Vola Importing Company. No. 106,527; Oct. 19; Gaz. vol. 219; p. 927.
Macaroni, spaghetti, and vermicelli. Skinner Manufacturing Company. No. 106,689; Oct. 26; Gaz. vol. 219; p. 1231.
Magazine, Monthly. Boy Scouts of America. No. 106,403; Oct. 19; Gaz. vol. 219; p. 923.
Magazine, Weekly. Every Week Corporation. No. 106,758; Oct. 26; Gaz. vol. 219; p. 1233.
Magazines, Monthly. Farm Engineering Publishing Company. No. 106,317; Oct. 19; Gaz. vol. 219; p. 921.
Magazines, Monthly. The Photographic Journal of America, Incorporated. No. 106,364; Oct. 19; Gaz. vol. 219; p. 922.
Magazines published monthly. The Dean-Hicks Company. No. 106,578; Oct. 26; Gaz. vol. 219; p. 1228.
Mail-boxes. H. P. Sickels. No. 106,374; Oct. 19; Gaz. vol. 219; p. 922.
Manicure implements, Certain named. H. Böker & Co. No. 106,407; Oct. 19; Gaz. vol. 219; p. 923.
Marble. The Victoria Marble Company. No. 106,526; Oct. 19; Gaz. vol. 219; p. 927.
Marchpane and marchpane surrogates. Kruchen & Haas. No. 106,632; Oct. 26; Gaz. vol. 219; p. 1229.
Massage instruments. J. F. Brodigan. No. 106,404; Oct. 19; Gaz. vol. 219; p. 923.
Massage-machines, Vacuum. New Life Massage Co. No. 106,476; Oct. 19; Gaz. vol. 219; p. 925.
Matches. Aktieselskabet H. E. Gooch & Co.'s Tændstikfabriker Og Aktietændstikfabriken Godthaab. No. 106,391; Oct. 19; Gaz. vol. 219; p. 923.
Matches. The Ohio Match Company. No. 106,662; Oct. 26; Gaz. vol. 219; p. 1230.
Mayonnaise. Hunkele Bros. No. 106,770; Oct. 26; Gaz. vol. 219; p. 1234.
Meal, Calf-. International Stock Food Co. No. 106,614; Oct. 26; Gaz. vol. 219; p. 1229.
Measuring and scientific appliances and parts thereof, Certain named. Firm of C. Zeiss. Nos. 106,131–2; Oct. 12; Gaz. vol. 219; p. 582.
Measuring-rules. The Stanley Rule & Level Company. No. 1,106,810; Oct. 26; Gaz. vol. 219; p. 1235.
Measuring rules and tape, thermometers, and lantern-slides. United Drug Company. No. 106,707; Oct. 26; Gaz. vol. 219; p. 1232.
Meat-choppers and parts thereof. Sander Mfg. Co. No. 106,123; Oct. 12; Gaz. vol. 219; p. 582.
Medical compound for coughs, colds, hoarseness, asthma, &c. F. Malina. No. 106,349; Oct. 19; Gaz. vol. 219; p. 922.
Medical substance, Antigonorrheic and astringent. The Bayer Company. No. 106,285; Oct. 19; Gaz. vol. 219; p. 920.
Medicinal preparation. The Eli Lilly and Company. No. 106,348; Oct. 19; Gaz. vol. 219; p. 922.
Medicinal preparation for cholera and other diseases of hogs. J. Calma. No. 106,298; Oct. 19; Gaz. vol. 219; p. 920.
Medicinal preparation for indigestion, dyspepsia, &c. R. J. Stone. No. 106,519; Oct. 19; Gaz. vol. 219; p. 927.
Medicinal preparations for the intestinal tract. J. T. McFadden. No. 106,651; Oct. 26; Gaz. vol. 219; p. 1230.
Medicinal tonic. E. Burns. No. 106,406; Oct. 19; Gaz. vol. 219; p. 923.
Medicines and pharmaceutical preparations, Certain named. Weld & Company. No. 106,817; Oct. 26; Gaz. vol. 219; p. 1235.
Medicines for certain named disorders. J. W. R. Laxton. No. 106,635; Oct. 26; Gaz. vol. 219; p. 1230.
Medicines for venereal diseases. Fort Worth Chemical Company. No. 106,319; Oct. 19; Gaz. vol. 219; p. 921.
Milk, Condensed. Steinhardter & Nordlinger. No. 106,696; Oct. 26; Gaz. vol. 219; p. 1231.
Milk, Dried or desiccated. Borden's Condensed Milk Company. No. 106,402; Oct. 19; Gaz. vol. 219; p. 923.
Molding-machines, foundry cranes and sprue-cutters, &c. The Coleman Foundry Equipment Company. No. 106,568; Oct. 26; Gaz. vol. 219; p. 1228.
Mops. American Disinfecting Co. No. 106,392; Oct. 19; Gaz. vol. 219; p. 923.
Motor trucks, bodies, chassis, and running-gear. Denby Motor Truck Company. No. 106,302; Oct. 19; Gaz. vol. 219; p. 920.
Motors, Hydraulic. W. Hope. No. 106,441; Oct. 19; Gaz. vol. 219; p. 924.
Motors. Non-electric marine. Hoefer Manufacturing Company. No. 106,102; Oct. 12; Gaz. vol. 219; p. 581.
Musical instruments and supplies, Certain named. Buescher Band Instrument Co. No. 106,560; Oct. 26; Gaz. vol. 219; p. 1227.
Naphtha, benzin, and distillate, Motor-. Petroleum Products Company. No. 106,363; Oct. 19; Gaz. vol. 219; p. 922.
Negligées, Women's. A. Barss & Bro. No. 106,395; Oct. 19; Gaz. vol. 219; p. 923.

Newspaper, Daily. Enossis Publishing Company. No. 106,226; Oct. 19; Gaz. vol. 219; p. 918.
Nuts, Coupling-. The Lealie Company. No. 106,638; Oct. 26; Gaz. vol. 219; p. 1230.
Nuts, Lock-. American Lock-Nut Company. No. 106,725; Oct. 26; Gaz. vol. 219; p. 1232.
Oats, Rolled. The Corno Mills Company. No. 106,072; Oct. 5; Gaz. vol. 219; p. 267.
Oil deodorizer and disinfectant. W. E. Quinn. No. 106,676; Oct. 26; Gaz. vol. 219; p. 1231.
Oil for intestinal torpidity and constipation, White mineral. Sharp & Dohme. No. 106,375; Oct. 19; Gaz. vol. 219; p. 922.
Oil, Linseed-. W. R. Grace & Co. No. 106,096; Oct. 12; Gaz. vol. 219; p. 581.
Oil, Olive-. V. Marrone. No. 106,460; Oct. 19; Gaz. vol. 219; p. 925.
Oil, Olive-. O. L. E. A. Olivicoltori Liguri ed Esportatori Associate. No. 106,669; Oct. 26; Gaz. vol. 219; p. 1230.
Oil-substitute tablets, Castor-. Stotherts Limited. No. 106,811; Oct. 26; Gaz. vol. 219; p. 1235.
Oil, White mineral. Standard Oil Company of New York. No. 106,517; Oct. 19; Gaz. vol. 219; p. 927.
Oils and gasolene, Lubricating-. The Hawkeye Oil Company. No. 106,154; Oct. 12; Gaz. vol. 219; p. 583.
Oils and greases, Lubricating. Fiske Brothers Refining Co. No. 106,095; Oct. 12; Gaz. vol. 219; p. 581.
Oils, lacquers, enamels, and paints, Paint-. A. Eichler. No. 106,148; Oct. 12; Gaz. vol. 219; p. 583.
Oils, Pure olive-. A. Novaro. No. 106,080; Oct. 5; Gaz. vol. 219; p. 267.
Ointment. W. B. Ridgely. No. 106,181; Oct. 12; Gaz. vol. 219; p. 584.
Ointments. Biz-Nes Drug Company. No. 106,552; Oct. 26; Gaz. vol. 219; p. 1227.
Outer suits and overcoats, Men's and youths'. S. Rosenthal & Bros. No. 106,507; Oct. 19; Gaz. vol. 219; p. 926.
Overalls, jumpers, coats, and trousers. Rose-Rogers Co. Nos. 106,505–6; Oct. 19; Gaz. vol. 219; p. 926.
Overalls. Neustadter Bros. No. 106,791; Oct. 26; Gaz. vol. 219; p. 1234.
Packings, Rubber and composition. The Mechanical Rubber Company. No. 106,352; Oct. 19; Gaz. vol. 219; p. 922.
Paint, Disinfecting-. Tmco Mfg. Co. No. 106,522; Oct. 19; Gaz. vol. 219; p. 927.
Paint or varnish removers and the like. New Era Remover Company. No. 106,475; Oct. 19; Gaz. vol. 219; p. 925.
Paints and varnishes. Aktiengesellschaft Johannes Jesorich. No. 106,080; Oct. 12; Gaz. vol. 219; p. 581.
Paints, driers, enamels, &c. The Patterson-Sargent Company. No. 106,608; Oct. 26; Gaz. vol. 219; p. 1230.
Paints, lacs, stains, &c. Davies & Meacham. Nos. 106,572–6; Oct. 26; Gaz. vol. 219; p. 1228.
Paints, lacs, stains, &c. Davies & Meacham. Nos. 106,748–50; Oct. 26; Gaz. vol. 219; p. 1233.
Paints, paint colors and pigments. Clinton Metallic Paint Co. No. 106,217; Oct. 19; Gaz. vol. 219; p. 917.
Paints, paint-oils, and wood-stain, Waterproofing-. Bruno Grosche & Company. No. 106,430; Oct. 19; Gaz. vol. 219; p. 924.
Paper and type-writer ribbons, Carbon-. Peerless Carbon & Ribbon Mfg. Co. No. 106,254; Oct. 19; Gaz. vol. 219; p. 919.
Paper bags. Crown Willamette Paper Co. No. 106,414; Oct. 19; Gaz. vol. 219; p. 924.
Paper bags. The Union Bag & Paper Company. Nos. 106,703–5; Oct. 26; Gaz. vol. 219; p. 1232.
Paper, Bond and ledger. Russell Falls Company. Nos. 106,369–70; Oct. 19; Gaz. vol. 219; p. 922.
Paper boxes. A. T. Harrell. No. 106,766; Oct. 26; Gaz. vol. 219; p. 1233.
Paper boxes, Folding. Morris Fibre Board Company. No. 106,853; Oct. 19; Gaz. vol. 219; p. 922.
Paper, Cover-. Strathmore Paper Company. No. 106,280; Oct. 19; Gaz. vol. 219; p. 923.
Paper-making machinery. J. Marx & Company. No. 106,114; Oct. 12; Gaz. vol. 219; p. 581.
Paper other than carbon or coated manifold papers, Writing and type-writing. S. J. Mitchell. Nos. 106,244–5; Oct. 19; Gaz. vol. 219; p. 918.
Paper, Toilet-. Albany Perforated Wrapping Paper Co. No. 106,134; Oct. 12; Gaz. vol. 219; p. 582.
Paper, Toilet-. L. R. Fisher. No. 106,759; Oct. 26; Gaz. vol. 219; p. 1233.
Paper, Toilet-. The John Hoberg Co. No. 106,439; Oct. 19; Gaz. vol. 219; p. 924.
Paper, Toilet-. The John Hoberg Company. No. 106,609; Oct. 26; Gaz. vol. 219; p. 1229.
Paper towels, table-covers, diapers, and toilet-paper. Scott Paper Company. No. 106,690; Oct. 26; Gaz. vol. 219; p. 1231.
Paper, Tracing-. Crane & Co. No. 106,090; Oct. 12; Gaz. vol. 219; p. 581.
Paper, Writing-. American Pad & Paper Company. No. 106,281; Oct. 19; Gaz. vol. 219; p. 919.
Paper, Writing-. H. A. Sarle. No. 106,801; Oct. 26; Gaz. vol. 219; p. 1235.
Papers, Printing, writing and cover. Hudson Valley Paper Co. No. 106,442; Oct. 19; Gaz. vol. 219; p. 934.
Papers, Wall-. Imperial Wall Paper Company. No. 106,157; Oct. 12; Gaz. vol. 219; p. 583.
Paraffin, Refined liquid. The Stern Sonneborn Oil Co. No. 106,697; Oct. 26; Gaz. vol. 219; p. 1231.
Peanuts, Fresh, salted, and roasted. Werden & Co. No. 106,715; Oct. 26; Gaz. vol. 219; p. 1232.
Peat. E. Dyckerhoff. No. 106,584; Oct. 26; Gaz. vol. 219; p. 1228.
Pens and penholders, Steel. Hinks, Wells & Co. No. 106,101; Oct. 12; Gaz. vol. 219; p. 581.
Pens, Fountain-. Eagle Pencil Company. Nos. 106,092–3; Oct. 12; Gaz. vol. 219; p. 581.
Pens, Steel. Hinks, Wells & Co. Nos. 106,098–100; Oct. 12; Gaz. vol. 219; p. 581.
Perfumes. Agra Company. No. 106,084; Oct. 12; Gaz. vol. 219; p. 581.
Perfumes, toilet waters, creams, rouges, and powders. The C. B. Woodworth Sons Co. No. 106,129; Oct. 12; Gaz. vol. 219; p. 582.
Periodical, Weekly. American Buyer. No. 106,194; Oct. 19; Gaz. vol. 219; p. 917.
Pharmaceutical preparations, Certain named. The De Pree Chemical Company. No. 106,222; Oct. 19; Gaz. vol. 219; p. 918.
Phonographs, Talking Doll & Novelty Co. No. 106,187, Oct. 12; Gaz. vol. 219; p. 584.
Phonographs and phonographic supplies. The Aeolian Company. No. 106,723; Oct. 26; Gaz. vol. 219; p. 1232.
Phonographs, talking-machines, &c. The Buckley-Newhall Company. Nos. 106,200–10; Oct. 19; Gaz. vol. 219; p. 917.
Photographic apparatus and supplies. Neue Photographische Gesellschaft Aktiengesellschaft. No. 106,473; Oct. 19; Gaz. vol. 219; p. 925.
Photographic paper, Sensitized. Eastman Kodak Co. No. 106,147; Oct. 12; Gaz. vol. 219; p. 582.
Photographic portraits. Sprague-Hathaway Co. No. 106,378; Oct. 19; Gaz. vol. 219; p. 922.
Pianos, Player-. Koch & Droge Piano Co. No. 106,340; Oct. 19; Gaz. vol. 219; p. 921.
Pianos. Wagner Piano Company. No. 106,191; Oct. 12; Gaz. vol. 219; p. 584.
Picture films, Moving-. California Motion Picture Corporation. No. 106,730; Oct. 26; Gaz. vol. 219; p. 1233.
Picture films, Moving-. Melies Mfg. Co. No. 106,115; Oct. 12; Gaz. vol. 219; p. 582.
Piece goods, Certain named. Voss & Stern. No. 106,710; Oct. 26; Gaz. vol. 219; p. 1232.
Piece goods of certain named materials. Adair & Bruyere. No. 106,390; Oct. 19; Gaz. vol. 219; p. 923.
Pile timbers, Ship and dock. Swift & Covington. No. 106,698; Oct. 26; Gaz. vol. 219; p. 1231.
Pills, Purgative. The W. H. Comstock Company. No. 106,220; Oct. 19; Gaz. vol. 219; p. 918.
Pipe and drain-traps, Lead. United Lead Company. No. 106,524; Oct. 19; Gaz. vol. 219; p. 927.
Pipe and elbows. Lamb & Ritchie Co. No. 106,783; Oct. 26; Gaz. vol. 219; p. 1234.
Pipes and tubes. National Tube Company. No. 106,618; Oct. 12; Gaz. vol. 219; p. 582.
Piston-rings. The V. A. Longaker Company. No. 106,640; Oct. 26; Gaz. vol. 219; p. 1230
Plastic, Medicated. D. Mybakker. No. 106,171; Oct. 12; Gaz. vol. 219; p. 583.
Plows. Parlin & Orendorff Company. No. 106,490; Oct. 19; Gaz. vol. 219; p. 926.
Plows, harrows, seed-sowing machines, cultivators, &c. O. Baeckman. No. 106,284; Oct. 19; Gaz. vol. 219; p. 920.
Plowshares. M. Mares. No. 106,076; Oct. 5; Gaz. vol. 219; p. 267.
Plowshares. M. Mares. No. 106,113; Oct. 12; Gaz. vol. 219; p. 581.
Polish for wood requiring a glossy finish. E. I. Meadowcroft. No. 106,242; Oct. 19; Gaz. vol. 219; p. 918.
Polishes for restoring finish on varnished-surface work. Berry Brothers. No. 106,141; Oct. 12; Gaz. vol. 219; p. 582.
Popcorn and popcorn confections. National Candy Company. No. 106,790; Oct. 26; Gaz. vol. 219; p. 1234.
Poultry, Dressed. Weinberg Brothers and Company. No. 106,816; Oct. 26; Gaz. vol. 219; p. 1235.
Poultry, eggs, stock, &c., Dressed and live. Twin Oak Poultry and Egg Company. No. 106,304; Oct. 19; Gaz. vol. 219; p. 923.
Powder, Absorbent and antiseptic dusting-. Gerhard Mennen Chemical Co. No. 106,464; Oct. 19; Gaz. vol. 219; p. 925.
Powder, Black sporting-. E. I. du Pont de Nemours Powder Company. No. 106,821; Oct. 26; Gaz. vol. 219; p. 1235.
Powder, Smokeless rifle-. Hercules Powder Company. No. 106,328; Oct. 19; Gaz. vol. 219; p. 921.
Powders and rouge. The J. A. Pozzoni Pharmacal Co. No. 106,365; Oct. 19; Gaz. vol. 219; p. 922.
Powders, toilet waters, and perfumes, Talcum, &c. A. P. Babcock Co. No. 106,071; Oct. 5; Gaz. vol. 219; p. 267.
Preparation for dandruff, &c. Nelrow Chemical Company. No. 106,472; Oct. 19; Gaz. vol. 219; p. 925.
Preparation for poor circulation of the hands and feet, paralysis, &c. E. Waltner. No. 106,718; Oct. 26; Gaz. vol. 219; p. 1232.
Preparation for treatment of affected eyes. J. T. Nulty. No. 106,251; Oct. 19; Gaz. vol. 219; p. 919.

Preparation for treatment of kidneys, worms, chicken and hog cholera. G. W. Peeler. No. 106,670; Oct. 26; Gaz. vol. 219; p. 1231.
Preparation for treatment of old sores, carbuncles, and cancers. Whitaker & Kincaid. No. 106,717; Oct. 26; Gaz. vol. 219; p. 1232.
Preparation for use as a tonic and remedy for stomach and blood trouble, Liquid. F. A. Dillingham. No. 106,224; Oct. 19; Gaz. vol. 219; p. 918.
Preparation, Weed-killer. E. A. Schofield. No. 106,686; Oct. 26; Gaz. vol. 219; p. 1231.
Preparations for fertilizing and treating vegetation. Dextrogermoform Propagating Co. No. 106,223; Oct. 19; Gaz. vol. 219; p. 918.
Preparations for undertakers' use, Certain named. The Embalmers' Supply Co. No. 106,303; Oct. 19; Gaz. vol. 219; p. 920.
Publication, Monthly. The Northwest Farm Press Co. No. 106,357; Oct. 19; Gaz. vol. 219; p. 922.
Publications, Printed periodical. T. Leavitt. No. 106,343; Oct. 19; Gaz. vol. 219; p. 921.
Punch in concentrated syrup form, Non-alcoholic fruit. A. M. Luckett. Nos. 106,162–3; Oct. 12; Gaz. vol. 219; p. 583.
Purgative. The Bayer Company. No. 106,201; Oct. 19; Gaz. vol. 219; p. 917.
Purgative and blood-purifier. F. Mocsik. No. 106,246; Oct. 19; Gaz. vol. 219; p. 918.
Railroad spreaders, snow-plows, and flangers. The O. F. Jordan Company. No. 106,158; Oct. 12; Gaz. vol. 219; p. 583.
Raisins, Seeded. Rosenberg Bros. & Co. No. 106,683; Oct. 26; Gaz. vol. 219; p. 1231.
Ranges and stoves and heating-stoves, Cooking. The Stamford Foundry Company. No. 106,186; Oct. 12; Gaz. vol. 219; p. 584.
Razors and safety-razors and blades. Yorkshire Steel Co. No. 106,277; Oct. 19; Gaz. vol. 219; p. 919.
Razors, knives, scissors, shears. M. Klaas. Nos. 106,625–6; Oct. 26; Gaz. vol. 219; p. 1229.
Refractory mineral capable of resisting high temperatures. Estate of A. E. Foote. Nos. 106,304–6; Oct. 19; Gaz. vol. 219; p. 920.
Refrigerators. Borden Stove Company. No. 106,734; Oct. 26; Gaz. vol. 219; p. 1232.
Refrigerators. The Buckley-Newhall Company. Nos. 106,211–12; Oct. 19; Gaz. vol. 219; p. 917.
Remedies for certain named diseases. Chemische Fabrik Reisholz Gesellschaft mit beschränker Haftung. No. 106,213; Oct. 19; Gaz. vol. 219; p. 917.
Remedies for diseases of dogs. Vermilax Company. No. 106,271; Oct. 19; Gaz. vol. 219; p. 919.
Remedy against syphilis, sleeping-sickness, &c. Farbwerke vorm. Meister Lucius & Brüning. No. 106,308; Oct. 19; Gaz. vol. 219; p. 920.
Remedy for certain named diseases. J. N. Murdoch Company. No. 106,173; Oct. 12; Gaz. vol. 219; p. 583.
Remedy for constipation, &c. S. Fargo. No. 106,314; Oct. 19; Gaz. vol. 219; p. 921.
Remedy for constipation, sour stomach, &c. S. Fargo. No. 106,316; Oct. 19; Gaz. vol. 219; p. 921.
Remedy for corns. S. Fargo. No. 106,588; Oct. 26; Gaz. vol. 219; p. 1228.
Remedy for diseases of the skin and semi-exterior mucous membranes. Geo. H. Lee Company. No. 106,344; Oct. 19; Gaz. vol. 219; p. 921.
Remedy for diseases of women. W. B. Jones. No. 106,447; Oct. 19; Gaz. vol. 219; p. 925.
Remedy for female ailments. Davis & Lawrence Company. No. 106,221; Oct. 19; Gaz. vol. 219; p. 918.
Remedy for headache and neuralgia. J. L. Pamerleau. No. 106,253; Oct. 19; Gaz. vol. 219; p. 919.
Remedy for indigestion, biliousness, &c. S. Fargo. No. 106,309; Oct. 19; Gaz. vol. 219; p. 920.
Remedy for la grippe, ague, influenza, and malaria. Thompson Remedy Co. No. 106,814; Oct. 26; Gaz. vol. 219; p. 1235.
Remedy for laxative purposes and for purifying the blood. S. Fargo. No. 106,312; Oct. 19; Gaz. vol. 219; p. 920.
Remedy for the eyes. J. Luttenberger. No. 106,164; Oct. 12; Gaz. vol. 219; p. 583.
Remedy for the treatment of certain named animal diseases. Spohn Medical Company. No. 106,377; Oct. 19; Gaz. vol. 219; p. 922.
Remedy for treatment of certain named diseases. S. Fargo. No. 106,315; Oct. 19; Gaz. vol. 219; p. 921.
Remedy, Liquid liver. L. F. Christman. No. 106,564; Oct. 26; Gaz. vol. 219; p. 1227.
Remedy, Pile. C. H. Warren. No. 106,272; Oct. 19; Gaz. vol. 219; p. 919.
Remedy, Toothache. M. Gennarelli. No. 106,152; Oct. 12; Gaz. vol. 219; p. 583.
Resuscitating appliances. Life Saving Devices Co. No. 106,639; Oct. 26; Gaz. vol. 219; p. 1230.
Ribbons. W. E. Dodd. No. 106,581; Oct. 26; Gaz. vol. 219; p. 1228.
Ribbons, W. Openhym & Sons. No. 106,485; Oct. 19; Gaz. vol. 219; p. 926.
Rice. Standard Milling Co. No. 106,694; Oct. 26; Gaz. vol. 219; p. 1231.
Rivets and burs. The American Brass Company. No. 106,136; Oct. 12; Gaz. vol. 219; p. 582.
Roofing, roofing felt and cement, Ready. Warren Bhret Company. No. 106,273; Oct. 19; Gaz. vol. 219; p. 919.
Rope, binder and other twines. Bafficer, Erbsloh and Company. Nos. 106,500–1; Oct. 19; Gaz. vol. 219; p. 926.
Rouge, liquid face-powder, skin-lotion, &c. Madam Duval Company. No. 106,583; Oct. 26; Gaz. vol. 219; p. 1228.
Rubber boots and shoes. Boston Rubber Shoe Company. No. 106,735; Oct. 26; Gaz. vol. 219; p. 1233.
Rubber boots and shoes. Colchester Rubber Company. No. 106,567; Oct. 26; Gaz. vol. 219; p. 1228.
Rubber boots, shoes, and overshoes and rubber-soled canvas boots and shoes. Hood Rubber Company. No. 106,331; Oct. 19; Gaz. vol. 219; p. 921.
Rubber goods and surgical appliances, Certain named. Druggists' Supply Corporation. No. 106,417; Oct. 19; Gaz. vol. 219; p. 924.
Rubber goods, Cementing and vulcanising patches for. E. Z. Patch Company. No. 106,418; Oct. 19; Gaz. vol. 219; p. 924.
Rubber goods, Certain named. United & Globe Rubber M'f'g Companies. No. 106,268; Oct. 19; Gaz. vol. 219; p. 919.
Rubber, Reclaimed. Bloomingdale Rubber Company. No. 106,288; Oct. 19; Gaz. vol. 219; p. 920.
Rubber-soled boots and shoes with canvas tops. United States Rubber Company. No. 106,708; Oct. 26; Gaz. vol. 219; p. 1232.
Rust or scale preventing materials in water-containing devices. Flint, Eaton & Co. No. 106,423; Oct. 19; Gaz. vol. 219; p. 924.
Saleratus, bicarbonate of soda, and sal-soda. Church & Dwight Co. Nos. 106,214–16; Oct. 19; Gaz. vol. 219; p. 917.
Salt. Couto & Co. No. 106,145; Oct. 12; Gaz. vol. 219; p. 582.
Salt, Table. D. G. Cutler Company. No. 106,747; Oct. 26; Gaz. vol. 219; p. 1233.
Salts, Effervescent. Imperial Laboratories Co. No 106,443; Oct. 19; Gaz. vol. 219; p. 924.
Salve. H. W. Howser. No. 106,769; Oct. 26; Gaz. vol. 219; p. 1234.
Salve. W. J. Lind. No. 106,240; Oct. 19; Gaz. vol 219; p. 918.
Salve. Tomahawk Medicine Co. No. 106,267; Oct. 19; Gaz. vol. 219; p. 919.
Salve compound for cuts, sores, and bruises. A. Pavell. No. 106,120; Oct. 12; Gaz. vol. 219; p. 582.
Salve or ointment. H. G. Frobase. No. 106,322; Oct. 19; Gaz. vol. 219; p. 921.
Salves, medicinal tonics, laxatives, &c. Lesella Remedies Company. No. 106,239; Oct. 19; Gaz. vol. 219; p. 918.
Sap or gum of the ficus-vine, Tree. M. Hydes. No. 106,333; Oct. 19; Gaz. vol. 219; p. 921.
Satins, Broad. H. R. Mallinson & Co. No. 106,643; Oct. 26; Gaz. vol. 219; p. 1230.
Sausage-casings. The William Davies Company. No 106,571; Oct. 26; Gaz. vol. 219; p. 1228.
Scalp and hair tonics. F. De Martino. No. 106,649; Oct. 26; Gaz. vol. 219; p. 1230.
Sedative. The Bayer Company. No. 106,199; Oct. 19; Gaz. vol. 219; p. 917.
Sedative and hypnotic. The Bayer Company. No. 106,202; Oct. 19; Gaz. vol. 219; p. 917.
Separators and parts thereof. Aktiebolaget Eskilstuna Separator. No. 106,133; Oct. 12; Gaz. vol. 219; p. 582.
Sewing-cotton or cotton thread. The Clark Thread Co. No. 106,565; Oct. 26; Gaz. vol. 219; p. 1227.
Sewing-machines, vacuum-cleaners, and carpet-sweepers. The Buckley-Newhall Company. Nos. 106,205–6; Oct. 19; Gaz. vol. 219; p. 917.
Shades, Window-. F. Schoenherr. No. 106,513; Oct. 19; Gaz. vol. 219; p. 927.
Shaft-hangers. Standard Pressed Steel Co. No. 106,695; Oct. 26; Gaz. vol. 219; p. 1231.
Shampoo-powder. F. H. Gazzolo. No. 106,151; Oct. 12; Gaz. vol. 219; p. 583.
Shampoo preparation. Vail Brothers. No. 106,525; Oct. 19; Gaz. vol. 219; p. 927.
Shaving preparation, Liquid. Societe Anonyme de l'Emulsior des Indes. No. 106,515; Oct. 19; Gaz. vol. 219; p. 927.
Shawls. Queen City Knitting Mills. Nos. 106,674–5; Oct. 26; Gaz. vol. 219; p. 1231.
Sheetings and drillings. Piedmont Manufacturing Company. No. 106,494; Oct. 19; Gaz. vol. 219; p. 926.
Shirts. M. Goldman. No. 106,428; Oct. 19; Gaz. vol. 219; p. 924.
Shirts. Meyer Levin & Son. No. 106,347; Oct. 19; Gaz. vol. 219; p. 922.
Shirts and overalls, Negligée and work. S. Heller & Sons. No. 106,438; Oct. 19; Gaz. vol. 219; p. 924.
Shirts, drawers, and union suits. The Manhattan Shirt Company. No. 106,644; Oct. 26; Gaz. vol. 219; p. 1230.
Shirts, Work-. Lewis Brothers Company. No. 106,785; Oct. 26; Gaz. vol. 219; p. 1234.
Shock-absorbers. Comfort Shock Absorber Co. No 106,412; Oct. 19; Gaz. vol. 219; p. 924.
Shock-absorbers. The R. & R. Mfg. Co. No. 106,499; Oct. 19; Gaz. vol. 219; p. 926.
Shoes. Rogers Peet Company. No. 106,366; Oct. 19; Gaz. vol. 219; p. 922.
Shoes. Watson Shoe Co. No. 106,532; Oct. 19; Gaz vol. 219; p. 927.

Shoes and other footwear. De Cou Brothers Company. No. 106,579; Oct. 26; Gaz. vol. 219; p. 1228.
Shoes, Leather. Wm. Henne & Co. No. 106,604; Oct. 26; Gaz. vol. 219; p. 1229.
Shoes, Leather. Wichert & Gardiner. No. 106,719; Oct. 26; Gaz. vol. 219; p. 1232.
Silk, cotton, and wool and combinations thereof piece goods. Sebros Dress Fabric Co. No. 106,800; Oct. 26; Gaz. vol. 219; p. 1235.
Silk, wool, linen, and cotton piece goods. Blanchini Ferier. Nos. 106,549–51; Oct. 26; Gaz. vol. 219; p. 1227.
Silks, Broad. H. R. Mallinson & Co. No. 106,642; Oct. 26; Gaz. vol. 219; p. 1230.
Silos and tanks. The C. C. Fouts Co. No. 106,320; Oct. 19; Gaz. vol. 219; p. 921.
Silver-lead, Ceylon plumbago, and flake graphite, East India. H. M. Riddle. No. 106,180; Oct. 12; Gaz. vol. 219; p. 583.
Smokers' articles and appliances not of precious metal. W. F. Hirschmann. No. 106,607; Oct. 26; Gaz. vol. 219; p. 1229.
Snuff, Catarrh-. M. R. Valenzuela. No. 106,269; Oct. 19; Gaz. vol. 219; p. 919.
Soap. John T. Stanley Co. Nos. 106,126–7; Oct. 12; Gaz. vol. 219; p. 582.
Soap. John T. Stanley Co. No. 106,379; Oct. 19; Gaz. vol. 219; p. 923.
Soap. Peet Bros. Mfg. Co. No. 106,177; Oct. 12; Gaz. vol. 219; p. 583.
Soap, Laundry, bath, and toilet. James S. Kirk & Company. No. 106,339; Oct. 19; Gaz. vol. 219; p. 921.
Soap, Toilet. The J. B. Williams Company. No. 106,388; Oct. 19; Gaz. vol. 219; p. 923.
Soap, Toilet and laundry. Colgate & Co. No. 106,411; Oct. 19; Gaz. vol. 219; p. 924.
Soap, Toilet and laundry. Colgate & Co. No. 106,743; Oct. 26; Gaz. vol. 219; p. 1233.
Soaps, Toilet. S. Fargo. No. 106,313; Oct. 19; Gaz. vol. 219; p. 920.
Solution for eczema and other skin diseases, Chemical. G. T. Burnham. No. 106,293; Oct. 19; Gaz. vol. 219; p. 920.
Spark-plugs and valve-lifters. The Auburn Ignition Mfg. Co. No. 106,089; Oct. 12; Gaz. vol. 219; p. 581.
Spices and mustard. E. R. Durkee & Co. No. 106,754; Oct. 26; Gaz. vol. 219; p. 1233.
Spices, flavoring extracts. The Kusac Company. No. 106,782; Oct. 26; Gaz. vol. 219; p. 1234.
Sponges. McKesson & Robbins. No. 106,241; Oct. 19; Gaz. vol. 219; p. 918.
Sporting goods, Certain named. The Enterprise Manufacturing Company. Nos. 106,419–20; Oct. 19; Gaz. vol. 219; p. 924.
Starch. National Starch Co. No. 106,249; Oct. 19; Gaz. vol. 219; p. 918.
Stationers' supplies, Certain named. William Mann Company. Nos. 106,645–6; Oct. 26; Gaz. vol. 219; p. 1230.
Stationers' supplies, Certain named. William R. Jenkins Co. No. 106,336; Oct. 19; Gaz. vol. 219; p. 921.
Staying-machines. M. D. Knowlton Company. No. 106,627; Oct. 26; Gaz. vol. 219; p. 1229.
Steel bars. The Bets-Pierce Company. No. 106,131; Oct. 26; Gaz. vol. 219; p. 1232.
Steel, Tool-. Firth-Sterling Steel Company. No. 106,094; Oct. 12; Gaz. vol. 219; p. 581.
Stogies. The Miller Cigar Co. No. 106,243; Oct. 19; Gaz. vol. 219; p. 918.
Stoves and heaters. American Stove Company. No. 106,541; Oct. 26; Gaz. vol. 219; p. 1227.
Stoves, ranges, heaters, irons, &c., Electric. The Michigan Stove Company. No. 106,170; Oct. 12; Gaz. vol. 219; p. 583.
Sugar impurities, Catalytic agent for causing the precipitation of. Kieselguhr Company of America. No. 106,159; Oct. 12; Gaz. vol. 219; p. 583.
Suits, cloaks, and dresses, Ladies'. Blogg & Littauer. No. 106,397; Oct. 19; Gaz. vol. 219; p. 923.
Suits, coats, skirts, shirts, &c. G. S. Bassett. No. 106,730; Oct. 26; Gaz. vol. 219; p. 1232.
Sulfur flowers. San Francisco Sulphur Co. No. 106,685; Oct. 26; Gaz. vol. 219; p. 1231.
Sunbonnets, sun-hats, dust-caps, &c. Winget Manufacturing Co. No. 106,818; Oct. 26; Gaz. vol. 219; p. 1235.
Switches and receptacles, door, &c., switches, Flush. Newton Manufacturing Company. No. 106,657; Oct. 26; Gaz. vol. 219; p. 1230.
Tablets, Laxative. The Fellows Medical M'f'g Co. No. 106,422; Oct. 19; Gaz. vol. 219; p. 924.
Tableware and ornamental chinaware, China. Onondaga Pottery Company. No. 106,360; Oct. 19; Gaz. vol. 219; p. 922.
Tacks, rivets, burs, &c. Atlas Tack Company. No. 106,729; Oct. 26; Gaz. vol. 219; p. 1232.
Talking-machines. Taux-Wel Talking Machine Company. No. 106,189; Oct. 12; Gaz. vol. 219; p. 584.
Tanks, Seamless. Janney-Steinmetz & Co. No. 106,446; Oct. 19; Gaz. vol. 219; p. 925.
Tanks, Water-closet. Thomas Maddock's Sons Co. No. 106,167; Oct. 12; Gaz. vol. 219; p. 583.
Tea and roasted coffee. John Blaul's Sons Co. No. 106,733; Oct. 26; Gaz. vol. 219; p. 1232.
Teas. Golden Seal Tea Co. No. 106,596; Oct. 26; Gaz. vol. 219; p. 1228.
Teas, coffees, cocoa, and salad-oil. Bloomingdale Bros. No. 106,398; Oct. 19; Gaz. vol. 219; p. 923.
Telephone parts, &c. Internationale Galalith-Gesellschaft Hoff & Co. No. 106,234; Oct. 19; Gaz. vol. 219; p. 918.
Textile machinery, Certain named. Curtis & Marble Machine Company. No. 106,299; Oct. 19; Gaz. vol. 219; p. 920.
Threads, Sewing-. The Singer Manufacturing Company. No. 106,688; Oct. 26; Gaz. vol. 219; p. 1231.
Tire fillers and patches for cementing. Service Motor Supply Company. No. 106,125; Oct. 12; Gaz. vol. 219; p. 582.
Tires and tubes, Rubber. The National Tire Company. No. 106,079; Oct. 5; Gaz. vol. 219; p. 267.
Tires, Elastic vehicle-. The Republic Rubber Company. No. 106,503; Oct. 19; Gaz. vol. 219; p. 926.
Tires, Rubber vehicle-. Akron Tire Co. No. 106,085; Oct. 12; Gaz. vol. 219; p. 581.
Tobaccos, Plug, twist, cut-plug, smoking, and leaf. Macklin-Zimmer-McGill Tobacco Co. No. 106,075; Oct. 5; Gaz. vol. 219; p. 267.
Toilet and pharmaceutical preparations, Certain named. Richard Hudnut. Nos. 106,231–2; Oct. 19; Gaz. vol. 219; p. 918.
Toilet preparation. Cupid Blush Company. No. 106,746; Oct. 26; Gaz. vol. 219; p. 1233.
Toilet preparations, Certain named. Holman Soap Co. No. 106,330; Oct. 19; Gaz. vol. 219; p. 921.
Toilet preparations, Certain named. The Importers Company. Nos. 106,444–5; Oct. 19; Gaz. vol. 219; p. 924.
Toilet preparations for the complexion. H. R. Davis. No. 106,301; Oct. 19; Gaz. vol. 219; p. 920.
Tonic and digestive powder, Medicinal. A. Virdone. No. 106,100; Oct. 12; Gaz. vol. 219; p. 584.
Tonic, Tubercular. J. F. Daley. No. 106,300; Oct. 19; Gaz. vol. 219; p. 920.
Tonics, Medicinal. E. Scheller & Co. No. 106,802; Oct. 26; Gaz. vol. 219; p. 1235.
Tooth cleansing and preserving preparation. F. L. Moss. No. 106,247; Oct. 19; Gaz. vol. 219; p. 918.
Tooth-paste. C. S. Van Orden. No. 106,270; Oct. 19; Gaz. vol. 219; p. 919.
Tooth-paste, tooth, face, and talcum powders, &c. Hydrox Chemical Company. No. 106,771; Oct. 26; Gaz. vol. 219; p. 1234.
Toy pennants. Cruver Manufacturing Company. No. 106,413; Oct. 19; Gaz. vol. 219; p. 924.
Toys, Plain and mechanical. Marshall Field & Company. No. 106,589; Oct. 26; Gaz. vol. 219; p. 1228.
Tracing-cloth. The Winterbottom Book Cloth Company. No. 106,535; Oct. 19; Gaz. vol. 219; p. 927.
Tractors. The Joliet Oil Tractor Co. No. 106,615; Oct. 26; Gaz. vol. 219; p. 1229.
Treatment for dyspepsia, kidney and liver complaints. J. A. Heintzelman. No. 106,155; Oct. 12; Gaz. vol. 219; p. 583.
Trousers, Men's. J. S. Wojtalewicz. No. 106,720; Oct. 26; Gaz. vol. 219; p. 1232.
Truck bolster, Railway-car-. Pressed Steel Car Company. No. 106,257; Oct. 19; Gaz. vol. 219; p. 919.
Umbrellas. John Murphy Umbrella Co. No. 106,655; Oct. 26; Gaz. vol. 219; p. 1230.
Undershirts, drawers, and union suits. The Cooper M'f'g Co. No. 106,570; Oct. 26; Gaz. vol. 219; p. 1228.
Undershirts, drawers, union suits, &c. Oppenheim, Oberndorf & Co. No. 106,486; Oct. 19; Gaz. vol. 219; p. 926.
Uniforms, house-dresses, &c., Nurses' and maids'. Hays & Green. No. 106,436; Oct. 19; Gaz. vol. 219; p. 924.
Unions. Bridgman Bros. Co. No. 106,555; Oct. 26; Gaz. vol. 219; p. 1227.
Valve-cups constructed of bow-spring metal, graphite, and canvas. Parker Cup & Specialty Works. No. 106,665; Oct. 26, Gaz. vol. 219; p. 1230.
Valve-disks. G. R. Starrs. No. 106,264; Oct. 19; Gaz. vol. 219; p. 919.
Valves, Composition disk brass. Penberthy Injector Co. No. 106,255; Oct. 19; Gaz. vol. 219; p. 919.
Valves, Metallic. The Wm. Powell Co. No. 106,179; Oct. 12; Gaz. vol. 219; p. 583.
Varnish. The Forbes Varnish Company. No. 106,150; Oct. 12; Gaz. vol. 219; p. 583.
Varnishes. H. L. Colman. No. 106,143; Oct. 12; Gaz. vol. 219; p. 582.
Vaults, Cement burial-. The Norwalk Vault Company. No. 106,358; Oct. 19; Gaz. vol. 219; p. 922.
Vegetables and kitchen herbs, Pulverised. G. B. Martino & Figlio. No. 106,787; Oct. 26; Gaz. vol. 219; p. 1234.
Vehicles, Commercial motor-. Wichita Falls Motor Co. No. 106,192; Oct. 12; Gaz. vol. 219; p. 584.
Velvets and plushes in the piece. The Salt's Textile Manufacturing Company. No. 106,511; Oct. 19; Gaz. vol. 219; p. 926.
Velvets, velveteens, and corduroys. Rosen, Plechner & Lipschutz. No. 106,800; Oct. 26; Gaz. vol. 219; p. 1234.
Velvets, woolens, worsteds, dress-linens, &c. The John S. Naylor Company. No. 106,656; Oct. 26; Gaz. vol. 219; p. 1230.

Vermin and noxious insects, Means for destroying. Fritz Schulz Aktiengesellschaft. No. 106,227; Oct. 19; Gaz. vol. 219; p. 918.
Veterinary remedies for distemper, influenza, &c. Wells Medicine Company. No. 106,274; Oct. 19; Gaz. vol. 219; p. 917.
Veterinary remedy for sores, cuts, &c. Huntsman Remedy Company. No. 106,332; Oct. 19; Gaz. vol. 219; p. 927.
Viburnum compound. J. C. Beach, M. D. No. 106,203; Oct. 19; Gaz. vol. 219; p. 917.
Violin, viola, &c., strings. V. C. Squier. No. 106,692; Oct. 26; Gaz. vol. 219; p. 1231.
Viruses, serums, toxins, and antitoxins. Parke Davis & Co. No. 106,175; Oct. 12; Gaz. vol. 219; p. 583.
Wagons and carts. The Sechler & Company. No. 106,371; Oct. 19; Gaz. vol. 219; p. 922.
Waists and dresses, Shirt-. Rand Brothers. No. 106,502; Oct. 19; Gaz. vol. 219; p. 926.
Washing-powder. Los Angeles Soap Company. No. 106,454; Oct. 19; Gaz. vol. 219; p. 925.
Watches. R. H. Macy & Co. No. 106,457; Oct. 19; Gaz. vol. 219; p. 925.
Watches and watch-movements. J. Racine & Co. No. 106,258; Oct. 19; Gaz. vol. 219; p. 919.
Watches, watchcases, watch-movements, and parts thereof. The Keystone Watch Case Company. No. 106,237; Oct. 19; Gaz. vol. 219; p. 918.
Water, Mineral. J. Thomas. No. 106,813; Oct. 26; Gaz. vol. 219; p. 1235.
Water, Natural mineral. I. Du Bouchet. No. 106,291; Oct. 19; Gaz. vol. 219; p. 920.
Waters, Table-. St. Louis Agency of National Pure Water Company. No. 106,693; Oct. 26; Gaz. vol. 219; p. 1231.
Waterproof textile fabrics. Eastern Finishing Works. No. 106,225; Oct. 19; Gaz. vol. 219; p. 918.
Waterproofing compound for leather and leather belting. Olmsted-Flint Company. No. 106,359. Oct. 19; Gaz. vol. 219; p. 922.
Wax and fire-extinguishing compound, Ironing-. Wizard Products Co. No. 106,722; Oct. 26; Gaz. vol. 219; p. 1232.
Wax, Paraffin-. W. R. Grace & Co. No. 106,597; Oct. 26; Gaz. vol. 219; p. 1228.
Waxes, wood-dye, paste wood-filler, &c., Powdered and prepared. S. C. Johnson & Son. No. 106,108; Oct. 12; Gaz. vol. 219; p. 581.
Webbing, woven straps, fabric belting, &c. L. H. Gilmer Co. No. 106,425; Oct. 19; Gaz. vol. 219; p. 924.
Whiskies, Blend of straight. R. M. Rose Company. No. 106,122; Oct. 12; Gaz. vol. 219; p. 582.
Whisky. H. Huber & Co. No. 106,613; Oct. 26; Gaz. vol. 219; p. 1229.
Whisky. A. Margulis. No. 106,647; Oct. 26; Gaz. vol. 219; p. 1230.
Whisky, Blended Scotch. Macdonald & Muir. No. 106,456; Oct. 19; Gaz. vol. 219; p. 925.
Whistle-calls. C. L. Butts. No. 106,738; Oct. 26; Gaz. vol. 219; p. 1233.
Wine, Muscatel. H. N. Gilbey. No. 106,230; Oct. 19; Gaz. vol. 219; p. 918.
Wine, Sherry-. Piury & Co. No. 106,256; Oct. 19; Gaz. vol. 219; p. 919.
Woolen piece goods. Arthur Koenig Company. No. 106,629; Oct. 26; Gaz. vol. 219; p. 1229.
Woolen piece goods. The Cleveland Worsted Mills Co. No. 106,410; Oct. 19; Gaz. vol. 219; p. 923.
Worsted piece goods. Firm of R. Clough. No. 106,566; Oct. 26; Gaz. vol. 219; p. 1227.
Woven and knitted fabrics of wool, cotton, and silk or mixture of same. Botany Worsted Mills. No. 106,736; Oct. 26; Gaz. vol. 219; p. 1233.
Wrenches. Automatic Wrench Manufacturing Company. No. 106,196; Oct. 19; Gaz. vol. 219; p. 917.
Wrenches. Bonney Vise & Tool Works. No. 106,400; Oct. 19; Gaz. vol. 219; p. 923.
Yarn. William Whitman Company. No. 106,718; Oct. 26; Gaz. vol. 219; p. 1232.

ALPHABETICAL LIST OF LABELS.

"A Healthful Drink." (For a Beverage.) Lime-Kola Co. No. 18,795; Oct. 5; Gaz. vol. 219; p. 268.
"Albifine." (For a Cosmetic.) F. J. Hamp. No. 18,797; Oct. 12; Gaz. vol. 219; p. 585.
"Alundum." (For Grinding-Wheels.) Norton Company. No. 18,792; Oct. 5; Gaz. vol. 219; p. 268.
"Auto City." (For Beer.) Auto City Brewing Co. No. 18,783; Oct. 5; Gaz. vol. 219; p. 268.
"Butter-Cream Bread." (For Bread.) R. L. Nafziger. No. 18,801; Oct. 12; Gaz. vol. 219; p. 585.
"Cash Premium Coffee, Money in Every Package." (For Coffee.) O. H. Baughman. No. 18,796; Oct. 12; Gaz. vol. 219; p. 585.
"Crystolon." (For Grinding-Wheels.) Norton Company. No. 18,791; Oct. 5; Gaz. vol. 219; p. 268.
"Eu-ca-lyp-tine." (For a Remedy.) P. S. Frick. No. 18,804; Oct. 19; Gaz. vol. 219; p. 928.
"Good Scout." (For a Confection.) Dirnberger Pop Corn Co. No. 18,787; Oct. 5; Gaz. vol. 219; p. 268.
"Home Dry Cleaner." (For a Cleaning Compound.) H. B. Hutchens and E. M. Graves. No. 18,788; Oct. 5; Gaz. vol. 219; p. 268.
"Hopson's Mexican Style Pecan Candy." (For Candy.) The A. B. C. Candy Co. No. 18,803; Oct. 19; Gaz. vol. 219; p. 928.
"Horlick's Biscuit." (For Biscuit.) A. A. Horlick. No. 18,805; Oct. 19; Gaz. vol. 219; p. 928.
"Huff's Hoarhound and Honey Drops." (For a Confection.) The H. H. Huff Mfg. Co. No. 18,808; Oct. 26; Gaz. vol. 219; p. 1236.
"Janet Brand." (For Strawberries.) Louisiana Strawberry Distributing Company. No. 18,807; Oct. 19; Gaz. vol. 219; p. 928.
"Kara." (For Depilation.) Murrey & Ridgeway. No. 18,809; Oct. 26; Gaz. vol. 219; p. 1236.
"Karina." (For Cigars.) Franklin MacVeagh & Company. No. 18,700; Oct. 5; Gaz. vol. 219; p. 268.
"Kir-Mer." (For a Cleaner.) M. E. Kirchuebel. No. 18,789; Oct. 5; Gaz. vol. 219; p. 268.
"La Casera." (For Cigars.) Kohl & Herman. No. 18,799; Oct. 12; Gaz. vol. 219; p. 585.
"Leadoil." (For Mediums for Thinning Paste Pigments.) Leadoil Company. No. 18,806; Oct. 19; Gaz. vol. 219; p. 928.
"McMahon's Diamait Health Bread." (For Bread.) McMahon Bros. No. 18,800; Oct. 12; Gaz. vol. 219; p. 585.
"New Five." (For Cigars.) A. C. Henschel & Co. No. 18,798; Oct. 12; Gaz. vol. 219; p. 585.
"Parkwood Brand." (For Canned Peaches.) The Tiedtke Bros. Co. No. 18,794; Oct. 5; Gaz. vol. 219; p. 268.
"Personal Record." (For Sound-Records for Talking-Machines.) Columbia Graphophone Co. No. 18,785; Oct. 5; Gaz. vol. 219; p. 268.
"Perugia Ointment." (For Ointment.) L. Laurensi. No. 18,814; Oct. 26; Gaz. vol. 219; p. 1236.
"Pottery." (For Earthenware Pottery.) J. J. Dale. No. 18,786; Oct. 5; Gaz. vol. 219; p. 268.
"Randall Bros. Liniment." (For a Liniment.) Randall Brothers Company. No. 18,793; Oct. 5; Gaz. vol. 219; p. 268.
"The National Cholera Remedy." (For a Remedy for Hog-Cholera.) The National Hog Cholera Remedy Company. No. 18,802; Oct. 12; Gaz. vol. 219; p. 585.
"Trophy Won February 25th 1915 At The American Art League." (For Gowns and Suits.) W. Burns. No. 18,784; Oct. 5; Gaz. vol. 219; p. 268.
"Ulman's Old Log Cabin Whiskey." (For Whisky.) I. Ulman & Sons. No. 18,813; Oct. 26; Gaz. vol. 219; p. 1236.
"Ulman's Rose Gin." (For Gin.) I. Ulman & Sons. No. 18,810; Oct. 26; Gaz. vol. 219; p. 1236.
"Ulso Whiskey." (For Whisky.) I. Ulman & Sons. No. 18,812; Oct. 26; Gaz. vol. 219; p. 1236.
"Wicomico Club Whiskey." (For Whisky.) I. Ulman & Sons. No. 18,811; Oct. 26; Gaz. vol. 219; p. 1236.

PRINTS.

"Alvin Silver." (For Alvin Silver.) Alvin Manufacturing Company. No. 4,086; Oct. 19; Gaz. vol. 219; p. 928.

"Alvin Silver Plate." (For Alvin Silver.) Alvin Manufacturing Company. No. 4,080; Oct. 12; Gaz. vol. 219; p. 585.

"As The Modern House-Wife Does It." (For a Mechanical Bread-Mixer.) Consolidated Gas, Electric Light & Power Company of Baltimore. No. 4,103; Oct. 26; Gaz. vol. 219; p. 1236.

"B. V. D. Men's V Neck Two Piece Suit." (For Athletic Underwear.) The B. V. D. Company. No. 4,087; Oct. 19; Gaz. vol. 219; p. 928.

"B. V. D. Men's V Neck Union Suit." (For Athletic Underwear.) The B. V. D. Company. No. 4,088; Oct. 19; Gaz. vol. 219; p. 928.

"Ballistite." (For Smokeless Shotgun-Powder.) E. I. du Pont de Nemours Powder Co. No. 4,107; Oct. 26; Gaz. vol. 219; p. 1236.

"Big Dan." (For Nickel Alarm-Clocks.) E. H. Snow. No. 4,099; Oct. 19; Gaz. vol. 219; p. 928.

"Blue Monday." (For an Electric Washing-Machine.) Consolidated Gas, Electric Light & Power Company of Baltimore. No. 4,079; Oct. 5; Gaz. vol. 219; p. 268.

"Burn Your Refuse Before It Becomes Filth." (For a Garbage-Incinerator.) Consolidated Gas, Electric Light & Power Company of Baltimore. No. 4,076; Oct. 5; Gaz. vol. 219; p. 268.

"Cherry Smash." (For Cherry Smash.) J. E. Fowler. No. 4,096; Oct. 19; Gaz. vol. 219; p. 928.

"Cincinnati Automatic Pedestal Operating Table." (For Operating-Tables.) The Max Wocher & Son Co. No. 4,081; Oct. 12; Gaz. vol. 219; p. 585.

"Cleaning—The New Way." (For an Electrical Vacuum-Cleaner.) Consolidated Gas, Electric Light & Power Company of Baltimore. No. 4,073; Oct. 5; Gaz. vol. 219; p. 268.

"Cleaning the Old Way." (For an Electrical Vacuum-Cleaner.) Consolidated Gas, Electric Light & Power Company of Baltimore. No. 4,092; Oct. 19; Gaz. vol. 219; p. 928.

"Cook In Comfort." (For a Gas-Range.) Consolidated Gas, Electric Light & Power Company of Baltimore. No. 4,077; Oct. 5; Gaz. vol. 219; p. 268.

"Cooking In Comfort." (For a Gas-Range.) Consolidated Gas, Electric Light & Power Company of Baltimore. No. 4,075; Oct. 5; Gaz. vol. 219; p. 268.

"Dirt, Discomfort and Discomfiture." (For an Electric Iron.) Consolidated Gas, Electric Light & Power Company of Baltimore. No. 4,094; Oct. 19; Gaz. vol. 219; p. 928.

"Don't Court Disaster." (For an Electric Iron.) Consolidated Gas, Electric Light & Power Company of Baltimore. No. 4,106; Oct. 26; Gaz. vol. 219; p. 1236.

"Economy In The Home." (For Black Dye.) E. J. Reilly. No. 4,082; Oct. 12; Gaz. vol. 219; p. 585.

"Egaday." (For Poultry Feed.) South Texas Grain Company. No. 4,100; Oct. 19; Gaz. vol. 219; p. 928.

"German Eagle." (For Bread.) N. Ludwig. No. 4,098; Oct. 19; Gaz. vol. 219; p. 928.

"Good Ship—Satisfied Customer" (For Gentlemen's Furnishing Goods and Clothing.) D. M. Boyd. No. 4,090; Oct. 19; Gaz. vol. 219; p. 928.

"Independent Of The Garbage Man." (For a Garbage-Incinerator.) Consolidated Gas, Electric Light & Power Company of Baltimore. No. 4,078; Oct. 5; Gaz. vol. 219; p. 268.

"Krumm's." (For Noodles.) A. C. Krumm, Sr., and A. C. Krumm, Jr. No. 4,097; Oct. 19; Gaz. vol. 219; p. 928.

"Liberated." (For an Electric Dish-Washing Machine.) Consolidated Gas, Electric Light & Power Company of Baltimore. No. 4,102; Oct. 26; Gaz. vol. 219; p. 1236.

"Marker for Public Roads." (For Markers for Public Roads.) J. H. Beeson. No. 4,071; Oct. 5; Gaz. vol. 219; p. 268.

"Measurements Required When Ordering B. V. D. Underwear." (For Athletic Underwear.) The B. V. D. Company. No. 4,089; Oct. 19; Gaz. vol. 219; p. 928.

"Needa Helper?" (For a Mechanical Bread-Mixer.) Consolidated Gas, Electric Light & Power Company of Baltimore. No. 4,104; Oct. 26; Gaz. vol. 219; p. 1236.

"Oils that Lubricate Most." (For Oils.) Vacuum Oil Company. Nos. 4,083–5; Oct. 12; Gaz. vol. 219; p. 585.

"Superiora." (For Magnolia-Leaves.) Dr. H. Dux & Bros. No. 4,095; Oct. 19; Gaz. vol. 219; p. 928.

"Taking The Work Out of Washing." (For Electric Washing-Machines.) Consolidated Gas, Electric Light & Power Company of Baltimore. No. 4,093; Oct. 19; Gaz. vol. 219; p. 928.

"The Magic of Efficiency." (For an Electric Iron.) Consolidated Gas, Electric Light & Power Company of Baltimore. No. 4,072; Oct. 5; Gaz. vol. 219; p. 268.

"The Ordeal." (For a Gas Water-Heater.) Consolidated Gas, Electric Light and Power Company of Baltimore. No. 4,091; Oct. 19; Gaz. vol. 219; p. 928.

"The Oriole Heater." (For a Gas Water-Heater.) Consolidated Gas, Electric Light & Power Company of Baltimore. No. 4,074; Oct. 5; Gaz. vol. 219; p. 268.

"Two Magicians." (For an Electric Iron.) Consolidated Gas, Electric Light & Power Company of Baltimore. No. 4,105; Oct. 26; Gaz. vol. 219; p. 1236.

"Why be a Dish Washer?" (For an Electric Dish-Washing Machine.) Consolidated Gas, Electric Light & Power Company of Baltimore. No. 4,101; Oct. 26; Gaz. vol 219; p. 1236.

DISCLAIMERS.

Hinges, Alining-plate for floor-. O. Katzenberger. No. 1,037,149; date of patent Aug. 27, 1912; disclaimer filed Oct. 6, 1915; Gaz. vol. 219; p. 591.

Incubator-heating system. C. S. Bryant. (Reissue.) No. 13,515; date of patent Jan. 21, 1913; disclaimer filed Sept. 28, 1915; Gaz. vol. 219; p. 274.

OFFICIAL GAZETTE

UNITED STATES PATENT OFFICE

VOL. 218 - 219

SEPT. - OCT.

1915

MICRO PHOTO INC.M
CLEVELAND, OHIO P